FCC RADIO TEST REPORT-WIFI
FCC ID:2AGR3-GLBMOB55

Product：	Smartphone
Trade Name：	GLOBE, MULTITECH
Model Name：	GLB-MOB55
Serial Model：	GCP-5050, MT-MOB5050, MT-CP55
Report No.：	NTEK-2015NT11022996F4

Prepared for

SGM Representaciones S.A.S

Av Suba No 115-58 Centro Ilarco Oficina 703 Bogota Colombia

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name ..... SGM Representaciones S.A.S

Address..... Av Suba No 115-58 Centro Ilarco Oficina 703 Bogota Colombia

Manufacture's Name... Haier International(HK)Limited

Address..... 505,Block B2, KeXing Science Park, KeYuan Road, Nanshan, Shenzhen, China

Product description

Product name..... Smartphone

Model and/or type reference GLB-MOB55

Serial Model GCP-5050, MT-MOB5050, MT-CP55

Standards ..... FCC Part15.247 01 Oct. 2015

Test procedure ..... ANSI C63.10-2013 and KDB 558074: June 5, 2014

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test .....

Date (s) of performance of tests..... 02 Nov. 2015 ~24 Nov. 2015

Date of Issue ..... 24 Nov. 2015

Test Result..... **Pass**

Testing Engineer : Eileen Liu.

(Eileen Liu)

Technical Manager : Brown Lu

(Brown Lu)

Authorized Signatory : Sam. Chen

(Sam Chen)

Table of Contents

Page

Table of Contents

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.205	Band Edge Emission	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1)” N/A” denotes test is not applicable in this Test Report

1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd
Add.:1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.
FCC Registration No.:238937; IC Registration No.:9270A-1
CNAS Registration No.:L5516

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>Smartphone</td></tr>
<tr><td>Trade Name</td><td>GLOBE, MULTITECH</td></tr>
<tr><td>Model Name</td><td>GLB-MOB55</td></tr>
<tr><td>Serial Model</td><td>GCP-5050, MT-MOB5050, MT-CP55</td></tr>
<tr><td>Model Difference</td><td>All the model are the same circuit and RF module,
except the model name and colour.</td></tr>
<tr><td>Product Description</td><td>
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n(20MHz): 2412~2462MHz
802.11n(40MHz):2422~2452MHz</td></tr>
<tr><td>Modulation Type:</td><td>IEEE 802.11b :
DSSS (CCK, QPSK, DBPSK)
IEEE 802.11g/n (HT20/HT40) : OFDM (64QAM, 16QAM, QPSK, BPSK)</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>802.11b:11/5.5/2/1 Mbps
802.11g:54/48/36/24/18/12/9/6Mbps
802.11n(20MHz/40MHz):150/144.44/130/117/115.56/104/86.67/78/52/6.5Mbps</td></tr>
<tr><td>Number Of Channel</td><td>802.11b/g/n20MHz:11CH
802.11n40MHz:7CH</td></tr>
<tr><td>Antenna Designation:</td><td>Please see Note 3.</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>1.0 dbi</td></tr>
</table>
</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Ratings</td><td>DC 3.8V</td></tr>
<tr><td>Adapter</td><td>Model:JT105-050100
Input: AC100-240V~, 50/60Hz
Output: 5.0V⎓, 1A</td></tr>
<tr><td>Battery</td><td>DC 3.8V,2500mAh</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2.

Channel List for 802.11b/g/n(20 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

Channel List for 802.11n(40MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
03	2422	06	2437	09	2452		
04	2427	07	2442				
05	2432	08	2447				

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	N/A	FPCB Antenna	N/A	1.0	Wifi Antenna

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n20 CH1/ CH6/ CH11
Mode 4	802.11n40 CH3/ CH6/ CH9
Mode 5	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n20 CH1/ CH6/ CH11
Mode 4	802.11n40 CH3/ CH6/ CH9
Mode 5	Link Mode

Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

(2) EUT configured to transmit continuously:

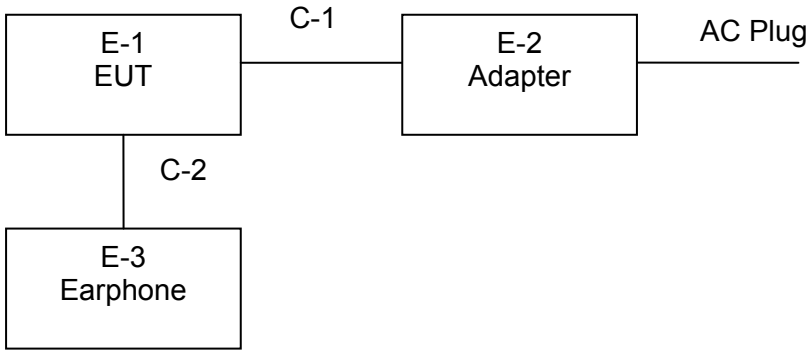
(3) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

Mode	Data Rate
IEEE 802.11b	1 Mbps
IEEE 802.11g	6 Mbps
IEEE 802.11n20	MCS 7
IEEE 802.11n40	MCS 7

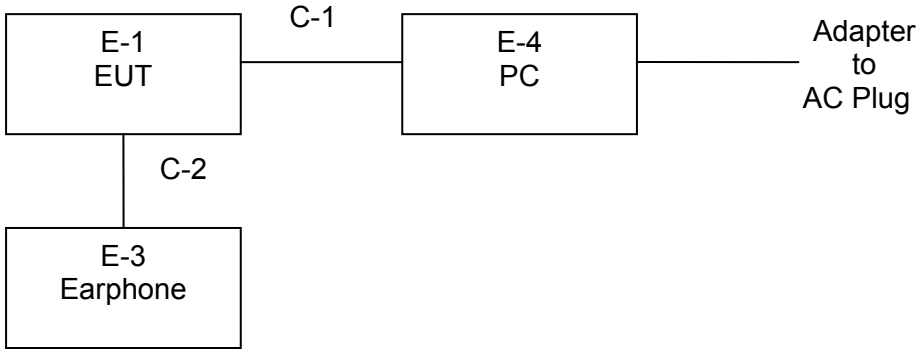
Operated Mode for Worst Duty Cycle	
Test Signal Duty Cycle (x)	Average correction factor (dB)
100% - IEEE 802.11b	0
100% - IEEE 802.11g	0
100% - IEEE 802.11n (HT20)	0
100% - IEEE 802.11n (HT40)	0

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

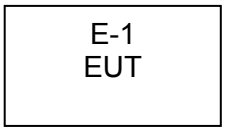
Conducted Emission Test 1



Conducted Emission Test 2



Radiated Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	Smartphone	GLOBE, MULTITECH	GLB-MOB55	N/A	EUT
E-2	Adapter	N/A	GLB-MOB55	N/A	
E-3	Earphone	N/A	2688		
E-4	PC	lenovo	Y43p	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2m	
C-2	NO	NO	1.0m	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2015.07.06	2016.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2015.06.06	2016.06.05	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2015.07.06	2016.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2015.06.06	2016.06.05	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2015.06.06	2016.06.05	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2015.07.06	2016.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2015.07.06	2016.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2014.12.22	2015.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2015.06.06	2016.06.05	1 year
10	Power Meter	R&S	NRVS	100696	2015.07.06	2016.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2015.07.06	2016.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2015.06.06	2016.06.05	1 year
2	LISN	R&S	ENV216	101313	2015.08.24	2016.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2015.08.24	2016.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2015.06.06	2016.06.05	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2015.06.06	2016.06.05	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2015.06.06	2016.06.05	1 year

1	Attenuation	MCE	24-10-34	BN9258	2015.07.06	2016.07.05	1 year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

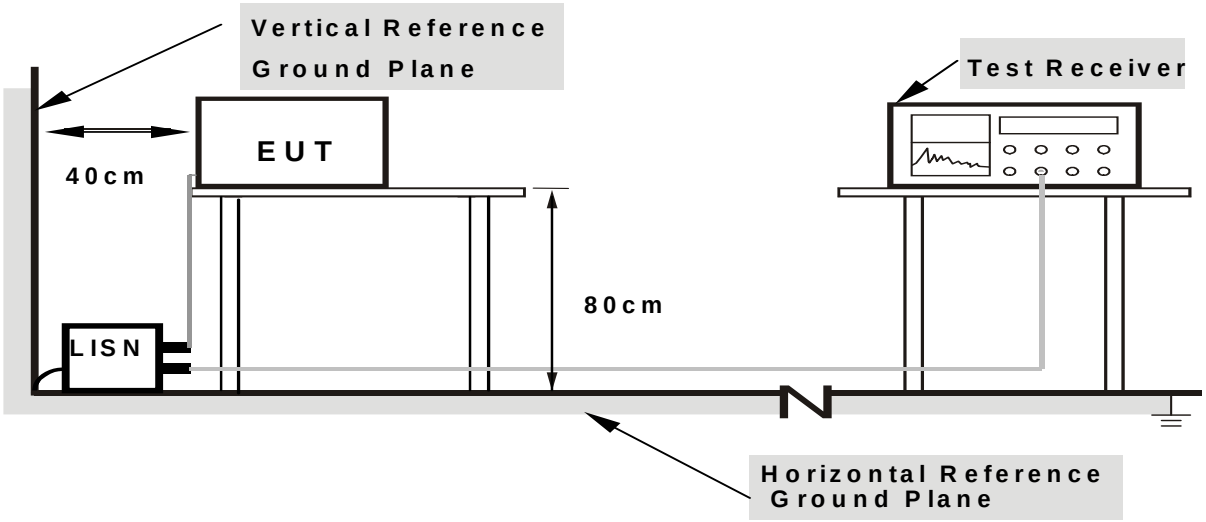
3.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

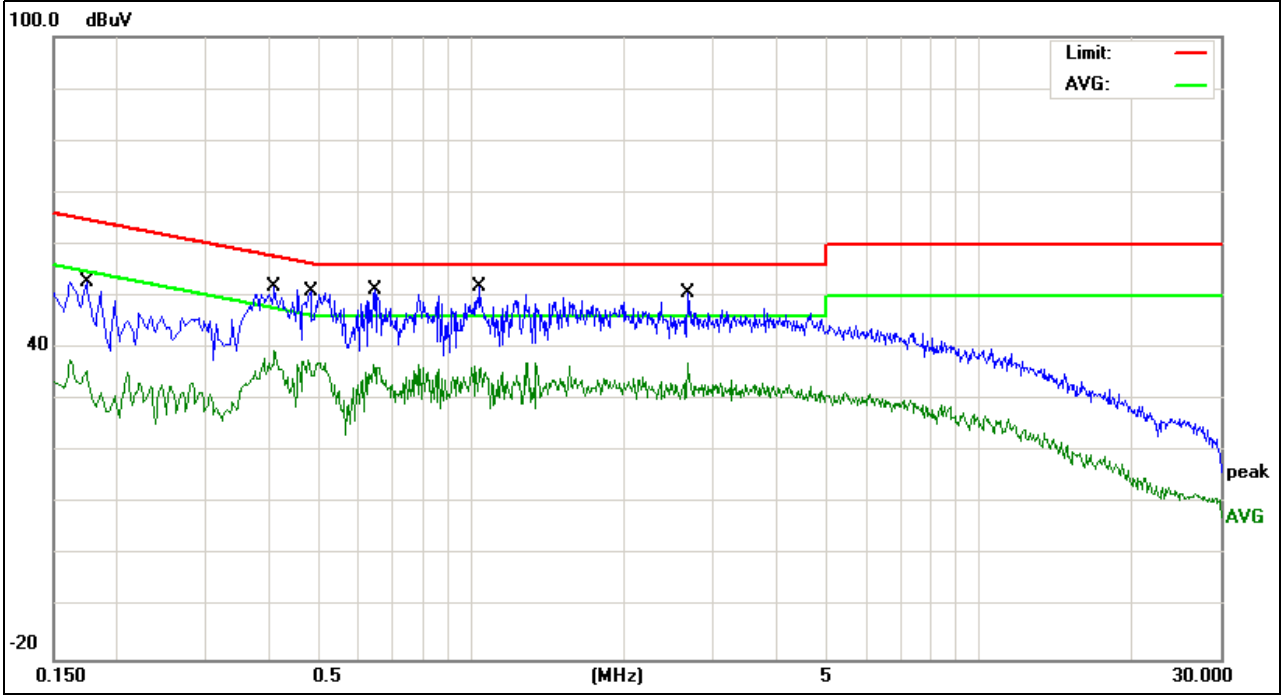
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form Adapter AC 120V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1737	43.24	9.47	52.71	64.78	-12.07	QP
0.1737	28.41	9.47	37.88	54.78	-16.90	AVG
0.4082	42.63	9.19	51.82	57.68	-5.86	QP
0.4082	30.30	9.19	39.49	47.68	-8.19	AVG
0.4811	41.49	9.48	50.97	56.32	-5.35	QP
0.4811	28.34	9.48	37.82	46.32	-8.50	AVG
0.6439	41.83	9.56	51.39	56.00	-4.61	QP
0.6439	27.33	9.56	36.89	46.00	-9.11	AVG
1.0374	42.26	9.56	51.82	56.00	-4.18	QP
1.0374	26.97	9.56	36.53	46.00	-9.47	AVG
2.6640	41.10	9.60	50.70	56.00	-5.30	QP
2.6640	27.53	9.60	37.13	46.00	-8.87	AVG

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

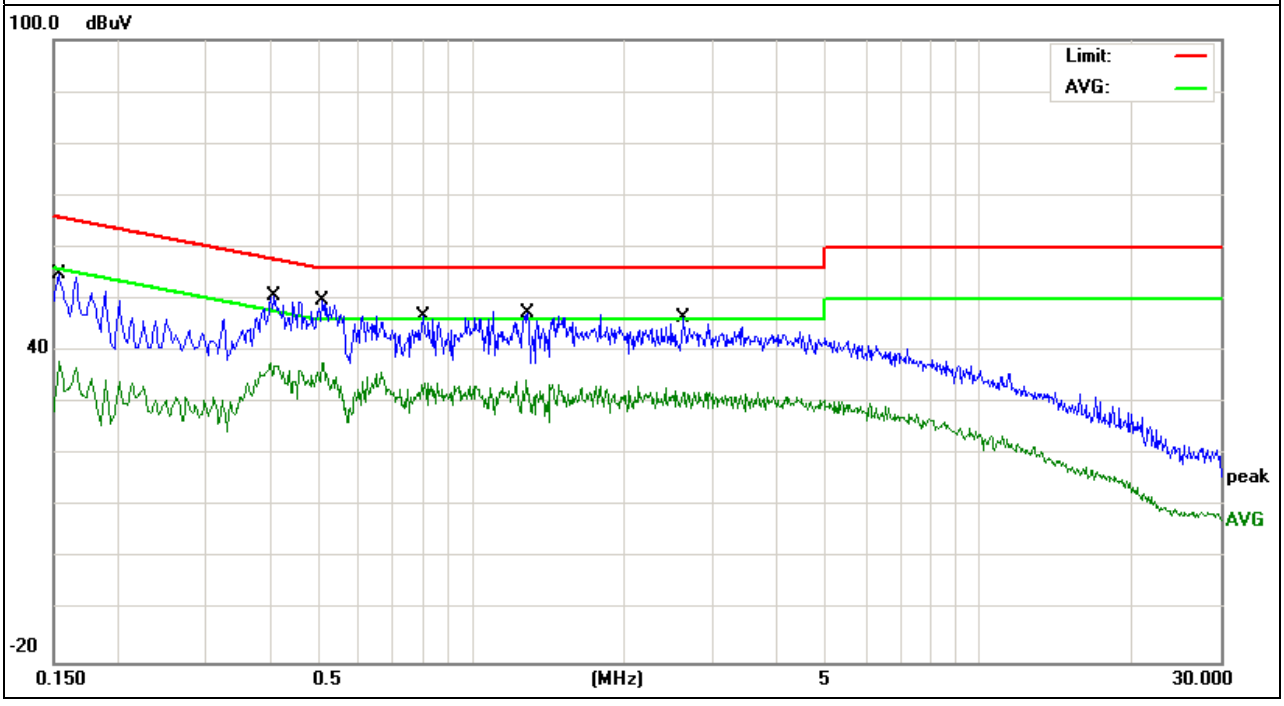


EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 5.0V form Adapter AC 120V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1532	45.24	9.49	54.73	65.82	-11.09	QP
0.1532	28.61	9.49	38.10	55.82	-17.72	AVG
0.4082	41.51	9.19	50.70	57.68	-6.98	QP
0.4082	28.52	9.19	37.71	47.68	-9.97	AVG
0.507	40.23	9.55	49.78	56.00	-6.22	QP
0.507	28.12	9.55	37.67	46.00	-8.33	AVG
0.8044	37.26	9.57	46.83	56.00	-9.17	QP
0.8044	24.43	9.57	34.00	46.00	-12.00	AVG
1.2886	37.75	9.57	47.32	56.00	-8.68	QP
1.2886	24.75	9.57	34.32	46.00	-11.68	AVG
2.6082	36.85	9.60	46.45	56.00	-9.55	QP
2.6082	23.25	9.60	32.85	46.00	-13.15	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

