FCC Test Report

Client Information:

Applicant: PRECASTER ENTERPRISES Co., Ltd

Applicant add.: No.204,Sec.2,Hu-Hsing Rd., Taichung, Taiwan, R.O.C.

EUT Information:

EUT Name: Bluetooth leveler

Model No.: 40-6250

Brand Name: Johnson Lvel & Tool

FCC ID: YWSCA200SS

Prepared By:

Asia Institute Technology (Dongguan) Limited
Add. : No.6 Binhe Road, Tianxin Village, Huangjiang,
Dongguan, Guangdong, China.

Date of Receipt: Otc. 27, 2010 Date of Test: Nov.1—8, 2010

Date of Issue: Nov. 8, 2010 Test Result: **Pass**

Test procedure used: ANSI C63.4-2003

This device described above has been tested by Asia Institute Technology (Dongguan) Limited, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
*This test report must not be used by the client to claim product endorsement by any agency of the U.S. government.

Reviewed by: Jim He
Test director

Approved by: Bovey Yang
Technical director

1 Contents

2 Test Summary

2.1 Compliance with FCC Part 15 subpart C

Test	Test Requirement	Stanadard Paragraph	Result
Conduction Emissions	FCC Part 15 C:2009	Section 15.203	**PASS**
Antenna Requirement	FCC Part 15 C:2009	Section 15.247(c)	**PASS**
Occupied Bandwidth	FCC Part 15 C:2009	Section 15.247(a)	**PASS**
Carrier Frequencies Separated	FCC Part 15 C:2009	Section 15.247(a)(1)	**PASS**
Hopping Channel Number	FCC Part 15 C:2009	Section 15.247(a)(1) (iii)	**PASS**
Dwel Time	FCC Part 15 C:2009	Section 15.247(a)(1) (iii)	**PASS**
Maximum Peak Output Power	FCC Part 15 C:2009	Section 15.247(b)(1)	**PASS**
Band edge	FCC Part 15 C:2009	Section 15.247(d)	**PASS**
Conducted Spurious Emissions	FCC Part 15 C:2009	Section 15.247(d)	**PASS**
Radiated Emissions	FCC Part 15 C:2009	Section 15.247(d)	**PASS**

2.2 Measurement Uncertainty

All measurements involve certain levels of uncertainties, The following measurements uncertainty Level have estimated based on ANSI C63.4:2003, the maximum value of the uncertainty as below

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	Radiated Emission Test	±3.57dB

3 Test Facility

The test facility is recognized, certified or accredited by the following organizations:

.FCC- Registration No: 248337

The 3m Semi-Anechoic Chamber, 3m/10m Open Area Test Site and Shielding Room of Asia Institute Technology (Dong guan) Limited have been registered by Federal Communications Commission (FCC) on Dec.07, 2006.

.Industry Canada(IC)-Registration No: IC6819A-1 & IC6819A-2

The 3m Semi-Anechoic Chamber and 3m/10m Open Area Test Site of Asia Institute Technology (Dongguan) Limited have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing on Nov.07, 2006.

.VCCI- Registration No: R-2482 & C-2730

The 3m/10m Open Area Test Site and Shielding Room of Asia Institute Technology (Dongguan) Limited have been registered by Voluntary Control Council for Interference on Jan.24, 2007.

.TUV Rhineland

Asia Institute Technology (Dongguan) Limited has been assessed on Jan.16, 2007 that it can carry out EMC tests by order and under supervision of TUV Rhineland.

.ITS- Registration No: TMPSHA031

Asia Institute Technology (Dongguan) Limited has been assessed and included in Intertek Shanghai TMP Program regarding Laboratory facilities and test equipment on Nov.10, 2006.

3.1 Deviation from standard

None

3.2 Abnormalities from standard conditions

None

4 General Information

4.1 General Description of EUT

Manufacturer:	SINTAI Optical(shen zhen) CO., LTD.
Manufacturer Address:	Li-Song_lang The Second Industry Zone, Gongming Town, Shenzhen City,Guang Dong Province, China.
EUT Name:	Bluetooth leveler
Model No:	40-6250
Operation frequency:	2402 MHz to 2480MHz
Channel Number:	79
Modulation Technology:	GFSK, π/4 DQPSK, 8DPSK
AntennaType:	Printed on PCB
Brand Name:	Johnson Lvel & Tool
Serial No:	N/A
Power Supply Range:	DC 5V from adapter AC 100-240V 50/60Hz
Power Supply:	DC 5V from adapter AC 120V60Hz
Power Cord:	DC Input Line: 1.8m / Unshielded / Undetachable / Without ferrite core
Signal Cable:	N/A

Model description: N/A

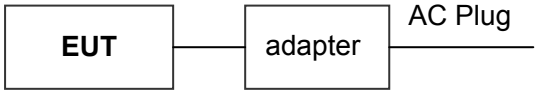
Description of Channel:

channel	Frequency (MHz)	channel	Frequency (MHz)
1	2402	…..	……
1	2403	……	……
2	2404	79	2480
.....	.....		
39	2441		
40	2442		
41	2443		
42	2444		

4.2 Description of Test conditions

(1) EUT was tested in normal configuration (Please See following Block diagram)

1. Block diagram of EUT configuration



(2) E.U.T. test conditions:

15.31(e) :For intentional radiators, measurements of the variation of the input power or the adiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% ofthe nominal rated supply voltage. For battery operated equipment, theequipment tests shall be performed using a new battery.

(3) Test frequencies:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and. if required. reported for each band in which the device can be operated with the device operating at the number of fequencies in each band specified in the following table:

Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

(4) Frequency range of radiated measurements:

According to the 15.33,The test range will be upto the tenth harmonic of the highest fundamental frequency

(5) During the preliminary test, GFSK, π/4-QPSK & 8DPSK with DH1 were pre-tested and found that 8DPSK emits the highest output power. Then the tests were carried on with DH1 compare to DH3 & DH5 and found that 8DPSK with DH5 emit the highest output power, and therefore had been tested under operating condition.

Following channels were selected for the radiated emission testing only as listed below:

Tested Channel	Modulation Type	Packet Type
Low, Mid, High	GFSK	DH 5
Low, Mid, High	8DPSK	DH 5

4.3 Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	signal cable
1	AC Adapter	Li-Song_lang	JLD-0505WU	N/A	1.5m / Unshielded / Undetachable / Without ferrite core	N/A

5 Equipments List for All Test Items

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	ADVANTEST	R3182	150900201	2010.10.16	2011.04.15
2	EMI Measuring Receiver	Schaffner	SCR3501	235	2010.10.16	2011.04.15
3	Low Noise Pre Amplifier	Tsj	MLA-10K01-B01-27	1205323	2010.09.08	2011.03.07
4	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2010.04.08	2011.04.07
5	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2010.07.15	2011.07.14
6	Broadband Horn Antenna	SCHWARZBECK	BBHA9120A	451	2010.07.15	2011.07.14
7	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2010.09.08	2011.03.07
8	EMI Test Receiver	R&S	ESCI	100124	2009.12.29	2010.12.28
9	LISN	Kyoritsu	KNW-242	8-837-4	2010.04.08	2011.04.07
10	LISN	Kyoritsu	KNW-407	8-1789-3	2010.04.08	2011.04.07

11	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2010.09.08	2011.03.07
12	Loop Antenna	ARA	PLA-1030/B	1029	2010.03.20	2011.03.19

6 Test Result

6.1 Antenna Requirement

6.1.1 Standard requirement

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

15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

6.1.2 EUT Antenna

The antenna is integrated on the main PCB and no consideration of replacement.antenna gain is 1dbi max

6.2 Conduction Emissions Measurement

6.2.1 limit

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

Note:Decreases with the logarithm of the frequency.

6.2.2 Test procedure

EUT was placed upon a wooden test table 0.8m above the horizontal metal reference plane and 0.4m from the vertical ground plane, and it was connected to an AMN. The closest distance between the boundary of the EUT and the surface of the AMN is 0.8m. All peripherals were connected to another AMN, and placed at a distance of 10cm from each other. A spectrum and receiver was connected to the RF output port of the AMN. Both average and quasi-peak value were detected.

6.2.3 Test result

Test Data: 2010-11-4

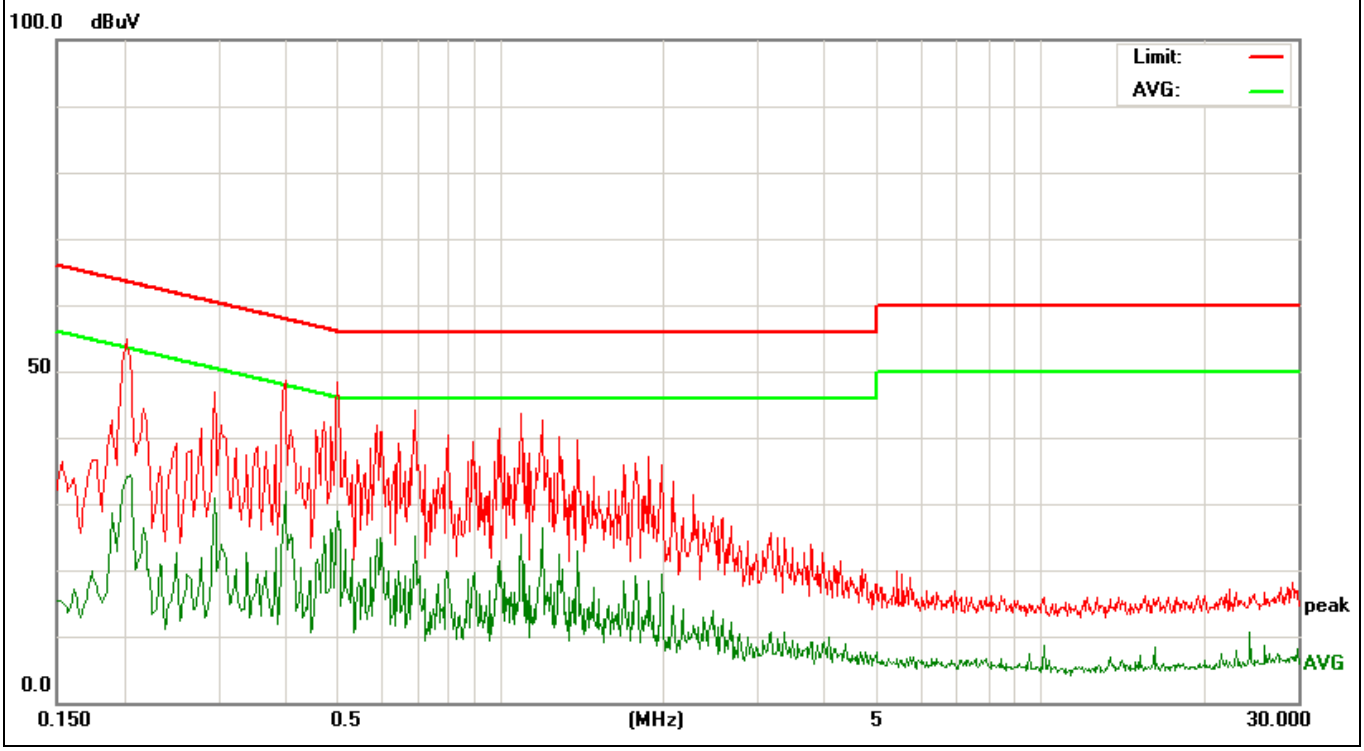
Operating Environment: 20.3°C, 48% RH, 102 Kpa

Line DC 5V From adapter AC 120V60Hz TX MODE

Frequency	Factor	Meter Reading (dBμV)		Emission Level (dBμV)		Limits (dBμV)		Margin (dB)	
(MHz)	(dB)	Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
0.2060	11.09	41.09	23.33	52.18	34.42	63.36	53.36	-11.18	-18.94
0.2940	10.75	36.10	20.20	46.85	30.95	60.41	50.41	-13.56	-19.46
0.3980	10.54	38.10	21.42	48.64	31.96	57.89	47.89	-9.25	-15.93
0.4980	10.35	37.94	18.49	48.29	28.84	56.03	46.03	-7.74	-17.19
1.1940	10.18	32.41	16.30	42.59	26.48	56.00	46.00	-13.41	-19.52
1.9820	10.17	25.64	9.11	35.81	19.28	56.00	46.00	-20.19	-26.72

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. '*' means the worst case

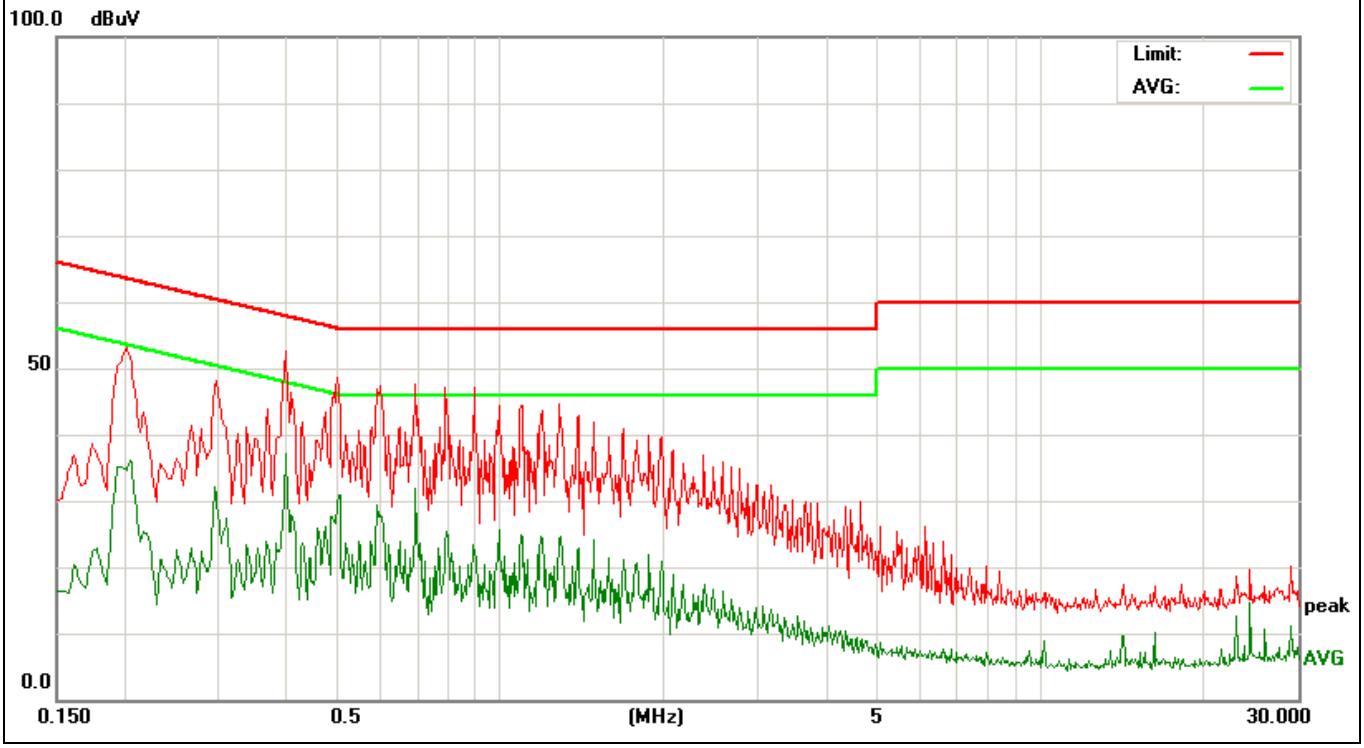


Neutral DC 5V From adapter AC 120V60Hz TX MODE

Frequency	Factor	Meter Reading (dBµV)		Emission Level (dBµV)		Limits (dBµV)		Margin (dB)	
(MHz)	(dB)	Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
0.2058	11.1000	40.8500	24.90	51.9500	36.00	63.3700	53.37	-11.4200	-17.37
0.2938	10.7500	36.7600	21.31	47.5100	32.06	60.4100	50.41	-12.9000	-18.35
0.3980	10.5400	42.2100	26.58	52.7500	37.12	57.8900	47.89	-5.1400	-10.77
0.5020	10.3500	36.4200	20.50	46.7700	30.85	56.0000	46.00	-9.2300	-15.15
0.6938	10.2700	37.2800	21.66	47.5500	31.93	56.0000	46.00	-8.4500	-14.07
1.0900	10.1900	34.1900	14.74	44.3800	24.93	56.0000	46.00	-11.6200	-21.07

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. '*' means the worst case



Note: '*' means the worst case

Quasi peak/Average = Reading Level + Factor

Factor= Cable Loss + LISN insertion loss

Mode: TX

6.3 Occupied Bandwidth

6.3.1 limit

15.247(a) (1)Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

6.3.2 Test procedure

(1) Connected the antenna port to the Spectrum Analyzer , set the Spectrum Analyzer as RBW=30kHz,VB𝕎≧RBW,Sweep time=Auto, Detector Function=Peak

(2) The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission.

