AUDIX Technology (Shenzhen) Co., Ltd.
52 Block, Shenzhen Science & Industry Park,
Nantou, Shenzhen, Guangdong, China

Tel : 0755-26639495~6-7
Fax : 86 0755-26632877

Technical Compliance Statement

No. ACS-E15154

The following products have been tested by us with the listed standards and found in compliance with the council EMC directive 2004/108/EC. It is demonstrative for the compliance with this EMC Directive.

Submitter : **TPV Electronics (FuJian) Co., Ltd.**
Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China

Product : **31.5"(80cm)LCD Monitor**

Brand Name	Model No.
PHILPS	BDL3230QL; BDL3230*****

Test Standards :		
EN 55022: 2010+AC: 2011(Class A) AS/NZS CISPR 22:2009+A1:2010	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	
EN 61000-3-2: 2006+A1: 2009+A2: 2009	Electromagnetic compatibility(EMC) Part 3 :Limits Section 2 : Limits for harmonic current emissions (equipment input current≦16A per phase)	
EN 61000-3-3: 2013	Electromagnetic compatibility(EMC) Part 3 :Limits Section 3 : Limits of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current≦16A	
EN 55024: 2010	Information technology equipment-Immunity characteristics limits and methods of measurement	
	IEC 61000-4-2: 2008	Electrostatic discharge
	IEC 61000-4-3: 2010	RF Field Strength susceptibility
	IEC 61000-4-4: 2012	Electrical Fast transients
	IEC 61000-4-5: 2005	Surge
	IEC 61000-4-6: 2013	Conducted Susceptiblity
	IEC 61000-4-8: 2009	Magnetic field immunity
	IEC 61000-4-11: 2004	Dips / Voltage Interruption Variation

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Signature: David Jin

CE

David Jin
Manager
Date：Apr. 08, 2015

The statement is based on a single evaluation of one sample of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo.

EMC TEST REPORT

For

TPV Electronics (FuJian) Co., Ltd.

Product：31.5"(80cm)LCD Monitor

Brand Name	Model No.
PHILPS	BDL3230QL; BDL3230*****

Prepared for : TPV Electronics (FuJian) Co., Ltd.
Rongqiao Economic and Technological Development Zone,
Fuqing City, Fujian Province, P.R. China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496
Fax: (0755) 26632877

Report Number : ACS-E15154
Date of Test : Mar. 15~31, 2015
Date of Report : Apr. 08, 2015

TABLE OF CONTENT

Description Page

TEST REPORT VERIFICATION

Applicant : TPV Electronics (FuJian) Co., Ltd.

EUT Description : 31.5"(80cm)LCD Monitor

(A) Brand Name & Brand Name :

Brand Name	Model No.
PHILPS	BDL3230QL; BDL3230*****

(B) Serial No. : N/A

(C) Power Supply : AC 100-240V; 50/60Hz

(D) Test Voltage : AC 230V/50Hz

Test Procedure Used:

AS/NZS CISPR 22:2009+A1:2010, EN 55022: 2010+AC: 2011 (Class A),
EN 61000-3-2: 2006+A1: 2009+A2: 2009, EN 61000-3-3: 2013
EN 55024: 2010
(IEC 61000-4-2: 2008, IEC 61000-4-3: 2010, IEC 61000-4-4: 2012,
IEC 61000-4-5: 2005, IEC 61000-4-6: 2013, IEC 61000-4-8: 2009, IEC 61000-4-11: 2004)

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device, the severe levels which the device can endure and EUT's performance criterion. The test results are contained in this test report. Audix Technology (Shenzhen) Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests. Also, this report shows that the EUT is technically compliant with the EN 55022 and EN 55024 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : Mar. 15~31, 2015 Report of date: Apr. 08, 2015

Prepared by : Miya Zhou / Assistant

Reviewed by : Jack Zhong / Assistant Manager

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Approved & Authorized Signer : Signature: David Jin 4.8
David Jin / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	**Standard**	**Results**	**Remark**
Conducted disturbance at mains terminals	EN 55022: 2010+AC: 2011	PASS	Minimum passing margin is 24.28dB at 3.584MHz
Conducted disturbance at telecommunication port	EN 55022: 2010+AC: 2011	PASS	Minimum passing margin is 22.26dB at 0.270MHz
Radiated disturbance (30-1000MHz)	EN 55022: 2010+AC: 2011	PASS	Minimum passing margin is 11.16dB at 30.000MHz
Radiated disturbance (1-6GHz)	EN 55022: 2010+AC: 2011	PASS	Minimum passing margin is 8.70dB at 2011.20MHz
Harmonic current emissions	EN 61000-3-2: 2006+ A1: 2009+A2: 2009	PASS	Meets the Class D requirement
Voltage fluctuations & flicker	EN 61000-3-3: 2013	PASS	Meets the requirement

IMMUNITY (EN 55024: 2010)				
Description of Test Item	**Basic Standard**	**Results**	**Performance Criteria**	**Observation Criteria**
Electrostatic discharge (ESD)	IEC 61000-4-2: 2008	PASS	B	A&B
Radio-frequency, Continuous radiated disturbance	IEC 61000-4-3: 2010	PASS	A	A
Electrical fast transient (EFT)	IEC 61000-4-4: 2012	PASS	B	A&B
Surge (Input a.c. power port)	IEC 61000-4-5: 2005	PASS	B	A&B
Surge(Telecommunication port)		PASS	C	C
Radio-frequency, Continuous conducted disturbance	IEC 61000-4-6: 2013	PASS	A	A
Power frequency magnetic field	IEC 61000-4-8: 2009	PASS	A	A
Voltage dips, >95% reduction	IEC 61000-4-11: 2004	PASS	B	A
Voltage dips, 30% reduction		PASS	C	A
Voltage interruptions		PASS	C	C
N/A is an abbreviation for Not Applicable.				

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Description	:	31.5"(80cm)LCD Monitor
Model Number & Brand Name	:	<table><tr><td>Brand Name</td><td>Model No.</td></tr><tr><td>PHILPS</td><td>BDL3230QL; BDL3230*****</td></tr></table> The "*" could be any alphanumeric character including blank for marketing differentiation.
Test Model	:	BDL3230QL
Applicant	:	TPV Electronics (FuJian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
Manufacturer #1	:	TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
Manufacturer #2	:	L&T Display Technology (Fujian) Limited Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
Manufacturer #3	:	TPV Display Technology (Wuhan) Co., Ltd. Unique No. 11 Zhuankou Development District of Economic Technological Development Zone, Wuhan City, P.R. China
Manufacturer #4	:	TPV DISPLAY TECHNOLOGY (CHINA) CO., LTD. No.106,Jinghai third Rd., BDA, Beijing, P.R.China
Manufacturer #5	:	TPV Display Technology（Beihai）Co., Ltd. China Electronic Beihai Industry Park,Northeast of the Crossing between Taiwan Road and Jilin Road, Beihai City, Guangxi,P.R.China
Manufacturer #6	:	TPV Technology(Qingdao) Co.,Ltd. NO.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandong Province, China(PRC)
Manufacturer #7	:	Envision Industry of Electronic Products Ltd. Rodovia Anhanguera S/N – KM 49 Tijuco Preto - Jundiaí – SP - Brazil

Manufacturer #8	:	Hefei Huntkey Display Technology Co.,Ltd. South Jinxiu Road, East Qingtan Road, Economic And Technological Development Zone, Hefei
Manufacturer #9	:	TREND SMART CE MEXICO S. DE R.L. DE C.V. Avenida Sor Juana Ines de la Cruz No. 19602 Parque Industrial la Frontera Fracc. Nueva Tijuana (Otay) Tijuana, B.C. CP.22500
Manufacturer #10	:	TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P.R.China
Manufacturer #11	:	TPV Display Technology (Xiamen) Co., Ltd. No. 1 Xianghai Road, Xiamen Torch Hi-Tech Industrial Development Zone (Xiang'An) Xiamen City, Fujian Province P.R. China
Max. Resolution	:	1920*1080@60Hz
Max. Work Frequency	:	148MHz
Panel	:	Manufacturer : TPV, M/N: TPT315B5
Power Cord	:	Unshielded, Detachable, 1.8m/1.5m (2 pins)
D-Sub Cable	:	Shielded, Detachable, 1.8m/1.5m (Bonded two ferrite cores)
DVI Cable	:	Shielded, Detachable, 1.8m/1.5m (Bonded two ferrite cores)
Audio Cable	:	Unshielded, Detachable, 1.8m/1.5m
HDMI Cable	:	Shielded, Detachable, 1.8m /1.5m
Date of Test	:	Mar. 15~31, 2015
Date of Receipt	:	Mar. 14, 2015
Sample Type	:	Prototype production

2.2. Tested Supporting System Details

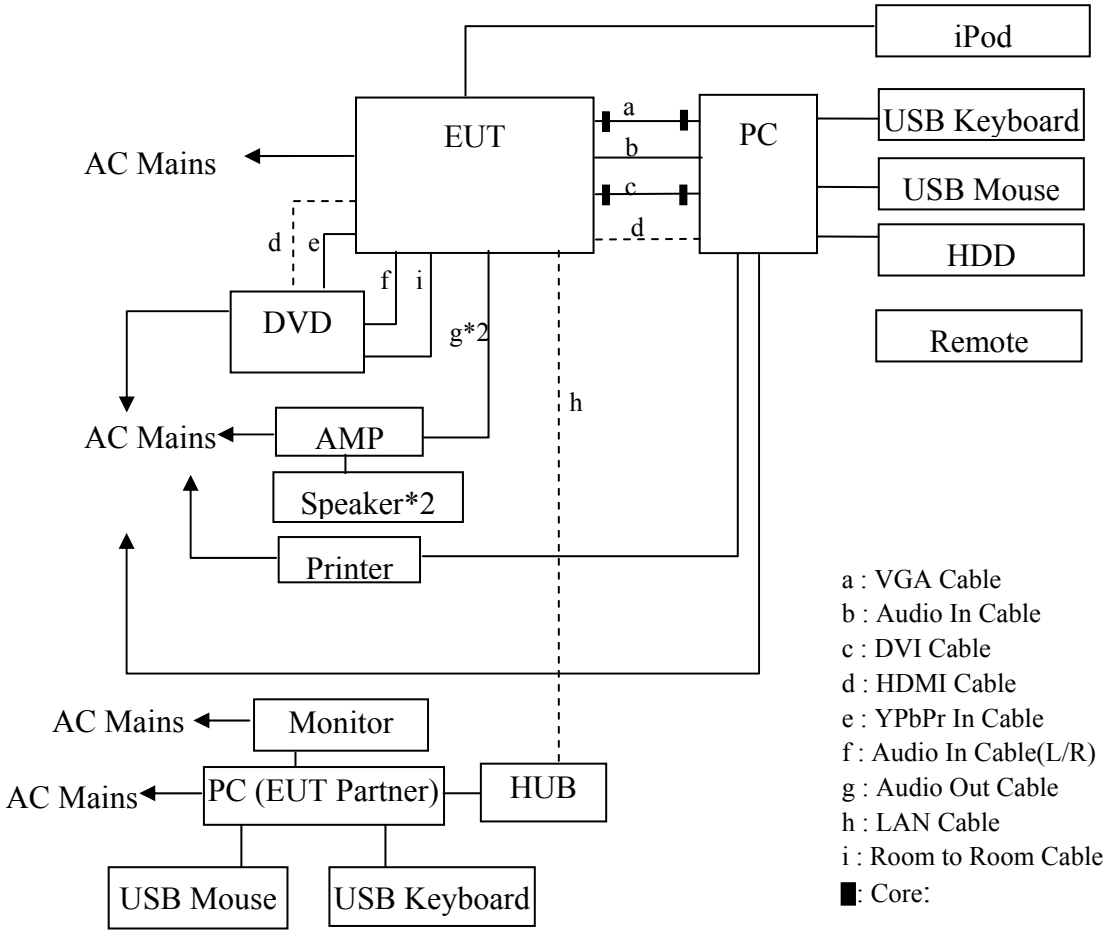
No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	Personal Computer	Test PC U	DELL	Vostro 470	2SP05W1	☑FCC DoC ☑BSMI ID:R33002
		Power Cord: Unshielded, Detachable, 1.8m Display Card: (VGA+DVI+HDMI)				
2.	USB Keyboard	ACS-EMC- K03R	DELL	SK-8115	CN-ODJ313-71616-711-04WJ	☑ FCC DoC ☑BSMI ID: T3A002
		Power Cord: shielded, Undetachable, 2.0m				
3.	USB Mouse	ACS-EMC-M03R	DELL	M0C5UO	512023253	☑ FCC DoC ☑BSMI ID: R41108
		Power Cord: shielded, Undetachable, 1.8m				
4.	Printer	ACS-EMC-PT04	HP	C9079A	-	☐FCC ID ☑BSMI ID
		USB Cable: shielded, Detachable, 1.5m Power Cord: Unshielded, Detachabled, 1.8m Power Adaptor: HP, 0957-2119, DC Cable: Unshielded, Detachabled, 1.5m				
5.	HDD	ACS-EMC-HDD01	Terasys	F12-UF	A0100215-5390018	☑FCC DoC ☑BSMI ID
		USB Cable: shielded, Detachable, 1.0m				
6.	DVD	ACS-EMC-DVD01	DENON	DVD-3910	4098400342E	☐FCC ID ☐BSMI ID
		Audio In (L/R)Cable: Shielded, Detachabled, 1.8m Component In Cable: Shielded, Detachabled, 1.8m Room to Room In Cable: Shielded, Detachabled, 1.8m Power Cord: Unshielded, Detachabled , 1.8m				
7.	iPod	ACS-EMC-IPS11	APPLE	A1373	Cc4JC9VSF4VF	☑FCC DoC ☑BSMI ID: R33057
		Data Cable: Shielded, Detachabled, 1.0m				
8.	Power Amplifier	ACS-EMC-AMP01	SANGU	AV-805	N/A	☐FCC ID ☐BSMI ID
		Audio Out (L/R)Cable: Shielded, Detachabled, 1.8m Speaker :Manufacturer: Shark M/N: HTW-615 External Speaker: 8Ω,15W				

【PC system which transmitting 】

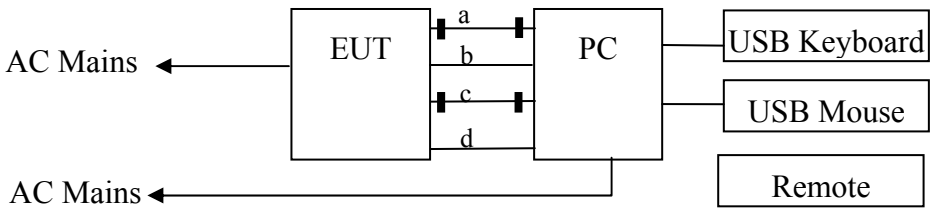
No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	Personal Computer	Test PC N	DELL	Studio 540	J14XK2X	☑FCC DoC ☑BSMI ID:R33002
		Power Cord: Unshielded, Detachable, 1.8m LAN Cable: Unshielded, Detachable, 10m Display Card: HD3650 (DVI+Display+HDMI)				
2.	USB Keyboard	ACS-EMC- K02R	DELL	SK-8115	CN-ORH656-658 90-686-007J	☑ FCC DoC ☑BSMI ID: T3A002
		Power Cord: shielded, Undetachable, 2.0m				
3.	USB Mouse	ACS-EMC-M02R	DELL	M056UO	512024264	☑FCC DoC ☑BSMI ID: R41108
		Power Cord: shielded, Undetachable, 1.8m				
4.	Monitor	ACS-EMC-LM04R	DELL	1907FPt	CN-009759-71618 -6AP-ACPP	☑FCC DoC ☑BSMI ID: R3A002
		Power Cord: Unshielded, Detachable, 1.8m DVI Cable: Shielded, Detachable, 1.8m				
5.	HUB	ACS-EMC-DL01	D-Link	DGS-1008D	B2C6468500621	☑FCC DoC ☐BSMI ID
		Data Cable: Shielded, Detachabled, 1.8m Adapter: M/N: RL48-07V51000, DC Cable: Unshielded, Detachabled , 1.0m				

2.3.Block Diagram of connection between EUT and simulators

For EMI Tests



For EMS Tests



Note : PC Mode and DVD Mode can not link the HDMI port at the same time.

(EUT: 31.5"(80cm)LCD Monitor)

2.4.Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park,Nantou, Shenzhen, Guangdong, China
3m Anechoic Chamber	:	Certificated by FCC, USA Registration Number: 90454 Valid Date: Dec. 30, 2017
3m & 10m Anechoic Chamber	:	Certificated by FCC, USA Registration Number: 794232 Valid Date: Oct.31, 2015
EMC Lab.	:	Certificated by DAkkS, Germany Registration No: D-PL-12151-01-00 Valid Date: Dec.15, 2016 Accredited by NVLAP, USA NVLAP Code: 200372-0 Valid Date: Mar.31, 2016

2.5.Measurement Uncertainty（95% confidence levels, k=2）

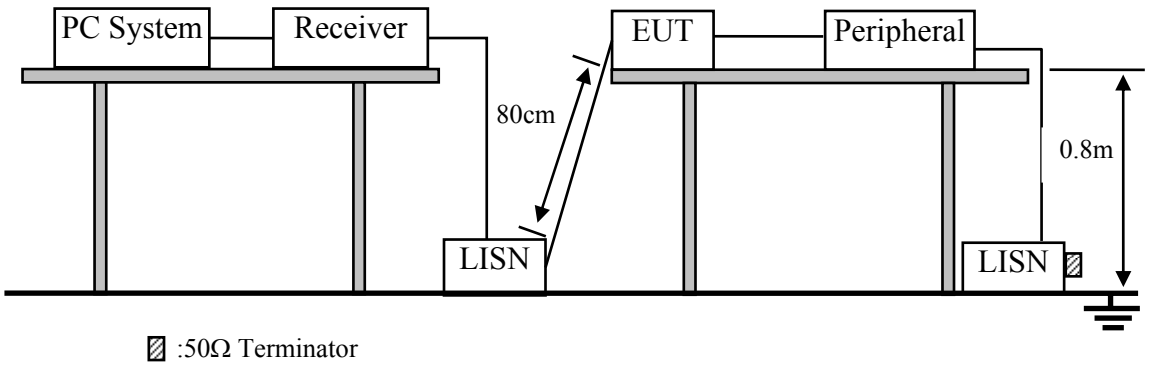
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 2 Conduction	3.1dB(150kHz~30MHz)
Uncertainty for ISN test in No.2 Conduction	3.5dB(150kHz~30MHz)
Uncertainty for Radiation Emission test in 10m chamber (Distance: 10m)	3.5dB (30~200MHz, Polarize: H)
	3.5dB (30~200MHz, Polarize: V)
	3.7dB (200M~1GHz, Polarize: H)
	3.6dB (200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz)	5.1dB (Distance: 3m Polarize: V)
	5.3dB (Distance: 3m Polarize: H)
Uncertainty for Flicker test	5.2%
Uncertainty for Harmonic test	9.4%
Uncertainty for C/S Test	1.4dB (Using CDN test)
	3.2dB (Using EM clamp test)
Uncertainty for R/S Test	1.7dB (80MHz~200MHz)
	1.7dB(200MHz~1000MHz)
Uncertainty for test site temperature and humidity and pressure	0.6℃
	3%
	1kPa

3. POWER LINE CONDUCTED EMISSION MEASUREMENT

3.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESCI	100843	Oct.29,14	1 Year
2	L.I.S.N.#1	Rohde & Schwarz	ENV4200	100041	Apr.28,14	1 Year
3	L.I.S.N.#2	Kyoritsu	KNW-407	8-1628-5	Apr.28,14	1 Year
4	Terminator	Hubersuhner	50Ω	No.1	Apr.28,14	1 Year
5	Terminator	Hubersuhner	50Ω	No.2	Apr.28,14	1 Year
6	RF Cable	Fujikura	3D-2W	No.2	Apr.28,14	1 Year
7	Coaxial Switch	Anritsu	MP59B	6201397223	May.16,14	1 Year
8	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100340	Apr.28,14	1 Year
9	Test Software	AUDIX	E3	6.100913a	N/A	N/A

3.2.Block Diagram of Test Setup



3.3.Test Standard

EN 55022: 2010+AC: 2011 (Class A)

3.4.Power Line Conducted Emission Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	79	66
500kHz ~ 30MHz	73	60

Notes: The lower limit shall apply at the transition frequencies.

3.5.EUT Configuration on Test

The following equipments are installed on conducted emission test to meet EN 55022 requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5.1.31.5"(80cm)LCD Monitor

Model Number : BDL3230QL
Serial Number : N/A

3.5.2.Support Equipment : As Tested Supporting System Detail, in Section 2.2.

3.6. Operating Condition of EUT

3.6.1. Setup the EUT and simulator as shown as Section 3.2.

3.6.2. Turned on the power of all equipment.

3.6.3. PC system ran the Self-test program “EMC TEST. exe” by windows XP and sent “H” Character to 31.5"(80cm)LCD Monitor (EUT) through DVI / VGA / HDMI card, the Screen of EUT displayed and filled with “H” pattern.

3.6.4. The PC system was running the program “1kHz signal playing” and sending sound to EUT.

3.6.5. The PC system was reading / writing data from / into iPod during testing.

3.6.6. The other peripheral devices were driven and operated in turn during all testing.

3.7. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#).The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the EN 55022 regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 3.8.

3.8. Power Line Conducted Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

The EUT with the following test modes were tested and selected (No. 3~6) to read Q.P values, all the test results are listed in next pages.