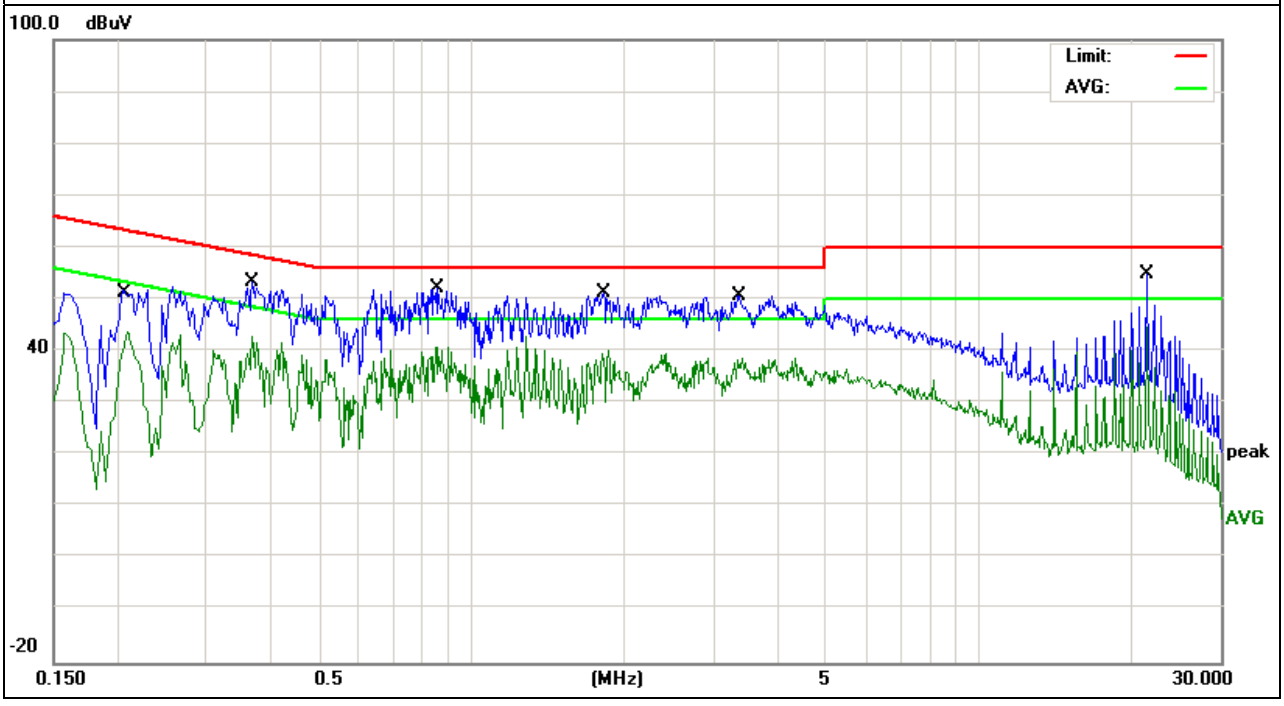


EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form Adapter AC 240V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.2094	42.29	9.46	51.75	63.23	-11.48	QP
0.2094	34.38	9.46	43.84	53.23	-9.39	AVG
0.3689	44.17	9.29	53.46	58.52	-5.06	QP
0.3689	33.55	9.29	42.84	48.52	-5.68	AVG
0.8569	42.47	9.56	52.03	56.00	-3.97	QP
0.8569	31.32	9.56	40.88	46.00	-5.12	AVG
1.8188	41.55	9.57	51.12	56.00	-4.88	QP
1.8188	30.47	9.57	40.04	46.00	-5.96	AVG
3.3635	41.11	9.64	50.75	56.00	-5.25	QP
3.3635	29.16	9.64	38.80	46.00	-7.20	AVG
21.3721	44.93	9.98	54.91	60.00	-5.09	QP
21.3721	34.74	9.98	44.72	50.00	-5.28	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

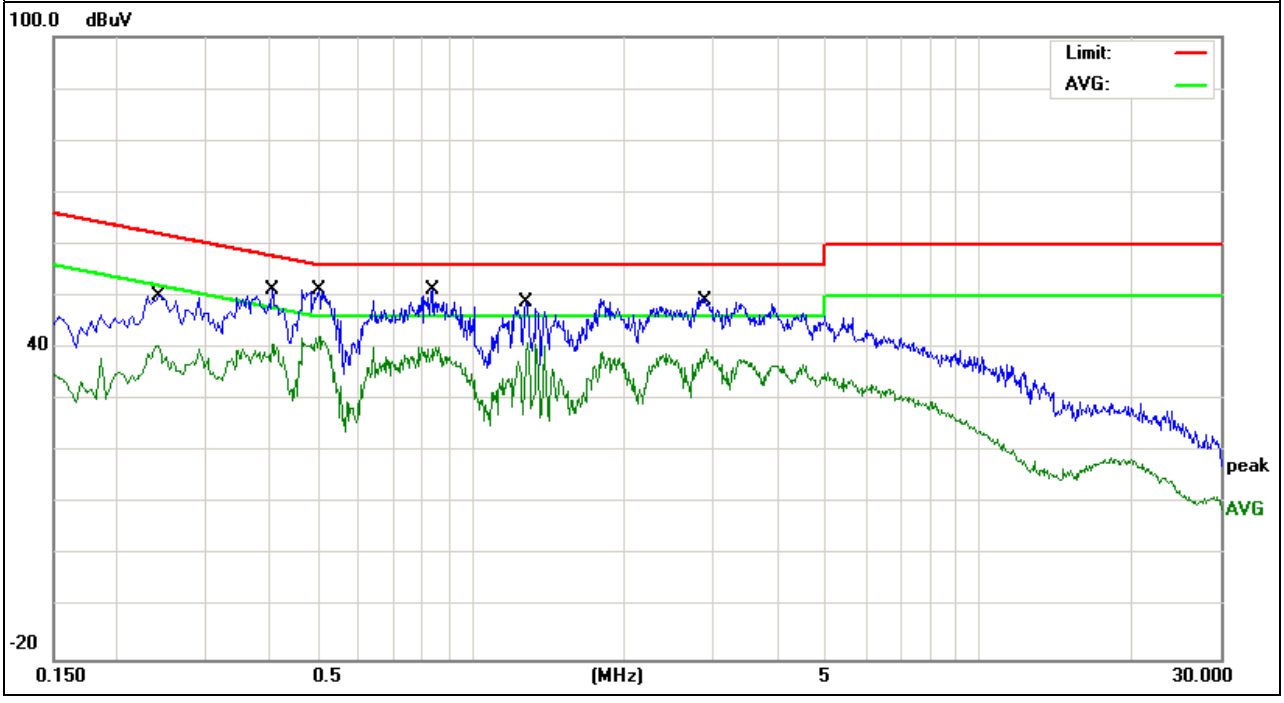


EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 5.0V form Adapter AC 240V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.2416	40.70	9.50	50.20	62.04	-11.84	QP
0.2416	30.94	9.50	40.44	52.04	-11.60	AVG
0.404	41.95	9.18	51.13	57.77	-6.64	QP
0.404	31.61	9.18	40.79	47.77	-6.98	AVG
0.4993	41.74	9.55	51.29	56.01	-4.72	QP
0.4993	32.63	9.55	42.18	46.01	-3.83	AVG
0.8393	41.67	9.57	51.24	56.00	-4.76	QP
0.8393	30.66	9.57	40.23	46.00	-5.77	AVG
1.2887	39.41	9.57	48.98	56.00	-7.02	QP
1.2887	31.56	9.57	41.13	46.00	-4.87	AVG
2.8997	40.08	9.62	49.70	56.00	-6.30	QP
2.8997	30.24	9.62	39.86	46.00	-6.14	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

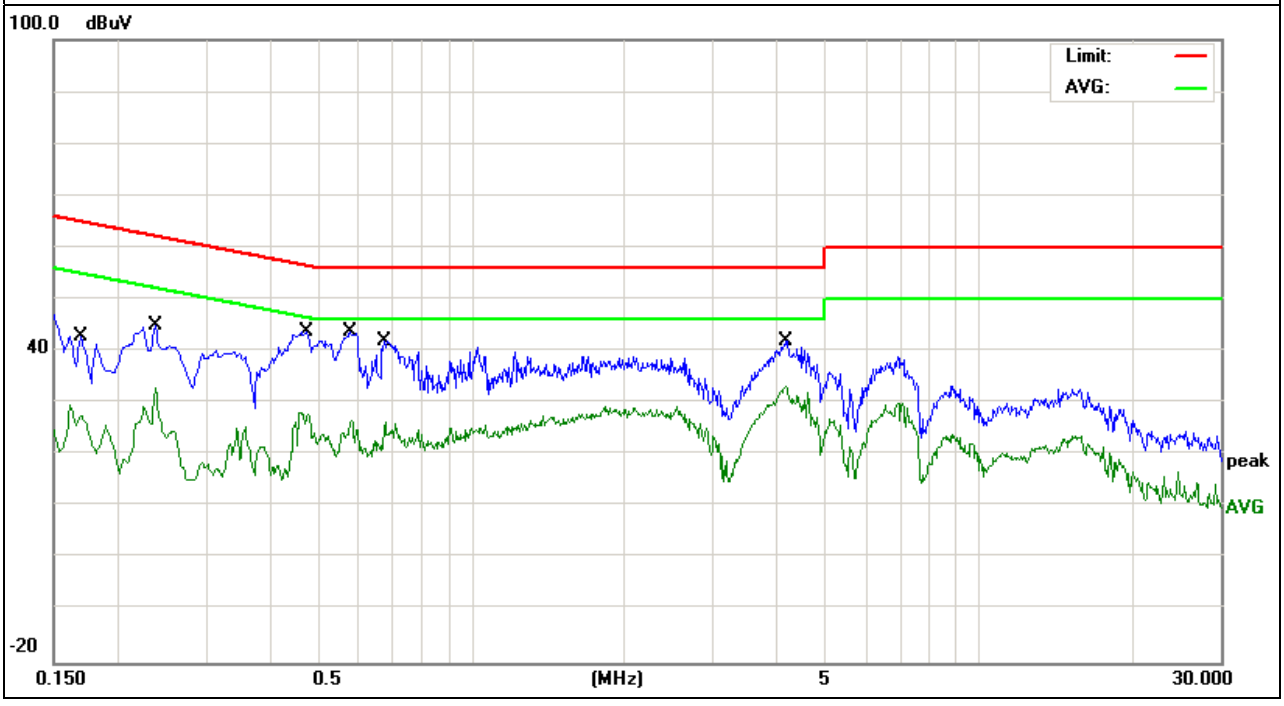


EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form PC AC 120V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1500	41.21	9.49	50.70	65.99	-15.29	QP
0.1500	19.37	9.49	28.86	55.99	-27.13	AVG
0.2300	33.31	9.49	42.80	62.45	-19.65	QP
0.2300	20.62	9.49	30.11	52.45	-22.34	AVG
0.4780	30.58	9.46	40.04	56.37	-16.33	QP
0.4780	13.83	9.46	23.29	46.37	-23.08	AVG
0.5700	28.87	9.56	38.43	56.00	-17.57	QP
0.5700	14.05	9.56	23.61	46.00	-22.39	AVG
0.7140	26.80	9.57	36.37	56.00	-19.63	QP
0.7140	15.03	9.57	24.60	46.00	-21.40	AVG
4.1979	28.01	9.66	37.67	56.00	-18.33	QP
4.1979	19.97	9.66	29.63	46.00	-16.37	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

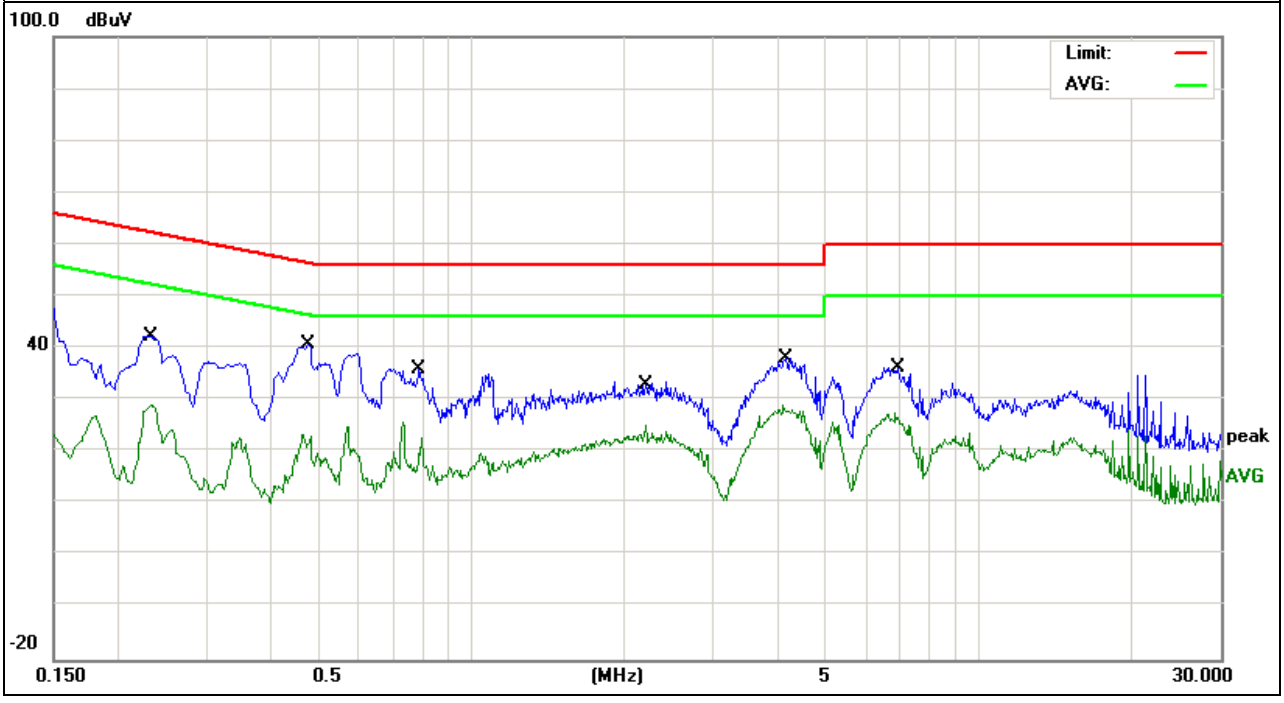


EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 5.0V form PC AC 120V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.2340	32.71	9.49	42.20	62.30	-20.10	QP
0.2340	19.49	9.49	28.98	52.30	-23.32	AVG
0.4780	31.17	9.46	40.63	56.37	-15.74	QP
0.4780	15.35	9.46	24.81	46.37	-21.56	AVG
0.7900	26.44	9.57	36.01	56.00	-19.99	QP
0.7900	16.19	9.57	25.76	46.00	-20.24	AVG
2.2058	24.11	9.58	33.69	56.00	-22.31	QP
2.2058	15.42	9.58	25.00	46.00	-21.00	AVG
4.1140	23.94	9.66	33.60	56.00	-22.40	QP
4.1140	19.29	9.66	28.95	46.00	-17.05	AVG
6.8699	26.56	9.70	36.26	60.00	-23.74	QP
6.8699	17.71	9.70	27.41	50.00	-22.59	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

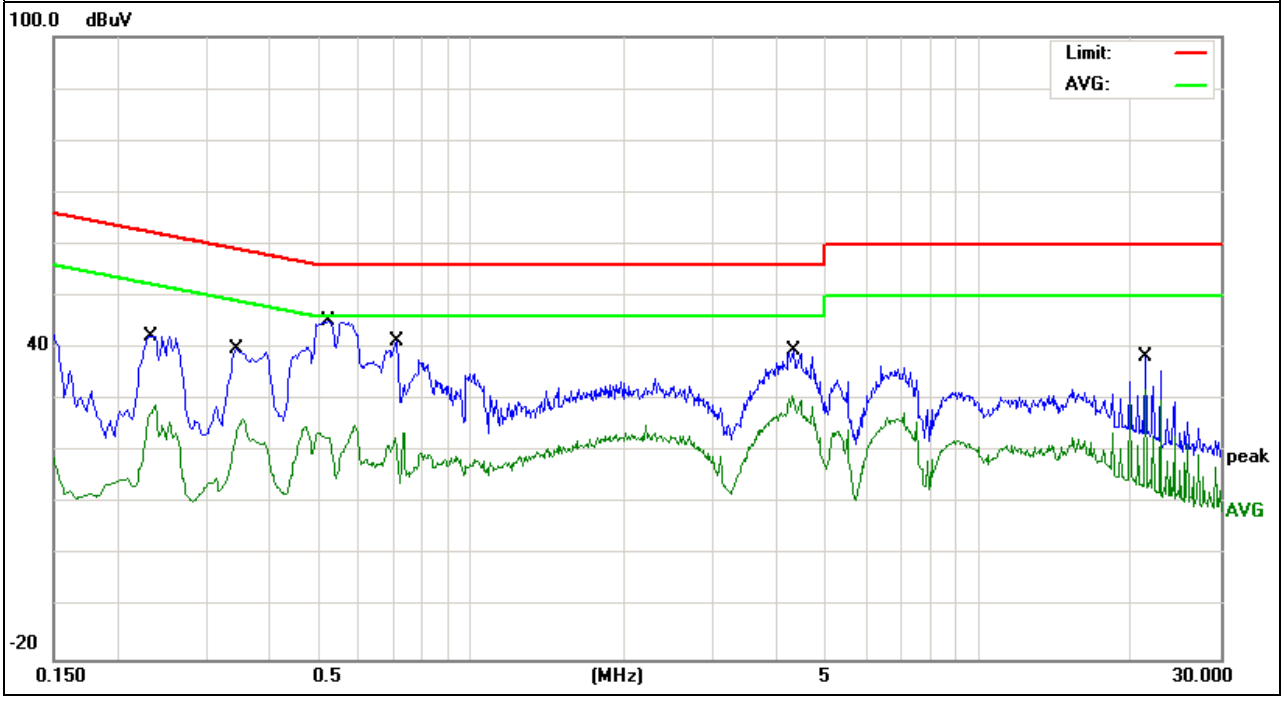


EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form PC AC 240V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.2340	32.83	9.49	42.32	62.30	-19.98	QP
0.2340	19.58	9.49	29.07	52.30	-23.23	AVG
0.3459	30.49	9.38	39.87	59.06	-19.19	QP
0.3459	17.07	9.38	26.45	49.06	-22.61	AVG
0.5220	35.55	9.55	45.10	56.00	-10.90	QP
0.5220	15.64	9.55	25.19	46.00	-20.81	AVG
0.7140	31.69	9.57	41.26	56.00	-14.74	QP
0.7140	14.23	9.57	23.80	46.00	-22.20	AVG
4.3059	29.77	9.67	39.44	56.00	-16.56	QP
4.3059	21.30	9.67	30.97	46.00	-15.03	AVG
21.3419	28.44	9.98	38.42	60.00	-21.58	QP
21.3419	21.95	9.98	31.93	50.00	-18.07	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

