

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-NEOSTRA001

March 28, 2012

This Report Concerns: Original Report	Equipment Type: Mobile Internet Devices (MID)
Test Engineer:	Jack Liu <i>Jack Liu</i>
Report No.:	BST12020357Y-1ER-3-2
Receive EUT Date/Test Date:	March 20, 2012/ March 21-27, 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 SinTek Laboratory Co.,Ltd.

(FCC Registered Test Site Number: 963441) on

No.7, Xinshidai Industrial, Guantian Village, Shiyan Town, Baoan District, Shenzhen, Guangdong 518108, 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 : N707H6, M702H7, M703H6, M803H6, M803H7, M708H6E, M801H7E, N708H7, M705H6, M715H6, M715H6A, M805H6, M1005H6, M704H6, M507H8, M507H9, M707H8, M707H9, M708H9, M718H9, M718H9A, M705H9, M715H9, M715H9A, M704HG1, M735HG1, M805HG1, M1005HG1, PMID701C, PMID701I, PTAB7201, PTAB7201X, PTAB8000, PTAB8100, PTAB9100, PMID702, B705H8, B715H8, B715H8A, B705H9, B715H9, B715H9A, B801H1, B801H6

Power Supply : DC 5.2V (Powered by Adapter) or DC 3.7V (Li-ion battery)

2.2. Block Diagram of EUT Configuration

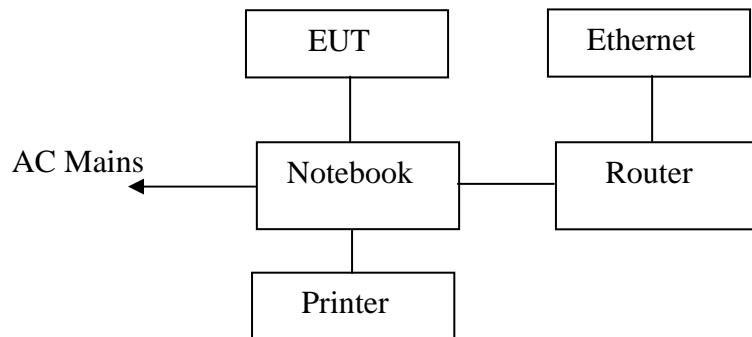


Figure 1 EUT Setup of Connect to PC mode



Figure 2 EUT Setup of Connect to Adapter mode

2.3. Support Equipment List

Name	Model No	S/N	Manufacturer	Used “ ”
Adapter Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5.2V, 1000mA	TPA-200510C01	--	--	
Notebook	A42J	--	ASUS	
Router	TL-R402M	07115200391	TP-LINK	
Printer	P320A	--	HP	

2.4. Test Conditions

Temperature: 23~25

Relative Humidity: 50~63 %

3. FCC ID LABEL

FCC ID: FCK-NEOSTRA001

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

5.1. For Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS30	828985/018	Jun. 01, 11	1 Year
2.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Jun. 01, 11	1 Year
3.	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Jun. 01, 11	1 Year
4.	Conical	Emtek	N/A	N/A	N/A	N/A
5.	Voltage Probe	Schwarzbeck	TK9416	N/A	Jun. 01, 11	1 Year
6.	Coaxial Switch	Anritsu	MP59B	6100214550	Jun. 01, 11	1 Year

5.2. For Radiated Emission Measurement

Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	Jun. 01, 11	1 Year
2.	Test Receiver	Rohde&Schwarz	ESC830	828982/018	Jun. 01, 11	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	142	Jun. 01, 11	1 Year
4.	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	Jun. 01, 11	1 Year
5.	Cable	Schwarzbeck	AK9513	ACRX1	Jun. 01, 11	1 Year
6.	Cable	Rosenberger	N/A	FR2RX2	Jun. 01, 11	1 Year
7.	Cable	Schwarzbeck	AK9513	CRRX2	Jun. 01, 11	1 Year
8.	Cable	Schwarzbeck	AK9513	CRRX2	Jun. 01, 11	1 Year
9.	Single Phase Power Line Filter	MPE	23332C	N/A	Jun. 01, 11	1 Year
10.	Single Phase Power Line Filter	MPE	23333C	N/A	Jun. 01, 11	1 Year
11.	Signal Generator	HP	864A	3625U00573	Jun. 01, 11	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

