FCC 47 CFR PART 15 SUBPART C
TEST REPORT

For

Product Name: ClickShare CSE-200
Brand Name: Barco
Model No.: R9861520
Series Model.: N/A
FCC ID: 2AAED-R9861520
IC: 9393B-R9861520
Test Report Number:
C151211R01-RPB

Issued for

Barco NV

President Kennedypark 35, 8500 Kortrijk, Belgium

Issued by

Compliance Certification Services Inc.

Kun shan Laboratory

No.10 Weiye Rd., Innovation park, Eco&Tec,
Development Zone, Kunshan City, Jiangsu, China

TEL: 86-512-57355888

FAX: 86-512-57370818

TESTING CERT #2541.01

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1. TEST RESULT CERTIFICATION

Product Name:	ClickShare CSE-200
Trade Name:	Barco
Model Name:	R9861520
Series Model:	N/A
Applicant Discrepancy:	Initial
Device Category:	Portable device
Date of Test:	December 20, 2015 ~ January 10, 2016
Applicant:	**Barco NV** President Kennedypark 35, 8500 Kortrijk, Belgium
Manufacturer:	**Barco NV** President Kennedypark 35, 8500 Kortrijk, Belgium
Application Type:	Certification

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC 47 CFR Part 15 Subpart C	No non-compliance noted
Canada RSS-247 Issue 1	No non-compliance noted
Canada RSS-Gen Issue 4	No non-compliance noted

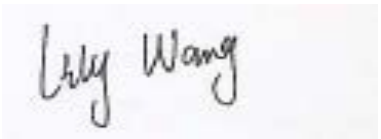
The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

Approved by:

Jeff.Fang
RF Manager
Compliance Certification Services Inc.

Tested by:



Lily.Wang
Test Engineer
Compliance Certification Services Inc.

2. EUT DESCRIPTION

Product Name:	ClickShare CSE-200
Brand Name:	Barco
Model Name:	R9861520
Series Model:	N/A
Model Discrepancy:	N/A
Power Adapter:	Brand Name: GLOBTEK Model :GT-46180-1812 Input: 100-240V~0.6A 50-60Hz Output: DC12V 1.5A
Frequency Range :	Bluetooth:2402 ~ 2480 MHz
Transmit Power :	Bluetooth:2.26dBm
Modulation Technique :	Bluetooth: FHSS
Transmit Data Rate :	Bluetooth: GFSK(1 Mbps),π/4-DQPSK(2 Mbps),8-DPSK(3 Mbps)
Number of Channels :	Bluetooth: 79 Channels
Antenna Specification:	dipole antenna for 2.4GHz Gain 2.0dBi

Remark:

1.The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.

2.This submittal(s) (test report) is intended for ***FCC ID: 2AAED-R9861520*** filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.

3.This submittal(s) (test report) is intended for ***IC: 9393B-R9861520*** filing to comply with Canada RSS-247 Issue 1 and Canada RSS-Gen Issue 4 Rules.

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, 15.207, 15.209 ,15.247.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EXERCISEEUT

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.10 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

Under 1GHz

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 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.10.

Above 1GHz

The EUT is placed on a turn table, which is 1.5 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.10.

3.4 TEST Mode

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	Antenna
Peak Output Power	GFSK	1 Mbps	0/39/78	1
	8DPSK	3 Mbps		
Hopping Channel Bandwidth	GFSK	1 Mbps	0/39/78	1
	8DPSK	3 Mbps		
Hopping Channel Separation	GFSK	1 Mbps	38-39	1
	8DPSK	3 Mbps		
Number of Hopping Frequency	GFSK	1 Mbps	0-78	1
	8DPSK	3 Mbps		
Dwell Time	DH1/DH3/DH5	1 Mbps	39	1
	3DH1/3DH3/3DH5	3 Mbps		
Spurious Emission	GFSK	1 Mbps	0/39/78	1
	8DPSK	3 Mbps		
Band Edge Emissions	GFSK	1 Mbps	0/78	1
	8DPSK	3 Mbps		
Radiated Emissions Below 1GHz	GFSK	1 Mbps	78	1
Radiated Emissions Above 1GHz	GFSK	1 Mbps	0/39/78	1
	8DPSK	3 Mbps		
AC Power Conducted Emissions	CTX	-	-	-

Remark: For radiated test cases below 1 GHz, the worst mode data rate channel 78 of 1Mbps was reported only, because this data rate has the highest RF output power at preliminary tests.

3.5 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
0.0900 - 0.1100	16.420 - 16.423	399.9 - 410.0	4.50 - 5.15
0.4950 - 0.505(1)	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960.0 - 1240	7.25 - 7.75
4.1250 - 4.1280	25.50 - 25.67	1300 - 1427	8.025 - 8.500
4.17725 - 4.17775	37.50 - 38.25	1435.0 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73.0 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.2150 - 6.2180	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108.00 - 121.94	1718.8 - 1722.2	13.25 - 13.40
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.50
8.2910 - 8.2940	149.90 - 150.05	2310 - 2390	15.35 - 16.20
8.3620 - 8.3660	156.52475 - 156.52525	2483.5 - 2500.0	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.1700	3260 - 3267	23.6 - 24.0
12.2900 - 12.2930	167.72 - 173.20	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345 - 3358	36.43 - 36.5 (2)
12.57675 - 12.57725	322.0 - 335.4	3600 - 4400	
13.3600 - 13.4100			

[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.

4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards. facilities and accreditations

5. FACILITIES AND ACCREDITATIONS

5.1 FACILTIES

All measurement facilities used to collect the measurement data are located at
CCS China Kunshan Lab at 10#Weiye Rd, Innovation Park Eco. & Tec. Development Zone Kunshan city JiangSu, (215300), CHINA.

The sites are constructed in conformance with the requirements of ANSI C63.10 and CISPR Publication 22.

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

5.3 LABORATORY ACCREDITATIONS AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by American Association for Laboratory Accreditation Program for the specific scope accreditation under Lab Code: 200581-0 to perform Electromagnetic Interference tests according to FCC Part 15 or 18 requirements. In addition, the test facilities are listed with Federal Communication Commission, Laboratory Division, 424105 for 10m chamber, 238958 for 3m chamber .

5.4 TABLE OF ACCREDITATIONS

Our laboratories are accredited and approved by the following accreditation body according to ISO/IEC 17025.

Taiwan	TAF
USA	A2LA

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	Industry Canada
Japan	VCCI
Taiwan	BSMI
USA	FCC

Copies of granted accreditation certificates are available for downloading from our web site, http:///www.ccsrf.com

5.5 LIST OF MEASURING EQUIPMENT

Conducted Emissions Test Site					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Data**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	MY44020154	2015-4-9	2016-4-8
DETECTOR NEGATIVE	Agilent	8473B	MY42240176	2015-5-11	2016-5-10
OSCILLOSCOPE	Agilent	DSO6104A	MY44002585	2015-3-16	2016-3-15
Power meter	Anritsu	ML2495A	1445010	2015-04-24	2016-04-23
Power sensor	Anritsu	MA2411B	1339220	2015-04-24	2016-04-23
Power SPLITTER	Mini-Circuits	ZN2PD-9G	SF078500430	N.C.R	N.C.R
DC Power Supply	AGILENT	E3632A	MY50340053	N.C.R	N.C.R
Temp. / Humidity Chamber	TERCHY	MHK-120AK	X30109	2015-1-22	2016-1-21
Test Software			EZ-EMC		

977 Chamber					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Data**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	MY44020154	2015-4-9	2016-4-8
EMI Test Receiver	R&S	ESCI	101378	2015-1-22	2016-1-21
Pre-Amplfier	MINI	ZFL-1000VH2	d041703	2015-1-22	2016-1-21
Pre-Amplfier	Miteq	JS41-00101800-32-10P	1675713	2015-1-22	2016-1-21
Bilog Antenna	Sunol	JB1	A062604	2015-3-6	2016-3-5
Horn-antenna	SCHWARZBECK	BBHA9120D	D:266	2015-3-7	2016-3-6
Turn Table	CT	CT123	4165	N.C.R	N.C.R
Antenna Tower	CT	CTERG23	3256	N.C.R	N.C.R
Controller	CT	CT1OO	95637	N.C.R	N.C.R
Test Software			EZ-EMC		

Conducted Emission					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Data**	**Calibration Due**
EMI TEST RECEIVER	R&S	ESCI	100781	2015-3-16	2016-3-15
V (V-LISN)	SCHWARZBECK	NNLK 8129	8129-143	N.C.R	N.C.R
LISN (EUT)	FCC	FCC-LISN-50/ 250-50-2-02	05012	2015-3-16	2016-3-15
Pulse LIMITER	R&S	ESH3-Z2	100524	2015-9-24	2016-9-23
Test Software			EZ-EMC		

Remark: *Each piece of equipment is scheduled for calibration once a year.*

5.6 SETUP CONFIGURATION

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

5.7 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID
	Notebook	DELL	E5430	CN8YYW1	N/A

Remark:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

6. FCC PART 15.247 REQUIREMENTS

6.1 PEAK POWER

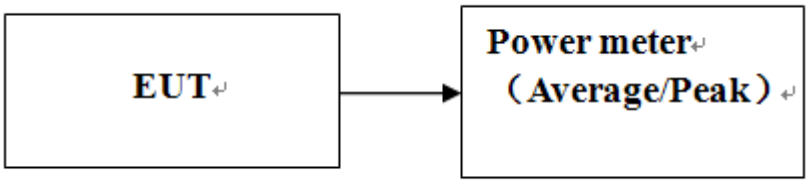
Limit

The maximum peak output power of the intentional radiator shall not exceed the following:

1. According to §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.
2. According to §15.247(b)(1), For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.
3. According to §15.247(b)(3), for systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 Watt.
4. According to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Remark: *Each piece of equipment is scheduled for calibration once a year.*

Test Configuration



Test Procedure

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v03r03.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

Test Results

No non-compliance noted

Test RESULTS

1M GFSK Modulation mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Limit (mW)	Result
Low	2402	2.06	1.607	125	PASS
Mid	2441	2.26	1.683		PASS
High	2480	1.67	1.469		PASS

3M 8-DPSK Modulation mode

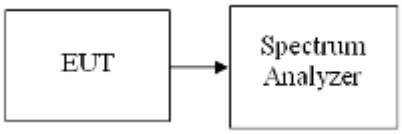
Channel	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Limit (mW)	Result
Low	2402	1.37	1.371	125	PASS
Mid	2441	-1.59	0.693		PASS
High	2480	1.05	1.274		PASS

6.2 20DB BANDWIDTH & 99% bandwidth MEASUREMENT

Limit

According to §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.

Test Configuration



Test Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 30kHz, VBW = 300kHz, Span = 3MHz, Sweep = auto.
4. Max hold, mark 2 peaks of hopping channel and record the 2 peaks frequency.

Test Results of Bandwidth

No non-compliance noted

Operation Mode:	1 Mbps	Test Date:	January 2, 2016
Temperature:	24°C	Tested by:	Lily.Wang

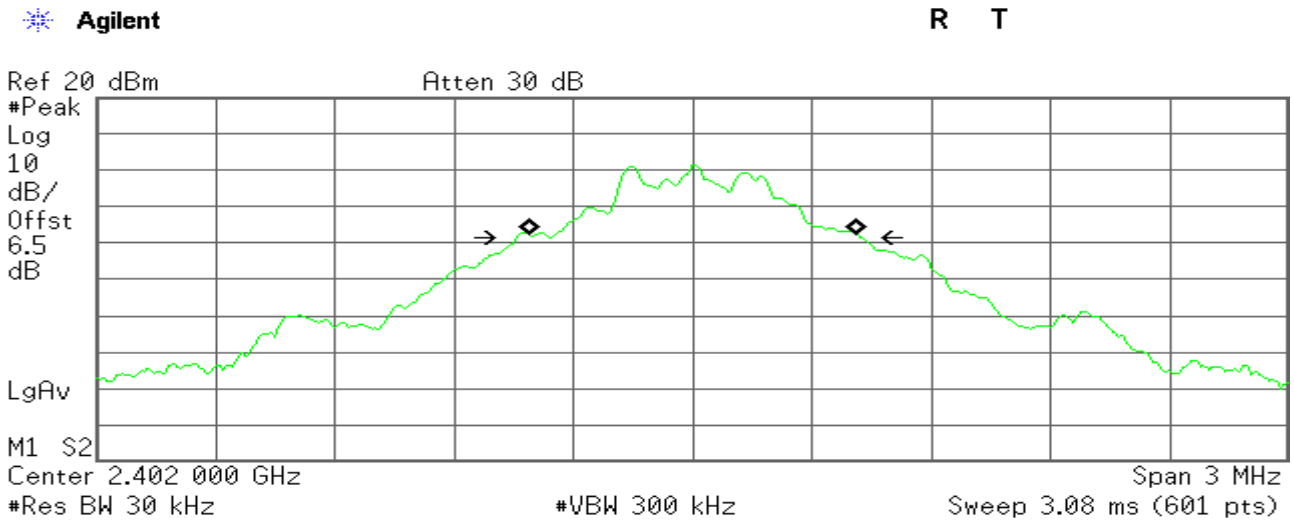
Channel	Frequency (MHz)	20dB Bandwidth (B) (MHz)	99% Bandwidth (B) (MHz)
00	2402	0.868	0.820
39	2441	0.866	0.817
78	2480	0.871	0.817

Operation Mode:	3 Mbps	Test Date:	January 2, 2016
Temperature:	24°C	Tested by:	Lily.Wang

Channel	Frequency (MHz)	20dB Bandwidth (B) (MHz)	99% Bandwidth (B) (MHz)
00	2402	1.226	1.156
39	2441	1.227	1.156
78	2480	1.247	1.158

Test Plot

1M Channel 00

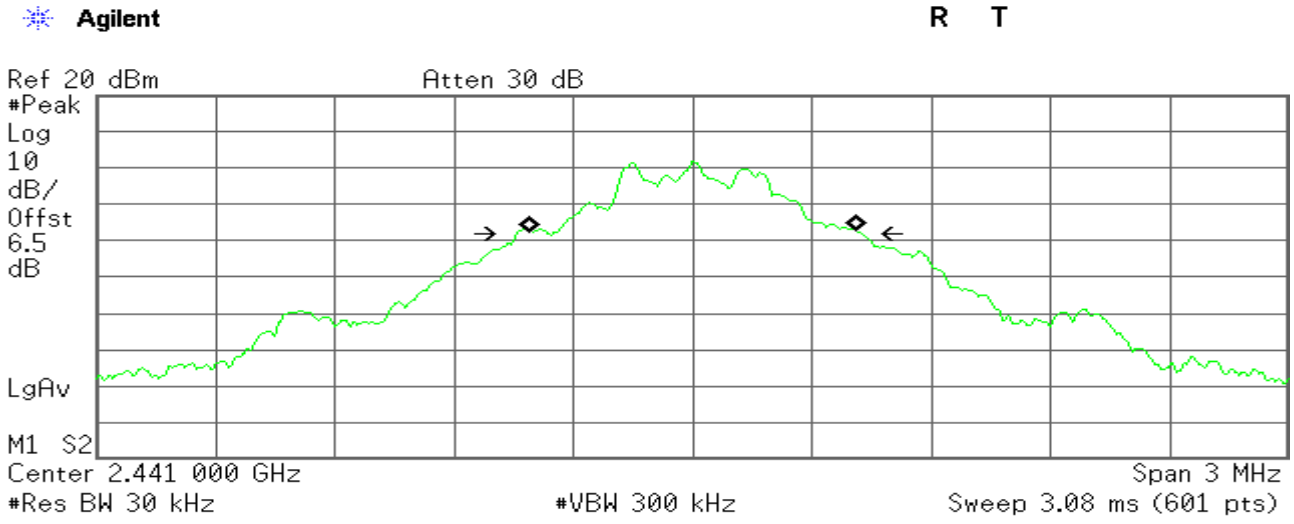


Occupied Bandwidth
819.7178 kHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -697.517 Hz
x dB Bandwidth 868.080 kHz

1M Channel 39

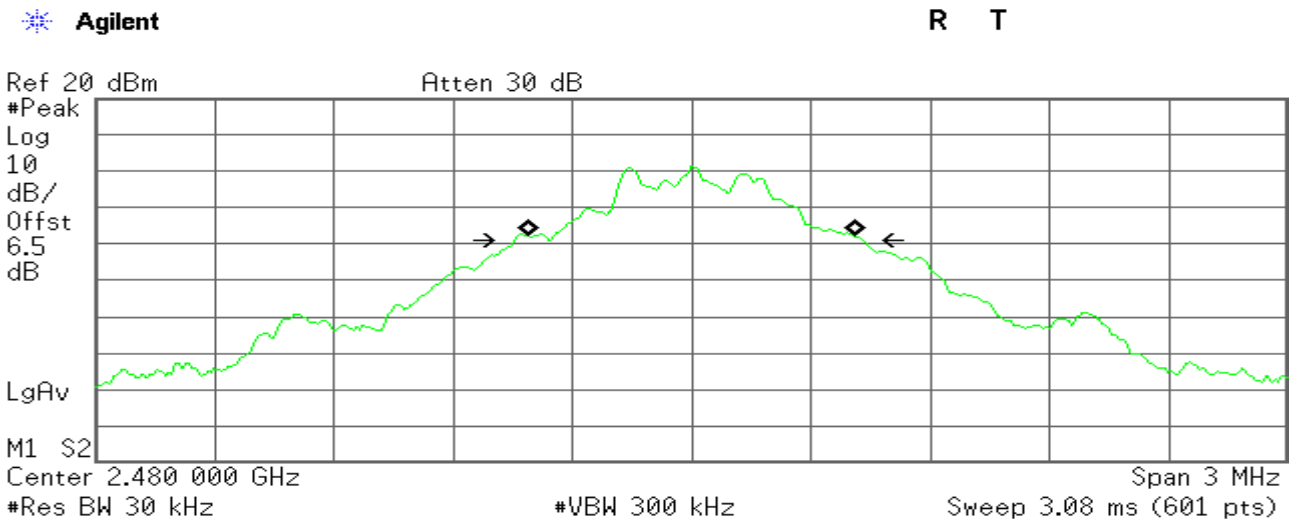


Occupied Bandwidth
817.1820 kHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -17.639 Hz
x dB Bandwidth 866.293 kHz

1M Channel 78

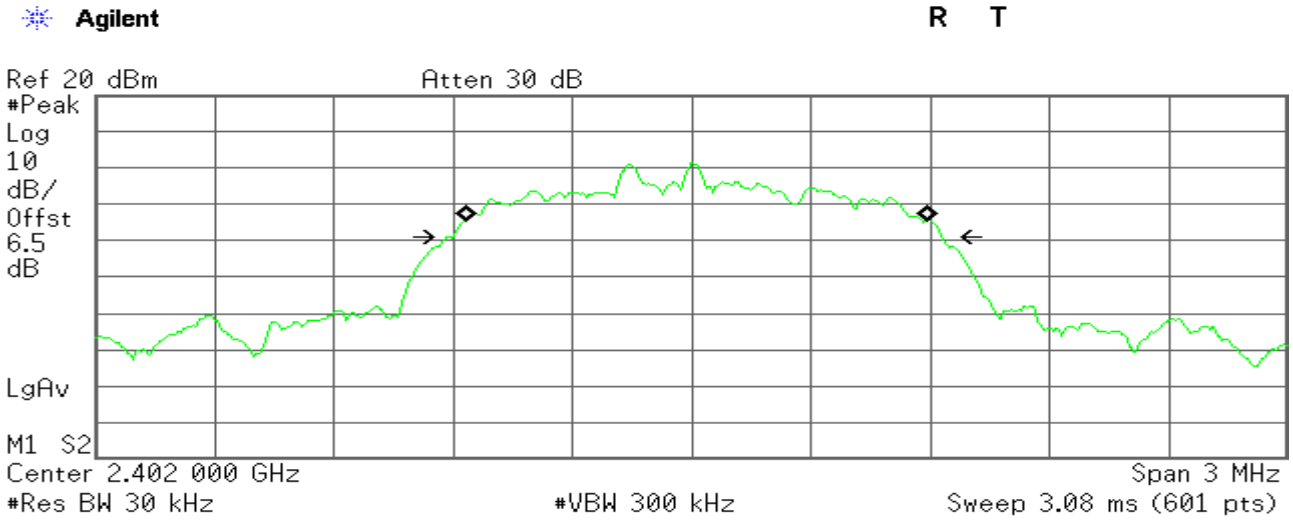


Occupied Bandwidth
816.8318 kHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -1.219 kHz
x dB Bandwidth 870.951 kHz

3M Channel 00

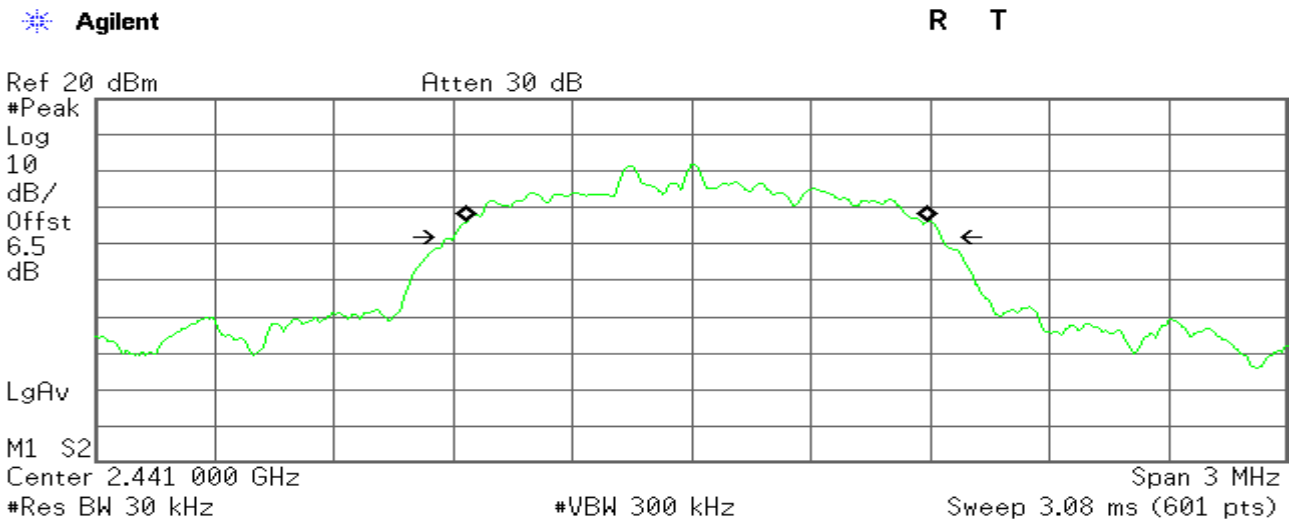


Occupied Bandwidth
1.1557 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error 13.939 kHz
x dB Bandwidth 1.226 MHz

3M Channel 39

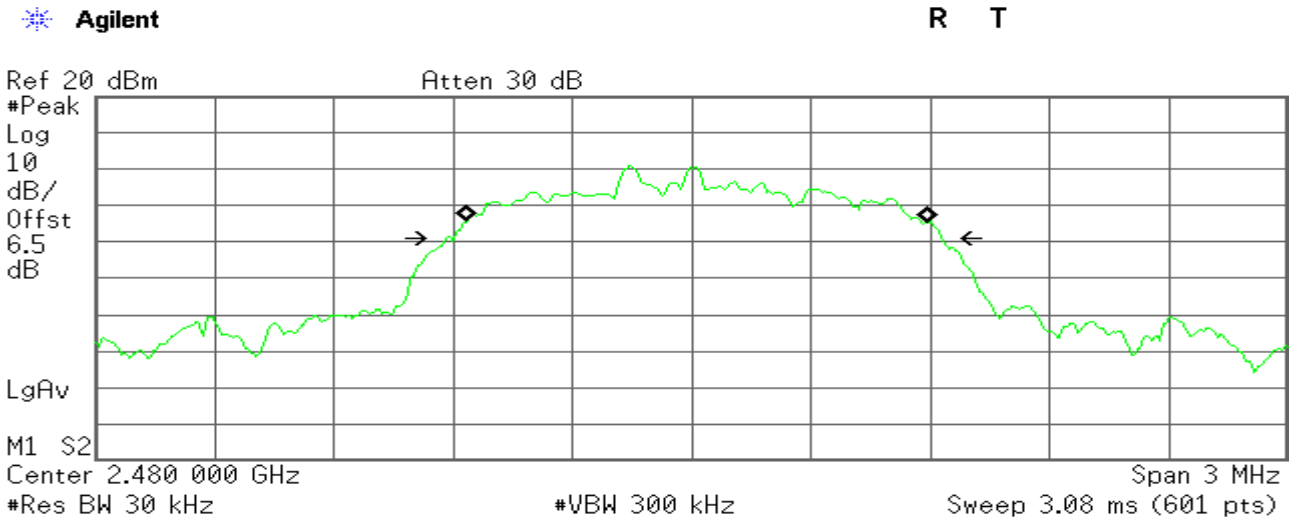


Occupied Bandwidth
1.1561 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error 13.788 kHz
x dB Bandwidth 1.227 MHz

3M Channel 78



Occupied Bandwidth
1.1580 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

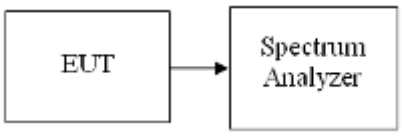
Transmit Freq Error 14.559 kHz
x dB Bandwidth 1.247 MHz

6.3 HOPPING CHANNEL SEPARATION

LIMIT

According to §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.

Test Configuration



TEST PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = middle of hopping channel.
4. Set the spectrum analyzer as RBW = 30kHz, VBW = 100kHz, Span = 3MHz, Sweep = auto.
5. Max hold, mark 2 peaks of hopping channel and record the 2 peaks frequency.

