



FCC TEST REPORT

according to

FCC Rules and Regulations Part 15 Subpart C

Applicant	: Amtek system Co., Ltd.
Address	: 14F-11, No. 79, Sec. 1, Hsin Tai Wu Rd., Hsi Chih City, Taipei Hsien 22101, Taiwan
Equipment	: Tablet PC
Model No.	: W101, W102
FCC ID	: R4RAIRW101M072
Trade Name	: iTablet

Laboratory Accreditation



- The test result refers exclusively to the test presented test model / sample.,
- Without written approval of **Cerpass Technology Corp.** the test report shall not be reproduced except in full.
- The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



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CERTIFICATE OF COMPLIANCE

according to

FCC Rules and Regulations Part 15 Subpart C

Applicant	: Amtek system Co., Ltd.
Address	: 14F-11, No. 79, Sec. 1, Hsin Tai Wu Rd., Hsi Chih City, Taipei Hsien 22101, Taiwan
Equipment	: Tablet PC
Model No.	: W101, W102
FCC ID	: R4RAIRW101M072

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4** The equipment was ***passed*** the test performed according to **FCC Rules and Regulations Part 15 Subpart C (2009)**.

The test was carried out on Nov. 30, 2010 at ***CerpPASS Technology Corp.***

Signature


Anson Chou
EMC/RF B.U. Vice General Manager



1. Report of Measurements and Examinations

1.1 List of Measurements and Examinations

FCC Rule	Description of Test	Result
15.203	. Antenna Requirement	Pass
15.207	. Conducted Emission	Pass
15.209	. Radiated Emission	Pass
15.247(a)(1)	. Channel Carrier Frequencies Separation	Pass
15.247(a)(1)	. 20dB Bandwidth Measurement	Pass
15.247(a)(1)	. Dwell Time	Pass
15.247(b)	. Number of Hopping Channels	Pass
15.247(b)	. Peak Output Power Measurement Data	Pass
15.247(d)	. Band Edges Measurement Data	Pass



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

CPU	Platform	Intel Atom Menlow-XL Z530 1.6GHz
	Cooling Method	Passive
Memory	Memory	2GB DDR2 SDRAM
Mass Storage	Storage	Pata IDE 1.8" SSD 32 G(MLC flash)
	Card Reader	SD Card
Video	Display Controller	LCD Multi touch panel controller
	LCD Display	10.1" , 1024X600 Glare type panel, LED backlight
	External Display	HDMI
	Camera	Camera 2M(Built-in)
Audio	Audio Features	Built in stereo speakers
		Build in analogue microphone where location
		Stereo headphones (3.5mm)
Other I/O Devices	Communication	802.11 b/g/n WiFi
		Bluetooth
		3G (option)
	Keyboard	NA
I/O Ports	External connectors	DC-in Jack
		3.5mm stereo headphone socket
		USB 2.0 Ports x 3
	Power Management	yes
Power System	AC/DC Adapter	AC 110~220Volt, 12V 3.A
	Battery Pack	4200m AH
	Power Management	yes
Dimension		270.3x169x18
Weight		1.0kg
OS		Windows 7 Home Premium



2.2 Test Mode & Test Software

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4
- b. The complete test system included remote workstation, Monitor, SD Card, Ipad, Earphone, and EUT for EMC test. The remote workstation included Notebook.
- c. Executive program, "EMIWIFITEST" under WIN7, which generates complete line of continuously repeating "H" pattern was used as the test software. The program was executed as follows:
 1. Turn on the power of all equipment.
 2. The PC reads the test program from the hard disk drive and runs it.
 3. The PC sends "H" messages to the monitor, and the monitor displays "H" patterns on the screen.
 4. The PC sends "H" messages to the internal SD Card, and the Hard Disk reads and writes the message.
 5. Repeat the steps from 2 to 4.
- d. The EUT was executed to keep transmitting and receiving data via Bluetooth.
- e. The following test mode was performed for conduction and radiation test:
 - GFSK: CH 00: 2402MHz, CH 39: 2441MHz, CH 78: 2480MHz.
 - $\pi/4$ -DQPSK: CH 00: 2402MHz, CH 39: 2441MHz, CH 78: 2480MHz.
 - 8DPSK: CH 00: 2402MHz, CH 39: 2441MHz, CH 78: 2480MHz.

2.3 Description of Test System

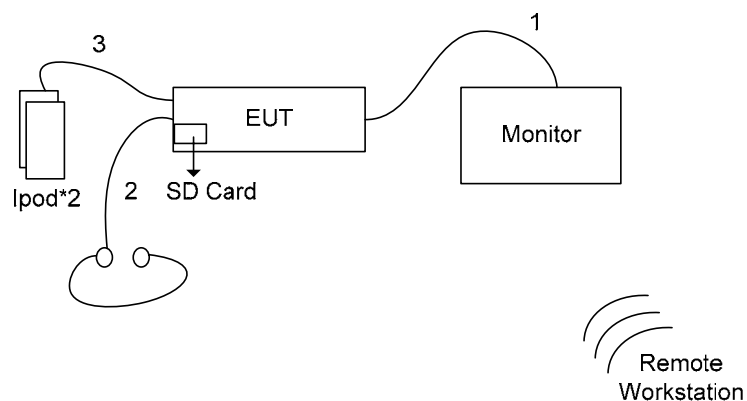
Device	Manufacturer	Model No.	Description
Monitor	DELL	U2410f	Power Cable, Unshielding 1.8 m Data Cable, HDMI Shielding 1.35 m
Ipod*2	Apple	A1320	Data Cable, USB Shielding, 1.0m
Earphone	MIC	MIC-4	Data Cable, Audio Shielding 1.35 m
SD Card	N/A	N/A	N/A
Remote workstation			
Notebook	SONY	VPCEB25FW	Power Cable, Adapter Unshielding 1.8 m

Use Cable:

Cable	Quantity	Description
HDMI	1	Unshielding, 1.5m



2.4 Connection Diagram of Test System



1. The HDMI cable is connected from EUT to the Monitor.
 2. The Audio cable is connected from EUT to the Earphone.
 3. The USB cables are connected from EUT to the Ipod.
- * The EUT keeps to transmit and receive data via Notebook by Wireless.



2.5 General Information of Test

Test Site :	CerpPASS Technology Corp. 2F-11, No. 3, Yuan Qu St. (Nankang Software Park), Taipei, Taiwan 115, R.O.C.
Test Site Location (OATS1-SD):	No. 68-1, Shibachong Si, Shihding Township, Taipei County, Taiwan, R.O.C.
FCC Registration Number :	TW1061, TW1056, 390316, 488071
IC Registration Number :	4934B-1, 4934D-1
VCCI Registration Number :	T-543 for Telecommunication Test C-3328 for Conducted emission test R-3428 for Radiated emission test G-97 for Radiated emission test above 1GHz.
Test Voltage:	AC 120V/ 60Hz
Test in Compliance with:	ANSI C63.4-2003 FCC Part 15 Subpart C
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 25000MHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.

2.6 Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE/NEUTRAL	2.71 dB
Radiated Emission	30 MHz ~ 25GHz	Vertical	4.11 dB
		Horizontal	4.10 dB
6 dB Bandwidth	---	---	7500 Hz
Maximum Peak Output Power	---	---	1.4 dB
100kHz Bandwidth of Frequency Band Edges	---	---	2.2 dB
Power Spectral Density	---	---	2.2 dB



☐ Additional attachment as following record:

[illegible]



3. Antenna Requirements

3.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

3.2 Antenna Construction and Directional Gain

Antenna type: PCB Antenna(the antenna is permanent attached)

Antenna Gain: 2.29 dBi



4. Test of Conducted Emission

4.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

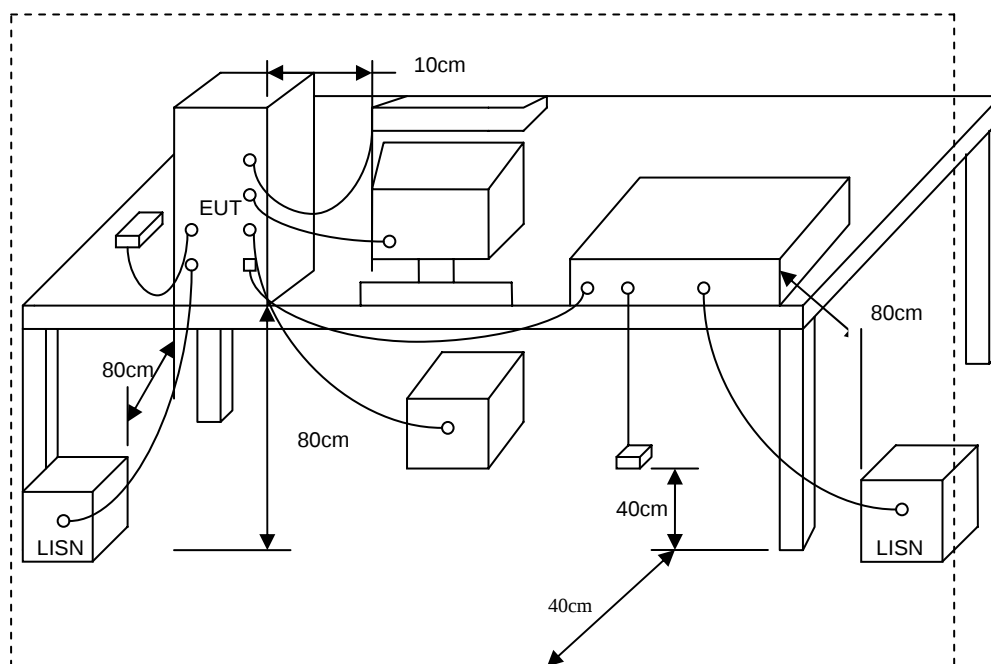
*Decreases with the logarithm of the frequency.

4.2 Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



4.3 Typical Test Setup



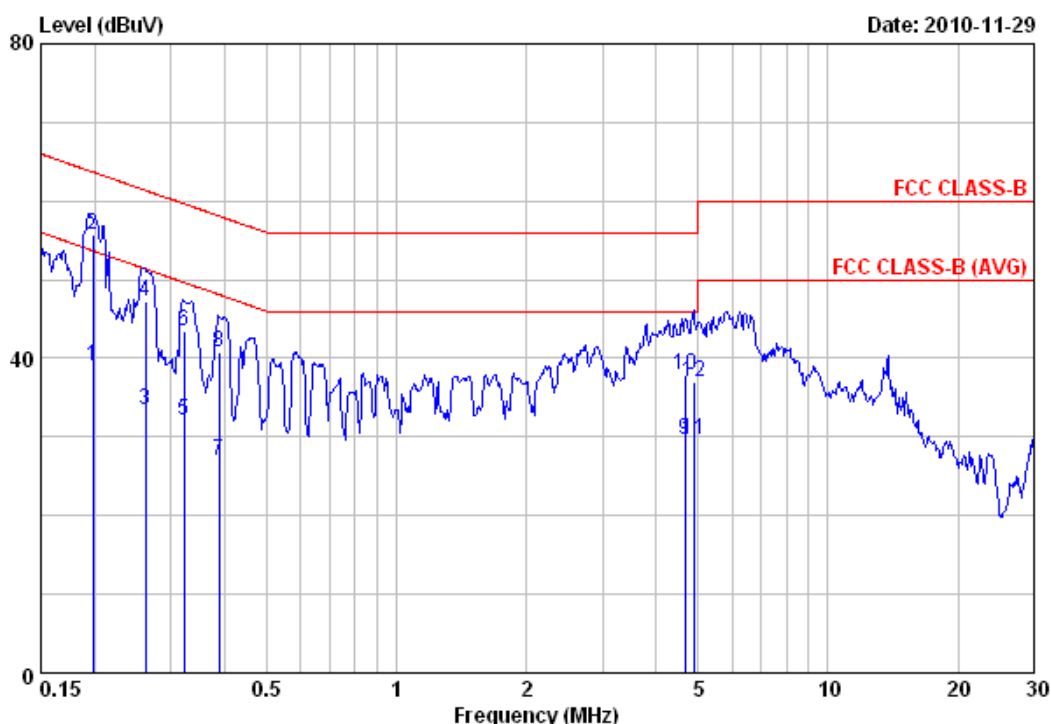
4.4 Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Receiver	R&S	ESCI	100821	2010/01/21	2011/01/20
LISN	Schwarzbeck	NSLK 8127	8127-516	2010/05/25	2011/05/24
LISN	EMCO	3825/2	9703-2655	2010/07/19	2011/07/18



4.5 Test Result and Data

Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: GFSK CH0	Temperature	: 25 °C
Memo	:	Humidity	: 56 %



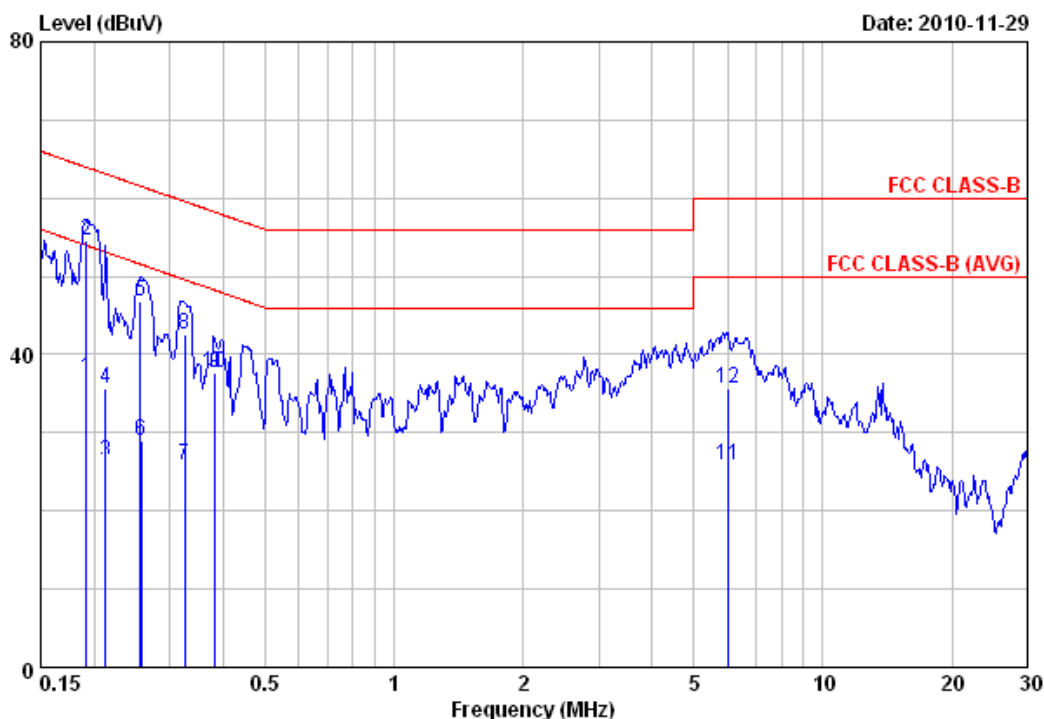
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.20	38.94	0.11	39.05	53.68	-14.63	Average
2	0.20	55.70	0.11	55.81	63.68	-7.87	QP
3	0.26	33.32	0.11	33.43	51.35	-17.92	Average
4	0.26	47.21	0.11	47.32	61.35	-14.03	QP
5	0.32	31.90	0.12	32.02	49.64	-17.62	Average
6	0.32	43.41	0.12	43.53	59.64	-16.11	QP
7	0.39	26.90	0.11	27.01	48.12	-21.11	Average
8	0.39	40.57	0.11	40.68	58.12	-17.44	QP
9	4.67	29.42	0.33	29.75	46.00	-16.25	Average
10	4.67	37.51	0.33	37.84	56.00	-18.16	QP
11	4.87	29.22	0.34	29.56	46.00	-16.44	Average
12	4.87	36.73	0.34	37.07	56.00	-18.93	QP

Notes:

1. Result = Read Value + Factor
2. Factor = LISN Factor + Cable Loss
3. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
4. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: GFSK CH0	Temperature	: 25 °C
Memo	:	Humidity	: 56 %



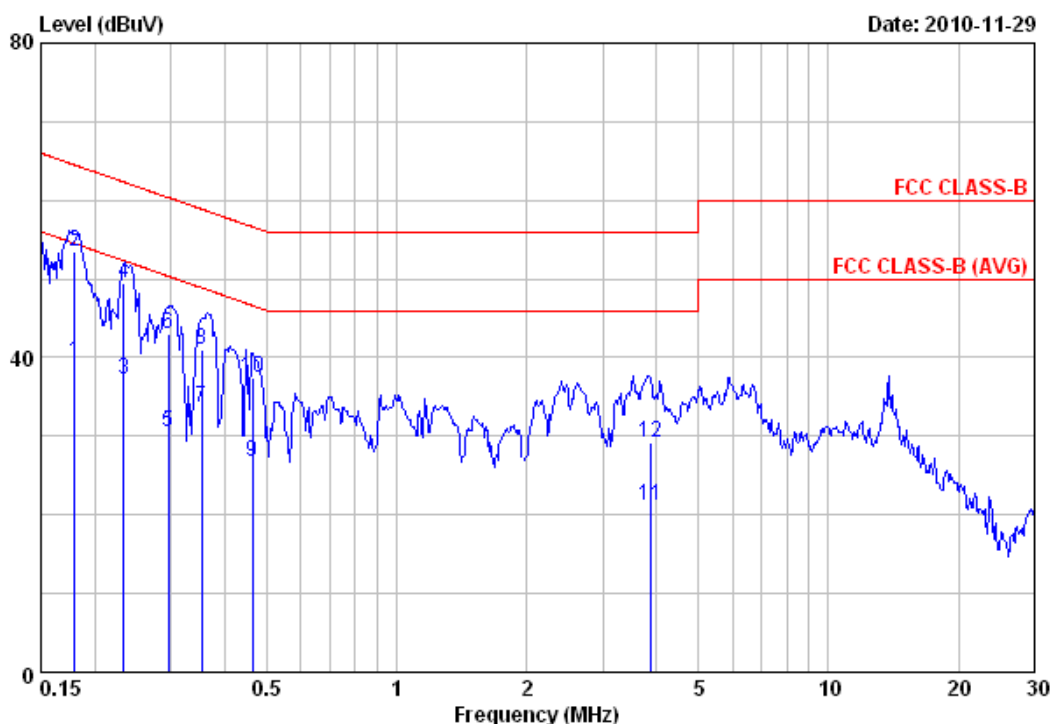
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.19	36.85	0.14	36.99	53.96	-16.97	Average
2	0.19	54.44	0.14	54.58	63.96	-9.38	QP
3	0.21	26.22	0.13	26.35	53.10	-26.75	Average
4	0.21	35.63	0.13	35.76	63.10	-27.34	QP
5	0.26	46.65	0.13	46.78	61.56	-14.78	QP
6	0.26	28.92	0.13	29.05	51.51	-22.46	Average
7	0.32	25.65	0.14	25.79	49.59	-23.80	Average
8	0.32	42.52	0.14	42.66	59.59	-16.93	QP
9	0.38	37.50	0.14	37.64	58.20	-20.56	QP
10	0.38	37.49	0.14	37.63	58.20	-20.57	QP
11	6.01	25.55	0.35	25.90	50.00	-24.10	Average
12	6.01	35.30	0.35	35.65	60.00	-24.35	QP

Notes:

1. Result = Read Value + Factor
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3. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
4. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: $\pi/4$ -DQPSK CH0	Temperature	: 25 °C
Memo	:	Humidity	: 56 %



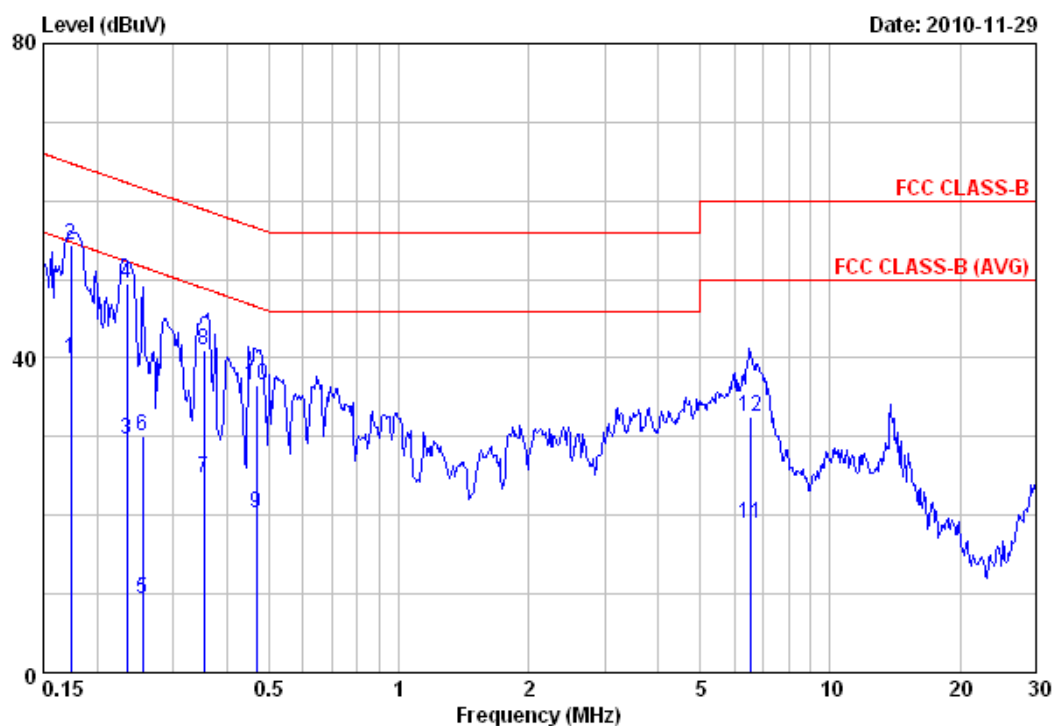
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.18	39.27	0.11	39.38	54.50	-15.12	Average
2	0.18	53.33	0.11	53.44	64.50	-11.06	QP
3	0.23	37.03	0.11	37.14	52.35	-15.21	Average
4	0.23	49.27	0.11	49.38	62.35	-12.97	QP
5	0.30	30.47	0.12	30.59	50.34	-19.75	Average
6	0.30	42.95	0.12	43.07	60.34	-17.27	QP
7	0.35	33.49	0.11	33.60	48.86	-15.26	Average
8	0.35	40.99	0.11	41.10	58.86	-17.76	QP
9	0.46	26.64	0.11	26.75	46.63	-19.88	Average
10	0.46	37.26	0.11	37.37	56.63	-19.26	QP
11	3.87	20.85	0.32	21.17	46.00	-24.83	Average
12	3.87	28.83	0.32	29.15	56.00	-26.85	QP

Notes:

1. Result = Read Value + Factor
2. Factor = LISN Factor + Cable Loss
3. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1, 6, 11 or 3, 6, 9 (for HT40) are almost the same below 1GHz, so that the channel 1 or 3 (for HT40) was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: $\pi/4$ -DQPSK CH0	Temperature	: 25 °C
Memo	:	Humidity	: 56 %



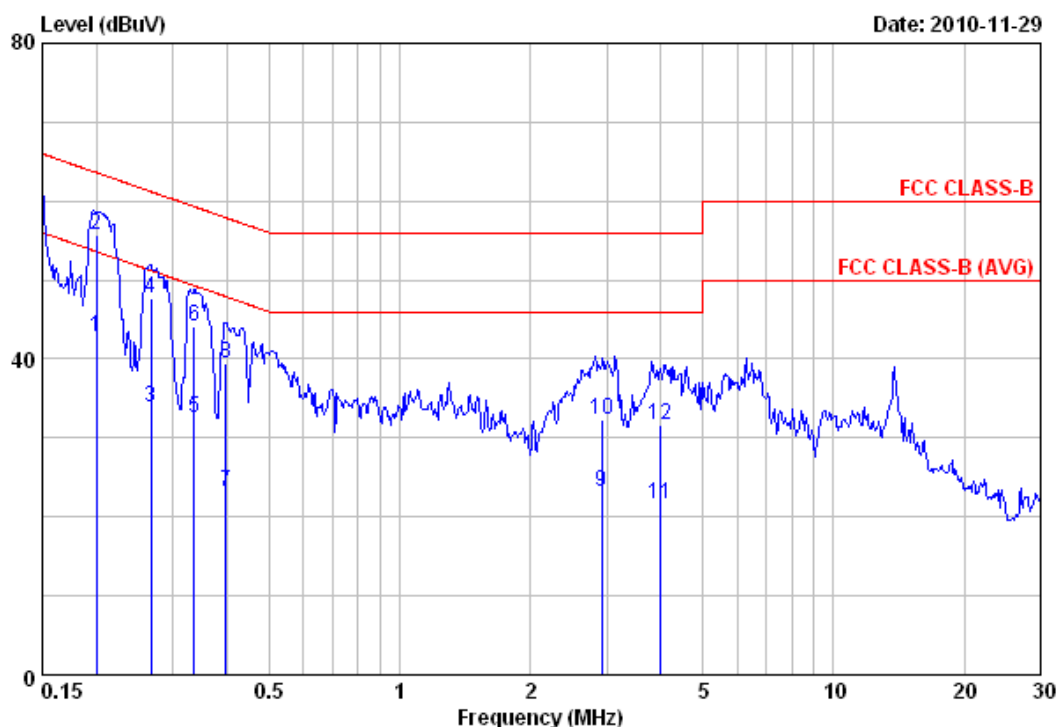
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.17	39.66	0.14	39.80	54.79	-14.99	Average
2	0.17	54.18	0.14	54.32	64.79	-10.47	QP
3	0.23	29.59	0.13	29.72	52.28	-22.56	Average
4	0.23	49.38	0.13	49.51	62.28	-12.77	QP
5	0.25	9.19	0.13	9.32	51.60	-42.28	Average
6	0.25	30.03	0.13	30.16	61.60	-31.44	QP
7	0.35	24.68	0.14	24.82	48.87	-24.05	Average
8	0.35	40.86	0.14	41.00	58.87	-17.87	QP
9	0.47	20.11	0.14	20.25	46.57	-26.32	Average
10	0.47	36.39	0.14	36.53	56.57	-20.04	QP
11	6.53	18.51	0.37	18.88	50.00	-31.12	Average
12	6.53	32.12	0.37	32.49	60.00	-27.51	QP

Notes:

1. Result = Read Value + Factor
2. Factor = LISN Factor + Cable Loss
3. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
4. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: LINE
Test Mode	: 8DPSK CH0	Temperature	: 25 °C
Memo	:	Humidity	: 56 %



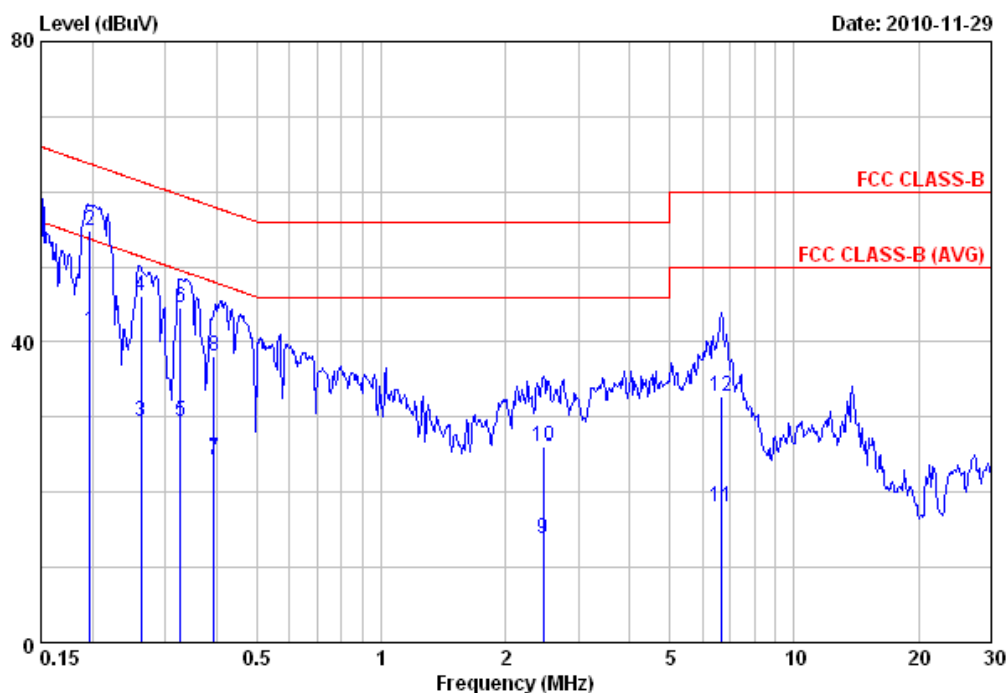
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.20	42.60	0.11	42.71	53.61	-10.90	Average
2	0.20	55.62	0.11	55.73	63.61	-7.88	QP
3	0.27	33.68	0.11	33.79	51.19	-17.40	Average
4	0.27	47.56	0.11	47.67	61.19	-13.52	QP
5	0.34	32.33	0.12	32.45	49.30	-16.85	Average
6	0.34	44.04	0.12	44.16	59.30	-15.14	QP
7	0.40	23.11	0.11	23.22	47.90	-24.68	Average
8	0.40	39.31	0.11	39.42	57.90	-18.48	QP
9	2.92	22.91	0.27	23.18	46.00	-22.82	Average
10	2.92	32.01	0.27	32.28	56.00	-23.72	QP
11	3.99	21.35	0.32	21.67	46.00	-24.33	Average
12	3.99	31.28	0.32	31.60	56.00	-24.40	QP

Notes:

1. Result = Read Value + Factor
2. Factor = LISN Factor + Cable Loss
3. All emission below 1GHz at 802.11g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
4. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: NEUTRAL
Test Mode	: 8DPSK CH0	Temperature	: 25 °C
Memo	:	Humidity	: 56 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	0.20	41.30	0.14	41.44	53.71	-12.27	Average
2	0.20	54.60	0.14	54.74	63.71	-8.97	QP
3	0.26	29.26	0.13	29.39	51.35	-21.96	Average
4	0.26	46.05	0.13	46.18	61.35	-15.17	QP
5	0.33	29.20	0.14	29.34	49.53	-20.19	Average
6	0.33	44.35	0.14	44.49	59.53	-15.04	QP
7	0.39	24.21	0.14	24.35	47.99	-23.64	Average
8	0.39	38.05	0.14	38.19	57.99	-19.80	QP
9	2.47	13.47	0.24	13.71	46.00	-32.29	Average
10	2.47	25.88	0.24	26.12	56.00	-29.88	QP
11	6.66	17.64	0.37	18.01	50.00	-31.99	Average
12	6.66	32.43	0.37	32.80	60.00	-27.20	QP

Notes:

1. Result = Read Value + Factor
2. Factor = LISN Factor + Cable Loss
3. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
4. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1, 6, 11 or 3, 6, 9 (for HT40) are almost the same below 1GHz, so that the channel 1 or 3 (for HT40) was chosen as representative in final test.
5. The data is worse case.

Test engineer: Ben



5. Test of Radiated Emission

5.1 Test Limit

Radiated emissions from 30 MHz to 25 GHz were measured according to the methods defines in ANSI C63.4-2003. The EUT was placed, 0.8 meter above the ground plane, as shown in section 5.6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions. For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB μ V/ M)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the above table.

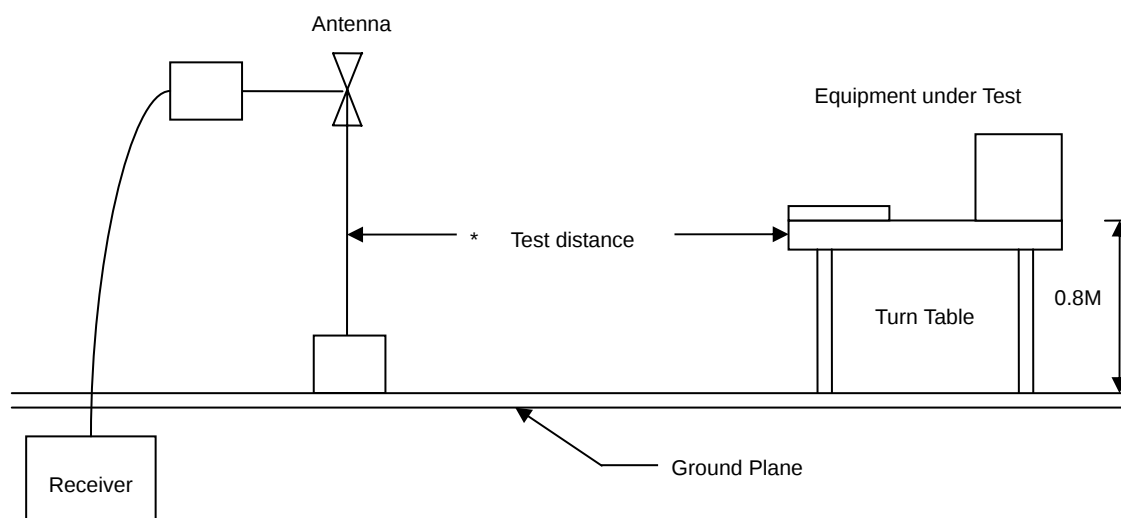
Frequency (MHz)	Distance Meters	Radiated (dB μ V/ M)
30-230	10	30
230-1000	10	37

5.2 Test Procedures

- The EUT was placed on a rotatable table top 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.



