FCC Test Report

Report No.: AGC05U110704F2C

FCC ID	:	ZGRTORNADO
PRODUCT DESIGNATION	:	GSM Mobile Phone
BRAND NAME	:	Ice Mobile
TEST MODEL	:	Tornado II
CLIENT	:	Dynamics Hong Kong Limited
DATE OF ISSUE	:	Aug. 23, 2011
STANDARD(S)	:	FCC Part 15 Rules

Attestation of ***G***lobal ***C***ompliance Co., Ltd.

VERIFICATION OF COMPLIANCE

Applicant	Dynamics Hong Kong Limited
	Room A4,3/F,Friend's House ,No.6A Carnarvon Road, Tsim Sha Tsui,Kowloon,Hong Kong
Manufacturer	Dynamics Hong Kong Limited
	Room A4,3/F,Friend's House ,No.6A Carnarvon Road, Tsim Sha Tsui,Kowloon,Hong Kong
Product Designation	GSM Mobile Phone
Brand Name	Ice Mobile
Model Name	Tornado II
FCC ID	ZGRTORNADO
Report Number	AGC05U110704F2C
Date of Test	Aug. 21, 2011~Aug. 22, 2011

WE HEREBY CERTIFY THAT:

The above equipment was tested by Attestation of Global Compliance Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 15.247.

Tested By: Curoky Chen Aug. 23, 2011

Reviewed By: Forrest Lei Aug. 23, 2011

Approved By: Solger Zhang Aug. 23, 2011

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

The EUT is a **GSM Mobile Phone** designed as an “WiFi Device”. It is designed by way of utilizing the DSSS and OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.412 GHz to 2.462GHz
Rated Output Power	11b:12.01dBm ,11g:11.87dBm
Modulation	DBPSK,DQPSK,CCK,16-QAM,64-QAM
Data Rate	DSSS(1/2/5.5/11),OFDM(6/9/12/18/24/36/48/54)
Number of channels	11
Antenna Designation	Integrated Antenna
Antenna Gain	0.85dBi(max)
Power Supply	DC3.7V by Built-in Li-ion Battery

1.2 TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency
2400~2483.5MHZ	1	2412MHZ
	2	2417MHZ
	3	2422 MHZ
	4	2427 MHZ
	5	2432 MHZ
	6	2437 MHZ
	7	2437 MHZ
	8	2447 MHZ
	9	2452 MHZ
	10	2457 MHZ
	11	2462MHZ

1.3 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: ZGRTORNADO** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

1.4 TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.5 TEST FACILITY

All measurement facilities used to collect the measurement data are located at
Attestation of Global Compliance Co., Ltd.
1F., No.2 Building, Huafeng No.1 Technical Industrial Park, Sanwei, Xixiang, Baoan District, Shenzhen
The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003.
FCC register No.: 259865

1.6 SPECIAL ACCESSORIES

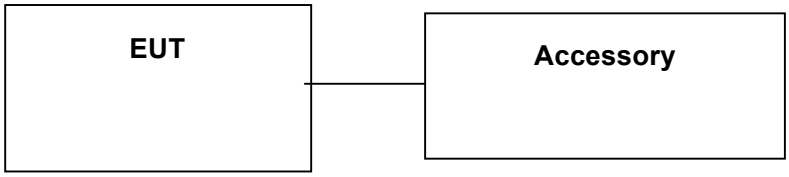
Not available for this EUT intended for grant.

1.7 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2. SYSTEM TEST CONFIGURATION

2.1 CONFIGURATION OF EUT SYSTEM



2.2 EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID
1	GSM Mobile Phone	Ice Mobile	Tornado II	EUT
2	Adapter	Ice Mobile	Tornado II	accessory
3	battery	Ice Mobile	Tornado II	accessory
4	USB Cable	N/A	N/A	accessory
5	Earphone	N/A	N/A	accessory

Note: All the accessories have been used during the test. the Earphone and the adapter can't both connect to the mobile phone. all the following "EUT" in setup diagram means EUT system.

3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.207	Conduction Emission	Compliant
§15.209	Radiated Emission	Compliant
§15.247	Maximum Output Power	Compliant
§15.247	6dB Bandwidth	Compliant
§15.247	Band Edges	Compliant
§15.247	Spurious Emission	Compliant
§15.247	Power Spectral Density	Compliant

4. DESCRIPTION OF TEST MODES

The following operating modes were applied for the related test items. For Radiated Emission, 3 axis were chosen for testing for each applicable modes.

TEST MODES
Transmit by 802.11b with Date rate(1/2/5.5/11)
Transmit by 802.11g with Date rate (6/9/12/18/24/36/48/54)

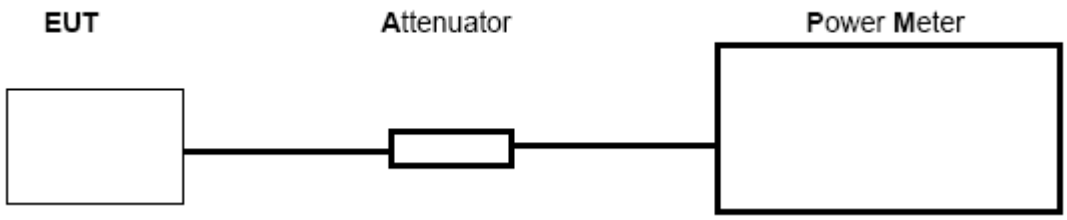
1 The EUT has been set to operate continuously on the lowest, middle and highest operation frequency individually.
2 All modes under which configure applicable have been tested and the worst mode test data recording in the test report.

5 PEAK OUTPUT POWER

5.1 MEASUREMENT PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Connect EUT RF output port to power meter through an RF attenuator
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Set the RBW greater than 6DB bandwidth of emission.
5. Record the maximum power from the power meter.

5.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



5.3 MEASUREMENT EQUIPMENT USED

Description	Manufacturer	Model	SERIAL NUMBER	Cal. Date	Cal. Due
Power meter	Agilent	N1911A	N/A	06/27/2011	06/26/2012
Power sensor	Agilent	N192XA	N/A	06/27/2011	06/26/2012
RF attenuator	N/A	RFA20db	N/A	N/A	N/A

5.4 LIMITS AND MEASUREMENT RESULT

802.11b

LIMITS AND MEASUREMENT RESULT			
Frequency (GHz)	Result (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	12.01	30	Pass
2.442	11.79	30	Pass
2.462	11.91	30	Pass

802.11g

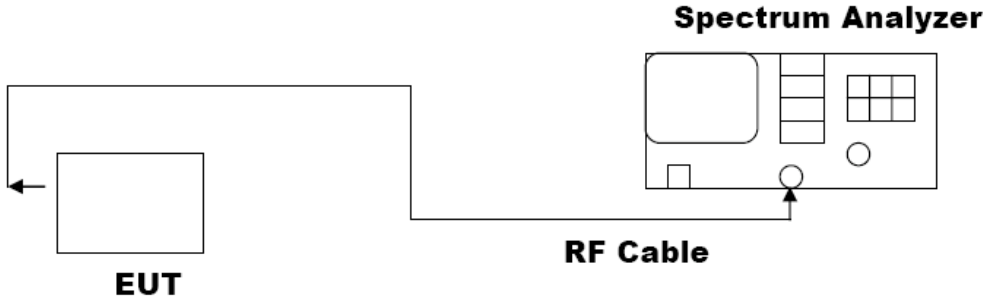
LIMITS AND MEASUREMENT RESULT			
Frequency (GHz)	Result (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	11.84	30	Pass
2.442	11.87	30	Pass
2.462	11.82	30	Pass

6 6 DB BANDWIDTH

6.1 MEASUREMENT PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
3, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz,
   VBW= 100 KHz.
4. Set SPA Trace 1 Max hold, then View.

6.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



6.3 MEASUREMENT EQUIPMENT USED

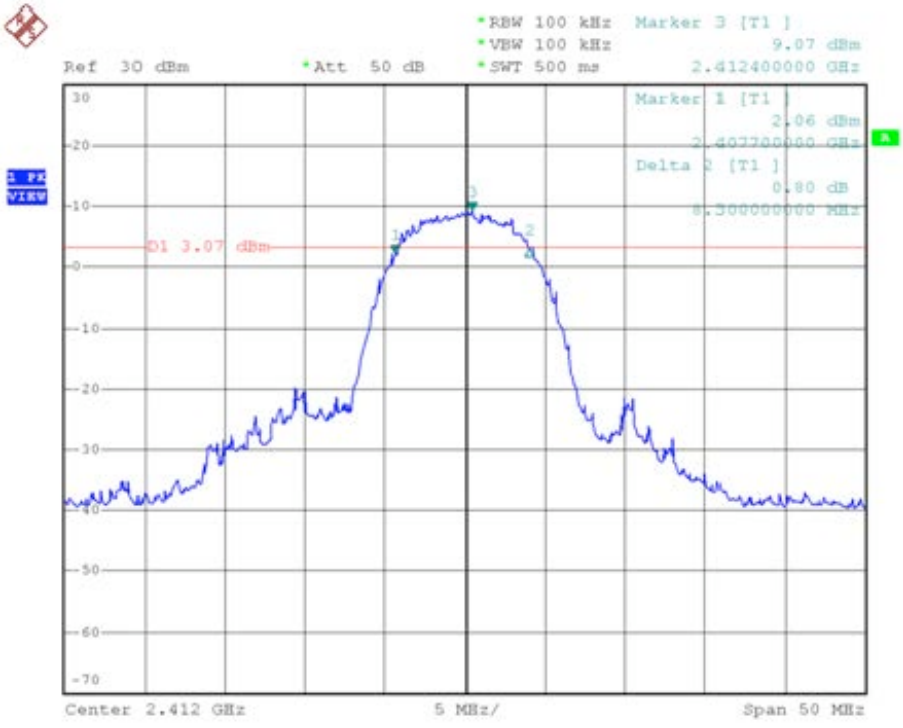
SHIELDING ROOM					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Test receiver	R&S	ESCI	N/A	06/27/2011	06/26/2012

6.4 LIMITS AND MEASUREMENT RESULTS

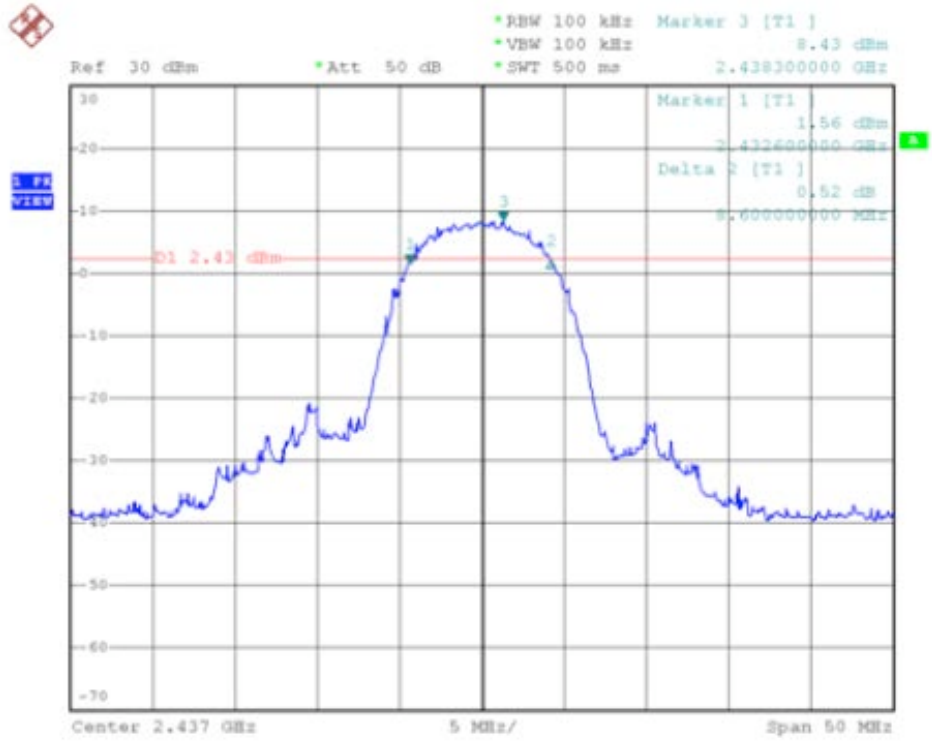
802.11b

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Measurement Result		
	Test Data (KHz)		Criteria
>500KHZ	Low Channel	8300	PASS
	Middle Channel	8600	PASS
	High Channel	8100	PASS

