


FCC PART 15 CLASS B
EMI MEASUREMENT AND TEST REPORT
For

SHENZHEN NEOSTRA TECHNOLOGY CO., LTD
4-5/F, 7 Building, Huaide Cuihai Industrial Park, Fuyong, Baoan District, Shenzhen, China

FCC ID: FCK-NEOSTRA002

September 18, 2012

This Report Concerns: Original Report		Equipment Type: Mobile Internet Devices (MID)	
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Test Engineer of performing the tests:	Adam Yang	<i>Adam Yang</i>	
Report No.:	BST12081031Y-1E-3-2		
Receive EUT Date/Test Date:	August 30, 2012/ September 3-17, 2012		
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1. GENERAL INFORMATION

1.1. Report information

1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BST in any way guarantees the later performance of the product/equipment.

1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, BST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BST, unless the applicant has authorized BST in writing to do so.

Test Facility -

The test site used to collect the radiated data is located on the address of

Shenzhen Certification Technology Service Co., Ltd

(FCC Registered Test Site Number: 197647) on

2F, Building B, East Area of Nanchang Second Industrial Zone, Gushu 2nd Road,

Bao'an District, shenzhen 518126, China

The Test Site is constructed and calibrated to meet the FCC requirements.

1.2. Measurement Uncertainty

Available upon request.

2. PRODUCT DESCRIPTION

2.1. EUT Description

Applicant : SHENZHEN NEOSTRA TECHNOLOGY CO., LTD
Address : 4-5/F, 7 Building, Huaide Cuihai Industrial Park, Fuyong,
Baoan District, Shenzhen, China

Manufacturer : SHENZHEN NEOSTRA TECHNOLOGY CO., LTD
Address : 4-5/F, 7 Building, Huaide Cuihai Industrial Park, Fuyong,
Baoan District, Shenzhen, China

EUT Description : Mobile Internet Devices (MID)

Trade Name : neostra

Model Number : M805A1, UTAB80, UTAB70, PTAB704, PMID704,
PMID801, N708H6, M701H4, M701H9, M702A1, M703A1,
M703AG1, M704A1, M708A1, M708A2, M708B1, M708B2,
M709B1, M709B2, M709Q9, M801H9, M802A1, M803A1,
M805A1, M805AG1, M806A1, M805H9, M806A2, M809B1,
M809Q9, B809B1, M809Q9, M979Q9, M1005A1, M1006A1,
M1006A2, M1006AG1, M1006AG2, M1019Q9, M1169Q9

Power Supply : DC 3.7V (Li-ion battery)

2.2. Block Diagram of EUT Configuration

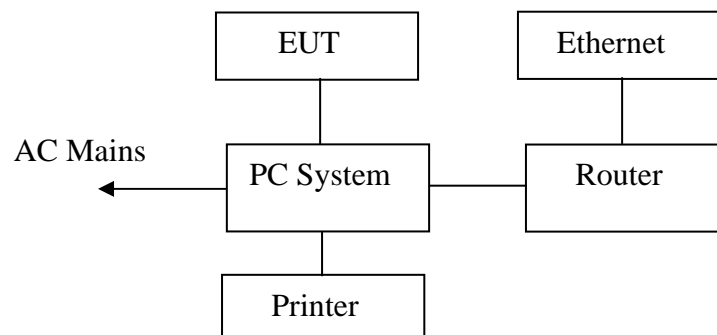


Figure 1 EUT Setup of Connect to PC mode

2.3. Support Equipment List

Name	Model No	S/N	Manufacturer	Used “ ”
PC system	AM1830	N/A	Acer	
Printer	HP1020	N/A	HP	
Router	PL-R860	N/A	TP-LINK	

2.4. Test Conditions

Temperature: 23~27

Relative Humidity: 50~63 %

3. FCC ID LABEL

FCC ID: FCK-NEOSTRA002

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference, and**
- 2. This device must accept any interference received, including interference that may cause undesired operation.**

Label Location on EUT

EUT View/ FCC ID Label Location



4. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Test Results
Conducted disturbance	Pass
Radiated disturbance	Pass

Remark: “N/A” means “Not applicable.”

Modifications

No modification was made.

