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# Technical Compliance Statement

No. ACS-E15155

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.
PHILIPS	BDL3230QL; BDL3230*****

Test Standards :	
EN 55013: 2013	Limits and methods of measurement of radio Emission characteristics of broadcast receivers 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 55020: 2007+A11: 2011	Sound and television broadcast receivers and associated 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



信華科技(深圳)有限公司

Audix Technology (Shenzhen) Co., Ltd.

EMC 部門報告專用章

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Signature

David Jin

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.

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.

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Report Number : ACS-E15155

Date of Test : Mar. 19~31, 2015

Date of Report : Apr. 08, 2015

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### 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.
	PHILIPS	BDL3230QL; BDL3230*****

(B) Serial No. : N/A

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

Test Procedure Used:

EN 55013: 2013

EN 61000-3-2: 2006+A1: 2009+A2: 2009, EN 61000-3-3: 2013

EN 55020: 2007+A11: 2011

(IEC 61000-4-2: 2008, IEC 61000-4-3: 2010, IEC 61000-4-4: 2012)

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the EN 55013, EN 61000-3-2, EN 61000-3-3 and EN 55020 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. 19~31, 2015 Report of date: Apr. 08, 2015

Prepared by : *Miya Zhou* Reviewed by : *Jack Zhong*  
Miya Zhou / Assistant Jack Zhong / Assistant Manager

信華科技 (深圳) 有限公司  
Audix Technology (Shenzhen) Co., Ltd.  
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Stamp only for EMC Dept. Report

Signature *David Jin 4.8*  
David Jin / Manager

Approved & Authorized Signer :

# 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( EN 55013: 2013)				
Description of Test Item	Standard	Results	Remark	
Conducted Emission at mains terminals	EN 55013: 2013	PASS	Minimum passing margin is 8.29dB at 3.173MHz	
Radiated Emission	EN 55013: 2013	N/A	N/A	
Emission Power Clamp	EN 55013: 2013	PASS	Minimum passing margin is 13.45dB at 37.560MHz	
Emission voltage at the antenna terminals	EN 55013: 2013	N/A	N/A	
Wanted Signal and Emission Voltage AT The RF Output	EN 55013: 2013	N/A	N/A	
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 55020: 2007+A11: 2011)				
Description of Test Item	Basic Standard	Results	Performance Criteria	Observation Criteria
Electrostatic discharge (ESD)	IEC 61000-4-2: 2008	PASS	B	A & B
Electrical fast transient (EFT)	IEC 61000-4-4: 2012	PASS	B	A & B
S1: Input Immunity	EN 55020: 2007+A11: 2011	N/A	N/A	N/A
S2A: RF Voltage Input Interference	EN 55020: 2007+A11: 2011	PASS	A	A
S2B: RF Voltage (In common made)	EN 55020: 2007+A11: 2011	N/A	N/A	N/A
S3: Ambient Electromagnetic Field	EN 55020: 2007+A11: 2011	N/A	N/A	N/A
S4: Screening Effectiveness	EN 55020: 2007+A11: 2011	N/A	N/A	N/A
S5: RF e.m. field keyed carrier test	EN 55020: 2007+A11: 2011	PASS	A	A
S3: Ambient Electromagnetic Field	EN 55020: 2007+A11: 2011	PASS	A	A
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	Brand Name	Model No.
	PHILIPS	BDL3230QL; BDL3230*****

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

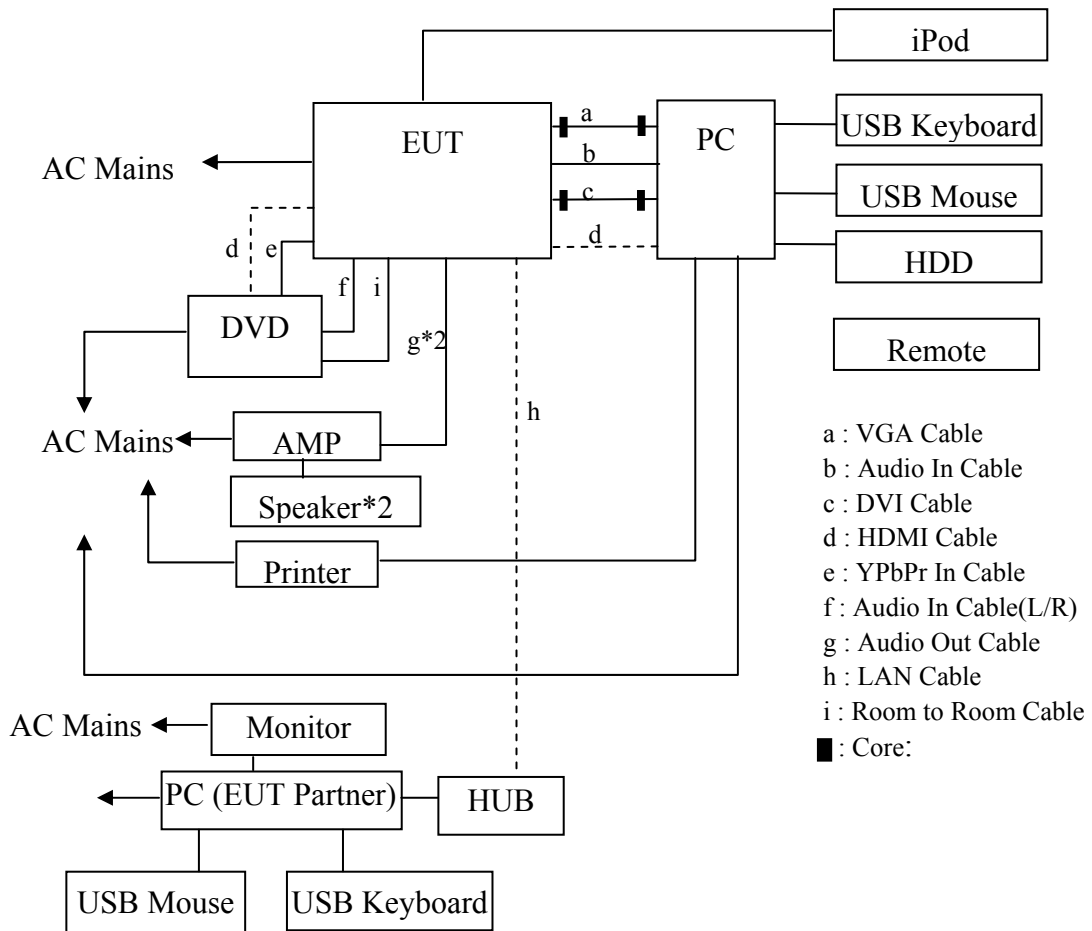
Manufacturer #8	:	Hefei Huntkey Display Technology Co.,Ltd. South Jinxiu Road, East Qingtan Road, Economic And Technological Development Zone, Hefei
Manufacturer #9	:	TREND SMART CE MEXICO S. DE R.L. DE C.V. Avenida Sor Juana Ines de la Cruz No. 19602 Parque Industrial la Frontera Fracc. Nueva Tijuana (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. 19~31, 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	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> 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	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: T3A002
		Power Cord: shielded, Undetachable, 2.0m				
3.	USB Mouse	ACS-EMC-M03R	DELL	M0C5UO	512023253	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R41108
		Power Cord: shielded, Undetachable, 1.8m				
4.	Printer	ACS-EMC-PT04	HP	C9079A	-	<input type="checkbox"/> FCC ID <input checked="" type="checkbox"/> BSMI ID
		USB Cable: shielded, Detachable, 1.5m Power Cord: Unshielded, Detachable, 1.8m Power Adaptor: HP, 0957-2119, DC Cable: Unshielded, Detachable, 1.5m				
5.	HDD	ACS-EMC-HDD01	Terasys	F12-UF	A0100215-5390018	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID
		USB Cable: shielded, Detachable, 1.0m				
6.	DVD	ACS-EMC-DVD01	DENON	DVD-3910	4098400342E	<input type="checkbox"/> FCC ID <input type="checkbox"/> BSMI ID
		Audio In (L/R)Cable: Shielded, Detachable, 1.8m Component In Cable: Shielded, Detachable, 1.8m Room to Room In Cable: Shielded, Detachable, 1.8m Power Cord: Unshielded, Detachable , 1.8m				
7.	iPod	ACS-EMC-IPS11	APPLE	A1373	Cc4JC9VSF4VF	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R33057
		Data Cable: Shielded, Detachable, 1.0m				
8.	Power Amplifier	ACS-EMC-AMP01	SANGU	AV-805	N/A	<input type="checkbox"/> FCC ID <input type="checkbox"/> BSMI ID
		Audio Out (L/R)Cable: Shielded, Detachable, 1.8m Speaker :Manufacturer: Shark M/N: HTW-615 External Speaker: 8Ω,15W				

2.3. Block Diagram of connection between EUT and simulators



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 )**

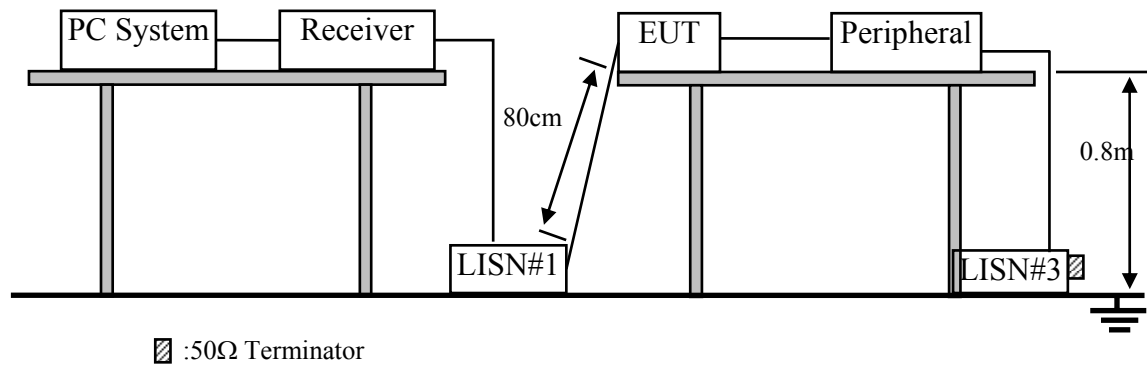
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.1 dB (150kHz to 30MHz)
Uncertainty for Power Clamp Test	3.5 dB
Uncertainty for Flicker test	5.2%
Uncertainty for Harmonic test	9.4%
EN 55020 S3	0.7 dB
Uncertainty for Temperature and humidity test for ETSI	3%
	0.6

### 3. POWER LINE CONDUCTED EMISSION TEST

#### 3.1. Test Equipment

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 55013: 2013

#### 3.4. Power Line Conducted Emission Limit

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

- Notes: 1. \*Decreasing linearly with logarithm of frequency.  
2. 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 55013 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 simulators as shown in Section 3.2.

3.6.2.Turn on the power of all equipments.

3.6.3.Let the EUT work in test modes(HDMI In / AV In / Ypbpr In / USB In) and test it.

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 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The side of power line was 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 55013 on 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 results are reported on Section 3.8.

3.8.Conducted Emission at Mains Terminals 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. 1~4) to read Q.P and Average 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

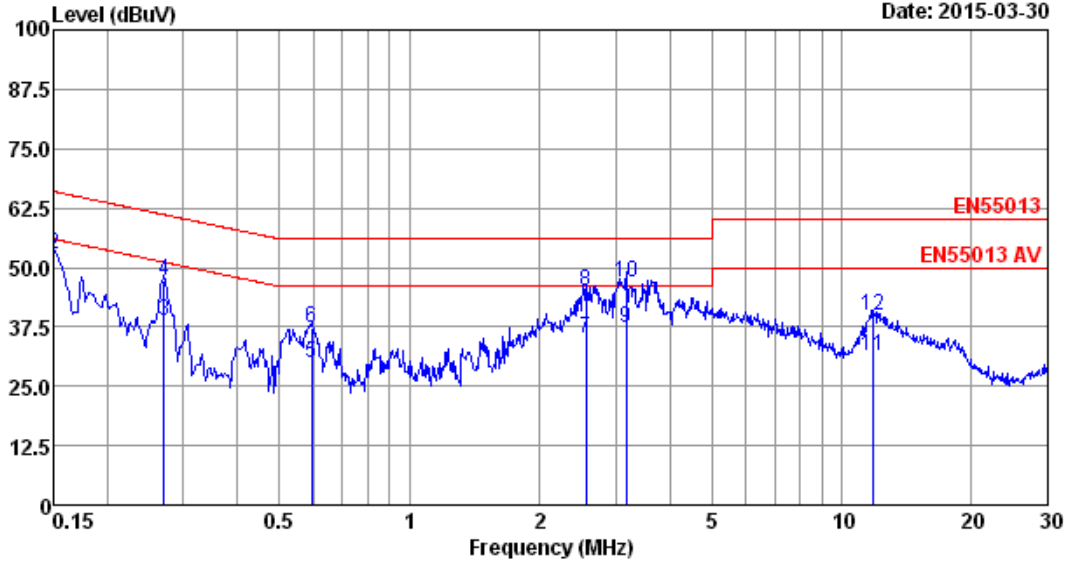
Humidity: 53.3%                                      Pressure: 101.4kPa

The details of test modes are as follows :

No.	Test Mode	Input Port	Resolution & Frequency	Reference Test Data No.	
				LINE	NEUTRAL
1.	DVD Mode	HDMI	1080P	# 33	# 34
2.		AV In	AV In	# 35	# 36
3.		Ypbpr In	Ypbpr In	# 37	# 38
4.	USB Reading	USB	USB Reading	# 39	# 40

( Worst test mode)

Data: 33 File: E:\2015 Report Data-CE\ITPVACS15Q0206.EM6 (92) Date: 2015-03-30

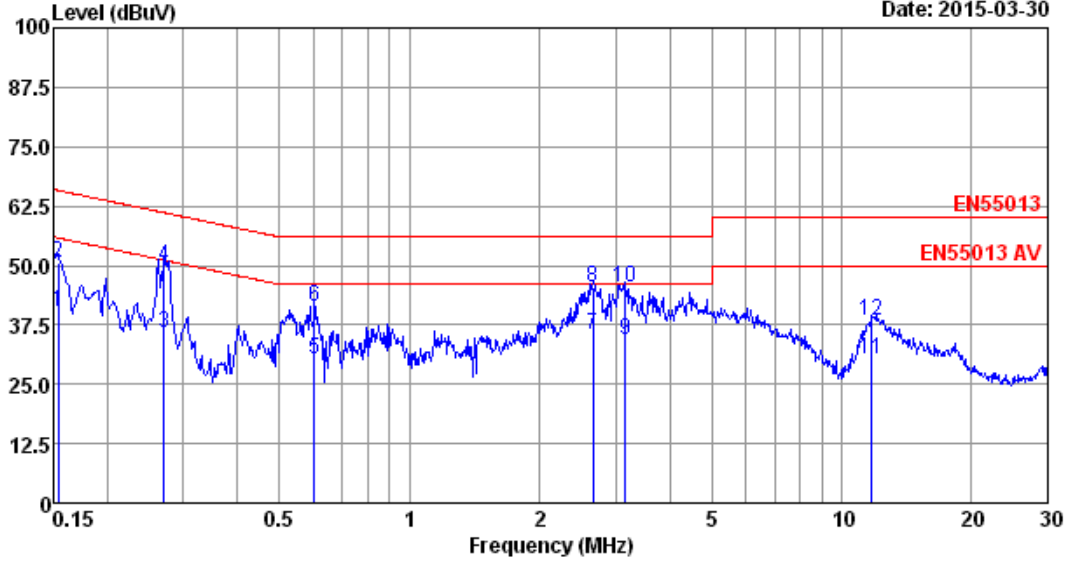


Site no :2# Conduction Data No :33  
 Dis./Lisn :14 ENV4200 L1 LISN phase:LINE  
 Limit :EN55013 Pre :101.4kPa  
 Env./Ins. :22.9°C/53.3% Engineer :Nick\_Huang  
 EUT :BDL3230QL  
 Power Rating :AC 230V/50Hz  
 Test Mode :DVD Playing  
 HDMI:1080P  
 Line:1.8m

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	20.32	40.10	56.00	15.90	Average
2	0.150	9.88	9.90	32.99	52.77	66.00	13.23	QP
3	0.270	9.90	9.89	18.95	38.74	51.12	12.38	Average
4	0.270	9.90	9.89	27.61	47.40	61.12	13.72	QP
5	0.595	9.79	9.89	10.30	29.98	46.00	16.02	Average
6	0.595	9.79	9.89	17.62	37.30	56.00	18.70	QP
7	2.567	9.77	9.91	15.45	35.13	46.00	10.87	Average
8	2.567	9.77	9.91	25.44	45.12	56.00	10.88	QP
9	3.173	9.76	9.92	17.69	37.37	46.00	8.63	Average
10	3.173	9.76	9.92	27.34	47.02	56.00	8.98	QP
11	11.807	9.75	9.98	11.75	31.48	50.00	18.52	Average
12	11.807	9.75	9.98	20.19	39.92	60.00	20.08	QP

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

Data: 34 File: E:\2015 Report Data-CE\ITPVACS15Q0206.EM6 (92) Date: 2015-03-30

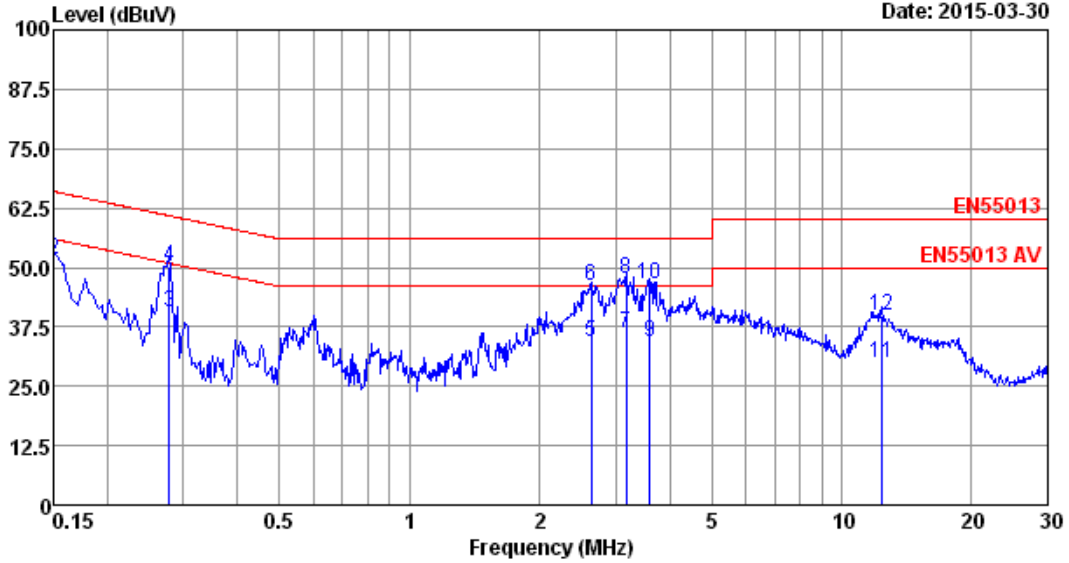


Site no	:2# Conduction	Data No	:34
Dis./Lisn	:14 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN55013	Pre	:101.4kPa
Env./Ins.	:22.9°C/53.3%	Engineer	:Nick_Huang
EUT	:BDL3230QL		
Power Rating	:AC 230V/50Hz		
Test Mode	:DVD Playing		
	HDMI:1080P		
	Line:1.8m		

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	20.56	40.38	55.78	15.40	Average
2	0.154	9.92	9.90	30.76	50.58	65.78	15.20	QP
3	0.270	9.89	9.89	15.97	35.75	51.12	15.37	Average
4	0.270	9.89	9.89	29.98	49.76	61.12	11.36	QP
5	0.601	9.87	9.89	10.52	30.28	46.00	15.72	Average
6	0.601	9.87	9.89	21.56	41.32	56.00	14.68	QP
7	2.664	9.75	9.91	15.68	35.34	46.00	10.66	Average
8	2.664	9.75	9.91	25.77	45.43	56.00	10.57	QP
9	3.156	9.75	9.92	14.78	34.45	46.00	11.55	Average
10	3.156	9.75	9.92	25.90	45.57	56.00	10.43	QP
11	11.745	9.77	9.98	10.33	30.08	50.00	19.92	Average
12	11.745	9.77	9.98	18.63	38.38	60.00	21.62	QP

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

Data: 35 File: E:\2015 Report Data-CE\ITPVACS15Q0206.EM6 (92) Date: 2015-03-30



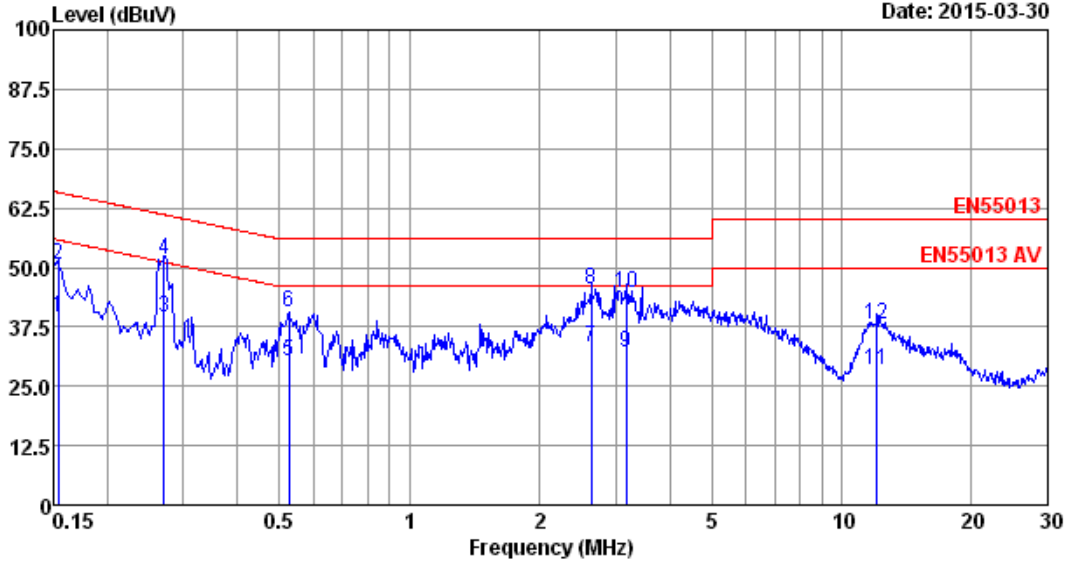
Site no	:2# Conduction	Data No	:35
Dis./Lisn	:14 ENV4200 L1	LISN phase:	LINE
Limit	:EN55013	Pre	:101.4kPa
Env./Ins.	:22.9°C/53.3%	Engineer	:Nick_Huang
EUT	:BDL3230QL		
Power Rating	:AC 230V/50Hz		
Test Mode	:DVD Playing		
	AV In		
	Line:1.8m		

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	20.59	40.37	56.00	15.63	Average
2	0.150	9.88	9.90	31.77	51.55	66.00	14.45	QP
3	0.277	9.89	9.89	20.80	40.58	50.90	10.32	Average
4	0.277	9.89	9.89	30.24	50.02	60.90	10.88	QP
5	2.636	9.77	9.91	14.57	34.25	46.00	11.75	Average
6	2.636	9.77	9.91	26.32	46.00	56.00	10.00	QP
7	3.173	9.76	9.92	16.63	36.31	46.00	9.69	Average
8	3.173	9.76	9.92	28.03	47.71	56.00	8.29	QP
9	3.603	9.75	9.92	14.79	34.46	46.00	11.54	Average
10	3.603	9.75	9.92	26.82	46.49	56.00	9.51	QP
11	12.384	9.76	9.99	10.29	30.04	50.00	19.96	Average
12	12.384	9.76	9.99	20.13	39.88	60.00	20.12	QP