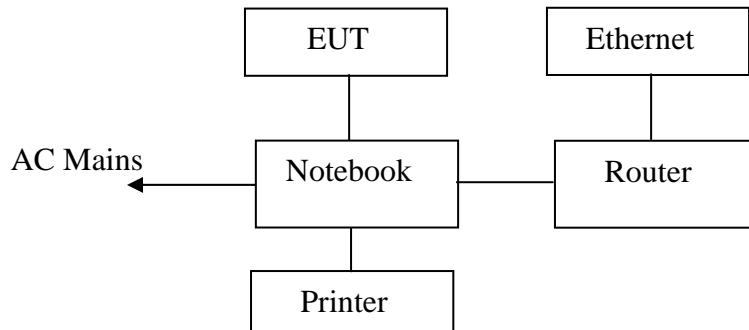


Figure 1 EUT Setup of Connect to PC mode

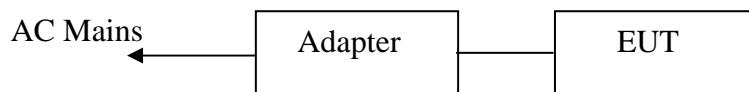
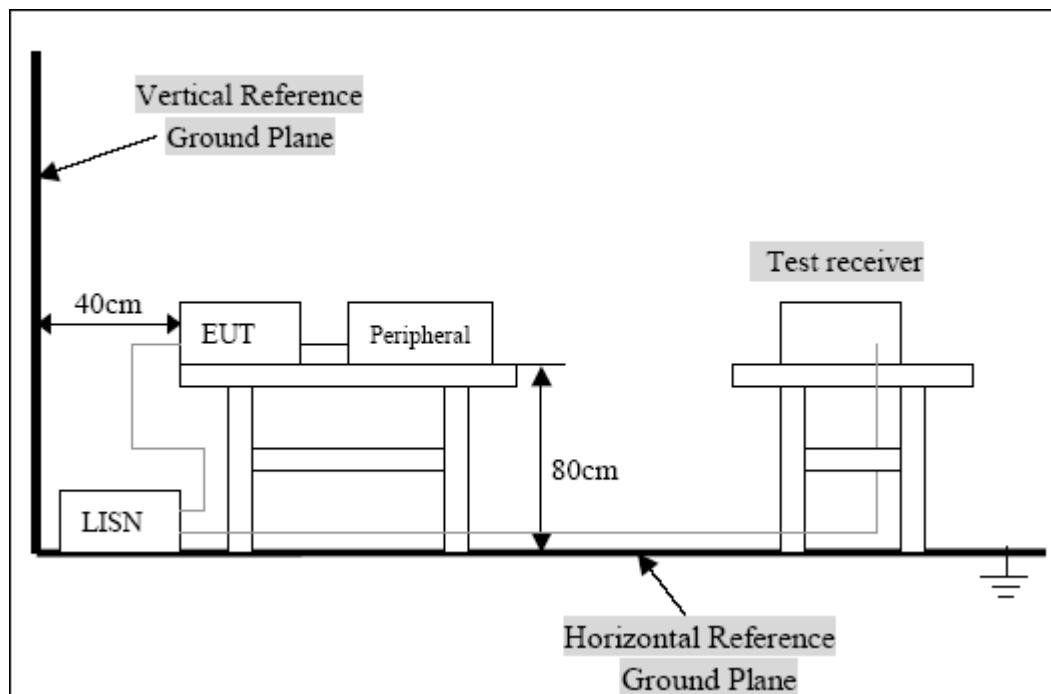


Figure 2 EUT Setup of Connect to Adapter mode

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 modes (Connect to PC, Connect to Adapter) and test it.