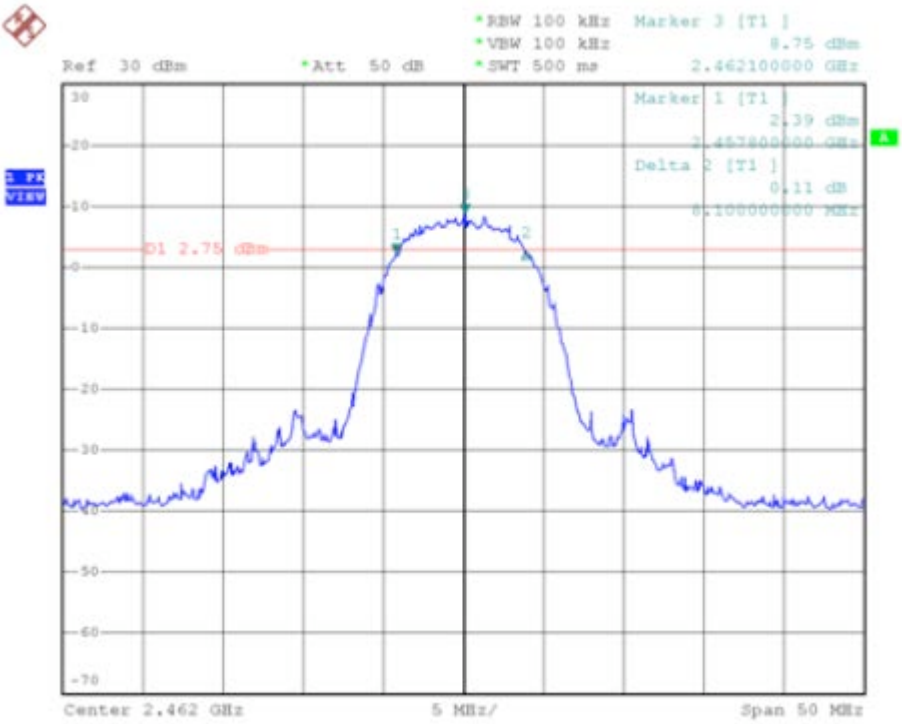
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



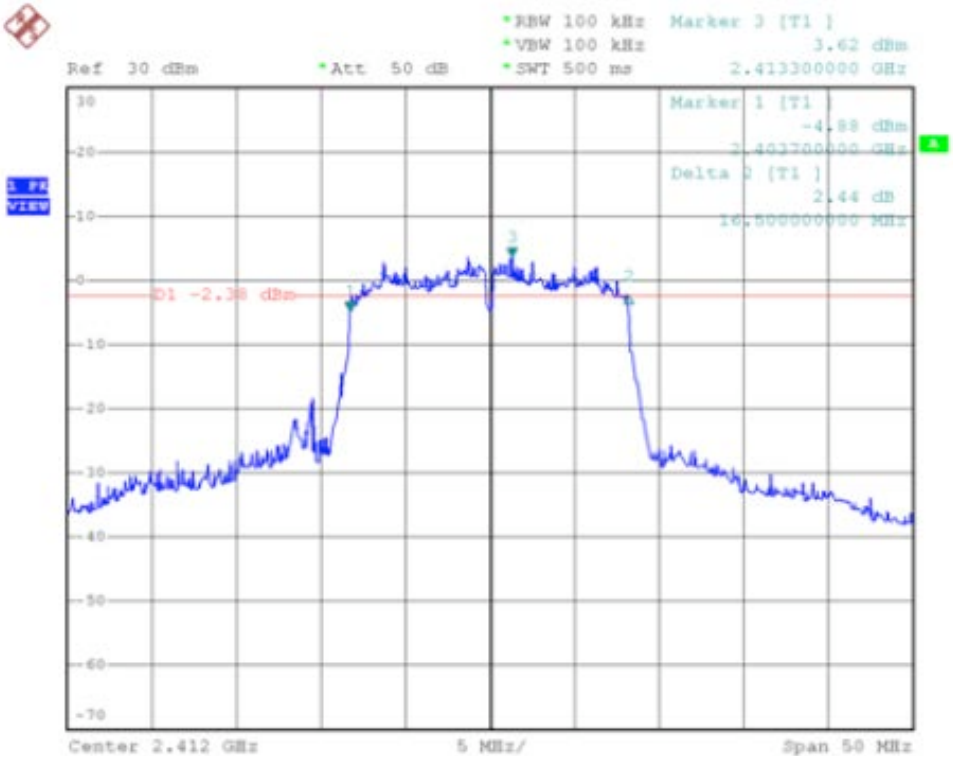
TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



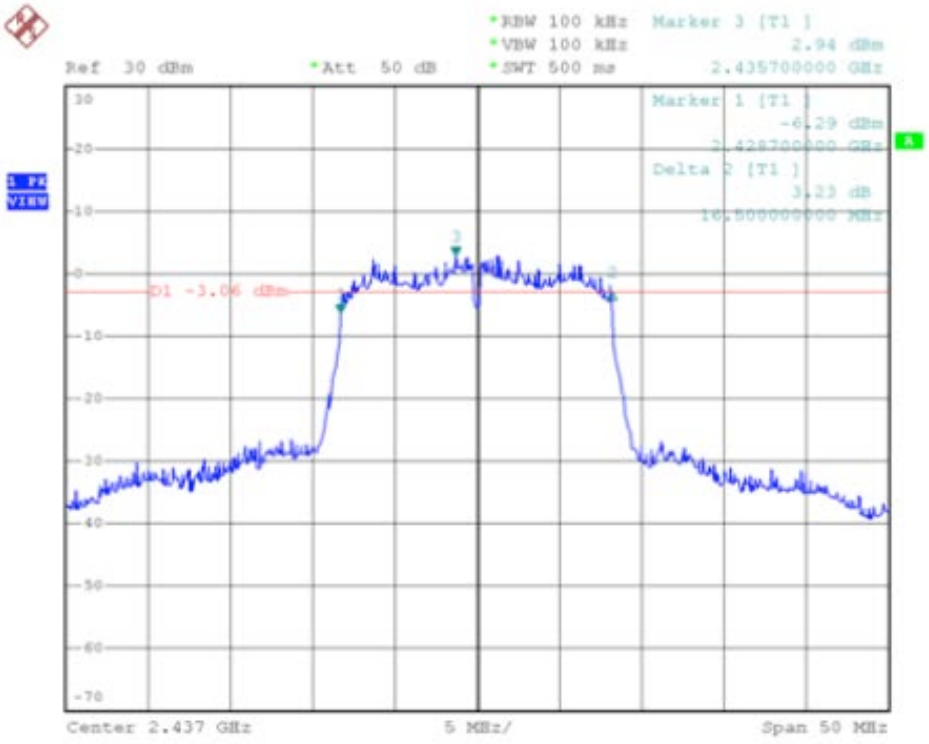
802.11g

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Measurement Result		
	Test Data (KHz)		Criteria
>500KHZ	Low Channel	16500	PASS
	Middle Channel	16500	PASS
	High Channel	16500	PASS

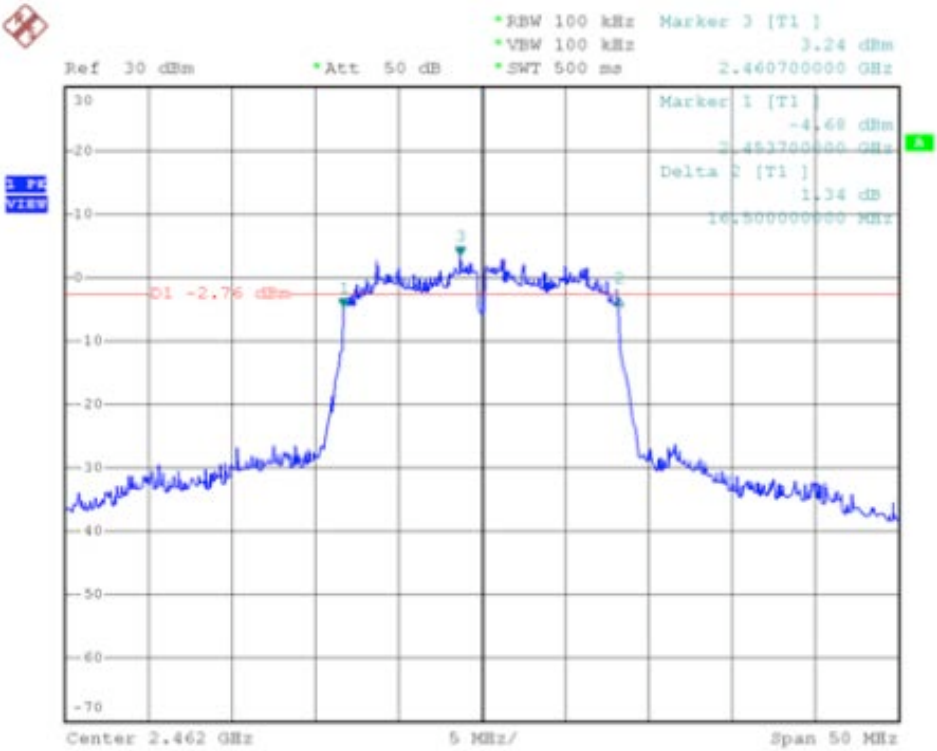
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

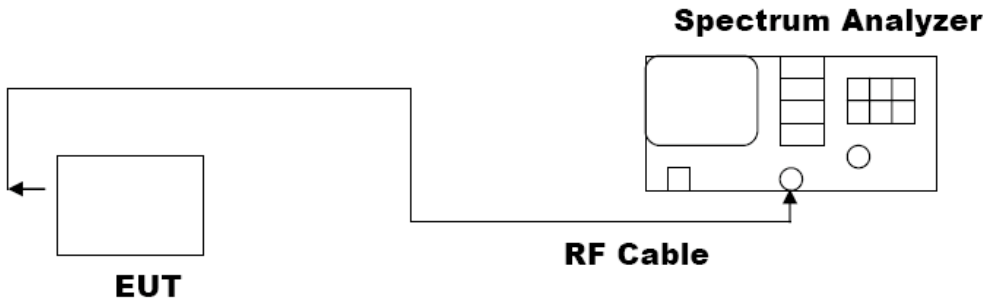


7. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

7.1 MEASUREMENT PROCEDURE

(1). The EUT was placed on a turn table which is 0.8m above ground plane.
(2). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
(3), Set the EUT Work on the top, the middle and the bottom operation frequency individually.
(4), Set SPA Centre Frequency = Operation Frequency, RBW= 3 KHz,
VBW= 30 KHz., Sweep time= Auto
(5), Set SPA Trace 1 Max hold, then View.

7.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



7.3 MEASUREMENT EQUIPMENT USED

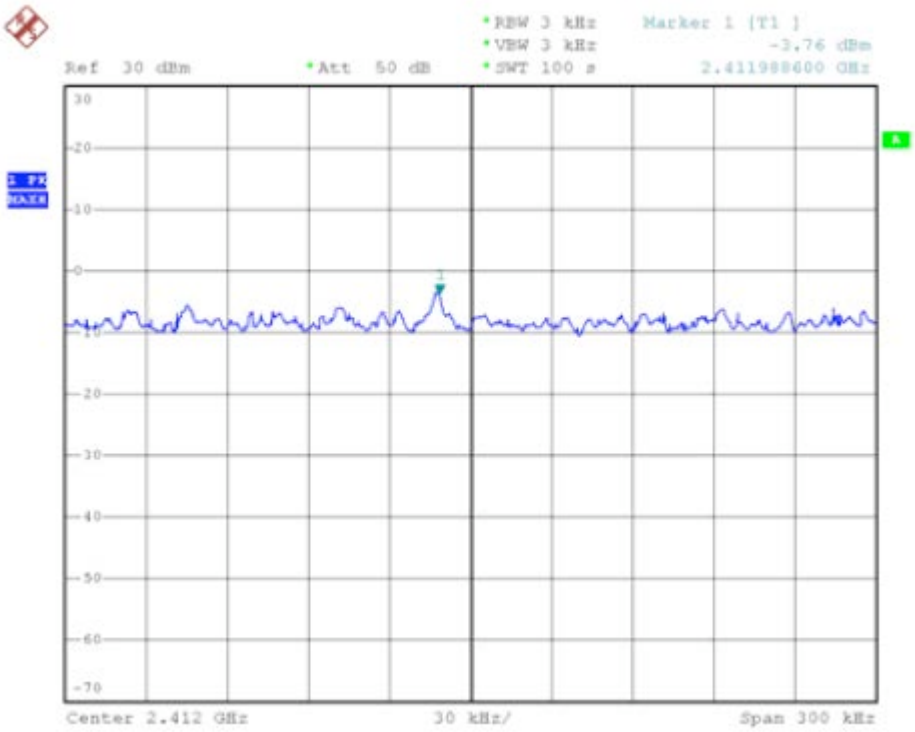
SHIELDING ROOM					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Test receiver	R&S	ESCI	N/A	06/27/2011	06/26/2012

