FCC COMPLIANCE TEST REPORT

Technical Statement of Conformity

in accordance with 47 CFR Part 15 Subpart C

The product

Equipment Under Test	: EXPANT
Model Number	: EXPANT
Product Series	: N/A
Report Number	: HA140504-FID
Issue Date	: 29-Aug-2014
Test Result	: Compliance

is produced by

BOW Technology Co., Ltd.

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BSMI Registration No.: SL2-IN-E-0023, SL2-A1-E-0023, SL2-IS-E-0023, SL2-R1-E-0023, SL2-R2-E-0023, SL2-L1-E-0023

FCC Designation No.: TW1071
TAF Accreditation No.: 1163
VCCI Registration No.: R-2156, C-2329, T-219

Contents

Test Result Certification

Applicant	: BOW Technology Co., Ltd.
Address of Applicant	: No. 10-12, Ln. 468, Wufu Rd., Wufeng Dist., Taichung City, Taiwan, R.O.C.
Manufacturer	: GEWISE INDUSTRIAL INC.
Address of Manufacturer	: No. 7, Road 24, Taichung Industrial Park, Taichung City, Taiwan, R.O.C.
Trade Name	: N/A
Equipment Under Test	: EXPANT
Model Number	: EXPANT
Product Series	: N/A
FCC ID	: 2ACVZ-BOW-EXPANT
Filing Type	: Certification
Sample Received Date	: 21-JUL-2014
Test Standard	:

☒ FCC Part 15 Subpart C §15.249

Deviations from standard test methods & any other specifications : NONE

Remark:

1. This report details the results of the test carried out on one sample.
2. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.203, 15.207, 15.209, 15.249.
3. This report applies to the above sample only and shall not be reproduced in part without written approval of HongAn Technology Co., Ltd..

Documented by: Kay Wang

Kay Wang/ ADM. Dept Staff 2014-08-29

Tested by: Eason Hsieh

Eason Hsieh/ ENG. Dept. Staff 2014-08-18

Approved by: Peter Chin **Date:** 2014-08-29

Peter Chin / Section Manager

Summary of Test Result

	Test Item	Applicable Standard	Test Result
1	Antenna Requirement	FCC part 15 subpart C §203	Compliance
2	Conducted limits	FCC part 15 subpart C §207	Compliance
3	Radiated emission limits	FCC part 15 subpart C §209	Compliance
4	Field Strength	FCC part 15 subpart C §249(a)	Compliance
5	Band-edge measurement	FCC part 15 subpart C §249(d)	Compliance
6	20dB Bandwidth	FCC part 15 subpart C §215	Compliance

1 General Description

1.1 Description of EUT

Equipment Under Test	**:**	EXPANT
Model Number of EUT	**:**	EXPANT
Product Series	**:**	N/A
Power Supply	**:**	DC 5 V
Frequency Range	**:**	2415~2472 MHz
Number of Channels	**:**	20 Channels
Carrier Frequency of Each Channel	**:**	2415 MHz, 2418 MHz, 2421 MHz, 2424 MHz, 2427 MHz, 2430 MHz, 2433 MHz, 2436 MHz, 2439 MHz, 2442 MHz, 2445 MHz, 2448 MHz, 2451 MHz, 2454 MHz, 2457 MHz, 2460 MHz, 2463 MHz, 2466 MHz, 2469 MHz, 2472 MHz
Antenna Specification	**:**	Printed Antenna/ Gain: 1.16 dBi
Modulation Technique	**:**	GFSK
Specification	**:**	**Dimensions :** 30 mm (L) X25 mm (W) X 5 mm (H) **Weight :** 10 g **Function**：The EUT is a 2.4GHz wireless module. **※For more detail specification, please refer to the User Manual.**

1.2 Test Instruments

1.2.1. Instruments Used for Measurement

HA1

Instrument Name	Manufacture Mode	Model Number	Serial Number	Last Cal. Date	Next Cal. Date
RF Amplifier	AR	15S1G3	306578	11-AUG-2014	11-AUG-2015
EMI Receiver	R&S	ESCI	100615	03-MAR-2014	03-MAR-2015
Spectrum Analyzer	R&S	FSL6	100323	11-JUN-2014	11-JUN-2015
Spectrum Analyzer	Advantest	R3172	101202158	24-JUN-2014	24-JUN-2015
Preamplifier	WIRELESS	FPA-6592G	060009	09-JUL-2014	09-JUL-2015
Preamplifier	HD	HD17187	004	04-AUG-2014	04-AUG-2015
Bilog Antenna	TESEQ	CBL6111D	25769	03-MAR-2014	03-MAR-2015
Bilog Antenna	Schaffner	CBL6112B	2860	12-AUG-2014	12-AUG-2015
Double-Ridged Waveguide Horn	EMCO	3115	9912-5992	04-MAY-2014	04-MAY-2015
Temp. & Humidity Chamber	Giant Force	GTH-150-20-SP-AR	MMA0907-012	22-JUL-2014	22-JUL-2015
Horn Antenna (18-40GHz)	Com-Power	AH-840	101042	03-Jul-2014	03-Jul-2015
Microwave Preamplifier	Com-Power	PAM-840	461269	02-Jul-2014	02-Jul-2015
L.I.S.N.	Mess Tec	NNB-2/16Z	03/1006	24-Jan-2014	24-Jan-2015
L.I.S.N.	EMCIS	LN2-16	LN04023	01-Aug-2014	01-Aug-2015

※ The test equipments used are calibrated and can be traced to National ITRI and International Standards.

1.3 Auxiliary Equipments

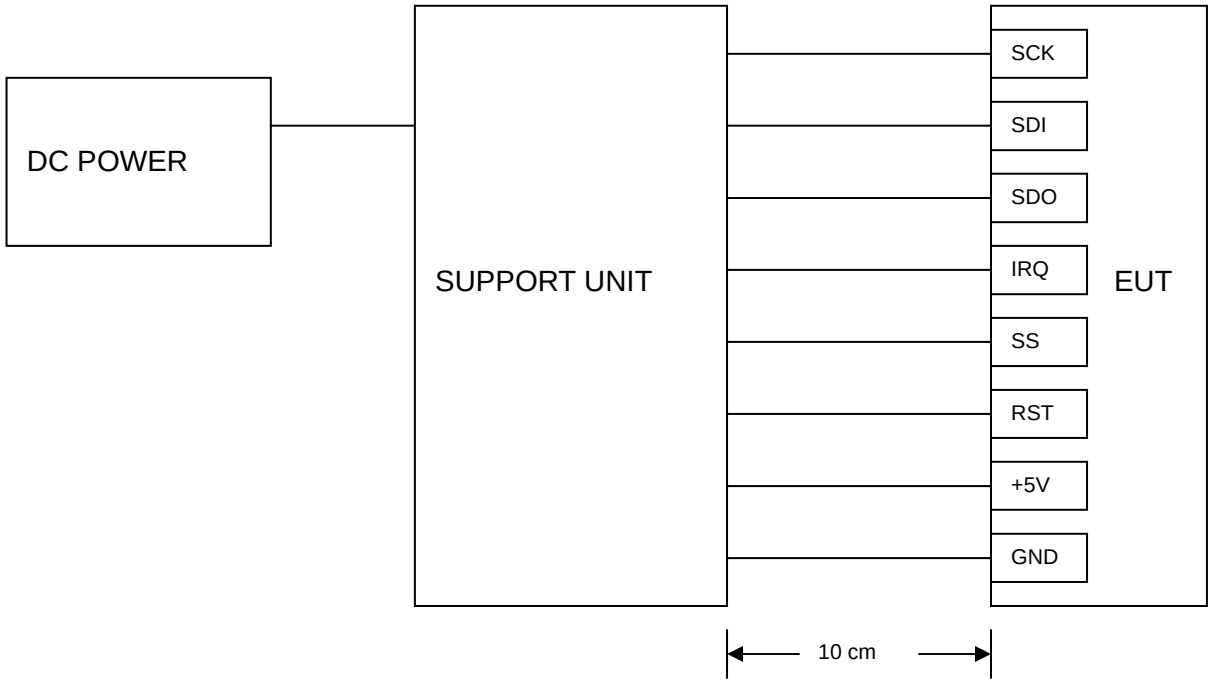
1.3.1. Provided by HongAn Technology Co., Ltd. for Emission Test.

No.	Equipment	Model No.	Serial No.	EMC Approved	Brand	Power Cord
01	DC Power Supply No.1	DPS-5050	L6000002860	BSMI FCC VOC	LOKO POWER	Non-shielded, Un-detachable, 2m

1.3.2. Provided by the Manufacturer

N/A

1.4 EUT SETUP



Note: Main Test Sample: EXPANT

1.5 Identifying the Final Test Mode

1. TX mode 1: set at CH01 (2415MHz), and transmitting. EUT in Vertical Position.
2. TX mode 2: set at CH11 (2445MHz), and transmitting. EUT in Vertical Position.
3. TX mode 3: set at CH20 (2472MHz), and transmitting. EUT in Vertical Position.

Note:

1. During radiated emission pre-test, rotation of the EUT through three orthogonal axes has been evaluated.
2. After pre-test, we identified that the TX Vertical Position was most likely to cause maximum disturbance and most likely to be susceptible to disturbance. Therefore, the Final Assessment was performed for the worst case. All pre-test data show at appendix.
3. The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

4. Channel Low (2415MHz), Mid (2445MHz) and High (2472MHz) with highest data rate were chosen for full testing.
5. According to its specifications, the EUT must comply with the requirements of the Section 15.203, 15.207, 15.209 and 15.249 under the FCC Rules Part 15 Subpart C.

1.6 Final Test Mode (Worst Case)

Conducted Emission: Mode 1.
Field Strength: Mode 1.
Radiated Emission (30~1000 MHz): Mode 2.
Radiated Emission (1~26.5GHz): Mode 2.

1.7 Condition of Power Supply

DC 5 V

1.8 EUT Configuration

1. Setup the EUT as shown in Sec.1.4 Block Diagram.
2. Turn on the power of all equipments.
3. Activate the selected Final Test Mode.

1.9 Test Methodology

The tests documented in this report were performed in accordance with ANSI C63.4 (2009) and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, 15.203, 15.207, 15.209 and 15.249.

1.10 General Test Procedures

Conducted Emissions

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

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C 63.4 (2009).

1.11 Modification

N/A

1.12 FCC Part 15.205 restricted bands of operations

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

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37635-8.38675	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

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

1.13 Qualification of Test Facility

BSMI Certificate No. : SL2-IS-E-0023, SL2-IN-E-0023, SL2-R1-E-0023, SL2-R2-E-0023, SL2-A1-E-0023, SL2-L1-E-0023.

FCC Designation No. : TW1071

TAF Accreditation No. : 1163

VCCI Certificate No. : R-2156, C-2329, T-219

2 Power line Conducted Emission Measurement

2.1 Test Instruments

Refer to Sec. 1.2 Test Instruments.

