FCC Test Report

for

2.4GHz RF Modular

Model Number	**:**	**DZ-ZB-SP**
FCC ID	**:**	**YCMDZZBSP**
Report Number	**:**	**RF-D230-1210-474**
Date of Receipt	**:**	**November 23, 2012**
Date of Report	**:**	**December 11, 2012**

Prepared for

DiZiC Co., Ltd.

3Fl., No 4-2 Jin Xi Street, Zhong Shan District, 104 Taipei, TAIWAN

Prepared by

Central Research Technology Co.

EMC Test Laboratory

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NVLAP LAB CODE 200575-0

Verification of Compliance

Equipment under Test	**:** 2.4GHz RF Modular
Model No.	**:** DZ-ZB-SP
FCC ID	**:** YCMDZZBSP
Manufacturer	**:** DiZiC Co., Ltd.
Applicant	**:** DiZiC Co., Ltd.
Address	**:** 3Fl., No 4-2 Jin Xi Street, Zhong Shan District, 104 Taipei, TAIWAN
Applicable Standards	**:** 47 CFR part 15, Subpart C
Date of Testing	**:** November 26 ~ December 5, 2012
Deviation	**:** N/A
Condition of Test Sample	**:** Mass Production

We, **Central Research Technology Co**., hereby certify that one sample of the designated product was tested in our facility during the period mentioned above. The test records, data evaluation and Equipment Under Test (EUT) configurations shown in the present report are true and accurate representation of the measurements of the sample's RF characteristics under the conditions herein specified.

The test results show that the EUT as described in the present report is in compliance with the requirements set forth in the standards mentioned above and apply to the tested sample identified in the present report only. The test report shall not be reproduced, except in its entirety, without the written approval of Central Research Technology Co.

PREPARED BY : _____ , **DATE :** Dec. 11, 2012
(Cathy Chen/ Technical Manager)

APPROVED BY : _____ , **DATE :** Dec. 11, 2012
(Tsun-Yu Shih/General Manager)

Contents

1 General Description

1.1 General Description of EUT

Equipment under Test	:	2.4GHz RF Modular
Model No.	:	DZ-ZB-SP
Power in	:	3Vdc
Test Voltage	:	3Vdc by batteries
Manufacturer	:	DiZiC Co. Ltd.
Channel Numbers	:	16
Frequency Range	:	2405~2480MHz
Function Modulation	:	OQPSK
Modular Function	:	IEEE 802.15.4 / Zigbee
Antenna Spec	:	Printed Antenna Gain : 1.95dBi
Function Description	:	

The EUT is used to transmit and receive command both. Please refer to the user's manual for the details.

Perform the functions of EUT continuously by executing the test program supplied by manufacturer.

1.2 Applied standards

(1) Conduction Emission Requirement

For intentional device, according to §15.207(a) line conduction emission limit is as below table.

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

* Decreases with the logarithm of the frequency.

(2) Radiated Emission Requirement

For intentional device, according to §15.209, the general requirement of field strength of radiated emissions from intentional radiator at a distance of 3 meters shall not exceed the below table.

Frequency (MHz)	Measurement Distance (m)	Field Strength (uV/m)	Field Strength (dBuV/m)
30 – 88	3	100	40.0
88 – 216	3	150	43.5
216 – 960	3	200	46.0
960 – 1610	3	500	54.0
above 1610	3	500	54.0

Note 1- The lower limit shall apply at the transition frequency.

(3) 6dB Bandwidth

According to 15.247(a)(2), Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

(4) Maximun Peak Output Power

According to 15.247(b)(3), For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

(5) 100kHz Bandedge

According to 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. 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).

(6) Power spectral density

According to 15.247(e),for digitally modulated systems,the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

(7) Restricted Band

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
[2]1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)
13.36 - 13.41			

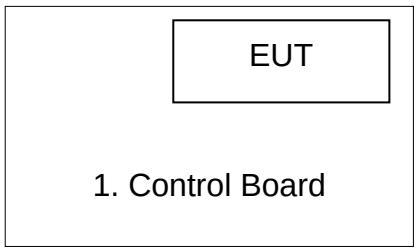
[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2] Above 38.6

1.3 The Support Units

No.	Unit	Model No./ Serial No.	Trade Name	Power Code	Supported by lab.
1.	Control Board	DZ_ZBDMB03	DiZiC	N/A	

1.4 Layout of Setup



Connecting Cables :

No.	Cable	Length	Shielded	Core	Shielded Backshell	Supported by lab.	Note
N/A	*	*	*	*	*	*	

1.5 Test Capability

Test Facility

The test facility used for evaluating the conformance of the EUT with each standard in the present report meets what required in CISPR16-1-4, CISPR16-2-3 and ANSI C63.4:2003.

Test Room	Type of Test Room	Descriptions
TR1	10m semi-anechoic chamber (23m×14m×9m)	Complying with the NSA requirements in documents CISPR 22 and ANSI C63.4:2003. For the radiated emission measurement.
TR11	3m semi-anechoic chamber (9m × 6m × 6m)	
TR13	Test Site	For the RF conducted emission measurement.
TR5	Shielding Room (8m×5m×4m)	For the conducted emission measurement.

Test Laboratory Competence Information

Central Research Technology Co. has been accredited / filed / authorized by the agencies listed in the following table.

Certificate	Nation	Agency	Code	Mark
Accreditation Certificate	USA	NVLAP	200575-0	ISO/IEC 17025
	R.O.C. (Taiwan)	TAF	0905	ISO/IEC 17025
	R.O.C. (Taiwan)	BSMI	SL2-IN-E-0033, SL2-IS-E-0033, SL2-R1/R2-E-0033, SL2-A1-E-0033 SL2-L1-E-0033	ISO/IEC 17025
Site Filing Document	USA	FCC	474046, TW1053	Test facility list & NSA/SVSWR Data
	Canada	IC	4699A-1,-3	Test facility list & NSA Data
	Japan	VCCI	R-1527,C-1609,T-1441, G-10, C-4400, G-614, T-1334	Test facility list & NSA/SVSWR Data
Authorization Certificate	Germany	TUV	10021687	ISO/IEC 17025
	Norway	Nemko	ELA212	ISO/IEC 17025

The copy of each certificate can be downloaded from our web site: www.crc-lab.com

1.6 Measurement Uncertainty

The assessed measurement uncertainty with a suitable coverage factor K to ensure 95% confidence level for the normal distribution are shown as below, the values are less than U_{cispr} in table 1 of CISPR 16-4-2.

Test Item	Measurement Uncertainty	
Radiated Emission: (30MHz~200MHz)	Horizontal 3.5dB；Vertical 3.8dB	
Radiated Emission: (200MHz~1GHz)	Horizontal 3.9dB；Vertical 3.9dB	
Radiated Emission: (1GHz~18GHz)	Horizontal 3.5dB；Vertical 3.6dB	
Radiated Emission: (18GHz~26.5GHz)	Horizontal 4.4dB；Vertical 4.5dB	
Line Conducted Emission	ESH2-Z5	3.1dB
	ENV 4200	2.8dB

2 Maximum Peak Output Power

Result: Pass

2.1 Applied standard

According to 15.247(b)(3), For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

2.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No./ Serial No.	Last Calibration Date	Calibration Due Date
Spectrum Analyzer	Agilent	E4405B/ MY45106706	March 29, 2012	March 29, 2013
Test Site	N.A.	TR13	NCR	NCR

Note:

1.The calibrations are traceable to NML/ROC.

2.NCR : No Calibration Required.

Instrument Setting

RBW	VBW	Detector	Trace	Comment
3MHz	3MHz	Peak	Maxhold	

Climatic Condition

Ambient Temperature：21℃ Relative Humidity : 54%

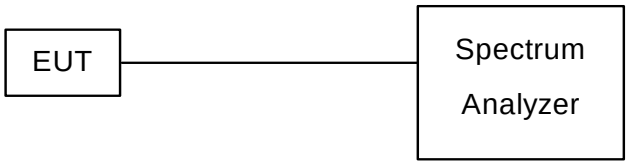
2.3 Measurement Procedure

a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. The software provided by client enabled the EUT to transmit data at lowest, middle and highest channel frequencies individually.

c. Measurement the maximum peak output and compare with the required limit.

2.4 Test configuration



2.5 Test Data

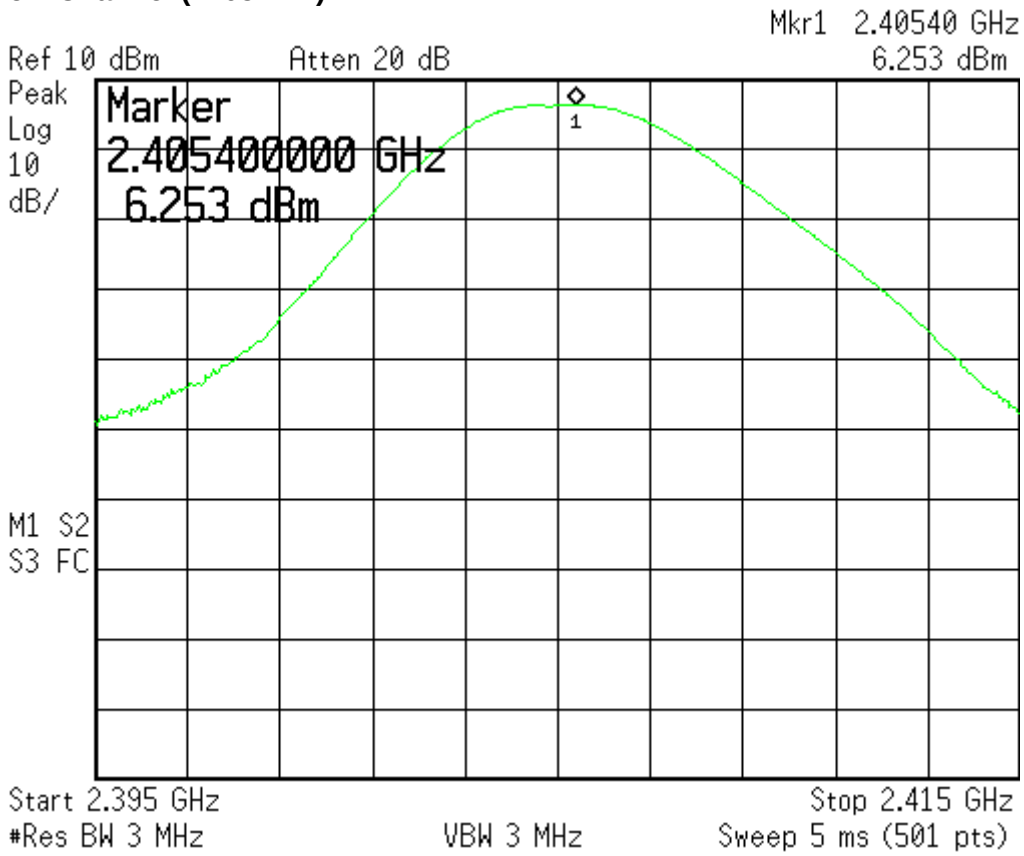
Test Mode : Continuous Transmitting **Tester :** Jun

Operating Frequency (MHz)	Reading Data (dBm)	Correction Factor (dB)	Emission (dBm)	Limit (dBm)	Margin (dB)
2405	6.25	0.8	7.05	30	22.95
2440	6.23	0.8	7.03	30	22.97
2480	-3.36	0.8	-2.56	30	32.56

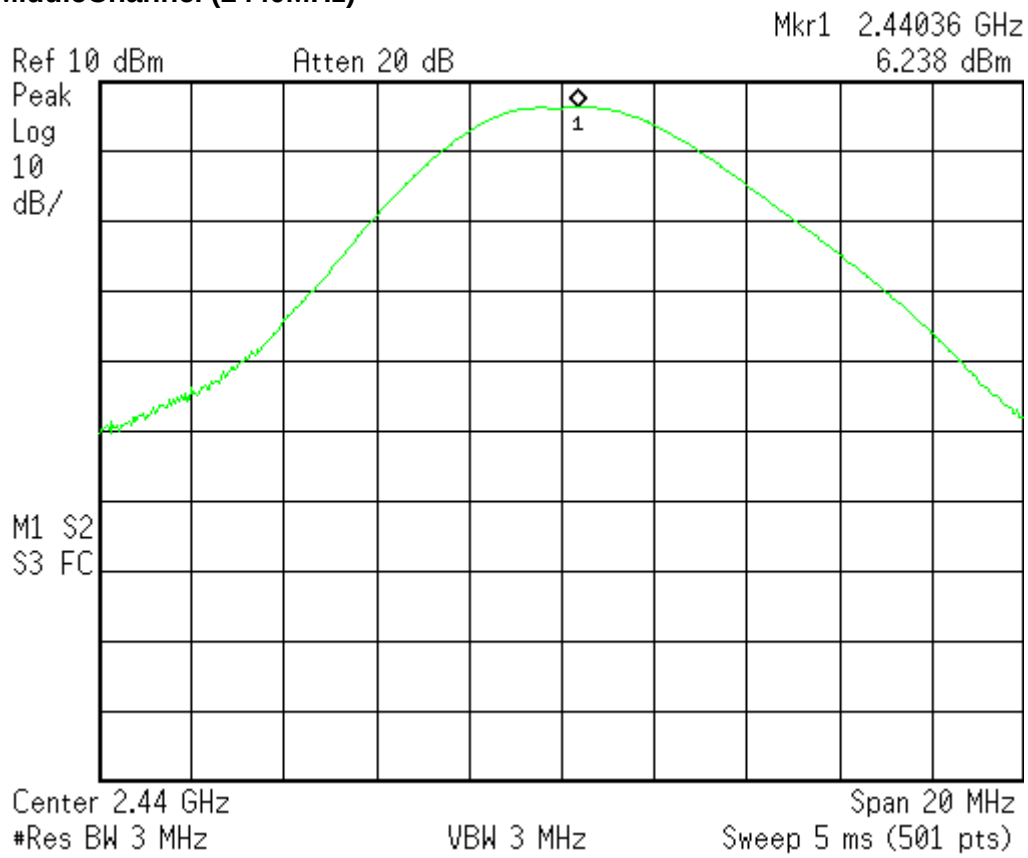
Note:

1. Correction Factor (dB) = Cable Loss + Attenuator
2. Emission (dBm) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission

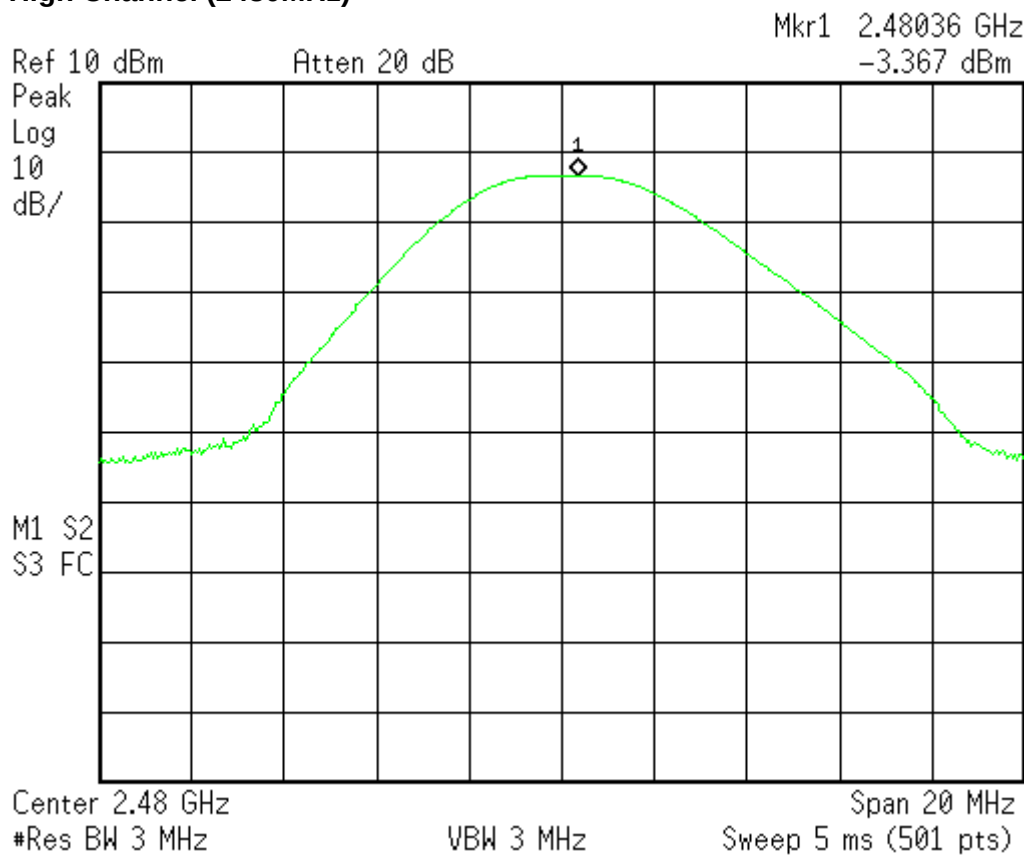
Low Channel (2405MHz)



MiddleChannel (2440MHz)



High Channel (2480MHz)



3 Band Edge

Result: Pass

3.1 Applied standard

According to 15.247(c),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. 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).

3.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No./ Serial No.	Last Calibration Date	Calibration Due Date
Spectrum Analyzer	Agilent	E4405B/ MY45106706	March 29, 2012	March 29, 2013
Test Site	N.A.	TR13	NCR	NCR
Spectrum Analyzer	Agilent	FSP40/ 100031	July 11, 2012	July 11, 2013
Antenna	EMCO	3117/ 00082847	March 1, 2012	March 1, 2013
PRE-AMPLIFIER	MITEQ	JS4-00101800-28 -10P/1498979	Dec. 21, 2011	Dec. 21, 2012
PRE-AMPLIFIER	MITEQ	JS4-00101800-28 -5A/742309	Dec. 14, 2011	Dec. 14, 2012
Semi - anechoic Chamber	ETS. LINDGREN	TR11/ 906-A	Feb. 12, 2012	Feb. 12, 2013

Note:

1.The calibrations are traceable to NML/ROC.

2.NCR : No Calibration Required.

Instrument Setting

RBW	VBW	Detector	Trace	Comment
100kHz	300kHz	Peak	Maxhold	100kHz Bandedge
1MHz	3MHz	Peak	Maxhold	Bandedge Peak
1MHz	10Hz	Peak	Maxhold	Bandedge Average

Climatic Condition

Ambient Temperature：24℃ Relative Humidity : 54%

3.3 Measurement Procedure

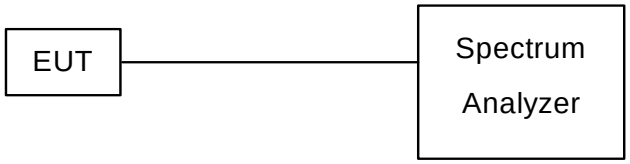
a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. The software provided by client enabled the EUT to transmit data at lowest and highest channel frequencies individually.