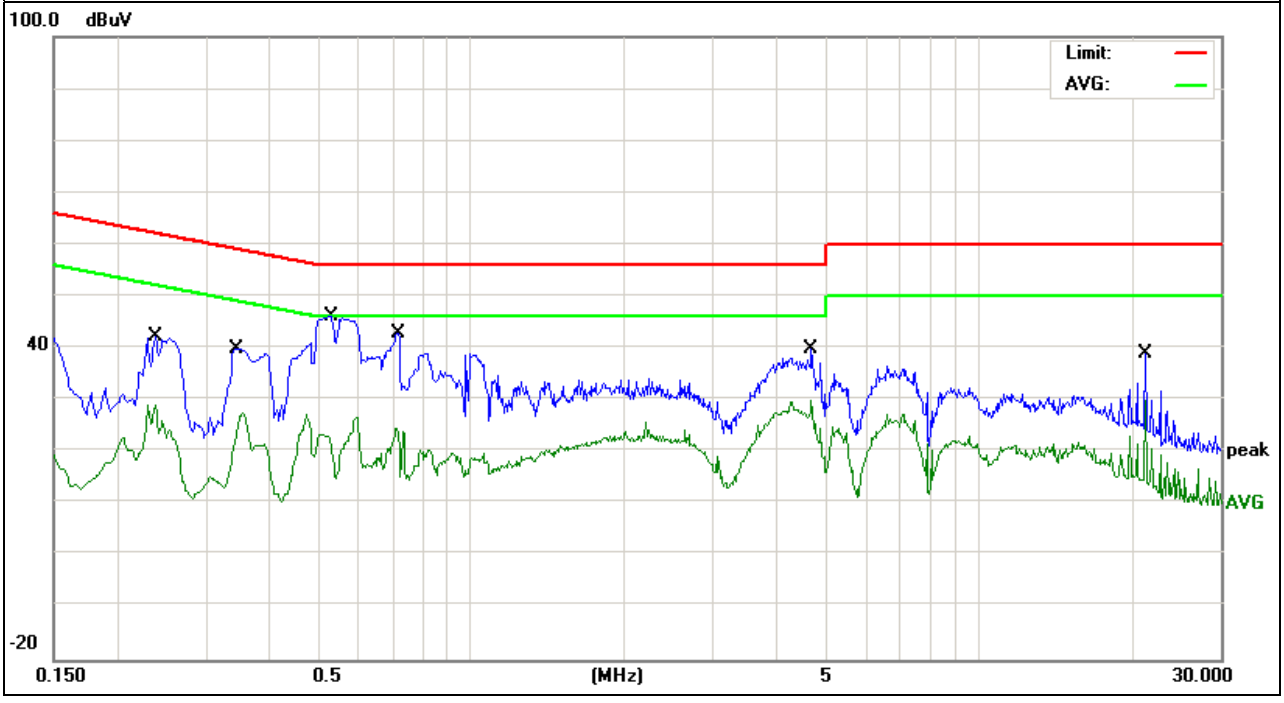


EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 5.0V form PC AC 240V/60Hz	Test Mode：	Mode 5

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.2379	32.76	9.50	42.26	62.17	-19.91	QP
0.2379	19.51	9.50	29.01	52.17	-23.16	AVG
0.3459	30.50	9.38	39.88	59.06	-19.18	QP
0.3459	18.19	9.38	27.57	49.06	-21.49	AVG
0.5299	36.59	9.55	46.14	56.00	-9.86	QP
0.5299	17.68	9.55	27.23	46.00	-18.77	AVG
0.718	33.26	9.57	42.83	56.00	-13.17	QP
0.718	15.00	9.57	24.57	46.00	-21.43	AVG
4.6859	30.24	9.67	39.91	56.00	-16.09	QP
4.6859	20.24	9.67	29.91	46.00	-16.09	AVG
21.3299	28.99	9.98	38.97	60.00	-21.03	QP
21.3299	20.04	9.98	30.02	50.00	-19.98	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below 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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	dBuV/m@at 3M	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / *10Hz* for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

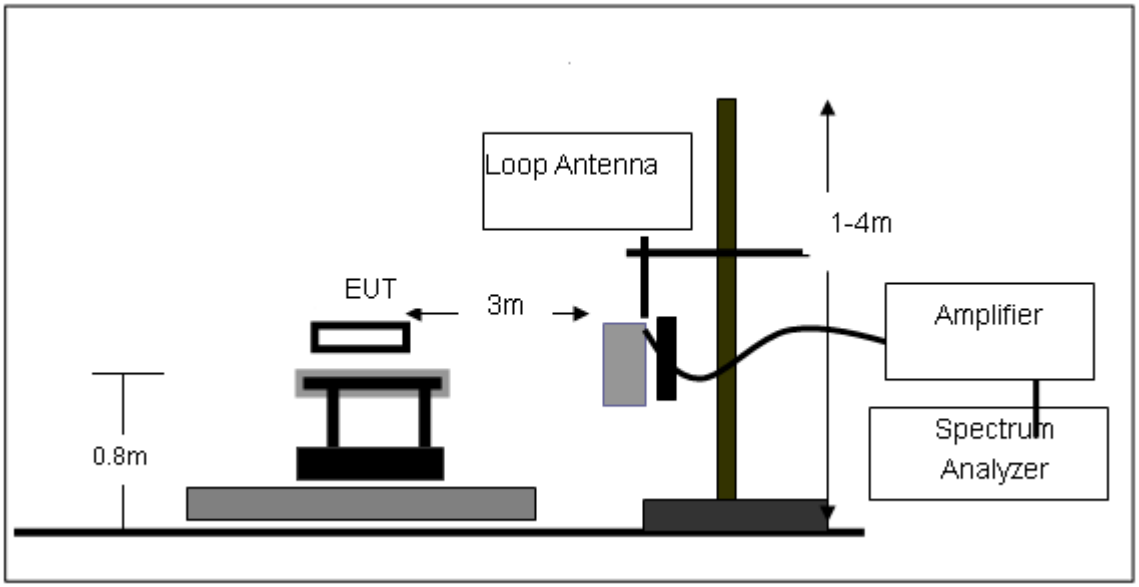
Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

3.2.3 DEVIATION FROM TEST STANDARD

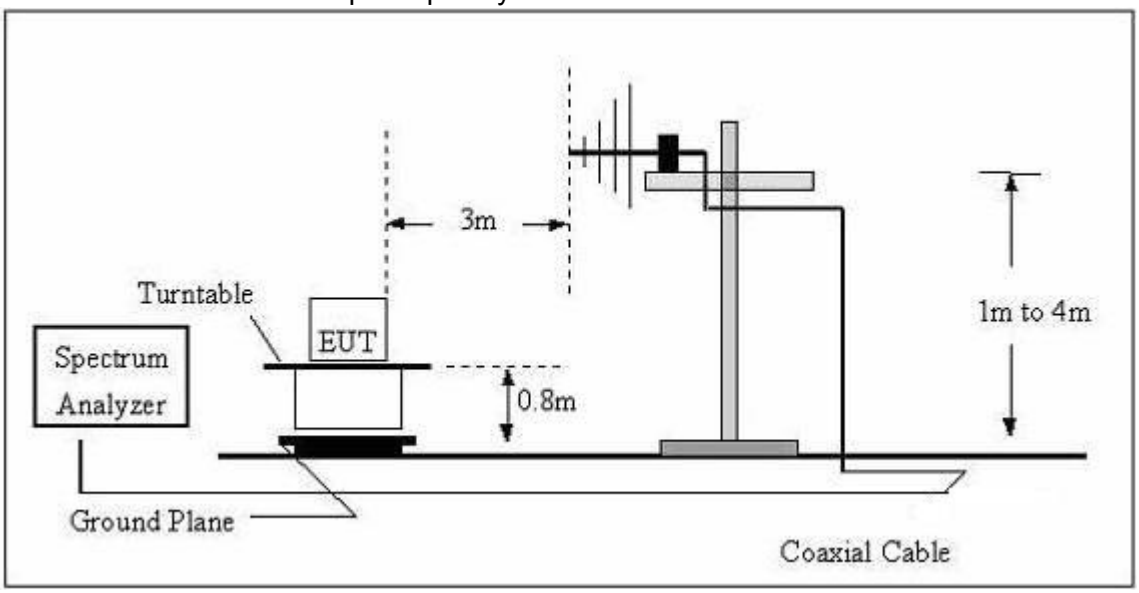
No deviation

3.2.4 TEST SETUP

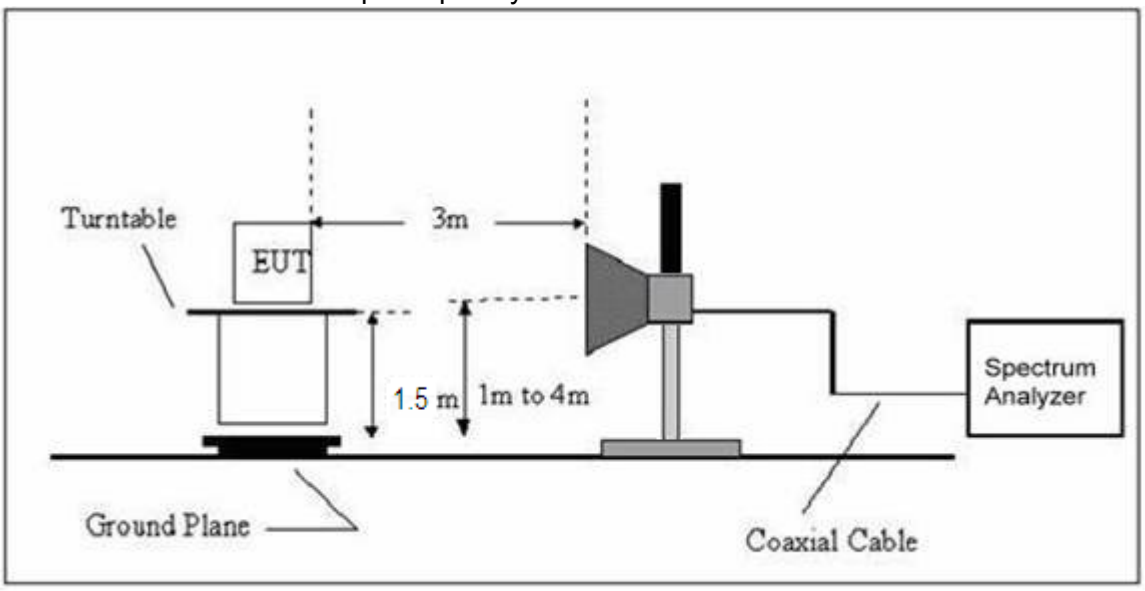
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

EUT：	Smartphone	Model Name. ：	GLB-MOB55
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	N/A
--	--	--	--	N/A

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

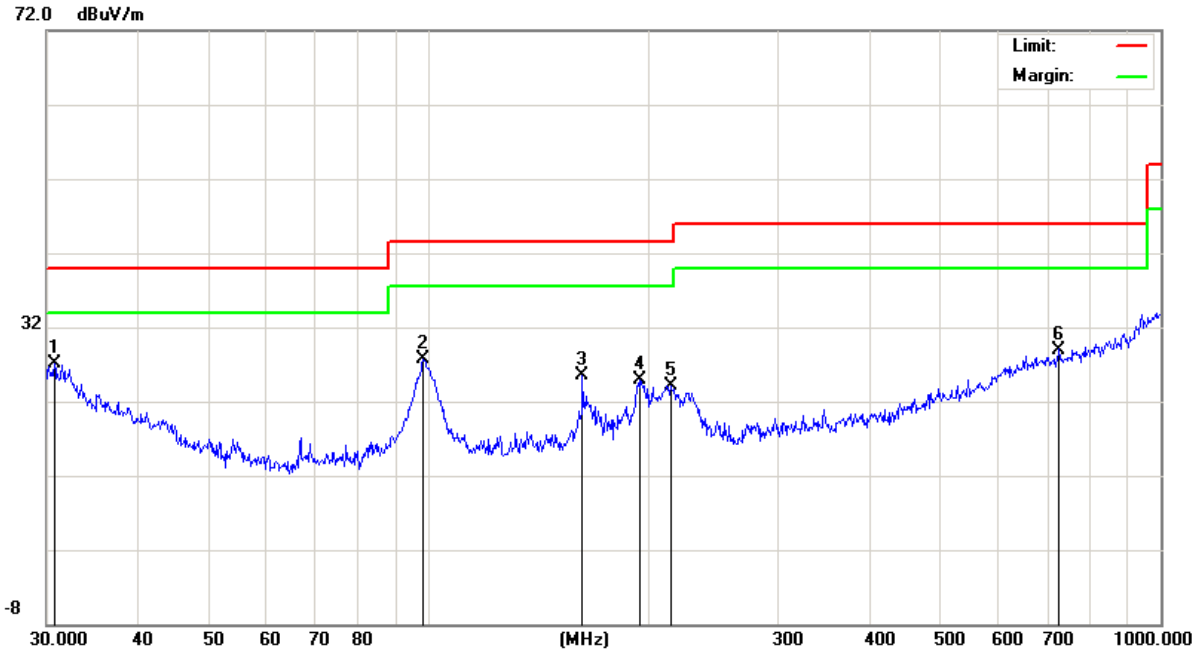
3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX -802.11B (High CH)		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	30.7454	7.85	19.30	27.15	40.00	-12.85	QP
V	98.1419	17.34	10.44	27.78	43.50	-15.72	QP
V	162.0414	13.97	11.56	25.53	43.50	-17.97	QP
V	193.7727	13.51	11.39	24.90	43.50	-18.60	QP
V	213.7633	13.17	11.03	24.20	43.50	-19.30	QP
V	726.8052	7.34	21.66	29.00	46.00	-17.00	QP

Remark:

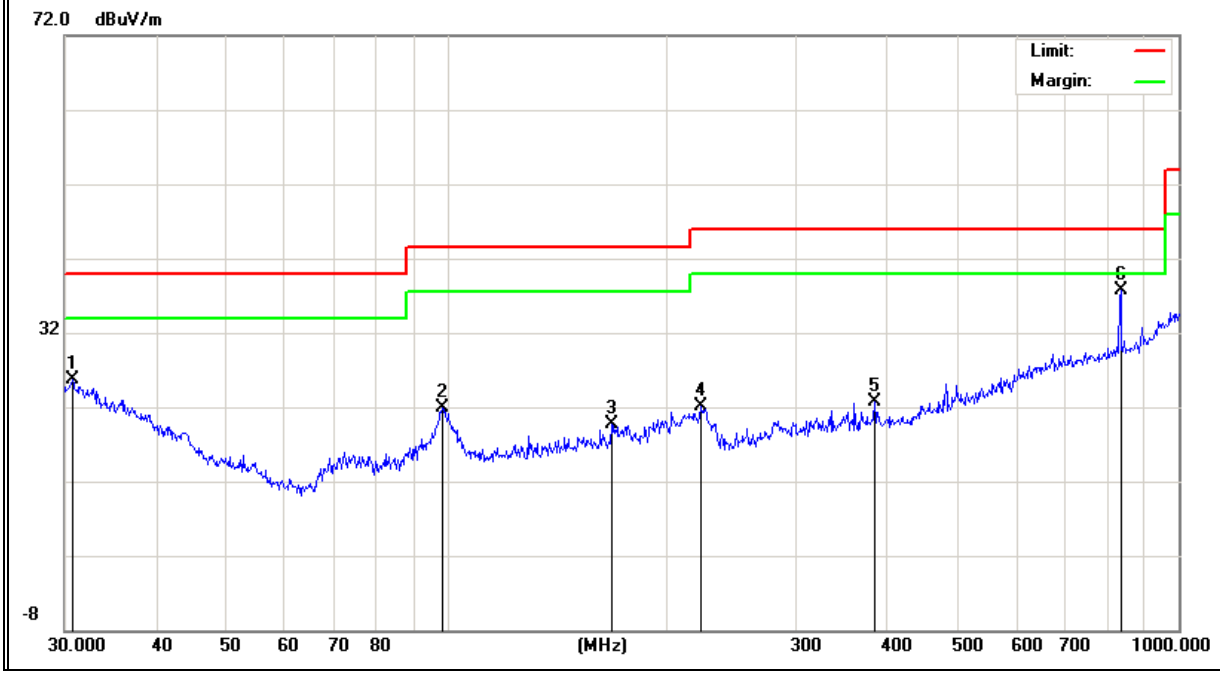
Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
H	30.7454	6.50	19.30	25.80	40.00	-14.20	QP
H	98.4866	11.42	10.40	21.82	43.50	-21.68	QP
H	167.8242	7.47	12.20	19.67	43.50	-23.83	QP
H	222.1698	11.20	10.88	22.08	46.00	-23.92	QP
H	383.9318	7.77	14.90	22.67	46.00	-23.33	QP
H	833.3171	14.60	23.16	37.76	46.00	-8.24	QP

Remark:

Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit



3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (2412 MHz)-Above 1G							
Vertical	4824.247	53.25	10.44	63.69	74.00	-10.31	Pk
Vertical	4824.247	32.19	10.44	42.63	54.00	-11.37	Av
Vertical	7236.192	50.07	12.39	62.46	74.00	-11.54	Pk
Vertical	7236.192	32.62	12.39	45.01	54.00	-8.99	Av
Horizontal	4824.306	51.74	10.44	62.18	74.00	-11.82	Pk
Horizontal	4824.306	31.26	10.44	41.70	54.00	-12.30	Av
Horizontal	7236.119	47.82	12.39	60.21	74.00	-13.79	Pk
Horizontal	7236.119	31.22	12.39	43.61	54.00	-10.39	Av
Mid Channel (2437 MHz)-Above 1G							
Vertical	4874.297	55.22	10.40	65.62	74.00	-8.38	Pk
Vertical	4874.297	33.66	10.40	44.06	54.00	-9.94	Av
Vertical	7311.354	46.41	12.75	59.16	74.00	-14.84	Pk
Vertical	7311.354	31.28	12.75	44.03	54.00	-9.97	Av
Horizontal	4874.297	53.67	10.40	64.07	74.00	-9.93	Pk
Horizontal	4874.297	32.97	10.40	43.37	54.00	-10.63	Av
Horizontal	7311.255	45.74	12.75	58.49	74.00	-15.51	Pk
Horizontal	7311.255	30.25	12.75	43.00	54.00	-11.00	Av
High Channel (2462 MHz)- Above 1G							
Vertical	4924.173	51.89	10.39	62.28	74.00	-11.72	Pk
Vertical	4924.173	31.16	10.39	41.55	54.00	-12.45	Av
Vertical	7386.182	45.52	12.68	58.20	74.00	-15.80	Pk
Vertical	7386.182	29.68	12.68	42.36	54.00	-11.64	Av
Horizontal	4924.298	50.04	10.39	60.43	74.00	-13.57	Pk
Horizontal	4924.298	30.33	10.39	40.72	54.00	-13.28	Av
Horizontal	7386.304	47.87	12.68	60.55	74.00	-13.45	Pk
Horizontal	7386.304	32.63	12.68	45.31	54.00	-8.69	Av

Note:”802.11b” mode is the worst mode.