5.3 Typical Test Setup



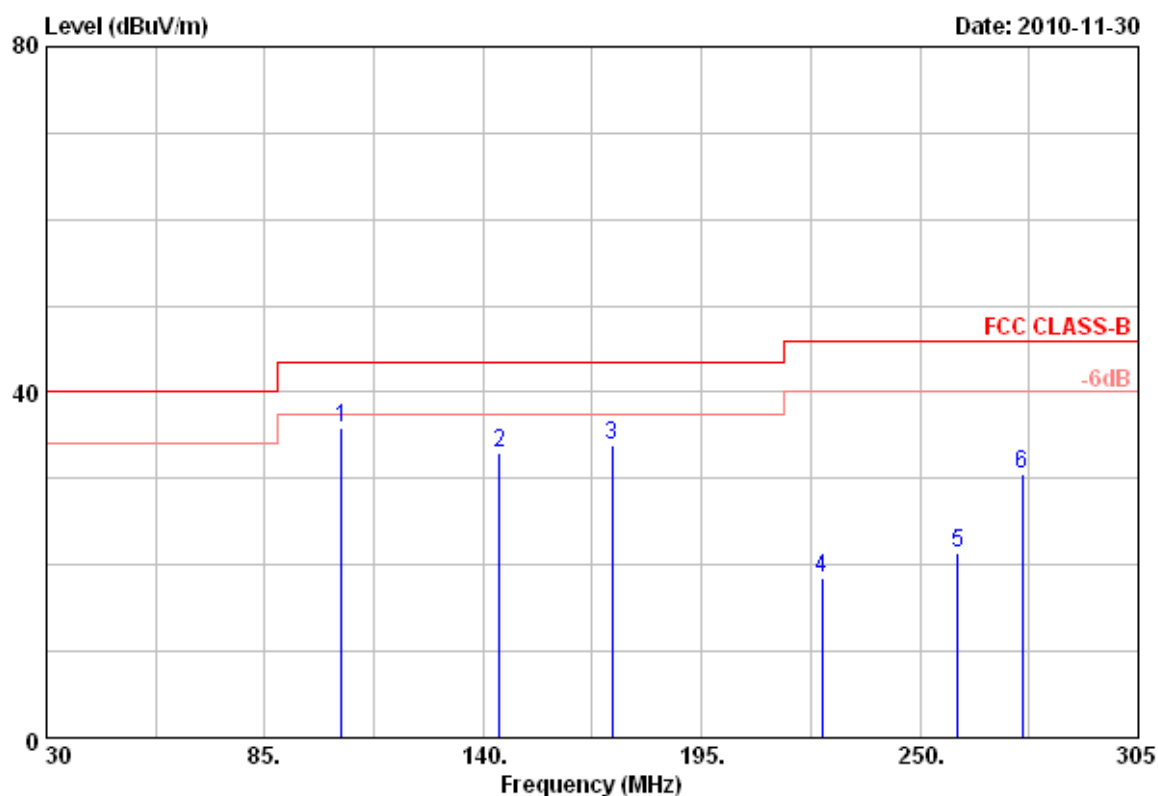
5.4 Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	SCHAFFNER	SCR3501	437	2010/10/14	2011/10/13
Amplifier	Agilent	8447D	2944A10531	2010/02/05	2011/02/04
Bilog Antenna	Schaffner	CBL6112D	22242	2010/02/05	2011/02/04
Spectrum Analyzer	R&S	FSP 3	100800	2010/02/09	2011/02/08
SPECTRUM ANALYZER	R&S	FSP40	100219	2010/11/05	2011/11/04
HORN ANTENNA	EMCO	3115	31589	2010/05/04	2011/05/03
Preamplifier	Agilent	8449B	3008A01954	2010/02/26	2011/02/25



5.5 Test Result and Data

Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps

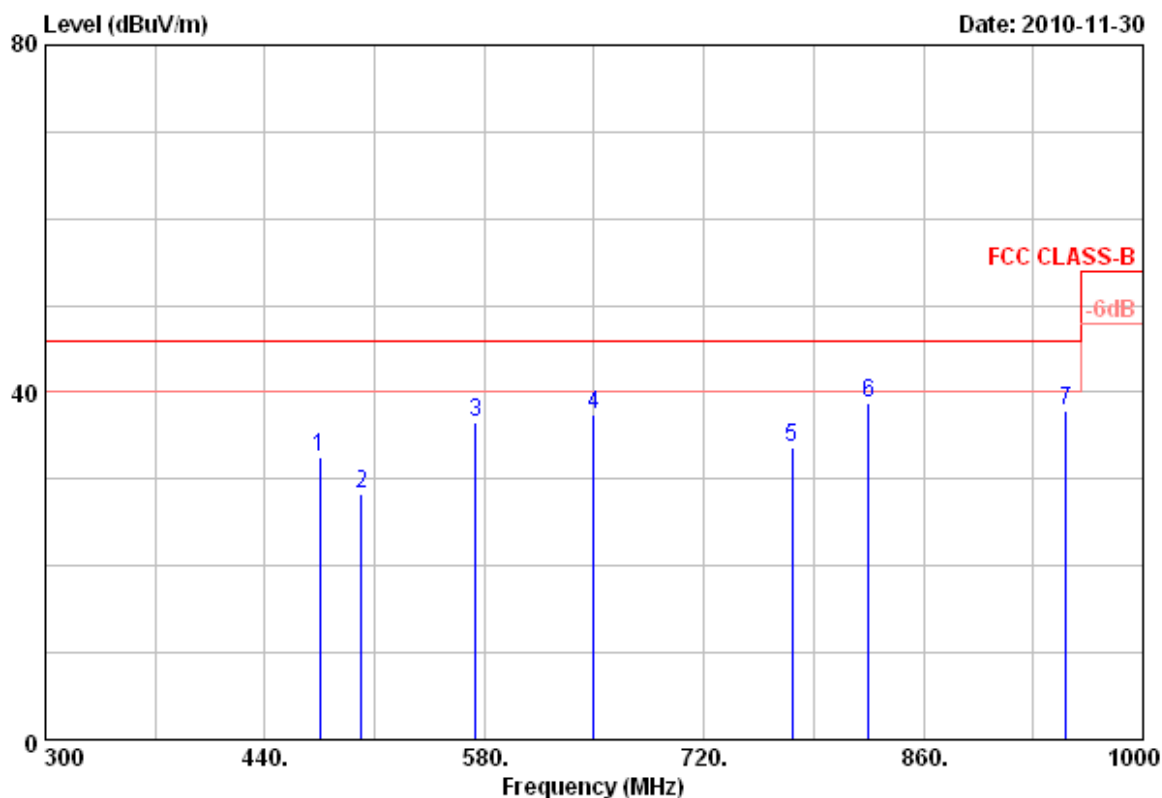


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	104.25	47.73	-11.82	35.91	43.50	-7.59	Peak	100	0
2	144.13	42.57	-9.57	33.00	43.50	-10.50	Peak	100	0
3	172.45	49.68	-15.80	33.88	43.50	-9.62	Peak	100	0
4	225.25	35.64	-17.04	18.60	46.00	-27.40	Peak	100	0
5	259.63	34.99	-13.53	21.46	46.00	-24.54	Peak	100	0
6	275.85	44.50	-14.01	30.49	46.00	-15.51	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	475.00	41.65	-9.05	32.60	46.00	-13.40	Peak	100	0
2	501.60	36.37	-7.97	28.40	46.00	-17.60	Peak	100	0
3	574.40	44.89	-8.45	36.44	46.00	-9.56	Peak	100	0
4	650.00	42.80	-5.40	37.40	46.00	-8.60	Peak	100	0
5	776.00	34.14	-0.58	33.56	46.00	-12.44	Peak	100	0
6	825.00	38.67	0.03	38.70	46.00	-7.30	Peak	100	0
7	951.00	31.74	6.08	37.82	46.00	-8.18	Peak	100	0

Remarks: 1. Result = Read Value + Factor

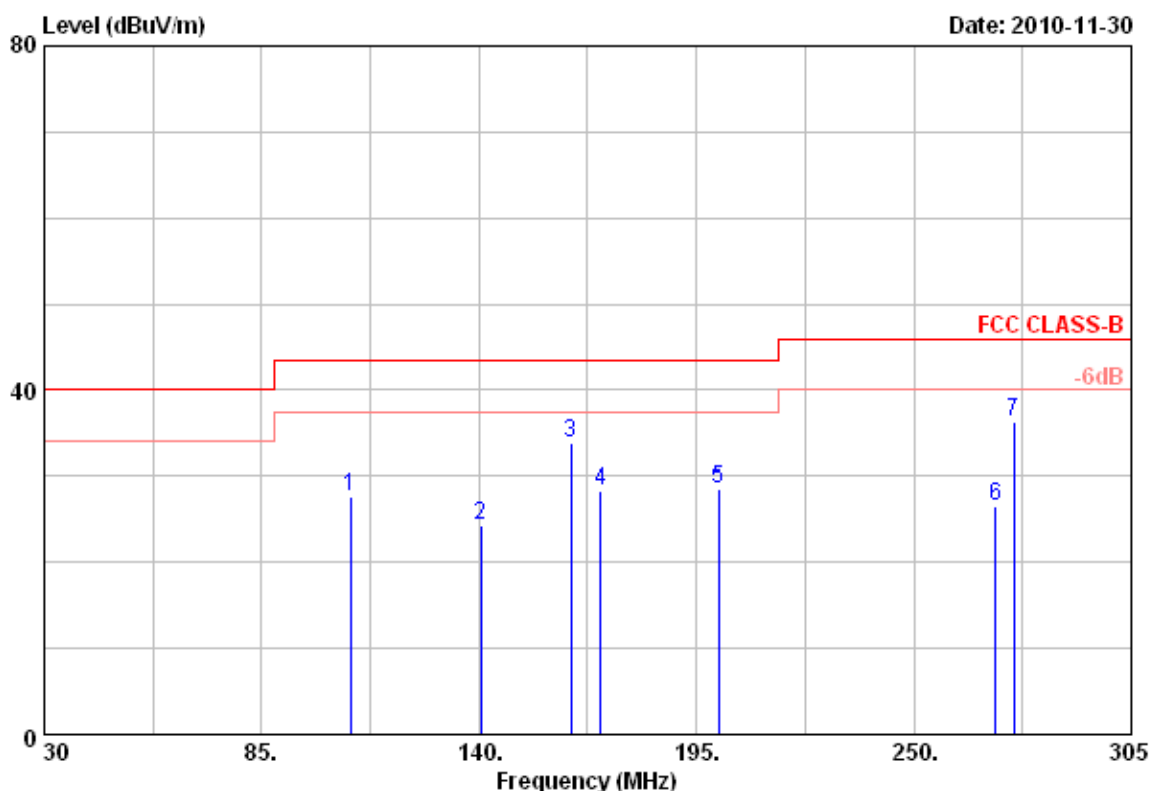
2. Factor = Antenna Factor + Cable Loss - Amplifier

3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.

4. The data is worst case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps

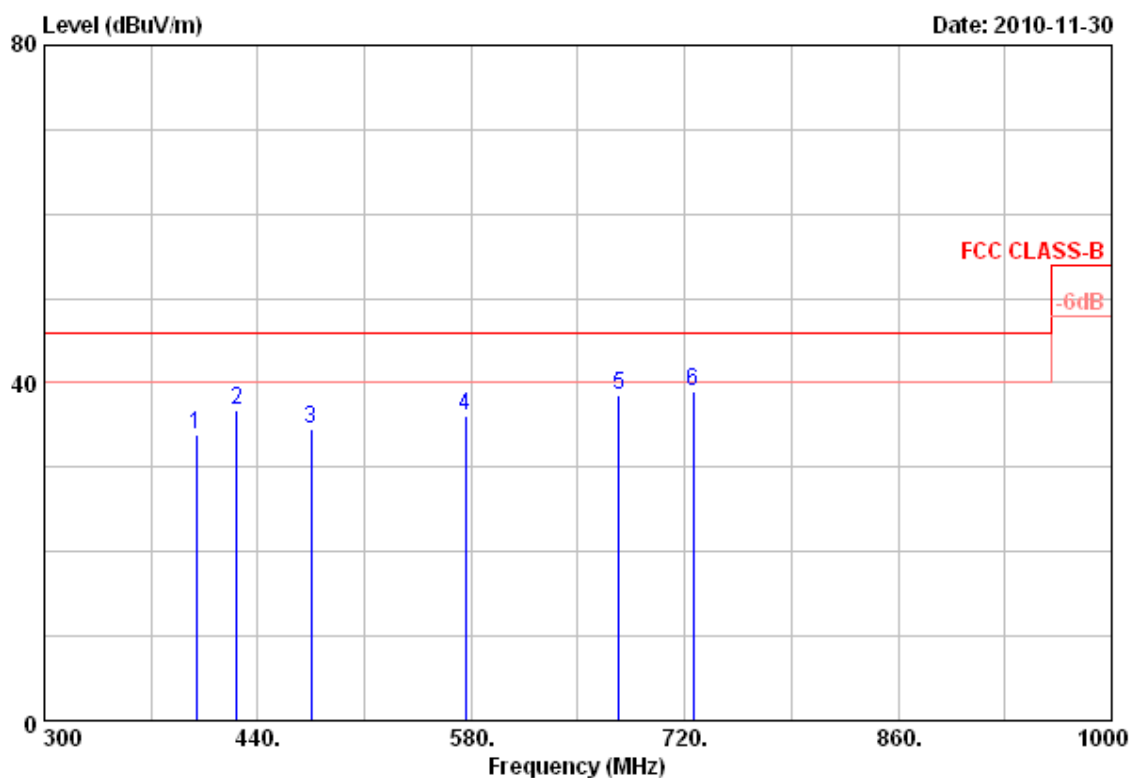


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	107.55	46.46	-18.78	27.68	43.50	-15.82	Peak	100	0
2	140.55	40.72	-16.50	24.22	43.50	-19.28	Peak	100	0
3	163.38	54.17	-20.19	33.98	43.50	-9.52	Peak	100	0
4	170.80	49.66	-21.32	28.34	43.50	-15.16	Peak	100	0
5	200.50	44.75	-16.30	28.45	43.50	-15.05	Peak	100	0
6	270.63	40.56	-14.11	26.45	46.00	-19.55	Peak	100	0
7	275.30	50.66	-14.44	36.22	46.00	-9.78	Peak	100	0

Remarks: 1. Result = Read Value + Factor
 2. Factor = Antenna Factor + Cable Loss - Amplifier
 3. According to technical experiences, all spurious emission of BT mode at channel 0, 39, 78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
 4. The data is worst case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps

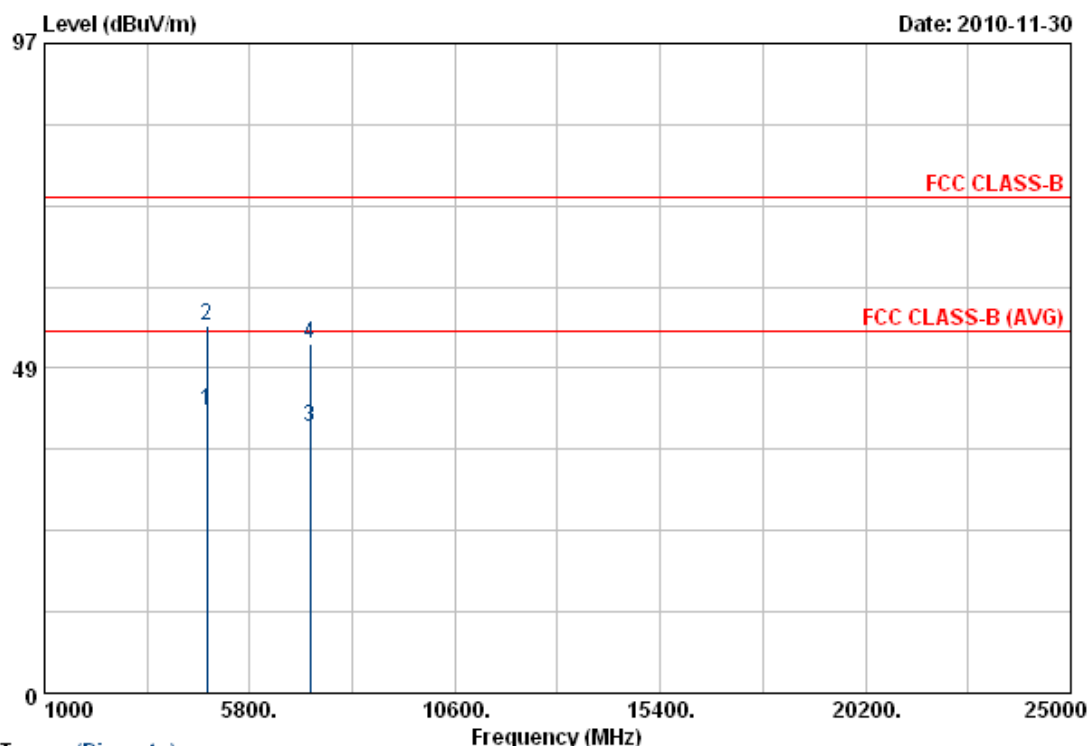


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	399.40	44.48	-10.69	33.79	46.00	-12.21	Peak	100	0
2	426.00	46.53	-9.71	36.82	46.00	-9.18	Peak	100	0
3	475.00	42.87	-8.22	34.65	46.00	-11.35	Peak	100	0
4	576.50	37.23	-1.18	36.05	46.00	-9.95	Peak	100	0
5	676.60	37.63	0.90	38.53	46.00	-7.47	Peak	100	0
6	725.60	35.99	3.06	39.05	46.00	-6.95	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps



Trace: (Discrete)

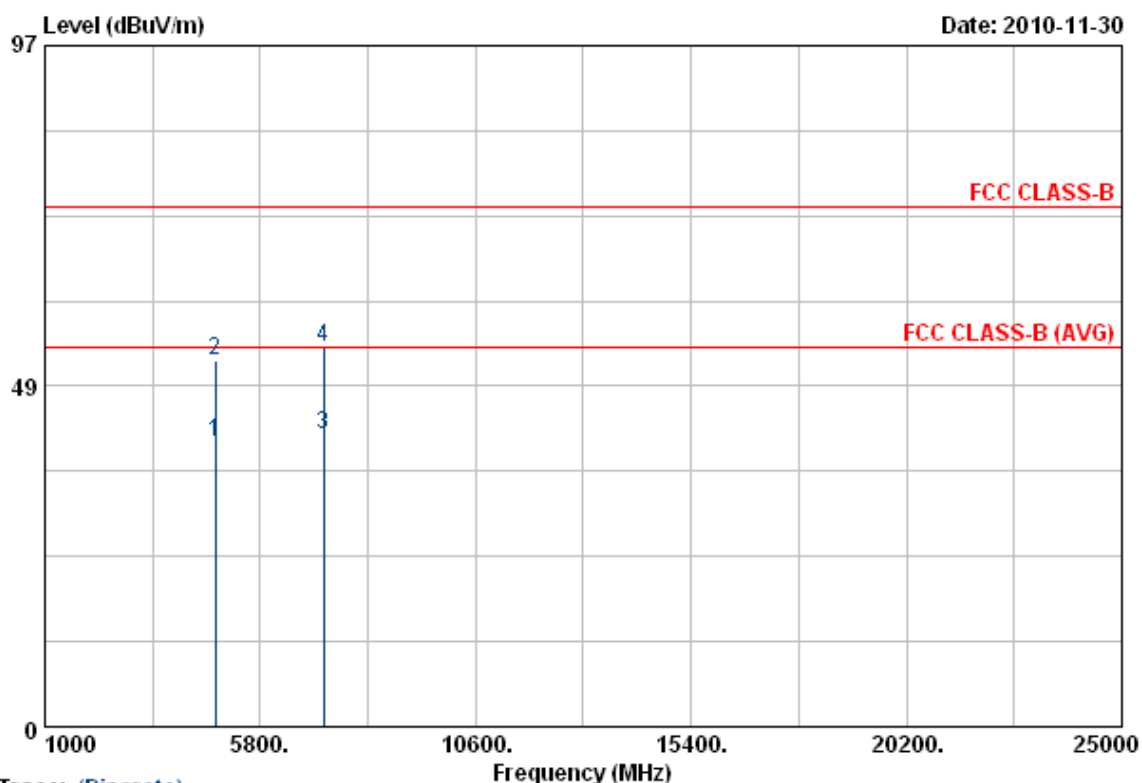
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4804.03	36.32	5.83	42.15	54.00	-11.85	Average	119	240
2	4804.03	48.99	5.83	54.82	74.00	-19.18	Peak	119	240
3	7205.43	29.64	10.21	39.85	54.00	-14.15	Average	119	240
4	7205.43	41.92	10.21	52.13	74.00	-21.87	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps



Trace: (Discrete)

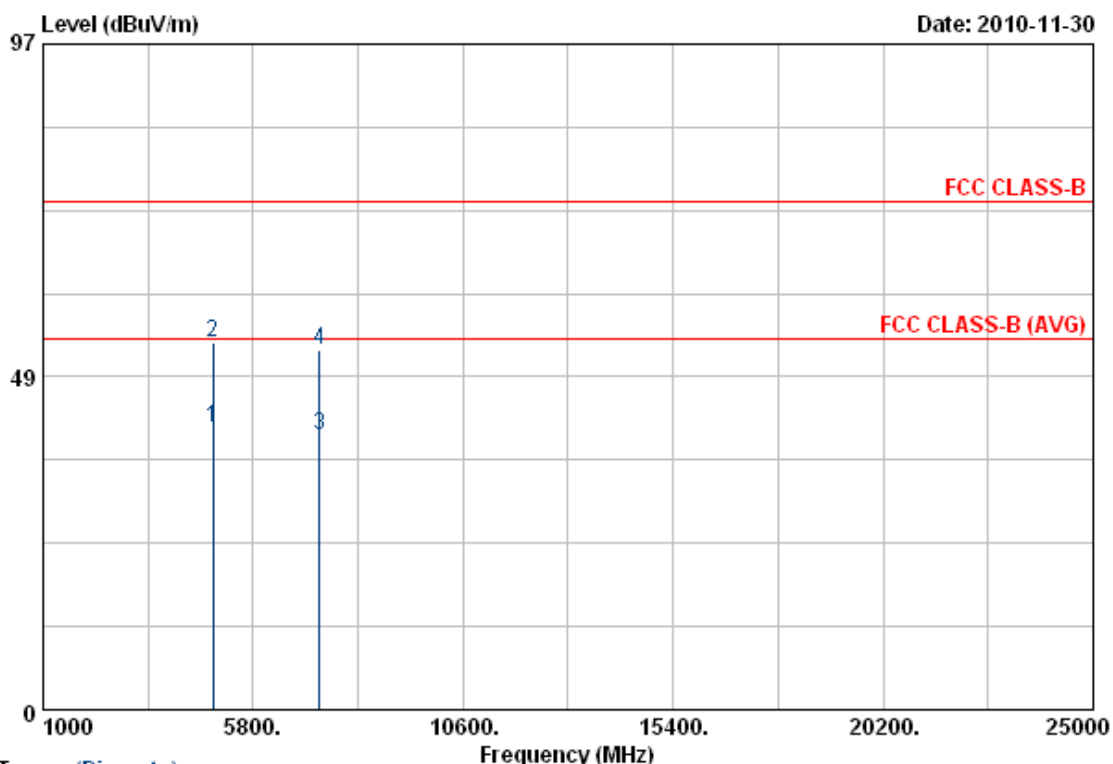
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4803.95	34.65	5.83	40.48	54.00	-13.52	Average	150	250
2	4803.95	46.22	5.83	52.05	74.00	-21.95	Peak	150	250
3	7205.65	31.30	10.21	41.51	54.00	-12.49	Average	150	250
4	7205.65	43.73	10.21	53.94	74.00	-20.06	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 39	Humidity	: 60 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 1 Mbps



Trace: (Discrete)

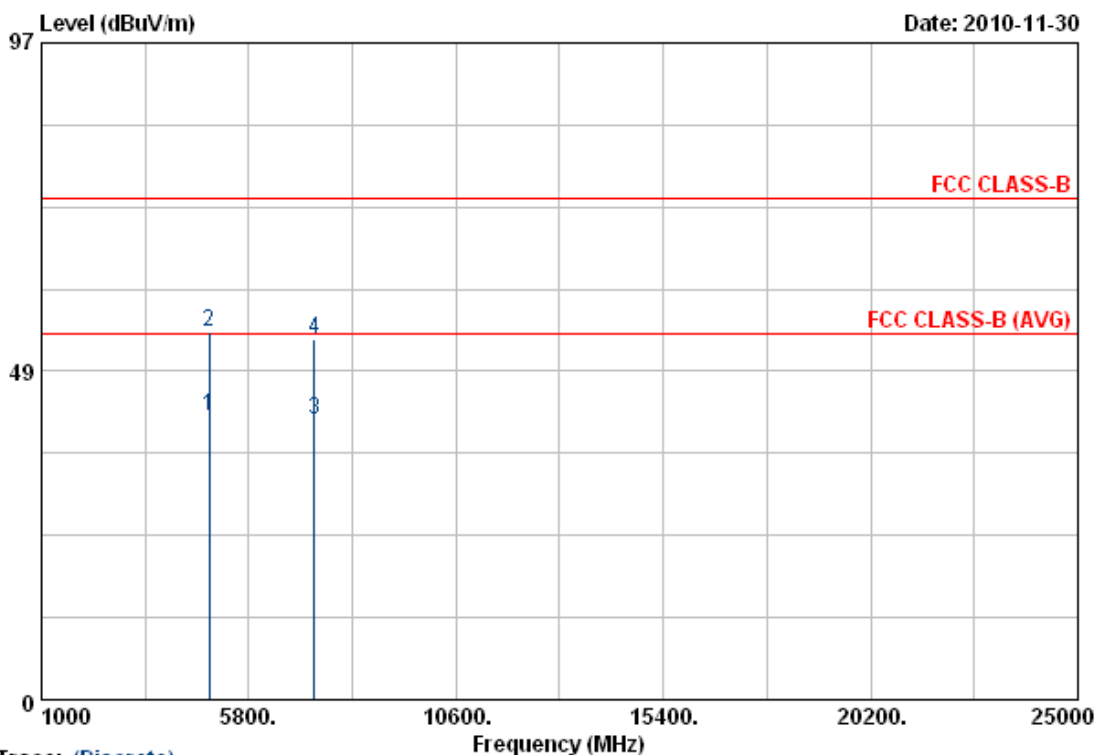
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4882.03	34.87	6.10	40.97	54.00	-13.03	Average	119	240
2	4882.03	47.48	6.10	53.58	74.00	-20.42	Peak	119	240
3	7322.88	29.29	10.57	39.86	54.00	-14.14	Average	119	240
4	7322.88	41.84	10.57	52.41	74.00	-21.59	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 39	Humidity	: 60 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps



Trace: (Discrete)

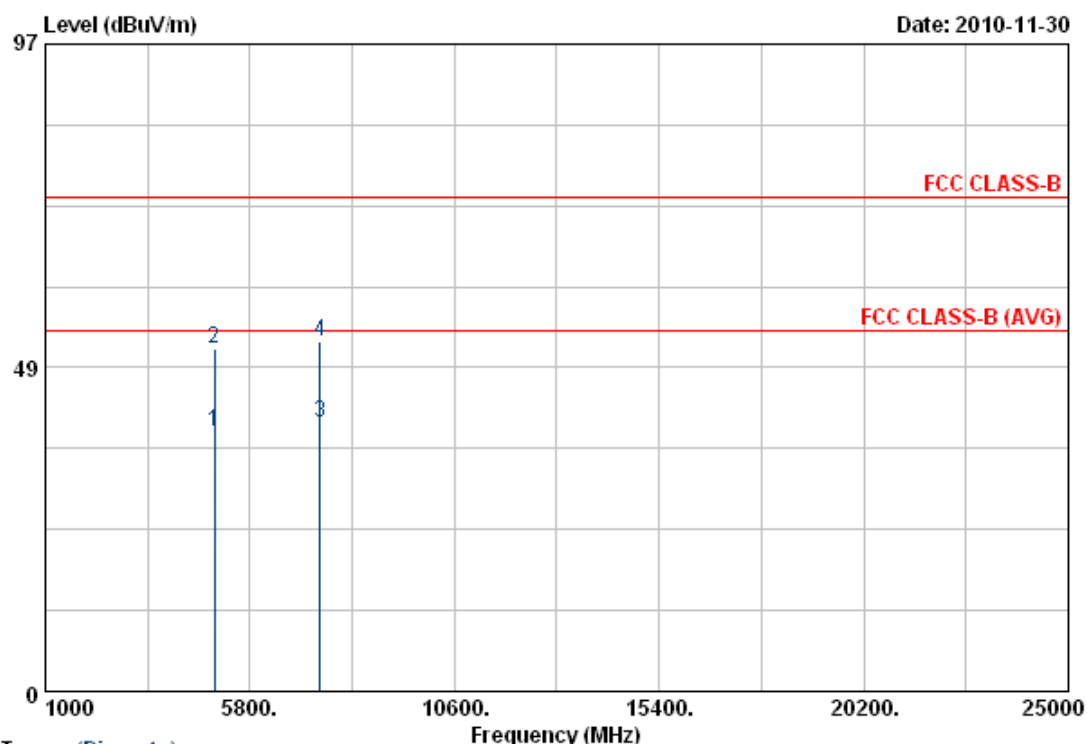
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4882.08	35.84	6.10	41.94	54.00	-12.06	Average	150	250
2	4882.08	48.18	6.10	54.28	74.00	-19.72	Peak	150	250
3	7322.05	30.82	10.57	41.39	54.00	-12.61	Average	150	250
4	7322.05	42.73	10.57	53.30	74.00	-20.70	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 78	Humidity	: 60 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps



Trace: (Discrete)

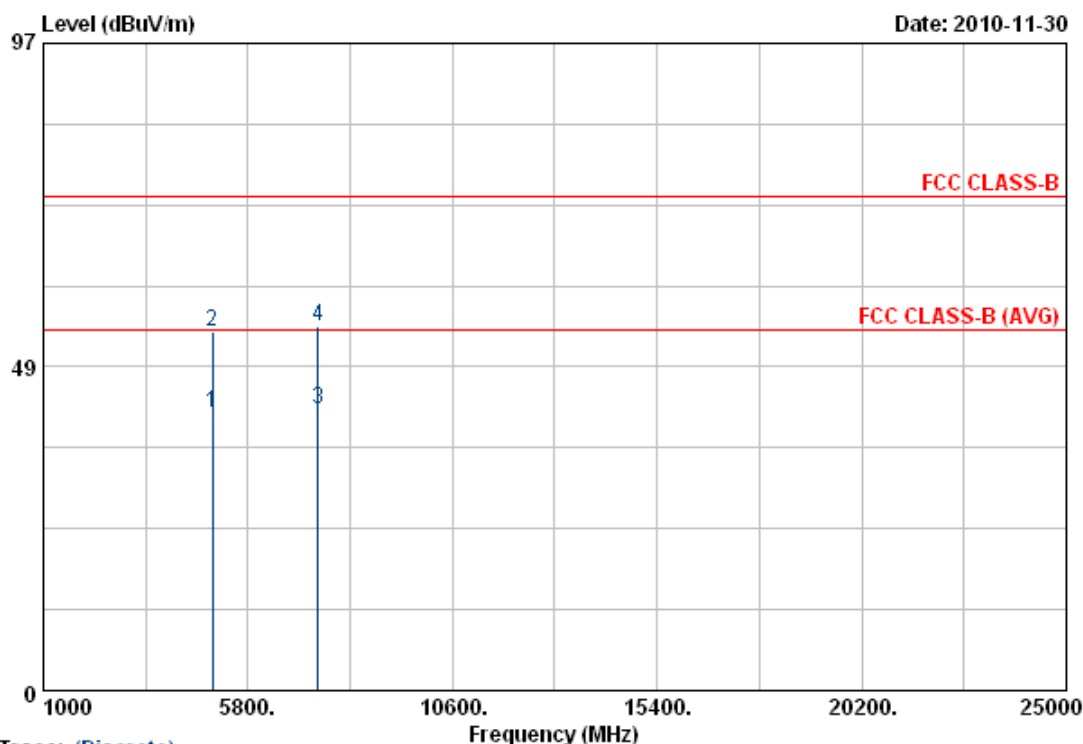
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4959.93	32.57	6.36	38.93	54.00	-15.07	Average	119	240
2	4959.93	44.96	6.36	51.32	74.00	-22.68	Peak	119	240
3	7439.93	29.43	10.92	40.35	54.00	-13.65	Average	119	240
4	7439.93	41.52	10.92	52.44	74.00	-21.56	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 78	Humidity	: 60 %
Modulation Type	: GFSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 1 Mbps



Trace: (Discrete)

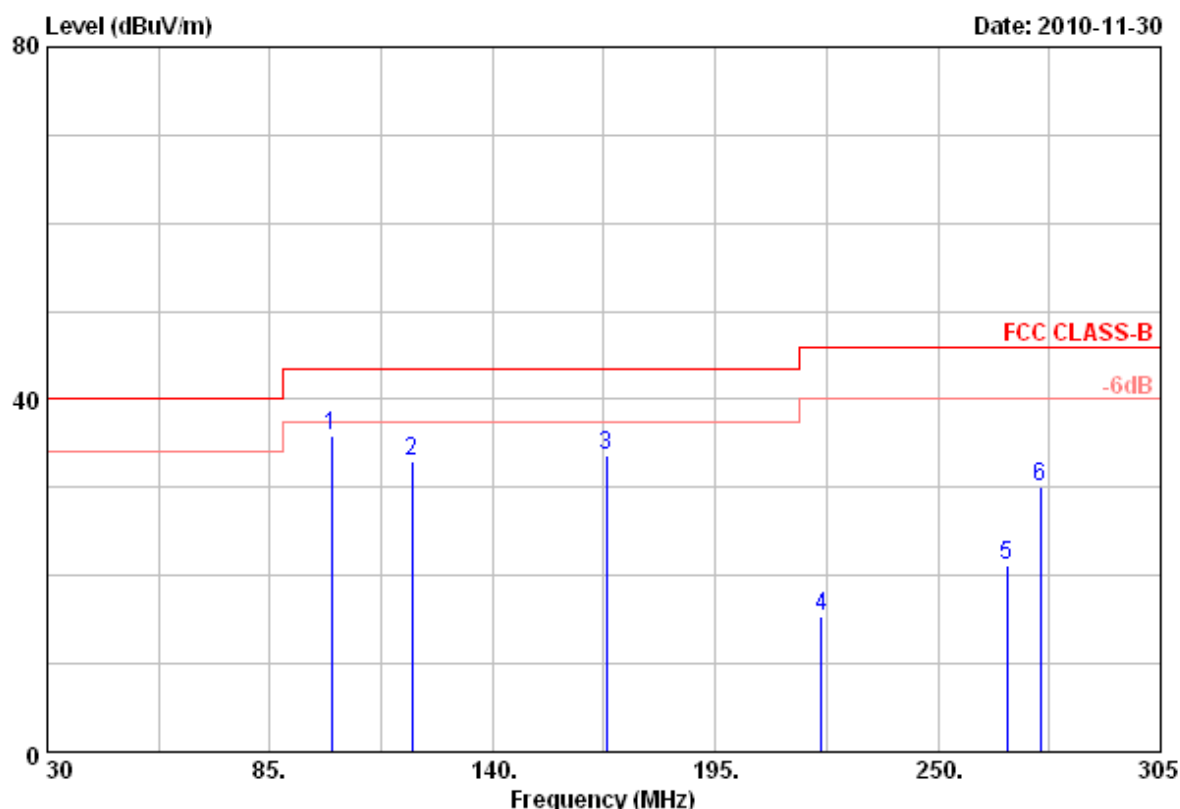
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4960.05	35.28	6.36	41.64	54.00	-12.36	Average	150	250
2	4960.05	47.37	6.36	53.73	74.00	-20.27	Peak	150	250
3	7444.78	31.22	10.94	42.16	54.00	-11.84	Average	150	250
4	7444.78	43.53	10.94	54.47	74.00	-19.53	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps