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



Data: 36 File: E:\2015 Report Data-CE\ITPVACS15Q0206.EM6 (92) Date: 2015-03-30

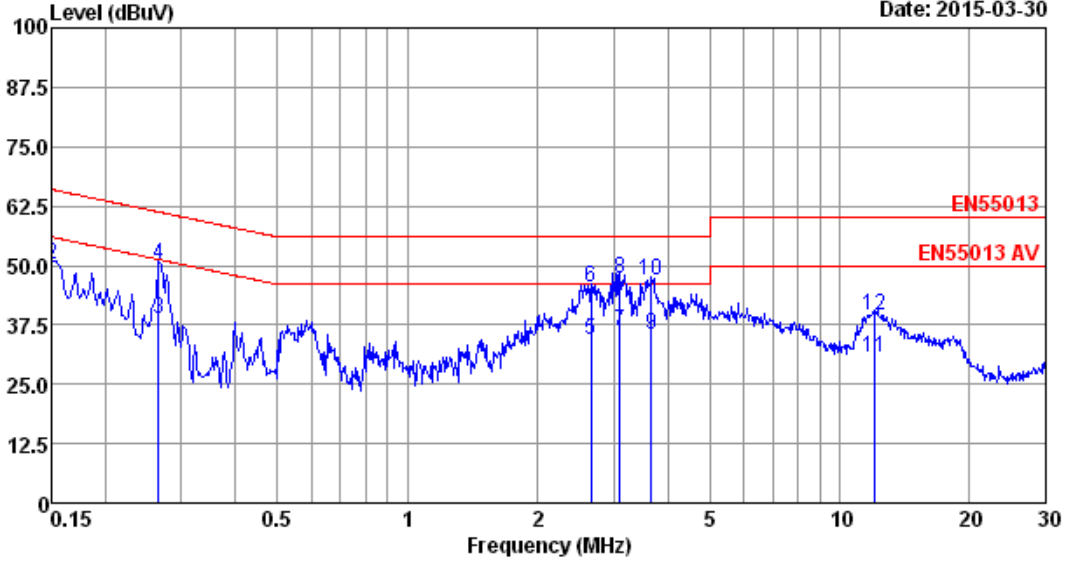


Site no	:2# Conduction	Data No	:36
Dis./Lisn	:14 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN55013	Pre	:101.4kPa
Env./Ins.	:22.9°C/53.3%	Engineer	:Nick_Huang
EUT	:BDL3230QL		
Power Rating	:AC 230V/50Hz		
Test Mode	:DVD Playing		
	AV In		
	Line:1.8m		

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	19.63	39.45	55.78	16.33	Average
2	0.154	9.92	9.90	30.70	50.52	65.78	15.26	QP
3	0.270	9.89	9.89	19.59	39.37	51.12	11.75	Average
4	0.270	9.89	9.89	31.72	51.50	61.12	9.62	QP
5	0.527	9.88	9.89	10.54	30.31	46.00	15.69	Average
6	0.527	9.88	9.89	20.66	40.43	56.00	15.57	QP
7	2.636	9.75	9.91	13.63	33.29	46.00	12.71	Average
8	2.636	9.75	9.91	25.65	45.31	56.00	10.69	QP
9	3.173	9.75	9.92	12.52	32.19	46.00	13.81	Average
10	3.173	9.75	9.92	24.96	44.63	56.00	11.37	QP
11	12.060	9.77	9.98	8.75	28.50	50.00	21.50	Average
12	12.060	9.77	9.98	18.33	38.08	60.00	21.92	QP

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

Data: 37 File: E:\2015 Report Data-CE\ITPVACS15Q0206.EM6 (92) Date: 2015-03-30

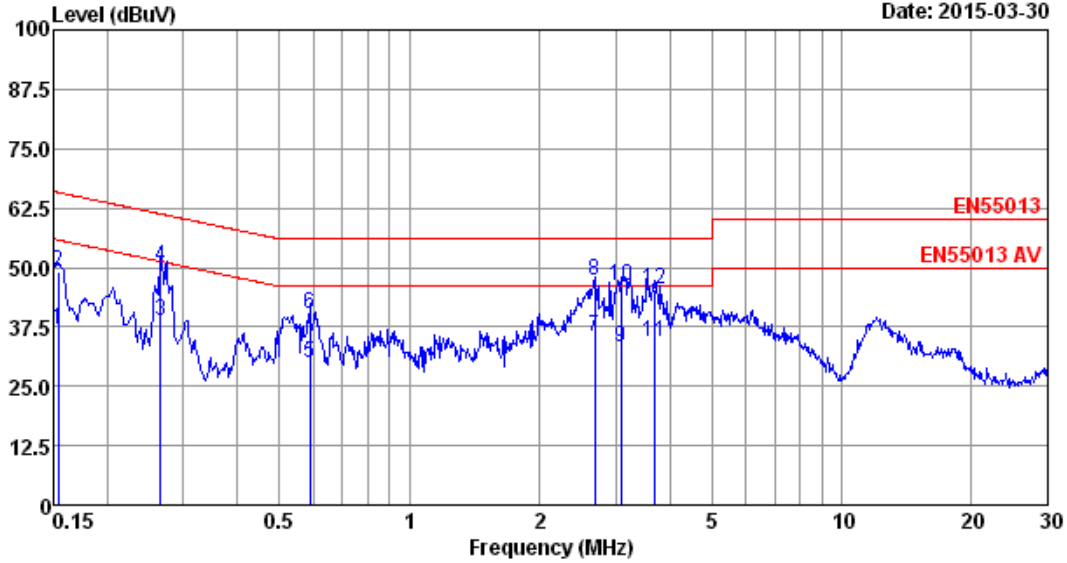


Site no	:2# Conduction	Data No	:37
Dis./Lisn	:14 ENV4200 L1	LISN phase:	LINE
Limit	:EN55013	Pre	:101.4kPa
Env./Ins.	:22.9°C/53.3%	Engineer	:Nick_Huang
EUT	:BDL3230QL		
Power Rating	:AC 230V/50Hz		
Test Mode	:DVD Playing		
	YPbPr In		
	Line:1.8m		

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	16.63	36.41	56.00	19.59	Average
2	0.150	9.88	9.90	30.32	50.10	66.00	15.90	QP
3	0.266	9.90	9.89	18.85	38.64	51.25	12.61	Average
4	0.266	9.90	9.89	30.31	50.10	61.25	11.15	QP
5	2.664	9.77	9.91	14.57	34.25	46.00	11.75	Average
6	2.664	9.77	9.91	25.55	45.23	56.00	10.77	QP
7	3.107	9.76	9.92	16.63	36.31	46.00	9.69	Average
8	3.107	9.76	9.92	27.68	47.36	56.00	8.64	QP
9	3.661	9.75	9.92	15.79	35.46	46.00	10.54	Average
10	3.661	9.75	9.92	27.07	46.74	56.00	9.26	QP
11	11.996	9.75	9.98	11.03	30.76	50.00	19.24	Average
12	11.996	9.75	9.98	19.69	39.42	60.00	20.58	QP

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

Data: 38 File: E:\2015 Report Data-CE\ITPVACS15Q0206.EM6 (92) Date: 2015-03-30

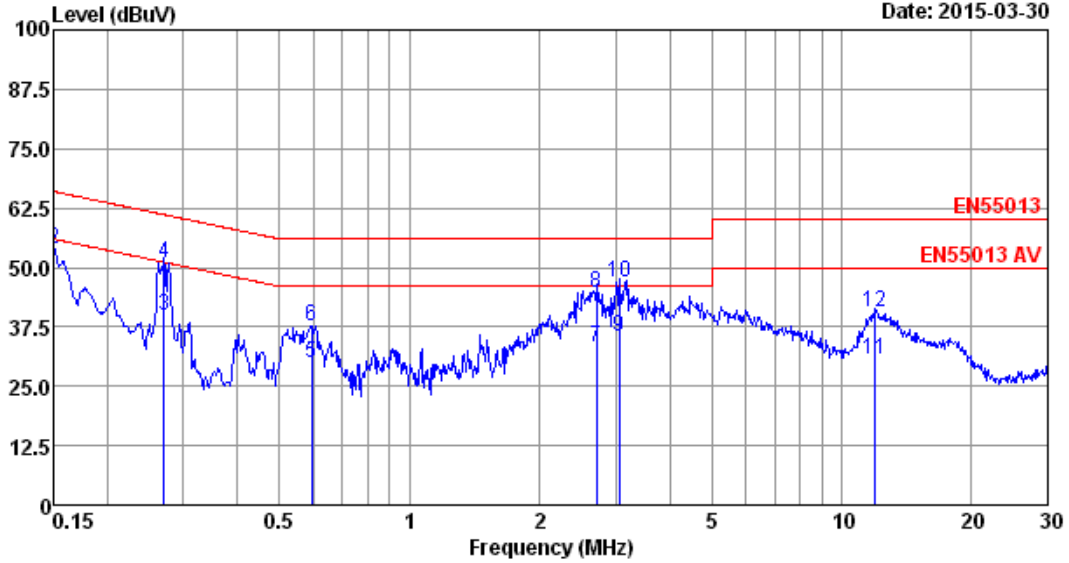


Site no	:2# Conduction	Data No	:38
Dis./Lisn	:14 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN55013	Pre	:101.4kPa
Env./Ins.	:22.9°C/53.3%	Engineer	:Nick_Huang
EUT	:BDL3230QL		
Power Rating	:AC 230V/50Hz		
Test Mode	:DVD Playing		
	YPbPr In		
	Line:1.8m		

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	16.98	36.80	55.78	18.98	Average
2	0.154	9.92	9.90	29.26	49.08	65.78	16.70	QP
3	0.266	9.89	9.89	18.79	38.57	51.25	12.68	Average
4	0.266	9.89	9.89	30.39	50.17	61.25	11.08	QP
5	0.589	9.87	9.89	10.23	29.99	46.00	16.01	Average
6	0.589	9.87	9.89	20.53	40.29	56.00	15.71	QP
7	2.678	9.75	9.91	15.70	35.36	46.00	10.64	Average
8	2.678	9.75	9.91	27.43	47.09	56.00	8.91	QP
9	3.090	9.75	9.92	13.63	33.30	46.00	12.70	Average
10	3.090	9.75	9.92	26.38	46.05	56.00	9.95	QP
11	3.700	9.75	9.92	14.79	34.46	46.00	11.54	Average
12	3.700	9.75	9.92	25.58	45.25	56.00	10.75	QP

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

Data: 39 File: E:\2015 Report Data-CE\ITPVACS15Q0206.EM6 (92) Date: 2015-03-30

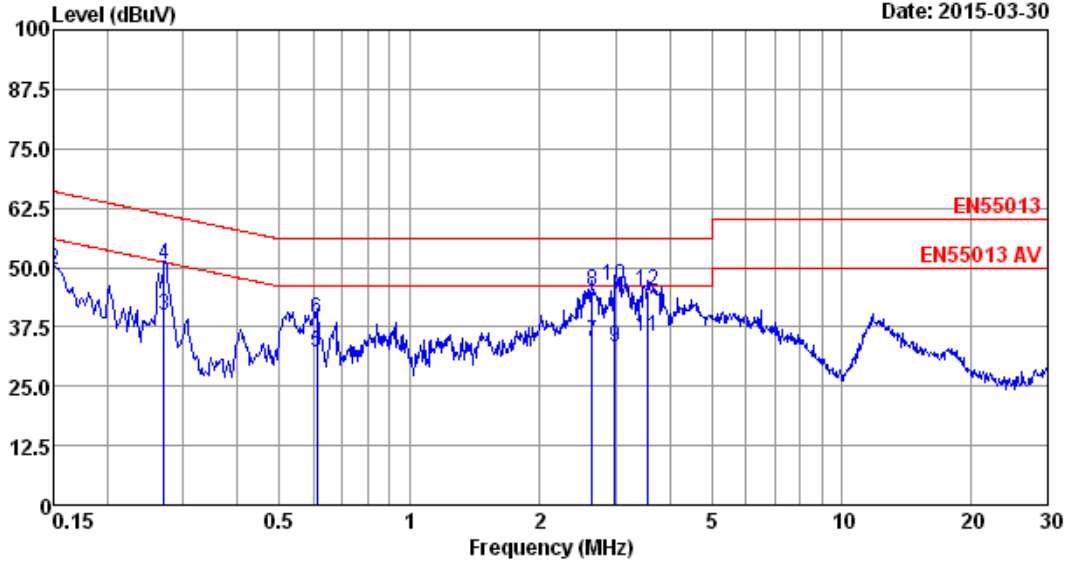


Site no	:2# Conduction	Data No	:39
Dis./Lisn	:14 ENV4200 L1	LISN phase	:LINE
Limit	:EN55013	Pre	:101.4kPa
Env./Ins.	:22.9°C/53.3%	Engineer	:Nick_Huang
EUT	:BDL3230QL		
Power Rating	:AC 230V/50Hz		
Test Mode	:USB Reading		

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	20.15	39.93	56.00	16.07	Average
2	0.150	9.88	9.90	33.97	53.75	66.00	12.25	QP
3	0.270	9.90	9.89	20.03	39.82	51.12	11.30	Average
4	0.270	9.90	9.89	31.14	50.93	61.12	10.19	QP
5	0.595	9.79	9.89	10.25	29.93	46.00	16.07	Average
6	0.595	9.79	9.89	18.02	37.70	56.00	18.30	QP
7	2.707	9.77	9.91	13.63	33.31	46.00	12.69	Average
8	2.707	9.77	9.91	24.90	44.58	56.00	11.42	QP
9	3.058	9.76	9.92	15.87	35.55	46.00	10.45	Average
10	3.058	9.76	9.92	27.04	46.72	56.00	9.28	QP
11	11.933	9.75	9.98	10.79	30.52	50.00	19.48	Average
12	11.933	9.75	9.98	20.68	40.41	60.00	19.59	QP

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

Data: 40 File: E:\2015 Report Data-CEIT\TPVACS15Q0206.EM6 (92) Date: 2015-03-30



Site no	:2# Conduction	Data No	:40
Dis./Lisn	:14 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN55013	Pre	:101.4kPa
Env./Ins.	:22.9°C/53.3%	Engineer	:Nick_Huang
EUT	:BDL3230QL		
Power Rating	:AC 230V/50Hz		
Test Mode	:USB Reading		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	9.92	9.90	16.96	36.78	56.00	19.22	Average
2	0.150	9.92	9.90	29.53	49.35	66.00	16.65	QP
3	0.270	9.89	9.89	20.16	39.94	51.12	11.18	Average
4	0.270	9.89	9.89	30.63	50.41	61.12	10.71	QP
5	0.611	9.87	9.89	12.52	32.28	46.00	13.72	Average
6	0.611	9.87	9.89	19.41	39.17	56.00	16.83	QP
7	2.650	9.75	9.91	14.78	34.44	46.00	11.56	Average
8	2.650	9.75	9.91	25.46	45.12	56.00	10.88	QP
9	2.993	9.75	9.92	13.63	33.30	46.00	12.70	Average
10	2.993	9.75	9.92	26.59	46.26	56.00	9.74	QP
11	3.565	9.75	9.92	15.89	35.56	46.00	10.44	Average
12	3.565	9.75	9.92	25.40	45.07	56.00	10.93	QP

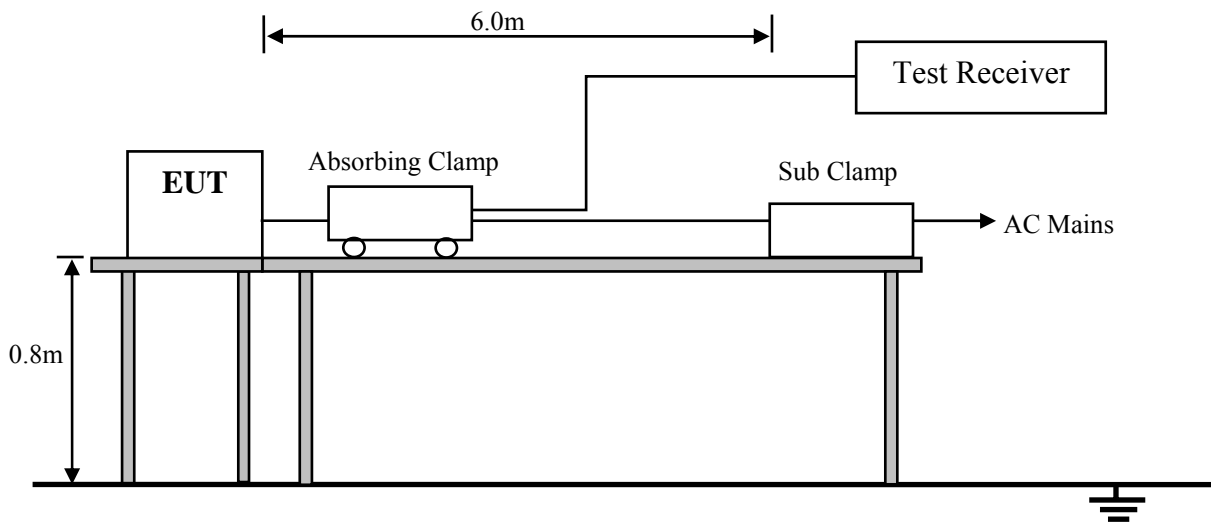
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

## 4. EMISSION POWER TEST

### 4.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	1# 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.	Absorbing Clamp	Rohde & Schwarz	MDS-21	100096	Dec.12,14	1 Year
4.	N50(f-m) 6dB Fixed Attenuator	Agilent	8491A	MY39264395	Dec.12,14	1 Year
5.	RF Cable	Hubersuhner	RG400	NO.1	Apr.28,14	1 Year
6.	Coaxial Switch	Anritsu	MP59B	6201397224	Apr.28,14	1 Year
7.	Test Software	AUDIX	E3	6.2009-5-21a(n)	N/A	N/A

### 4.2. Block Diagram of Test Setup



### 4.3. Emission Power Limit

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

Frequency MHz	Interference Power Limits dB(pW)	
	Quasi-peak Value	Average Value
30 ~ 300	45 Increasing Linearly with Frequency to 55 (Q.P.)	35 Increasing Linearly with Frequency to 45 (A.V.)

### 4.4. EUT Configuration on Test

The configuration of EUT are listed in Section 3.5.

### 4.5. Operating Condition of EUT

4.5.1. Setup the EUT and simulators as shown in Section 4.2.

4.5.2. Turn on the power of all equipments.

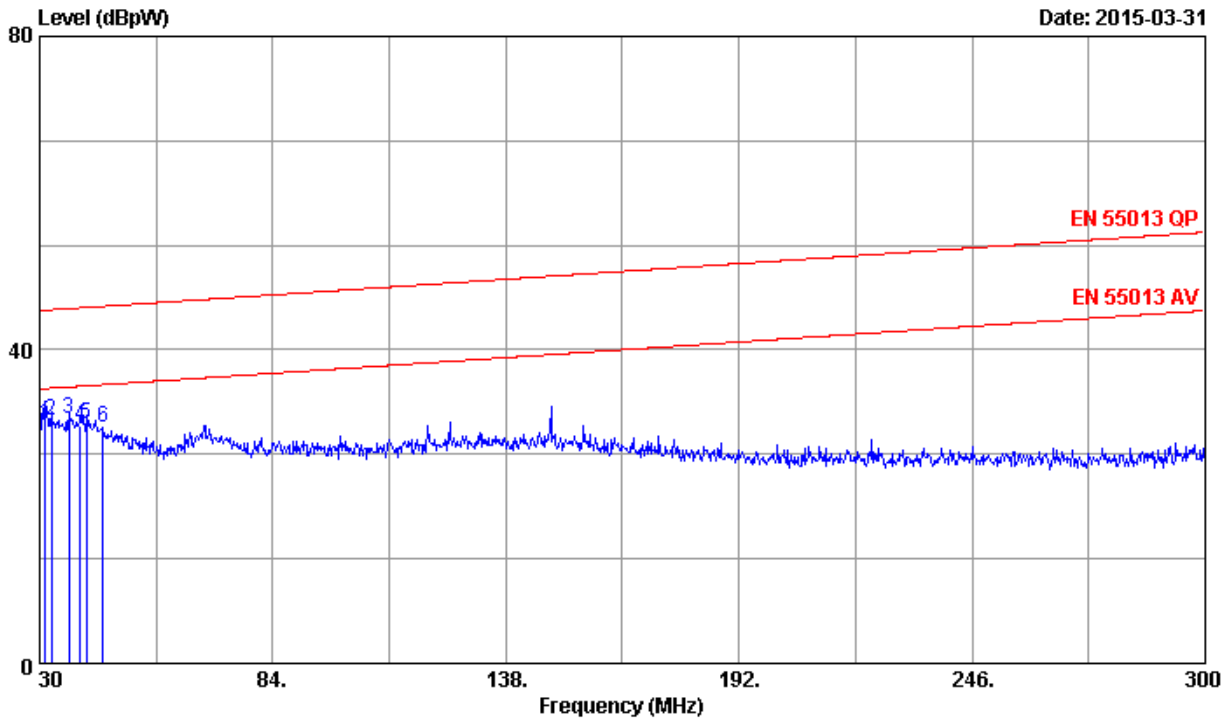
4.5.3. Let the EUT work in test modes (HDMI In / AV In / Ypbpr In / USB Playing) and test it.