Radiated band edge:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
802.11b							
2390	62.35	-13.06	49.29	74	-24.71	peak	Vertical
2390	29.57	-13.06	16.51	74	-57.49	peak	Horizontal
2483.5	60.25	-12.78	47.47	74	-26.53	peak	Vertical
2483.5	62.41	-12.78	49.63	74	-24.37	peak	Horizontal
802.11g							
2390	60.23	-13.06	47.17	74	-26.83	peak	Vertical
2390	59.87	-13.06	46.81	74	-27.19	peak	Horizontal
2483.5	59.96	-12.78	47.18	74	-26.82	peak	Vertical
2483.5	60.24	-12.78	47.46	74	-26.54	peak	Horizontal
802.11n（20）							
2390	60.54	-13.06	47.48	74	-26.52	peak	Vertical
2390	60.29	-13.06	47.23	74	-26.77	peak	Horizontal
2483.5	60.36	-12.78	47.58	74	-26.42	peak	Vertical
2483.5	60.29	-12.78	47.51	74	-26.49	peak	Horizontal
802.11n（40）							
2390	60.85	-13.06	47.79	74	-26.21	peak	Vertical
2390	60.44	-13.06	47.38	74	-26.62	peak	Horizontal
2483.5	61.92	-12.78	49.14	74	-24.86	peak	Vertical
2483.5	60.31	-12.78	47.53	74	-26.47	peak	Horizontal

4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

4.1.1 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. 3 kHz ≤Set the RBW≤100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP

4.1.4 EUT OPERATION CONDITIONS

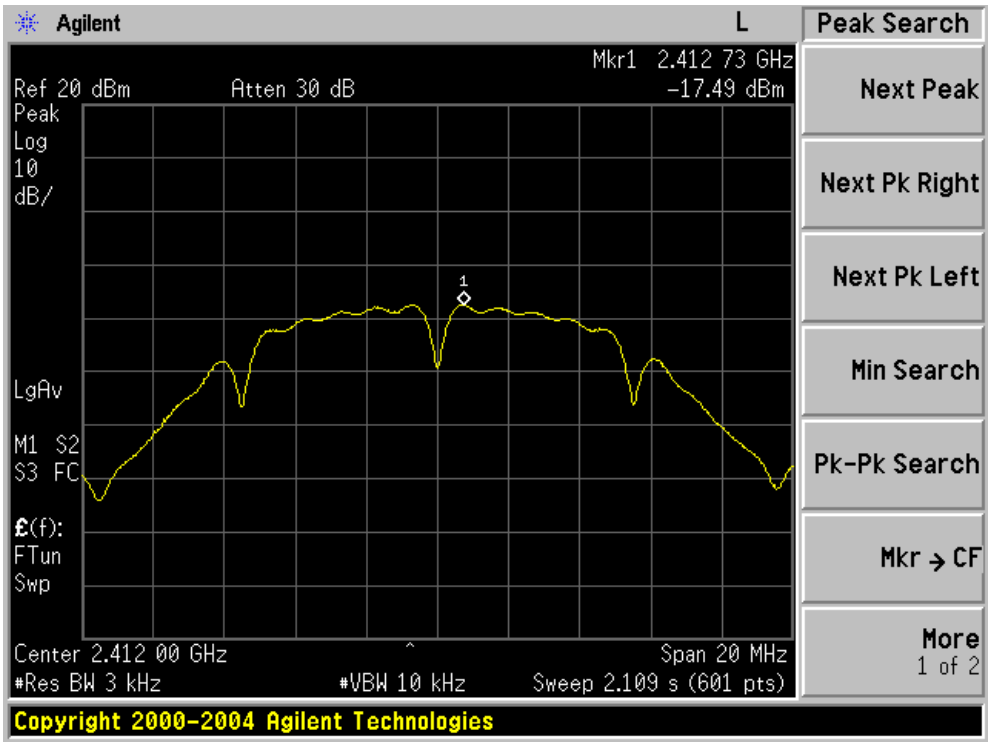
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

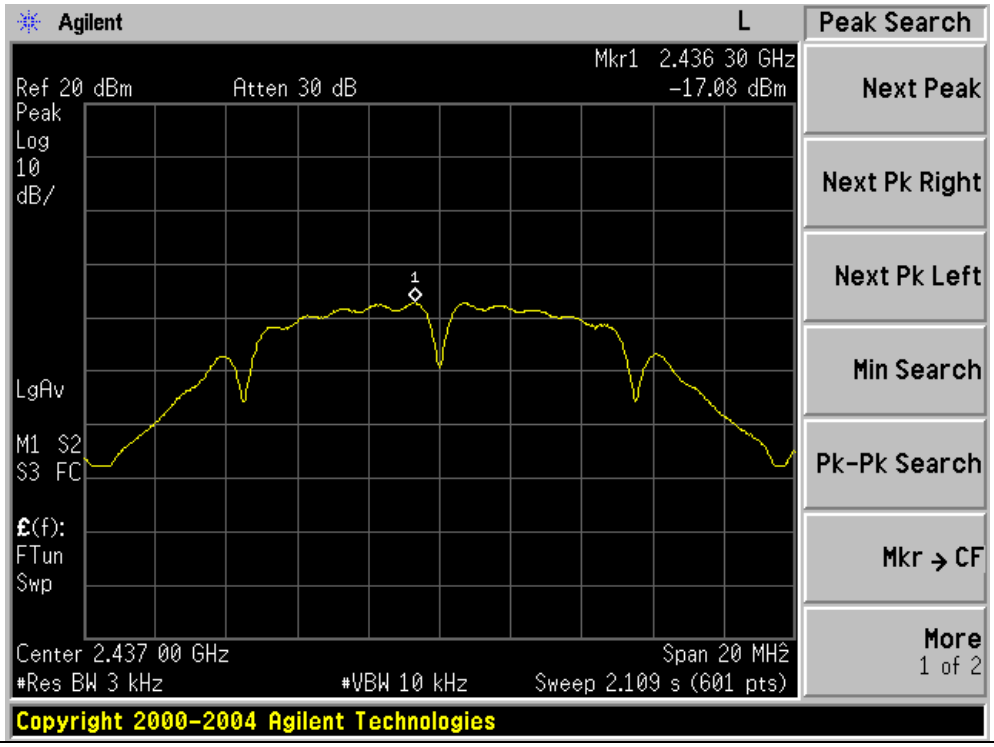
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX b Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm/3KHz)	Limit (dBm/3KHz)	Result
2412 MHz	-17.49	8	PASS
2437 MHz	-17.08	8	PASS
2462 MHz	-16.70	8	PASS

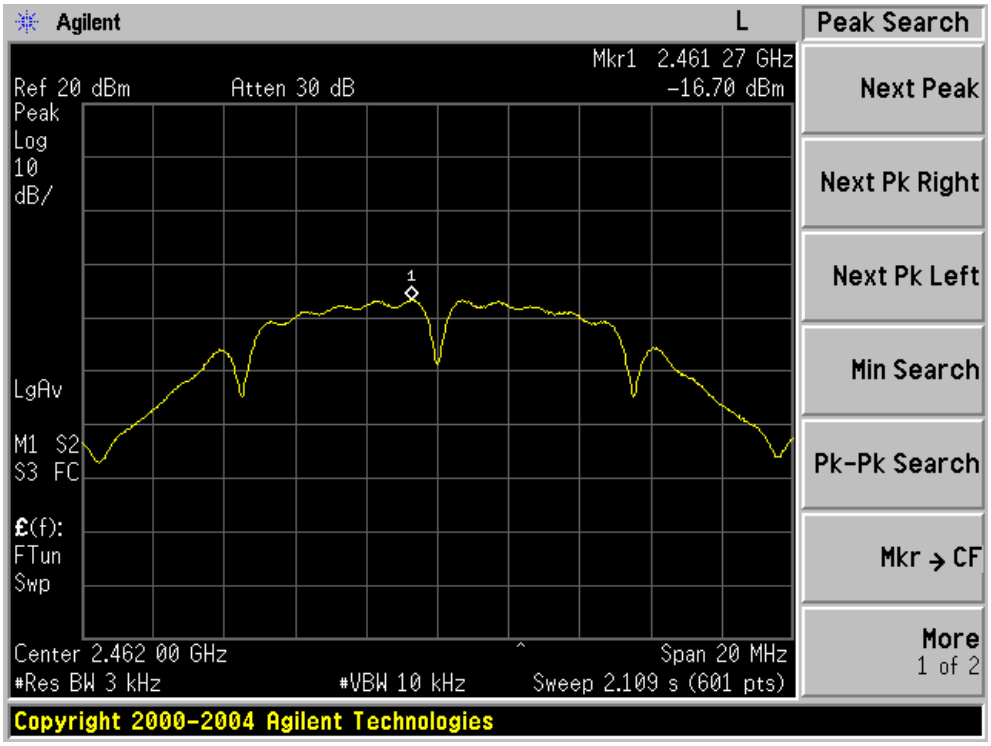
TX CH01



TX CH06



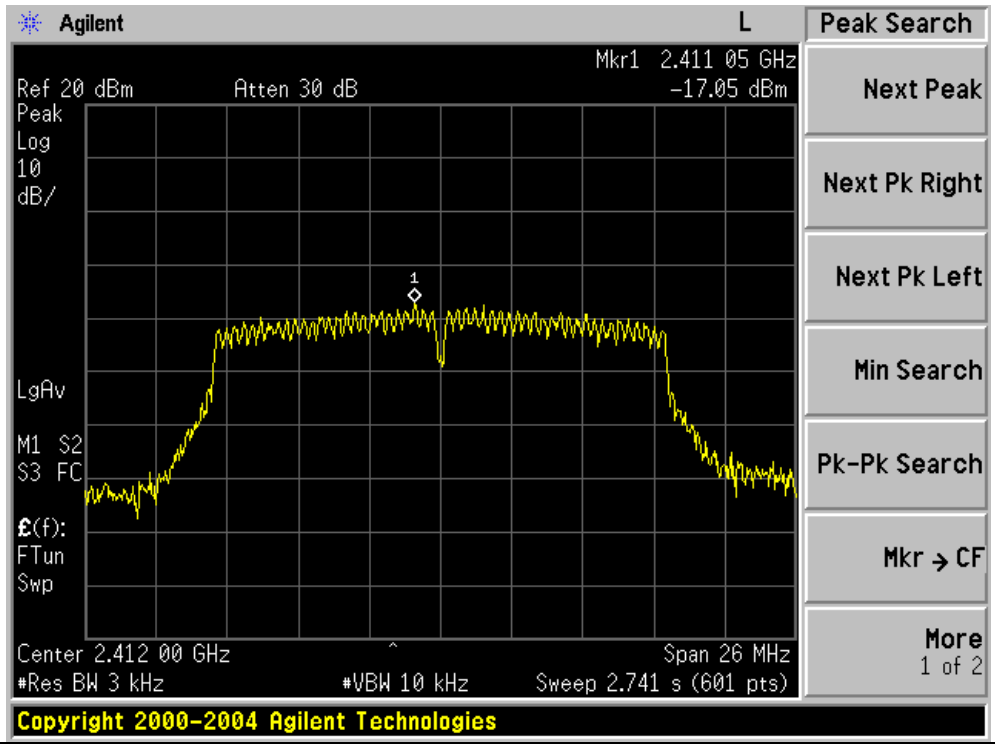
TX CH11



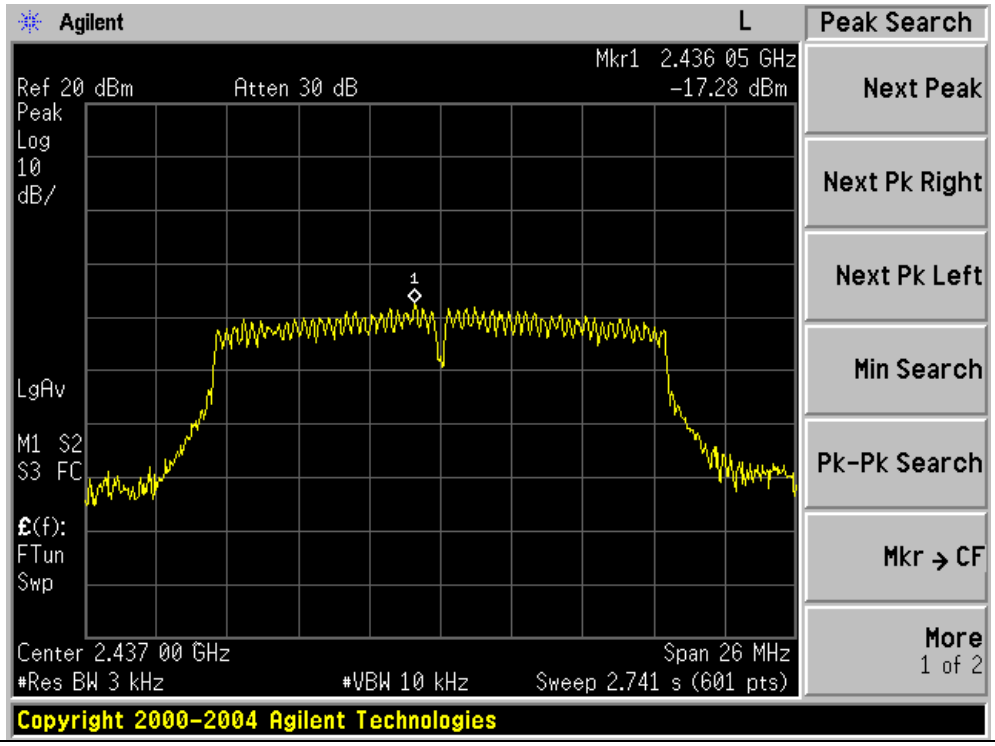
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX g Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm/3KHz)	Limit (dBm/3KHz)	Result
2412 MHz	-17.05	8	PASS
2437 MHz	-17.28	8	PASS
2462 MHz	-18.13	8	PASS

