

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 : PB76110
Test Specification : FCC 47 CFR PART 15 SUBPART C: Oct., 2009
ANSI C63.4-2003
Issue Date : Mar. 26, 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	Mar. 26, 2010	Initial Issue	

Verification

Issued Date: 2010/03/26

Product Type : Smartphone
Applicant : HTC Corporation
Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330,
Taiwan
Trade Name : HTC
Model Number : PB76110
FCC ID : NM8PB76110
IC ID : 4115B-PB76110
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.

Tel : +886-3-2710188 / Fax : +886-3-2710190

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.

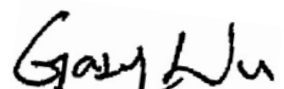
Approved By :



(Manager)

(Miller Lee)

Reviewed By :



(Testing Engineer)

(John Cheng)

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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(c)	A8.5	Transmitter Radiated Emissions	PASS	----
15.247(b)(1)	A8.4 (2)	Max. Output Power	PASS	----
15.247(a)(1)	A8.1 (1)	20dB RF Bandwidth	PASS	----
15.247(a)(1)(iii)	A8.1 (2)	Carrier Frequency Separation	PASS	----
15.247(a)(1)(iii)	A8.1 (4)	Number of Hopping	PASS	----
15.247(a)(1)(iii)	A8.1 (4)	Time of Occupancy (Dwell Time)	PASS	----
15.247(c)	A8.5	Out of Band Conducted Spurious Emission	PASS	----
15.247(c)	A8.5	Band Edge 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	:	PB76110		
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	:	NM8PB76110		
IC ID	:	4115B-PB76110		
Frequency Range	:	2402 ~ 2480 MHz		
Modulation Type	:	GFSK for 1Mbps		
		$\pi/4$ -DQPSK for 2Mbps		
		8DPSK for 3Mbps		
Antenna Type	:	PIFA Type		
Antenna Gain	:	0.8 dBi		
RF Output Power (Conducted)	:	GFSK for 1Mbps	0.775	dBm
		$\pi/4$ -DQPSK for 2Mbps	0.970	dBm
		8DPSK for 3Mbps	0.979	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:

Test Mode
Mode 1: GFSK Mode
Mode 2: $\pi/4$ -DQPSK Mode
Mode 3: 8DPSK Mode
Mode 4: IDLE Mode
Mode 5: Normal Operation Mode

Description of Test Modes

Preliminary tests were performed in different modulation to find the worst case. The modulation shown in the table below is the worst-case. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Modulation Type	Channel	Frequency (MHz)	Packet Type	Conducted Power (dBm)	Worst Case
GFSK	Low	2402	DH1	0.775	<input type="checkbox"/>
	Middle	2441	DH3	0.661	<input type="checkbox"/>
	High	2480	DH5	0.637	<input type="checkbox"/>
	Low	2402	DH1	0.367	<input type="checkbox"/>
	Middle	2441	DH3	0.330	<input type="checkbox"/>
	High	2480	DH5	0.370	<input type="checkbox"/>
	Low	2402	DH1	0.645	<input type="checkbox"/>
	Middle	2441	DH3	0.582	<input type="checkbox"/>
	High	2480	DH5	0.551	<input type="checkbox"/>
$\pi/4$ -DQPSK	Low	2402	2DH1	0.912	<input type="checkbox"/>
	Middle	2441	2DH3	0.869	<input type="checkbox"/>
	High	2480	2DH5	0.970	<input type="checkbox"/>
	Low	2402	2DH1	0.418	<input type="checkbox"/>
	Middle	2441	2DH3	0.381	<input type="checkbox"/>
	High	2480	2DH5	0.455	<input type="checkbox"/>
	Low	2402	2DH1	0.685	<input type="checkbox"/>
	Middle	2441	2DH3	0.655	<input type="checkbox"/>
	High	2480	2DH5	0.746	<input type="checkbox"/>
8DPSK	Low	2402	3DH1	0.401	<input type="checkbox"/>
	Middle	2441	3DH3	0.499	<input type="checkbox"/>
	High	2480	3DH5	0.412	<input type="checkbox"/>
	Low	2402	3DH1	0.930	<input type="checkbox"/>
	Middle	2441	3DH3	0.979	<input checked="" type="checkbox"/>
	High	2480	3DH5	0.736	<input type="checkbox"/>
	Low	2402	3DH1	0.257	<input type="checkbox"/>
	Middle	2441	3DH3	0.330	<input type="checkbox"/>
	High	2480	3DH5	0.097	<input type="checkbox"/>

Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

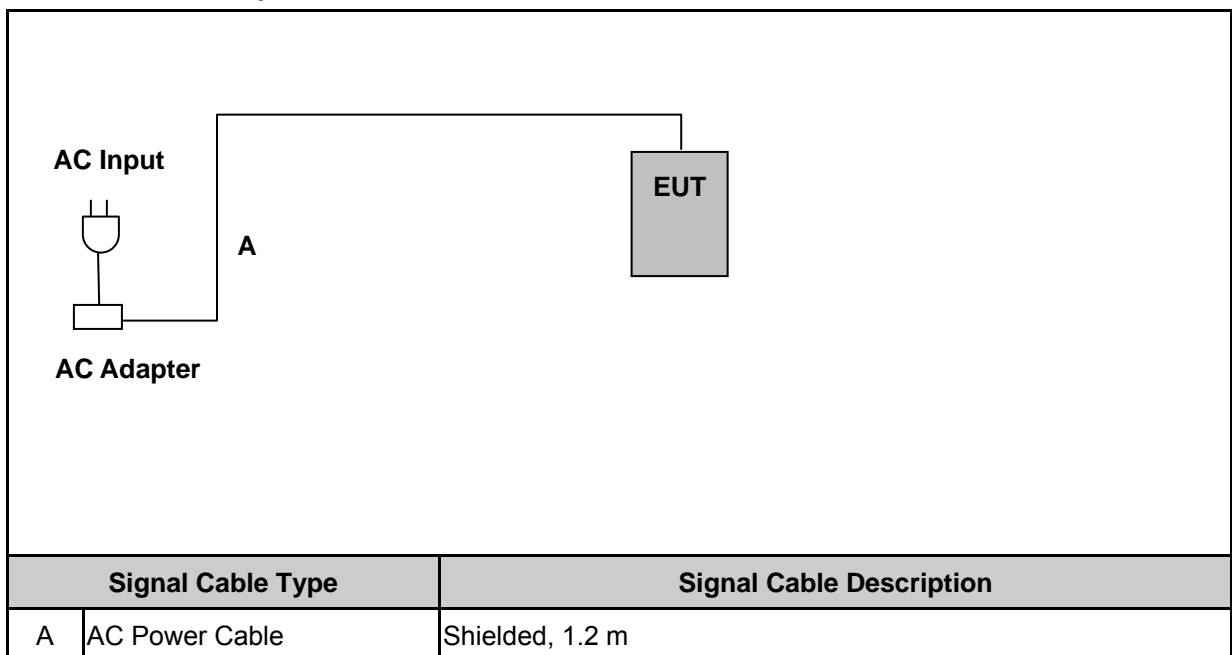
	Product	Manufacturer	Model Number	Serial Number	Power Cord
1.	Bluetooth Tester	R & S	CBT	100350	NA

3.2. EUT Exercise Software

1.	Setup the EUT and Bluetooth Tester (CBT) as shown on 3.3.
2.	Turn on the power of all equipment.
3.	EUT run test program.
4.	Open Bluetooth function link to CBT.

3.3. Configuration of Test System Details

EUT Link to AC Adapter



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

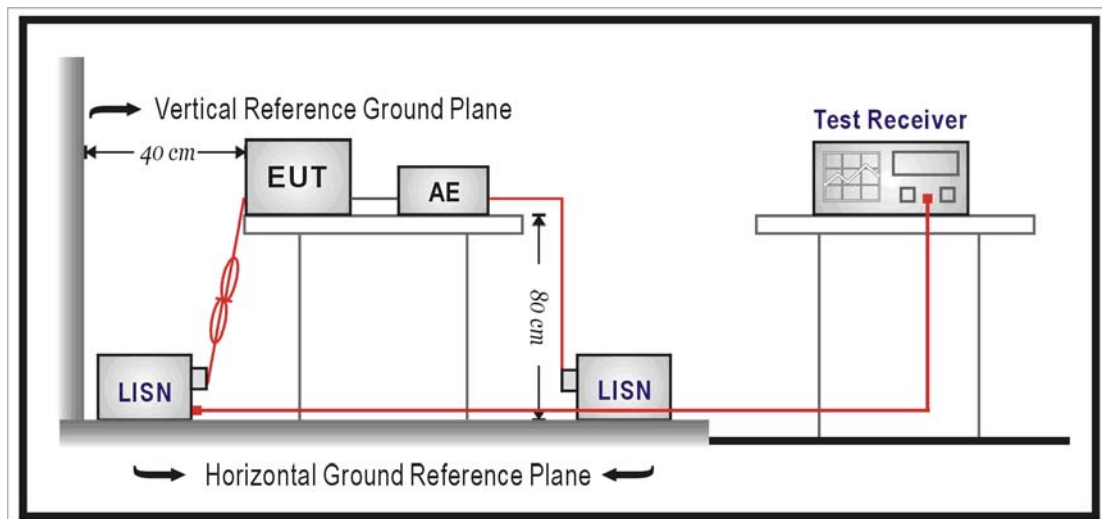
4.2. Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	07/01/2009	(1)
LISN	R&S	ENV216	101040	03/02/2010	(1)
LISN	R&S	ENV216	101041	03/02/2010	(1)
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



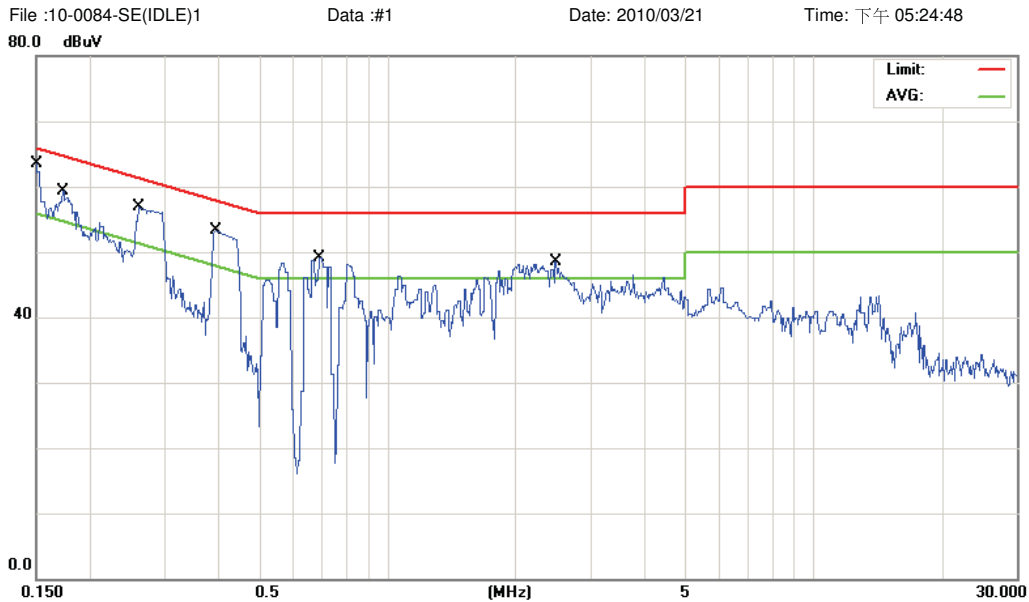
4.4. Test Procedure

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



Site : Conducted Phase: **L1** Temperature: 26 °C
 Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55 %
 EUT: Smartphone
 M/N: PB76110
 Mode: 4
 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	49.20	10.11	59.31	65.99	-6.68	QP	
2		0.1500	27.60	10.11	37.71	55.99	-18.28	AVG	
3		0.1731	41.20	10.10	51.30	64.81	-13.51	QP	
4		0.1731	12.50	10.10	22.60	54.81	-32.21	AVG	
5		0.2606	42.10	10.06	52.16	61.41	-9.25	QP	
6		0.2606	22.00	10.06	32.06	51.41	-19.35	AVG	
7		0.3943	38.50	10.00	48.50	57.97	-9.47	QP	
8		0.3943	20.10	10.00	30.10	47.97	-17.87	AVG	
9		0.6980	34.20	9.87	44.07	56.00	-11.93	QP	
10		0.6980	15.90	9.87	25.77	46.00	-20.23	AVG	
11		2.4800	33.00	9.77	42.77	56.00	-13.23	QP	
12		2.4800	20.90	9.77	30.67	46.00	-15.33	AVG	

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

●:Reference Only

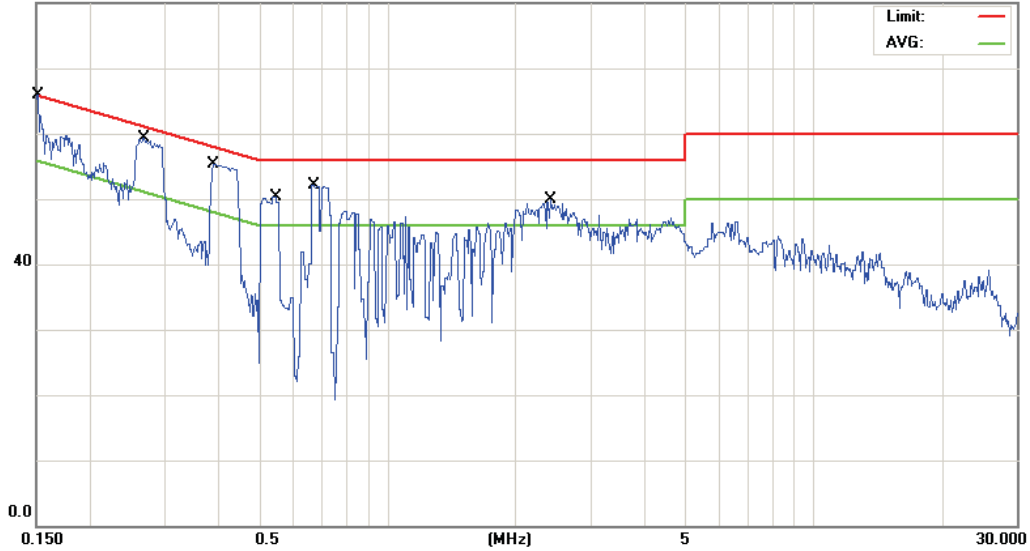
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Data :#2

Date: 2010/03/21

Time: 下午 05:42:10

80.0 dBuV



Site : Conducted

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 4

Note: Adapter #1

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1514	48.90	10.10	59.00	65.92	-6.92	QP	
2	0.1514	25.40	10.10	35.50	55.92	-20.42	AVG	
3 *	0.2676	44.60	10.04	54.64	61.19	-6.55	QP	
4	0.2676	25.10	10.04	35.14	51.19	-16.05	AVG	
5	0.3887	38.40	10.00	48.40	58.09	-9.69	QP	
6	0.3887	14.10	10.00	24.10	48.09	-23.99	AVG	
7	0.5450	35.20	9.94	45.14	56.00	-10.86	QP	
8	0.5450	11.70	9.94	21.64	46.00	-24.36	AVG	
9	0.6710	36.80	9.88	46.68	56.00	-9.32	QP	
10	0.6710	13.80	9.88	23.68	46.00	-22.32	AVG	
11	2.4170	31.80	9.76	41.56	56.00	-14.44	QP	
12	2.4170	14.00	9.76	23.76	46.00	-22.24	AVG	

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

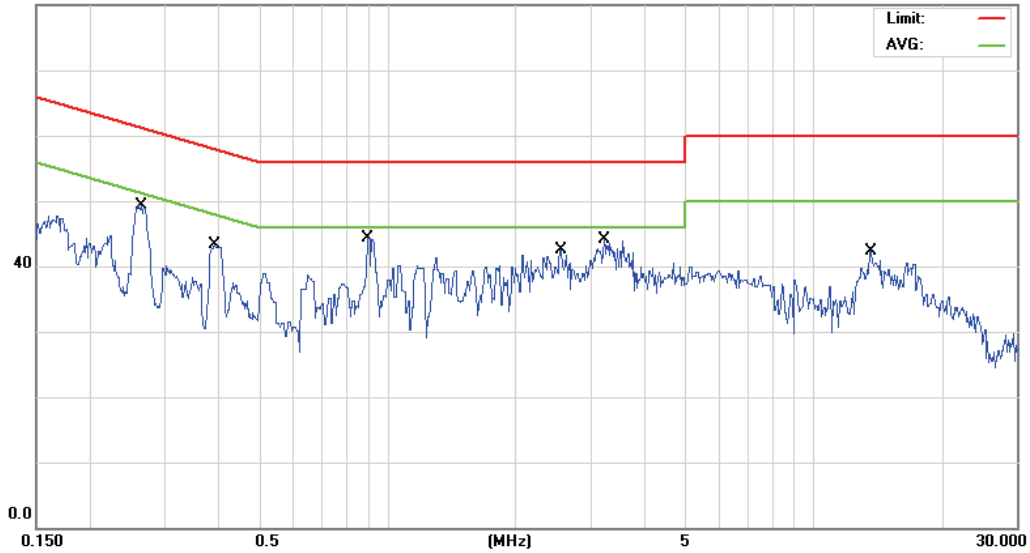
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File :10-0084-SE(IDLE)3
 80.0 dBuV

Data :#1

Date: 2010/03/21

Time: 下午 05:33:39



Site : Conducted

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 4

Note: Adapter #2

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.2641	35.10	10.05	45.15	61.30	-16.15	QP	
2	0.2641	25.60	10.05	35.65	51.30	-15.65	AVG	
3	0.3922	29.40	10.00	39.40	58.02	-18.62	QP	
4	0.3922	14.80	10.00	24.80	48.02	-23.22	AVG	
5	0.9050	30.10	9.80	39.90	56.00	-16.10	QP	
6	0.9050	19.80	9.80	29.60	46.00	-16.40	AVG	
7	2.5430	29.00	9.78	38.78	56.00	-17.22	QP	
8	2.5430	18.30	9.78	28.08	46.00	-17.92	AVG	
9	3.2180	31.40	9.82	41.22	56.00	-14.78	QP	
10 *	3.2180	22.00	9.82	31.82	46.00	-14.18	AVG	
11	13.6000	27.10	10.32	37.42	60.00	-22.58	QP	
12	13.6000	18.40	10.32	28.72	50.00	-21.28	AVG	

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

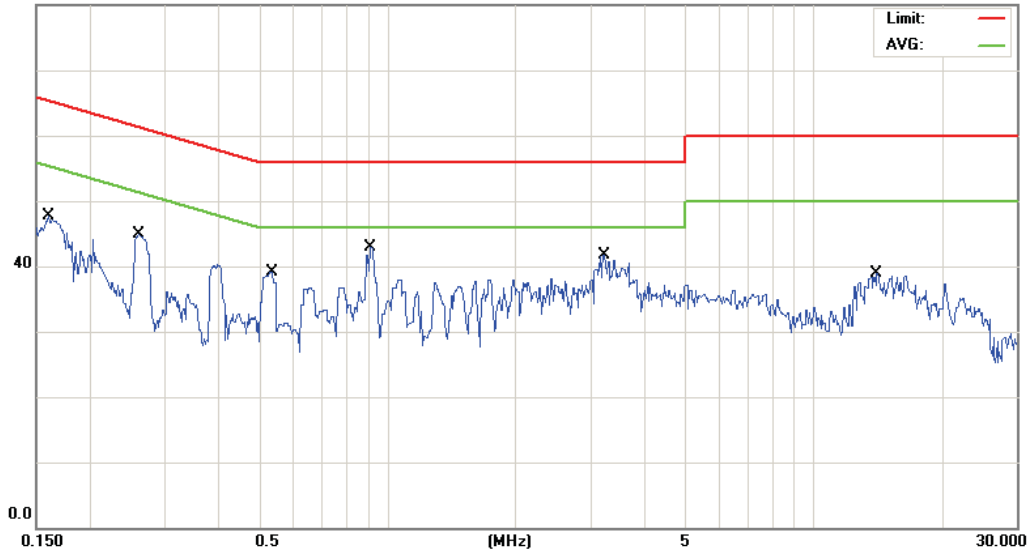
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 80.0 dBuV

Data :#2

Date: 2010/03/21

Time: 下午 05:36:12



Site : Conducted

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 4

Note: Adapter #2

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1598	30.50	10.10	40.60	65.47	-24.87	QP	
2	0.1598	9.80	10.10	19.90	55.47	-35.57	AVG	
3	0.2606	31.20	10.05	41.25	61.41	-20.16	QP	
4	0.2606	20.50	10.05	30.55	51.41	-20.86	AVG	
5	0.5360	26.30	9.94	36.24	56.00	-19.76	QP	
6	0.5360	15.70	9.94	25.64	46.00	-20.36	AVG	
7 *	0.9140	30.20	9.78	39.98	56.00	-16.02	QP	
8	0.9140	19.30	9.78	29.08	46.00	-16.92	AVG	
9	3.2090	28.20	9.81	38.01	56.00	-17.99	QP	
10	3.2090	17.60	9.81	27.41	46.00	-18.59	AVG	
11	14.1000	25.40	10.33	35.73	60.00	-24.27	QP	
12	14.1000	16.10	10.33	26.43	50.00	-23.57	AVG	

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

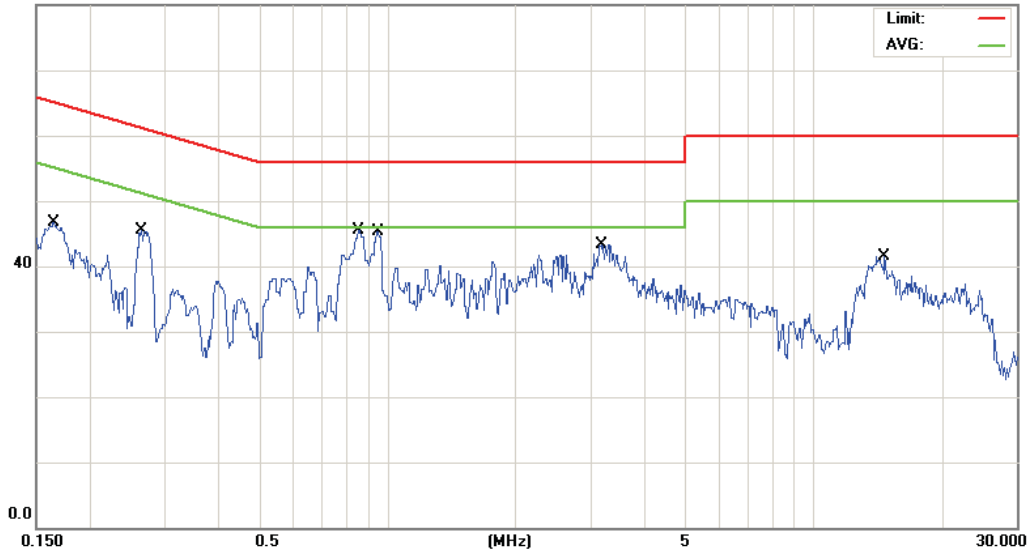
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File :10-0084-SE(IDLE)2
 80.0 dBuV