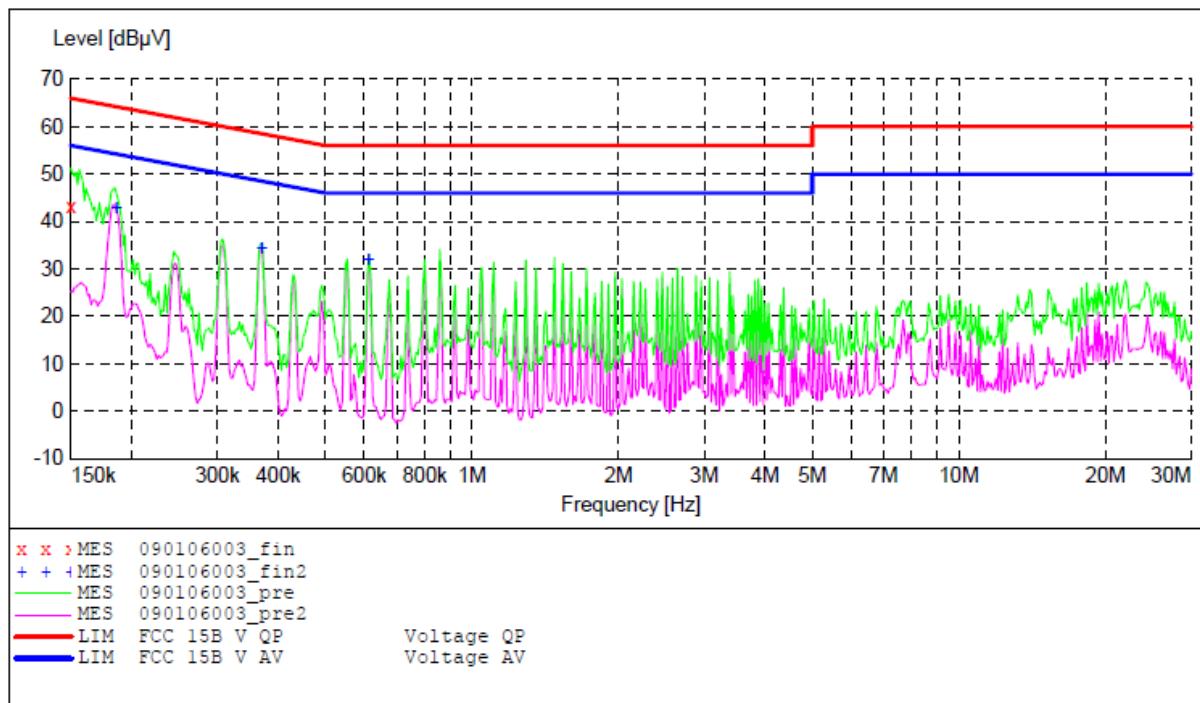
6.6. Test Procedure

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 form 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 N Line



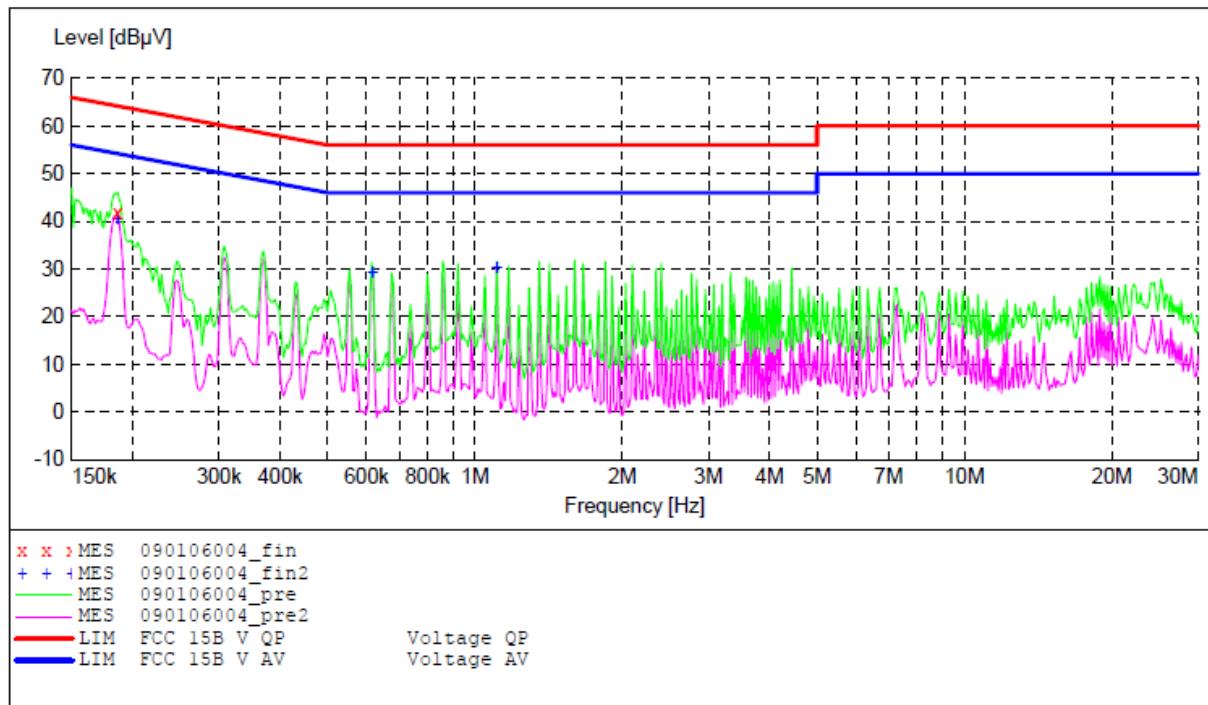
MEASUREMENT RESULT: "090106003_fin"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.150000	43.10	11.0	66	22.9	QP	N	GND

