

Technical Compliance Statement



For the following information

**Ref. File No.: C1M1503219
(C1M1501263)**

Product : LCD Monitor
Model Number : PM-65
Brand : AG neovo
Applicant : TPV Electronics (Fujian) Co., Ltd.
Standards : FCC CFR 47 Part 15 Subpart B/Oct. 2013 and

CISPR 22/1997 and ICES-003 Issue 5:2012 (Class B Limit)

We hereby certify that the above product has been tested by us and complied with the FCC and IC official limits. These products might be marketed at the US according to FCC Rule CFR 47 Part 2 and Part 15 Subpart B Class B Equipment Regulations. The test was performed in accordance with the procedures from ANSI C63.4-2009. The test data & results are issued on the test report no. EM-F150151.

Signature

A handwritten signature in blue ink, appearing to read 'Allen Wang', written over a horizontal line.

Allen Wang/Assistant General Manager
Date: 2015. 03. 20

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



NVLAP Lab Code 200077-0

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 DoC and INDUSTRY CANADA

TPV Electronics (Fujian) Co., Ltd.

LCD Monitor

Model No. : PM-65

Brand : AG neovo

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
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File Number : C1M1503219 (C1M1501263)
(ACS Ref. No.: ACS5Q0224)
Report Number : EM-F150151
Date of Test : 2014. 11. 06
Date of Report : 2015. 03. 20

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TEST REPORT FOR COMPLIANCE DECLARATION

Applicant : TPV Electronics (Fujian) Co., Ltd.
 EUT Description : LCD Monitor
 (A) Model No. : PM-65
 (B) Serial No. : N/A
 (C) Brand : AG neovo
 (D) Power Supply : AC 100V-240V, 50/60Hz
 (E) Test Voltage : AC 120V/60Hz

Measurement Standard Used:

FCC CFR 47 Part 15 Subpart B/Oct. 2013 and CISPR 22/1997
 ANSI C63.4-2009
 ICES-003 Issue 5 Aug. 2012

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 IC 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.

The 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.

[This report is based on report of EM-F150040.]

Date of Test : 2014. 11. 06 Date of Report : 2015. 03. 20

Producer : 
 (Sandy Chen/Administrator)

Signatory : 
 (Allen Wang/Assistant General Manager)

Name of the Representative of the Responsible Party : _____

Signature : _____

1. DESCRIPTION OF VERSION

Edition No.	Date of Revision	Revision Summary	Report Number
0	2015. 03. 20	Original Report.	EM-F150151

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	FCC CFR 47 Part 15 Subpart B: 2013 and ICES-003: 2012	Class B	PASS
		Minimum passing margin is 10.56dB at 0.233MHz	
Radiated Emission Measurement	FCC CFR 47 Part 15 Subpart B: 2013 and CISPR 22: 1997 and ICES-003: 2012	Class B	PASS
		Minimum passing margin is 4.60dB at 124.09MHz	

3. GENERAL INFORMATION

3.1. Description of Device (EUT)

Description	:	LCD Monitor (The PC IN/VGA function was tested in this report. The AV function had been tested in other report of ACS-F15081.)
Model Number	:	PM-65
Brand	:	AG neovo
Applicant	:	TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
Max. Resolution	:	1920*1080/60Hz
Max. Working Frequency	:	148MHz
DVI Cable	:	Shielded, Detachable, 1.5m/1.8m Bonded two ferrite cores
D-Sub Cable	:	Shielded, Detachable, 1.5m/1.8m Bonded two ferrite cores
Display Cable	:	Shielded, Detachable, 1.5m/1.8m
HDMI Cable	:	Shielded, Detachable, 1.5m/1.8m
USB Cable	:	Shielded, Detachable, 1.5m/1.8m Bonded two ferrite cores
Audio Cable	:	Non-Shielded, Detachable, 1.5m/1.8m
AC Power Cord	:	Non-Shielded, Detachable, 1.5m/1.8m (3pin)
Date of Receipt of Sample	:	2014. 09. 23
Date of Test	:	2014. 11. 06

Remark :

The EUT with following test modes were pre-scanned.

Test Item	Data Cable & AC Power Cord	LCD Angle	Input Port	Display, Resolution/Frequency
Powerline Conducted Emission Measurement	1.8m	0°	D-Sub	(1)"H" Pattern, 640*480/60Hz (2)"H" Pattern, 1280*1024/75Hz (3)"H" Pattern, 1920*1080/60Hz
			DVI	"H" Pattern, 1920*1080/60Hz
			Display	"H" Pattern, 1920*1080/60Hz
			HDMI1	"H" Pattern, 1920*1080/60Hz
			HDMI2	"H" Pattern, 1920*1080/60Hz
	1.5m		D-Sub	"H" Pattern, 1920*1080/60Hz
	1.8m	90°	D-Sub	"H" Pattern, 1920*1080/60Hz
Radiated Emission Measurement	1.8m	0°	D-Sub	"H" Pattern, 1920*1080/60Hz
			DVI	"H" Pattern, 1920*1080/60Hz
			Display	"H" Pattern, 1920*1080/60Hz
			HDMI1	(1)"H" Pattern, 640*480/60Hz (2)"H" Pattern, 1280*1024/75Hz (3)"H" Pattern, 1920*1080/60Hz
			HDMI2	"H" Pattern, 1920*1080/60Hz
	1.5m		HDMI2	"H" Pattern, 1920*1080/60Hz
	1.8m	90°	HDMI2	"H" Pattern, 1920*1080/60Hz

Finally, the under worst test mode is demonstrated compliance with the standards in the report.

Test Item	Data Cable & AC Power Cord	LCD Angle	Input Port	Display, Resolution/Frequency
Powerline Conducted Emission Measurement	1.8m	0°	D-Sub	"H" Pattern, 1920*1080/60Hz
			HDMI	"Color Bar" Image, 1080p
Radiated Emission Measurement	1.8m	0°	HDMI	"H" Pattern, 1920*1080/60Hz
			HDMI	"Color Bar" Image, 1080p

3.2. Tested Supporting System Details

3.2.1. PC SYSTEM (LINK TO EUT)

Model Number	:	D09M
Serial Number	:	8BLJYBX
FCC ID	:	By DoC
BSMI ID	:	R33002
Manufacturer	:	DELL
LAN Cable	:	Shielded, Detachable, 2.0m
DVI HDMI Cable	:	Shielded, Detachable, 2.0m
Power Cord	:	Non-Shielded, Detachable, 1.8m

3.2.2. LCD MONITOR (LINK TO EUT)

Model Number	:	U3011T
Serial Number	:	CN-0PH5NY-74445-0C3-067L
FCC ID	:	By DoC
BSMI ID	:	R31018
Manufacturer	:	DELL
DVI Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
Display Cable	:	Shielded, Detachable, 1.8m
Power Cord (To EUT)	:	Non-Shielded, Detachable, 1.8m

3.2.3. LASER PRINTER

Model Number	:	ML-1630
Serial Number	:	4561B1CP600023X
FCC ID	:	A3LML1630
BSMI ID	:	R33475
Manufacturer	:	SAMSUNG
Data Cable	:	Shielded, Detachable, 1.8m
Power Cord	:	Non-Shielded, Detachable, 1.8m

3.2.4. USB KEYBOARD

Model Number	:	SK-8115
Serial Number	:	N/A
FCC ID	:	By DoC
BSMI ID	:	T3A002
Manufacturer	:	DELL
Data Cable	:	Shielded, Undetachable, 2.0m Bonded a ferrite core

3.2.5. USB MOUSE

Model Number	:	MS111-T
Serial Number	:	CN-0KW2YH-71616-282-0XYP
FCC ID	:	By DoC
BSMI ID	:	R3A002
Manufacturer	:	DELL
Data Cable	:	Shielded, Undetachable, 1.8m

3.2.6. I-POD PLAYER #1 (LINK TO EUT)

Model Number : A1204
 Serial Number : 4H722TMJVTE
 FCC ID : By DoC
 BSMI ID : R33057
 Manufacturer : APPLE
 USB Cable : Shielded, Undetachable, 1.0m

3.2.7. I-POD PLAYER #2

Model Number : A1204
 Serial Number : 4H722TCGVTE
 FCC ID : By DoC
 BSMI ID : R33057
 Manufacturer : APPLE
 USB Cable : Shielded, Undetachable, 1.0m