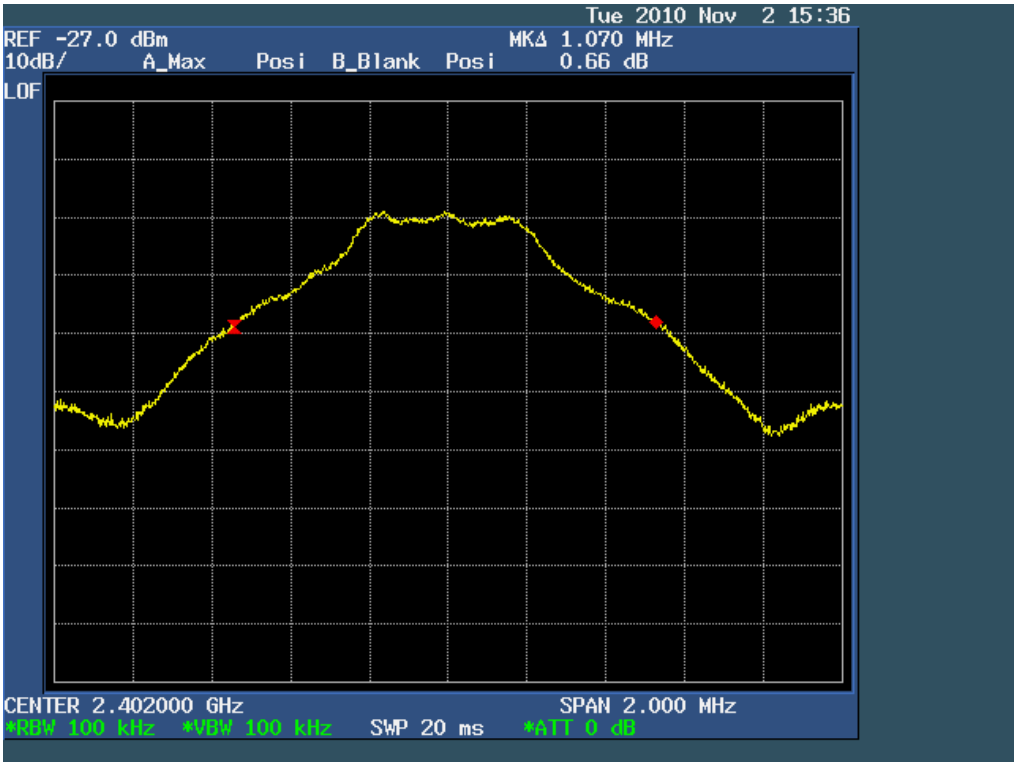
(3) The above procedure shall be repeated at the lowest, the middle, and the highest frequency of the stated frequency range with modulated mode. also shall be performed at different modes of operation

6.3.3 Test result

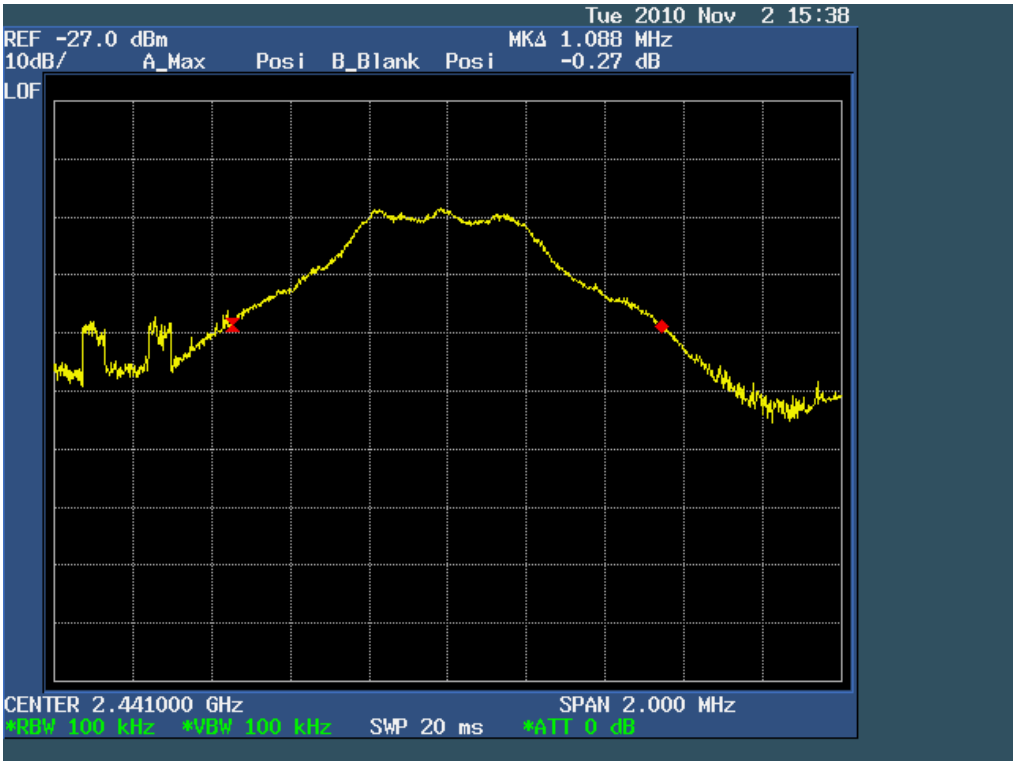
For GFSK

channel	Channel frenqucy (MHz)	20dB bandwidth (KHz)	Limit (KHz)	Conclusion
Low	2402	1070	N/A	Pass
Middle	2441	1088	N/A	Pass
Highest	2480	1094	N/A	Pass

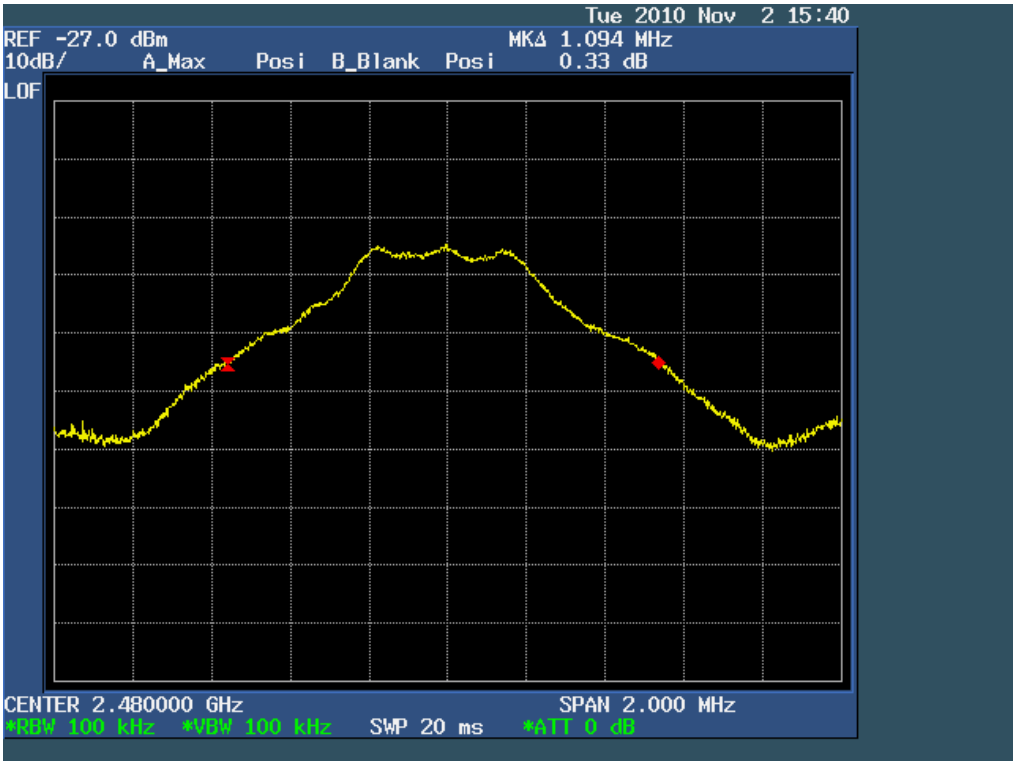
CH1


Tue 2010 Nov 2 15:36
REF -27.0 dBm
MKΔ 1.070 MHz
10dB/ A_Max Posi B_Blank Posi 0.66 dB
LOF
CENTER 2.402000 GHz
SPAN 2.000 MHz
*RBW 100 kHz *VBW 100 kHz SWP 20 ms *ATT 0 dB

CH39


Tue 2010 Nov 2 15:38
REF -27.0 dBm
MKΔ 1.088 MHz
10dB/ A_Max Posi B_Blank Posi -0.27 dB
LOF
CENTER 2.441000 GHz
SPAN 2.000 MHz
*RBW 100 kHz *VBW 100 kHz SWP 20 ms *ATT 0 dB

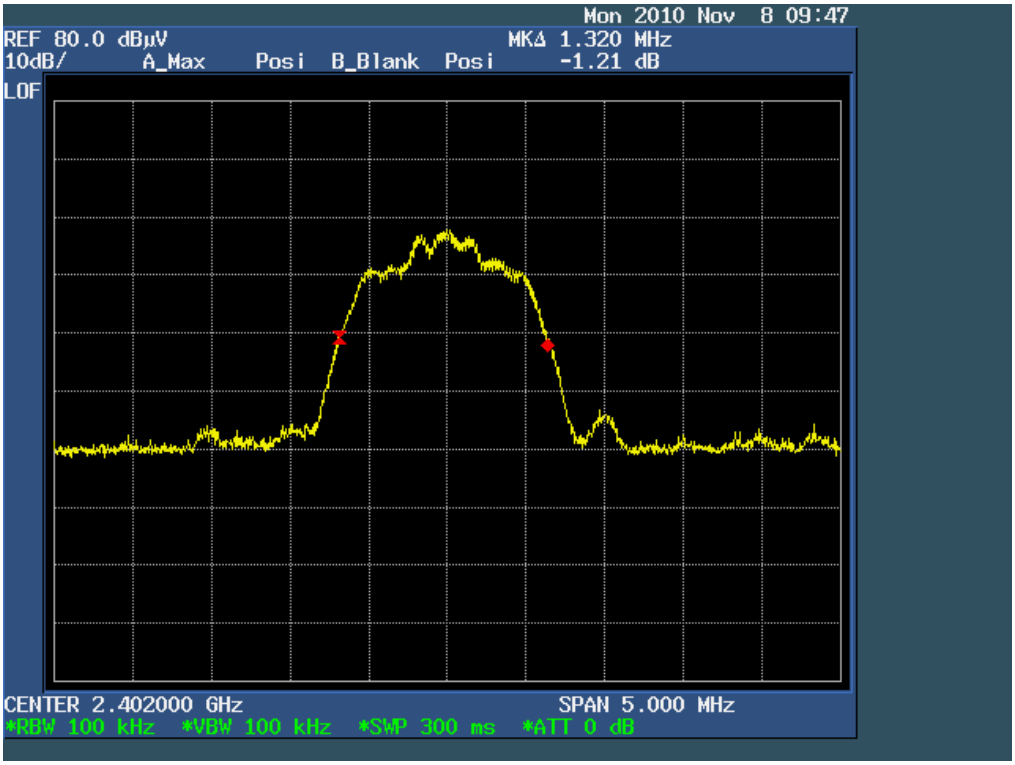
CH79



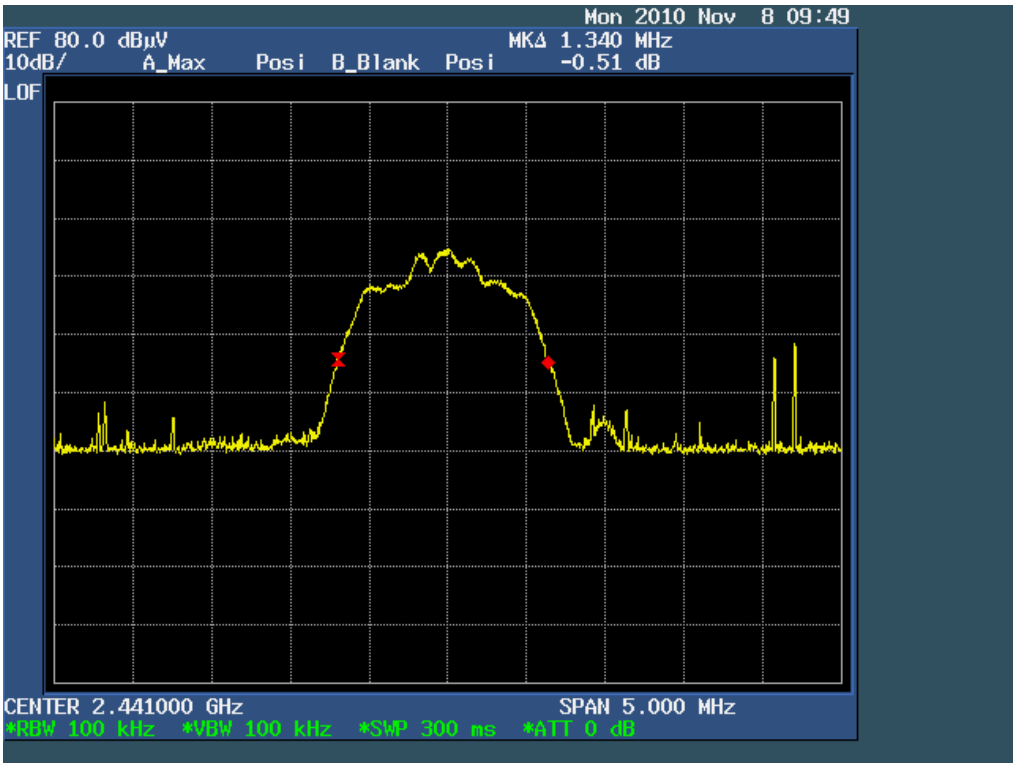
For 8DPSK

channel	Channel frenqucy (MHz)	20dB bandwidth (KHz)	Limit (KHz)	Conclusion
Low	2402	1320	N/A	Pass
Middle	2441	1340	N/A	Pass
Highest	2480	1355	N/A	Pass