Data: 20

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : HDMI In  
 Memo : AC LINE

	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.18	30.43	45.06	14.63	QP
2	32.700	25.49	5.55	31.04	45.11	14.07	QP
3	36.750	26.14	5.02	31.16	45.26	14.10	QP
4	39.450	26.54	3.83	30.37	45.36	14.99	QP
5	40.800	26.41	4.22	30.63	45.41	14.78	QP
6	44.580	25.45	4.71	30.16	45.55	15.39	QP

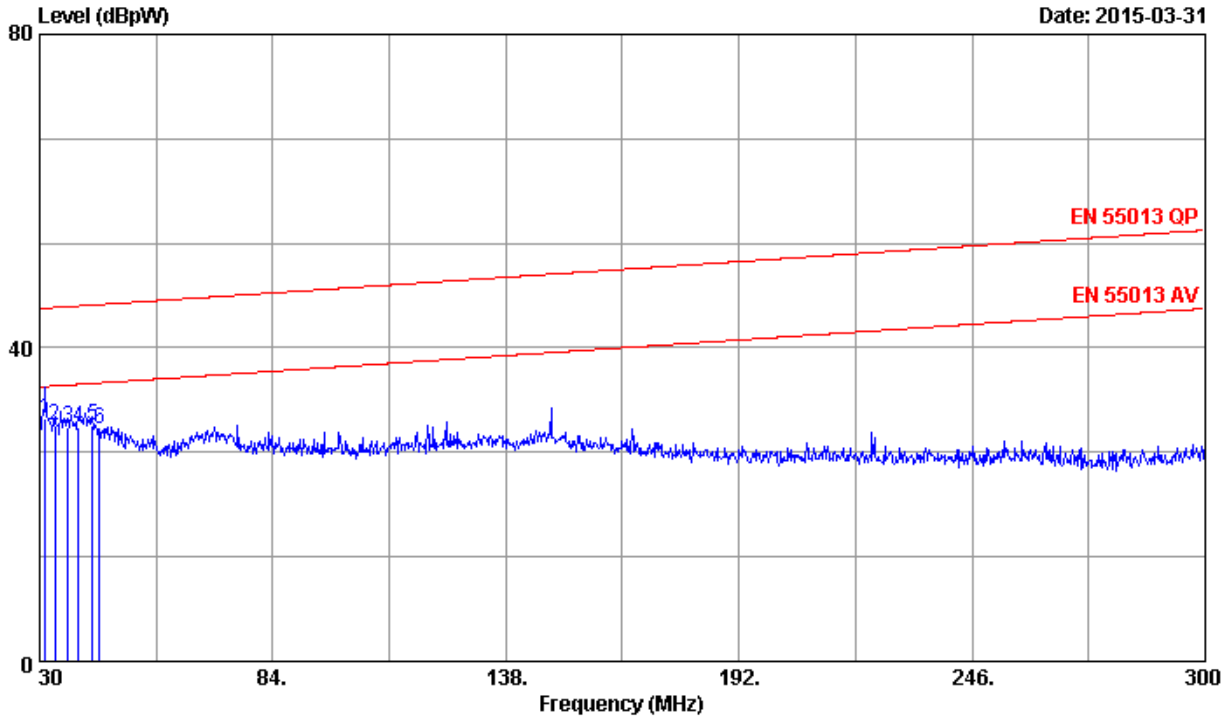
Remarks: 1. Emission Level= Clamp Factor(Include Cable Loss)+Reading.  
 2. If the average limit is met when using a quasi-peak detector,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Data: 21

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : AV In  
 Memo : AC LINE

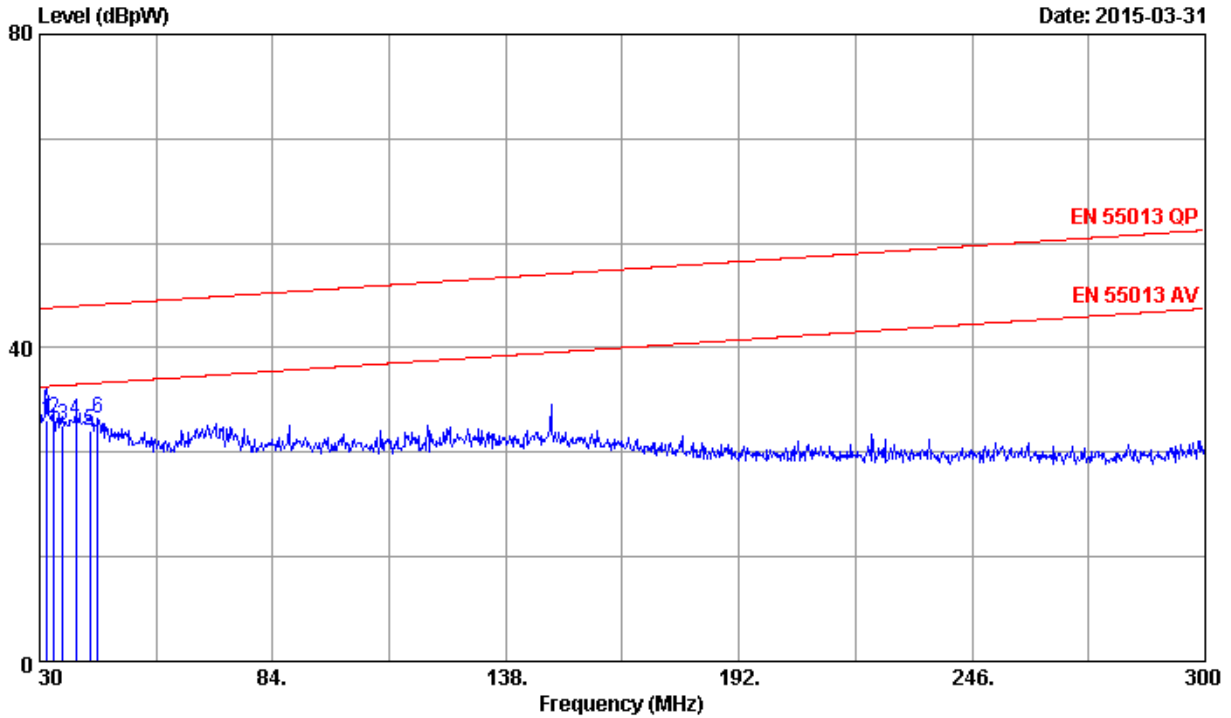
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.65	30.90	45.06	14.16	QP
2	33.510	25.62	4.47	30.09	45.14	15.05	QP
3	36.480	26.10	3.77	29.87	45.25	15.38	QP
4	38.910	26.46	3.43	29.89	45.34	15.45	QP
5	42.150	26.06	4.04	30.10	45.46	15.36	QP
6	43.770	25.65	4.09	29.74	45.52	15.78	QP

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

Data: 22

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : YPbPr In  
 Memo : AC LINE

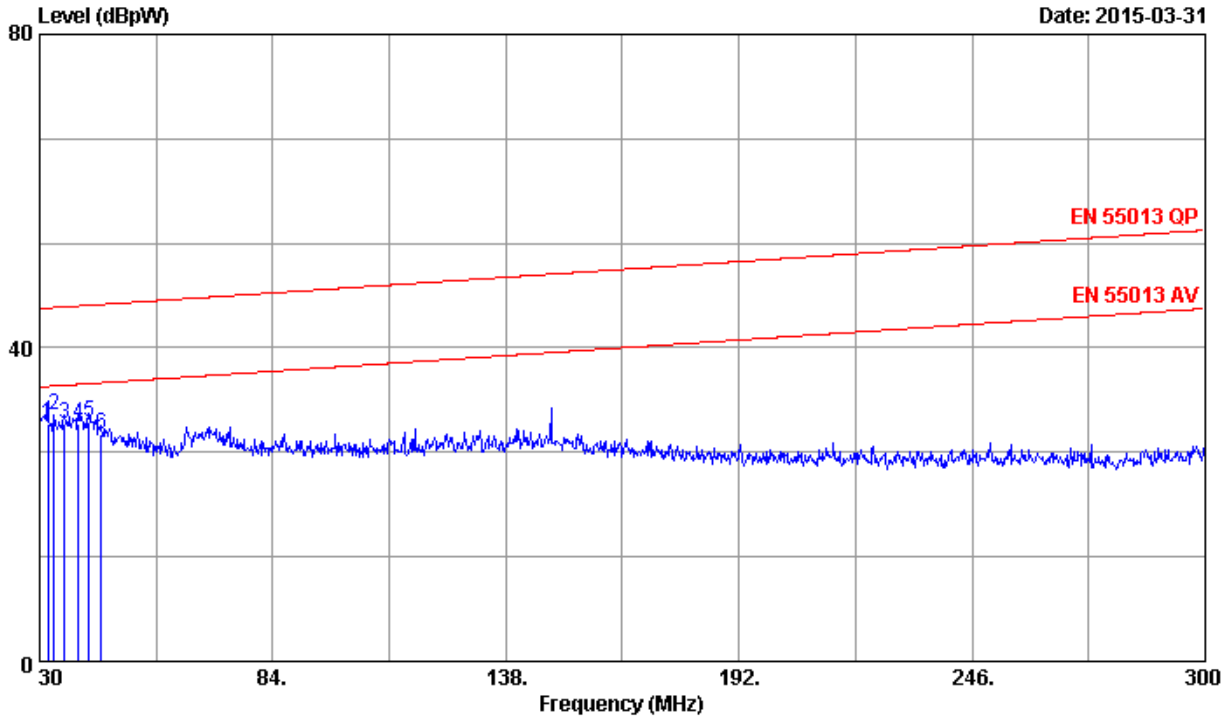
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.620	25.30	5.44	30.74	45.07	14.33	QP
2	33.240	25.58	5.43	31.01	45.13	14.12	QP
3	35.400	25.93	4.26	30.19	45.21	15.02	QP
4	38.370	26.39	4.38	30.77	45.32	14.55	QP
5	41.610	26.20	3.18	29.38	45.44	16.06	QP
6	43.500	25.72	5.19	30.91	45.51	14.60	QP

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

Data: 23

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : USB Reading  
 Memo : AC LINE

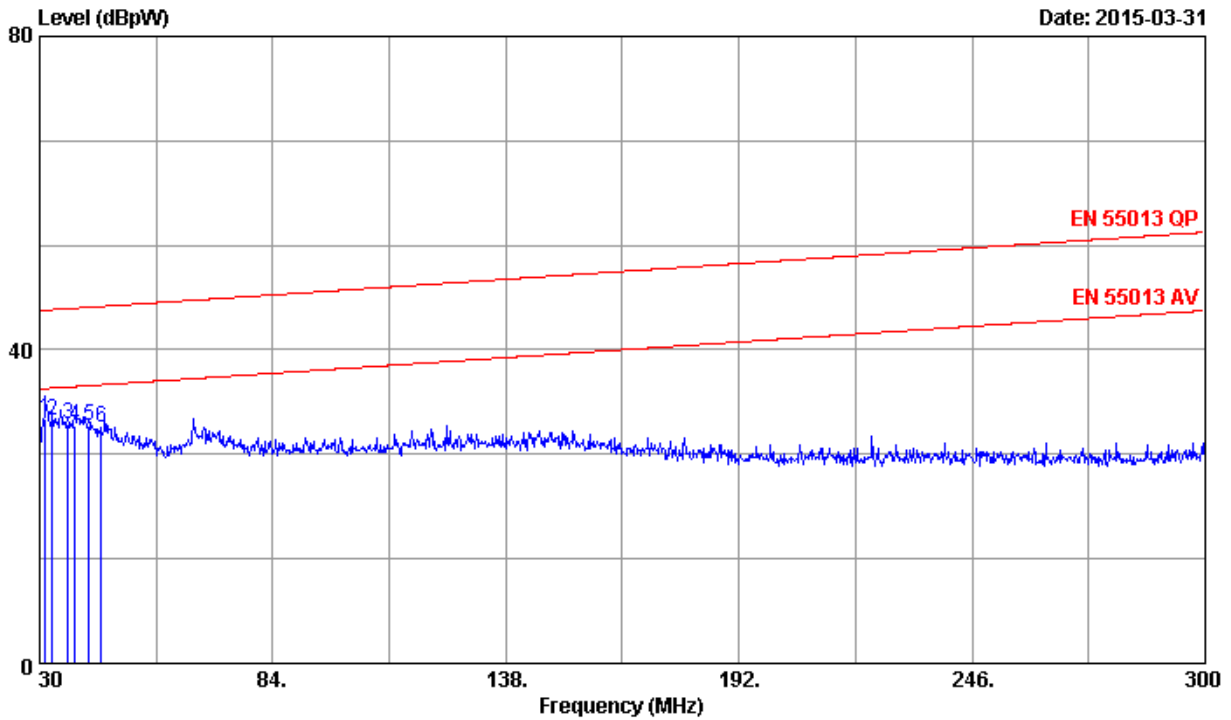
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.890	25.34	4.92	30.26	45.08	14.82	QP
2	33.240	25.58	5.78	31.36	45.13	13.77	QP
3	35.670	25.97	4.36	30.33	45.22	14.89	QP
4	38.910	26.46	3.92	30.38	45.34	14.96	QP
5	41.340	26.27	4.32	30.59	45.43	14.84	QP
6	44.310	25.52	3.53	29.05	45.54	16.49	QP

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

Data: 19

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : HDMI In  
 Memo : HDMI LINE

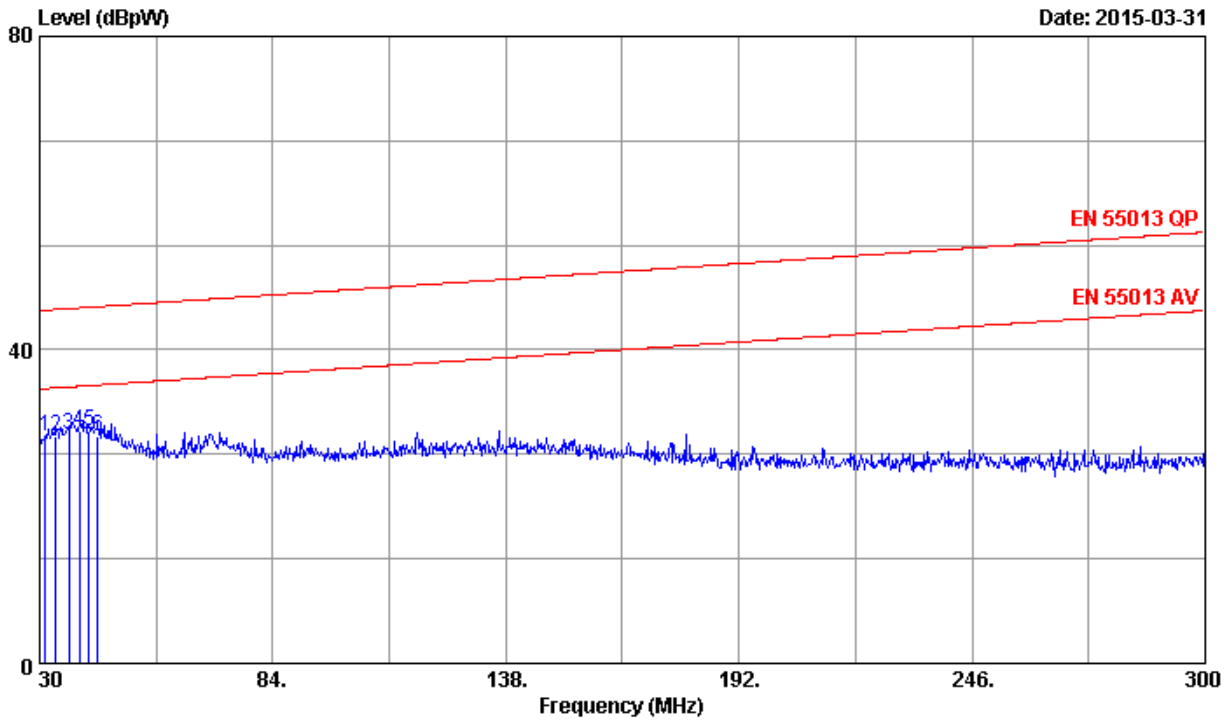
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.84	31.09	45.06	13.97	QP
2	32.970	25.53	5.51	31.04	45.12	14.08	QP
3	36.480	26.10	4.38	30.48	45.25	14.77	QP
4	38.100	26.35	4.04	30.39	45.31	14.92	QP
5	41.340	26.27	3.95	30.22	45.43	15.21	QP
6	44.310	25.52	4.50	30.02	45.54	15.52	QP

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

Data: 17

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : AV IN  
 Memo : HDMI LINE

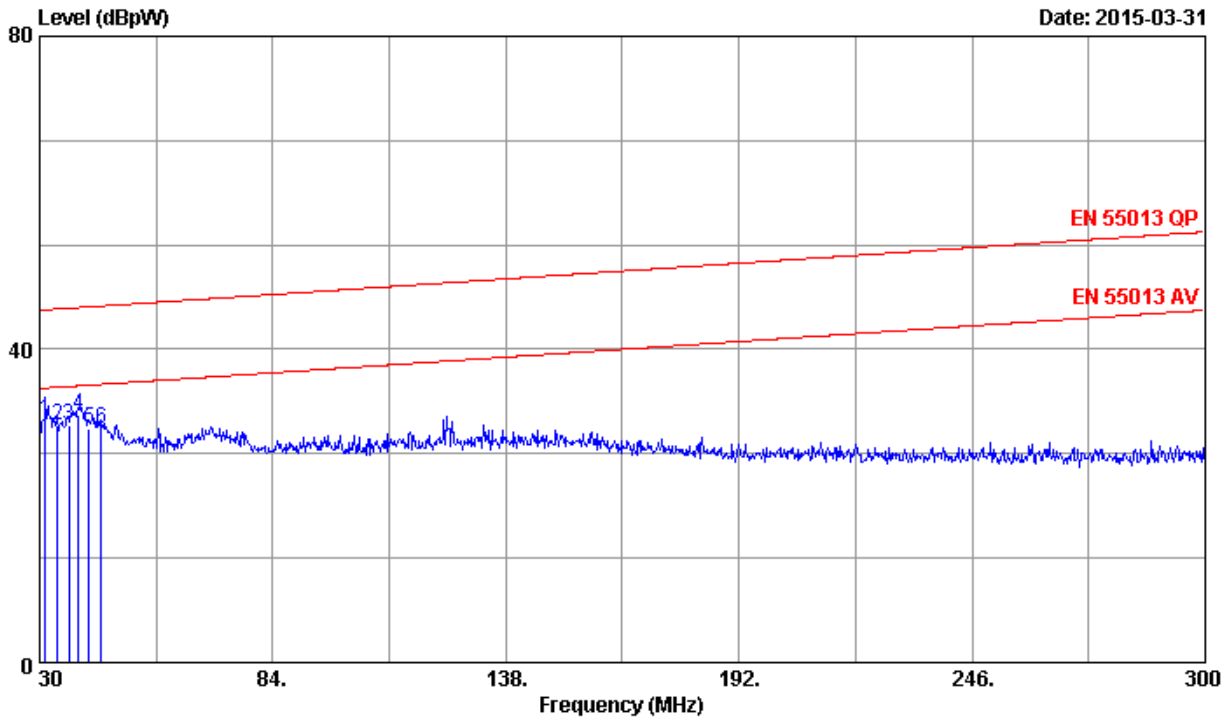
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	3.73	28.98	45.06	16.08	QP
2	33.780	25.67	3.37	29.04	45.15	16.11	QP
3	36.750	26.14	3.08	29.22	45.26	16.04	QP
4	39.180	26.50	3.22	29.72	45.35	15.63	QP
5	41.340	26.27	3.36	29.63	45.43	15.80	QP
6	43.500	25.72	3.29	29.01	45.51	16.50	QP

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

Data: 16

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : YPbPr In  
 Memo : HDMI LINE

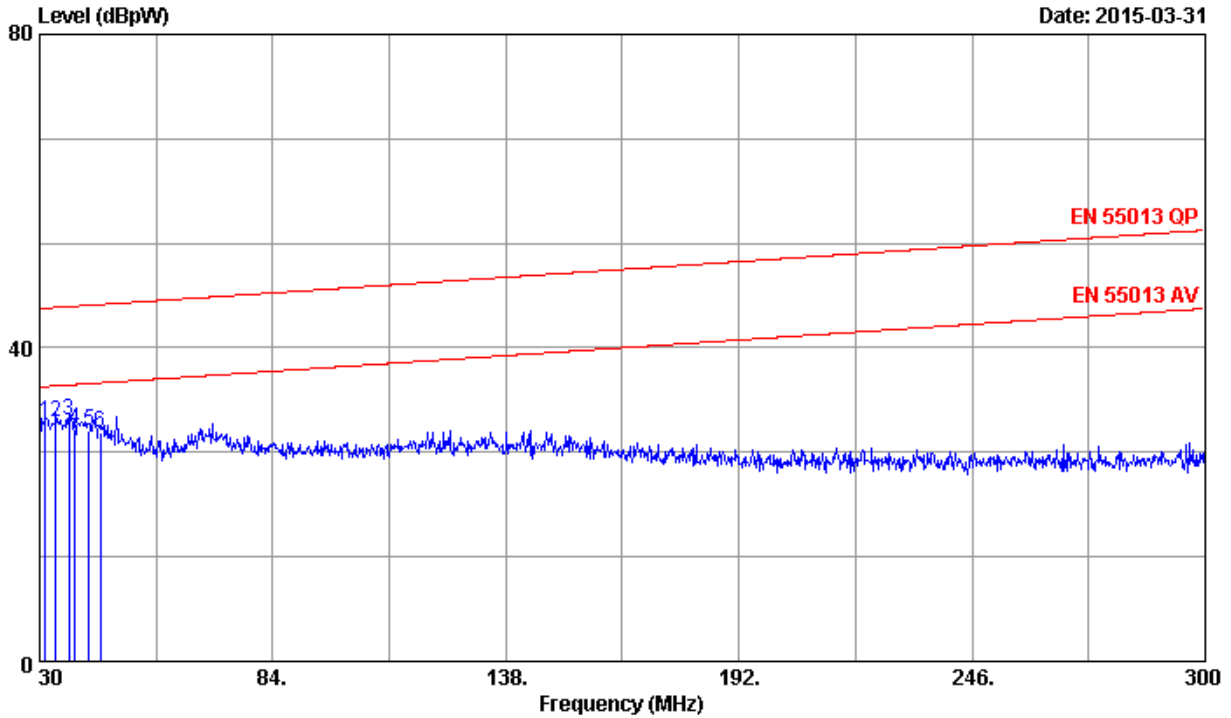
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.69	30.94	45.06	14.12	QP
2	34.050	25.71	4.69	30.40	45.16	14.76	QP
3	36.750	26.14	4.26	30.40	45.26	14.86	QP
4	38.910	26.46	5.15	31.61	45.34	13.73	QP
5	41.340	26.27	3.67	29.94	45.43	15.49	QP
6	44.310	25.52	4.37	29.89	45.54	15.65	QP

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

Data: 18

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : USB Reading  
 Memo : HDMI LINE

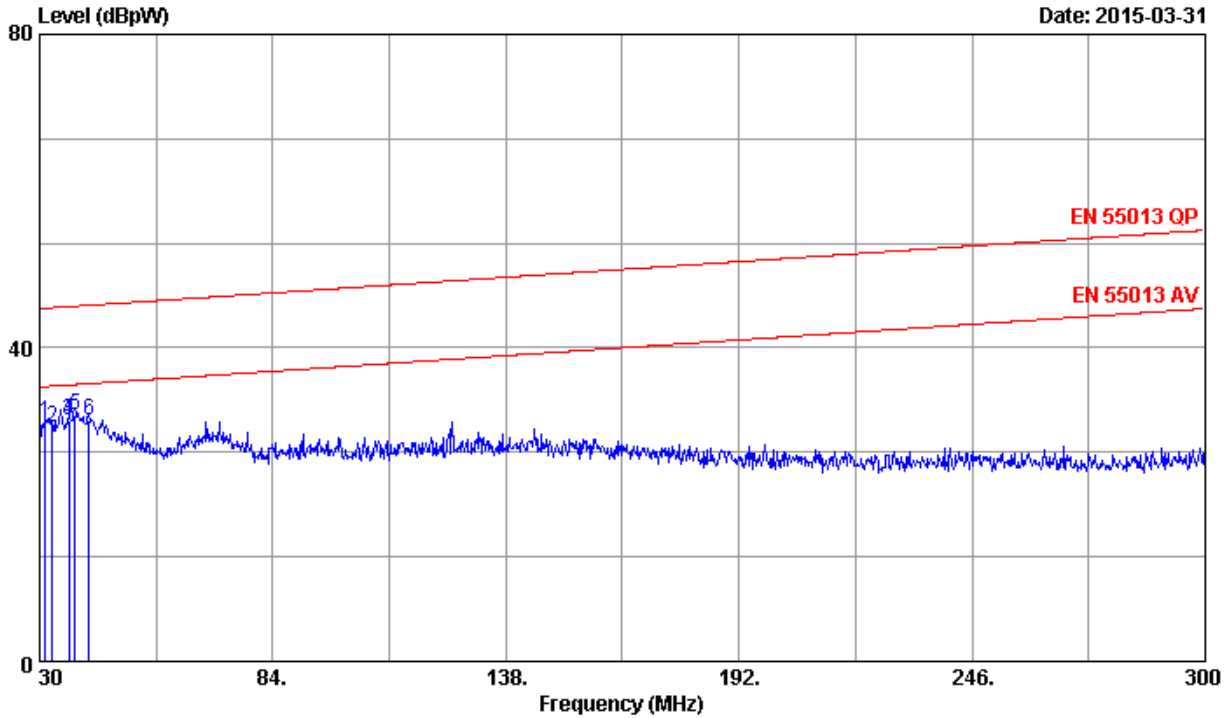
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.17	30.42	45.06	14.64	QP
2	33.780	25.67	4.91	30.58	45.15	14.57	QP
3	36.750	26.14	4.61	30.75	45.26	14.51	QP
4	38.100	26.35	3.37	29.72	45.31	15.59	QP
5	41.340	26.27	3.04	29.31	45.43	16.12	QP
6	44.040	25.59	3.50	29.09	45.53	16.44	QP

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

Data: 15

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : HDMI In  
 Memo : YPbPr LINE