MEASUREMENT RESULT: "090106003_fin2"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.186000	42.90	11.2	54	11.3	AV	N	GND
0.370500	34.50	11.8	49	14.0	AV	N	GND
0.613500	32.00	12.0	46	14.0	AV	N	GND

Test mode: Connect to PC L Line



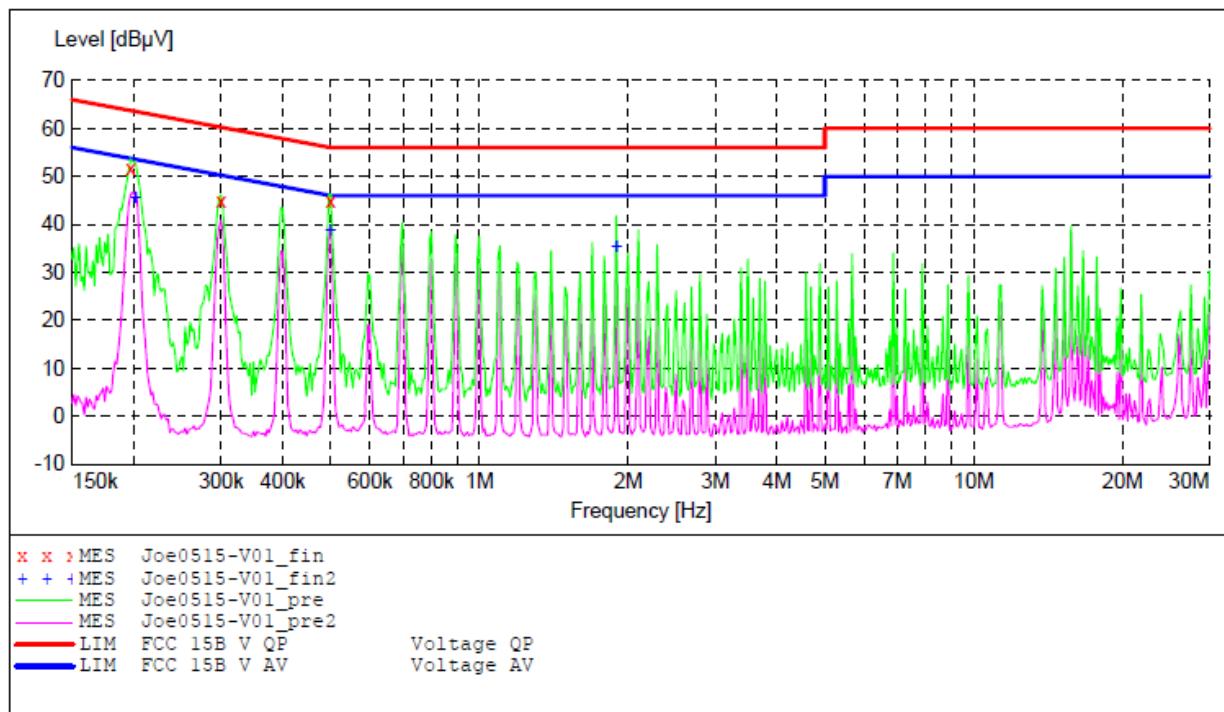
MEASUREMENT RESULT: "090106004_fin"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.186000	41.70	11.2	64	22.5	QP	L1	GND

MEASUREMENT RESULT: "090106004_fin2"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.186000	40.40	11.2	54	13.8	AV	L1	GND
0.618000	29.20	11.9	46	16.8	AV	L1	GND
1.108500	30.30	11.8	46	15.7	AV	L1	GND