2.2 Test Arrangement and Procedure

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

2.3 Limit (§ 15.207)

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency (MHz)	Limits (dBuV)	
	Q.P. (Quasi-Peak)	A.V. (Average)
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

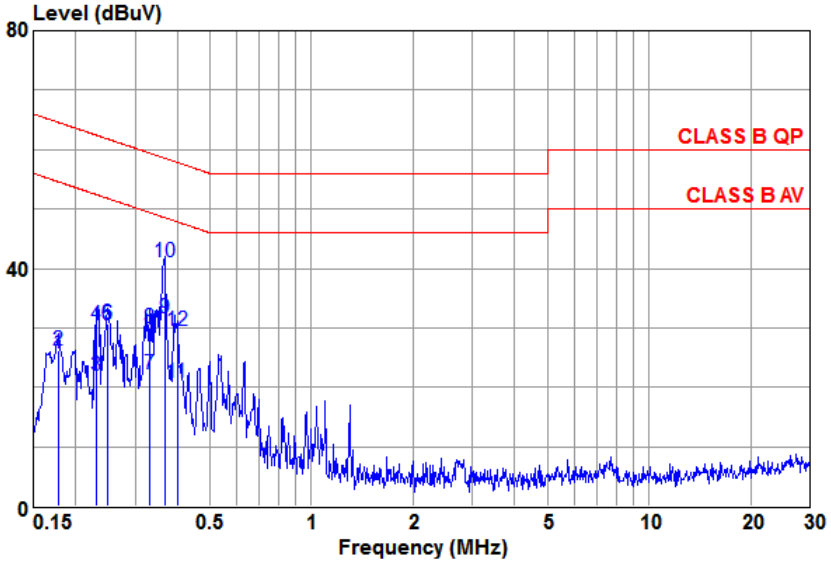
2.4 Test Result

Compliance

The final test data are shown on the following page(s).

Power Line Conducted Emission Test Data

Test Date	:	18-Aug-2014	Power Line	:	LINE
Temperature	:	28℃	Humidity	:	41%



		Freq	Reading	C.F	Result	Limit	Margin	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	
1		0.178	25.64	0.13	25.77	54.59	-28.82	Average
2		0.178	26.06	0.13	26.19	64.59	-38.40	QP
3		0.230	21.84	0.10	21.94	52.44	-30.50	Average
4		0.230	30.29	0.10	30.39	62.44	-32.05	QP
5		0.248	30.27	0.10	30.37	51.82	-21.45	Average
6		0.248	30.68	0.10	30.78	61.82	-31.04	QP
7		0.330	22.01	0.09	22.10	49.44	-27.34	Average
8		0.330	29.95	0.09	30.04	59.44	-29.40	QP
9	*	0.367	31.50	0.09	31.59	48.56	-16.97	Average
10	@	0.367	40.96	0.09	41.05	58.56	-17.51	QP
11		0.400	20.74	0.09	20.83	47.86	-27.03	Average
12		0.400	29.35	0.09	29.44	57.86	-28.42	QP

Result = Reading + C.F ; C.F = LISN Factor + Cable Loss

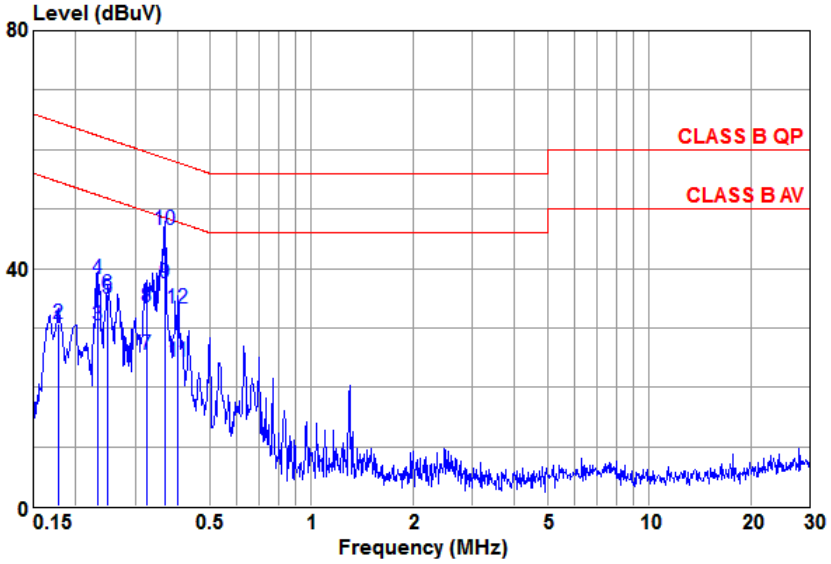
@ :Maximum QP * :Maximum AVG x :Over Limit

Remark：

1. Measuring frequencies from 0.15 MHz to 30 MHz.
2. The emissions measured in frequency range from 0.15 MHz to 30 MHz were made with an instrument using quasi-peak detector and average detector.
3. The IF bandwidth of SPA between 0.15 MHz to 30 MHz was 10kHz; the IF bandwidth of Test Receiver between 0.15 MHz to 30 MHz was 9kHz.

Power Line Conducted Emission Test Data

Test Date	:	18-Aug-2014	Power Line	:	Neutral
Temperature	:	28℃	Humidity	:	41%



		Freq	Reading	C.F	Result	Limit	Margin	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	
1		0.179	29.94	0.12	30.06	54.55	-24.49	Average
2		0.179	30.52	0.12	30.64	64.55	-33.91	QP
3		0.233	30.42	0.09	30.51	52.35	-21.84	Average
4		0.233	38.10	0.09	38.19	62.35	-24.16	QP
5		0.249	34.90	0.09	34.99	51.78	-16.79	Average
6		0.249	35.64	0.09	35.73	61.78	-26.05	QP
7		0.327	25.35	0.08	25.43	49.53	-24.10	Average
8		0.327	33.52	0.08	33.60	59.53	-25.93	QP
9	*	0.367	37.54	0.08	37.62	48.56	-10.94	Average
10	@	0.367	46.43	0.08	46.51	58.56	-12.05	QP
11		0.402	24.23	0.08	24.31	47.81	-23.50	Average
12		0.402	33.25	0.08	33.33	57.81	-24.48	QP

Result = Reading + C.F ; C.F = LISN Factor + Cable Loss

@ :Maximum QP * :Maximum AVG x :Over Limit

Remark：

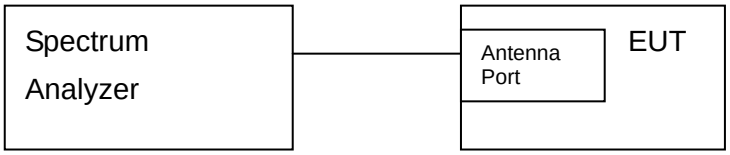
1. Measuring frequencies from 0.15 MHz to 30 MHz.
2. The emissions measured in frequency range from 0.15 MHz to 30 MHz were made with an instrument using quasi-peak detector and average detector.
3. The IF bandwidth of SPA between 0.15 MHz to 30 MHz was 10kHz; the IF bandwidth of Test Receiver between 0.15 MHz to 30 MHz was 9kHz.

3 20 dB Bandwidth of the Emission

3.1 Test Instruments

Refer to Sec. 1.2 Test Instruments.