	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.25	30.50	45.06	14.56	QP
2	32.970	25.53	4.31	29.84	45.12	15.28	QP
3	36.750	26.14	4.55	30.69	45.26	14.57	QP
4	36.750	26.14	4.55	30.69	45.26	14.57	QP
5	38.100	26.35	5.07	31.42	45.31	13.89	QP
6	41.340	26.27	4.48	30.75	45.43	14.68	QP

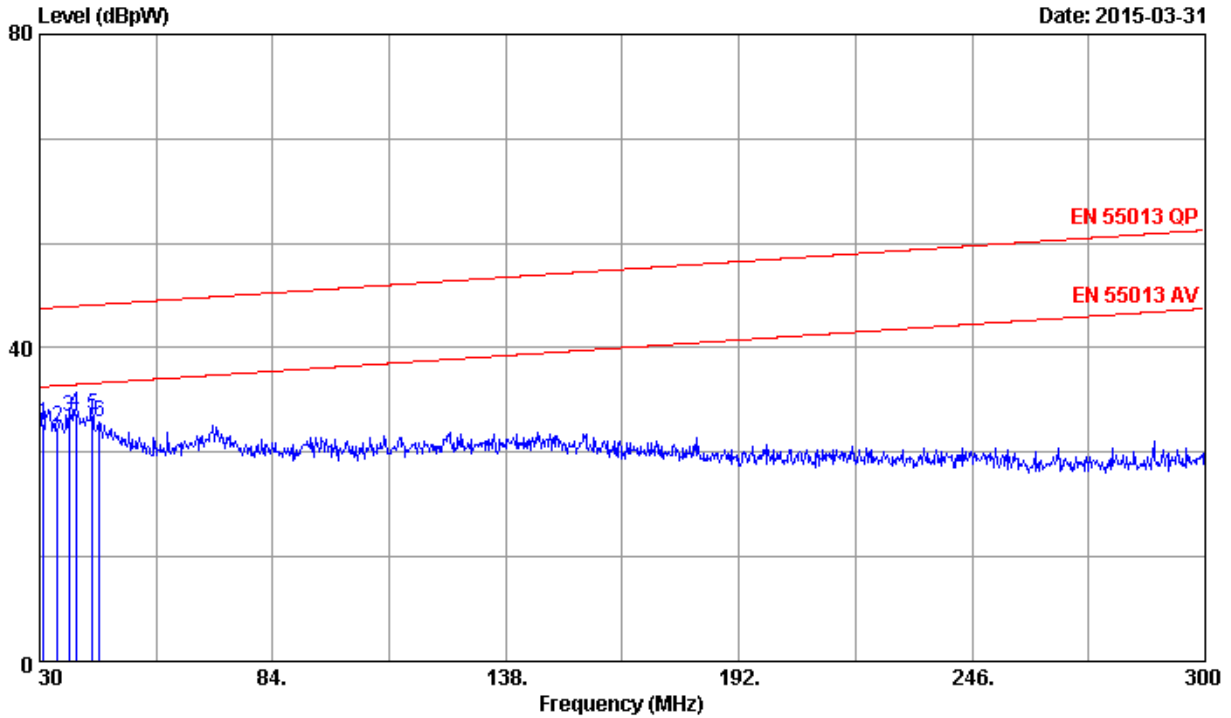
Remarks: 1. Emission Level= Clamp Factor(Include Cable Loss)+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Data: 14

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : YPbPb In  
 Memo : YPbPr LINE

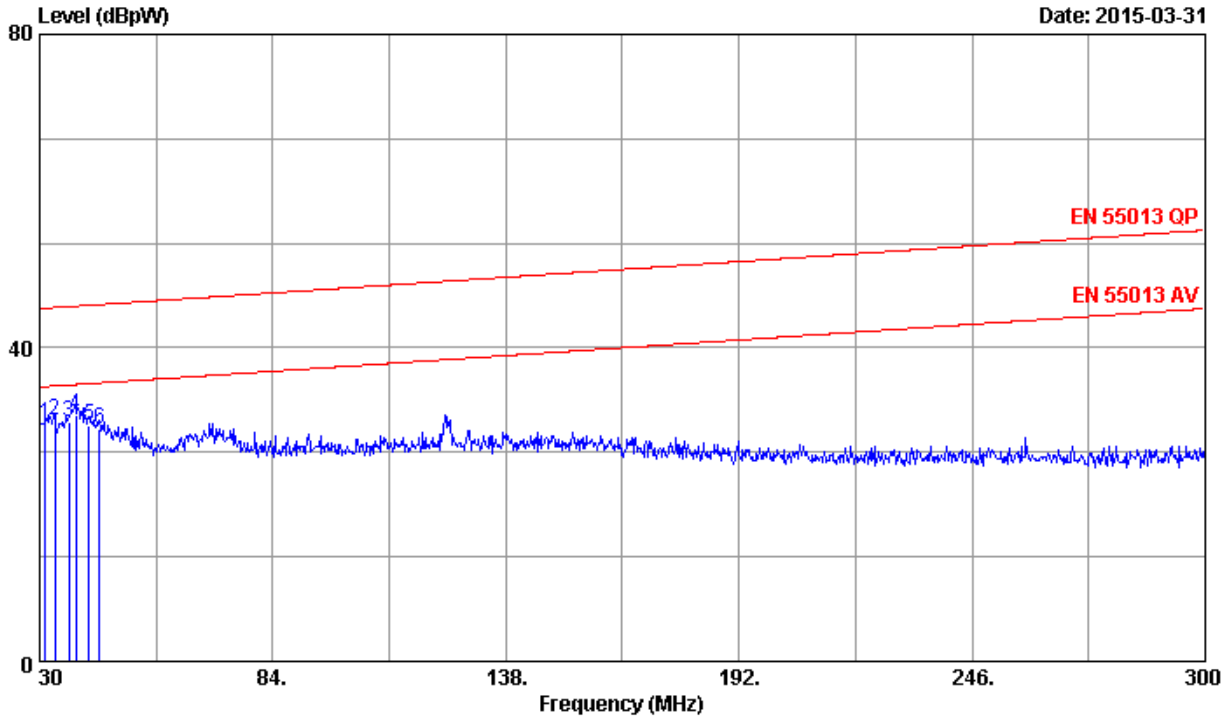
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	30.810	25.15	5.05	30.20	45.04	14.84	QP
2	34.050	25.71	4.18	29.89	45.16	15.27	QP
3	36.750	26.14	4.96	31.10	45.26	14.16	QP
4	38.370	26.39	5.23	31.62	45.32	13.70	QP
5	42.150	26.06	5.39	31.45	45.46	14.01	QP
6	43.770	25.65	4.89	30.54	45.52	14.98	QP

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

Data: 13

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : USB Reading  
 Memo : YPbPr LINE

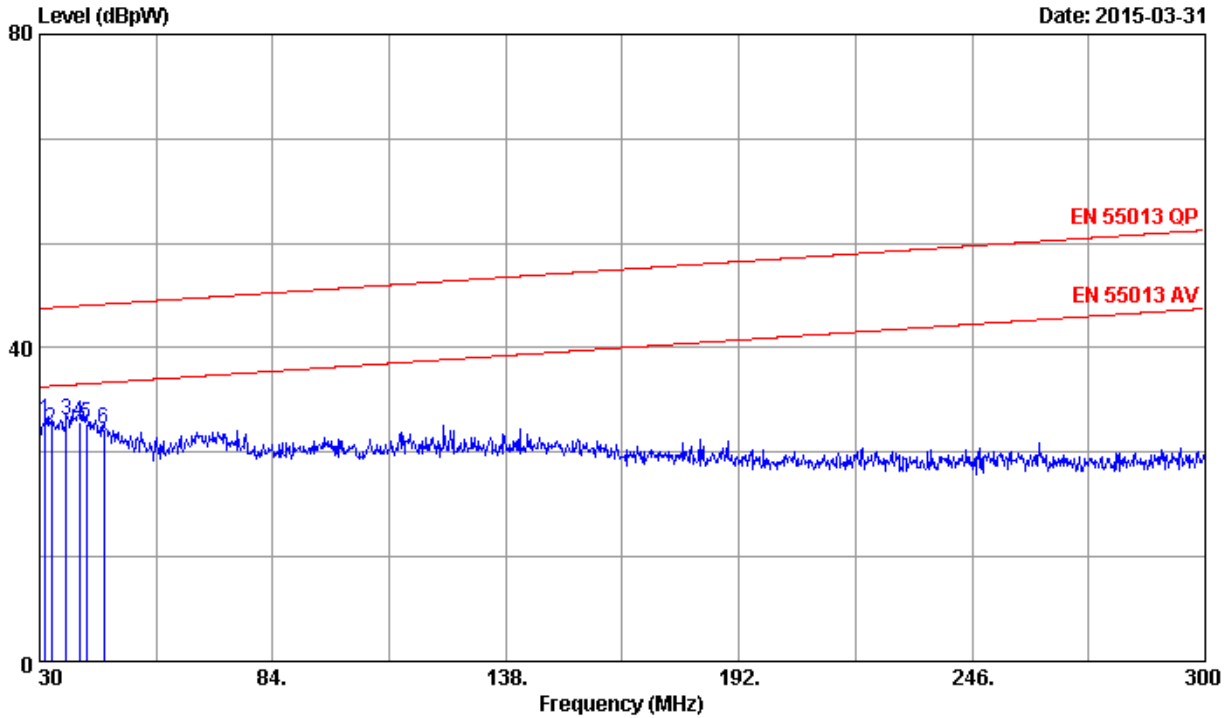
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.16	30.41	45.06	14.65	QP
2	33.510	25.62	5.02	30.64	45.14	14.50	QP
3	36.750	26.14	4.31	30.45	45.26	14.81	QP
4	38.370	26.39	4.94	31.33	45.32	13.99	QP
5	41.340	26.27	3.90	30.17	45.43	15.26	QP
6	43.770	25.65	4.01	29.66	45.52	15.86	QP

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

Data: 10

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : HDMI In  
 Memo : AUDIO IN LINE

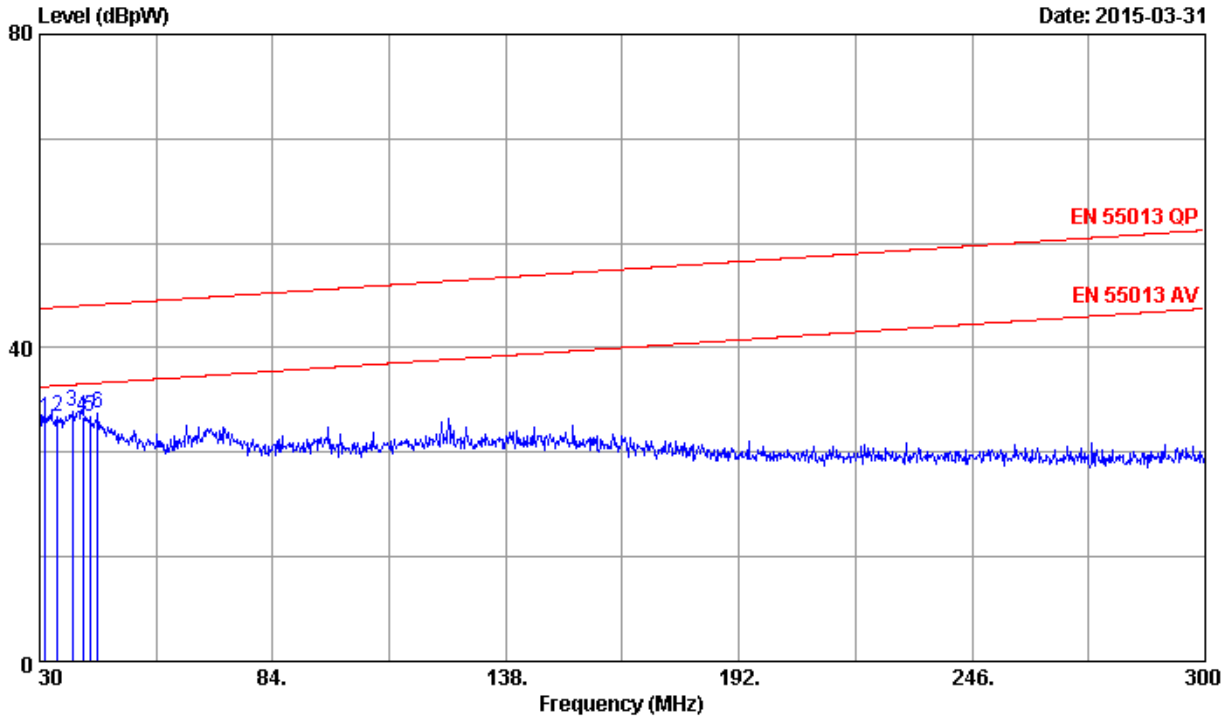
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.56	30.81	45.06	14.25	QP
2	32.700	25.49	4.19	29.68	45.11	15.43	QP
3	36.210	26.06	4.66	30.72	45.24	14.52	QP
4	39.180	26.50	3.97	30.47	45.35	14.88	QP
5	40.800	26.41	3.95	30.36	45.41	15.05	QP
6	44.850	25.39	4.19	29.58	45.56	15.98	QP

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

Data: 9

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : AV In  
 Memo : AUDIO IN LINE

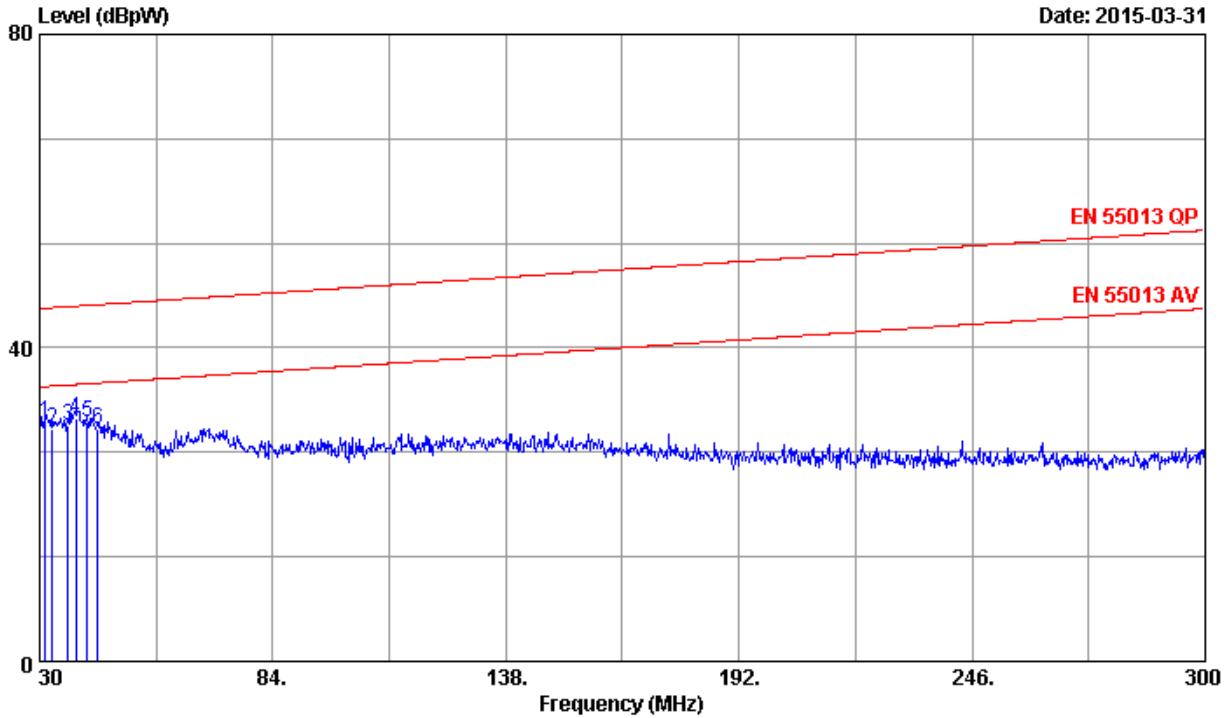
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.65	30.90	45.06	14.16	QP
2	34.050	25.71	5.52	31.23	45.16	13.93	QP
3	37.560	26.27	5.57	31.84	45.29	13.45	QP
4	39.990	26.62	4.65	31.27	45.38	14.11	QP
5	41.610	26.20	5.02	31.22	45.44	14.22	QP
6	43.500	25.72	5.87	31.59	45.51	13.92	QP

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

Data: 11

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : YPbPr In  
 Memo : AUDIO IN LINE

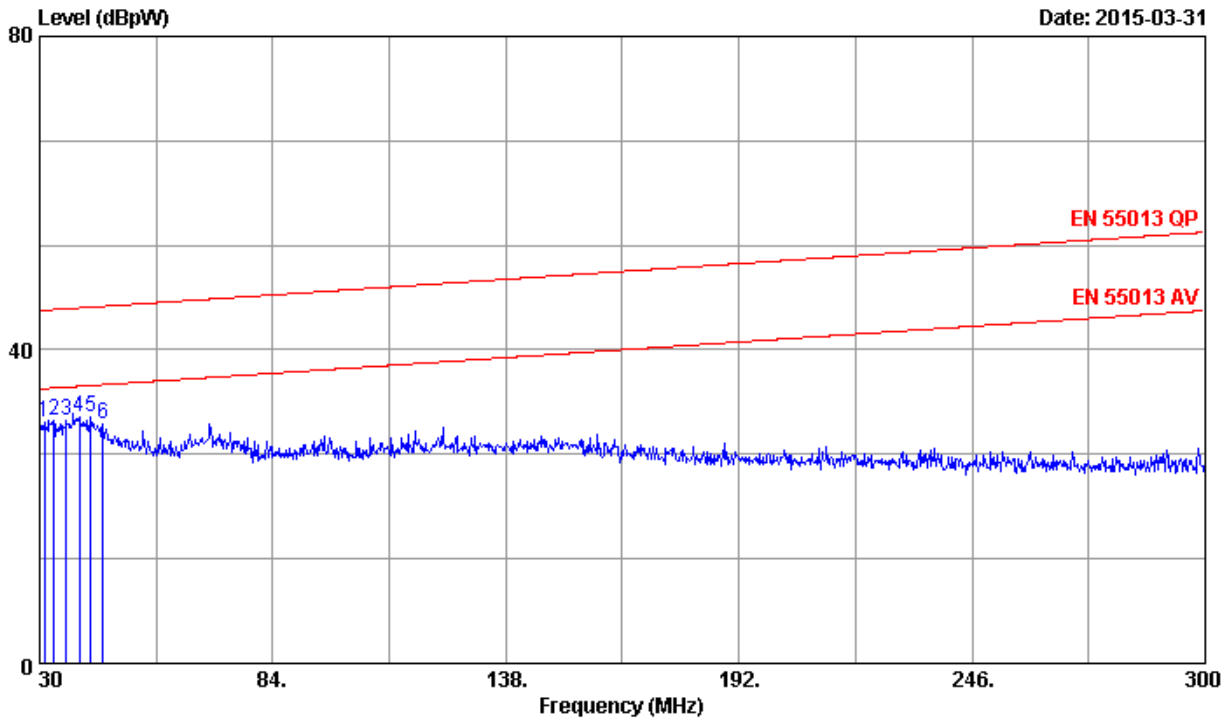
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.33	30.58	45.06	14.48	QP
2	32.970	25.53	4.14	29.67	45.12	15.45	QP
3	36.480	26.10	3.92	30.02	45.25	15.23	QP
4	38.370	26.39	4.68	31.07	45.32	14.25	QP
5	41.070	26.34	4.15	30.49	45.42	14.93	QP
6	43.500	25.72	3.89	29.61	45.51	15.90	QP

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

Data: 12

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : USB Reading  
 Memo : AUDIO IN LINE

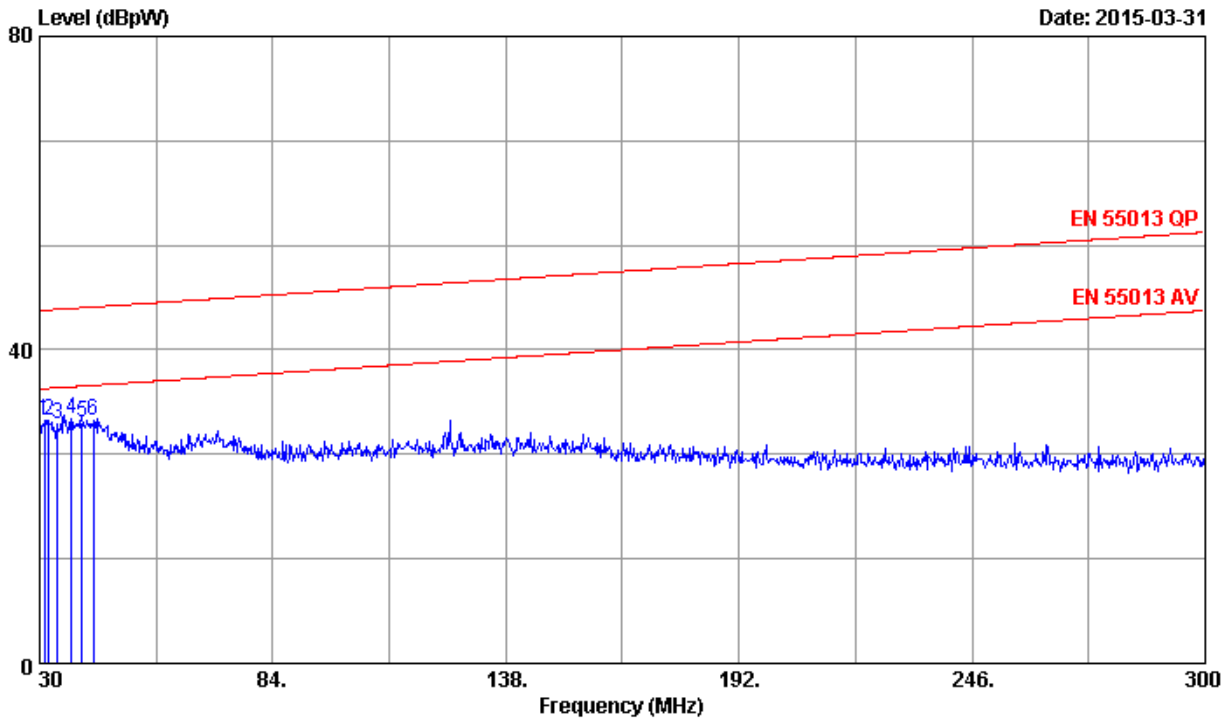
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.080	25.20	5.46	30.66	45.05	14.39	QP
2	33.240	25.58	5.29	30.87	45.13	14.26	QP
3	36.210	26.06	4.83	30.89	45.24	14.35	QP
4	39.180	26.50	4.91	31.41	45.35	13.94	QP
5	41.880	26.13	5.29	31.42	45.45	14.03	QP
6	44.580	25.45	5.07	30.52	45.55	15.03	QP

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

Data: 6

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : HDMI In  
 Memo : AUDIO OUT LINE