TEST RESULTS

No non-compliance noted

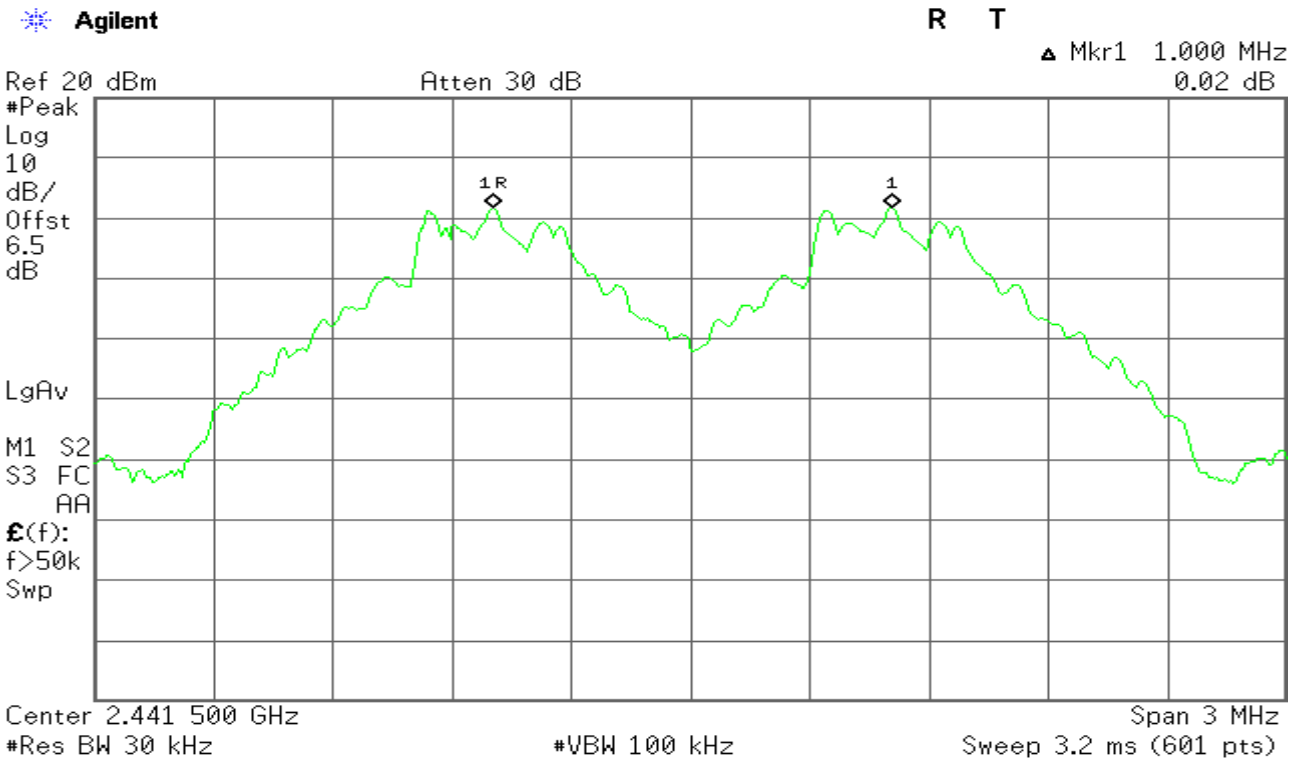
Operation Mode:	1 Mbps	Test Date:	January 3, 2016
Temperature:	24°C	Tested by:	Lily.Wang

Channel	Frequency (MHz)	Separation (MHz)	(2/3 of 20dB BW) Limits (MHz)	Result
39~40	2441~2442	1.000	0.581	Pass

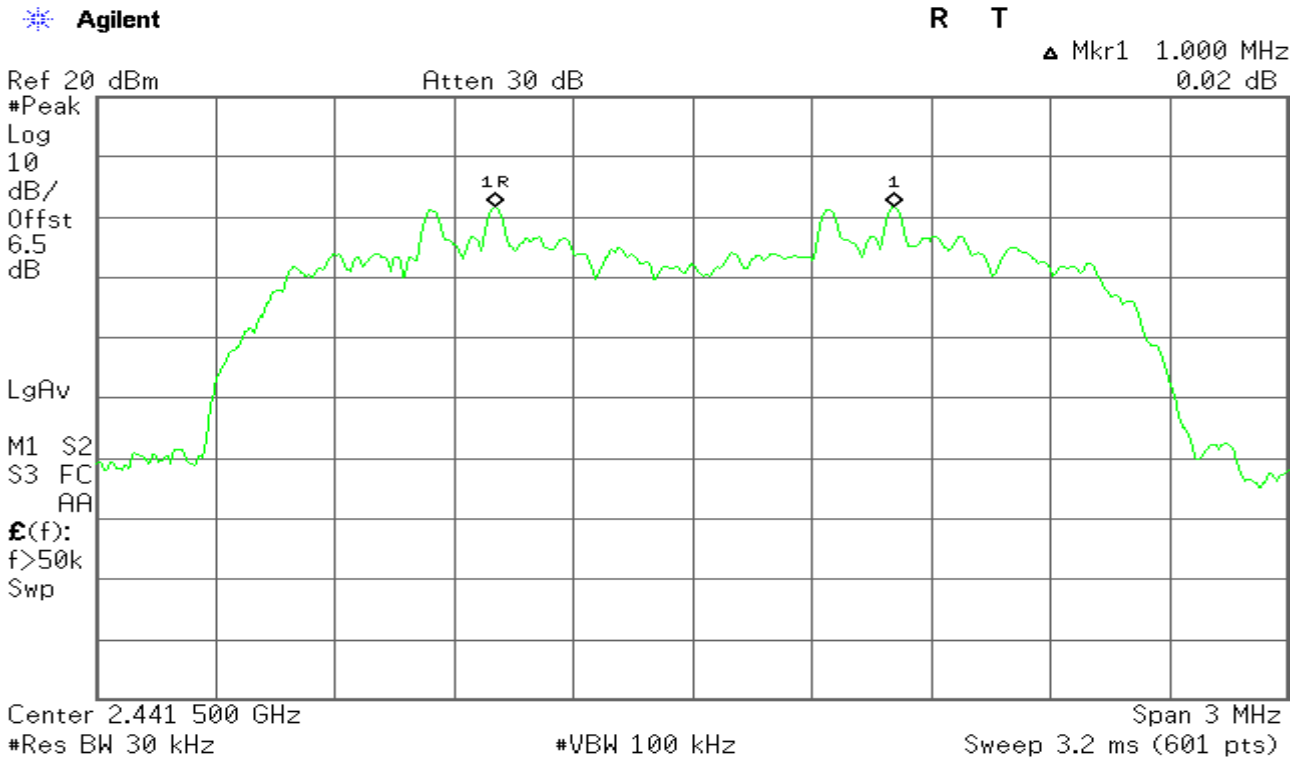
Operation Mode:	3 Mbps	Test Date:	January 3, 2016
Temperature:	24°C	Tested by:	Lily.Wang

Channel	Frequency (MHz)	Separation (MHz)	(2/3 of 20dB BW) Limits (MHz)	Result
39~40	2441~2442	1.000	0.831	Pass

1M Channel Separation Plot on Channel 39-40



3M Channel Separation Plot on Channel 39-40

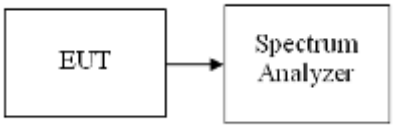


6.4 NUMBER OF HOPPING FREQUENCY

LIMIT

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400MHz-2483.5 MHz bands shall use at least 15 hopping frequencies.

Test Configuration



TEST PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set spectrum analyzer Start=2400MHz, Stop = 2441.5MHz, Sweep = auto and Start=2441.5MHz, Stop = 2483.5MHz, Sweep = auto.
4. Set the spectrum analyzer as RBW, VBW=1MHz.
5. Max hold, view and count how many channel in the band.

TEST RESULTS

No non-compliance noted

Test Data

Operation Mode:	1 Mbps	Test Date:	January 2, 2016
Temperature:	24°C	Tested by:	Lily.Wang

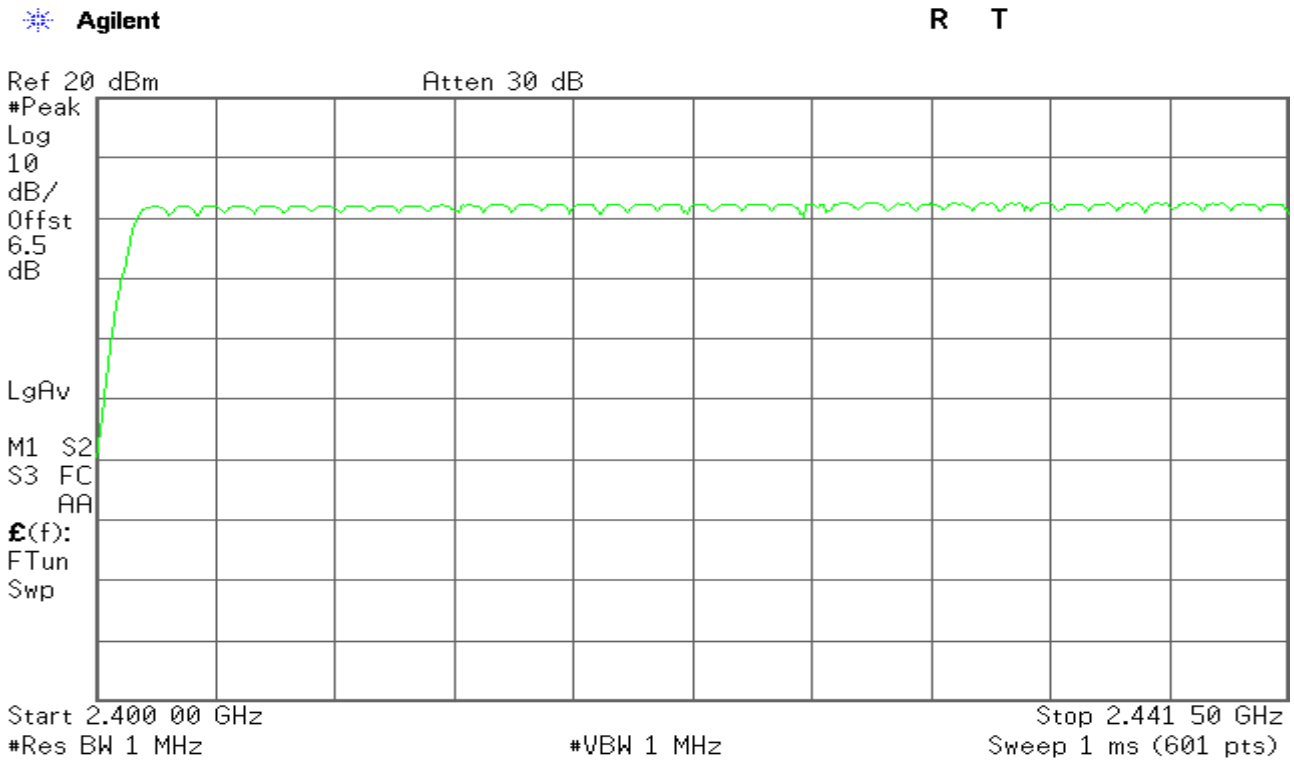
Result (No. of CH)	Limit (No. of CH)	Result
79	>15	PASS

Operation Mode:	3 Mbps	Test Date:	January 2, 2016
Temperature:	24°C	Tested by:	Lily.Wang

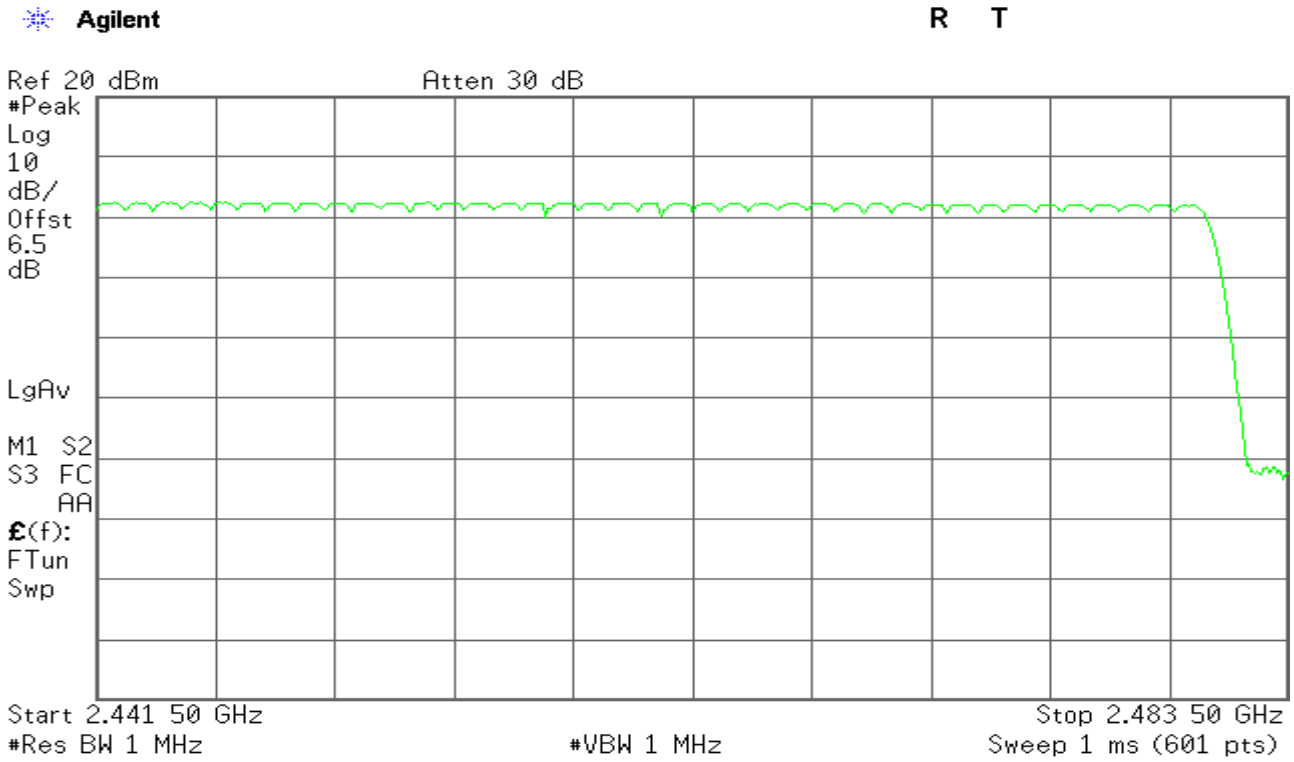
Result (No. of CH)	Limit (No. of CH)	Result
79	>15	PASS

Test Plot:1M

Channel Number 2.4 GHz – 2.441.5 GHz

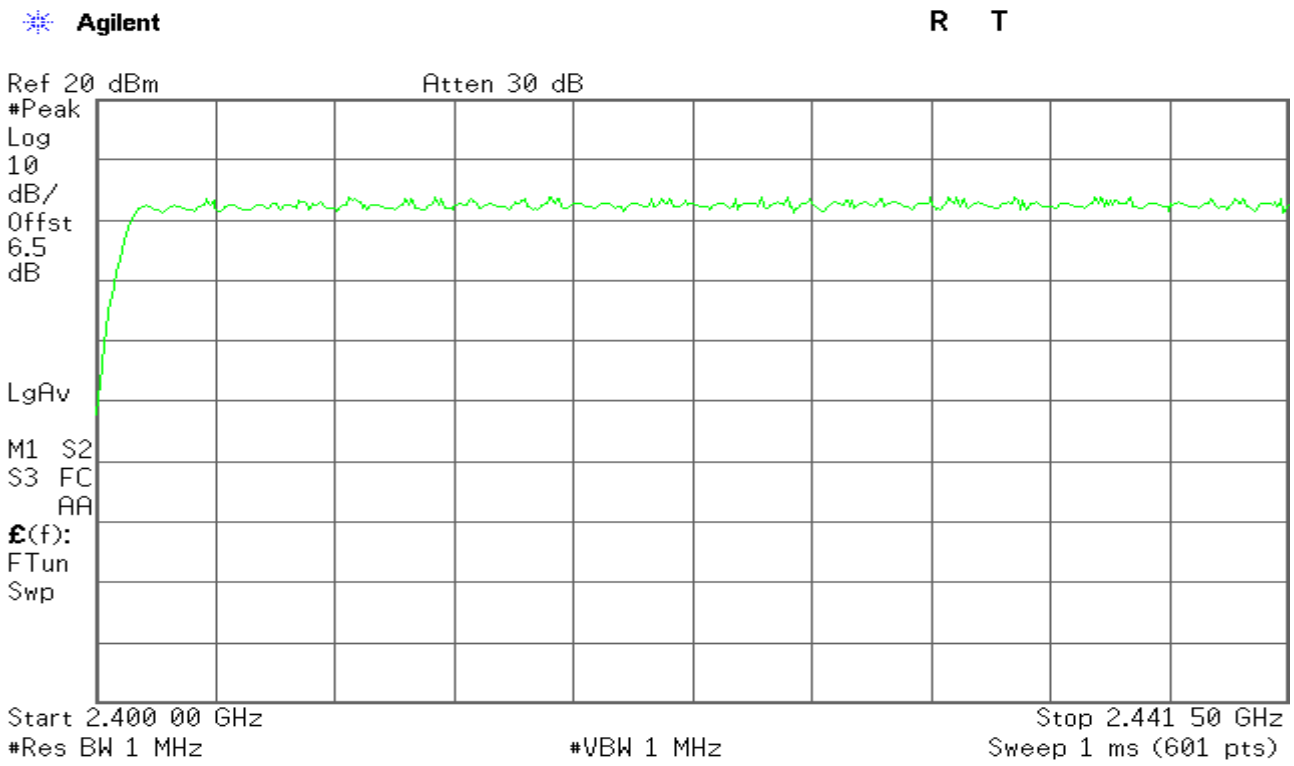


Channel Number 2.441.5 GHz – 2.4835 GHz

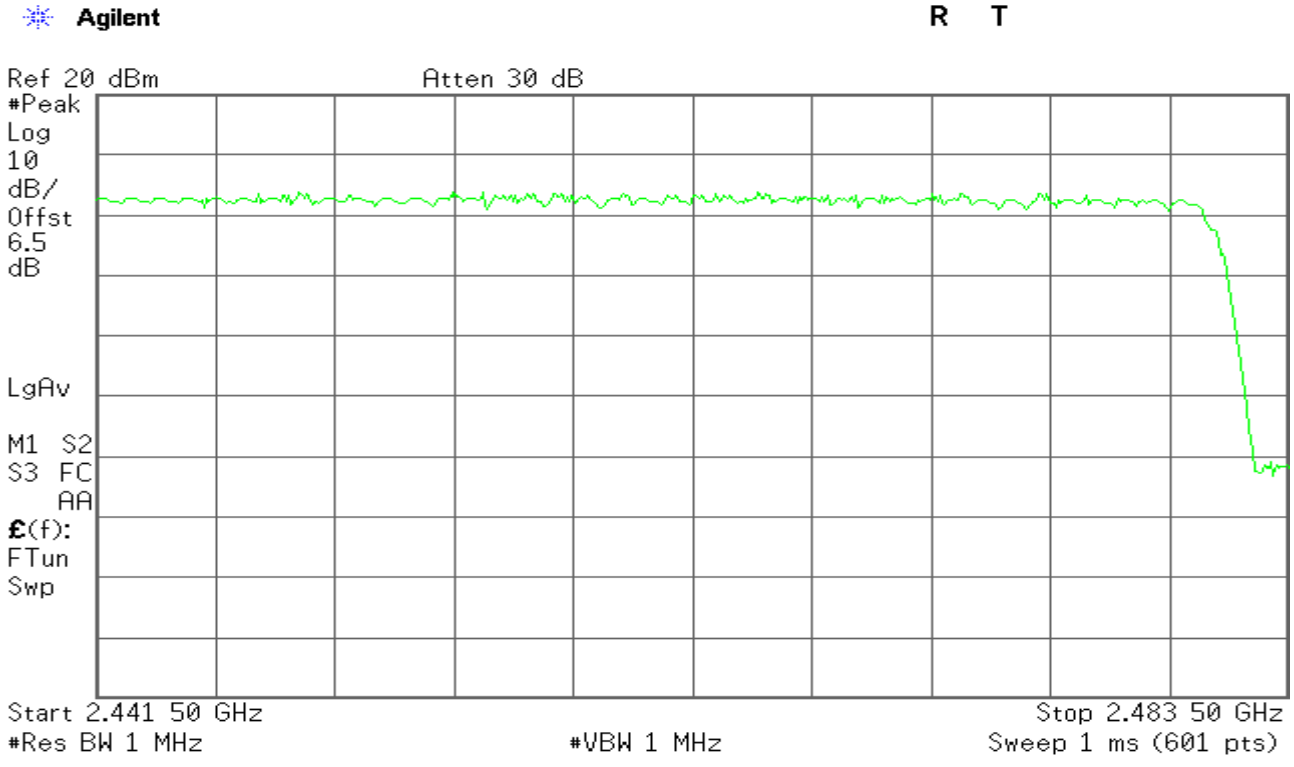


Test Plot:3M

Channel Number 2.4 GHz – 2.441.5 GHz



Channel Number 2.441.5 GHz – 2.4835 GHz

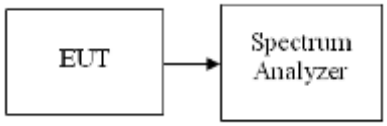


6.5 TIME OF OCCUPANCY (DWELL TIME)

LIMIT

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400MHz-2483.5 MHz bands. The average time of occupancy on any channels shall not greater than 0.4 s within a period 0.4 s multiplied by the number of hopping channels employed.

Test Configuration



TEST PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = operating frequency.
4. Set the spectrum analyzer as RBW, VBW=1MHz, Span = 0Hz, Sweep = auto.
5. Repeat above procedures until all frequency measured were complete.

TEST RESULTS

No non-compliance noted

Test Data

1M

DH 1

0.315 * (1600/2)/79 * 31.6 = 100.80(ms)

Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
0.315	100.80	31.60	400	PASS

DH 3

1.675* (1600/4)/79 * 31.6 = 268.00 (ms)

Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
1.675	268.00	31.60	400	PASS

DH 5

2.933* (1600/6)/79 * 31.6 = 312.85 (ms)

Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
2.933	312.85	31.60	400	PASS

3M
DH 1
0.4158 * (1600/2)/79 * 31.6 = 133.06 (ms)

Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
0.4158	133.06	31.60	400	PASS

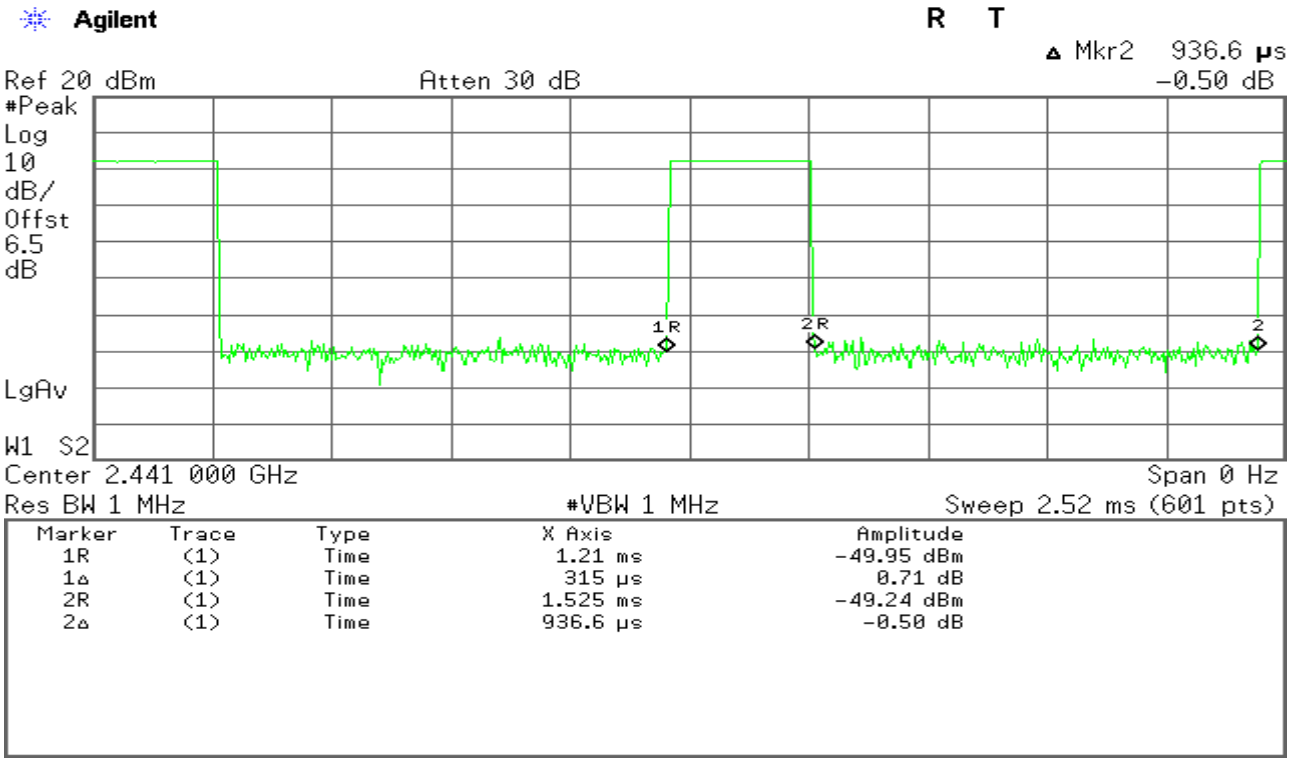
DH 3
1.700* (1600/4)/79 * 31.6 = 272.00 (ms)

Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
1.700	272.00	31.60	400	PASS

