



FCC COMPLIANCE TEST REPORT

Technical Statement of Conformity
in accordance with 47 CFR Part 15 Subpart C

The product

Equipment Under Test : Bluetooth Speaker
Model Number : CA2-BSP
Product Series : CA-BSP
Report Number : HA140108-FD
Issue Date : 28-March-2014
Test Result : Compliance

is produced by

InfoThink Technology Co., LTD.

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SL2-IS-E-0023, SL2-R1-E-0023,
SL2-R2-E-0023, SL2-L1-E-0023

FCC Designation No.: TW1071

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Test Result Certification

Applicant	:	InfoThink Technology Co., LTD
Address of Applicant	:	5F., NO.133, XINHU 1ST. RD., NEIHU DIST., TAIPEI CITY 11494, TAIWAN
Manufacturer	:	DONGXING ELECTRONIC CO., LTD.
Address of Manufacturer	:	NO.,16 JIANGBEI RD., XIANI MANAGEMENT ZONE QINGXI TOWN GUANGDONG
Trade Name	:	N/A
Equipment Under Test	:	Bluetooth Speaker
Model Number	:	CA2-BSP
Product Series	:	CA-BSP
FCC ID	:	2AB7O-CA2-BSP
Filing Type	:	Certification
Sample Received Date	:	19-Feb-2014
Test Standard	:	

FCC Part 15 Subpart C §15.247

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 both ANSI C63.4 (2009) and ANSI C63.10 (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, 15.247.
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:

2014-03-28

Kay Wang/ ADM. Dept Staff

Tested by:

2014-03-21

Kidd Liao/ ENG. Dept. Staff

Approved by:

Date: 2014-03-28

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	Hopping Frequency Separation	FCC part 15 subpart C §247(a)(1)	Compliance
5	Number of Hopping Channels	FCC part 15 subpart C §247(a)(1)	Compliance
6	Average Time of Occupancy	FCC part 15 subpart C §247(a)(1)(iii)	Compliance
7	Peak Output Power	FCC part 15 subpart C §247(b)	Compliance
8	100kHz Bandwidth of Band Edges	FCC part 15 subpart C §247(d)	Compliance

1 General Description

1.1 Description of EUT

Equipment Under Test	:	Bluetooth Speaker							
Model Number of EUT	:	CA2-BSP							
Product Series	:	CA-BSP							
Power Supply	:	Input: 5Vdc, 1A Output: 5Vdc, 2.1A							
Frequency Range	:	2402~2480 MHz							
Transmit Power	:	0.24 dBm							
Number of Channels	:	79 Channels							
Carrier Frequency of Each Channel	:	00	2402	20	2422	40	2442	60	2462
		01	2403	21	2423	41	2443	61	2463
		02	2404	22	2424	42	2444	62	2464
		03	2405	23	2425	43	2445	63	2465
		04	2406	24	2426	44	2446	64	2466
		05	2407	25	2427	45	2447	65	2467
		06	2408	26	2428	46	2448	66	2468
		07	2409	27	2429	47	2449	67	2469
		08	2410	28	2430	48	2450	68	2470
		09	2411	29	2431	49	2451	69	2471
		10	2412	30	2432	50	2452	70	2472
		11	2413	31	2433	51	2453	71	2473
		12	2414	32	2434	52	2454	72	2474
		13	2415	33	2435	53	2455	73	2475
		14	2416	34	2436	54	2456	74	2476
		15	2417	35	2437	55	2457	75	2477
		16	2418	36	2438	56	2458	76	2478
		17	2419	37	2439	57	2459	77	2479
		18	2420	38	2440	58	2460	78	2480
		19	2421	39	2441	59	2461	-	-
Antenna Specification	:	PCB Antenna/ Gain: 1.76 dBi							
Modulation Technique	:	FHSS Bluetooth : GFSK Bluetooth EDR : π/4-DQPSK, 8-DPSK							
Transmit Data Rate	:	Bluetooth : 1Mbps Bluetooth EDR : 2/3 Mbps							



Specification	Dimensions : 108 mm (L) X 108 mm (W) X 42.5 mm (H) Weight : 640g Function : The EUT is a Bluetooth Speaker. ※For more detail specification, please refer to the User Manual.
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1.2 Test Instruments

3.3.1. 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-2012	11-AUG-2013
EMI Receiver	R&S	ESCI	100615	03-MAR-2013	03-MAR-2014
Spectrum Analyzer	R&S	FSL6	100323	11-JUN-2012	11-JUN-2013
Spectrum Analyzer	Advantest	R3172	101202158	24-JUN-2012	24-JUN-2013
Preamplifier	WIRELESS	FPA-6592G	060009	09-JUL-2012	09-JUL-2013
Preamplifier	HD	HD17187	004	04-AUG-2012	04-AUG-2013
Bilog Antenna	TESEQ	CBL6111D	25769	03-MAR-2013	03-MAR-2014
Bilog Antenna	Schaffner	CBL6112B	2860	12-AUG-2012	12-AUG-2013
Double-Ridged Waveguide Horn	EMCO	3115	9912-5992	04-MAY-2013	04-MAY-2014
Temp. & Humidity Chamber	Giant Force	GTH-150-20-SP-AR	MMA0907-012	22-JUL-2012	22-JUL-2013

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

1.3 Auxiliary Equipments

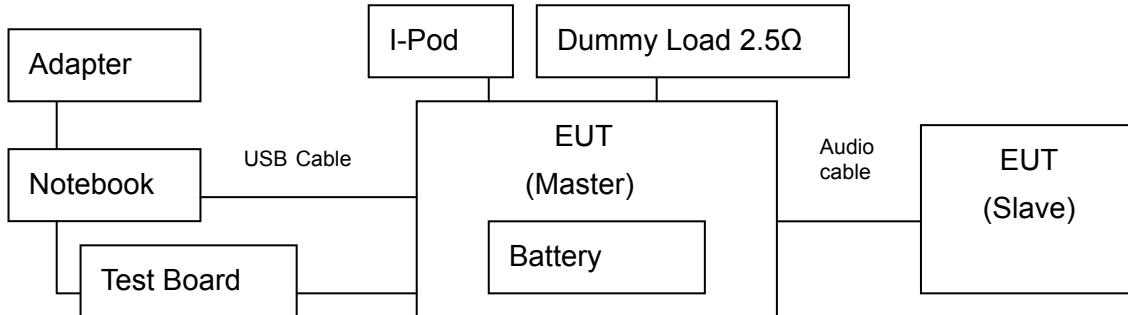
1.3.1. Provided by HongAn Technology Co., Ltd. for Emission Test.

No.	Equipment	Model No.	Serial No.	EMC Approved	Brand	Description	
						Data Cable	Power Cable
1	Notebook	N61J	N61JV-021A520M	CE, FCC, C-TICK N13219, BSMI R31018	ASUS	Adapter to Notebook Unshielded*1.8 m	AC to Adapter Unshielded*1.8 m
2	I Pod	A1204	4H734AQPVTE	BSMI R33057	APPLE	N/A	N/A
3	Dummy 2.5 Ω	N/A	N/A	N/A	N/A	N/A	N/A
4	Bluetooth Test Board	N/A	N/A	N/A	N/A	N/A	N/A

1.3.2. Provided by the Manufacturer

N/A

1.4 EUT SETUP



Note: Main Test Sample: CA2-BSP

1.5 Identifying the Final Test Mode

1. Mode 1: TX BT mode (1Mbps) CH 00.
2. Mode 2: TX BT mode (1Mbps) CH 39.
3. Mode 3: TX BT mode (1Mbps) CH 78.
4. Mode 4: TX BT EDR mode (2Mbps) CH 00.
5. Mode 5: TX BT EDR mode (2Mbps) CH 39.
6. Mode 6: TX BT EDR mode (2Mbps) CH 78.
7. Mode 7: TX BT EDR mode (3Mbps) CH 00.
8. Mode 8: TX BT EDR mode (3Mbps) CH 39.
9. Mode 9: TX BT EDR mode (3Mbps) CH 78.
10. Mode 10: RX mode.

Note:

1. To access into different Bluetooth modes, the EUT is connected to Notebook through USB cable. Notebook executes PUTTY testing program to control the Bluetooth function.

-
2. EUT has been evaluated placing in all three orthogonal directions. In horizontal position, the EUT was most likely to cause maximum unwanted disturbance. Therefore, the final assessments were performed in horizontal position.
 3. After pre-test, we identified that the Mode 9 (the worst case) was most likely to cause maximum unwanted disturbance on 30~1GHz. Mode 10 (the worst case) was most likely to cause maximum unwanted disturbance on 1~26.5 GHz. Therefore, the Final Assessments were performed for the worst cases, respectively. All pre-test data show at appendix.
 4. Channel Low (2402 MHz), Mid (2441 MHz) and High (2480 MHz) 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 15.247 under the FCC Rules Part 15 Subpart C.

Remark:

The EUT could perform scanning function through USB connection. In real world, however, when using USB mode, Bluetooth function will be disabled. In other words, Bluetooth function could only work when powering by battery.

1.6 Final Test Mode

1. Radiated Emission (30~960MHz): Mode 9.
2. Radiated Emission (above 960MHz): Mode 1.
3. Conducted Emission: Mode 9.

1.7 Condition of Power Supply

DC 5 V, through USB port.

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 15.247.

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 13.3 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. The EUT was designed to be mounted on back of front seat, according to the requirements in Section 13.4.1 of ANSI C 63.4 (2009), only one axe of the EUT has to be measured.

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

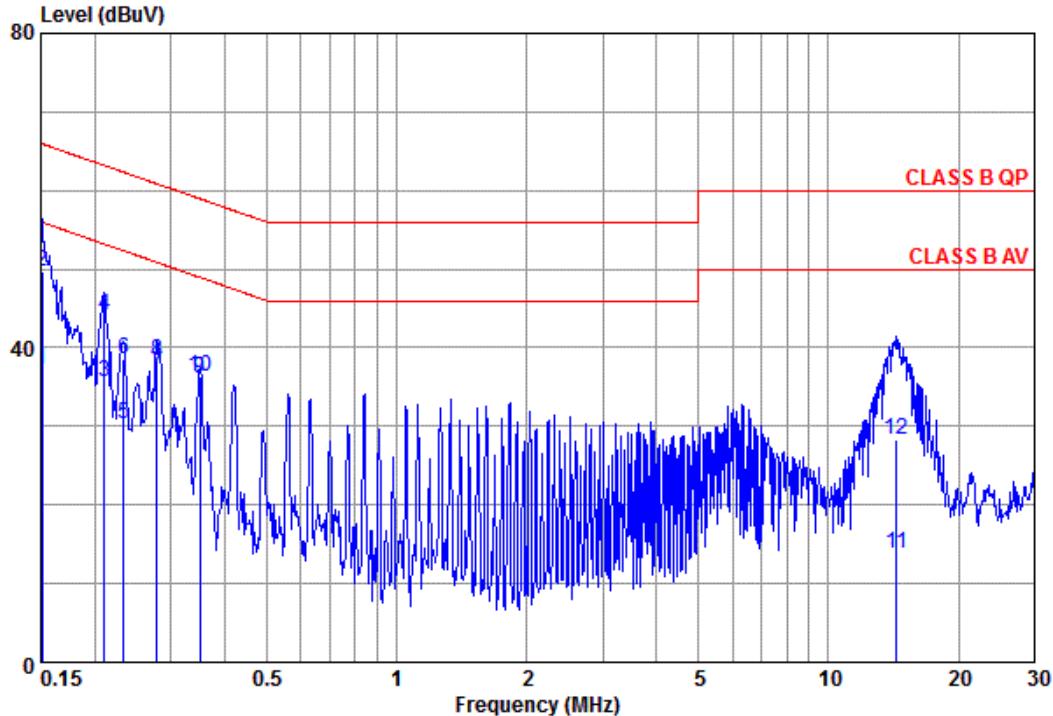
N/A.

Compliance

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

Conducted Emission Test Data

Test Date : 2014-03-21 Power Line : Line
Temperature : 23.9°C Humidity : 35%



	Freq	Reading	C.F	Result	Limit	Margin	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.151	37.06	0.10	37.16	55.96	-18.80	Average
2	@ 0.151	49.59	0.10	49.69	65.96	-16.27	QP
3	0.211	34.93	0.66	35.59	53.18	-17.59	Average
4	0.211	43.40	0.66	44.06	63.18	-19.12	QP
5	0.233	29.83	0.58	30.41	52.85	-21.94	Average
6	0.233	37.87	0.58	38.45	62.35	-23.90	QP
7	0.279	36.43	0.42	36.85	50.85	-14.00	Average
8	0.279	37.82	0.42	38.24	60.85	-22.61	QP
9	* 0.350	35.88	0.22	36.10	48.96	-12.86	Average
10	0.350	36.13	0.22	36.35	58.96	-22.61	QP
11	14.364	12.97	0.76	13.73	50.00	-36.27	Average
12	14.364	27.56	0.76	28.32	60.00	-31.68	QP

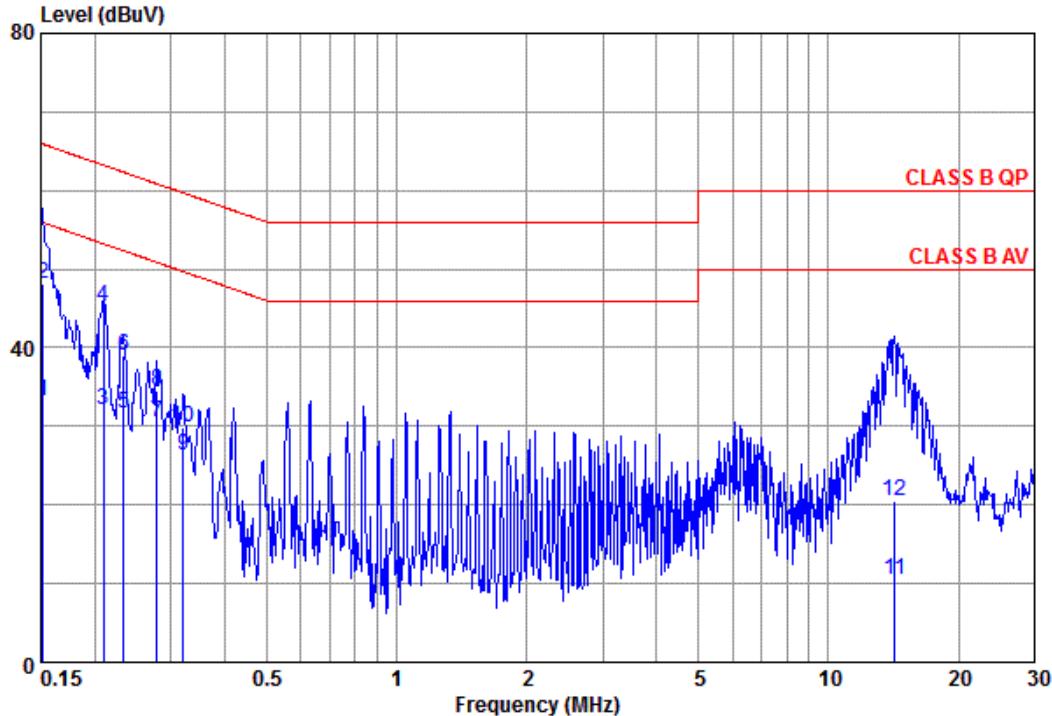
Result = Reading + C.F ; C.F = LISN Factor + Cable Loss

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

Remark : All readings are Quasi-Peak and Average values.

Conducted Emission Test Data

Test Date : 2014-03-21 Power Line : Neutral
Temperature : 23.9°C Humidity : 35%



	Freq	Reading	C.F	Result	Limit	Margin	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	33.20	0.10	33.30	55.91	-22.61	Average
2	@ 0.152	48.09	0.10	48.19	65.91	-17.72	QP
3	0.209	31.92	0.10	32.02	53.23	-21.21	Average
4	0.209	45.23	0.10	45.33	63.23	-17.90	QP
5	0.233	31.45	0.10	31.55	52.85	-20.80	Average
6	0.233	39.00	0.10	39.10	62.35	-23.25	QP
7	* 0.279	30.42	0.09	30.51	50.85	-20.34	Average
8	0.279	34.34	0.09	34.43	60.85	-26.42	QP
9	0.320	26.22	0.10	26.32	49.71	-23.39	Average
10	0.320	29.77	0.10	29.87	59.71	-29.84	QP
11	14.213	9.78	0.78	10.56	50.00	-39.44	Average
12	14.213	19.71	0.78	20.49	60.00	-39.51	QP

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

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

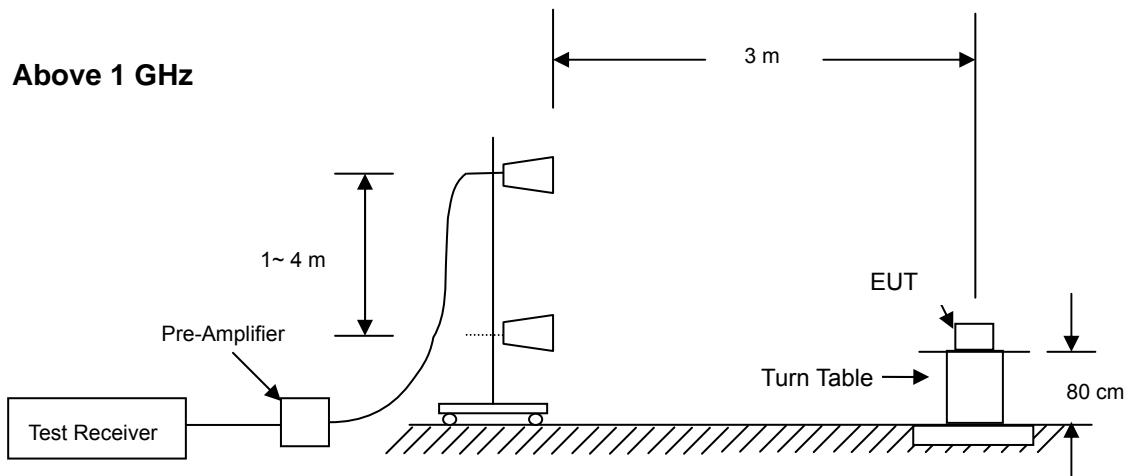
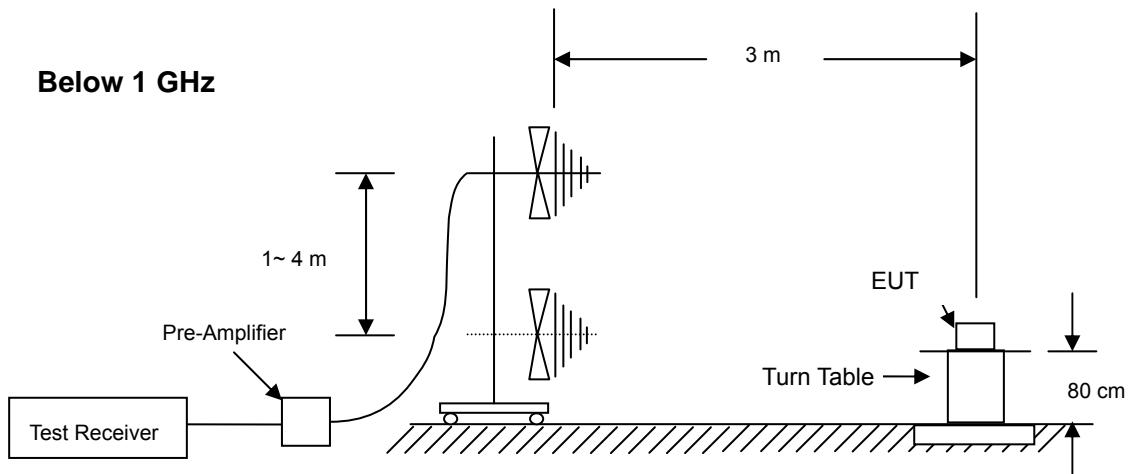
Remark : All readings are Quasi-Peak and Average values.

3 Radiated Emission Test

3.1 Test Instruments

Refer to Sec. 1.2 Test Instruments.

3.2 Test Arrangement and Procedure



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. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:
 - (a) Below 1 GHz: RBW = 100 kHz/ VBW = 1 MHz/ Sweep = AUTO.
 - (b) Above 1 GHz: Peak: RBW = VBW = 1MHz/ Sweep = AUTO; Average: RBW = 1MHz/ VBW =

10Hz/ Sweep = AUTO.

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

3.3 Limit (§ 15.205 & § 15.209)

3.3.1. Limit of Restricted Band of Operation (§ 15.205)

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

Frequency Band			
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	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	
13.36-13.41			

3.3.2. 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.

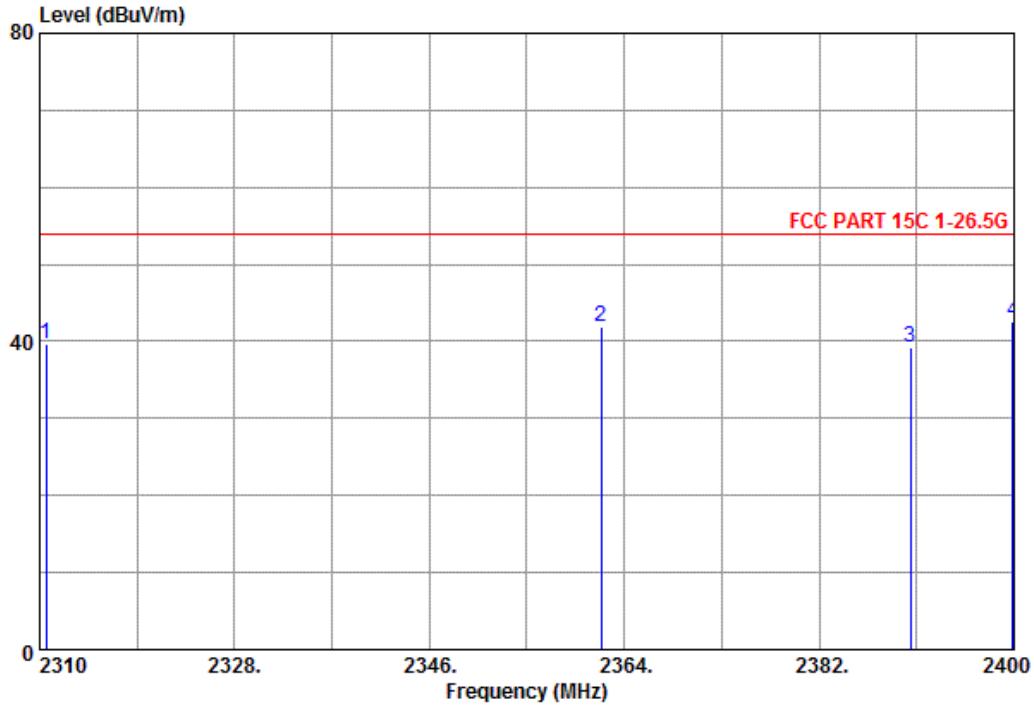
3.4 Test Result

Compliance

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

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 00
Test Mode	: Mode 1		



Freq	Reading	C.F.	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV/m}	dB _{UV/m}	dB			
1 2310.600	47.58	-7.88	39.70	54.00	-14.30	---	---	
2 2361.900	49.68	-7.74	41.94	54.00	-12.06	---	---	
3 2390.400	46.88	-7.63	39.25	54.00	-14.75	---	---	
4 @2399.900	50.19	-7.63	42.56	54.00	-11.44	---	---	

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

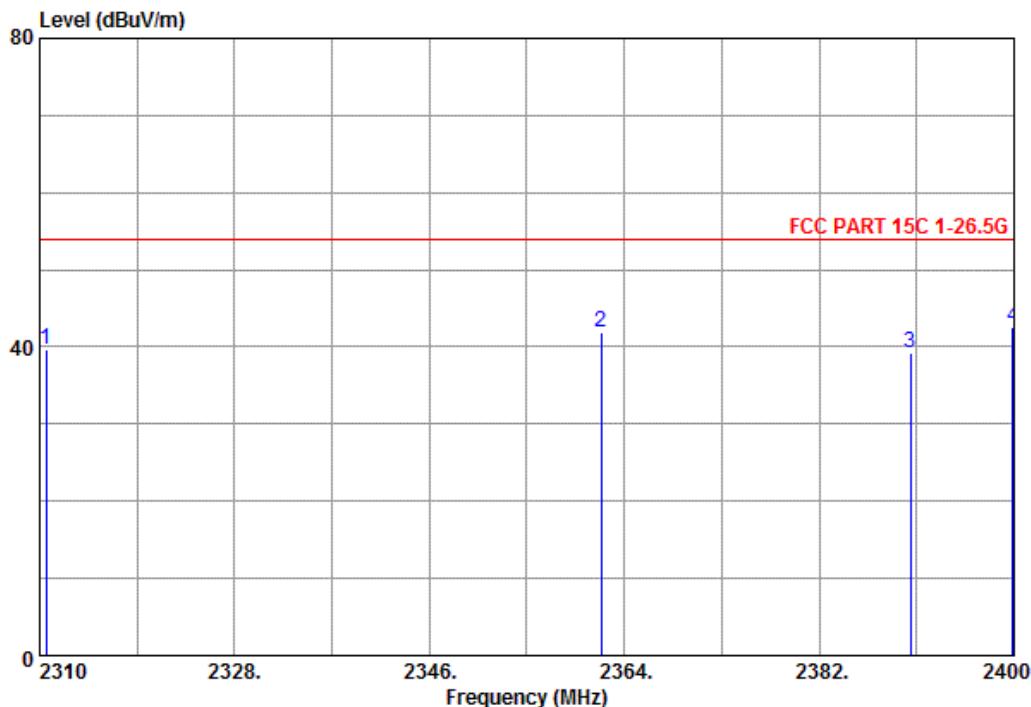
@ :Maximum Data x :Over Limit

Remark :

1. Measuring frequencies from 2310 to 2400 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: 00
Test Mode	: Mode 1		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2310.600	47.58	-7.88	39.70	54.00	-14.30	---	---	
2 2361.900	49.68	-7.74	41.94	54.00	-12.06	---	---	
3 2390.400	46.88	-7.63	39.25	54.00	-14.75	---	---	
4 @2399.900	50.19	-7.63	42.56	54.00	-11.44	---	---	

