FCC 47 CFR PART 15 SUBPART C

TEST REPORT

For

Applicant:	**Social Mobile Telecommunications**
Address:	**801 NE 167th St. Suite#314, North Miami Beach. FL 33162, USA**
Product Name:	**GSM MOBILE PHONE**
Model Name:	**FB203**
Brand Name:	**Social**
FCC ID:	**Z6RSMFB203A**
Report No.:	**DPH130705F03**
Date of Issue:	**July 20, 2013**

Issued by:	**Shenzhen Top-cert Service Co., Ltd.**
Address:	**Room 506, Hongyu Commercial Building, Gushu 2nd Road, Baoan District, Shenzhen, China**
Tel:	**0755-61196328**
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Revision History		
Issue	Date	Reason for Revision
1.0	July 20, 2013	First edition

1. VERIFICATION OF CONFORMITY

Equipment Under Test:	Mobile Phone
Brand Name:	Social
Model Number:	FB203
Series Model Name:	N/A
Difference description:	N/A
FCC ID:	Z6RSMFB203A
Applicant:	Social Mobile Telecommunications
	801 NE 167th St. Suite#314, North Miami Beach. FL 33162, USA
Manufacturer:	Skynet Technology Limitd
	Room 2211-2215, Zhongshen Garden, Caitian Road, Futian District, Shenzhen, China
Technical Standards:	47 CFR Part 15 Subpart C
File Number:	DPH130705F03
Date of test:	June 20, 2013 ~ July 20, 2013
Deviation:	July 20, 2013
Condition of Test Sample:	Normal
Test Result:	PASS

The above equipment was tested by Shenzhen Top-cert Service Co., Ltd. for compliance with the requirement set forth in FCC rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature):

Rex Luo

Rex Luo
Test Engineer

Top-cert Service Co., Ltd. topcert

Approved by (+ signature):

Joe Jia

Joe Jia
Manager

2. GENERAL INFORMATION

2.1 Product Information

Product	GSM Mobile Phone
Trade Name	Social
Model Number	FB203
Power Supply	DC 5V by AC/DC adapter 100-240V~50/60Hz DC 3.7V by battery
Frequency Range	2402MHz -2480MHz
Modulation Type	FHSS
Antenna Type:	Internal Fixed
Channel Spacing:	1MHz
Channel Number	79(CH Low: 2402MHz, CH Mid: 2441MHz, CH High: 2480MHz)
Temperature Range	-20°C ~ 50°C

NOTE:

1. Please refer to Appendix I for the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.

2.2 OBJECTIVE

The objective of the report is to perform tests according to 47 CFR Part 15 Subpart C for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15(10-1-05 Edition)	Radio Frequency Devices

2.3 TEST STANDARDS AND RESULTS

Test items and the results are as bellow:

No.	Section	Description	Result	Date of Test
1	15.247(a)	Number of Hopping Frequency	PASS	2013-07-08
2	15.247(b)	Peak Output Power	PASS	2013-07-08
3	15.247(a)	20dB Bandwidth	PASS	2013-07-08
4	15.247(a)	Frequency Separation	PASS	2013-07-08
5	15.247(a)	Dwell Time	PASS	2013-07-08
6	15.247(d)	Conducted Spurious Emission	PASS	2013-07-08
7	15.247(d)	Radiated Spurious Emission	PASS	2013-07-20
8	15.247(d	Band Edge	PASS	2013-07-20
9	15.207	Power Line Conducted Emission Test	PASS	2013-07-08

Note: 1. The test result judgment is decided by the limit of measurement standard
2. The information of measurement uncertainty is available upon the customer's request.

2.4 ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35ºC
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

3. TEST FACILITY

3.1 TEST FACILITY

Test Site:	Attestation of Global Compliance (Shenzhen) Co., Ltd.
Location:	2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China
Description:	There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009 and CISPR 16 requirements. The FCC Registration Number is **259865** The **IC** Registration Number is **141296** The **CNAS** Registration Number is **CNAS L5488.**
Site Filing:	The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.
Instrument Tolerance:	All measuring equipment is in accord with ANSI C63.4:2009 and CISPR 16 requirements that meet industry regulatory agency and accreditation agency requirement.
Ground Plane:	Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna.

3.2 GENERAL TEST PROCEDURES

EUT Function and Test Mode

The EUT has been tested under normal operating (TX) and standby (RX) condition.
Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report.

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4:2009,Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4:2009.

3.3 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41			

[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2] Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

4. SETUP OF EQUIPMENT UNDER TEST

4.1 SUPPORT EQUIPMENT

Device Type	Brand	Model	Series No.	Data Cable	Power Cord
N/A	N/A	N/A	N/A	N/A	N/A

Remark:

All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.2 TEST EQUIPMENT LIST

Instrumentation: The following list contains equipment used at Most for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

No.	Equipment	Manufacturer	Model No.	S/N	Calibration due date
1	Test Receiver	Rohde & Schwarz	ESCI	100492	2014/03/09
2	L.I.S.N.	Rohde & Schwarz	ENV216	100093	2014/03/09
3	Coaxial Switch	Anritsu Corp	MP59B	6200283933	N/A
4	Terminator	Hubersuhner	50Ω	No.1	2014/03/09
5	RF Cable	SchwarzBeck	N/A	No.1	N/A
6	Test Receiver	Rohde & Schwarz	ESPI	101202	2014/03/09
7	Test Antenna – Horn	Schwarzbeck	BBHA 9120C	--	2014/03/02
8	Test Antenna – Bi-Log	Schwarzbeck	VULB 9163	--	2014/03/02
9	Power Splitter	Weinschel	1506A	NW521	N/A
10	Spectrum Analyzer	Agilent	4408B	MY41440460	2014/03/09
11	Cable	Resenberger	N/A	NO.1	N/A
12	Cable	SchwarzBeck	N/A	NO.2	N/A
13	Cable	SchwarzBeck	N/A	NO.3	N/A
14	Signal Generator	IFR	2032	203002/100	2014/03/09
15	Universal Radio Communication Tester	ROHDE&SCHWARZ	CMU200	0304789	2014/03/09
16	Telecommunication Antenna	European Antennas	PSA 75301R/170	0304213	2014/03/02
17	DC Power Supply	Good Will	GPS-3030DD	EF920938	2014/03/09
18	Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2014/03/09

NOTE: *Equipments listed above have been calibrated and are in the period of validation.*

5. 47 CFR Part 15C 15.247 Requirements

5.1 Number of Hopping Frequency

5.1.1 Definition

According to FCC section 15.247(a),(1)(iii), A frequency hopping system in the 2400–2483.5 MHz band shall use at least 15 channels.

5.1.2 Test Description

The EUT is powered by the Battery, is coupled to the Spectrum Analyzer (SA) through the Attenuator/DC Block. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power. The RF load attached to the EUT antenna terminal is 50Ohm.

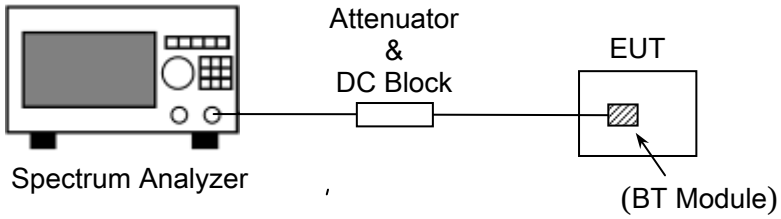


Figure 1: RF Test Setup

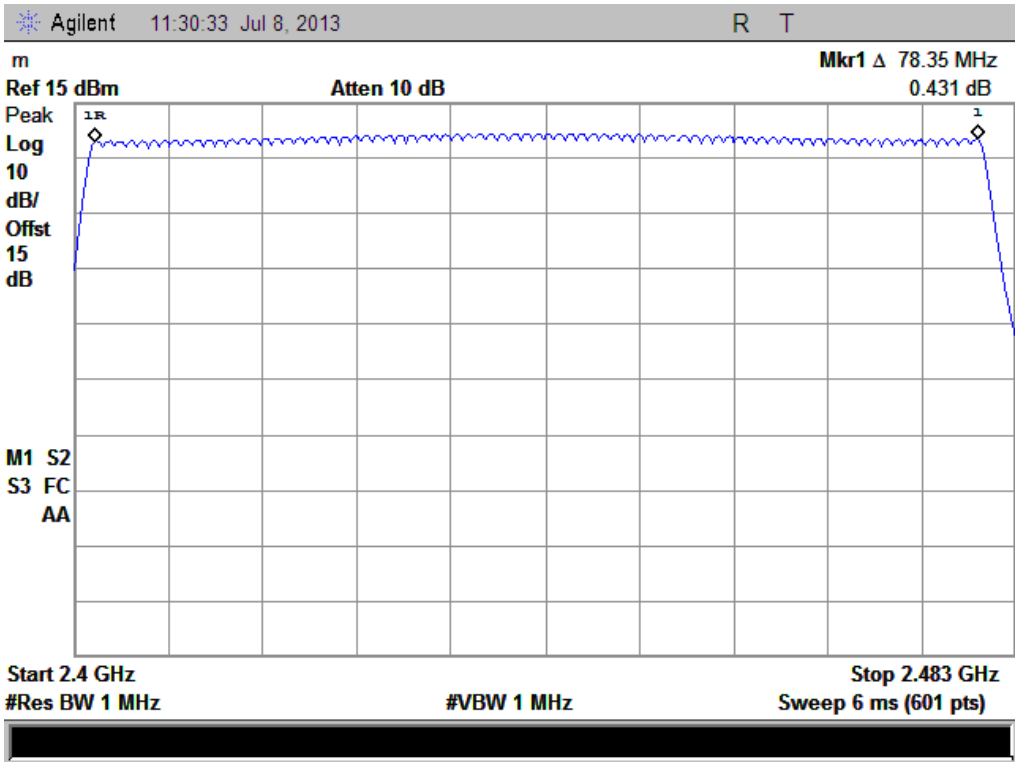
5.1.3 Test Result

The EUT operating at frequency hopping mode and the employed channel number is following;

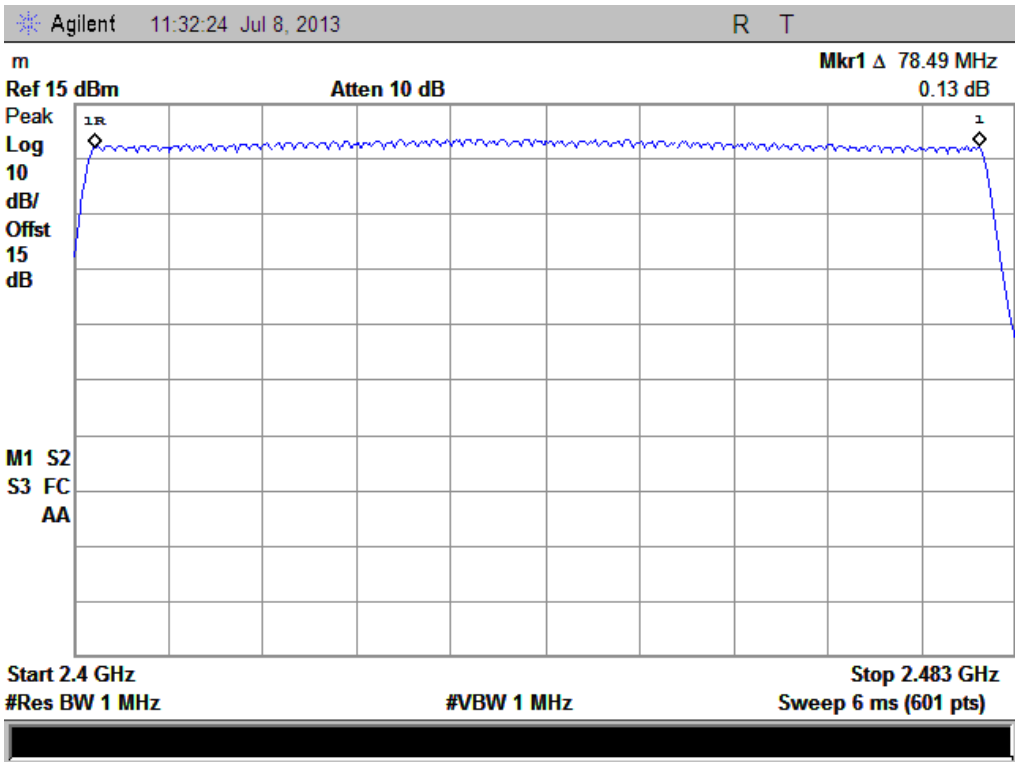
Measurement Table

Test Mode	Frequency Band (MHz)	Channel Numbers	Limits	Result
GFSK Mode (1Mbps)	2402-2483.5	79	≥15	PASS
π/4DQPOSK (2Mbps)	2402-2483.5	79	≥15	PASS
8-DPSK (3Mbps)	2402-2483.5	79	≥15	PASS

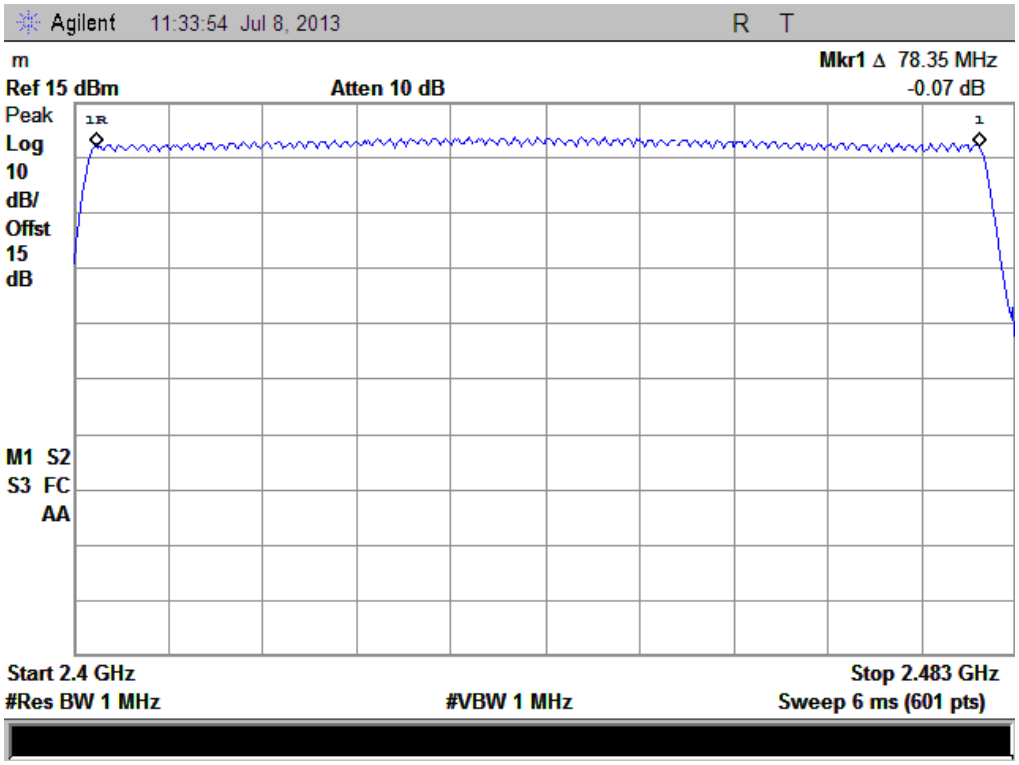
Test Plots



(GFSK Mode)



(π /4DQPOSK)


Agilent 11:33:54 Jul 8, 2013
R T
m
Mkr1 Δ 78.35 MHz
Ref 15 dBm
Atten 10 dB
-0.07 dB
Peak
Log
10
dB/
Offst
15
dB
1R
1
M1 S2
S3 FC
AA
Start 2.4 GHz
Stop 2.483 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 6 ms (601 pts)

(8-DPSK)

5.2 Peak Output Power

5.2.1 Definition

According to FCC section 15.247(b),(1), For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.

5.2.2 Test Description

The EUT is powered by the Battery, is coupled to the Spectrum Analyzer (SA) through the Attenuator/DC Block. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power. The RF load attached to the EUT antenna terminal is 50Ohm.

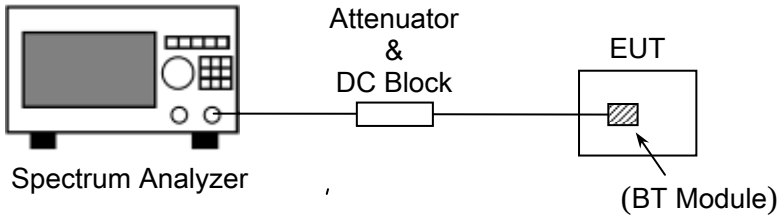


Figure 1: RF Test Setup

5.2.3 Test Result

The lowest, middle and highest channels of each rate mode are record as following;

Measurement table

GFSK mode

Channel	Frequency (MHz)	Rate (Mbps)	Measured Output Peak Power		Limit		Verdict
			dBm	W	dBm	W	
0	2422	1Mbps	8.145	0.00652	20.96	0.125	PASS
39	2441	1Mbps	9.412	0.00873			PASS
78	2480	1Mbps	8.468	0.00703			PASS

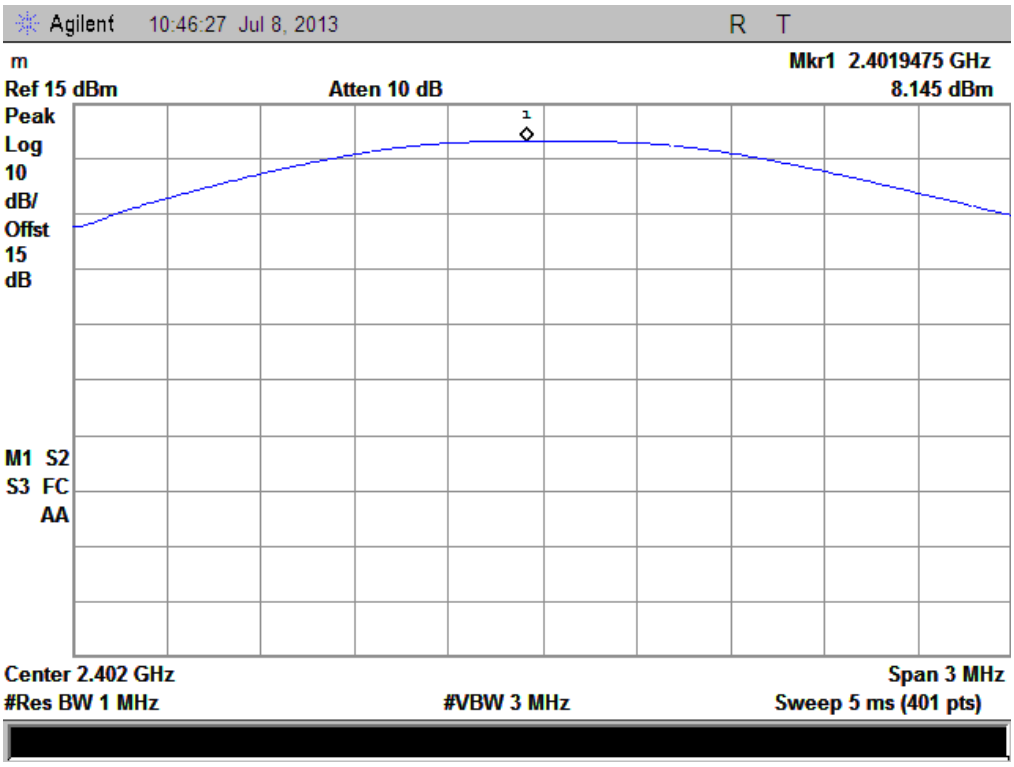
GFSK mode

Channel	Frequency (MHz)	Rate (Mbps)	Measured Output Peak Power		Limit		Verdict
			dBm	W	dBm	W	
0	2422	2Mbps	7.544	0.00568	20.96	0.125	PASS
39	2441	2Mbps	8.586	0.00722			PASS
78	2480	2Mbps	7.464	0.00558			PASS