7.4 LIMITS AND MEASUREMENT RESULT

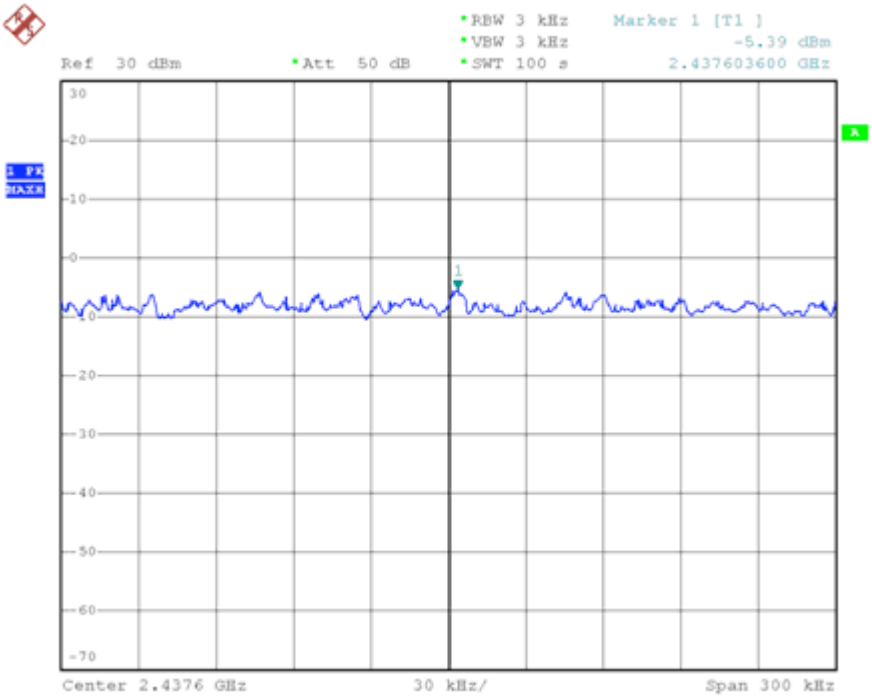
802.11b

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Measurement Result		
	Test Data (dBm/3KHz)		Criteria
8 dBm / 3KHz	Low Channel	-3.76	Pass
	Middle Channel	-5.39	Pass
	High Channel	-3.88	Pass

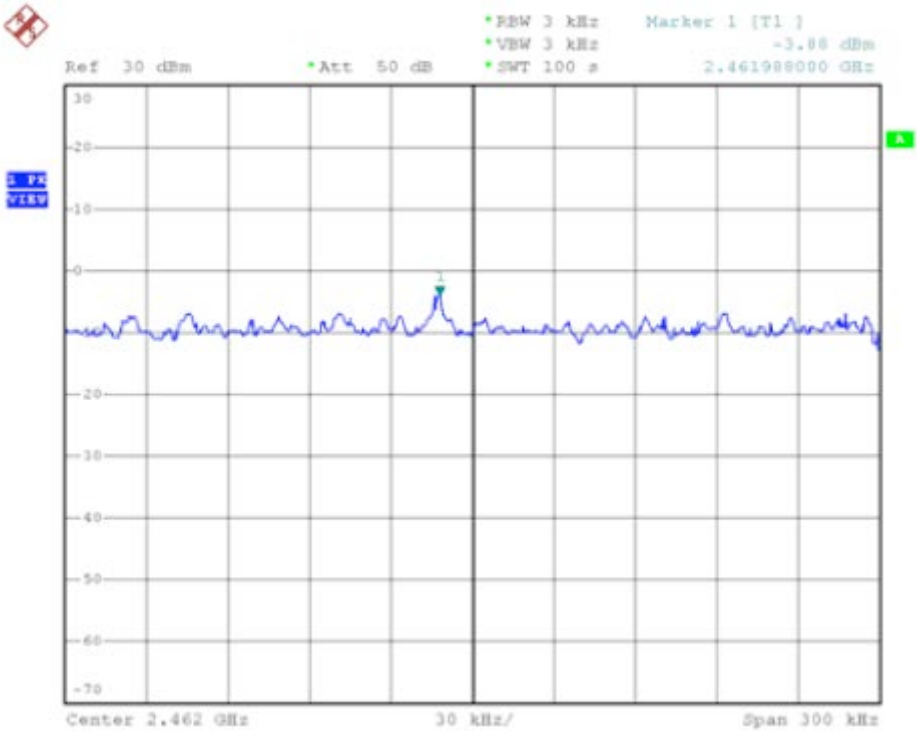
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL



TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL



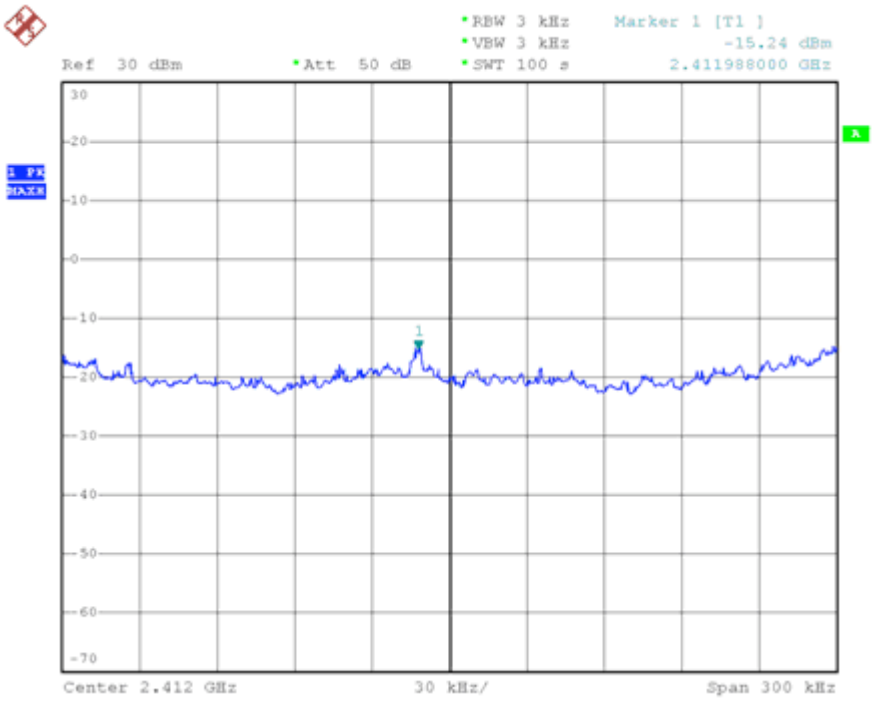
TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



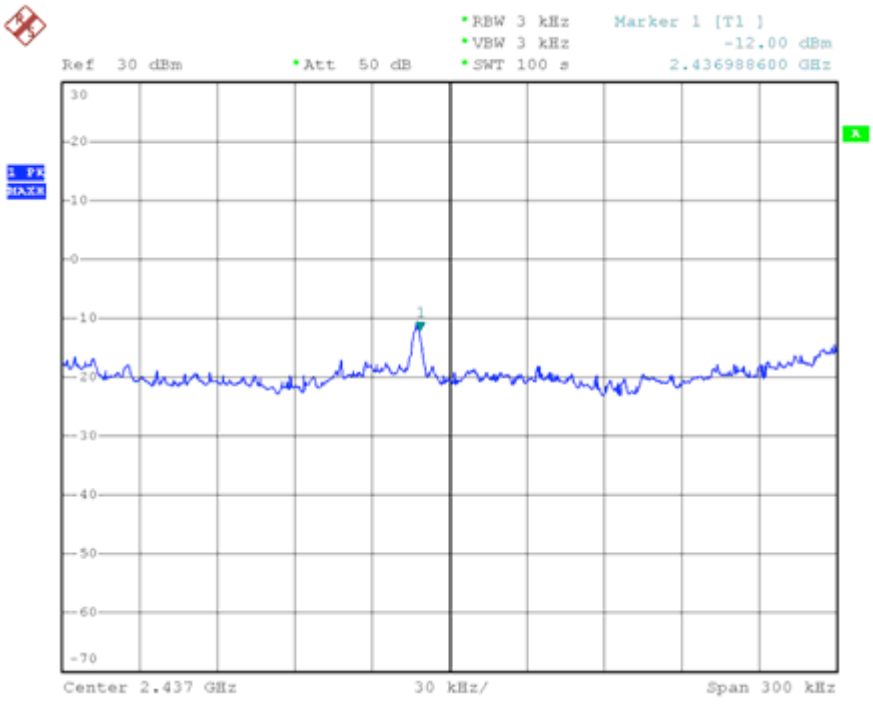
802.11g

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Measurement Result		
	Test Data (dBm/3KHz)		Criteria
8 dBm / 3KHz	Low Channel	-15.24	Pass
	Middle Channel	-12.00	Pass
	High Channel	-13.32	Pass

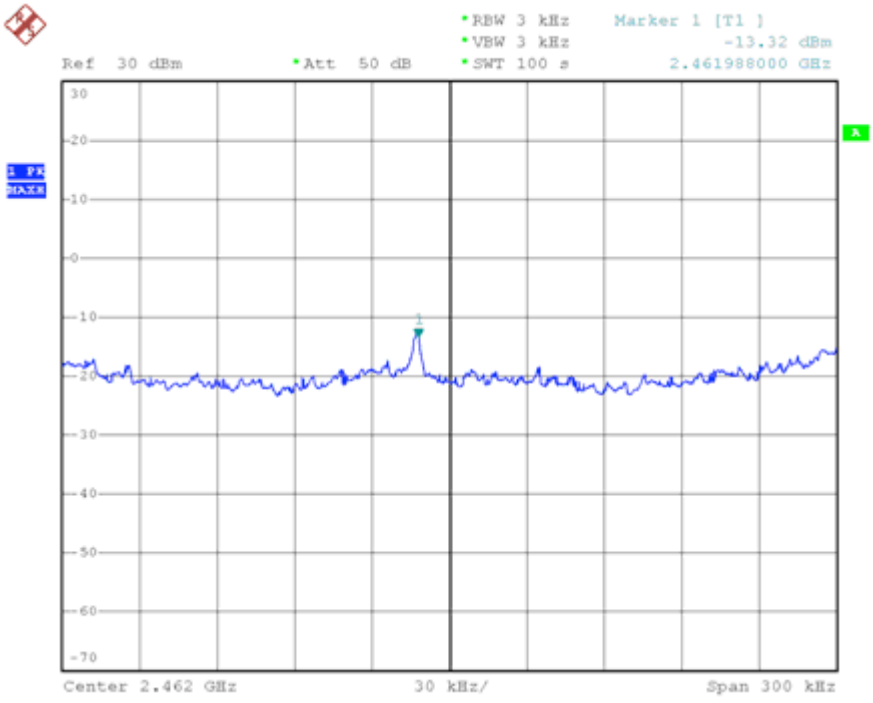
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL



TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL



TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



8. RADIATED EMISSION MEASUREMENT

8.1 MEASUREMENT PROCEDURE

1 Configure the EUT according to ANSI C63.4.The EUT was placed on the top of the turntable 0.8 Meter above ground. The phase center of the receiving antenna mounted on the top of a height-Variable antenna tower was placed 3 meters far away from the turntable.

2 Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine The position of the highest radiation.

3 The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.

4 For each suspected emissions, the antenna tower was scan(from 1M to 4M)and then the turntable was Rotated(from 0 degree to 360degrees) to find the maximum reading.

5 Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under
Maximum Hold Mode

6 For emission above 1GHZ,use 1MHZ VBW and RBW for peak reading. Then 1MHZ RBW and 10Hz VBW For average reading in spectrum analyzer.

7 When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one Complete pulse train, including blanking interavls,as long as the pulse train does not exceed 0.1 seconds. As an alternative(provided the transmitter operates for longer than 0.1 seconds) or in cases where the Pulse train exceeds 0.1 seconds,the measured field strength shall be determined from the average absolute voltage during a 0.1 seconds interval during which the field strength is at its maximum value.

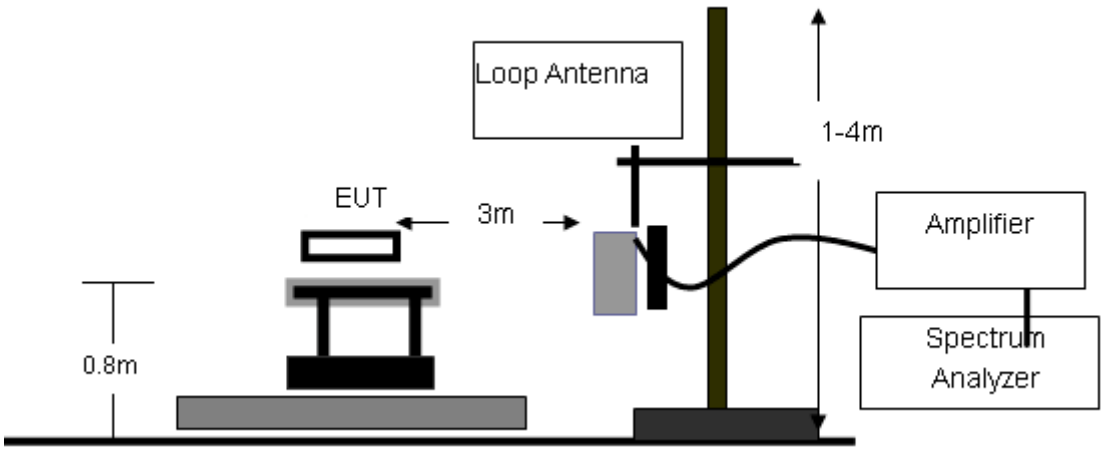
8 If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3dB margin will be repeated one by one using the quasi-peak method for below 1GHz.

9 For testing above 1GHZ,the emissions level of the EUT in peak mode was lower than average limit(that Means the emissions level in peak mode also complies with the limit in average mode)then testing will be Stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average Mode again and reported.