3.2.8. BLU-RAY DISC / DVD PLAYER (LINK TO EUT)

Model Number : BDP-S370
 Serial Number : 3213944
 Manufacturer : SONY
 BSMI ID : R33021
 Component Cable : Non-Shielded, Detachable, 1.8m (3pin)
 Audio Cable : Non-Shielded, Detachable, 1.8m (1 to 2pin)
 HDMI Cable : Shielded, Detachable, 1.8m
 (ONLY FOR 1080P TESTED MODE USED)
 Power Cord : Non-Shielded, Undtachable, 1.8m

3.2.9. SPEAKER #1 (LINK TO EUT)

Model Number : S330D
 Brand : Edifiep
 BSMI ID : R32696
 Audio Cable : Non-Shielded, Detachable, 1.8m (2Pin)
 Power Cord : Non-Shielded, Undetachable, 1.5m

3.2.10. SPEAKERS (LEFT AND RIGHT) #2 (LINK TO EUT)

Model Number : SP4020-4620
 Manufacturer : NEC
 Audio Cable*2 : Non-Shielded, Detachable, 1.5m (2Pin)

3.2.11. DATA CABLE (RS-232)*2 : Shielded, Detachable, 1.8m

3.3. Test Facility

Name of Firm	:	AUDIX Technology Corporation EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Facility & Location	:	No. 8 Shielded Room No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan. No. 1 10m Semi-Anechoic Chamber No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan Federal Communication Commission Registration Number: 705125 Renewal on July 02, 2012
NVLAP Lab Code	:	200077-0
TAF Accreditation No	:	1724

3.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150kHz ~ 30MHz	± 3.43dB
Radiation Test (Distance: 10m)	30MHz ~ 300MHz	± 2.99dB
	300MHz ~ 1000MHz	± 2.73dB
Radiation Test (Distance: 3m)	Above 1GHz	±3.73dB

Remark : Uncertainty = $ku_c(y)$

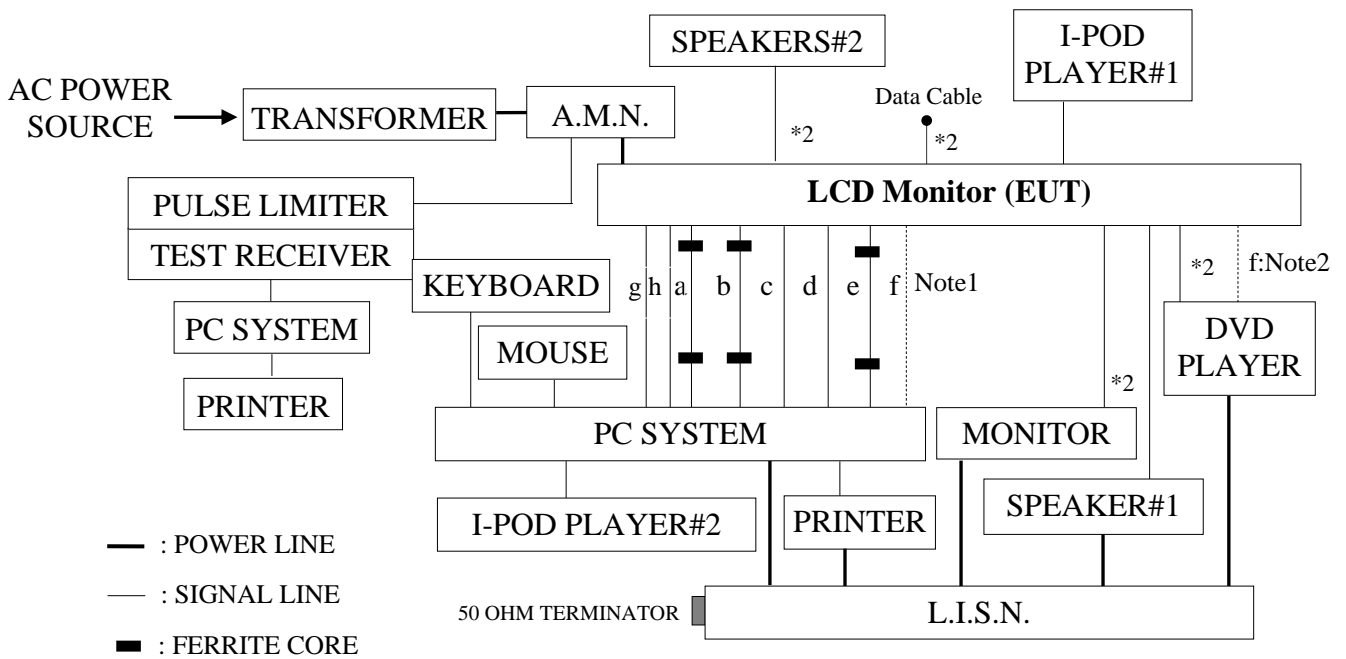
4. POWERLINE CONDUCTED EMISSION MEASUREMENT

4.1. Test Equipment

The following test equipment was used during the powerline conducted emission measurement: (No. 8 Shielded Room)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R & S	ESR3	101774	2014. 02. 19	1 Year
2.	A.M.N.	R & S	ESH2-Z5	100366	2014. 03. 21	1 Year
3.	L.I.S.N.	Kyoritsu	KNW-407	8-855-9	2014. 12. 26	1 Year
4.	Pulse Limiter	R & S	ESH3-Z2	100354	2014. 01. 18	1 Year

4.2. Block Diagram of Test Setup



- a: D-SUB CABLE b: DVI CABLE
 c: AUDIO CABLE d: DISPLAY CABLE
 e: USB CABLE f: HDMI CABLE
 g: DVI h: LAN CABLE

Note : 1. HDMI cable to PC system for “H” Pattern, 1920*1080/60Hz Mode Used

Note : 2. HDMI cable to DVD player for HDMI “Color Bar” Image, 1080p mode Used

Remark: Connect the HDMI Cable Separately.

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 dB μ V	56 ~ 46 dB μ V
500kHz ~ 5MHz	56 dB μ V	46 dB μ V
5MHz ~ 30MHz	60 dB μ V	50 dB μ V

- 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 self-test program “EMC Test” by Windows 7 and sending “H” characters to the LCD Monitor (EUT) via D-Sub or HDMI input, the screen was filling with “H” pattern by EUT’s resolution.
- 4.4.5. The DVD player was playing DVD disk and sending “Color Bar” image to LCD Monitor through EUT’s resolution via HDMI input. (ONLY FOR 1080P TESTED MODE USED)
- 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 it'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 C63.4-2009 during conducted measurement.

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

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 test modes was performed during this section testing and to read Q.P & Average value, and the test data are listed in next pages.

EUT : LCD Monitor Model No. : PM-65

Test Date : 2014. 11. 06 Temperature : 26 Humidity : 49%

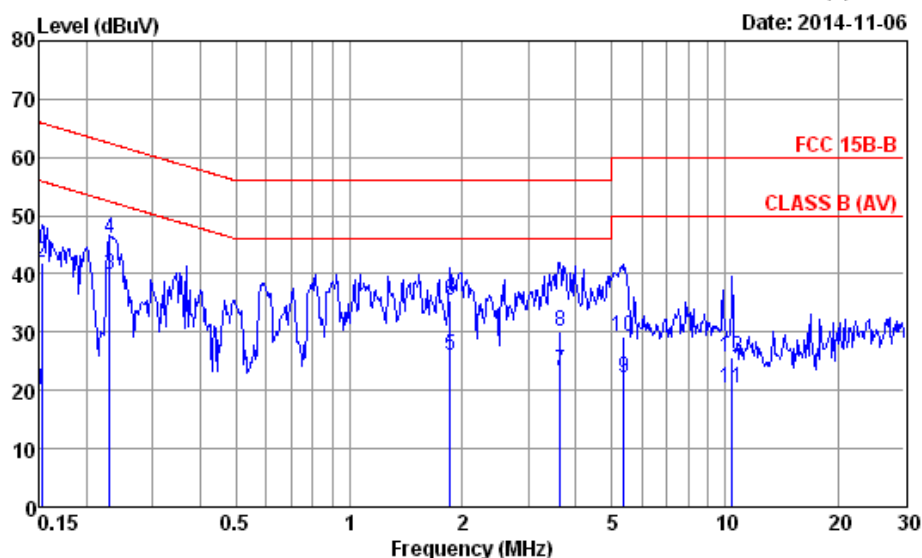
The detail of test mode is as follows :

Mode	Data Cable & AC Power Cord	LCD Angle	Input Port	Display, Resolution/ Frequency	Reference Test Data No.	
					Neutral	Line
1.	1.8m	0°	D-Sub	"H" Pattern, 1920*1080/60Hz	# 2	# 1
2.	1.8m	0°	HDMI	"Color Bar" Image, 1080p	# 4	# 3