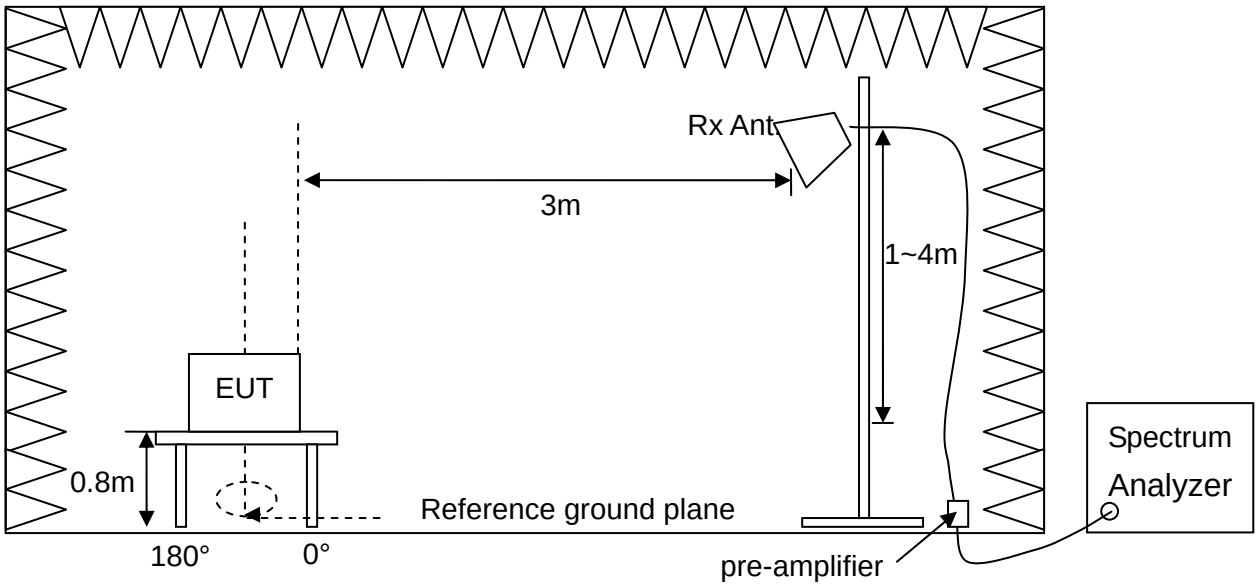
c. Measurement the band edge and compare with the required limit.

3.4 Test configuration

100kHz Bandedge



Restricted Bandedge Measurement



3.5 Test Data

100KHz Bandedge Measurement

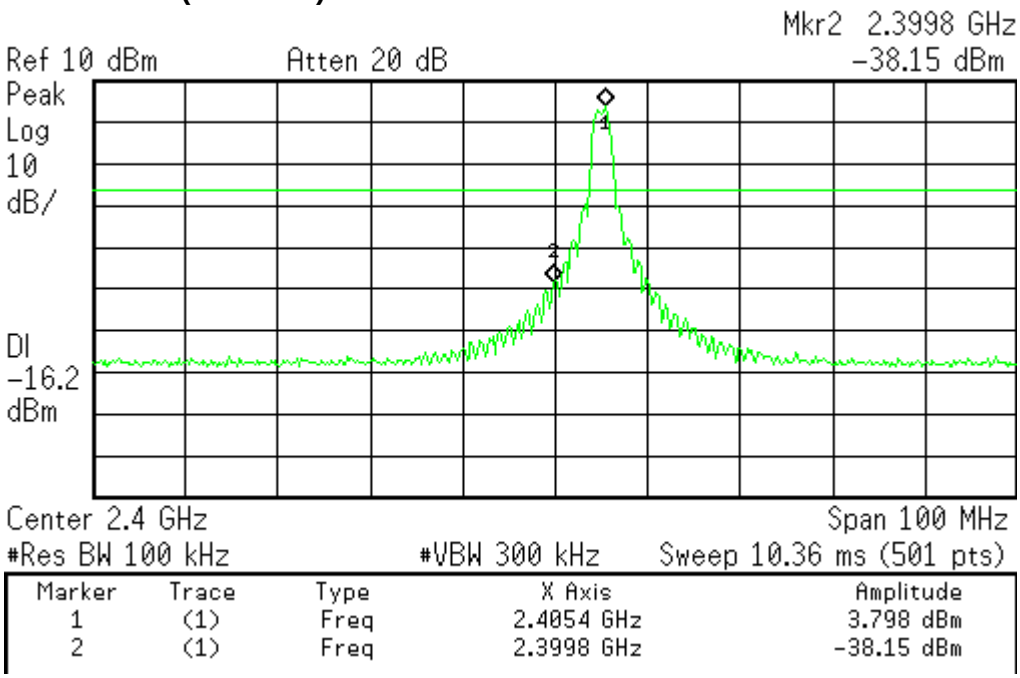
Test Mode : Continuous Transmitting **Tester :** Jun

Operation Frequency (MHz)	Maximum Emission Level (dBm)	Emission Frequency (MHz)	Emission Level of out band (dBm)	Attenuation (dB)	Limit (dB)	Margin (dB)
2405	3.79	2399.8	-38.15	41.94	20	21.94
2480	-6.48	2483.7	-43.07	36.59	20	16.59

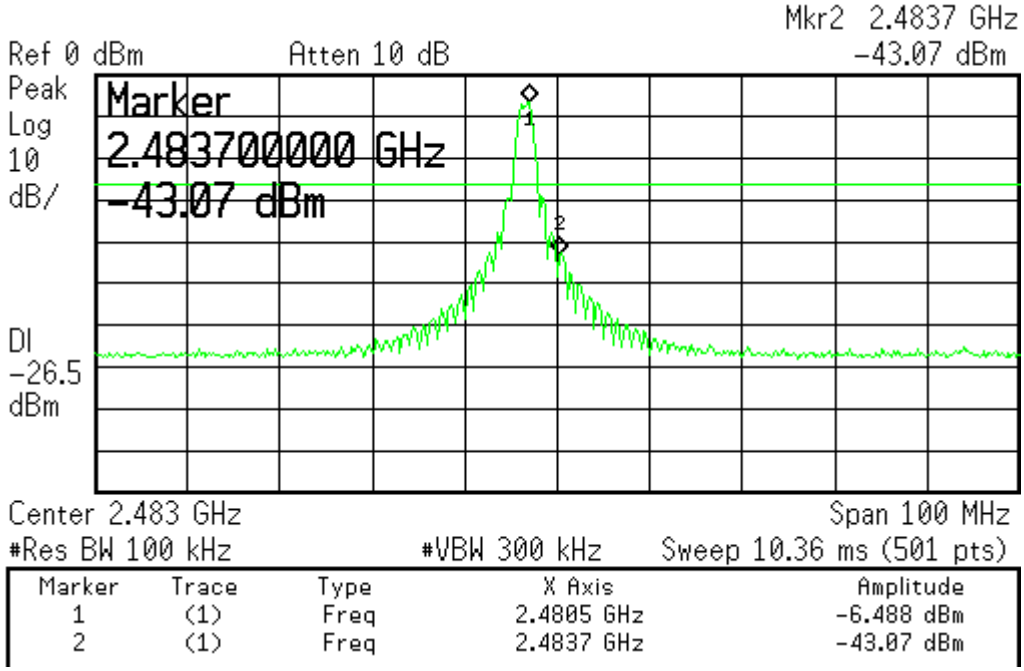
Note:

1. Attenuation (dB) = Maximum Emission Level - Emission Level
2. Margin (dB) = Attenuation – Limit

Low Channel (2405MHz)



High Channel (2480MHz)



Restricted Bandedge Measurement

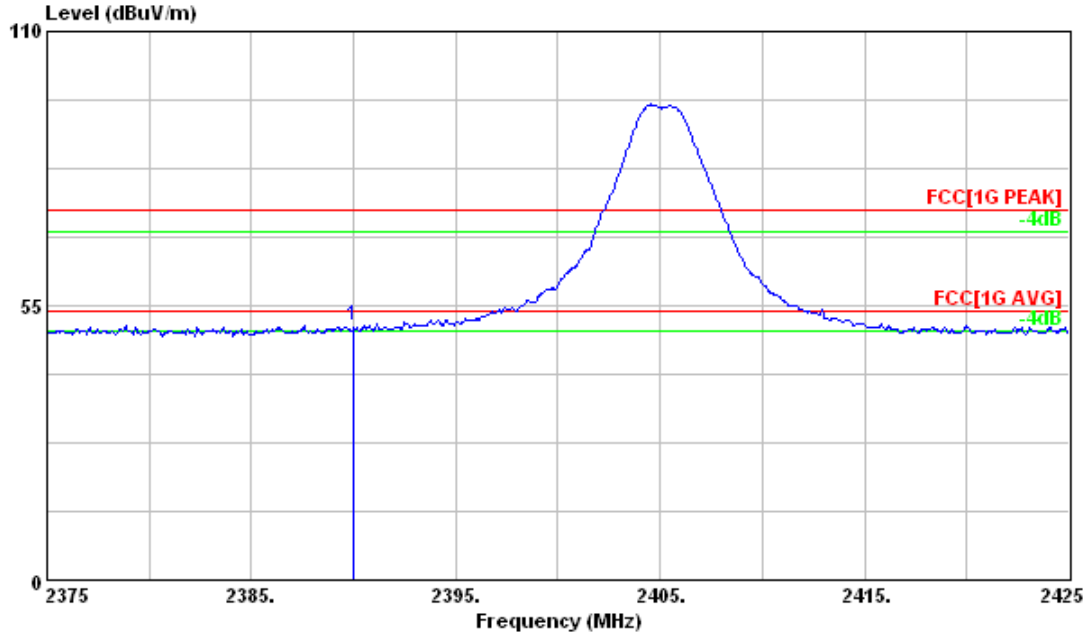
Test Mode : Continuous Transmitting **Tester :** Liu

Operation frequency : 2405MHz							
Frequency (MHz)	**Reading Data (dBuV)**	**Correction Factor (dB/m)**	**Emission (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Polarization**	**Remark**
2385.30	53.33	-2.40	50.93	74	23.07	Horizontal	Peak
2385.30	43.01	-2.40	40.61	54	13.39	Horizontal	Average
2390.00	53.42	-2.40	51.02	74	22.98	Vertical	Peak
2390.00	43.07	-2.40	40.67	54	13.33	Vertical	Average
Operation frequency : 2480MHz							
2483.5	60.39	-2.25	58.14	74	15.86	Horizontal	Peak
2483.5	54.56	-2.25	52.31	54	1.69	Horizontal	Average
2483.5	59.3	-2.25	57.05	74	16.95	Vertical	Peak
2483.5	53.44	-2.25	51.19	54	2.81	Vertical	Average

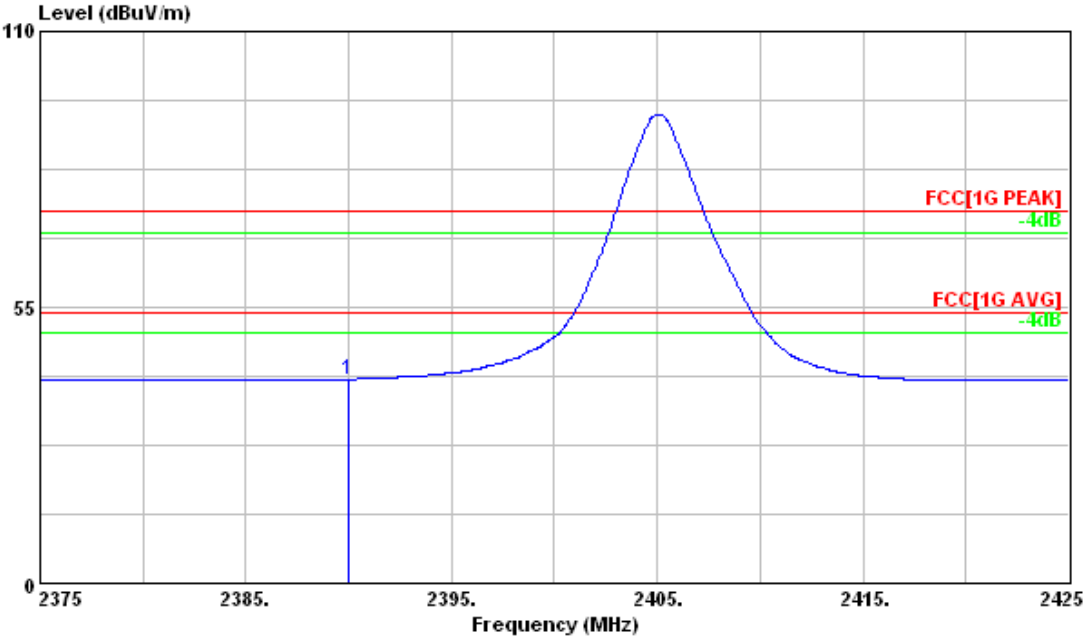
Note:

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Pre-amplifier
2. Emission (dBuV/m) = Reading Data + Correction Factor
3. Margin(dB) = Limit – Emission

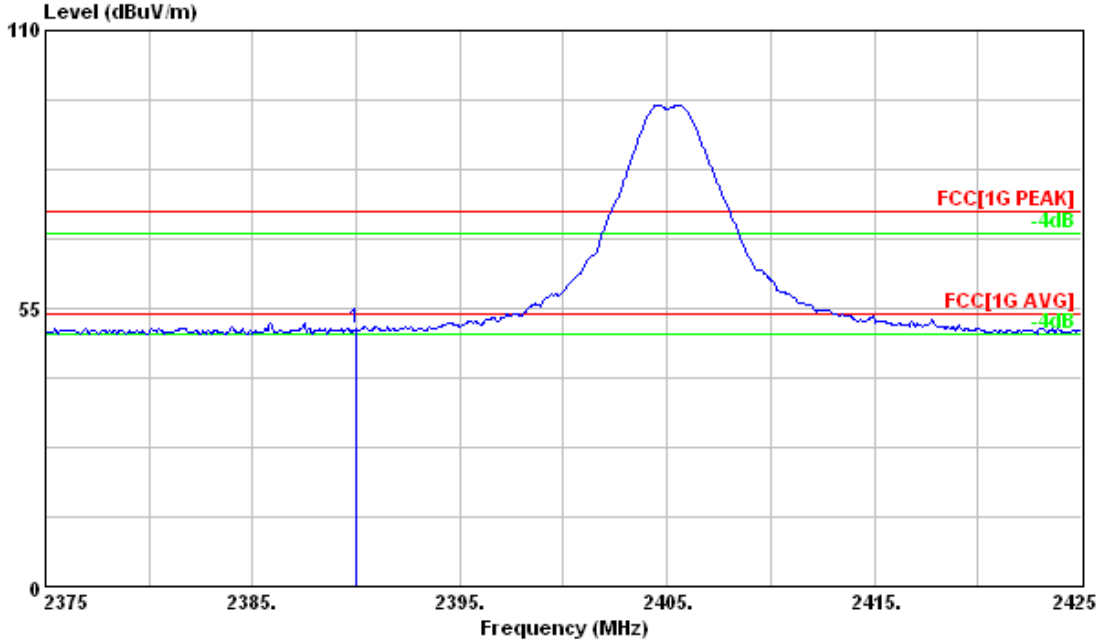
Low Channel (2405MHz), H Polarization – Peak



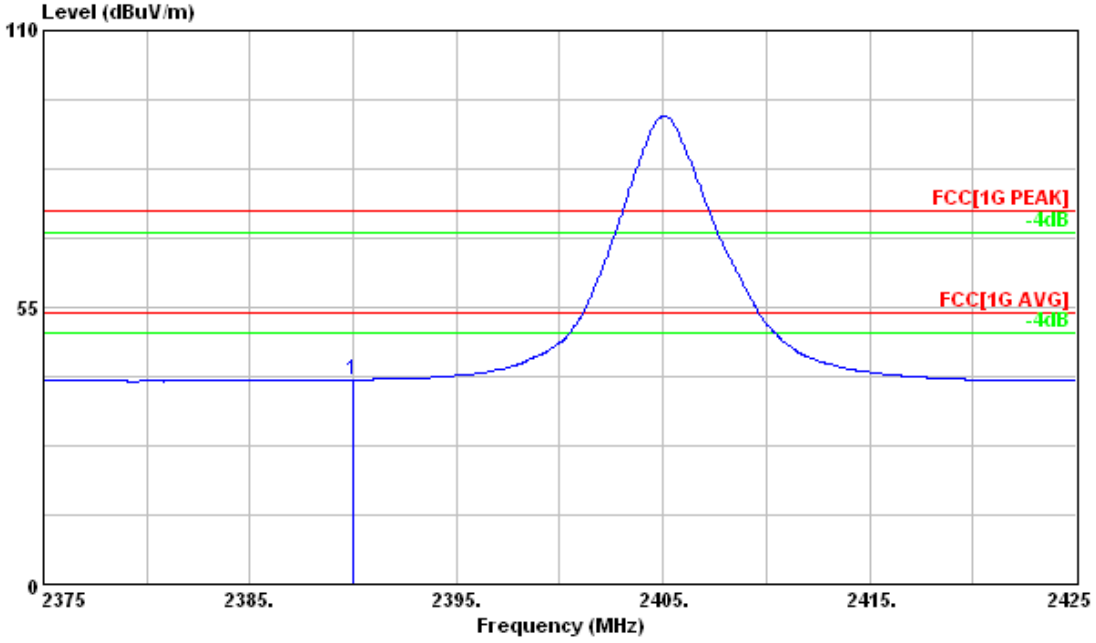
Low Channel (2405MHz), H Polarization – Average



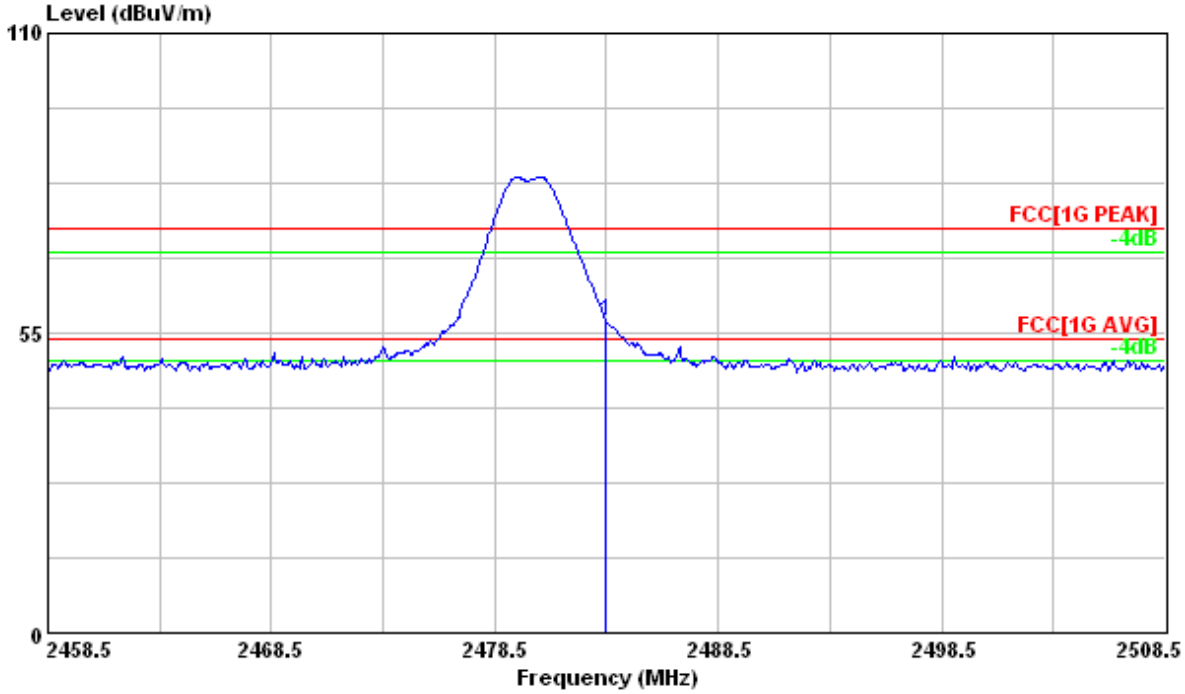
Low Channel (2405MHz), V Polarization – Peak