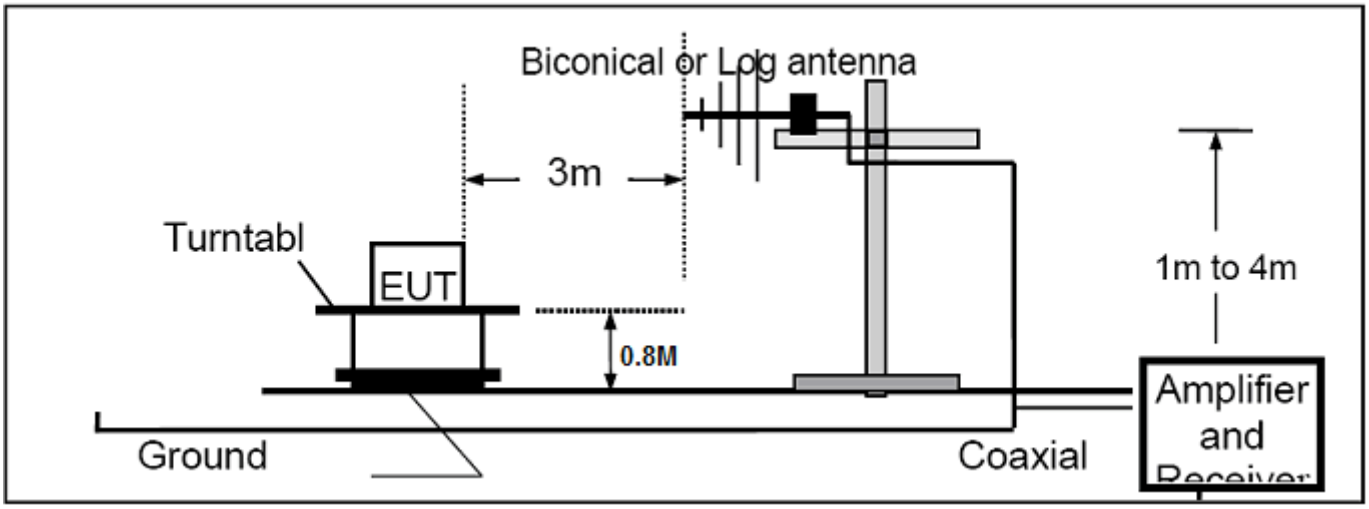
10 in case the emission is lower than 30MHz,loop antenna has to be used for measurement and the recorded Data should be QP measured by receiver. High-Low scan is not required in this case.

8.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

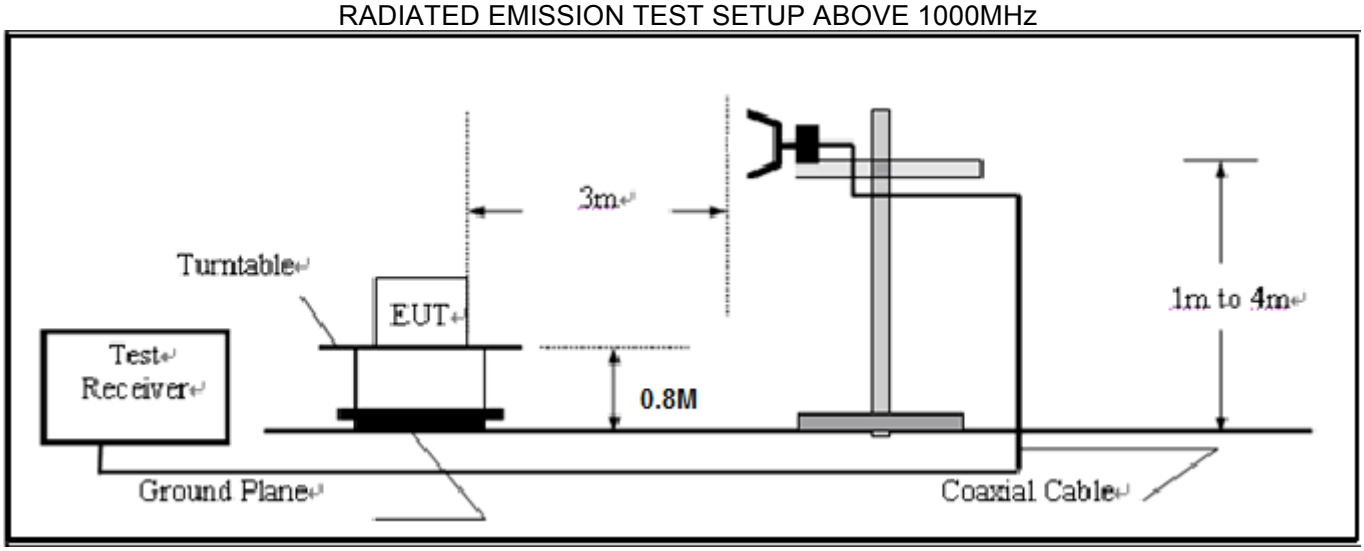
RADIATED EMISSION TEST SETUP BELOW 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



8.3 MEASUREMENT EQUIPMENT USED

Description	Manufacturer	Model	SERIAL NUMBER	Cal. Date	Cal. Due
Spectrum Analyzer	Agilent	E4440A	N/A	06/27/2011	06/26/2012
Amplifier	EM	EM30180	0607030	06/27/2011	06/26/2012
Horn Antenna	EM	EM-AH-10180	N/A	06/27/2011	06/26/2012
Amplifier	EM	EM30180	N/A	06/27/2011	06/26/2012
Bilogical Antenna	A.H. Systems Inc.	SAS-521-4	N/A	06/27/2011	06/26/2012
Loop Antenna	Daze	ZN30900N	SEL0097	06/27/2011	06/26/2012
Isolation Transformer	LETEAC	LTBK	--	06/27/2011	06/26/2012

8.4 LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test Data	Criteria
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.	At least -20dBc than the limit Specified on the BOTTOM Channel	PASS
In addition, radiation emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in§15.209(a))	At least -20dBc than the limit Specified on the TOP Channel	PASS

15.209(a) Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: only the worst case result in the this test report.

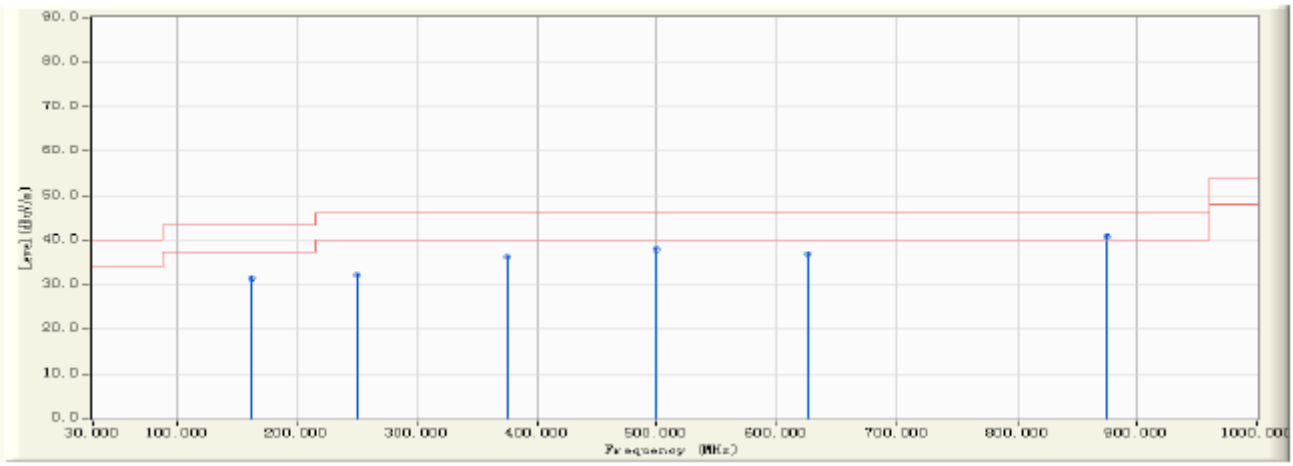
RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequency to 30MHz.

RADIATED EMISSION BELOW 1G

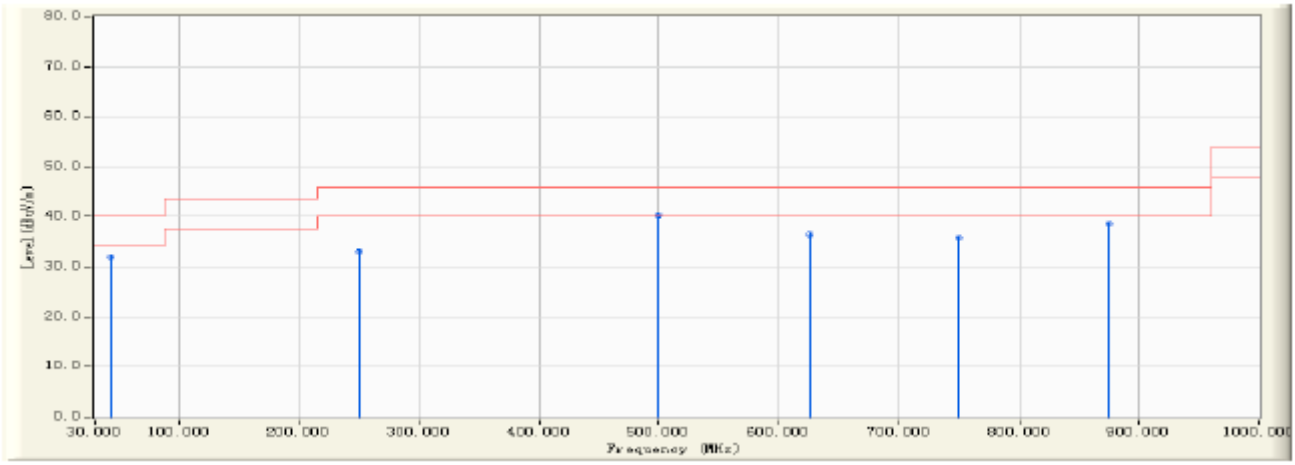
EUT	GSM Mobile Phone	Model Name	Tornado II
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC3.7V
Test Mode	2412MHZ (worst case)	Modulation	802.11b

TEST PLOT OF VERTICAL POSTION



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		162.350	-17.891	49.360	31.469	-12.031	43.500	QUASIPEAK
2		250.006	-15.238	47.350	32.113	-13.887	46.000	QUASIPEAK
3		375.830	-11.286	47.390	36.105	-9.895	46.000	QUASIPEAK
4		499.998	-8.875	46.800	37.925	-8.075	46.000	QUASIPEAK
5		625.310	-6.880	43.890	37.010	-8.990	46.000	QUASIPEAK
6	*	874.990	-1.980	42.860	40.880	-5.120	46.000	QUASIPEAK

TEST PLOT OF HORIZONTAL POSTION



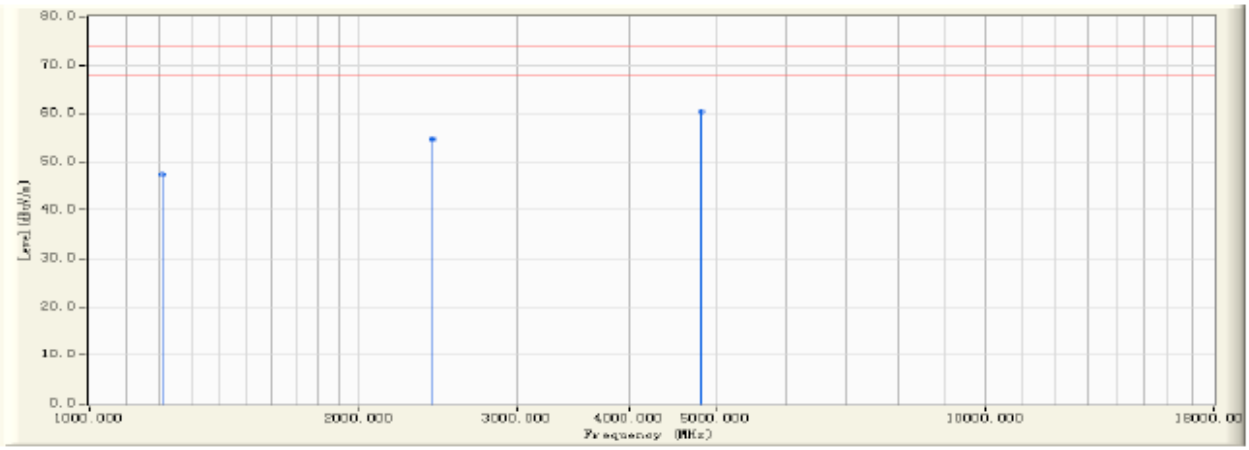
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		43.693	-15.205	47.250	32.046	-7.954	40.000	QUASIPEAK
2		250.016	-15.237	48.320	33.083	-12.917	46.000	QUASIPEAK
3	*	499.136	-8.896	49.300	40.404	-5.596	46.000	QUASIPEAK
4		625.301	-6.879	43.260	36.381	-9.619	46.000	QUASIPEAK
5		749.320	-4.395	40.310	35.915	-10.085	46.000	QUASIPEAK
6		875.012	-1.980	40.620	38.639	-7.361	46.000	QUASIPEAK

