Technical Compliance Statement

For the following information **Ref. File No.: C1M1703395**

Product	:	LCD Monitor
Model Number	:	(1)270LM00040 (2)PDS271***
Brand	:	AOC
Applicant	:	TPV Electronics (FuJian) Co., Ltd.
Standards	:	47 CFR FCC Part 15 Subpart B and ICES-003 Issue 6:2016 (Class B Limit)

We hereby certify that the above product has been tested by us and complied with the FCC and ISED official limits. The product might be marketed in US in accordance with the standard 47 CFR FCC Part 2 and Part 15 Subpart B class B equipment regulations under FCC Rules. The test was performed according to the procedures mentioned in ANSI C63.4:2014. The test data and results are issued on the test report no. **EM-F170244**.

Signature

Alex Deng/Deputy Manager
Date: 2017. 04. 25

Testing Laboratory
1724

TESTING
NVLAP LAB CODE 200077-0

Test Laboratory:
AUDIX Technology Corporation, EMC Department
NVLAP Lab. Code: 200077-0
FCC OET Designation: TW1004 & TW1090
Web Site: www.audixtech.com

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

TEST REPORT FOR FCC and ISED

On Behalf of

TPV Electronics (FuJian) Co., Ltd.

LCD Monitor

Model No.: (1)270LM00040 (2)PDS271***

Brand: AOC

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

Prepared By：AUDIX Technology Corporation
EMC Department
No. 53-11, Dingfu, Linkou Dist.,
New Taipei City 244, Taiwan

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File Number	：	C1M1703395
Report Number	：	EM-F170244
Date of Test	：	2017. 04. 14 ~ 18
Date of Report	：	2017. 04. 25

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TEST REPORT FOR COMPLIANCE DECLARATION

Applicant	:	TPV Electronics (FuJian) Co., Ltd.
EUT Description	:	LCD Monitor
(A) Model No.	:	(1)270LM00040 (2)PDS271***
(B) Serial No.	:	N/A
(C) Brand	:	AOC
(D) Power Supply	:	AC 100-240V, 50/60Hz

Rules of Compliance and Measurement Standards：

47 CFR FCC Part 15 Subpart B
ANSI C63.4:2014
ICES-003 Issue 6:2016

The device described above was tested by AUDIX Technology Corporation, to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart B with the provisions of sections 15.107 and 15.109 and ICES-003 Class B limits both conducted and radiated emissions.

The measurement results are contained in this test report and AUDIX Technology Corporation is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC and ISED official limits.

This report applies to above tested sample only and which shall not be reproduced in part without written approval of AUDIX Technology Corporation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Date of Test : 2017. 04. 14 ~ 18 Date of Report : 2017. 04. 25

Producer : _____
(Kitty Ni/Section Manager)

Signatory : _____
(Alex Deng/Deputy Manager)

Name of the Representative of the Responsible Party : _____

Signature : _____

1. DESCRIPTION OF VERSION

Edition No.	Date of Revision	Revision Summary	Report Number
0	2017. 04. 25	Original Report.	EM-F170244

2. SUMMARY OF STANDARDS AND RESULTS

2.1. Description of Standards and Results

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

EMISSION			
Description of Test Item	**Standard**	**Limits**	**Results**
Powerline Conducted Emission Measurement	47 CFR FCC Part 15 Subpart B and ICES-003: 2016	Class B	PASS
		Minimum passing margin is 6.27dB at 4.900MHz	
Radiated Emission Measurement	47 CFR FCC Part 15 Subpart B and ICES-003: 2016	Class B	PASS
		Minimum passing margin is 2.22dB at 742.507MHz (Horizontal, 4.0m/110°)	
Radiated Emission Measurement	47 CFR FCC Part 15 Subpart B and ICES-003: 2016	Class B	PASS
		Minimum passing margin is 14.81dB at 1031.54MHz	

3. GENERAL INFORMATION

3.1. Description of Device (EUT)

Description	:	LCD Monitor
Model Number	:	(1)270LM00040 (2)PDS271*** (The "*" could be any alphanumeric character including blank for marketing differentiation.) The difference of above models is in sales marketing. The model 270LM00040 was tested in this report.
Serial Number	:	N/A
Brand	:	AOC
Applicant	:	TPV Electronics (FuJian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
Max. Working Frequency	:	170MHz
Max. Resolution	:	1920*1080/60Hz
Connection Cable	:	Shielded, Detachable, 0.5m Shileded, Detachable, 0.7m Shileded, Detachable, 1.0m
HDMI Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
AC Power Cord	:	Unshielded, Detachable, 1.2m (2C) Unshielded, Detachable, 1.5m (2C) Unshielded, Detachable, 1.8m (2C)
Date of Receipt of Sample	:	2017. 03. 23
Date of Test	:	2017. 04. 14 ~ 18

Remark 1:
The EUT is a LCD Monitor which input/output ports provided as follows:

View of Monitor:
(1) One Connection Port
(2) One Earphone Port

View of External Power:
(3) One Connection Port
(4) One HDMI Port
(5) One AC Port

Remark 2：
The EUT with following test modes were pre-scanned.

Test Item	Input Port	Connection Cable	Power Cord	Resolution & Frequency
Conducted emissions at AC mains power port	Connection (HDMI)	1.0m	1.8m	640*480/60Hz
				1280*1024/75Hz
				1920*1080/60Hz
	Connection (HDMI)	1.0m	1.5m	1920*1080/60Hz
	Connection (HDMI)	1.0m	1.2m	1920*1080/60Hz
	Connection (HDMI)	0.7m	1.8m	1920*1080/60Hz
	Connection (HDMI)	0.5m	1.8m	1920*1080/60Hz
Radiated emission (30 – 1000MHz)	Connection (HDMI)	1.0m	1.8m	640*480/60Hz
				1280*1024/75Hz
				1920*1080/60Hz
	Connection (HDMI)	1.0m	1.5m	1920*1080/60Hz
	Connection (HDMI)	1.0m	1.2m	1920*1080/60Hz
	Connection (HDMI)	0.7m	1.8m	1920*1080/60Hz
	Connection (HDMI)	0.5m	1.8m	1920*1080/60Hz
Radiated emission (1 – 6GHz)	Connection (HDMI)	1.0m	1.8m	1280*1024/75Hz
				1920*1080/60Hz
	Connection (HDMI)	1.0m	1.5m	1920*1080/60Hz
	Connection (HDMI)	1.0m	1.2m	1920*1080/60Hz
	Connection (HDMI)	0.7m	1.8m	1920*1080/60Hz
	Connection (HDMI)	0.5m	1.8m	1920*1080/60Hz

Finally, the under worst test modes are demonstrated compliance with the standards in the report.