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Data: 2 File: D:\test data\REPORT\2014\1M1410XXX\1M1410145-C-D.EM6 (4)



Site no. : No.8 Shielded Room Data no. : 2
 Condition : ESH2-Z5 366 Phase : NEUTRAL
 Limit : FCC 15B-B
 Env. / Ins. : 26°C / 49% ESR3 (1774) Engineer : Hank
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : 1920*1080/60Hz D-SUB
 Line: 1.8m

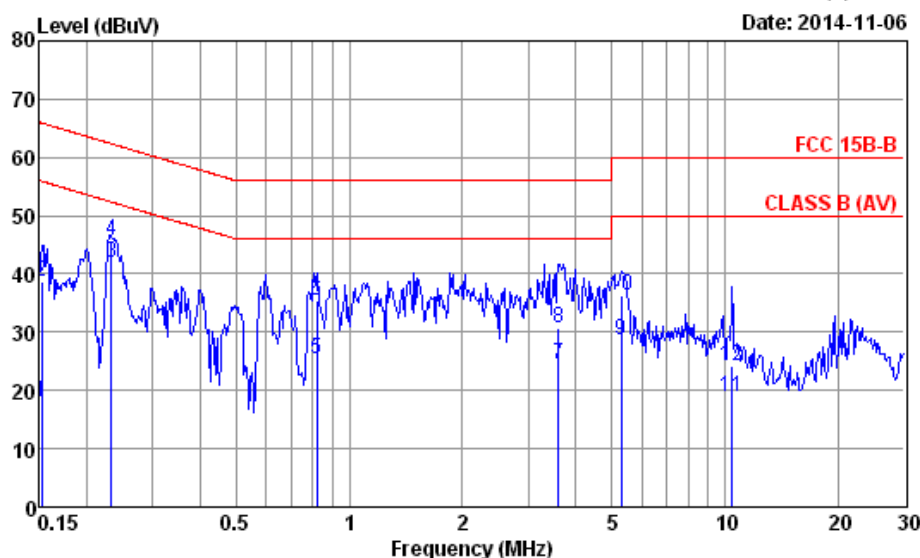
	AMN	Cable	Pulse	Emission					
Freq.	Factor	Loss	Att.	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)		
1	0.152	0.21	0.02	9.85	10.10	20.18	55.91	35.73	Average
2	0.152	0.21	0.02	9.85	31.90	41.98	65.91	23.93	QP
3	0.230	0.21	0.03	9.85	29.86	39.95	52.44	12.49	Average
4	0.230	0.21	0.03	9.85	35.96	46.05	62.44	16.39	QP
5	1.858	0.25	0.06	9.84	15.87	26.02	46.00	19.98	Average
6	1.858	0.25	0.06	9.84	25.35	35.50	56.00	20.50	QP
7	3.642	0.33	0.08	9.86	13.00	23.27	46.00	22.73	Average
8	3.642	0.33	0.08	9.86	19.93	30.20	56.00	25.80	QP
9	5.362	0.38	0.10	9.86	11.91	22.25	50.00	27.75	Average
10	5.362	0.38	0.10	9.86	18.85	29.19	60.00	30.81	QP
11	10.452	0.48	0.14	9.89	9.85	20.36	50.00	29.64	Average
12	10.452	0.48	0.14	9.89	15.28	25.79	60.00	34.21	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + 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.



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Data: 1 File: D:\test data\REPORT\2014\C1M1410XXX\C1M1410145-C-D.EM6 (4)



Site no. : No.8 Shielded Room Data no. : 1
 Condition : ESH2-Z5 366 Phase : LINE
 Limit : FCC 15B-B
 Env. / Ins. : 26°C / 49% ESR3 (1774) Engineer : Hank
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : 1920*1080/60Hz D-SUB
 Line: 1.8m

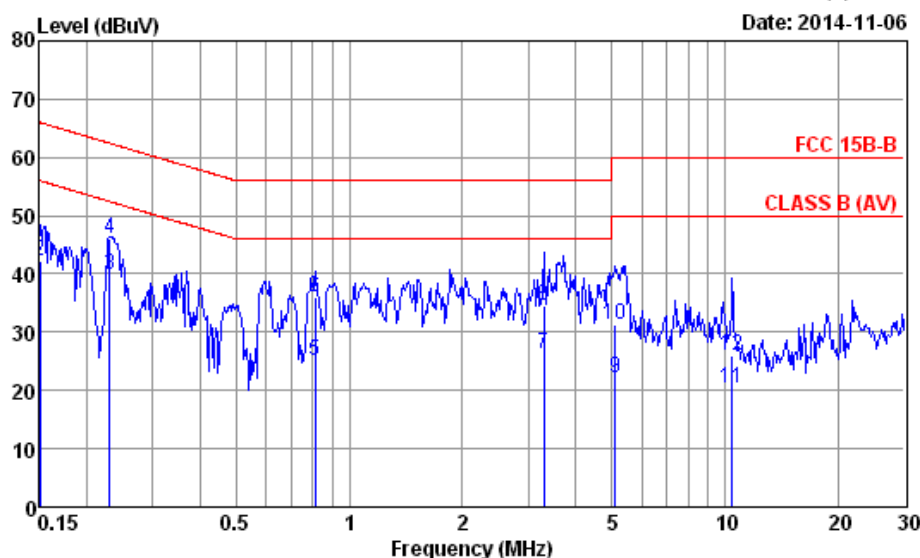
	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.152	0.18	0.02	9.85	7.83	17.88	55.91	38.03	Average
2	0.152	0.18	0.02	9.85	28.49	38.54	65.91	27.37	QP
3	0.233	0.18	0.03	9.85	31.73	41.79	52.35	10.56	Average
4	0.233	0.18	0.03	9.85	35.66	45.72	62.35	16.63	QP
5	0.822	0.21	0.04	9.84	15.21	25.30	46.00	20.70	Average
6	0.822	0.21	0.04	9.84	25.40	35.49	56.00	20.51	QP
7	3.603	0.28	0.08	9.86	14.16	24.38	46.00	21.62	Average
8	3.603	0.28	0.08	9.86	20.43	30.65	56.00	25.35	QP
9	5.277	0.33	0.10	9.86	18.43	28.72	50.00	21.28	Average
10	5.277	0.33	0.10	9.86	26.12	36.41	60.00	23.59	QP
11	10.452	0.45	0.14	9.89	8.44	18.92	50.00	31.08	Average
12	10.452	0.45	0.14	9.89	13.81	24.29	60.00	35.71	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + 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.



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 Email: emc@audixtech.com

Data: 4 File: D:\test data\REPORT\2014\1M1410XXX\1M1410145-C-D.EM6 (4)



Site no. : No.8 Shielded Room Data no. : 4
 Condition : ESH2-Z5 366 Phase : NEUTRAL
 Limit : FCC 15B-B
 Env. / Ins. : 26°C / 49% ESR3 (1774) Engineer : Hank
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : HDMI 1080P
 Line: 1.8m

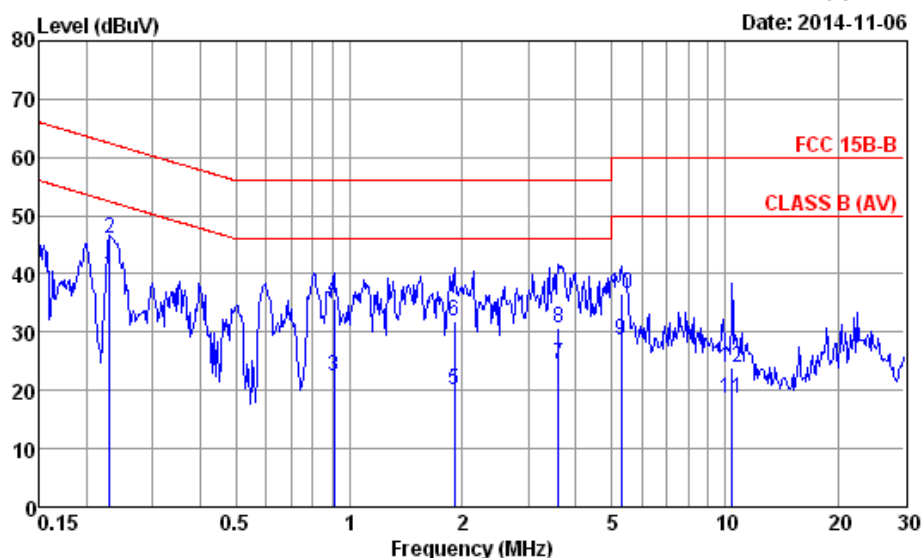
	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Margin (dB)	Remark
1	0.150	0.21	0.02	9.85	9.91	19.99	55.99	36.00	Average
2	0.150	0.21	0.02	9.85	32.16	42.24	65.99	23.75	QP
3	0.230	0.21	0.03	9.85	29.84	39.93	52.44	12.51	Average
4	0.230	0.21	0.03	9.85	35.99	46.08	62.44	16.36	QP
5	0.813	0.23	0.04	9.84	15.03	25.14	46.00	20.86	Average
6	0.813	0.23	0.04	9.84	25.78	35.89	56.00	20.11	QP
7	3.293	0.31	0.07	9.86	16.05	26.29	46.00	19.71	Average
8	3.293	0.31	0.07	9.86	24.20	34.44	56.00	21.56	QP
9	5.112	0.37	0.10	9.86	11.85	22.18	50.00	27.82	Average
10	5.112	0.37	0.10	9.86	20.87	31.20	60.00	28.80	QP
11	10.452	0.48	0.14	9.89	9.98	20.49	50.00	29.51	Average
12	10.452	0.48	0.14	9.89	15.54	26.05	60.00	33.95	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + 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.



