FAGUNDEZ

DESCRIÇÃO DA PROPOSTA DE PREÇOS

À
SUPERINTÊNDENCIA ESTADUAL DE LICITAÇÕES

REF PE Nº 342/2019

Prezados Senhores.

Apresentamos a V.S., nossa Proposta de venda nos termos do Edital e seus Anexos.
O prazo de validade de nossa **Proposta é de 60 (sessenta) dias** corridos, contados da data de sua apresentação.
Declaramos que estamos de pleno acordo com todas as condições estabelecidas no Edital e seus Anexos, bem como aceitamos todas as obrigações e responsabilidades especificadas no Termo de Referência.
Declaramos que nos preços cotados estão incluídas todas as despesas que, direta ou indiretamente, fazem parte da prestação dos serviços, tais como gastos da empresa com suporte técnico e administrativo, impostos, seguro, taxas, ou quaisquer outros que possam incidir sobre gastos da empresa, sem quaisquer acréscimos em virtude de expectativa inflacionária e deduzidos os descontos eventualmente concedidos.
Caso nos seja adjudicado o objeto da licitação, comprometemos a assinar o Contrato no prazo determinado no documento de convocação, e para esse fim fornecemos os seguintes dados:

FAGUNDEZ

Razão Social: FAGUNDEZ DISTRIBUIÇÃO LTDA.

CNPJ/MF: 07.953.689/0001-18
Endereço: Av. MARINGÁ 1354 BLOCO D UNIDADE 7 – PINHAIS - PARANÁ
Tel./Fax: (041) 3012-4562
CEP: 83.324-442
E-MAIL: allan.link@fagundez.com / igor.sartori@fagundez.com

Banco: Banco do Brasil Agência: 3406-1 C/C: 14148-8

Dados do Representante Legal da Empresa para assinatura do Contrato:

Nome:	ROGERIO RICARDO FAGUNDES	
Endereço:	Av. MARINGÁ 1354 BLOCO D UNIDADE 7 – PINHAIS - PARANÁ	
CEP:	83.324-442	
CPF/MF:	858.035.889-20	
Cargo/Função:	REPRESENTANTE LEGAL	
Cart. Ident. nº:	5.368.045-3	Expedido por: SSP PR
Naturalidade:	CURITIBA	Nacionalidade: BRASILEIRA

FAGUNDEZ

ITEM	MARCA/MODELO	QTD	PREÇO UNIT.	PREÇO TOTAL
5	**Marca: LG** **Modelo: 24BL550J + Adaptador HDMIxDVI**	372	980,00	364.460,00

Valor Global da Proposta: R$ 364.460,00 (trezentos e sessenta e quatro mil, quatrocentos e sessenta reais).
Prazo de entrega: até 30 (trinta) dias corridos.
Garantia: 36 (trinta) meses on-site.

DESCRITIVO DO ITEM: Tamanho de tela: mínimo de 23,8 polegadas; Formato de tela: Wide screen; Ajuste de altura e rotação (pivô) 90º; Tipo de tela: LED; Ângulo de Visão Horizontal: mínimo de 160 graus; Ângulo de Visão Vertical: mínimo de 160 graus; Resolução mínima: 1366 x 768 Pixel; Brilho: mínimo de 200 cd/m²; Tempo de Resposta: máximo de 5 ms; Conexões: D-Sub (VGA) e DVI-D; Cabos inclusos: D-Sub (VGA) e DVI-D; Fonte de Alimentação: Bivolt e embutida no pedestal ou no corpo do monitor (interna); Cor frontal, traseira e da base: preto ou cinza; Função suporte de parede: Sim; Pedestal (Base Ajustável): Base removível e inclinável; Certificado Energy Star; Certificado TCO'03 ou superior quanto à emissão de radiação. **Garantia de 36 meses a contar do recebimento definitivo.**

Pinhais, 03 de janeiro de 2.020.

FAGUNDEZ DISTRIBUIÇÃO LTDA
CNPJ – 07.953.689/0001-18
ROGERIO RICARDO FAGUNDES
CPF – 858.035.889-20

07.953.689/0001-18
FAGUNDEZ DISTRIBUIÇÃO

Av. Maringa, Nº 1354 Bloco D Uni 7
Emiliano Perneta - CEP: 83.324-442
Pinhais - PR

Ministério da Economia
Secretaria Especial de Desburocratização, Gestão e Governo Digital
Secretaria de Gestão

Sistema de Cadastramento Unificado de Fornecedores - SICAF

Declaração

Declaramos para os fins previstos na Lei nª 8.666, de 1993, conforme documentação registrada no SICAF, que a situação do fornecedor no momento é a seguinte:

Dados do Fornecedor

CNPJ:	**07.953.689/0001-18**
Razão Social:	**FAGUNDEZ DISTRIBUICAO LTDA**
Nome Fantasia:	**FAGUNDEZ DISTRIBUICAO**
Situação do Fornecedor:	**Credenciado** Data de Vencimento do Cadastro: **19/02/2021**

Ocorrências e Impedimentos

Ocorrência:	**Consta**
Impedimento de Licitar:	**Nada Consta**
Ocorrências Impeditivas indiretas:	**Nada Consta**
Vínculo com "Serviço Público":	**Nada Consta**

Níveis cadastrados:

I - Credenciamento

II - Habilitação Jurídica

III - Regularidade Fiscal e Trabalhista Federal

Receita Federal e PGFN	Validade:	**11/08/2020**
FGTS	Validade:	**14/03/2020**
Trabalhista **(http://www.tst.jus.br/certidao)**	Validade:	**28/08/2020**

IV - Regularidade Fiscal Estadual/Distrital e Municipal

Receita Estadual/Distrital	Validade:	**07/04/2020**
Receita Municipal	Validade:	**26/03/2020**

VI - Qualificação Econômico-Financeira

Validade: **31/05/2020**

CPF: 945.978.712-68 Nome: BIANCA MATIAS DE SOUZA
Ass: _____

Ministério da Economia
Secretaria Especial de Desburocratização, Gestão e Governo Digital
Secretaria de Gestão

Sistema de Cadastramento Unificado de Fornecedores - SICAF

Declaração

Declaramos para os fins previstos na Lei nº 8.666, de 1993, conforme documentação registrada no SICAF, que a situação do fornecedor no momento é a seguinte:

Dados do Fornecedor

CNPJ: **07.953.689/0001-18**
Razão Social: **FAGUNDEZ DISTRIBUICAO LTDA**
Nome Fantasia: **FAGUNDEZ DISTRIBUICAO**
Situação do Fornecedor: **Credenciado** Data de Vencimento do Cadastro: **19/02/2020**

Ocorrências e Impedimentos

Ocorrência: **Consta**
Impedimento de Licitar: **Nada Consta**

Níveis cadastrados:

I - Credenciamento

II - Habilitação Jurídica

III - Regularidade Fiscal e Trabalhista Federal

Receita Federal e PGFN	Validade:	**06/07/2020**
FGTS	Validade:	**05/02/2020**
Trabalhista **(http://www.tst.jus.br/certidao)**	Validade:	**12/07/2020**

IV - Regularidade Fiscal Estadual/Distrital e Municipal

Receita Estadual/Distrital	Validade:	**10/02/2020**
Receita Municipal	Validade:	**29/02/2020**

VI - Qualificação Econômico-Financeira

Validade: **31/05/2020**

Esta declaração é uma simples consulta e não tem efeito legal

CPF: 858.035.889-20 Nome: ROGERIO RICARDO FAGUNDES
Ass: _____

FILTROS APLICADOS:

Nome: FAGUNDEZ DISTRIBUICAO LTDA

CPF / CNPJ: 07.953.689/0001-18

LIMPAR

Data da consulta: 04/03/2020 10:32:04

Data da última atualização: 03/03/2020 18:00:06

DETALHAR	CNPJ/CPF DO SANCIONADO	NOME DO SANCIONADO	UF DO SANCIONADO	ÓRGÃO/ENTIDADE SANCIONADORA	TIPO DA SANÇÃO	DATA DE PUBLICAÇÃO DA SANÇÃO
Nenhum registro encontrado						

Menu principal (/?pEncPastaId=tPdFQ-lDfvKV9OlzZD0aIXmc-9CKW0TYmATl_5NXdVlVIbkYUCfVWLGogl_RyQ5ddlKcF6u_VDZLHtSA-Z4ElgL3gWJB77tiTExlUL0mQm43QU4L)
Fornecedores (/?pEncPastaId=NDHLbHAEbb4mJsMB3mmrhd5JnhtSVjzjmKV045Rl-tFH-myYssuGLvadfzth6N_GBH-DZKd2em9sfKfhd-H0qIJvilA5NdQBa82vLAXMAG43QU4L)
Impedidos de Licitar

Impedimentos

Cadastro de Fornecedores Impedidos de Licitar e Contratar com a Administração Pública Estadual

Excel | PDF

Procurar: 07.953.689/0001-18

Publicado	Processo	CPF / CNPJ	Nome / Razão Social

Nenhum registro encontrado

Mostrando de 0 à 0 de 0 registros (filtrado do total de 124 registros)

Anterior | Próxima

ROGÉRIO RICARDO FAGUNDES, brasileiro, solteiro, natural de Maringá/PR, nascido em 08/05/1970, comerciante, portador da Cédula de Identidade RG. 5.368.045-3 SSP/PR, CPF 858.035.889-20, residente e domiciliado em Pinhais – Paraná, Rua Curuá nº 118, bairro Alphaville Graciosa, CEP. 83.327-089.

RAFAEL FAGUNDES, brasileiro, solteiro, natural de Maringá/PR, nascido em 20/05/1974, comerciante, portador da Cédula de Identidade RG 5.130.694-5 SSP/PR, CPF. 922.222.779-49, residente e domiciliado em Curitiba – Paraná, Rua Equador nº 342, apto. 21-B, Bairro Bacacheri, CEP. 82.510-120.

Únicos sócios da sociedade empresa **FAGUNDEZ DISTRIBUIÇÃO LTDA.**, com sede e foro em Pinhais – Paraná na Avenida Maringá n. 1354, Bloco D, Unidade 7, Bairro Emiliano Perneta, CEP. 83.324-442, registrada na Junta Comercial do Estado do Paraná sobe NIRE 41205689756 e inscrita no CNPJ sob. N. 07.953.689/0001-18 resolvem, assim, alterar o contrato social:

CLÁUSULA PRIMEIRA – AUMENTO DO CAPITAL SOCIAL

O Capital Social que era de R$ 1.800.000,00 (hum milhão e oitocentos mil reais), é elevado para R$ 12.850.000,00 (doze milhões, oitocentos e cinquenta mil reais) mediante o aproveitamento de Reserva de Capitais, (Subvenção para Investimentos), no valor de R$ 11.050.000,00 (onze milhões e cinquenta mil reais), aumento este distribuído de forma proporcional a atual participação dos sócios.

CLÁUSULA SEGUNDA – CAPITAL SOCIAL

Tendo em vista o aumento ocorrido, o capital social, representado por 12.850.000 (doze milhões, oitocentos e cinquenta mil) quotas, no valor de R$ 1,00 (hum real) cada uma, totalmente integralizadas anteriormente em moeda corrente nacional, fica assim distribuído entre os sócios:

SOCIO	(%)	QUOTAS	VALOR
ROGÉRIO RICARDO FAGUNDES	75,00	9.637.500	9.637.500,00
RAFAEL FAGUNDES	25,00	3.212.500	3.212.500,00
TOTAL	100.00	12.850.000	12.850.000,00

CLÁUSULA TERCEIRA – RETIRADA DE SÓCIO

O sócio **RAFAEL FAGUNDES,** não desejando mais permanecer na sociedade, retira-se e vende a totalidade que corresponde a 3.212.500 (três milhões, duzentos e doze mil e quinhentos) quotas de R$ 1,00 (hum real) cada uma, integralmente subscrito e integralizado a **ROGÉRIO RICARDO FAGUNDES.**

O sócio retirante dá e recebe da sociedade e do sócio remanescente plena, total e irrevogável quitação em relação às quotas transferidas e seus haveres junto à Sociedade, passando o sócio remanescente a exercer todos os direitos e deveres decorrentes das quotas transferidas.

CLÁUSULA QUARTA – CAPITAL SOCIAL

Conforme alteração do Capital Social, altera-se a cláusula quinta do contrato societário, que passará a ser da seguinte forma:

O Capital Social, inteiramente subscrito e integralizado em moeda corrente pelo sócio, neste ato, é de R$ 12.850.000,00 (doze milhões, oitocentos e cinquenta mil reais), dividido em 12.850.000 (doze milhões, oitocentos e cinquenta mil) quotas, de R$ 1,00 (hum real), cada uma, assim distribuído:

SOCIO	(%)	QUOTAS	VALOR
ROGÉRIO RICARDO FAGUNDES	100.00	12.850.000	12.850.000,00
TOTAL	100.00	12.850.000	12.850.000,00

CLÁUSULA QUINTA – SOCIEDADE LIMITADA UNIPESSOAL.

A partir desta data a Sociedade passará a ser uma **SOCIEDADE LIMITADA UNIPESSOAL**, conforme artigo 1.052, parágrafo único, da Lei 10.406/2002.

CLÁUSULA SEXTA – ADMINISTRAÇÃO DA SOCIEDADE, DEVERES E OBRIGAÇÕES.

O sócio decide alterar a cláusula oitava do contrato societário, que passará a ser da seguinte forma:

CLÁUSULA OITAVA - ADMINISTRAÇÃO DA SOCIEDADE E USO DO NOME EMPRESARIAL: A administração da sociedade caberá ao sócio, **ROGÉRIO RICARDO FAGUNDES**, com os poderes e atribuições de gerir e administrar os negócios da sociedade, representá-la ativa e passivamente, judicial e extra judicialmente, perante órgãos públicos, instituições financeiras, entidades privadas e terceiros em geral, bem como praticar todos os demais atos necessários à consecução dos objetivos ou à defesa dos interesses e direitos da sociedade, autorizado o uso do nome empresarial.

CLÁUSULA SÉTIMA: O administrador declara, sob pena da lei, de que não está impedido de exercer a administração da sociedade, por lei especial, ou em virtude de condenação criminal, ou por se encontrarem sob os efeitos dela, a pena que vede, ainda que temporariamente, o acesso a cargos públicos, ou por crime falimentar, de prevaricação, peita ou suborno, concussão peculato, ou contra a economia popular, contra o sistema financeiro nacional, contra normas de defesa de concorrência, contra relações de consumo, fé pública, ou a propriedade.

CLÁUSULA OITAVA: MANUTENÇÃO DA VIGÊNCIA DAS DEMAIS CLÁUSULAS. Permanecem inalteradas as demais cláusulas do Contrato Social primitivo, restando em plena vigência todas aquelas que não venham a colidir com as disposições da presente alteração contratual.

CLÁUSULA NONA: CONSOLIDAÇÃO DO CONTRATO: Em consonância com o que determina o art 2.031 da Lei 10.406/2002, os sócios **RESOLVEM,** por este instrumento, atualizar e consolidar o contrato social, tornando assim sem efeito a partir desta data as cláusulas e condições contidas no contrato primitivo que, adequando às disposições da referida Lei 10.406/2002 aplicadas a este tipo societário, passa a ter a seguinte redação:

"CONSOLIDAÇÃO DO CONTRATO SOCIAL"
FAGUNDEZ DISTRIBUIÇÃO LTDA
CNPJ 07.953.689/0001-18
NIRE 41205689756

ROGÉRIO RICARDO FAGUNDES, brasileiro, solteiro, natural de Maringá/PR, nascido em 08/05/1970, comerciante, portador da Cédula de Identidade RG. 5.368.045-3 SSP/PR, CPF 858.035.889-20, residente e domiciliado em Pinhais – Paraná, Rua Curuá nº 118, bairro Alphaville Graciosa, CEP. 83.327-089.

Único sócio da **Sociedade Limitada Unipessoal, FAGUNDEZ DISTRIBUIÇÃO LTDA**., com sede e foro em Pinhais – Paraná na Avenida Maringá n. 1354, Bloco D, Unidade 7, Bairro Emiliano Perneta, CEP. 83.324-442, registrada na Junta Comercial do Estado do Paraná sobe NIRE 41205689756 e inscrita no CNPJ sob. N. 07.953.689/0001-18.

CLÁUSULA PRIMEIRA: A sociedade girará sob o nome empresarial de **FAGUNDEZ DISTRIBUIÇÃO LTDA**., com sede e foro em Pinhais – Paraná na Avenida Maringá n. 1354, Bloco D, Unidade 7, Bairro Emiliano Perneta, CEP. 83.324-442, registrada na Junta Comercial do Estado do Paraná sobe NIRE 41205689756 e inscrita no CNPJ sob. N. 07.953.689/0001-18, I.E. 90369733-47.

CLÁUSULA SEGUNDA: A sede da sociedade é em Pinhais – Paraná na Avenida Maringá n. 1354, Bloco D, Unidade 7, Bairro Emiliano Perneta, CEP. 83.324-442.

CLÁUSULA TERCEIRA: A sociedade tem como objetivo empresarial:

Comércio Atacadista e Varejista, Importação e Exportação de Equipamentos e Suprimentos de Informática, de Aparelhos de Ar Condicionado, de Televisão e de Bicicletas, Peças, Partes e Acessórios; Importação e Comércio Varejista de Equipamentos de Telefonia e Comunicação, de Peças e Acessórios para Aparelhos Eletro Eletrônicos e de Materiais Elétricos; Fabricação de Microcomputadores e de Bicicletas; Importação e Comercio Atacadista de Óculos; Desenvolvimento e Licenciamento de Programas de Computador; Consultoria em Tecnologia da Informação; Tratamento de Dados e Provedores de Serviços de Aplicação e de Hospedagem na Internet; Serviços de Instalação e Manutenção Elétrica e Locação de Equipamentos de Informática.

CLÁUSULA QUARTA: A sociedade iniciou suas atividades em 02 de maio de 2006 e seu prazo é indeterminado.

CLÁUSULA QUINTA – CAPITAL SOCIAL.

O capital social, inteiramente subscrito e integralizado em moeda corrente pelo sócio, neste ato, é de R$ 12.850.000,00 (doze milhões, oitocentos e cinquenta mil reais), dividido em 12.850.000 (doze milhões, oitocentos e cinquenta mil) quotas de R$ 1,00 (hum real), cada uma, assim distribuído:

SÓCIO	QUOTAS	VALOR	%
ROGÉRIO RICARDO FAGUNDES	12.850.000	12.850.000,00	100%
TOTAL	12.850.000	12.850.000,00	100%

Parágrafo único: A partir desta data a Sociedade passará a ser uma **SOCIEDADE LIMITADA UNIPESSOAL**, conforme artigo 1.052, parágrafo único, da Lei 10.406/2002.

CLAUSULA SEXTA: As cotas da sociedade são indivisíveis e não poderão ser cedidas ou transferidas a terceiros sem o consentimento do sócio, a quem fica assegurado o direito de preferência em igualdade de condições e preço, se postas a venda, as mesmas serão formalizadas e realizadas mediante alteração contratual pertinente.

§ ÚNICO: As cotas do capital social e todos os direitos a elas inerentes, são declaradas impenhoráveis e não sujeitos a execução por dívida de qualquer natureza de seus titulares.

CLÁUSULA SÉTIMA: A administração da sociedade caberá ao sócio **ROGÉRIO RICARDO FAGUNDES**, na qualidade de **ADMINISTRADOR** aos quais compete em conjunto ou isoladamente o uso do nome empresarial, e a representação ativa, passiva, judicial e extra judicial da sociedade sendo vedado, no entanto, o seu uso em atividades estranhas ao interesse social especialmente à prestação de avais, endossos, fianças e caução de favor ou assumir obrigações seja em favor de qualquer dos cotistas ou de terceiros, bem como onerar ou alienar bens imóveis da sociedade.

CLÁUSULA OITAVA: O administrador declara, sob pena da lei, de que não está impedido de exercer a administração da sociedade, por lei especial, ou em virtude de condenação criminal, ou por se encontrarem sob os efeitos dela, a pena que vede, ainda que temporariamente, o acesso a cargos públicos, ou por crime falimentar, de prevaricação, peita ou suborno, concussão peculato, ou contra a economia popular,

contra o sistema financeiro nacional, contra normas de defesa de concorrência, contra relações de consumo, fé pública, ou a propriedade.

CLÁUSULA NONA: Ao término de cada exercício social, em 31 de dezembro, o sócio administrador, prestará contas justificadas de sua administração, procedendo à elaboração do inventário, do balanço patrimonial e do balanço do resultado econômico, cabendo aos sócios, na proporção de suas quotas, os lucros e perdas apuradas.

CLÁUSULA DÉCIMA: Nos quatro meses seguintes ao término do exercício social, o sócio deliberará sobre as contas e designará administrador quando for o caso.

CLÁUSULA DÉCIMA PRIMEIRA: O sócio poderá, fixar retirada mensal, a título de pró-labore, observadas as disposições regulamentares pertinentes.

CLÁUSULA DÉCIMA SEGUNDA: Falecendo o interditado o sócio, a sociedade continuará suas atividades com os herdeiros, sucessores e o incapaz. Não sendo possível ou inexistindo interesse destes, o valor de seus haveres serão apurados e liquidados com base na situação patrimonial da sociedade, a data de resolução, verificada em balanço especialmente levantado.

§ ÚNICO: O mesmo procedimento será adotado em outros casos em que a sociedade se resolva em relação a seu sócio.

CLÁUSULA DÉCIMA TERCEIRA: A sociedade poderá a qualquer tempo, abrir, alterar endereço ou fechar filial ou outra dependência, mediante alteração contratual assinada pelo sócio administrador.

CLÁUSULA DÉCIMA QUARTA: Fica eleito o foro de Pinhais – PR, para o exercício e o cumprimento dos direitos e obrigações resultantes deste contrato.

E, por assim terem justos e contratados, lavram, datam e assinam o presente instrumento em única via, obrigando-se fielmente por si e seus herdeiros a cumpri-lo em todos os seus termos.

Pinhais (PR), 11 de Setembro de 2019.

Reconhecimento de firma

4º TABELIONATO DE NOTAS

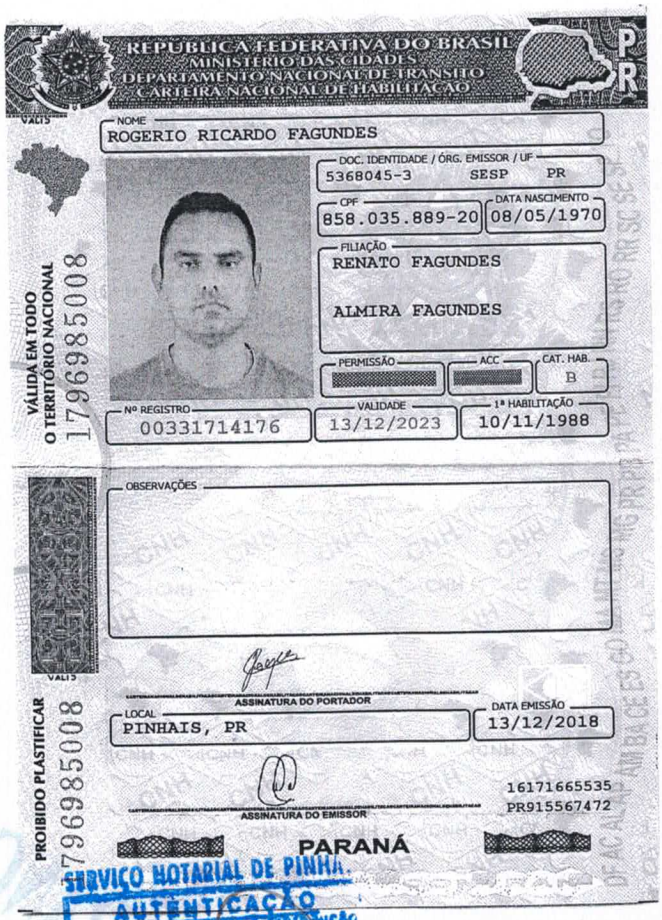
ROGÉRIO RICARDO FAGUNDES
Sócio Administrador

RAFAEL FAGUNDES
Sócio Retirante

CERTIFICO O REGISTRO EM 01/11/2019 09:45 SOB Nº 20196326028.
PROTOCOLO: 196326028 DE 30/10/2019. CÓDIGO DE VERIFICAÇÃO:
11905061091. NIRE: 41205689756.
FAGUNDEZ DISTRIBUIÇÃO LTDA

LEANDRO MARCOS RAYSEL BISCAIA
SECRETÁRIO-GERAL
CURITIBA, 01/11/2019
www.empresafacil.pr.gov.br

JUNTA COMERCIAL DO PARANÁ



REPÚBLICA FEDERATIVA DO BRASIL
MINISTÉRIO DAS CIDADES
DEPARTAMENTO NACIONAL DE TRÂNSITO
CARTEIRA NACIONAL DE HABILITAÇÃO

PR

NOME
ROGERIO RICARDO FAGUNDES

DOC. IDENTIDADE / ÓRG. EMISSOR / UF
5368045-3 SESP PR

CPF
858.035.889-20

DATA NASCIMENTO
08/05/1970

FILIAÇÃO
RENATO FAGUNDES
ALMIRA FAGUNDES

PERMISSÃO

ACC

CAT. HAB.
B

Nº REGISTRO
00331714176

VALIDADE
13/12/2023

1ª HABILITAÇÃO
10/11/1988

VÁLIDA EM TODO O TERRITÓRIO NACIONAL
1796985008

OBSERVAÇÕES

ASSINATURA DO PORTADOR

LOCAL
PINHAIS, PR

DATA EMISSÃO
13/12/2018

ASSINATURA DO EMISSOR

16171665535
PR915567472

PARANÁ

PROIBIDO PLASTIFICAR
1796985008

SERVIÇO NOTARIAL DE PINHAIS
AUTENTICAÇÃO
A presente fotocópia é reprodução fiel do documento apresentado neste Cartório
24 JAN. 2019
Fábio César Hildebrand Lopes
Tabelião
PINHAIS - PR

Lei 13.228 de 18/07/2001
SELO FUNARPEN
Tabelionato de Notas
Exclusivo para
Autenticação de Cópia
FPF61740

TABELIONATO DE NOTAS
CRISTIANE DE FÁTIMA BORBELLA FERREIRA
Est. Juramentada
PINHAIS - PR

PODER JUDICIÁRIO

COMARCA DA REGIÃO METROPOLITANA DE CURITIBA - FORO REGIONAL DE PINHAIS

Rua 22 de Abril, 199 - Pinhais - PR
CEP 83323-240 - Fone (41) 3667-6977
E-mail: distribuidor@distribuidorpinhais.com.br

OFÍCIO DISTRIBUIDOR E ANEXOS
Denise Miguel Zattar - Oficial Titular

Certidão Negativa

Certifico, a pedido de parte interessada, que revendo os livros e arquivos de distribuição FALENCIA, CONCORDATA E RECUPERACAO JUDICIAL E EXTRA-JUDICIAL sob minha guarda neste cartório, verifiquei NÃO CONSTAR nenhum registro em andamento contra:

FAGUNDEZ DISTRIBUICAO LTDA

CNPJ 07.953.689/0001-18, no período compreendido desde 10/07/1998, data de instalação deste cartório, até a presente data.

PINHAIS/PR, 10 de Janeiro de 2020

BEL. DENISE MIGUEL ZATTAR - D.J. 237/06

Joice Teles Fernandes
Funcionária Juramentada
Portaria nº 17/2018

Custas = R$ 33,66
Página 0001/0001

PODER JUDICIÁRIO
JUSTIÇA DO TRABALHO

CERTIDÃO NEGATIVA DE DÉBITOS TRABALHISTAS

Nome: FAGUNDEZ DISTRIBUICAO LTDA
(MATRIZ E FILIAIS) CNPJ: 07.953.689/0001-18
Certidão nº: 187203760/2019
Expedição: 21/10/2019, às 14:38:44
Validade: 17/04/2020 - 180 (cento e oitenta) dias, contados da data de sua expedição.

Certifica-se que **FAGUNDEZ DISTRIBUICAO LTDA (MATRIZ E FILIAIS)**, inscrito(a) no CNPJ sob o nº **07.953.689/0001-18**, **NÃO CONSTA** do Banco Nacional de Devedores Trabalhistas.

Certidão emitida com base no art. 642-A da Consolidação das Leis do Trabalho, acrescentado pela Lei nº 12.440, de 7 de julho de 2011, e na Resolução Administrativa nº 1470/2011 do Tribunal Superior do Trabalho, de 24 de agosto de 2011.

Os dados constantes desta Certidão são de responsabilidade dos Tribunais do Trabalho e estão atualizados até 2 (dois) dias anteriores à data da sua expedição.

No caso de pessoa jurídica, a Certidão atesta a empresa em relação a todos os seus estabelecimentos, agências ou filiais.

A aceitação desta certidão condiciona-se à verificação de sua autenticidade no portal do Tribunal Superior do Trabalho na Internet (http://www.tst.jus.br).

Certidão emitida gratuitamente.

INFORMAÇÃO IMPORTANTE

Do Banco Nacional de Devedores Trabalhistas constam os dados necessários à identificação das pessoas naturais e jurídicas inadimplentes perante a Justiça do Trabalho quanto às obrigações estabelecidas em sentença condenatória transitada em julgado ou em acordos judiciais trabalhistas, inclusive no concernente aos recolhimentos previdenciários, a honorários, a custas, a emolumentos ou a recolhimentos determinados em lei; ou decorrentes de execução de acordos firmados perante o Ministério Público do Trabalho ou Comissão de Conciliação Prévia.

MINISTÉRIO DA FAZENDA
Secretaria da Receita Federal do Brasil
Procuradoria-Geral da Fazenda Nacional

CERTIDÃO POSITIVA COM EFEITOS DE NEGATIVA DE DÉBITOS RELATIVOS AOS TRIBUTOS FEDERAIS E À DÍVIDA ATIVA DA UNIÃO

Nome: FAGUNDEZ DISTRIBUICAO LTDA
CNPJ: 07.953.689/0001-18

Ressalvado o direito de a Fazenda Nacional cobrar e inscrever quaisquer dívidas de responsabilidade do sujeito passivo acima identificado que vierem a ser apuradas, é certificado que:

1. constam débitos administrados pela Secretaria da Receita Federal do Brasil (RFB) com exigibilidade suspensa nos termos do art. 151 da Lei nº 5.172, de 25 de outubro de 1966 - Código Tributário Nacional (CTN), ou objeto de decisão judicial que determina sua desconsideração para fins de certificação da regularidade fiscal, ou ainda não vencidos; e

2. não constam inscrições em Dívida Ativa da União (DAU) na Procuradoria-Geral da Fazenda Nacional (PGFN).

Conforme disposto nos arts. 205 e 206 do CTN, este documento tem os mesmos efeitos da certidão negativa.

Esta certidão é válida para o estabelecimento matriz e suas filiais e, no caso de ente federativo, para todos os órgãos e fundos públicos da administração direta a ele vinculados. Refere-se à situação do sujeito passivo no âmbito da RFB e da PGFN e abrange inclusive as contribuições sociais previstas nas alíneas 'a' a 'd' do parágrafo único do art. 11 da Lei nº 8.212, de 24 de julho de 1991.

A aceitação desta certidão está condicionada à verificação de sua autenticidade na Internet, nos endereços <http://rfb.gov.br> ou <http://www.pgfn.gov.br>.

Certidão emitida gratuitamente com base na Portaria Conjunta RFB/PGFN nº 1.751, de 2/10/2014.
Emitida às 11:14:53 do dia 27/10/2019 <hora e data de Brasília>.
Válida até 24/04/2020.
Código de controle da certidão: **A0BB.E942.130A.1444**
Qualquer rasura ou emenda invalidará este documento.

Estado do Paraná
Secretaria de Estado da Fazenda
Receita Estadual do Paraná

Certidão Positiva

de Débitos Tributários e de Dívida Ativa Estadual

com Efeitos de Negativa

(Art. 206 do CTN)

Nº 021184644-48

Certidão fornecida para o CNPJ/MF: **07.953.689/0001-18**
Nome: **FAGUNDEZ DISTRIBUICAO LTDA**

Ressalvado o direito da Fazenda Pública Estadual inscrever e cobrar débitos ainda não registrados ou que venham a ser apurados, certificamos que, verificando os registros da Secretaria de Estado da Fazenda, constatamos existir pendências cadastradas em nome do contribuinte acima identificado, nesta data, as quais estão com a exigibilidade suspensa nos termos dos incisos II, III e/ou VI, do art. 151, do Código Tributário Nacional (Lei 5.172/1966).

Obs.: Esta Certidão engloba todos os estabelecimentos da empresa e refere-se a débitos de natureza tributária e não tributária, bem como ao descumprimento de obrigações tributárias acessórias

Válida até 10/02/2020 - Fornecimento Gratuito

A autenticidade desta certidão deverá ser confirmada via Internet
www.fazenda.pr.gov.br

Emitido via Internet Pública (12/12/2019 17:10:14)

PREFEITURA MUNICIPAL DE PINHAIS

ESTADO DO PARANÁ

SECRETARIA MUNICIPAL DE FINANÇAS

CERTIDÃO NEGATIVA DE DÉBITOS

Nº 5993/2020

[PESSOA FÍSICA/JURÍDICA]

Nome/Razão: FAGUNDEZ DISTRIBUICAO LTDA	
CPF/CNPJ: 07.953.689/0001-18	
Endereço: AVENIDA MARINGA, 1354	
Complemento: BL D UNIDADE 7	CEP: 83.324-442
Bairro: EMILIANO PERNETA	
Cidade: Pinhais	Estado: Paraná

Certifico, para os devidos fins, que **INEXISTEM DÉBITOS** referentes a Tributos Municipais, **Comerciais e Imobiliários**, inscritos ou não em Dívida Ativa, em nome do contribuinte acima citado, até a presente data.

Reserva-se o direito da fazenda Municipal cobrar e inserir quaisquer dívidas de responsabilidade do sujeito passivo posteriormente apuradas, mesmo as referentes a períodos compreendidos nesta CERTIDÃO.

A aceitação da presente certidão esta condicionada à verificação de sua validade na internet no endereço: www.pinhais.pr.gov.br ou no setor tributário da Prefeitura Municipal.

Observação: Esta certidão é válida somente para o contribuite acima citado.

Autenticidade do Documento

Certidão Emitida gratuitamente conforme Lei 501/2001
Emitida Eletronicamente via Internet
30/01/2020 às 09:48
Qualquer rasura ou emenda invalida este documento
WGT211207-000-ANQXHK-192808616

Validade: 30 dias a partir da Data de Emissão. Emitido Via Web

Voltar Imprimir

CAIXA ECONÔMICA FEDERAL

Certificado de Regularidade do FGTS - CRF

Inscrição: 07.953.689/0001-18
Razão Social: FAGUNDEZ DISTRIBUICAO LTDA
Endereço: AV MARINGA 1354 BRCAO / EMILIANO PERNETA / PINHAIS / PR / 83324-442

A Caixa Econômica Federal, no uso da atribuição que lhe confere o Art. 7, da Lei 8.036, de 11 de maio de 1990, certifica que, nesta data, a empresa acima identificada encontra-se em situação regular perante o Fundo de Garantia do Tempo de Servico - FGTS.

O presente Certificado não servirá de prova contra cobrança de quaisquer débitos referentes a contribuições e/ou encargos devidos, decorrentes das obrigações com o FGTS.

Validade: 07/01/2020 a 05/02/2020

Certificação Número: 2020010703064530224110

Informação obtida em 15/01/2020 14:23:18

A utilização deste Certificado para os fins previstos em Lei esta condicionada a verificação de autenticidade no site da Caixa: **www.caixa.gov.br**

TRIBUNAL DE JUSTI◆A DO ESTADO DO TOCANTINS
Pal◆cio da Justi◆a Rio Tocantins, Pra◆a dos Girass◆is, sn - Bairro Centro - CEP 77001002 - Palmas - TO - http://wwa.tjto.jus.br
Tribunal de Justi◆a

ATESTADO DE CAPACIDADE TÉCNICA Nº 38 / 2016 - PRESIDÊNCIA/DIGER/DIADM

AQUISIÇÃO/COMPRAS

O Tribunal de Justiça do Estado do Tocantins, inscrito no CNPJ nº 25.053.190/0001-36, com sede no Palácio da Justiça Rio Tocantins, Praça dos Girassóis, s/n, CEP: 77.015.007, nesta Capital, por meio de seu Diretor Administrativo, no uso das atribuições que lhe são conferidas pela Instrução Normativa TJTO nº 01/2015, **ATESTA** que a empresa **FAGUNDEZ DISTRIBUIÇÃO - LTDA**, pessoa jurídica de direito privado, inscrita no CNPJ/MF sob o nº 07.953.689/0001-18 com sede na Av. Maringá, nº 1354 Bloco D , Unidade 7 - CEP: 83324-442 Pinhais - Paraná, cumpriu com (X) **REGULARIDADE**, as normas e condições previamente ajustadas na Ata de Registro de Preços nº 133/2015, e nos Contratos, para atender as necessidades do Poder Judiciário do Estado do Tocantins, conforme, abaixo relacionado:

- Objeto: **"C**ontratação de empresa para aquisição futura de monitor, com garantia on-site, por um período mínimo de 36 (trinta e seis) meses, objetivando atender as necessidades do Poder Judiciário do Estado do Tocantins."

Número do processo	15.0.000013822-0
Objeto contratado	Monitor LCD LED, da marca LG, modelo 22MP55PQ
Nota de empenho	2015NE00742 (evento 0832521) 2016/00274 (evento 0964654)
Contratos	Contrato nº 169/2015 (evento 0833359) - Aquisição de 1.000 (um mil) unidades, valor unitário R$ 640,00 (seiscentos quarenta reais). Valor total R$ 640.000,00 (seiscentos e quarenta mil reais). Contrato nº 65/2016 (evento 0966938) - Aquisição de 500 (quinhentas) unidades, valor unitário R$ 640,00 (seiscentos e quarenta reais). Valor total R$ 320.000,00 (trezentos e vinte mil reais).
	NF nº 000.263.793 (evento 0860269)

Notas fiscais	NF nº 000.268.633 (evento 0875835) NF nº 000.285.292 (evento 0988206)

Oportunamente, informamos que não houve problemas até o presente momento quanto a execução do contrato. Não obstante, destacamos que da primeira solicitação dos equipamentos (evento 0829875), estes foram entregues em duas partes, uma vez que houve “quebra no estoque de insumos e férias coletivas” do empregados do distribuidor oficial (evento 0859636), não havendo prejuízos para Administração.

Palmas-TO, 09 de dezembro de 2016.

Documento assinado eletronicamente por **Wagner William Voltolini**, **Chefe de Divis&#65533;o**, em 13/12/2016, &#65533;s 11:00, conforme art. 1&#65533;, III, "b", da Lei 11.419/2006.

Documento assinado eletronicamente por **Marco Aur&#65533;lio Giralde**, **Diretor de Tecnologia da Informa&#65533;&#65533;o**, em 13/12/2016, &#65533;s 17:09, conforme art. 1&#65533;, III, "b", da Lei 11.419/2006.

Documento assinado eletronicamente por **Joana Darc Batista Silva**, **Diretor Administrativo Substituto**, em 14/12/2016, &#65533;s 14:55, conforme art. 1&#65533;, III, "b", da Lei 11.419/2006.

A autenticidade do documento pode ser conferida no link http://sei.tjto.jus.br/verifica/ informando o c&#65533;digo verificador **1262210** e o c&#65533;digo CRC **1ACFD766**.

16.0.000032408-0 1262210v4

SERVIÇO PÚBLICO FEDERAL
MJSP - POLÍCIA FEDERAL
COORDENAÇÃO-GERAL DE TECNOLOGIA DA INFORMAÇÃO - CGTI/DLOG/PF

ATESTADO DE CAPACIDADE TÉCNICA Nº 3185482/2017-CGTI/DLOG/PF

Processo nº 08206.000582/2017-86

Interessado: FAGUNDEZ DISTRIBUIÇÃO LTDA

Certifico que a empresa FAGUNDEZ DISTRIBUIÇÃO LTDA, situada na Av. Maringá 1354, Bloco D, Unidade 7, Pinhais - PR, inscrita no CNPJ sob o nº 07.953.689/0001-18, forneceu o objeto constante no contrato 12/2016 - CGTI/DLOG/PF (Empenho: 2016NE800190), não havendo nada que desabone, tecnicamente, a execução do serviço de entrega de 8.000 (oito mil) equipamentos monitores 23" Marca: LG Modelo: 23MB35VQ-H, acompanhados de seus respectivos pedestais Oxford, engates para pedestal Cortemetal e cabos de força Extensão Tripolar 30cm, no ambito das várias unidades da Polícia Federal espalhadas no Brasil, ressalto que até a presente data não foi aplicada nenhuma penalidade à empresa por descumprimento contratual.

MARCELO DE AZAMBUJA FORTES
Perito Criminal Federal
Coordenador-Geral de Tecnologia da Informação

Documento assinado eletronicamente por **MARCELO DE AZAMBUJA FORTES**, **Coordenador-Geral**, em 07/07/2017, às 16:42, conforme horário oficial de Brasília, com fundamento no art. 6º, § 1º, do Decreto nº 8.539, de 8 de outubro de 2015.

A autenticidade deste documento pode ser conferida no site http://sei.dpf.gov.br/sei/controlador_externo.php?acao=documento_conferir&id_orgao_acesso_externo=0, informando o código verificador **3185482** e o código CRC **1E4A2C95**.

Referência: Processo nº 08206.000582/2017-86 SEI nº 3185482

FAGUNDEZ

DECLARAÇÃO

PREGÃO ELETRÔNICO Nº 342/2019

A empresa Fagundez Distribuição LTDA, inscrita no CNPJ/MF sob o n° 07.953.689/0001-18, por intermédio de seu representante legal, Sr. Rogerio Ricardo Fagundes, portador da Carteira de Identidade n° 5.368.045-3 SSP-PR e inscrito no CPF sob o n° 858.035.889-20, declara, para fins do disposto no inciso V do art. 27 da Lei nº 8.666, de 21 de junho de 1993, acrescido pela Lei nº 9.854, de 27 de outubro de 1999, que não emprega menor de 18 (dezoito) anos em trabalho noturno, perigoso ou insalubre e não emprega menor de 16 (dezesseis) anos, salvo menor, a partir de 14 (quatorze) anos, na condição de aprendiz, nos termos do inciso XXXIII, do art. 7º da Constituição Federal.

Pinhais, 04 de janeiro de 2020.

FAGUNDEZ DISTRIBUIÇÃO LTDA
CNPJ – 07.953.689/0001-18
ROGERIO RICARDO FAGUNDES
CPF – 858.035.889-20

07.953.689/0001-18
FAGUNDEZ DISTRIBUIÇÃO

Av. Maringa, Nº 1354 Bloco D Uni 7
Emiliano Perneta - CEP: 83.324-442
Pinhais - PR

FAGUNDEZ

DECLARAÇÃO DE INEXISTÊNCIA DE FATOS IMPEDITIVOS

PREGÃO ELETRÔNICO Nº 342/2019

A empresa Fagundez Distribuição LTDA, inscrita no CNPJ/MF sob o n° 07.953.689/0001-18, por intermédio de seu representante legal, Sr. Rogerio Ricardo Fagundes, portador da Carteira de Identidade n° 5.368.045-3 SSP-PR e inscrito no CPF sob o n° 858.035.889-20, declara, sob as penas da lei, que até a presente data inexistem fatos impeditivos para sua habilitação no presente processo licitatório, ciente da obrigatoriedade de declarar ocorrências posteriores.

Pinhais, 04 de janeiro de 2020.

FAGUNDEZ DISTRIBUIÇÃO LTDA
CNPJ – 07.953.689/0001-18
ROGERIO RICARDO FAGUNDES
CPF – 858.035.889-20

07.953.689/0001-18
FAGUNDEZ DISTRIBUIÇÃO

Av. Maringa, Nº 1354 Bloco D Uni 7
Emiliano Perneta - CEP: 83.324-442
Pinhais - PR

RECEITA ESTADUAL

PARANÁ
GOVERNO DO ESTADO
SECRETARIA DA FAZENDA

Comprovante de Inscrição Cadastral - CICAD

Inscrição no CAD/ICMS	Inscrição CNPJ	Início das Atividades
90369733-47	07.953.689/0001-18	04/2006

Empresa / Estabelecimento

Nome Empresarial	**FAGUNDEZ DISTRIBUICAO LTDA**
Título do Estabelecimento	**FAGUNDEZ DISTRIBUICAO**
Endereço do Estabelecimento	**AV MARINGA, 1354, BL D-UNID7 - EMILIANO PERNETA - CEP 83324-442 FONE: (41) 3012-4500 - FAX: (41) 3012-4511**
Município de Instalação	**PINHAIS - PR, DESDE 10/2010**
	(Estabelecimento Matriz)

Qualificação

Situação Atual	**ATIVO - REGIME NORMAL / NORMAL - DIA 12 DO MES+1, DESDE 06/2018**
Natureza Jurídica	**206-2 - SOCIEDADE EMPRESÁRIA LTDA**
Atividade Econômica Principal do Estabelecimento	**4651-6/01 - COMERCIO ATACADISTA DE EQUIPAMENTOS DE INFORMATICA**
Atividade(s) Econômica(s) Secundária(s) do Estabelecimento	**2621-3/00 - FABRICACAO DE EQUIPAMENTOS DE INFORMATICA** **3092-0/00 - FABRICACAO DE BICICLETAS E TRICICLOS NAO-MOTORIZADOS, PECAS E ACESSORIOS** **4649-4/02 - COMERCIO ATACADISTA DE APARELHOS ELETRONICOS DE USO PESSOAL E DOMESTICO** **4649-4/03 - COMERCIO ATACADISTA DE BICICLETAS, TRICICLOS E OUTROS VEICULOS RECREATIVOS** **4649-4/99 - COMERCIO ATACADISTA DE OUTROS EQUIPAMENTOS E ARTIGOS DE USO PESSOAL E DOMESTICO NAO ESPECIFICADOS ANTERIORMENTE** **4651-6/02 - COMERCIO ATACADISTA DE SUPRIMENTOS PARA INFORMATICA** **4669-9/99 - COMERCIO ATACADISTA DE OUTRAS MAQUINAS E EQUIPAMENTOS NAO ESPECIFICADOS ANTERIORMENTE; PARTES E PECAS** **4751-2/01 - COMERCIO VAREJISTA ESPECIALIZADO DE EQUIPAMENTOS E SUPRIMENTOS DE INFORMATICA** **4752-1/00 - COMERCIO VAREJISTA ESPECIALIZADO DE EQUIPAMENTOS DE TELEFONIA E COMUNICACAO** **4757-1/00 - COMERCIO VAREJISTA ESPECIALIZADO DE PECAS E ACESSORIOS PARA APARELHOS ELETROELETRONICOS PARA USO DOMESTICO, EXCETO INFORMATICA E COMUNICAC**

Quadro Societário

Tipo	Inscrição	Nome Completo / Nome Empresarial	Qualificação
CPF	**922.222.779-49**	**RAFAEL FAGUNDES**	**SÓCIO**
CPF	**858.035.889-20**	**ROGERIO RICARDO FAGUNDES**	**SÓCIO-ADMINISTRADOR**

Este CICAD tem validade até 07/02/2020.

Os dados cadastrais deste estabelecimento poderão ser confirmados via Internet **www.fazenda.pr.gov.br**

Estado do Paraná
Secretaria de Estado da Fazenda
Receita Estadual do Paraná

CAD/ICMS Nº 90369733-47

Emitido Eletronicamente via Internet
08/01/2020 8:51:06

Dados transmitidos de forma segura
Tecnologia CELEPAR

RECEITA ESTADUAL

PARANÁ
GOVERNO DO ESTADO
SECRETARIA DA FAZENDA

Comprovante de Inscrição Cadastral - CICAD

Inscrição Auxiliar no CAD/ICMS	Inscrição CNPJ	Início das Atividades
90568673-90	07.953.689/0001-18	08/2011

Empresa / Estabelecimento

Nome Empresarial	**FAGUNDEZ DISTRIBUICAO LTDA**
Título do Estabelecimento	**FAGUNDEZ DISTRIBUICAO**
Endereço do Estabelecimento	**AV MARINGA, 1354, BL D-UNID7 - EMILIANO PERNETA - CEP 83324-442 FONE: (41) 3012-4500 - FAX: (41) 3012-4511**
Município de Instalação	**PINHAIS - PR, DESDE 08/2011**
	(Estabelecimento Matriz)

Qualificação

Situação Atual	**ATIVO - REGIME DIFERENCIADO / SUBSTITUTO TRIBUTARIO - DIA 09 DO MES+1, DESDE 08/2011**
Natureza Jurídica	**206-2 - SOCIEDADE EMPRESÁRIA LTDA**
Atividade Econômica Principal do Estabelecimento	**4652-4/00 - COMERCIO ATACADISTA DE COMPONENTES ELETRONICOS E EQUIPAMENTOS DE TELEFONIA E COMUNICACAO**
Atividade(s) Econômica(s) Secundária(s) do Estabelecimento	

Quadro Societário

Tipo	Inscrição	Nome Completo / Nome Empresarial	Qualificação
CPF	**922.222.779-49**	**RAFAEL FAGUNDES**	**SÓCIO**
CPF	**858.035.889-20**	**ROGERIO RICARDO FAGUNDES**	**SÓCIO-ADMINISTRADOR**

Este CICAD tem validade até 07/02/2020.

Os dados cadastrais deste estabelecimento poderão ser confirmados via Internet www.fazenda.pr.gov.br

Estado do Paraná
Secretaria de Estado da Fazenda
Receita Estadual do Paraná

CAD/ICMS Nº 90568673-90

Emitido Eletronicamente via Internet
08/01/2020 8:52:39

Dados transmitidos de forma segura
Tecnologia CELEPAR

BALANÇO PATRIMONIAL

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Saldo Inicial	Saldo Final
Ativo		R$ 25.436.519,39	R$ 36.442.568,25
Ativo Circulante		R$ 25.215.086,68	R$ 36.258.277,34
Disponibilidades		R$ 1.969.706,93	R$ 1.421.427,50
Caixa		R$ 17.458,57	R$ 36.879,64
Caixa Central		R$ 15.005,75	R$ 31.582,29
Caixa Faturamento		R$ 2.452,82	R$ 5.297,35
Bancos contas correntes		R$ 1.949.826,63	R$ 1.381.848,85
Banco Itau S.A. - C/C - 21922-2		R$ 776.674,98	R$ 593.595,61
Banco do Brasil S.A. - C/C - 14148-8		R$ 773.464,24	R$ 289.669,33
(-) Banco Itau S.A. - 34500-1 - C/Garantia 2		R$ (0,00)	R$ 3.705,92
Banco Banrisul - C/C 060395120-6		R$ 133.931,66	R$ 15.877,92
Banco Caixa Econômica Federal - C/C 557-6		R$ 49.815,37	R$ 2.188,56
Banco Santander - C/C 13-000204-4		R$ 124.724,77	R$ 127.097,22
Banco do Brasil S.A. - C/C - 14148-8 - Caução		R$ 0,00	R$ 7,00
Sicoob - Banco Cooperativo do Brasil C/C 110203-		R$ 11.255,74	R$ 97.930,09
Banco Santander - Caução		R$ 0,00	R$ 666,66
Banco Bradesco S.A. - Ag 6349 C/C - 008114		R$ 13.887,80	R$ 150.533,02
Banco Caixa Econômica Federal - C/C Garantia 38-		R$ 66.072,07	R$ 66.072,07
(-) Banco Caixa Econômica Federal - C/C Garantia 00.		R$ (0,00)	R$ 19.980,00
(-) Banco Caixa Econômica Federal - C/C Garantia 9-5		R$ (0,00)	R$ 9.187,45
(-) Banco Caixa Econômica Federal - C/C Garantia 10-		R$ (0,00)	R$ 5.338,00
Aplicações de liquidez imediata		R$ 2.421,73	R$ 2.699,01
Sicoob Conta Capital		R$ 2.421,73	R$ 2.699,01
Creditos		R$ 23.245.379,75	R$ 34.836.849,84
Clientes		R$ 12.841.440,33	R$ 13.903.739,00
Duplicatas a Receber		R$ 12.904.690,50	R$ 13.955.448,11
Creditos BNDES a Receber		R$ 17.564,29	R$ 2.123,90
(-) Duplicatas Descontadas - Banco Brasil		R$ (0,00)	R$ (53.833,01)
(-) Duplicatas Descontadas - Itaú		R$ (80.814,46)	R$ 0,00

BALANÇO PATRIMONIAL

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Saldo Inicial	Saldo Final
Adiantamento a Fornecedores Diversos		R$ 53.099,70	R$ 111.709,57
Adiantamento a Fornecedores Diversos		R$ 53.099,70	R$ 111.709,57
Adiantamento a Terceiros		R$ 5.062,02	R$ 28.433,59
Adiantamento de Salario		R$ 704,11	R$ 0,00
Adiantamento de custos s/importações - EVL		R$ 358,68	R$ (0,00)
Adiantamento de Ferias		R$ 3.999,23	R$ 28.433,59
Tributos e contribuições a compensar		R$ 426.677,06	R$ 3.834.510,06
ICMS a Recuperar		R$ 0,00	R$ 3.362.864,92
(-) Cofins a Recuperar		R$ (0,00)	R$ 283.950,29
(-) PIS a Recuperar		R$ (0,00)	R$ 61.859,21
IPI a Recuperar		R$ 15.354,74	R$ 109.003,46
PIS Retido a Recuperar		R$ 9.637,65	R$ 0,00
COFINS Retido a Recuperar		R$ 43.616,73	R$ 0,00
Creditos a Recuperar - PER/DCOMP		R$ 357.847,30	R$ 16.145,54
Outros Tributos a Recuperar		R$ 220,64	R$ 686,64
(-) Empréstimo a Terceiros		R$ (0,00)	R$ 4.000,00
(-) Emprestimo a funcionários		R$ (0,00)	R$ 4.000,00
Estoques		R$ 9.919.100,64	R$ 16.954.457,62
Estoque de mercadorias para revenda		R$ 6.230.171,36	R$ 12.314.235,24
Estoque de insumos para industria		R$ 3.474.698,64	R$ 4.401.743,66
Estoque RMA - defeito		R$ 158.749,72	R$ 141.238,18
Estoque Próprio em poder de Terceiros		R$ 55.480,92	R$ 97.240,54
Ativo não Circulante		R$ 221.432,71	R$ 184.290,91
Investimentos		R$ 4.909,00	R$ 6.699,00
Intangível		R$ 4.909,00	R$ 6.699,00
Marcas e Patentes		R$ 4.909,00	R$ 6.699,00
Imobilizado		R$ 216.523,71	R$ 177.591,91
Imobilizado Operacional		R$ 750.499,81	R$ 762.316,35
Máquinas e equipamentos		R$ 79.710,06	R$ 83.749,94
Móveis e utensílios		R$ 157.164,22	R$ 164.940,88
Computadores e periféricos		R$ 76.848,39	R$ 76.848,39

BALANÇO PATRIMONIAL

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Saldo Inicial	Saldo Final
Instalações		R$ 44.278,78	R$ 44.278,78
Benfeitoria em Imóveis de Terceiros		R$ 9.911,36	R$ 9.911,36
Veículo Toyota Hilux 2009 Placa ARO4483		R$ 89.587,00	R$ 89.587,00
Veículo Mitsubishi 2012 Placa APX 2332		R$ 104.000,00	R$ 104.000,00
Veículo Kia Sportage 2013 Placa ADX 5734		R$ 114.000,00	R$ 114.000,00
Veículo Mercedes Benz C180 2013 Placa AOA 2777		R$ 75.000,00	R$ 75.000,00
(-) Depreciação acumulada		R$ (533.976,10)	R$ (584.724,44)
(-) Máquinas e equipamentos		R$ (39.546,22)	R$ (43.347,36)
(-) Móveis e utensílios		R$ (46.929,53)	R$ (52.250,80)
(-) Computadores e periféricos		R$ (76.848,39)	R$ (76.848,39)
(-) Instalações		R$ (36.047,85)	R$ (38.779,53)
(-) Benfeitoria em Imóveis de Terceiros		R$ (9.911,36)	R$ (9.911,36)
(-) Veículo Toyota Hilux 2009 Placa ARO4483		R$ (89.587,00)	R$ (89.587,00)
(-) Veículo Mitsubishi 2012 Placa APX 2332		R$ (93.905,75)	R$ (104.000,00)
(-) Veículo Honda Civic 2012 Placa AFZ 1077		R$ (68.500,00)	R$ (0,00)
(-) Veículo Kia Sportage 2013 Placa ADX 5734		R$ (62.700,00)	R$ (95.000,00)
(-) Veículo Mercedes Benz C180 2013 Placa AOA 27		R$ (10.000,00)	R$ (75.000,00)
Passivo		R$ 25.436.519,39	R$ 36.442.568,25
Passivo Circulante		R$ 18.022.455,58	R$ 19.003.697,04
Contas a Pagar		R$ 15.517.782,66	R$ 17.010.074,74
Fornecedores a pagar		R$ 15.421.845,17	R$ 16.919.401,53
Fornecedores Nacionais		R$ 11.370.813,84	R$ 13.447.662,08
Fornecedores a pagar		R$ 11.100.444,06	R$ 13.194.951,81
(-) Debitos de Fornecedor a Compensar de Troca/R		R$ (1.672,00)	R$ (1.672,00)
Transportes, Fretes e Sedex a pagar		R$ 172.982,17	R$ 27.749,89
Contas a pagar		R$ 99.059,61	R$ 97.690,62
Convênio Farmacia a Pagar		R$ 0,00	R$ 2.587,02
Doações Pequeno Príncipe		R$ 0,00	R$ 305,00
Faturas de Transporte a Pagar		R$ 0,00	R$ 126.049,74
Fonecedores Internacionais		R$ 4.051.031,33	R$ 3.471.739,45

BALANÇO PATRIMONIAL

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Saldo Inicial	Saldo Final
Fornecedores Internacionais		R$ 4.051.031,33	R$ 3.471.739,45
Mercadorias em Transito		R$ 95.937,49	R$ 90.673,21
Estoque de Terceiros - RMA - DEM. - CONSIG.		R$ 95.937,49	R$ 90.673,21
Empréstimos e Financiamentos		R$ 675.421,19	R$ 0,00
Empréstimos e Financiamentos Bancários		R$ 675.421,19	R$ 0,00
Banco Itau S.A. - Emprestimos CP		R$ 128.181,10	R$ (0,00)
Banco Banrisul - Emprestimos CP		R$ 335.812,45	R$ 0,00
(-) Juros s/Emprest. a Incorrer - CP		R$ (35.698,52)	R$ 0,00
Banco Santander - Emprestimo CP		R$ 247.126,16	R$ 0,00
Obrigações Trabalhistas		R$ 571.000,19	R$ 813.581,70
Folha de pagamento		R$ 96.064,00	R$ 136.530,06
Salarios a pagar		R$ 93.081,73	R$ 132.730,68
Rescisões de empregados a pagar		R$ 1.550,96	R$ 3.236,52
Pensao Alimenticia		R$ 1.431,31	R$ 562,86
Pro-labore		R$ 8.929,02	R$ 9.076,78
Pro-labore a pagar		R$ 8.929,02	R$ 9.076,78
Encargos Sociais		R$ 116.818,91	R$ 172.487,52
INSS a pagar		R$ 68.433,44	R$ 98.032,76
FGTS a pagar		R$ 20.298,08	R$ 31.046,35
Contribuições a sindicatos a recolher		R$ 924,58	R$ 924,58
IRRF S/FL PGTO a pagar		R$ 27.162,81	R$ 42.483,83
Provisões Folha de Pgto		R$ 349.188,26	R$ 495.487,34
Provisões Folha de Pgto		R$ 349.188,26	R$ 495.487,34
Provisão INSS s/ferias		R$ 67.074,94	R$ 97.051,48
Provisão FGTS s/ferias		R$ 20.225,02	R$ 29.426,44
Provisão de Ferias		R$ 261.888,30	R$ 369.009,42
Obrigações Tributárias		R$ 805.325,08	R$ 716.029,79
Impostos Retidos a recolher		R$ 8.736,63	R$ 10.378,15
IRRF Retido a Recolher		R$ 892,51	R$ 725,76
IRRF s/Juros s/capital proprio Retido a Recolher		R$ 5.465,06	R$ 7.321,07
CSRF a Recolher		R$ 2.379,06	R$ 2.331,32

BALANÇO PATRIMONIAL

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Saldo Inicial	Saldo Final
Impostos e Contribuições sobre o Lucro		R$ 427.328,28	R$ 451.797,68
IRPJ a pagar		R$ 328.779,46	R$ 333.636,49
CSLL a pagar		R$ 98.548,82	R$ 118.161,19
Impostos e Contribuições sobre receitas		R$ 369.260,17	R$ 253.853,96
ICMS a pagar		R$ 137.453,90	R$ (0,00)
ISS a pagar		R$ 0,00	R$ 46,00
ICMS ST a pagar		R$ 231.806,27	R$ 253.807,96
Outras Contas a pagar		R$ 25.923,46	R$ 14.084,73
Demais contas a pagar		R$ 25.923,46	R$ 14.084,73
Juros s/Capital Própio a pagar Rafael		R$ 25.923,46	R$ 14.084,73
Antecipação de Clientes		R$ 427.003,00	R$ 449.926,08
Antecipação de Clientes		R$ 427.003,00	R$ 449.926,08
Clientes Diversos		R$ 427.003,00	R$ 449.926,08
Passivo não Circulante		R$ 358.977,01	R$ 16.125,86
Empréstimos e Financiamentos		R$ 1.542,49	R$ (0,00)
Empréstimos e Financiamentos Bancários		R$ 1.542,49	R$ (0,00)
Leasing Honda Civic - Prixx Veiculos Ltda		R$ 1.542,49	R$ (0,00)
Receitas Diferidas		R$ 357.434,52	R$ 16.125,86
Receitas Diferidas		R$ 357.434,52	R$ 16.125,86
Patrimônio líquido		R$ 7.055.086,80	R$ 17.422.745,35
Capital		R$ 1.800.000,00	R$ 1.800.000,00
Capital Social		R$ 1.800.000,00	R$ 1.800.000,00
Capital subscrito		R$ 1.800.000,00	R$ 1.800.000,00
Reservas		R$ 470.617,73	R$ 8.444.202,89
Reservas de Capital		R$ 0,00	R$ 7.992.553,86
Subvenção para Investimentos		R$ 0,00	R$ 7.992.553,86
Reservas de Reavaliação		R$ 89.587,00	R$ 89.587,00
Reavaliação de Ativo Imobilizado		R$ 89.587,00	R$ 89.587,00
Reservas de Lucros		R$ 381.030,73	R$ 362.062,03
Reserva de Lucros a Distribuir		R$ 381.030,73	R$ 362.062,03
Lucros e prejuízos acumulados		R$ 4.784.469,07	R$ 7.178.542,46
Lucros/prejuízos do exercício		R$ 4.784.469,07	R$ 7.178.542,46