Test Item	Input Port	Connection Cable	Power Cord	Resolution & Frequency
Conducted emissions at AC mains power port	Connection (HDMI)	1.0m	1.8m	1920*1080/60Hz
Radiated emission (30 – 1000MHz)	Connection (HDMI)	1.0m	1.8m	1920*1080/60Hz
Radiated emission (1 – 6GHz)	Connection (HDMI)	1.0m	1.8m	1920*1080/60Hz

3.2. Tested Supporting System Details

3.2.1. Support Peripheral Unit

No.	Product	Brand	Model No.	Serial No.	Approval
1	PC System	HP	SHNGC-M003 MT	SGH014R6GN	By DoC
2	Keyboard	HP	KB-0316	N/A	By DoC
3	Mouse	HP	M-S48a	LZE20501531	FCC ID: JNZ201213
4	Laser Printer	SAMSUNG	ML-1630	4561B1CP600023X	FCC ID: A3LML1630
5	USB Storage Media	pqi	U172p	95110880023240	By DoC
6	Earphone	LGITON	FS-99	N/A	N/A

3.2.2. Cable List

No.	Cable Description Of The Above Support Units
1	AC Power Cord: Unshielded, Detachable, 1.8m
2	Data Cable: Shielded, Undetachable, 1.8m
3	Data Cable: Shielded, Undetachable, 1.8m
4	USB Cable: Shielded, Detachable, 1.8m AC Power Cord: Unshielded, Detachable, 1.8m
5	USB Cable: Shielded, Detachable, 1.5m
6	Earphone Cable: Unshielded, Undetachable, 1.1m

3.3. Test Facility

Name of Firm	:	**AUDIX Technology Corporation** **EMC Department** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Location & Facility	:	**No. 5 Shielded Room** **No. 3 Open Area Test Site** **No. 2 3m Semi-Anechoic Chamber** No. 67-4, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724
FCC OET Designation	:	TW1004 & TW1090

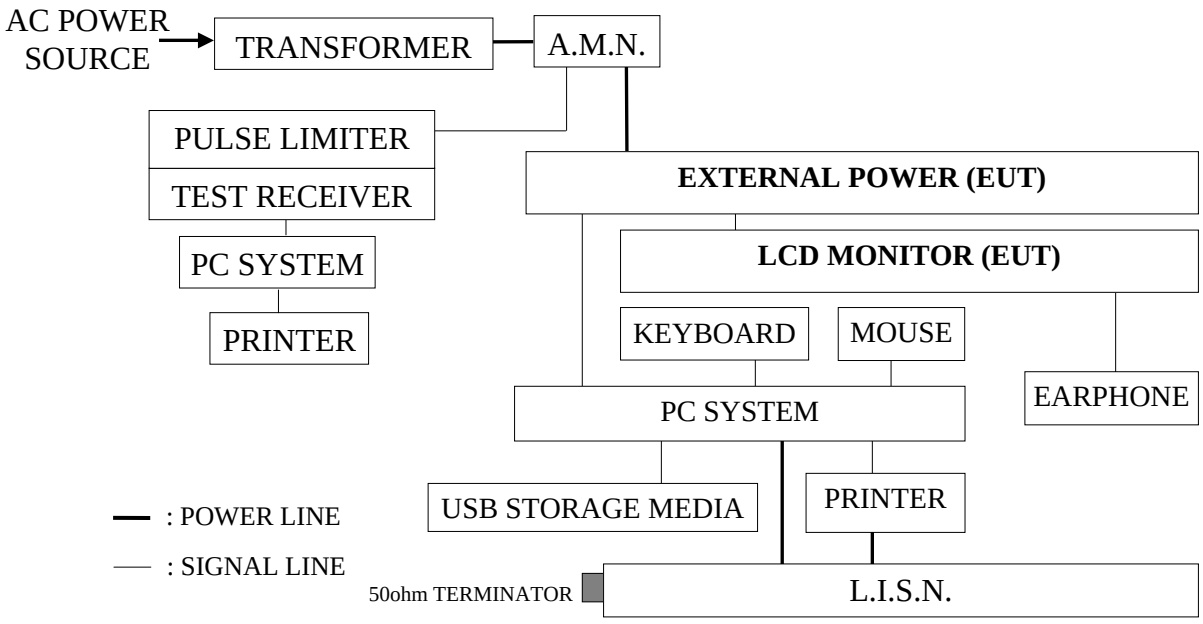
4. POWERLINE CONDUCTED EMISSION MEASUREMENT

4.1. Test Equipment

The following test equipment was used during the powerline conducted emission measurement: (No. 5 Shielded Room)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESR3	101773	2017. 02. 16	1 Year
2.	A.M.N.	R&S	ENV4200	100003	2016. 06. 07	1 Year
3.	L.I.S.N.	Kyoritsu	KNW-407	8-1539-2	2016. 12. 28	1 Year
4.	Pulse Limiter	R&S	ESH3-Z2	100355	2017. 01. 16	1 Year

4.2. Block Diagram of Test Setup



4.3. Powerline Conducted Emission Limit

(FCC§15.107/ICES-003, Class B)

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66~56 dBμV	56~46 dBμV
500kHz~5MHz	56 dBμV	46 dBμV
5MHz~30MHz	60 dBμV	50 dBμV

Remark:
1. If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.
2. The lower limit applies at the band edges.

4.4. Operating Condition of EUT

4.4.1. Set up the EUT and simulator as shown on 4.2.

4.4.2. To turn on the power of all equipment.

4.4.3. The PC system read data from disk.

4.4.4. The PC system was running the test program “Win FCC” by Windows 7 and the screen of LCD Monitor (EUT) displaying pattern “H” by EUT’s resolution via component input during the testing.

4.4.5. The PC system was running the program “Windows Media Player” and sending sounds to earphone.

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

4.5. Test Procedure

The EUT was placed on the table which was above the ground by 80cm and its adapter's power cord was connected to the AC main through an Artificial Mains Network (A.M.N.). The peripheral devices power cord connected to the power mains through another line impedance stabilization network (L.I.S.N.). This provided a 50 ohm coupling impedance for the measuring equipment. (Please refer to the block diagram of the test setup and photographs.)
Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.4:2014 during conducted measurement.

The bandwidth of the R&S Test Receiver ESR3 was set at 9 kHz.

The frequency range from 150kHz to 30MHz was pre-scanned with a peak detector.

All the readings of measurements were with the Quasi-Peak detector and Average detector. (Remark: If the Average limit is met when using a Quasi-Peak detector, the Average detector is unnecessary)

4.6. Powerline Conducted Emission Measurement Results

PASSED. All emissions not reported below are too low against the prescribed limits.