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

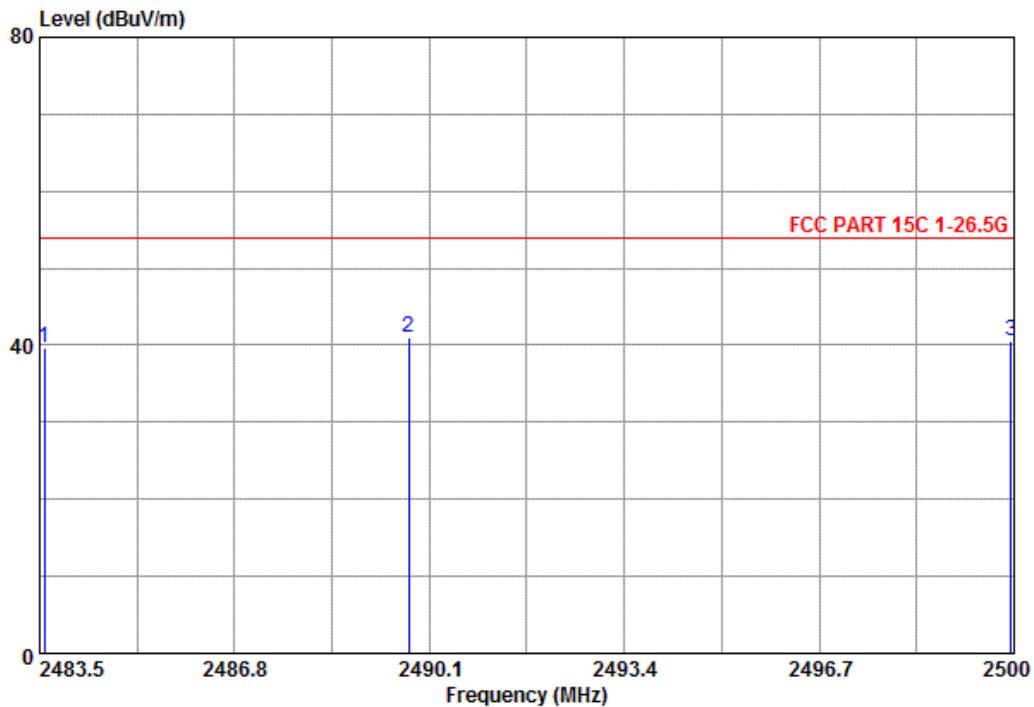
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 2310 to 2400 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 78
Test Mode	: Mode 3		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 2483.583	47.14	-7.39	39.75	54.00	-14.25	---	---	
2 @2489.753	48.28	-7.33	40.95	54.00	-13.05	---	---	
3 2499.950	47.96	-7.33	40.63	54.00	-13.37	---	---	

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

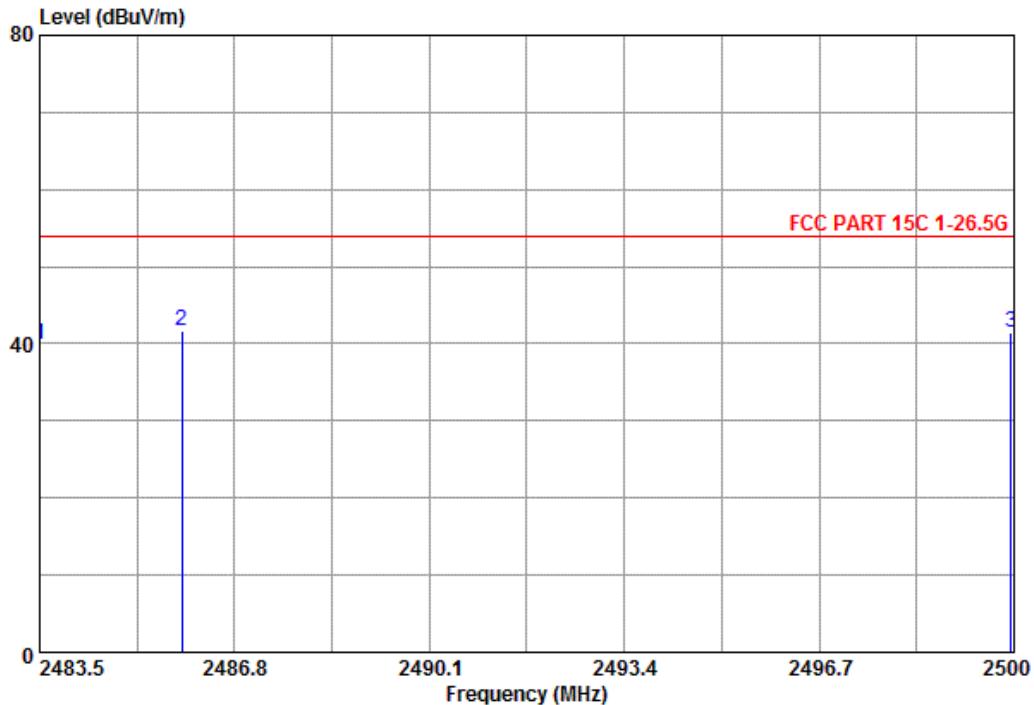
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 2483.5 to 2500 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: 78
Test Mode	: Mode 3		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2483.500	47.25	-7.39	39.86	54.00	-14.14	---	---	
2 @2485.909	49.14	-7.39	41.75	54.00	-12.25	---	---	
3 2499.950	48.68	-7.33	41.35	54.00	-12.65	---	---	

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

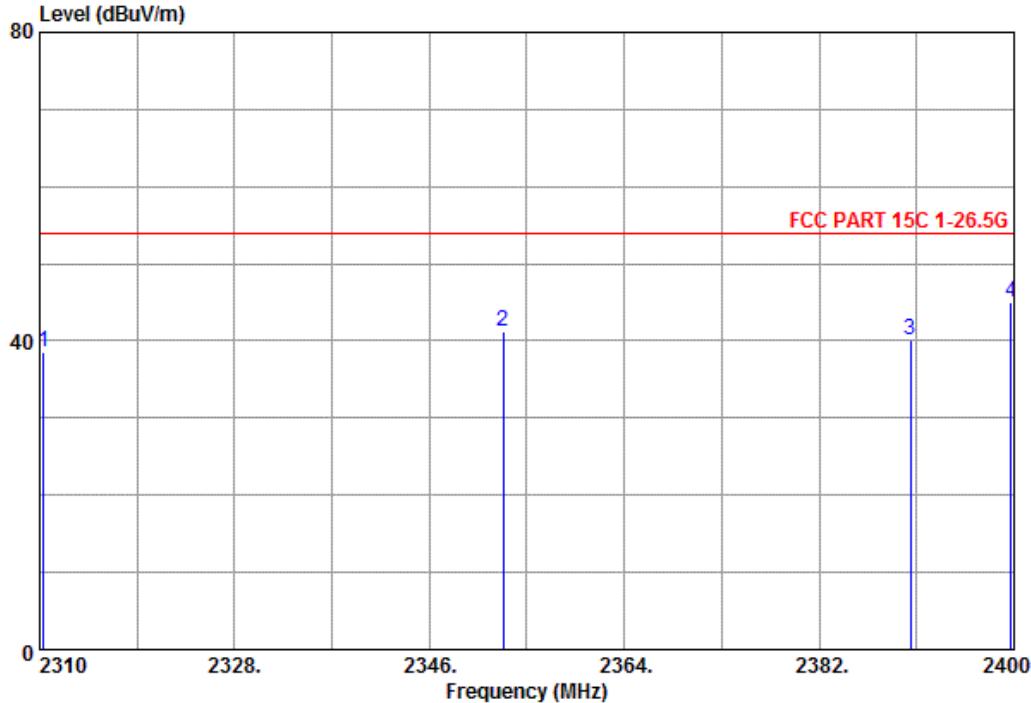
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 2483.5 to 2500 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 00
Test Mode	: Mode 4		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2310.360	46.48	-7.88	38.60	54.00	-15.40	---	---	
2 2352.840	49.00	-7.74	41.26	54.00	-12.74	---	---	
3 2390.460	47.77	-7.63	40.14	54.00	-13.86	---	---	
4 @2399.730	52.70	-7.63	45.07	54.00	-8.93	---	---	

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

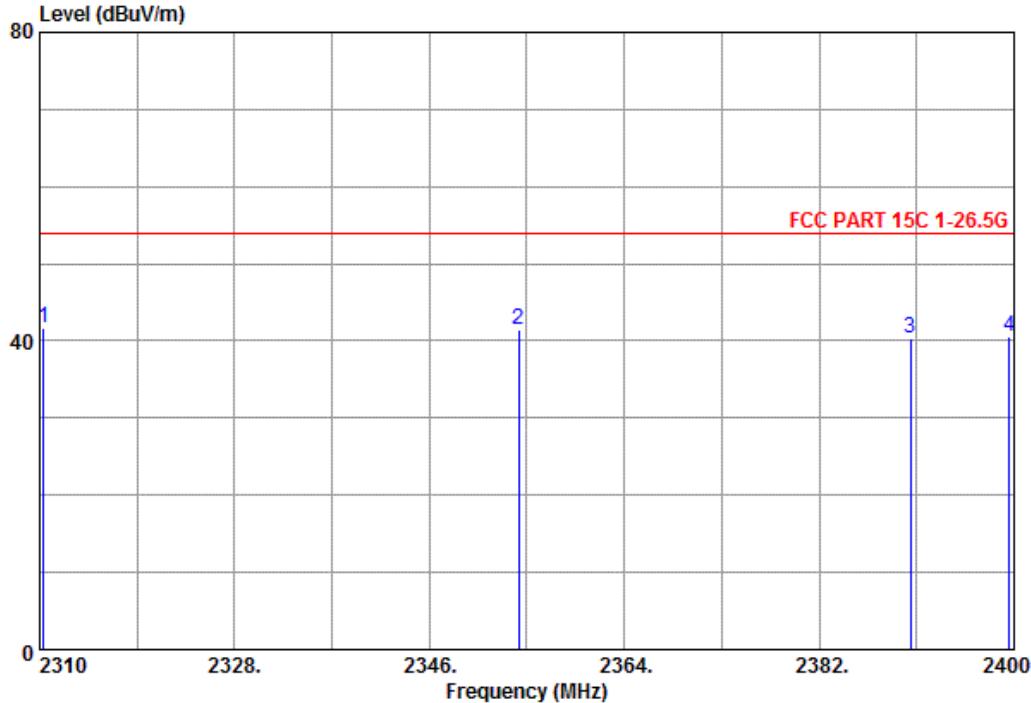
@ :Maximum Data x :Over Limit

Remark :

1. Measuring frequencies from 2310 to 2400 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: 00
Test Mode	: Mode 4		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 @2310.360	49.64	-7.88	41.76	54.00	-12.24	---	---	
2 2354.280	49.26	-7.74	41.52	54.00	-12.48	---	---	
3 2390.460	47.94	-7.63	40.31	54.00	-13.69	---	---	
4 2399.550	48.23	-7.63	40.60	54.00	-13.40	---	---	

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

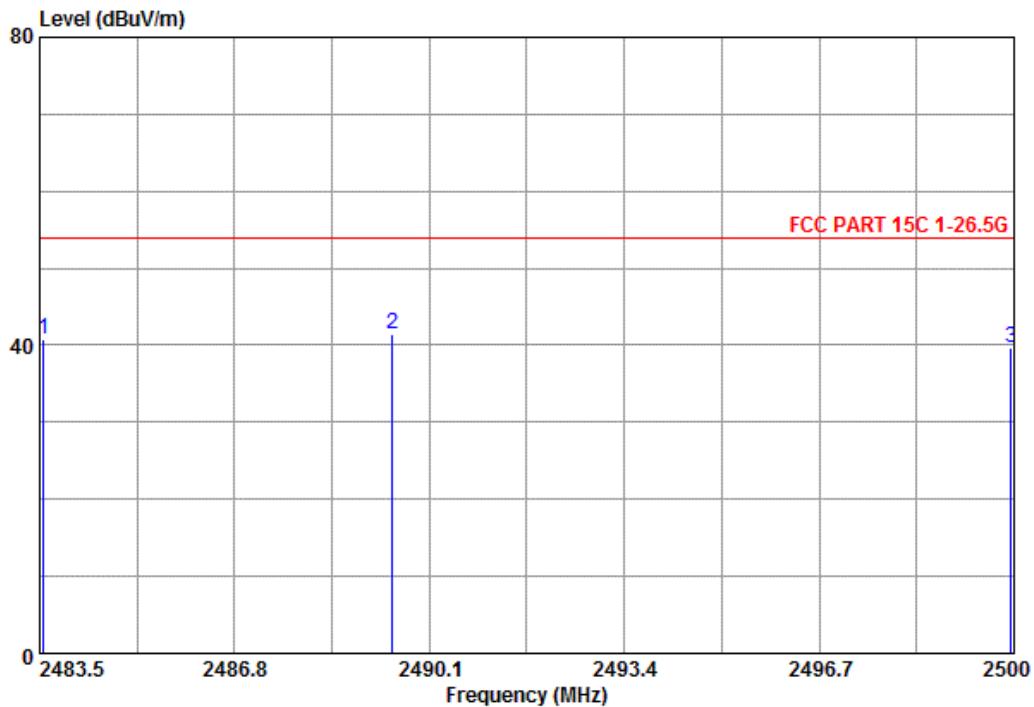
@ :Maximum Data x :Over Limit

Remark :

1. Measuring frequencies from 2310 to 2400 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 78
Test Mode	: Mode 6		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 2483.566	48.20	-7.39	40.81	54.00	-13.19	---	---	
2 @2489.473	48.85	-7.33	41.52	54.00	-12.48	---	---	
3 2499.950	47.08	-7.33	39.75	54.00	-14.25	---	---	

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

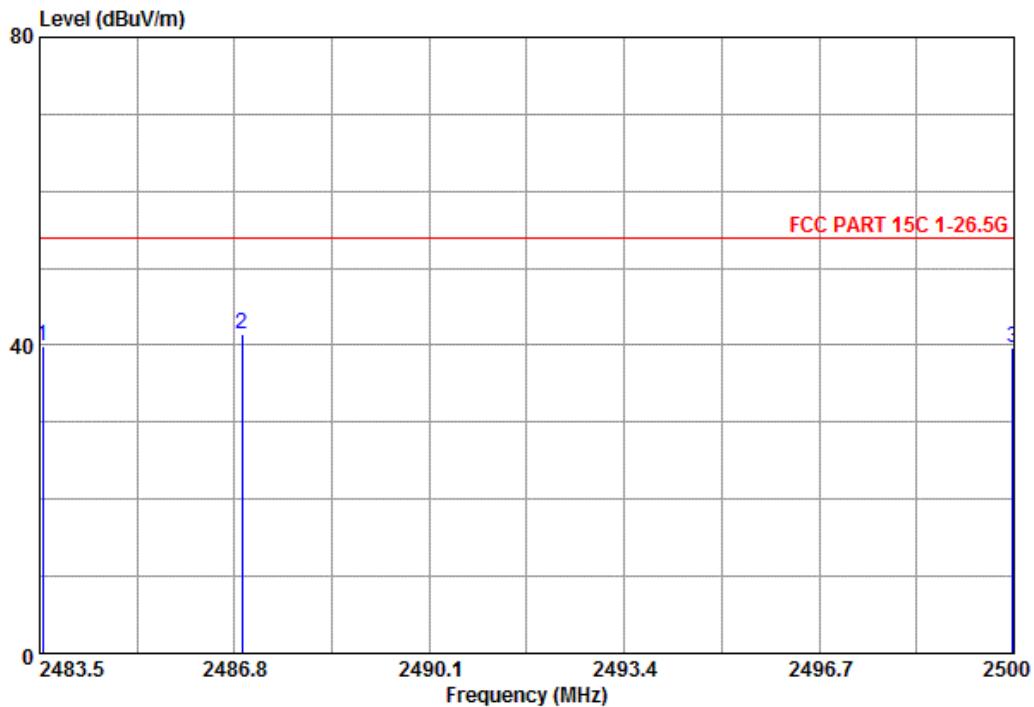
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 2483.5 to 2500 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: 78
Test Mode	: Mode 6		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2483.550	47.24	-7.39	39.85	54.00	-14.15	---	---	
2 @2486.932	48.73	-7.39	41.34	54.00	-12.66	---	---	
3 2499.983	47.06	-7.33	39.73	54.00	-14.27	---	---	

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

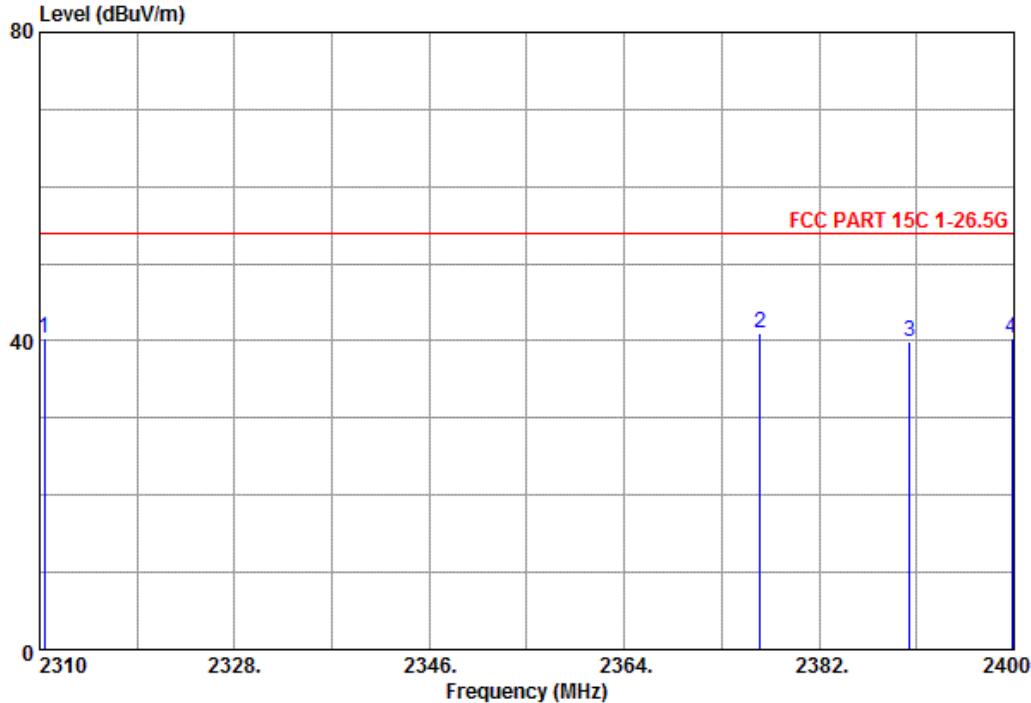
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 2483.5 to 2500 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 00
Test Mode	: Mode 7		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2310.450	48.17	-7.88	40.29	54.00	-13.71	---	---	
2 @2376.510	48.69	-7.69	41.00	54.00	-13.00	---	---	
3 2390.370	47.50	-7.63	39.87	54.00	-14.13	---	---	
4 2399.820	48.04	-7.63	40.41	54.00	-13.59	---	---	

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

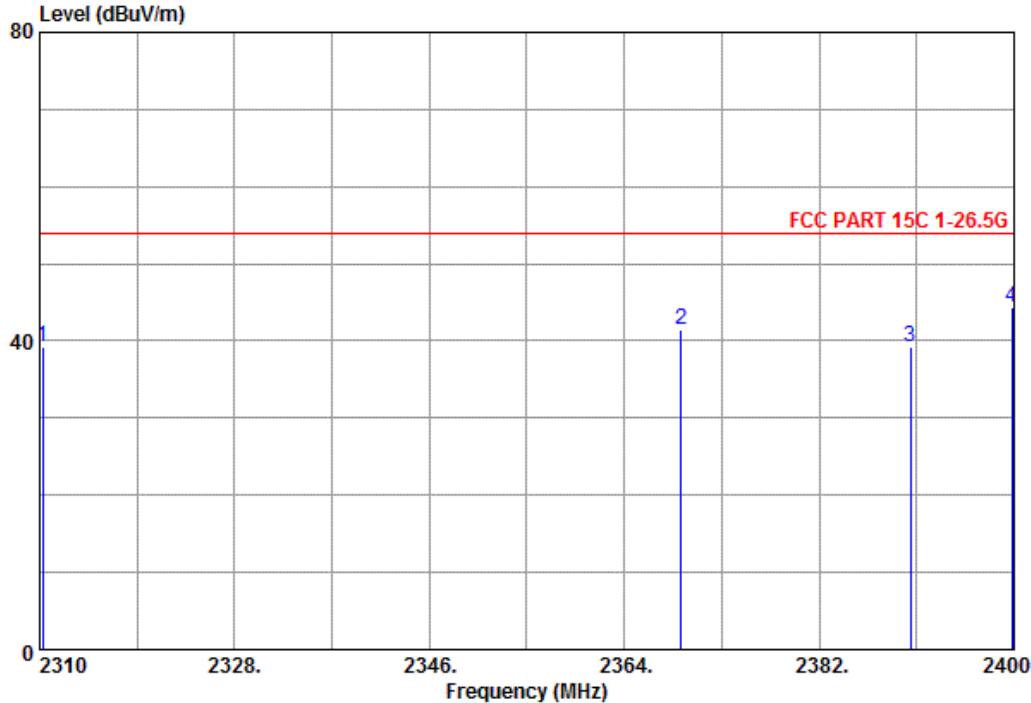
@ :Maximum Data x :Over Limit

Remark :

1. Measuring frequencies from 2310 to 2400 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: 00
Test Mode	: Mode 7		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2310.270	47.15	-7.88	39.27	54.00	-14.73	---	---	
2 2369.220	49.13	-7.69	41.44	54.00	-12.56	---	---	
3 2390.460	46.76	-7.63	39.13	54.00	-14.87	---	---	
4 @2399.820	52.02	-7.63	44.39	54.00	-9.61	---	---	

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

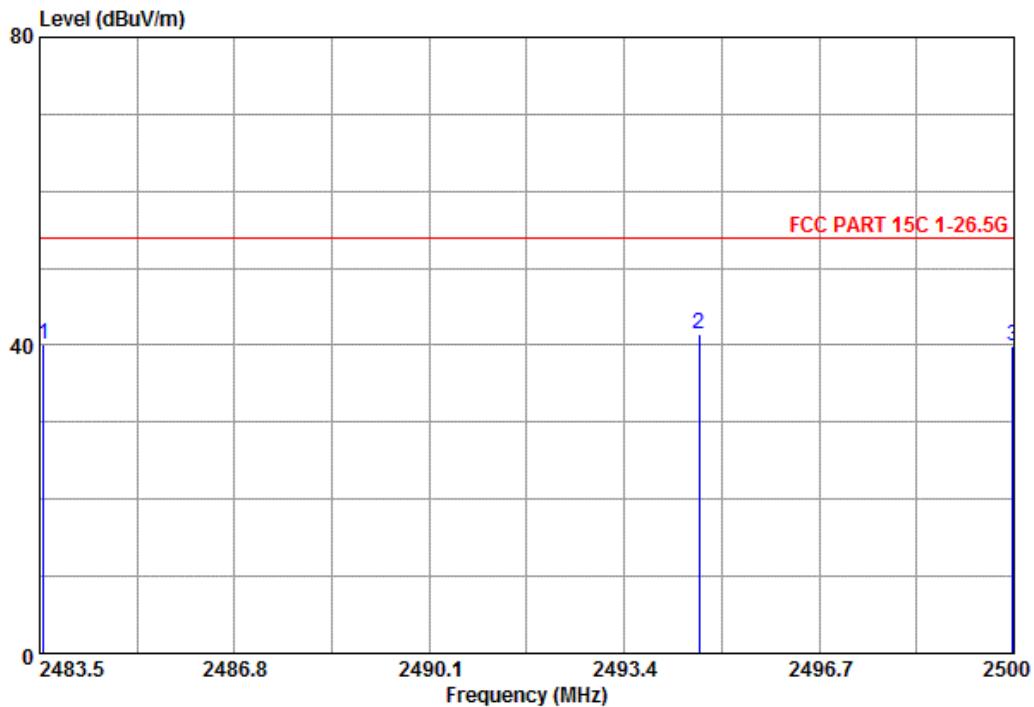
@ :Maximum Data x :Over Limit

Remark :

1. Measuring frequencies from 2310 to 2400 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 78
Test Mode	: Mode 9		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 2483.566	47.46	-7.39	40.07	54.00	-13.93	---	---	
2 @2494.670	48.85	-7.33	41.52	54.00	-12.48	---	---	
3 2499.983	47.20	-7.33	39.87	54.00	-14.13	---	---	

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

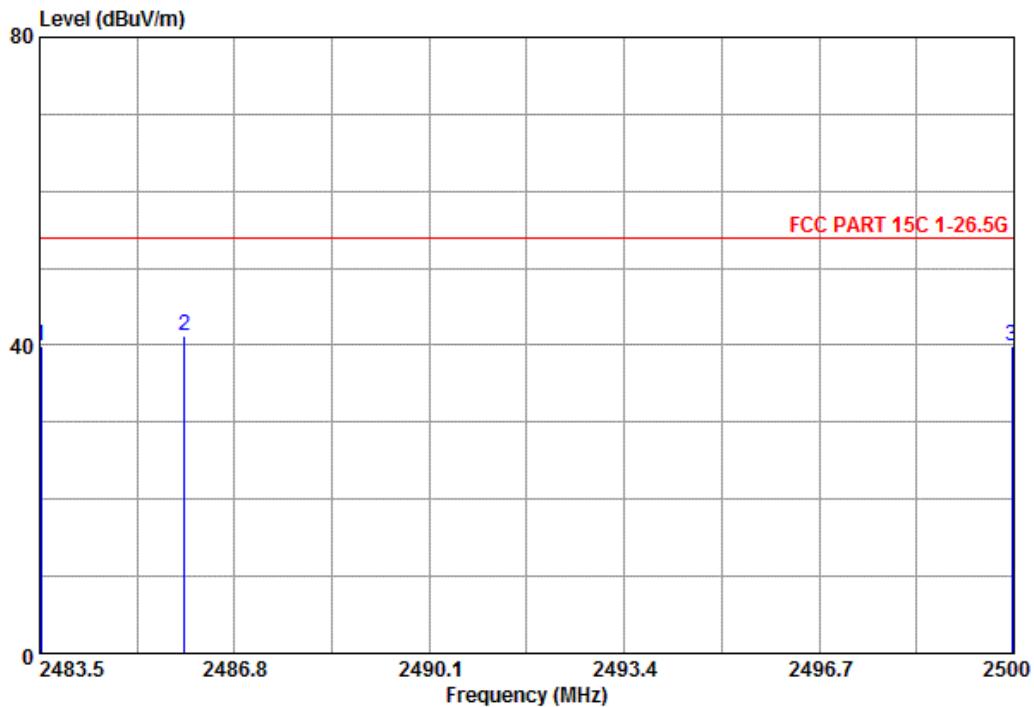
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 2483.5 to 2500 MHz.
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.