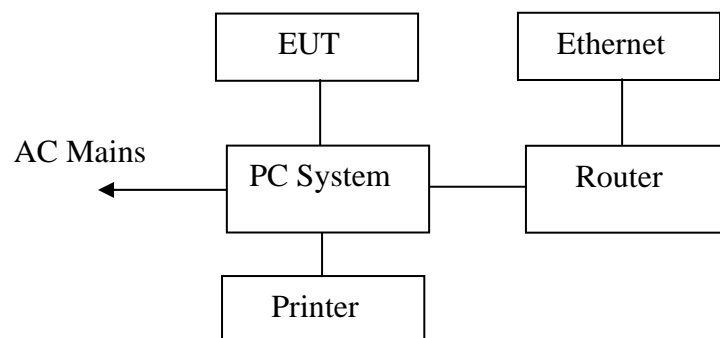
5. TEST EQUIPMENT USED

Equipment/Facilities	Manufacturer	Model	Serial no.	Date of Cal.	Cal. Interval
3m Semi-Anechoic Chamber	Changzhou Chengyu	EC3048	N/A	May 5, 2012	1 Year
Broadband antenna	SCHWARZBECK	VULB 9168	VULB9168-438	Aug. 14, 2012	1 Year
Horn antenna	R&S	HF906	10027	Aug. 14, 2012	1 Year
ETS Horn Antenna	ETS	3160	SEL0076	May 8, 2012	1 Year
Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	Apr. 6, 2012	1 Year
Spectrum analyzer	Agilent	E4443A	MY46185649	Apr. 6, 2012	1 Year
Spectrum analyzer	Agilent	E4440A	MY46187335	Apr. 6, 2012	1 Year
Spectrum analyzer	Agilent	E4446A	MY45300103	Apr. 6, 2012	1 Year
Test receiver	R&S	ESCI	100492	Apr. 6, 2012	1 Year
Test receiver	R&S	ESCI	101202	Apr. 6, 2012	1 Year
L.I.S.N.	SCHWARZBECK	NSLK8126	8126466	Apr. 6, 2012	1 Year
L.I.S.N.	SCHWARZBECK	NSLK8126	8126487	Apr. 6, 2012	1 Year
Cable	Resenberger	N/A	NO.1	Apr. 6, 2012	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Apr. 6, 2012	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Apr. 6, 2012	1 Year
Pre-amplifier	SCHWARZBECK	BBV9743	9743-019	Apr. 6, 2012	1 Year
Pre-amplifier	R&S	AFS33-1800 2650-30-8P-44	SEL0080	Apr. 6, 2012	1 Year

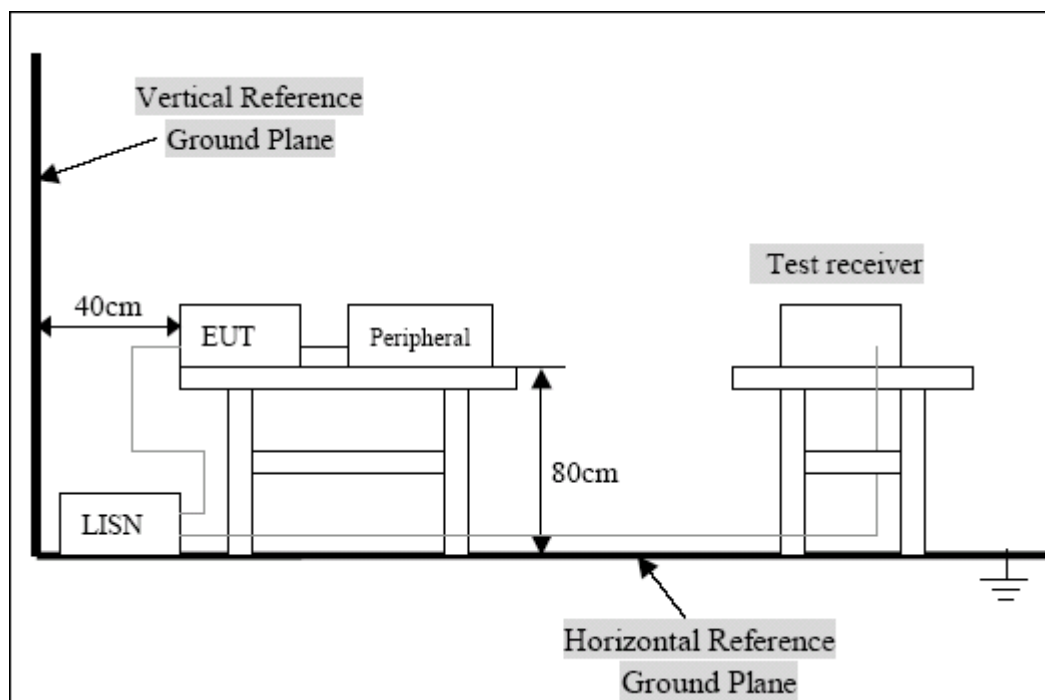
6. CONDUCTED EMISSION TEST

6.1. Block Diagram of Test Setup

6.1.1. Block Diagram of connection between the EUT and the simulators



6.1.2. Test Setup Diagram



6.2. Test Standard

FCC Part 15 CLASS B

ANSI C63.4 2003

6.3. Conducted Emission Limit(Class B)

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.