EUT: 31.5"(80cm)LCD Monitor Model No. : BDL3230QL

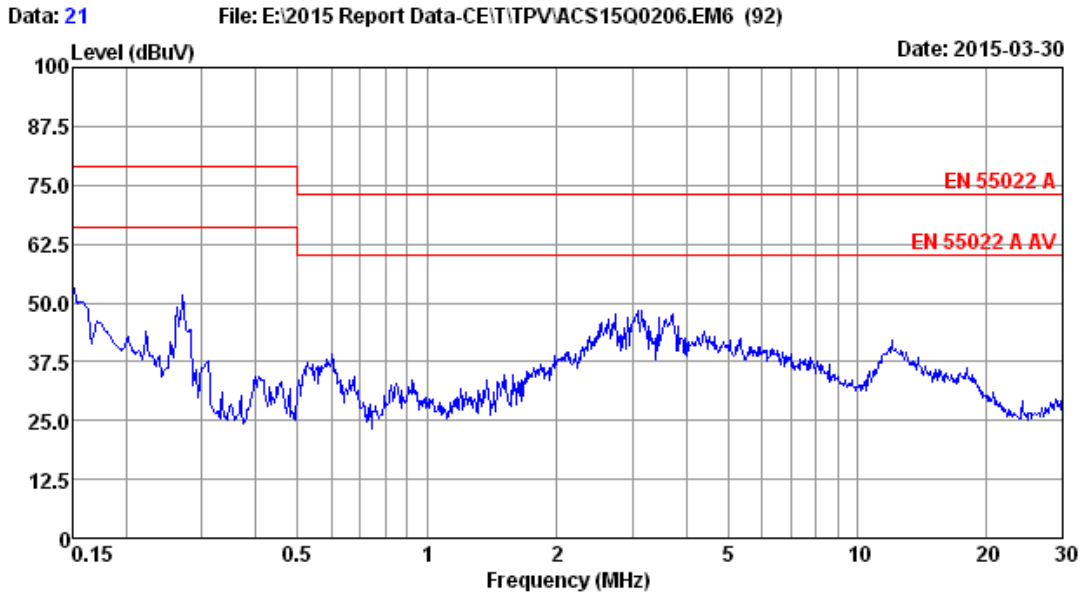
Test Date: Mar. 30, 2015 Temperature: 22.9℃

Humidity: 53.3% Pressure: 101.4kPa

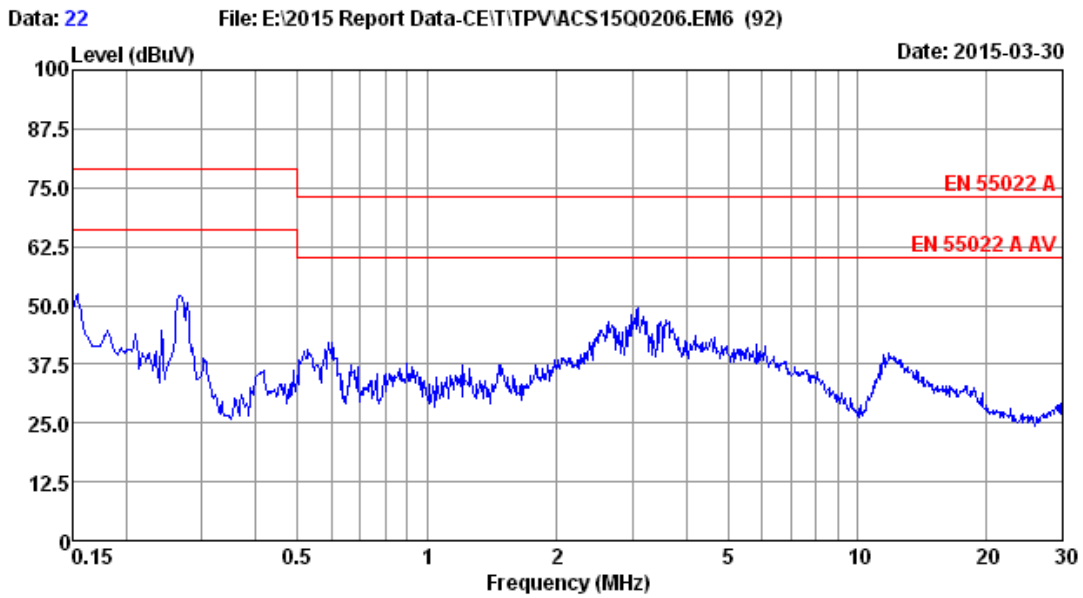
The details of test modes are as follows：

No.	Cable	Input Port	Resolution & Frequency	Reference Test Data No.	
				LINE	NEUTRAL
1.	1.8m	DVI	640*480/60Hz	# 21	# 22
2.			1280*1024/75Hz	# 23	# 24
3. ※			**1920*1080/60Hz**	**# 25**	**# 26**
4.		VGA	1920*1080/60Hz	# 29	# 30
5.		HDMI	1920*1080/60Hz	# 31	# 32
6.	1.5m	DVI	1920*1080/60Hz	# 27	# 28

(※ Worst test mode)

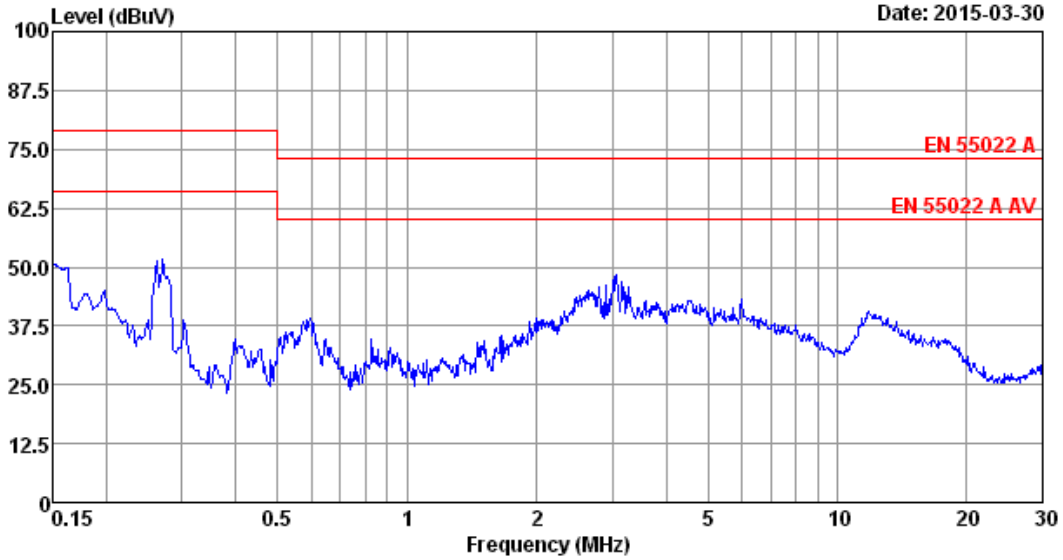



```
Site no       :2# Conduction                    Data No    :21
Dis./Lisn     :14 ENV4200 L1                    LISN phase:LINE
Limit         :EN 55022 A                       Pre        :101.4kPa
Env./Ins.     :22.9*C/53.3%                     Engineer   :Nick_Huang
EUT           :BDL3230QL
Power Rating  :AC 230V/50Hz
Test Mode     :Running "H" Pattern And 1KHz Playing
               DVI:640*480@60Hz
               Line:1.8m
```



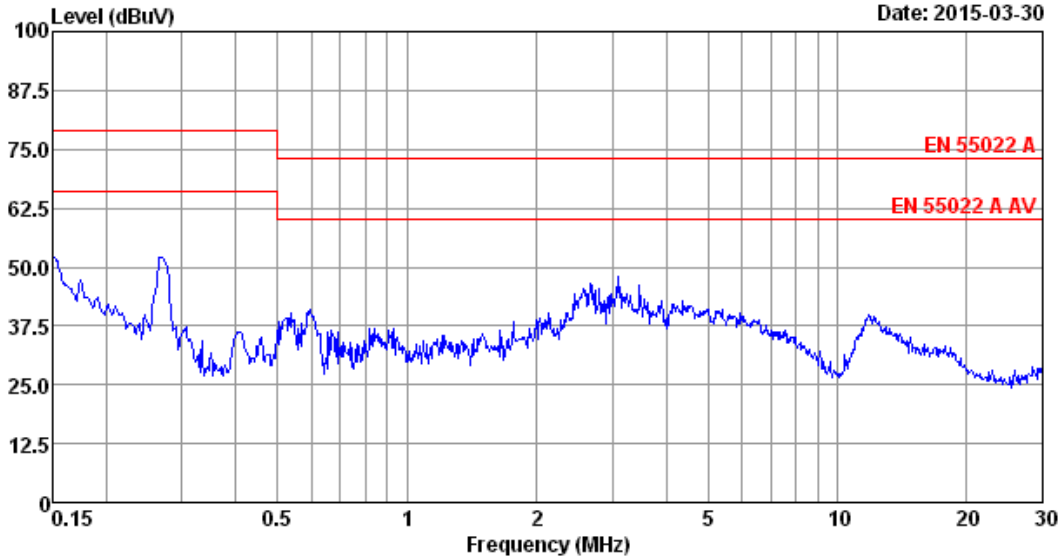

```
Site no       :2# Conduction                    Data No    :22
Dis./Lisn     :14 ENV4200 N                     LISN phase:NEUTRAL
Limit         :EN 55022 A                       Pre        :101.4kPa
Env./Ins.     :22.9*C/53.3%                     Engineer   :Nick_Huang
EUT           :BDL3230QL
Power Rating  :AC 230V/50Hz
Test Mode     :Running "H" Pattern And 1KHz Playing
               DVI:640*480@60Hz
               Line:1.8m
```

Data: 23 File: E:\2015 Report Data-CE\T\TPV\ACS15Q0206.EM6 (92)

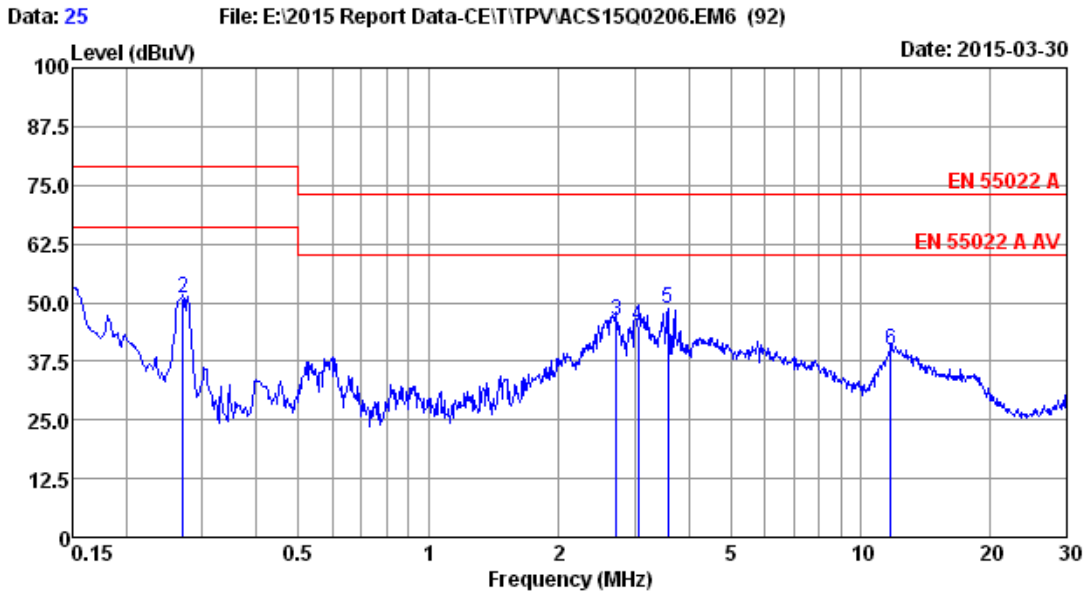



```
Site no       :2# Conduction                    Data No    :23
Dis./Lisn     :14 ENV4200 L1                    LISN phase:LINE
Limit         :EN 55022 A                       Pre        :101.4kPa
Env./Ins.     :22.9*C/53.3%                     Engineer   :Nick_Huang
EUT           :BDL3230QL
Power Rating  :AC 230V/50Hz
Test Mode     :Running "H" Pattern And 1KHz Playing
               DVI:1280*1024@75Hz
               Line:1.8m
```

Data: 24 File: E:\2015 Report Data-CE\T\TPV\ACS15Q0206.EM6 (92)




```
Site no       :2# Conduction                    Data No    :24
Dis./Lisn     :14 ENV4200 N                     LISN phase:NEUTRAL
Limit         :EN 55022 A                       Pre        :101.4kPa
Env./Ins.     :22.9*C/53.3%                     Engineer   :Nick_Huang
EUT           :BDL3230QL
Power Rating  :AC 230V/50Hz
Test Mode     :Running "H" Pattern And 1KHz Playing
               DVI:1280*1024@75Hz
               Line:1.8m
```

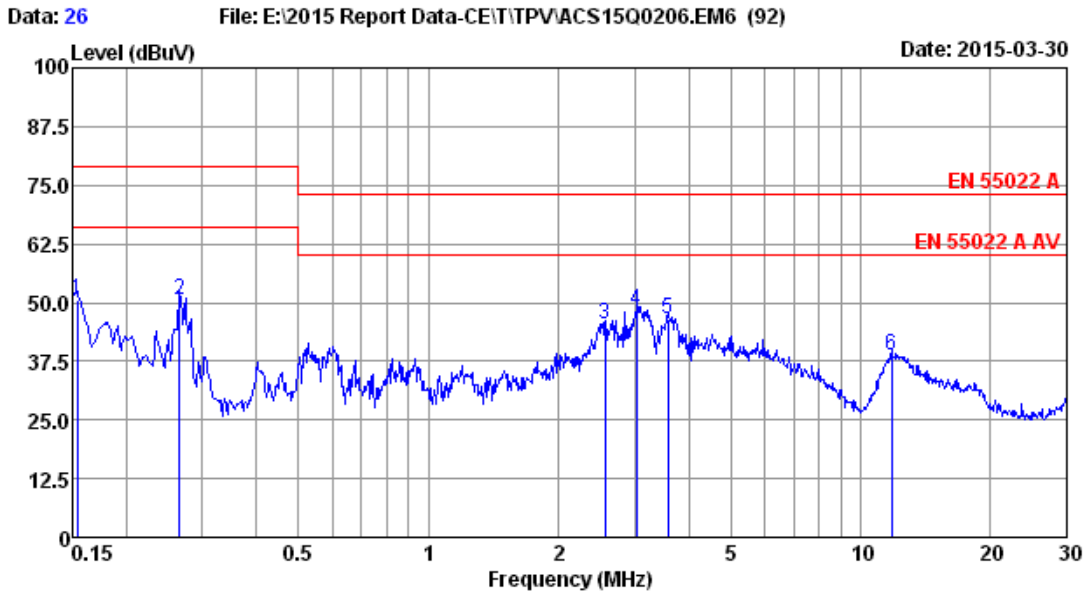


Site no :2# Conduction
Dis./Lisn :14 ENV4200 L1
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.8m

Data No :25
LISN phase:LINE
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	9.88	9.90	31.59	51.37	79.00	27.63	QP
2	0.270	9.90	9.89	31.00	50.79	79.00	28.21	QP
3	2.721	9.77	9.91	26.26	45.94	73.00	27.06	QP
4	3.058	9.76	9.92	25.23	44.91	73.00	28.09	QP
5	3.584	9.75	9.92	29.05	48.72	73.00	24.28	QP
6	11.745	9.75	9.98	20.27	40.00	73.00	33.00	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

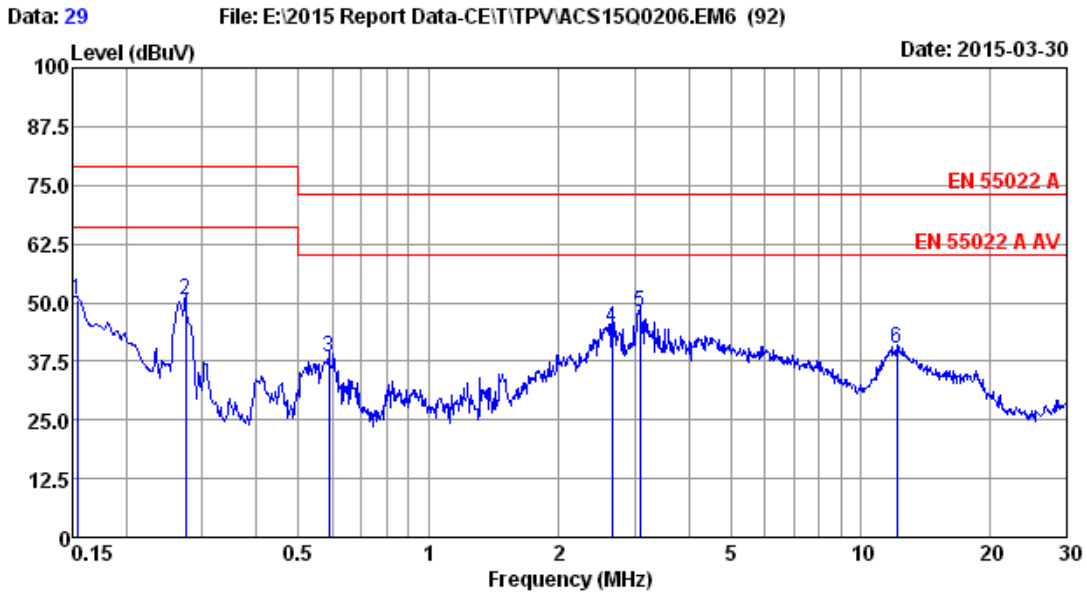


Site no :2# Conduction
Dis./Lisn :14 ENV4200 N
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.8m

Data No :26
LISN phase:NEUTRAL
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.92	9.90	30.65	50.47	79.00	28.53	QP
2	0.266	9.89	9.89	30.89	50.67	79.00	28.33	QP
3	2.567	9.75	9.91	25.59	45.25	73.00	27.75	QP
4	3.025	9.75	9.92	28.71	48.38	73.00	24.62	QP
5	3.584	9.75	9.92	26.97	46.64	73.00	26.36	QP
6	11.807	9.77	9.98	18.95	38.70	73.00	34.30	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

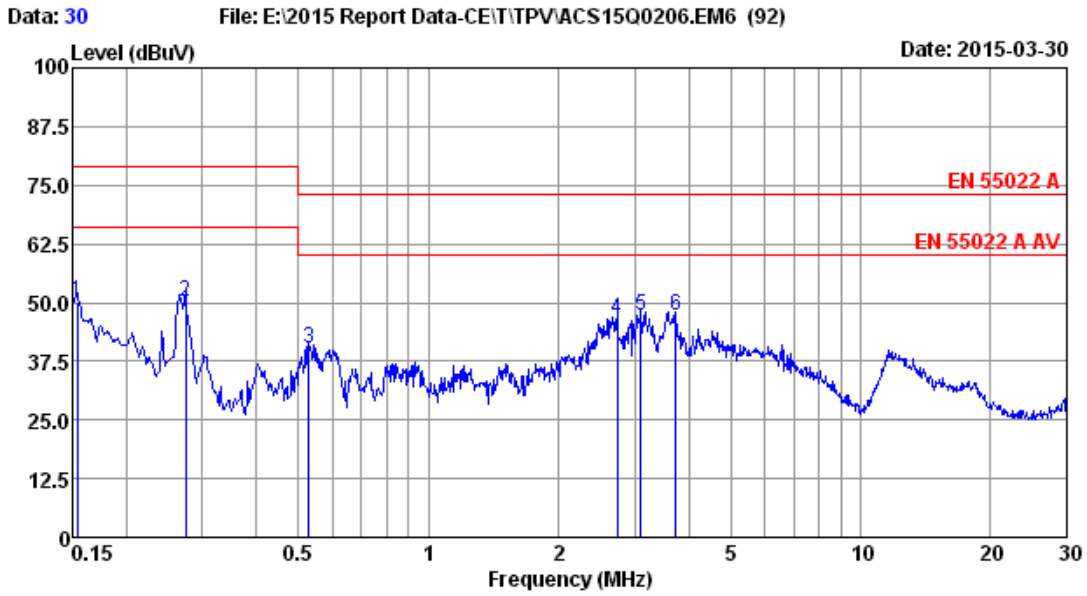


Site no :2# Conduction
Dis./Lisn :14 ENV4200 L1
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
VGA:1920*1080@60Hz
Line:1.8m

Data No :29
LISN phase:LINE
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.89	9.90	30.68	50.47	79.00	28.53	QP
2	0.274	9.89	9.89	30.72	50.50	79.00	28.50	QP
3	0.589	9.78	9.89	18.82	38.49	73.00	34.51	QP
4	2.664	9.77	9.91	25.04	44.72	73.00	28.28	QP
5	3.090	9.76	9.92	28.22	47.90	73.00	25.10	QP
6	12.124	9.75	9.98	20.38	40.11	73.00	32.89	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

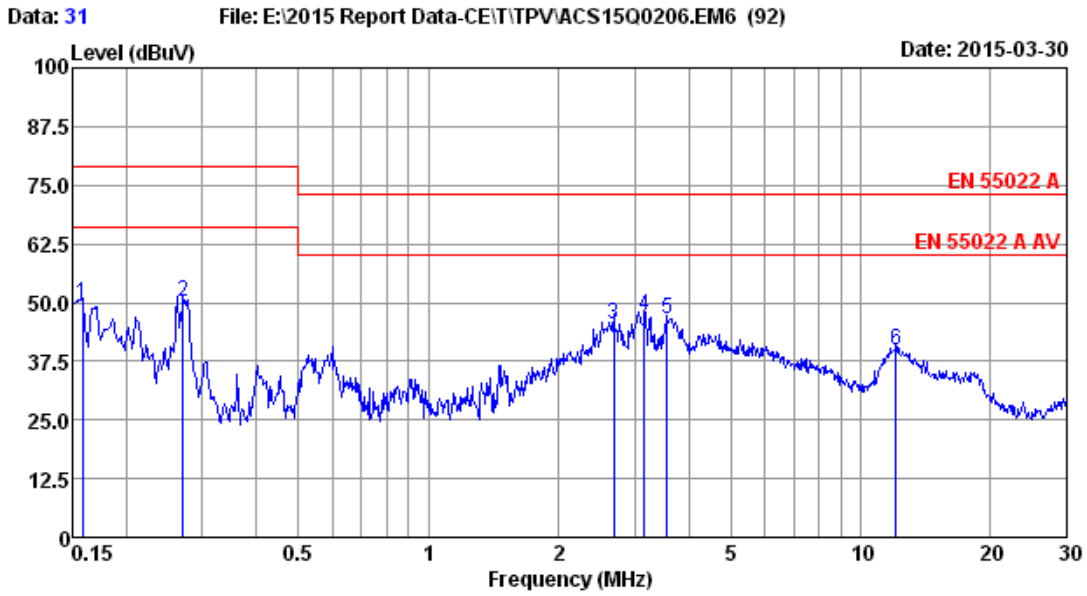


Site no :2# Conduction
Dis./Lisn :14 ENV4200 N
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
VGA:1920*1080@60Hz
Line:1.8m

Data No :30
LISN phase:NEUTRAL
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.92	9.90	30.36	50.18	79.00	28.82	QP
2	0.274	9.89	9.89	30.48	50.26	79.00	28.74	QP
3	0.529	9.88	9.89	20.56	40.33	73.00	32.67	QP
4	2.736	9.75	9.92	26.76	46.43	73.00	26.57	QP
5	3.107	9.75	9.92	27.59	47.26	73.00	25.74	QP
6	3.740	9.75	9.92	27.46	47.13	73.00	25.87	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

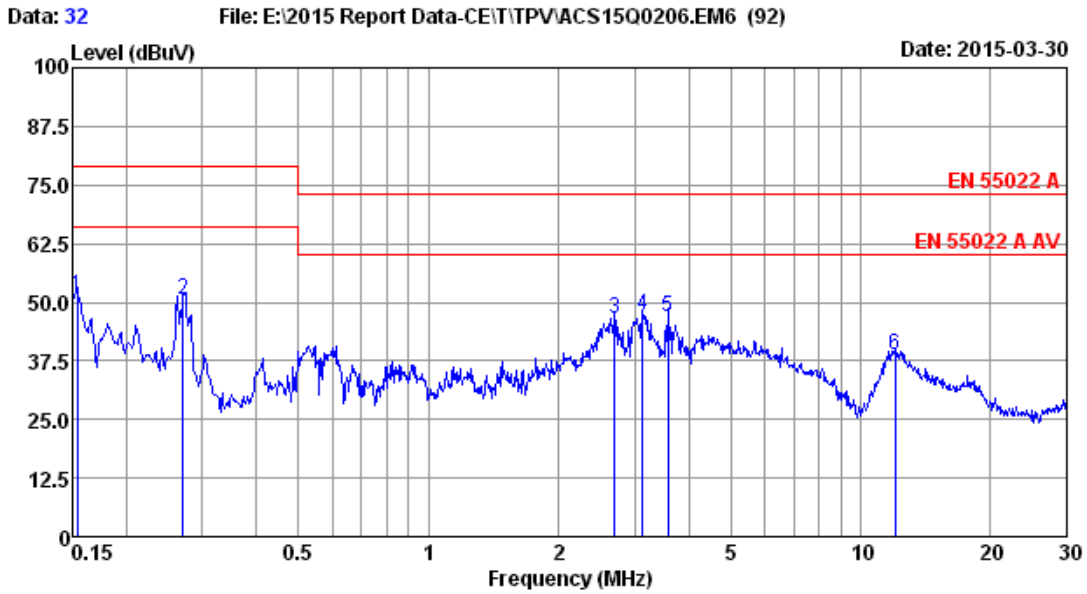


Site no :2# Conduction
Dis./Lisn :14 ENV4200 L1
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
HDMI:1920*1080@60Hz
Line:1.8m

Data No :31
LISN phase:LINE
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.158	9.89	9.90	30.06	49.85	79.00	29.15	QP
2	0.270	9.90	9.89	30.33	50.12	79.00	28.88	QP
3	2.678	9.77	9.91	25.76	45.44	73.00	27.56	QP
4	3.156	9.76	9.92	27.62	47.30	73.00	25.70	QP
5	3.565	9.75	9.92	26.71	46.38	73.00	26.62	QP
6	12.060	9.75	9.98	20.22	39.95	73.00	33.05	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

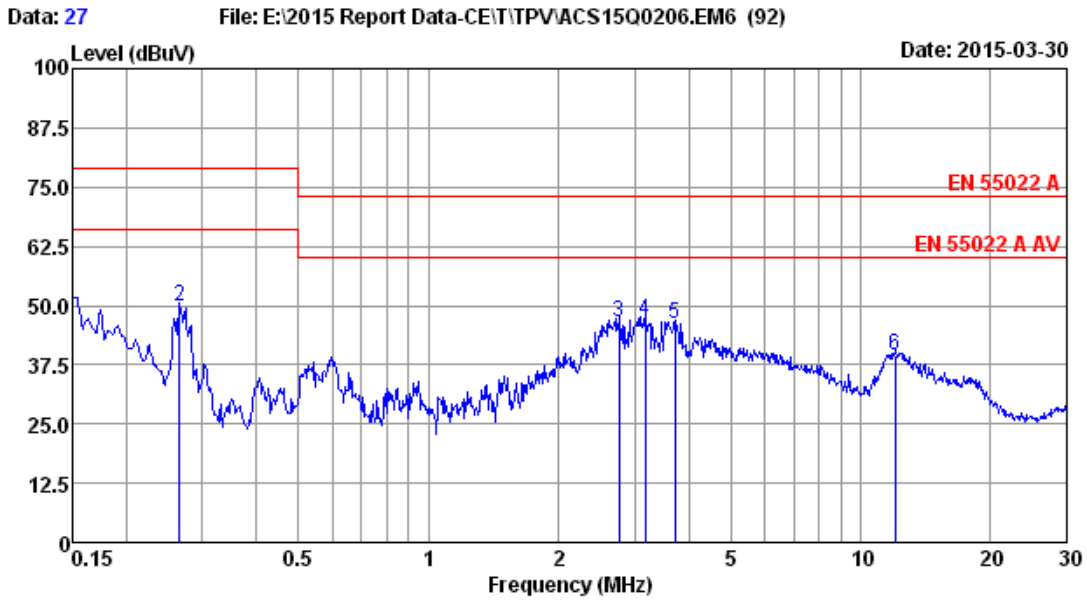


Site no :2# Conduction
Dis./Lisn :14 ENV4200 N
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
HDMI:1920*1080@60Hz
Line:1.8m