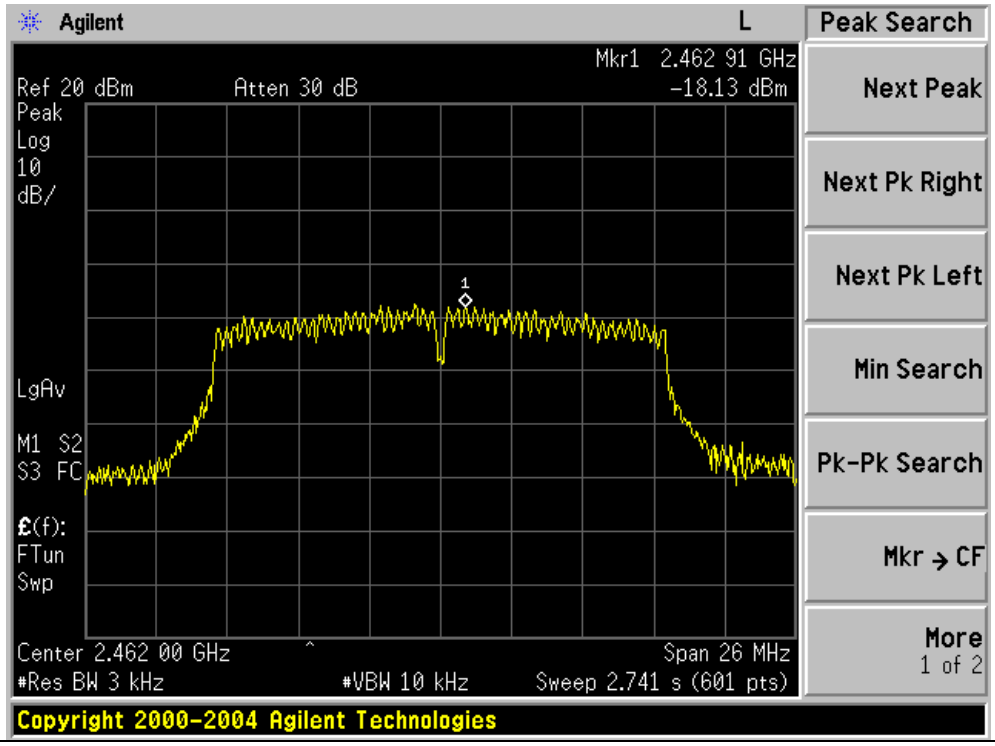
TX CH01



TX CH06



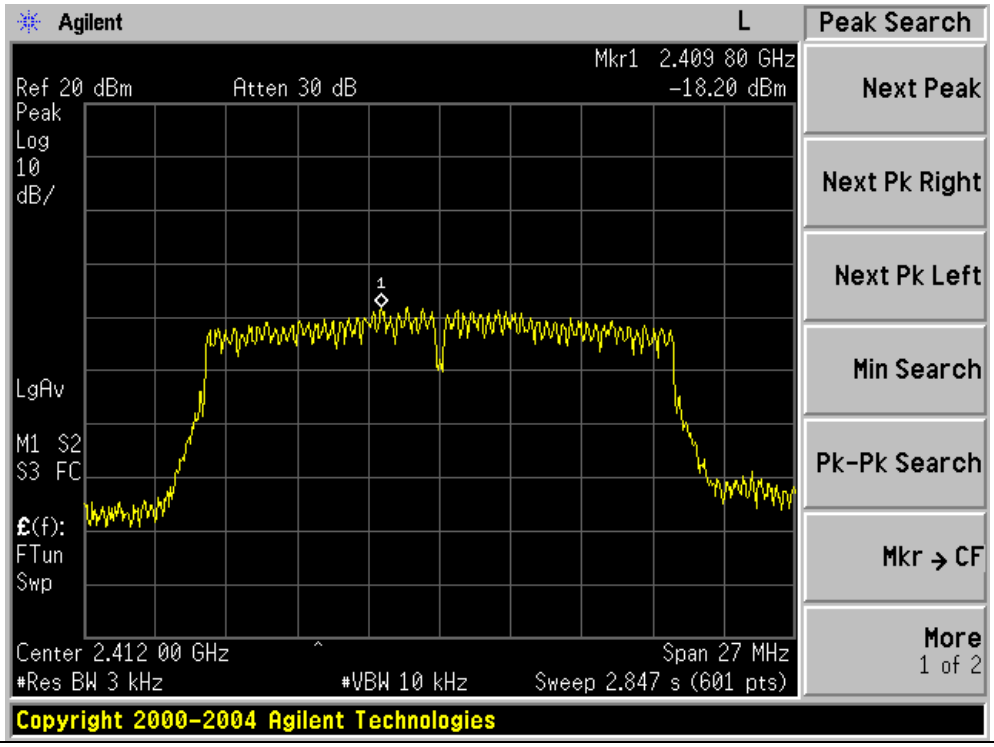
TX CH11



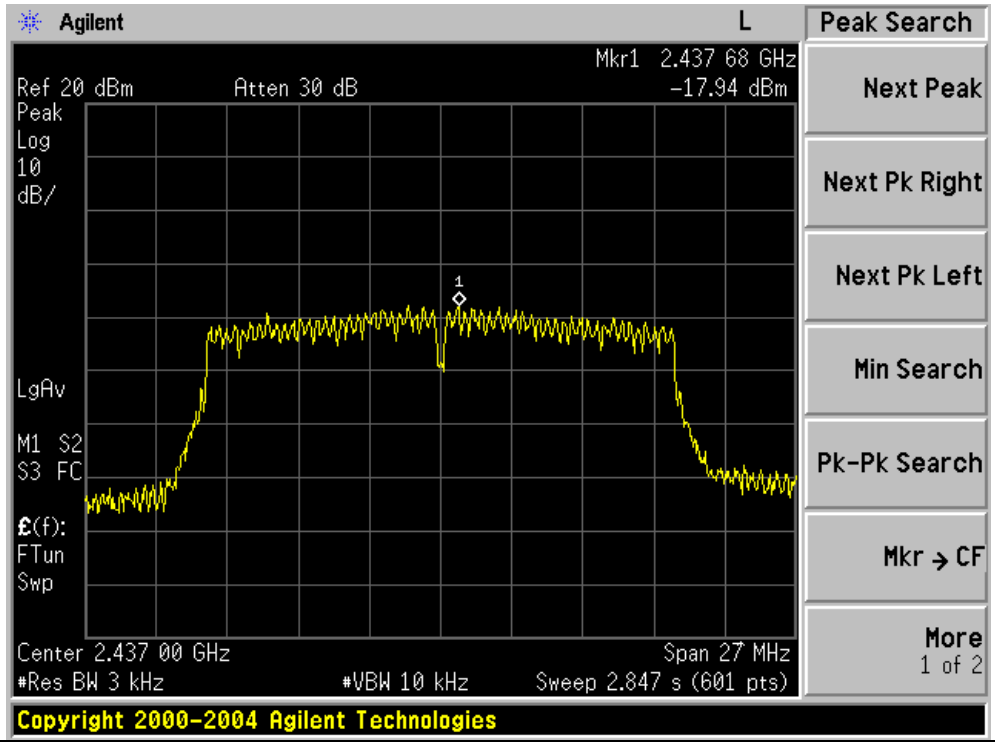
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX n Mode (20MHz)/CH01, CH06, CH11		

Frequency	Power Density (dBm/3KHz)	Limit (dBm/3KHz)	Result
2412 MHz	-18.20	8	PASS
2437 MHz	-17.94	8	PASS
2462 MHz	-17.21	8	PASS

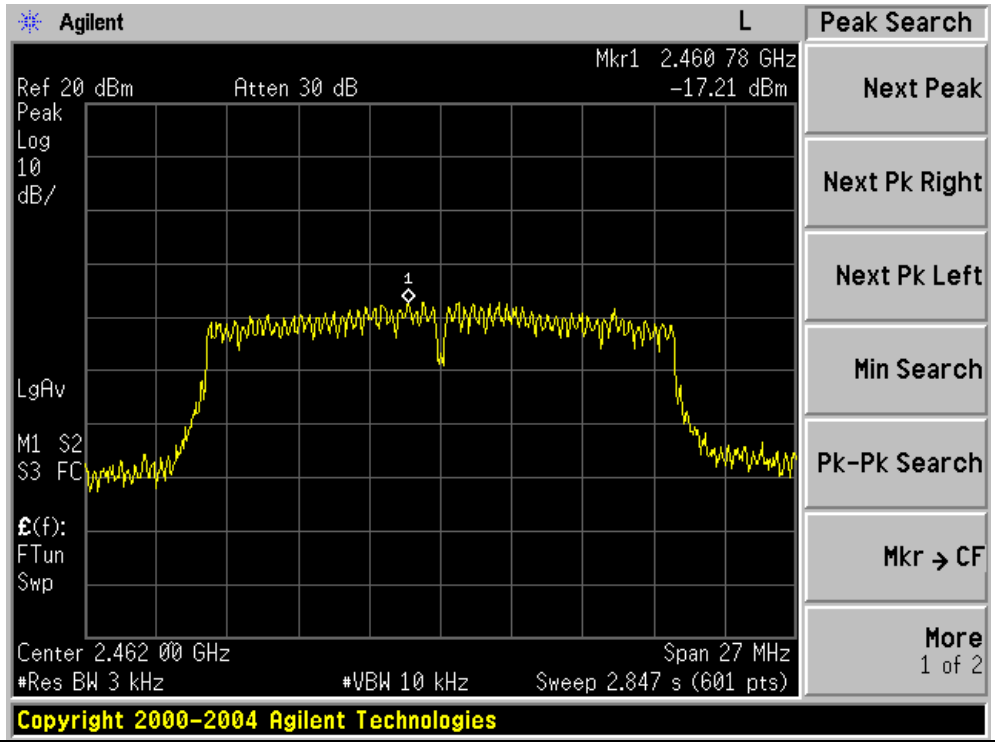
TX CH01



TX CH06



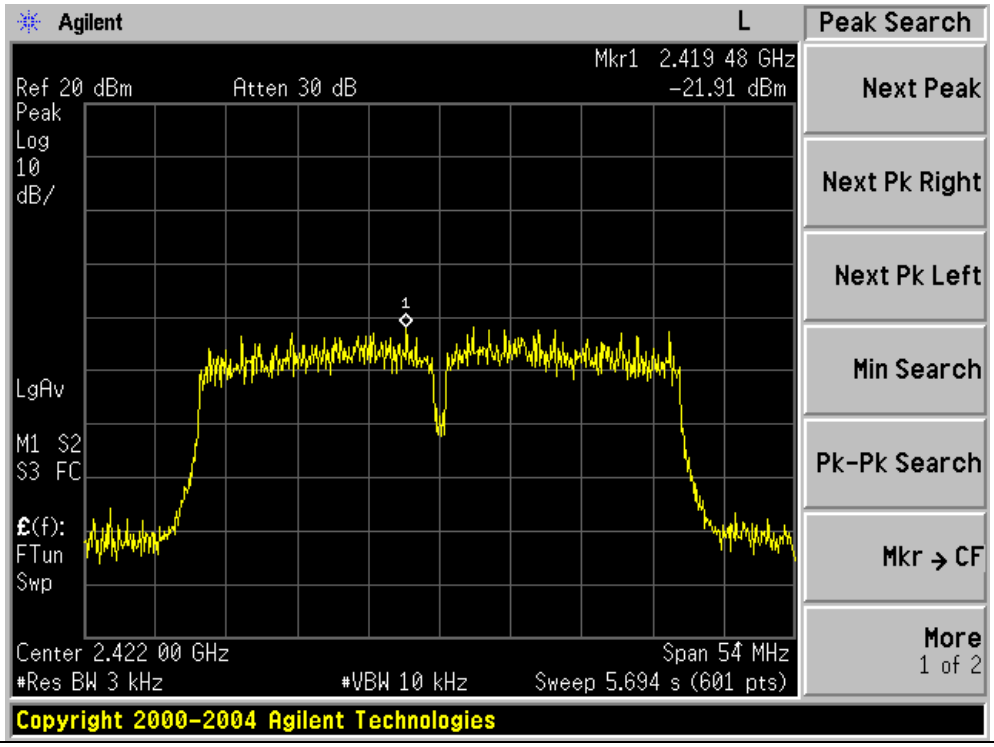
TX CH11



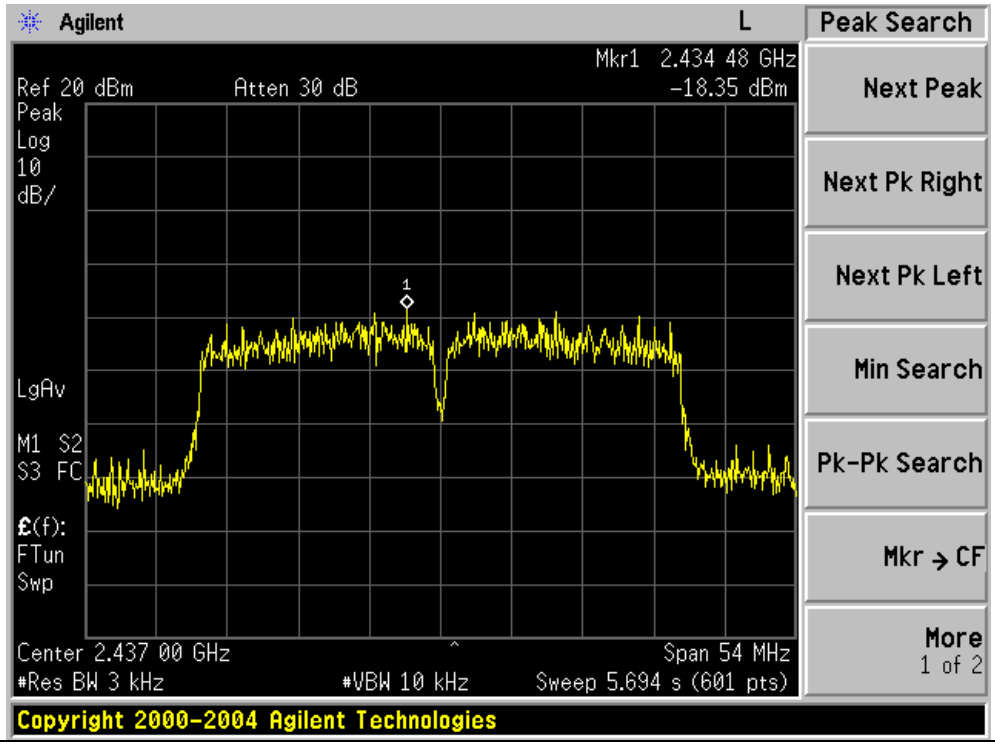
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX n Mode (40MHz)/CH03, CH06, CH09		

Frequency	Power Density (dBm/3KHz)	Limit (dBm/3KHz)	Result
2422 MHz	-21.91	8	PASS
2437 MHz	-18.35	8	PASS
2452 MHz	-21.00	8	PASS

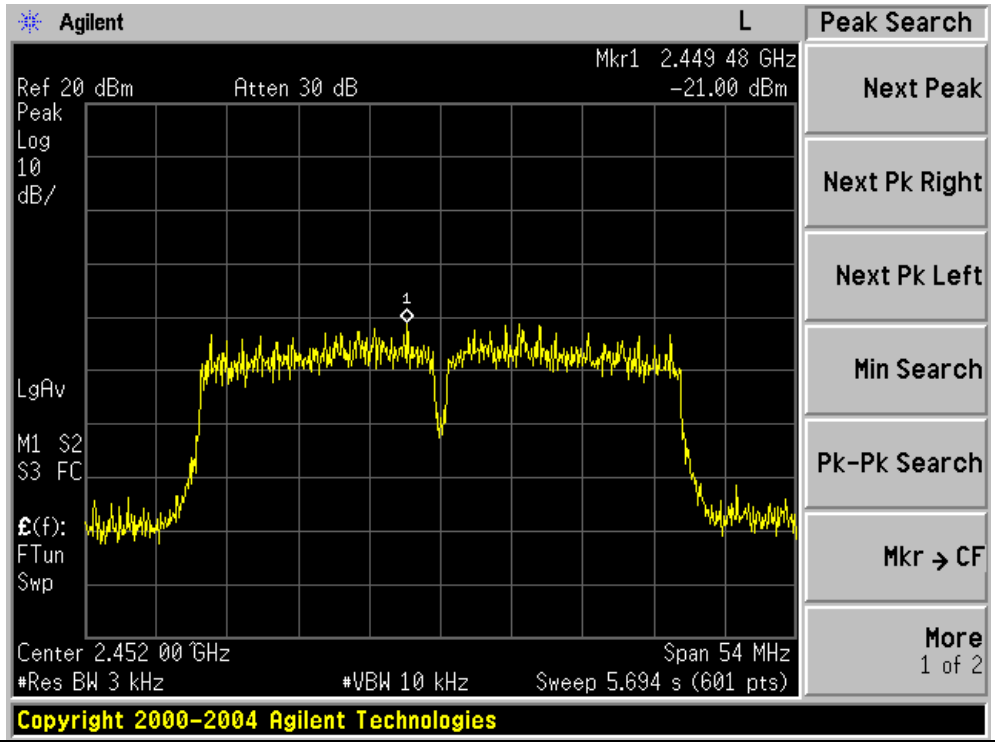
TX CH03



TX CH06



TX CH09



5. BANDWIDTH TEST

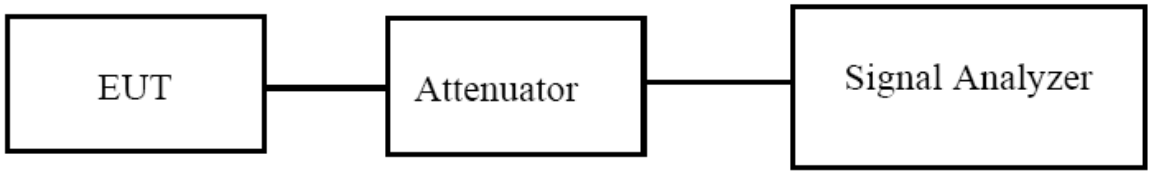
5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

5.1.1 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP



5.1.2 EUT OPERATION CONDITIONS

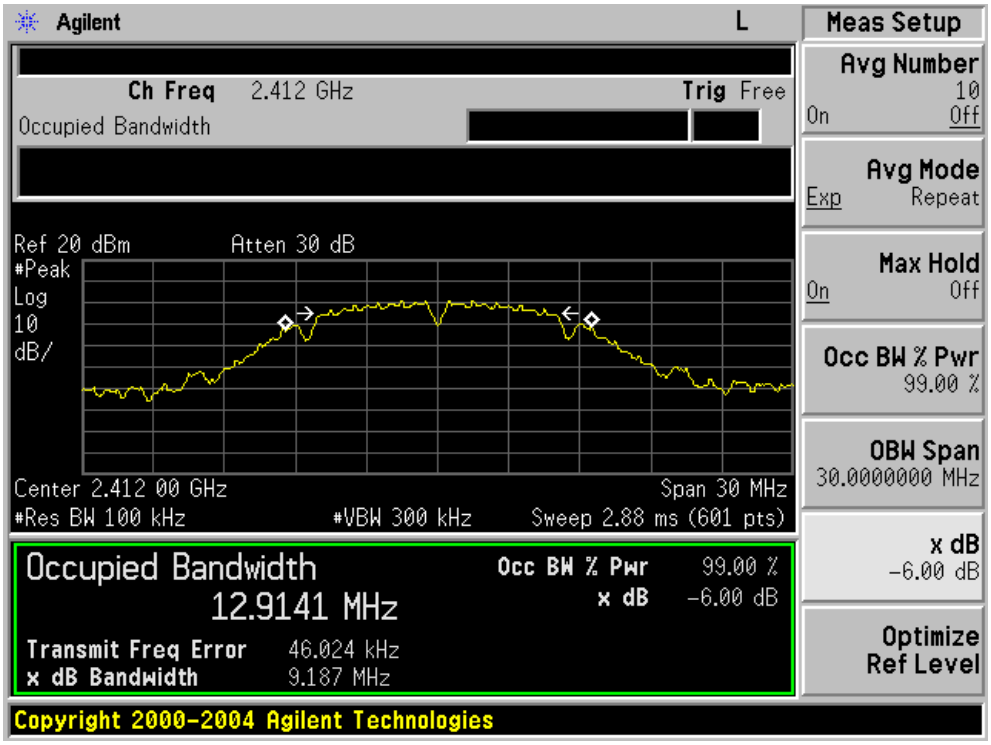
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.3 TEST RESULTS