Data :#1

Date: 2010/03/21

Time: 下午 05:30:09



Site : Conducted

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 4

Note: Adapter #3

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1647	29.40	10.10	39.50	65.22	-25.72	QP	
2		0.1647	11.20	10.10	21.30	55.22	-33.92	AVG	
3		0.2641	28.60	10.05	38.65	61.30	-22.65	QP	
4		0.2641	19.00	10.05	29.05	51.30	-22.25	AVG	
5		0.8600	29.10	9.82	38.92	56.00	-17.08	QP	
6		0.8600	19.40	9.82	29.22	46.00	-16.78	AVG	
7		0.9500	29.90	9.78	39.68	56.00	-16.32	QP	
8		0.9500	18.00	9.78	27.78	46.00	-18.22	AVG	
9		3.1730	30.70	9.82	40.52	56.00	-15.48	QP	
10	*	3.1730	21.40	9.82	31.22	46.00	-14.78	AVG	
11		14.6500	26.30	10.26	36.56	60.00	-23.44	QP	
12		14.6500	17.90	10.26	28.16	50.00	-21.84	AVG	

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

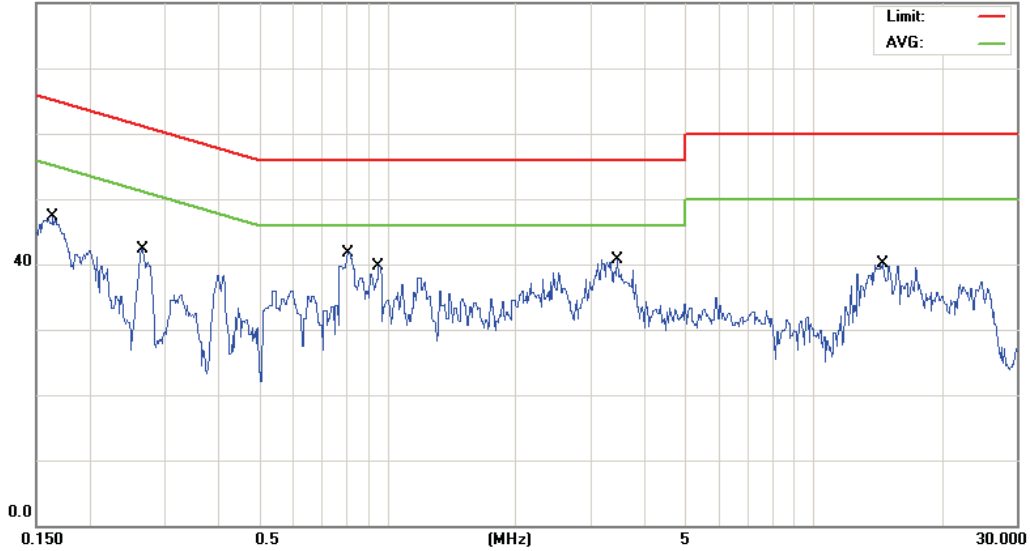
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File :10-0084-SE(IDLE)2

Data :#2

Date: 2010/03/21

Time: 下午 05:39:23

80.0 dBuV


Site : Conducted

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 4

Note: Adapter #3

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1640	29.90	10.09	39.99	65.25	-25.26	QP	
2		0.1640	9.10	10.09	19.19	55.25	-36.06	AVG	
3		0.2648	27.00	10.04	37.04	61.28	-24.24	QP	
4		0.2648	16.20	10.04	26.24	51.28	-25.04	AVG	
5	*	0.8150	28.20	9.82	38.02	56.00	-17.98	QP	
6		0.8150	16.70	9.82	26.52	46.00	-19.48	AVG	
7		0.9590	25.30	9.77	35.07	56.00	-20.93	QP	
8		0.9590	12.90	9.77	22.67	46.00	-23.33	AVG	
9		3.4610	23.60	9.81	33.41	56.00	-22.59	QP	
10		3.4610	16.50	9.81	26.31	46.00	-19.69	AVG	
11		14.5000	25.20	10.31	35.51	60.00	-24.49	QP	
12		14.5000	15.60	10.31	25.91	50.00	-24.09	AVG	

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

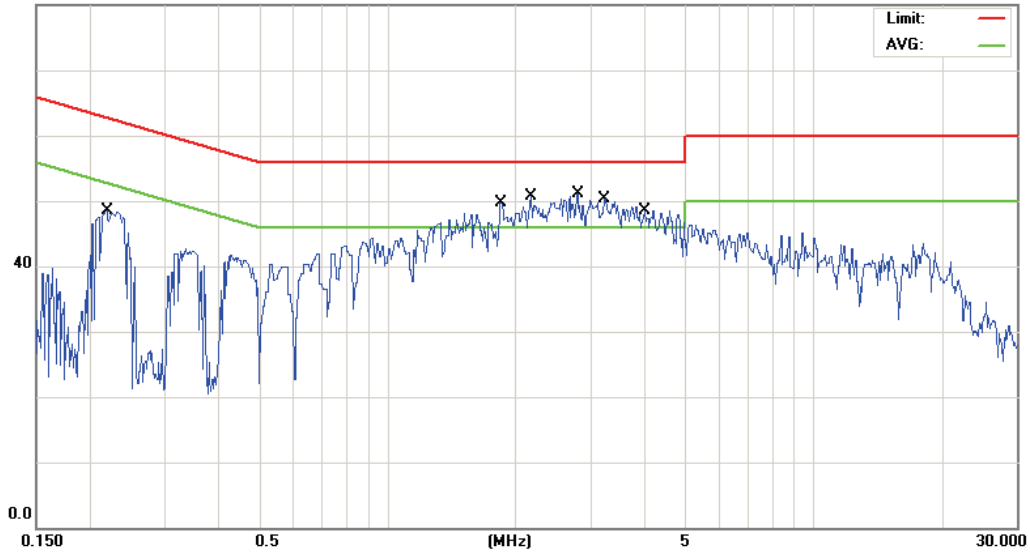
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File :10-0084-SE(IDLE)4
 80.0 dBuV

Data :#1

Date: 2010/03/25

Time: 下午 05:11:56



Site : Conducted

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 4

Note: Adapter #4

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.2186	34.10	10.07	44.17	62.87	-18.70	QP	
2	0.2186	19.00	10.07	29.07	52.87	-23.80	AVG	
3	1.8410	32.10	9.69	41.79	56.00	-14.21	QP	
4	1.8410	20.90	9.69	30.59	46.00	-15.41	AVG	
5	2.1740	32.00	9.73	41.73	56.00	-14.27	QP	
6	2.1740	21.30	9.73	31.03	46.00	-14.97	AVG	
7 *	2.7860	32.20	9.82	42.02	56.00	-13.98	QP	
8	2.7860	21.80	9.82	31.62	46.00	-14.38	AVG	
9	3.2180	32.00	9.82	41.82	56.00	-14.18	QP	
10	3.2180	21.80	9.82	31.62	46.00	-14.38	AVG	
11	4.0010	30.90	9.85	40.75	56.00	-15.25	QP	
12	4.0010	21.10	9.85	30.95	46.00	-15.05	AVG	

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

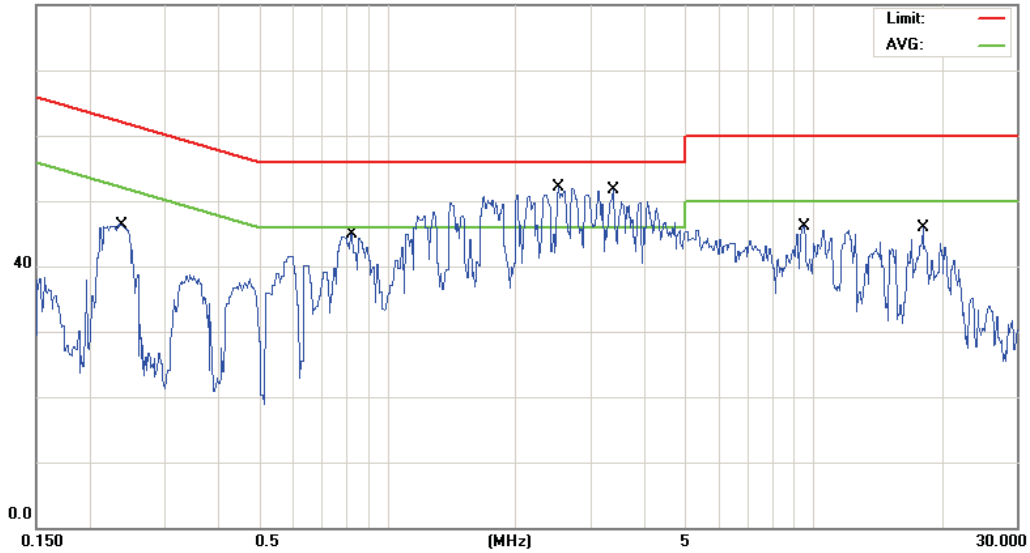
●Reference Only

File :10-0084-SE(IDLE)4
 80.0 dBuV

Data :#2

Date: 2010/03/25

Time: 下午 05:38:15



Site : Conducted	Phase: N	Temperature: 26 °C
Limit: CISPR22 Class B Conduction(QP)	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone		
M/N: PB76110		
Mode: 4		
Note: Adapter #4		

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.2368	33.20	10.06	43.26	62.20	-18.94	QP	
2	0.2368	21.20	10.06	31.26	52.20	-20.94	AVG	
3	0.8240	28.10	9.82	37.92	56.00	-18.08	QP	
4	0.8240	15.60	9.82	25.42	46.00	-20.58	AVG	
5 *	2.5249	32.31	9.76	42.07	56.00	-13.93	QP	
6	2.5249	20.31	9.76	30.07	46.00	-15.93	AVG	
7	3.3800	31.10	9.81	40.91	56.00	-15.09	QP	
8	3.3800	20.00	9.81	29.81	46.00	-16.19	AVG	
9	9.5000	27.50	10.16	37.66	60.00	-22.34	QP	
10	9.5000	17.50	10.16	27.66	50.00	-22.34	AVG	
11	18.0000	26.10	10.45	36.55	60.00	-23.45	QP	
12	18.0000	16.40	10.45	26.85	50.00	-23.15	AVG	

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

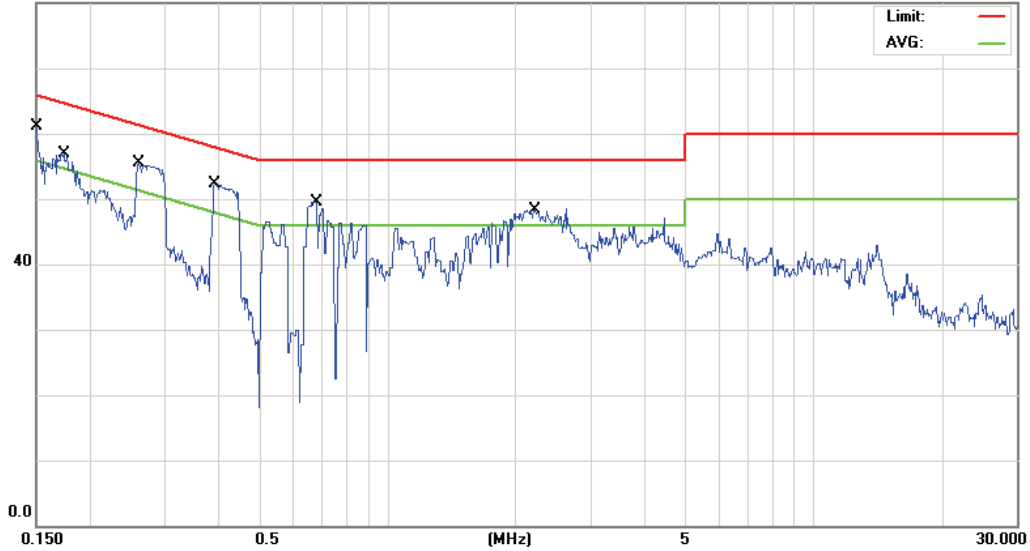
●Reference Only

File :10-0084-SE(WCDMA B5+BT+W Data :#1

Date: 2010/03/21

Time: 下午 06:51:41

80.0 dBuV



Site : Conducted

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

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	47.70	10.11	57.81	65.99	-8.18	QP	
2		0.1500	26.20	10.11	36.31	55.99	-19.68	AVG	
3		0.1737	40.20	10.10	50.30	64.78	-14.48	QP	
4		0.1737	11.20	10.10	21.30	54.78	-33.48	AVG	
5		0.2606	41.00	10.06	51.06	61.41	-10.35	QP	
6		0.2606	21.20	10.06	31.26	51.41	-20.15	AVG	
7		0.3922	37.50	10.00	47.50	58.02	-10.52	QP	
8		0.3922	17.60	10.00	27.60	48.02	-20.42	AVG	
9		0.6800	34.20	9.88	44.08	56.00	-11.92	QP	
10		0.6800	16.50	9.88	26.38	46.00	-19.62	AVG	
11		2.2100	32.40	9.74	42.14	56.00	-13.86	QP	
12		2.2100	17.90	9.74	27.64	46.00	-18.36	AVG	

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

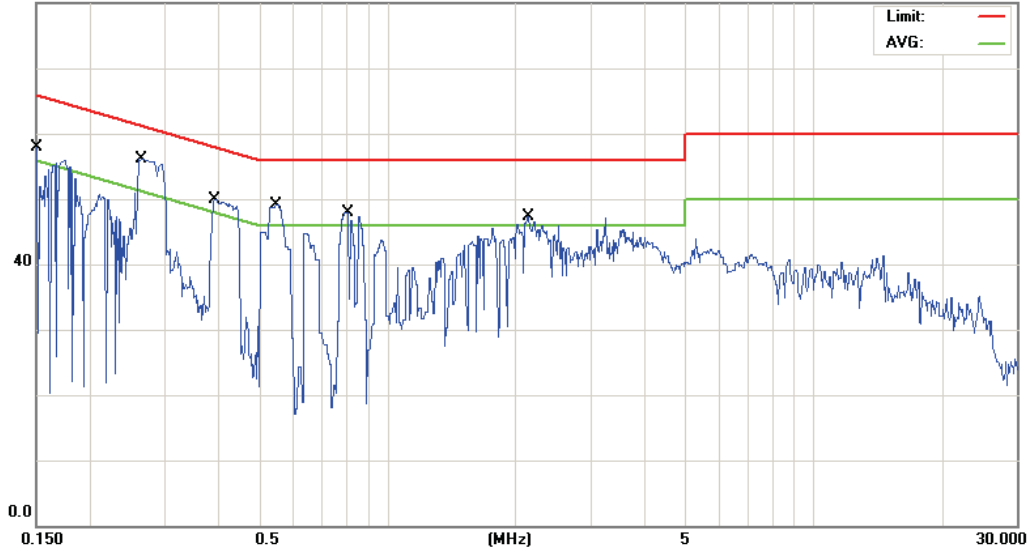
●Reference Only

File :10-0084-SE(WCDMA B5+BT+W Data :#2

Date: 2010/03/21

Time: 下午 07:09:25

80.0 dBuV



Site : Conducted

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

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	44.90	10.10	55.00	65.99	-10.99	QP	
2	0.1500	21.30	10.10	31.40	55.99	-24.59	AVG	
3 *	0.2641	43.30	10.04	53.34	61.30	-7.96	QP	
4	0.2641	21.90	10.04	31.94	51.30	-19.36	AVG	
5	0.3922	35.50	10.00	45.50	58.02	-12.52	QP	
6	0.3922	12.90	10.00	22.90	48.02	-25.12	AVG	
7	0.5540	33.90	9.93	43.83	56.00	-12.17	QP	
8	0.5540	12.00	9.93	21.93	46.00	-24.07	AVG	
9	0.8059	32.30	9.83	42.13	56.00	-13.87	QP	
10	0.8059	10.20	9.83	20.03	46.00	-25.97	AVG	
11	2.1380	29.80	9.72	39.52	56.00	-16.48	QP	
12	2.1380	13.70	9.72	23.42	46.00	-22.58	AVG	

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

●Reference Only

File :10-0084-SE(WCDMA B5+BT+W Data :#1

Date: 2010/03/21

Time: 下午 08:03:19

80.0 dBuV


Site : Conducted

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

Note: Adapter #2

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1556	30.00	10.11	40.11	65.69	-25.58	QP	
2	0.1556	8.70	10.11	18.81	55.69	-36.88	AVG	
3	0.8960	34.30	9.80	44.10	56.00	-11.90	QP	
4 *	0.8960	24.70	9.80	34.50	46.00	-11.50	AVG	
5	1.2920	22.20	9.63	31.83	56.00	-24.17	QP	
6	1.2920	11.80	9.63	21.43	46.00	-24.57	AVG	
7	2.5250	29.60	9.78	39.38	56.00	-16.62	QP	
8	2.5250	18.50	9.78	28.28	46.00	-17.72	AVG	
9	3.3260	31.70	9.82	41.52	56.00	-14.48	QP	
10	3.3260	22.10	9.82	31.92	46.00	-14.08	AVG	
11	13.5500	26.90	10.32	37.22	60.00	-22.78	QP	
12	13.5500	18.00	10.32	28.32	50.00	-21.68	AVG	

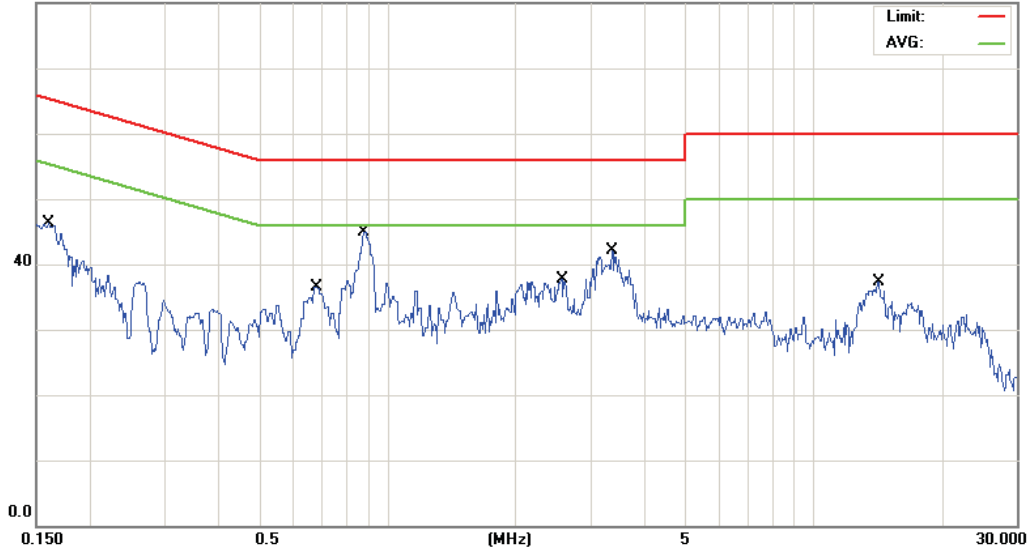
*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0084-SE(WCDMA B5+BT+W Data :#2

Date: 2010/03/21

Time: 下午 07:59:23

80.0 dBuV


Site : Conducted

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

Note: Adapter #2

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1598	30.10	10.10	40.20	65.47	-25.27	QP	
2	0.1598	7.50	10.10	17.60	55.47	-37.87	AVG	
3	0.6800	22.60	9.88	32.48	56.00	-23.52	QP	
4	0.6800	12.50	9.88	22.38	46.00	-23.62	AVG	
5 *	0.8870	31.00	9.80	40.80	56.00	-15.20	QP	
6	0.8870	19.00	9.80	28.80	46.00	-17.20	AVG	
7	2.5610	22.20	9.76	31.96	56.00	-24.04	QP	
8	2.5610	12.70	9.76	22.46	46.00	-23.54	AVG	
9	3.3620	27.90	9.81	37.71	56.00	-18.29	QP	
10	3.3620	17.00	9.81	26.81	46.00	-19.19	AVG	
11	14.1500	22.40	10.33	32.73	60.00	-27.27	QP	
12	14.1500	14.40	10.33	24.73	50.00	-25.27	AVG	

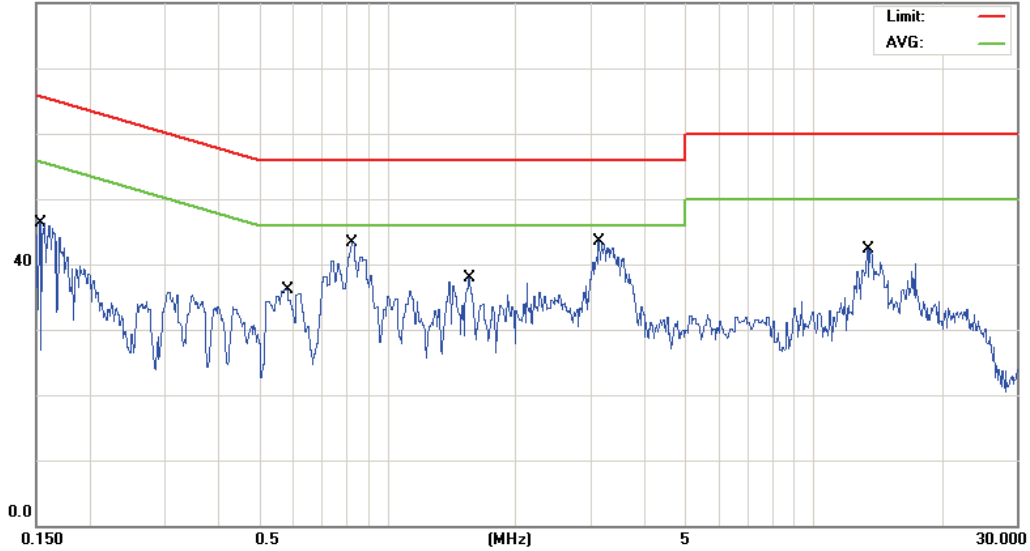
*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0084-SE(WCDMA B5+BT+W Data :#1

Date: 2010/03/21

Time: 下午 07:29:02

80.0 dBuV


Site : Conducted

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

Note: Adapter #3

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1528	29.30	10.11	39.41	65.84	-26.43	QP	
2		0.1528	7.80	10.11	17.91	55.84	-37.93	AVG	
3		0.5810	25.70	9.92	35.62	56.00	-20.38	QP	
4		0.5810	16.80	9.92	26.72	46.00	-19.28	AVG	
5	*	0.8330	29.20	9.83	39.03	56.00	-16.97	QP	
6		0.8330	18.90	9.83	28.73	46.00	-17.27	AVG	
7		1.5530	22.70	9.69	32.39	56.00	-23.61	QP	
8		1.5530	13.30	9.69	22.99	46.00	-23.01	AVG	
9		3.1280	28.90	9.83	38.73	56.00	-17.27	QP	
10		3.1280	18.30	9.83	28.13	46.00	-17.87	AVG	
11		13.3500	24.20	10.33	34.53	60.00	-25.47	QP	
12		13.3500	15.30	10.33	25.63	50.00	-24.37	AVG	