Data No :32
LISN phase:NEUTRAL
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.92	9.90	31.33	51.15	79.00	27.85	QP
2	0.270	9.89	9.89	30.95	50.73	79.00	28.27	QP
3	2.692	9.75	9.91	26.80	46.46	73.00	26.54	QP
4	3.123	9.75	9.92	27.68	47.35	73.00	25.65	QP
5	3.584	9.75	9.92	27.14	46.81	73.00	26.19	QP
6	11.996	9.77	9.98	18.95	38.70	73.00	34.30	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

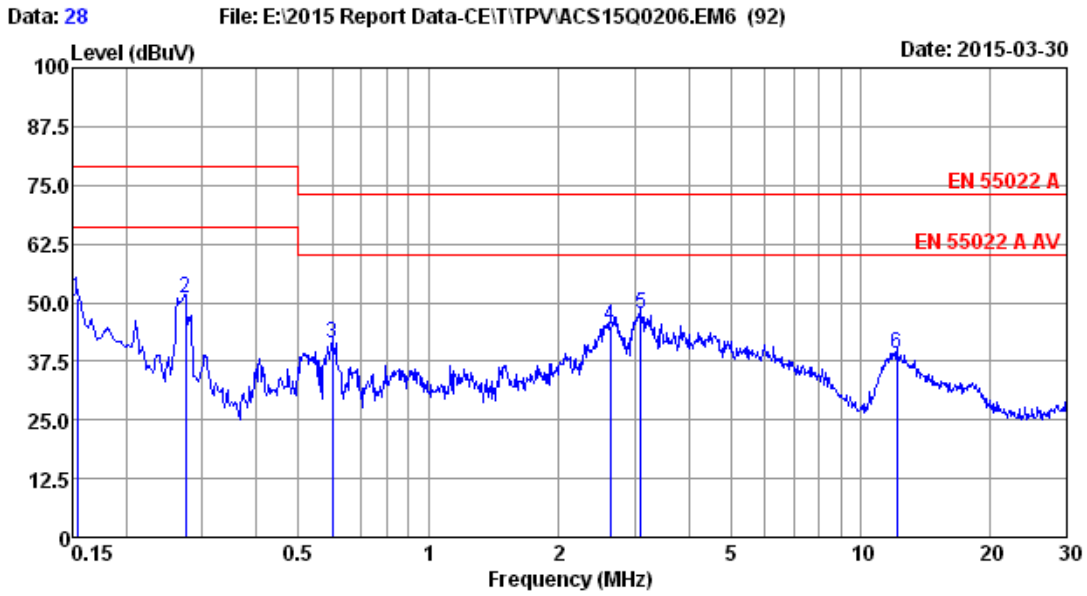


Site no :2# Conduction
Dis./Lisn :14 ENV4200 L1
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.5m

Data No :27
LISN phase:LINE
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	9.88	9.90	30.89	50.67	79.00	28.33	QP
2	0.266	9.90	9.89	29.87	49.66	79.00	29.34	QP
3	2.765	9.77	9.92	26.74	46.43	73.00	26.57	QP
4	3.173	9.76	9.92	27.17	46.85	73.00	26.15	QP
5	3.720	9.75	9.92	26.32	45.99	73.00	27.01	QP
6	11.996	9.75	9.98	19.77	39.50	73.00	33.50	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.



Site no :2# Conduction
Dis./Lisn :14 ENV4200 N
Limit :EN 55022 A
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.5m

Data No :28
LISN phase:NEUTRAL
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.92	9.90	31.12	50.94	79.00	28.06	QP
2	0.274	9.89	9.89	31.01	50.79	79.00	28.21	QP
3	0.598	9.87	9.89	21.65	41.41	73.00	31.59	QP
4	2.636	9.75	9.91	25.51	45.17	73.00	27.83	QP
5	3.107	9.75	9.92	27.88	47.55	73.00	25.45	QP
6	12.124	9.77	9.98	19.38	39.13	73.00	33.87	QP

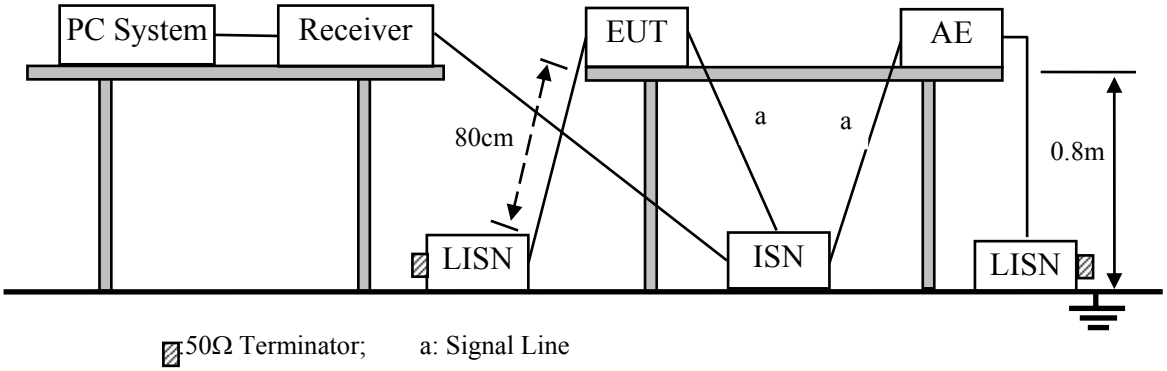
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

4. CONDUCTED DISTURBANCE AT TELECOMMUNICATION PORTS MEASUREMENT

4.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	2# Shielding Room	AUDIX	N/A	N/A	Apr.17,14	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCI	100843	Oct.29,14	1 Year
3.	L.I.S.N. #1	Rohde & Schwarz	ENV4200	100041	Apr.28,14	1 Year
4.	L.I.S.N. #2	Kyoritsu	KNW-407	8-1628-5	Apr.28,14	1 Year
5.	Terminator	Hubersuhner	50Ω	No.1	Apr.28,14	1 Year
6.	Terminator	Hubersuhner	50Ω	No.2	Apr.28,14	1 Year
7.	RF Cable	Fujikura	3D-2W	No.2	Apr.28,14	1Year
8.	Current Probe	Rohde & Schwarz	EZ-17	833335/009	Oct.26,14	1 Year
9.	Single Balanced Telecom Pair ISN	FCC	FCC-TLISN-T2-02	20534	Oct.29,14	1 Year
10.	Two Balanced Telecom Pairs ISN	FCC	FCC-TLISN-T4-02	20535	Oct.29,14	1Year
11.	Four Balanced Telecom Pairs ISN	FCC	FCC-TLISN-T8-02	20412	Apr.28,14	1Year
12.	Coaxial Switch	Anritsu	MP59B	6201397223	May.16,14	1 Year
13.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	Apr.28,14	1Year
14.	I.S.N.	TESEQ	ISN T800	30858	Oct.29,14	1 Year
15.	Test Software	AUDIX	E3	6.100913a	N/A	N/A

4.2. Block Diagram of Test Setup



4.3. Test Standard

EN 55022: 2010+AC: 2011

4.4. Conducted Emission at Telecommunication Ports Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	97~87	84~74
500kHz ~ 30MHz	87	74

Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

4.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5

4.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 4.2.

4.7. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to EN 55022: 2010+AC: 2011 on Conducted Disturbance test.
And connected to the telecommunication ports through ISN. Both sides of telecommunication line are investigated to find out the maximum conducted emission according to EN 55022: 2010+AC: 2011 regulations during conducted disturbance test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 4.8.

4.8. Conducted Emission at Telecommunication Ports Test Results

PASS.

The EUT with the following test modes were tested and to read Q.P values, all the test results are listed in next pages.

EUT: 31.5"(80cm)LCD Monitor Model Number: BDL3230QL

Test Date: Mar. 30, 2015 Temperature: 22.9℃

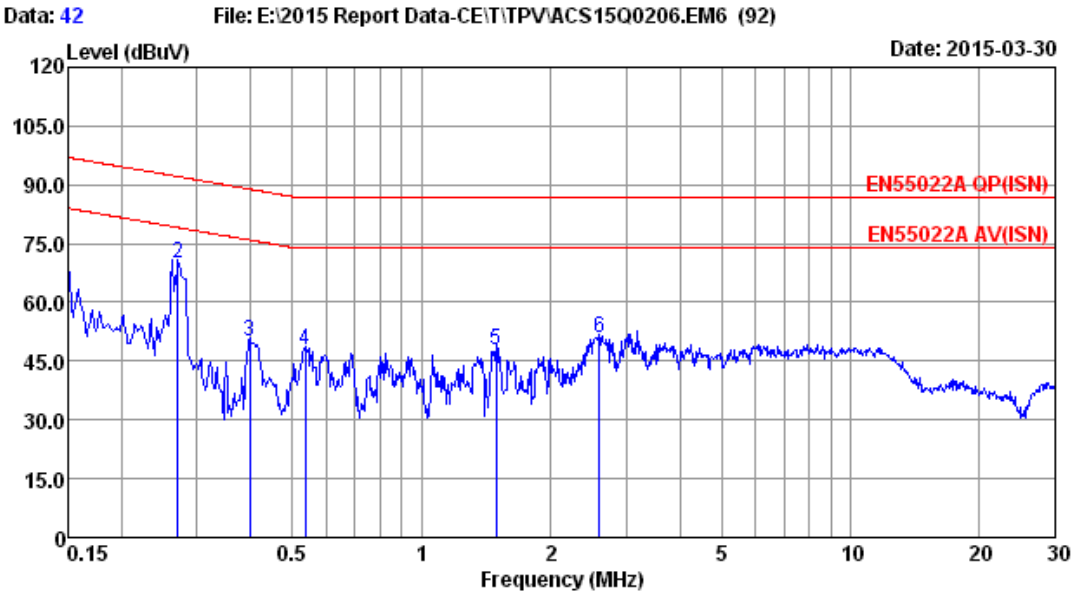
Humidity: 53.3% Pressure: 101.4kPa

The details of test modes are as follows：

No.	Test Mode	Reference Test Data No.
1.	LAN:10Mbps	# 42
2. ※	**LAN:100Mbps**	**# 41**

(※ Worst test mode)

No.6 Ke Feng Road,Block 52,
ShenZhen Science & Industry Park
Nantou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057



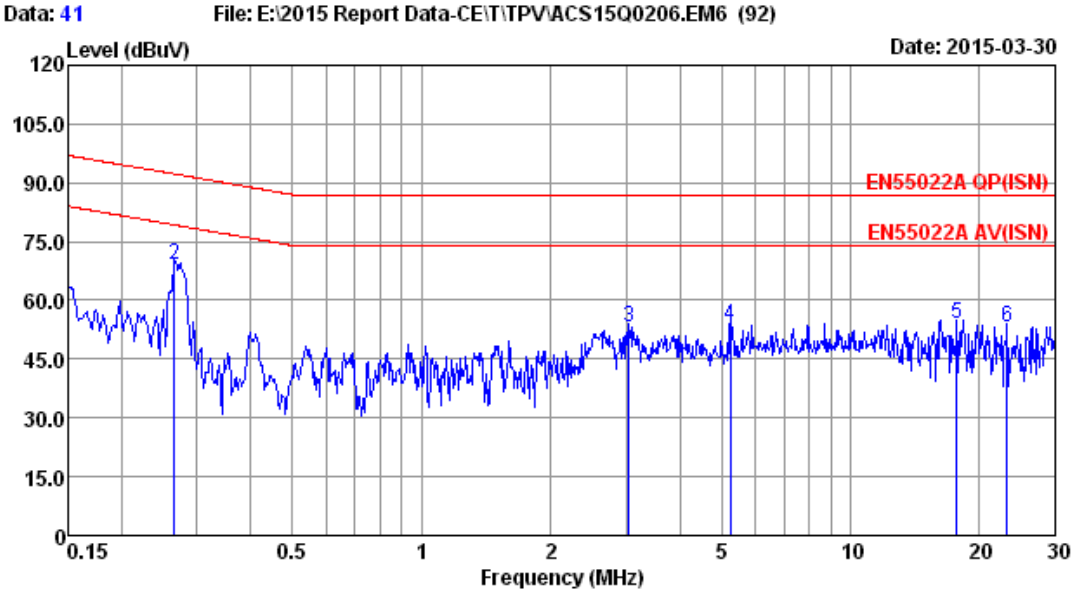
Site no :2# Conduction
Dis./Lisn :2014 ISN T800 CATE5
Limit :EN55022A QP(ISN)
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :ISN:10Mbps

Data No :42
LISN phase:
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	ISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	10.10	9.90	47.29	67.29	97.00	29.71	QP
2	0.270	9.81	9.89	50.16	69.86	92.12	22.26	QP
3	0.398	9.69	9.89	30.38	49.96	88.90	38.94	QP
4	0.535	9.62	9.89	28.37	47.88	87.00	39.12	QP
5	1.495	9.45	9.90	28.37	47.72	87.00	39.28	QP
6	2.594	9.38	9.91	31.73	51.02	87.00	35.98	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

No.6 Ke Feng Road,Block 52,
ShenZhen Science & Industry Park
Nantou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057



Site no :2# Conduction
Dis./Lisn :2014 ISN T800 CATE5
Limit :EN55022A QP(ISN)
Env./Ins. :22.9*C/53.3%
EUT :BDL3230QL
Power Rating :AC 230V/50Hz
Test Mode :ISN:100Mbps

Data No :41
LISN phase:
Pre :101.4kPa
Engineer :Nick_Huang

No	Freq (MHz)	ISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	10.10	9.90	42.66	62.66	97.00	34.34	QP
2	0.266	9.82	9.89	49.29	69.00	92.25	23.25	QP
3	3.041	9.37	9.92	33.75	53.04	87.00	33.96	QP
4	5.249	9.32	9.93	34.47	53.72	87.00	33.28	QP
5	17.661	9.35	10.02	34.74	54.11	87.00	32.89	QP
6	23.140	9.46	10.05	33.73	53.24	87.00	33.76	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

5. RADIATED EMISSION MEASUREMENT

5.1. Test Equipments

The following test equipments are used during the radiated emission measurement:

5.1.1. For frequency range 30MHz~1000MHz (At Anechoic Chamber)

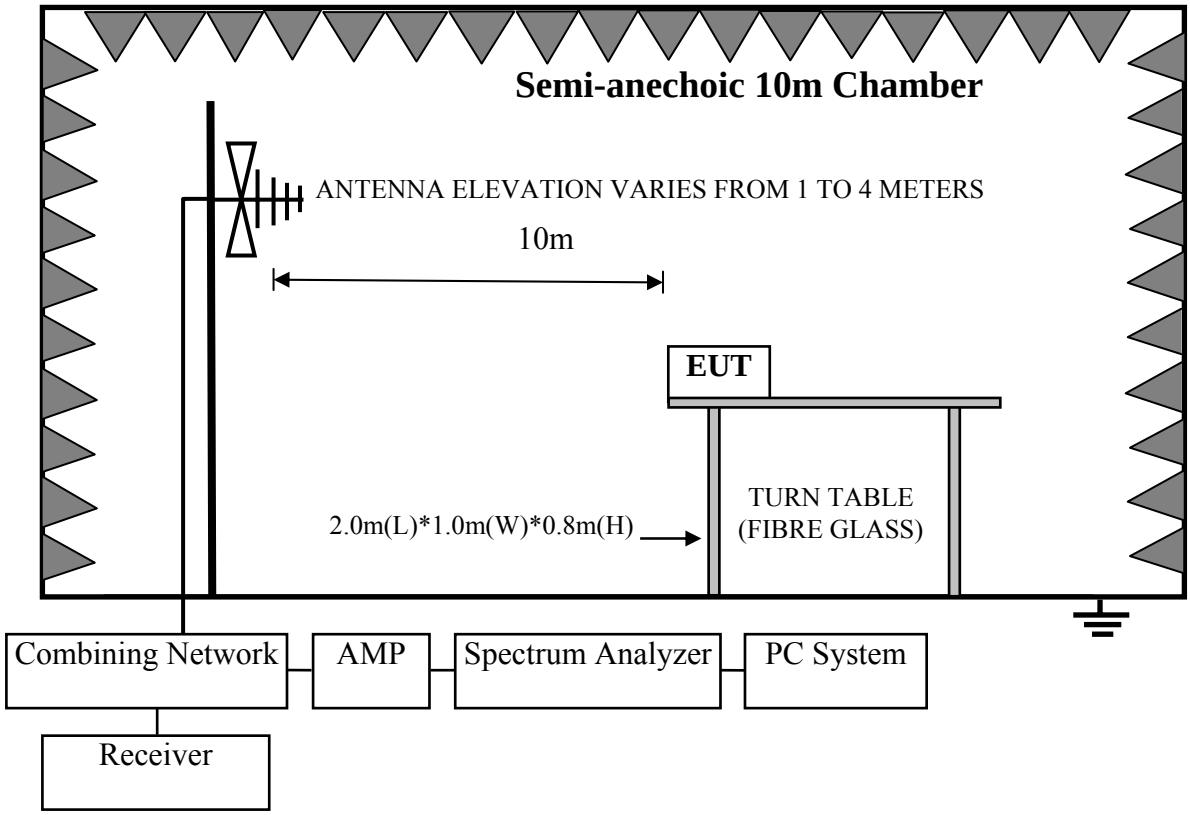
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	10m Chamber	AUDIX	N/A	N/A	Nov.25,14	1 Year
2.	EMC Analyzer	Agilent	E7405A	MY42000131	Nov.05,14	1 Year
3.	EMC Analyzer	Agilent	E7405A	MY45116588	Oct.26,14	1 Year
4.	Test Receiver	Rohde & Schwarz	ESCI	100842	Apr.28,14	1 Year
5.	Amplifier	Agilent	8447D	2944A10684	Apr.28,14	1Year
6.	Amplifier	Agilent	8447D	2944A11140	Apr.28,14	1 Year
7.	Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-493	Apr.08,14	1 Year
8.	Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-429	Dec.17,14	1 Year
9.	RF Cable	MIYAZAKI	CFD400-NL	10m Chamber No.1	Apr.28,14	1 Year
10.	RF Cable	MIYAZAKI	CFD400-NL	10m Chamber No.2	Apr.28,14	1 Year
11.	Coaxial Switch	Anritsu	MP59B	6201397220	May.16,14	1 Year
12.	Coaxial Switch	Anritsu	MP59B	6201397221	May.16,14	1 Year
13.	Coaxial Switch	Anritsu	MP59B	6201397222	May.16,14	1 Year
14.	Test Software	AUDIX	E3	6.100913a	N/A	N/A

5.1.2. For frequency range 1GHz~6GHz (At Anechoic Chamber)

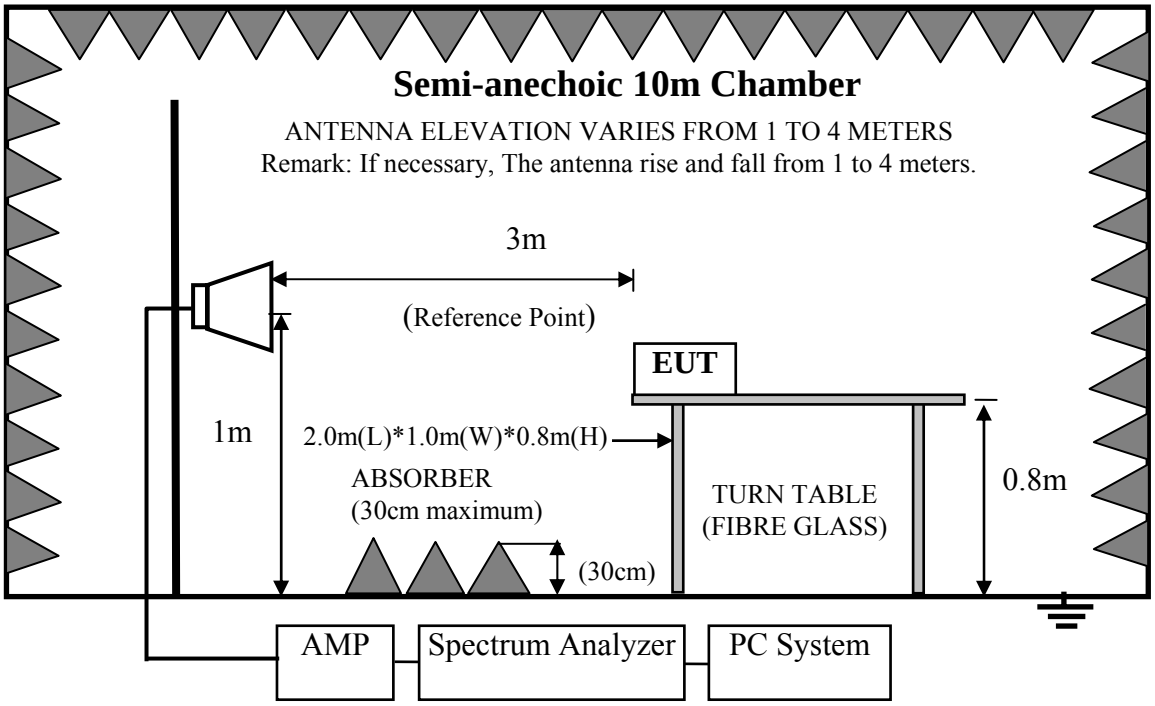
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMC Analyzer	Agilent	N9030A	MY51380221	Oct.29,14	1 Year
2.	Horn Antenna	ETS	3115	9607-4877	Sep.20,14	1 Year
3.	Amplifier	Agilent	8449B	3008A00863	Apr.28,14	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	Apr.28,14	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX106	28616/2	Apr.28,14	1 Year
6.	10m Chamber	AUDIX	N/A	N/A	Mar.31,14	1 Year
7.	Test Software	AUDIX	E3	6.2009-5-21a(n)	N/A	N/A

5.2.Block Diagram of Test Setup

5.2.1. In 10m Anechoic Chamber Test Setup Diagram for 30-1000MHz



5.2.2. In Anechoic (10m) Chamber Test Setup Diagram for 1-6GHz



5.3.Test Standard

EN 55022: 2010+AC: 2011 (Class A)

5.4.Radiated Emission Limit

All emanations from a devices or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 230	10	40
230 ~ 1000	10	47
1000~3000	3	76(Peak) 56(Average)
3000~6000	3	80(Peak) 60(Average)

Note: (1) Emission level = Antenna Factor + Cable Loss + Reading
Emission level = Antenna Factor -Amp Factor +Cable Loss + Reading (above 1000MHz)
(2) The lower limit shall apply at the transition frequencies.
(3) Distance refers to the distance in meters between the test antenna and the closed point of any part of the EUT.

5.5.EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

5.6.Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 5.2.

5.7.Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m & 10m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all the interface cables were changed according to EN 55022 Class A on Radiated Disturbance test.

The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCI) is 120 kHz.

The resolution bandwidth of the EMC Analyzer N9030A was set at 1MHz. (For above 1GHz)

The frequency range from 30MHz to 1000MHz was pre-scanned with a peak detector and all final readings of measurement from Test Receiver are Quasi-Peak values.

The frequency range from 1GHz to 6GHz was checked and all final readings of measurement were with Peak and Average detector, measurement distance was 3m at semi-anechoic chamber. The portion of the test volume that was obstructed by absorber placed on the floor (30cm maximum).

Finally, selected operating situations at Anechoic Chamber measurement, all the test results are listed in section 5.8.

5.8.Radiated Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

EUT: 31.5"(80cm)LCD Monitor Model No. : BDL3230QL

For frequency range 30MHz~1000MHz

The EUT with the following test modes were tested and selected (No. 3 ~6) to read Q.P values, all the test results listed in next pages.