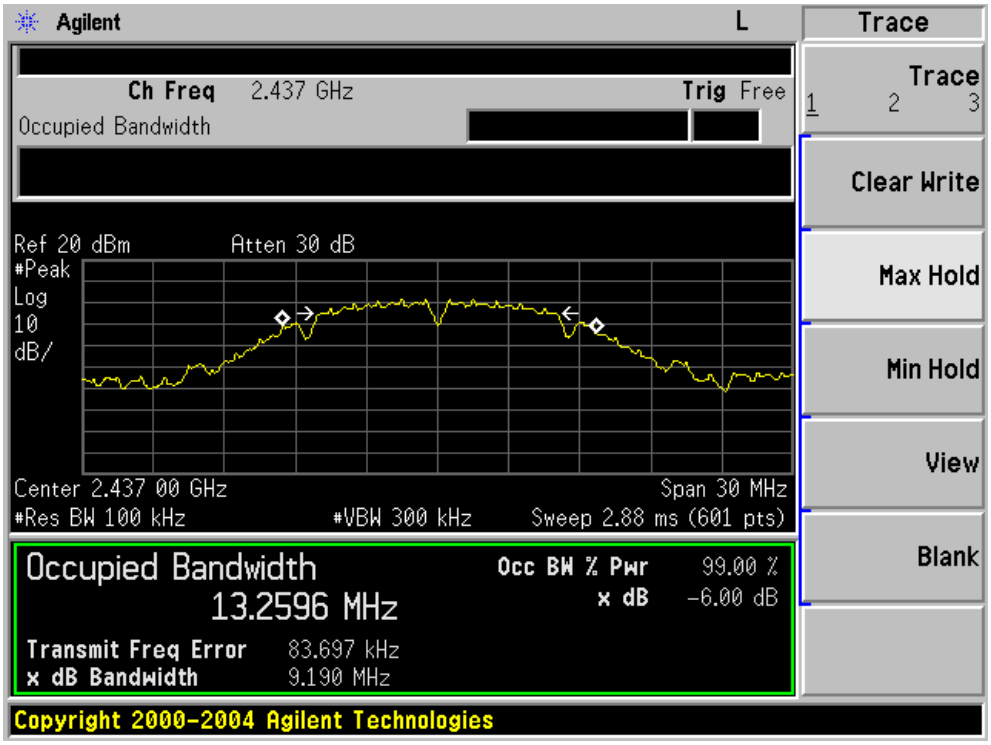
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX b Mode /CH01, CH06, CH11		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	9.187	500	Pass
Middle	2437	9.190	500	Pass
High	2462	9.692	500	Pass

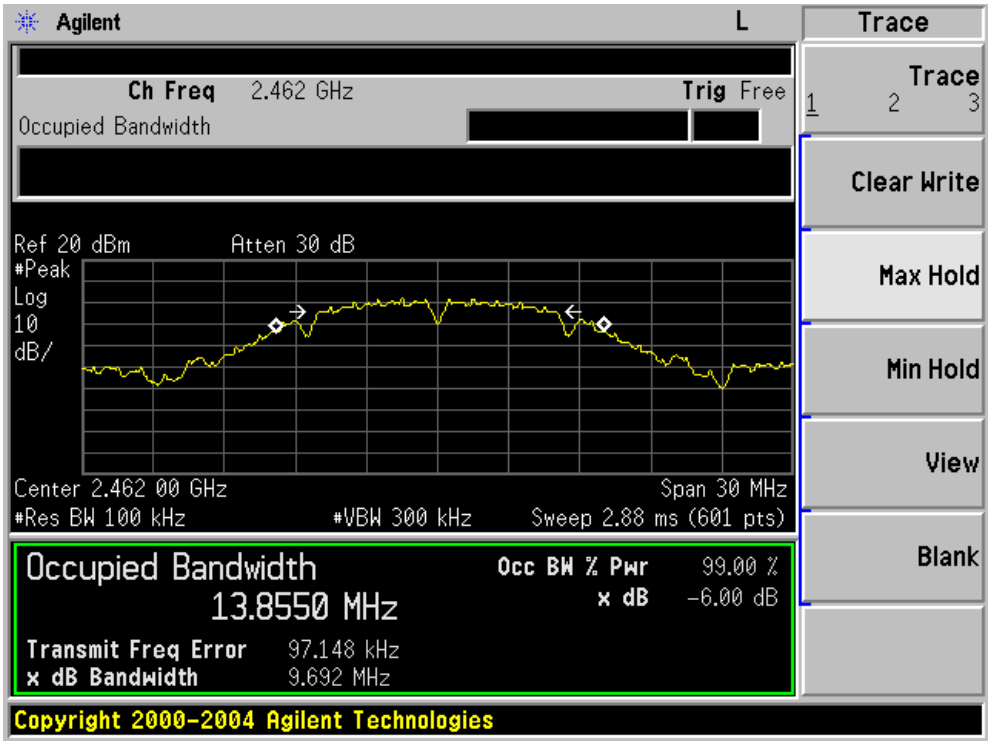
TX CH 01



TX CH 06



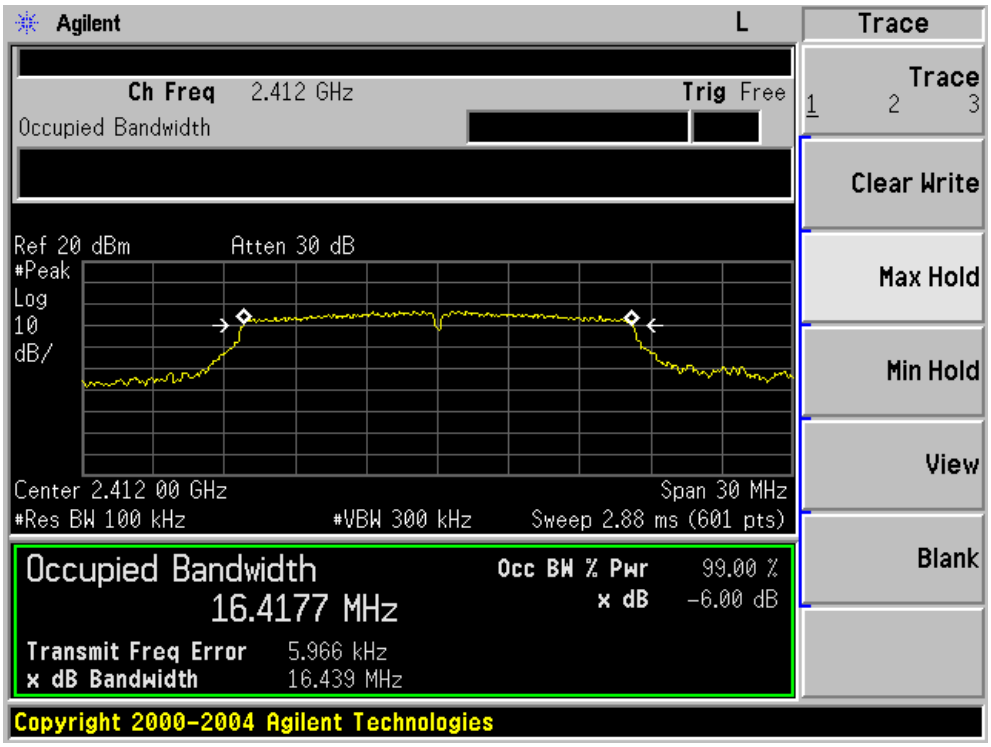
TX CH 11



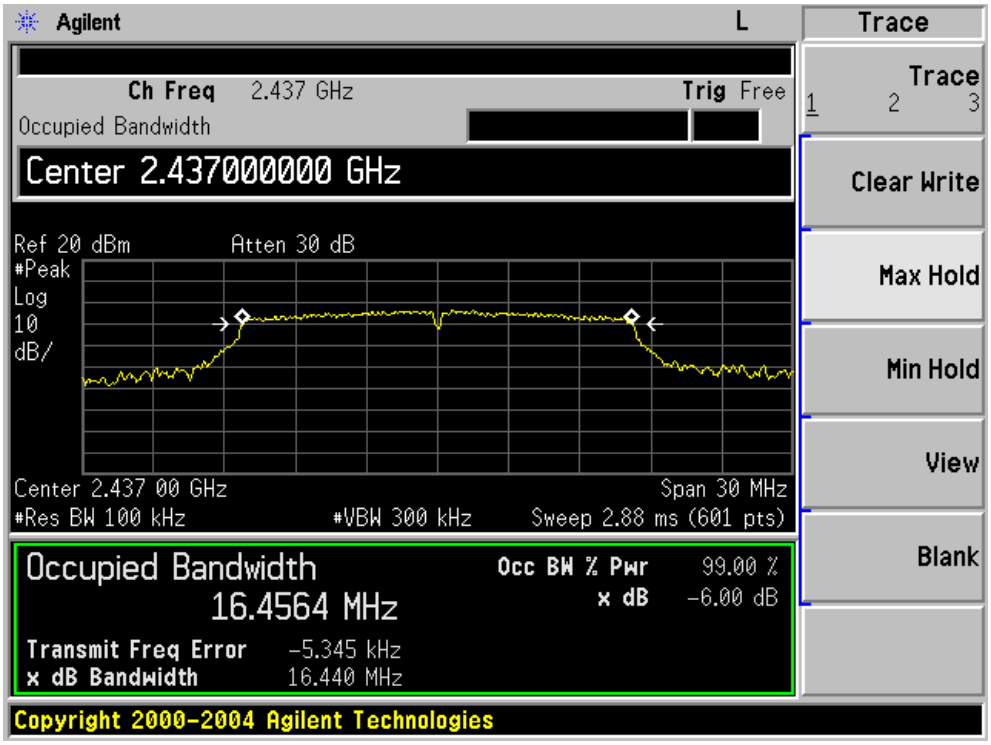
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX g Mode /CH01, CH06, CH11		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.439	500	Pass
Middle	2437	16.440	500	Pass
High	2462	16.449	500	Pass

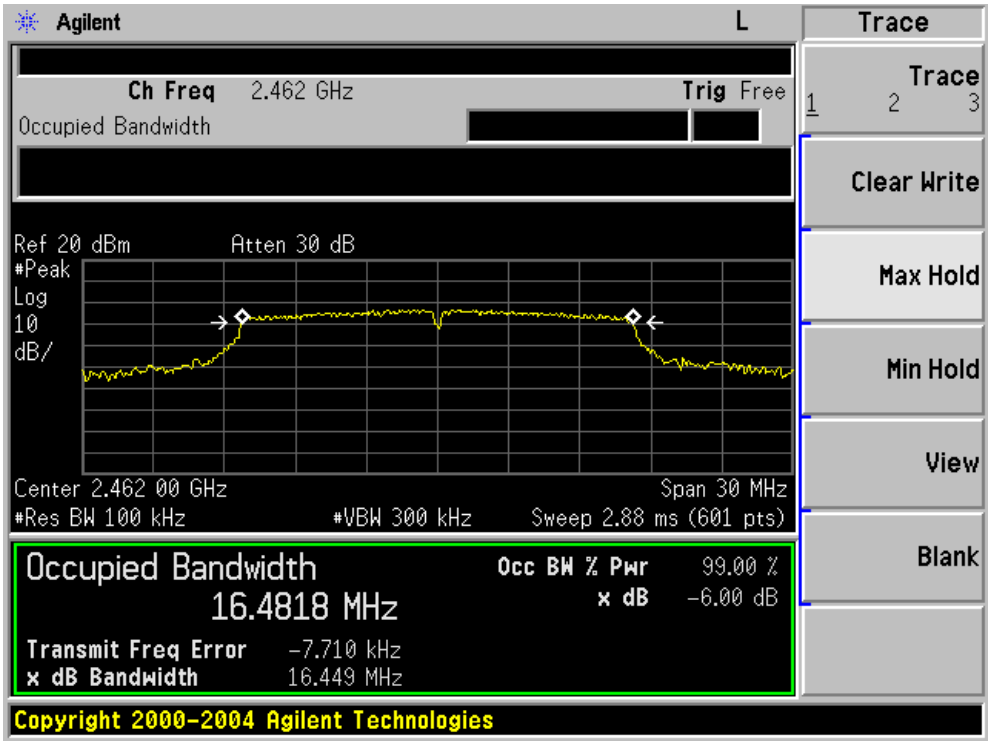
TX CH 01



TX CH 06



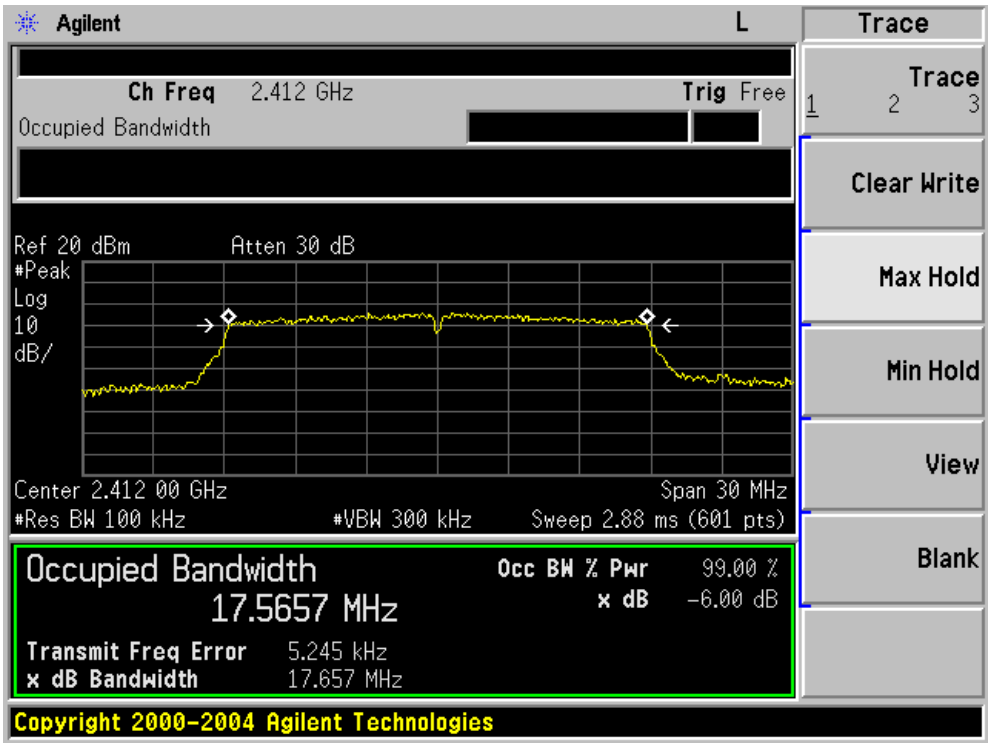
TX CH 11



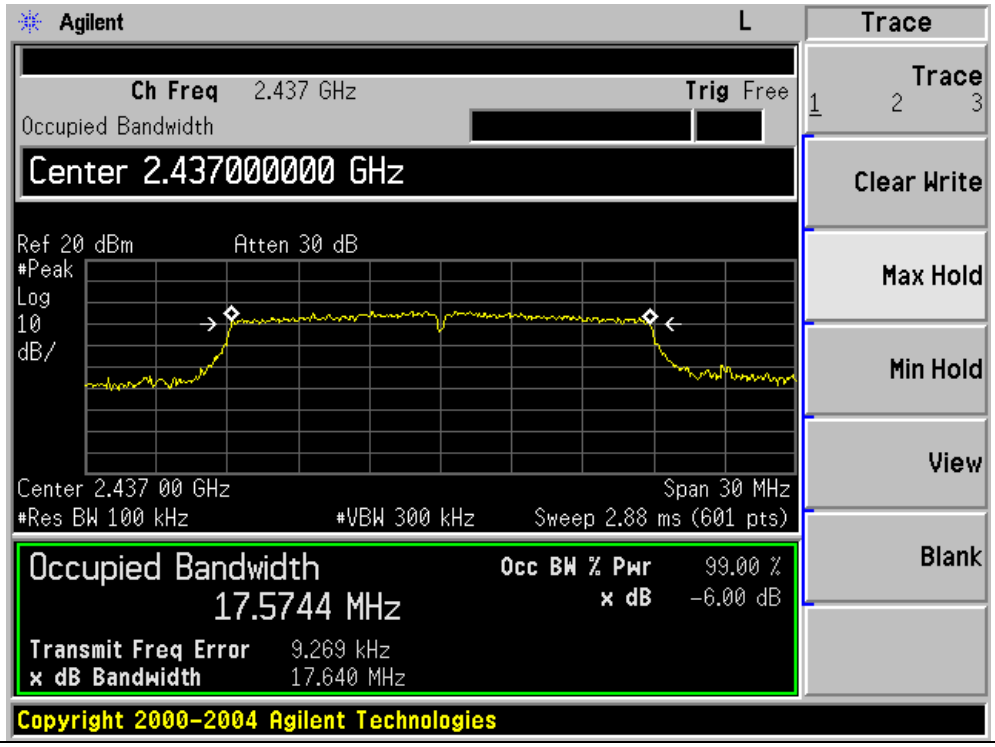
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	17.657	500	Pass
Middle	2437	17.640	500	Pass
High	2462	17.645	500	Pass