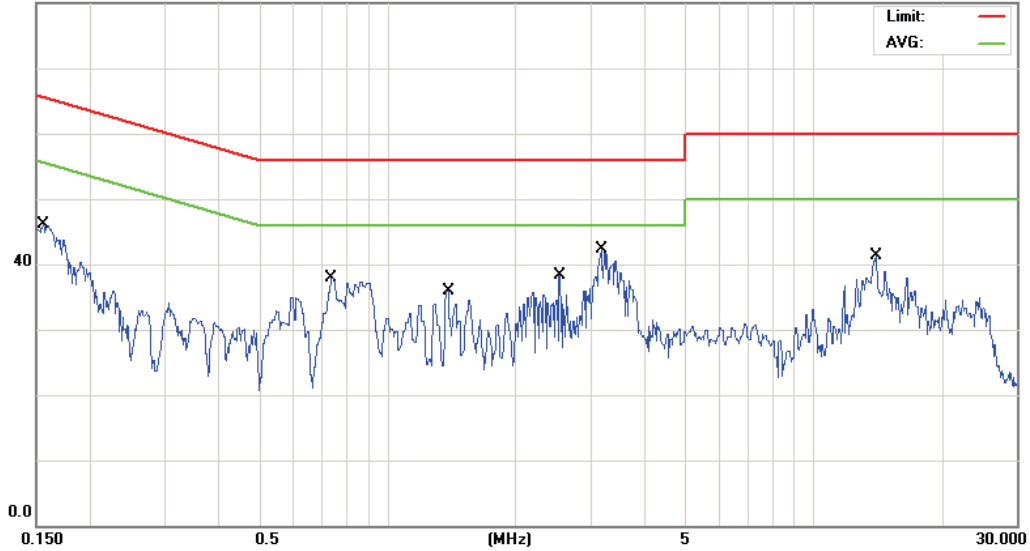
*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0084-SE(WCDMA B5+BT+W Data :#2

Date: 2010/03/21

Time: 下午 07:31:31

80.0 dBuV


Site : Conducted

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

Note: Adapter #3

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1556	29.30	10.10	39.40	65.69	-26.29	QP	
2		0.1556	8.60	10.10	18.70	55.69	-36.99	AVG	
3		0.7430	24.40	9.85	34.25	56.00	-21.75	QP	
4		0.7430	14.90	9.85	24.75	46.00	-21.25	AVG	
5		1.3820	21.90	9.67	31.57	56.00	-24.43	QP	
6		1.3820	11.50	9.67	21.17	46.00	-24.83	AVG	
7		2.5340	26.50	9.77	36.27	56.00	-19.73	QP	
8		2.5340	11.50	9.77	21.27	46.00	-24.73	AVG	
9		3.1730	24.30	9.81	34.11	56.00	-21.89	QP	
10	*	3.1730	16.80	9.81	26.61	46.00	-19.39	AVG	
11		14.0000	26.50	10.34	36.84	60.00	-23.16	QP	
12		14.0000	15.20	10.34	25.54	50.00	-24.46	AVG	

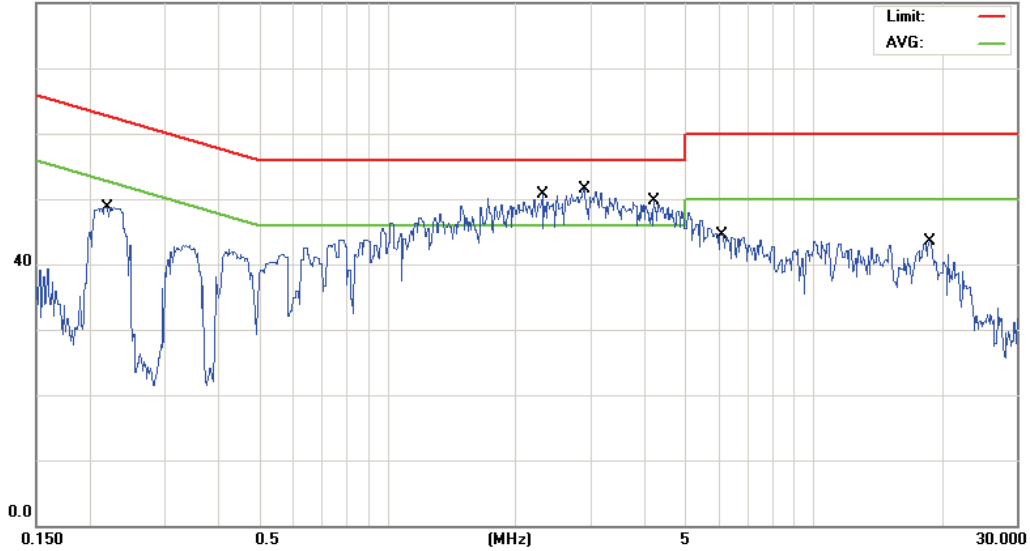
*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0084-SE(WCDMA B2+BT+W Data :#1

Date: 2010/03/25

Time: 下午 09:06:05

80.0 dBuV


Site : Conducted

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

Note: Adapter #4

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.2207	26.00	0.48	26.48	62.79	-36.31	QP	
2	0.2207	13.10	0.48	13.58	52.79	-39.21	AVG	
3	2.3090	27.40	0.15	27.55	56.00	-28.45	QP	
4	2.3090	19.30	0.15	19.45	46.00	-26.55	AVG	
5	2.8850	27.20	0.22	27.42	56.00	-28.58	QP	
6 *	2.8850	21.20	0.22	21.42	46.00	-24.58	AVG	
7	4.2170	27.30	0.22	27.52	56.00	-28.48	QP	
8	4.2170	18.00	0.22	18.22	46.00	-27.78	AVG	
9	6.1500	24.00	0.18	24.18	60.00	-35.82	QP	
10	6.1500	15.00	0.18	15.18	50.00	-34.82	AVG	
11	18.6500	25.10	0.65	25.75	60.00	-34.25	QP	
12	18.6500	16.60	0.65	17.25	50.00	-32.75	AVG	

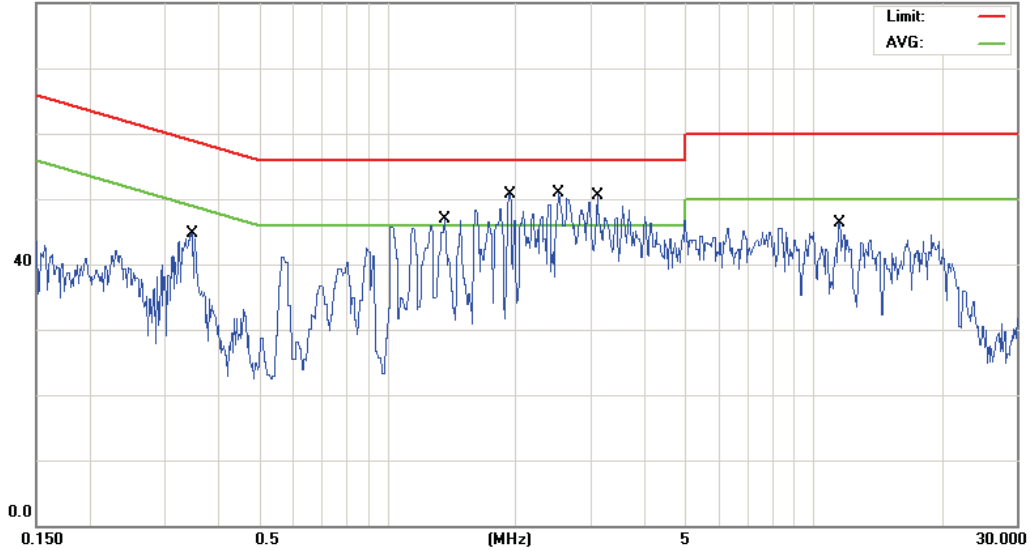
*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0084-SE(WCDMA B2+BT+W Data :#2

Date: 2010/03/25

Time: 下午 09:12:33

80.0 dBuV


Site : Conducted

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PB76110

Mode: 5

Note: Adapter #4

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.3466	28.30	10.22	38.52	59.04	-20.52	QP	
2	0.3466	17.40	10.22	27.62	49.04	-21.42	AVG	
3	1.3639	31.10	9.84	40.94	56.00	-15.06	QP	
4	1.3639	19.80	9.84	29.64	46.00	-16.36	AVG	
5	1.9309	31.20	9.85	41.05	56.00	-14.95	QP	
6	1.9309	19.60	9.85	29.45	46.00	-16.55	AVG	
7	2.5159	33.70	9.92	43.62	56.00	-12.38	QP	
8	2.5159	23.50	9.92	33.42	46.00	-12.58	AVG	
9 *	3.1009	35.00	9.96	44.96	56.00	-11.04	QP	
10	3.1009	24.80	9.96	34.76	46.00	-11.24	AVG	
11	11.4500	26.90	10.31	37.21	60.00	-22.79	QP	
12	11.4500	16.20	10.31	26.51	50.00	-23.49	AVG	

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

●Reference Only

5 Radiated Interference Measurement

5.1. Limit

Frequency Range (MHz)	Peak (dBuV)
30 to 88	39
88 to 216	43.5
216 to 960	46.4
Above 960	49.5

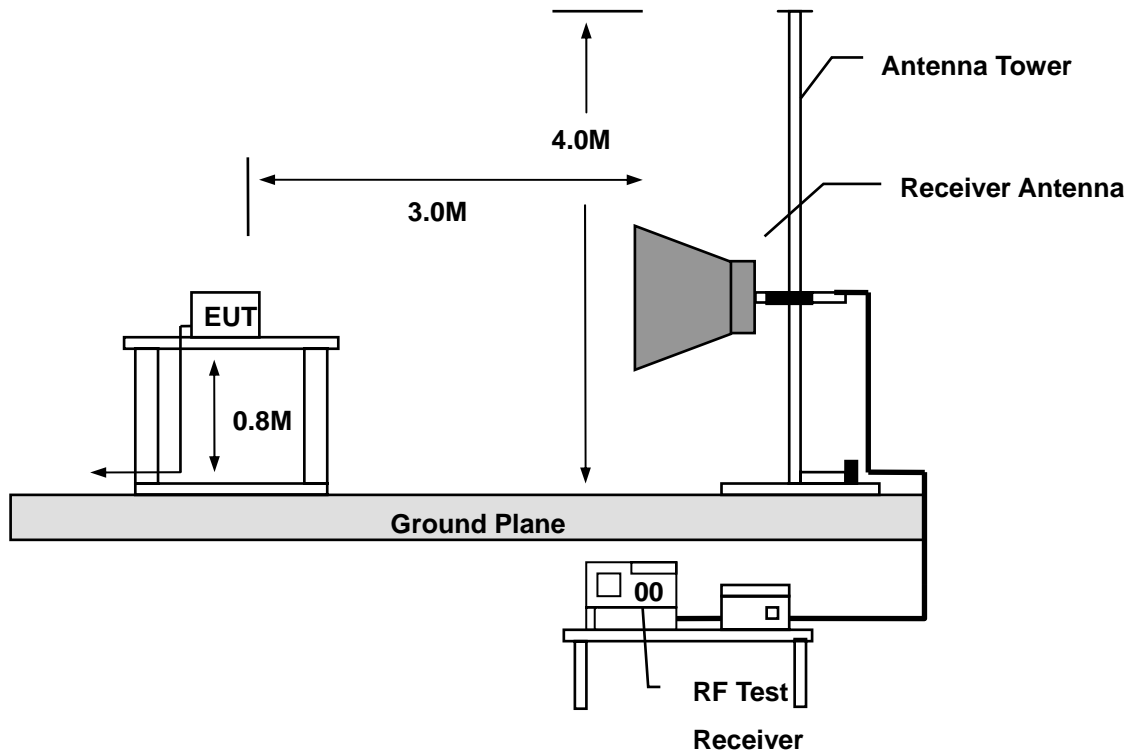
5.2. Test Instruments

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)
Bi-log Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	06/23/2009	(2)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	888001	08/06/2009	(1)

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 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.

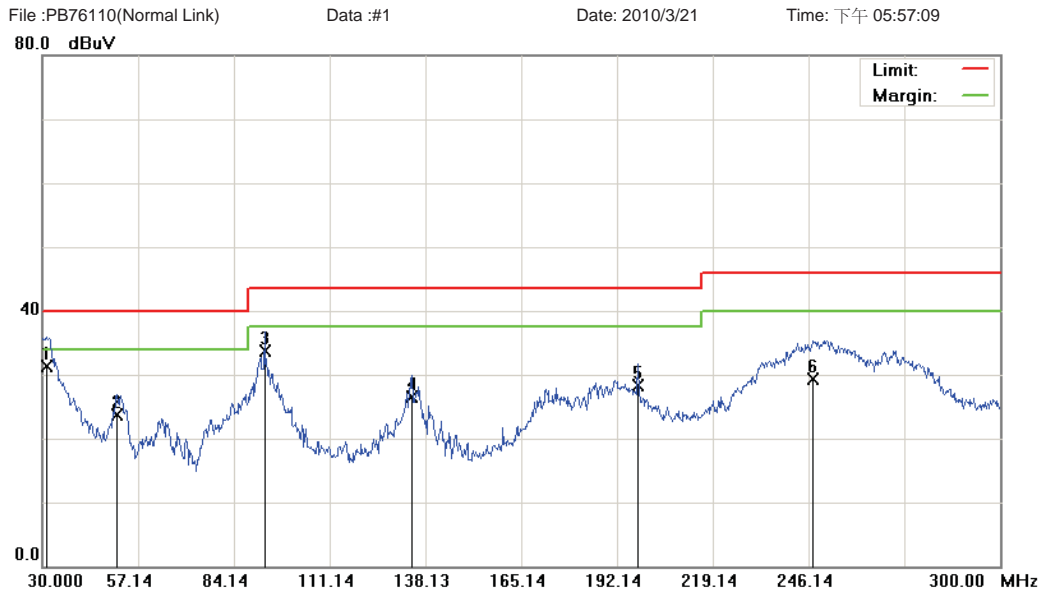
$$(2) \text{ Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)}$$

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



Site: : 966 Chamber Polarization: *Vertical* Temperature: 22 °C
 Limit: FCC Class B 3M Radiation Power: AC 120V/60Hz Humidity: 60 %
 EUT: Smartphone Distance: 3m RBW: 120 KHz VBW: 300 KHz
 M/N: PB76110
 Mode: 5
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree	Comment
1	*	31.2150	44.68	-13.29	31.39	40.00	-8.61	QP		
2		51.0600	35.78	-12.17	23.61	40.00	-16.39	QP		
3		92.6400	46.25	-12.57	33.68	43.50	-9.82	QP		
4		134.2200	42.36	-15.92	26.44	43.50	-17.06	QP		
5		197.9400	41.36	-13.14	28.22	43.50	-15.28	QP		
6		247.3500	40.26	-11.05	29.21	46.00	-16.79	QP		

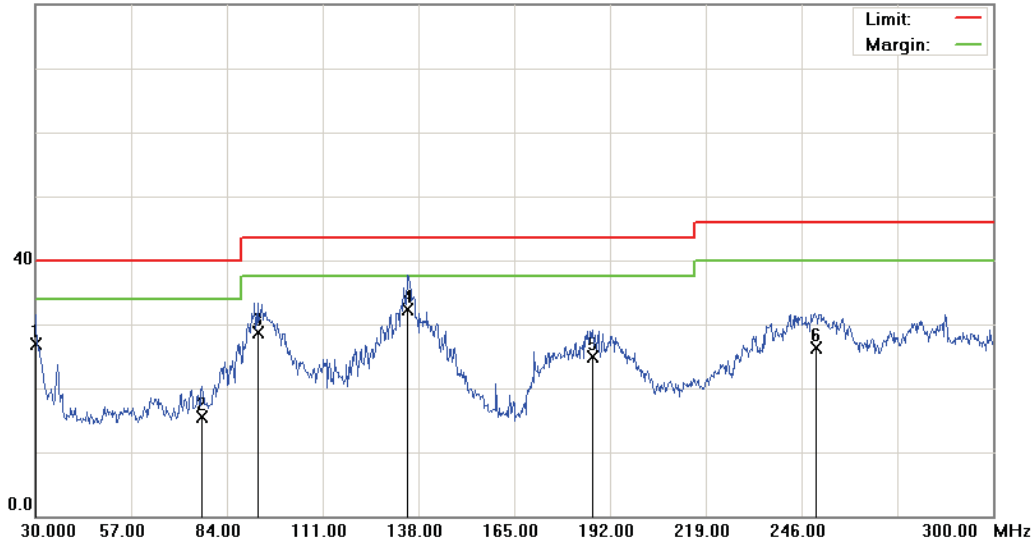
*:Maximum data x:Over limit !:over margin

File :PB76110(Normal Link)

Data :#3

Date: 2010/3/21

Time: 下午 06:02:57

80.0 dBuV


Site: : 966 Chamber

 Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 120 KHz VBW: 300 KHz

M/N: PB76110

Mode: 5

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		30.0000	40.26	-13.32	26.94	40.00	-13.06	QP		
2		76.9800	32.49	-16.92	15.57	40.00	-24.43	QP		
3		92.6400	41.28	-12.57	28.71	43.50	-14.79	QP		
4	*	135.0300	48.19	-15.97	32.22	43.50	-11.28	QP		
5		187.1400	38.56	-13.62	24.94	43.50	-18.56	QP		
6		249.9150	37.08	-10.83	26.25	46.00	-19.75	QP		

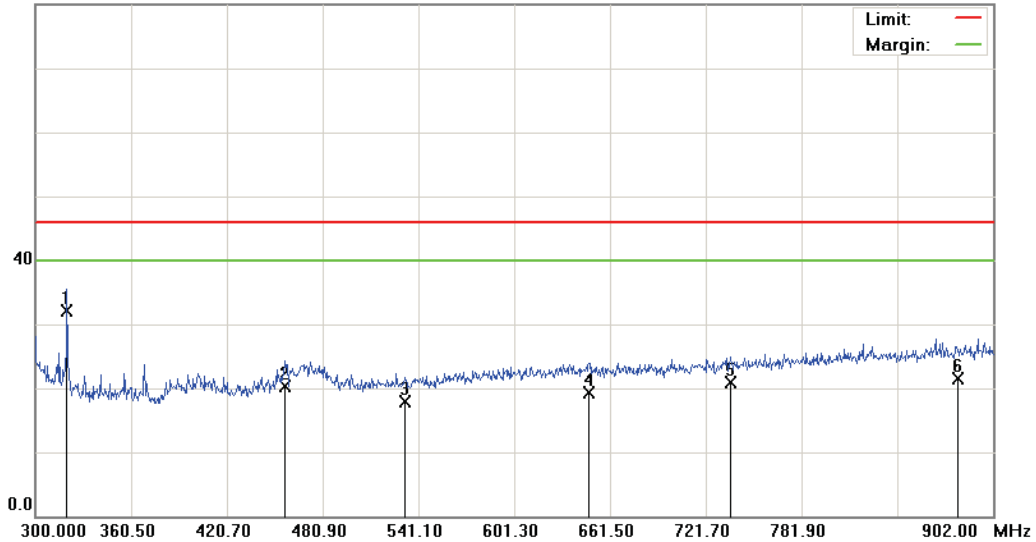
*:Maximum data x:Over limit !:over margin

File :PB76110(Normal Link)

Data :#2

Date: 2010/3/21

Time: 下午 06:00:02

80.0 dBuV


Site : 966 Chamber

 Polarization: *Vertical*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 120 KHz VBW: 300 KHz

M/N: PB76110

Mode: 5

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	319.8660	41.98	-9.82	32.16	46.00	-13.84	QP		
2		457.1220	28.34	-7.96	20.38	46.00	-25.62	QP		
3		532.3720	24.25	-6.33	17.92	46.00	-28.08	QP		
4		647.9560	23.48	-4.27	19.21	46.00	-26.79	QP		
5		737.0520	24.29	-3.29	21.00	46.00	-25.00	QP		
6		879.4250	22.16	-0.71	21.45	46.00	-24.55	QP		

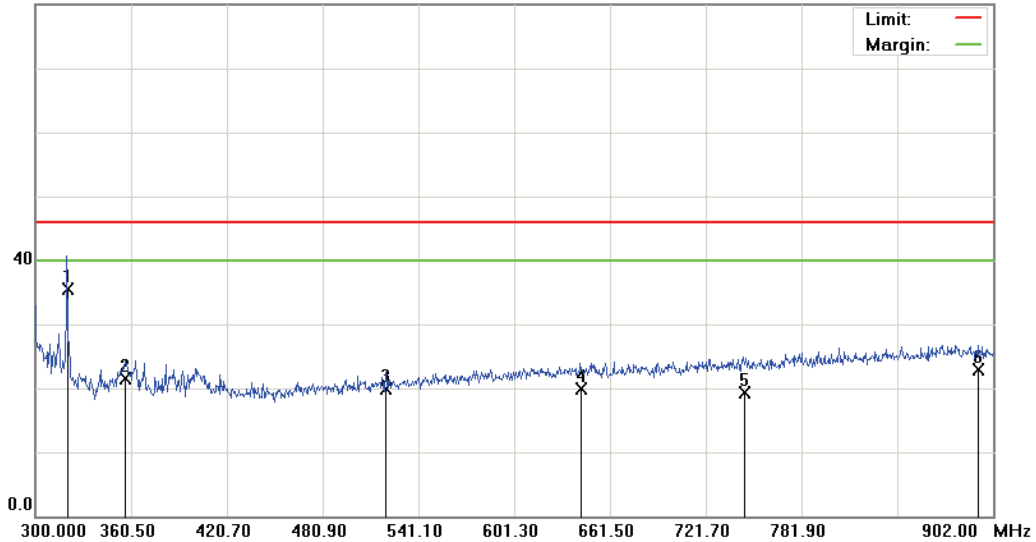
*:Maximum data x:Over limit !:over margin

File :PB76110(Normal Link)

Data :#4

Date: 2010/3/21

Time: 下午 06:05:51

80.0 dBuV


Site : 966 Chamber

 Polarization: *Horizontal*

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 120 KHz VBW: 300 KHz

M/N: PB76110

Mode: 5

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree	Comment
1	*	320.1670	45.37	-9.81	35.56	46.00	-10.44	QP		
2		356.5880	30.29	-8.87	21.42	46.00	-24.58	QP		
3		520.3320	26.49	-6.57	19.92	46.00	-26.08	QP		
4		642.8390	24.39	-4.50	19.89	46.00	-26.11	QP		
5		745.1790	22.35	-3.11	19.24	46.00	-26.76	QP		
6		892.3680	23.67	-0.69	22.98	46.00	-23.02	QP		