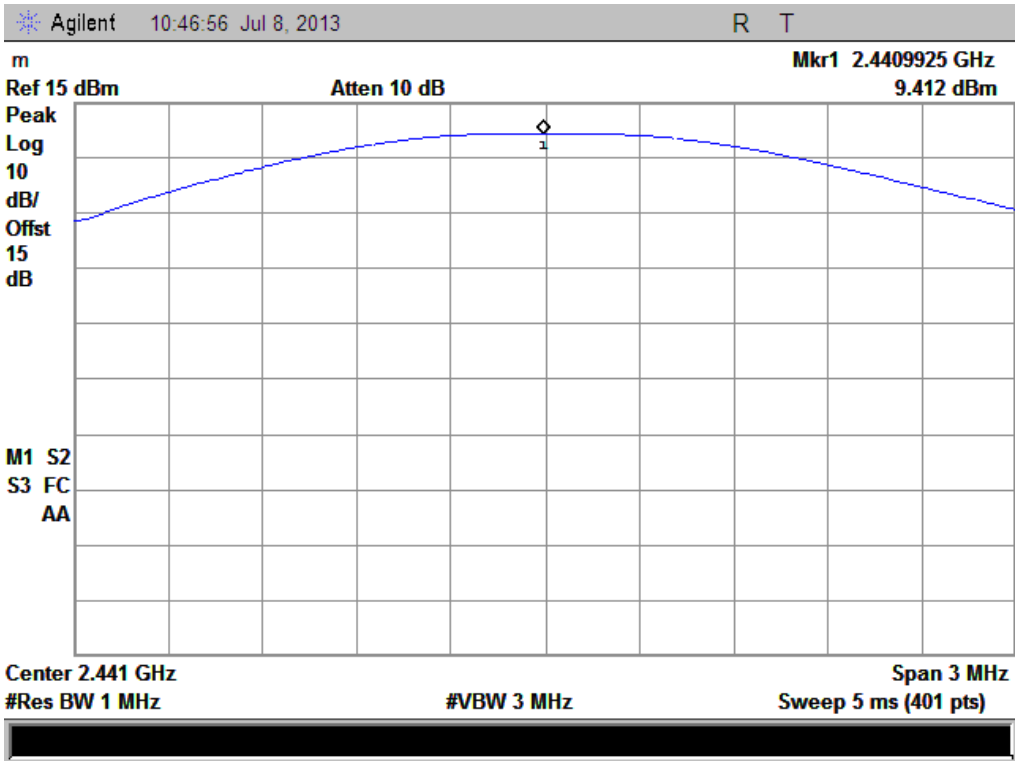
GFSK mode

Channel	Frequency (MHz)	Rate (Mbps)	Measured Output Peak Power		Limit		Verdict
			dBm	W	dBm	W	
0	2422	3Mbps	7.665	0.00584	20.96	0.125	PASS
39	2441	3Mbps	8.903	0.00777			PASS
78	2480	3Mbps	7.853	0.00610			PASS

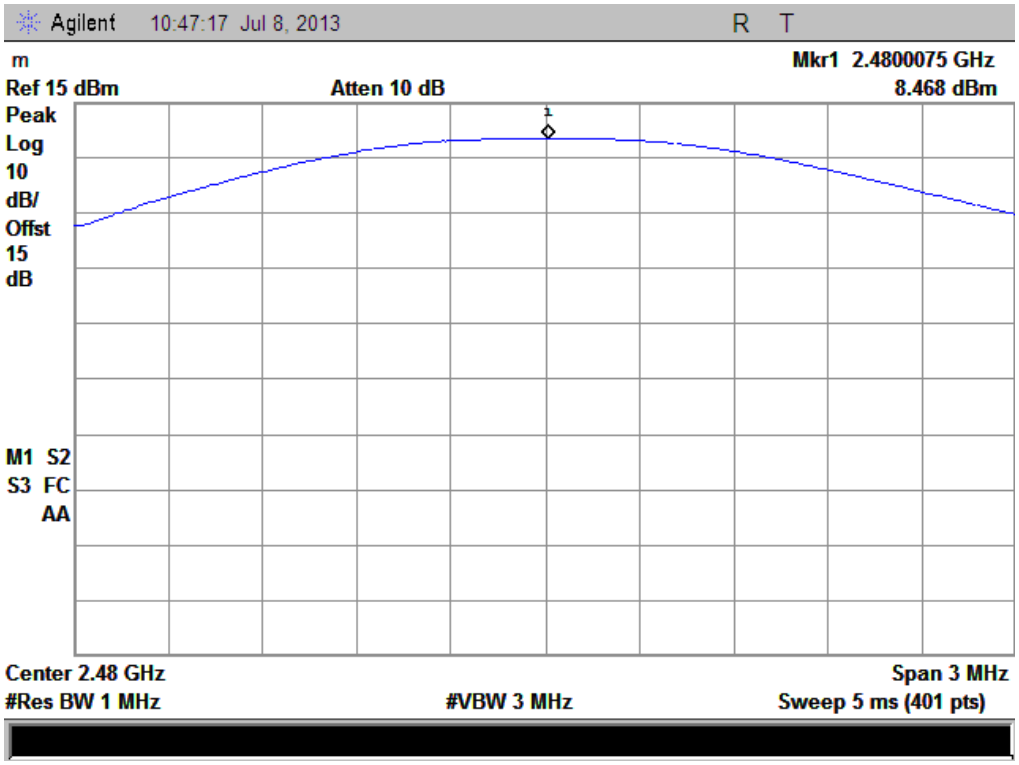
Test Plot



(GFSK Mode Low Channel)



(GFSK Mode Middle Channel)



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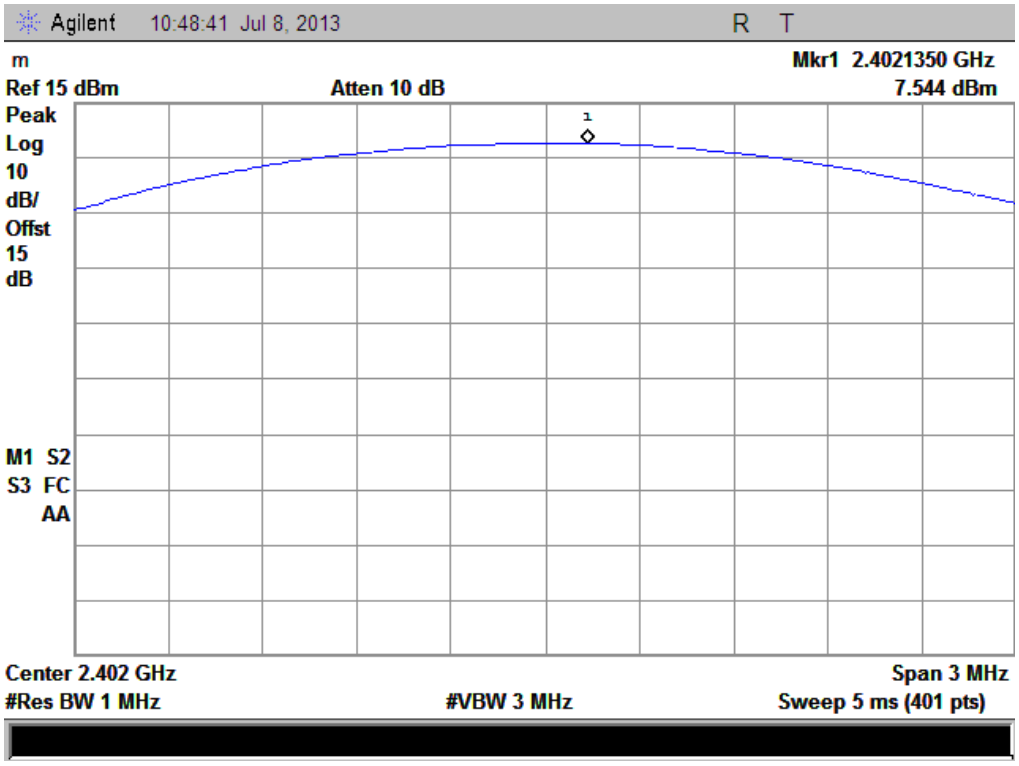
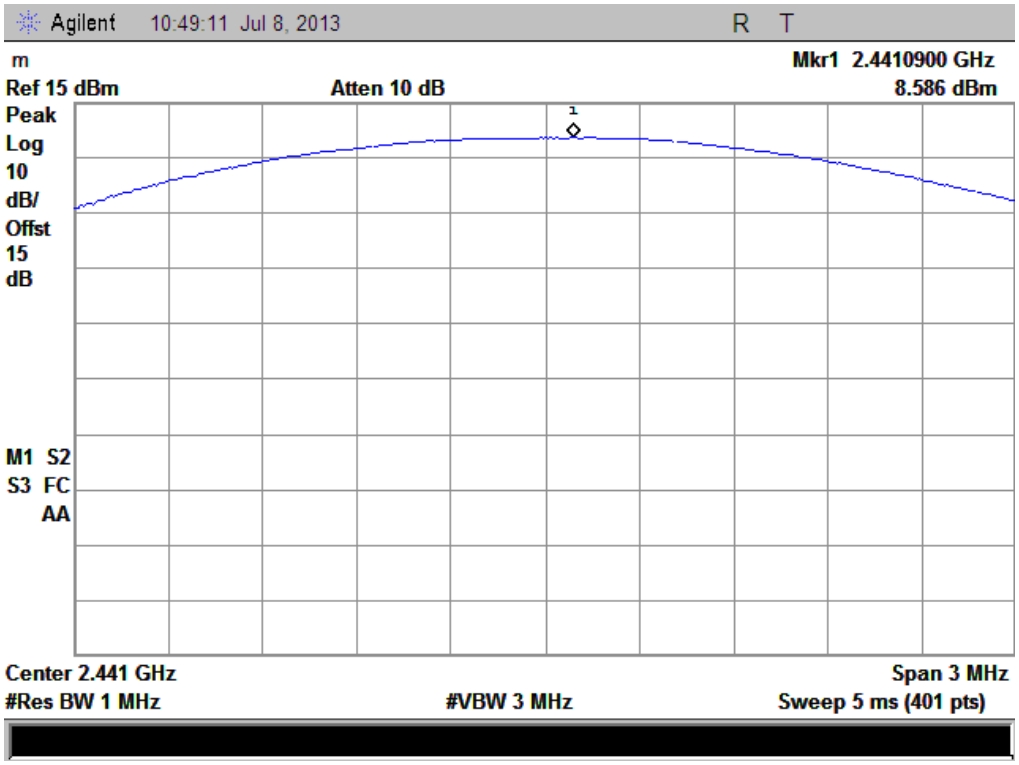


(π /4DQPOSK Mode Low Channel)



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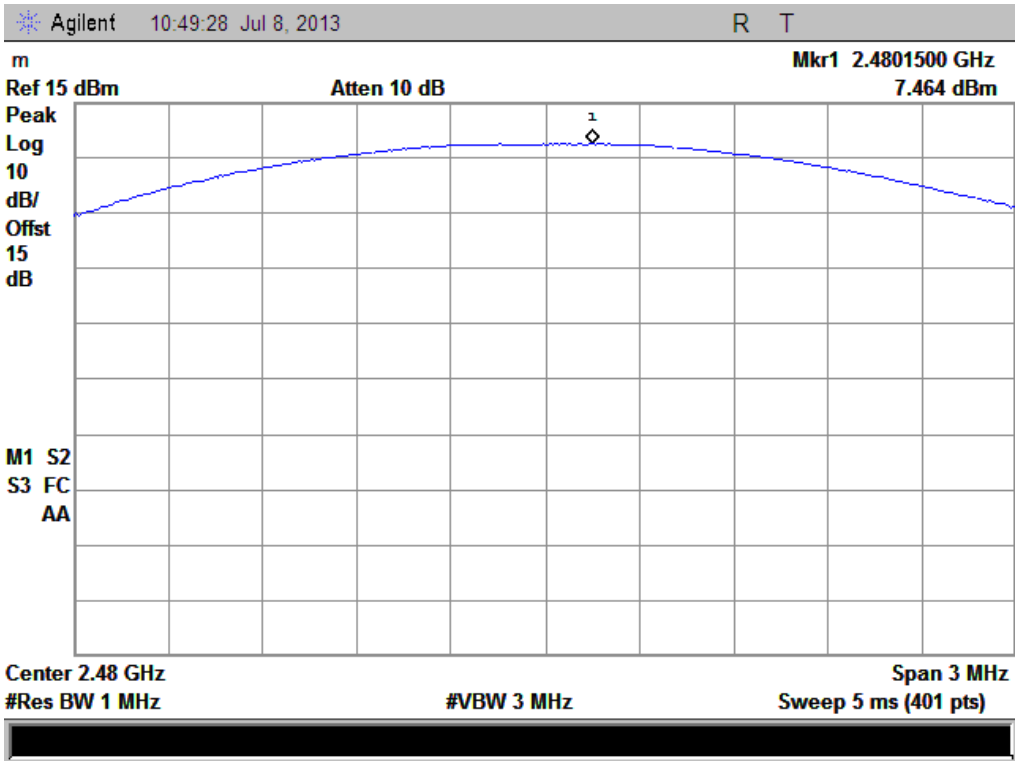
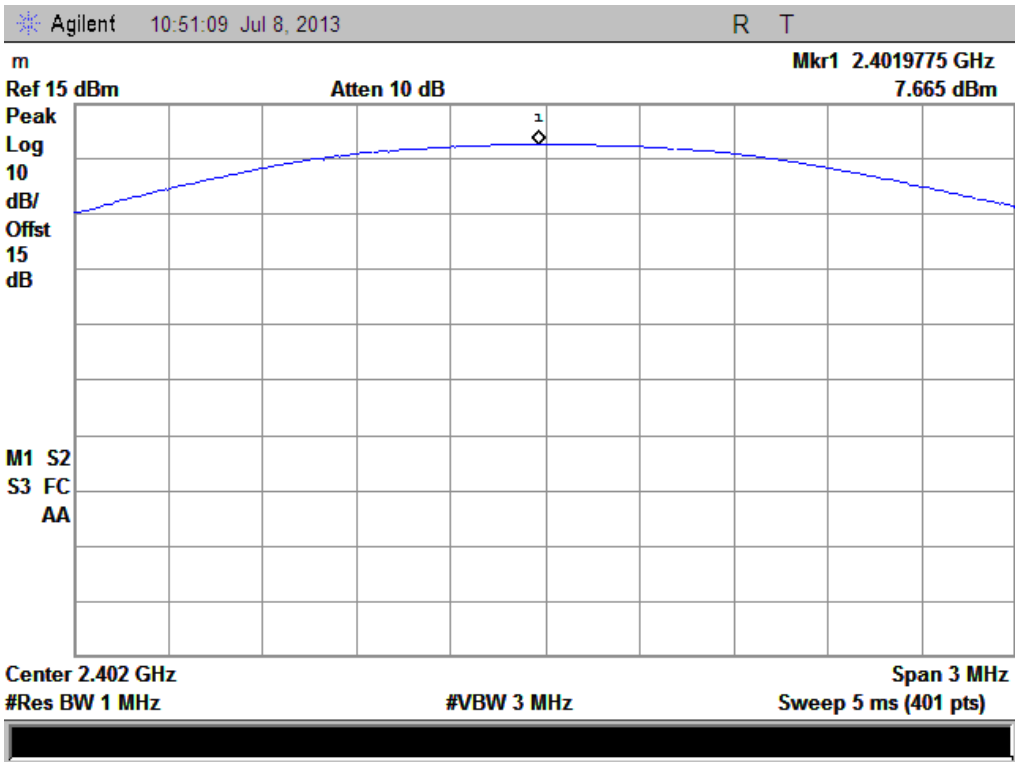
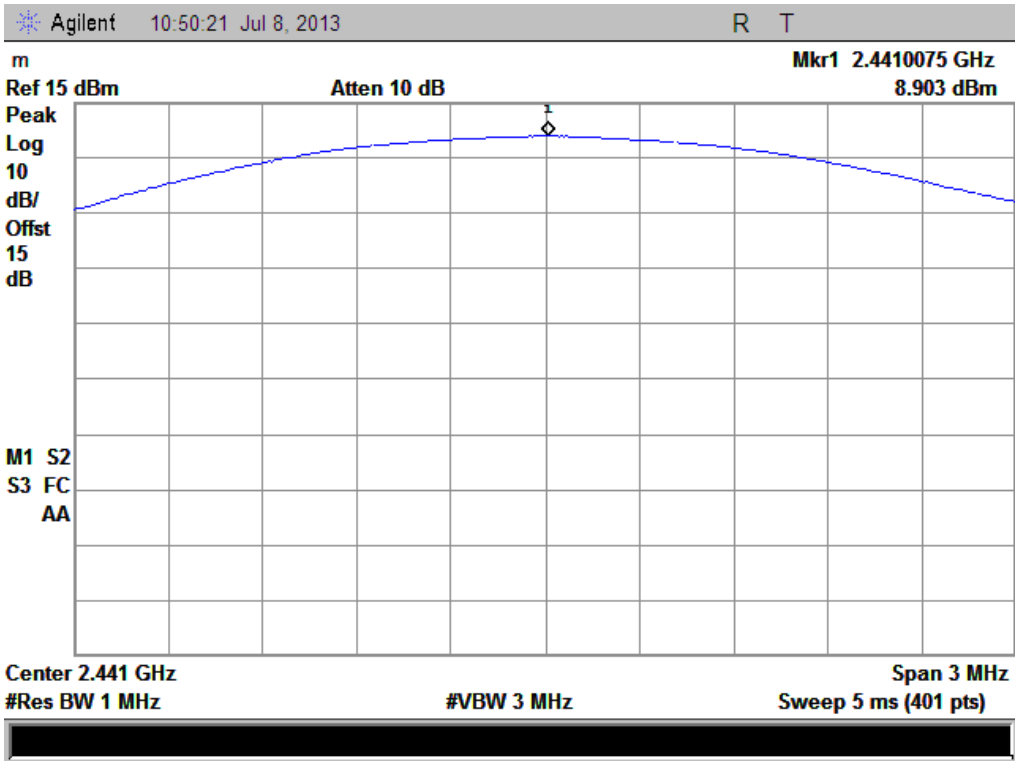


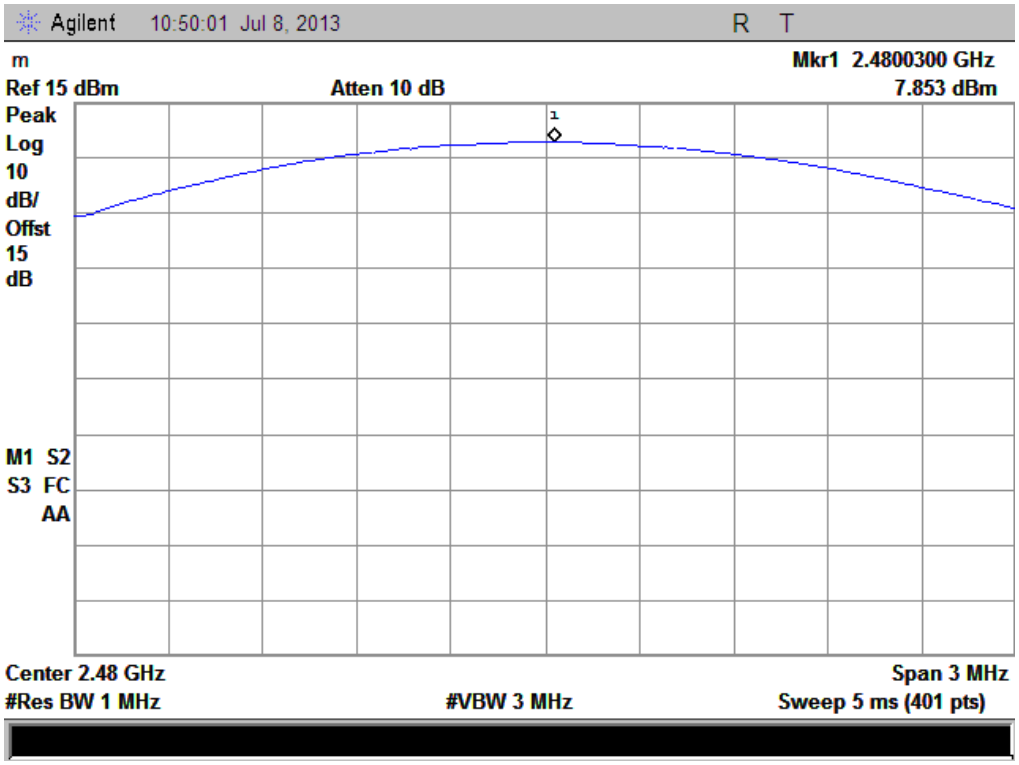
(π/4DQPOSK Mode High Channel)



(8-DPSK Mode Low Channel)



(8-DPSK Mode Middle Channel)



(8-DPSK Mode High Channel)

5.3 20dB Bandwidth

5.3.1 Definition

According to FCC section 15.247(a),(1), The 20dB bandwidth is know as the 99% emission bandwidth, or 20dB bandwidth (10*log1%=20dB) taking the total RF output power.

5.3.2 Test Description

The EUT is powered by the Battery, is coupled to the Spectrum Analyzer (SA) through the Attenuator/DC Block. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power. The RF load attached to the EUT antenna terminal is 50Ohm.