Note:
*1. " * "means this data is the worst emission level.*
2. Measurement Level = Reading Level + Correct Factor

RADIATED EMISSION ABOVE 1G

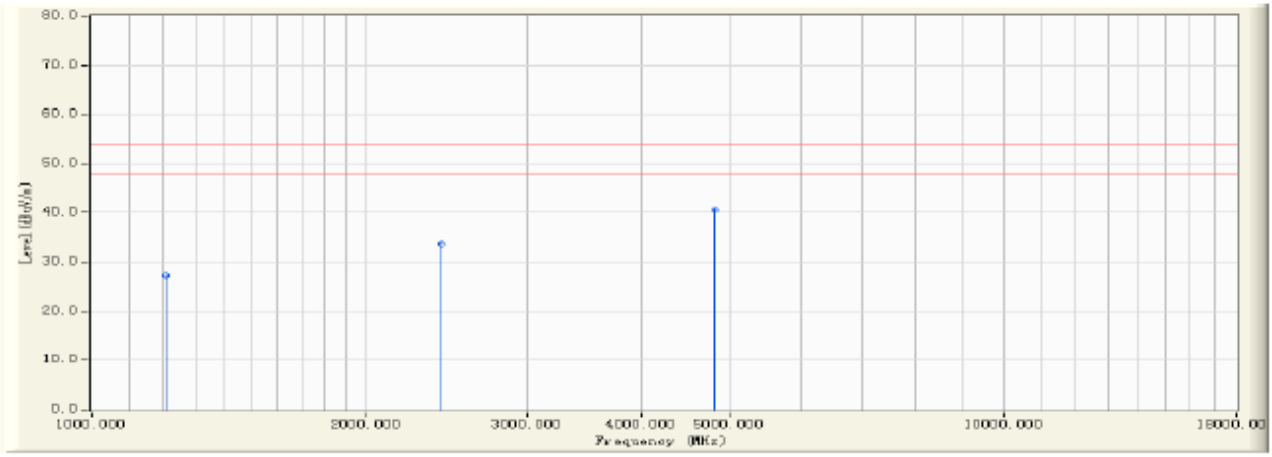
EUT	GSM Mobile Phone	Model Name	Tornado II
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC3.7V
Test Mode	2412MHZ (worst case)	Modulation	802.11b

TEST PLOT OF VERTICAL POSTION



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1207.490	-5.882	53.290	47.408	-26.592	74.000	PEAK
2		2412.080	0.428	54.190	54.619	-19.381	74.000	PEAK
3	*	4825.370	7.350	53.180	60.531	-13.469	74.000	PEAK

TEST PLOT OF HORIZONTAL POSTION



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1207.490	-5.882	33.160	27.278	-26.722	54.000	AVERAGE
2		2412.080	0.428	33.290	33.719	-20.281	54.000	AVERAGE
3	*	4825.370	7.350	33.260	40.611	-13.389	54.000	AVERAGE

Note:
*1. " * "means this data is the worst emission level.*
2. Measurement Level = Reading Level + Correct Factor

9 BAND EDGE EMISSION

9.1 MEASUREMENT PROCEDURE

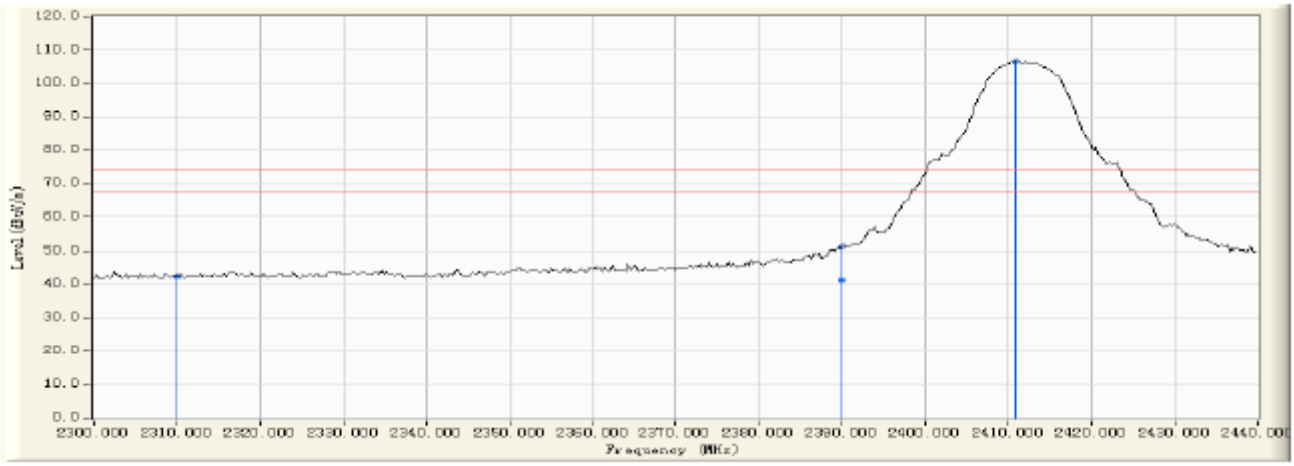
1, Set the EUT Work on the top, the bottom operation frequency individually.
2. Set SPA Start or Stop Frequency = Operation Frequency, RBW= 1MHz, VBW= 1MHz.
3. The band edges was measured and receorded.

9.2 TEST SET-UP

The Same as described in section 8.2

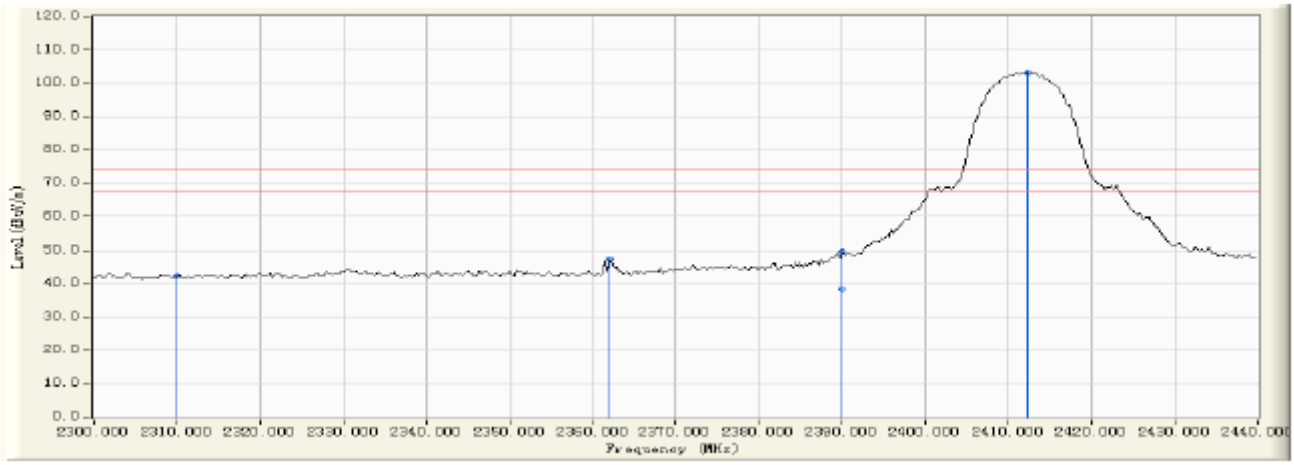
9.3 TEST RESULT

802.11b TEST PLOT OF BAND EDGE FOR LOW CHANNEL-VERTICAL



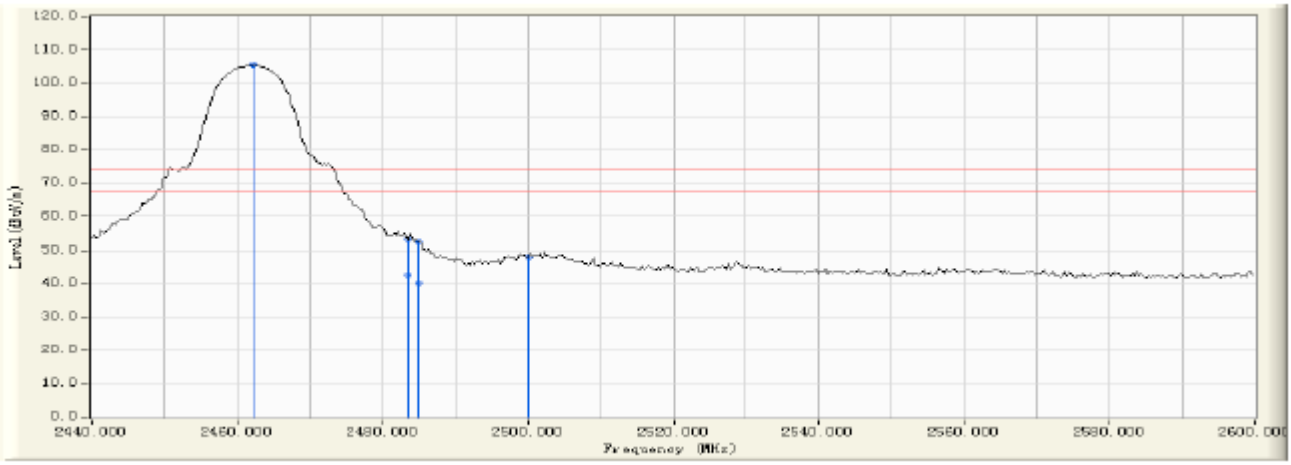
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	-10.012	52.192	42.180	-31.820	74.000	PEAK
2		2390.000	-10.041	61.303	51.263	-22.737	74.000	PEAK
3		2390.000	-10.041	51.200	41.160	-12.840	54.000	AVERAGE
4	*	2410.938	-10.018	116.611	106.594	32.594	74.000	PEAK

802.11b TEST PLOT OF BAND EDGE FOR LOW CHANNEL-HORIZONTAL



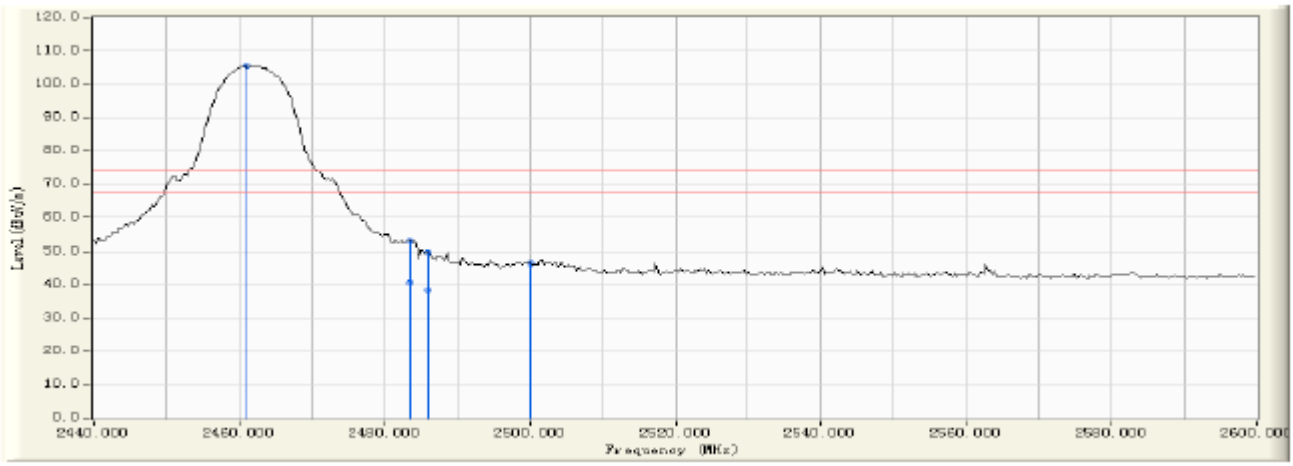
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	-10.012	52.301	42.289	-31.711	74.000	PEAK
2		2362.036	-10.030	57.208	47.178	-26.822	74.000	PEAK
3		2390.000	-10.041	59.676	49.636	-24.364	74.000	PEAK
4		2390.000	-10.041	48.320	38.280	-15.720	54.000	AVERAGE
5	*	2412.335	-10.016	113.280	103.263	29.263	74.000	PEAK