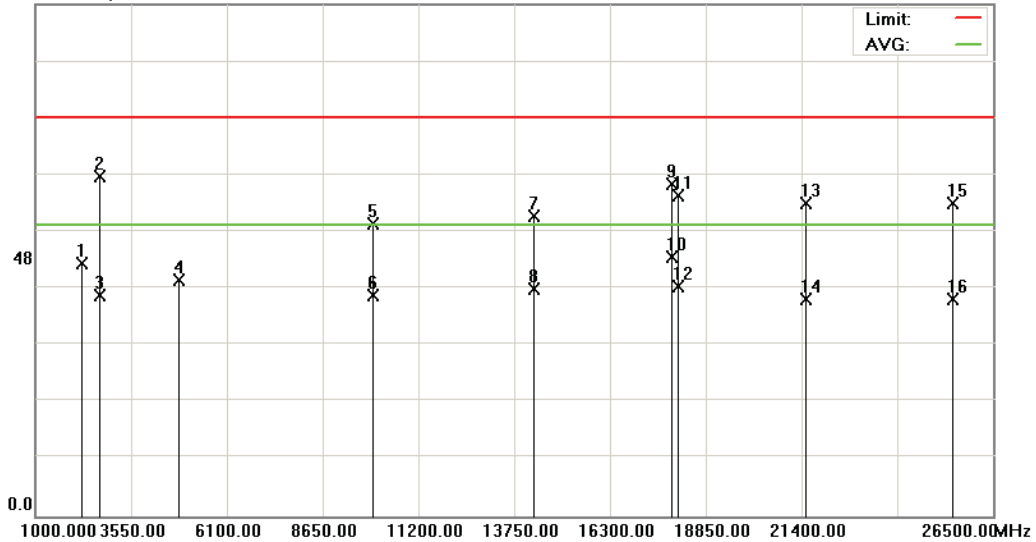
*:Maximum data x:Over limit !:over margin

File :PB76110(2402MHz)

Data :#17

Date: 2010/3/23

Time: 上午 11:03:45

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 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 3

Note: 2402MHz

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		2234.200	46.52	0.45	46.97	74.00	-27.03	peak		
2		2700.000	40.48	22.58	63.06	74.00	-10.94	peak		
3		2700.000	18.43	22.58	41.01	54.00	-12.99	AVG		
4		4804.000	36.57	7.32	43.89	74.00	-30.11	peak		
5		9992.700	36.32	17.92	54.24	74.00	-19.76	peak		
6		9992.700	23.05	17.92	40.97	54.00	-13.03	AVG		
7		14284.000	36.98	18.64	55.62	74.00	-18.38	peak		
8		14284.000	23.43	18.64	42.07	54.00	-11.93	AVG		
9		17936.000	37.00	24.73	61.73	74.00	-12.27	peak		
10	*	17936.000	23.39	24.73	48.12	54.00	-5.88	AVG		
11		18089.250	36.29	23.24	59.53	74.00	-14.47	peak		
12		18089.250	19.45	23.24	42.69	54.00	-11.31	AVG		
13		21523.250	36.72	21.34	58.06	74.00	-15.94	peak		
14		21523.250	18.88	21.34	40.22	54.00	-13.78	AVG		
15		25429.000	39.13	19.03	58.16	74.00	-15.84	peak		
16		25429.000	21.18	19.03	40.21	54.00	-13.79	AVG		

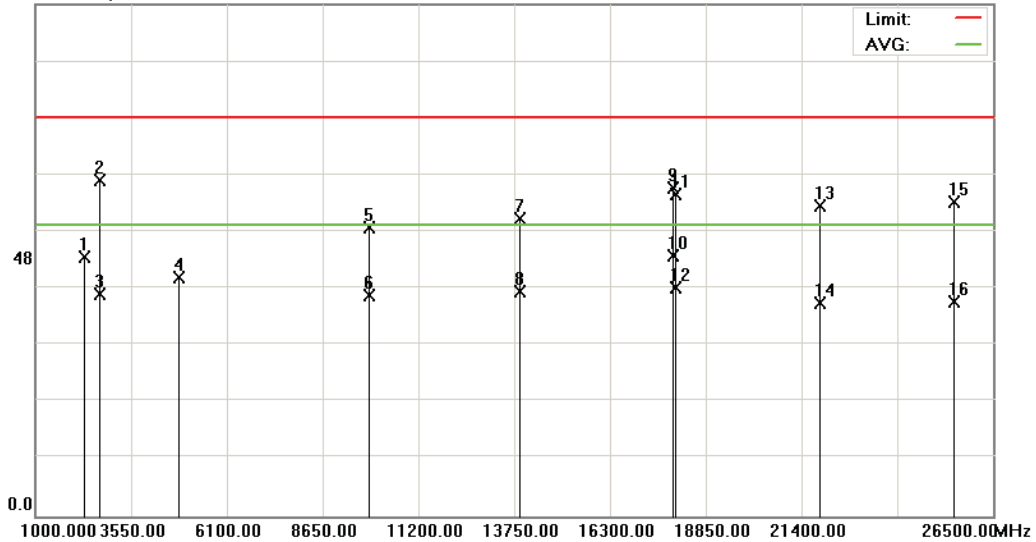
*:Maximum data x:Over limit !:over margin

File :PB76110(2402MHz)

Data :#18

Date: 2010/3/23

Time: 上午 11:05:03

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 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 3

Note: 2402MHz

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		2276.700	47.73	0.45	48.18	74.00	-25.82	peak		
2		2700.000	39.78	22.58	62.36	74.00	-11.64	peak		
3		2700.000	18.67	22.58	41.25	54.00	-12.75	AVG		
4		4804.000	36.89	7.32	44.21	74.00	-29.79	peak		
5		9883.200	35.63	17.82	53.45	74.00	-20.55	peak		
6		9883.200	23.11	17.82	40.93	54.00	-13.07	AVG		
7		13884.000	36.84	18.41	55.25	74.00	-18.75	peak		
8		13884.000	23.39	18.41	41.80	54.00	-12.20	AVG		
9		17968.000	36.01	24.98	60.99	74.00	-13.01	peak		
10	*	17968.000	23.47	24.98	48.45	54.00	-5.55	AVG		
11		18051.000	36.38	23.27	59.65	74.00	-14.35	peak		
12		18051.000	19.18	23.27	42.45	54.00	-11.55	AVG		
13		21867.500	36.43	21.19	57.62	74.00	-16.38	peak		
14		21867.500	18.45	21.19	39.64	54.00	-14.36	AVG		
15		25450.250	39.35	19.02	58.37	74.00	-15.63	peak		
16		25450.250	20.88	19.02	39.90	54.00	-14.10	AVG		

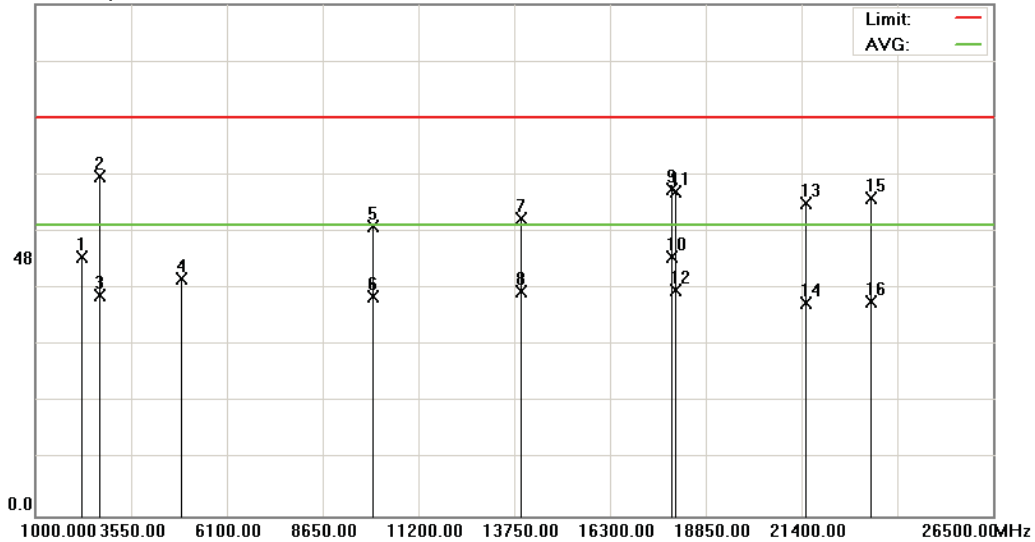
*:Maximum data x:Over limit !:over margin

File :PB76110(2441MHz)

Data :#17

Date: 2010/3/23

Time: 上午 11:07:36

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 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 3

Note: 2441MHz

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		2216.350	47.68	0.36	48.04	74.00	-25.96	peak		
2		2700.000	40.46	22.58	63.04	74.00	-10.96	peak		
3		2700.000	18.34	22.58	40.92	54.00	-13.08	AVG		
4		4882.000	36.27	7.74	44.01	74.00	-29.99	peak		
5		9956.200	36.09	17.81	53.90	74.00	-20.10	peak		
6		9956.200	22.95	17.81	40.76	54.00	-13.24	AVG		
7		13904.000	36.61	18.53	55.14	74.00	-18.86	peak		
8		13904.000	23.24	18.53	41.77	54.00	-12.23	AVG		
9		17936.000	36.01	24.73	60.74	74.00	-13.26	peak		
10	*	17936.000	23.31	24.73	48.04	54.00	-5.96	AVG		
11		18051.000	36.96	23.27	60.23	74.00	-13.77	peak		
12		18051.000	18.67	23.27	41.94	54.00	-12.06	AVG		
13		21502.000	36.61	21.36	57.97	74.00	-16.03	peak		
14		21502.000	18.13	21.36	39.49	54.00	-14.51	AVG		
15		23261.500	38.17	20.78	58.95	74.00	-15.05	peak		
16		23261.500	19.12	20.78	39.90	54.00	-14.10	AVG		

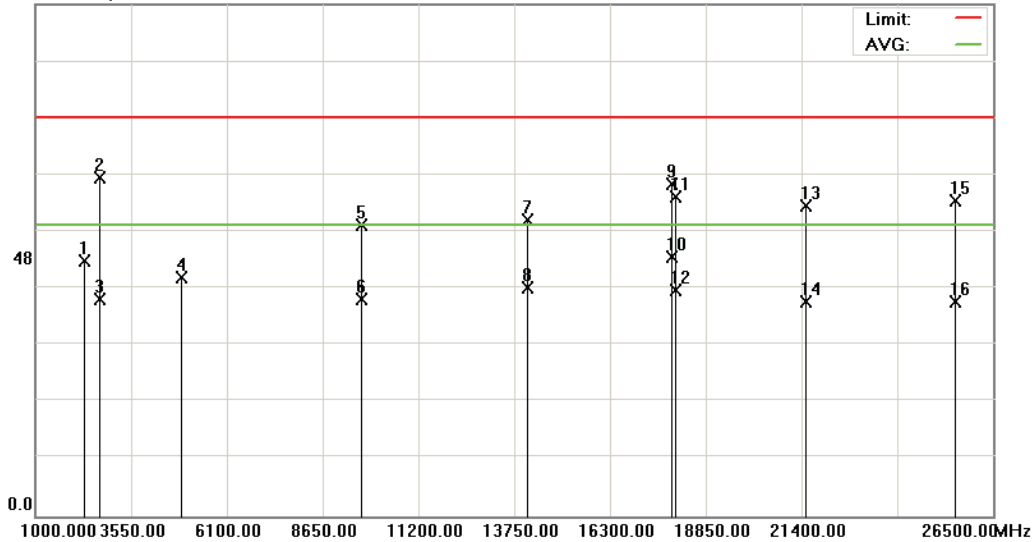
*:Maximum data x:Over limit !:over margin

File :PB76110(2441MHz)

Data :#18

Date: 2010/3/23

Time: 上午 11:08:54

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: *Horizontal*

Temperature: 22 ℃

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 3

Note: 2441MHz

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		2298.800	46.93	0.53	47.46	74.00	-26.54	peak		
2		2703.650	40.95	21.89	62.84	74.00	-11.16	peak		
3		2703.650	18.42	21.89	40.31	54.00	-13.69	AVG		
4		4882.000	36.46	7.74	44.20	74.00	-29.80	peak		
5		9689.750	36.57	17.35	53.92	74.00	-20.08	peak		
6		9689.750	22.93	17.35	40.28	54.00	-13.72	AVG		
7		14104.000	36.18	18.90	55.08	74.00	-18.92	peak		
8		14104.000	23.43	18.90	42.33	54.00	-11.67	AVG		
9		17924.000	36.75	24.81	61.56	74.00	-12.44	peak		
10	*	17924.000	23.28	24.81	48.09	54.00	-5.91	AVG		
11		18046.750	35.95	23.27	59.22	74.00	-14.78	peak		
12		18046.750	18.56	23.27	41.83	54.00	-12.17	AVG		
13		21502.000	36.28	21.36	57.64	74.00	-16.36	peak		
14		21502.000	18.45	21.36	39.81	54.00	-14.19	AVG		
15		25501.250	39.51	18.98	58.49	74.00	-15.51	peak		
16		25501.250	20.78	18.98	39.76	54.00	-14.24	AVG		

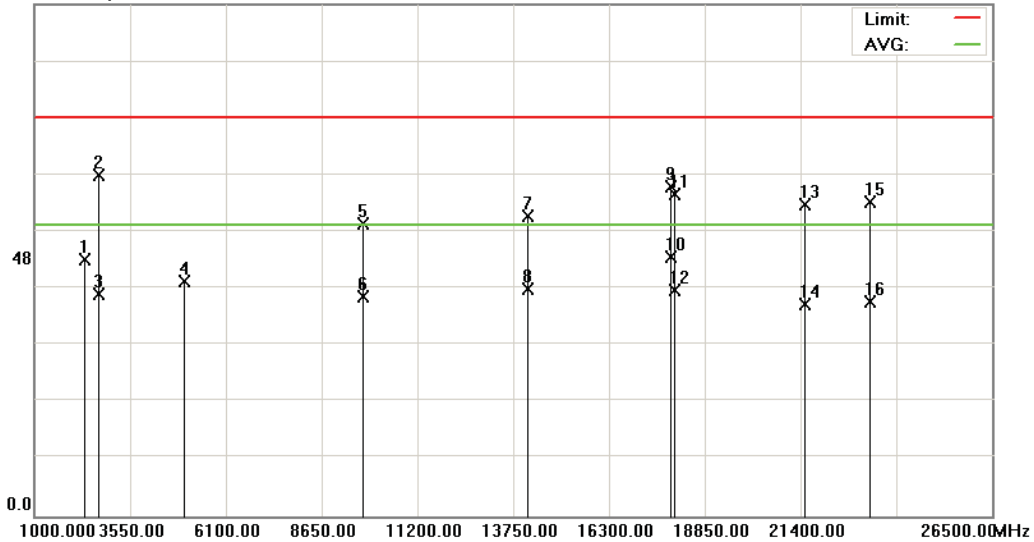
*:Maximum data x:Over limit !:over margin

File :PB76110(2480MHz)

Data :#17

Date: 2010/3/23

Time: 上午 11:10:22

95.0 dBuV/m


Site: : 966 Chamber

 Polarization: *Vertical*

Temperature: 22 ℃

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 3

Note: 2480MHz

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		2317.500	47.26	0.29	47.55	74.00	-26.45	peak		
2		2700.000	40.65	22.58	63.23	74.00	-10.77	peak		
3		2700.000	18.61	22.58	41.19	54.00	-12.81	AVG		
4		4960.000	35.90	7.80	43.70	74.00	-30.30	peak		
5		9733.550	36.60	17.63	54.23	74.00	-19.77	peak		
6		9733.550	23.05	17.63	40.68	54.00	-13.32	AVG		
7		14116.000	36.77	18.87	55.64	74.00	-18.36	peak		
8		14116.000	23.22	18.87	42.09	54.00	-11.91	AVG		
9		17956.000	36.36	24.75	61.11	74.00	-12.89	peak		
10	*	17956.000	23.37	24.75	48.12	54.00	-5.88	AVG		
11		18038.250	36.34	23.28	59.62	74.00	-14.38	peak		
12		18038.250	18.61	23.28	41.89	54.00	-12.11	AVG		
13		21514.750	36.38	21.35	57.73	74.00	-16.27	peak		
14		21514.750	18.03	21.35	39.38	54.00	-14.62	AVG		
15		23261.500	37.53	20.78	58.31	74.00	-15.69	peak		
16		23261.500	19.05	20.78	39.83	54.00	-14.17	AVG		

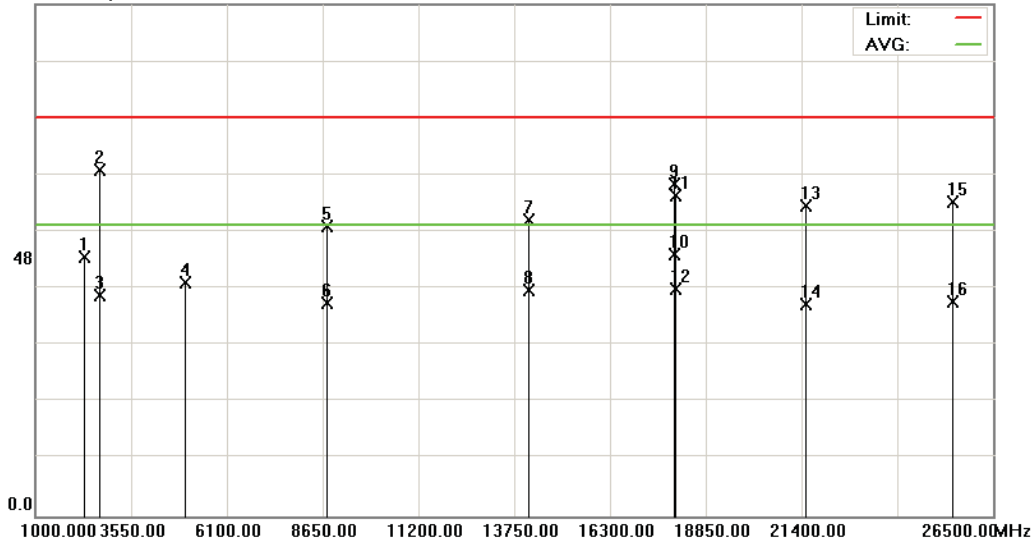
*:Maximum data x:Over limit !:over margin

File :PB76110(2480MHz)

Data :#18

Date: 2010/3/23

Time: 上午 11:11:40

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 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 3

Note: 2480MHz

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		2288.600	47.65	0.41	48.06	74.00	-25.94	peak		
2		2700.000	41.63	22.58	64.21	74.00	-9.79	peak		
3		2700.000	18.46	22.58	41.04	54.00	-12.96	AVG		
4		4960.000	35.66	7.80	43.46	74.00	-30.54	peak		
5		8773.600	37.73	16.04	53.77	74.00	-20.23	peak		
6		8773.600	23.52	16.04	39.56	54.00	-14.44	AVG		
7		14112.000	36.12	18.89	55.01	74.00	-18.99	peak		
8		14112.000	23.08	18.89	41.97	54.00	-12.03	AVG		
9		17992.000	36.11	25.43	61.54	74.00	-12.46	peak		
10	*	17992.000	23.19	25.43	48.62	54.00	-5.38	AVG		
11		18055.250	36.30	23.26	59.56	74.00	-14.44	peak		
12		18055.250	18.92	23.26	42.18	54.00	-11.82	AVG		
13		21506.250	36.21	21.35	57.56	74.00	-16.44	peak		
14		21506.250	18.00	21.35	39.35	54.00	-14.65	AVG		
15		25429.000	39.37	19.03	58.40	74.00	-15.60	peak		
16		25429.000	20.65	19.03	39.68	54.00	-14.32	AVG		

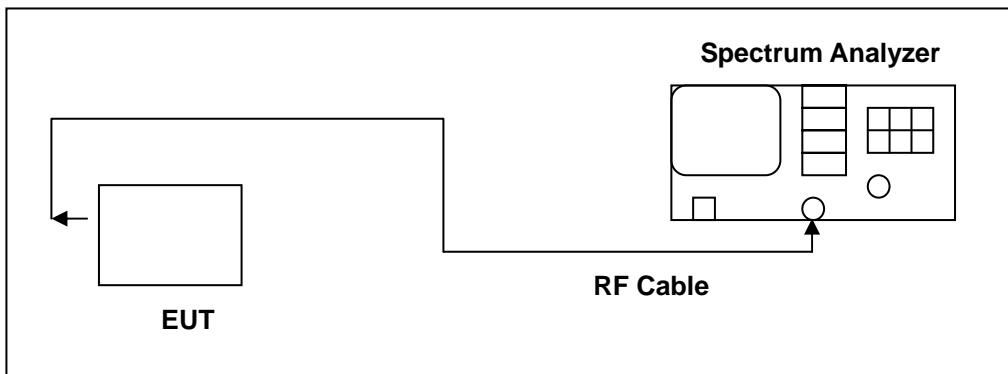
*:Maximum data x:Over limit !:over margin

6 Maximum Conducted Output Power Measurement

6.1. Limit

For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels < 1 watt.

6.2. Test Setup



6.3. 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.

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 spectrum analyzer. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the spectrum Analyzer, for prevent the spectrum analyzer 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 $(\text{GAIN} - 6)/3$ dBm.