Radiated Emission Test Data (Restricted Band Edge)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: 78
Test Mode	: Mode 9		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2483.517	47.19	-7.39	39.80	54.00	-14.20	---	---	
2 @2485.958	48.54	-7.39	41.15	54.00	-12.85	---	---	
3 2499.967	47.19	-7.33	39.86	54.00	-14.14	---	---	

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

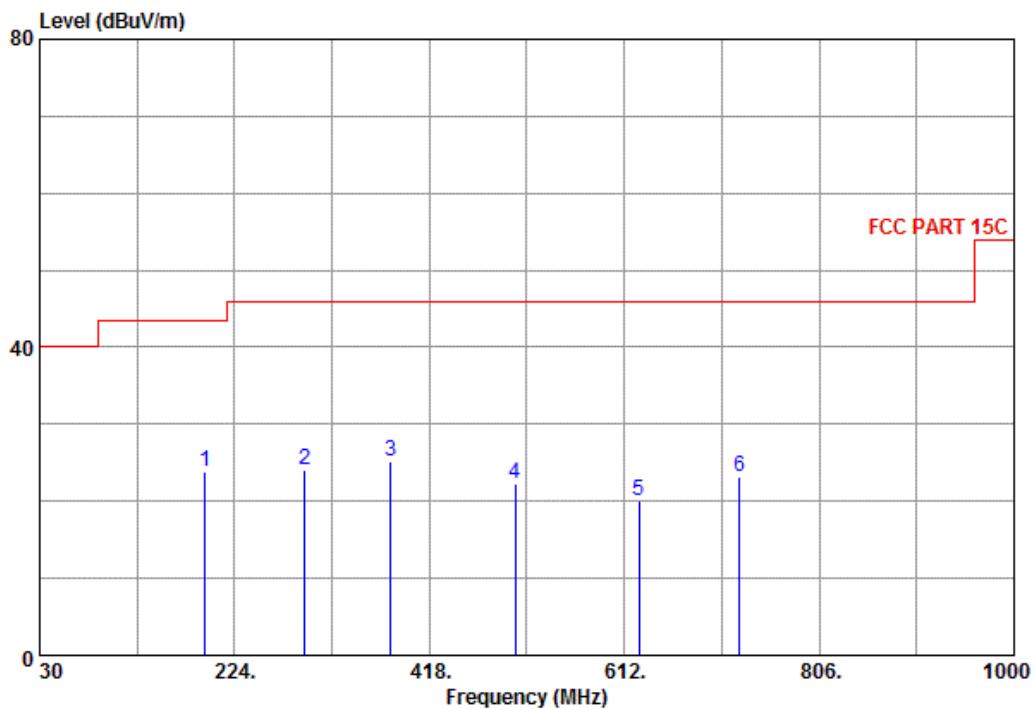
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 2483.5 to 2500 MHz.
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.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : 00
Test Mode : Mode 1



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 @ 194.900	41.13	-17.30	23.83	43.50	-19.67	---	---	
2 293.840	41.63	-17.64	23.99	46.00	-22.01	---	---	
3 379.200	39.26	-14.09	25.17	46.00	-20.83	---	---	
4 503.360	33.40	-11.18	22.22	46.00	-23.78	---	---	
5 626.550	28.86	-8.76	20.10	46.00	-25.90	---	---	
6 726.460	29.76	-6.58	23.18	46.00	-22.82	---	---	

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

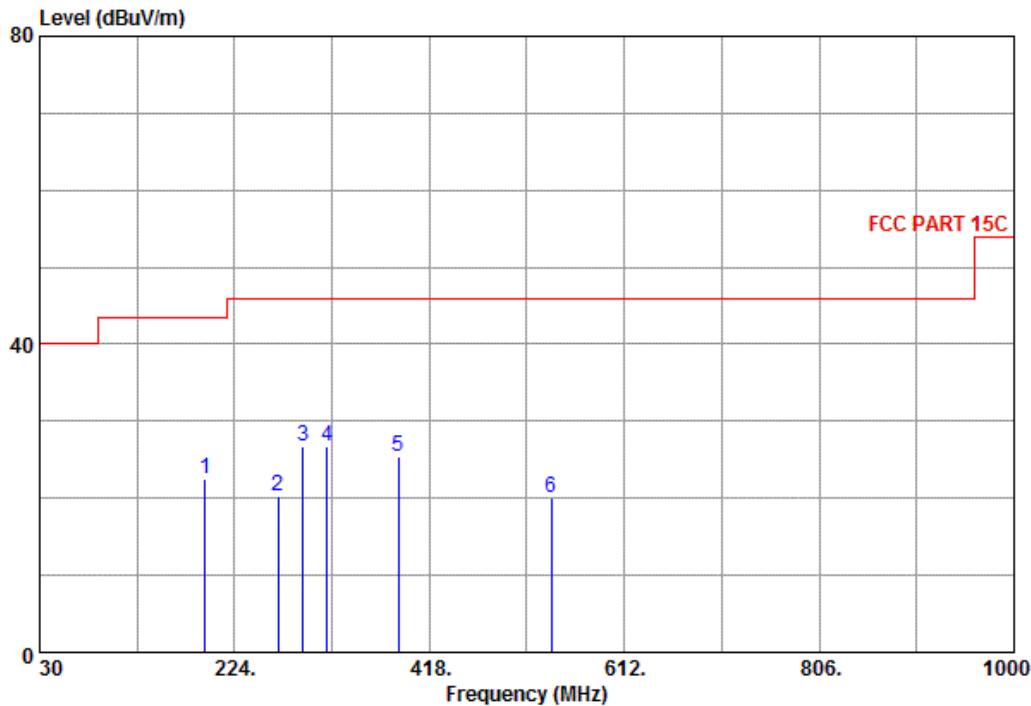
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 00
Test Mode : Mode 1



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 194.900	39.89	-17.30	22.59	43.50	-20.91	---	---	
2 267.650	39.11	-18.92	20.19	46.00	-25.81	---	---	
3 @ 291.900	44.47	-17.71	26.76	46.00	-19.24	---	---	
4 316.150	43.19	-16.49	26.70	46.00	-19.30	---	---	
5 386.960	39.38	-13.94	25.44	46.00	-20.56	---	---	
6 539.250	30.52	-10.57	19.95	46.00	-26.05	---	---	

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

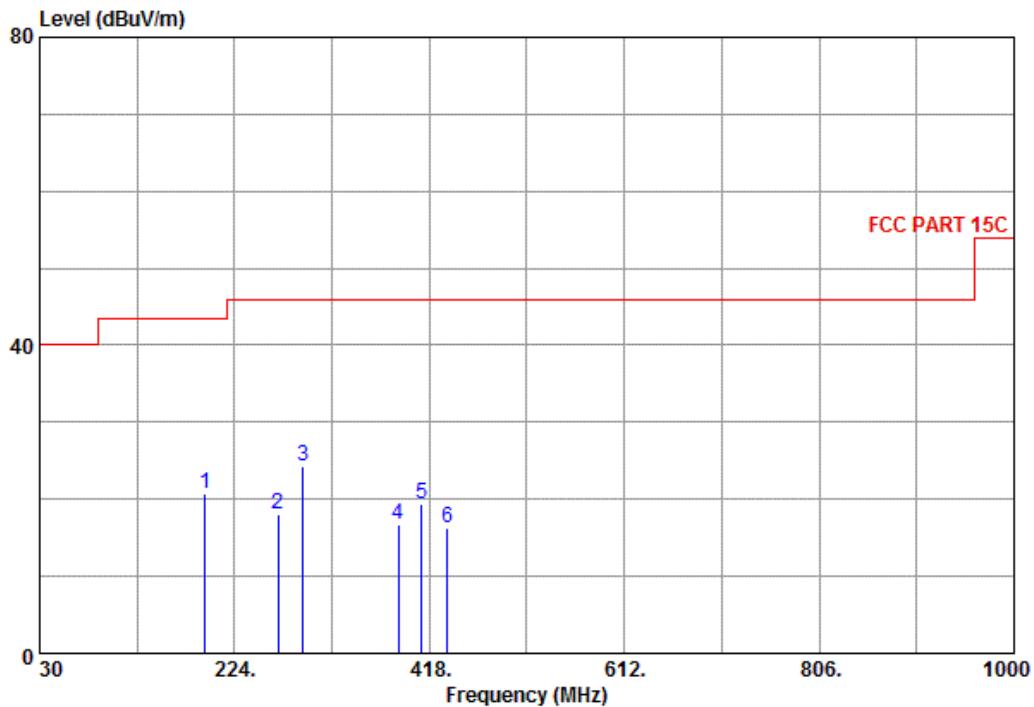
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : 39
Test Mode : Mode 2



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 194.900	37.96	-17.30	20.66	43.50	-22.84	---	---	
2 267.650	36.98	-18.92	18.06	46.00	-27.94	---	---	
3 @ 291.900	41.89	-17.71	24.18	46.00	-21.82	---	---	
4 386.960	30.64	-13.94	16.70	46.00	-29.30	---	---	
5 410.240	34.44	-15.01	19.43	46.00	-26.57	---	---	
6 435.460	31.33	-15.00	16.33	46.00	-29.67	---	---	

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

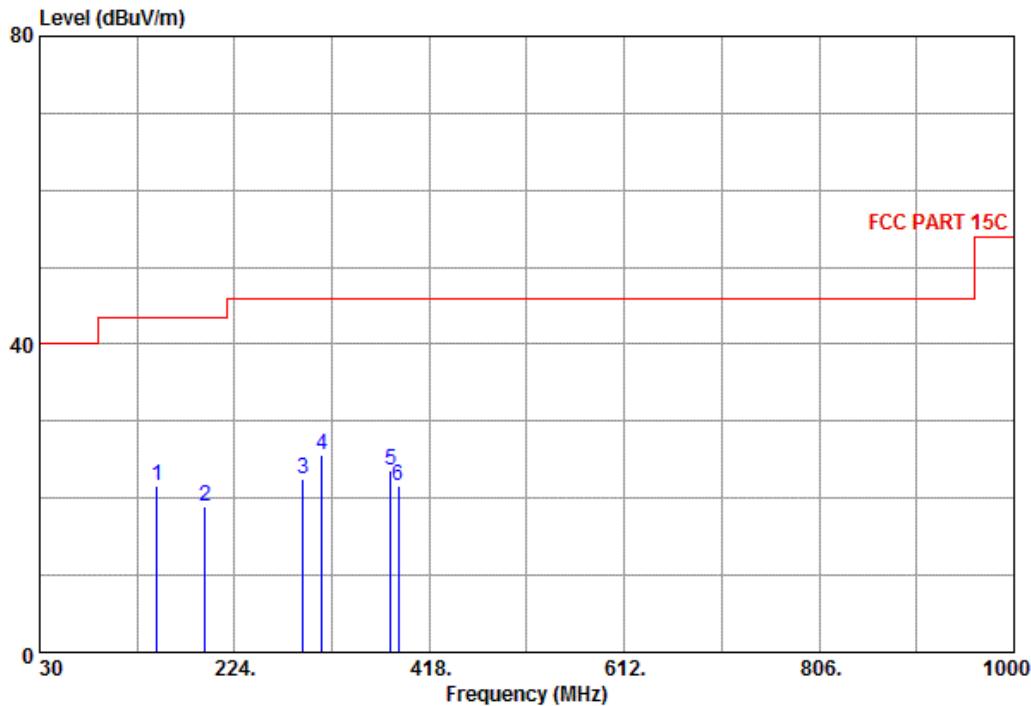
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 39
Test Mode : Mode 2



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 146.400	43.43	-21.78	21.65	43.50	-21.85	---	---	
2 194.900	36.29	-17.30	18.99	43.50	-24.51	---	---	
3 291.900	40.23	-17.71	22.52	46.00	-23.48	---	---	
4 @ 311.300	42.35	-16.75	25.60	46.00	-20.40	---	---	
5 379.200	37.78	-14.09	23.69	46.00	-22.31	---	---	
6 386.960	35.59	-13.94	21.65	46.00	-24.35	---	---	

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

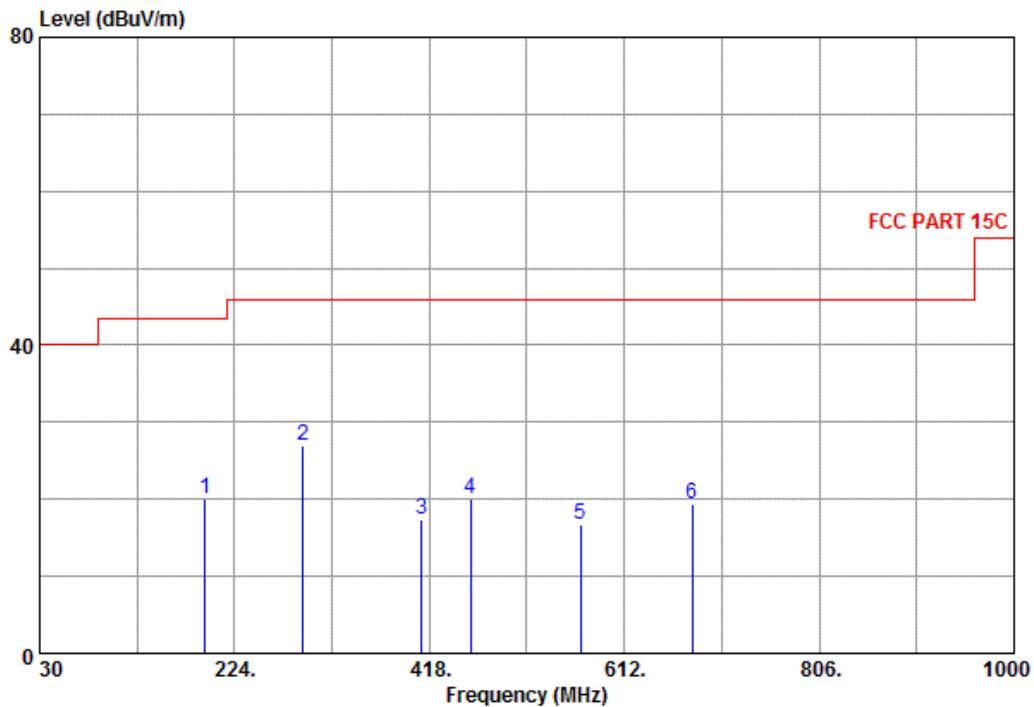
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : 78
Test Mode : Mode 3



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 194.900	37.40	-17.30	20.10	43.50	-23.40	---	---	
2 @ 291.900	44.59	-17.71	26.88	46.00	-19.12	---	---	
3 410.240	32.49	-15.01	17.48	46.00	-28.52	---	---	
4 458.740	32.76	-12.80	19.96	46.00	-26.04	---	---	
5 568.350	26.93	-10.19	16.74	46.00	-29.26	---	---	
6 679.900	26.76	-7.38	19.38	46.00	-26.62	---	---	

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

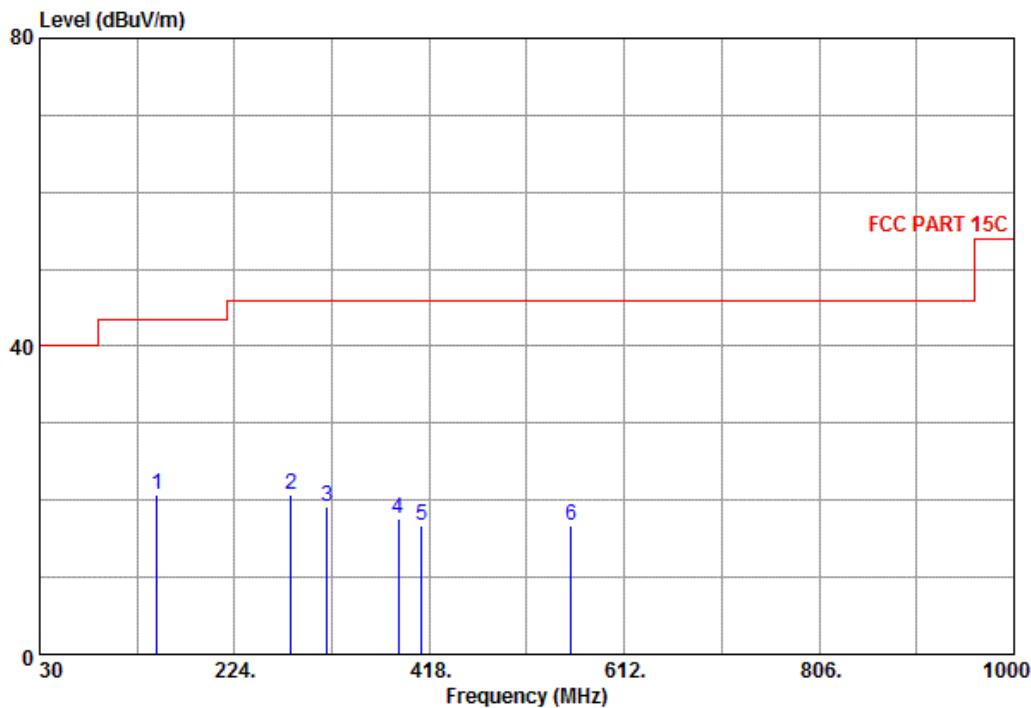
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 78
Test Mode : Mode 3



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 @ 146.400	42.46	-21.78	20.68	43.50	-22.82	---	---	
2 280.260	39.08	-18.30	20.78	46.00	-25.22	---	---	
3 316.150	35.66	-16.49	19.17	46.00	-26.83	---	---	
4 386.960	31.64	-13.94	17.70	46.00	-28.30	---	---	
5 410.240	31.63	-15.01	16.62	46.00	-29.38	---	---	
6 558.650	27.16	-10.37	16.79	46.00	-29.21	---	---	

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

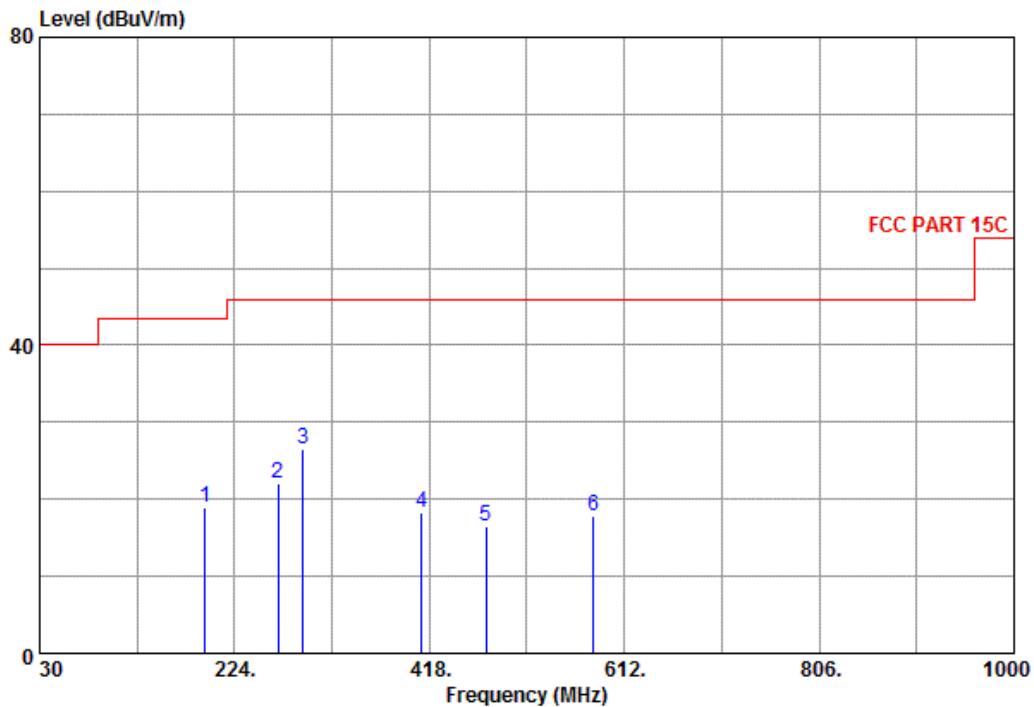
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 00
Test Mode	: Mode 4		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 194.900	36.20	-17.30	18.90	43.50	-24.60	---	---	
2 267.650	40.95	-18.92	22.03	46.00	-23.97	---	---	
3 @ 291.900	44.23	-17.71	26.52	46.00	-19.48	---	---	
4 410.240	33.38	-15.01	18.37	46.00	-27.63	---	---	
5 474.260	29.13	-12.72	16.41	46.00	-29.59	---	---	
6 580.960	27.63	-9.89	17.74	46.00	-28.26	---	---	

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

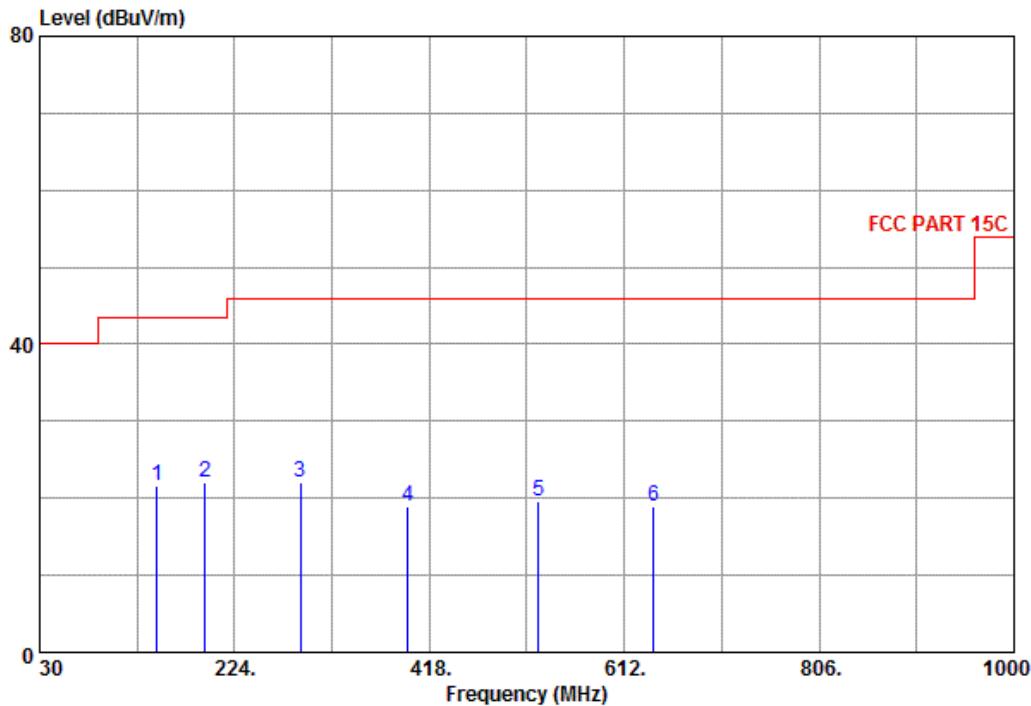
@ :Maximum Data x :Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 00
Test Mode : Mode 4



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 146.400	43.43	-21.78	21.65	43.50	-21.85	---	---	
2 @ 194.900	39.34	-17.30	22.04	43.50	-21.46	---	---	
3 289.960	39.90	-17.78	22.12	46.00	-23.88	---	---	
4 396.660	32.86	-13.86	19.00	46.00	-27.00	---	---	
5 526.640	30.15	-10.61	19.54	46.00	-26.46	---	---	
6 641.100	27.50	-8.56	18.94	46.00	-27.06	---	---	

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

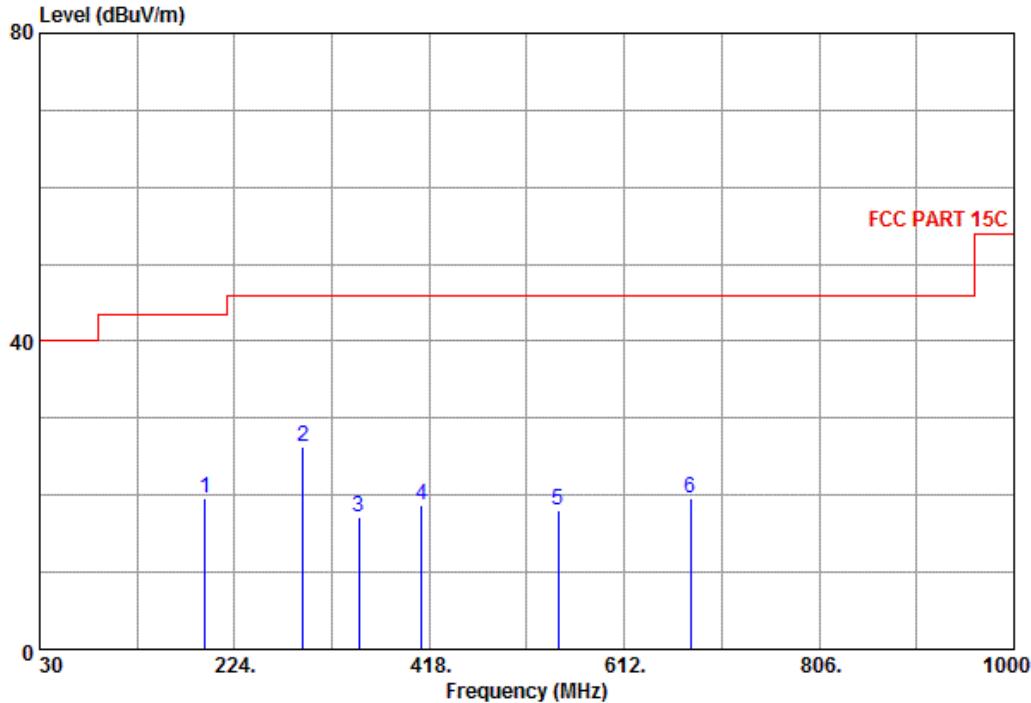
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 39
Test Mode	: Mode 5		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 194.900	36.82	-17.30	19.52	43.50	-23.98	---	---	
2 @ 291.900	44.02	-17.71	26.31	46.00	-19.69	---	---	
3 348.160	32.05	-14.86	17.19	46.00	-28.81	---	---	
4 410.240	33.66	-15.01	18.65	46.00	-27.35	---	---	
5 546.040	28.60	-10.55	18.05	46.00	-27.95	---	---	
6 677.960	26.93	-7.40	19.53	46.00	-26.47	---	---	

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

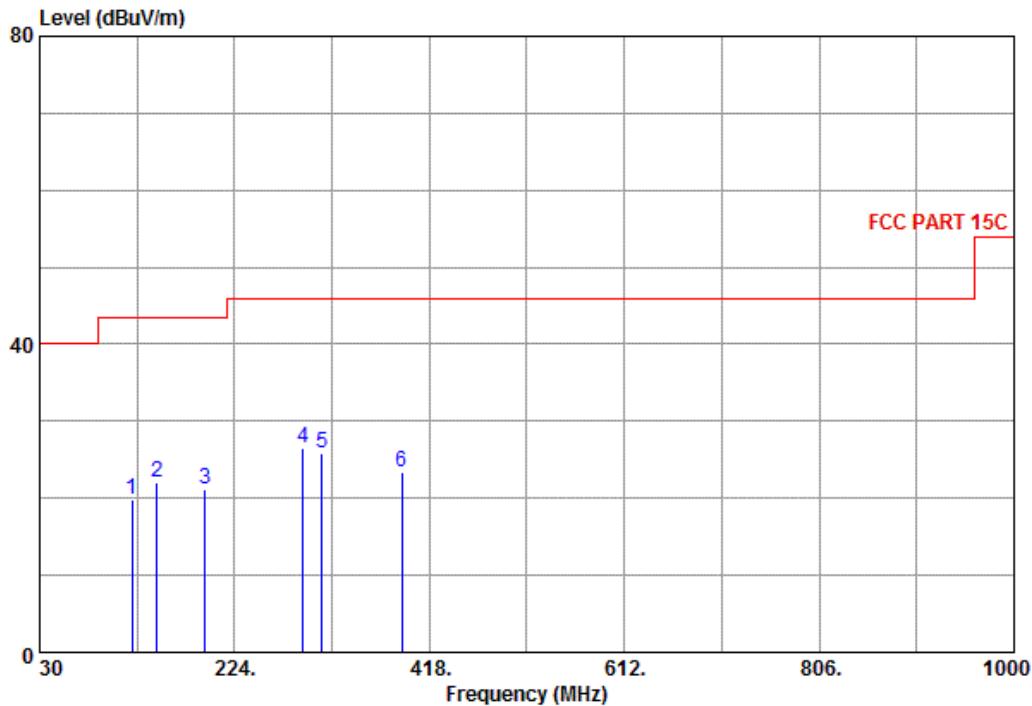
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 38
Test Mode : Mode 5