Test Date: Mar. 31, 2015 Temperature: 22.5℃

Humidity: 49.4% Pressure: 101.7kPa

The details of test modes are as follows：

No.	Cable	Input Port	Resolution & Frequency	Reference Test Data No.	
				Horizontal	Vertical
1.	1.8m	VGA	640*480/60Hz	# 2	# 1
2.			1280*1024/75Hz	# 4	# 3
3. ※			**1920*1080/60Hz**	**# 6**	**# 5**
4.		DVI	1920*1080/60Hz	# 12	# 11
5.		HDMI	1920*1080/60Hz	# 10	# 9
6.	1.5m	VGA	1920*1080/60Hz	# 8	# 7

(※ Worst test mode)

For frequency range 1GHz~6GHz

The EUT with below test (No.1~4) were measured within Anechoic Chamber and the test results listed in next pages

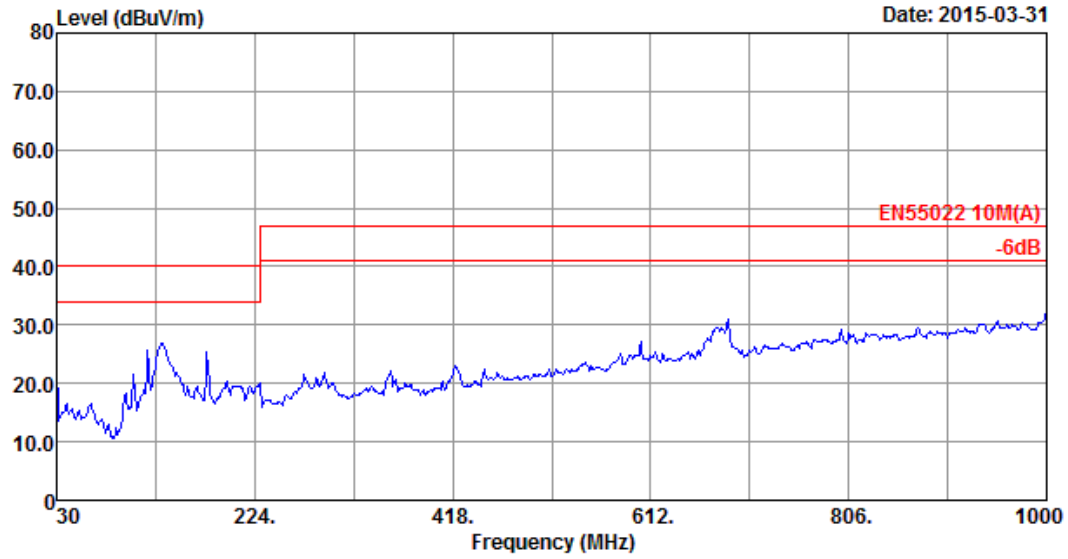
Test Date: Mar. 31, 2015 Temperature: 21.8℃

Humidity: 49.7% Pressure: 101.7kPa

No.	Cable	Input Port	Resolution & Frequency	Reference Test Data No.	
				Horizontal	Vertical
1.	1.8m	VGA	1280*1024/75Hz	# 2	# 1
2. ※			**1920*1080/60Hz**	**# 4**	**# 3**
3.		DVI	1920*1080/60Hz	# 6	# 5
4.		HDMI	1920*1080/60Hz	# 8	# 7

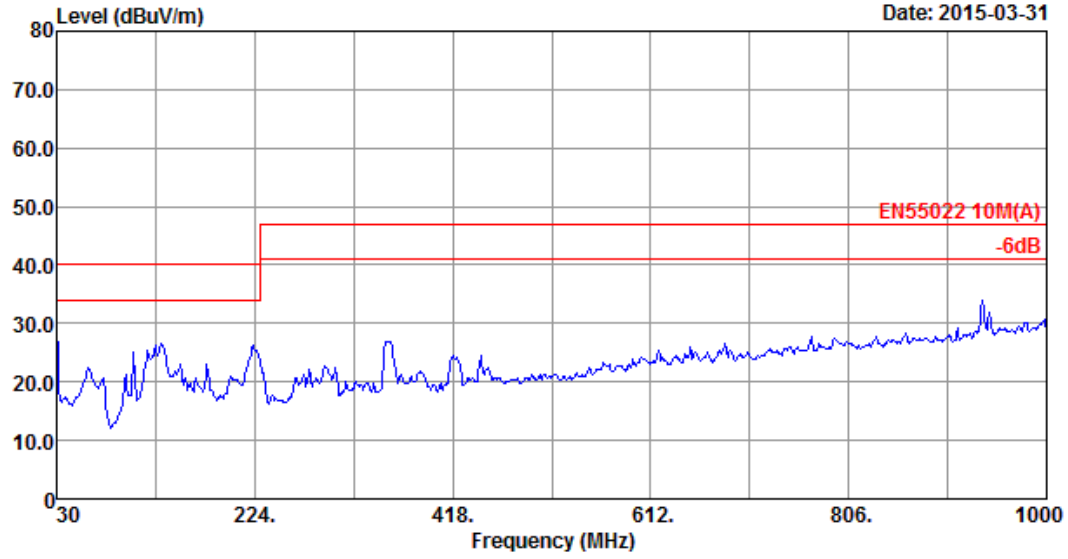
(※ Worst test mode)

Data: 2 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-L.EM6 (96)



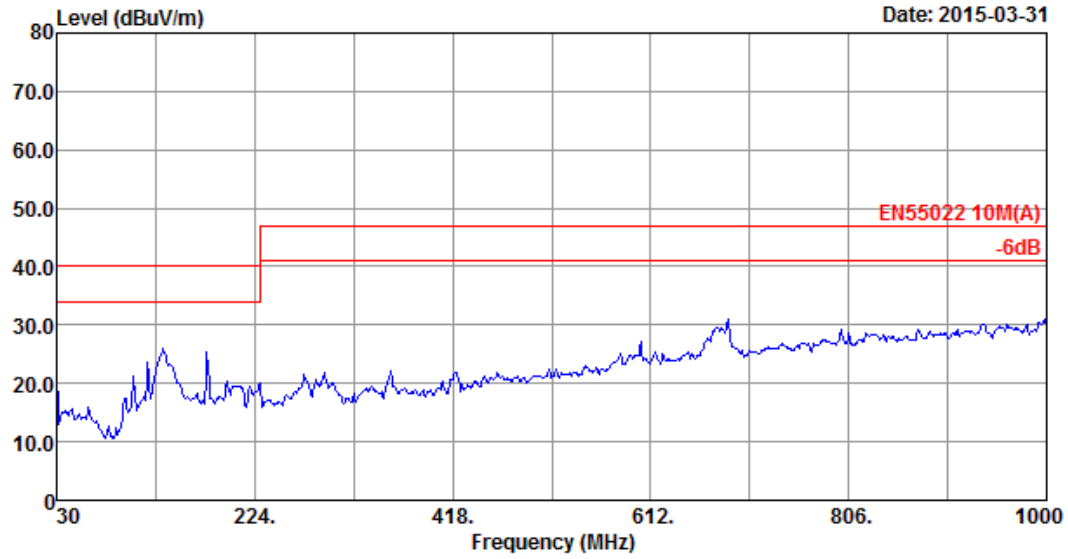

```
Site no.      : 10m Chamber                 Data No.   : 2
Dis. / Ant.   : 10m  2014 9168-429          Ant. pol.  : HORIZONTAL
Limit         : EN55022 10M(A)              Pre        : 101.7kPa
Env. / Ins.   : 22.5*C/49.4%                Engineer   : ELLIS
EUT           : BDL3230QL
Power Rating  : AC 230V/50Hz
Test Mode     : Running "H" Pattern And 1KHz Playing
                VGA:640*480@60Hz
                Line:1.8m
```

Data: 1 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-L.EM6 (96)



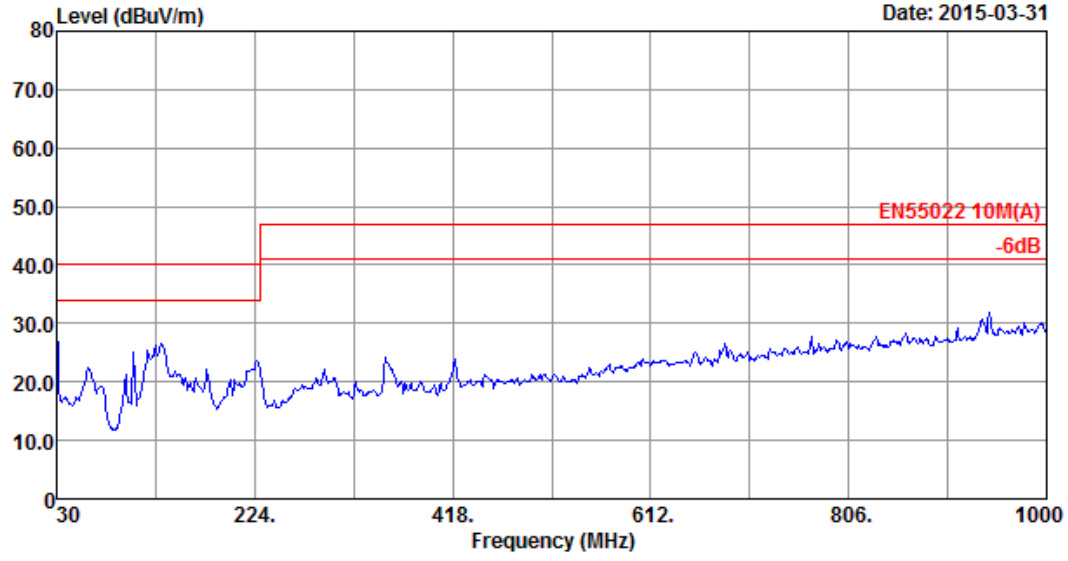

```
Site no.      : 10m Chamber                 Data No.   : 1
Dis. / Ant.   : 10m  2014 9168-493          Ant. pol.  : VERTICAL
Limit         : EN55022 10M(A)              Pre        : 101.7kPa
Env. / Ins.   : 22.5*C/49.4%                Engineer   : ELLIS
EUT           : BDL3230QL
Power Rating  : AC 230V/50Hz
Test Mode     : Running "H" Pattern And 1KHz Playing
                VGA:640*480@60Hz
                Line:1.8m
```

Data: 4 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-L.EM6 (96)

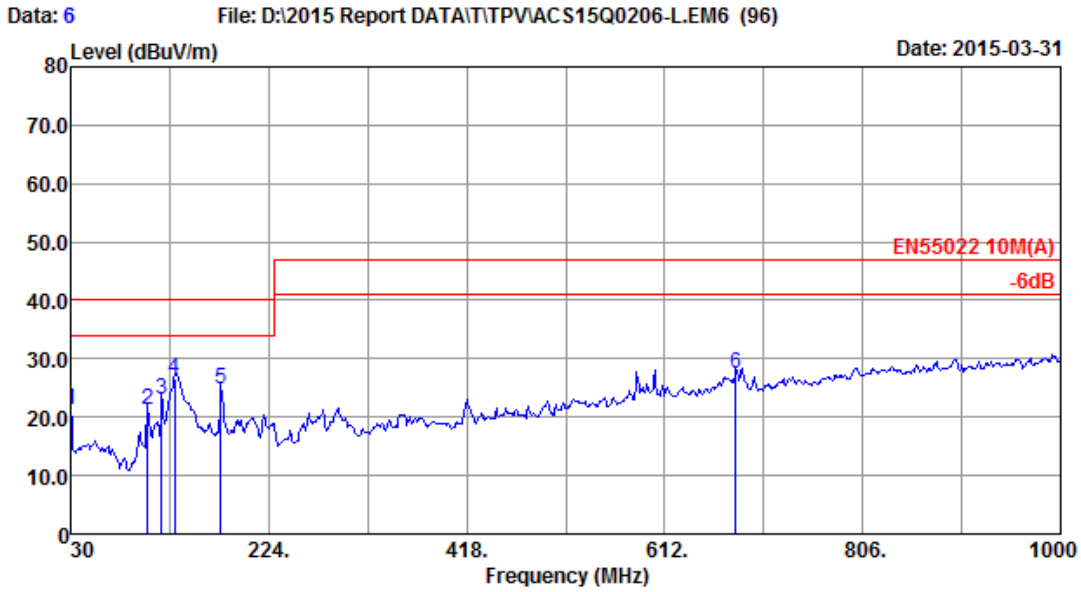



```
Site no.      : 10m Chamber                 Data No.   : 4
Dis. / Ant.   : 10m  2014 9168-429          Ant. pol.  : HORIZONTAL
Limit         : EN55022 10M(A)              Pre        : 101.7kPa
Env. / Ins.   : 22.5*C/49.4%                Engineer   : ELLIS
EUT           : BDL3230QL
Power Rating  : AC 230V/50Hz
Test Mode     : Running "H" Pattern And 1KHz Playing
                VGA:1280*1024@75Hz
                Line:1.8m
```

Data: 3 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-L.EM6 (96)




```
Site no.      : 10m Chamber                 Data No.   : 3
Dis. / Ant.   : 10m  2014 9168-493          Ant. pol.  : VERTICAL
Limit         : EN55022 10M(A)              Pre        : 101.7kPa
Env. / Ins.   : 22.5*C/49.4%                Engineer   : ELLIS
EUT           : BDL3230QL
Power Rating  : AC 230V/50Hz
Test Mode     : Running "H" Pattern And 1KHz Playing
                VGA:1280*1024@75Hz
                Line:1.8m
```



Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-429
Limit : EN55022 10M(A)
Env. / Ins. : 22.5*C/49.4%
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
VGA:1920*1080@60Hz
Line:1.8m

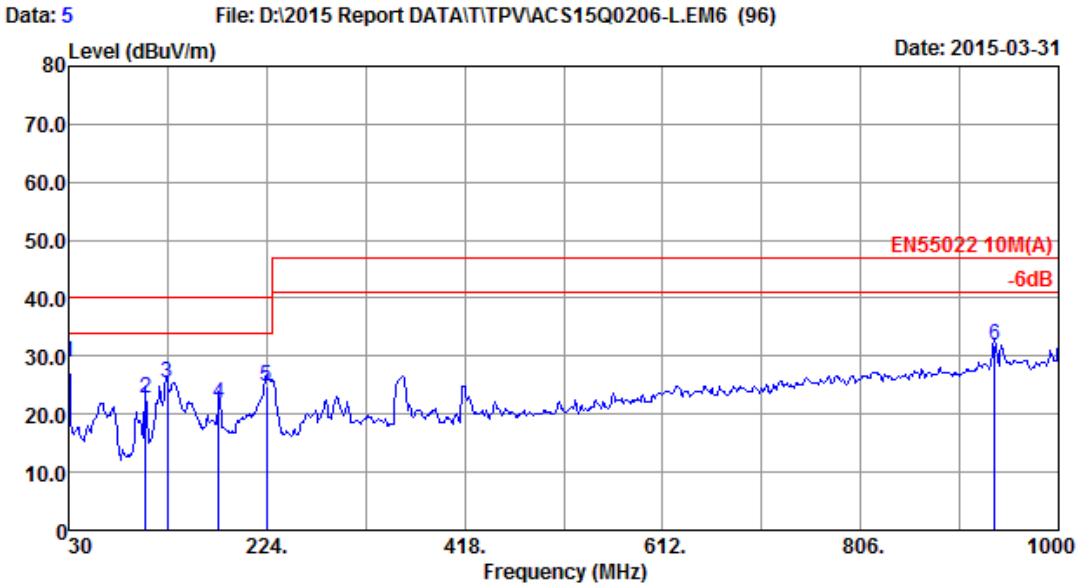
Data No. : 6
Ant. pol. : HORIZONTAL
Pre : 101.7kPa
Engineer : ELLIS

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	30.000	12.50	0.68	8.15	21.33	40.00	18.67	QP
2	105.660	9.77	1.11	10.23	21.11	40.00	18.89	QP
3	119.240	11.03	1.19	10.92	23.14	40.00	16.86	QP
4	131.850	12.20	1.25	13.01	26.46	40.00	13.54	QP
5	177.440	12.50	1.44	10.73	24.67	40.00	15.33	QP
6	681.840	20.60	3.21	3.72	27.53	47.00	19.47	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3. The worst emission was detected at 131.850 MHz with corrected signal level of 26.46 dBμV/m (Limit is 40.00 dBμV/m) when the antenna was at horizontal polarization and at 3.3m high and the turntable was at 214°.

4. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-493
Limit : EN55022 10M(A)
Env. / Ins. : 22.5*C/49.4%
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
VGA:1920*1080@60Hz
Line:1.8m

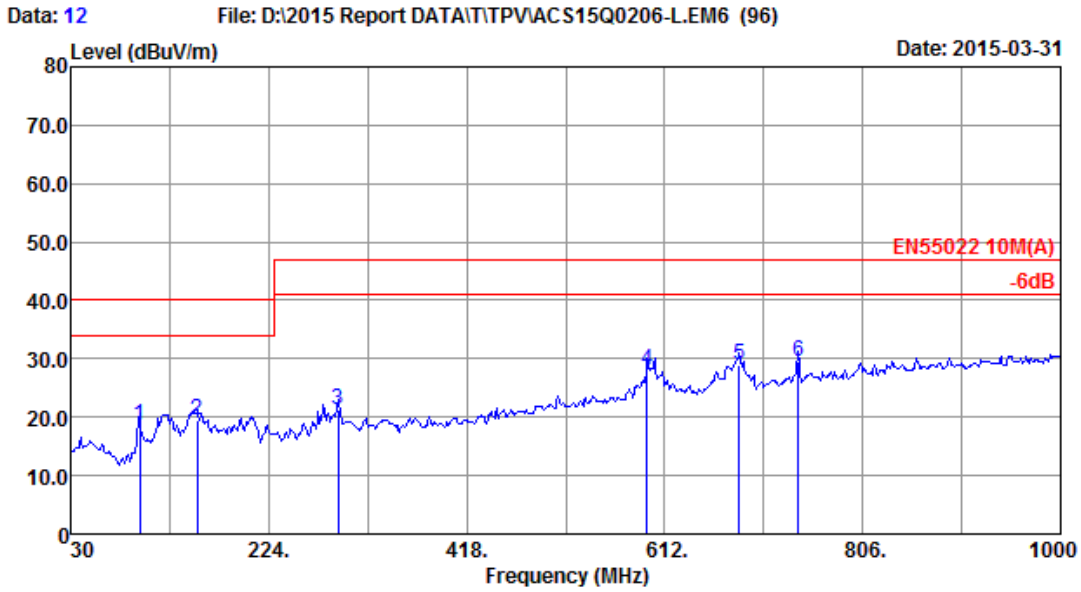
Data No. : 5
Ant. pol. : VERTICAL
Pre : 101.7kPa
Engineer : ELLIS

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	30.000	12.10	0.83	15.91	28.84	40.00	11.16	QP
2	105.660	9.73	1.37	11.71	22.81	40.00	17.19	QP
3	127.000	11.50	1.47	12.53	25.50	40.00	14.50	QP
4	177.440	12.06	1.64	8.27	21.97	40.00	18.03	QP
5	224.000	9.70	1.77	13.30	24.77	40.00	15.23	QP
6	936.950	24.10	3.44	4.42	31.96	47.00	15.04	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3. The worst emission was detected at 30.000MHz with corrected signal level of 28.84 dBμV/m (Limit is 40.00 dBμV/m) when the antenna was at vertical polarization and at 1.3m high and the turntable was at 78°.

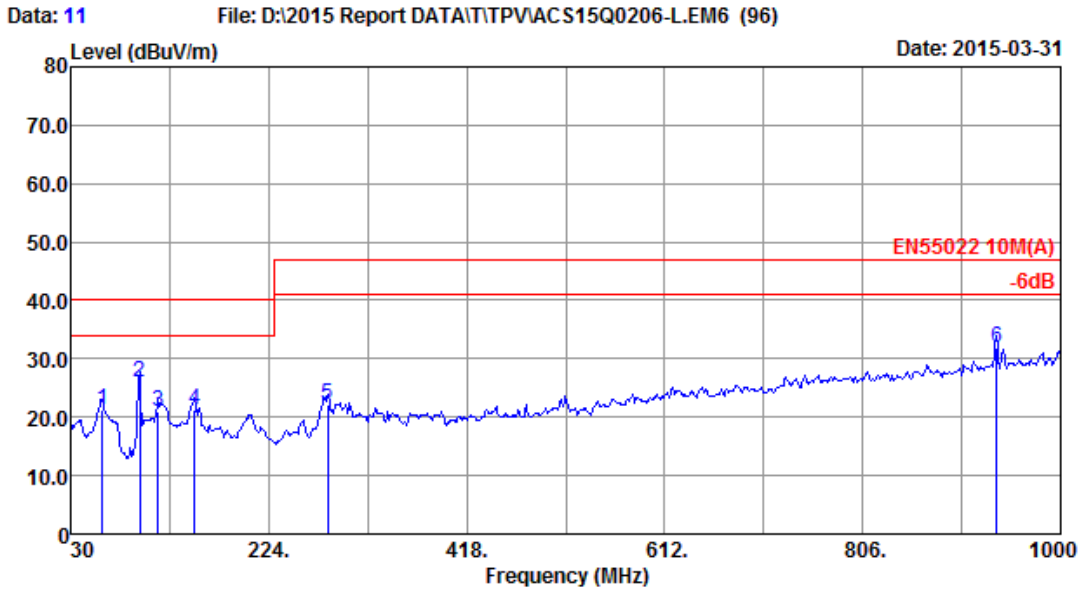
4. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



Site no. : 10m Chamber
Data No. : 12
Dis. / Ant. : 10m 2014 9168-429
Ant. pol. : HORIZONTAL
Limit : EN55022 10M(A)
Pre : 101.7kPa
Env. / Ins. : 22.5*C/49.4%
Engineer : ELLIS
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	97.900	8.96	1.07	8.62	18.65	40.00	21.35	QP
2	154.160	13.12	1.35	4.91	19.38	40.00	20.62	QP
3	291.900	13.24	1.75	6.13	21.12	47.00	25.88	QP
4	594.540	19.51	2.86	5.61	27.98	47.00	19.02	QP
5	684.750	20.63	3.22	5.12	28.97	47.00	18.03	QP
6	742.950	21.47	3.42	4.55	29.44	47.00	17.56	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

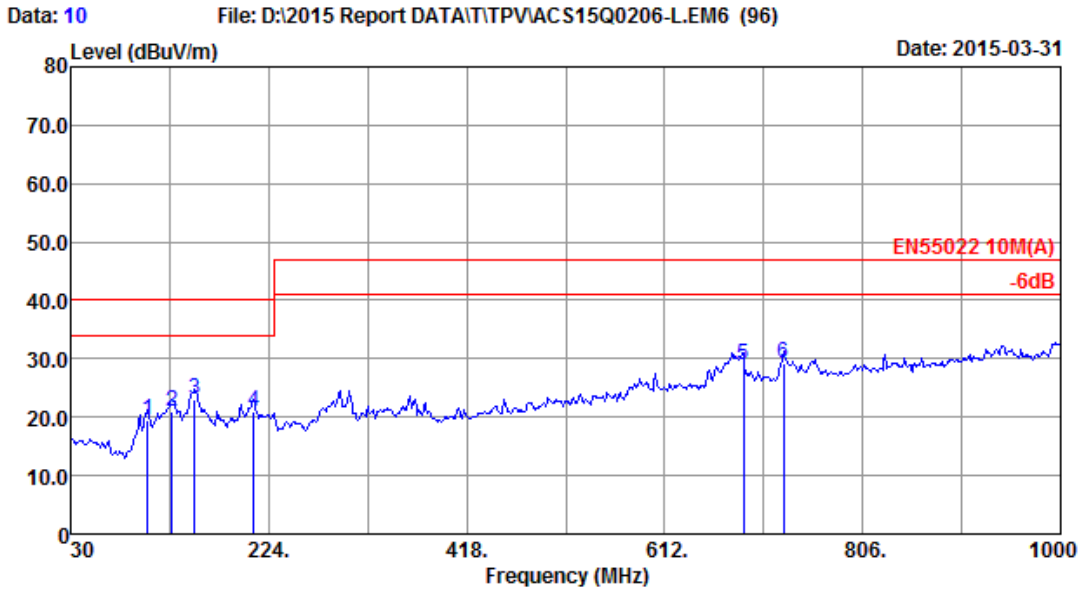


Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-493
Limit : EN55022 10M(A)
Env. / Ins. : 22.5*C/49.4%
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.8m

Data No. : 11
Ant. pol. : VERTICAL
Pre : 101.7kPa
Engineer : ELLIS

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	61.040	13.25	1.06	6.82	21.13	40.00	18.87	QP
2	97.900	8.59	1.33	15.96	25.88	40.00	14.12	QP
3	115.360	10.54	1.42	9.04	21.00	40.00	19.00	QP
4	151.250	13.57	1.56	6.19	21.32	40.00	18.68	QP
5	282.200	13.11	1.89	7.05	22.05	47.00	24.95	QP
6	936.950	24.10	3.44	4.30	31.84	47.00	15.16	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