3.2 Test Arrangement and Procedure

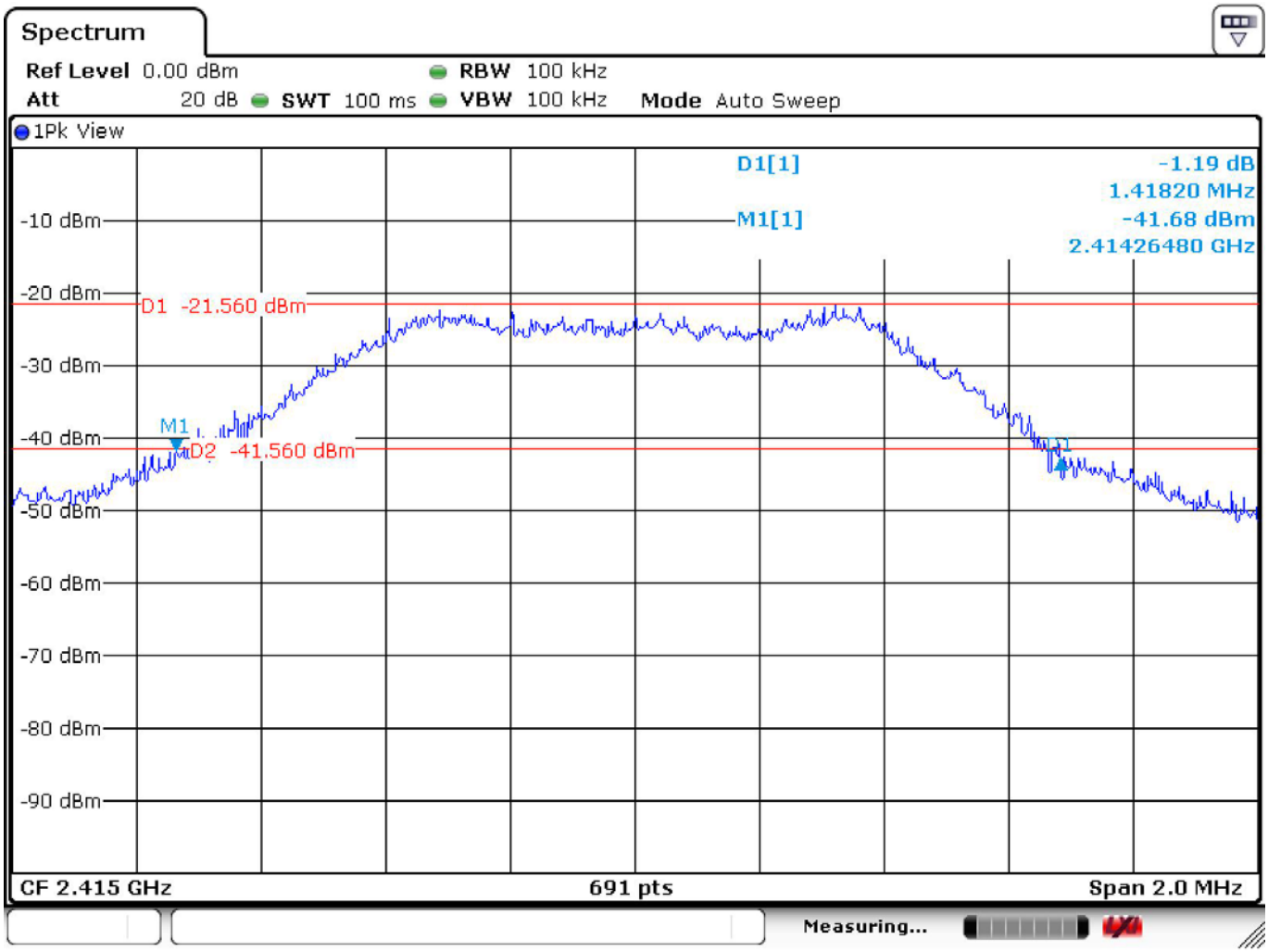


3.3 Test Result

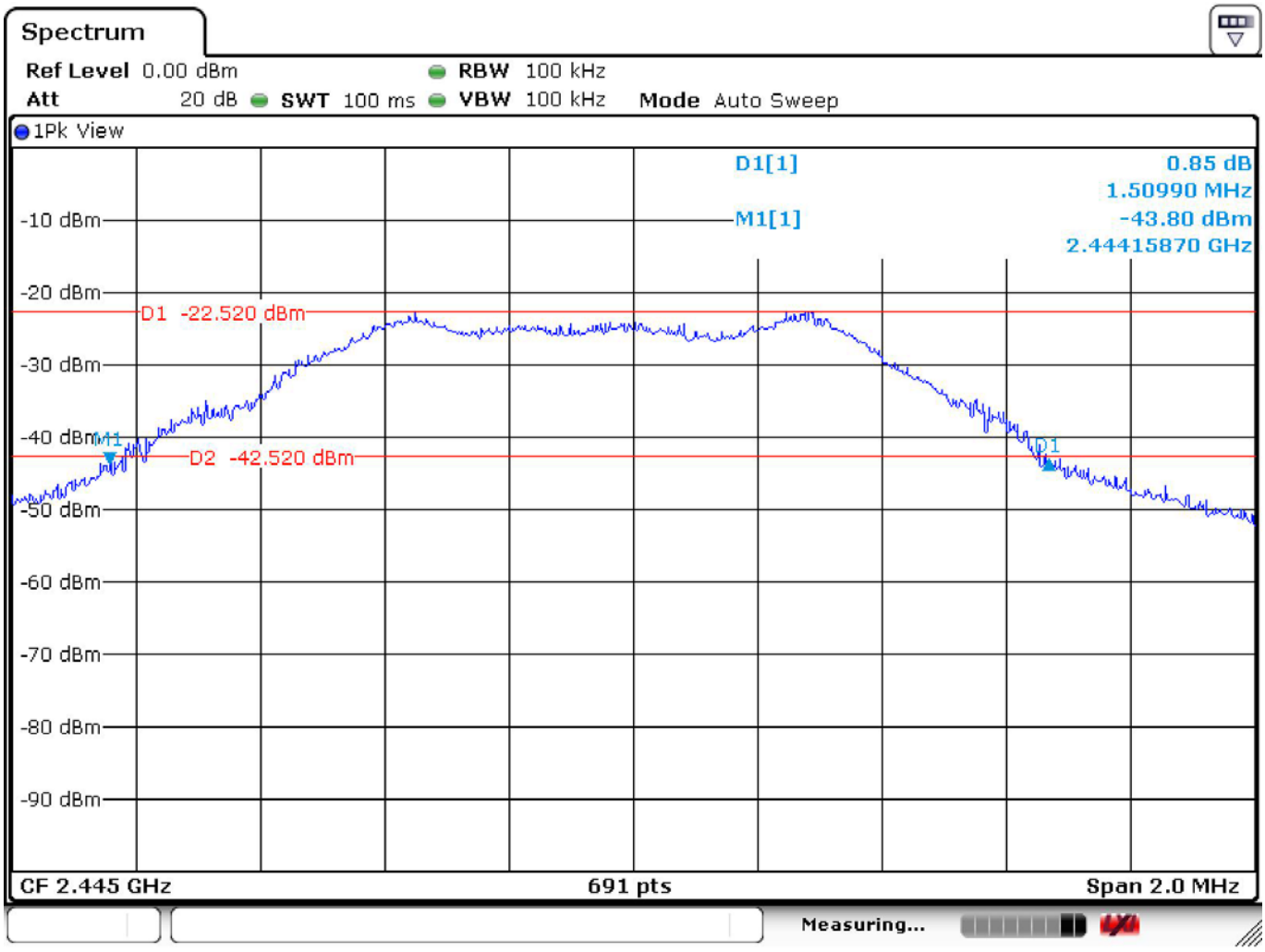
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
01	2415	1.4182
11	2445	1.5099
20	2472	1.4454
Note: Because the 20 dB Bandwidths are over 1MHz, the RBW setting of measuring Field strength of Fundamental should be at 3 MHz, and VBW should be at 10 MHz.		

The final test data are shown on the following page(s).

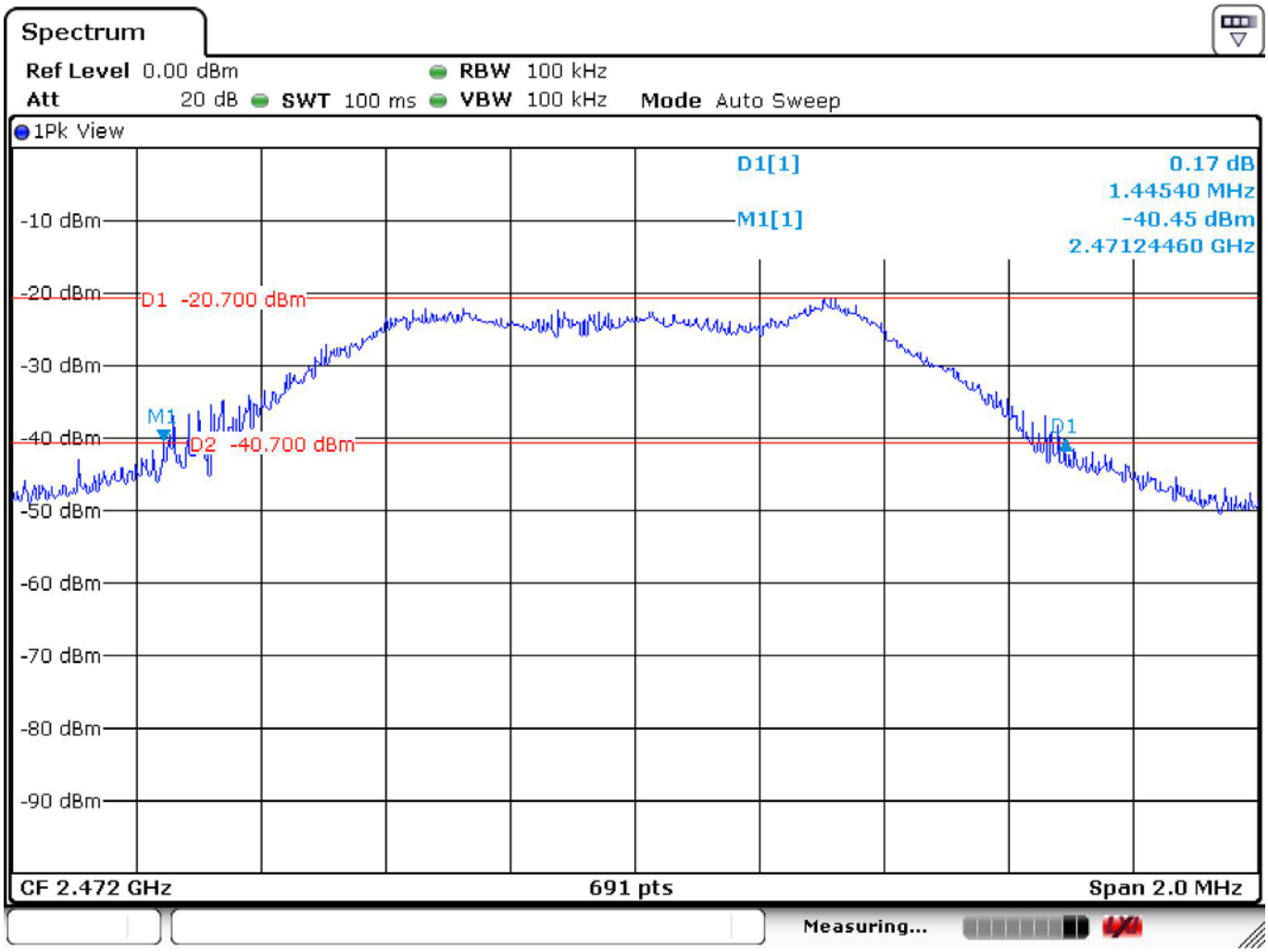
Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
			Channel	:	CH01 (2415MHz)



Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
			Channel	:	CH11 (2445MHz)



Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
			Channel	:	CH20 (2472MHz)



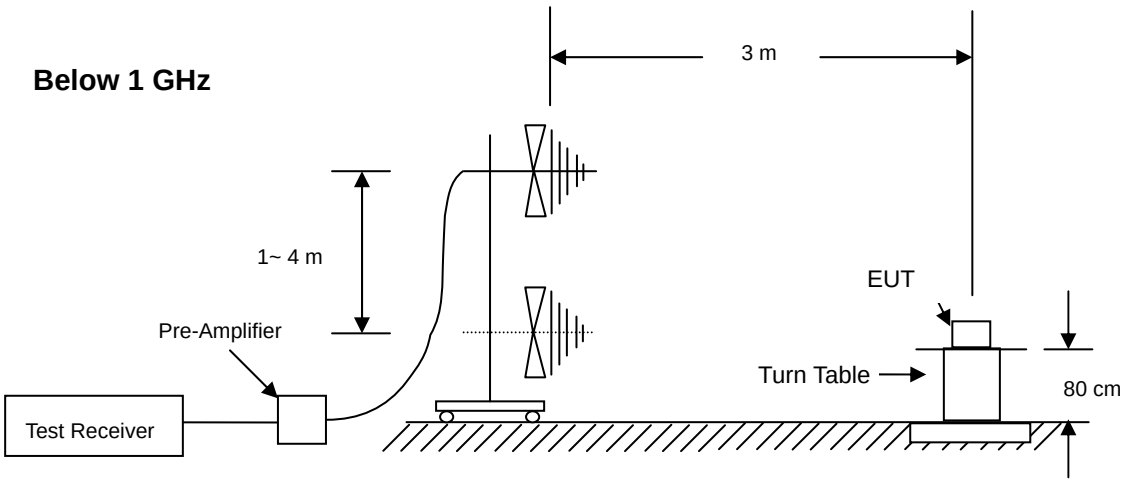
4 Radiated Emission Test

4.1 Test Instruments

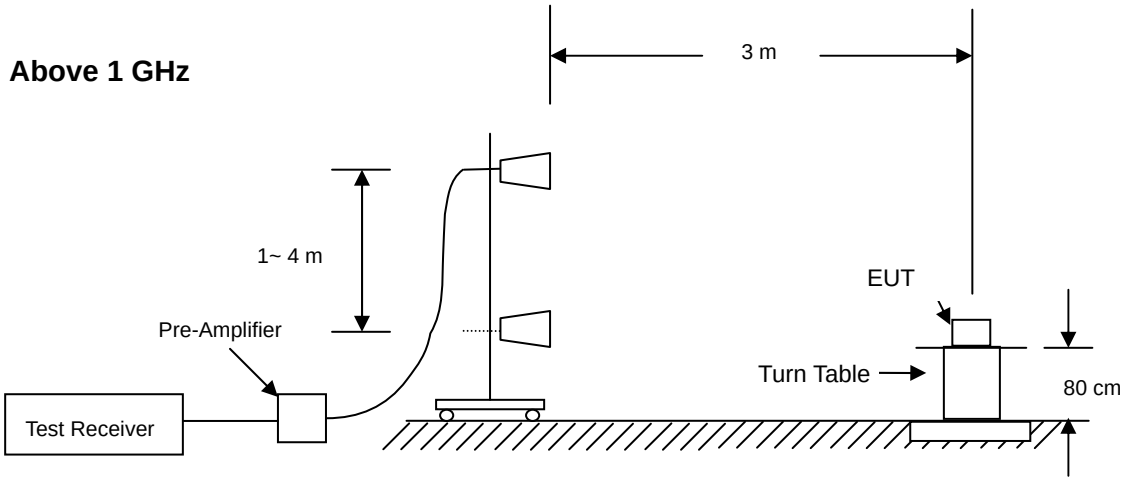
Refer to Sec. 1.2 Test Instruments.