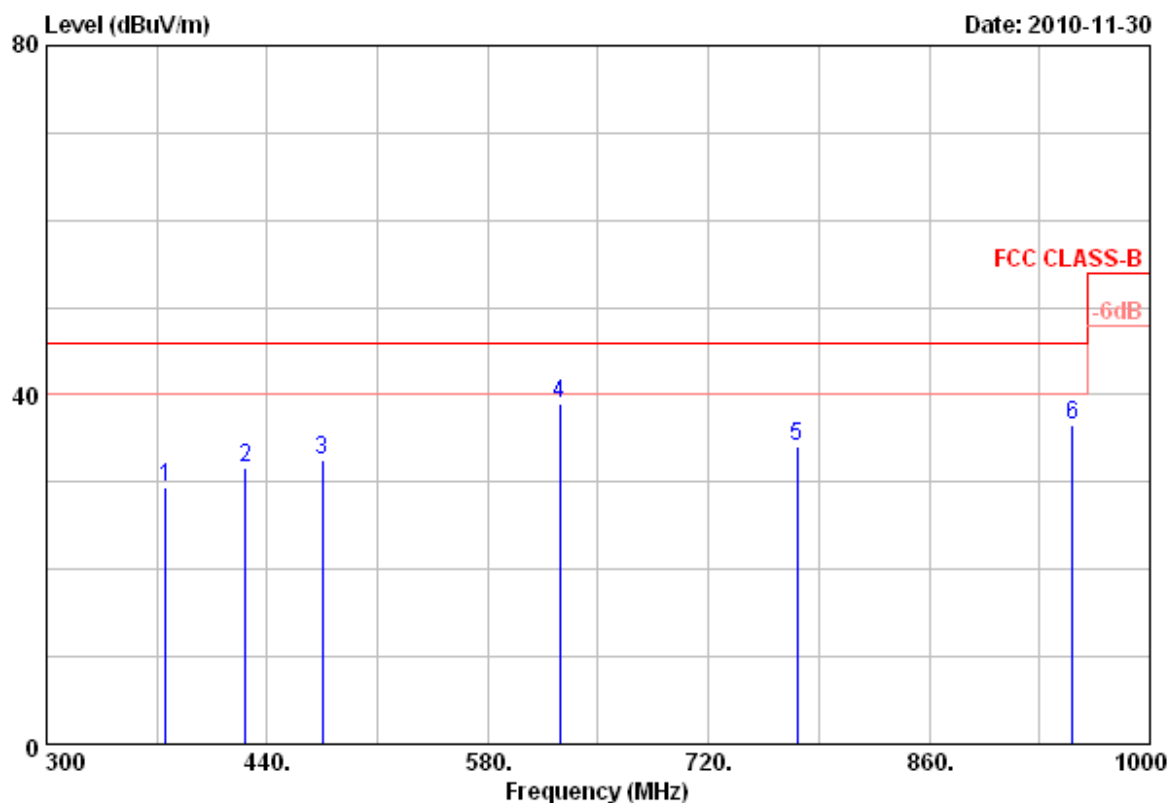


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	100.13	47.83	-11.95	35.88	43.50	-7.62	Peak	100	0
2	120.20	42.74	-9.73	33.01	43.50	-10.49	Peak	100	0
3	168.05	49.26	-15.51	33.75	43.50	-9.75	Peak	100	0
4	221.13	31.81	-16.54	15.27	46.00	-30.73	Peak	100	0
5	267.05	34.84	-13.68	21.16	46.00	-24.84	Peak	100	0
6	275.30	44.01	-13.97	30.04	46.00	-15.96	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	375.60	39.66	-10.34	29.32	46.00	-16.68	Peak	100	0
2	426.00	41.68	-10.09	31.59	46.00	-14.41	Peak	100	0
3	475.00	41.65	-9.05	32.60	46.00	-13.40	Peak	100	0
4	625.50	42.76	-3.86	38.90	46.00	-7.10	Peak	100	0
5	776.00	34.57	-0.58	33.99	46.00	-12.01	Peak	100	0
6	951.00	30.48	6.08	36.56	46.00	-9.44	Peak	100	0

Remarks: 1. Result = Read Value + Factor

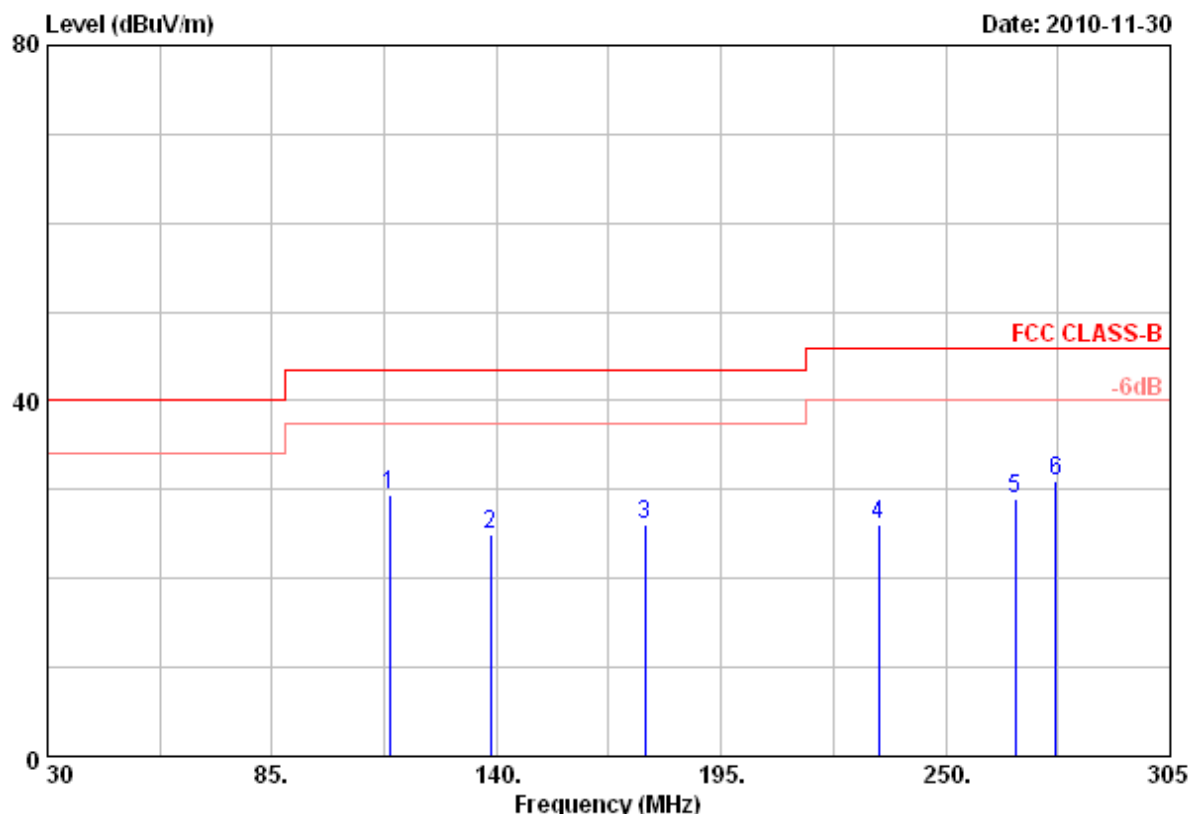
2. Factor = Antenna Factor + Cable Loss - Amplifier

3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.

4. The data is worst case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	113.88	46.90	-17.43	29.47	43.50	-14.03	Peak	100	0
2	138.63	41.40	-16.34	25.06	43.50	-18.44	Peak	100	0
3	176.30	46.90	-20.76	26.14	43.50	-17.36	Peak	100	0
4	233.50	41.26	-15.26	26.00	46.00	-20.00	Peak	100	0
5	267.05	43.66	-14.67	28.99	46.00	-17.01	Peak	100	0
6	276.95	45.43	-14.51	30.92	46.00	-15.08	Peak	100	0

Remarks: 1. Result = Read Value + Factor

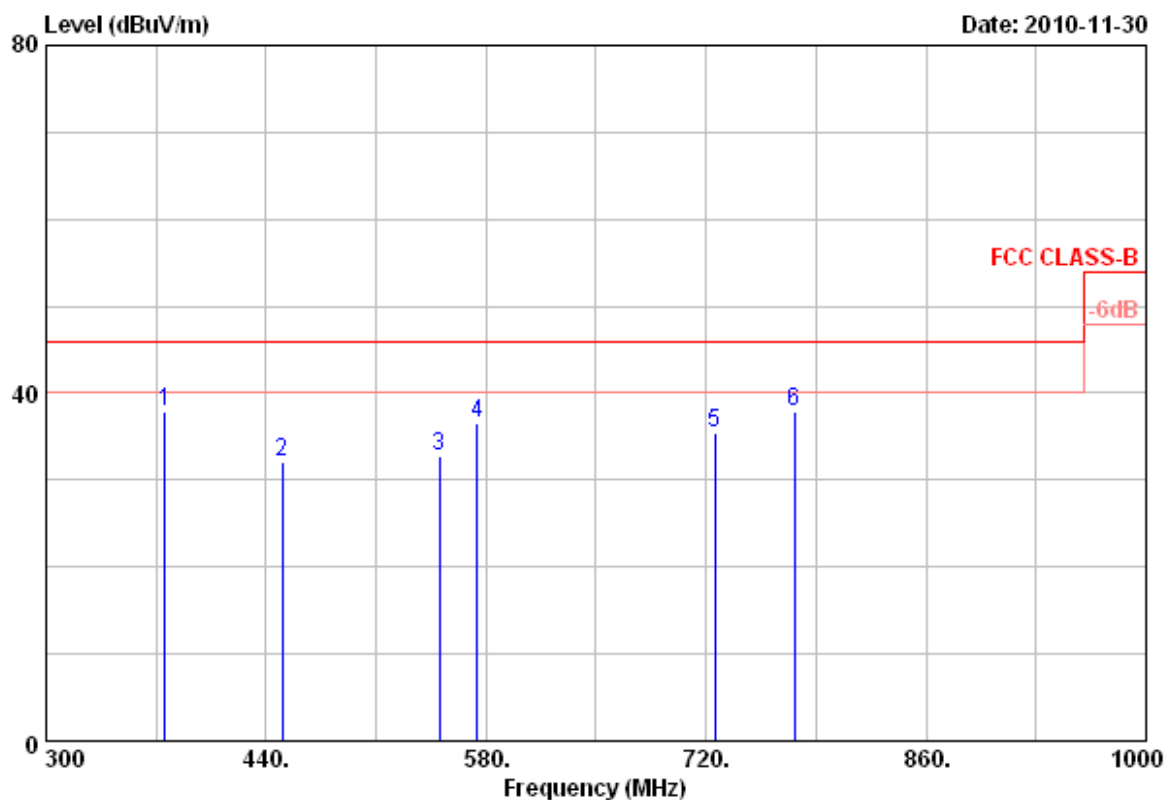
2. Factor = Antenna Factor + Cable Loss - Amplifier

3. According to technical experiences, all spurious emission of BT mode at channel 0, 39, 78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.

4. The data is worst case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 65 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps

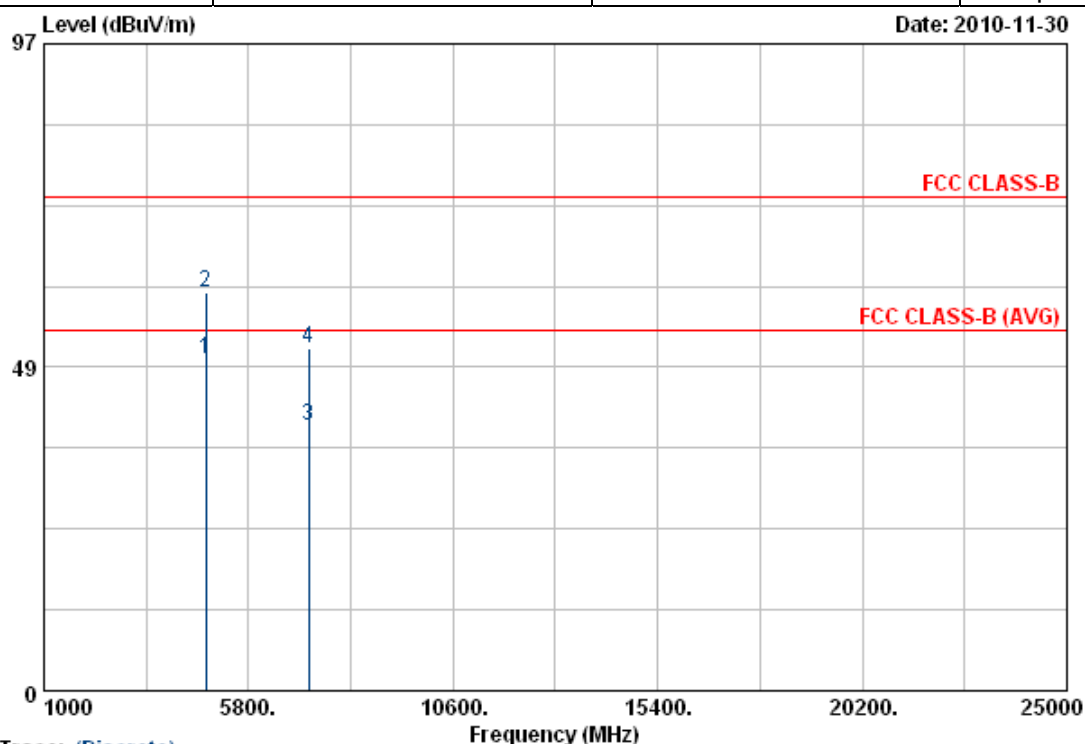


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	375.60	51.37	-13.59	37.78	46.00	-8.22	Peak	100	0
2	450.50	40.64	-8.54	32.10	46.00	-13.90	Peak	100	0
3	550.60	33.53	-0.73	32.80	46.00	-13.20	Peak	100	0
4	574.40	37.98	-1.41	36.57	46.00	-9.43	Peak	100	0
5	725.60	32.28	3.06	35.34	46.00	-10.66	Peak	100	0
6	776.00	34.58	3.39	37.97	46.00	-8.03	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Trace: (Discrete)

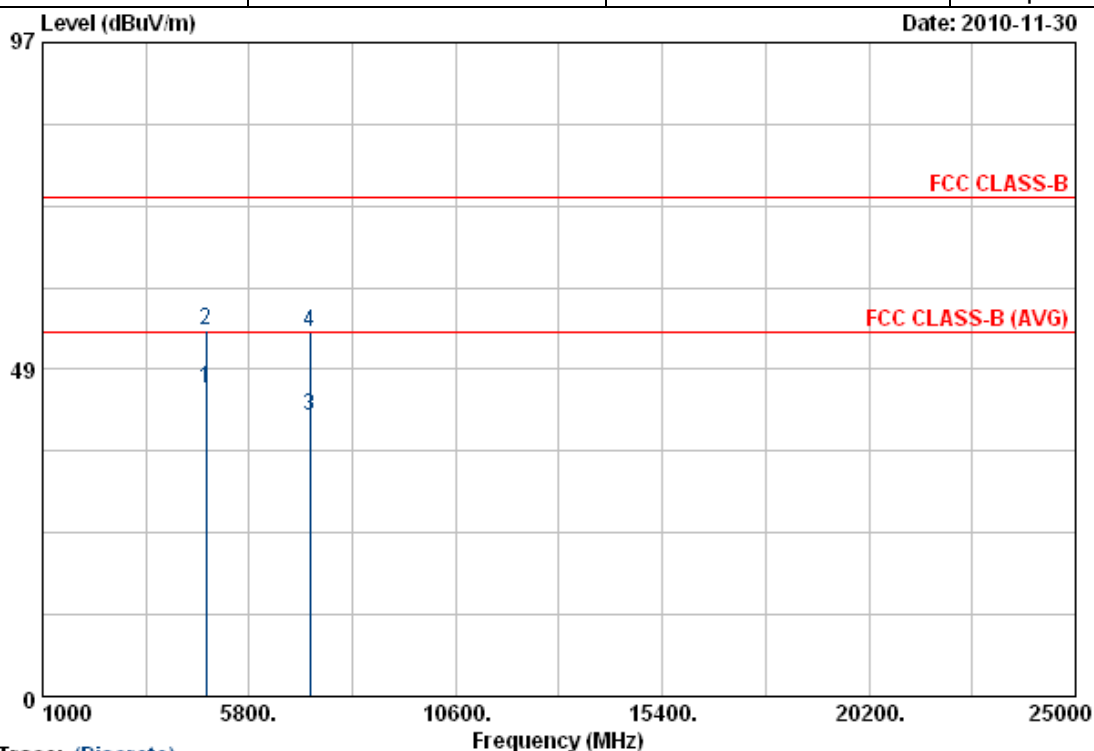
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4803.98	43.79	5.83	49.62	54.00	-4.38	Average	119	240
2	4803.98	53.96	5.83	59.79	74.00	-14.21	Peak	119	240
3	7205.98	29.55	10.21	39.76	54.00	-14.24	Average	119	240
4	7205.98	41.21	10.21	51.42	74.00	-22.58	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Trace: (Discrete)

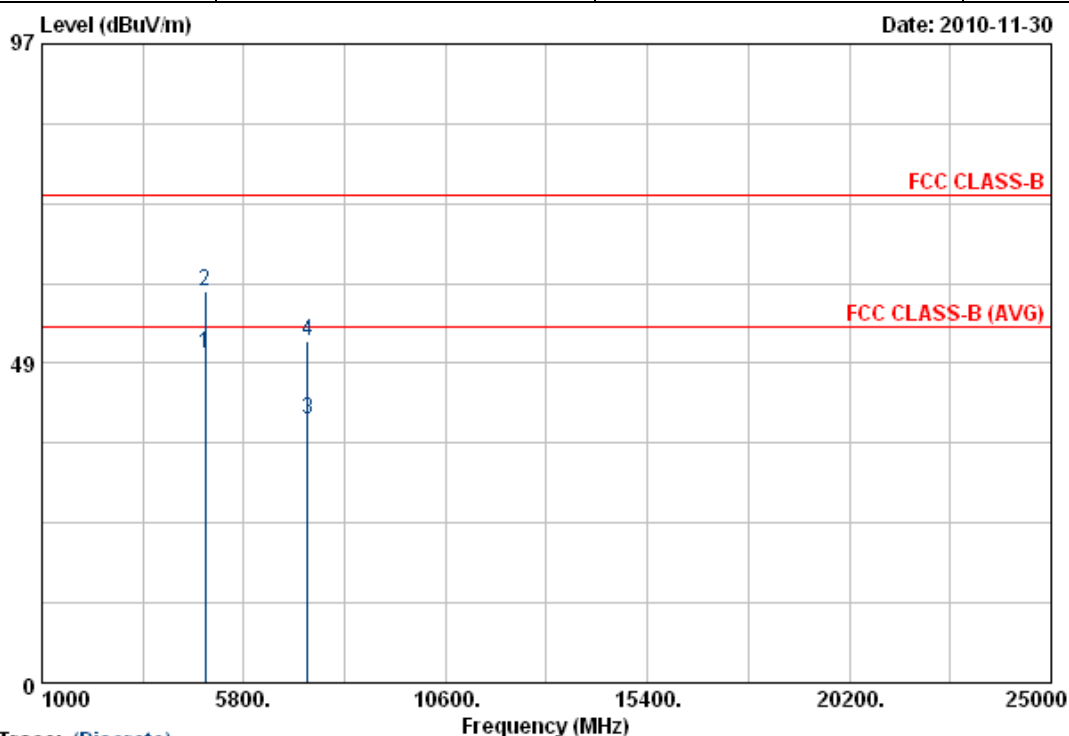
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4804.00	39.74	5.83	45.57	54.00	-8.43	Average	150	250
2	4804.00	48.61	5.83	54.44	74.00	-19.56	Peak	150	250
3	7206.03	31.49	10.21	41.70	54.00	-12.30	Average	150	250
4	7206.03	43.82	10.21	54.03	74.00	-19.97	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 39	Humidity	: 60 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Trace: (Discrete)

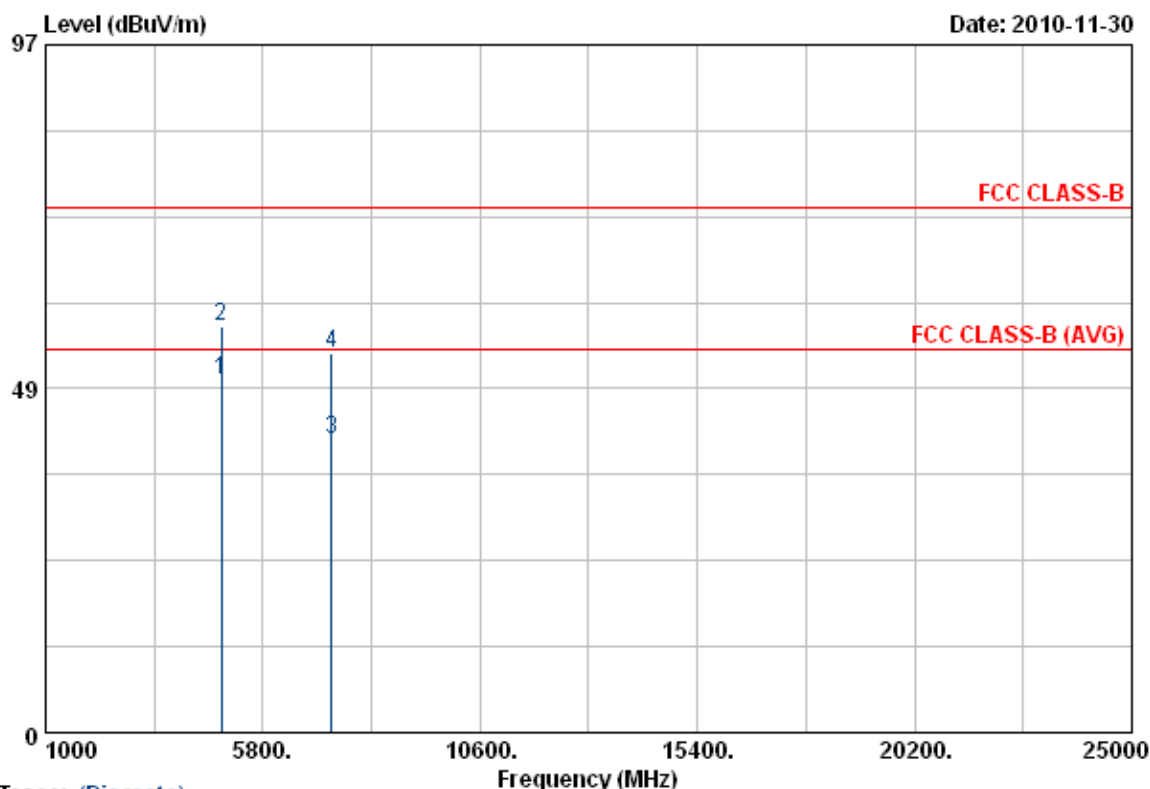
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4882.00	43.77	6.10	49.87	54.00	-4.13	Average	119	240
2	4882.00	53.30	6.10	59.40	74.00	-14.60	Peak	119	240
3	7323.03	29.27	10.58	39.85	54.00	-14.15	Average	119	240
4	7323.03	41.42	10.58	52.00	74.00	-22.00	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 39	Humidity	: 60 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Trace: (Discrete)

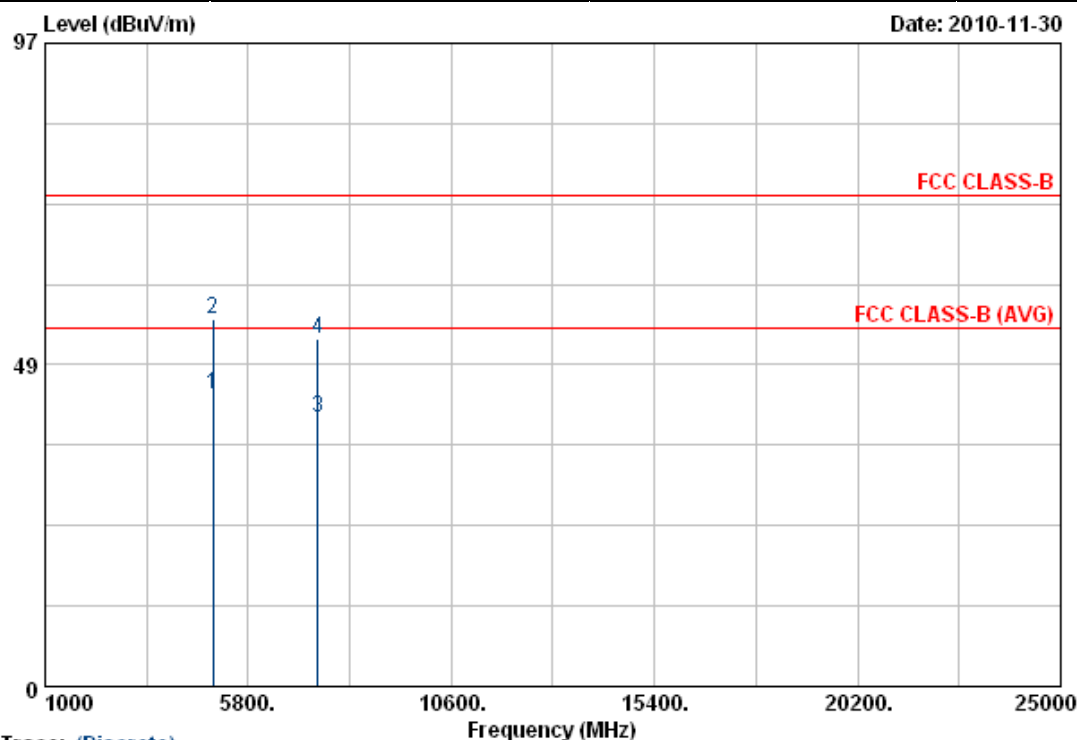
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4882.03	43.62	6.10	49.72	54.00	-4.28	Average	150	250
2	4882.03	51.12	6.10	57.22	74.00	-16.78	Peak	150	250
3	7323.15	30.86	10.58	41.44	54.00	-12.56	Average	150	250
4	7323.15	42.80	10.58	53.38	74.00	-20.62	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 78	Humidity	: 60 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Trace: (Discrete)

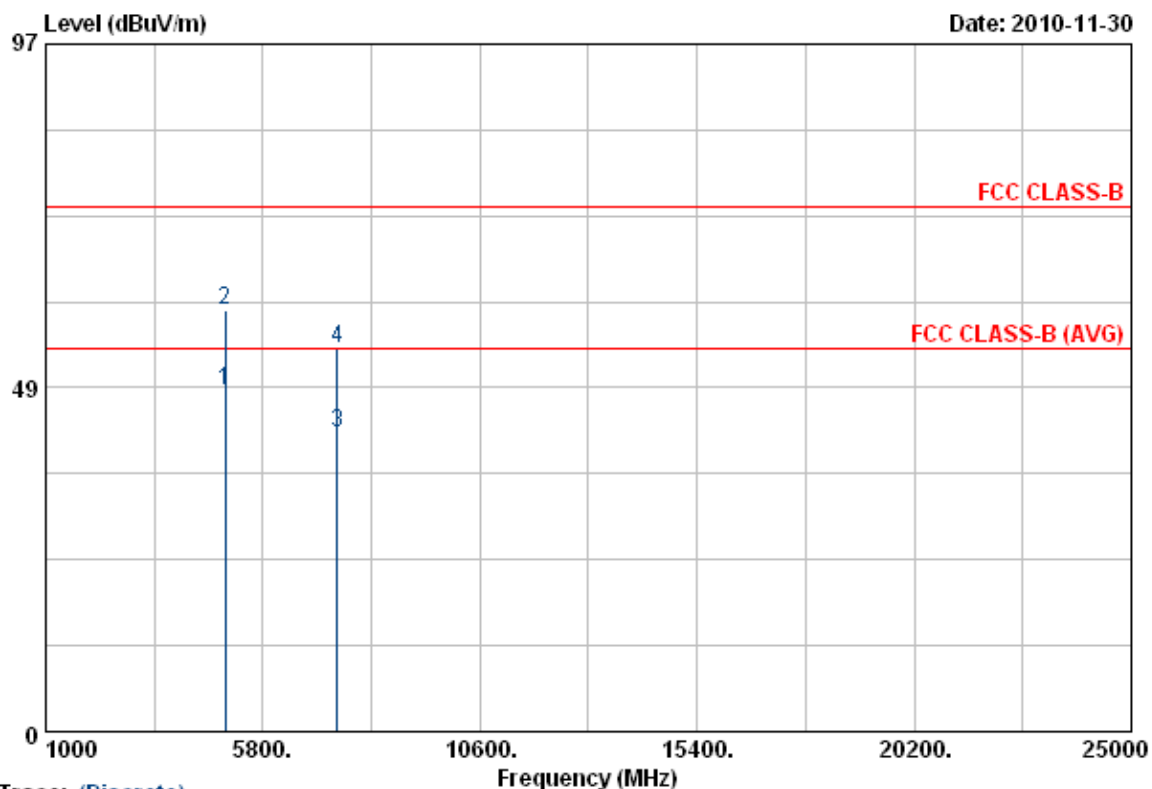
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4960.00	37.58	6.36	43.94	54.00	-10.06	Average	119	240
2	4960.00	49.05	6.36	55.41	74.00	-18.59	Peak	119	240
3	7442.50	29.51	10.92	40.43	54.00	-13.57	Average	119	240
4	7442.50	41.62	10.92	52.54	74.00	-21.46	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 78	Humidity	: 60 %
Modulation Type	: $\pi/4$ -DQPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 2 Mbps



Trace: (Discrete)

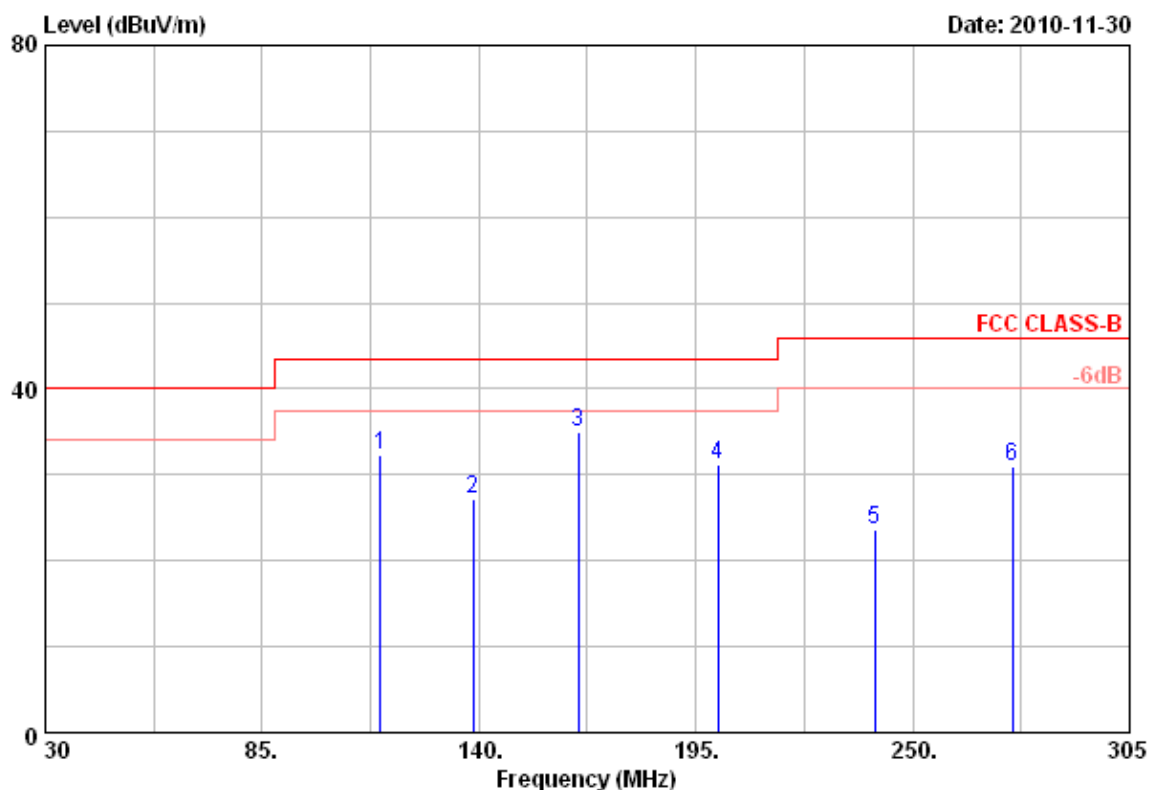
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4959.98	41.64	6.36	48.00	54.00	-6.00	Average	150	250
2	4959.98	53.01	6.36	59.37	74.00	-14.63	Peak	150	250
3	7442.50	31.29	10.92	42.21	54.00	-11.79	Average	150	250
4	7442.50	43.19	10.92	54.11	74.00	-19.89	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps

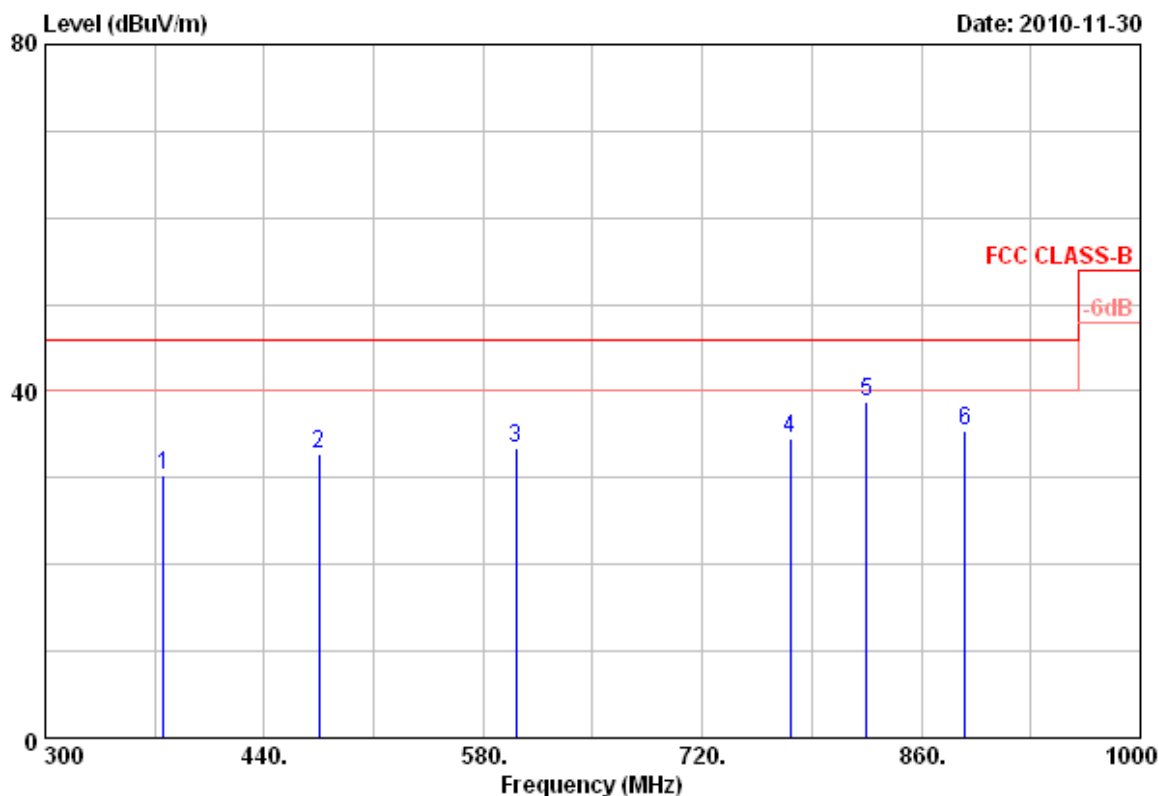


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	114.98	43.55	-11.16	32.39	43.50	-11.11	Peak	100	0
2	138.63	36.57	-9.28	27.29	43.50	-16.21	Peak	100	0
3	165.30	49.66	-14.62	35.04	43.50	-8.46	Peak	100	0
4	200.50	44.64	-13.46	31.18	43.50	-12.32	Peak	100	0
5	240.38	39.64	-16.10	23.54	46.00	-22.46	Peak	100	0
6	275.30	44.97	-13.97	31.00	46.00	-15.00	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps

