



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

Siren Hub

MODEL NUMBER: 7HGWWZAA0

FCC ID: 2AB2Q7HGWWZAA0

REPORT NUMBER: 4788579258.1-2

ISSUE DATE: August 30, 2018

Prepared for

**LEEDARSON LIGHTING CO., LTD
Xingtai Industrial Zone, Economic Development Zone, Changtai County,
Zhangzhou City, Fujian Province, P.R.China**

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
--	08/30/2018	Initial Issue	



Summary of Test Results			
Clause	Test Items	FCC	Test Results
1	6dB Bandwidth	FCC 15.247 (a) (2)	PASS
2	Peak Conducted Output Power	FCC 15.247 (b) (3)	PASS
3	Power Spectral Density	FCC 15.247 (e)	PASS
4	Conducted Bandedge and Spurious Emission	FCC 15.247 (d)	PASS
5	Radiated Bandedge and Spurious Emission	FCC 15.247 (d) FCC 15.209 FCC 15.205	PASS
6	Conducted Emission Test For AC Power Port	FCC 15.207	PASS
7	Antenna Requirement	FCC 15.203	PASS



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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: LEEDARSON LIGHTING CO., LTD
Address: Xingtai Industrial Zone, Economic Development Zone, Changtai County, Zhangzhou City, Fujian Province, P.R.China

Manufacturer Information

Company Name: LEEDARSON LIGHTING CO., LTD
Address: Xingtai Industrial Zone, Economic Development Zone, Changtai County, Zhangzhou City, Fujian Province, P.R.China

EUT Description

Product Name: Siren Hub
Model Name: 7HGWZAA0
Date Tested: July 12~25, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	PASS

Tested By:

Kebo Zhang
Engineer

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo
Laboratory Manager



2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB558074 D01 DTS Meas Guidance v04, KDB414788 D01 Radiated Test Site v01r01, FCC CFR 47 Part 2, FCC CFR 47 Part 15 and ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. IAS (Lab Code: TL-702) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has demonstrated compliance with ISO/IEC Standard 17025:2005, General requirements for the competence of testing and calibration laboratories FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules IC(Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320. VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B, the VCCI registration No. is C-20012 and T-20011
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Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OATS.



4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.90dB
Uncertainty for Radiation Emission test(include Fundamental emission) (9KHz-30MHz)	2.2dB
Uncertainty for Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	4.52dB
Uncertainty for Radiation Emission test (1GHz to 26GHz)(include Fundamental emission)	5.04dB(1-6GHz)
	5.30dB (6GHz-18Gz)
	5.23dB (18GHz-26Gz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	



5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Equipment	Siren Hub
Model Name	7HGWWZAA0
Radio Technology	IEEE802.11b/g/n HT20/n HT40
Operation frequency	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 2422MHz—2452MHz
Modulation	IEEE 802.11b: DSSS(CCK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)
Power Supply	AC120V/60Hz

5.2. MAXIMUM OUTPUT POWER

Frequency Range (MHz)	Number of Transmit Chains (NTX)	IEE Std. 802.11	Frequency (MHz)	Channel Number	Max PK Conducted Power (dBm)
2412-2462	1	IEEE 802.11b	2412-2462	1-11[11]	16.573
2412-2462	1	IEEE 802.11g	2412-2462	1-11[11]	23.589
2412-2462	1	IEEE 802.11nHT20	2412-2462	1-11[11]	23.294
2422-2452	1	IEEE 802.11nHT40	2422-2452	3-9[7]	22.991



5.3. CHANNEL LIST

Channel List for 802.11b/g/n (20 MHz)					
Channel	Frequency (MHz)	Channel	Frequency(MHz)	Channel	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	-	-

Channel List for 802.11n (40 MHz)			
Channel	Frequency (MHz)	Channel	Frequency(MHz)
3	2422	7	2442
4	2427	8	2447
5	2432	9	2452
6	2437	-	-

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel (MHz)
IEEE 802.11b	LCH :CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11g	LCH :CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11n HT20	LCH :CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11n HT40	LCH :CH03 2422
	MCH: CH06 2437
	HCH: CH09 2452



5.5. THE WORSE CASE CONFIGURATIONS

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
Test Software		UI_mptool					
Modulation Mode	Transmit Antenna Number	Test Channel					
		NCB: 20MHz			NCB: 40MHz		
		CH 1	CH 7	CH 13	CH 3	CH 7	CH 11
802.11b	1	target	target	target	N/A		
802.11g	1	target	target	target			
802.11n HT20	1	target	target	target			
802.11n HT40	1	N/A	N/A	N/A	target	target	target

5.6. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity	55 ~ 65%	
Atmospheric Pressure:	1025Pa	
Temperature	TN	23 ~ 28°C
Voltage :	VL	N/A
	VN	AC 120V/60Hz
	VH	N/A

Note: VL= Lower Extreme Test Voltage

VN= Nominal Voltage

VH= Upper Extreme Test Voltage

TN= Normal Temperature

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2412-2462	Internal Antenna	0.01dBi

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	☒ 1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.
IEEE 802.11g	☒ 1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	☒ 1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	☒ 1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.



5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	N/A	N/A	N/A	N/A
2	Debug board	N/A	N/A	N/A

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	Network port	NA	NA	0.5	N/A

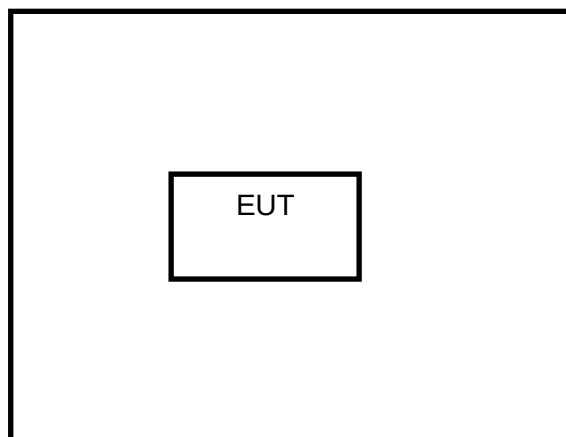
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	Switching Adapter	NA	DSA-10PFL-05 FUS	Input: AC 100~240, 50~60Hz, 0.3A Output: +5V 1.5A

TEST SETUP

The EUT can work in engineering mode with a software through a PC before test.

SETUP DIAGRAM FOR TESTS



**5.9. MEASURING INSTRUMENT AND SOFTWARE USED**

Conducted Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☒	EMI Test Receiver	R&S	ESR3	101961	Dec.12,2017	Dec.11,2018
☒	Two-Line V- Network	R&S	ENV216	101983	Dec.12,2017	Dec.11,2018
☒	Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Dec.12,2017	Dec.11,2018
Software						
Used	Description		Manufacturer	Name		Version
☒	Test Software for Conducted disturbance		Farad	EZ-EMC		Ver. UL-3A1
Radiated Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☒	MXE EMI Receiver	KESIGHT	N9038A	MY56400 036	Dec.12,2017	Dec.11,2018
☒	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Jan.09, 2016	Jan.09, 2019
☒	Preamplifier	HP	8447D	2944A090 99	Dec.12,2017	Dec.11,2018
☒	EMI Measurement Receiver	R&S	ESR26	101377	Dec.12,2017	Dec.11,2018
☒	Horn Antenna	TDK	HRN-0118	130939	Jan. 09, 2016	Jan. 09, 2019
☒	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	Jan.06, 2016	Jan.06, 2019
☒	Preamplifier	TDK	PA-02-0118	TRS-305- 00066	Dec.12,2017	Dec.11,2018
☒	Preamplifier	TDK	PA-02-2	TRS-307- 00003	Dec.12,2017	Dec.11,2018
☒	Loop antenna	Schwarzbeck	1519B	00008	Mar. 26, 2016	Mar. 25, 2019
Software						
Used	Description		Manufacturer	Name		Version
☒	Test Software for Radiated disturbance		Farad	EZ-EMC		Ver. UL-3A1
Other instruments						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☒	Spectrum Analyzer	Keysight	N9030A	MY55410512	Dec.12,2017	Dec.11,2018
☒	Power Meter	Keysight	N1911A	MY55416024	Dec.12,2017	Dec.11,2018
☒	Power Sensor	Keysight	N1921A	MY51100041	Dec.12,2017	Dec.11,2018



6. ANTENNA PORT TEST RESULTS

6.1. ON TIME AND DUTY CYCLE

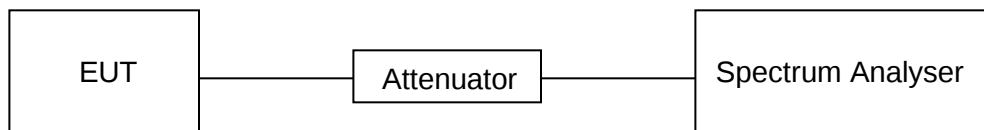
LIMITS

None; for reporting purposes only

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



RESULTS

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (KHz)	Final setting For VBW (KHz)
11b	12.18	12.23	0.9959	99.59	0.02	0.08	0.5
11g	2.024	2.072	0.9768	97.68	0.10	0.49	0.5
11n20	1.889	1.938	0.9747	97.47	0.11	0.53	1
11n40	0.929	0.965	0.9626	96.26	0.17	1.08	2

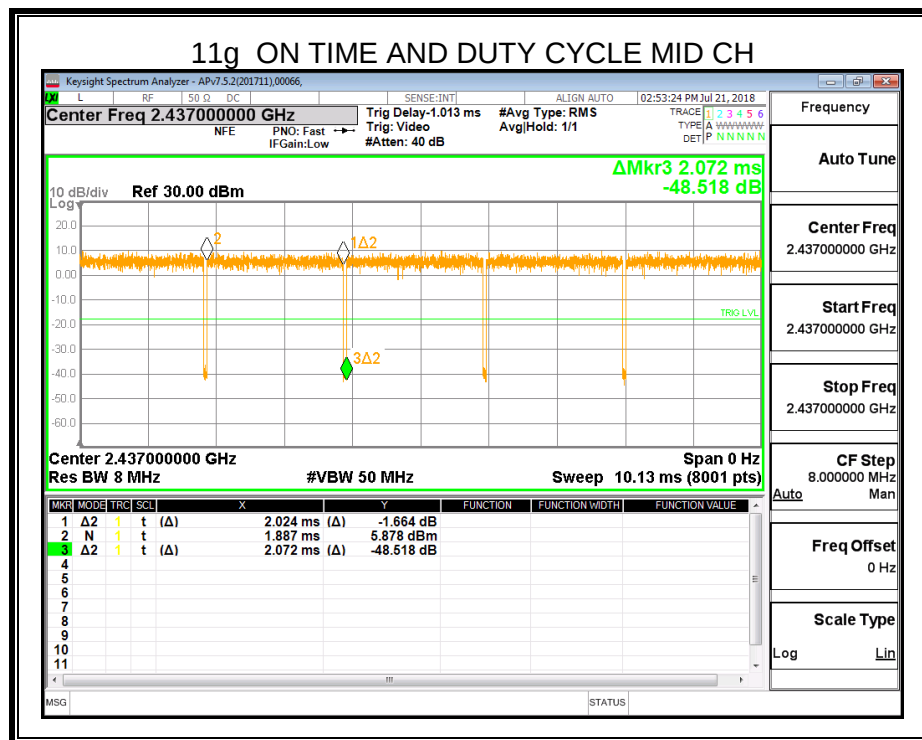
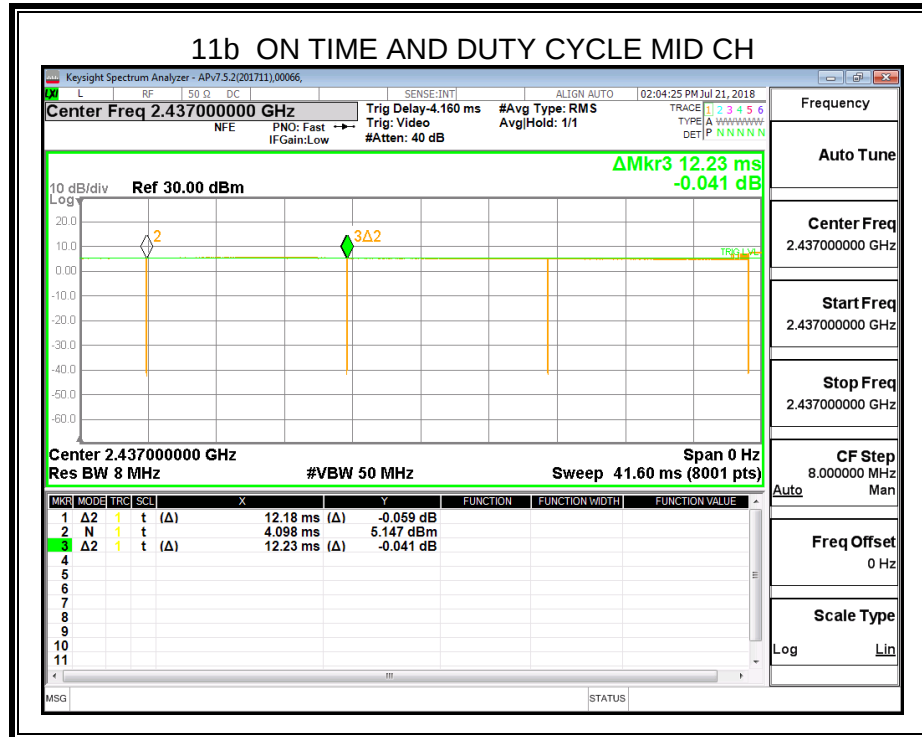
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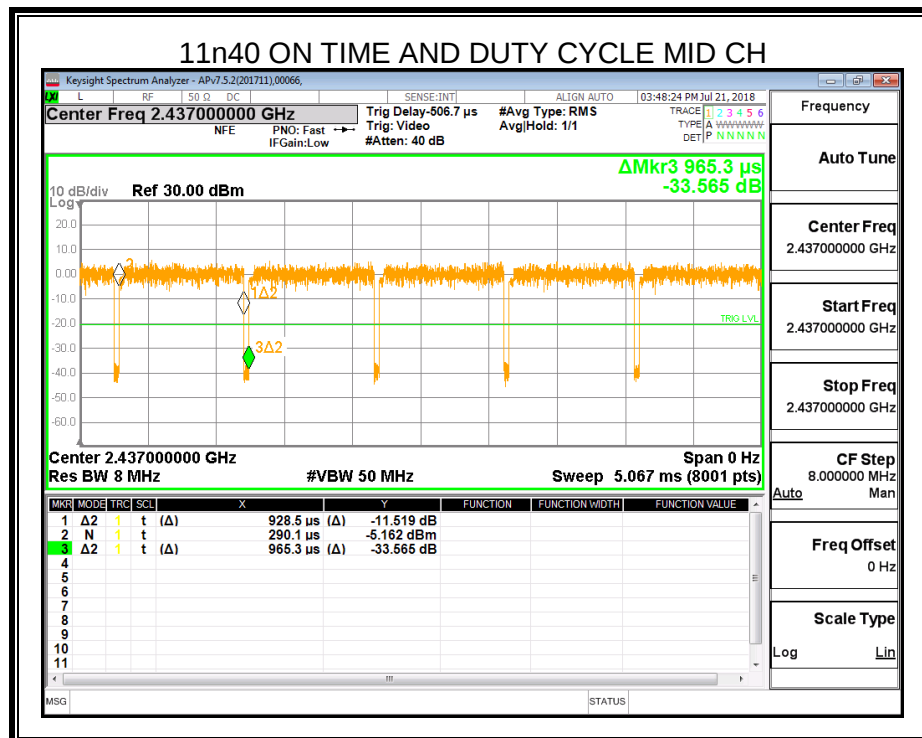
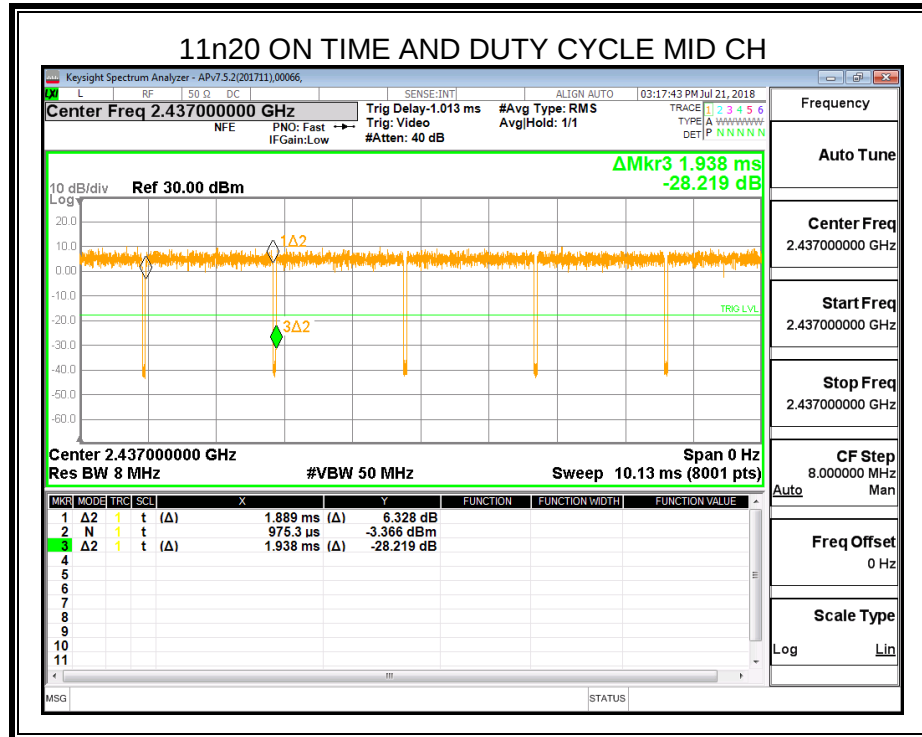
Duty Cycle Correction Factor=10log (1/x).

Where: x is Duty Cycle (Linear)

Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be used.







6.2. 6 dB DTS BANDWIDTH

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(a)(2)	6 dB Bandwidth	$\geq 500\text{KHz}$	2400-2483.5

TEST PROCEDURE

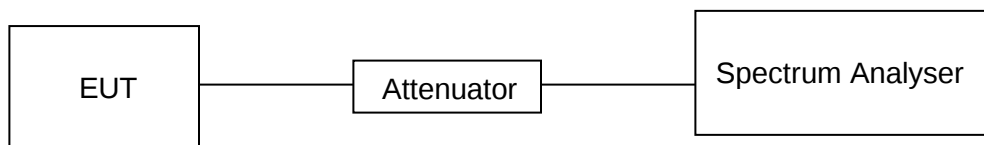
KDB 558074D01 Section 8.1 test method.

Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100K
VBW	$\geq 3 \times \text{RBW}$
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP

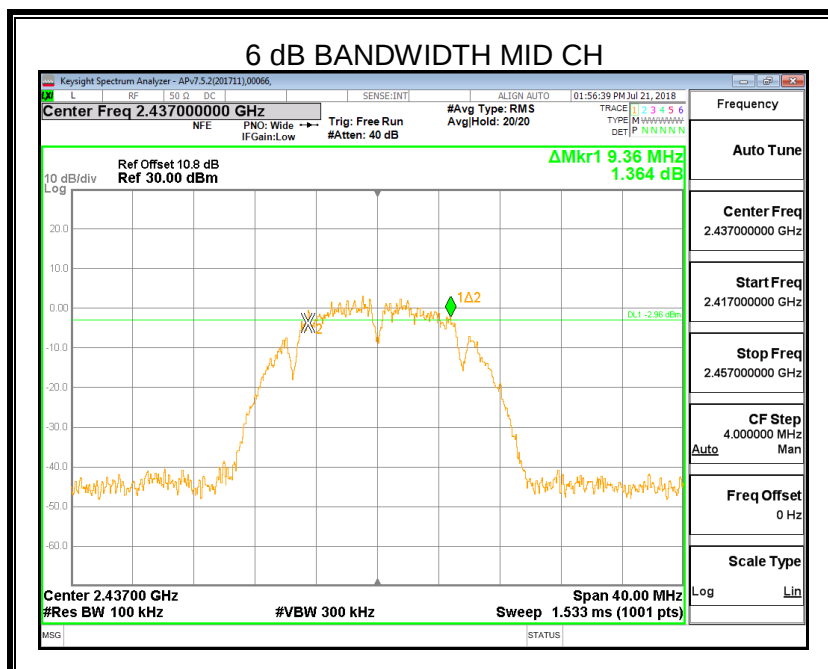
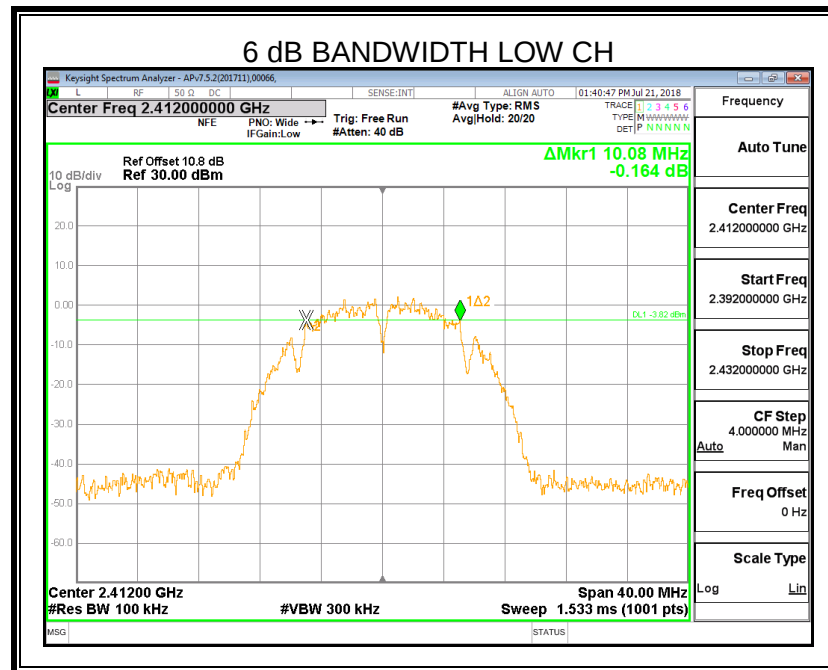


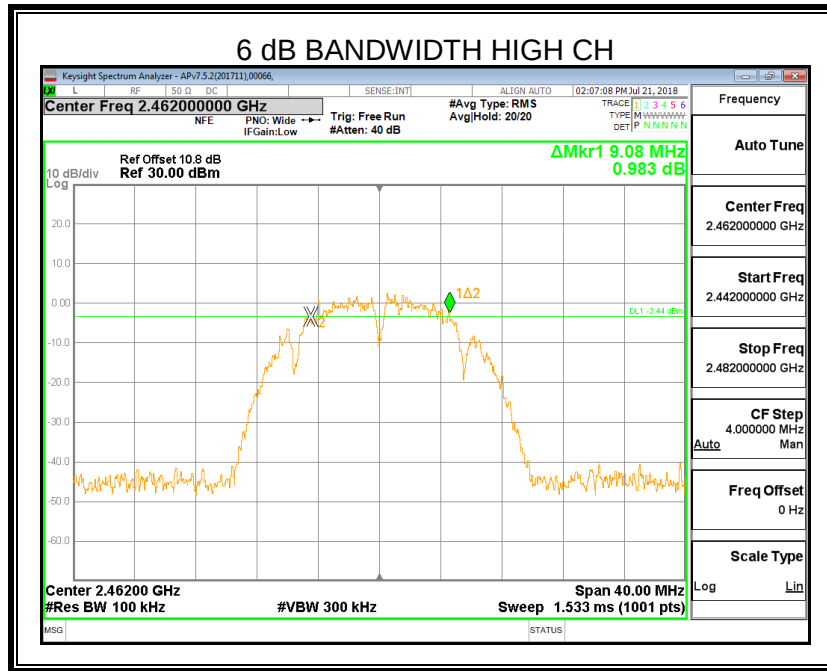
RESULTS



6.2.1. 802.11b MODE

Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
2412	10.08	500	Pass
2437	9.36	500	Pass
2462	9.08	500	Pass

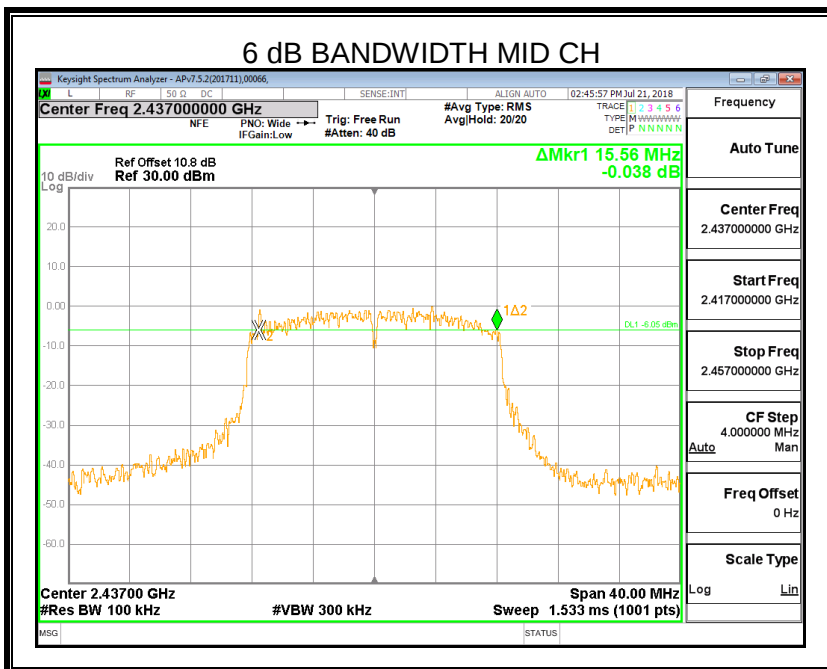
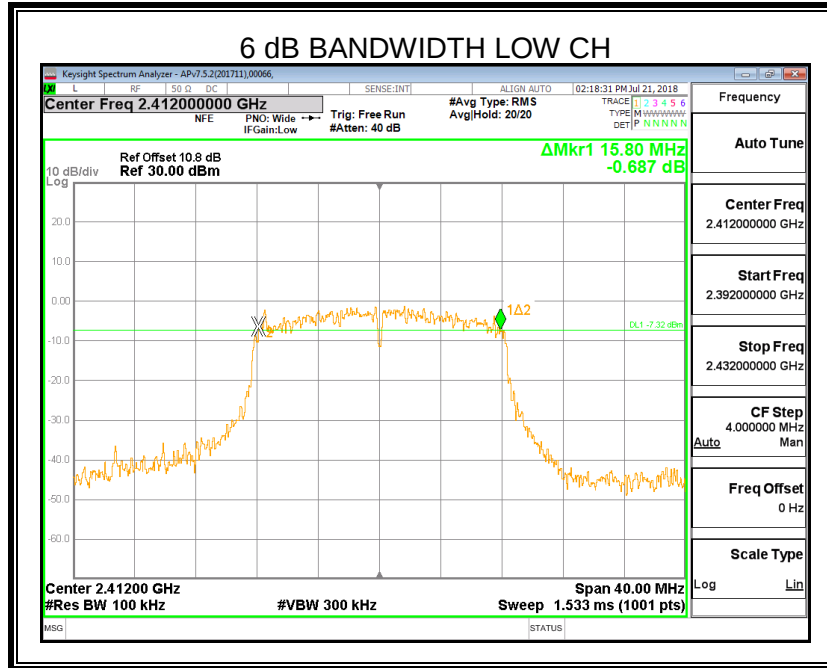


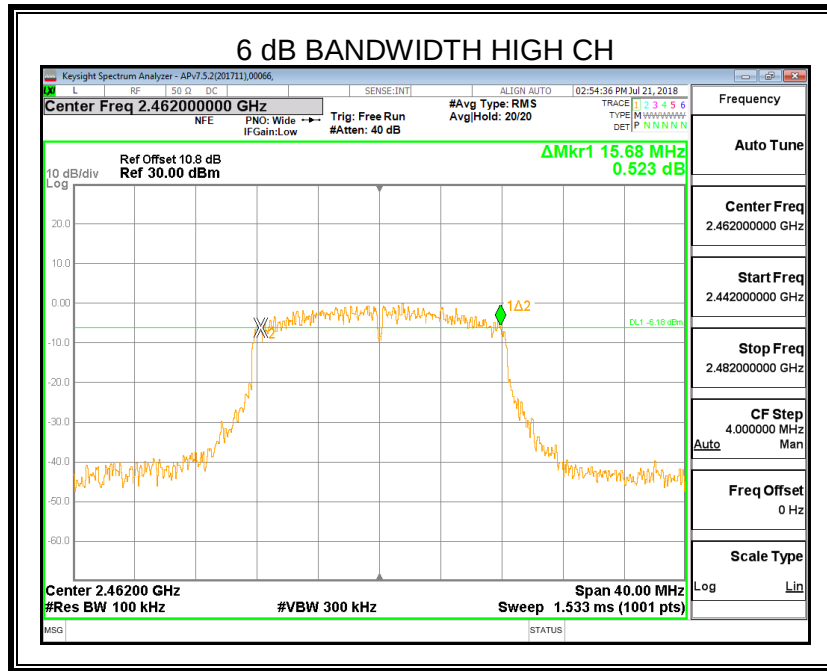




6.2.2. 802.11g MODE

Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
2412	15.80	500	Pass
2437	15.56	500	Pass
2462	15.68	500	Pass

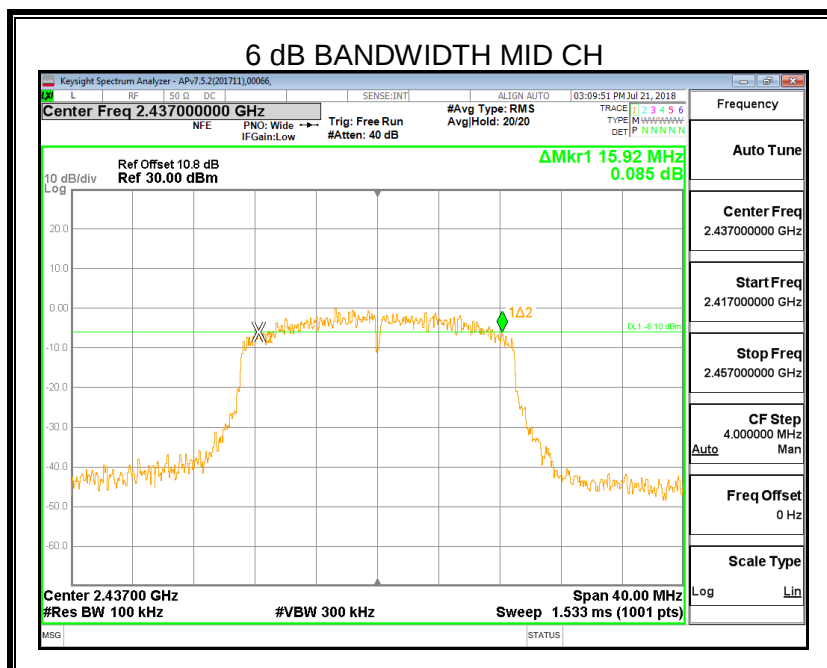
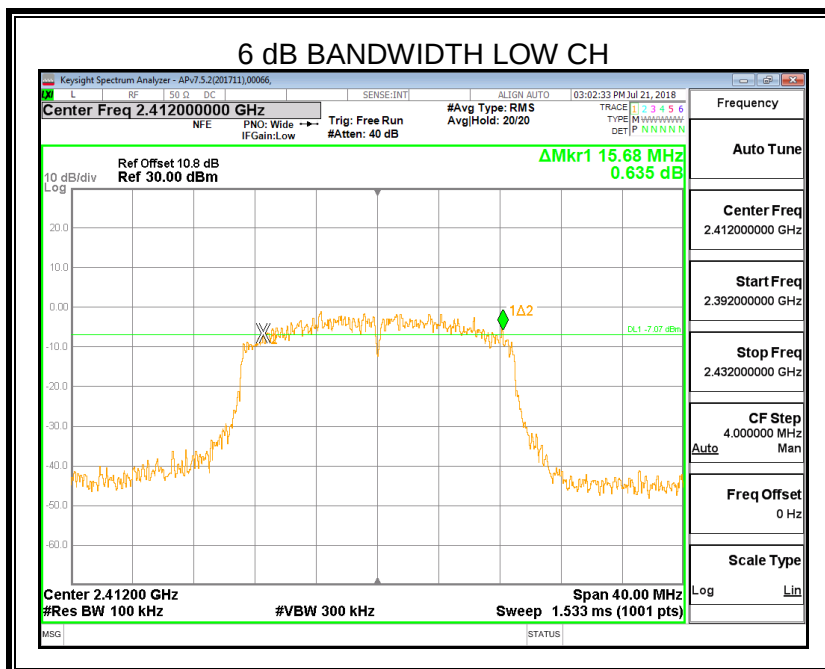


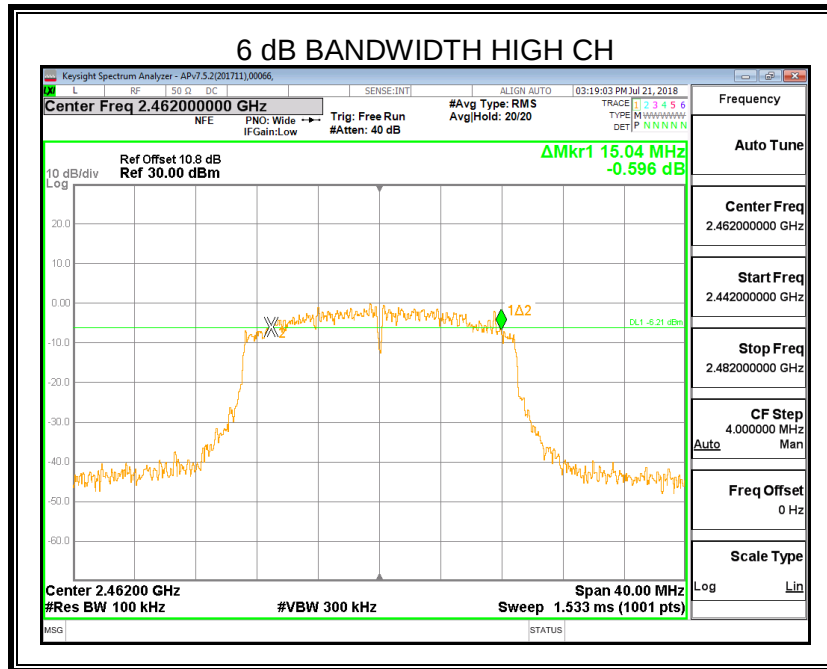




6.2.3. 802.11n20 MODE

Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
2412	15.68	500	Pass
2437	15.92	500	Pass
2462	15.04	500	Pass

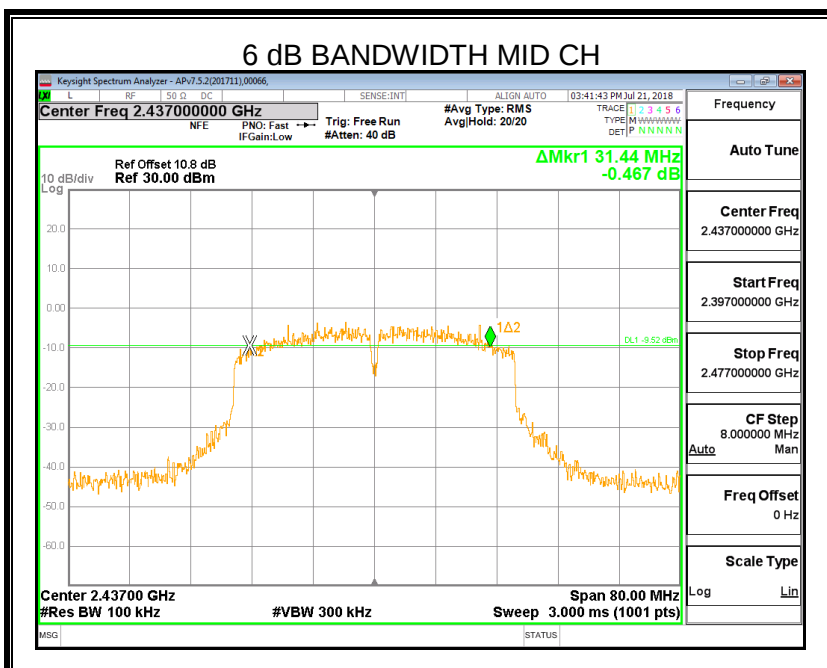
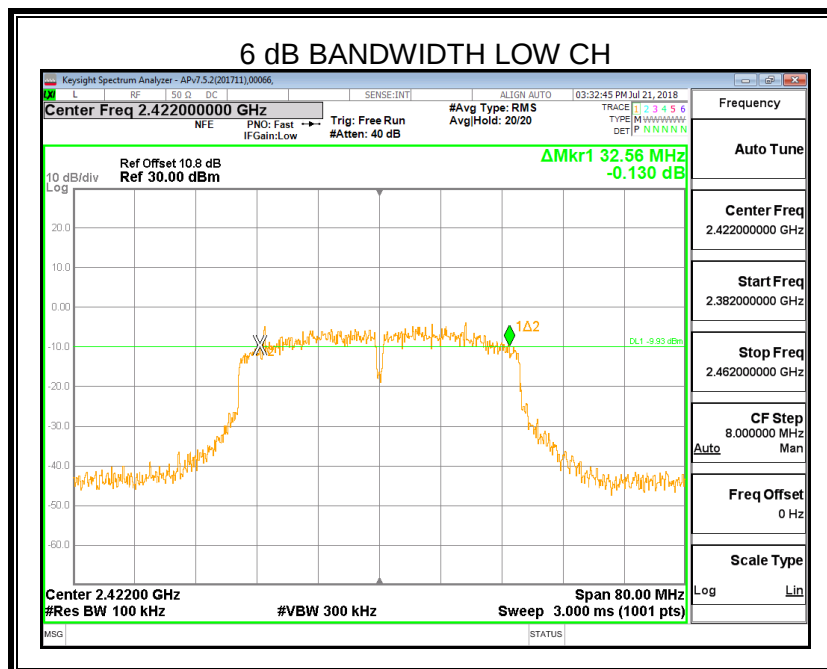


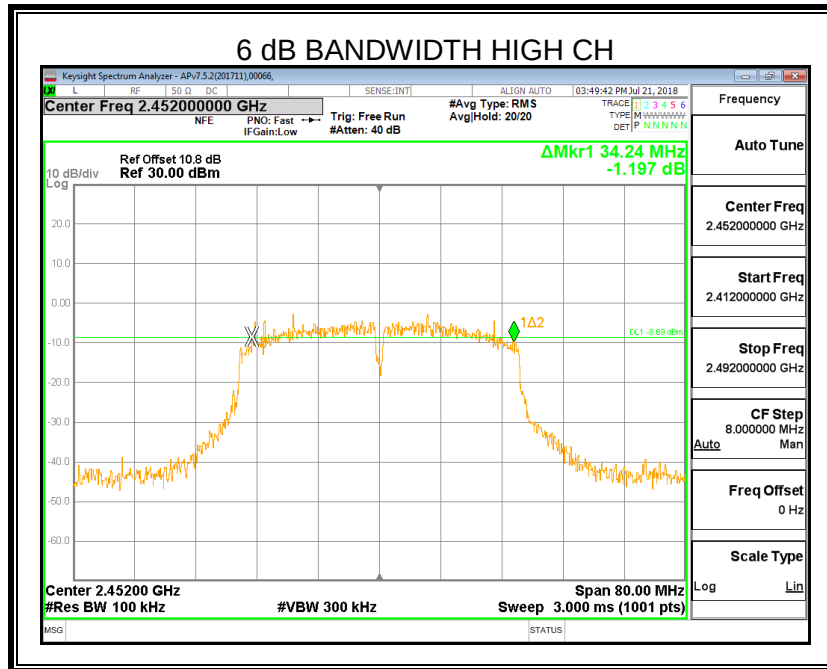




6.2.4. 802.11n40 MODE

Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
2422	32.56	500	Pass
2437	31.44	500	Pass
2452	34.24	500	Pass







6.3. PEAK CONDUCTED OUTPUT POWER

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5

TEST PROCEDURE

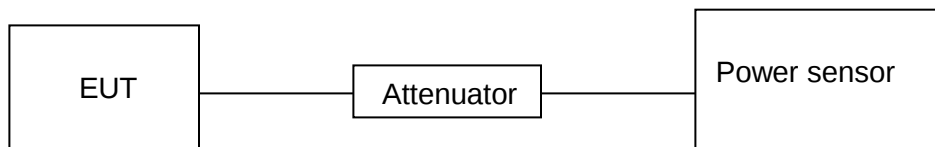
KDB558074D01 section 9.1.3 for peak measurement and 9.2.3 for average measurement.