DEMONSTRAÇÃO DE RESULTADO DO EXERCÍCIO

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Valor
RECEITA OPERACIONAL BRUTA		R$ 161.215.706,49
Revenda de Mercadorias		R$ 117.518.944,79
Prestação de Serviços		R$ 27.298,20
Venda de Produção Propria		R$ 43.669.463,50
(-) DEDUÇÕES DA RECEITA BRUTA		R$ (26.798.966,96)
(-) Devoluções de Vendas		R$ (1.651.241,29)
(-) Abatimentos/Descontos Concedidos		R$ (5.956,17)
(-) ICMS ST		R$ (3.129.545,48)
(-) PIS		R$ (2.334.782,99)
(-) COFINS		R$ (10.753.997,83)
(-) ICMS		R$ (14.160.543,38)
(-) IPI		R$ (2.435.375,82)
(-) ICMS DIFAL		R$ (319.531,90)
(-) ISS		R$ (545,96)
Credito Presumido ICMS		R$ 7.992.553,86
(-) DESPESAS OPERACIONAIS FINANCEIRAS		R$ (2.241.422,81)
(-) Juros s/obrigações Fiscais		R$ (979,10)
(-) Juros Passivos		R$ (6.501,48)
(-) Descontos Concedidos		R$ (9.060,60)
(-) Despesas com Juros sobre Financiamento		R$ (42.037,97)
(-) Despesas Cartão BNDES		R$ (17.122,97)
(-) Tarifas de Cobranças de Títulos		R$ (163.650,85)
(-) Tarifas Bancárias		R$ (11.761,71)
(-) IOF		R$ (7.883,28)
(-) Custas Processuais		R$ (55.805,01)
(-) Juros s/Capital Próprio		R$ (515.668,35)
(-) Pis s/ Receitas Financeiras		R$ (2.077,07)
(-) Cofins s/ Receitas Financeiras		R$ (9.640,96)
(-) Variação Cambial Passiva		R$ (1.399.233,46)
OUTRAS RECEITAS		R$ 2.129.338,55
Receitas Eventuais - ND/BONIFICAÇÃO		R$ 1.998.830,04
Recuperação de Despesas		R$ 85.118,96
Venda de Material Reciclável		R$ 8.926,89
Recuperação em Recebíveis		R$ 36.462,66

DEMONSTRAÇÃO DE RESULTADO DO EXERCÍCIO

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Valor
RESULTADO ANTES DO IR E CSLL		R$ 11.553.729,86
(-) Provisão para IR e CSLL		R$ (1.167.449,11)
(-) Provisão para IRPJ		R$ (846.399,95)
(-) Provisão para CSLL		R$ (321.049,16)
RESULTADO LÍQUIDO DO EXERCÍCIO		R$ 10.386.280,75
RECEITA LÍQUIDA		R$ 134.416.739,53
LUCRO BRUTO		R$ 21.089.707,01
(-) DESPESAS NÃO OPERACIONAIS		R$ (39.044,25)
(-) Doações		R$ (150,00)
(-) Depreciação Veículos não operacional		R$ (38.894,25)
(-) DESPESAS OPERACIONAIS ADM		R$ (668.384,99)
(-) Veículos Manutenção		R$ (35.378,20)
(-) Locação de Imóvel		R$ (272.576,64)
(-) Energia Elétrica		R$ (47.271,07)
(-) Água e Esgoto		R$ (3.954,53)
(-) Telefonia Fixa		R$ (22.053,76)
(-) Telefonia Celular		R$ (17.577,07)
(-) Manutenção e Reparos		R$ (36.822,31)
(-) Impostos e Taxas		R$ (18.470,97)
(-) Cartório		R$ (6.432,54)
(-) Locação de Máquinas e Equipamentos		R$ (163,35)
(-) IPTU		R$ (8.981,40)
(-) Material de Uso e Consumo		R$ (6.794,11)
(-) Material de Limpeza		R$ (37.809,86)
(-) Material de Escritório		R$ (29.607,70)
(-) Jornais Revistas e Periódicos		R$ (39,90)
(-) Despesas com Depreciação		R$ (10.757,58)
(-) Embalagens		R$ (45.219,30)
(-) Hospedagem / Manutenção de Site		R$ (330,33)
(-) Vigilância Eletrônica		R$ (31.190,24)
(-) Despesas c/estrutura de dados		R$ (879,76)
(-) Materiais de Manutenção		R$ (20.869,43)
(-) Bens de Pequeno Valor		R$ (9.821,81)
(-) Perdas Operacionais		R$ (5.383,13)

DEMONSTRAÇÃO DE RESULTADO DO EXERCÍCIO

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Valor
(-) DESPESAS OPERACIONAIS COMERCIAIS		R$ (2.473.013,84)
(-) V.P.C - Bonificações		R$ (30.052,91)
(-) Transportes, Fretes e Sedex de Mercadorias		R$ (1.351.114,13)
(-) Creditos e Consultas Comerciais		R$ (54.073,16)
(-) Comissões sobre Faturamento Direto		R$ (549.042,00)
(-) Comissões de Representantes Autônomos		R$ (28.639,03)
(-) Despesas Gerais c/Vendas		R$ (38.151,66)
(-) Transportes Domésticos - Moto Frete		R$ (30.952,37)
(-) Publicidade / MKT Distribuição		R$ (54.450,34)
(-) Assessoria de Projetos		R$ (336.538,24)
(-) CUSTOS SOBRE IMPORTAÇÕES		R$ (795.352,77)
(-) Fretes Internacionais		R$ (450.115,31)
(-) Armazenagem		R$ (208.544,30)
(-) Taxas Siscomex		R$ (1.080,00)
(-) IOF - Importação		R$ (4.975,71)
(-) Desconsolidação		R$ (7.635,22)
(-) Desembaraço		R$ (80.608,63)
(-) Transporte Local		R$ (42.393,60)
(-) DESPESAS COM PESSOAL		R$ (5.780.519,57)
(-) FGTS		R$ (278.837,59)
(-) INSS		R$ (967.270,38)
(-) Pro-labore		R$ (135.496,94)
(-) Salários		R$ (1.844.697,89)
(-) Horas Extras		R$ (16.273,03)
(-) Férias		R$ (463.568,72)
(-) 13º Salário		R$ (264.497,85)
(-) Aviso prévio/Indenizações trabalhistas		R$ (28.563,37)
(-) Vale Combustível		R$ (71.733,55)
(-) Treinamentos e Cursos		R$ (11.223,82)
(-) Vale transporte		R$ (54.453,19)
(-) PAT - Programa de Alimentação do Trabalhador		R$ (193.544,28)
(-) Plano de Saúde		R$ (98.097,22)
(-) Uniformes / Roupas e Acessórios		R$ (6.067,59)
(-) Academia		R$ (13.049,50)

DEMONSTRAÇÃO DE RESULTADO DO EXERCÍCIO

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Valor
(-) Saúde Ocupacional		R$ (7.374,14)
(-) Auxílio Educação		R$ (22.089,01)
(-) PPR		R$ (40.835,17)
(-) Estagiários		R$ (11.500,07)
(-) Multa Rescisória		R$ (70.048,81)
(-) Plano Odontológico		R$ (23,12)
(-) Convênio Farmácia		R$ (0,00)
(-) Outros Benefícios a Colaboradores e Terceiros		R$ (119.964,91)
(-) Bonificações + DSR		R$ (312.937,11)
(-) Comissões sobre Vendas		R$ (744.767,31)
(-) Auxilio Aluguel		R$ (3.605,00)
(-) CUSTOS OPERACIONAIS		R$ (112.531.679,75)
(-) Custo das mercadorias vendidas		R$ (81.729.649,70)
(-) Custo dos produtos vendidos		R$ (30.802.030,05)
(-) OUTRAS DESPESAS OPERACIONAIS		R$ (297.910,50)
(-) Perdas por Obsolescênciia de estoque		R$ (48.474,43)
(-) Perdas em Recebíveis		R$ (249.436,07)
(-) DESPESAS OPER. ADM C/TERCEIRIZADAS		R$ (1.043.127,67)
(-) Assessoria Contabil		R$ (251.142,90)
(-) Assessoria Jurídica		R$ (13.589,42)
(-) Assessoria da Qualidade		R$ (7.525,11)
(-) Assessoria de Projetos		R$ (73.917,48)
(-) Assessoria PPB		R$ (112.147,60)
(-) Assessoria de Logística		R$ (338.197,82)
(-) Assessoria Fiscal		R$ (5.630,00)
(-) Assessoria em Software		R$ (61.734,97)
(-) Serviços de Terceiros		R$ (149.737,50)
(-) RMA - Manutenção e Garantia		R$ (3.504,87)
(-) Serviço de Limpeza		R$ (26.000,00)
RECEITAS OPERACIONAIS FINANCEIRAS		R$ 878.107,93
Variação Cambial Ativa		R$ 587.962,00
Juros Ativos		R$ 128.066,64
Rendimento de Aplicação Automática		R$ 2.316,91
Descontos Obtidos		R$ 123.770,16

DEMONSTRAÇÃO DE RESULTADO DO EXERCÍCIO

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

Período Selecionado: 01 de Janeiro de 2018 a 31 de Dezembro de 2018

Descrição	Nota	Valor
Juros Correção Selic		R$ 35.992,22

Fagundez Distribuição Ltda

CNPJ: 07.953.689/0001-18 Inscrição Estadual: 9036973347
Telefone: 41-3012-4582 Fax: 41-3012-4599 Cidade: Pinhais-PR

Demonstração dos Fluxos de Caixa no período de 01/01/2018 até 31/12/2018

DESCRICAO	de 01/01/2018 à 31/12/2018
FLUXO DAS ATIVIDADES OPERACIONAIS	228.789,57
Recebimento de clientes	160.169.787,35
Pagamentos a fornecedores	150.727.905,16
Pagamentos a empregados	6.641.134,94
Pagamentos de impostos e contribuições	2.571.957,68
FLUXO DAS ATIVIDADES DE FINANCIAMENTO	1.542,49
Outros pagamentos decorrentes de atividades de financiamento	1.542,49
Variação de caixa no período	227.247,08
Saldo inicial das disponibilidades	**1.530.641,26**
Saldo final das disponibilidades	**1.757.888,34**

Alexander F. da Costa Solano
CRC PR-053296/O - Contabilista
CPF 97884715953

Rogerio Ricardo Fagundes
SÓCIO ADMINISTRADOR
CPF 85803588920

FAGUNDEZ

DEMONSTRAÇÃO DE LUCROS OU PREJUÍZOS ACUMULADOS – DLPA

Empresa: FAGUNDEZ DISTRIBUIÇÃO LTDA	
CNPJ: 07.953.689/0001-18	UF/Município: PR/PINHAIS

	Saldos R$
1. Saldo Acumulado do Exercício do ano anterior (ANO DE 2017)	4.784.469,07
2. Ajustes de exercícios anteriores	346,50
3. Lucro Líquido do Exercício (ANO DE 2018)	10.386.280,75
Incorporação ao capital	0,00
4. Destinação do Lucro	7.992.553,86
4.1. Transferência para reservas	7.992.553,86
4.2. Distribuição dos lucros	0,00
5. Saldo Acumulado Atual (SALDO FINAL DE 2018)	7.178.542,46

Pinhais, 23/04/2019

Alexander F. da Costa Solano
CRC PR 053.296/O-0
CPF 97884715953

Empresa: **FAGUNDEZ DISTRIBUIÇÃO LTDA** **Livro nº: 18**

CNPJ: **07.953.689/0001-18** **Data de emissão: 31/12/2018**

Insc. Junta Comercial: 41205689756 Data: 19/04/2006

NOTAS EXPLICATIVAS
EXERCÍCIO 2018

1- A Empresa está inserida no ramo de comércio varejista especializado de equipamentos e suprimentos de informática e de equipamentos para escritório, representação comercial, reparação e manutenção de computadores e periféricos, suporte técnico, manutenção e serviços de tecnologia da informação e industrialização de equipamentos de informática e bicicletas;

2- As demonstrações financeiras foram elaboradas de acordo com as diretrizes contábeis, em obediência aos preceitos da Legislação Comercial;

3- O resultado foi apurado pelo regime de competência de exercícios.

4- O grupo disponível é formado por subgrupos numerários, onde estão alocadas as contas **Caixa**, a qual apresenta o saldo controlado por relatórios mensais no montante de R$ 36.879,64 (Trinta e seis mil, oitocentos e setenta e nove reais e sessenta e quatro centavos), **Bancos** onde estão evidenciadas as contas correntes bancárias, no valor de R$ 1.381.848,85 (Hum milhão, trezentos e oitenta e um mil, oitocentos e quarenta e oito reais e oitenta e cinco centavos) e ainda o saldo da conta **Aplicação financeira**, de liquidez imediata, no valor total de R$ 2.699,01 (Dois mil, seiscentos e noventa e nove reais e um centavo);

5- Os créditos são compostos pela conta Duplicatas a receber, cujo saldo é controlado por conciliação mensal, onde os créditos não recebidos a mais de seis meses, são baixados para resultado, quando não enviados para cobrança judicial, previsto na Lei 9430/2009.

6- O grupo de impostos a recuperar é formado pelos créditos de tributos federais e estaduais, no valor de R$ 3.834.510,06 (Três milhões, oitocentos e trinta e quatro mil, quinhentos e dez reais e seis centavos);

7- O estoque é valorado pelo custo médio ponderado e quantificado através do inventário físico;

8- No grupo do ativo não circulante, imobilizado, os bens estão registrados pelo custo de aquisição combinando com os seguintes aspectos:

- No subgrupo Imobilizações Técnicas, temos os bens utilizados na atividade fim da empresa.
- A depreciação é calculada pelo método linear, sendo utilizadas as taxas vigentes na legislação fiscal.

9- O Passivo circulante está demonstrado pelos valores originais, acrescidos, quando aplicável, com os correspondentes encargos financeiros e variações monetárias.

10- O regime de apuração para IRPJ e CSLL, é reconhecido em base trimestral, de acordo com as alíquotas vigentes.

11- O Capital é composto de R$1.800.000 (Hum milhão e oitocentos mil) quotas no valor de 1,00 (um real) cada, totalizando 1.800.000,00 (Hum milhão e oitocentos mil reais), totalmente integralizados;

12- O Faturamento foi contabilizado, atendendo aos princípios de sua realização sendo dividido em venda de mercadorias e produção própria:

- As vendas de mercadorias no ano foram no total de R$ 117.519.012,36 (Cento e dezessete milhões, quinhentos e dezenove mil, doze reais e trinta e seis centavos), as vendas de produção própria no montante de R$ 43.669.463,50 (Quarenta e três milhões, seiscentos e sessenta e nove mil, quatrocentos e sessenta e três reais e cinquenta centavos) e as prestações de serviços somam R$ 27.298,20 (Vinte e sete mil duzentos e noventa e oito reais e vinte centavos). Totalizando um montante de R$ 161.215.774,06 (Cento e sessenta e um milhões, duzentos e quinze mil, setecentos e setenta e quatro reais e seis centavos).

  As demonstrações financeiras foram preparadas de acordo com a **NBCT 6**.

Alexander F. da Costa Solano
CRC/PR - 053296/O
CPF - 978.847.159-53

Rogerio Ricardo Fagundes
CPF - 858.035.889-20

MINISTÉRIO DA FAZENDA
SECRETARIA DA RECEITA FEDERAL DO BRASIL
SISTEMA PÚBLICO DE ESCRITURAÇÃO DIGITAL – Sped Versão: 6.0.4

RECIBO DE ENTREGA DE ESCRITURAÇÃO CONTÁBIL DIGITAL

IDENTIFICAÇÃO DO TITULAR DA ESCRITURAÇÃO

NIRE	CNPJ	
41205689756	07.953.689/0001-18	

NOME EMPRESARIAL
Fagundez Distribuição Ltda

IDENTIFICAÇÃO DA ESCRITURAÇÃO

FORMA DA ESCRITURAÇÃO CONTÁBIL	PERÍODO DA ESCRITURAÇÃO
Livro Diário	01/01/2018 a 31/12/2018
NATUREZA DO LIVRO	**NÚMERO DO LIVRO**
Livro Diário	18

IDENTIFICAÇÃO DO ARQUIVO (HASH)
6F.59.88.F1.EE.39.26.11.09.89.5F.9F.45.5D.B5.4D.62.D9.5E.EB

ESTE LIVRO FOI ASSINADO COM OS SEGUINTES CERTIFICADOS DIGITAIS:

QUALIFICAÇÃO DO SIGNATARIO	CPF/CNPJ	NOME	Nº SÉRIE DO CERTIFICADO	VALIDADE	RESPONSÁVEL LEGAL
Pessoa Jurídica (e-CNPJ ou e-PJ)	07953689000118	FAGUNDEZ DISTRIBUICAO LTDA:07953689000118	485641819097148359702796549527094078 90	15/02/2019 a 15/02/2020	Não
SÓCIO ADMINISTRADOR	85803588920	ROGERIO RICARDO FAGUNDES:858035889 20	195813933809762311 8	30/08/2018 a 29/08/2021	Sim
Contador	97884715953	ALEXANDER FERREIRA DA COSTA SOLANO:97884715953	747043213237849022855751089441723742 84	17/06/2016 a 16/06/2019	Não

NÚMERO DO RECIBO:

6F.59.88.F1.EE.39.26.11.09.89.5F.9F.4
5.5D.B5.4D.62.D9.5E.EB-2

Escrituração recebida via Internet
pelo Agente Receptor SERPRO

em 03/05/2019 às 13:00:03

DC.43.3C.F9.BF.9F.76.5F
D4.1D.E5.11.11.6F.DD.DC

Considera-se autenticado o livro contábil a que se refere este recibo, dispensando-se a autenticação de que trata o art. 39 da Lei nº 8.934/1994. Este recibo comprova a autenticação.

BASE LEGAL: Decreto nº 1.800/1996, com a alteração do Decreto nº 8.683/2016, e arts. 39, 39-A, 39-B da Lei nº 8.934/1994 com a alteração da Lei Complementar nº 1247/2014.

TERMOS DE ABERTURA E ENCERRAMENTO

Entidade: Fagundez Distribuição Ltda

Período da Escrituração: 01/01/2018 a 31/12/2018 CNPJ: 07.953.689/0001-18

Número de Ordem do Livro: 18

TERMO DE ABERTURA	
Nome Empresarial	Fagundez Distribuição Ltda
NIRE	41205689756
CNPJ	07.953.689/0001-18
Número de Ordem	18
Natureza do Livro	Livro Diário
Município	Pinhais
Data do arquivamento dos atos constitutivos	02/05/2006
Data de arquivamento do ato de conversão de sociedade simples em sociedade empresária	
Data de encerramento do exercício social	31/12/2018
Quantidade total de linhas do arquivo digital	1708313

TERMO DE ENCERRAMENTO	
Nome Empresarial	Fagundez Distribuição Ltda
Natureza do Livro	Livro Diário
Número de ordem	18
Quantidade total de linhas do arquivo digital	1708313
Data de inicio	01/01/2018
Data de término	31/12/2018

Este documento é parte integrante de escrituração cuja autenticação se comprova pelo recibo de número 6F.59.88.F1.EE.39.26.11.09.89.5F.9F.45.5D.B5.4D.62.D9.5E.EB-2, nos termos do Decreto nº 8.683/2016.

Este relatório foi gerado pelo Sistema Público de Escrituração Digital – Sped

FAGUNDEZ

ANÁLISE ECONÔMICA FINANCEIRA

ÍNDICES:

1 - ÍNDICE LIQUIDEZ GERAL:

AC+ANC	36.442.568,25	LG	1,918
PC+PNC	19.019.822,90		

2 - ÍNDICE LIQUIDEZ CORRENTE:

AC	36.258.277,34	LC	1,906
PC	19.003.697,04		

3 - ÍNDICES DE SOLVÊNCIA GERAL:

AT	36.442.568,25	SG	1,918
PC+PNC	19.019.822,90		

4 - ENDIVIDAMENTO TOTAL:

PC + PNC	19.019.822,90	ET	0,521
AT	36.442.568,25		

Pinhais, 23 de Abril de 2019

FAGUNDEZ DISTRIBUIÇÃO LTDA
CNPJ - 07.953.689/0001-18
ALEXANDER F. DA COSTA SOLANO
CPF - 978.847.159-53
CRC PR 053.296/O-0

Alexander F. C. Solano
CRC nº 053.296/O-0 PR

ATTESTATION OF CONFORMITY

Directive(s):	*2014/30/EU*
Attestation No.:	*SECE1803136-A*
Applicant / Holder:	*LG Electronics Nanjing New Technology Co.,Ltd.*
Address:	*No.346,Yaoxin Road Economic & Technical Development Zone Nanjing China*
Product / Test Item:	*LCD Monitor*
Model / Type Reference:	*24BK550##, 24BL550## (The symbol"#" in the model name can be any alphanumeric character or blank)*

The submitted sample(s) have been tested with the following standard(s) and found to be in compliance with the essential requirements of the Directive(s):

Standard(s)	
EN 55032 : 2015+AC:2016 (Class B)	EN 55024 : 2010+A1 : 2015
EN 61000-3-2 : 2014	IEC 61000-4-2 : 2008
EN 61000-3-3 : 2013	IEC 61000-4-3 : 2006+A1:2007+A2:2010
	IEC 61000-4-4 : 2012
	IEC 61000-4-5 : 2014
	IEC 61000-4-6 : 2013
	IEC 61000-4-8 : 2009
	IEC 61000-4-11 : 2004+AMD1:2017 CSV

The referred test report(s) show that the product fulfills the essential requirements set out in the Directive(s). On this basis, together with the manufacturer's own documented production control, the manufacturer or his European authorized representative can in his EC Declaration of Conformity verify compliance with the Directive(s). The CE marking could be affixed only when all the relevant and effective EC Directives are complied with.

CE

Miro Chueh /
EMC/RF B.U. Manager
2018-08-24

Cerpass Technology Corporation

Cerpass Technology Corporation
No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan
Cerpass Technology (Suzhou) Co.,Ltd
No.66, Tangzhuang Rd., Suzhou Industrial Park, Jiangsu 215006, China

EMC TEST REPORT

Authorized under **D**eclaration **o**f **C**onformity

According to

EN 55032 : 2015+AC:2016 (Class B)
EN 61000-3-2 : 2014
EN 61000-3-3 : 2013

EN 55024 : 2010+A1 : 2015
IEC 61000-4-2 : 2008
IEC 61000-4-3 : 2006+A1:2007+A2:2010
IEC 61000-4-4 : 2012
IEC 61000-4-5 : 2014
IEC 61000-4-6 : 2013
IEC 61000-4-8 : 2009
IEC 61000-4-11 : 2004+AMD1:2017 CSV

Applicant	:	LG Electronics Nanjing New Technology Co.,Ltd.
Address	:	No.346,Yaoxin Road Economic & Technical Development Zone Nanjing China
Equipment	:	LCD Monitor
Model No.	:	24BK550##, 24BL550## (The symbol"**#**" in the model name can be any alphanumeric character or blank)

I HEREBY CERTIFY THAT :

The case was received on Aug 10, 2018 and the report was carried out on Aug 18, 2018 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

EMC TEST REPORT

Issued by:

Cerpass Technology (Suzhou) Co.,Ltd

No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China

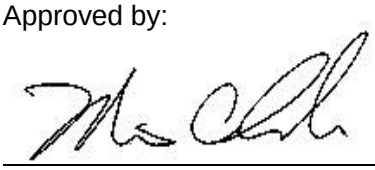
Tel:86-512-6917-5888

Fax:86-512-6917-5666

The test record, data evaluation & Equipment Under Test configurations represented herein are true and accurate accounts of the measurements of the samples EMC characteristics under the conditions specified in this report.

The above equipment was tested by Cerpass Technology Corp. for compliance with the requirements of technical standards specified above under the EMC Directive **2014/30/EU.** The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties

Approved by:



Miro Chueh
EMC/RF B.U. Manager

Laboratory Accreditation:

☐ Cerpass Technology Corporation

TAF LAB Code:	1439

☒ Cerpass Technology(SuZhou) Co., Ltd.

CNAS LAB Code:	L5515

Contents

History of this test report

☐ ORIGINAL.

■ Additional attachment as following record:

Report No	Version	Date	Description
SECE1611048	Rev 01	Dec 02, 2016	Initial Issue
SECE1611048-A	Rev 02	Jan 16, 2017	Second Issue(Update the standard)
SECE1703167-A	Rev 03	Mar 29, 2018	Third Issue(Update the standard)
SECE1803136-A	Rev 04	Aug 20, 2018	Fouth Issue (Add a model name: 24BL550##)

1. Summary of Test Procedure and Test Results

EMISSION【EN 55032: 2015+AC:2016】			
Standard	**Item**	**Result**	**Remarks**
EN 55032: 2015	Conducted (Power Port)	PASS	Meet Class B Limit Minimum passing margin(QP) is -10.36 dB at 4.8620 MHz
	Conducted (Telecom port)	N/A	N/A
	Radiated	PASS	Meets Class B Limit Minimum passing margin(QP) is -2.21 dB at 47.9300 MHz
EN 61000-3-2: 2014	Harmonic current emissions	N/A	N/A
EN61000-3-3:2013	Voltage fluctuations & flicker	PASS	Meets the requirements

IMMUNITY【EN 55024 : 2010+A1: 2015】			
Standard	**Item**	**Result**	**Remarks**
IEC 61000-4-2: 2008	ESD	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-3: 2006+A1:2007+A2:2010	RS	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-4: 2012	EFT	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-5:2014	Surge	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-6:2013	CS	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-8:2009	PFMF	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-11: 2004+AMD1:2017 CSV	Voltage dips & voltage variations	PASS	Meets the requirements of Voltage Dips: 1) >95% reduction Performance Criterion A 2) 30% reduction Performance Criterion A Voltage Interruptions: 1) >95% reduction Performance Criterion C

2. Immunity Testing Performance Criteria Definition

Criteria A:	The apparatus shell continues to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible loss of performance. If the manufacturer does not specify the minimum performance level or the permissible performance loss, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
Criteria B:	After test, the apparatus shell continues to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomenon below a performance level specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed. However, no change of operating state if stored data is allowed to persist after the test. If the manufacturer does not specify the minimum performance level or the permissible performance loss, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
Criteria C:	Temporary loss of function is allowed, provided the functions is self-recoverable or can be restored by the operation of controls by the user in accordance with the manufacturer instructions. Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

3. Test Configuration of Equipment under Test

3.1. Feature of Equipment under Test

Fouth Issue:

Product Name:	LCD Monitor
Model Name:	24BK550## , *__24BL550##__ (The symbol"#" in the model name can be any alphanumeric character or blank)
	Remark:__24BL550J__ was selected as the test model and their data have been recorded in this report.
Power supply cable	Non-shielded, 1.5m&1.8m
VGA Cable	Shielded, 1.5m&1.8m
HDMI Cable	Shielded, 1.5m&1.8m
Display Cable	Shielded, 1.5m&1.8m

*Add a model name.

Note: Please refer to user manual.

Initial Issue:

Product Name:	LCD Monitor
Model Name:	24BK550## (The symbol"#" in the model name can be any alphanumeric character or blank)
	Remark: __24BK550Y__ was selected as the test model and their data have been recorded in this report.
Power supply cable	Non-shielded, 1.5m&1.8m
VGA Cable	Shielded, 1.5m&1.8m
DVI Cable	Shielded, 1.5m&1.8m
HDMI Cable	Shielded, 1.5m&1.8m
Display Cable	Shielded, 1.5m&1.8m

Note: Please refer to user manual.

3.2. Test Mode and Test Manner

EN 55032 :

a. During testing, the interface cables and equipment positions were varied according to Europe Standard .

b. An executive program, “MyHwin” under Win 8, which generates a complete line of continuously repeating colour bars was used as the test software.

The program was executed as follows:

1. Turn on the power of all equipment.
2. The EUT reads the test program from the hard disk drive and runs it.
3. PC sends “Colour bars” messages to the EUT, and the monitor displays “Colour bars” patterns on the screen.
4. Run the Colour bars. Run the Colour bars. the colour bars with moving picture element with comply with requirement of ITU-RBT 471-1.
5. Repeat the steps from 2 to 4.

EN55024:

a. During testing, the interface cables and equipment positions were varied according to Europe Standard EN55024 Class B.

b. An executive program, “MyHwin” under Win 8, which generates a complete line of continuously repeating “H” pattern was used as the test software.

The program was executed as follows:

1. Turn on the power of all equipment.
2. The EUT reads the test program from the hard disk drive and runs it.
3. PC sends “H” messages to the EUT, and the monitor displays “H” patterns on the screen.

c. 4. Repeat the steps from 2 to 3.

d. The complete test system included PC, USB Keyboard, USB Mouse, Earphone and EUT for test.

e. The test modes for CE,RE as follow:

Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)

Test Mode 2: Full system (Display mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)

Test Mode 3: Full system (HDMI mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)

Test Mode 4: Full system (VGA mode 1920*1080@60Hz) for Vertical Signal from Computer (230V/50Hz)

Test Mode 5: Full system (VGA mode 1280*1024@75Hz) for Horizontal Signal from Computer (230V/50Hz)

Test Mode 6: Full system (VGA mode 640*480@60Hz) for Horizontal Signal from Computer (230V/50Hz)

Test Mode 7: Full system (HDMI 1080P Mode) Signal from DVD Play (230V/50Hz)

Test Mode 8: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (110V/60Hz)

“Test mode 1,8” was reported as final data.

f. The test modes for H&F,EMS as follow:

Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer

Test Mode 2: Full system (Display mode 1920*1080@60Hz) for Horizontal Signal from Computer

Test Mode 3: Full system (HDMI mode 1920*1080@60Hz) for Horizontal Signal from Computer

Test Mode 4: Full system (VGA mode 1920*1080@60Hz) for Vertical Signal from Computer

Test Mode 5: Full system (VGA mode 1280*1024@75Hz) for Horizontal Signal from Computer

Test Mode 6: Full system (VGA mode 640*480@60Hz) for Horizontal Signal from Computer

Test Mode 7: Full system (HDMI 1080P Mode) Signal from DVD Play

"Test mode 1" was reported as final data.

g. The maximum operating frequency is above 108MHz, the test frequency range is from 1GHz to 6GHz.

3.3. Description of Support Unit

Device	Manufacturer	Model No.	Description
PC	HP	HP Compaq Elite 8200 MTPC	Non-Shielded ,1.8m(R33001)
USB Keyboard	DELL	SK-8115	T3A002
USB Mouse	DELL	G0K02XYK	R41108
Earphone	EDIFIER	N/A	N/A

Use Cable:

No.	Cable	Quantity	Description
A	VGA Cable	1	Shielded, 1.5m&1.8m
B	HDMI Cable	1	Shielded, 1.5m&1.8m
C	Display Cable	1	Shielded, 1.5m&1.8m
D	Audio out Cable	1	Non-Shielded, 1.8m
E	USB Cable	1	Shielded, 1.8m, with one ferrite core bonded
F	USB Cable	1	Shielded, 1.5m

3.4. General Information of Test

☐	Test Site	**Cerpass Technology Corporation** Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582
	FCC	TW1079, TW1061
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-4399, R-4218 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
☒	Test Site	**Cerpass Technology (Suzhou) Co.,Ltd** Address: No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China Tel: +86-512-6917-5888 Fax: +86-512-6917-5666
	CNAS	L5515
	IC	7290A-1, 7290A-2
	VCCI	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test G-227 for radiated disturbance above 1GHz
Frequency Range Investigated:		Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 6000MHz
Test Distance :		The test distance of radiated emission below 1GHz from antenna to EUT is 10 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.

3.5. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Uncertainty
Conducted emissions(LINE)	9KHz-30MHz	+/- 0.7738 dB
Conducted emissions(NEUTRAL)	9KHz-30MHz	+/- 0.7886 dB

Measurement	Polarity	Frequency	Uncertainty
Radiated emissions (below 1GHz)	H	30MHz ~ 200MHz	+/- 3.8909dB
		200MHz ~1000MHz	+/- 3.6555dB
	V	30MHz ~ 200MHz	+/- 3.8948dB
		200MHz ~1000MHz	+/- 3.6538dB
Radiated emissions (above 1GHz)	H	1000MHz ~18000MHz	+/- 3.8948 dB
		18000MHz ~40000MHz	+/-3.8844dB
	V	1000MHz ~18000MHz	+/- 3.8906dB
		18000MHz ~40000MHz	+/- 3.8744dB

Measurement	Uncertainty
ESD—Rise time tr	10%
ESD—Peak current Ip	6%
ESD—Current at 30 ns	6%
ESD—Current at 60 ns	6%
ESD- Charging voltage	1%
RS above 1GHz	±2.37dB
RS under 1GHz	±3.83dB
EFT—Rise time tr	4%
EFT—Peak current Ip	4%
EFT—Current	4%
Surge—Rise time tr	4%
Surge—Peak current Ip	4%

Surge—Current	4%
CS-CND	±0.80dB
CS-Clamp	±1.06dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Consistent with industry standard (e.g. CISPR 32: 2015, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

4. Test of Conducted Emission

4.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in European Standard EN 55032.

Table A.8 – Requirements for conducted emissions from the AC mains power ports of Class A equipment

Applicable to 1. AC mains power ports (3.1.1)				
Table clause	**Frequency range** MHz	**Coupling device** (see Table A.7)	**Detector type / bandwidth**	**Class A limits dB(µV)**
A8.1	0,15 – 0,5	AMN	Quasi Peak / 9 kHz	79
	0,5 – 30			73
A8.2	0,15 – 0,5	AMN	Average / 9 kHz	66
	0,5 – 30			60
NOTE Apply A8.1 and A8.2 across the entire frequency range.				

Table A.9 – Requirements for conducted emissions from the AC mains power ports of Class B equipment

Applicable to 1. AC mains power ports (3.1.1)				
Table clause	**Frequency range** MHz	**Coupling device** (see Table A.7)	**Detector type / bandwidth**	**Class B limits dB(µV)**
A9.1	0,15 – 0,5	AMN	Quasi Peak / 9 kHz	66 – 56
	0,5 – 5			56
	5 – 30			60
A9.2	0,15 – 0,5	AMN	Average / 9 kHz	56 – 46
	0,5 – 5			46
	5 – 30			50
NOTE Apply A9.1 and A9.2 across the entire frequency range.				

Table A.10 – Requirements for asymmetric mode conducted emissions from Class A equipment

Applicable to

1. wired network ports (3.1.30)
2. optical fibre ports (3.1.24) with metallic shield or tension members
3. antenna ports (3.1.3)

Table clause	Frequency range MHz	Coupling device (see Table A.7)	Detector type / bandwidth	Class A voltage limits dB(µV)	Class A current limits dB(µA)
A10.1	0,15 – 0,5	AAN	Quasi Peak / 9 kHz	97 – 87	n/a
	0,5 – 30			87	
	0,15 – 0,5	AAN	Average / 9 kHz	84 – 74	
	0,5 – 30			74	
A10.2	0,15 – 0,5	CVP and current probe	Quasi Peak / 9 kHz	97 – 87	53 – 43
	0,5 – 30			87	43
	0,15 – 0,5	CVP and current probe	Average / 9 kHz	84 – 74	40 – 30
	0,5 – 30			74	30
A10.3	0,15 – 0,5	Current Probe	Quasi Peak / 9 kHz	n/a	53 – 43
	0,5 – 30				43
	0,15 – 0,5	Current Probe	Average / 9 kHz		40 – 30
	0,5 – 30				30

NOTE 1 The choice of coupling device and measurement procedure is defined in Annex C.

NOTE 2 AC mains power ports shall meet the limits given in Table A.8.

NOTE 3 The test shall cover the entire frequency range.

NOTE 4 The application of the voltage and/or current limits is dependent on the measurement procedure used. Refer to Table C.1 for applicability.

NOTE 5 Testing is required at only one EUT supply voltage and frequency.

NOTE 6 Applicable to ports listed above and intended to connect to cables longer than 3 m.

Table A.11 – Requirements for asymmetric mode conducted emissions from Class B equipment

Applicable to

1. wired network ports (3.1.30)
2. optical fibre ports (3.1.24) with metallic shield or tension members
3. broadcast receiver tuner ports (3.1.8)
4. antenna ports (3.1.3)

Table clause	Frequency range MHz	Coupling device (see Table A.7)	Detector type / bandwidth	Class B voltage limits dB(µV)	Class B current limits dB(µA)
A11.1	0,15 – 0,5	AAN	Quasi Peak / 9 kHz	84 – 74	n/a
	0,5 – 30			74	
	0,15 – 0,5	AAN	Average / 9 kHz	74 – 64	
	0,5 – 30			64	
A11.2	0,15 – 0,5	CVP and current probe	Quasi Peak / 9 kHz	84 – 74	40 – 30
	0,5 – 30			74	30
	0,15 – 0,5	CVP and current probe	Average / 9 kHz	74 – 64	30 – 20
	0,5 – 30			64	20
A11.3	0,15 – 0,5	Current Probe	Quasi Peak / 9 kHz	n/a	40 – 30
	0,5 – 30				30
	0,15 – 0,5	Current Probe	Average / 9 kHz		30 – 20
	0,5 – 30				20

NOTE 1 The choice of coupling device and measurement procedure is defined in Annex C.

NOTE 2 Screened ports including TV broadcast receiver tuner ports are tested with a common-mode impedance of 150 Ω. This is typically accomplished with the screen terminated by 150 Ω to earth.

NOTE 3 AC mains power ports shall meet the limits given in Table A.**9**.

NOTE 4 The test shall cover the entire frequency range.

NOTE 5 The application of the voltage and/or current limits is dependent on the measurement procedure used. Refer to Table C.1 for applicability.

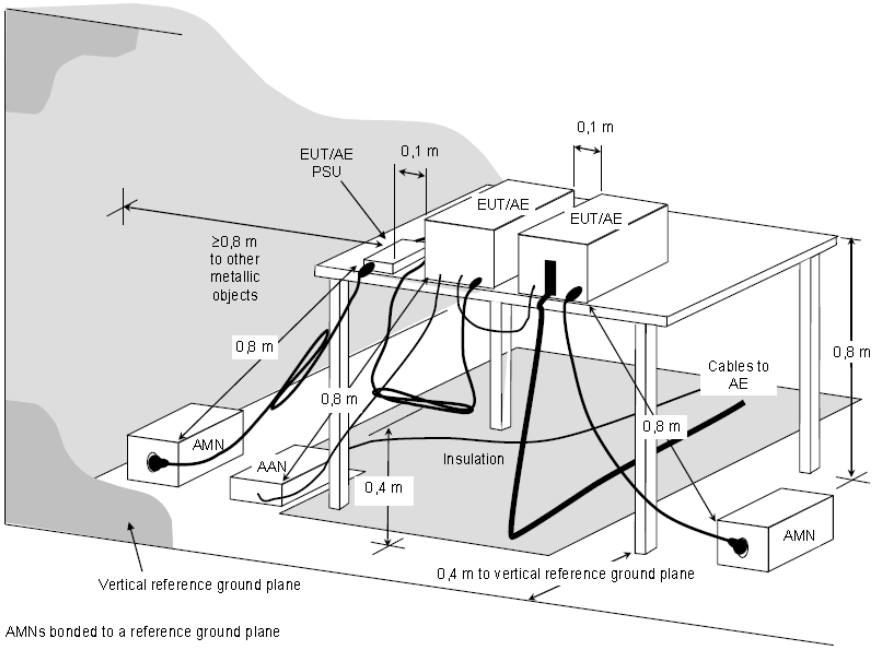
NOTE 6 Testing is required at only one EUT supply voltage and frequency.

NOTE 7 Applicable to ports listed above and intended to connect to cables longer than 3 m.

4.2. Test Procedures

a. The EUT was placed on a desk 0.8 meters height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
b. Connect EUT to the power mains through a Artificial Mains Network (AMN).
c. All the support units are connecting to the other AMN.
d. The AMN provides 50 ohm coupling impedance for the measuring instrument.
e. The CISPR states that a 50 ohm, 50 micro-Henry AMN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched
h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

4.3. Typical Test Setup



NOTE The 0,8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be ≥0,8 m.

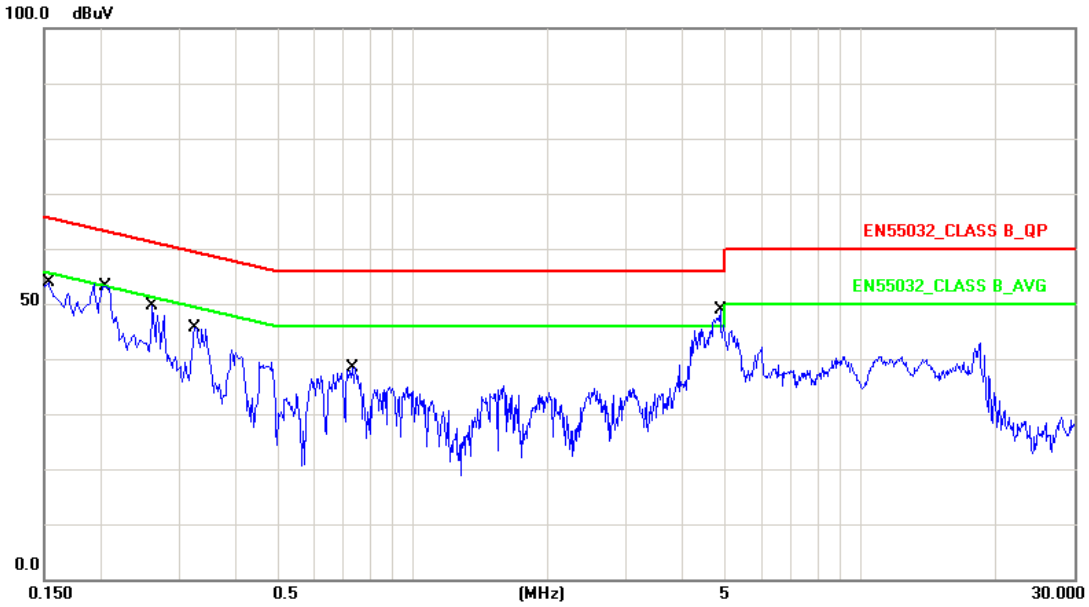
Figure D.2 – Example measurement arrangement for table-top EUT (Conducted emission measurement – alternative 1)

4.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2018.07.18	2019.07.17
AMN	R&S	ESH2-Z5	100182	2017.08.26	2018.08.25
ISN	FCC	FCC-TLISN-T2-02	20379	2018.03.21	2019.03.20
ISN	FCC	FCC-TLISN-T4-02	20380	2018.06.14	2019.06.13
ISN	FCC	FCC-TLISN-T8-02	20381	2017.11.29	2018.11.28
ISN	TESEQ	ISN ST08	30175	2017.08.26	2018.08.25
ISN	TESEQ	ISN S751	31531	2017.10.17	2018.10.16
LISN	FCC	FCC-LISN-50-200-2-02	112087	2017.08.26	2018.08.25
LISN	SCHWARZBECK	NSLK 8127	8127-920	2017.11.08	2018.11.07
Current Probe	R&S	EZ-17	100303	2018.03.21	2019.03.20
Passive Voltage Probe	R&S	ESH2-Z3	100026	2018.03.21	2019.03.20
Pulse Limiter	R&S	ESH3-Z2	100529	2018.03.21	2019.03.20
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2018.03.23	2019.03.22
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A

4.5. Test Data and Result

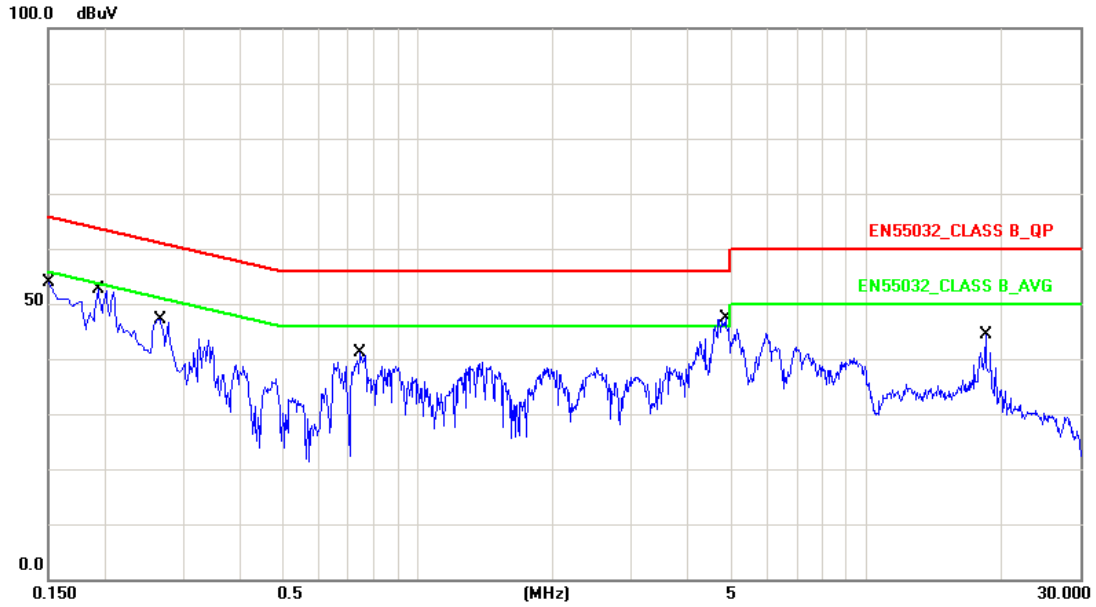
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)		
AC Power :	AC 230V/50Hz	Phase :	LINE
Temperature :	24°C	Humidity :	53%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	10.06	33.49	43.55	65.78	-22.23	QP
2	0.1539	10.06	9.00	19.06	55.78	-36.72	AVG
3	0.2060	10.07	40.83	50.90	63.36	-12.46	QP
4	0.2060	10.07	27.95	38.02	53.36	-15.34	AVG
5	0.2620	10.07	35.96	46.03	61.36	-15.33	QP
6	0.2620	10.07	22.36	32.43	51.36	-18.93	AVG
7	0.3260	10.08	32.66	42.74	59.55	-16.81	QP
8	0.3260	10.08	19.87	29.95	49.55	-19.60	AVG
9	0.7340	10.11	26.80	36.91	56.00	-19.09	QP
10	0.7340	10.11	13.11	23.22	46.00	-22.78	AVG
11	4.8620	10.32	35.32	45.64	56.00	-10.36	QP
12	4.8620	10.32	20.24	30.56	46.00	-15.44	AVG

Note: Measurement Level = Reading Level + Correct Factor

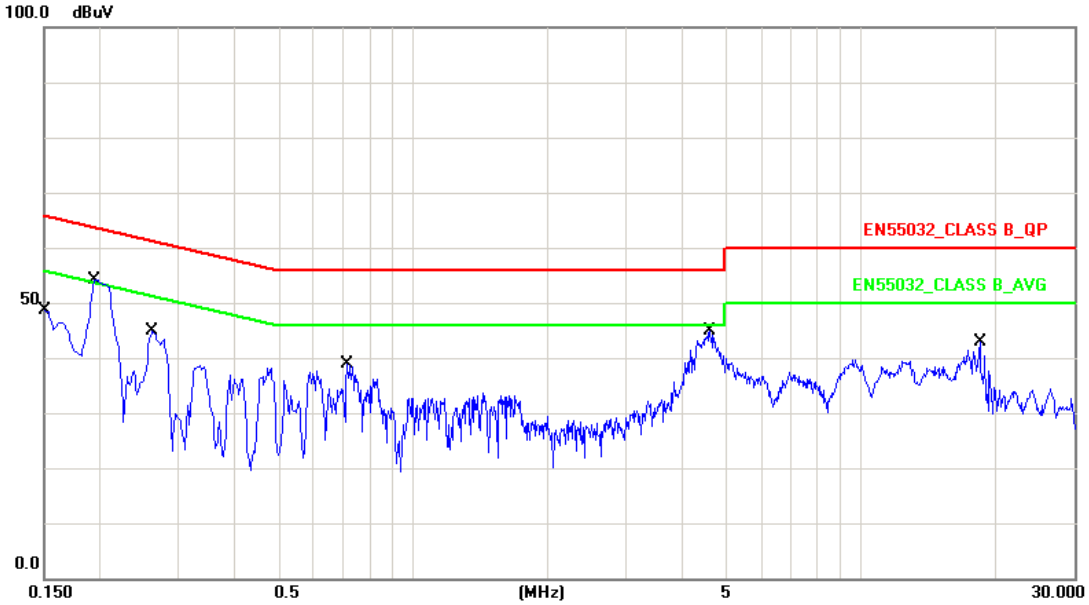
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Temperature :	24°C	Humidity :	53%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.09	35.95	46.04	65.99	-19.95	QP
2	0.1500	10.09	11.12	21.21	55.99	-34.78	AVG
3	0.1940	10.09	39.21	49.30	63.86	-14.56	QP
4	0.1940	10.09	23.06	33.15	53.86	-20.71	AVG
5	0.2660	10.09	34.42	44.51	61.24	-16.73	QP
6	0.2660	10.09	23.25	33.34	51.24	-17.90	AVG
7	0.7460	10.13	29.57	39.70	56.00	-16.30	QP
8	0.7460	10.13	16.80	26.93	46.00	-19.07	AVG
9	4.8500	10.43	32.53	42.96	56.00	-13.04	QP
10	4.8500	10.43	20.16	30.59	46.00	-15.41	AVG
11	18.4980	10.96	24.27	35.23	60.00	-24.77	QP
12	18.4980	10.96	19.77	30.73	50.00	-19.27	AVG

Note: Measurement Level = Reading Level + Correct Factor

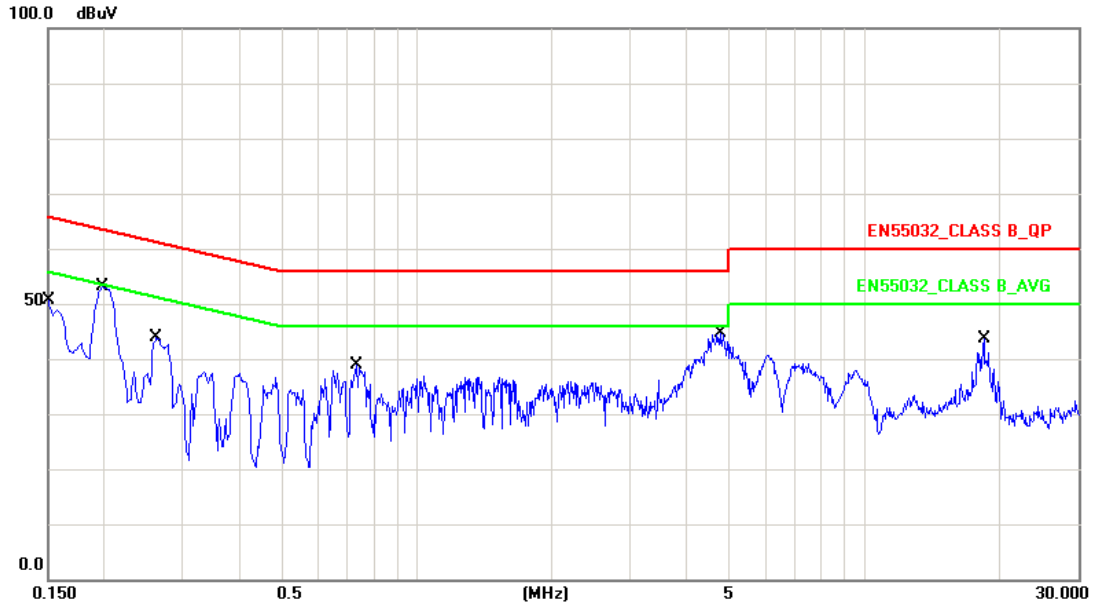
Test Mode :	Test Mode 8: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (110V/60Hz)		
AC Power :	AC 110V/60Hz	Phase :	LINE
Temperature :	24°C	Humidity :	53%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.06	31.80	41.86	65.99	-24.13	QP
2	0.1500	10.06	11.65	21.71	55.99	-34.28	AVG
3	0.1940	10.06	41.19	51.25	63.86	-12.61	QP
4	0.1940	10.06	25.05	35.11	53.86	-18.75	AVG
5	0.2620	10.07	32.45	42.52	61.36	-18.84	QP
6	0.2620	10.07	18.73	28.80	51.36	-22.56	AVG
7	0.7140	10.11	27.15	37.26	56.00	-18.74	QP
8	0.7140	10.11	13.31	23.42	46.00	-22.58	AVG
9	4.6180	10.31	30.33	40.64	56.00	-15.36	QP
10	4.6180	10.31	14.59	24.90	46.00	-21.10	AVG
11	18.4340	10.76	25.99	36.75	60.00	-23.25	QP
12	18.4340	10.76	19.09	29.85	50.00	-20.15	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Test Mode 8: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (110V/60Hz)		
AC Power :	AC 110V/60Hz	Phase :	NEUTRAL
Temperature :	24°C	Humidity :	53%
Pressure(mbar) :	1002	Date:	2018.8.18



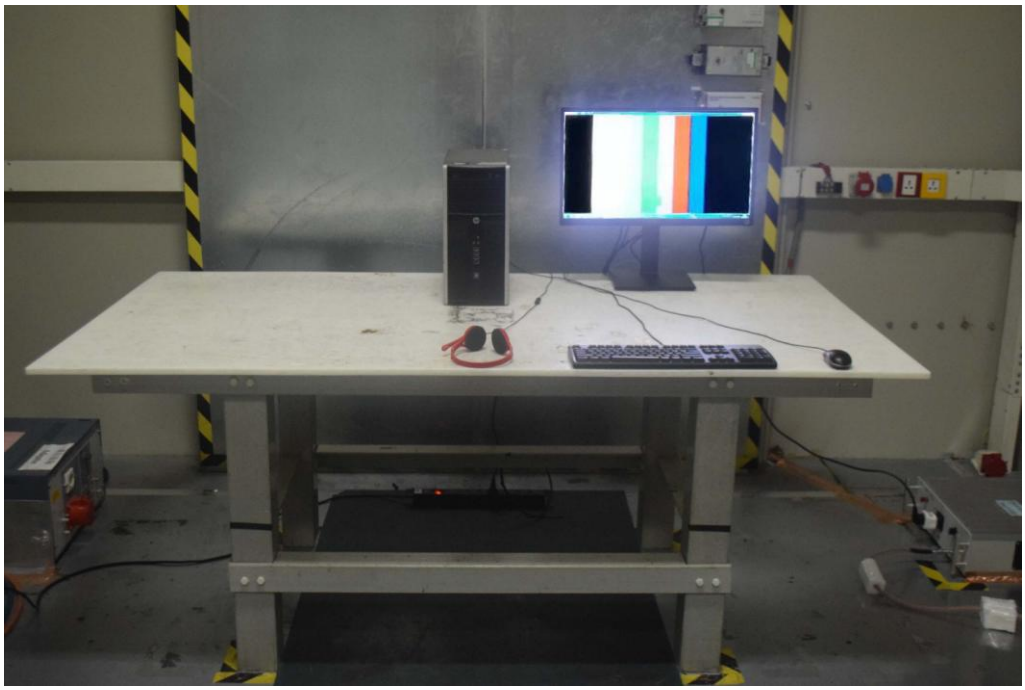
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.09	31.60	41.69	65.99	-24.30	QP
2	0.1500	10.09	10.94	21.03	55.99	-34.96	AVG
3	0.1980	10.09	41.20	51.29	63.69	-12.40	QP
4	0.1980	10.09	26.77	36.86	53.69	-16.83	AVG
5	0.2620	10.09	31.75	41.84	61.36	-19.52	QP
6	0.2620	10.09	17.68	27.77	51.36	-23.59	AVG
7	0.7340	10.13	27.17	37.30	56.00	-18.70	QP
8	0.7340	10.13	13.64	23.77	46.00	-22.23	AVG
9	4.7580	10.43	29.66	40.09	56.00	-15.91	QP
10	4.7580	10.43	17.00	27.43	46.00	-18.57	AVG
11	18.4300	10.96	26.68	37.64	60.00	-22.36	QP
12	18.4300	10.96	20.40	31.36	50.00	-18.64	AVG

Note: Measurement Level = Reading Level + Correct Factor

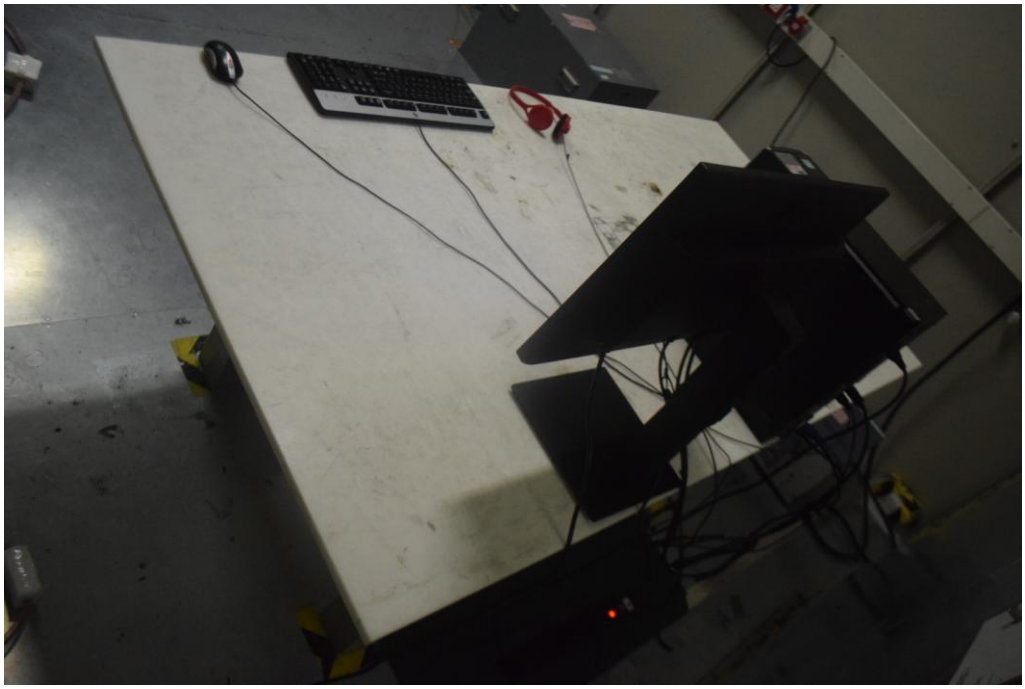
Test engineer: Gilbert Chen

4.6. Test Photographs

Front View



Rear View



5. Test of Radiated Emission

5.1. Test Limit

The EUT shall meet the limits of below Table when measured at the measuring distance R in accordance with the methods described in European Standard EN 55032. If the reading on the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the highest reading shall be recorded, with the exception of any brief isolated high reading, which shall be ignored.

Table 1 – Required highest frequency for radiated measurement

Highest internal frequency (F_x)	Highest measured frequency
$F_x \leq 108$ MHz	1 GHz
108 MHz $< F_x \leq$ 500 MHz	2 GHz
500 MHz $< F_x \leq$ 1 GHz	5 GHz
$F_x >$ 1 GHz	$5 \times F_x$ up to a maximum of 6 GHz
NOTE 1 For FM and TV broadcast receivers, F_x is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies. NOTE 2 F_x is defined in 3.1.19.	

Where the F_x is unknown, the radiated emission measurements shall be performed up to 6 GHz.

Table A.2 – Requirements for radiated emissions at frequencies up to 1 GHz for Class A equipment

Table clause	Frequency range MHz	Measurement		Class A limits dB(µV/m)
		Distance m	Detector type/ bandwidth	OATS/SAC (see Table A.1)
A2.1	30 – 230	10	Quasi Peak / 120 kHz	40
	230 – 1 000			47
A2.2	30 – 230	3		50
	230 – 1 000			57
NOTE Apply only A2.1 or A2.2 across the entire frequency range.				

Table A.3 – Requirements for radiated emissions at frequencies above 1 GHz for Class A equipment

Table clause	Frequency range MHz	Measurement		Class A limits dB(µV/m)
		Distance m	Detector type/ bandwidth	FSOATS (see Table A.1)
A3.1	1 000 – 3 000	3	Average / 1 MHz	56
	3 000 – 6 000			60
A3.2	1 000 – 3 000		Peak / 1 MHz	76
	3 000 – 6 000			80
NOTE Apply A3.1 and A3.2 across the frequency range from 1 000 MHz to the highest required frequency of measurement derived from Table 1.				

Table A.4 – Requirements for radiated emissions at frequencies up to 1 GHz for Class B equipment

Table clause	Frequency range MHz	Measurement		Class B limits dB(μV/m)
		Distance m	Detector type/ bandwidth	OATS/SAC (see Table A.1)
A4.1	30 – 230	10	Quasi Peak / 120 kHz	30
	230 – 1 000			37
A4.2	30 – 230	3		40
	230 – 1 000			47
NOTE Apply only table clause A4.1 or A4.2 across the entire frequency range.				

Table A.5 – Requirements for radiated emissions at frequencies above 1 GHz for Class B equipment

Table clause	Frequency range MHz	Measurement		Class B limits dB(μV/m)
		Distance m	Detector type/ bandwidth	FSOATS (see Table A.1)
A5.1	1 000 – 3 000	3	Average/ 1 MHz	50
	3 000 – 6 000			54
A5.2	1 000 – 3 000		Peak/ 1 MHz	70
	3 000 – 6 000			74
NOTE Apply A5.1 and A5.2 across the frequency range from 1 000 MHz to the highest required frequency of measurement derived from Table 1.				

Table A.6 – Requirements for radiated emissions from FM receivers

Table clause	Frequency range MHz	Measurement		Class B limit dB(μV/m)	
		Distance m	Detector type/ bandwidth	Fundamental	Harmonics
				OATS/SAC (see Table A.1)	OATS/SAC (see Table A.1)
A6.1	30 – 230	10	Quasi peak/ 120 kHz	50	42
	230 – 300				42
	300 – 1 000				46
A6.2	30 – 230	3		60	52
	230 – 300				52
	300 – 1 000				56
NOTE 1 Apply only A.6.1 or A.6.2 across the entire frequency range. NOTE 2 These relaxed limits apply only to emissions at the fundamental and harmonic frequencies of the local oscillator. Signals at all other frequencies shall be compliant with the limits given in Table A.4.					

Table A.12 – Requirements for conducted differential voltage emissions from Class B equipment

Applicable to
1. TV broadcast receiver tuner ports (3.1.8) with an accessible connector
2. RF modulator output ports (3.1.27)
3. FM broadcast receiver tuner ports (3.1.8) with an accessible connector

Table clause	Frequency range MHz	Detector type/ bandwidth	Class B limits dB(µV) 75 Ω			Applicability
			Other	Local Oscillator Fundamental	Local Oscillator Harmonics	
A12.1	30 – 950	For frequencies ≤1 GHz Quasi Peak/ 120 kHz	46	46	46	See NOTE 1
	950 – 2 150		46	54	54	
A12.2	950 – 2 150		46	54	54	See NOTE 2
A12.3	30 – 300		46	54	50	See NOTE 3
	300 – 1 000				52	
A12.4	30 – 300	For frequencies ≥1 GHz Peak/ 1 MHz	46	66	59	See NOTE 4
	300 – 1 000				52	
A12.5	30 – 950		46	76	46	See NOTE 5
	950 – 2 150			n/a	54	

NOTE 1 Television receivers (analogue or digital), video recorders and PC TV broadcast receiver tuner cards working in channels between 30 MHz and 1 GHz, and digital audio receivers.