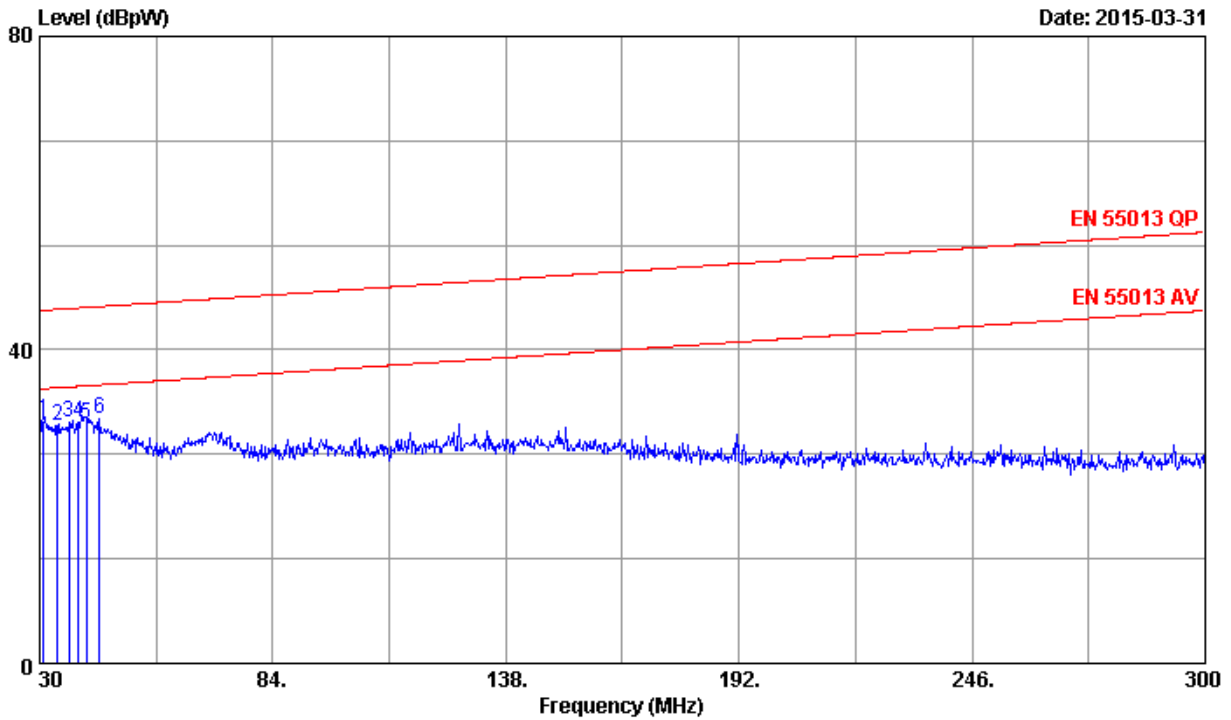
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.080	25.20	5.69	30.89	45.05	14.16	QP
2	32.160	25.39	5.62	31.01	45.09	14.08	QP
3	34.050	25.71	4.80	30.51	45.16	14.65	QP
4	37.290	26.22	4.90	31.12	45.28	14.16	QP
5	39.720	26.58	4.15	30.73	45.37	14.64	QP
6	42.420	25.99	4.90	30.89	45.47	14.58	QP

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

Data: 8

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : AV In  
 Memo : AUDIO OUT LINE

	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	30.810	25.15	5.77	30.92	45.04	14.12	QP
2	34.050	25.71	4.56	30.27	45.16	14.89	QP
3	36.750	26.14	4.71	30.85	45.26	14.41	QP
4	38.910	26.46	4.33	30.79	45.34	14.55	QP
5	40.800	26.41	4.07	30.48	45.41	14.93	QP
6	43.770	25.65	5.52	31.17	45.52	14.35	QP

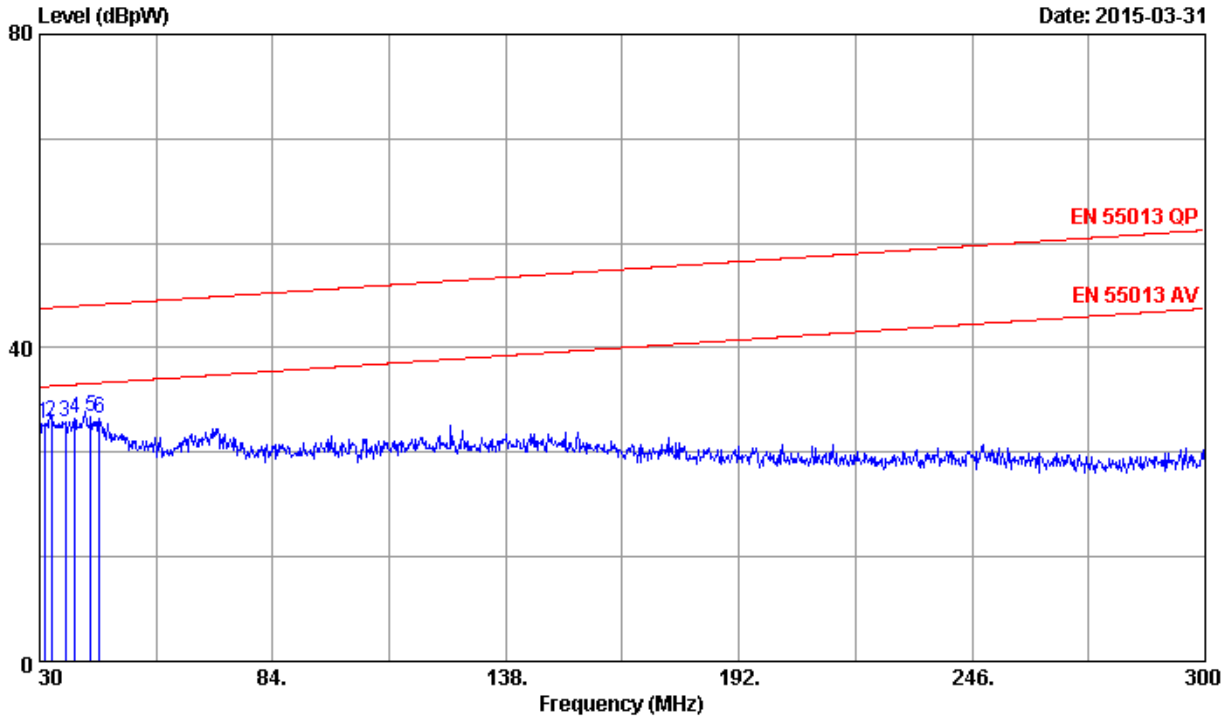
Remarks: 1. Emission Level= Clamp Factor(Include Cable Loss)+Reading.  
 2. If the average limit is met when using a quasi-peak detector,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Data: 7

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : YPbPr In  
 Memo : AUDIO OUT LINE

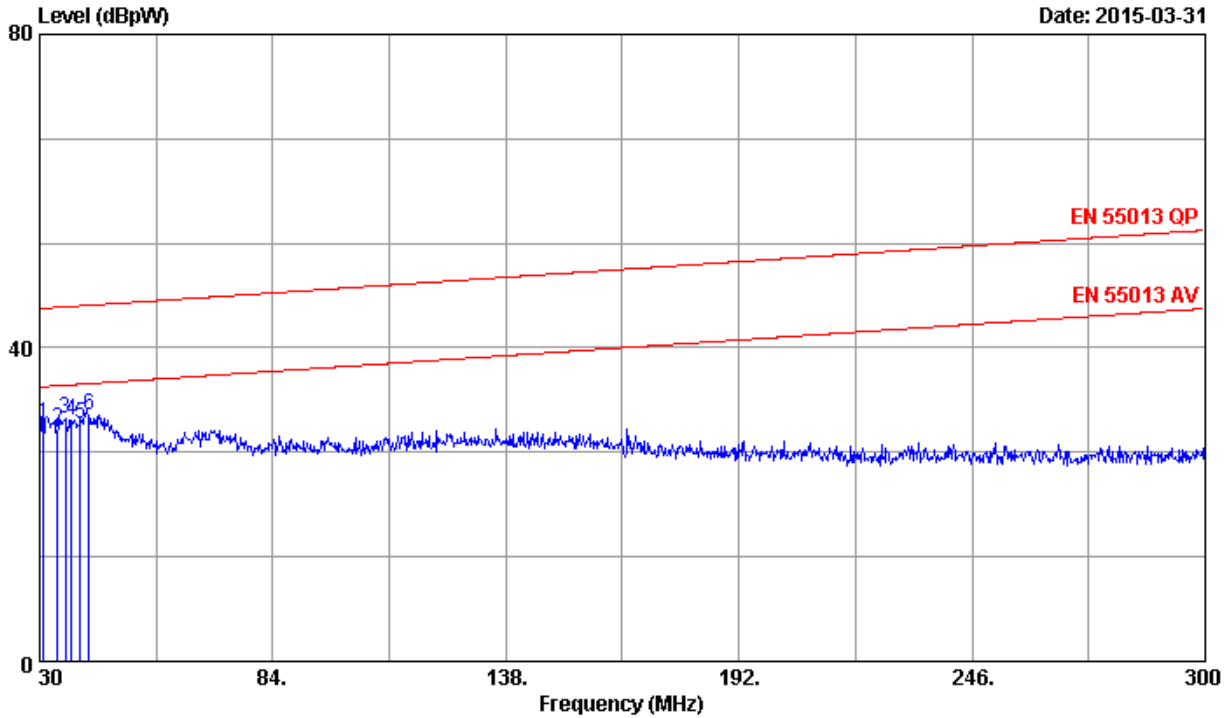
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.080	25.20	5.03	30.23	45.05	14.82	QP
2	32.700	25.49	4.96	30.45	45.11	14.66	QP
3	35.940	26.02	4.59	30.61	45.23	14.62	QP
4	38.100	26.35	4.56	30.91	45.31	14.40	QP
5	41.880	26.13	5.04	31.17	45.45	14.28	QP
6	43.770	25.65	5.25	30.90	45.52	14.62	QP

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

Data: 5

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : USB Reading  
 Memo : AUDIO OUT LINE

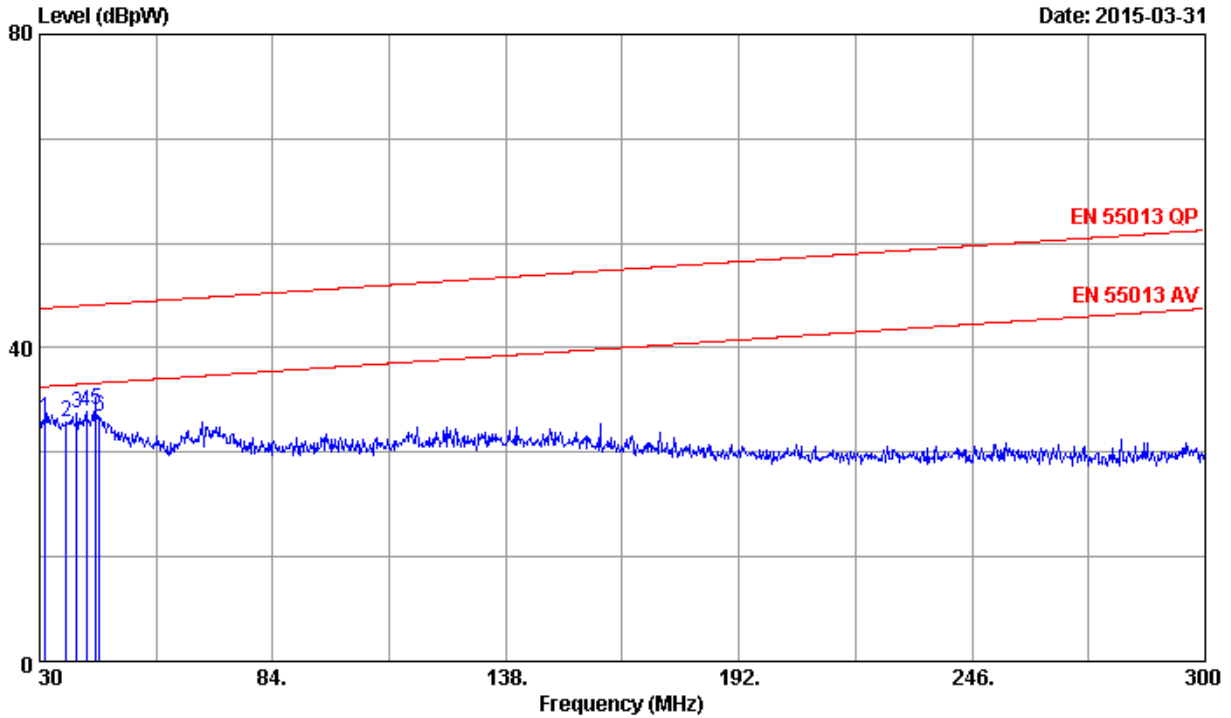
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	30.810	25.15	5.06	30.21	45.04	14.83	QP
2	34.050	25.71	4.01	29.72	45.16	15.44	QP
3	35.940	26.02	4.88	30.90	45.23	14.33	QP
4	37.290	26.22	4.58	30.80	45.28	14.48	QP
5	39.450	26.54	3.69	30.23	45.36	15.13	QP
6	41.340	26.27	5.06	31.33	45.43	14.10	QP

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

Data: 2

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : HDMI In  
 Memo : USB LINE

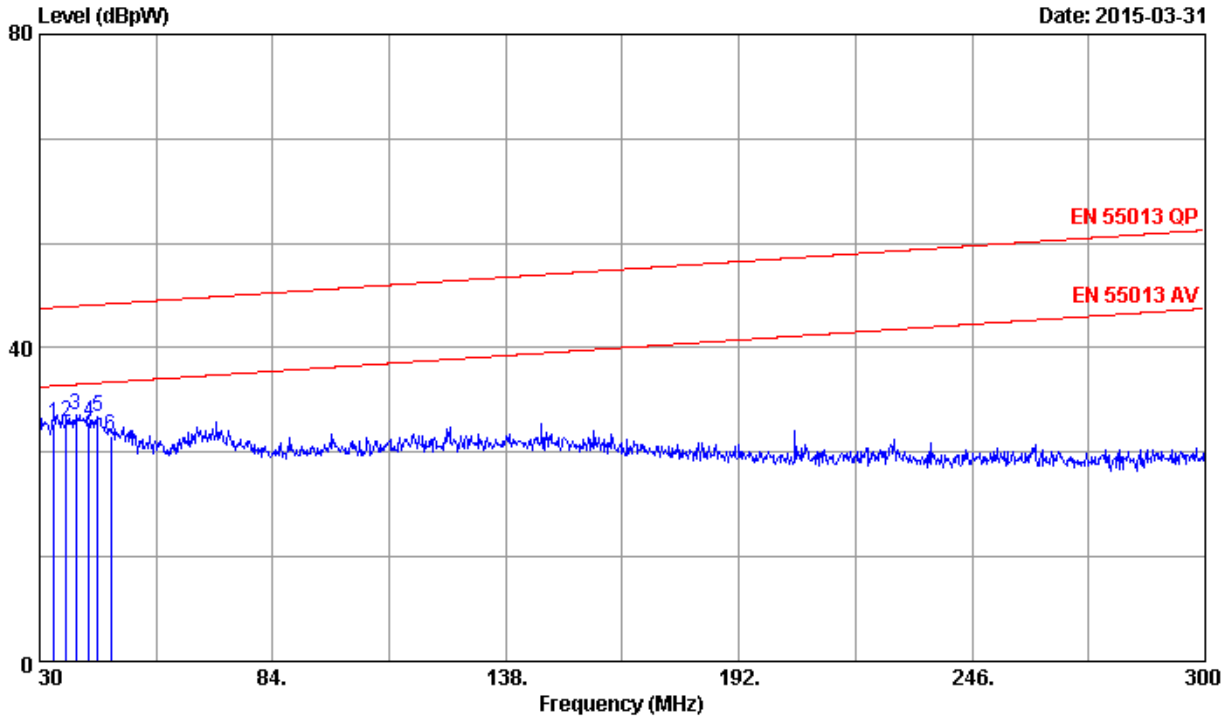
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	5.69	30.94	45.06	14.12	QP
2	36.210	26.06	4.41	30.47	45.24	14.77	QP
3	38.640	26.43	5.25	31.68	45.33	13.65	QP
4	40.800	26.41	5.42	31.83	45.41	13.58	QP
5	42.960	25.85	6.15	32.00	45.49	13.49	QP
6	43.770	25.65	5.50	31.15	45.52	14.37	QP

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

Data: 1

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : AV In  
 Memo : USB LINE

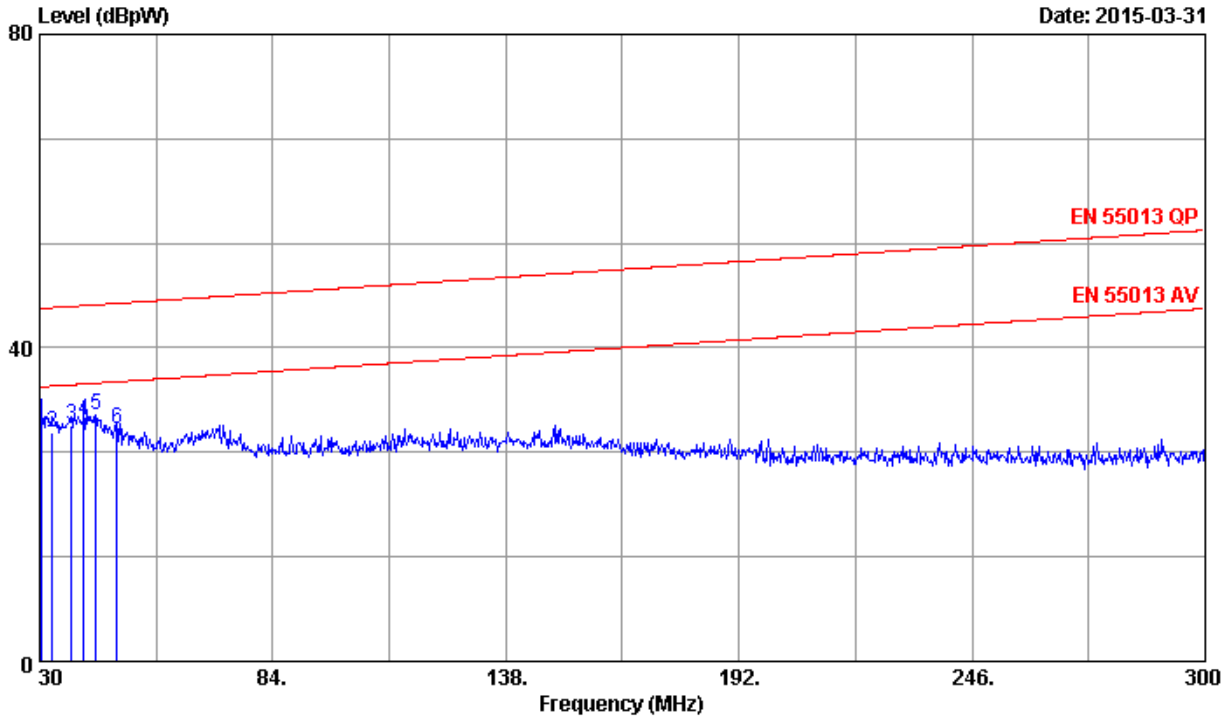
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	33.240	25.58	4.64	30.22	45.13	14.91	QP
2	36.210	26.06	4.38	30.44	45.24	14.80	QP
3	38.370	26.39	4.99	31.38	45.32	13.94	QP
4	41.340	26.27	4.25	30.52	45.43	14.91	QP
5	43.500	25.72	5.42	31.14	45.51	14.37	QP
6	46.470	25.01	3.69	28.70	45.62	16.92	QP

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

Data: 3

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : YPbPr In  
 Memo : USB LINE

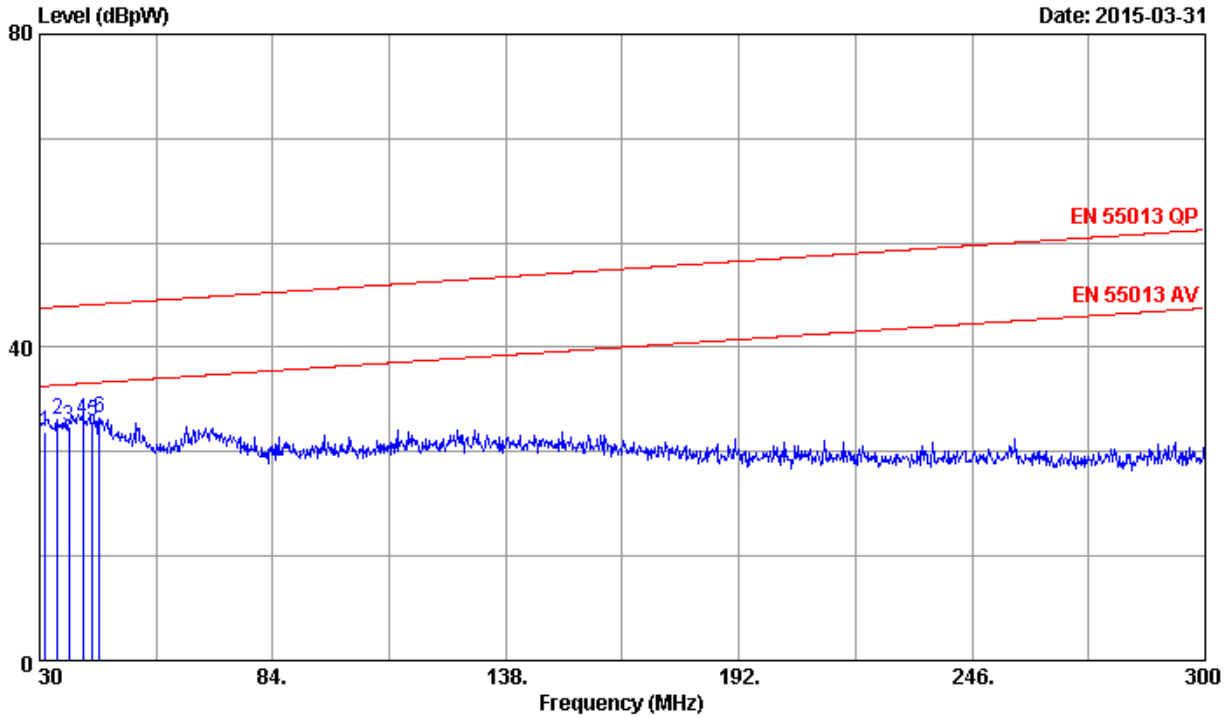
	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	30.540	25.10	5.56	30.66	45.03	14.37	QP
2	32.970	25.53	3.66	29.19	45.12	15.93	QP
3	37.290	26.22	3.92	30.14	45.28	15.14	QP
4	40.260	26.55	4.31	30.86	45.39	14.53	QP
5	42.960	25.85	5.50	31.35	45.49	14.14	QP
6	47.820	24.70	4.85	29.55	45.67	16.12	QP

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

Data: 4

File: F:\2015 REPORT DATA\TPV\ACS15Q0206.EM6 (23)

Date: 2015-03-31



Site no. : Power Clamp Test Site  
 Dis. / Ant. : 2014 CLAMP-100096  
 Limit : EN 55013 QP Pre : 101.6kPa  
 Env. / Ins. : 23.5°C/54% Engineer : Nick\_Huang  
 EUT : BDL3230QL  
 Power Rating : AC 230V/50Hz  
 Test Mode : USB Reading  
 Memo : USB LINE

	Freq. (MHz)	Clamp Factor (dB)	Reading (dBpW)	Emission Level (dBpW)	Limits (dBpW)	Margin (dB)	Remark
1	31.350	25.25	4.03	29.28	45.06	15.78	QP
2	34.050	25.71	5.10	30.81	45.16	14.35	QP
3	36.750	26.14	3.71	29.85	45.26	15.41	QP
4	39.990	26.62	4.09	30.71	45.38	14.67	QP
5	42.150	26.06	4.41	30.47	45.46	14.99	QP
6	43.770	25.65	5.26	30.91	45.52	14.61	QP

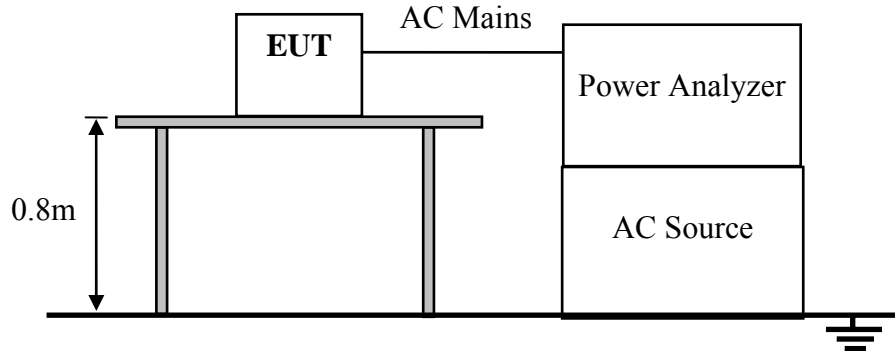
Remarks: 1. Emission Level= Clamp Factor(Include Cable Loss)+Reading.  
 2. If the average limit is met when using a quasi-peak detector,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

## 5. HARMONIC CURRENT EMISSION TEST

### 5.1. 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

### 5.2. Block Diagram of Test Setup



### 5.3. Test Standard

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

### 5.4. 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	0.15 × 15/n

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

### 5.5. 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.

### 5.6. 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.

### 5.7. Test Results

**PASS.**

Please refer to the following pages.