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Data: 3 File: D:\test data\REPORT\2014\C1M1410XXX\C1M1410145-C-D.EM6 (4)



Site no. : No.8 Shielded Room Data no. : 3
 Condition : ESH2-Z5 366 Phase : LINE
 Limit : FCC 15B-B
 Env. / Ins. : 26°C / 49% ESR3 (1774) Engineer : Hank
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : HDMI 1080P
 Line: 1.8m

	AMN	Cable	Pulse	Emission					
Freq.	Factor	Loss	Att.	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dB)		
1	0.230	0.18	0.03	9.85	29.65	39.71	52.44	12.73	Average
2	0.230	0.18	0.03	9.85	35.95	46.01	62.44	16.43	QP
3	0.909	0.21	0.04	9.86	12.21	22.32	46.00	23.68	Average
4	0.909	0.21	0.04	9.86	25.50	35.61	56.00	20.39	QP
5	1.908	0.24	0.06	9.84	9.86	20.00	46.00	26.00	Average
6	1.908	0.24	0.06	9.84	21.62	31.76	56.00	24.24	QP
7	3.603	0.28	0.08	9.86	14.27	24.49	46.00	21.51	Average
8	3.603	0.28	0.08	9.86	20.45	30.67	56.00	25.33	QP
9	5.277	0.33	0.10	9.86	18.45	28.74	50.00	21.26	Average
10	5.277	0.33	0.10	9.86	26.17	36.46	60.00	23.54	QP
11	10.452	0.45	0.14	9.89	8.08	18.56	50.00	31.44	Average
12	10.452	0.45	0.14	9.89	13.55	24.03	60.00	35.97	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + 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. RADIATED EMISSION MEASUREMENT

5.1. Test Equipment

The following test equipment was used during radiated emission measurement:

5.1.1. For 30MHz~1000MHz Frequency (At No. 1 10m Semi-Anechoic Chamber)

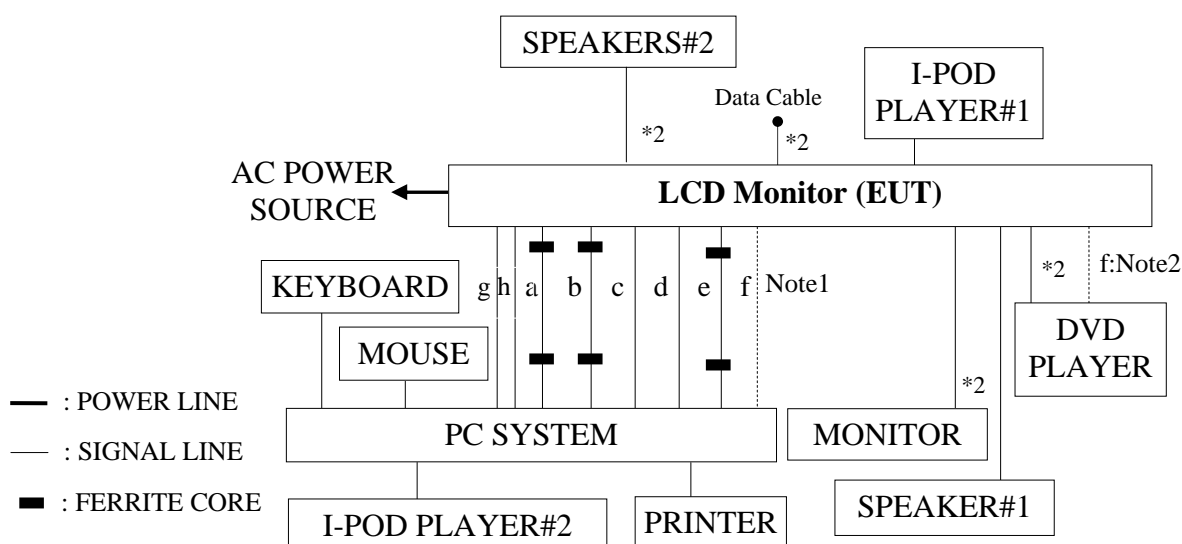
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-503	MY51250850	2014. 03. 04	1 Year
2.	Spectrum Analyzer	Agilent	N9010A-503	MY51250948	2014. 03. 04	1 Year
3.	Test Receiver	R & S	ESCI7	100922	2014. 05. 06	1 Year
4.	Amplifier	Sonoma	11909A	187158	2015. 02. 27	1 Year
5.	Amplifier	Sonoma	11909A	187159	2014. 03. 06	1 Year
6.	Bilog Antenna	TESEQ	CBL6112D	33819	2014. 04. 19	1 Year
7.	Bilog Antenna	TESEQ	CBL6112D	33820	2014. 04. 19	1 Year

5.1.2. For Above 1GHz Frequency (At No. 1 10m Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY51250943	2014. 02. 18	1 Year
2.	Amplifier	HP	8449B	3008A02681	2014. 03. 28	1 Year
3.	Horn Antenna	EMCO	3117	00114403	2014. 03. 18	1 Year