The EUT with following worst test modes was measured during this section testing and all the test results were listed in next pages.

EUT：LCD Monitor M/N：270LM00040

Test Date：2017. 04. 17 Temperature：26℃ Humidity：58%

The details of test modes are as follows：

Mode	Input Port	Connection Cable	Power Cord	Resolution/Frequency	Reference Test Data No.	
					Natural	Line
1	Connection (HDMI)	1.0m	1.8m	1920*1080/60Hz	# 18	# 17

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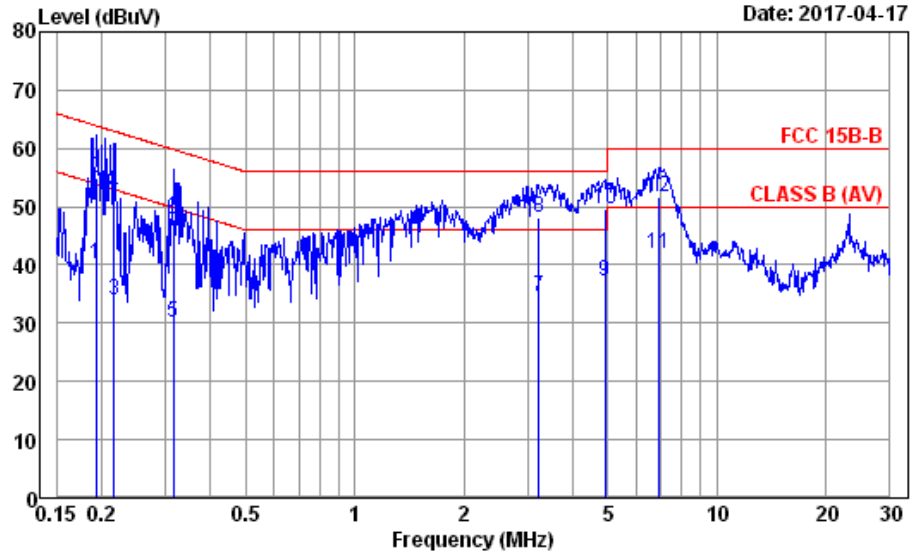
Data: 18 File: D:\test-data\Report\2017\C1M1703XXX\C1M1703395-C-D.EM6 (58)



Site no. : No.5 Shielded Room Data no. : 18
Condition : ENV4200 100003 LISN Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 26*C / 58% ESR3 (101773) Engineer : Eason
EUT : 270LM00040
Power Rating : 120Vac / 60Hz
Test Mode : 1920*1080/60Hz HDMI
Power Cord 1.8m
HDMI Cable 1m

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.193	10.14	0.02	9.86	20.04	40.06	53.89	13.83	Average
2	0.193	10.14	0.02	9.86	34.85	54.87	63.89	9.02	QP
3	0.216	10.13	0.02	9.86	13.87	33.88	52.96	19.08	Average
4	0.216	10.13	0.02	9.86	32.26	52.27	62.96	10.69	QP
5	0.315	10.07	0.02	9.86	10.30	30.25	49.84	19.59	Average
6	0.315	10.07	0.02	9.86	27.73	47.68	59.84	12.16	QP
7	3.224	10.08	0.04	9.86	14.55	34.53	46.00	11.47	Average
8	3.224	10.08	0.04	9.86	28.09	48.07	56.00	7.93	QP
9	4.900	10.26	0.05	9.87	17.09	37.27	46.00	8.73	Average
10	4.900	10.26	0.05	9.87	29.55	49.73	56.00	6.27	QP
11	6.878	10.51	0.06	9.87	21.48	41.92	50.00	8.08	Average
12	6.878	10.51	0.06	9.87	31.19	51.63	60.00	8.37	QP

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

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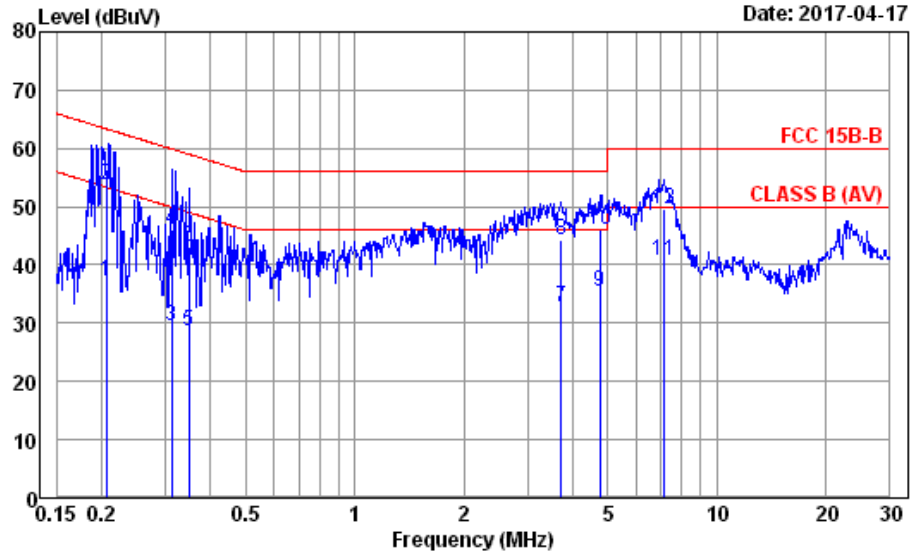


Site no. : No.5 Shielded Room Data no. : 17
Condition : ENV4200 100003 LISN Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 26*C / 58% ESR3 (101773) Engineer : Eason
EUT : 270LM00040
Power Rating : 120Vac / 60Hz
Test Mode : 1920*1080/60Hz HDMI
Power Cord 1.8m
HDMI Cable 1m

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.206	10.16	0.02	9.86	17.10	37.14	53.35	16.21	Average
2	0.206	10.16	0.02	9.86	33.69	53.73	63.35	9.62	QP
3	0.312	10.10	0.02	9.86	9.44	29.42	49.93	20.51	Average
4	0.312	10.10	0.02	9.86	26.04	46.02	59.93	13.91	QP
5	0.348	10.08	0.02	9.86	8.61	28.57	49.00	20.43	Average
6	0.348	10.08	0.02	9.86	23.12	43.08	59.00	15.92	QP
7	3.720	10.22	0.04	9.87	12.50	32.63	46.00	13.37	Average
8	3.720	10.22	0.04	9.87	24.11	44.24	56.00	11.76	QP
9	4.746	10.40	0.05	9.87	15.14	35.46	46.00	10.54	Average
10	4.746	10.40	0.05	9.87	25.64	45.96	56.00	10.04	QP
11	7.175	10.81	0.07	9.87	20.12	40.87	50.00	9.13	Average
12	7.175	10.81	0.07	9.87	28.82	49.57	60.00	10.43	QP