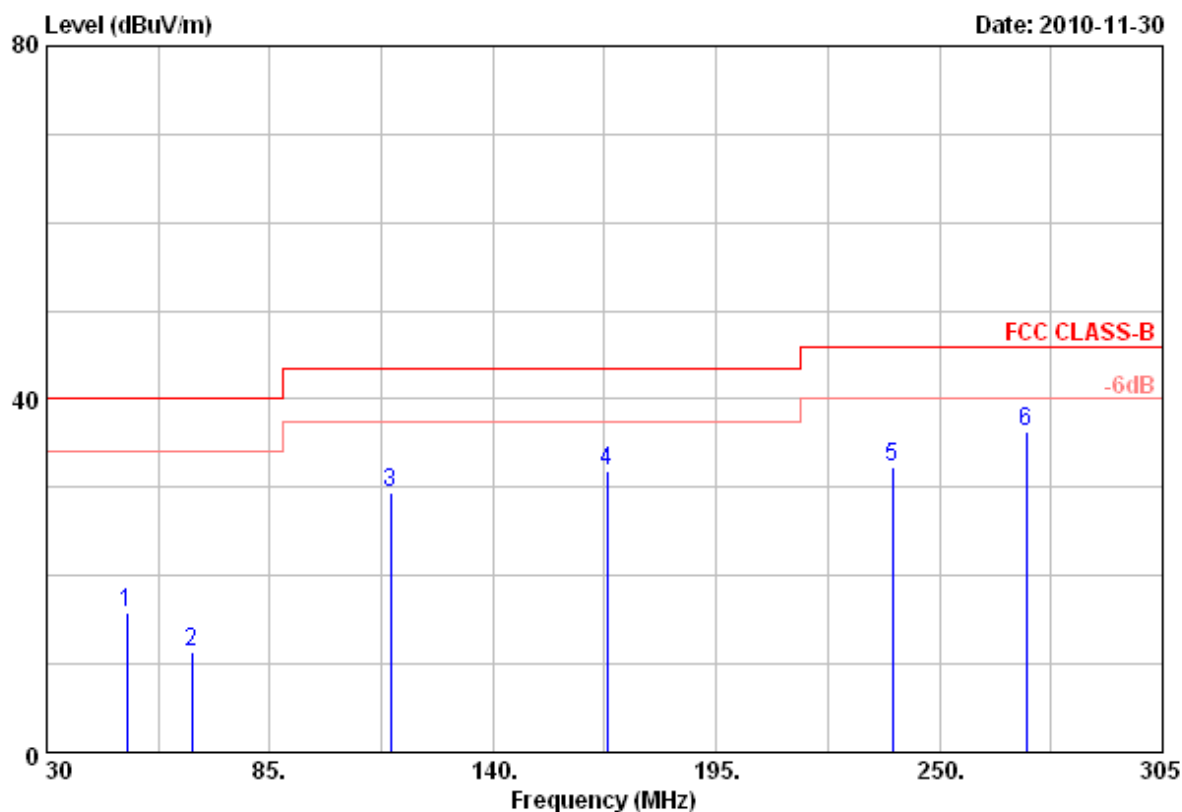


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	375.60	40.65	-10.34	30.31	46.00	-15.69	Peak	100	0
2	475.00	41.88	-9.05	32.83	46.00	-13.17	Peak	100	0
3	601.00	41.46	-8.02	33.44	46.00	-12.56	Peak	100	0
4	776.00	35.22	-0.58	34.64	46.00	-11.36	Peak	100	0
5	825.00	38.65	0.03	38.68	46.00	-7.32	Peak	100	0
6	888.00	30.28	5.12	35.40	46.00	-10.60	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps

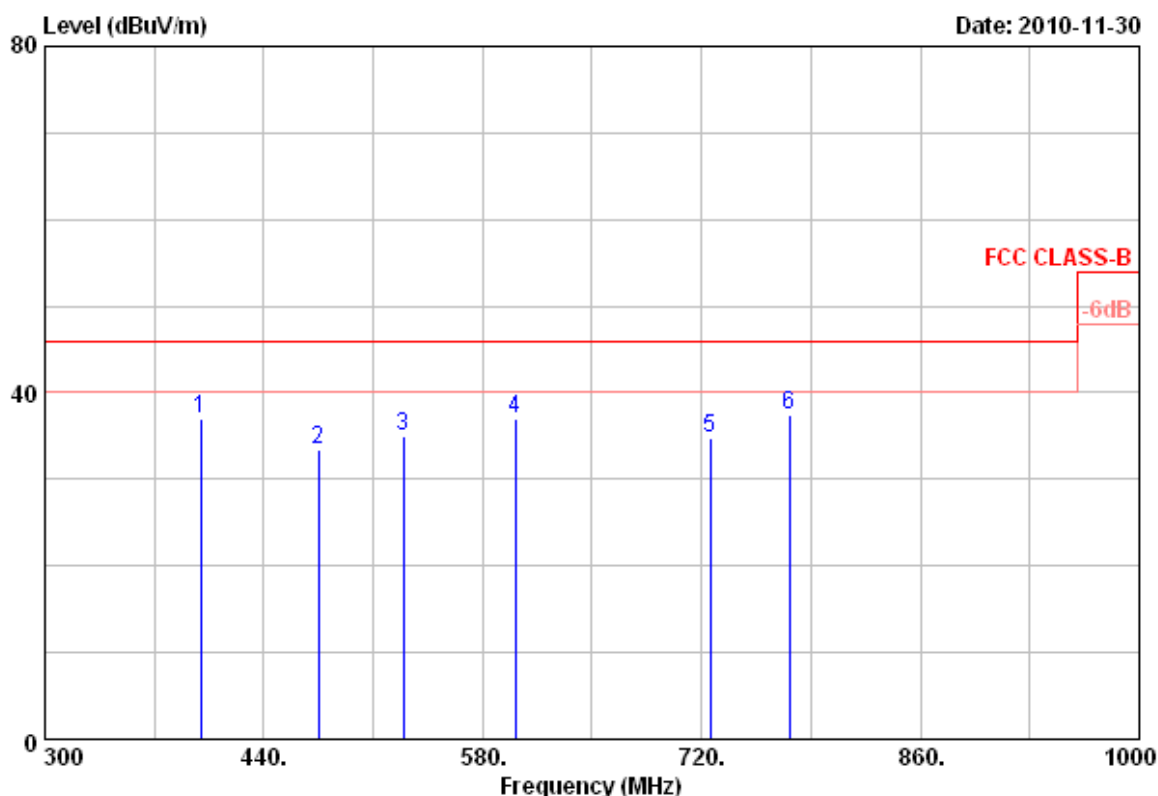


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	49.80	29.57	-13.80	15.77	40.00	-24.23	Peak	100	0
2	65.75	33.30	-21.89	11.41	40.00	-28.59	Peak	100	0
3	114.70	46.57	-17.23	29.34	43.50	-14.16	Peak	100	0
4	168.05	52.88	-21.09	31.79	43.50	-11.71	Peak	100	0
5	238.45	47.56	-15.27	32.29	46.00	-13.71	Peak	100	0
6	271.45	50.48	-14.17	36.31	46.00	-9.69	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 23 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps

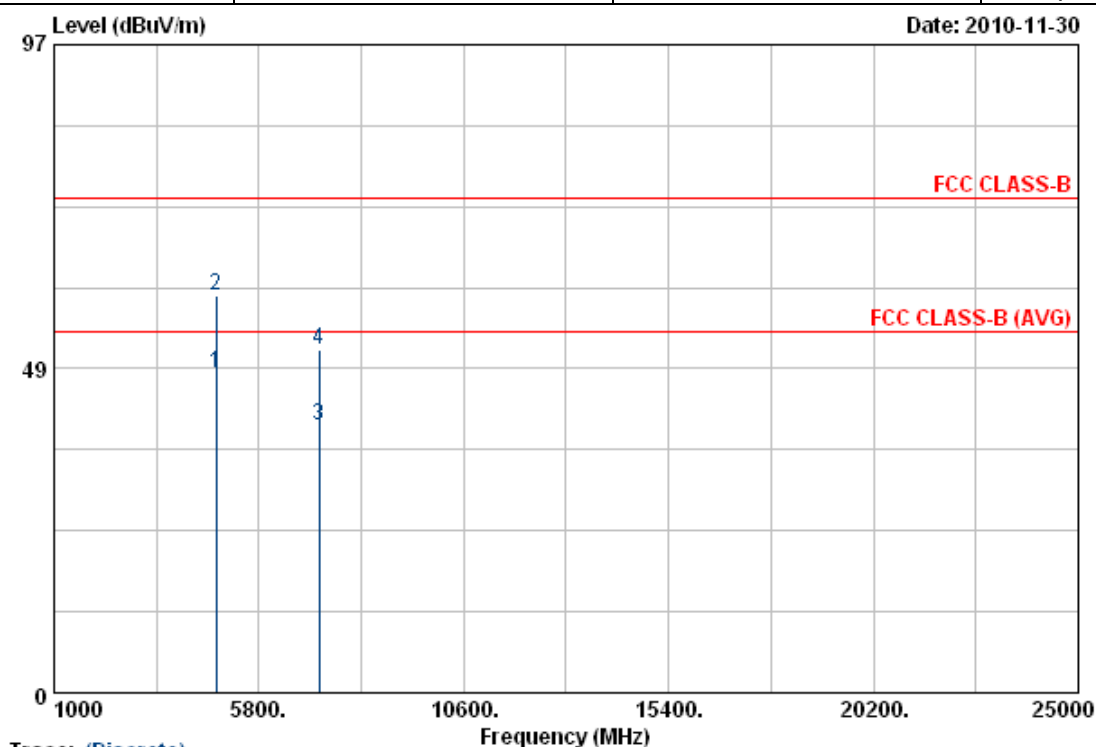


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	399.40	47.65	-10.69	36.96	46.00	-9.04	Peak	100	0
2	475.00	41.66	-8.22	33.44	46.00	-12.56	Peak	100	0
3	529.60	38.53	-3.63	34.90	46.00	-11.10	Peak	100	0
4	601.00	36.57	0.42	36.99	46.00	-9.01	Peak	100	0
5	725.60	31.68	3.06	34.74	46.00	-11.26	Peak	100	0
6	776.00	34.10	3.39	37.49	46.00	-8.51	Peak	100	0

Remarks: 1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. According to technical experiences, all spurious emission of BT mode at channel 0,39,78 are almost the same below 1GHz, so that the channel 0 was chosen as representative in final test.
4. The data is worst case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps



Trace: (Discrete)

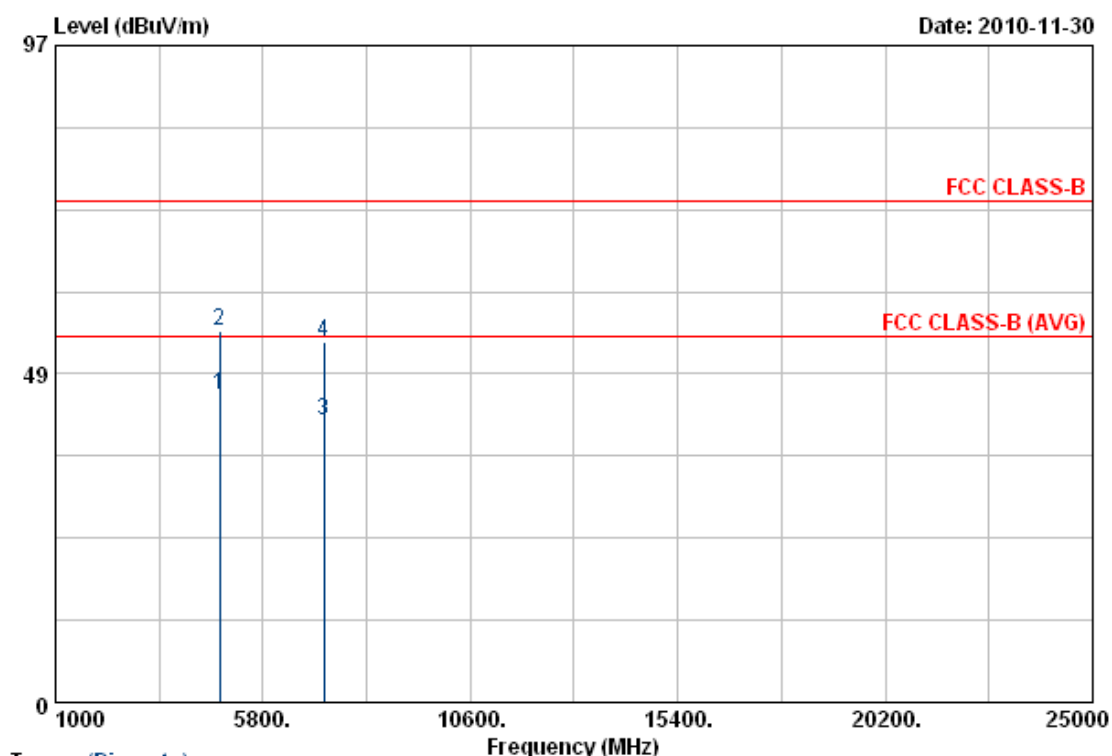
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4804.00	41.96	5.83	47.79	54.00	-6.21	Average	119	240
2	4804.00	53.67	5.83	59.50	74.00	-14.50	Peak	119	240
3	7206.15	29.73	10.21	39.94	54.00	-14.06	Average	119	240
4	7206.15	41.16	10.21	51.37	74.00	-22.63	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 0	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps



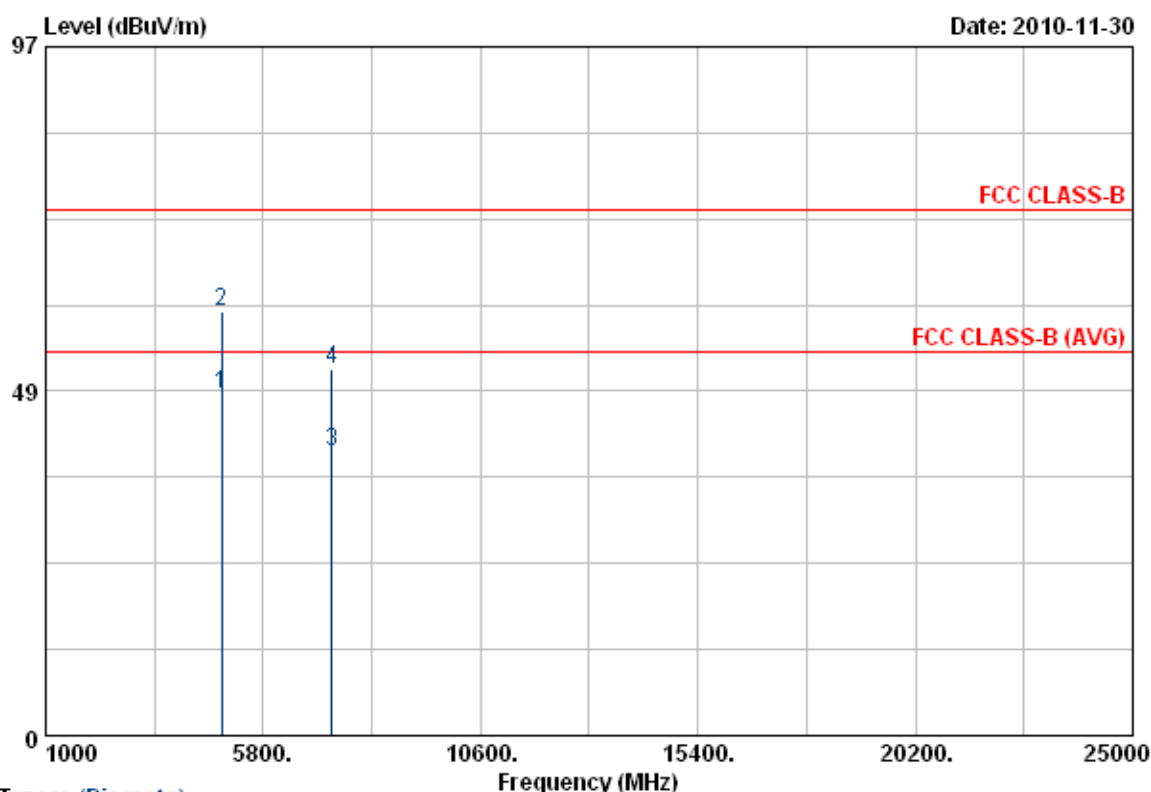
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4804.00	39.65	5.83	45.48	54.00	-8.52	Average	150	250
2	4804.00	49.09	5.83	54.92	74.00	-19.08	Peak	150	250
3	7205.83	31.33	10.21	41.54	54.00	-12.46	Average	150	250
4	7205.83	42.92	10.21	53.13	74.00	-20.87	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 39	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps



Trace: (Discrete)

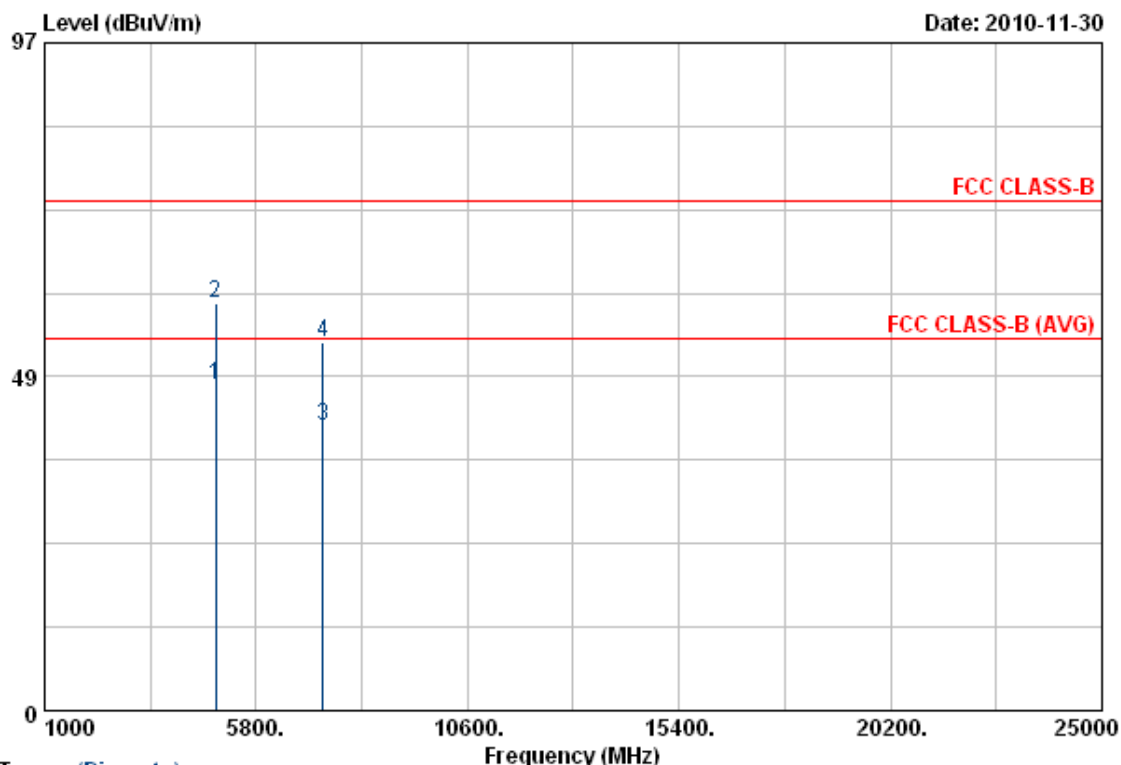
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4881.98	41.88	6.10	47.98	54.00	-6.02	Average	119	240
2	4881.98	53.70	6.10	59.80	74.00	-14.20	Peak	119	240
3	7322.98	29.28	10.58	39.86	54.00	-14.14	Average	119	240
4	7322.98	41.08	10.58	51.66	74.00	-22.34	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 39	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps



Trace: (Discrete)

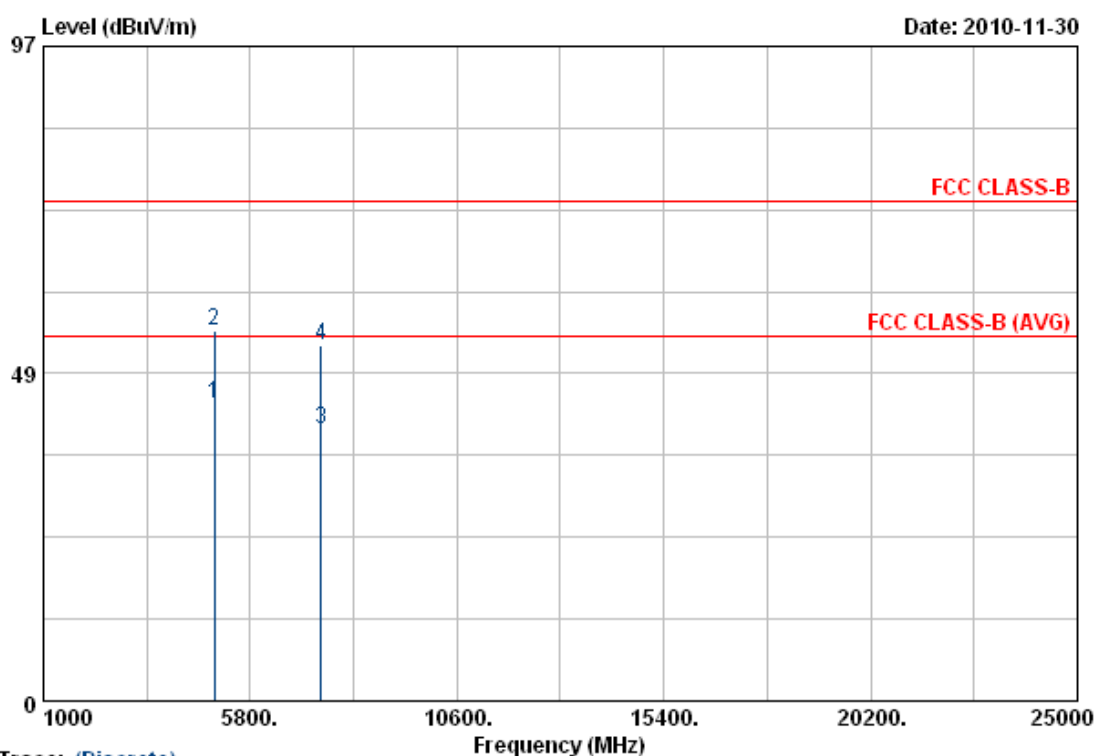
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4882.00	41.19	6.10	47.29	54.00	-6.71	Average	150	250
2	4882.00	53.02	6.10	59.12	74.00	-14.88	Peak	150	250
3	7322.95	30.83	10.58	41.41	54.00	-12.59	Average	150	250
4	7322.95	42.80	10.58	53.38	74.00	-20.62	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 78	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps



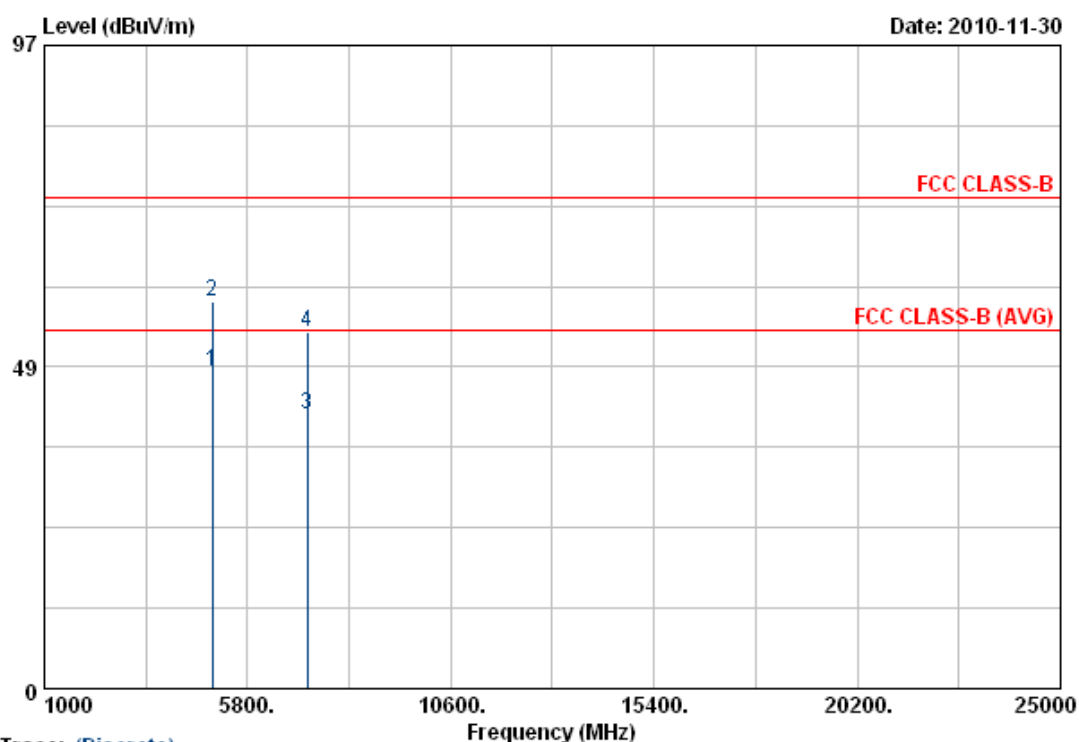
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4960.00	37.56	6.36	43.92	54.00	-10.08	Average	119	240
2	4960.00	48.44	6.36	54.80	74.00	-19.20	Peak	119	240
3	7436.40	29.28	10.91	40.19	54.00	-13.81	Average	119	240
4	7436.40	41.88	10.91	52.79	74.00	-21.21	Peak	119	240

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 26 °C
Operation Channel	: 78	Humidity	: 60 %
Modulation Type	: 8DPSK	Atmospheric Pressure	: 1020 hPa
Memo	:	Rate	: 3 Mbps



Trace: (Discrete)

Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4960.03	41.56	6.36	47.92	54.00	-6.08	Average	150	250
2	4960.03	52.10	6.36	58.46	74.00	-15.54	Peak	150	250
3	7201.28	31.23	10.20	41.43	54.00	-12.57	Average	150	250
4	7201.28	43.48	10.20	53.68	74.00	-20.32	Peak	150	250

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Test engineer: Ben



6. 20dB Bandwidth Measurement Data

6.1 Test Limit

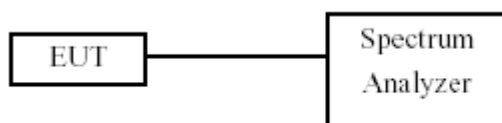
Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

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.

6.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 30 KHz and VBW to 100 KHz.
- The 20 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20 dB.

6.3 Test Setup Layout



6.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2010/05/08	2011/05/07



6.5 Test Result and Data

Modulation Standard: GFSK (1Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency (MHz)	20dB Bandwidth (KHz)
00	2402	888.00
39	2441	860.00
78	2480	860.00

Modulation Standard: $\pi/4$ -DQPSK (2Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency (MHz)	20dB Bandwidth (KHz)
00	2402	1252.00
39	2441	1248.00
78	2480	1244.00

Modulation Standard: 8DPSK (3Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

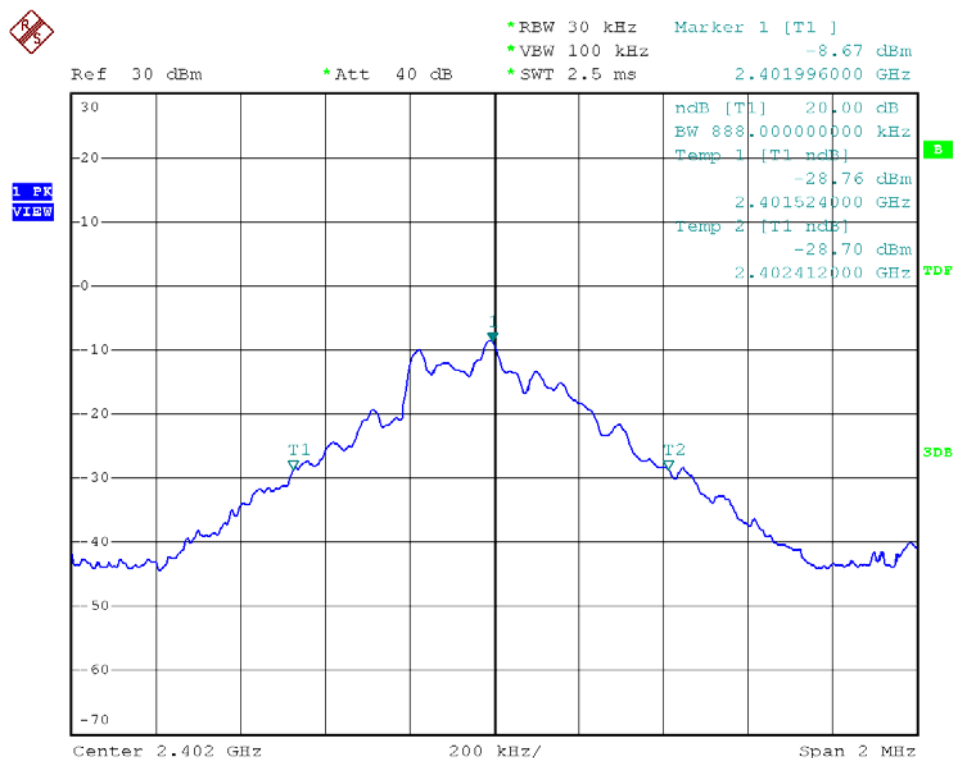
Atmospheric pressure: 1020 hPa

Humidity: 65%

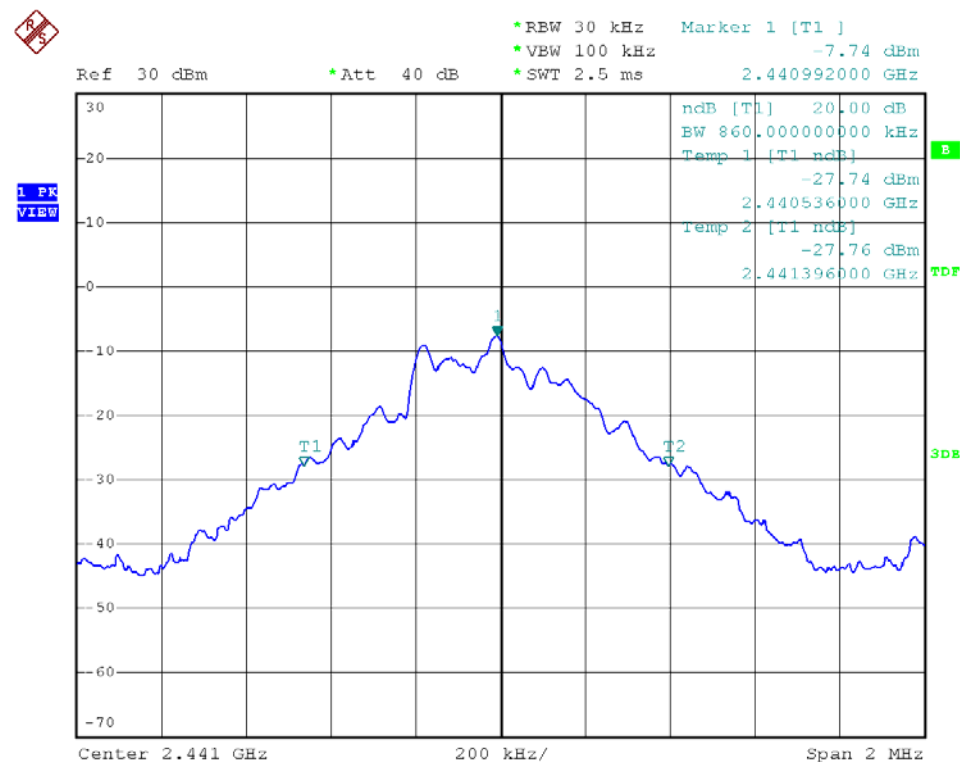
Channel	Frequency (MHz)	20dB Bandwidth (KHz)
00	2402	1272.00
39	2441	1260.00
78	2480	1272.00