NOTE 2 Tuner units (not the LNB) for satellite signal reception.

NOTE 3 Frequency modulation audio receivers and PC tuner cards.

NOTE 4 Frequency modulation car radios.

NOTE 5 Applicable to EUTs with RF modulator output ports (for example DVD equipment, video recorders, camcorders and decoders etc.) designed to connect to TV broadcast receiver tuner ports.

NOTE 6 Testing is required at only one EUT supply voltage and frequency.

NOTE 7 The term 'other' refers to all emissions other than the fundamental and the harmonics of the local oscillator.

NOTE 8 The test shall be performed with the device operating at each reception channel.

NOTE 9 The test shall cover the entire frequency range.

5.2. Test Procedures

a. The EUT was placed on a rotatable table top 0.8 meter above ground.

b. The EUT was set 3/10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.

c. The table was rotated 360 degrees to determine the position of the highest radiation.

d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.

e. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

5.3. Typical Test Setup

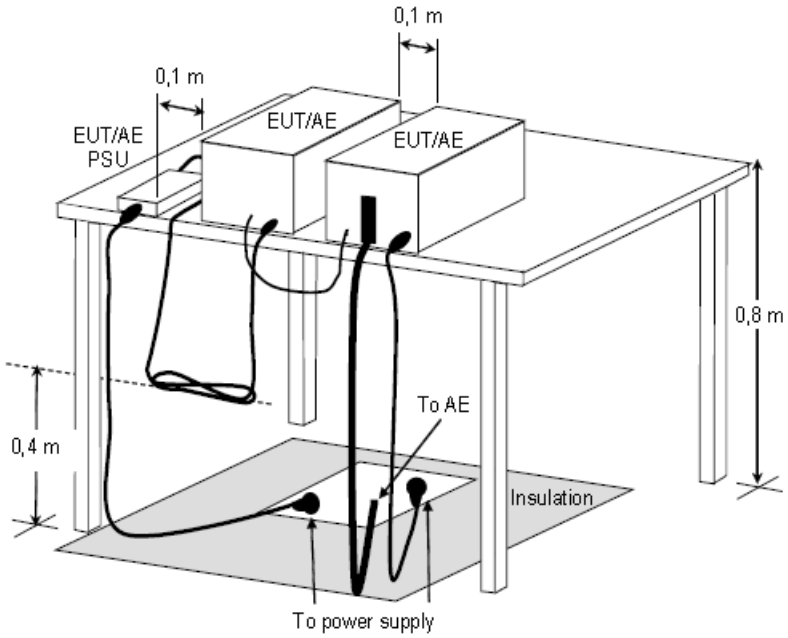


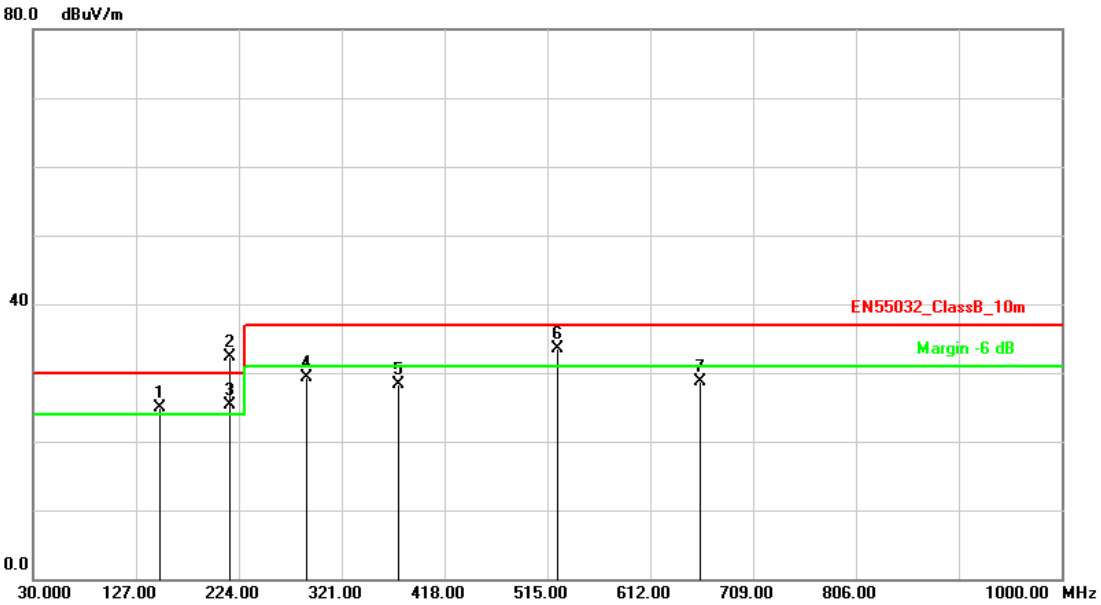
Figure D.8 – Example measurement arrangement for table-top EUT (Radiated emission measurement)

5.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI7	100968	2017.10.16	2018.10.15
Preamplifier	EMCI	EMCI030-00-3230	SN016723	2018.03.21	2019.03.20
Preamplifier	Agilent	8449B	3008A02342	2018.03.21	2019.03.20
Bilog Antenna	Sunol Science	JB1	A072414-2	2018.07.20	2019.07.19
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-618	2018.04.21	2019.04.20
Spectrum Analyzer	R&S	FSP40	100324	2017.11.02	2018.11.01
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-001	2018.03.23	2019.03.22
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A

5.5. Test Result and Data (30MHz ~ 1000MHz)

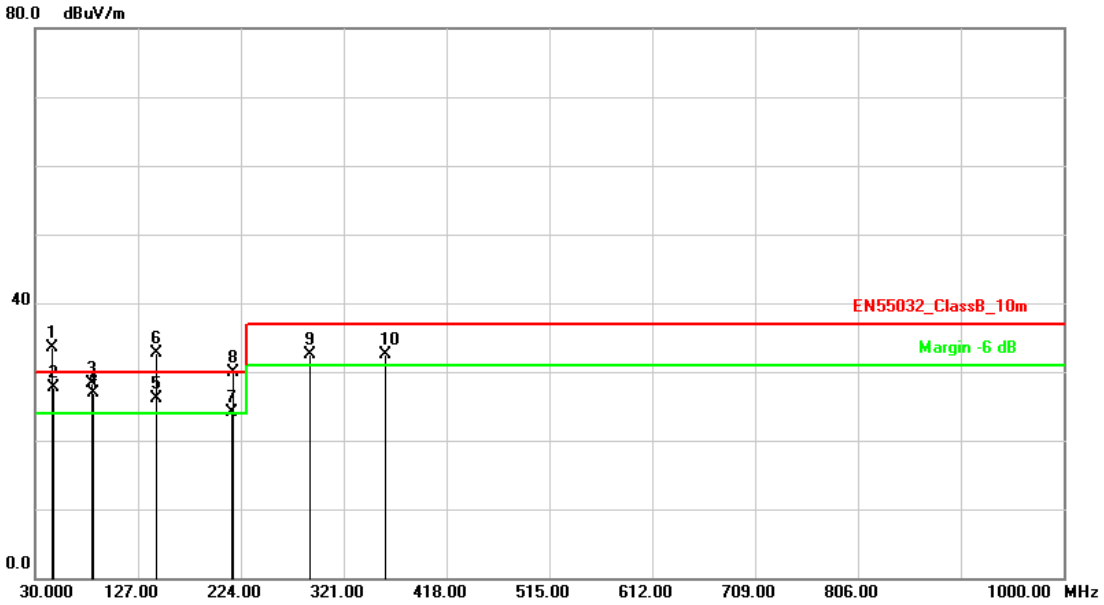
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	149.3100	-11.76	36.68	24.92	30.00	-5.08	peak	400	326
2	215.2700	-12.84	45.24	32.40	30.00	2.40	peak	400	359
3	216.2300	-12.82	38.03	25.21	30.00	-4.79	QP	400	361
4	288.0199	-9.98	39.20	29.22	37.00	-7.78	peak	400	48
5	374.3500	-7.89	36.18	28.29	37.00	-8.71	peak	400	21
6	524.7000	-3.49	36.93	33.44	37.00	-3.56	peak	100	331
7	659.5299	-1.16	29.91	28.75	37.00	-8.25	peak	100	357

Note: Measurement Level = Reading Level + Correct Factor

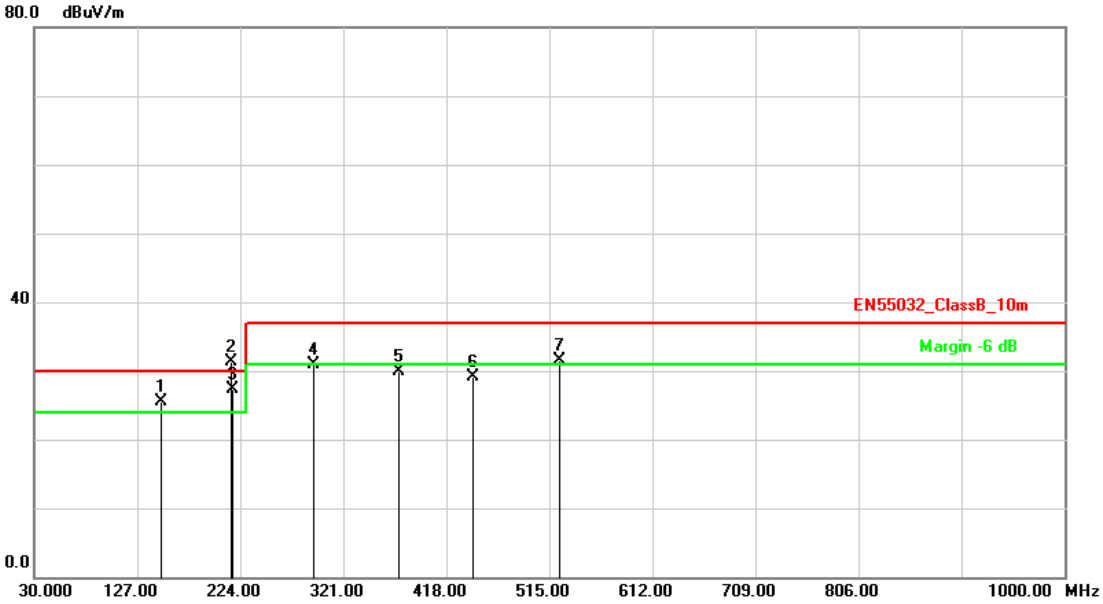
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	46.4900	-15.57	49.14	33.57	30.00	3.57	peak	400	148
2	47.9300	-16.38	44.17	27.79	30.00	-2.21	QP	400	100
3	83.3500	-17.32	45.67	28.35	30.00	-1.65	peak	100	191
4	84.3600	-17.31	44.19	26.88	30.00	-3.12	QP	100	219
5	144.4200	-11.42	37.43	26.01	30.00	-3.99	QP	100	63
6	144.4600	-11.42	44.11	32.69	30.00	2.69	peak	100	133
7	215.9000	-12.82	36.97	24.15	30.00	-5.85	QP	100	255
8	216.2400	-12.81	42.80	29.99	30.00	-0.01	peak	100	358
9	288.9900	-9.93	42.53	32.60	37.00	-4.40	peak	100	235
10	359.8000	-8.18	40.75	32.57	37.00	-4.43	peak	400	60

Note: Measurement Level = Reading Level + Correct Factor

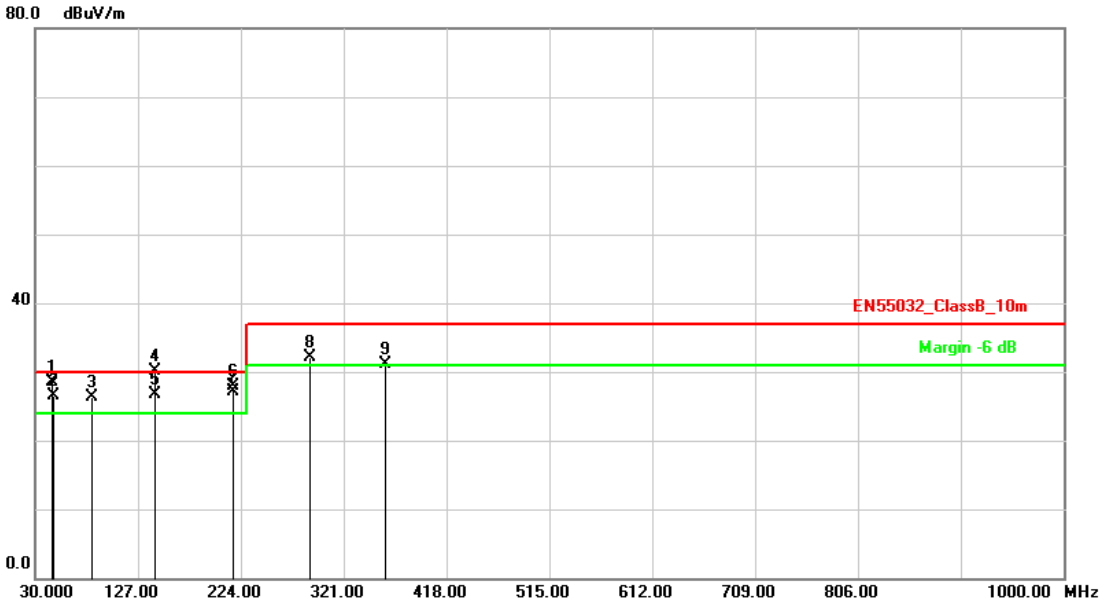
Test Mode :	Test Mode 8: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (110V/60Hz)		
AC Power :	AC 110V/60Hz	Ant. Polarization:	Horizontal
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	149.3100	-11.76	37.18	25.42	30.00	-4.58	peak	100	129
2	215.2700	-12.84	44.24	31.40	30.00	1.40	peak	400	65
3	216.2900	-12.81	40.12	27.31	30.00	-2.69	QP	400	2
4	293.8399	-9.69	40.63	30.94	37.00	-6.06	peak	100	238
5	373.3798	-7.91	37.83	29.92	37.00	-7.08	peak	100	185
6	443.2200	-5.94	35.04	29.10	37.00	-7.90	peak	400	27
7	524.7000	-3.49	34.93	31.44	37.00	-5.56	peak	100	120

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Test Mode 8: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (110V/60Hz)		
AC Power :	AC 110V/60Hz	Ant. Polarization:	Vertical
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18

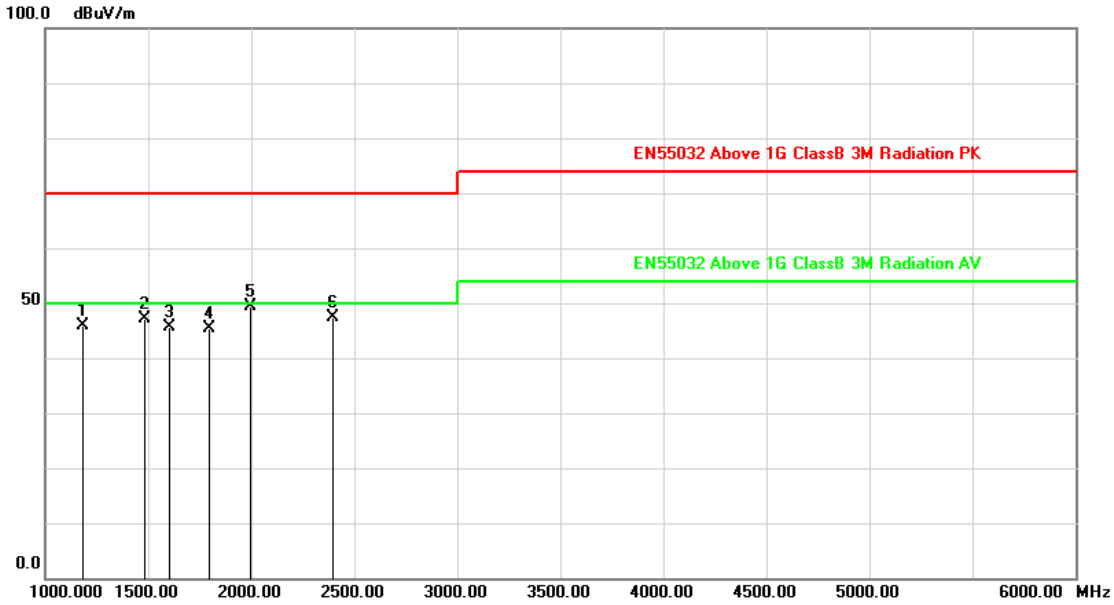


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	46.4900	-15.57	44.14	28.57	30.00	-1.43	peak	400	268
2	47.2800	-16.02	42.61	26.59	30.00	-3.41	QP	400	210
3	83.3499	-17.32	43.67	26.35	30.00	-3.65	peak	100	319
4	142.5200	-11.29	41.49	30.20	30.00	0.20	peak	100	214
5	143.2899	-11.34	38.05	26.71	30.00	-3.29	QP	100	172
6	216.2400	-12.81	40.80	27.99	30.00	-2.01	peak	100	168
7	217.4600	-12.78	39.87	27.09	30.00	-2.91	QP	100	30
8	288.9900	-9.93	42.03	32.10	37.00	-4.90	peak	100	129
9	359.8000	-8.18	39.25	31.07	37.00	-5.93	peak	400	204

Note: Measurement Level = Reading Level + Correct Factor

5.6. Test Result and Data (1000MHz ~ 6000MHz)

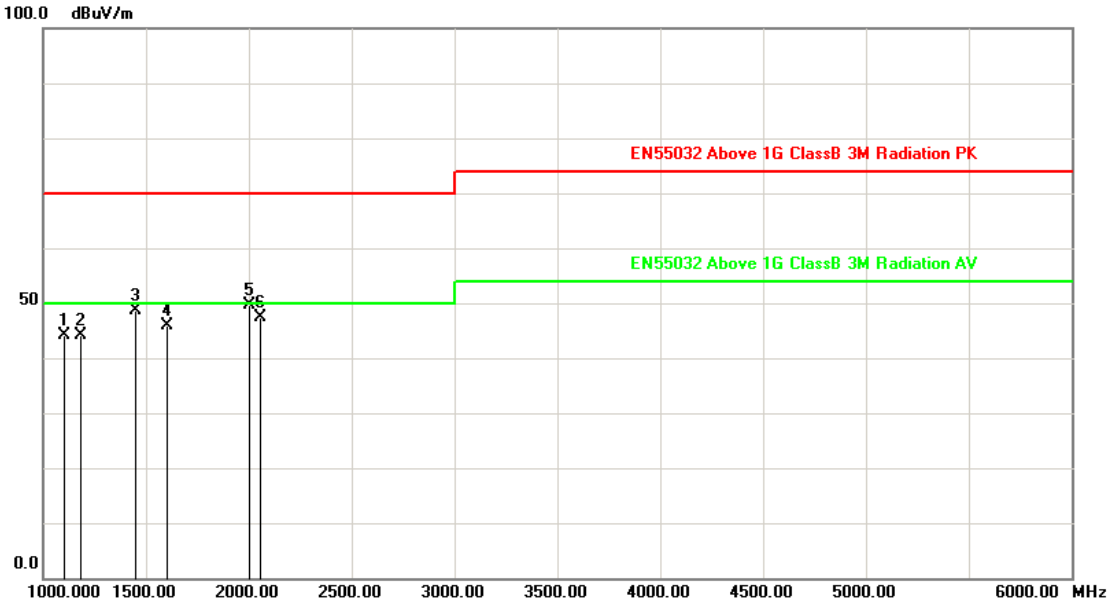
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1185.000	-8.23	54.02	45.79	70.00	-24.21	peak	100	326
2	1485.000	-6.37	53.55	47.18	70.00	-22.82	peak	200	24
3	1600.000	-5.65	51.39	45.74	70.00	-24.26	peak	100	58
4	1795.000	-4.42	49.77	45.35	70.00	-24.65	peak	100	169
5	1995.000	-3.15	52.62	49.47	70.00	-20.53	peak	100	254
6	2395.000	-1.66	49.00	47.34	70.00	-22.66	peak	200	12

Note: Measurement Level = Reading Level + Correct Factor

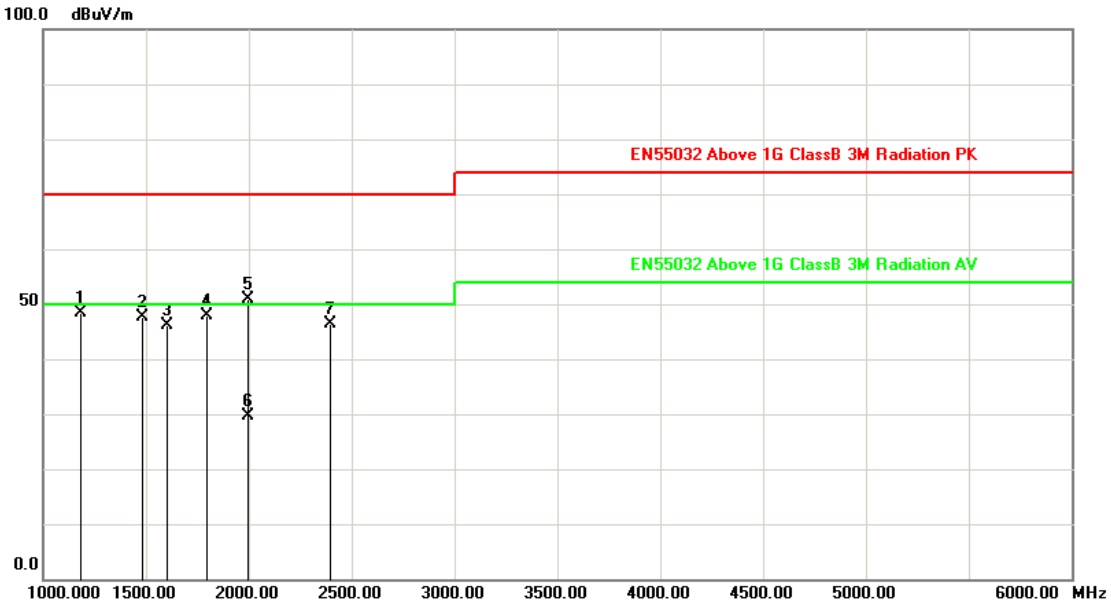
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (230V/50Hz)		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1105.000	-8.72	52.81	44.09	70.00	-25.91	peak	100	325
2	1185.000	-8.23	52.30	44.07	70.00	-25.93	peak	200	64
3	1450.000	-6.59	55.25	48.66	70.00	-21.34	peak	100	201
4	1600.000	-5.65	51.50	45.85	70.00	-24.15	peak	200	128
5	2000.000	-3.12	52.68	49.56	70.00	-20.44	peak	200	168
6	2055.000	-2.92	50.25	47.33	70.00	-22.67	peak	200	117

Note: Measurement Level = Reading Level + Correct Factor

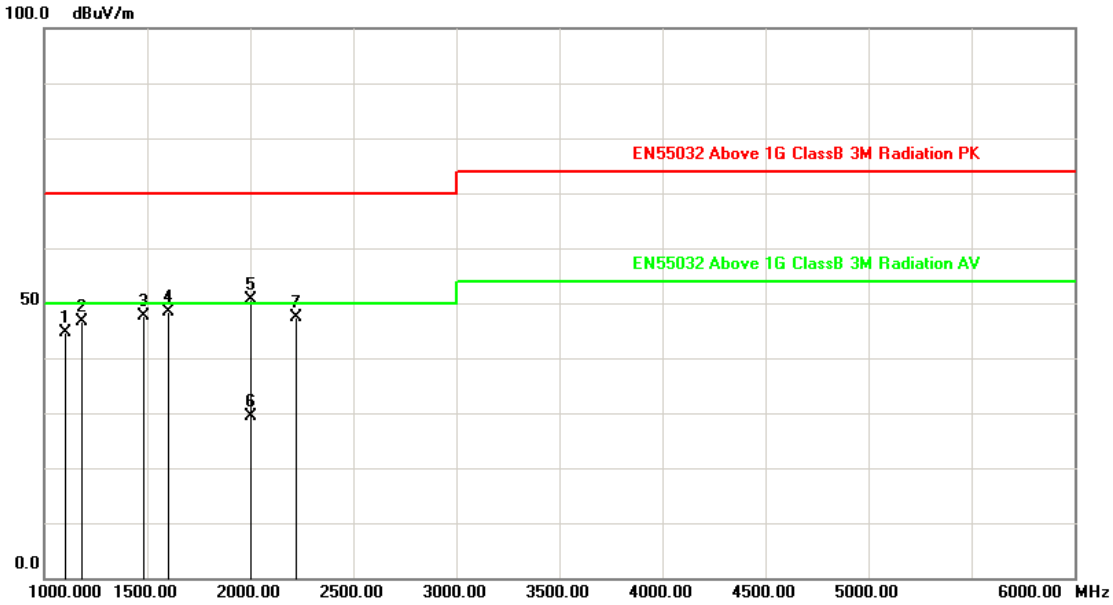
Test Mode :	Test Mode 8: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (110V/60Hz)		
AC Power :	AC 110V/60Hz	Ant. Polarization:	Horizontal
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1185.000	-8.23	56.52	48.29	70.00	-21.71	peak	100	128
2	1485.000	-6.37	54.05	47.68	70.00	-22.32	peak	200	67
3	1600.000	-5.65	51.89	46.24	70.00	-23.76	peak	100	152
4	1795.000	-4.42	52.27	47.85	70.00	-22.15	peak	100	305
5	1995.000	-3.15	54.12	50.97	70.00	-19.03	peak	200	24
6	1997.000	-3.14	32.69	29.55	50.00	-20.45	AVG	200	128
7	2395.000	-1.66	48.00	46.34	70.00	-23.66	peak	100	201

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Test Mode 8: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer (110V/60Hz)		
AC Power :	AC 110V/60Hz	Ant. Polarization:	Vertical
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



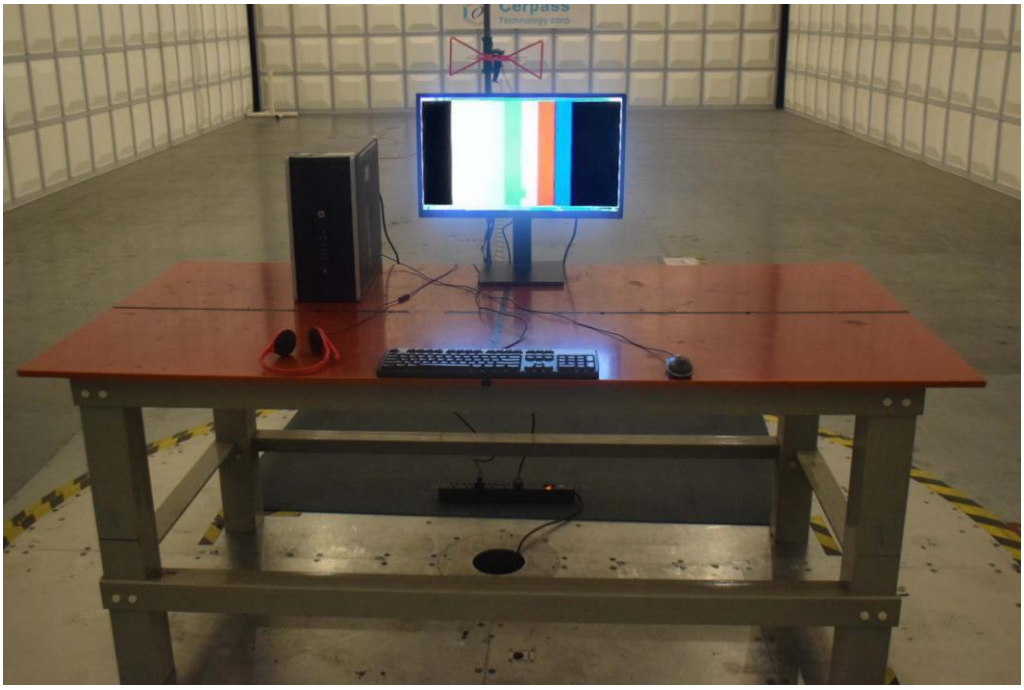
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1105.000	-8.72	53.31	44.59	70.00	-25.41	peak	100	215
2	1185.000	-8.23	54.80	46.57	70.00	-23.43	peak	200	134
3	1485.000	-6.37	53.91	47.54	70.00	-22.46	peak	200	204
4	1600.000	-5.65	54.00	48.35	70.00	-21.65	peak	100	128
5	2000.000	-3.12	53.68	50.56	70.00	-19.44	peak	200	12
6	2002.000	-3.11	32.48	29.37	50.00	-20.63	AVG	200	306
7	2225.000	-2.29	49.55	47.26	70.00	-22.74	peak	100	124

Note: Measurement Level = Reading Level + Correct Factor

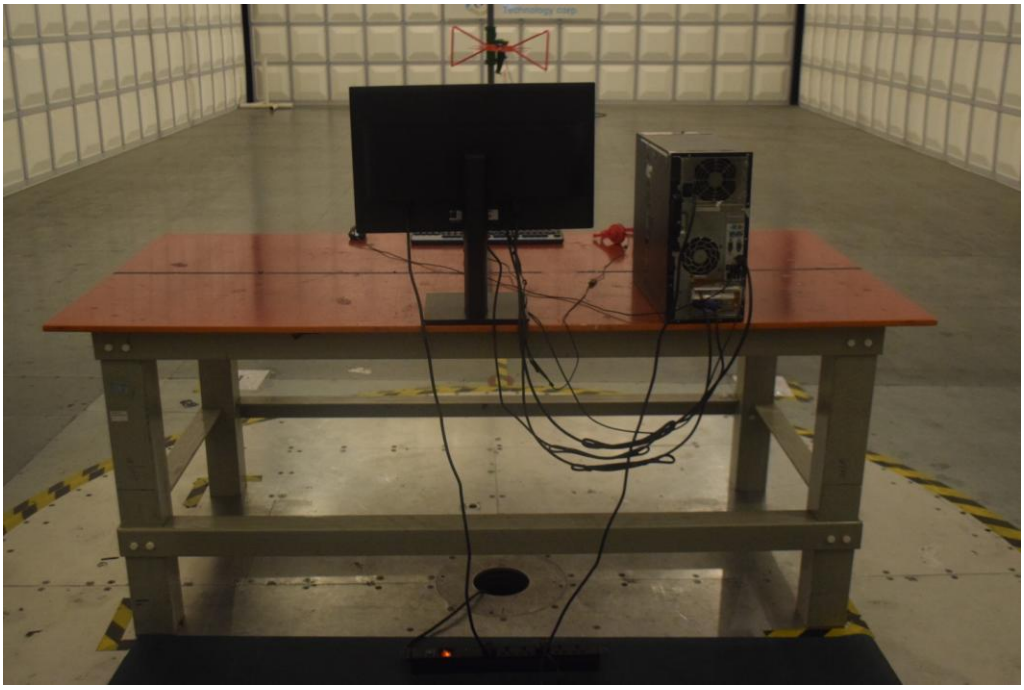
Test engineer: Gilbert Chen

5.7. Test Photographs (30MHz ~ 1000MHz)

Front View

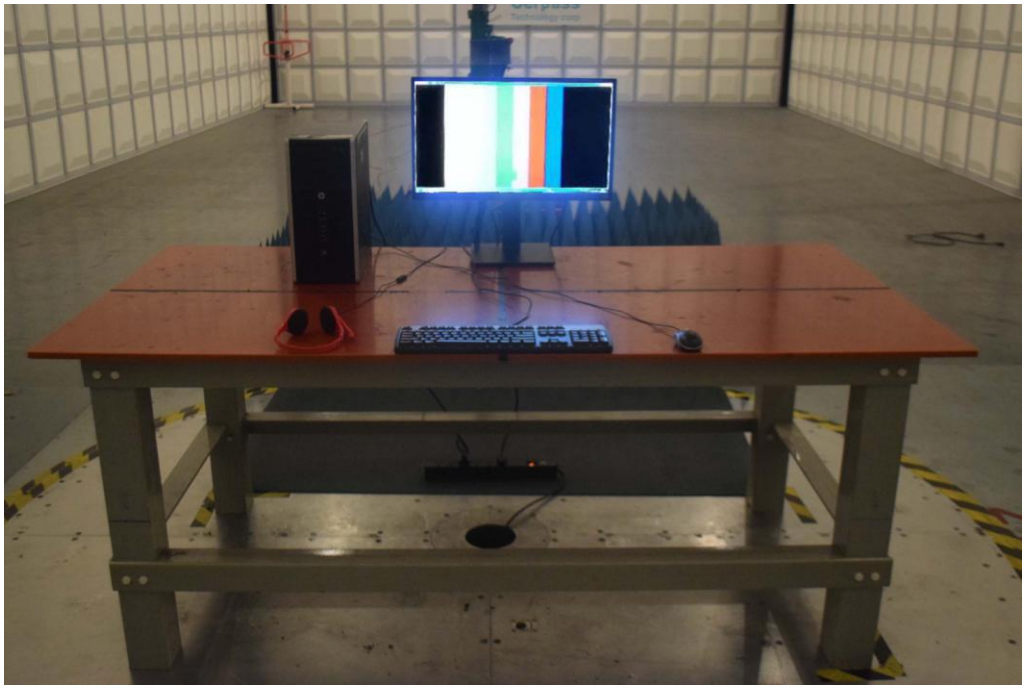


Rear View

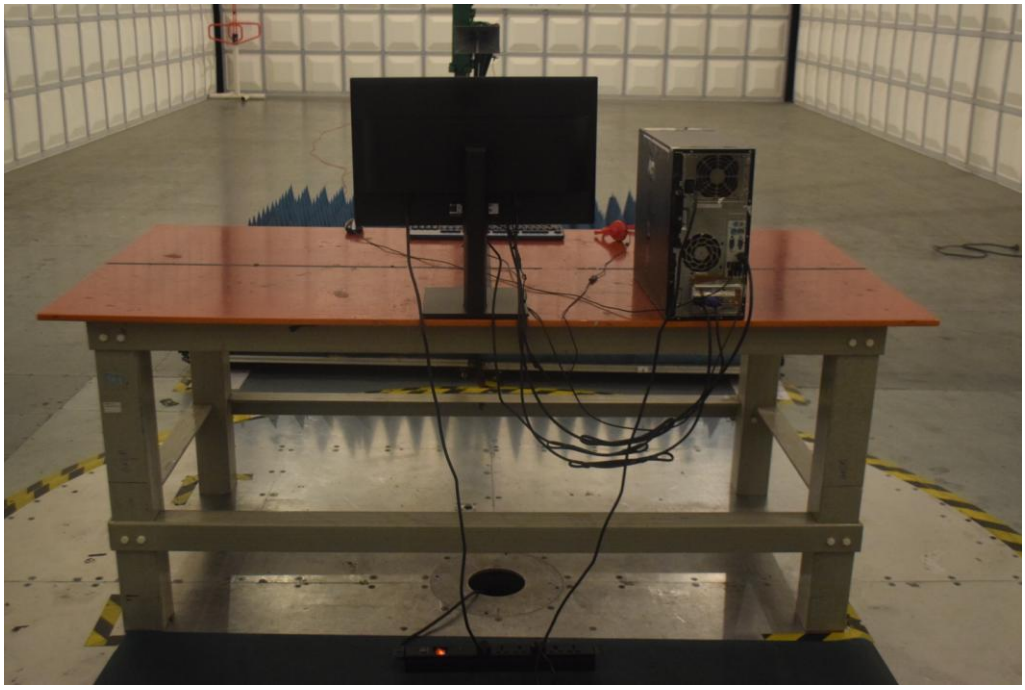


5.8. Test Photographs (1000MHz ~ 6000MHz)

Front View



Rear View



6. Harmonics Test

6.1. Limits for Class A equipment

Harmonics Order n	Max. permissible harmonics current A	Harmonics Order n	Max. permissible harmonics current A
Odd harmonics		Even harmonics	
3	2.30	2	1.08
5	1.14	4	0.43
7	0.77	6	0.30
9	0.40	8<=n<=40	0.23x8/n
11	0.33		
13	0.21		
15<=n<=39	0.15x15/n		

(b) Limits for Class B equipment

For Class B equipment, the harmonics of the input current shall not exceed the values given in Table that is the limit of Class A multiplied by a factor of 1,5.

(c) Limits for Class C equipment

Harmonics Order n	Maximum permissible harmonic current expressed as a percentage of the input current at the fundamental frequency %
2	2
3	$30 \cdot \lambda^*$
5	10
7	7
9	5
11<n<39 (odd harmonics only)	3
* λ is the circuit power factor	

(d) Limits for Class D equipment

Harmonics Order n	Maximum permissible harmonic current per watt mA/W	Maximum permissible harmonic current A
3	3.4	2.30
5	1.9	1.14
7	1.0	0.77
9	0.5	0.40
11	0.35	0.33
11 < n < 39 (odd harmonics only)	3.85/n	See limit of Class A

NOTE: According to section 7 of EN 61000-3-2, the above limits for all equipment except for lighting equipment having an active input power > 75 W and no limits apply for equipment with an active input power up to and including 75 W.

6.2. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2018.07.04	2019.07.03
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2018.03.23	2019.03.22
HARCS	EMC Partner AG	Ver 4.18	N/A	N/A	N/A

6.3. Test Result and Data

The power of EUT is less than 75W after the testing. According the standard, the equipment with a rated power of 75W or less, other than lighting equipment, limits are not specified in this standard. So the test data needn't list.

7. Voltage Fluctuations Test

7.1. Test Procedure

The equipment shall be tested under the conditions of **Clause 5.**

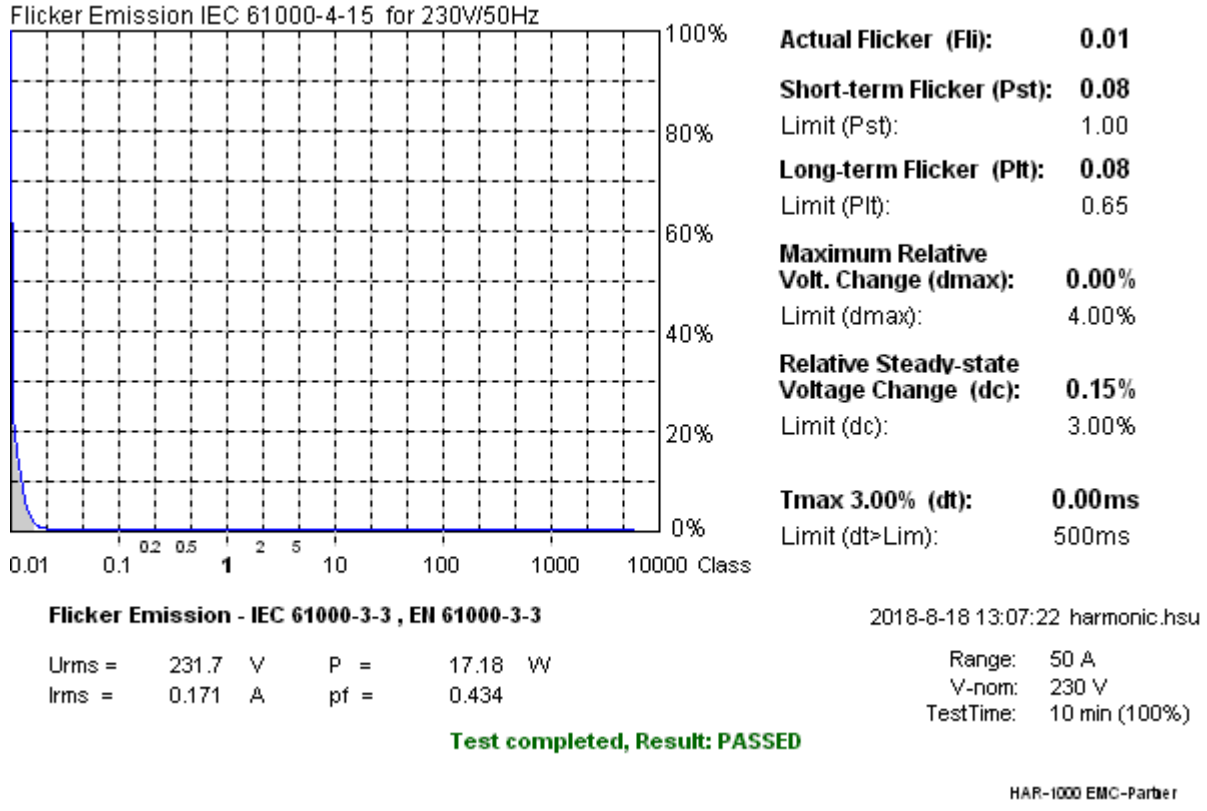
The total impedance of the test circuit, excluding the appliance under test, but including the internal impedance of the supply source, shall be equal to the reference impedance. The stability and tolerance of the reference impedance shall be adequate to ensure that the overall accuracy of ±8% is achieved during the whole assessment procedure.

7.2. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2018.07.04	2019.07.03
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2018.03.23	2019.03.22
HARCS	EMC Partner AG	Ver 4.18	N/A	N/A	N/A

7.3. Test Result and Data

Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 1
Temperature	:	22℃
Humidity	:	52%
Atmospheric Pressure	:	100 kPa
Test Date	:	Aug 18, 2018



Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed

Urms =	231.7V	Freq =	50.013	Range:	50 A
Irms =	0.171A	Ipk =	0.610A	cf =	3.571
P =	17.18W	S =	39.59VA	pf =	0.434

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : No LIN

Limits :	Plt :	0.65	Pst :	1.00	
		dmax :	4.00 %	dc :	3.00 %
		dtLim:	3.00 %	dt>Lim:	500ms

Test completed, Result: PASSED

Test engineer: Gilbert Chen

7.4. Test Photographs

8. Electrostatic Discharge Immunity Test

8.1. Test Procedure

a. In the case of air discharge testing the climatic conditions shall be within the following ranges:
   - ambient temperature: 15℃ to 35℃;
   - relative humidity : 30% to 60%;
   - atmospheric pressure : 86 KPa (860 hPa) to 106 KPa (1060 hPa).

b. Test programs and software shall be chosen so as to exercise all normal modes of operation of the EUT. The use of special exercising software is encouraged, but permitted only where it can be shown that the EUT is being comprehensively exercised.

c. The test voltage shall be increased from the minimum to the selected test severity level, in order to determine any threshold of failure. The final severity level should not exceed the product specification value in order to avoid damage to the equipment.

d. The test shall be performed with both air discharge and contact discharge. On reselected points at least 10 single discharges (in the most sensitive polarity) shall be applied on air discharge. On reselected points at least 25 single discharges (in the most sensitive polarity) shall be applied on contact discharge.

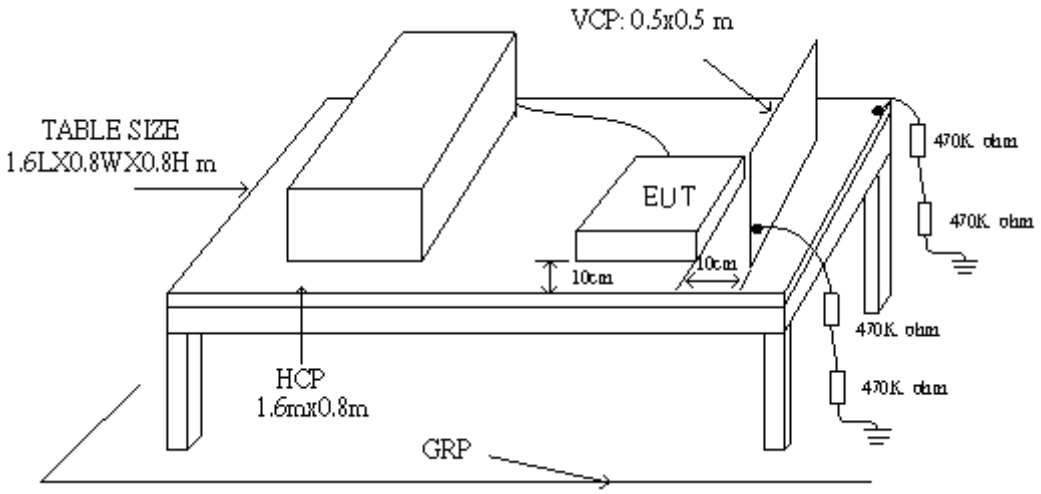
e. For the time interval between successive single discharges an initial value of one second is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.

f. In the case of contact discharges, the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

g. In the case of painted surface covering a conducting substrate, the following procedure shall be adopted :
   - ✧ If the coating is not declared to be an insulating coating by the equipment manufacturer, then the pointed tip of the generator shall penetrate the coating so as to make contact with the conducting substrate.
   - ✧ Coating declared as insulating by the manufacturer shall only be submitted to the air discharge.
   - ✧ The contact discharge test shall not be applied to such surfaces.

h. In the case of air discharges, the round discharge tip of the discharge electrode shall be approached as fast as possible (without causing mechanical damage) to touch the EUT . After each discharge, the ESD generator (discharge electrode) shall be removed from the EUT. The generator is then retriggered for a new single discharge. This procedure shall be repeated until the discharges are completed. In the case of an air discharge test, the discharge switch, which is used for contact discharge, shall be closed.

8.2. Test Setup for Tests Performed in Laboratory



The test setup consists of the test generator, EUT and auxiliary instrumentation necessary to perform DIRECT and INDIRECT application of discharges to the EUT as applicable, in the follow manner :

a. Contact Discharge to the conductive surfaces and to coupling plane;

b. Air Discharge at insulating surfaces.

The preferred test method is that of type tests performed in laboratories and the only accepted method of demonstrating conformance with this standard. The EUT was arranged as closely as possible to arrangement in final installed conditions.

A ground reference plane was provided on the floor of the test site. It was a metallic sheet (copper or aluminum) of 0.25 mm, minimum thickness; other metallic may be used but they shall have at least 0.65 mm thickness. In the Exclusive Certification Corp., we provided 1 mm thickness stainless steel ground reference plane. The minimum size of the ground reference plane is 2.5 m x 2.5 m, the exact size depending on the dimensions of the EUT. It was connected to the protective grounding system.

The EUT was arranged and connected according to its functional requirements. A distance of 1m minimum was provided between the EUT and the wall of the lab. and any other metallic structure. In cases where this length exceeds the length necessary to apply the discharges to the selected points, the excess length shall, where possible, be placed non-inductively off the ground reference plane and shall not come closer than 0.2m to other conductive parts in the test setup.

Where the EUT is installed on a metal table, the table was connected to the reference plane via a cable with a 470k ohm resister located at each end, to prevent a build-up of charge. The test setup was consist a wooden table, 0.8m high, standing on the ground reference plane. A HCP, 1.6 m x

0.8 m, was placed on the table. The EUT and cables was isolated from the HCP by an insulating support 0.5 mm thick. The VCP size, 0.5 m x 0.5 m.

8.3. Test Severity Levels

Contact Discharge		Air Discharge	
Level	Test Voltage (kV) of Contact discharge	Level	Test Voltage (kV) of Air Discharge
1	±2	1	±2
2	±4	2	±4
3	±6	3	±8
4	±8	4	±15
X	Specified	X	Specified
Remark: “X” is an open level.			

8.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
ESD Simulator	EM Test	Dito	P1645186902	2017.09.20	2018.09.19
Tonometer	shanghaifengyun	DYM3	3251	2018.01.17	2019.01.16
Dehumidifier	ZEDO	ZD-220LB	CEP-TH-01	N/A	N/A
Humidifier	YADU	YZ-DS251C	CEP-TH-02	N/A	N/A
Temperature/ Humidity Meter	feiyan	N/A	102	2018.03.23	2019.03.22
ESD Simulator	NoiseKen	ESS-B3011A	AEC00315-00C-0A	2017.12.07	2018.12.06

8.5. Test Result and Data

Basic Standard	:	IEC 61000-4-2
Final Test Result	:	PASS
Test Voltage	:	±2 / ±4 / ±8 kV for air discharge, ±2 / ±4 /±6 kV for contact discharge
Temperature	:	29°C
Relative Humidity	:	49 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Aug 18,2018

Mode 1

	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	—	+	—	+	—	+	—	+	—	+	—	+	—	+	—
HCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
Screw	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
Case	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
Panel	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
VGA Port	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
HDMI Port	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
Display Port	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
Audio Port	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
Button	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
LED	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Test engineer: Gilbert Chen

8.6. Test Photographs

9. Radio Frequency electromagnetic field immunity test

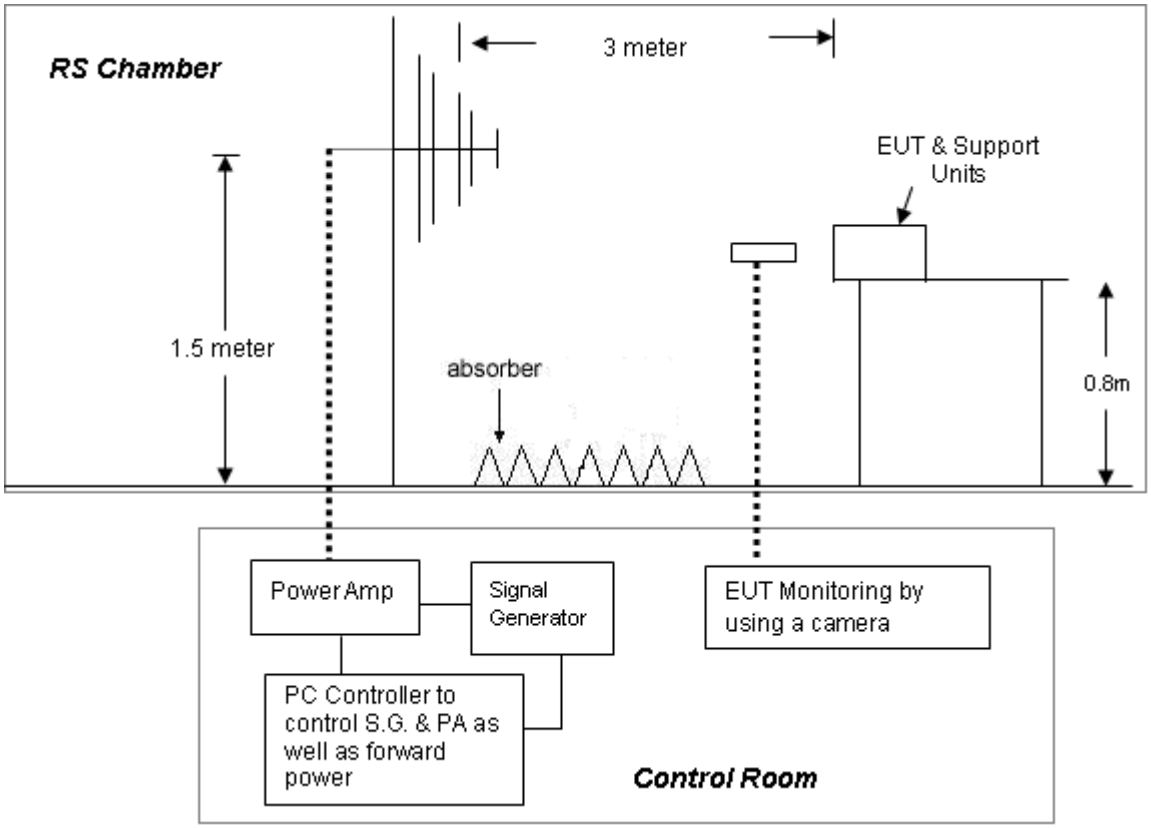
9.1. Test Procedure

a. The equipment to be tested is placed in the center of the enclosure on a wooden table. The equipment is then connected to power and signal leads according to pertinent installation instructions.
b. The antenna which is enabling the complete frequency range of 80-1000 MHz is placed 3m away from the equipment. The required field strength is determined by placing the field strength meter(s) on top of or directly alongside the equipment under test and monitoring the field strength meter via a remote field strength indicator outside the enclosure while adjusting the continuous-wave to the applicable antennae.
c. The test is normally performed with the antenna facing the most sensitive side of the EUT. The polarization of the field generated by the bucolical antenna necessitates testing each position twice, once with the antenna positioned vertically and again with the antenna positioned horizontally. The circular polarization of the field from the log-spiral antenna makes a change of position of the antenna unnecessary.
d. At each of the above conditions, the frequency range is swept 80-1000 MHz, pausing to adjust the R.F. signal level or to switch oscillators and antenna. The rate of sweep is in the order of 1.5*10-3 decades/s. The sensitive frequencies or frequencies of dominant interest may be discretely analyzed.

9.2. Test Severity Levels

Frequency Band : 80-1000 MHz	
Level	Test field strength (V/m)
1	1
2	3
3	10
X	Specified
Remark: “X” is an open class.	

9.3. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

NOTE:

TABLETOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

9.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Signal Generator	R&S	SML03	103287	2018.03.21	2019.03.20
Power Sensor	R&S	NR P-Z91	100383	2018.03.21	2019.03.20
Power Meter	R&S	NRP	101206	2018.03.21	2019.03.20
Power Amplifer	BONN	BLWA0830-160/100/40D	076659	2018.03.21	2019.03.20
Istropic Electric Field Probe	EST.LINDGREN	HI-6105	137445	2018.01.17	2019.01.16
EMS Antenna	R&S	HL046E	100028	N/A	N/A
Temperature/ Humidity Meter	feiyan	N/A	101	2018.03.23	2019.03.22
EMC-32	Rohde&Schwarz	Ver 6.10.0	N/A	N/A	N/A

9.5. Test Result and Data

Basic Standard	: IEC 61000-4-3
Final Test Result	: PASS
Frequency Range	: 80~1000 MHz
Temperature	: 24°C
Relative Humidity	: 51%
Atmospheric Pressure	: 100 kPa
Test Date	: Aug 18,2018

Mode 1

Modulation : AM 80% , 1KHz sine wave , Dwell time: 3.0 S Frequency Step Size : 1 % of preceding frequency value				
Frequency (MHz)	Antenna Polarization	face	Field strength (V/m)	Result
80~1000	Vertical	Front	3 V/m	A
80~1000	Vertical	Rear	3 V/m	A
80~1000	Vertical	Left	3 V/m	A
80~1000	Vertical	Right	3 V/m	A
80~1000	Horizontal	Front	3 V/m	A
80~1000	Horizontal	Rear	3 V/m	A
80~1000	Horizontal	Left	3 V/m	A
80~1000	Horizontal	Right	3 V/m	A

Test engineer: Gilbert Chen

9.6. Test Photographs

10. Electrical Fast Transient/ Burst Immunity Test

10.1. Test Procedure

a. In order to minimize the effect of environmental parameters on test results, the climatic conditions when test is carrying out shall comply with the following requirements:
- ✧ ambient temperature: 15℃ to 35℃;
- ✧ relative humidity : 45% to 75%;
- ✧ Atmospheric pressure: 86 Kpa (860 mbar) to 106 Kpa (1060 mbar).

b. In order to minimize the effect of environmental parameters on test results, the electromagnetic environment of the laboratory shall not influence the test results.

c. The variety and diversity of equipment and systems to be tested make it difficult to establish general criteria for the evaluation of the effects of fast transients/bursts on equipment and systems.

d. Test on Power Line:
- ✧ The EFT/B-generator was located on the GRP.
  For floor standing equipment 1,0 m
  For table top equipment 0,5 m
- ✧ The EFT/B-generator provides the ability to apply the test voltage in a non-symmetrical condition to the power supply input terminals of the EUT.

e. Test on Communication Lines
- ✧ The coupling clamp is composed of a clamp unit for housing the cable (length more than 3 m), and was placed on the GRP.
- ✧ The coupling clamp provides the ability of coupling the fast transient/bursts to the cable under test.

f. The test results may be classified on the basic of the operating conditions and the functional specification of the equipment under test, according to the following performance criteria :
- ✧ Normal performance within the specification limits.
- ✧ Temporary degradation or loss of function or performance which is self-recoverable.
- ✧ Temporary degradation or loss of function or performance which requires operator intervention or system reset.
- ✧ Degradation or loss of function which is not recoverable due to damage of equipment (components).

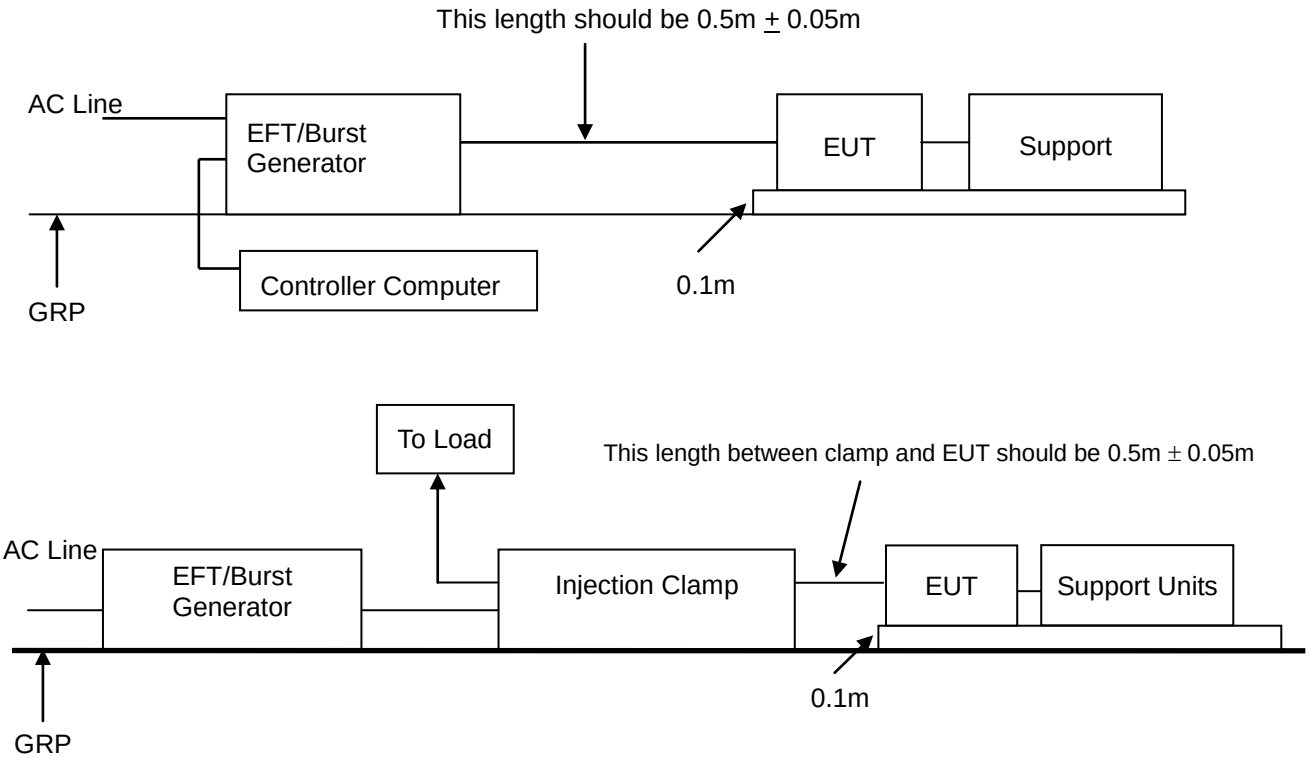
10.2. Test Severity Levels

The following test severity levels are recommended for the fast transient/burst test :

Open circuit output test voltage ± 10%		
Level	On Power Supply	On I/O signal, data and control line
1	0.5 KV	0.25 KV
2	1.0 KV	0.50 KV
3	2.0 KV	1.00 KV
4	4.0 KV	2.00 KV
X	Specified	Specified

Remark : “ X ” is an open level. The level is subject to negotiation between the user and manufacturer or is specified by the manufacturer.

10.3. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

NOTE:

TABLETOP EQUIPMENT

The configuration consisted of a wooden table (0.1m high) standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system. A minimum distance of 0.5m was provided between the EUT and the walls of the laboratory or any other metallic structure.

FLOOR STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC 61000-4-4 and its cables, were isolated from the Ground Reference Plane by an insulating support that is 0.1-meter thick. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system.

10.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2018.06.20	2019.06.19
CDN	EMCPARTNER	CDN2000-06-32	121	2018.03.21	2019.03.20
Coupling clamp	EMCPARTNER	CN-EFT1000	547	2018.03.21	2019.03.20
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2018.03.23	2019.03.22

10.5. Test Result and Data

Basic Standard	:	IEC 61000-4-4
Final Test Result	:	PASS
Test Voltage	:	On Power Supply -- ±1.0 Kv On I/O signal, data and control line -- ±0.5 kV
Temperature	:	21°C
Relative Humidity	:	48 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Aug 18,2018

Mode 1

Pulse : 5/50 ns		Repetition Rate: 5 kHz			
Burst : 15m/300ms					
Test time : 1 min/each condition					
Voltage/ Mode/ Polarity/ Result/ Phase		0.5 kV		1.0 kV	
		+	—	+	—
Power Line	L	---	---	A	A
	N	---	---	A	A
	L-N	---	---	A	A
	PE	---	---	A	A
	L-PE	---	---	A	A
	N-PE	---	---	A	A
	L-N-PE	---	---	A	A

Test engineer: Gilbert Chen

10.6. Test Photographs

11. Surge Immunity Test

11.1.Test Procedure

a. Climatic conditions
The climatic conditions shall comply with the following requirements :
- ✧ ambient temperature : 15 ℃ to 35 ℃
- ✧ relative humidity : 10 % to 75 %
- ✧ atmospheric pressure : 86 kPa to 106 kPa (860 mbar to 1060 mbar)

b. Electromagnetic conditions
the electromagnetic environment of the laboratory shall not influence the test results.

c. The test shall be performed according the test plan that shall specify the test set-up with
- ✧ generator and other equipment utilized;
- ✧ test level (voltage/current);
- ✧ generator source impedance;
- ✧ internal or external generator trigger;
- ✧ number of tests : at least five positive and five negative at the selected points;
- ✧ repetition rate : maximum 1/min.
- ✧ inputs and outputs to be tested;
- ✧ representative operating conditions of the EUT;
- ✧ sequence of application of the surge to the circuit;
- ✧ phase angle in the case of AC. power supply;
- ✧ actual installation conditions, for example :
  AC : neutral earthed,
  DC : (+) or (-) earthed to simulated the actual earthing conditions.

d. If not otherwise specified the surges have to be applied synchronized to the voltage phase at the zero-crossing and the peak value of the AC. voltage wave (positive and negative).

e. The surges have to be applied line to line and line(s) and earth. When testing line to earth, the test voltage has to be applied successively between each of the lines and earth, if there is no other specification.

f. The test procedure shall also consider the non-linear current-voltage characteristics of the equipment under test. Therefore the test voltage has to be increased by steps up to the test level specified in the product standard or test plan.

g. All lower levels including the selected test level shall be satisfied. For testing the secondary protection, the output voltage of the generator shall be increased up to the worst-case voltage breakdown level (let-through level) of the primary protection.