4.2 Test Arrangement and Procedure

Below 1 GHz



Above 1 GHz



1. The EUT is placed on a turntable, which is 0.8 m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
4. Maxium procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:
   (a) Below 1 GHz: RBW =100 kHz/ VBW = 1 MHz/ Sweep = AUTO.
   (b) Above 1 GHz: Peak: RBW = 3MHz/ VBW = 10MHz/ Sweep = AUTO.

7. Repeat above procedures until the meausreemnts for all frequencies are complete.

4.3 Limit of Field Strength of Fundamental (§ 15.249)

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency (MHz)	Field strength of fundamental (microvolts/ meter)	Field strength of harmonics (meters)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

Note:

1. Field strength limits are specified at a distance of 3 meters.
2. For frequencies above 1000 MHz, the field strength limits in above table are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

4.4 Limit of Spurious Emission (§ 15.209)

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is lesser attenuation.

Frequency (MHz)	Field strength (microvolts/ meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g.§§ 15.231 and 15.241.

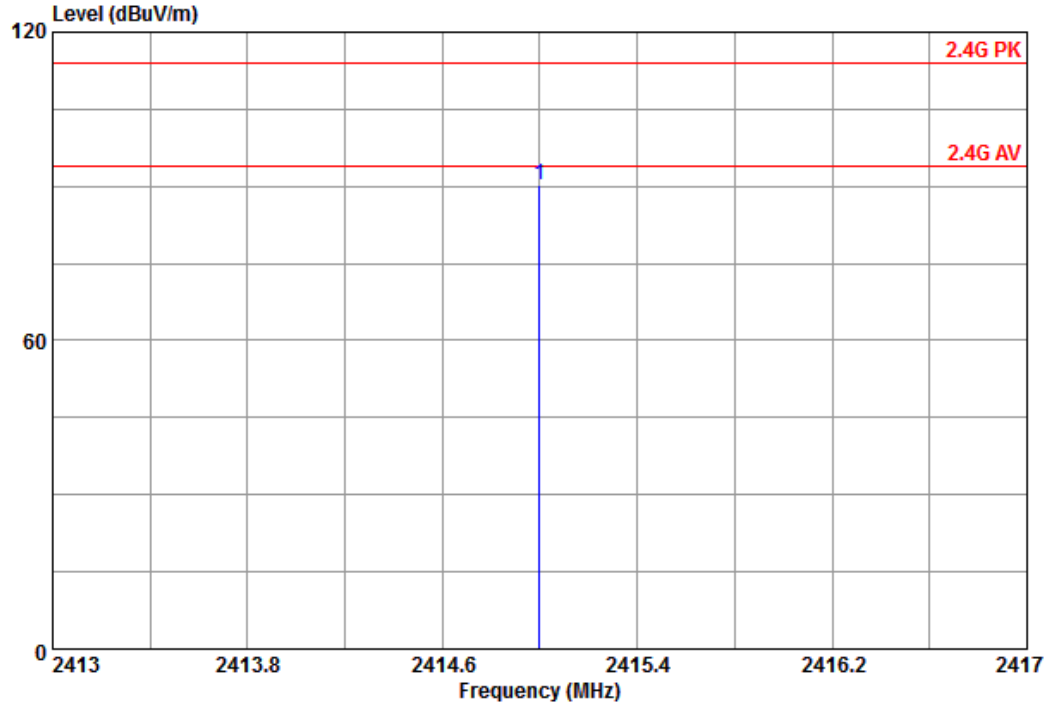
4.5 Test Result

Compliance

The final test data are shown on the following page(s).

Radiated Emission Test Data (Field Strength of Fundamental)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH01 (2415MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	@2415.000	97.75	-7.58	90.17	94.00	-3.83	---	---	Peak

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

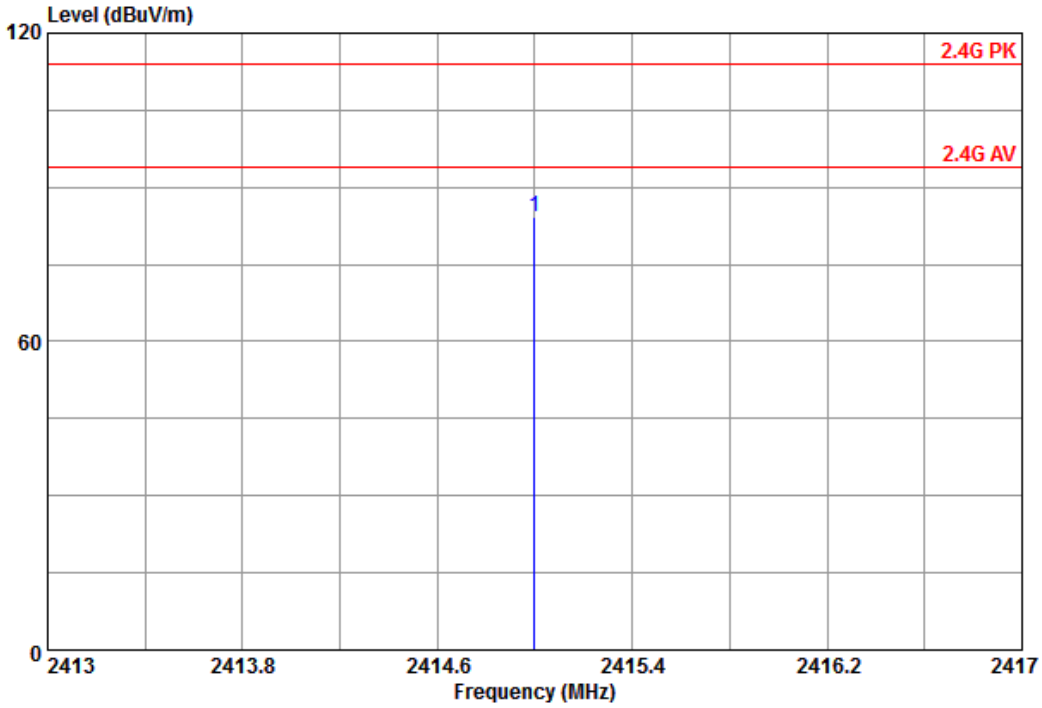
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   Peak Setting 1GHz to 10th harmonics of fundamental, RBW = 3MHz, VBW =10MHz, Sweep = AUTO.
   Note: Because the 20 dB Bandwidth is over 1MHz, the RBW setting of measuring Field strength of Fundamental should be 3MHz, and VBW should be at 10 MHz.

Radiated Emission Test Data (Field Strength of Fundamental)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH01 (2415MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	@2415.000	91.80	-7.58	84.22	94.00	-9.78	---	---	Peak

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

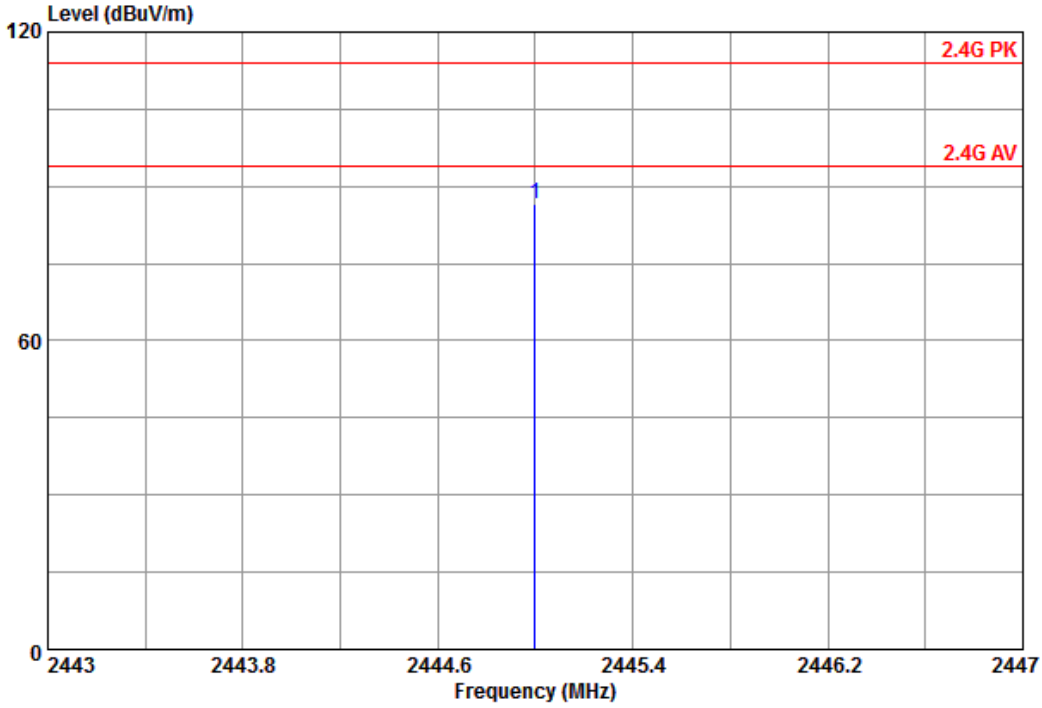
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   Peak Setting 1GHz to 10th harmonics of fundamental, RBW = 3MHz, VBW =10MHz, Sweep = AUTO.
   Note: Because the 20 dB Bandwidth is over 1MHz, the RBW setting of measuring Field strength of Fundamental should be 3MHz, and VBW should be at 10 MHz.

Radiated Emission Test Data (Field Strength of Fundamental)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH11 (2445MHz)
EUT Position	:	Vertical (Keeping TX)			



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 @2445.000	93.92	-7.49	86.43	94.00	-7.57	---	---	Peak

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

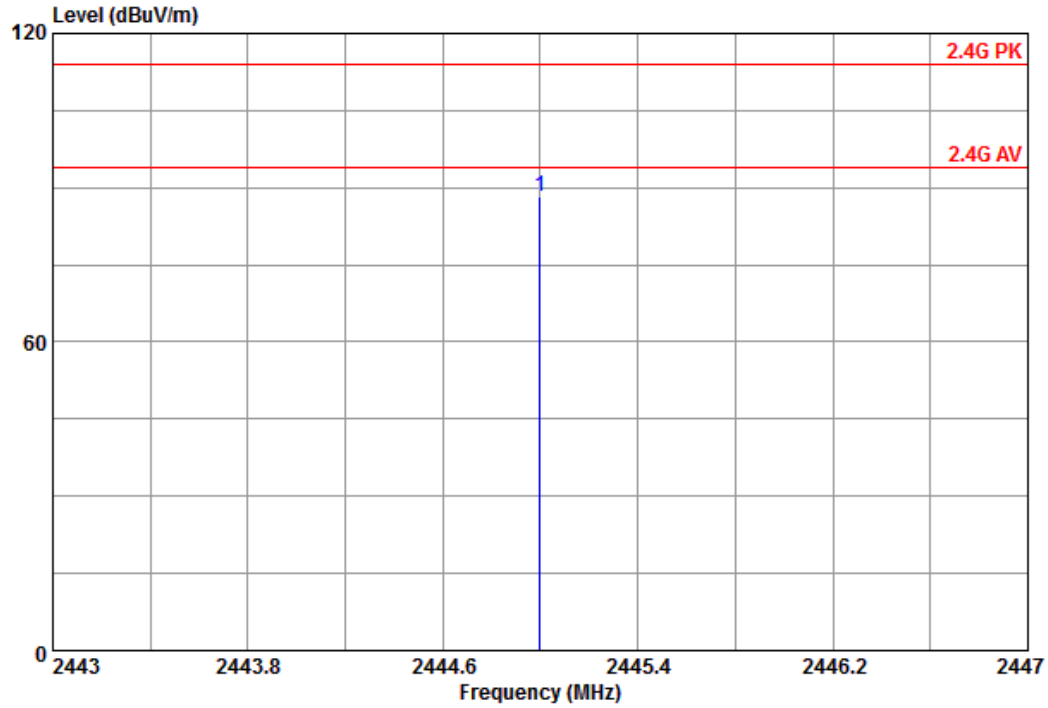
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   Peak Setting 1GHz to 10th harmonics of fundamental, RBW = 3MHz, VBW =10MHz, Sweep = AUTO.
   Note: Because the 20 dB Bandwidth is over 1MHz, the RBW setting of measuring Field strength of Fundamental should be 3MHz, and VBW should be at 10 MHz.