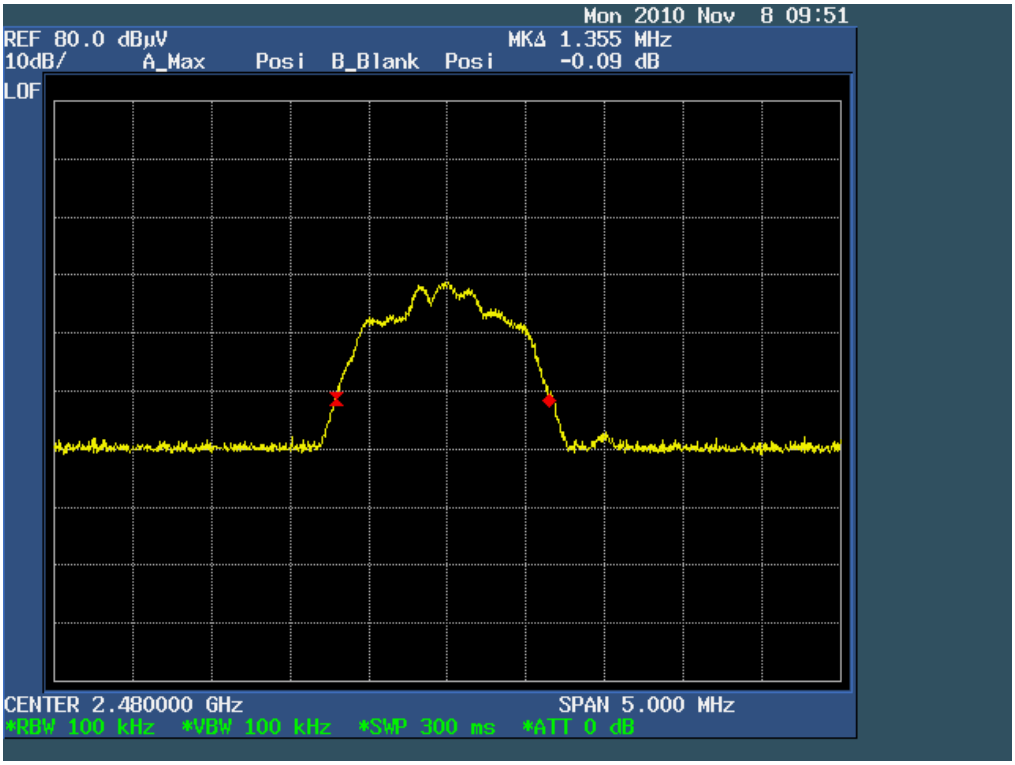
CH1


Mon 2010 Nov 8 09:47
REF 80.0 dBµV
MKΔ 1.320 MHz
10dB/ A_Max Posi B_Blank Posi -1.21 dB
LOF
CENTER 2.402000 GHz
SPAN 5.000 MHz
*RBW 100 kHz *VBW 100 kHz *SWP 300 ms *ATT 0 dB

C39


Mon 2010 Nov 8 09:49
REF 80.0 dBµV
MKΔ 1.340 MHz
10dB/ A_Max Posi B_Blank Posi -0.51 dB
LOF
CENTER 2.441000 GHz
SPAN 5.000 MHz
*RBW 100 kHz *VBW 100 kHz *SWP 300 ms *ATT 0 dB

CH79


Mon 2010 Nov 8 09:51
REF 80.0 dBµV
MKΔ 1.355 MHz
10dB/ A_Max Posi B_Blank Posi -0.09 dB
LOF
CENTER 2.480000 GHz
SPAN 5.000 MHz
*RBW 100 kHz *VBW 100 kHz *SWP 300 ms *ATT 0 dB

6.4 Carrier Frequencies Separated

6.4.1 limit

15.247(a) (1)Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

6.4.2 Test procedure

(1) Connected the antenna port to the Spectrum Analyzer, set the Spectrum Analyzer as RBW=100kHz,VBW≧RBW,Sweep time=Auto, Detector Function=Peak

(2) The EUT should be transmitting at its maximum data rate. Use the marker-delta function to determine the separation between the peaks of the adjacent channels

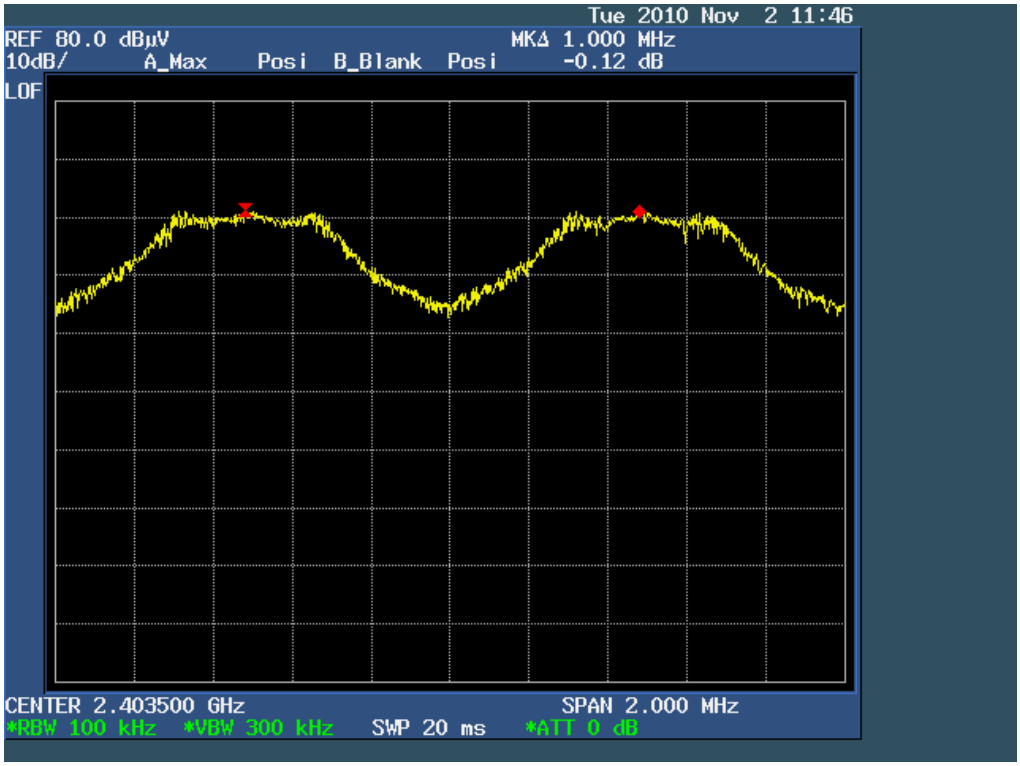
(3) The above procedure shall be repeated at the lowest, the middle, and the highest frequency of the stated frequency range with modulated mode. also shall be performed at different modes of operation

6.4.3 Test result

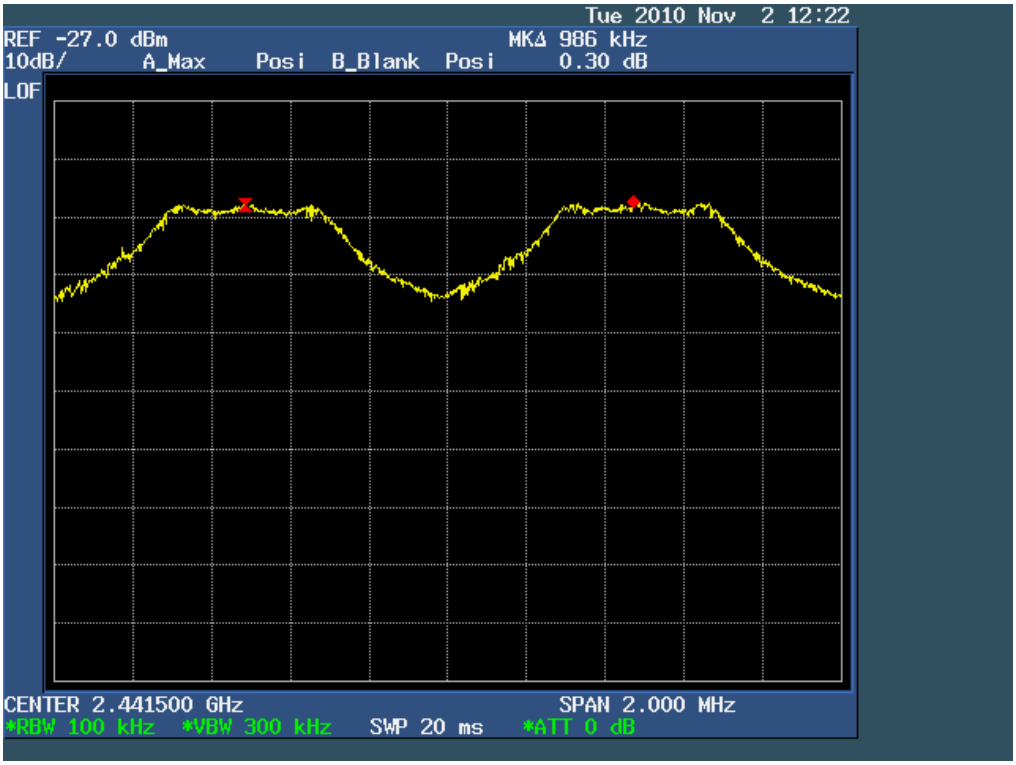
For GFSK

channel	Channel frenqucy (MHz)	Channel Separation (MHz)	Conclusion
Low	2402	1.000	Pass
Middle	2441	0.986	Pass
Highest	2480	0.933	Pass

CH1


Tue 2010 Nov 2 11:46
REF 80.0 dBµV
MKΔ 1.000 MHz
10dB/ A_Max Posi B_Blank Posi -0.12 dB
LOF
CENTER 2.403500 GHz
SPAN 2.000 MHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB

CH39

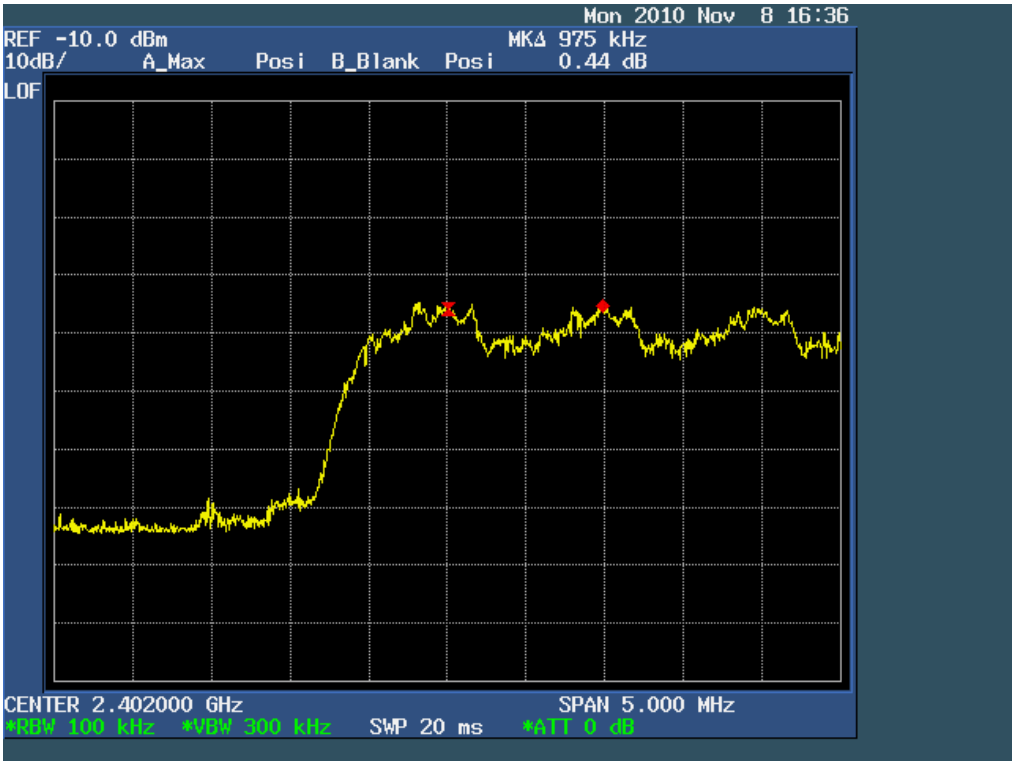

Tue 2010 Nov 2 12:22
REF -27.0 dBm
MKΔ 986 kHz
10dB/ A_Max Posi B_Blank Posi 0.30 dB
LOF
CENTER 2.441500 GHz
SPAN 2.000 MHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB