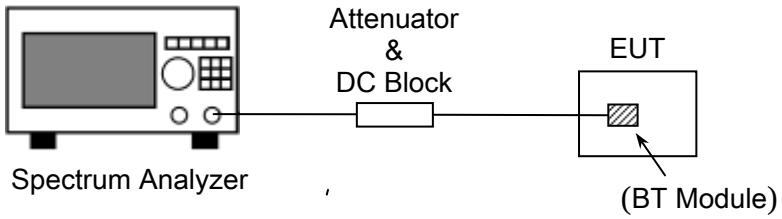


Figure 1: RF Test Setup

5.3.3 Test Result

The EUT operating at frequency hopping-off mode and the 20dB measurement result is following;

GFSK Mode

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	Result
0	2402	1.049	PASS
39	2441	1.065	PASS
78	2480	1.059	PASS

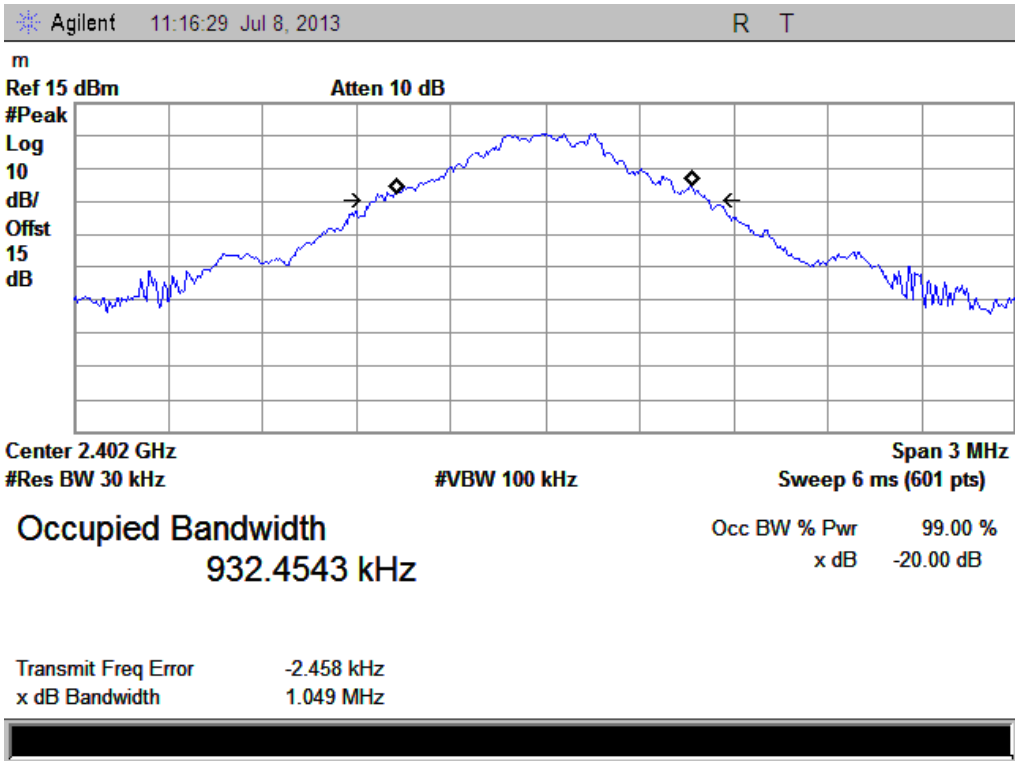
π/4DQPOSK Mode

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	Result
0	2402	1.323	PASS
39	2441	1.316	PASS
78	2480	1.296	PASS

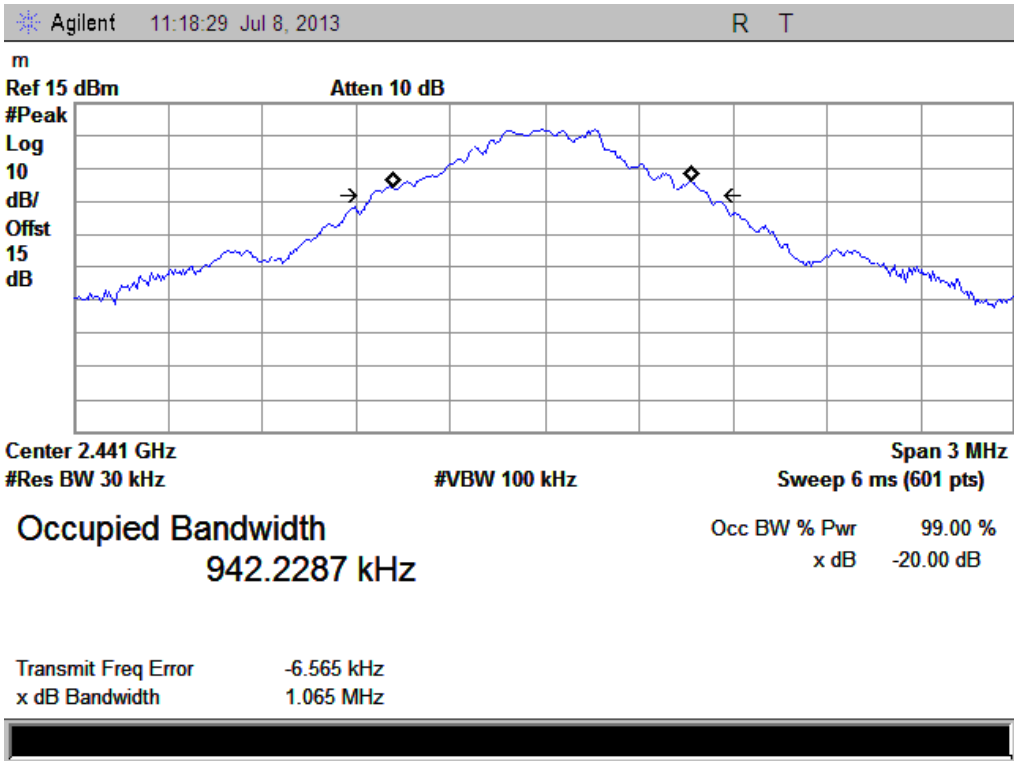
8-DPSK Mode

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	Result
0	2402	1.310	PASS
39	2441	1.297	PASS
78	2480	1.308	PASS

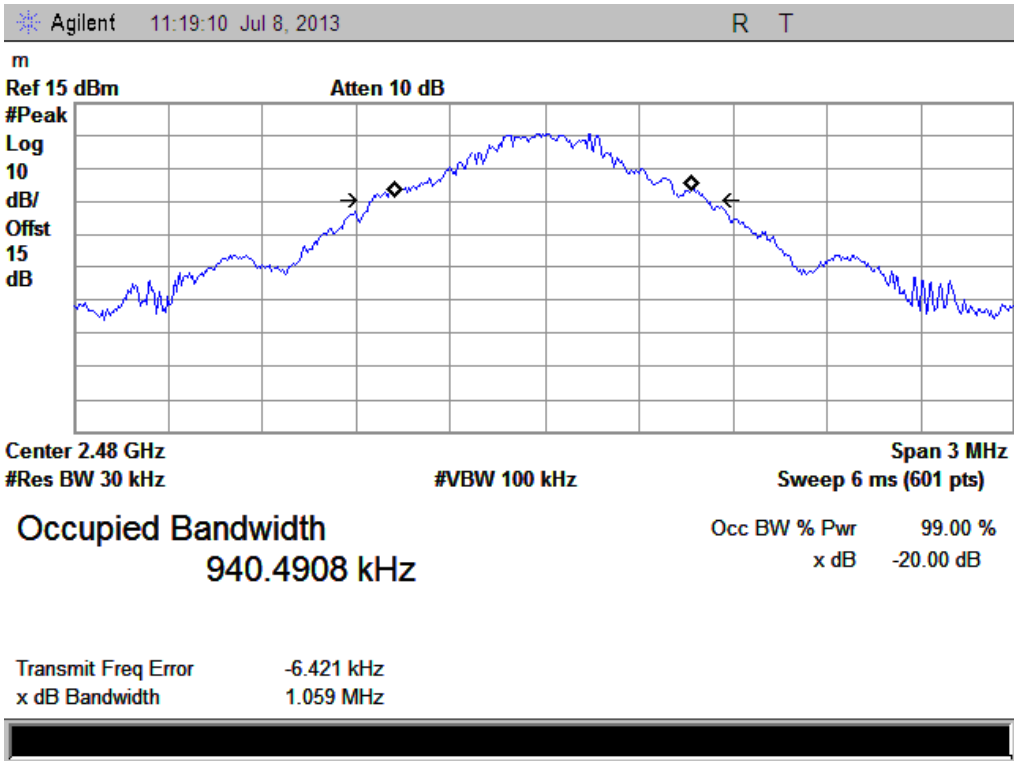
Test Plot



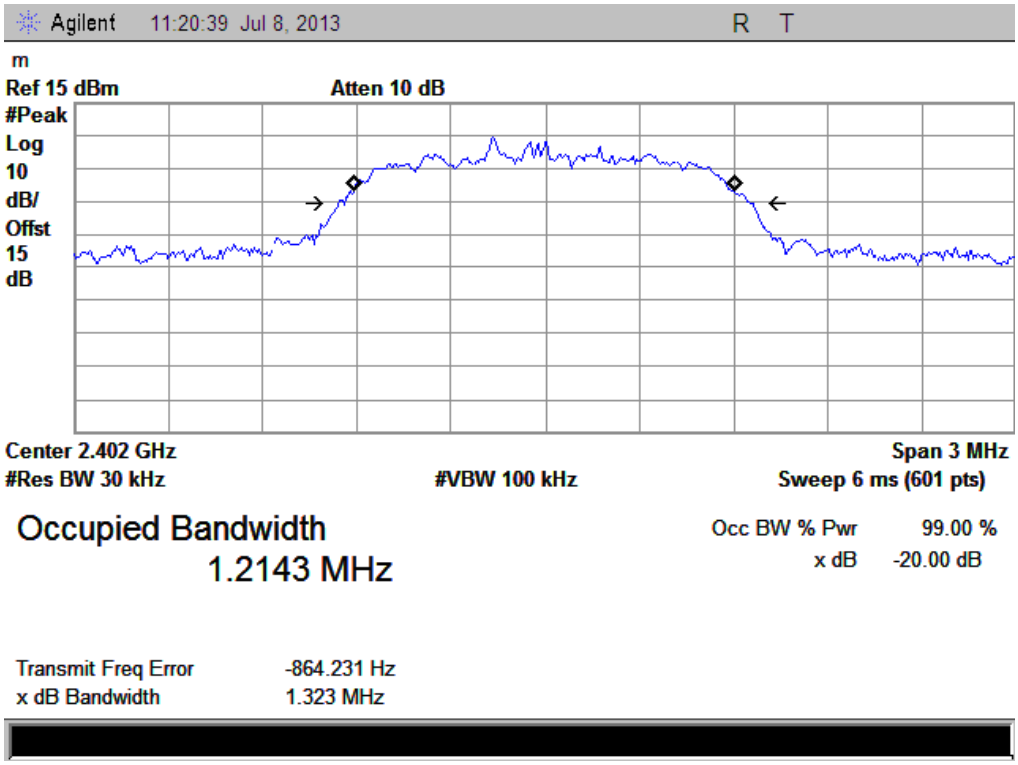
(GFSK Mode Low Channel)



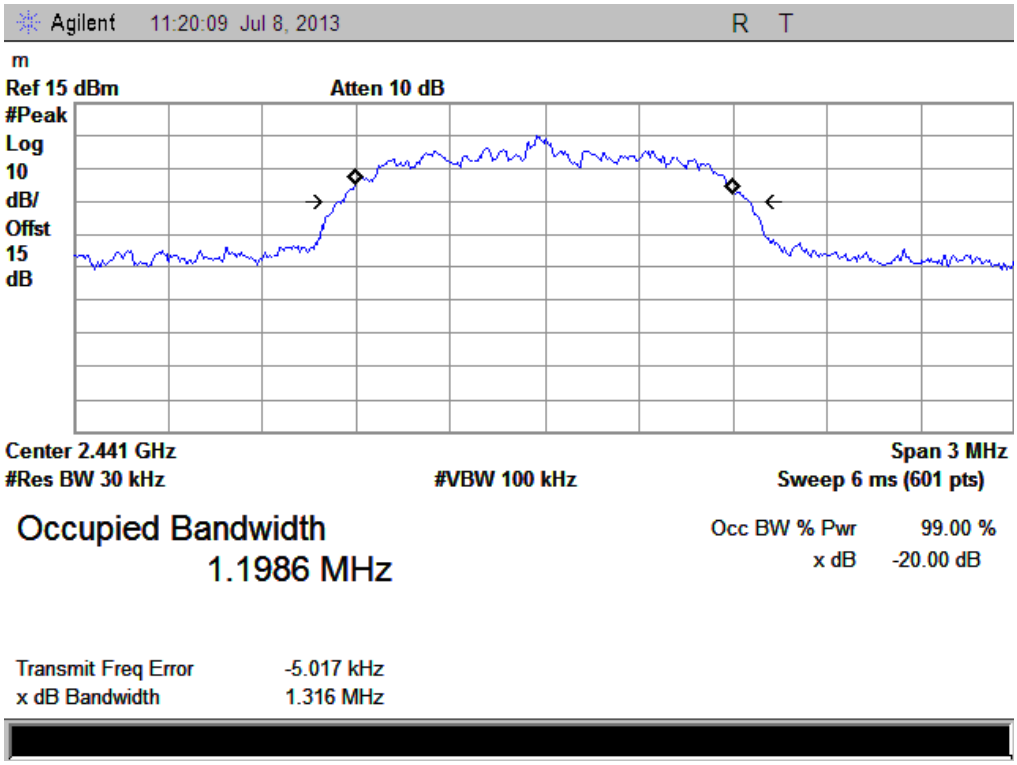
(GFSK Mode Middle Channel)



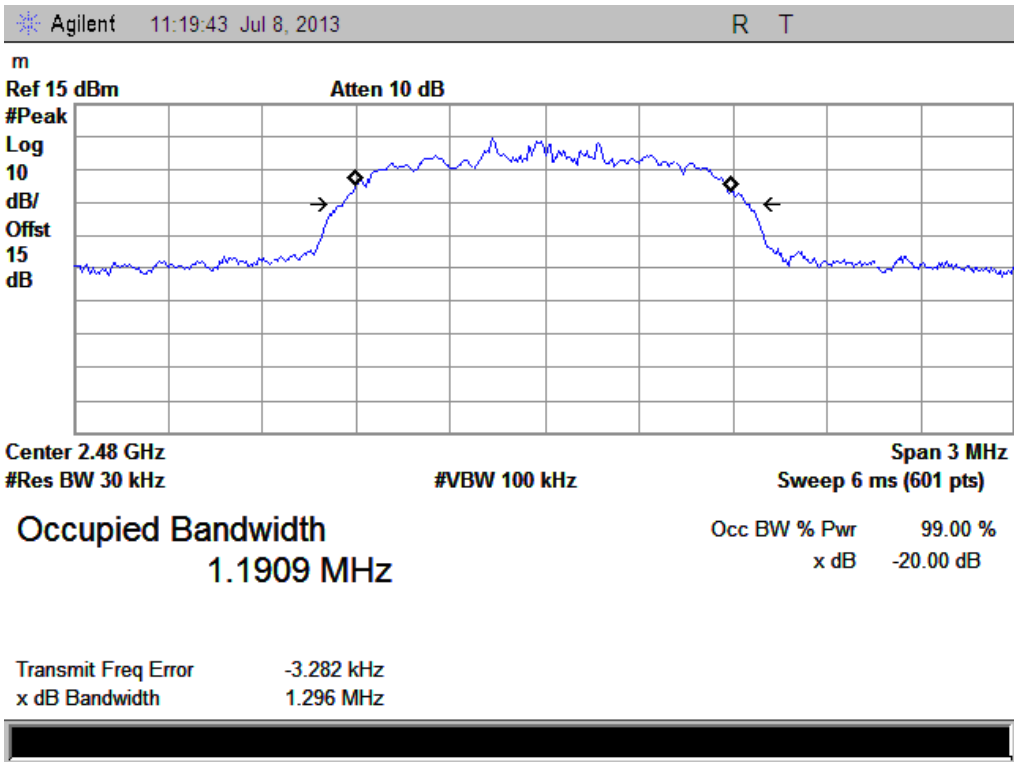
(GFSK Mode High Channel)



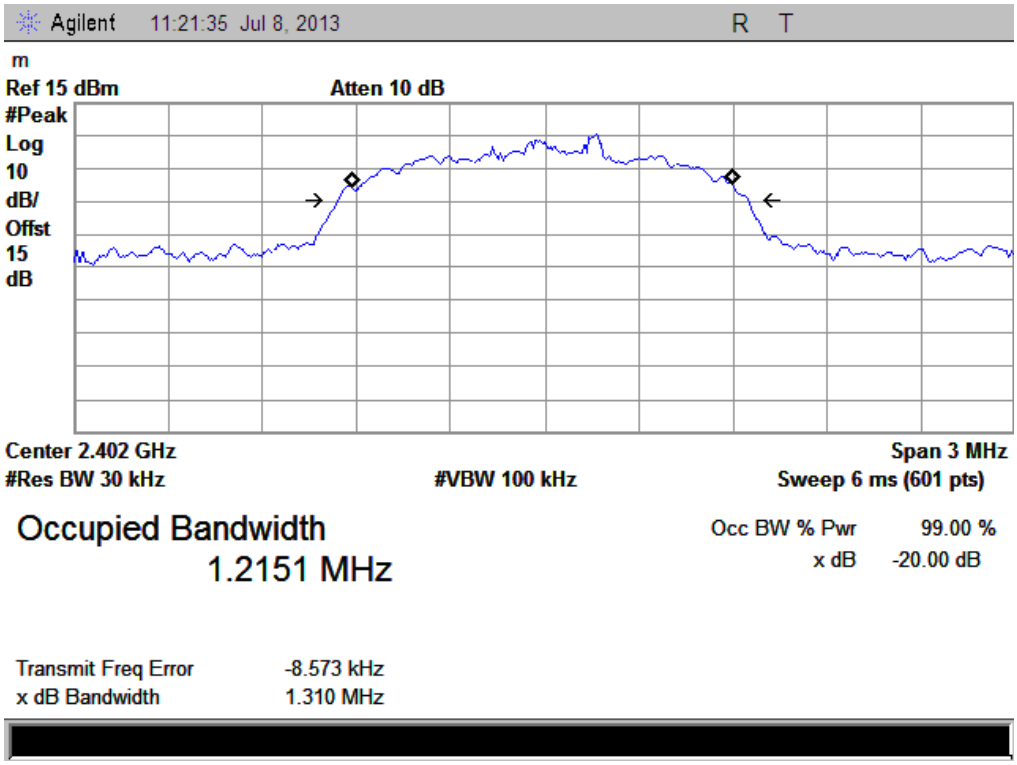
(π /4DQPOSK Mode Low Channel)



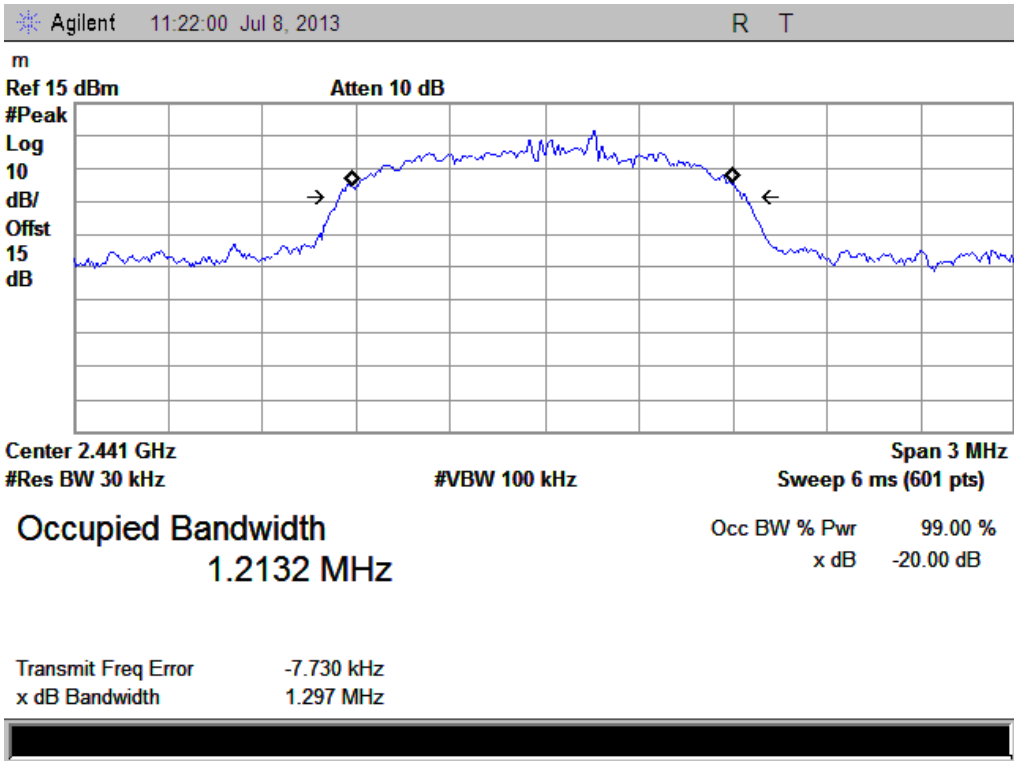
(π /4DQPOSK Mode Middle Channel)