Place the EUT on the table and set it in the transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.

Measure peak power each channel.

TEST SETUP



RESULTS



Mode	Channel	Peak. Power [dBm]	Verdict
11B	2412	15.700	PASS
11B	2437	16.573	PASS
11B	2462	15.981	PASS
11G	2412	22.631	PASS
11G	2437	23.589	PASS
11G	2462	23.355	PASS
11N20	2412	22.309	PASS
11N20	2437	23.294	PASS
11N20	2462	23.081	PASS
11N40	2422	21.989	PASS
11N40	2437	22.475	PASS
11N40	2452	22.991	PASS

Mode	Channel	Average. Power [dBm]	Verdict
11B	2412	12.525	PASS
11B	2437	13.126	PASS
11B	2462	13.112	PASS
11G	2412	12.394	PASS
11G	2437	13.326	PASS
11G	2462	13.335	PASS
11N20	2412	12.027	PASS
11N20	2437	13.042	PASS
11N20	2462	13.001	PASS
11N40	2422	11.406	PASS
11N40	2437	11.903	PASS
11N40	2452	12.261	PASS



6.4. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC §15.247 (e)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5

TEST PROCEDURE

KDB 558074D01 section 10.2 test method.

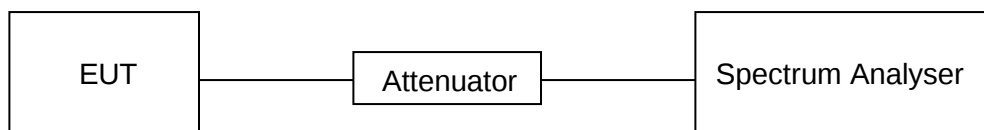
Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
VBW	$\geq 3 \times \text{RBW}$
Span	$1.5 \times \text{DTS bandwidth}$
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP

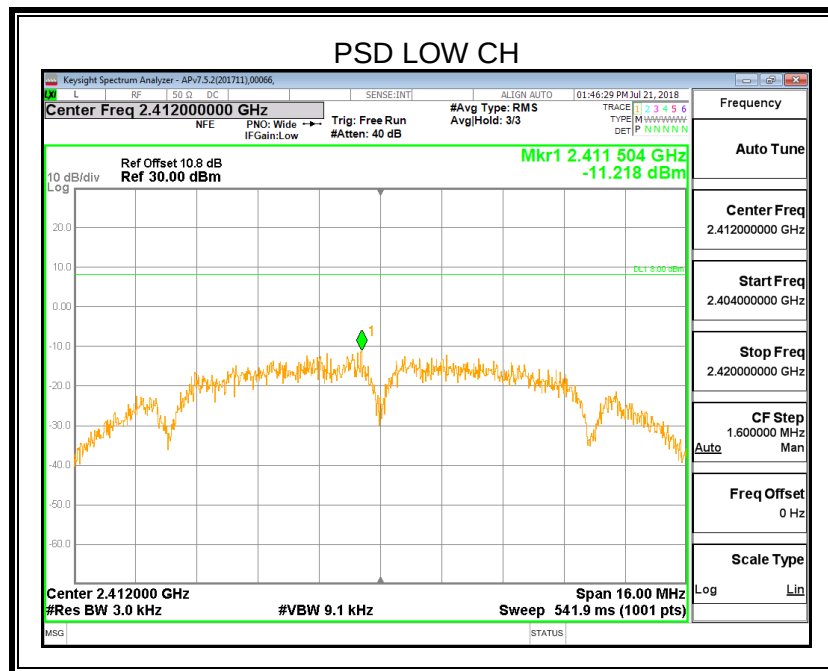


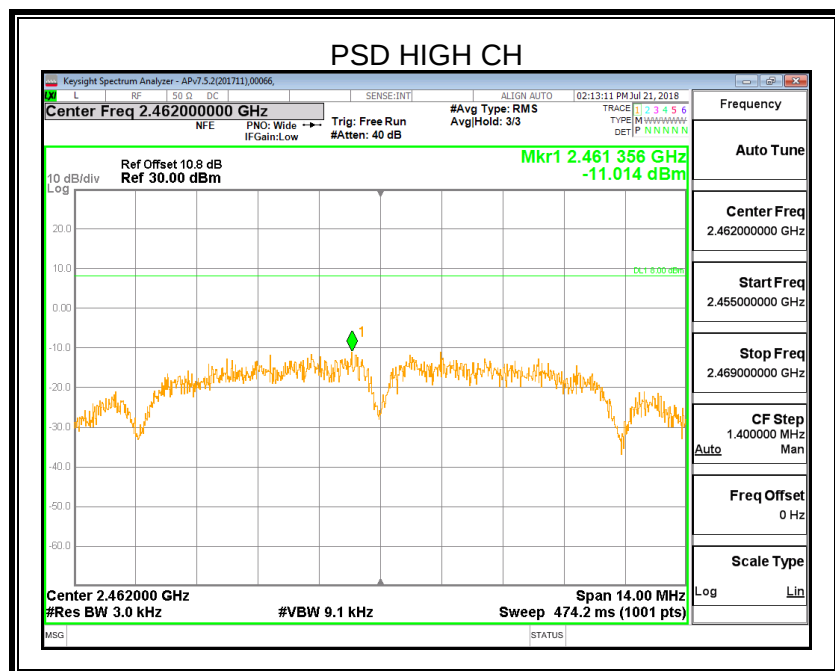
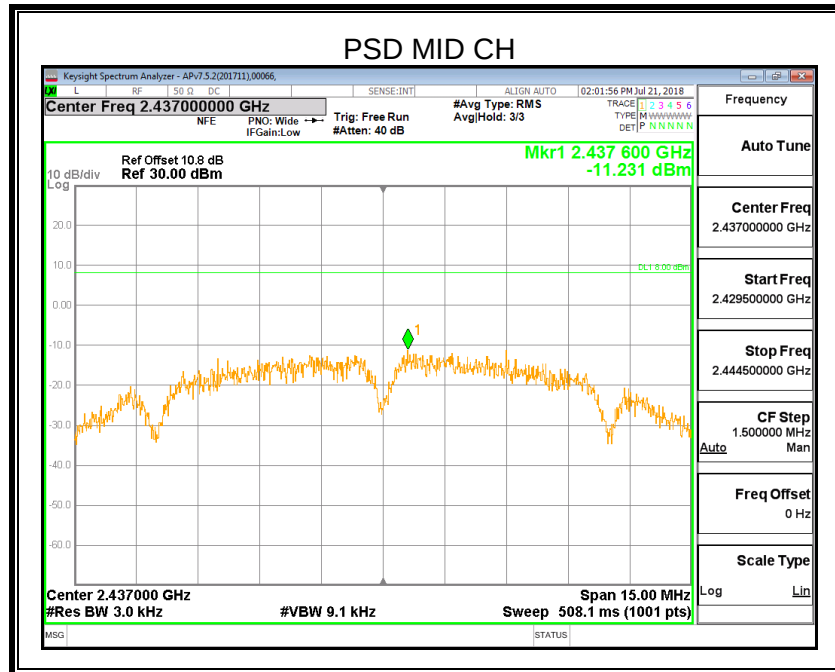


RESULTS

6.4.1. 802.11b MODE

Channel	Meas.Level [dBm/30kHz]	Limit(dBm)	Verdict
2412	-11.218	8	PASS
2437	-11.231	8	PASS
2462	-11.014	8	PASS

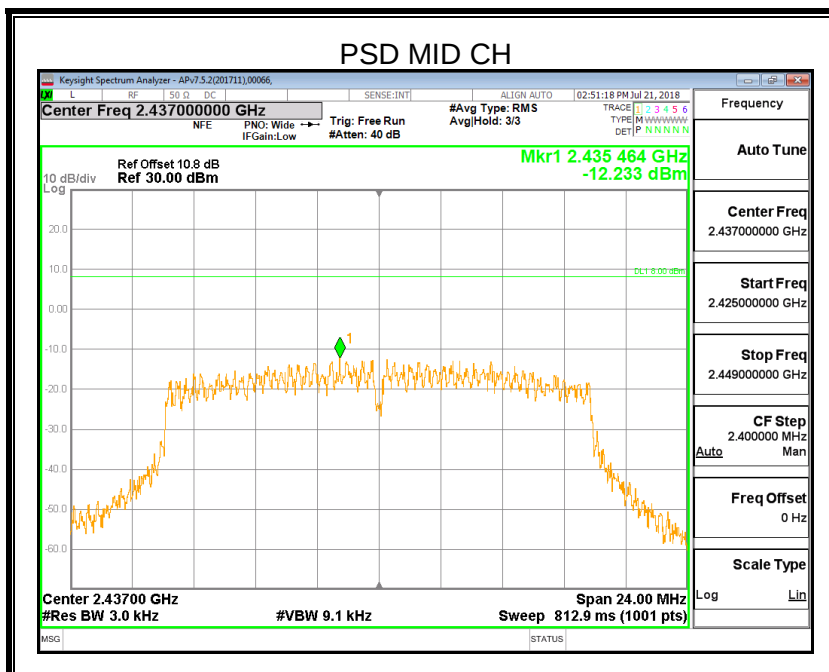
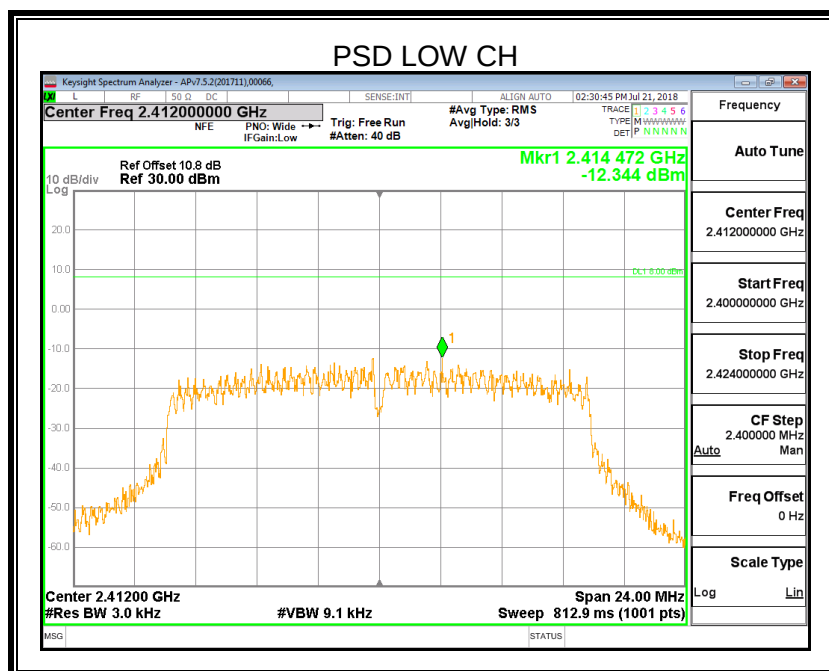


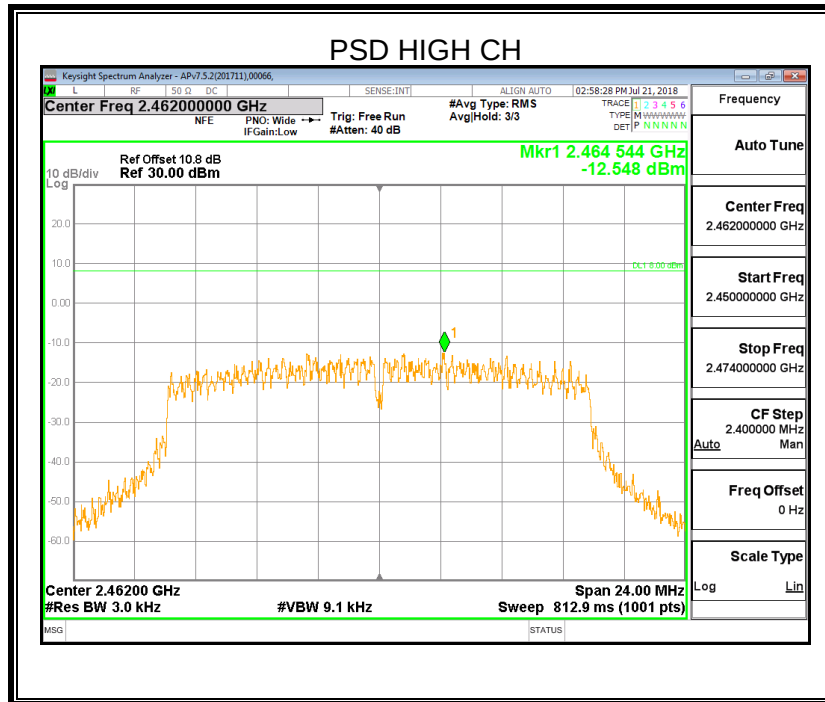




6.4.2. 802.11g MODE

Channel	Meas.Level [dBm/30kHz]	Limit(dBm)	Verdict
2412	-12.344	8	PASS
2437	-12.233	8	PASS
2462	-12.548	8	PASS

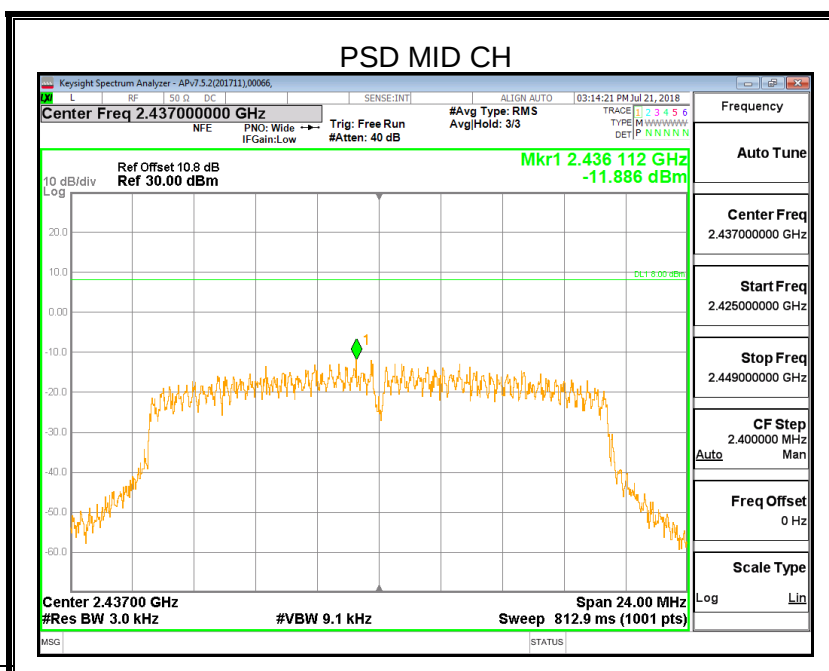
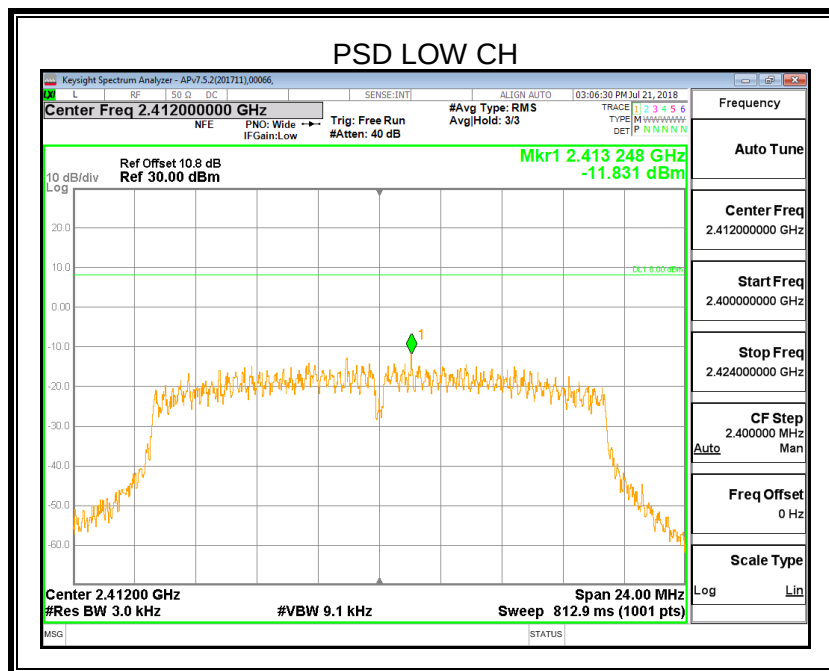


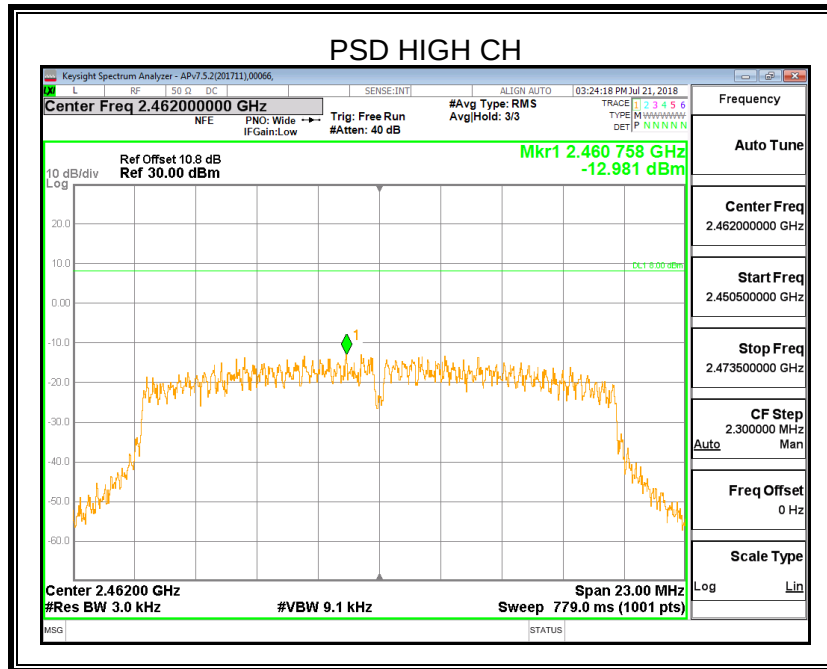




6.4.3. 802.11n20 MODE

Channel	Meas.Level [dBm/30kHz]	Limit(dBm)	Verdict
2412	-11.831	8	PASS
2437	-11.886	8	PASS
2462	-12.981	8	PASS

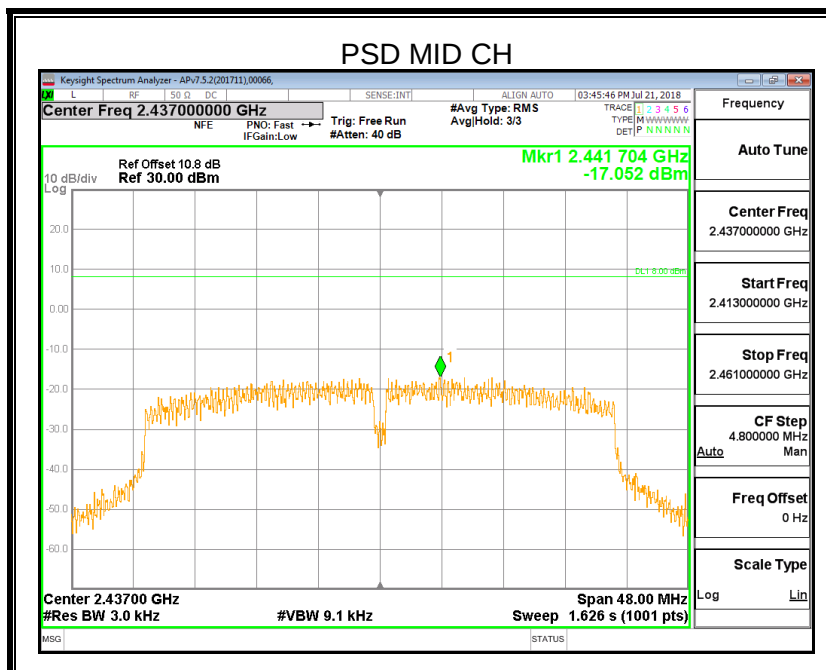
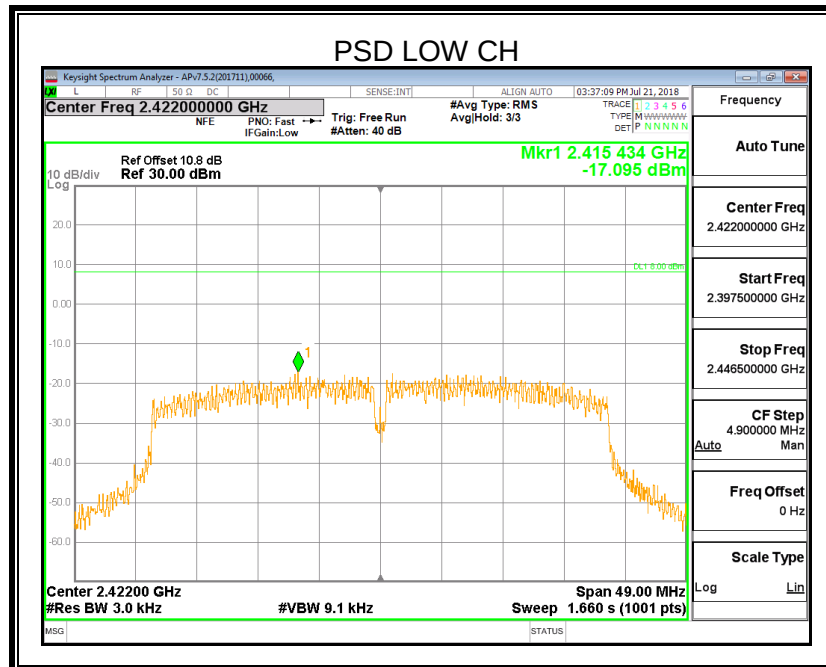


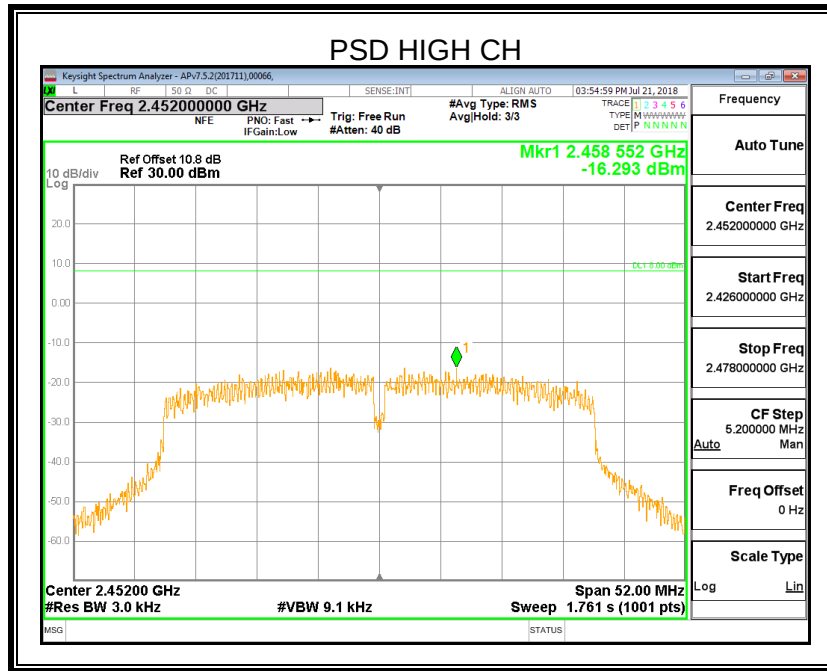




6.4.4. 802.11n40 MODE

Channel	Meas.Level [dBm/30kHz]	Limit(dBm)	Verdict
2412	-17.095	8	PASS
2437	-17.052	8	PASS
2462	-16.293	8	PASS







6.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

FCC Part15 (15.247) Subpart C		
Section	Test Item	Limit
FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

KDB 558074D01 section 11 test method.

Connect the UUT to the spectrum analyser and use the following settings:

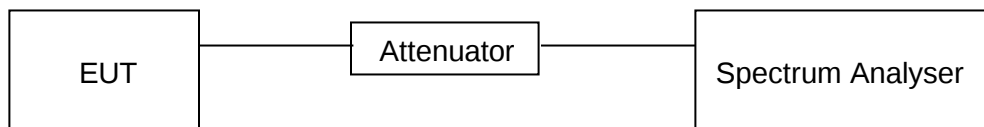
Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100K
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	$\geq 3 \times \text{RBW}$
measurement points	$\geq \text{span}/\text{RBW}$
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

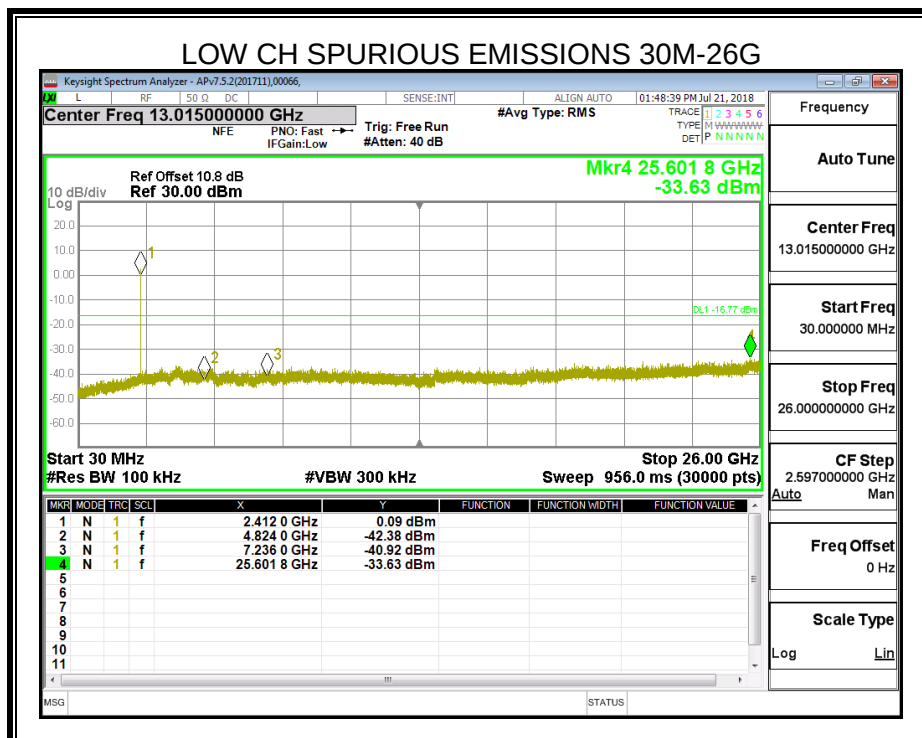
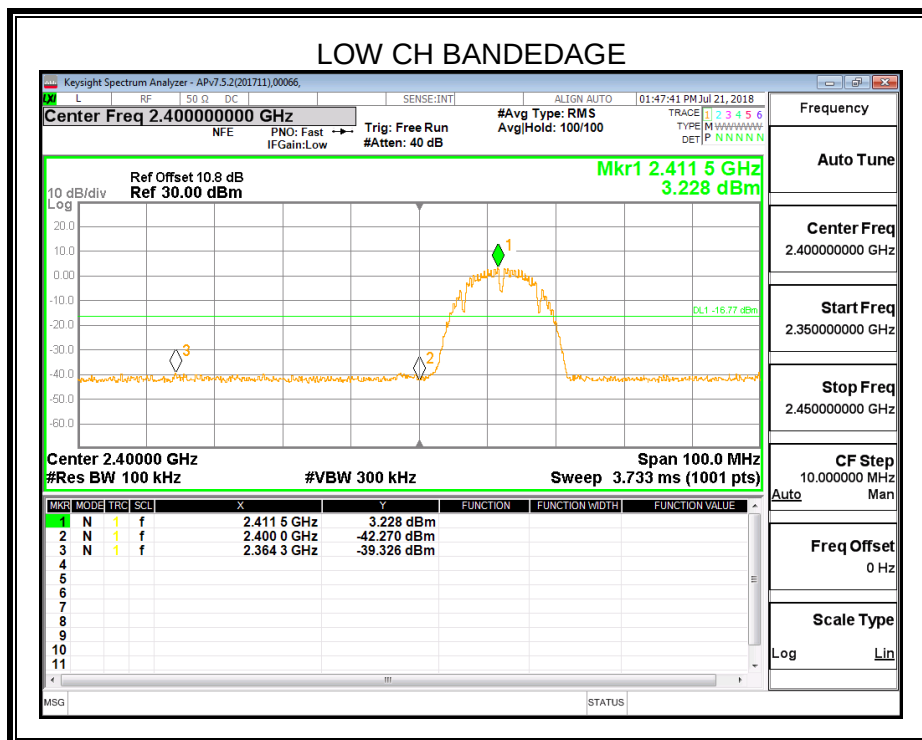
TEST SETUP

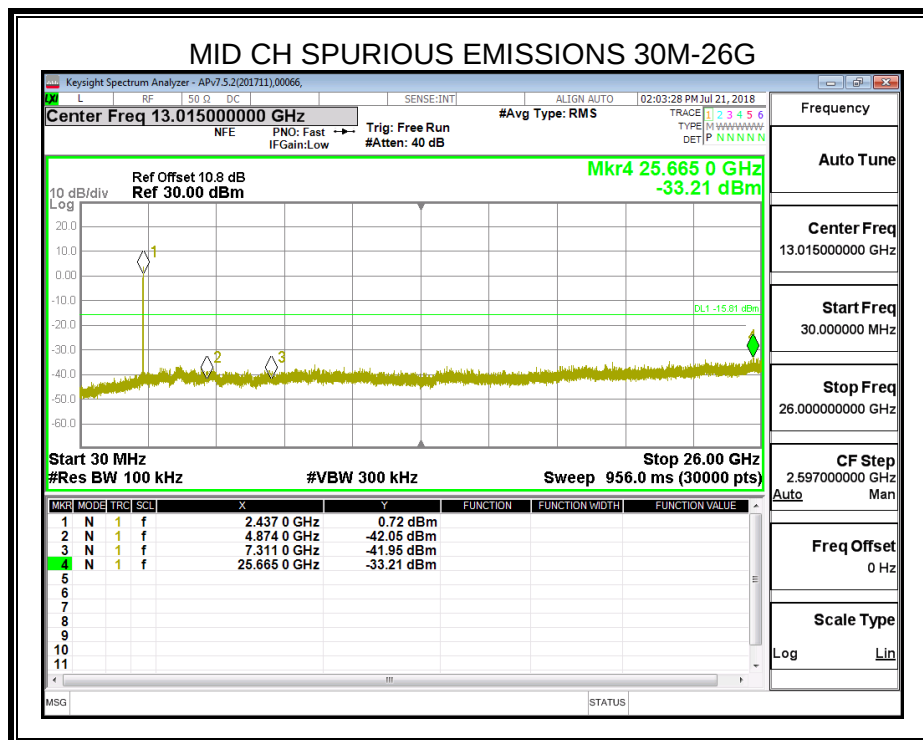
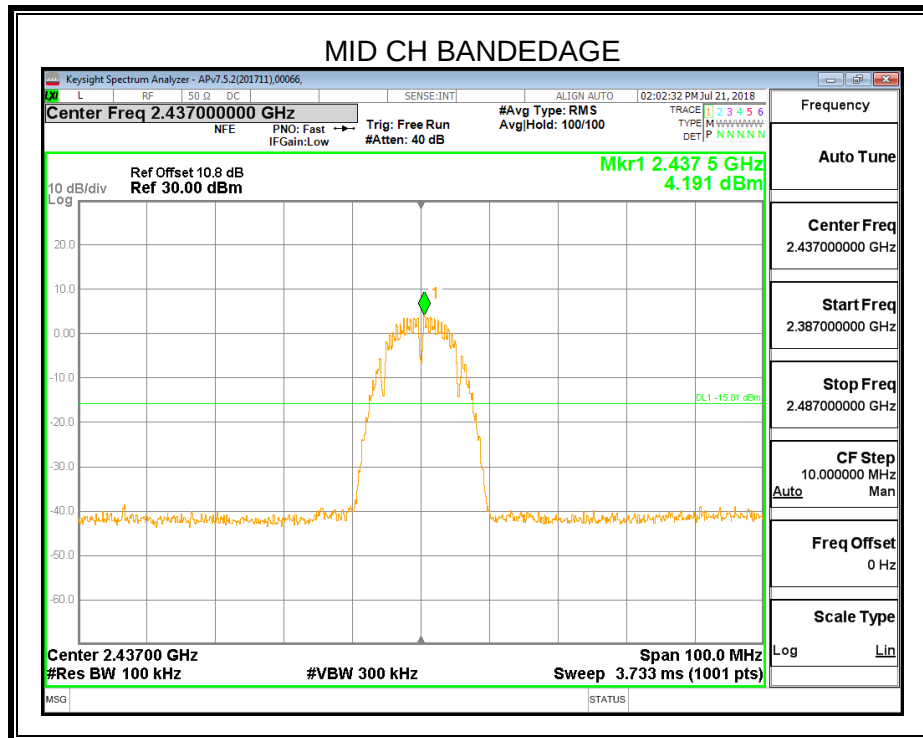