6.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC Part 15 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

6.5. Operating Condition of EUT

6.5.1. Setup the EUT and simulators as shown in Section 6.1.

6.5.2. Turn on the power of all equipments.

6.5.3. Let the EUT work in test mode (Connect to PC) and test it.

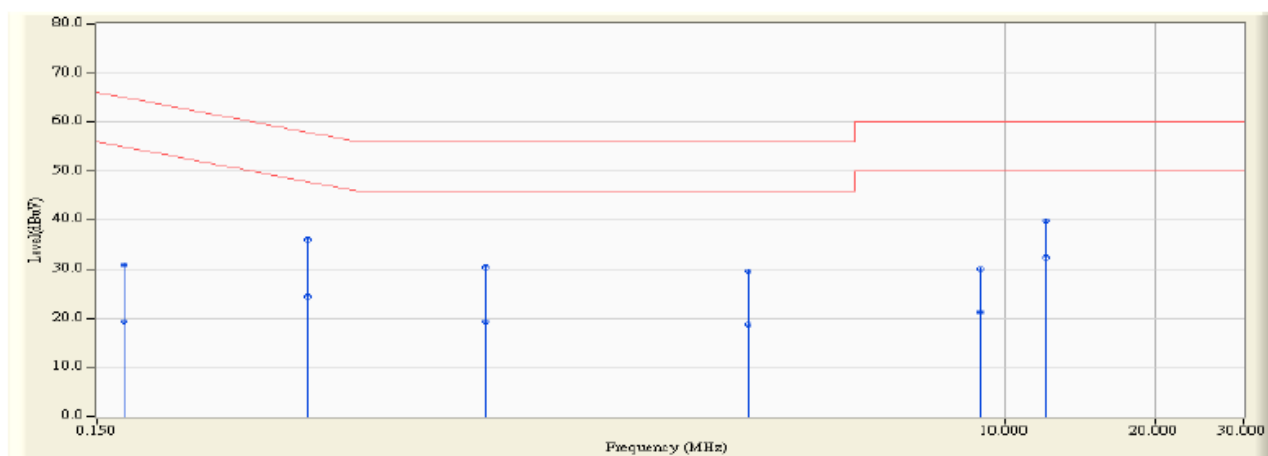
6.6. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver is used to test the emissions from both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