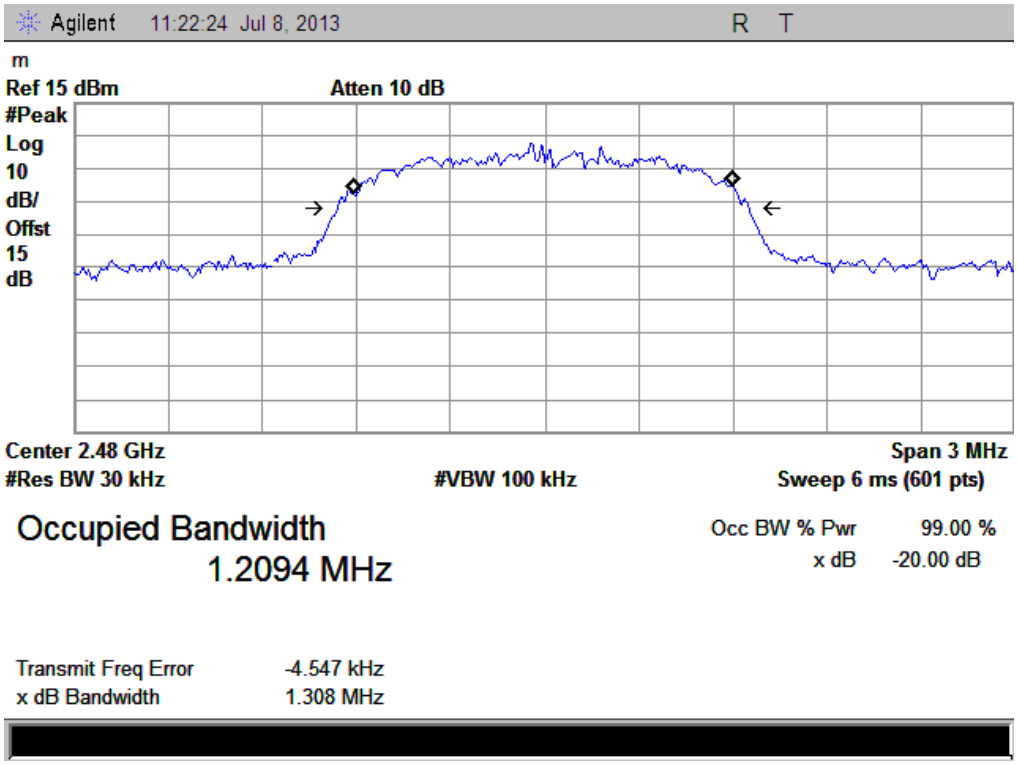
(π /4DQPOSK Mode High Channel)



(8-DPSK Mode Low Channel)



(8-DPSK Mode Middle Channel)



(8-DPSK Mode High Channel)

5.4 Carried Frequency Separation

5.4.1 Definition

According to FCC section 15.247(a),(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

5.4.2 Test Description

The EUT is powered by the Battery, is coupled to the Spectrum Analyzer (SA) through the Attenuator/DC Block. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power. The RF load attached to the EUT antenna terminal is 50Ohm.

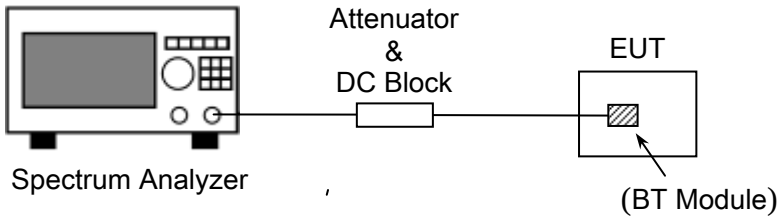


Figure 1: RF Test Setup

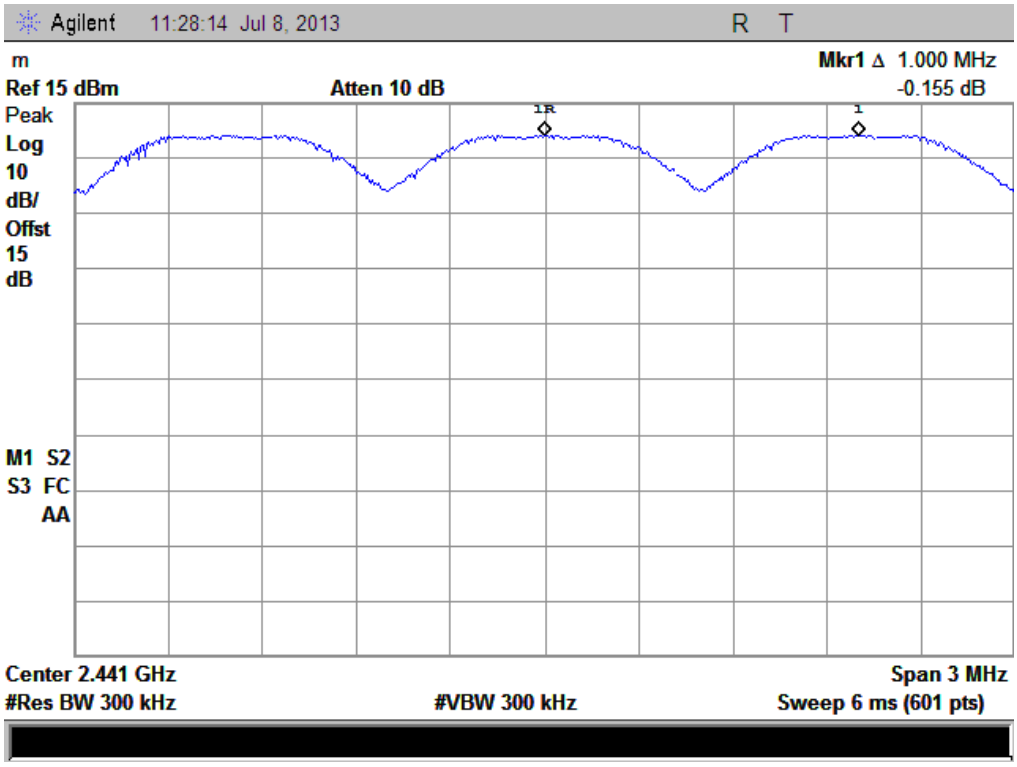
5.4.3 Test Result

The EUT operating at frequency hopping-on mode and the measurement result is following;

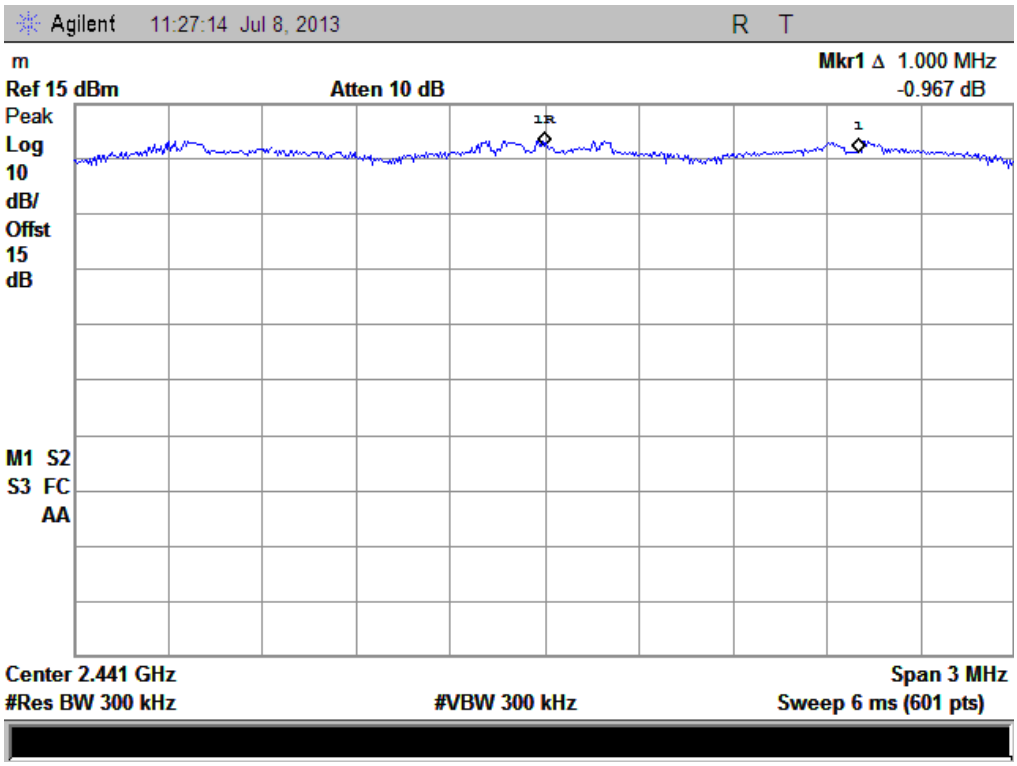
Measurement Table

Test Mode	Frequency Separation (MHz)	Limits	Limits (≥ two-thirds 20 dB bandwidth)	Result
GFSK Mode (1Mbps)	1.000	≥25KHz	0.710MHz	PASS
π/4DQPOSK (2Mbps)	1.000	≥25KHz	0.877MHz	PASS
8-DPSK (3Mbps)	1.005	≥25KHz	0.865MHz	PASS

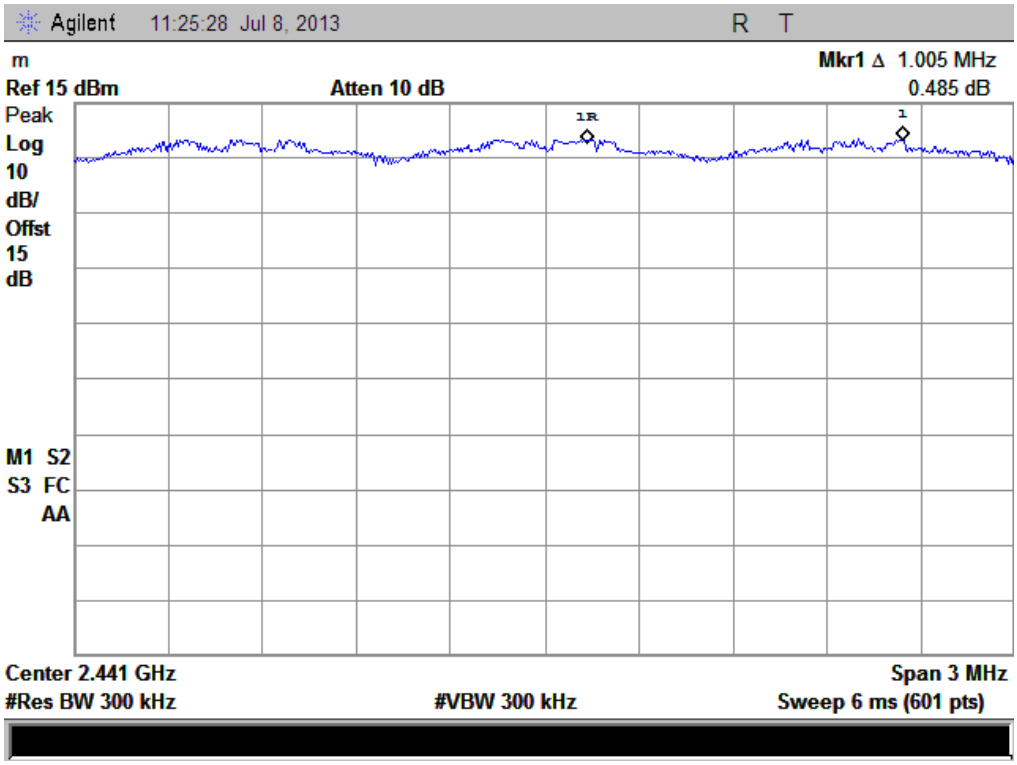
Test Plots



(GFSK Mode)



(π /4DQPOSK)


Agilent 11:25:28 Jul 8, 2013
R T
m
Mkr1 Δ 1.005 MHz
Ref 15 dBm
Atten 10 dB
0.485 dB
Peak
Log
10
dB/
Offst
15
dB
1R
1
M1 S2
S3 FC
AA
Center 2.441 GHz
Span 3 MHz
#Res BW 300 kHz
#VBW 300 kHz
Sweep 6 ms (601 pts)

(8-DPSK)

5.5 Time Of Occupancy (Dwell Time)

5.5.1 Definition

According to FCC section 15.247(a),(1)(iii), Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. 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. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

5.5.2 Test Description

The EUT is powered by the Battery, is coupled to the Spectrum Analyzer (SA) through the Attenuator/DC Block. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power. The RF load attached to the EUT antenna terminal is 50Ohm.

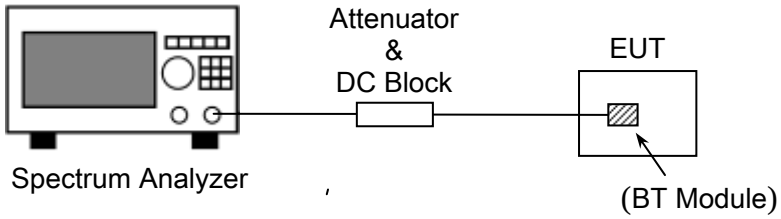


Figure 1: RF Test Setup

5.5.3 Test Result

The Dwell Time and Period calculated formulas is;

{Total Of Dwell Time} = {Pulse Time} * (1600 / 6) / {Number Of Hopping Frequency} * {Period}

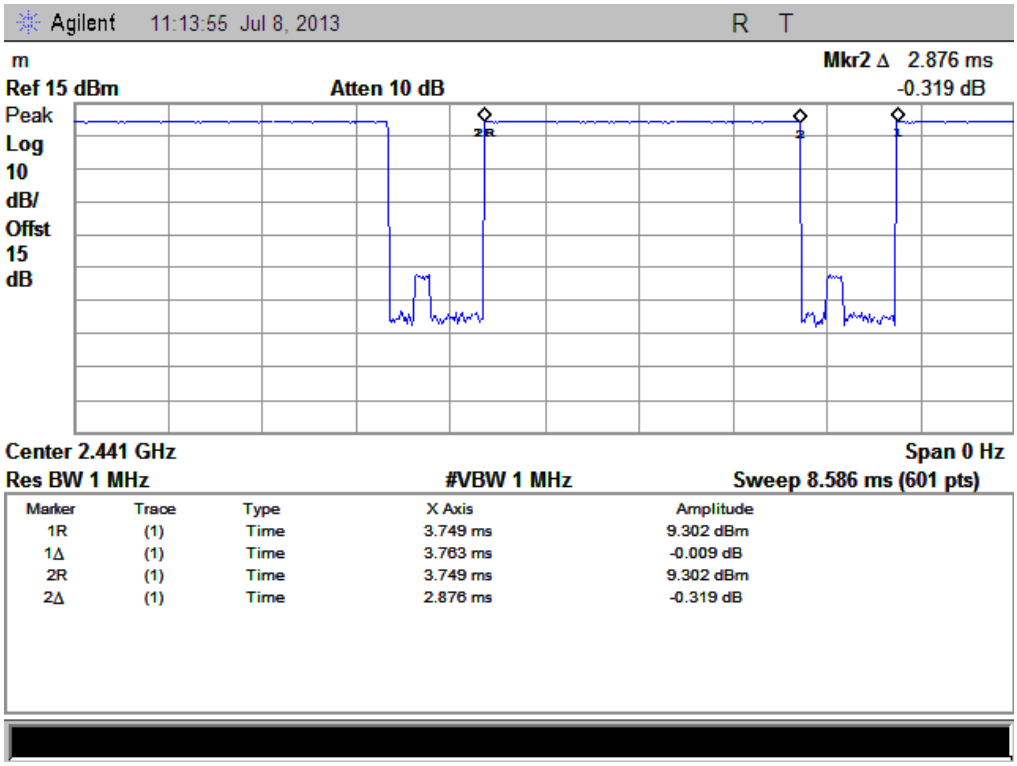
{Period} = 0.4s * {Number Of Hopping Frequency}

The EUT operating at frequency hopping-on mode and the measurement result is following;

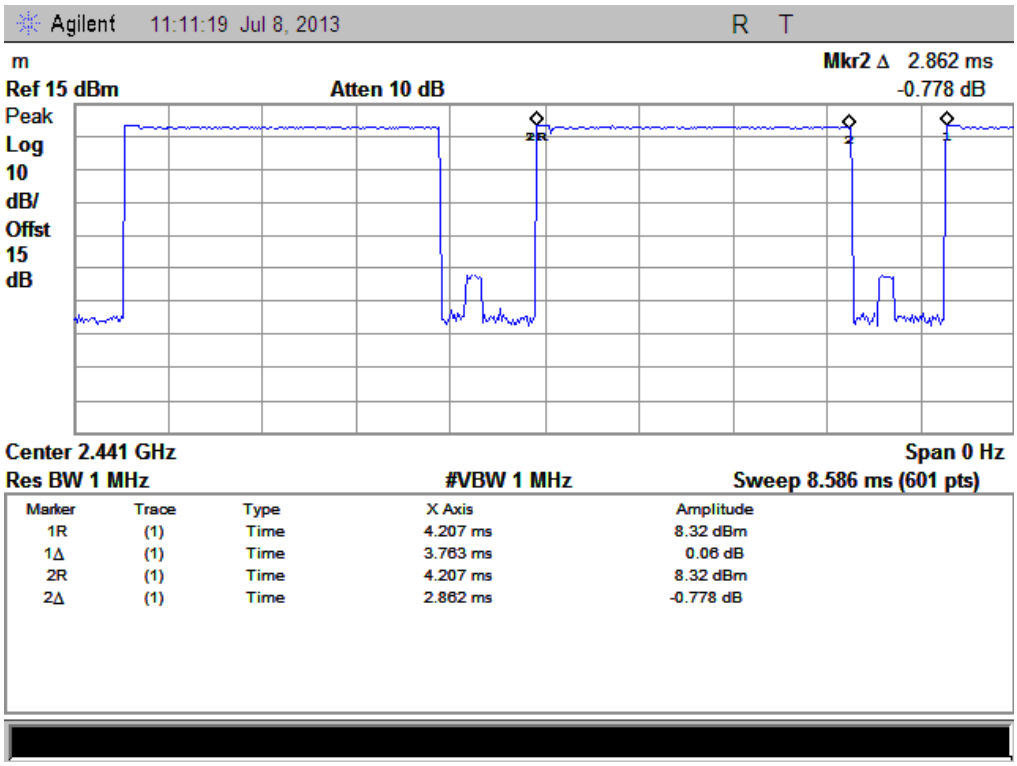
Measurement Table

Test Mode	Pulse Time (ms)	Total of Dwell Time (ms)	Limits (ms)	Result
GFSK Mode (1Mbps)	2.876	306.77	400	PASS
π /4DQPOSK (2Mbps)	2.862	305.28	400	PASS
8-DPSK (3Mbps)	2.862	305.28	400	PASS

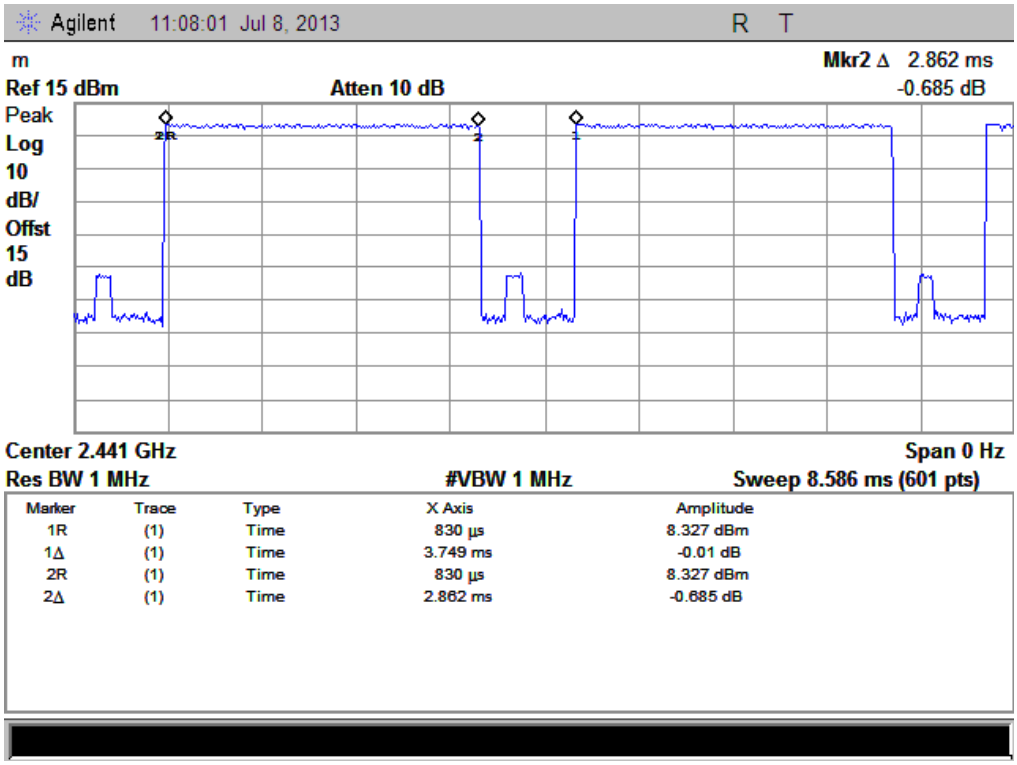
Test Plots



(GFSK Mode)



(π /4DQPOSK)


Agilent 11:08:01 Jul 8, 2013
R T
m
Mkr2 Δ 2.862 ms
Ref 15 dBm
Atten 10 dB
-0.685 dB
Peak
Log
10
dB/
Offst
15
dB
Center 2.441 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 1 MHz
Sweep 8.586 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 830 µs 8.327 dBm
1Δ (1) Time 3.749 ms -0.01 dB
2R (1) Time 830 µs 8.327 dBm
2Δ (1) Time 2.862 ms -0.685 dB

(8-DPSK)

5.6 Conducted Spurious Emission

5.6.1 Definition

According to FCC section 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits

5.6.2 Test Description

The EUT is powered by the Battery, is coupled to the Spectrum Analyzer (SA) through the Attenuator/DC Block. The path loss as the factor is calibrated to correct the reading. During the measurement, the EUT is activated and is set to operate at maximum power. The RF load attached to the EUT antenna terminal is 50Ohm.

