

FCC 47 CFR PART 15 SUBPART C

Product Type : Smartphone
Applicant : HTC Corporation
Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County
330, Taiwan
Trade Name : HTC
Model Number : PC70110
FCC ID : NM8PC70110
Test Specification : FCC 47 CFR PART 15 SUBPART C: Oct., 2009
ANSI C63.4-2003
Issue Date : Apr. 06, 2010

Issue by

A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Apr. 06, 2010	Initial Issue	

Test Report Verification

Issued Date: 2010/04/06

Product Type : Smartphone
Applicant : HTC Corporation
Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330,
Taiwan
Trade Name : HTC
Model Number : PC70110
FCC ID : NM8PC70110
EUT Rated Voltage : DC 5.0V, 1.0A
Test Voltage : 120 Vac / 60 Hz
Applicable Standard : FCC 47 CFR PART 15 SUBPART C: Oct., 2009
ANSI C63.4-2003
Test Result : Complied
Performed Lab. : A Test Lab Techno Corp.

No. 140-1, Changan Street, Bade City,
Taoyuan Country 334, Taiwan R.O.C.

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Taiwan Accreditation Foundation accreditation number:
1330



<http://www.atl-lab.com.tw/e-index.htm>

The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the Electromagnetic Compatibility Directive 2004/108/EC and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By : Miller Lee
(Manager) (Miller Lee)

Reviewed By : Gary Wu
(Testing Engineer)

(Gary Wu)

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1 General Information

1.1 Summary of Test Result

Standard		Item	Result	Remark
15.247	RSS-GEN			
15.207	7.2.2	AC Power Conducted Emission	PASS	----
----	6	Receiver Radiated Emissions	PASS	----
Standard		Item	Result	Remark
15.247	RSS-210			
15.247(d)	A8.5	Transmitter Radiated Emissions	PASS	----
15.247(b)(3)	A8.4	Max. Output Power	PASS	----
15.247(a)(2)	A8.2 (a)	6dB RF Bandwidth	PASS	----
15.247(e)	A8.2 (b)	Power Spectral Density	PASS	----
15.247(c)	A8.5	Out of Band Conducted Spurious Emission	PASS	----
15.247(d)	A8.5	Band Edge Measurement	PASS	----
15.247(c)	A8.5	Occupied Bandwidth Measurement	PASS	----
15.203	-	Antenna Requirement	PASS	----

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2 Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.24 dB.

Radiated Emission

The measurement uncertainty of 30 MHz - 1GHz is evaluated as ± 3.072 dB.

2 EUT Description

Product	:	Smartphone
Trade Name	:	HTC
Model Number	:	PC70110
Applicant	:	HTC Corporation No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan
Manufacturer	:	HTC Corporation No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan
FCC ID	:	NM8PC70110
Frequency Range	:	2412 ~ 2462 MHz
Modulation Type	:	IEEE 802.11b:DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g:DSSS(CCK, DQPSK, DBPSK)+ OFDM(QPSK, BPSK, 16-QAM, 64-QAM)
Antenna Type	:	PIFA
Antenna Gain	:	0.8 dBi
Max. RF Output Power	:	IEEE 802.11b: 0.089 W / 19.49 dBm IEEE 802.11g: 0.192 W / 22.84 dBm

3 Test Methodology

3.1. Mode of Operation

Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

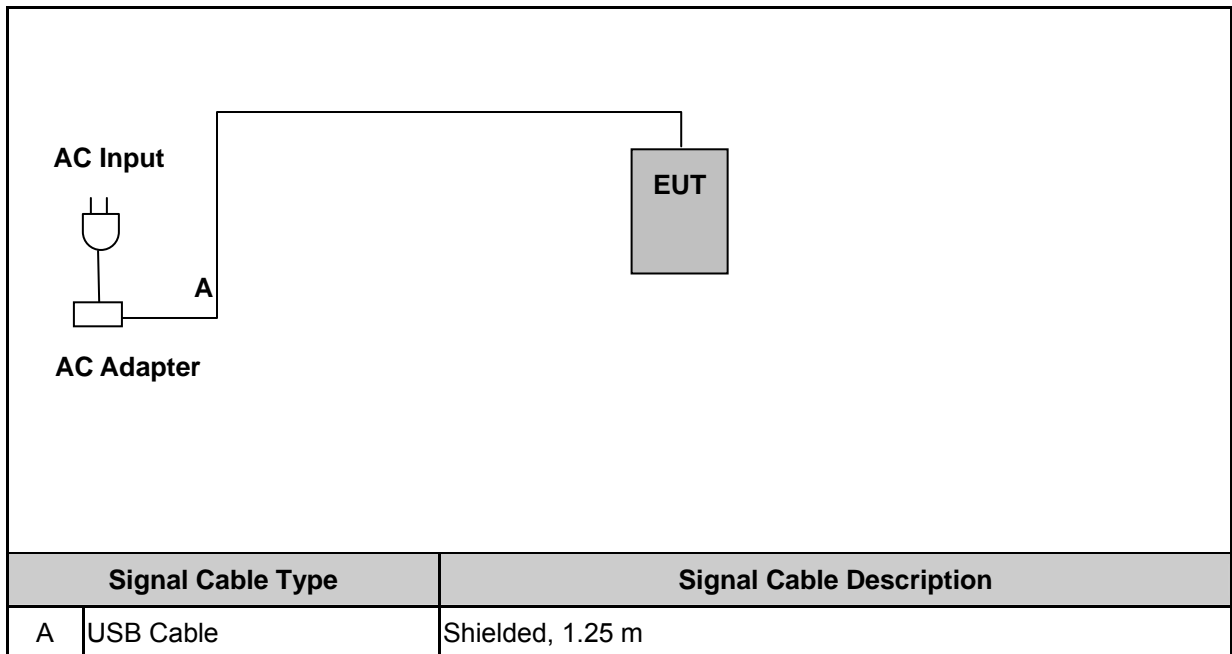
Pre-Test Mode
Mode 1: IDLE Mode
Mode 2: Normal Operation Mode
Mode 3: IEEE 802.11b Link Mode
Mode 4: IEEE 802.11g Link Mode
EUT Pre-Test Source
1. Sample 1 st
2. Sample 2 nd
AC Adapter Pre-Test Source
AC Adapter #1
AC Adapter #2
AC Adapter #3
AC Adapter #4

Final-Test Mode
Mode 1: IDLE Mode
Mode 2: Normal Operation Mode
Mode 3: IEEE 802.11b Link Mode
Mode 4: IEEE 802.11g Link Mode
Final-Test of EUT Source
Sample 1 st
Final -Test of AC Adapter Source
AC Adapter #1

3.2. EUT Exercise Software

1.	Setup the EUT shown on 3.3.
2.	Turn on the power of all equipment.
3.	Turn on Wi-Fi function link to AP.

3.3. Configuration of Test System Details



3.4. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	25
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

4 Conducted Emission Measurement

4.1. Limit

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

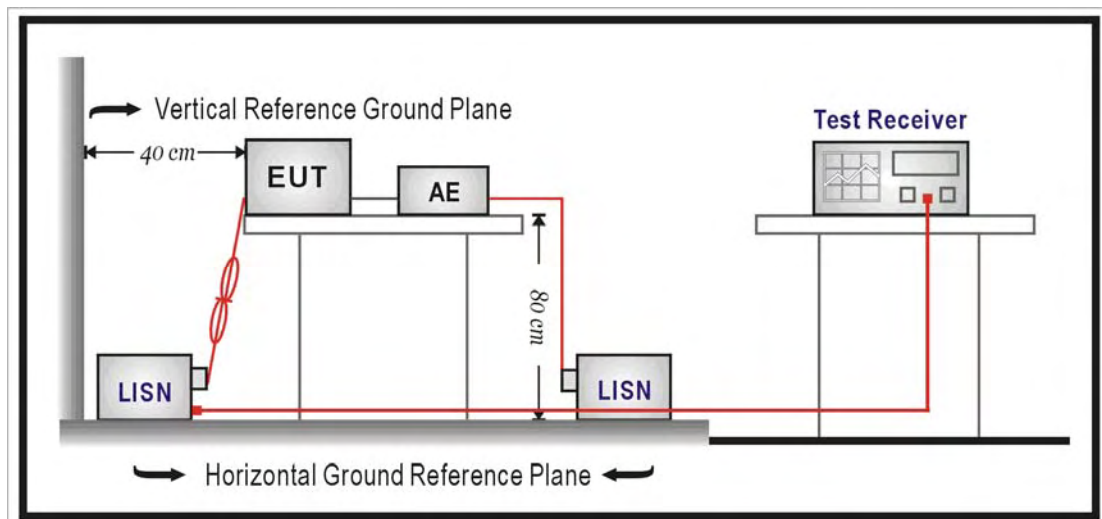
4.2. Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	07/01/2009	(1)
LISN	EMCO	3816/2 SH	00060110	06/05/2009	(1)
LISN	EMCO	3816/2 SH	00060111	06/29/2009	(1)
Transient Limiter	ELECTRO-METRICS	EM-7600	777	09/22/2009	(2)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

4.3. Test Setup



4.4. Test Procedure

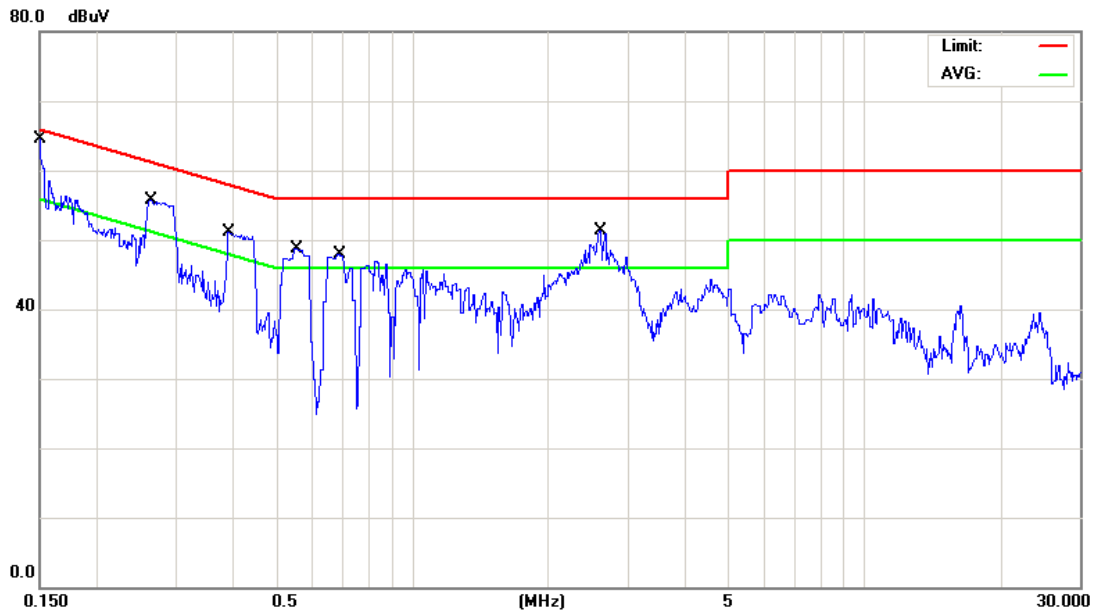
The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.1.

4.5. Test Result

File :10-0016-SE(MAIN-A3B3C3D3) Data :#1 Date: 2010/01/20 Time: 下午 01:36:06



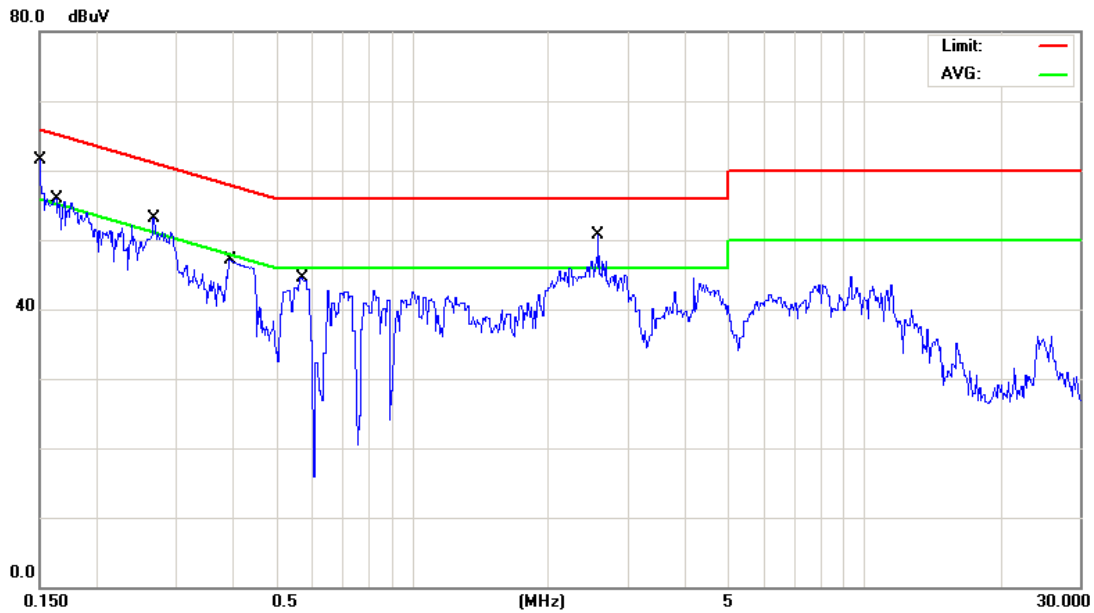
Site : Conducted Phase: **L1** Temperature: 26 °C
 Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55 %
 EUT: Smartphone
 M/N: PC70110
 Mode: 1
 Note: Adapter #1

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1500	49.80	9.73	59.53	65.99	-6.46	QP	
2		0.1500	28.20	9.73	37.93	55.99	-18.06	AVG	
3		0.2634	40.80	9.75	50.55	61.32	-10.77	QP	
4		0.2634	22.20	9.75	31.95	51.32	-19.37	AVG	
5		0.3915	35.00	9.78	44.78	58.03	-13.25	QP	
6		0.3915	12.80	9.78	22.58	48.03	-25.45	AVG	
7		0.5540	34.40	9.79	44.19	56.00	-11.81	QP	
8		0.5540	14.60	9.79	24.39	46.00	-21.61	AVG	
9		0.6889	32.40	9.79	42.19	56.00	-13.81	QP	
10		0.6889	12.60	9.79	22.39	46.00	-23.61	AVG	
11		2.5970	37.20	9.93	47.13	56.00	-8.87	QP	
12		2.5970	24.80	9.93	34.73	46.00	-11.27	AVG	

*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0016-SE(MAIN-A3B3C3D3) Data :#2 Date: 2010/01/20 Time: 下午 01:41:22



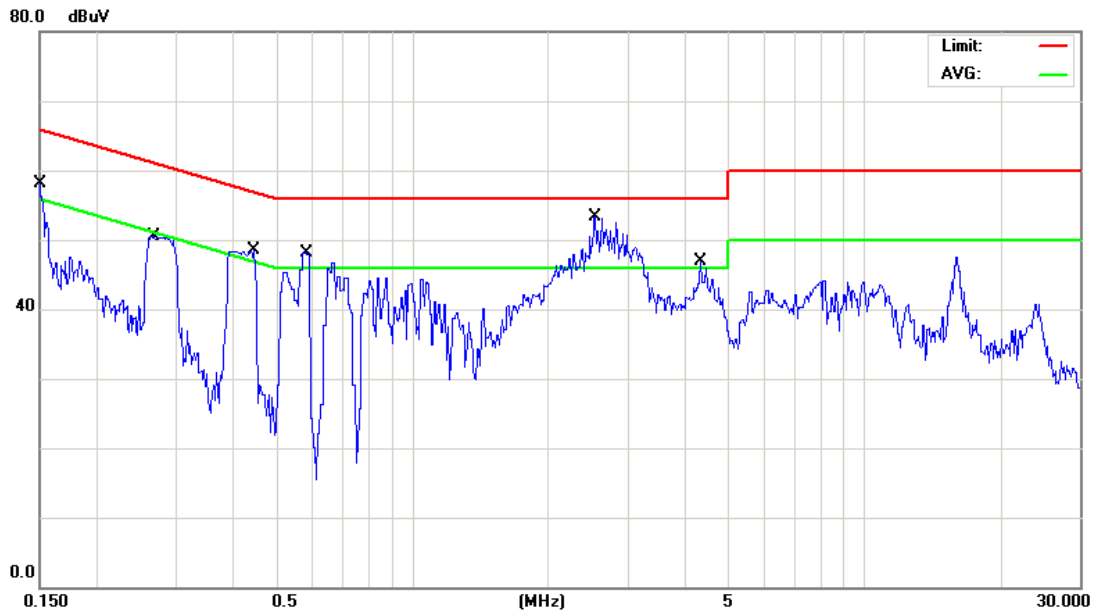
Site : Conducted	Phase: L2	Temperature: 26 °C
Limit: CISPR22 Class B Conduction(QP)	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		
M/N: PC70110		
Mode: 1		
Note: Adapter #1		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1500	46.70	9.73	56.43	65.99	-9.56	QP	
2		0.1500	26.00	9.73	35.73	55.99	-20.26	AVG	
3		0.1626	38.70	9.73	48.43	65.32	-16.89	QP	
4		0.1626	12.20	9.73	21.93	55.32	-33.39	AVG	
5		0.2676	37.60	9.76	47.36	61.19	-13.83	QP	
6		0.2676	21.70	9.76	31.46	51.19	-19.73	AVG	
7		0.3942	32.70	9.78	42.48	57.97	-15.49	QP	
8		0.3942	12.80	9.78	22.58	47.97	-25.39	AVG	
9		0.5720	30.30	9.79	40.09	56.00	-15.91	QP	
10		0.5720	14.40	9.79	24.19	46.00	-21.81	AVG	
11		2.5789	35.90	9.93	45.83	56.00	-10.17	QP	
12		2.5789	22.30	9.93	32.23	46.00	-13.77	AVG	

*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0016-SE(MAIN-A3B3C3D3) Data :#3 Date: 2010/01/20 Time: 下午 02:04:12