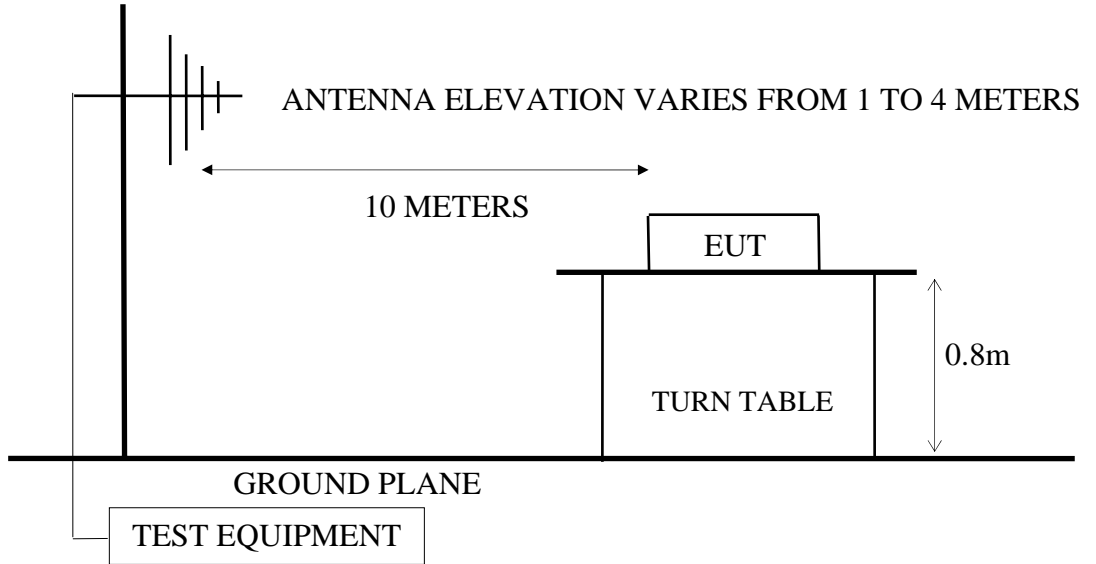
5.2. Block Diagram of Test Setup

5.2.1. Block Diagram of connection between EUT and simulators



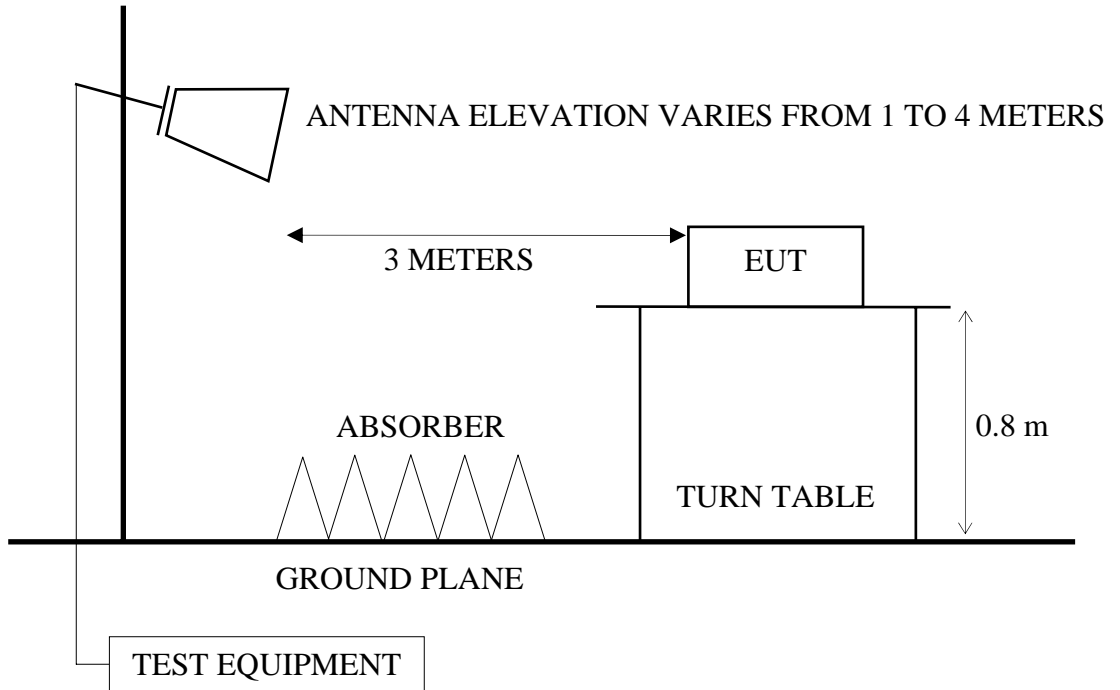
5.2.2. Semi-Anechoic Chamber (10m) Setup Diagram for 30-1000MHz

ANTENNA TOWER



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

BORE-SIGHT ANTENNA TOWER



5.3. Radiation Emission Limit

(FCC§15.109/CISPR 22/ICES-003, Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 230	10	30
230 ~ 1000	10	37
Above 1000	3	74.0 (Peak)
Above 1000	3	54.0 (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 E.U.T.
 - (3) There is no over 1GHz limits in CISPR 22/1997 standard. Therefore a FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.109 (a)(g).

5.4. Operating Condition of EUT

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

5.5. Test Procedure

- 5.5.1. For Frequency Range was 30MHz-1000MHz which measurement distance was 10m at Semi-Anechoic Chamber:

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 could be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antennas (Bilog Antenna) 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 C63.4-2009 on radiated measurement.

The bandwidth of the R & S Test Receiver ESCI7 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 semi-anechoic chamber.

5.5.2. For Frequency Range was above 1GHz which measurement distance was 3m 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 polarizations of the antenna were set on measurement, and both average and peak emission level were recorded from spectrum analyzer. In order to find the maximum emission level, all the interface cables were manipulated according to ANSI C63.4-2009 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.

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 test modes was measured during radiated testing and all the test data are listed in section 5.6.1.

EUT : LCD Monitor Model No. : PM-65

Test Date : 2014. 11. 06 Temperature : 24 Humidity : 63%

The detail of test mode is as follows :

Mode	Data Cable & AC Power Cord	LCD Angle	Input Port	Display, Resolution/ Frequency	Reference Test Data No.	
					Horizontal	Vertical
1.	1.8m	0°	HDMI	"H" Pattern, 1920*1080/60Hz	# 2	# 1
2.	1.8m	0°	HDMI	"Color Bar" Image, 1080p	# 4	# 3

(mode for maximum detected emission)

For above 1GHz frequency range

The EUT with following test modes was measured during radiated testing and all the test data are listed in section 5.6.2.

EUT : LCD Monitor Model No. : PM-65

Test Date : 2014. 11. 06 Temperature : 24 Humidity : 63%

The detail of test mode is as follows :

Mode	Data Cable & AC Power Cord	LCD Angle	Input Port	Display, Resolution/ Frequency	Reference Test Data No.	
					Horizontal	Vertical
1.	1.8m	0°	HDMI	"H" Pattern, 1920*1080/60Hz	# 6	# 5
2.	1.8m	0°	HDMI	"Color Bar" Image, 1080p	# 8	# 7

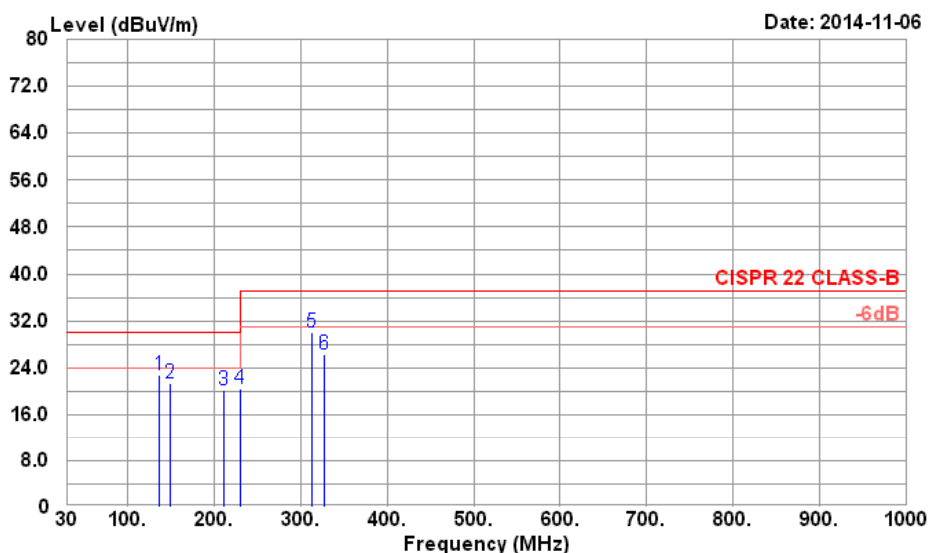
Note : For measurements above 1GHz, the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
(According to ANSI C63.4-2009 section 8.3.2.2)

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



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Data: 2 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1
 Dis. / Ant. : 10m 6112D 33820
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 24°C / 63%
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : 1920*1080/60Hz HDMI
 Line:1.8M

Data no. : 2
 Ant. pol. : HORIZONTAL
 Engineer : ROY-YU

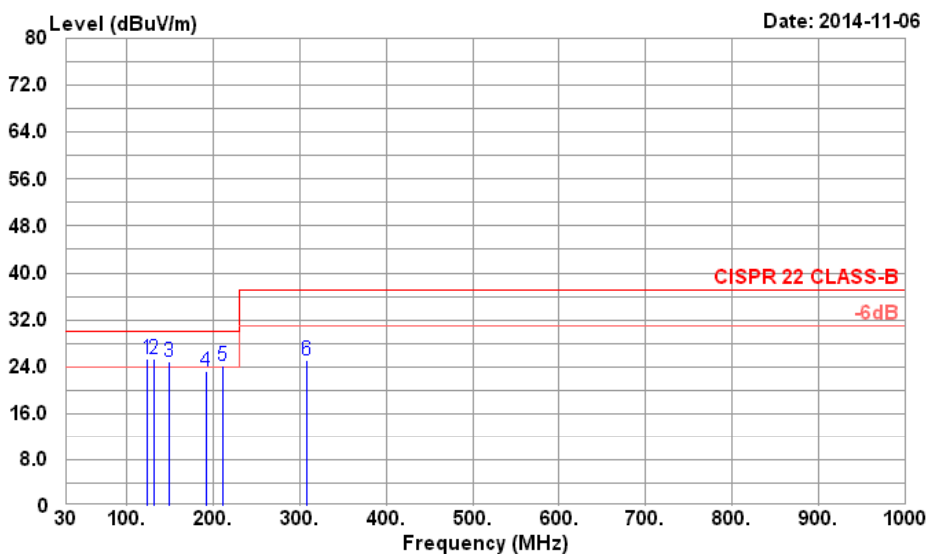
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	135.73	11.56	1.98	9.15	22.69	30.00	7.31	QP
2	149.31	10.65	2.09	8.63	21.37	30.00	8.63	QP
3	210.42	10.00	2.53	7.58	20.11	30.00	9.89	QP
4	230.79	11.28	2.67	6.55	20.50	37.00	16.50	QP
5	312.27	13.51	3.17	13.43	30.11	37.00	6.89*	QP
6	326.82	13.90	3.26	9.12	26.28	37.00	10.72	QP

Remarks: 1.Emission Level= Antenna Factor + Cable Loss + Reading.
 2.The emission levels that are 20dB below the official limit are not reported
 3.The worst emission is detected at 312.27MHz with corrected signal level of 30.11dB μ V/m (limit is 37.0dB μ V/m) when the antenna is at horizontal polarization and is at 4m high and the turn table is at 216°.
 4.0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.