6.7. Test Result

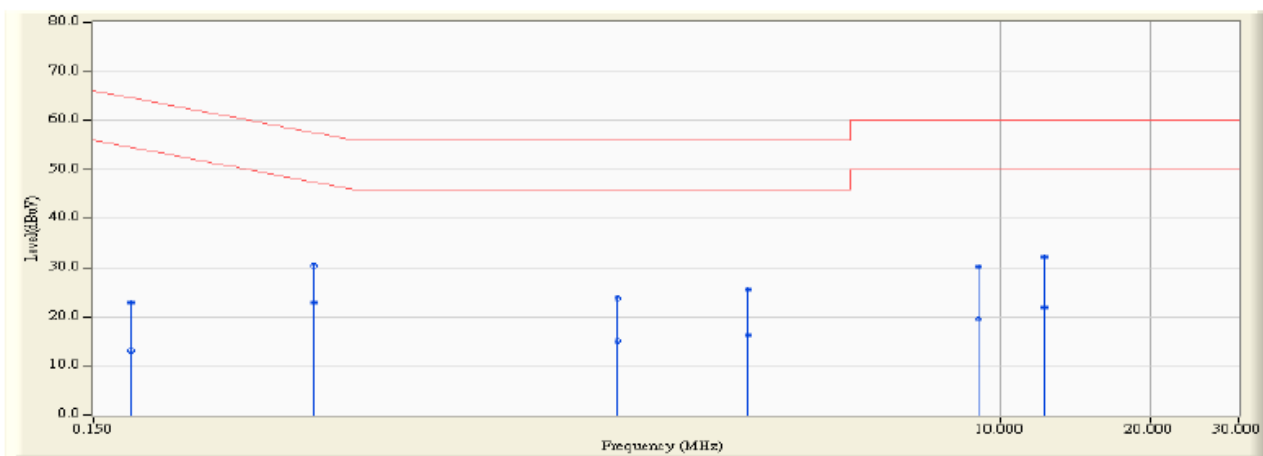
Pass

Test mode: Connect to PC L Line



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV)	Margin (dB)	Limit (dBμV)	Detector Type
1	0.170	9.778	21.080	30.858	-34.126	64.983	QUASIPeAK
2	0.170	9.778	9.610	19.388	-35.596	54.983	AVERAGE
3	0.396	9.830	26.160	35.990	-21.945	57.935	QUASIPeAK
4	0.396	9.830	14.520	24.350	-23.585	47.935	AVERAGE
5	0.900	9.662	20.880	30.542	-25.458	56.000	QUASIPeAK
6	0.900	9.662	9.550	19.212	-26.788	46.000	AVERAGE
7	3.048	9.820	19.700	29.520	-26.480	56.000	QUASIPeAK
8	3.048	9.820	8.850	18.670	-27.330	46.000	AVERAGE
9	8.884	9.949	20.110	30.058	-29.942	60.000	QUASIPeAK
10	8.884	9.949	11.240	21.188	-28.812	50.000	AVERAGE
11	12.037	10.069	29.880	39.949	-20.051	60.000	QUASIPeAK
12	* 12.037	10.069	22.210	32.279	-17.721	50.000	AVERAGE

Test mode: Connect to PC N Line

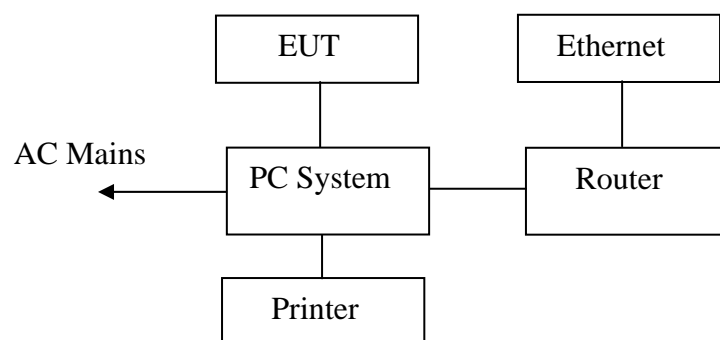


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.177	9.767	13.230	22.997	-41.612	64.609	QUASIPeAK
2	0.177	9.767	3.410	13.177	-41.432	54.609	AVERAGE
3	0.416	9.838	20.610	30.448	-27.087	57.535	QUASIPeAK
4	*	9.838	13.090	22.928	-24.607	47.535	AVERAGE
5	1.693	9.745	13.980	23.725	-32.275	56.000	QUASIPeAK
6	1.693	9.745	5.210	14.955	-31.045	46.000	AVERAGE
7	3.107	9.821	15.610	25.431	-30.569	56.000	QUASIPeAK
8	3.107	9.821	6.560	16.381	-29.619	46.000	AVERAGE
9	9.017	9.977	20.370	30.347	-29.653	60.000	QUASIPeAK
10	9.017	9.977	9.640	19.617	-30.383	50.000	AVERAGE
11	12.255	10.127	22.130	32.257	-27.743	60.000	QUASIPeAK
12	12.255	10.127	11.650	21.777	-28.223	50.000	AVERAGE