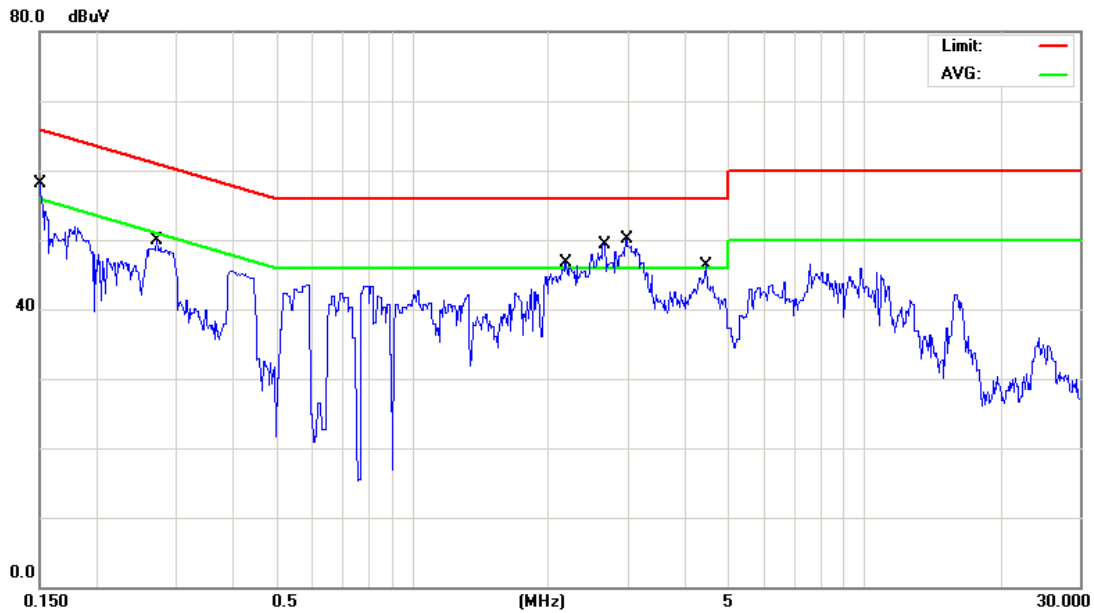
Site : Conducted	Phase: L1	Temperature: 26 °C
Limit: CISPR22 Class B Conduction(QP)	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		
M/N: PC70110		
Mode: 2		
Note: Adapter #1		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	45.40	9.73	55.13	65.99	-10.86	QP	
2		0.1500	24.80	9.73	34.53	55.99	-21.46	AVG	
3		0.2676	38.20	9.76	47.96	61.19	-13.23	QP	
4		0.2676	21.60	9.76	31.36	51.19	-19.83	AVG	
5		0.4454	33.00	9.78	42.78	56.96	-14.18	QP	
6		0.4454	9.90	9.78	19.68	46.96	-27.28	AVG	
7		0.5810	33.60	9.79	43.39	56.00	-12.61	QP	
8		0.5810	12.80	9.79	22.59	46.00	-23.41	AVG	
9	*	2.5340	40.80	9.92	50.72	56.00	-5.28	QP	
10		2.5340	27.70	9.92	37.62	46.00	-8.38	AVG	
11		4.3250	30.00	10.01	40.01	56.00	-15.99	QP	
12		4.3250	16.90	10.01	26.91	46.00	-19.09	AVG	

*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0016-SE(MAIN-A3B3C3D3) Data :#4 Date: 2010/01/20 Time: 下午 02:08:32



Site : Conducted	Phase: L2	Temperature: 26 °C
Limit: CISPR22 Class B Conduction(QP)	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		
M/N: PC70110		
Mode: 2		
Note: Adapter #1		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.80	9.73	54.53	65.99	-11.46	QP	
2		0.1500	24.50	9.73	34.23	55.99	-21.76	AVG	
3		0.2717	36.50	9.76	46.26	61.06	-14.80	QP	
4		0.2717	21.20	9.76	30.96	51.06	-20.10	AVG	
5		2.1829	30.70	9.88	40.58	56.00	-15.42	QP	
6		2.1829	18.40	9.88	28.28	46.00	-17.72	AVG	
7	*	2.6510	40.60	9.93	50.53	56.00	-5.47	QP	
8		2.6510	26.90	9.93	36.83	46.00	-9.17	AVG	
9		2.9660	36.40	9.89	46.29	56.00	-9.71	QP	
10		2.9660	26.60	9.89	36.49	46.00	-9.51	AVG	
11		4.4600	29.10	10.02	39.12	56.00	-16.88	QP	
12		4.4600	16.10	10.02	26.12	46.00	-19.88	AVG	

*:Maximum data x:Over limit !:over margin

●Reference Only

5 Radiated Interference Measurement

5.1. Limit

Frequency Range (MHz)	Peak (dBuV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960	54

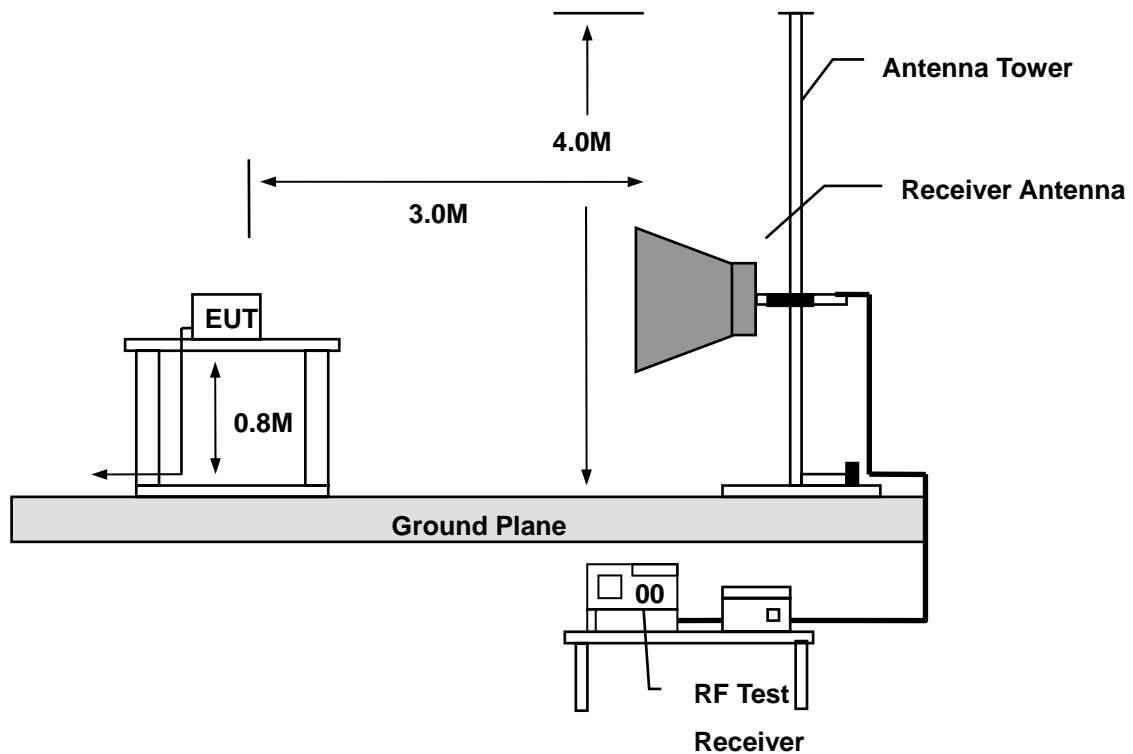
5.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/27/2009	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/20/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	07/01/2009	(1)
Pre Amplifier	Agilent	8447D	2944A10961	06/30/2009	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	06/23/2009	(2)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	TE01	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

5.3. Setup



5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission 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.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts per meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in decibels referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

$$(1) \text{ Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)}$$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

$$(2) \text{ Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)}$$

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

5.5. Test Result

5.5.1. Below 1GHz

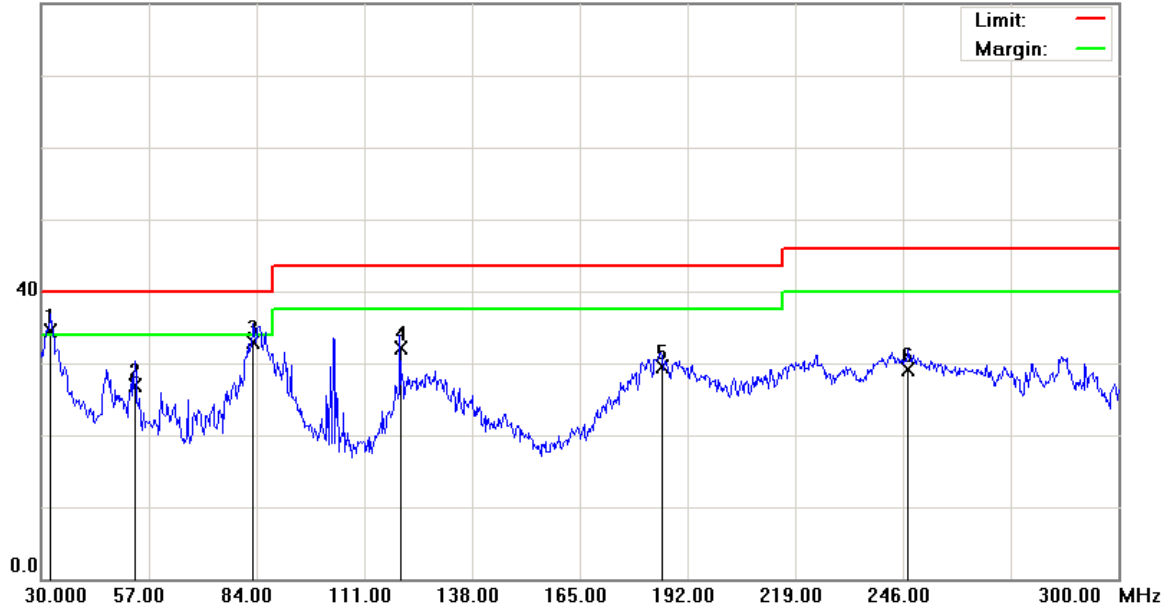
File :PC70110(Normal link)

Data :#1

Date: 2010/1/29

Time: 上午 10:41:57

80.0 dBuV/m



Site : RF Conducted

 Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 120 KHz VBW: 300

M/N: PC70110

KH

Mode: 2

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1	*	32.4300	47.78	-13.25	34.53	40.00	-5.47			QP	
2		53.4900	39.03	-12.19	26.84	40.00	-13.16			QP	
3		83.1900	48.21	-15.39	32.82	40.00	-7.18			QP	
4		120.0450	46.35	-14.21	32.14	43.50	-11.36			QP	
5		185.3850	43.25	-13.78	29.47	43.50	-14.03			QP	
6		247.3500	40.12	-11.05	29.07	46.00	-16.93			QP	

*:Maximum data x:Over limit !:over margin

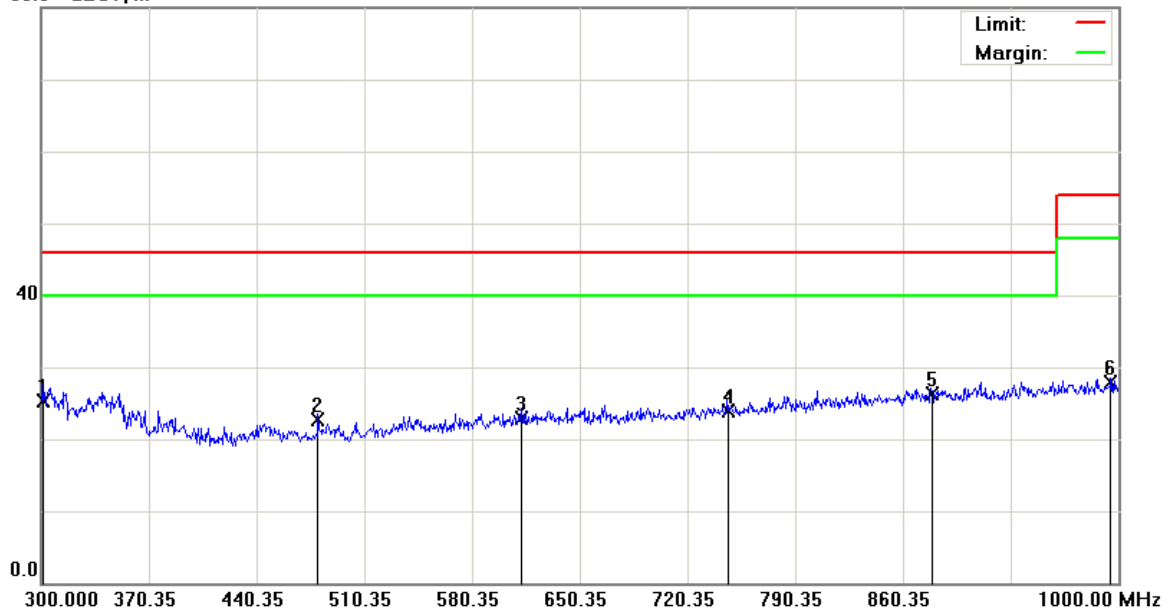
File :PC70110(Normal link)

Data :#2

Date: 2010/1/29

Time: 上午 10:45:40

80.0 dBuV/m



Site: : RF Conducted

 Polarization: *Vertical*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 120 KHz VBW: 300

M/N: PC70110

KH

Mode: 2

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		301.0500	35.31	-10.02	25.29	46.00	-20.71	QP		
2		479.9000	30.15	-7.53	22.62	46.00	-23.38	QP		
3		612.2000	27.33	-4.52	22.81	46.00	-23.19	QP		
4		746.2500	27.07	-3.11	23.96	46.00	-22.04	QP		
5	*	878.5500	27.10	-0.73	26.37	46.00	-19.63	QP		
6		995.1000	27.05	0.78	27.83	54.00	-26.17	QP		

*:Maximum data x:Over limit !:over margin

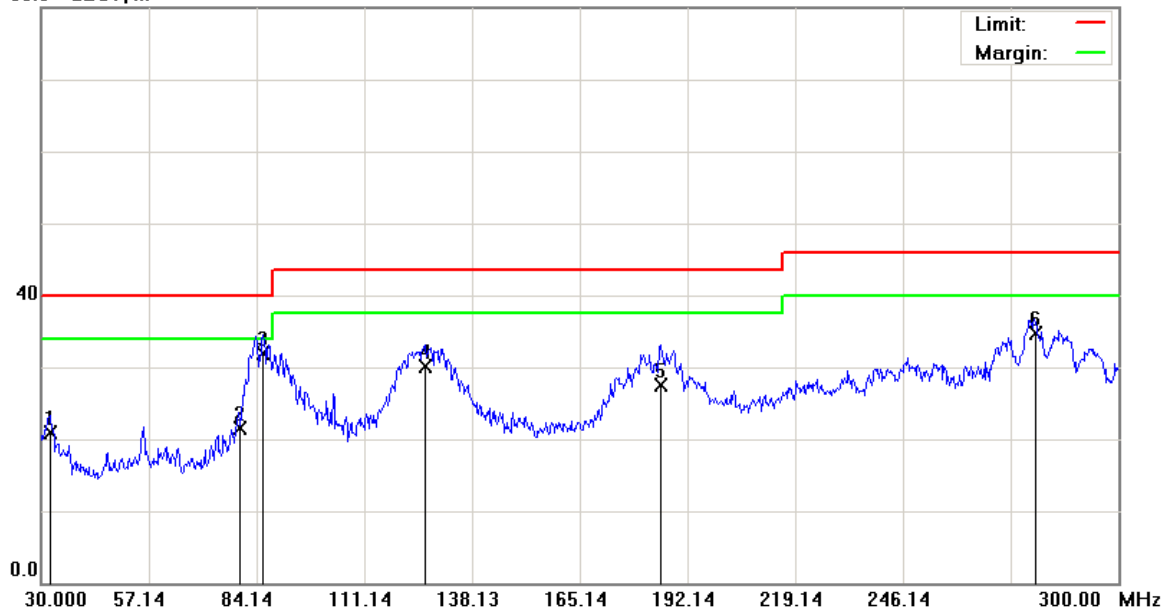
File :PC70110(Normal link)

Data :#3

Date: 2010/1/29

Time: 上午 10:49:24

80.0 dBuV/m



Site: : RF Conducted

 Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 120 KHz VBW: 300 KH

M/N: PC70110

Mode: 2

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		32.2950	34.25	-13.26	20.99	40.00	-19.01	QP			
2		79.5450	38.14	-16.61	21.53	40.00	-18.47	QP			
3	*	85.6200	46.38	-14.53	31.85	40.00	-8.15	QP			
4		126.1200	45.35	-15.17	30.18	43.50	-13.32	QP			
5		185.2500	41.33	-13.79	27.54	43.50	-15.96	QP			
6		279.0750	45.11	-10.48	34.63	46.00	-11.37	QP			

*:Maximum data x:Over limit !:over margin

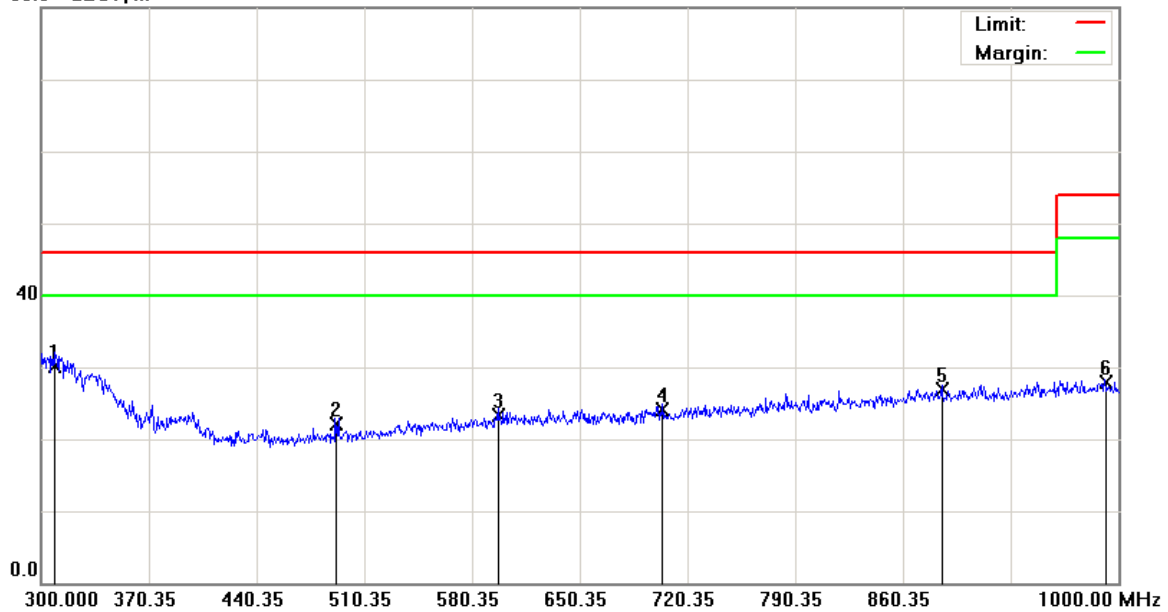
File :PC70110(Normal link)

Data :#4

Date: 2010/1/29

Time: 上午 10:53:08

80.0 dBuV/m



Site : RF Conducted

 Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 120 KHz VBW: 300

M/N: PC70110

KH

Mode: 2

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Detector	Comment
1	*	308.7500	40.11	-9.91	30.20	46.00	-15.80			QP	
2		491.4500	29.38	-7.21	22.17	46.00	-23.83			QP	
3		597.1500	28.15	-4.88	23.27	46.00	-22.73			QP	
4		703.9000	28.03	-3.98	24.05	46.00	-21.95			QP	
5		885.2000	27.12	-0.14	26.98	46.00	-19.02			QP	
6		991.2500	27.05	0.89	27.94	54.00	-26.06			QP	

*:Maximum data x:Over limit !:over margin

5.5.2. Above 1GHz

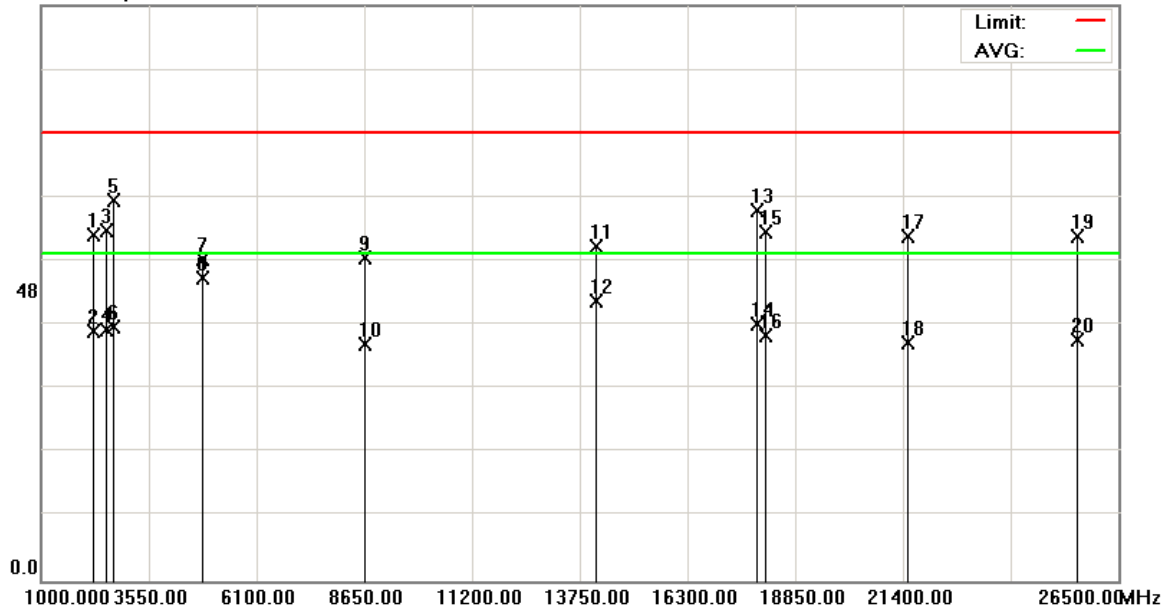
File :PC70110(2412)