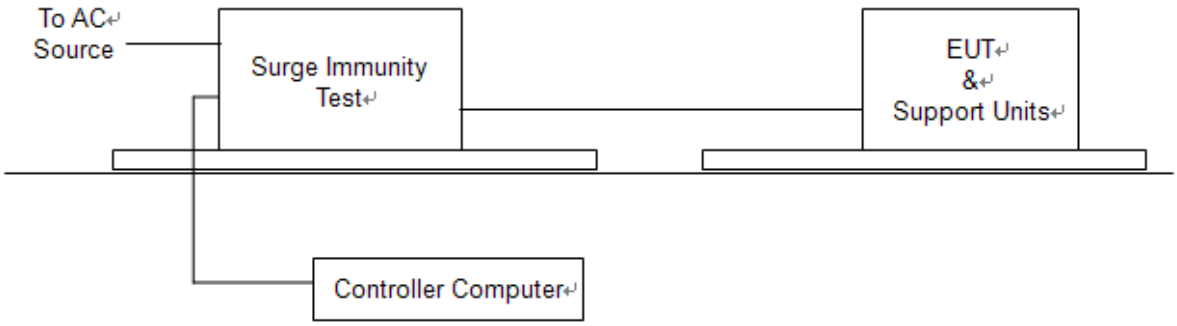
h. If the actual operating signal sources are not available, that may be simulated. Under no circumstances may the test level exceed the product specification. The test shall be carried out according to a test plan.

i. To find all critical points of the duty cycle of the equipment, a sufficient number of positive and negative test pulses shall be applied. For acceptance test previously unstressed equipment shall be used to the protection devices shall be replaced.

11.2. Test Severity Level

Level	Open-circuit test voltage, ± 10%, KV
1	0.5
2	1.0
3	2.0
4	4.0
X	Specified
NOTE: “X” is an open class. This level can be specified in the product specification.	

11.3. TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

11.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	TESEQ	NSG 3060	1830	2018.02.07	2019.02.06
CDN	TESEQ	CDN 3061	1575	2018.02.07	2019.02.06
CDN	TESEQ	CNV508T5	P 1546167499	2018.02.07	2019.02.06
CDN	TESEQ	CDN HSS-2	41020	2018.02.07	2019.02.06
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2018.03.23	2019.03.22

11.5. Test Result and Data

Basic Standard	:	IEC 61000-4-5
Final Test Result	:	PASS
Test Voltage	:	Input AC Power Port -- ±0.5/1.0 kV for Line to Line ±0.5/1.0/2.0 kV for Line to Ground
Temperature	:	21°C
Relative Humidity	:	48 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Aug 18,2018

Mode 1

Waveform : 1.2/50μs(8/20μs) Repetition rate : 60 sec Time : 20 time/each condition						
/Phase Voltage / Mode / Polarity / Result			0°	90°	180°	270°
0.5/1.0 kV	L-N	+	A	A	A	A
		—	A	A	A	A
0.5/1.0/2.0kV	L-PE	+	A	A	A	A
		—	A	A	A	A
	N-PE	+	A	A	A	A
		—	A	A	A	A

Test engineer: Gilbert Chen

11.6. Test Photographs

12. Conduction Disturbances induced by Radio-Frequency Fields

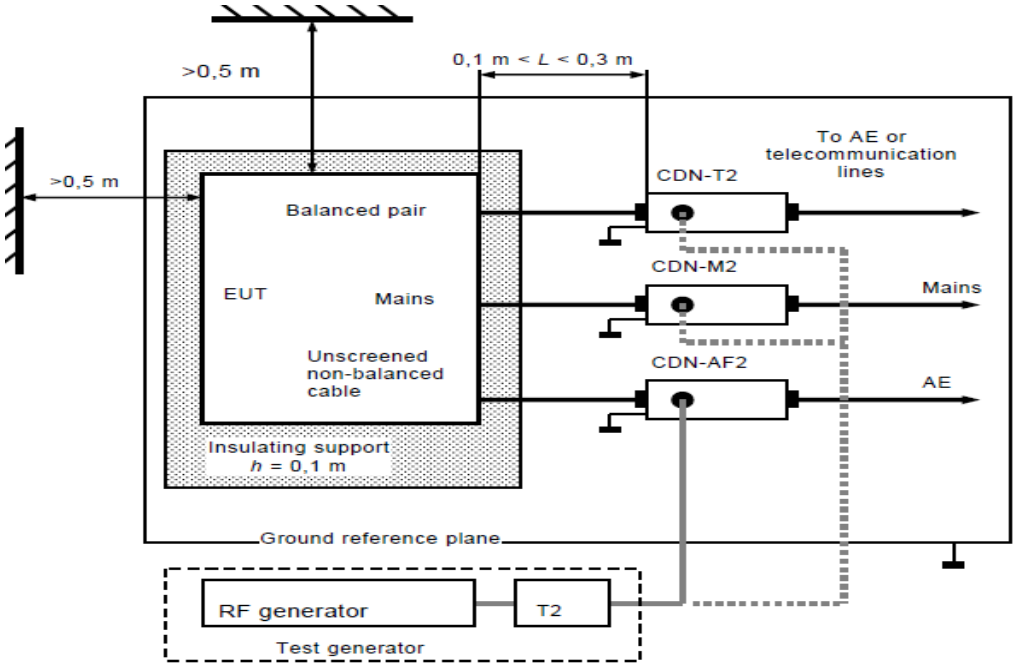
12.1. Test Procedure

a. The EUT shall be operated within its intended climatic conditions. The temperature and relative humidity should be recorded.
b. This test method test can be performed without using a sell shielded enclosure. This is because the disturbance levels applied and the geometry of the setups are not likely to radiated a high amount of energy, especially at the lower frequencies. If under certain circumstances the radiated energy is too high, a shielded enclosure has to be used.
c. The test shall be performed with the test generator connected to each of the coupling and decoupling devices in turn while the other non-excited RF-input ports of the coupling devices are terminated by a 50 ohm load resistor.
d. The frequency range is swept from 150 KHz to 80 MHz, using the signal levels established during the setting process, and with the disturbance signal 80% amplitude modulated with a 1KHz sign wave, pausing to adjust the RF-signal level or to switch coupling devices as necessary. The rate of sweep shall no exceed 1.5 x 10^{-3} decades/s. Where the frequency is swept incrementally, the step size shall no exceed 1% of the start and thereafter 1% of the preceding frequency value.
e. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies e.g. clock frequency (ies) and harmonics or frequencies of dominant interest shall be analyzed separately.
f. An alternative test procedure may be adopted, wherein the frequency range is swept incrementally, with a step size not exceeding 4% of the start ad thereafter 4% of the preceding frequency value. The test level should be at least twice the value of the specified test level.
g. In cases of dispute, the test procedure using a step size not exceeding 1% of the start and thereafter 1% of preceding frequency value shall take precedence.
h. Attempts should be made to fully exercise the EUT during testing, and to fully interrogate all exercise modes selected for susceptibility.
i. The use of special exercising programs is recommended.
j. Testing shall be performed according to a Test Plan, which shall be included in the test report.
k. It may be necessary to carry out some investigatory testing in order to establish some aspects of the test plan.

12.2. Test Severity Levels

Level	Voltage Level (e.m.f.)
1	1 V
2	3 V
3	10 V
x	Specified
NOTE - x is an open class. This level can be specified in the product specification.	

12.3.TEST SETUP



Note: 1. The EUT is setup 0.1m above Ground Reference Plane

2. The CDNs and / or EM clamp used for real test depends on ports and cables configuration of EUT.

3. For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

12.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Conducted immunity test system	FRANKONIA	CIT-10/75	102D1294	2018.03.21	2019.03.20
EM Injection clamp	FCC	F-203I-23MM	536	2018.03.21	2019.03.20
CDN	FRANKONIA	CDN-M2+M3	A3011102	2018.03.21	2019.03.20
CDN	FCC	CDN-M5/32	A3013024	2018.03.21	2019.03.20
CDN	TESEQ	CDN T8-10	43767	2017.08.26	2018.08.25
CDN	TESEQ	CDN T2-10	43762	2017.08.26	2018.08.25
CDN	TESEQ	CDN T4-10	43754	2017.08.26	2018.08.25
CDN	TESEQ	CDN M016	44025	2017.08.26	2018.08.25
6 dB Attenuator	FRANKONIA	N/A	N/A	2018.03.21	2019.03.20
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2018.03.23	2019.03.22
EN61000-4-6	Hubert GmbH	Ver 2.21	N/A	N/A	N/A

12.5. Test Result and Data

Basic Standard	:	IEC 61000-4-6
Final Test Result	:	PASS
Coupling mode	:	CDN-(M2+M3) for AC power ports CDN-T4 for signal ports EM-Clamp for signal ports
Temperature	:	21°C
Relative Humidity	:	48 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Aug 18,2018

Mode 1

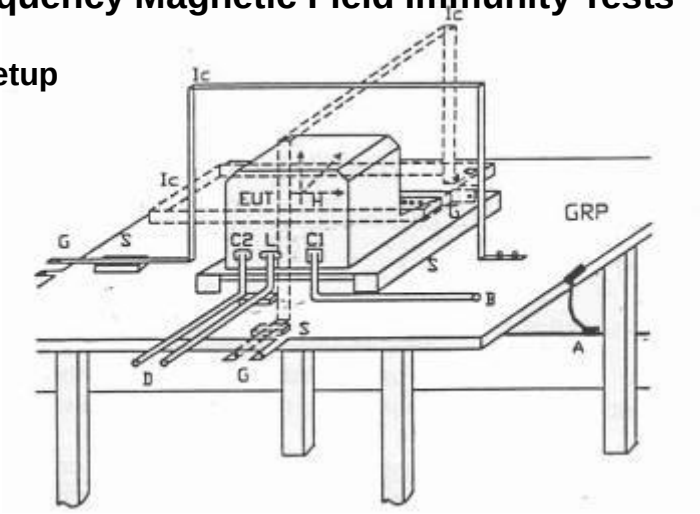
Frequency : 0.15~80MHz, Modulation : AM 80%,1KHz sine wave, Dwell time: 3.0s Frequency Step Size : 1 % of preceding frequency value			
Frequency	Test mode	Voltage(V)	Result
0.15 ~ 80MHz	Power(M3)	3	A

Test engineer: Gilbert Chen

12.6. Test Photographs

13. Power Frequency Magnetic Field Immunity Tests

13.1. Test Setup



GPR	:	Ground plane	C1	:	Power supply circuit
A	:	Safety earth	C2	:	Signal circuit
S	:	Insulating support	L	:	Communication line
EUT	:	Equipment under test	B	:	To power supply source
Lc	:	Induction coil	D	:	To signal source, simulator
E	:	Earth terminal	G	:	To the test generator

13.2. Test Severity Levels

Level	Magnetic field strength A/m
1	1
2	3
3	10
4	30
5	100
X[1)]	special
NOTE 1 “X” is an open level. This level can be givenin the product specification.	

13.3. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2018.06.20	2019.06.19
H-Filed-Loop	EMCPARTNER	MF1000-1	144	2018.03.21	2019.03.20
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2018.03.23	2019.03.22

13.4. Test Result and Data

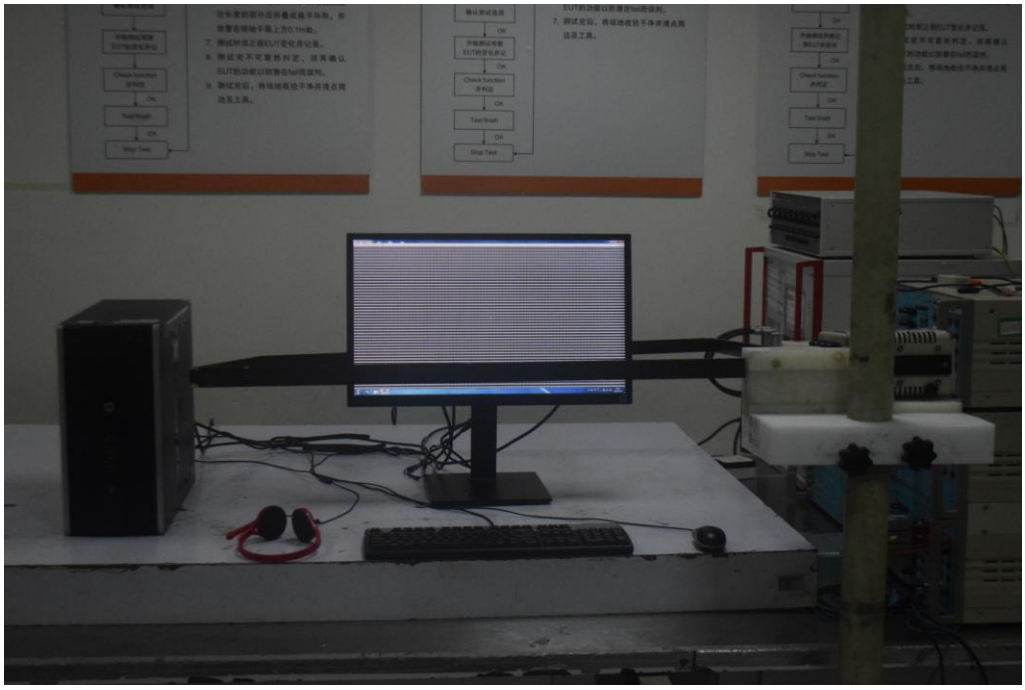
Basic Standard	:	IEC 61000-4-8
Final Test Result	:	PASS
Temperature	:	21°C
Relative Humidity	:	48 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Aug 18,2018

Mode 1

Power Frequency Magnetic Field : 50/60 Hz 1 A/m		
Coil Orientation	Testing duration	Results
X-axis	1.0 Min	A
Y-axis	1.0 Min	A
Z-axis	1.0 Min	A

Test engineer: Gilbert Chen

13.5. Test Photographs



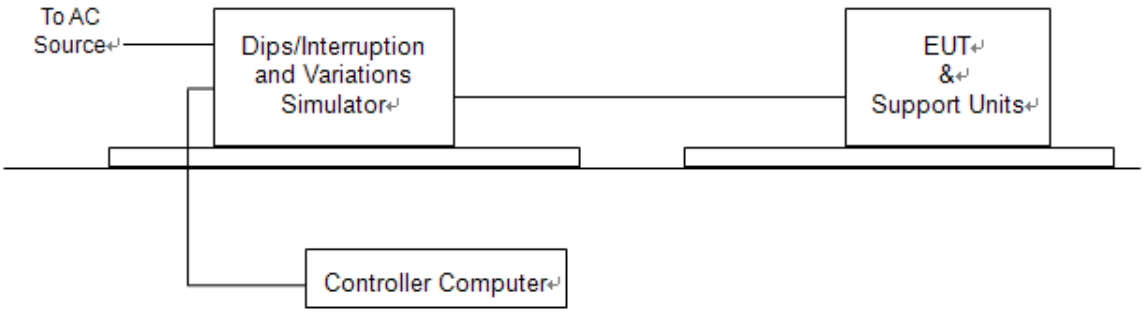
14. Voltage Dips and Voltage Interruptions Immunity Test Setup

14.1. Test Conditions

1. Source voltage and frequency : AC 100/230/240V / 50Hz, Single phase.
2. Test of interval : 10 sec.
3. Level and duration : Sequence of 3 dips/interrupts.
4. Voltage rise (and fall) time : 1 ~ 5 μs.
5. Test severity :

Voltage dips and Interrupt reduction (%)	Test Duration (period)
>95%	250
30%	25
>95%	0.5

14.2. TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

14.3. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2018.06.20	2019.06.19
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2018.03.23	2019.03.22

14.4. Test Result and Data

Basic Standard	:	IEC 61000-4-11
Final Test Result	:	PASS
Temperature	:	21°C
Relative Humidity	:	48 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Aug 18,2018

Mode 1

Voltage(UT): AC 110 V 60 Hz Interval(s) : 10s Times : 3										
Test mod	Test level UT %	Durations (period / ms)	Phase / Result							
			0	45	90	135	180	225	270	315
Voltage interruptions	>95%	250	C	C	C	C	C	C	C	C
Voltage dips	30%	25	A	A	A	A	A	A	A	A
	>95%	0.5	A	A	A	A	A	A	A	A

Voltage(UT): AC 230/240 V 50 Hz Interval(s) : 10s Times : 3										
Test mod	Test level UT %	Durations (period / ms)	Phase / Result							
			0	45	90	135	180	225	270	315
Voltage interruptions	>95%	250	C	C	C	C	C	C	C	C
Voltage dips	30%	25	A	A	A	A	A	A	A	A
	>95%	0.5	A	A	A	A	A	A	A	A

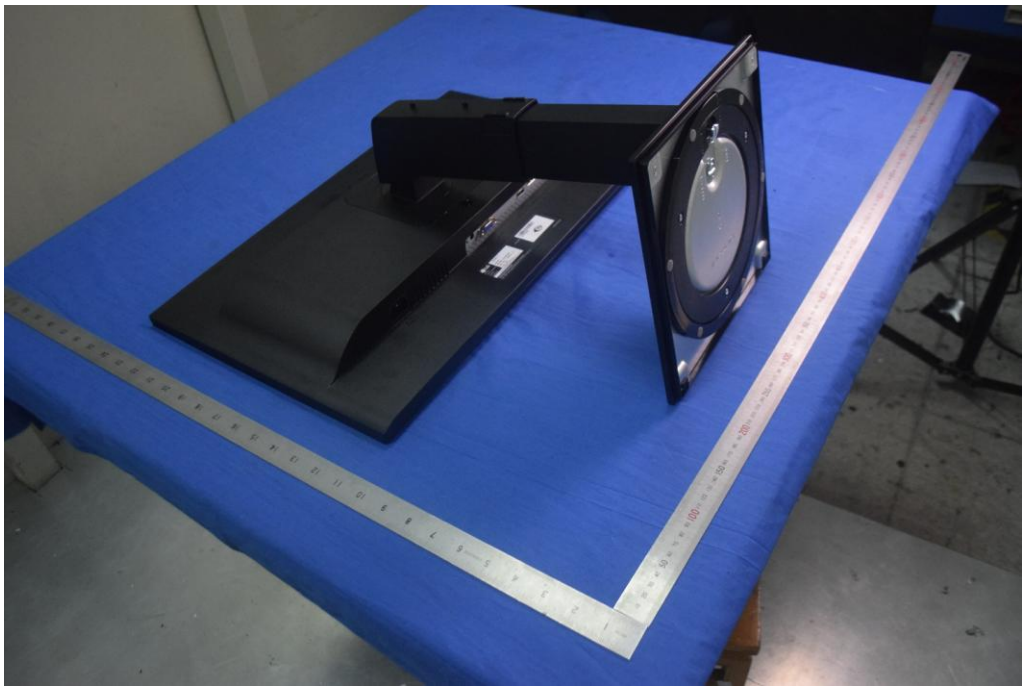
Test engineer: Cilbert Chen

14.5. Test Photographs

15. Photographs of EUT

1) EUT Photo

2) EUT Photo

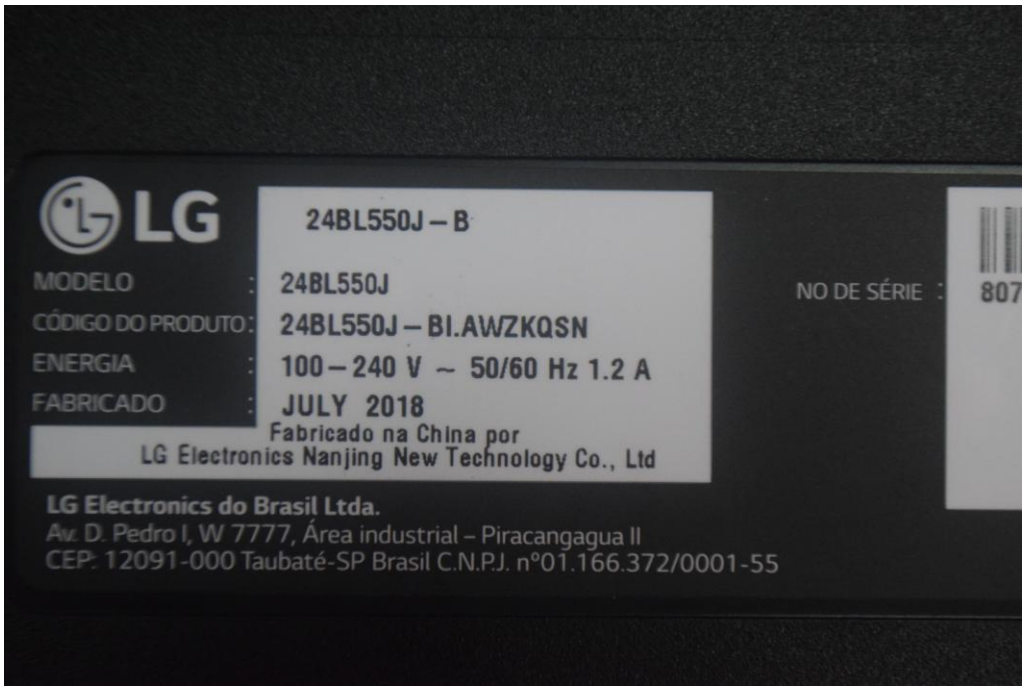


3) EUT Photo

4) EUT Photo

5) EUT Photo

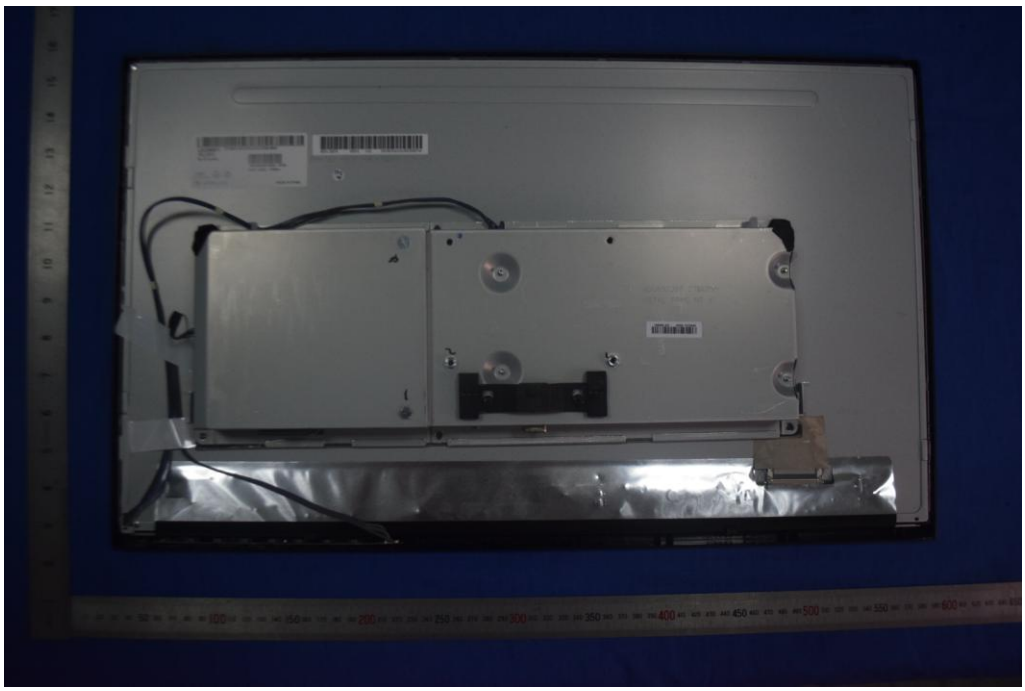
6) EUT Photo



7) EUT Photo

8) EUT Photo

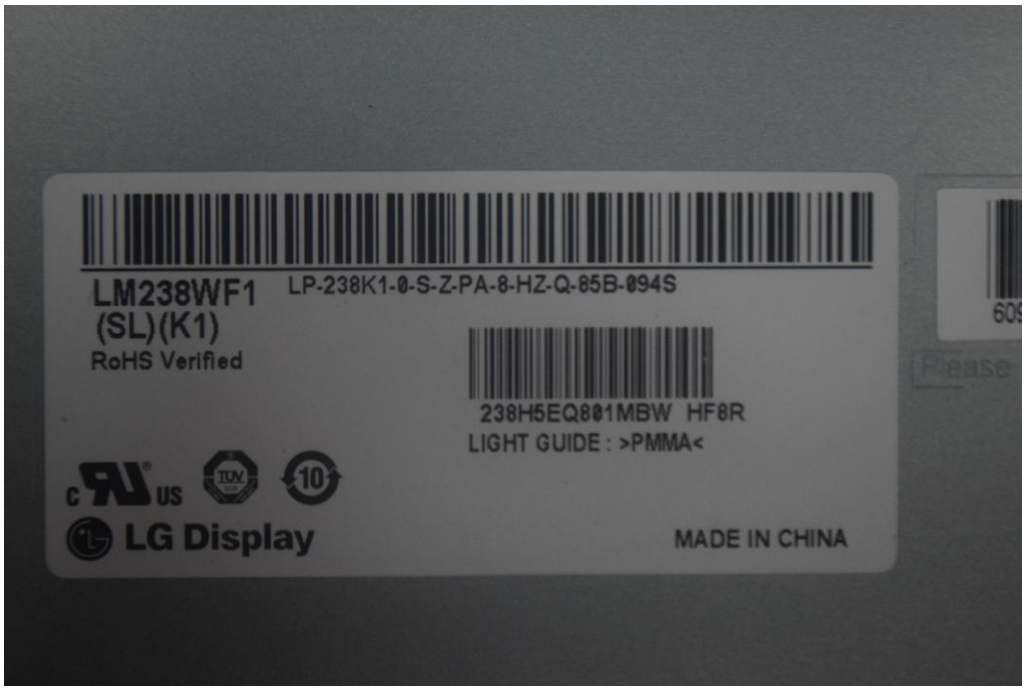
9) EUT Photo



10) EUT Photo

11) EUT Photo

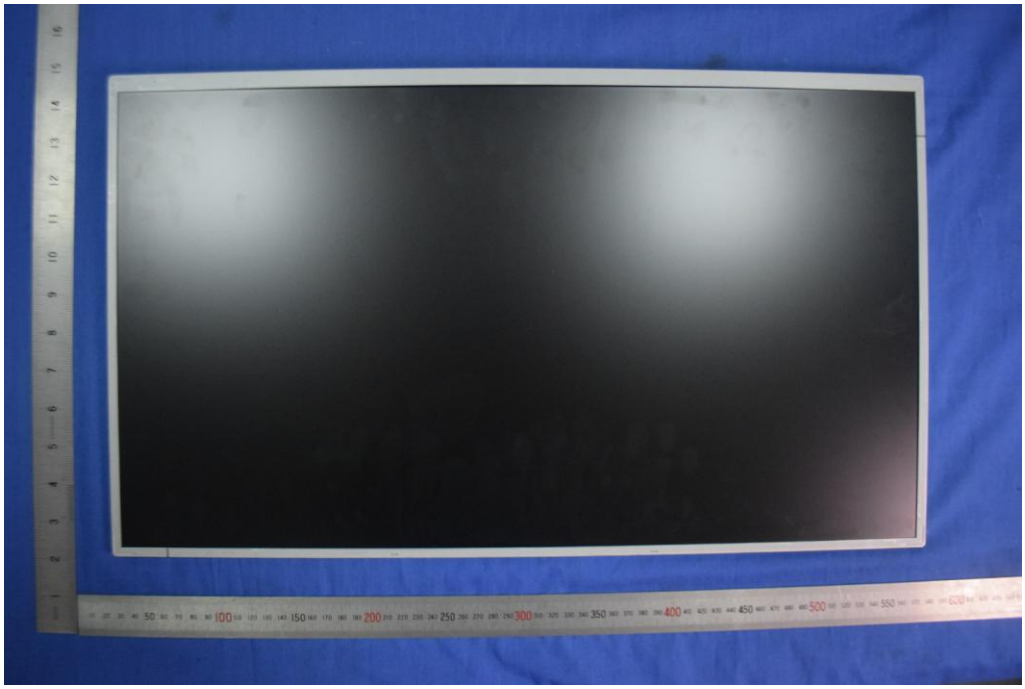
12) EUT Photo



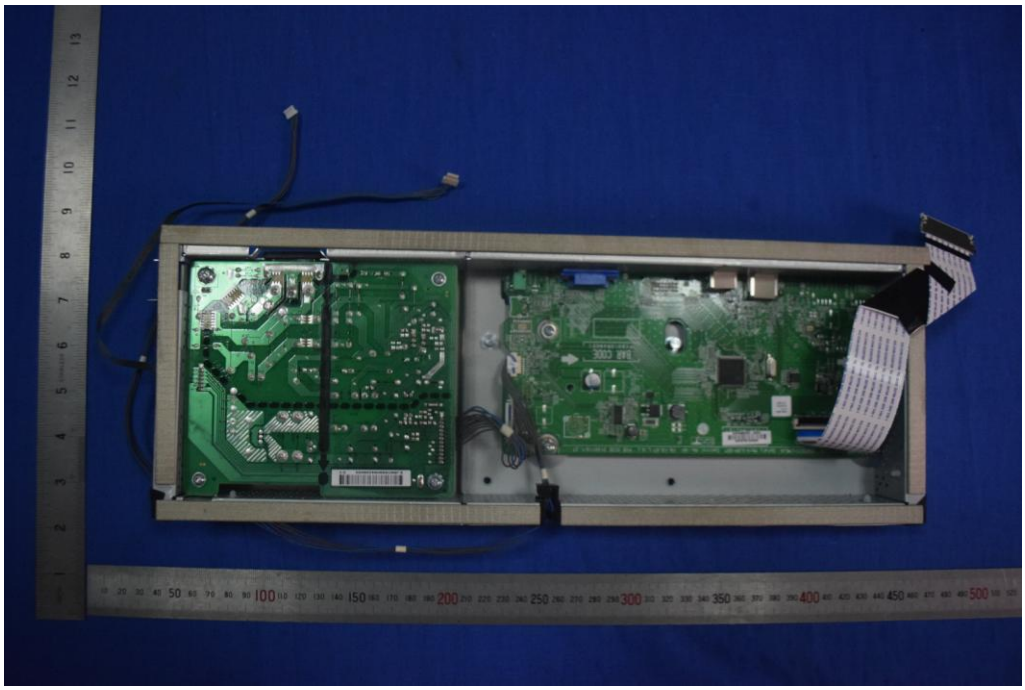
13) EUT Photo

14) EUT Photo

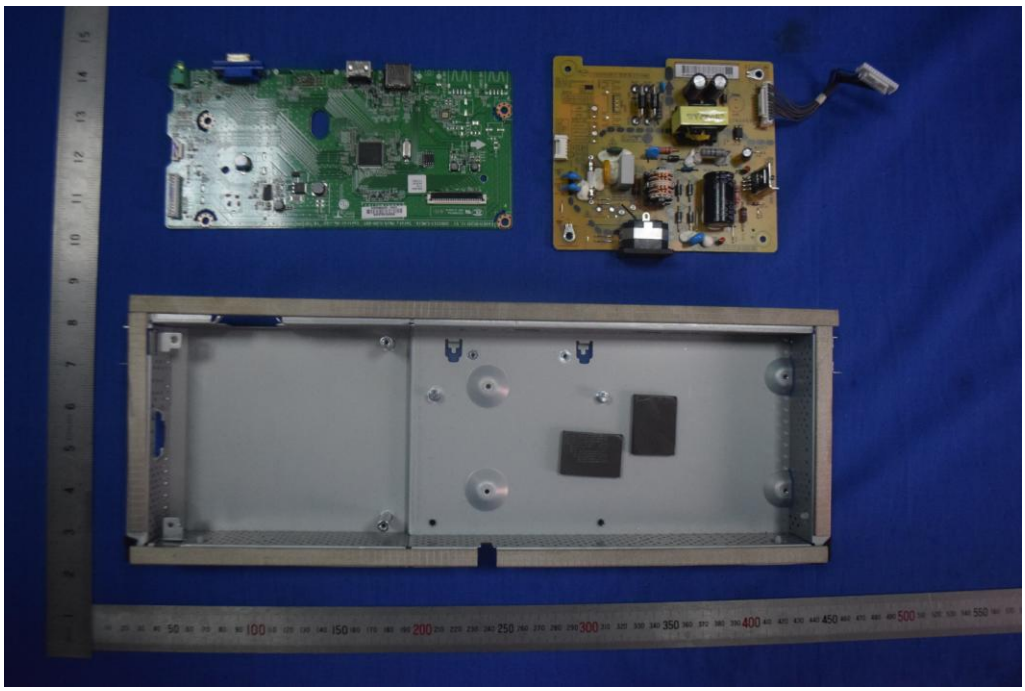
15) EUT Photo



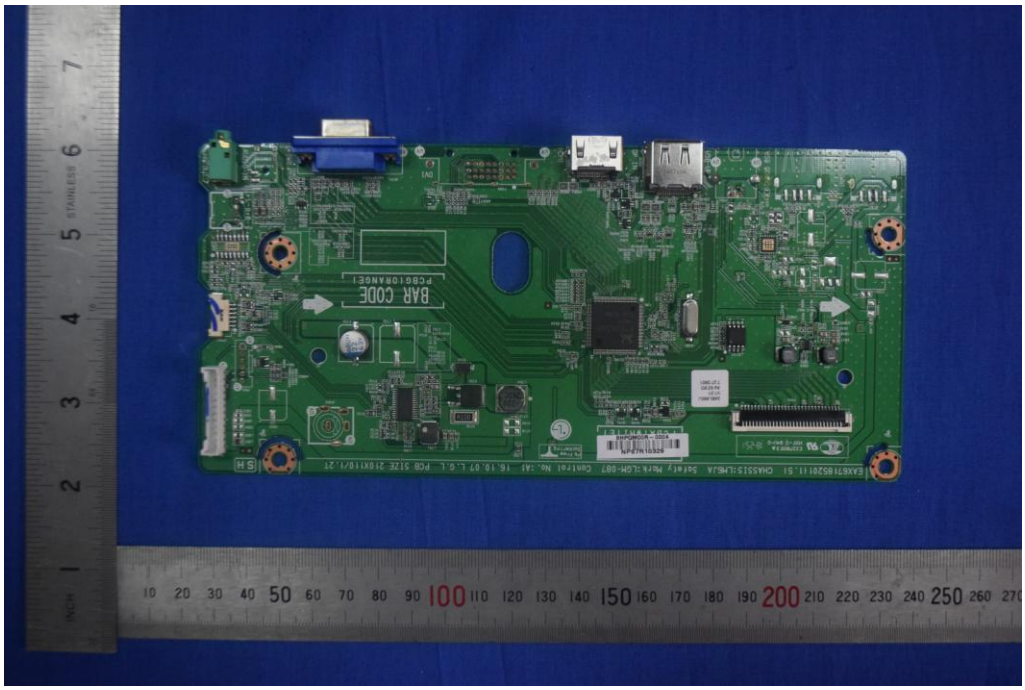
16) EUT Photo



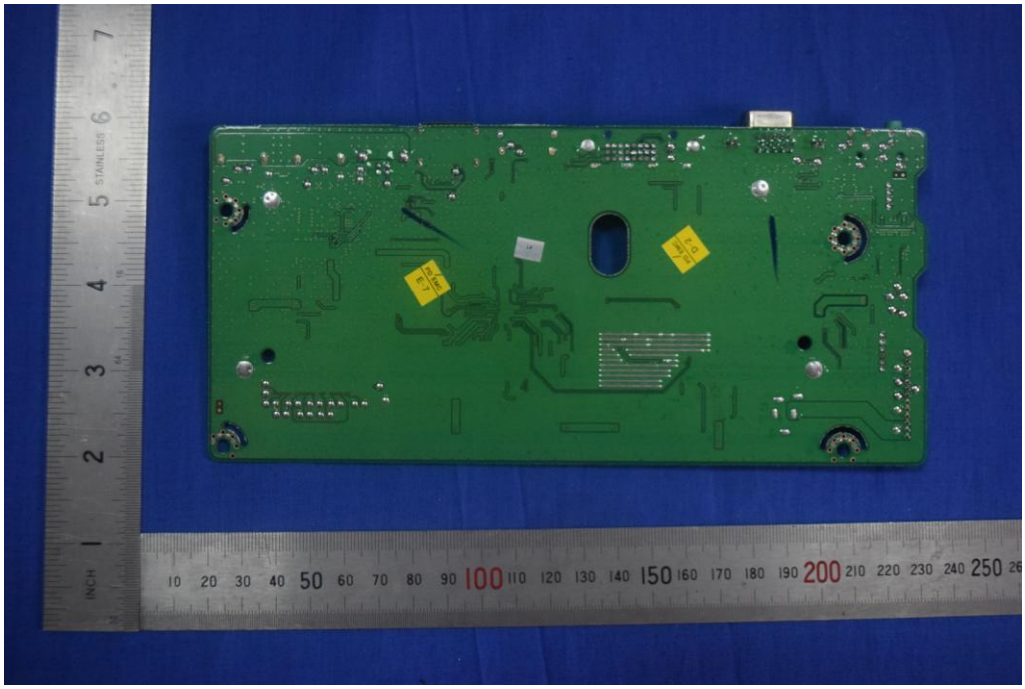
17) EUT Photo



18) EUT Photo



19) EUT Photo



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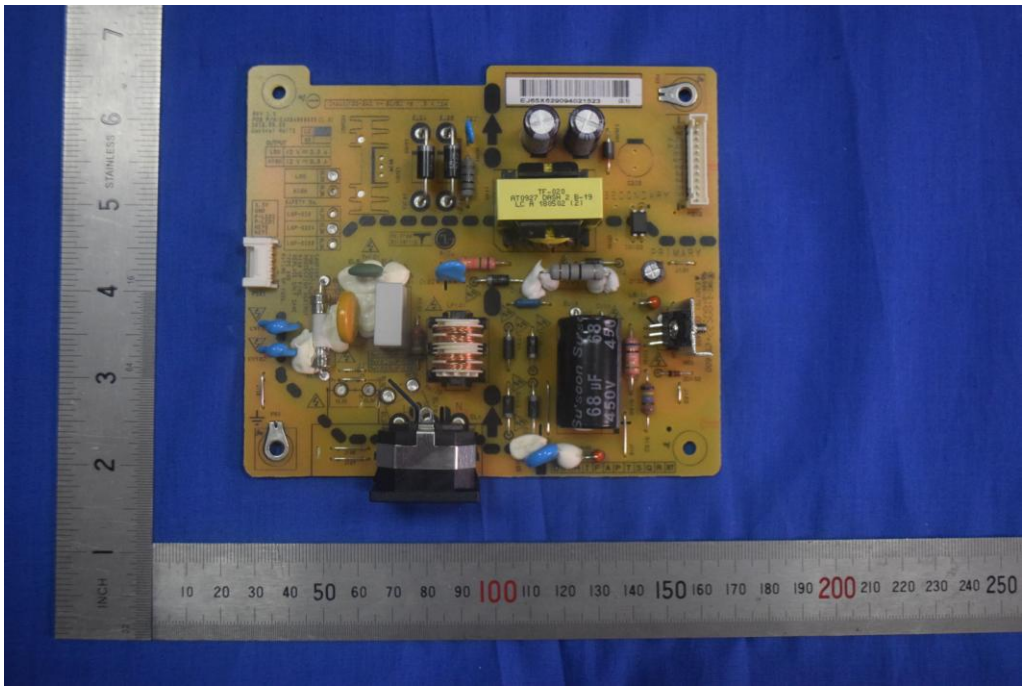
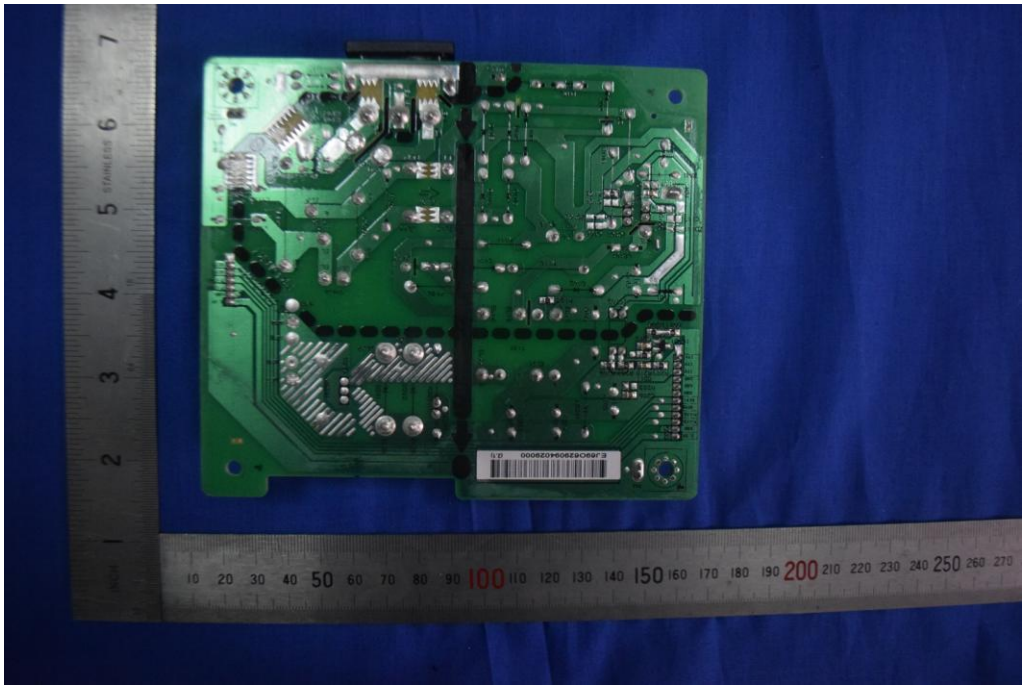
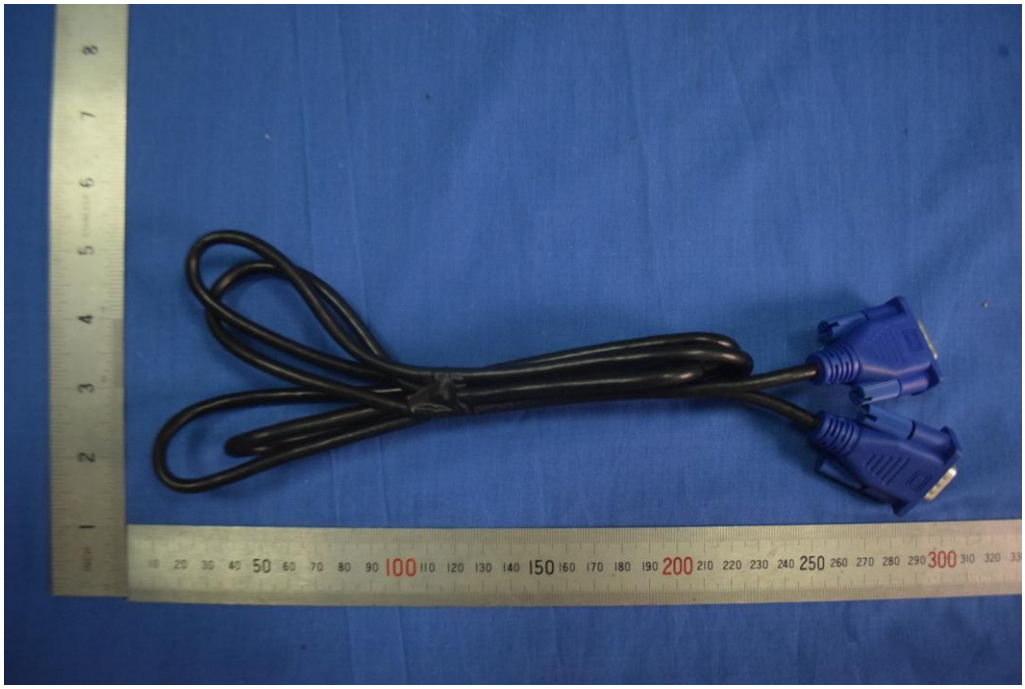


21) EUT Photo



22) EUT Photo

23) EUT Photo



24) EUT Photo

25) EUT Photo

São Paulo, 23 de Dezembro de 2019.

DECLARAÇÃO

A LG Eletronics de São Paulo Ltda, situada a Av. Dom Pedro I número w7777 em Taubaté, SP e inscrita no CNPJ do MF sob número 01.166.372/0001-55, legítima detentora da tecnologia do monitor de vídeo modelo 24BL550J, DECLARA para os fins Pregão Eletrônico 342/2019 da SUPEL – RO que o produto em questão possui 36 (trinta e seis) meses de garantia total contra defeitos de fabricação, com atendimento On-Site. Declara também que os equipamentos não são descontinuados ou estão em fase final de produção.

Informamos ainda que os procedimentos para o atendimento das garantias referentes a este processo/contrato deverão ser tratados diretamente com nosso Distribuidor oficial Fagundez Distribuição LTDA e a verificação de garantia pode ser realizada através do site "https://www.ntccomputadores.com.br/garantia.php" assim como a abertura dos chamados será através do site "https://www.ntccomputadores.com.br/rt".

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E-mail: rodrigo.soletti@lge.com

CERTIFICATE OF CONFORMITY

This Certificate indicates that the Applicant has satisfied the Intertek requirements for the application of the EPA ENERGY STAR Mark to the model(s) described in the Product(s) Covered section of the referenced Compliance Report when made in accordance with the conditions set forth in the Energy Efficiency Certification Agreement, the Certification Report and the Program Manual. This certificate is issued subject to the Applicant attaining, and remaining in, compliance with any separate EPA ENERGY STAR Program requirements necessary for use of the ENERGY STAR Mark. This document is the property of Intertek Testing Services and is not transferable.

Company:	LG Electronics, Inc.	**OEM name:**	LG Electronics, Inc.
Address:	No.346,Yaoxin Road Economic & Technical Development Zone Nanjing Jiangsu	**Address:**	No.346,Yaoxin Road Economic & Technical Development Zone Nanjing Jiangsu
Country:	China	**Country:**	China
Contact:	Xu Chunhua	**Contact:**	Xu Chunhua
Phone:	025-85575570-8215	**Phone:**	025-85575570-8215
FAX:	025-85802789	**FAX:**	025-85802789
Email:	chunhua.xu@lge.com	**Email:**	chunhua.xu@lge.com

3rd-party Report Issuing Office: Intertek Testing Services Shanghai

Control Number: *4007364* **Authorized by:** for Dean Davidson, Certification Manager

This document supersedes all previous Certificate of Conformity for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672
www.intertek.com

Standard(s):	ENERGY STAR® Program Requirements for Displays Version 7.0
Product:	Display (LCD Monitor)
Models:	24BK550Y-B(24BK550Y);24BK550Y-W(24BK550Y);24BK550Y-I(24BK550Y),24BL550J-B(24BL550J)

ATTESTATION OF CONFORMITY

Attestation No.:	*SEFD1807072-B*
Applicant / Holder:	*LG Electronics USA*
Address:	*1000 Sylvan Avenue Englewood Cliffs New Jersey United States*
Product / Test Item:	*LCD Monitor*
Model / Type Reference:	*24BK550##, 24BL550##* *(The symbol "#" in the model name can be any alphanumeric character or blank)*

The submitted sample(s) have been tested with the following standard(s) and found to be in compliance with the essential requirements:

Standard(s)

Applicable to ANSI C63.4 – 2014
(The Information Technology Equipment)
That this product has been assessed against the following Applicable Standards
CISPR PUB. 22, FCC Part 15 Subpart B and ICES 003 Issue 6

The measurements shown in this test report may issue a Supplier's Declaration of Conformity and apply the FCC mark.

Miro Chueh EMC/RF B.U. Manager
2018-08-24

Cerpass Technology Corporation

- Cerpass Technology (Suzhou) Co.,Ltd
  No.66, Tangzhuang Rd., Suzhou Industrial Park, Jiangsu 215006, China

EMC TEST REPORT

According to

47 CFR, Part 15B, CISPR PUB. 22
ICES-003 issue 6

Applicant	:	LG Electronics USA
Address	:	1000 Sylvan Avenue Englewood Cliffs New Jersey United States
Equipment	:	LCD Monitor
Model No.	:	24BK550##, 24BL550## (The symbol "**#**" in the model name can be any alphanumeric character or blank)

I HEREBY CERTIFY THAT :

The sample was received on Aug.18, 2018 and the testing was carried out on Aug. 18, 2018 at *Cerpass Technology (Suzhou) Co.,Ltd*. The test result refers exclusively to the test presented test model / sample. Without written approval of *Cerpass Technology (Suzhou) Co.,Ltd*, the test report shall not be reproduced except in full.

Approved by:

Miro Chueh
EMC/RF B.U. Manager

EMC TEST REPORT

Issued by:

Cerpass Technology (Suzhou) Co.,Ltd

No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China

Tel:+86-512-6917-5888

Fax:+86-512-6917-5666

The test record, data evaluation & Equipment. Under Test configurations represented herein are true and accurate accounts of the measurements of the samples EMC characteristics under the conditions specified in this report.

Contents

History of this test report

Report No.	Issue Date	Description
TEFD1611200	Nov. 30, 2016	Original
TEFD1612010	Dec. 06, 2016	Second edition: 1. Add Panel: LGM238LC4
TEFD1612010-B	Mar. 29, 2018	Third edition(Update the standard)
SEFD1807072	Jul. 24, 2018	Fourth edition(Add panel:LM238WF1)
SEFD1807072-B	Aug. 21, 2018	Fifth edition(Add a model name:24BL550##)

1. Summary of Test Procedure and Test Result

1.1. Applicable Standards

FCC

The measurements shown in this test report were made in accordance with the procedures given in ANSI C63.4 – 2014 and the energy emitted by this equipment was passed Part 2, Part 15, CISPR PUB. 22.

Canada

The measurements shown in this test report were made in accordance with the procedures given in Canada ICES-003 issue 6 section 3.a and 3.b.

The energy emitted by this equipment was passed both Radiated and Conducted Emissions Class **B** limits.

Test Item	Normative References	Test Result
Conducted Emission	ANSI C63.4-2014, FCC Part 15 Subpart B, KDB17416, Canada ICES-003 issue 6	PASS
Radiated Emission	ANSI C63.4-2014, FCC Part 15 Subpart B, KDB17416, Canada ICES-003 issue 6	PASS

2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Original:

LCD Monitor	Model No.	**24BK550##** (The symbol "#" in the model name can be any alphanumeric character or blank)
	Remark	**24BK550Y** was selected as the test model and its data have been recorded in this report.
	Panel	LG \ LGM238CA41
Power Cable	Non-shielding, 1.5 & 1.8m	
HDMI Cable	Shielded, 1.5 & 1.8m	
VGA Cable	Shielded, 1.5 & 1.8m	
DVI Cable	Shielded, 1.5 & 1.8m	
Display Cable	Shielded, 1.5 & 1.8m	

First edition:

LCD Monitor	Model No.	**24BK550##** (The symbol "#" in the model name can be any alphanumeric character or blank)
	Remark	**24BK550Y** was selected as the test model and its data have been recorded in this report.
	Panel	LG \ LGM238LC4
Power Cable	Non-shielding, 1.5 & 1.8m	
HDMI Cable	Shielded, 1.5 & 1.8m	
VGA Cable	Shielded, 1.5 & 1.8m	
DVI Cable	Shielded, 1.5 & 1.8m	
Display Cable	Shielded, 1.5 & 1.8m	

Fourth edition:

LCD Monitor	Model No.	**24BK550##** (The symbol "#" in the model name can be any alphanumeric character or blank)
	Remark	**24BK550Y** was selected as the test model and its data have been recorded in this report.
	Panel	LG \ LM238WF1
Power Cable	Non-shielding, 1.5 & 1.8m	
HDMI Cable	Shielded, 1.5 & 1.8m	
VGA Cable	Shielded, 1.5 & 1.8m	
DVI Cable	Shielded, 1.5 & 1.8m	
Display Cable	Shielded, 1.5 & 1.8m	

Fifth edition:

LCD Monitor	Model No.	**24BK550##, 24BL550##** (The symbol "#" in the model name can be any alphanumeric character or blank)
	Remark	**24BL550J** was selected as the test model and its data have been recorded in this report.
	Panel	LG \ LM238WF1
Power Cable	Non-shielding, 1.5 & 1.8m	
HDMI Cable	Shielded, 1.5 & 1.8m	
VGA Cable	Shielded, 1.5 & 1.8m	
Display Cable	Shielded, 1.5 & 1.8m	

2.2. Test Manner

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.

b. An executive program, “BURNIN.EXE” under WIN 8, which generates a complete line of continuously repeating “H” pattern was used as the test software.

The program was executed as follows:

1. Turn on the power of all equipment.
2. The PC reads the test program from the hard disk drive and runs it.
3. The PC sends “H” messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
4. The PC sends “H“ messages to the printer.
5. Repeat the steps from 2 to 4.

c. An executive program, “BURNIN.EXE” was executed to play 1kHz signals.

d. An executive program, “BURNIN.EXE” was executed to read and write data from USB3.0 HDD.

e. The complete test system included PC, USB Keyboard, USB Mouse, Earphone and EUT for EMI test.

f. The test modes of EMI test as follow:

Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer
Test Mode 2: Full system (Display mode 1920*1080@60Hz) for Horizontal Signal from Computer
Test Mode 3: Full system (HDMI mode 1920*1080@60Hz) for Horizontal Signal from Computer
Test Mode 4: Full system (VGA mode 1920*1080@60Hz) for Vertical Signal from Computer
Test Mode 5: Full system (VGA mode 1280*1024@75Hz) for Horizontal Signal from Computer
Test Mode 6: Full system (VGA mode 640*480@60Hz) for Horizontal Signal from Computer
Test Mode 7: Full system (HDMI 1080P Mode) Signal from DVD Player

caused “Test Mode 1” generated the worst case, it was reported as the final data.

g. The maximum operating frequency is above 108MHz, the test frequency range is from 30MHz to 18GHz.

2.3. Description of Test System

Device	Manufacturer	Model No.	Description
PC	HP	HP Compaq Elite 8200 MTPC	Non-Shielded ,1.8m(R33001)
USB Keyboard	DELL	SK-8115	T3A002
USB Mouse	DELL	G0K02XYK	R41108
Earphone	EDIFIER	N/A	N/A

Use Cable:

Cable	Quantity	Description
VGA Cable	1	Shielded, 1.5m&1.8m
HDMI Cable	1	Shielded, 1.5m&1.8m
Display Cable	1	Shielded, 1.5m&1.8m
Audio out Cable	1	Non-Shielded, 1.8m
USB Cable	1	Shielded, 1.8m, with one ferrite core bonded
USB Cable	1	Shielded, 1.5m

2.4. General Information of Test

☒Test Site	**Cerpass Technology (Suzhou) Co.,Ltd** Address: No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China Tel: +86-512-6917-5888 Fax: +86-512-6917-5666	
	CNAS	L5515
	IC	7920A-1, 7920A-2
	VCCI	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test G-227 for radiated disturbance above 1GHz

2.5. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Uncertainty
Conducted emissions(LINE)	9KHz-30MHz	+/- 0.7738 dB
Conducted emissions(NEUTRAL)	9KHz-30MHz	+/- 0.7886 dB

Measurement	Polarity	Frequency	Uncertainty
Radiated emissions (below 1GHz)	H	30MHz ~ 200MHz	+/- 3.8909dB
		200MHz ~1000MHz	+/- 3.6555dB
	V	30MHz ~ 200MHz	+/- 3.8948dB
		200MHz ~1000MHz	+/- 3.6538dB
Radiated emissions (above 1GHz)	H	1000MHz ~18000MHz	+/- 3.8948dB
		18000MHz ~40000MHz	+/-3.8844dB
	V	1000MHz ~18000MHz	+/- 3.8906dB
		18000MHz ~40000MHz	+/- 3.8744dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. Test of Conducted Emission

3.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz, according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

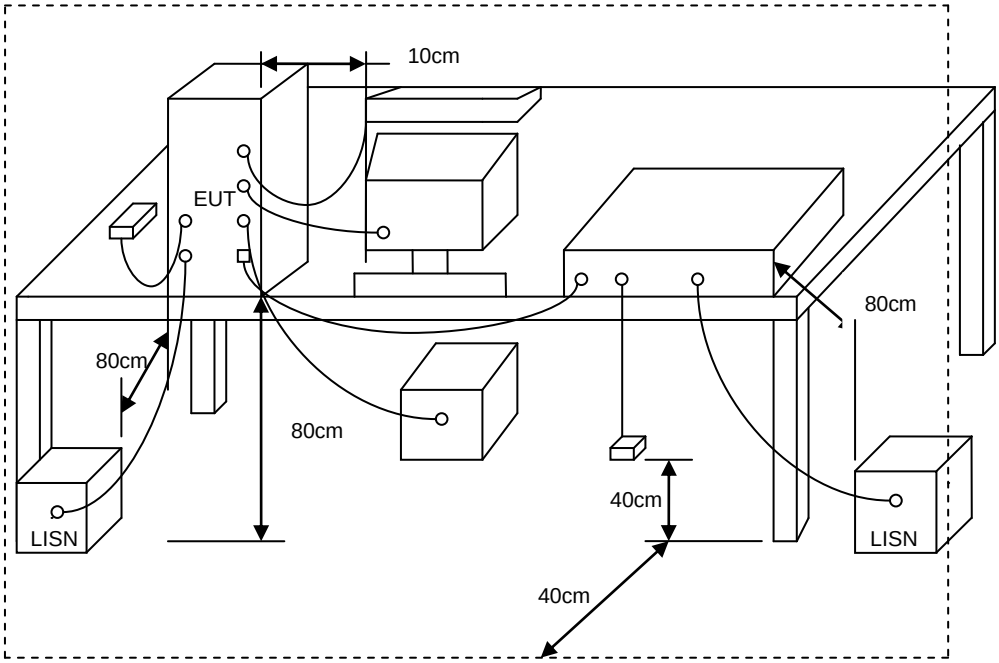
Conducted Emission Limits:

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

3.2. Test Procedures

a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

3.3. Typical test Setup

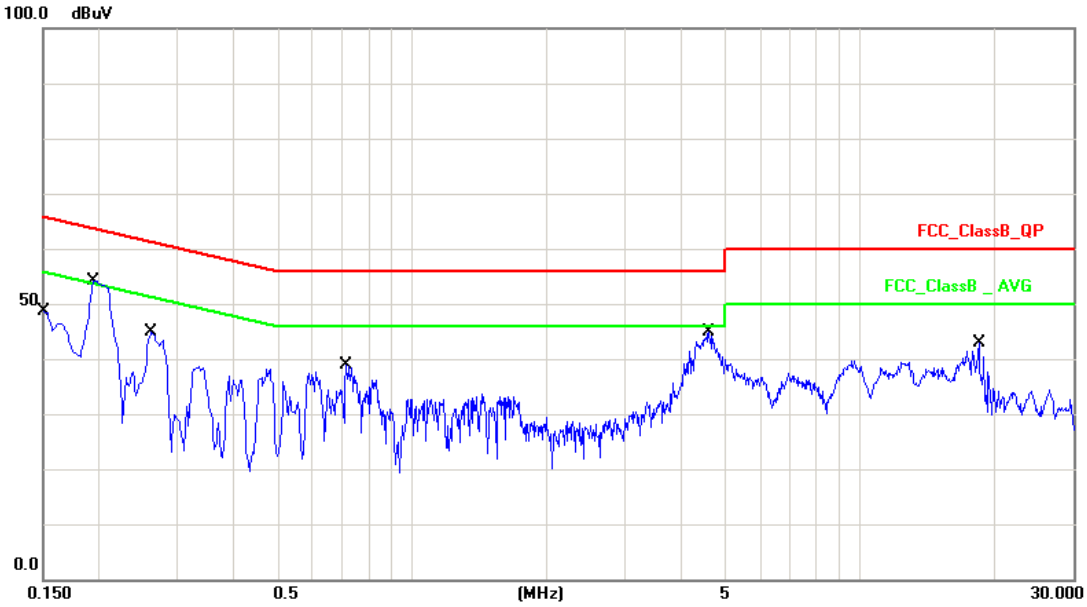


3.4. Measurement Equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Test Receiver	R&S	ESCI	100565	2018.07.18	2019.07.17
AMN	R&S	ESH2-Z5	100182	2017.08.26	2018.08.25
ISN	FCC	FCC-TLISN-T2-02	20379	2018.03.21	2019.03.20
ISN	FCC	FCC-TLISN-T4-02	20380	2018.06.14	2019.06.13
ISN	FCC	FCC-TLISN-T8-02	20381	2017.11.29	2018.11.28
ISN	TESEQ	ISN ST08	30175	2017.08.26	2018.08.25
ISN	TESEQ	ISN S751	31531	2017.10.17	2018.10.16
LISN	FCC	FCC-LISN-50-200-2-02	112087	2017.08.26	2018.08.25
LISN	SCHWARZBECK	NSLK 8127	8127-920	2017.11.08	2018.11.07
LISN	R&S	ENV216	100325	2017.12.12	2018.12.11
Current Probe	R&S	EZ-17	100303	2018.03.21	2019.03.20
Passive Voltage Probe	R&S	ESH2-Z3	100026	2018.03.21	2019.03.20
Pulse Limiter	R&S	ESH3-Z2	100529	2018.03.21	2019.03.20
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2018.03.23	2019.03.22
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A

3.5. Test Result and Data

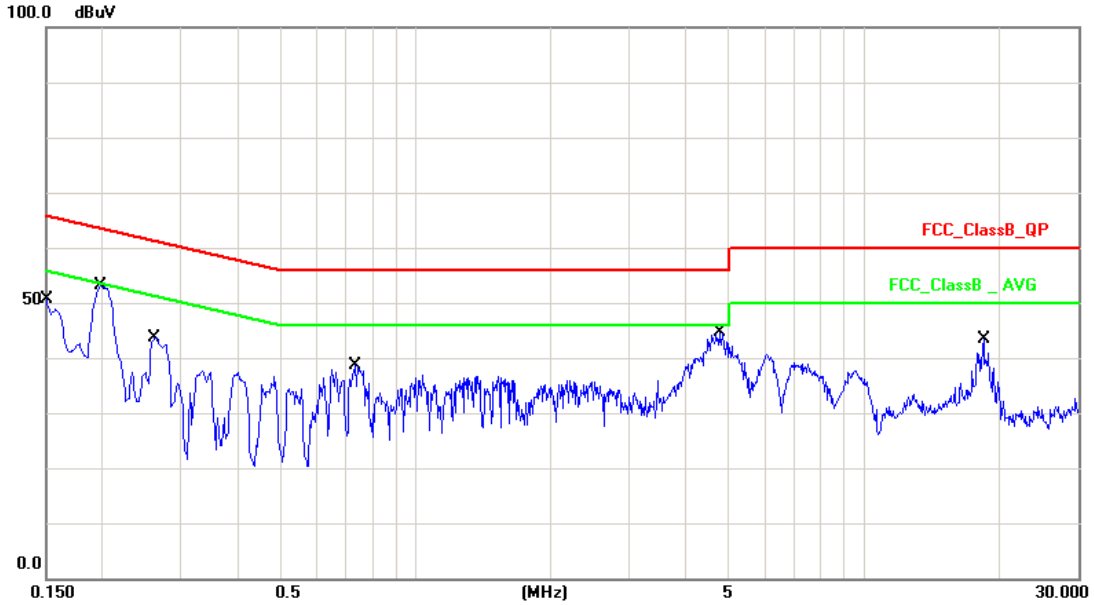
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer		
AC Power :	AC 120V/60Hz	Phase :	LINE
Temperature :	24˚C	Humidity :	53%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.06	31.80	41.86	65.99	-24.13	QP
2	0.1500	10.06	11.65	21.71	55.99	-34.28	AVG
3	0.1940	10.06	41.19	51.25	63.86	-12.61	QP
4	0.1940	10.06	25.05	35.11	53.86	-18.75	AVG
5	0.2620	10.07	32.45	42.52	61.36	-18.84	QP
6	0.2620	10.07	18.73	28.80	51.36	-22.56	AVG
7	0.7140	10.11	27.15	37.26	56.00	-18.74	QP
8	0.7140	10.11	13.31	23.42	46.00	-22.58	AVG
9	4.6180	10.31	30.33	40.64	56.00	-15.36	QP
10	4.6180	10.31	14.59	24.90	46.00	-21.10	AVG
11	18.4340	10.76	25.99	36.75	60.00	-23.25	QP
12	18.4340	10.76	19.09	29.85	50.00	-20.15	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Temperature :	24°C	Humidity :	53%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.06	31.60	41.66	65.99	-24.33	QP
2	0.1500	10.06	10.94	21.00	55.99	-34.99	AVG
3	0.1980	10.06	41.20	51.26	63.69	-12.43	QP
4	0.1980	10.06	26.77	36.83	53.69	-16.86	AVG
5	0.2620	10.07	31.75	41.82	61.36	-19.54	QP
6	0.2620	10.07	17.68	27.75	51.36	-23.61	AVG
7	0.7340	10.11	27.17	37.28	56.00	-18.72	QP
8	0.7340	10.11	13.64	23.75	46.00	-22.25	AVG
9	4.7580	10.32	29.66	39.98	56.00	-16.02	QP
10	4.7580	10.32	17.00	27.32	46.00	-18.68	AVG
11	18.4300	10.76	26.68	37.44	60.00	-22.56	QP
12	18.4300	10.76	20.40	31.16	50.00	-18.84	AVG