Test mode: Connect to Adapter N Line



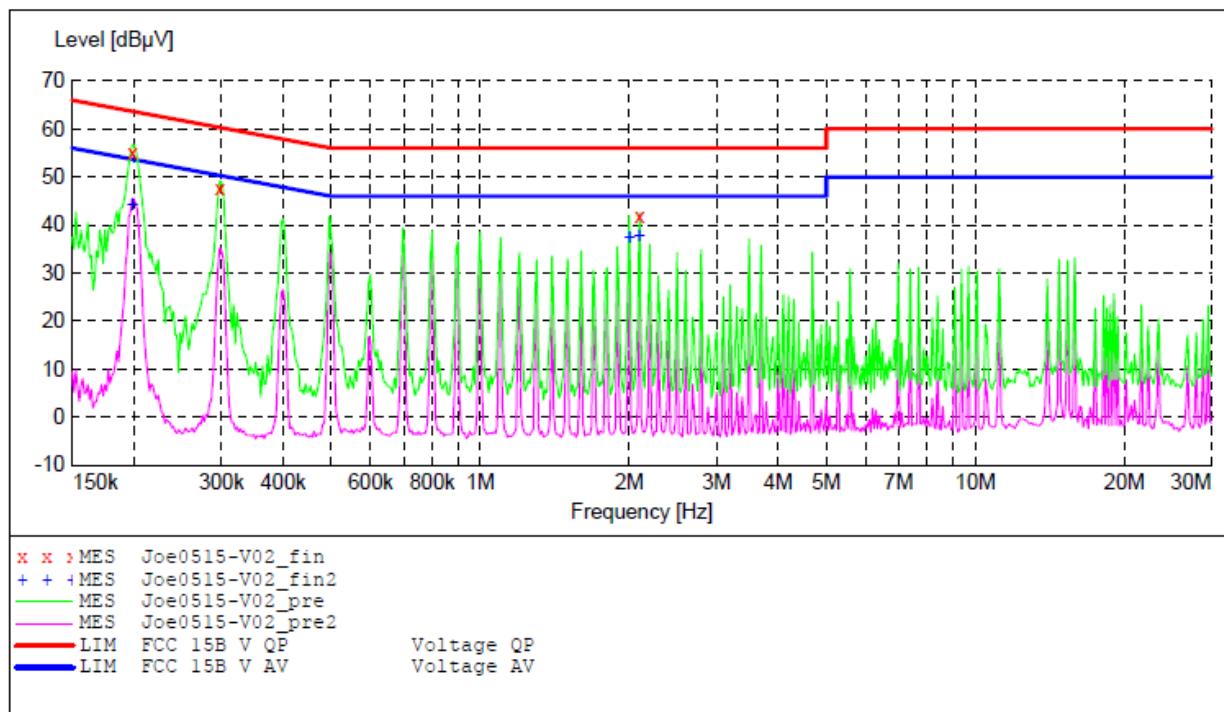
MEASUREMENT RESULT: "Joe0515-V01_fin"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.196675	51.70	11.2	64	12.0	QP	N	GND
0.300025	44.80	11.6	60	15.4	QP	N	GND
0.499611	44.90	12.0	56	11.1	QP	N	GND

MEASUREMENT RESULT: "Joe0515-V01_fin2"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.201433	45.70	11.2	54	7.9	AV	N	GND
0.499611	38.80	12.0	46	7.2	AV	N	GND
1.890342	35.20	11.7	46	10.8	AV	N	GND

Test mode: Connect to Adapter L Line



MEASUREMENT RESULT: "Joe0515-V02_fin"

5/15/2010 8:54AM	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.198248	55.00	11.2	64	8.7	QP	L1	GND
	0.297644	47.50	11.6	60	12.8	QP	L1	GND
	2.096657	41.70	11.6	56	14.3	QP	L1	GND

MEASUREMENT RESULT: "Joe0515-V02_fin2"

5/15/2010 8:54AM	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.198248	44.10	11.2	54	9.6	AV	L1	GND
	1.998776	37.50	11.7	46	8.5	AV	L1	GND
	2.096657	37.90	11.6	46	8.1	AV	L1	GND