CH79

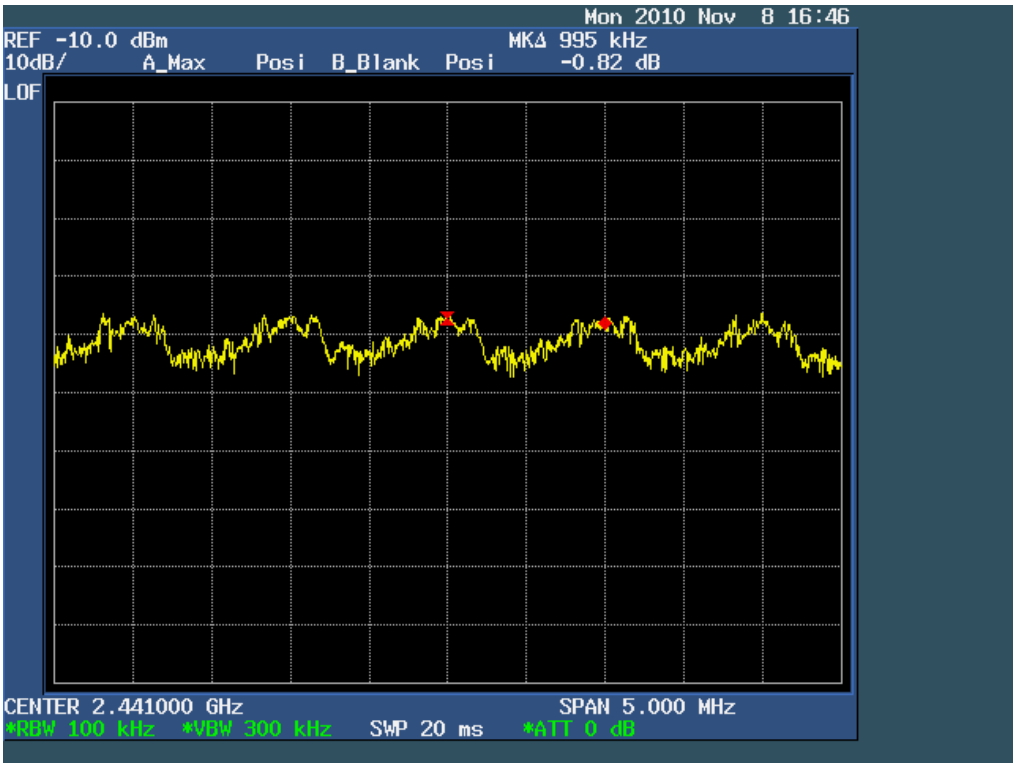
For 8DPSK

channel	Channel frenqucy (MHz)	Channel Separation (MHz)	Conclusion
Low	2402	0.975	Pass
Middle	2441	0.995	Pass
Highest	2480	1.005	Pass

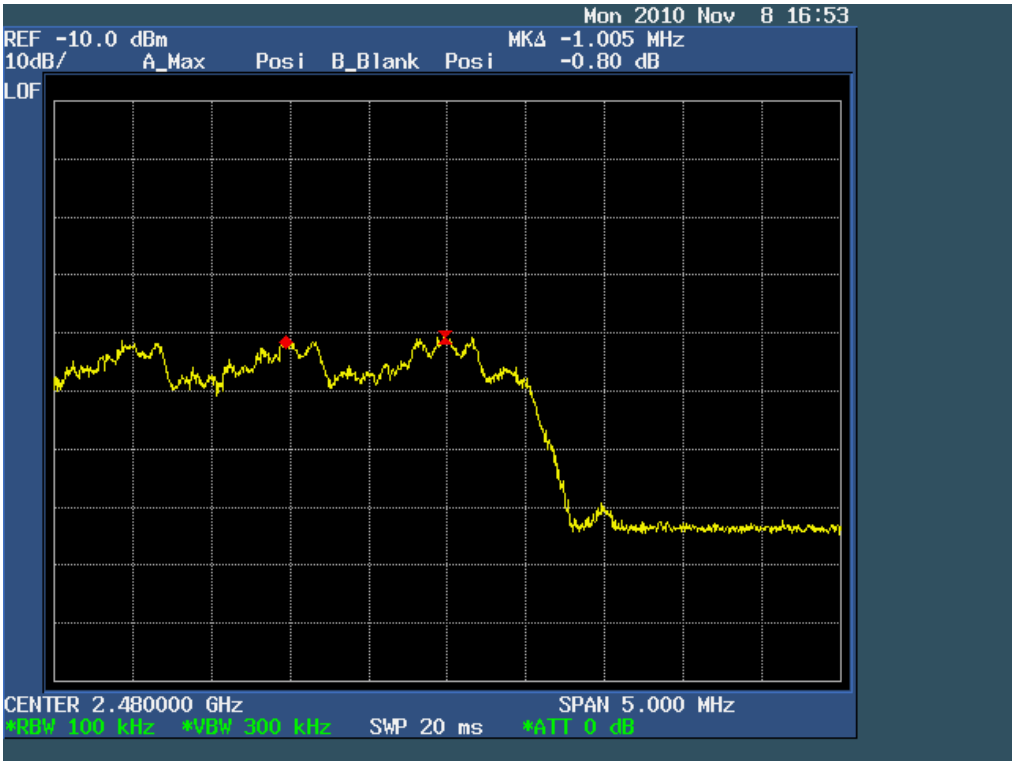
CH1


Mon 2010 Nov 8 16:36
REF -10.0 dBm
MKΔ 975 kHz
10dB/ A_Max Posi B_Blank Posi 0.44 dB
LOF
CENTER 2.402000 GHz
SPAN 5.000 MHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB

CH39


Mon 2010 Nov 8 16:46
REF -10.0 dBm
MKΔ 995 kHz
10dB/ A_Max Posi B_Blank Posi -0.82 dB
LOF
CENTER 2.441000 GHz
SPAN 5.000 MHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB

CH79


Mon 2010 Nov 8 16:53
REF -10.0 dBm
MKΔ -1.005 MHz
10dB/ A_Max Posi B_Blank Posi -0.80 dB
LOF
CENTER 2.480000 GHz
SPAN 5.000 MHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB

6.5 Hopping Channel Number

6.5.1 limit

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.

6.5.2 Test procedure

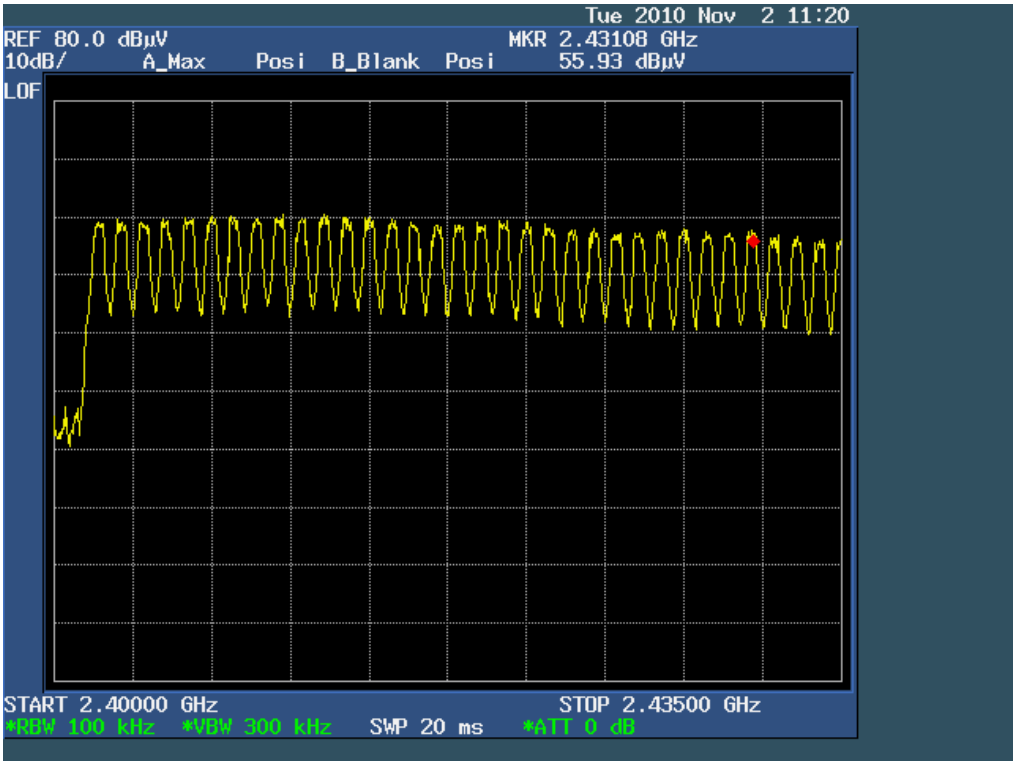
(1) Connected the antenna port to the Spectrum Analyzer , set the Spectrum Analyzer as RBW=100kHz,VBW≧RBW,Sweep time=Auto, Detector Function=Peak Trace=Maxhold

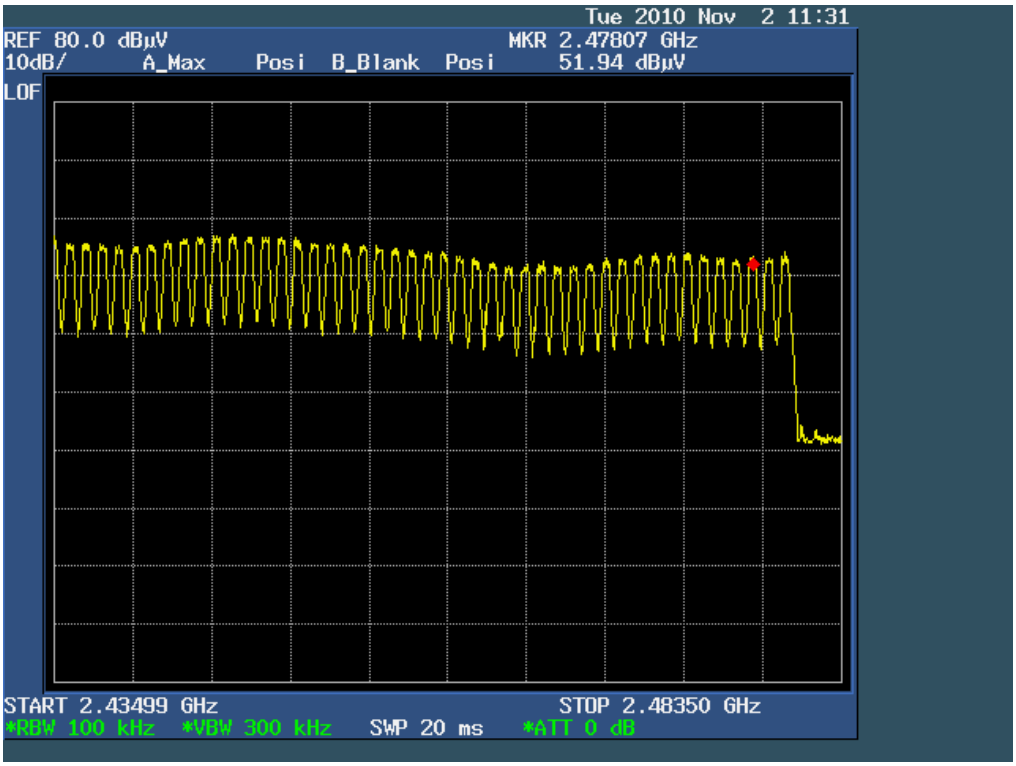
(2) The EUT should be have its hopping function enabled. Maxhold and record hopping channels It may prove necessary to break the span up to sections, in order to clearly show all of the hopping frequencies.

6.5.3 Test result

For GFSK

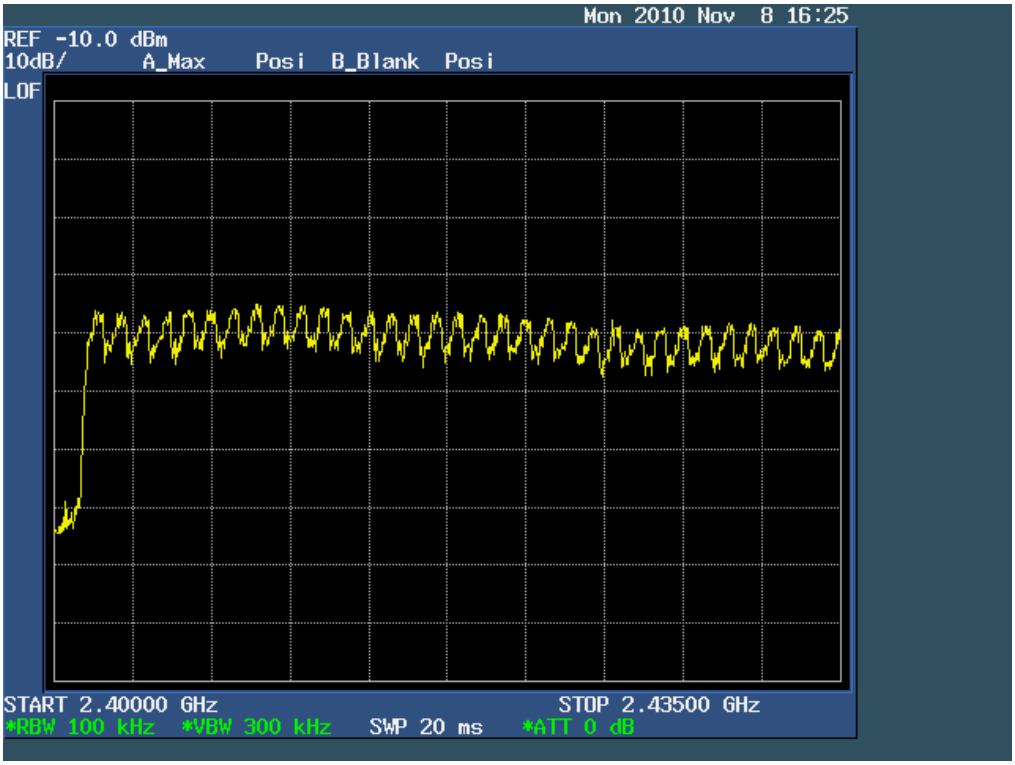
Hopping Channel Number result		
Operating Mode: GFSK Mode	Test date:2010-11-04	
Result	Limit	Conclusion
79	15	Pass

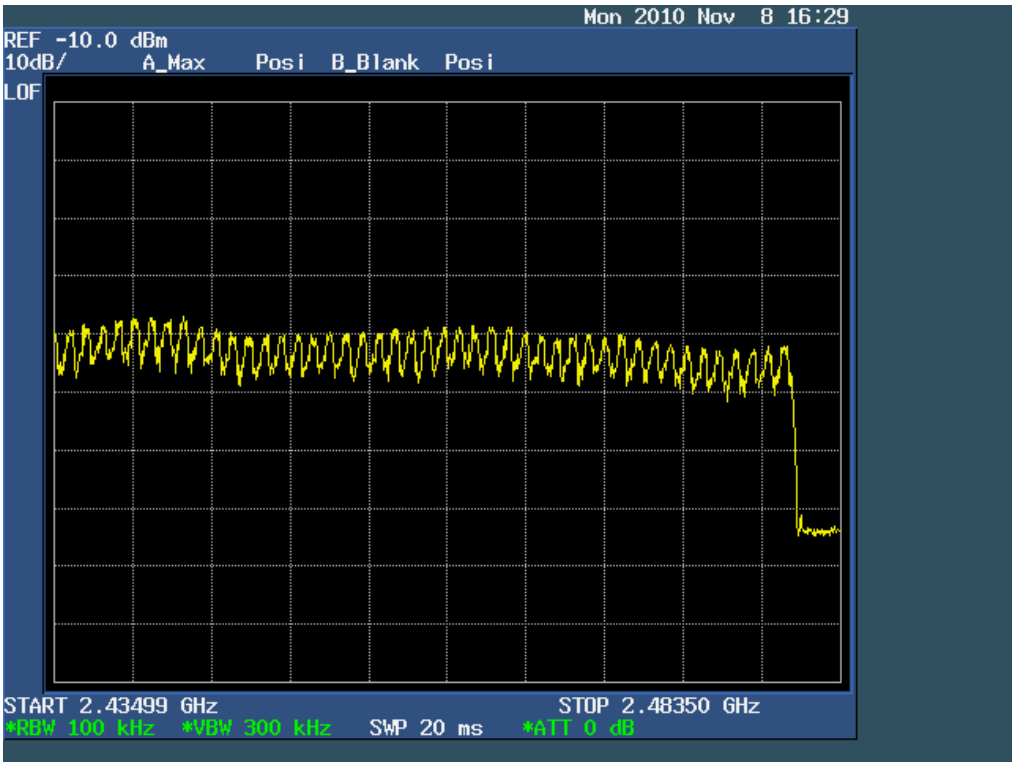

Tue 2010 Nov 2 11:20
REF 80.0 dBµV
MKR 2.43108 GHz
10dB/ A_Max Posi B_Blank Posi
55.93 dBµV
LOF
START 2.40000 GHz
STOP 2.43500 GHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB


Tue 2010 Nov 2 11:31
REF 80.0 dBµV
MKR 2.47807 GHz
10dB/ A_Max Posi B_Blank Posi
51.94 dBµV
LOF
START 2.43499 GHz
STOP 2.48350 GHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB

For 8DPSK

Hopping Channel Number result		
Operating Mode: GFSK Mode	Test date:2010-11-08	
Result	Limit	Conclusion
79	15	Pass


Mon 2010 Nov 8 16:25
REF -10.0 dBm
10dB/ A_Max Posi B_Blank Posi
LOF
START 2.40000 GHz
STOP 2.43500 GHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB


Mon 2010 Nov 8 16:29
REF -10.0 dBm
10dB/ A_Max Posi B_Blank Posi
LOF
START 2.43499 GHz
STOP 2.48350 GHz
*RBW 100 kHz *VBW 300 kHz SWP 20 ms *ATT 0 dB

6.6 Dwell time

6.6.1 limit

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.