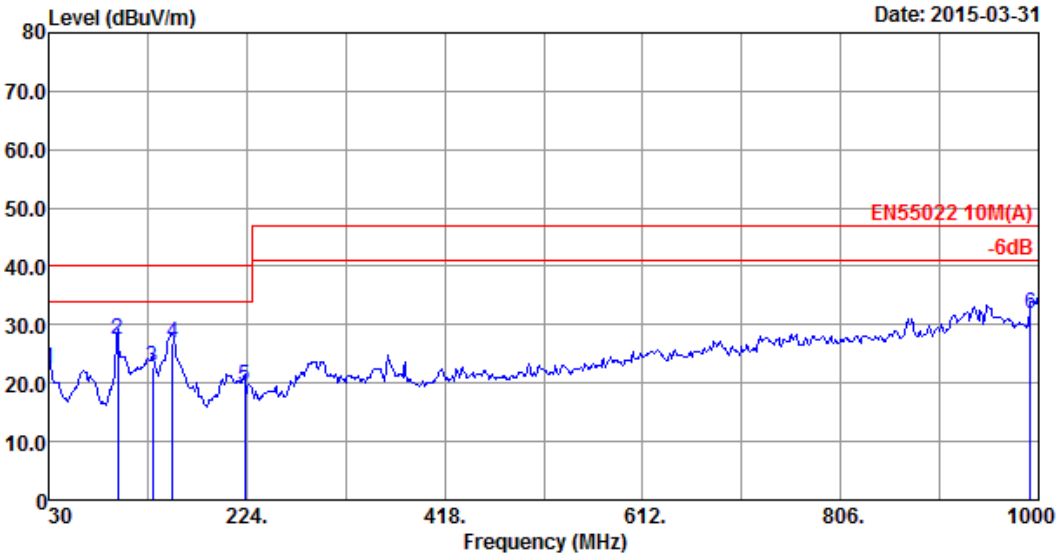


Site no. : 10m Chamber
Data No. : 10
Dis. / Ant. : 10m 2014 9168-429
Ant. pol. : HORIZONTAL
Limit : EN55022 10M(A)
Pre : 101.7kPa
Env. / Ins. : 22.5*C/49.4%
Engineer : ELLIS
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
HDMI:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	105.660	9.77	1.11	8.49	19.37	40.00	20.63	QP
2	128.940	11.94	1.24	7.76	20.94	40.00	19.06	QP
3	151.250	13.07	1.34	8.50	22.91	40.00	17.09	QP
4	209.450	9.95	1.54	9.59	21.08	40.00	18.92	QP
5	689.600	20.68	3.24	5.15	29.07	47.00	17.93	QP
6	728.400	21.25	3.37	4.64	29.26	47.00	17.74	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Data: 9 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-L.EM6 (96)



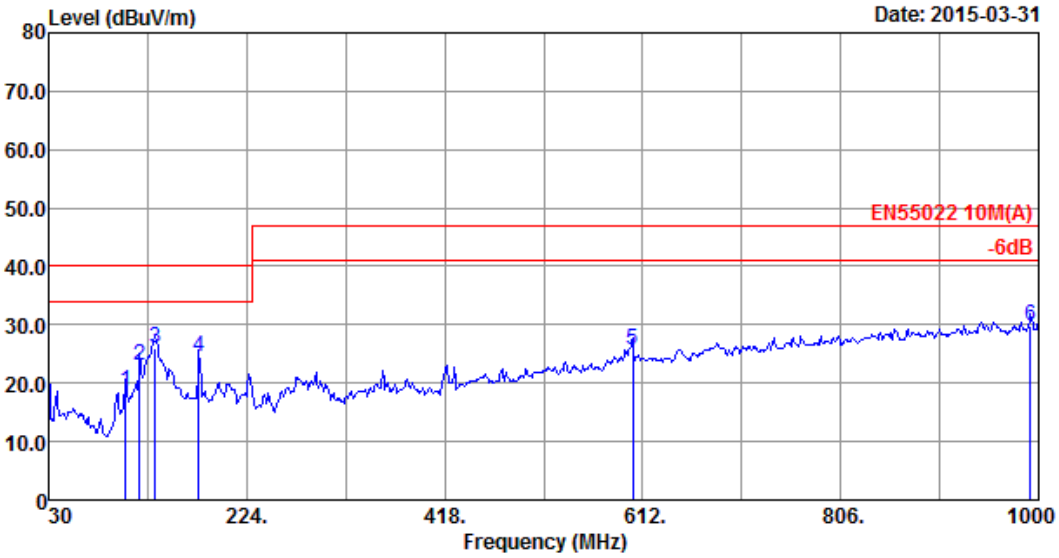
Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-493
Limit : EN55022 10M(A)
Env. / Ins. : 22.5*C/49.4%
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
HDMI:1920*1080@60Hz
Line:1.8m

Data No. : 9
Ant. pol. : VERTICAL
Pre : 101.7kPa
Engineer : ELLIS

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	30.000	12.10	0.83	9.47	22.40	40.00	17.60	QP
2	97.900	8.59	1.33	17.45	27.37	40.00	12.63	QP
3	131.850	12.17	1.49	9.13	22.79	40.00	17.21	QP
4	151.250	13.57	1.56	11.64	26.77	40.00	13.23	QP
5	222.060	9.70	1.76	8.13	19.59	40.00	20.41	QP
6	992.240	24.29	3.56	4.17	32.02	47.00	14.98	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Data: 8 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-L.EM6 (96)

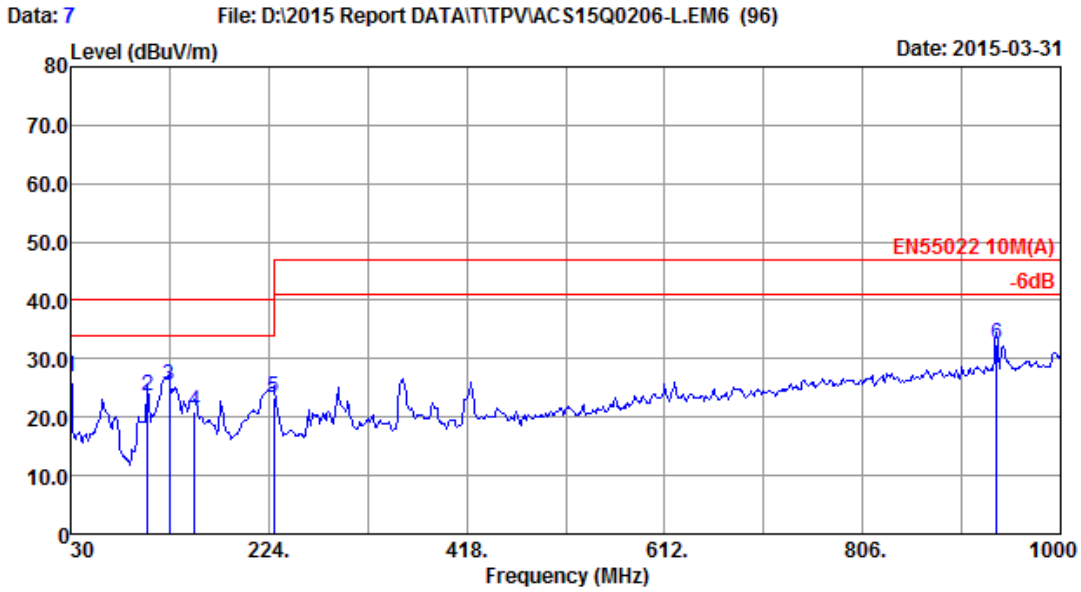


Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-429
Limit : EN55022 10M(A)
Env. / Ins. : 22.5*C/49.4%
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
VGA:1920*1080@60Hz
Line:1.5m

Data No. : 8
Ant. pol. : HORIZONTAL
Pre : 101.7kPa
Engineer : ELLIS

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	105.660	9.77	1.11	7.75	18.63	40.00	21.37	QP
2	119.240	11.03	1.19	10.88	23.10	40.00	16.90	QP
3	134.760	12.45	1.27	12.27	25.99	40.00	14.01	QP
4	177.440	12.50	1.44	10.63	24.57	40.00	15.43	QP
5	602.300	19.63	2.90	3.17	25.70	47.00	21.30	QP
6	992.240	24.03	4.20	1.68	29.91	47.00	17.09	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



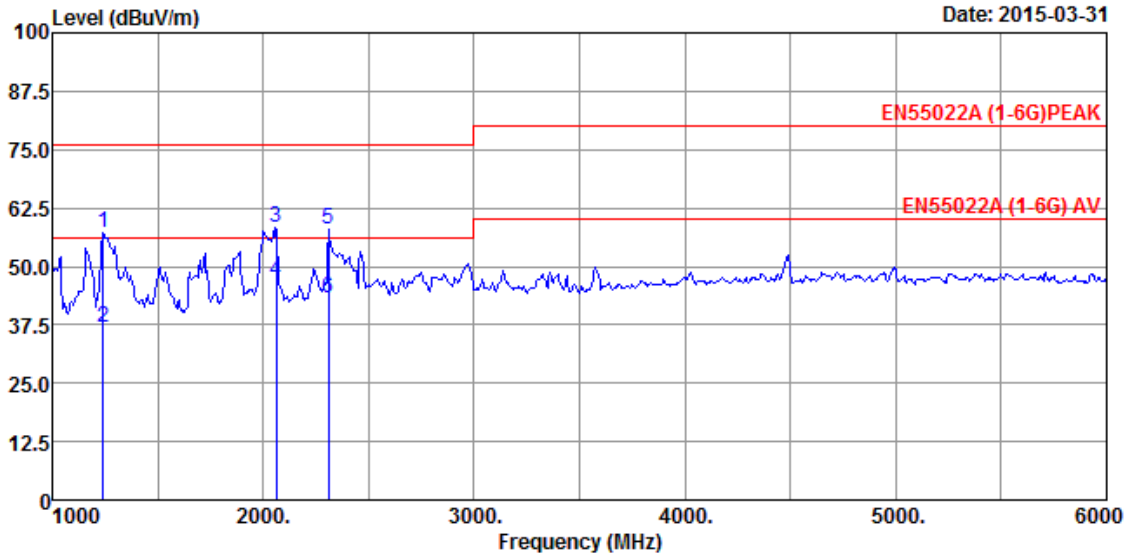
Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-493
Limit : EN55022 10M(A)
Env. / Ins. : 22.5*C/49.4%
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1KHz Playing
VGA:1920*1080@60Hz
Line:1.5m

Data No. : 7
Ant. pol. : VERTICAL
Pre : 101.7kPa
Engineer : ELLIS

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	30.000	12.10	0.83	13.99	26.92	40.00	13.08	QP
2	105.660	9.73	1.37	12.50	23.60	40.00	16.40	QP
3	127.000	11.50	1.47	12.55	25.52	40.00	14.48	QP
4	151.250	13.57	1.56	5.91	21.04	40.00	18.96	QP
5	228.850	10.07	1.78	11.39	23.24	40.00	16.76	QP
6	936.950	24.10	3.44	4.96	32.50	47.00	14.50	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

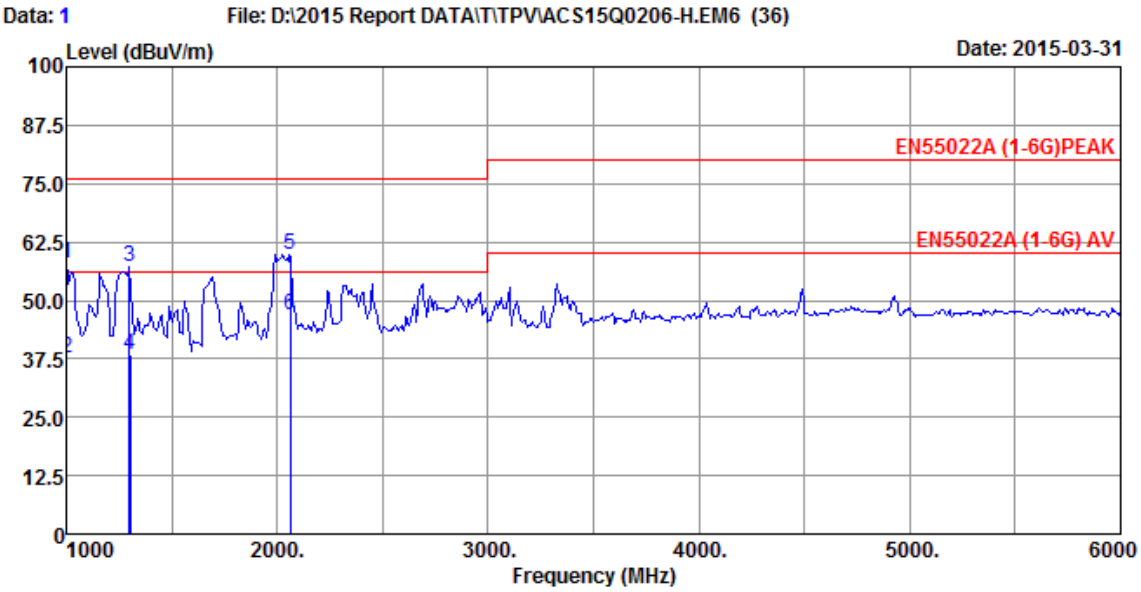
Data: 2 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-H.EM6 (36)



Site no. : 10m Chamber Data No. : 2
Dis. / Ant. : 3m 2014 3115 9607-4877 Ant. pol. : HORIZONTAL
Limit : EN55022A (1-6G) PEAK Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7% Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
VGA:1280*1024@75Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1240.65	24.83	1.96	35.61	66.00	57.18	76.00	18.82	Peak
2	1241.55	24.83	1.96	35.61	45.76	36.94	56.00	19.06	Average
3	2060.55	27.71	3.41	34.95	62.03	58.20	76.00	17.80	Peak
4	2061.46	27.71	3.41	34.95	50.65	46.82	56.00	9.18	Average
5	2310.54	28.12	3.45	34.87	61.40	58.10	76.00	17.90	Peak
6	2311.65	28.12	3.45	34.87	46.63	43.33	56.00	12.67	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

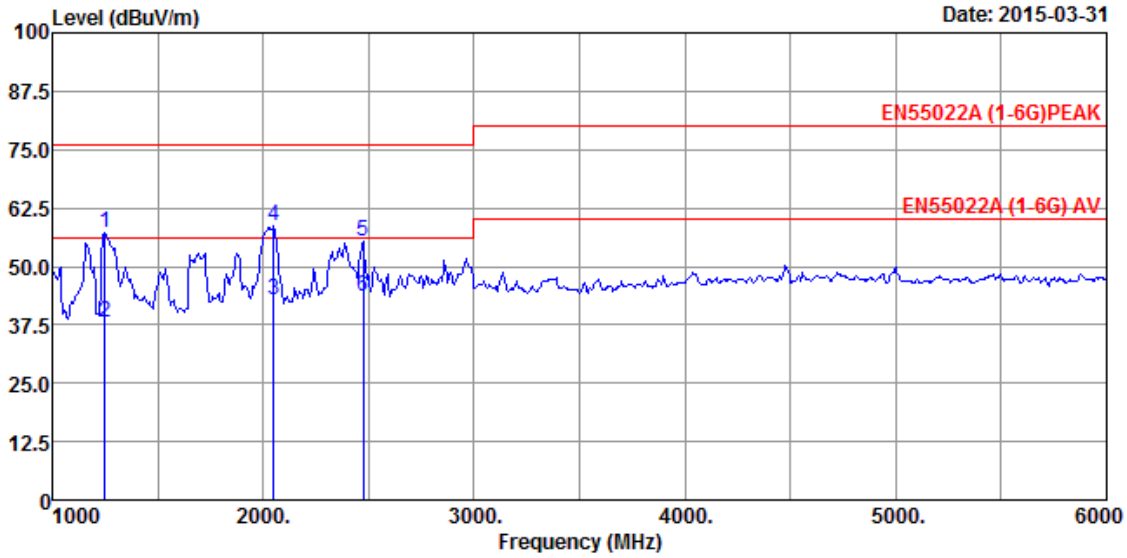


Site no. : 10m Chamber Data No. : 1
Dis. / Ant. : 3m 2014 3115 9607-4877 Ant. pol. : VERTICAL
Limit : EN55022A (1-6G)PEAK Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7% Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
VGA:1280*1024@75Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1000.46	23.50	1.66	36.01	68.63	57.78	76.00	18.22	Peak
2	1001.56	23.51	1.66	36.01	48.58	37.74	56.00	18.26	Average
3	1300.65	25.12	2.03	35.52	65.61	57.24	76.00	18.76	Peak
4	1301.47	25.12	2.03	35.52	46.67	38.30	56.00	17.70	Average
5	2060.66	27.71	3.41	34.95	63.79	59.96	76.00	16.04	Peak
6	2061.50	27.71	3.41	34.95	50.59	46.76	56.00	9.24	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

Data: 4 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-H.EM6 (36)

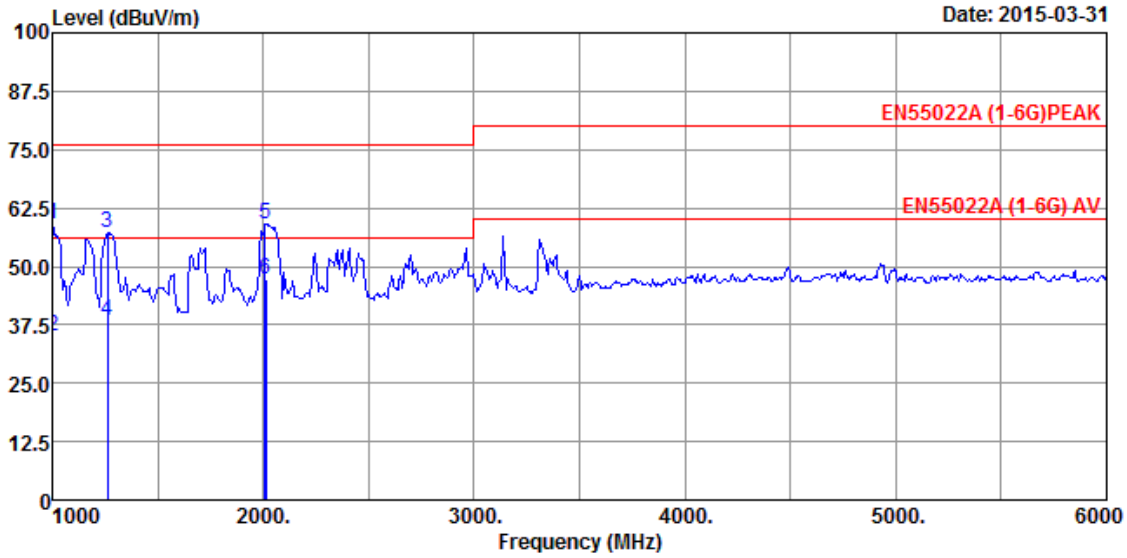


Site no. : 10m Chamber Data No. : 4
Dis. / Ant. : 3m 2014 3115 9607-4877 Ant. pol. : HORIZONTAL
Limit : EN55022A (1-6G) PEAK Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7% Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
VGA:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1250.62	24.88	1.97	35.60	66.01	57.26	76.00	18.74	Peak
2	1251.40	24.88	1.98	35.60	46.69	37.95	56.00	18.05	Average
3	2049.03	27.69	3.41	34.95	46.56	42.71	56.00	13.29	Average
4	2050.56	27.69	3.41	34.95	62.36	58.51	76.00	17.49	Peak
5	2475.65	28.36	3.47	34.83	58.41	55.41	76.00	20.59	Peak
6	2476.46	28.37	3.47	34.83	46.68	43.69	56.00	12.31	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

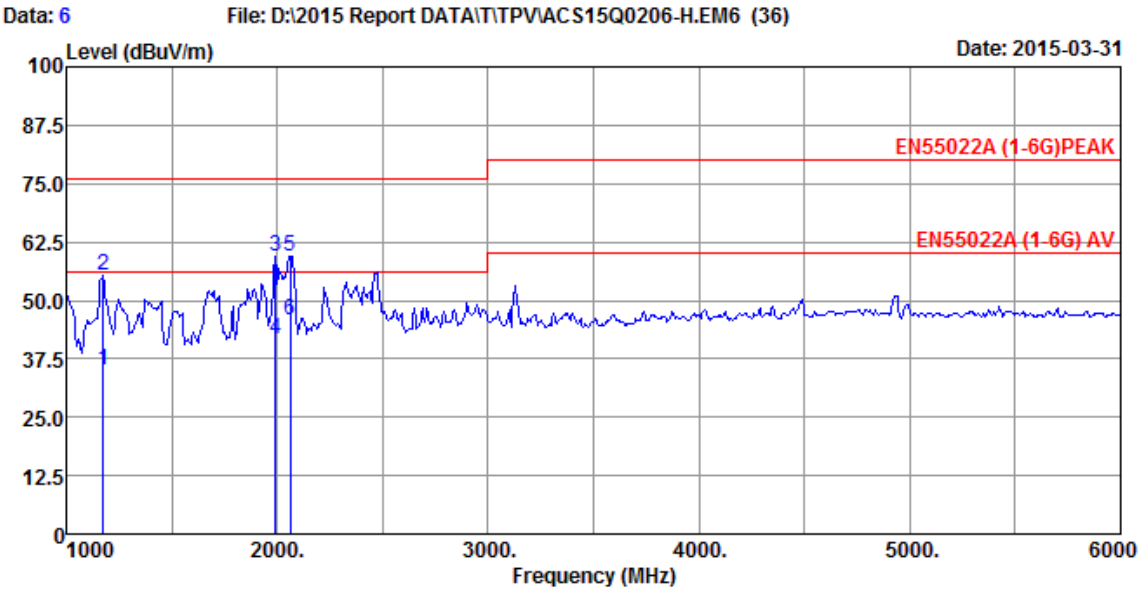
Data: 3 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-H.EM6 (36)



Site no. : 10m Chamber Data No. : 3
Dis. / Ant. : 3m 2014 3115 9607-4877 Ant. pol. : VERTICAL
Limit : EN55022A (1-6G)PEAK Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7% Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
VGA:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1000.55	23.50	1.66	36.01	69.95	59.10	76.00	16.90	Peak
2	1001.30	23.51	1.66	36.01	46.05	35.21	56.00	20.79	Average
3	1260.55	24.93	1.99	35.58	65.85	57.19	76.00	18.81	Peak
4	1261.46	24.93	1.99	35.58	47.14	38.48	56.00	17.52	Average
5	2010.65	27.62	3.40	34.97	62.94	58.99	76.00	17.01	Peak
6	2011.20	27.62	3.40	34.97	51.25	47.30	56.00	8.70	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

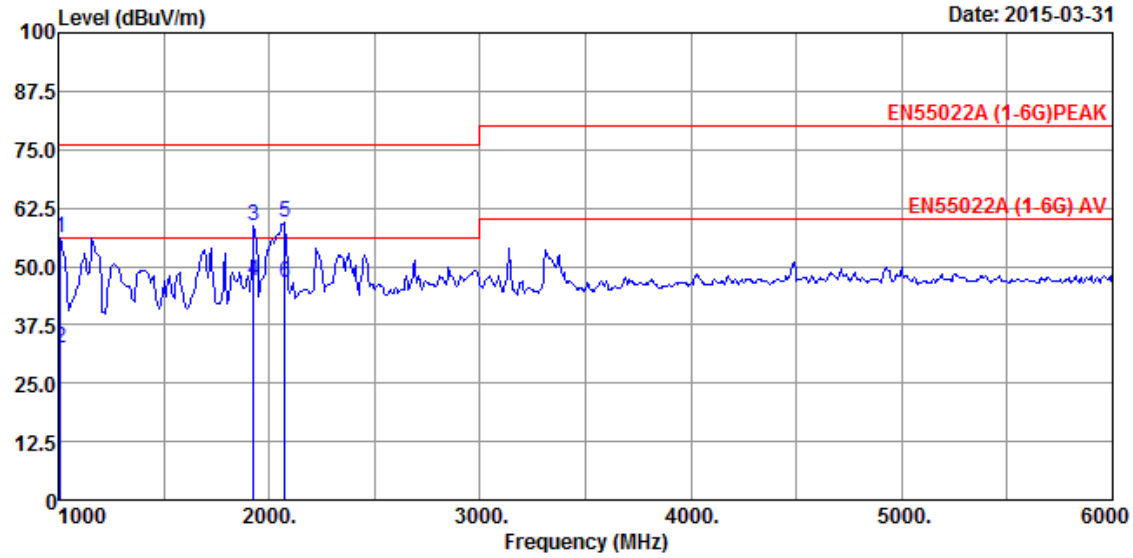


Site no. : 10m Chamber
Data No. : 6
Dis. / Ant. : 3m 2014 3115 9607-4877
Ant. pol. : HORIZONTAL
Limit : EN55022A (1-6G) PEAK
Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7%
Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
DVI:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1174.30	24.49	1.89	35.71	44.47	35.14	56.00	20.86	Average
2	1175.55	24.50	1.89	35.71	64.76	55.44	76.00	20.56	Peak
3	1990.55	27.57	3.38	34.97	63.32	59.30	76.00	16.70	Peak
4	1991.57	27.58	3.38	34.97	45.59	41.58	56.00	14.42	Average
5	2060.56	27.71	3.41	34.95	63.42	59.59	76.00	16.41	Peak
6	2061.27	27.71	3.41	34.95	49.42	45.59	56.00	10.41	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