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

5. RADIATED EMISSION MEASUREMENT

5.1. Test Equipment

The following test .equipment was used during the radiated emission measurement:

5.1.1. For 30MHz~1000MHz Frequency (At No. 3 Open Area Test Site)

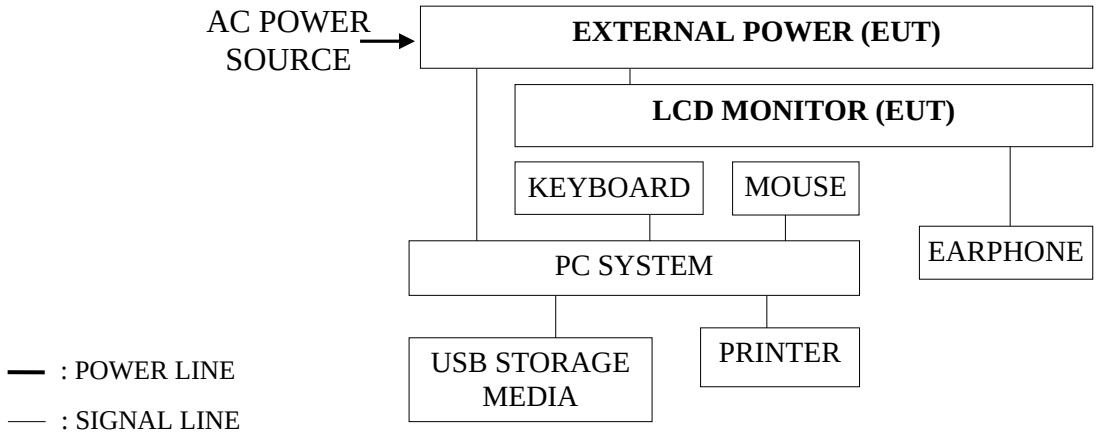
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-503	MY51120074	2016. 10. 24	1 Year
2.	Test Receiver	R&S	ESCS30	100039	2016. 06. 05	1 Year
3.	Amplifier	HP	8447D	2443A03938	N.C.R.	N.C.R.
4.	Bilog Antenna	CHASE	UPA6109	1031	2017. 02. 25	1 Year
5.	Bilog Antenna	CHASE	VBA6106A	1227	2017. 02. 25	1 Year

5.1.2. For Above 1GHz Frequency (At No. 2 3m Semi-Anechoic Chamber)

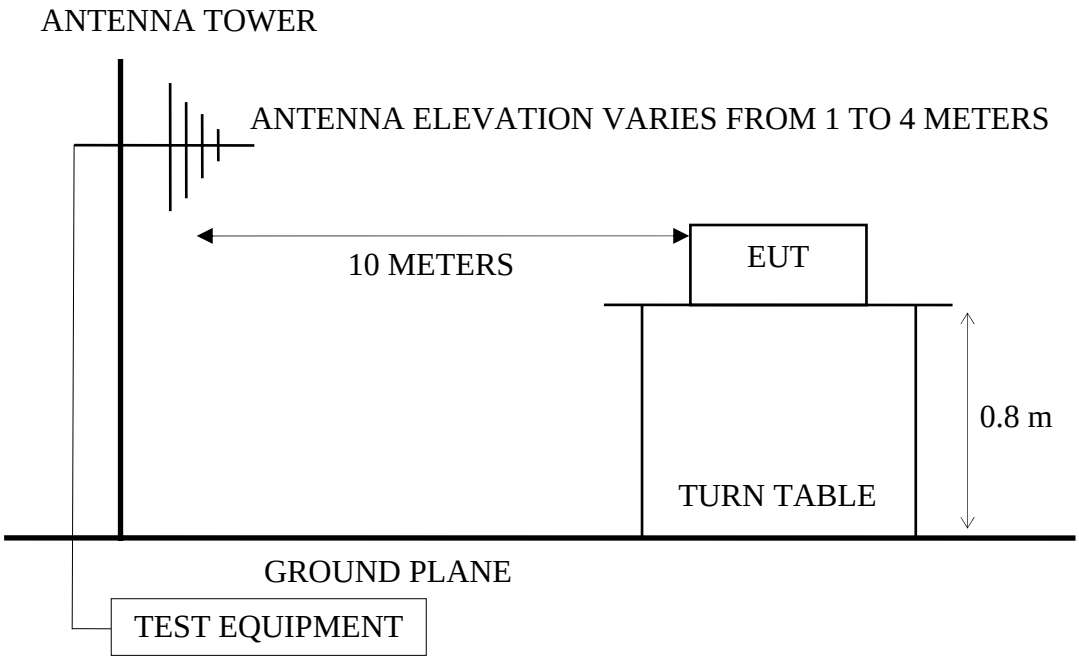
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY48031076	2016. 09. 30	1 Year
2.	Amplifier	Agilent	8449B	3008A02596	2016. 12. 27	1 Year
3.	Horn Antenna	EMCO	3115	9112-3775	2016. 05. 13	1 Year

5.2. Block Diagram of Test Setup

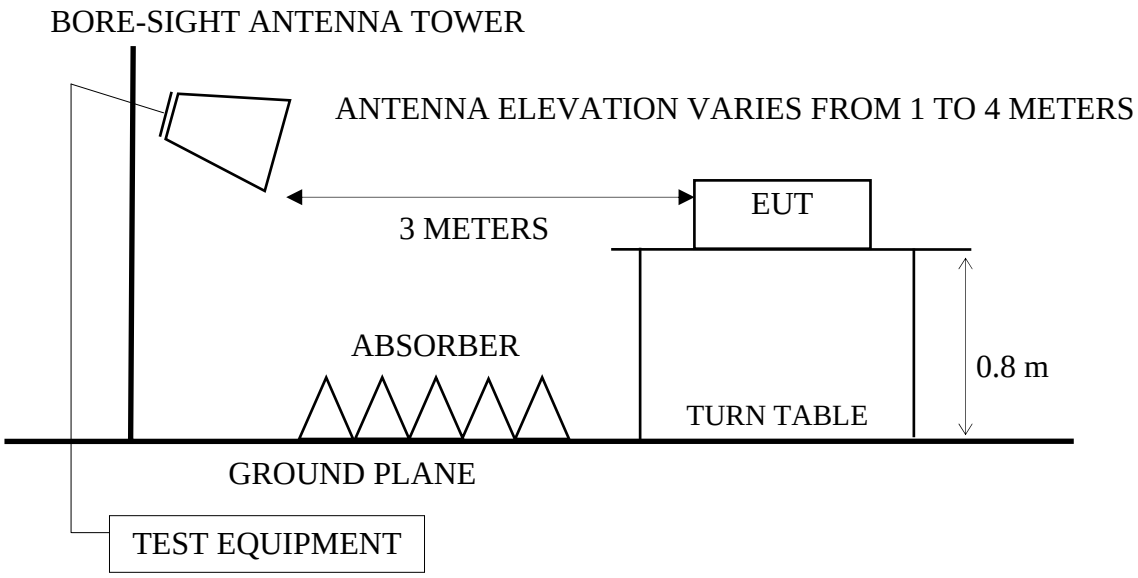
5.2.1. Block Diagram of connection between EUT and simulators