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Data: 1 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1
 Dis. / Ant. : 10m 6112D 33819
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 24°C / 63%
 EUT : PM-65
 Power Rating : 12UVac/60Hz
 Test Mode : 1920*1080/60Hz HDMI
 Line:1.8M

Data no. : 1
 Ant. pol. : VERTICAL
 Engineer : ROY-YU

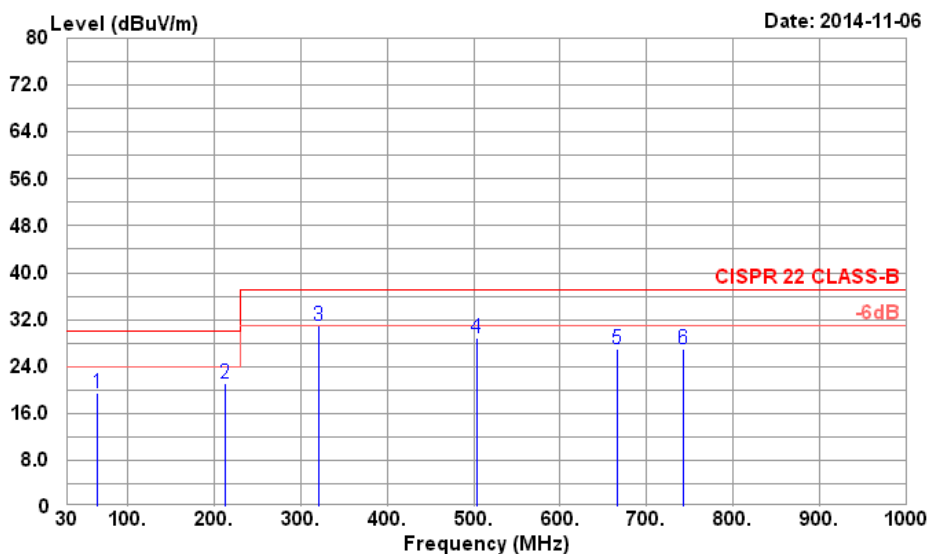
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	124.09	12.02	1.35	12.03	25.40	30.00	4.60*	QP
2	131.85	11.60	1.39	12.41	25.40	30.00	4.60	QP
3	148.34	10.61	1.48	12.74	24.83	30.00	5.17	QP
4	191.99	9.19	1.72	12.39	23.30	30.00	6.70	QP
5	210.42	9.95	1.82	12.49	24.26	30.00	5.74	QP
6	308.39	13.34	2.28	9.47	25.09	37.00	11.91	QP

Remarks: 1.Emission Level= Antenna Factor + Cable Loss + Reading.
 2.The emission levels that are 20dB below the official limit are not reported
 3.The worst emission is detected at 124.09MHz with corrected signal level of 25.40dB μ V/m (limit is 30.0dB μ V/m) when the antenna is at vertical polarization and is at 1m high and the turn table is at 198°.
 4.0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.



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Data: 4 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1
 Dis. / Ant. : 10m 6112D 33820
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 24°C / 63%
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : HDMI 1080P
 Line:1.8M

Data no. : 4
 Ant. pol. : HORIZONTAL
 Engineer : ROY-YU

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	64.92	6.50	1.34	11.74	19.58	30.00	10.42	QP
2	212.36	10.10	2.54	8.49	21.13	30.00	8.87	QP
3	320.03	13.72	3.22	13.97	30.91	37.00	6.09	QP
4	504.33	17.11	4.17	7.59	28.87	37.00	8.13	QP
5	665.35	18.83	4.91	3.14	26.88	37.00	10.12	QP
6	741.98	19.56	5.21	2.23	27.00	37.00	10.00	QP

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



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Data: 3 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1
 Dis. / Ant. : 10m 6112D 33819
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 24°C / 63%
 EUT : PM-65
 Power Rating : 12UVac/60Hz
 Test Mode : HDMI 1080P
 Line:1.8M

Data no. : 3
 Ant. pol. : VERTICAL
 Engineer : ROY-YU

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	51.34	8.12	0.82	12.14	21.08	30.00	8.92	QP
2	171.62	9.46	1.62	11.46	22.54	30.00	7.46	QP
3	266.68	12.57	2.10	11.13	25.80	37.00	11.20	QP
4	548.95	17.62	3.19	7.03	27.84	37.00	9.16	QP
5	670.20	18.73	3.59	3.96	26.28	37.00	10.72	QP
6	742.95	19.42	3.79	5.17	28.38	37.00	8.62	QP

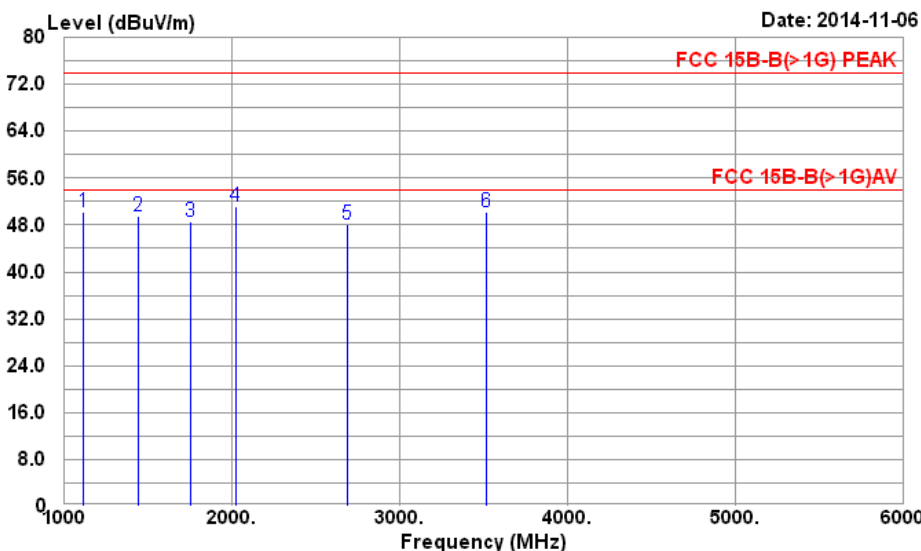
Remarks: 1.Emission Level= Antenna Factor + Cable Loss + Reading.
 2.The emission levels that are 20dB below the official limit are not reported

5.6.2. Above 1GHz Frequency Range Radiated Emission Measurement Results



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Data: 6 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1 Data no. : 6
 Dis. / Ant. : 3m 3117 14403 Ant. pol. : HORIZONTAL
 Limit : FCC 15B-B(>1G) PEAK
 Env. / Ins. : 24°C / 63% Engineer : ROY-YU
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : 1920*1080/60Hz HDMI
 Line:1.8M

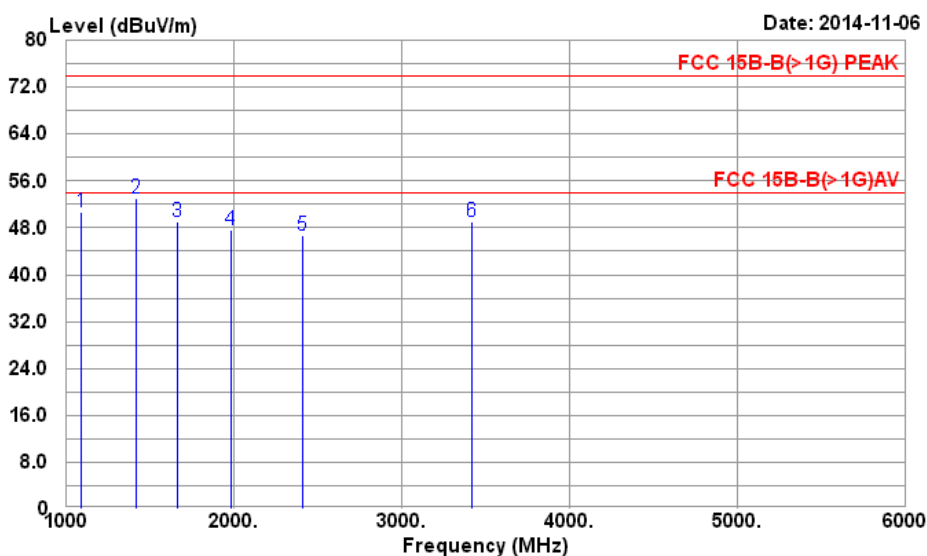
Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Reading (dB μV)	Emission Level (dB μV/m)	Limits (dB μV/m)	Margin (dB)	Remark
1 1115.00	27.75	1.88	36.17	56.84	50.30	74.00	23.70	Peak
2 1445.00	27.88	2.17	35.78	55.18	49.45	74.00	24.55	Peak
3 1750.00	29.80	2.31	35.59	52.02	48.54	74.00	25.46	Peak
4 2025.00	31.72	2.42	35.48	52.40	51.06	74.00	22.94	Peak
5 2690.00	32.52	2.89	35.72	48.35	48.04	74.00	25.96	Peak
6 3515.00	32.63	3.12	35.69	50.04	50.10	74.00	23.90	Peak