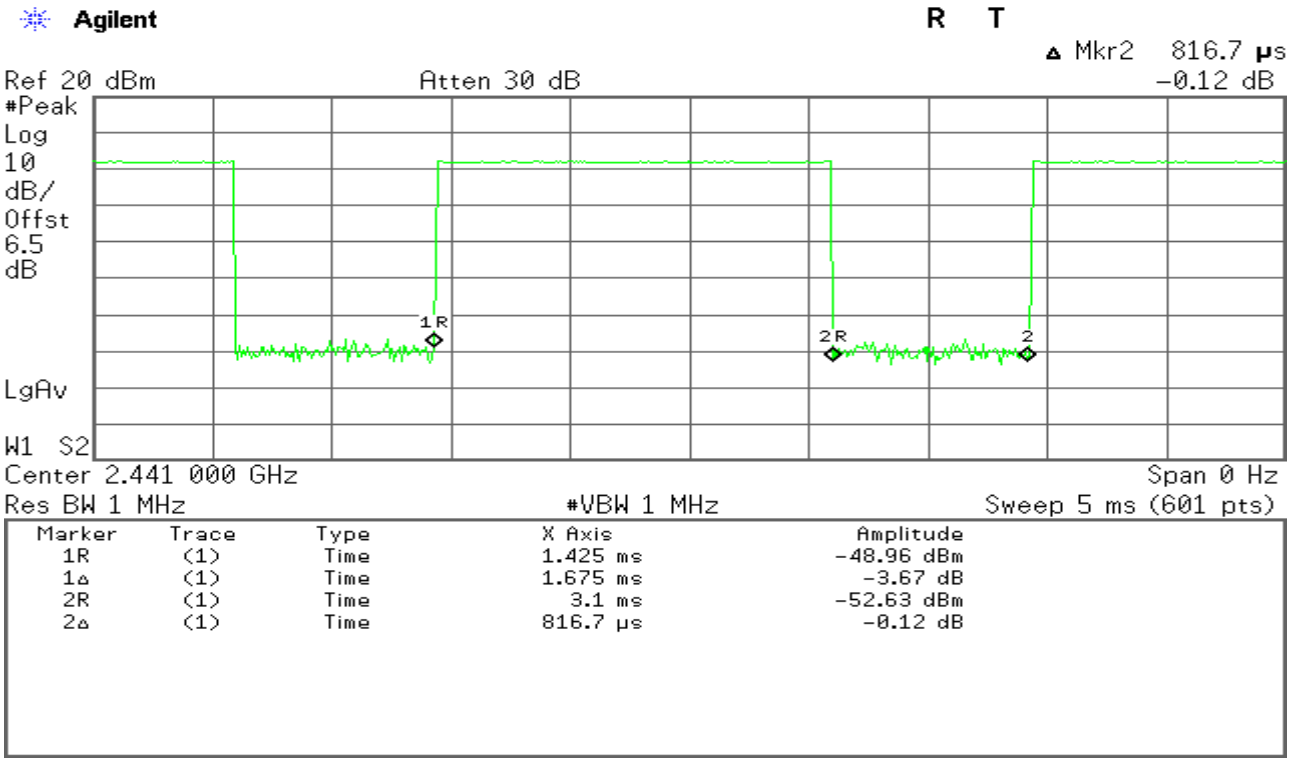
DH 5
2.967* (1600/6)/79 * 31.6 = 316.48(ms)

Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
2.967	316.48	31.60	400	PASS

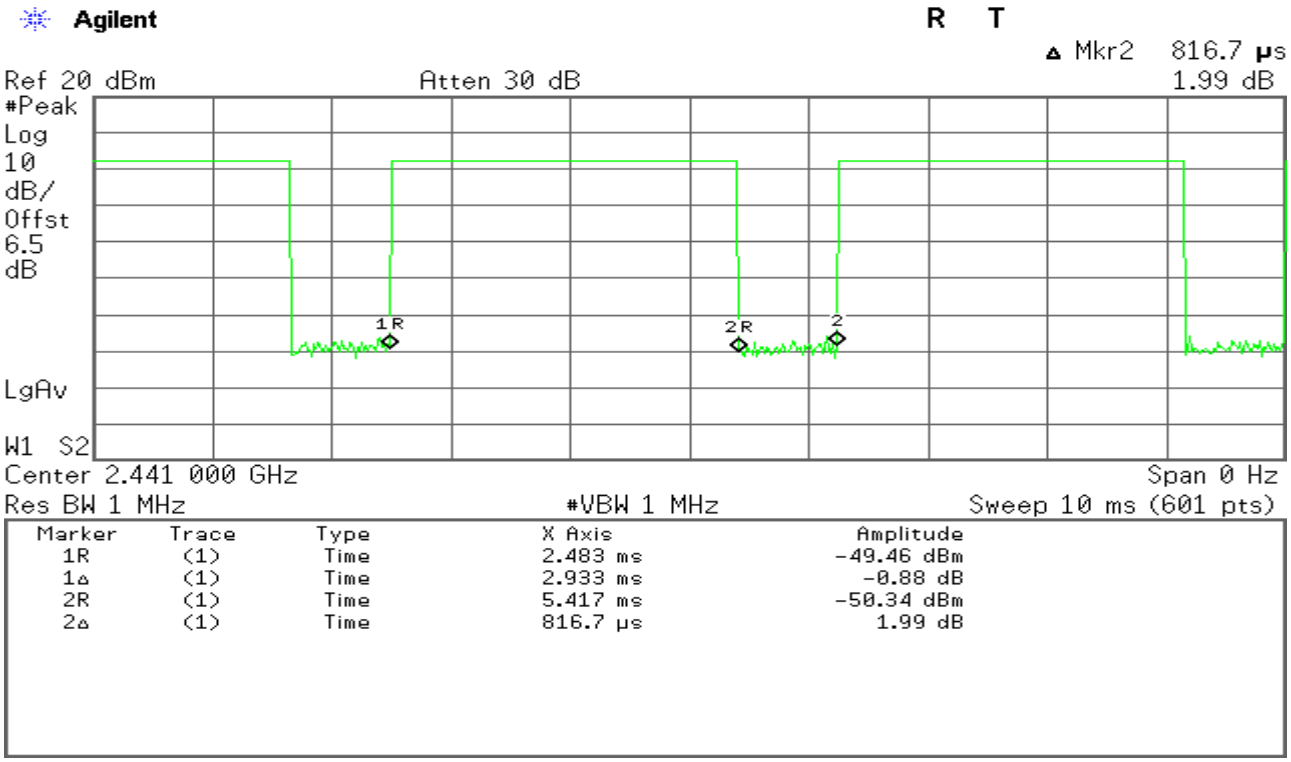
1M-DH1



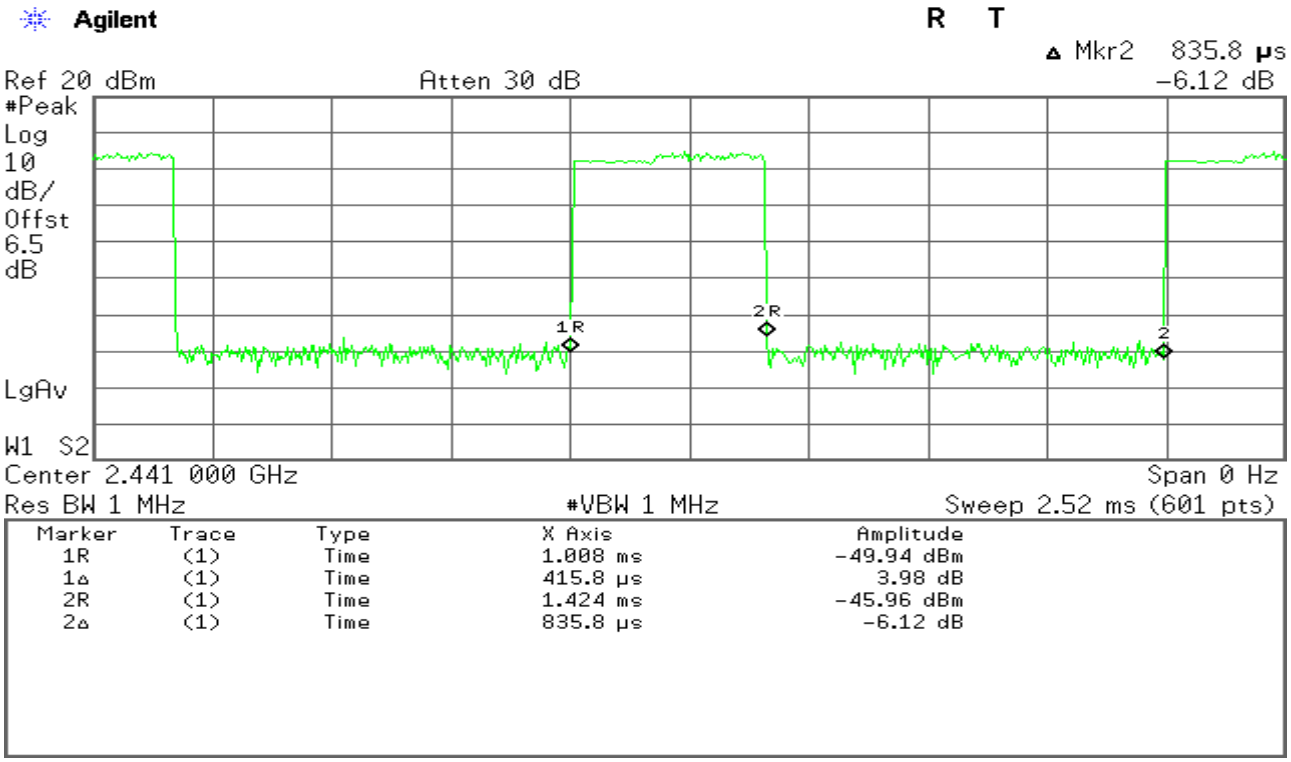
1M-DH3



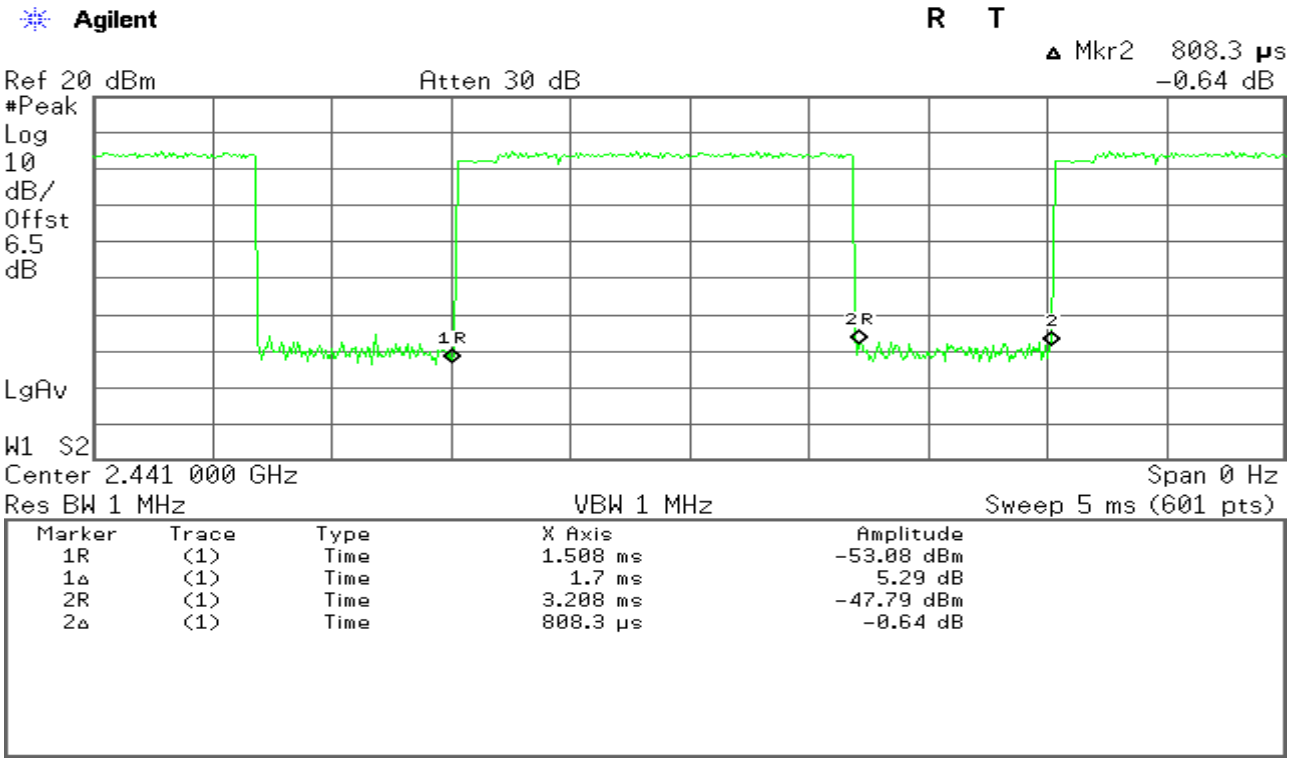
1M-DH5



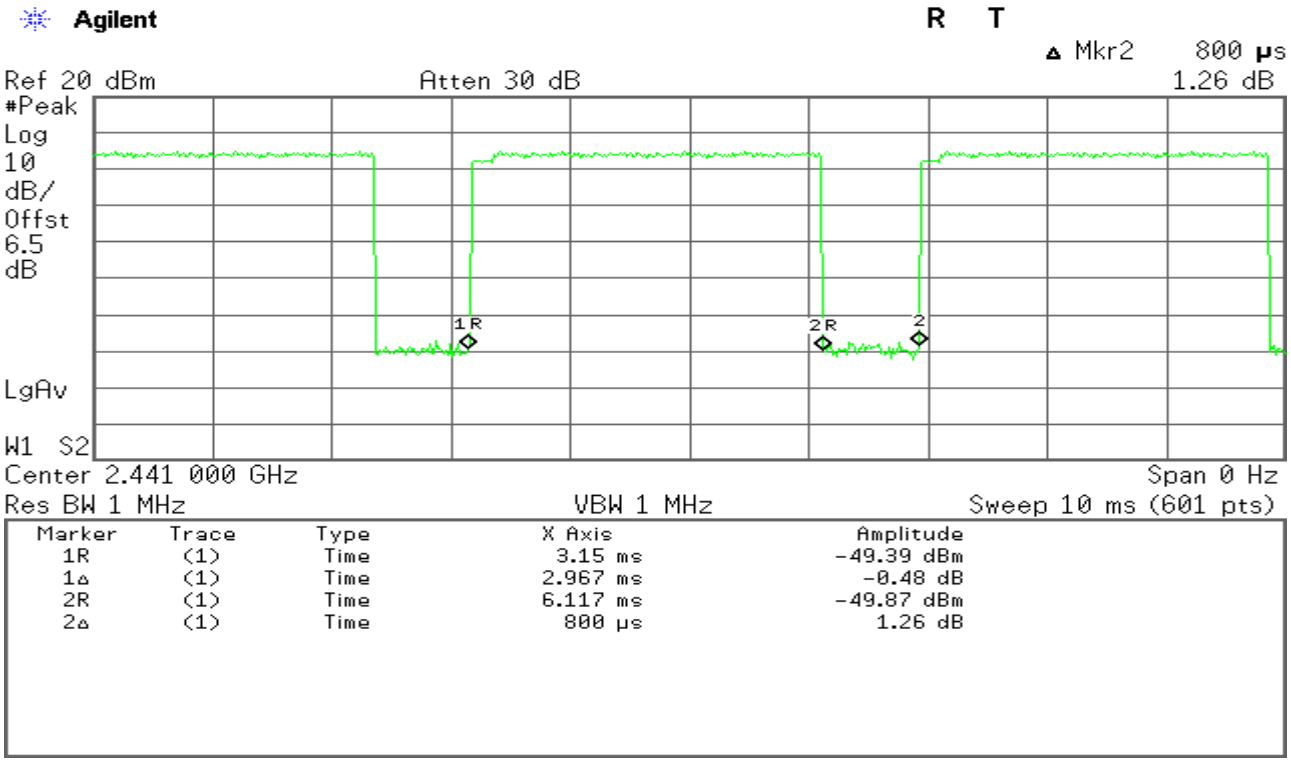
3M-DH1



3M-DH3



3M-DH5

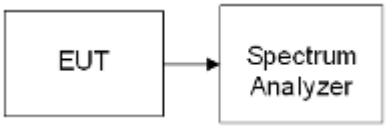


6.6 Conducted Band Edges Measurement

LIMIT

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

Test Configuration



TEST PROCEDURE

1. The testing follows the guidelines in Band-edge Compliance of RF Conducted Emissions of FCC Public Notice DA 00-705 Measurement Guidelines.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100kHz (≧1% span=10MHz), VBW = 300kHz (≧3RBW). Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100kHz RBW. The attenuation shall be 30 dB instead of 20 dB when RMS conducted output power procedure is used.
4. Enable hopping function of the EUT and then repeat step 2. and 3.
5. Measure and record the results in the test report.

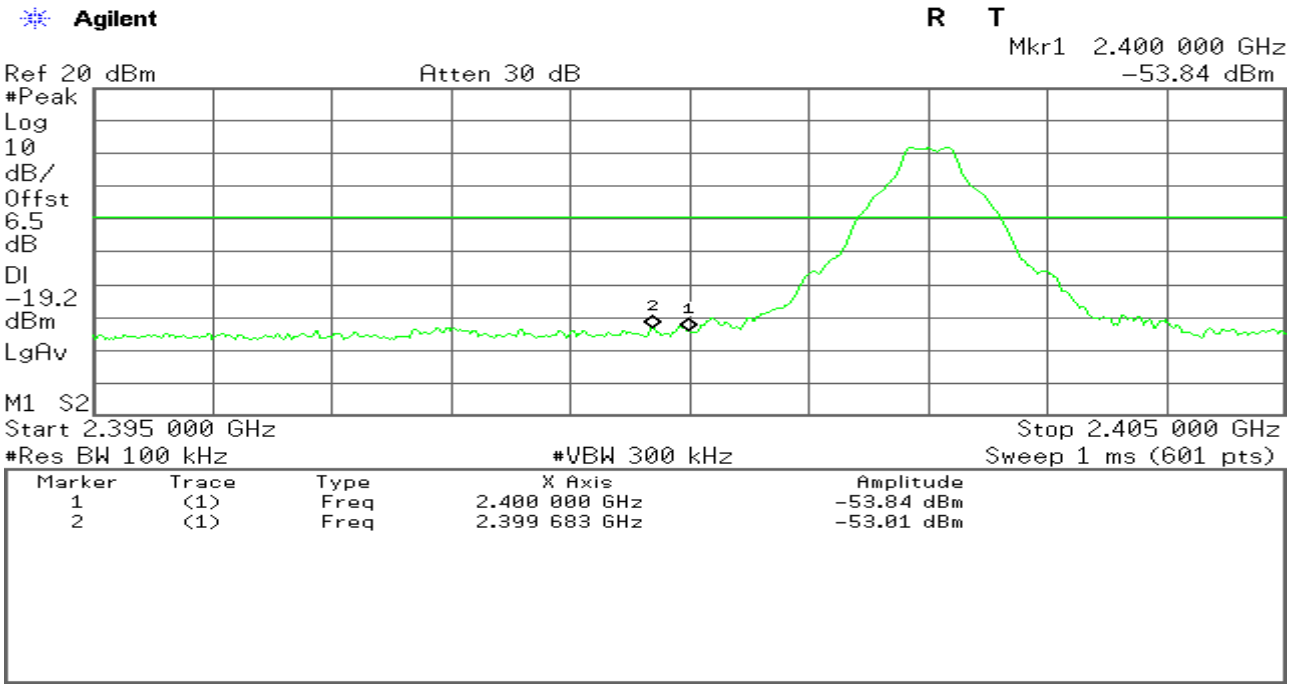
TEST RESULTS

No non-compliance noted

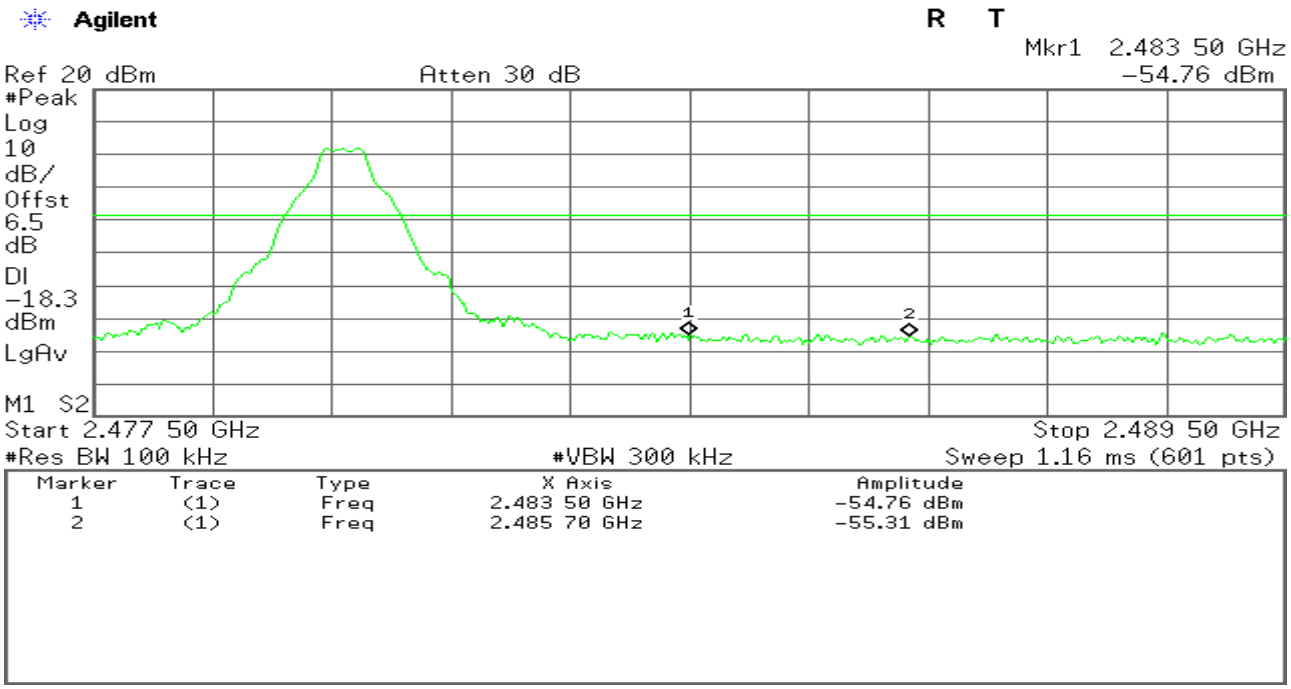
Test Result of Conducted Band Edges

Operation Mode:	1 Mbps	Test Date:	January 2, 2016
Test Channel:	00 and 78	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C

Low Band Edge Plot on Channel 00

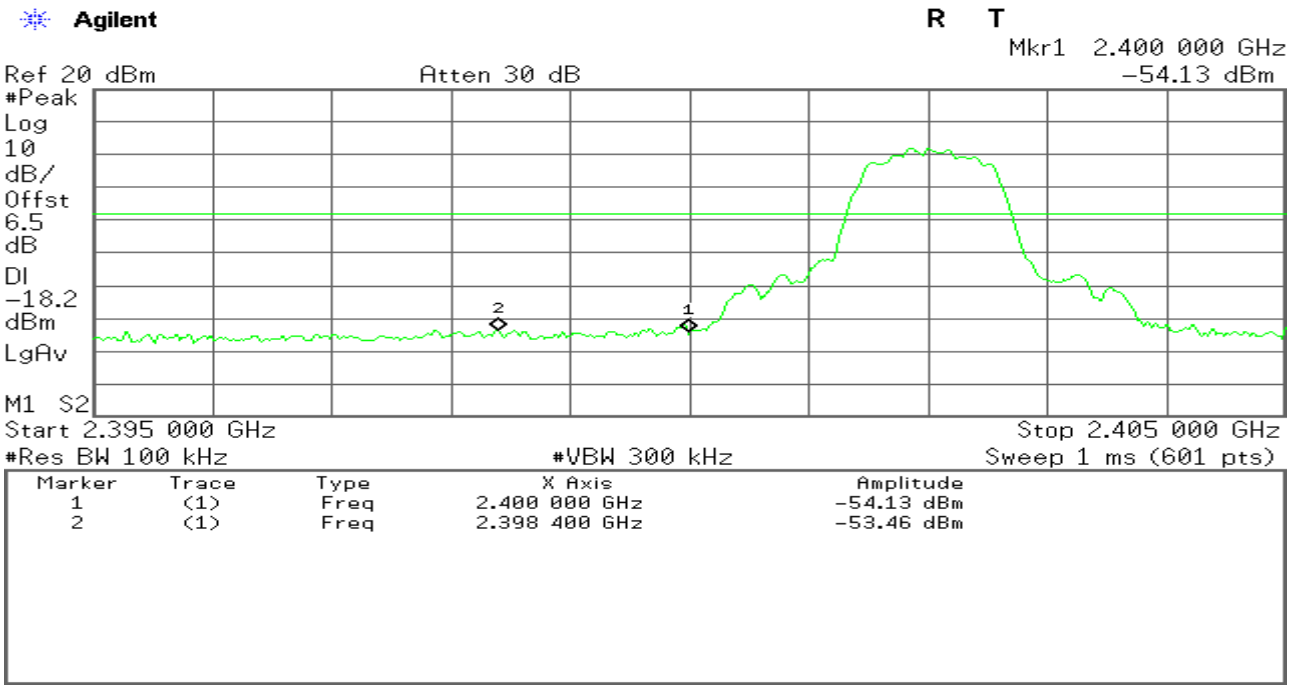


High Band Edge Plot on Channel 78

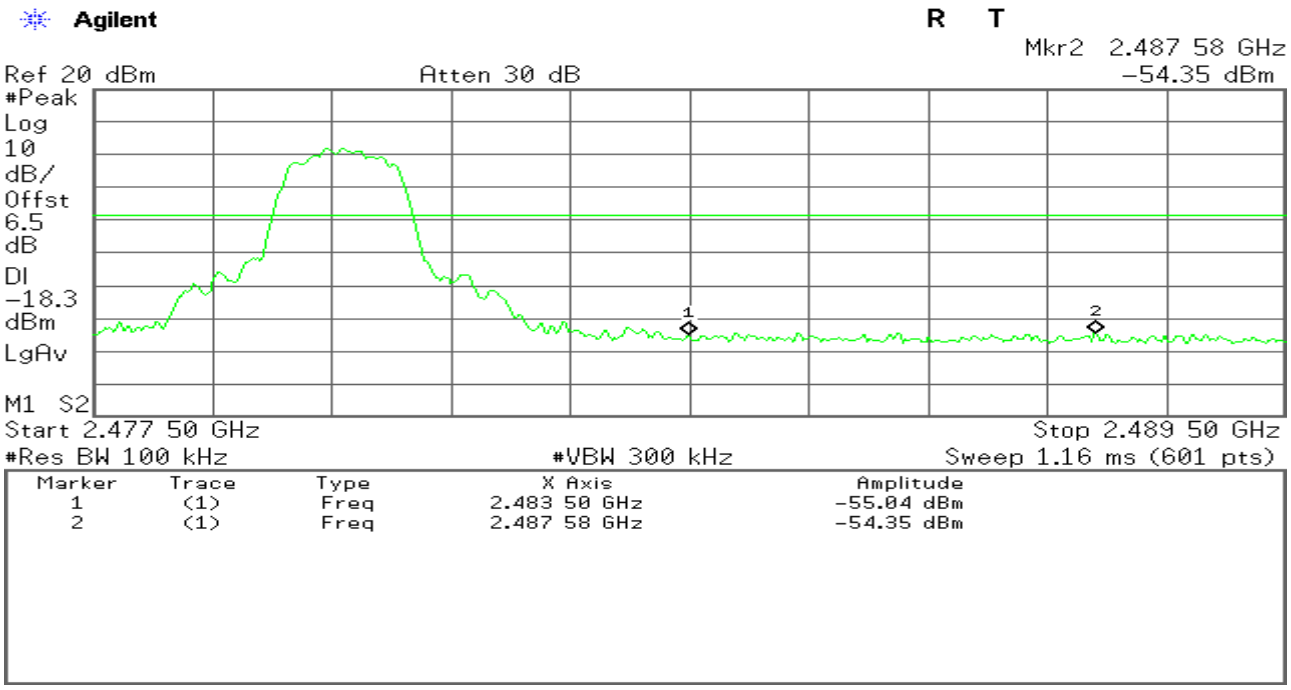


Operation Mode:	3 Mbps	Test Date:	January 2, 2016
Test Channel:	00 and 78	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C