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

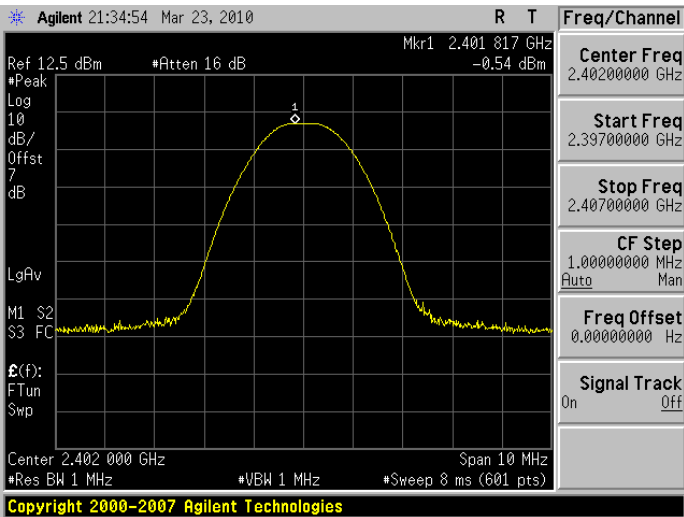
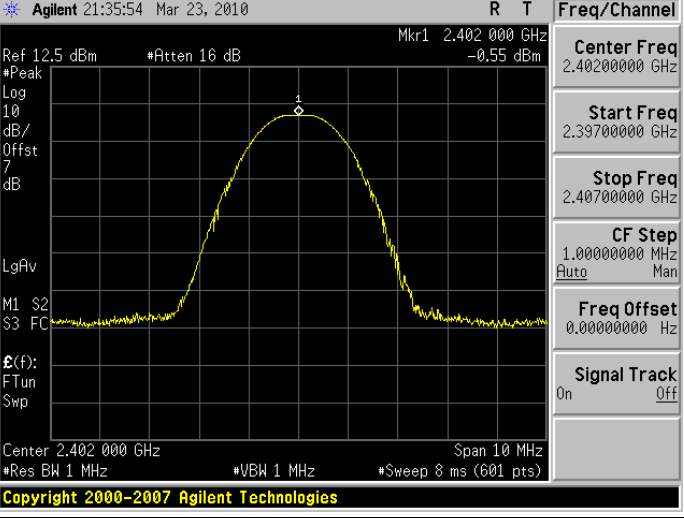
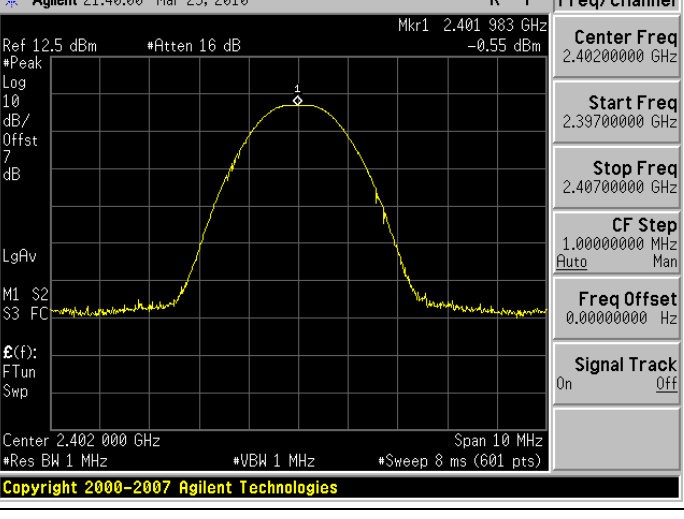
6.5. Test Result

Product	Smartphone					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 1: GFSK Link Mode					
Date of Test	03/23/2010			Test Site	TE06	
Frequency (MHz)	Packet Type	Average Power		Peak Power		Limit (W)
		(dBm)	(W)	(dBm)	(W)	
2402	DH1	0.732	0.001	0.775	0.001	< 1
	DH3	0.548	0.001	0.661	0.001	< 1
	DH5	0.425	0.001	0.637	0.001	< 1
2441	DH1	0.329	0.001	0.367	0.001	< 1
	DH3	0.241	0.001	0.330	0.001	< 1
	DH5	0.201	0.001	0.370	0.001	< 1
2480	DH1	0.540	0.001	0.645	0.001	< 1
	DH3	0.343	0.001	0.582	0.001	< 1
	DH5	0.215	0.001	0.551	0.001	< 1

Product	Smartphone					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 2: $\pi/4$ -DQPSK Mode					
Date of Test	03/23/2010			Test Site	TE06	
Frequency (MHz)	Packet Type	Average Power		Peak Power		Limit (W)
		(dBm)	(W)	(dBm)	(W)	
2402	DH1	0.424	0.001	0.912	0.001	< 1
	DH3	0.552	0.001	0.869	0.001	< 1
	DH5	0.409	0.001	0.970	0.001	< 1
2441	DH1	0.118	0.001	0.418	0.001	< 1
	DH3	0.188	0.001	0.381	0.001	< 1
	DH5	0.156	0.001	0.455	0.001	< 1
2480	DH1	0.416	0.001	0.685	0.001	< 1
	DH3	0.247	0.001	0.655	0.001	< 1
	DH5	0.351	0.001	0.746	0.001	< 1

Product	Smartphone					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 3: 8DPSK Mode					
Date of Test	03/23/2010			Test Site	TE06	
Frequency (MHz)	Packet Type	Average Power		Peak Power		Limit (W)
		(dBm)	(W)	(dBm)	(W)	
2402	DH1	0.297	0.001	0.401	0.001	< 1
	DH3	0.284	0.001	0.499	0.001	< 1
	DH5	0.292	0.001	0.412	0.001	< 1
2441	DH1	0.283	0.001	0.930	0.001	< 1
	DH3	0.267	0.001	0.979	0.001	< 1
	DH5	0.315	0.001	0.736	0.001	< 1
2480	DH1	0.039	0.001	0.257	0.001	< 1
	DH3	0.043	0.001	0.330	0.001	< 1
	DH5	0.039	0.001	0.097	0.001	< 1

6.6. Test Graphs

Mode 1: GFSK Link Mode_2402 MHz	
DH1	 <p>Agilent 21:34:54 Mar 23, 2010 R T Freq/Channel Ref 12.5 dBm #Atten 16 dB Mkr1 2.401 817 GHz #Peak -0.54 dBm Log 10 dB/ Offst 7 dB LgAv M1 S2 S3 FC E(f): FTun Swp Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts) Copyright 2000-2007 Agilent Technologies</p> <p>Center Freq 2.40200000 GHz Start Freq 2.39700000 GHz Stop Freq 2.40700000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off</p>
DH3	 <p>Agilent 21:35:54 Mar 23, 2010 R T Freq/Channel Ref 12.5 dBm #Atten 16 dB Mkr1 2.402 000 GHz #Peak -0.55 dBm Log 10 dB/ Offst 7 dB LgAv M1 S2 S3 FC E(f): FTun Swp Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts) Copyright 2000-2007 Agilent Technologies</p> <p>Center Freq 2.40200000 GHz Start Freq 2.39700000 GHz Stop Freq 2.40700000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off</p>
DH5	 <p>Agilent 21:40:00 Mar 23, 2010 R T Freq/Channel Ref 12.5 dBm #Atten 16 dB Mkr1 2.401 983 GHz #Peak -0.55 dBm Log 10 dB/ Offst 7 dB LgAv M1 S2 S3 FC E(f): FTun Swp Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts) Copyright 2000-2007 Agilent Technologies</p> <p>Center Freq 2.40200000 GHz Start Freq 2.39700000 GHz Stop Freq 2.40700000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off</p>

Mode 1: GFSK Link Mode_2441 MHz	
DH1	
DH3	
DH5	

Mode 1: GFSK Link Mode_2480 MHz	
DH1	<p>Agilent 21:56:11 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 000 GHz -0.92 dBm</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH3	<p>Agilent 21:58:45 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.479 950 GHz -0.95 dBm</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH5	<p>Agilent 22:00:48 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 133 GHz -0.94 dBm</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>

Mode2: $\pi/4$ -DQPSK Link Mode_2402 MHz															
DH1	<p>Agilent 21:37:06 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.402 150 GHz -0.69 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv M1 S2 S3 FC $\mathcal{E}(f)$: FTun Swp</p> <p>Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.40200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.39700000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.40700000 GHz</td></tr> <tr><td>CF Step</td><td>1.00000000 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> </table>	Freq/Channel		Center Freq	2.40200000 GHz	Start Freq	2.39700000 GHz	Stop Freq	2.40700000 GHz	CF Step	1.00000000 MHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.40200000 GHz														
Start Freq	2.39700000 GHz														
Stop Freq	2.40700000 GHz														
CF Step	1.00000000 MHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
DH3	<p>Agilent 21:37:22 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.402 150 GHz -0.69 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv M1 S2 S3 FC $\mathcal{E}(f)$: FTun Swp</p> <p>Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.40200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.39700000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.40700000 GHz</td></tr> <tr><td>CF Step</td><td>1.00000000 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> </table>	Freq/Channel		Center Freq	2.40200000 GHz	Start Freq	2.39700000 GHz	Stop Freq	2.40700000 GHz	CF Step	1.00000000 MHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.40200000 GHz														
Start Freq	2.39700000 GHz														
Stop Freq	2.40700000 GHz														
CF Step	1.00000000 MHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
DH5	<p>Agilent 21:38:14 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.402 133 GHz -0.68 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv M1 S2 S3 FC $\mathcal{E}(f)$: FTun Swp</p> <p>Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.40200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.39700000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.40700000 GHz</td></tr> <tr><td>CF Step</td><td>1.00000000 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> </table>	Freq/Channel		Center Freq	2.40200000 GHz	Start Freq	2.39700000 GHz	Stop Freq	2.40700000 GHz	CF Step	1.00000000 MHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.40200000 GHz														
Start Freq	2.39700000 GHz														
Stop Freq	2.40700000 GHz														
CF Step	1.00000000 MHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														

Mode2: $\pi/4$ -DQPSK Link Mode_2441 MHz	
DH1	<p>Agilent 21:50:48 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Mkr1 2.441 100 GHz -0.74 dBm</p> <p>Center 2.441 000 GHz Span 10 MHz</p> <p>#Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH3	<p>Agilent 21:47:44 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Mkr1 2.441 150 GHz -0.74 dBm</p> <p>Center 2.441 000 GHz Span 10 MHz</p> <p>#Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH5	<p>Agilent 21:45:44 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Mkr1 2.441 133 GHz -0.72 dBm</p> <p>Center 2.441 000 GHz Span 10 MHz</p> <p>#Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>

Mode2: $\pi/4$ -DQPSK Link Mode_2480 MHz															
DH1	<p>Agilent 22:04:45 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 200 GHz -1.03 dBm</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.48000000 GHz</td></tr> <tr><td>Start Freq</td><td>2.47500000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.48500000 GHz</td></tr> <tr><td>CF Step</td><td>1.00000000 MHz</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>Off</td></tr> </table>	Freq/Channel		Center Freq	2.48000000 GHz	Start Freq	2.47500000 GHz	Stop Freq	2.48500000 GHz	CF Step	1.00000000 MHz	Freq Offset	0.00000000 Hz	Signal Track	Off
Freq/Channel															
Center Freq	2.48000000 GHz														
Start Freq	2.47500000 GHz														
Stop Freq	2.48500000 GHz														
CF Step	1.00000000 MHz														
Freq Offset	0.00000000 Hz														
Signal Track	Off														
DH3	<p>Agilent 22:05:04 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 133 GHz -0.99 dBm</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.48000000 GHz</td></tr> <tr><td>Start Freq</td><td>2.47500000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.48500000 GHz</td></tr> <tr><td>CF Step</td><td>1.00000000 MHz</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>Off</td></tr> </table>	Freq/Channel		Center Freq	2.48000000 GHz	Start Freq	2.47500000 GHz	Stop Freq	2.48500000 GHz	CF Step	1.00000000 MHz	Freq Offset	0.00000000 Hz	Signal Track	Off
Freq/Channel															
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Start Freq	2.47500000 GHz														
Stop Freq	2.48500000 GHz														
CF Step	1.00000000 MHz														
Freq Offset	0.00000000 Hz														
Signal Track	Off														
DH5	<p>Agilent 22:05:59 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 133 GHz -0.97 dBm</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.48000000 GHz</td></tr> <tr><td>Start Freq</td><td>2.47500000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.48500000 GHz</td></tr> <tr><td>CF Step</td><td>1.00000000 MHz</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>Off</td></tr> </table>	Freq/Channel		Center Freq	2.48000000 GHz	Start Freq	2.47500000 GHz	Stop Freq	2.48500000 GHz	CF Step	1.00000000 MHz	Freq Offset	0.00000000 Hz	Signal Track	Off
Freq/Channel															
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Start Freq	2.47500000 GHz														
Stop Freq	2.48500000 GHz														
CF Step	1.00000000 MHz														
Freq Offset	0.00000000 Hz														
Signal Track	Off														

Mode3: 8DPSK Link Mode_2402 MHz	
DH1	<p>Agilent 21:40:53 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.401 983 GHz -1.23 dBm</p> <p>Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH3	<p>Agilent 21:41:48 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.402 017 GHz -1.23 dBm</p> <p>Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH5	<p>Agilent 21:42:04 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.402 000 GHz -1.22 dBm</p> <p>Center 2.402 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>

Mode3: 8DPSK Link Mode_2441 MHz

<p style="text-align: center;">DH1</p>	<p>Agilent 21:45:26 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.441 017 GHz -1.30 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv</p> <p>M1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.441 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 2.44100000 GHz</p> <p>Start Freq 2.43600000 GHz</p> <p>Stop Freq 2.44600000 GHz</p> <p>CF Step 1.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p style="text-align: center;">DH3</p>	<p>Agilent 21:44:28 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.441 017 GHz -1.33 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv</p> <p>M1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.441 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 2.44100000 GHz</p> <p>Start Freq 2.43600000 GHz</p> <p>Stop Freq 2.44600000 GHz</p> <p>CF Step 1.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p style="text-align: center;">DH5</p>	<p>Agilent 21:43:52 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.441 033 GHz -1.31 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv</p> <p>M1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.441 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 2.44100000 GHz</p> <p>Start Freq 2.43600000 GHz</p> <p>Stop Freq 2.44600000 GHz</p> <p>CF Step 1.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

Mode3: 8DPSK Link Mode_2480 MHz

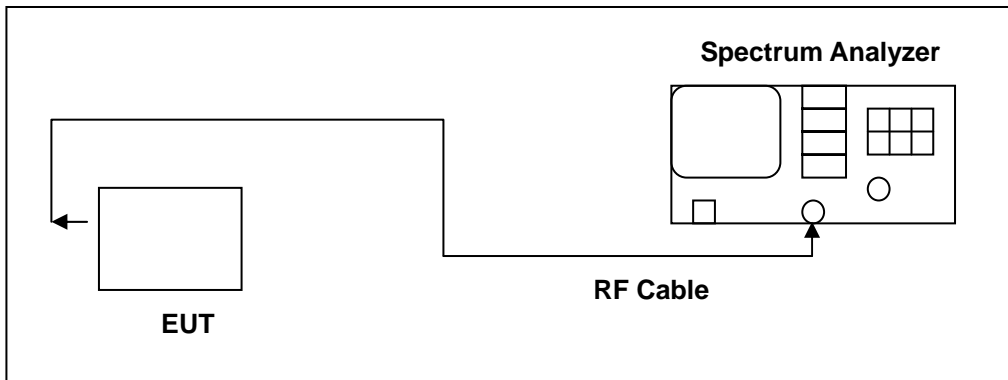
<p style="text-align: center;">DH1</p>	<p>Agilent 22:06:20 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 000 GHz -1.60 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv</p> <p>M1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 pts)</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>2.48000000 GHz</td> </tr> <tr> <td>Start Freq</td> <td>2.47500000 GHz</td> </tr> <tr> <td>Stop Freq</td> <td>2.48500000 GHz</td> </tr> <tr> <td>CF Step</td> <td>1.00000000 MHz</td> </tr> <tr> <td></td> <td>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	2.48000000 GHz	Start Freq	2.47500000 GHz	Stop Freq	2.48500000 GHz	CF Step	1.00000000 MHz		Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel																	
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Stop Freq	2.48500000 GHz																
CF Step	1.00000000 MHz																
	Auto Man																
Freq Offset	0.00000000 Hz																
Signal Track	On Off																
<p style="text-align: center;">DH3</p>	<p>Agilent 22:08:47 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 000 GHz -1.62 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv</p> <p>M1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.48000000 GHz</td> </tr> <tr> <td>Start Freq</td> <td>2.47500000 GHz</td> </tr> <tr> <td>Stop Freq</td> <td>2.48500000 GHz</td> </tr> <tr> <td>CF Step</td> <td>1.00000000 MHz</td> </tr> <tr> <td></td> <td>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	2.48000000 GHz	Start Freq	2.47500000 GHz	Stop Freq	2.48500000 GHz	CF Step	1.00000000 MHz		Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
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CF Step	1.00000000 MHz																
	Auto Man																
Freq Offset	0.00000000 Hz																
Signal Track	On Off																
<p style="text-align: center;">DH5</p>	<p>Agilent 22:09:00 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 2.480 000 GHz -1.61 dBm</p> <p>#Peak Log 10 dB/Offst 7 dB LgAv</p> <p>M1 S2 S3 FC</p> <p>Ⓔ(f): FTun Swp</p> <p>Center 2.480 000 GHz Span 10 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 8 ms (601 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>2.48000000 GHz</td> </tr> <tr> <td>Start Freq</td> <td>2.47500000 GHz</td> </tr> <tr> <td>Stop Freq</td> <td>2.48500000 GHz</td> </tr> <tr> <td>CF Step</td> <td>1.00000000 MHz</td> </tr> <tr> <td></td> <td>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	2.48000000 GHz	Start Freq	2.47500000 GHz	Stop Freq	2.48500000 GHz	CF Step	1.00000000 MHz		Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
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	Auto Man																
Freq Offset	0.00000000 Hz																
Signal Track	On Off																

7 Minimum 20dB RF Bandwidth Measurement

7.1. Limit

For frequency hopping systems operating in the 2400–2483.5 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hop-ping channel is < 1 MHz.

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 RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = approx. 2 to 3 times the 20dB bandwidth, centered on a hopping frequency
2. RBW \geq 1% of the 20dB span
3. VBW \geq RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

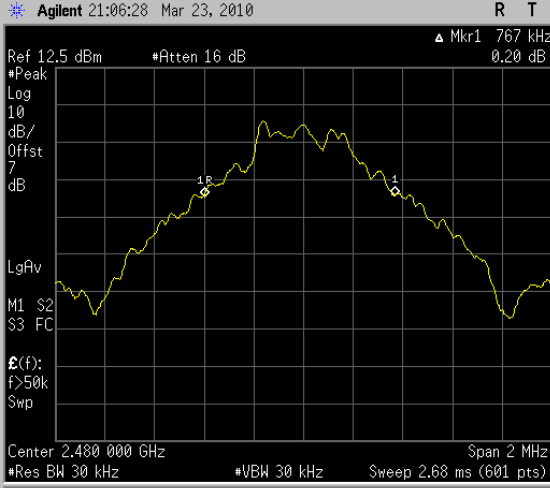
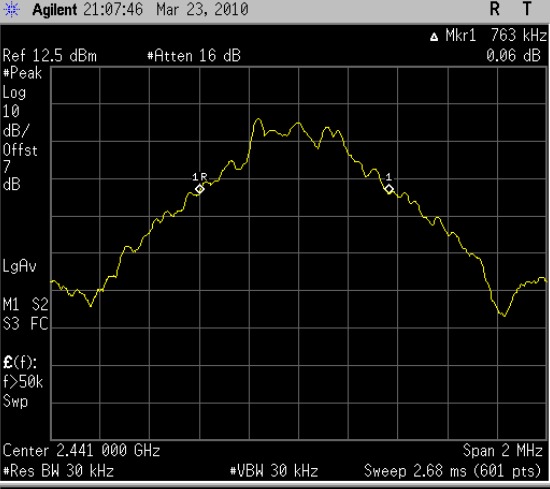
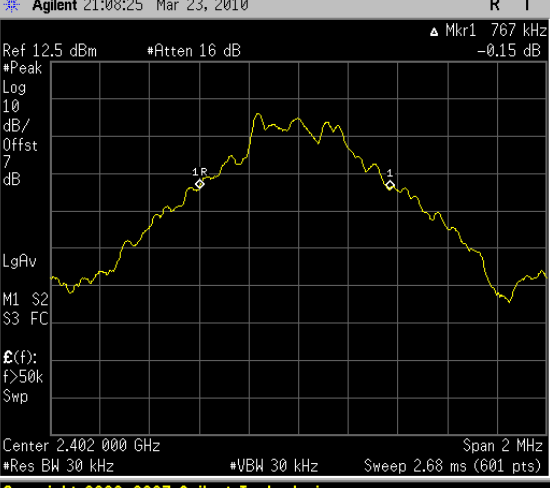
The trace was allowed to stabilize. The EUT was transmitting at its maximum data rate. The marker-to-peak function was used to set the marker to the peak of the emission. The marker-delta function was used to measure 20dB down one side of the emission. The marker-delta function and marker was moved to the other side of the emission until it was even with the reference marker. The marker-delta reading at this point was the 20dB bandwidth of the emission.

7.5. Test Result

Product	Smartphone		
Test Item	Minimum 20dB RF Bandwidth		
Test Mode	Mode 1: GFSK Link Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency (MHz)	Measurement (MHz)		Limit (MHz)
2402	0.767		< 1
2441	0.763		< 1
2480	0.767		< 1

Product	Smartphone		
Test Item	Minimum 20dB RF Bandwidth		
Test Mode	Mode 3: 8DPSK Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency (MHz)	20dB Bandwidth (MHz)	2/3 20dB Bandwidth (MHz)	Limit (MHz)
2402	1.237	0.825	< 1
2441	1.240	0.827	< 1
2480	1.270	0.847	< 1

7.6. Test Graphs

Mode 1: GFSK Link Mode															
2402	 <p>Agilent 21:06:28 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Center 2.480 000 GHz Span 2 MHz</p> <p>#Res BW 30 kHz #VBW 30 kHz Sweep 2.68 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1" data-bbox="1189 376 1316 862"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.48000000 GHz</td></tr> <tr><td>Start Freq</td><td>2.47900000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.48100000 GHz</td></tr> <tr><td>CF Step</td><td>200.000000 kHz</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>Off</td></tr> </table>	Freq/Channel		Center Freq	2.48000000 GHz	Start Freq	2.47900000 GHz	Stop Freq	2.48100000 GHz	CF Step	200.000000 kHz	Freq Offset	0.00000000 Hz	Signal Track	Off
Freq/Channel															
Center Freq	2.48000000 GHz														
Start Freq	2.47900000 GHz														
Stop Freq	2.48100000 GHz														
CF Step	200.000000 kHz														
Freq Offset	0.00000000 Hz														
Signal Track	Off														
2441	 <p>Agilent 21:07:46 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Center 2.441 000 GHz Span 2 MHz</p> <p>#Res BW 30 kHz #VBW 30 kHz Sweep 2.68 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1" data-bbox="1189 907 1316 1393"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.44100000 GHz</td></tr> <tr><td>Start Freq</td><td>2.44000000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.44200000 GHz</td></tr> <tr><td>CF Step</td><td>200.000000 kHz</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>Off</td></tr> </table>	Freq/Channel		Center Freq	2.44100000 GHz	Start Freq	2.44000000 GHz	Stop Freq	2.44200000 GHz	CF Step	200.000000 kHz	Freq Offset	0.00000000 Hz	Signal Track	Off
Freq/Channel															
Center Freq	2.44100000 GHz														
Start Freq	2.44000000 GHz														
Stop Freq	2.44200000 GHz														
CF Step	200.000000 kHz														
Freq Offset	0.00000000 Hz														
Signal Track	Off														
2480	 <p>Agilent 21:08:25 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Center 2.402 000 GHz Span 2 MHz</p> <p>#Res BW 30 kHz #VBW 30 kHz Sweep 2.68 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p> <table border="1" data-bbox="1189 1438 1316 1924"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.40200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.40100000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.40300000 GHz</td></tr> <tr><td>CF Step</td><td>200.000000 kHz</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>Off</td></tr> </table>	Freq/Channel		Center Freq	2.40200000 GHz	Start Freq	2.40100000 GHz	Stop Freq	2.40300000 GHz	CF Step	200.000000 kHz	Freq Offset	0.00000000 Hz	Signal Track	Off
Freq/Channel															
Center Freq	2.40200000 GHz														
Start Freq	2.40100000 GHz														
Stop Freq	2.40300000 GHz														
CF Step	200.000000 kHz														
Freq Offset	0.00000000 Hz														
Signal Track	Off														

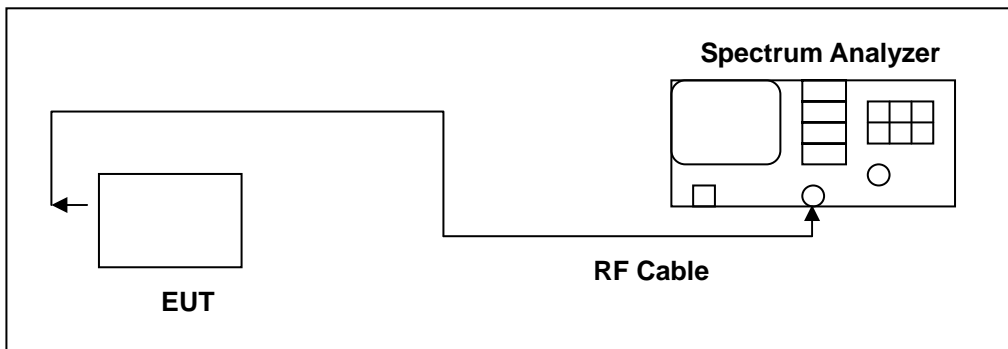
Mode3: 8DPSK Link Mode	
2402	<p>Agilent 21:09:10 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>▲ Mkr1 1.237 MHz -0.04 dB</p> <p>Center 2.402 000 GHz Span 2 MHz</p> <p>#Res BW 30 kHz #VBW 30 kHz Sweep 2.68 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
2441	<p>Agilent 21:09:46 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>▲ Mkr1 1.240 MHz -0.11 dB</p> <p>Center 2.441 000 GHz Span 2 MHz</p> <p>#Res BW 30 kHz #VBW 30 kHz Sweep 2.68 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
2480	<p>Agilent 21:10:37 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>▲ Mkr1 1.270 MHz -0.02 dB</p> <p>Center 2.480 000 GHz Span 2 MHz</p> <p>#Res BW 30 kHz #VBW 30 kHz Sweep 2.68 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>

8 Carrier Frequency Separation Measurement

8.1. Limit

For frequency hopping systems operating in the 2400–2483.5 MHz band shall use at least 75 hopping frequencies. The Carrier Frequency Separation is 1 MHz.