Data :#17

Date: 2010/3/18

Time: 上午 11:37:44

95.0 dBuV/m



Site: : 966 Chamber Polarization: **Vertical** Temperature: 22 °C
 Limit: FCC part 15 (PK) Power: AC 120V/60Hz Humidity: 60 %
 EUT: Smartphone Distance: 3m RBW: 1000 VBW: 1000
 M/N: PC70110 KH KH
 Mode: 3
 Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2206.150	56.71	0.46	57.17	74.00	-16.83	peak		
2		2206.150	40.83	0.46	41.29	54.00	-12.71	AVG		
3		2532.550	57.44	0.46	57.90	74.00	-16.10	peak		
4		2532.550	41.05	0.46	41.51	54.00	-12.49	AVG		
5		2703.650	41.01	21.89	62.90	74.00	-11.10	peak		
6		2703.650	20.09	21.89	41.98	54.00	-12.02	AVG		
7		4824.300	45.61	7.49	53.10	74.00	-20.90	peak		
8	*	4824.300	42.59	7.49	50.08	54.00	-3.92	AVG		
9		8642.200	37.33	15.91	53.24	74.00	-20.76	peak		
10		8642.200	23.16	15.91	39.07	54.00	-14.93	AVG		
11		14120.000	36.24	18.87	55.11	74.00	-18.89	peak		
12		14120.000	27.31	18.87	46.18	54.00	-7.82	AVG		
13		17916.000	36.19	24.87	61.06	74.00	-12.94	peak		
14		17916.000	17.56	24.87	42.43	54.00	-11.57	AVG		
15		18136.000	34.33	23.23	57.56	74.00	-16.44	peak		
16		18136.000	17.27	23.23	40.50	54.00	-13.50	AVG		
17		21523.250	35.59	21.34	56.93	74.00	-17.07	peak		
18		21523.250	18.00	21.34	39.34	54.00	-14.66	AVG		
19		25518.250	38.03	18.97	57.00	74.00	-17.00	peak		
20		25518.250	20.89	18.97	39.86	54.00	-14.14	AVG		

*:Maximum data x:Over limit !:over margin

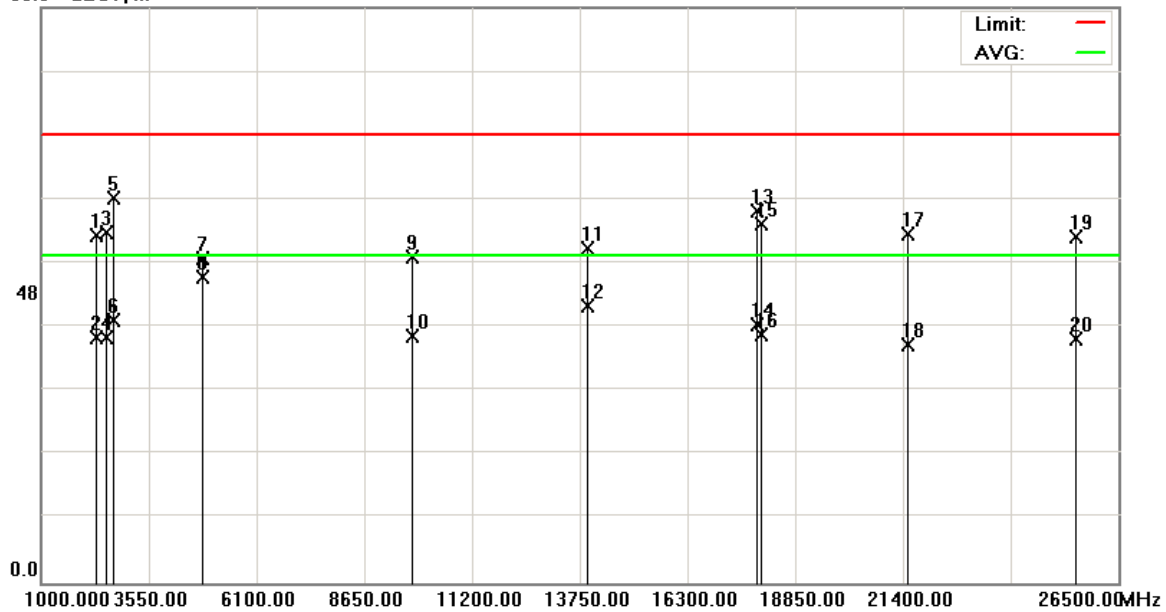
File :PC70110(2412)

Data :#18

Date: 2010/3/18

Time: 上午 11:40:38

95.0 dBuV/m



Site: : 966 Chamber

 Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KH

VBW: 1000 KH

M/N: PC70110

Mode: 3

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2299.650	56.89	0.54	57.43	74.00	-16.57	peak		
2		2299.650	40.01	0.54	40.55	54.00	-13.45	AVG		
3		2534.250	57.28	0.46	57.74	74.00	-16.26	peak		
4		2534.250	40.05	0.46	40.51	54.00	-13.49	AVG		
5		2703.650	41.66	21.89	63.55	74.00	-10.45	peak		
6		2703.650	21.55	21.89	43.44	54.00	-10.56	AVG		
7		4824.300	46.12	7.49	53.61	74.00	-20.39	peak		
8	*	4824.300	43.09	7.49	50.58	54.00	-3.42	AVG		
9		9788.300	36.13	17.68	53.81	74.00	-20.19	peak		
10		9788.300	22.99	17.68	40.67	54.00	-13.33	AVG		
11		13928.000	36.64	18.53	55.17	74.00	-18.83	peak		
12		13928.000	27.14	18.53	45.67	54.00	-8.33	AVG		
13		17936.000	36.70	24.73	61.43	74.00	-12.57	peak		
14		17936.000	17.89	24.73	42.62	54.00	-11.38	AVG		
15		18042.500	35.99	23.27	59.26	74.00	-14.74	peak		
16		18042.500	17.63	23.27	40.90	54.00	-13.10	AVG		
17		21502.000	36.15	21.36	57.51	74.00	-16.49	peak		
18		21502.000	17.99	21.36	39.35	54.00	-14.65	AVG		
19		25488.500	38.05	19.00	57.05	74.00	-16.95	peak		
20		25488.500	21.19	19.00	40.19	54.00	-13.81	AVG		

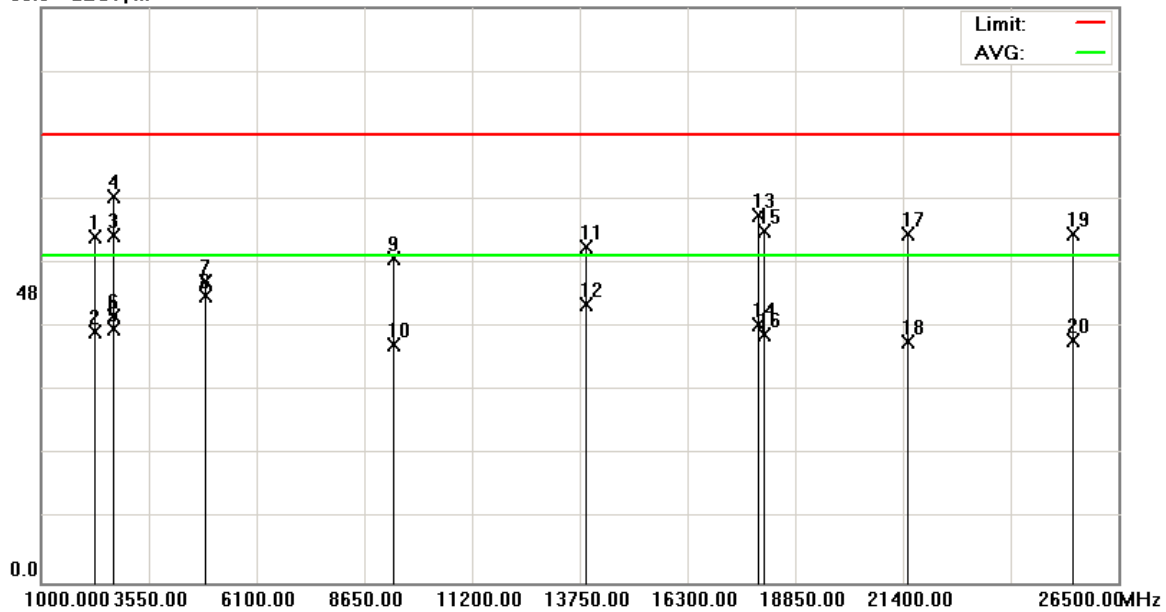
*:Maximum data x:Over limit !:over margin

File :PC70110(2437)

Data :#17

Date: 2010/3/18

Time: 上午 11:36:06

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KH

VBW: 1000 KH

M/N: PC70110

Mode: 3

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2264.800	56.69	0.44	57.13	74.00	-16.87	peak		
2		2264.800	41.11	0.44	41.55	54.00	-12.45	AVG		
3		2700.000	56.52	0.84	57.36	74.00	-16.64	peak		
4		2700.000	62.86	0.84	63.70	74.00	-10.30	peak		
5		2700.000	41.15	0.84	41.99	54.00	-12.01	AVG		
6		2700.000	43.31	0.84	44.15	54.00	-9.85	AVG		
7		4875.400	42.05	7.73	49.78	74.00	-24.22	peak		
8	*	4875.400	39.56	7.73	47.29	54.00	-6.71	AVG		
9		9321.100	36.54	16.91	53.45	74.00	-20.55	peak		
10		9321.100	22.40	16.91	39.31	54.00	-14.69	AVG		
11		13892.000	36.94	18.47	55.41	74.00	-18.59	peak		
12		13892.000	27.59	18.47	46.06	54.00	-7.94	AVG		
13		17980.000	35.48	25.21	60.69	74.00	-13.31	peak		
14		17980.000	17.35	25.21	42.56	54.00	-11.44	AVG		
15		18093.500	34.76	23.24	58.00	74.00	-16.00	peak		
16		18093.500	17.75	23.24	40.99	54.00	-13.01	AVG		
17		21502.000	36.17	21.36	57.53	74.00	-16.47	peak		
18		21502.000	18.35	21.36	39.71	54.00	-14.29	AVG		
19		25424.750	38.66	19.03	57.69	74.00	-16.31	peak		
20		25424.750	20.91	19.03	39.94	54.00	-14.06	AVG		

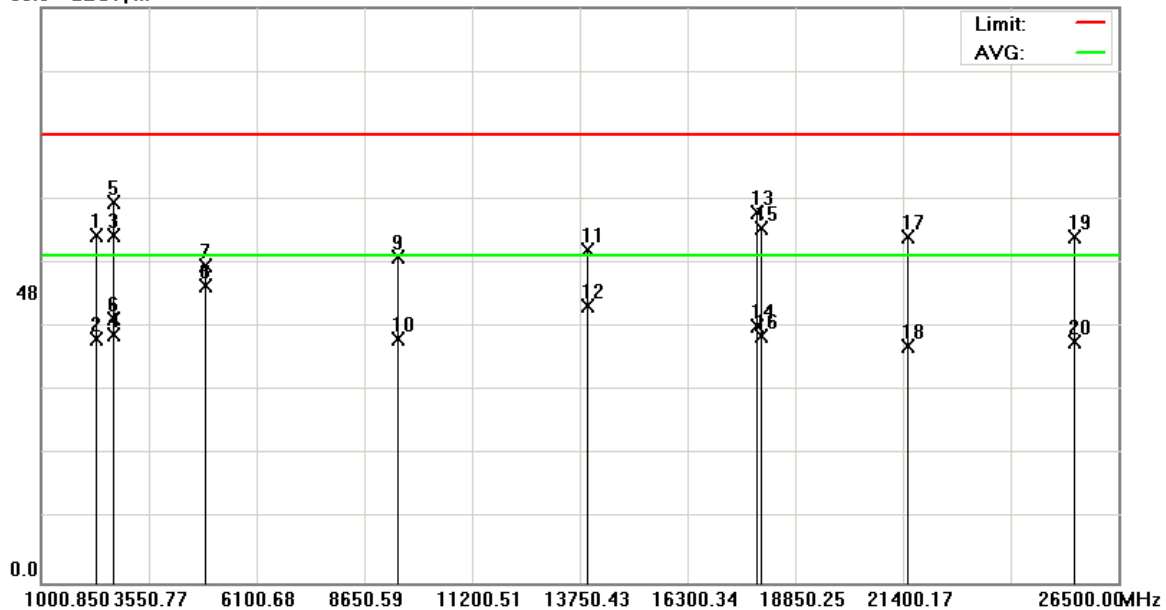
*:Maximum data x:Over limit !:over margin

File :PC70110(2437)

Data :#18

Date: 2010/3/18

Time: 上午 11:43:32

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KH

VBW: 1000 KH

M/N: PC70110

Mode: 3

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2283.500	56.86	0.44	57.30	74.00	-16.70	peak		
2		2283.500	39.92	0.44	40.36	54.00	-13.64	AVG		
3		2694.900	56.54	0.93	57.47	74.00	-16.53	peak		
4		2694.900	39.94	0.93	40.87	54.00	-13.13	AVG		
5		2703.650	40.91	21.89	62.80	74.00	-11.20	peak		
6		2703.650	21.81	21.89	43.70	54.00	-10.30	AVG		
7		4875.400	44.63	7.73	52.36	74.00	-21.64	peak		
8	*	4875.400	41.21	7.73	48.94	54.00	-5.06	AVG		
9		9423.300	36.83	17.05	53.88	74.00	-20.12	peak		
10		9423.300	23.16	17.05	40.21	54.00	-13.79	AVG		
11		13924.000	36.54	18.54	55.08	74.00	-18.92	peak		
12		13924.000	27.19	18.54	45.73	54.00	-8.27	AVG		
13		17932.000	36.47	24.76	61.23	74.00	-12.77	peak		
14		17932.000	17.55	24.76	42.31	54.00	-11.69	AVG		
15		18034.000	35.18	23.28	58.46	74.00	-15.54	peak		
16		18034.000	17.56	23.28	40.84	54.00	-13.16	AVG		
17		21506.250	35.73	21.35	57.08	74.00	-16.92	peak		
18		21506.250	17.79	21.35	39.14	54.00	-14.86	AVG		
19		25454.500	38.03	19.01	57.04	74.00	-16.96	peak		
20		25454.500	20.80	19.01	39.81	54.00	-14.19	AVG		

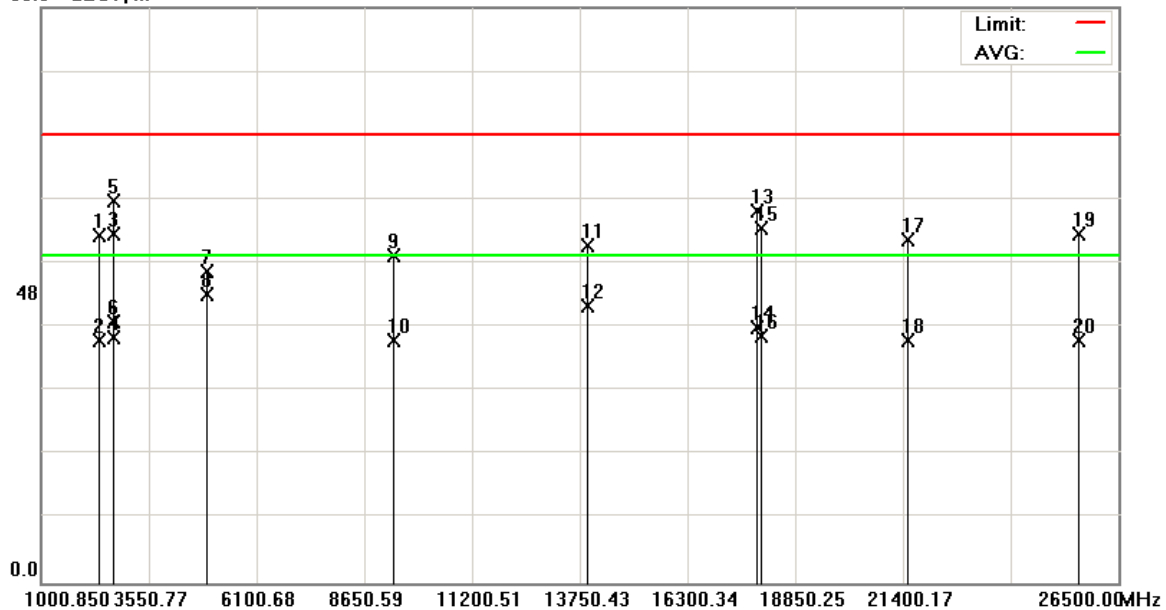
*:Maximum data x:Over limit !:over margin

File :PC70110(2462)

Data :#17

Date: 2010/3/18

Time: 上午 11:34:33

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

 RBW: 1000 KH
 VBW: 1000 KH

M/N: PC70110

Mode: 3

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2364.250	57.26	0.21	57.47	74.00	-16.53	peak		
2		2364.250	39.76	0.21	39.97	54.00	-14.03	AVG		
3		2689.800	56.56	1.03	57.59	74.00	-16.41	peak		
4		2689.800	39.46	1.03	40.49	54.00	-13.51	AVG		
5		2703.650	41.26	21.89	63.15	74.00	-10.85	peak		
6		2703.650	21.12	21.89	43.01	54.00	-10.99	AVG		
7		4922.850	43.79	7.65	51.44	74.00	-22.56	peak		
8	*	4922.850	39.96	7.65	47.61	54.00	-6.39	AVG		
9		9321.100	37.19	16.91	54.10	74.00	-19.90	peak		
10		9321.100	23.02	16.91	39.93	54.00	-14.07	AVG		
11		13908.000	37.15	18.53	55.68	74.00	-18.32	peak		
12		13908.000	27.15	18.53	45.68	54.00	-8.32	AVG		
13		17912.000	36.53	24.89	61.42	74.00	-12.58	peak		
14		17912.000	17.28	24.89	42.17	54.00	-11.83	AVG		
15		18046.750	35.18	23.27	58.45	74.00	-15.55	peak		
16		18046.750	17.42	23.27	40.69	54.00	-13.31	AVG		
17		21506.250	35.34	21.35	56.69	74.00	-17.31	peak		
18		21506.250	18.63	21.35	39.98	54.00	-14.02	AVG		
19		25552.250	38.56	18.95	57.51	74.00	-16.49	peak		
20		25552.250	21.06	18.95	40.01	54.00	-13.99	AVG		