802.11bTEST PLOT OF BAND EDGE FOR HIGH CHANNEL-VERTIACAL



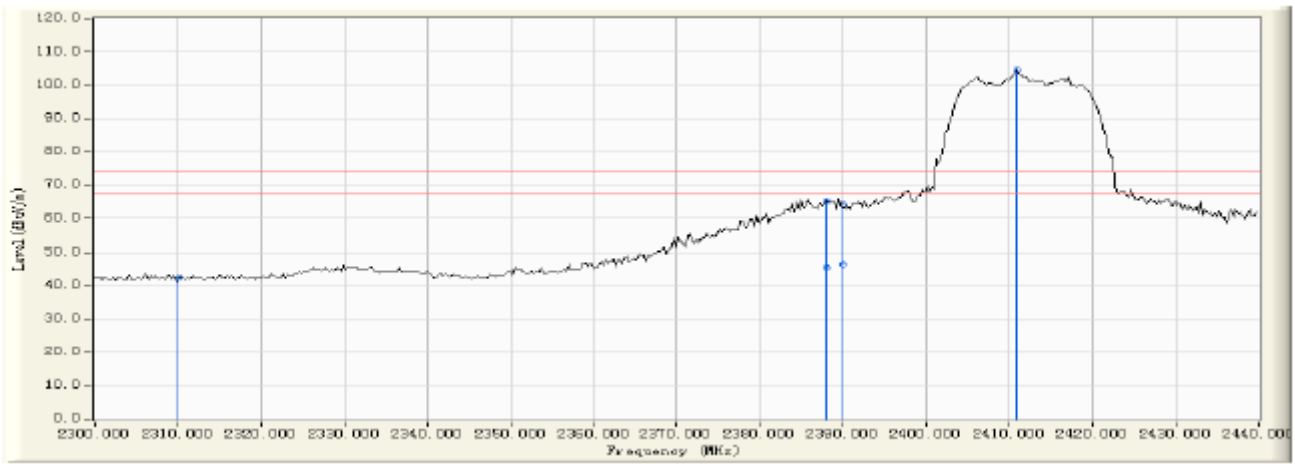
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2462.355	-9.908	115.337	105.428	31.428	74.000	PEAK
2		2483.500	-9.856	63.357	53.501	-20.499	74.000	PEAK
3		2483.500	-9.856	52.170	42.314	-11.686	54.000	AVERAGE
4		2485.030	-9.854	62.337	52.483	-21.517	74.000	PEAK
5		2485.030	-9.854	50.100	40.246	-13.754	54.000	AVERAGE
6		2500.000	-9.810	57.854	48.044	-25.956	74.000	PEAK

802.11bTEST PLOT OF BAND EDGE FOR HIGH CHANNEL-HORIZONTAL



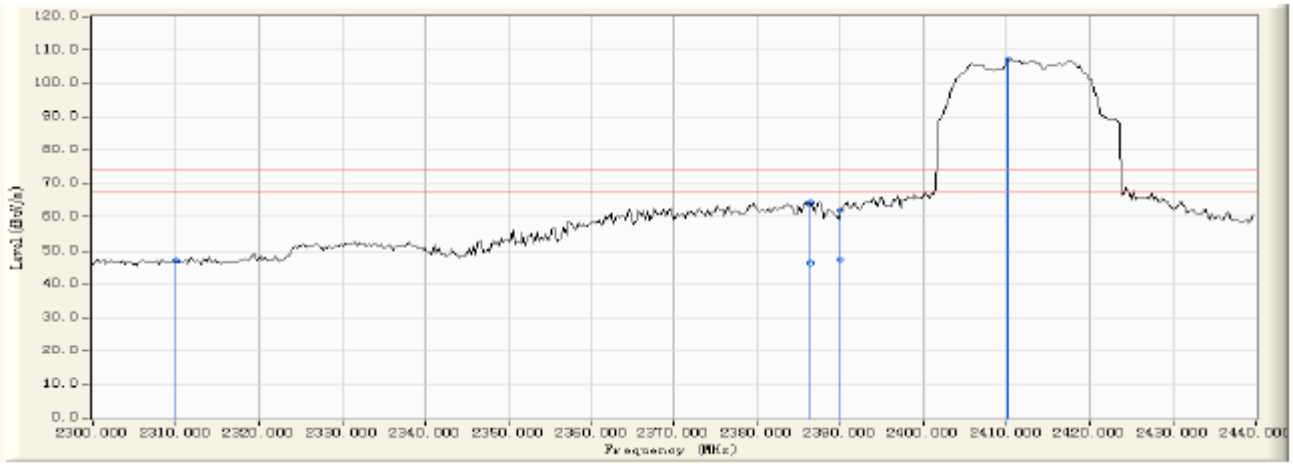
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2461.078	-9.911	115.452	105.541	31.541	74.000	PEAK
2		2483.500	-9.856	62.818	52.962	-21.038	74.000	PEAK
3		2483.500	-9.856	50.310	40.454	-13.546	54.000	AVERAGE
4		2485.988	-9.851	59.266	49.414	-24.586	74.000	PEAK
5		2485.988	-9.851	48.260	38.408	-15.592	54.000	AVERAGE
6		2500.000	-9.810	56.080	46.270	-27.730	74.000	PEAK

802.11g TEST PLOT OF BAND EDGE FOR LOW CHANNEL-VERTICAL



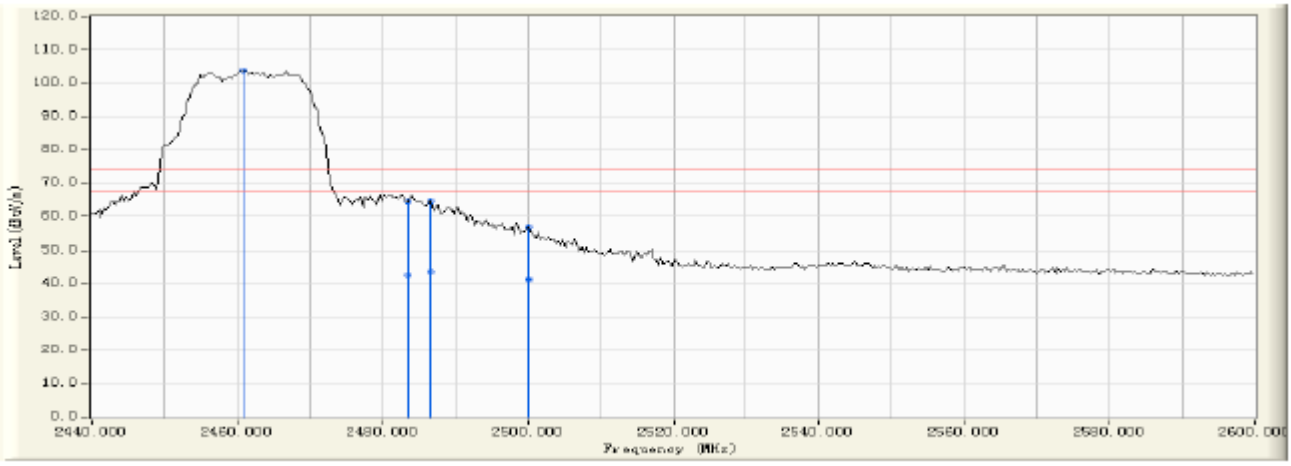
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	-10.012	52.086	42.074	-31.926	74.000	PEAK
2		2388.024	-10.038	75.442	65.404	-8.596	74.000	PEAK
3		2388.024	-10.038	55.390	45.352	-8.648	54.000	AVERAGE
4		2390.000	-10.041	74.227	64.187	-9.813	74.000	PEAK
5		2390.000	-10.041	56.320	46.280	-7.720	54.000	AVERAGE
6	*	2410.938	-10.018	114.454	104.437	30.437	74.000	PEAK

802.11g TEST PLOT OF BAND EDGE FOR LOW CHANNEL-HORIZONTAL



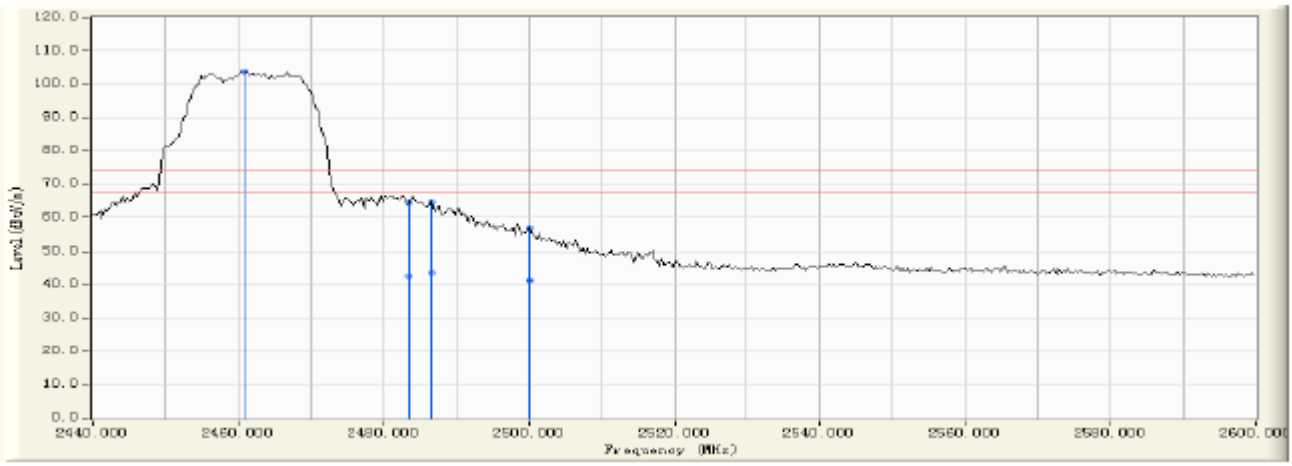
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	-10.012	56.980	46.968	-27.032	74.000	PEAK
2		2386.347	-10.036	74.388	64.351	-9.649	74.000	PEAK
3		2386.347	-10.036	56.310	46.273	-7.727	54.000	AVERAGE
4		2390.000	-10.041	71.998	61.958	-12.042	74.000	PEAK
5		2390.000	-10.041	57.320	47.280	-6.720	54.000	AVERAGE
6	*	2410.100	-10.018	117.268	107.250	33.250	74.000	PEAK

802.11g TEST PLOT OF BAND EDGE FOR HIGH CHANNEL-VERTICAL



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2460.758	-9.912	113.936	104.024	30.024	74.000	PEAK
2		2483.500	-9.856	74.598	64.742	-9.258	74.000	PEAK
3		2483.500	-9.856	52.360	42.504	-11.496	54.000	AVERAGE
4		2486.627	-9.850	74.465	64.614	-9.386	74.000	PEAK
5		2486.627	-9.850	53.160	43.309	-10.691	54.000	AVERAGE
6		2500.000	-9.810	66.627	56.817	-17.183	74.000	PEAK
7		2500.000	-9.810	51.040	41.230	-12.770	54.000	AVERAGE

802.11g TEST PLOT OF BAND EDGE FOR HIGH CHANNEL-HORIZONTAL



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2460.758	-9.912	113.936	104.024	30.024	74.000	PEAK
2		2483.500	-9.856	74.598	64.742	-9.258	74.000	PEAK
3		2483.500	-9.856	52.360	42.504	-11.496	54.000	AVERAGE
4		2486.627	-9.850	74.465	64.614	-9.386	74.000	PEAK
5		2486.627	-9.850	53.160	43.309	-10.691	54.000	AVERAGE
6		2500.000	-9.810	66.627	56.817	-17.183	74.000	PEAK
7		2500.000	-9.810	51.040	41.230	-12.770	54.000	AVERAGE

Note:
1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

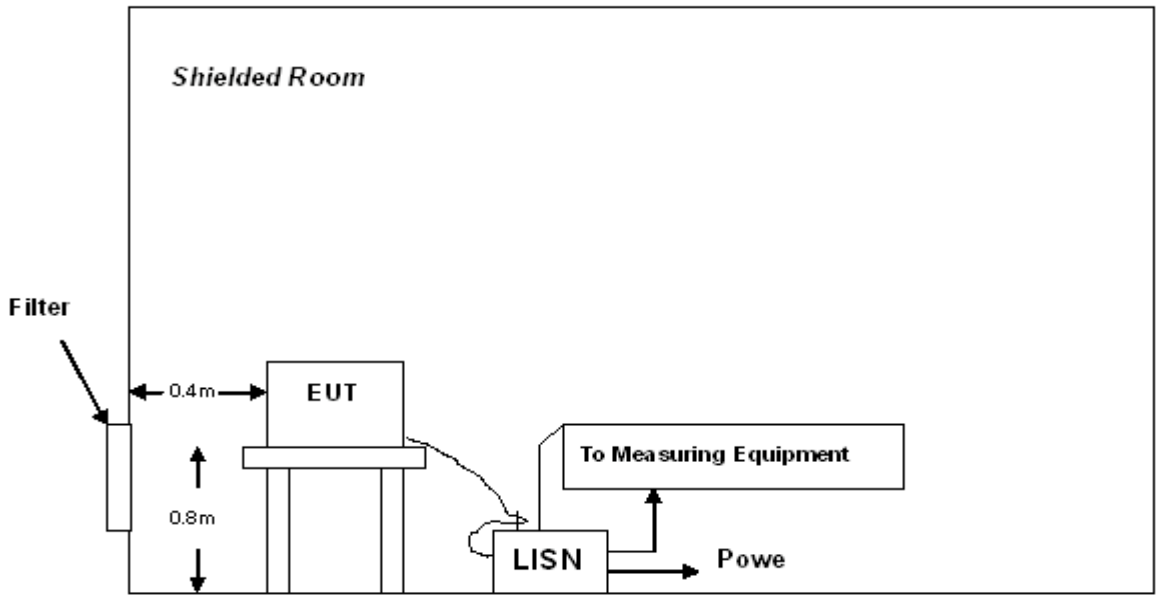
10 FCC LINE CONDUCTED EMISSION TEST

10.1 LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

**Note: 1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

10.2 BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



A: Powered through filter

10.3 PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2) Support equipment, if needed, was placed as per ANSI C63.4.
3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4) The EUT charged by adapter which received 120V power from a LISN.
5) All support equipments received AC120V power from a second LISN, if any
6) The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8) During the above scans, the emissions were maximized by cable manipulation.
9) The following test mode(s) were scanned during the preliminary test:

Preliminary Line Conducted Emission Test				
Frequency Range Investigated		**150 KHz TO 30 MHz**		
Mode of operation	Date	Report No.	Data#	Worst Mode
802.11b	07/22/2011	AGC05U110704	Tornado II-0	☒
802.11g	07/22/2011	AGC05U110704	Tornado II-1	☐

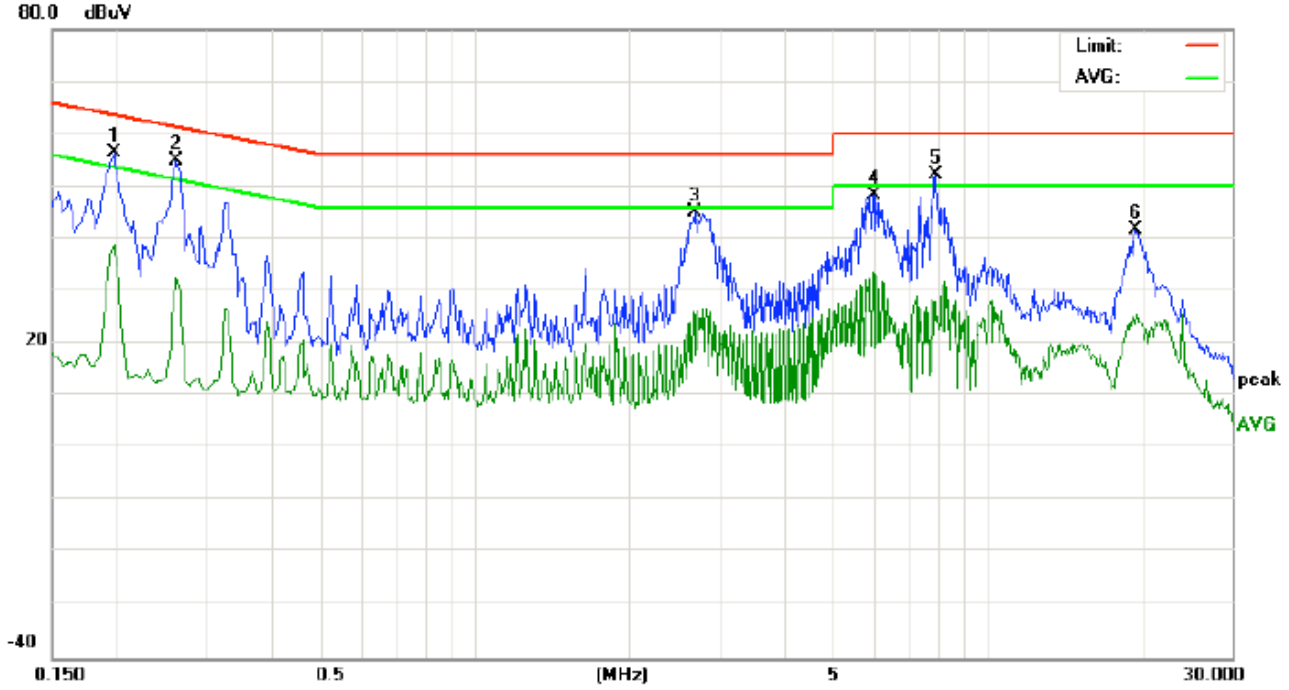
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

10.4 FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1) EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3) The test data of the worst case condition(s) was reported on the Summary Data page.

10.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST

TEST RESULT OF L LINE



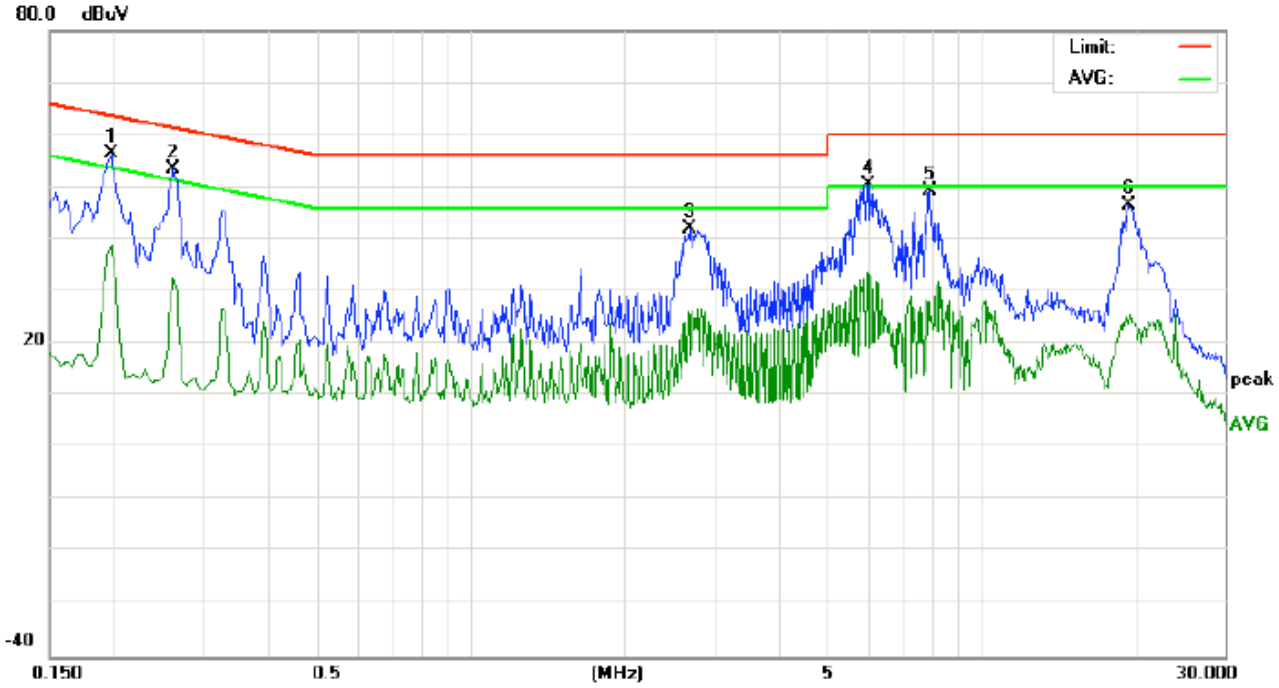
Site: Conduction
Limit: FCC Class B Conduction(QP)
EUT: GSM Mobile Phone
M/N: Tornado II
Mode: 802.11b
Note:

Phase: *L1*
Power:

Temperature: 26
Humidity: 60 %

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1980	46.21		28.77	10.21	56.42		38.98	63.69	53.69	-7.27	-14.71	P	
2	0.2620	44.73		22.43	10.27	55.00		32.70	61.36	51.36	-6.36	-18.66	P	
3	2.6819	34.51		14.85	10.47	44.98		25.32	56.00	46.00	-11.02	-20.68	P	
4	6.0339	38.15		23.17	10.28	48.43		33.45	60.00	50.00	-11.57	-16.55	P	
5	7.9339	41.89		17.74	10.35	52.24		28.09	60.00	50.00	-7.76	-21.91	P	
6	19.4779	31.53		13.69	10.11	41.64		23.80	60.00	50.00	-18.36	-26.20	P	

TEST RESULT OF N LINE



Site: Conduction
Limit: FCC Class B Conduction(QP)
EUT: GSM Mobile Phone
M/N: Tornado II
Mode: 802.11b
Note:

Phase: *N*
Power:

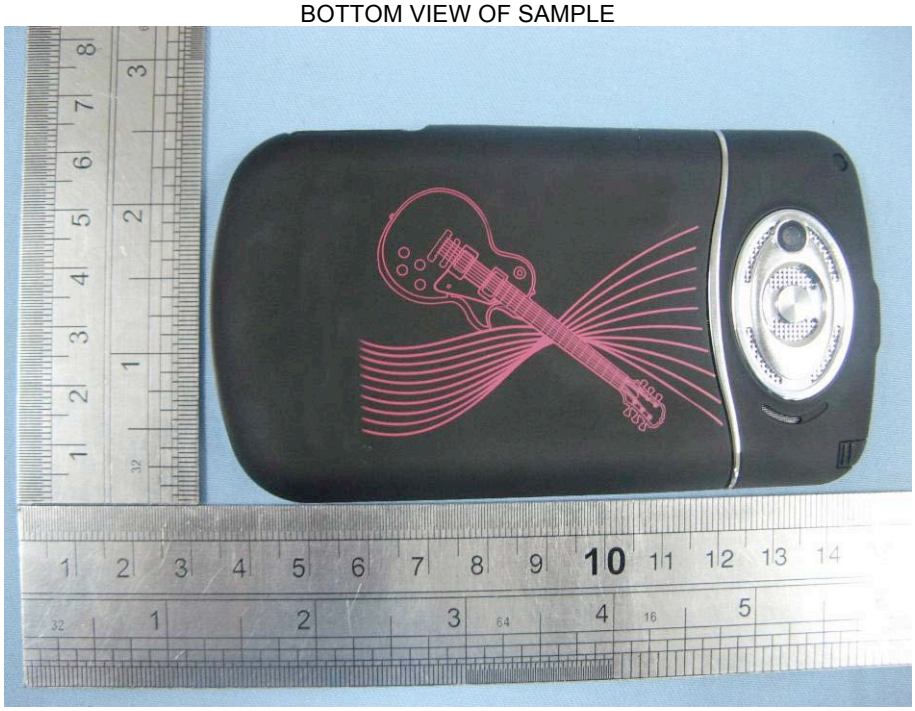
Temperature: 26
Humidity: 60 %

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1980	46.21		28.77	10.21	56.42		38.98	63.69	53.69	-7.27	-14.71	P	
2	0.2620	43.23		22.43	10.27	53.50		32.70	61.36	51.36	-7.86	-18.66	P	
3	2.6819	31.51		14.85	10.47	41.98		25.32	56.00	46.00	-14.02	-20.68	P	
4	6.0339	40.15		23.17	10.28	50.43		33.45	60.00	50.00	-9.57	-16.55	P	
5	7.9339	38.89		17.74	10.35	49.24		28.09	60.00	50.00	-10.76	-21.91	P	
6	19.4779	36.53		13.69	10.11	46.64		23.80	60.00	50.00	-13.36	-26.20	P	