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 RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth transmitter of the V6 had its hopping function enabled. The following spectrum analyzer settings were used:

1. Span = wide enough to capture the peaks of two adjacent channels
2. Resolution (or IF) Bandwidth (RBW) \geq 1% of the span
3. Video (or Average) Bandwidth (VBW) \geq RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

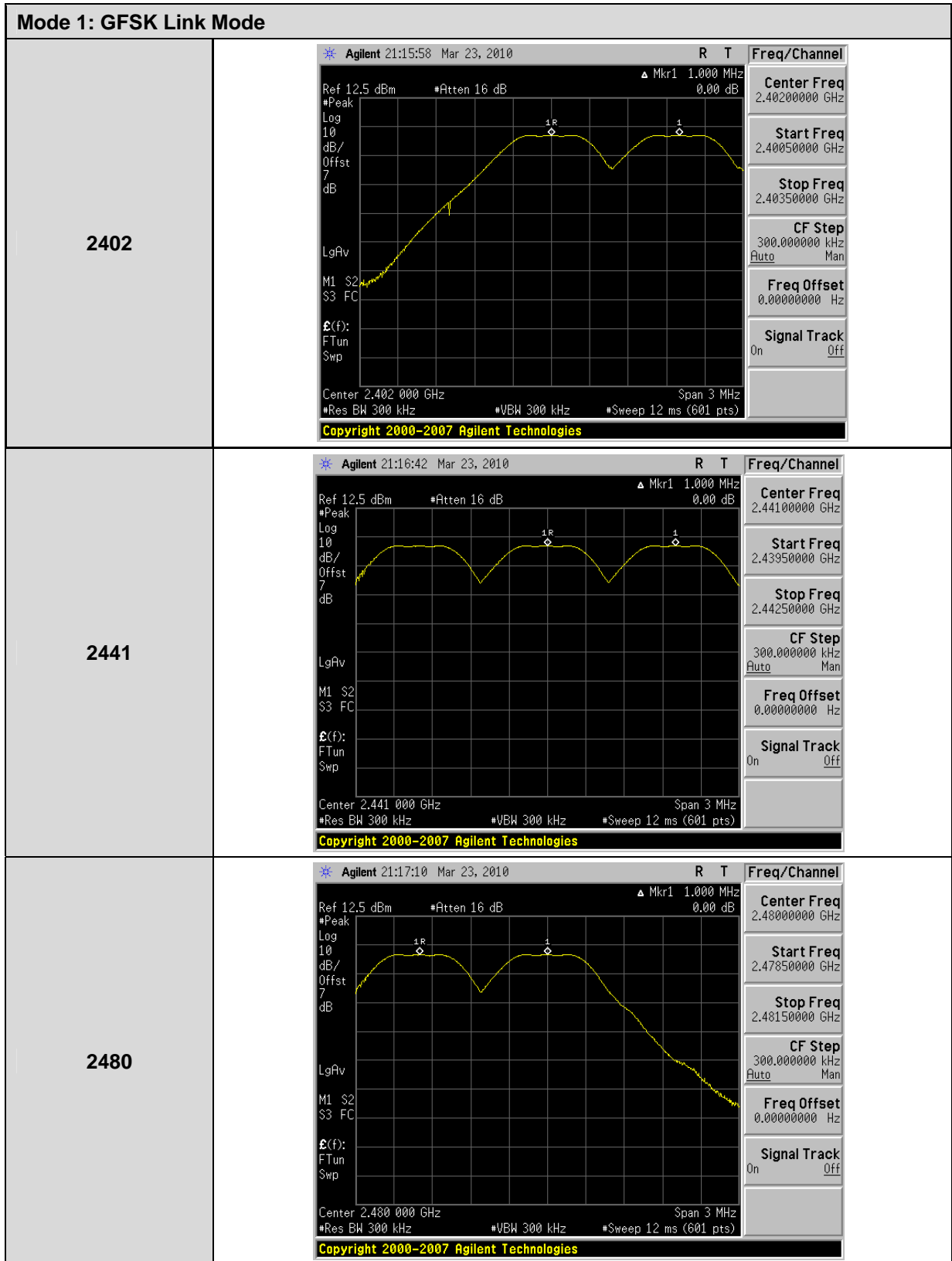
The trace was allowed to stabilize. The marker-delta function was used to determine the separation between the peaks of the adjacent channels.

8.5. Test Result

Product	Smartphone		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 1: GFSK Link Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency (MHz)	Measurement (MHz)	Limit (MHz)	
2402	1	1	
2441	1	1	
2480	1	1	

Product	Smartphone		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 3: 8DPSK Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency (MHz)	Measurement (MHz)	Limit (MHz)	
2402	1	1	
2441	1	1	
2480	1	1	

8.6. Test Graphs



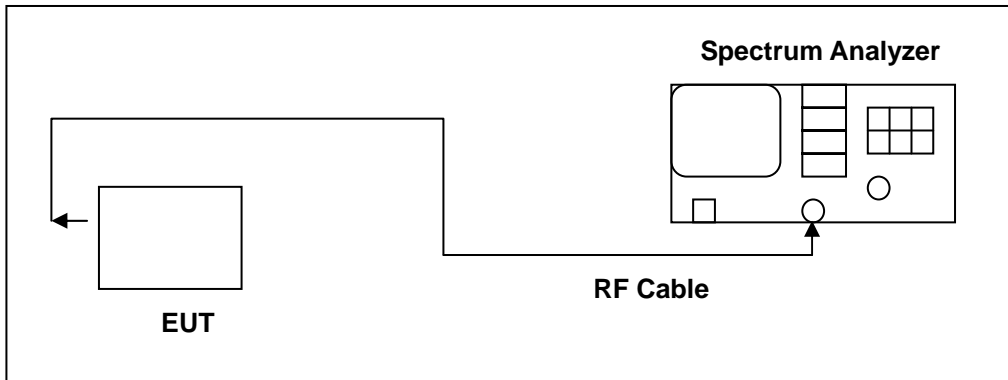
Mode3: 8DPSK Link Mode															
2402	<p>Agilent 21:15:17 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 1.000 MHz 0.01 dB</p> <p>#Peak Log 10 dB/Offst 7 dB</p> <p>LgAv</p> <p>M1 S2 S3 FC</p> <p>E(f): FTun Swp</p> <p>Center 2.402 000 GHz Span 3 MHz #Res BW 300 kHz #VBW 300 kHz #Sweep 12 ms (601 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>2.40200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.40050000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.40350000 GHz</td></tr> <tr><td>CF Step</td><td>300.000000 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	2.40200000 GHz	Start Freq	2.40050000 GHz	Stop Freq	2.40350000 GHz	CF Step	300.000000 kHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.40200000 GHz														
Start Freq	2.40050000 GHz														
Stop Freq	2.40350000 GHz														
CF Step	300.000000 kHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
2441	<p>Agilent 21:14:40 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 1.000 MHz 0.00 dB</p> <p>#Peak Log 10 dB/Offst 7 dB</p> <p>LgAv</p> <p>M1 S2 S3 FC</p> <p>E(f): FTun Swp</p> <p>Center 2.441 000 GHz Span 3 MHz #Res BW 300 kHz #VBW 300 kHz #Sweep 12 ms (601 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>2.44100000 GHz</td></tr> <tr><td>Start Freq</td><td>2.43950000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.44250000 GHz</td></tr> <tr><td>CF Step</td><td>300.000000 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	2.44100000 GHz	Start Freq	2.43950000 GHz	Stop Freq	2.44250000 GHz	CF Step	300.000000 kHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.44100000 GHz														
Start Freq	2.43950000 GHz														
Stop Freq	2.44250000 GHz														
CF Step	300.000000 kHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														
2480	<p>Agilent 21:12:01 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB Mkr1 1.000 MHz -0.03 dB</p> <p>#Peak Log 10 dB/Offst 7 dB</p> <p>LgAv</p> <p>M1 S2 S3 FC</p> <p>E(f): FTun Swp</p> <p>Center 2.480 000 GHz Span 3 MHz #Res BW 300 kHz #VBW 300 kHz Sweep 1 ms (601 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>2.48000000 GHz</td></tr> <tr><td>Start Freq</td><td>2.47850000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.48150000 GHz</td></tr> <tr><td>CF Step</td><td>300.000000 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	2.48000000 GHz	Start Freq	2.47850000 GHz	Stop Freq	2.48150000 GHz	CF Step	300.000000 kHz Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel															
Center Freq	2.48000000 GHz														
Start Freq	2.47850000 GHz														
Stop Freq	2.48150000 GHz														
CF Step	300.000000 kHz Auto Man														
Freq Offset	0.00000000 Hz														
Signal Track	On Off														

9 Number of Hopping Measurement

9.1. Limit

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels.

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

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = the frequency band of operation
2. RBW \geq 1% of the span
3. VBW \geq RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

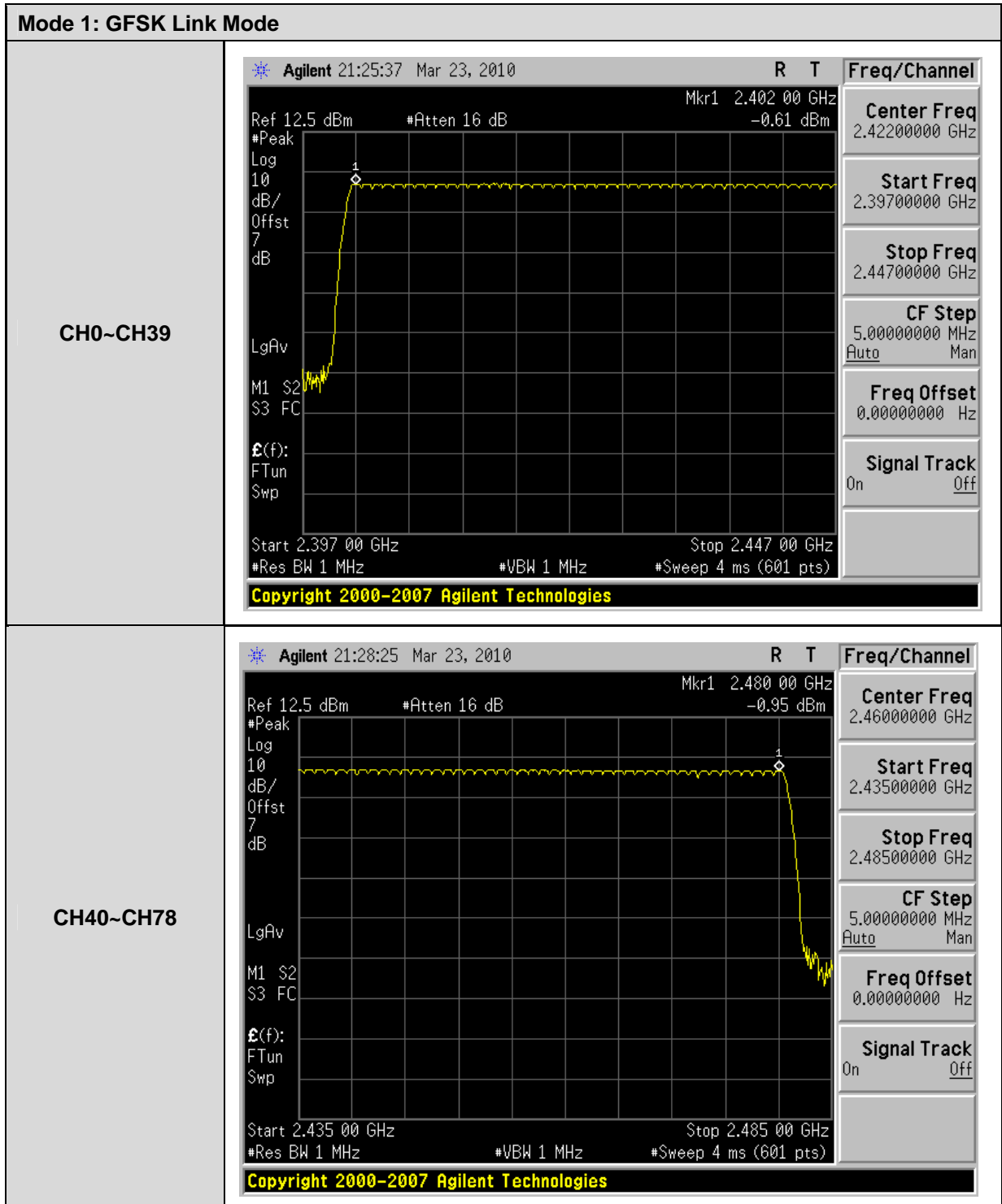
The trace was allowed to stabilize.

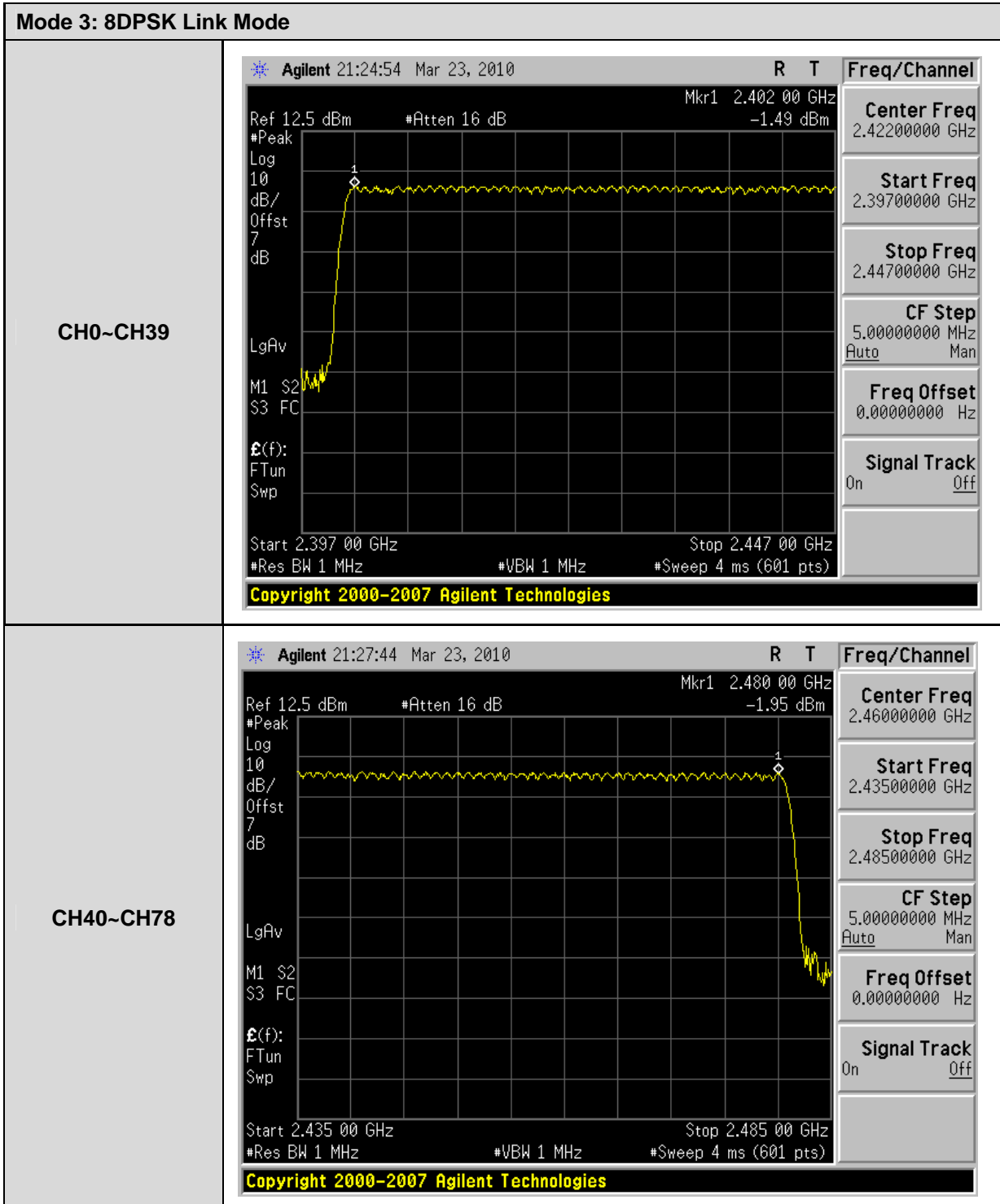
9.5. Test Result

Product	Smartphone		
Test Item	Number of Hopping		
Test Mode	Mode 1: GFSK Link Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency Range (MHz)	Measurement (ch)		Limit (ch)
2402 - 2480	79		> 15

Product	Smartphone		
Test Item	Number of Hopping		
Test Mode	Mode 3: 8DPSK Mode		
Date of Test	03/23/2010	Test Site	TE06
Frequency Range (MHz)	Measurement (ch)		Limit (ch)
2402 - 2480	79		> 15

9.6. Test Graphs



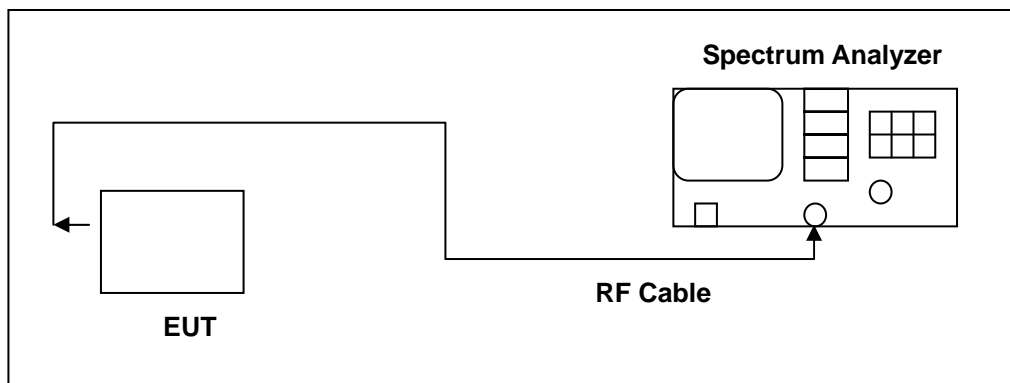


10 Time of Occupancy (Dwell Time) Measurement

10.1. Limit

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

10.2. Test Setup



10.3. 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.

10.4. Test Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

1. Span = zero span, centered on a hopping channel
2. RBW = 1 MHz
3. VBW \geq RBW
4. Sweep = as necessary to capture the entire dwell time per hopping channel
5. Detector function = peak
6. Trace = max hold

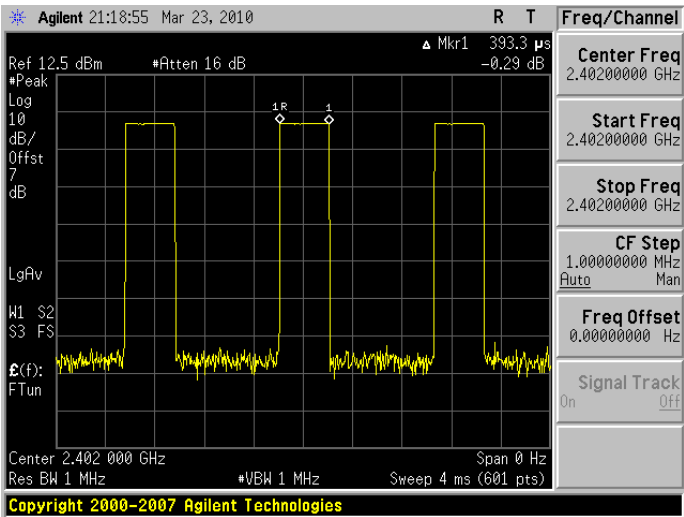
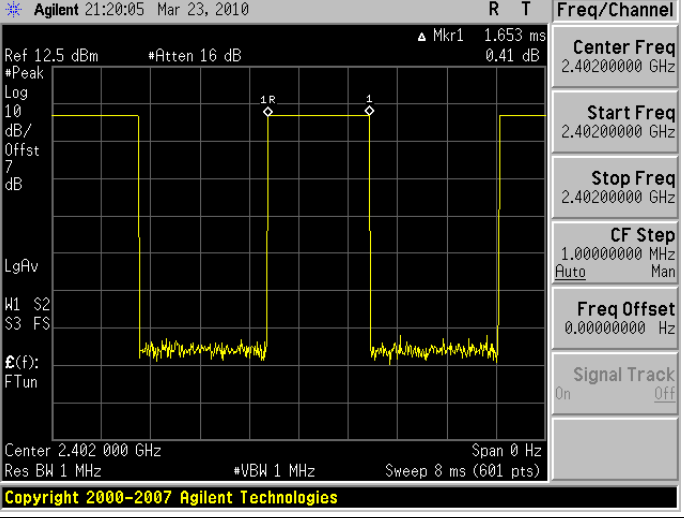
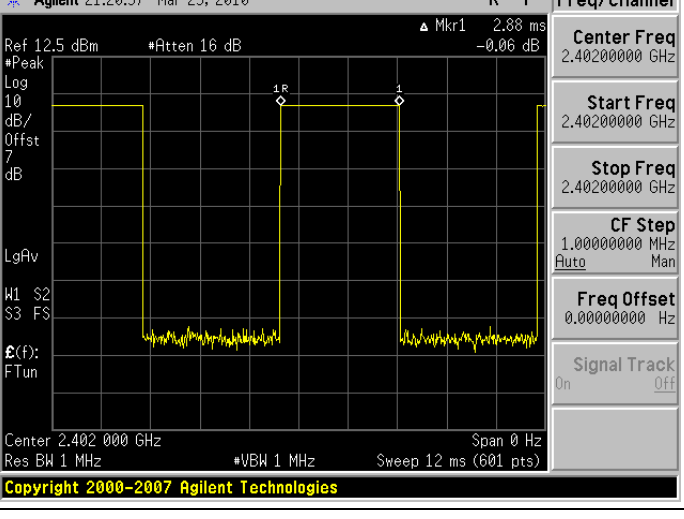
The marker-delta function was used to determine the dwell time.