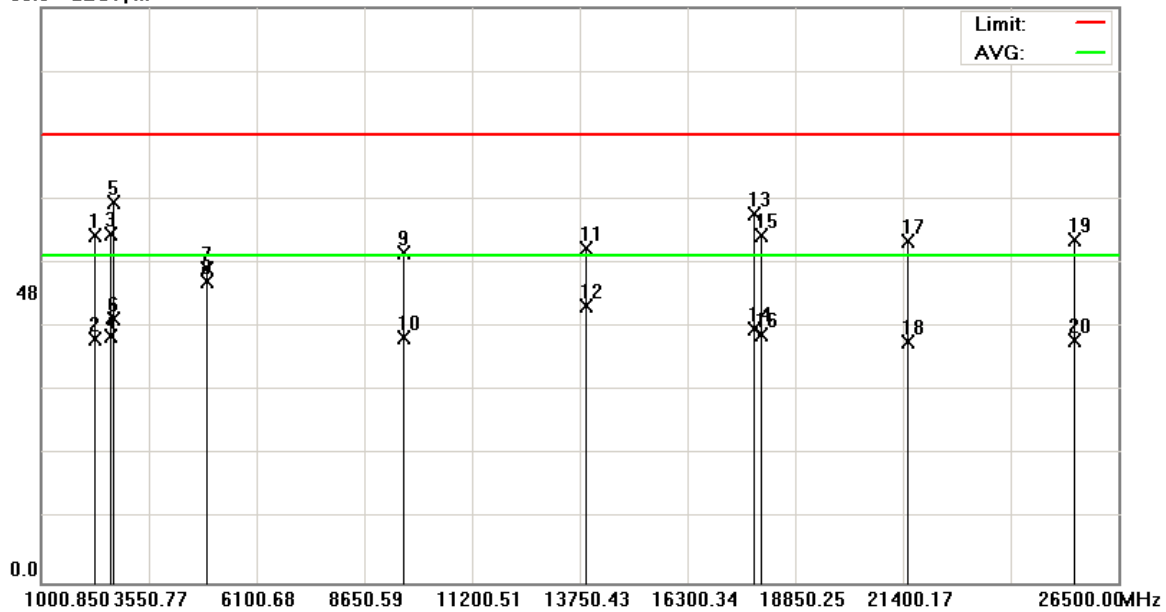
*:Maximum data x:Over limit !:over margin

File :PC70110(2462)

Data :#18

Date: 2010/3/18

Time: 上午 11:45:30

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KH

VBW: 1000 KH

M/N: PC70110

Mode: 3

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2250.350	56.89	0.49	57.38	74.00	-16.62	peak		
2		2250.350	39.82	0.49	40.31	54.00	-13.69	AVG		
3		2654.100	56.63	0.94	57.57	74.00	-16.43	peak		
4		2654.100	39.78	0.94	40.72	54.00	-13.28	AVG		
5		2703.650	40.92	21.89	62.81	74.00	-11.19	peak		
6		2703.650	21.73	21.89	43.62	54.00	-10.38	AVG		
7		4922.850	44.31	7.65	51.96	74.00	-22.04	peak		
8	*	4922.850	42.08	7.65	49.73	54.00	-4.27	AVG		
9		9572.950	37.15	17.27	54.42	74.00	-19.58	peak		
10		9572.950	23.20	17.27	40.47	54.00	-13.53	AVG		
11		13884.000	36.71	18.41	55.12	74.00	-18.88	peak		
12		13884.000	27.24	18.41	45.65	54.00	-8.35	AVG		
13		17880.000	36.58	24.36	60.94	74.00	-13.06	peak		
14		17880.000	17.52	24.36	41.88	54.00	-12.12	AVG		
15		18055.250	34.16	23.26	57.42	74.00	-16.58	peak		
16		18055.250	17.70	23.26	40.96	54.00	-13.04	AVG		
17		21523.250	35.05	21.34	56.39	74.00	-17.61	peak		
18		21523.250	18.37	21.34	39.71	54.00	-14.29	AVG		
19		25437.500	37.72	19.02	56.74	74.00	-17.26	peak		
20		25437.500	20.98	19.02	40.00	54.00	-14.00	AVG		

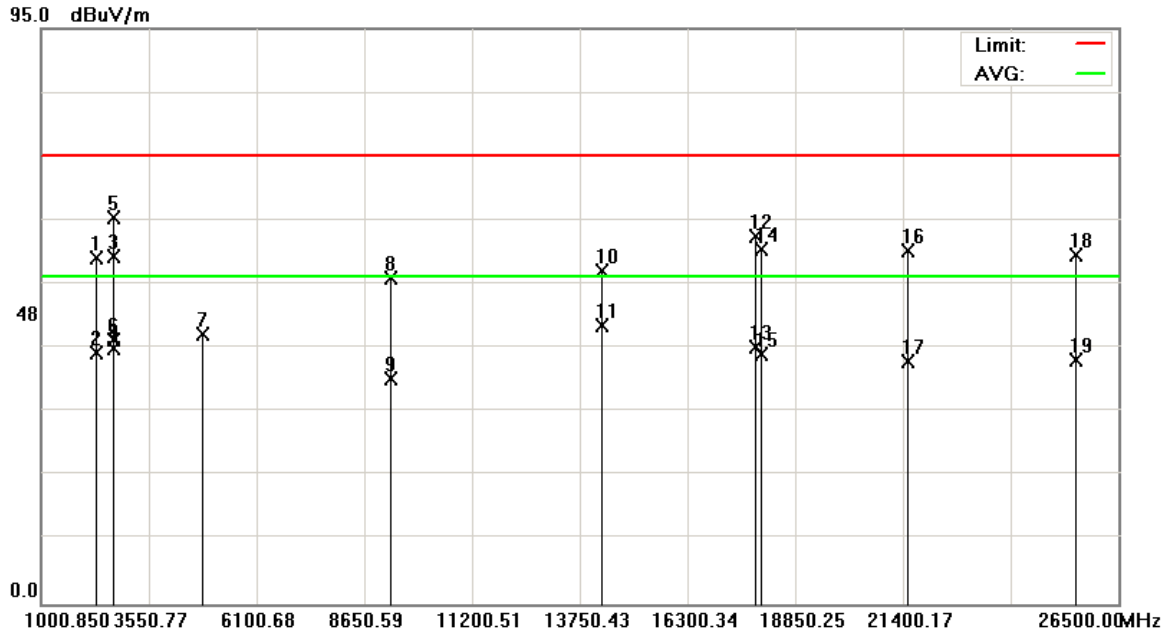
*:Maximum data x:Over limit !:over margin

File :PC70110(2412) Power 13

Data :#17

Date: 2010/2/6

Time: 上午 11:30:45



Site: : 966 Chamber

 Polarization: *Vertical*

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

M/N: PC70110

Mode: 4

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2294.550	56.65	0.46	57.11	74.00	-16.89			peak
2		2294.550	41.09	0.46	41.55	54.00	-12.45			AVG
3		2690.650	56.34	1.01	57.35	74.00	-16.65			peak
4		2690.650	41.21	1.01	42.22	54.00	-11.78			AVG
5		2700.000	41.13	22.58	63.71	74.00	-10.29			peak
6		2700.000	20.93	22.58	43.51	54.00	-10.49			AVG
7		4824.000	36.98	7.48	44.46	74.00	-29.54			peak
8		9284.600	37.09	16.74	53.83	74.00	-20.17			peak
9		9284.600	20.54	16.74	37.28	54.00	-16.72			AVG
10		14248.000	36.33	18.68	55.01	74.00	-18.99			peak
11	*	14248.000	27.19	18.68	45.87	54.00	-8.13			AVG
12		17904.000	35.83	24.94	60.77	74.00	-13.23			peak
13		17904.000	17.56	24.94	42.50	54.00	-11.50			AVG
14		18059.500	35.34	23.26	58.60	74.00	-15.40			peak
15		18059.500	17.93	23.26	41.19	54.00	-12.81			AVG
16		21502.000	37.06	21.36	58.42	74.00	-15.58			peak
17		21502.000	18.77	21.36	40.13	54.00	-13.87			AVG
18		25475.750	38.60	19.00	57.60	74.00	-16.40			peak
19		25475.750	21.22	19.00	40.22	54.00	-13.78			AVG

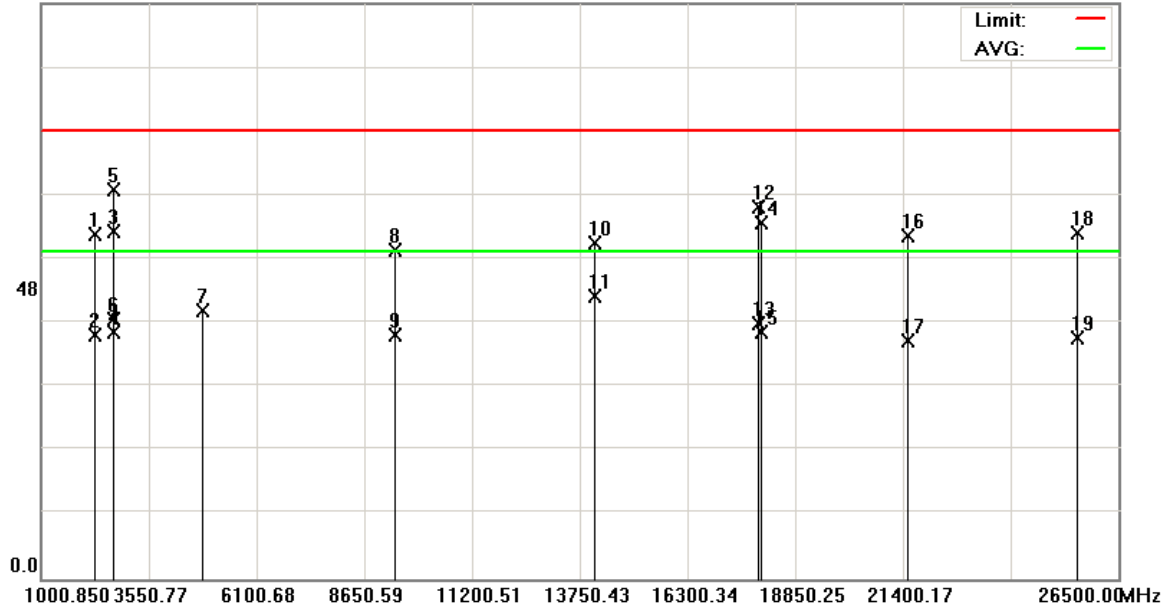
*:Maximum data x:Over limit !:over margin

File :PC70110(2412) Power 13

Data :#18

Date: 2010/2/6

Time: 上午 11:48:58

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

M/N: PC70110

Mode: 4

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2266.500	56.34	0.43	56.77	74.00	-17.23	peak		
2		2266.500	39.86	0.43	40.29	54.00	-13.71	AVG		
3		2687.250	56.36	1.02	57.38	74.00	-16.62	peak		
4		2687.250	39.75	1.02	40.77	54.00	-13.23	AVG		
5		2703.650	42.38	21.89	64.27	74.00	-9.73	peak		
6		2703.650	20.90	21.89	42.79	54.00	-11.21	AVG		
7		4824.000	36.92	7.48	44.40	74.00	-29.60	peak		
8		9353.950	37.22	16.95	54.17	74.00	-19.83	peak		
9		9353.950	23.39	16.95	40.34	54.00	-13.66	AVG		
10		14100.000	36.57	18.90	55.47	74.00	-18.53	peak		
11	*	14100.000	27.69	18.90	46.59	54.00	-7.41	AVG		
12		17968.000	36.42	24.98	61.40	74.00	-12.60	peak		
13		17968.000	17.23	24.98	42.21	54.00	-11.79	AVG		
14		18059.500	35.60	23.26	58.86	74.00	-15.14	peak		
15		18059.500	17.44	23.26	40.70	54.00	-13.30	AVG		
16		21519.000	35.40	21.34	56.74	74.00	-17.26	peak		
17		21519.000	18.07	21.34	39.41	54.00	-14.59	AVG		
18		25531.000	38.23	18.96	57.19	74.00	-16.81	peak		
19		25531.000	20.90	18.96	39.86	54.00	-14.14	AVG		

*:Maximum data x:Over limit !:over margin

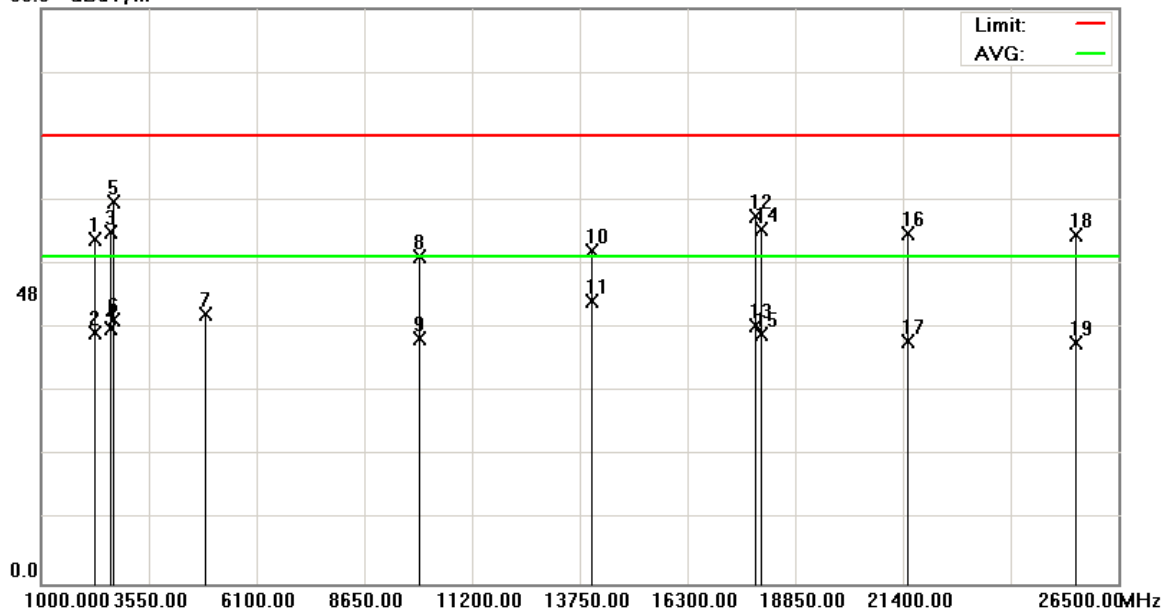
File :PC70110(2437) Power 13

Data :#17

Date: 2010/2/6

Time: 上午 11:32:26

95.0 dBuV/m



Site: : 966 Chamber

 Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

M/N: PC70110

Mode: 4

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2255.450	56.47	0.47	56.94	74.00	-17.06			peak
2		2255.450	41.09	0.47	41.56	54.00	-12.44			AVG
3		2640.500	57.13	0.97	58.10	74.00	-15.90			peak
4		2640.500	41.12	0.97	42.09	54.00	-11.91			AVG
5		2703.650	41.06	21.89	62.95	74.00	-11.05			peak
6		2703.650	21.77	21.89	43.66	54.00	-10.34			AVG
7		4874.000	36.81	7.72	44.53	74.00	-29.47			peak
8		9937.950	36.21	17.78	53.99	74.00	-20.01			peak
9		9937.950	22.64	17.78	40.42	54.00	-13.58			AVG
10		14008.000	36.23	18.67	54.90	74.00	-19.10			peak
11	*	14008.000	27.89	18.67	46.56	54.00	-7.44			AVG
12		17904.000	35.83	24.94	60.77	74.00	-13.23			peak
13		17904.000	17.78	24.94	42.72	54.00	-11.28			AVG
14		18021.250	35.37	23.28	58.65	74.00	-15.35			peak
15		18021.250	18.00	23.28	41.28	54.00	-12.72			AVG
16		21502.000	36.47	21.36	57.83	74.00	-16.17			peak
17		21502.000	18.71	21.36	40.07	54.00	-13.93			AVG
18		25467.250	38.51	19.00	57.51	74.00	-16.49			peak
19		25467.250	20.86	19.00	39.86	54.00	-14.14			AVG

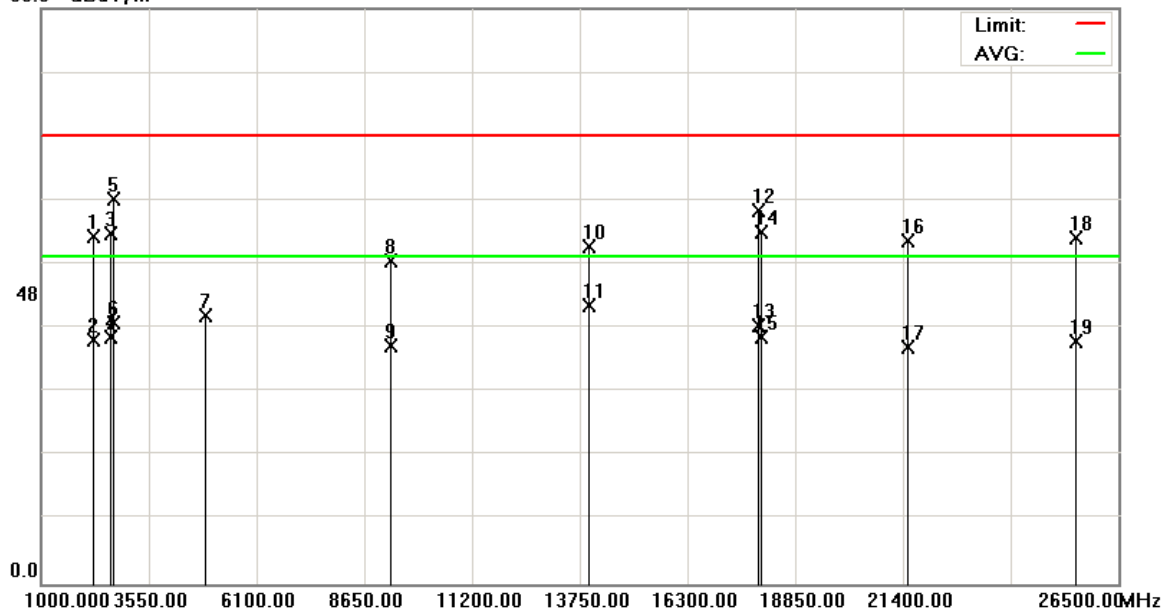
*:Maximum data x:Over limit !:over margin

File :PC70110(2437) Power 13

Data :#18

Date: 2010/2/6

Time: 上午 11:47:05

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: Smartphone

Distance: 3m

M/N: PC70110

Mode: 4

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2243.550	56.95	0.45	57.40	74.00	-16.60			peak
2		2243.550	39.88	0.45	40.33	54.00	-13.67			AVG
3		2631.150	56.91	0.92	57.83	74.00	-16.17			peak
4		2631.150	39.92	0.92	40.84	54.00	-13.16			AVG
5		2703.650	41.72	21.89	63.61	74.00	-10.39			peak
6		2703.650	21.15	21.89	43.04	54.00	-10.96			AVG
7		4874.000	36.51	7.72	44.23	74.00	-29.77			peak
8		9273.650	36.77	16.65	53.42	74.00	-20.58			peak
9		9273.650	22.54	16.65	39.19	54.00	-14.81			AVG
10		13968.000	37.22	18.59	55.81	74.00	-18.19			peak
11	*	13968.000	27.32	18.59	45.91	54.00	-8.09			AVG
12		17980.000	36.53	25.21	61.74	74.00	-12.26			peak
13		17980.000	17.45	25.21	42.66	54.00	-11.34			AVG
14		18042.500	34.86	23.27	58.13	74.00	-15.87			peak
15		18042.500	17.36	23.27	40.63	54.00	-13.37			AVG
16		21514.750	35.27	21.35	56.62	74.00	-17.38			peak
17		21514.750	17.73	21.35	39.08	54.00	-14.92			AVG
18		25492.750	38.03	18.99	57.02	74.00	-16.98			peak
19		25492.750	21.14	18.99	40.13	54.00	-13.87			AVG