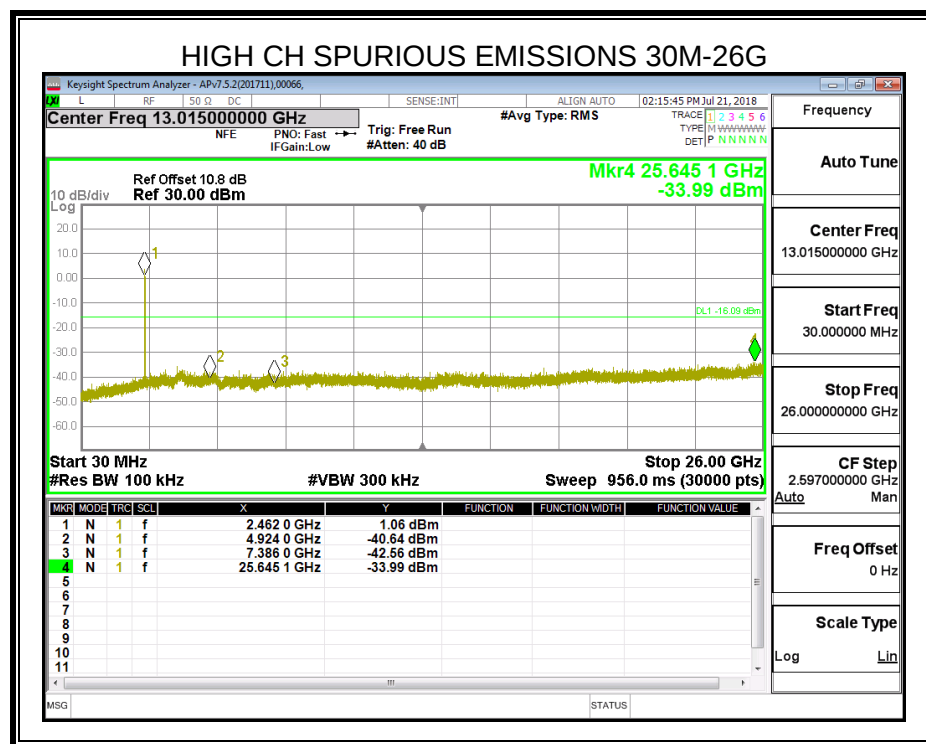
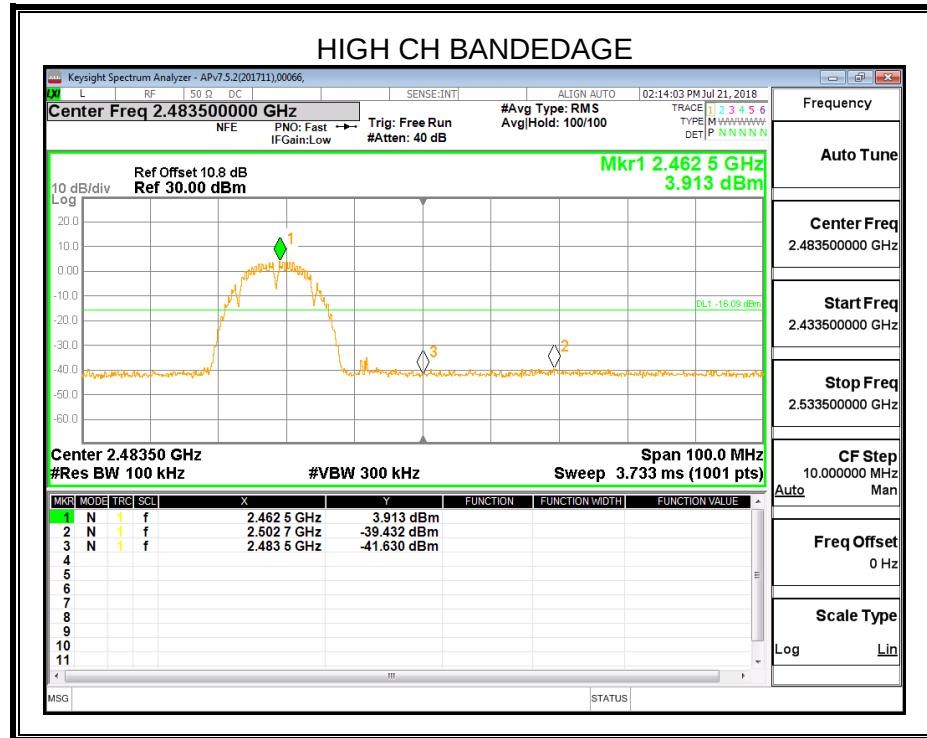


RESULTS

6.5.1. 802.11b MODE

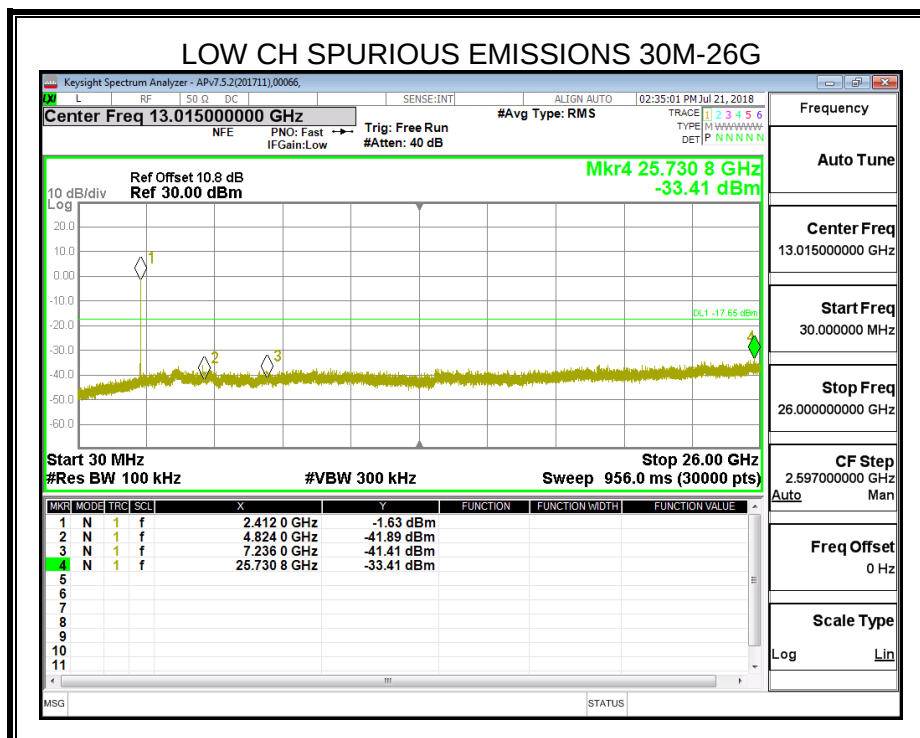
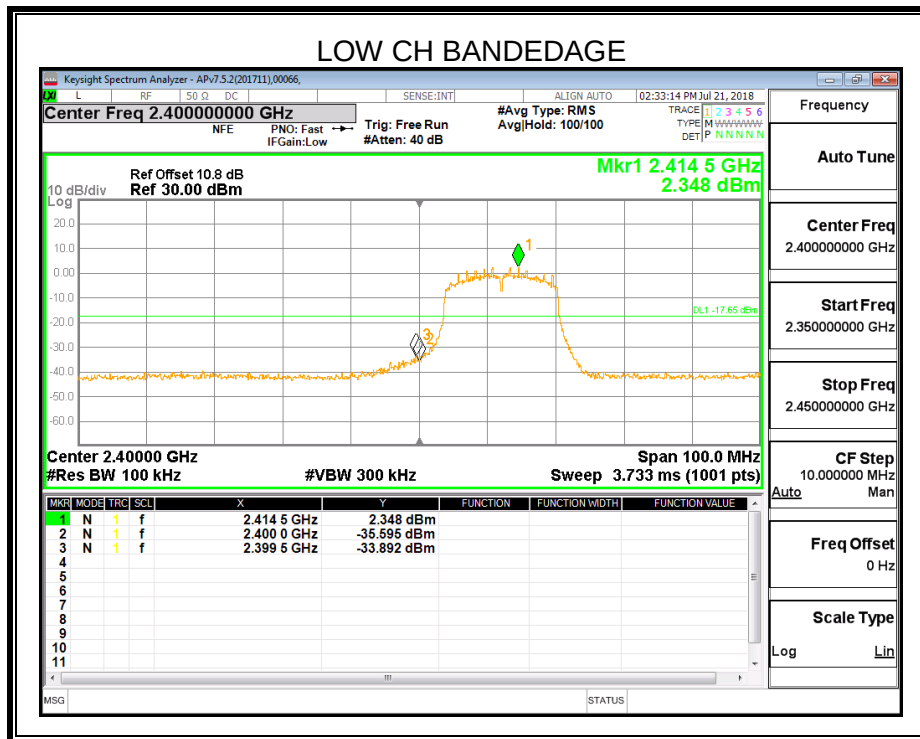


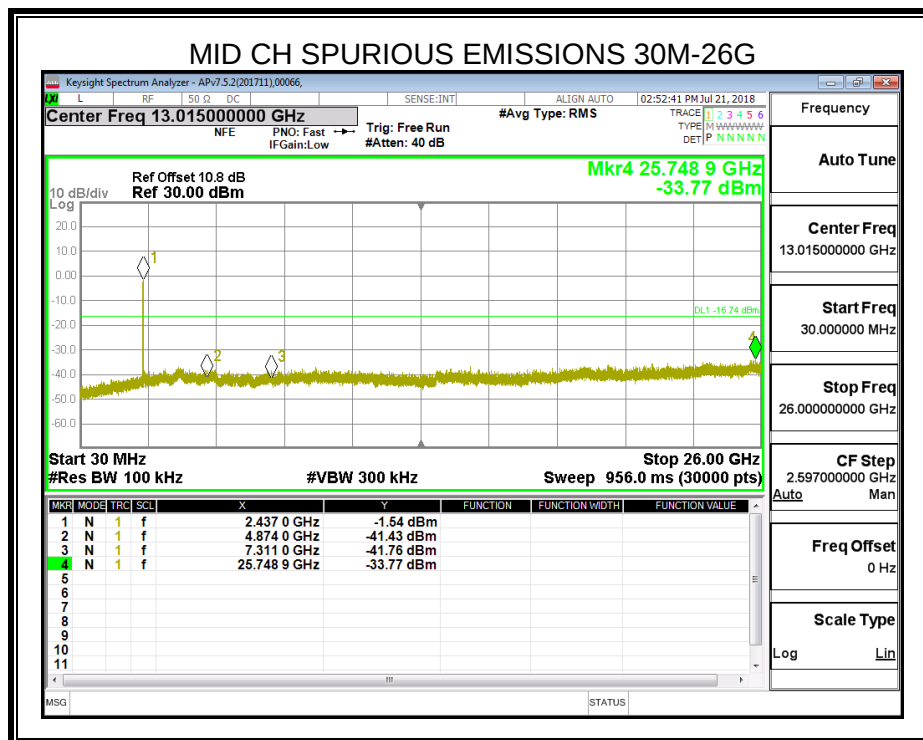
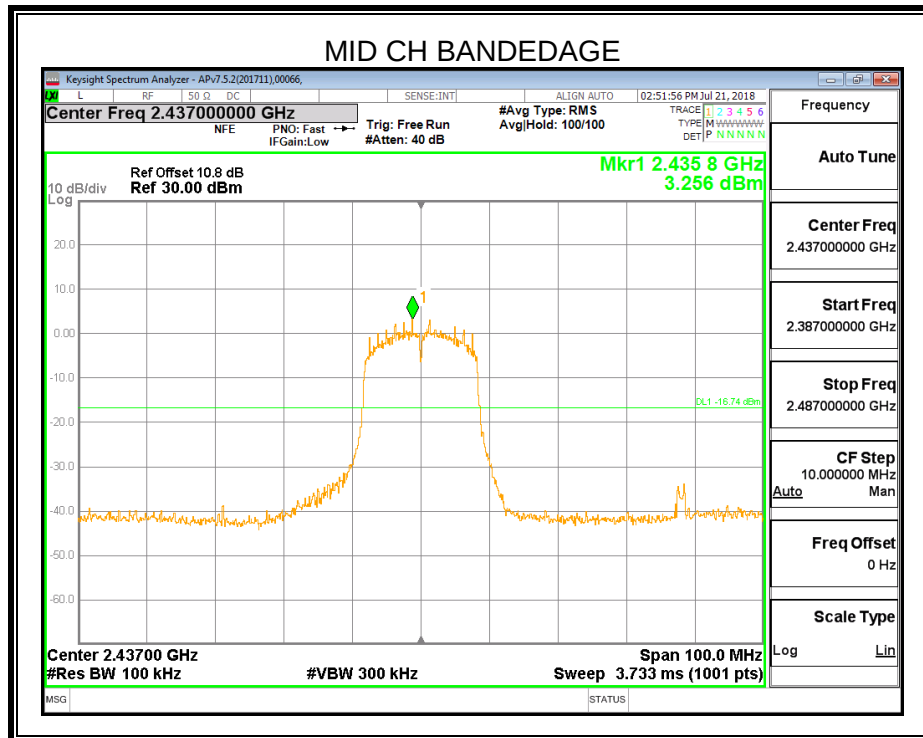


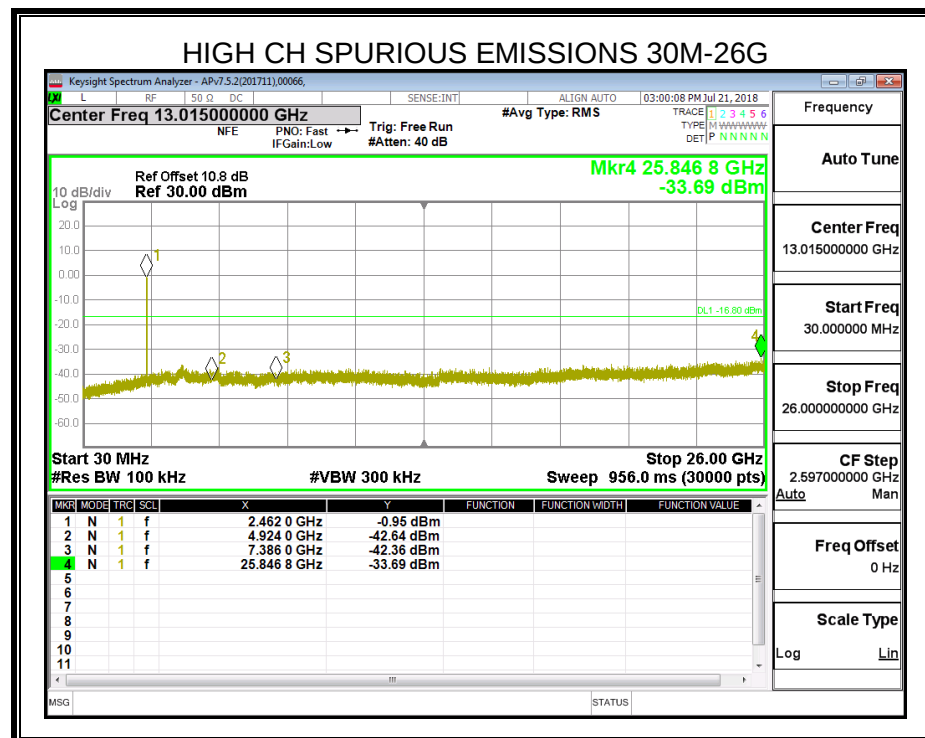
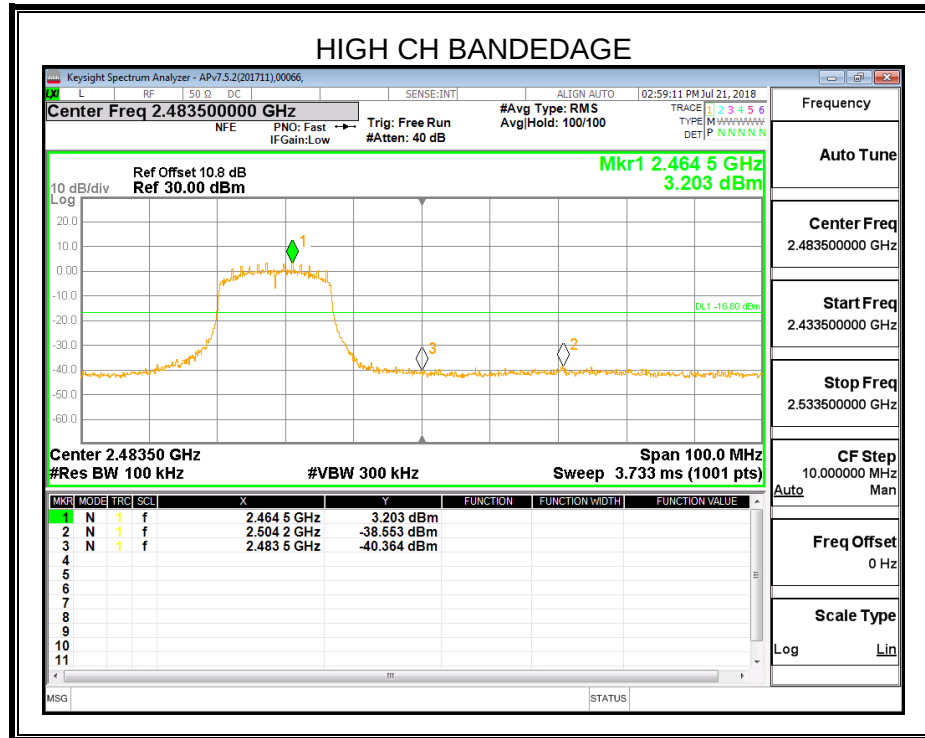




6.5.2. 802.11g MODE

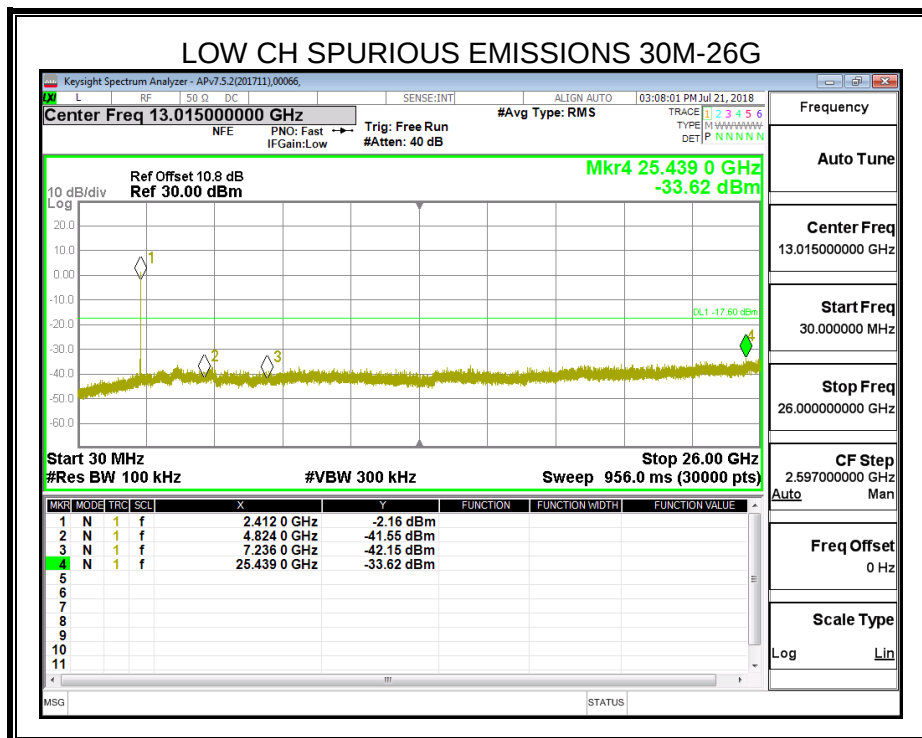
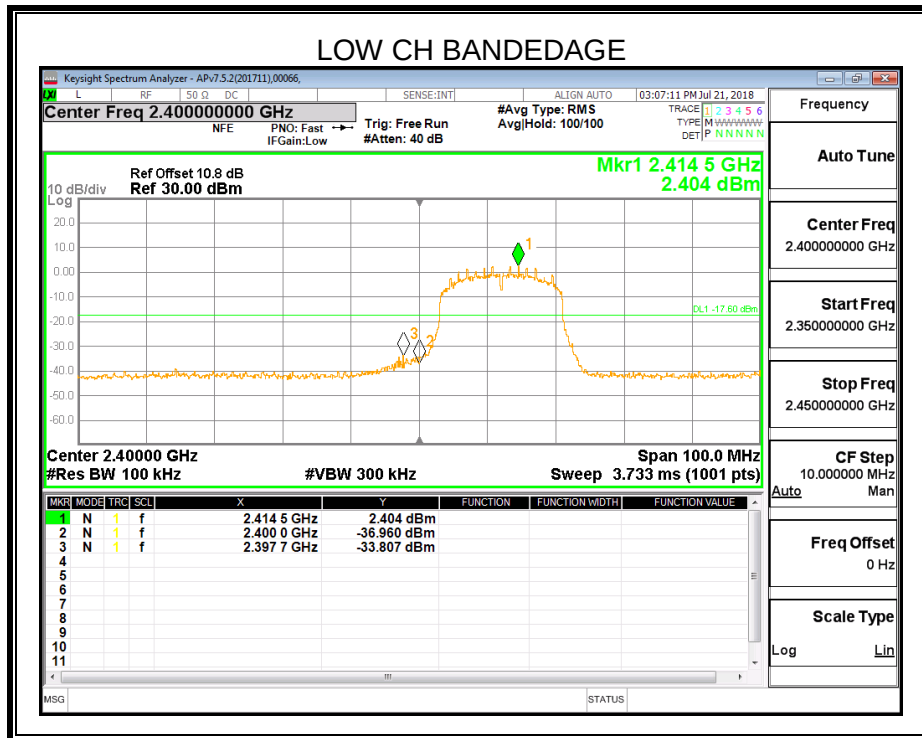


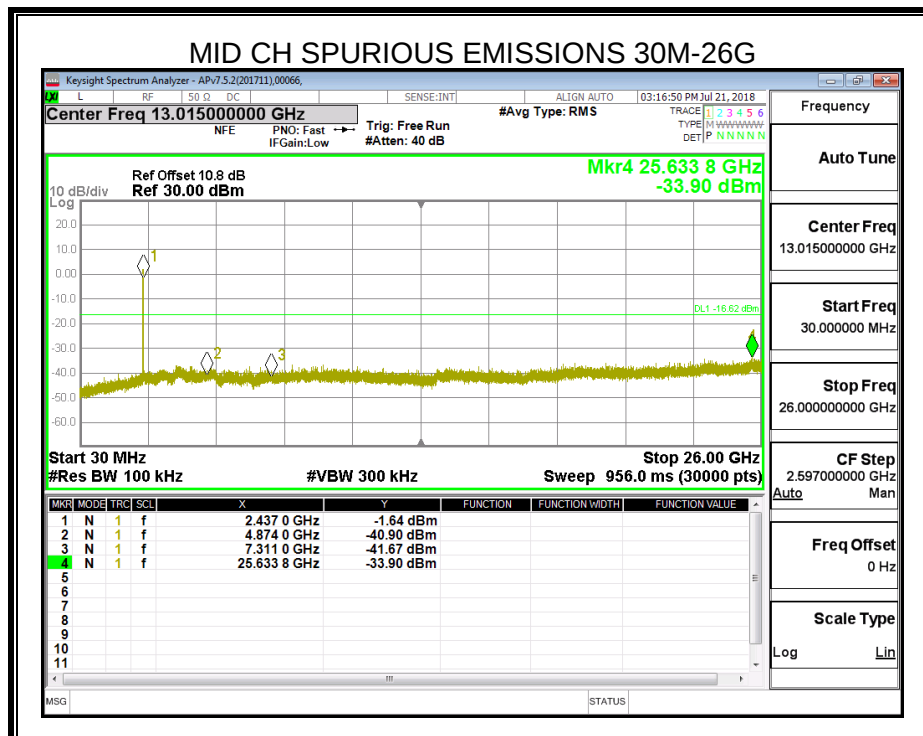
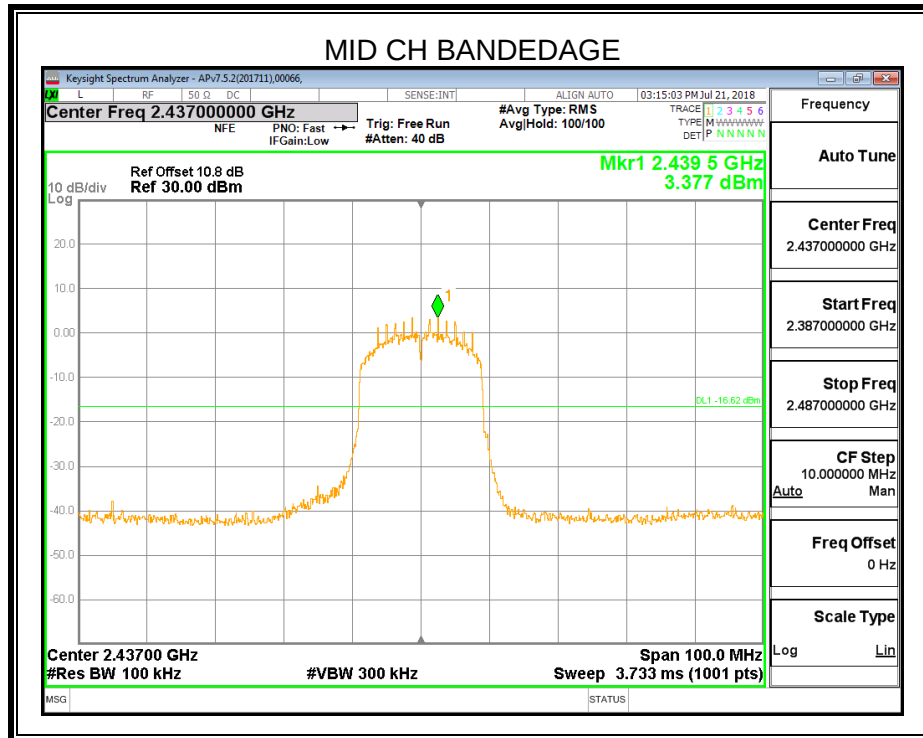


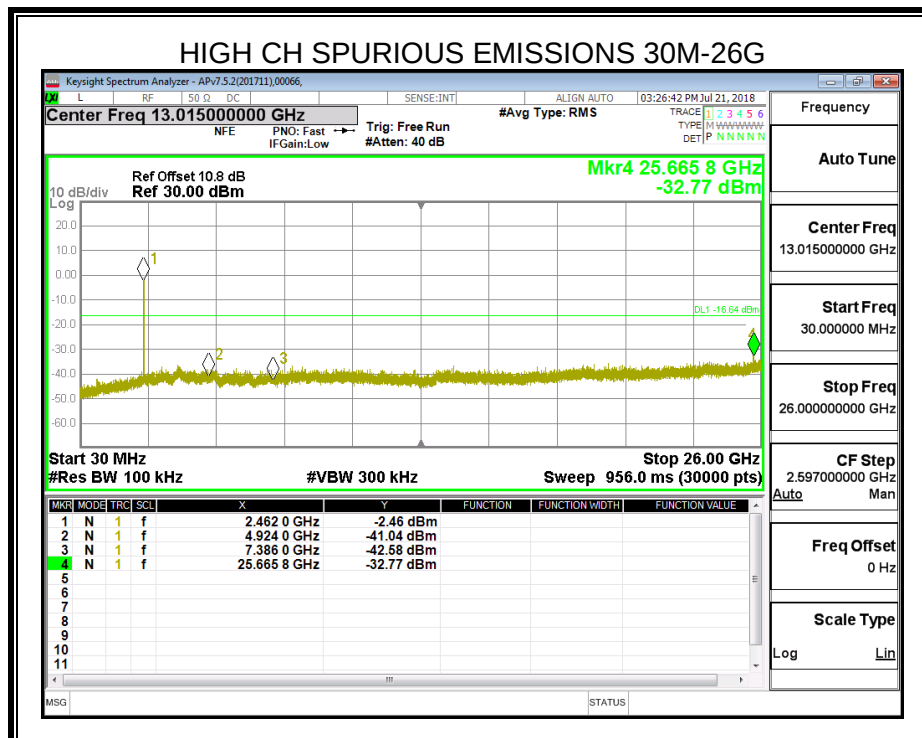
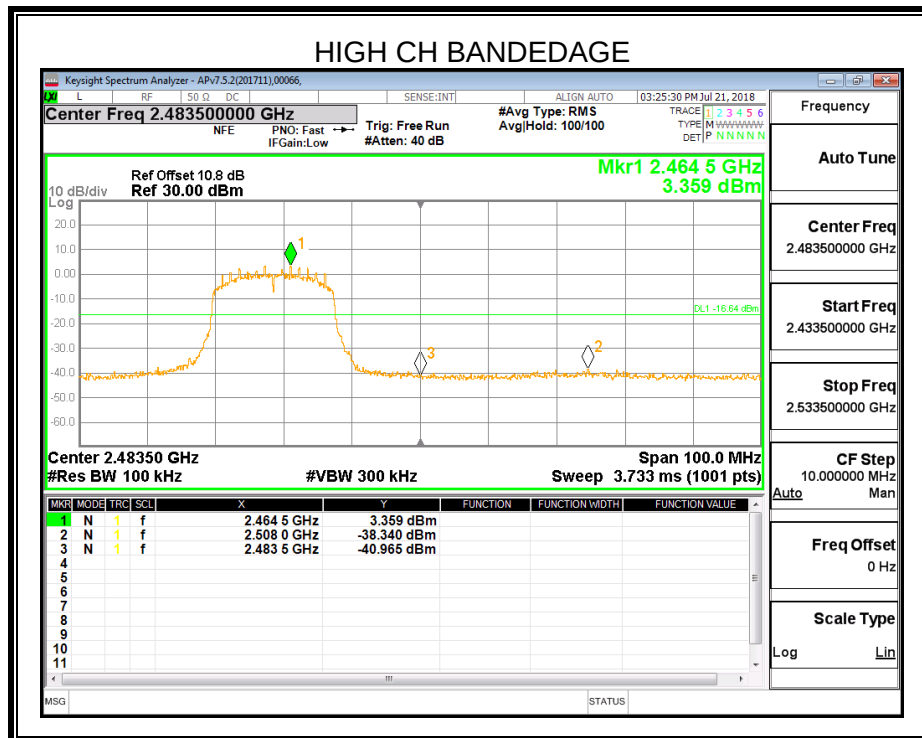




6.5.3. 802.11n20 MODE

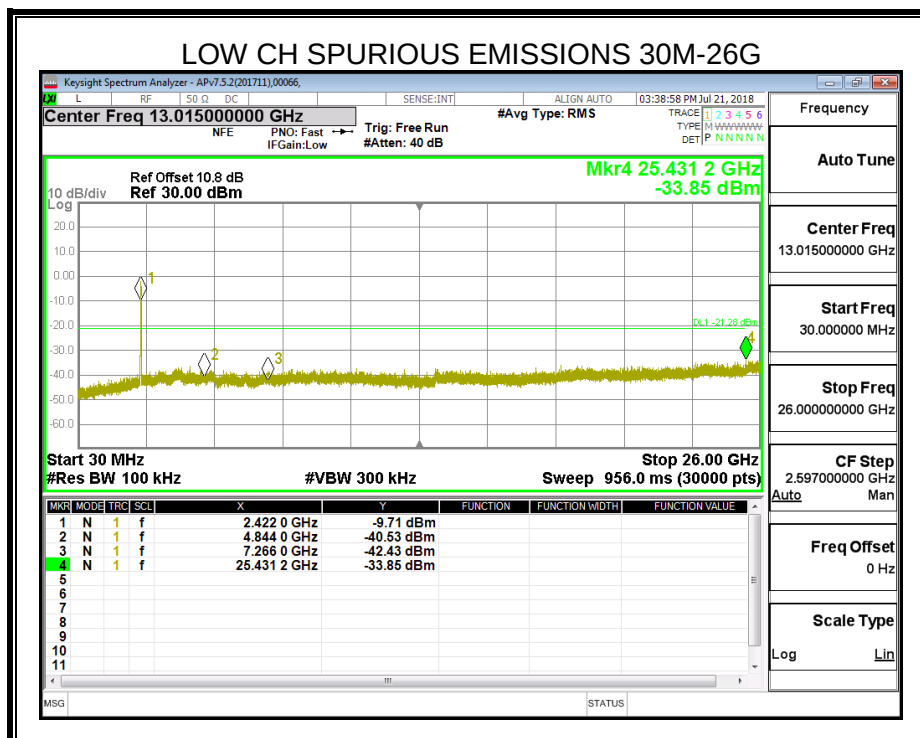
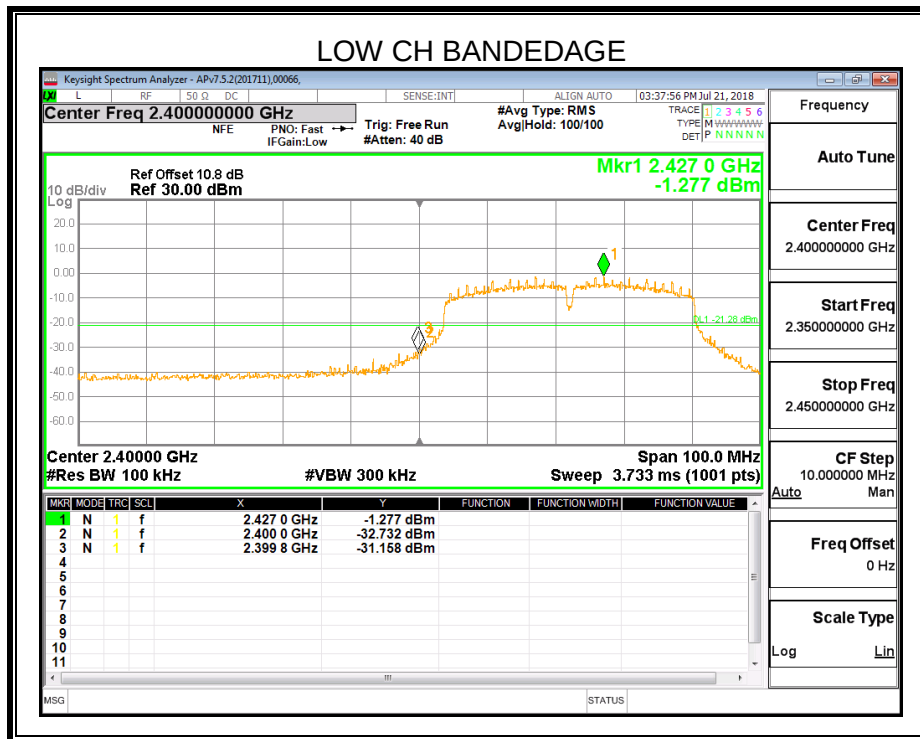