Low Band Edge Plot on Channel 00



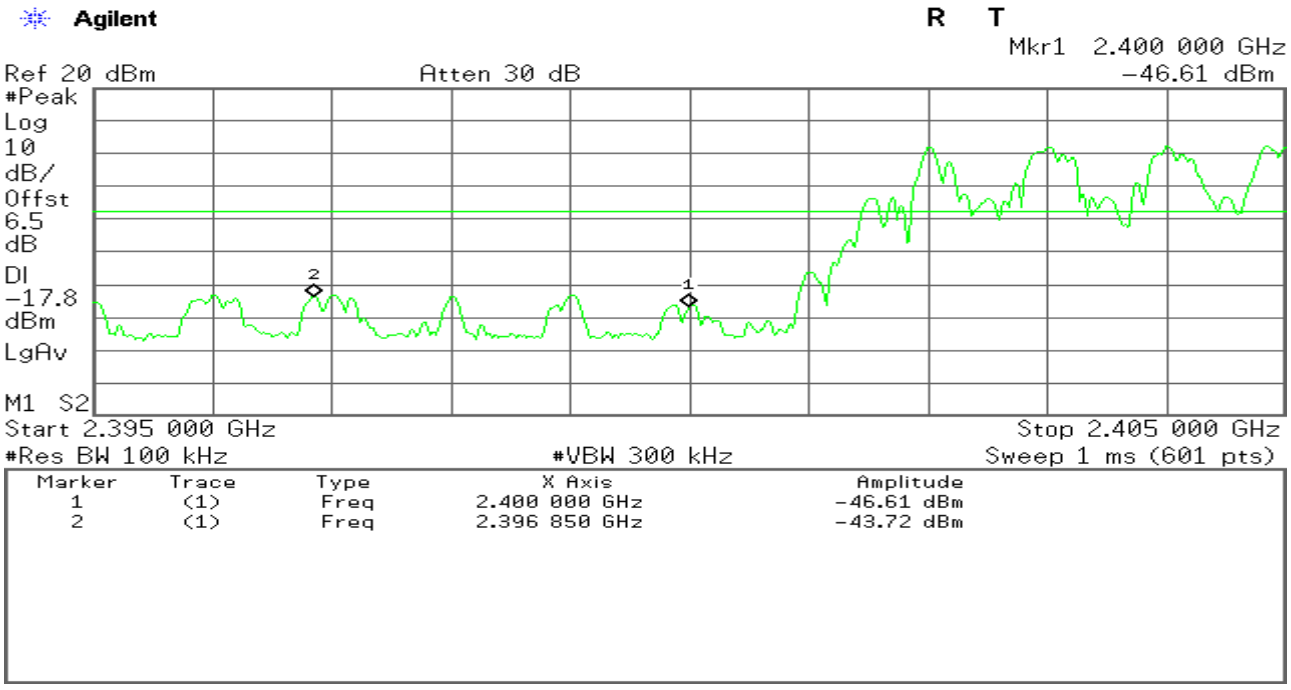
High Band Edge Plot on Channel 78



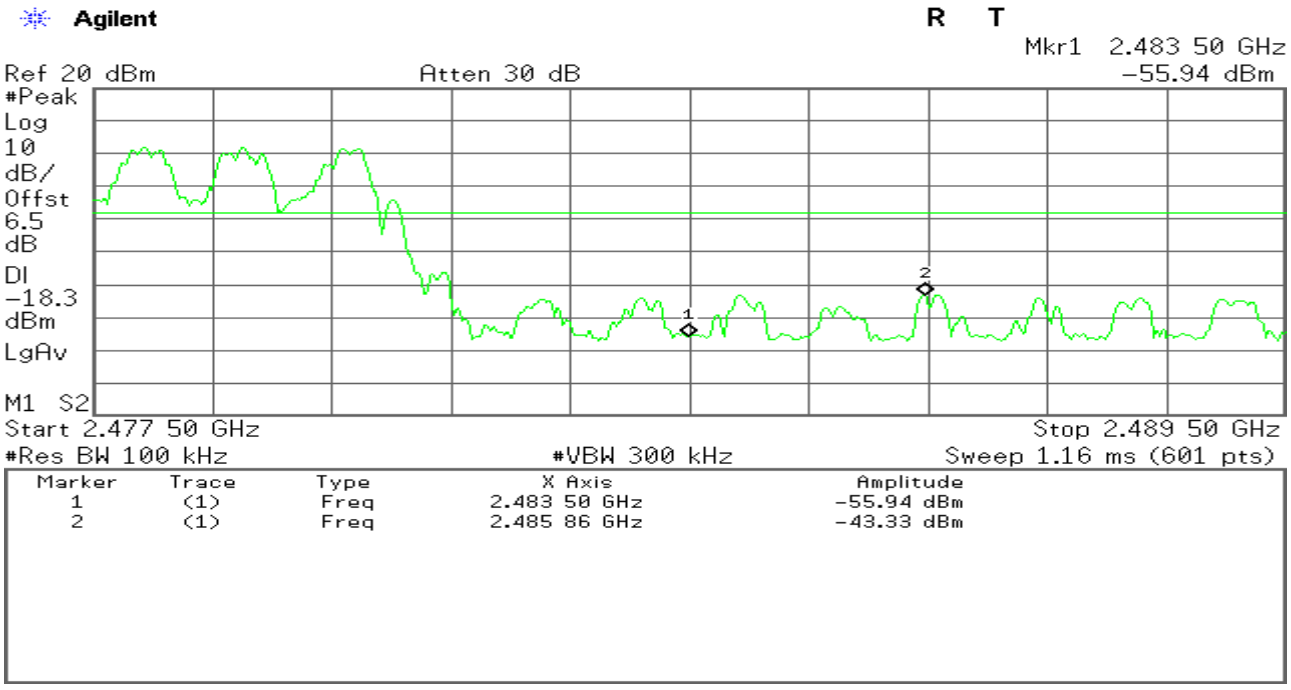
Test Result of Conducted Hopping Mode Band Edges

Operation Mode:	1 Mbps	Test Date:	January 2, 2016
Humidity:	52 % RH	Temperature:	24°C

1Mbps Hopping Mode Low Band Edge Plot

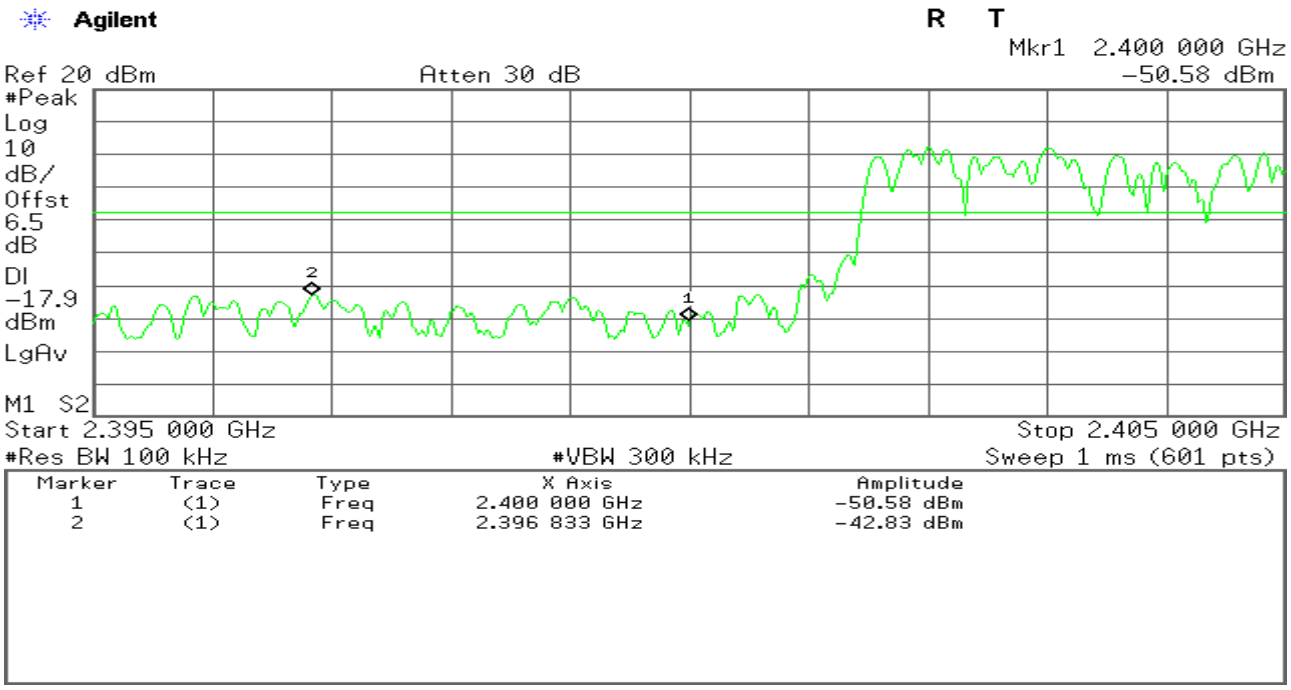


1Mbps Hopping Mode High Band Edge Plot

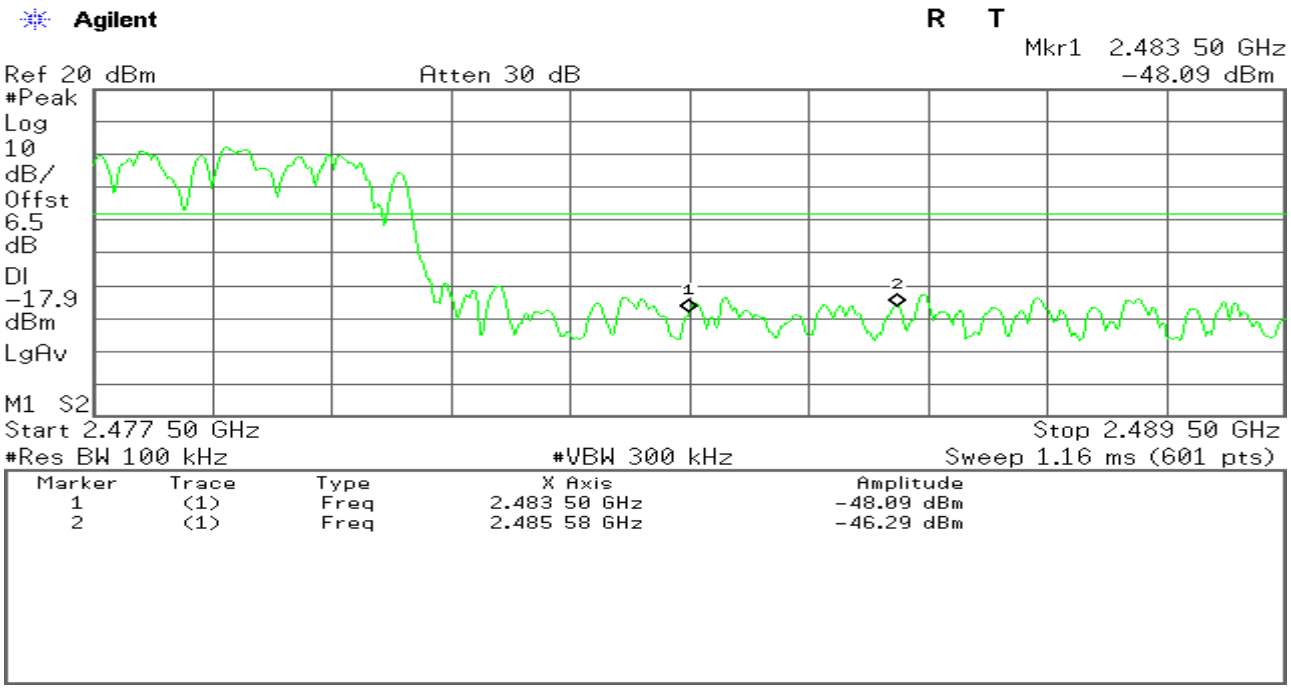


Operation Mode:	3 Mbps	Test Date:	January 2, 2016
Humidity:	52 % RH	Temperature:	24°C

3Mbps Hopping Mode Low Band Edge Plot



3Mbps Hopping Mode High Band Edge Plot

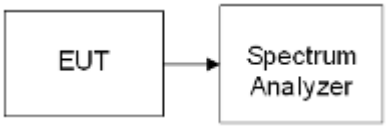


6.7 Conducted Spurious Emission Measurement

LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Test Configuration



TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

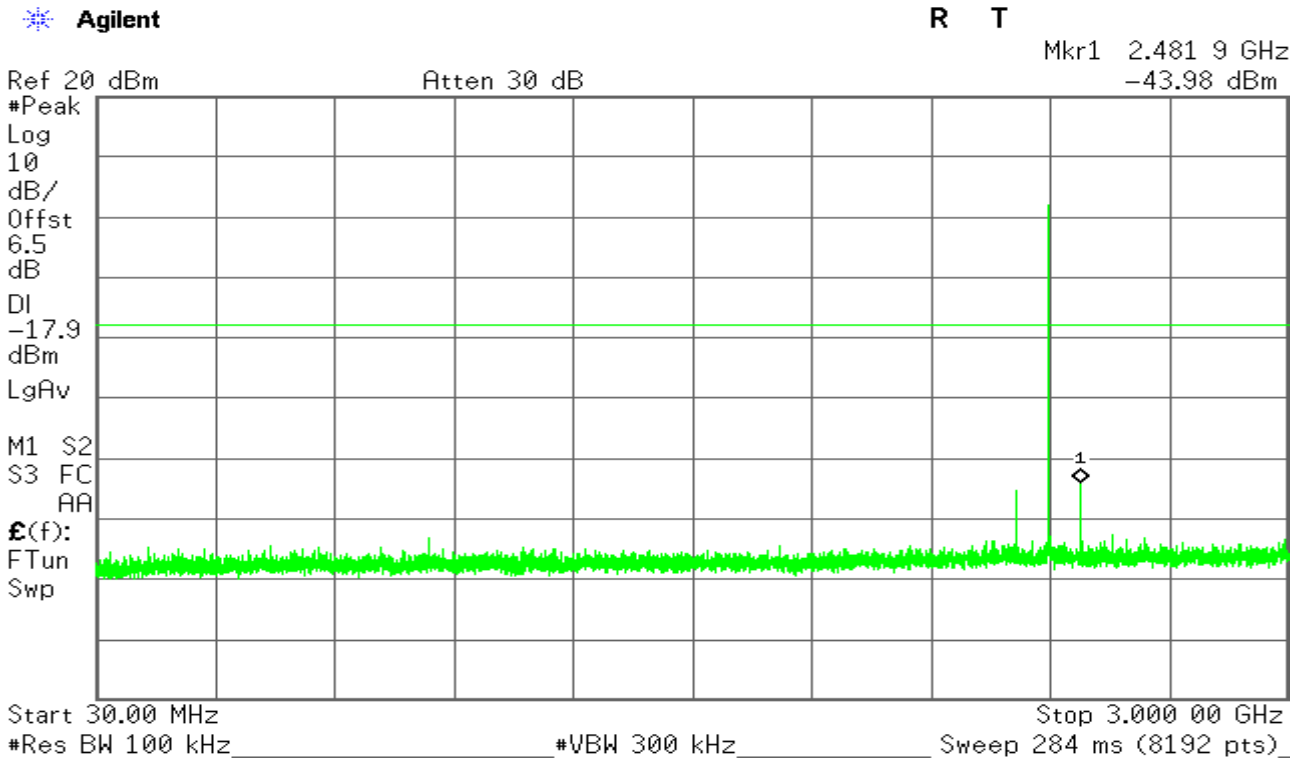
The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 KHz. The video bandwidth is set to 300 KHz.

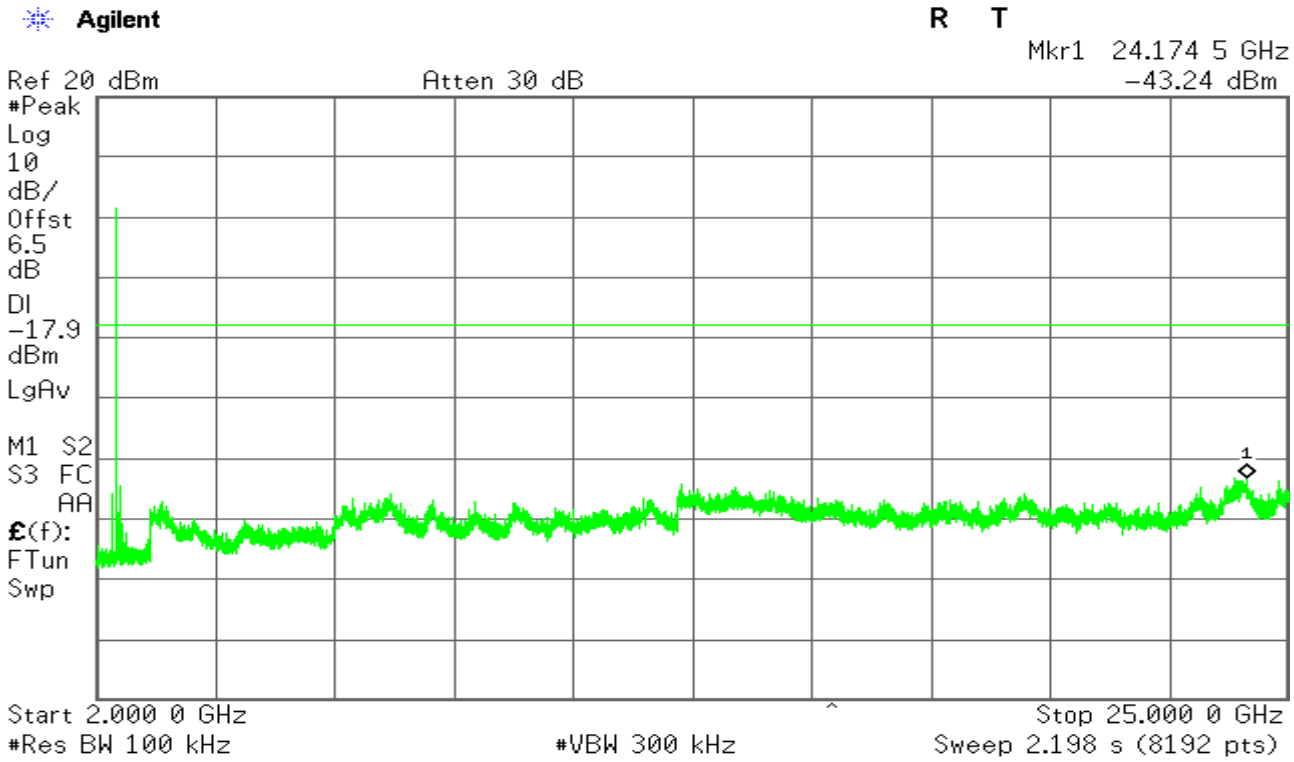
Measurements are made over the 30MHz to 26GHz range with the transmitter set to the lowest, middle, and highest channels.

TEST RESULTS

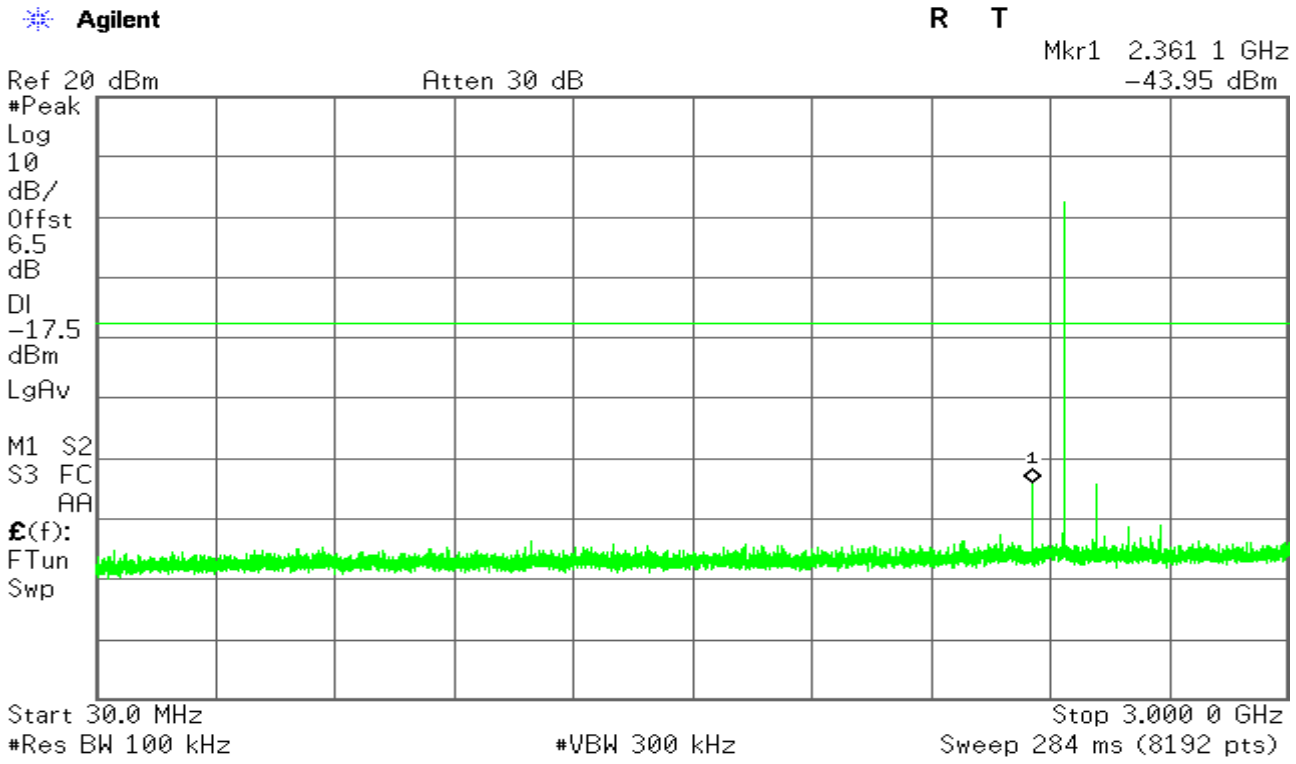
No non-compliance noted

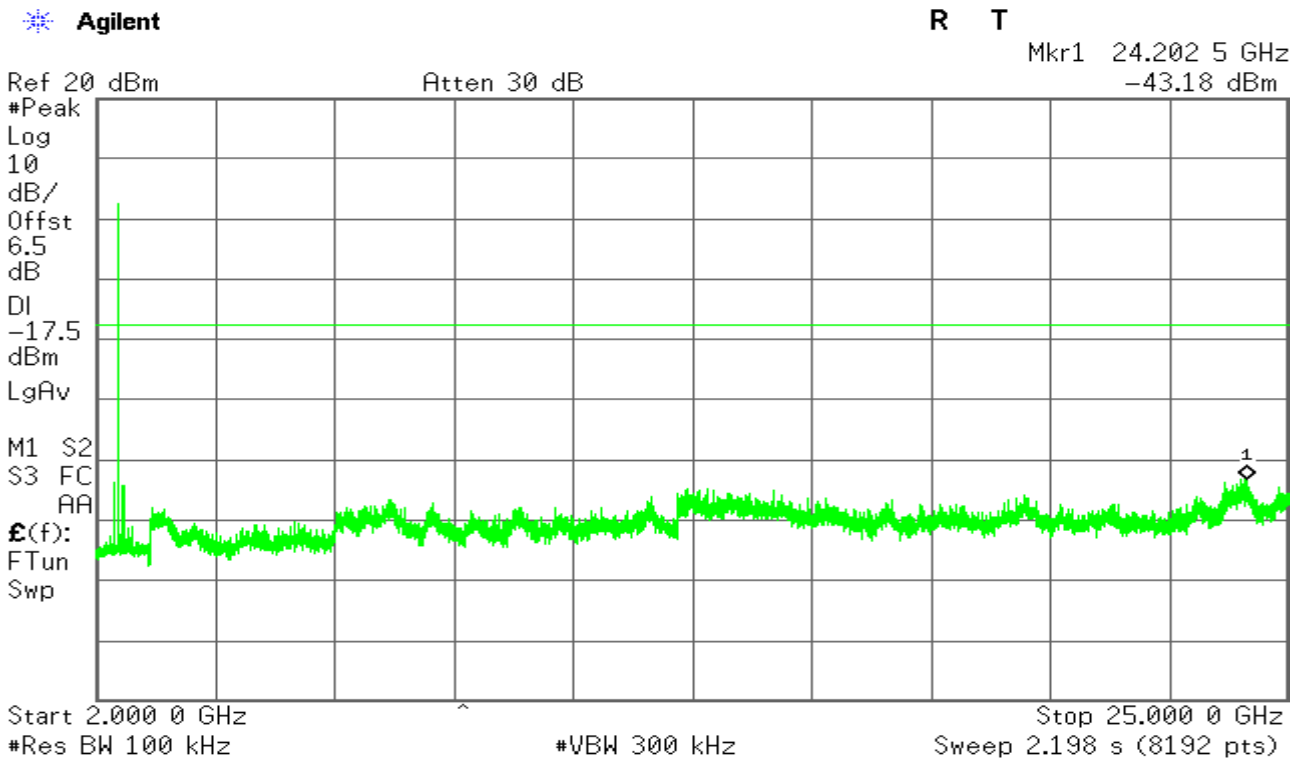
Operation Mode:	1 Mbps	Test Date:	January 2, 2016
Test Channel:	00	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C