Radiated Emission Test Data (Field Strength of Fundamental)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH11 (2445MHz)
EUT Position	:	Vertical (Keeping TX)			



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 @2445.000	95.86	-7.49	88.37	94.00	-5.63	---	---	Peak

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

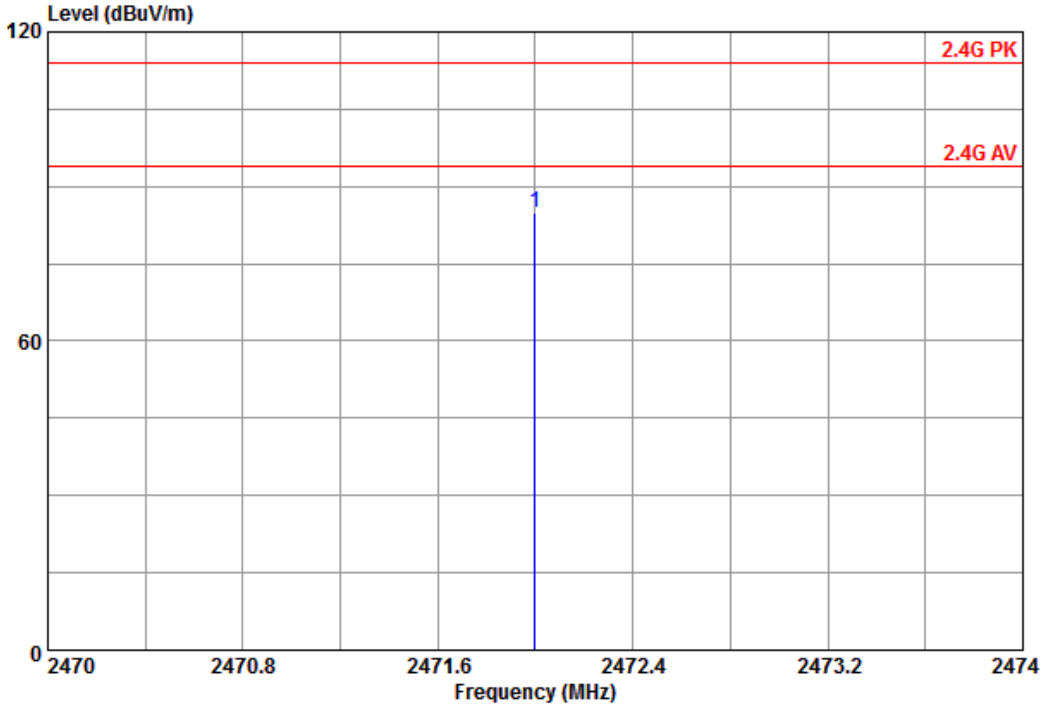
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   Peak Setting 1GHz to 10th harmonics of fundamental, RBW = 3MHz, VBW =10MHz, Sweep = AUTO.
   Note: Because the 20 dB Bandwidth is over 1MHz, the RBW setting of measuring Field strength of Fundamental should be 3MHz, and VBW should be at 10 MHz.

Radiated Emission Test Data (Field Strength of Fundamental)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH20 (2472MHz)
EUT Position	:	Vertical (Keeping TX)			



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 @2472.000	92.28	-7.39	84.89	94.00	-9.11	---	---	Peak

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

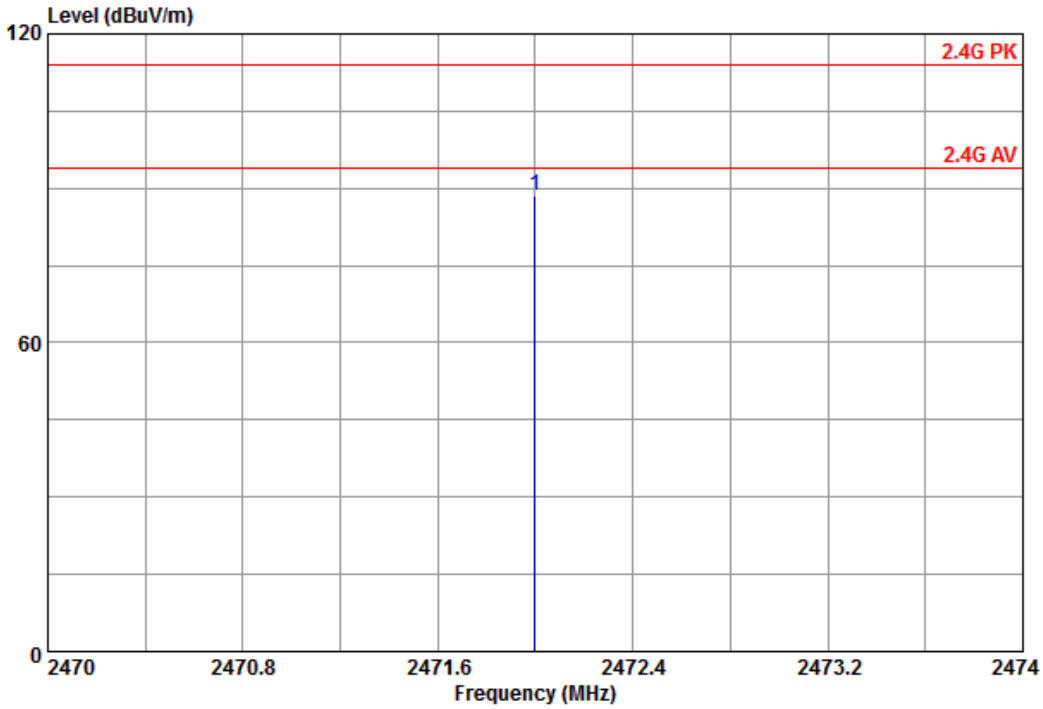
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   Peak Setting 1GHz to 10th harmonics of fundamental, RBW = 3MHz, VBW =10MHz, Sweep = AUTO.
   Note: Because the 20 dB Bandwidth is over 1MHz, the RBW setting of measuring Field strength of Fundamental should be 3MHz, and VBW should be at 10 MHz.

Radiated Emission Test Data (Field Strength of Fundamental)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH20 (2472MHz)
EUT Position	:	Vertical (Keeping TX)			



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 @2472.000	95.90	-7.39	88.51	94.00	-5.49	---	---	Peak

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

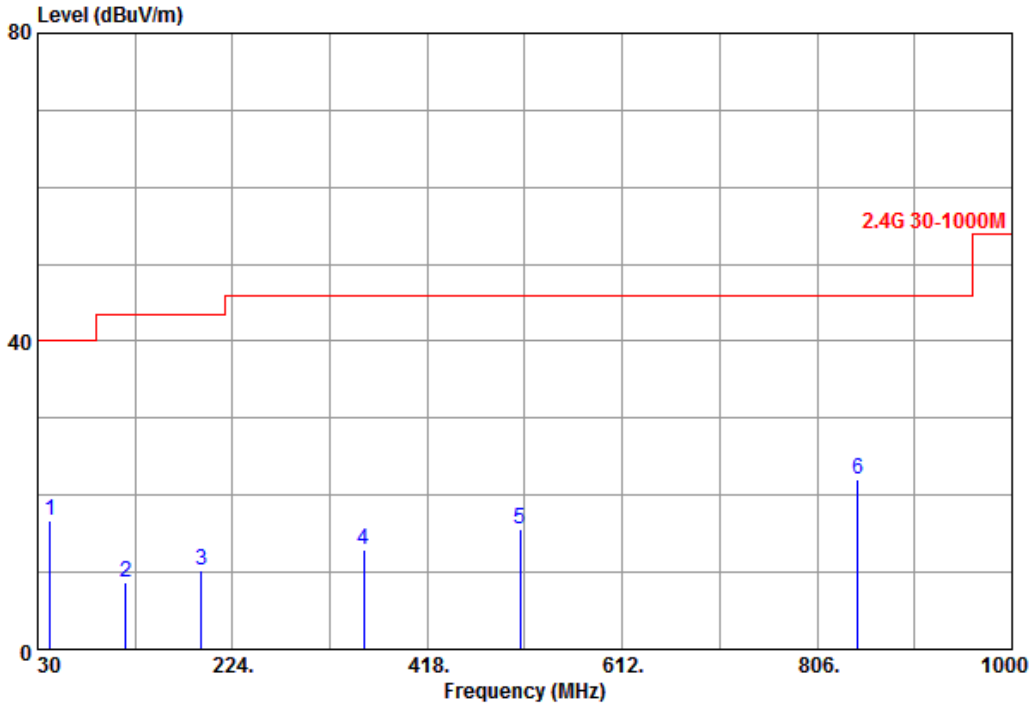
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   Peak Setting 1GHz to 10th harmonics of fundamental, RBW = 3MHz, VBW =10MHz, Sweep = AUTO.
   Note: Because the 20 dB Bandwidth is over 1MHz, the RBW setting of measuring Field strength of Fundamental should be 3MHz, and VBW should be at 10 MHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH11 (2445MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 @	42.610	26.29	-9.50	16.79	40.00	-23.21	---	---	
2	117.300	31.70	-23.04	8.66	43.50	-34.84	---	---	
3	192.960	27.66	-17.32	10.34	43.50	-33.16	---	---	
4	354.950	27.62	-14.77	12.85	46.00	-33.15	---	---	
5	510.150	26.66	-11.00	15.66	46.00	-30.34	---	---	
6	846.740	27.05	-4.96	22.09	46.00	-23.91	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