5.2.2. Open Area Test Site (10m) Setup Diagram for 30-1000MHz



5.2.3. Semi-Anechoic Chamber (3m) Setup Diagram for above 1GHz



5.3. Radiation Emission Limit

(FCC§15.109/ICES-003, Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 230	10	30
230 ~ 1000	10	37
Above 1000	3	73.98 (Peak)
Above 1000	3	53.98 (Average)

Notes：(1) The tighter limit applies at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

(3) The CISPR 22 limit is used as an alternative according to FCC 15.109(g) and ICES-003 clause 5

5.4. Operating Condition of EUT

Same as powerline conducted emission measurement which is listed in 4.4. except to the test set up replaced by section 5.2.

5.5. Test Procedure

5.5.1. For Frequency Range 30MHz-1000MHz, which measurement was at Open Area Test Site:

The EUT and its simulator were placed on a turn table which was 0.8 meter above ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set to 10 meters away from the receiving antenna which were mounted on an antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antennas were used as a receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2014 on radiated measurement.

The bandwidth of the R&S Test Receiver ESCS30 was set at 120 kHz.

The frequency range from 30MHz to 1000MHz was checked with Peak detector and all final readings of measurement were with Quasi-Peak detector at Open Area Test Site.

5.5.2. For Frequency Range above 1GHz, which measurement was at Semi-Anechoic Chamber:

The EUT and its simulators were placed on a turn table which was 0.8 meter above ground. The portion of the test volume that was obstructed by absorber placed on the floor (30cm maximum). The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set to 3 meters away from the receiving antenna which was mounted on an antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna were set on measurement, and both average and peak emission level were recorded form spectrum analyzer. In order to find the maximum emission level, all the interface cables were manipulated according to ANSI C63.4:2014 on radiated measurement.

The resolution bandwidth of Agilent Spectrum Analyzer N9010A-526 was set at 1MHz.

The frequency range above 1GHz was checked and all final readings of measurement were with Peak and Average detector at Semi-Anechoic Chamber.

5.6. Radiated Emission Measurement Results

PASSED. All emissions not reported below are too low against the prescribed limits.

For 30MHz-1000MHz frequency range

The EUT with following worst test modes was measured during this section testing and all the test results were listed in section 5.6.1.

EUT：LCD Monitor M/N：270LM00040

Test Date：2017. 04. 14 Temperature：22℃ Humidity：58%

The details of test modes are as follows：

Mode	Input Port	Connection Cable	Power Cord	Resolution/Frequency	Reference Test Data No.	
					Horizontal	Vertical
1	Connection (HDMI)	1.0m	1.8m	1920*1080/60Hz	# 16	# 15

For above 1GHz frequency range：

The EUT with following worst test modes was measured during this section testing and all the test results were listed in section 5.6.1.

EUT：LCD Monitor M/N：270LM00040

Test Date：2017. 04. 18 Temperature：24℃ Humidity：62%

The details of test modes are as follows：

Mode	Input Port	Connection Cable	Power Cord	Resolution/Frequency	Reference Test Data No.	
					Horizontal	Vertical
1	Connection (HDMI)	1.0m	1.8m	1920*1080/60Hz	# 14	# 13

5.6.1. 30-1000MHz Frequency Range Radiated Emission Measurement Results

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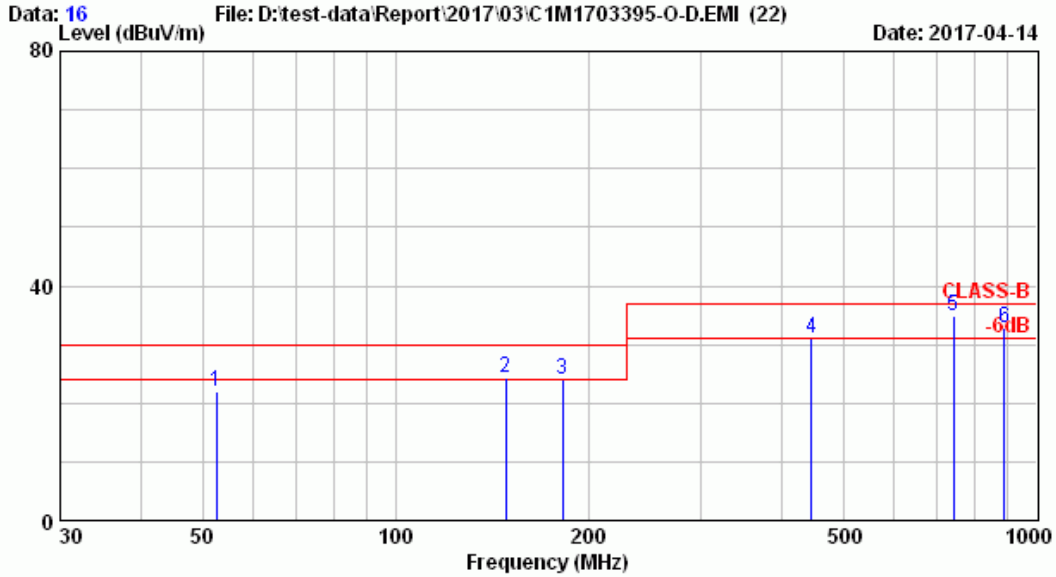

Site no. : OATS NO.3 Data no. : 16
Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : HORIZONTAL
Limit : CLASS-B
Env. / Ins. : 22*C / 58% ESCS 30 (039) Engineer : Ghost
EUT : 270LM00040
Power Rating : 120Vac / 60Hz
Test Mode : 1920*1080/60Hz HDMI 1m
Power 1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	52.633	16.99	0.85	4.26	22.11	30.00	7.89	QP
2	148.505	21.67	1.56	1.23	24.47	30.00	5.53	QP
3	182.510	22.58	1.81	-0.30	24.09	30.00	5.91	QP
4	445.504	17.58	3.07	10.53	31.18	37.00	5.82	QP
5	742.507	22.88	4.02	7.88	34.78	37.00	2.22	QP
6	891.005	24.44	4.44	3.87	32.75	37.00	4.25	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emissions not reported are 20 dB lower than the specified limit.