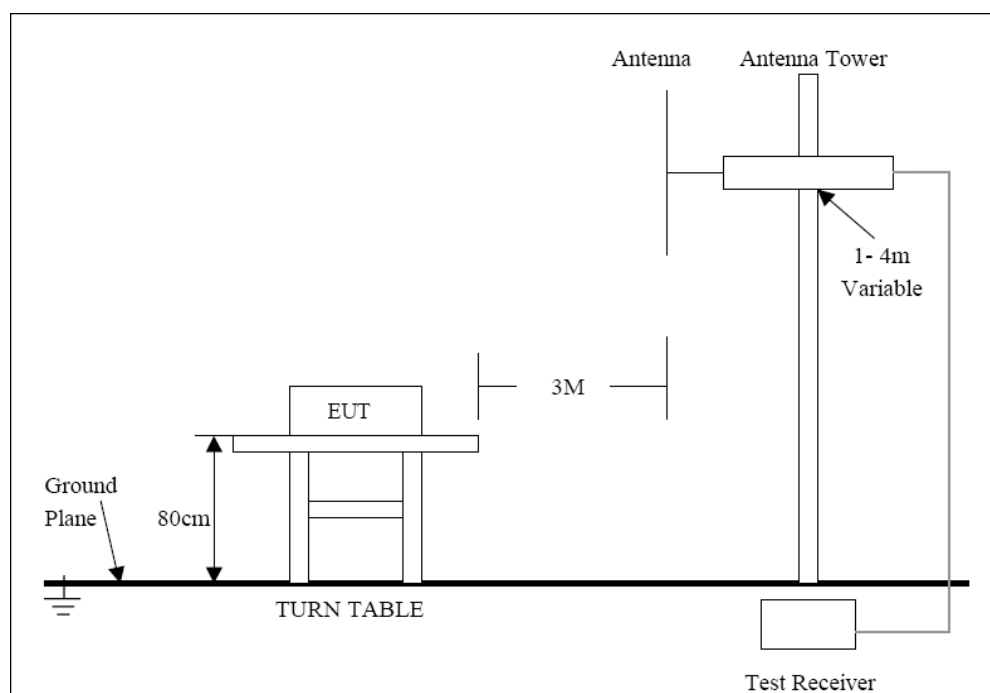
7. RADIATED EMISSION MEASUREMENT

7.1. Block Diagram of EUT Configuration

7.1.1. Block Diagram of connection between the EUT and the simulators



7.1.2. Semi-anechoic Chamber Test Setup Diagram



7.2. Test Standard

FCC Part 15 CLASS B
ANSI C63.4 2003

7.3. Radiated Emission Limit(Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
Above 1000	3	54.0

Note:(1) The smaller limit shall apply 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 EUT or system.

7.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Measurement to meet the Commission requirements and operating regulations in a manner which tends to maximize Its emission characteristics in normal application.

7.5. Operating Condition of EUT

7.5.1.Setup the EUT as shown on Section 7.1

7.5.2.Turn on the power of all equipments.

7.5.3.Let the EUT work in test mode (Connect to PC) and measure it.

7.6. Test Procedure

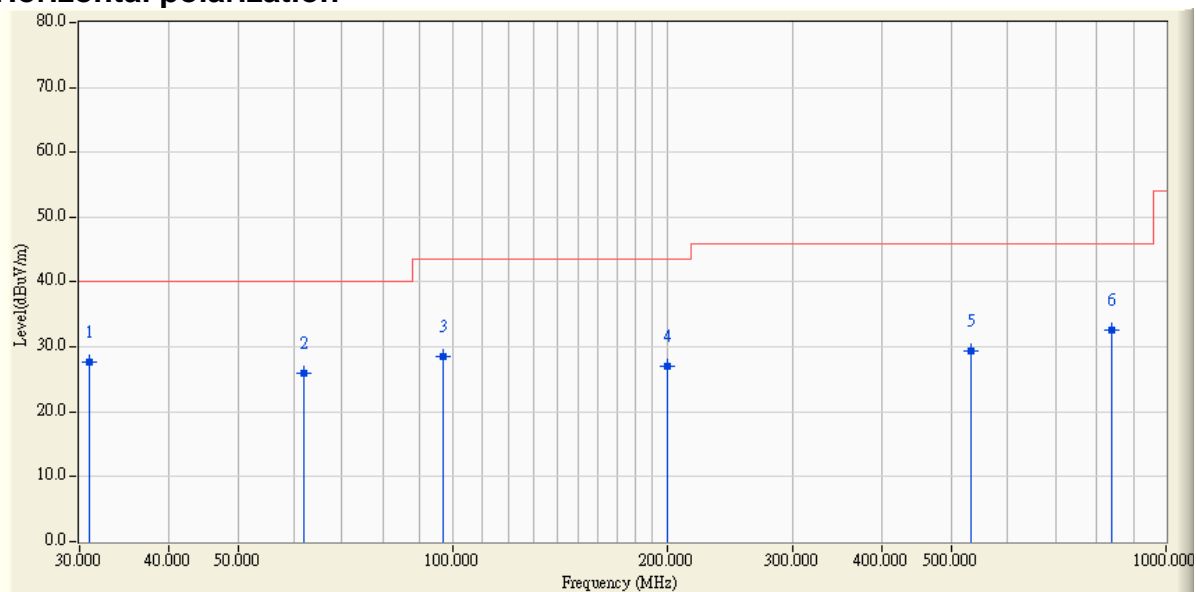
The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Calibrated Loop antenna is used as receiving antenna for frequencies below 30MHz, Calibrated Bilog antenna is used as receiving antenna for frequencies between 30 MHz and 1 GHz, Calibrated Horn antenna is used as receiving antenna for frequencies above 1000MHz. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