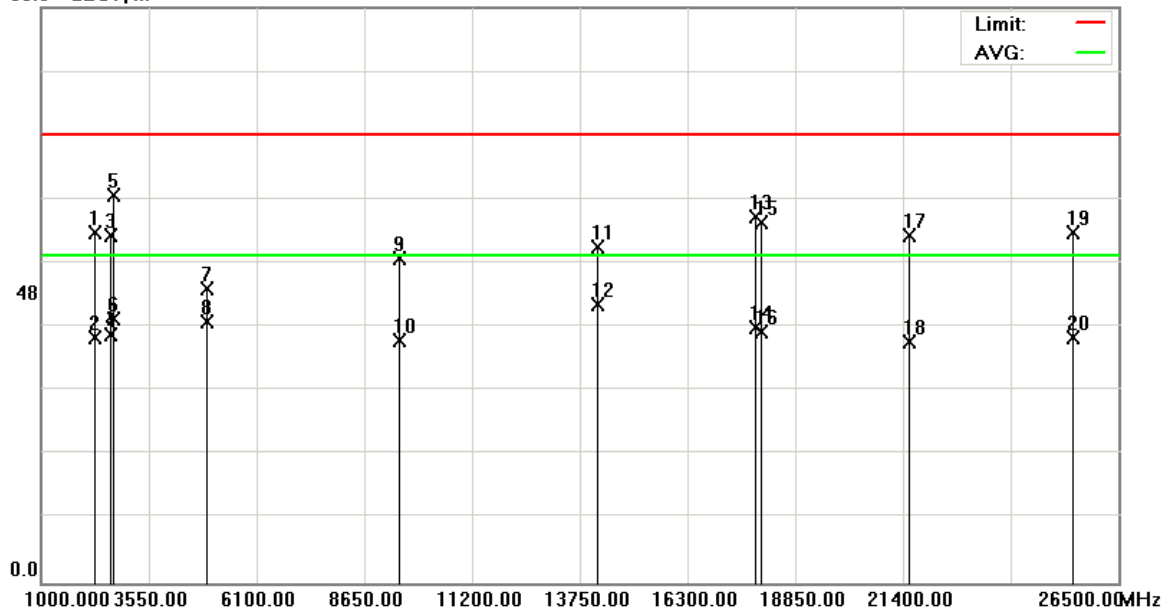
*:Maximum data x:Over limit !:over margin

File :PC70110(2462)

Data :#17

Date: 2010/2/6

Time: 上午 11:29:04

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KH

VBW: 1000 KH

M/N: PC70110

Mode: 4

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2267.350	57.30	0.43	57.73	74.00	-16.27	peak		
2		2267.350	40.04	0.43	40.47	54.00	-13.53	AVG		
3		2642.200	56.49	0.97	57.46	74.00	-16.54	peak		
4		2642.200	39.89	0.97	40.86	54.00	-13.14	AVG		
5		2703.650	42.13	21.89	64.02	74.00	-9.98	peak		
6		2703.650	21.77	21.89	43.66	54.00	-10.34	AVG		
7		4922.850	40.83	7.65	48.48	74.00	-25.52	peak		
8		4922.850	35.47	7.65	43.12	54.00	-10.88	AVG		
9		9470.750	36.57	16.91	53.48	74.00	-20.52	peak		
10		9470.750	23.06	16.91	39.97	54.00	-14.03	AVG		
11		14148.000	36.53	18.83	55.36	74.00	-18.64	peak		
12	*	14148.000	27.24	18.83	46.07	54.00	-7.93	AVG		
13		17900.000	35.44	24.96	60.40	74.00	-13.60	peak		
14		17900.000	17.31	24.96	42.27	54.00	-11.73	AVG		
15		18017.000	36.20	23.29	59.49	74.00	-14.51	peak		
16		18017.000	18.19	23.29	41.48	54.00	-12.52	AVG		
17		21536.000	36.03	21.34	57.37	74.00	-16.63	peak		
18		21536.000	18.53	21.34	39.87	54.00	-14.13	AVG		
19		25420.500	38.87	19.03	57.90	74.00	-16.10	peak		
20		25420.500	21.36	19.03	40.39	54.00	-13.61	AVG		

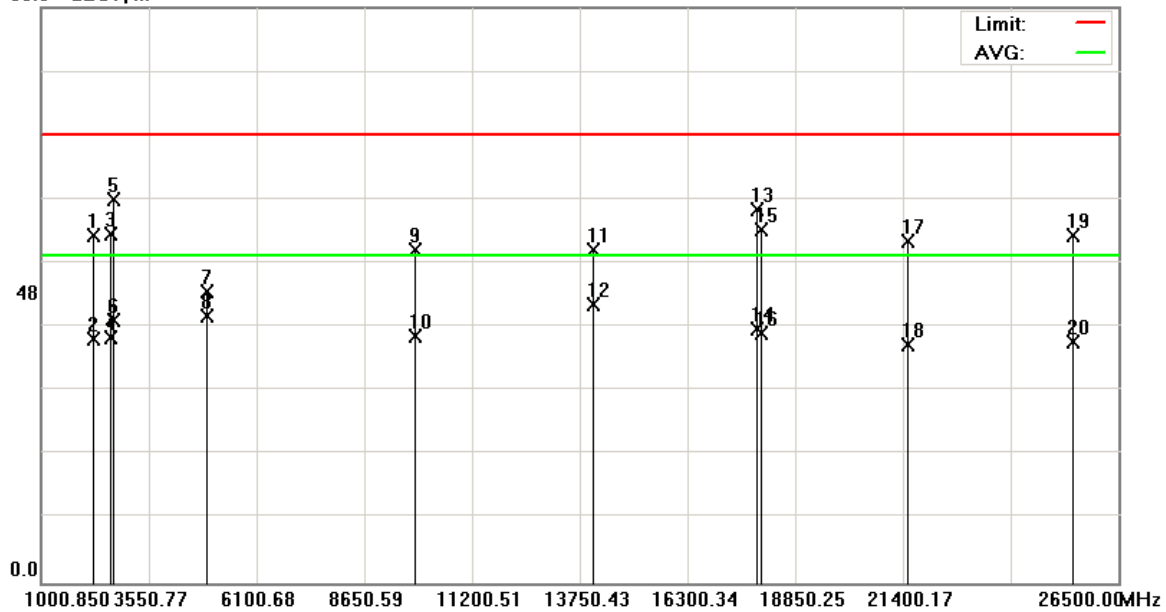
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File :PC70110(2462)

Data :#18

Date: 2010/2/6

Time: 上午 11:50:27

95.0 dBuV/m

 Site: : 966 Chamber
 Limit: FCC part 15 (PK)
 EUT: Smartphone
 M/N: PC70110
 Mode: 4
 Note: CH11(2462MHz)

 Polarization: **Horizontal**
 Power: AC 120V/60Hz
 Distance: 3m

 Temperature: 22 °C
 Humidity: 60 %
 RBW: 1000 KH
 VBW: 1000 KH

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2241.850	56.90	0.44	57.34	74.00	-16.66	peak		
2		2241.850	39.74	0.44	40.18	54.00	-13.82	AVG		
3		2615.850	56.90	0.73	57.63	74.00	-16.37	peak		
4		2615.850	39.78	0.73	40.51	54.00	-13.49	AVG		
5		2700.000	40.64	22.58	63.22	74.00	-10.78	peak		
6		2700.000	20.88	22.58	43.46	54.00	-10.54	AVG		
7		4922.850	40.36	7.65	48.01	74.00	-25.99	peak		
8		4922.850	36.44	7.65	44.09	54.00	-9.91	AVG		
9		9824.800	37.23	17.77	55.00	74.00	-19.00	peak		
10		9824.800	22.89	17.77	40.66	54.00	-13.34	AVG		
11		14072.000	36.11	18.77	54.88	74.00	-19.12	peak		
12	*	14072.000	27.25	18.77	46.02	54.00	-7.98	AVG		
13		17956.000	36.92	24.75	61.67	74.00	-12.33	peak		
14		17956.000	17.24	24.75	41.99	54.00	-12.01	AVG		
15		18017.000	34.92	23.29	58.21	74.00	-15.79	peak		
16		18017.000	18.00	23.29	41.29	54.00	-12.71	AVG		
17		21510.500	35.10	21.35	56.45	74.00	-17.55	peak		
18		21510.500	17.98	21.35	39.33	54.00	-14.67	AVG		
19		25424.750	38.28	19.03	57.31	74.00	-16.69	peak		
20		25424.750	20.69	19.03	39.72	54.00	-14.28	AVG		

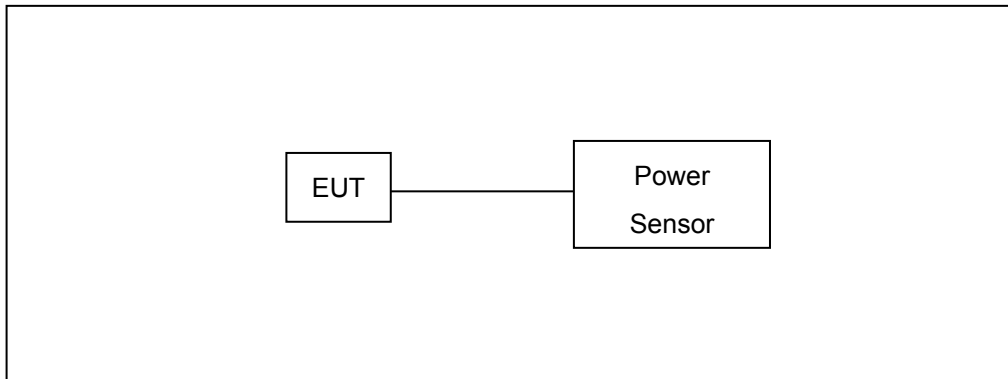
*:Maximum data x:Over limit !:over margin

6 Maximum Conducted Output Power Measurement

6.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm.

6.2. Test Setup



6.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	R&S	NRP-Z81	100017	05/17/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

6.4. Test Procedure

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to power sensor. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the power sensor, for prevent the power sensor input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to (GAIN - 6)/3 dBm.

The antenna port of the EUT was connected to the input of a power sensor. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

6.5. Test Result

Product	Smartphone					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 3: IEEE 802.11b Link Mode					
Date of Test	01/27/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average Power		Peak Power		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2412	1	16.30	0.043	18.98	0.079	< 30
2437	1	17.01	0.050	19.61	0.091	< 30
2462	1	16.81	0.048	19.49	0.089	< 30
2412	11	15.12	0.033	17.11	0.051	< 30
2437	11	15.95	0.039	17.08	0.051	< 30
2462	11	15.88	0.039	17.43	0.055	< 30

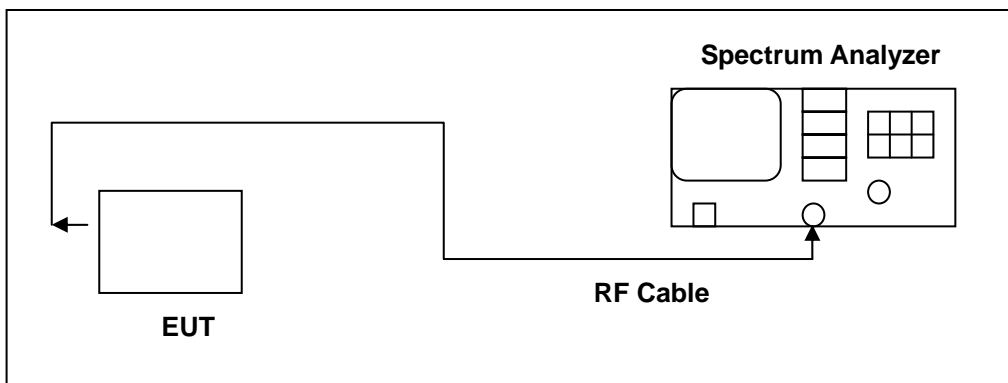
Product	Smartphone					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 4: IEEE 802.11g Link Mode					
Date of Test	01/27/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average Power		Peak Power		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2412	6	13.97	0.025	21.61	0.145	< 30
2437	6	13.59	0.023	22.42	0.175	< 30
2462	6	14.38	0.027	22.84	0.192	< 30
2412	54	10.21	0.010	18.96	0.079	< 30
2437	54	10.15	0.010	18.32	0.068	< 30
2462	54	10.38	0.011	18.49	0.071	< 30

7 6dB RF Bandwidth Measurement

7.1. Limit

Systems using digital modulation techniques may operate in the 2400–2483.5 MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

7.2. Test Setup



7.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

7.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels (Channel low, middle, high)

7.5. Test Result

Product	Smartphone		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 3: IEEE 802.11b Link Mode		
Date of Test	01/28/2010	Test Site	TE06
Frequency (MHz)	Measurement (kHz)		Limit (kHz)
2412	6000		> 500
2437	5225		> 500
2462	6575		> 500

Product	Smartphone		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 4: IEEE 802.11g Link Mode		
Date of Test	01/28/2010	Test Site	TE06
Frequency (MHz)	Measurement (kHz)		Limit (kHz)
2412	16175		> 500
2437	16225		> 500
2462	16375		> 500

7.6. Test Graphs

Mode 3: IEEE 802.11b Link Mode	
2412	<p>Agilent 16:59:56 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 6.000 MHz -0.47 dB</p> <p>Center 2.412 000 GHz Span 50 MHz</p> <p>*Res BW 100 kHz *VBW 100 kHz Sweep 6.133 ms (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
2437	<p>Agilent 17:00:49 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 5.225 MHz 0.79 dB</p> <p>Center 2.437 000 GHz Span 50 MHz</p> <p>*Res BW 100 kHz *VBW 100 kHz Sweep 6.133 ms (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
2462	<p>Agilent 17:01:49 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 6.575 MHz 0.46 dB</p> <p>Center 2.462 000 GHz Span 50 MHz</p> <p>*Res BW 100 kHz *VBW 100 kHz Sweep 6.133 ms (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>

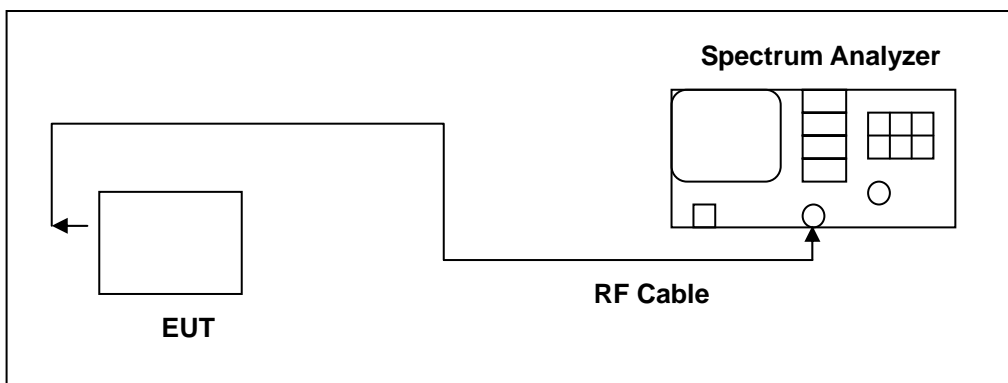
Mode 4: IEEE 802.11g Link Mode															
2412	<p>Agilent 16:52:51 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 16.175 MHz 0.46 dB</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>V1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.412 000 GHz Span 50 MHz #Res BW 100 kHz #VBW 100 kHz Sweep 6.133 ms (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1"> <thead> <tr> <th colspan="2">Freq/Channel</th> </tr> </thead> <tbody> <tr> <td>Center Freq</td> <td>2.41200000 GHz</td> </tr> <tr> <td>Start Freq</td> <td>2.38700000 GHz</td> </tr> <tr> <td>Stop Freq</td> <td>2.43700000 GHz</td> </tr> <tr> <td>CF Step</td> <td>5.00000000 MHz Auto Man</td> </tr> <tr> <td>Freq Offset</td> <td>0.00000000 Hz</td> </tr> <tr> <td>Signal Track</td> <td>On Off</td> </tr> </tbody> </table>	Freq/Channel		Center Freq	2.41200000 GHz	Start Freq	2.38700000 GHz	Stop Freq	2.43700000 GHz	CF Step	5.00000000 MHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.41200000 GHz														
Start Freq	2.38700000 GHz														
Stop Freq	2.43700000 GHz														
CF Step	5.00000000 MHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
2437	<p>Agilent 16:54:08 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 16.225 MHz -0.56 dB</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>V1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.437 000 GHz Span 50 MHz #Res BW 100 kHz #VBW 100 kHz Sweep 6.133 ms (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1"> <thead> <tr> <th colspan="2">Freq/Channel</th> </tr> </thead> <tbody> <tr> <td>Center Freq</td> <td>2.43700000 GHz</td> </tr> <tr> <td>Start Freq</td> <td>2.41200000 GHz</td> </tr> <tr> <td>Stop Freq</td> <td>2.46200000 GHz</td> </tr> <tr> <td>CF Step</td> <td>5.00000000 MHz Auto Man</td> </tr> <tr> <td>Freq Offset</td> <td>0.00000000 Hz</td> </tr> <tr> <td>Signal Track</td> <td>On Off</td> </tr> </tbody> </table>	Freq/Channel		Center Freq	2.43700000 GHz	Start Freq	2.41200000 GHz	Stop Freq	2.46200000 GHz	CF Step	5.00000000 MHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.43700000 GHz														
Start Freq	2.41200000 GHz														
Stop Freq	2.46200000 GHz														
CF Step	5.00000000 MHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
2462	<p>Agilent 16:55:07 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 16.375 MHz -1.36 dB</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>V1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.462 000 GHz Span 50 MHz #Res BW 100 kHz #VBW 100 kHz Sweep 6.133 ms (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1"> <thead> <tr> <th colspan="2">Freq/Channel</th> </tr> </thead> <tbody> <tr> <td>Center Freq</td> <td>2.46200000 GHz</td> </tr> <tr> <td>Start Freq</td> <td>2.43700000 GHz</td> </tr> <tr> <td>Stop Freq</td> <td>2.48700000 GHz</td> </tr> <tr> <td>CF Step</td> <td>5.00000000 MHz Auto Man</td> </tr> <tr> <td>Freq Offset</td> <td>0.00000000 Hz</td> </tr> <tr> <td>Signal Track</td> <td>On Off</td> </tr> </tbody> </table>	Freq/Channel		Center Freq	2.46200000 GHz	Start Freq	2.43700000 GHz	Stop Freq	2.48700000 GHz	CF Step	5.00000000 MHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.46200000 GHz														
Start Freq	2.43700000 GHz														
Stop Freq	2.48700000 GHz														
CF Step	5.00000000 MHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														

8 Maximum Power Density Measurement

8.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.2. Test Setup



8.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

8.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The spectrum analyzer RES BW was set to 3 kHz. The START and STOP frequencies were set to the band edges of the maximum output pass band. If there is no clear maximum amplitude in any given portion of the band, it may be necessary to make measurements at a number of bands defined by several START and STOP frequency pairs. The specification calls for a 1 second interval at each 3 kHz bandwidth; total SWEEP TIME is calculated as follows:

$$\text{SWEEP TIME (SEC)} = (\text{Fstop, kHz} - \text{Fstart, kHz}) / 3 \text{ kHz}$$