6.6.2 Test procedure

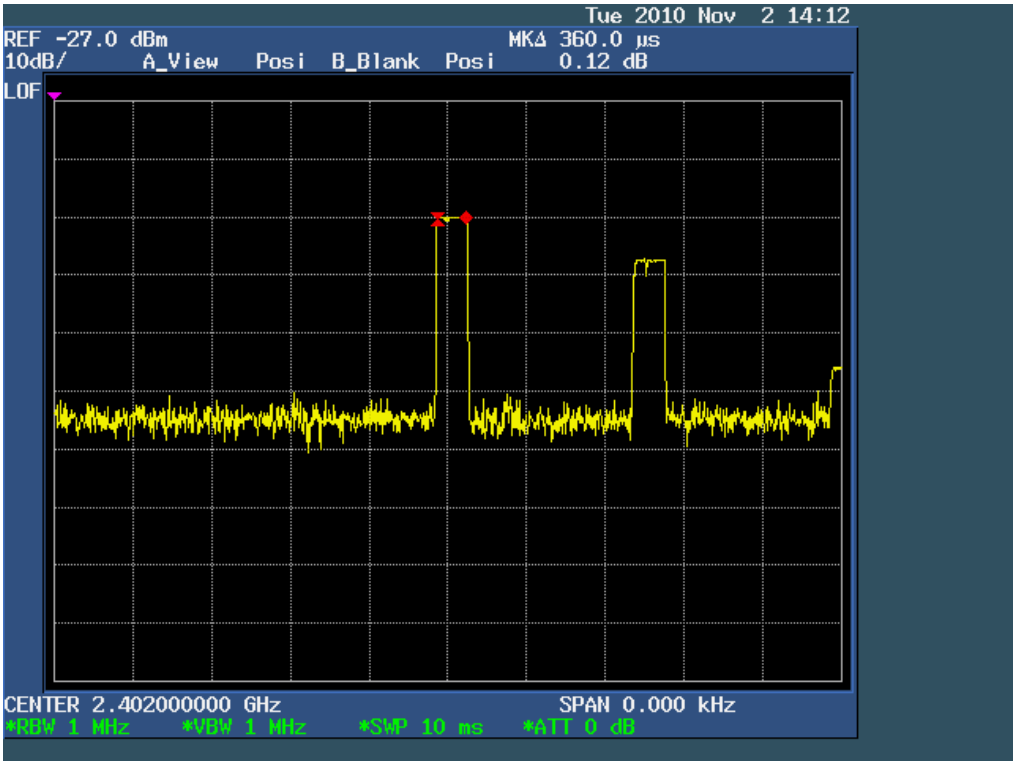
(1) connect the antenna port of the EUT to spectrum analyzer and set it in transmitting mode.
(2) Set center frequency of spectrum analyzer = operating frequency.
(3) Set the spectrum analyzer as RBW=1MHz, VBW=1MHz, Span=0Hz, Sweep Time is more than once pulse time.
(4) Measure the maximum time duration of one single pulse.
(5) Set the EUT for DH5, DH3 and DH1 packet transmitting.
(6) DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 3.37 x 31.6 = 106.6 within 31.6 seconds.
(7) DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 5.06 x 31.6 = 160 within 31.6 seconds.
(8) DH1 Packet permit maximum 1600 / 79 /2 = 10.12 hops per second in each channel (1 time slot RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 10.12 x 31.6 = 320 within 31.6 seconds.

6.6.3 Test result

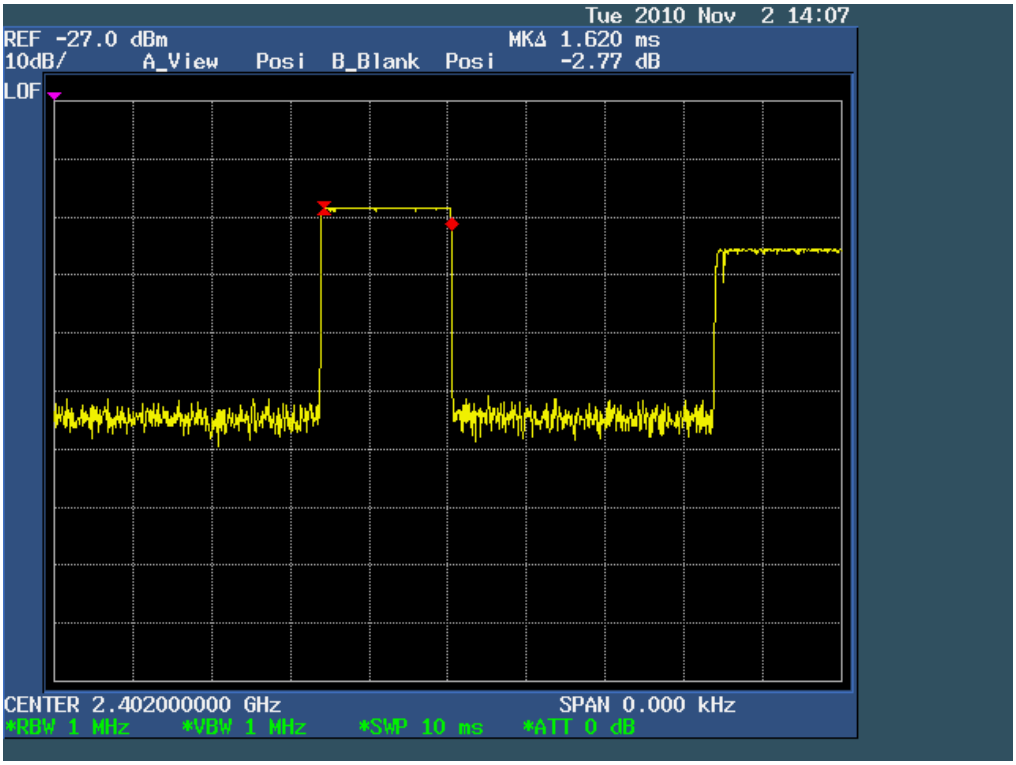
（1）GFSK Mode

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2402 MHz	2.85	0.3038	0.4000
DH3	2402 MHz	1.62	0.2592	0.4000
DH1	2402 MHz	0.36	0.1152	0.4000

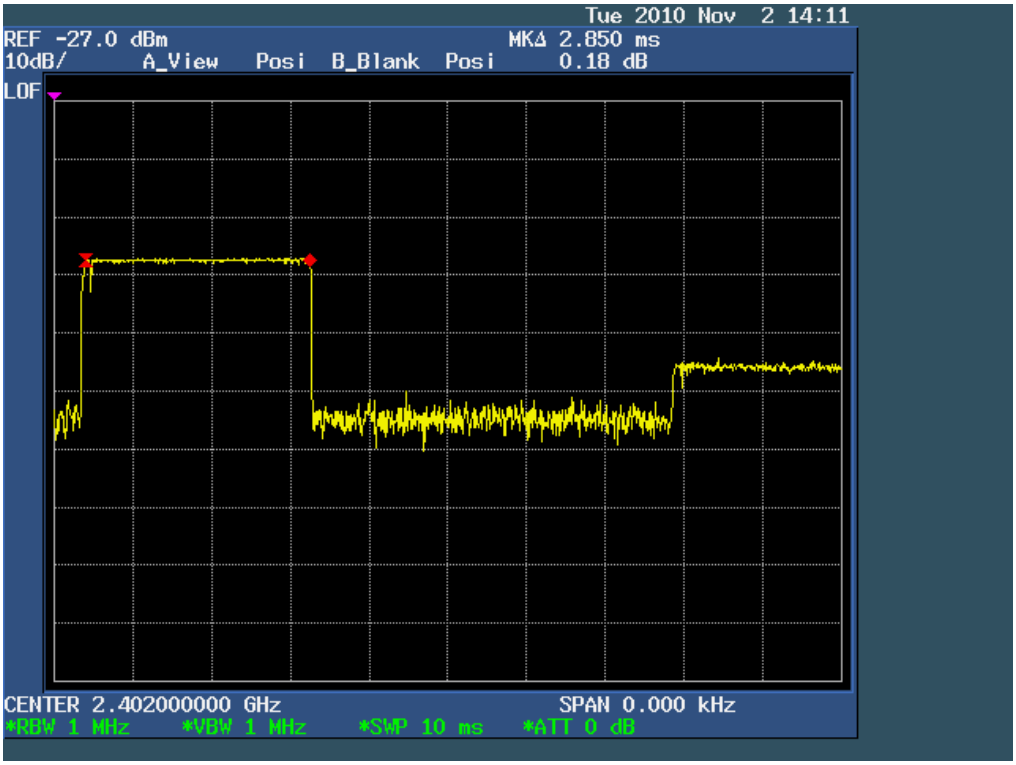
DH1


Tue 2010 Nov 2 14:12
REF -27.0 dBm
MKΔ 360.0 µs
10dB/ A_View Posi B_Blank Posi 0.12 dB
LOF
CENTER 2.402000000 GHz
SPAN 0.000 kHz
*RBW 1 MHz *VBW 1 MHz *SWP 10 ms *ATT 0 dB

DH3


Tue 2010 Nov 2 14:07
REF -27.0 dBm
MKΔ 1.620 ms
10dB/ A_View Posi B_Blank Posi -2.77 dB
LOF
CENTER 2.402000000 GHz
SPAN 0.000 kHz
*RBW 1 MHz *VBW 1 MHz *SWP 10 ms *ATT 0 dB

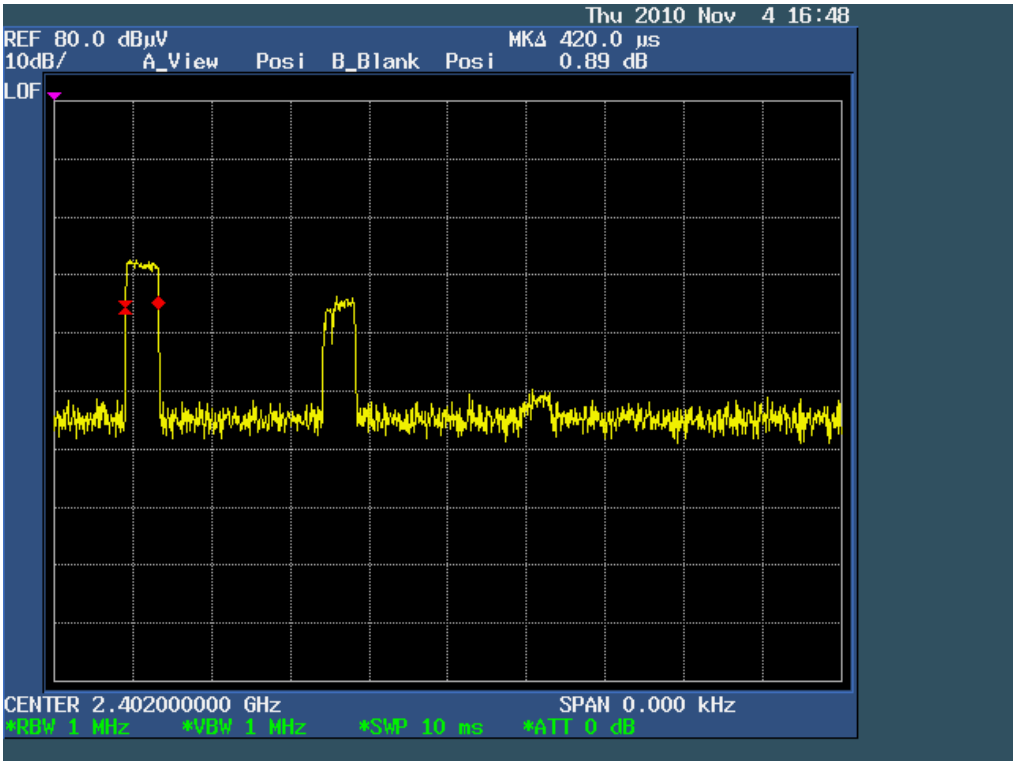
DH5


Tue 2010 Nov 2 14:11
REF -27.0 dBm
MKΔ 2.850 ms
10dB/ A_View Posi B_Blank Posi 0.18 dB
LOF
CENTER 2.402000000 GHz
SPAN 0.000 kHz
*RBW 1 MHz
*VBW 1 MHz
*SWP 10 ms
*ATT 0 dB