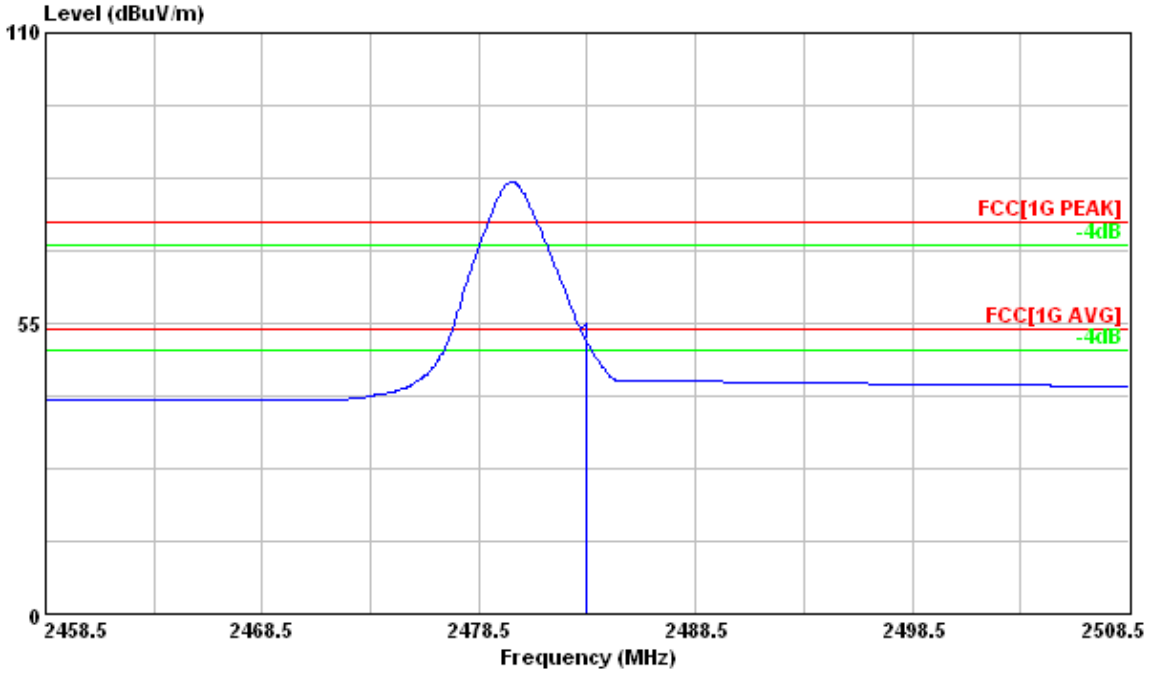
Low Channel (2405MHz), V Polarization – Average



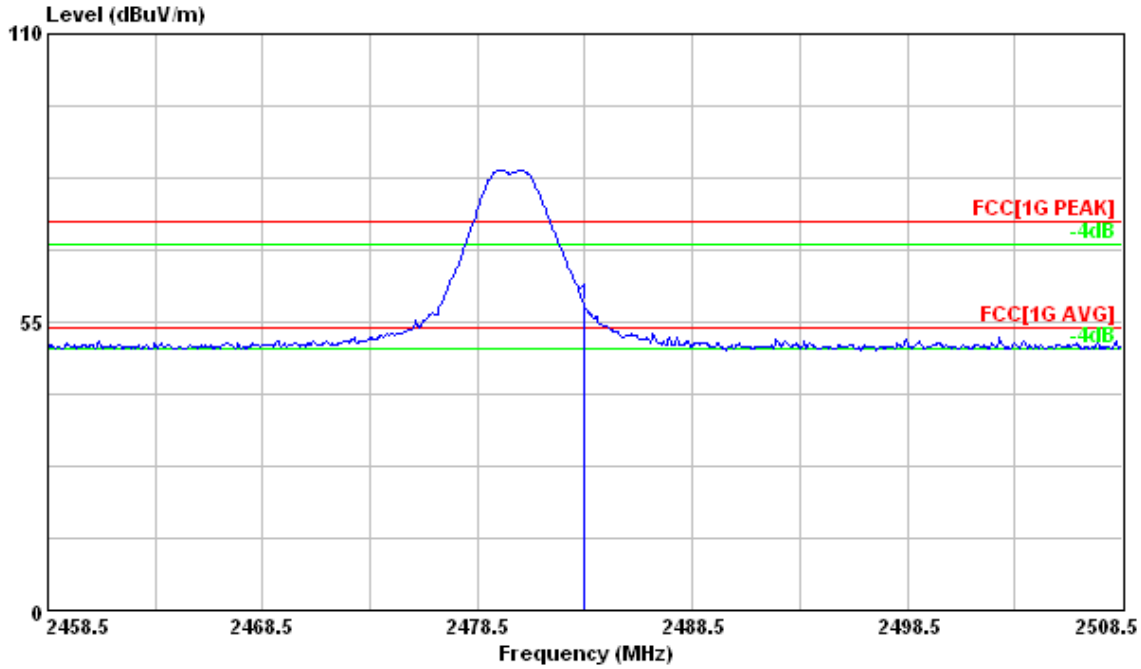
High Channel (2480MHz), H Polarization – Peak



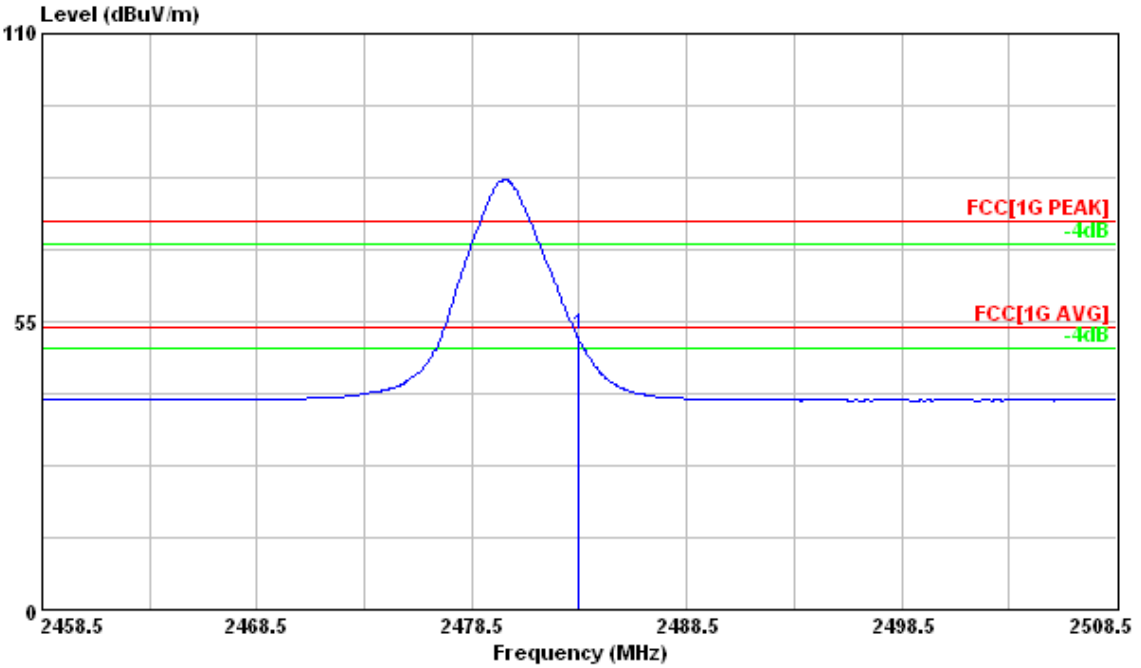
High Channel (2480MHz), H Polarization – Average



High Channel (2480MHz), V Polarization – Peak



High Channel (2480MHz), V Polarization – Average



4 6dB Bandwidth

Result: Pass

4.1 Applied standard

According to 15.247(a)(2), Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

4.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No. /Serial No.	Last Calibration Date	Calibration Due Date
Spectrum Analyzer	Agilent	E4405B/ MY45106706	March 29, 2012	March 29, 2013
Test Site	N.A.	TR13	NCR	NCR

Note:

1. The calibrations are traceable to NML/ROC.
2. NCR:No Calibration Required.

Instrument Setting

RBW	VBW	Detector	Trace	Comment
30kHz	100kHz	Peak	Maxhold	

Climatic Condition

Ambient Temperature：22℃ Relative Humidity :60%

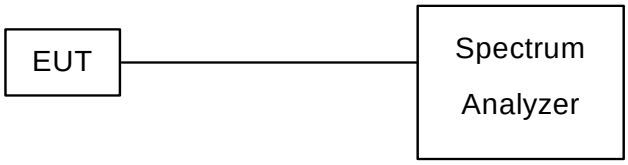
4.3 Measurement Procedure

a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. A software provided by client enabled the EUT to transmit data at low, middle and high channel frequencies individually.

c. Measure the 6dB bandwidth and compare with the required limit.

4.4 Test configuration

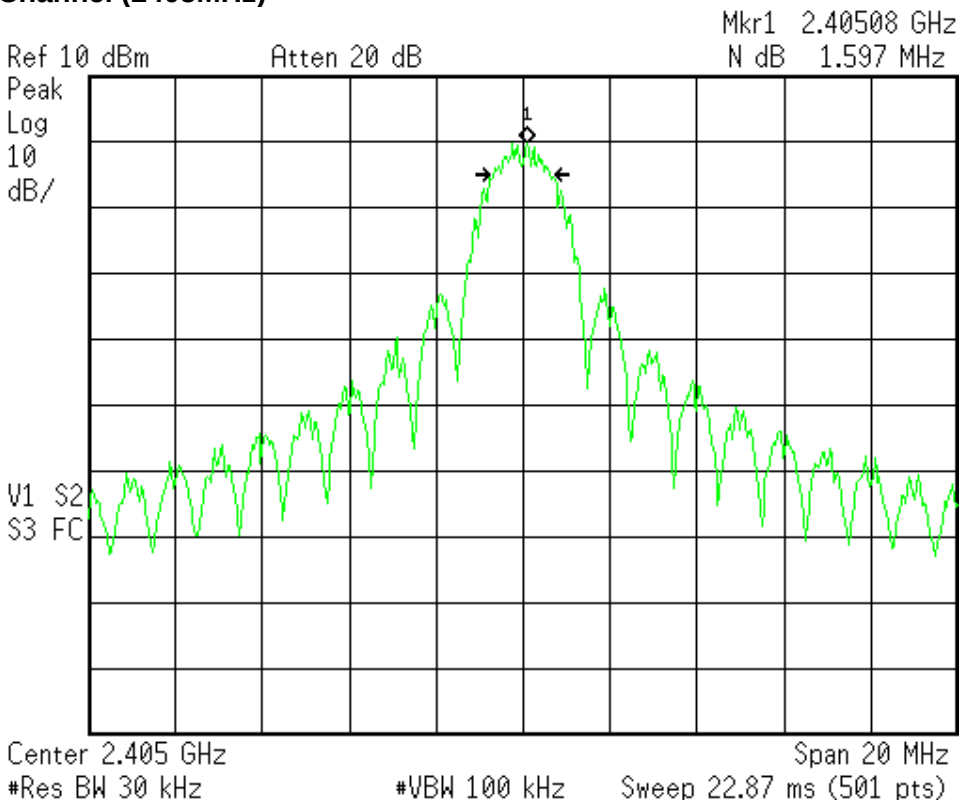


4.5 Test Data

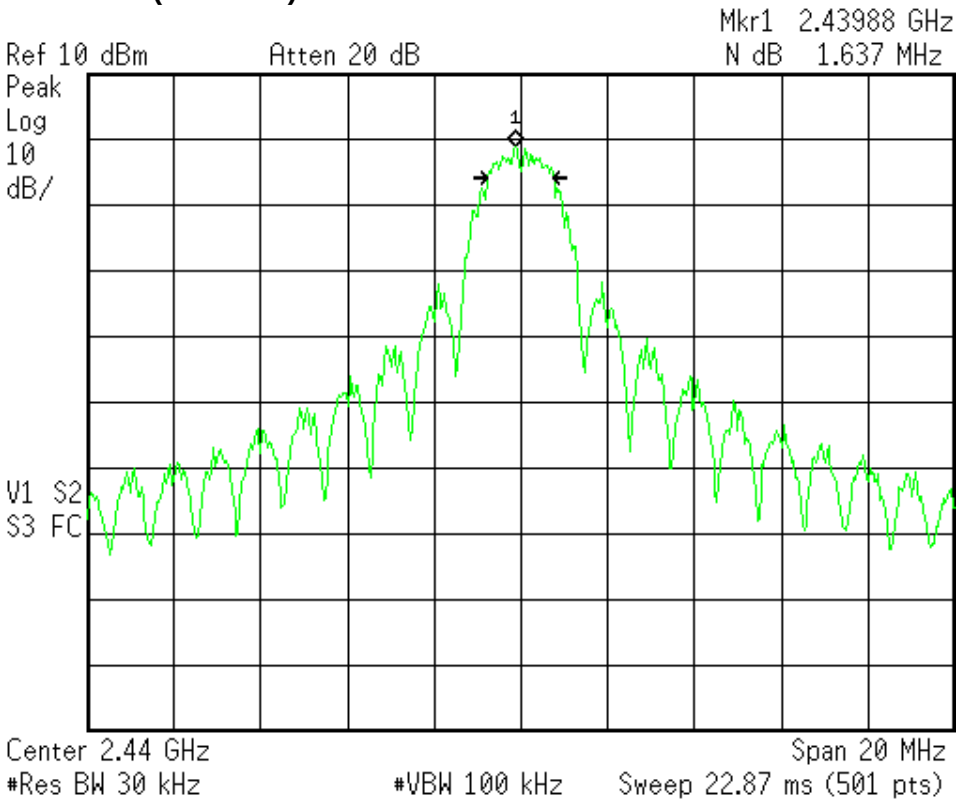
Test Mode : Continuous Transmitting **Tester** **:** Jun

Operating Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (kHz)
2405	1.597	500
2440	1.637	500
2480	1.597	500

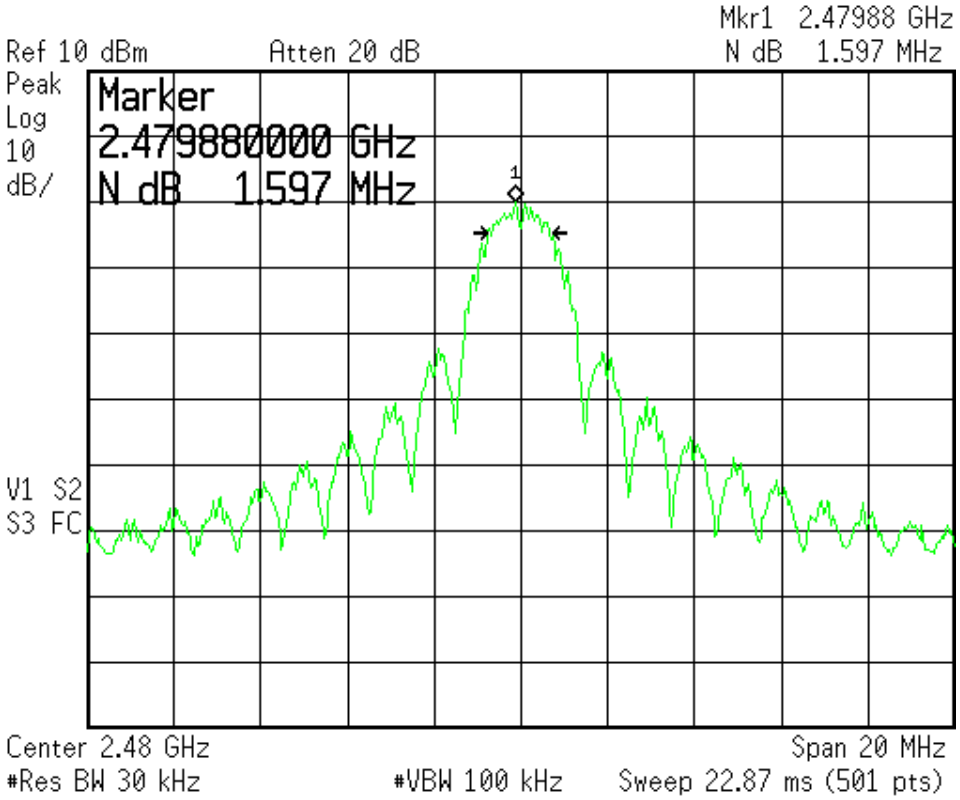
Low Channel (2405MHz)



Middle Channel (2440MHz)



High Channel (2480MHz)



5 Peak Power Spectral Density

Result: Pass

5.1 Applied standard

According to 15.247(e),for digitally modulated systems,the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

5.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No. /Serial No.	Last Calibration Date	Calibration Due Date
Spectrum Analyzer	Agilent	E4405B/ MY45106706	March 29, 2012	March 29, 2013
Test Site	N.A.	TR13	NCR	NCR

Note:

1. The calibrations are traceable to NML/ROC.
2. NCR:No Calibration Required.

Instrument Setting

RBW	VBW	Detector	Trace	Comment
3kHz	10kHz	Peak	Maxhold	

Climatic Condition

Ambient Temperature：22℃ Relative Humidity :60%

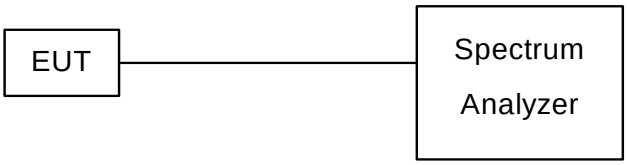
5.3 Measurement Procedure

a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. A software provided by client enabled the EUT to transmit data at low, middle and high channel frequencies individually.

c. Measure the peak power spectrum density and compare with the required limit.