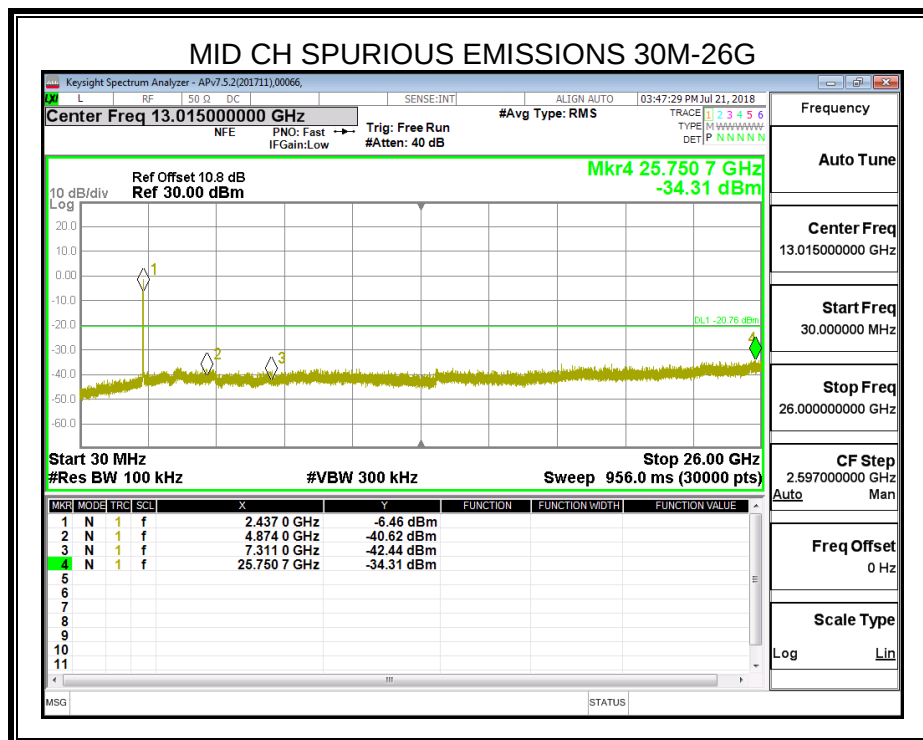
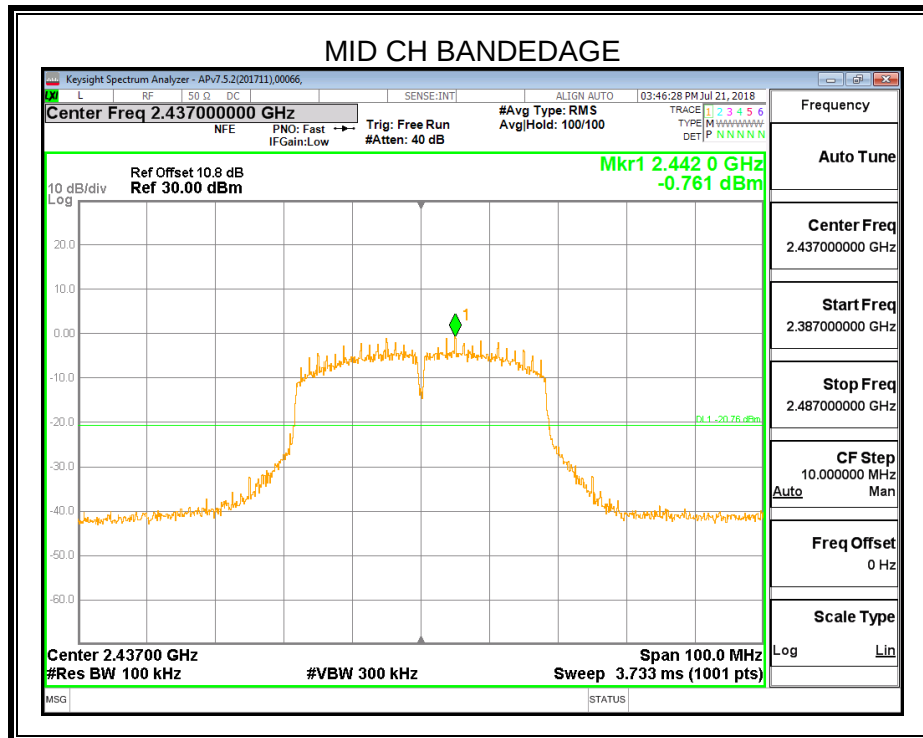


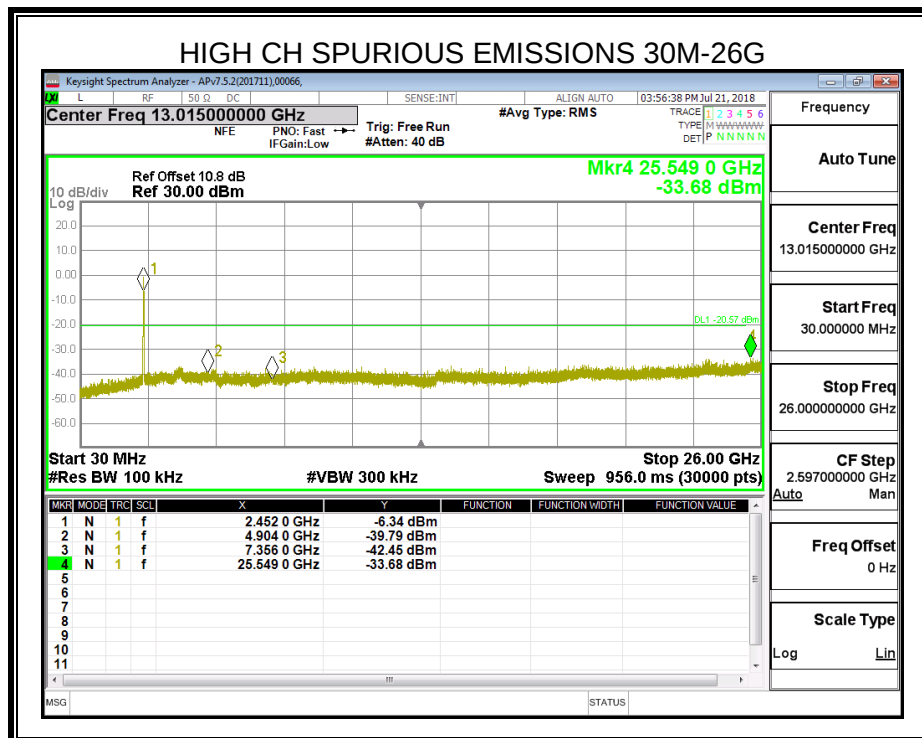
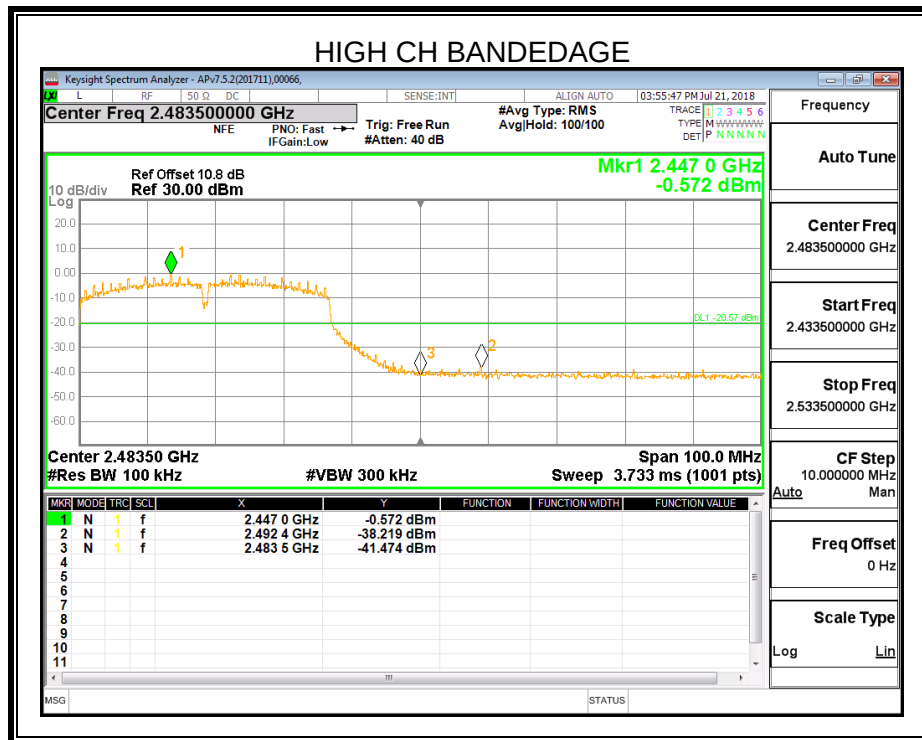




6.5.4. 802.11n40 MODE









7. RADIATED TEST RESULTS

LIMITS

Please refer to FCC §15.205 and §15.209

Radiation Disturbance Test Limit for FCC (Class B)(9KHz-1GHz)

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
960~1000	500	3

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.



Radiation Disturbance Test Limit for FCC (Above 1G)

Frequency (MHz)	dB(uV/m) (at 3 meters)	
	Peak	Average
Above 1000	74	54

Restricted bands of operation

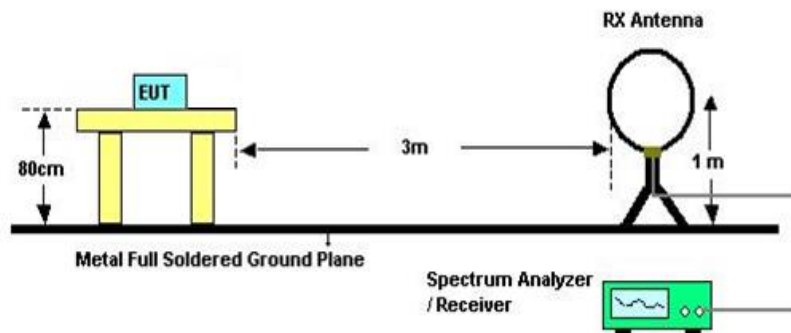
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	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	(²)
13.36-13.41			

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

²Above 38.6c

TEST SETUP AND PROCEDURE

Below 30MHz

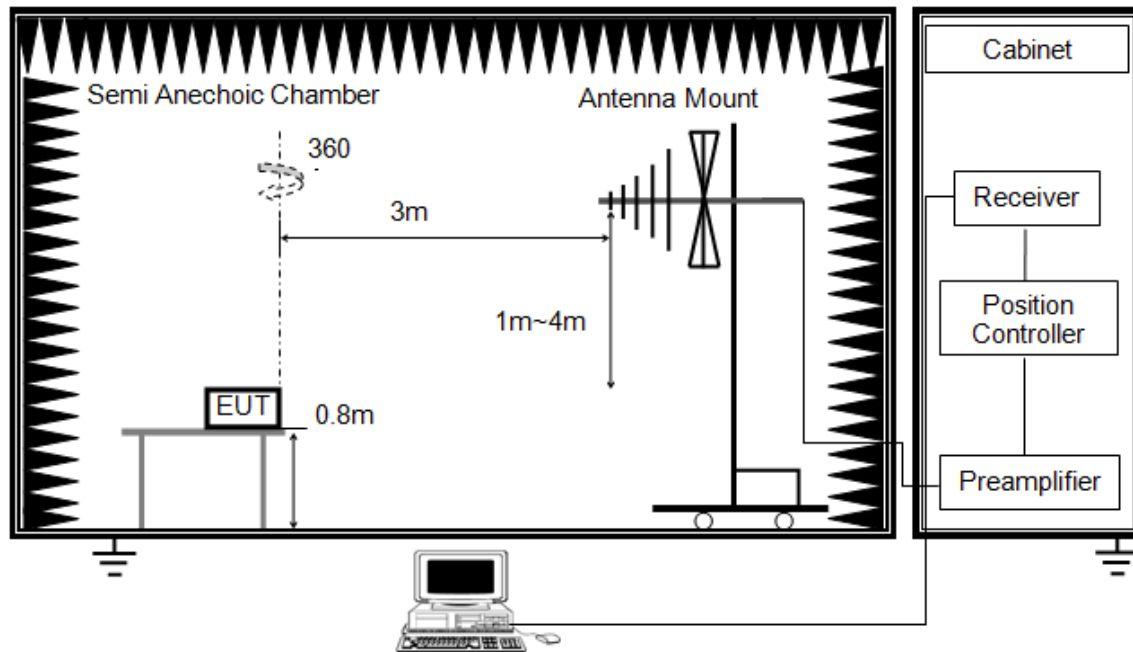


The setting of the spectrum analyser

RBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013
2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
6. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)
7. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

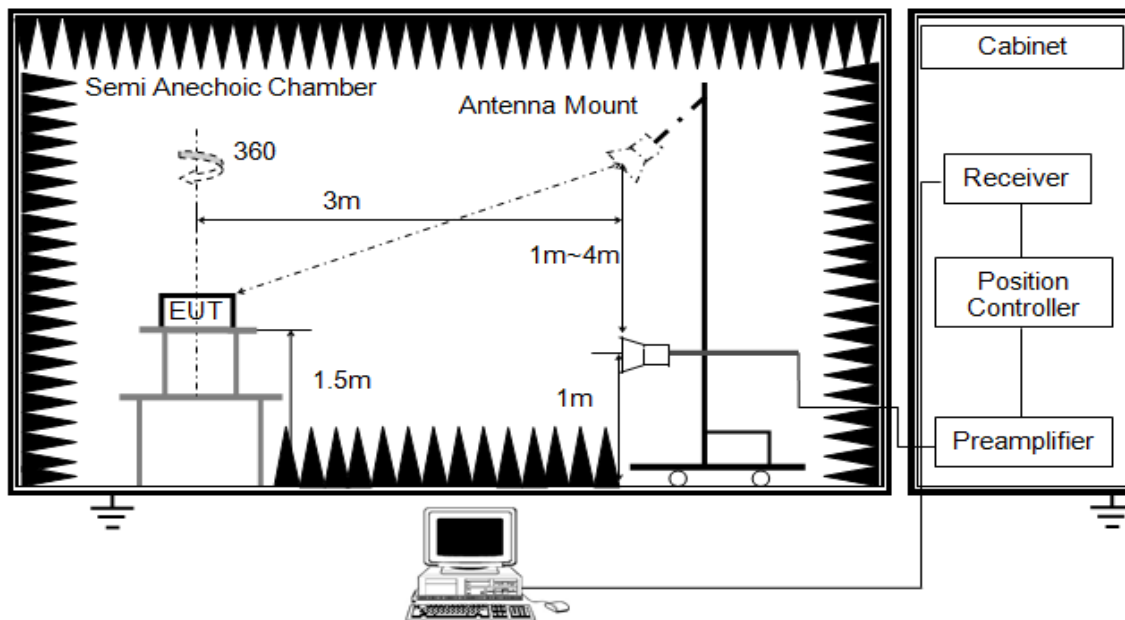
Below 1G



The setting of the spectrum analyser

RBW	120K
VBW	300K
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
6. For the actual test configuration, please refer to the related Item in this test report (Photographs of the Test Configuration)

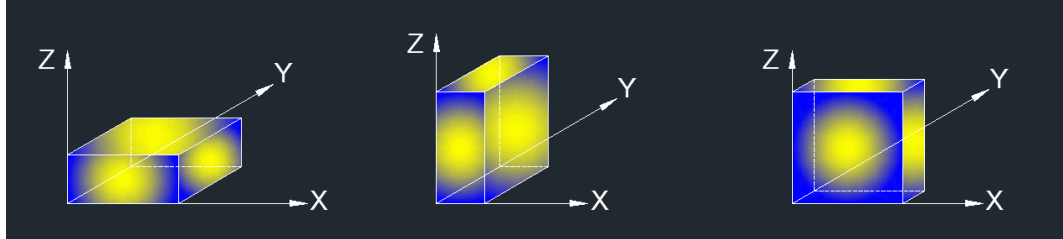


The setting of the spectrum analyser

RBW	1M
VBW	PEAK: 3M AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 1.5m above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.
6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector. For the Duty Cycle please refer to clause 6.1.ON TIME AND DUTY CYCLE.
7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

X axis, Y axis, Z axis positions:



Note1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report

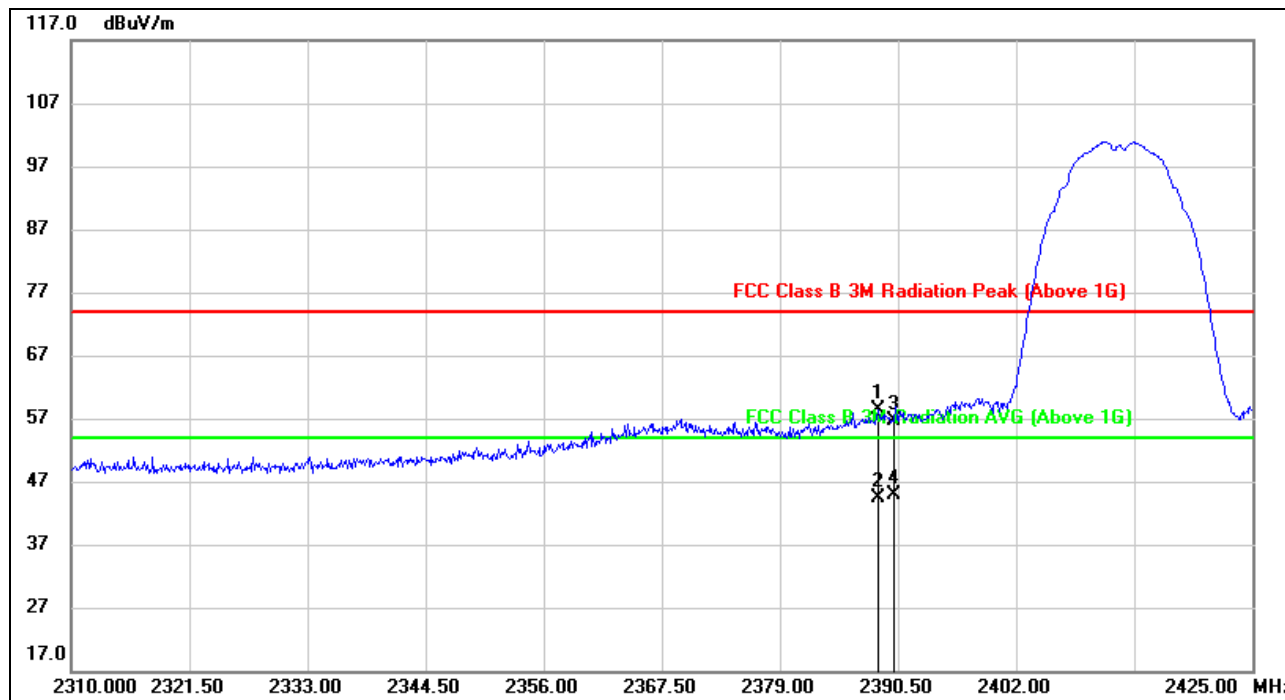
Note 2: All the EUT's emissions had been evaluated for simultaneous transmission with the other WIFI 2.4GHz and ZigBee transmitter and there were no any additional or worse emissions found.



7.1. RESTRICTED BANDEDGE

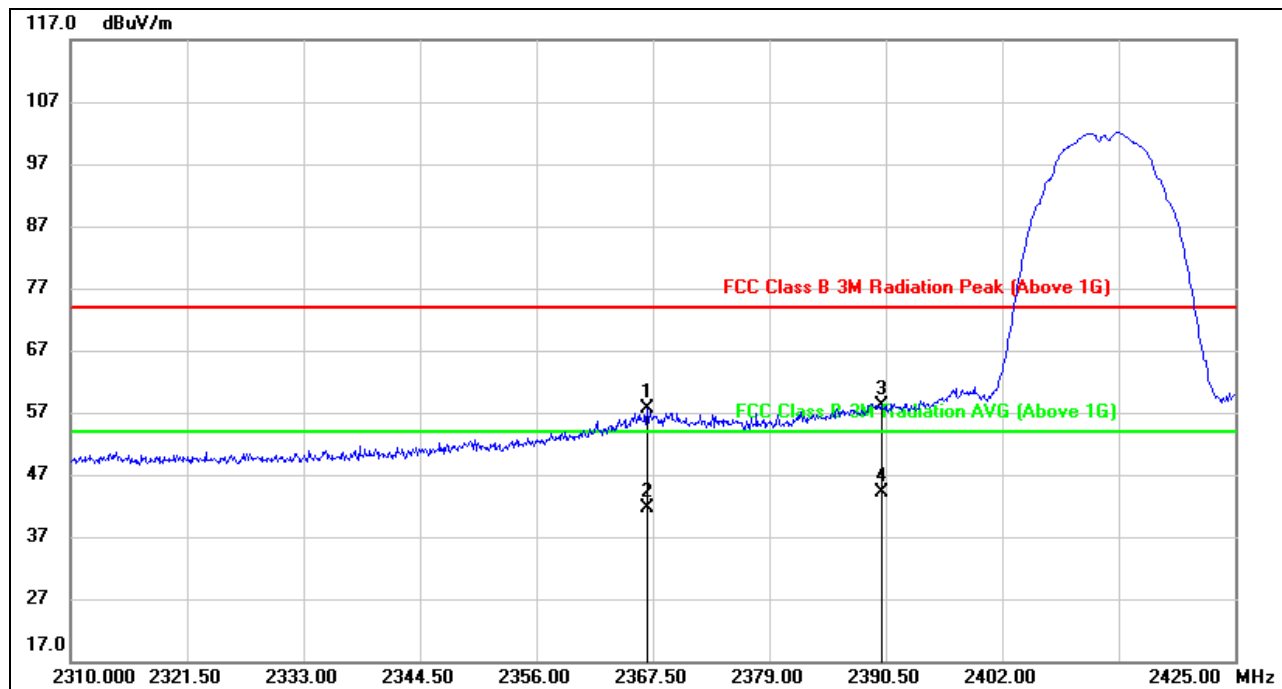
7.1.1. 802.11b MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



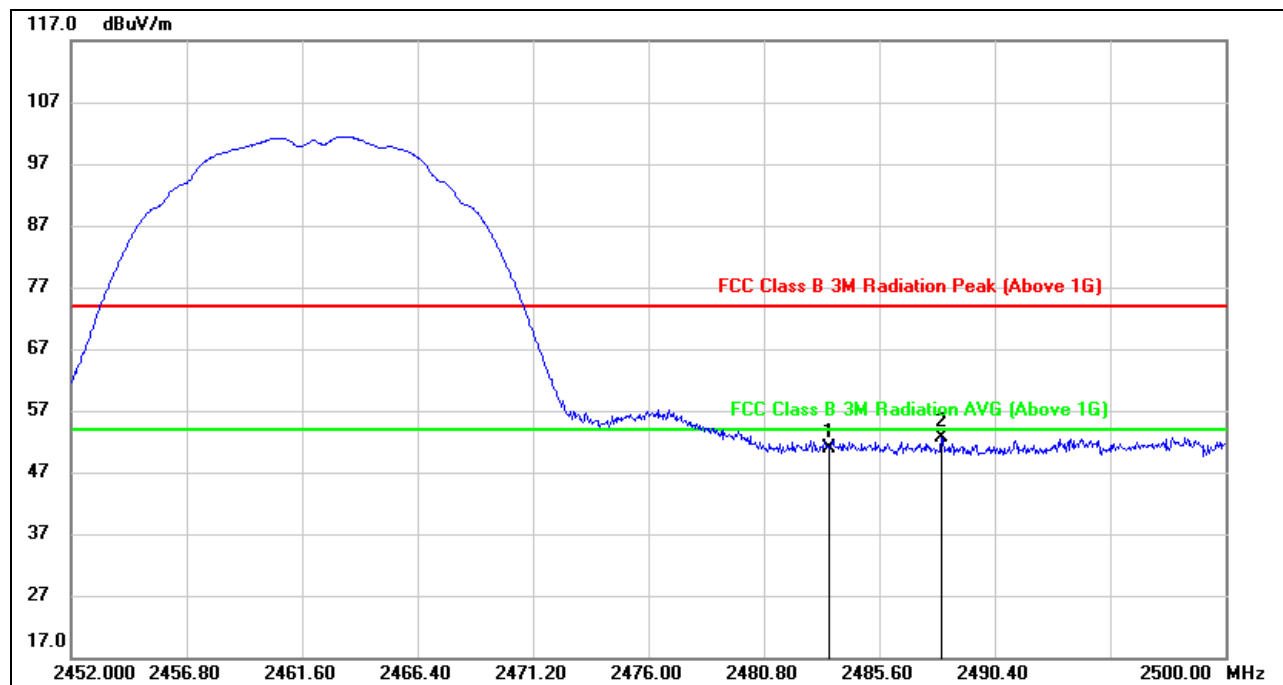
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.545	25.27	33.15	58.42	74.00	-15.58	peak
2	2388.545	11.29	33.15	44.44	54.00	-9.56	AVG
3	2390.000	23.53	33.14	56.67	74.00	-17.33	peak
4	2390.000	11.74	33.14	44.88	54.00	-9.12	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$ where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2366.925	24.24	33.40	57.64	74.00	-16.36	peak
2	2366.925	8.25	33.40	41.65	54.00	-12.35	AVG
3	2390.000	24.82	33.24	58.06	74.00	-15.94	peak
4	2390.000	10.86	33.24	44.10	54.00	-9.90	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$ where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

**RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)**

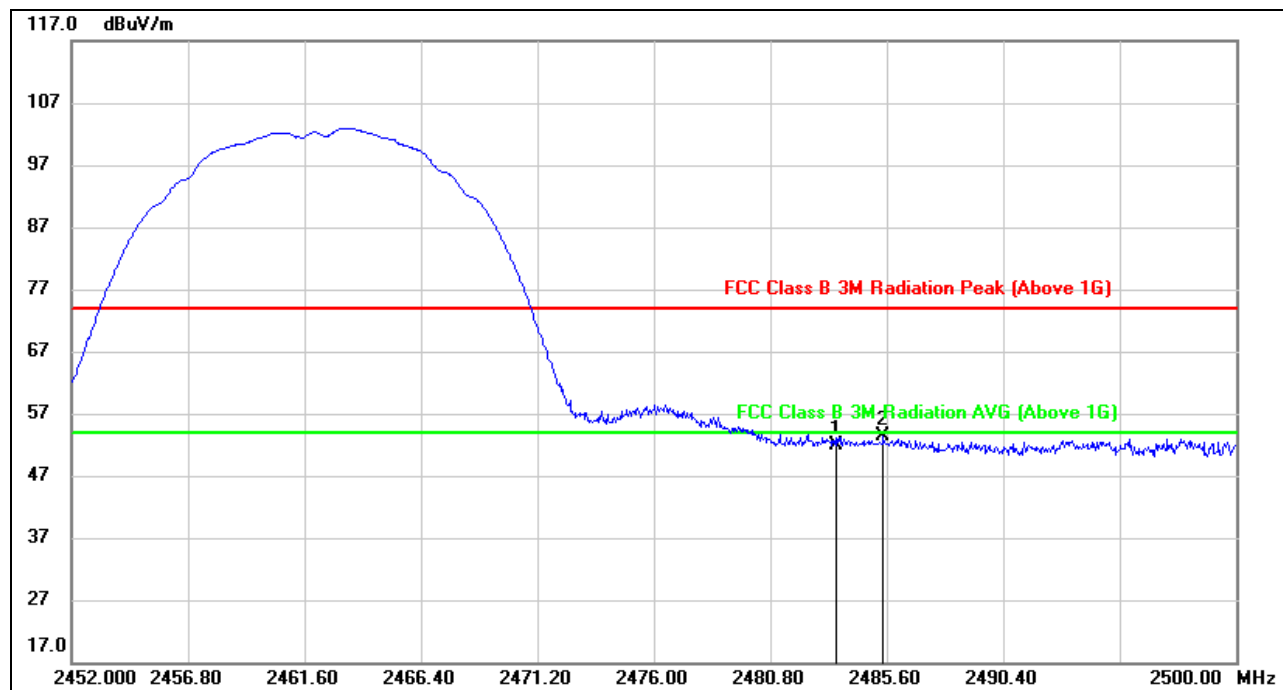
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.19	32.78	50.97	74.00	-23.03	peak
2	2488.192	19.82	32.78	52.60	74.00	-21.40	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

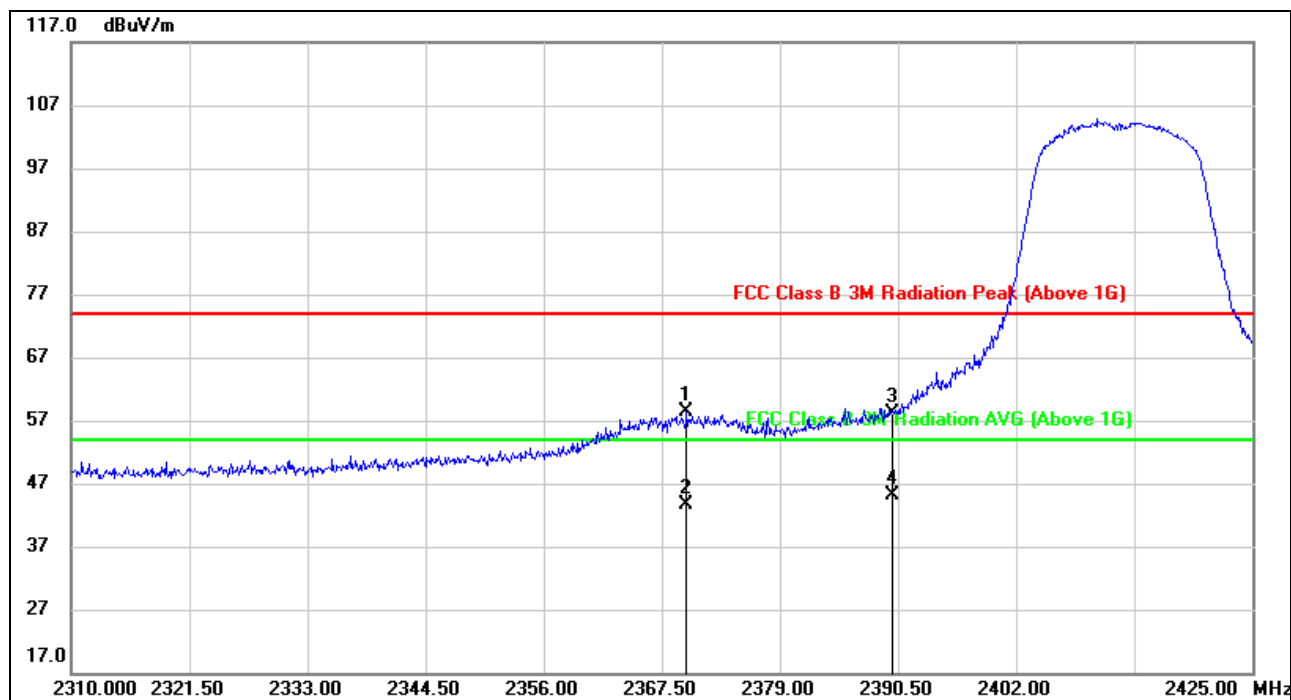
3. Peak: Peak detector.