7. RADIATED EMISSION MEASUREMENT

7.1. Block Diagram of EUT Configuration

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

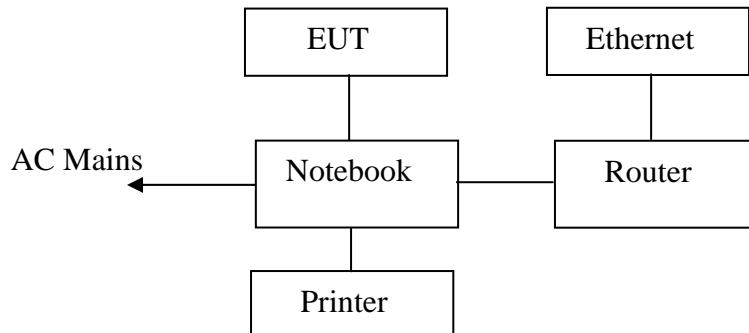


Figure 1 EUT Setup of Connect to PC mode

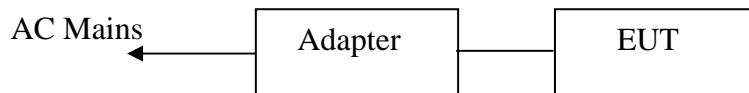
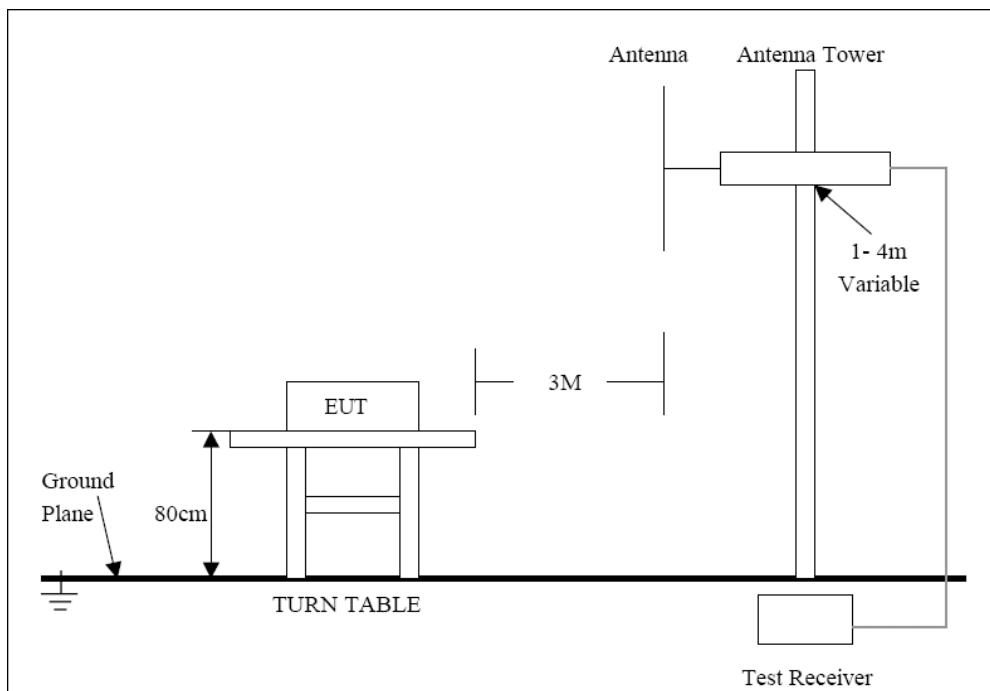


Figure 2 EUT Setup of Connect to Adapter mode

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 modes (Connect to PC, Connect to Adapter) and measure it.

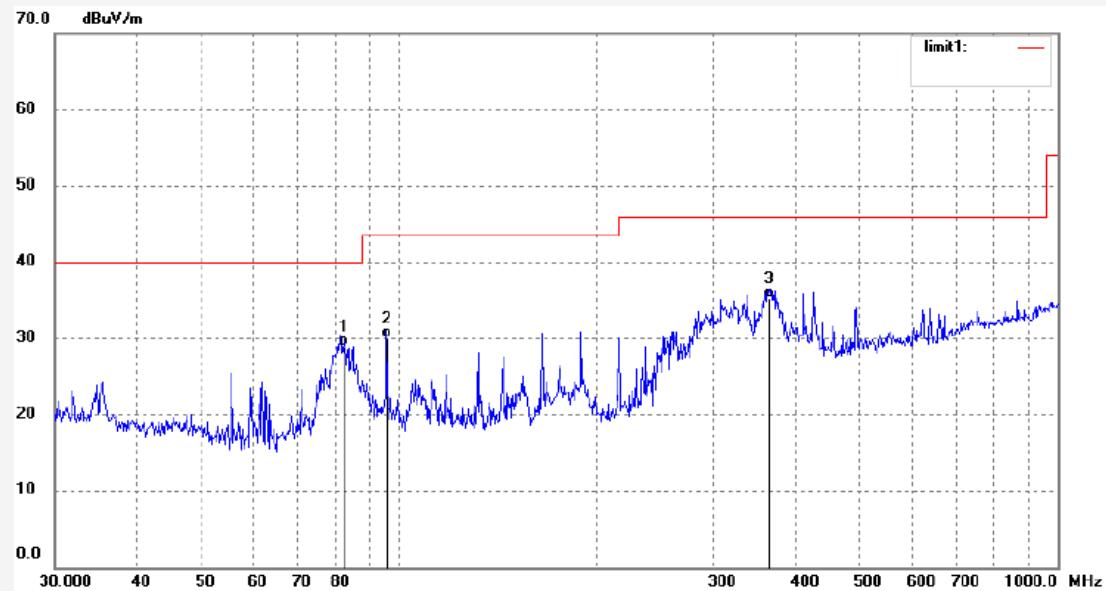
7.6. Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. calibrated antenna are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