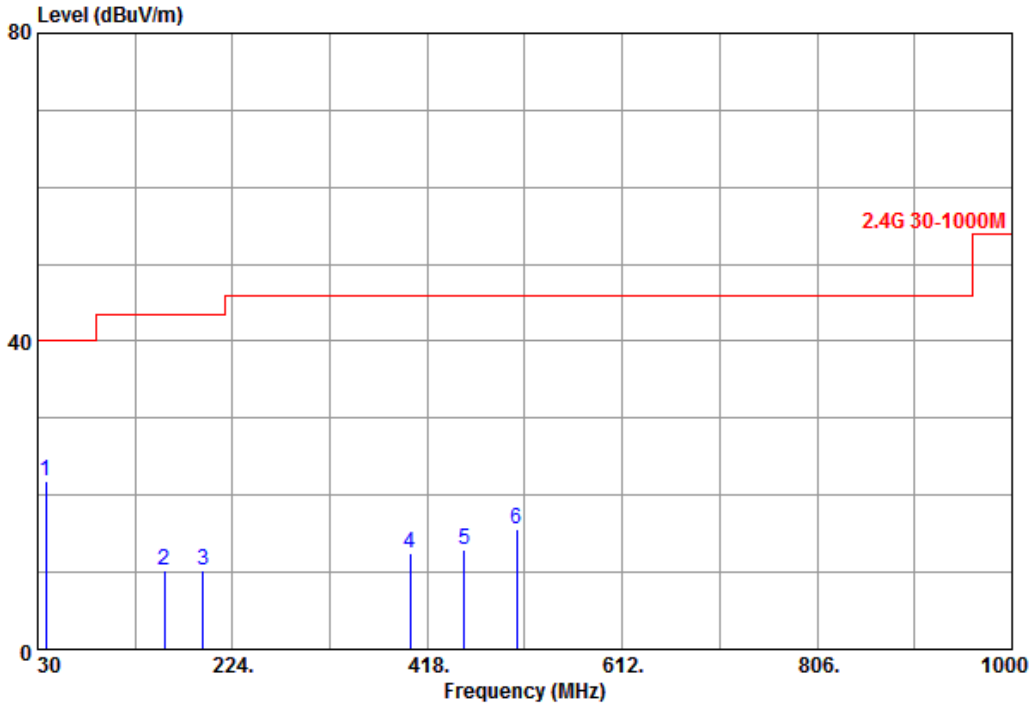
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 30 MHz to 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode.
3. Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
4. All readings are Peak values. None of the peak value reading exceeds the Q.P. limit. Hence, Q.P. reading was not measured.
5. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH11 (2445MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 @	37.760	28.92	-7.18	21.74	40.00	-18.26	---	---	
2	156.100	32.55	-22.23	10.32	43.50	-33.18	---	---	
3	194.900	27.61	-17.30	10.31	43.50	-33.19	---	---	
4	400.540	26.49	-13.97	12.52	46.00	-33.48	---	---	
5	454.860	25.78	-12.82	12.96	46.00	-33.04	---	---	
6	507.240	26.71	-11.07	15.64	46.00	-30.36	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

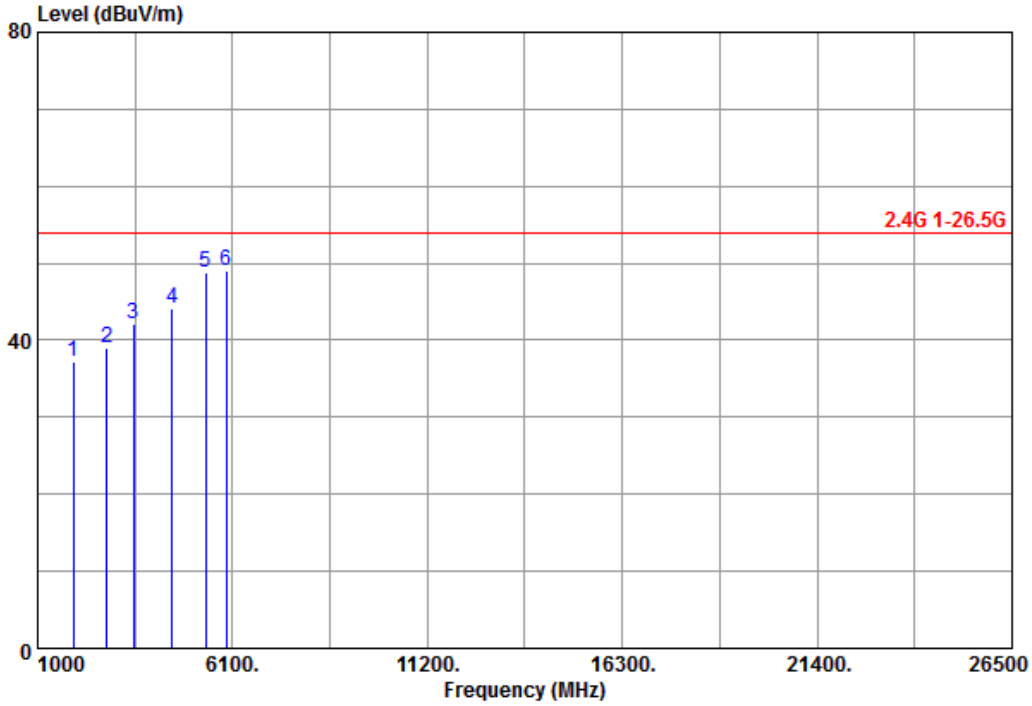
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 30 MHz to 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode.
3. Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
4. All readings are Peak values. None of the peak value reading exceeds the Q.P. limit. Hence, Q.P. reading was not measured.
5. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Above and Field Strength to 10th Harmonic)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH01 (2415MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1943.500	46.31	-9.00	37.31	54.00	-16.69	---	---	
2	2810.500	45.53	-6.44	39.09	54.00	-14.91	---	---	
3	3499.000	46.51	-4.40	42.11	54.00	-11.89	---	---	
4	4519.000	44.77	-0.74	44.03	54.00	-9.97	---	---	
5	5386.000	46.45	2.30	48.75	54.00	-5.25	---	---	
6	@5947.000	45.41	3.73	49.14	54.00	-4.86	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

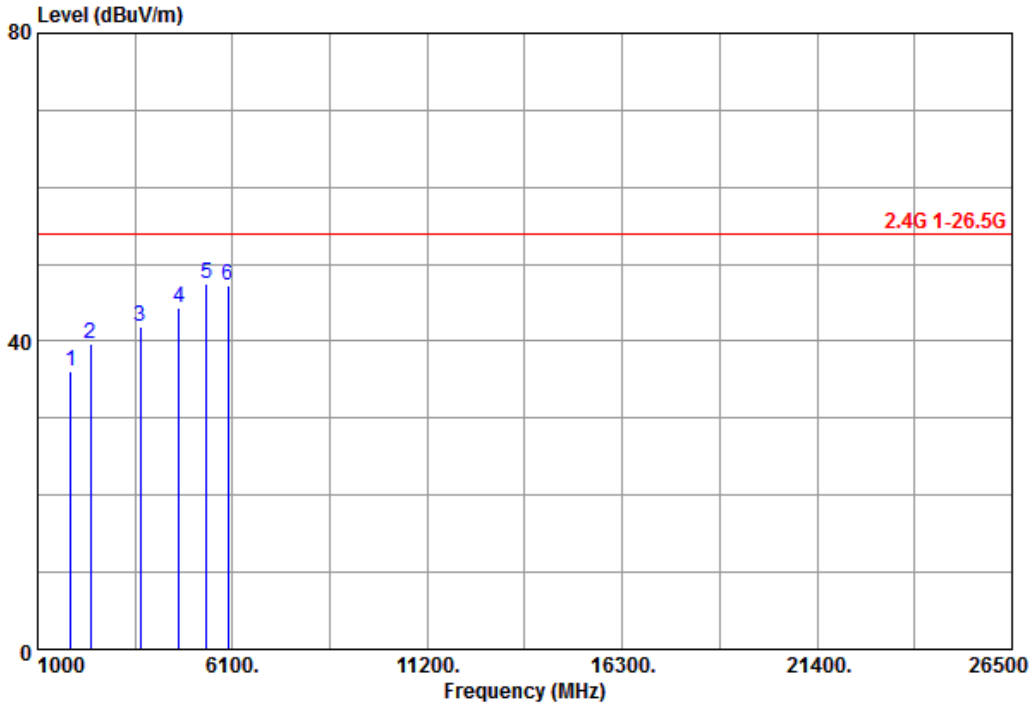
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO. Use Peak detector.

Radiated Emission Test Data (Above and Field Strength to 10th Harmonic)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH01 (2415MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1867.000	45.44	-9.41	36.03	54.00	-17.97	---	---	
2	2377.000	47.40	-7.69	39.71	54.00	-14.29	---	---	
3	3677.500	45.74	-3.87	41.87	54.00	-12.13	---	---	
4	4697.500	44.22	0.07	44.29	54.00	-9.71	---	---	
5	@5411.500	45.12	2.38	47.50	54.00	-6.50	---	---	
6	5972.500	43.53	3.78	47.31	54.00	-6.69	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

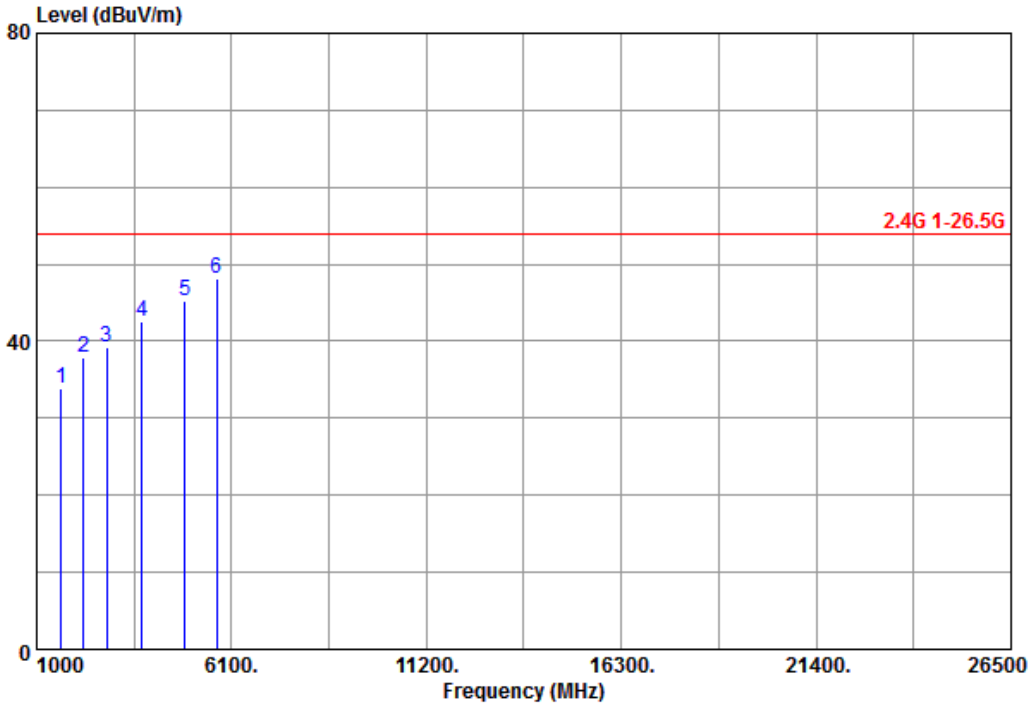
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO. Use Peak detector.