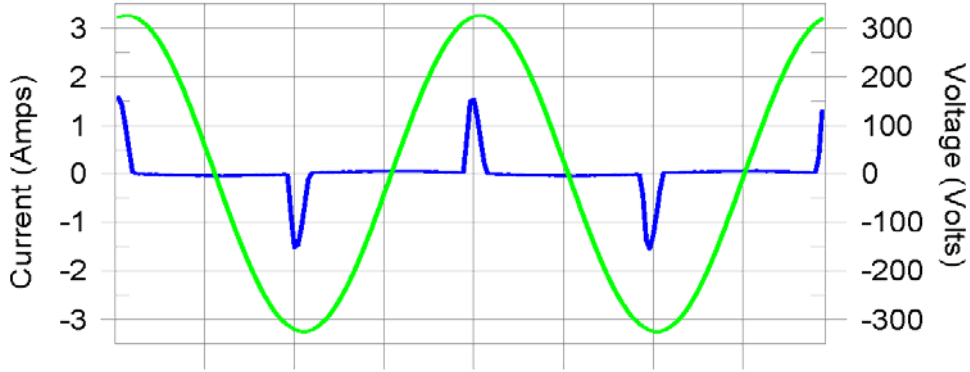


EUT: BDL3230QL  
 Test category: Class-D per Ed. 4.0 (2014) (European limits)  
 Test date: 2015-3-15  
 Test duration (min): 2.5  
 Comment: DVD Playing  
 Customer: TPV

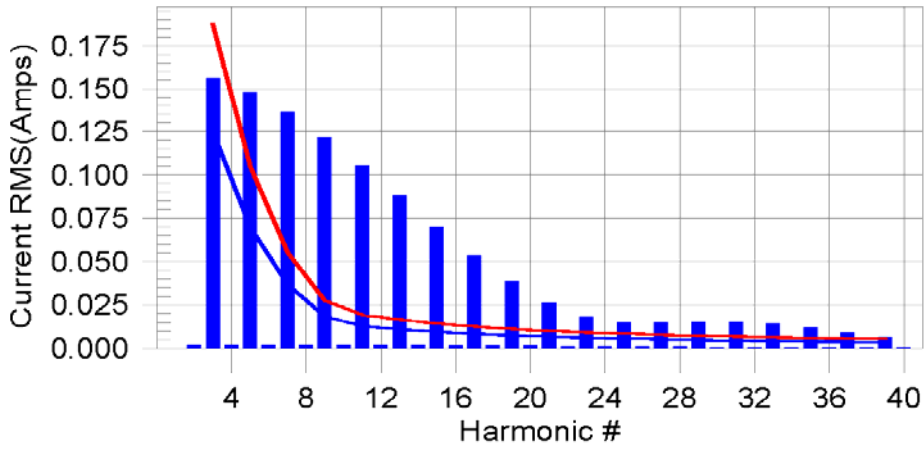
Tested by: SUN  
 Test Margin: 100  
 Start time: 19:09:26  
 End time: 19:12:17  
 Data file name: H-000263.cts\_data

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 815.9% of the limit.

EUT: BDL3230QL  
 Test category: Class-D per Ed. 4.0 (2014) (European limits)  
 Test date: 2015-3-15  
 Test duration (min): 2.5  
 Comment: DVD Playing  
 Customer: TPV

Tested by: SUN  
 Test Margin: 100  
 Start time: 19:09:26  
 End time: 19:12:17  
 Data file name: H-000263.cts\_data

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  
 I\_Peak (Amps): 1.617  
 I\_Fund (Amps): 0.168  
 Power (Watts): 36.8

Frequency(Hz): 50.00  
 I\_RMS (Amps): 0.373  
 Crest Factor: 4.348  
 Power Factor: 0.432

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	0.148	0.105	N/A	N/L
6	0.002	0.000	N/A	0.003	0.000	N/A	N/L
7	0.136	0.037	N/A	0.136	0.055	N/A	N/L
8	0.002	0.000	N/A	0.003	0.000	N/A	N/L
9	0.122	0.018	N/A	0.122	0.028	N/A	N/L
10	0.002	0.000	N/A	0.003	0.000	N/A	N/L
11	0.105	0.013	N/A	0.106	0.019	N/A	N/L
12	0.002	0.000	N/A	0.003	0.000	N/A	N/L
13	0.088	0.011	N/A	0.088	0.017	N/A	N/L
14	0.002	0.000	N/A	0.003	0.000	N/A	N/L
15	0.070	0.010	N/A	0.071	0.014	N/A	N/L
16	0.002	0.000	N/A	0.002	0.000	N/A	N/L
17	0.054	0.008	N/A	0.054	0.013	N/A	N/L
18	0.002	0.000	N/A	0.002	0.000	N/A	N/L
19	0.039	0.007	N/A	0.040	0.011	N/A	N/L
20	0.002	0.000	N/A	0.002	0.000	N/A	N/L
21	0.027	0.007	N/A	0.027	0.010	N/A	N/L
22	0.001	0.000	N/A	0.002	0.000	N/A	N/L
23	0.018	0.006	N/A	0.019	0.009	N/A	N/L
24	0.001	0.000	N/A	0.002	0.000	N/A	N/L
25	0.015	0.006	N/A	0.015	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	0.016	0.005	N/A	0.016	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	0.015	0.007	N/A	N/L
32	0.001	0.000	N/A	0.001	0.000	N/A	N/L
33	0.014	0.004	N/A	0.014	0.006	N/A	N/L
34	0.001	0.000	N/A	0.001	0.000	N/A	N/L
35	0.012	0.004	N/A	0.012	0.006	N/A	N/L
36	0.001	0.000	N/A	0.001	0.000	N/A	N/L
37	0.009	0.004	N/A	0.009	0.006	N/A	N/L
38	0.001	0.000	N/A	0.001	0.000	N/A	N/L
39	0.006	0.004	N/A	0.007	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  
 Test category: Class-D per Ed. 4.0 (2014) (European limits)  
 Test date: 2015-3-15  
 Test duration (min): 2.5  
 Comment: DVD Playing  
 Customer: TPV

Tested by: SUN  
 Test Margin: 100  
 Start time: 19:09:26  
 End time: 19:12:17  
 Data file name: H-000263.cts\_data

Test Result: N/L Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms): 230.08  
 I\_Peak (Amps): 1.617  
 I\_Fund (Amps): 0.168  
 Power (Watts): 36.8

Frequency(Hz): 50.00  
 I\_RMS (Amps): 0.373  
 Crest Factor: 4.348  
 Power Factor: 0.432

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.091	0.460	19.89	OK
3	0.466	2.071	22.48	OK
4	0.052	0.460	11.39	OK
5	0.051	0.920	5.55	OK
6	0.029	0.460	6.31	OK
7	0.051	0.690	7.37	OK
8	0.010	0.460	2.16	OK
9	0.063	0.460	13.69	OK
10	0.013	0.460	2.93	OK
11	0.058	0.230	25.35	OK
12	0.009	0.230	4.10	OK
13	0.058	0.230	25.04	OK
14	0.004	0.230	1.62	OK
15	0.049	0.230	21.21	OK
16	0.009	0.230	4.05	OK
17	0.043	0.230	18.81	OK
18	0.009	0.230	3.75	OK
19	0.037	0.230	16.28	OK
20	0.006	0.230	2.78	OK
21	0.031	0.230	13.30	OK
22	0.004	0.230	1.80	OK
23	0.021	0.230	9.08	OK
24	0.005	0.230	2.02	OK
25	0.018	0.230	7.99	OK
26	0.003	0.230	1.23	OK
27	0.023	0.230	9.96	OK
28	0.003	0.230	1.18	OK
29	0.018	0.230	7.89	OK
30	0.003	0.230	1.35	OK
31	0.023	0.230	9.86	OK
32	0.003	0.230	1.31	OK
33	0.022	0.230	9.74	OK
34	0.003	0.230	1.41	OK
35	0.020	0.230	8.89	OK
36	0.003	0.230	1.14	OK
37	0.018	0.230	7.65	OK
38	0.002	0.230	0.89	OK
39	0.014	0.230	6.13	OK
40	0.003	0.230	1.32	OK

## 6. VOLTAGE FLUCTUATIONS & FLICKER TEST

### 6.1. Test Equipments

Same as Section 5.1.

### 6.2. Block Diagram of Test Setup

Same as Section 5.2.

### 6.3. Test Standard

EN 61000-3-3: 2013

### 6.4. 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.

### 6.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

### 6.6. Operating Condition of EUT

Same as Section 5.6.

### 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 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.

### 6.8. 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: DVD Playing  
 Customer: TPV

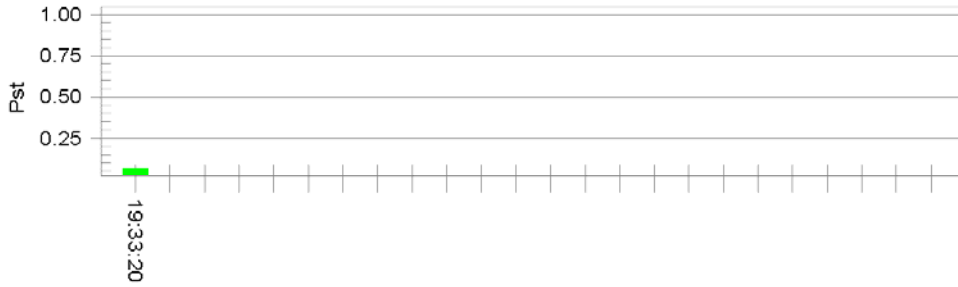
Tested by: SUN  
 Test Margin: 100  
 Start time: 19:22:49  
 End time: 19:33:21  
 Data file name: F-000265.cts\_data

Test Result: Pass

Status: Test Completed

Pst and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.90		
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

## 7. 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

**For EN55020:**

**Criterion A:**

**Definition: normal performance within limits specified by the manufacturer, requestor and purchaser.**

The equipment shall continue to operate as intended during the test. No change of actual operating state (for example change of channel) is allowed as a result of the application of the test. The criterion of compliance with the requirement is a wanted to unwanted audio signal ratio of  $\geq 40\text{dB}$  at a wanted audio signal level of 50mW (or for AM sound receivers the criterion is  $\geq 26\text{dB}$  at 50mW, or For AM and FM car radios and for broadcast receiver cards for computers the criterion is  $\geq 26\text{dB}$  at 500mW), or at another audio signal level specified by the manufacturer. No degradation of test picture is allowed.

**Criterion B:**

**Definition: temporary loss of function or degradation of performance which ceases after the Emission ceases, and from which the equipment under test recovers its normal performance, without operator intervention.**

After the test, the equipment shall continue to operate as intended without operator intervention. No loss of function is allowed after the test when the apparatus is used as intended, but failures which are recovered automatically but which cause temporary delay in processing are permissible. No change of actual operating state is allowed as a result of the application of the test. During the test, degradation of performance is allowed.

**Criterion C:**

**Definition: temporary loss of function or degradation of performance, the correction of which requires operator intervention.**

**Criterion D:**

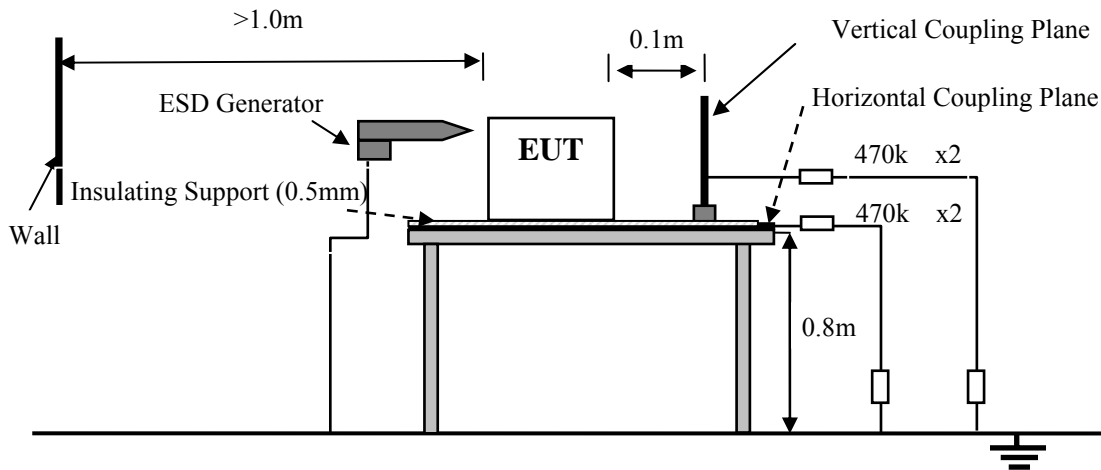
**Definition: loss of function or degradation of performance, which is not recoverable, owing to damage to hardware or software, or loss of data.**

## 8. ELECTROSTATIC DISCHARGE TEST

### 8.1. 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

### 8.2. Block Diagram of Test Setup



### 8.3. Test Standard

EN 55020: 2007+A11: 2011 (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)

### 8.4. 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	

### 8.5. EUT Configuration on Test

The configuration of EUT are listed in Section 3.5.

### 8.6. Operating Condition of EUT

Same as Conducted test which is listed in Section 3.6. except the test set up replaced by Section 8.2.

## 8.7. Test Procedure

### 8.7.1. Air Discharge:

The test was applied on non-conductive surfaces of EUT. The round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT. After each discharge, the discharge electrode was removed from the EUT. 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.

### 8.7.2. Contact Discharge:

All the procedure was same as Section 8.7.1. except that the generator was re-triggered for a new single discharge for each pre-selected test point. The tip of the discharge electrode was touch the EUT before the discharge switch was operated.

### 8.7.3. Indirect discharge for horizontal coupling plane

At least 20 single discharges were 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.

### 8.7.4. Indirect discharge for vertical coupling plane

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

## 8.8. 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 10 times and negative 10 times discharge

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

Discharge Voltage	Type of discharge	Dischargeable Points	Performance		Result (Pass/Fail)
			Required	Observation	
±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

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

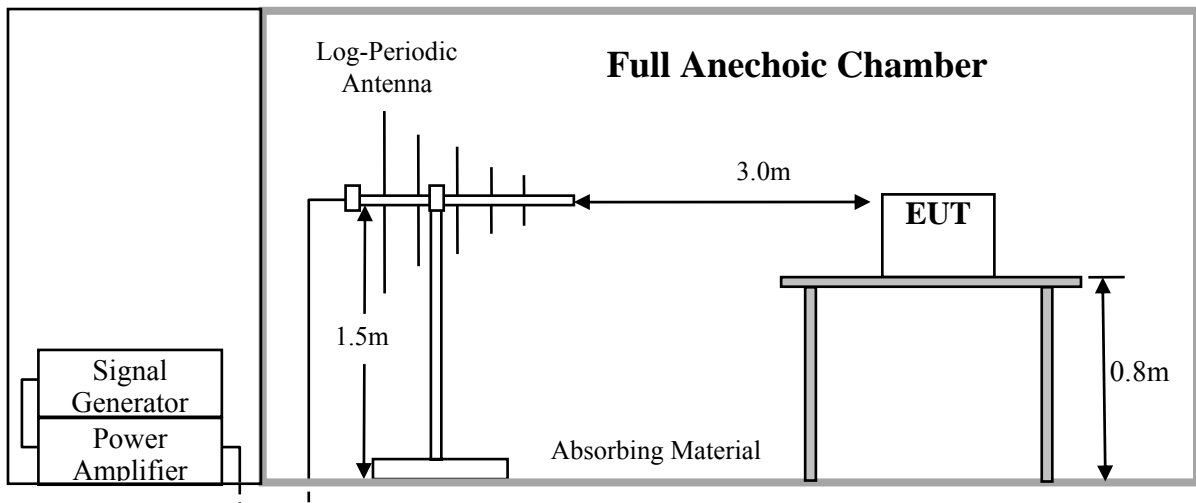
## 9. RF E.M. FIELD KEYED CARRIER TEST

### 9.1. 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	R&S	SML02	100822	Apr. 28,14	1 Year
3.	Audio Analyzer	HP	8903B	3514A16369	Apr. 28,14	1 Year
4.	Pattern Generator	Philiphs	PM5418	LO625020	Apr. 28,14	1 Year
5.	Log-periodic Antenna	A&R	AT1080	16512	NCR	NCR
6.	RF Cable	JINGCHENG	KLMR400	No.1/2/3	NCR	NCR
7.	Amplifier	A&R	100W/1000M1	17028	NCR	NCR
8.	Band-stop filter	Erika Fiedler Messtechnik	8 ohm	N/A	Mar. 25,14	0.5Year
9.	Band-stop filter	Erika Fiedler Messtechnik	300 ohm	N/A	Mar. 25,14	0.5Year
10.	Band-stop filter	Erika Fiedler Messtechnik	$\infty$ ohm	N/A	Mar. 25,14	0.5Year

Note: NCR: No calibration required(calibrated with system)

### 9.2. Block Diagram of Test Setup



### 9.3. Test Standard

EN 55020: 2007+A11: 2011 (IEC 61000-4-3: 2010),  
Severity Level 2 at 3V/m

### 9.4. Severity Levels and Performance Criterion

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

### 9.5.EUT Configuration

The configuration of EUT are listed in Section 3.5.

### 9.6.Operating Condition of EUT

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

### 9.7.Test Procedure

The test was carried out on one Fully Anechoic Chamber, the EUT and its simulators are placed on a wood table which is 0.8 meter above ground. EUT is set 3 meter away from the transmitting antenna which is mounted on an antenna tower. All ports were terminated with shielded resistors exclude the ports which related to non-broadcast functions, video ports were terminated by 75 ohm, audio ports were terminated by 10kohm.

An audio analyzer will be used to monitor s/n from EUT's speaker/audio out/earphone. Picture quality will be monitored from EUT's screen through a CCD camera or from EUT's video out through a test TV set. Vertical polarization of the antenna is setting on test. Right side of EUT must be faced this transmitting antenna.

All the scanning conditions are as follows :

Test Level	
Frequency	900MHz
Test level	3V/m (un-modulated)
Dwell time	3s
Test signal	duty cycle 1/8 217 Hz repetition frequency

### 9.8.Test Results

**PASS.**

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

## RF E.M. Field Keyed Carrier Test Results

Audix Technology(Shenzhen) Co.,Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Mar. 19, 2015
EUT	:	31.5"(80cm)LCD Monitor	Temperature	:	21.5±0.6
M/N	:	BDL3230QL	Humidity	:	52±3%
Test Voltage	:	AC 230V/50Hz	Pressure	:	100.6±1kPa
Test Engineer	:	Mark	Test Mode	:	As Section 3.6
Scanning Frequency	:	900MHz	Field Strength	:	3V/m
Required Performance	:	A	Actual Performance	:	A
Monitor Type	:	Sound			

Test signal:

900MHz ,3V/m , duty cycle 1/8

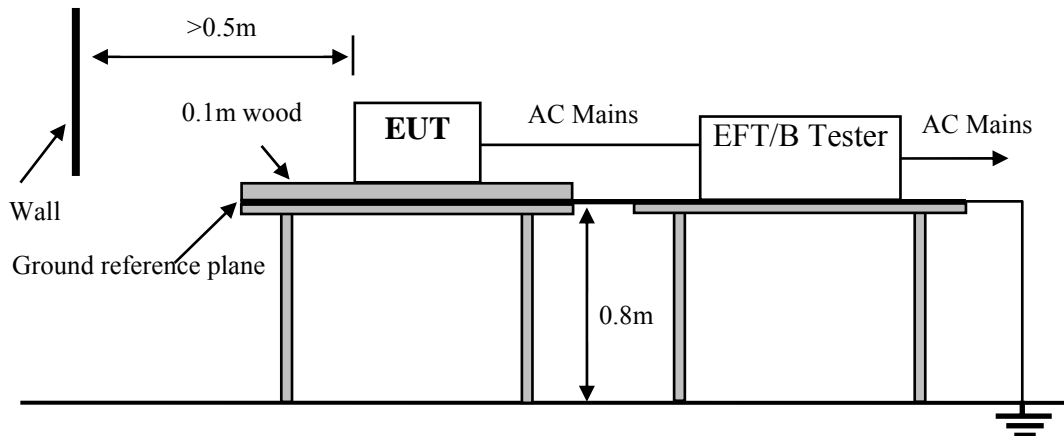
217 Hz repetition frequency

## 10.ELECTRICAL FAST TRANSIENT/BURST TEST

### 10.1.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

### 10.2.Block Diagram of Test Setup



### 10.3.Test Standard

EN 55020: 2007+A11: 2011 (IEC 61000-4-4: 2012)  
 (Severity Level 1 at 0.5kV, Severity Level 2 at 1kV)

### 10.4.Severity Levels and Performance Criterion

Open Circuit Output Test Voltage $\pm 10\%$			
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	

### 10.5.EUT Configuration on Test

The configuration of EUT are listed in Section 3.5.

### 10.6.Operating Condition of EUT

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

## 10.7. Test Procedure

The EUT and its simulators were placed on a ground reference plane and were insulated from it by a wood support  $0.1\text{m} \pm 0.01\text{m}$  thick. The ground reference plane was  $1\text{m} \times 1\text{m}$  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.

### 10.7.1. 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.

### 10.7.2. For signal lines and control lines ports:

It's unnecessary to test.

### 10.7.3. For DC output line ports:

It's unnecessary to test.

## 10.8. Test Results

**PASS.**

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

## 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>B</b>	Actual Performance	:	<b>A &amp; B</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 (Pass/Fail)
		Required	Observation(+ )	Observation( - )	
L	0.5kV	B	A	A	Pass
	1.0kV	B	B	B	Pass
N	0.5kV	B	A	A	Pass
	1.0kV	B	B	B	Pass
L-N	0.5kV	B	A	A	Pass
	1.0kV	B	B	B	Pass

Remark: Test class "B" Means the EUT with some noise during test, But it can be recover by itself.