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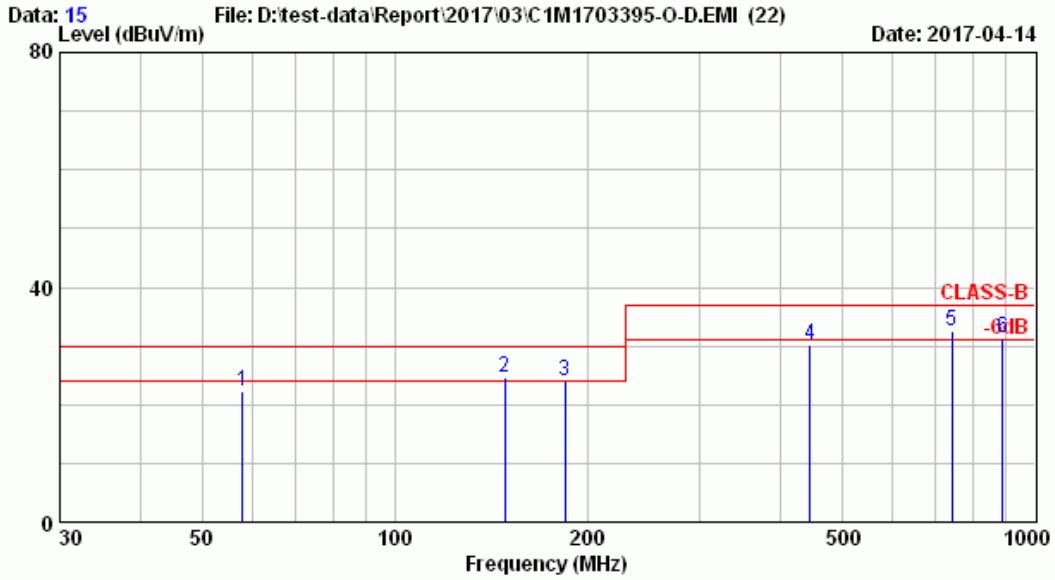

Site no. : OATS NO.3 Data no. : 15
Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : VERTICAL
Limit : CLASS-B
Env. / Ins. : 22*C / 58% ESCS 30 (039) Engineer : Ghost
EUT : 270LM00040
Power Rating : 120Vac / 60Hz
Test Mode : 1920*1080/60Hz HDMI 1m
Power 1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	57.913	15.14	0.90	6.35	22.39	30.00	7.61	QP
2	148.502	21.67	1.56	1.26	24.50	30.00	5.50	QP
3	184.299	22.59	1.83	-0.43	23.99	30.00	6.01	QP
4	445.502	17.58	3.07	9.65	30.30	37.00	6.70	QP
5	742.507	22.88	4.02	5.63	32.53	37.00	4.47	QP
6	891.005	24.44	4.44	2.45	31.32	37.00	5.68	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emissions not reported are 20 dB lower than the specified limit.

5.6.2. Above 1GHz Frequency Range Radiated Emission Measurement Results

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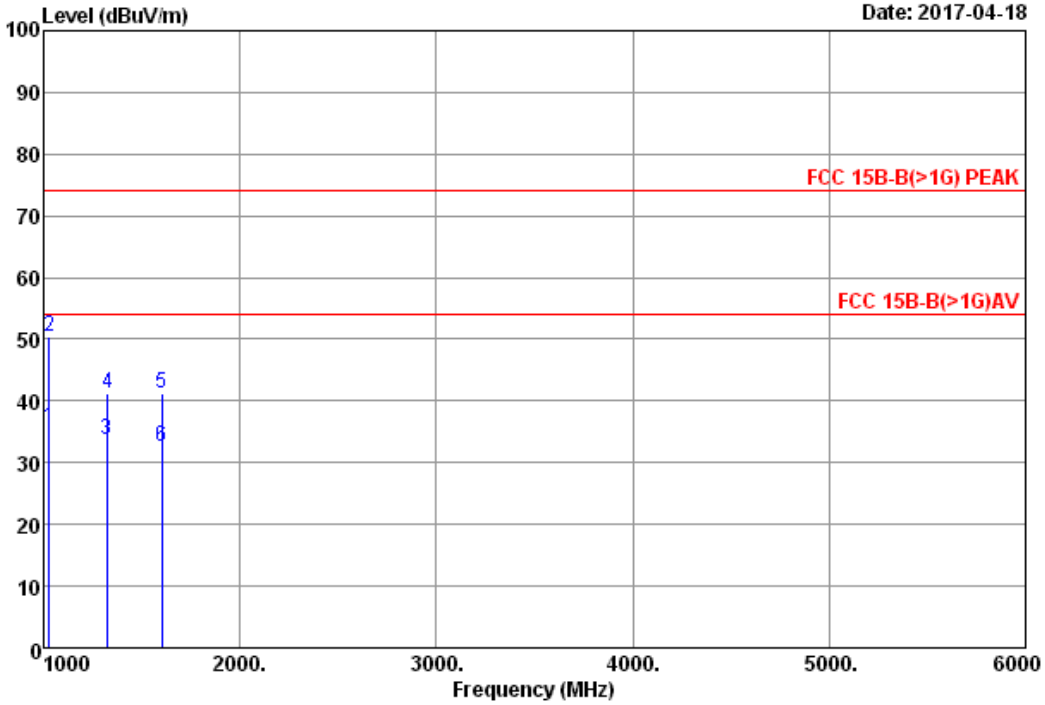
Data: 14 File: D:\Test data\REPORT\2017\03\C1M1703395-CHAMBER.EM6 (22)



Site no. : Audix No.2 Chamber Data no. : 14
Dis. / Ant. : 3m HORN3115-3775 Ant. pol. : HORIZONTAL
Limit : FCC 15B-B(>1G) PEAK
Env. / Ins. : 24*C / 62% N9010A (076) Engineer : Bruce
EUT : 270LM00040
Power Rating : 120Vac/60Hz
Test Mode : 1920*1080/60Hz HDMI 1m
Power 1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	PREAMP Gain (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	
1	1029.27	24.76	4.34	36.83	43.26	35.53	53.98	18.45	Average
2	1030.00	24.76	4.34	36.83	58.20	50.47	73.98	23.51	Peak
3	1321.81	25.29	4.98	36.18	39.67	33.76	53.98	20.22	Average
4	1325.00	25.29	4.98	36.17	47.25	41.35	73.98	32.63	Peak
5	1600.00	26.10	5.41	35.73	45.34	41.12	73.98	32.86	Peak
6	1602.72	26.10	5.41	35.72	36.67	32.46	53.98	21.52	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Preamp Gain + Reading.
2. The emissions not reported are 20 dB lower than the specified limit.