Radiated Emission Test Data (Above and Field Strength to 10th Harmonic)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH11 (2445MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1637.500	44.32	-10.39	33.93	54.00	-20.07	---	---	
2	2224.000	45.99	-8.13	37.86	54.00	-16.14	---	---	
3	2836.000	45.61	-6.34	39.27	54.00	-14.73	---	---	
4	3754.000	46.18	-3.68	42.50	54.00	-11.50	---	---	
5	4876.000	44.41	0.80	45.21	54.00	-8.79	---	---	
6	@5717.500	44.86	3.17	48.03	54.00	-5.97	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

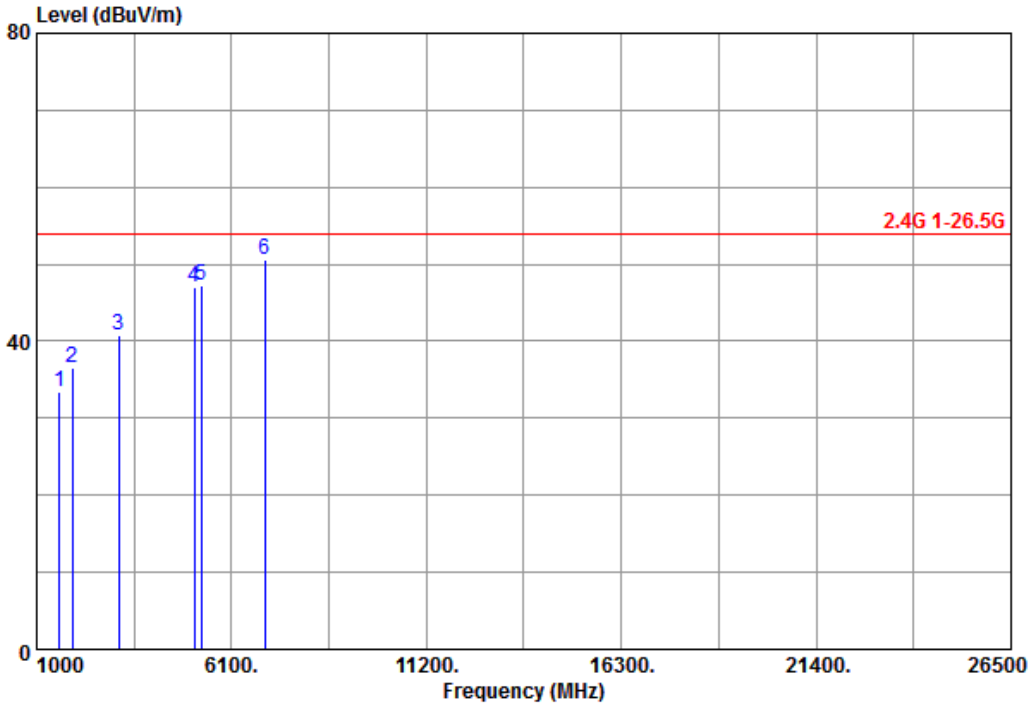
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO. Use Peak detector.

Radiated Emission Test Data (Above and Field Strength to 10th Harmonic)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH11 (2445MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1586.500	44.11	-10.70	33.41	54.00	-20.59	---	---	
2	1943.500	45.57	-9.00	36.57	54.00	-17.43	---	---	
3	3142.000	46.29	-5.45	40.84	54.00	-13.16	---	---	
4	5131.000	45.45	1.65	47.10	54.00	-6.90	---	---	
5	5309.500	45.00	2.13	47.13	54.00	-6.87	---	---	
6	@6967.000	43.74	6.78	50.52	54.00	-3.48	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

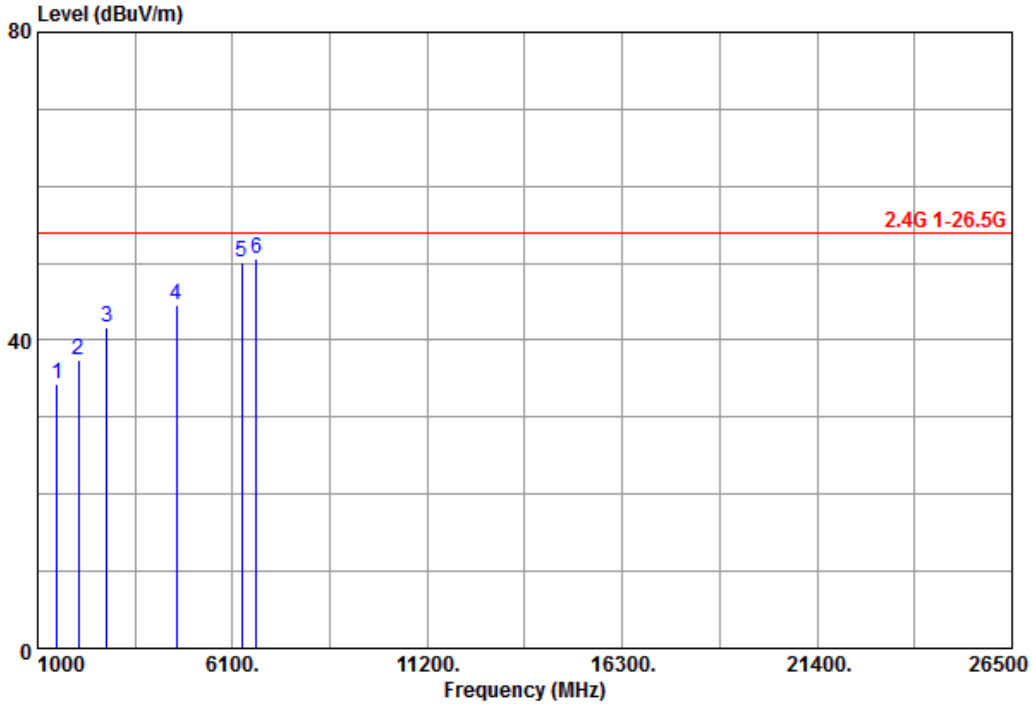
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO. Use Peak detector.

Radiated Emission Test Data (Above and Field Strength to 10th Harmonic)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH20 (2472MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1510.000	45.24	-11.02	34.22	54.00	-19.78	---	---	
2	2071.000	46.01	-8.58	37.43	54.00	-16.57	---	---	
3	2810.500	48.17	-6.44	41.73	54.00	-12.27	---	---	
4	4621.000	44.86	-0.30	44.56	54.00	-9.44	---	---	
5	6329.500	45.29	4.89	50.18	54.00	-3.82	---	---	
6	@6712.000	44.46	6.02	50.48	54.00	-3.52	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

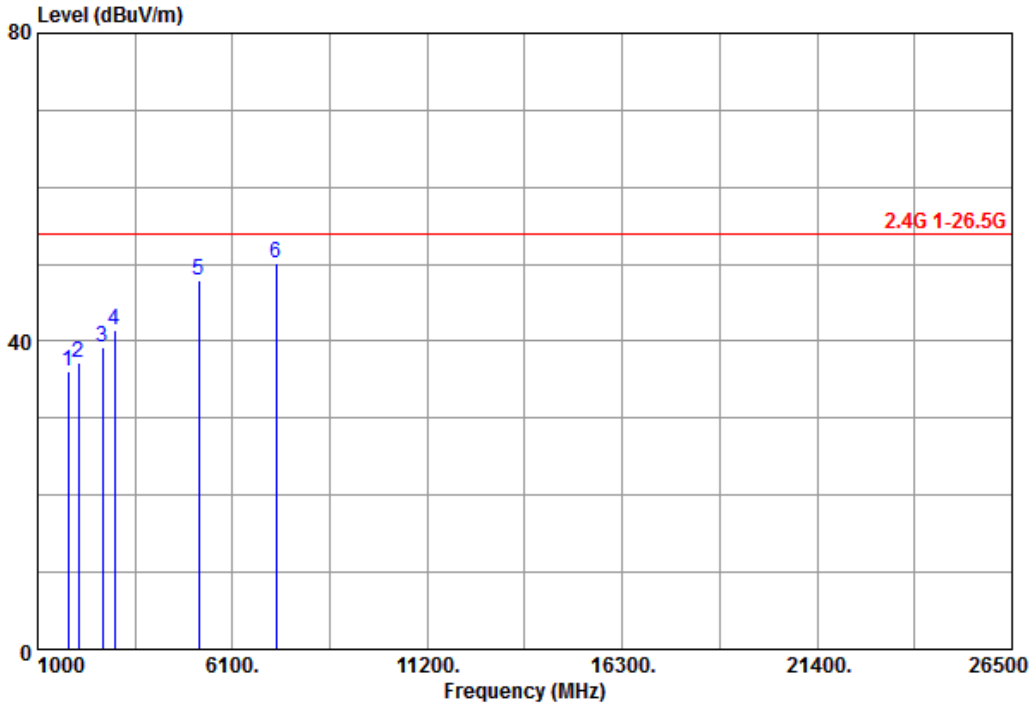
@ :Maximum Data x :Over Limit

Remark：

6. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
7. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
8. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
9. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
10. Spectrum setting:
    (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
    (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO. Use Peak detector.

Radiated Emission Test Data (Above and Field Strength to 10th Harmonic)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH20 (2472MHz)
EUT Position	:	Vertical (Keeping TX & Charging mode)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1790.500	45.94	-9.79	36.15	54.00	-17.85	---	---	
2	2071.000	45.80	-8.58	37.22	54.00	-16.78	---	---	
3	2708.500	46.00	-6.74	39.26	54.00	-14.74	---	---	
4	3014.500	47.19	-5.84	41.35	54.00	-12.65	---	---	
5	5207.500	46.10	1.86	47.96	54.00	-6.04	---	---	
6	@7247.500	42.88	7.35	50.23	54.00	-3.77	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO. Use Peak detector.

5 Out of Band Emission Test

5.1 Test Instruments

Refer to Sec. 1.2 Test Instruments.

5.2 Test Arrangement and Procedure

Refer to Sec. 3.2.

5.3 Limit of Field Strength of Fundamental (§ 15.249(d))

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

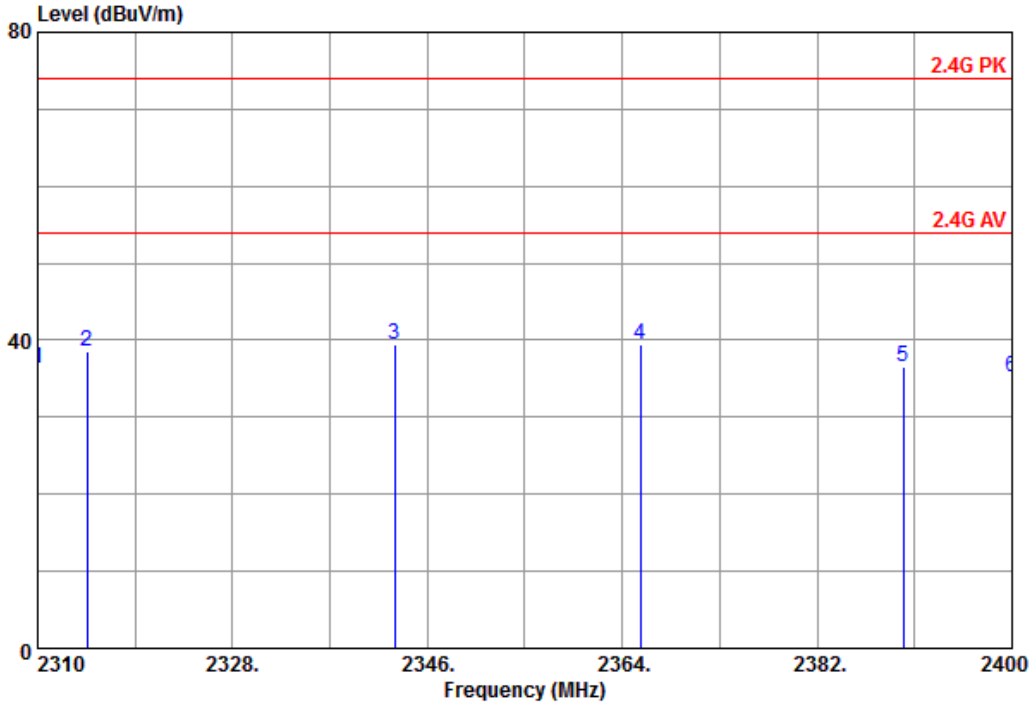
5.4 Test Result

Compliance

The final test data are shown on the following page(s).