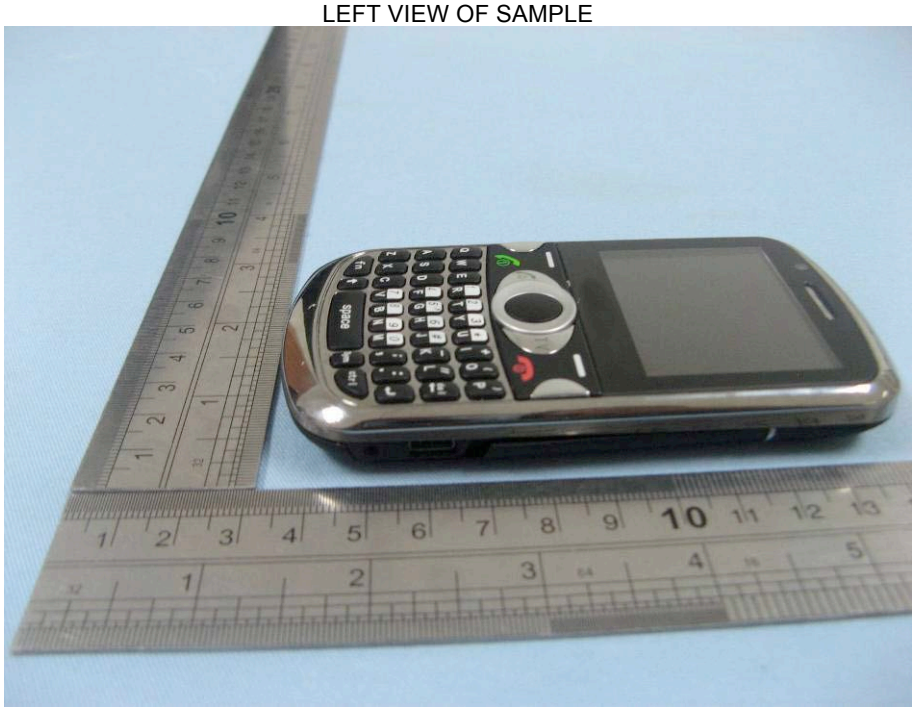
APPENDIX I
PHOTOGRAPHS OF THE EUT

TOP VIEW OF SAMPLE

BOTTOM VIEW OF SAMPLE



LEFT VIEW OF SAMPLE



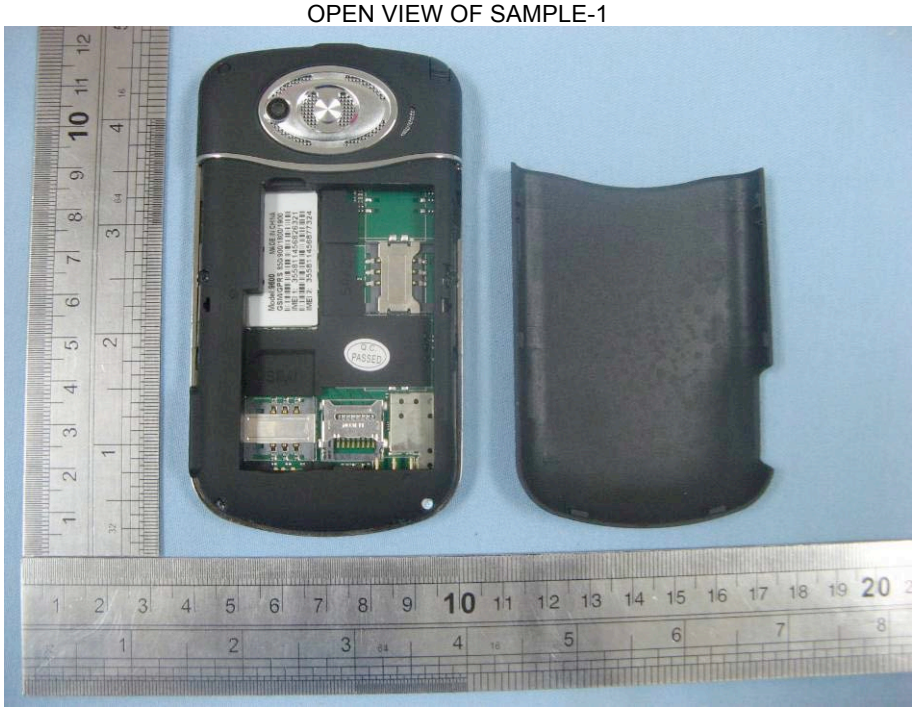
RIGHT VIEW OF SAMPLE

FRONT VIEW OF SAMPLE

BACK VEIW OF SAMPLE

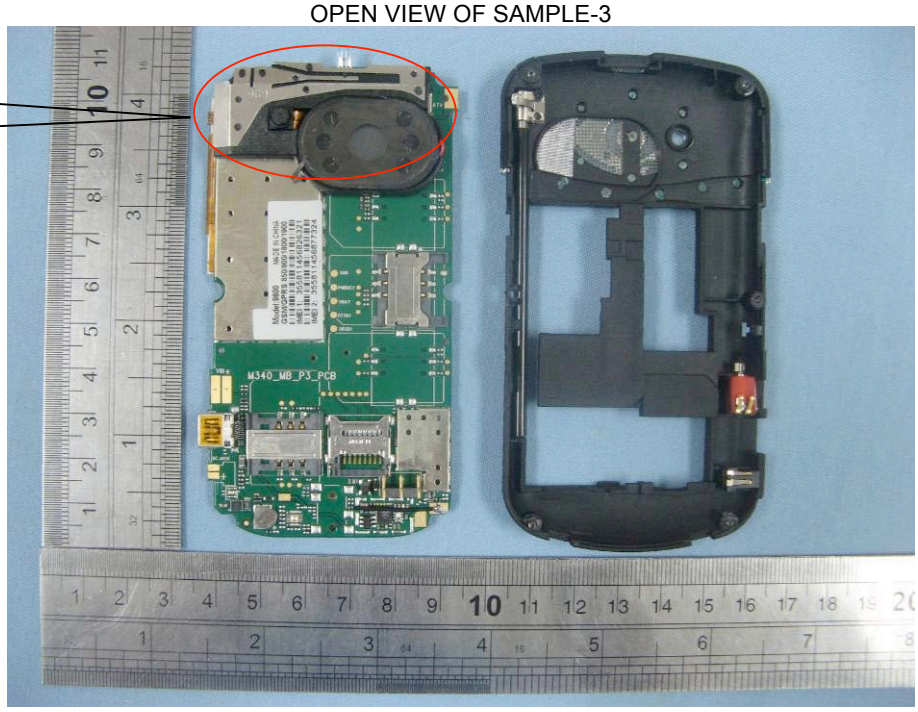
ALL VIEW OF SAMPLE

OPEN VIEW OF SAMPLE-1

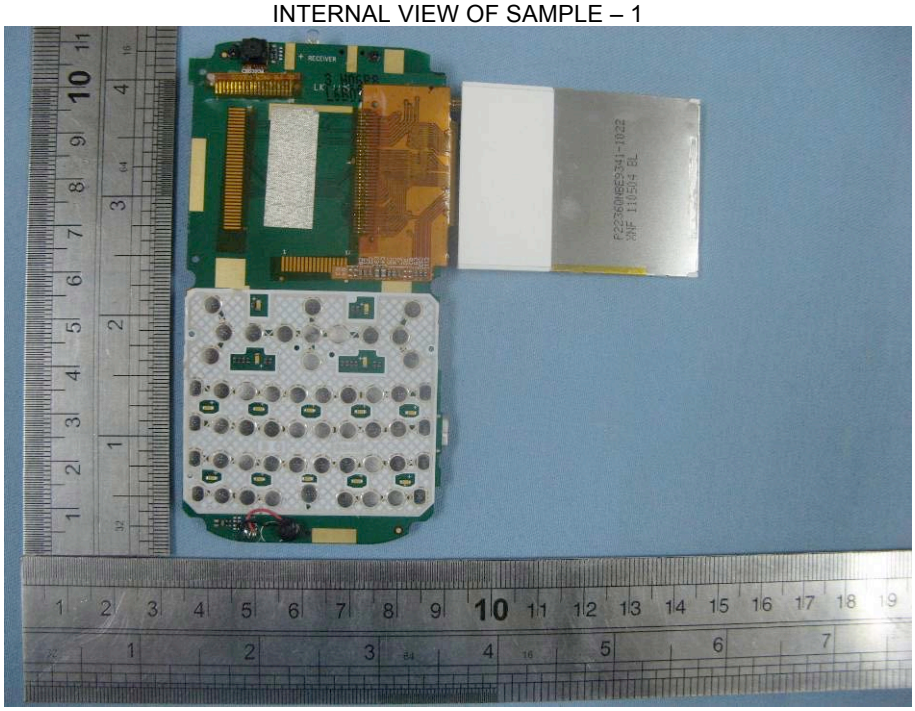


OPEN VIEW OF SAMPLE-2

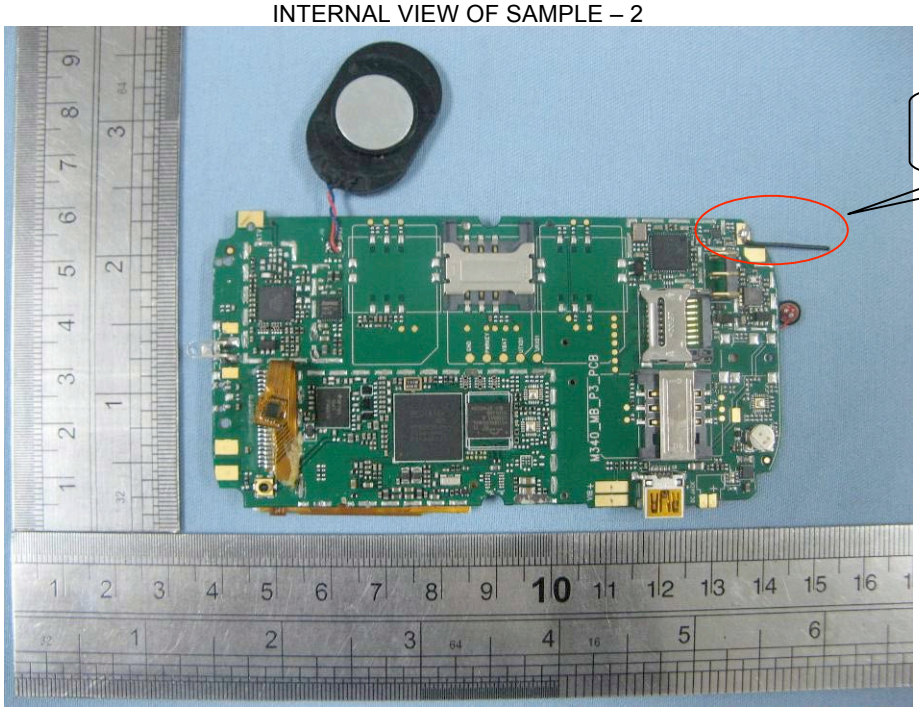
OPEN VIEW OF SAMPLE-3



INTERNAL VIEW OF SAMPLE – 1



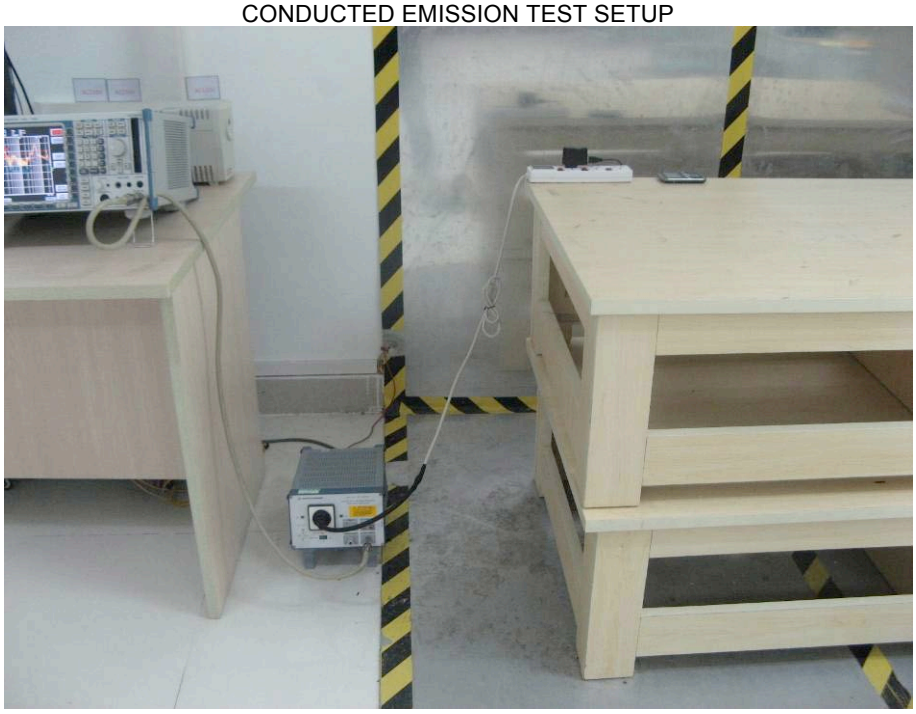
INTERNAL VIEW OF SAMPLE – 2



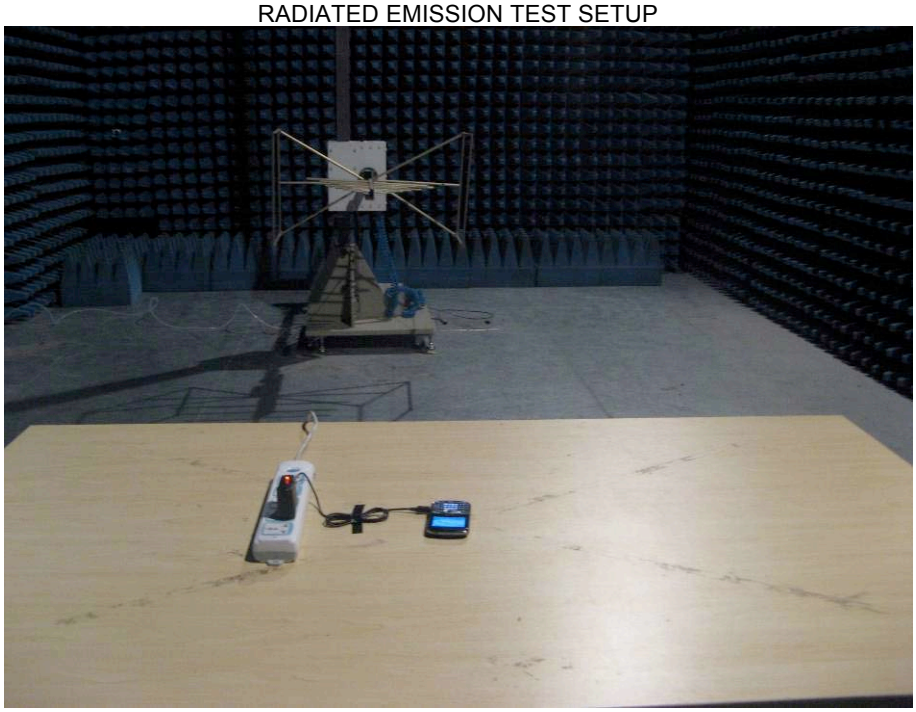
APPENDIX II

PHOTOGRAPHS OF THE TEST SETUP

CONDUCTED EMISSION TEST SETUP



RADIATED EMISSION TEST SETUP



----END OF REPORT----