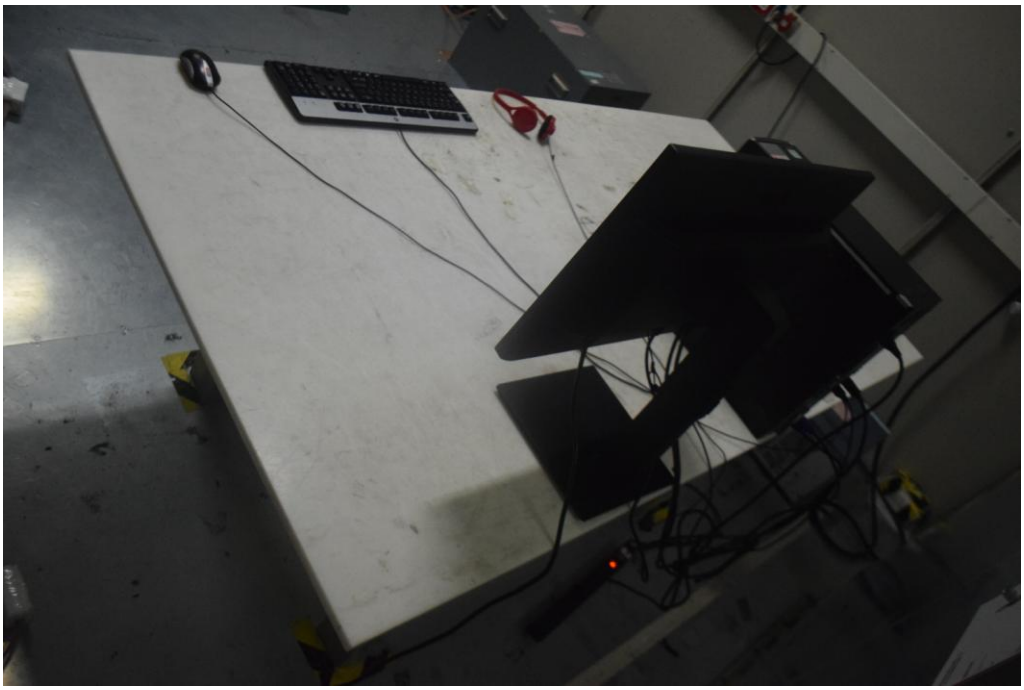
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Gilbert Chen

3.6. Test Photographs

Front View

Rear View



4. Test of Radiated Emission

4.1. Test Limit

Below 1GHz (for digital device)

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

FREQUENCY (MHz)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Limit tables for non-digital device:

Class A Radiated Emission limit at 10m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	90	39
88 - 216	150	43.5
216 – 960	210	46.4
Above 960	300	49.5

Class B Radiated Emission limit at 3m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	100	40
88 - 216	150	43.5
216 – 960	200	46
Above 960	500	54

Above 1GHz(for all device)

Frequency (MHZ)	Class A (dBuV/m) (At 10m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 1000	49.5	69.5	54	74

NOTE: (1) The lower limit shall apply at the transition frequencies.
(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
(3) The measurement above 1GHz is at close-in distances 3m,and determine the limit L2 corresponding to the close-in distance d2 by applying the following relation: L2 = L1 (d1/d2), where L1 is the specified limit in microvolts per metre (uV/m) at the distance d1 (10m), L2 is the new limit for distance d2 (3m).
So the new Class A limit above 1GHz at 3m is as following table:

Frequency (MHZ)	Class A (dBuV/m) (At 3m)	
	Average	Peak
Above 1000	60	80

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5^{th} harmonic of the highest frequency or 40GHz, whichever is lower

4.2. Test Procedures

Procedure of Preliminary Test

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a 15 cm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC 120VAC/60Hz power source from the outlet socket under the turntable. All support equipment power received from another socket under the turntable.
- The antenna was placed at 3 or 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 40GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

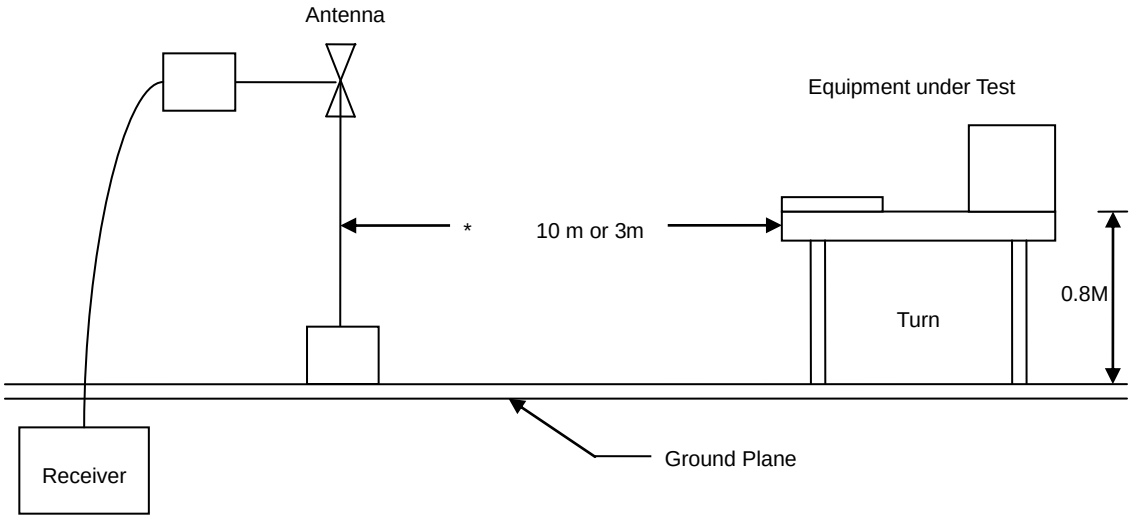
- Set the spectrum analyzer/ Receiver in the following setting as:
  Below 1GHz:
  RBW=120KHz / VBW=300KHz / Sweep=AUTO
  Above 1GHz:
  Peak: RBW=1MHz, VBW=3MHz / Sweep=AUTO
  Average: RBW=1MHz / VBW=1.6Hz / Sweep=AUTO
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

Procedure of Final Test

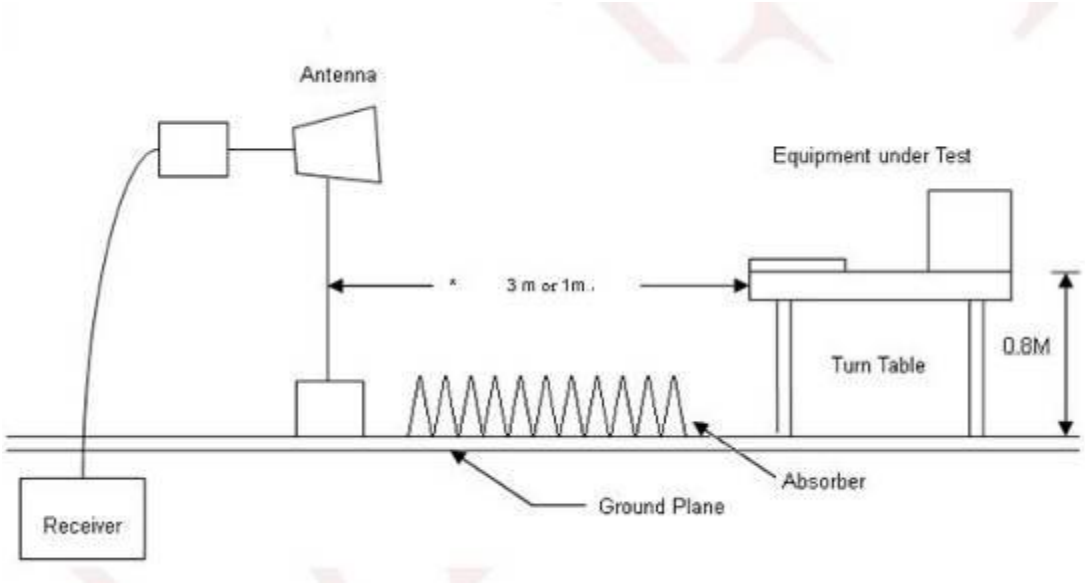
- EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 40GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 or 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recording at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. Below 1GHz the Q.P. reading and above 1GHz the Peak and Average reading are presented.
- The test data of the worst-case condition(s) was recorded.

4.3. Typical test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup

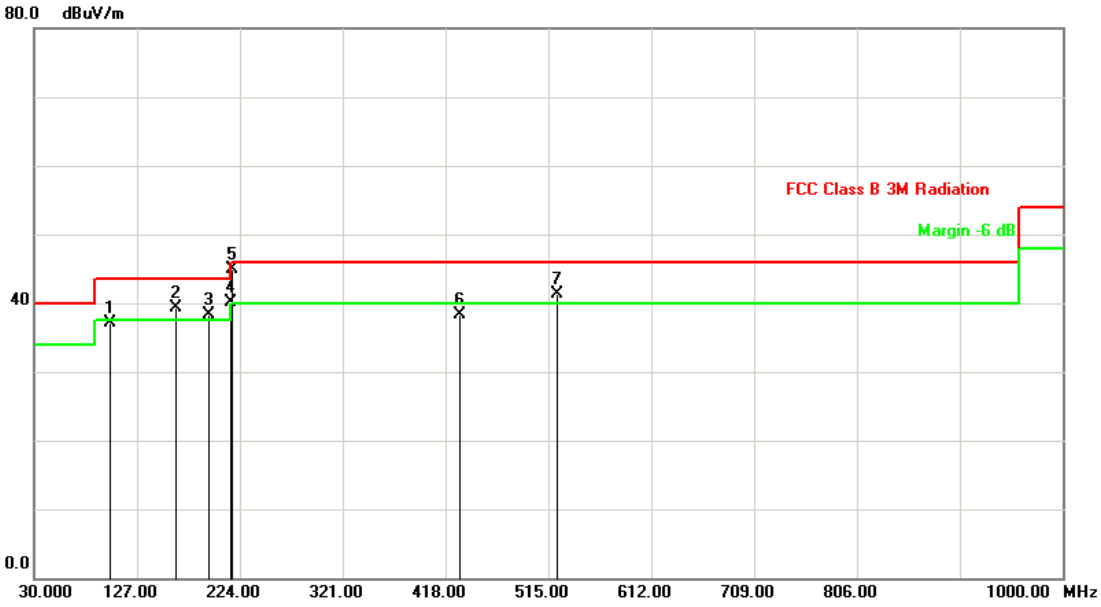


4.4. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI	101183	2018.07.05	2019.07.04
Preamplifier	songyi	EM330	60618	2018.03.21	2019.03.20
Preamplifier	HP	8447F	3113A05582	2018.03.21	2019.03.20
Preamplifier	Agilent	8449B	3008A02342	2018.03.21	2019.03.20
Bilog Antenna	Sunol Science	JB1	A072414-1	2018.07.07	2019.07.06
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-618	2018.04.21	2019.04.20
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2018.07.07	2019.07.06
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-348	2018.06.05	2019.06.04
Preamplifier	COM-POWER	PA-840	711885	2018.03.21	2019.03.20
Spectrum Analyzer	R&S	FSP40	100324	2017.11.02	2018.11.01
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2018.03.23	2019.03.22
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A

4.5. Test Result and Data (30MHz ~ 1GHz)

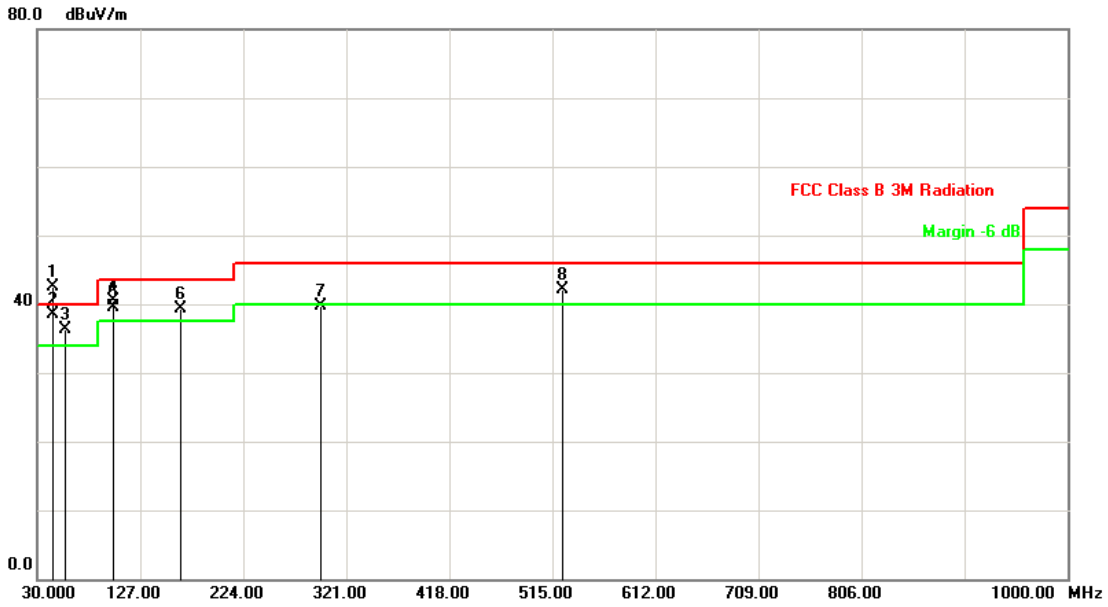
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	101.7800	-12.79	49.93	37.14	43.50	-6.36	peak	100	312
2	163.8600	-12.51	51.80	39.29	43.50	-4.21	peak	200	1
3	194.9000	-12.49	50.79	38.30	43.50	-5.20	peak	183	360
4	216.0400	-12.24	52.39	40.15	46.00	-5.85	QP	200	184
5	216.2400	-12.23	57.17	44.94	46.00	-1.06	peak	200	198
6	431.5799	-4.51	42.89	38.38	46.00	-7.62	peak	100	42
7	523.7300	-4.36	45.57	41.21	46.00	-4.79	peak	200	325

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18

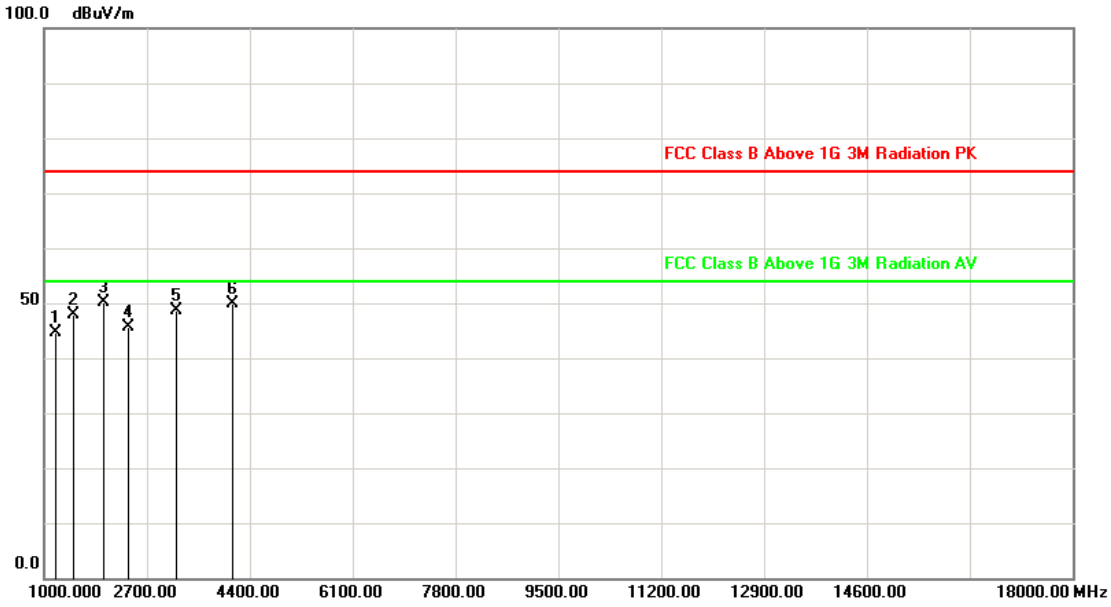


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	44.5500	-8.40	50.92	42.52	40.00	2.52	peak	200	114
2	44.8500	-8.54	47.07	38.53	40.00	-1.47	QP	200	85
3	56.1900	-12.02	48.32	36.30	40.00	-3.70	peak	200	65
4	101.7800	-12.79	53.32	40.53	43.50	-2.97	peak	200	297
5	102.3700	-12.79	52.27	39.48	43.50	-4.02	QP	200	193
6	164.8300	-12.52	51.83	39.31	43.50	-4.19	peak	200	219
7	296.7500	-8.39	48.07	39.68	46.00	-6.32	peak	107	360
8	524.7000	-4.34	46.44	42.10	46.00	-3.90	peak	200	22

Note: Measurement Level = Reading Level + Correct Factor

4.6. Test Result and Data (1GHz ~ 18GHz)

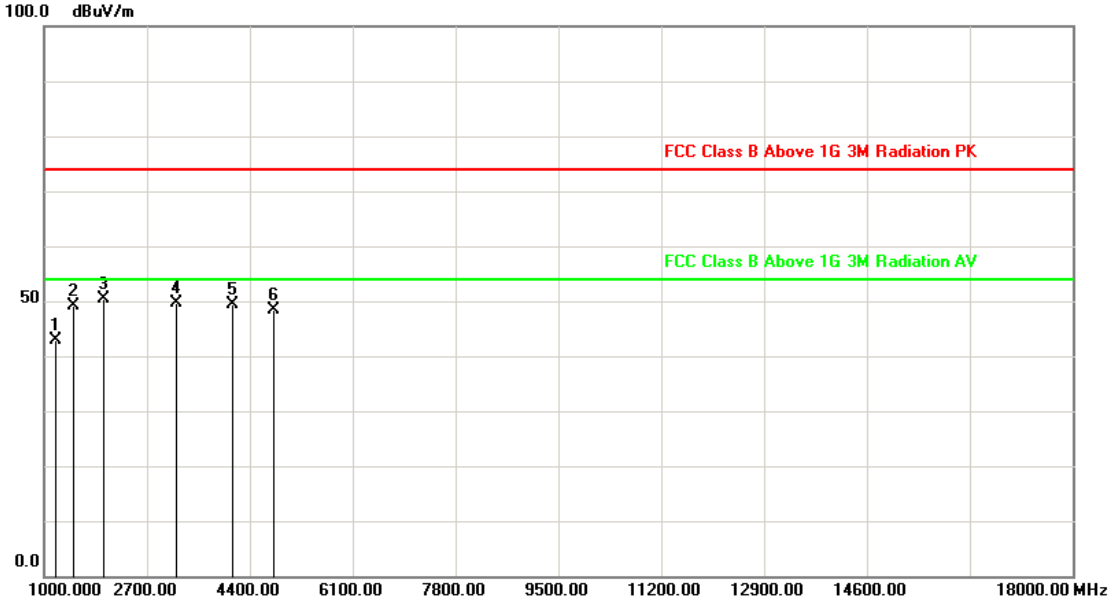
Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1187.000	-8.27	52.85	44.58	74.00	-29.42	peak	100	168
2	1476.000	-5.96	53.89	47.93	74.00	-26.07	peak	200	259
3	1986.000	-3.76	53.83	50.07	74.00	-23.93	peak	200	164
4	2394.000	-2.23	47.82	45.59	74.00	-28.41	peak	100	207
5	3193.000	-0.15	48.72	48.57	74.00	-25.43	peak	200	54
6	4111.000	3.29	46.49	49.78	74.00	-24.22	peak	100	128

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Test Mode 1: Full system (VGA mode 1920*1080@60Hz) for Horizontal Signal from Computer		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Temp :	25°C	Humidity :	52%
Pressure(mbar) :	1002	Date:	2018.8.18



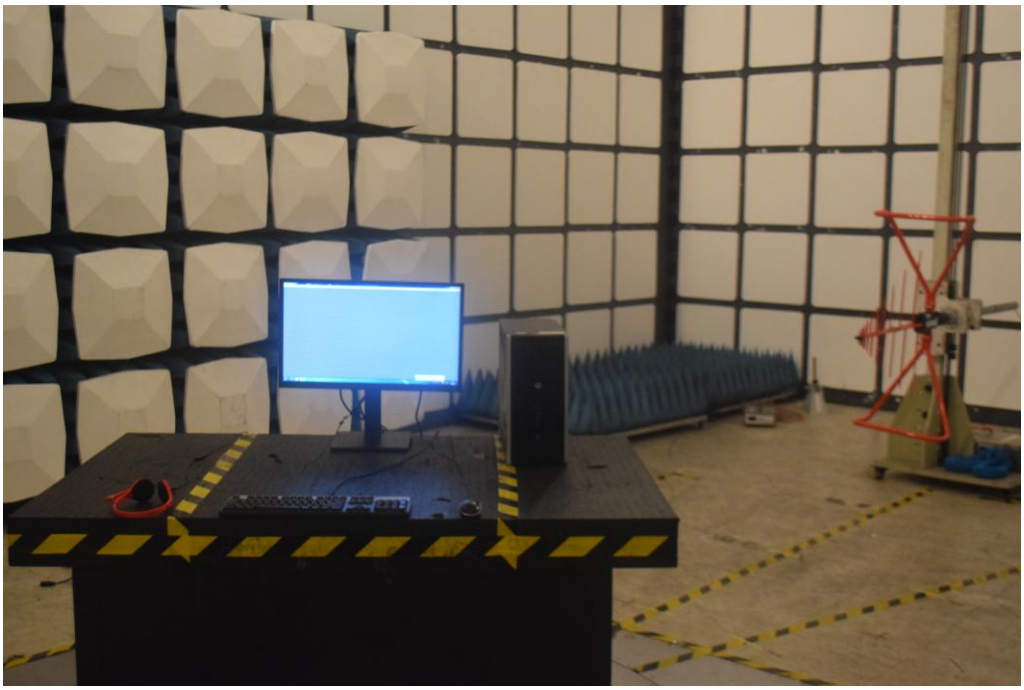
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1187.000	-8.27	51.27	43.00	74.00	-31.00	peak	100	325
2	1476.000	-5.96	55.01	49.05	74.00	-24.95	peak	200	64
3	1986.000	-3.76	54.26	50.50	74.00	-23.50	peak	100	201
4	3193.000	-0.15	49.66	49.51	74.00	-24.49	peak	100	25
5	4111.000	3.29	46.03	49.32	74.00	-24.68	peak	200	206
6	4791.000	3.26	45.24	48.50	74.00	-25.50	peak	100	14

Note: Measurement Level = Reading Level + Correct Factor

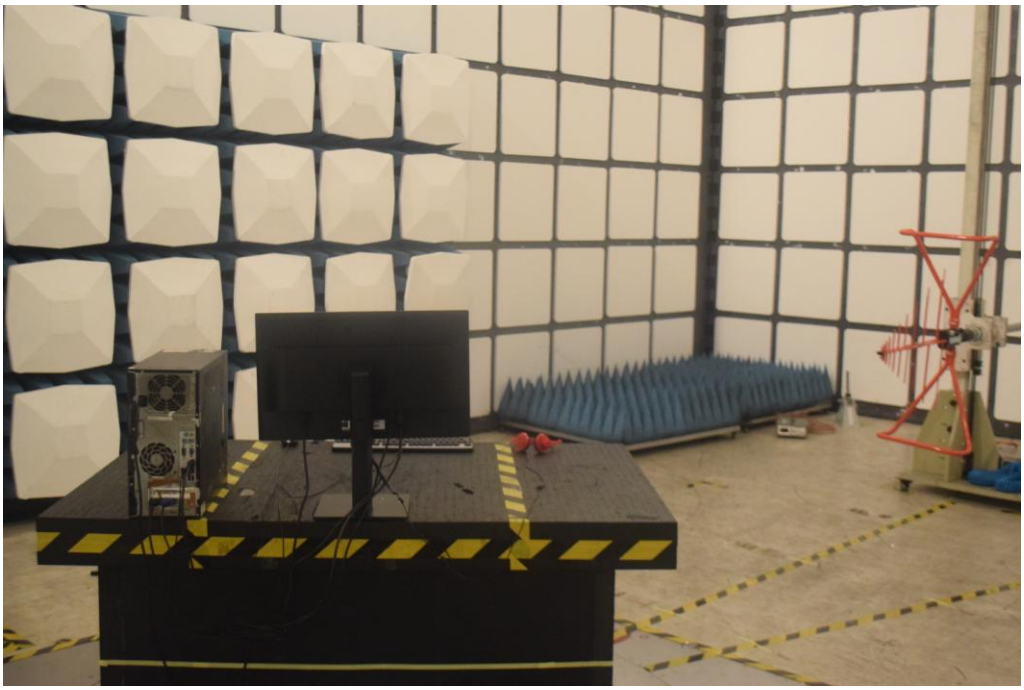
Test engineer: Gilbert Chen

4.7. Test Photographs (30MHz ~ 1GHz)

Front View

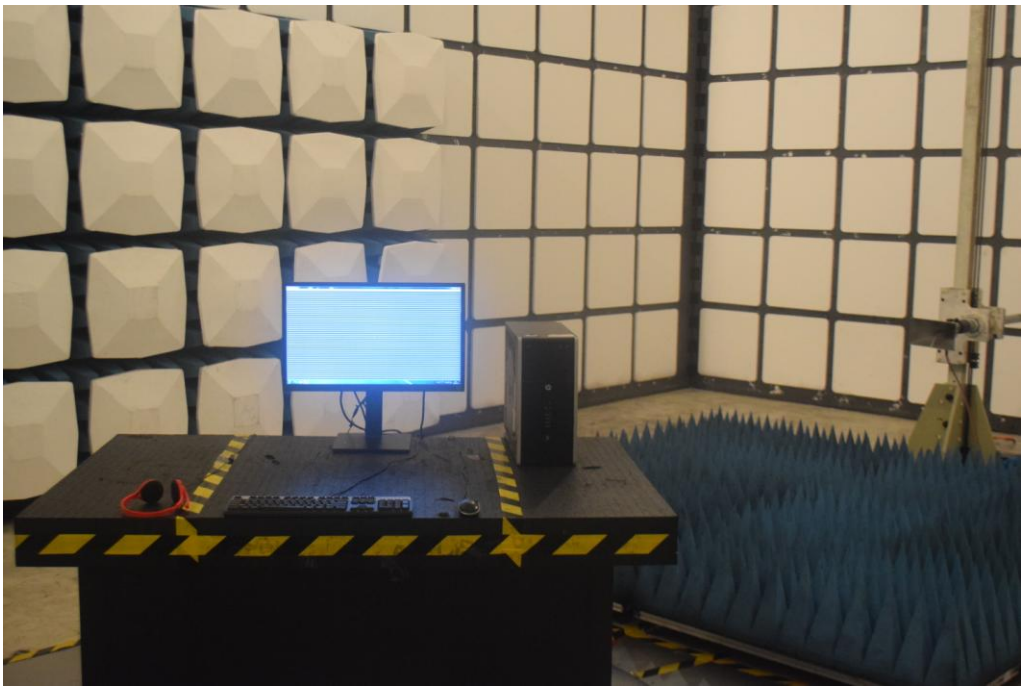


Rear View

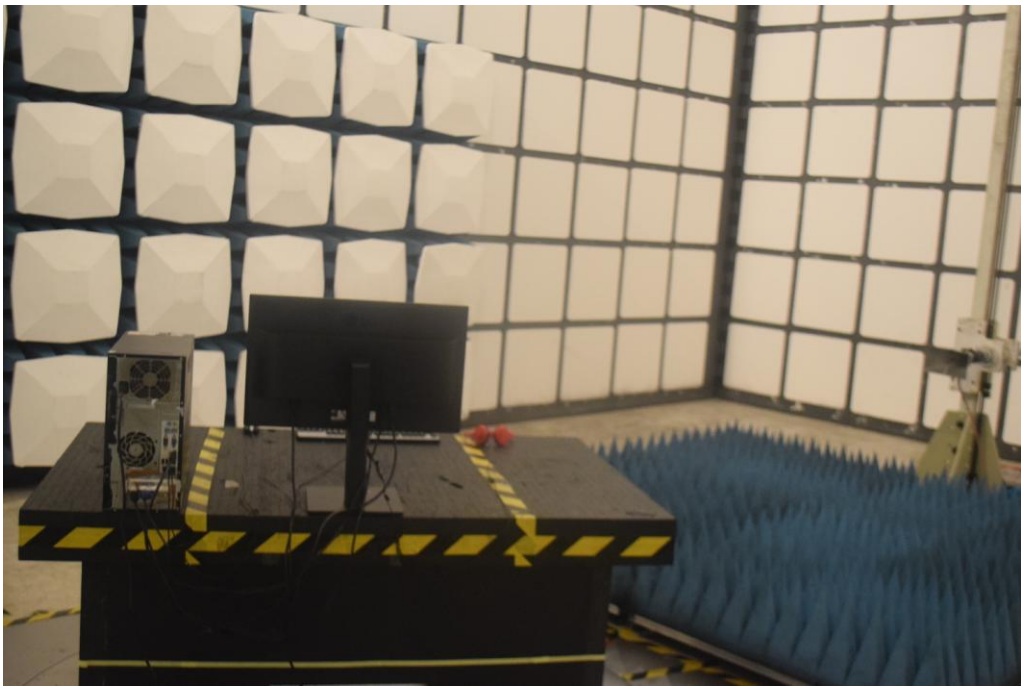


4.8. Test Photographs (1GHz ~ 18GHz)

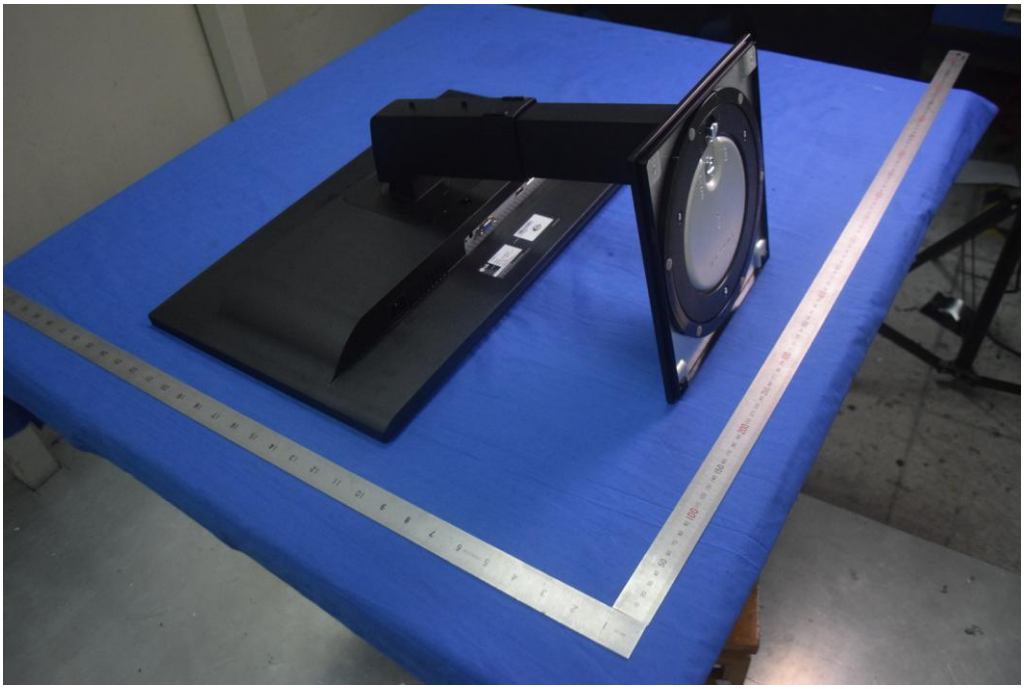
Front View



Rear View

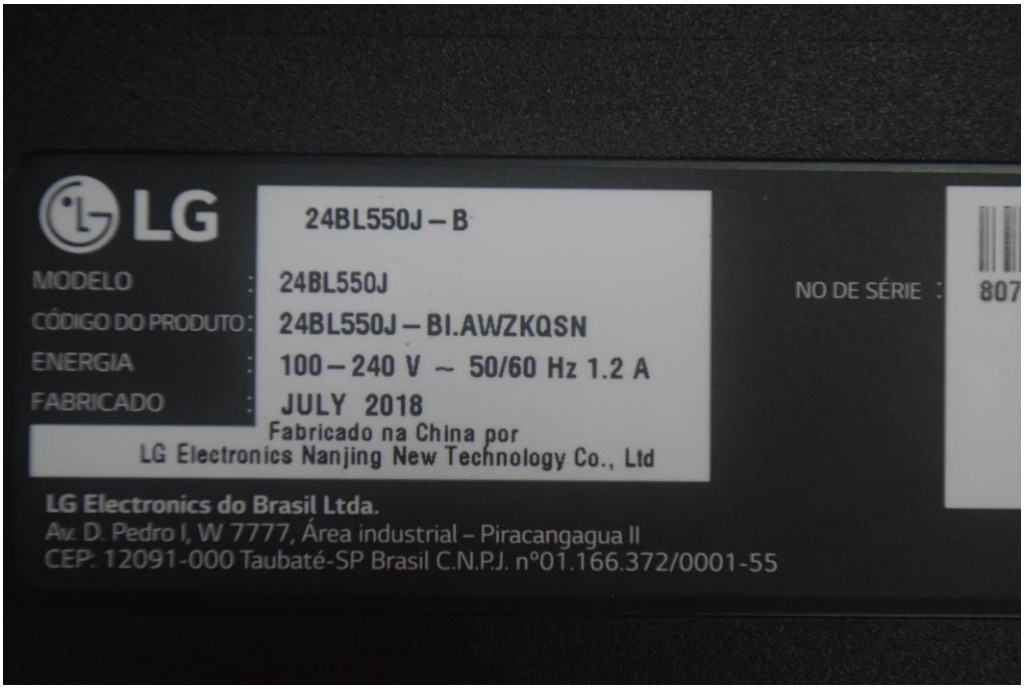


5. EUT Photographs

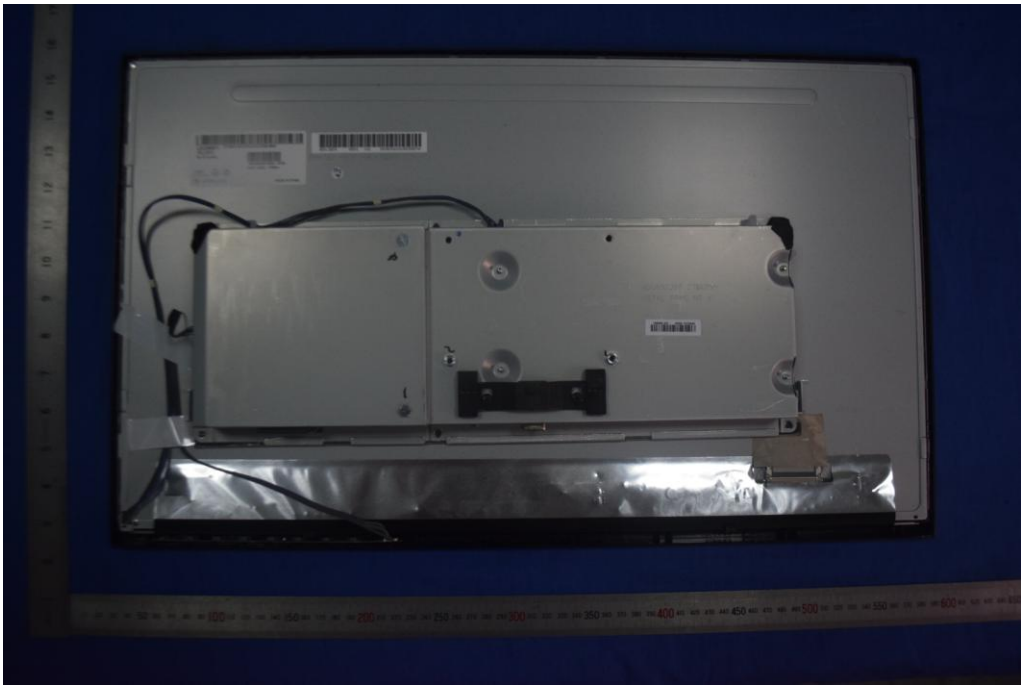


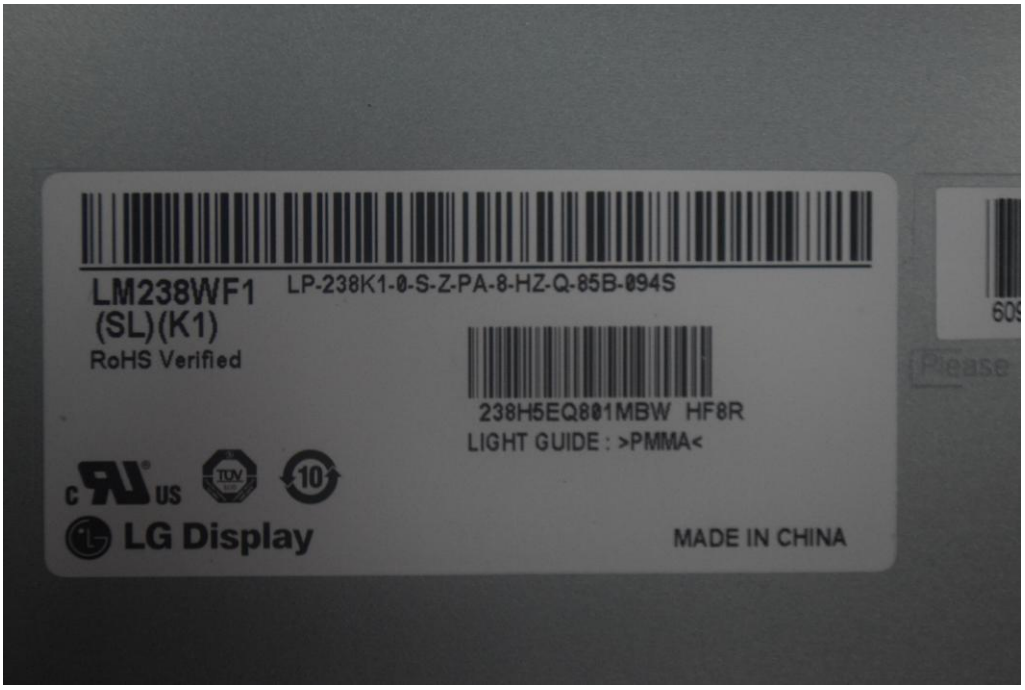

INPUT

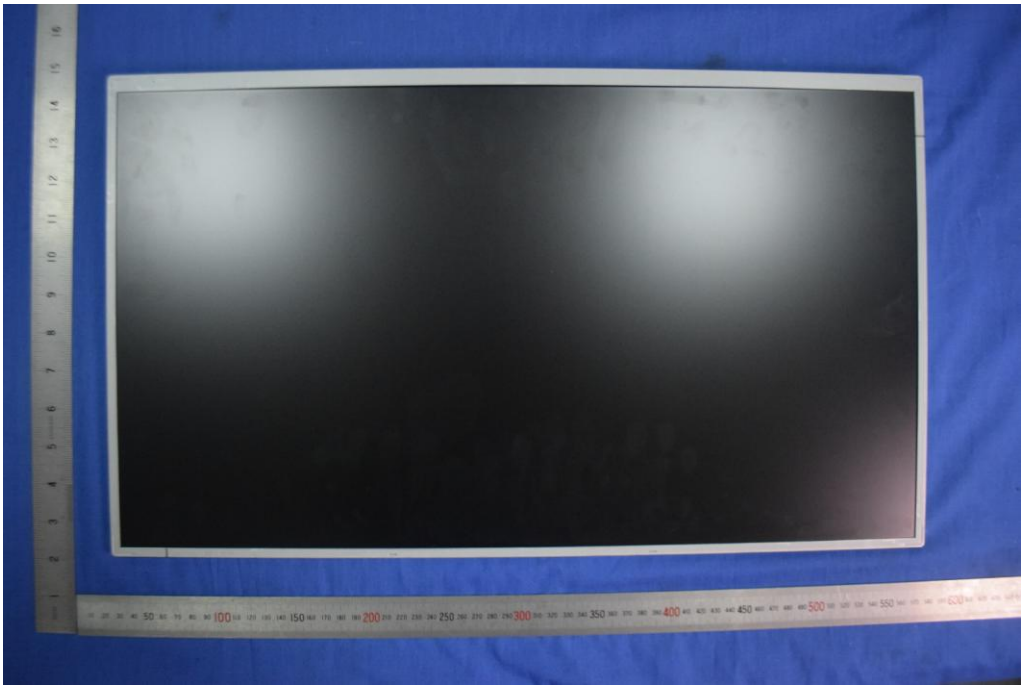

AC-IN

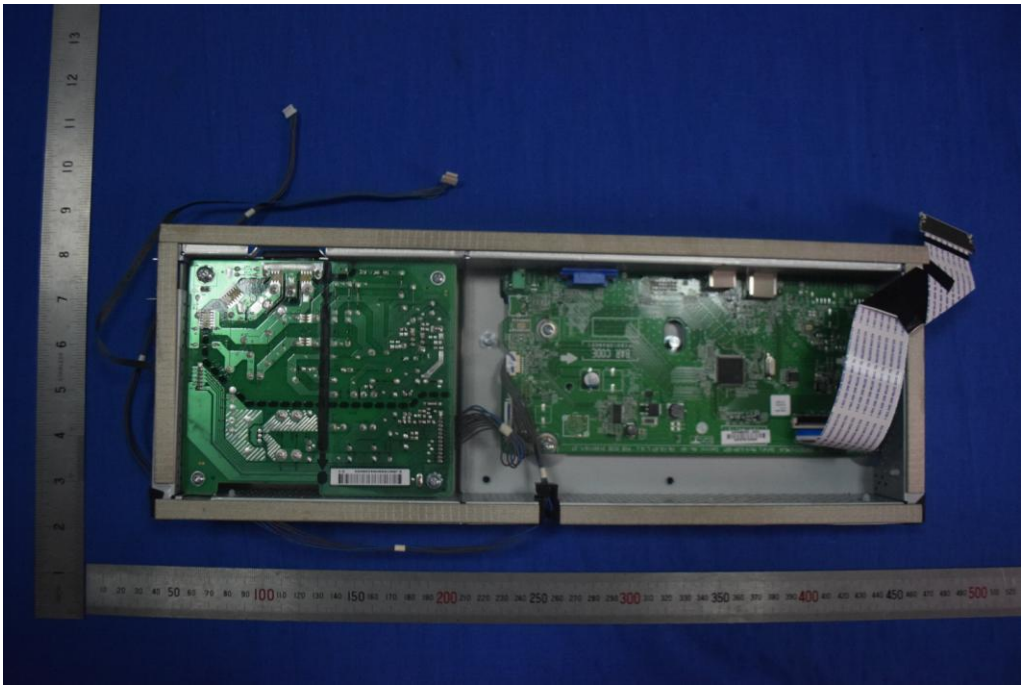

LG
24BL550J – B
MODELO : 24BL550J
CÓDIGO DO PRODUTO : 24BL550J – BI.AWZKQSN
ENERGIA : 100 – 240 V ~ 50/60 Hz 1.2 A
FABRICADO : JULY 2018
Fabricado na China por
LG Electronics Nanjing New Technology Co., Ltd
NO DE SÉRIE :
807
LG Electronics do Brasil Ltda.
Av. D. Pedro I, W 7777, Área industrial – Piracangagua II
CEP: 12091-000 Taubaté-SP Brasil C.N.P.J. nº01.166.372/0001-55

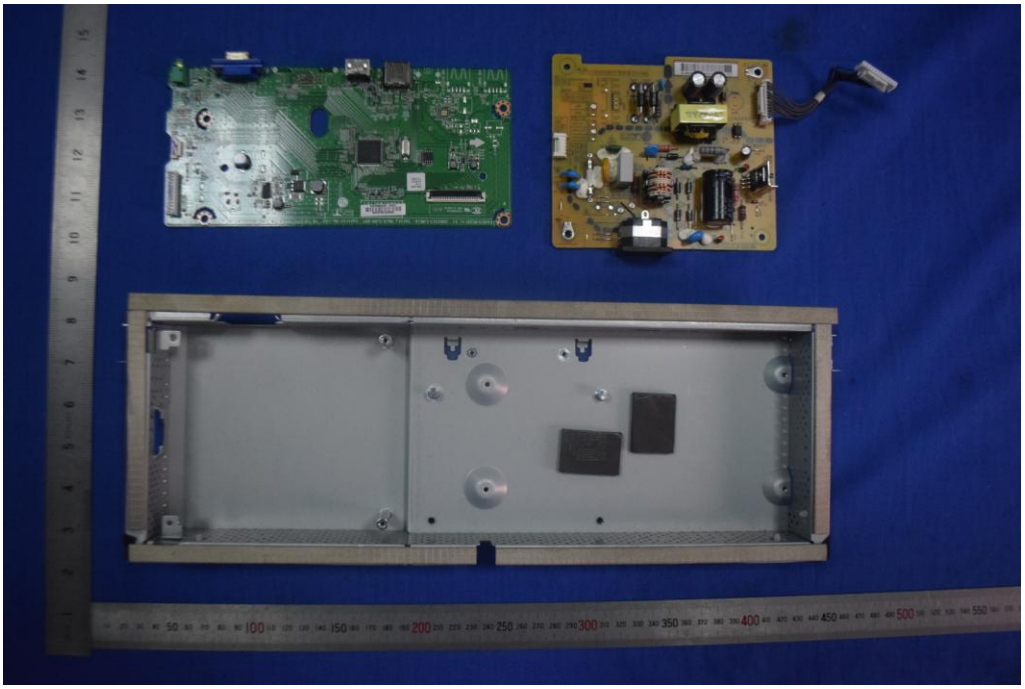

LG

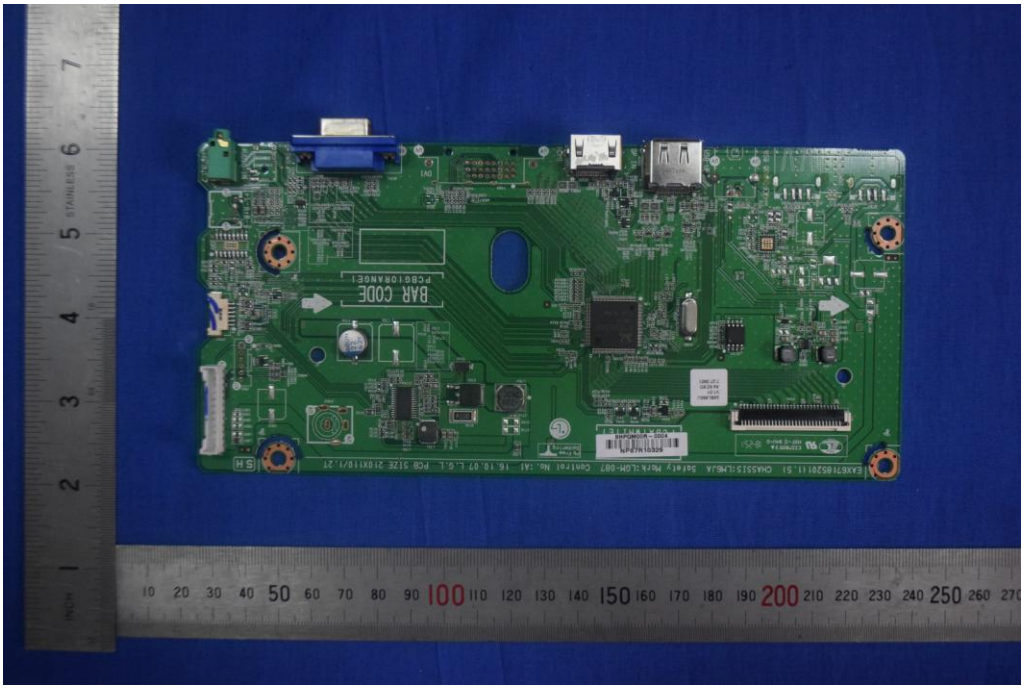


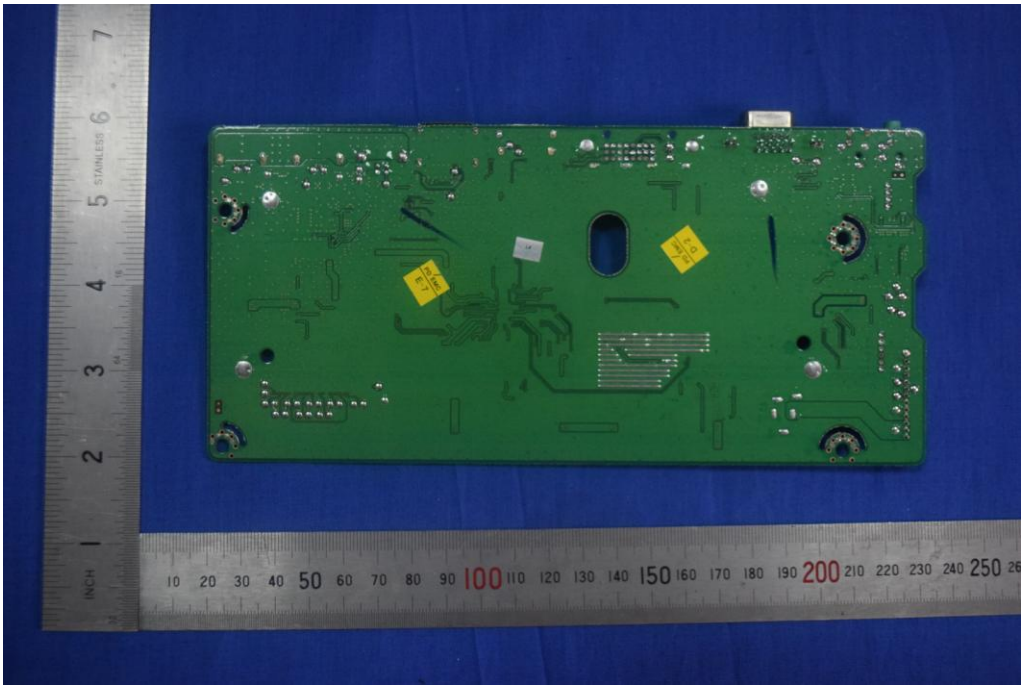

LM238WF1
(SL)(K1)
RoHS Verified
LP-238K1-0-S-Z-PA-8-HZ-Q-85B-094S
238H5EQ801MBW HF8R
LIGHT GUIDE : >PMMA<
LG Display
MADE IN CHINA

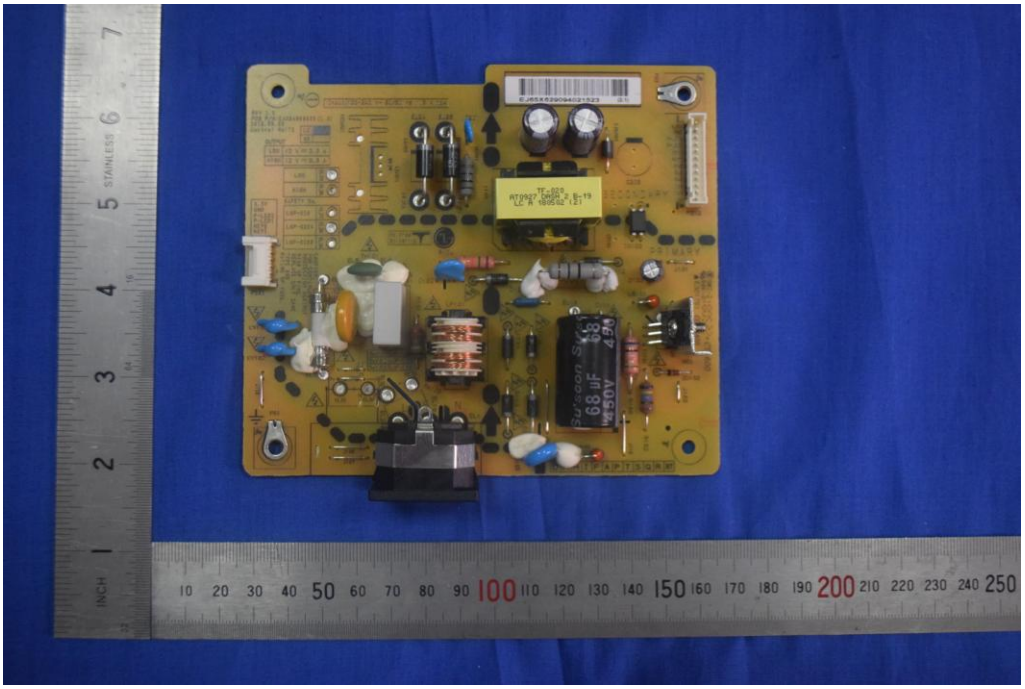


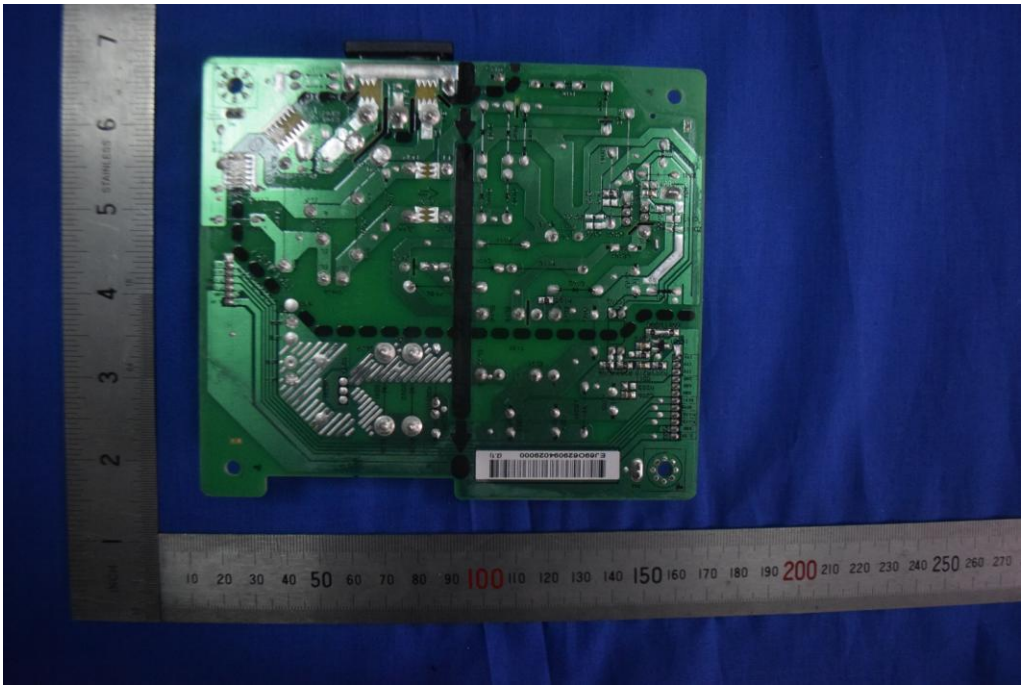


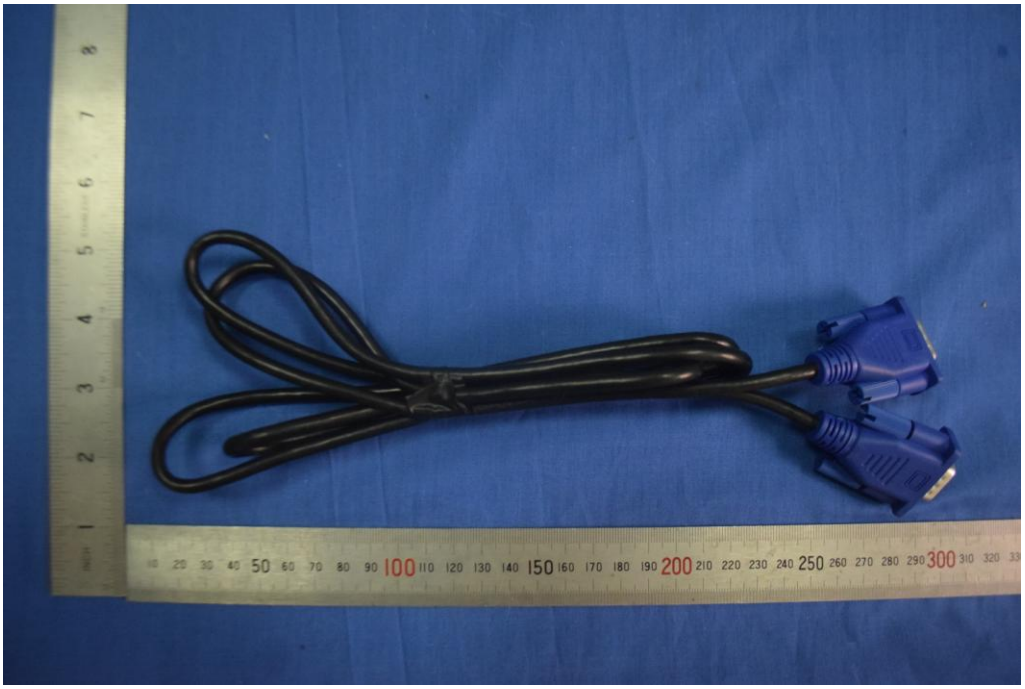












Microsoft

硬件认证报告 **Approved**

私有产品 ID:	**14331528044489807**
共享的产品 ID:	**1152921504607554682**
提交 ID:	**1152921504627771983**
提交日期:	**2018/8/22**
完成日期:	**2018/8/22**
公司:	**LG Electronics Inc.**
产品名称:	**24BL550J**
类别:	**Device**
产品类型:	**Monitor**
资格等级:	**Certified for Microsoft Windows 10 Client family versions 1506 and 1511, x86** **Certified for Microsoft Windows 10 Client family versions 1506 and 1511, x64** **Signature Only - Microsoft Windows XP family, x86** **Signature Only - Microsoft Windows XP family, x64** **Signature Only - Microsoft Windows 2000 family** **认证为声明性 INF**
市场营销名称:	**24BL550J**

LG Electronics

Verification Report

Applicant(Manufacture : LG Electronics Inc.
Address : LG Electronics Inc. 77, Sanho-daero,Gumi-Si, Gyeongsangbuk-Do, 730-709, Korea
LG Electronics Mlawa Sp. z o.o. LG Electronics 7 Street, 06-500 Mlawa, Poland
PT.LG Electronics IndonesiaBlock G, MM2100 Industrial Town,17520 Cikarang Barat, Bekasi Jawa Barat, Indonesia
LG Electronics Nanjing New Technology Co., Ltd.No.346 Yaoxin Road, Economic & Technical Development Zone, Nanjing, 210038, China
LG Electronics do Brasil Ltda. ; Av. Dom Pedro I, W 7777 - Distrito Industrial - Piracangagua II – Taubaté/SP - Brasil.

Type of Product : **LCD Monitor**
Model Name : **24BL550J-B**
["#" can be 'blank' or A~Z]
Company Name : **LG Electronics Inc.**

Report Reference No. : LGENT-RoHS 2.0-2018-020
Date of issue : 2018/8/14
Date of Revision : —

This technical documentation covers series(or derivation) model [24BL550J]
which has same conceptual design and manufacturing drawing with 24BL550J and the series
(or derivation) model have same high risk parts and applications exemped under RoHS directive

Testing Method : IEC 62321 : 2008
1. Review of Test report to be submitted by supplier
The object of the technical documentation described is in conformity with RoHS directive:
- Technical documentation compiled according to standard EN 50581:2012;
- Analytical test results (when applicable) using the method referenced in standards EN 62321.

Test Requested : RoHS Directive 2011/65/EU

Conclusion : Based on the review of previous reports and verification results of the submitted samples, the results comply with the RoHS Directive 2011/65/EU and its subsequent amendments.