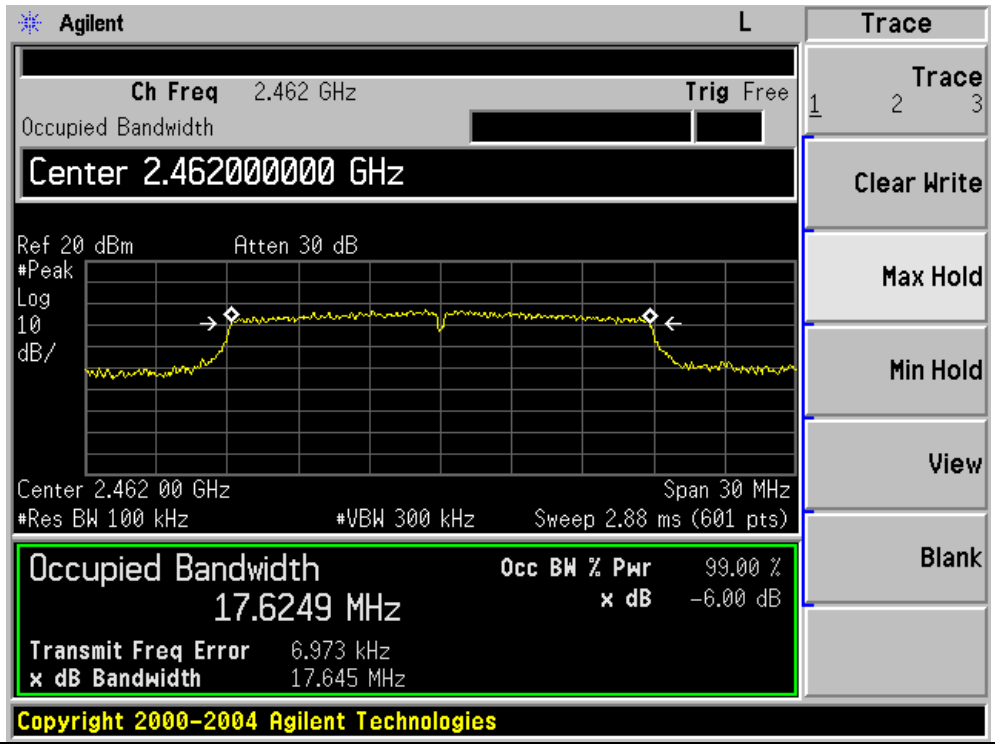
TX CH 01



TX CH 06



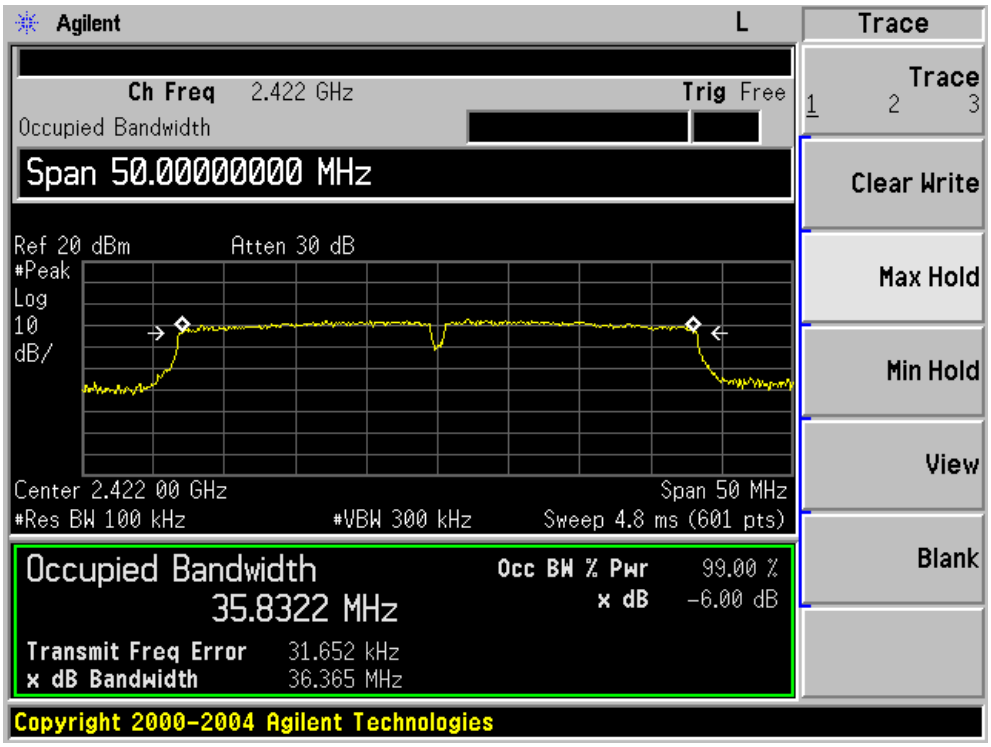
TX CH 11



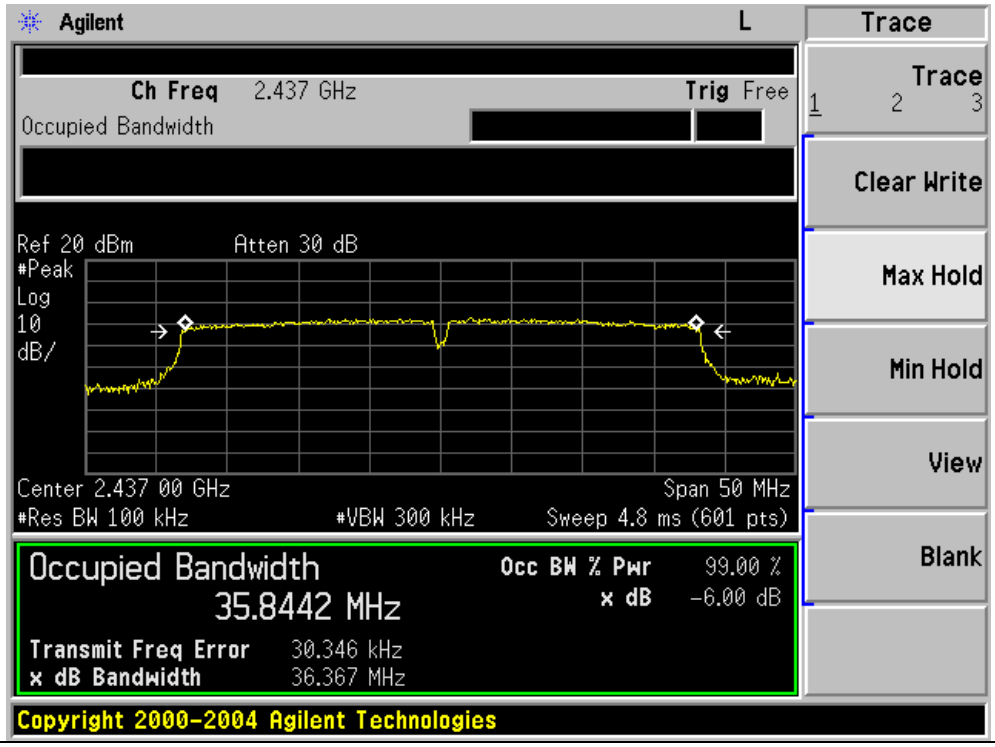
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH09		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2422	36.365	500	Pass
Middle	2437	36.367	500	Pass
High	2452	35.270	500	Pass

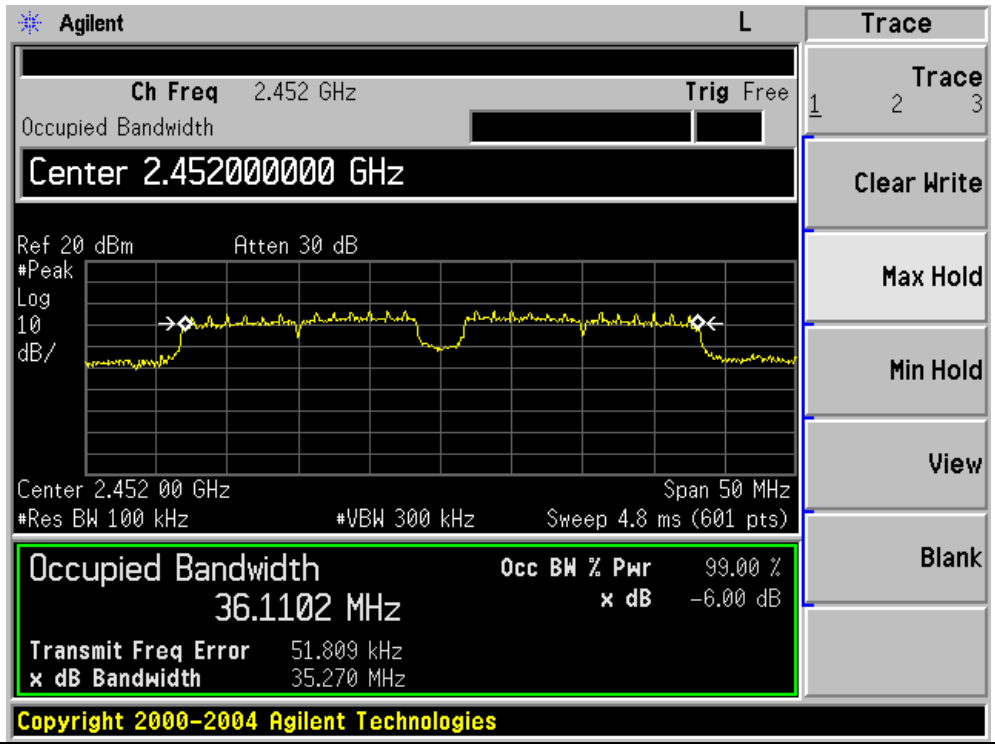
TX CH 03



TX CH 06



TX CH 09



6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

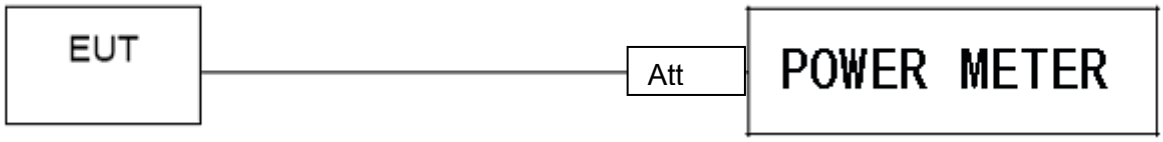
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.8V
Test Mode ：	TX b/g/n(20M/40M) Mode		

Test Channe	Frequency	Maximum Peak Conducted Output Power（PK）	Maximum Peak Conducted Output Power（AV）	LIMIT
	(MHz)	(dBm)	(dBm)	dBm
TX 802.11b Mode				
CH01	2412	13.23	11.27	30
CH06	2437	13.38	11.42	30
CH11	2462	14.03	12.07	30
TX 802.11g Mode				
CH01	2412	10.88	8.92	30
CH06	2437	11.32	9.36	30
CH11	2462	12.20	10.24	30
TX 802.11n(20) Mode				
CH01	2412	10.38	8.42	30
CH06	2437	10.52	8.56	30
CH11	2462	10.30	8.34	30
TX 802.11n(40) Mode				
CH03	2422	7.68	5.72	30
CH06	2437	7.85	5.89	30
CH09	2452	7.63	5.67	30

7. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

APPLICABLE STANDARD

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated 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) (see §15.205(c)).

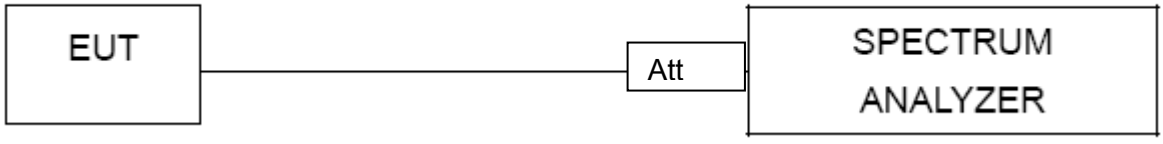
TEST PROCEDURE

a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
c) Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
e) Repeat above procedures until all measured frequencies were complete.

7.1 DEVIATION FROM STANDARD

No deviation.

7.2 TEST SETUP



7.3 EUT OPERATION CONDITIONS

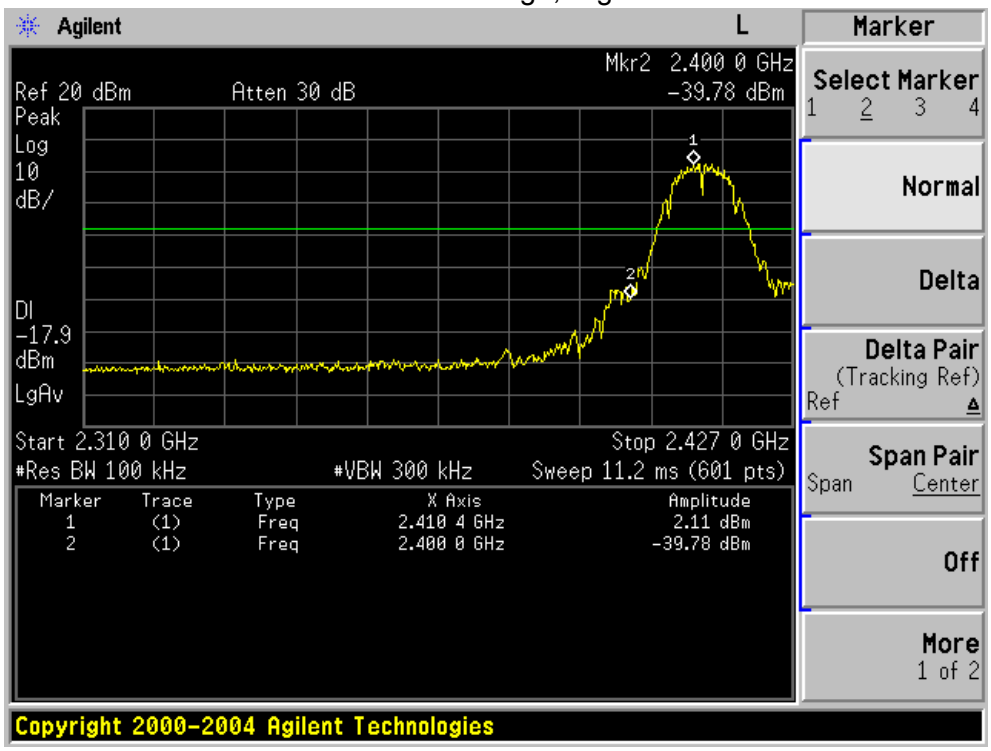
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.4 TEST RESULTS

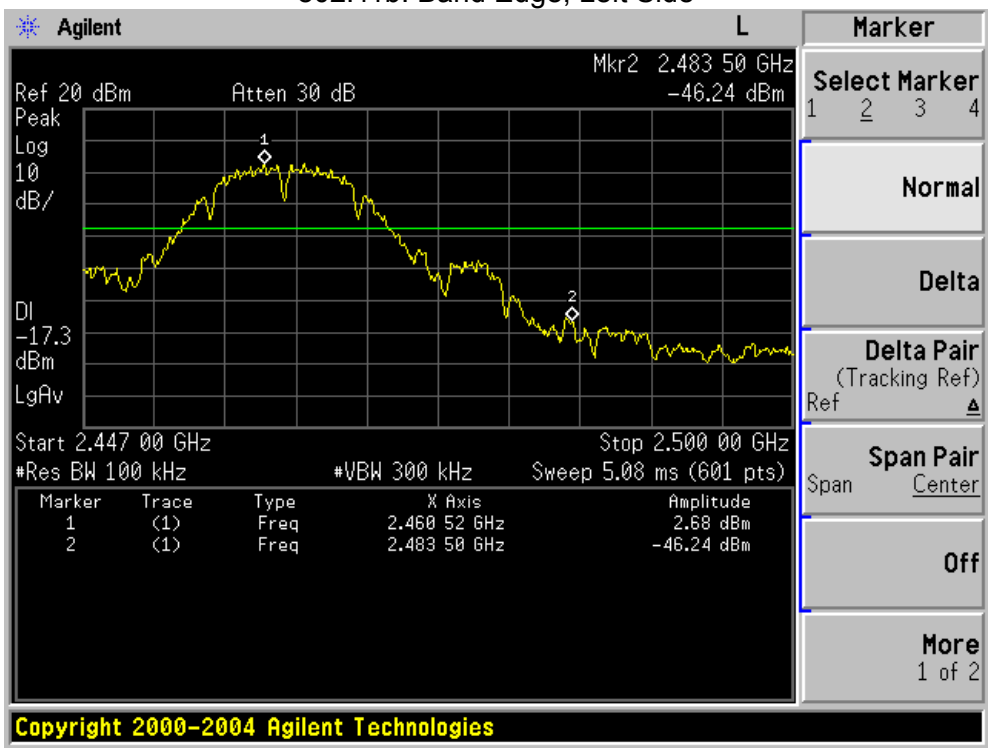
EUT：	Smartphone	Model Name ：	GLB-MOB55
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.8V

Frequency Band MHz	Delta Peak to band emission (dBc)	＞Limit (dBc)	Result
802.11b mode			
2400	41.89	20	Pass
2483.5	48.92	20	Pass
802.11g mode			
2400	32.22	20	Pass
2483.5	39.13	20	Pass
802.11n-HT20 mode			
2400	31.47	20	Pass
2483.5	35.32	20	Pass
802.11n-HT40 mode			
2400	36.28	20	Pass
2483.5	35.64	20	Pass