Modulation Standard: GFSK (1Mbps)
Channel: 00

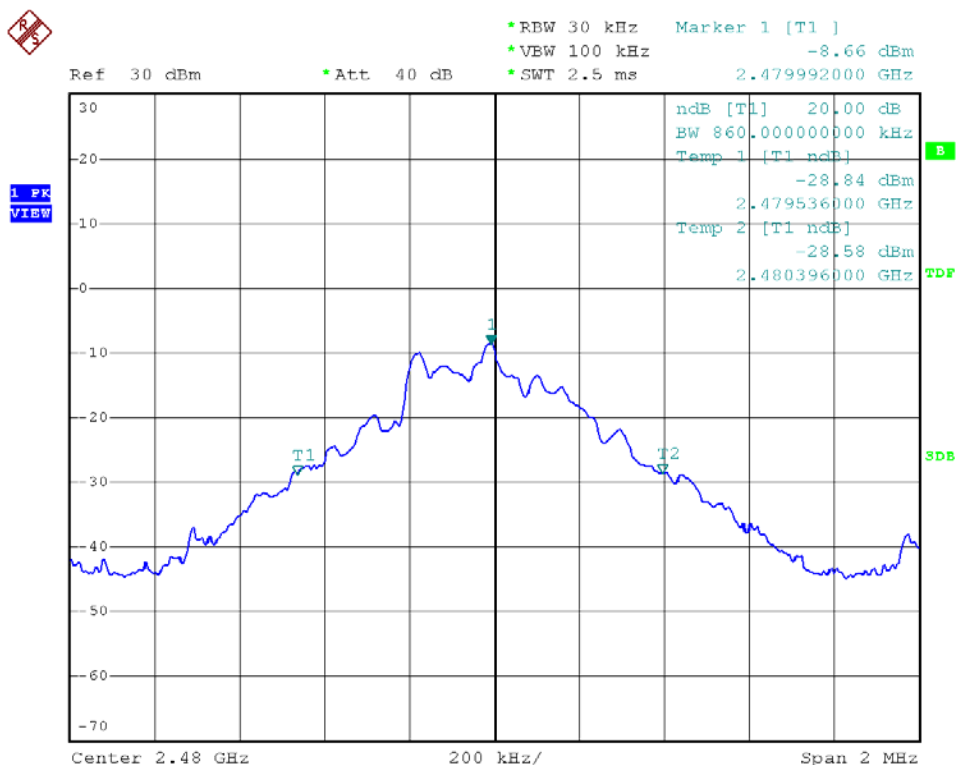


Modulation Standard: GFSK (1Mbps)
Channel: 39

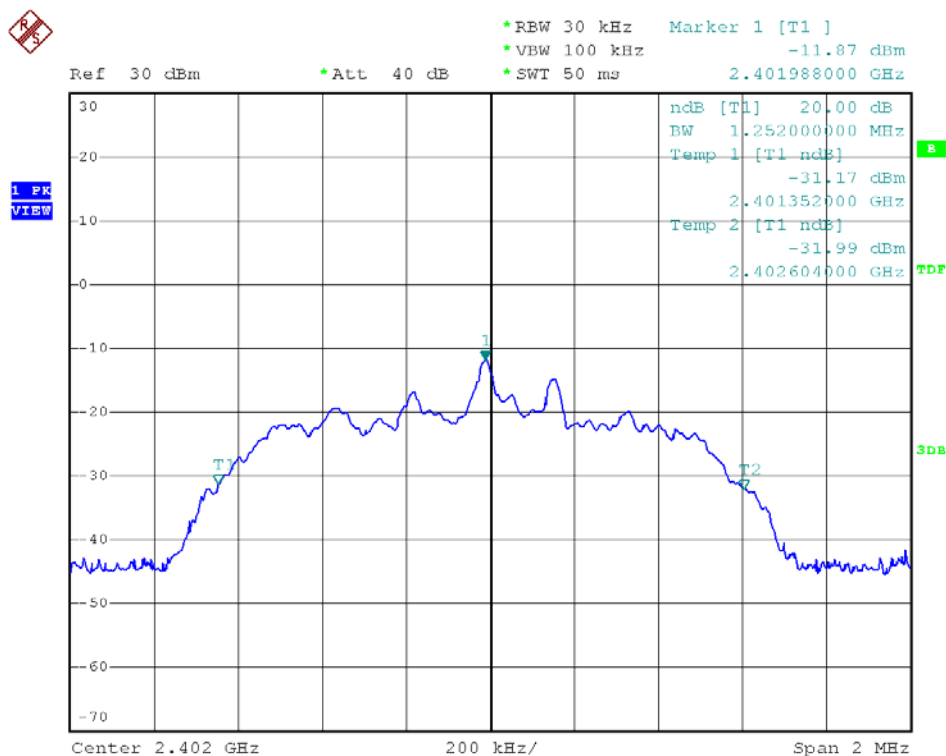




Modulation Standard: GFSK (1Mbps)
Channel: 78

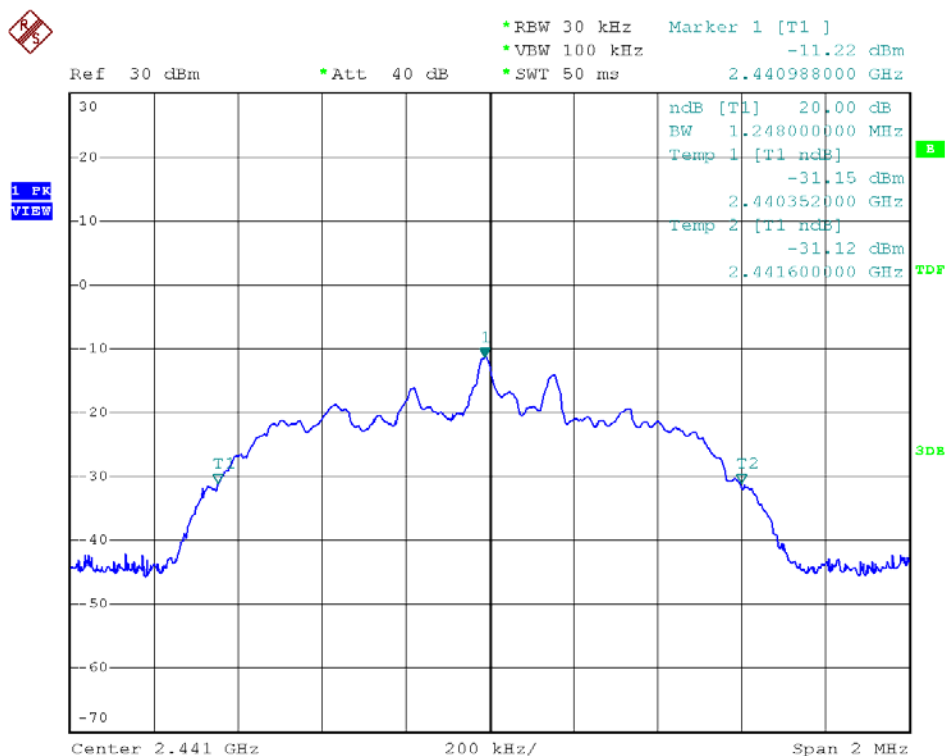


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 00

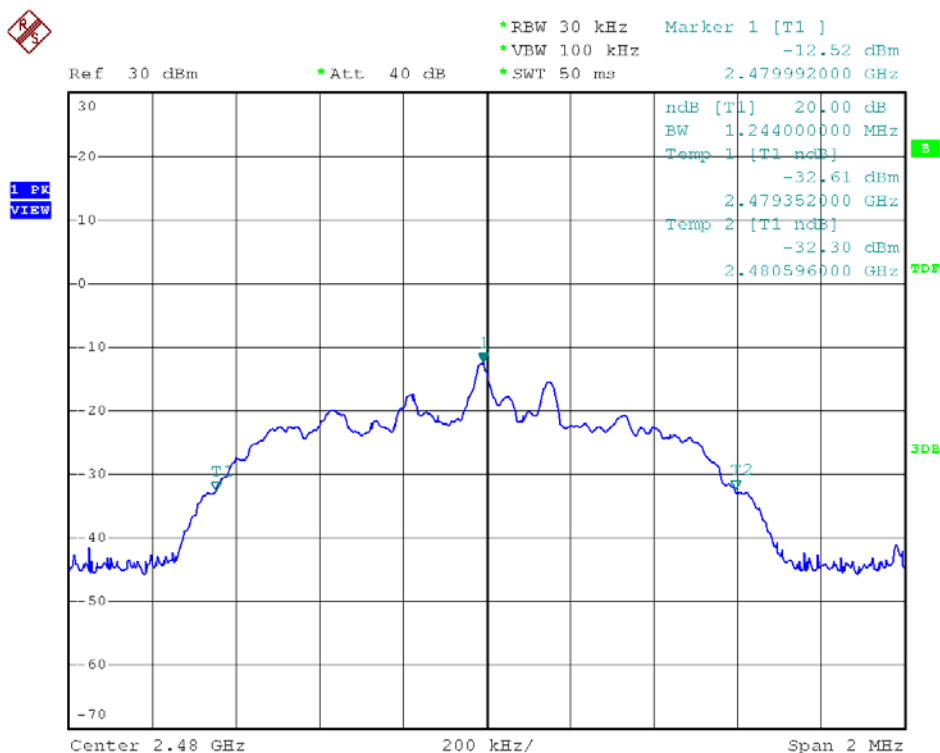




Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 39

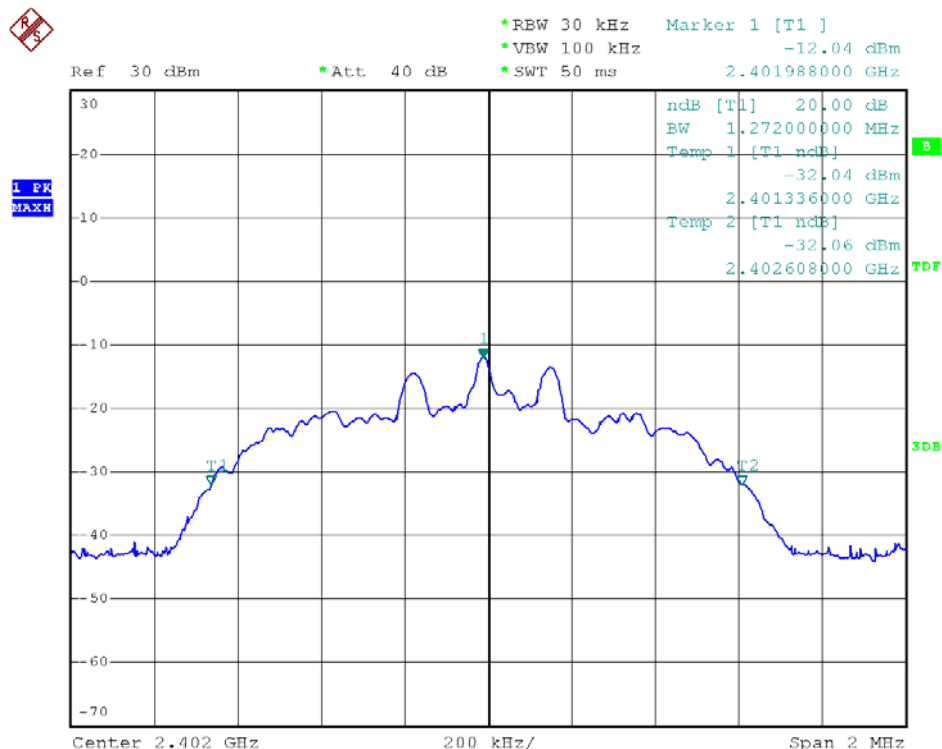


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 78

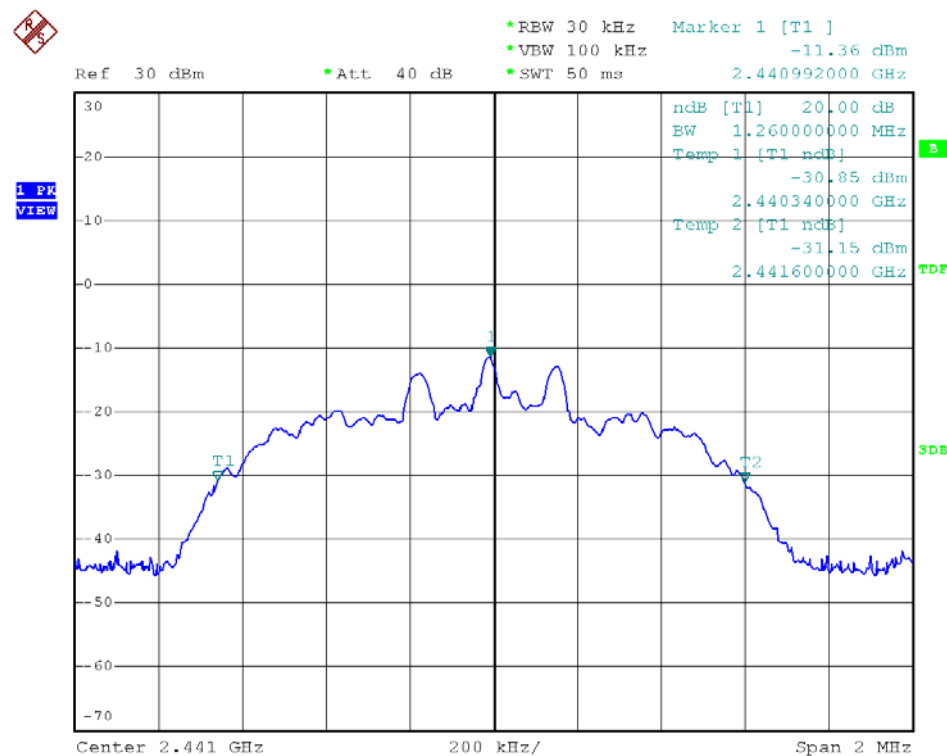




Modulation Standard: 8DPSK (3Mbps)
Channel: 00

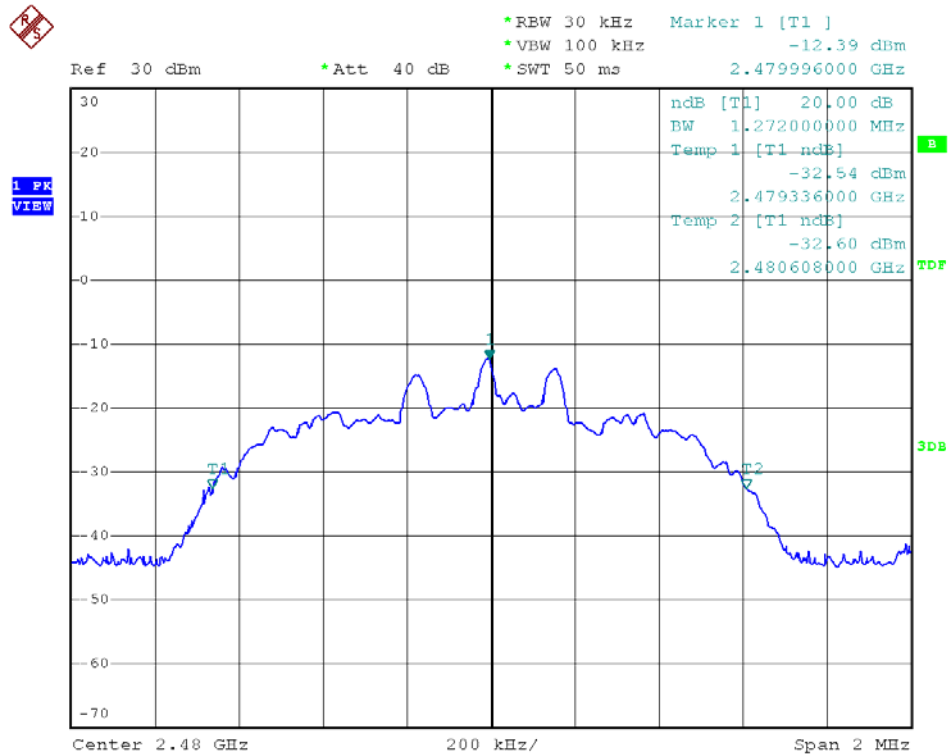


Modulation Standard: 8DPSK (3Mbps)
Channel: 39





Modulation Standard: 8DPSK (3Mbps)
Channel: 78





7. Frequencies Separation

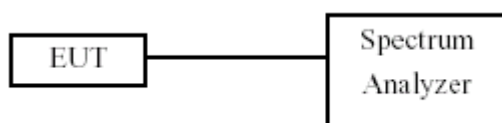
7.1 Test Limit

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.

7.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 100 KHz and VBW to 100 KHz.
- By using the MaxHold function record the separation of two adjacent channels.
- Measure the frequency difference of these two adjacent channels.

7.3 Test Setup Layout



7.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2010/05/08	2011/05/07



7.5 Test Result and Data

Modulation Standard: GFSK (1Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)
00	2402	1.004	0.592
39	2441	1.004	0.573
78	2480	1.004	0.573

Modulation Standard: $\pi/4$ -DQPSK (2Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)
00	2402	1.000	0.844
39	2441	1.004	0.832
78	2480	1.004	0.829

Modulation Standard: 8DPSK (3Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

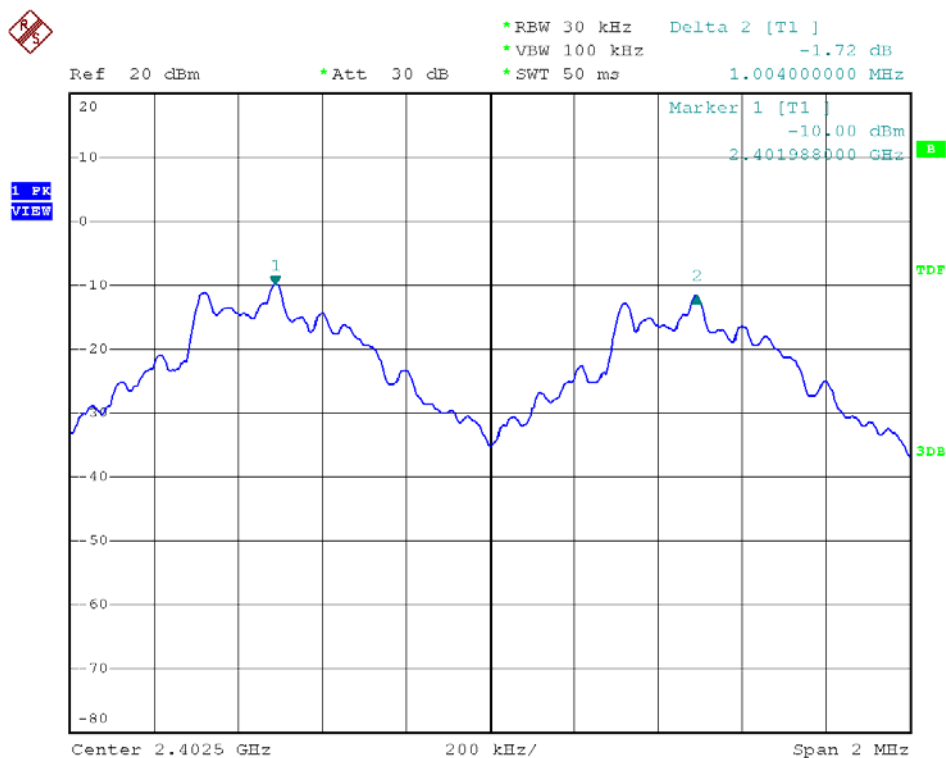
Atmospheric pressure: 1020 hPa

Humidity: 65%

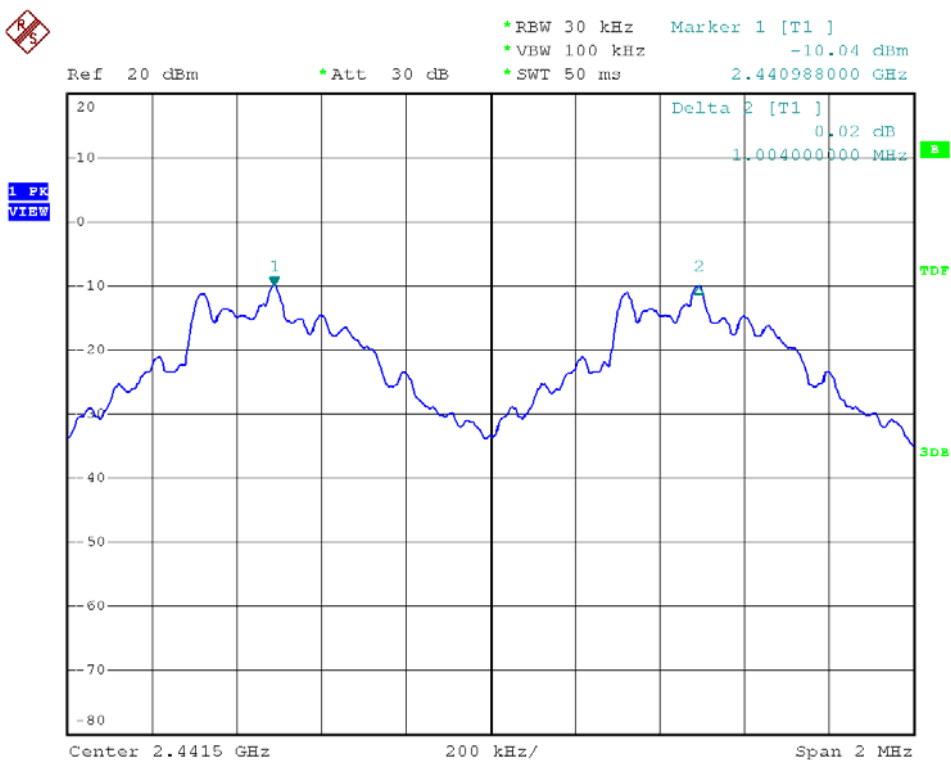
Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)
00	2402	1.000	0.848
39	2441	1.004	0.840
78	2480	1.004	0.848



Modulation Standard: GFSK (1Mbps)
Channel: 00

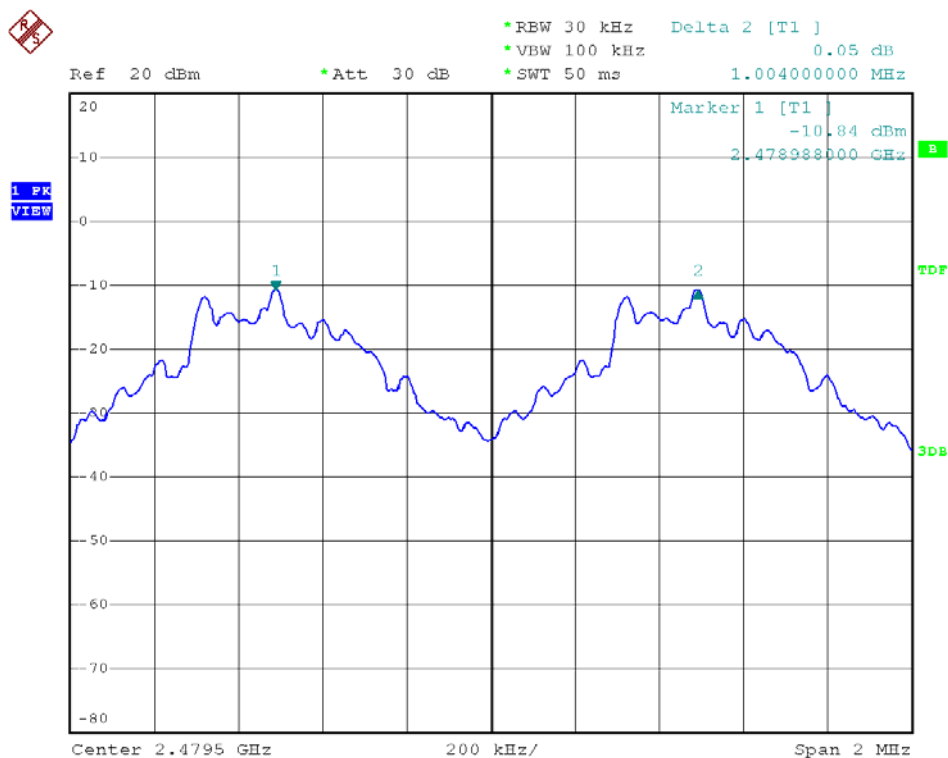


Modulation Standard: GFSK (1Mbps)
Channel: 39

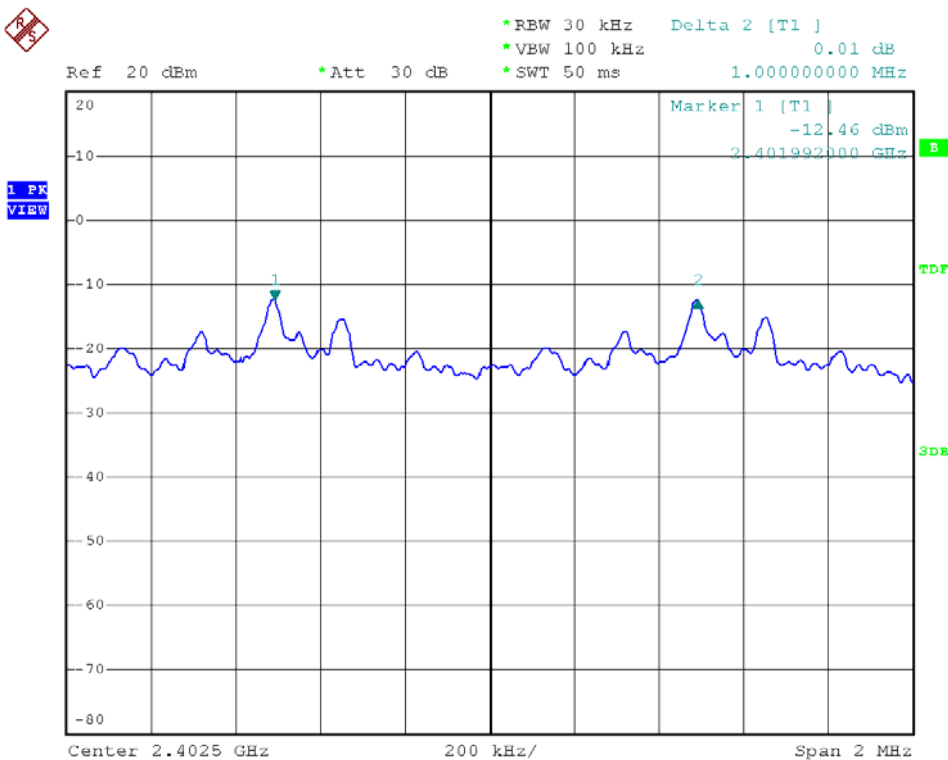




Modulation Standard: GFSK (1Mbps)
Channel: 78

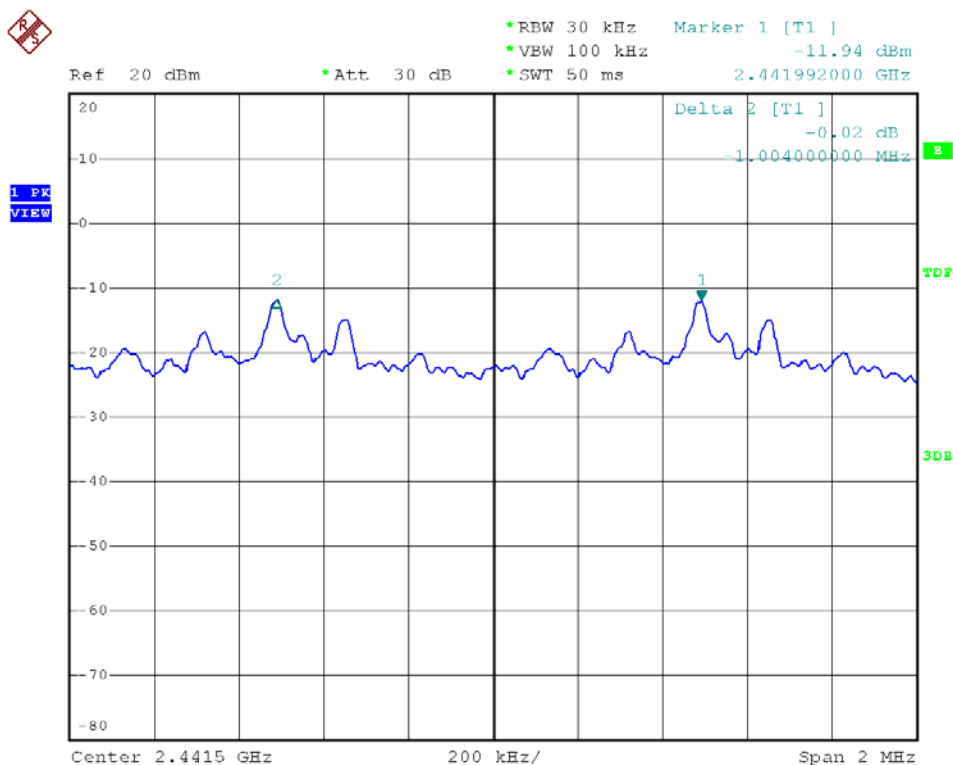


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 00

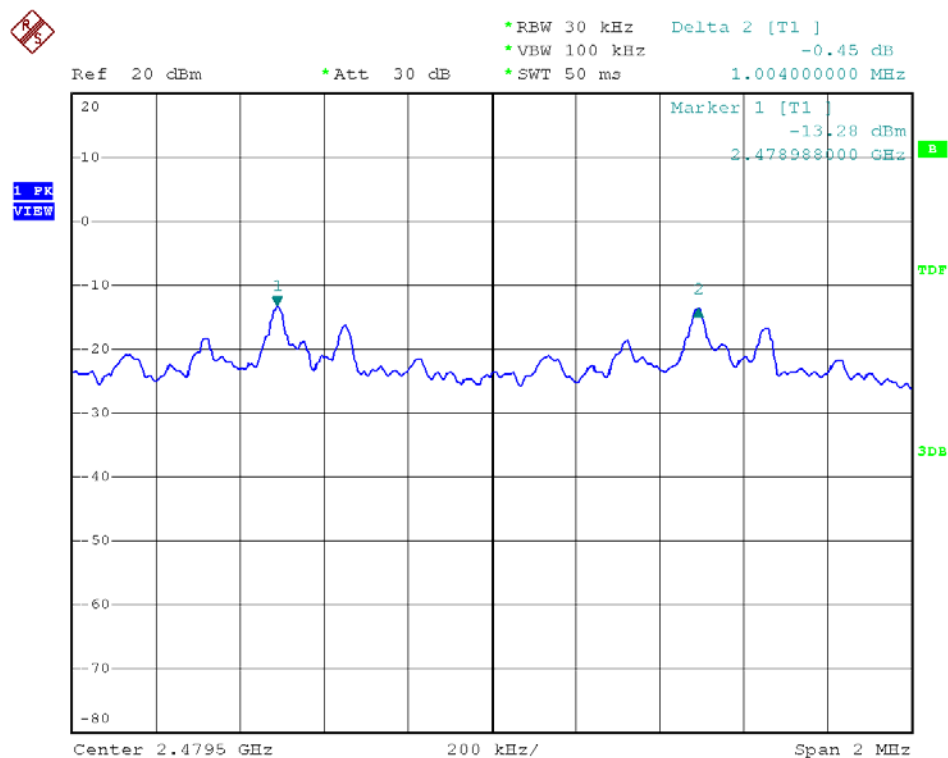




Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 39

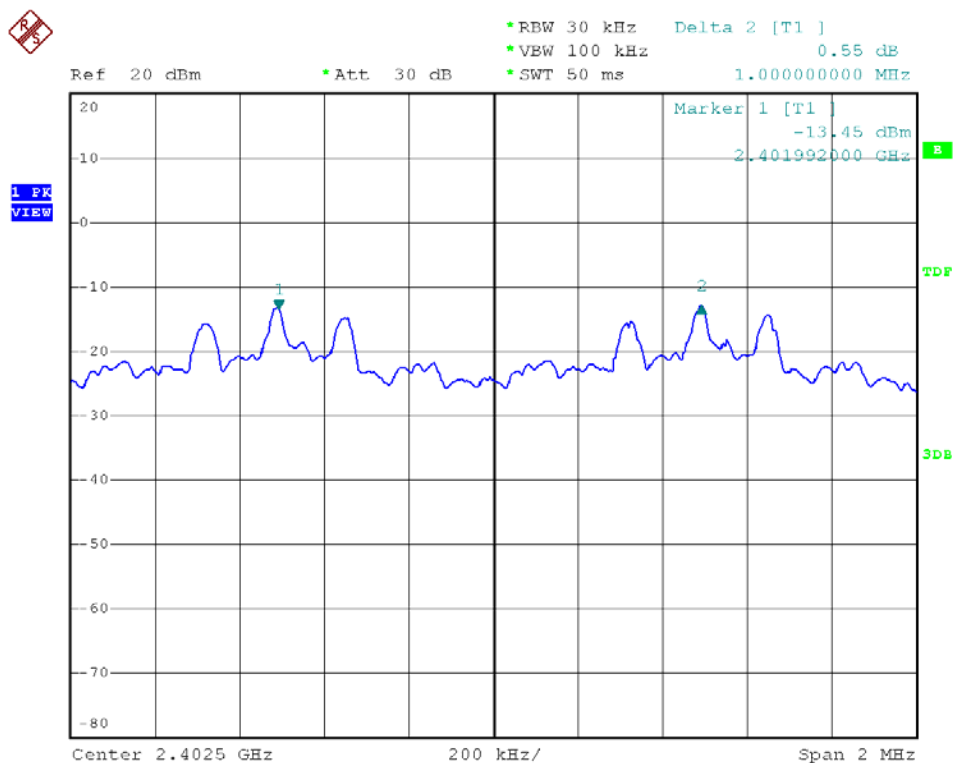


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 78

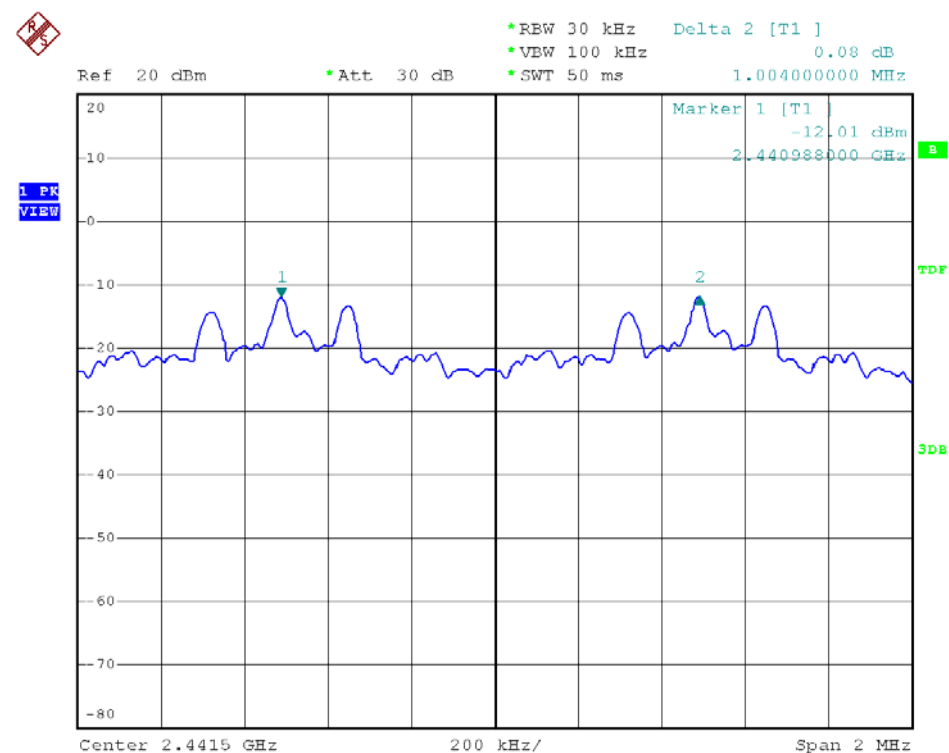




Modulation Standard: 8DQPSK (3Mbps)
Channel: 00

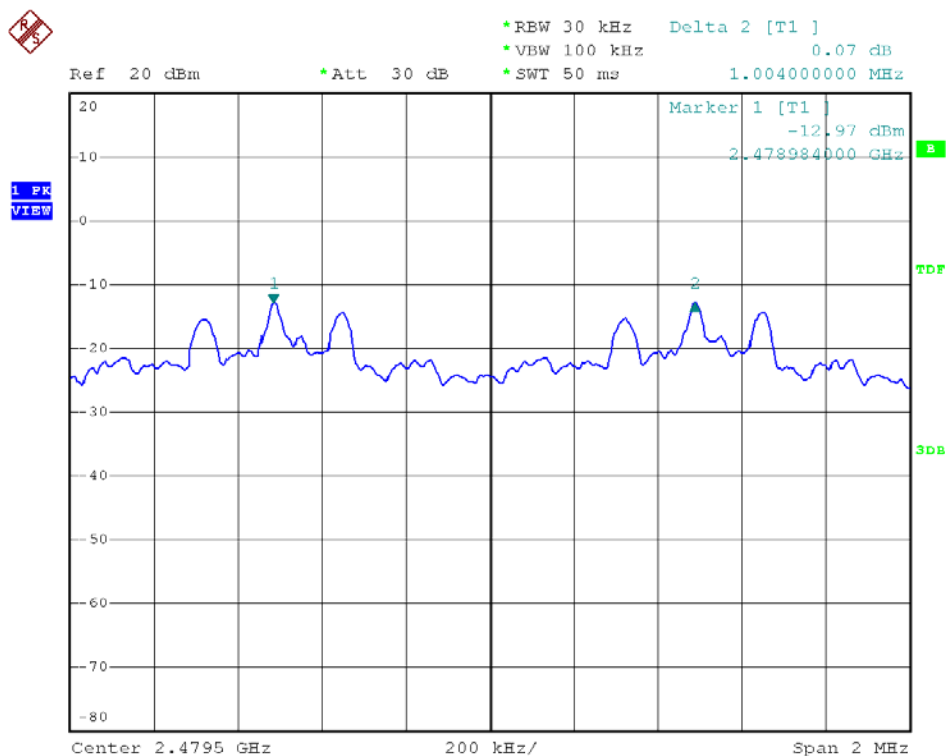


Modulation Standard: 8DQPSK (3Mbps)
Channel: 39





Modulation Standard: 8DQPSK (3Mbps)
Channel: 78





8. Dwell Time on each channel

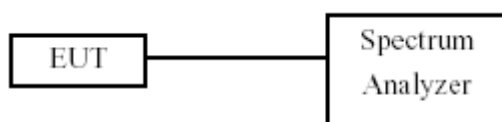
8.1 Test Limit

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

8.2 Test Procedures

1. The transmitter output was connected to the spectrum analyzer.
2. Adjust the center frequency to measure frequency, then set zero span mode.
2. Set RBW of spectrum analyzer to 100 KHz and VBW to 100 KHz.
4. Measure the time duration of one transmission on the measured frequency.