5.4 Test configuration



5.5 Test Data

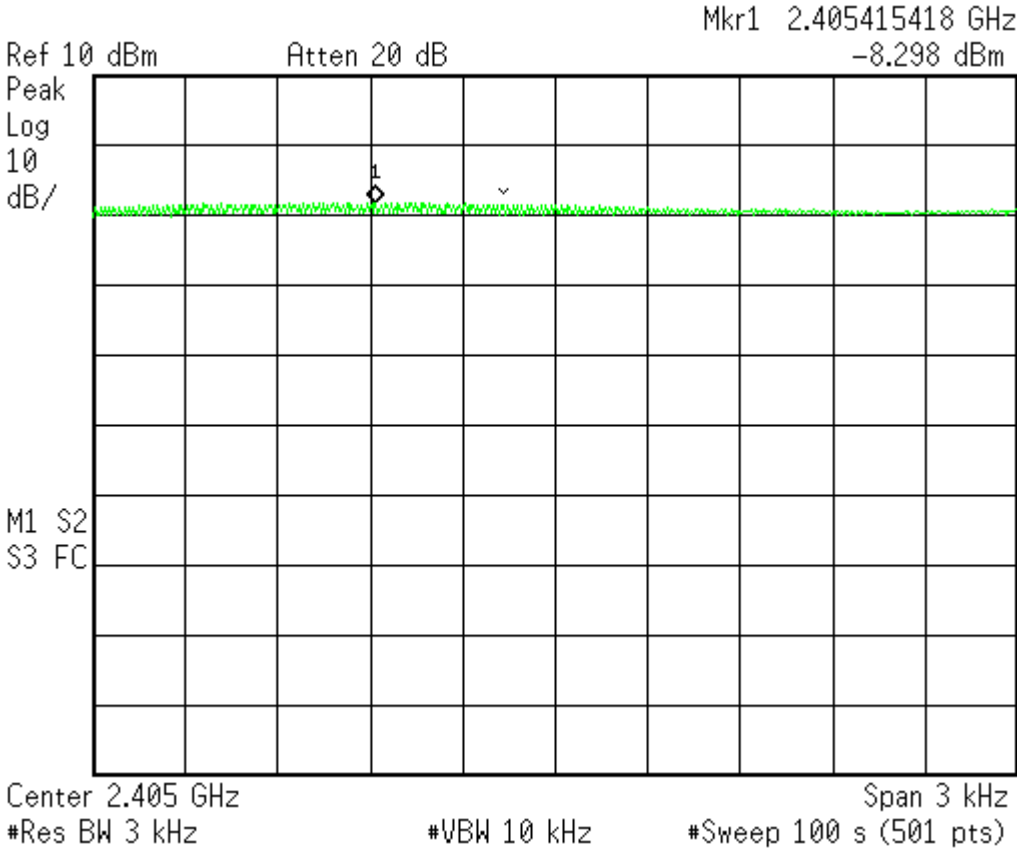
Test Mode : Continuous Transmitting **Tester** **:** Jun

Operating Frequency (MHz)	Reading Data (dBm)	Correction Factor (dB)	Emission (dBm)	Limit (dBm)	Margin (dBm)
2405	-8.29	0.8	-7.49	8	15.49
2440	-8.25	0.8	-7.45	8	15.45
2480	-18.45	0.8	-17.65	8	25.65

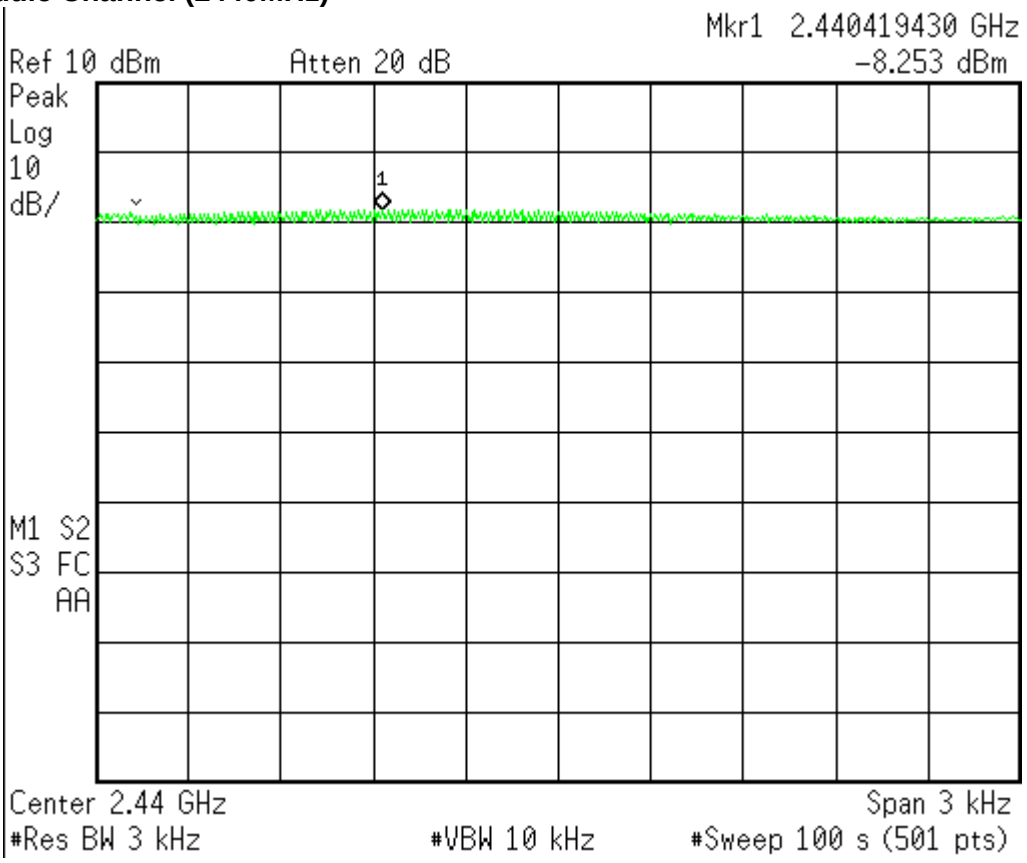
Note:

1. Correction Factor (dB) = Cable Loss + Attenuator
2. Emission (dBm) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission

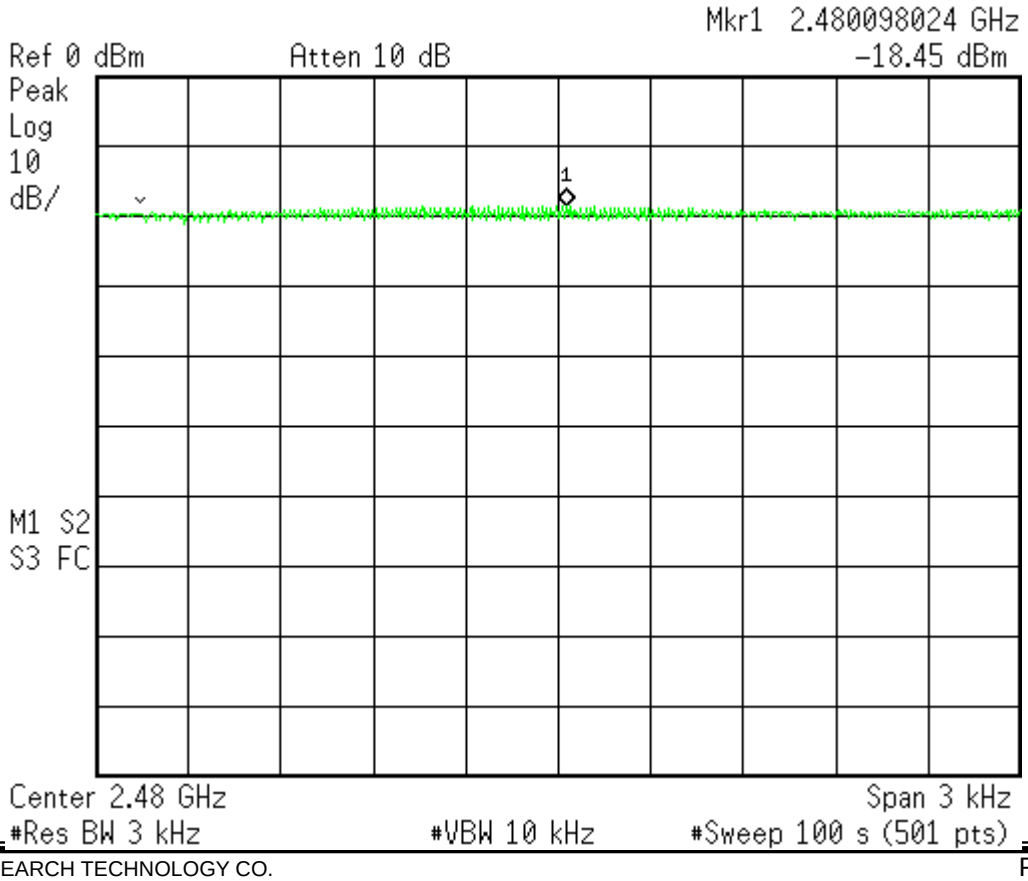
Low Channel (2405MHz)



Middle Channel (2440MHz)



High Channel (2480MHz)



6 Radiated Emission

Result: Pass

6.1 Applied standard

According to 15.247(c),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. 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).

6.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No./ Serial No.	Last Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESCS 30/ 836858/020	Sept. 10, 2012	Sept. 10, 2013
Spectrum Analyzer	Agilent	FSP40/ 100031	July 11, 2012	July 11, 2013
Broadband Antenna	R&S	HL-562/ 830547/010	May 2, 2012	May 2, 2013
Antenna	EMCO	3117/ 00082847	March 1, 2012	March 1, 2013
Pre-Amplifier	Mini Circuit	ZKL-2/ 001	July 16, 2012	Jan.16, 2013
Pre-Amplifier	Mini Circuit	ZKL-2/ 002	July 16, 2012	Jan.16, 2013
PRE-AMPLIFIER	MITEQ	JS4-00101800-28-10P/1498979	Dec. 21, 2011	Dec. 21, 2012
PRE-AMPLIFIER	MITEQ	JS4-00101800-28-5A/742309	Dec. 14, 2011	Dec. 14, 2012
RF Cable	JYEBAO	0214/ C0049	July 16, 2012	Jan.16, 2013
RF Cable	JYEBAO	0214/ C0050	July 16, 2012	Jan.16, 2013
RF Cable	H+S	Sucoflex 104/ C0081	Oct. 15, 2012	April 15, 2013
Semi - anechoic Chamber	ETS. LINDGREN	TR11/ 906-A	Feb. 12, 2012	Feb. 12, 2013

Note:

1. The calibrations are traceable to NML/ROC.
2. NCR : No Calibration Required.
3. The calibration date of the semi-anechoic chamber listed above is the date of NSA measurement.

Instrument Setting

RBW	VBW	Detector	Trace	Comment
120kHz	N/A	Quasi-Peak	Maxhold	Below 1GHz
1MHz	3MHz	Peak	Maxhold	Above 1GHz, Peak
1MHz	10Hz	Peak	Maxhold	Above 1GHz, Average

Climatic Condition

Ambient Temperature：24℃ Relative Humidity :53%

6.3 Measurement Procedure

a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. A software provided by client enabled the EUT to transmit and receive data at operating frequency.(if necessary)

c. If the EUT is tabletop equipment, it should be placed on a wooden table with a height of 0.8 meters above the reference ground plane in the semi-anechoic chamber. If the EUT is floor-standing equipment, it should be placed on a non-conducted support with a height of 12 millimeters above the reference ground plane in the semi-anechoic chamber.

d. The EUT is set 3m away from the interference receiving antenna.

e. Rapidly sweep the signal in the test frequency range by using the spectrum through the Maximum-peak detector.

f. Rotate the EUT from 0° to 360° and position the receiving antenna at heights from 1 to 4 meters above the reference ground plane continuously to determine at least six frequencies associated with higher emission levels and record them.

g. Then measure each frequency found from step f. by using the spectrum with rotating the EUT and positioning the receiving antenna height to determine the maximum level.

h. For measurement of frequency below 1000MHz, set the receiver detector to be Quasi-Peak per CISPR 16-1 to find out the maximum level occurred.

i. For measurement of frequency above 1000MHz, set the spectrum detector to be Peak or Average to find out the maximum level occurred, if any.

j. Record frequency, azimuth angle of the turntable, height, and polarization of the receiving antenna and compare the maximum level with the required limit.

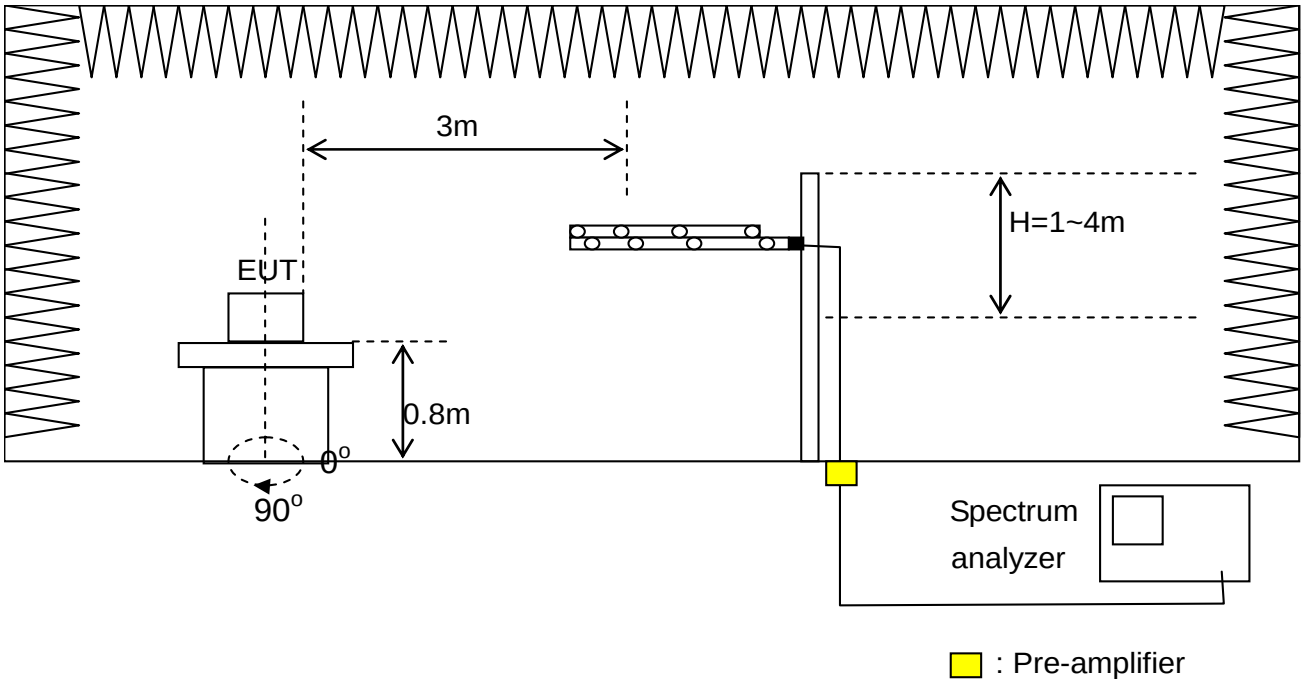
k. Change the receiving antenna to another polarization to measure radiated emission by following step e. to j. again.

l. If the peak emission level below 1000MHz measured from step f. is 4dB lower than the limit specified, then the emission values presented will be the peak value only. Otherwise, accurate Q.P. value will be measured and presented.

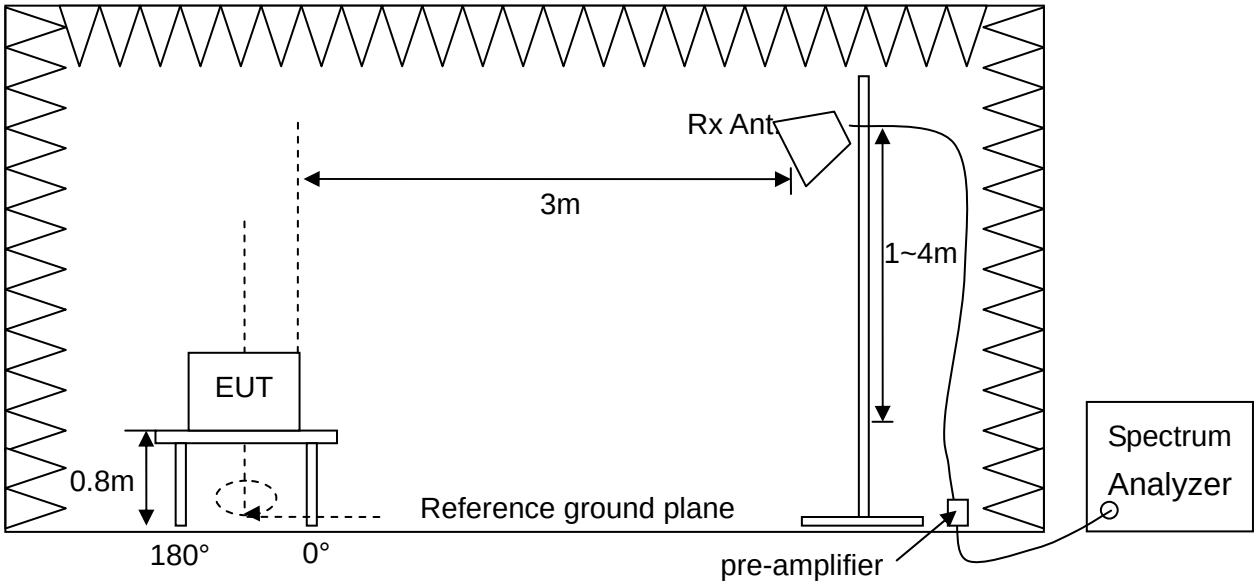
m. If the peak emission level above 1000MHz measured from step f. is 20dB lower than the limit specified, then the emission values presented will be the peak value only. Otherwise, accurate A.V. value will be measured and presented.

6.4 Test configuration

Below 1GHz



Above 1GHz



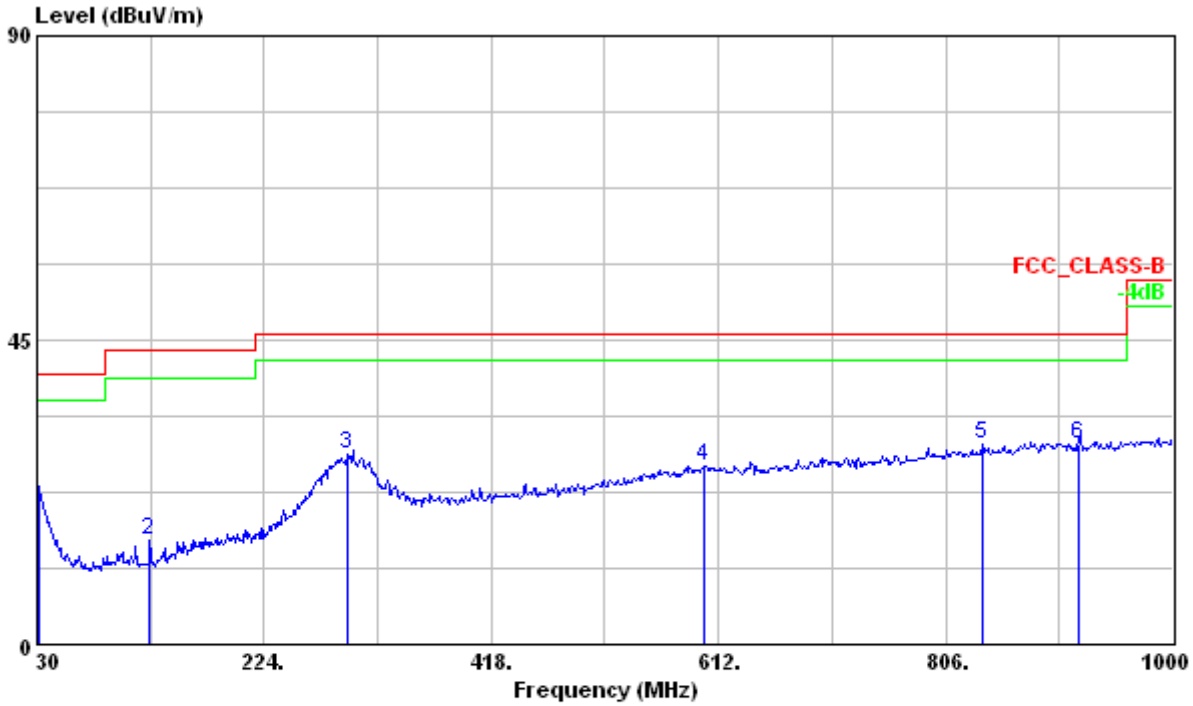
6.5 Test Data

Radiated Emission Measurement below 1000MHz

Test Mode : **2405MHz, Continuous Transmitting**

Test Distance : 3m **Tester** : Liu

Polarization : Horizontal **Frequency Range** : 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	31.080	23.37	32.04	-8.67	40.00	-16.63	---	---	HORIZONTAL	Peak
2	125.850	15.36	34.37	-19.01	43.50	-28.14	---	---	HORIZONTAL	Peak
3	295.140	28.00	40.34	-12.34	46.00	-18.00	---	---	HORIZONTAL	Peak
4	599.600	26.45	30.97	-4.52	46.00	-19.55	---	---	HORIZONTAL	Peak
5	838.300	29.55	31.11	-1.56	46.00	-16.45	---	---	HORIZONTAL	Peak
6	920.200	29.46	29.95	-0.49	46.00	-16.54	137	213	HORIZONTAL	QP