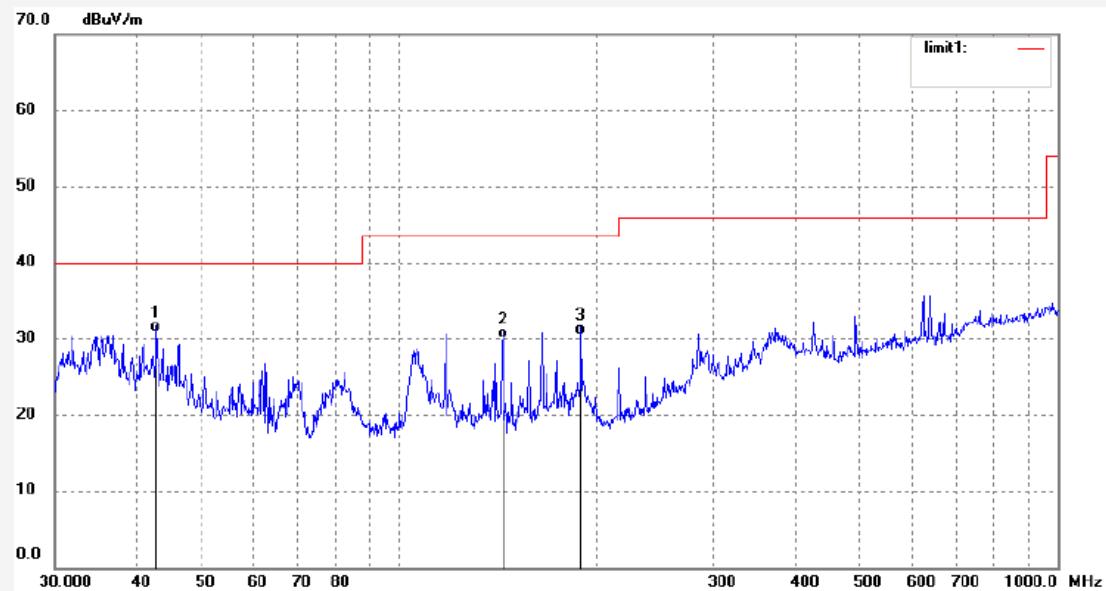
The bandwidth of test receiver is set at 120kHz in 30-1000MHz. and set at 1MHz in above 1000MHz.