4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

**RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)**

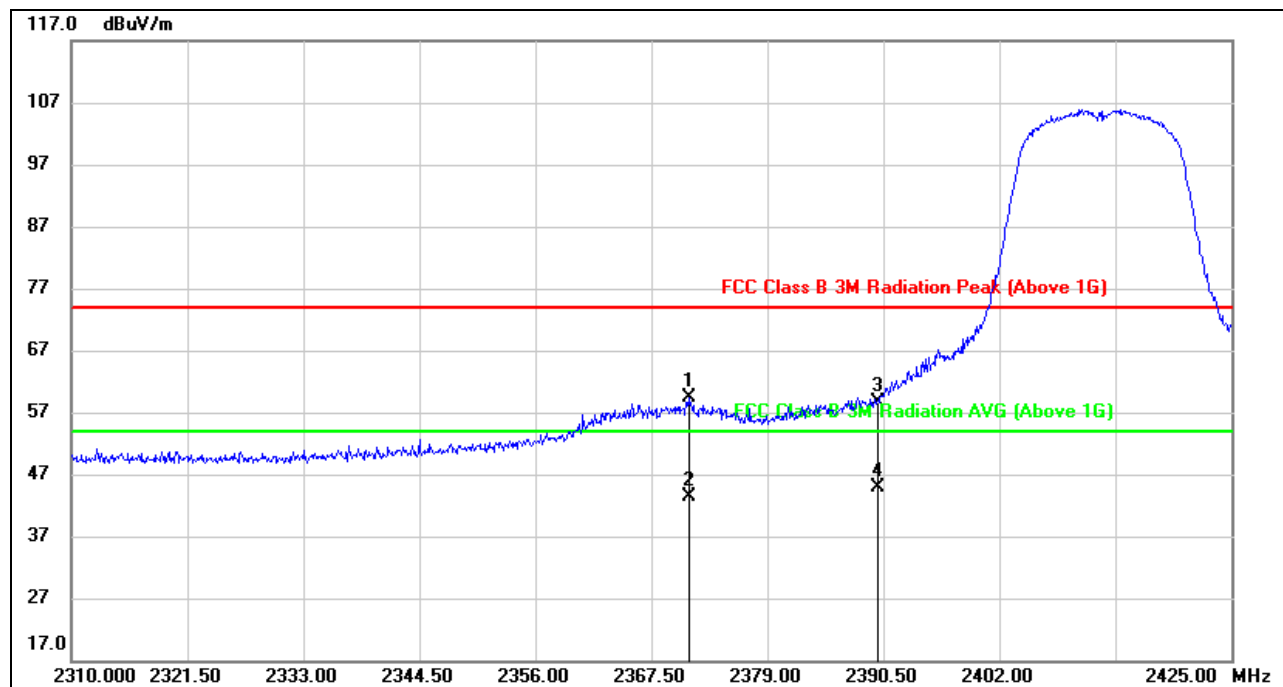
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.02	32.88	51.90	74.00	-22.10	peak
2	2485.456	20.55	32.89	53.44	74.00	-20.56	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

**7.1.2. 802.11g MODE****RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2369.915	25.06	33.29	58.35	74.00	-15.65	peak
2	2369.915	10.26	33.29	43.55	54.00	-10.45	AVG
3	2390.000	24.93	33.14	58.07	74.00	-15.93	peak
4	2390.000	11.97	33.14	45.11	54.00	-8.89	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

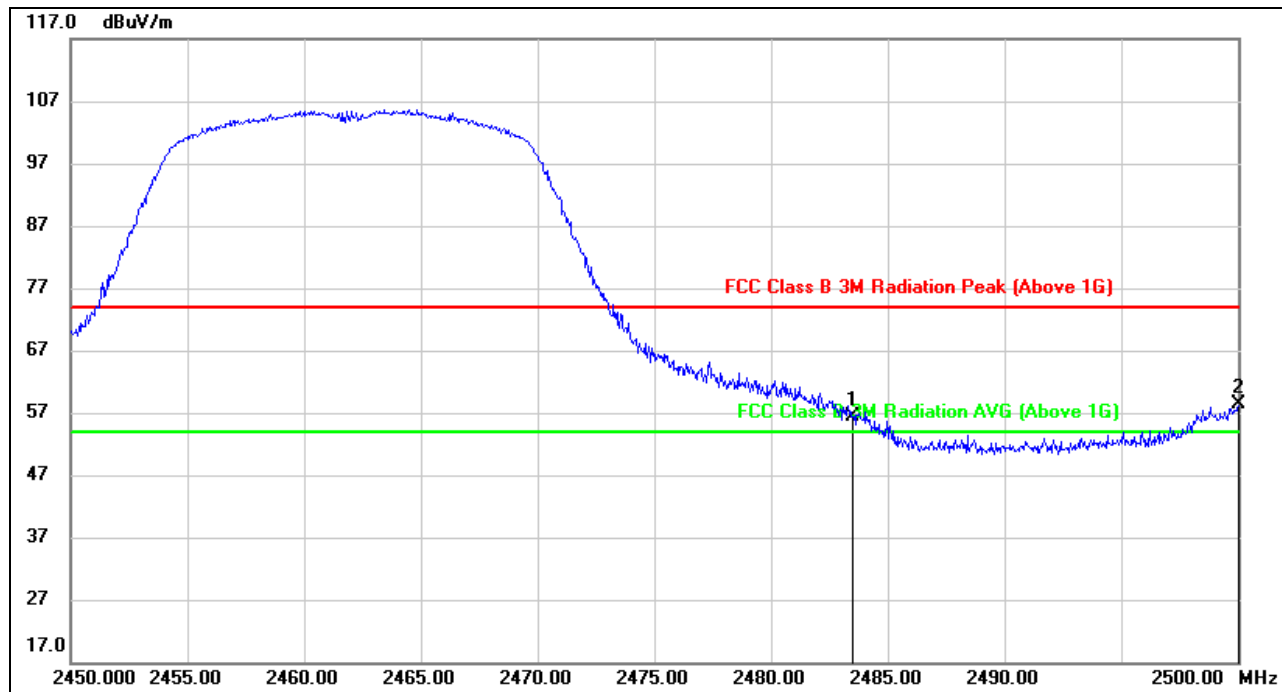
**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2371.180	25.92	33.38	59.30	74.00	-14.70	peak
2	2371.180	9.90	33.38	43.28	54.00	-10.72	AVG
3	2390.000	25.35	33.24	58.59	74.00	-15.41	peak
4	2390.000	11.71	33.24	44.95	54.00	-9.05	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



PEAK

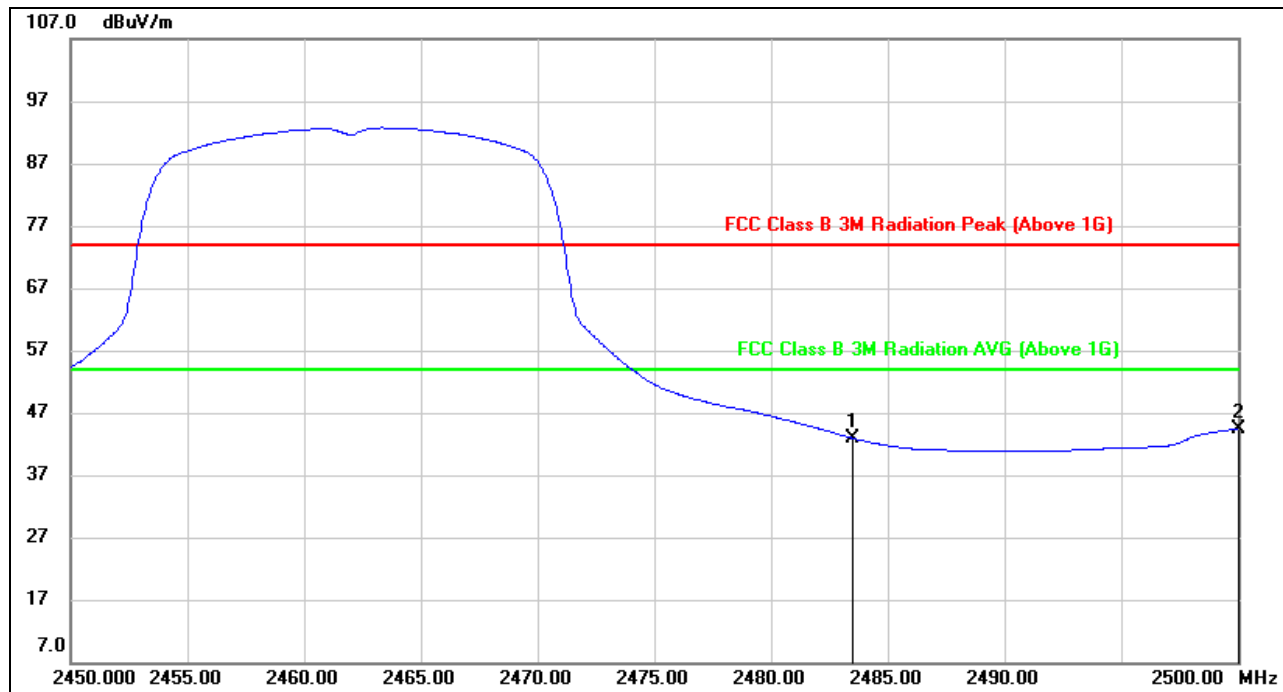
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	23.69	32.78	56.47	74.00	-17.53	peak
2	2500.000	25.67	32.77	58.44	74.00	-15.56	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



AVG

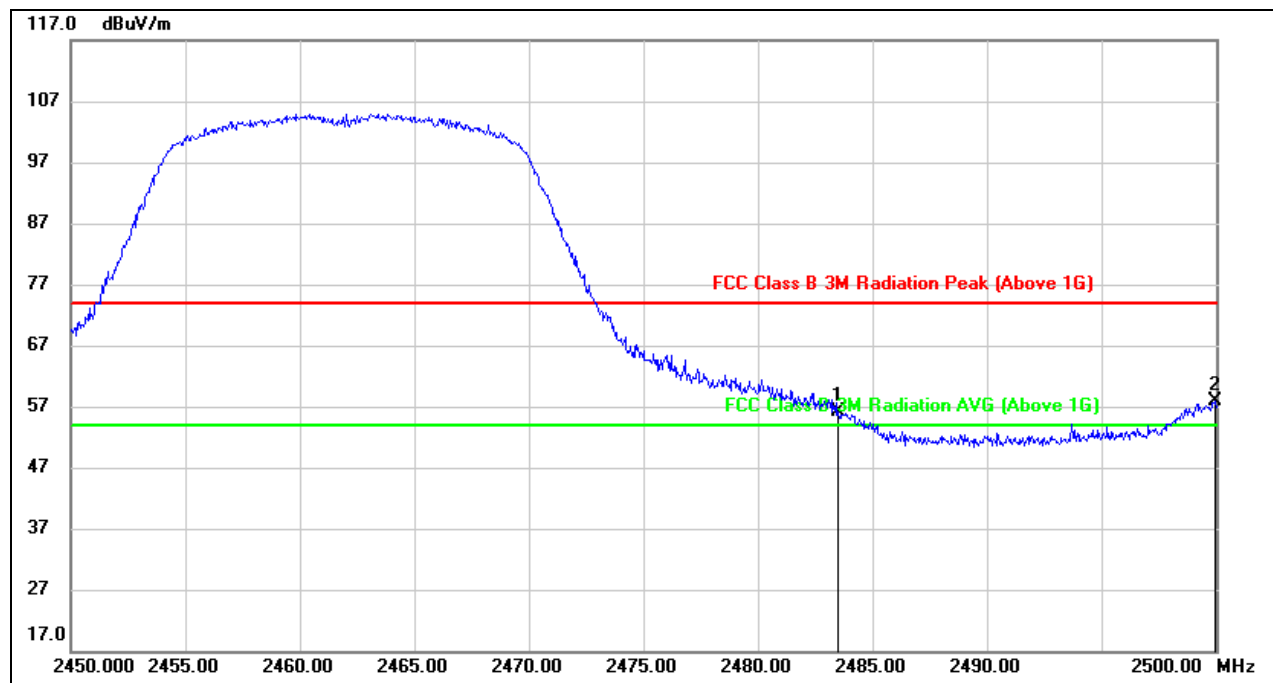
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	10.17	32.78	42.95	54.00	-11.05	AVG
2	2500.000	11.69	32.77	44.46	54.00	-9.54	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: $VBW=1/Ton$ where: ton is transmit duration.
4. For transmit duration, please refer to clause 6.1.
5. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



PEAK

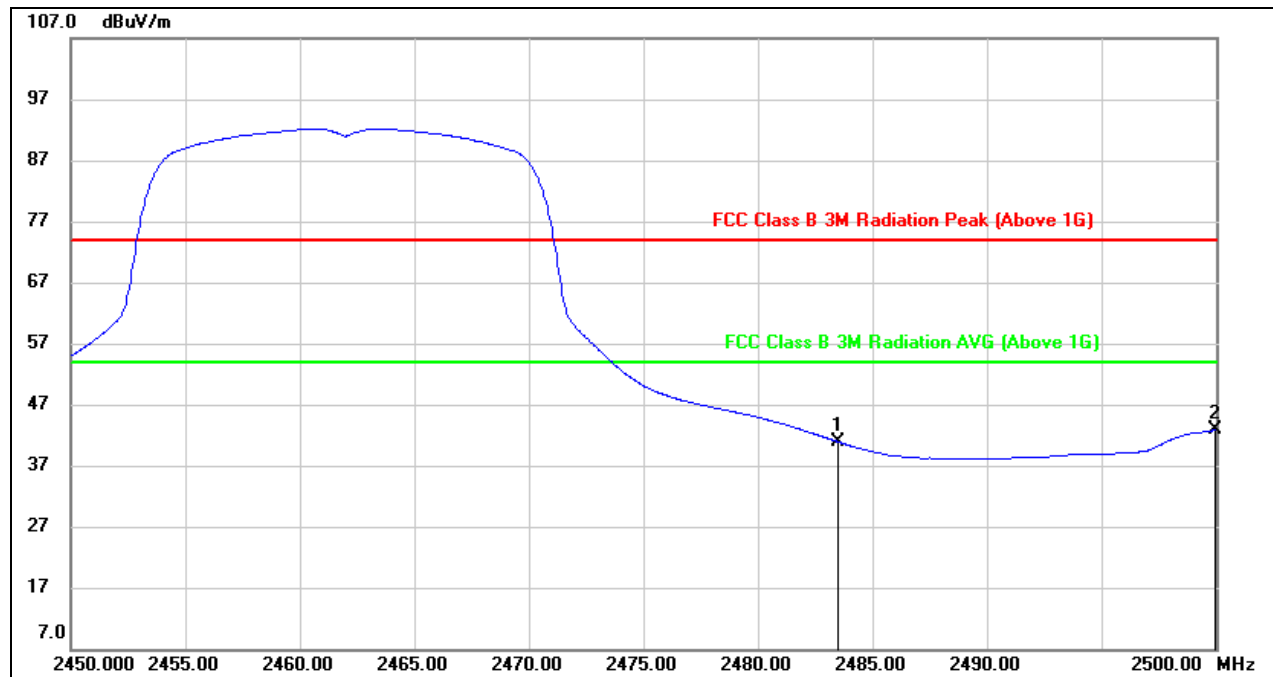
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	23.21	32.88	56.09	74.00	-17.91	peak
2	2499.950	24.97	32.87	57.84	74.00	-16.16	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



AVG

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

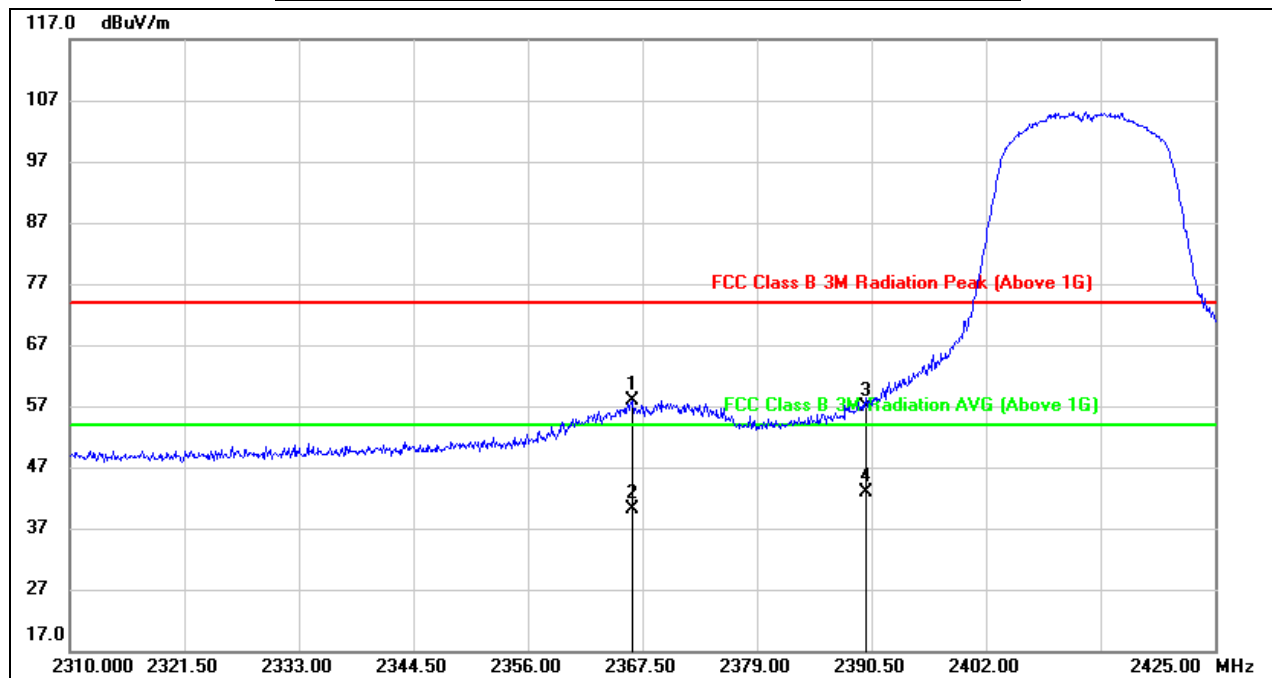
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	7.99	32.88	40.87	54.00	-13.13	AVG
2	2499.950	9.99	32.87	42.86	54.00	-11.14	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: $VBW=1/Ton$ where: ton is transmit duration.
4. For transmit duration, please refer to clause 6.1.
5. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



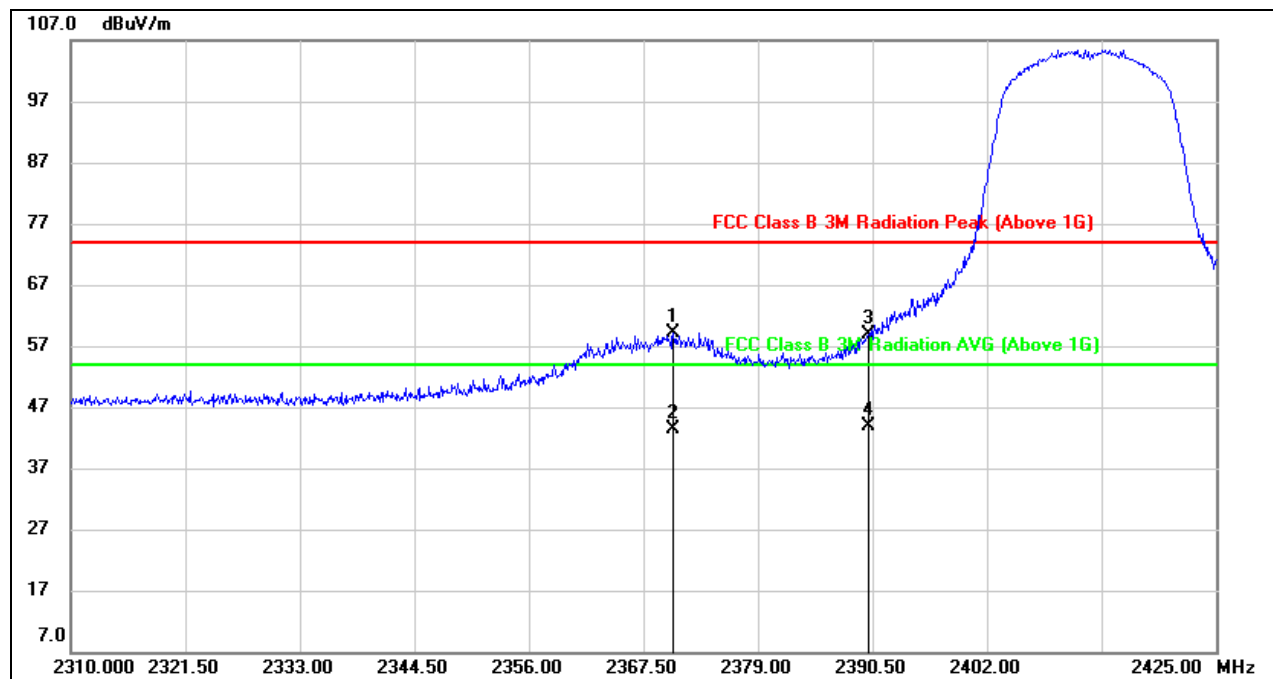
7.1.3. 802.11n20 MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



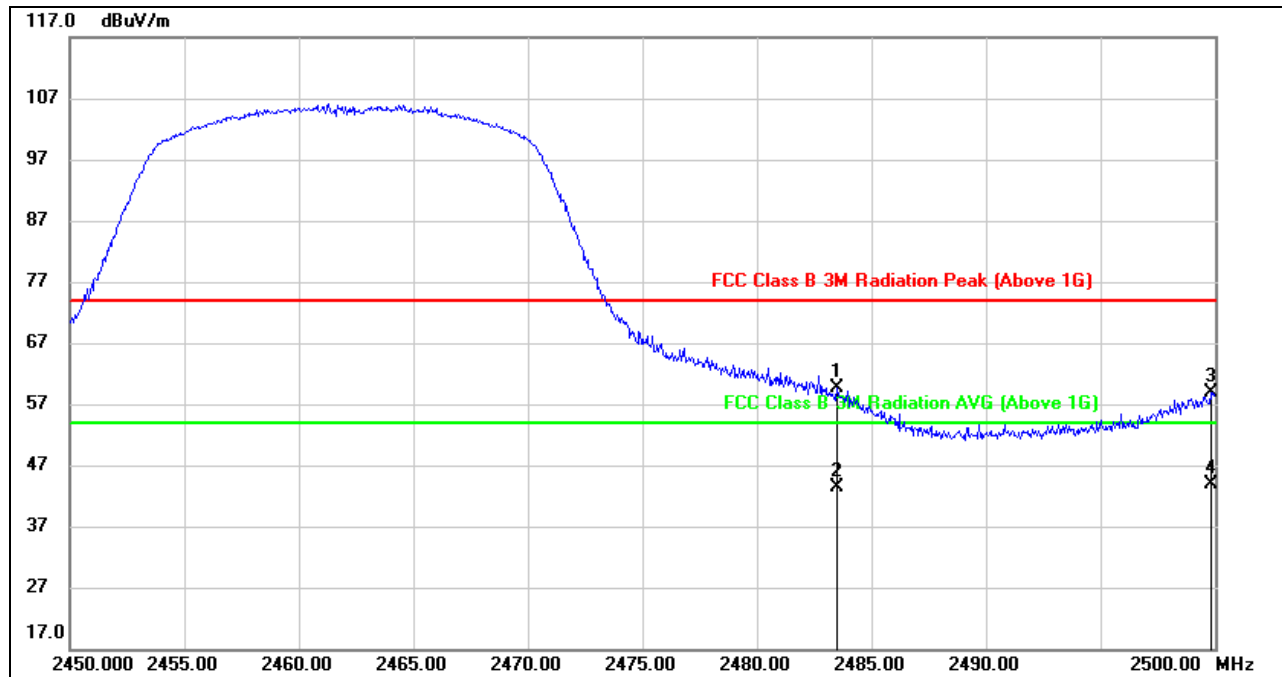
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2366.465	24.56	33.31	57.87	74.00	-16.13	peak
2	2366.465	6.74	33.31	40.05	54.00	-13.95	AVG
3	2390.000	23.84	33.14	56.98	74.00	-17.02	peak
4	2390.000	9.83	33.14	42.97	54.00	-11.03	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$ where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2370.490	25.83	33.39	59.22	74.00	-14.78	peak
2	2370.490	9.91	33.39	43.30	54.00	-10.70	AVG
3	2390.000	25.59	33.24	58.83	74.00	-15.17	peak
4	2390.000	10.72	33.24	43.96	54.00	-10.04	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

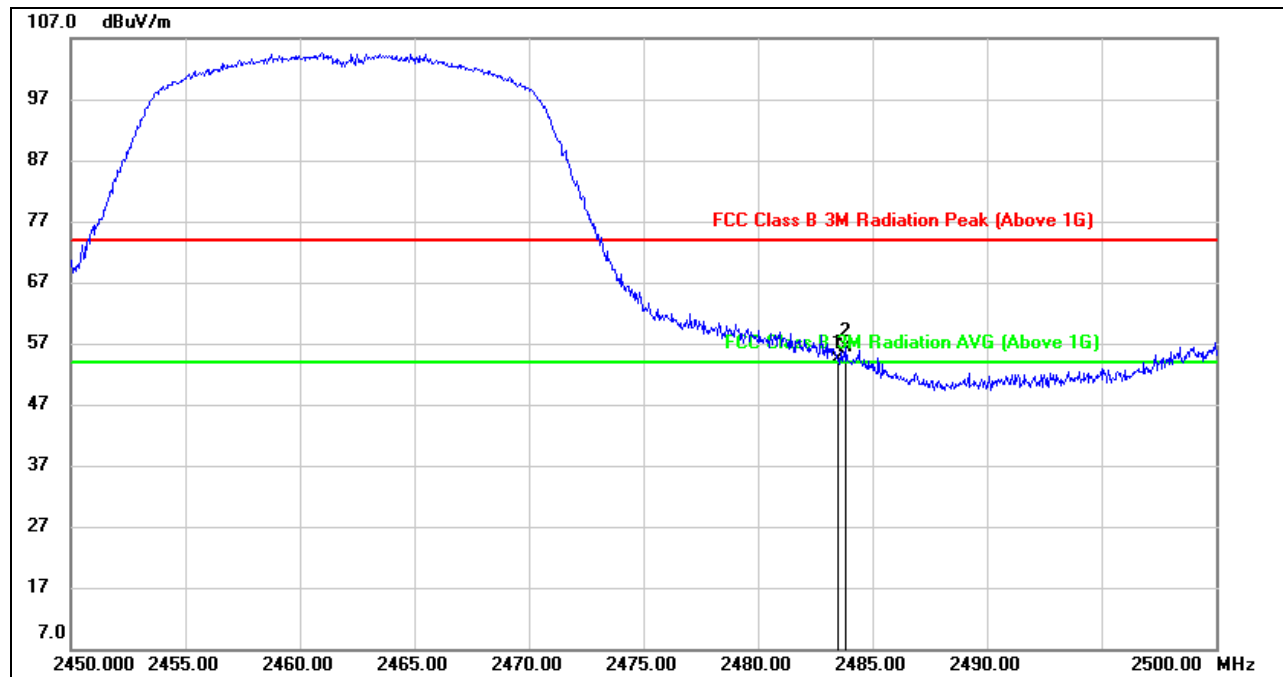
**RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	26.90	32.78	59.68	74.00	-14.32	peak
2	2483.500	10.52	32.78	43.30	54.00	-10.70	AVG
3	2499.800	26.21	32.77	58.98	74.00	-15.02	peak
4	2499.800	11.21	32.77	43.98	54.00	-10.02	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



PEAK

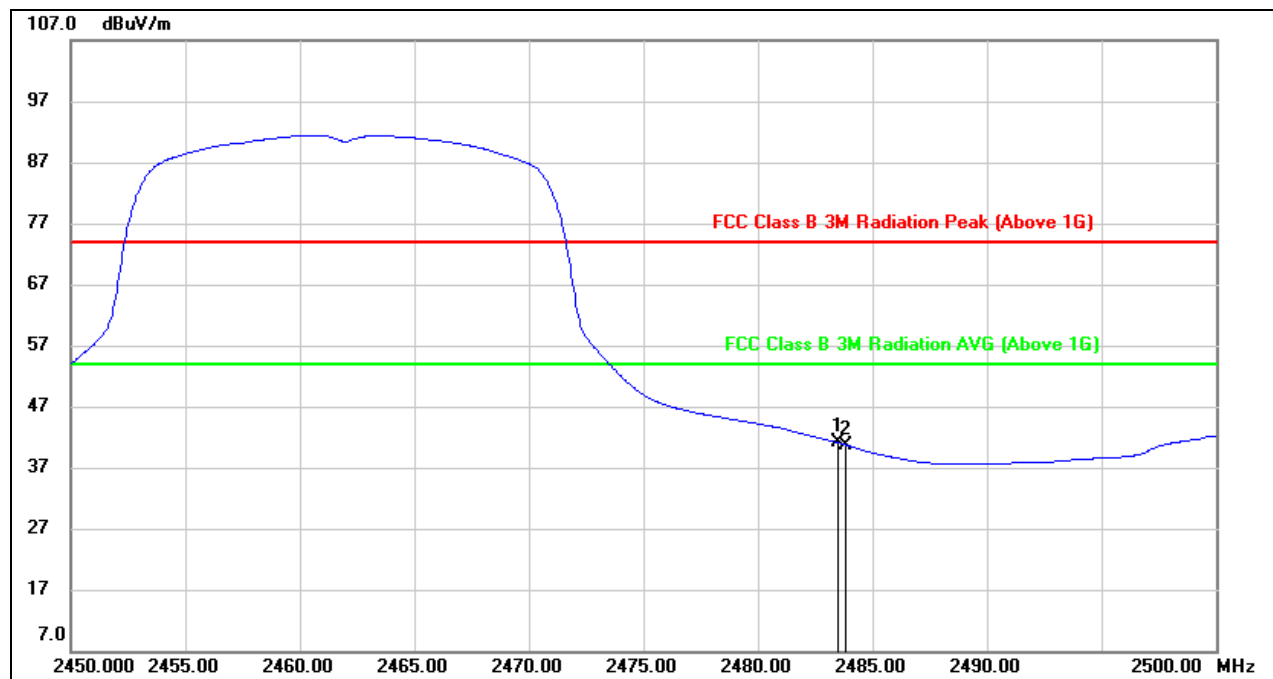
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	21.51	32.88	54.39	74.00	-19.61	peak
2	2483.850	23.61	32.88	56.49	74.00	-17.51	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



AVG

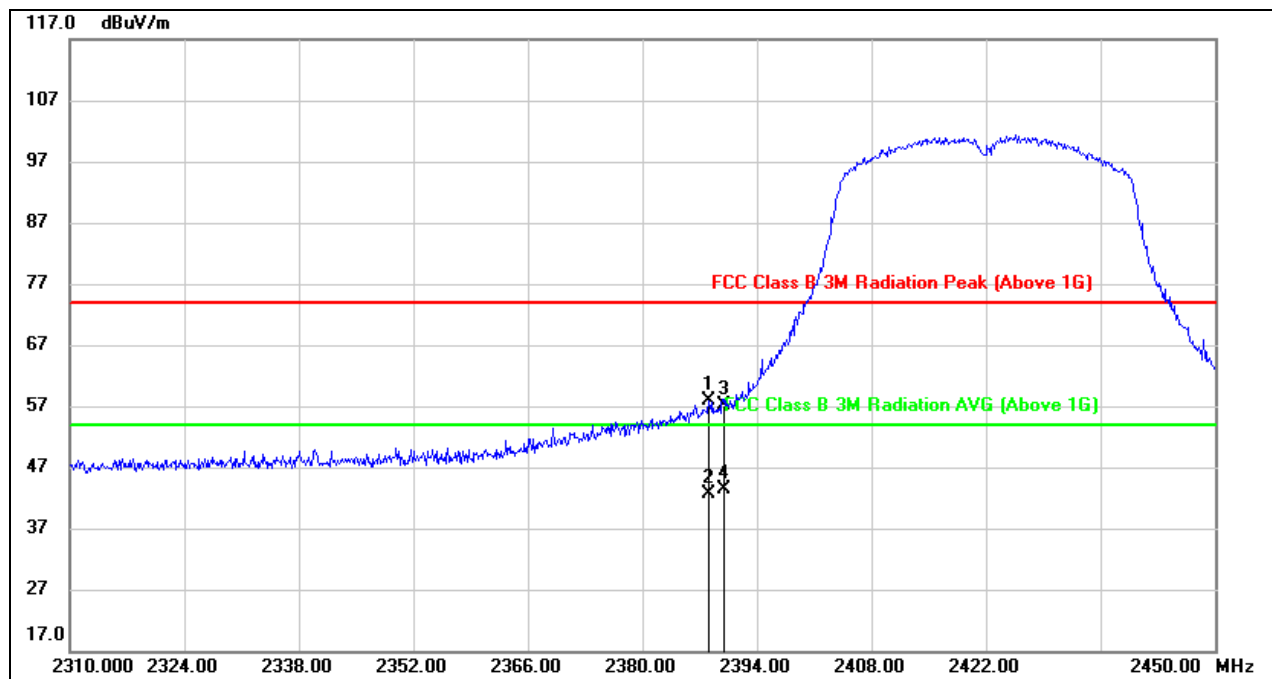
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	8.17	32.88	41.05	54.00	-12.95	AVG
2	2483.850	7.78	32.88	40.66	54.00	-13.34	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: $VBW=1/Ton$ where: ton is transmit duration.
4. For transmit duration, please refer to clause 6.1.
5. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

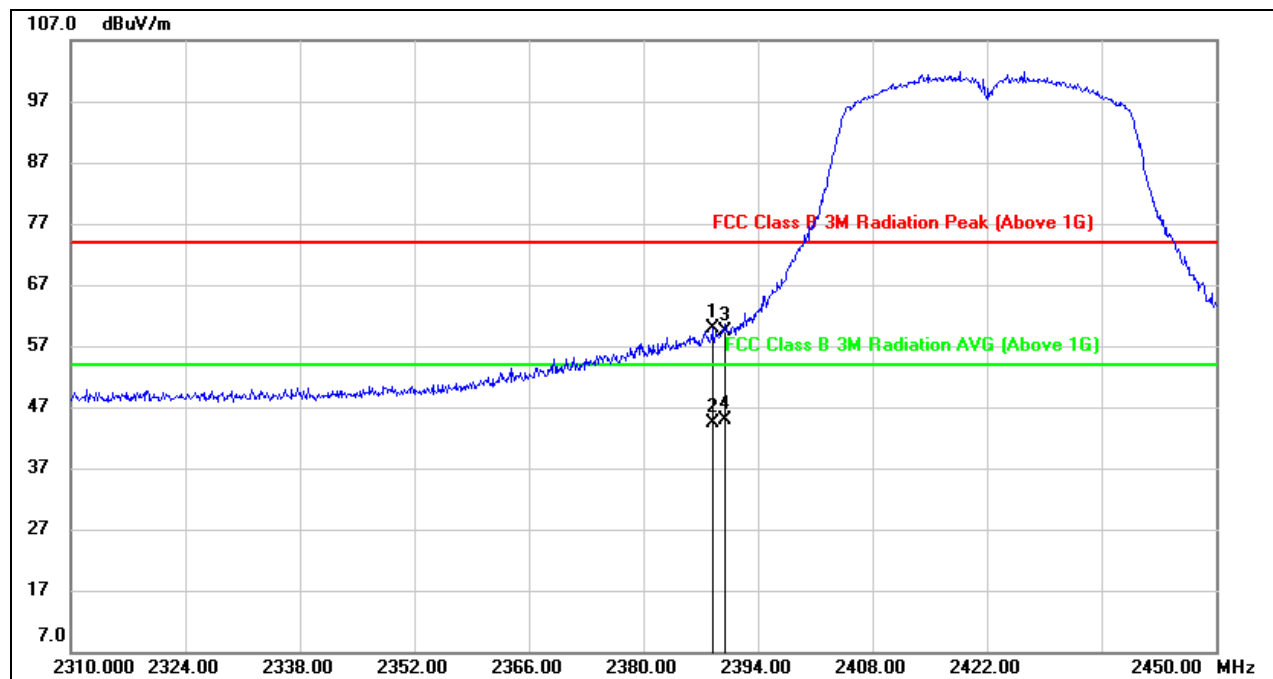


7.1.4. 802.11n40 MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.120	24.67	33.15	57.82	74.00	-16.18	peak
2	2388.120	9.59	33.15	42.74	54.00	-11.26	AVG
3	2390.000	23.90	33.14	57.04	74.00	-16.96	peak
4	2390.000	10.36	33.14	43.50	54.00	-10.50	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

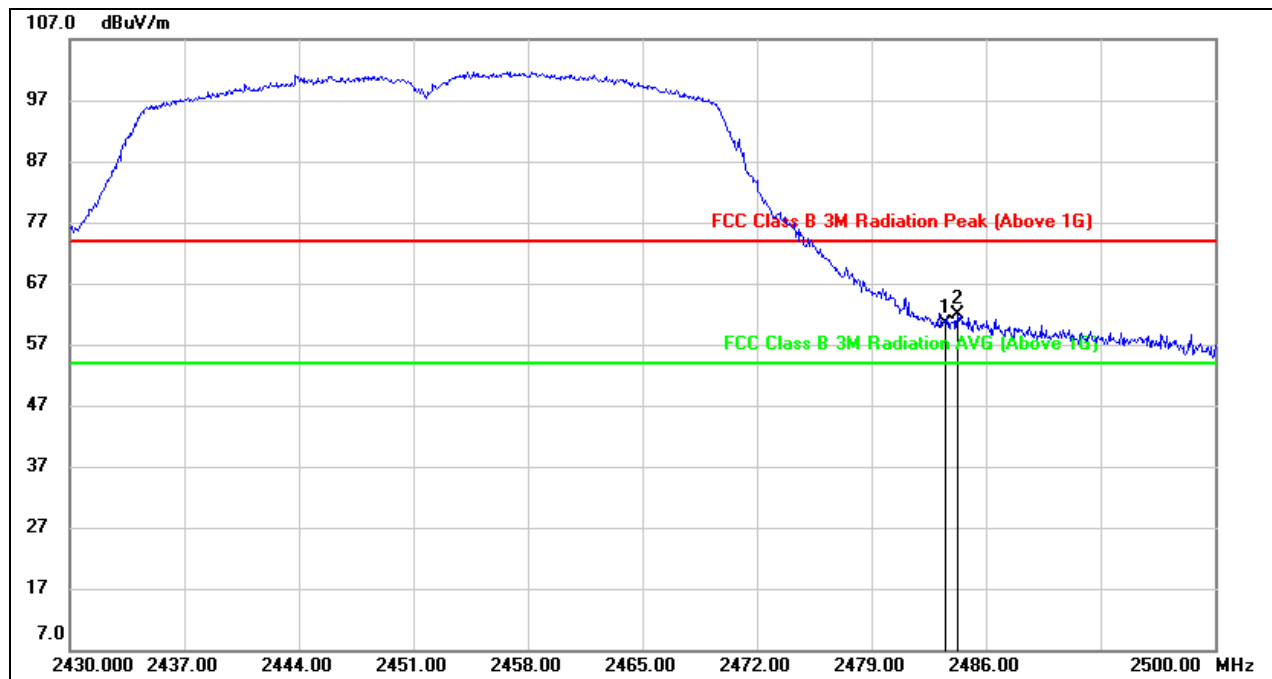
**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.400	26.64	33.25	59.89	74.00	-14.11	peak
2	2388.400	11.12	33.25	44.37	54.00	-9.63	AVG
3	2390.000	26.25	33.24	59.49	74.00	-14.51	peak
4	2390.000	11.71	33.24	44.95	54.00	-9.05	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 6.1.
6. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