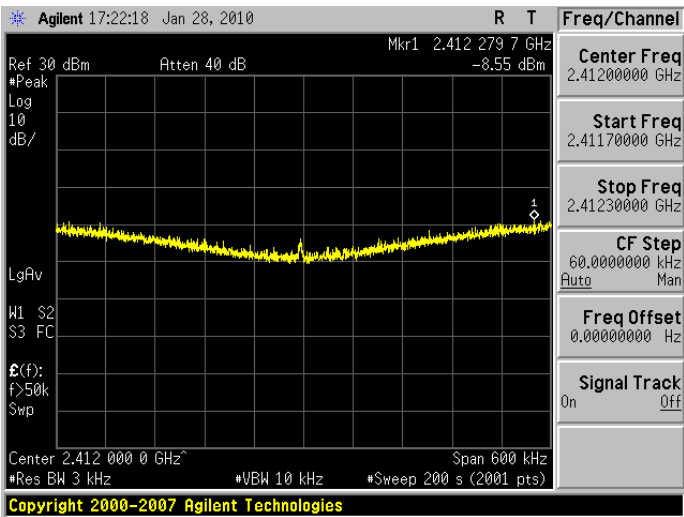
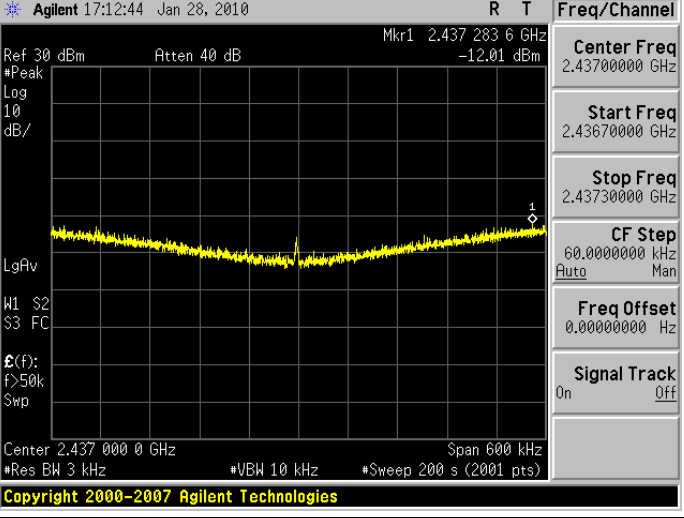
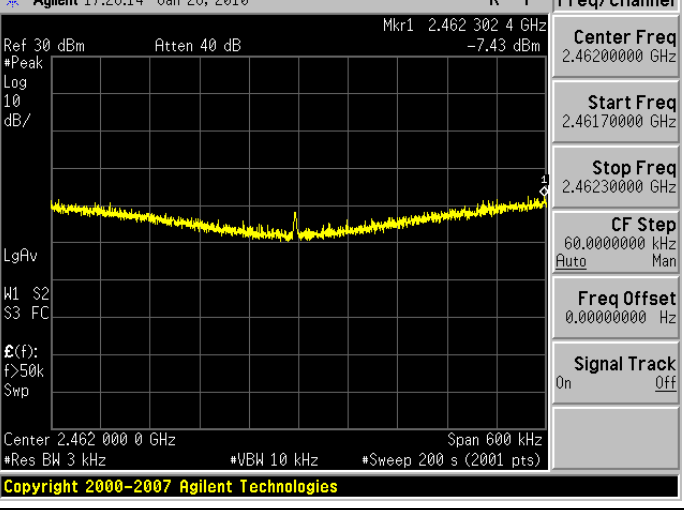
Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

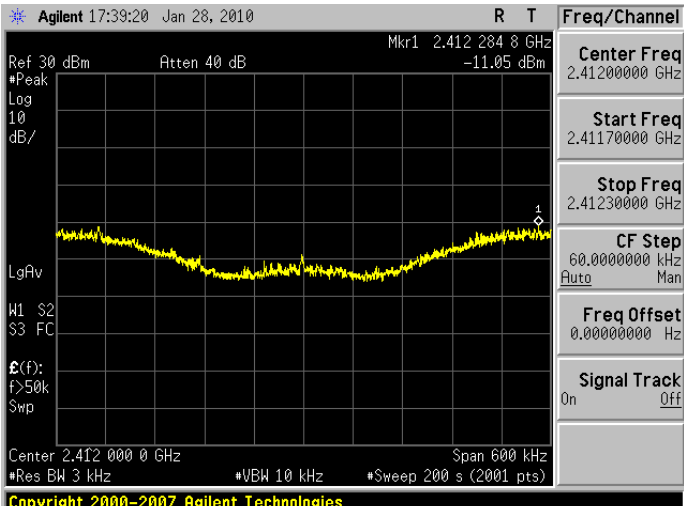
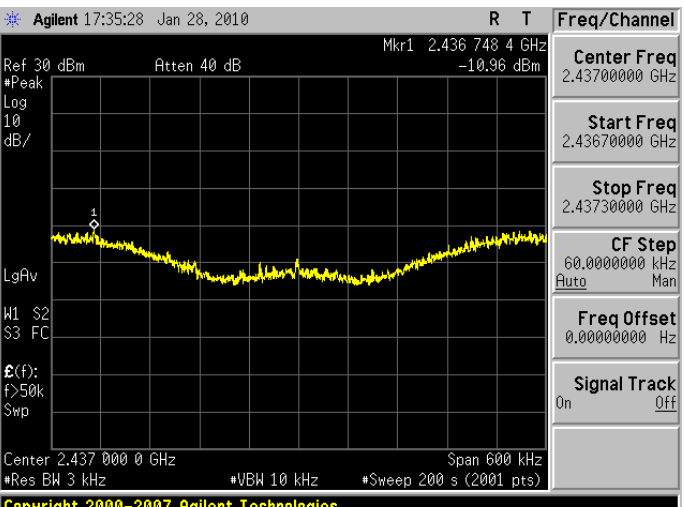
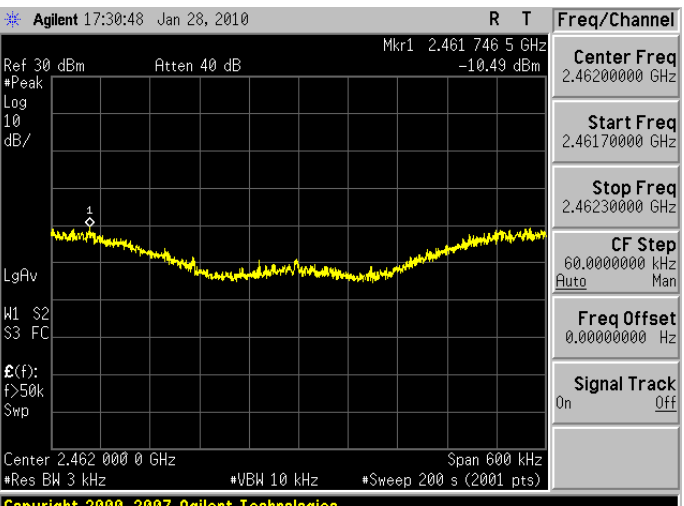
8.5. Test Result

Product	Smartphone		
Test Item	Maximum Power Density		
Test Mode	Mode 3: IEEE 802.11b Link Mode		
Date of Test	01/28/2010	Test Site	TE06
	Frequency (MHz)	Measurement (dBm)	Limit (dBm)
	2412	-8.55	< 8
	2437	-12.01	< 8
	2462	-7.43	< 8

Product	Smartphone		
Test Item	Maximum Power Density		
Test Mode	Mode 4: IEEE 802.11g Link Mode		
Date of Test	01/28/2010	Test Site	TE06
	Frequency (MHz)	Measurement (dBm)	Limit (dBm)
	2412	-11.05	< 8
	2437	-10.96	< 8
	2462	-10.49	< 8

8.6. Test Graphs

Mode 3: IEEE 802.11b Link Mode															
2412	 <p>Agilent 17:22:18 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 2.412 279 7 GHz -8.55 dBm</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>W1 S2 S3 FC</p> <p>Ⓔ(f): F>50k Swp</p> <p>Center 2.412 000 0 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.41200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.41170000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.41230000 GHz</td></tr> <tr><td>CF Step</td><td>60.0000000 kHz Auto Man</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>On Off</td></tr> </table>	Freq/Channel		Center Freq	2.41200000 GHz	Start Freq	2.41170000 GHz	Stop Freq	2.41230000 GHz	CF Step	60.0000000 kHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.41200000 GHz														
Start Freq	2.41170000 GHz														
Stop Freq	2.41230000 GHz														
CF Step	60.0000000 kHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
2437	 <p>Agilent 17:12:44 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 2.437 283 6 GHz -12.01 dBm</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>W1 S2 S3 FC</p> <p>Ⓔ(f): F>50k Swp</p> <p>Center 2.437 000 0 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.43700000 GHz</td></tr> <tr><td>Start Freq</td><td>2.43670000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.43730000 GHz</td></tr> <tr><td>CF Step</td><td>60.0000000 kHz Auto Man</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>On Off</td></tr> </table>	Freq/Channel		Center Freq	2.43700000 GHz	Start Freq	2.43670000 GHz	Stop Freq	2.43730000 GHz	CF Step	60.0000000 kHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.43700000 GHz														
Start Freq	2.43670000 GHz														
Stop Freq	2.43730000 GHz														
CF Step	60.0000000 kHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
2462	 <p>Agilent 17:26:14 Jan 28, 2010</p> <p>Ref 30 dBm Atten 40 dB Mkr1 2.462 302 4 GHz -7.43 dBm</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>W1 S2 S3 FC</p> <p>Ⓔ(f): F>50k Swp</p> <p>Center 2.462 000 0 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.46200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.46170000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.46230000 GHz</td></tr> <tr><td>CF Step</td><td>60.0000000 kHz Auto Man</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>On Off</td></tr> </table>	Freq/Channel		Center Freq	2.46200000 GHz	Start Freq	2.46170000 GHz	Stop Freq	2.46230000 GHz	CF Step	60.0000000 kHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.46200000 GHz														
Start Freq	2.46170000 GHz														
Stop Freq	2.46230000 GHz														
CF Step	60.0000000 kHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														

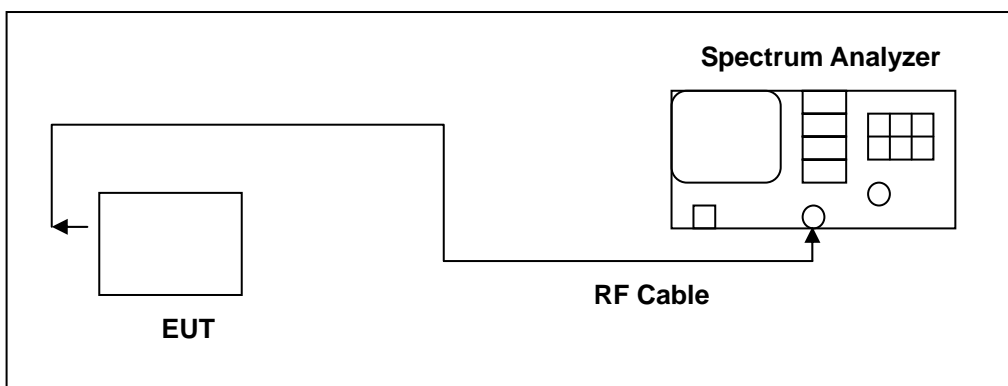
Mode 4: IEEE 802.11g Link Mode	
2412	 <p>Agilent 17:39:20 Jan 28, 2010 R T</p> <p>Mkr1 2.412 284 8 GHz -11.05 dBm</p> <p>Ref 30 dBm Atten 40 dB</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>W1 S2 S3 FC</p> <p>Ⓐ(f): f>50k Swp</p> <p>Center 2.412 000 0 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.41170000 GHz</p> <p>Stop Freq 2.41230000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
2437	 <p>Agilent 17:35:28 Jan 28, 2010 R T</p> <p>Mkr1 2.436 748 4 GHz -10.96 dBm</p> <p>Ref 30 dBm Atten 40 dB</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>W1 S2 S3 FC</p> <p>Ⓐ(f): f>50k Swp</p> <p>Center 2.437 000 0 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.43670000 GHz</p> <p>Stop Freq 2.43730000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
2462	 <p>Agilent 17:30:48 Jan 28, 2010 R T</p> <p>Mkr1 2.461 746 5 GHz -10.49 dBm</p> <p>Ref 30 dBm Atten 40 dB</p> <p>#Peak Log 10 dB/</p> <p>LgAv</p> <p>W1 S2 S3 FC</p> <p>Ⓐ(f): f>50k Swp</p> <p>Center 2.462 000 0 GHz Span 600 kHz #Res BW 3 kHz #VBW 10 kHz #Sweep 200 s (2001 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.46170000 GHz</p> <p>Stop Freq 2.46230000 GHz</p> <p>CF Step 60.0000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

9 Out of Band Conducted Emissions Measurement

9.1. Limit

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

9.2. Test Setup



9.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

9.4. Test Procedure

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

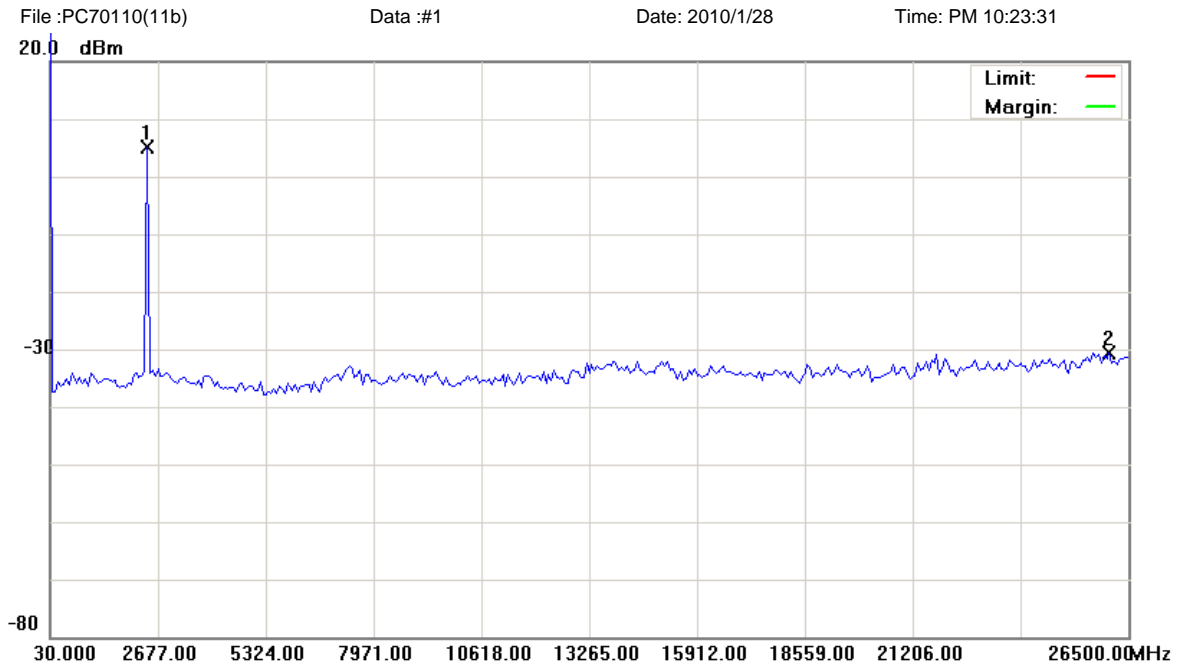
All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel low, middle, high)

9.5. Test Result

Product	Smartphone		
Test Item	Out of Band Conducted Emissions		
Test Mode	Mode 3: IEEE 802.11b Link Mode		
Date of Test	01/28/2010	Test Site	TE06
Frequency (MHz)	Fundamental (dBm)	Limit (dBm)	Measurement (dBm)
2412	5.17	-14.83	-30.52
2437	5.55	-14.45	-30.55
2462	2.13	-17.87	-32.39

Product	Smartphone		
Test Item	Out of Band Conducted Emissions		
Test Mode	Mode 4: IEEE 802.11g Link Mode		
Date of Test	01/28/2010	Test Site	TE06
Frequency (MHz)	Fundamental (dBm)	Limit (dBm)	Measurement (dBm)
2412	6.17	-13.83	-32.44
2437	4.55	-15.45	-31.17
2462	-1.88	-21.88	-31.89

9.6. Test Graphs

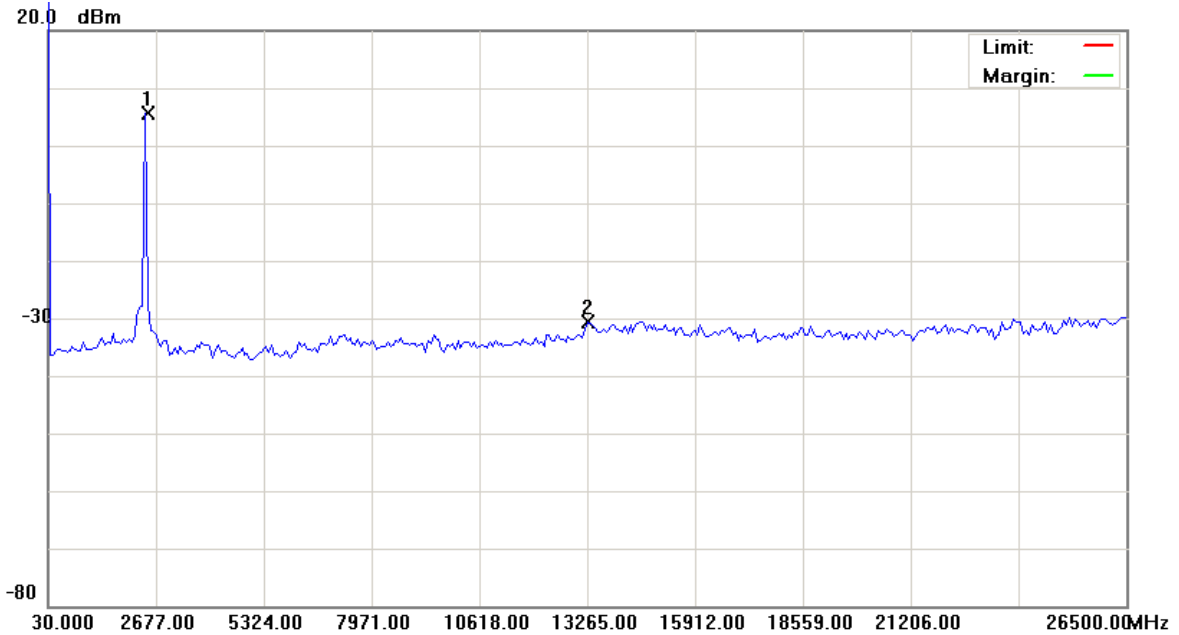


Site : RF Conducted	Phase:	Temperature: 26 °C
Limit:	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		RBW: 100 KHz VBW: 100 KHz
M/N: PC70110		
Mode: 3		
Note: 2412MHZ		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Comment
1	*	2412.000	-0.92	6.09	5.17			peak	Tx
2		26036.77	-37.50	6.98	-30.52			peak	