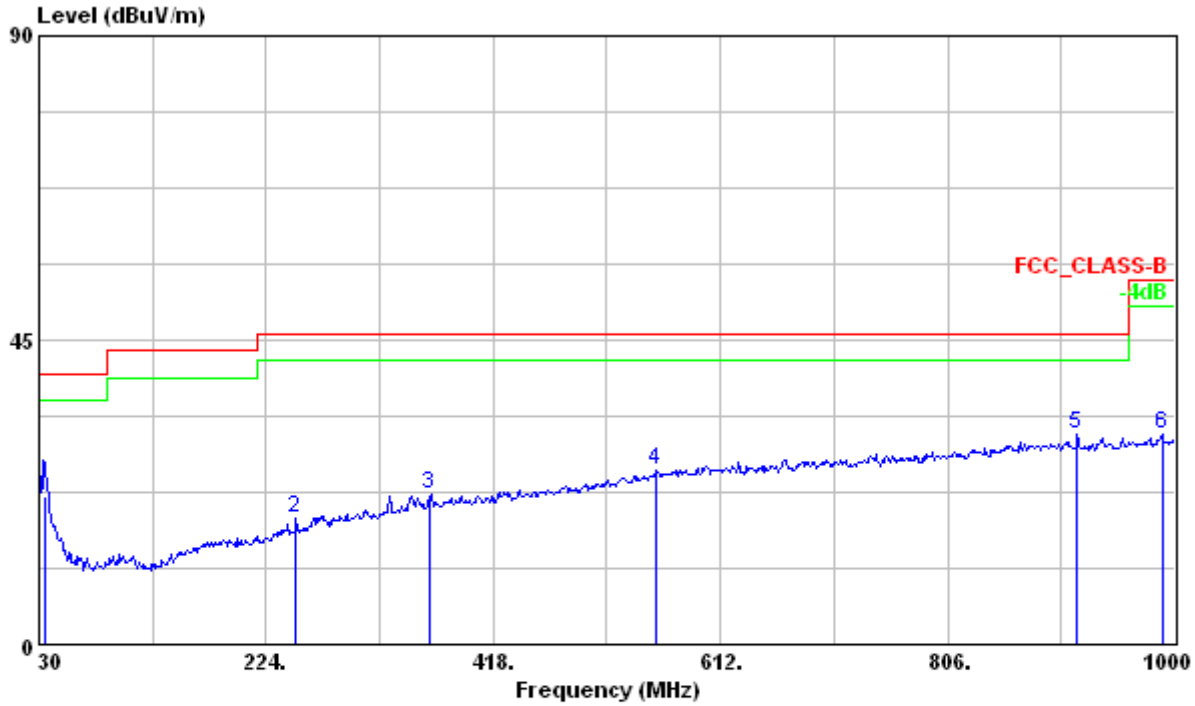
Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode : **2405MHz, Continuous Transmitting**

Test Distance : 3m **Tester** : Liu

Polarization : Vertical **Frequency Range** : 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	34.325	21.96	32.62	-10.66	40.00	-18.04	104	194	VERTICAL	QP
2	248.970	18.57	32.41	-13.84	46.00	-27.43	---	---	VERTICAL	Peak
3	364.400	22.13	32.00	-9.87	46.00	-23.87	---	---	VERTICAL	Peak
4	557.600	25.68	30.97	-5.29	46.00	-20.32	---	---	VERTICAL	Peak
5 @	916.700	31.21	31.71	-0.50	46.00	-14.79	---	---	VERTICAL	Peak
6	989.330	30.95	30.85	0.10	54.00	-23.05	---	---	VERTICAL	Peak

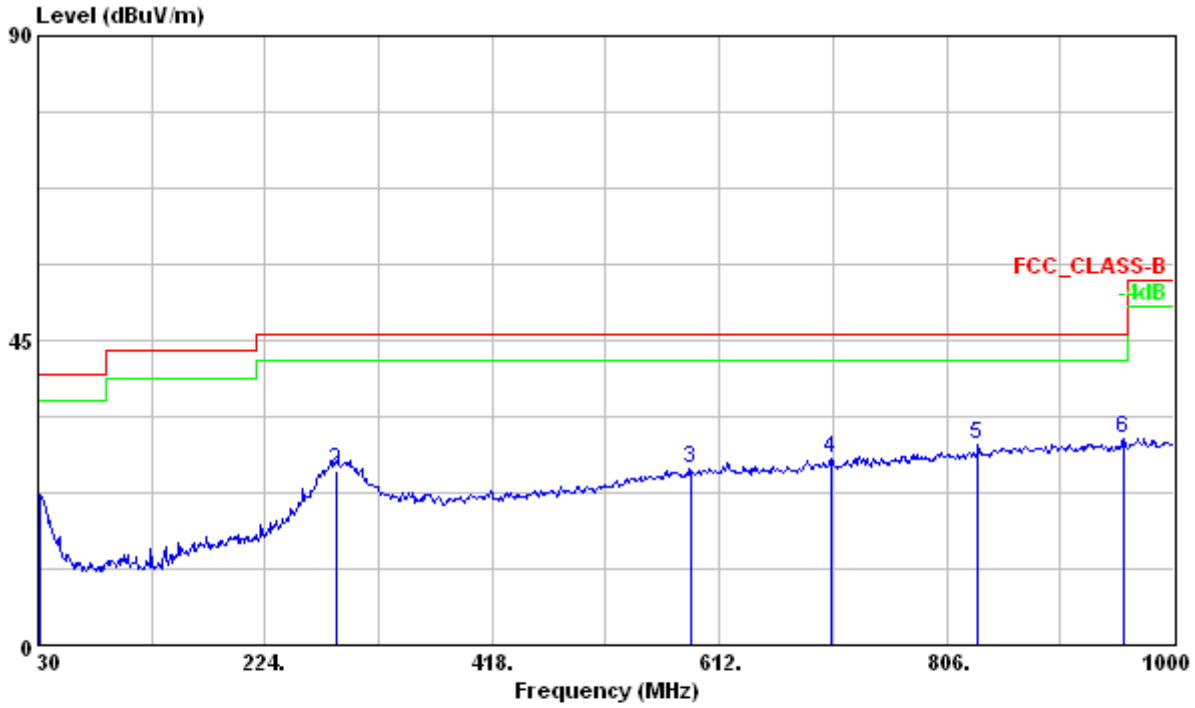
Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode : **2440MHz, Continuous Transmitting**

Test Distance : 3m **Tester** : Liu

Polarization : Horizontal **Frequency Range** : 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	31.890	22.08	31.25	-9.17	40.00	-17.92	---	---	HORIZONTAL	Peak
2	285.690	25.80	38.59	-12.79	46.00	-20.20	137	213	HORIZONTAL	QP
3	587.000	25.97	30.72	-4.75	46.00	-20.03	---	---	HORIZONTAL	Peak
4	708.030	27.62	30.66	-3.04	46.00	-18.38	---	---	HORIZONTAL	Peak
5	832.700	29.67	31.33	-1.66	46.00	-16.33	---	---	HORIZONTAL	Peak
6 @	957.300	30.38	30.70	-0.32	46.00	-15.62	---	---	HORIZONTAL	Peak

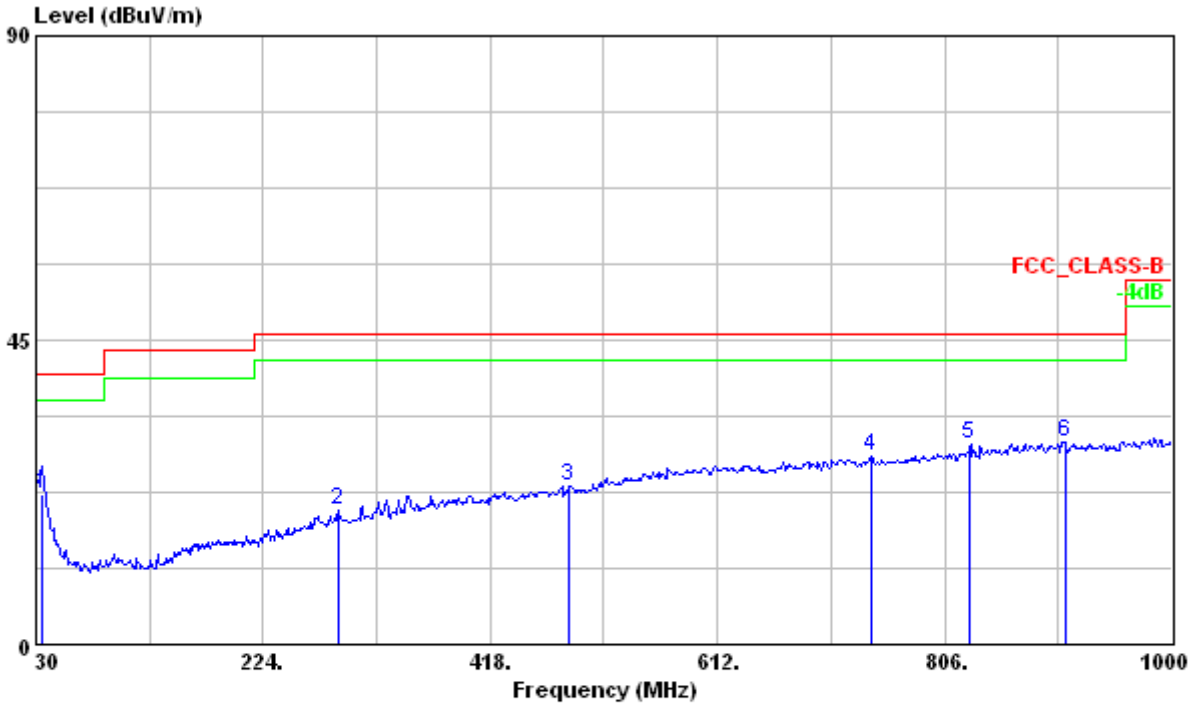
Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode : **2440MHz, Continuous Transmitting**

Test Distance : 3m **Tester** : Liu

Polarization : Vertical **Frequency Range** : 30MHz~1000MHz

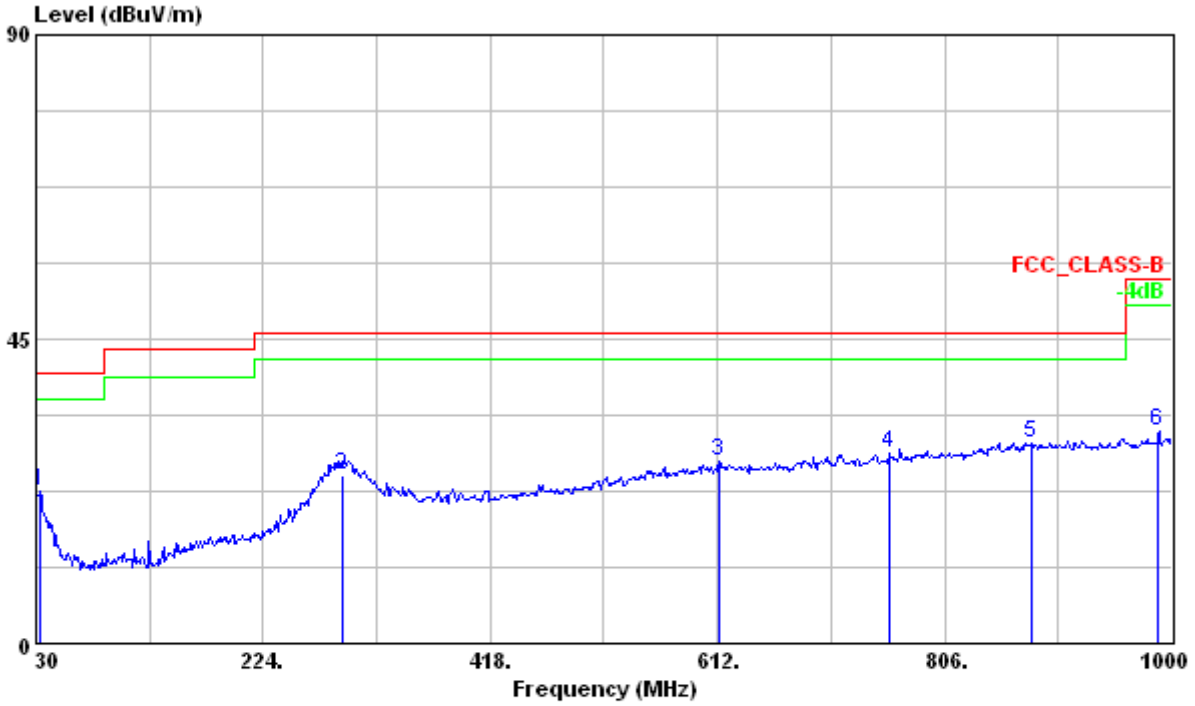


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	35.130	22.20	33.34	-11.14	40.00	-17.80	100	187	VERTICAL	QP
2	287.580	19.70	32.46	-12.76	46.00	-26.30	---	---	VERTICAL	Peak
3	485.500	23.45	30.78	-7.33	46.00	-22.55	---	---	VERTICAL	Peak
4	743.100	27.72	30.65	-2.93	46.00	-18.28	---	---	VERTICAL	Peak
5	827.800	29.56	31.30	-1.74	46.00	-16.44	---	---	VERTICAL	Peak
6 @	908.820	29.98	30.49	-0.51	46.00	-16.02	---	---	VERTICAL	Peak

Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode	**: 2480MHz, Continuous Transmitting**		
Test Distance	**:** 3m	**Tester**	**:** Liu
Polarization	**:** Horizontal	**Frequency Range**	**:** 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	33.240	22.57	32.57	-10.00	40.00	-17.43	---	---	HORIZONTAL	Peak
2	292.440	24.98	37.52	-12.54	46.00	-21.02	125	200	HORIZONTAL	QP
3	613.600	27.02	31.47	-4.45	46.00	-18.98	---	---	HORIZONTAL	Peak
4	759.200	28.14	30.92	-2.78	46.00	-17.86	---	---	HORIZONTAL	Peak
5	880.300	29.57	30.45	-0.88	46.00	-16.43	---	---	HORIZONTAL	Peak
6	988.800	31.31	31.21	0.10	54.00	-22.69	---	---	HORIZONTAL	Peak

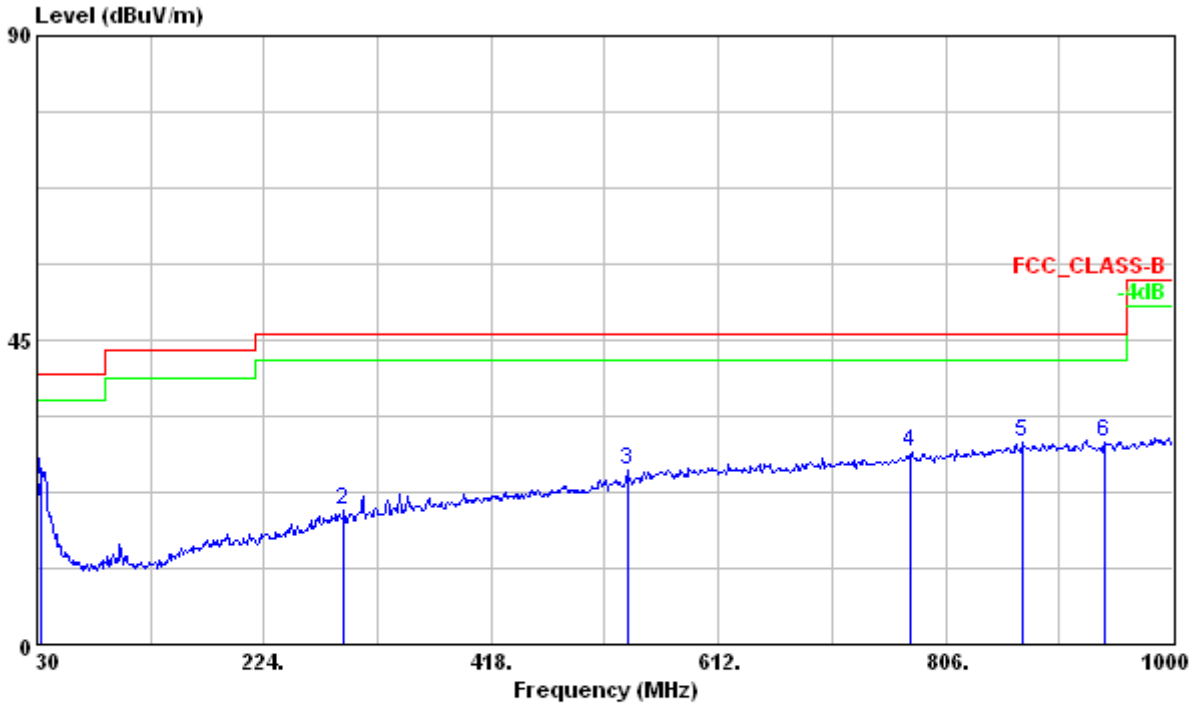
Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode : **2480MHz, Continuous Transmitting**

Test Distance : 3m **Tester** : Liu

Polarization : Vertical **Frequency Range** : 30MHz~1000MHz

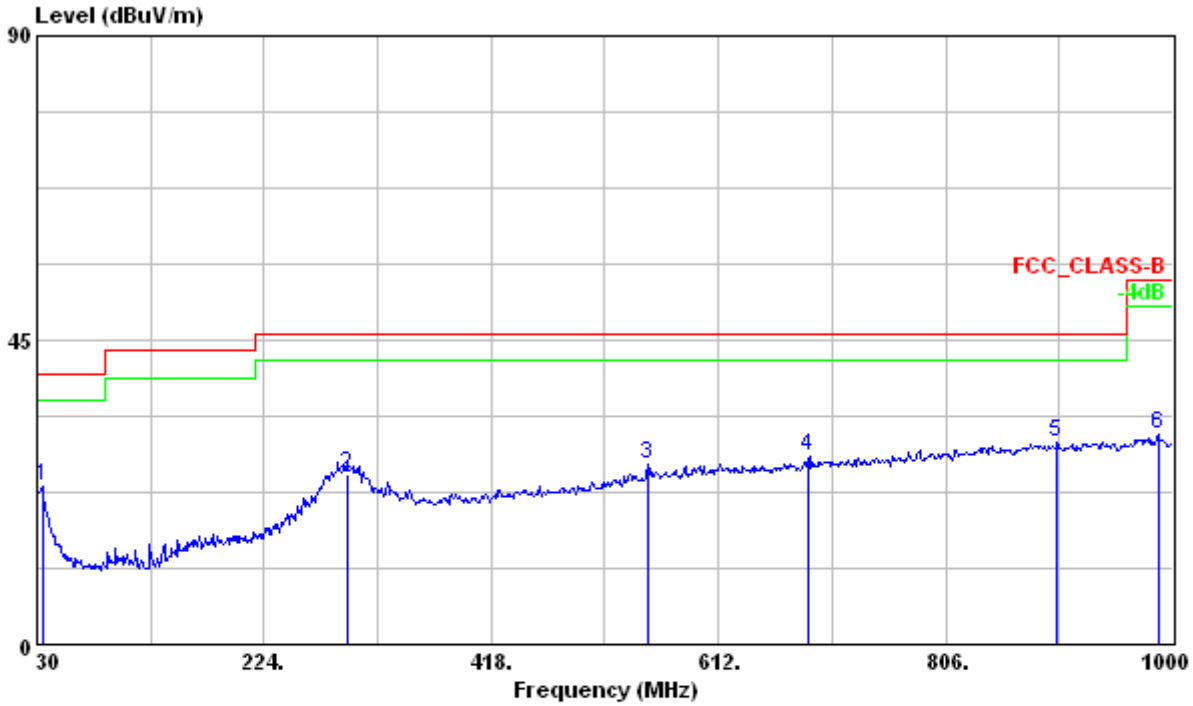


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1 @	33.240	24.16	34.16	-10.00	40.00	-15.84	100	178	VERTICAL	QP
2	291.630	19.88	32.49	-12.61	46.00	-26.12	---	---	VERTICAL	Peak
3	534.500	25.66	31.59	-5.93	46.00	-20.34	---	---	VERTICAL	Peak
4	776.700	28.33	30.86	-2.53	46.00	-17.67	---	---	VERTICAL	Peak
5	871.200	29.76	30.78	-1.02	46.00	-16.24	---	---	VERTICAL	Peak
6	941.900	29.88	30.32	-0.44	46.00	-16.12	---	---	VERTICAL	Peak

Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode	**: 2405MHz, Continuous Receiving**		
Test Distance	**:** 3m	**Tester**	**:** Liu
Polarization	**:** Horizontal	**Frequency Range**	**:** 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	34.590	23.51	34.34	-10.83	40.00	-16.49	---	---	HORIZONTAL	Peak
2	294.330	25.13	37.53	-12.40	46.00	-20.87	133	189	HORIZONTAL	QP
3	552.000	26.70	32.08	-5.38	46.00	-19.30	---	---	HORIZONTAL	Peak
4	689.200	27.70	31.04	-3.34	46.00	-18.30	---	---	HORIZONTAL	Peak
5	901.300	30.01	30.55	-0.54	46.00	-15.99	---	---	HORIZONTAL	Peak
6	987.400	31.00	30.93	0.07	54.00	-23.00	---	---	HORIZONTAL	Peak

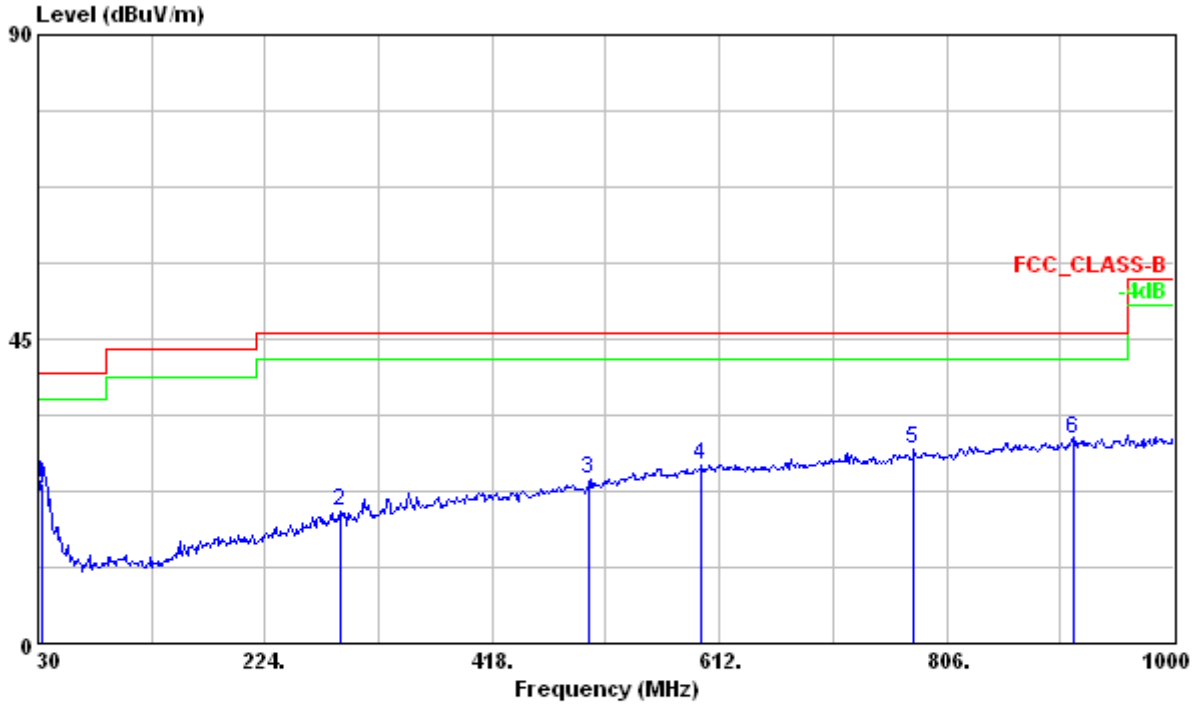
Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode : **2405MHz, Continuous Receiving**

Test Distance : 3m **Tester** : Liu

Polarization : Vertical **Frequency Range** : 30MHz~1000MHz

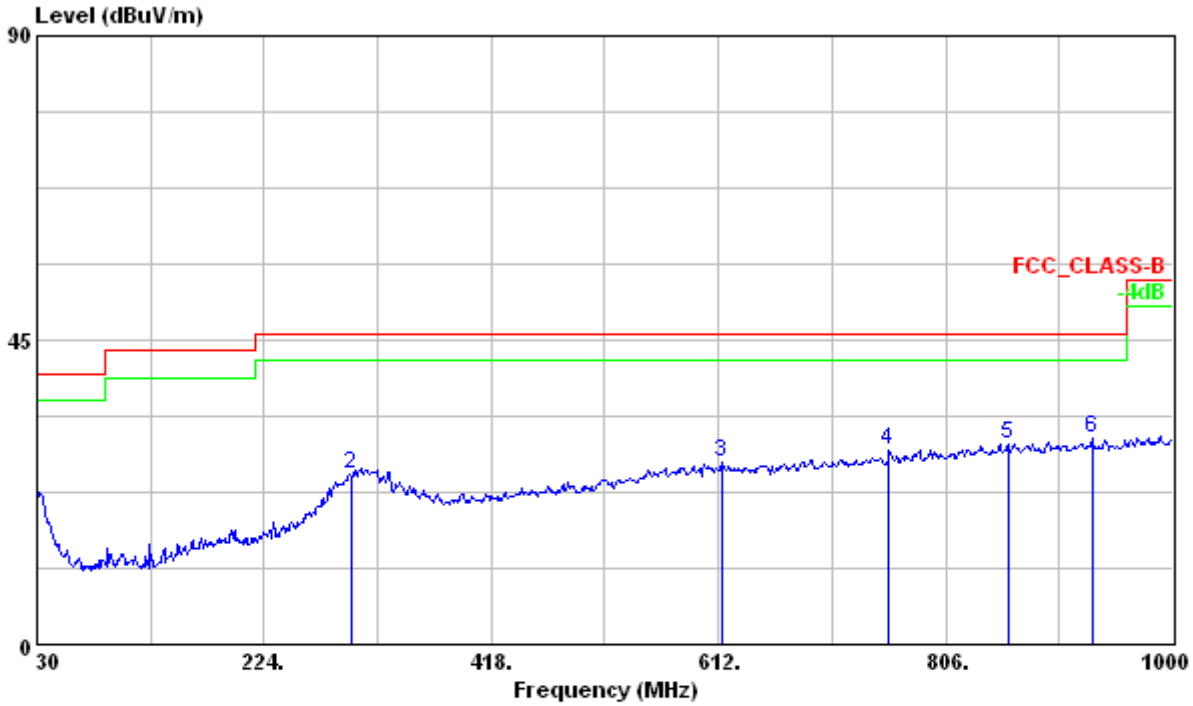


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	33.780	23.65	33.97	-10.32	40.00	-16.35	100	198	VERTICAL	QP
2	288.390	19.61	32.37	-12.76	46.00	-26.39	---	---	VERTICAL	Peak
3	500.900	24.22	31.25	-7.03	46.00	-21.78	---	---	VERTICAL	Peak
4	596.100	26.44	31.02	-4.58	46.00	-19.56	---	---	VERTICAL	Peak
5	778.100	28.64	31.15	-2.51	46.00	-17.36	---	---	VERTICAL	Peak
6 @	913.900	30.27	30.77	-0.50	46.00	-15.73	---	---	VERTICAL	Peak

Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode	**: 2440MHz, Continuous Receiving**		
Test Distance	**:** 3m	**Tester**	**:** Liu
Polarization	**:** Horizontal	**Frequency Range**	**:** 30MHz~1000MHz

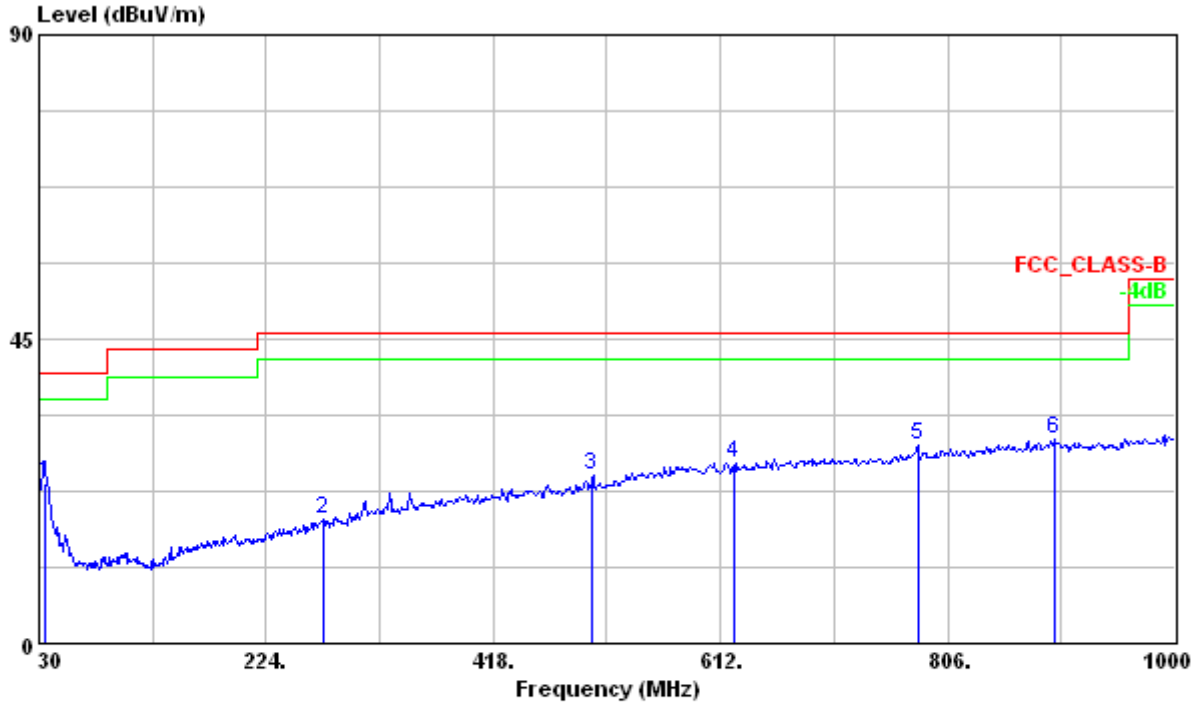


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	30.540	19.56	27.90	-8.34	40.00	-20.44	102	200	HORIZONTAL	QP
2	297.840	25.21	37.35	-12.14	46.00	-20.79	---	---	HORIZONTAL	Peak
3	615.000	26.80	31.25	-4.45	46.00	-19.20	---	---	HORIZONTAL	Peak
4	757.100	28.72	31.52	-2.80	46.00	-17.28	---	---	HORIZONTAL	Peak
5	859.300	29.60	30.83	-1.23	46.00	-16.40	---	---	HORIZONTAL	Peak
6 @	931.400	30.56	31.02	-0.46	46.00	-15.44	---	---	HORIZONTAL	Peak

Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Mode	**: 2440MHz, Continuous Receiving**		
Test Distance	**:** 3m	**Tester**	**:** Liu
Polarization	**:** Vertical	**Frequency Range**	**:** 30MHz~1000MHz

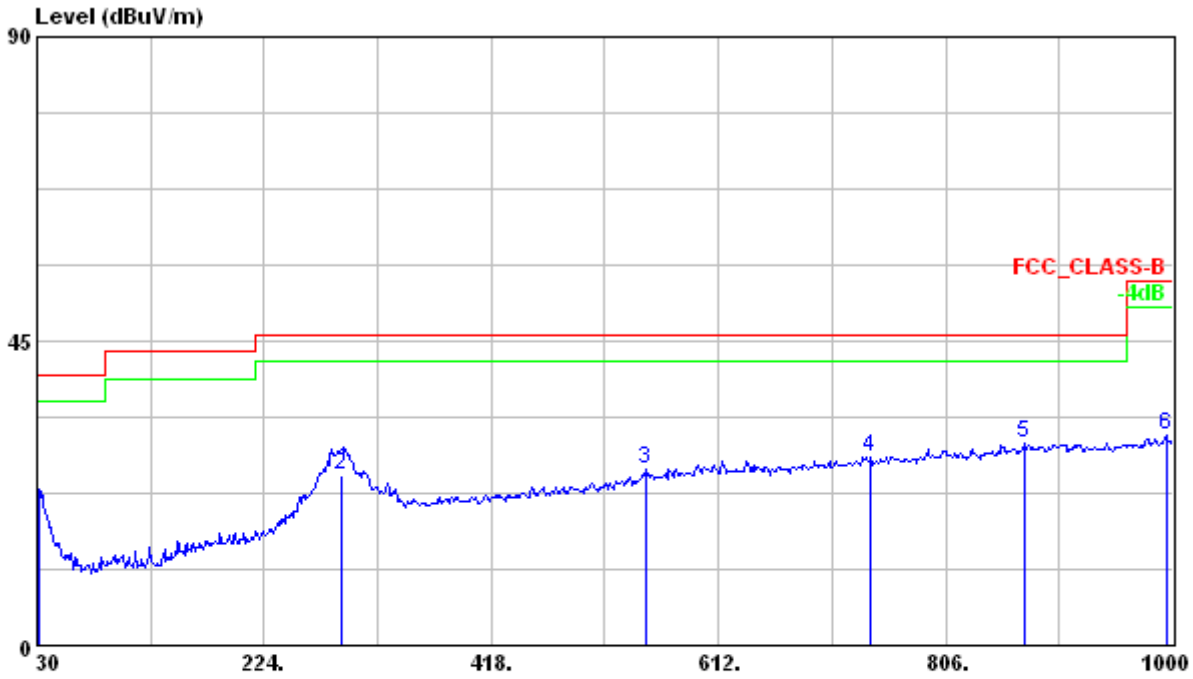


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	34.590	23.81	34.64	-10.83	40.00	-16.19	100	180	VERTICAL	QP
2	272.730	18.32	31.30	-12.98	46.00	-27.68	---	---	VERTICAL	Peak
3	503.000	24.79	31.75	-6.96	46.00	-21.21	---	---	VERTICAL	Peak
4	624.100	26.71	31.12	-4.41	46.00	-19.29	---	---	VERTICAL	Peak
5	780.200	29.19	31.67	-2.48	46.00	-16.81	---	---	VERTICAL	Peak
6 @	897.800	30.19	30.77	-0.58	46.00	-15.81	---	---	VERTICAL	Peak

Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Model	**: 2480MHz, Continuous Receiving**		
Test Distance	**:** 3m	**Tester**	**:** Liu
Polarization	**:** Horizontal	**Frequency Range**	**:** 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	31.890	22.97	32.14	-9.17	40.00	-17.03	---	---	HORIZONTAL	Peak
2	290.280	25.28	37.99	-12.71	46.00	-20.72	135	123	HORIZONTAL	QP
3	550.600	26.10	31.51	-5.41	46.00	-19.90	---	---	HORIZONTAL	Peak
4	741.700	27.83	30.77	-2.94	46.00	-18.17	---	---	HORIZONTAL	Peak
5	873.300	29.85	30.83	-0.98	46.00	-16.15	---	---	HORIZONTAL	Peak
6	994.400	31.01	30.85	0.16	54.00	-22.99	---	---	HORIZONTAL	Peak

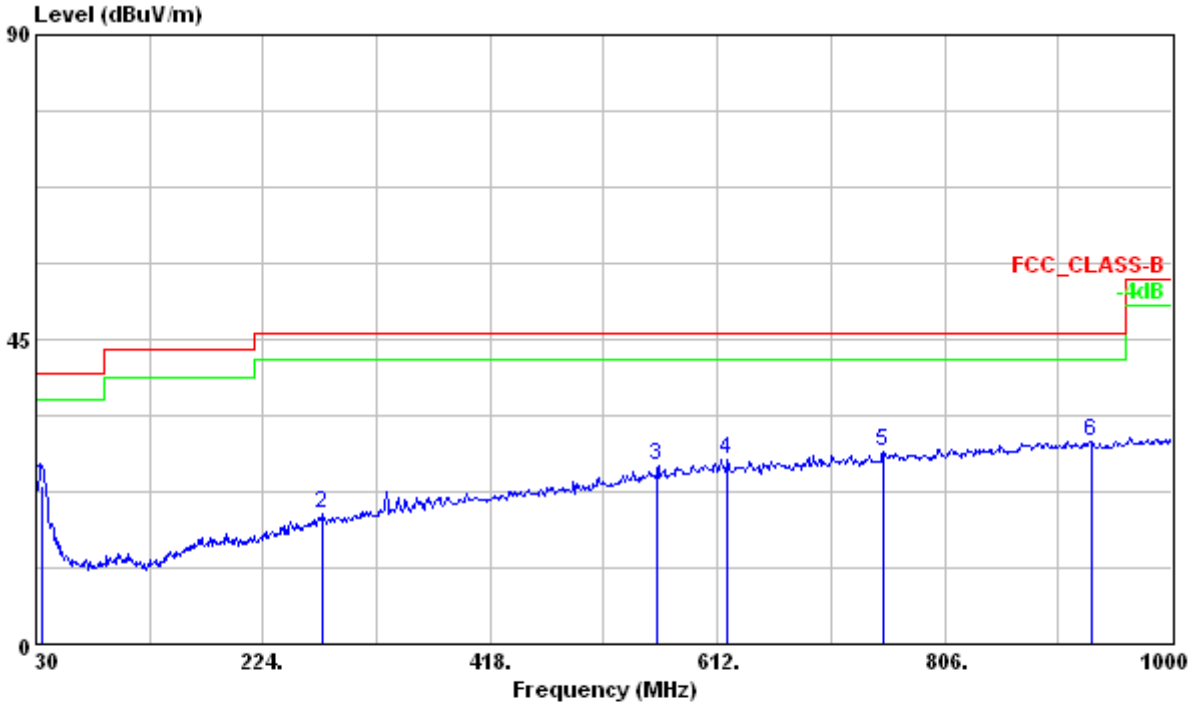
Note：

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Test Model **: 2480MHz, Continuous Receiving**