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



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Data: 5 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1 Data no. : 5
 Dis. / Ant. : 3m 3117 14403 Ant. pol. : VERTICAL
 Limit : FCC 15B-B(>1G) PEAK
 Env. / Ins. : 24°C / 63% Engineer : ROY-YU
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : 1920*1080/60Hz HDMI
 Line:1.8M

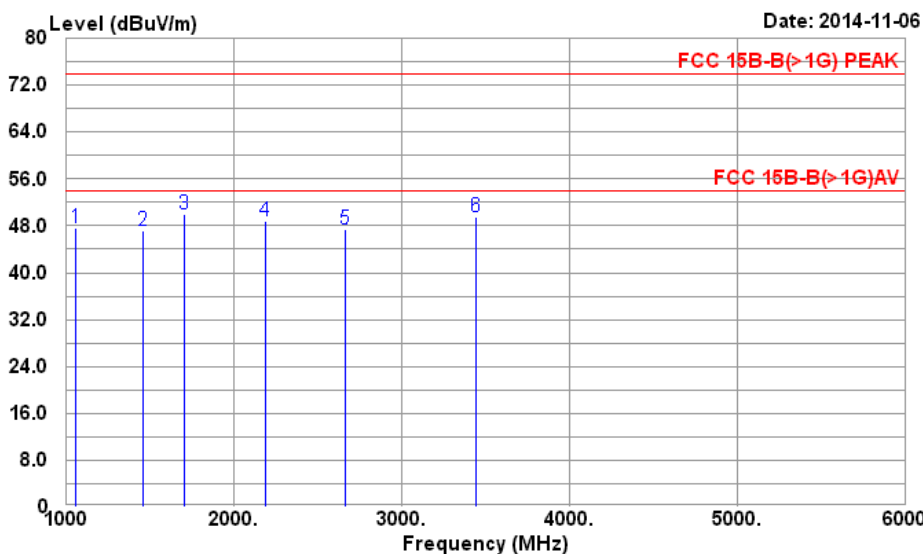
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	1085.00	27.73	1.85	36.22	57.31	50.67	74.00	23.33	Peak
2	1415.00	27.87	2.15	35.81	58.82	53.03	74.00	20.97	Peak
3	1665.00	29.17	2.28	35.63	53.12	48.94	74.00	25.06	Peak
4	1980.00	31.57	2.39	35.48	49.06	47.54	74.00	26.46	Peak
5	2405.00	32.20	2.79	35.61	47.41	46.79	74.00	27.21	Peak
6	3420.00	32.65	3.09	35.72	48.96	48.98	74.00	25.02	Peak

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



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Data: 8 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1 Data no. : 8
 Dis. / Ant. : 3m 3117 14403 Ant. pol. : HORIZONTAL
 Limit : FCC 15B-B(>1G) PEAK
 Env. / Ins. : 24*C / 63% Engineer : ROY-YU
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : HDMI 1080P
 Line:1.8M

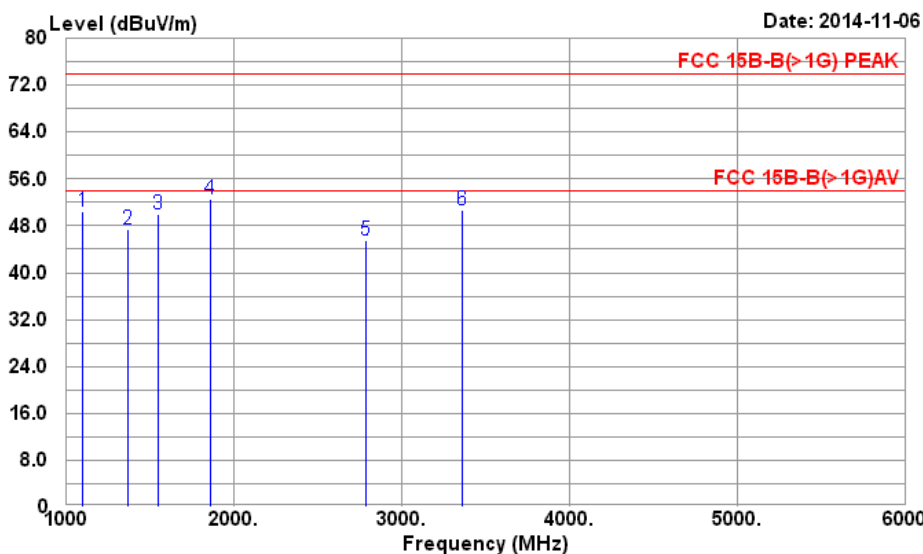
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Reading (dB μV)	Emission Level (dB μV/m)	Limits (dB μV/m)	Margin (dB)	Remark
1	1055.00	27.72	1.82	36.26	54.38	47.66	74.00	26.34	Peak
2	1460.00	27.89	2.18	35.76	52.80	47.11	74.00	26.89	Peak
3	1700.00	29.42	2.29	35.61	53.93	50.03	74.00	23.97	Peak
4	2190.00	31.93	2.59	35.54	49.80	48.78	74.00	25.22	Peak
5	2660.00	32.50	2.89	35.71	47.65	47.33	74.00	26.67	Peak
6	3445.00	32.63	3.10	35.71	49.39	49.41	74.00	24.59	Peak

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



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Data: 7 File: D:\TEST DATA\REPORT\2014\IC1M1410XXX\IC1M1410145\IC1M1410145.EM6 (8)



Site no. : 10m Chamber No.1 Data no. : 7
 Dis. / Ant. : 3m 3117 14403 Ant. pol. : VERTICAL
 Limit : FCC 15B-B(>1G) PEAK
 Env. / Ins. : 24*C / 63% Engineer : ROY-YU
 EUT : PM-65
 Power Rating : 120Vac/60Hz
 Test Mode : HDMI 1080P
 Line:1.8M

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Reading (dB μV)	Emission Level (dB μV/m)	Limits (dB μV/m)	Margin (dB)	Remark
1	1095.00	27.74	1.86	36.20	57.12	50.52	74.00	23.48	Peak
2	1370.00	27.85	2.11	35.86	53.24	47.34	74.00	26.66	Peak
3	1545.00	28.28	2.23	35.69	55.22	50.04	74.00	23.96	Peak
4	1860.00	30.69	2.35	35.54	55.10	52.60	74.00	21.40	Peak
5	2785.00	32.64	2.90	35.75	45.65	45.44	74.00	28.56	Peak
6	3360.00	32.68	3.07	35.73	50.63	50.65	74.00	23.35	Peak