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1	122.150	42.52	-22.61	19.91	43.50	-23.59	---	---	
2	146.400	43.77	-21.78	21.99	43.50	-21.51	---	---	
3	194.900	38.42	-17.30	21.12	43.50	-22.38	---	---	
4	291.900	44.27	-17.71	26.56	46.00	-19.44	---	---	
5	311.300	42.68	-16.75	25.93	46.00	-20.07	---	---	
6	390.840	37.30	-13.89	23.41	46.00	-22.59	---	---	

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

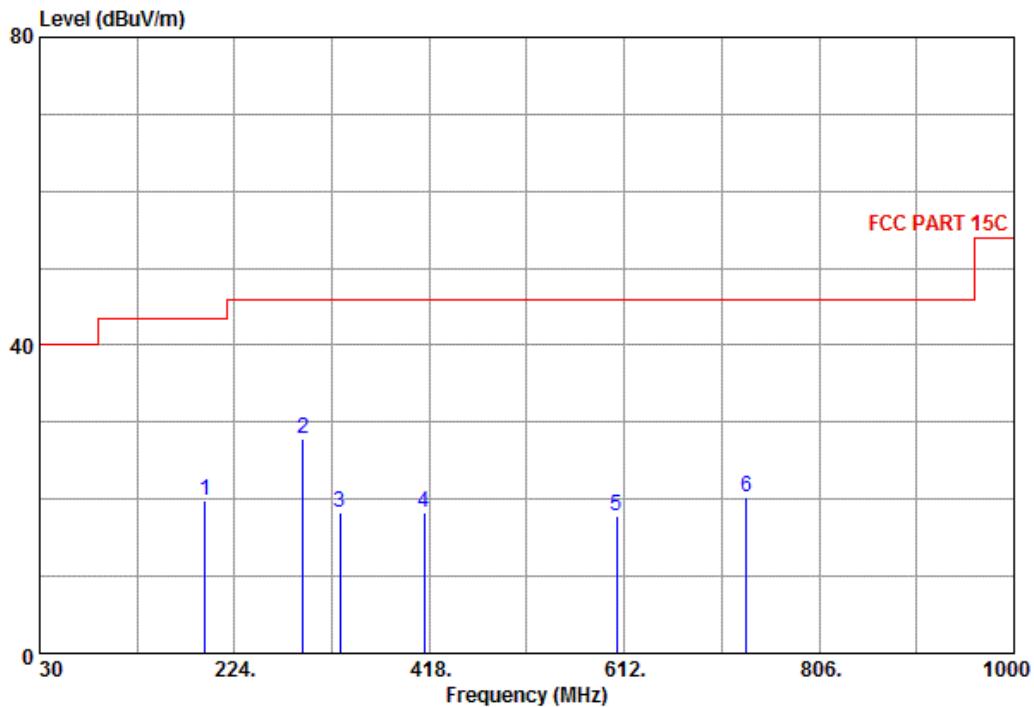
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 79
Test Mode	: Mode 6		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 194.900	37.19	-17.30	19.89	43.50	-23.61	---	---	
2 @ 291.900	45.62	-17.71	27.91	46.00	-18.09	---	---	
3 328.760	34.05	-15.72	18.33	46.00	-27.67	---	---	
4 413.150	33.61	-15.33	18.28	46.00	-27.72	---	---	
5 604.240	27.13	-9.23	17.90	46.00	-28.10	---	---	
6 733.250	26.86	-6.53	20.33	46.00	-25.67	---	---	

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

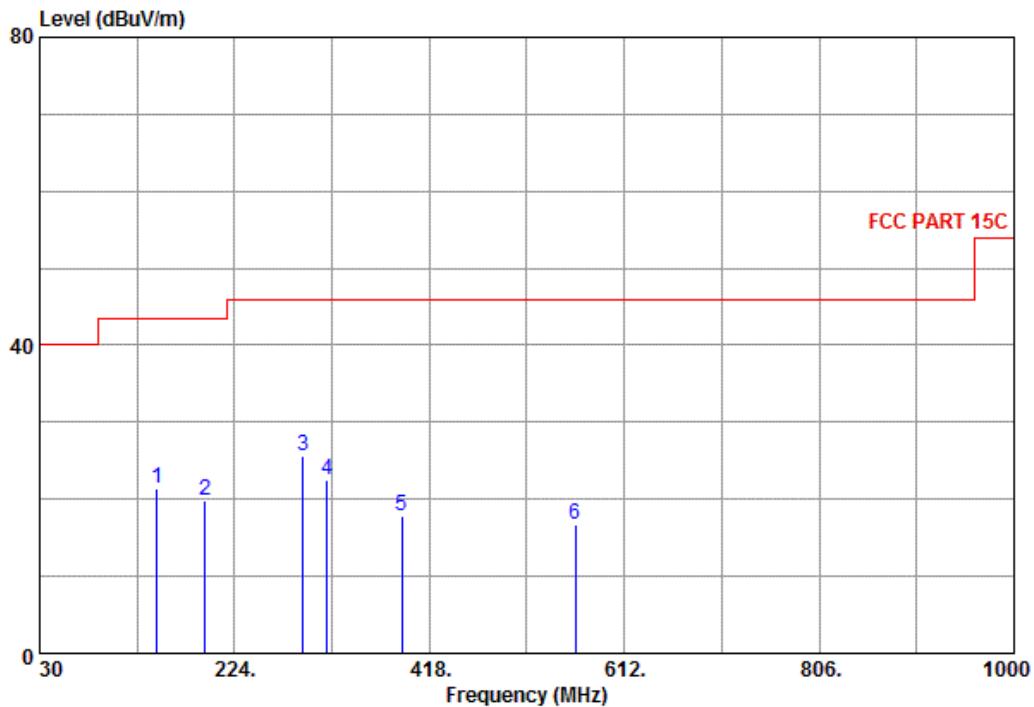
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: 79
Test Mode	: Mode 6		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 146.400	43.10	-21.78	21.32	43.50	-22.18	---	---	
2 194.900	37.06	-17.30	19.76	43.50	-23.74	---	---	
3 @ 291.900	43.25	-17.71	25.54	46.00	-20.46	---	---	
4 316.150	38.90	-16.49	22.41	46.00	-23.59	---	---	
5 390.840	31.61	-13.89	17.72	46.00	-28.28	---	---	
6 563.500	27.08	-10.28	16.80	46.00	-29.20	---	---	

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

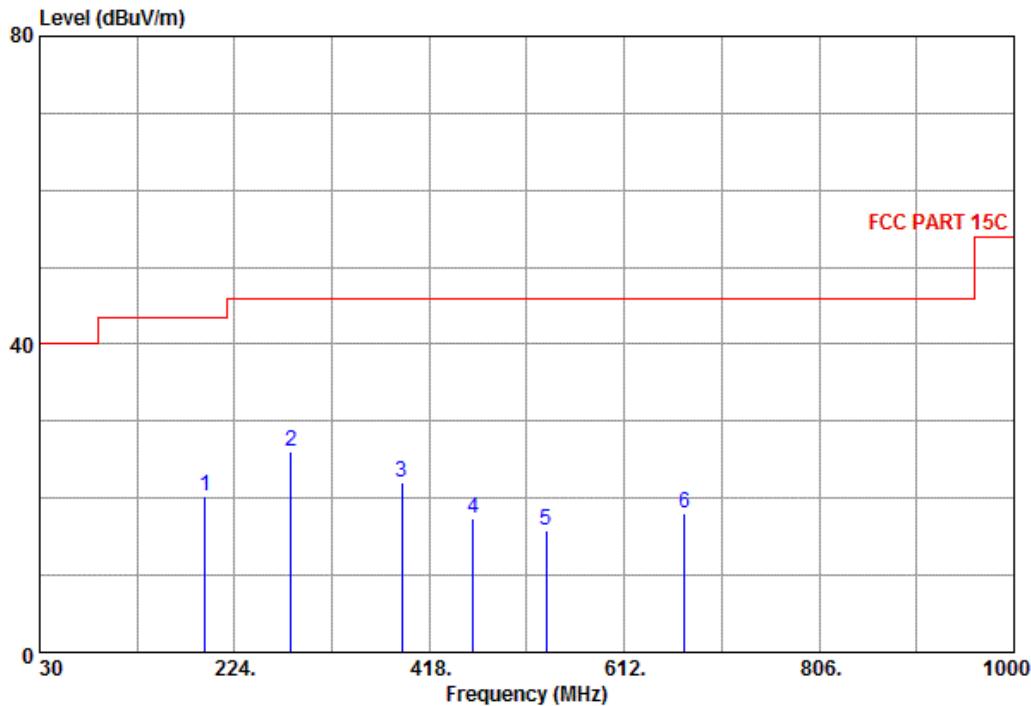
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : 00
Test Mode : Mode 7



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _B uV	dB	dB _B uV/m	dB _B uV/m	dB			
1 194.900	37.58	-17.30	20.28	43.50	-23.22	---	---	
2 @ 280.260	44.43	-18.30	26.13	46.00	-19.87	---	---	
3 390.840	35.96	-13.89	22.07	46.00	-23.93	---	---	
4 461.650	30.17	-12.79	17.38	46.00	-28.62	---	---	
5 534.400	26.45	-10.59	15.86	46.00	-30.14	---	---	
6 672.140	25.69	-7.55	18.14	46.00	-27.86	---	---	

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

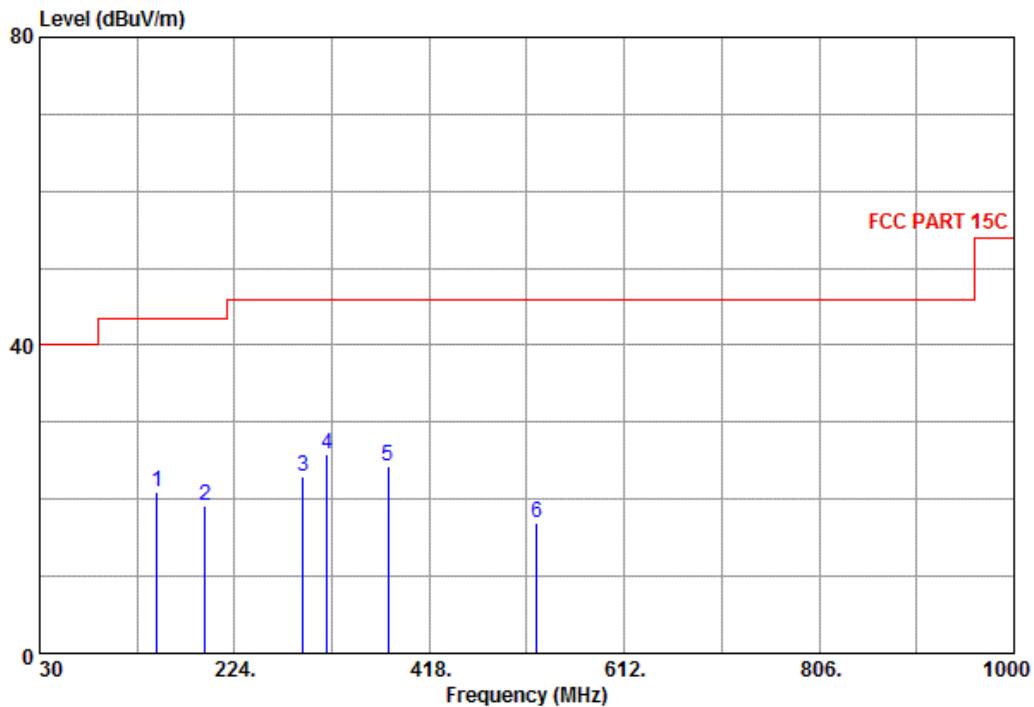
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 30 MHz to 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 00
Test Mode : Mode 7



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1	146.400	42.77	-21.78	20.99	43.50	-22.51	---	---	
2	194.900	36.41	-17.30	19.11	43.50	-24.39	---	---	
3	291.900	40.60	-17.71	22.89	46.00	-23.11	---	---	
4	316.150	42.26	-16.49	25.77	46.00	-20.23	---	---	
5	377.260	38.51	-14.16	24.35	46.00	-21.65	---	---	
6	524.700	27.58	-10.62	16.96	46.00	-29.04	---	---	

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

@ : Maximum Data x : Over Limit

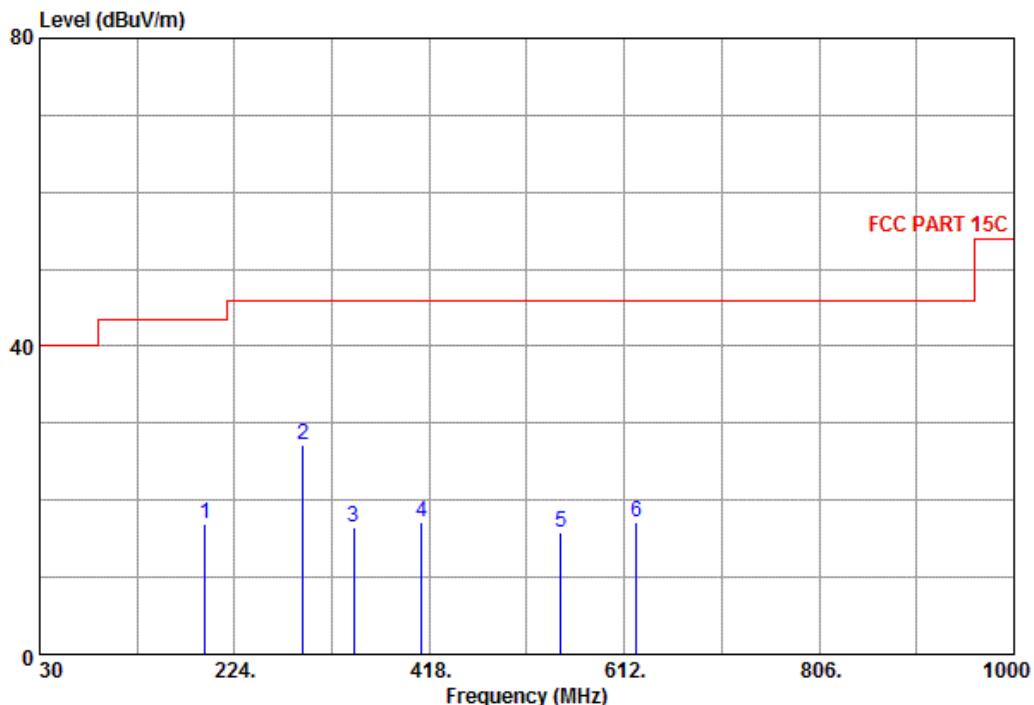
Remark :

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Horizontal
Test Mode : Mode 8

Humidity : 35%
Tested by : Kidd Liao
Channel : 39



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 194.900	34.34	-17.30	17.04	43.50	-26.46	---	---	
2 @ 291.900	44.87	-17.71	27.16	46.00	-18.84	---	---	
3 342.340	31.42	-14.90	16.52	46.00	-29.48	---	---	
4 410.240	32.25	-15.01	17.24	46.00	-28.76	---	---	
5 548.950	26.47	-10.54	15.93	46.00	-30.07	---	---	
6 623.640	26.02	-8.81	17.21	46.00	-28.79	---	---	

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

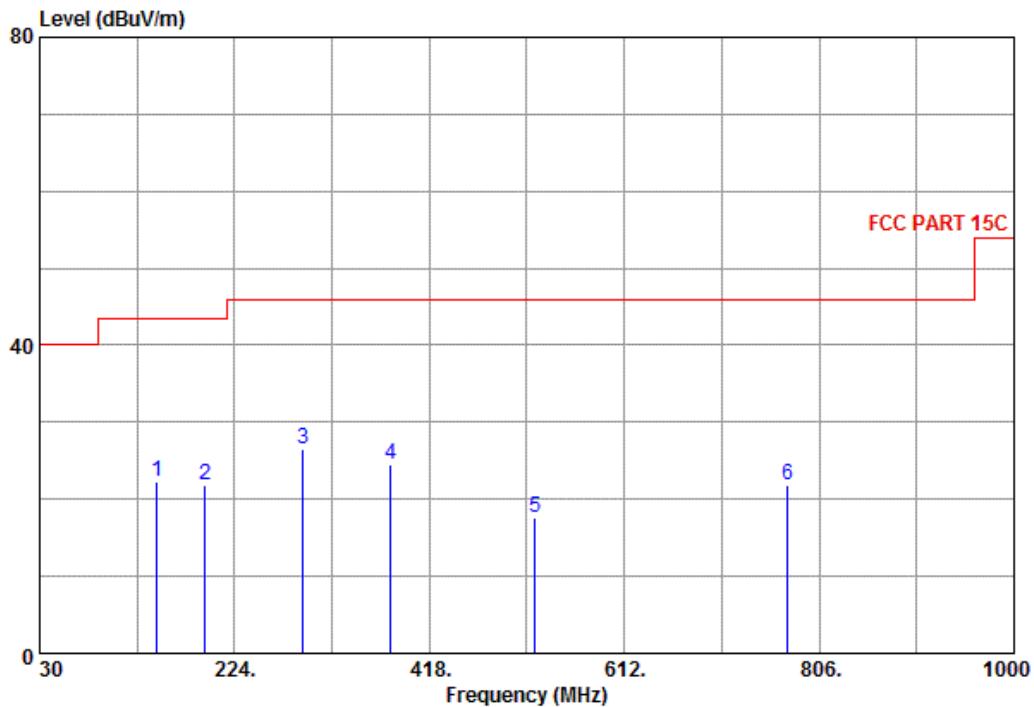
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 39
Test Mode : Mode 8



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 146.400	44.08	-21.78	22.30	43.50	-21.20	---	---	
2 194.900	39.05	-17.30	21.75	43.50	-21.75	---	---	
3 @ 291.900	44.18	-17.71	26.47	46.00	-19.53	---	---	
4 379.200	38.57	-14.09	24.48	46.00	-21.52	---	---	
5 522.760	28.31	-10.67	17.64	46.00	-28.36	---	---	
6 774.960	28.06	-6.16	21.90	46.00	-24.10	---	---	

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

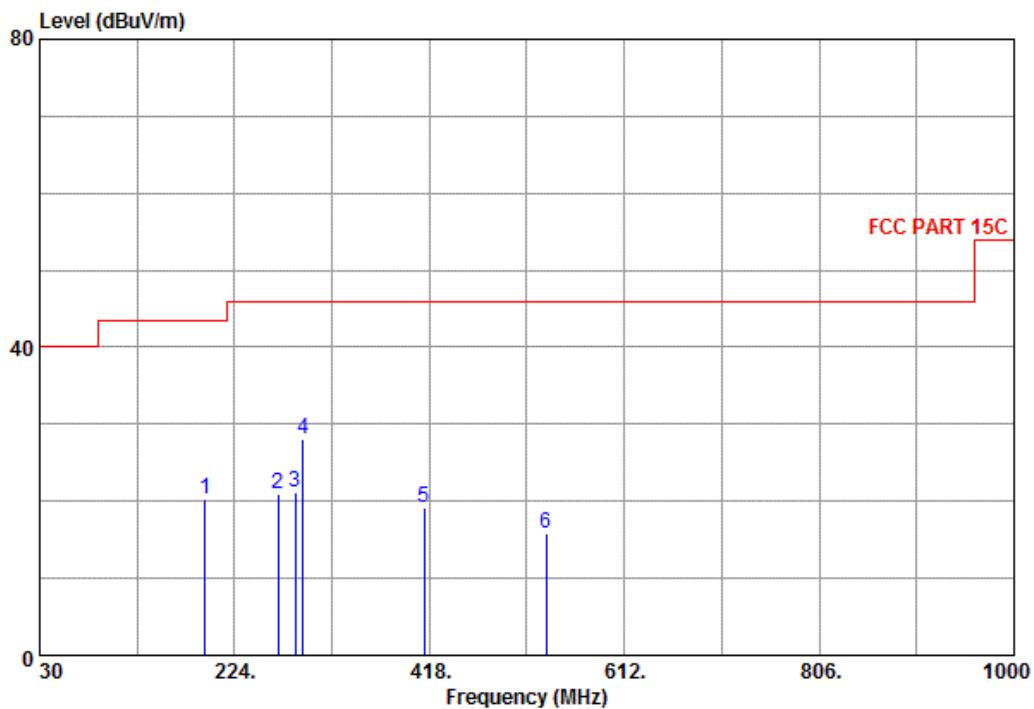
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 78
Test Mode	: Mode 9		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 194.900	37.58	-17.30	20.28	43.50	-23.22	---	---	
2 267.650	39.96	-18.92	21.04	46.00	-24.96	---	---	
3 284.140	39.22	-18.10	21.12	46.00	-24.88	---	---	
4 @ 291.900	45.81	-17.71	28.10	46.00	-17.90	---	---	
5 413.150	34.51	-15.33	19.18	46.00	-26.82	---	---	
6 534.400	26.31	-10.59	15.72	46.00	-30.28	---	---	

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

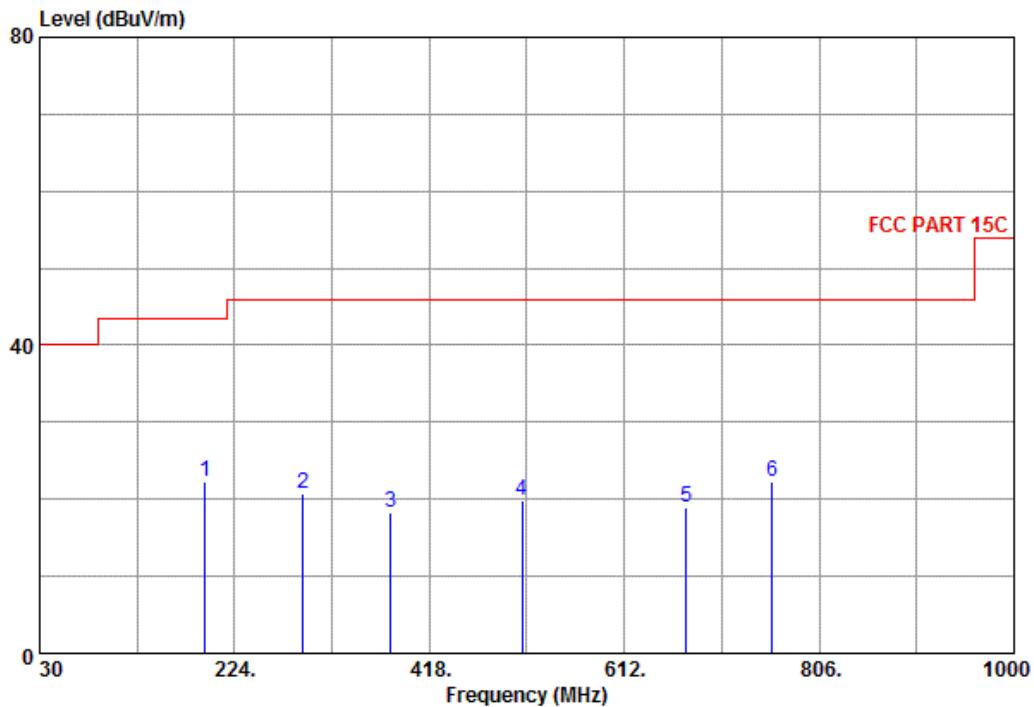
@ :Maximum Data x :Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 78
Test Mode : Mode 9



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 @ 194.900	39.60	-17.30	22.30	43.50	-21.20	---	---	
2 291.900	38.44	-17.71	20.73	46.00	-25.27	---	---	
3 379.200	32.35	-14.09	18.26	46.00	-27.74	---	---	
4 510.150	30.81	-11.00	19.81	46.00	-26.19	---	---	
5 674.080	26.46	-7.47	18.99	46.00	-27.01	---	---	
6 759.440	28.68	-6.32	22.36	46.00	-23.64	---	---	

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

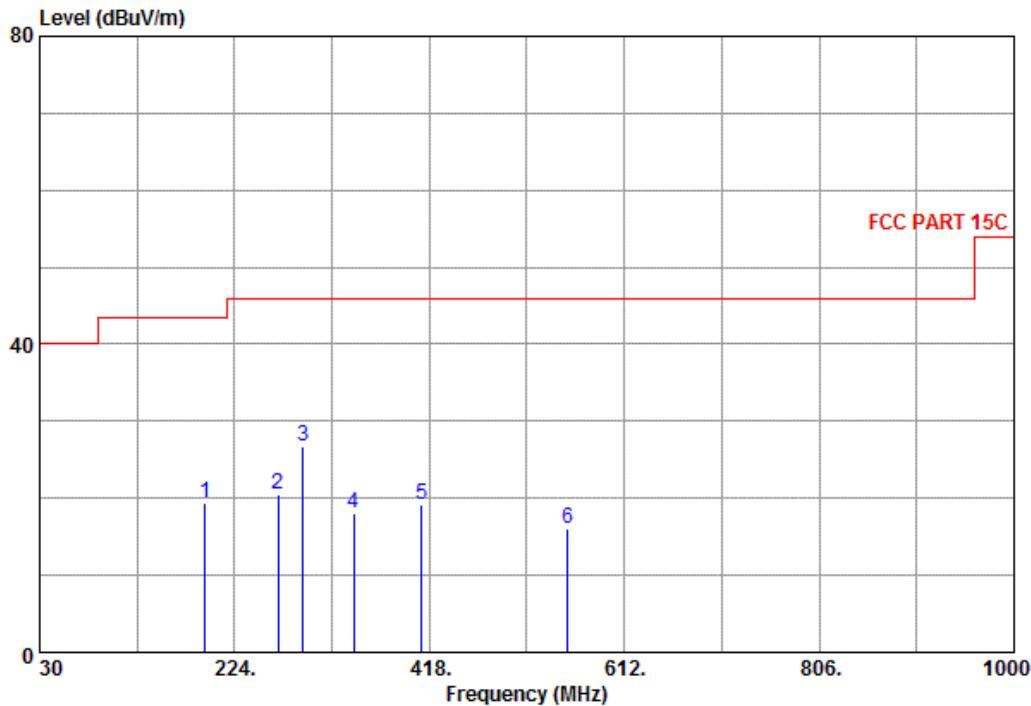
@ : Maximum Data x : Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : RX
Test Mode : Mode 10



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _B uV	dB	dB _B uV/m	dB _B uV/m	dB			
1 194.900	36.64	-17.30	19.34	43.50	-24.16	---	---	
2 267.650	39.45	-18.92	20.53	46.00	-25.47	---	---	
3 @ 291.900	44.47	-17.71	26.76	46.00	-19.24	---	---	
4 342.340	32.88	-14.90	17.98	46.00	-28.02	---	---	
5 410.240	34.09	-15.01	19.08	46.00	-26.92	---	---	
6 555.740	26.57	-10.43	16.14	46.00	-29.86	---	---	