8.3 Test Setup Layout



8.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2010/05/08	2011/05/07



8.5 Test Result and Data

Modulation Standard: GFSK (1Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

a) 2402 MHz Dwell Time is	=	133.76 ms
b) 2441 MHz Dwell Time is	=	133.76 ms
c) 2480 MHz Dwell Time is	=	133.76 ms

Modulation Standard: $\pi/4$ -DQPSK (2Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

a) 2402 MHz Dwell Time is	=	325.06 ms
b) 2441 MHz Dwell Time is	=	295.00 ms
c) 2480 MHz Dwell Time is	=	325.60 ms

Modulation Standard: 8DPSK (3Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

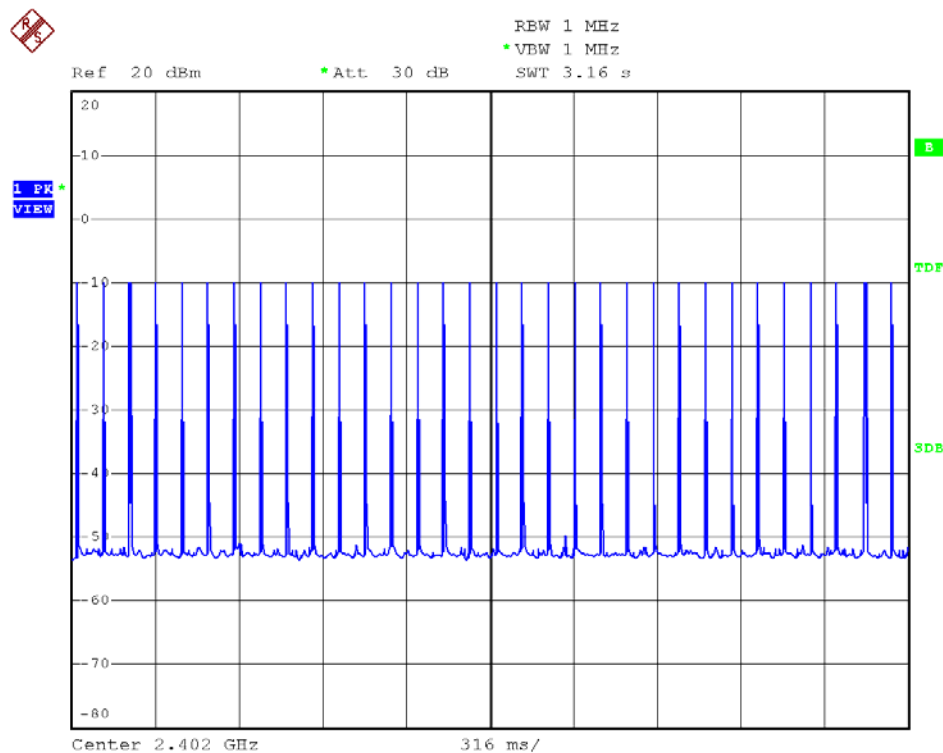
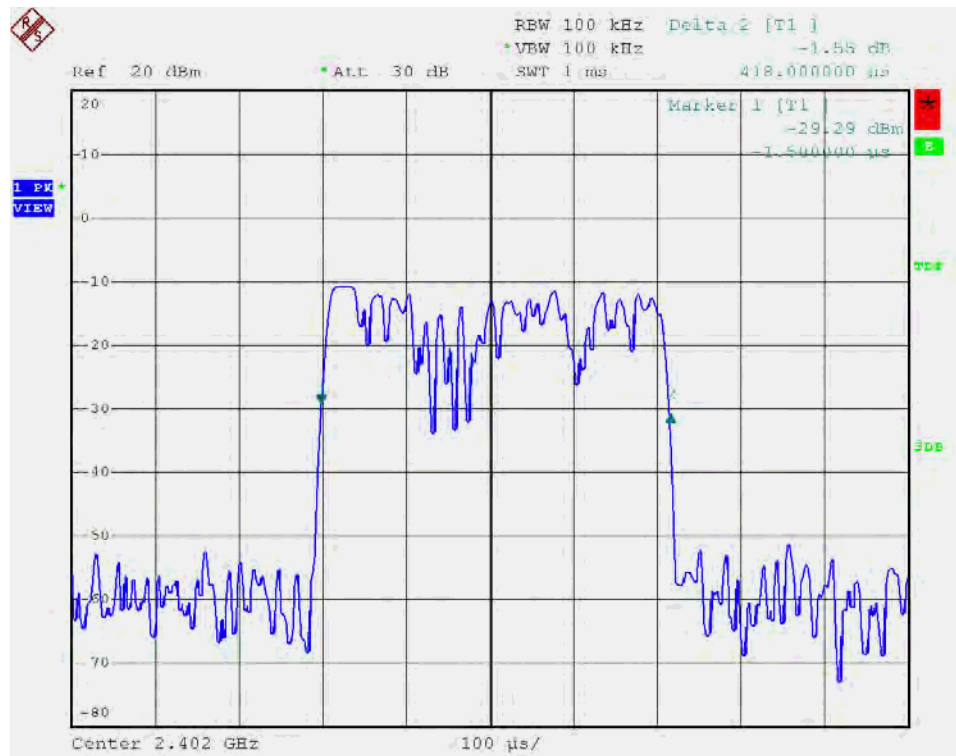
Atmospheric pressure: 1020 hPa

Humidity: 65%

a) 2402 MHz Dwell Time is	=	295.00 ms
b) 2441 MHz Dwell Time is	=	295.00 ms
c) 2480 MHz Dwell Time is	=	324.50 ms

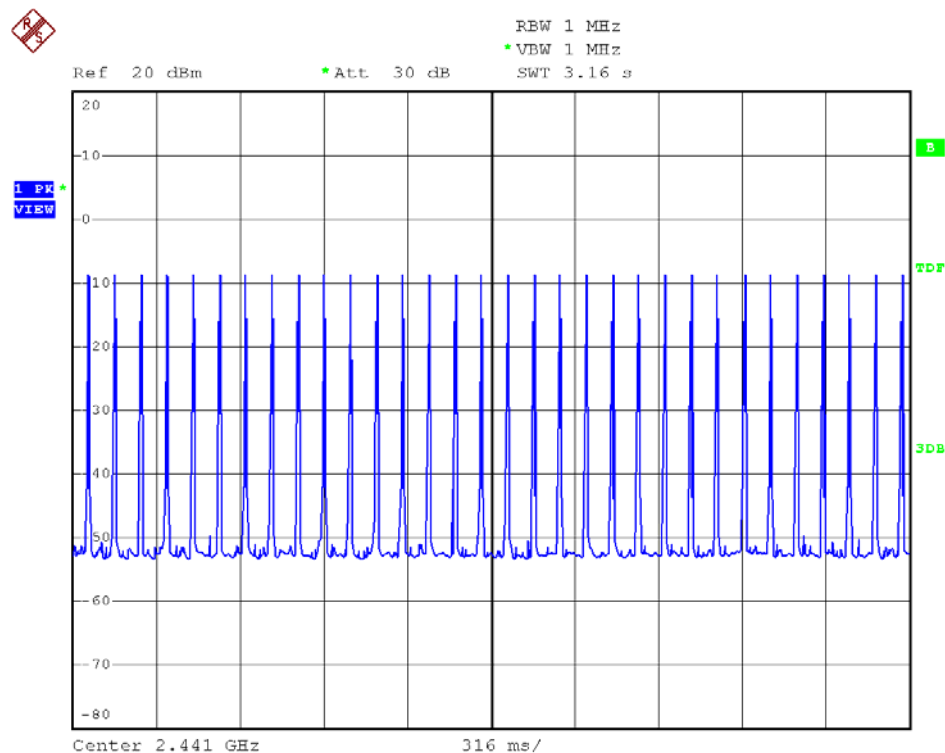
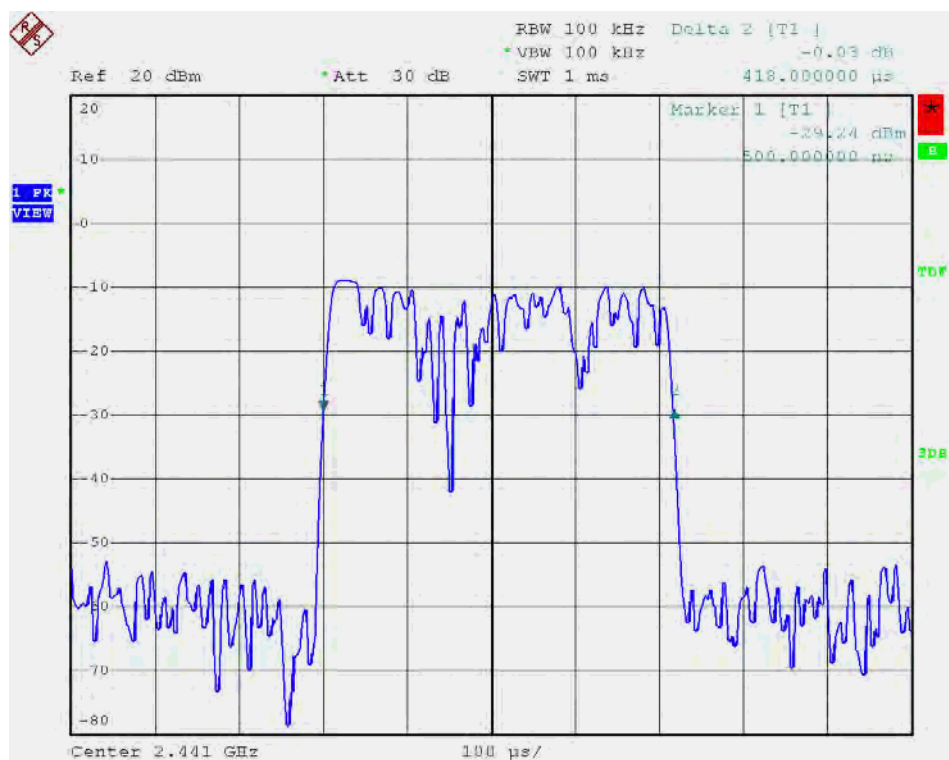


Modulation Standard: GFSK (1Mbps)
Channel: 00



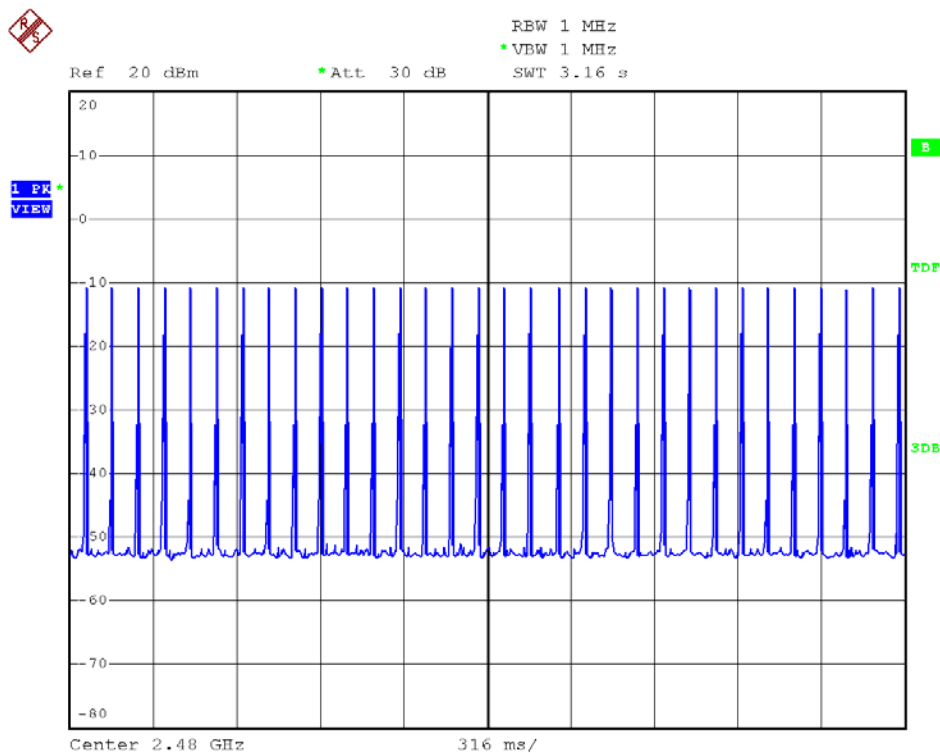
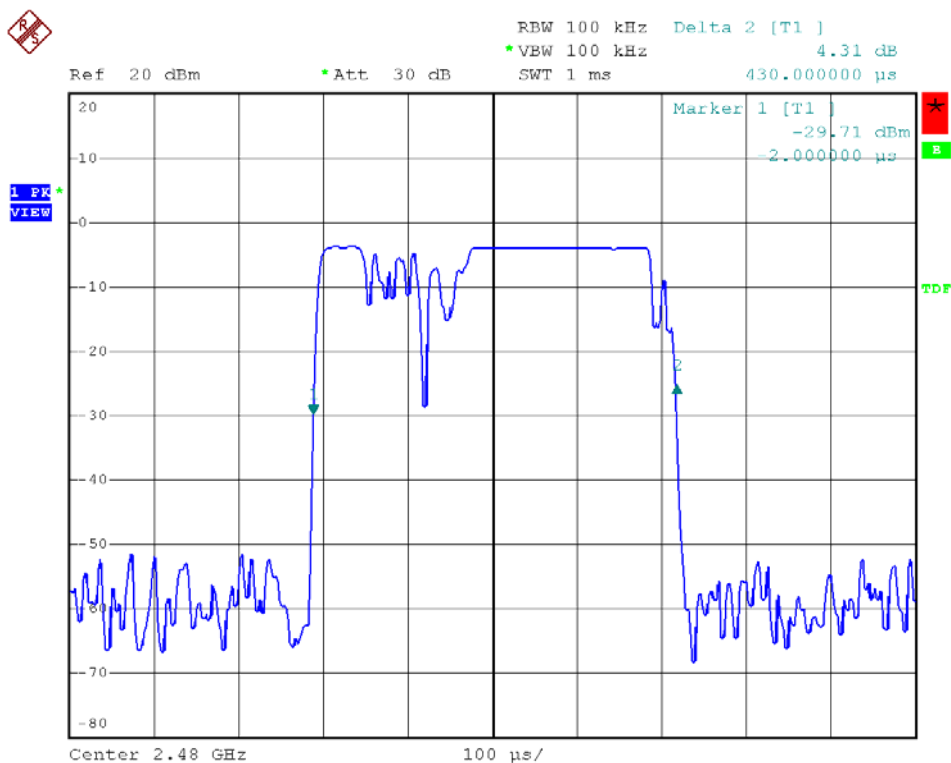


Modulation Standard: GFSK (1Mbps)
Channel: 39



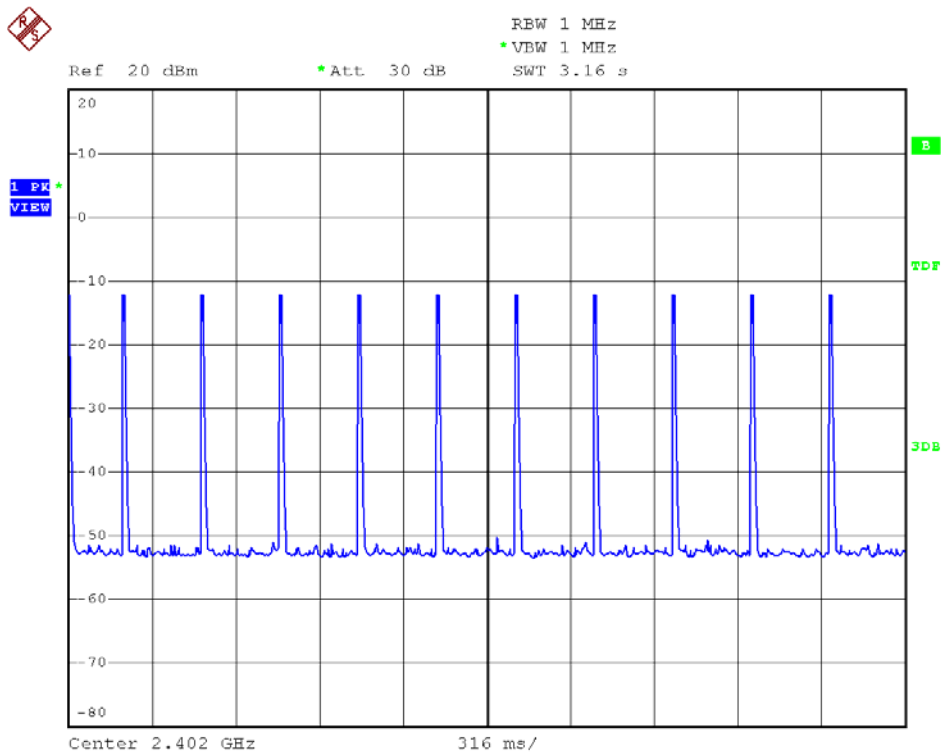
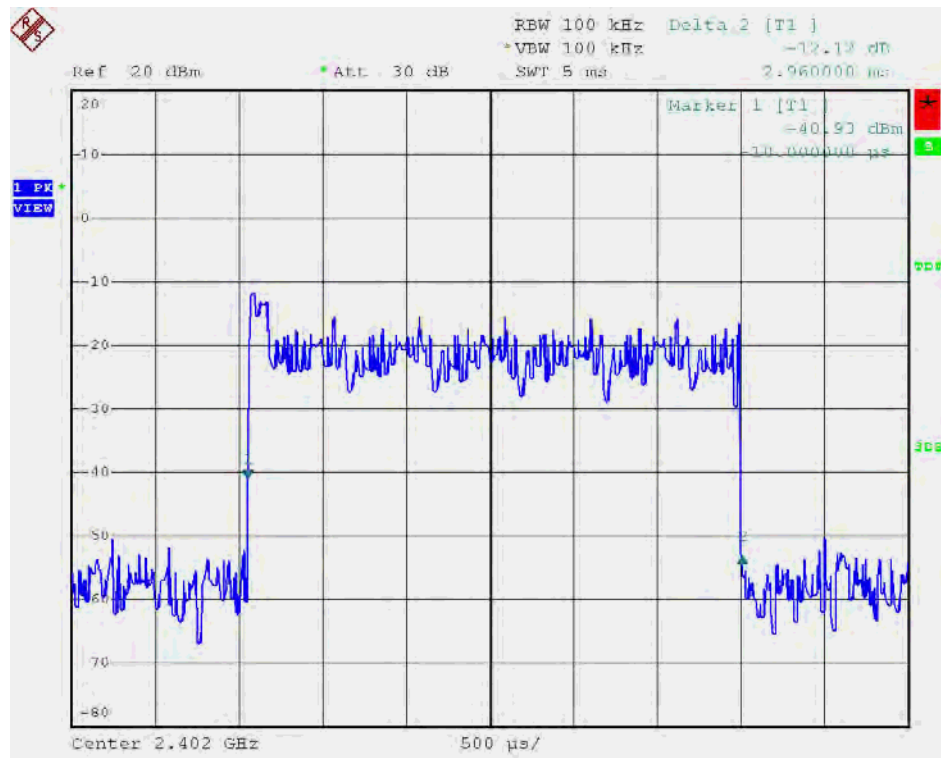


Modulation Standard: GFSK (1Mbps)
Channel: 78



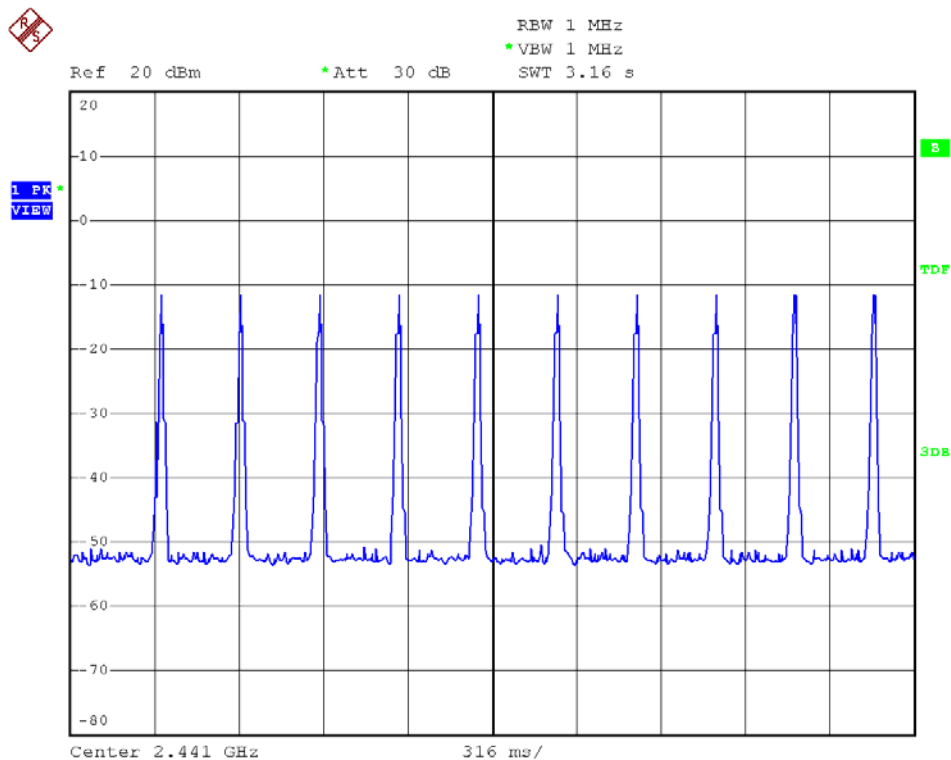
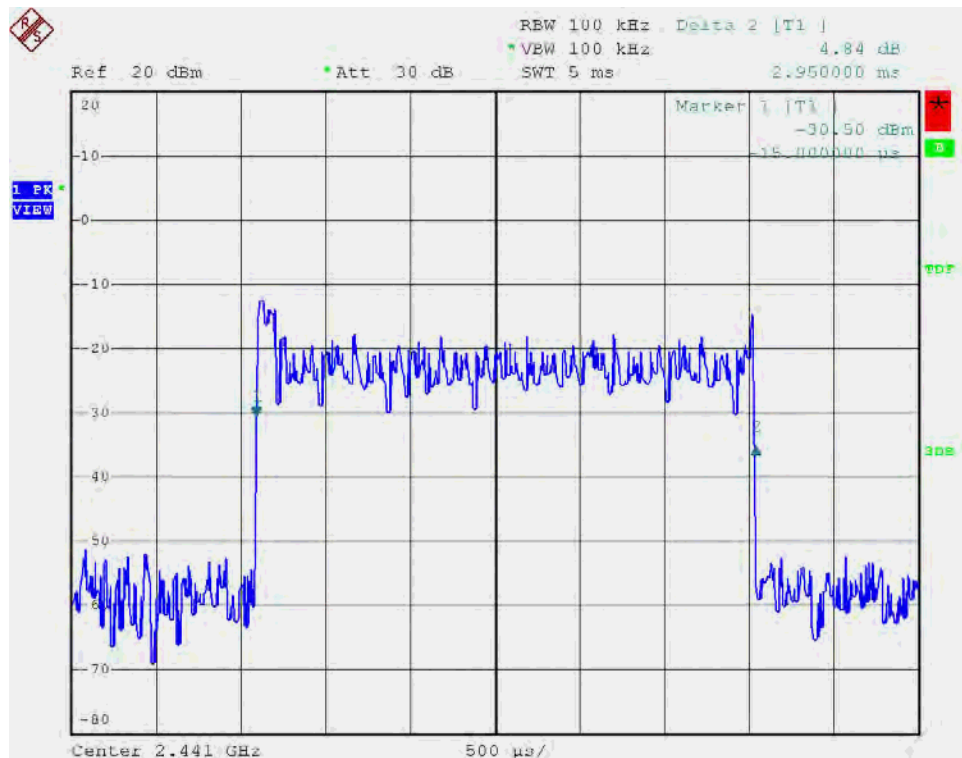


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 00



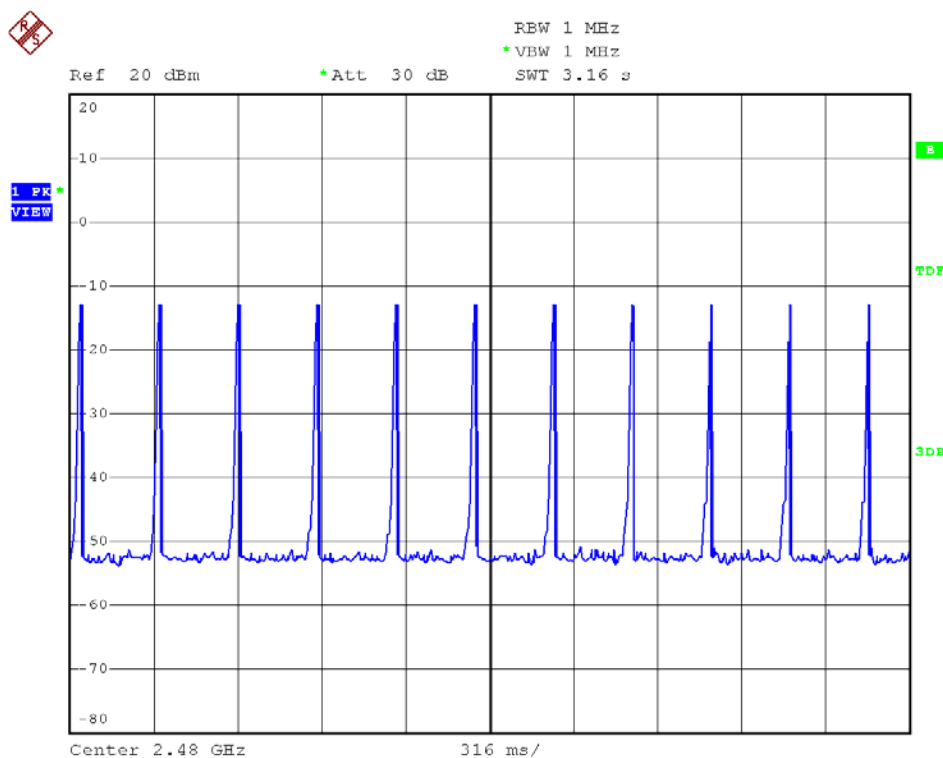
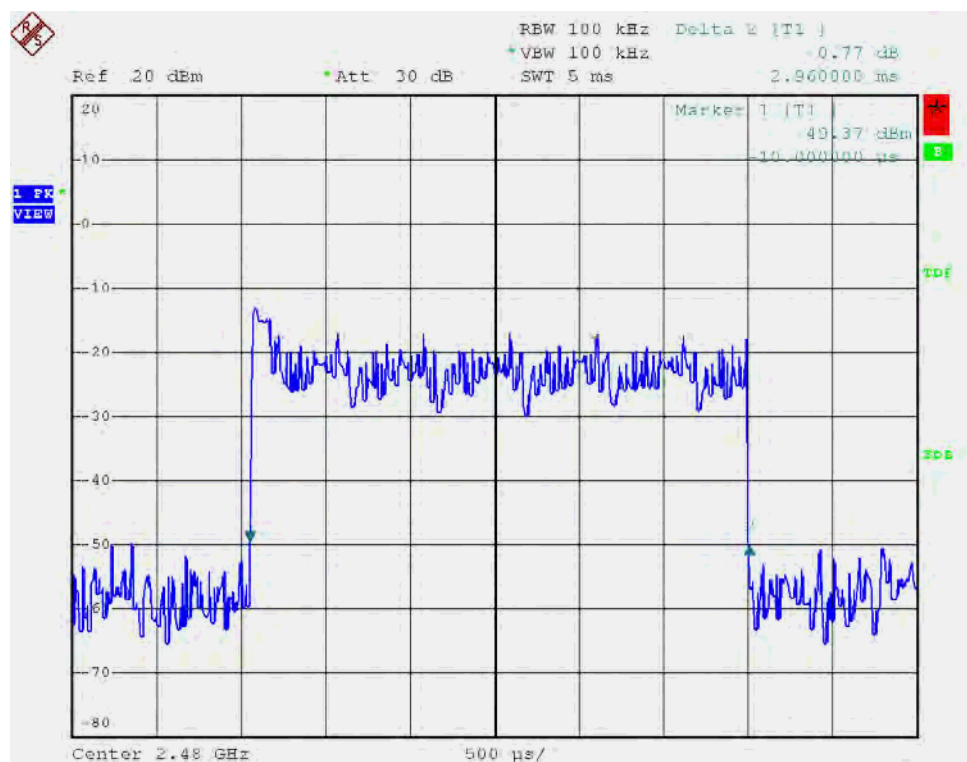


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 39



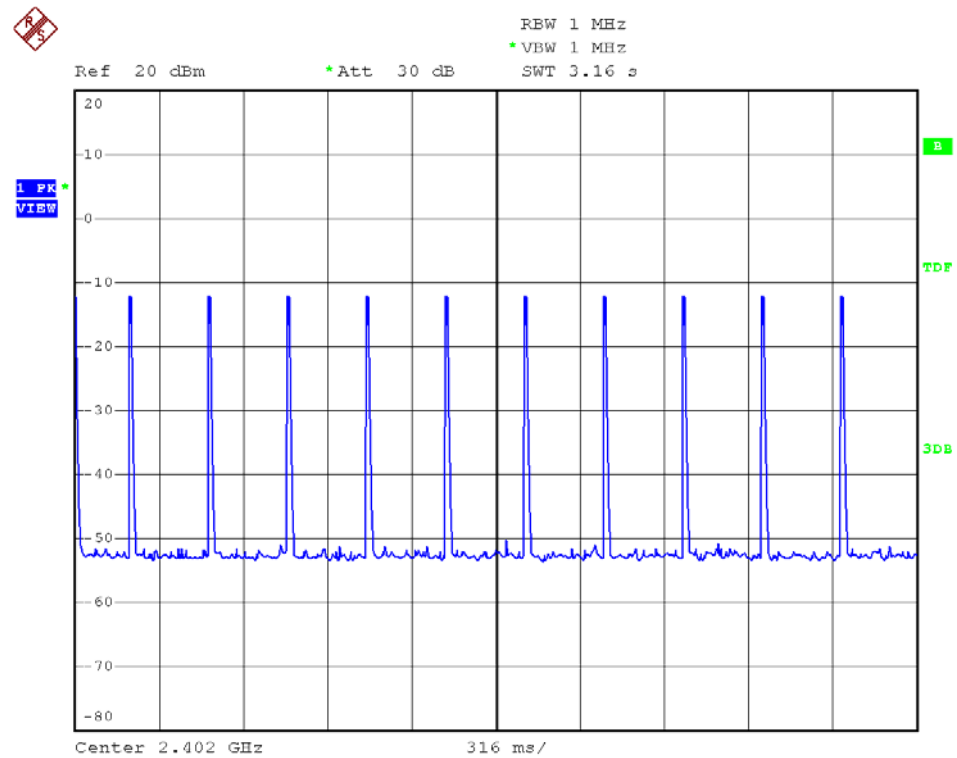
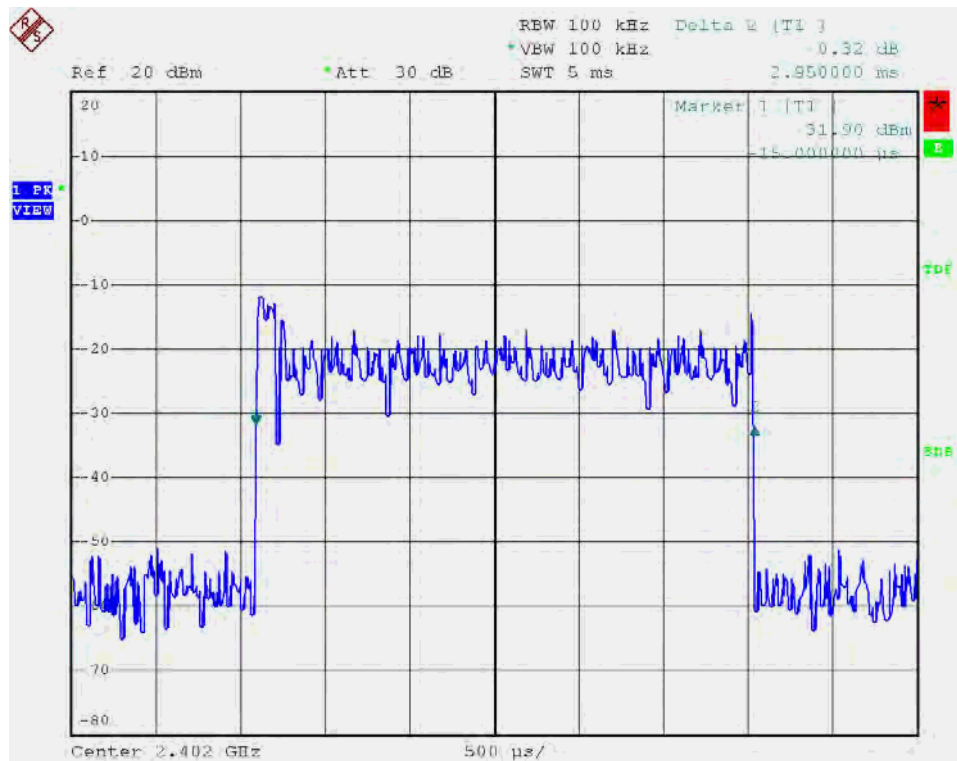