7.7. Test Result

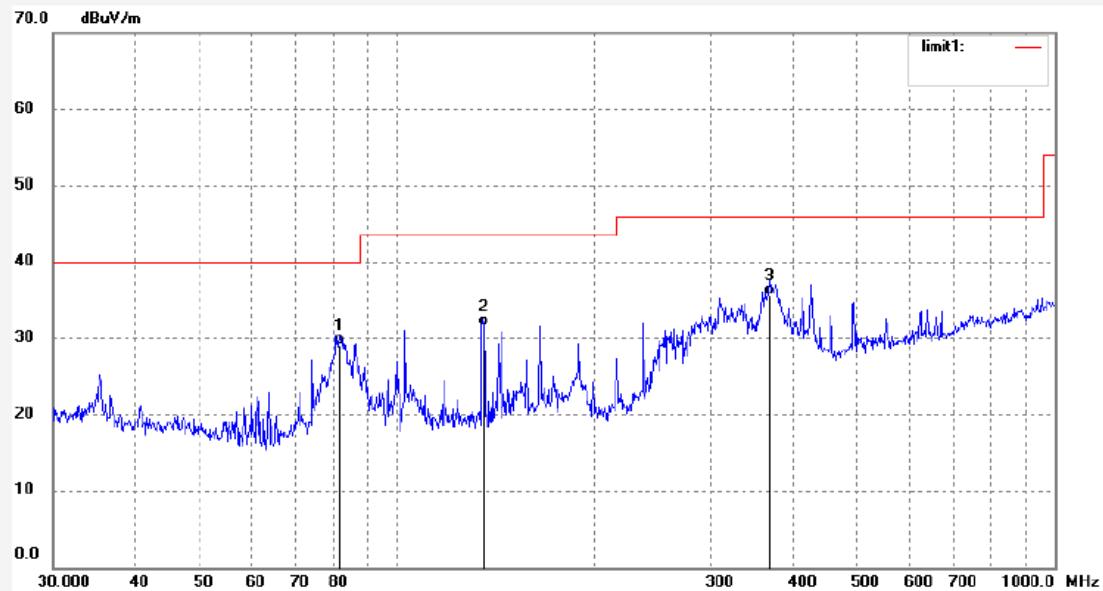
PASS

Test mode: Connect to PC Horizontal polarization

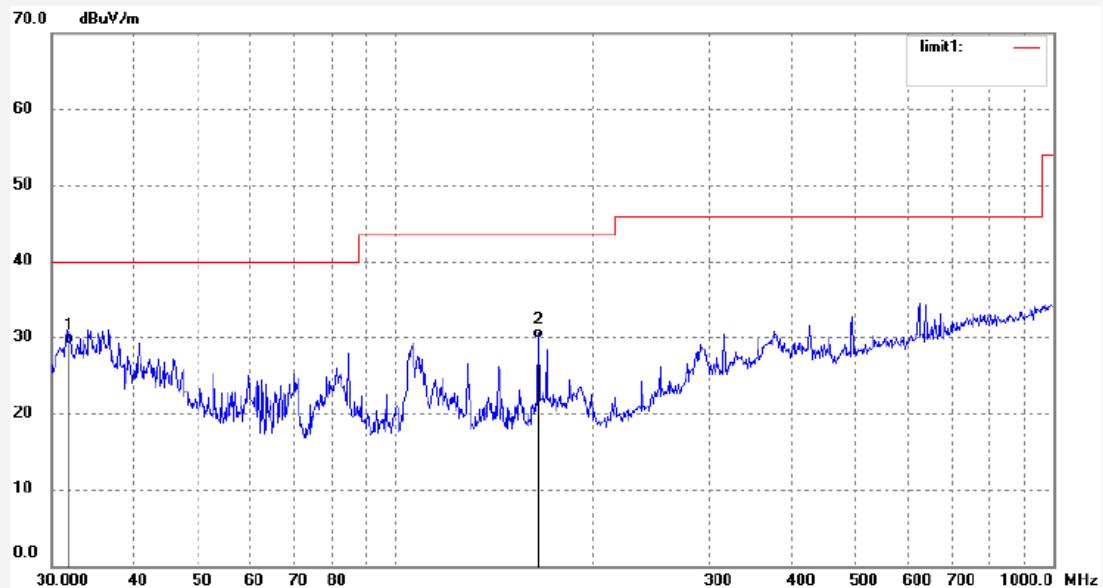
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	82.0739	15.51	13.49	29.00	40.00	-11.00	QP	
2	96.6483	16.03	14.06	30.09	43.50	-13.41	QP	
3	366.8025	13.83	21.49	35.32	46.00	-10.68	QP	

Test mode: Connect to PC Vertical polarization

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	43.0798	14.04	16.87	30.91	40.00	-9.09	QP	
2	144.7760	15.55	14.48	30.03	43.50	-13.47	QP	
3	190.1074	15.66	14.87	30.53	43.50	-12.97	QP	

Test mode: Connect to Adapter Horizontal polarization

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	82.3603	15.56	13.50	29.06	40.00	-10.94	QP	
2	135.9643	17.02	14.64	31.66	43.50	-11.84	QP	
3	370.6681	14.10	21.51	35.61	46.00	-10.39	QP	

Test mode: Connect to Adapter Vertical polarization

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	31.9234	10.14	19.01	29.15	40.00	-10.85	QP	
2	165.8910	15.11	14.67	29.78	43.50	-13.72	QP	