Reviewed by :Zu Liqiang Team Leader
R&D Planning,Team Leader, LG Electronics Nanjing New Technology Co.,Ltd

LG B2B MONITOR

24BL550J

23,8” Monitor B2B IPS LED FHD

23,8"

KEY FEATURES

- **Tela 23,8” IPS Full HD**
- **Ajuste de Altura, Inclinação e Ângulo**
- **Pivot bi-direcional de 90°**
- **Portas HDMI, DisplayPort e D-Sub**

ESPECIFICAÇÕES

CARACTERÍSTICAS DO PRODUTO	
Modelo	24BL550J
Tela	23,8" Full HD IPS
Cor	Preto
Código para Vendas	24BL550J-B.AWZ
Brilho	250 cd/m²
TELA	
Tamanho	23,8"
Tipo de Tela	IPS
Brilho	250 cd/m²
Resolução Máxima	1920 x 1080
Contraste Dinâmico	1000:1
Suporte de Cores	16,7M
Pixel Pitch	0,2745 x 0,2745 mm
Tempo de Resposta	5ms
Revestimento de Tela	Anti-Glare treatment (3H)
Frequência	H: 30 - 83 kHz V: 56 - 75 Hz
Ângulo de Visão	178° / 178°
Suporte de Parede (VESA)	Sim (100 x 100mm)
ENTRADAS/SAÍDAS	
D-Sub	Sim
DisplayPort	Sim (v1.2)
HDMI	Sim (v1.4)
Headphone Out	Sim
RECURSOS	
Alto-Falantes	-
Picture Mode	Sim
Reader Mode	Sim
HDCP	Sim (1.4)
Plug & Play	Sim
Color Calibrated	-
Dual Control	Sim
Flicker Safe	Sim
Smart Energy Saving	Sim
Super Resolution+	Sim
OnScreen Control	Sim

DIMENSÕES	
Ajuste de Ângulo	Sim (0°/355°)
Ajuste de Inclinação	Sim (-5°/35°)
Ajuste de Altura	Sim (130mm)
Pivot	Sim (90°)
Líquida (com base)	553,8 x 382,9 x 240 mm (LxAxP)
Líquida (sem base)	553,8 x 333,1 x 58,4 mm (LxAxP)
Bruta (com embalagem)	627 x 178 x 505 mm (LxAxP)
PESO	
Líquido (com base)	5,7 kg
Líquido (sem base)	3,6 kg
Bruto (com embalagem)	7,56 kg
ACESSÓRIOS	
Cabo de Alimentação	Sim
Cabo HDMI	Sim
Cabo DisplayPort	Sim
Cabo D-Sub	Sim
CERTIFICAÇÕES	
TCO (Ver.)	Sim (7.0)
UL (cUL)	Sim
TUV-GS	Sim
TUV-Ergo	Sim
CB	Sim
FCC-B	Sim
CE	Sim
EPA	Sim (7.0)
ISO 9241-307	Sim
Windows	Windows 10
ROHS, REACH	Sim
ENERGIA	
Fonte	Interna
Consumo de Energia (EPA)	16W (Típico EPA)
OUTROS	
Garantia	1 ano contado da entrega efetiva do produto ao consumidor.
NCM	8528.52.20
CEST	21.068.00
Código EAN	8806098328161

	Ref. Certif. No.
IEC IECEE CB SCHEME	SG PSB-OF-03622

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Monitor (LCD Monitor)
Name and address of the applicant	**LG Electronics Nanjing** **New Technology Co., Ltd** 346, Yaoxin Road Economic & Technical Development Zone 210038 Nanjing PEOPLE'S REPUBLIC OF CHINA
Name and address of the manufacturer	LG Electronics Nanjing New Technology Co., Ltd 346, Yaoxin Road, Economic & Technical Development Zone, 210038 Nanjing, PEOPLE'S REPUBLIC OF CHINA
Name and address of the factory	LG Electronics Nanjing New Technology Co., Ltd 346, Yaoxin Road, Economic & Technical Development Zone, 210038 Nanjing, PEOPLE'S REPUBLIC OF CHINA
Ratings and principal characteristics	Rated input voltage: 100-240 Vac Rated input current: 1) 1.2 A; 2) 1.5 A Rated frequency: 50/60 Hz Protection class: I
Model/type Ref.	1) 24BK550##, 24BL550## 2) 27BK550## (The symbol "#" can be blank, 0-9 or A-Z, is not influencing on safety)
A sample of the product was tested and found to be in conformity with	IEC 60950-1:2005 IEC 60950-1:2005/AMD1:2009 IEC 60950-1:2005/AMD2:2013
as shown in the Test Report Ref. No. which forms part of this certificate	081-180816-000

This CB Test Certificate is issued by the National Certification Body

CBS 048125 0723 Rev. 00

Date, 2018-08-13

(Watson Yang)

TÜV SÜD PSB Pte Ltd • 1 Science Park Drive • Singapore 118221

PSB Singapore

Name and address of the factory (continued)

PT. LG Electronics Indonesia
Block G, MM2100 Industrial Town, 17520 Cikarang Barat, Bekasi, Jawa Barat, INDONESIA

LG Electronics Inc.
77, Sanho-daero, Gumi-si, Gyeongsangbuk-do 730-709, REPUBLIC OF KOREA

LG Electronics Mexicali S.A.DEC.V.
Calle Orbita 36,Parque In.M.II, Mexicali,B.C.C.P.21600, MEXICO

LG Electronics De Sao Paulo LTDA.
Avenida Dom Pedro-1, W-7777,, 12010-970 D.I.Piracangagua II,Taubate/SP, BRAZIL

LG Electronics Mlawa Sp. zo. o.
7 LG Electronics St.,, 06-500 Mlawa, POLAND

LG Electronics India Pvt. Ltd.
Plot No. A-5, MIDC, Ranjangaon, 412 220 Tal. Shirur, Pune, INDIA

LG Electronics RUS, LLC
b. 9, 86km of Minskoe highway, Rural village Dorokhovskoe, 143160 Ruza District, Moscow Region, RUSSIAN FEDERATION

LG ELECTRONICS REYNOSA S A DE C V
CARRETERA A MATAMOROS Y BRECHA E99, APDO, POSTAL 178 REYNOSA TAMPS, MEXICO

LG Electronics S.A. (Pty) Ltd
1 Monte Carlo Drive, Raceway Industrial Park, Gosforth Park, Germiston, 1419 SOUTH AFRICA

Industria Nacional de Ensamblajes S.A INNACENSA
Duran Boliche KM 6.5, 092411 Complejo de Bodegas Leinati, ECUADOR

The trademark is as below:

CBS 048125 0723 Rev. 00

Date, 2018-08-13

(Watson Yang)

TÜV SÜD PSB Pte Ltd • 1 Science Park Drive • Singapore 118221

PSB Singapore

Test Report issued under the responsibility of:

NCB TÜV SÜD PSB Pte Ltd
1 Science Park Drive,
Singapore 118221

PSB Singapore

TEST REPORT

IEC 60950-1
Information technology equipment – Safety – Part 1: General requirements

Report Number. ..... :	081-180816-000
Date of issue ..... :	2018-08-09
Total number of pages ..... :	82
Applicant's name ..... :	LG Electronics Nanjing New Technology Co., Ltd
Address ..... :	346, Yaoxin Road, Economic & Technical Development Zone, 210038 Nanjing, PEOPLE'S REPUBLIC OF CHINA
Test specification:	
Standard ..... :	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60950_1F
Test Report Form(s) Originator .... :	SGS Fimko Ltd
Master TRF ..... :	Dated 2014-02

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description ..... :	LCD Monitor
Trade Mark ..... :	LG
Manufacturer ..... :	Same as applicant.
Model/Type reference ..... :	1) 24BK550##, 24BL550## 2) 27BK550## (The symbol "#" can be blank, 0-9 or A-Z, is not influencing on safety)
Ratings ..... :	1) 100-240 Vac, 50/60 Hz, 1.2 A 2) 100-240 Vac, 50/60 Hz, 1.5 A

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	TÜV SÜD Asia Ltd. Taiwan Branch	
Testing location/ address.....:		7F., No.37, Sec. 2, Zhongyang S., Rd., Beitou District, Taipei City, 11270, TAIWAN.	
☐	**Associated CB Testing Laboratory:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name + signature).....:		Mr. Frank Tsai	Frank Tsai .....
Approved by (name + signature).....:		Mr. Ethan Huang	Ethan Huang .....
☐	**Testing procedure: TMP/CTF Stage 1:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name + signature).....:			
Approved by (name + signature).....:			
☐	**Testing procedure: WMT/CTF Stage 2:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name + signature).....:			
Witnessed by (name + signature).....:			
Approved by (name + signature).....:			
☐	**Testing procedure: SMT/CTF Stage 3 or 4:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name + signature).....:			
Witnessed by (name + signature).....:			
Approved by (name + signature).....:			
Supervised by (name + signature).....:			

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List of Attachments (including a total number of pages in each attachment):

Attachment No. 1	National and Group Differences (for IEC 60950-1 2nd Ed)	81	pages
Attachment No. 2	Japan Deviations	2	pages
Attachment No. 3	Singapore Deviations	5	pages
Attachment No. 4	Measurement Section	3	pages
Attachment No. 5	Marking Plate	1	page
Attachment No. 6	Photo	14	pages

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
All test results were found satisfactory in accordance with IEC 60950-1:2005 (2nd Edition) + A1: 2009 + A2:2013 and EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 3.

Summary of compliance with National Differences:

List of countries addressed

For IEC 60950-1:2005 (2nd Edition) + Am 1: 2009 and EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+ A2:2013

According to CB Bulletin, the National Differences include Australia (AU), Canada (CA), China (CN), Germany (DE), Israel (IL), Japan (JP), Korea (KR), Switzerland (CH) and United States of America (US). Group Differences (CENELEC COMMON MODIFICATIONS) as listed in the European Standard are recorded in this Report.
(Attachment No. 1)

For Japan Deviations:

The Special National Condition include (J3000 (H25)).

(Attachment No. 2)

For Singapore Deviations (IEC 60950-1, 1st ed. (2001))

The National Deviations include Singapore (SG).

(Attachment No. 3)

☒ **The product fulfils the requirements of IEC 60950-1:2005 + A1:2009 + A2:2013/ EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013**

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

See attachment No. 5
(Total 1 page)

Test item particulars.....:	
Equipment mobility.....:	[**X**] movable [] hand-held [] transportable [] stationary [] for building-in [] direct plug-in
Connection to the mains.....:	[**X**] pluggable equipment [**X**] type A [] type B [] permanent connection [**X**] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition.....:	[**X**] continuous [] rated operating / resting time:
Access location .....:	[**X**] operator accessible [] restricted access location
Over voltage category (OVC) .....:	[] OVC I [**X**] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values .....:	+10 %, -10 %
Tested for IT power systems .....:	[**X**] Yes [] No
IT testing, phase-phase voltage (V) .....:	230 V (Norway)
Class of equipment .....:	[**X**] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) .....:	16 A or 20 A (for US)
Pollution degree (PD) .....:	[] PD 1 [**X**] PD 2 [] PD 3
IP protection class .....:	Ordinary
Altitude during operation (m) .....:	Up to 2,000
Altitude of test laboratory (m) .....:	below 2,000
Mass of equipment (kg) .....:	Approx. 3.62 (without stand base for model 24BK550##) Approx. 5.77 (with stand base for model 24BK550##) Approx. 5.13 (without stand base for model 27BK550##) Approx. 7.28 (with stand base for model 27BK550##)
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2018-07-23
Date (s) of performance of tests.....:	2018-07-24 to 2018-08-07

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General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☐ comma / ☒ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☒ **Yes** ☐ **Not applicable**
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies) ..... :

1) LG Electronics Nanjing New Technology Co., Ltd (ID No.: 048125)
346, Yaoxin Road, Economic & Technical Development Zone, 210038 Nanjing,
PEOPLE'S REPUBLIC OF CHINA

2) LG Electronics Inc. (ID No.: 033786)
77, Sanho-daero, Gumi-si, Gyeongsangbuk-do 730-709, REPUBLIC OF KOREA

3) PT. LG Electronics Indonesia (ID No.: 028528)
Block G, MM2100 Industrial Town, 17520 Cikarang Barat, Bekasi, Jawa Barat, INDONESIA

4) LG Electronics De Sao Paulo LTDA. (ID No.: 048130)
Avenida Dom Pedro-1, W-7777, 12010-970 D.I.Piracangagua II, Taubate/SP, BRAZIL

5) LG Electronics Mlawa Sp. zo. o. (ID No.: 057932)
7 LG Electronics St., 06-500 Mlawa, POLAND

6) LG Electronics Mexicali S.A.DEC.V. (ID No.: 048124)
Calle Orbita 36, Parque In.M.II, Mexicali, B.C.C.P.21600, MEXICO

7) LG ELECTRONICS REYNOSA S A DE C V (ID No.: 061017)
CARRETERA A MATAMOROS Y BRECHA E99, APDO POSTAL 178 REYNOSA TAMPS, MEXICO

8) LG Electronics RUS, LLC (ID No.: 060724)
b. 9, 86km of Minskoe highway, Rural village Dorokhovskoe, 143160 Ruza District, Moscow Region, RUSSIAN FEDERATION

9) LG Electronics India Pvt. Ltd. (ID No.: 059116)
Plot No. A-5, MIDC, Ranjangaon, 412 220 Tal. Shirur, Pune, INDIA

10) LG Electronics S.A. (Pty) Ltd (ID No.: 077656)
LG Office, Raceway Industrial Park, Monte Carlo Drive Gosforth Park, Germiston, Johannesburg, 1419 SOUTH AFRICA

11) Industria Nacional de Ensamblajes S.A INNACENSA (ID No.: 092572)
Duran Boliche KM 6.5, 092411 Complejo de Bodegas Leinati, ECUADOR

General product information:

The equipment is a desk top LCD monitor classified as information technology equipment.

Model 24BK550## and 24BL550## are 23.8'' LCD Monitor with LED Backlight.

Model 27BK550**##** is 27.0'' LCD Monitor with LED Backlight.

Model 24BK550## is similar to model 27BK550## except for panel size, input current and model designation.

Model 24BK550## is similar to model 24BL550## except for main board and model designation.

Model 24BL550## is similar to model 27BK550## except for main board, panel size, input current and model designation.

The maximum ambient temperature specified by manufacturer is 40 °C.

The built-in non-approved Power Board type LGP-020A was evaluated in this report and which complied with L.P.S. See appended table 2.5 for details.

The EUT has the following features:

1. The internal metal chassis is considered as fire enclosure, which is covered all parts.

2. The external plastic enclosure is regarded as mechanical and electrical enclosure, made of min. HB material.

3. The inner speaker is optional.

4. The alternate stand base can be used.

5. The stand is optional.

Unless otherwise specified, all tests were performed on model 27BK550, only limited tests were performed on model 24BK550, due to testing previously performed on the subject unit.

Abbreviations used in the report:

- normal conditions	**N.C**.	- single fault conditions	**S.F.C**
- functional insulation	**OP**	- basic insulation	**BI**
- double insulation	**DI**	- supplementary insulation	**SI**
- between parts of opposite polarity	**BOP**	- reinforced insulation	**RI**

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1	**GENERAL**	P

1.5	**Components**		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table 1.5.1).	P
1.5.2	Evaluation and testing of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
1.5.3	Thermal controls	No thermal control.	N/A
1.5.4	Transformers	Transformer used is suitable for the intended application and complies with the relevant requirements of the standard and particularly with those of Annex C.	P
1.5.5	Interconnecting cables	Interconnection o/p cable to other device is carrying only SELV voltages on an energy level below 240 VA. →Except for the insulation material, there is no further requirement to the o/p interconnection cable.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.6	Capacitors bridging insulation	X2 capacitor according to IEC 60384-14 with 2.5 kVpk pulse test. Y2 capacitor according to IEC 60384-14 with 5.0 kVpk pulse test. Y1 capacitor according to IEC 60384-14 with 8.0 kVpk pulse test. Y1 type capacitor (CY104 or CY105) is provided and bridged between primary and secondary of SPS board.	P
1.5.7	Resistors bridging insulation	See below.	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	The bleeder resistor is located after fuse, see table 2.1.1.7 for details.	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	No such bridging resistors provided.	N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No such bridging resistors provided.	N/A
1.5.8	Components in equipment for IT power systems	Y-Cap. are all rated min. 230 V and complied with IEC 60384-14, and others component in such condition has suitable voltage rating. See table 1.5.1 for details.	P
1.5.9	Surge suppressors	See below.	P
1.5.9.1	General	Certified Varistor (VR101) is used between L and N of SPS, see appended table 1.5.1 for details.	P
1.5.9.2	Protection of VDRs	The current fuses (F101) provided protection.	P
1.5.9.3	Bridging of functional insulation by a VDR	Refer to 1.5.9.1.	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	**Power interface**		P
1.6.1	AC power distribution systems	TN / IT power system. (see 1.5.8 and 1.7.2.4 for IT power system)	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6.2	Input current	The definition for highest load according to 1.2.2.1, for this equipment is the unit operated under full brightness and contrast of the LCD backlight circuit. Results see appended table.	P
1.6.3	Voltage limit of hand-held equipment	This equipment is not hand-held equipment.	N/A
1.6.4	Neutral conductor	Basic insulation for rated voltage between earthed parts and primary phases.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings	See clause 1.7.1.1 and 1.7.1.2.	P
1.7.1.1	Power rating marking	See below.	P
	Multiple mains supply connections.....:	Only one supply from the AC mains.	N/A
	Rated voltage(s) or voltage range(s) (V) .....:	100-240 Vac	P
	Symbol for nature of supply, for d.c. only.....:	Mains from AC source.	N/A
	Rated frequency or rated frequency range (Hz) ...:	50/60 Hz	P
	Rated current (mA or A) .....:	1) 1.2 A 2) 1.5 A	P
1.7.1.2	Identification markings	See below.	P
	Manufacturer's name or trade-mark or identification mark .....:	**Trademark:** LG	P
	Model identification or type reference .....:	See page 2 for details.	P
	Symbol for Class II equipment only .....:	Class I equipment.	N/A
	Other markings and symbols .....:	Additional symbols or markings that do not give rise to misunderstand.	P
1.7.1.3	Use of graphical symbols	Graphical symbols placed on the equipment complying with IEC 60417 or ISO 3864-2 or ISO 7000.	P
1.7.2	Safety instructions and marking	Safety instructions in English. Other languages will be provided when submitted for national approval.	P
1.7.2.1	General	Instructions are available.	P
1.7.2.2	Disconnect devices	Appliance Inlet is provided as disconnection device.	P
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	Installation instruction will be stated when equipment is intended to be used for IT power system.	P
1.7.2.5	Operator access with a tool	No operator accessible area which needs to be accessed by use of a tool.	N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.4	Supply voltage adjustment .....:	No supply voltage adjustment device.	N/A
	Methods and means of adjustment; reference to installation instructions .....:	Ditto.	N/A
1.7.5	Power outlets on the equipment .....:	No power outlet provided.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:	Marking adjacent to fuse reads as F101 T3.15 A, 250 Vac of SPS board.	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals .....:	Main earth connection for supply wiring is marked on inlet by symbol IEC 60417, No. 5019. This symbol is not used for other earth connection.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment with Appliance Inlet is intended to be use the detachable type power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	Mains from AC source only.	N/A
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking .....:	The marking and indication of the power switch is located on the switch so that indication of function is clear.	P
1.7.8.2	Colours ....:	No safety involved colour identification	P
1.7.8.3	Symbols according to IEC 60417.....:	The 60417-1-IEC-5009 (⏻) is marked on secondary power switch.	P
1.7.8.4	Markings using figures .....:	No indicators for different positions.	N/A
1.7.9	Isolation of multiple power sources .....:	Only one supply from mains.	N/A
1.7.10	Thermostats and other regulating devices .....:	No thermostats used.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth for 15 sec. and then again for 15 sec. with the cloth soaked with Petroleum Ether. After this test there was no damage to the label. The marking on the label did not fade. There was no curling nor lifting of the label edge.	P
1.7.12	Removable parts	Marking is not placed on removable parts.	P
1.7.13	Replaceable batteries ..... :	No batteries provided.	N/A
	Language(s) ..... :		—
1.7.14	Equipment for restricted access locations ..... :	No restricted access location.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2	**PROTECTION FROM HAZARDS**		P
2.1	**Protection from electric shock and energy hazards**		P
2.1.1	Protection in operator access areas	See below clause for details.	P
2.1.1.1	Access to energized parts	See below.	P
	Test by inspection ..... :	Operator cannot contact with any parts with only basic insulation to ELV or hazardous voltage.	P
	Test with test finger (Figure 2A) ..... :	No access with test finger to any parts with only basic insulation to ELV or hazardous voltage.	P
	Test with test pin (Figure 2B) ..... :	The test pin cannot touch hazardous voltage through any openings or seams of the whole enclosure.	P
	Test with test probe (Figure 2C) ..... :	No TNV circuit.	N/A
2.1.1.2	Battery compartments	No battery compartments provided.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A
2.1.1.5	Energy hazards ..... :	No energy hazard in operator access area. The connectors of the equipment below 240 VA.	P
2.1.1.6	Manual controls	None at ELV or hazardous voltage.	N/A
2.1.1.7	Discharge of capacitors in equipment	Voltage decay measurement was conducted with an oscilloscope having an input impedance of 100 MΩ.	P
	Measured voltage (V); time-constant (s) ..... :	<1s; (see appended table 2.1.1.7 in measurement section).	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply . :		N/A
	b) Internal battery connected to the d.c. mains supply :		N/A
2.1.1.9	Audio amplifiers ..... :	Audio jack in the EUT comply with clause 2.1.1.1.	P
2.1.2	Protection in service access areas	No maintenance work in operation mode necessary.	N/A
2.1.3	Protection in restricted access locations	The equipment is not intended to be used in restricted locations.	N/A

2.2	**SELV circuits**		P
2.2.1	General requirements	42.4 V peak or 60 Vdc are not exceeded in SELV circuit under normal operation or single fault condition.	P
2.2.2	Voltages under normal conditions (V) .....:	Between any SELV circuits 42.4 V peak or 60 Vdc are not exceeded.	P
2.2.3	Voltages under fault conditions (V) .....:	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71 V peak and 120 Vpk were not exceed and SELV limits not for longer than 0.2 seconds. (see appended table 2.2.2 and 5.3)	P
2.2.4	Connection of SELV circuits to other circuits .....:	See 2.2.2 and 2.2.3. No direct connection between SELV and any primary circuits.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuits provided.	N/A
	Type of TNV circuits .....:		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions .....:		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed .....:		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed .....:		—
2.3.5	Test for operating voltages generated externally		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.4	**Limited current circuits**		P
2.4.1	General requirements	The limits specified in 2.4.2 are not exceeded under normal operating conditions and in the event of a single failure within the equipment of the inverter output connector.	P
2.4.2	Limit values	See below.	P
	Frequency (Hz).....:	(See appended table 2.4.2 in measurement section)	—
	Measured current (mA) .....:	The peak drop voltage was measured with an oscilloscope at a 2 kΩ non-inductive resistor. Results see appended table 2.4.2	—
	Measured voltage (V).....:	<450 V	—
	Measured circuit capacitance (nF or µF).....:	≤0.1 µF	—
2.4.3	Connection of limited current circuits to other circuits	Primary to secondary bridging by Y1 type capacitor (CY104 or CY105). The output circuit is therefore also regarded as the Limited Current Circuit.	P

2.5	**Limited power sources**		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	The PSU output is limited to the values of table 2B in normal operation conditions and in the case of a single fault. (Results see appended table 2.5).	P
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA) .....:	See appended table 2.5.	—
	Current rating of overcurrent protective device (A) .:	No over current protective device.	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.6	**Provisions for earthing and bonding**		P
2.6.1	Protective earthing	The accessible metal enclosure is reliably connected to the main protective earthing terminal of the equipment.	P
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by double or reinforce insulation or by basic insulation and protective earthing.	P
	Use of symbol for functional earthing .....:		N/A
2.6.3	Protective earthing and protective bonding conductors	See below.	P
2.6.3.1	General		P
2.6.3.2	Size of protective earthing conductors	Appliance Inlet is used. Power supply cord is not provided.	P
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
2.6.3.3	Size of protective bonding conductors	Protective bonding conductor is complied with the requirements of 2.6.3.4.	P
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
	Protective current rating (A), cross-sectional area (mm^2), AWG .....:		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) .....:	< 0.1 Ω (see appended table).	P
2.6.3.5	Colour of insulation.....:	No earthing wiring used.	N/A
2.6.4	Terminals	The equipment with detachable power supply core, connected on Appliance Inlet.	P
2.6.4.1	General	See below.	P
2.6.4.2	Protective earthing and bonding terminals	The equipment with detachable power supply cord, connected on Appliance Inlet.	N/A
	Rated current (A), type, nominal thread diameter (mm) .....:		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Protective earthing conductor is in Appliance Inlet; the earth pin of Inlet is connected to PCB earthing trace directly with solderd then connected to metal chassis with connection by screwed grounding pad on PCB.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5	Integrity of protective earthing	See below.	P
2.6.5.1	Interconnection of equipment	This equipment has its own earthing connection. Any other units connected via the interconnecting cable to other unit shall provide SELV only.	P
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses in earthing conductor.	P
2.6.5.3	Disconnection of protective earth	It is not possible to disconnect protective earth without disconnecting mains; an appliance inlet is used as disconnect device.	P
2.6.5.4	Parts that can be removed by an operator	Plug or inlet, earthing connected before and disconnected after hazardous voltage. No other operator removable parts.	P
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect earthing except for the removing of the earthed parts itself.	P
2.6.5.6	Corrosion resistance	All safety earthing connections in compliance with Annex J.	P
2.6.5.7	Screws for protective bonding	No self tapping screws are used.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system	Not intend to connect with telecommunication network or a cable distribution system for the integrity of protective earthing.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	**Overcurrent and earth fault protection in primary circuits**		P
2.7.1	Basic requirements	Equipment relies on 16 A or 20 A rated fuse or circuit breaker of the wall outlet installation protection of the building installation in regard to L to N short circuit. Overcurrent protection is provided by the built-in device fuses.	P
	Instructions when protection relies on building installation	English.	P
2.7.2	Faults not simulated in 5.3.7	The protection devices are well dimensioned and mounted.	P
2.7.3	Short-circuit backup protection	Pluggable equipment type A, the building installation is considered as providing short circuit protection.	P
2.7.4	Number and location of protective devices .....:	Overcurrent protection by several built-in fuse, earth fault protection by fuse or circuit breaker in the phase of the building installation.	P
2.7.5	Protection by several devices	Only one fuse.	N/A
2.7.6	Warning to service personnel.....:	No service work necessary.	N/A

2.8	**Safety interlocks**		N/A
2.8.1	General principles	No safety interlock provided.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) .....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.9	**Electrical insulation**		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	P
2.9.2	Humidity conditioning	Humidity treatment performed for 120 h.	P
	Relative humidity (%), temperature (°C) .....:	91 % R.H., 40 °C	—
2.9.3	Grade of insulation	Please refer to 5.2, 2.10 and 4.5.	P
2.9.4	Separation from hazardous voltages	See below.	P
	Method(s) used .....:	Method 1.	—

2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General	See 2.10.3, 2.10.4 and 2.10.5.	P
2.10.1.1	Frequency .....:	The frequency does not exceed 30 kHz.	P
2.10.1.2	Pollution degrees .....:	Pollution degrees 2.	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4.	P
2.10.1.4	Intervening unconnected conductive parts	Complied with.	P
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	The rms and the peak voltage were measured on the switching power supply. The unit was connected to a 240 V power system and secondary ground was maintained during measurement. Results see appended table 2.10.2.	P
2.10.2.1	General	Complied	P
2.10.2.2	RMS working voltage	See appended table 2.10.2.	P
2.10.2.3	Peak working voltage	See appended table 2.10.2.	P
2.10.3	Clearances	See below.	P
2.10.3.1	General		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.2	Mains transient voltages	See appended table 2.10.3 and 2.10.4.	P
	a) AC mains supply .....:	2500 Vpk considered.	P
	b) Earthed d.c. mains supplies .....:		N/A
	c) Unearthed d.c. mains supplies .....:		N/A
	d) Battery operation .....:		N/A
2.10.3.3	Clearances in primary circuits	See appended table 2.10.3 and 2.10.4.	P
2.10.3.4	Clearances in secondary circuits	See appended table 2.10.3 and 2.10.4 and refer to 5.3.4.	P
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply .....:	2500 Vpk assumed.	P
2.10.3.7	Transients from d.c. mains supply .....:		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:	No TNV circuit.	N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply .....:		N/A
	For a d.c. mains supply .....:		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	See below.	P
2.10.4.1	General	See appended table 2.10.3 and 2.10.4.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIa/IIIb assumed.	P
	CTI tests .....:	CTI rating for all materials of min. 100.	—
2.10.4.3	Minimum creepage distances	See appended table 2.10.3 and 2.10.4.	P
2.10.5	Solid insulation	Complied with 2.10.5.2 to 2.10.5.14 and 5.2.	P
2.10.5.1	General	See below.	P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	Complied with 2.10.5.2 and 2.10.10.	P
2.10.5.4	Semiconductor devices	See 2.10.5.3.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.5.	Cemented joints	See appended table 2.10.3 and 2.10.4.	P
2.10.5.6	Thin sheet material – General	Reinforced insulation.	P
2.10.5.7	Separable thin sheet material	See appended table C.2.	P
	Number of layers (pcs) .....:	See appended table C.2.	—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure	Electric strength test applied to each one layer.	P
	Electric strength test	See appended table 5.2.	—
2.10.5.11	Insulation in wound components	See below	P
2.10.5.12	Wire in wound components	Reinforced insulation.	P
	Working voltage .....:	(see appended table 2.10.2).	P
	a) Basic insulation not under stress .....:		N/A
	b) Basic, supplementary, reinforced insulation .....:		N/A
	c) Compliance with Annex U .....:	Triple insulated wire is used in secondary winding of T101 for reinforced insulation, also see annex U.	P
	Two wires in contact inside wound component; angle between 45° and 90° .....:	Insulation tape and/or tubing provided.	—
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage .....:		N/A
	- Basic insulation not under stress .....:		N/A
	- Supplementary, reinforced insulation .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.6	Construction of printed boards	See below.	P
2.10.6.1	Uncoated printed boards	See appended table 2.10.3 and 2.10.4.	P
2.10.6.2	Coated printed boards	No coated printed wiring boards.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....:		N/A
2.10.7	Component external terminations	See appended table 2.10.3 and 2.10.4.	P
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling	Approved sources of opto-couplers used. For details see table 1.5.1.	P
2.10.10	Test for Pollution Degree 1 environment and insulating compound	See above.	P
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts	Passed 2.10.10.	P

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Clause	Requirement + Test	Result - Remark	Verdict
3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P
3.1.1	Current rating and overcurrent protection	Internal wires are UL recognized wiring that is PVC insulated, rated VW-1, min. 80 °C, 300 V. Internal wiring gauge is suitable for current intended to be carried.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	Internal wires with only basic isolation are routed so that they are not close to any live bare components. The wires are secured by solder pins or quick connect terminals so that a loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	Securely held on PCB. No hazard. The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	P
3.1.5	Beads and ceramic insulators	Not used.	N/A
3.1.6	Screws for electrical contact pressure	Electrical connections screwed two or more complete threads into metal.	P
3.1.7	Insulating materials in electrical connections	All current carrying and safety earthing connections are metal to metal.	P
3.1.8	Self-tapping and spaced thread screws	No self-tapping or spaced thread screws used.	N/A
3.1.9	Termination of conductors	All conductors are reliable secured.	P
	10 N pull test	10N pull test performed for all relevant conductors. No hazards caused hereby.	P
3.1.10	Sleeving on wiring	Sleevings on wiring reliable kept in position by cable ties or by the use of heatshrunk sleeving.	P

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Clause	Requirement + Test	Result - Remark	Verdict

3.2	**Connection to a mains supply**		P
3.2.1	Means of connection	See below.	P
3.2.1.1	Connection to an a.c. mains supply	Approved appliance inlet used.	P
3.2.1.2	Connection to a d.c. mains supply	No connection to d.c. mains supply.	N/A
3.2.2	Multiple supply connections	Only one supply connection.	N/A
3.2.3	Permanently connected equipment	The unit is not permanent connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm) .....:		—
3.2.4	Appliance inlets	The appliance inlet complies with IEC/EN 60320-1.	P
3.2.5	Power supply cords	Not provided.	N/A
3.2.5.1	AC power supply cords	See above.	N/A
	Type .....:		—
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
3.2.5.2	DC power supply cords	Not connect to DC mains.	N/A
3.2.6	Cord anchorages and strain relief	This equipment is not with non-detachable power supply cord.	N/A
	Mass of equipment (kg), pull (N) .....:		—
	Longitudinal displacement (mm) .....:		—
3.2.7	Protection against mechanical damage	No sharp edges and no part likely to damage the power cord.	P
3.2.8	Cord guards	No cord guard provided.	N/A
	Diameter or minor dimension D (mm); test mass (g) .....:		—
	Radius of curvature of cord (mm) .....:		—
3.2.9	Supply wiring space	Not permanently connected and without non-detachable power supply cord.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Equipment provided with an Appliance Inlet.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) .....:		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) .....:		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.4	**Disconnection from the mains supply**		P
3.4.1	General requirement	See below.	P
3.4.2	Disconnect devices	Appliance inlet used as disconnect device.	P
3.4.3	Permanently connected equipment	The unit is not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	When the disconnect device is disconnected no remaining parts with hazardous voltage in the equipment.	P
3.4.5	Switches in flexible cords	No isolation switch provided.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The appliance coupler disconnects both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Equipment is single phase.	N/A
3.4.8	Switches as disconnect devices	No switch as disconnect device.	N/A
3.4.9	Plugs as disconnect devices	Appliance inlet used as disconnect device.	N/A
3.4.10	Interconnected equipment	Not interconnected equipment.	N/A
3.4.11	Multiple power sources	Only one supply connection provided.	N/A

3.5	**Interconnection of equipment**		P
3.5.1	General requirements	The power supply is not considered for connection to TNV.	P
3.5.2	Types of interconnection circuits .....:	Interconnection circuits of SELV and L.C.C. through the connector.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection circuits.	N/A
3.5.4	Data ports for additional equipment	The outputs of data ports are supply by limited power source PSU.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4	**PHYSICAL REQUIREMENTS**		P
4.1	**Stability**		P
	Angle of 10°	This equipment is of a stable mechanical construction and does not overbalance when titled to an angle of 10 degree from its normal upright position.	P
	Test force (N) .....:	Equipment is not a floor standing unit.	N/A
4.2	**Mechanical strength**		P
4.2.1	General	See below.	P
	Rack-mounted equipment.	No such construction.	N/A
4.2.2	Steady force test, 10 N	10 N applied to components.	P
4.2.3	Steady force test, 30 N	30 N applied to internal chassis.	P
4.2.4	Steady force test, 250 N	250 N applied to outer enclosure. No energy or other hazards.	P
4.2.5	Impact test	500 g steel sphere ball fall, from 1.3 m height onto outer enclosure. No safety relevant damages.	P
	Fall test	Ditto.	P
	Swing test	Ditto.	P
4.2.6	Drop test; height (mm) .....:	The unit is not hand-held or direct plug-in equipment.	N/A
4.2.7	Stress relief test	After 7 h at 70 °C and cooling down to room temperature, no shrinkage, distortion or loosing of outer plastic enclosure parts was noticeable on the equipment. The internal metal chassis also treated as parts of enclosure.	P
4.2.8	Cathode ray tubes	No cathode ray tube.	N/A
	Picture tube separately certified .....:		N/A
4.2.9	High pressure lamps	No high pressure lamp.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.10	Wall or ceiling mounted equipment; force (N) .....:	Weight of the equipment: 3.62 kg. (without stand base) Force applied: 10.86 kg, which was 3 times the weight of the equipment. Weight of the equipment: 5.13 kg. (without stand base) Force applied: 15.39 kg, which was 3 times the weight of the equipment. The mounting means did withstand the force applied without breaking or damaging the mounting bracket, its securing means, or that portion of the unit to which it was attached.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.3	**Design and construction**		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	P
4.3.2	Handles and manual controls; force (N) .....:	No handles or manual controls.	N/A
4.3.3	Adjustable controls	No control devices.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to with stand usual mechanical stress. For the protection, solder pins, cable ties and heat shrunk tubing are used.	P
4.3.5	Connection by plugs and sockets	No mismatching of connectors possible.	N/A
4.3.6	Direct plug-in equipment	The equipment is not a direct plug-in unit.	N/A
	Torque .....:		—
	Compliance with the relevant mains plug standard .....:		N/A
4.3.7	Heating elements in earthed equipment	No heating elements.	N/A
4.3.8	Batteries	No batteries provided.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	Insulation not in contact with oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases	The equipment does not contain liquid.	N/A
4.3.12	Flammable liquids .....:	No flammable liquids in this unit.	N/A
	Quantity of liquid (l) .....:		N/A
	Flash point (°C) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.13	Radiation	See below.	P
4.3.13.1	General	See clause 4.3.13.5.	P
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) .....:		—
	Measured high-voltage (kV) .....:		—
	Measured focus voltage (kV) .....:		—
	CRT markings .....:		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No UV radiation.	N/A
	Part, property, retention after test, flammability classification .....:		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:	No UV radiation.	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	See clause 4.3.13.5.2.	P
4.3.13.5.1	Lasers (including laser diodes)	No laser provided.	N/A
	Laser class .....:		—
4.3.13.5.2	Light emitting diodes (LEDs)	LED in this equipment is used for indicating function. For LED backlight, the luminance of the source does not exceed 10^4 cd/m^2.	—
4.3.13.6	Other types .....:	No other type of source inside the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General	No hazardous moving parts.	N/A
4.4.2	Protection in operator access areas .....:	No hazardous moving parts.	N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations .....:	The equipment is not intended to be used in restricted locations.	N/A
4.4.4	Protection in service access areas	No hazardous moving parts.	N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a)……:		N/A
	Is considered to cause pain, not injury. b) ……...:		N/A
	Considered to cause injury. c) ……:		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning ……..:		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning ……..:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.5	**Thermal requirements**		P
4.5.1	General	See below.	P
4.5.2	Temperature tests	See appended table 4.5.	P
	Normal load condition per Annex L .....:	Maximum normal load which specified by manufacturer.	—
4.5.3	Temperature limits for materials	See appended table 4.5.	P
4.5.4	Touch temperature limits	See appended table 4.5.	P
4.5.5	Resistance to abnormal heat .....:	It is clear the transformer (T101) bobbin in this unit will meet the requirements (phenolic type), also see Annex C for the details of material. Other material see table 4.5.5.	P
4.6	**Openings in enclosures**		P
4.6.1	Top and side openings	See below.	P
	Dimensions (mm) .....:	(see appended table 4.6.1 & 4.6.2 in measurement section).	—
4.6.2	Bottoms of fire enclosures	See below.	P
	Construction of the bottomm, dimensions (mm) ..:	(see appended table 4.6.1 & 4.6.2 in measurement section).	—
4.6.3	Doors or covers in fire enclosures	No doors or covers provided.	N/A
4.6.4	Openings in transportable equipment	Not transportable equipment.	N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) .....:		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes	No barrier or screen secured with adhesive.	N/A
	Conditioning temperature (°C), time (weeks).....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
4.7	**Resistance to fire**		P
4.7.1	Reducing the risk of ignition and spread of flame	Use of materials with the required flammability classes and testing in Single Fault Conditions.	P
	Method 1, selection and application of components wiring and materials	Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	P
	Method 2, application of all of simulated fault condition tests	Not used.	N/A
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	With having the following components: - components in primary - components in secondary (not supplied by L.P.S.) - components having unenclosed arcing parts at hazardous voltages or energy level - insulated wiring The fire enclosure is required.	P
4.7.2.2	Parts not requiring a fire enclosure	See 4.7.2.1.	N/A
4.7.3	Materials		P
4.7.3.1	General	Integrated circuits and small electrical parts mounted on a printed wiring board min. rated V-1 or better.	P
4.7.3.2	Materials for fire enclosures	The internal metal chassis used as fire enclosure.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	The other parts outside of fire enclosure used material rated HB or better.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components mounted on a printed wiring board min. rated V-1 or better.	P
4.7.3.5	Materials for air filter assemblies	No air filters assemblies.	N/A
4.7.3.6	Materials used in high-voltage components	No high voltage component used.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		P
5.1	**Touch current and protective conductor current**		P
5.1.1	General	See sub-clause 5.1.2 to 5.1.6.	P
5.1.2	Configuration of equipment under test (EUT)	EUT has only one mains connection.	P
5.1.2.1	Single connection to an a.c. mains supply	Each piece of equipment tested separately.	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Equipment is tested using the test circuit in figure 5 A.	P
5.1.4	Application of measuring instrument	Tests are conducted using one of the measuring instruments in annex D, or any other circuit giving the same results.	P
5.1.5	Test procedure	The touch current was measured from supply to conductive parts and to 10 cm by 20 cm metal foil wrapped on accessible non- conductive parts (plastic enclosure).	P
5.1.6	Test measurements	See appended table 5.1.	P
	Supply voltage (V) ..... :	264 Vac	—
	Measured touch current (mA) ..... :	See appended table 5.1.	—
	Max. allowed touch current (mA) ..... :	3.5 mA (for PE) or 0.25 mA (for accessible non- conductive parts).	—
	Measured protective conductor current (mA) ..... :		—
	Max. allowed protective conductor current (mA)... :		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General ..... :	Touch current does not exceed 3.5 mA.	N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	Not connected to telecommunication networks.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	No TNV.	N/A
	Supply voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
5.1.8.2	Summation of touch currents from telecommunication networks	No TNV.	N/A
	a) EUT with earthed telecommunication ports ..... :		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A
5.2	**Electric strength**		P
5.2.1	General	All tests voltages were applied for 1 minute in the chamber after the humidity test of 2.9.2 and in warm conditions after the heating test of 4.5.2. No isolation breakdown was observed. (Results see appended tables)	P
5.2.2	Test procedure	See appended table 5.2.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	Blocked opening test, results see appended table.	P
5.3.2	Motors	No motor provided.	N/A
5.3.3	Transformers	No high temp. of the transformer is to be observed or to be expected. (see appended table 5.3 and Annex C)	P
5.3.4	Functional insulation ..... :	Short Circuit tests. Result see appended table 5.3.	P
5.3.5	Electromechanical components	No electromechanical components.	N/A
5.3.6	Audio amplifiers in ITE ..... :	Result see appended table 5.3.	P
5.3.7	Simulation of faults	Faults in primary and secondary components and operational insulation were already considered for the building-in power supply board. No other abnormal tests necessary.	P
5.3.8	Unattended equipment	None of them are used.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire propagated beyond the equipment. No molten metal was emitted. Electric strength test was passed.	P
5.3.9.1	During the tests	Ditto.	P
5.3.9.2	After the tests	Ditto.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	**Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment**		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	Not connected to telecommunication networks directly.	N/A
	Supply voltage (V) .....:		—
	Current in the test circuit (mA) .....:		—
6.1.2.2	Exclusions .....:		N/A

6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) .....:		—
	Current limiting method .....:		—

7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	**General**	Not connected to cable distribution system directly.	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
A.1	**Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)**		N/A
A.1.1	Samples ..... :		—
	Wall thickness (mm) ..... :		—
A.1.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.1.3	Mounting of samples ..... :		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D ..... :		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.2	**Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)**		N/A
A.2.1	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—
A.2.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.2.3	Mounting of samples ..... :		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C ..... :		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.3	**Hot flaming oil test (see 4.6.2)**		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	**General requirements**		N/A
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	**Test conditions**		N/A
B.3	**Maximum temperatures**		N/A
B.4	**Running overload test**		N/A
B.5	**Locked-rotor overload test**		N/A
	Test duration (days) ..... :		—
	Electric strength test: test voltage (V) ..... :		—
B.6	**Running overload test for d.c. motors in secondary circuits**		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) ..... :		N/A
B.7	**Locked-rotor overload test for d.c. motors in secondary circuits**		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) ..... :		N/A
B.8	**Test for motors with capacitors**		N/A
B.9	**Test for three-phase motors**		N/A
B.10	**Test for series motors**		N/A
	Operating voltage (V) ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict

C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position .....:	(See appended table 1.5.1)	—
	Manufacturer .....:	(See appended table 1.5.1)	—
	Type .....:	(See appended table 1.5.1)	—
	Rated values .....:	(See appended table 1.5.1)	—
	Method of protection .....:		—
C.1	**Overload test**	(See appended table 5.3)	P
C.2	**Insulation**	(See appended table 5.2 and C.2)	P
	Protection from displacement of windings .....:	(See appended table C.2)	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		P
D.1	**Measuring instrument**	Figure D.1 used.	P
D.2	**Alternative measuring instrument**		N/A
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		P
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	**Clearances**		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	**Determination of mains transient voltage (V)**		N/A
G.2.1	AC mains supply .....:		N/A
G.2.2	Earthed d.c. mains supplies .....:		N/A
G.2.3	Unearthed d.c. mains supplies .....:		N/A
G.2.4	Battery operation .....:		N/A
G.3	**Determination of telecommunication network transient voltage (V) .....:**		N/A
G.4	**Determination of required withstand voltage (V)**		N/A
G.4.1	Mains transients and internal repetitive peaks .....:		N/A
G.4.2	Transients from telecommunication networks .....:		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	**Measurement of transient voltages (V)**		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	**Determination of minimum clearances .....:**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		N/A
J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		P
	Metal(s) used .....:	Metals which the combination electrochemical potential is less than 0.6 V.	—
K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) .....:		N/A
K.3	Thermostat endurance test; operating voltage (V) .....:		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....:		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	Maximum normal load which specified by manufacturer.	P
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) .....:		—
M.3.1.2	Voltage (V) .....:		—
M.3.1.3	Cadence; time (s), voltage (V) .....:		—
M.3.1.4	Single fault current (mA) .....:		—
M.3.2	Tripping device and monitoring voltage .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....:		N/A
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		N/A
N.1	ITU-T impulse test generators	Not used.	N/A
N.2	IEC 60065 impulse test generator		N/A
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		P
	- Preferred climatic categories .....:	Approved varistor (VR101) provided.	P
	- Maximum continuous voltage .....:	Ditto.	P
	- Combination pulse current .....:	Ditto.	P
	Body of the VDR Test according to IEC60695-11-5.....:		N/A
	Body of the VDR. Flammability class of material (min V-1).....:	Complied.	P
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)	Not used.	N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment	Not used.	N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**	N/A

U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.12)**		P
		FURUKAWA ELECTRIC CO., LTD / TEX-E	—

V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		P
V.1	Introduction	See below.	P
V.2	TN power distribution systems	Single-phase TN power system considered and used for testing.	P

W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A

X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A

Y	**ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)**		N/A
Y.1	Test apparatus .....:		N/A
Y.2	Mounting of test samples .....:		N/A
Y.3	Carbon-arc light-exposure apparatus .....:		N/A
Y.4	Xenon-arc light exposure apparatus .....:		N/A

Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**	N/A

AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**		—
CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		N/A
CC.1	General	No such construction.	N/A
CC.2	Test program 1……..:		N/A
CC.3	Test program 2……..:		N/A
CC.4	Test program 3.....:		N/A
CC.5	Compliance.....:		N/A
DD	**ANNEX DD, Requirements for the mounting means of rack-mounted equipment**		N/A
DD.1	General	No such construction.	N/A
DD.2	Mechanical strength test, variable N……..:		N/A
DD.3	Mechanical strength test, 250N, including end stops……:		N/A
DD.4	Compliance……..:		N/A
EE	**ANNEX EE, Household and home/office document/media shredders**		N/A
EE.1	General	The equipment is not a household and home/office document/media shredders.	N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols……..:		N/A
	Information of user instructions, maintenance and/or servicing instructions……:		N/A
EE.3	Inadvertent reactivation test……:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols……..:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A) ……..:		N/A
	Test with wedge probe (Figure EE1 and EE2) ……:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Metal enclosure	Interchangeable	Interchangeable	Metal, Min. 0.80 mm thick	UL 94	UL
Enclosure / Stand base	KINGFA SCI & TECH CO LTD	HP-126	HB, Min. 1.6 mm thick	UL 94, IEC/EN 60950-1	UL E171666 and tested with appliance
Alt.	Interchangeable	Interchangeable	Min. HB or better, Min. 1.6 mm thick	UL 94	UL
Printed wiring board	SHENG KHUANG ELECTRONICS CO LTD	03V0-B	V-0, 105ºC, min. 1.2mm	UL 796, IEC/EN 60950-1	UL E107495 and tested with appliance
Alt.	Interchangeable	Interchangeable	Min. V-1, min. 105 ºC, min. 1.2mm	UL 796	UL
LCD Panel	LG Electronics Inc.	LGM238CA41	23.8'' LED backlight	IEC/EN 60950-1	Tested with appliance
	LG Electronics Inc.	LGM238LC4	23.8" LED backlight	IEC/EN 60950-1	Tested with appliance
	LG Display Co., Ltd.	LM238WF1	23.8" LED backlight	IEC/EN 60950-1	Tested with appliance
	BOE	MV270FHM-XXX [6)]	27.0'' LED backlight	IEC/EN 60950-1	Tested with appliance
Power Board, type LGP-020A					
Appliance Inlet (SK102)	Shenzhen Delikang Electronics	CDJ-3	10 A/250 V, 70 ºC.	IEC/EN 60320-1	VDE 40010513
Alt.	Tecx-Unions Technology Corp.	TU-301-SP	10 A/250 V, 70 ºC.	IEC/EN 60320-1	VDE 40025582
Fuse [3)] (F101)	Littelfuse Inc.	215 Series	T3.15A H, 250 V 5×20mm	IEC/EN 60127-1, IEC/EN 60127-2	VDE 40013521
Alt.	Conquer Electronics Co., Ltd.	UDA, UDA-A	T3.15A H, 250 V 5×20mm	IEC/EN 60127-1, IEC/EN 60127-2	VDE 40008022
Electrolyte capacitor (C101) (Optional)	Interchangeable	Interchangeable	68 µF, min. 450 Vac, min. 105 °C.	--	--

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components (Continue)				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Varistor (VR101)	Thinking Electronic Industrial Co., Ltd.	TVR 14621	620 V Min.	IEC 61051-1, IEC 61051-2, UL 1449 3rd	VDE 005944 UL E186499
Bleeder Resistors (R101)	Interchangeable	Interchangeable	Max. 2.2 M Ohms, 1/2 W.	--	--
X-Capacitor (CX101)	Europtronic	MPX	Max. 0.33 µF, Min. 250 V, Min. X2, Min. 85 °C	IEC/EN 60384-14: 2005	VDE 40018238
Alt.	Cowell Fashion Co Ltd Pilkor Electronics	PCX2 337 PCX2 339	Max. 0.33 µF, Min. 250 V, Min. X2, Min. 85 °C	IEC/EN 60384-14: 2005	S 1119856
Alt.	Cowell Fashion Co Ltd Pilkor Electronics	PCX2 335	Max. 0.33 µF, Min. 250 V, Min. X2, Min. 85 °C	IEC/EN 60384-14: 2005	ENEC 0256-3C
Alt.	Cheng Tung Industrial Co., Ltd.	CTX	Max. 0.33 µF, Min. 250 V, Min. X2, Min. 85 °C	IEC/EN 60384-14: 2005	VDE 116941
Y-Capacitor (CY101, CY102) (Optional)	Dongguan South HongMing	F	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 118357
Alt.	Yinan Don's	CT81	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 135256
Alt.	SAMWHA	SD	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40015804
Alt.	TDK	CD	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 124321

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components (Continue)				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Alt.	JYA-NAY	JN	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40001831
Alt.	MURATA	KX	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40002831
Alt.	KUNSHAN WANSHENG	CT7	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40012143
Bridge Capacitor (CY105) (Optional)	Dongguan South HongMing	F	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 118357
Alt.	Yinan Don's	CT81	Max.2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 135256
Alt.	SAMWHA	SD	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40015804
Alt.	TDK	CD	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 124321
Alt.	JYA-NAY	JN	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40001831
Alt.	MURATA	KX	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40002831
Alt.	KUNSHAN WANSHENG	CT7	Max. 2200 pF, Min. 250 Vac, Min. 85 °C, Y1	IEC/EN 60384-14: 2005	VDE 40012143

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components (Continue)				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Optocoupler (IC102)	Lite-On Technology Corp	LTV-817 (marked with 817, maybe with suffix)	External cr: min. 7.63 mm, Internal cr: min. 5.2 mm., DTI: min. 0.6 mm, 110 °C	IEC/EN 60950-1	Semko:1119078
Alt.	EverLight Electronics Co., Ltd.	EL817.	External cr: 7.7 mm, Internal cr: 6.0 mm., DTI: 0.5 mm, 100 °C	IEC/EN 60950-1	Nemko 207644
Transformer (T101)	Lien Chang	TF-020	Class B	IEC/EN 60950-1	Tested with appliance
Line Filter (LF101)	LIEN CHANG	LF-00241W	130 °C	IEC/EN 60950-1	Tested with appliance
NTC Thermistor (TH101)	THINGKING	SCK-103	240 V, 10 Ω at 25 °C	--	--
Alt.	Interchangeable	Interchangeable	240 V, 10 Ω at 25 °C	--	--
Printed wiring board	Interchangeable	Interchangeable	Min V-1, min. 105 ºC, min. 1.2 mm	UL 796	UL

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

2) an asterisk indicates a mark which assures the agreed level of surveillance

3) Cord set: according to the manufacturer's declaration, the unit will be supplied with a power attachment cord and plug which meet the national requirements which have been approved to relevant national and international standards.

4) All sources of fuse are broken the circuit within 120s with a current equal to 210% of the current rating.

5) Component D203 with Heat sink is optional.

6) Each "X" can be 0-9 or A-Z or blank for marketing purpose and no impact safety related critical components and constructions.

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer ..... :	See appended table 1.5.1 for details.	
Type..... :	See appended table 1.5.1 for details.	
Separately tested..... :	See appended table 1.5.1 for details.	
Bridging insulation ..... :	RI	
External creepage distance..... :	See appended table 1.5.1 for details.	
Internal creepage distance ..... :	See appended table 1.5.1 for details.	
Distance through insulation ..... :	See appended table 1.5.1 for details.	
Tested under the following conditions..... :	RI	
Input..... :	--	
Output..... :	--	
supplementary information		

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (Vac/Hz)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Test for model 24BK550 Test with main board-1						
90/50	0.482	--	26.0	F101	0.482	Max. normal load with DVI IN
90/60	0.485	--	26.0	F101	0.485	Max. normal load with DVI IN
100/50	0.444	1.2	25.8	F101	0.444	Max. normal load with DVI IN
100/60	0.450	1.2	25.8	F101	0.450	Max. normal load with DVI IN
240/50	0.240	1.2	25.0	F101	0.240	Max. normal load with DVI IN
240/60	0.243	1.2	25.0	F101	0.243	Max. normal load with DVI IN
254/50	0.229	--	25.0	F101	0.229	Max. normal load with DVI IN
254/60	0.231	--	25.0	F101	0.231	Max. normal load with DVI IN
264/50	0.225	--	25.1	F101	0.225	Max. normal load with DVI IN
264/60	0.226	--	25.1	F101	0.226	Max. normal load with DVI IN
90/50	0.486	--	26.3	F101	0.486	Max. normal load with VGA IN
90/60	0.492	--	26.3	F101	0.492	Max. normal load with VGA IN
100/50	0.447	1.2	26.1	F101	0.447	Max. normal load with VGA IN
100/60	0.453	1.2	26.1	F101	0.453	Max. normal load with VGA IN
240/50	0.241	1.2	25.3	F101	0.241	Max. normal load with VGA IN
240/60	0.242	1.2	25.3	F101	0.242	Max. normal load with VGA IN
254/50	0.231	--	25.4	F101	0.231	Max. normal load with VGA IN
254/60	0.232	--	25.4	F101	0.232	Max. normal load with VGA IN
264/50	0.224	--	25.4	F101	0.224	Max. normal load with VGA IN
264/60	0.226	--	25.4	F101	0.226	Max. normal load with VGA IN
Supplementary information: Maximum normal load: Unit was operated continuously with max. brightness, contrasts, voice and resolution (1080*1920 pixels).						

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (Vac/Hz)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Test for model 24BK550 Test with main board-1						
90/50	0.493	--	26.4	F101	0.493	Max. normal load with HDMI IN
90/60	0.499	--	26.4	F101	0.499	Max. normal load with HDMI IN
100/50	0.453	1.2	26.2	F101	0.453	Max. normal load with HDMI IN
100/60	0.459	1.2	26.2	F101	0.459	Max. normal load with HDMI IN
240/50	0.246	1.2	25.4	F101	0.246	Max. normal load with HDMI IN
240/60	0.247	1.2	25.4	F101	0.247	Max. normal load with HDMI IN
254/50	0.236	--	25.5	F101	0.236	Max. normal load with HDMI IN
254/60	0.238	--	25.5	F101	0.238	Max. normal load with HDMI IN
264/50	0.230	--	25.5	F101	0.230	Max. normal load with HDMI IN
264/60	0.231	--	25.5	F101	0.231	Max. normal load with HDMI IN
90/50	0.485	--	26.4	F101	0.485	Max. normal load with Display IN
90/60	0.491	--	26.4	F101	0.491	Max. normal load with Display IN
100/50	0.445	1.2	26.2	F101	0.445	Max. normal load with Display IN
100/60	0.449	1.2	26.2	F101	0.449	Max. normal load with Display IN
240/50	0.240	1.2	25.1	F101	0.240	Max. normal load with Display IN
240/60	0.242	1.2	25.1	F101	0.242	Max. normal load with Display IN
254/50	0.232	--	25.1	F101	0.232	Max. normal load with Display IN
254/60	0.234	--	25.1	F101	0.234	Max. normal load with Display IN
264/50	0.226	--	25.1	F101	0.226	Max. normal load with Display IN
264/60	0.228	--	25.1	F101	0.228	Max. normal load with Display IN
Supplementary information: Maximum normal load: Unit was operated continuously with max. brightness, contrasts, voice and resolution (1080*1920 pixels).						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (Vac/Hz)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Test for model 27BK550 Test with main board-1						
90/50	0.557	--	29.6	F101	0.557	Max. normal load with DVI IN
90/60	0.565	--	29.6	F101	0.565	Max. normal load with DVI IN
100/50	0.514	1.5	29.4	F101	0.514	Max. normal load with DVI IN
100/60	0.522	1.5	29.4	F101	0.522	Max. normal load with DVI IN
240/50	0.279	1.5	28.8	F101	0.279	Max. normal load with DVI IN
240/60	0.282	1.5	28.9	F101	0.282	Max. normal load with DVI IN
254/50	0.268	--	28.9	F101	0.268	Max. normal load with DVI IN
254/60	0.269	--	28.9	F101	0.269	Max. normal load with DVI IN
264/50	0.260	--	28.9	F101	0.260	Max. normal load with DVI IN
264/60	0.262	--	28.9	F101	0.262	Max. normal load with DVI IN
90/50	0.558	--	29.8	F101	0.558	Max. normal load with VGA IN
90/60	0.566	--	29.8	F101	0.566	Max. normal load with VGA IN
100/50	0.512	1.5	29.6	F101	0.512	Max. normal load with VGA IN
100/60	0.520	1.5	29.6	F101	0.520	Max. normal load with VGA IN
240/50	0.276	1.5	29.0	F101	0.276	Max. normal load with VGA IN
240/60	0.278	1.5	29.0	F101	0.278	Max. normal load with VGA IN
254/50	0.265	--	29.1	F101	0.265	Max. normal load with VGA IN
254/60	0.267	--	29.1	F101	0.267	Max. normal load with VGA IN
264/50	0.258	--	29.1	F101	0.258	Max. normal load with VGA IN
264/60	0.259	--	29.1	F101	0.259	Max. normal load with VGA IN
Supplementary information: Maximum normal load: Unit was operated continuously with max. brightness, contrasts, voice and resolution (1080*1920 pixels).						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (Vac/Hz)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Test for model 27BK550 Test with main board-1						
90/50	0.560	--	29.9	F101	0.560	Max. normal load with HDMI IN
90/60	0.567	--	29.9	F101	0.567	Max. normal load with HDMI IN
100/50	0.516	1.5	29.6	F101	0.516	Max. normal load with HDMI IN
100/60	0.524	1.5	29.6	F101	0.524	Max. normal load with HDMI IN
240/50	0.281	1.5	29.1	F101	0.281	Max. normal load with HDMI IN
240/60	0.282	1.5	29.1	F101	0.282	Max. normal load with HDMI IN
254/50	0.269	--	29.1	F101	0.269	Max. normal load with HDMI IN
254/60	0.271	--	29.1	F101	0.271	Max. normal load with HDMI IN
264/50	0.261	--	29.1	F101	0.261	Max. normal load with HDMI IN
264/60	0.263	--	29.1	F101	0.263	Max. normal load with HDMI IN
90/50	0.556	--	29.6	F101	0.556	Max. normal load with Display IN
90/60	0.563	--	29.6	F101	0.563	Max. normal load with Display IN
100/50	0.512	1.5	29.4	F101	0.512	Max. normal load with Display IN
100/60	0.518	1.5	29.4	F101	0.518	Max. normal load with Display IN
240/50	0.249	1.5	28.9	F101	0.249	Max. normal load with Display IN
240/60	0.282	1.5	28.9	F101	0.282	Max. normal load with Display IN
254/50	0.267	--	28.9	F101	0.267	Max. normal load with Display IN
254/60	0.268	--	28.9	F101	0.268	Max. normal load with Display IN
264/50	0.261	--	28.9	F101	0.261	Max. normal load with Display IN
264/60	0.264	--	28.9	F101	0.264	Max. normal load with Display IN
Supplementary information: Maximum normal load: Unit was operated continuously with max. brightness, contrasts, voice and resolution (1080*1920 pixels).						

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (Vac/Hz)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Test for model 24BL550 Test with main board-2						
90/50	0.327	--	16.47	F101	0.327	Max. normal load with HDMI IN
90/60	0.326	--	17.53	F101	0.326	Max. normal load with HDMI IN
100/50	0.316	1.2	17.38	F101	0.316	Max. normal load with HDMI IN
100/60	0.318	1.2	17.37	F101	0.318	Max. normal load with HDMI IN
240/50	0.161	1.2	16.81	F101	0.161	Max. normal load with HDMI IN
240/60	0.163	1.2	16.66	F101	0.163	Max. normal load with HDMI IN
254/50	0.161	--	17.19	F101	0.161	Max. normal load with HDMI IN
254/60	0.161	--	17.38	F101	0.161	Max. normal load with HDMI IN
264/50	0.158	--	16.43	F101	0.158	Max. normal load with HDMI IN
264/60	0.160	--	17.23	F101	0.160	Max. normal load with HDMI IN
90/50	0.343	--	17.58	F101	0.343	Max. normal load with D-Sub IN
90/60	0.341	--	17.51	F101	0.341	Max. normal load with D-Sub IN
100/50	0.315	1.2	17.45	F101	0.315	Max. normal load with D-Sub IN
100/60	0.313	1.2	17.50	F101	0.313	Max. normal load with D-Sub IN
240/50	0.169	1.2	17.10	F101	0.169	Max. normal load with D-Sub IN
240/60	0.166	1.2	17.25	F101	0.166	Max. normal load with D-Sub IN
254/50	0.163	--	17.20	F101	0.163	Max. normal load with D-Sub IN
254/60	0.163	--	17.14	F101	0.163	Max. normal load with D-Sub IN
264/50	0.160	--	17.35	F101	0.160	Max. normal load with D-Sub IN
264/60	0.160	--	17.33	F101	0.160	Max. normal load with D-Sub IN
Supplementary information: Maximum normal load: Unit was operated continuously with max. brightness, contrasts, voice and resolution (1080*1920 pixels).						

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (Vac/Hz)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Test for model 24BL550 Test with main board-2						
90/50	0.350	--	17.47	F101	0.350	Max. normal load with Display IN
90/60	0.354	--	17.48	F101	0.354	Max. normal load with Display IN
100/50	0.323	1.2	17.33	F101	0.323	Max. normal load with Display IN
100/60	0.325	1.2	17.33	F101	0.325	Max. normal load with Display IN
240/50	0.170	1.2	17.07	F101	0.170	Max. normal load with Display IN
240/60	0.170	1.2	17.07	F101	0.170	Max. normal load with Display IN
254/50	0.163	--	17.10	F101	0.163	Max. normal load with Display IN
254/60	0.162	--	17.11	F101	0.162	Max. normal load with Display IN
264/50	0.158	--	17.12	F101	0.158	Max. normal load with Display IN
264/60	0.158	--	17.13	F101	0.158	Max. normal load with Display IN
Supplementary information: Maximum normal load: Unit was operated continuously with max. brightness, contrasts, voice and resolution (1080*1920 pixels).						