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 78



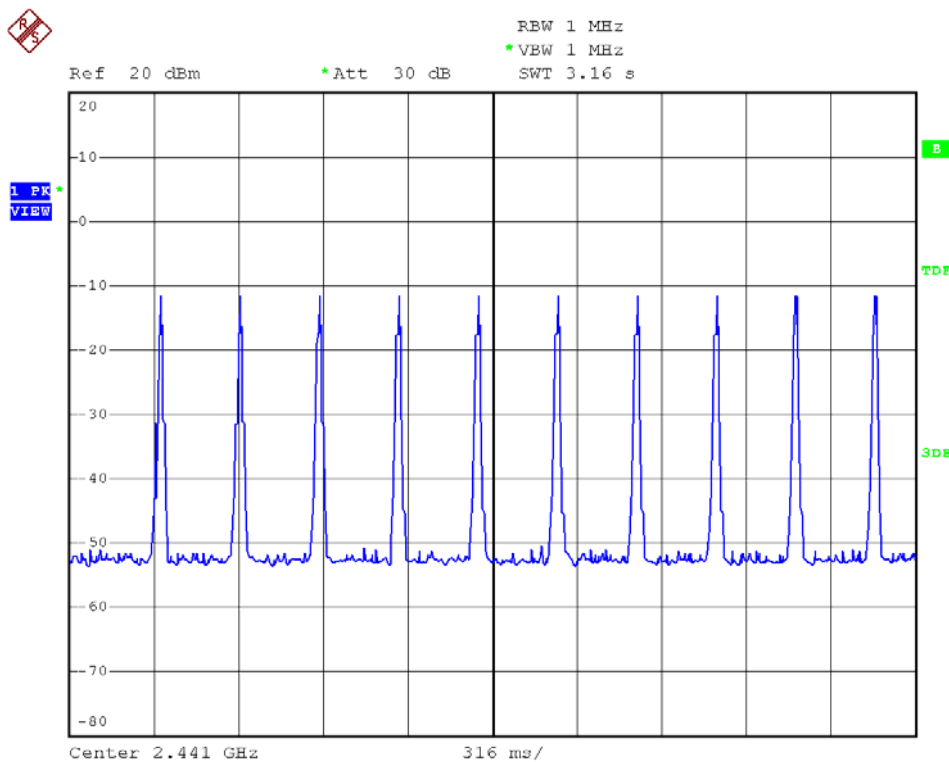
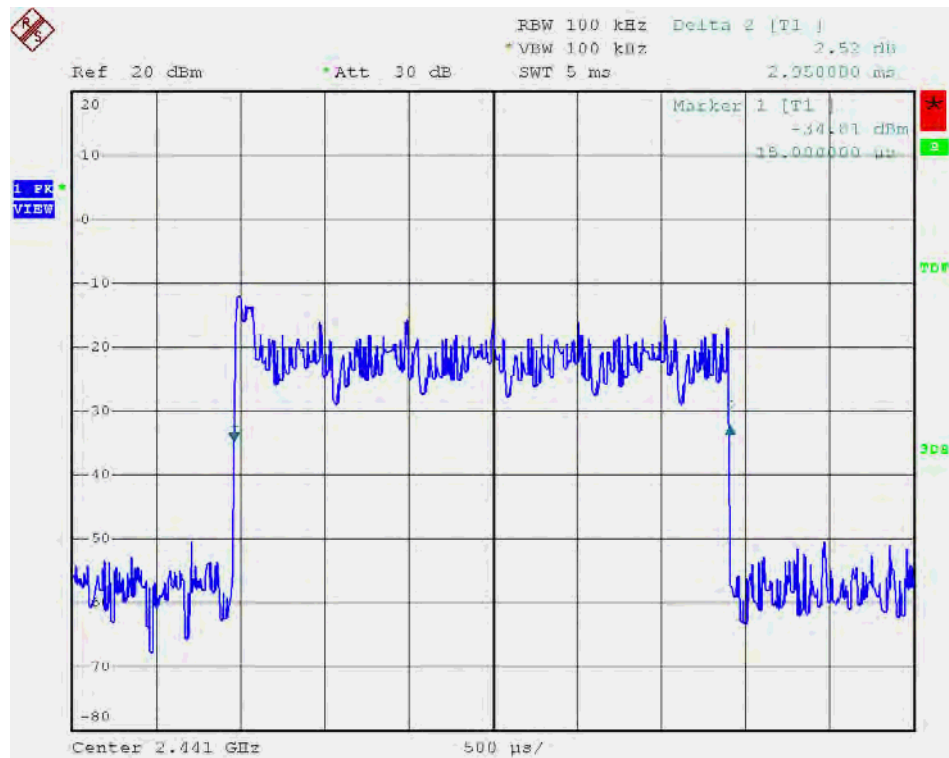


Modulation Standard: 8DPSK (3Mbps)
Channel: 00



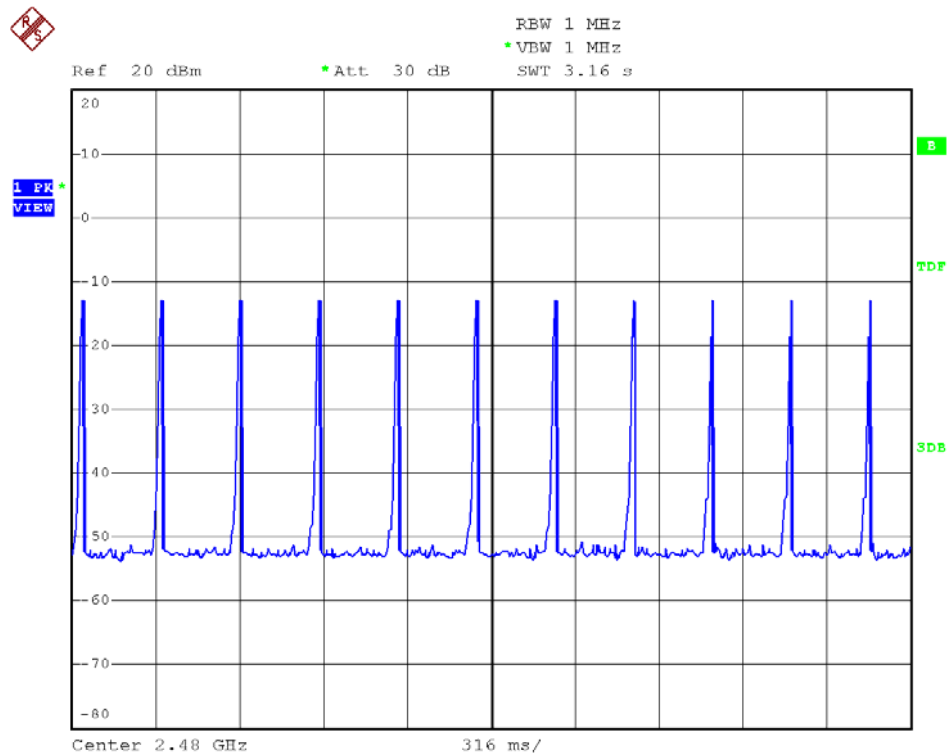
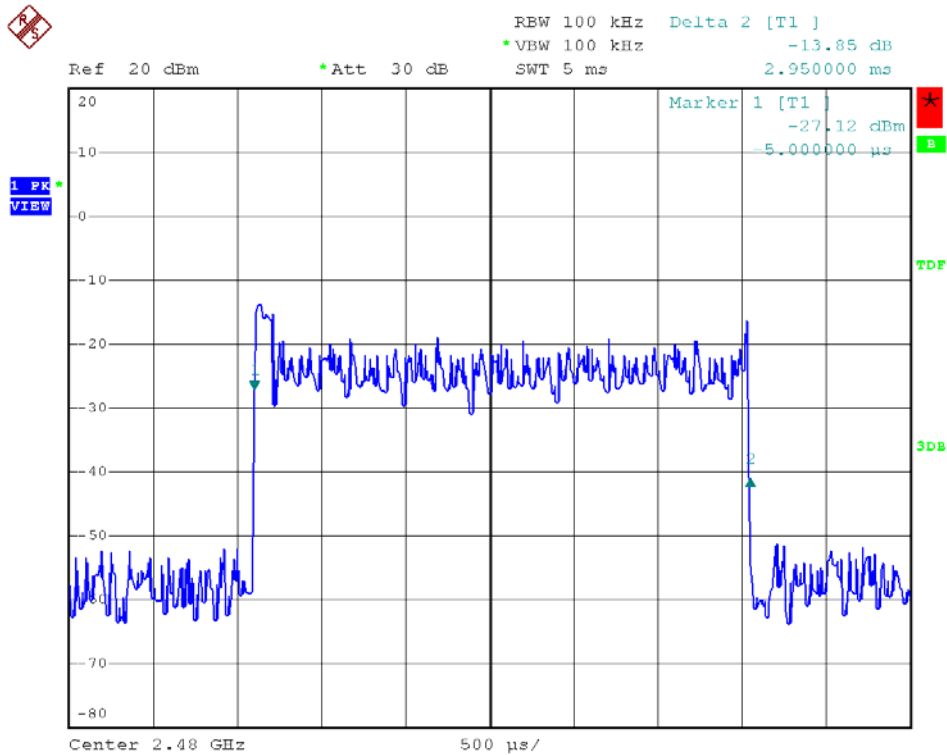


Modulation Standard: 8DPSK (3Mbps)
Channel: 39





Modulation Standard: 8DPSK (3Mbps)
Channel: 78





9. Number of Hopping Channels

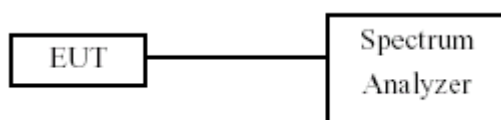
9.1 Test Limit

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

9.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 100 KHz and VBW to 100 KHz.
3. Set the MaxHold function, and then keep the EUT in hopping mode. Record all the signals from each channel until each one has been record.

9.3 Test Setup Layout



9.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2010/05/08	2011/05/07

9.5 Test Result and Data

Modulation Standard: GFSK (1Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Number of hopping channels:	79	Channels
-----------------------------	----	----------

Modulation Standard: $\pi/4$ -DQPSK (2Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Number of hopping channels:	79	Channels
-----------------------------	----	----------

Modulation Standard: 8DPSK (3Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

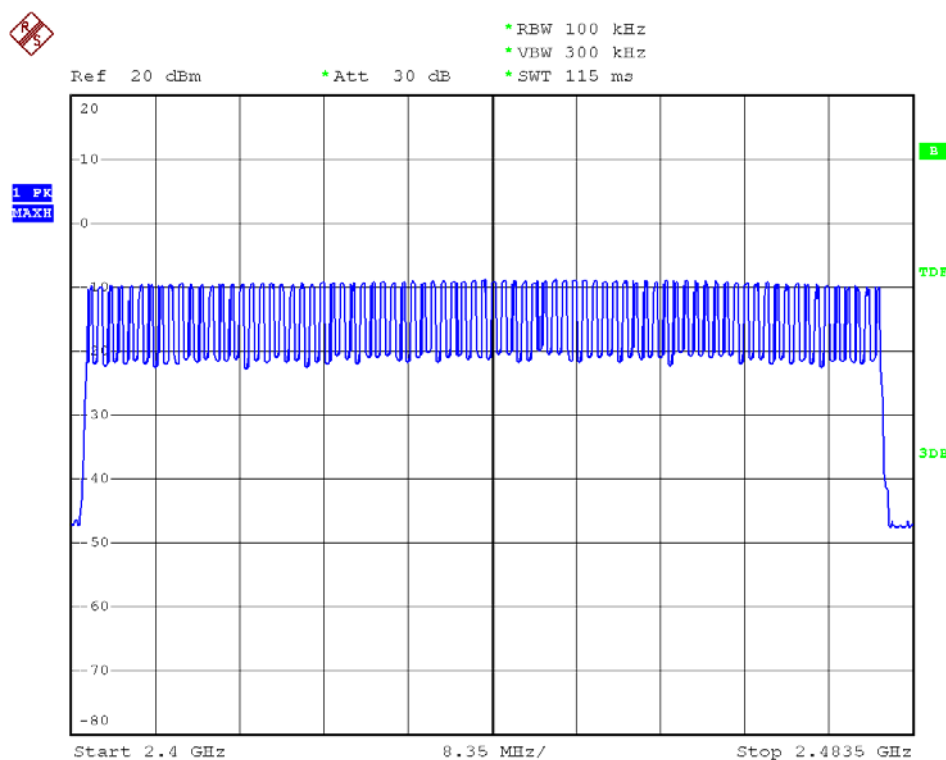
Atmospheric pressure: 1020 hPa

Humidity: 65%

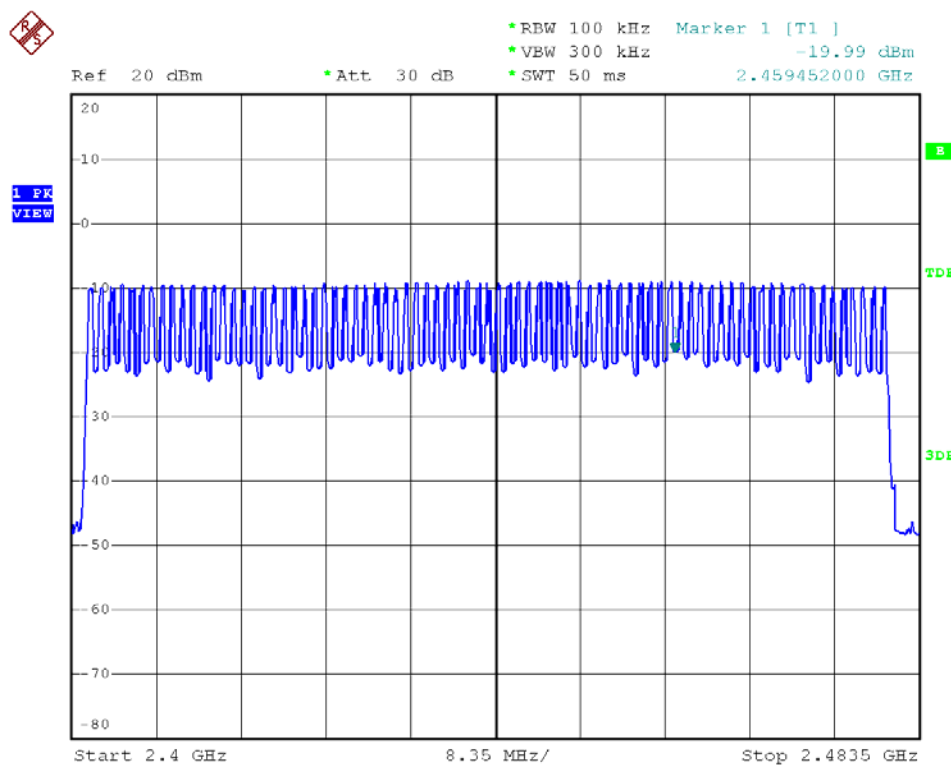
Number of hopping channels:	79	Channels
-----------------------------	----	----------



Modulation Standard: GFSK (1Mbps)

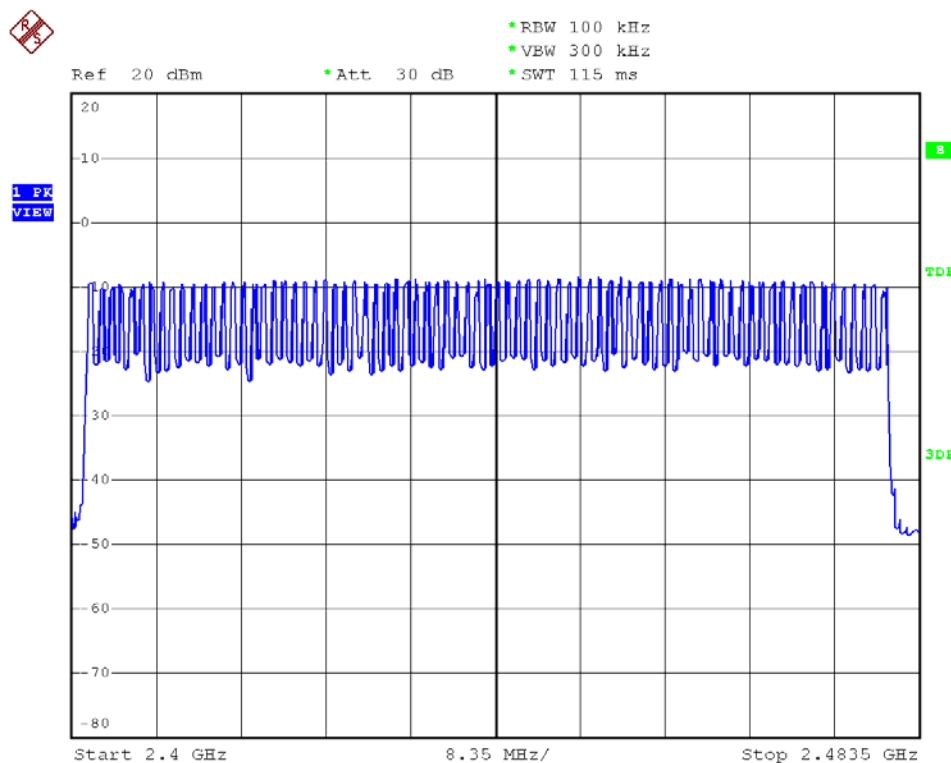


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)





Modulation Standard: 8DPSK (3Mbps)





10. Maximum Peak Output Power

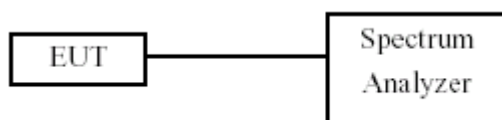
10.1 Test Limit

The Maximum Peak Output Power Measurement is 125mW.

10.2 Test Procedures

The antenna port(RF output)of the EUT was connected to the input(RF input)of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

10.3 Test Setup Layout



10.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2010/05/08	2011/05/07



10.5 Test Result and Data

Modulation Standard: GFSK (1Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
00	2402	-14.14	0.1
39	2441	-13.17	0.1
78	2478	-13.75	0.1

Modulation Standard: $\pi/4$ -DQPSK (2Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
00	2402	-9.06	0.1
39	2441	-8.10	0.1
78	2478	-9.23	0.1

Modulation Standard: 8DPSK (3Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

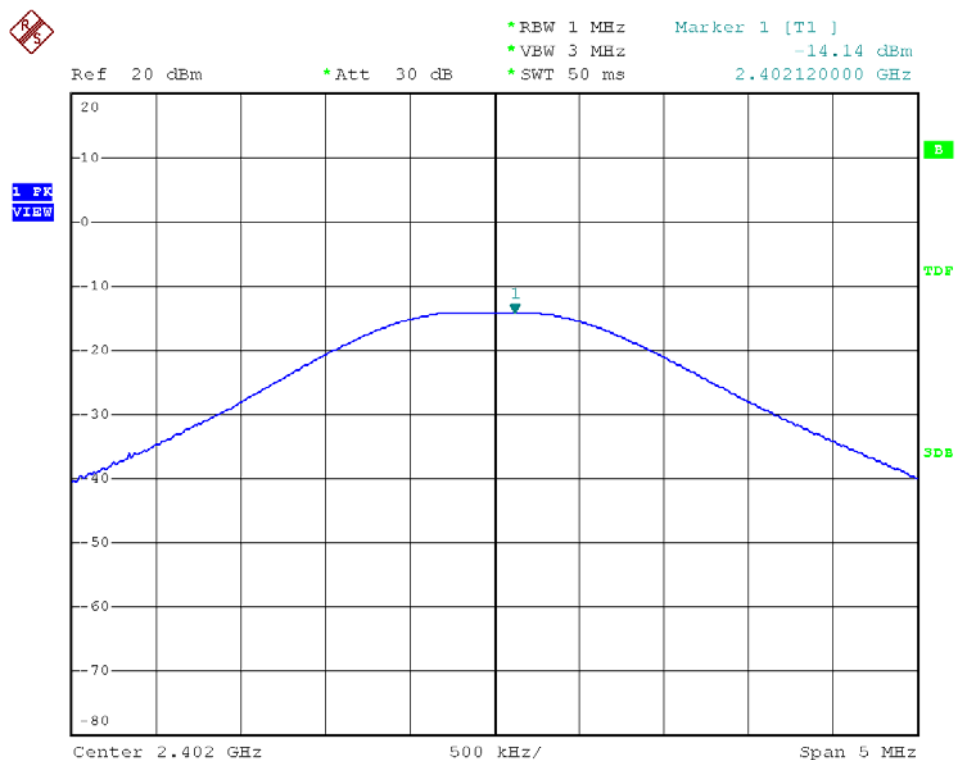
Atmospheric pressure: 1020 hPa

Humidity: 65%

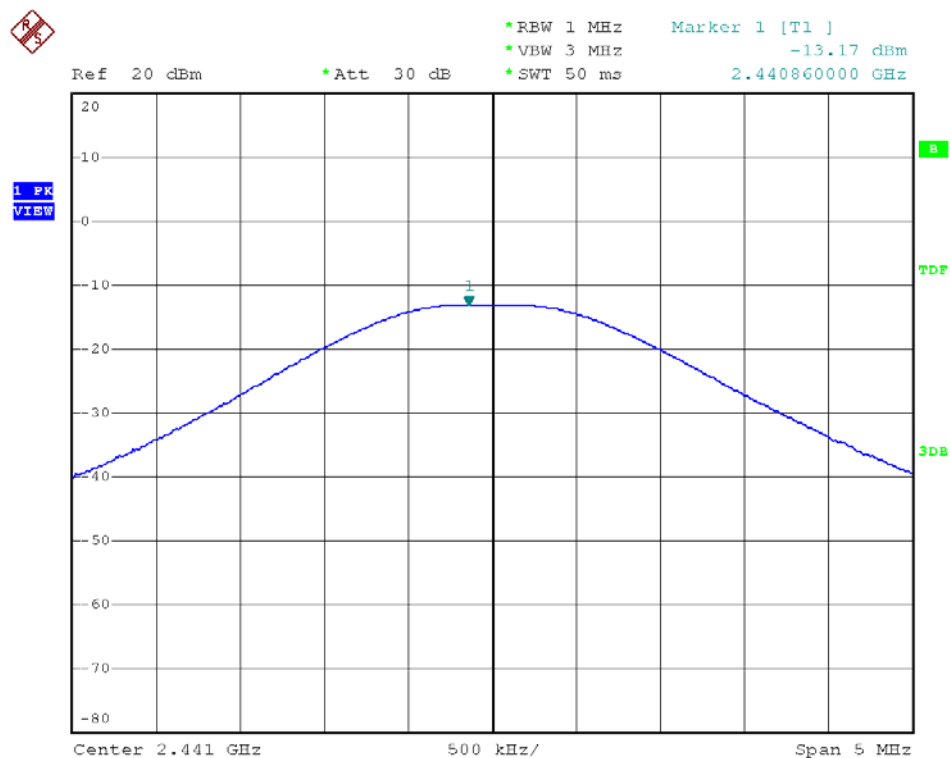
Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
00	2402	-9.06	0.1
39	2441	-10.26	0.1
78	2478	-11.60	0.1



Modulation Standard: GFSK (1Mbps)
Channel: 00

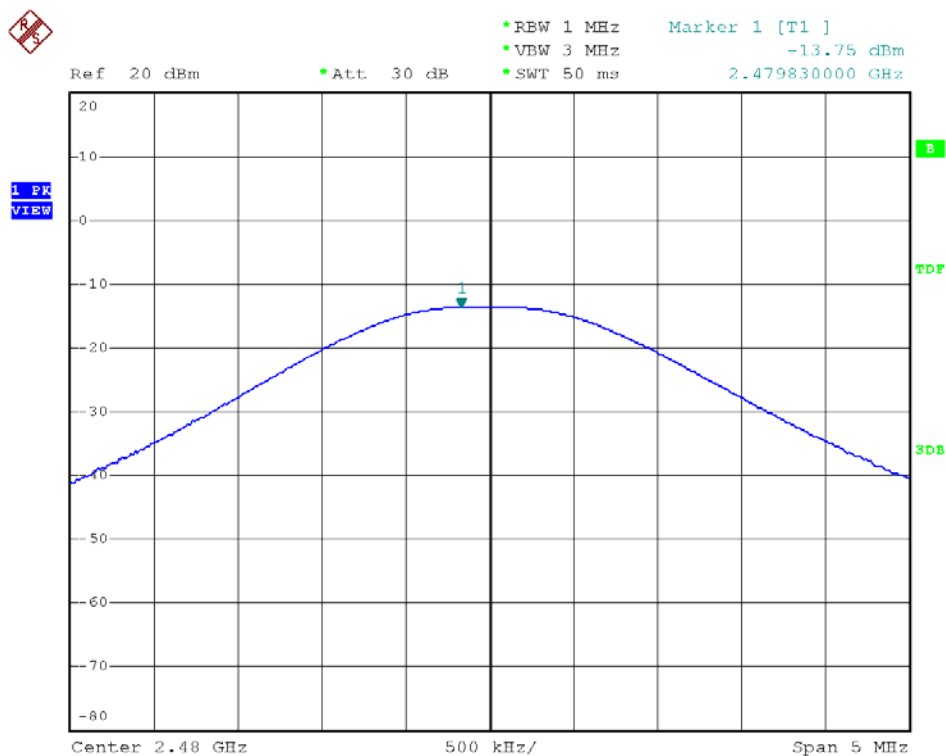


Modulation Standard: GFSK (1Mbps)
Channel: 39

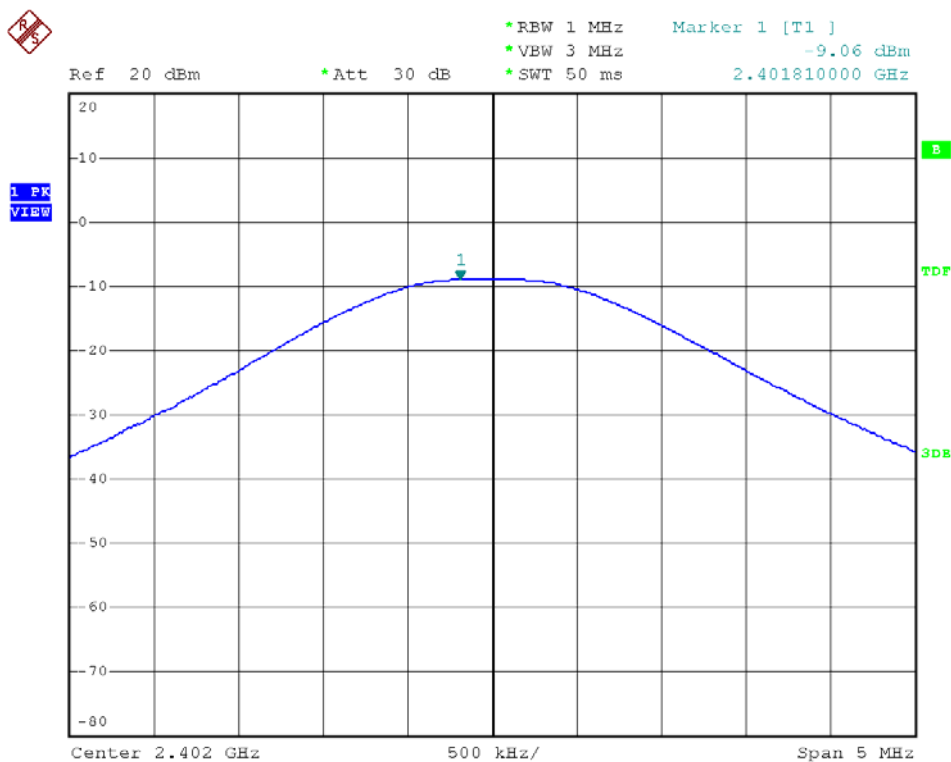




Modulation Standard: GFSK (1Mbps)
Channel: 78

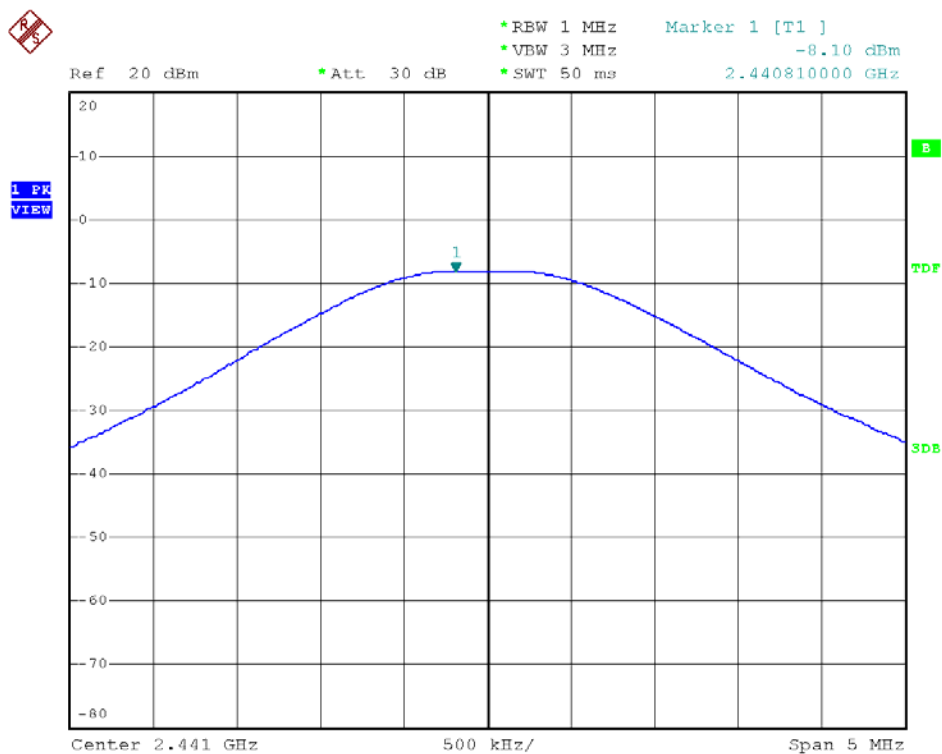


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 00

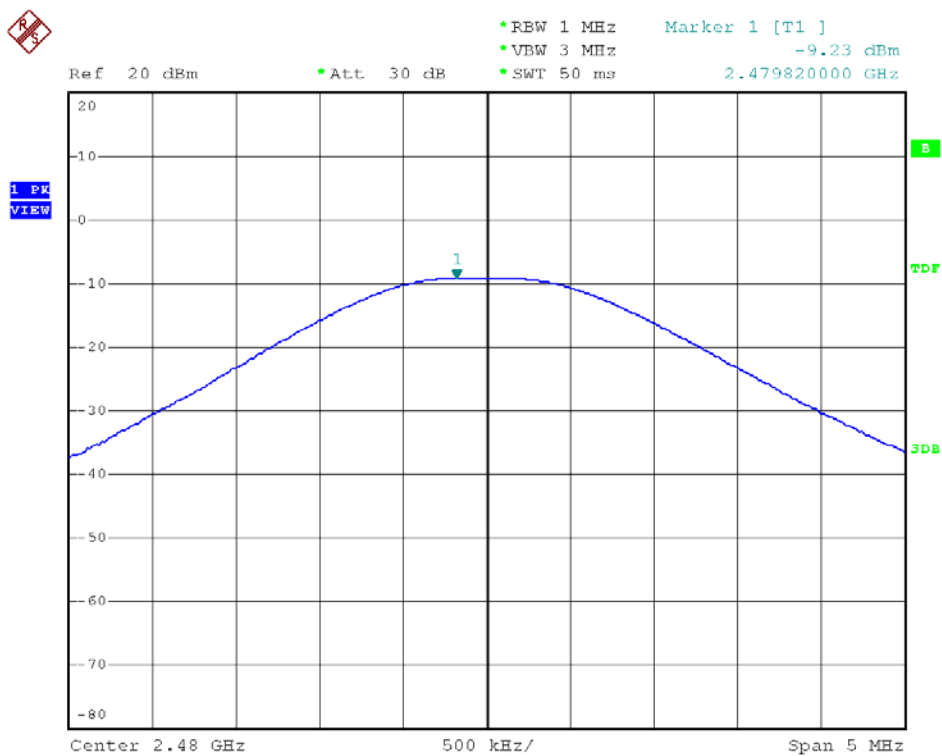




Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 39

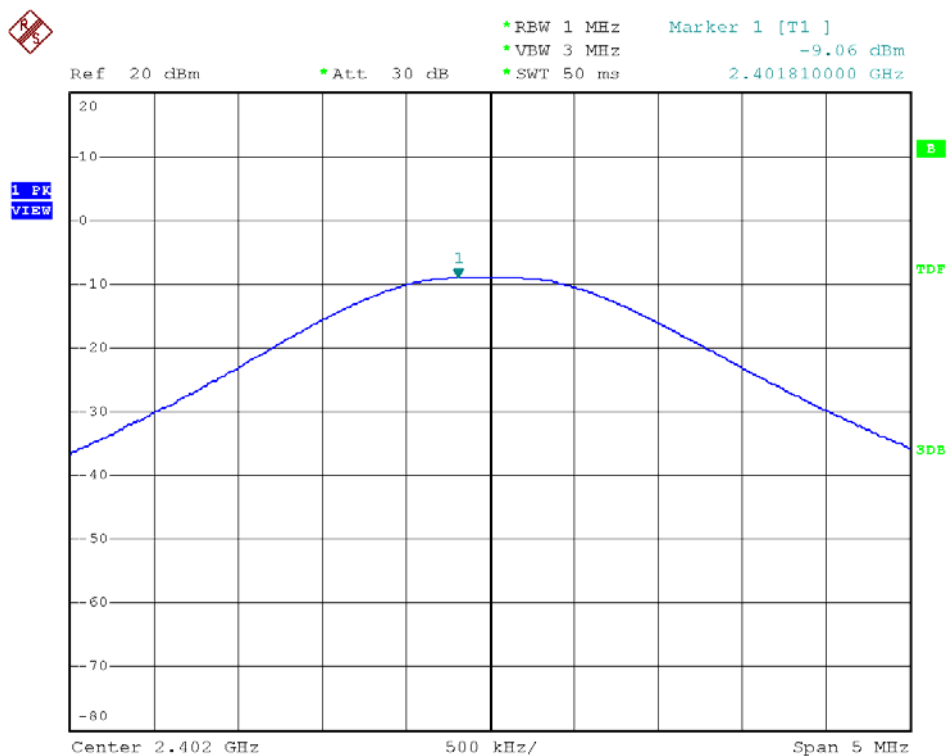


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 78

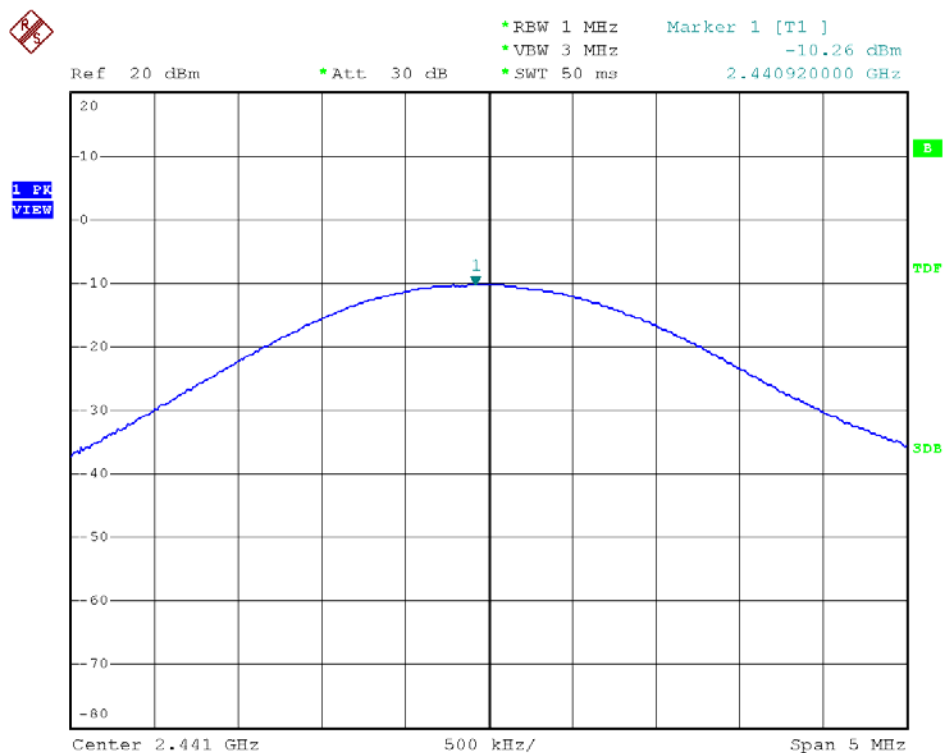




Modulation Standard: 8DPSK (3Mbps)
Channel: 00

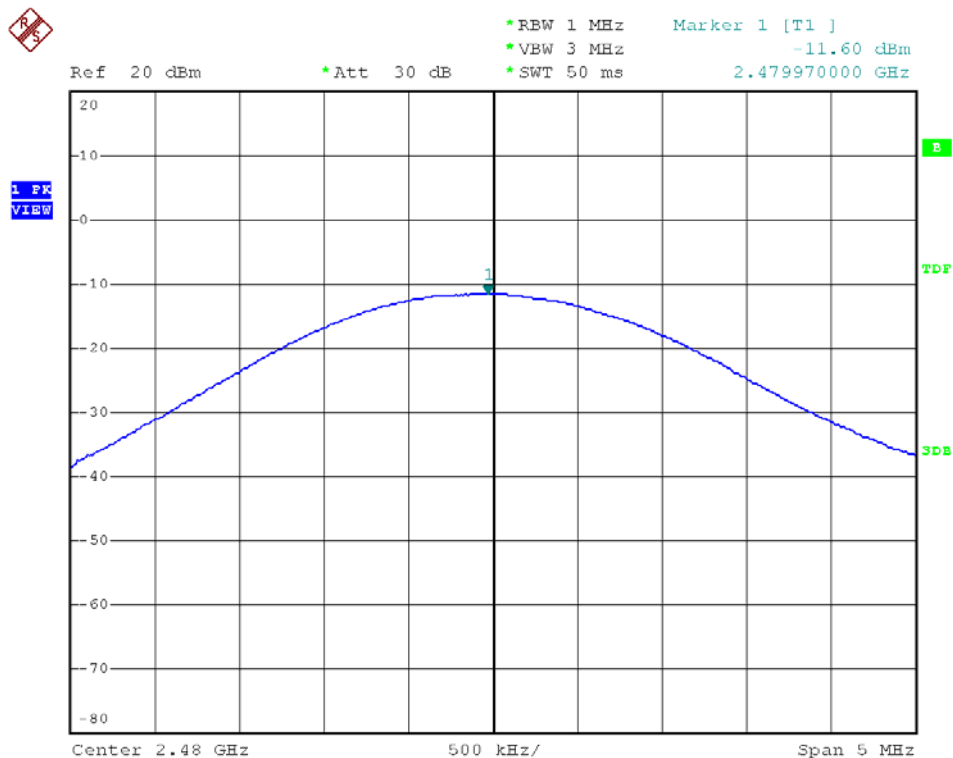


Modulation Standard: 8DPSK (3Mbps)
Channel: 39





Modulation Standard: 8DPSK (3Mbps)
Channel: 78





11. Band Edges Measurement

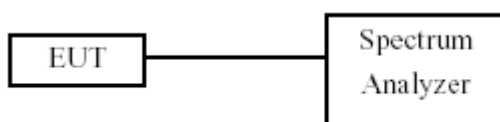
11.1 Test Limit

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

11.2 Test Procedure :

- The transmitter output was connected to the spectrum analyzer via a low lose cable.
- Set both RBW and VBW of spectrum analyzer to 100 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- The band edges was measured and recorded.