10.5. Test Result

Product	Smartphone		
Test Item	Time of Occupancy (Dwell Time)		
Test Mode	Mode 1: GFSK Link Mode		
Date of Test	03/23/2010	Test Site	TE06
DH1			
Cycle Calculate	79CH * 0.4 = 31.6 (sec)		
The EUT Hopping Number per Sec	1600 times/sec		
Each Channel Dwell Times per Sec	800/79CH = 10.13(times/sec)		
Each Channel Dwell Times (1)	0.3933 ms (sec)		
Each Channel Dwell Times on Cycle(2)	31.6 * 10.13 = 320.108(times)		
Dwell Times on Cycle (1) * (2)	125.8985 ms (sec)		
LIMIT(msec)	< = 400		
DH3			
Cycle Calculate	79CH * 0.4 = 31.6 (sec)		
The EUT Hopping Number per Sec	1600 times/sec		
Each Channel Dwell Times per Sec	400/79CH = 5.1(times/sec)		
Each Channel Dwell Times (1)	1.653 ms (sec)		
Each Channel Dwell Times on Cycle(2)	31.6 * 5.1 = 161.16(times)		
Dwell Times on Cycle (1) * (2)	266.39748 ms (sec)		
LIMIT(msec)	< = 400		
DH5			
Cycle Calculate	79CH * 0.4 = 31.6 (sec)		
The EUT Hopping Number per Sec	1600 times/sec		
Each Channel Dwell Times per Sec	266.7/79CH = 3.37(times/sec)		
Each Channel Dwell Times (1)	2.880 ms (sec)		
Each Channel Dwell Times on Cycle(2)	31.6 * 3.37 = 106.492(times)		
Dwell Times on Cycle (1) * (2)	306.69696 ms (sec)		
LIMIT(msec)	< = 400		

Product	Smartphone		
Test Item	Time of Occupancy (Dwell Time)		
Test Mode	Mode 3: 8DPSK Mode		
Date of Test	03/23/2010	Test Site	TE06
DH1			
Cycle Calculate	79CH * 0.4 = 31.6 (sec)		
The EUT Hopping Number per Sec	1600 times/sec		
Each Channel Dwell Times per Sec	800/79CH = 10.13(times/sec)		
Each Channel Dwell Times (1)	0.3933 ms (sec)		
Each Channel Dwell Times on Cycle(2)	31.6 * 10.13 = 320.108(times)		
Dwell Times on Cycle (1) * (2)	125.8985 ms (sec)		
LIMIT(msec)	< = 400		
DH3			
Cycle Calculate	79CH * 0.4 = 31.6 (sec)		
The EUT Hopping Number per Sec	1600 times/sec		
Each Channel Dwell Times per Sec	400/79CH = 5.1(times/sec)		
Each Channel Dwell Times (1)	1.640 ms (sec)		
Each Channel Dwell Times on Cycle(2)	31.6 * 5.1 = 161.16(times)		
Dwell Times on Cycle (1) * (2)	264.3024 ms (sec)		
LIMIT(msec)	< = 400		
DH5			
Cycle Calculate	79CH * 0.4 = 31.6 (sec)		
The EUT Hopping Number per Sec	1600 times/sec		
Each Channel Dwell Times per Sec	266.7/79CH = 3.37(times/sec)		
Each Channel Dwell Times (1)	2.900 ms (sec)		
Each Channel Dwell Times on Cycle(2)	31.6 * 3.37 = 106.492(times)		
Dwell Times on Cycle (1) * (2)	308.8268 ms (sec)		
LIMIT(msec)	< = 400		

10.6. Test Graphs

Mode 1: GFSK Link Mode	
DH1	 <p>Agilent 21:18:55 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>▲ Mkr1 393.3 ps -0.29 dB</p> <p>Center 2.402 000 GHz Res BW 1 MHz #VBW 1 MHz Sweep 4 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH3	 <p>Agilent 21:20:05 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>▲ Mkr1 1.653 ms 0.41 dB</p> <p>Center 2.402 000 GHz Res BW 1 MHz #VBW 1 MHz Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
DH5	 <p>Agilent 21:20:37 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>▲ Mkr1 2.83 ms -0.06 dB</p> <p>Center 2.402 000 GHz Res BW 1 MHz #VBW 1 MHz Sweep 12 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>

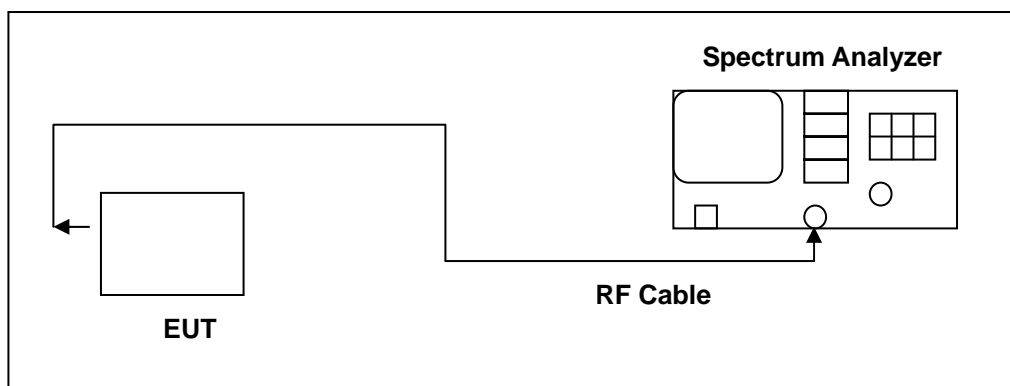
Mode3: 8DPSK Link Mode	
3DH1	<p>Agilent 21:22:35 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Center 2.402 000 GHz</p> <p>Res BW 1 MHz #VBW 1 MHz Sweep 4 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
3DH3	<p>Agilent 21:22:06 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Center 2.402 000 GHz</p> <p>Res BW 1 MHz #VBW 1 MHz Sweep 8 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>
3DH5	<p>Agilent 21:21:38 Mar 23, 2010</p> <p>Ref 12.5 dBm #Atten 16 dB</p> <p>Center 2.402 000 GHz</p> <p>Res BW 1 MHz #VBW 1 MHz Sweep 12 ms (601 pts)</p> <p>Copyright 2000-2007 Agilent Technologies</p>

11 Out of Band Conducted Emissions Measurement

11.1. 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

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

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.

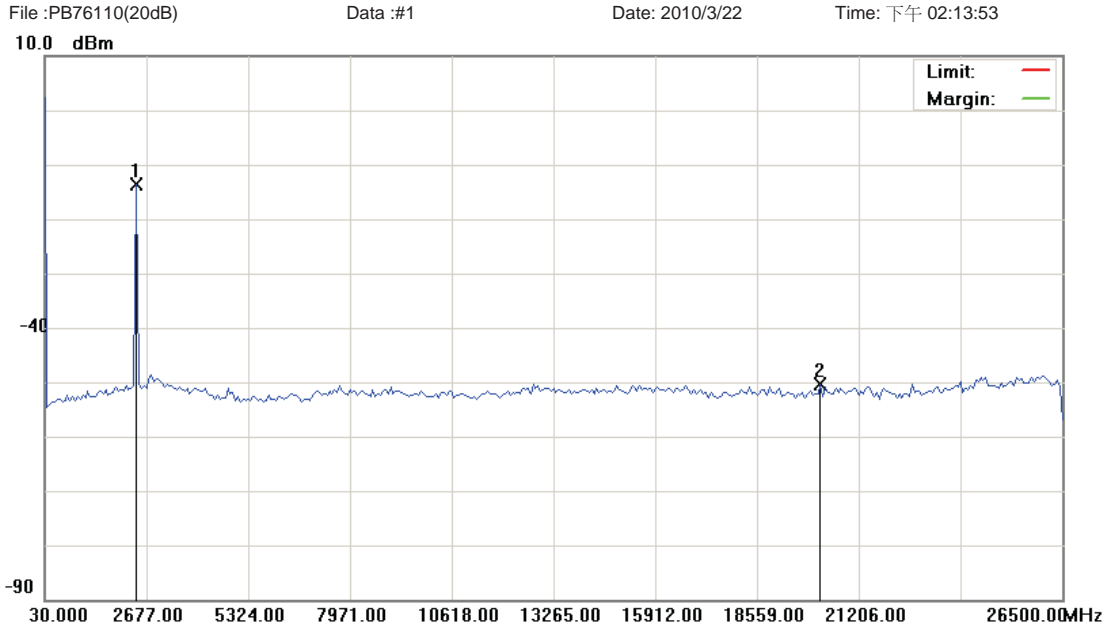
All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel 0, 39, 78)

11.5. Test Result

Product	Smartphone		
Test Item	Out of Band Conducted		
Test Mode	Mode 1: GFSK Link Mode		
Date of Test	03/22/2010	Test Site	TE06
Frequency (MHz)	Fundamental (dB μ V)	Limit (dB μ V)	Measurement (dB μ V)
2402	-13.65	-33.65	-50.44
2441	-13.96	-33.96	-50.94
2480	-11.65	-31.65	-51.03

Product	Smartphone		
Test Item	Out of Band Conducted		
Test Mode	Mode 3: 8DPSK Mode		
Date of Test	03/22/2010	Test Site	TE06
Frequency (MHz)	Fundamental (dB μ V)	Limit (dB μ V)	Measurement (dB μ V)
2402	-14.15	-34.15	-50.69
2441	-14.96	-34.96	-50.46
2480	-12.65	-32.65	-51.80

11.6. Test Graphs



Site: : RF Conducted	Polarization:	Temperature: 22 °C
Limit:	Power:	Humidity: 60 %
EUT: Smartphone	Distance:	RBW: 100 KHz VBW: 100 KHz
M/N: PB76110		
Mode: 1		
Note: 2402		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2402.000	-19.74	6.09	-13.65			peak		Tx
2		20213.375	-57.20	6.76	-50.44			peak		

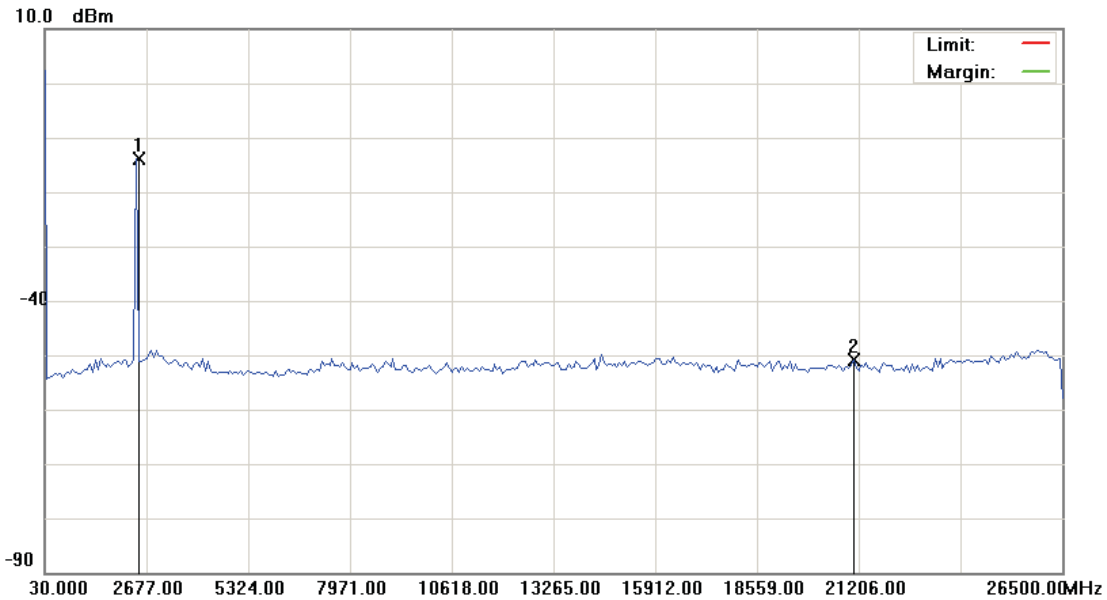
*:Maximum data x:Over limit !:over margin

File :PB76110(20dB)

Data :#2

Date: 2010/3/22

Time: 下午 02:15:22


 Site: : RF Conducted
 Limit:
 EUT: Smartphone
 M/N: PB76110
 Mode: 1
 Note: 2441

 Polarization:
 Power:
 Distance:
 Temperature: 22 °C
 Humidity: 60 %
 RBW: 100 KHz VBW: 100 KHz

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	2441.000	-20.05	6.09	-13.96			peak			Tx
2		21073.650	-57.74	6.80	-50.94			peak			

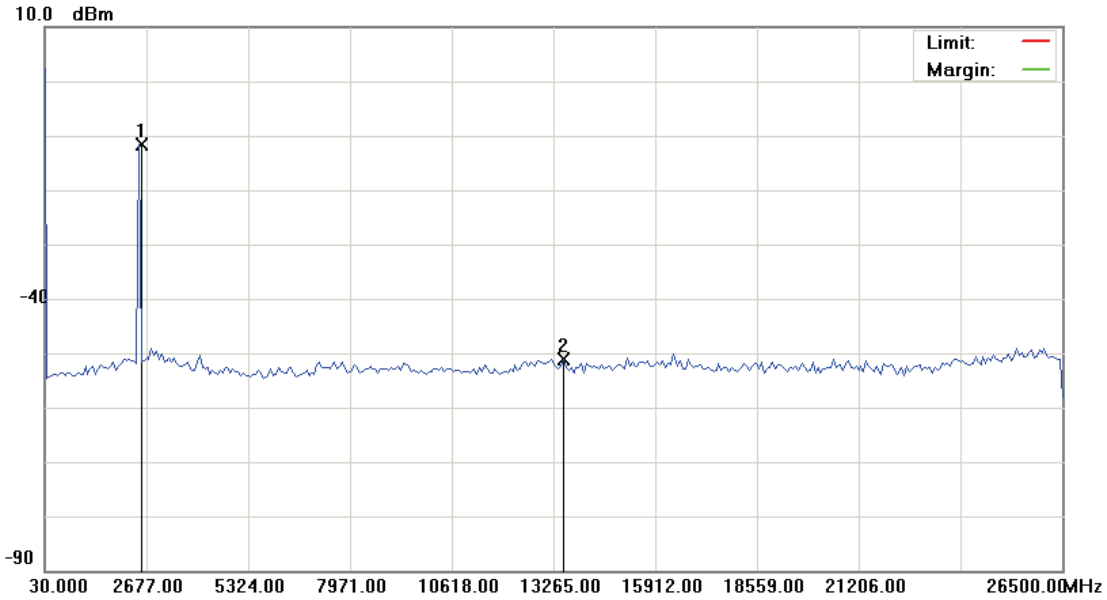
*:Maximum data x:Over limit !:over margin

File :PB76110(20dB)

Data :#3

Date: 2010/3/22

Time: 下午 02:17:51

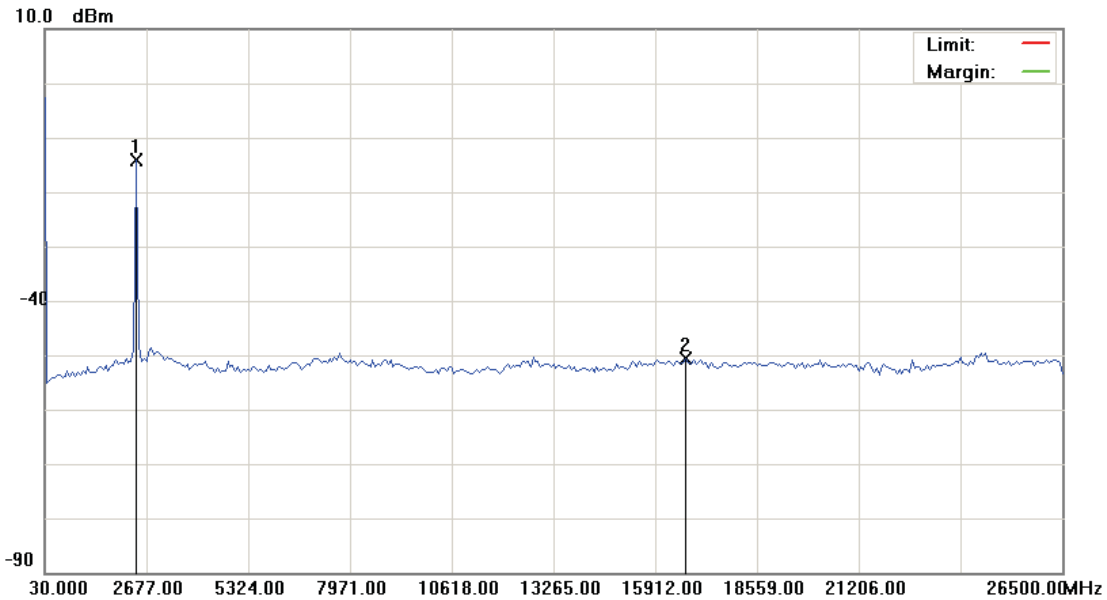

 Site: : RF Conducted
 Limit:
 EUT: Smartphone
 M/N: PB76110
 Mode: 1
 Note: 2480

 Polarization:
 Power:
 Distance:
 Temperature: 22 °C
 Humidity: 60 %
 RBW: 100 KHz VBW: 100 KHz

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2480.000	-17.74	6.09	-11.65			peak		Tx
2		13529.700	-57.54	6.51	-51.03			peak		

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

File :PB76110(20dB)EDR Data :#1 Date: 2010/3/22 Time: 下午 02:25:37

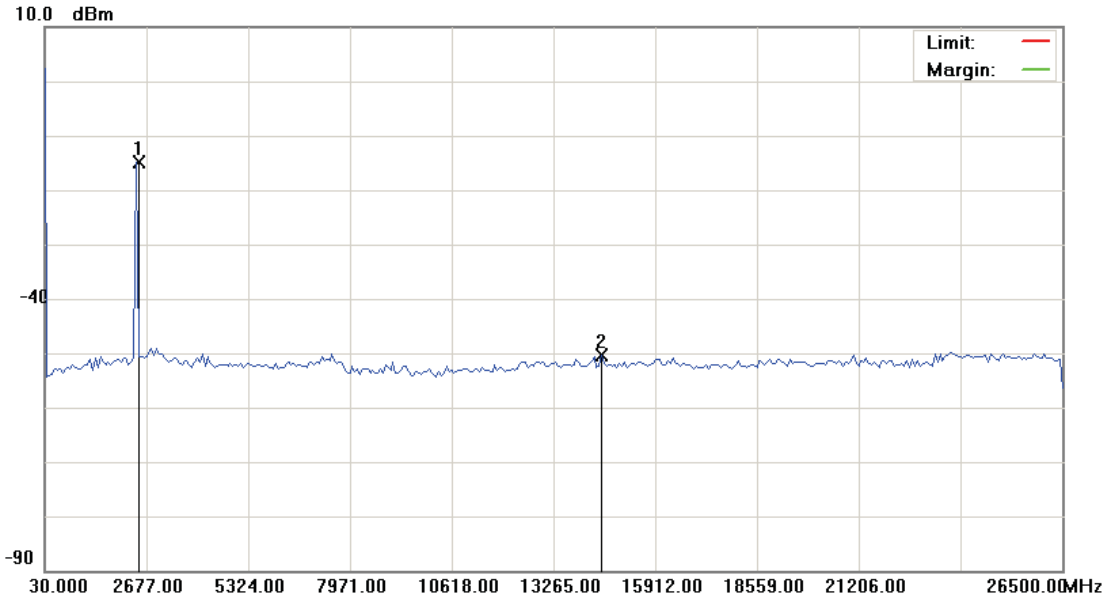


Site: : RF Conducted	Polarization:	Temperature: 22 °C
Limit:	Power:	Humidity: 60 %
EUT: Smartphone	Distance:	RBW: 100 KHz VBW: 100 KHz
M/N: PB76110		
Mode: 3		
Note: 2402		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	2402.000	-20.24	6.09	-14.15			peak			Tx
2		16706.100	-57.32	6.63	-50.69			peak			

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

File :PB76110(20dB)EDR Data :#2 Date: 2010/3/22 Time: 下午 02:23:31

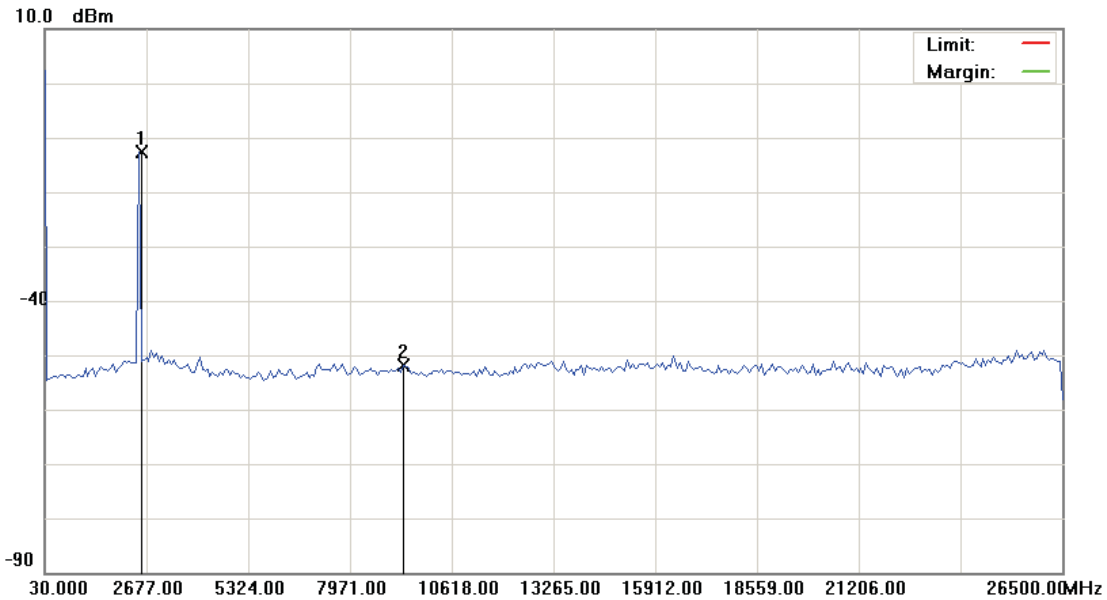


Site: : RF Conducted	Polarization:	Temperature: 22 °C
Limit:	Power:	Humidity: 60 %
EUT: Smartphone	Distance:	RBW: 100 KHz VBW: 100 KHz
M/N: PB76110		
Mode: 3		
Note: 2441		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2441.000	-21.05	6.09	-14.96			peak		Tx
2		14522.325	-57.01	6.55	-50.46			peak		

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

File :PB76110(20dB)EDR Data :#3 Date: 2010/3/22 Time: 下午 02:21:17



Site: : RF Conducted	Polarization:	Temperature: 22 °C
Limit:	Power:	Humidity: 60 %
EUT: Smartphone	Distance:	RBW: 100 KHz VBW: 100 KHz
M/N: PB76110		
Mode: 3		
Note: 2480		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	2480.000	-18.74	6.09	-12.65			peak			Tx
2		9360.675	-58.15	6.35	-51.80			peak			

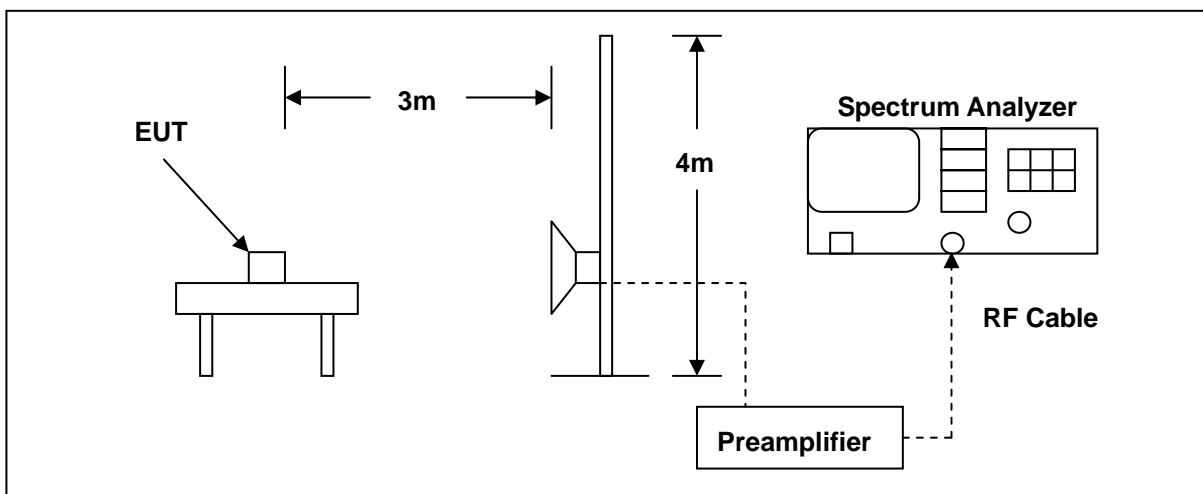
*:Maximum data x:Over limit !:over margin

12 Band Edges Measurement

12.1. 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

12.2. Test Setup



12.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	06/23/2009	(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.