Band-Edge Test Data (Lower Edge)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH01 (2415MHz)
EUT Position	:	Vertical (keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	2310.000	44.20	-7.88	36.32	54.00	-17.68	---	---	
2	2314.590	46.46	-7.88	38.58	54.00	-15.42	---	---	
3	@2342.940	47.28	-7.79	39.49	54.00	-14.51	---	---	
4	2365.710	47.10	-7.74	39.36	54.00	-14.64	---	---	
5	2390.000	44.28	-7.63	36.65	54.00	-17.35	---	---	
6	2400.000	42.90	-7.63	35.27	54.00	-18.73	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

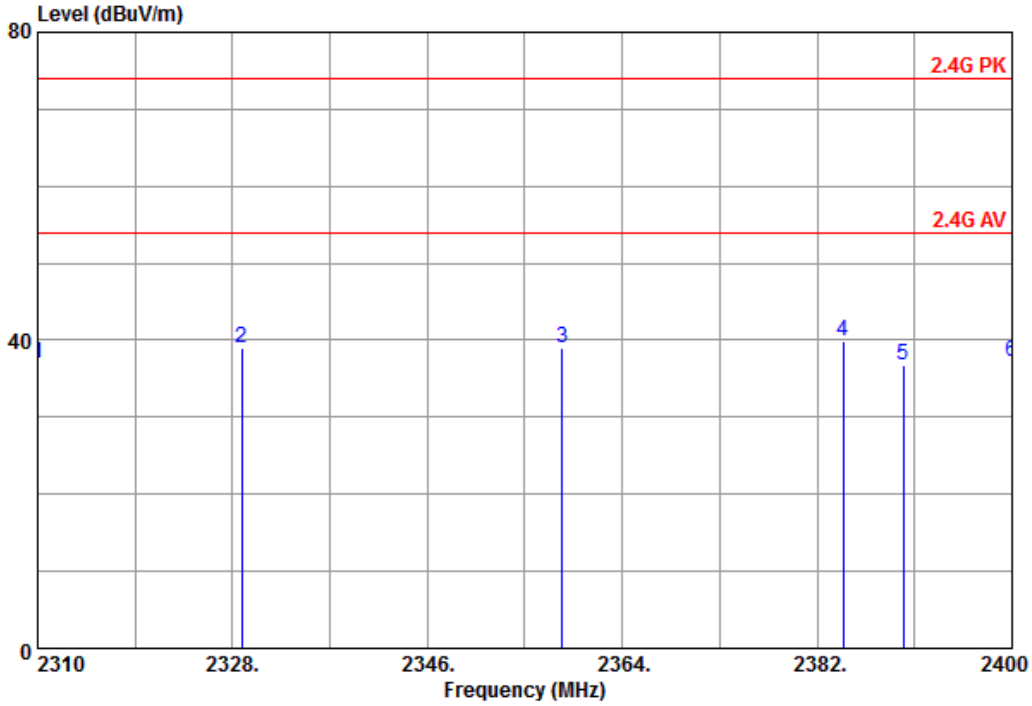
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

Band-Edge Test Data (Lower Edge)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH01 (2415MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	2310.000	44.90	-7.88	37.02	54.00	-16.98	---	---	
2	2328.810	46.91	-7.84	39.07	54.00	-14.93	---	---	
3	2358.420	46.76	-7.74	39.02	54.00	-14.98	---	---	
4	@2384.430	47.58	-7.69	39.89	54.00	-14.11	---	---	
5	2390.000	44.30	-7.63	36.67	54.00	-17.33	---	---	
6	2400.000	44.92	-7.63	37.29	54.00	-16.71	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

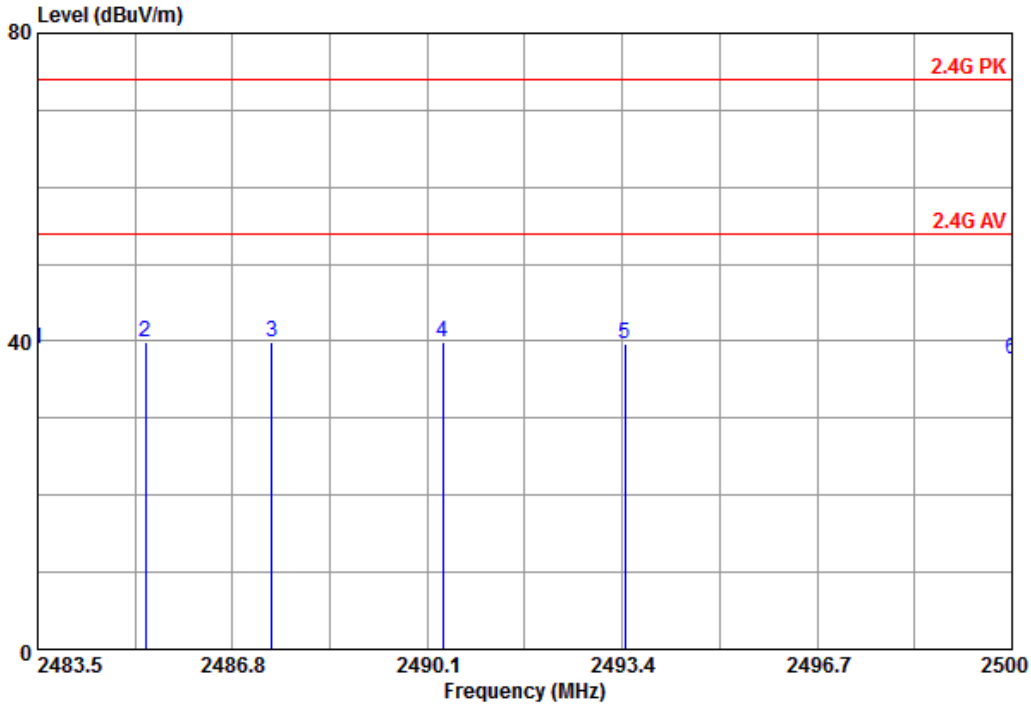
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

Band-Edge Test Data (Upper Edge)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Horizontal	Channel	:	CH20 (2472MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	2483.500	46.46	-7.39	39.07	54.00	-14.93	---	---	
2	@2485.332	47.38	-7.39	39.99	54.00	-14.01	---	---	
3	2487.460	47.30	-7.39	39.91	54.00	-14.09	---	---	
4	2490.364	47.27	-7.33	39.94	54.00	-14.06	---	---	
5	2493.449	47.08	-7.33	39.75	54.00	-14.25	---	---	
6	2500.000	45.03	-7.33	37.70	54.00	-16.30	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

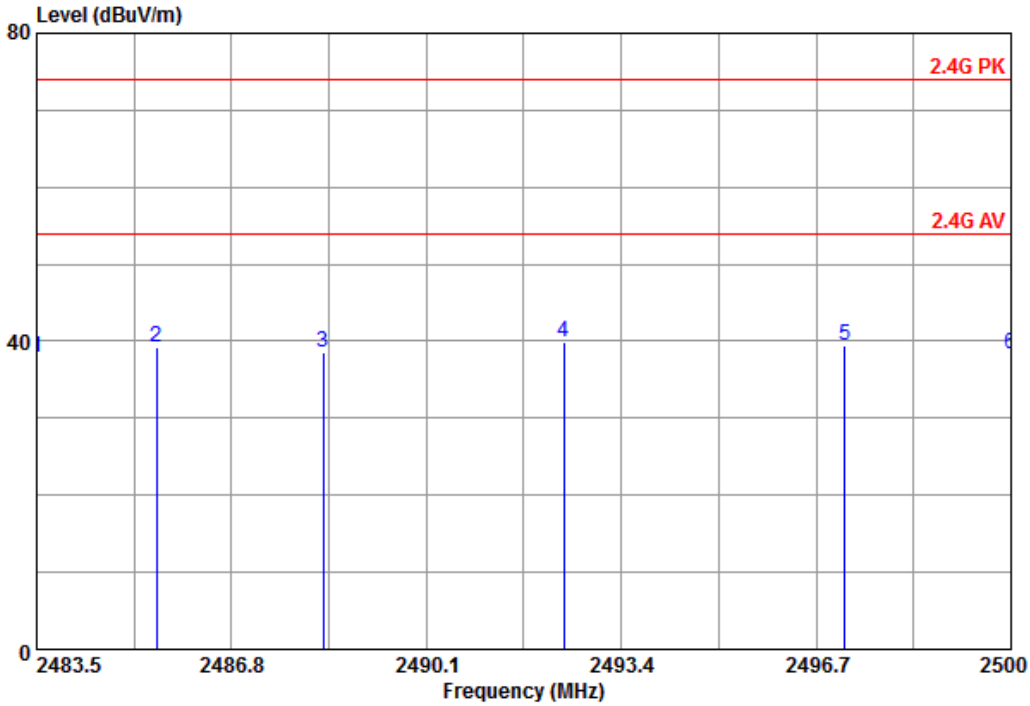
@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

Band-Edge Test Data (Upper Edge)

Temperature	:	28℃	Humidity	:	41%
Test Date	:	18-Aug-2014	Tested by	:	Eason Hsieh
Polarization	:	Vertical	Channel	:	CH20 (2472MHz)
EUT Position	:	Vertical (Keeping TX)			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	2483.500	45.30	-7.39	37.91	54.00	-16.09	---	---	
2	2485.530	46.68	-7.39	39.29	54.00	-14.71	---	---	
3	2488.351	45.94	-7.33	38.61	54.00	-15.39	---	---	
4	@2492.427	47.20	-7.33	39.87	54.00	-14.13	---	---	
5	2497.178	46.87	-7.33	39.54	54.00	-14.46	---	---	
6	2500.000	45.59	-7.33	38.26	54.00	-15.74	---	---	

C.F = Antenna Factor + Cable Loss - Preamp gain
Result = Reading + C.F ; Margin = Result - Limit

@ :Maximum Data x :Over Limit

Remark：

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
5. Spectrum setting:
   (a) Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
   (b) Average Setting 1GHz to 10th harmonics of fundamental,: RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

6 Antenna requirement

6.1 Limit (§ 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. The use of a permanently attached antenna or of an antenna that uses a uniue coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

6.2 Test Result

Compliance.

The EUT applies a fixed PCB antenna.