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

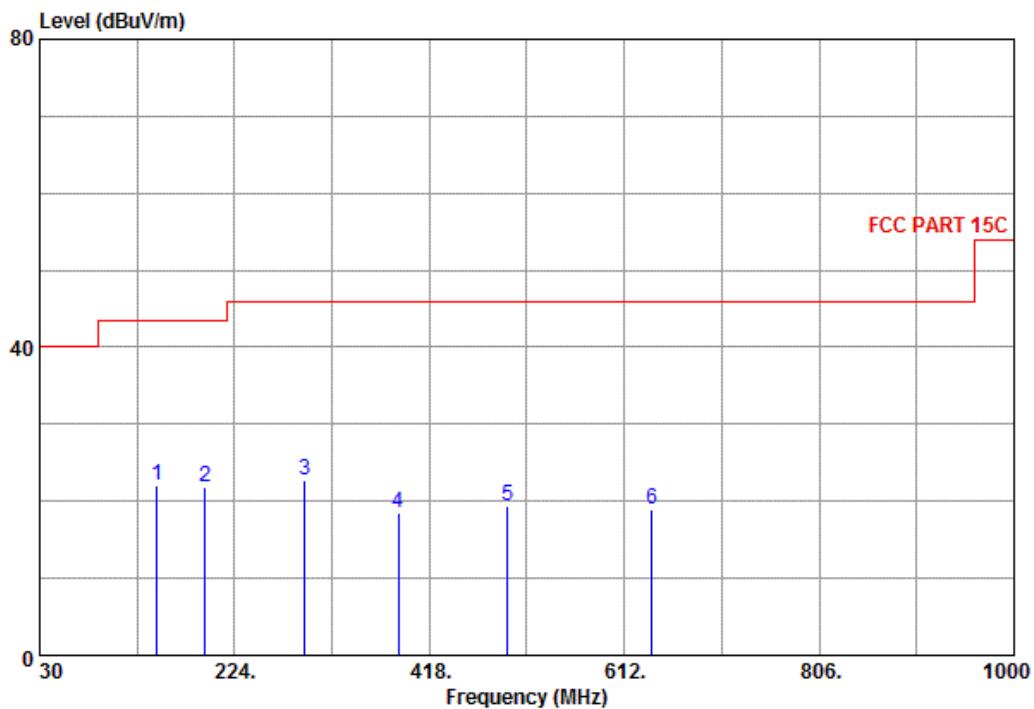
@ : Maximum Data x : Over Limit

Remark :

1. Measuring frequencies from 30 MHz to 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Below 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Vertical	Channel	: RX
Test Mode	: Mode 10		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 @ 146.400	43.94	-21.78	22.16	43.50	-21.34	---	---	
2 194.900	39.23	-17.30	21.93	43.50	-21.57	---	---	
3 293.840	40.48	-17.64	22.84	46.00	-23.16	---	---	
4 386.960	32.45	-13.94	18.51	46.00	-27.49	---	---	
5 495.600	30.91	-11.53	19.38	46.00	-26.62	---	---	
6 639.160	27.56	-8.58	18.98	46.00	-27.02	---	---	

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

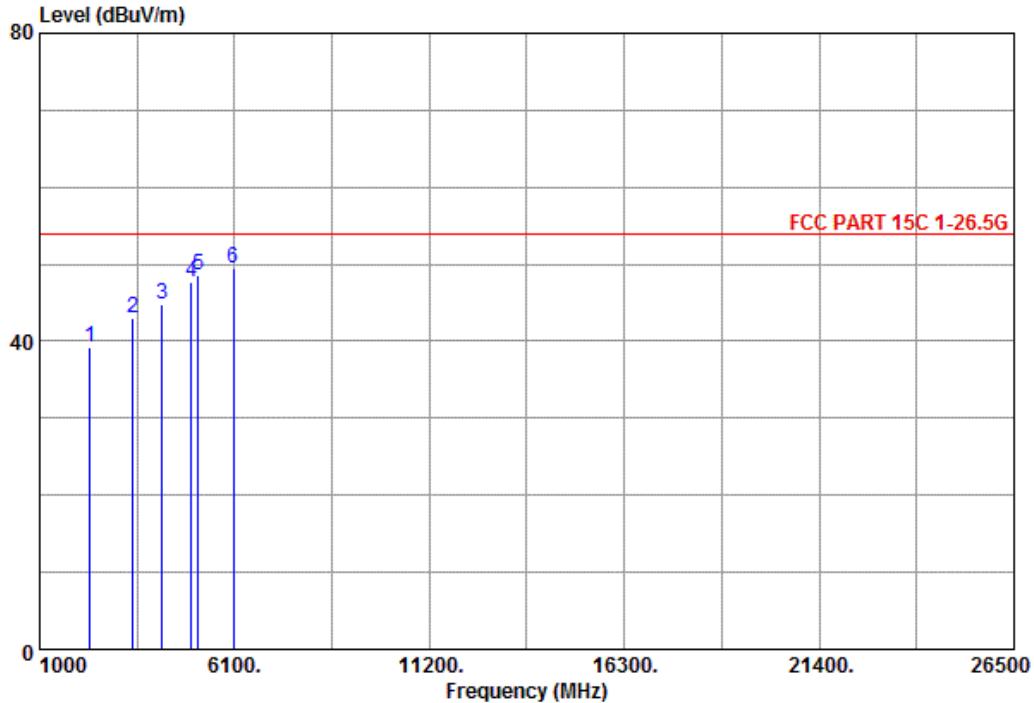
@ :Maximum Data x :Over Limit

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 Q.P. 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. The IF bandwidth of SPA between 30 MHz to 1 GHz was 100 kHz.

Radiated Emission Test Data (Above 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 00
Test Mode	: Mode 1		



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1 2326.000	47.08	-7.84	39.24	54.00	-14.76	---	---	
2 3448.000	47.64	-4.56	43.08	54.00	-10.92	---	---	
3 4213.000	46.88	-2.04	44.84	54.00	-9.16	---	---	
4 4978.000	46.44	1.22	47.66	54.00	-6.34	---	---	
5 5156.500	46.87	1.69	48.56	54.00	-5.44	---	---	
6 @6074.500	45.40	4.07	49.47	54.00	-4.53	---	---	

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

@ :Maximum Data x :Over Limit

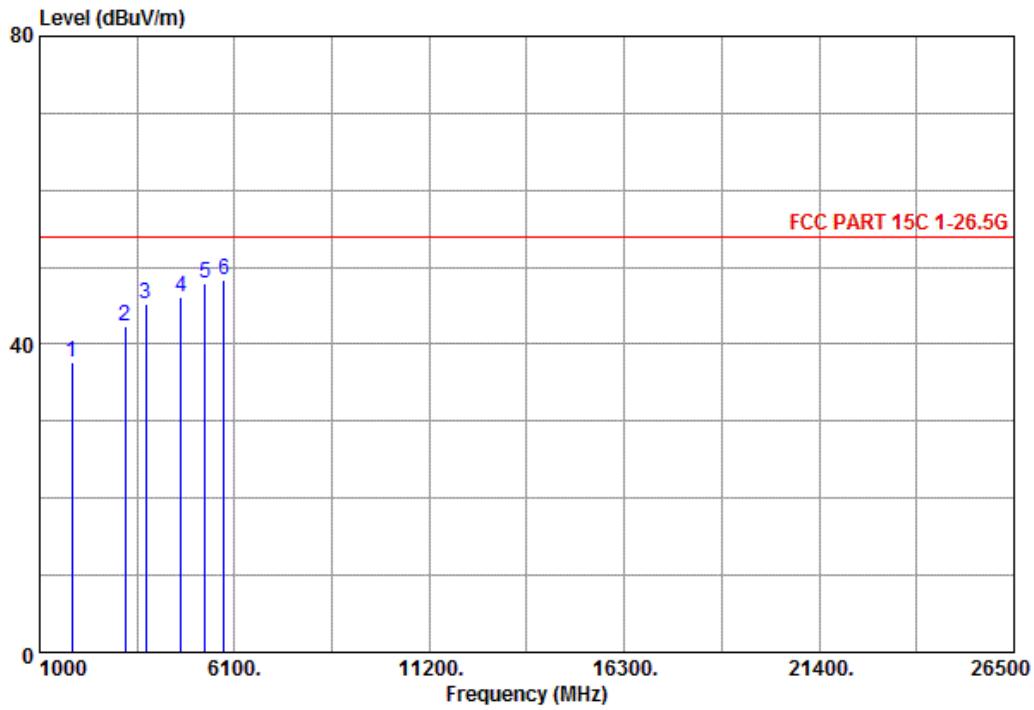
Remark :

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 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.
- 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.
- All readings are Peak values. None of the peak value reading exceeds the A.V. limit. Hence, A.V. reading was not measured.
- Spectrum setting:**
 - Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
 - Average Setting 1GHz to 10th harmonics of fundamental, RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 1

Humidity : 35%
Tested by : Kidd Liao
Channel : 00



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 1841.500	47.17	-9.47	37.70	54.00	-16.30	---	---	
2 3244.000	47.39	-5.15	42.24	54.00	-11.76	---	---	
3 3779.500	48.79	-3.58	45.21	54.00	-8.79	---	---	
4 4697.500	46.10	0.07	46.17	54.00	-7.83	---	---	
5 5335.000	45.76	2.17	47.93	54.00	-6.07	---	---	
6 605819.500	45.02	3.43	48.45	54.00	-5.55	---	---	

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

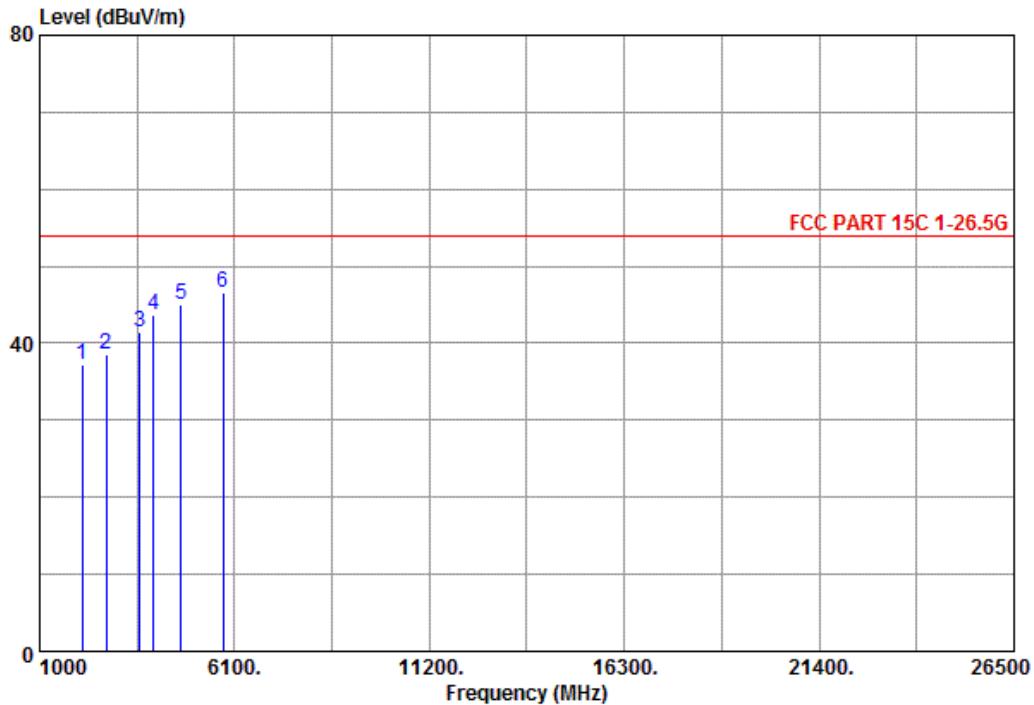
@ : Maximum Data x : Over Limit

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : 39
Test Mode : Mode 2



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1	2122.000	45.74	-8.44	37.30	54.00	-16.70	---	---	
2	2734.000	45.19	-6.64	38.55	54.00	-15.45	---	---	
3	3626.500	45.48	-4.07	41.41	54.00	-12.59	---	---	
4	3983.500	46.61	-2.99	43.62	54.00	-10.38	---	---	
5	4697.500	44.91	0.07	44.98	54.00	-9.02	---	---	
6	05794.000	43.33	3.34	46.67	54.00	-7.33	---	---	

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

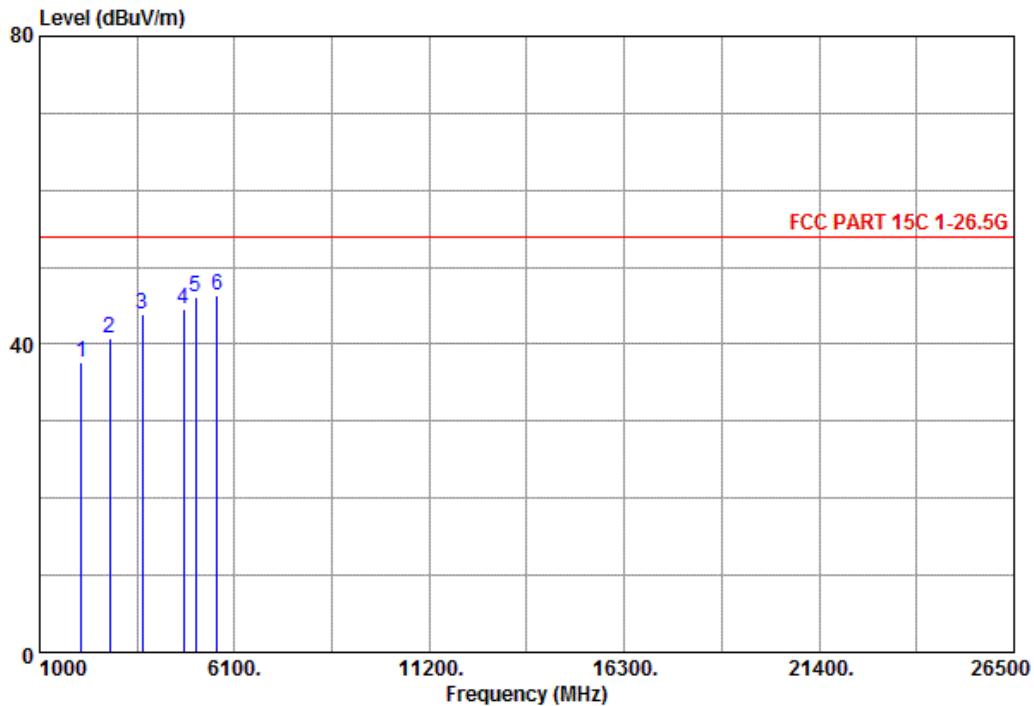
@ : Maximum Data x : Over Limit

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Vertical Channel : 39
Test Mode : Mode 2



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	2096.500	46.25	-8.54	37.71	54.00	-16.29	---	---	
2	2836.000	47.16	-6.34	40.82	54.00	-13.18	---	---	
3	3677.500	47.73	-3.87	43.86	54.00	-10.14	---	---	
4	4774.000	44.24	0.35	44.59	54.00	-9.41	---	---	
5	5080.000	44.64	1.52	46.16	54.00	-7.84	---	---	
6	5641.000	43.32	2.96	46.28	54.00	-7.72	---	---	

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

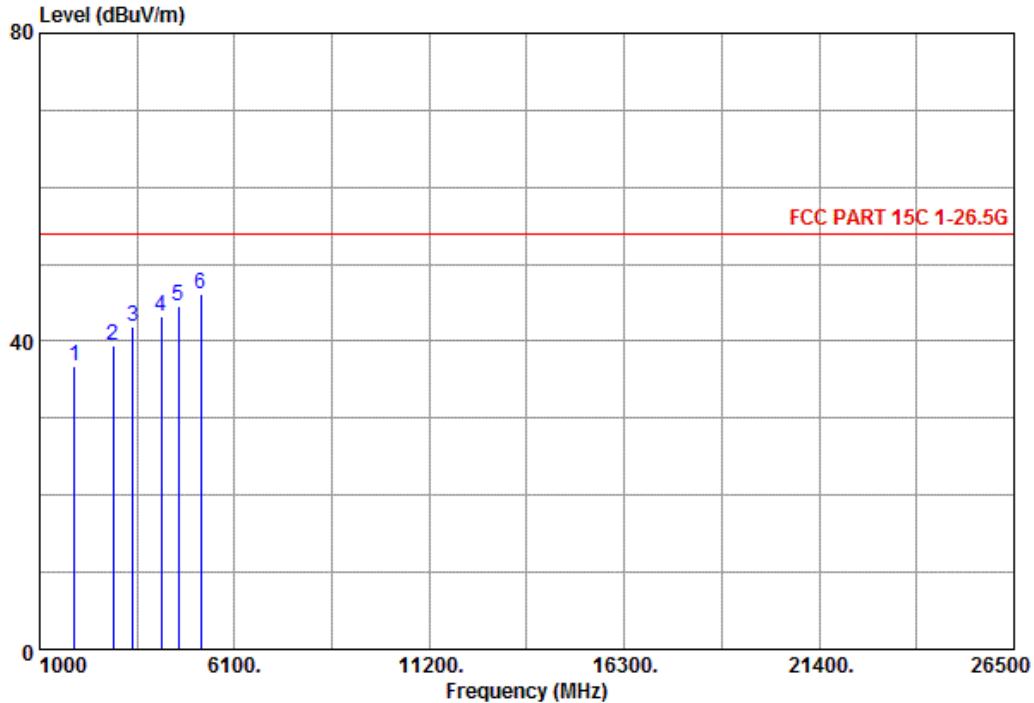
@ : Maximum Data x : Over Limit

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : 78
Test Mode : Mode 3



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dB _{UV}	dB	dB _{UV} /m	dB _{UV} /m	dB			
1	1918.000	45.90	-9.16	36.74	54.00	-17.26	---	---	
2	2912.500	45.60	-6.14	39.46	54.00	-14.54	---	---	
3	3448.000	46.51	-4.56	41.95	54.00	-12.05	---	---	
4	4187.500	45.40	-2.12	43.28	54.00	-10.72	---	---	
5	4621.000	44.81	-0.30	44.51	54.00	-9.49	---	---	
6	05207.500	44.33	1.86	46.19	54.00	-7.81	---	---	

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

@ : Maximum Data x : Over Limit

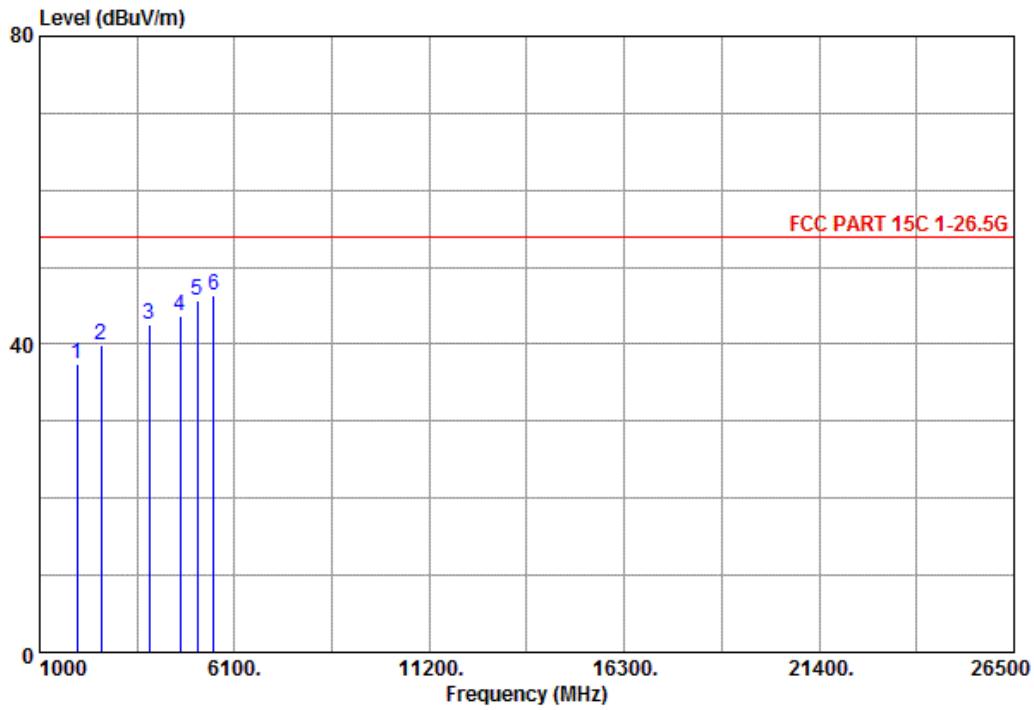
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 3

Humidity : 35%
Tested by : Kidd Liao
Channel : 78



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 1969.000	46.32	-8.94	37.38	54.00	-16.62	---	---	
2 2606.500	46.90	-7.04	39.86	54.00	-14.14	---	---	
3 3856.000	45.97	-3.38	42.59	54.00	-11.41	---	---	
4 4672.000	43.74	-0.08	43.66	54.00	-10.34	---	---	
5 5131.000	44.13	1.65	45.78	54.00	-8.22	---	---	
6 55564.500	43.64	2.73	46.37	54.00	-7.63	---	---	

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

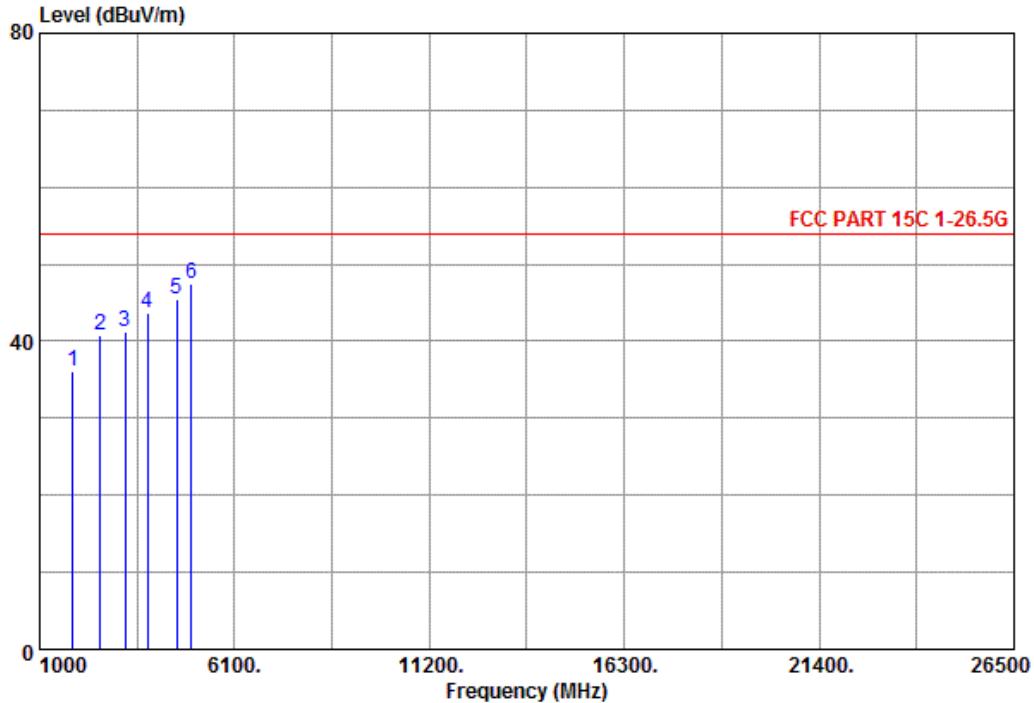
@ : Maximum Data x : Over Limit

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:
 - i. Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
 - ii. Average Setting 1GHz to 10th harmonics of fundamental, RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

Radiated Emission Test Data (Above 1 GHz)

Temperature	: 23.9°C	Humidity	: 35%
Test Date	: 21-Mar-2014	Tested by	: Kidd Liao
Polarization	: Horizontal	Channel	: 00
Test Mode	: Mode 4		



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1867.000	45.50	-9.41	36.09	54.00	-17.91	---	---	
2	2581.000	47.97	-7.09	40.88	54.00	-13.12	---	---	
3	3244.000	46.39	-5.15	41.24	54.00	-12.76	---	---	
4	3830.500	47.10	-3.48	43.62	54.00	-10.38	---	---	
5	4595.500	45.85	-0.38	45.47	54.00	-8.53	---	---	
6	04978.000	46.21	1.22	47.43	54.00	-6.57	---	---	

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

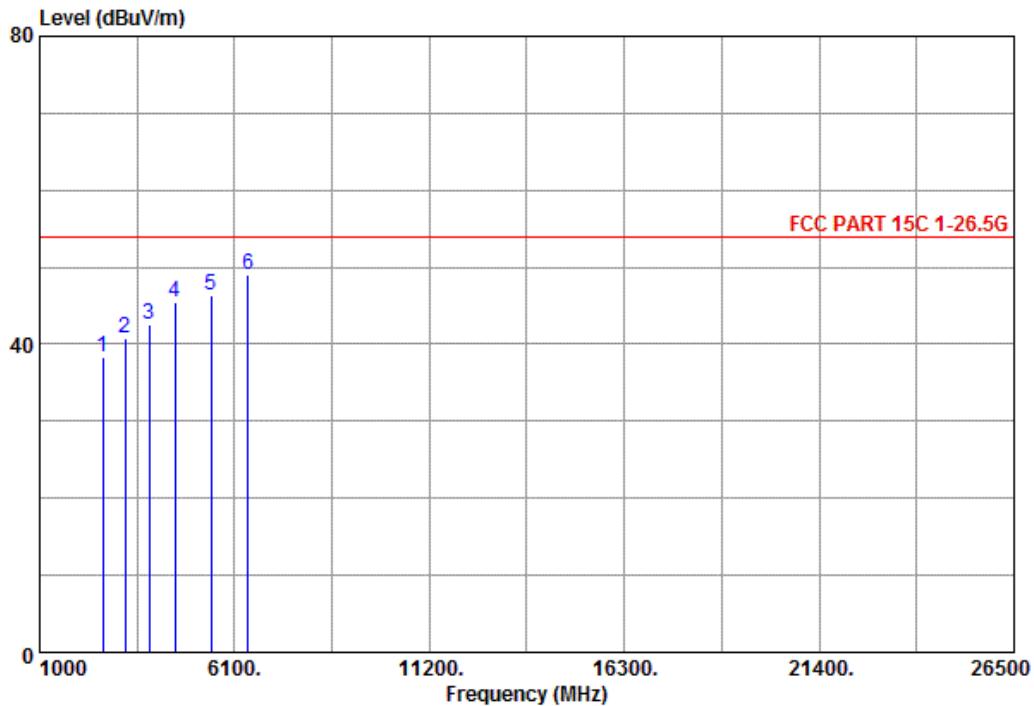
@ : Maximum Data x : Over Limit

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature	:	23.9°C	Humidity	:	35%
Test Date	:	21-Mar-2014	Tested by	:	Kidd Liao
Polarization	:	Vertical	Channel	:	00
Test Mode	:	Mode 4			



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	2657.500	45.20	-6.83	38.37	54.00	-15.63	---	---	
2	3244.000	45.86	-5.15	40.71	54.00	-13.29	---	---	
3	3856.000	45.94	-3.38	42.56	54.00	-11.44	---	---	
4	4544.500	46.06	-0.66	45.40	54.00	-8.60	---	---	
5	5488.000	43.76	2.56	46.32	54.00	-7.68	---	---	
6	66457.000	43.80	5.25	49.05	54.00	-4.95	---	---	