*:Maximum data x:Over limit !:over margin

File :PC70110(11b) Data :#2 Date: 2010/1/28 Time: PM 10:21:37

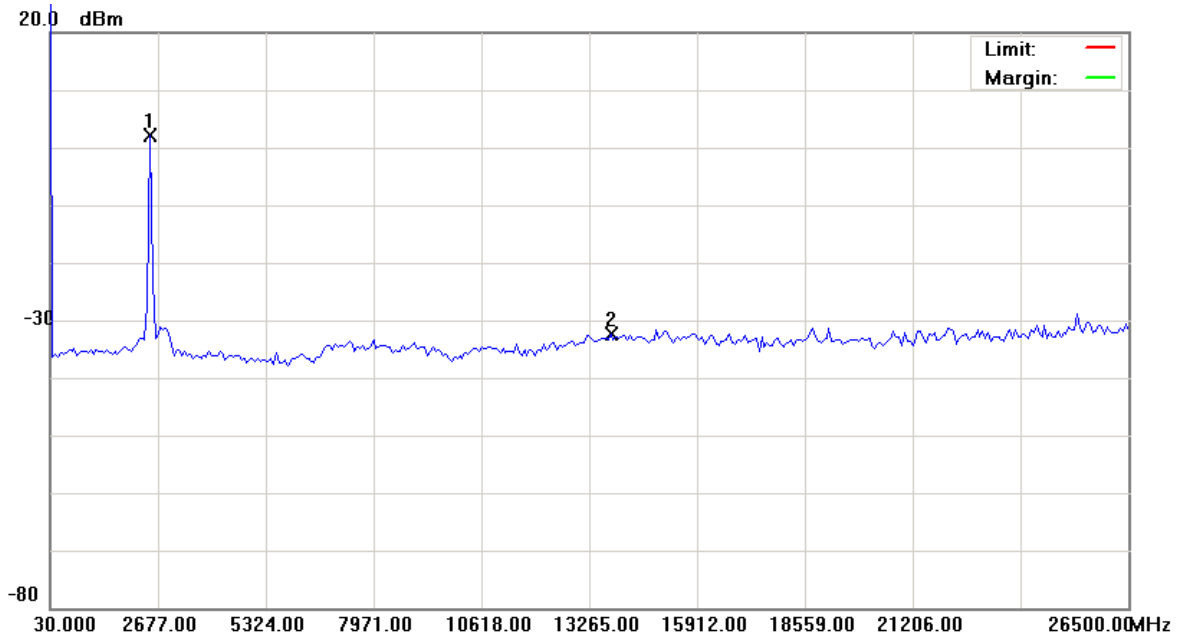


Site : RF Conducted	Phase:	Temperature: 26 °C
Limit:	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		RBW: 100 KHz VBW: 100 KHz
M/N: PC70110		
Mode: 3		
Note: 2437MHZ		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Comment
1	*	2437.000	-0.54	6.09	5.55			peak	Tx
2		13265.00	-37.05	6.50	-30.55			peak	

*:Maximum data x:Over limit !:over margin

File :PC70110(11b) Data :#3 Date: 2010/1/28 Time: PM 10:20:10

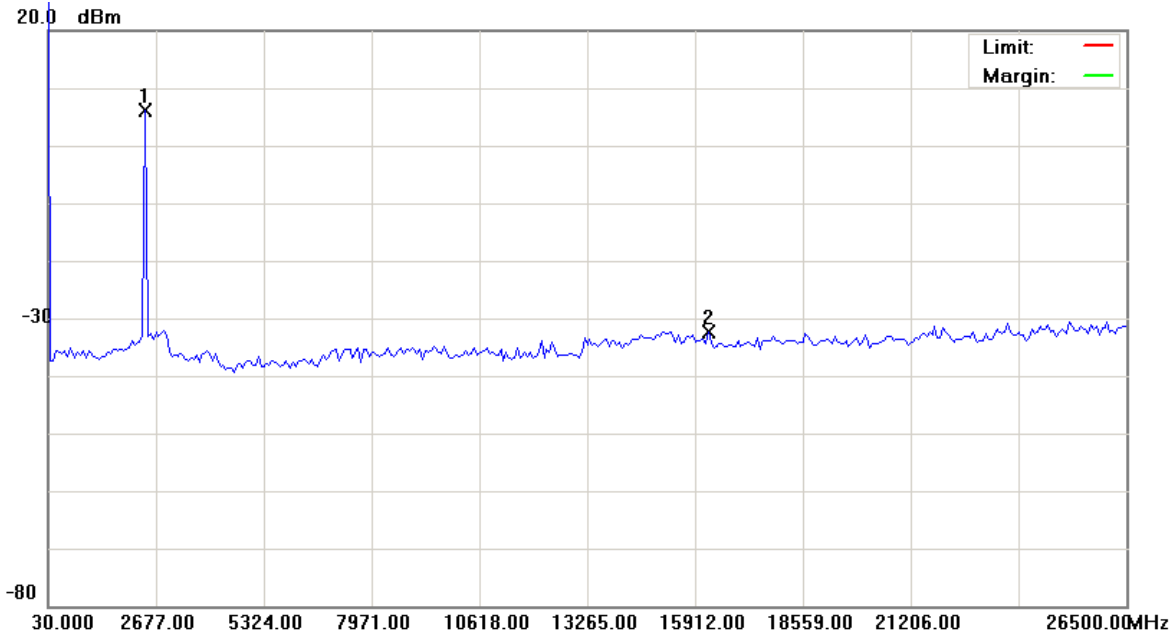


Site : RF Conducted	Phase:	Temperature: 26 °C
Limit:	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		RBW: 100 KHz VBW: 100 KHz
M/N: PC70110		
Mode: 3		
Note: 2462MHZ		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Comment
1	*	2462.000	-3.96	6.09	2.13			peak	Tx
2		13794.40	-38.91	6.52	-32.39			peak	

*:Maximum data x:Over limit !:over margin

File :PC70110(11g) Data :#1 Date: 2010/1/28 Time: PM 10:18:41

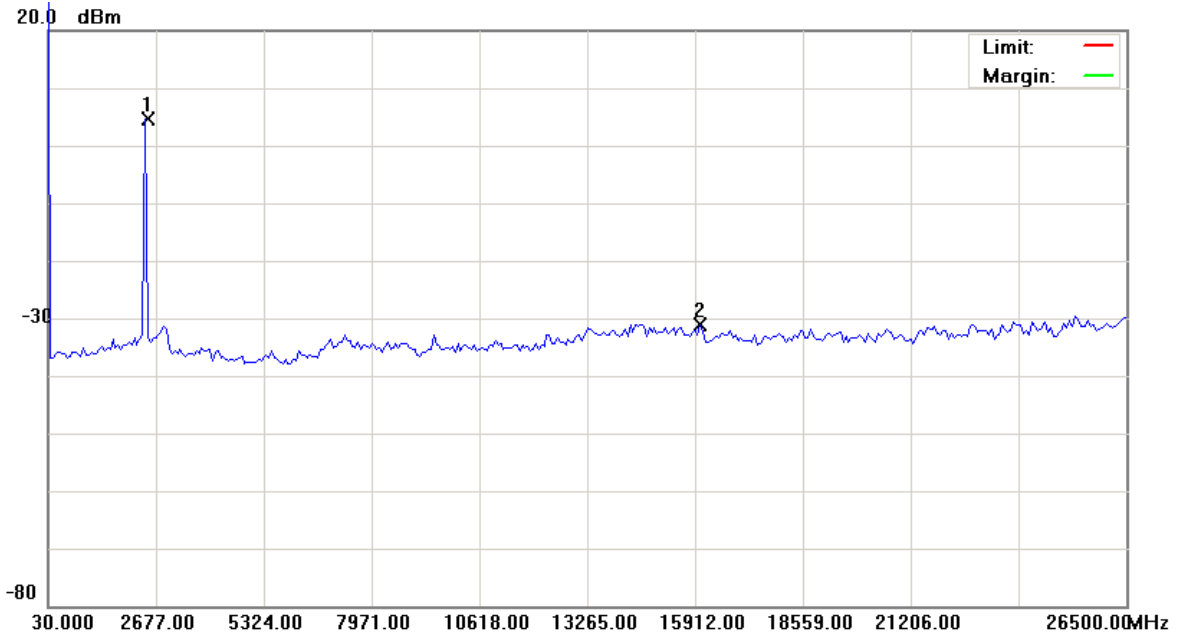


Site : RF Conducted	Phase:	Temperature: 26 °C
Limit:	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		RBW: 100 KHz VBW: 100 KHz
M/N: PC70110		
Mode: 4		
Note: 2412MHZ		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Comment
1	*	2412.000	0.08	6.09	6.17			peak	Tx
2		16242.87	-39.05	6.61	-32.44			peak	

*:Maximum data x:Over limit !:over margin

File :PC70110(11g) Data :#2 Date: 2010/1/28 Time: PM 10:16:53

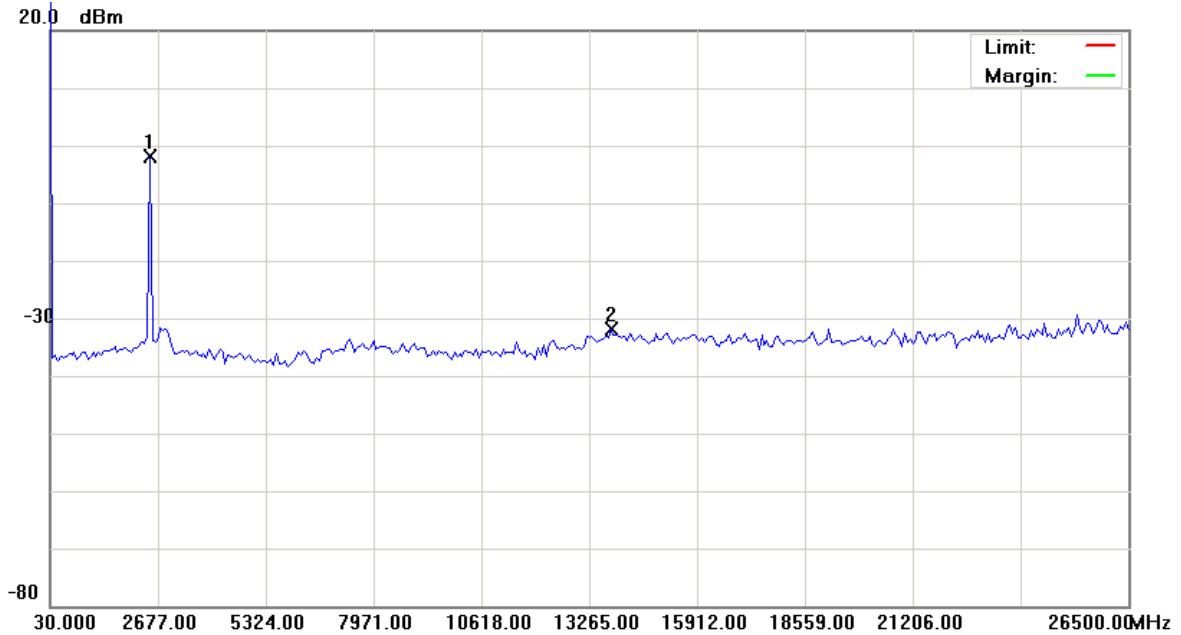


Site : RF Conducted	Phase:	Temperature: 26 °C
Limit:	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		RBW: 100 KHz VBW: 100 KHz
M/N: PC70110		
Mode: 4		
Note: 2437MHZ		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Comment
1	*	2437.000	-1.54	6.09	4.55			peak	Tx
2		16044.35	-37.78	6.61	-31.17			peak	

*:Maximum data x:Over limit !:over margin

File :PC70110(11g) Data :#3 Date: 2010/1/28 Time: PM 10:14:05



Site : RF Conducted	Phase:	Temperature: 26 °C
Limit:	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		RBW: 100 KHz VBW: 100 KHz
M/N: PC70110		
Mode: 4		
Note: 2462MHZ		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Comment
1	*	2462.000	-7.97	6.09	-1.88			peak	Tx
2		13794.40	-38.41	6.52	-31.89			peak	

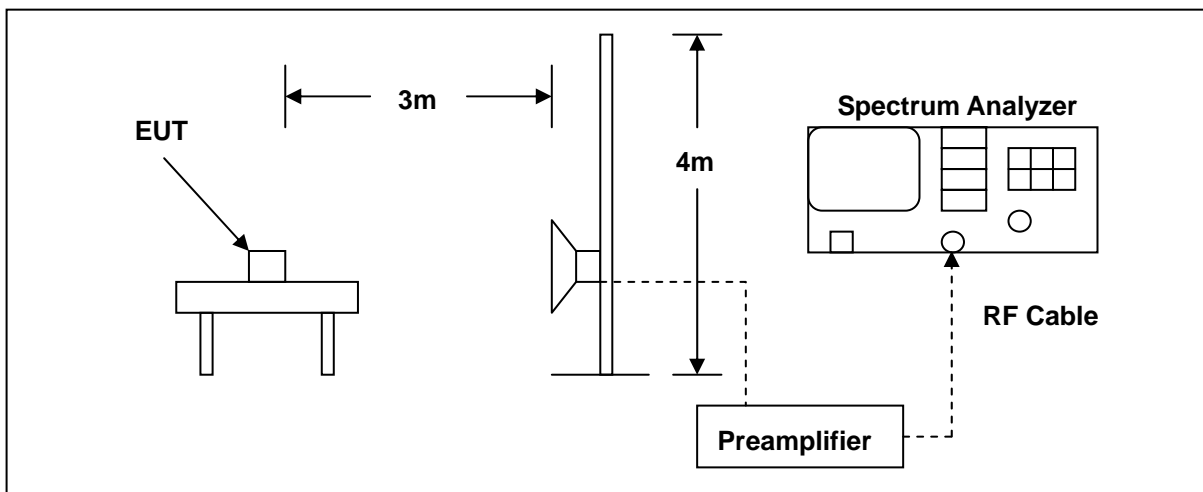
*:Maximum data x:Over limit !:over margin

10 Band Edges Measurement

10.1. Limit

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

10.2. Test Setup



10.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	01/27/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	07/01/2009	(1)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	9120D	9120D-550	07/01/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

10.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

10.5. Test Graphs

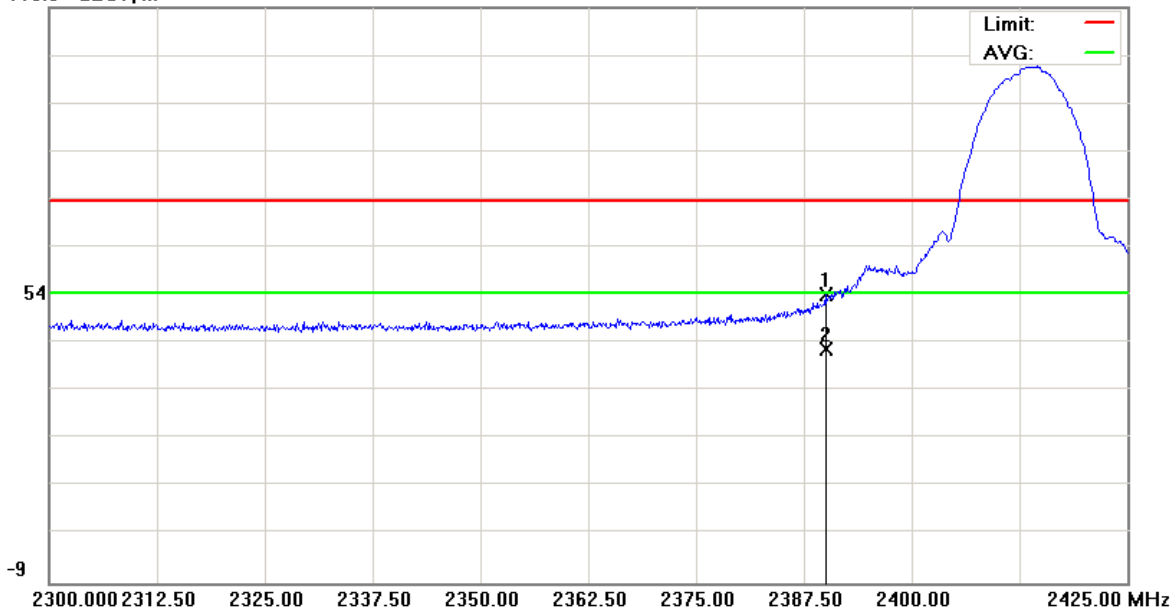
File :PC70110(Band Edge)

Data :#1

Date: 2010/1/28

Time: 下午 04:05:35

116.0 dBuV/m



Site : 966 Chamber	Polarization: Vertical	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: PC70110		
Mode: 3		
Note: 2412MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	53.55	0.19	53.74	74.00	-20.26	peak		
2	*	2390.000	41.53	0.19	41.72	54.00	-12.28	AVG		

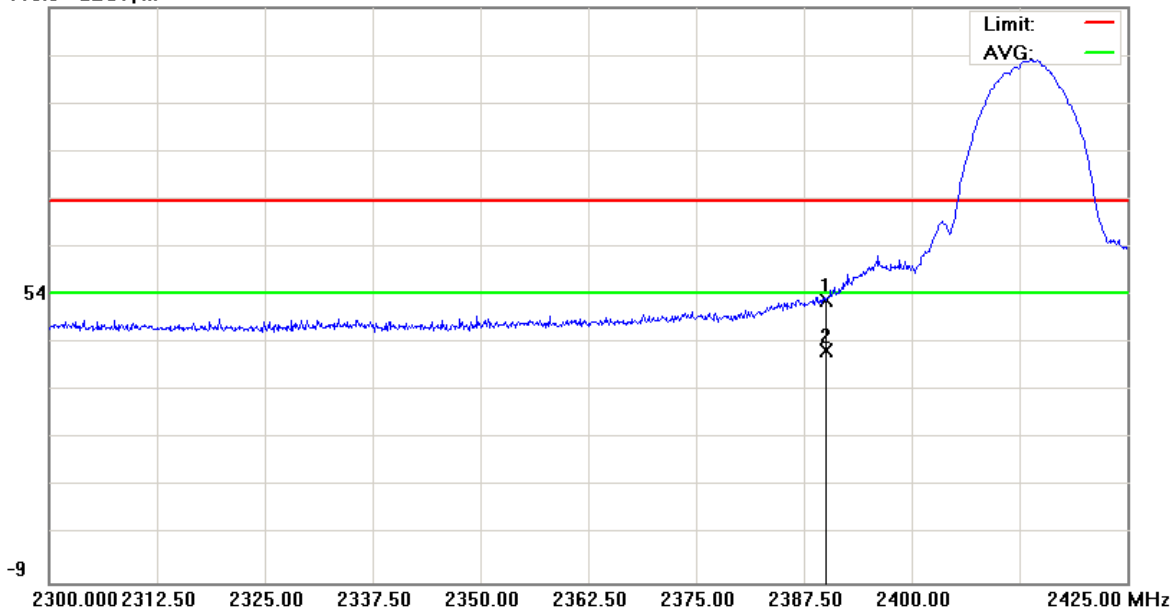
*:Maximum data x:Over limit !:over margin

File :PC70110(Band Edge)

Data :#5

Date: 2010/2/1

Time: 上午 09:57:17

116.0 dBuV/m


Site: : 966 Chamber	Polarization: Horizontal	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: PC70110		
Mode: 3		
Note: 2412MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	52.31	0.19	52.50	74.00	-21.50	peak		
2	*	2390.000	41.25	0.19	41.44	54.00	-12.56	AVG		

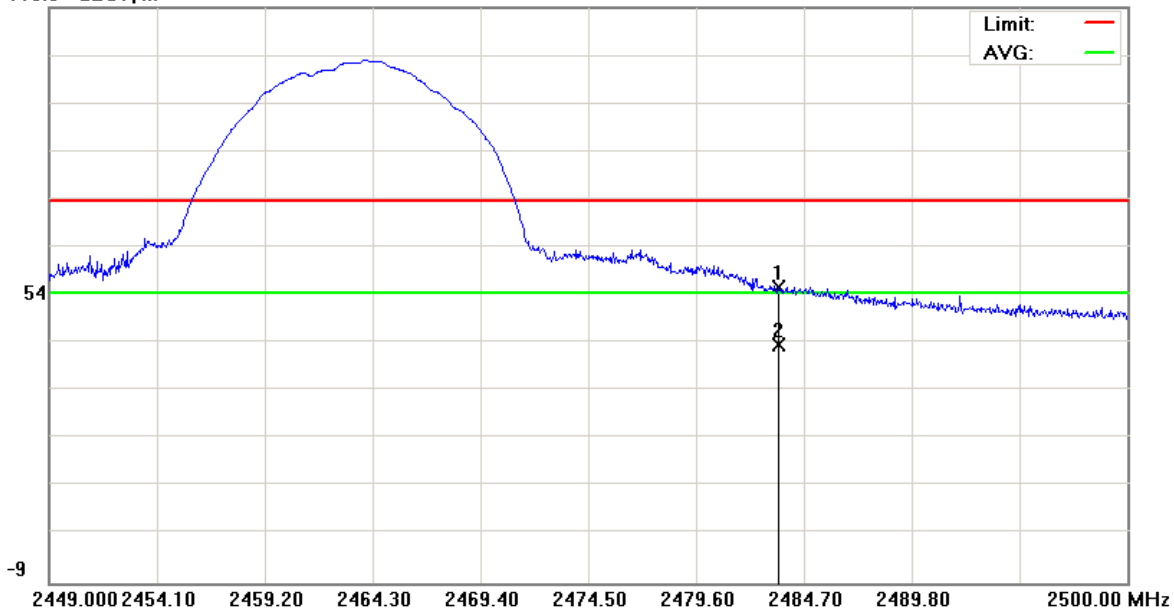
*:Maximum data x:Over limit !:over margin