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Clause	Requirement + Test	Result - Remark	Verdict

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
12	2	12.08	2.7	32.1	
Supplementary information: Energy does not exceed 240VA between any two points in accessible parts (o/p) connector of secondary circuit.					

2.1.1.5 c) 2)	TABLE: stored energy	N/A
Capacitance C (µF)	Voltage U (V)	Energy E (J)
--	--	--
supplementary information:		

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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits		P
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
T101 pin 6 to earth	81	--	--
After R201 to earth	78	--	R201
After D203/D204/C201 to earth	--	12.7	D203/D204/C201

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
D201	0 Vdc
C201	7.2 Vdc

supplementary information:

If the voltage exceeded 42.4 V pk or 60 V dc, the measurement was taken again after the next component in series with the secondary until the voltage measured was less than 42.4 V pk or 60 V dc.

Each voltage measured and each component located in series directly before the measurement was noted.

After the fault introduction, the voltage did not exceed 42.4 V pk or 60 V dc for longer than 0.2 seconds.
In addition, a limit of 71 V pk or 120 V pk was not exceeded.

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Clause	Requirement + Test	Result - Remark	Verdict

2.5	TABLE: Limited power sources					P
Circuit output tested: see below.						
Note: Measured Uoc (V) with all load circuits disconnected: see below.						
Components	Test condition (Single fault)	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
Output	Nc	12.08	2.7	≤8.0	32.1	≤100
R201	Sc	12.08	2.1	≤8.0	25.1	≤100
D203	Sc*	12.08	0	≤8.0	0	≤100
IC102 Pin 1 to Pin 2	Sc*	12.08	0	≤8.0	0	≤100
IC102 Pin 3 to Pin 4	Sc*	12.08	0	≤8.0	0	≤100
C203	Sc*	12.08	0	≤8.0	0	≤100
D102	Sc*	12.08	0	≤8.0	0	≤100
supplementary information:						
Nc = Normal condition, Sc = Short circuit, Oc = Open circuit *= Shut down immediately.						

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.2	TABLE: Max. working voltage measurement		P
Location	Peak voltage (V)	RMS voltage (V) Peak	Comments
For Transformer (T101)			
Pin 1 to pin 6	348	207	--
Pin 1 to pin 10	408	207	--
Pin 3 to pin 6	**500**	**236**	**Max. Vpk/Vrms**
Pin 3 to pin 10	460	227	--
Pin 4 to pin 6	408	206	--
Pin 4 to pin 10	360	204	--
Pin 5 to pin 6	344	204	--
Pin 5 to pin 10	352	204	--
For optocoupler (IC102)			
Pin 1 to pin 3	356	210	--
Pin 1 to pin 4	356	211	--
Pin 2 to pin 3	356	210	--
Pin 2 to pin 4	356	212	--
For Bridging Capacitor(CY104)			
Pri. Pin to Sec. Pin	344	204	--
Supplementary information: 1) Input Voltage / Frequency: 240 Vac / 60 Hz 2) The following terminals were connected to earth: T101 Pin 6.			

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.3 and 2.10.4	**TABLE: Clearance and creepage distance measurements**					**P**
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
Prim. → Sec. traces	**420**	**250**	**4.0**	↓	**5.0**	↓
Under IC102	420	250	4.0	7.8	5.0	7.8
Under CY103	420	250	4.0	8.0	5.0	8.0
Prim. →Sec. traces under T101	**500**	**236**	**4.8**	8.0	**5.0**	8.0
Between Fuse two ends solder side	**420**	**250**	**1.5**	4.0	**2.5**	4.0
Between Fuse two ends component side	**420**	**250**	**1.5**	8.9	**2.5**	8.9
Line to neutral before fuse	**420**	**250**	**1.5**	4.0	**2.5**	4.0
Primary trace to earth trace (L/N trace to earth trace)	**420**	**250**	**2.0**	2.5	**2.5**	Min. 2.5
Primary trace to earth trace (under CY101, CY102)	**420**	**250**	**2.0**	7.5	**2.5**	7.5
Primary trace to earth metal chassis	**420**	**250**	**2.0**	4.5	**2.5**	4.5
Primary component to earth metal chassis	**420**	**250**	**2.0**	4.5	**2.5**	4.5

Supplementary information:

1. The CTI rating of PCB is material group IIIa/IIIb (Cl. 2.10.4).

2. Separation Method between SELV and hazard circuit (Cl. 2.2.3) by double or reinforced insulation (Method 1).

3. Functional insulation shorted, see Cl. 5.3.4.

4. C101, CY101, CY102, CY105 are fixed in position by silicone or glue.

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.5	TABLE: Distance through insulation measurements				P
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Optocoupler IC102 (Reinforced insulation)	356	240	3000 Vac	0.4	Min. 0.4
Optocoupler IC102 (Reinforced insulation)	356	240	3000 Vac	0.4	Min. 0.4
Bobbin of transformer T101 (Reinforced insulation)	500	240	3000 Vac	0.4	0.71
Insulating tapes in switching power transformer T101 (Reinforced insulation)	500	240	3000 Vac	2 layers	3 layers
Supplementary information: See appended table 1.5.1 for further details.					

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Clause	Requirement + Test	Result - Remark	Verdict

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available				--					--
Is it possible to install the battery in a reverse polarity position?				--					--
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--
Test results:									Verdict
- Chemical leaks									--
- Explosion of the battery									--
- Emission of flame or expulsion of molten metal									--
- Electric strength tests of equipment after completion of tests									--
Supplementary information:									

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Clause	Requirement + Test	Result - Remark	Verdict

4.3.8	TABLE: Batteries	N/A
Battery category.....: (Lithium, NiMh, NiCad, Lithium Ion …) Manufacturer.....: Type / model .....: Voltage.....: Capacity.....: mAh Tested and Certified by (incl. Ref. No.) .....: Circuit protection diagram:		

MARKINGS AND INSTRUCTIONS (1.7.13)	
Location of replaceable battery	
Language(s) ……..:	
Close to the battery ……..:	
In the servicing instructions ……..:	
In the operating instructions ……..:	

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V)	90 Vac	90 Vac	90 Vac	264 Vac	—
	Ambient T_{min} (°C)	--	--	--	--	—
	Ambient T_{max} (°C)	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)				Allowed T_{max} (°C)
Test conditions:		Horizontal (Data port downward)	Vertical (Data port rightward)	Elevation angle (Data port downward)	Elevation angle (Data port downward)	--
Test on model 24BK550 For Power board						
AC Inlet		50.3	47.5	50.7	49.4	70
VR101 body		60.1	54.0	60.6	56.7	85
CX101 body		62.4	57.0	62.7	58.3	85
LF101 body		63.0	57.9	63.1	56.9	130
C101 body		60.0	58.1	60.4	57.1	105
PWB near D104		65.8	63.3	66.7	59.5	105
IC102 body		67.0	65.4	67.9	66.2	100
T101 coil		73.6	67.2	73.8	73.7	110
T101 core		71.2	64.8	71.2	70.9	110
LB201 coil		69.4	66.5	69.6	68.5	105
C204 body		69.2	61.1	68.5	67.7	105
For Main board						
L704 coil		83.7	83.6	83.7	83.6	105
PWB near IC100		62.7	68.6	62.4	62.5	105
PWB near Q700		80.7	82.8	80.5	80.4	105

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V)	90 Vac	90 Vac	90 Vac	264 Vac	—
	Ambient T_{min} (°C)	--	--	--	--	—
	Ambient T_{max} (°C)	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)				Allowed T_{max} (°C)
Test conditions:		Horizontal (Data port downward)	Vertical (Data port rightward)	Elevation angle (Data port downward)	Elevation angle (Data port downward)	--
For SELV board						
L1 coil		64.5	66.2	64.9	65.0	105
Plastic enclosure inside near T101		50.6	45.8	50.2	49.6	60
Plastic enclosure outside near T101		41.0	44.5	46.9	46.4	95
Panel body near top		46.3	46.5	45.3	45.6	80
Metal enclosure outside near power		49.3	47.2	48.9	48.7	70
Ambient		40.0	40.0	40.0	40.0	--
Actual ambient before shift to 40 °C		24.5	24.7	25.3	24.9	--
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V)	90 Vac	90 Vac	90 Vac	264 Vac	—
	Ambient T_{min} (°C)	--	--	--	--	—
	Ambient T_{max} (°C)	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)				Allowed T_{max} (°C)
Test conditions:		Horizontal (Data port downward)	Vertical (Data port rightward)	Elevation angle (Data port downward)	Elevation angle (Data port downward)	--
Test on model 27BK550 **For Power board**						
AC Inlet		48.0	46.1	48.4	47.2	70
VR101 body		59.2	53.4	59.5	56.1	85
CX101 body		60.8	55.6	61.0	57.3	85
LF101 body		65.3	60.0	65.3	57.9	130
C101 body		61.8	60.8	62.0	58.3	105
PWB near D104		65.5	62.9	66.1	58.3	105
IC102 body		65.7	66.5	65.9	65.2	100
T101 coil		76.2	70.2	75.9	77.5	110
T101 core		73.4	67.7	73.0	74.4	110
LB201 coil		69.4	66.2	69.7	68.8	105
C204 body		71.0	62.7	70.1	70.6	105
For Main board						
L704 coil		94.2	93.2	93.8	93.4	105
PWB near IC100		62.3	67.3	61.9	61.6	105
PWB near Q700		80.4	80.7	80.0	79.7	105

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V)	90 Vac	90 Vac	90 Vac	264 Vac	—
	Ambient T_{min} (°C)	--	--	--	--	—
	Ambient T_{max} (°C)	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)				Allowed T_{max} (°C)
Test conditions:		Horizontal (Data port downward)	Vertical (Data port rightward)	Elevation angle (Data port downward)	Elevation angle (Data port downward)	--
For SELV board						
L1 coil		60.8	59.9	60.6	60.7	105
Plastic enclosure inside near T101		45.1	45.9	44.7	44.2	60
Plastic enclosure outside near T101		47.3	45.3	46.9	46.5	95
Panel body near top		46.0	45.0	44.8	45.9	80
Metal enclosure outside near Audio Inlet		48.6	49.1	48.9	48.0	70
Ambient		40.0	40.0	40.0	40.0	--
Actual ambient before shift to 40 °C		25.3	25.3	25.8	25.6	--
Supplementary information:						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--

Supplementary information:

Test condition: Above tests were conducted with Main board and max. normal load with HDMI IN.

The temperatures were measured by thermal couple (type K) method under worst case normal mode as described in 1.6.2 at voltage described in 1.4.5. The worst case normal mode is defined with max. load of the LCD Monitor.

With max. ambient temperature specified as 40 °C, therefore, the maximum temperature rise is calculated as follows:

Winding components:

- Class B → 120-10 = 110 °C (for T101)

Components with:

- max. temp. of 70 °C (AC inlet)
- max. temp. of 100 °C (Optocoupler)
- max. temp. of 85 °C (X cap, Varistor)
- max. temp. of 105 °C (Electrolyte capacitor, PWB, choke)
- max. temp. of 130 °C (Line Filter)
- When no class of insulation is given, min. insulation 105 °C assumed.

User accessible area:

- material is Plastic (95 °C) → 95 °C
- material is Glass (80 °C) → 80 °C
- material is Metal (70 °C) → 70 °C

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.5.5	TABLE: Ball pressure test of thermoplastic parts		P
	Allowed impression diameter (mm) .....:	≤ 2 mm	—
Part		Test temperature (°C)	Impression diameter (mm)
Bobbin of Line filter LF101		125	0.75
Supplementary information: The diameter of the impression caused by the ball did not exceed 2 mm.			

4.7	TABLE: Resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
1)	1)	1)	1)	1)	1)
Supplementary information: 1) See appended table 1.5.1 for details.					

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.1	TABLE: touch current measurement			P
Measured between:		Measured (mA)	Limit (mA)	Comments/conditions
Earthed metal enclosure		0.214	3.5	System ON, Normal polarity, with “e” opened.
Earthed metal enclosure		0.214	3.5	System ON, reverse polarity with “e” opened.
Secondary terminals (-)		0.214	3.5	System ON, Normal polarity, with “e” opened.
Secondary terminals (-)		0.214	3.5	System ON, reverse polarity with “e” opened.
Plastic enclosure with metal foil		0.01	0.25	System ON, Normal polarity, with “e” closed.
Plastic enclosure with metal foil		0.01	0.25	System ON, reverse polarity with “e” closed.
supplementary information:				
Input voltage: 264 Vac, Input frequency: 60 Hz. Overall capacity: CY101, CY102 = 2200 pF, Bridge Capacitor: CY104 = 2200 pF.				

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Electric strength measurements			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
For Unit				
Between power switch two ends (power off)		AC	1500	No
Primary – earthing parts		DC	2460	No
Primary – Secondary output		DC	4242	No
Primary to accessible plastic enclosure with metal foil		AC	3000	No
For Transformer				
T101 Primary – Secondary		AC	3000	No
T101 Secondary – core *		AC	3000	No
2 layer of insulation tape used in T101		AC	3000	No
Supplementary information: 1) There was no indication of breakdown as a result of applying the test voltage to the indicated locations for 60 seconds. 2) *: Core is considered as hazardous live parts.				

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) .....:	25 °C or see below.	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	See Table 1.5.1 for detail.	—

Component No.	Fault	Supply voltage (Vac)	Test time	Fuse #	Fuse current (A)	Observation
D104	S	240	1 s	F101	6.7→0	Unit shut down, F101 opened. No hazard, no extremely high temperature.
C101	S	240	1 s	F101	6.7→0	Unit shut down, F101 opened. No hazard, no extremely high temperature.
D101	S	240	1 h	F101	0.028→ 0.25	Screen off, Fold back. No hazard, no extremely high temperature.
C103	S	240	5 min	F101	6.7→0	Unit shut down after 5 min, F101 opened, ZD103 damaged. No hazard, no extremely high temperature.
C105	S	240	10 min	F101	0.029	Screen off, Fold back. No hazard, no extremely high temperature.
D102	S	240	10 min	F101	0.029	Screen off, Fold back. No hazard, no extremely high temperature.
D203	S	240	10 min	F101	0.027	Screen off, Fold back. No hazard, no extremely high temperature.
C203	S	240	30 min	F101	0.027→ 0.116	Screen off, Fold back. No hazard, no extremely high temperature.
IC102 (pin 1-2)	S	240	10 min	F101	0.029	Screen off, Fold back. No hazard, no extremely high temperature.
IC102 (pin 3-4)	S	240	10 min	F101	0.027	Screen off, Fold back. No hazard, no extremely high temperature.
IC102 (pin 4)	O	240	10 min	F101	0.027	Screen off, Fold back. No hazard, no extremely high temperature.
IC102 (pin 1)	O	240	10 min	F101	0.027	Screen off, Fold back. No hazard, no extremely high temperature.
T101 (pin 6-10)	S	240	10 min	F101	0.027	Screen off, Fold back. No hazard, no extremely high temperature.
T101 (12V output)	o-l	240	3 h	F101	0.45	Output loaded to 2.7 A. No hazard. Max. temperature obtained: T101 coil: 130.8 °C T101 core: 120.5 °C, Ambient: 26 °C

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Component No.	Fault	Supply voltage (Vac)	Test time	Fuse #	Fuse current (A)	Observation
Speaker (L, R)	S	240	30 min	F101	0.263	Normal operation. No hazard.
Openings (For model 27BK550)	Blocked	240	4.33 h	F101	0.282	Normal operation. No hazard. Max. temperature obtained: T101 coil: 65.6 °C T101 core: 62.6 °C Ambient: 26.4 °C.
Openings (For model 24BK550)	Blocked	240	3.98 h	F101	0.247	Normal operation. No hazard. Max. temperature obtained: T101 coil: 61.7 °C T101 core: 59.0 °C Ambient: 26.1 °C.
Supplementary information:						
Fault: S = short circuit, O = open circuit, o-l = overload						
Note: 1. Temperature of all components was considered, no high temperature exceeding request. 2. If fuse not open have repeat test three times.						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
T101 Primary winding to secondary winding	RI	500	236	See appended table 5.2	4.4	5.0	0.4 mm min. or 2 layers min. or TIW
T101 Core to secondary winding	RI	500	236	See appended table 5.2	4.4	5.0	0.4 mm min. or 2 layers min. or TIW
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T101 Primary winding to secondary winding	RI			See appended table 5.2	Triple insulated wire on secondary	Triple insulated wire on secondary	See appended table C.2.
T101 Core to secondary winding	RI			See appended table 5.2	Triple insulated wire on secondary	Triple insulated wire on secondary	See appended table C.2.
supplementary information:							
1. Triple insulation wire used in secondary winding. core is considered as primary. 2. The transformer manufactured by each factory passed the test and result the same. 3. Details construction refer to appended table C.2.							

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: transformers	P

1. Dimension (UNIT : m/m)

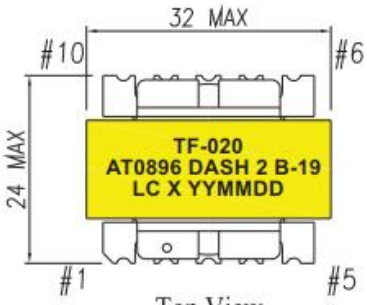
Safety

"MARKING SPEC"
TF-020
AT0896 DASH 2 B-19
LC X YYMMDD

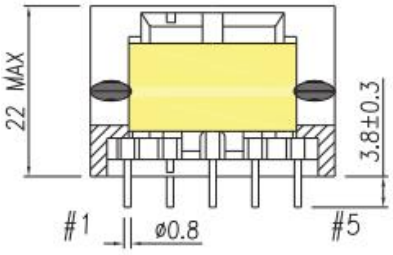
SAFETY NO.	TF-020
LCE PART NO.	AT0896
DASH 2 B-19	Lien Chang electronic 'CLASS B' system
LC	Lien Chang electronic
X	A : CHINA ZhongTai FACTORY ID B : CHINA FanYou FACTORY ID S: CHINA Feelux FACTORY ID

LOT NO (YYMMDD)		
YEAR (YY)	MONTH (MM)	DAY (DD)
2012Y-12 2013Y-13 2014Y-14	01M-01 . 12M- 12	01D-01 . 31D-31

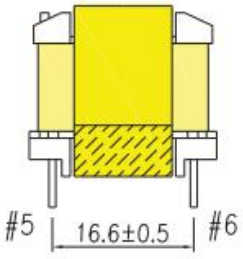
※ GAP CORE : TOP SIDE INSERT .
※ CUT OFF PIN : #8.
※ CUTTING 1/2 PIN : #2.
※ ADHESIVE RESIN : : E-500 .
※ CENTER EPOXY : 8757W .



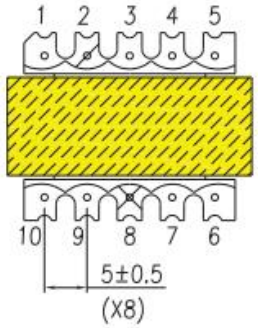
Top View



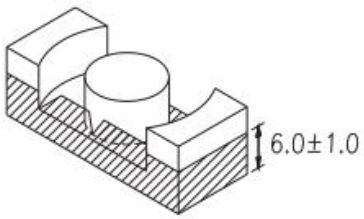
Front View



Side View



Bottom View

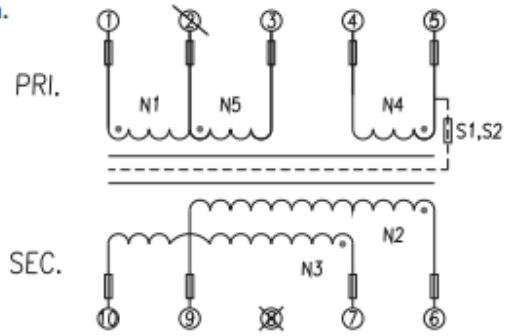


BOTTOM CORE :
POLYESTER FILM TAPE (0.025t X 2)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: transformers	P

2. Schematic Diagram.



3. Winding Specification.

" ● " START WINDING " ▭ " TEFLON TUBE
" × " REMOVE PIN

No.	TERMINAL		WIRE	TURNS	WINDING METHOD	LAYER	BARRIER TAPE		INSULATION	
	S	F					TOP. (WIDTH)	BOTTOM (WIDTH)	P/E TAPE (T/W)	TURNS
N1	1	2	2UEW 0.40Φ	25	SOLENOID	2	×	3 mm	0.025 x11 (YELLOW)	1
S1		5	CopperTape 5mmW	0.9	LEAD WIRE UEW 0.30Φ	1	×	3 mm	0.025 x11 (YELLOW)	2
N2	6	9	TEX-E 0.50Φ	8	SOLENOID	2	×	3 mm	0.025 x11 (YELLOW)	1
N3	7	10	TEX-E 0.50Φ	8	SOLENOID	2	×	3 mm	0.025 x11 (YELLOW)	2
S2		5	CopperTape 5mmW	0.9	LEAD WIRE UEW 0.30Φ	1	×	3 mm	0.025 x11 (YELLOW)	1
N4	5	4	2UEW 0.20Φ	10	SPACED	1	×	3 mm	0.025 x11 (YELLOW)	1
N5	2	3	2UEW 0.40Φ	25	SOLENOID	2	×	3 mm	0.025 x11 (YELLOW)	2
CORE FIXING TAPE									0.025 x11 (YELLOW)	3

※ WINDING DIRECTION : PIN VIEW WINDING C.C.W (Clock contrary winding)

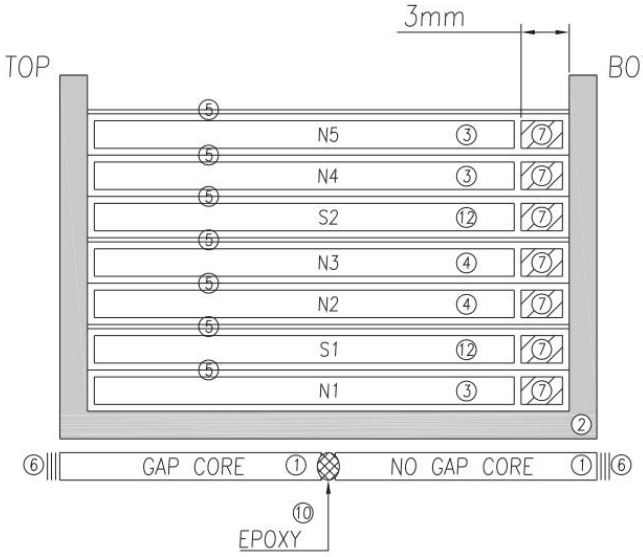
※ PIN WIRING SPEC : T.I.W & UEW WIRE=> 1.0Tc Min

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: transformers	P

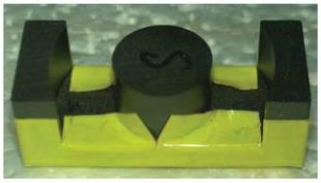
7. Section Diagram.

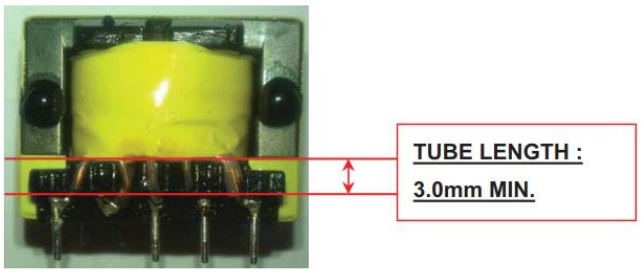
Safety



※ CENTER EPOXY : MORE THAN 80% OF THE VOLUME APPLIED TO THE GAP.

※THERE IS USE CROSS TAPE TWO TURNS OF BOTTOM CORE.





IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: transformers	P

8. Material List.

Safety

No.	Component	Name Of Material	Manufacture Component	Material Color	UL File No.
1	Core	ER2920 TP4A	TDG HOLDING CO., LTD.	Black	
		ER2819 JF1	WUXI SPINEL MAGNETICS CO., LTD.		
2	Bobbin	94V-0 Phenol PM9820 10PIN	SUMITOMO BAKELITE CO., LTD.	Black	E41429
3	Wire	Polyurethane MW28-C MW75-C N1 N5 : 2UEW 0.40Φ N4 : 2UEW 0.20Φ	KUNSHAN DELICONN ELECTRONICAL SCIENCE & TECHNOLOGY CO., LTD. PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO., LTD.	Brass Yellow	E250708 E201757
4		Cat no. TEX-E N2 N3 : TEX-E 0.50Φ	FURUKAWA ELECTRIC CO., LTD	Brass Yellow	E206440
5	Insulation Tape	Polyester Film Tape Cat No. CT	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD.	Yellow	E165111
6	Core Fixing Tape	Polyester Film Tape Cat No. 1350-1	3M COMPANY		E17385
7	Barrier Tape	Polyester Film Tape Cat No. 44	3M COMPANY	Transparency	E17385
8	Tube	TEFLON TUBE Cat no. TFL	GREAT HOLDING INDUSTRIAL CO LTD	Transparency	E156256
9	Varnish	V1630FS	ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	Transparency	E87039
10	Epoxy	8757W	SUZHOU ROUTEN ELECTRONICS CO., LTD	White	
11	Adhesive resin :	E-500	SUZHOU EATTO ELECTRONIC MATERIAL CO., LTD.	Black	
12	Shield	COPPER FOIL	SUZHOU GUANPU ELECTRIC CO., LTD.	Brass	
			MEI LI ELECTRONICS MATERIAL CO., LTD	Brass	
13	Solder	PF606 (Sn96.5/Ag3/Cu0.5)	SHENMAO TECHNOLOGY INC.	Silver	
14	Flux	TE-807	KUNSHAU TOPTRY HUYE ELECTRONIC MATERIALS CO., LTD.	Lemon Yellow	
15	Marking	INK & Label HI-68k	SHANGHAI HUASHI ELECTRONIC CO., LTD.	Black	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

List of test equipment used:
A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date

PSB Singapore

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
Attachment Form No.....:	EU_GD_IEC60950_1F
Attachment Originator.....:	SGS Fimko Ltd
Master Attachment.....:	Date 2014-02

EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it´s amendmets are prefixed “Z”		
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1 Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note; 6.2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2		P

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note 6.1.2.1 Note 2 6.2.2.1 Note 2 EE.3 Note		P
General (A2:2013)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	**Replace** the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	See below.	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010	Deleted.	N/A
1.5.1 (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *	Added.	P

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	The equipment is not a PORTABLE SOUND SYSTEM.	N/A
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.	Ditto.	N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: – is designed to allow the user to listen to recorded or broadcast sound or video; and – primarily uses headphones or earphones that can be worn in or on or around the ears; and – allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: – hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	– analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and – a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with Its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed “programme simulation noise” described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: – the symbol of Figure 1 with a minimum height of 5 mm; and – the following wording, or similar: "To prevent possible hearing damage, do not listen at high volume levels for long periods."  **Figure 1 – Warning label (IEC 60417-6044)** Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.		N/A
	Zx.4.3 Wireless listening devices In wireless mode: – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.		N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;	Considered.	P
	c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	This subclause has been declared ‘void’.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 | 0,75 [a)] | Over 6 up to and including 10| (0,75) [b)] 1,0 | Over 10 up to and including 16| (1,0) [c)] 1,5 | In the conditions applicable to Table 3B delete the words "in some countries" in condition [a)]. In NOTE 1, applicable to Table 3B, delete the second sentence.		N/A
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 | 1,5 to 2,5 | 1,5 to 4 | Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	No ionizing radiation.	N/A
Bibliography	Additional EN standards.		—

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Clause	Requirement + Test	Result - Remark	Verdict

ZA	**NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**	—

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1 (A11:2009)	In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	In **Norway**, due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		P
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: “Apparaten skall anslutas till jordat uttag”		N/A
1.7.2.1 (A11:2009)	In **Norway** and **Sweden**, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).”		

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”		N/A
1.7.2.1 (A2:2013)	In **Denmark**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in **Denmark** shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 1.7.5 (A11:2009)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A
1.7.5 (A2:2013)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a. Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b. Justification the Heavy Current Regulations, 6c		N/A
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.		P

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	In the **United Kingdom**, to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c		N/A
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A
3.2.1.1	In the **United Kingdom**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In **Ireland**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In the **United Kingdom**, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm^2 to 1,5 mm^2 nominal cross-sectional area.		N/A
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply. **UK Application Note**: BS 1363-1:1995+A4:2012 has now superseded the previous version (incorporating Amendments 1:1997, 2:2003 and 3:2007) which has been withdrawn. Our recommendation is for users to always identify and follow the latest version of a standard to which a dated reference is made. This is also applicable in the case of BS EN 60950-1 and users would need to refer to the latest version of BS 1363-1:1995+A4:2012 when applying BS EN 60950-1.		N/A
4.3.6	In **Ireland**, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In **Finland**, **Norway** and **Sweden** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	In **Finland**, **Norway** and **Sweden**, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No connection to the telecommunication networks.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	Ditto.	N/A
7.2	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	No connection to the cable distribution system.	N/A
7.3 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.	Ditto.	N/A

Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

PSB Singapore

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 (AUSTRALIA/NEW ZEALAND) NATIONAL DIFFERENCES

(Information technology equipment-safety)

Differences according to.....: AS/NZS 60950.1:2015

Attachment Form No.....: AU_NZ_ND_IEC60950_1F

Attachment Originator .....: JAS-ANZ

Master Attachment.....: 2017-06

	National Differences		—
Appendix ZZ	Variations to IEC 60950-1, Ed 2.2 (2013) for Australia and New Zealand		—
1.2	**DEFINITIONS**		N/A
	After definition 'PERSON, SERVICE', insert the following new definition: POTENTIAL IGNITION SOURCE…….1.2.12.201	Inserted.	N/A
1.5	**COMPONENTS**		N/A
1.5.1	1. First paragraph, insert the following text after the words 'IEC component standard: or the relevant Australian/New Zealand Standard 2. In the Note, insert the following text after the word standard: or the relevant Australian/New Zealand Standard 3. Second paragraph, delete the words 'without further evaluation'	Added.	N/A
1.5.2	1. First paragraph, insert the following text after the word 'standard' or an Australian/New Zealand Standard 2. First paragraph, second dash item, second line, insert the following text after the word 'standard' or an Australian/New Zealand Standard 3. First paragraph, second dash item, last line, insert the following text after the word 'standard': or an Australian/New Zealand Standard	Added.	N/A

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1.7	**MARKINGS AND INSTRUCTIONS**		N/A
1.7.1.3	*Delete* existing text and *replace* with the following: Graphical symbols placed on the equipment as a requirement of this standard, shall be in accordance with IEC 60417 or ISO 3864-2 or ISO 7000, if available. In the absence of suitable symbols, the manufacturer may design specific graphical symbols. Symbols as required by this standard placed on the equipment shall be explained in the user manual	Replaced.	N/A
2.9	**ELECTRICAL INSULATION**		N/A
2.9.2	Variation Second paragraph, *delete* the word 'designated'	Deleted.	N/A
3.2.5	**POWER SUPPLY CORDS**		N/A
Table 3B	Variation *1. Delete* the first four rows and replace with the following: Over 0.2 up to and including 3 — 0.5[a] — 18 [0.8] Over 3 up to and including 7.5 — 0.75 — 16 [1.3] Over 7.5 up to including 10 — (0.75)[b] 1.00 — 16 [1.3] Over 10 up to including 16 — (1.0)[c] 1.5 — 14 [2]	Compliance shall be evaluated during the national approval.	N/A
	2. Delete NOTE 1 and renumber existing NOTE 2 as 'NOTE'		N/A
	3. Delete Footnote [a] and replace with the following: [a] This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the to the plug does not exceed 2 m (0,5 mm2 three-core supply flexible cords are not permitted; see AS/NZS 3191)		N/A
4.3	**DESIGN AND CONSTRUCTION**		N/A
4.3.6	Variation *Delete* the third paragraph and *replace* with the following:	Unit is not DIRECT PLUG-IN EQUIPMENT.	N/A
	Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112 shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets		N/A

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4.3.8	Addition Eighth paragraph, *insert* the following new note after the first dash item:	Refer to below.	N/A
	NOTE 6.201 In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of SELV may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.	Not provided by power from an UPS.	N/A
4.3.13.5.1	Variation *Delete* the first paragraph and *replace* with the following: Except as permitted below, equipment shall be classified and labelled according to IEC 60825-1 or AS/NZS 60825.1, IEC 60825-2 or AS/NZS 60825.2 and IEC 60825-12, as applicable	Replaced.	N/A
	Third paragraph, first sentence, after 'IEC 60825-1', *insert* the following text: or AS/NZS 60825.1		N/A
	Fourth paragraph, after 'IEC 60825-1', *insert* the following text: or AS/NZS 60825.1		N/A
4.7	**RESISTANCE TO FIRE**		N/A
4.7	Addition At the end of Clause 4.7, *insert* the following text: For alternate tests refer to Clause 4.7.201		N/A
6	**CONNECTION TO TELECOMMUNICATIONS NETWORKS**		N/A
6.2.2	Variation For Australia only, *delete* the first paragraph and Note, and *replace* with the following: In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2	No connection to the TELECOMMUNICATION NETWORK.	N/A

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6.2.2.1	Variation For Australia only, *delete* the first paragraph including the Notes, and *replace* with the following: In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator Reference 1 of Table N.1. The interval between successive impulses is 60 s and the initial voltage, Uc, is: (i) for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and (ii) For 6.2.1 b) and 6.2.1 c): 1.5kV		N/A
	NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines		N/A
	NOTE 202 The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages		N/A
6.2.2.2	Variation For Australia only, delete the second paragraph including the Note, and replace with the following: In Australia only, the a.c. test voltage is (i) for 6.2.1 a): 3kV; and (ii) for 6.2.1b) and 6.2.1c): 1.5kV		N/A
	NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.		N/A
	NOTE 202 The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A
7	**CONNECTION TO CABLE DISTRIBUTION NETWORK**		N/A
7.3	Addition *Add* the following before the first paragraph: Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes	No connection to the CABLE DISTRIBUTION SYSTEMS.	N/A
Annex P	Addition *Add* the following Normative References: AS/NZS 3191, Electric flexible cords AS/NZS 3112, Approval and test specification—Plugs and socket-outlets	Added.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Special national conditions (if any)		N/A
1.2.12	**FLAMMABILITY**		N/A
1.2.12.15	Addition After Clause 1.2.12.15, *insert* the following new clause:	Inserted.	N/A
1.2.12.201	**POTENTIAL IGNITION SOURCE** Possible fault which can start a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15 VA	Inserted.	N/A
	Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS		N/A
	NOTE 1 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE		N/A
	NOTE 2 This definition is from AS/NZS 60065:2012, Clause 2.8.11.		N/A
4	**PHYSICAL REQUIREMENTS**		N/A
4.1	Addition After Clause 4.1, *insert* new Clause 4.1.201 as follows:		N/A
4.1.201	**Display devices used for television purposes** Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065		N/A
4.3	**DESIGN AND CONSTRUCTION**		N/A
4.3.8	Addition After Clause 4.3.8, *add* the following new clause as follows	Refer to below.	N/A
4.3.8.201	**Products containing coin/button cell batteries and batteries designated R1** The requirements of AS/NZS 60065:2012 Amendment 1:2015, Clause 14.10.201 apply for this Clause.	No such coin/button cell batteries.	N/A

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4.7	**RESISTANCE TO FIRE**		N/A
4.7.3.6	Addition After Clause 4.7.3.6, *add* new clauses as follows:		N/A
4.7.201	**Resistance to fire—Alternative tests**		N/A
4.7.201.1	**General** Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following: a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length.	Compliance shall be evaluated during the national approval.	N/A
	b) The following parts which would contribute negligible fuel to a fire: – small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; – small electrical components, such as capacitors with a volume not exceeding 1,750 mm3, integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1, or better, according to AS/NZS 60695.11.10		N/A
	NOTE In considering how to minimize propagation of fire and what 'small parts are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another		N/A
	Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5		N/A
	For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5		N/A
	The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.2	**Testing of non-metallic materials** Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.		N/A
4.7.201.3	**Testing of insulating materials** Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE Contacts in components such as switch contacts are considered to be connections. For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested. The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Clause of AS/NZS 60695.11.5	**Change**		N/A
	9 Test procedure			
	9.2 Application of Needle-flame	*Delete* the first and second paragraphs and *replace* with the following: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1. If possible the flame shall be applied at least 10 mm from a corner. The duration of application of the test flame shall be 30 s ± 1 s		
	9.3 Number of test specimens	*Delete* existing text and *replace* with the following: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.		
	11 Evaluation of test results	*Delete* existing text and *replace* with the following: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15s		
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part			N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.4	**Testing in the event of non-extinguishing material** If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3 by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested.		N/A
	NOTE 1 If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.		N/A
	NOTE 2 If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing		N/A
	NOTE 3 Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.		N/A
4.7.201.5	**Testing of printed boards** The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE.	Printed boards provided min V-1 class material.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The test is not carried out if the – Printed board does not carry any POTENTIAL IGNITION SOURCE; – Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or – Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. *Compliance shall be determined using the smallest thickness of the material.*		N/A
	NOTE Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 m when the circuit supplied is disconnected.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

Canada (CA)			
National standard reference….: Amendment 2:2014 to CAN/CSA-C22.2 No 60950-1-07			
SPECIAL NATIONAL CONDITIONS The following is a summary of the key national differences based on national regulatory requirements, such as the Canadian Electrical Code (CEC) Part I and the Canadian Building Code, which are referenced in legislation and which form the basis for the rules and practices followed in electrical and building installations			
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	See last page.	N/A
1.1.2	Baby monitors are required to comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Equipment acceptable for connection to 20 A.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.	No such cord or cable is provided	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single-phase equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and "Class 2" or equivalent. Marking shall be located adjacent to the terminals and shall be visible during wiring.	No connectors and wiring terminal for external Class 2 circuit.	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	See last page.	N/A
2.6	Equipment with isolated ground (earthing) receptacles is required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).	Considered, see table 2.6.3.4 of test report IEC 60950-1.	P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.	No standard supply outlets, receptacles, lamp holders or such transformers.	N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	No such terminal block.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	Power supply cord is not provided.	N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.	The equipment is not for connection to a DC main supply.	N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Not permanent connection equipment.	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	Power supply cord is not provided.	N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanent connection equipment.	P
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.	Not permanent connection equipment; To be evaluated before marketing into Canada.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).	No wire binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for Canadian/US wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No AC motors in the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such device is used for equipment.	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	Equipment not with battery systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No store device for flammable liquid.	N/A
4.3.13.5	Equipment with lasers is required to meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.	No laser contained.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	Such condition is not considered.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	Ditto.	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.	No ionizing radiation.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
OTHER DIFFERENCES The following key national differences are based on requirements other than national regulatory requirements			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	Critical components are complied with relevant IEC standards for correct application and use. See table 1.5.1 in test report for details.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.	No TNV circuits.	N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV circuits.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092)		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	Compliance shall be evaluated during the national approval.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	Not appliance of CRT in the equipment.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	The equipment has no handles.	N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No connection to the TELECOMMUNICATION NETWORK.	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No TNV circuits.	N/A
Annex EE	Articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV circuits.	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No TNV circuits.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

China (CN)			
National standard reference….: GB4943.1-2011			
1.1.2	GB 4943.1-2011 applies to equipment for use at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Amend the third dashed paragraph of 1.1.2 as: ——equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;	To be evaluated during National approval.	N/A
1.4.5	After the third paragraph, add a paragraph: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer. The first dash paragraph "-the RATED VOLTAGE is 230V single -phase or 400V three-phase, in which case the tolerance shall be taken as +10% and -10%" of IEC 60950-1:2005 is deleted in GB 4943.1-2011	Considered.	P
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: For equipment not to be operated at tropical climatic conditions, Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: For equipment is to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.	The equipment is intended to be used at tropical climate regions. The maximum ambient temperature permitted by the manufacturer's specification is 35 °C	P
1.5. 2	Add a note behind the first break off section in Clause 1.5.2: A component used shall comply with related requirements corresponding altitude of 5000m.	To be evaluated during National approval.	N/A
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	To be evaluated during National approval.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Based on the AC mains supply of China, the RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.	Considered for 220V of rated voltage and 50Hz of rated frequency.	P
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions: For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."  For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."  If only the symbol used, the explanation of the symbol shall be contained in the instruction manual. The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.	To be evaluated during National approval.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Amended the first paragraph as: Protection in PRIMARY CIRCUITS against over current short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3. Delete note of Clause 2.7.1.	Considered.	P
2.9.2	First section of Clause 2.9.2 amended as two sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature 40±2 ºC and a relative humidity of (93±3)%. During this conditioning the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %. The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.	The equipment is to be operated at tropical climatic conditions. The humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature 40 ºC and a relative humidity of 93 %.	P

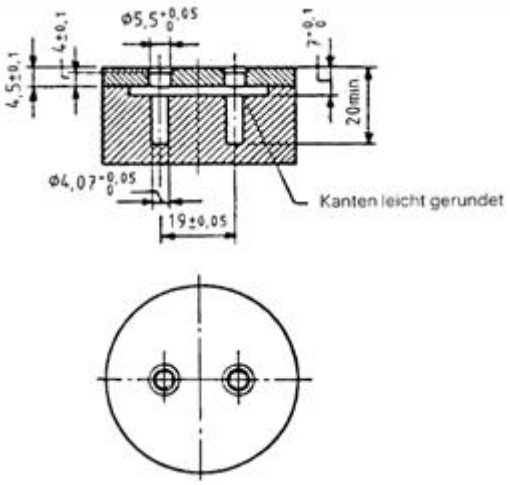
IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.1	Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.	To be evaluated during National approval.	N/A
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.	Added.	P
2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1（IEC 60664-1）. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.	Added.	P
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.	To be evaluated during National approval.	N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.	No cathode ray tube provided.	P

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex E	Last section of Annex E amended as: For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 °C shall be added to the calculated temperature rise. And add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.	Noted.	P
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0.1 mm increment.	Changed. The alternative method not used.	N/A
Annex BB (informative)	Amended as: The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.	Noted.	P

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DD (normative)	Added annex DD: Instructions for the new safety warning labels. DD.1 Altitude warning label  Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefore it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used at altitude above 2000m. DD.2 Climate warning label  Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefore it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used in tropical climate region.	To be evaluated during National approval.	N/A
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese、Tibetan、Mongolian、Zhuang Language and Uighu.	Normative Chinese Illustration was provided; the other language version shall be evaluated during national approval.	N/A
Other amendments	In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U.	Amended.	N/A
Quoting standards and reference documents	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendments.	The latest edition of the referenced document to be applied during National approval.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
Quoting standards and reference documents	For the usage of international standards in Chinese national standards and industry standards is various, in the aim of achieving easy operation and based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies; - The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard. When quoting several chapters or clauses of the international standard, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1: 2005 and GB 4943.1-2011.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Germany (DE)			
National standard reference….: VDE 0805-1:2011-01			
EK1-557-13 2013-07			N/A
1.5	Bei Steckernetzteilen wird der angeformte Stecker als Komponente betrachtet und in Deutschland generell nach DIN VDE 0620-1:2010 bzw. DIN VDE 0620-1:2013 und DIN VDE 0620-2-1:2013 beurteilt. Nach der Prüfung gemäß DIN VDE 0620-2-1:2013, Abschnitt 24.2 muss der Stecker noch die Prüfung entsprechend DIN VDE 0620-101:1992 Abschnitt 7 Bild 2 „ Lehre für die Auswechselbarkeit" bestehen. Es muss möglich sein, die Stecker in die Lehre ohne übermäßige Kraft so einzuführen, dass ihre Stirnfläche die Oberfläche der Lehre berührt. The moulded plug of plug-in power supplies will be considered as component and will be generally evaluated in Germany according to DIN VDE 0620-1:2010 respectively DIN VDE 0620-1:2013 and DIN VDE 0620-2-1:2013 After the test according to DIN VDE 0620-2-1:2013, sub-clause 24.2, the plug be shall still pass the test according to DIN VDE 0620-101:1992 clause 7, figure 2 "Gauge for interchangeability" It should be possible to insert the plug without applying an excessive force such that the end surface touches the surface of the gauge 		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

ProdSG			
Annex ZC 1.7.2.1	According to ProdSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.	To be evaluated during National approval.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Israel (IL)	
National standard reference….: SI 60950 Part 1 (2012)	
Additional clauses that are not referenced in the International Standard are numbered in this Standard beginning with the number 201 or beginning with the decimal number X.201. **Scope (Translation of clause 1 of the International Standard with national modifications and additions)** **Note:** The national modifications and additions in this clause are brought in a different font.	—

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.1.1	**Equipment covered by this Standard** This Standard is applicable to mains-powered or battery-powered in information technology equipment, including electrical business equipment and associated equipment, with a rated voltage not exceeding 600 V. This Standard is also applicable to such information technology equipment: - designed for use as telecommunication terminal equipment and telecommunication network infrastructure equipment, regardless of the source of power; - designed and intended to be connected directly to, or used as infrastructure equipment in, a cable distribution system, regardless of the source of power; - designed to use the AC mains supply as a communication transmission medium (see clause 6, note 4 and clause 7.1, note 4). This Standard is also applicable to components and subassemblies intended for incorporartion in information technology equipment. It is not expected that such components and subassemblies comply with every aspect of the Standard, provided that the complete information technology equipment, incorporating such components and subassemblies, dose comply. **Note 1:** Examples of aspects with which uninstalled components and subassemblies may not comply include the marking of the power rating and access to hazardous parts. **Note 2:** This Standard may be applied to the electronic parts of equipment even if the equipment does not wholly fall with its scope, such as large-scale air conditioning systems, fire detection systems and fire extinguishing systems. Different requirements may be necessary for some applications. This Standard specifies requirements intended to reduce risks of fire, electric shock or injury for the operator and layman who may come into contact with the equipment and, where specifically stated, for a service person. This Standard is intended to reduce such tasks with respect to installed equipment, whether it consists of a system of interconnected units or independent units, subject to installing, operating and maintaining the equipment in the manner prescribed by the manufacturer.		P

Examples of equipment that is in the scope of this Standard are: P

Generic product type	Specific example of generic type
Banking equipment	Monetary processing machines including automated teller (cash dispensing) machines (ATM)
Data and text processing machines and associated equipment	Data preparation equipment, data processing equipment, data storage equipment, personal computers, plotters, printers, scanners, text processing equipment, visual display units
Data network equipment	Bridges, data circuit terminating equipment (DCE), data terminal equipment (DTE), routers
Electrical and electronic retail equipment	Cash registers, point of sale terminals including associated electronic scales
Electrical and electronic office machines	Calculators, copying machines, dictation equipment, document shredding machines, duplicators, erasers, micrographic office equipment, motor-operated files, paper trimmers (punchers, cutting machines, separators) paper jogging machines, pencil sharpeners, staplers, typewriters
Other information technology equipment	Photocopying equipment, public information terminals, multimedia equipment
Postage equipment	Mail processing equipment, postage machines
Telecommunication network infrastructure equipment	Billing equipment, multiplexers, network powering equipment, network terminating , radio basestations, repeaters, transmission equipment, telecommunication switching equipment
Telecommunication terminal equipment	Facsimile equipment, key telephone systems, modems, PABXs[a], pagers, telephone answering machines, telephone sets (wired and wireless)

Note 3:

The requirements of Israeli Standard SI 60065 may also be used to meet safety requirements for multimedia equipment. (See IEC Guide 12, *Guide on the safety of multimedia equipment.*

This list is not intended to be comprehensive, and equipment that is not listed is not necessarily excluded from the scope.

Equipment complying with the relevant requirements in this Standard is considered suitable for use with process control equipment, automatic test equipment and similar systems requiring information processing facilities. However, this Standard does not include requirements for performance or functional characteristics of equipment.

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.1.2	**Additional requirements** Requirements additional to those specified in this Standard may be necessary for: - Equipment intended for operation in special environments (for example, extremes of temperature; excessive dust, moisture or vibration; flammable gases; and corrosive or explosive atmospheres); - Electromedical applications with physical connections to the patient; - Equipment intended to be used in vehicles, on board ships or aircraft, in tropical countries, or at altitudes greater than 2,000 m; - Equipment intended for use where ingress of water is possible; for guidance on such requirements and on relevant testing, see Annex T. **Note:** Attention is drawn to the fact that authorities of some countries impose additional requirements.		N/A
1.1.3	**Exclusions** This Standard does not apply to: - power supply systems which are not an integral part of the equipment, such as motor-generator sets, battery backup systems and transformers; - building installation wiring; - devices requiring no electric power.		N/A
Details of the national modifications and additions to clauses of the International Standard			
1.6	**Power interface** The clause is applicable with the following addition:		N/A
1.6.1	**AC Power Distribution Systems** - At the end of the clause, the following note shall be added; **Note:** In Israel, the clause is subject to the Electricity Law. 1954, its Regulations and updates.		N/A
1.7	**Marking and instructions** The clause is applicable with the following additions:		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	**Power rating** - Subclause 1.7.201 shall be added after the clause, as follows: **1.7.201 Marking in the Hebrew language** The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition to the marking required by clause 1.7.1, the following items shall be marked in the Hebrew language: 1. Name of the apparatus and its commercial designation; 2. Manufacturer's name and his address; if the equipment is imported, the importer's name and his address; 3. Manufacturer's registered trademark, if any; 4. Name of the model and serial number, if any; 5. Country of manufacture. The items shall be marked on the apparatus or on its packaging, or on a label well attached to the apparatus or its packaging, by bonding or sewing, such that the label cannot be easily removed.	Marking and instructions in English. Other languages will be provided when submitted for national approval.	N/A
1.7.2	**Safety instructions and marking**		N/A
1.7.2.1	**General** - The following shall be added at the end of the clause: All the instruction and all the warnings related to safety shall also be written in the Hebrew language.	Marking and instructions in English. Other languages will be provided when submitted for national approval.	N/A
1.201	- At the end of clause 1, clause 1.201 shall be added as follows: **Power consumption in standby mode** The equipment shall comply with the requirements of the Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011, with a permitted deviation of up to 10%.		N/A
2	**Protection from hazards** The clause is applicable with the following additions:		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.4	**Separation from hazardous voltages** The following shall be added at the beginning of the clause: According to the Electricity Law, 1954, and the Electricity Regulations (Earthing and protection means from electricity at voltages up to 1,000 V), 1991, in Israel, seven means of protection from electricity are permitted, as follows: 1) Network system earthing – (TN-C-S, TN-S); 2) Network system earthing – (TT); 3) Network Insulation Terre – (IT); 4) Isolated transformer; 5) Safety extra low voltage; 6) Residual current circuit breaker; 7) Reinforced insulation; Double insulation		N/A
2.201	Clause 2.201 shall be added at the end of clause 2, as follows: **Prevention of electromagnetic interference** The device shall meet the requirements of the relevant part of the Israeli Standard series, SI 961. If the device contains components for prevention of electromagnetic interference, the devices shall not lower the safety level of the device, as required by this Standard.	Not considered.	N/A
3	**Wiring, connections and supply** The clause is applicable with the following additions:		N/A
3.2 3.2.1 3.2.1.1	**Connection to a mains supply** **Means of connection** **Connection to an a.c. mains supply** After the Note, the following note shall be added: **Note:** In Israel, the supply plug shall comply with the requirements in Israeli Standard. SI 32 Part1.1.		N/A
3.2.1.2	**Connection to a d.c. mains supply** After the first paragraph, the following note shall be added: **Note:** At of the date of publication of this Standard, there is no Israeli Standard for connection accessories to d.c.	Not directly connected to the mains.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Annex P	Normative references The annex is applicable with the following modifications and additions: In place of some of the International Standards cited in the Standard and noted in this annex, the following Israeli Standards shall apply:	P

The referenced International Standard	The substituted Israeli Standard	Comments
IEC 60065: 2001	SI 60065[(a)] – Audio, video and similar electronic apparatus safety requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60065 – Edition 7.1: 2005-12.
IEC 60083	SI 32 Part 1.1[(a)] – Plugs and socket-outlets for household and similar purposes: Plugs and socket-outlets for single phase up to 16A – General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60884-1 – Third edition: 2002-06.
IEC 60227 (all parts)	SI 60227 (all parts) – Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	The Israeli Standard series, excluding national modifications and additions noted, is identical to the Standard series, IEC 60227 (all parts).
IEC 60245 (all parts)	SI 60245 Part 1 – Rubber insulated cables - Rated voltages up to and including 450/750 V: General requirements	The Israeli Standard series, excluding national modifications and additions noted, is identical to the Standard series, IEC 60245 (all parts).
IEC 60309 (all parts)[(b)]	SI 1109 Part 1 – Plugs, socket-outlets and couplers for industrial purposes: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60309-1 – Fourth edition: 1999-2.
	SI 1109 Part 2 – Plugs, socket-outlets and couplers for industrial purposes: Dimensional interchangeability requirements for pin and contact-tube accessories	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60309-2 – Fourth edition: 1999-4.

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Annex P *(Continued)*

The referenced International Standard	The substituted Israeli Standard	Comments
IEC 60317 (all parts) [b]	SI 1067 Part 1 – Enamelled[c] round copper wires with high mechanical properties	The Israeli Standard is identical to the International Electrotechnical Commission Standard, IEC 317-1: 1980-02.
	SI 1067 Part 2 – Self-fluxing enamelled[c] round copper wires	The Israeli Standard is identical to the International Electrotechnical Commission Standard, IEC 307-4: 1980-02.
	SI 1067 Part 3 – Enamelled[c] round copper wires with a temperature index of 180 °C	The Israeli Standard is identical to the International Electrotechnical Commission Standard, IEC 317-8: 1980-02.
IEC 60320 (all parts)[b]	SI 60320 Part 1 – Appliance couplers for household and similar general purposes: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-1: Second edition: 2001-06.
	SI 60320 Part 2.1 – Appliance couplers for household and similar general purposes: Sewing machine couplers	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-1: Second edition: 2000-07.
	SI 60320 Part 2.2 – Appliance couplers for household and similar general purposes: Interconnection couplers for household and similar equipment	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-2: Second edition: 1998-08.
	SI 60320 Part 2.3 – Appliance couplers for household and similar general purposes: appliance coupler with a degree of protection higher than IPXO	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-3: First edition: 1998-09.
IEC 60364-1: 2001	Electricity Law, 1954, with its Regulations and updates	–
IEC 60730-1: 1999 Amendment 1 (2003)	SI 60730 Part 1 – Automatic electrical controls for household and similar use: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60730-1: Edition 3.2: 2007-03.

P

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Annex P *(Continued)*

P

The referenced International Standard	The substituted Israeli Standard	Comments
IEC 60825-1	SI 60825 Part 1 – Safety of products: Equipment classification and requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60825-1: Second edition: 2007-03.
IEC 60947-1: 2004	SI 60947 Part 1 – Low-voltage switchgear and controlgear: General rules	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60947-1: Edition 5.0: 2007-06.
IEC 61058-1: 2000	SI 61058 Part 1 – Switches for appliances: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 61058-1: Edition 3.1: 2001.
ISO 3864 (all parts)[(b)]	SI 3864 Part 1[(a)] – Graphic symbols -	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Organization for Standardization Standard, ISO 3864-1: First edition: 2002-05-15.

Notes:

(a) The Standard is being revised.

(b) In the International Standard series, there are parts not yet adopted as Israeli Standards. This table notes the relevant Israeli Standards, and in the Comments column, the corresponding parts of the International Standard series.

(c) Not relevant to the translation.

- The following shall be added to the annex:

Israeli Standards

SI 961 (all parts) - Electromagnetic compatibility

Israeli Laws, Regulations and documents

Electricity Law, 1954, with its Regulations and updates

Consumer Protection Order (Marking of goods), 1983, Kovetz HaTakanot 4465 dated 1983-02-24

Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Japan (JP)			
National standard reference….: J 60950-1(H29)			
1.2.4.1	Add the following new notes. Note: Even if the equipment is designed as Class I, the equipment is regarded as CLASS 0I EQUIPMENT (see 1.2.4.3A) when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.	Added.	N/A
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing either of the following a) or b) in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring. a) Provision of 2-pin plug with earthing lead including the condition of that 2-pin adaptor with earthing lead wire is provided or recommended. b) Provision of an independent earthing terminal, when 2-core mains cord (without earthing conductor) is used. Note - CLASS 0I EQUIPMENT may have a part constructed with Double Insulation or Reinforced Insulation.	Added.	N/A
1.3.2	Add the following notes after first paragraph: Note 1 Transportable or similar equipment that are relocated frequently for intended usage should not be design as Class I or CLASS 0I EQUIPMENT unless it is intended to be installed by a service personnel. Note 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as Class I or CLASS 0I EQUIPMENT unless it is intended to be installed by service personnel.	Added.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	Replace the first paragraph with the follows: Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standard, or IEC component standards, or components shall have equivalent to or better properties than these. Replace Note 1 with the following: Note 1 Components complying with the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance. Note 2 JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope. Add the following after the last paragraph: For an appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1, the size of the connector shall comply with relevant standard sheet of IEC 60320-1 or JIS C 8283-1. A power supply cord set complying with JIS C 8286 is regarded to comply with this requirement. Note 3 A power supply cord set provided with appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1 should comply with JIS C 8286.	Replaced.	P
1.5.2	Add the following Note 2 after the 4th dashed paragraph: Note 2 See 1.7.5A when Type C.14 appliance coupler rated 10 A per JIS C 8283-1 is used with an equipment rated not more than 125 V and rated more than 10 A.	Replaced.	P
1.5.5	Add the following Note after the last paragraph: NOTE An interconnection cord sets provided with interconnecting coupler for mains supply complying with JIS C 8283-2-2 should comply with JIS C 8286.		N/A
1.5.9.1	Add the following in the last of NOTE 1: Gas discharge tube connected in series with VDR may be used.	No gas discharge tube (GDT).	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

1.7	Replace EE.2 and EE.4 with the following: JA.1 Shredder warning JA.3 Shredder power disconnection	Replaced.	N/A
1.7.1.2	Replace first and second dashed paragraphs with the followings: - manufacturer's or responsible company's name or trade-mark or identification mark; - manufacturer's or responsible company's model identification or type reference;	Replaced. Relevant information sees marking label.	P
1.7.2.1	Add the following after the second paragraph. Instruction or equipment marking regarding safety shall be written in Japanese unless otherwise permitted in this standard.	Added.	N/A
1.7.2.5	Replace the last sentence with the following: An acceptable marking for an electric shock hazard is  (6.2.4 of JIS S 0101).		N/A
1.7.5	Replace the second paragraph with the following. Socket-outlets conforming to JISC8282-1 are examples of standard power supply outlets.	No socket-outlets provided.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5A	Add the following new clause after 1.7.5 1.7.5.A Power supply cord set If appliance coupler according to IEC60320-1, C.14(rated current: 10A) is used in equipment whose rated voltage is less than 125V and rated current is over 10A, the following instruction or equivalent shall be described in the operating instruction. “Use only designated cord set attached in this equipment” *Example in Japanese:* “この機器に同こん(梱)した指定の電源コードセットだけを使用して下さい。” If appliance coupler is used for connection to the mains and if the cord set is not provided within the package for the equipment, suitable information regarding to the cord set shall be described in the operating instruction Note Since the combination of appliance inlet with earthing pin and two-core cord set (without earthing conductor) is special, the cord set should be attached in the equipment and the operating *instruction should provide the information that the cord set is exclusively used with the equipment and not allowed to use with other equipment.*	Rated current max. 1.5 A used in equipment. Compliance shall be evaluated during the national approval.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.14A	Add the following new clause after 1.7.14 1.7.14A Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following or equivalent instructions shall be marked. - the following instruction shall be marked on the mains plug or on the visible place of the main body "Provide an earthing connection" *Example in Japanese:* "必ず接地接続を行ってください。" - the following instruction shall be marked on the visible place of the main body or written in the operating instructions: "Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains." *Example in Japanese:* 接地接続は必ず, 電源プラグを電源につなぐ前に行ってください。 また, 接地接続を外す場合は, 必ず電源プラグを電源から切り離してから行ってください。	Added.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.7.14B	Add the following new clause after 1.7.14 1.7.14B Protective earthing conductor used for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment, the suitable information for the protective earthing connection shall be provided in the operating instruction. (See 2.6.3.2)	Added.	N/A
2.1.1.1	Replace item b) of 2.1.1.1with the following. b) A test with the test finger, Figure 2A, which shall not contact parts described above when applied to openings in the ENCLOSURES after removal of parts that can be detached by an OPERATOR, including fuseholders, and with OPERATOR access doors and covers open. It is permitted to leave lamps in place for this test. Connectors that can be separated by an OPERATOR, other than those complying with JIS C 8303 or JIS C 8285 or IEC 60309 series or JIS C 8283 series or IEC 60320 series, shall also be tested during disconnection. But even if the connector does not comply with these standards, the one having equivalent to or better performance need not be tested during disconnection. Note 4 Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Replaced.	N/A
2.5	Replace “IEC 60730-1” with “JIS C 9730-1” (in item b).	Replaced.	N/A
2.6.2	Delete the following line. • the symbol  ,IEC 60417-5018 (2011-07);		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.2	Add the following after the first paragraph. However, where the single core conductor is used for protective earthing lead or earthing cord for CLASS 0I EQUIPMENT, either of the following condition shall be met. - Use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having equivalent to or more strength and thickness. - Single core cord or single core cabtire cable with 1.25 mm^2 or more cross-sectional area.	Added.	N/A
2.6.3.5	Add the following after the first paragraph. However, this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.	Added.	N/A
2.6.4.2	Replace the first paragraph with the following. Equipment required to have protective earthing shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal. However, for CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal other than appliance inlet, the separate main protective earthing terminal may be treated as mains protective earthing terminal.	Added.	N/A
2.6.5.4	Replace the first sentence with the following. Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following: Add the following after last paragraph: Note For CLASS 0I EQUIPMENT,1.7.14A is applied instead of this requirement.	Replaced.	N/A
2.6.5.8A	Add the following new clause after 2.6.5.8 2.6.5.8A Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.	Added.	N/A
2.7.6	Replace “ISO 3864, No. 5036” with “6.2.4 of JIS S 0101”.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.1	Replace the 8th paragraph with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2. Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Replaced.	P
2.10.3.2 Table 2J	In Japan, the value of the main power supply transient voltage for the nominal ac main power supply voltage of 100 V is determined by applying the row of AC main power supply voltage 150 V.	Add.	P
2.10.4.3	Replace the 6th paragraph with the following: The above minimum CREEPAGE DISTANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2. Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Add.	P
2.10.9	Replace “1.4.5” in the third paragraph with “1.4.12”.		N/A
3.2.3	Add the following after the third paragraph. Table 3A applies when cables complying JIS C 3662 series of standards or JIS C 3663 series of standards are used. In case of other cables, cable entries shall be so designed that the cable could be fitted in a conduit.	The unit is not permanent connected equipment.	N/A
3.2.4	Add the following as 4th dashed paragraph. - be so constructed that mechanical stress shall not transmit to the soldering part of inlet terminal during insertion or removal of the connector except that the body of the inlet is secured and is secured not only soldering.	Inlet is cover by adequate mechanical construction, not rely on soldering.	P

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	Add the following after Note 3: Note 4 In Japan, mains cords having equivalent to or better electro-mechanical and fire safety performance as above and complying with Appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance can be used. Replace the paragraph after Note 3 with the following. For equipment required to have protective earthing, a PROTECTIVE EARTHING CONDUCTOR shall be included in the MAINS SUPPLY cord except for CLASS 0I EQUIPMENT having separate protective earthing conductor from mains cord. Add the following after the second paragraph after Note 3: Note 5 For the cross-sectional area of mains cord described in Note 4, relevant Japanese wiring regulation can be applied.		N/A
3.2.5A	Add the following new clause after 3.2.5 3.2.5A AC mains plug Mains plug for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-1 or equivalent to or better performance. Power supply cord set complying with JIS C 8286 is regarded to meet the requirements. Mains plug with fuse link for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-2-1 or equivalent to or better performance. Note Mains plug complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.		N/A
3.3.4 Table 3D	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 series of standards or JIS C 3663 series of standards, the terminals shall be suitable for the size of the intended cables.		N/A
3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earthing terminal of CLASS 0I EQUIPMENT.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
4.2.8	Add the following after the first paragraph: Note Intrinsically protected picture tube is required to comply with JIS C 6965 in clause 18 of JIS C 6065. No intrinsically protected picture tube which is out of scope of JIS C 6965 is required to test according to sub-clause 18.2 of JIS C 6065.		N/A
4.3.4	Add the following after the first sentence: This requirement also applies to those connections in CLASS 0I EQUIPMENT, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10.		N/A
4.3.5	Replace the first dashed paragraph with the following. Within a manufacturer's unit or system, plugs and sockets likely to be used by the OPERATOR or by a SERVICE PERSON shall not be employed in a manner likely to create a hazard due to misconnection. In particular, connectors complying with IEC 60320/JIS C 8283 series of standards or JIS C 8303 or JIS C 8358 shall not be used for SELV CIRCUITS or TNV CIRCUITS. Keying, location or, in the case of connectors accessible only to a SERVICE PERSON, clear markings are permitted to meet the requirement.		N/A
4.3.6	Replace the 1st paragraph with the following DIRECT PLUG-IN EQUIPMENT shall not impose undue stress on the socket-outlet. The mains plug part shall comply with the standard for the relevant mains plug. (see 3.2.5A)	The unit is not direct plug-in equipment.	N/A
4.4.2	Replace the paragraph with the following: HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall also comply with Annex JA.		N/A
4.5.3	Add the following note to footnote b) of Table 4B: NOTE In case no data for the material is available, Appendix 4, 1. (1). b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances is regarded as maximum temperature limit of the material.		N/A
5.1.3	Add a note after the first paragraph as follows: Note – Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, test is conducted using the test circuit from IEC 60990, figure 13.	The EUT is used in single-phase power system.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5.1.6 — Verdict: P

Replace Table 5A as follows

Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. [a]	Maximum PROTECTIVE CONDUCTOR CURRENT
All equipment	Accessible parts and circuits not connected to protective earth [b]	0,25	–
HAND-HELD	Main protective earthing terminal of CLASS I EQUIPMENT	0,75	–
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	0,5	–
MOVABLE (other than HANDHELD, but including TRANSPORTABLE EQUIPMENT)	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	–
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	–
STATIONARY, PLUGGABLE TYPE A	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	–
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	–
All other STATIONARY EQUIPMENT – not subject to the conditions of 5.1.7 – subject to the conditions of 5.1.7	Main protective earthing terminal of CLASS I EQUIPMENT	3,5 -	- 5% of input current
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0 -	- -

[a] If peak values of TOUCH CURRENT are measured, the maximum values are obtained by multiplying the r.m.s. values in the table by 1,414.
[b] Some unearthed accessible parts are covered in 1.5.6 and 1.5.7 and the requirements of 2.4 apply. These may be different from those in 5.1.6.