Data: 5 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-H.EM6 (36)

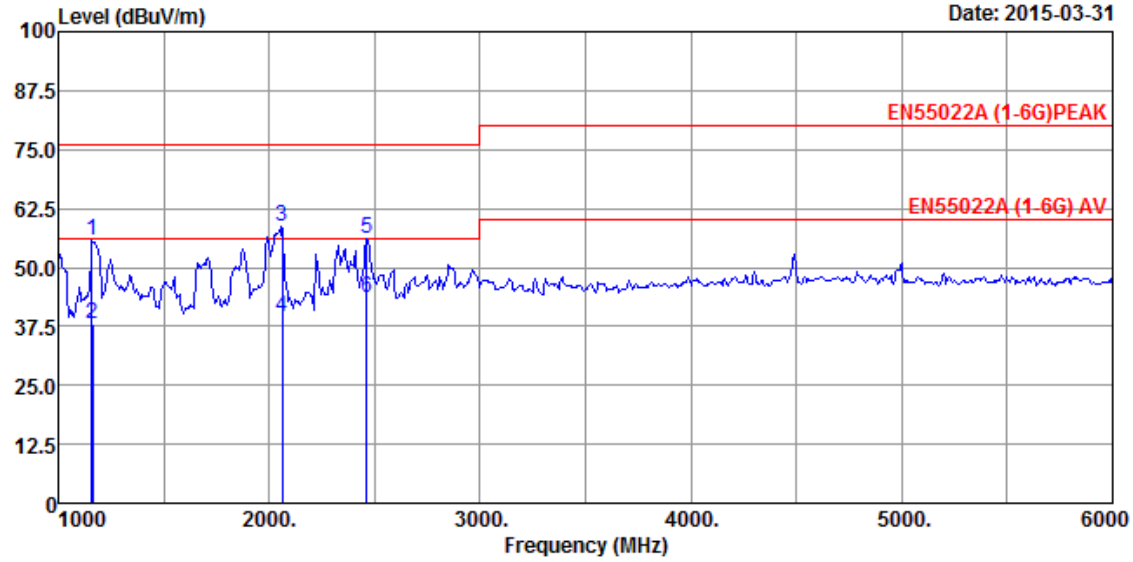


Site no. : 10m Chamber Data No. : 5
Dis. / Ant. : 3m 2014 3115 9607-4877 Ant. pol. : VERTICAL
Limit : EN55022A (1-6G)PEAK Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7% Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
DVI:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1010.57	23.56	1.67	35.99	66.87	56.11	76.00	19.89	Peak
2	1011.47	23.57	1.68	35.99	43.36	32.62	56.00	23.38	Average
3	1925.52	27.39	3.25	35.01	62.98	58.61	76.00	17.39	Peak
4	1926.75	27.39	3.25	35.01	51.23	46.86	56.00	9.14	Average
5	2075.56	27.73	3.41	34.95	63.35	59.54	76.00	16.46	Peak
6	2076.10	27.73	3.41	34.94	50.22	46.42	56.00	9.58	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

Data: 8 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-H.EM6 (36)

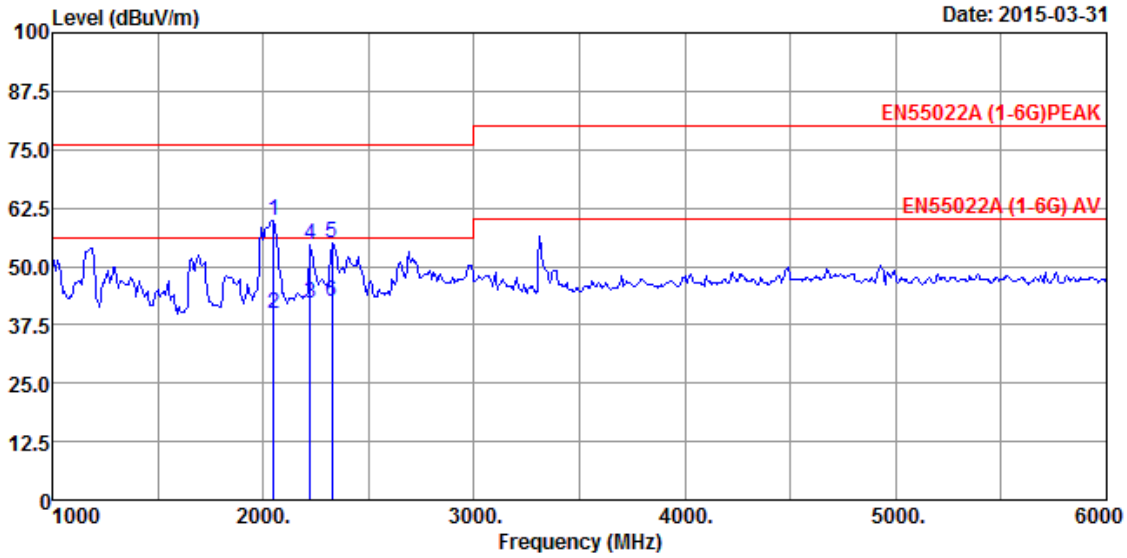


Site no. : 10m Chamber Data No. : 8
Dis. / Ant. : 3m 2014 3115 9607-4877 Ant. pol. : HORIZONTAL
Limit : EN55022A (1-6G) PEAK Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7% Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
HDMI:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1160.46	24.42	1.87	35.73	65.08	55.64	76.00	20.36	Peak
2	1161.25	24.42	1.87	35.73	47.56	38.12	56.00	17.88	Average
3	2060.45	27.71	3.41	34.95	62.32	58.49	76.00	17.51	Peak
4	2061.65	27.71	3.41	34.95	43.35	39.52	56.00	16.48	Average
5	2460.55	28.34	3.47	34.83	59.25	56.23	76.00	19.77	Peak
6	2461.77	28.34	3.47	34.83	46.58	43.56	56.00	12.44	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

Data: 7 File: D:\2015 Report DATA\T\TPV\ACS15Q0206-H.EM6 (36)



Site no. : 10m Chamber Data No. : 7
Dis. / Ant. : 3m 2014 3115 9607-4877 Ant. pol. : VERTICAL
Limit : EN55022A (1-6G) PEAK Pre : 101.7kPa
Env. / Ins. : 21.8*C/49.7% Engineer : FISH
EUT : BDL3230QL
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
HDMI:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	2050.46	27.69	3.41	34.95	63.66	59.81	76.00	16.19	Peak
2	2051.55	27.69	3.41	34.95	43.65	39.80	56.00	16.20	Average
3	2224.55	27.98	3.43	34.90	45.59	42.10	56.00	13.90	Average
4	2225.16	27.98	3.43	34.90	58.12	54.63	76.00	21.37	Peak
5	2325.65	28.14	3.45	34.87	58.30	55.02	76.00	20.98	Peak
6	2326.17	28.14	3.45	34.87	45.59	42.31	56.00	13.69	Average

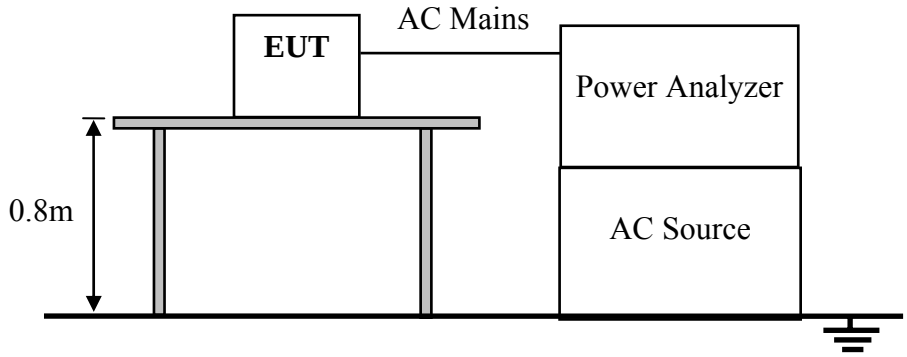
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

6. HARMONIC CURRENT EMISSION TEST

6.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	AC Source	California Instruments	5001ix	58481	Oct.26,14	1 Year
2.	Power Analyzer	California Instruments	PACS-1	72627	Oct.26,14	1 Year
3.	Test Software	California Instrument	CTS 4.0	V 4.2.12	N/A	N/A

6.2.Block Diagram of Test Setup



6.3.Test Standard

EN 61000-3-2: 2006+A1: 2009+A2: 2009; Class D

6.4.Limits of Harmonic Current

Limits for Class D Equipment		
Harmonic order (n)	**Maximum permissible harmonic current per watt (mA/W)**	**Maximum permissible harmonic current (A)**
3	3.4	0.23
5	1.9	1.14
7	1.0	0.77
9	0.5	0.40
11	0.35	0.33
13	0.30	0.21
15≤n≤39 (odd harmonic only)	3.85/n	0.15X15/n

Remark: if the EUT Power level is below 75 Watts and therefore has no defined limits.

6.5.EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

6.6.Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 6.2.

6.7. Test Procedure

The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the necessary for the EUT to be exercised.

6.8. Test Results

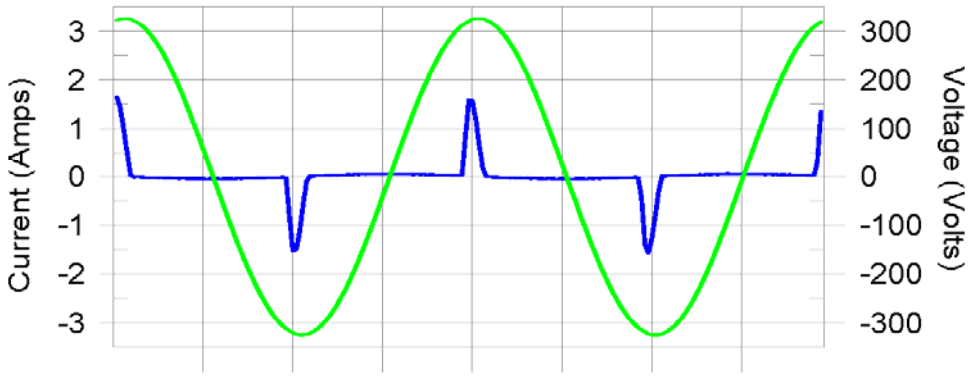
PASS.

Please refer to the following pages.

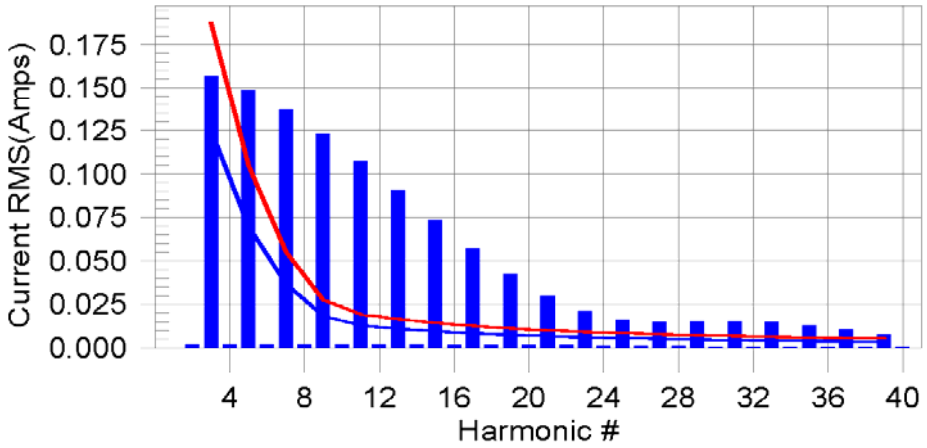
EUT: BDL3230QL Tested by: SUN
Test category: Class-D per Ed. 4.0 (2014) (European limits) Test Margin: 100
Test date: 2015-3-15 Start time: 19:18:40 End time: 19:21:31
Test duration (min): 2.5 Data file name: H-000264.cts_data
Comment: Running "H" Pattern And 1kHz Playing
Customer: TPV

Test Result: N/L Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line European Limits



Test result: N/L Worst harmonic was #11 with 834.4% of the limit.

EUT: BDL3230QL Tested by: SUN
Test category: Class-D per Ed. 4.0 (2014) (European limits) Test Margin: 100
Test date: 2015-3-15 Start time: 19:18:40 End time: 19:21:31
Test duration (min): 2.5 Data file name: H-000264.cts_data
Comment: Running "H" Pattern And 1kHz Playing
Customer: TPV

Test Result: N/L Source qualification: Normal
THC(A): 0.000 I-THD(%): 0.0 POHC(A): 0.000 POHC Limit(A): 0.000
Highest parameter values during test:
V_RMS (Volts): 230.08 Frequency(Hz): 50.00
I_Peak (Amps): 1.665 I_RMS (Amps): 0.377
I_Fund (Amps): 0.168 Crest Factor: 4.426
Power (Watts): 36.8 Power Factor: 0.426

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	0.000	N/A	0.004	0.000	N/A	N/L
3	0.156	0.125	N/A	0.157	0.188	N/A	N/L
4	0.002	0.000	N/A	0.003	0.000	N/A	N/L
5	0.148	0.070	N/A	0.149	0.105	N/A	N/L
6	0.002	0.000	N/A	0.003	0.000	N/A	N/L
7	0.137	0.037	N/A	0.138	0.055	N/A	N/L
8	0.002	0.000	N/A	0.003	0.000	N/A	N/L
9	0.123	0.018	N/A	0.124	0.028	N/A	N/L
10	0.002	0.000	N/A	0.003	0.000	N/A	N/L
11	0.108	0.013	N/A	0.108	0.019	N/A	N/L
12	0.002	0.000	N/A	0.003	0.000	N/A	N/L
13	0.091	0.011	N/A	0.091	0.017	N/A	N/L
14	0.002	0.000	N/A	0.003	0.000	N/A	N/L
15	0.074	0.010	N/A	0.074	0.014	N/A	N/L
16	0.002	0.000	N/A	0.003	0.000	N/A	N/L
17	0.057	0.008	N/A	0.058	0.013	N/A	N/L
18	0.002	0.000	N/A	0.002	0.000	N/A	N/L
19	0.042	0.007	N/A	0.043	0.011	N/A	N/L
20	0.002	0.000	N/A	0.002	0.000	N/A	N/L
21	0.030	0.007	N/A	0.030	0.010	N/A	N/L
22	0.001	0.000	N/A	0.002	0.000	N/A	N/L
23	0.021	0.006	N/A	0.021	0.009	N/A	N/L
24	0.001	0.000	N/A	0.002	0.000	N/A	N/L
25	0.016	0.006	N/A	0.016	0.009	N/A	N/L
26	0.001	0.000	N/A	0.002	0.000	N/A	N/L
27	0.015	0.005	N/A	0.015	0.008	N/A	N/L
28	0.001	0.000	N/A	0.001	0.000	N/A	N/L
29	0.015	0.005	N/A	0.015	0.007	N/A	N/L
30	0.001	0.000	N/A	0.001	0.000	N/A	N/L
31	0.015	0.005	N/A	0.016	0.007	N/A	N/L
32	0.001	0.000	N/A	0.001	0.000	N/A	N/L
33	0.015	0.004	N/A	0.015	0.006	N/A	N/L
34	0.001	0.000	N/A	0.001	0.000	N/A	N/L
35	0.013	0.004	N/A	0.013	0.006	N/A	N/L
36	0.001	0.000	N/A	0.001	0.000	N/A	N/L
37	0.010	0.004	N/A	0.010	0.006	N/A	N/L
38	0.001	0.000	N/A	0.001	0.000	N/A	N/L
39	0.007	0.004	N/A	0.008	0.005	N/A	N/L
40	0.001	0.000	N/A	0.001	0.000	N/A	N/L

Note: The EUT power level is below 75.0 Watts and therefore has no defined limits

EUT: BDL3230QL Tested by: SUN
Test category: Class-D per Ed. 4.0 (2014) (European limits) Test Margin: 100
Test date: 2015-3-15 Start time: 19:18:40 End time: 19:21:31
Test duration (min): 2.5 Data file name: H-000264.cts_data
Comment: Running "H" Pattern And 1kHz Playing
Customer: TPV

Test Result: N/L Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms):	230.08	Frequency(Hz):	50.00
I_Peak (Amps):	1.665	I_RMS (Amps):	0.377
I_Fund (Amps):	0.168	Crest Factor:	4.426
Power (Watts):	36.8	Power Factor:	0.426

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.087	0.460	18.85	OK
3	0.466	2.070	22.50	OK
4	0.052	0.460	11.35	OK
5	0.052	0.920	5.65	OK
6	0.029	0.460	6.22	OK
7	0.050	0.690	7.31	OK
8	0.010	0.460	2.13	OK
9	0.063	0.460	13.65	OK
10	0.013	0.460	2.91	OK
11	0.059	0.230	25.72	OK
12	0.010	0.230	4.26	OK
13	0.059	0.230	25.52	OK
14	0.004	0.230	1.74	OK
15	0.051	0.230	21.99	OK
16	0.010	0.230	4.18	OK
17	0.045	0.230	19.60	OK
18	0.009	0.230	3.92	OK
19	0.040	0.230	17.35	OK
20	0.006	0.230	2.67	OK
21	0.033	0.230	14.36	OK
22	0.004	0.230	1.87	OK
23	0.023	0.230	10.16	OK
24	0.005	0.230	2.10	OK
25	0.020	0.230	8.52	OK
26	0.003	0.230	1.36	OK
27	0.023	0.230	9.94	OK
28	0.003	0.230	1.25	OK
29	0.018	0.230	7.76	OK
30	0.003	0.230	1.33	OK
31	0.023	0.230	9.90	OK
32	0.003	0.230	1.48	OK
33	0.023	0.230	9.91	OK
34	0.003	0.230	1.37	OK
35	0.022	0.230	9.39	OK
36	0.003	0.230	1.19	OK
37	0.019	0.230	8.24	OK
38	0.002	0.230	0.98	OK
39	0.016	0.230	6.84	OK
40	0.003	0.230	1.45	OK

7. VOLTAGE FLUCTUATIONS & FLICKER TEST

7.1. Test Equipments

Same as Section 6.1.

7.2. Block Diagram of Test Setup

Same as Section 6.2.

7.3. Test Standard

EN 61000-3-3: 2013

7.4. Limits of Voltage Fluctuation and Flick

Test Item	Limit	Note
P_{st}	1.0	P_{st} means Short-term flicker indicator
P_{lt}	0.65	P_{lt} means long-term flicker indicator
T_{max}	500ms	T_{max} means maximum time that d(t) exceeds 3.3%
d_{max}(%)	4%	d_{max} means maximum relative voltage change.
d_c(%)	3.3%	d_c means relative steady-state voltage change.

7.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

7.6. Operating Condition of EUT

Same as Section 6.6.

7.7. Test Procedure

The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the most unfavorable sequence of voltage changes under normal conditions During the flick measurement, the measure time shall include that part of whole operation changes. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.

7.8. Test Results

PASS.
The EUT was tested and all the test results are listed in next pages.

EUT: BDL3230QL
Test category: All parameters (European limits)
Test date: 2015-3-15
Test duration (min): 10
Comment: Running "H" Pattern And 1kHz Playing
Customer: TPV

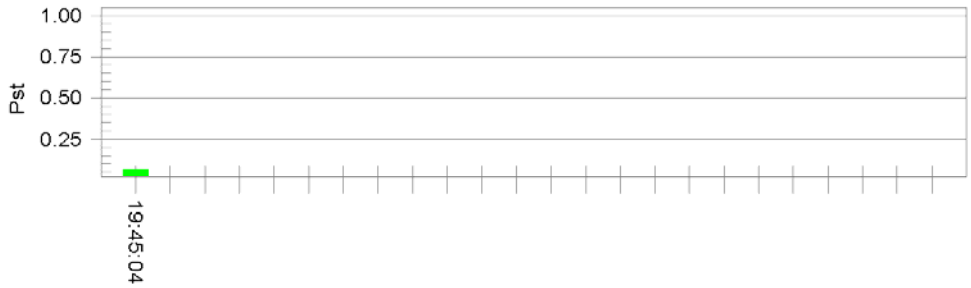
Tested by: SUN
Test Margin: 100
Start time: 19:34:34
End time: 19:45:05
Data file name: F-000266.cts_data

Test Result: Pass

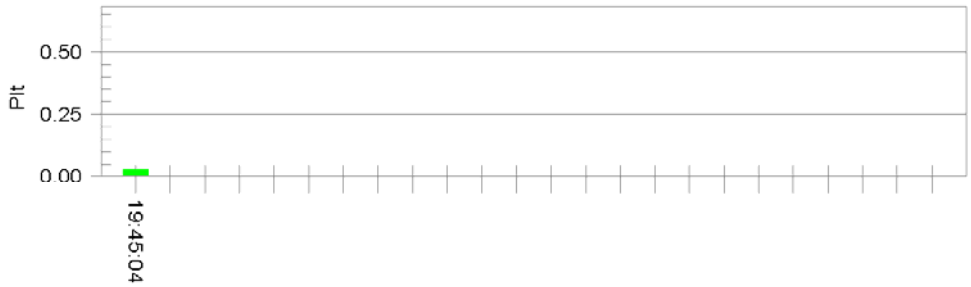
Status: Test Completed

Pst_i and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.99			
Highest dt (%):	0.00	Test limit (%):	N/A	N/A
T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.028	Test limit:	0.650	Pass

8. IMMUNITY PERFORMANCE CRITERIA

Performance Level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test, relative to a performance level by its manufacturer or the requestor of the test, or the agreed between the manufacturer and the purchaser of the product.

Definition related to the performance level:
1.Based on the used product standard
2.Based on the declaration of the manufacturer, requestor or purchaser

Performance criterion A

When seen from the normal viewing distance, the EUT shall operate with no change beyond the manufacturer's specification, in flicker, colour, focus and jitter (except for the power frequency magnetic field test).

Power frequency magnetic field test

For CRT monitors, the following also applies:
The jitter shall be measured using a measuring microscope as specified in 6.6.14 of ISO 9241-3.

The jitter (in mm) shall not exceed the value $\frac{(\text{character height in mm} + 0{,}3)\ \text{x}\ 2{,}5}{33{,}3}$ when the monitor is immersed in a continuous magnetic field of 1A/m (r.m.s.) at one of the power frequencies of 50Hz.

Alternatively, a field of 50A/m may be applied, and a transparent graduated mask used to assess the jitter. In that case, the jitter shall not exceed 50 times the value in the above formula.

NOTE-This test level is used to simplify the measurement of jitter. Lesser values of the test level may be used if non-linearity is experienced, due to, for example, saturation of screening material.

The EUT shall be tested in two positions, both perpendicular to the magnetic field.

Performance criterion B

Screen disturbances during the application of the test are permissible.

Performance criterion C

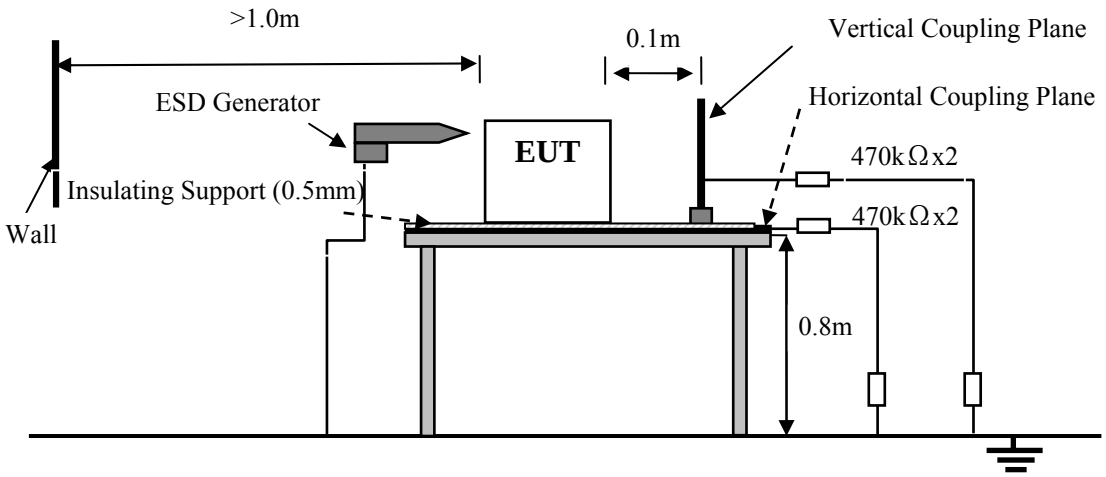
Failures which are not self-recovered after removal of the external disturbance, but which can be recovered to normal operation by reset or reboot are permissible.