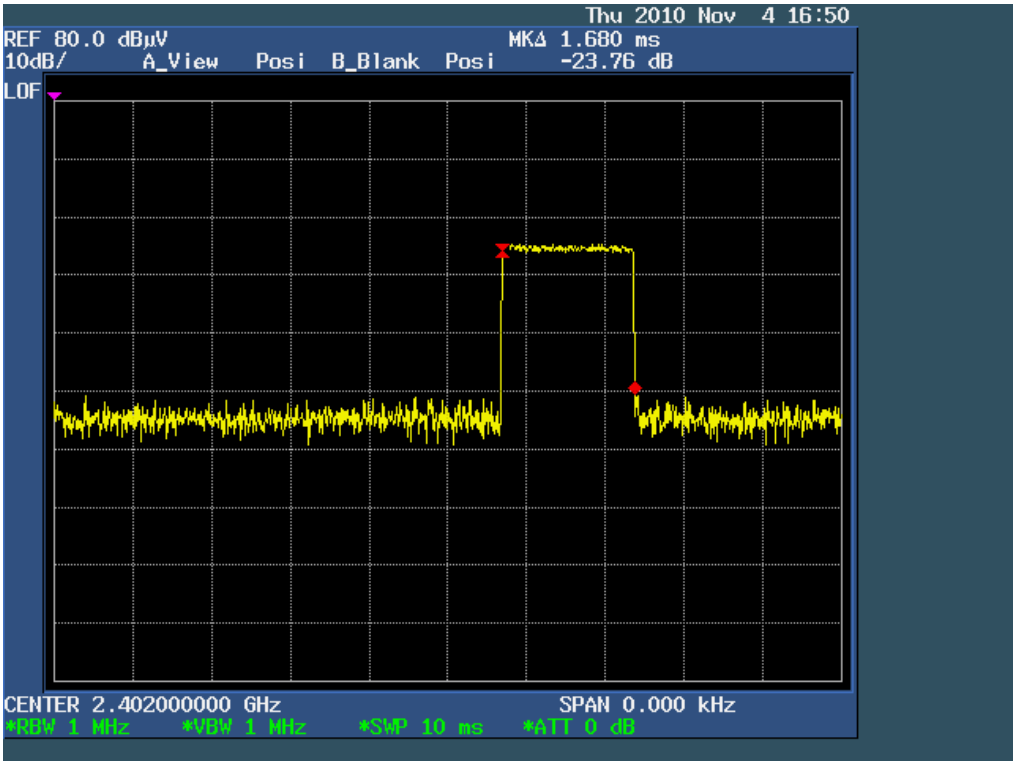
（2）8DPSK Mode

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2480 MHz	2.92	0.311	0.4000
DH3	2480 MHz	1.68	0.269	0.4000
DH1	2480 MHz	0.42	0.134	0.4000

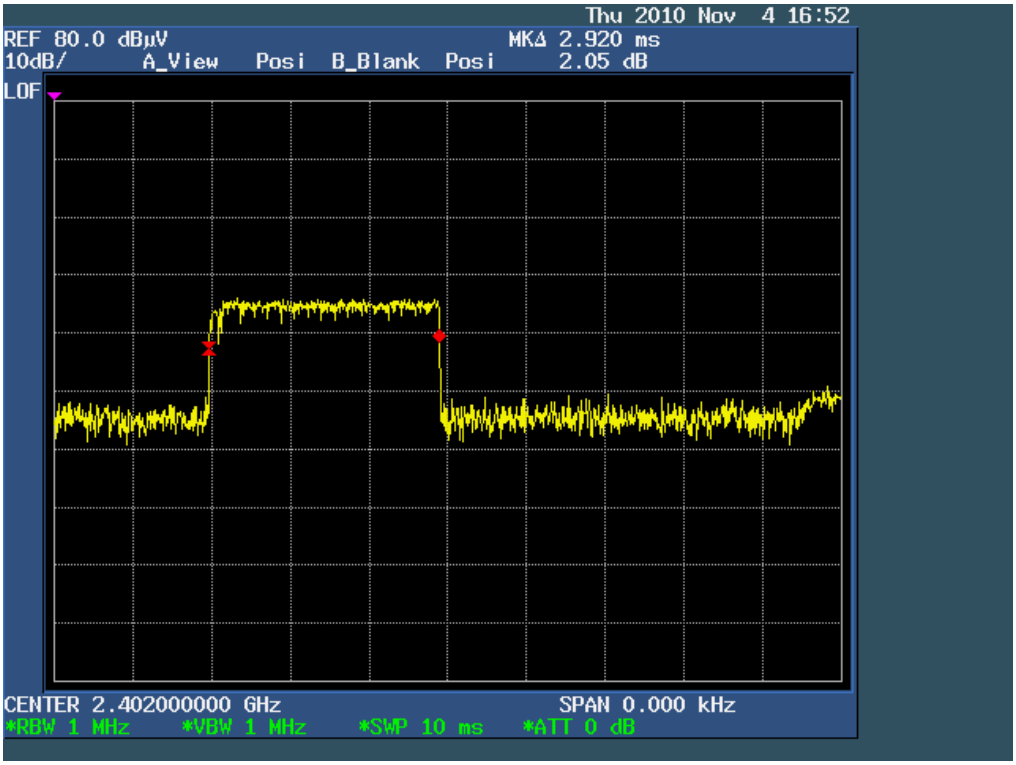
DH1



DH3


Thu 2010 Nov 4 16:50
REF 80.0 dBµV
MKΔ 1.680 ms
10dB/ A_View Posi B_Blank Posi -23.76 dB
LOF
CENTER 2.402000000 GHz
SPAN 0.000 kHz
*RBW 1 MHz *VBW 1 MHz *SWP 10 ms *ATT 0 dB

DH5


Thu 2010 Nov 4 16:52
REF 80.0 dBµV
MKΔ 2.920 ms
10dB/ A_View Posi B_Blank Posi 2.05 dB
LOF
CENTER 2.402000000 GHz
SPAN 0.000 kHz
*RBW 1 MHz *VBW 1 MHz *SWP 10 ms *ATT 0 dB

6.7 Maximum Peak Output Power

6.7.1 limit

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: 1watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

6.7.2 Test procedure

(1) Connected the antenna port to the Spectrum Analyzer, set the Spectrum Analyzer as RBW>20dB bandwidth as measured,VBW≧RBW,Sweep time=Auto, Detector Function=Peak

(2) The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power

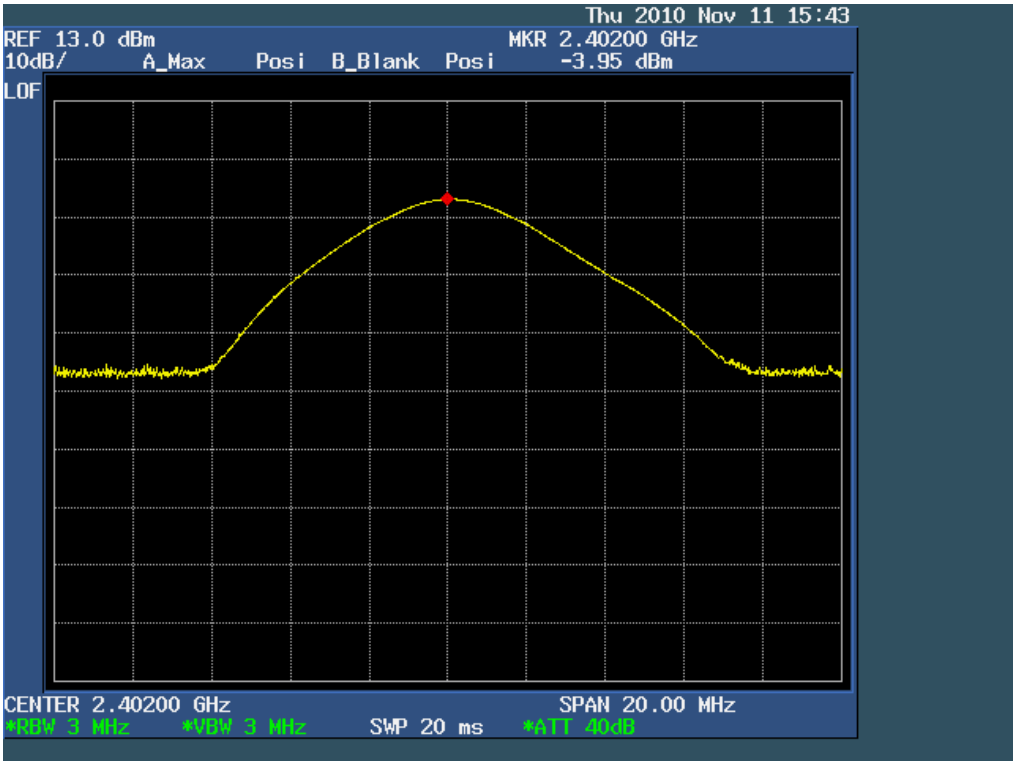
(3) The above procedure shall be repeated at the lowest, the middle, and the highest frequency of the stated frequency range with modulated mode. also shall be performed at different modes of operation

6.7.3 Test result

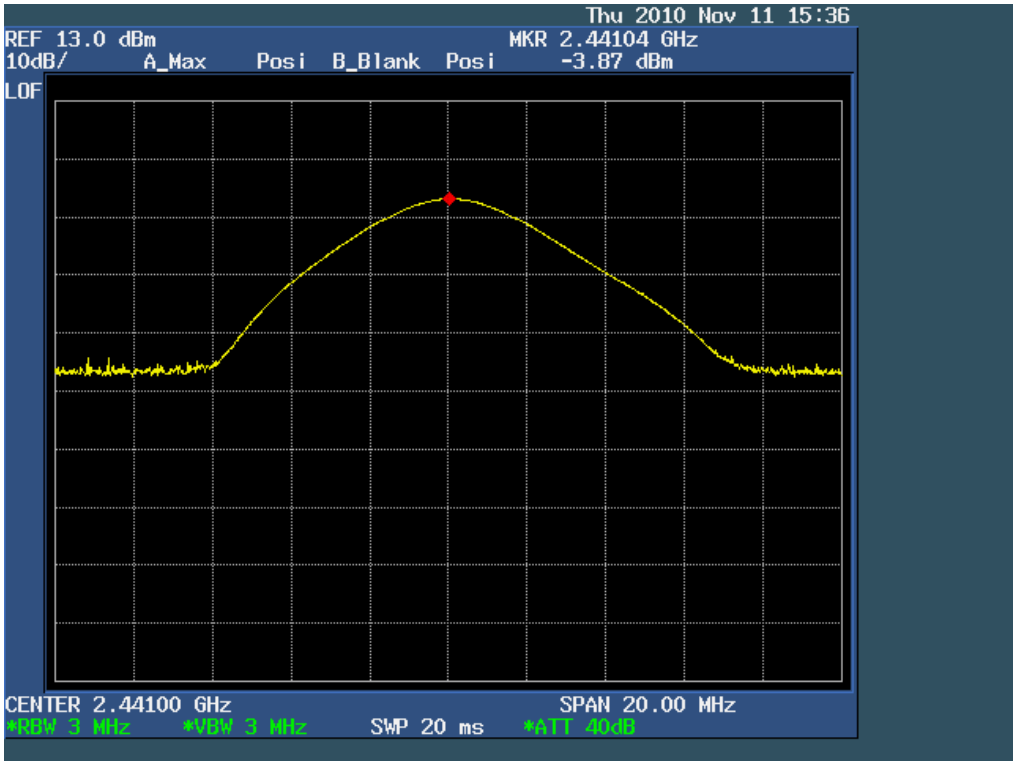
FOR GFSK

channel	Channel frenqucy (MHz)	Read Power (dBm)	Cable loss (dB)	Output power (dBm)	Limit (dBm)	Conclusion
Low	2402	-3.95	1.9	-2.05	30	Pass
Middle	2441	-3.87	1.9	-1.97	30	Pass
Highest	2480	-5.95	1.9	-4.05	30	Pass

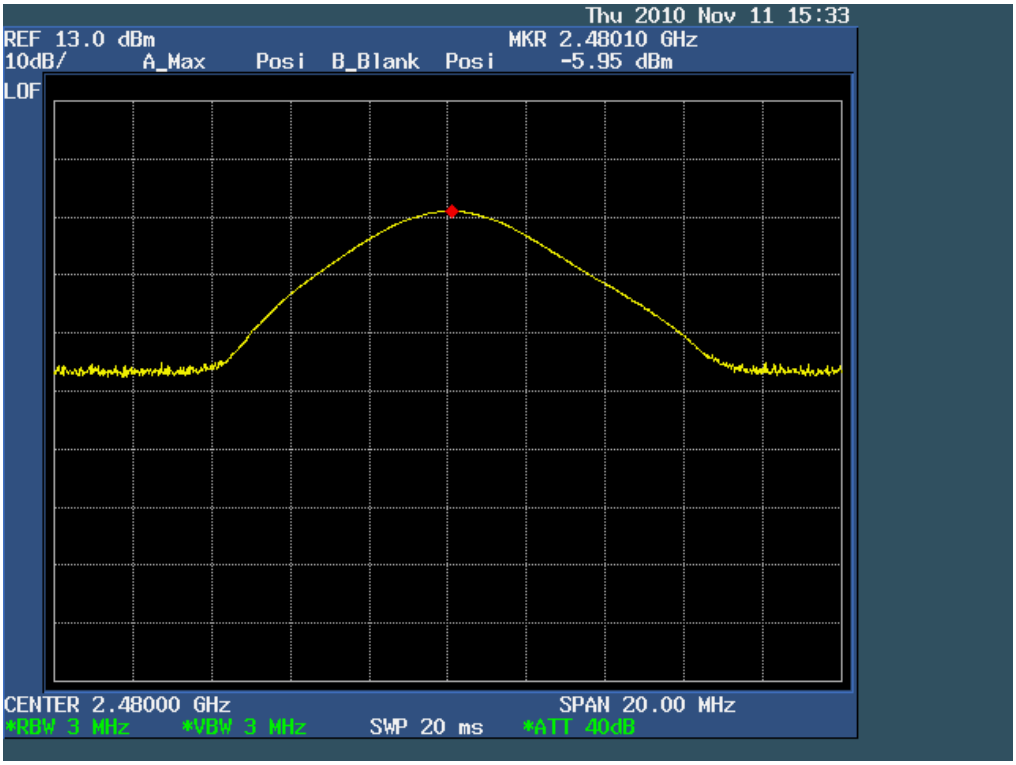
CH1


Thu 2010 Nov 11 15:43
REF 13.0 dBm
MKR 2.40200 GHz
10dB/ A_Max Posi B_Blank Posi -3.95 dBm
LOF
CENTER 2.40200 GHz
SPAN 20.00 MHz
*RBW 3 MHz
*VBW 3 MHz
SWP 20 ms
*ATT 40dB

CH39


Thu 2010 Nov 11 15:36
REF 13.0 dBm
MKR 2.44104 GHz
10dB/ A_Max Posi B_Blank Posi -3.87 dBm
LOF
CENTER 2.44100 GHz
SPAN 20.00 MHz
*RBW 3 MHz
*VBW 3 MHz
SWP 20 ms
*ATT 40dB