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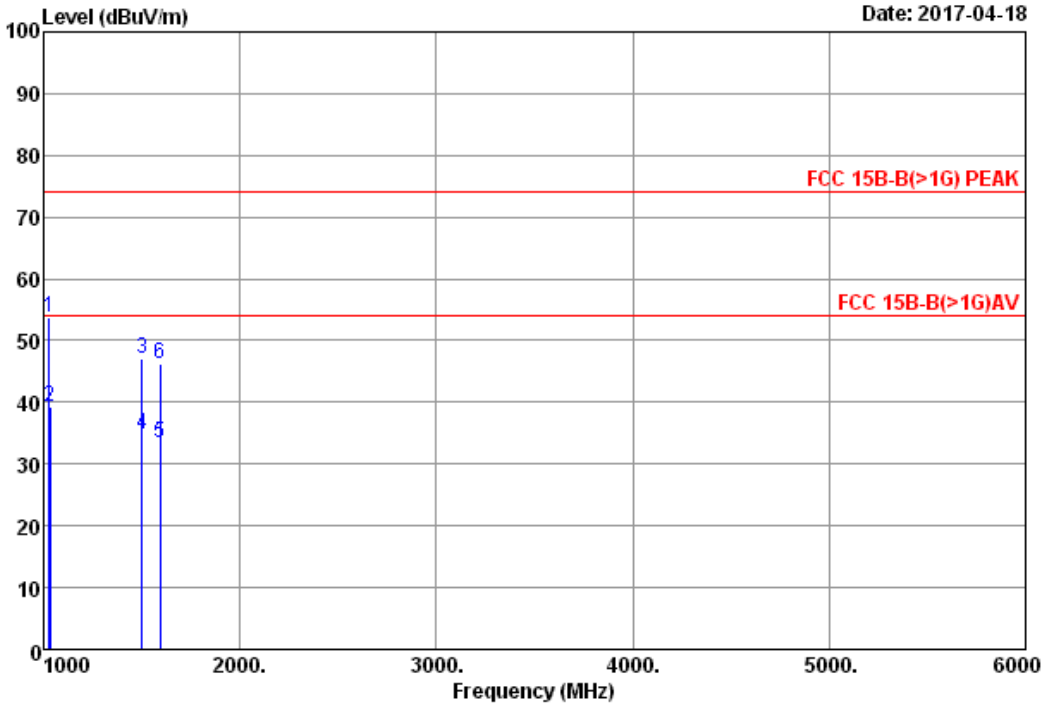
Data: 13 File: D:\Test data\REPORT\2017\03\C1M1703395-CHAMBER.EM6 (22)



Site no. : Audix No.2 Chamber Data no. : 13
Dis. / Ant. : 3m HORN3115-3775 Ant. pol. : VERTICAL
Limit : FCC 15B-B(>1G) PEAK
Env. / Ins. : 24*C / 62% N9010A (076) Engineer : Bruce
EUT : 270LM00040
Power Rating : 120Vac/60Hz
Test Mode : 1920*1080/60Hz HDMI 1m
Power 1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	PREAMP Gain (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	
1	1030.00	24.76	4.34	36.83	61.42	53.69	73.98	20.29	Peak
2	1031.54	24.76	4.35	36.83	46.89	39.17	53.98	14.81	Average
3	1500.00	25.60	5.41	35.84	51.98	47.15	73.98	26.83	Peak
4	1501.72	25.60	5.41	35.84	39.59	34.76	53.98	19.22	Average
5	1594.82	26.10	5.41	35.74	37.54	33.31	53.98	20.67	Average
6	1595.00	26.10	5.41	35.74	50.46	46.23	73.98	27.75	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Preamp Gain + Reading.
2. The emissions not reported are 20 dB lower than the specified limit.

6. DEVIATION TO TEST SPECIFICATIONS

【NONE】

7. MEASUREMENT UNCERTAINTY LIST

The measurement uncertainty was estimated for test on the EUT according to CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage of K=2.

The uncertainties value is not used in determining the PASS/FAIL results.

Test Items/Facilities	Frequency/Equipment/Unit	Uncertainty
Conducted emissions at AC mains power port	9kHz-150kHz	±3.7dB
	150kHz-30MHz	±3.5dB
Conducted emissions at wired network port	150kHz-30MHz	±3.5dB
Conducted emissions at broadcast receiver tuner port	150kHz-30MHz	±3.5dB
Conducted emissions Power Clamp	30MHz-300MHz	±4.4dB
Radiated electromagnetic	9kHz-30MHz	±0.5dB
Radiated emissions (10m Chamber)	30MHz-200MHz, 3m, Horizontal	±4.3dB
	200MHz-1000MHz, 3m, Horizontal	±4.3dB
	30MHz-200MHz, 3m, Vertical	±4.4dB
	200MHz-1000MHz, 3m, Vertical	±3.9dB
	30MHz-200MHz, 10m, Horizontal	±4.3dB
	200MHz-1000MHz, 10m, Horizontal	±4.1dB
	30MHz-200MHz, 10m, Vertical	±4.3dB
	200MHz-1000MHz, 10m, Vertical	±3.8dB
	1GHz-6GHz, 3m	±5.5dB
	6GHz-18GHz, 3m	±4.8dB
Radiated emissions (No.1 3m Chamber)	30MHz-200MHz, 3m, Horizontal	±3.9dB
	200MHz-1000MHz, 3m, Horizontal	±4.3dB
	30MHz-200MHz, 3m, Vertical	±4.5dB
	200MHz-1000MHz, 3m, Vertical	±4.1dB
	1GHz-6GHz, 3m	±5.1dB
	6GHz-18GHz, 3m	±5.5dB
Radiated emissions (No.2 3m Chamber)	30MHz-200MHz, 3m, Horizontal	±4.3dB
	200MHz-1000MHz, 3m, Horizontal	±4.3dB
	30MHz-200MHz, 3m, Vertical	±4.4dB
	200MHz-1000MHz, 3m, Vertical	±3.9dB
	1GHz-6GHz, 3m	±5.2dB
	6GHz-18GHz, 3m	±5.2dB
Radiated emissions (No.3 3m Chamber)	30MHz-200MHz, 3m, Horizontal	±4.7dB
	200MHz-1000MHz, 3m, Horizontal	±4.5dB
	30MHz-200MHz, 3m, Vertical	±4.3dB
	200MHz-1000MHz, 3m, Vertical	±4.1dB