9. ELECTROSTATIC DISCHARGE IMMUNITY TEST

9.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	ESD Tester	EM Test	Dito	P1349126669	Jun. 05,14	1 Year

9.2. Block Diagram of Test Setup



9.3. Test Standard

EN 55024: 2010
(IEC 61000-4-2: 2008)
Severity Level 1&2&3 for Air Discharge at 2kV&4kV&8kV
Severity Level 1&2 for Contact Discharge at 2kV&4kV

9.4. Severity Levels and Performance Criterion

Severity Level	Test Voltage Contact Discharge (kV)	Test Voltage Air Discharge (kV)	Performance criterion
1.	2	2	B
2.	4	4	
3.	6	8	
4.	8	15	
X	Special	Special	

9.5. EUT Configuration

The configuration of EUT are listed in Section 3.5.

9.6. Operating Condition of EUT

Same as Conducted test which is listed in Section 3.6. except the test set up replaced by Section 9.2.

9.7. Test Procedure

9.7.1. Air Discharge:

This test is done on a non-conductive surfaces. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 20 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

9.7.2. Contact Discharge:

For PC mode, all the procedure shall be same as Section 9.7.1. except that the generator is then re-triggered for a new single discharge and repeated 50 times for each pre-selected test point. the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

For TV mode, the generator was re-triggered for a new single discharge and repeated 20 times for each pre-selected test point. This procedure was repeated until all the air discharge completed.

9.7.3. Indirect discharge for horizontal coupling plane

At least 20 single discharges shall be applied to the horizontal coupling plane, at points on each side of the EUT. The discharge electrode positions vertically at a distance of 0.1m from the EUT and with the discharge electrode touching the coupling plane.

9.7.4. Indirect discharge for vertical coupling plane

At least 20 single discharge shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

9.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next pages.

Electrostatic Discharge Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Mar. 21, 2015
EUT	:	31.5"(80cm)LCD Monitor	Temperature	:	22.9±0.6℃
M/N	:	BDL3230QL	Humidity	:	48±3%
Test Voltage	:	AC 230V/50Hz	Test Mode	:	As Section 3.6
Test Engineer	:	Sun	Pressure	:	101.7±1kPa
Required Performance	:	B	Actual Performance	:	A&B

Air Discharge: ±2kV ±4kV ±8kV # For Air Discharge each Point Positive 10 times and negative 10 times discharge.

Contact Discharge: ±2kV ±4kV # For Contact Discharge each point positive 25times and negative 25 times discharge

For the time interval between successive single discharges an initial value of one second.

Discharge Voltage (kV)	Type of discharge	Dischargeable Points	Performance		Result
			Requi	Observati	(Pass/Fail)
±2	Contact	2,3,8,9	B	A	**Pass**
±4	Contact	2,3,8,9	B	B	**Pass**
±2	Air	1,4,5,6,7,8,9,10,11,12,13,14,15	B	A	**Pass**
±4	Air	1,4,5,6,7,8,9,10,11,12,13,14,15	B	A	**Pass**
±8	Air	1,4,5,6,7,8,9,10,11,12,13,14,15	B	B	**Pass**
±2	HCP-Bottom	Edge of the HCP	B	A	**Pass**
±2	VCP-Front	Center of the VCP	B	A	**Pass**
±2	VCP-Left	Center of the VCP	B	A	**Pass**
±2	VCP-Back	Center of the VCP	B	A	**Pass**
±2	VCP-Right	Center of the VCP	B	A	**Pass**
±4	HCP-Bottom	Edge of the HCP	B	A	**Pass**
±4	VCP-Front	Center of the VCP	B	A	**Pass**
±4	VCP-Left	Center of the VCP	B	A	**Pass**
±4	VCP-Back	Center of the VCP	B	A	**Pass**
±4	VCP-Right	Center of the VCP	B	A	**Pass**

Discharge Points Description

1	Slots	6	AC In Port	11	YPbPr In Port
2	Screws	7	Screen	12	IR Port
3	Metal	8	USB / LAN Port	13	RS232 Ports
4	LED	9	VGA / DVI / HDMI Port	14	Audio out Port
5	Buttons	10	Audio In Port	15	Switch

Remark:1.After discharge to the ungrounded part of EUT, it needs the bleeder resistor to remove the charge prior to next ESD pulse.

2.The Class "B" means the Screen of EUT has little flicker , the speakers has little noise, and data transmitting from the LAN Port was delayed, but it can recovery by itself after test.

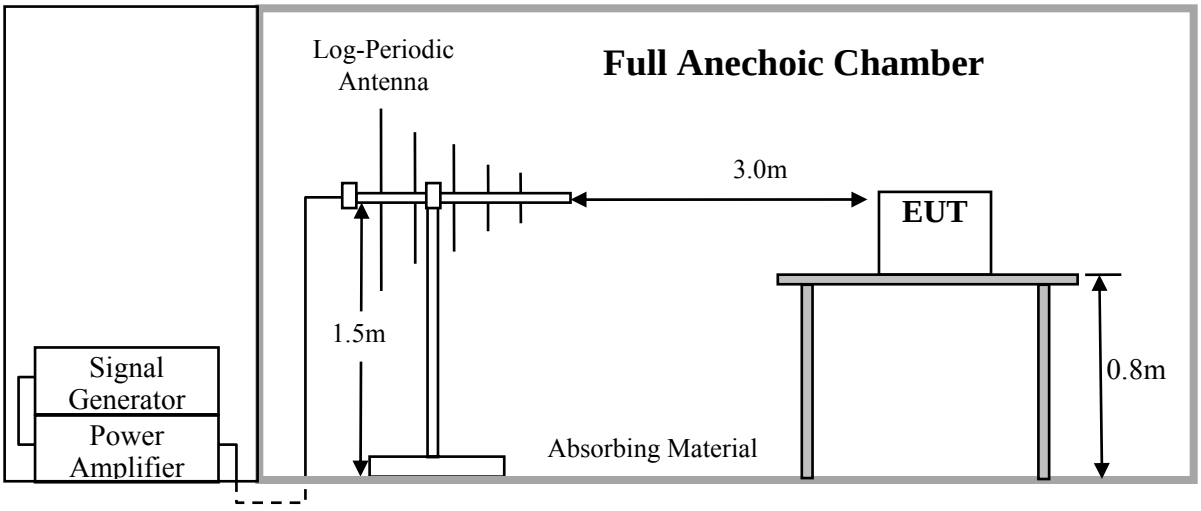
Discharge should be considered on Contact and Air and Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP).

10. RF FIELD STRENGTH SUSCEPTIBILITY TEST

10.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	2#Chamber	AUDIX	N/A	N/A	Apr.28,14	1Year
2.	Signal Generator	Agilent	N5181A	MY49061013	Oct.29,14	1Year
3	Amplifier	A&R	100W/1000M1	17028	NCR	NCR
4.	Power Meter	Anritsu	ML2487A	6K00002472	Aug.20,14	1Year
5.	Power Sensor	Anritsu	MA2491A	032516	Aug.20,14	1Year
6.	Log-periodic Antenna	A&R	AT1080	16512	NCR	NCR
7.	Test Software	AUDIX	I2	3.2010-1-8	N/A	N/A
Note: NCR: No calibration required(calibrated with system)						

10.2.Block Diagram of Test Setup



10.3.Test Standard

EN 55024: 2010 (IEC 61000-4-3: 2010), Severity Level 2 at 3V / m

10.4.Severity Levels and Performance Criterion

Severity Level	Test Field Strength V/m	Performance Criteria
1.	1	A
2.	3	
3.	10	
X.	Special	

10.5.EUT Configuration

The configuration of EUT are listed in Section 3.5.

10.6.Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 10.2.

10.7.Test Procedure

Testing was performed in a Fully anechoic chamber as recommended by IEC 61000-4-3. The EUT was placed on an 80 cm high non-conductive table located in the area of field uniformity. The radiating antenna was placed 3m in front of the EUT and Support system, and dwell time of the radiated interference was controlled by an automated, computer-controlled system. The signal source was stepped through the applicable frequency range at a rate no faster than 1% of the fundamental. The signal was amplitude modulated 80% over the frequency range 80 MHz to 1GHz at a level of 3 V/m. The dwell time was set at 3.0s. Field presence was monitored during testing via a field probe placed in close proximity to the EUT. Throughout testing, the EUT was closely monitored for signs of susceptibility. The test was performed with the antennae oriented in both a horizontal and vertical polarization.

All the scanning conditions are as follows **:**

Test conditions	
Frequency	80MHz-1GHz
Frequency increments step	1% of momentary used
Test level	3V/m (unmodulated)
Dwell time	3s
Test signal	80% amplitude modulated by 1kHz sinusoidal audio signal

10.8.Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

RF Field Strength Susceptibility Test Results

Audix Technology(Shenzhen) Co.,Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Mar. 23, 2015
EUT	:	31.5"(80cm)LCD Monitor	Temperature	:	22.8±0.6℃
M/N	:	BDL3230QL	Humidity	:	50±3%
Test Voltage	:	AC 230V/50Hz	Pressure	:	101.7±1kPa
Test Engineer	:	Mark	Test Mode	:	As Section 3.6
Required Performance	:	A	Actual Performance	:	A

Modulation: ☑ AM ☐ Pulse ☐ none 1 kHz 80%

Frequency Rang :80 MHz -1000MHz

	Horizontal		Vertical		Result
	Required	Observation	Required	Observation	(Pass / Fail)
Front	A	A	A	A	Pass
Right	A	A	A	A	Pass
Rear	A	A	A	A	Pass
Left	A	A	A	A	Pass

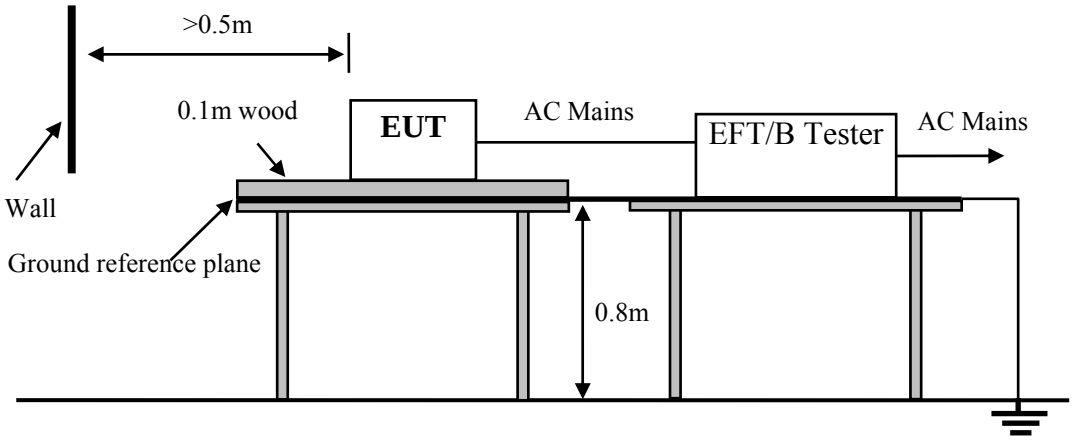
Remark:

11. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

11.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Burst Tester	TESEQ	NSG3025	28017	Apr.28,14	1 Year
2.	CDN	TESEQ	CDN8014	29638	Apr.28,14	1 Year
3.	Test Software	Schaffner	Win3025	V 4.00	N/A	N/A

11.2.Block Diagram of Test Setup



11.3.Test Standard

EN 55024: 2010
(IEC 61000-4-4: 2012, Severity Level 1 at 0.5kV,Severity Level 2 at 1kV)

11.4.Severity Levels and Performance Criterion

Open Circuit Output Test Voltage ±10%			
Severity Level	On Power Supply Lines	On I/O (Input/Output) Signal data and control lines	Performance criterion
1.	0.5 kV	0.25 kV	B
2.	1 kV	0.5 kV	
3.	2 kV	1 kV	
4.	4 kV	2 kV	
X	Special	Special	

11.5.EUT Configuration

The configuration of EUT are listed in Section 3.5.

11.6.Operating Condition of EUT

Same as Conducted Emission test which is listed in Section 3.6. except the test set up replaced by Section 11.2.

11.7.Test Procedure

The EUT and its simulators were placed on a ground reference plane and were insulated from it by a wood support 0.1m ± 0.01m thick. The ground reference plane was 1m*1m metallic sheet with 0.65mm minimum thickness. This reference ground plane was project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane was more than 0.5m. All cables to the EUT was placed on the wood support, cables not subject to EFT/B was routed as far as possible from the cable under test to minimize the coupling between the cables.

11.7.1.For input and output AC power ports**:**

The EUT was connected to the power mains by using a coupling device that couples the EFT interference signal to AC power lines. Both positive transients and negative transients of test voltage was applied during compliance test and the duration of the test can't less than 1min.

11.7.2.For signal lines and control lines ports**:**

It's unnecessary to test.

11.7.3.For DC output line ports**:**

It's unnecessary to test.

11.8.Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Electrical Fast Transient/Burst Test Results

Audix Technology (Shenzhen)Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Mar. 21, 2015
EUT	:	31.5"(80cm)LCD Monitor	Temperature	:	22.9±0.6℃
M/N	:	BDL3230QL	Humidity	:	48±3%
Test Voltage	:	AC 230V/50Hz	Test Mode	:	As Section 3.6
Test Engineer	:	Sun	Pressure	:	101.7±1kPa
Required Performance	:	B	Actual Performance	:	A&B

Repetition Frequency : 5 kHz Burst Duration : 15ms Burst Period: 300ms

Inject Time(s): 120s Inject Method: Direct

Inject Line: ☑ AC Mains ☐ DC Supply ☑ Signal

Line	Test Voltage	Performance			Result
		Required	Observation(+)	Observation(-)	(Pass/Fail)
L	0.5 kV	B	A	A	Pass
	1kV	B	B	B	Pass
N	0.5 kV	B	A	A	Pass
	1kV	B	B	B	Pass
L.N	0.5 kV	B	A	A	Pass
	1kV	B	B	B	Pass
L.PE	0.5 kV	-	-	-	-
	1kV	-	-	-	-
N.PE	0.5 kV	-	-	-	-
	1kV	-	-	-	-
L.N.PE	0.5 kV	-	-	-	-
	1kV	-	-	-	-
Signal Line	0.5 kV	B	B	B	Pass

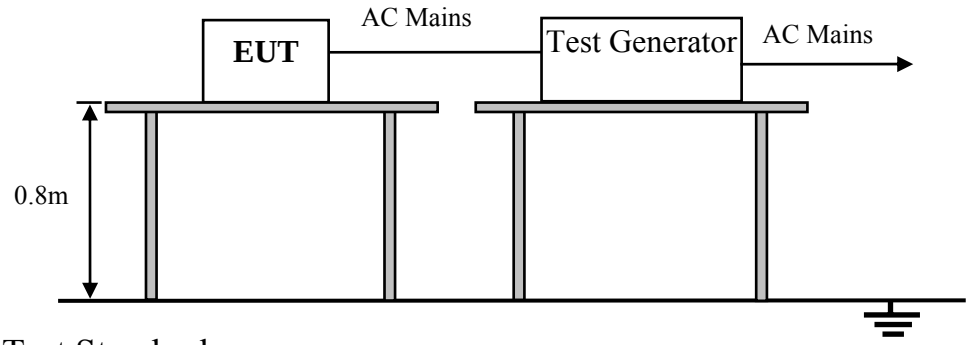
Remark: The Class “B” means the Screen of EUT has little flicker , the speakers has little noise, and data transmitting from the LAN port was delayed, but can recovery by itself after test.

12. SURGE TEST

12.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Transient Test System	EMC PARTNER	TRANSIENT 2000	TRA2006 F-S-T-D-R -1500	Oct.26,14	1 Year
2	CDN	EMC PARTNER	CDN-UTP8	CDN-UTP8-1508	Oct.26,14	1 Year
3	CDN	EMC PARTNER	CDN2000-06-25	CDN2000-06-25 0111	Oct.26,14	1 Year
4	Test Software	EMC PARTNER	Genecs	V3.25	N/A	N/A

12.2.Block Diagram of Test Setup



12.3.Test Standard

EN 55024: 2010, (IEC 61000-4-5: 2005)
Severity Level **:** Line to Line: Level 1&2 at 0.5kV&1kV
Line to Ground: Level 1&2&3 at 0.5kV&1kV&2kV
Signal Line: Level 1 at 0.5kV; Level 2 at 1kV.

12.4.Severity Levels and Performance Criterion

Severity Level	Open-Circuit Test Voltage kV	Performance criterion
1 2 3 4 *	0.5 1.0 2.0 4.0 Special	B

12.5.EUT Configuration

The configuration of EUT are listed in Section 3.5.

12.6.Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 12.2

12.7.Test Procedure

1) Set up the EUT and test generator as shown on Section 12.2.
2) For line to line coupling mode, provide a 1kV 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points, and for active line / neutral line to ground are same except test level is 2kV.
3) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
4) Different phase angles are done individually.
5) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

12.8.Test Results

PASS. Please refer to the following page.

Surge Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant :	TPV Electronics (FuJian) Co., Ltd.	Test Date :	Mar. 21, 2015
EUT :	31.5"(80cm)LCD Monitor	Temperature :	22.9±0.6℃
M/N :	BDL3230QL	Humidity :	48±3%
Power Supply :	AC 230V/50Hz	Test Mode :	As Section 3.6
Test Engineer :	Sun	Pressure :	101.7±1kPa
Required Performance :	**B & C**	Actual Performance :	**A & B & C**

No.of pluse: ±5 Interval:60 Seconds

Line : ☑ AC Mains ☐ DC Supply ☑ Signal

Location	Volt	500V			1kV			2kV			Result
	Phase	Performance			Performance			Performance			(Pass/Fail)
		Required	+	-	Required	+	-	Required	+	-	
L-N	0°	B	A	A	B	B	B				Pass
	90°	B	A	A	B	B	B				Pass
	180°	B	A	A	B	B	B				Pass
	270°	B	A	A	B	B	B				Pass
L-PE	0°	-	-	-	-	-	-	-	-	-	-
	90°	-	-	-	-	-	-	-	-	-	-
	180°	-	-	-	-	-	-	-	-	-	-
	270°	-	-	-	-	-	-	-	-	-	-
N-PE	0°	-	-	-	-	-	-	-	-	-	-
	90°	-	-	-	-	-	-	-	-	-	-
	180°	-	-	-	-	-	-	-	-	-	-
	270°	-	-	-	-	-	-	-	-	-	-
Signal Line	LAN	C	B	B	C	C	C				Pass

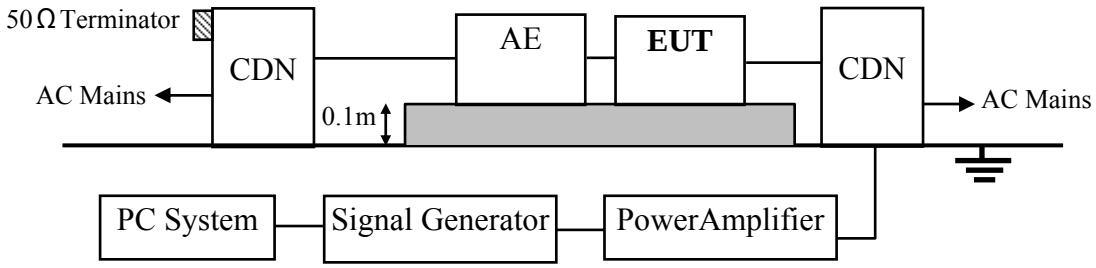
Remark: The Class “B” means the Screen of EUT has little flicker, the data transmitting from LAN port was interrupted during test. but can recovery by itself after test.
The class “C” means the data transmitting from LAN Port will interrupt and need to recover by manual.

13. INJECTED CURRENTS SUSCEPTIBILITY TEST

13.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	Agilent	N5181A	MY49061013	Oct.29,14	1 Year
2.	Amplifier	AR	25A250A	19152	NCR	NCR
3.	Amplifier	AR	100A250	19368	NCR	NCR
4.	Power meter	HP	436A	2016A07891	Apr.28,14	1Year
5.	Power sensor	Agilent	8482B	MY41090514	Nov.06,14	1Year
6.	CDN	FCC	FCC-801-M2-25	47	Apr.28,14	1 Year
7.	CDN	FCC	FCC-801-M3-25	107	Apr.28,14	1 Year
8.	CDN	FCC	FCC-801-M2-25	07035	Apr.28,14	1 Year
9.	CDN	FCC	FCC-801-M3-25	07045	Apr.28,14	1 Year
10.	PC	N/A	N/A	N/A	N/A	N/A
11.	Attenuator	Weinschel	40-6-34	LJ092	Apr.28,14	1 Year
12.	EM Injection Clamp	FCC	F-203I-23mm	403	Apr.28,14	1 Year
13.	RF Cable	MICABLE	A04-07-07-2M	09111340	NCR	NCR
14.	RF Cable	STORM	MFR-57500	90-195-2MTR	NCR	NCR
15.	Test Software	AUDIX	I2	3.2010-1-8	N/A	N/A
Note: NCR: No calibration required(calibrated with system)						

13.2.Block Diagram of Test Setup



13.3.Test Standard

EN 55024: 2010 (IEC 61000-4-6: 2013),
Severity Level 2 at 3V (rms) and frequency is from 0.15MHz to 80MHz

13.4.Severity Levels and Performance Criterion

Severity Level	Voltage Level (e.m.f.) V	Performance criterion
1	1	A
2	3	
3	10	
X	Special	

13.5.EUT Configuration

The configuration of EUT are listed in Section 3.5.

13.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 13.2.

13.7. Test Procedure

1) Set up the EUT, CDN and test generators as shown on Section 13.2.
2) Let the EUT work in test mode and measure it.
3) The EUT are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).
4) The disturbance signal described below is injected to EUT through CDN.
5) The EUT operates within its operational mode(s) under intended climatic conditions after power on.
6) The frequency range is swept from 150kHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1kHz sine wave.
7) The rate of sweep shall not exceed $1.5*10^{-3}$decades/s. Where the frequency is swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.
8) Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.

13.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Injected Currents Susceptibility Test Results

Audix Technology (Shenzhen)Co.,Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Mar. 23, 2015
EUT	:	31.5"(80cm)LCD Monitor	Temperature	:	22.8±0.6℃
M/N	:	BDL3230QL	Humidity	:	50±3%
Power Supply	:	AC 230V/50Hz	Test Mode	:	As Section 3.6
Test Engineer	:	Mark	Pressure	:	101.7±1kPa
Required Performance	:	A	Actual Performance	:	A

Frequency Range (MHz)	Injected Position	Voltage Level (e.m.f.)	Required	Observation	Result (Pass / Fail)
0.15 ~ 20	AC Mains	3V	A	A	PASS
20 ~ 80	AC Mains	3V	A	A	PASS
0.15 ~ 20	Signal Line	3V	A	A	PASS
20 ~ 80	Signal Line	3V	A	A	PASS

Modulation Signal:1kHz 80% AM

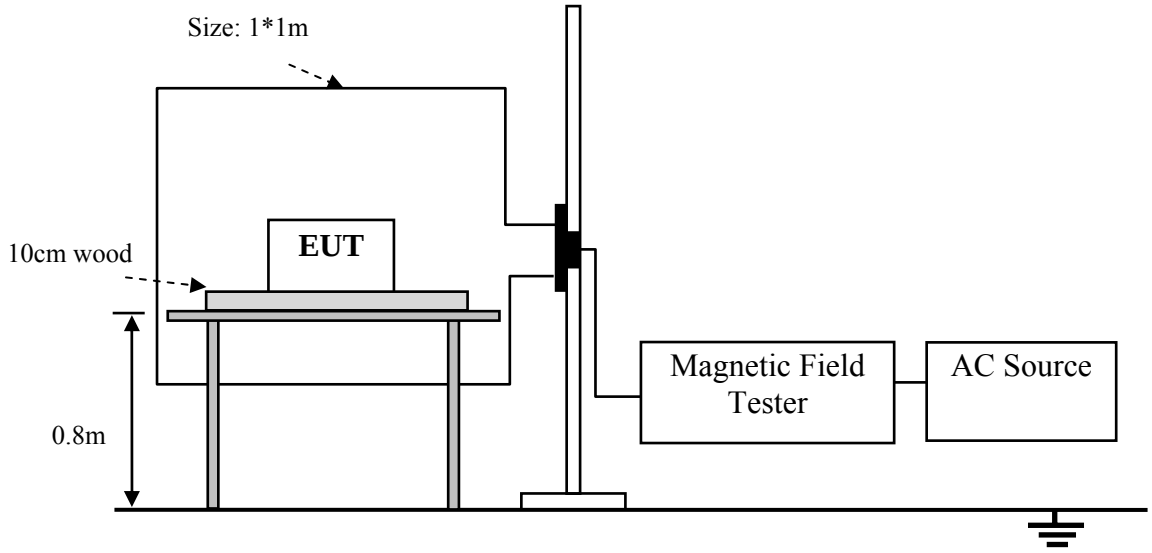
Remark:

14. MAGNETIC FIELD IMMUNITY TEST

14.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Magnetic Field Tester	HEAFELY	MAG100.1	083858-10	Apr. 28,14	1 Year

14.2.Block Diagram of Test Setup



14.3.Test Standard

EN 55024: 2010 (IEC 61000-4-8: 2009)
Severity Level 1 at 1A/m

14.4.Severity Levels and Performance Criterion

Severity Level	Magnetic Field Strength A/m	Performance criterion
1.	1	A
2.	3	
3.	10	
4.	30	
5.	100	
X.	Special	

14.5.EUT Configuration on Test

The configuration of EUT are listed in Section 3.5.