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

@ : Maximum Data x : Over Limit

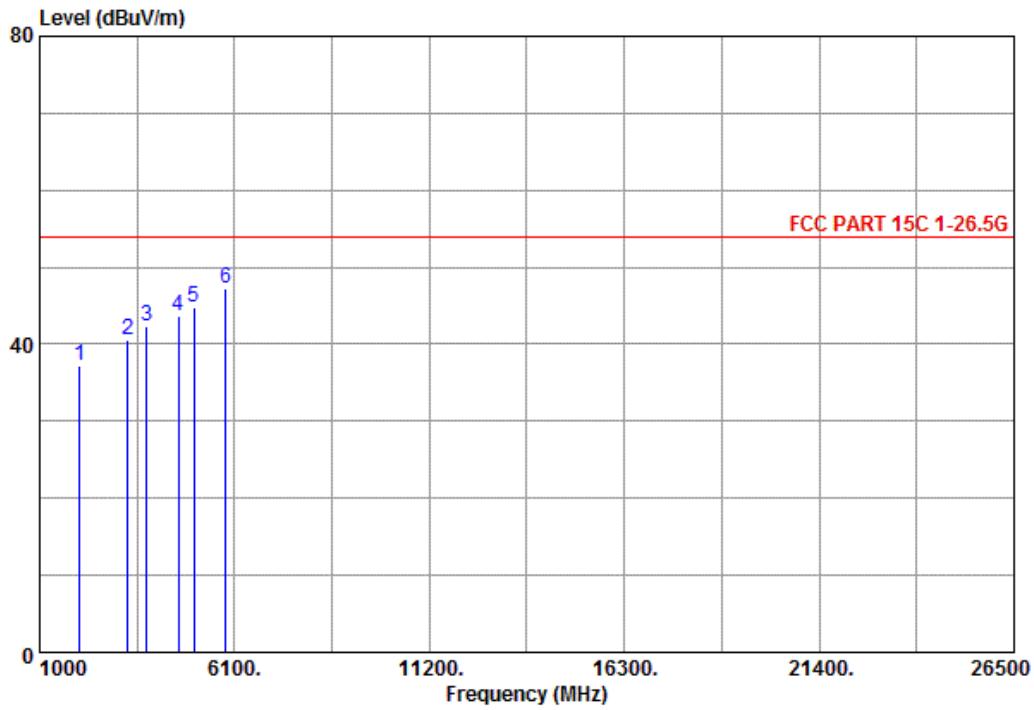
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Horizontal
Test Mode : Mode 5

Humidity : 35%
Tested by : Kidd Liao
Channel : 39



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2045.500	45.81	-8.64	37.17	54.00	-16.83	---	---	
2 3295.000	45.68	-5.01	40.67	54.00	-13.33	---	---	
3 3805.000	45.88	-3.52	42.36	54.00	-11.64	---	---	
4 4621.000	43.98	-0.30	43.68	54.00	-10.32	---	---	
5 5029.000	43.38	1.39	44.77	54.00	-9.23	---	---	
6 @5870.500	43.65	3.52	47.17	54.00	-6.83	---	---	

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

@ : Maximum Data x : Over Limit

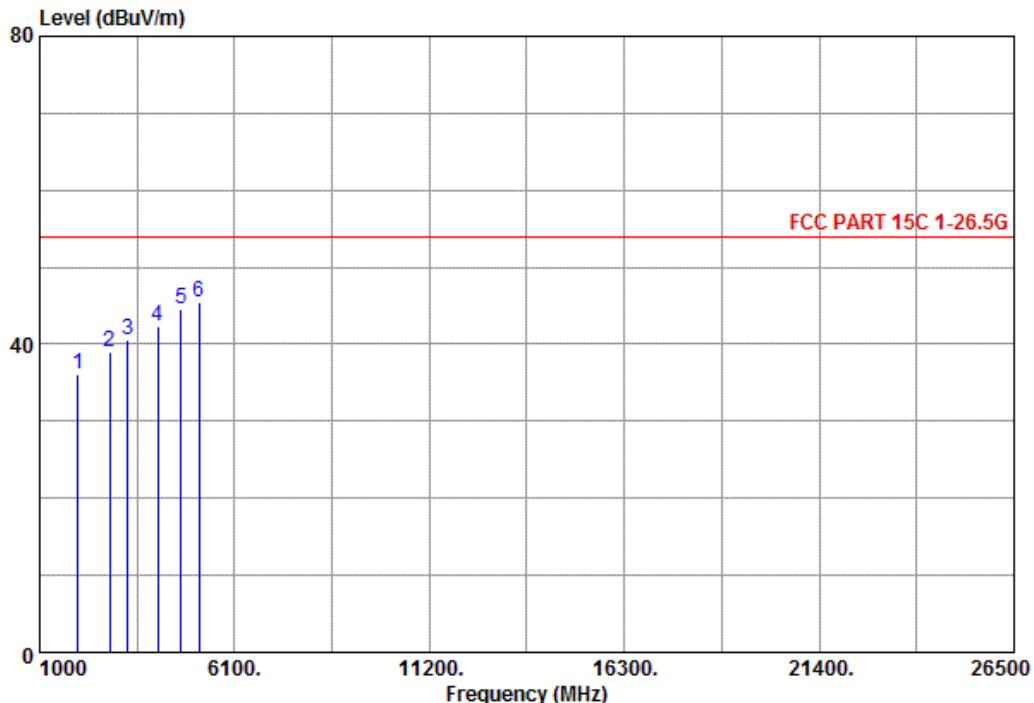
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 5

Humidity : 35%
Tested by : Kidd Liao
Channel : 38



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 1994.500	44.89	-8.85	36.04	54.00	-17.96	---	---	
2 2836.000	45.41	-6.34	39.07	54.00	-14.93	---	---	
3 3295.000	45.67	-5.01	40.66	54.00	-13.34	---	---	
4 4085.500	44.97	-2.55	42.42	54.00	-11.58	---	---	
5 4697.500	44.49	0.07	44.56	54.00	-9.44	---	---	
6 05182.000	43.68	1.78	45.46	54.00	-8.54	---	---	

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

@ : Maximum Data x : Over Limit

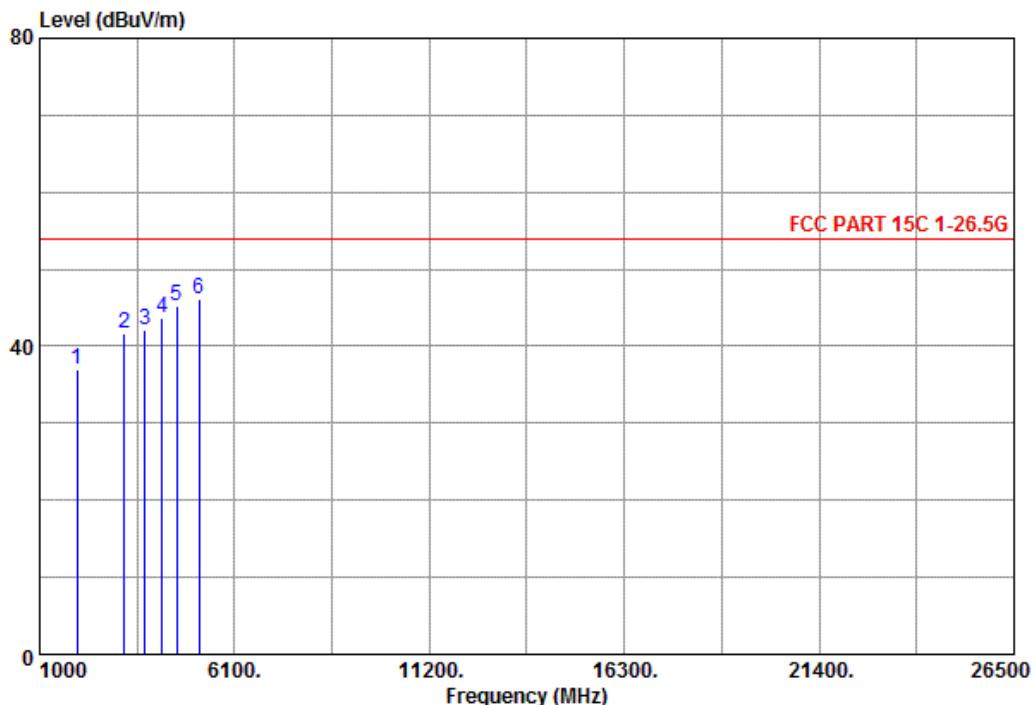
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Horizontal
Test Mode : Mode 6

Humidity : 35%
Tested by : Kidd Liao
Channel : 79



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 1969.000	46.01	-8.94	37.07	54.00	-16.93	---	---	
2 3218.500	46.96	-5.25	41.71	54.00	-12.29	---	---	
3 3754.000	45.82	-3.68	42.14	54.00	-11.86	---	---	
4 4213.000	45.69	-2.04	43.65	54.00	-10.35	---	---	
5 4595.500	45.64	-0.38	45.26	54.00	-8.74	---	---	
6 @5182.000	44.37	1.78	46.15	54.00	-7.85	---	---	

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

@ :Maximum Data x :Over Limit

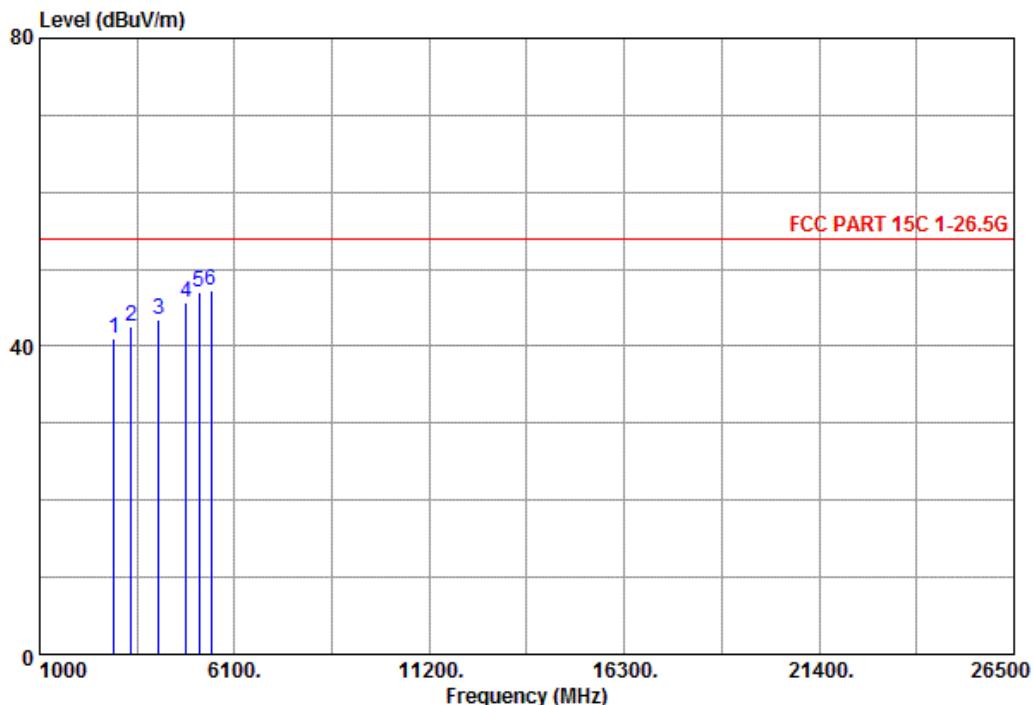
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 6

Humidity : 35%
Tested by : Kidd Liao
Channel : 79



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2938.000	47.10	-6.04	41.06	54.00	-12.94	---	---	
2 3397.000	47.37	-4.70	42.67	54.00	-11.33	---	---	
3 4111.000	45.96	-2.48	43.48	54.00	-10.52	---	---	
4 4825.000	45.12	0.57	45.69	54.00	-8.31	---	---	
5 5182.000	45.31	1.78	47.09	54.00	-6.91	---	---	
6 @5488.000	44.60	2.56	47.16	54.00	-6.84	---	---	

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

@ : Maximum Data x : Over Limit

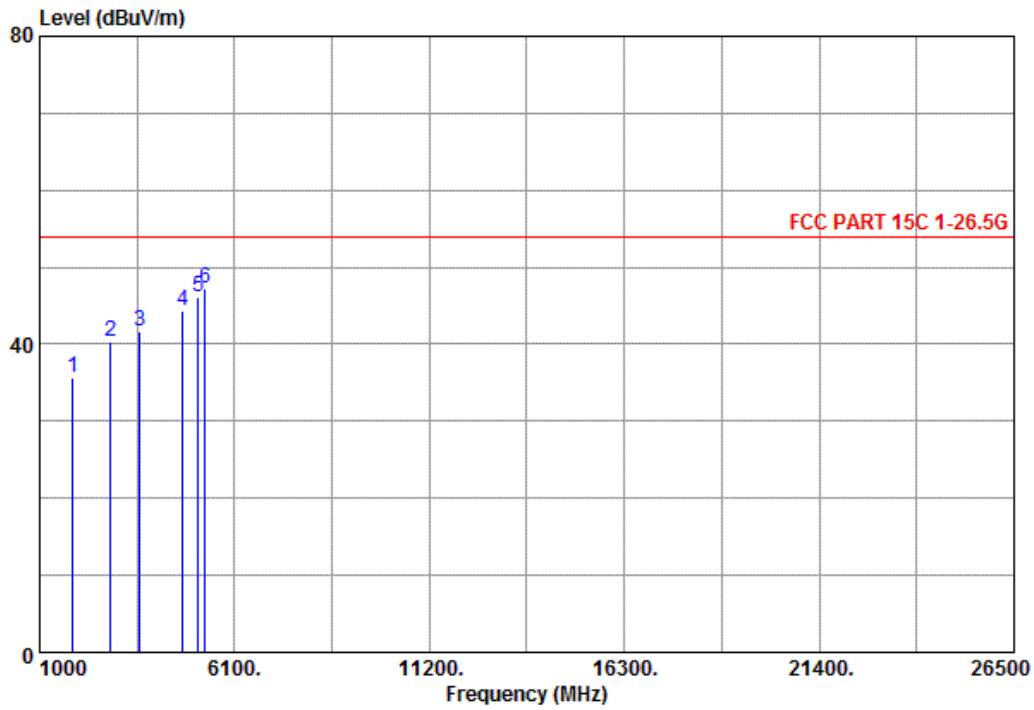
Remark :

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:
 - i. Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
 - ii. Average Setting 1GHz to 10th harmonics of fundamental, RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Horizontal
Test Mode : Mode 7

Humidity : 35%
Tested by : Kidd Liao
Channel : 00



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 1867.000	45.10	-9.41	35.69	54.00	-18.31	---	---	
2 2861.500	46.59	-6.25	40.34	54.00	-13.66	---	---	
3 3626.500	45.81	-4.07	41.74	54.00	-12.26	---	---	
4 4748.500	44.17	0.21	44.38	54.00	-9.62	---	---	
5 5156.500	44.34	1.69	46.03	54.00	-7.97	---	---	
6 05335.000	44.99	2.17	47.16	54.00	-6.84	---	---	

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

@ : Maximum Data x : Over Limit

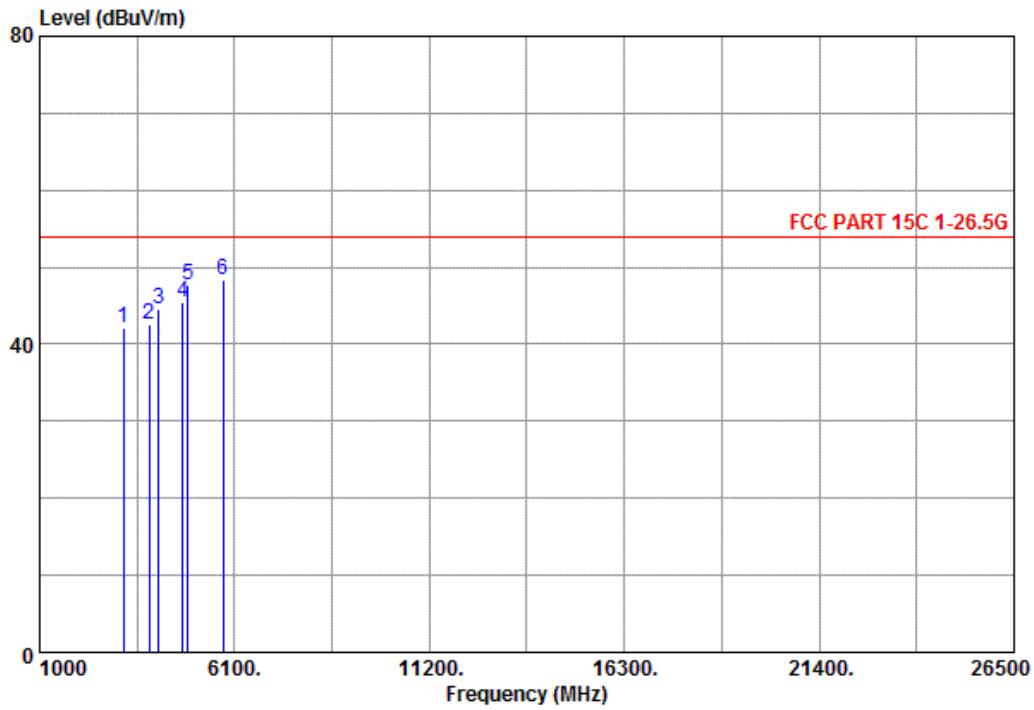
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 7

Humidity : 35%
Tested by : Kidd Liao
Channel : 00



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 3193.000	47.50	-5.29	42.21	54.00	-11.79	---	---	
2 3856.000	45.84	-3.38	42.46	54.00	-11.54	---	---	
3 4111.000	47.05	-2.48	44.57	54.00	-9.43	---	---	
4 4748.500	45.20	0.21	45.41	54.00	-8.59	---	---	
5 4876.000	46.83	0.80	47.63	54.00	-6.37	---	---	
6 @5794.000	44.92	3.34	48.26	54.00	-5.74	---	---	

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

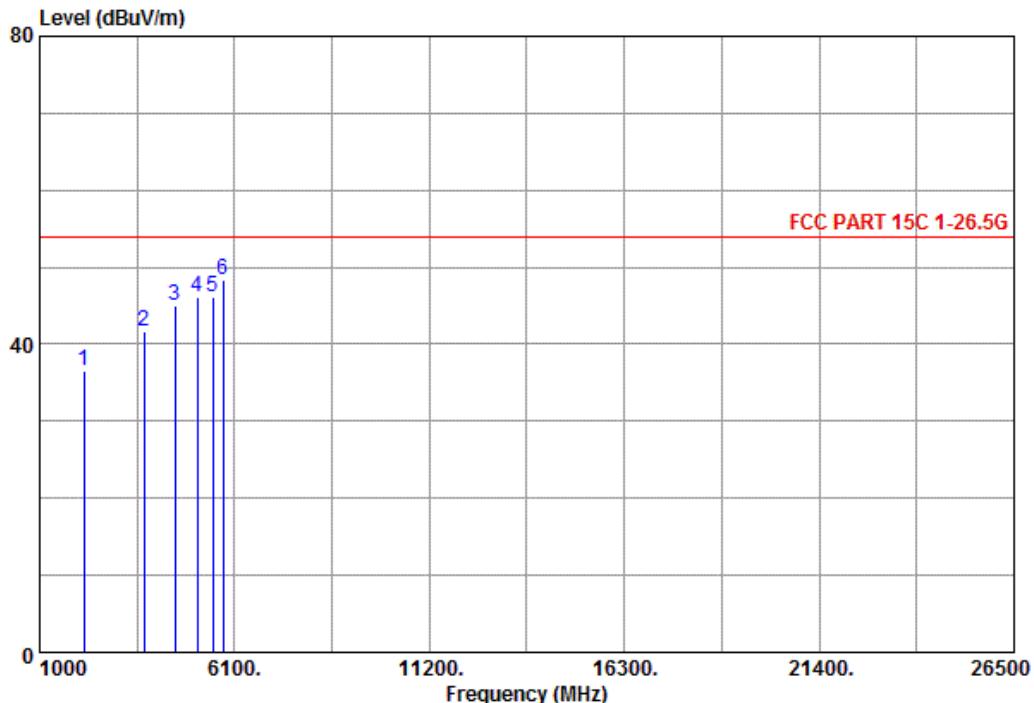
@ : Maximum Data x : Over Limit

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C Humidity : 35%
Test Date : 21-Mar-2014 Tested by : Kidd Liao
Polarization : Horizontal Channel : 39
Test Mode : Mode 8



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	2147.500	44.83	-8.33	36.50	54.00	-17.50	---	---	
2	3728.500	45.38	-3.77	41.61	54.00	-12.39	---	---	
3	4544.500	45.71	-0.66	45.05	54.00	-8.95	---	---	
4	5131.000	44.38	1.65	46.03	54.00	-7.97	---	---	
5	5539.000	43.42	2.69	46.11	54.00	-7.89	---	---	
6	605794.000	45.05	3.34	48.39	54.00	-5.61	---	---	

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

@ : Maximum Data x : Over Limit

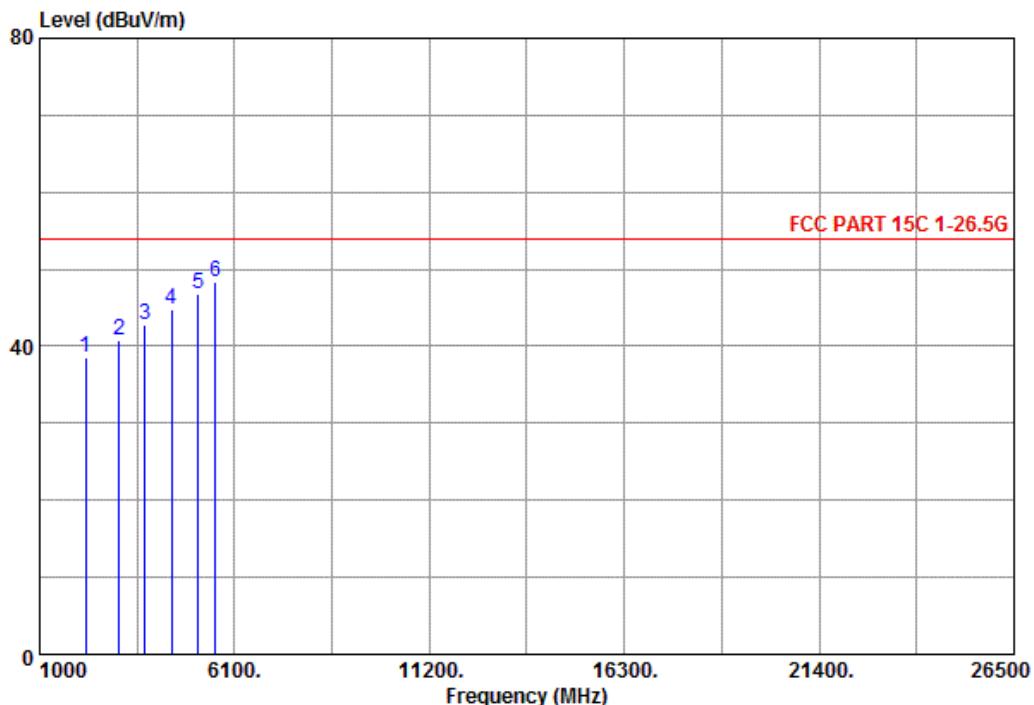
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 8

Humidity : 35%
Tested by : Kidd Liao
Channel : 39



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2198.500	46.83	-8.23	38.60	54.00	-15.40	---	---	
2 3091.000	46.34	-5.59	40.75	54.00	-13.25	---	---	
3 3754.000	46.39	-3.68	42.71	54.00	-11.29	---	---	
4 4442.500	45.88	-1.11	44.77	54.00	-9.23	---	---	
5 5156.500	45.14	1.69	46.83	54.00	-7.17	---	---	
6 @5590.000	45.56	2.83	48.39	54.00	-5.61	---	---	

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

@ :Maximum Data x :Over Limit

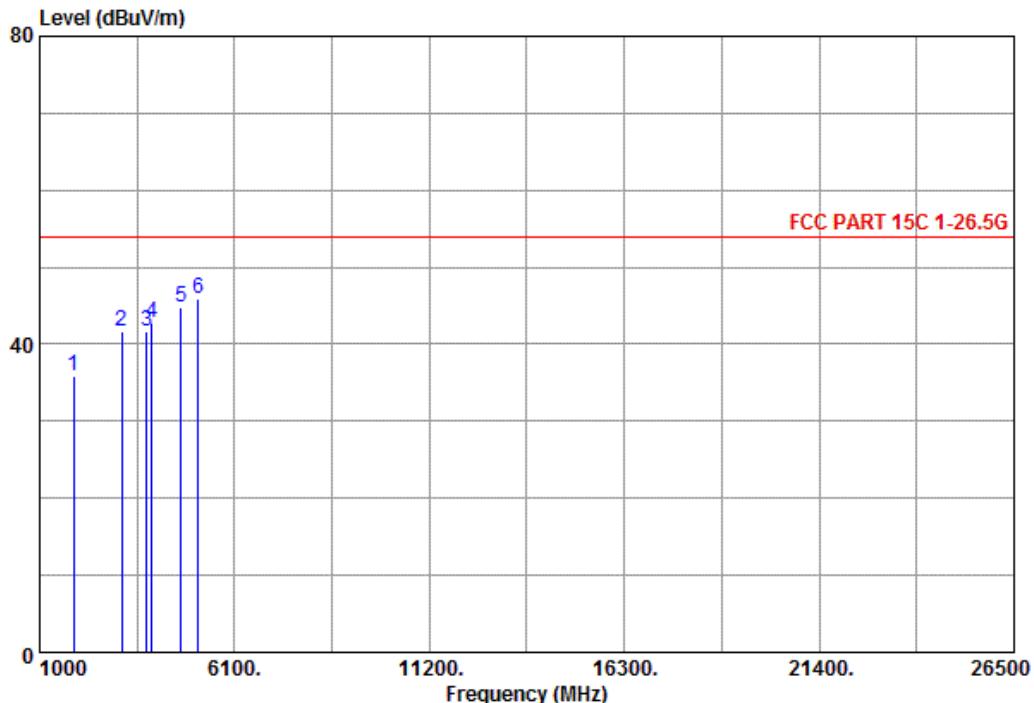
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Horizontal
Test Mode : Mode 9

Humidity : 35%
Tested by : Kidd Liao
Channel : 78



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 1892.500	45.11	-9.32	35.79	54.00	-18.21	---	---	
2 3142.000	47.02	-5.45	41.57	54.00	-12.43	---	---	
3 3805.000	45.24	-3.52	41.72	54.00	-12.28	---	---	
4 3932.500	45.90	-3.19	42.71	54.00	-11.29	---	---	
5 4697.500	44.70	0.07	44.77	54.00	-9.23	---	---	
6 @5156.500	44.22	1.69	45.91	54.00	-8.09	---	---	