Test Items/Facilities	Frequency/Equipment/Unit	Uncertainty
Radiated emissions (No.3 OATS)	30MHz-200MHz, 3m, Horizontal	±4.5dB
	200MHz-1000MHz, 3m, Horizontal	±4.4dB
	30MHz-200MHz, 3m, Vertical	±4.4dB
	200MHz-1000MHz, 3m, Vertical	±4.0dB
	30MHz-200MHz, 10m, Horizontal	±4.5dB
	200MHz-1000MHz, 10m, Horizontal	±4.2dB
	30MHz-200MHz, 10m, Vertical	±4.3dB
	200MHz-1000MHz, 10m, Vertical	±4.0dB
Radiated emissions (No.5 OATS)	30MHz-200MHz, 3m, Horizontal	±4.2dB
	200MHz-1000MHz, 3m, Horizontal	±4.7dB
	30MHz-200MHz, 3m, Vertical	±4.4dB
	200MHz-1000MHz, 3m, Vertical	±4.4dB
	30MHz-200MHz, 10m, Horizontal	±4.2dB
	200MHz-1000MHz, 10m, Horizontal	±4.6dB
	30MHz-200MHz, 10m, Vertical	±4.4dB
	200MHz-1000MHz, 10m, Vertical	±4.4dB
Radiated emissions (No.6 OATS)	30MHz-200MHz, 3m, Horizontal	±4.3dB
	200MHz-1000MHz, 3m, Horizontal	±4.4dB
	30MHz-200MHz, 3m, Vertical	±4.5dB
	200MHz-1000MHz, 3m, Vertical	±4.1dB
	30MHz-200MHz, 10m, Horizontal	±4.3dB
	200MHz-1000MHz, 10m, Horizontal	±4.2dB
	30MHz-200MHz, 10m, Vertical	±4.4dB
	200MHz-1000MHz, 10m, Vertical	±4.1dB
Radiated emissions (No.7 OATS)	30MHz-200MHz, 3m, Horizontal	±3.9dB
	200MHz-1000MHz, 3m, Horizontal	±4.5dB
	30MHz-200MHz, 3m, Vertical	±4.6dB
	200MHz-1000MHz, 3m, Vertical	±4.5dB
	30MHz-200MHz, 10m, Horizontal	±3.9dB
	200MHz-1000MHz, 10m, Horizontal	±4.3dB
	30MHz-200MHz, 10m, Vertical	±4.6dB
	200MHz-1000MHz, 10m, Vertical	±4.5dB
Radiated emissions (No.8 OATS)	30MHz-200MHz, 3m, Horizontal	±4.5dB
	200MHz-1000MHz, 3m, Horizontal	±4.3dB
	30MHz-200MHz, 3m, Vertical	±4.6dB
	200MHz-1000MHz, 3m, Vertical	±4.1dB
	30MHz-200MHz, 10m, Horizontal	±4.7dB
	200MHz-1000MHz, 10m, Horizontal	±4.2dB
	30MHz-200MHz, 10m, Vertical	±4.6dB
	200MHz-1000MHz, 10m, Vertical	±4.0dB

8. PHOTOGRAPHS

8.1. Photos of Powerline Conducted Emission Measurement

FRONT VIEW OF CONDUCTED MEASUREMENT

BACK VIEW OF CONDUCTED MEASUREMENT

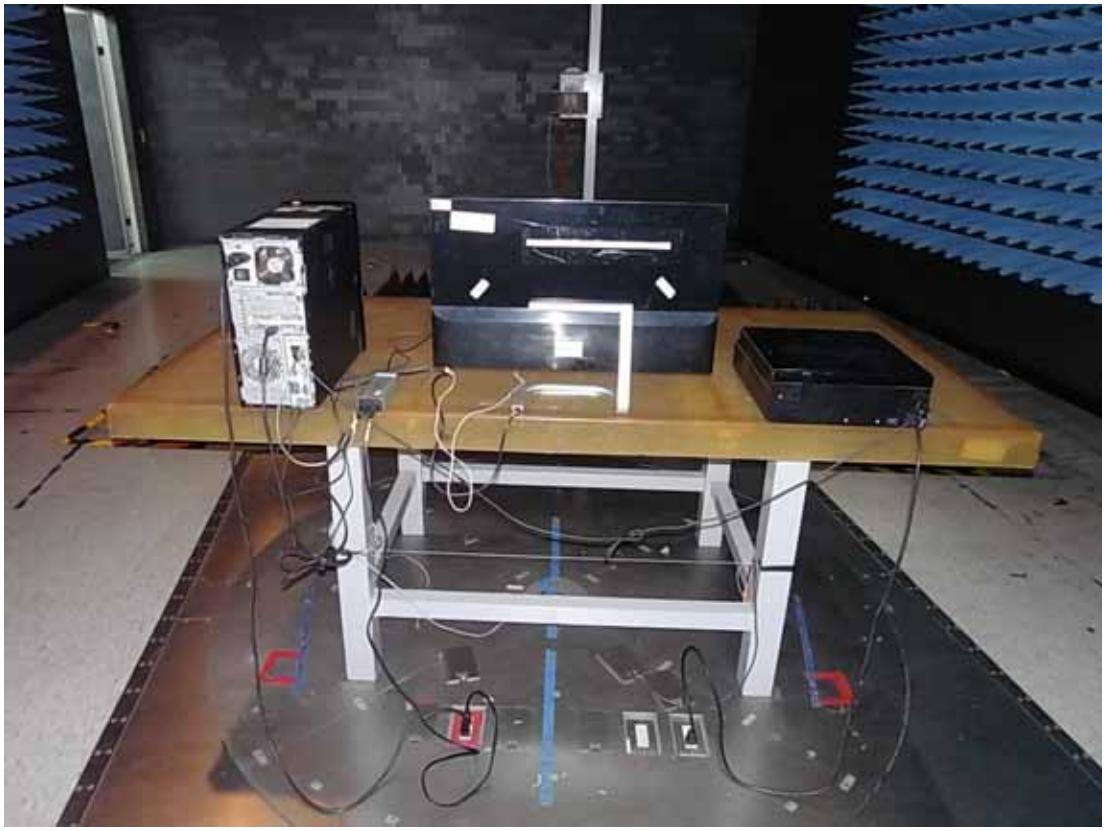
8.2. Photos of Radiated Emission Measurement at Open Area Test Site (30-1000MHz)

FRONT VIEW OF RADIATED MEASUREMENT

BACK VIEW OF RADIATED MEASUREMENT

8.3. Photos of Radiated Emission Measurement at Semi-Anechoic Chamber (Above 1GHz)

FRONT VIEW OF RADIATED MEASUREMENT



BACK VIEW OF RADIATED MEASUREMENT