File :PC70110(Band Edge)

Data :#3

Date: 2010/2/1

Time: 上午 10:03:11

116.0 dBuV/m


Site : 966 Chamber	Polarization: Vertical	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: PC70110		
Mode: 3		
Note: 2462MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	55.04	0.25	55.29	74.00	-18.71	peak		
2	*	2483.500	42.39	0.25	42.64	54.00	-11.36	AVG		

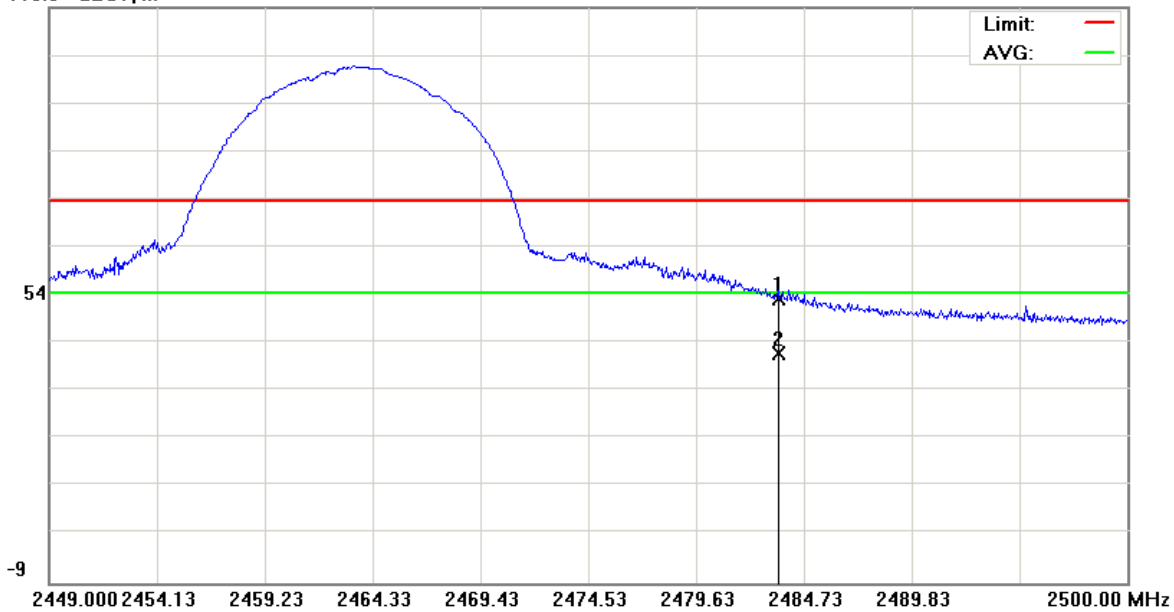
*:Maximum data x:Over limit !:over margin

File :PC70110(Band Edge)

Data :#7

Date: 2010/2/1

Time: 上午 10:05:46

116.0 dBuV/m


Site : 966 Chamber	Polarization: Horizontal	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000KHz VBW: 1000KHz
M/N: PC70110		
Mode: 3		
Note: 2462MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	52.60	0.25	52.85	74.00	-21.15	peak		
2	*	2483.500	40.75	0.25	41.00	54.00	-13.00	AVG		

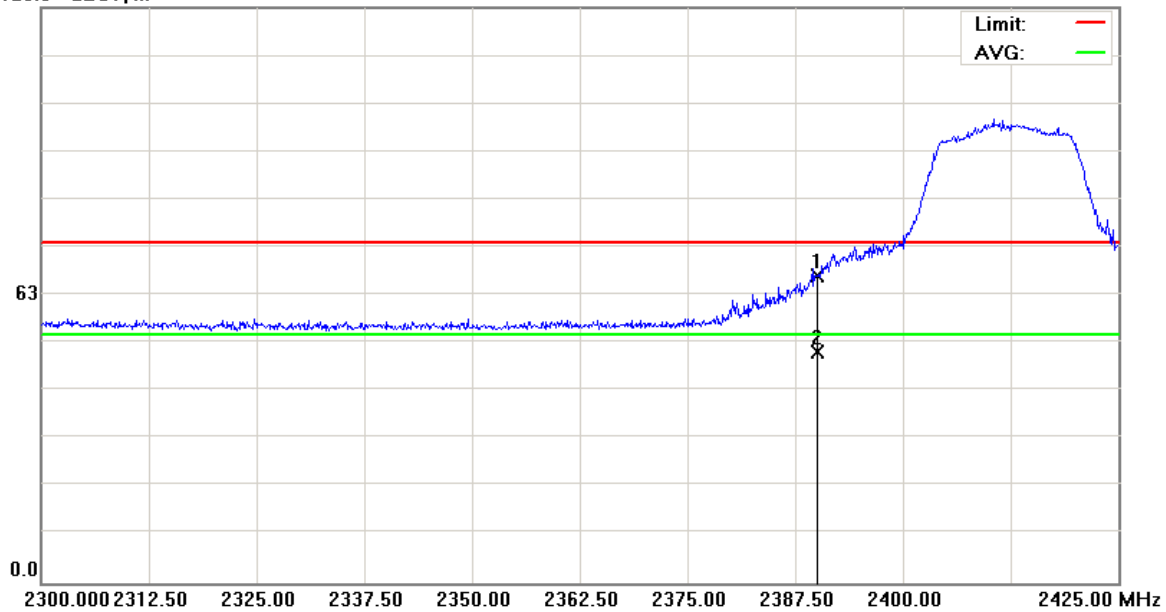
*:Maximum data x:Over limit !:over margin

File :PC70110(Band Edge) Power

Data :#3

Date: 2010/2/1

Time: 上午 10:36:41

125.0 dBuV/m


Site : 966 Chamber

 Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000KHz VBW: 1000 KHz

M/N: PC70110

Mode: 4

Note: 2412MHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	66.61	0.16	66.77	74.00	-7.23	peak		
2	*	2390.000	49.92	0.16	50.08	54.00	-3.92	AVG		

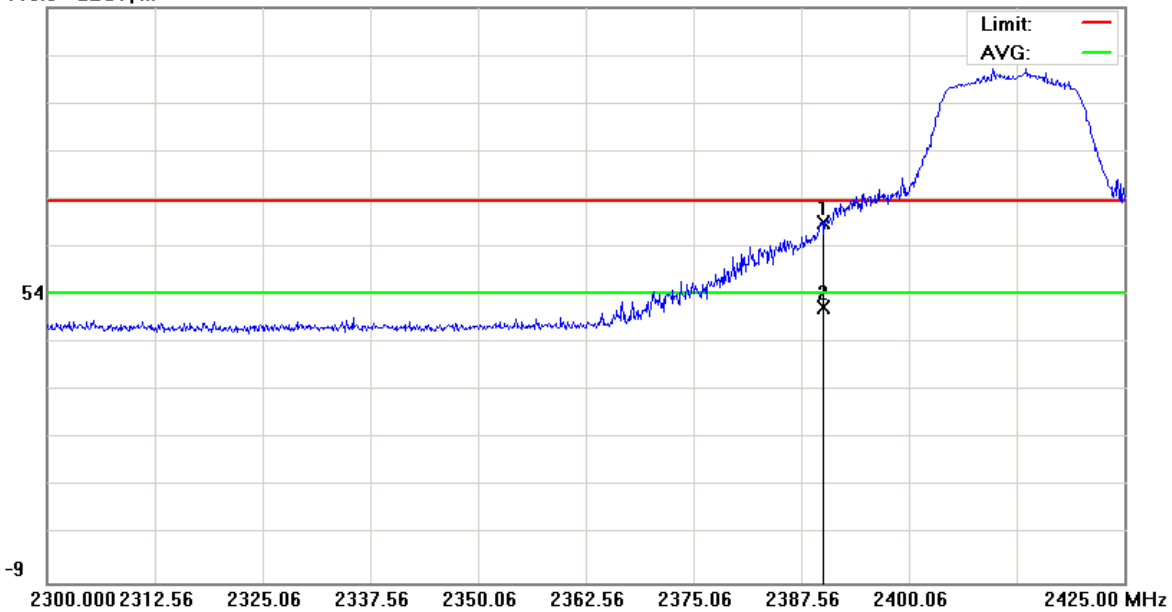
*:Maximum data x:Over limit !:over margin

File :PC70110(Band Edge) Power

Data :#7

Date: 2010/2/1

Time: 上午 10:40:19

116.0 dBuV/m


Site: : 966 Chamber	Polarization: Horizontal	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000KHz VBW: 1000 KHz
M/N: PC70110		
Mode: 4		
Note: 2412MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	68.99	0.19	69.18	74.00	-4.82	peak		
2	*	2390.000	50.53	0.19	50.72	54.00	-3.28	AVG		

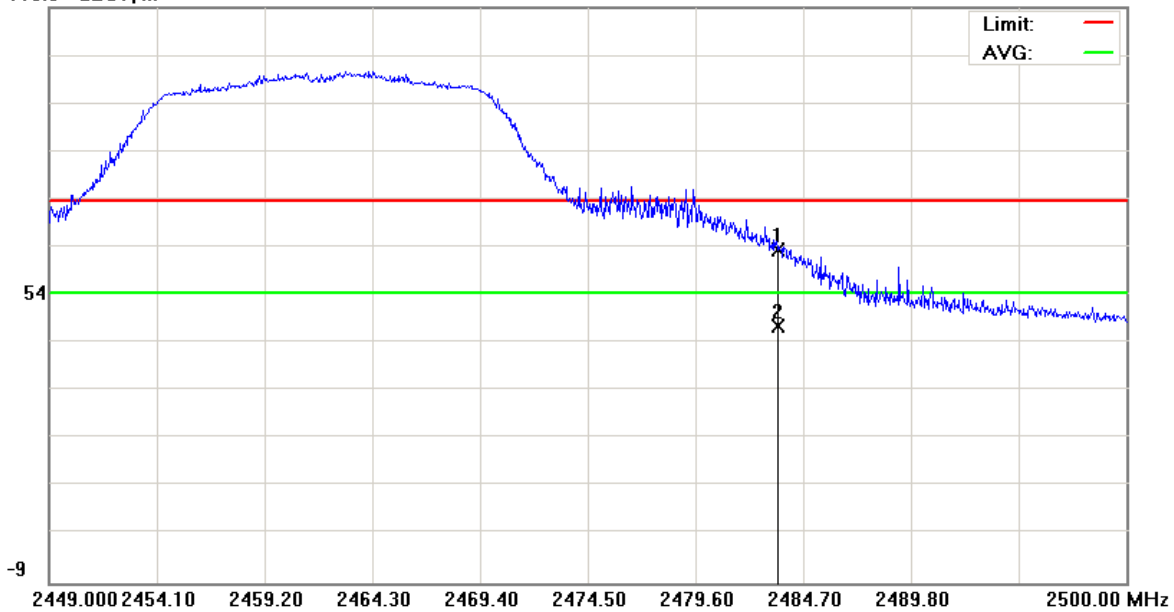
*:Maximum data x:Over limit !:over margin

File :PC70110(Band Edge) Power

Data :#1

Date: 2010/2/1

Time: 上午 10:20:37

116.0 dBuV/m


Site : 966 Chamber

 Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000KHz VBW: 1000 KHz

M/N: PC70110

Mode: 4

Note: 2462MHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	63.08	0.25	63.33	74.00	-10.67	peak		
2	*	2483.500	46.42	0.25	46.67	54.00	-7.33	AVG		

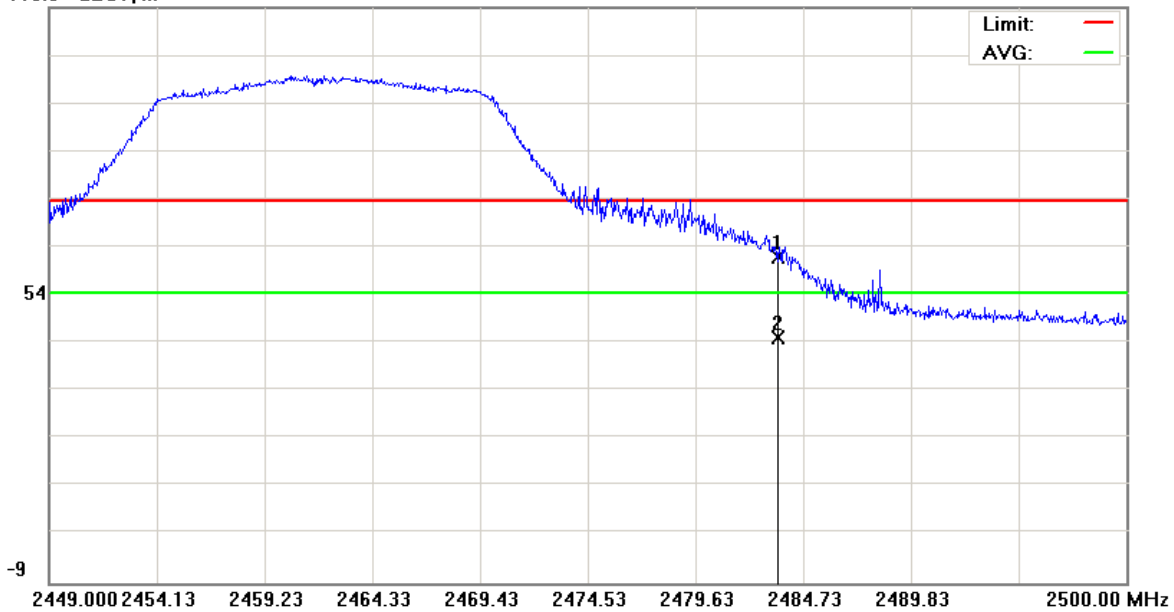
*:Maximum data x:Over limit !:over margin

File :PC70110(Band Edge) Power

Data :#5

Date: 2010/2/1

Time: 上午 10:24:25

116.0 dBuV/m


Site : 966 Chamber	Polarization: Horizontal	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000KHz VBW: 1000 KHz
M/N: PC70110		
Mode: 4		
Note: 2462MHz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	61.45	0.25	61.70	74.00	-12.30	peak		
2	*	2483.500	44.07	0.25	44.32	54.00	-9.68	AVG		

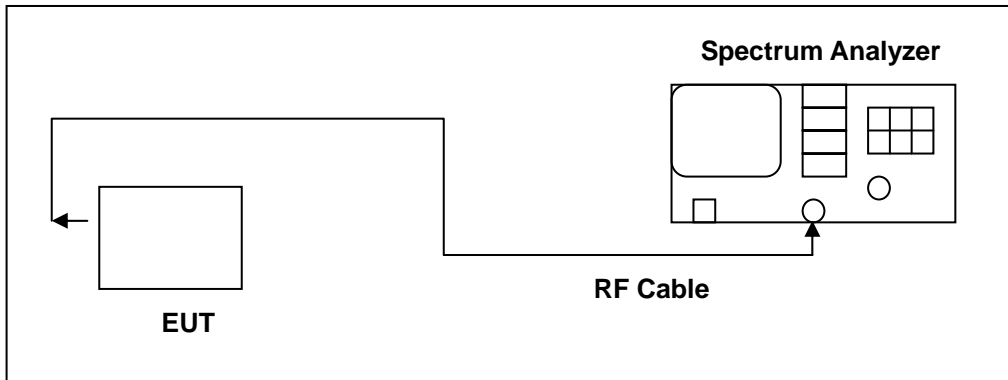
*:Maximum data x:Over limit !:over margin

11 99 % Occupied Bandwidth Measurement

11.1. Limit

N/A

11.2. Test Setup



11.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

11.4. Test Procedure

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled.

11.5. Test Result

Product	Smartphone		
Test Item	99 % Occupied Bandwidth		
Test Mode	Mode 3: IEEE 802.11b Link Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency (MHz)	Measurement (kHz)		Limit (kHz)
2412	15653.7		-----
2437	15379.2		-----
2462	15379.4		-----

Product	Smartphone		
Test Item	99 % Occupied Bandwidth		
Test Mode	Mode 4: IEEE 802.11g Link Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency (MHz)	Measurement (kHz)		Limit (kHz)
2412	16519.6		-----
2437	16439.3		-----
2462	16408.9		-----

11.6. Test Graphs

Mode 3: IEEE 802.11b Link Mode	
2412	<p>Agilent 15:59:14 Mar 23, 2010</p> <p>Ch Freq 2.412 GHz Trig Free</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.36700000 GHz</p> <p>Stop Freq 2.43700000 GHz</p> <p>CF Step 5.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 15.6537 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error -55.636 kHz</p> <p>x dB Bandwidth 18.251 MHz*</p> <p>Copyright 2000-2005 Agilent Technologies</p>
2437	<p>Agilent 15:59:21 Mar 23, 2010</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.41200000 GHz</p> <p>Stop Freq 2.46200000 GHz</p> <p>CF Step 5.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 15.3792 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error -7.364 kHz</p> <p>x dB Bandwidth 18.406 MHz*</p> <p>Copyright 2000-2005 Agilent Technologies</p>
2462	<p>Agilent 15:59:31 Mar 23, 2010</p> <p>Ch Freq 2.462 GHz Trig Free</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.43700000 GHz</p> <p>Stop Freq 2.48700000 GHz</p> <p>CF Step 5.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 15.3794 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error 110.803 kHz</p> <p>x dB Bandwidth 18.879 MHz*</p> <p>Copyright 2000-2005 Agilent Technologies</p>

Mode 4: IEEE 802.11g Link Mode	
2412	<p>Agilent 16:40:17 Mar 23, 2010</p> <p>Ch Freq 2.412 GHz Trig Free</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.38700000 GHz</p> <p>Stop Freq 2.43700000 GHz</p> <p>CF Step 5.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On</p> <p>Occupied Bandwidth 16.5196 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error -6.203 kHz</p> <p>x dB Bandwidth 20.283 MHz*</p> <p>Copyright 2000-2005 Agilent Technologies</p>
2437	<p>Agilent 16:40:22 Mar 23, 2010</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.41200000 GHz</p> <p>Stop Freq 2.46200000 GHz</p> <p>CF Step 5.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On</p> <p>Occupied Bandwidth 16.4393 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error -62.027 kHz</p> <p>x dB Bandwidth 20.192 MHz*</p> <p>Copyright 2000-2005 Agilent Technologies</p>
2462	<p>Agilent 16:40:27 Mar 23, 2010</p> <p>Ch Freq 2.462 GHz Trig Free</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.43700000 GHz</p> <p>Stop Freq 2.48700000 GHz</p> <p>CF Step 5.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On</p> <p>Occupied Bandwidth 16.4089 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error -28.843 kHz</p> <p>x dB Bandwidth 21.021 MHz*</p> <p>Copyright 2000-2005 Agilent Technologies</p>

12 Antenna Measurement

12.1. Limit

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.

And According to 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

12.2. Antenna Connector Construction

The antenna used in this product is **PIFA antenna**. And the maximum Gain of this antenna is only **0.8 dBi**.