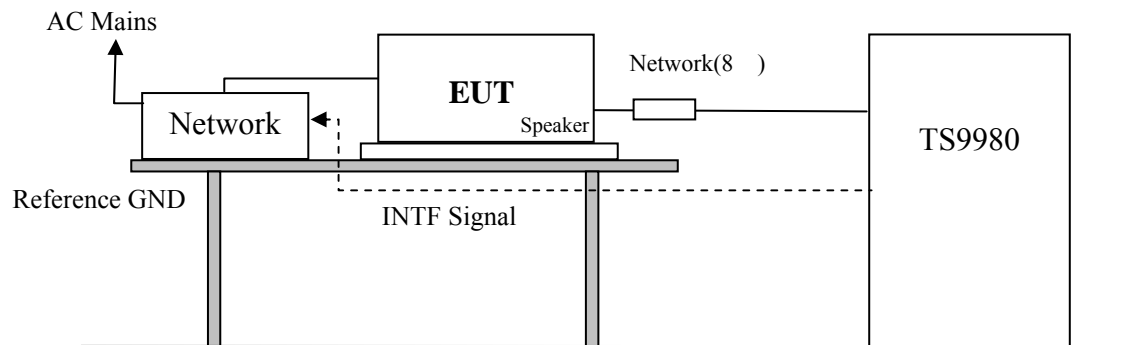
## 11. RF VOLTAGES INPUT INTERFERENCE (S2A)

### 11.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal Date	Cal. Interval
1.	Signal Generator	ROHDE&SCHWARZ	SML01	101754	Apr.28,14	1 Year
2.	Signal Generator	ROHDE&SCHWARZ	SML02	100822	Apr.28,14	1 Year
3.	Power Meter	ROHDE&SCHWARZ	NRVS	100735	Apr.28,14	1 Year
4.	Audio Analyzer	ROHDE&SCHWARZ	UPL	100687	Apr.28,14	1 Year
5.	RF-System Panel	ROHDE&SCHWARZ	TS-RSP	100052	N/A	N/A
6.	Power Amplifier	BONN ELEKTRONIK	BSA 1515-25	035338-05	N/A	N/A
7.	Power Amplifier	BONN ELEKTRONIK	BLWA 0310-1	035349	N/A	N/A
8.	Slide Bar Controller	Inn-Co	CO 1000	CO1000/025 /6280303/LL	N/A	N/A
9.	TV Test Transmitter	ROHDE&SCHWARZ	SFM	100092	Apr.28,14	1 Year
10.	TV Transmitter	ROHDE&SCHWARZ	SFQ	100521	Apr.28,14	1 Year
11.	TV Generator NTSC	ROHDE&SCHWARZ	SGMF	100019	Apr.28,14	1 Year
12.	TV Generator PAL	ROHDE&SCHWARZ	SGPF	100073	Apr.28,14	1 Year
13.	TV Generator SECAM	ROHDE&SCHWARZ	SGSF	100027	Apr.28,14	1 Year
14.	MPEG2 Measurement Generator	ROHDE&SCHWARZ	DVG	100319	Oct.29,14	1 Year
15.	Test Receiver	ROHDE&SCHWARZ	ESPI	100423	Apr.28,14	1 Year
16.	Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	100395	Nov.28,14	1 Year
17.	Lever Meter	ROHDE&SCHWARZ	URV35	100170	Apr.28,14	1Year
18.	Fixed Coaxial Attenuator	N/A	50FH-010-30	No.1	Apr.28,14	1 Year
19.	STRIP LINE TEM	Erika Fiedler Messtechnik	JACKY	N/A	Mar.25,15	0.5Year
20.	Band-stop filter	Erika Fiedler Messtechnik	8 ohm	N/A	Mar.25,15	0.5Year
21.	Band-stop filter	Erika Fiedler Messtechnik	300 ohm	N/A	Mar.25,15	0.5Year
22.	Band-stop filter	Erika Fiedler Messtechnik	$\infty$ ohm	N/A	Mar.25,15	0.5Year
23.	RCi network	Erika Fiedler Messtechnik	22k ohm	N/A	Mar.25,15	0.5Year
24.	RCi network	Erika Fiedler Messtechnik	1k ohm	N/A	Mar.25,15	0.5Year
25.	RCo network	Erika Fiedler Messtechnik	8 ohm	N/A	Mar.25,15	0.5Year
26.	RCo network	Erika Fiedler Messtechnik	300ohm	N/A	Mar.25,15	0.5Year
27.	RCo network	Erika Fiedler Messtechnik	$\infty$ ohm	N/A	Mar.25,15	0.5Year
28.	Impedence	Erika Fiedler Messtechnik	10k ohm	N/A	Mar.25,15	0.5Year
29.	Impedence	Erika Fiedler Messtechnik	300 ohm	N/A	Mar.25,15	0.5Year
30.	Impedence	Erika Fiedler Messtechnik	8 ohm	N/A	Mar.25,15	0.5Year
31.	Coupling network	Erika Fiedler Messtechnik	LC	N/A	Mar.25,15	0.5Year
32.	Coupling network	Erika Fiedler Messtechnik	MC	N/A	Mar.25,15	0.5Year
33.	Coupling network	Erika Fiedler Messtechnik	AC	N/A	Mar.25,15	0.5Year
34.	Mains filter	Erika Fiedler Messtechnik	230V/50Hz/16A	N/A	Mar.25,15	0.5Year
35.	Test Software	R&S	T80-K1	2.22	N/A	N/A



### 11.2. Block Diagram of Test Setup



### 11.3.Measurement Procedure

The EUT was placed 0.1m above a metallic ground plane of dimensions 2 X 1m. The ground connection of the mains filter (MSF) was directly connected to the metal table. All unused input/output connections on the EUT were terminated with the proper resistance. The power cable of the EUT was uniformly bundled together and as short as possible. The power supplied to the test system and to the mains filter (MSF) was attached to an isolation transformer. The 50ohm RF carrier signal was connected from the test system via a 50/75 ohm matching pad (RAM) to the EUT. This cable was used with ferrite rings as possible.

The measurement was performed with TS9980 (T80-K1, Ver.2.22).

### 11.4. Test Result

The EUT was complying with the requirements: A.  
For the measurement data, Please see the follow pages

The details of test modes:

Temperature: 20      Humidity: 49%

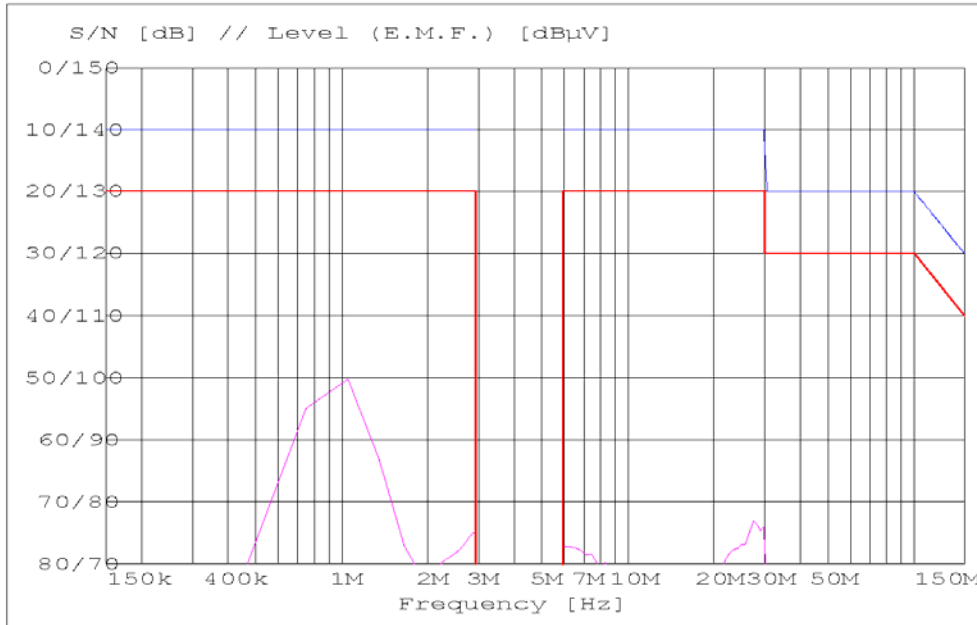
№	Interference Signal Inject to	Operating Mode	Measuring Type		Result
			Sound	Picture	
1	YPbPr Audio Out L	AV Mode	Sound	Picture	Pass
2.	YPbPr Audio Out R		Sound	Picture	Pass
3.	Headphones L		Sound	Picture	Pass
4.	Headphones R		Sound	Picture	Pass
5.	Mains		Sound	Picture	Pass

Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TPV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Sound	Monitor:	Headphones R
Channel:	- (0.00 MHz)	S/N:	79.9 dB
Country:	- (IF 38.90 MHz)	AF Level:	361 mV

Interf. Signal: Headphones R, 300315-00006-001, 3/30/2015, 9:42:28PM

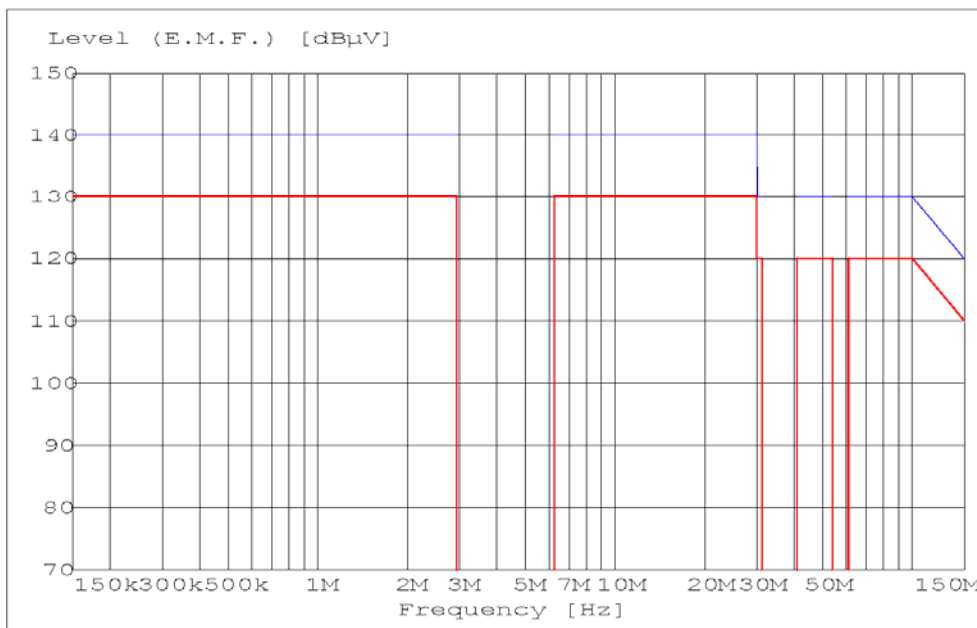


Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TPV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Picture
Channel:	- (0.00 MHz)
Country:	- (IF 38.90 MHz)

Interf. Signal: Headphones R, 300315-00006-002, 3/30/2015, 9:43:49PM

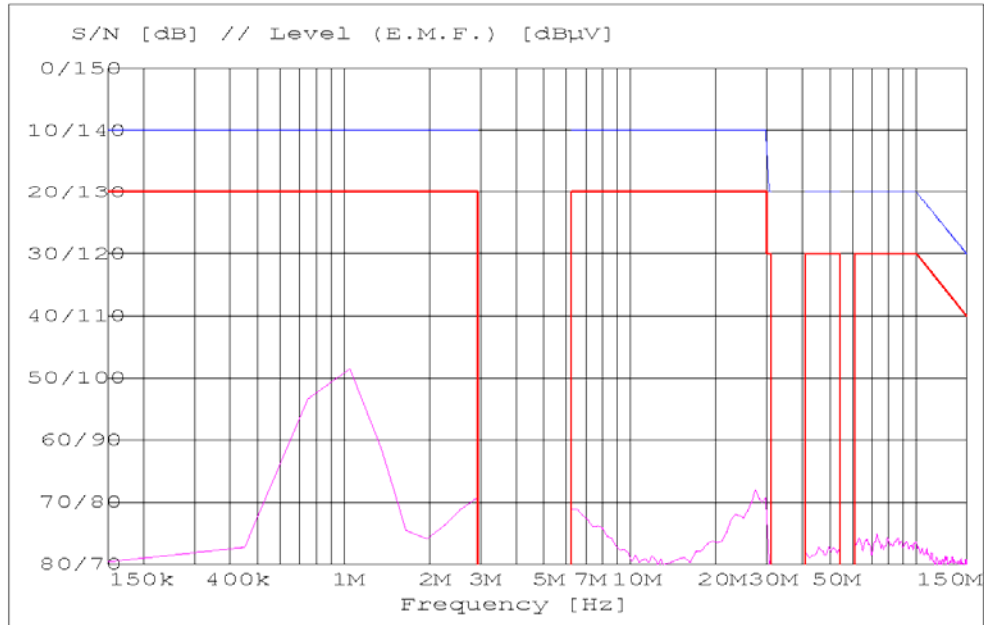


**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TEV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Sound	Monitor:	<b>Headphones L</b>
Channel:	- (0.00 MHz)	S/N:	78.3 dB
Country:	- (IF 38.90 MHz)	AF Level:	360 mV

**Interf. Signal: Headphones L, 300315-00005-001, 3/30/2015, 9:35:24PM**

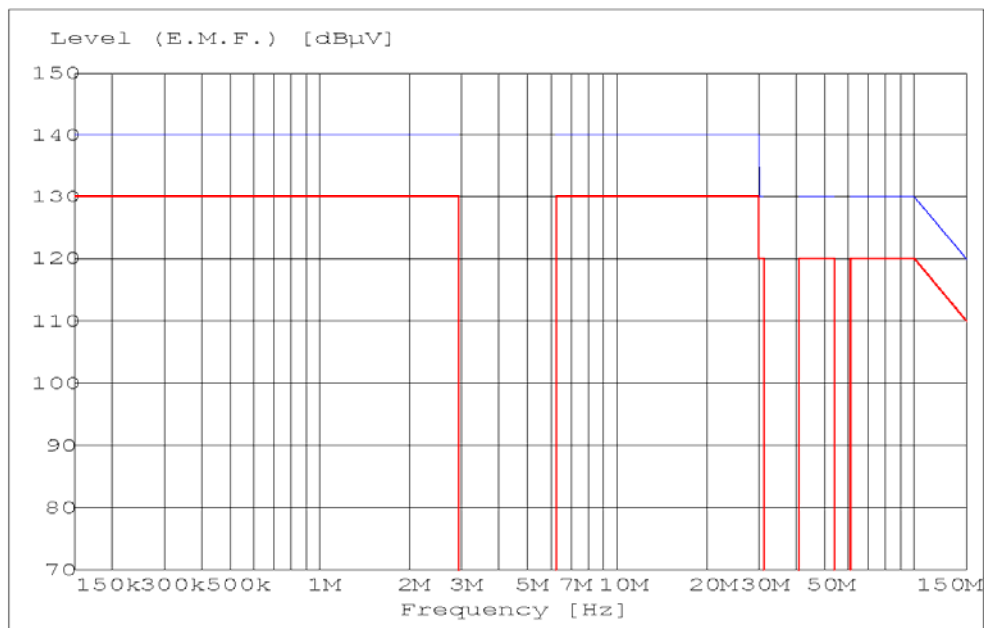


**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TEV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Picture
Channel:	- (0.00 MHz)
Country:	- (IF 38.90 MHz)

**Interf. Signal: Headphones L, 300315-00005-002, 3/30/2015, 9:38:52PM**

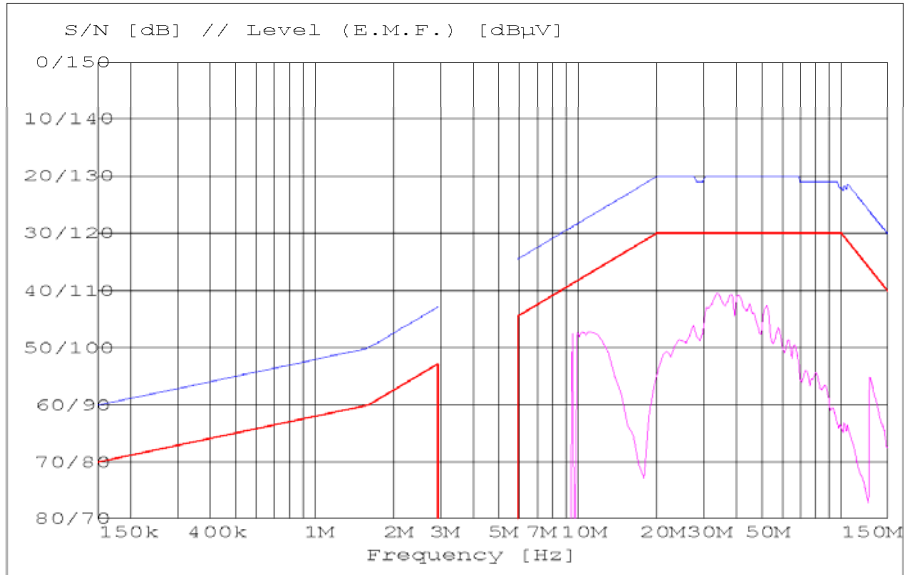


Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>

EUT: BDL4330QL Operator: Fire Zhang  
 Manufacturer: TPV Test Specifica: 20'C Humi:49%  
 Operating Condi: AV Mode Comment: AC 230V/50Hz  
 Test Site: AUDIX Technology(shenzhen)Co.,Ltd

Test Mode: AV - Sound Monitor: Audio Out R  
 Channel: - (0.00 MHz) S/N: 95.9 dB  
 Country: - (IF 38.90 MHz) AF Level: 421 mV

Interf. Signal: Audio Out R, 300315-00004-001, 3/30/2015, 9:37:26PM



Measurement Result, 300315-00004-001-1

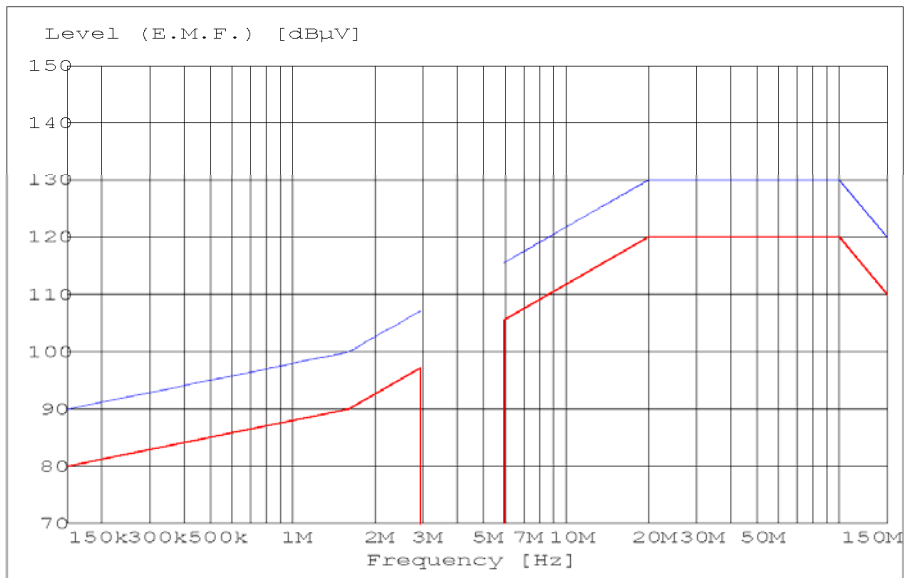
Frequency MHz	Level dBµV	Limit dBµV	Margin dB	Status	S/N dB
97.800000	128.0	120.0	8.0		64.0
98.600000	128.0	120.0	8.0		63.7
99.400000	128.0	120.0	8.0		63.5
100.200000	127.9	119.9	8.0		64.0
101.000000	127.7	119.7	8.0		64.5
101.800000	127.5	119.5	8.0		64.7

Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>

EUT: BDL4330QL Operator: Fire Zhang  
 Manufacturer: TPV Test Specifica: 20'C Humi:49%  
 Operating Condi: AV Mode Comment: AC 230V/50Hz  
 Test Site: AUDIX Technology(shenzhen)Co.,Ltd

Test Mode: AV - Picture  
 Channel: - (0.00 MHz)  
 Country: - (IF 38.90 MHz)

Interf. Signal: Audio Out R, 300315-00004-002, 3/30/2015, 9:39:29PM

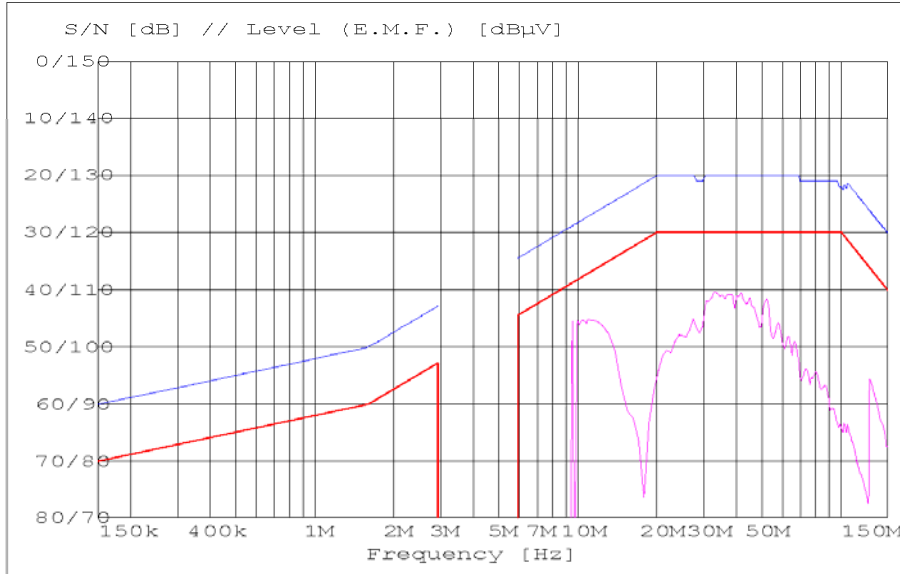


**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT: BDL4330QL Operator: Fire\_Zhang  
 Manufacturer: TPV Test Specifica: 20'C Humi:49%  
 Operating Condi: AV Mode Comment: AC 230V/50Hz  
 Test Site: AUDIX Technology(shenzhen)Co.,Ltd

Test Mode: AV - Sound Monitor: Audio Out L  
 Channel: - (0.00 MHz) S/N: 86.3 dB  
 Country: - (IF 38.90 MHz) AF Level: 416 mV

Interf. Signal: Audio Out L, 300315-00003-001, 3/30/2015, 9:32:41PM



**Measurement Result, 300315-00003-001-1**

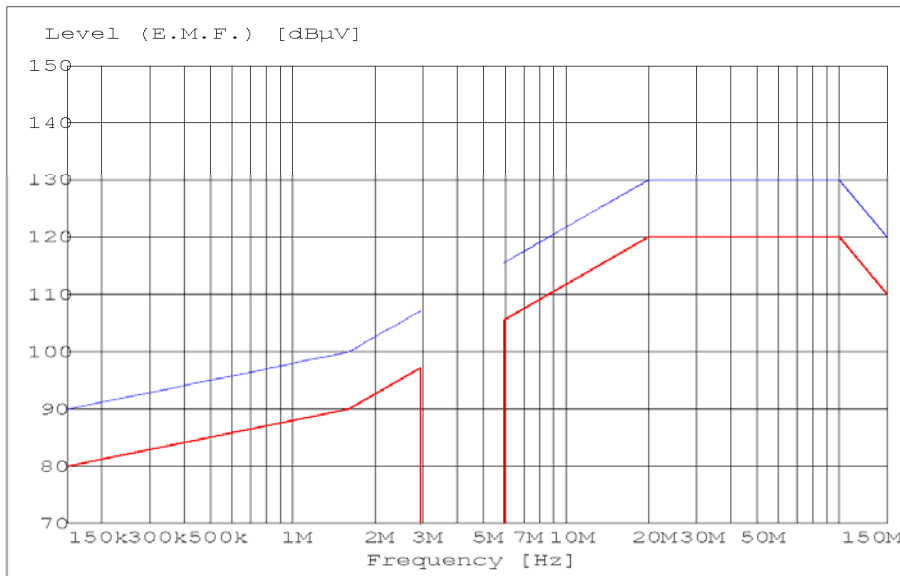
Frequency MHz	Level dBuV	Limit dBuV	Margin dB	Status	S/N dB
97.800000	128.0	120.0	8.0		64.1
98.600000	128.0	120.0	8.0		63.8
99.400000	128.0	120.0	8.0		63.6
100.200000	127.9	119.9	8.0		64.1
101.000000	127.7	119.7	8.0		64.7
101.800000	127.5	119.5	8.0		64.9