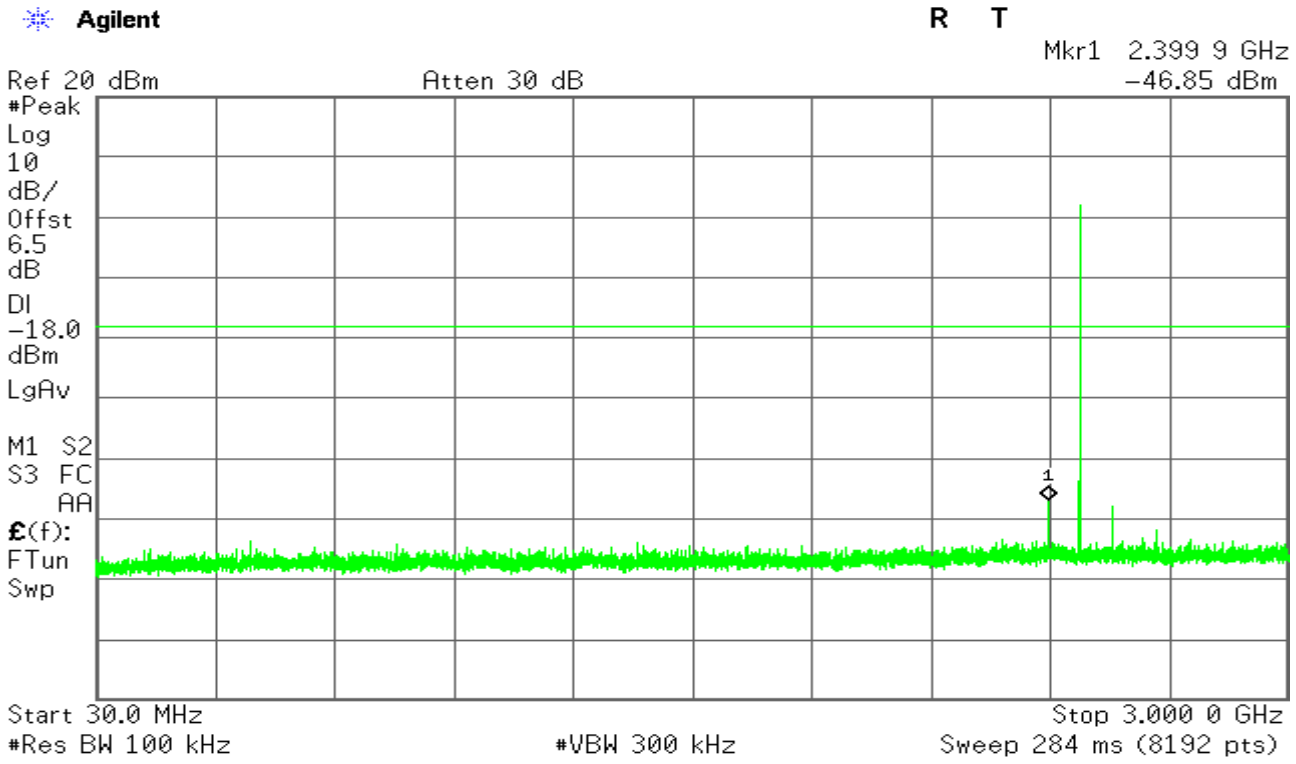


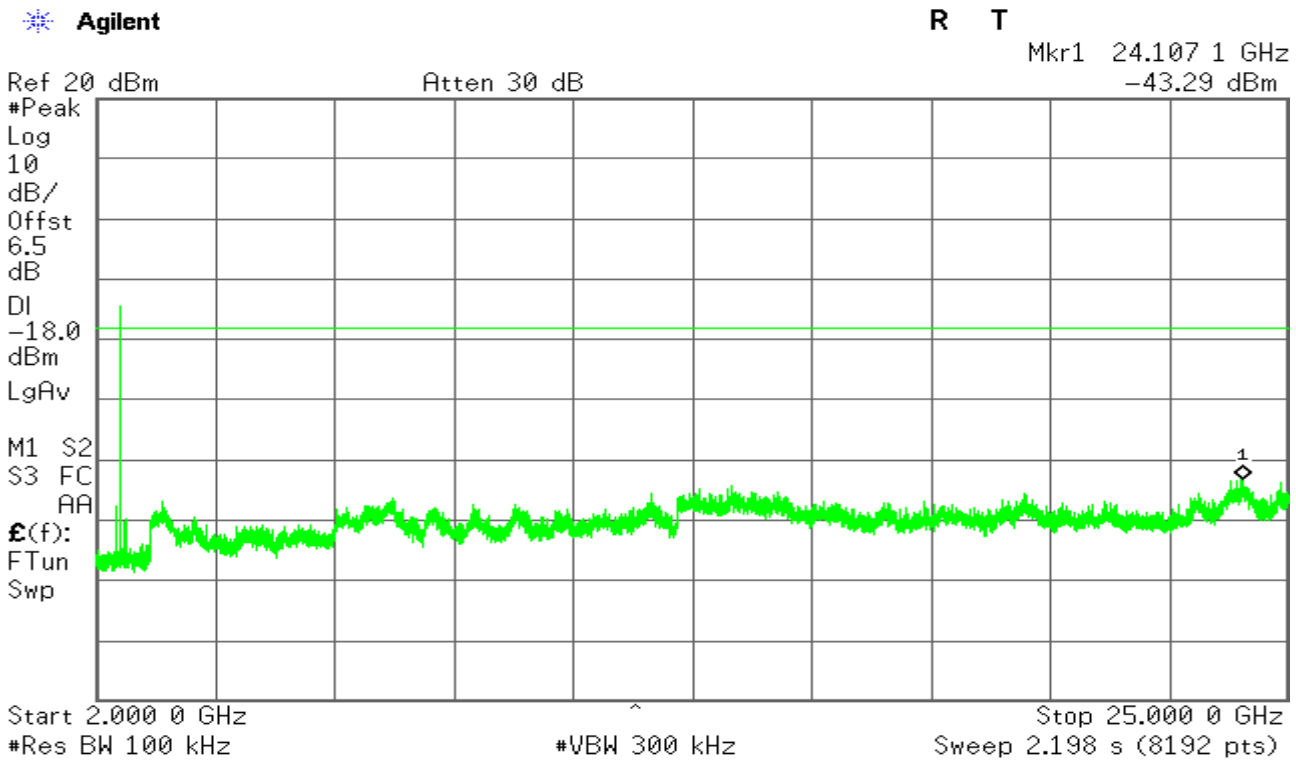
Operation Mode:	1 Mbps	Test Date:	January 2, 2016
Test Channel:	39	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C



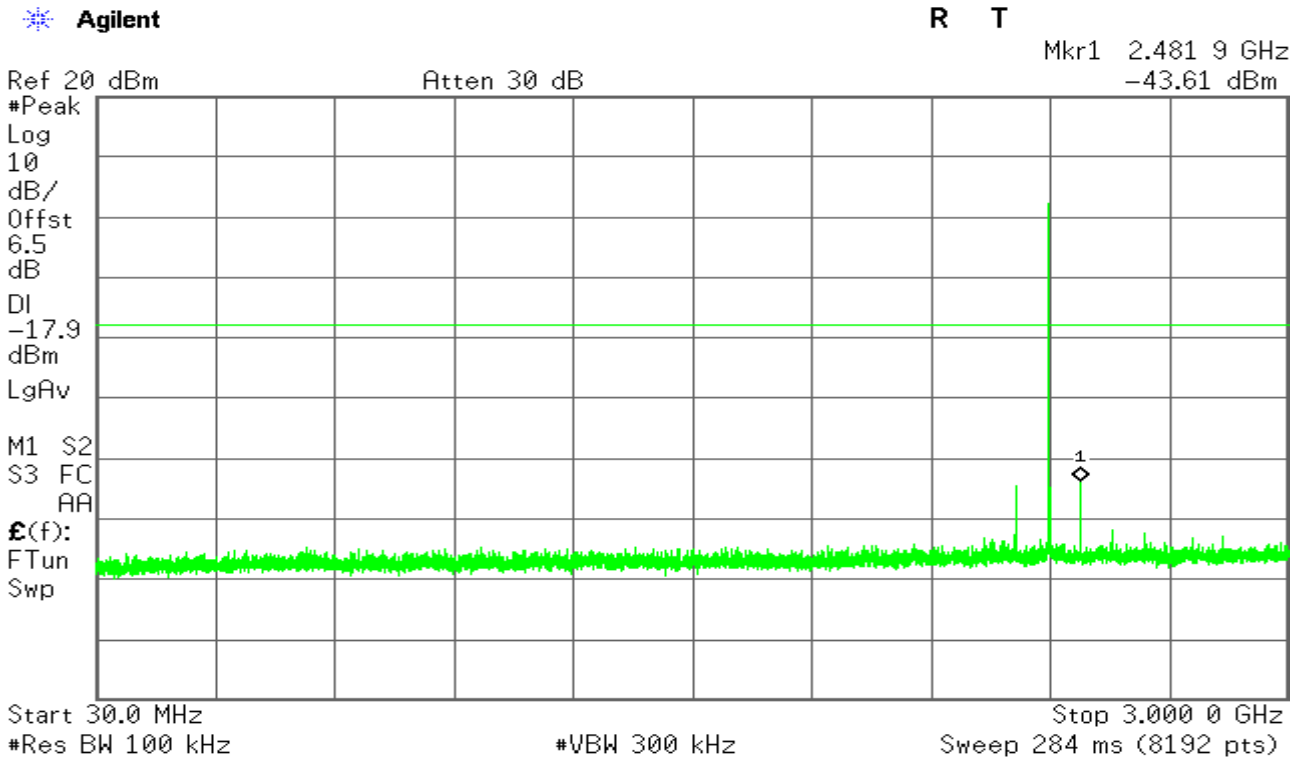


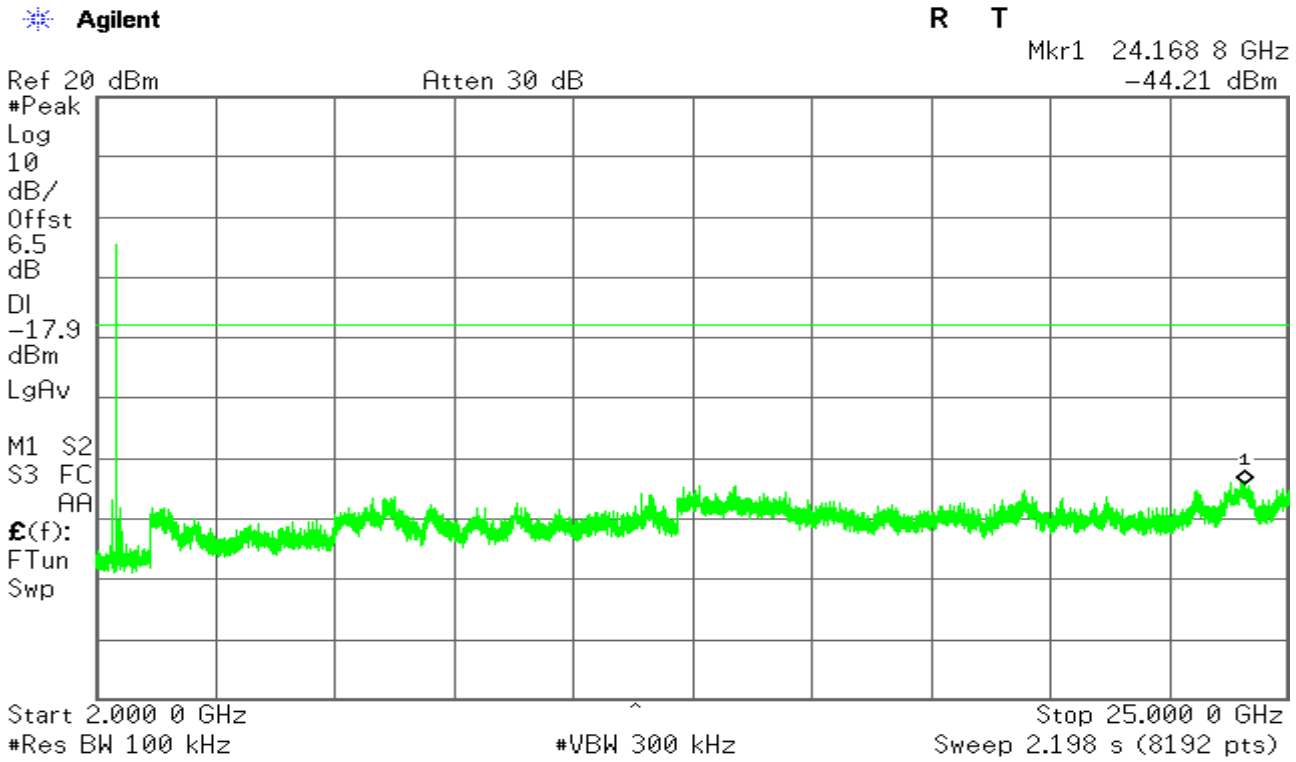
Operation Mode:	1 Mbps	Test Date:	January 2, 2016
Test Channel:	78	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C



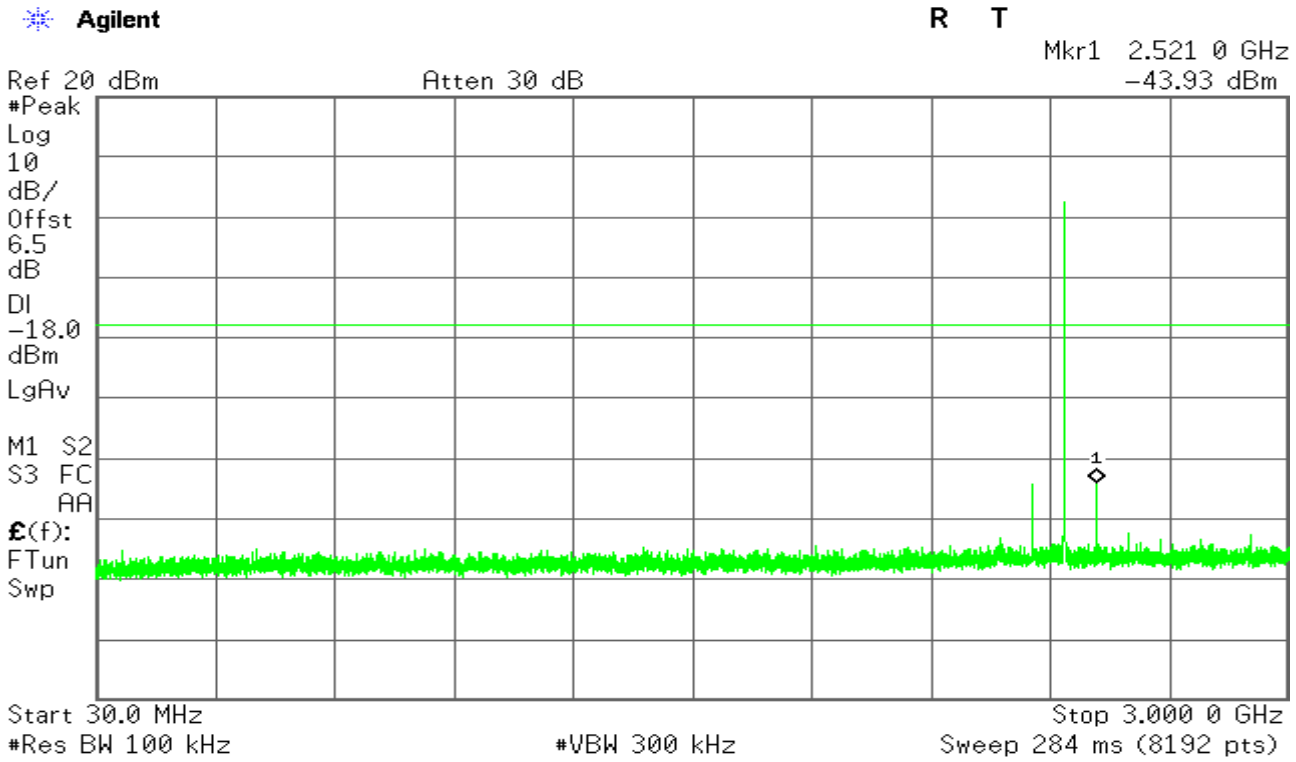


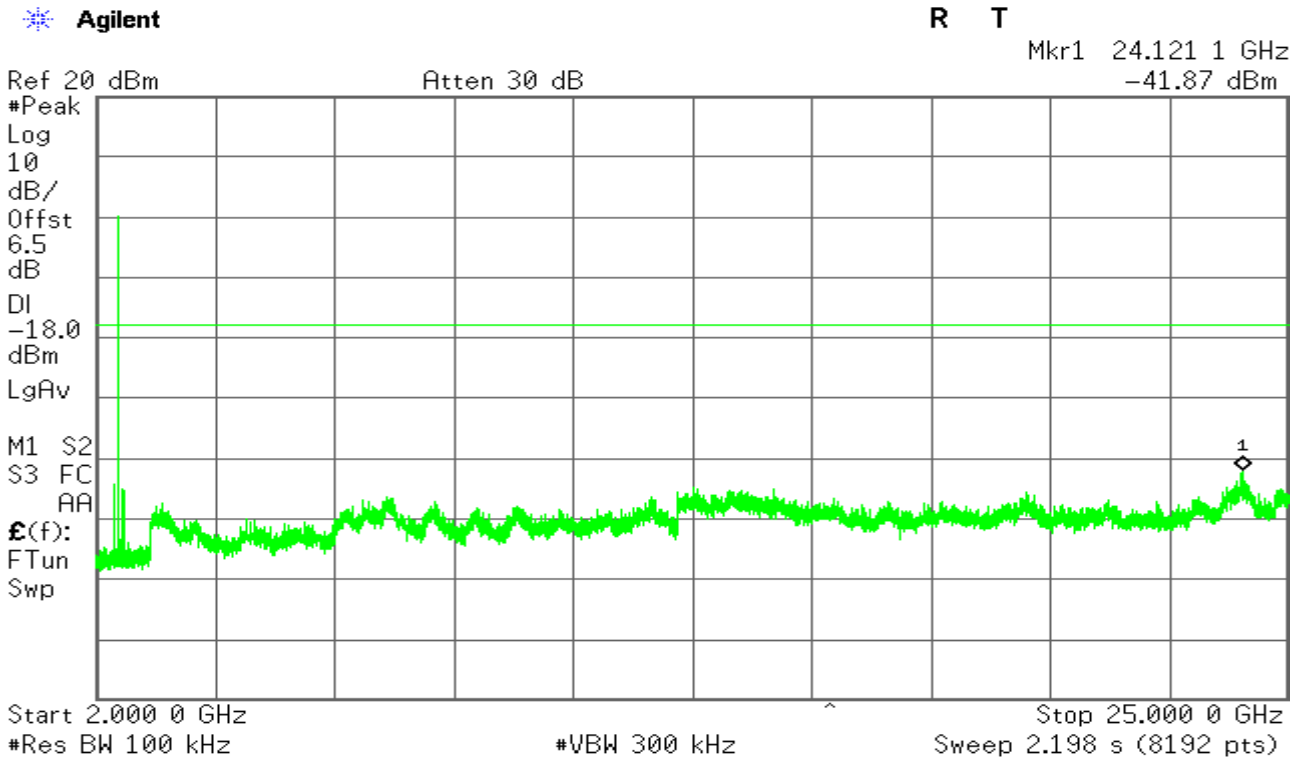
Operation Mode:	3 Mbps	Test Date:	January 2, 2016
Test Channel:	00	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C



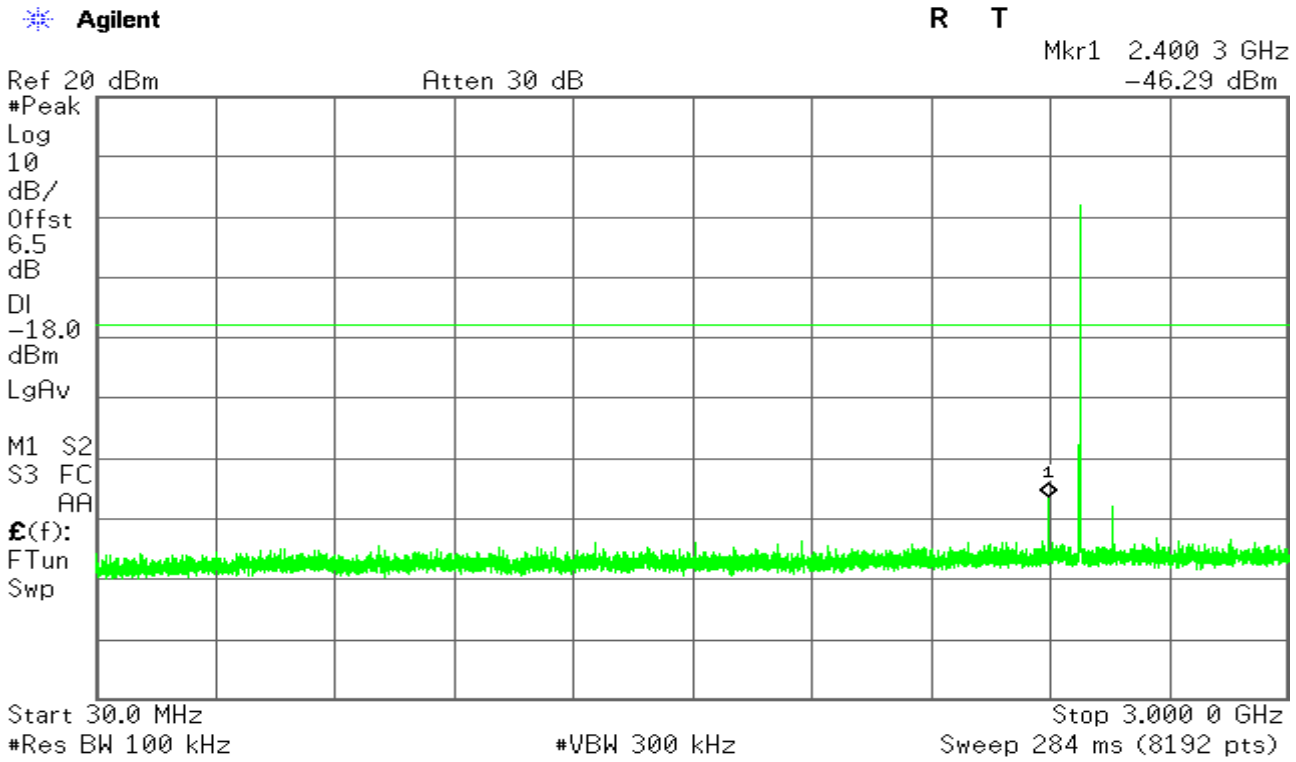


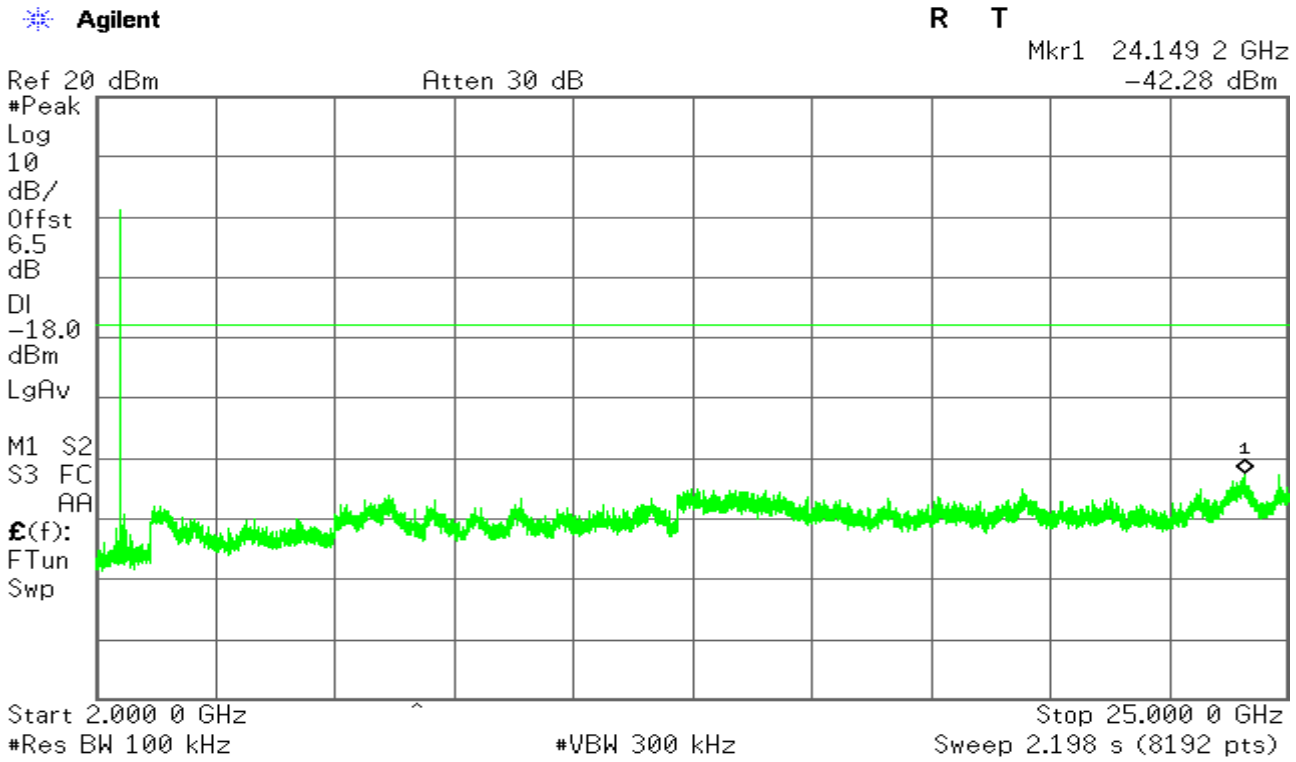
Operation Mode:	3 Mbps	Test Date:	January 2, 2016
Test Channel:	39	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C





Operation Mode:	3 Mbps	Test Date:	January 2, 2016
Test Channel:	78	Tested by:	Lily.Wang
Humidity:	52 % RH	Temperature:	24°C





6.8 Radiated Band Edge and Spurious Emission Measurement

LIMIT

1. Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500	3

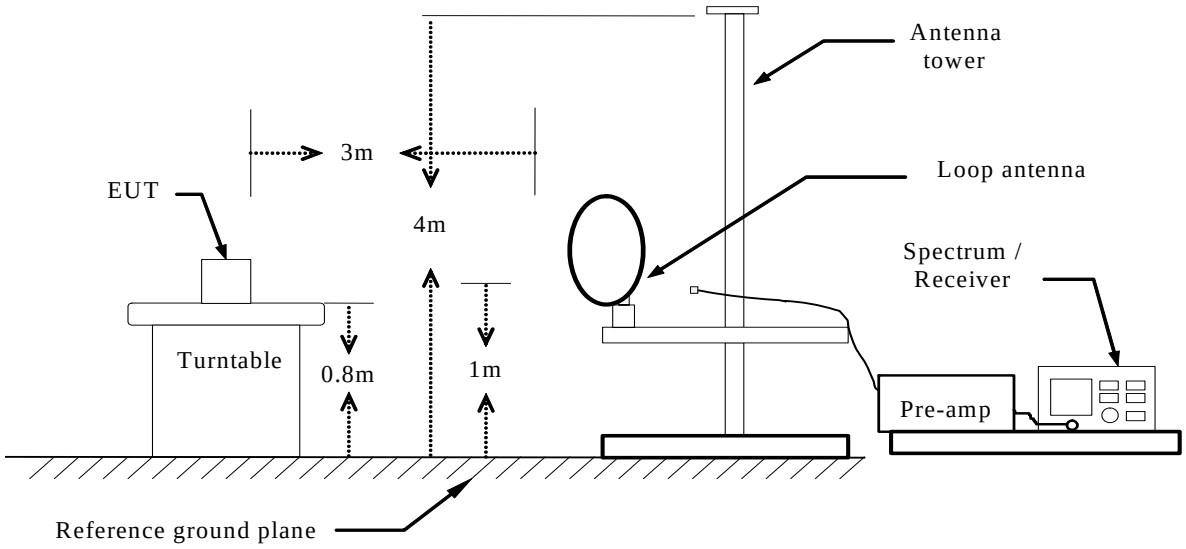
Remark: *Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of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