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

6. DEVIATION TO TEST SPECIFICATIONS

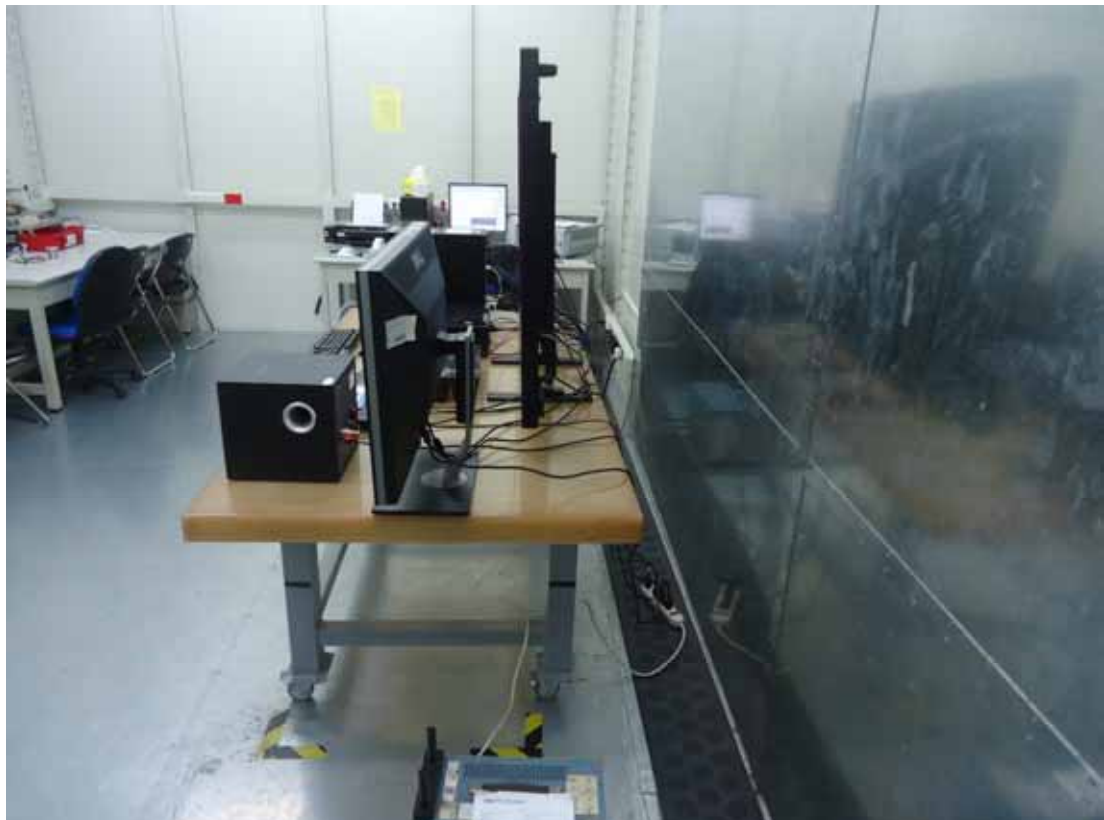
【NONE】

7. PHOTOGRAPHS

7.1. Photos of Powerline Conducted Emission Measurement



FRONT VIEW OF CONDUCTED MEASUREMENT

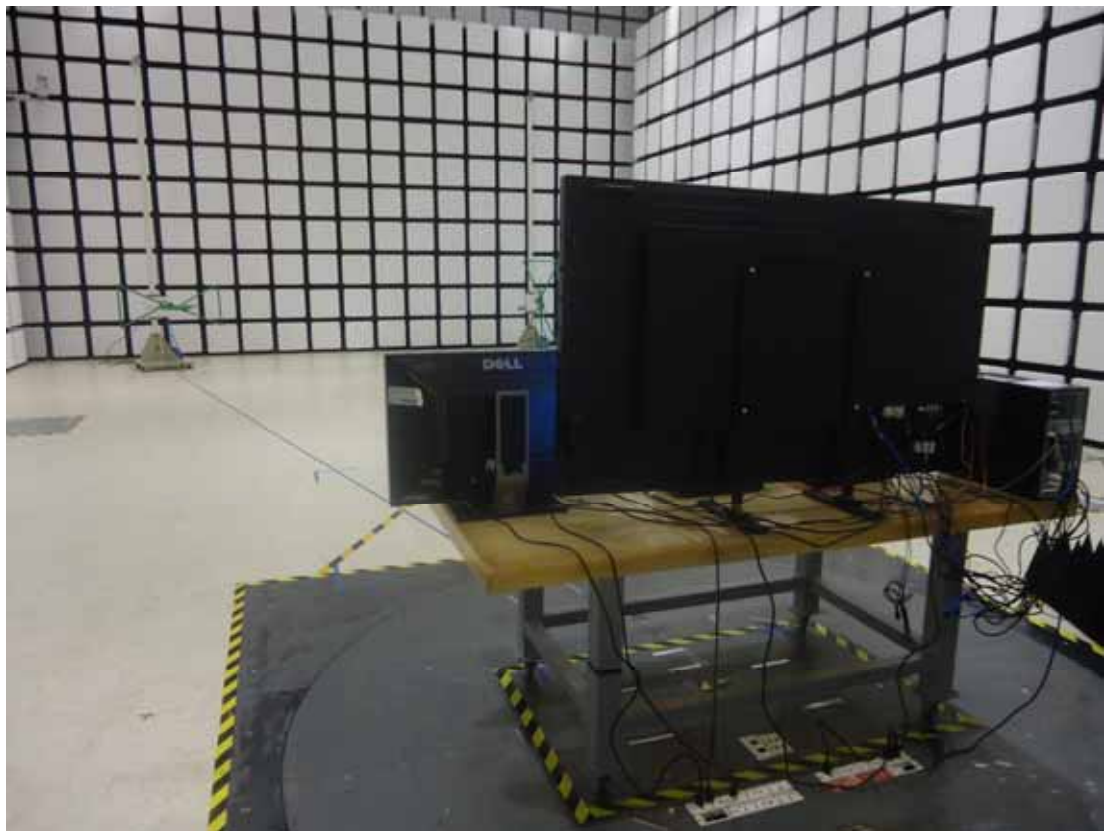


BACK VIEW OF CONDUCTED MEASUREMENT

7.2. Photos of Radiated Emission Measurement at Semi-Anechoic Chamber
(30-1000MHz)



FRONT VIEW OF RADIATED MEASUREMENT

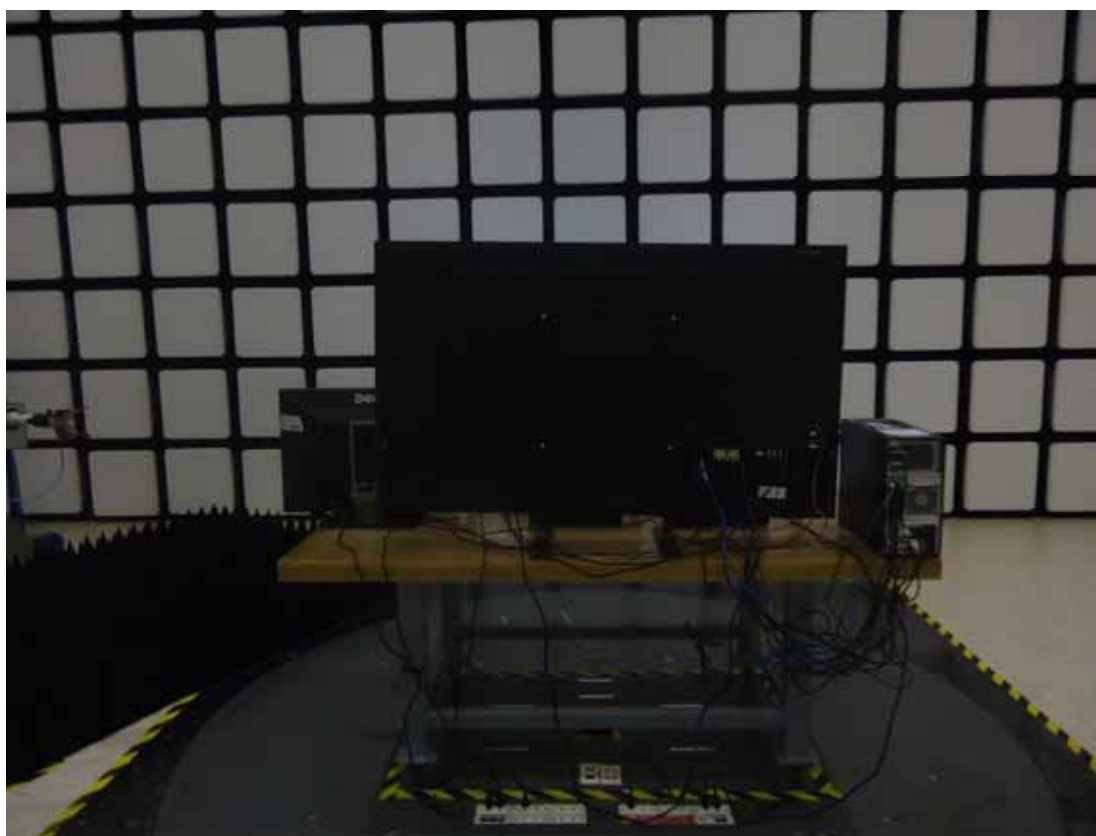


BACK VIEW OF RADIATED MEASUREMENT

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



FRONT VIEW OF RADIATED MEASUREMENT



BACK VIEW OF RADIATED MEASUREMENT