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

@ : Maximum Data x : Over Limit

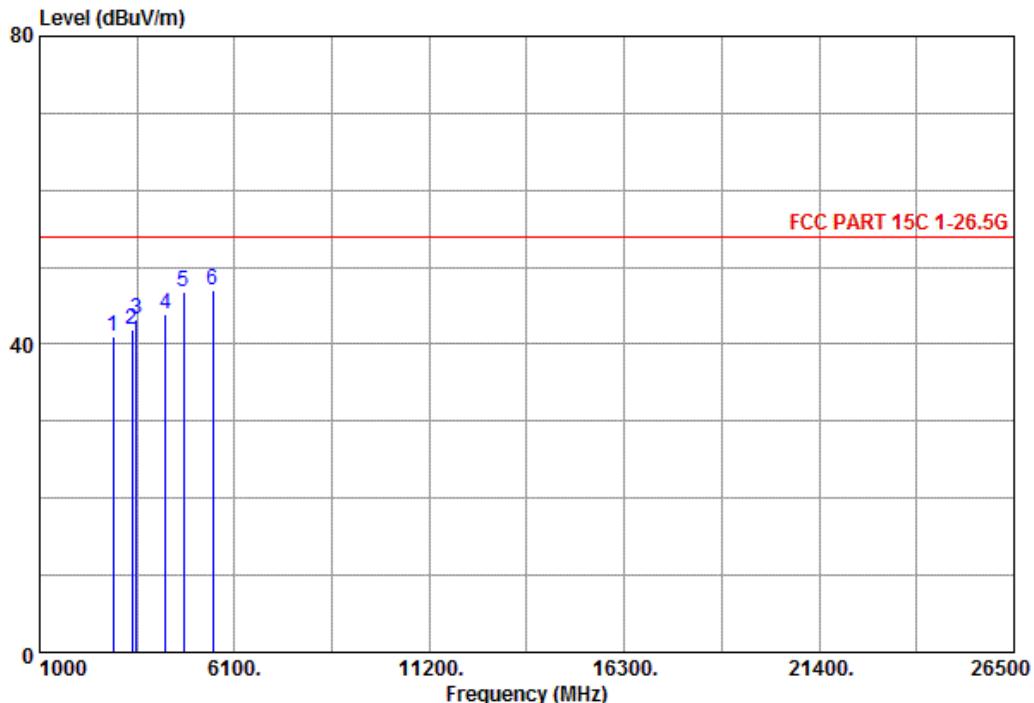
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 9

Humidity : 35%
Tested by : Kidd Liao
Channel : 78



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2912.500	47.13	-6.14	40.99	54.00	-13.01	---	---	
2 3422.500	46.66	-4.66	42.00	54.00	-12.00	---	---	
3 3524.500	47.56	-4.37	43.19	54.00	-10.81	---	---	
4 4289.500	45.68	-1.68	44.00	54.00	-10.00	---	---	
5 4774.000	46.50	0.35	46.85	54.00	-7.15	---	---	
6 @5539.000	44.31	2.69	47.00	54.00	-7.00	---	---	

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

@ : Maximum Data x : Over Limit

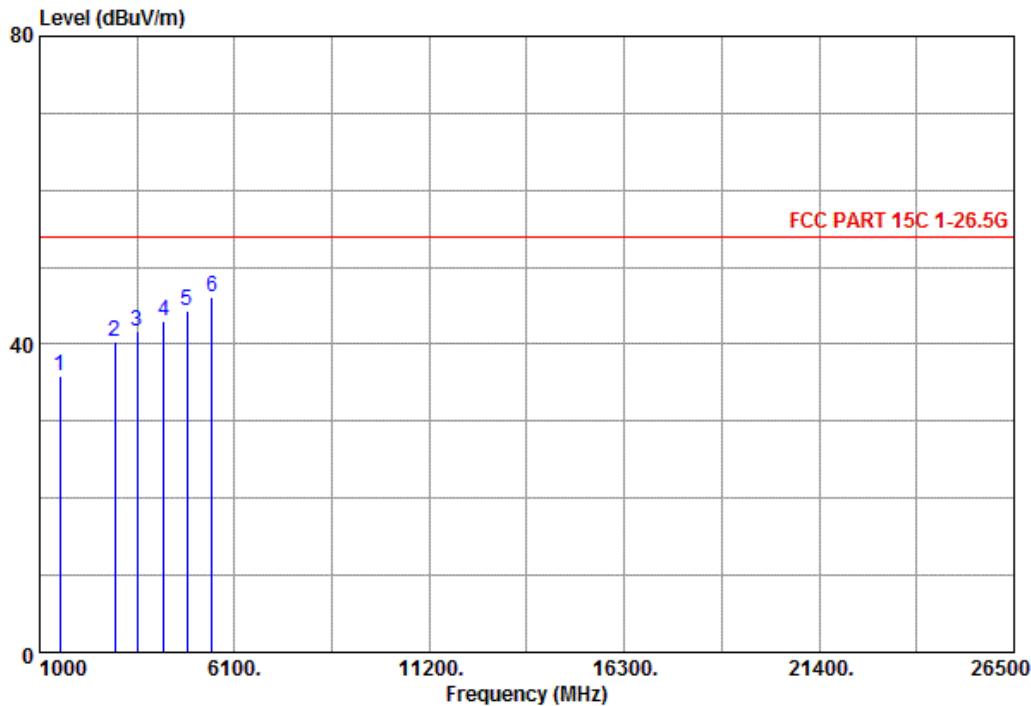
Remark :

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:
 - i. Peak Setting 1GHz to 10th harmonics of fundamental, RBW = VBW = 1MHz, Sweep = AUTO.
 - ii. Average Setting 1GHz to 10th harmonics of fundamental, RBW = 1MHz, VBW = 10Hz, Sweep = AUTO.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Horizontal
Test Mode : Mode 10

Humidity : 35%
Tested by : Kidd Liao
Channel : RX



	Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	1535.500	46.74	-10.86	35.88	54.00	-18.12	---	---	---
2	2963.500	46.33	-5.94	40.39	54.00	-13.61	---	---	---
3	3550.000	45.85	-4.27	41.58	54.00	-12.42	---	---	---
4	4238.500	45.03	-1.97	43.06	54.00	-10.94	---	---	---
5	4850.500	43.78	0.65	44.43	54.00	-9.57	---	---	---
6	605513.500	43.47	2.65	46.12	54.00	-7.88	---	---	---

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

@ : Maximum Data x : Over Limit

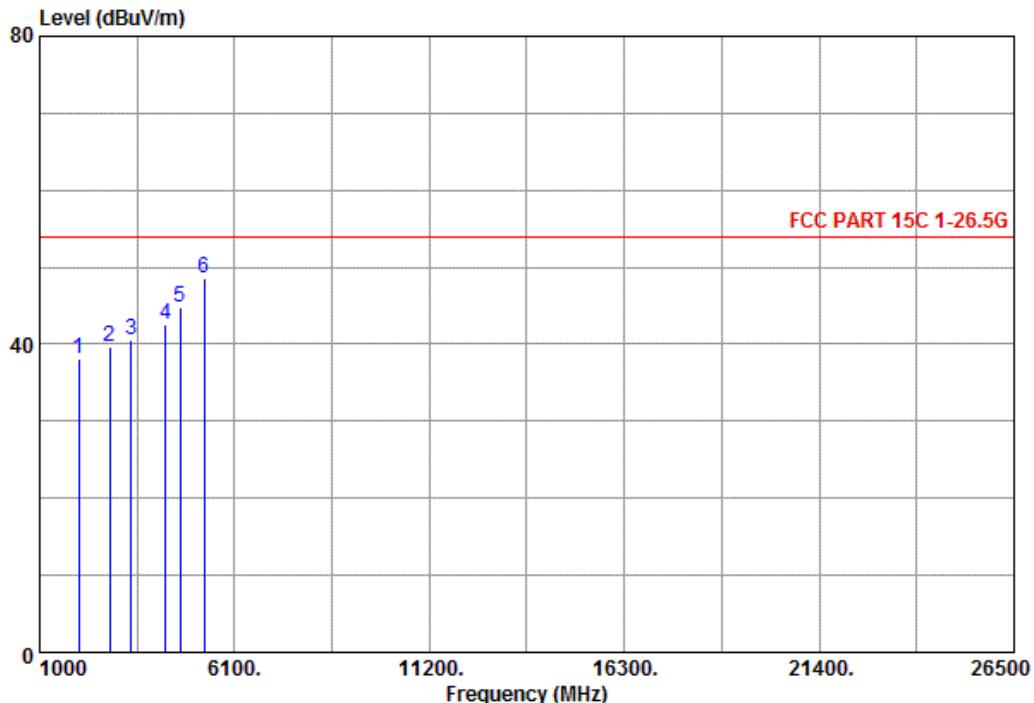
Remark :

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.

Radiated Emission Test Data (Above 1 GHz)

Temperature : 23.9°C
Test Date : 21-Mar-2014
Polarization : Vertical
Test Mode : Mode 10

Humidity : 35%
Tested by : Kidd Liao
Channel : RX



Freq	Reading	C.F	Result	Limit	Margin	A/pos	T/pos	Remark
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1 2020.000	46.79	-8.74	38.05	54.00	-15.95	---	---	
2 2836.000	46.11	-6.34	39.77	54.00	-14.23	---	---	
3 3397.000	45.31	-4.70	40.61	54.00	-13.39	---	---	
4 4289.500	44.19	-1.68	42.51	54.00	-11.49	---	---	
5 4672.000	44.93	-0.08	44.85	54.00	-9.15	---	---	
6 @5309.500	46.35	2.13	48.48	54.00	-5.52	---	---	

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.

4 20 dB Bandwidth

4.1 Test Instruments

Refer to Sec. 1.2 Test Instruments.

4.2 Test Arrangement and Procedure



1. The transmitter output was connected to a spectrum analyzer (through an attenuator, if it's necessary).
2. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 300kHz VBW. Measured the -20 dB bandwidth and plotted the graph.

4.3 Limit

None; For report purpose only.

4.4 Test Result

No non-compliance noted.

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

Bluetooth 1 Mbps		
Channel	Frequency (MHz)	20dB Bandwidth (MHz)
Low	2402	0.9169
Middle	2441	0.9169
High	2480	0.8310

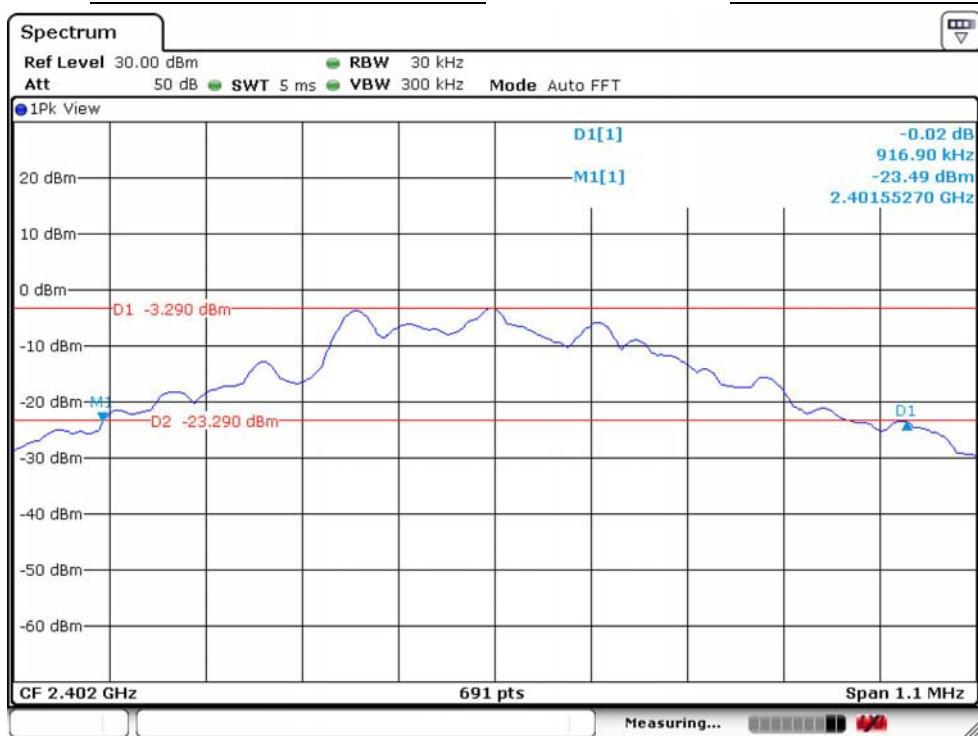
Bluetooth EDR 2 Mbps		
Channel	Frequency (MHz)	20dB Bandwidth (MHz)
Low	2402	1.2388
Middle	2441	1.2434
High	2480	1.2417

Bluetooth EDR 3 Mbps		
Channel	Frequency (MHz)	20dB Bandwidth (MHz)
Low	2402	1.2098
Middle	2441	1.2058
High	2480	1.2127



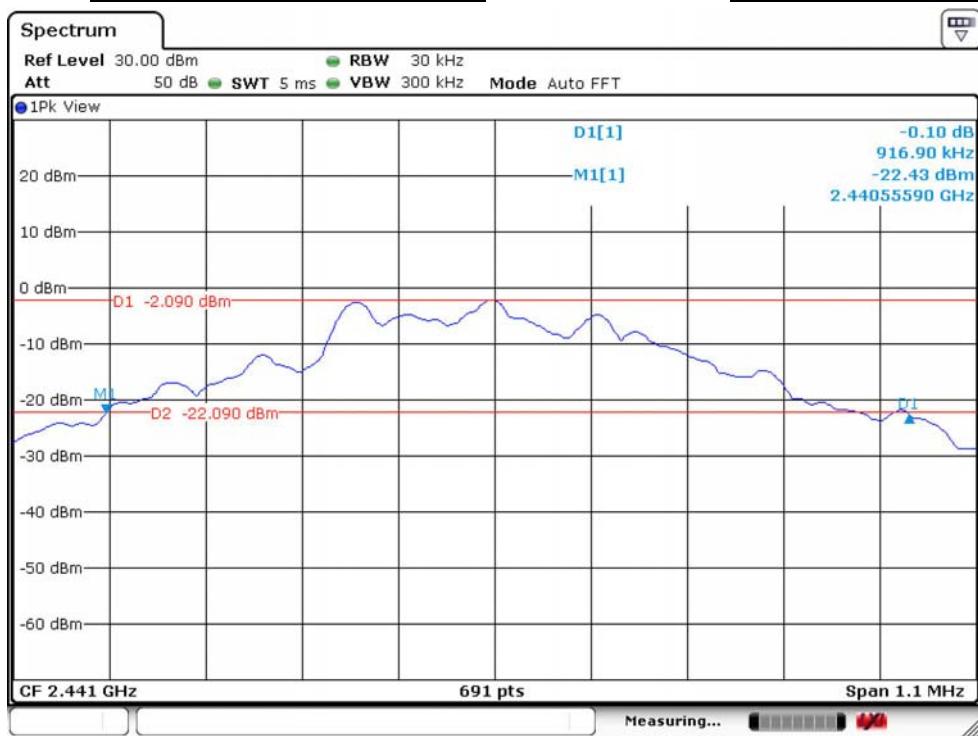
Temperature : 23.9°C
Test Date : 21-Mar-2014
Test Mode : BT (1Mbps)

Humidity : 35%
Tested by : Kidd Liao
Channel : 2402



Test Mode : BT (1Mbps)

Channel : 2441

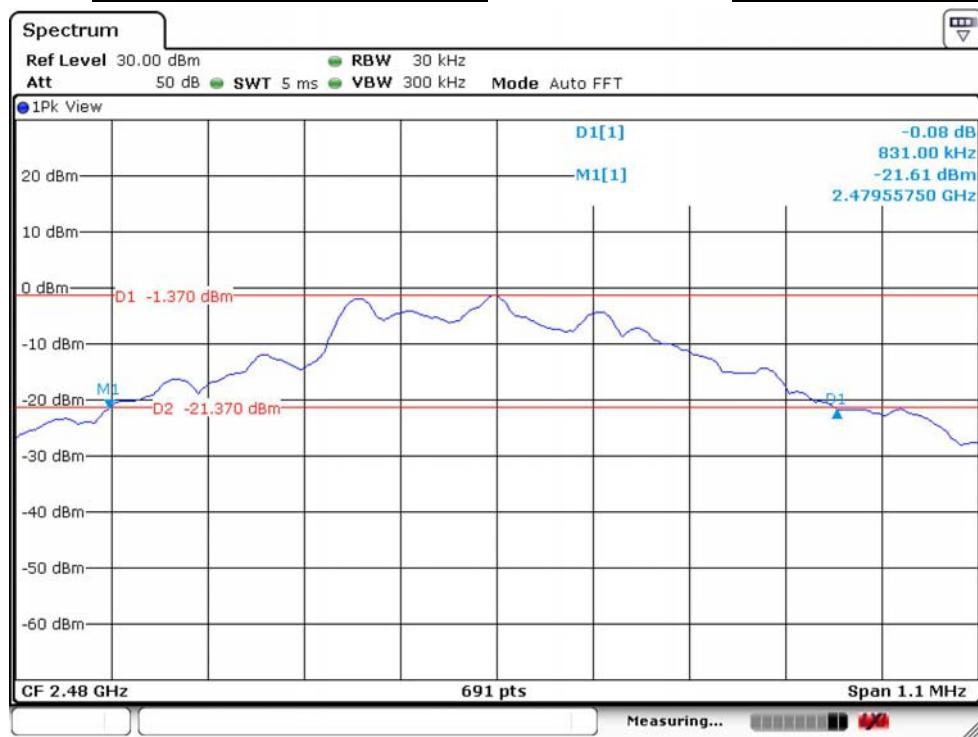


Test Mode

: BT (1 Mbps)

Channel

: 2480

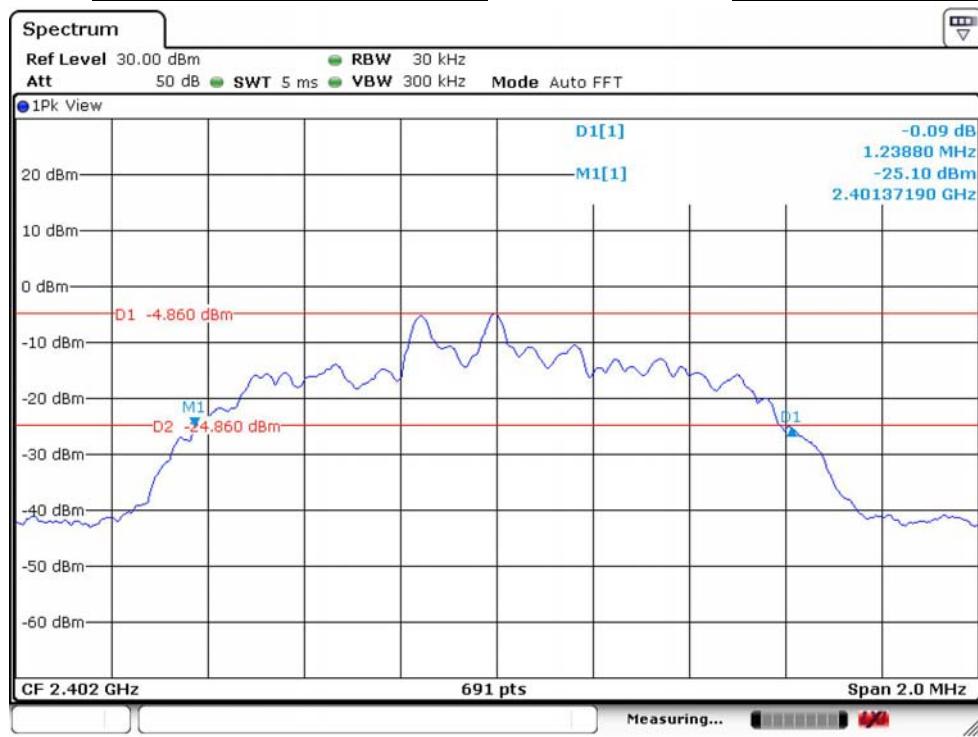


Test Mode

: BT EDR (2 Mbps)

Channel

: 2402

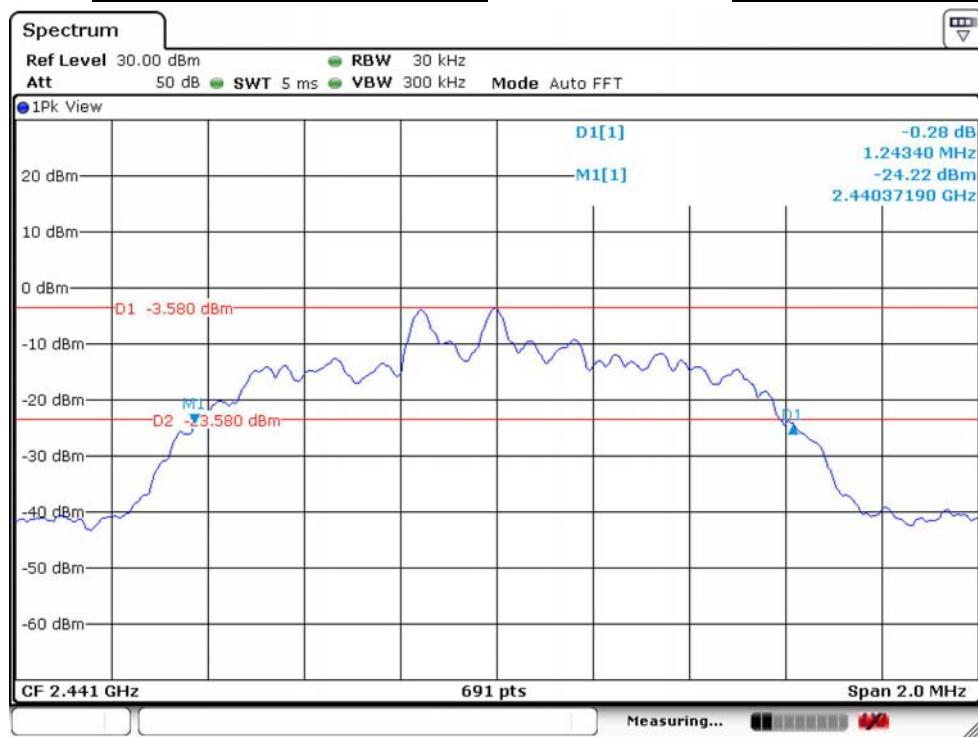


Test Mode

: BT EDR (2 Mbps)

Channel

: 2441

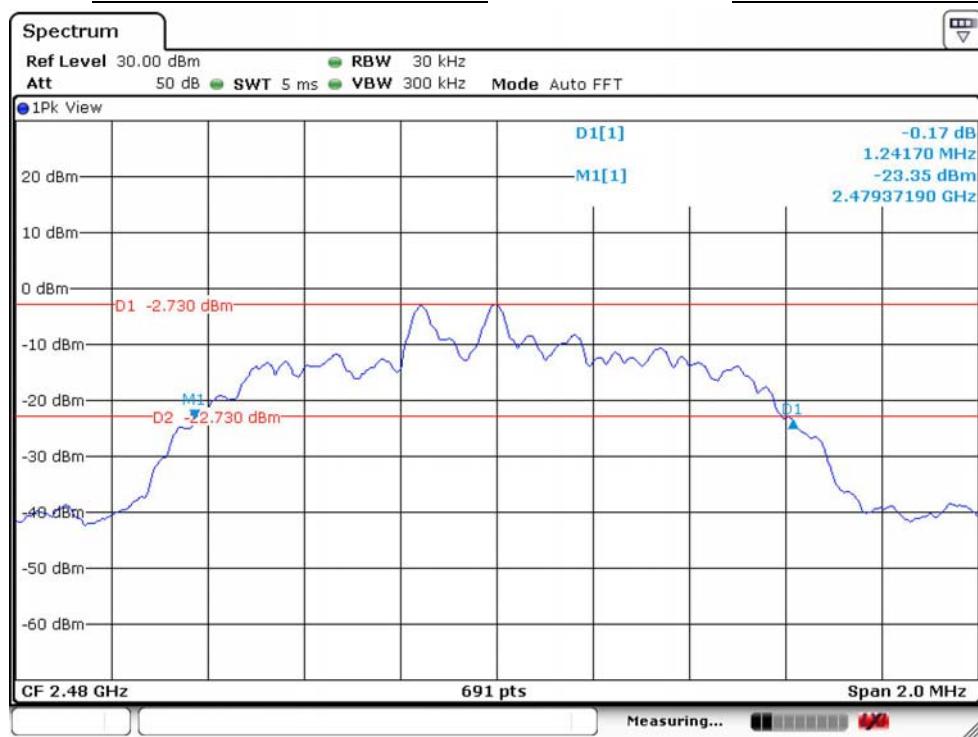


Test Mode

: BT EDR (2 Mbps)

Channel

: 2480

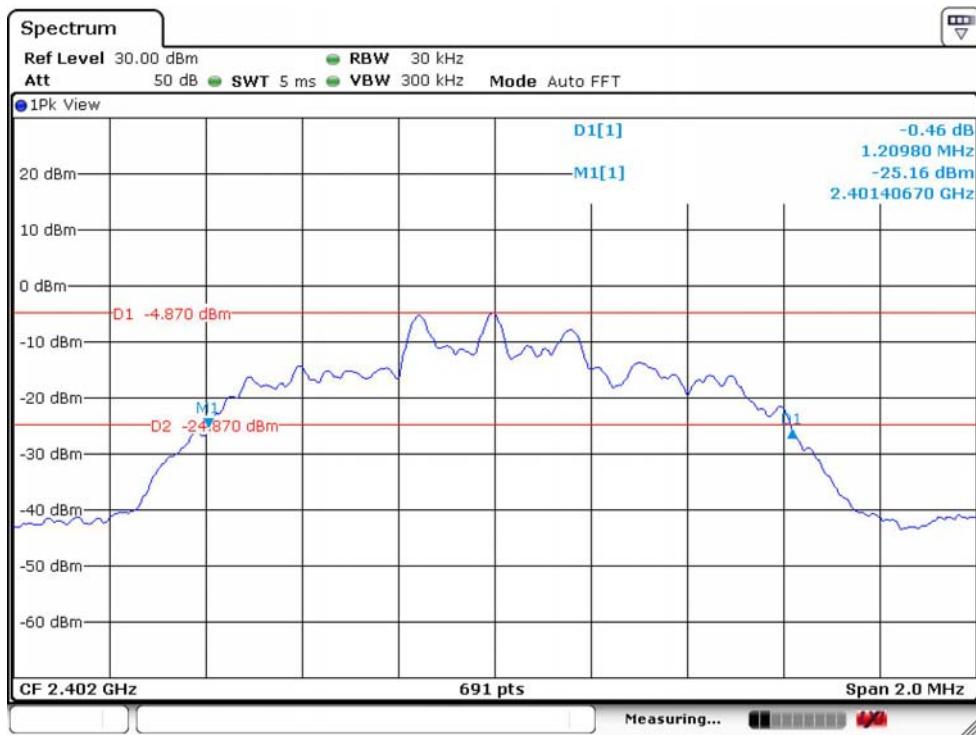


Test Mode

: BT EDR (3 Mbps)

Channel

: 2402

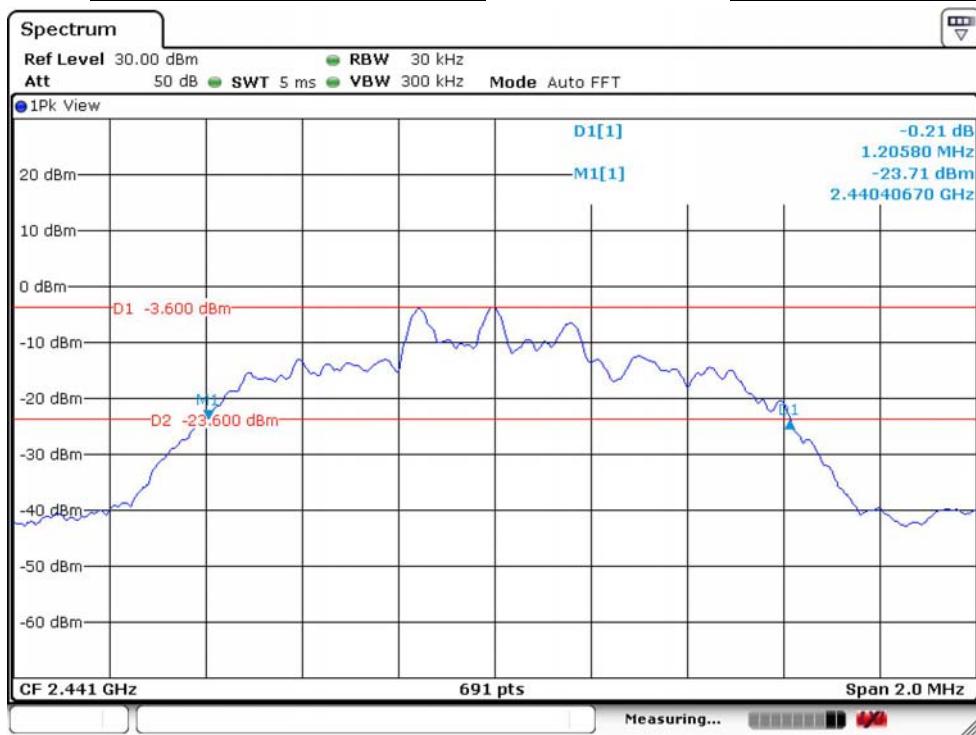


Test Mode

: BT EDR (3 Mbps)

Channel

: 2441

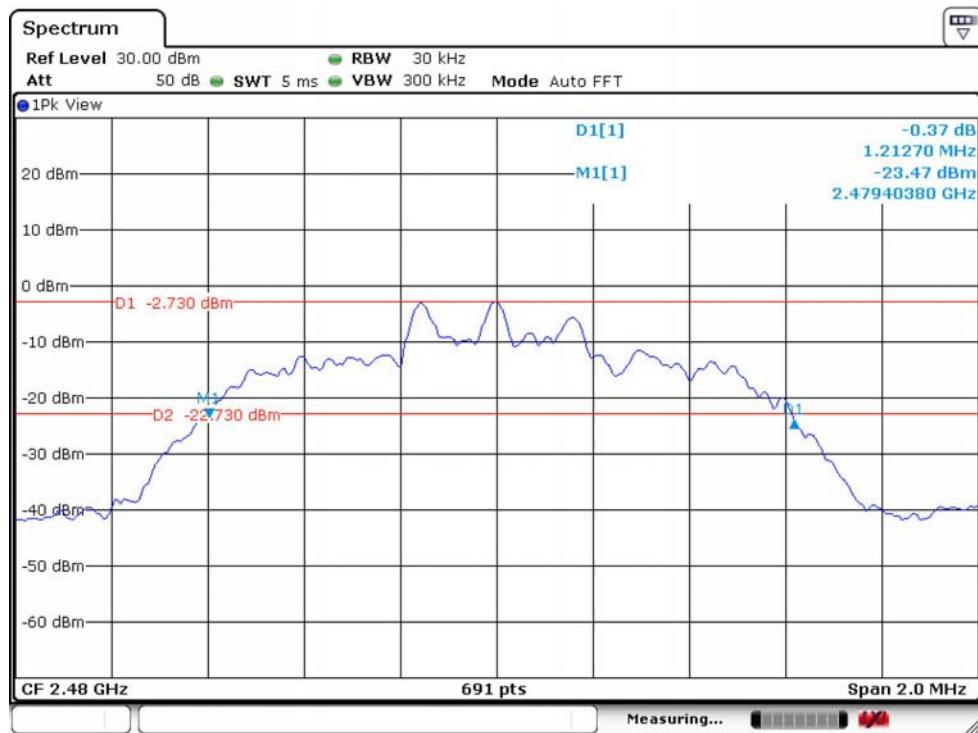


Test Mode

: BT EDR (3 Mbps)

Channel

: 2480



5 Hopping Frequency Separation

5.1 Test Instruments

Refer to Sec. 1.2 Test Instruments.