14.6.Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 14.2.

14.7.Test Procedure

The EUT shall be subjected to the test magnetic field by using the induction coil of standard dimensions (1m*1m) and shown in Section 14.2. The induction coil shall then be rotated by 90 °in order to expose the EUT to the test field with different orientations.

14.8.Test Results

PASS.
The EUT was tested and all the test results are listed in next page.

Magnetic Field Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Mar. 23, 2015
EUT	:	31.5"(80cm)LCD Monitor	Temperature	:	22.8±0.6℃
M/N	:	BDL3230QL	Humidity	:	50±3%
Test Voltage	:	AC 230V/50Hz	Test Mode	:	As Section 3.6
Test Engineer	:	Mark	Pressure	:	101.7±1kPa
Required Performance	:	A	Actual Performance	:	A

Test Level	Testing Duration	Coil Orientation	Required	Observation	Result(Pass/Fail)
1A/m	5 min / coil	X	A	A	PASS
1A/m	5 min / coil	Y	A	A	PASS
1A/m	5 min / coil	Z	A	A	PASS

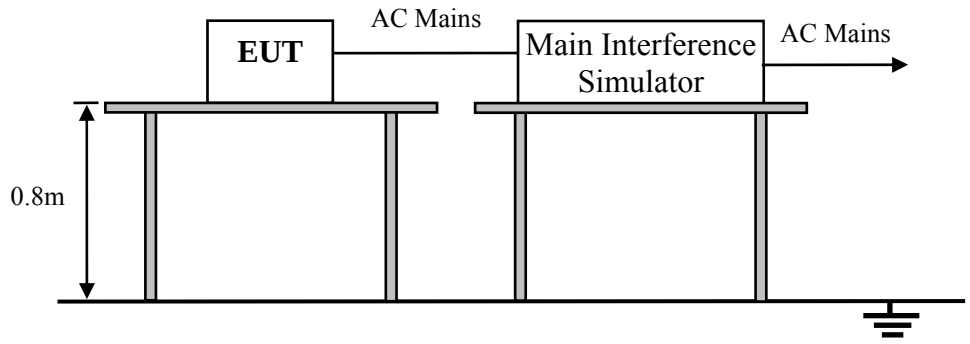
Remark:

15. VOLTAGE DIPS AND INTERRUPTIONS IMMUNITY TEST

15.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Main Interference Simulator	HAEFELY	PLINE 1610	083690-05	Apr. 28,14	1 Year

15.2. Block Diagram of Test Setup



15.3. Test Standard

EN 55024: 2008 (IEC 61000-4-11: 2004)

15.4. Severity Levels and Performance Criterion

Test Level %U_T	Voltage dip and short interruptions %U_T	Duration (in period)	Performance Criterion
0	100	250	C
0	100	0.5	B
70	30	25	C

15.5. EUT Configuration

The configuration of EUT are listed in Section 3.5.

15.6. Operating Condition of EUT

Same as Conducted Emission test which is listed in Section 3.6. except the test set up replaced by Section 15.2.

15.7. Test Procedure

1) The EUT and test generator were setup as shown on Section 15.2
2) The interruptions is introduced at selected phase angles with specified duration.
3) Record any degradation of performance.

15.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Voltage Dips And Interruptions Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Mar. 23, 2015
EUT	:	31.5"(80cm)LCD Monitor	Temperature	:	22.8±0.6℃
M/N	:	BDL3230QL	Humidity	:	50±3%
Power Supply	:	AC 230V/50Hz	Test Mode	:	As Section 3.6
Test Engineer	:	Mark	Pressure	:	101.7±1kPa
Required Performance	:	B & C	Actual Performance	:	A & C

Test Level % U_T	Voltage Dips & Short Interruptions % U_T	Duration (in period)	Phase Angle	Required	Observation	Result (Pass / Fail)
0	100	0.5P	0° -360°	B	A	PASS
70	30	25P	0° -360°	C	A	PASS
0	100	250P	0° -360°	C	C	PASS

Note 1: U_T is the rated voltage for the equipment.
Note 2:The frequency of the test voltage shall be within ±2% of the rated frequency, the output voltage shall be within ±5% of the rated voltage.

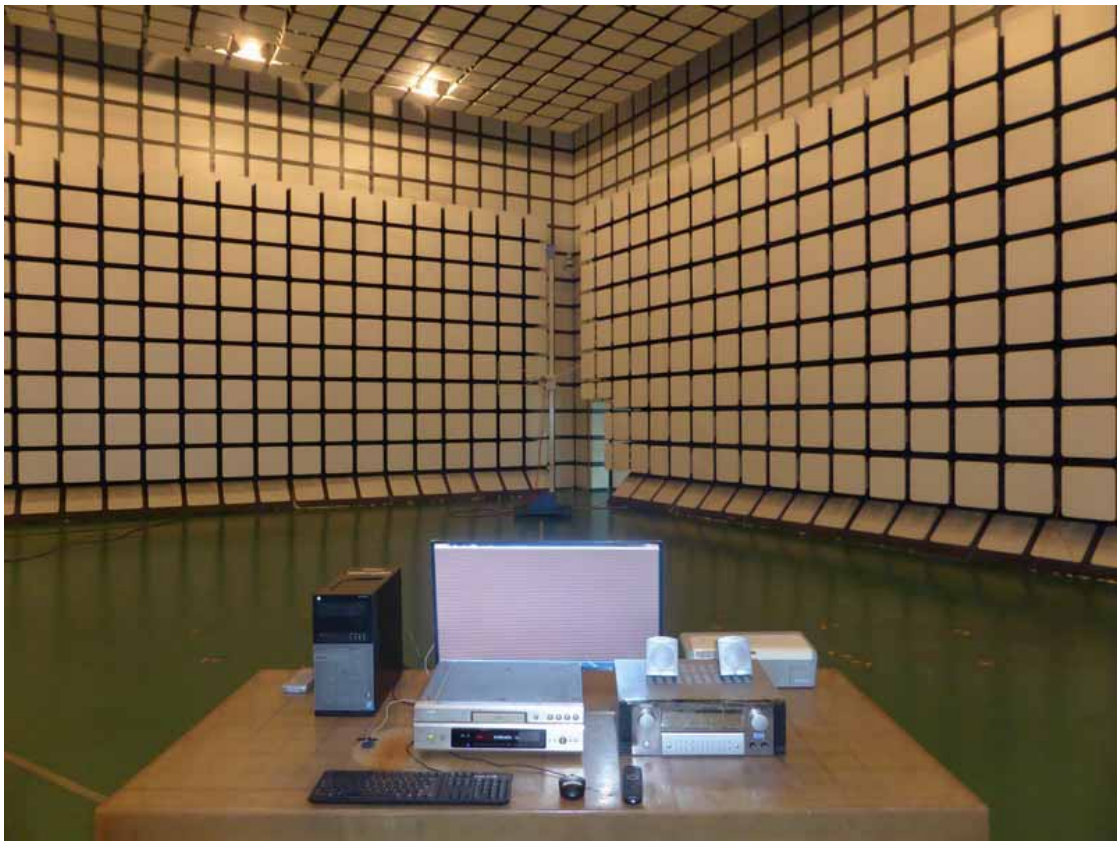
Remark: The class "C" means the EUT will resetart and data transmitting from USB Port will interrupt and need to recover by manual.

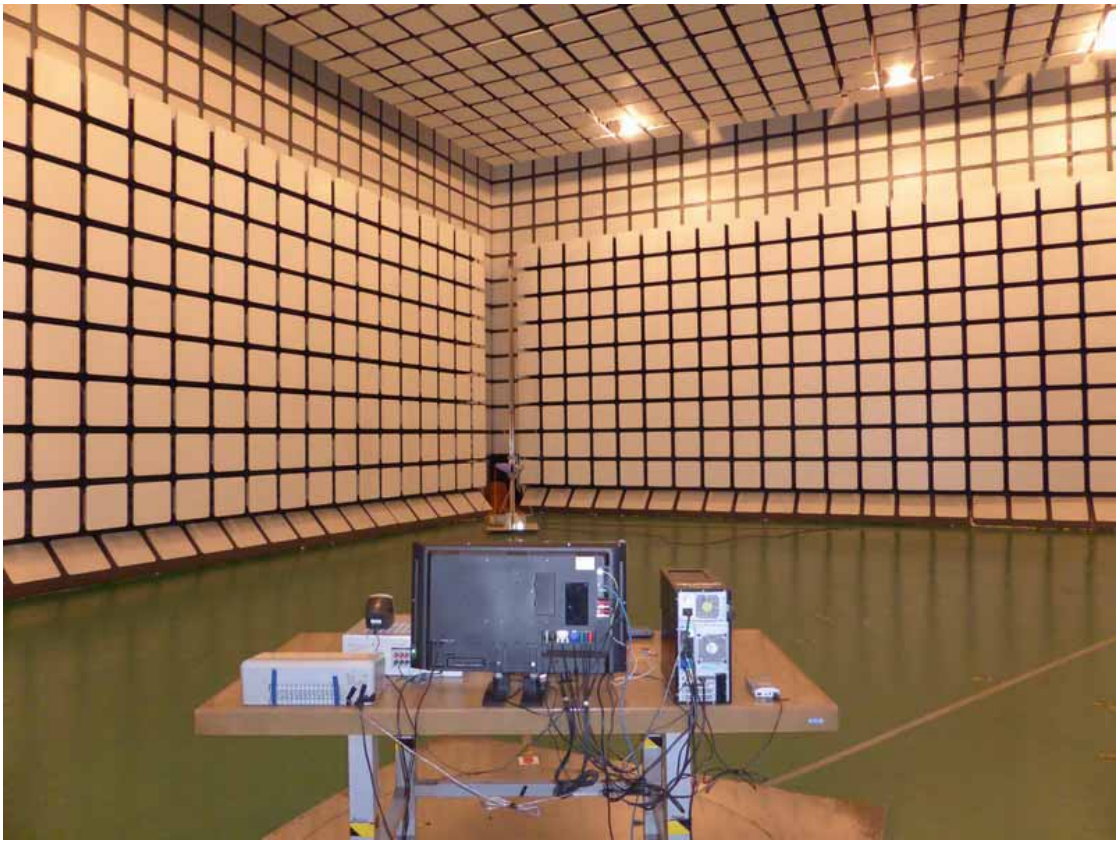
16. PHOTOGRAPH

16.1.Photos of Power Line Conducted Emission Test

16.2.Conducted Disturbance At Telecommunication Ports Test

16.3.Photos of Radiated Emission Test (In Anechoic Chamber)

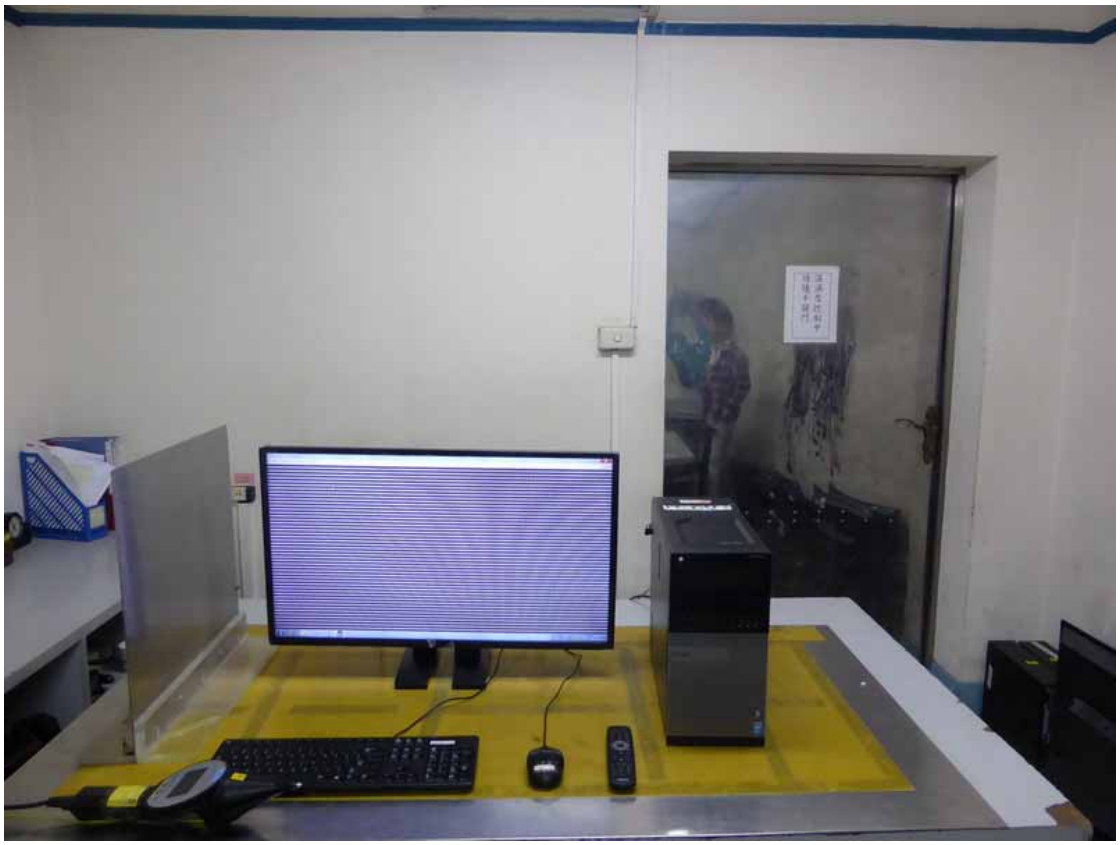




(At Anechoic 10m Chamber Test 1GHz –6GHz)

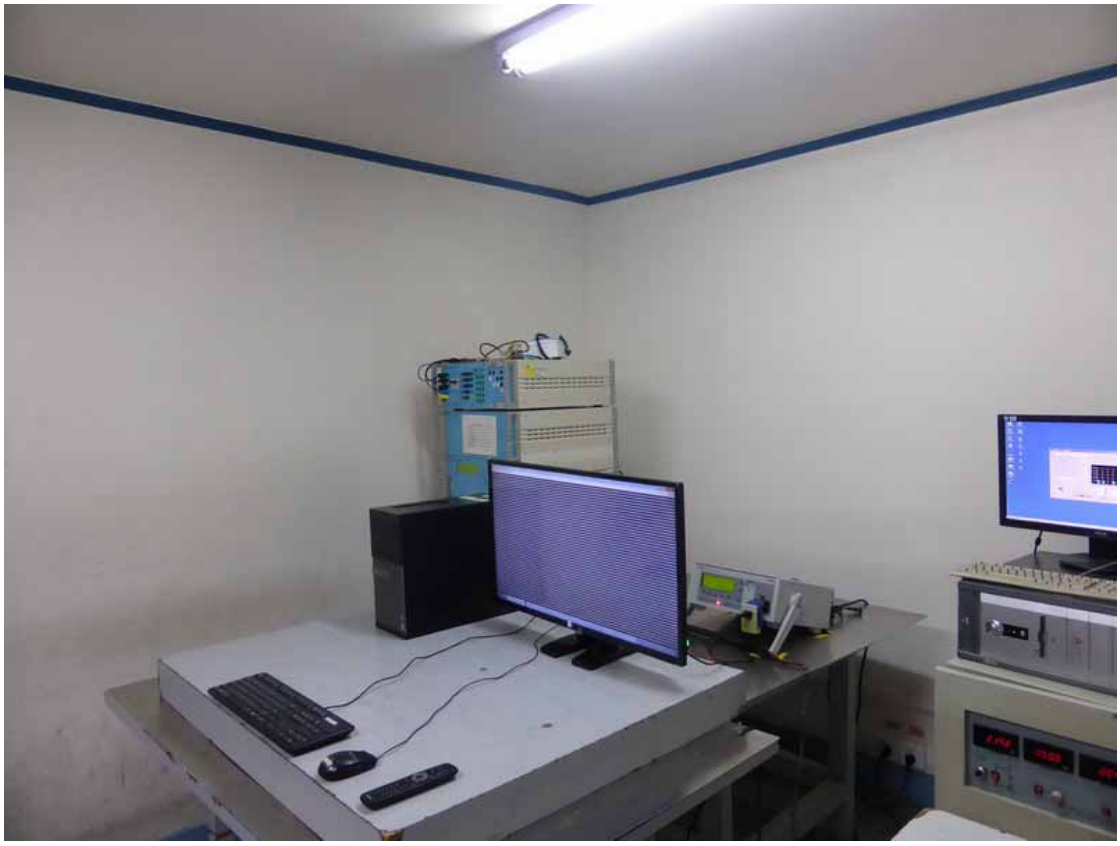
16.4.Photos of Harmonic & Flicker Test

16.5.Photos of Electrostatic Discharge Immunity Test



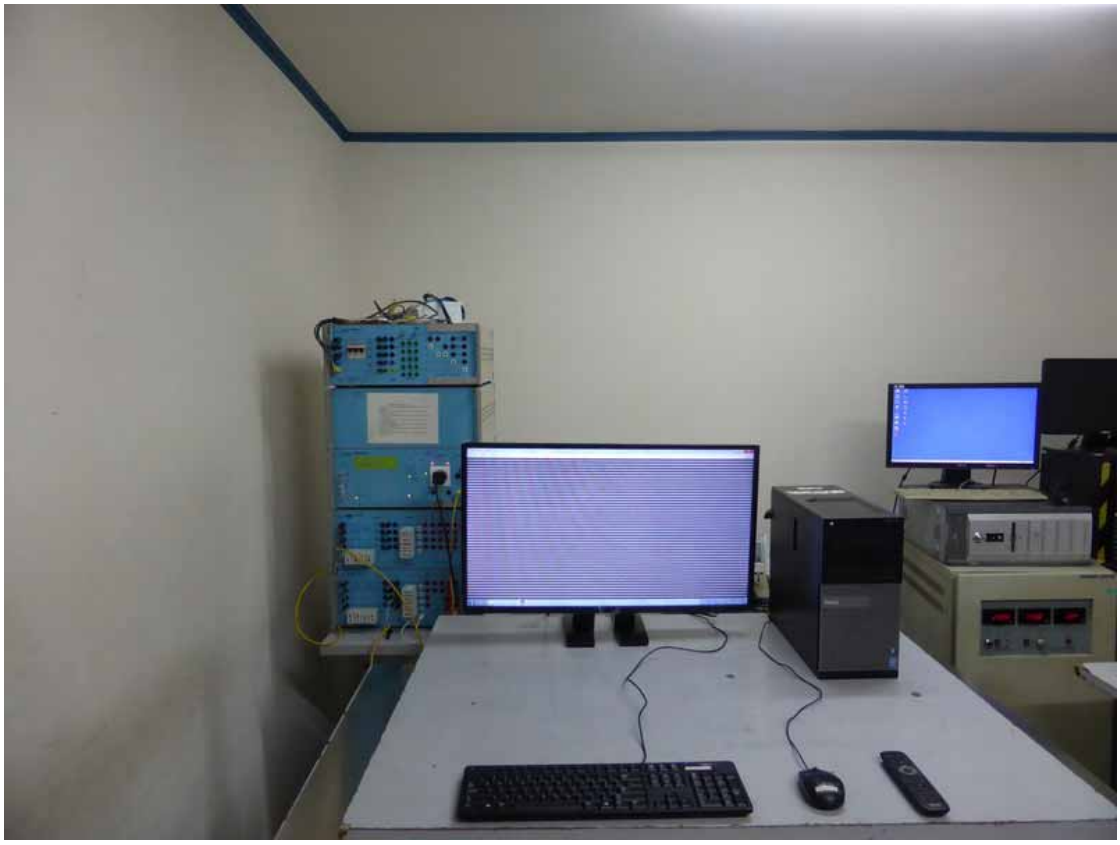
16.6.Photos of RF Strength Susceptibility Test

16.7.Photos of Electrical Fast Transient/Burst Immunity Test



Signal Line

16.8.Photo of Surge Test

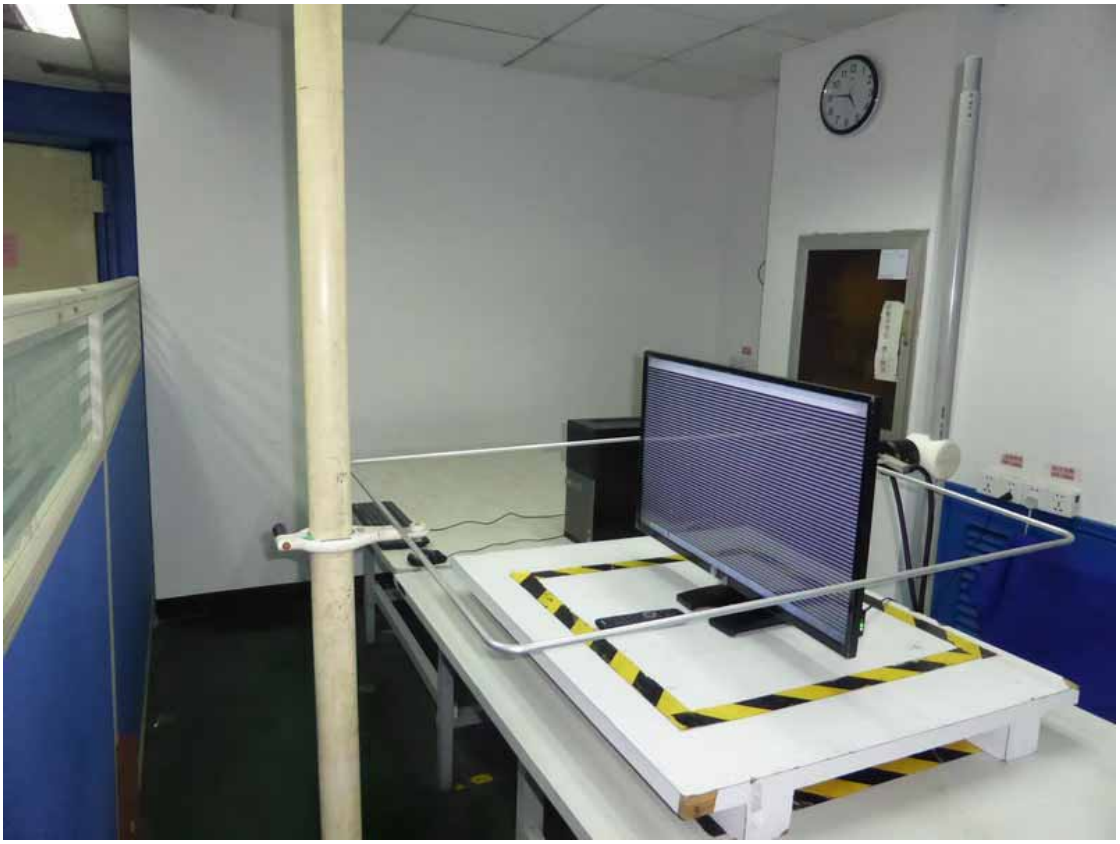


Signal Line

16.9.Photo of Injected Currents Susceptibility Test

Signal Line

16.10.Photo of Magnetic Field Test



16.11.Photo of Voltage Dips and interruptions test

16.12.Partner PC System