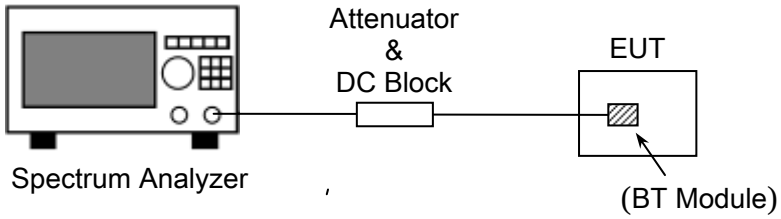
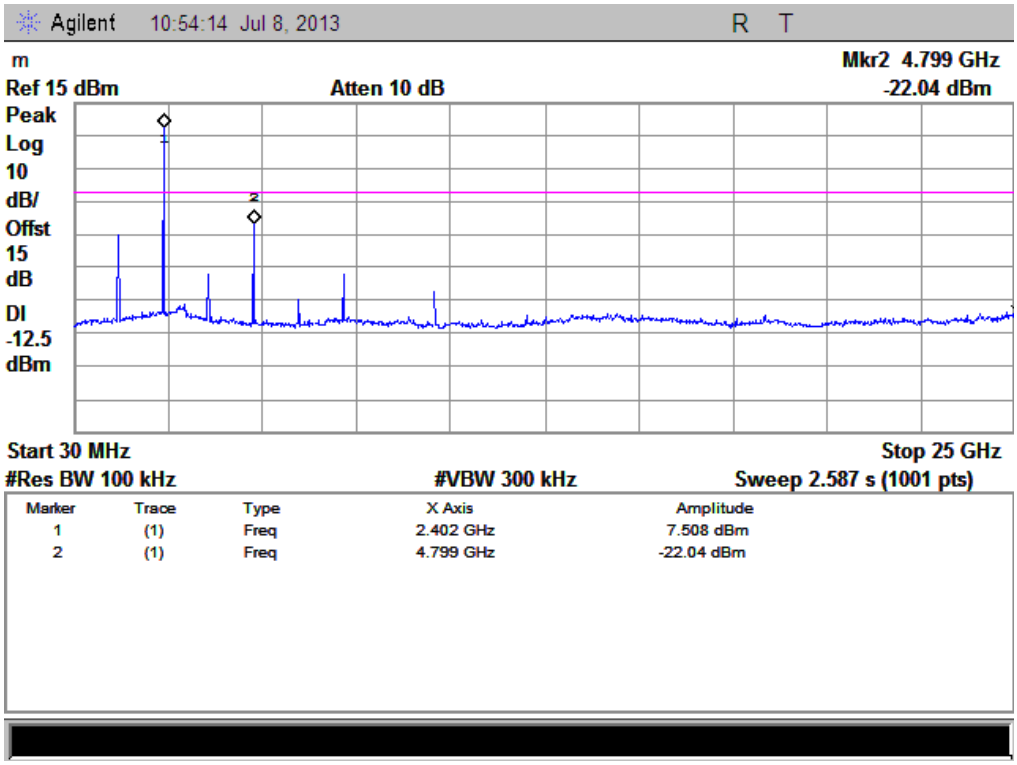


Figure 1: RF Test Setup

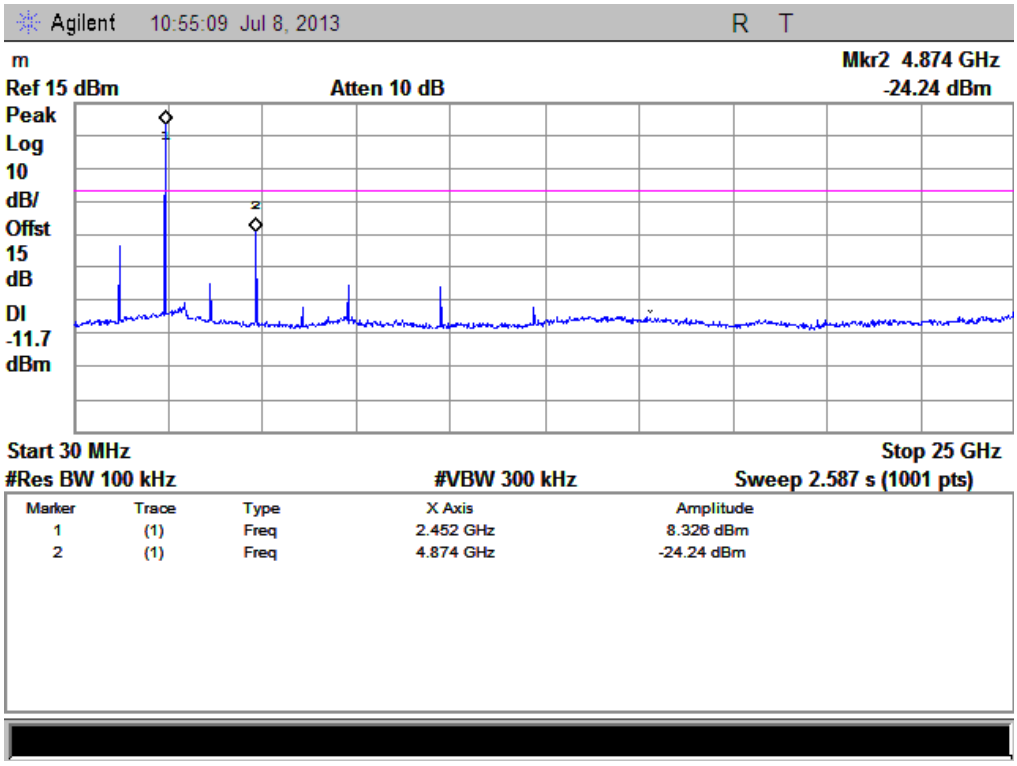
5.6.3 Test Result

The measurement frequency range is form 30MHz to the 10th Harmonic of fundamental frequency during test the EUT was operating at frequency hopping-off mode and the measurement result is following;

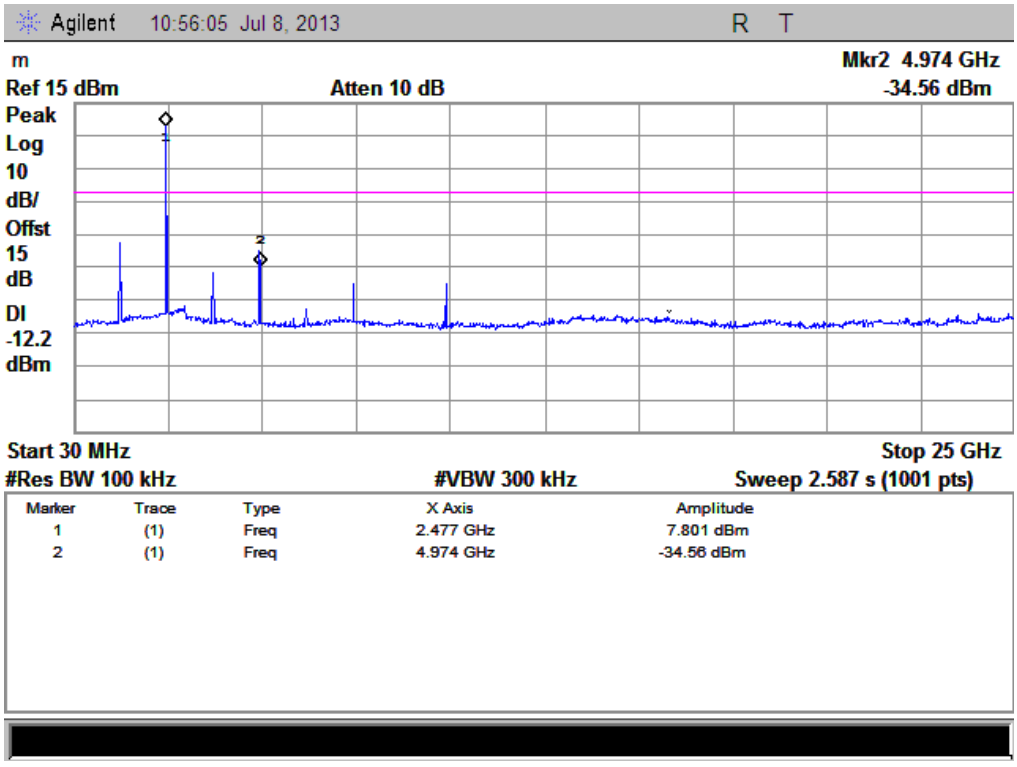
Test Plot



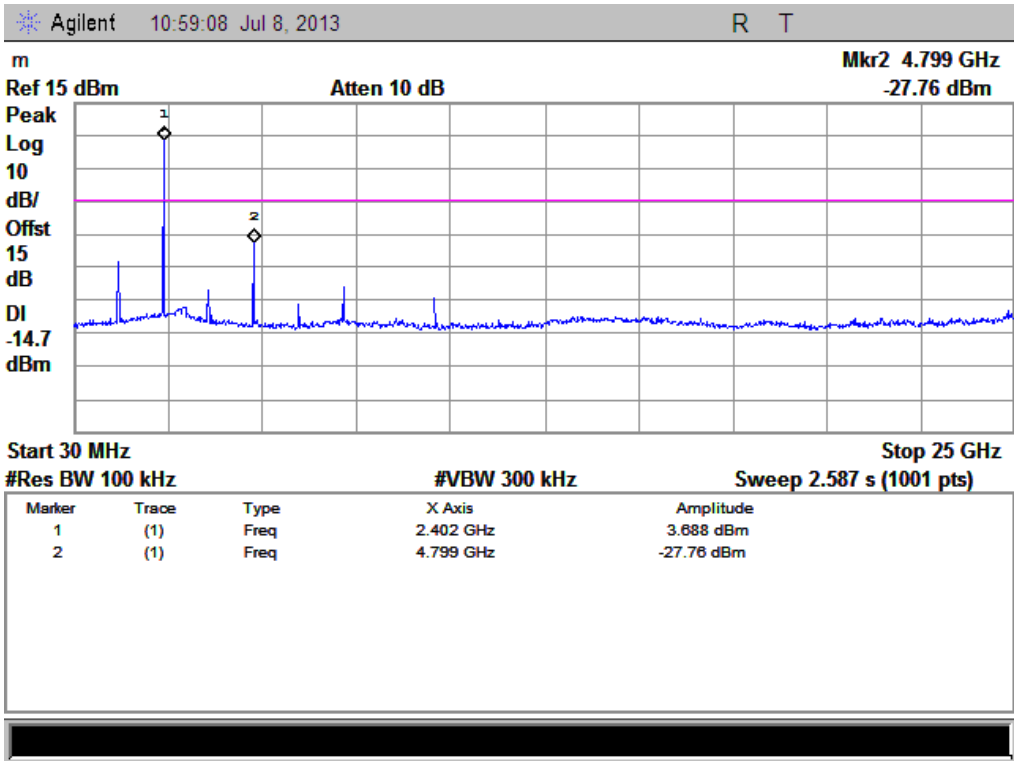
(GFSK Mode Low Channel)



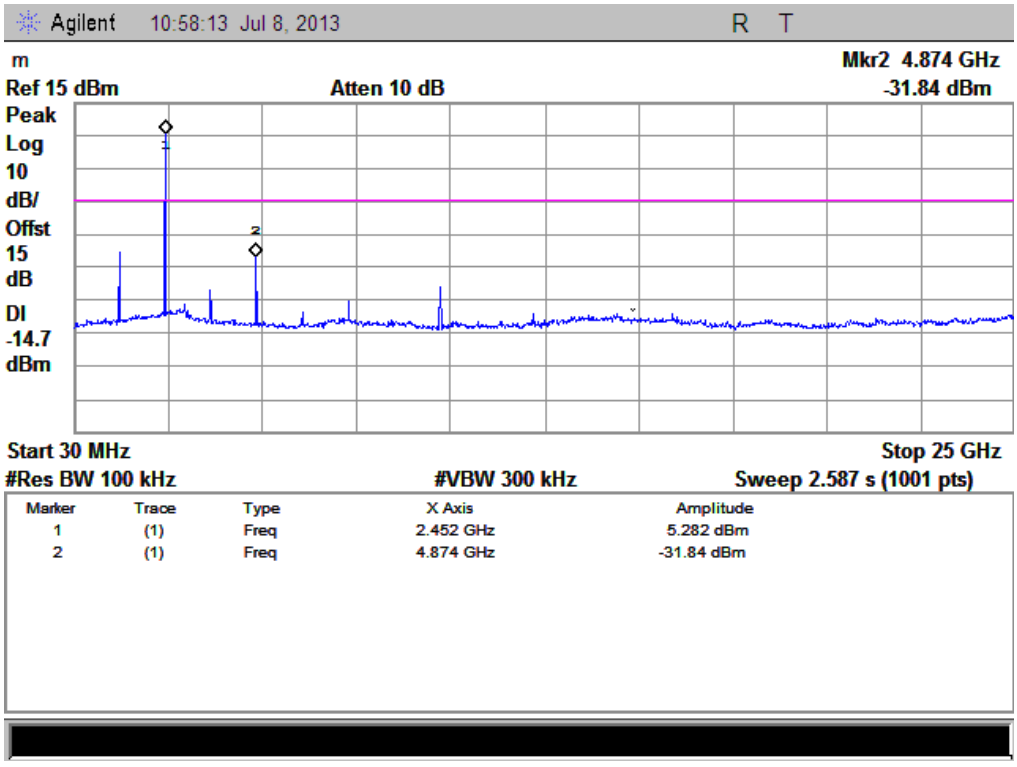
(GFSK Mode Middle Channel)



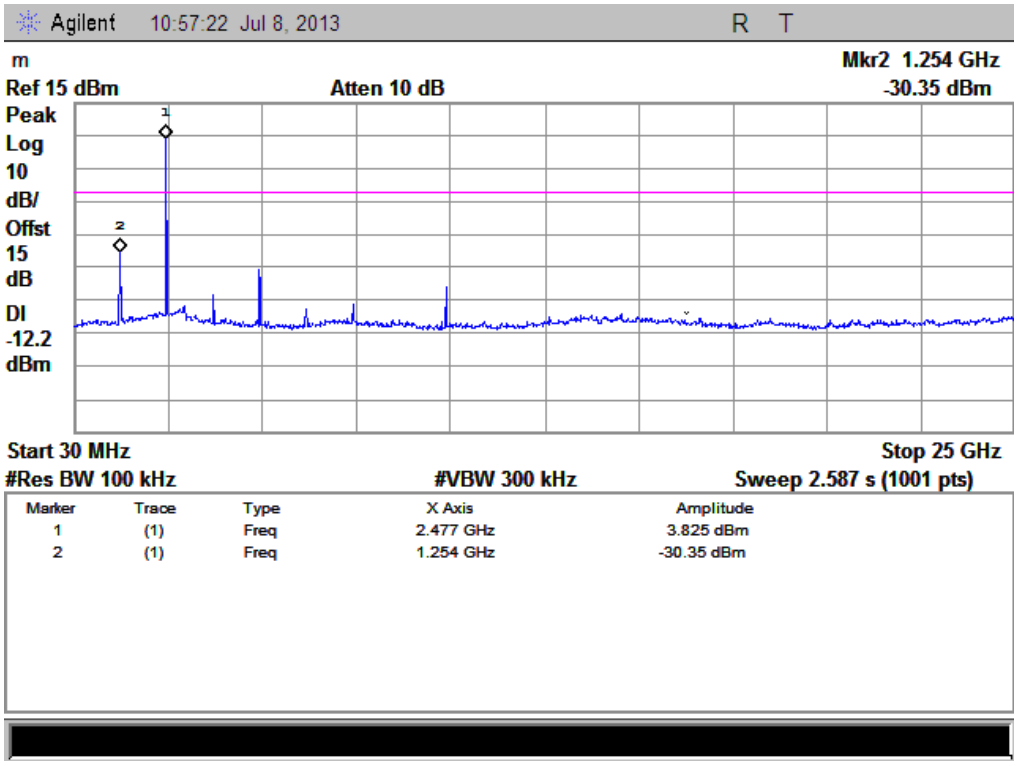
(GFSK Mode High Channel)



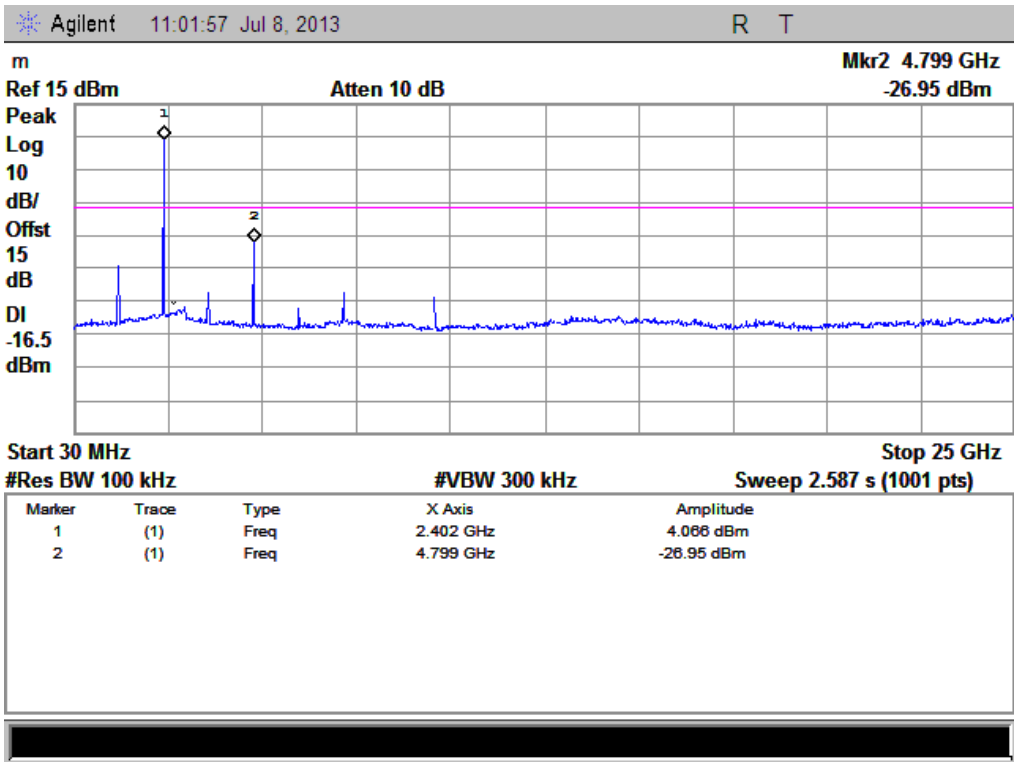
(π /4DQPOSK Mode Low Channel)