Test Distance **:** 3m **Tester** **:** Liu

Polarization **:** Vertical **Frequency Range :** 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	34.590	23.31	34.14	-10.83	40.00	-16.69	100	177	VERTICAL	QP
2	274.890	19.23	32.18	-12.95	46.00	-26.77	---	---	VERTICAL	Peak
3	561.100	26.30	31.52	-5.22	46.00	-19.70	---	---	VERTICAL	Peak
4	620.600	27.22	31.65	-4.43	46.00	-18.78	---	---	VERTICAL	Peak
5	753.600	28.52	31.38	-2.86	46.00	-17.48	---	---	VERTICAL	Peak
6 @	931.400	29.91	30.37	-0.46	46.00	-16.09	---	---	VERTICAL	Peak

Note：

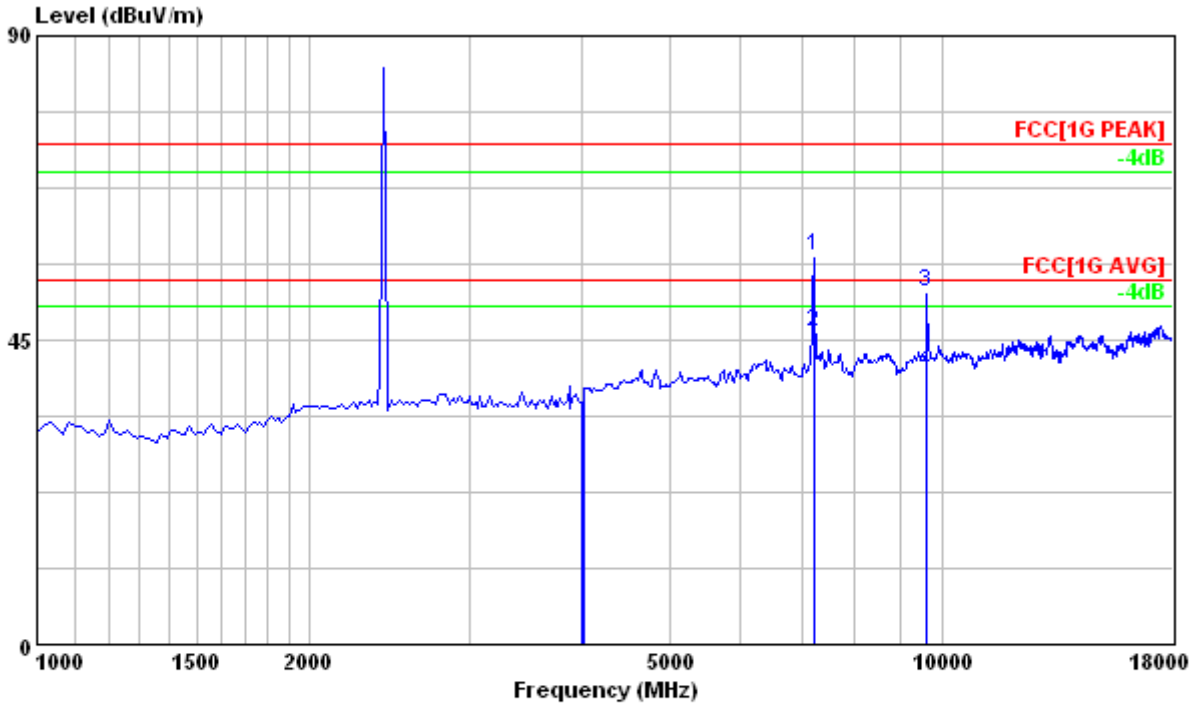
1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor

Radiated Emission Measurement above 1000MHz

Test Model **: 2405MHz, Continuous Transmitting**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Horizontal **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	7213.450	57.42	87.73	-30.31	74.00	-16.58	201	246	HORIZONTAL	Peak
2	7213.450	46.29	76.60	-30.31	54.00	-7.71	201	246	HORIZONTAL	Average
3	9621.750	52.09	77.63	-25.54	74.00	-21.91	202	330	HORIZONTAL	Peak
4	9621.750	40.13	65.67	-25.54	54.00	-13.87	202	330	HORIZONTAL	Average

Note:

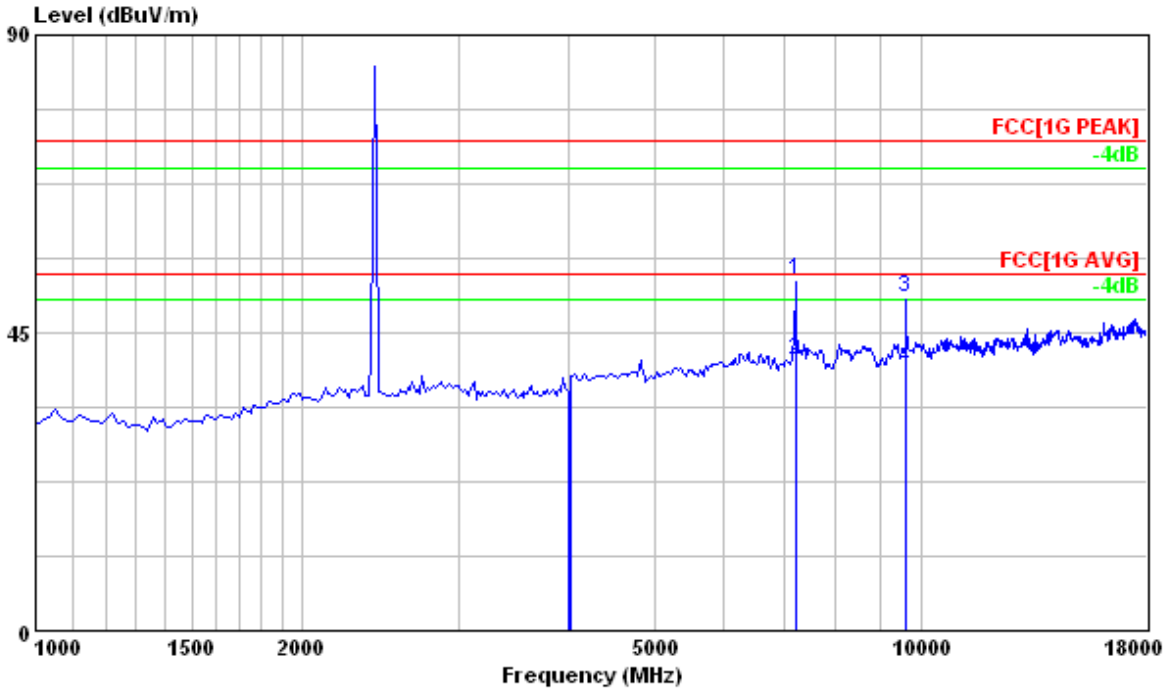
1. Emission Level (dBuV/m) = Reading Value + Correction Factor.
2. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2405MHz, Continuous Transmitting**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Vertical **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	7213.638	52.93	83.24	-30.31	74.00	-21.07	213	292	VERTICAL	Peak
2	7213.638	40.99	71.30	-30.31	54.00	-13.01	213	292	VERTICAL	Average
3	9622.000	50.28	75.81	-25.53	74.00	-23.72	231	221	VERTICAL	Peak
4	9622.000	39.67	65.20	-25.53	54.00	-14.33	231	221	VERTICAL	Average

Note:

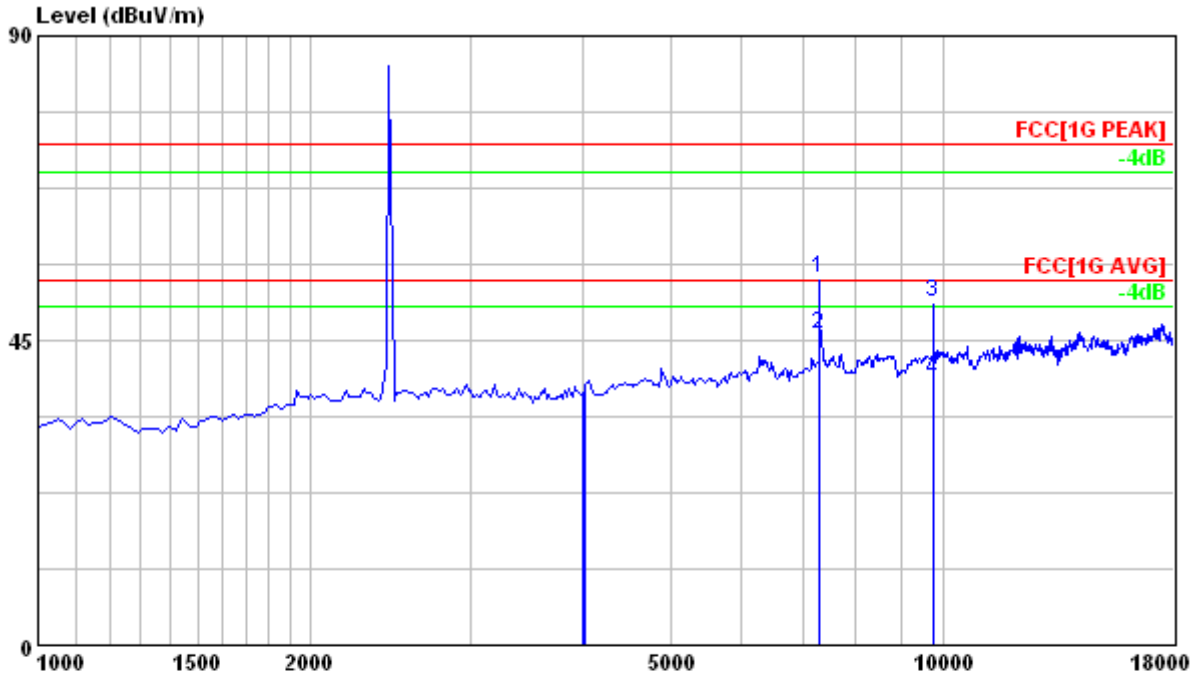
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2440MHz, Continuous Transmitting**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Horizontal **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	7318.600	54.25	84.36	-30.11	74.00	-19.75	144	242	HORIZONTAL	Peak
2 @	7318.600	45.74	75.85	-30.11	54.00	-8.26	144	242	HORIZONTAL	Average
3	9762.138	50.72	75.71	-24.99	74.00	-23.28	235	44	HORIZONTAL	Peak
4	9762.138	39.01	64.00	-24.99	54.00	-14.99	235	44	HORIZONTAL	Average

Note:

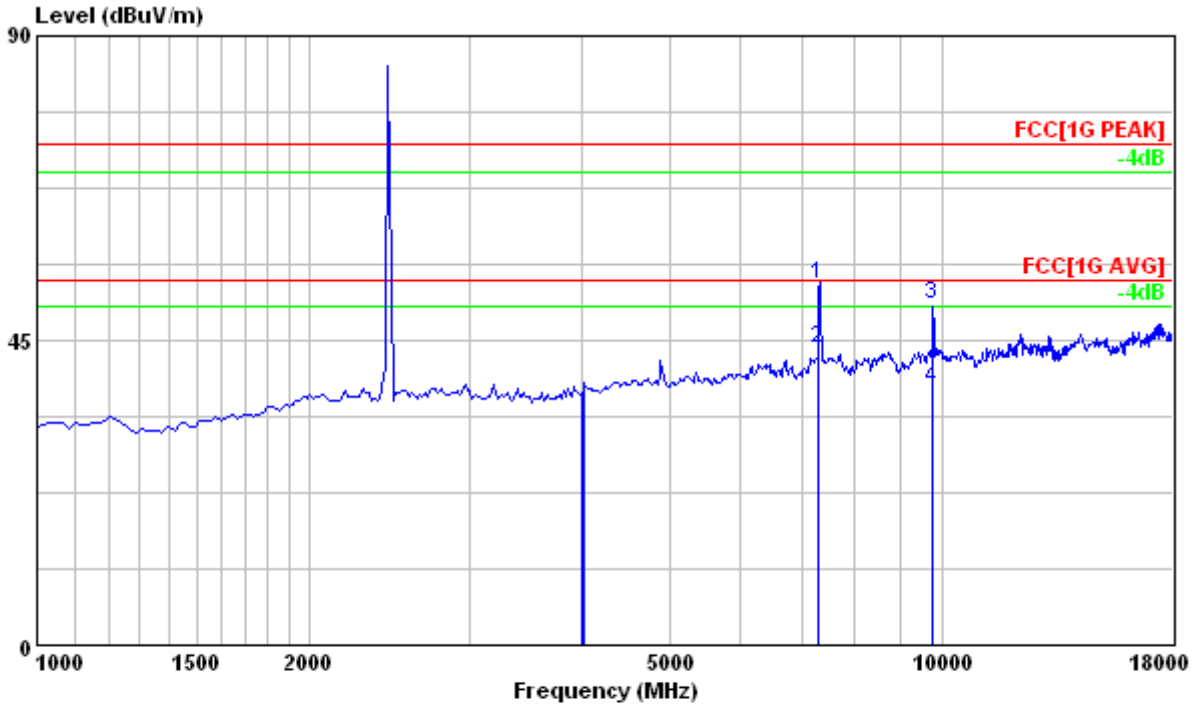
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2440MHz, Continuous Transmitting**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Vertical **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	7318.550	53.29	83.40	-30.11	74.00	-20.71	173	143	VERTICAL	Peak
2	7318.550	43.69	73.80	-30.11	54.00	-10.31	173	143	VERTICAL	Average
3	9761.950	50.21	75.20	-24.99	74.00	-23.79	170	30	VERTICAL	Peak
4	9761.950	37.97	62.96	-24.99	54.00	-16.03	170	30	VERTICAL	Average

Note:

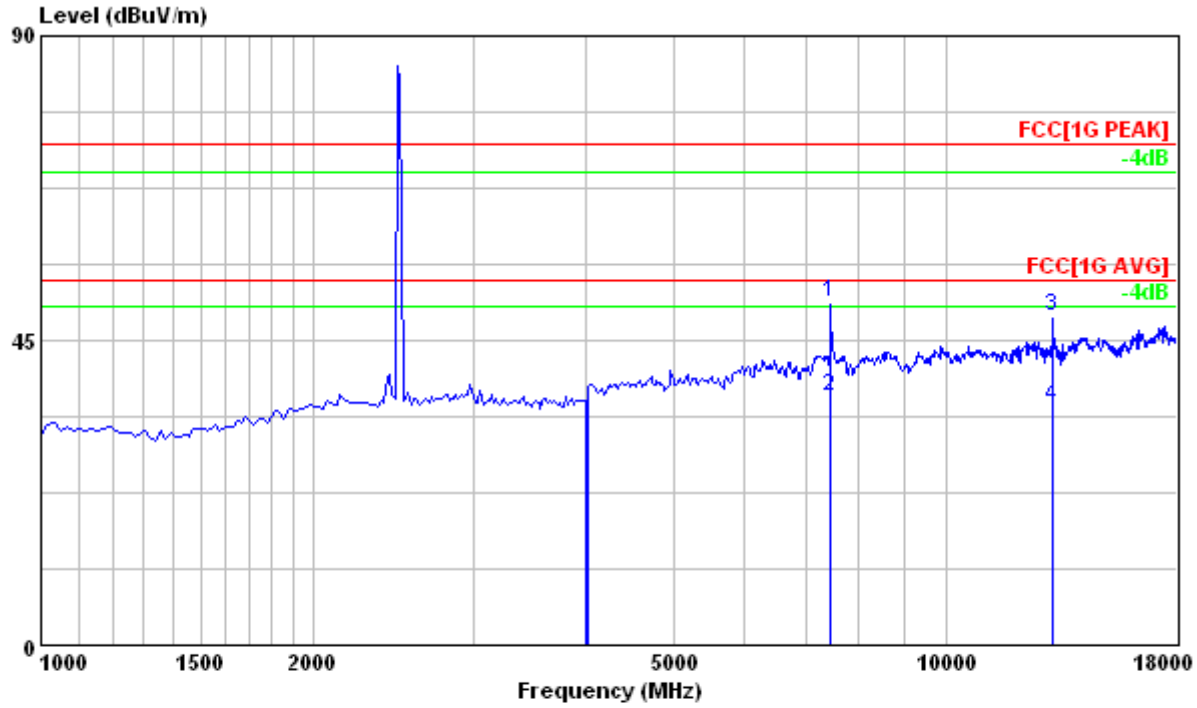
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2480MHz, Continuous Transmitting**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Horizontal **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	7441.600	50.62	80.40	-29.78	74.00	-23.38	195	83	HORIZONTAL	Peak
2	7441.600	36.72	66.50	-29.78	54.00	-17.28	195	83	HORIZONTAL	Average
3	13114.000	48.52	66.48	-17.96	74.00	-25.48	121	359	HORIZONTAL	Peak
4	13114.000	35.24	53.20	-17.96	54.00	-18.76	121	359	HORIZONTAL	Average

Note:

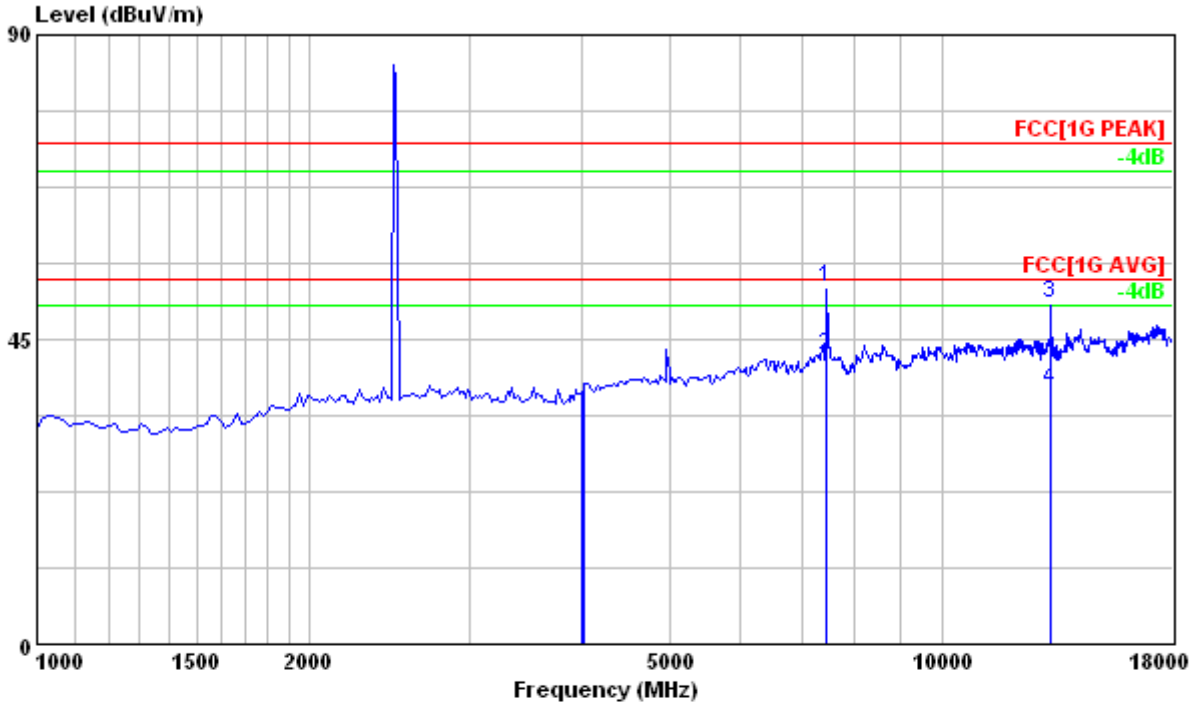
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2480MHz, Continuous Transmitting**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Vertical **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	7441.475	52.60	82.38	-29.78	74.00	-21.40	166	221	VERTICAL	Peak
2	7441.475	42.72	72.50	-29.78	54.00	-11.28	166	221	VERTICAL	Average
3	13208.100	50.36	68.46	-18.10	74.00	-23.64	194	67	VERTICAL	Peak
4	13208.100	37.49	55.59	-18.10	54.00	-16.51	194	67	VERTICAL	Average