11.3 Test Setup Layout



11.4 List of Measuring Equipment Used

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2010/05/08	2011/05/07



11.5 Test Result and Data

Modulation Standard: GFSK (1Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency	maximum value in frequency (MHz)	maximum value is (dBm)
00	2402	2399.84	-54.49
78	2480	2483.58	-54.54

Modulation Standard: $\pi/4$ -DQPSK (2Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency	maximum value in frequency (MHz)	maximum value is (dBm)
00	2402	2399.92	-56.46
78	2480	2483.58	-53.35

Modulation Standard: 8DPSK (3Mbps)

Test Date: Nov. 26, 2010

Temperature: 25

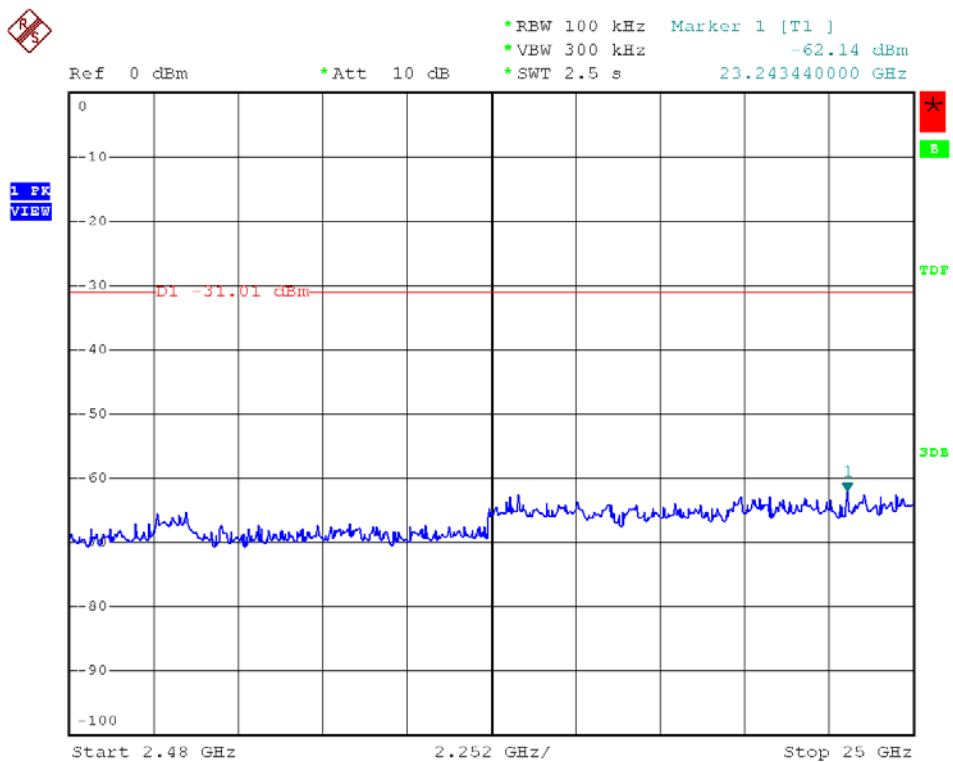
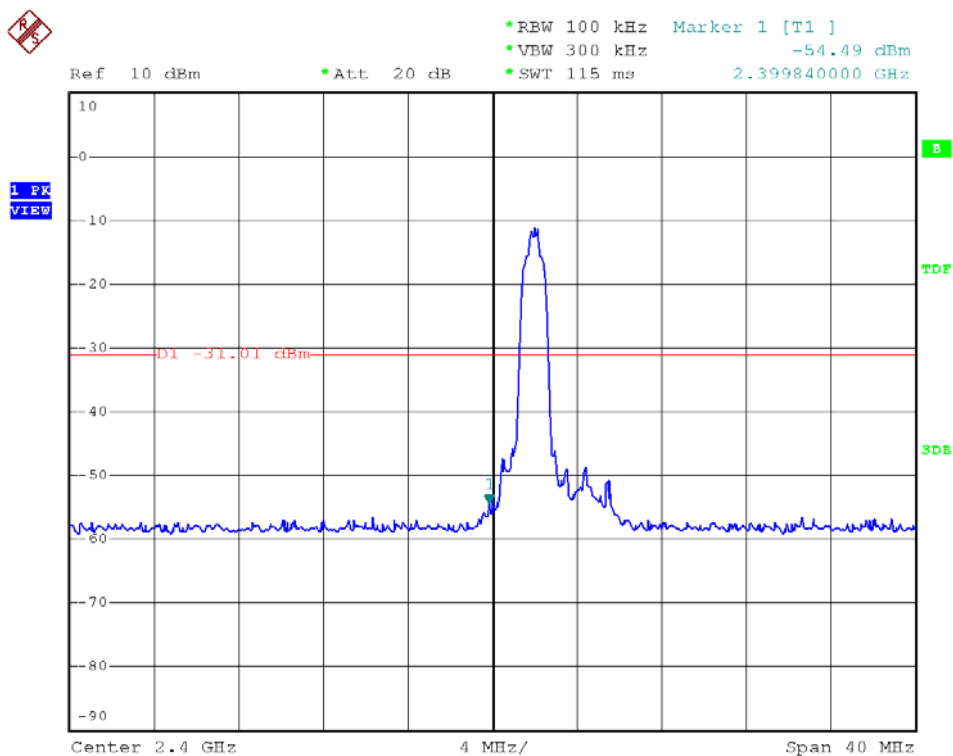
Atmospheric pressure: 1020 hPa

Humidity: 65%

Channel	Frequency	maximum value in frequency (MHz)	maximum value is (dBm)
00	2402	2399.52	-51.71
78	2480	2483.98	-52.81

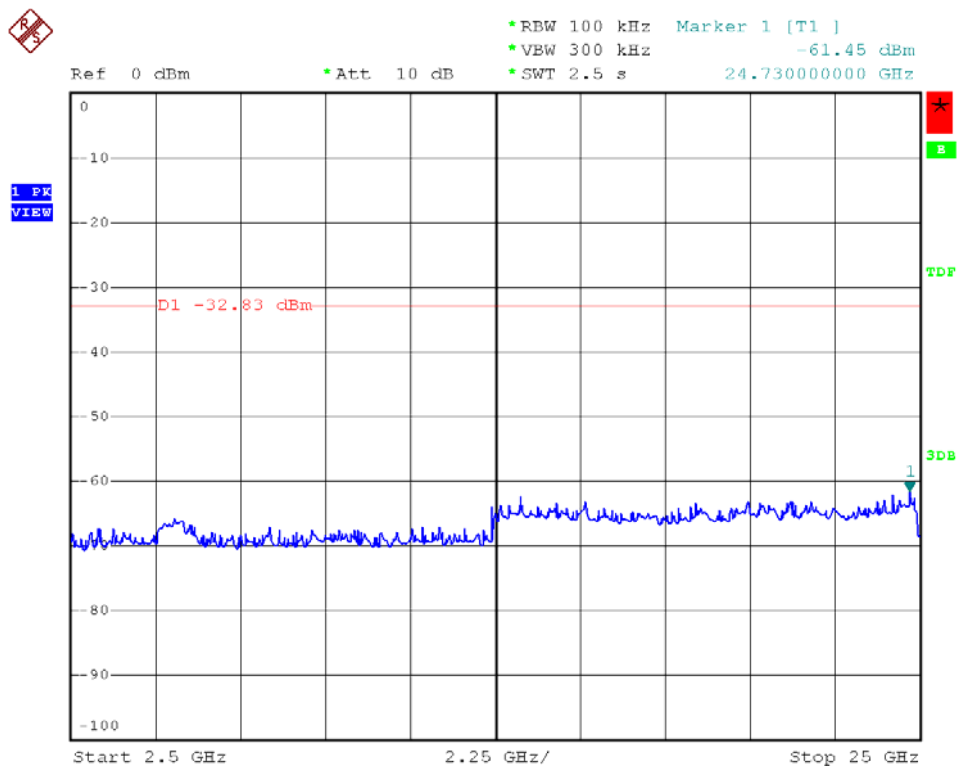
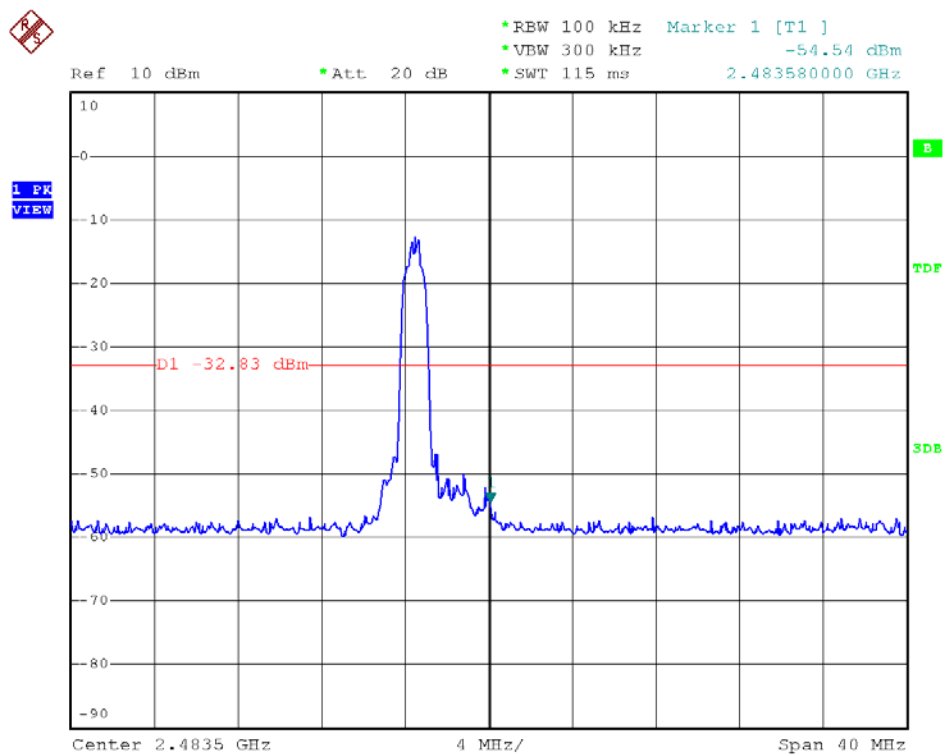


Modulation Standard: GFSK (1Mbps)
Channel: 00



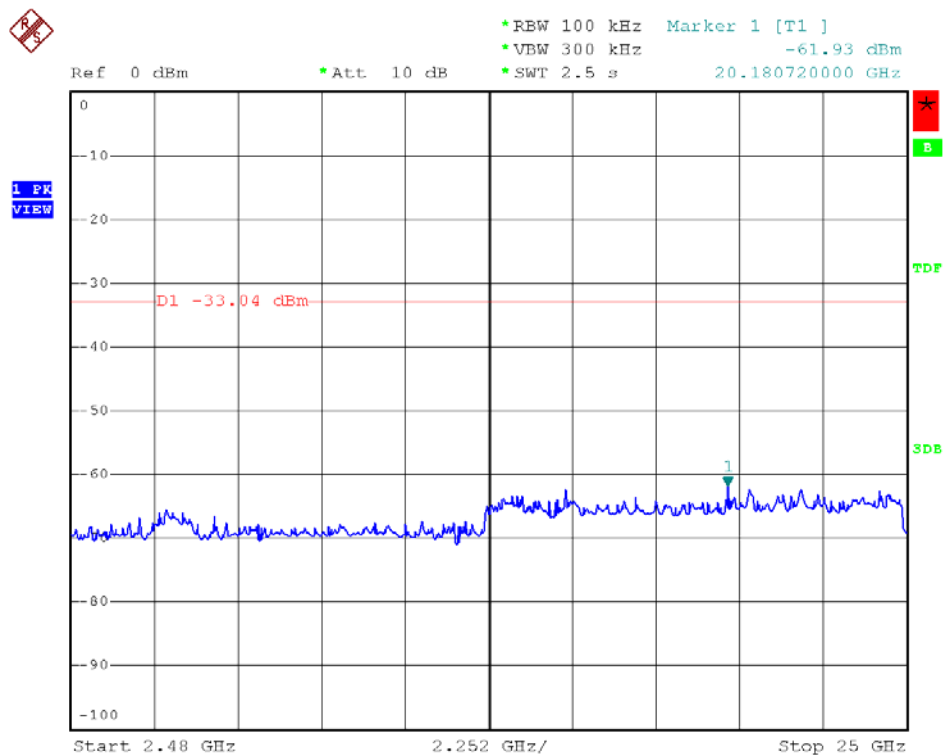
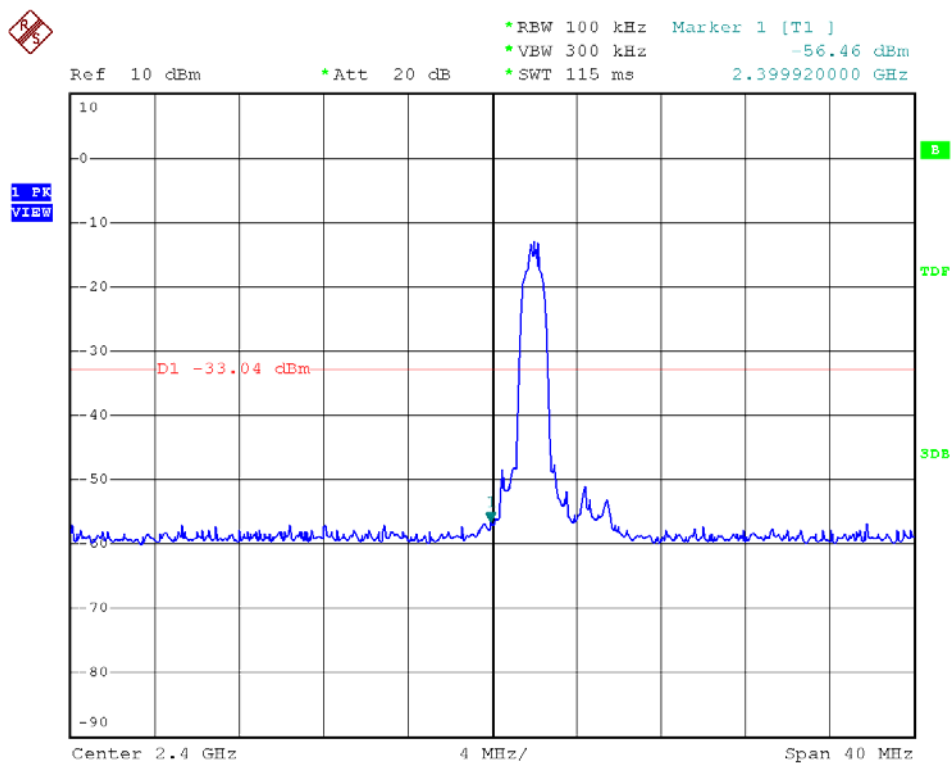


Modulation Standard: GFSK (1Mbps)
Channel: 78



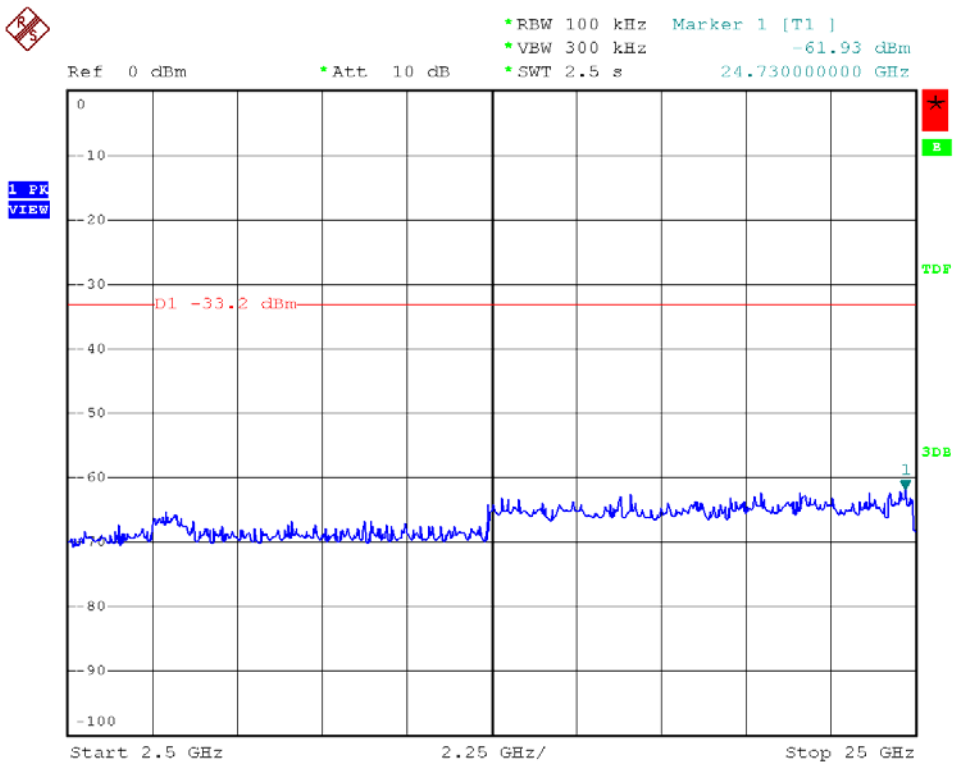
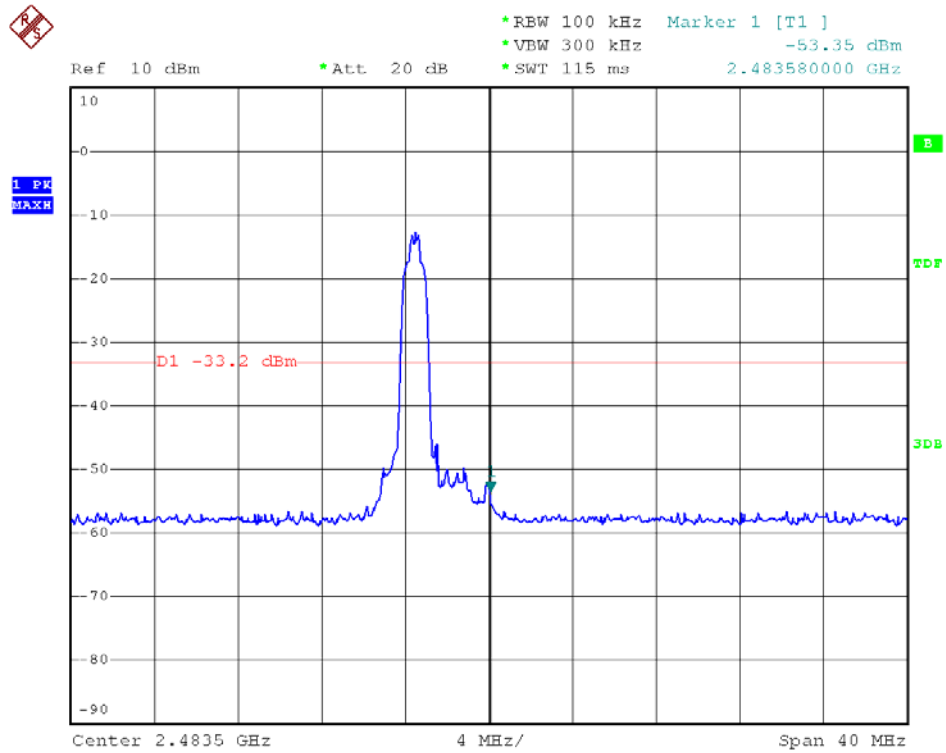


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 00



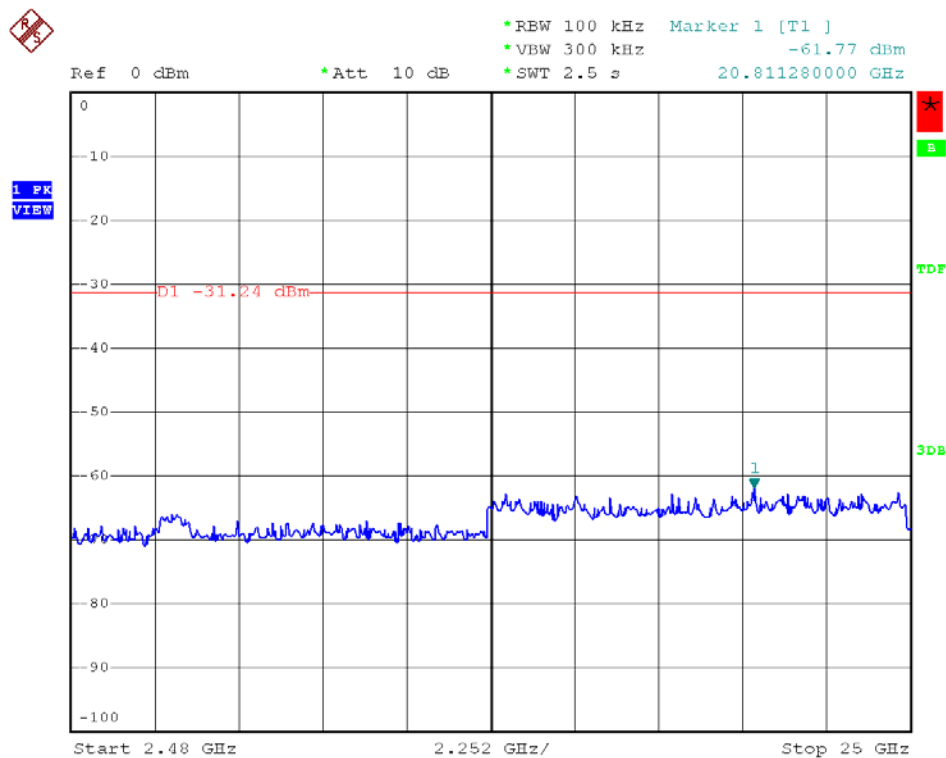
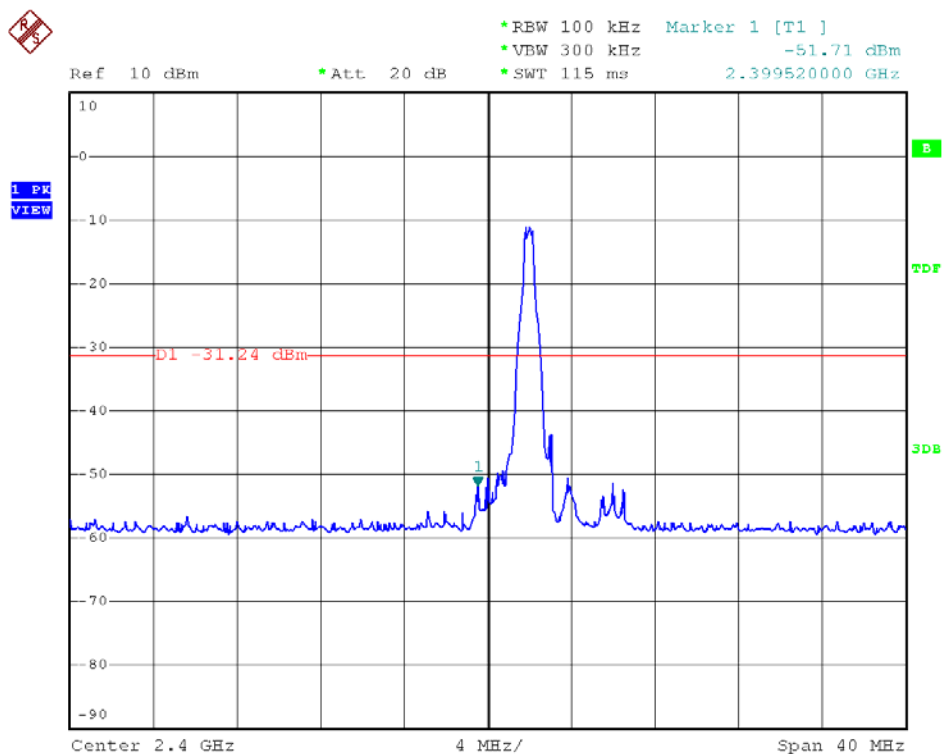


Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 78



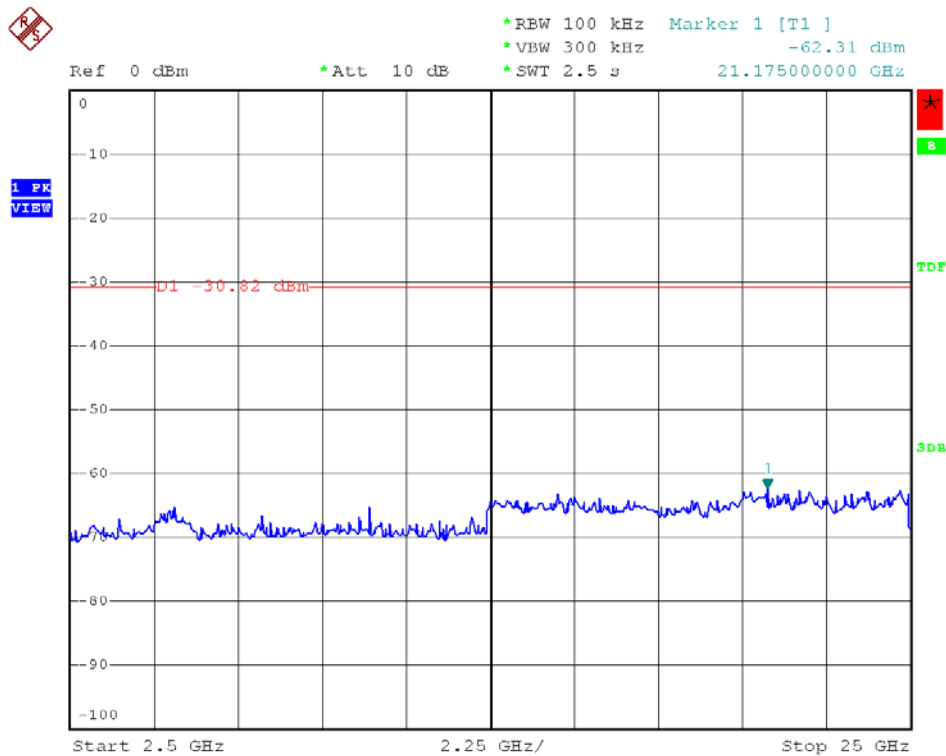
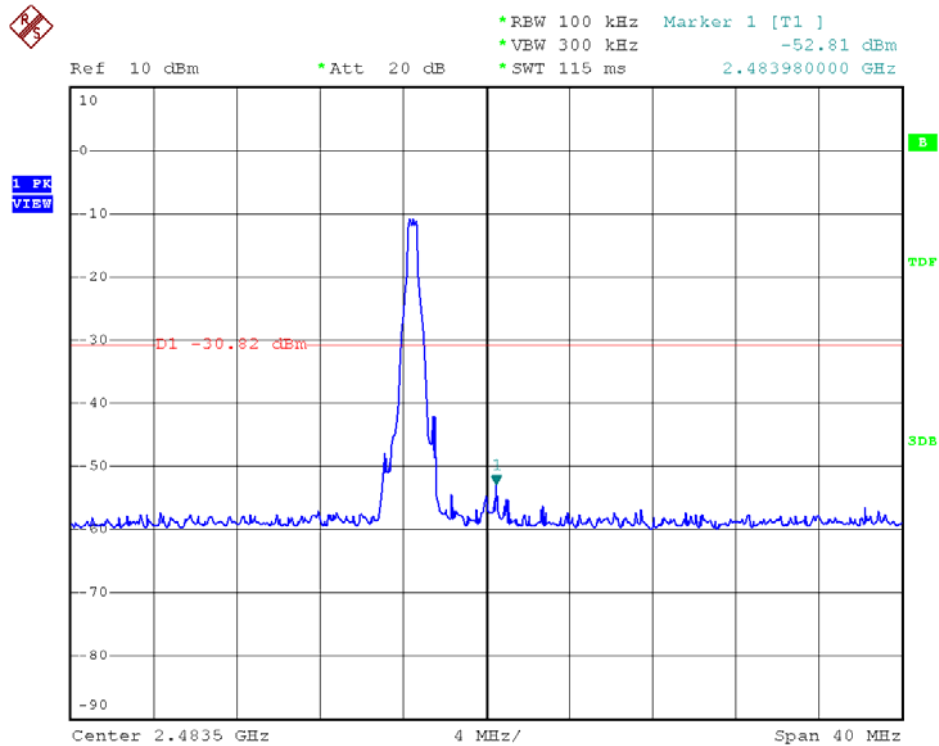


Modulation Standard: 8DPSK (3Mbps)
Channel: 00





Modulation Standard: 8DPSK (3Mbps)
Channel: 78



**11.6 Restrict band emission Measurement Data**

Test Date : Nov. 30, 2010
Temperature : 26
Humidity : 60%
Atmospheric Pressure : 1020 hPa
Modulation Standard : GFSK (1Mbps)

Channel 0						Fundamental Frequency: 2402 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2385.89	H	54.28	-2.49	51.79	Peak	74	54	-22.21	176	1.00
2385.89	H	40.61	-2.49	38.12	Ave	74	54	-15.88	176	1.00
2385.89	V	51.58	-2.49	49.09	Peak	74	54	-24.91	206	1.50
2385.89	V	39.61	-2.49	37.12	Ave	74	54	-16.88	206	1.50
Channel 78						Fundamental Frequency: 2480 MHz				
2483.58	H	55.64	-2.16	53.48	Peak	74	54	-20.52	170	1.21
2483.51	H	40.61	-2.16	38.45	Ave	74	54	-15.55	170	1.21
2483.58	V	52.86	-2.16	50.70	Peak	74	54	-23.30	176	1.50
2483.51	V	39.45	-2.16	37.29	Ave	74	54	-16.71	176	1.50

Test Date : Nov. 30, 2010
Temperature : 26
Humidity : 60%
Atmospheric Pressure : 1020 hPa
Modulation Standard : $\pi/4$ -DQPSK (2Mbps)

Channel 0						Fundamental Frequency: 2402 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2385.89	H	52.54	-2.49	50.05	Peak	74	54	-23.95	176	1.50
2385.89	H	45.62	-2.49	43.13	Ave	74	54	-10.87	176	1.50
2385.89	V	52.01	-2.49	49.52	Peak	74	54	-24.48	208	1.50
2385.89	V	43.27	-2.49	40.78	Ave	74	54	-13.22	208	1.50
Channel 78						Fundamental Frequency: 2480 MHz				
2484.00	H	54.70	-2.16	52.54	Peak	74	54	-21.46	170	1.21
2483.93	H	46.10	-2.16	43.94	Ave	74	54	-10.06	170	1.21
2483.93	V	43.32	-2.16	50.49	Peak	74	54	-23.51	176	1.50
2483.93	V	52.65	-2.16	41.16	Ave	74	54	-12.84	176	1.50



Test Date : Nov. 30, 2010
Temperature : 26
Humidity : 60%
Atmospheric Pressure : 1020 hPa
Modulation Standard : 8DPSK (3Mbps)

Channel 0						Fundamental Frequency: 2402 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2385.89	H	52.28	-2.49	49.79	Peak	74	54	-24.21	176	1.00
2385.89	H	45.69	-2.49	43.20	Ave	74	54	-10.80	176	1.00
2385.89	V	51.90	-2.49	49.41	Peak	74	54	-24.59	207	1.50
2385.89	V	43.87	-2.49	41.38	Ave	74	54	-12.62	207	1.50
Channel 78						Fundamental Frequency: 2480 MHz				
2483.81	H	55.90	-2.16	53.74	Peak	74	54	-20.26	170	1.21
2483.93	H	48.38	-2.16	46.22	Ave	74	54	-7.78	170	1.21
2484.00	V	54.85	-2.16	52.69	Peak	74	54	-21.31	176	1.50
2483.93	V	45.72	-2.16	43.56	Ave	74	54	-10.44	176	1.50

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz



12. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

12.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.