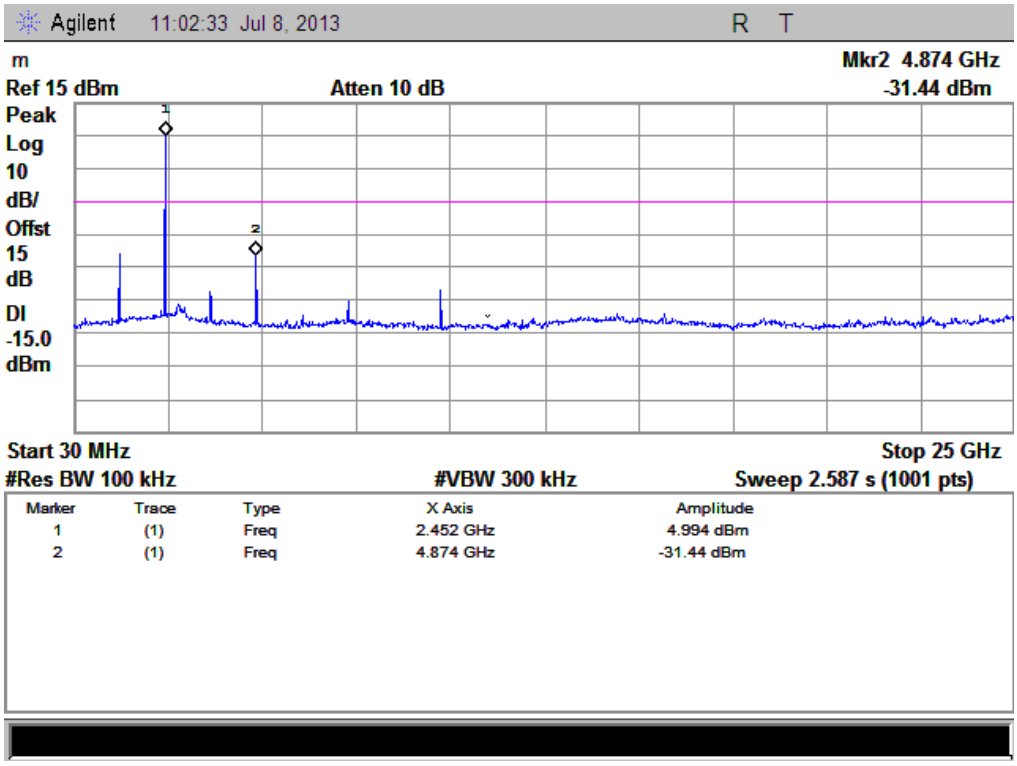
(π /4DQPOSK Mode Middle Channel)



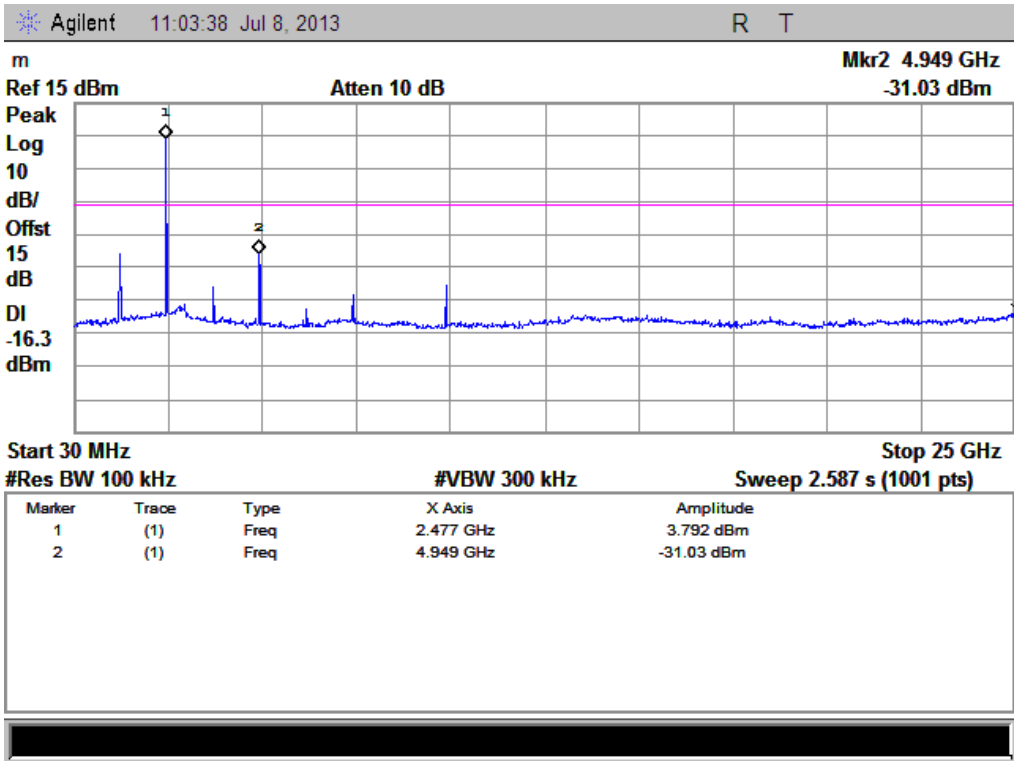
(π /4DQPOSK Mode High Channel)



(8-DPSK Mode Low Channel)



(8-DPSK Mode Middle Channel)



(8-DPSK Mode High Channel)

Result: PASS

5.7 Radiated Spurious Emission

5.7.1 Definition

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

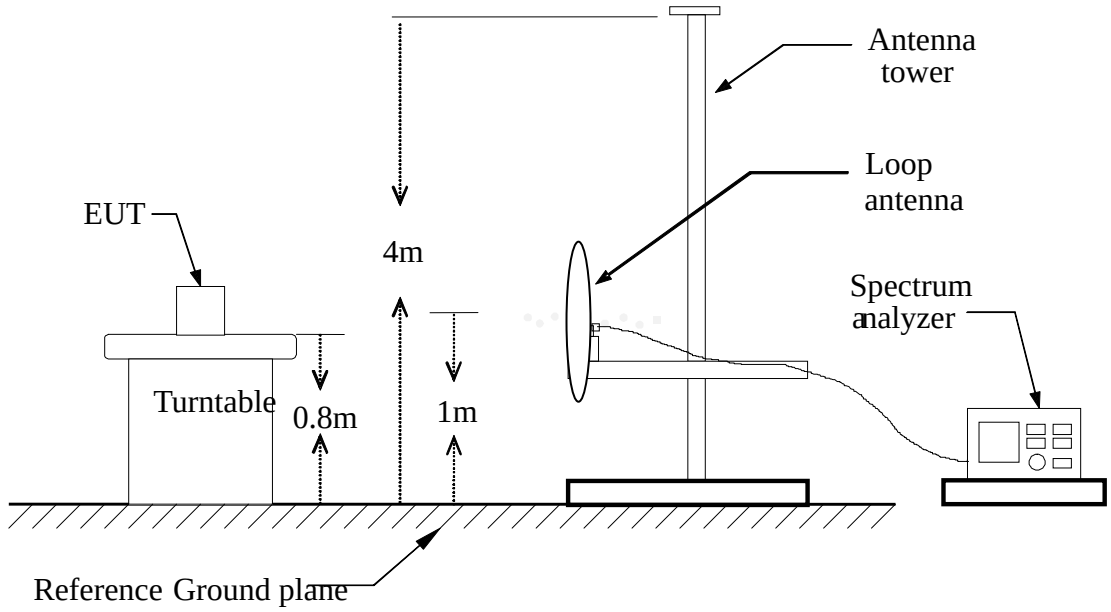
According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

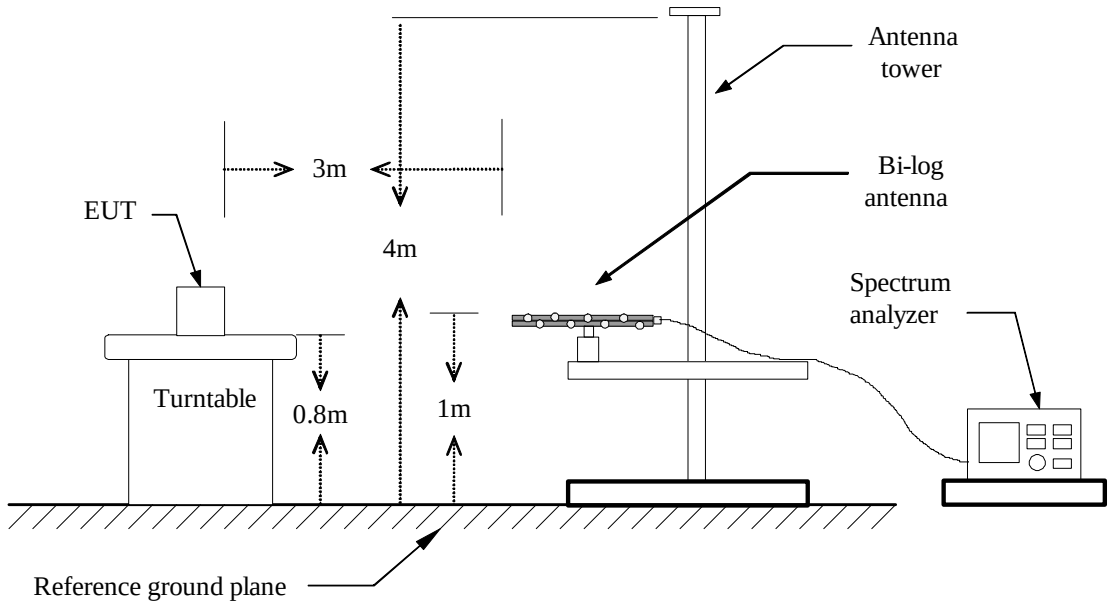
As shown in FCC section 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

5.7.2 Test Description

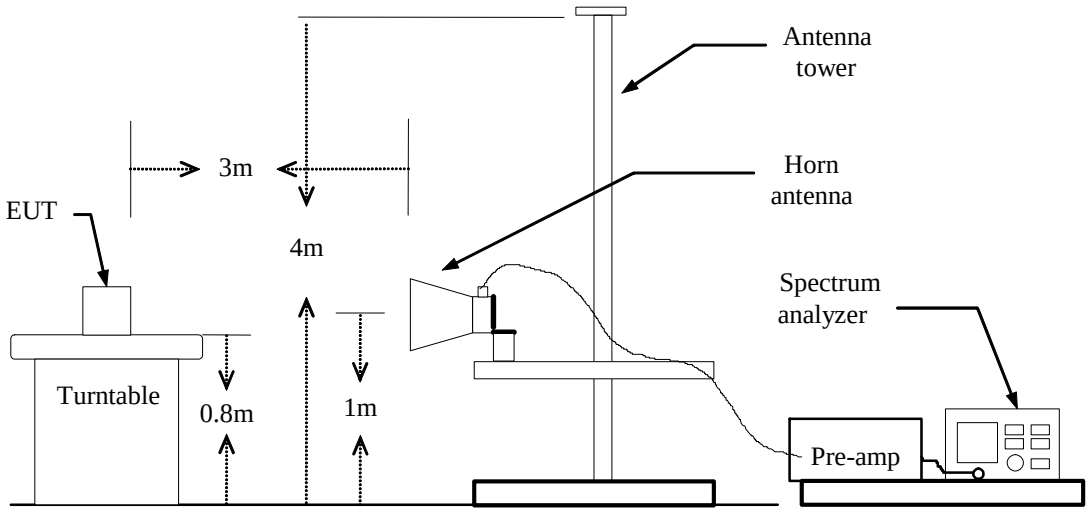
1. Test Setup:



Blow 1GHz:



Above 1GHz:



2. Test procedures

7. The EUT is placed on a turntable, which is 0.8m above ground plane.
3. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
1. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

   Below 1GHz: RBW=100 kHz / VBW=300 kHz / Sweep=AUTO

   Above 1GHz : (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
   (b) AVERAGE: RBW=1MHz / VBW=1MHz / Sweep=AUTO
4. Repeat above procedures until the measurements for all frequencies are complete.

5.7.3 TEST RESULT

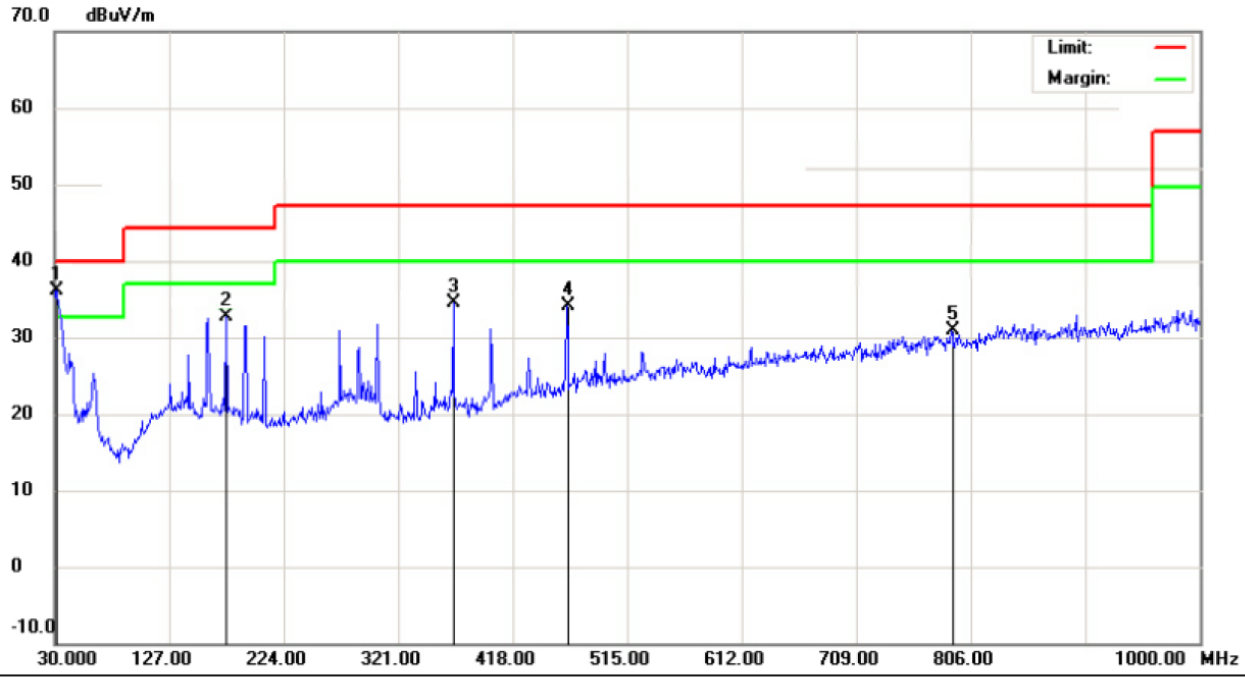
Form 9 KHz to 30MHz:

Freq.	Ant. Pol	Peak	Ant. / CL	Actual Fs	Peak	Peak
(MHz)	H/V	Reading	CF		Limit	Margin
		(dBuV)	(dB)	Peak	(dBuV/m)	(dB)
				(dBuV/m)		
	H					
	H					
	H					
N/A						>20
	V					
	V					
	V					
N/A						>20

-Note: No test data was detected in below 30MHz.

Form 30 MHz to 1GHz:

Radiated Emission Measurement



Site site MOST 3M
Polarization: *Vertical*
Temperature: 26

Limit: FCC Part15 B 3M Radiation
Power: AC 120/60Hz
Humidity: 61 %

EUT: GSM Mobile Phone
Distance:

M/N: FB203

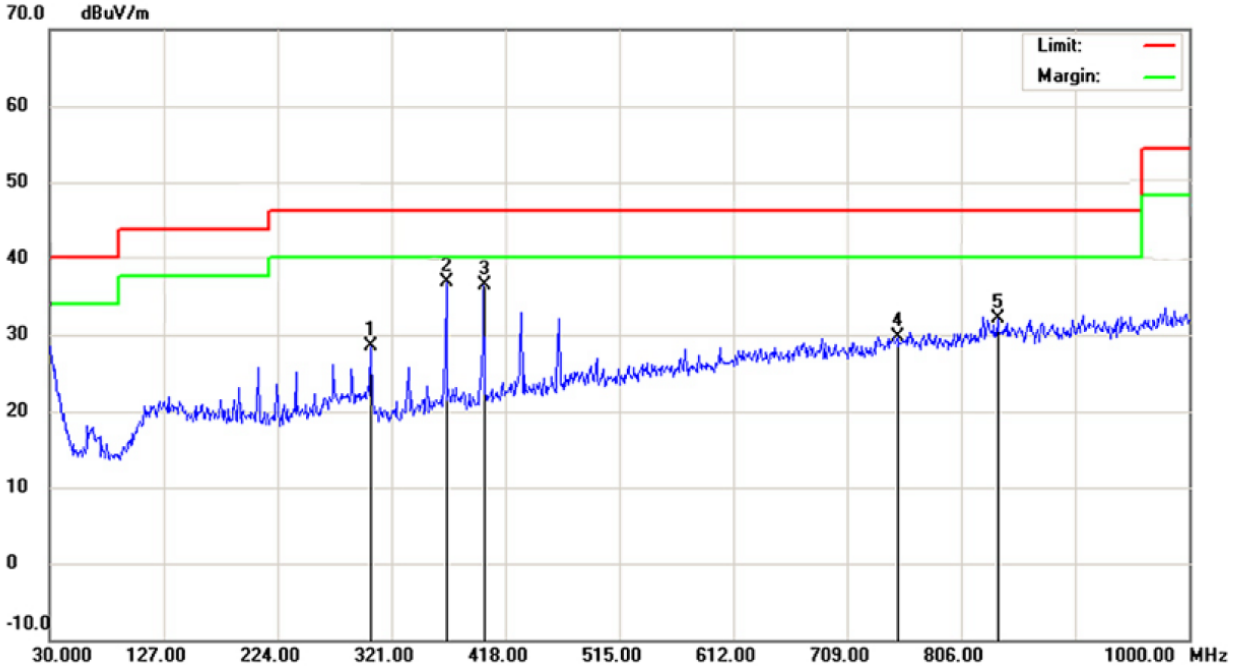
Mode: BT

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	30.9700	12.02	24.05	36.07	40.00	-3.93	peak			
2		175.5000	15.76	16.92	32.68	40.00	-7.32	peak			
3		367.5600	16.29	18.22	34.51	47.00	-12.49	peak			
4		463.5900	13.26	20.80	34.06	47.00	-12.94	peak			
5		789.5100	4.91	26.01	30.92	47.00	-16.08	peak			

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

Radiated Emission Measurement



Site site MOST 3M
Limit: FCC Part15 B 3M Radiation
EUT: GSM Mobile Phone
M/N: FB203
Mode: BT
Note:

Polarization: ***Horizontal***
Power: AC 120V/60Hz

Temperature: 26
Humidity: 61 %

Distance:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		303.5400	10.07	18.34	28.41	47.00	-18.59	peak			
2	*	367.5600	18.74	18.22	36.96	47.00	-10.04	peak			
3		399.5700	17.74	18.69	36.43	47.00	-10.57	peak			
4		751.6800	4.03	25.77	29.80	47.00	-17.20	peak			
5		837.0400	5.03	27.10	32.13	47.00	-14.87	peak			

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

Above 1 GHz

Operation Mode:	CH Low	**Test Date:**	2013-07-20
Temperature:	20°C	**Humidity:**	70 % RH

Freq.	Ant. Pol	Peak	AV	Ant. / CL	Actual Fs		Peak	AV	AV
(MHz)	H/V	Reading	Reading	CF			Limit	Limit	Margin
		(dBuV)	(dBuV)	(dB)	Peak	AV	(dBuV/m)	(dBuV/m)	(dB)
					(dBuV/m)	(dBuV/m)			
2402.00	H	91.74	89.44	9.08	100.82	98.52	N/A	N/A	/
4805.00	H	40.68	30.92	17.36	58.04	48.28	74.00	54.00	-5.72
N/A									>20
2402.00	V	90.32	88.26	9.08	99.40	97.34	N/A	N/A	/
4805.00	V	39.26	30.56	17.36	56.62	47.92	74.00	54.00	-6.08
N/A									>20

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
   a. Peak Setting 1GHz - 26GHz, RBW = 1MHz, VBW = 1MHz, Sweep time = *auto*.
   b. AV Setting 1GHz- 26GHz, RBW = 1MHz, VBW = 10 Hz, Sweep time = *auto*.

Operation Mode: CH Mid **Test Date:** 2013-07-20

Temperature: 20°C **Humidity:** 70 % RH

Freq.	Ant. Pol	Peak	AV	Ant. / CL	Actual Fs		Peak	AV	AV
(MHz)	H/V	Reading	Reading	CF			Limit	Limit	Margin
		(dBuV)	(dBuV)	(dB)	Peak	AV	(dBuV/m)	(dBuV/m)	(dB)
					(dBuV/m)	(dBuV/m)			
2441.00	H	92.58	90.19	9.31	101.89	99.50	N/A	N/A	/
4892.50	H	40.72	30.21	17.69	58.41	47.90	74.00	54.00	-6.10
N/A									>20
2441.00	V	91.59	89.54	9.31	100.90	98.85	N/A	N/A	/
4892.50	V	39.50	30.45	17.69	57.19	48.14	74.00	54.00	-5.86
N/A									>20

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
   a. Peak Setting 1GHz - 26GHz, RBW = 1MHz, VBW = 1MHz, Sweep time = *auto*.
   b. AV Setting 1GHz- 26GHz, RBW = 1MHz, VBW = 10 Hz, Sweep time = *auto*.