5.2 Test Arrangement and Procedure



1. The transmitter output was connected to a spectrum analyzer (through an attenuator, if it's necessary).
2. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 300kHz VBW.
3. Mark the peak outputs of two adjacent channels. And, measured the separation between the marked peak outputs of two adjacent channels.

5.3 Limit (§ 15.247(a)(1))

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

5.4 Test Result

Compliance.

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

**Bluetooth 1 Mbps**

Channel	Frequency (MHz)	20 dB bandwidth (MHz)	Limit (2/3 of 20dB bandwidth) (MHz)	Result	Verdict
Low	2402	0.9986	0.6113	0.9169	Pass
Middle	2441	0.9986	0.6113	0.9169	Pass
High	2480	1.0014	0.554	0.8310	Pass

Bluetooth EDR 2 Mbps

Channel	Frequency (MHz)	20 dB bandwidth (MHz)	Limit (2/3 of 20dB bandwidth) (MHz)	Result	Verdict
Low	2402	0.9986	0.8259	1.2388	Pass
Middle	2441	0.9986	0.8289	1.2434	Pass
High	2480	1.0014	0.8278	1.2417	Pass

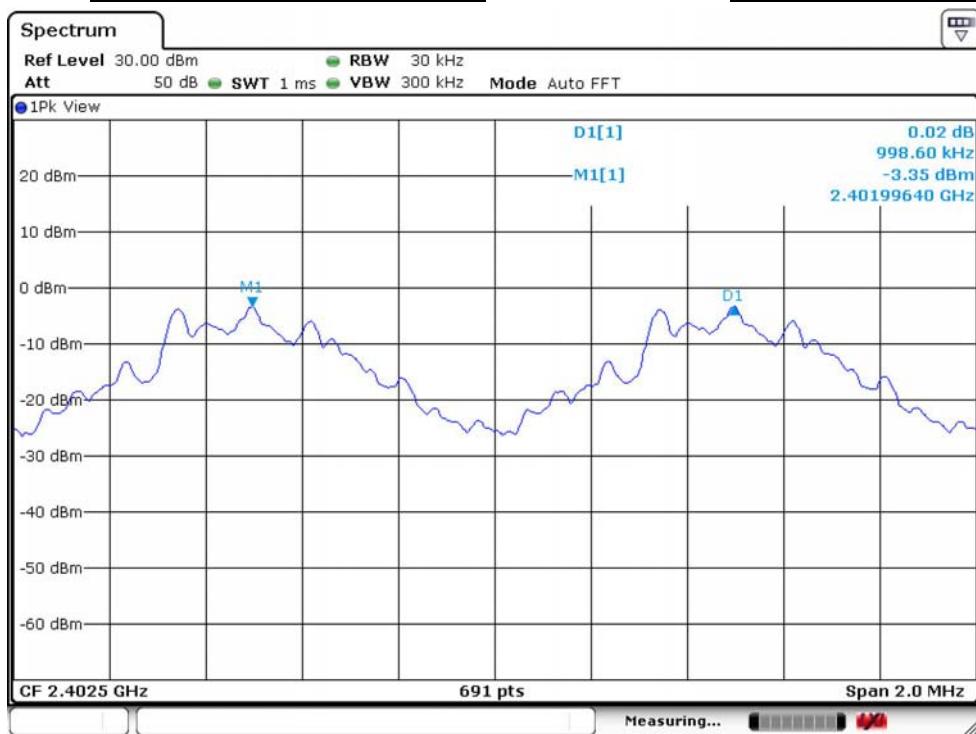
Bluetooth EDR 3 Mbps

Channel	Frequency (MHz)	20 dB bandwidth (MHz)	Limit (2/3 of 20dB bandwidth) (MHz)	Result	Verdict
Low	2402	0.9986	0.8065	1.2098	Pass
Middle	2441	1.0014	0.8039	1.2058	Pass
High	2480	1.0014	0.8085	1.2127	Pass



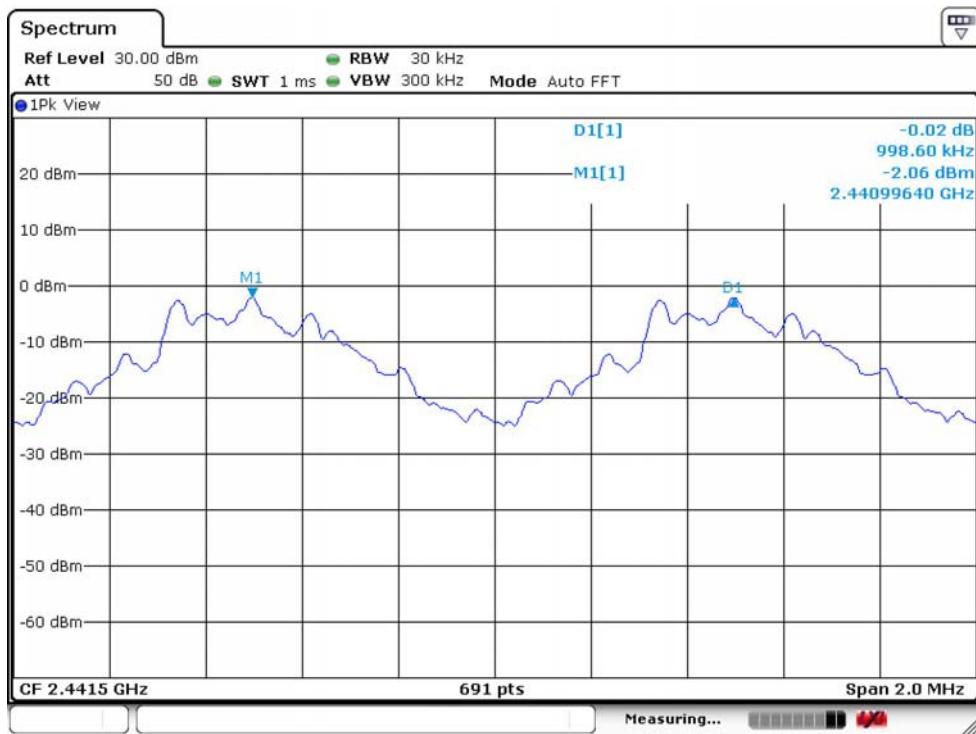
Temperature : 23.9°C
Test Date : 21-Mar-2014
Test Mode : BT (1Mbps)

Humidity : 35%
Tested by : Kidd Liao
Channel : 2402



Test Mode : BT (1Mbps)

Channel : 2441

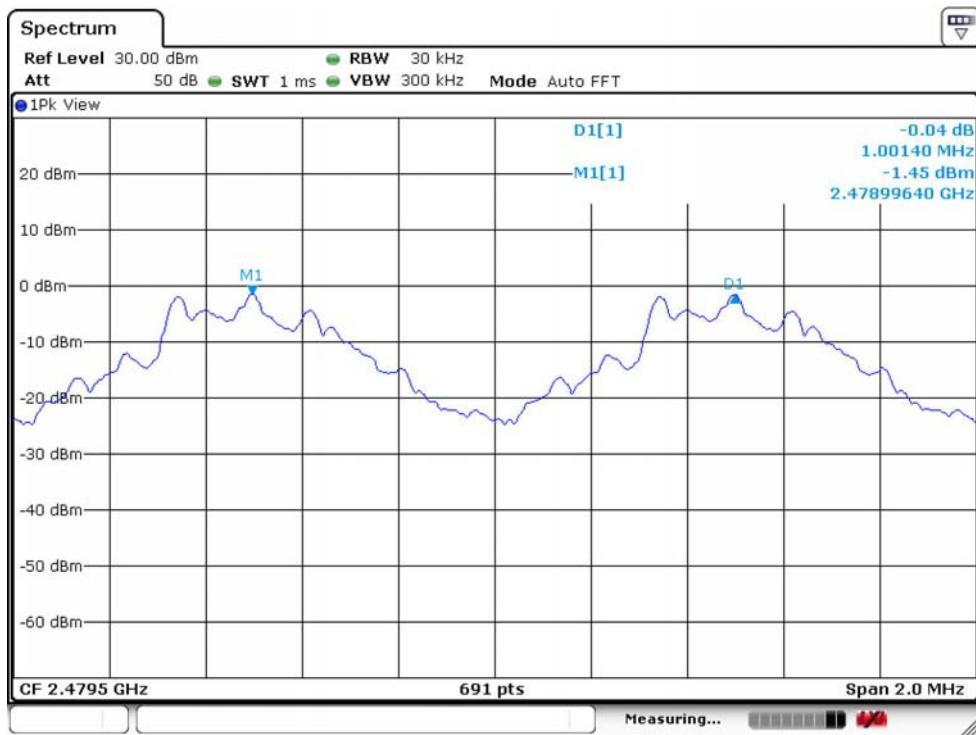


Test Mode

: BT (1 Mbps)

Channel

: 2480

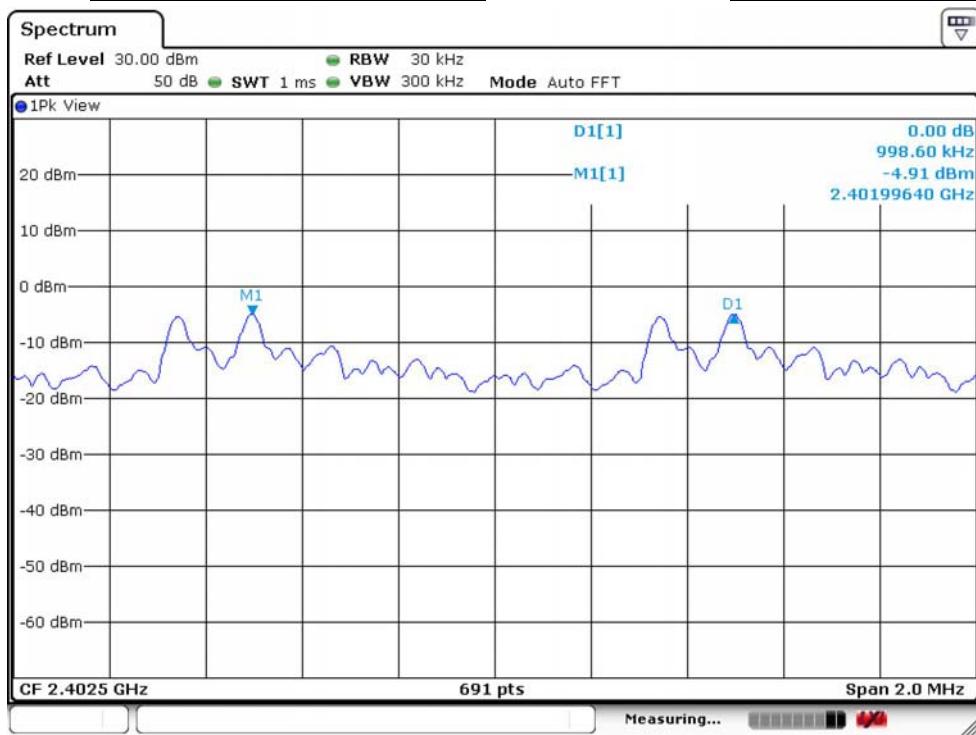


Test Mode

: BT EDR (2 Mbps)

Channel

: 2402

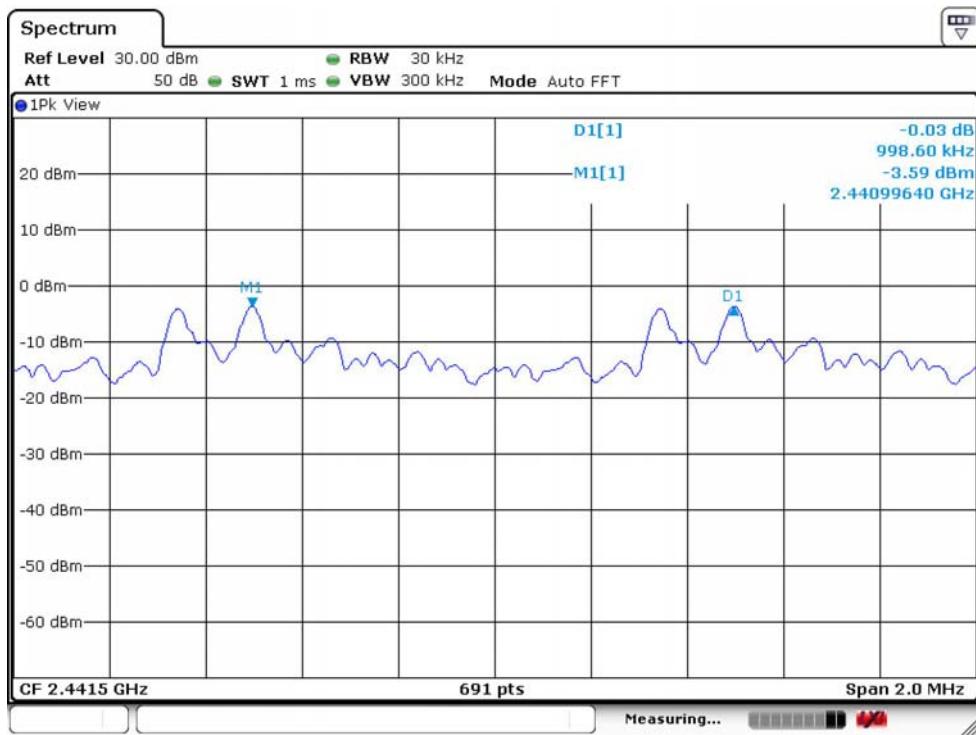


Test Mode

: BT EDR (2 Mbps)

Channel

: 2441

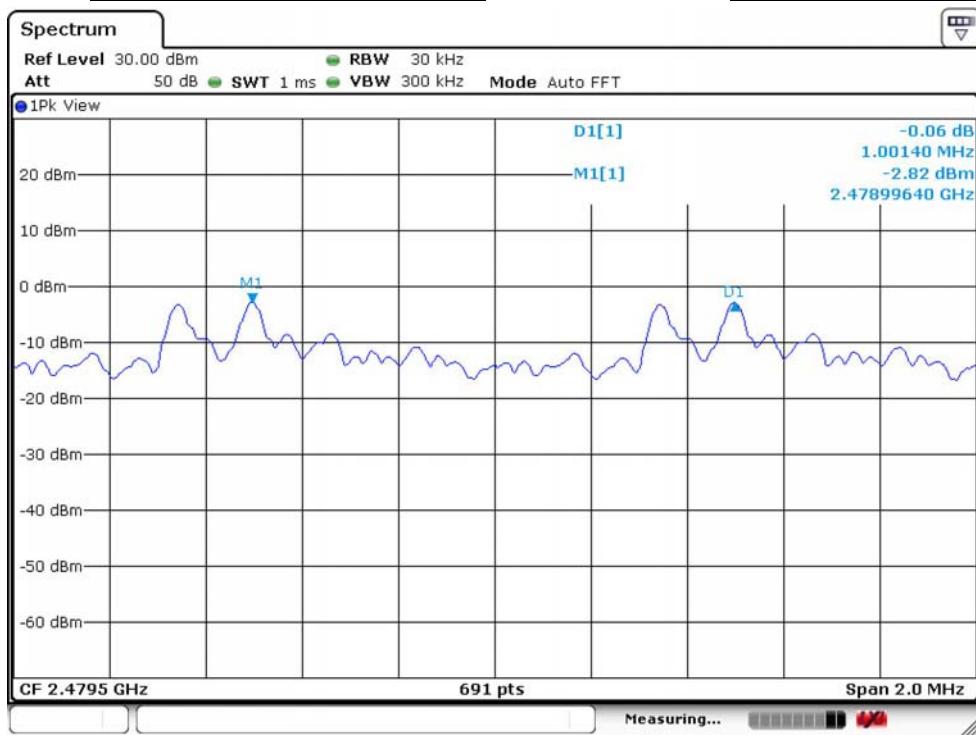


Test Mode

: BT EDR (2 Mbps)

Channel

: 2480

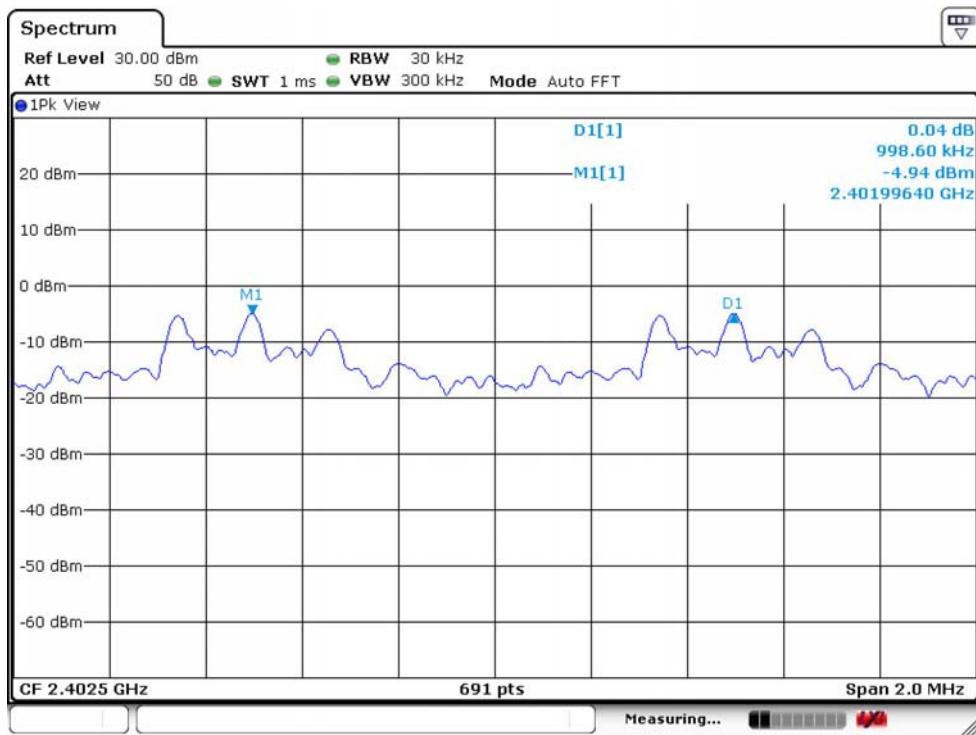


Test Mode

: BT EDR (3 Mbps)

Channel

: 2402

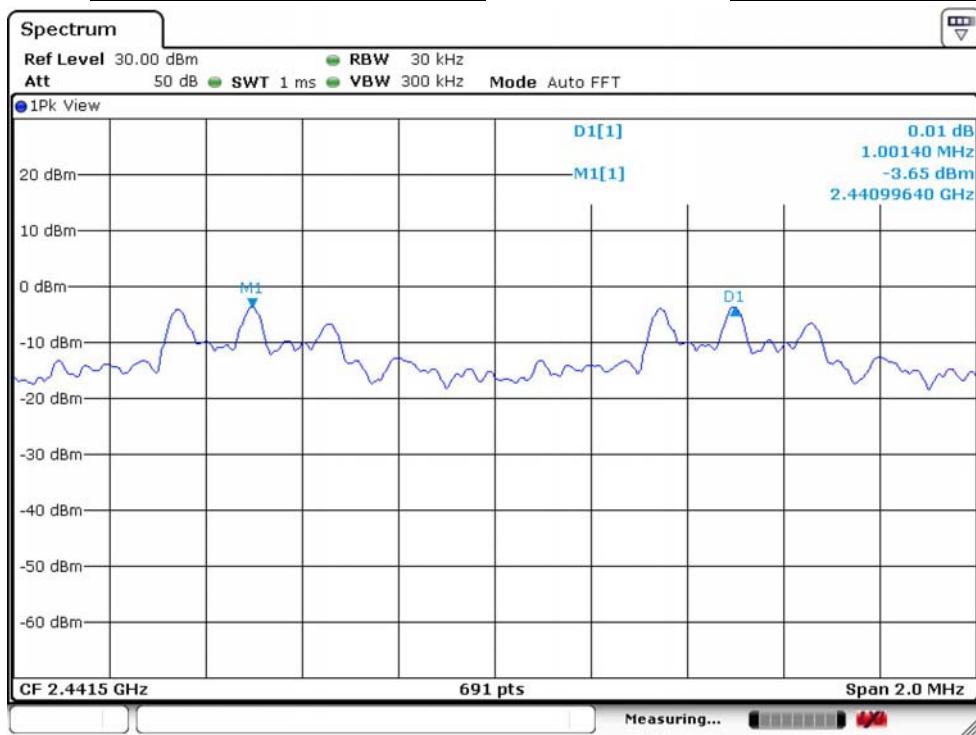


Test Mode

: BT EDR (3 Mbps)

Channel

: 2441



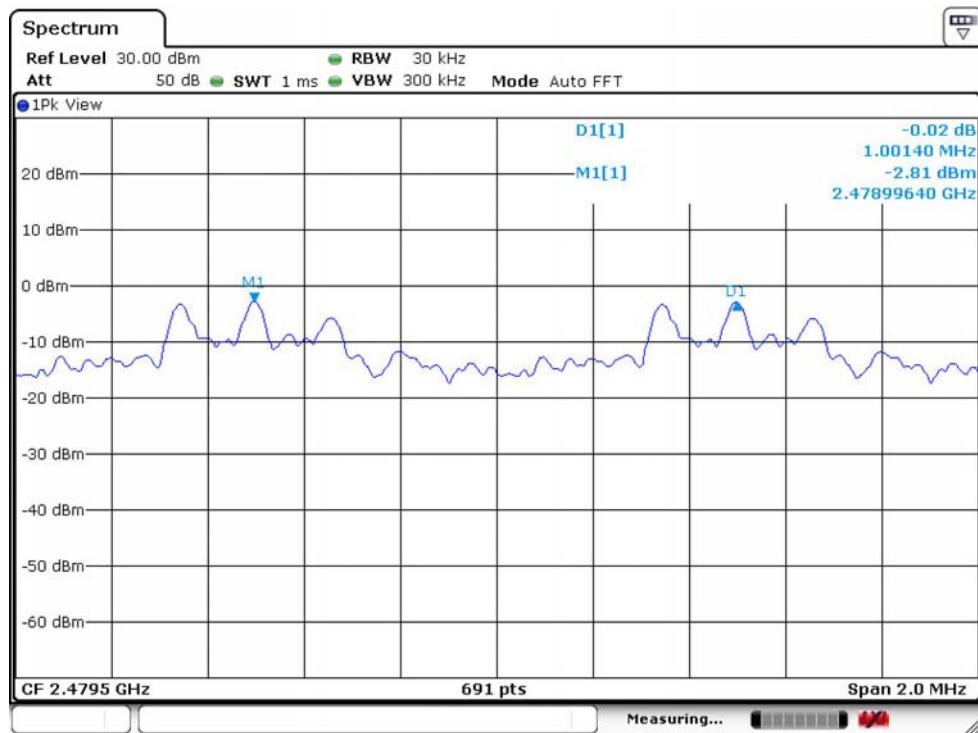


Test Mode

: BT EDR (3 Mbps)

Channel

: 2480

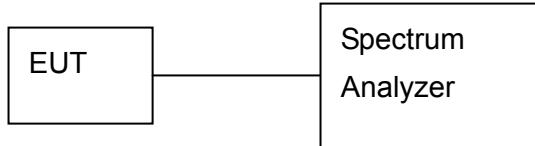


6 Number of Hopping Channels

6.1 Test Instruments

Refer to Sec. 1.2 Test Instruments.

6.2 Test Arrangement and Procedure



1. The transmitter output was connected to a spectrum analyzer (through an attenuator, if it's necessary).
2. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps.
3. The RBW is set to 100 kHz and VBW is set to 100 kHz .
4. Max Hold.

6.3 Limit (§ 15.247(a)(1)(iii))

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

6.4 Test Result

79 Channels have been used.

Compliance.

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