PEAK

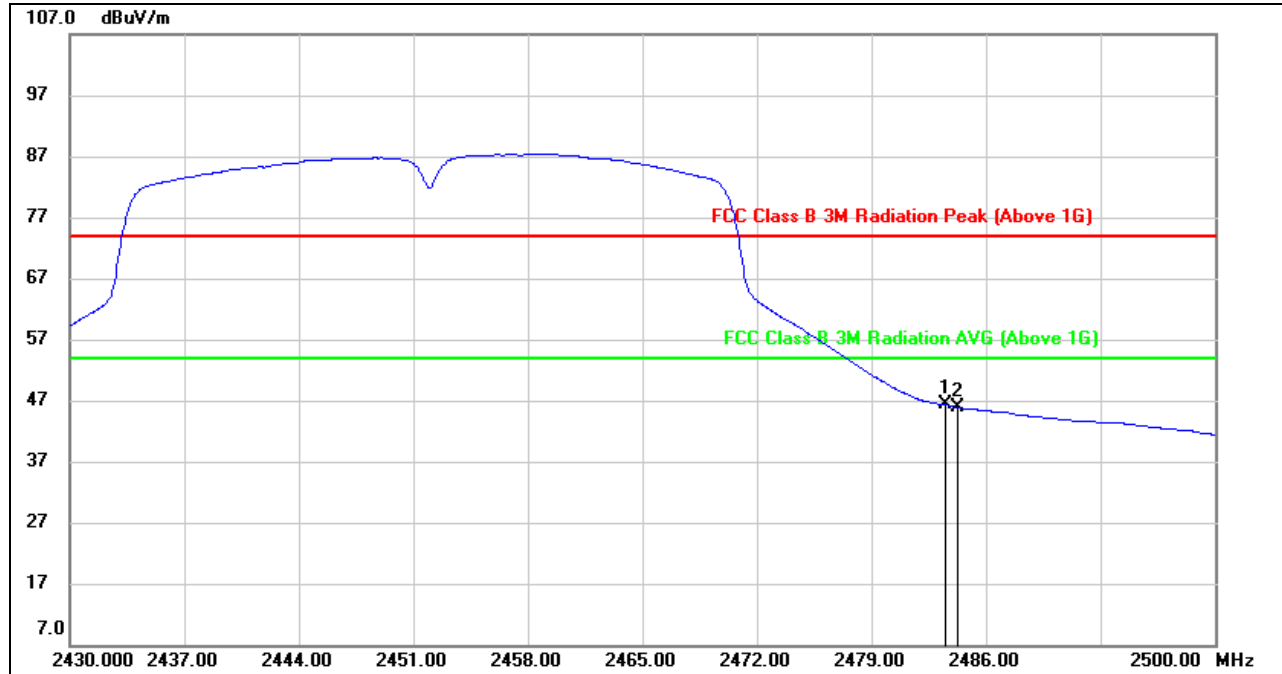
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	27.60	32.78	60.38	74.00	-13.62	peak
2	2484.250	28.98	32.78	61.76	74.00	-12.24	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



AVG

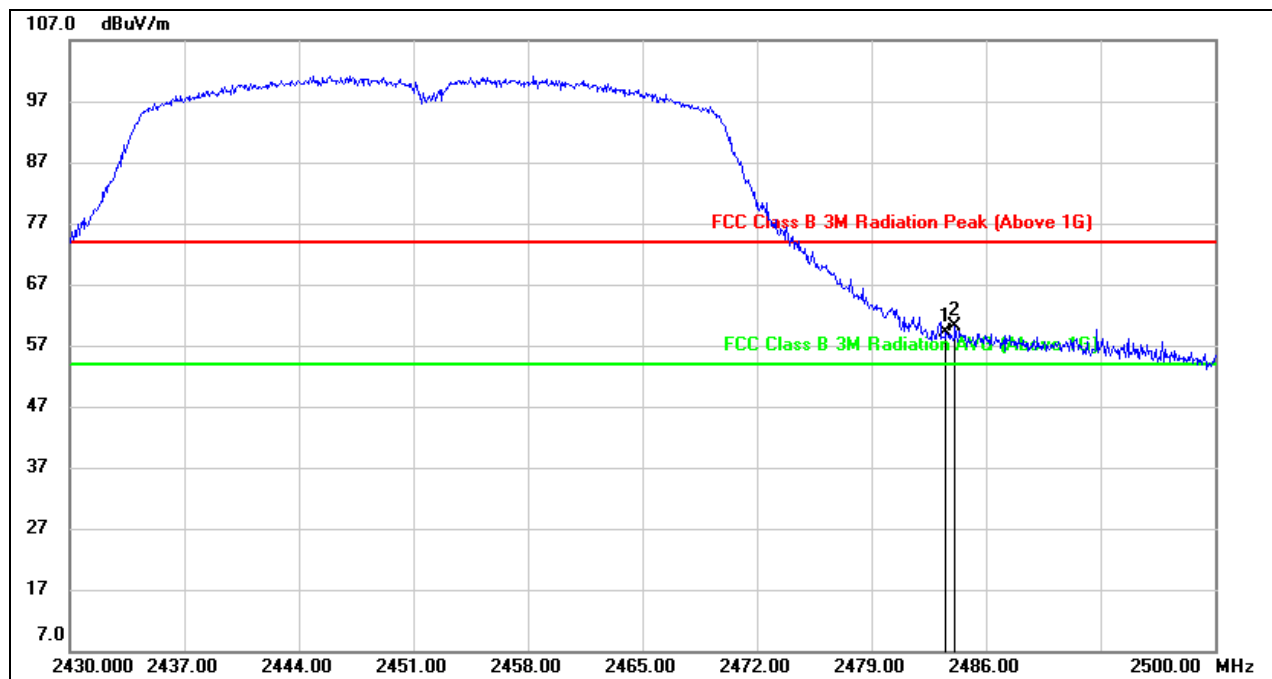
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	13.49	32.78	46.27	54.00	-7.73	AVG
2	2484.250	13.14	32.78	45.92	54.00	-8.08	AVG

- Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: $VBW=1/Ton$ where: ton is transmit duration.
4. For transmit duration, please refer to clause 6.1.
5. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



PEAK

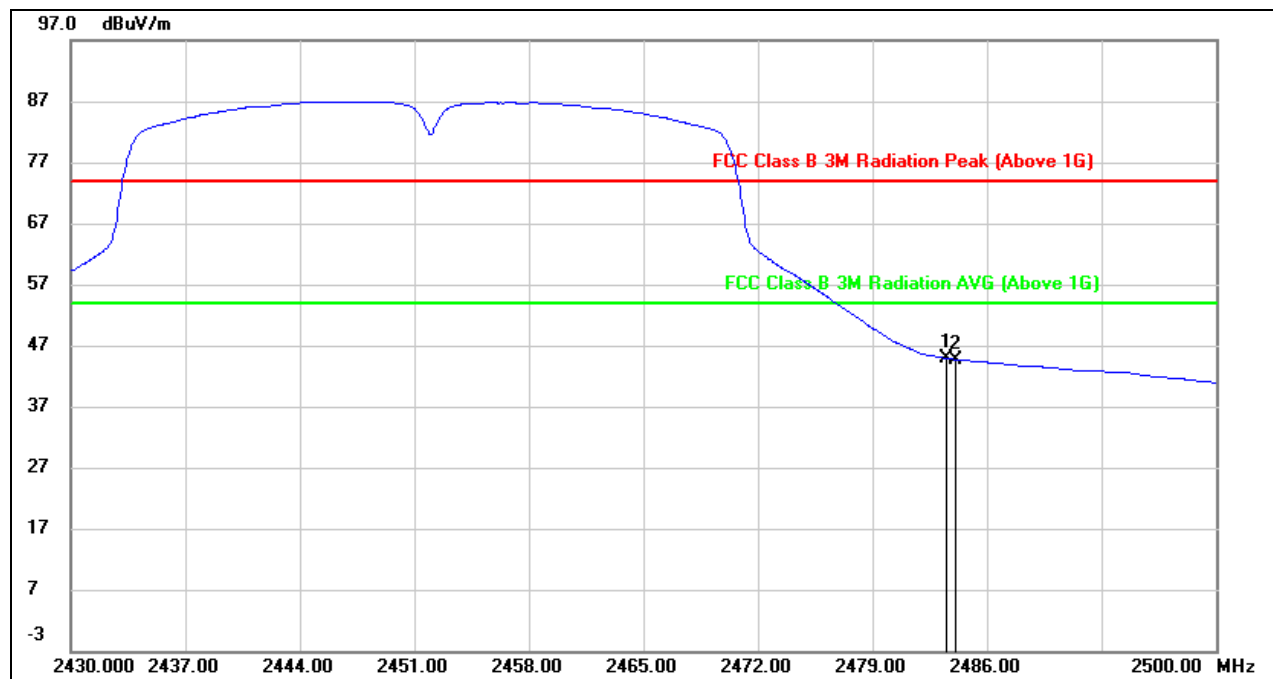
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	26.14	32.88	59.02	74.00	-14.98	peak
2	2484.110	27.26	32.88	60.14	74.00	-13.86	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



AVG

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	12.07	32.88	44.95	54.00	-9.05	AVG
2	2484.110	11.84	32.88	44.72	54.00	-9.28	AVG

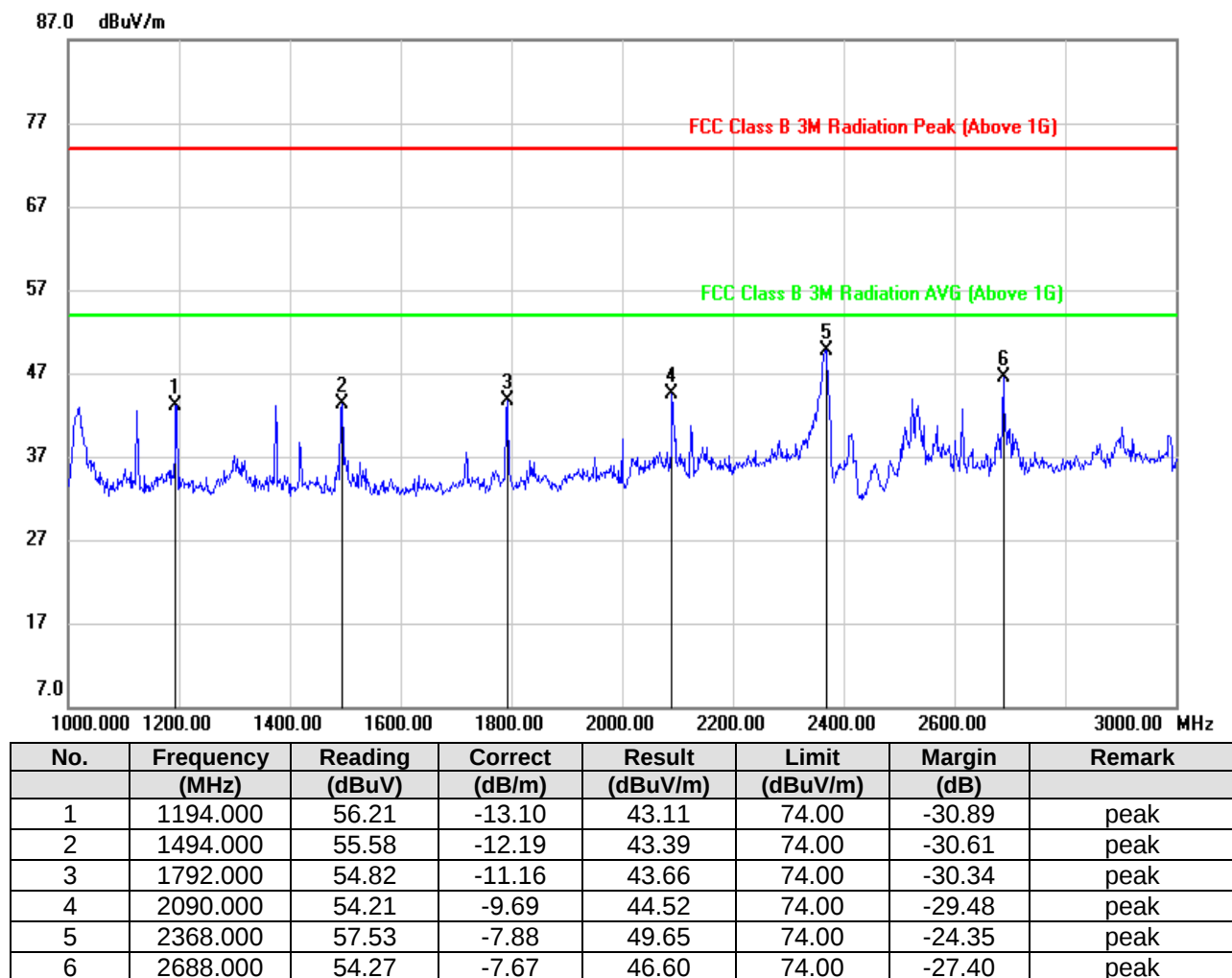
- Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: $VBW=1/Ton$ where: ton is transmit duration.
4. For transmit duration, please refer to clause 6.1.
5. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.



7.2. SPURIOUS EMISSIONS (1~3GHz)

7.2.1. 802.11b MODE

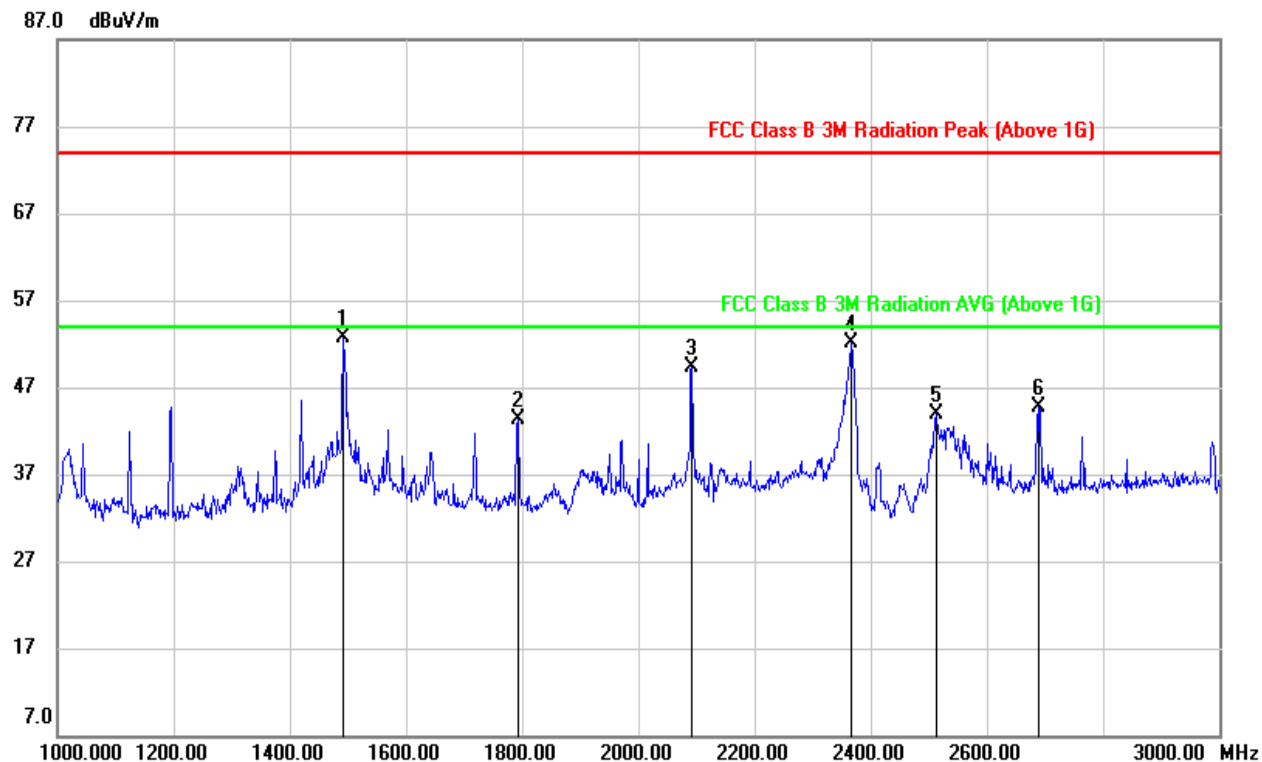
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

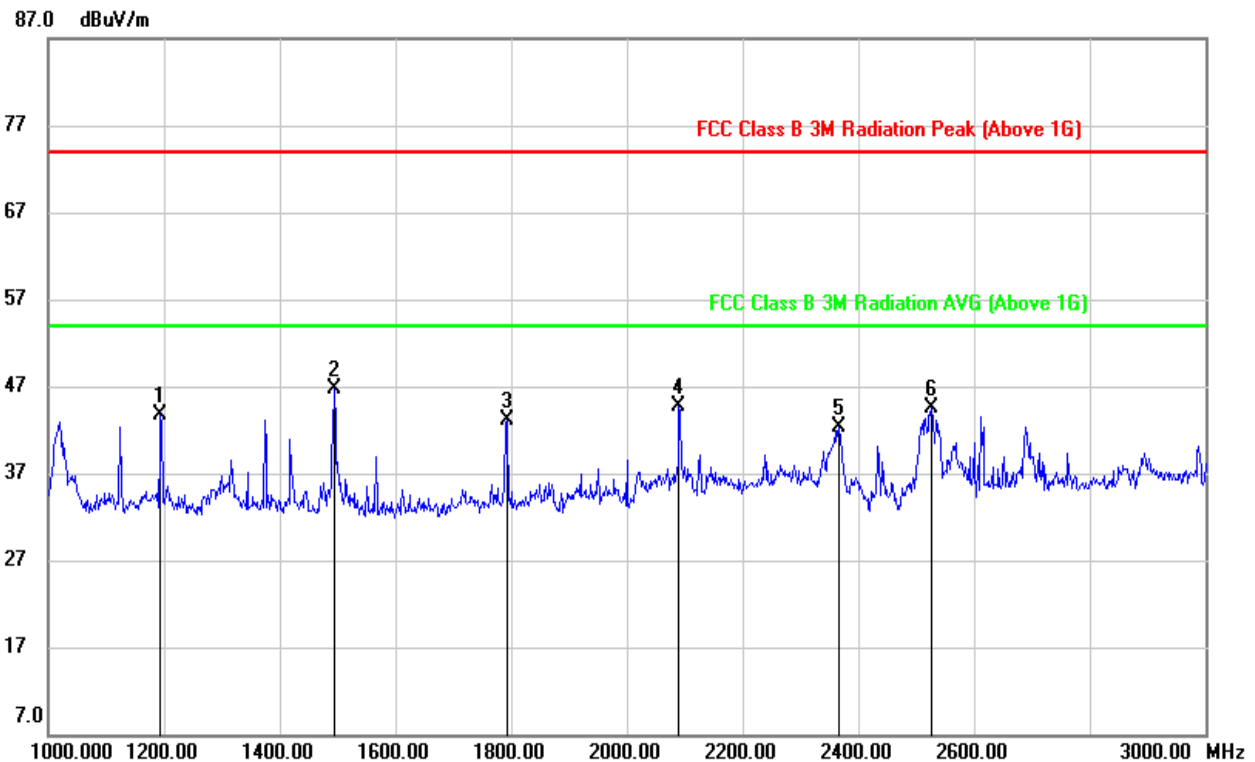
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1492.000	65.03	-12.28	52.75	74.00	-21.25	peak
2	1792.000	54.43	-11.16	43.27	74.00	-30.73	peak
3	2092.000	59.14	-9.77	49.37	74.00	-24.63	peak
4	2366.000	59.83	-7.77	52.06	74.00	-21.94	peak
5	2512.000	52.26	-8.29	43.97	74.00	-30.03	peak
6	2688.000	52.46	-7.69	44.77	74.00	-29.23	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

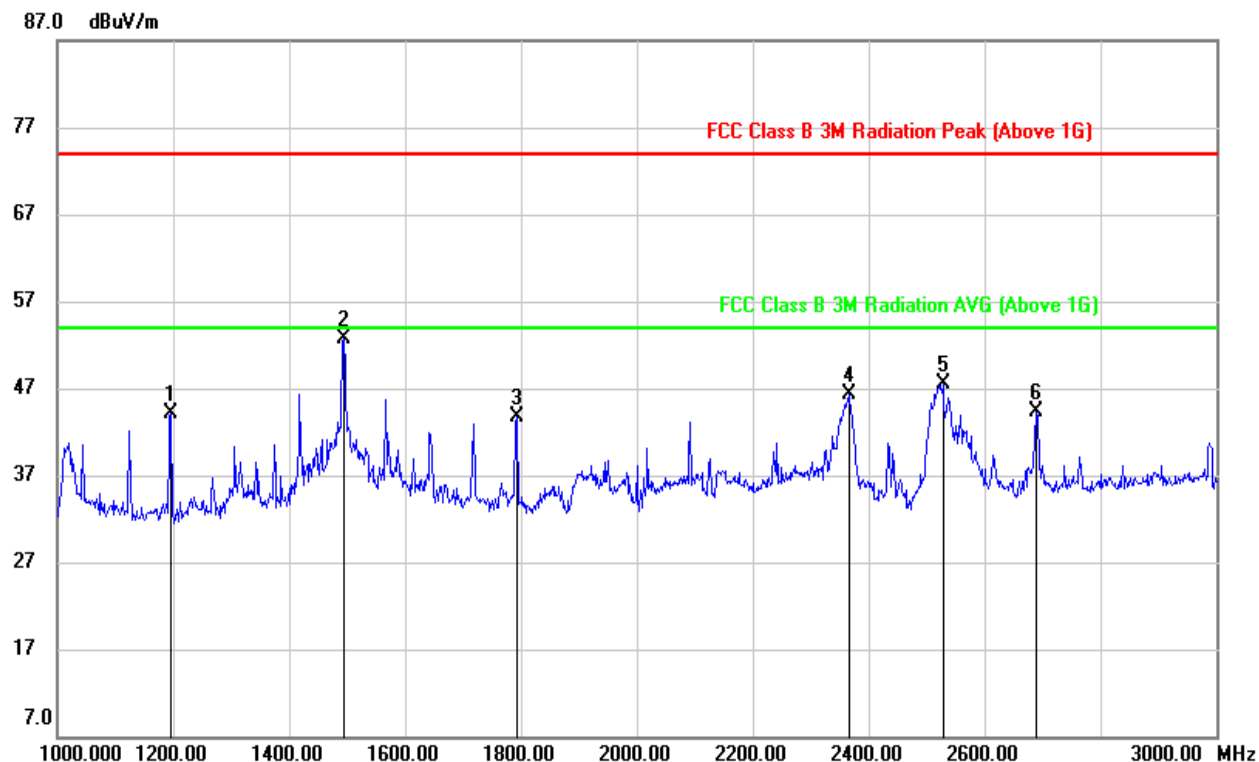
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.80	-13.10	43.70	74.00	-30.30	peak
2	1494.000	58.90	-12.19	46.71	74.00	-27.29	peak
3	1792.000	54.17	-11.16	43.01	74.00	-30.99	peak
4	2090.000	54.36	-9.69	44.67	74.00	-29.33	peak
5	2366.000	50.10	-7.87	42.23	74.00	-31.77	peak
6	2526.000	52.79	-8.38	44.41	74.00	-29.59	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

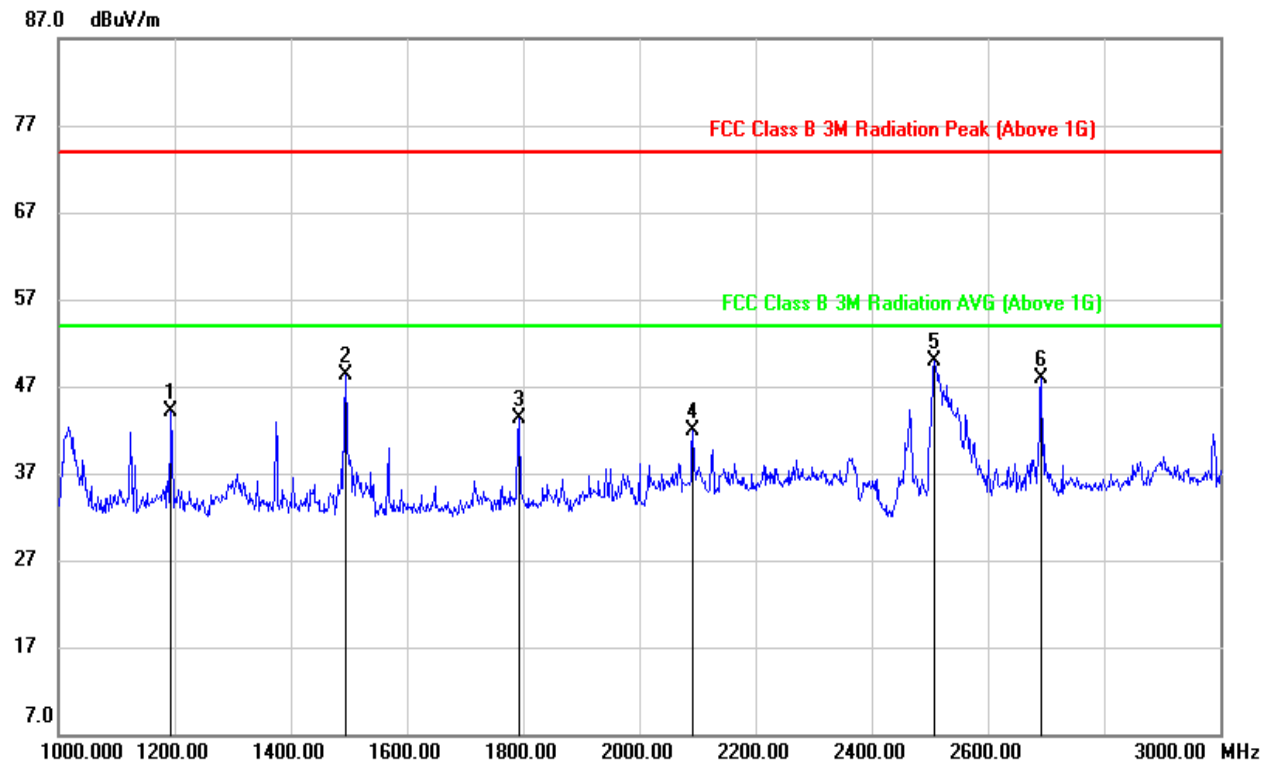
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1196.000	57.35	-13.20	44.15	74.00	-29.85	peak
2	1494.000	64.96	-12.28	52.68	74.00	-21.32	peak
3	1792.000	54.92	-11.16	43.76	74.00	-30.24	peak
4	2366.000	54.08	-7.77	46.31	74.00	-27.69	peak
5	2528.000	55.75	-8.28	47.47	74.00	-26.53	peak
6	2688.000	52.04	-7.69	44.35	74.00	-29.65	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

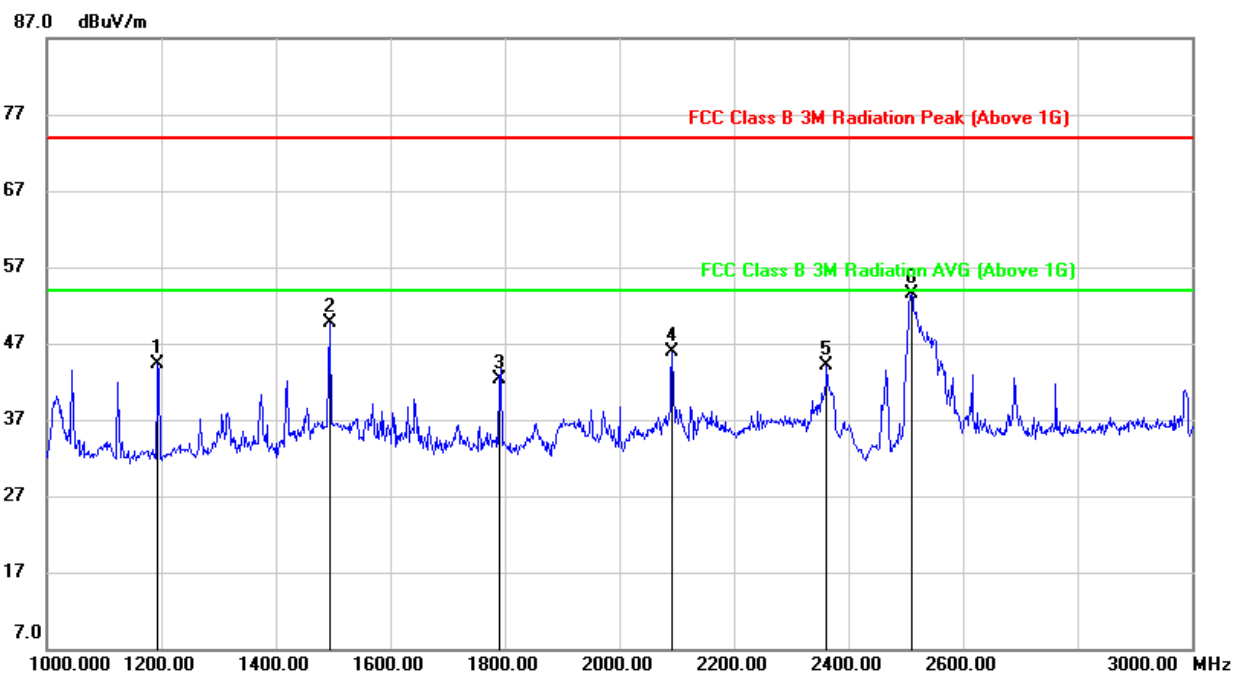
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	57.26	-13.10	44.16	74.00	-29.84	peak
2	1494.000	60.53	-12.19	48.34	74.00	-25.66	peak
3	1794.000	54.46	-11.15	43.31	74.00	-30.69	peak
4	2092.000	51.60	-9.67	41.93	74.00	-32.07	peak
5	2508.000	58.31	-8.40	49.91	74.00	-24.09	peak
6	2692.000	55.58	-7.63	47.95	74.00	-26.05	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

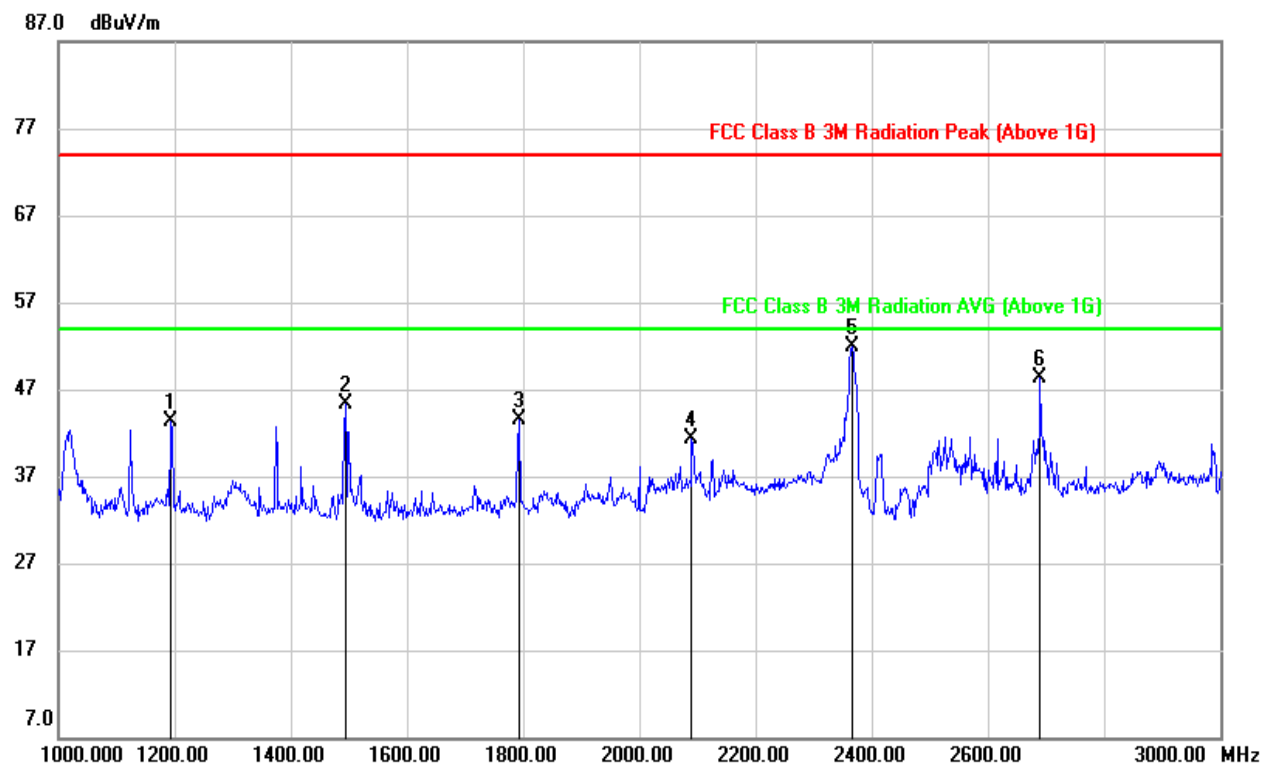
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	57.43	-13.22	44.21	74.00	-29.79	peak
2	1494.000	62.03	-12.28	49.75	74.00	-24.25	peak
3	1790.000	53.39	-11.16	42.23	74.00	-31.77	peak
4	2092.000	55.63	-9.77	45.86	74.00	-28.14	peak
5	2362.000	51.80	-7.74	44.06	74.00	-29.94	peak
6	2510.000	61.70	-8.29	53.41	74.00	-20.59	peak

- Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.