Operation Mode: CH High **Test Date:** 2013-07-20

Temperature: 20°C **Humidity:** 70 % RH

Freq.	Ant. Pol	Peak	AV	Ant. / CL	Actual Fs		Peak	AV	AV
(MHz)	H/V	Reading	Reading	CF			Limit	Limit	Margin
		(dBuV)	(dBuV)	(dB)	Peak	AV	(dBuV/m)	(dBuV/m)	(dB)
					(dBuV/m)	(dBuV/m)			
2480.00	H	91.88	89.87	9.47	101.19	99.18	N/A	N/A	/
4960.50	H	40.11	30.72	18.27	58.38	48.99	74.00	54.00	-5.01
N/A									>20
2480.00	V	91.63	89.35	9.47	100.94	98.66	N/A	N/A	/
4960.50	V	39.41	30.39	18.27	57.68	48.66	74.00	54.00	-5.34
N/A									>20

Notes:

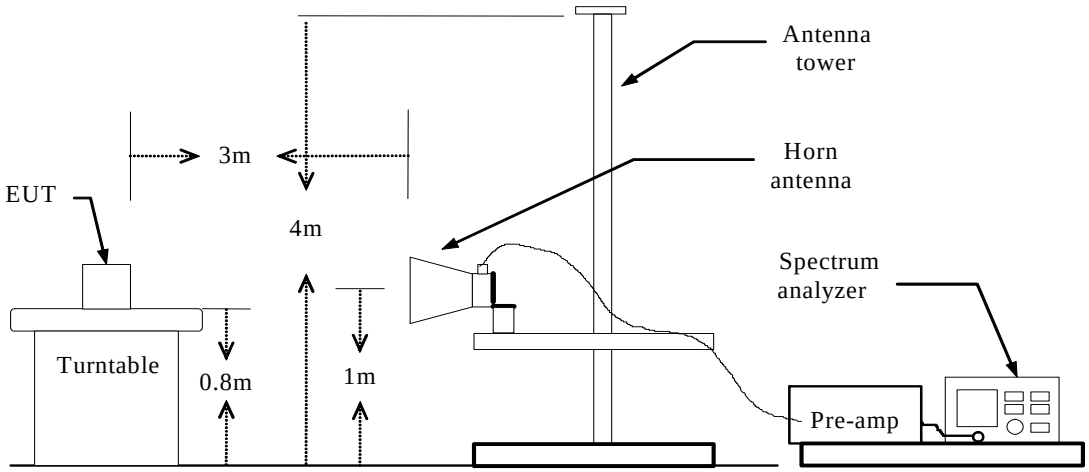
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
   a. Peak Setting 1GHz - 26GHz, RBW = 1MHz, VBW = 1MHz, Sweep time = *auto*.
   b. AV Setting 1GHz- 26GHz, RBW = 1MHz, VBW = 10 Hz, Sweep time = *auto*.

5.8 BAND EDGE

5.8.1 REQUIREMENT

According to FCC section 15.249(a), in any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.8.2 TEST DESCRIPTION

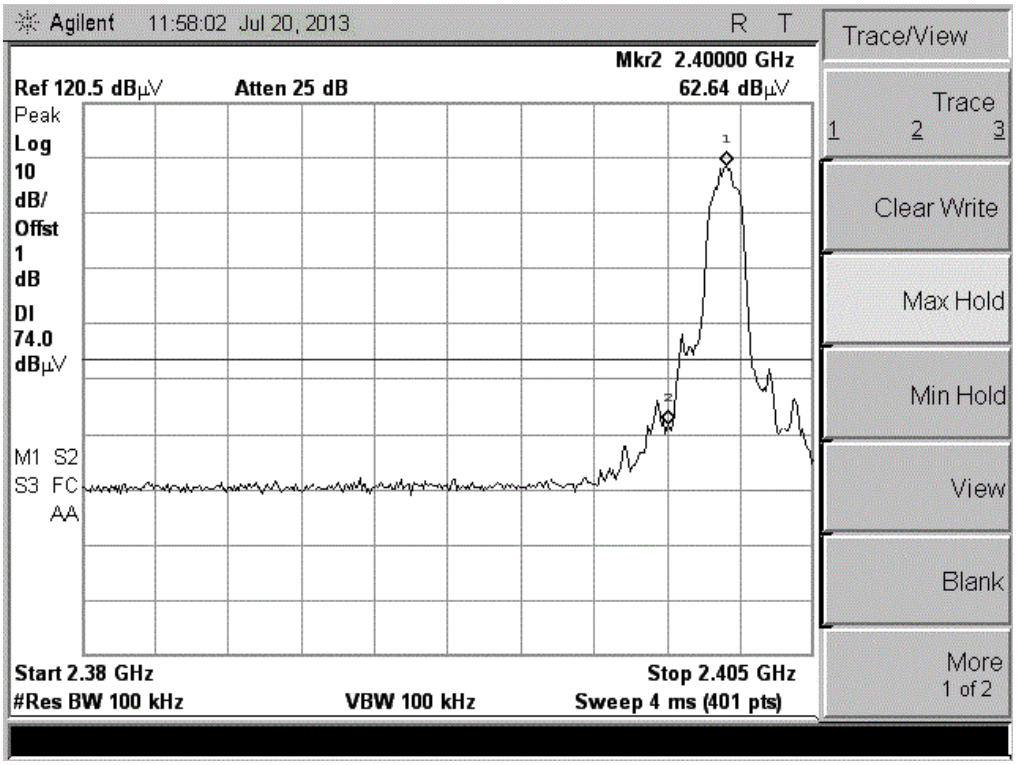


5.8.3 TEST RESULT

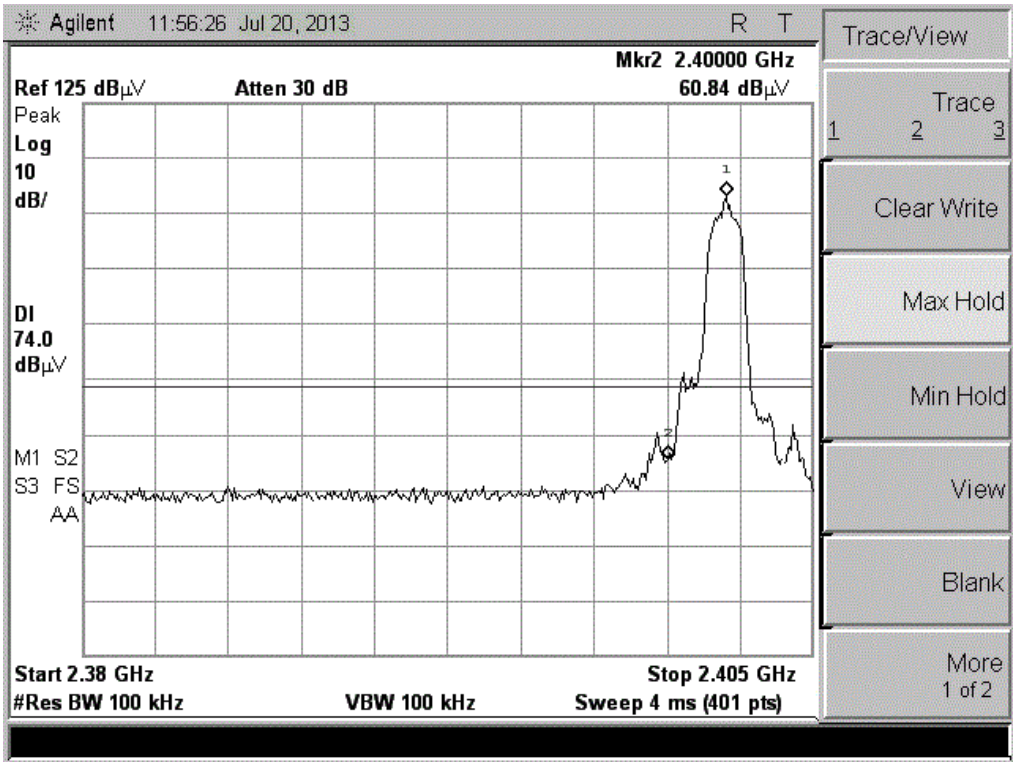
The EUT operates at hopping-off test mode. The lowest and highest channels are tested to verify the band edge emissions.

Test Mode		Channel Marked Frequency	Limit (dBuv/m)	Test Result Highest Emission (dBuv/m)			
				Vertical		Horizontal	
				Peak	Average	Peak	Average
Bluetooth	Low Channel	2400MHz	74(Peak) 54(Average)	62.64	44.71	60.84	43.26
	High Channel	2483.5MHz		55.22	40.16	52.42	39.24

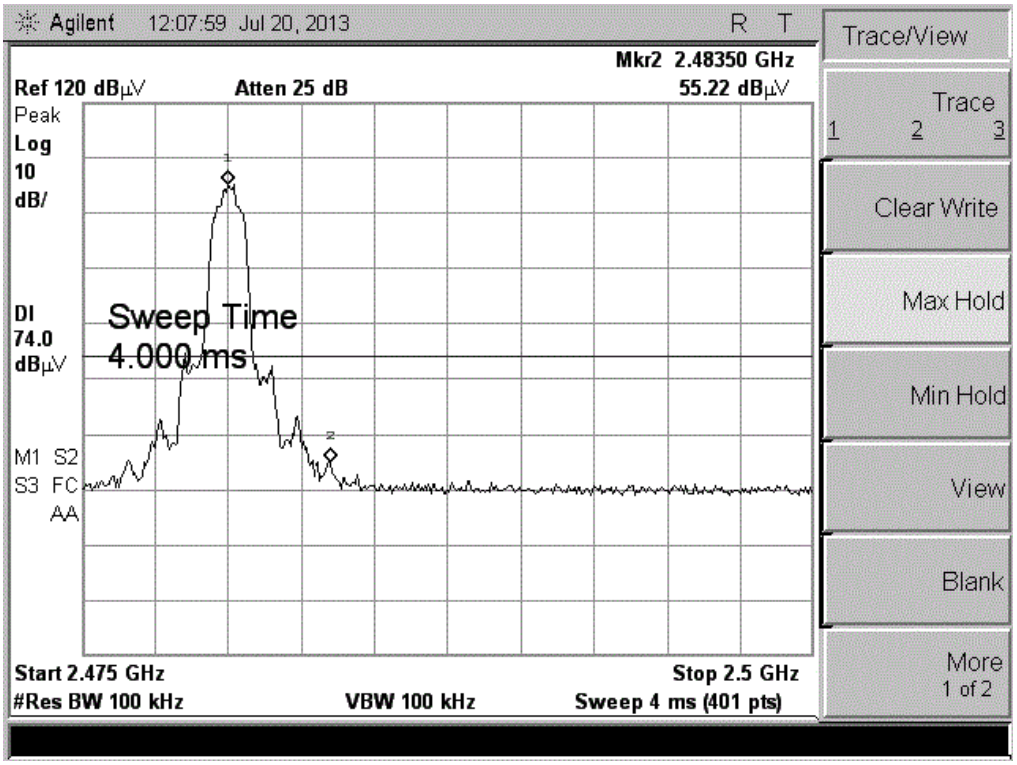
Test Plot:



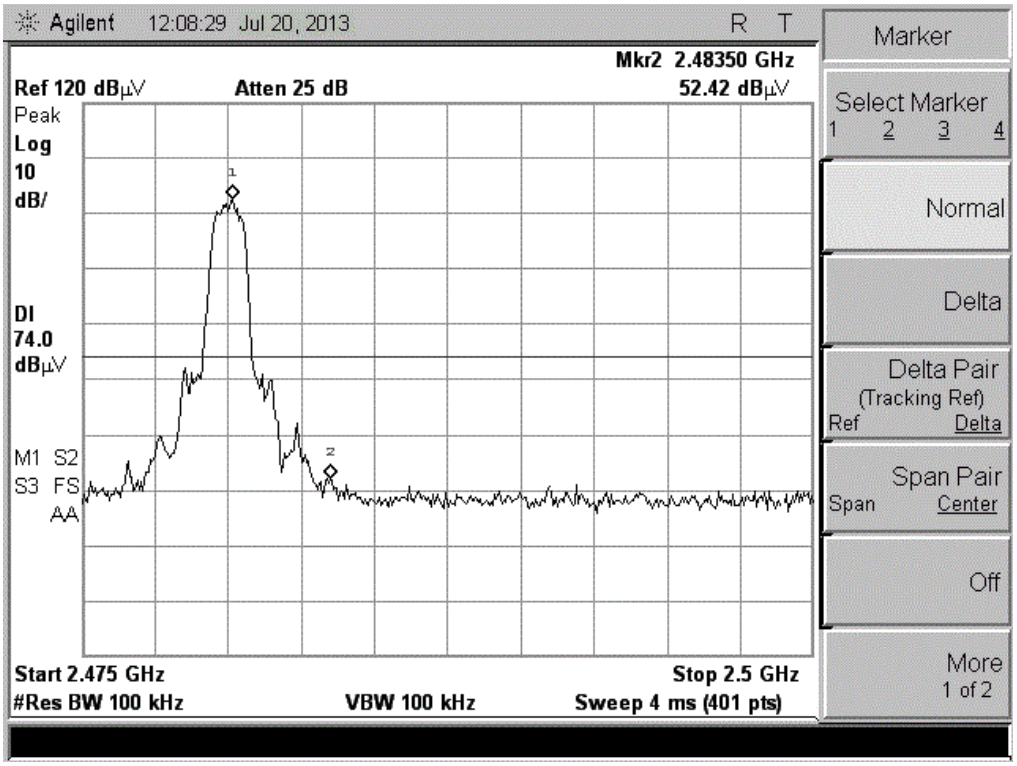
(CH Low, Vertical)



(CH Low, Horizontal)



(CH High, Vertical)



(CH High, Horizontal)

5.9 LINE CONDUCTED EMISSION TEST

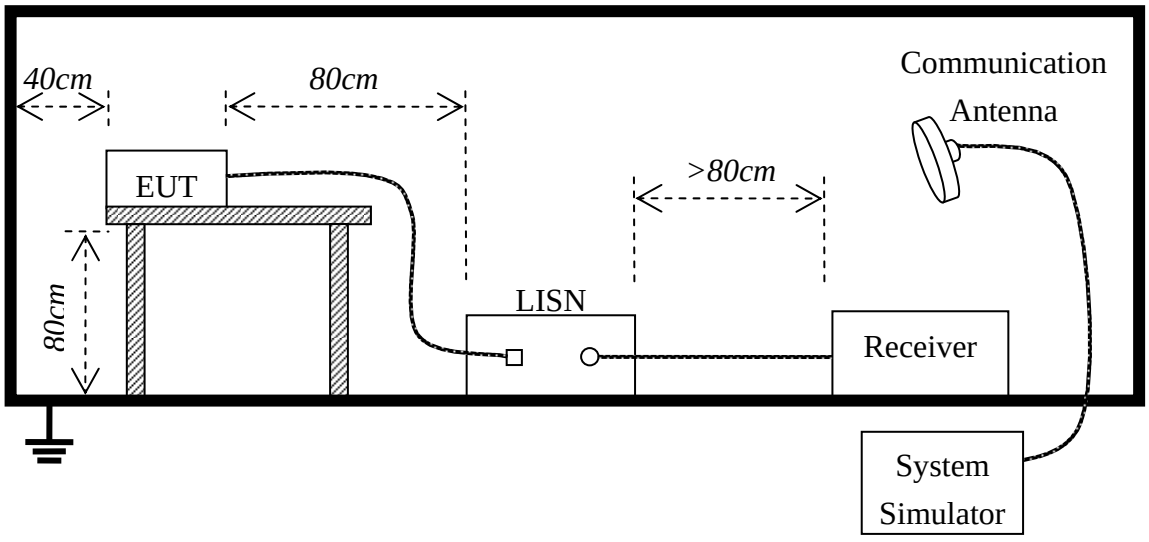
5.9.1 LIMITS OF LINE CONDUCTED EMISSION TEST

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

***Note:** 1. the lower limit shall apply at the transition frequency.*

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

5.9.2 BLOCK DIAGRAM OF TEST SETUP



5.9.3 PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per FCC Part 15 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2) Support equipment, if needed, was placed as per FCC Part 15.
3) All I/O cables were positioned to simulate typical actual usage as per FCC Part 15.
4) The EUT received DC 5V power by AC/DC adapter which through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5) All support equipments received power from a second LISN supplying power of AC 120V/60Hz, if any.
6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7) Analyzer / Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.
8) During the above scans, the emissions were maximized by cable manipulation.

5.9.4 FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

EUT and support equipment was set up on the test bench as per step 9 of the preliminary test.

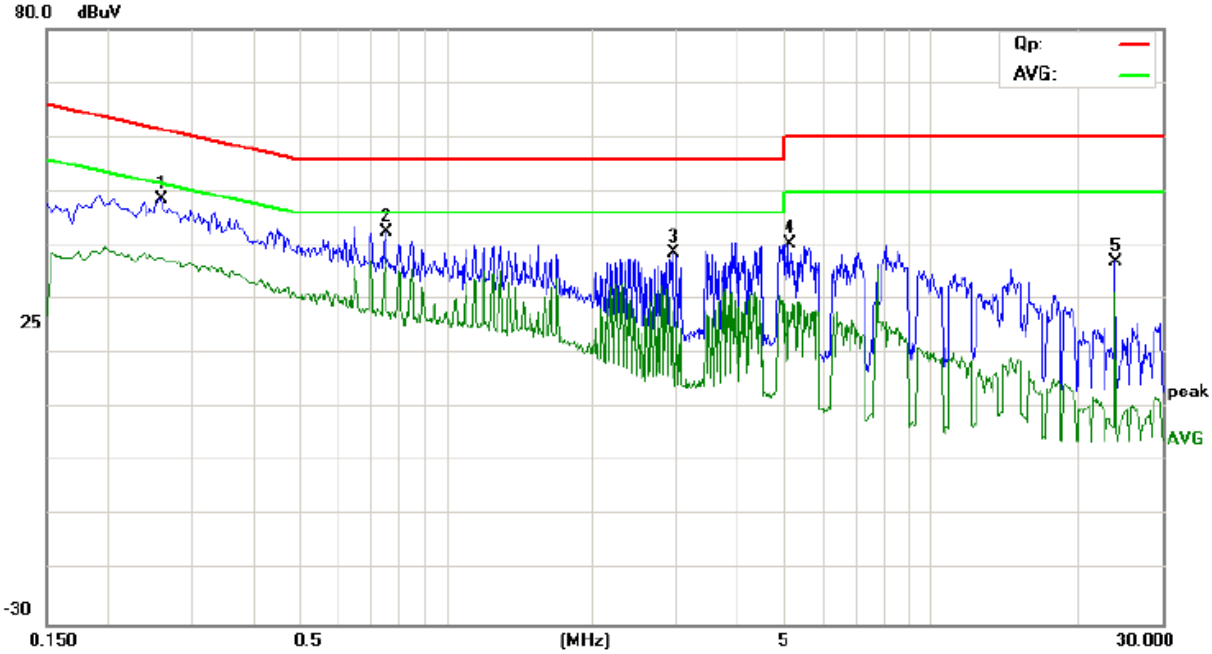
A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

The test data of the worst case condition(s) was reported on the Summary Data page.