2. In the above emission table, the tighter limit applies at the band edges.

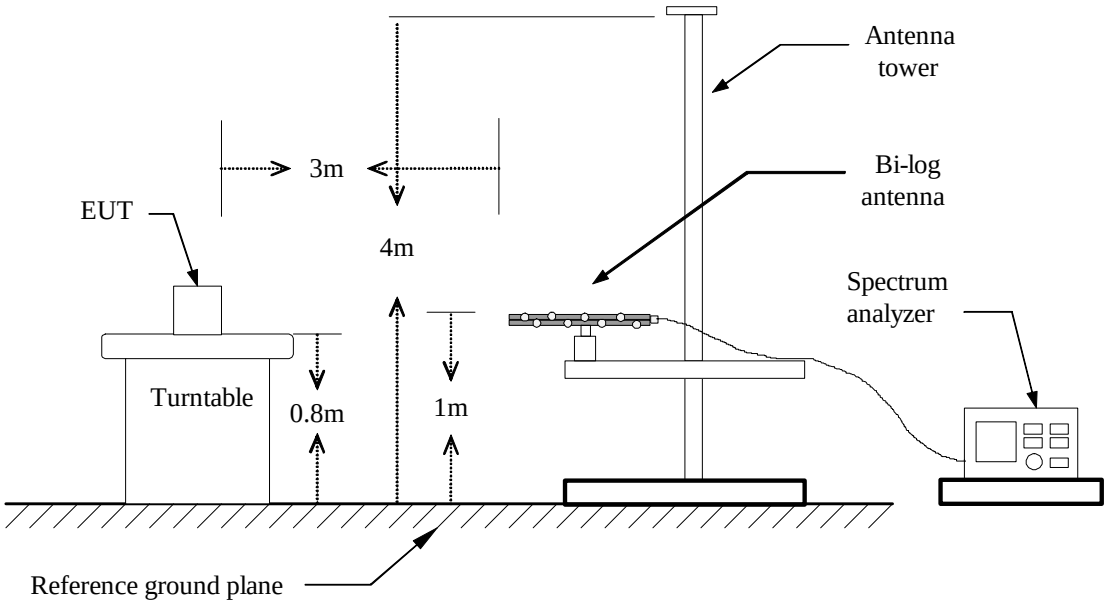
Frequency (Hz)	Field Strength (μV/m at 3-meter)	Field Strength (dBμV/m at 3-meter)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Test Configuration

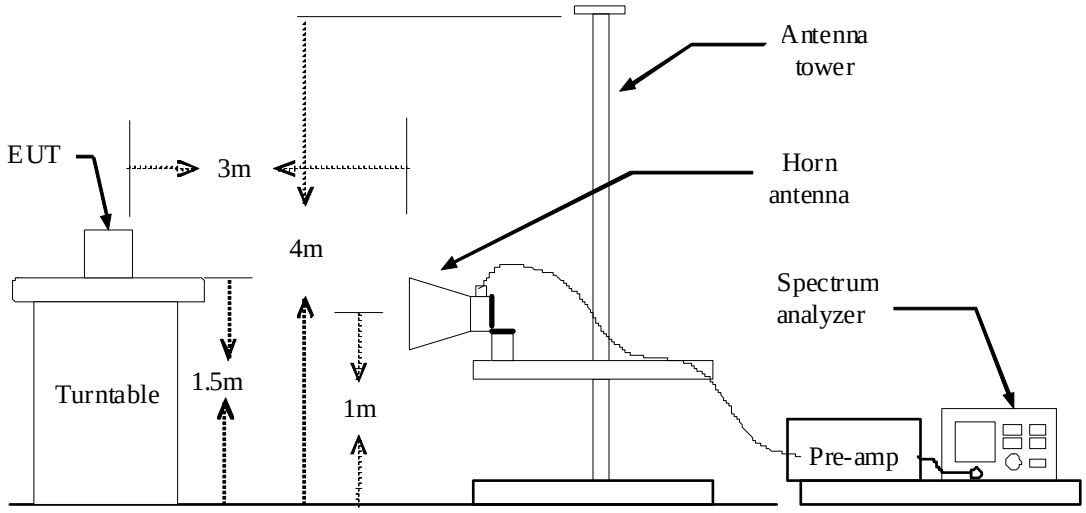
Below 30MHz



Below 1 GHz



Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable above ground plane, which is 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m 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:

   Below 1GHz:

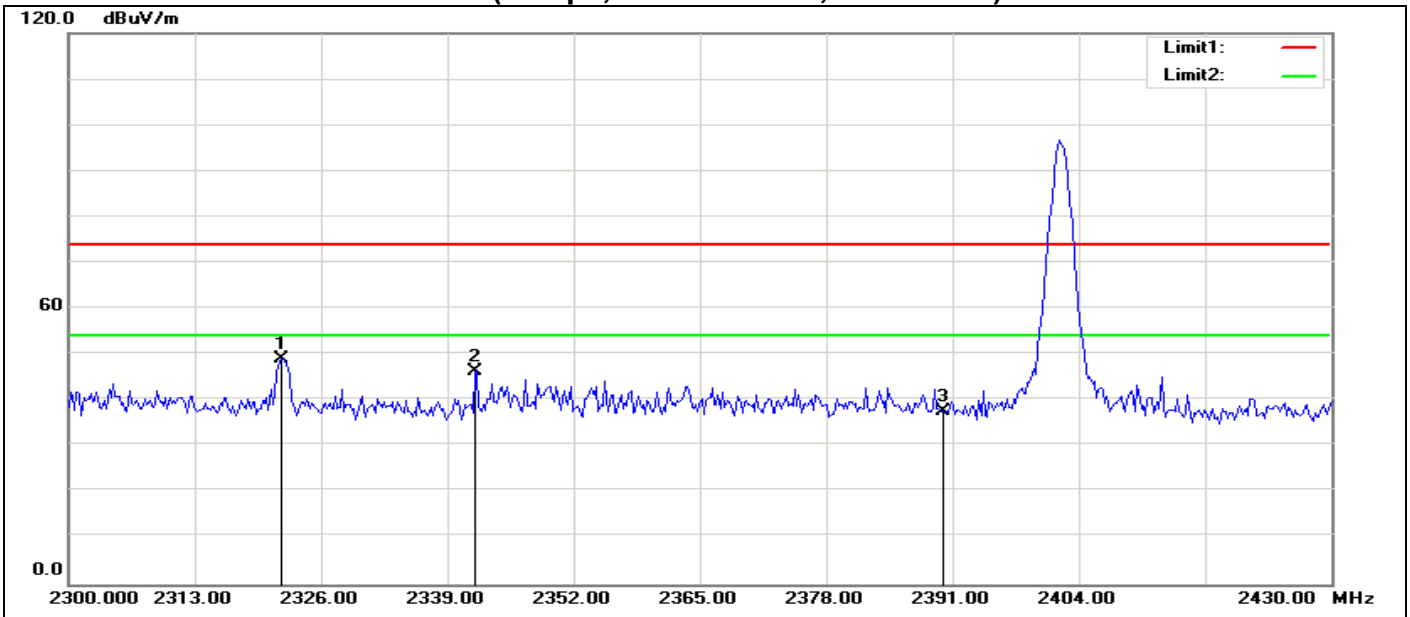
   RBW=100kHz / VBW=300kHz / Sweep=AUTO

   Above 1GHz:

   (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

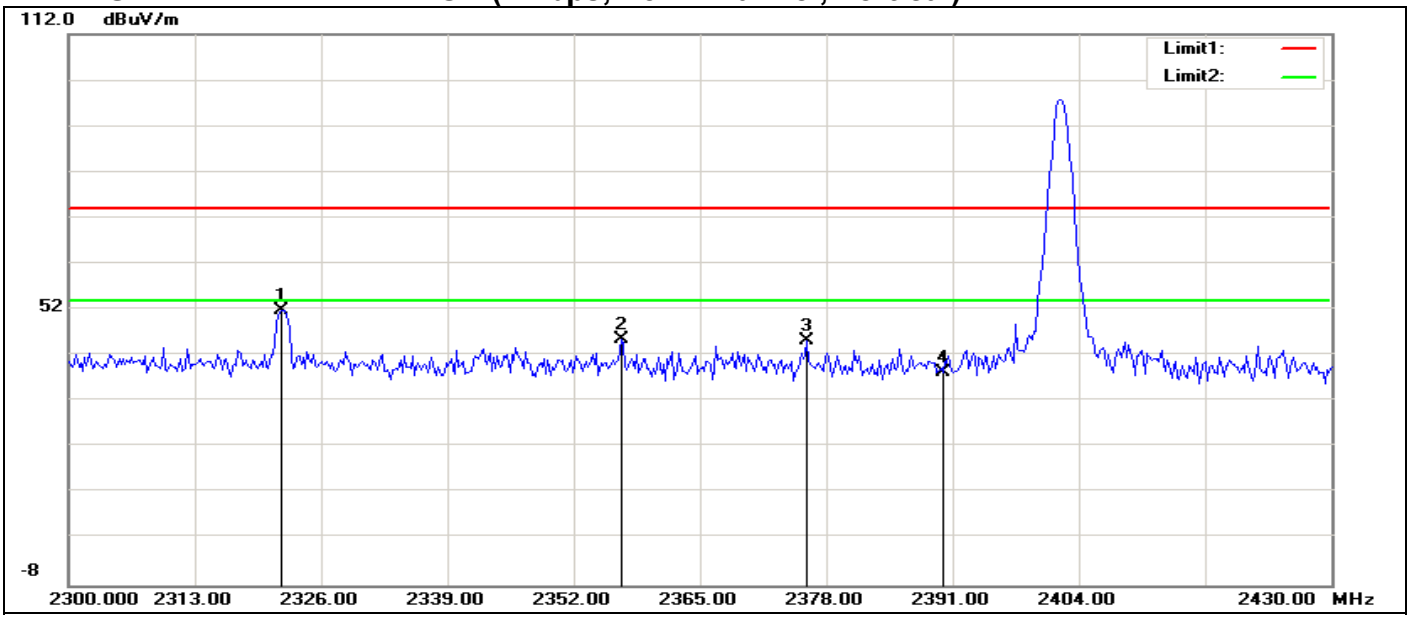
   (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
7. Repeat above procedures until the measurements for all frequencies are complete.

RESTRICTED BANDEDGE (1Mbps, Low Channel, Horizontal)



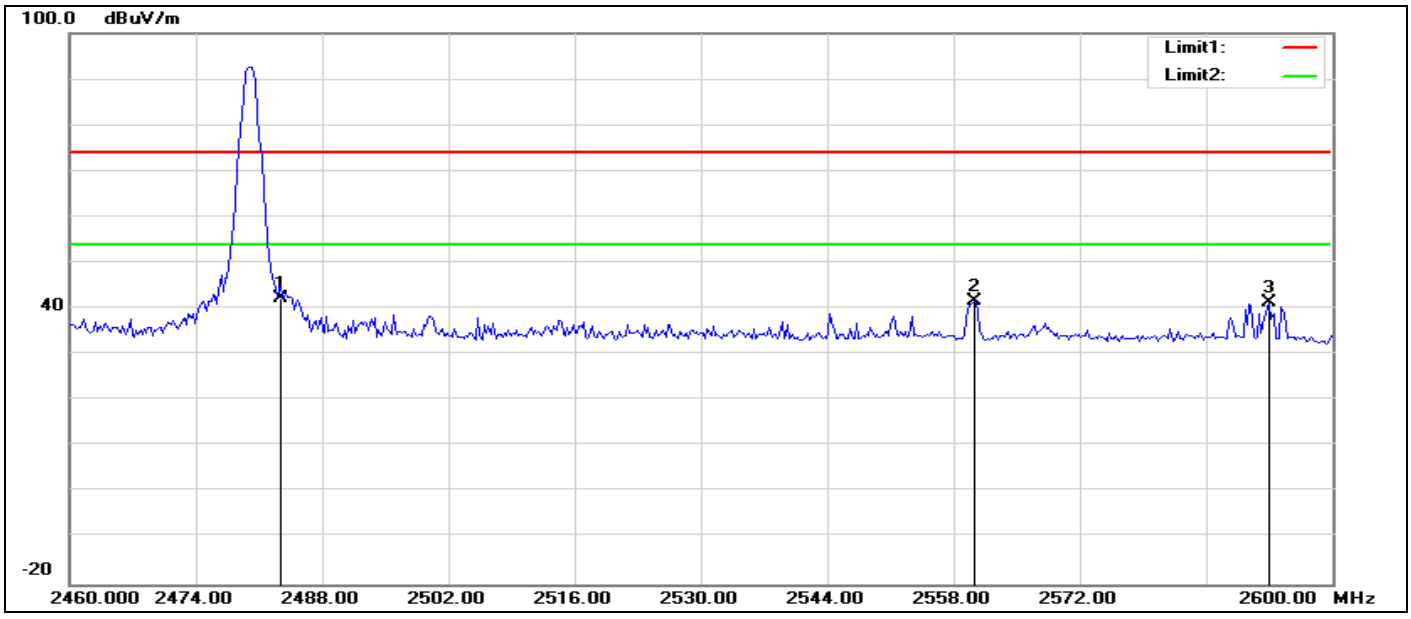
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2321.875	57.71	-8.62	49.09	74.00	-24.91	100	138	peak
2	2341.875	54.89	-8.58	46.31	74.00	-27.69	100	270	peak
3	2390.000	46.01	-8.49	37.52	74.00	-36.48	100	273	peak

RESTRICTED BANDEDGE (1Mbps, Low Channel, Vertical)



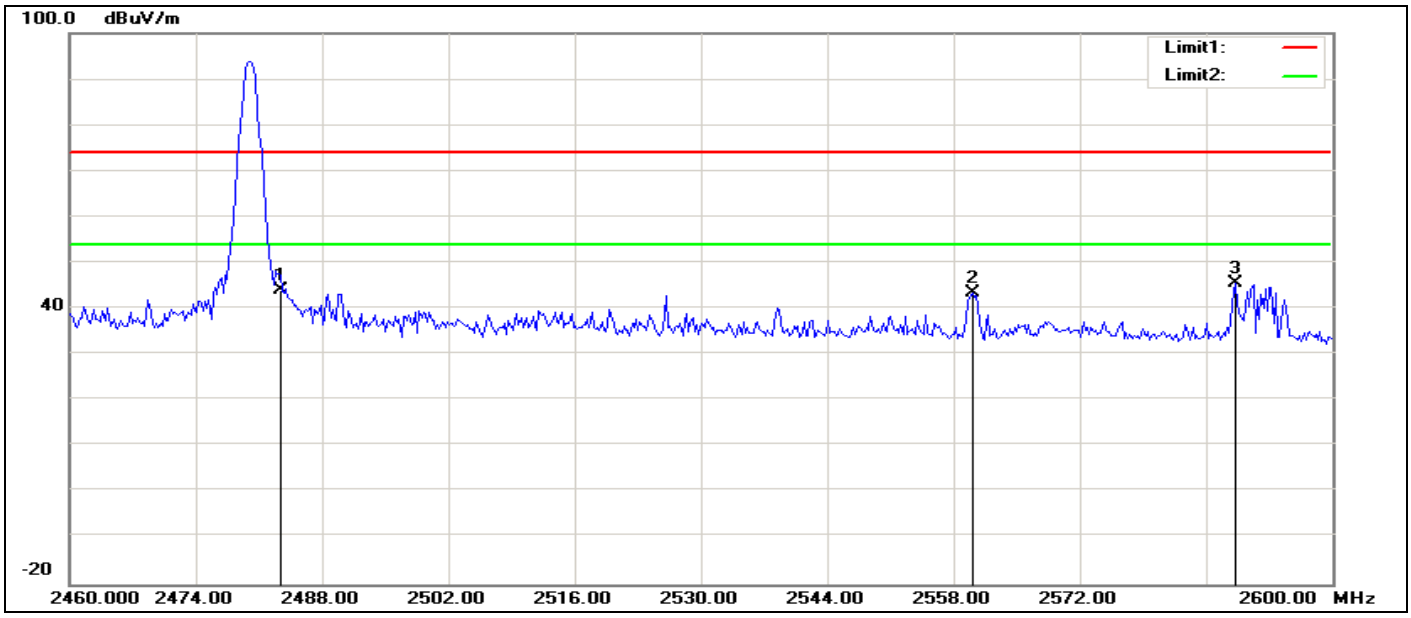
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2321.875	60.53	-8.62	51.91	74.00	-22.09	100	35	peak
2	2356.875	53.98	-8.55	45.43	74.00	-28.57	100	18	peak
3	2376.042	53.64	-8.51	45.13	74.00	-28.87	100	15	peak
4	2390.000	46.90	-8.49	38.41	74.00	-35.59	100	156	peak

RESTRICTED BANDEDGE (1Mbps Mode, High Channel, Horizontal)



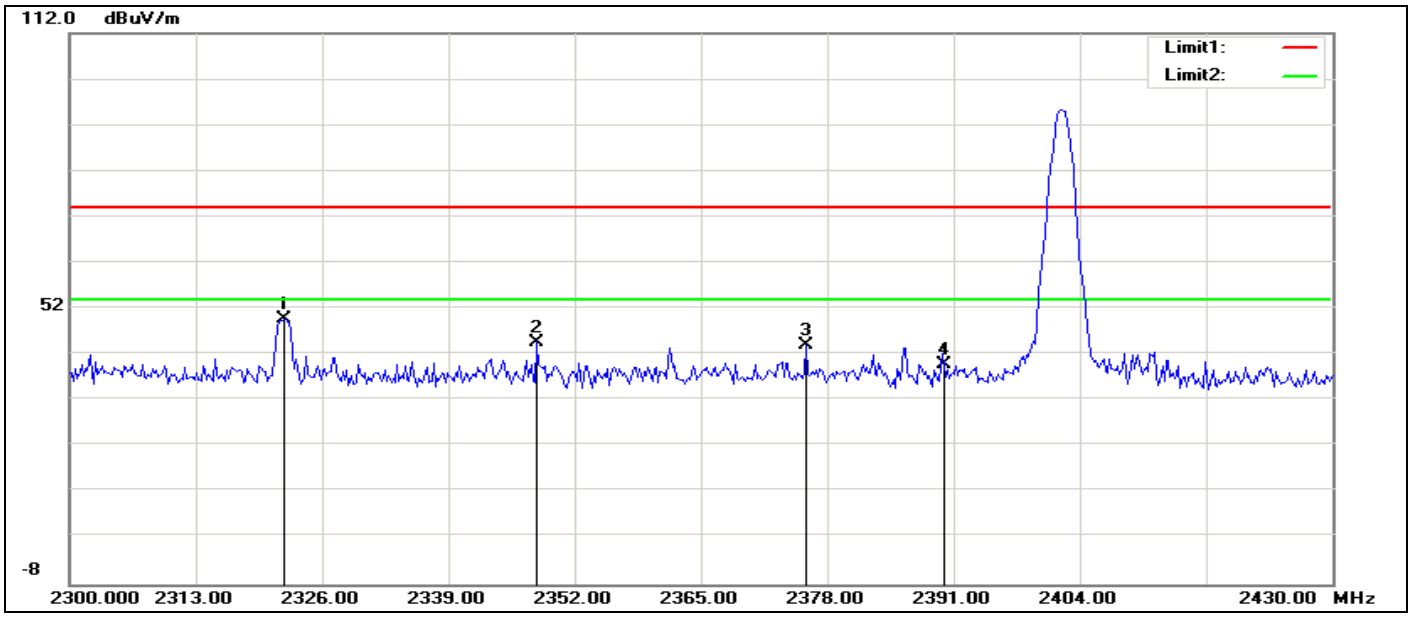
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	50.46	-8.30	42.16	74.00	-31.84	100	360	peak
2	2560.289	49.95	-8.15	41.80	74.00	-32.20	100	354	peak
3	2593.045	49.44	-8.09	41.35	74.00	-32.65	100	320	peak

RESTRICTED BANDEDGE (1Mbps, High Channel, Vertical)



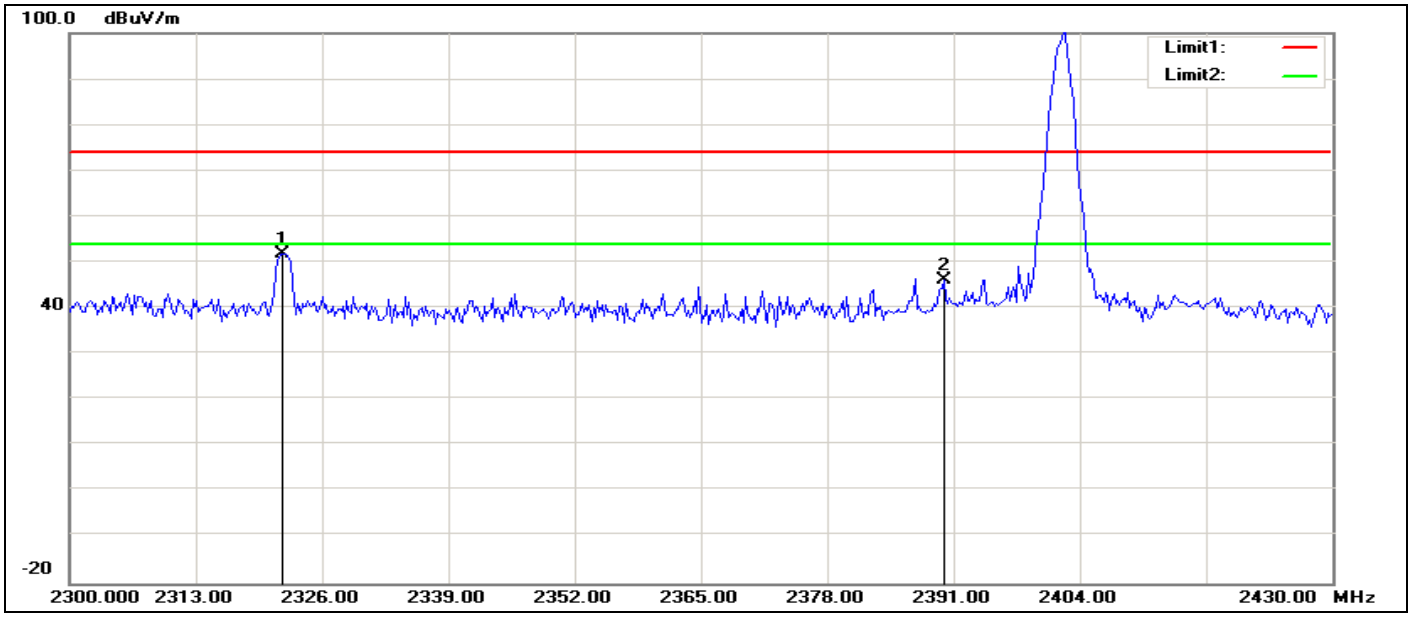
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	52.29	-8.30	43.99	74.00	-30.01	100	317	peak
2	2560.064	51.70	-8.15	43.55	74.00	-30.45	100	328	peak
3	2589.231	53.65	-8.10	45.55	74.00	-28.45	100	358	peak

RESTRICTED BANDEDGE (3Mbps, Low Channel, Horizontal)



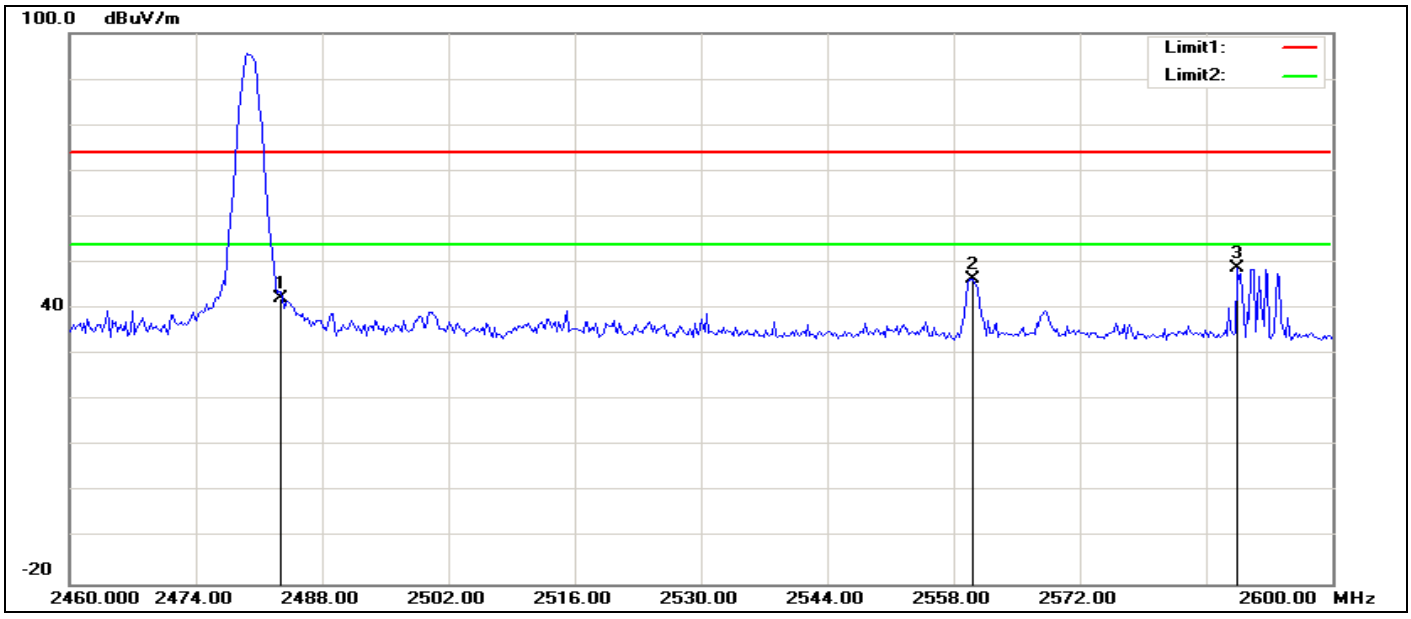
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2322.083	58.31	-8.62	49.69	74.00	-24.31	100	138	peak
2	2348.125	53.24	-8.57	44.67	74.00	-29.33	100	278	peak
3	2375.833	52.66	-8.51	44.15	74.00	-29.85	100	278	peak
4	2390.000	48.21	-8.49	39.72	74.00	-34.28	100	251	peak