Note:

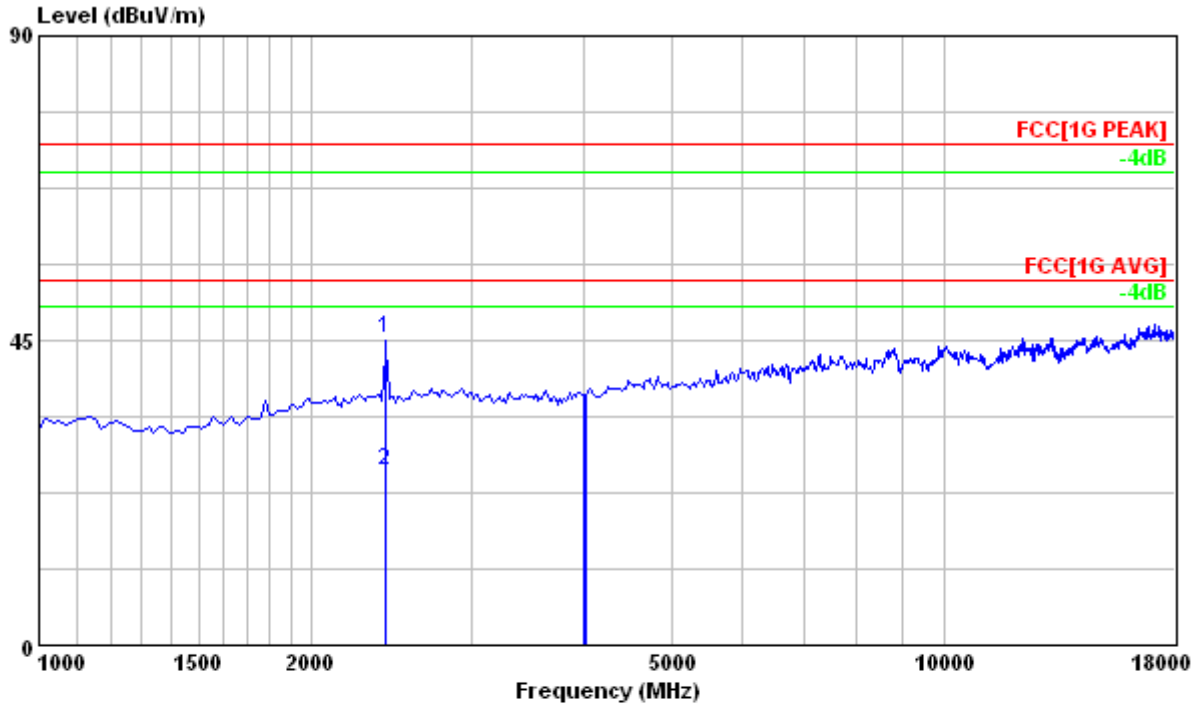
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2405MHz, Continuous Receiving**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Horizontal **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2413.150	45.32	84.63	-39.31	74.00	-28.68	159	110	HORIZONTAL	Peak
2	2413.150	25.65	64.96	-39.31	54.00	-28.35	159	110	HORIZONTAL	Average

Note:

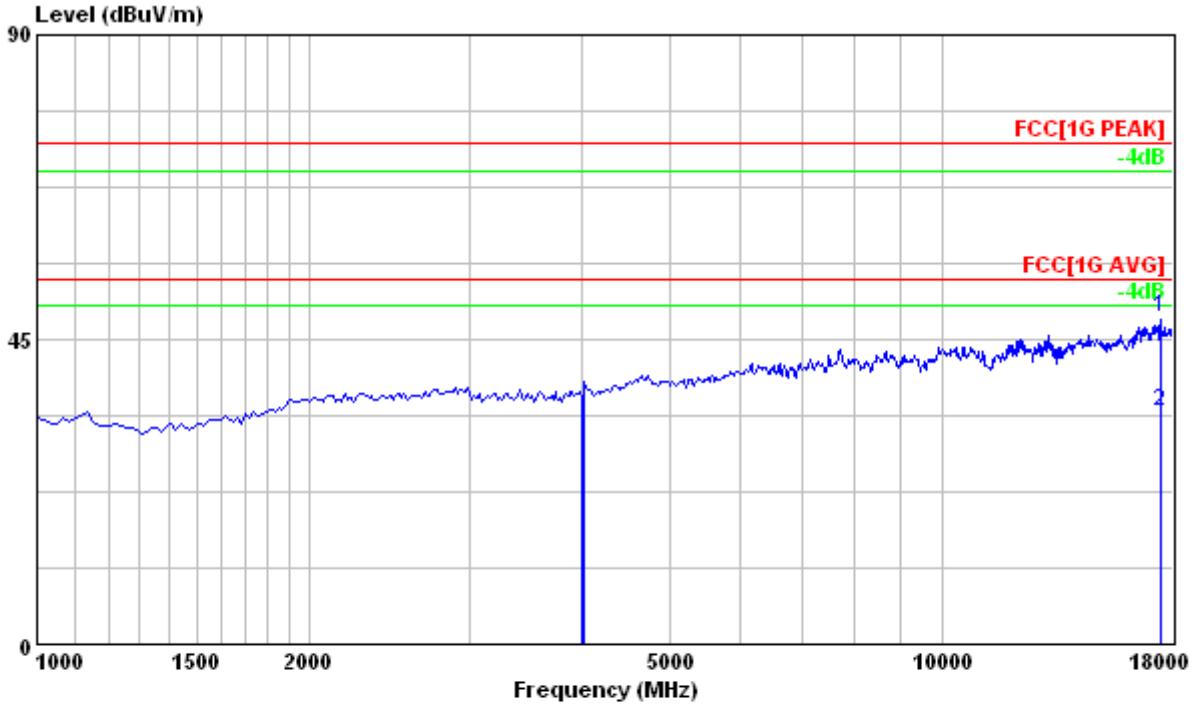
1. Emission Level (dBuV/m) = Reading Value + Correction Factor.
2. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2405MHz, Continuous Receiving**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Vertical **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	17425.800	48.38	61.61	-13.23	74.00	-25.62	121	242	VERTICAL	Peak
2	17425.800	34.26	47.49	-13.23	54.00	-19.74	121	242	VERTICAL	Average

Note:

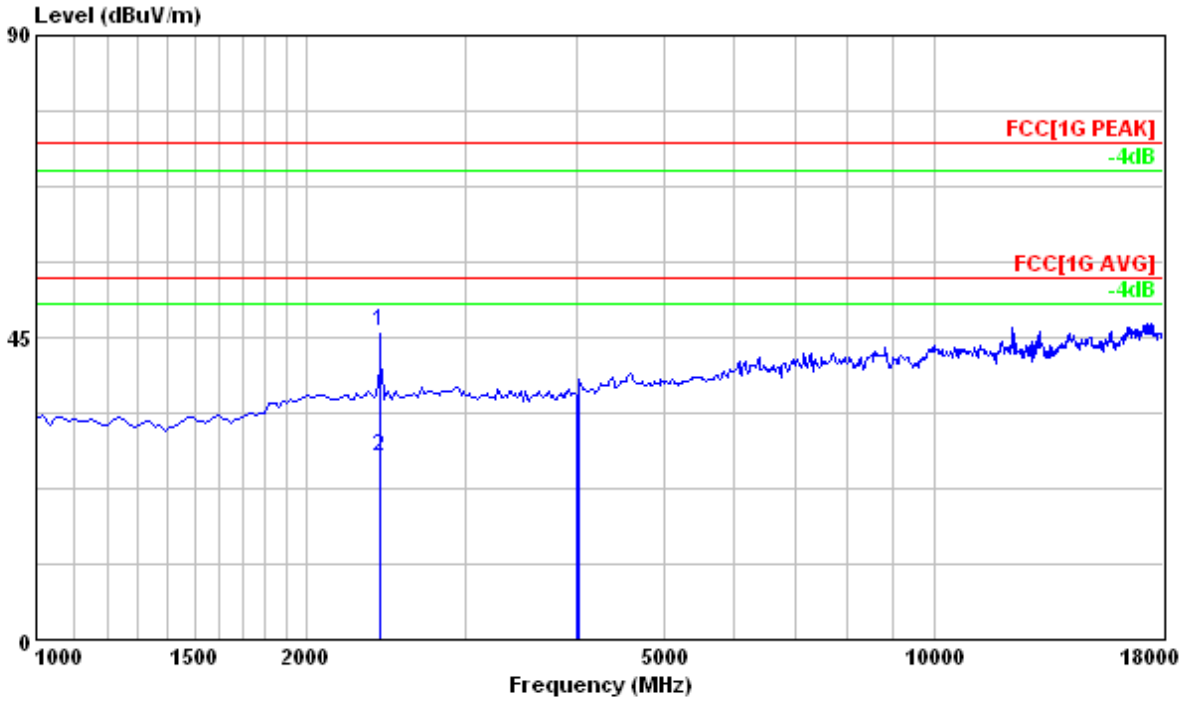
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2440MHz, Continuous Receiving**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Horizontal **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2416.825	45.78	85.09	-39.31	74.00	-28.22	191	120	HORIZONTAL	Peak
2	2416.825	27.17	66.48	-39.31	54.00	-26.83	191	120	HORIZONTAL	Average

Note:

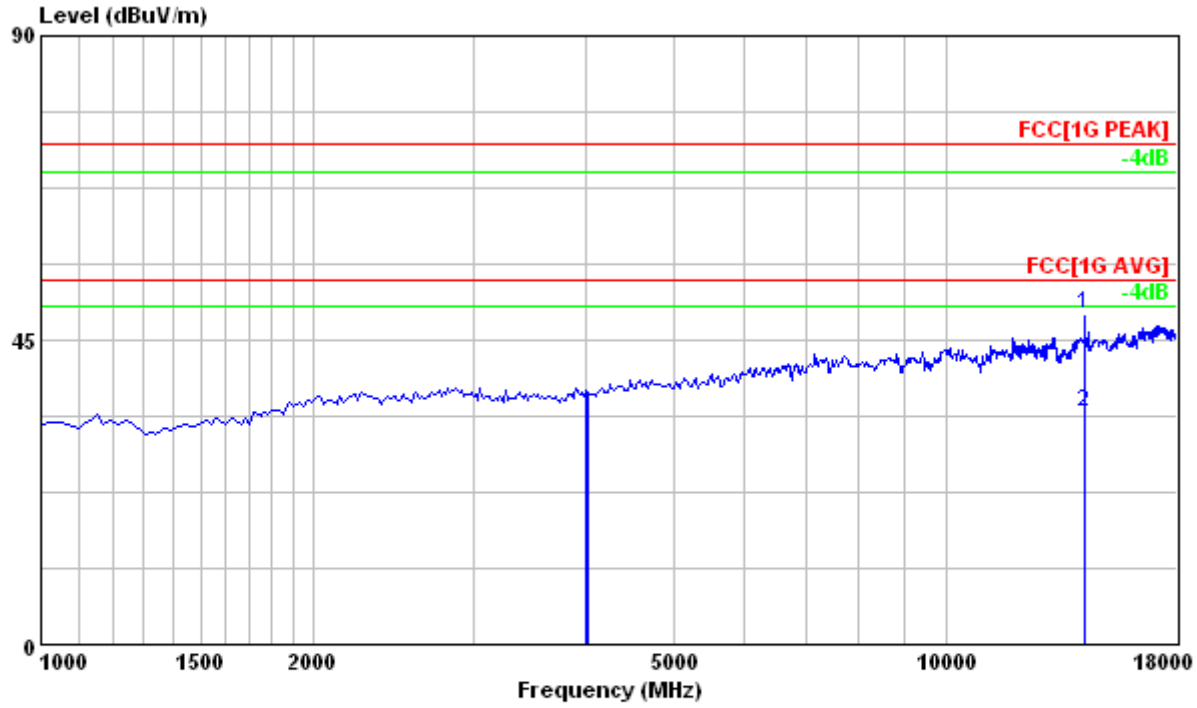
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2440MHz, Continuous Receiving**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Vertical **Frequency Range :**1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	14233.500	48.73	66.42	-17.69	74.00	-25.27	158	66	VERTICAL	Peak
2	14233.500	34.43	52.12	-17.69	54.00	-19.57	158	66	VERTICAL	Average

Note:

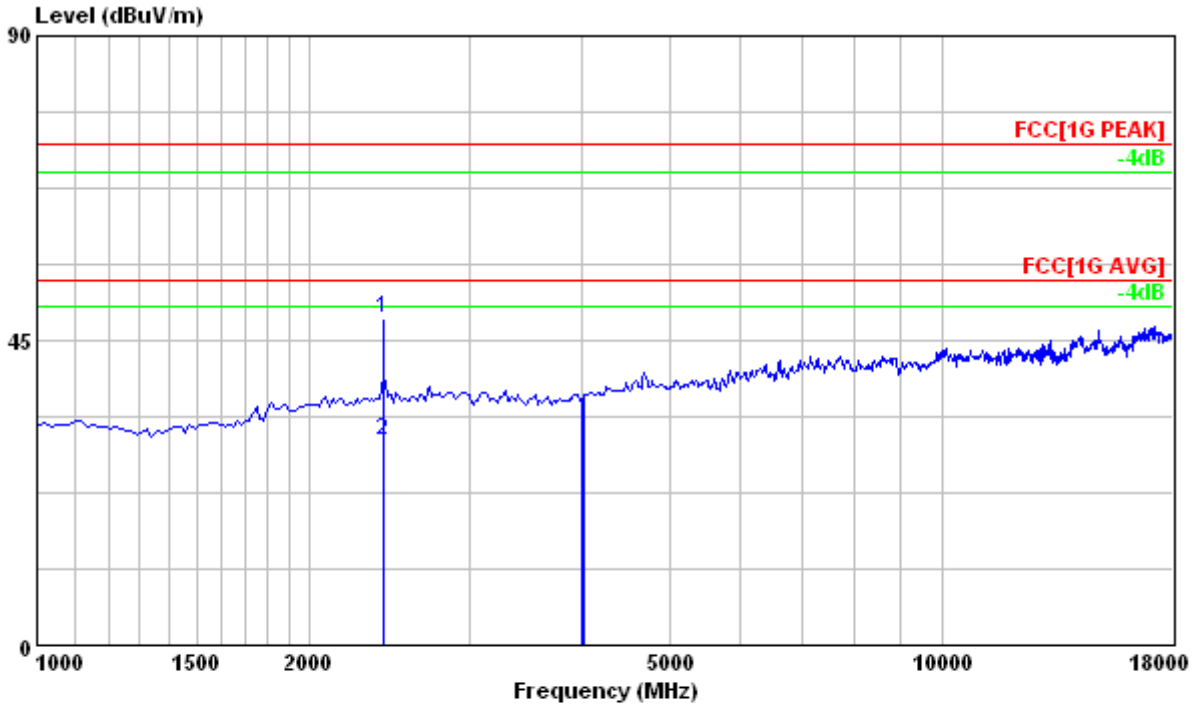
1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model **: 2480MHz, Continuous Receiving**

Test Distance **:** 3m **Tester** **:** Liu

Antenna Polarization **:** Horizontal **Frequency Range :**1GHz~25GHz



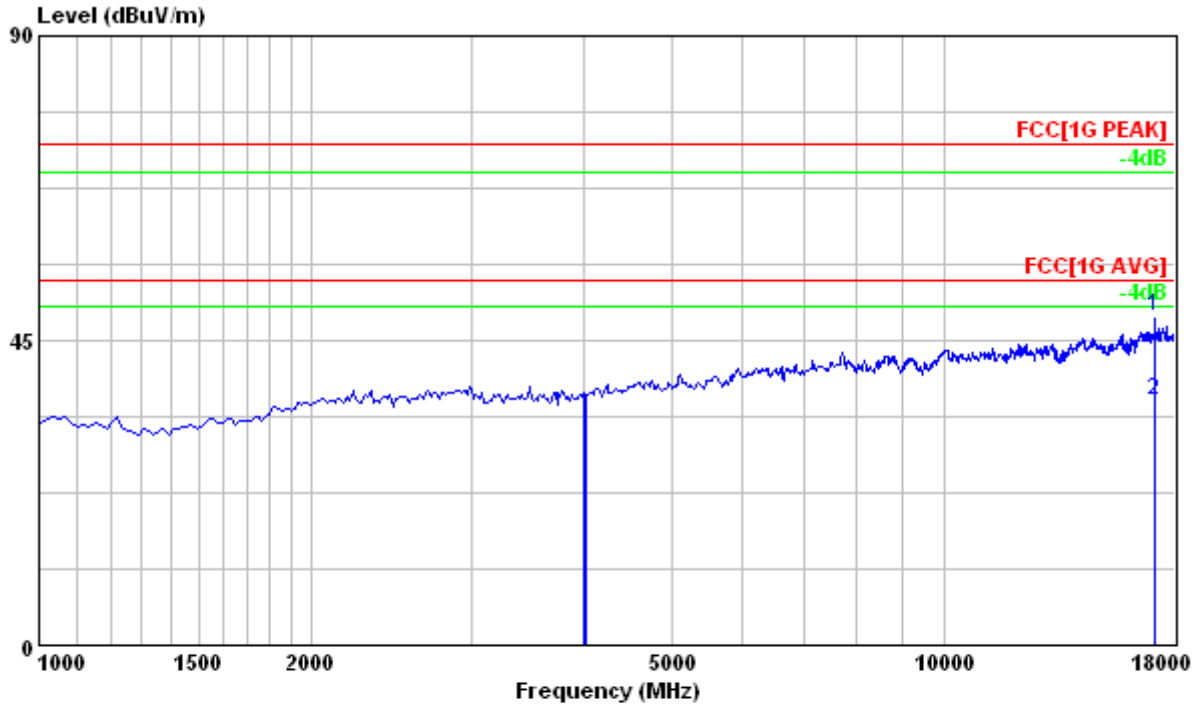
	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2410.825	48.27	87.58	-39.31	74.00	-25.73	105	209	HORIZONTAL	Peak
2	2410.825	30.18	69.49	-39.31	54.00	-23.82	105	209	HORIZONTAL	Average

Note:

1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

Test Model	**: 2480MHz, Continuous Receiving**		
Test Distance	**:** 3m	**Tester**	**:** Liu
Antenna Polarization	**:** Vertical	**Frequency Range :**	1GHz~25GHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	17076.000	48.41	61.12	-12.71	74.00	-25.59	120	255	VERTICAL	Peak
2	17076.000	36.19	48.90	-12.71	54.00	-17.81	120	255	VERTICAL	Average

Note:

1. Level (dBuV/m) = Read level + Factor.
2. Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier.
3. Over Limit (dB) = Level – Limit line
4. PK. and AV. are abbreviation of peak and average respectively.

No signal can be detected from 18GHz to 25GHz, so the graphs are omitted above 18GHz.

7 Antenna Requirement

7.1 Applied standard

According to 15.247(4), The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi

7.2 Antenna Information

This antenna's relative information as follow:

Brand	Model	Frequency Range (MHz)	Gain (dBi)	Comment
DiZiC	N/A	2400-2483.5	1.95	Printed antenna

7.3 Result

Gain of the antenna is less than 6dBi.