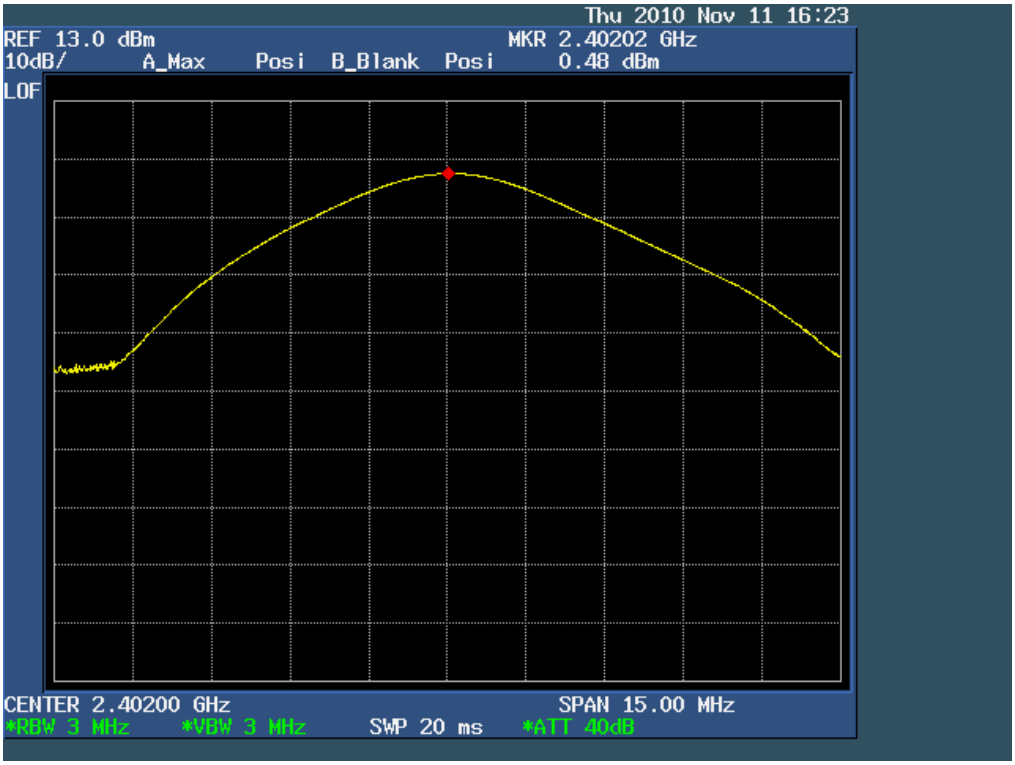
CH79



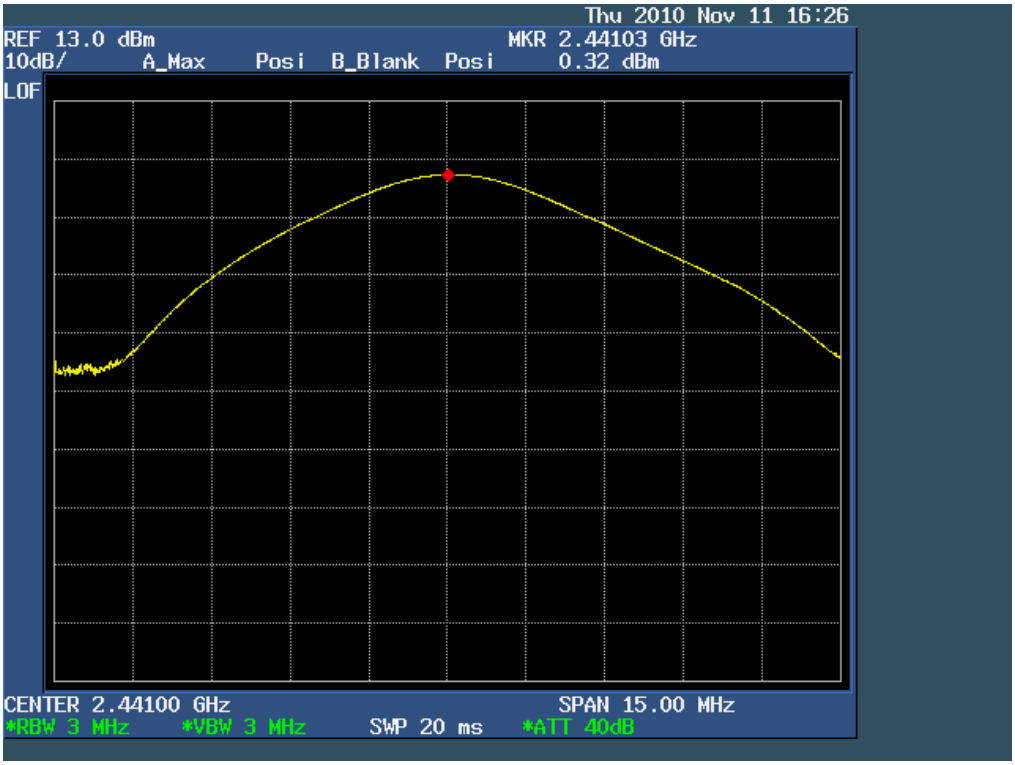
FOR 8DPSK

channel	Channel frenqucy (MHz)	Read Power (dBm)	Cable loss (dB)	Output power (dBm)	Limit (dBm)	Conclusion
Low	2402	0.48	1.9	2.38	30	Pass
Middle	2441	0.32	1.9	2.22	30	Pass
Highest	2480	-2.4	1.9	-0.9	30	Pass

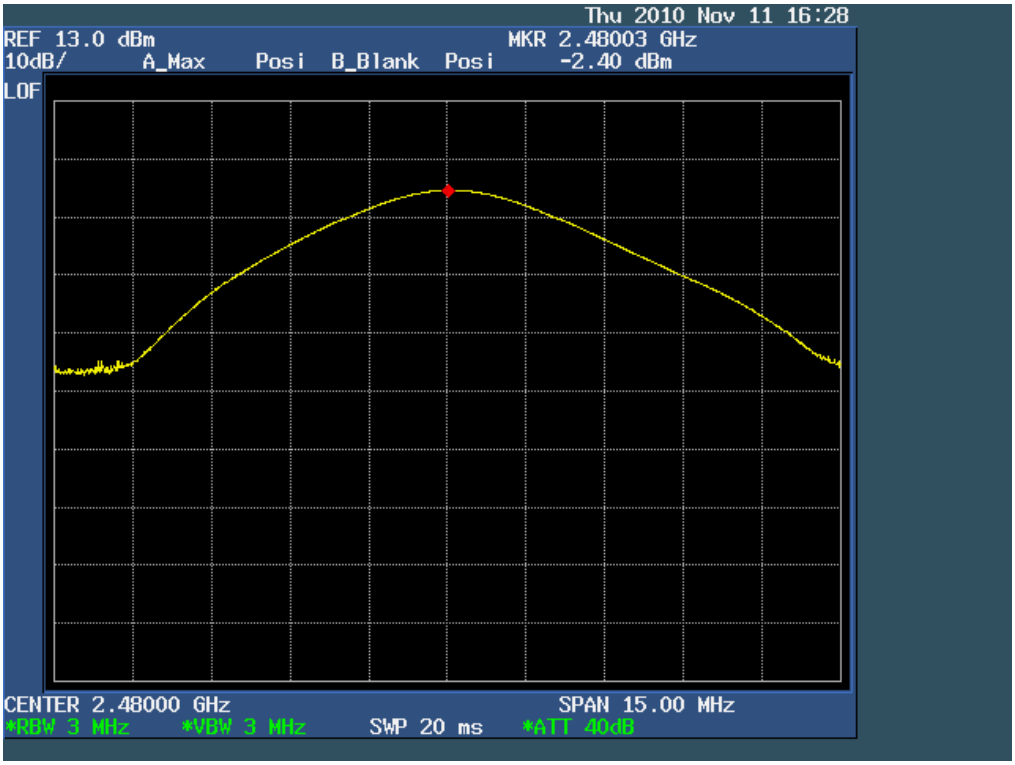
CH1


Thu 2010 Nov 11 16:23
REF 13.0 dBm
MKR 2.40202 GHz
10dB/ A_Max Posi B_Blank Posi 0.48 dBm
LOF
CENTER 2.40200 GHz
SPAN 15.00 MHz
*RBW 3 MHz
*VBW 3 MHz
SWP 20 ms
*ATT 40dB

CH39


Thu 2010 Nov 11 16:26
REF 13.0 dBm
MKR 2.44103 GHz
10dB/ A_Max Posi B_Blank Posi 0.32 dBm
LOF
CENTER 2.44100 GHz
SPAN 15.00 MHz
*RBW 3 MHz
*VBW 3 MHz
SWP 20 ms
*ATT 40dB

CH79


Thu 2010 Nov 11 16:28
REF 13.0 dBm
MKR 2.48003 GHz
10dB/ A_Max Posi B_Blank Posi -2.40 dBm
LOF
CENTER 2.48000 GHz
SPAN 15.00 MHz
*RBW 3 MHz
*VBW 3 MHz
SWP 20 ms
*ATT 40dB

6.8 Band edge

6.8.1 limit

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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.8.2 Test procedure

(1) Connected the antenna port to the Spectrum Analyzer, set the Spectrum Analyzer as RBW=100kHz,VBW≧RBW,Sweep time=Auto, Detector Function=Peak

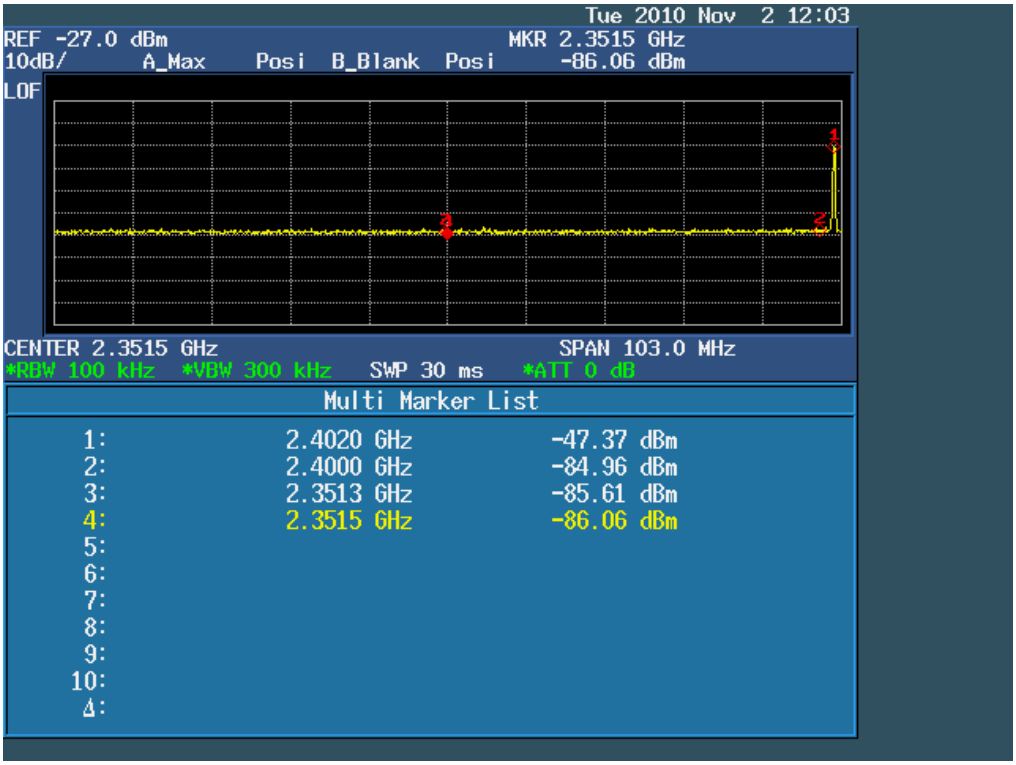
(2) The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. And then marker the bandedge Level.

(3) The above procedure shall be repeated at the lowest, and the highest frequency of the stated frequency range with modulated mode.

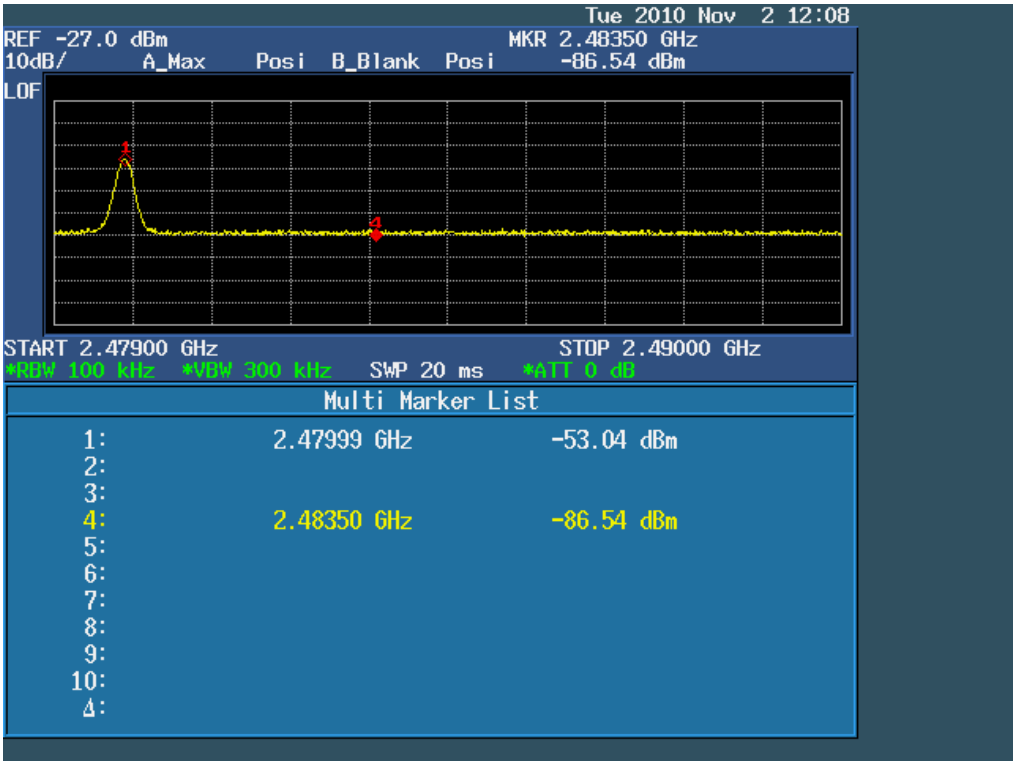
6.8.3 Test result

For GFSK

CH1

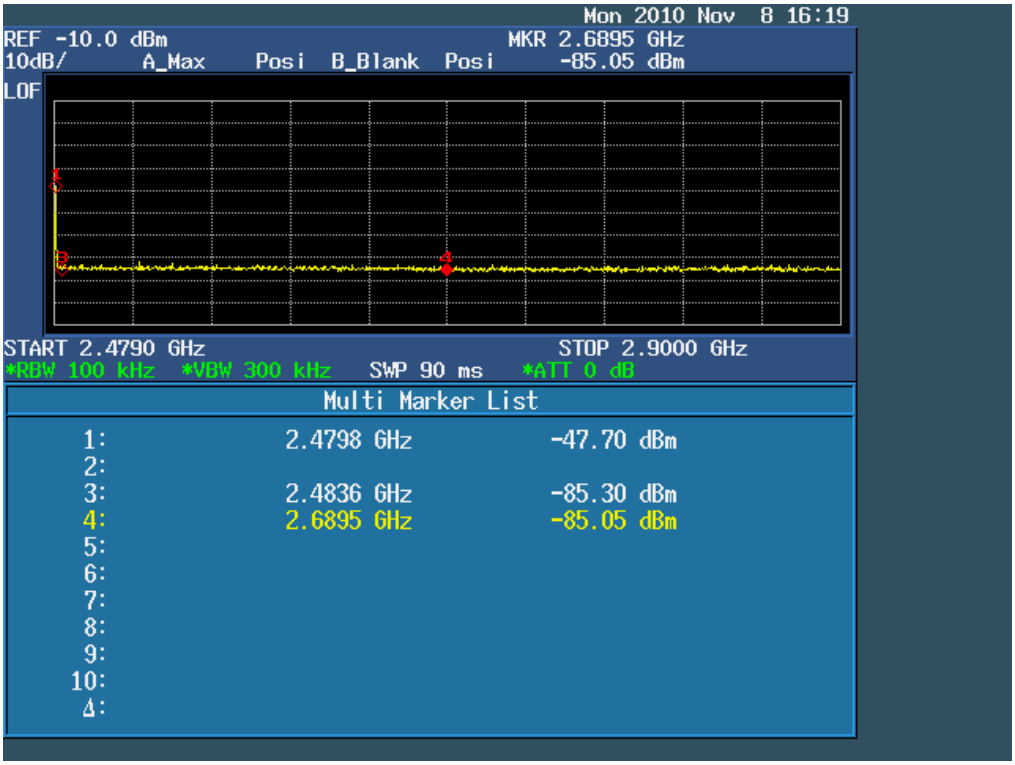


CH79



For 8DPSK

CH79



CH1

6.9 Radiated Emissions Measurement

6.9.1 Limit

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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c))