RESTRICTED BANDEDGE (3Mbps, Low Channel, Vertical)



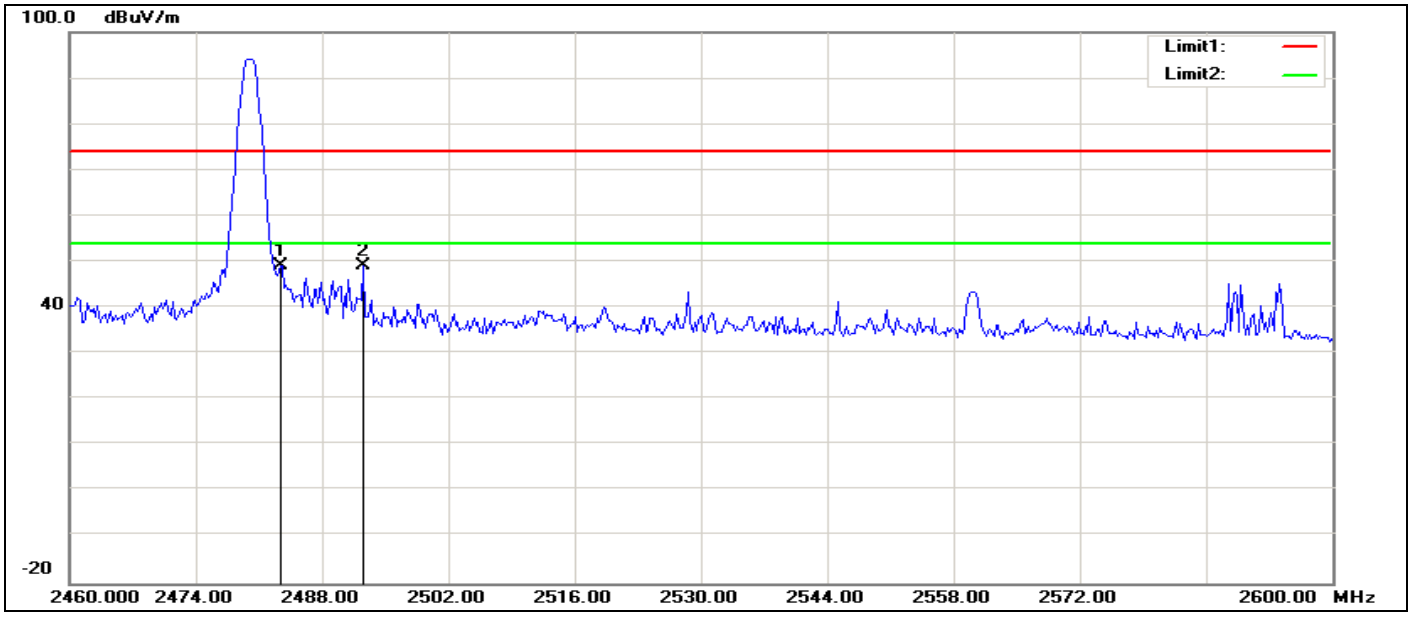
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2321.875	60.54	-8.62	51.92	74.00	-22.08	100	34	peak
2	2390.000	54.66	-8.49	46.17	74.00	-27.83	100	213	peak

RESTRICTED BANDEDGE (3Mbps, High Channel, Horizontal)



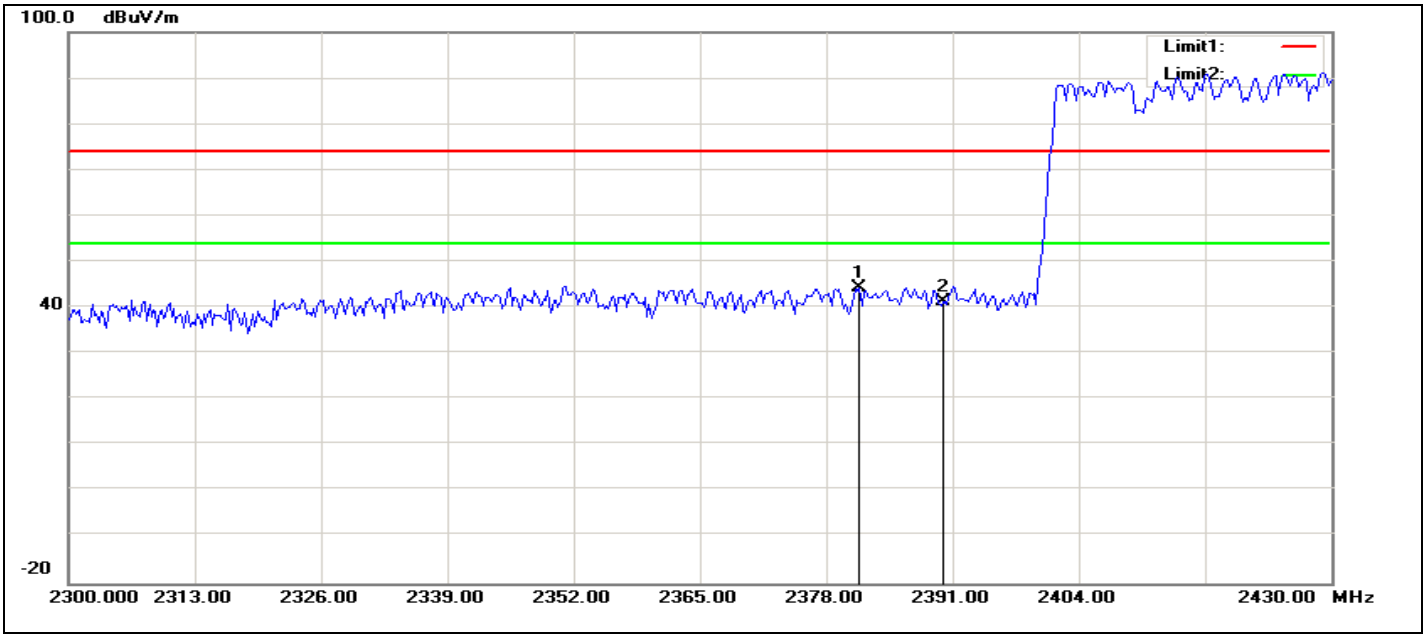
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	50.59	-8.30	42.29	74.00	-31.71	100	326	peak
2	2560.064	54.52	-8.15	46.37	74.00	-27.63	100	320	peak
3	2589.455	56.81	-8.09	48.72	74.00	-25.28	100	47	peak

RESTRICTED BANDEDGE (3Mbps, High Channel, Vertical)



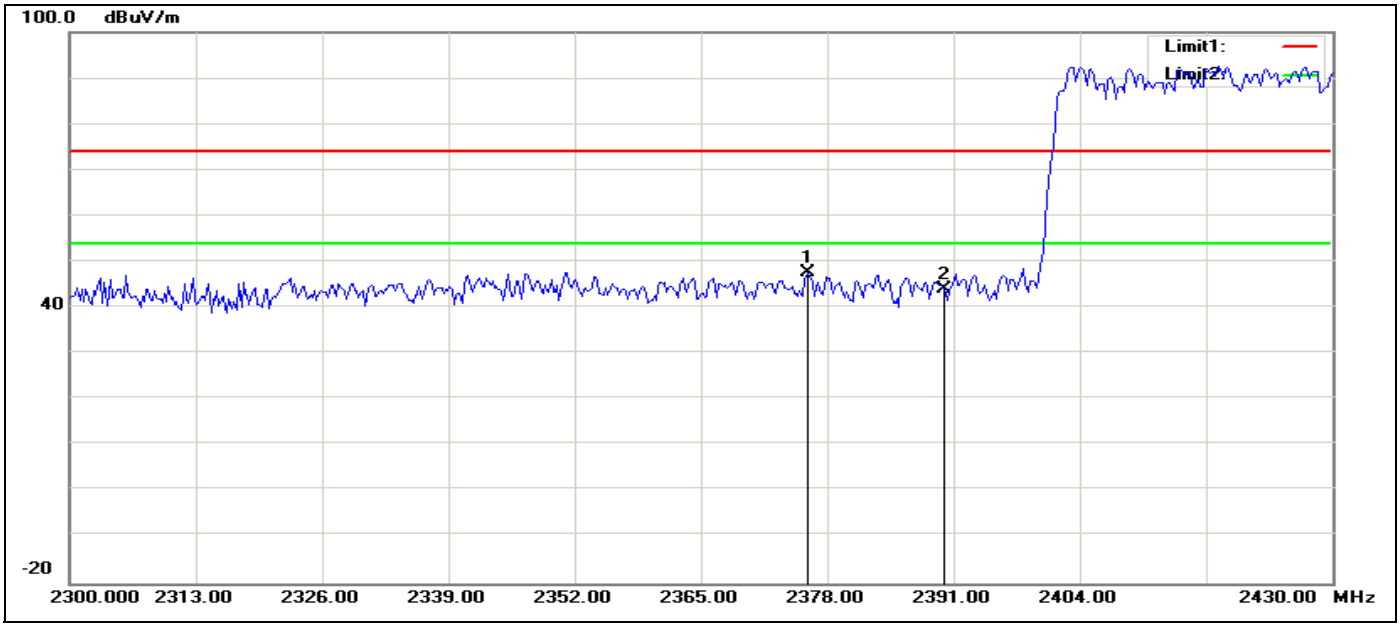
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	57.38	-8.30	49.08	74.00	-24.92	100	312	peak
2	2492.532	57.43	-8.28	49.15	74.00	-24.85	100	65	peak

RESTRICTED BANDEDGE (1Mbps, Low Channel, Horizontal,hopping)



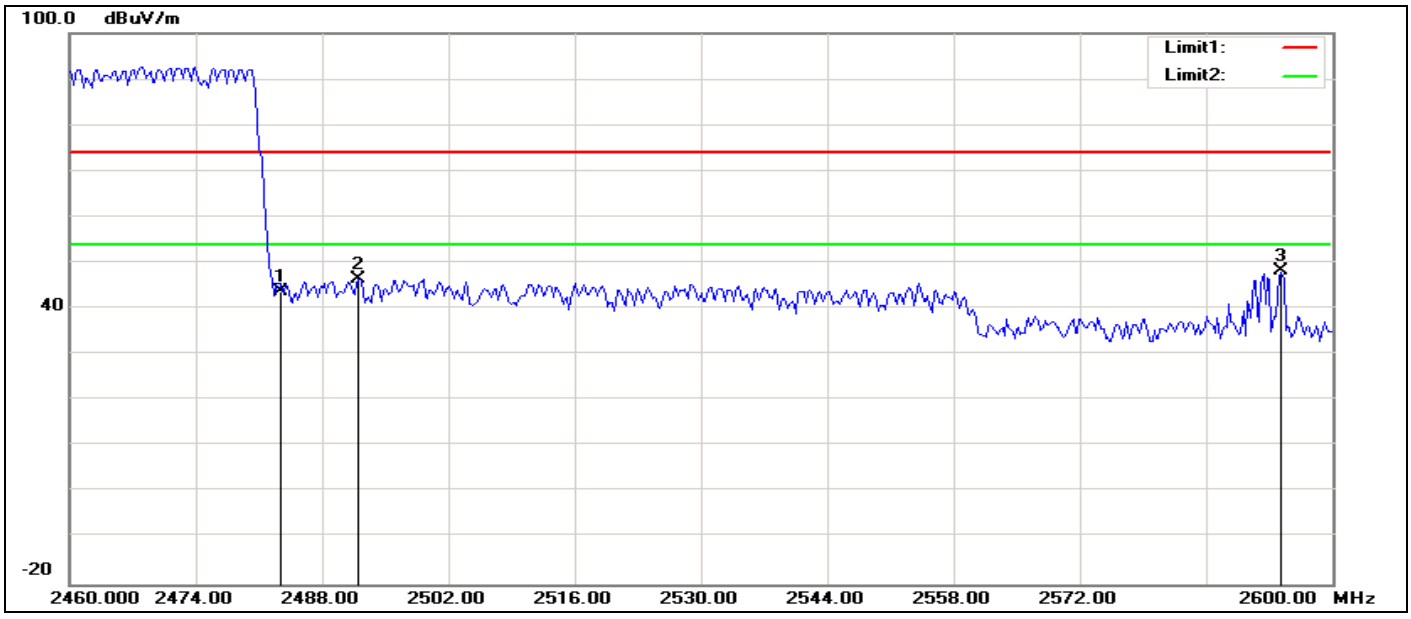
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2381.458	52.77	-8.50	44.27	74.00	-29.73	100	342	peak
2	2390.000	49.70	-8.49	41.21	74.00	-32.79	100	337	peak

RESTRICTED BANDEDGE (1Mbps, Low Channel, Vertical,hopping)



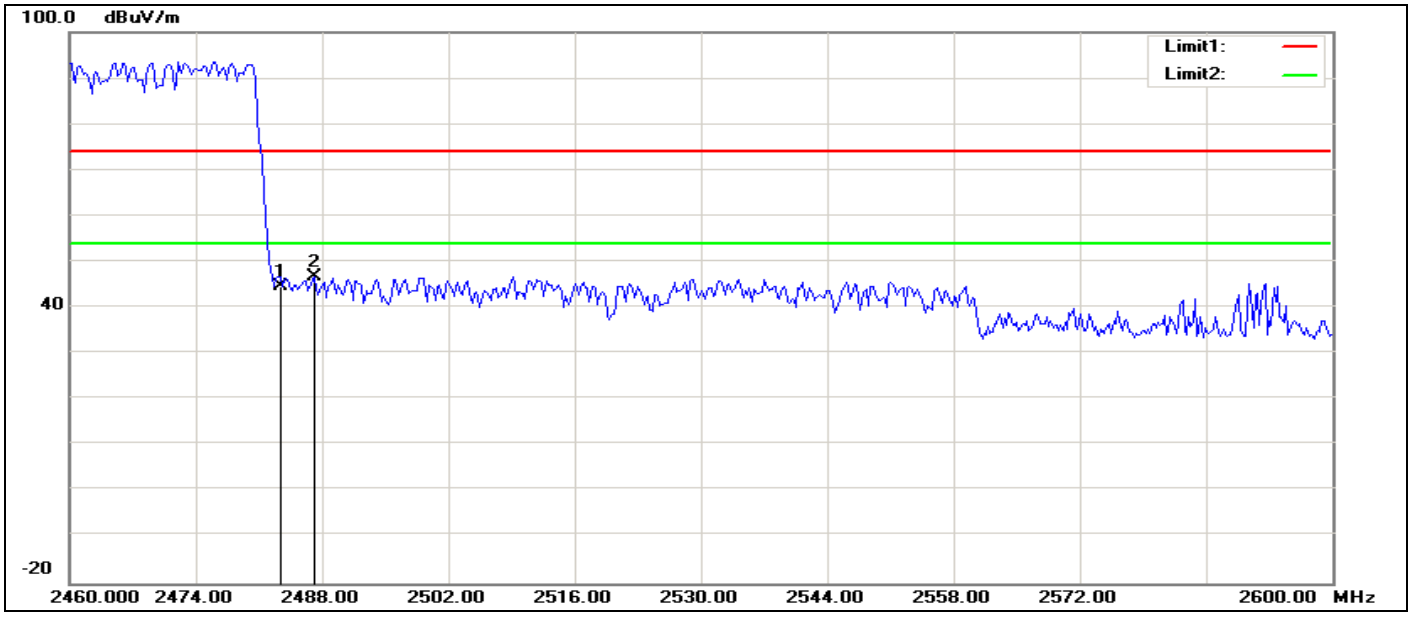
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2376.042	56.11	-8.51	47.60	74.00	-26.40	100	200	peak
2	2390.000	52.60	-8.49	44.11	74.00	-29.89	100	212	peak

RESTRICTED BANDEDGE (1Mbps Mode, High Channel, Horizontal,hopping)



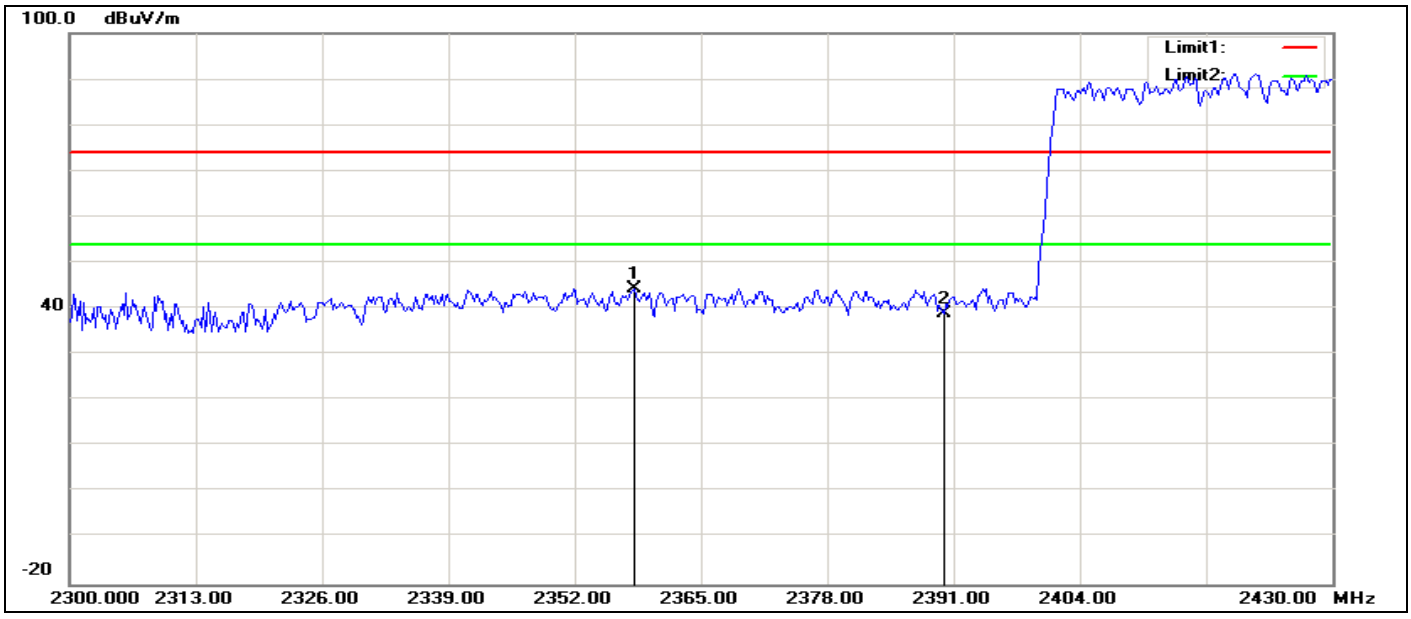
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	52.00	-8.30	43.70	74.00	-30.30	00	360	peak
2	2492.083	54.84	-8.29	46.55	74.00	-27.45	100	0	peak
3	2594.391	56.18	-8.08	48.10	74.00	-25.90	100	26	peak

RESTRICTED BANDEDGE (1Mbps, High Channel, Vertical,hopping)



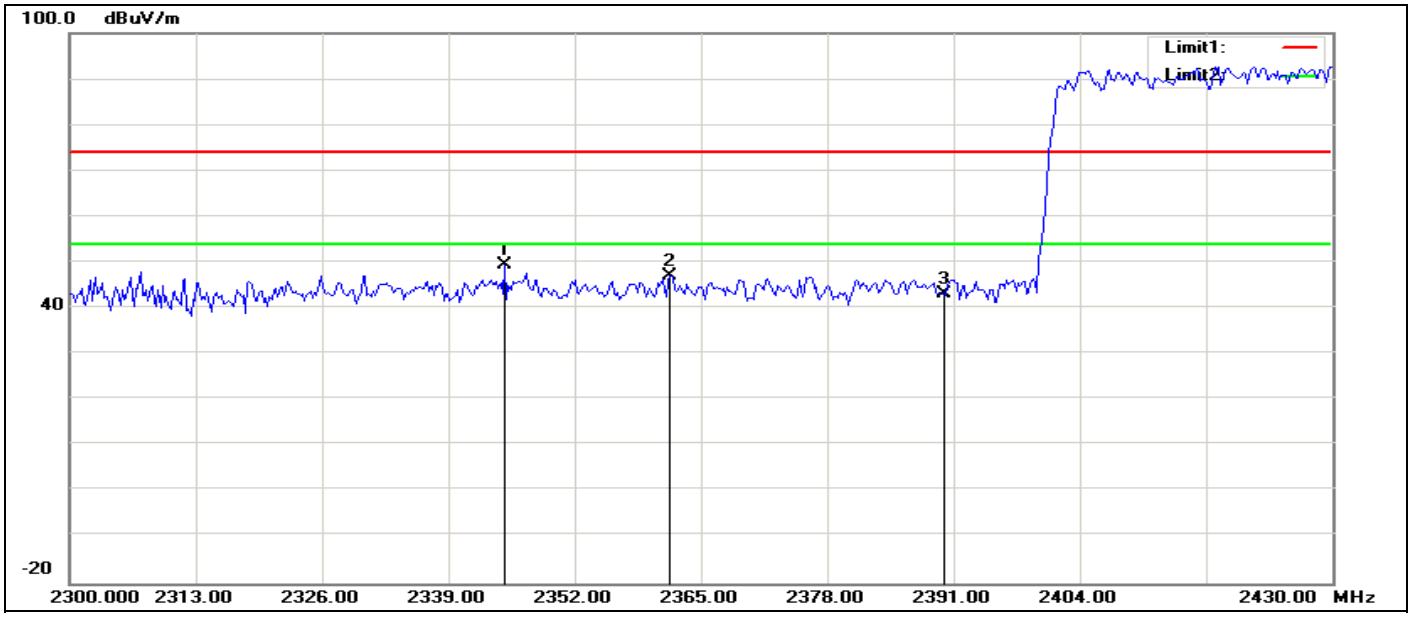
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	52.84	-8.30	44.54	74.00	-29.46	100	330	peak
2	2487.147	54.98	-8.30	46.68	74.00	-27.32	100	328	peak

RESTRICTED BANDEDGE (3Mbps, Low Channel, Horizontal,hopping)



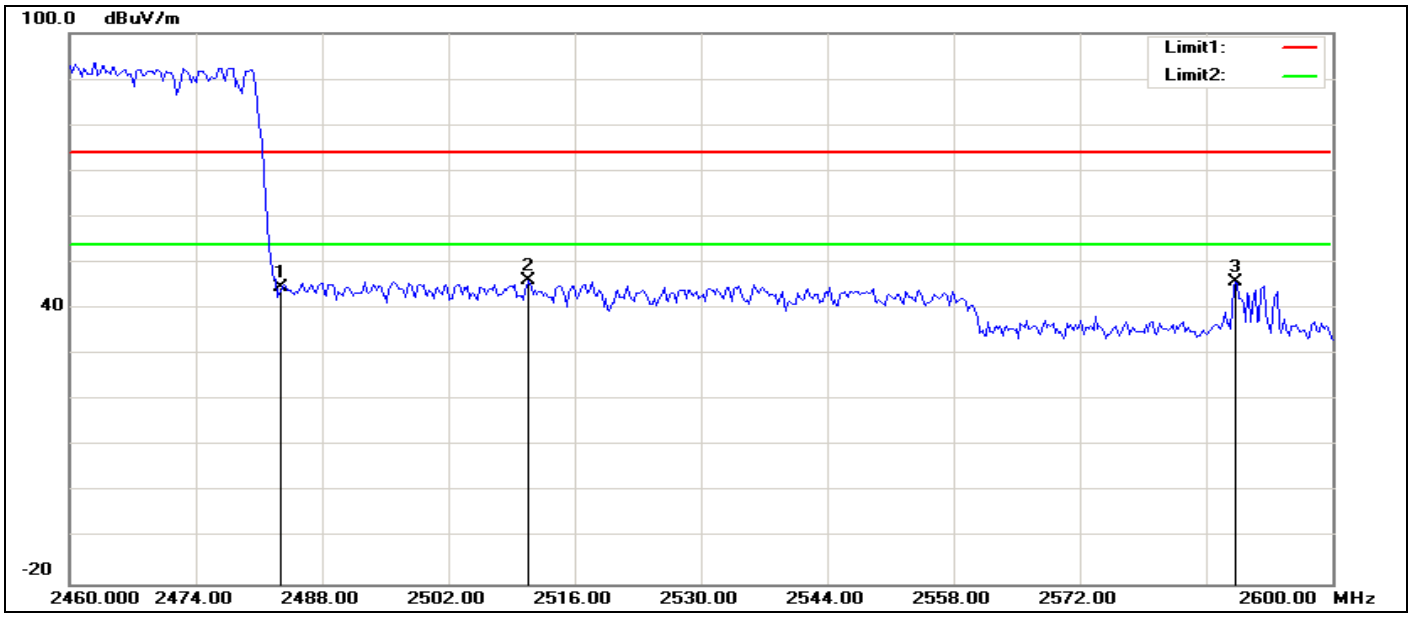
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2358.125	53.02	-8.55	44.47	74.00	-29.53	100	357	peak
2	2390.000	47.44	-8.49	38.95	74.00	-35.05	100	157	peak

RESTRICTED BANDEDGE (3Mbps, Low Channel, Vertical,hopping)