5.9.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST

Conducted Emission Measurement

File :FB203 Data :#1 Date: 2013/03/23 Time: 10:17:33



Site site #1 Phase: N Temperature: 26

Limit: FCC Part 15 B QP Power: AC 120V/60Hz Humidity: 60 %

EUT: GSM Mobile Phone

M/N: FB203

Mode: BT

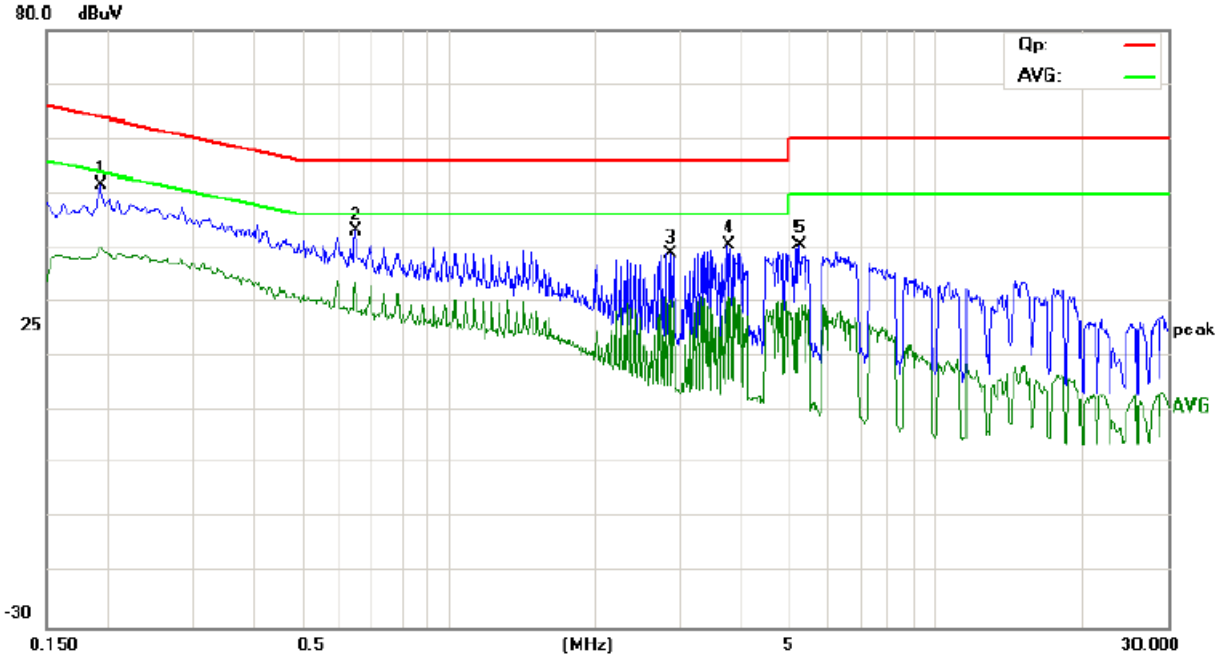
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2580	36.91	11.61	48.52	61.50	-12.98	peak	
2		0.7500	32.43	10.00	42.43	56.00	-13.57	peak	
3		2.9420	28.57	9.94	38.51	56.00	-17.49	peak	
4		5.0900	28.42	11.95	40.37	60.00	-19.63	peak	
5		23.9700	28.10	9.00	37.10	60.00	-22.90	peak	

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

Conducted Emission Measurement

File :FB203 Data :#2 Date: 2013/03/23 Time: 10:24:54



Site site #1 Phase: L1 Temperature: 26

Limit: FCC Part 15B QP Power: AC 120V/60Hz Humidity: 60 %

EUT: GSM Mobile Phone

M/N: FB203

Mode: BT

Note:

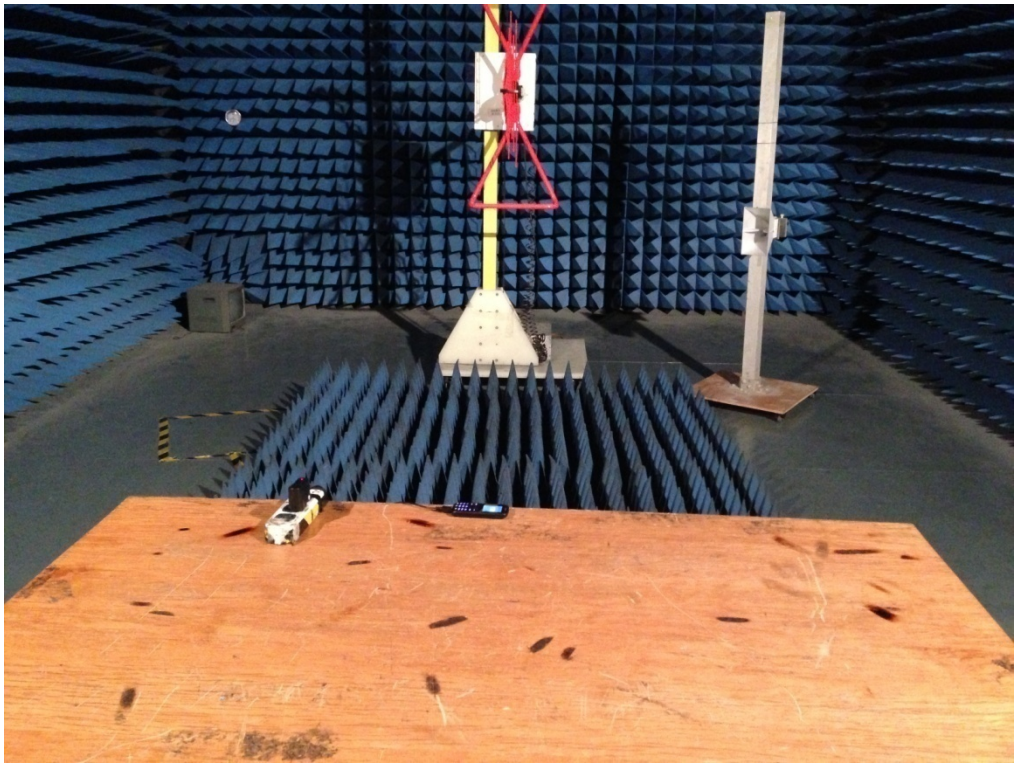
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1940	39.79	11.64	51.43	63.86	-12.43	peak	
2		0.6420	33.05	10.00	43.05	56.00	-12.95	peak	
3		2.8580	29.00	9.86	38.86	56.00	-17.14	peak	
4		3.7500	29.79	10.75	40.54	56.00	-15.46	peak	
5		5.2340	28.64	11.86	40.50	60.00	-19.50	peak	

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

APPENDIX 1
PHOTOGRAPHS OF TEST SETUP

CE TEST SETUP

RE TEST SETUP



APPENDIX 2
PHOTOGRAPHS OF EUT

FRONT VIEW OF SAMPLE

RIGHT VIEW OF SAMPLE

UP VIEW OF SAMPLE

DOWN VIEW OF SAMPLE

PHOTO OF CHARGER

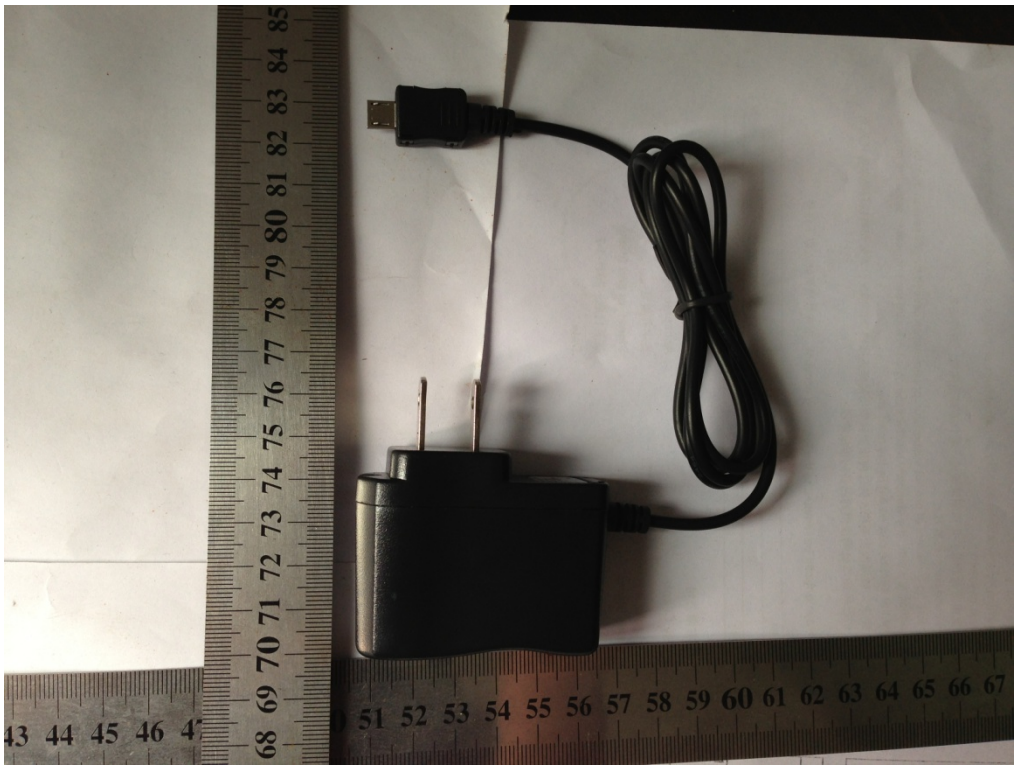
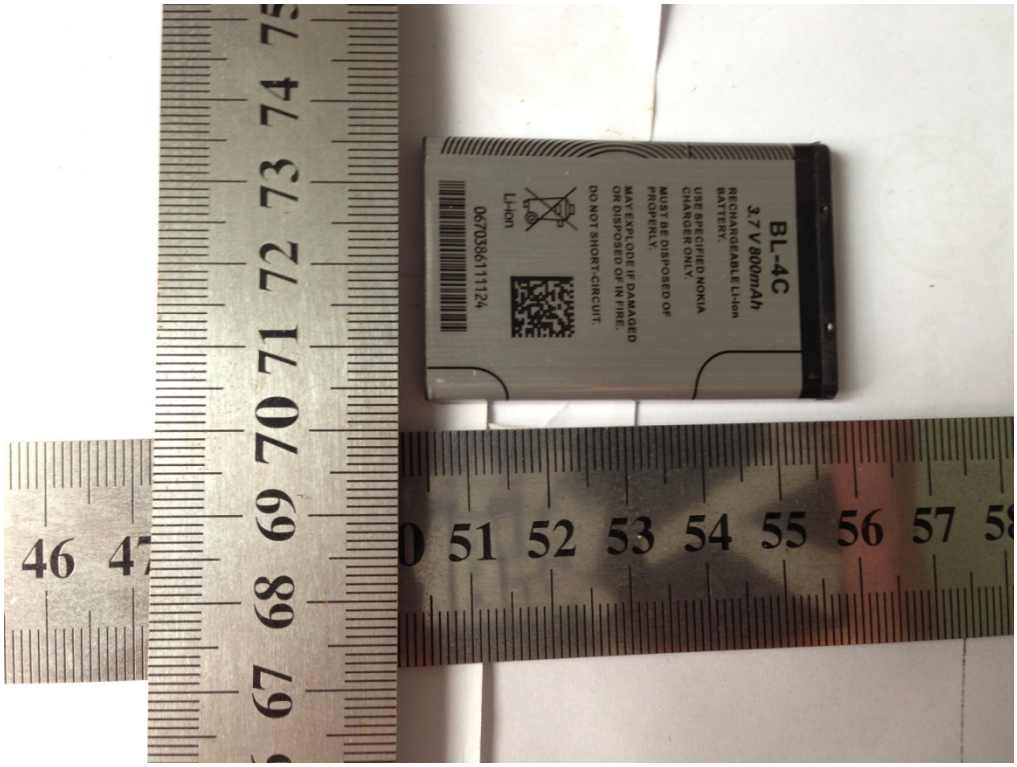


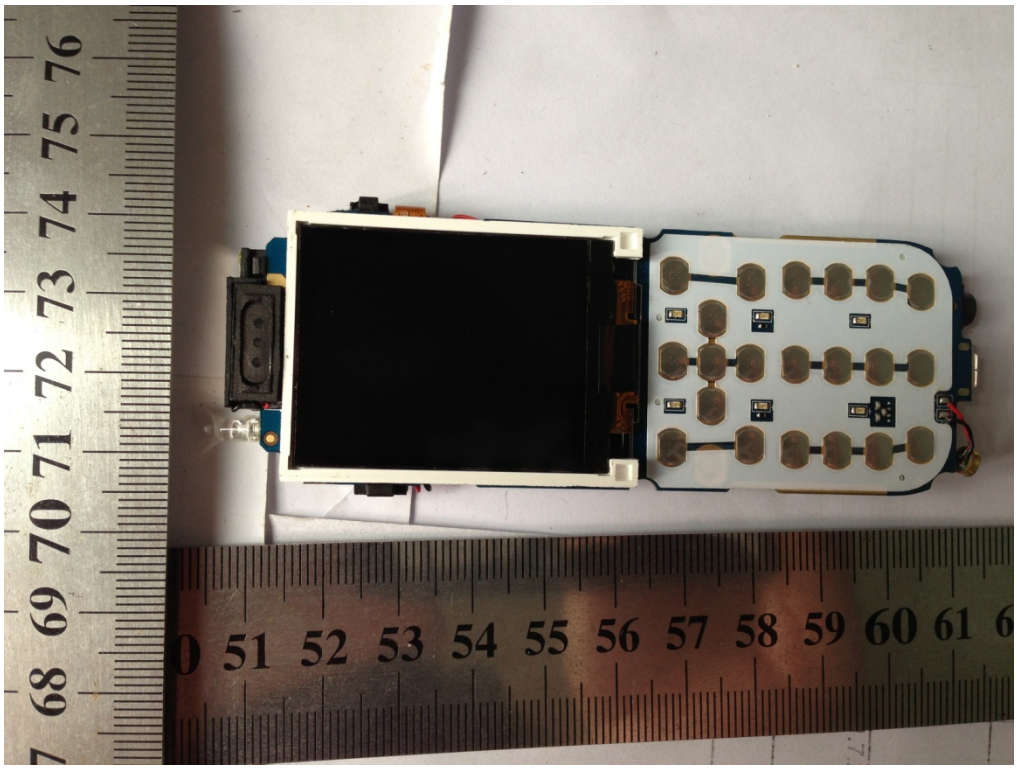
PHOTO OF BATTERY



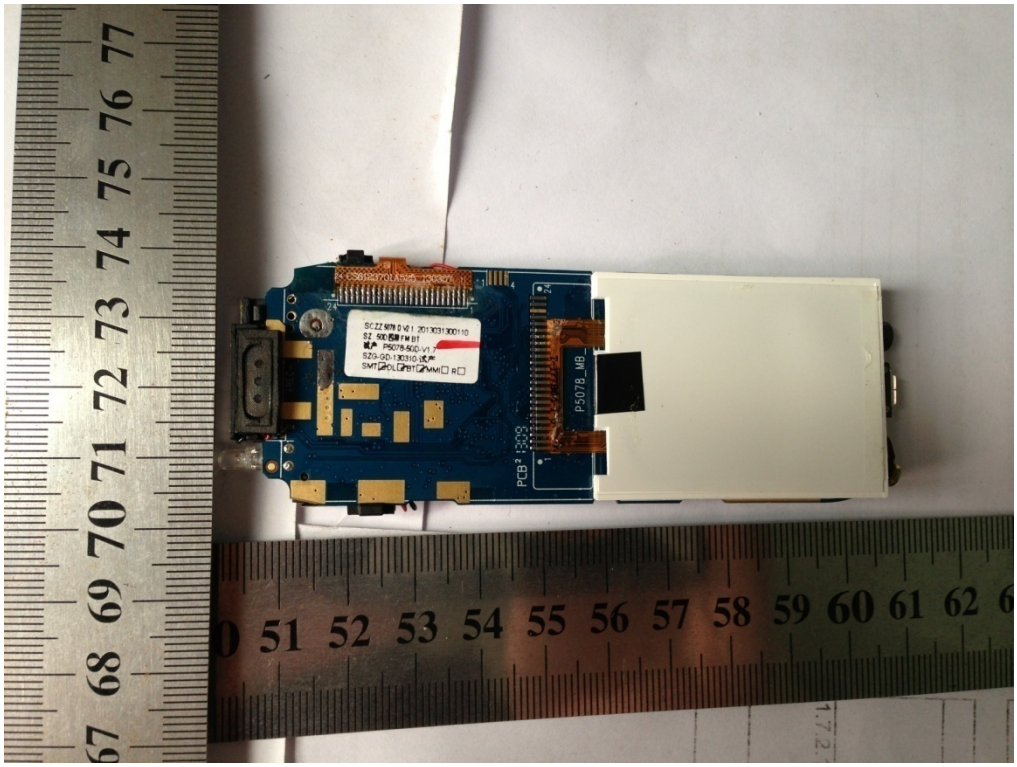
INTERNAL PHOTO OF SAMPLE - 1

INTERNAL PHOTO OF SAMPLE -2

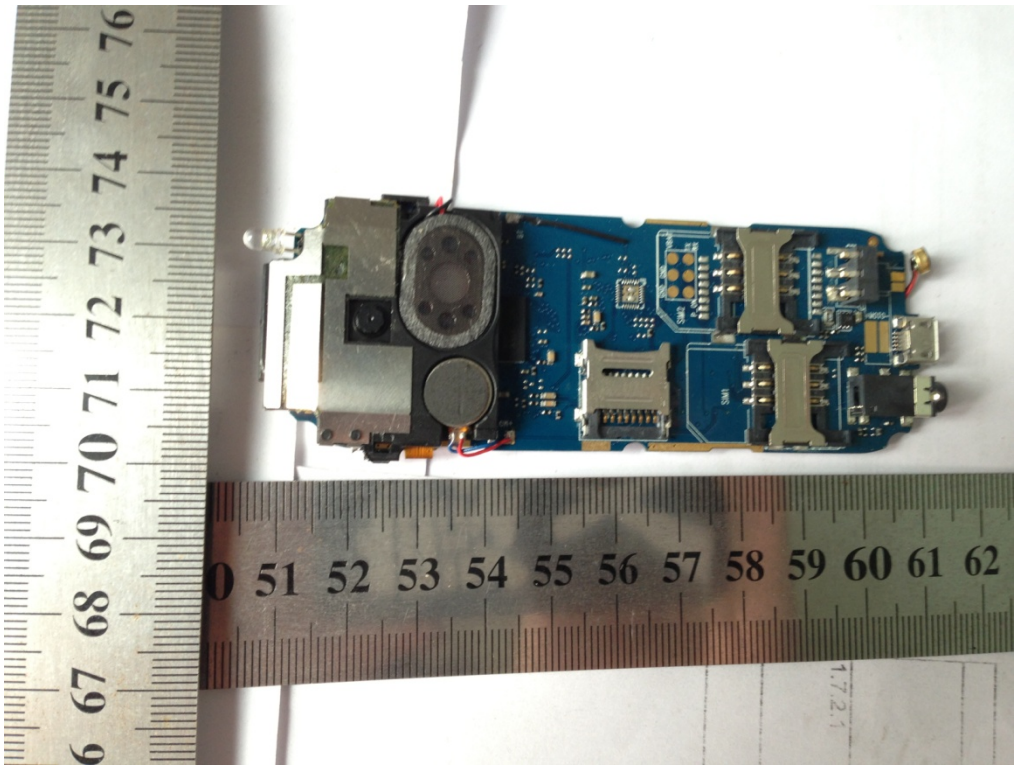
INTERNAL PHOTO OF SAMPLE - 3



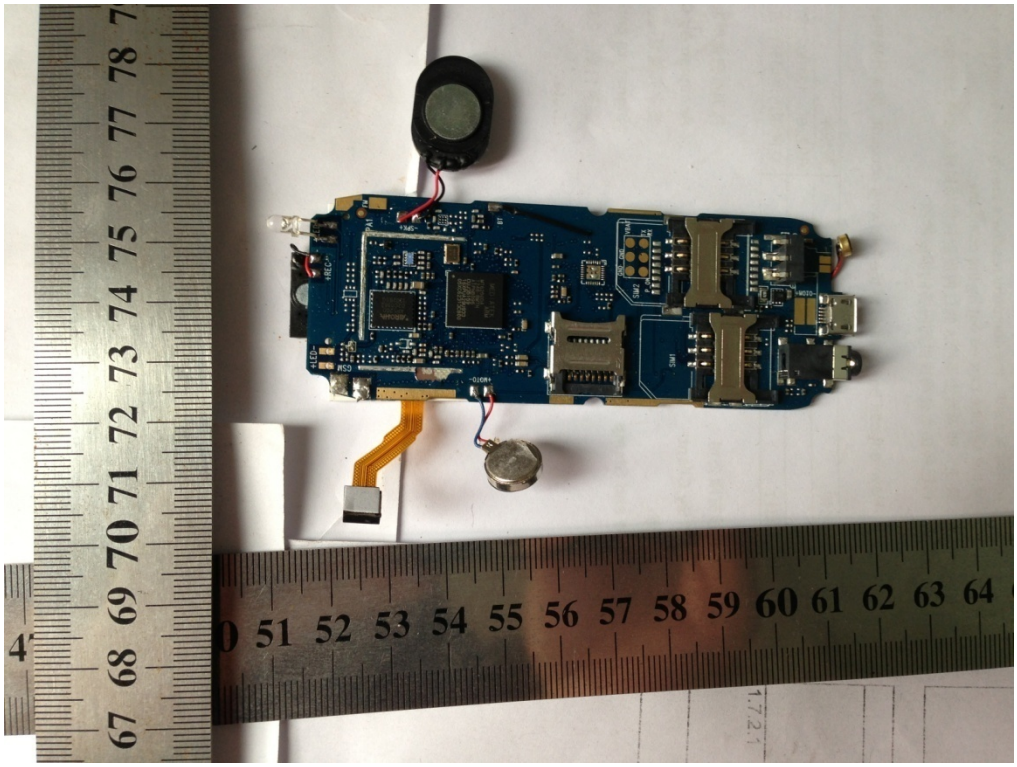
INTERNAL PHOTO OF SAMPLE - 4



INTERNAL PHOTO OF SAMPLE - 5



INTERNAL PHOTO OF SAMPLE – 6



------END OF REPORT------