7.2.2. 802.11g MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

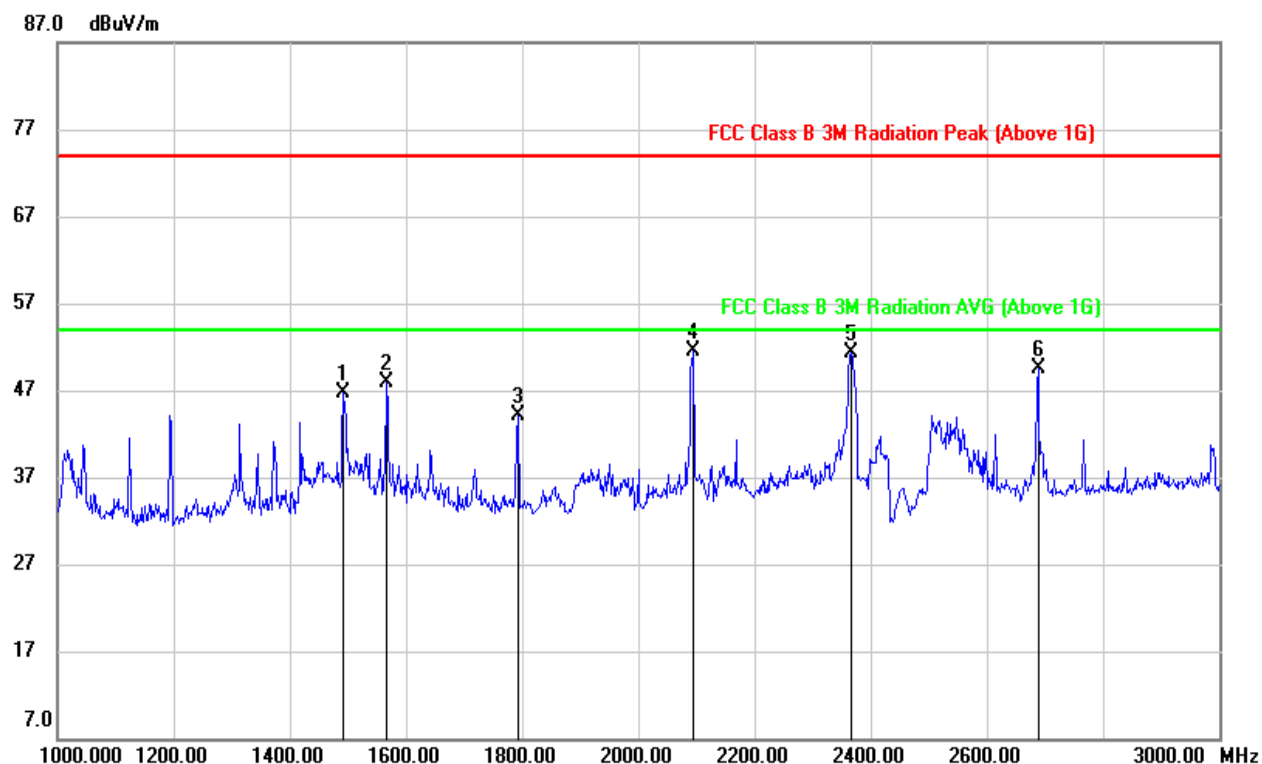


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.50	-13.10	43.40	74.00	-30.60	peak
2	1494.000	57.49	-12.19	45.30	74.00	-28.70	peak
3	1794.000	54.57	-11.15	43.42	74.00	-30.58	peak
4	2090.000	50.90	-9.69	41.21	74.00	-32.79	peak
5	2366.000	59.86	-7.87	51.99	74.00	-22.01	peak
6	2690.000	55.99	-7.65	48.34	74.00	-25.66	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

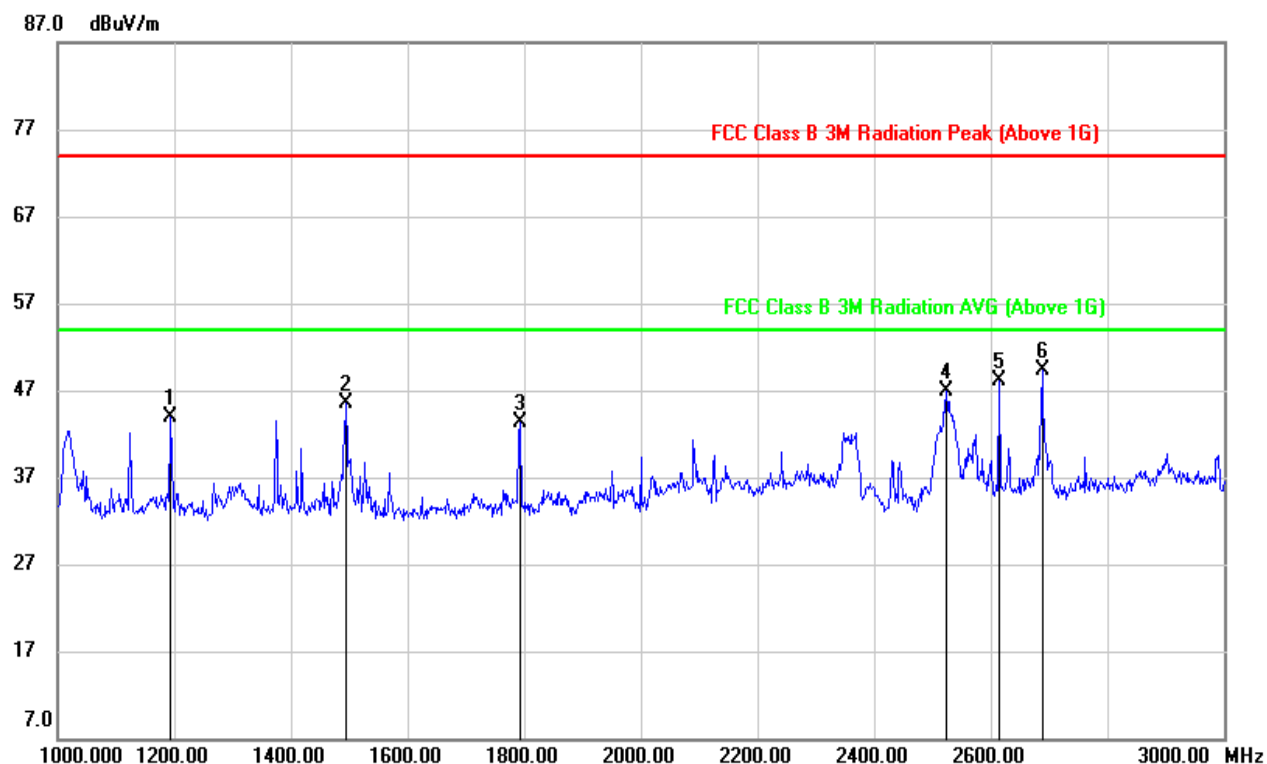
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1492.000	58.89	-12.28	46.61	74.00	-27.39	peak
2	1566.000	60.19	-12.21	47.98	74.00	-26.02	peak
3	1792.000	55.30	-11.16	44.14	74.00	-29.86	peak
4	2094.000	61.31	-9.74	51.57	74.00	-22.43	peak
5	2366.000	59.12	-7.77	51.35	74.00	-22.65	peak
6	2688.000	57.20	-7.69	49.51	74.00	-24.49	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

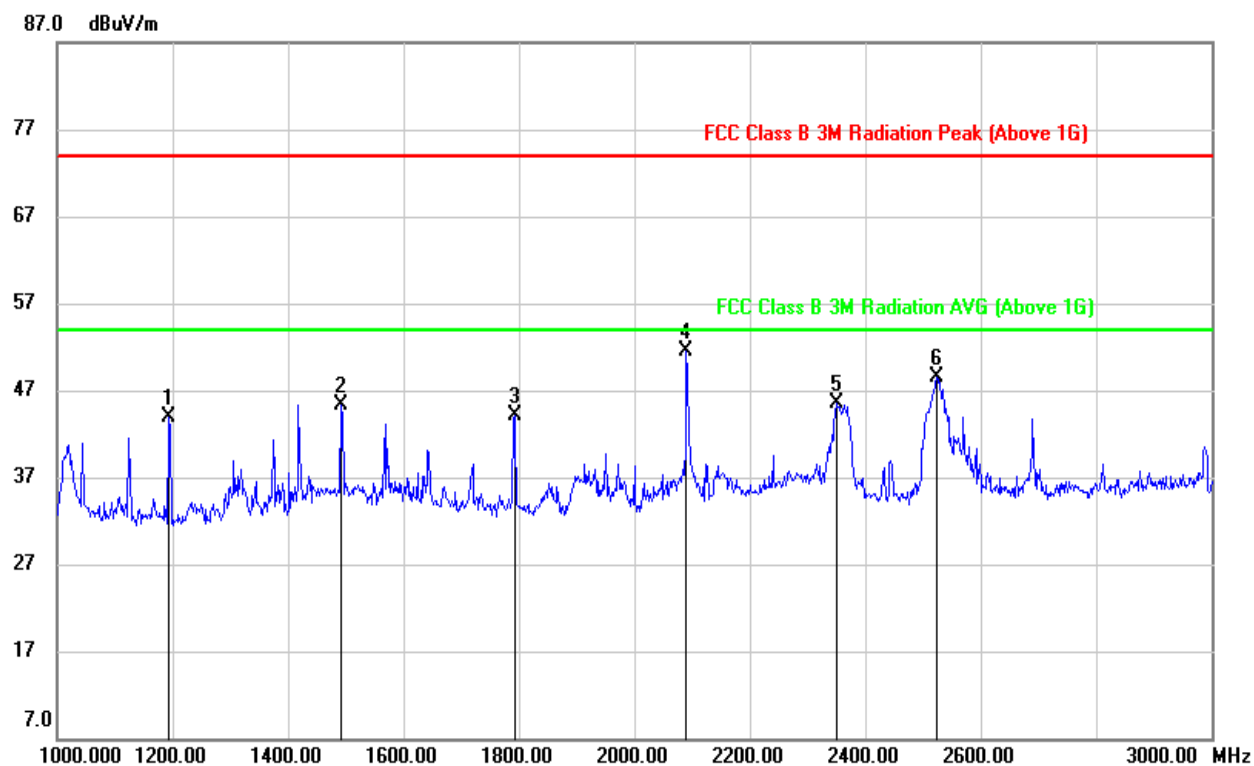
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.95	-13.10	43.85	74.00	-30.15	peak
2	1494.000	57.71	-12.19	45.52	74.00	-28.48	peak
3	1792.000	54.47	-11.16	43.31	74.00	-30.69	peak
4	2524.000	55.21	-8.38	46.83	74.00	-27.17	peak
5	2614.000	56.15	-8.03	48.12	74.00	-25.88	peak
6	2688.000	57.07	-7.67	49.40	74.00	-24.60	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

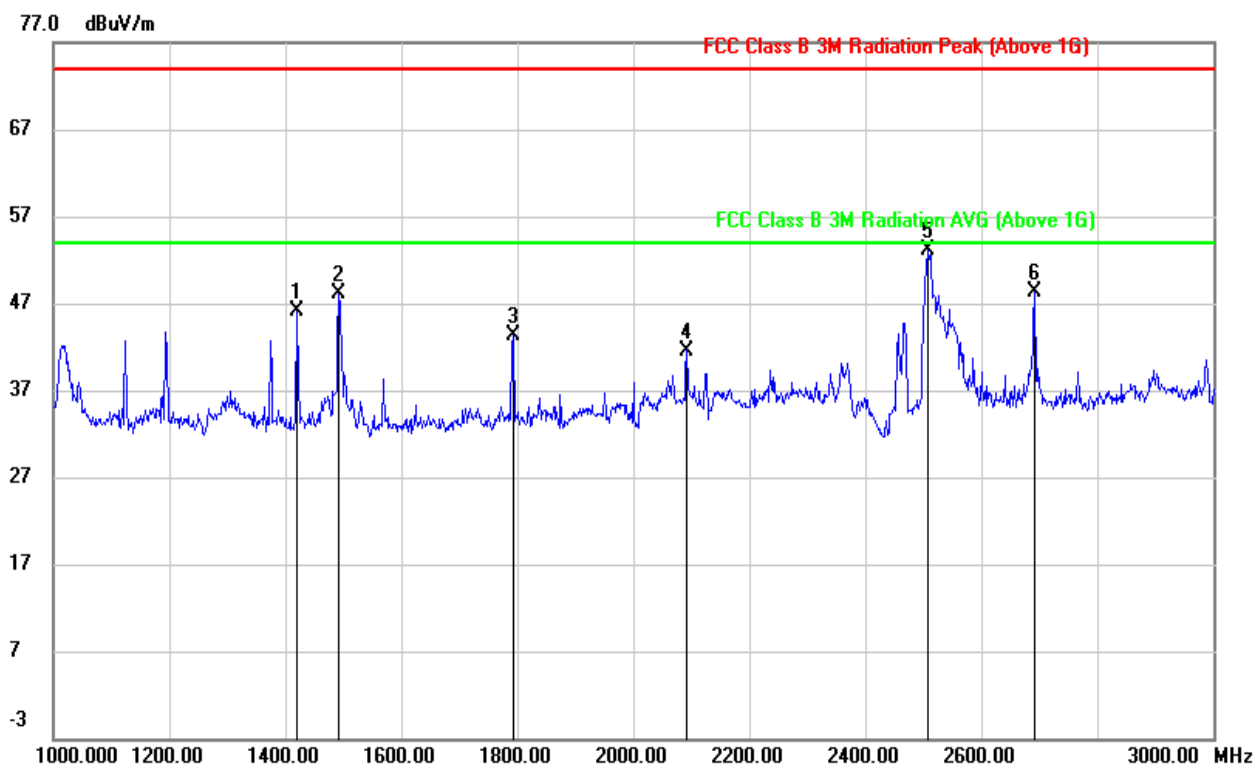
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	57.15	-13.22	43.93	74.00	-30.07	peak
2	1492.000	57.65	-12.28	45.37	74.00	-28.63	peak
3	1792.000	55.31	-11.16	44.15	74.00	-29.85	peak
4	2090.000	61.28	-9.79	51.49	74.00	-22.51	peak
5	2350.000	53.17	-7.65	45.52	74.00	-28.48	peak
6	2524.000	56.79	-8.28	48.51	74.00	-25.49	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

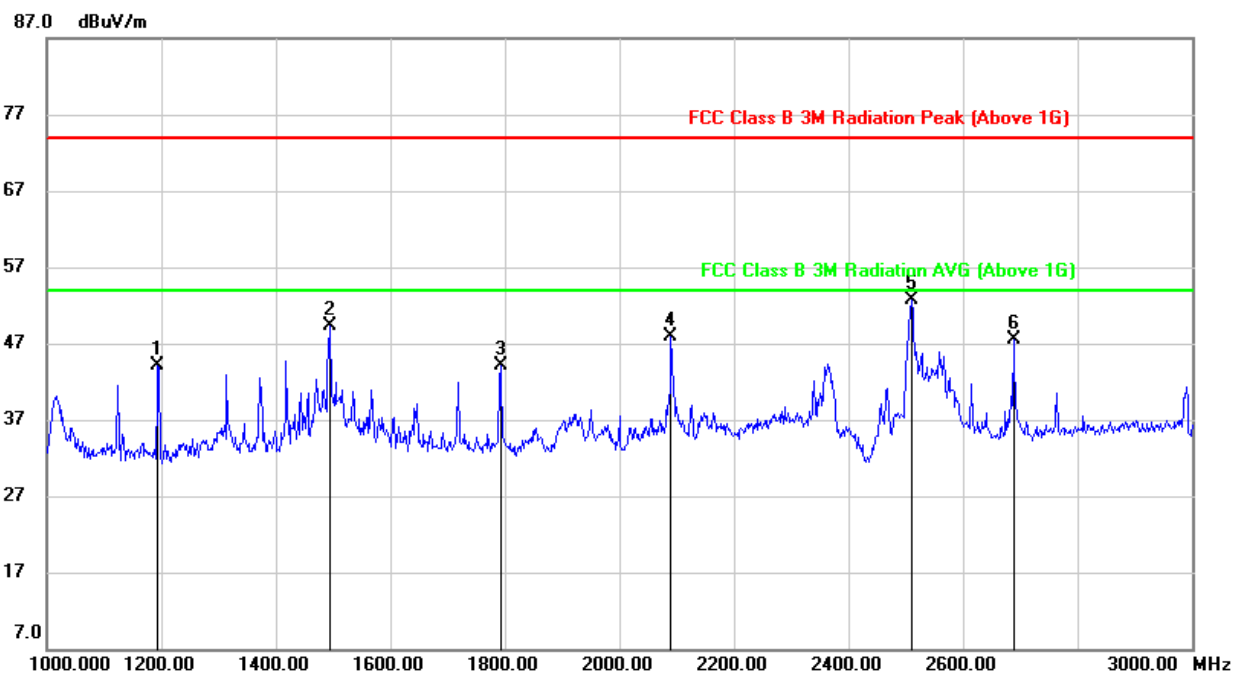
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1420.000	58.29	-12.14	46.15	74.00	-27.85	peak
2	1492.000	60.34	-12.20	48.14	74.00	-25.86	peak
3	1792.000	54.40	-11.16	43.24	74.00	-30.76	peak
4	2092.000	51.27	-9.67	41.60	74.00	-32.40	peak
5	2508.000	61.49	-8.40	53.09	74.00	-20.91	peak
6	2692.000	55.95	-7.63	48.32	74.00	-25.68	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

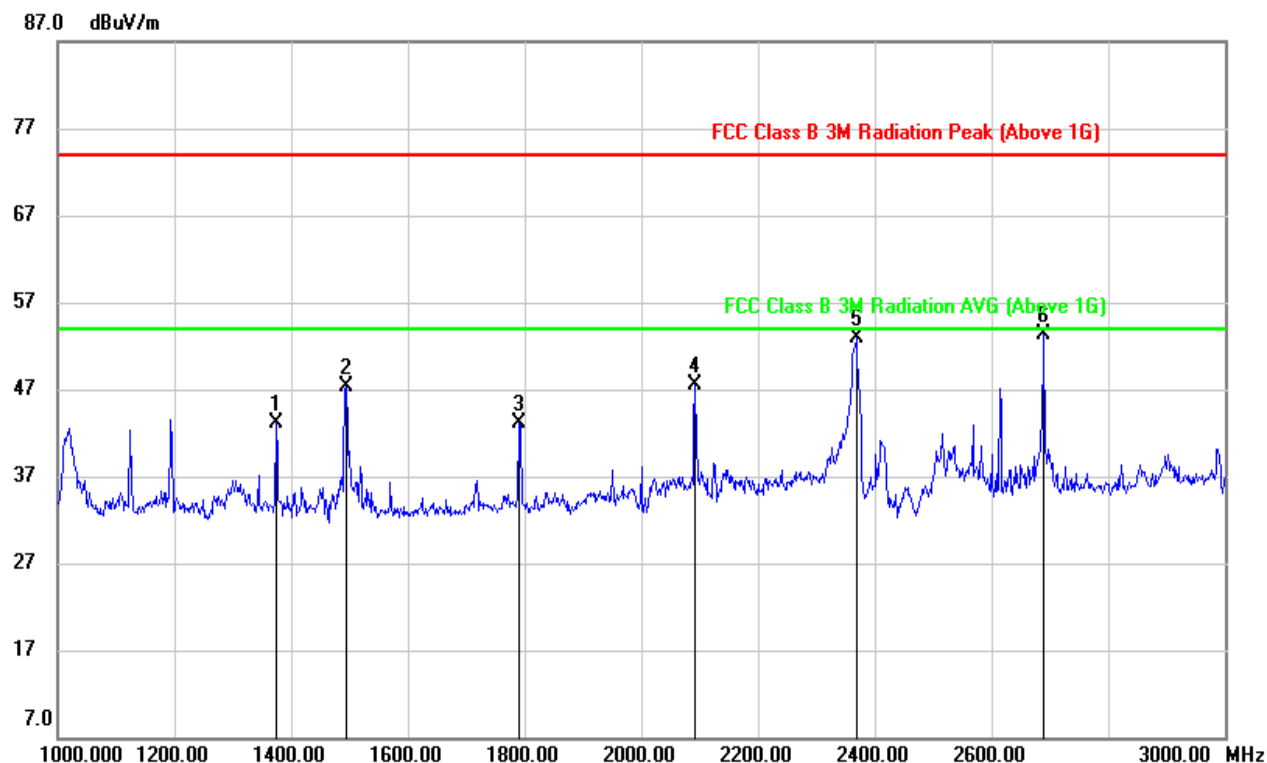
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	57.27	-13.22	44.05	74.00	-29.95	peak
2	1494.000	61.66	-12.28	49.38	74.00	-24.62	peak
3	1792.000	55.21	-11.16	44.05	74.00	-29.95	peak
4	2090.000	57.65	-9.79	47.86	74.00	-26.14	peak
5	2510.000	60.91	-8.29	52.62	74.00	-21.38	peak
6	2688.000	55.24	-7.69	47.55	74.00	-26.45	peak

- Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.



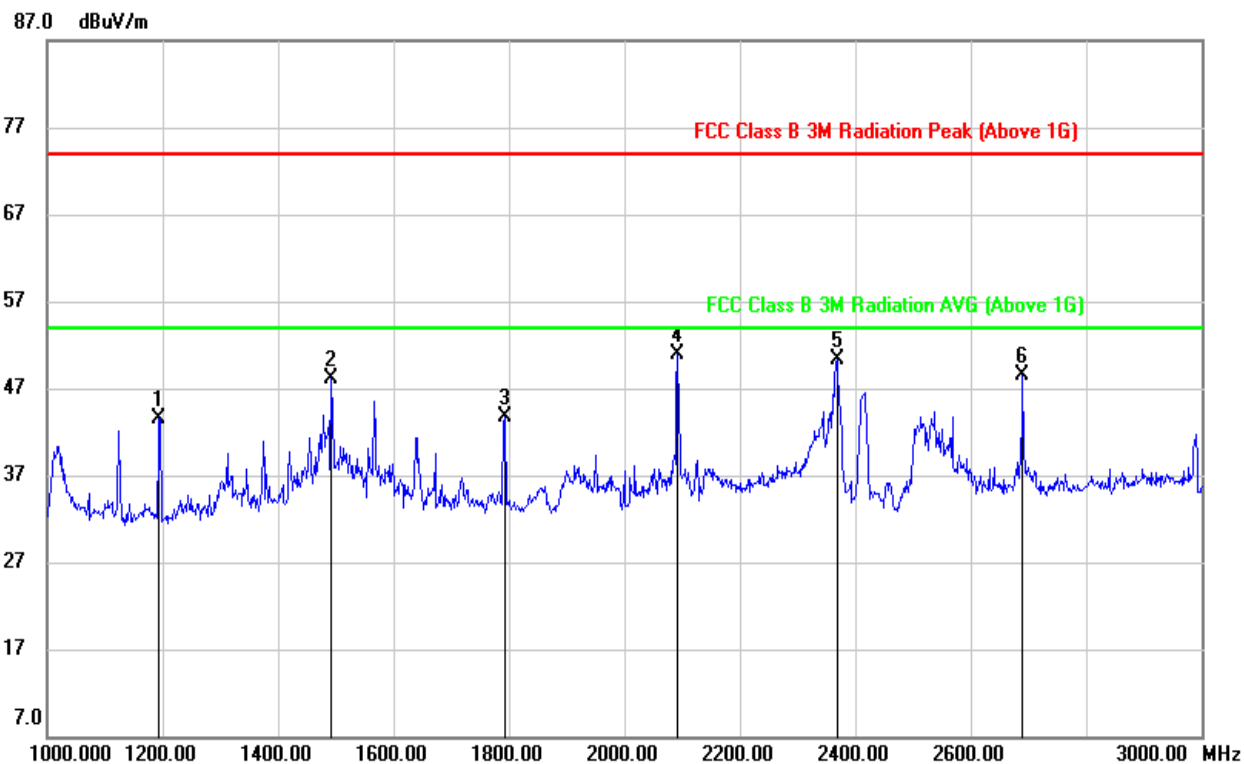
7.2.3. 802.11n20 MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1374.000	55.31	-12.22	43.09	74.00	-30.91	peak
2	1494.000	59.47	-12.19	47.28	74.00	-26.72	peak
3	1790.000	54.22	-11.16	43.06	74.00	-30.94	peak
4	2092.000	57.20	-9.67	47.53	74.00	-26.47	peak
5	2368.000	60.83	-7.88	52.95	74.00	-21.05	peak
6	2690.000	61.04	-7.65	53.39	74.00	-20.61	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

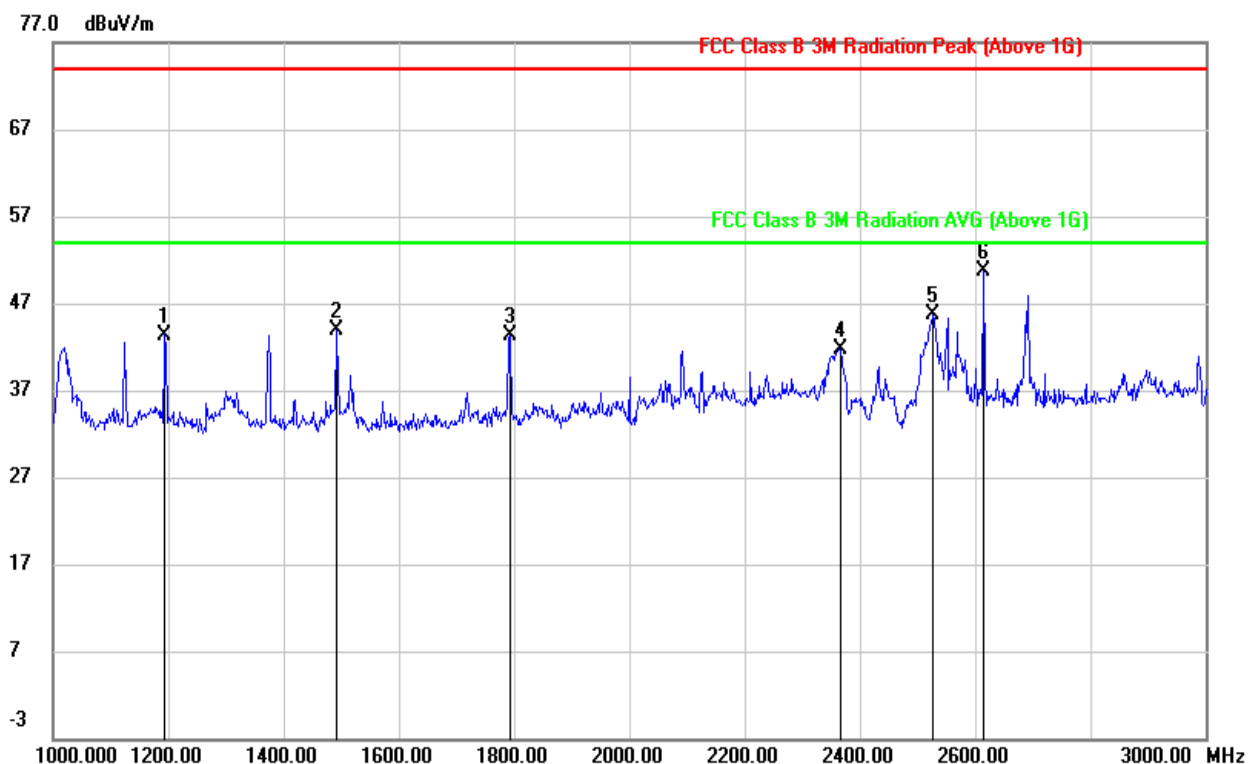
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.77	-13.22	43.55	74.00	-30.45	peak
2	1492.000	60.40	-12.28	48.12	74.00	-25.88	peak
3	1794.000	54.83	-11.15	43.68	74.00	-30.32	peak
4	2092.000	60.59	-9.77	50.82	74.00	-23.18	peak
5	2368.000	58.03	-7.78	50.25	74.00	-23.75	peak
6	2690.000	56.11	-7.67	48.44	74.00	-25.56	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

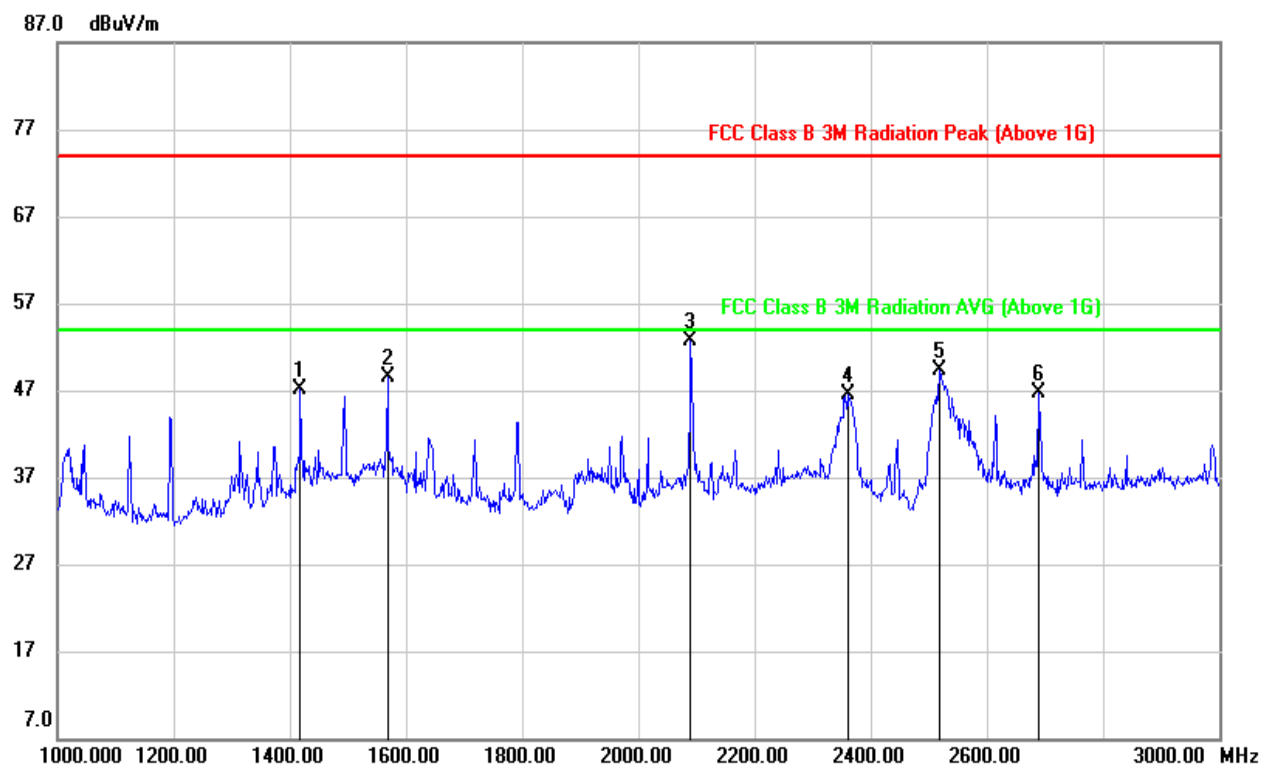
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.50	-13.10	43.40	74.00	-30.60	peak
2	1492.000	56.07	-12.20	43.87	74.00	-30.13	peak
3	1792.000	54.49	-11.16	43.33	74.00	-30.67	peak
4	2366.000	49.59	-7.87	41.72	74.00	-32.28	peak
5	2526.000	54.04	-8.38	45.66	74.00	-28.34	peak
6	2614.000	58.76	-8.03	50.73	74.00	-23.27	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

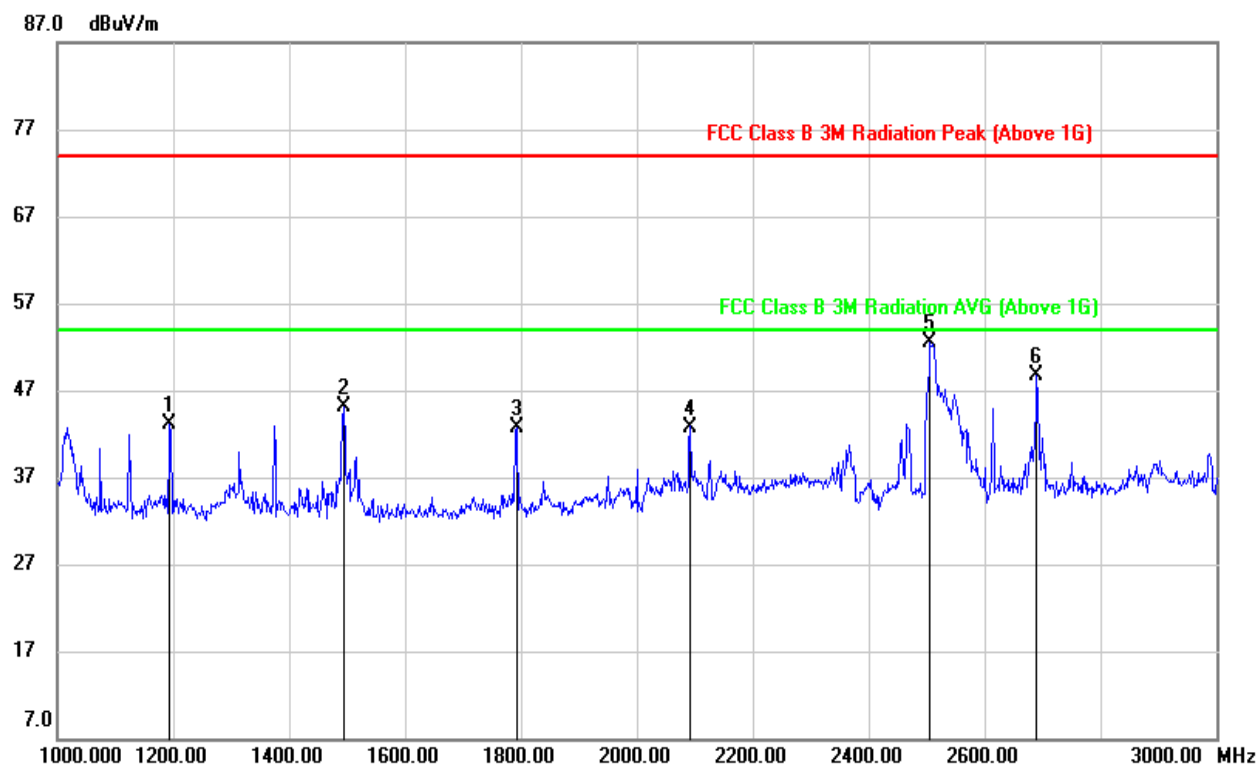
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1418.000	59.53	-12.39	47.14	74.00	-26.86	peak
2	1568.000	60.72	-12.19	48.53	74.00	-25.47	peak
3	2090.000	62.44	-9.79	52.65	74.00	-21.35	peak
4	2360.000	54.23	-7.72	46.51	74.00	-27.49	peak
5	2518.000	57.57	-8.28	49.29	74.00	-24.71	peak
6	2688.000	54.32	-7.69	46.63	74.00	-27.37	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

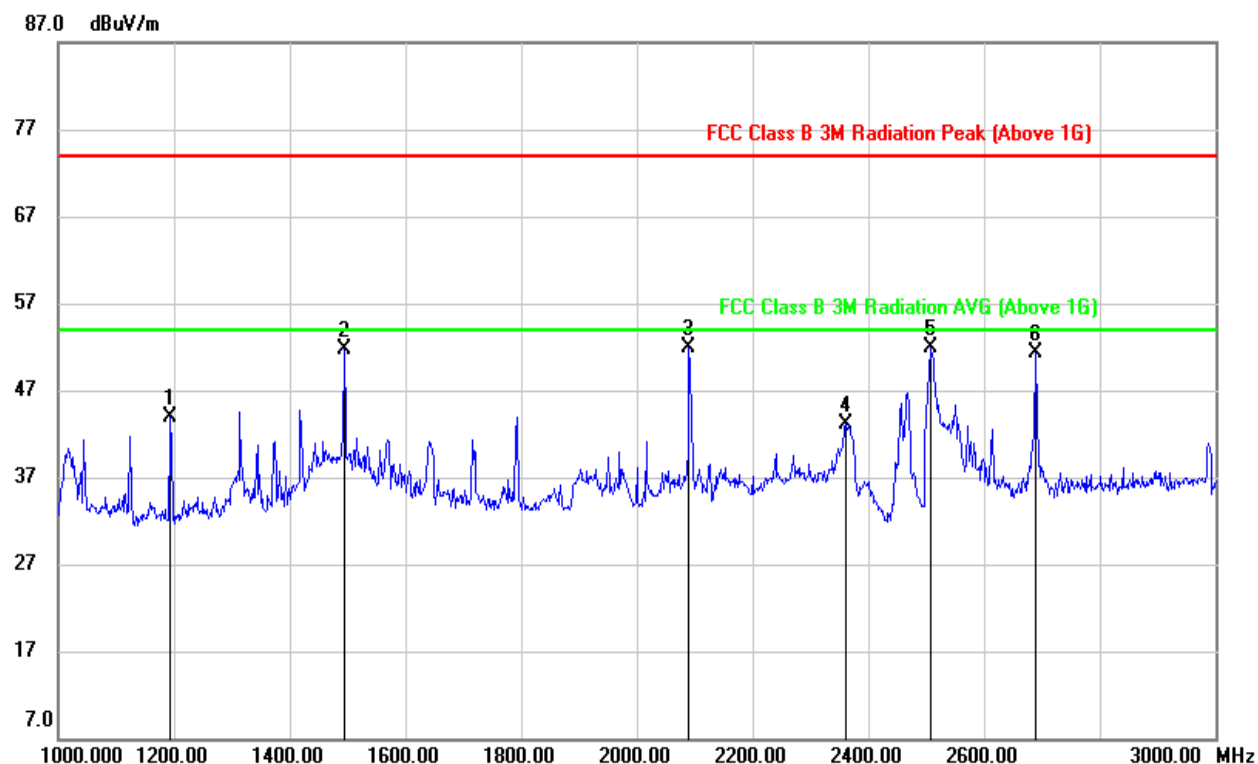
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.21	-13.10	43.11	74.00	-30.89	peak
2	1494.000	57.33	-12.19	45.14	74.00	-28.86	peak
3	1792.000	53.90	-11.16	42.74	74.00	-31.26	peak
4	2092.000	52.47	-9.67	42.80	74.00	-31.20	peak
5	2506.000	60.93	-8.40	52.53	74.00	-21.47	peak
6	2690.000	56.34	-7.65	48.69	74.00	-25.31	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	57.07	-13.22	43.85	74.00	-30.15	peak
2	1494.000	64.04	-12.28	51.76	74.00	-22.24	peak
3	2090.000	61.70	-9.79	51.91	74.00	-22.09	peak
4	2360.000	50.84	-7.72	43.12	74.00	-30.88	peak
5	2508.000	60.15	-8.30	51.85	74.00	-22.15	peak
6	2690.000	59.02	-7.67	51.35	74.00	-22.65	peak

Note: 1. Measurement = Reading Level + Correct Factor.