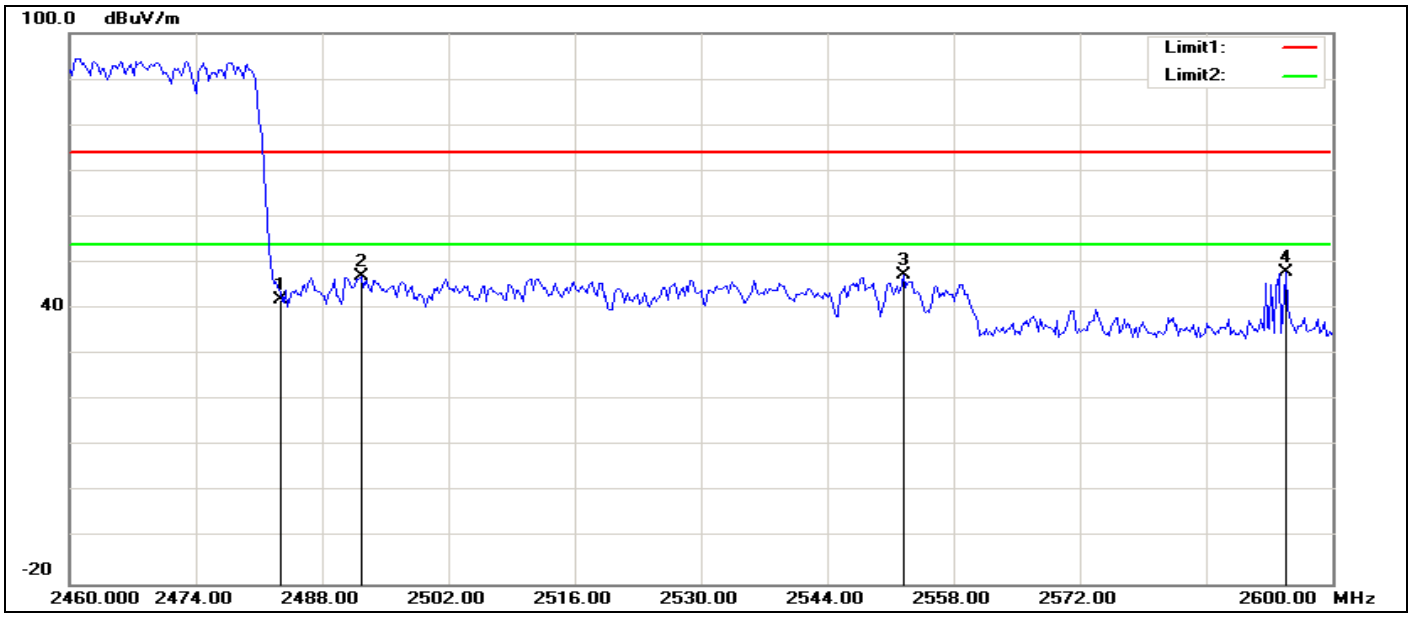
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2344.792	57.89	-8.57	49.32	74.00	-24.68	100	182	peak
2	2361.875	55.50	-8.54	46.96	74.00	-27.04	100	199	peak
3	2390.000	51.62	-8.49	43.13	74.00	-30.87	100	309	peak

RESTRICTED BANDEDGE (3Mbps, High Channel, Horizontal,hopping)



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	53.07	-8.30	44.77	74.00	-29.23	100	350	peak
2	2510.930	54.49	-8.25	46.24	74.00	-27.76	100	360	peak
3	2589.231	53.86	-8.10	45.76	74.00	-28.24	100	22	peak

RESTRICTED BANDEDGE (3Mbps, High Channel, Vertical)



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	50.36	-8.30	42.06	74.00	-31.94	100	217	peak
2	2492.308	55.37	-8.29	47.08	74.00	-26.92	100	328	peak
3	2552.436	55.59	-8.17	47.42	74.00	-26.58	100	329	peak
4	2594.840	56.03	-8.08	47.95	74.00	-26.05	100	56	peak

TEST RESULT OF RADIATED EMISSION

Operation Mode:	Normal Link	**Test Date:**	2015-12-27
Temperature:	25°C	**Tested by:**	Lily.Wang
Humidity:	48% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
38.7300	V	16.60	17.25	33.85	40.00	-6.15	peak
111.4800	V	25.33	12.05	37.38	43.50	-6.12	peak
154.1600	V	24.42	11.59	36.01	43.50	-7.49	peak
308.3900	V	21.45	14.59	36.04	46.00	-9.96	peak
720.6400	V	14.85	22.79	37.64	46.00	-8.36	peak
996.1200	V	15.93	24.96	40.89	54.00	-13.11	peak
37.7600	H	15.23	17.43	32.66	40.00	-7.34	peak
87.2300	H	24.79	10.71	35.50	40.00	-4.50	peak
308.3900	H	20.53	14.59	35.12	46.00	-10.88	peak
720.6400	H	18.44	22.79	41.23	46.00	-4.77	peak
832.1900	H	15.42	23.25	38.67	46.00	-7.33	peak
993.2100	H	16.14	24.95	41.09	54.00	-12.91	peak

Notes:

1. *Mea surements above show only up to maximum emissions noted, 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.*
2. *Radiated emissions measured in frequency range from 9 KHz to 1000MHz were made with an instrument using Peak detector mode.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *The IF bandwidth of SPA between 30MHz to 1GHz was 100kHz.*

Above 1 GHz

Operation Mode:	1 Mbps	**Test Date:**	December 30, 2015
Test Channel:	CH00	**Tested by:**	Lily.Wang
Temperature:	25°C	**Polarity:**	Ver. / Hor.

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4950.320	43.94	-2.20	41.74	80.00	-38.26	100	85	peak
2	7483.974	42.80	2.79	45.59	80.00	-34.41	100	120	peak
N/A									

Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5004.808	49.58	-2.04	47.54	80.00	-32.46	100	163	peak
2	7075.320	43.50	1.36	44.86	80.00	-35.14	100	167	peak
N/A									

Operation Mode:	1 Mbps	**Test Date:**	December 30, 2015
Test Channel:	CH39	**Tested by:**	Lily.Wang
Temperature:	25°C	**Polarity:**	Ver. / Hor.

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4868.590	43.50	-2.44	41.06	80.00	-38.94	100	249	peak
2	7483.974	42.41	2.79	45.20	80.00	-34.80	100	357	peak
N/A									

Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4868.590	43.75	-2.44	41.31	80.00	-38.69	100	333	peak
2	7020.833	44.62	1.17	45.79	80.00	-34.21	100	113	peak
N/A									

Operation Mode:	1 Mbps	**Test Date:**	December 30, 2015
Test Channel:	CH78	**Tested by:**	Lily.Wang
Temperature:	25°C	**Polarity:**	Ver. / Hor.

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5086.538	42.65	-1.90	40.75	74.00	-33.25	100	7	peak
2	7592.949	40.66	3.17	43.83	74.00	-30.17	100	237	peak
N/A									

Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5004.808	48.38	-2.04	46.34	74.00	-27.66	100	337	peak
2	7974.359	43.37	4.50	47.87	74.00	-26.13	100	148	peak
N/A									

Operation Mode:	3 Mbps	**Test Date:**	December 30, 2015
Test Channel:	CH00	**Tested by:**	Lily.Wang
Temperature:	25°C	**Polarity:**	Ver. / Hor.

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4841.346	44.60	-2.52	42.08	80.00	-37.92	100	3	peak
2	7293.269	42.01	2.12	44.13	80.00	-35.87	100	248	peak
N/A									

Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4650.641	48.36	-3.08	45.28	80.00	-34.72	100	228	peak
2	7238.782	42.10	1.93	44.03	80.00	-35.97	100	37	peak
N/A									

Operation Mode:	3 Mbps	**Test Date:**	December 30, 2015
Test Channel:	CH39	**Tested by:**	Lily.Wang
Temperature:	25°C	**Polarity:**	Ver. / Hor.

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4868.590	43.52	-2.44	41.08	80.00	-38.92	100	343	peak
2	7048.077	44.01	1.27	45.28	80.00	-34.72	100	117	peak
N/A									

Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4650.641	44.52	-3.08	41.44	80.00	-38.56	100	213	peak
2	7483.974	43.86	2.79	46.65	80.00	-33.35	100	0	peak
N/A									

Operation Mode:	3 Mbps	**Test Date:**	December 30, 2015
Test Channel:	CH78	**Tested by:**	Lily.Wang
Temperature:	25°C	**Polarity:**	Ver. / Hor.

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5004.808	44.54	-2.04	42.50	80.00	-37.50	100	108	peak
2	7456.731	42.23	2.69	44.92	80.00	-35.08	100	70	peak
N/A									

Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	4923.077	43.92	-2.28	41.64	80.00	-38.36	100	6	peak
2	7211.538	42.36	1.84	44.20	80.00	-35.80	100	252	peak
N/A									

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 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.*
4. *Spectrum setting:*
   a. *Peak Setting 1GHz to 10th harmonics of fundamental, RBW = 1MHz, VBW = 1MHz, Sweep time = Auto.*
   b. *AV Setting 1GH z to 10th harmonics of fundamental, RBW = 1MHz, VBW = 10Hz, Sweep time = Auto.*

6.9 POWERLINE CONDUCTED EMISSIONS

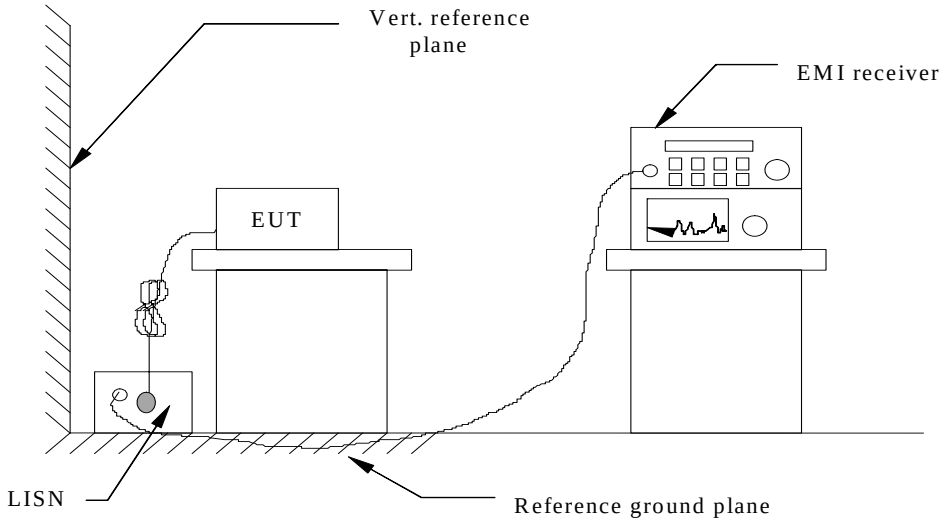
LIMIT

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 Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 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.

Test Configuration



See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST 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.

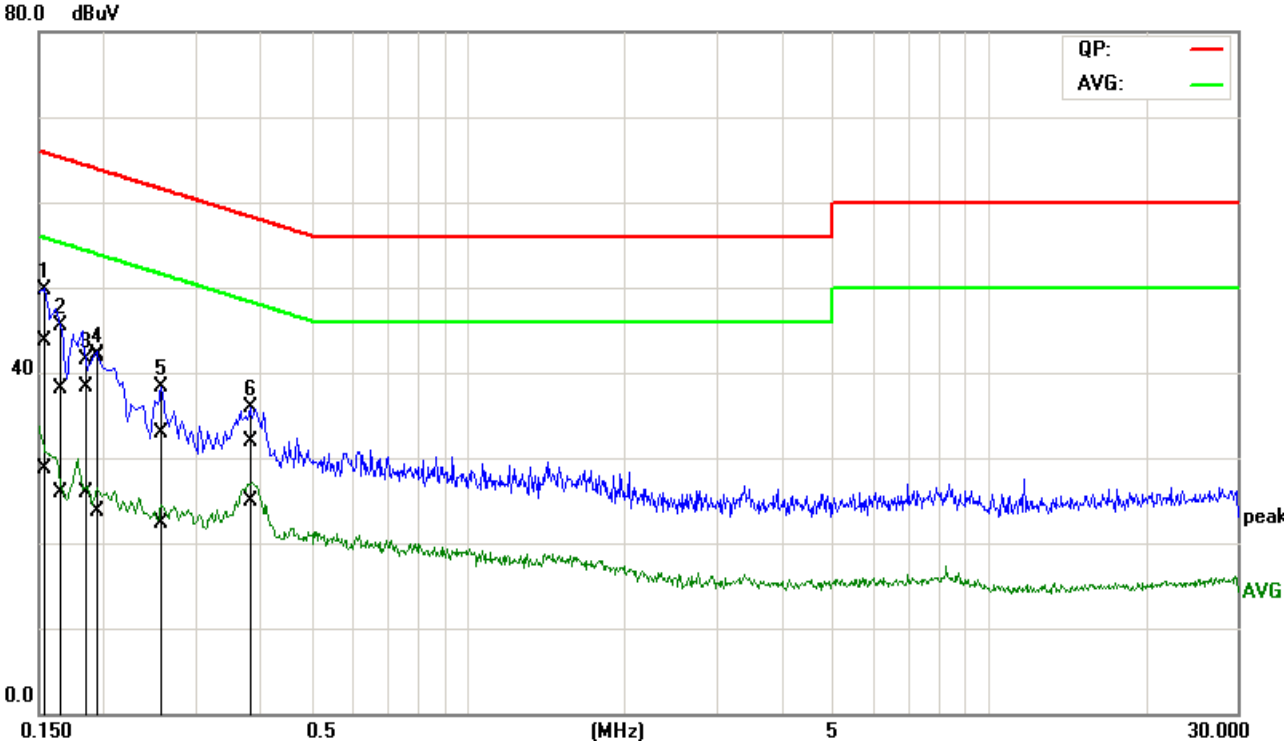
TEST RESULTS

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Test Data

Job No.:	C151211R01	Date:	2016-1-9
Model No.:	R9861520	Time:	PM 04:23:22
Standard:	FCC Class B	Temp.(C)/Hum.(%):	22(C)/48%
Test item:	Conduction test	Test By:	Lily.Wang
Line:	L1	Test Voltage:	AC 120V/60Hz
Model:		Description:	

L1

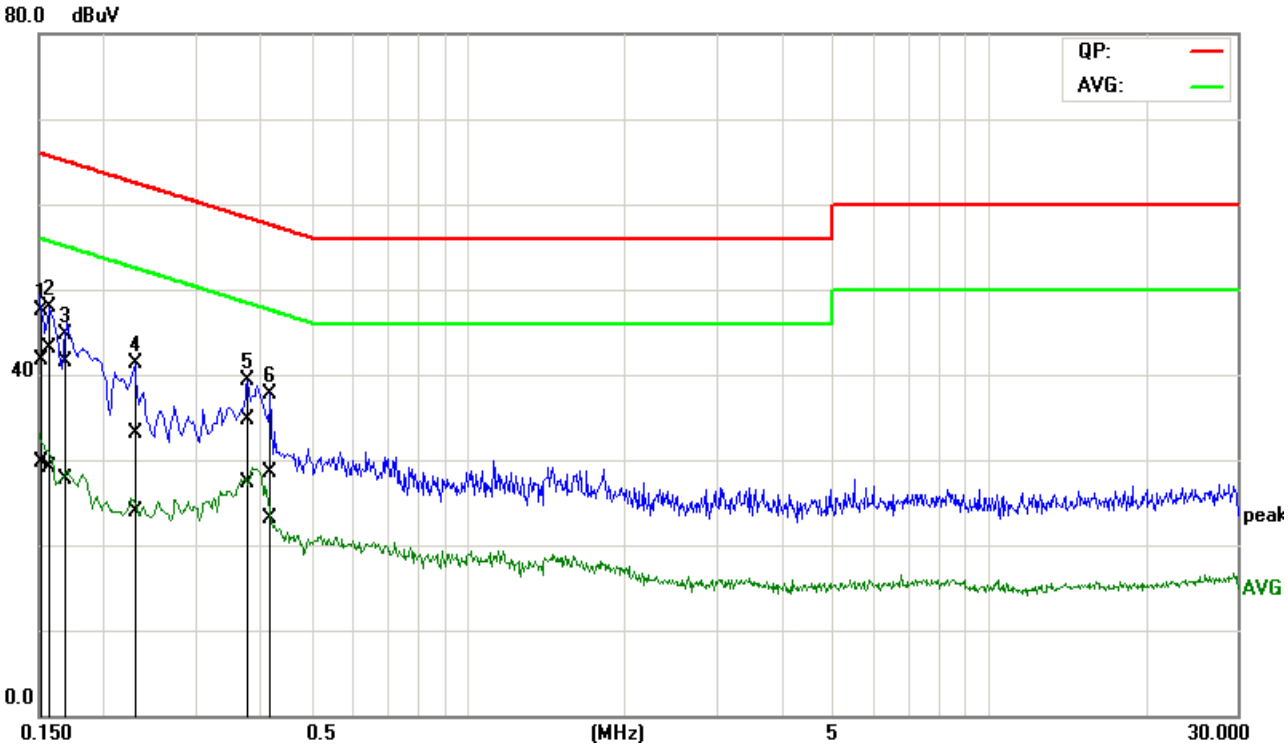


No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1511	23.83	8.94	19.78	43.61	28.72	65.94	55.94	-22.33	-27.22	Pass
2	0.1663	18.39	6.07	19.78	38.17	25.85	65.14	55.14	-26.97	-29.29	Pass
3	0.1855	18.44	6.12	19.79	38.23	25.91	64.24	54.24	-26.01	-28.33	Pass
4*	0.1963	22.16	3.98	19.79	41.95	23.77	63.77	53.77	-21.82	-30.00	Pass
5	0.2577	13.13	2.45	19.79	32.92	22.24	61.51	51.51	-28.59	-29.27	Pass
6	0.3818	12.02	5.10	19.80	31.82	24.90	58.24	48.24	-26.42	-23.34	Pass

Note: 1. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line).

Job No.:	C151211R01	Date:	2016-1-9
Model No.:	R9861520	Time:	PM 04:28:16
Standard:	FCC Class B	Temp.(C)/Hum.(%):	22(C)/48%
Test item:	Conduction test	Test By:	Lily.Wang
Line:	L2	Test Voltage:	AC 120V/60Hz
Model:		Description:	

L2

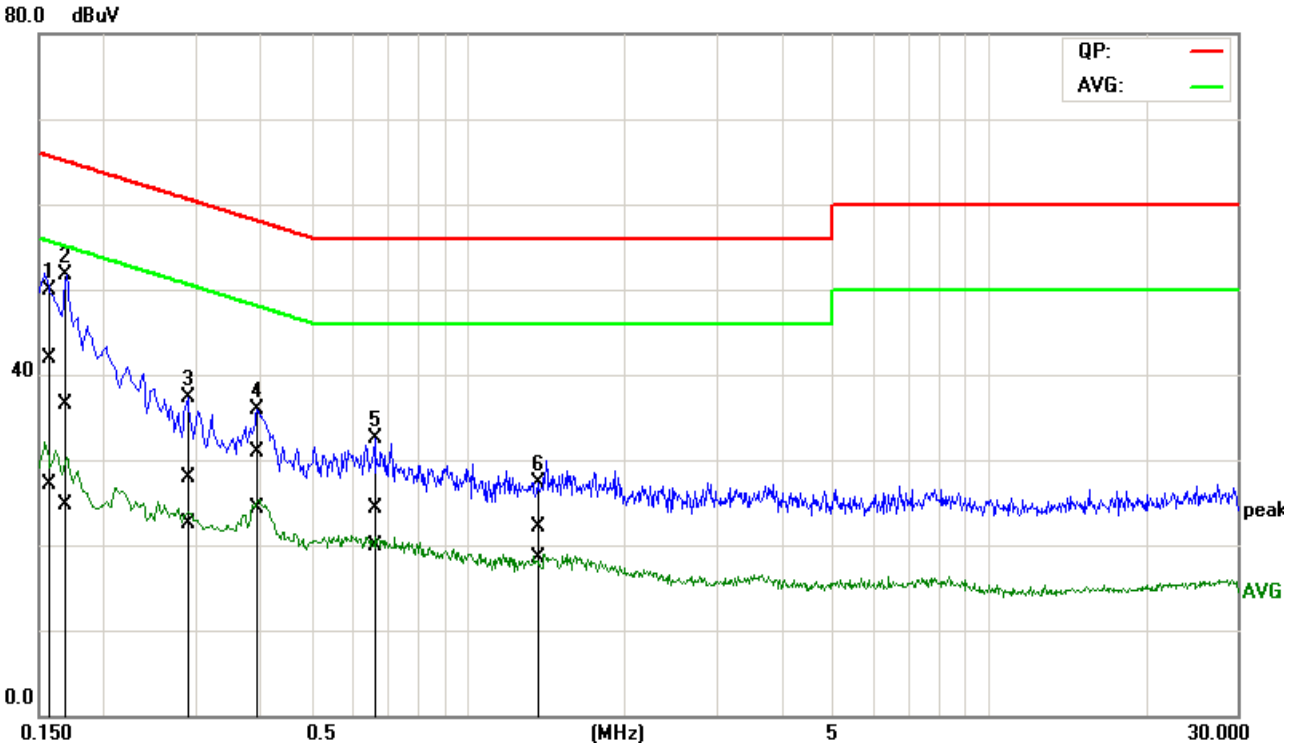


No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1526	22.00	10.04	19.73	41.73	29.77	65.86	55.86	-24.13	-26.09	Pass
2	0.1557	23.35	9.35	19.73	43.08	29.08	65.69	55.69	-22.61	-26.61	Pass
3	0.1666	21.71	7.93	19.73	41.44	27.66	65.13	55.13	-23.69	-27.47	Pass
4	0.2314	13.40	4.25	19.74	33.14	23.99	62.40	52.40	-29.26	-28.41	Pass
5*	0.3797	14.95	7.64	19.75	34.70	27.39	58.29	48.29	-23.59	-20.90	Pass
6	0.4177	8.68	3.30	19.75	28.43	23.05	57.49	47.49	-29.06	-24.44	Pass

Note: 1. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line).

Job No.:	C151211R01	Date:	2016-1-9
Model No.:	R9861520	Time:	PM 04:10:37
Standard:	FCC Class B	Temp.(C)/Hum.(%):	22(C)/48%
Test item:	Conduction test	Test By:	Lily.Wang
Line:	L1	Test Voltage:	AC 240V/60Hz
Model:		Description:	

L1

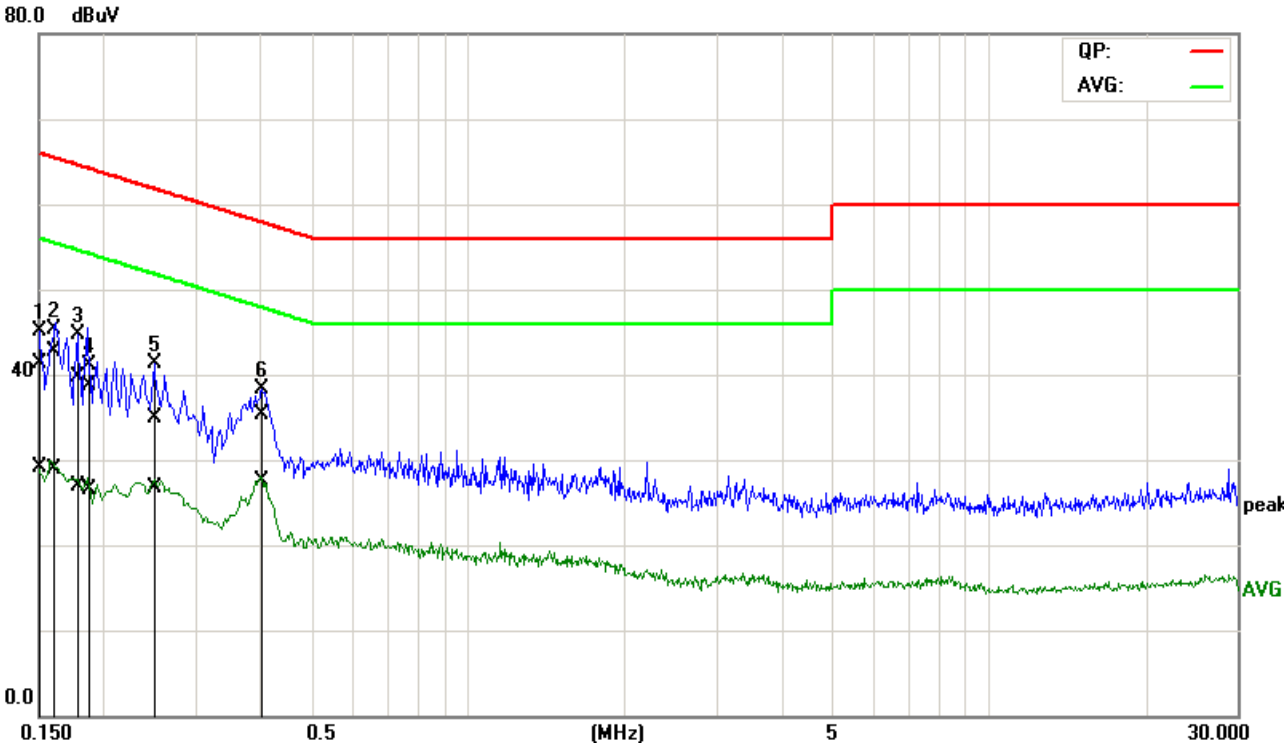


No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1*	0.1584	22.16	7.36	19.78	41.94	27.14	65.55	55.55	-23.61	-28.41	Pass
2	0.1707	16.68	4.96	19.78	36.46	24.74	64.93	54.93	-28.47	-30.19	Pass
3	0.2910	8.20	2.79	19.80	28.00	22.59	60.50	50.50	-32.50	-27.91	Pass
4	0.3909	11.05	4.54	19.80	30.85	24.34	58.04	48.04	-27.19	-23.70	Pass
5	0.6668	4.47	0.14	19.81	24.28	19.95	56.00	46.00	-31.72	-26.05	Pass
6	1.3570	2.27	-1.41	19.82	22.09	18.41	56.00	46.00	-33.91	-27.59	Pass

Note: 1. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line).

Job No.:	C151211R01	Date:	2016-1-9
Model No.:	R9861520	Time:	PM 04:18:03
Standard:	FCC Class B	Temp.(C)/Hum.(%):	22(C)/48%
Test item:	Conduction test	Test By:	Lily.Wang
Line:	L2	Test Voltage:	AC 240V/60Hz
Model:		Description:	

L2



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1505	21.64	9.34	19.73	41.37	29.07	65.97	55.97	-24.60	-26.90	Pass
2	0.1587	23.05	9.27	19.73	42.78	29.00	65.53	55.53	-22.75	-26.53	Pass
3	0.1784	19.89	7.17	19.73	39.62	26.90	64.56	54.56	-24.94	-27.66	Pass
4	0.1887	18.95	6.86	19.74	38.69	26.60	64.09	54.09	-25.40	-27.49	Pass
5	0.2518	15.26	7.04	19.74	35.00	26.78	61.70	51.70	-26.70	-24.92	Pass
6*	0.3985	15.59	7.75	19.75	35.34	27.50	57.88	47.88	-22.54	-20.38	Pass

Note: 1. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line).

*Re*mark:

1.The measuring frequencies range between 0.15 MHz and 30 MHz.

2.The emissions measured in the frequency range between 0.15 MHz and 30MHz were made with an instrument using Quasi-peak detector and Average detector.

3."---" denotes the emission level was or more than 2dB below the Average limit, and no re-check was made.

4.The IF bandwidth of SPA between 0.15MHz and 30MHz was 10KHz. The IF bandwidth of Test Receiver between 0.15MHz and 30MHz was 9kHz.

END OF REPORT