Annex G	Replace the paragraph before Table G.2 with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, and 1.5.1 of this standard in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.		N/A
Annex V V.1	Replace “3.1.2”in the first line of V.1 with “312” in the first line.		N/A
Annex W W.1	Replace the third sentence in the first paragraph with the following: Floating circuits can exist in CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and earthed circuits can exist in CLASS II EQUIPMENT.	Compliance shall be evaluated during the national approval.	N/A
Annex BB	This annex is not applicable.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Annex CC CC.2	Replace the third dashed paragraph with the following: *- 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF ± 10 uF and shorting the output;*	Replaced.	N/A
CC.3	Add note at end of CC.3: Note: The fast blow fuse should be the one complying with JIS C 6575-2.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
CC.4	Replace the 2nd dashed paragraph with the following: - 10 000 cycles of turning enable on and off with a 100 Ω± 5 Ω resistor and a 425 uF ± 10 uF capacitor in parallel with the output; Replace the 4th dashed paragraph with the following: - 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF ± 10 uF and shorting the output; Replace the 5th dashed paragraph with the following: −10 000 cycles of turning the input pin on and off with a capacitor rated 425 uF ± 10 uF connected to the input supply while keeping enable active and shorting the output; Replace the 6th dashed paragraph with the following: −10 000 cycles of turning the input pin on and off with an ferrite-core inductor having 350 mH ± 10 mH inductance at 1 kHz and less than 1 Ω d.c. resistance connected to the input supply and return while keeping enable active and shorting the output; Replace the 10th dashed paragraph with the following: −3 cycles of exposing the device (not energized) to 70 °C ± 2 °C for 24 h; followed by at least 1 h at room ambient; followed by at least 3 h at -30 °C ± 2 °C; followed by 3 h at room ambient; Replace the 11th dashed paragraph with the following: −10 cycles of exposing the device (while energized) to 50 °C ± 2 °C for 10 min; followed by 10 min at 0 °C ± 2 °C with a 5 min period of transition from one state to the other;		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex EE	Replace Annex EE with the following Annex JA. Annex JA (normative) Document shredding machines HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall additionally comply with the requirements of this annex. **JA.1 Markings and instructions** The symbol  (JIS S 0101:2000, 6.2.1) and the following precautions for use shall be marked on readily visible part adjacent to document feed opening. The marking shall be clearly legible, permanent, and easily discernible; - 子供が使用することによって，傷害などの危害が発生するおそれがある。; (that use by an infants/children may cause a hazard of injury etc.) - 文書投入口に手を触れることによって，細断機構に引き込まれるおそれがある。; (that a hand can be drawn into the mechanical section for shredding when touching the document-slot) -文書投入口に衣類が触れることによって，細断機構に引き込まれるおそれがある。; (that clothing can be drawn into the mechanical section for shredding when touching the document-slot) -文書投入口に髪の毛が触れることによって，細断機構に引き込まれるおそれがある。; (that hairs can be drawn into the mechanical section for shredding when touching the document-slot) - in case of equipment incorporating a commutator motor, 可燃性ガスを噴射することによって引火又は爆発するおそれがある。 (that equipment may catch fire or explode by spraying of flammable gas.) **JA.2 Inadvertent reactivation** Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1.	Not Document shredding machines.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
	JA.3 Disconnection from the mains supply Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. If two-position switch, the positions for “ON” and “OFF” shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for “OFF” shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols. Compliance is checked by inspection. **JA.4 Protection against hazardous moving parts** Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements. Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool. Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
			N/A

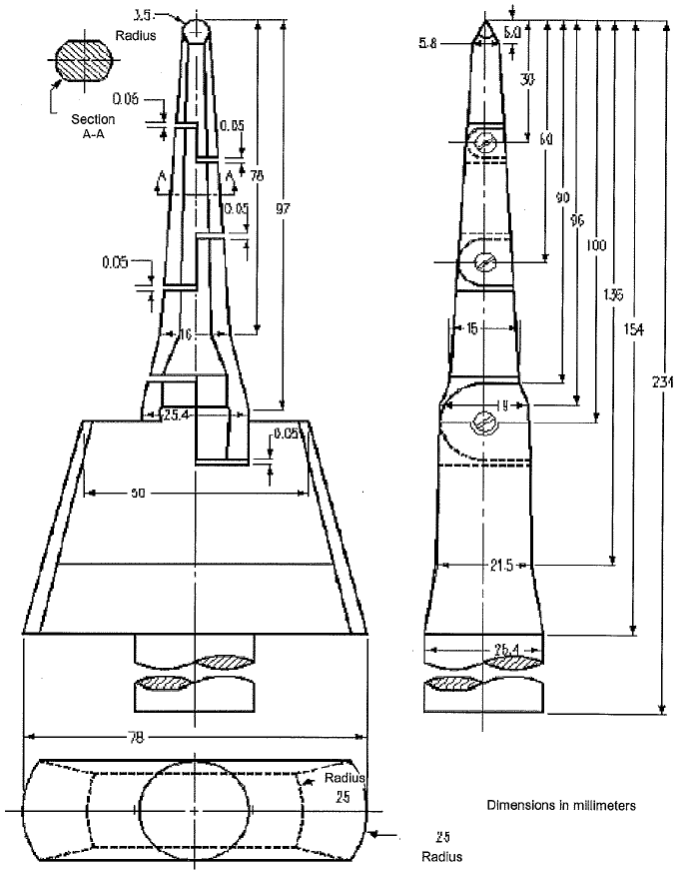
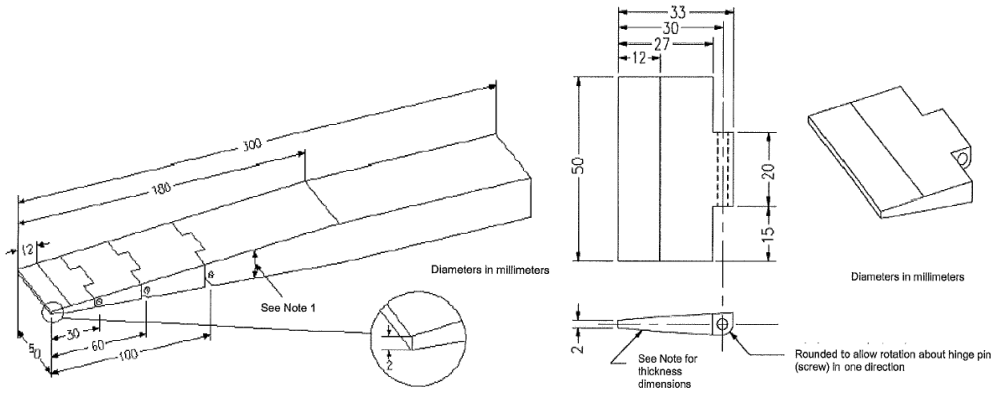


Figure JA.1 Test finger

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

N/A



(Details of the tip of wedge)

Distance from the tip (mm)	Thickness of probe (mm)
0	2
12	4
180	24

Note 1 - The thickness of the probe varies linearly, with slope changes at the respective points shown in the table.
Note 2 –The allowable dimensional tolerance of the probe is;
for ≤ 25 mm: +/- 0.13 mm
for > 25 mm: +/- 0.3 mm.

Figure JA.2 Wedge-probe.

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Korea (KR)			
National standard reference….: K 60950-1			
1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	No power supply cords provided.	N/A
8 EMC	The apparatus shall comply with the relevant CISPR standards.	Compliance shall be evaluated during the national approval.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

Switzerland (CH)			
National standard reference….: SN EN 60950-1:2006			
1.5.1	Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury. Switches containing mercury such as thermostats, relays and level controllers are not allowed.	No switch.	N/A
1.7.13	Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries Annex 2.15 of SR 814.81 applies for batteries containing cadmium and mercury. Note: Ordinance relating to environmentally hazardous substances, SR 814.013 of 1986-06-09 is not longer in force and superseded by SR 814.81 of 2009-02-01 (ChemRRV).	Not apply for.	N/A
3.2	Supply cords of portable electrical appliances having a rated current not exceeding 10 A shall be provided with a plug complying with IEC 60884-1(3.ed.) + am1, SEV 1011 and one of the following dimension sheets: - SEV 6533-2:2009 Plug type 11, L + N, 250V 10A - SEV 6534-2:2009 Plug type 12, L + N + PE, 250V 10A - SEV 6532-2:2009 Plug type 15, 3L + N + PE, 250/400V 10A Supply cords of portable electrical appliances having a rated current not exceeding 16 A shall be provided with a plug complying with IEC 60884-1(3.ed.) + am1, SEV 1011 and one of the following dimension sheets: - SEV 5933-2:2009 Plug type 21 L + N, 250 V, 16A - SEV 5934-2:2009 Plug type 23 L + N + PE, 250 V, 16A - SEV 5932-2:2009 Plug type 25 3L + N + PE, 250/400V 16A NOTE 16 A plugs are not often used in Swiss domestic installation system. See TRF template regulatory requirements Switzerland on IECEE Website R.R. TRF templates.	Power cord is not provided.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
USA (US)			
National standard reference….: UL60950-1, Edition 2, Amendment 2			
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	See last page.	N/A
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Equipment acceptable for connection to 20 A.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.	No such cord or cable is provided	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single-phase equipment.	N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with the NEC or CEC Part 1 shall be marked with the voltage rating and “Class 2” or equivalent. The marking shall be located adjacent to the terminals and shall be visible during wiring.	No such fuse.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	No such fuse used.	N/A
2.6	Equipment with isolated ground (earthing) receptacles are required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.	No standard supply outlets, receptacles, lamp holders or such transformers.	N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	See last page.	N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	Power supply cord is not provided.	N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.	The equipment is not for connection to a DC main supply.	N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Not permanent connection equipment.	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 & 12 of the CEC.	Power supply cord is not provided.	N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanent connection equipment.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).	No wire binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No AC motors in the equipment.	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such device is used for equipment.	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	Equipment not with battery systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No store device for flammable liquid.	N/A
4.3.13.5.1	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No laser contained.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	Such condition is not considered.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	Ditto.	N/A
4.7.3.1	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043.	Ditto.	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No ionizing radiation.	N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict

OTHER NATIONAL DIFFERENCES			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. These components include: attachment plugs, battery backup systems, battery packs cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables.	Critical components are complied with relevant IEC standards for correct application and use. See table 1.5.1 in test report for details.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, a TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage it to include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.	No TNV circuits.	N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the max. acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV circuits.	N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		N/A

IEC60950_1F – ATTACHMENT NO. 1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	Compliance shall be evaluated during the national approval.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	Not appliance of CRT in the equipment.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	The equipment has no handles.	N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No connection to the TELECOMMUNICATION NETWORK.	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No TNV circuits.	N/A
Annex EE	UL articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV circuits.	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No TNV circuits.	N/A

Attachment No. 2

PSB Singapore

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
APPENDIX	**Appendix 12 J3000 (H25)** Special National conditions, National deviation and other information according to MITI Ordinance No. 85.		--
1	General requirement When equipment provides with appliance inlet complying with JIS C 8283-1(2008), soldered parts of appliance inlet is not applied by force during insert or removal of connector. This is not applied when inlet body is fixed itself and not fixed by solder.	Inlet is fixed by adequate mechanical construction, not rely on soldering.	P
2	Requirement for equipment	See below.	N/A
2.1	Heater Appliances When diode is used in parallel at the power sources for adjustment of power consumption, the equipment shall remain safe for operation under open condition of one diode.	Not apply for.	N/A
	The current rating of one diode shall be more than main current. The diodes connected in parallel are same type.		N/A
	The heating test specified by clause 11 of JIS C 9335-1(2003) and a specified in applicable individual requirements under open condition of one diode of parallel shall comply with the requirements.		N/A
2.2	Electronic heater with glowing heating elements	Not electric stove.	N/A
	Surface treatment by paint or adhesive on protective frame or protective mesh shall not be used.		N/A
	Caution marking like below shall be on -easily visible place of the equipment or -Instruction manual 「注意 当該機器から、使用初期段階で揮発性有機化合物及びカルボニル化合物が最も放散するおそれがあるため、その際には十分換気を行うこと。」		N/A
3	Components used in equipment	No relevant equipment or component.	N/A

Attachment No. 2

PSB Singapore

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.1	Motor capacitors used in ventilating fan, electric fan, air conditioner electric washing machine, refrigerator or electric freezer shall be comply with - capacitors with protective elements or protective mechanism complying with JIS C 4908(2007) - P2 capacitor complying with IEC 60252-1(2001) Capacitor complying with below is acceptable enclosed by metal or ceramic		N/A
	Enclosed by metal or ceramic		N/A
	No non-metallic materials within 50 mm from capacitor surface		N/A
	Non-metallic material with 50 mm from capacitor surface comply with needle frame test of JIS 9335-1(2003), Annex E		N/A
	Non-metallic material with 50 mm from capacitor surface comply with V-1 test of JIS C 60965-11-10(2006)		N/A
3.2	Plug directly inserted to outlet used refrigerator or electric freezer. Shall comply with - Face contact with outlet shall have CTI with more than 400 according to JIS C 2134(2007) or - Supporting material of blades shall comply with glow wire test by temperature of 750°C according to JIS C 60695-2-11(2004) or JIS C 60695-2-12(2004). Materials having glow wire frame temperature of 775°C are acceptable.		N/A

Attachment No. 3

PSB Singapore

Clause	Requirement - Test	Result - Remark	Verdict

APPENDIX	National differences: Singapore **(SG)** IEC 60950-1, 1st edition	—

The following is the national differences in accordance with safety authority website www.spring.gov.sg/safety**, ref. Singapore Consumer Protection (Safety Requirements) – Information Booklet – Chapter 7.**

7 SAFETY AUTHORITY'S REQUIREMENTS

The Safety Authority monitors the safety of the controlled goods sold in Singapore by investigating all complaints, incidents and accidents reported to the authority. Experiences gained are translated into the Safety Authority's Requirements. These requirements are to be fulfilled in addition to the applicable safety standards.

No	Item	Requirement	Result - Remark	Verdict
		Applicable to all products		
1	Test certificate / Test report	Test certificate / Test report more than three (3) years old shall be rejected.		N/A
		Applicable to all electrical products		
2	All appliances	All appliances must be tested to 230 VAC.	Considered.	P
3	Voltage selector (voltage mis-match test)	Appliance fitted with voltage selector shall be tested as follows: Connect appliance to 230 VAC mains with voltage selector switch to settings not suitable for operation at 230 VAC.	No voltage selector.	N/A
4	Tropical condition test	All appliances (with tropical test requirements in applicable Standards) shall comply with the tropical condition test as stated in the relevant IEC Standards.		P
5	Class I appliances (3-pin mains plug)	All Class I appliances must be fitted with 3-pin mains plugs complied with SS 145/SS 472 that are registered with the Safety Authority.		N/A

Clause	Requirement - Test	Result - Remark	Verdict
6	Class II appliances (mains plug)	a) All Class II appliances must be fitted with 2-pin mains plug (Appendix T) complied with EN 50075. b) Class II appliances that are fitted with 3-pin mains plugs must use plugs that are complied with SS 145 and registered with the Safety Authority.	Class I equipment.	N/A
7	Appliances rated ≥ 3 kW or connected to fixed wiring	Electric appliance ≥ 3kW must be connected to fixed wiring. All connection to fixed wiring must be in accordance with Code of Practice CP5.	Not exceed 3kW.	N/A
8	Detachable power cord set (consists of mains plug, mains cord and appliance connector)	Detachable power cord set must be listed in the test report critical component list.	Not listed. But according to the manufacturer's declaration, the unit will be supplied with a power attachment cord and plug which meet the national requirements which have been approved to relevant national and international standards.	N/A
9	Circuit diagrams	Circuit diagrams must be indicated with component's values for products tested to IEC 60065 and IEC 60950-1.		P
10	Circuit diagrams of electronic modules in electrical appliances	Circuit diagrams of the electronic modules in the electrical appliances must be provided.		P
11	Controlled goods likely to be treated as toy by children	Controlled goods, having an enclosure, which is shaped and decorated so that it is likely to be treated as a toy by children, shall not be accepted for certification and registration.	The shape and function are not considered for toy.	N/A
Applicable to electric airpot				
12	Reboil Switch	No part of the reboil switch is allowed to protrude into the water pot, even if it is located above the maximum water level mark.		N/A
Applicable to AC adaptor				
13	3-pin AC adaptor (Appendix V)	Test report showing that the 3-pin complied with sub-clauses 12.1 & 12.3 of SS 246 must be submitted.	Not AC adaptor.	N/A

Clause	Requirement - Test	Result - Remark	Verdict
14	2-pin AC adaptor (Appendix V)	The 2-pin (Appendix T) shall comply with EN 50075	Not AC adaptor.	N/A
15	Detachable power supply cord set not supplied by Registered Supplier	Registered Supplier who is not supplying the detachable power supply cord set together with the AC Adaptor must provide written instruction to its customer on the type of approved detachable power cord set to use.	Not AC adaptor.	N/A
Applicable to computer products				
16	CD/DVD ROM (used in personal computer)	Test certificate showing that CD/DVD ROM has complied with IEC 825 must be provided.	No CD/DVD ROM provided.	N/A
17	Modem Card (used in personal computer)	Modem card incorporated in the personal computer must be tested at set level (sub-clauses 5.1& 6 of IEC 60950-1) or at component level.	No modem card provided.	N/A
Applicable to ceiling fan and cycle fan				
18	Ceiling fan and cycle fan	a) These appliances must be tested to sub-clauses 5.7 and 5.8 of SS 360: 1992. b) Installation instruction must mention the 3 expansion bolts for fastening the main suspension, safety cord, expansion bolt with hook for fastening safety cord and mounting plate. (Appendix Q) c) Drawing (Appendix P) to show that the wires within the motor shaft are not stressed must be provided.		N/A
Applicable to portable/wall socket-outlet and portable cable reel				
19	Portable/wall socket-outlet and portable cable reel	a) If residual current device (RCD) is incorporated, its tripping current must be less than 30mA and operating time must be less than 0.1 second and testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required. b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding **SINGLE** pin of the plug into any current-carrying socket aperture.		N/A

Clause	Requirement - Test	Result - Remark	Verdict
Applicable to roaster			
20	Roaster	A metal ring (Appendix U) must be provided to prevent the roaster from falling off in case the glass bowl shattered.		N/A
Applicable to Residual Current Circuit Breaker (RCCB)			
31	RCCB	Registration of RCCB is limited to 30 mA sensitivity and the operating time must be less than 0.1 second. Electronic RCCB will not be accepted for registration.		N/A
Applicable to electric instantaneous and storage water heater			
32	Instantaneous electric water heater and mains pressure electric storage water heater	Heating elements used must not be of the "bare-element" type.		N/A
33	Water heater incorporated with residual current device(RCD)	Testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required.		N/A
Applicable to multiway adaptor			
34	Multiway adaptor with 3-pin socket-outlets or combination of 3-pin and 2-pin socket-outlets	a) The socket contacts of the adaptor shall only accept 13A 3-pin mains plug complying with SS 145 and/or 2.5A 2-pin mains plug complying with EN 50075. b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding **SINGLE** pin of the plug into any current-carrying socket aperture. c) A barrier or other acceptable means shall be provided on the engagement surface of the 2.5A 2-pin socket-outlet of the adaptor to PREVENT entry of any types of 2-pin mains plugs except those complying with EN 50075. **(note: shutters cannot be regarded as barriers**) d) Adaptor incorporates with switch would require additional test to sub-clauses 13.11, 17.1.3 and 18.1.3 of SS 145: Part 2: 1997.		N/A

Attachment No. 3

PSB Singapore

Clause	Requirement - Test	Result - Remark	Verdict
Applicable to plasma/LCD display monitor			
35	Plasma/LCD display monitor with TV tuner	Plasma/LCD display monitor tested to IEC 60950-1 would require additional test to clauses 9 (related to antenna only), 10.1, 10.2, 10.3 and 12.5 of IEC 60065.	No TV tuner.	N/A

Attachment No. 4

PSB Singapore

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

2.1.1.7	**TABLE: Discharge test**				**P**
Condition	Switch Position	τ calculated (s)	τ measured (s)	comments	
Line-Neutral	--	0.726	0.627	Vo = 367 V 37 % x Vo = 140 V Vt = 1 sec = 76 V	
EMI Filter capacity: N/A					
Overall capacity: 0.33 µF (CX101=0.33 µF)					
Discharge resistor: R101 = 2.2 MΩ					

Attachment No. 4

PSB Singapore

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

2.4.2	TABLE: Limited current circuit measurement (continues)				P
Location	Voltage (V)	Current (mA)	Freq. (Hz)	Limit (mA)	Comments
CY104 secondary	0.054	0.108	50	0.7	Used the measuring instrument of annex D
	--	0.03 MIU	--	0.5 MIU	Used Simpson 228 for ETL/UL reference
Supplementary information:					

2.6.3.4	TABLE: Ground continue test	P
Location	Resistant measured (mΩ)	Comments
Test for model 27BK550		
PE terminal of AC inlet to earthed metal enclosure	7	32 A, 2 minute 1)
PE terminal of AC inlet to earthed metal enclosure	8	40 A, 2 minute, the voltage drop across the PB conductor is 0.333 V 2)
PE terminal of AC inlet to CY101 earth trace pin	8	32 A, 2 minute 1)
PE terminal of AC inlet to CY101 earth trace pin	9	40 A, 2 minute, the voltage drop across the PB conductor is 0.377 V 2)
Test for model 24BK550		
PE terminal of AC inlet to earthed metal enclosure	7	32 A, 2 minute 1)
PE terminal of AC inlet to earthed metal enclosure	8	40 A, 2 minute, the voltage drop across the PB conductor is 0.329 V 2)
PE terminal of AC inlet to CY101 earth trace pin	8	32 A, 2 minute 1)
PE terminal of AC inlet to CY101 earth trace pin	9	40 A, 2 minute, the voltage drop across the PB conductor is 0.377 V 2)
Supplementary information: 1) The resistance did not exceed 0.1 Ω from any accessible conductive part and earth. 2) The voltage drop did not exceed 2.5 V from any accessible conductive part and earth.		

Attachment No. 4

PSB Singapore

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

4.6.1& 4.6.2	**TABLE: enclosure openings**		**P**
Location		Size (mm)	Comments
Horizontal orientation			
Top side		Numerous circular openings, each measured max. 1.75 mm diameter.	Openings not exceed 5 mm in any dimension.
Left side		Numerous circular openings, each measured max. 1.75 mm diameter.	Openings not exceed 5 mm in any dimension.
Right side		Numerous circular openings, each measured max. 1.75 mm diameter.	Openings not exceed 5 mm in any dimension.
Rear side		--	No openings.
Bottom side		Numerous circular openings, each measured max. 1.75 mm diameter.	Numerous circular holes located on 0.81 mm thick metal enclosure. Center to center measured min. 5.7 mm and complied with Table 4D.
Vertical orientation, 90° clockwise			
Top side		Numerous circular openings, each measured max. 1.75 mm diameter.	Openings not exceed 5 mm in any dimension.
Left side		Numerous circular openings, each measured max. 1.75 mm diameter.	Openings not exceed 5 mm in any dimension.
Right side		Numerous circular openings, each measured max. 1.75 mm diameter.	Openings not exceed 5 mm in any dimension.
Rear side		--	No openings.
Bottom side		Numerous circular openings, each measured max. 1.75 mm diameter.	Numerous circular holes located on 0.81 mm thick metal enclosure. Center to center measured min. 5.7 mm and complied with Table 4D.
Supplementary Information: 1. The openings are evaluated in internal metal chassis. 2. See attached photo for the detail coverage areas of openings. 3. For models 27BK550 and 24BK550.			

Attachment No. 5

PSB Singapore

Note 1: The above labels are drafts of artworks for marking plate pending approval by National Certification Bodies and they shall not be affixed to products prior to such an approval.

Note 2: The additional markings which do not give rise to misunderstanding may be added.

Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

24BK550##
Overall view

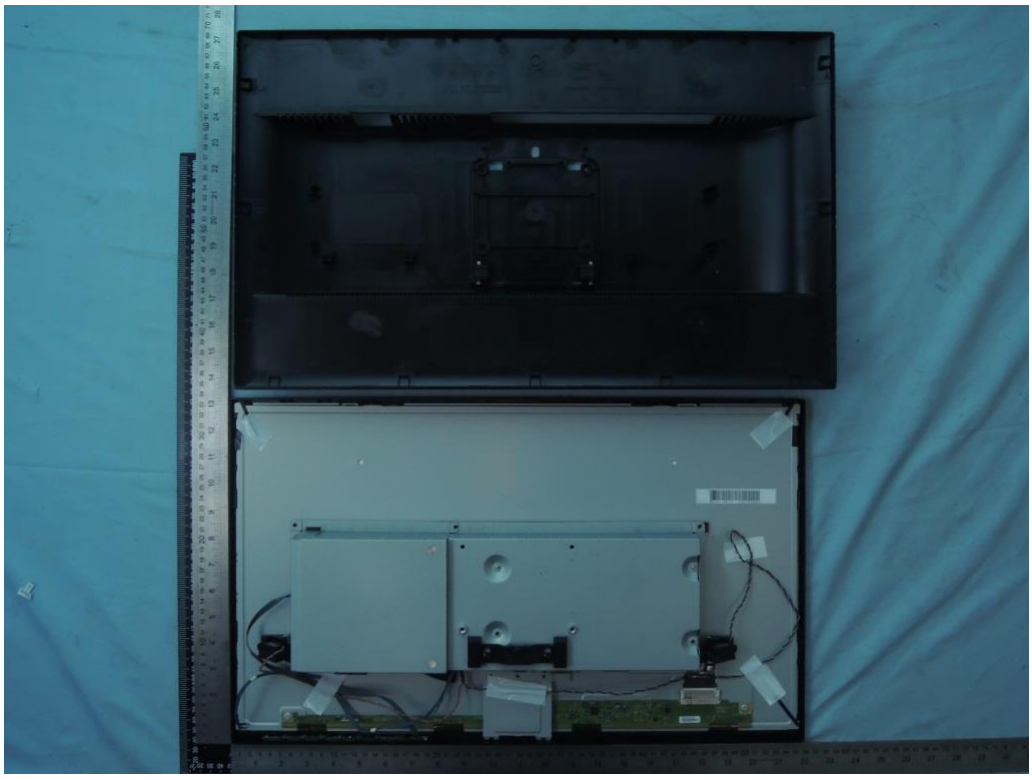
Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

Internal view

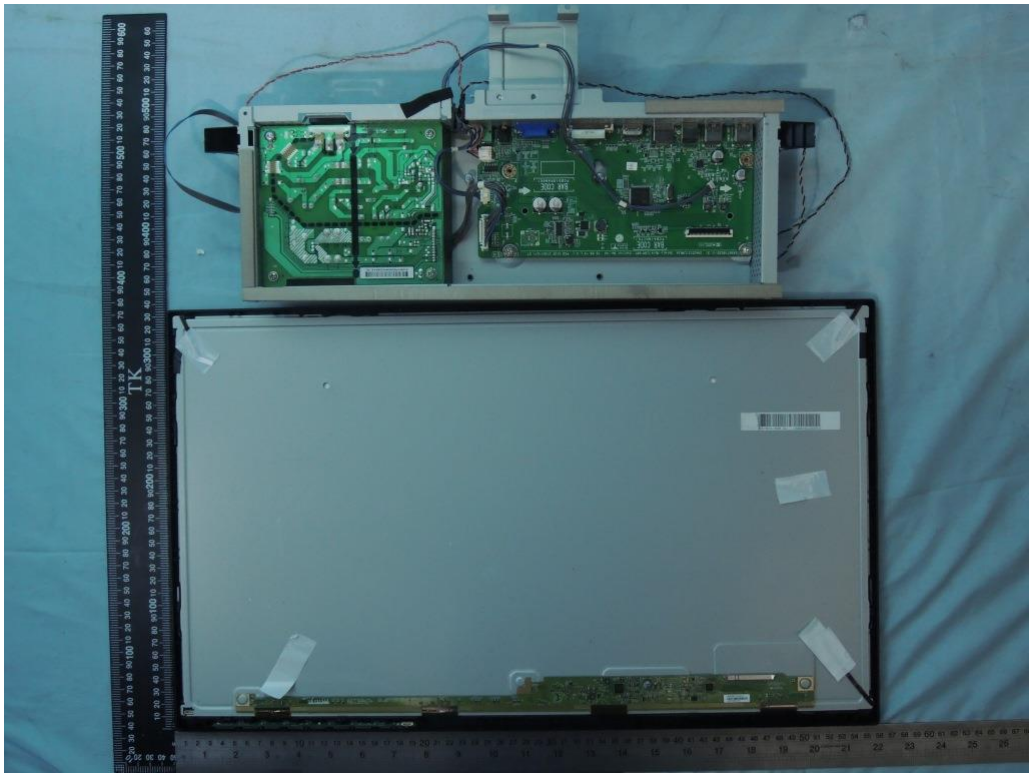


Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

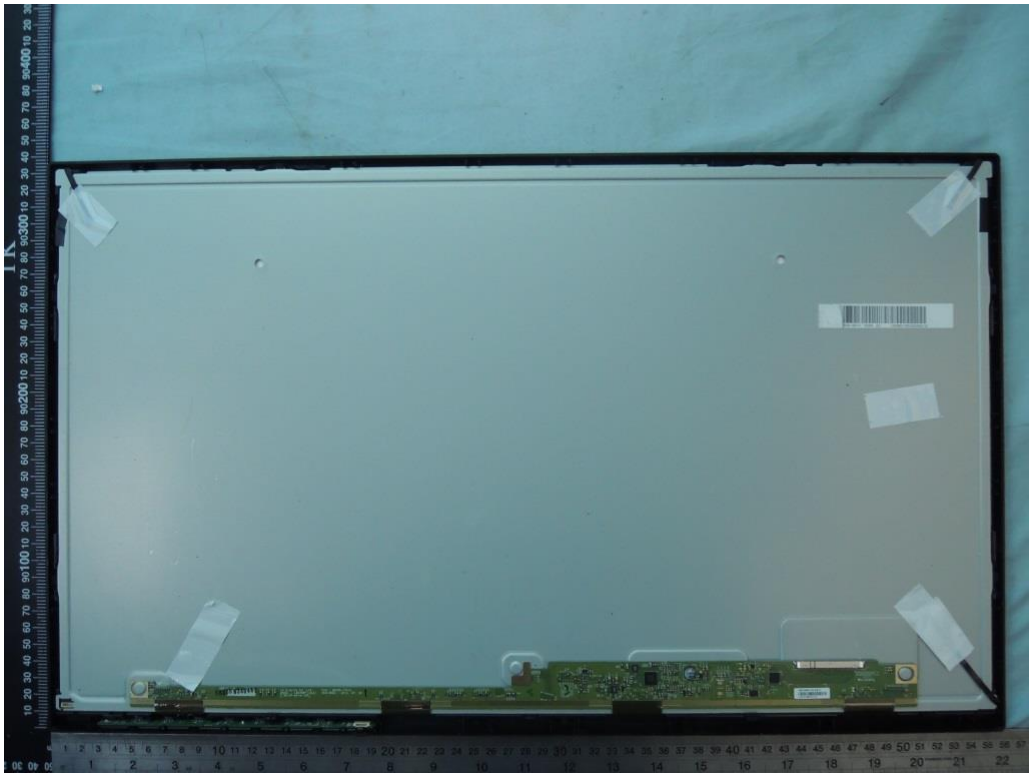


Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000



Connector View

Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

27BK550##
Overall view

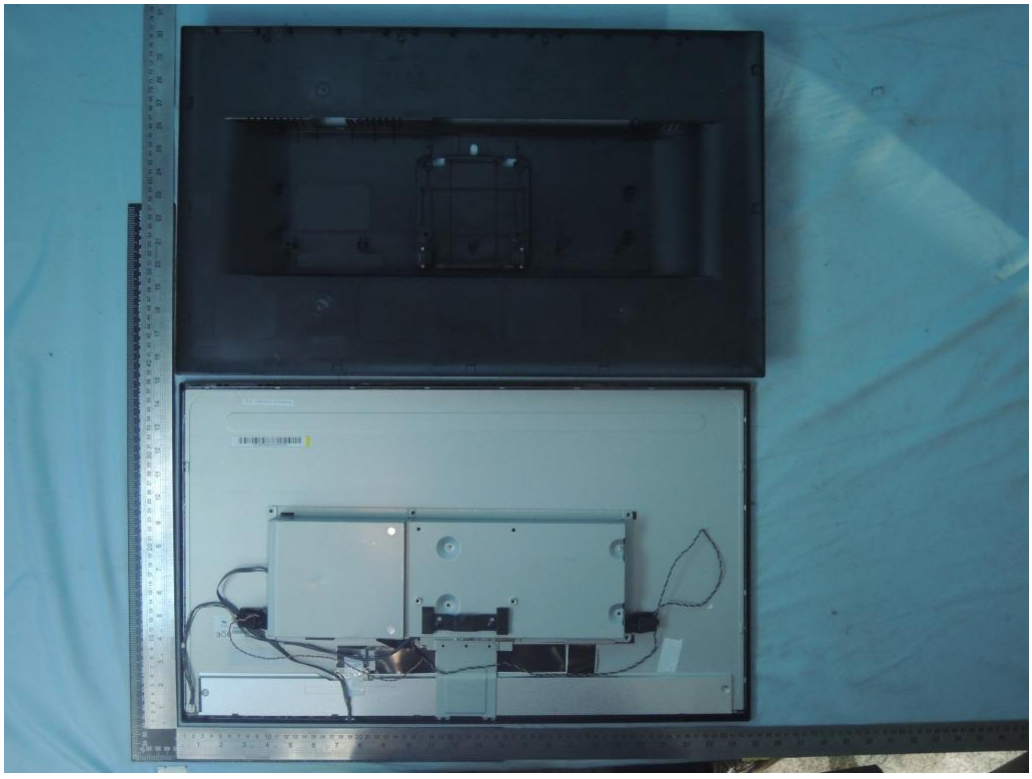
Attachment No. 6

PSB Singapore

Type Designation: **24BK550##, 27BK550##, 24BL550##**

Report Number: **081-180816-000**

Internal view

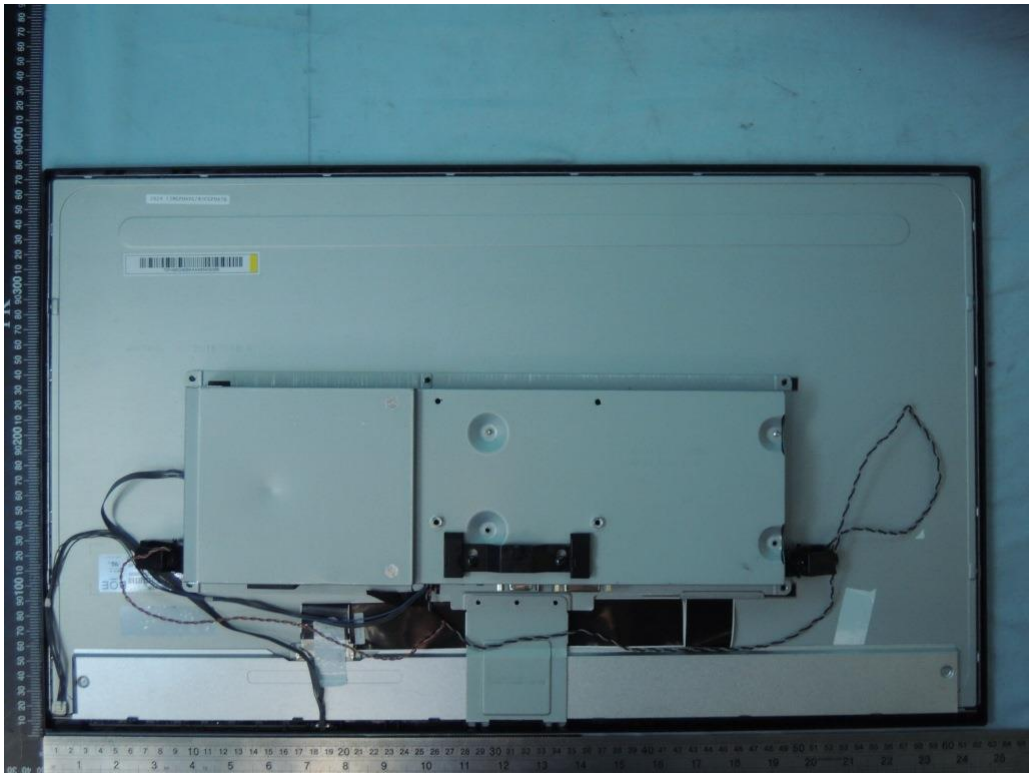


Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

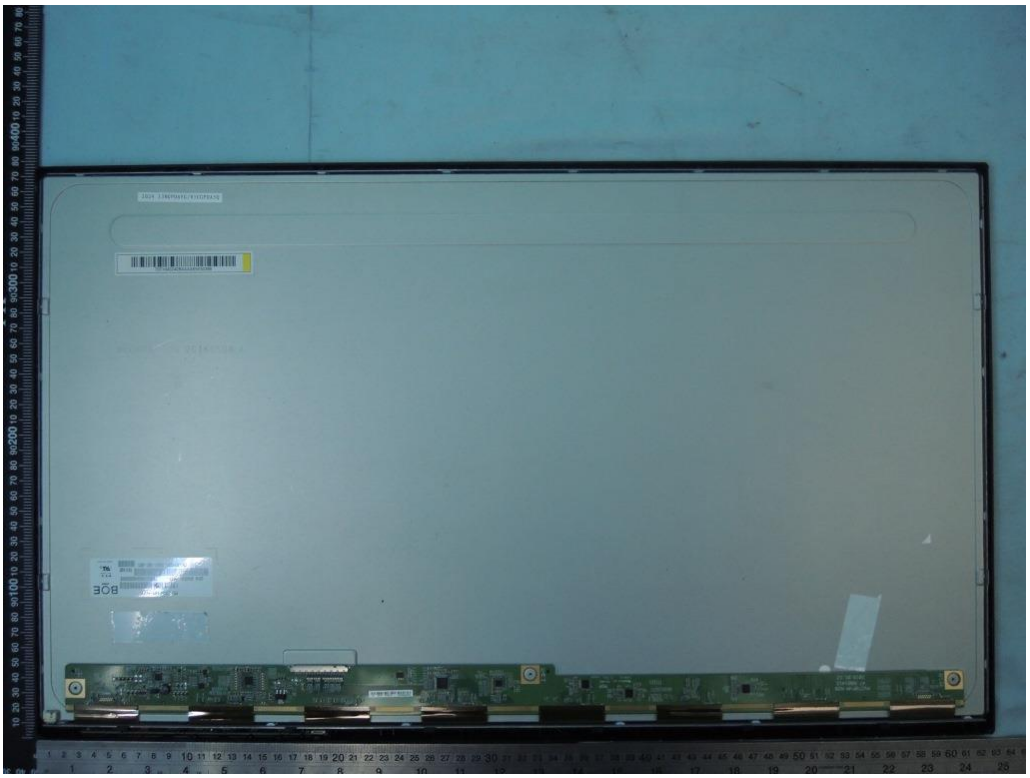


Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

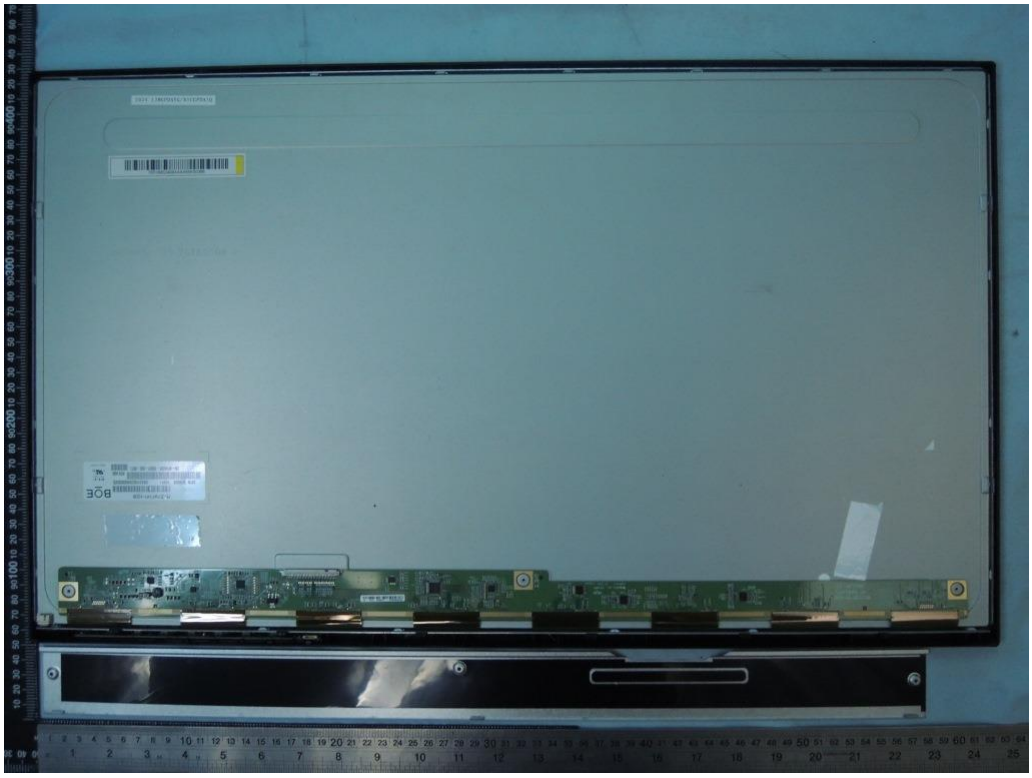


Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000



Connector View

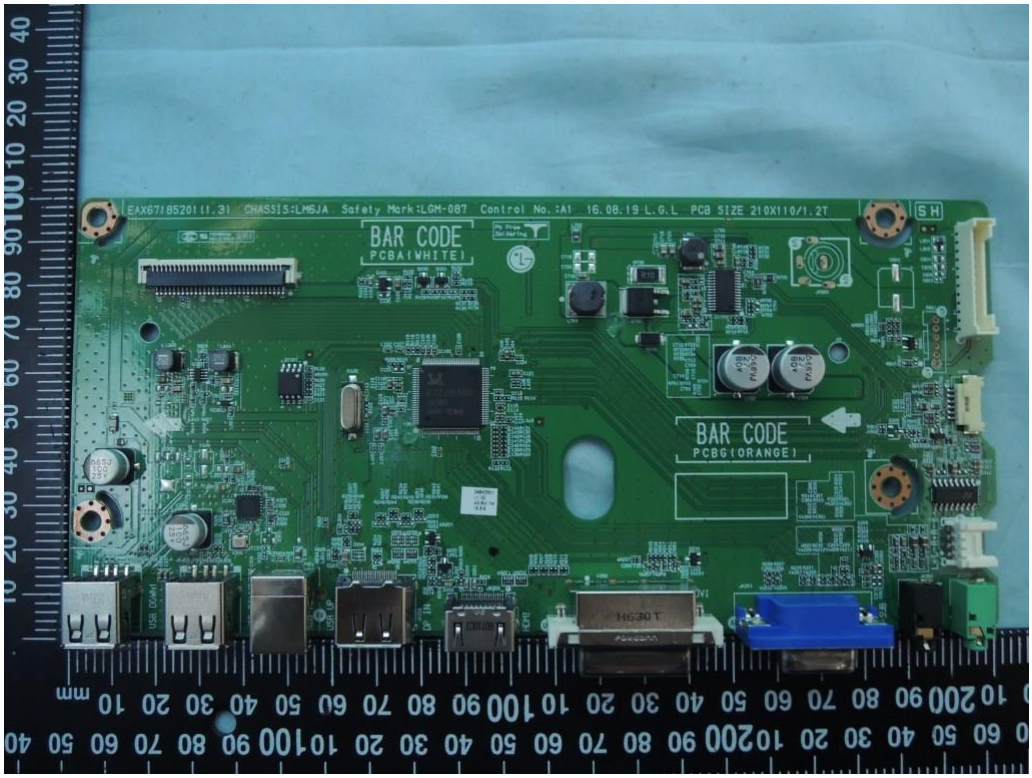
Attachment No. 6

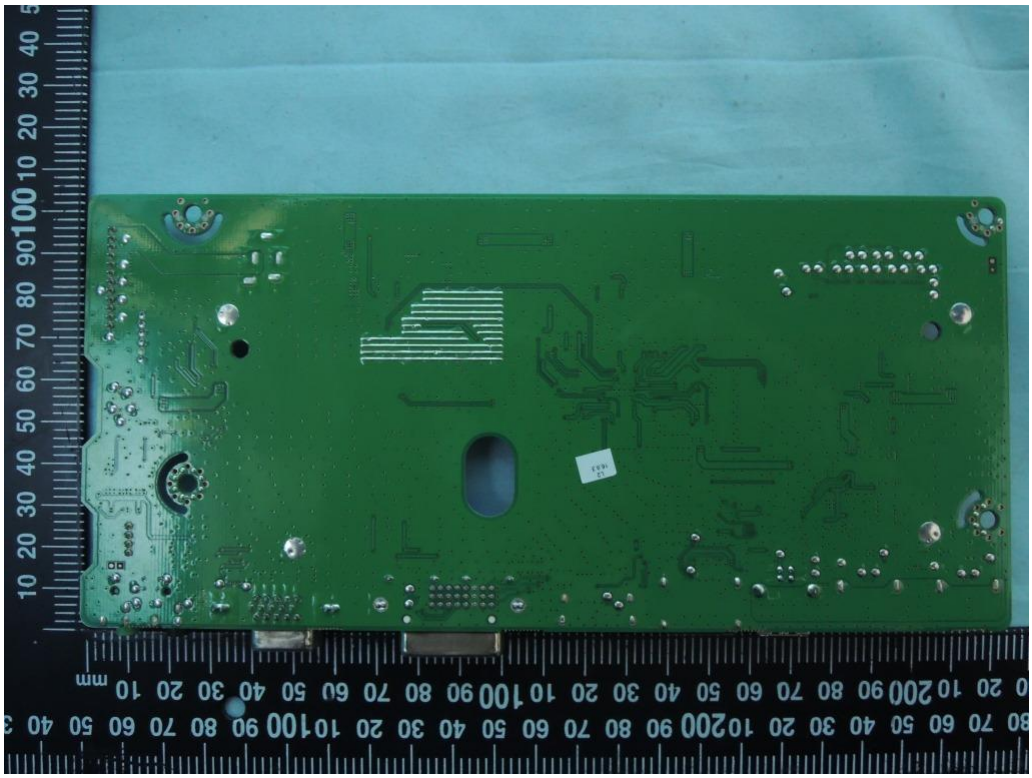
PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

Main board-1





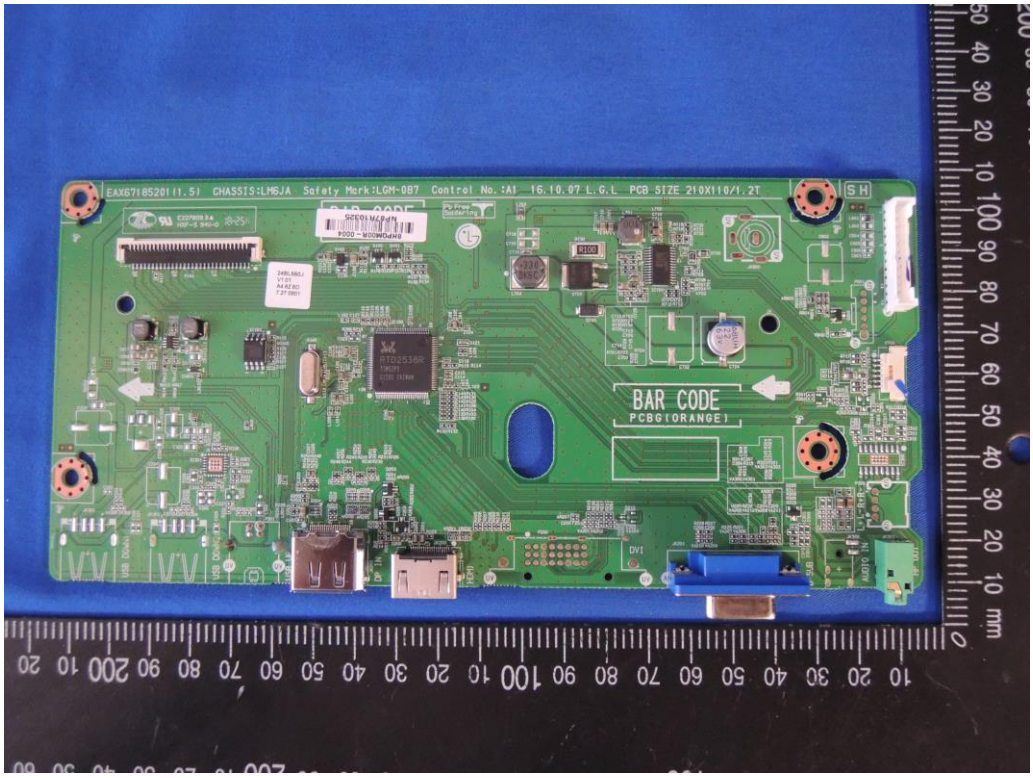
Attachment No. 6

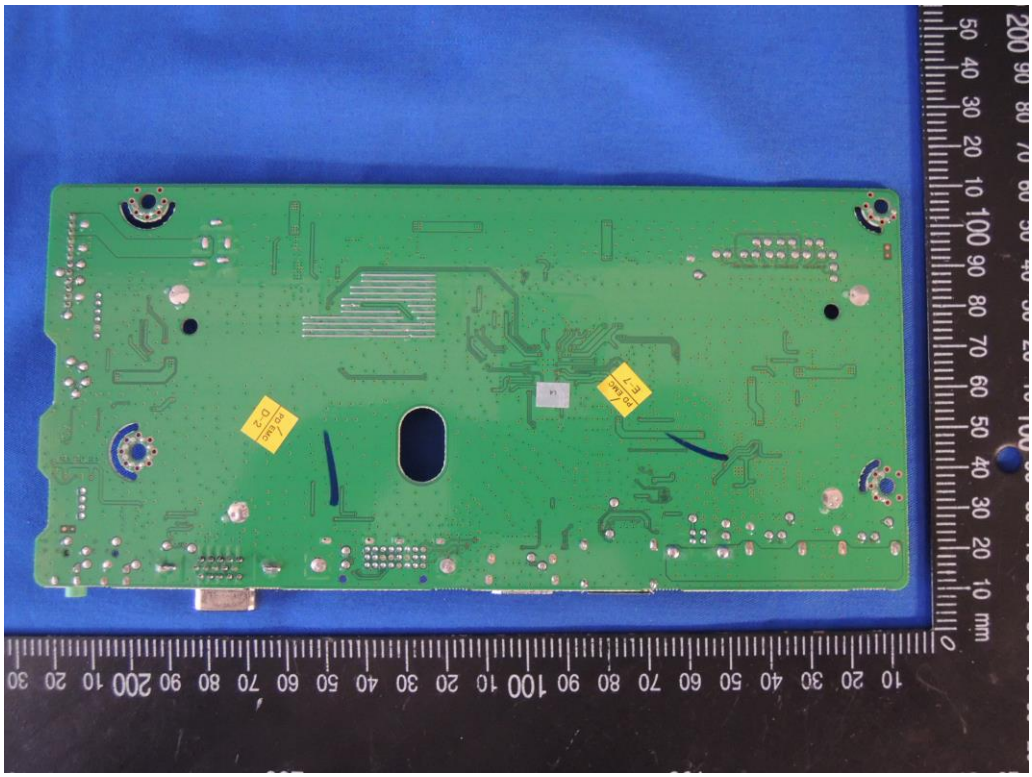
PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

Main board-2



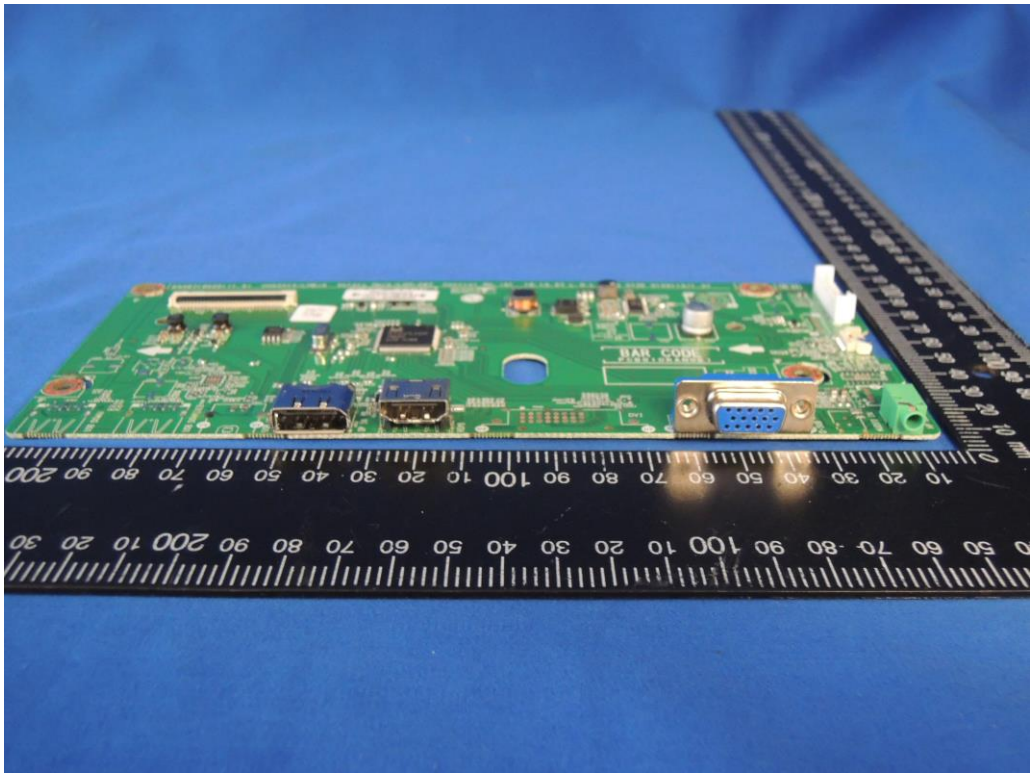


Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000



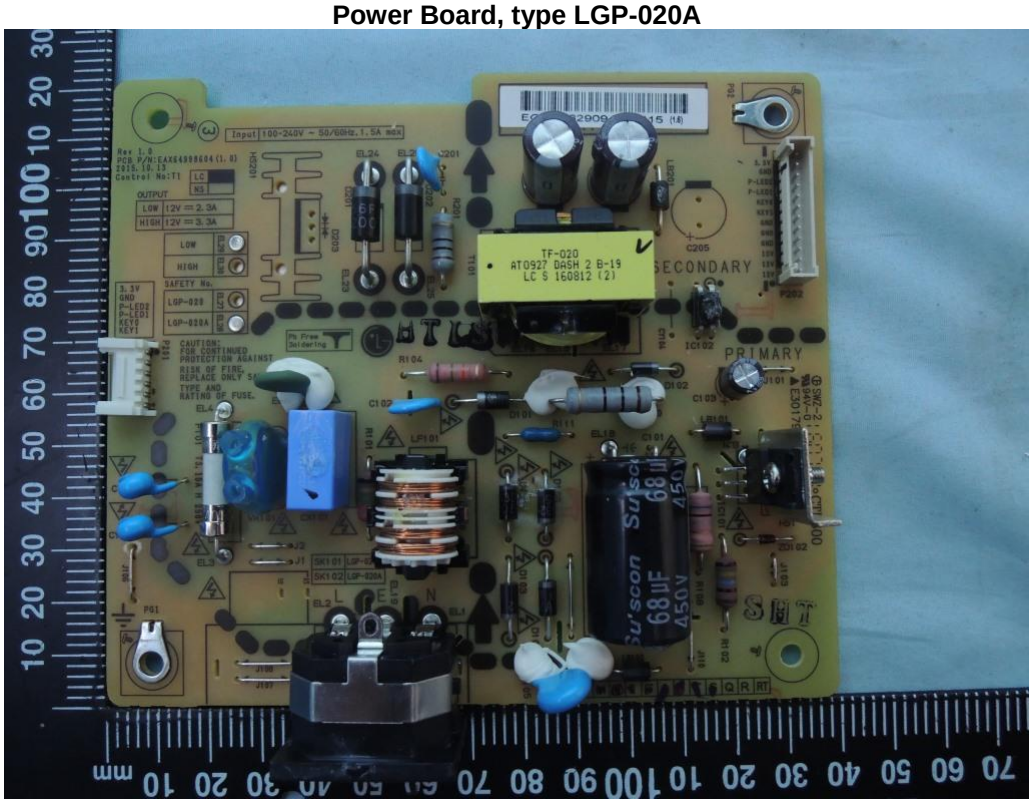
Attachment No. 6

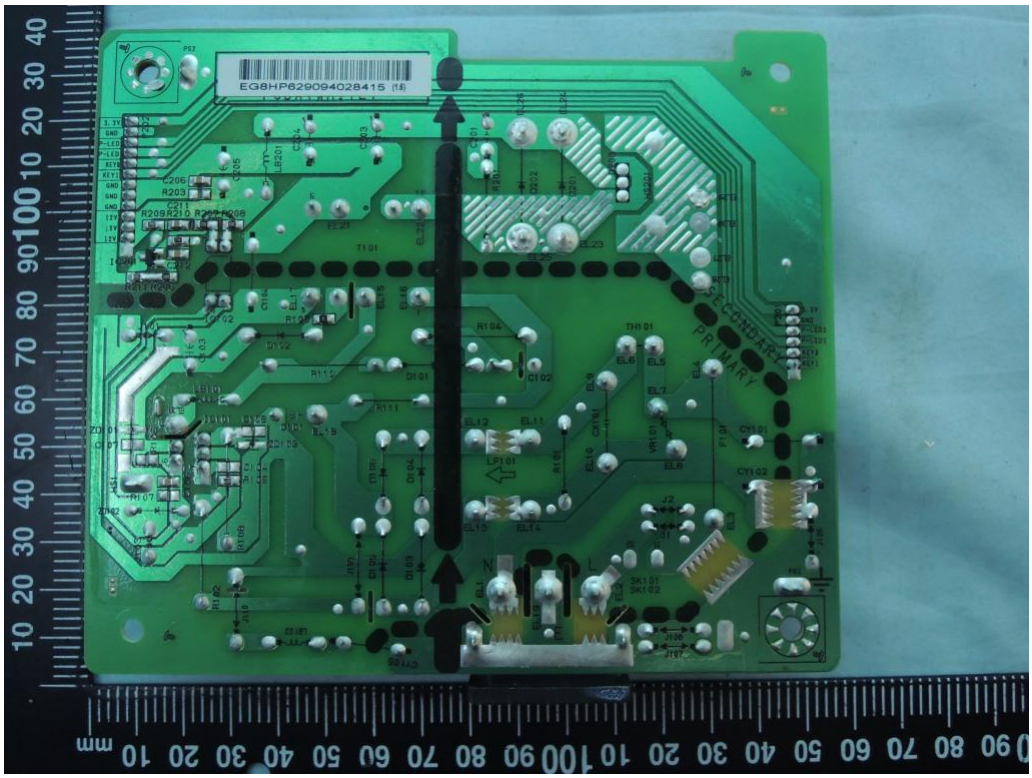
PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

Power Board, type LGP-020A





Attachment No. 6

PSB Singapore

Type Designation: 24BK550##, 27BK550##, 24BL550##

Report Number: 081-180816-000

Stand