The bandwidth of test receiver is set at 9kHz in below 30MHz. and set at 120kHz in 30-1000MHz.

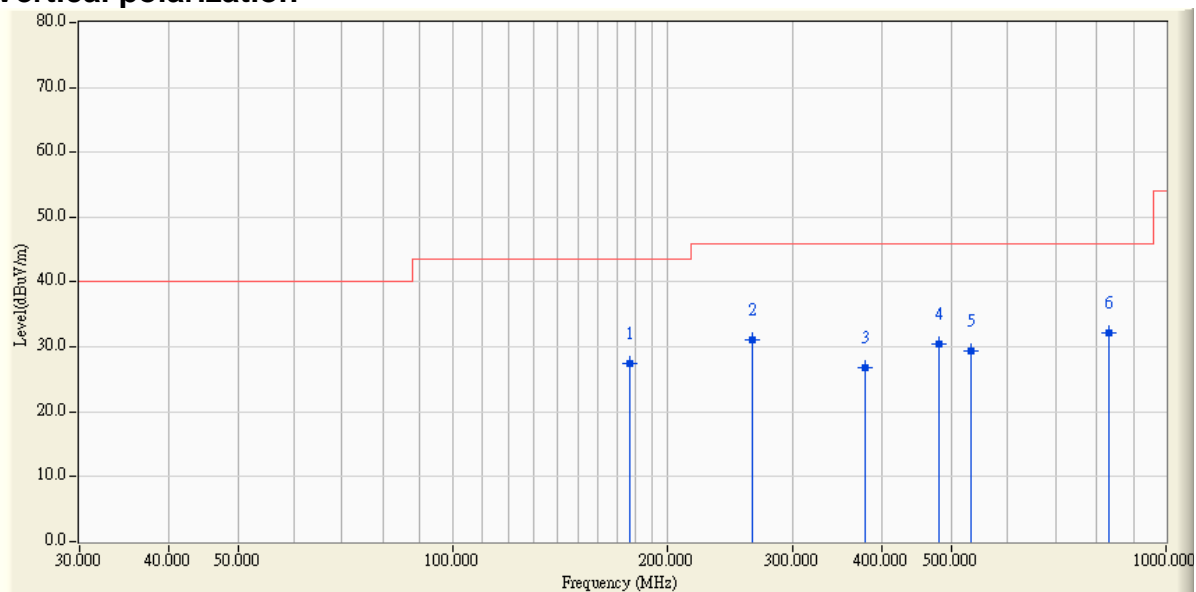
The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Peak detector and Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector. The frequency range from 9kHz to 1000MHz is checked. All the test results are listed in Section 7.7. The measurements greater than 20dB below the limit are not report.

7.7. Test Result

PASS

Horizontal polarization

		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	30.965	17.931	9.785	27.716	-12.284	40.000	QUASIPeAK
2		61.994	5.870	20.149	26.019	-13.981	40.000	QUASIPeAK
3		96.885	10.721	17.825	28.546	-14.954	43.500	QUASIPeAK
4		200.175	9.792	17.284	27.076	-16.424	43.500	QUASIPeAK
5		532.115	19.215	10.248	29.463	-16.537	46.000	QUASIPeAK
6		839.555	22.366	10.228	32.594	-13.406	46.000	QUASIPeAK

Vertical polarization

		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		176.825	9.290	18.245	27.535	-15.965	43.500	QUASIPeAK
2		263.665	13.888	17.189	31.077	-14.923	46.000	QUASIPeAK
3		378.125	16.533	10.246	26.779	-19.221	46.000	QUASIPeAK
4		479.825	18.304	12.227	30.532	-15.468	46.000	QUASIPeAK
5		533.155	19.292	9.985	29.277	-16.723	46.000	QUASIPeAK
6	*	832.755	22.206	10.028	32.234	-13.766	46.000	QUASIPeAK