Frequency of Emission (MHz)	Field Strength		Measurement Distance (meters)
	μV/m	dBμV/m	
0.009-0.49	2400/F(kHz)		300
0.49-1.705	24000/F(kHz)		30
1.705-30	30		30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

6.9.2 Test procedure

EUT was placed upon a wooden test table which was placed on the turn table 0.8m above the horizontal metal ground plane, and operating in the mode as mentioned above. A receiving antenna was placed 3m away from the EUT. During testing, turn around the turn table and move the antenna from 1m to 4m to find the maximum field-strength reading. All peripherals were placed at a distance of 10cm between each other. Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

6.9.3 Test Result

there is not detected blow 30MHz

Test Data: 2010-11-4

Frenqucy Range: 30MHz to 1GHz

RBW/VBW: 100KHz/300KHz for spectrum, RBW=120KHz for receiver

Measurement Distance: 3 m

Operating Environment: 25.3°C, 58% RH, 102 Kpa

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
71.3299	42.42	-15.09	27.33	40.00	-12.67	QUASIPEAK
143.8294	**49.25**	**-11.38**	**37.87**	**43.50**	**-5.63**	**QUASIPEAK**
163.7549	46.44	-11.03	35.41	43.50	-8.090	QUASIPEAK
179.3863	46.46	-12.16	34.30	43.50	-9.200	QUASIPEAK
251.1803	51.46	-11.95	39.51	46.00	-6.490	QUASIPEAK
360.4476	40.86	-8.580	32.28	46.00	-13.72	QUASIPEAK

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
36.38	**50.23**	**-13.86**	**36.37**	**40.00**	**-3.630**	**QUASIPEAK**
63.98	47.25	-13.45	33.80	40.00	-6.200	QUASIPEAK
71.83	51.23	-15.20	36.03	40.00	-3.970	QUASIPEAK
144.33	50.88	-11.34	39.54	43.50	-3.960	QUASIPEAK
179.39	50.82	-12.16	38.66	43.50	-4.840	QUASIPEAK
191.75	51.87	-13.51	38.36	43.50	-5.140	QUASIPEAK

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

Test Data: 2010-11-4
Frenqucy Range: 1GHz to 25GHz
RBW/VBW:1MHz/1MHz for Peak, 1MHz/10Hz for Average
Measurement Distance: 3 m
Operating Environment: 25.3°C, 58% RH, 102 Kpa

(1) GFSK Mode

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1440	52.36	-4.523	47.83	74.00	-26.16	PEAK
1440	47.56	-4.523	43.03	54.00	-10.96	AVERAGE
2390	25.10	0.487	25.587	74.00	-48.413	PEAK
2390	18.65	0.487	19.137	54.00	-34.863	AVERAGE
4804	59.65	4.100	63.75	74.00	-10.25	PEAK
4804	**48.88**	**4.100**	**52.98**	**54.00**	**-1.020**	**AVERAGE**
7206	45.75	7.550	53.30	74.00	-20.70	PEAK
7206	41.55	7.550	49.10	54.00	-4.900	AVERAGE
9608	35.21	11.54	46.75	74.00	-27.25	PEAK
9608	24.74	11.54	36.28	54.00	-17.72	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1758	42.56	-4.550	38.01	74.00	-35.99	PEAK
1758	40.88	-4.550	36.33	54.00	-17.67	AVERAGE
2390	30.21	0.487	30.697	74.00	-43.303	PEAK
2390	25.32	0.487	25.807	54.00	-28.193	AVERAGE
4804	59.65	4.100	63.75	74.00	-10.25	PEAK
4804	**48.21**	**4.100**	**52.31**	**54.00**	**-1.690**	**AVERAGE**
7206	47.26	7.550	54.81	74.00	-19.19	PEAK
7206	40.74	7.550	48.29	54.00	-5.710	AVERAGE
9608	32.40	11.54	43.94	74.00	-30.06	PEAK
9608	25.87	11.54	37.41	54.00	-16.59	AVERAGE

Note: '*' means the worst case
Measurement Level = Reading Level + Factor
Factor=Ant Factor + Cable Loss
Low Channel:2402 MHz

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4882	52.00	4.250	56.25	74.00	-17.75	PEAK
4882	**47.52**	**4.250**	**51.77**	**54.00**	**-2.230**	**AVERAGE**
7323	44.88	9.26	54.14	74.00	-19.86	PEAK
7323	32.41	9.26	41.67	54.00	-12.33	AVERAGE
9764	34.65	11.68	46.33	74.00	-27.67	PEAK
9764	21.45	11.68	33.13	54.00	-20.87	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4882	56.56	4.250	60.81	74.00	-13.19	PEAK
4882	**45.28**	**4.250**	**49.53**	**54.00**	**-4.470**	**AVERAGE**
7323	48.65	9.26	57.91	74.00	-16.09	PEAK
7323	39.24	9.26	48.50	54.00	-5.500	AVERAGE
9764	41.25	11.68	52.93	74.00	-21.07	PEAK
9764	29.55	11.68	41.23	54.00	-12.77	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

Middle Channel :2441 MHz

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.5	24.62	0.814	25.434	74.00	-48.566	PEAK
2483.5	19.45	0.814	20.264	54.00	-33.736	AVERAGE
4960	55.19	4.39	59.58	74.00	-14.42	PEAK
4960	**45.55**	**4.39**	**49.94**	**54.00**	**-4.06**	**AVERAGE**
7440	47.21	9.88	57.09	74.00	-16.91	PEAK
7440	36.87	9.88	46.75	54.00	-7.250	AVERAGE
9920	40.28	11.95	52.23	74.00	-21.77	PEAK
9920	30.81	11.95	42.76	54.00	-11.24	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.5	26.64	0.814	27.454	74.00	-46.546	PEAK
2483.5	20.55	0.814	21.364	54.00	-32.636	AVERAGE
4960	52.59	4.39	56.98	74.00	-17.02	PEAK
4960	**47.52**	**4.39**	**51.91**	**54.00**	**-2.090**	**AVERAGE**
7440	46.51	9.88	56.39	74.00	-17.61	PEAK
7440	32.54	9.88	42.42	54.00	-11.58	AVERAGE
9920	41.57	11.95	53.52	74.00	-20.48	PEAK
9920	30.65	11.95	42.60	54.00	-11.40	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

High Channel :2480 MHz

(2) π/4 DQPSK Mode

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2390	24.87	0.487	25.357	74.00	-48.643	PEAK
2390	20.47	0.487	20.957	54.00	-33.043	AVERAGE
4804	58.77	4.100	62.87	74.00	-11.13	PEAK
4804	**47.58**	**4.100**	**51.68**	**54.00**	**-2.320**	**AVERAGE**
7206	46.74	7.550	54.29	74.00	-19.71	PEAK
7206	37.12	7.550	44.67	54.00	-9.330	AVERAGE
9608	34.66	11.54	46.20	74.00	-27.80	PEAK
9608	27.28	11.54	38.82	54.00	-15.18	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2390	26.58	0.487	27.067	74.00	-46.933	PEAK
2390	19.57	0.487	20.057	54.00	-33.943	AVERAGE
4804	55.29	4.100	59.39	74.00	-14.61	PEAK
4804	44.88	4.100	48.98	54.00	-5.020	AVERAGE
7206	48.67	7.550	52.77	74.00	-21.23	PEAK
7206	**42.55**	**7.550**	**50.10**	**54.00**	**-3.900**	**AVERAGE**
9608	33.88	11.54	45.42	74.00	-28.58	PEAK
9608	24.87	11.54	36.41	54.00	-17.59	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

Low Channel:2402 MHz

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4882	54.00	4.250	58.25	74.00	-15.75	PEAK
4882	**44.65**	**4.250**	**48.90**	**54.00**	**-5.100**	**AVERAGE**
7323	46.71	9.26	55.97	74.00	-18.03	PEAK
7323	35.81	9.26	45.07	54.00	-8.930	AVERAGE
9764	40.26	11.68	51.94	74.00	-22.06	PEAK
9764	28.62	11.68	40.30	54.00	-13.70	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4882	55.23	4.250	59.48	74.00	-14.52	PEAK
4882	**44.27**	**4.250**	**48.52**	**54.00**	**-5.480**	**AVERAGE**
7323	49.85	9.26	58.52	74.00	-15.48	PEAK
7323	37.94	9.26	47.20	54.00	-6.800	AVERAGE
9764	42.87	11.68	54.55	74.00	-19.45	PEAK
9764	30.54	11.68	42.22	54.00	-11.78	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

Middle Channel :2441 MHz

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.5	27.12	0.814	27.934	74.00	-46.066	PEAK
2483.5	21.07	0.814	21.884	54.00	-32.116	AVERAGE
4960	54.26	4.39	58.65	74.00	-15.35	PEAK
4960	**44.71**	**4.39**	**49.10**	**54.00**	**-4.900**	**AVERAGE**
7440	48.22	9.88	58.10	74.00	-15.90	PEAK
7440	35.26	9.88	45.14	54.00	-8.860	AVERAGE
9920	38.26	11.95	50.21	74.00	-23.79	PEAK
9920	27.34	11.95	39.29	54.00	-14.71	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.5	25.66	0.814	26.474	74.00	-47.526	PEAK
2483.5	20.87	0.814	21.684	54.00	-32.316	AVERAGE
4960	54.68	4.39	59.07	74.00	-14.93	PEAK
4960	**46.81**	**4.39**	**51.20**	**54.00**	**-2.800**	**AVERAGE**
7440	47.29	9.88	57.17	74.00	-16.83	PEAK
7440	35.64	9.88	45.52	54.00	-8.48	AVERAGE
9920	37.84	11.95	49.79	74.00	-24.21	PEAK
9920	29.54	11.95	41.49	54.00	-12.51	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

High Channel :2480 MHz

(3) 8DPSK Mode

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2390	27.88	0.487	28.367	74.00	-45.633	PEAK
2390	20.56	0.487	21.047	54.00	32.953	AVERAGE
4804	54.98	4.100	58.99	74.00	-15.01	PEAK
4804	45.78	4.100	41.68	54.00	-12.32	AVERAGE
7206	46.64	7.550	54.19	74.00	-19.81	PEAK
7206	**38.77**	**7.550**	**46.32**	**54.00**	**-7.680**	**AVERAGE**
9608	32.58	11.54	44.12	74.00	-29.88	PEAK
9608	28.14	11.54	39.68	54.00	-14.32	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2390	29.55	0.487	30.037	74.00	-43.963	PEAK
2390	21.74	0.487	22.227	54.00	-31.773	AVERAGE
4804	55.87	4.100	59.97	74.00	-14.03	PEAK
4804	45.12	4.100	49.22	54.00	-4.780	AVERAGE
7206	46.66	7.550	54.21	74.00	-19.79	PEAK
7206	**39.28**	**7.550**	**52.82**	**54.00**	**-3.18**	**AVERAGE**
9608	33.25	11.54	44.79	74.00	-29.21	PEAK
9608	26.54	11.54	38.08	54.00	-15.92	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

Low Channel:2402 MHz

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4882	50.47	4.250	54.72	74.00	-19.28	PEAK
4882	**42.98**	**4.250**	**47.14**	**54.00**	**-6.860**	**AVERAGE**
7323	43.21	9.26	52.47	74.00	-21.53	PEAK
7323	30.75	9.26	40.01	54.00	-13.99	AVERAGE
9764	35.57	11.68	47.25	74.00	-26.75	PEAK
9764	24.98	11.68	36.66	54.00	-17.34	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4882	57.58	4.250	61.83	74.00	-12.17	PEAK
4882	**44.78**	**4.250**	**49.03**	**54.00**	**-4.970**	**AVERAGE**
7323	47.69	9.26	56.95	74.00	-17.05	PEAK
7323	37.84	9.26	47.10	54.00	-6.900	AVERAGE
9764	38.54	11.68	50.22	74.00	-23.78	PEAK
9764	27.68	11.68	39.36	54.00	-14.64	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

Middle Channel :2441 MHz

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.5	28.65	0.814	29.464	74.00	-44.536	PEAK
2483.5	21.01	0.814	21.824	54.00	-32.176	AVERAGE
4960	54.97	4.39	59.36	74.00	-14.64	PEAK
4960	**44.44**	**4.39**	**48.83**	**54.00**	**-5.170**	**AVERAGE**
7440	44.26	9.88	54.14	74.00	-19.86	PEAK
7440	37.88	9.88	47.76	54.00	-6.240	AVERAGE
9920	39.54	11.95	51.49	74.00	-22.51	PEAK
9920	30.59	11.95	42.54	54.00	-11.46	AVERAGE

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.5	27.24	0.814	28.054	74.00	-45.946	PEAK
2483.5	23.74	0.814	24.554	54.00	-29.446	AVERAGE
4960	50.49	4.39	54.88	74.00	-19.12	PEAK
4960	**45.67**	**4.39**	**50.06**	**54.00**	**-3.94**	**AVERAGE**
7440	44.36	9.88	54.24	74.00	-19.76	PEAK
7440	31.87	9.88	43.82	54.00	-10.18	AVERAGE
9920	38.64	11.95	50.59	74.00	-23.41	PEAK
9920	31.57	11.95	43.52	54.00	-10.48	AVERAGE

Note: '*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss

High Channel :2480 MHz