**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT: BDL4330QL Operator: Fire\_Zhang  
 Manufacturer: TPV Test Specifica: 20'C Humi:49%  
 Operating Condi: AV Mode Comment: AC 230V/50Hz  
 Test Site: AUDIX Technology(shenzhen)Co.,Ltd

Test Mode: AV - Picture  
 Channel: - (0.00 MHz)  
 Country: - (IF 38.90 MHz)

Interf. Signal: Audio Out L, 300315-00003-002, 3/30/2015, 9:33:42PM

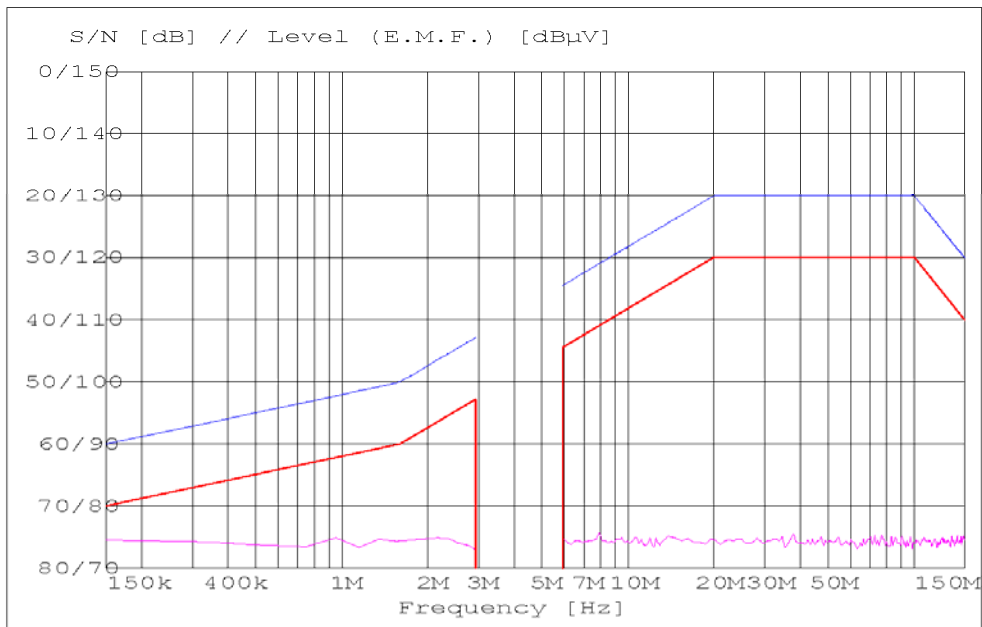


**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TEV	Test Specifica:	20'C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology (shenzhen)Co.,Ltd		

Test Mode:	AV - Sound	Monitor:	Speaker
Channel:	- (0.00 MHz)	S/N:	75.8 dB
Country:	- (IF 38.90 MHz)	AF Level:	52 mW

**Interf. Signal: YPbPr Audio In, 300315-00002-001, 3/30/2015, 9:06:34PM**

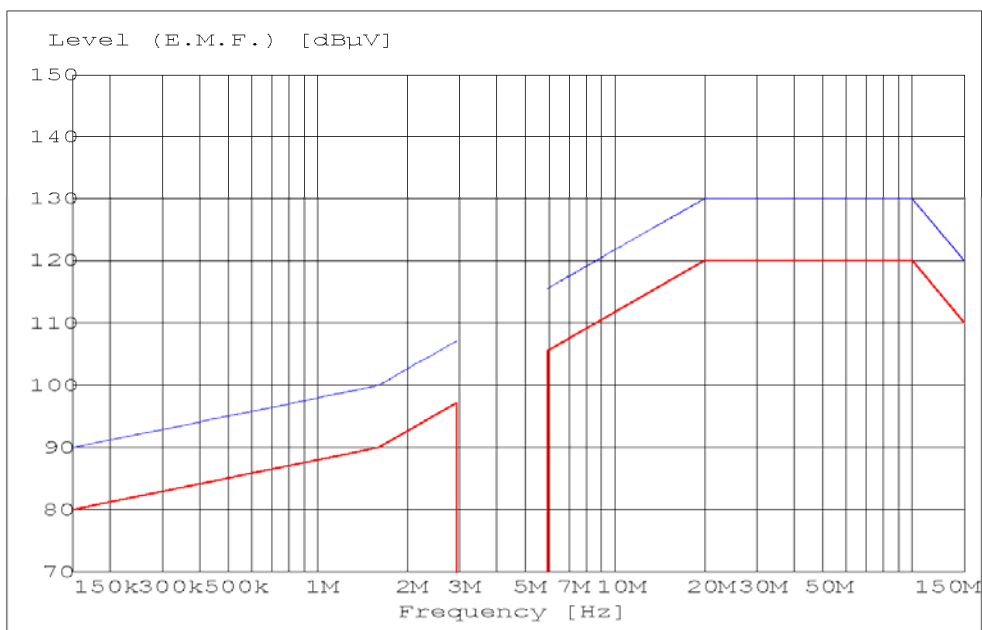


**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TEV	Test Specifica:	20'C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology (shenzhen)Co.,Ltd		

Test Mode:	AV - Picture
Channel:	- (0.00 MHz)
Country:	- (IF 38.90 MHz)

**Interf. Signal: YPbPr Audio In, 300315-00002-002, 3/30/2015, 9:07:33PM**

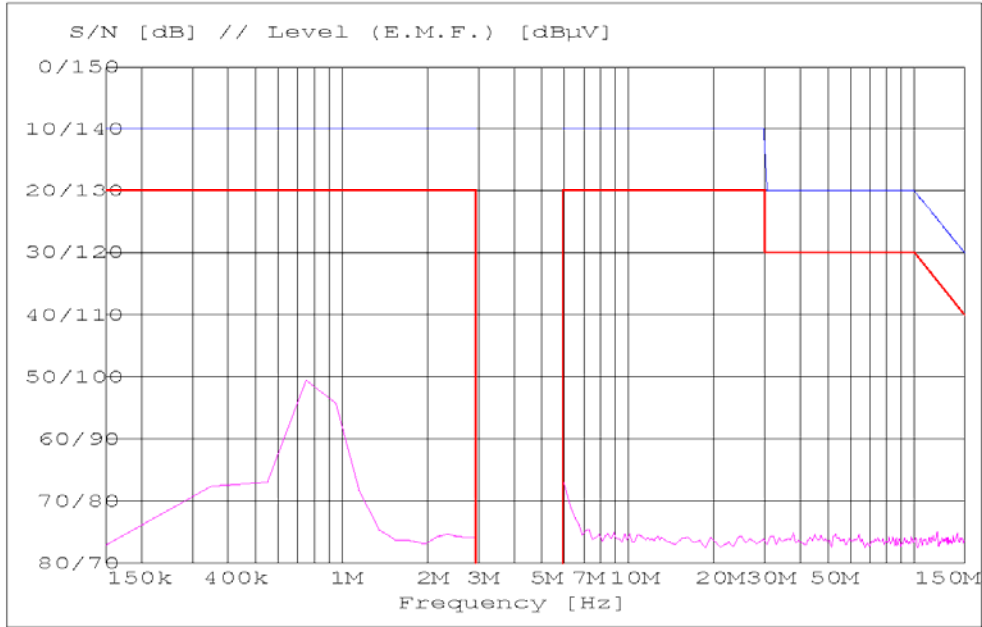


**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TEV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Sound	Monitor:	Speaker
Channel:	- (0.00 MHz)	S/N:	76.7 dB
Country:	- (IF 38.90 MHz)	AF Level:	55 mW

Interf. Signal: Mains, 300315-00001-001, 3/30/2015, 8:48:17PM

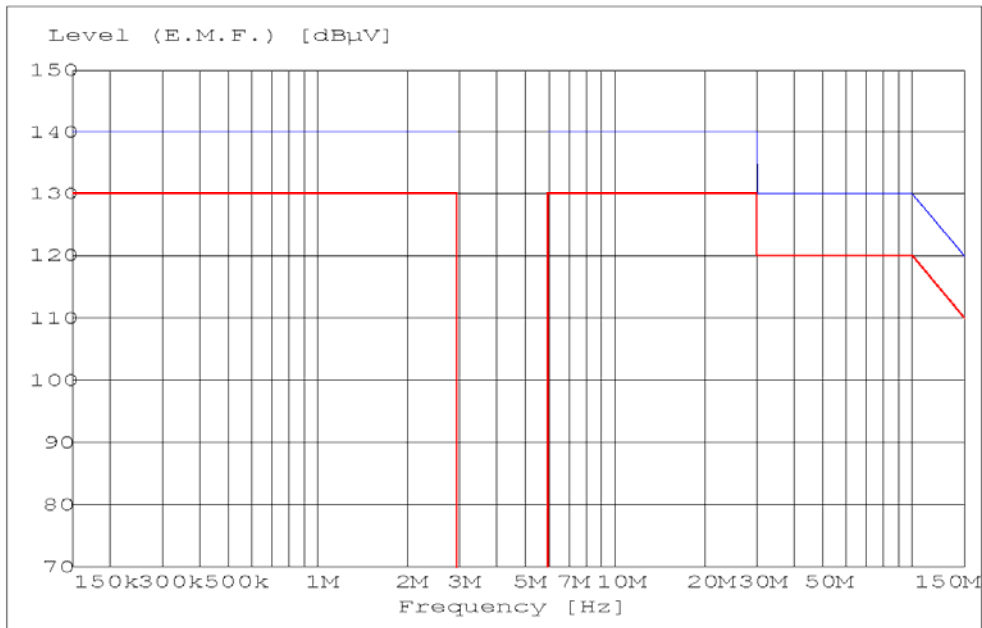


**Test: Immunity Conducted Voltages S2a <TPV ACS15Q0206>**

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TEV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Picture
Channel:	- (0.00 MHz)
Country:	- (IF 38.90 MHz)

Interf. Signal: Mains, 300315-00001-002, 3/30/2015, 8:49:16PM

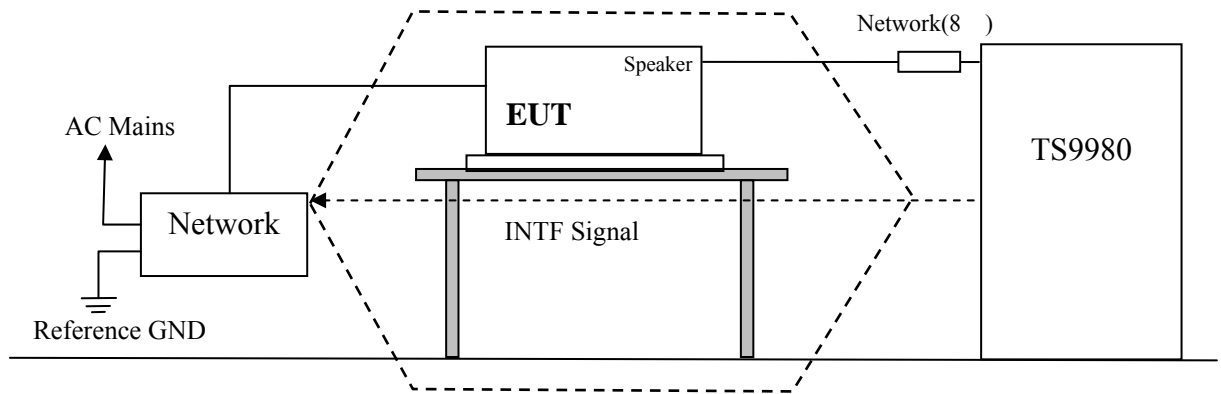


## 12.AMBIENT ELECTROMAGNETIC FIELD: S3

### 12.1.Test Equipments

Same as Section 11.1.

### 12.2.Block Diagram of Test Setup



### 12.3.Measurement Procedure

The EUT was placed on a non-metallic support, 0.1m above the lower conductor in the center of the strip line. The wanted signal was fed to all input terminals respectively. The unwanted signal is fed to a matching network of the strip line. The ground connection of the mains filter (M) was directly connected to the jack. All unused input/output connections on the EUT were terminated and shielded with the proper resistance. The power supply to the mains of the EUT was attached to the mains filter (M). Ferrite rings for this test was required on all test cables inside the shielded room.

The measurement was performed with TS9980 (T80-K1, Ver.2.22)

### 12.4.Test Result

The equipment does comply with the requirements: A.

For the measurement data, please see the follow pages.

No	Operating Mode	Measuring Type		Result
1	AV Mode	Sound	Picture	Pass

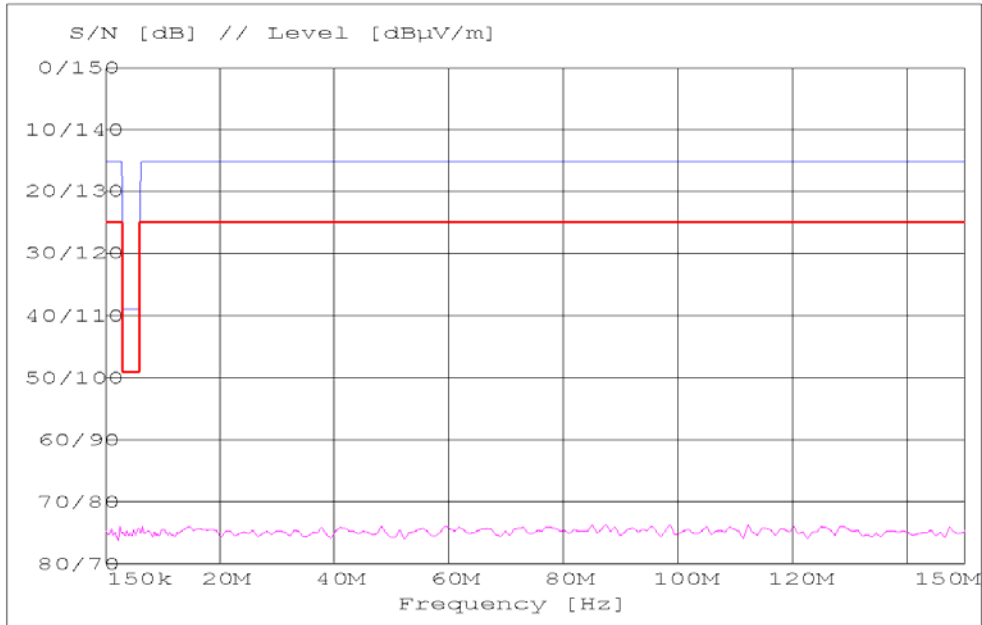


Test: Immunity Radiated Fields S3 <TPV ACS15Q0206>

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TPV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Sound	Monitor:	Speaker
Channel:	- (0.00 MHz)	S/N:	74.4 dB
Country:	- (IF 38.90 MHz)	AF Level:	48 mW

Interf. Signal: Scan, 300315-00005-001, 3/30/2015, 9:50:10EM K2 = 6.0 dB

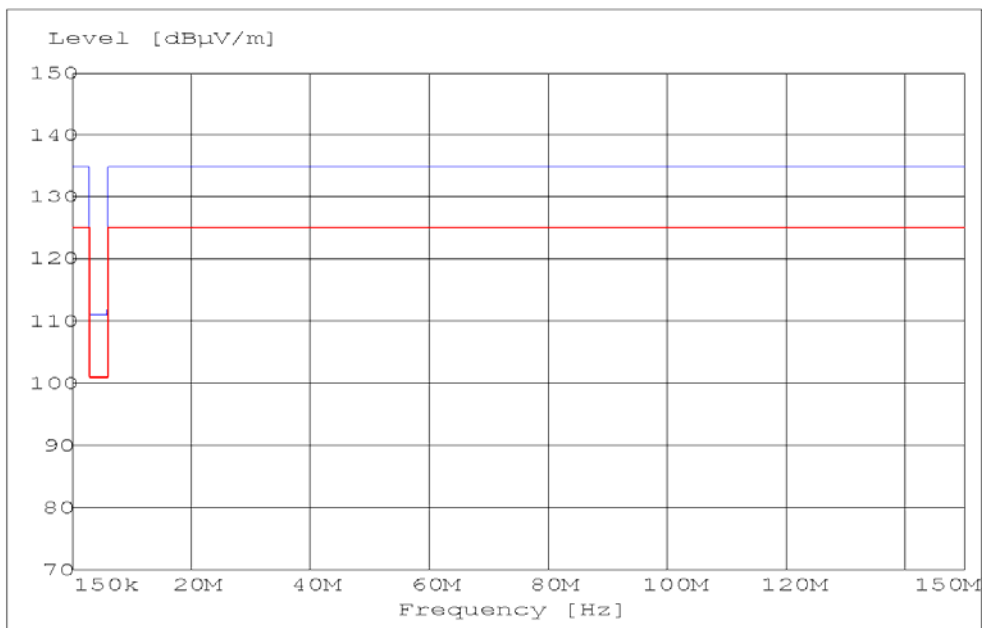


Test: Immunity Radiated Fields S3 <TPV ACS15Q0206>

EUT:	BDL4330QL	Operator:	Fire_Zhang
Manufacturer:	TPV	Test Specifica:	20°C Humi:49%
Operating Condi:	AV Mode	Comment:	AC 230V/50Hz
Test Site:	AUDIX Technology(shenzhen)Co.,Ltd		

Test Mode:	AV - Picture
Channel:	- (0.00 MHz)
Country:	- (IF 38.90 MHz)

Interf. Signal: Scan, 300315-00005-002, 3/30/2015, 9:51:04EM K2 = 6.0 dB



### 13. PHOTOGRAPH

#### 13.1. Photos of Power Line Conducted Emission Test



13.2. Photo of Emission Power Test



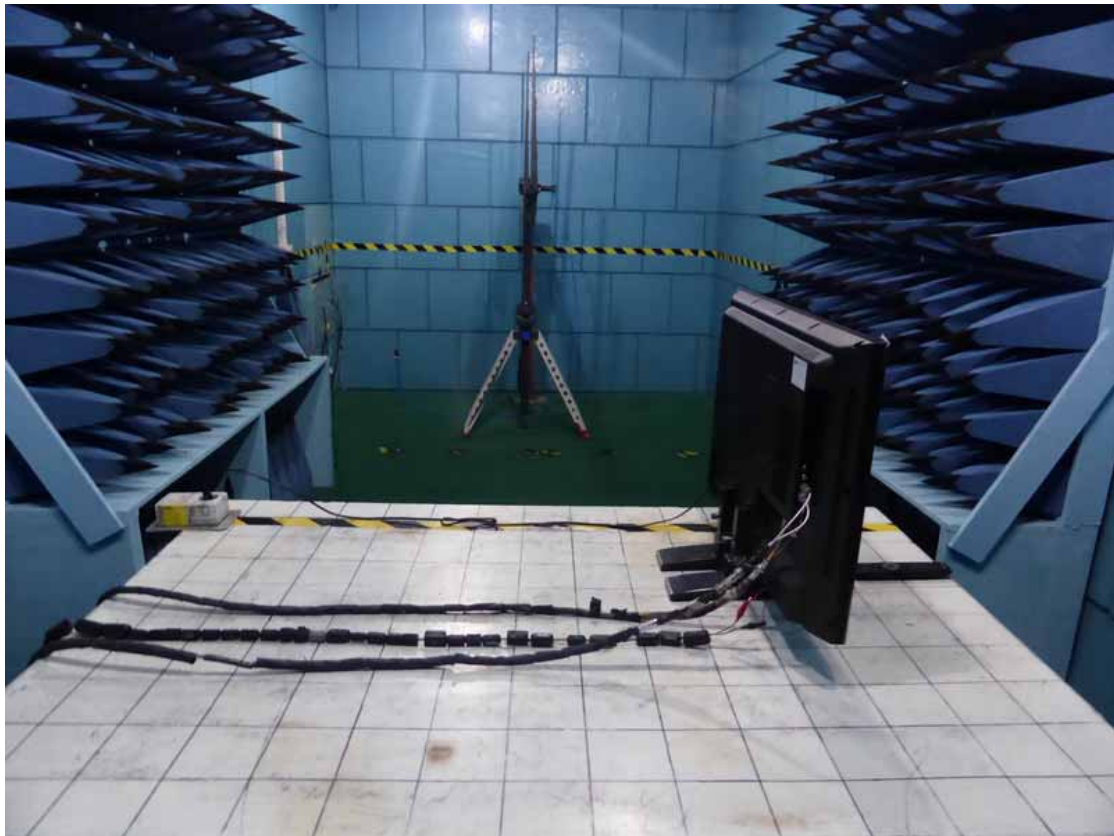
13.3. Photo of Harmonic & Flicker Test



13.4. Photos of Electrostatic Discharge Immunity Test



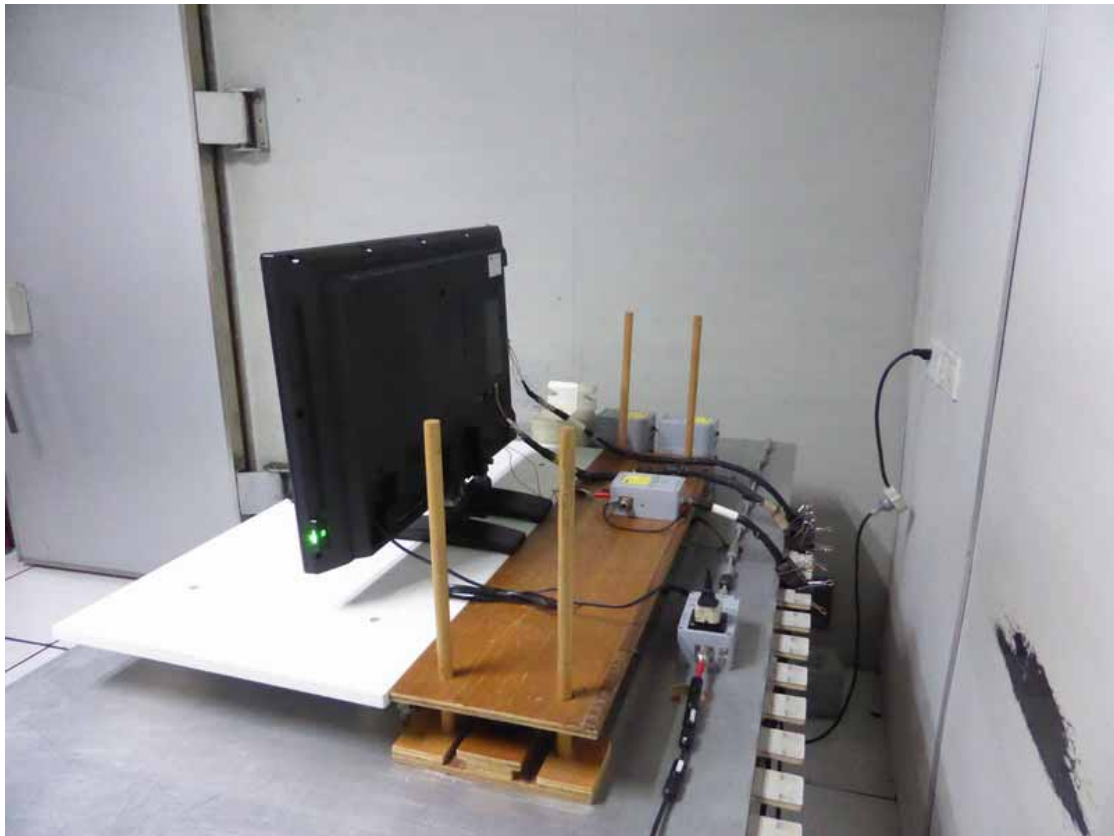
13.5. Photo of RF E.M. Field Keyed Carrier Test



13.6. Photo of Electrical Fast Transient/Burst Immunity Test



13.7. Photos of RF Voltages Input Interference (S2a) Test



13.8. Photo of Ambient Electromagnetic Field:S3 Test