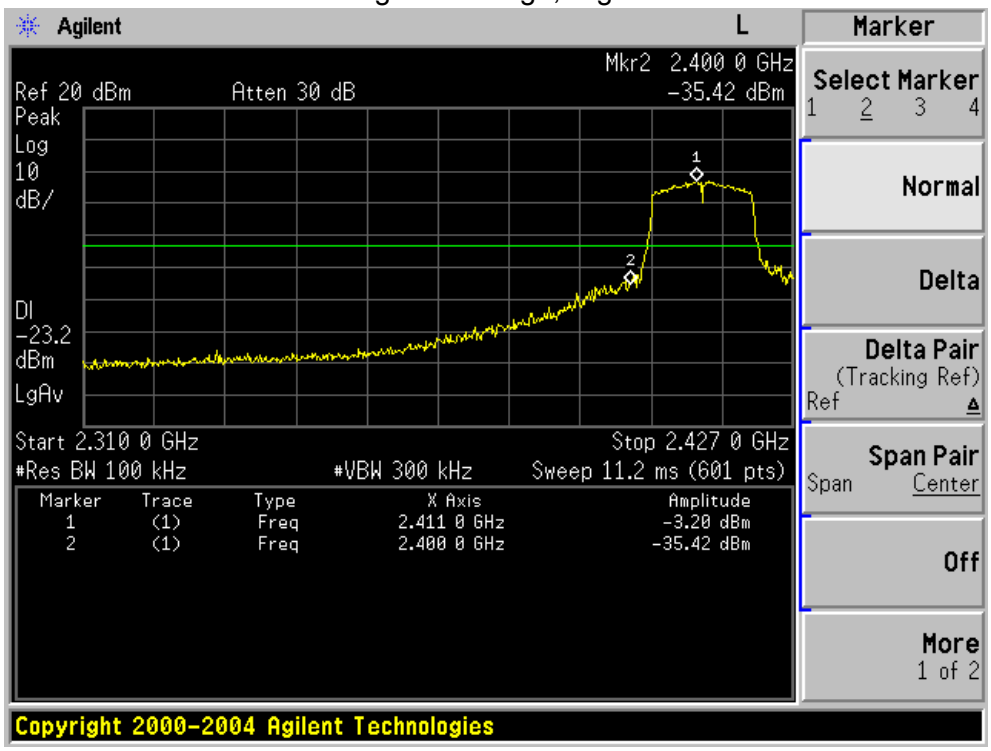
802.11b: Band Edge, Right Side



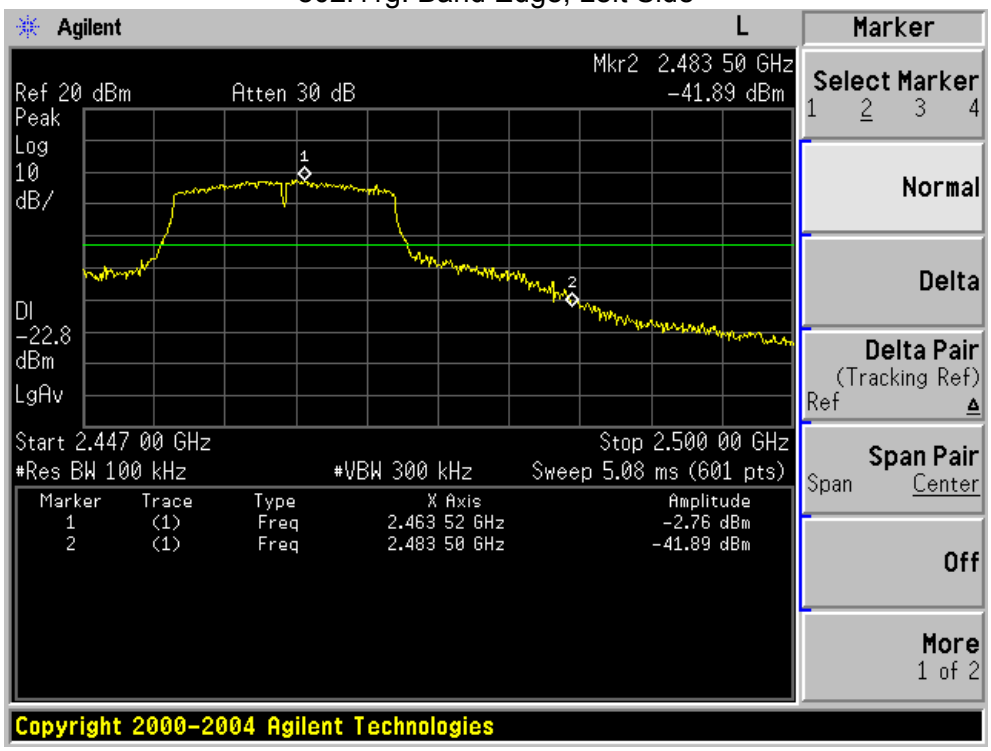
802.11b: Band Edge, Left Side



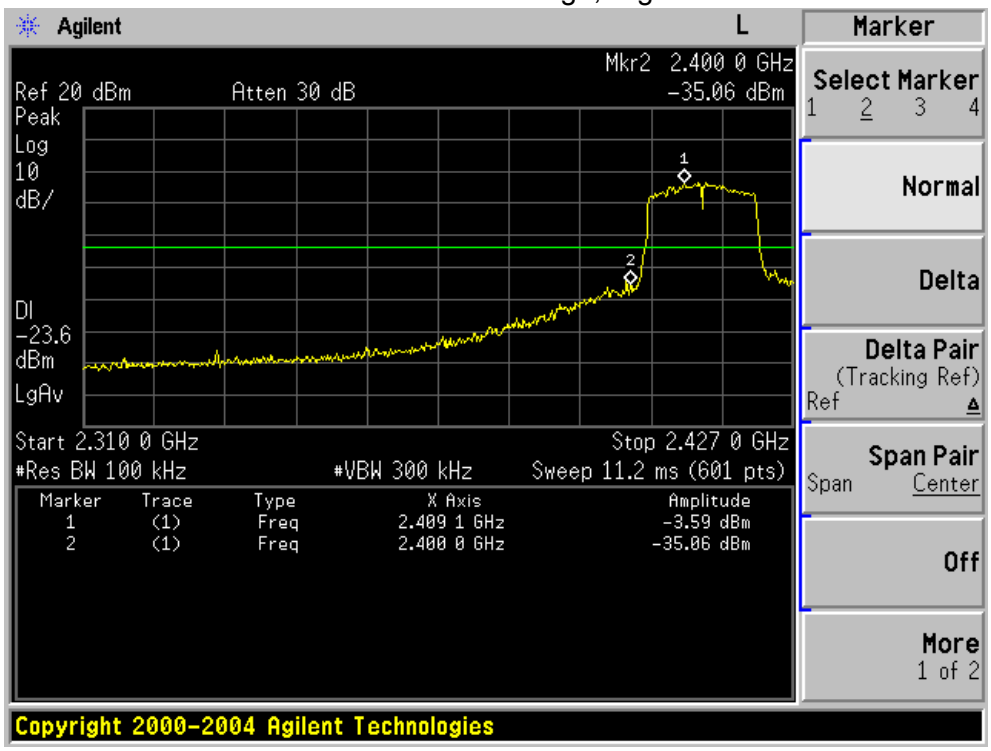
802.11g: Band Edge, Right Side



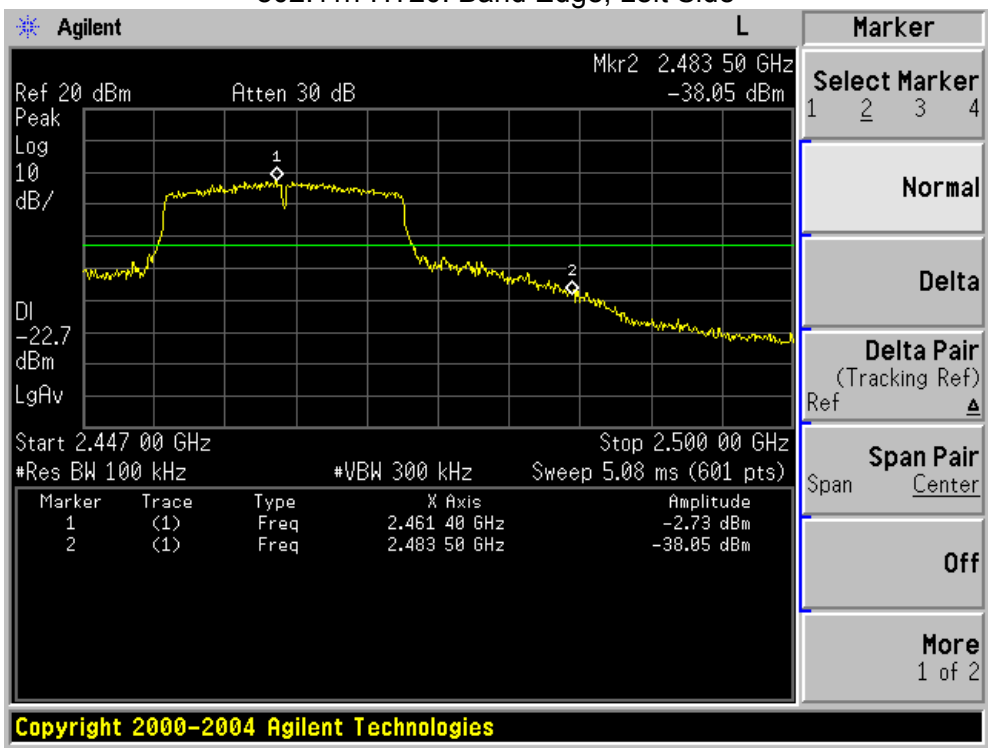
802.11g: Band Edge, Left Side



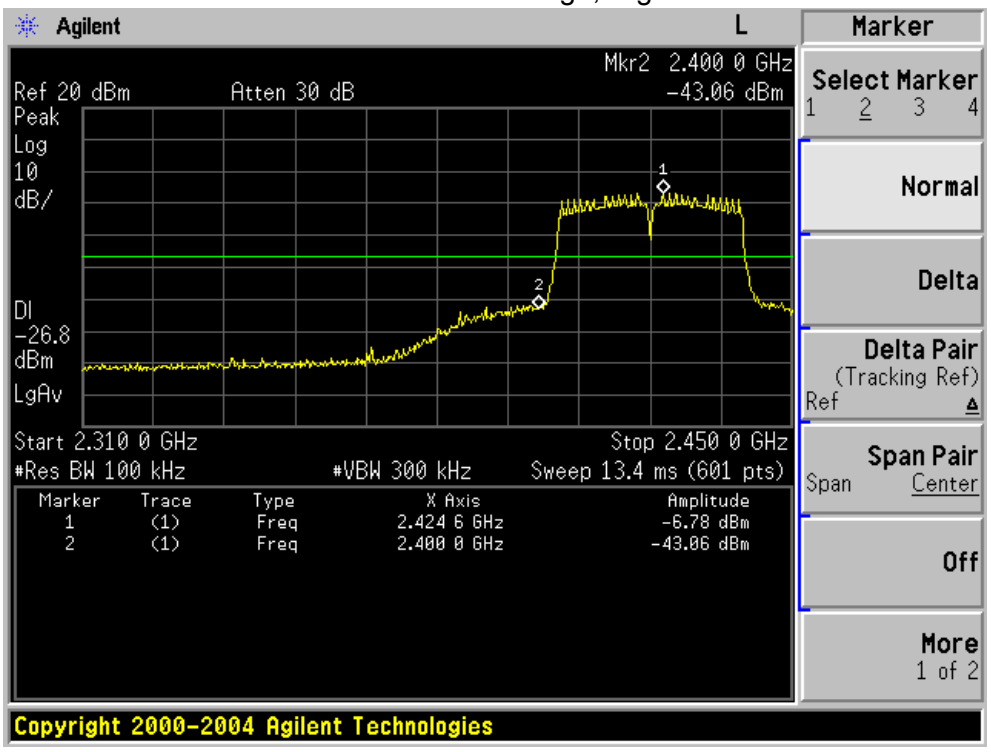
802.11n-HT20: Band Edge, Right Side



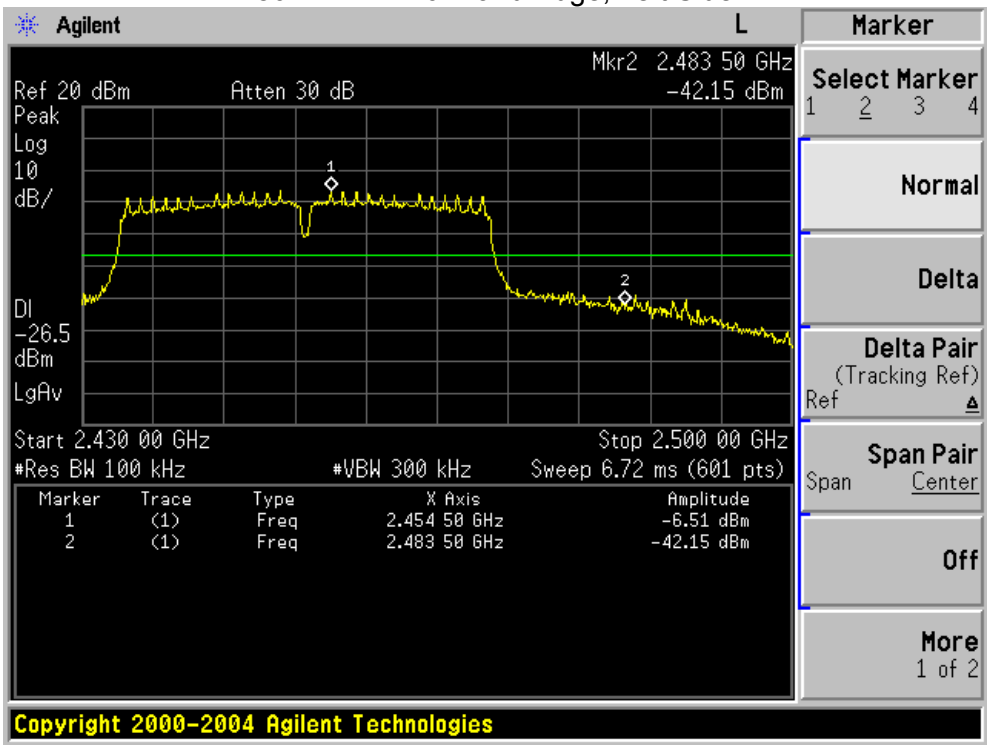
802.11n-HT20: Band Edge, Left Side



802.11n-HT40: Band Edge, Right Side



802.11n-HT40: Band Edge, Left Side



8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

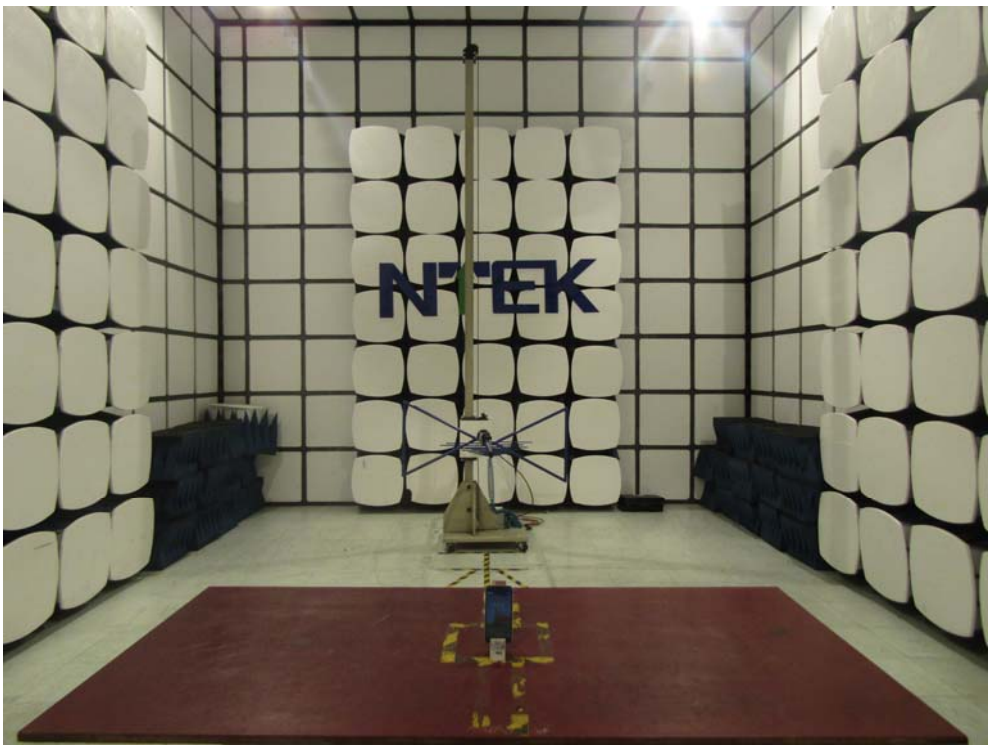
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

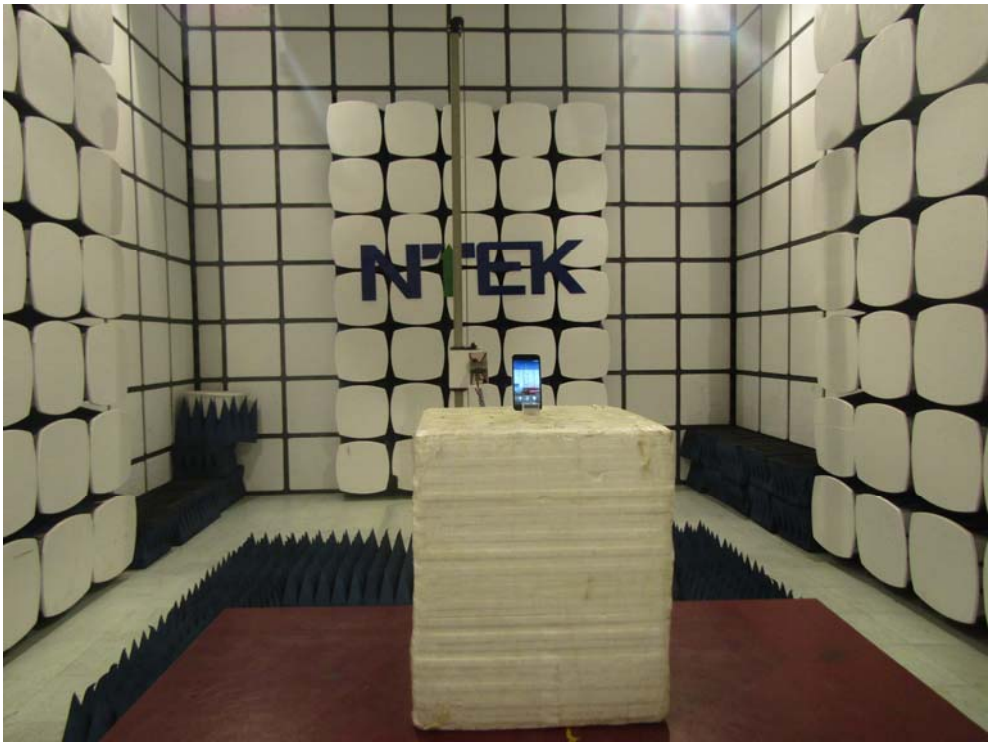
8.2 EUT ANTENNA

The EUT antenna is permanent attached antenna. It comply with the standard requirement.

9. EUT TEST PHOTO

Radiated Measurement Photos





CONDUCTED EMISSION Photos