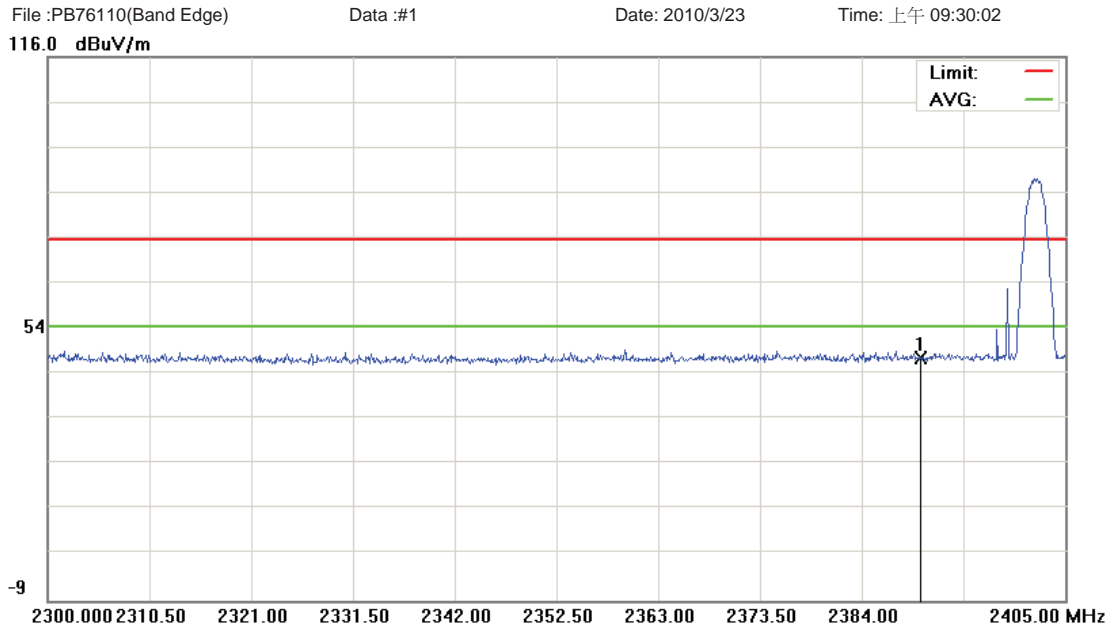
12.4. Test Procedure

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.

12.5. Test Graphs



Site: :966 Chamber	Polarization: <i>Vertical</i>	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000 KHz VBW: 1000 KHz
M/N: PB76110		
Mode: 1		
Note: 2402MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	2390.000	46.51	0.19	46.70	74.00	-27.30	peak		

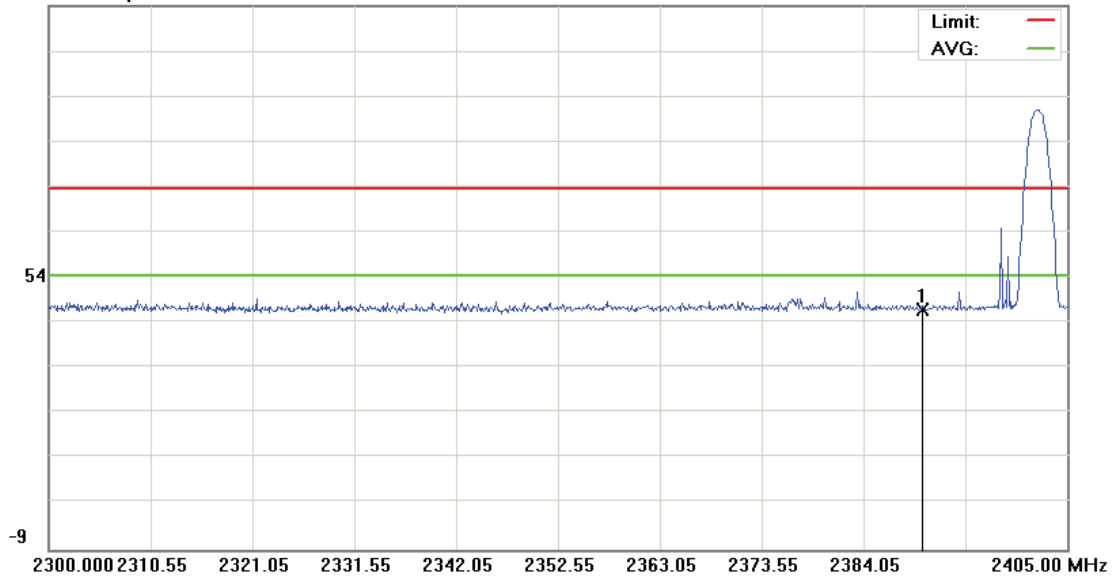
*:Maximum data x:Over limit !:over margin

File :PB76110(Band Edge)

Data :#5

Date: 2010/3/23

Time: 上午 09:37:50

116.0 dBuV/m


Site: :966 Chamber	Polarization: <i>Horizontal</i>	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000 KHz VBW: 1000 KHz
M/N: PB76110		
Mode: 1		
Note: 2402MHz		

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	45.94	0.19	46.13	74.00	-27.87	peak		

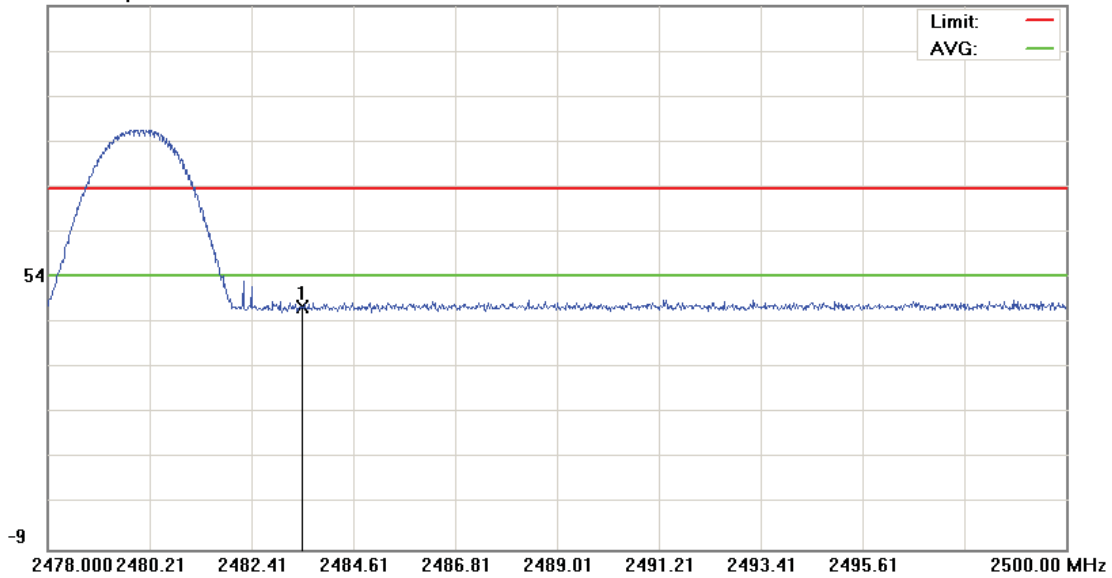
*:Maximum data x:Over limit !:over margin

File :PB76110(Band Edge)

Data :#3

Date: 2010/3/23

Time: 上午 09:32:21

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: 1000 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 1

Note: 2480MHz

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	46.60	0.25	46.85	74.00	-27.15	peak		

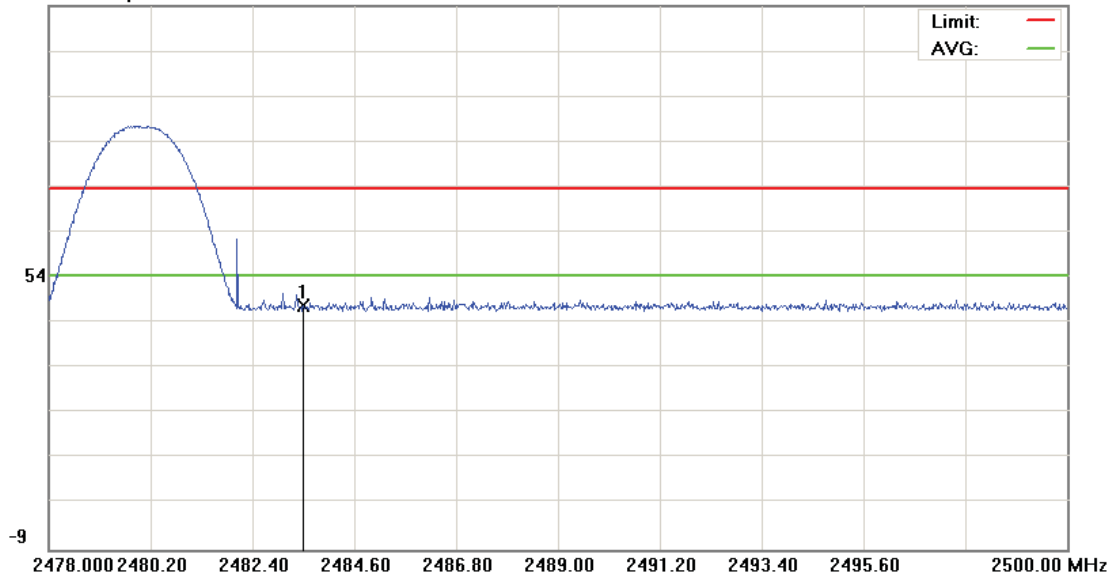
*:Maximum data x:Over limit !:over margin

File :PB76110(Band Edge)

Data :#7

Date: 2010/3/23

Time: 上午 09:40:19

116.0 dBuV/m


Site: :966 Chamber	Polarization: <i>Horizontal</i>	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000 KHz VBW: 1000 KHz
M/N: PB76110		
Mode: 1		
Note: 2480MHz		

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	46.75	0.25	47.00	74.00	-27.00	peak		

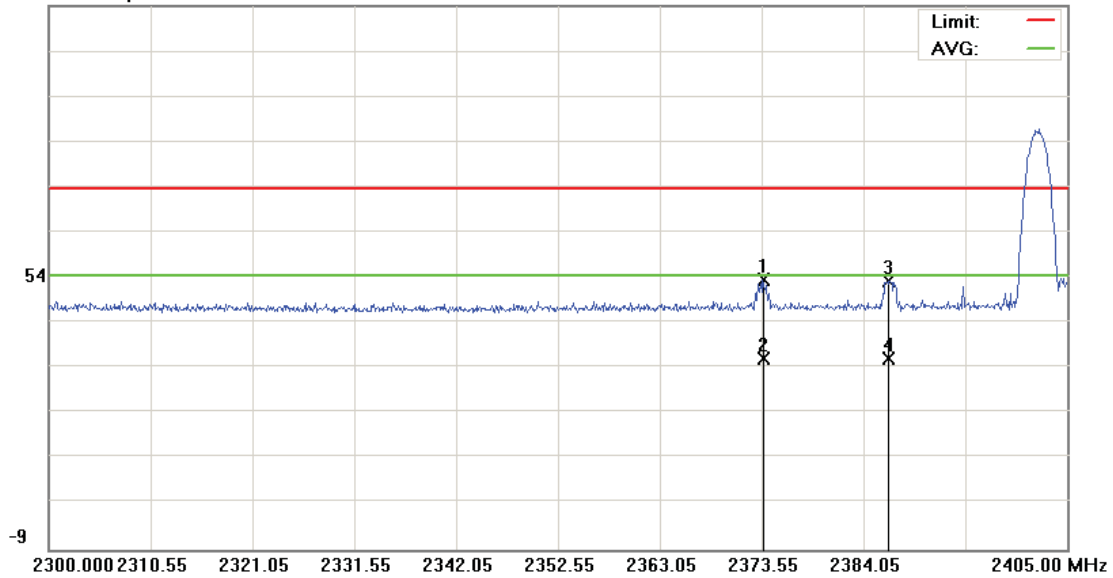
*:Maximum data x:Over limit !:over margin

File :PB76110(Band Edge)EDR

Data :#1

Date: 2010/3/23

Time: 上午 09:44:17

116.0 dBuV/m


Site: :966 Chamber	Polarization: <i>Vertical</i>	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000 KHz VBW: 1000 KHz
M/N: PB76110		
Mode: 3		
Note: 2402MHz		

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		2373.657	52.75	0.18	52.93	74.00	-21.07	peak		
2		2373.657	34.58	0.18	34.76	54.00	-19.24	AVG		
3		2386.520	52.59	0.18	52.77	74.00	-21.23	peak		
4	*	2386.520	34.66	0.18	34.84	54.00	-19.16	AVG		

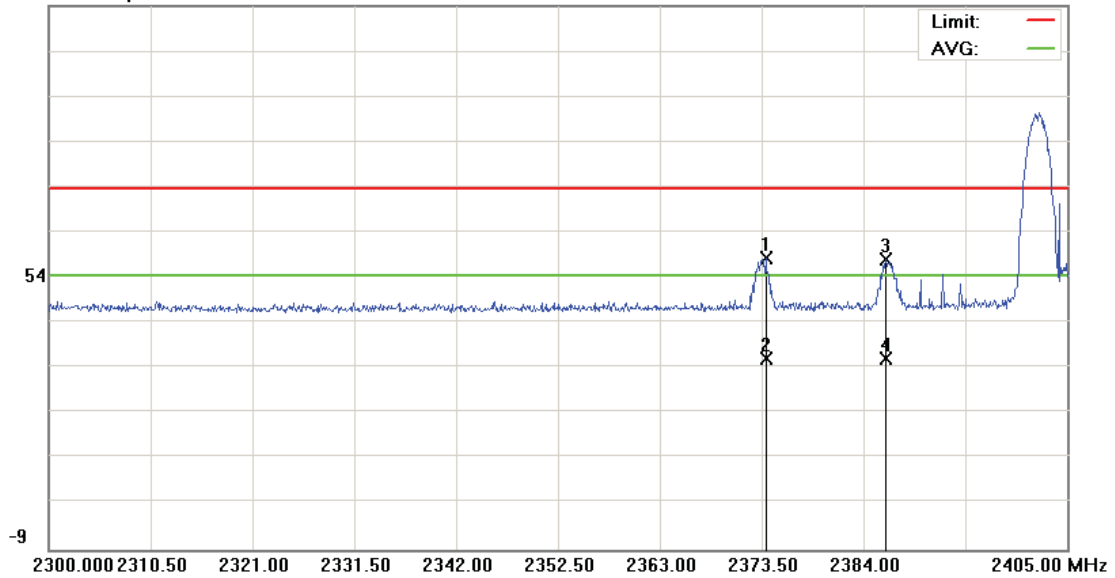
*:Maximum data x:Over limit !:over margin

File :PB76110(Band Edge)EDR

Data :#5

Date: 2010/3/23

Time: 上午 09:55:06

116.0 dBuV/m

 Site: :966 Chamber
 Limit: FCC part 15 (PK)
 EUT: Smartphone
 M/N: PB76110
 Mode: 3
 Note: 2402MHz

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

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

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	*	2373.920	57.71	0.18	57.89	74.00	-16.11	peak			
2		2373.920	34.64	0.18	34.82	54.00	-19.18	AVG			
3		2386.310	57.52	0.18	57.70	74.00	-16.30	peak			
4		2386.310	34.75	0.18	34.93	54.00	-19.07	AVG			

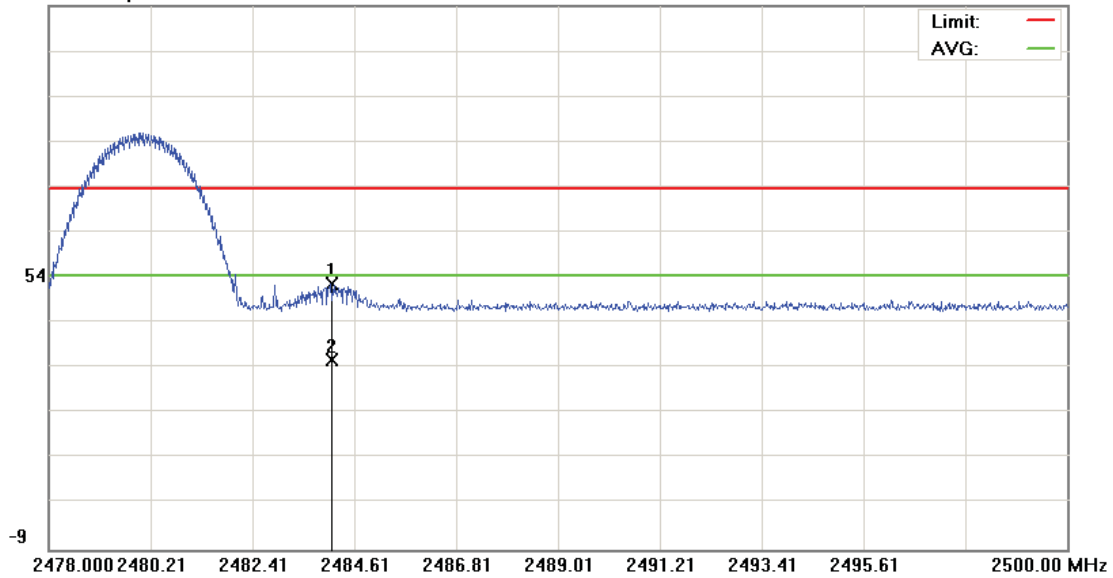
*:Maximum data x:Over limit !:over margin

File :PB76110(Band Edge)EDR

Data :#3

Date: 2010/3/23

Time: 上午 09:50:21

116.0 dBuV/m


Site: :966 Chamber

 Polarization: *Vertical*

Temperature: 22 ℃

Limit: FCC part 15 (PK)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Smartphone

Distance: 3m

RBW: 1000 KHz VBW: 1000 KHz

M/N: PB76110

Mode: 3

Note: 2480MHz

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		2484.105	51.76	0.25	52.01	74.00	-21.99	peak			
2	*	2484.105	34.48	0.25	34.73	54.00	-19.27	AVG			

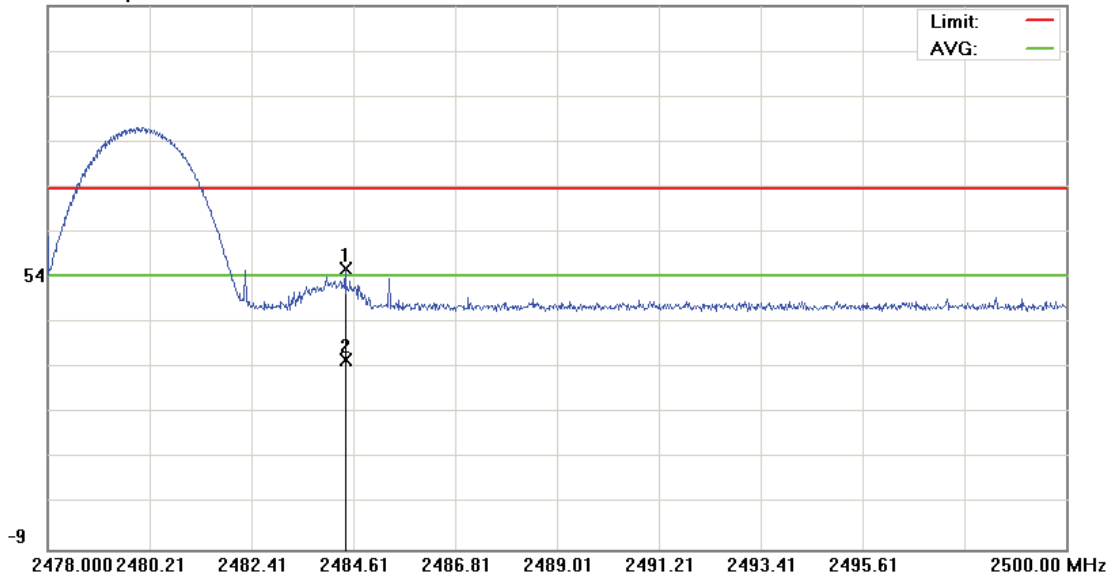
*:Maximum data x:Over limit !:over margin

File :PB76110(Band Edge)EDR

Data :#7

Date: 2010/3/23

Time: 上午 10:06:27

116.0 dBuV/m


Site: :966 Chamber	Polarization: <i>Horizontal</i>	Temperature: 22 °C
Limit: FCC part 15 (PK)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Smartphone	Distance: 3m	RBW: 1000 KHz VBW: 1000 KHz
M/N: PB76110		
Mode: 3		
Note: 2480MHz		

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	*	2484.435	55.35	0.25	55.60	74.00	-18.40	peak			
2		2484.435	34.50	0.25	34.75	54.00	-19.25	AVG			

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

13 Antenna Measurement

13.1. 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.

13.2. Antenna Connector Construction

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