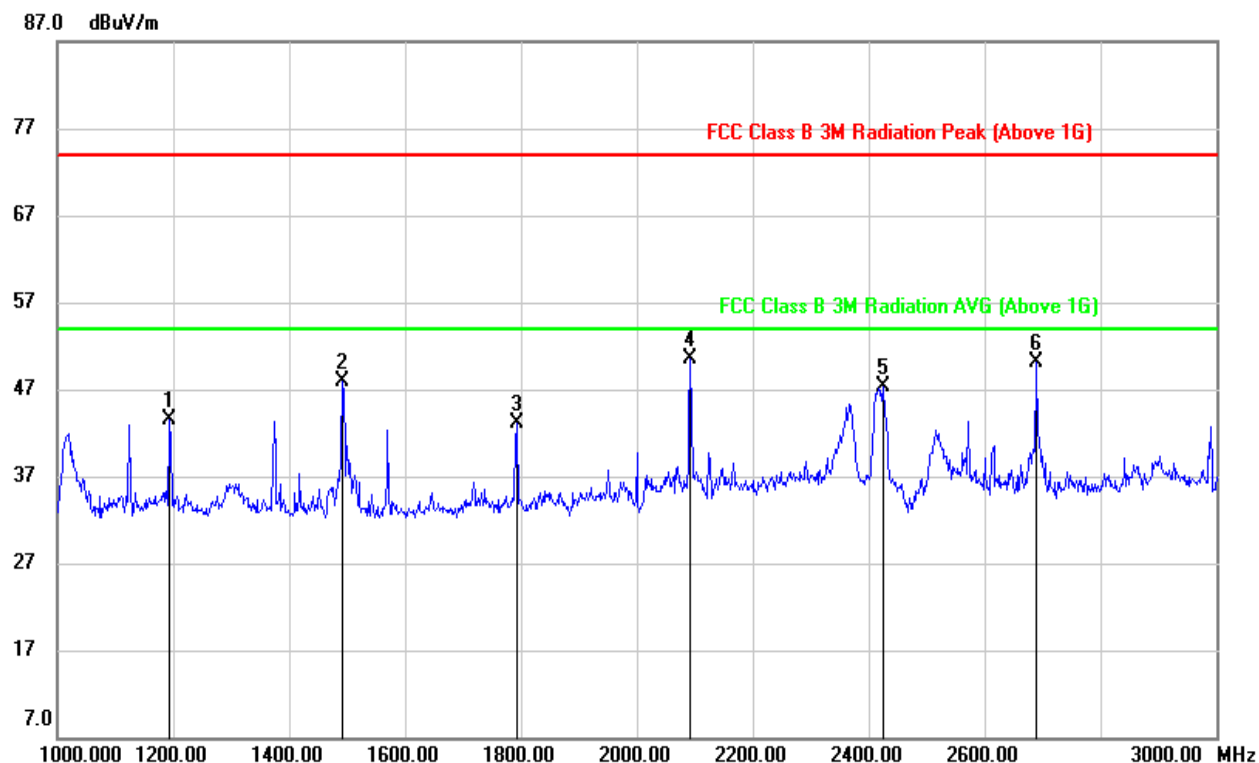
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



7.2.4. 802.11n40 MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

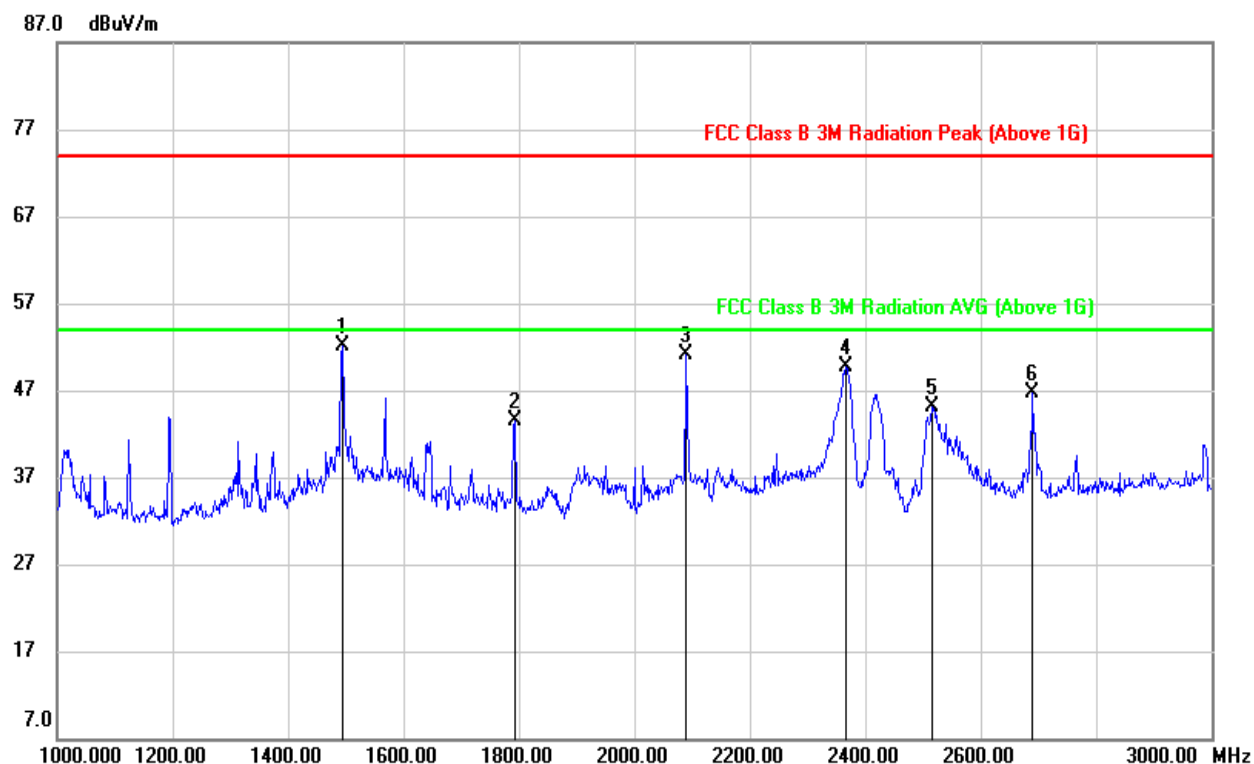


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.55	-13.10	43.45	74.00	-30.55	peak
2	1492.000	60.20	-12.20	48.00	74.00	-26.00	peak
3	1794.000	54.18	-11.15	43.03	74.00	-30.97	peak
4	2092.000	60.24	-9.67	50.57	74.00	-23.43	peak
5	2426.000	55.61	-8.24	47.37	74.00	-26.63	peak
6	2690.000	57.73	-7.65	50.08	74.00	-23.92	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

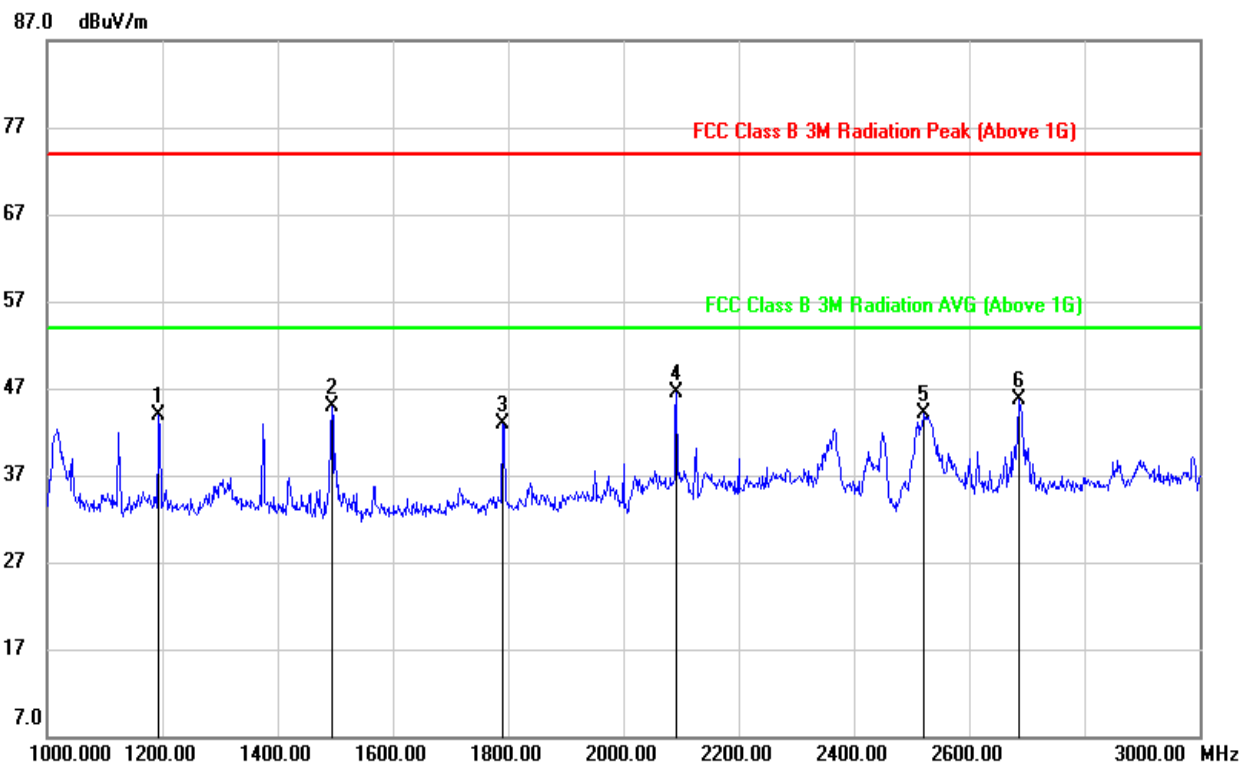
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1494.000	64.30	-12.28	52.02	74.00	-21.98	peak
2	1794.000	54.63	-11.15	43.48	74.00	-30.52	peak
3	2090.000	60.91	-9.79	51.12	74.00	-22.88	peak
4	2366.000	57.40	-7.77	49.63	74.00	-24.37	peak
5	2516.000	53.37	-8.28	45.09	74.00	-28.91	peak
6	2690.000	54.33	-7.67	46.66	74.00	-27.34	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

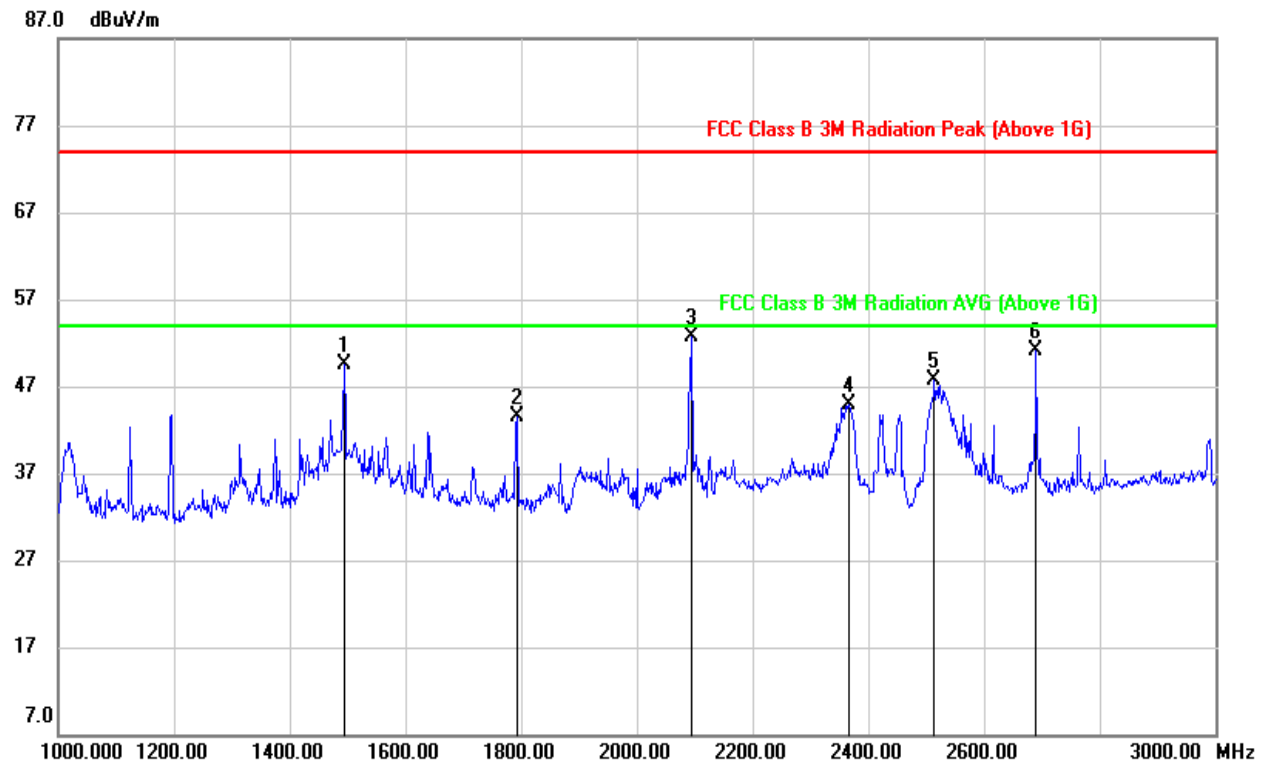
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	57.10	-13.10	44.00	74.00	-30.00	peak
2	1494.000	57.17	-12.19	44.98	74.00	-29.02	peak
3	1790.000	54.11	-11.16	42.95	74.00	-31.05	peak
4	2092.000	56.12	-9.67	46.45	74.00	-27.55	peak
5	2522.000	52.42	-8.38	44.04	74.00	-29.96	peak
6	2686.000	53.39	-7.68	45.71	74.00	-28.29	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

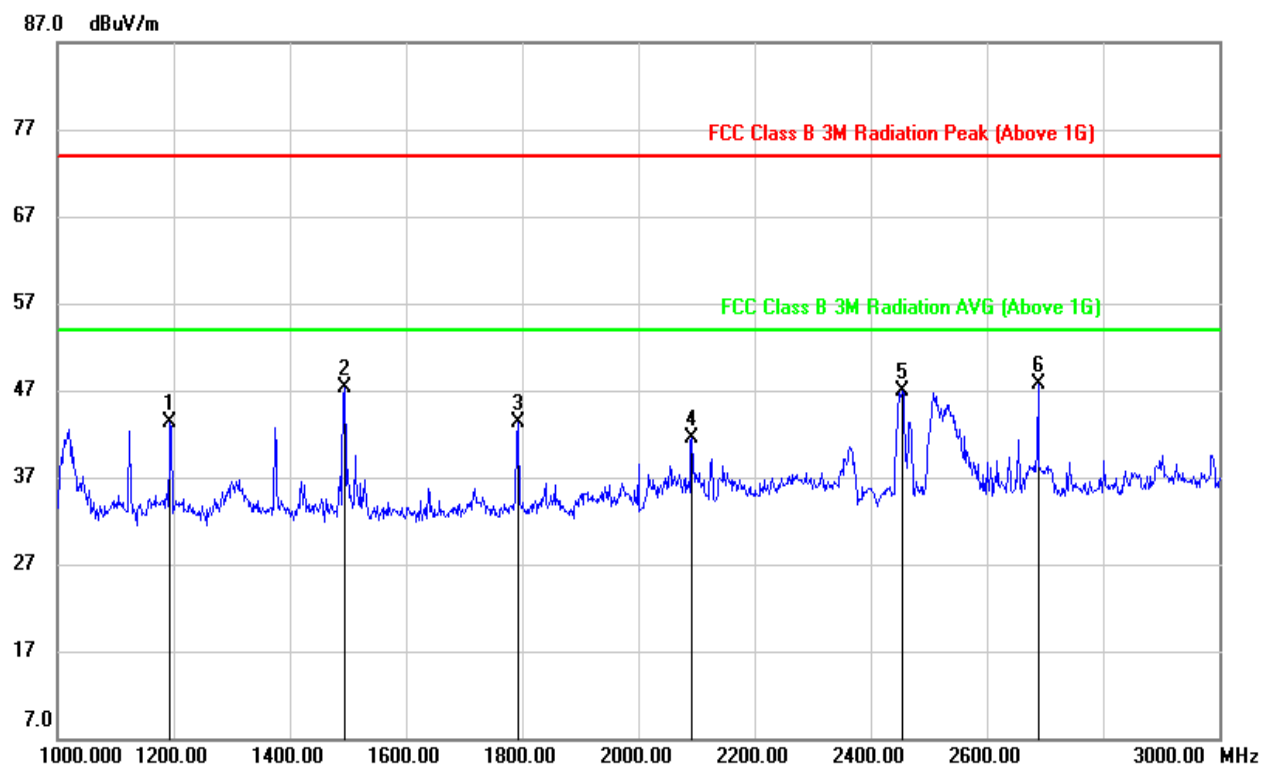
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1494.000	61.86	-12.28	49.58	74.00	-24.42	peak
2	1792.000	54.58	-11.16	43.42	74.00	-30.58	peak
3	2094.000	62.52	-9.74	52.78	74.00	-21.22	peak
4	2366.000	52.70	-7.77	44.93	74.00	-29.07	peak
5	2514.000	55.91	-8.28	47.63	74.00	-26.37	peak
6	2690.000	58.85	-7.67	51.18	74.00	-22.82	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

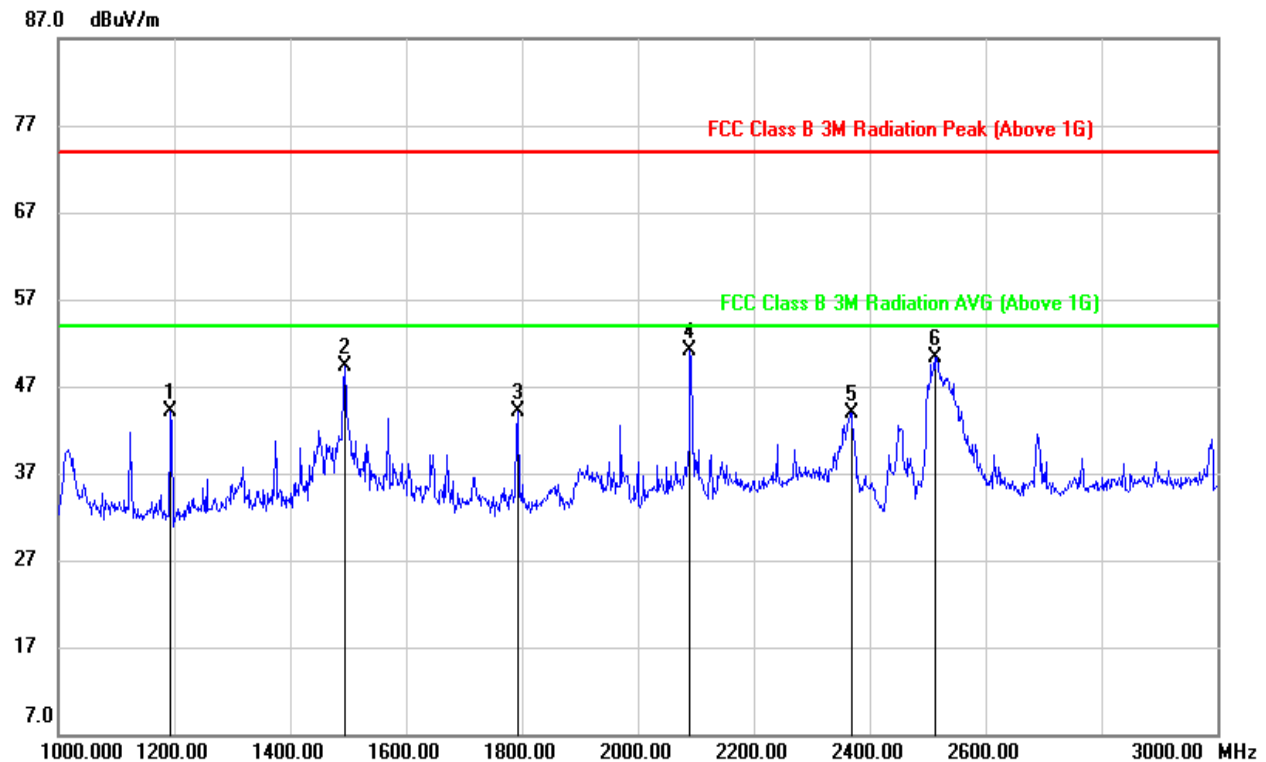
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	56.47	-13.10	43.37	74.00	-30.63	peak
2	1494.000	59.45	-12.19	47.26	74.00	-26.74	peak
3	1792.000	54.46	-11.16	43.30	74.00	-30.70	peak
4	2092.000	51.10	-9.67	41.43	74.00	-32.57	peak
5	2454.000	55.26	-8.35	46.91	74.00	-27.09	peak
6	2688.000	55.40	-7.67	47.73	74.00	-26.27	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	57.40	-13.22	44.18	74.00	-29.82	peak
2	1494.000	61.65	-12.28	49.37	74.00	-24.63	peak
3	1794.000	55.26	-11.15	44.11	74.00	-29.89	peak
4	2090.000	60.88	-9.79	51.09	74.00	-22.91	peak
5	2368.000	51.73	-7.78	43.95	74.00	-30.05	peak
6	2512.000	58.57	-8.29	50.28	74.00	-23.72	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

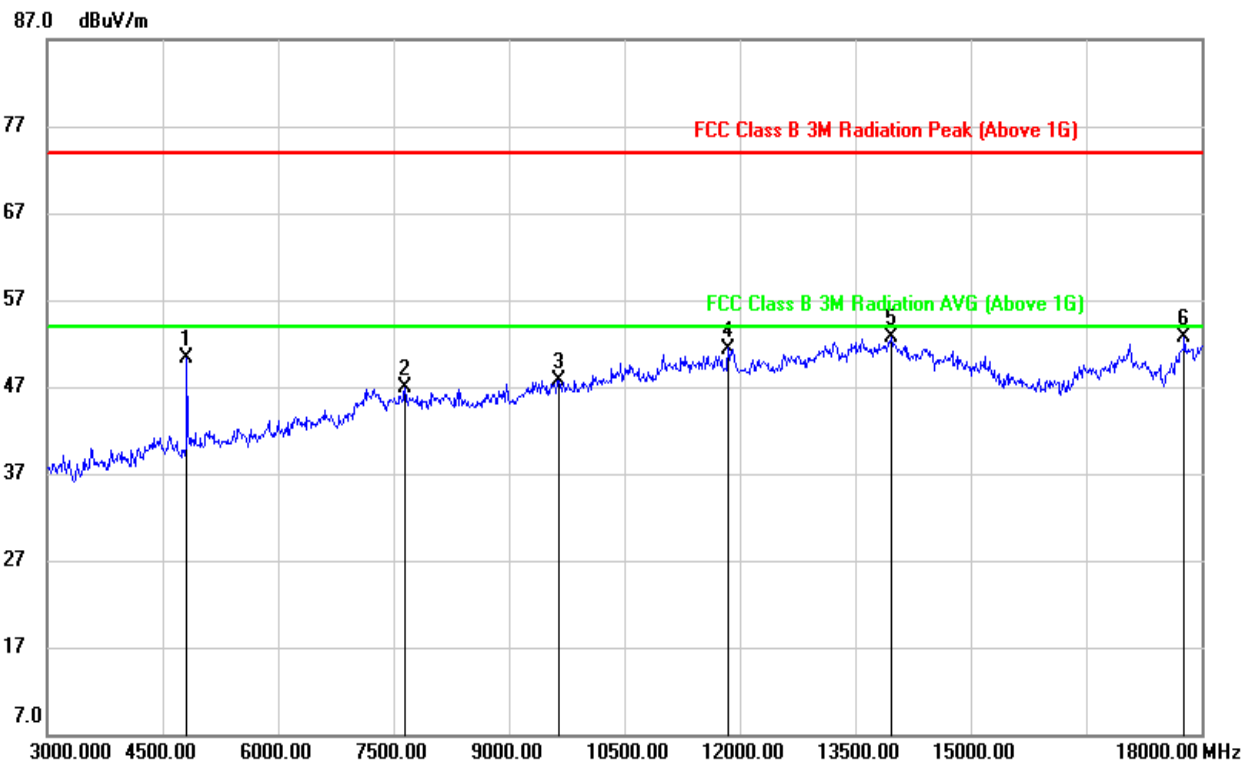
3. Peak: Peak detector.



7.3. SPURIOUS EMISSIONS (3~18GHz)

7.3.1. 802.11b MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

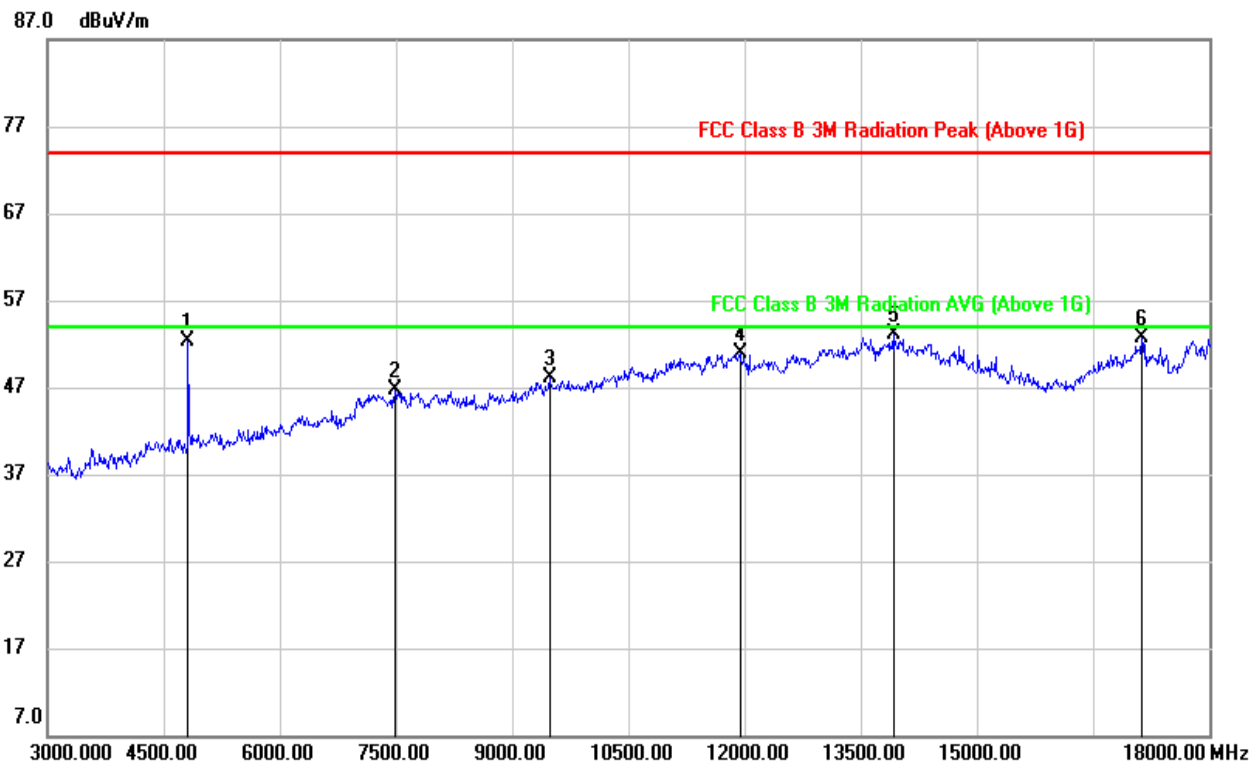


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	50.61	-0.38	50.23	74.00	-23.77	peak
2	7650.000	38.80	8.03	46.83	74.00	-27.17	peak
3	9645.000	36.41	11.24	47.65	74.00	-26.35	peak
4	11850.000	35.26	16.14	51.40	74.00	-22.60	peak
5	13965.000	32.09	20.66	52.75	74.00	-21.25	peak
6	17775.000	26.54	26.17	52.71	74.00	-21.29	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

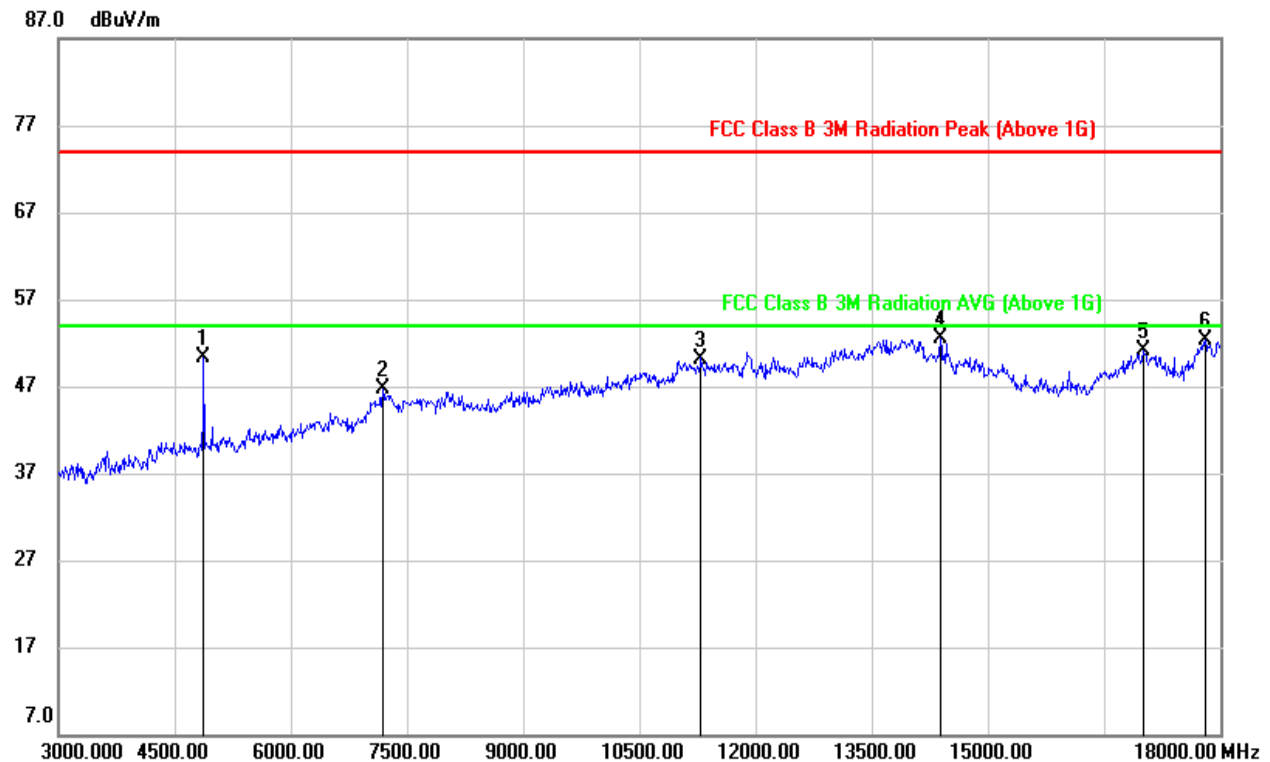
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	52.52	-0.31	52.21	74.00	-21.79	peak
2	7485.000	38.56	8.12	46.68	74.00	-27.32	peak
3	9480.000	36.74	11.27	48.01	74.00	-25.99	peak
4	11940.000	34.26	16.65	50.91	74.00	-23.09	peak
5	13920.000	32.20	20.83	53.03	74.00	-20.97	peak
6	17130.000	29.83	22.86	52.69	74.00	-21.31	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

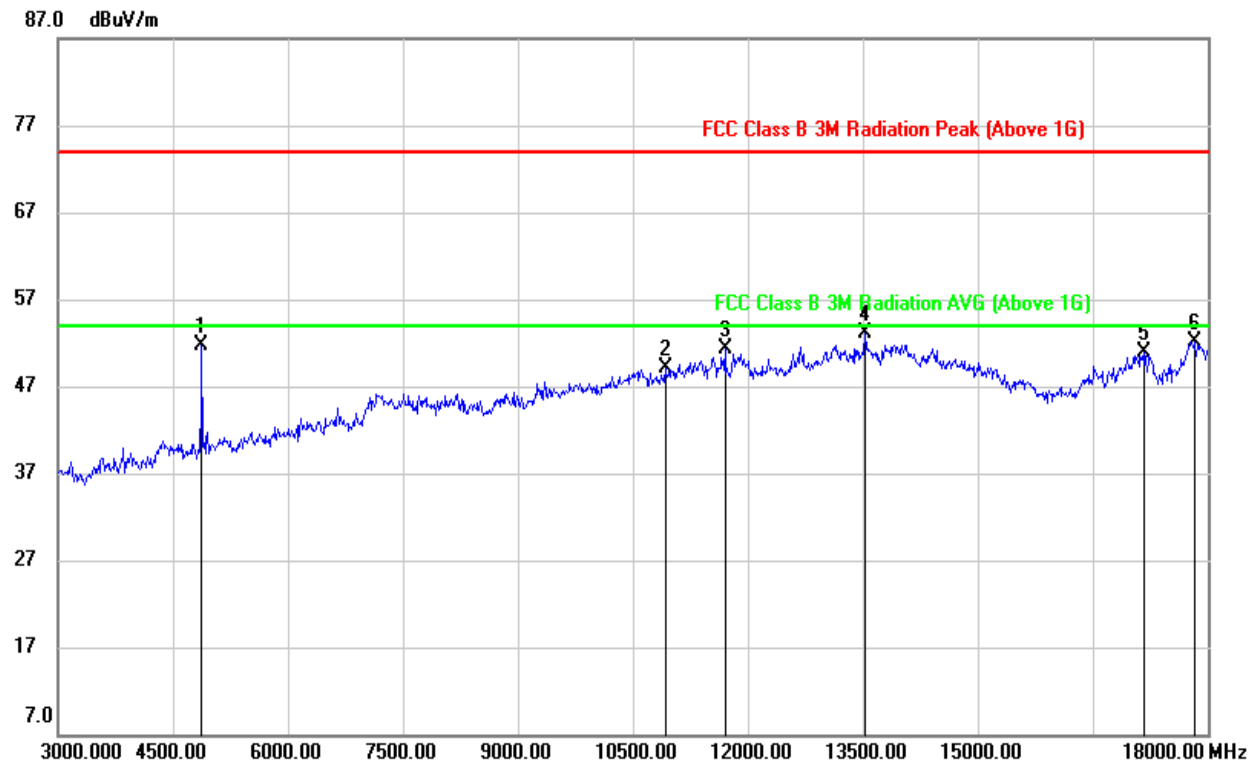
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	49.84	0.38	50.22	74.00	-23.78	peak
2	7185.000	38.99	7.73	46.72	74.00	-27.28	peak
3	11295.000	34.67	15.53	50.20	74.00	-23.80	peak
4	14385.000	32.46	19.97	52.43	74.00	-21.57	peak
5	17010.000	29.15	21.94	51.09	74.00	-22.91	peak
6	17805.000	25.89	26.48	52.37	74.00	-21.63	peak

Note: 1. Measurement = Reading Level + Correct Factor.

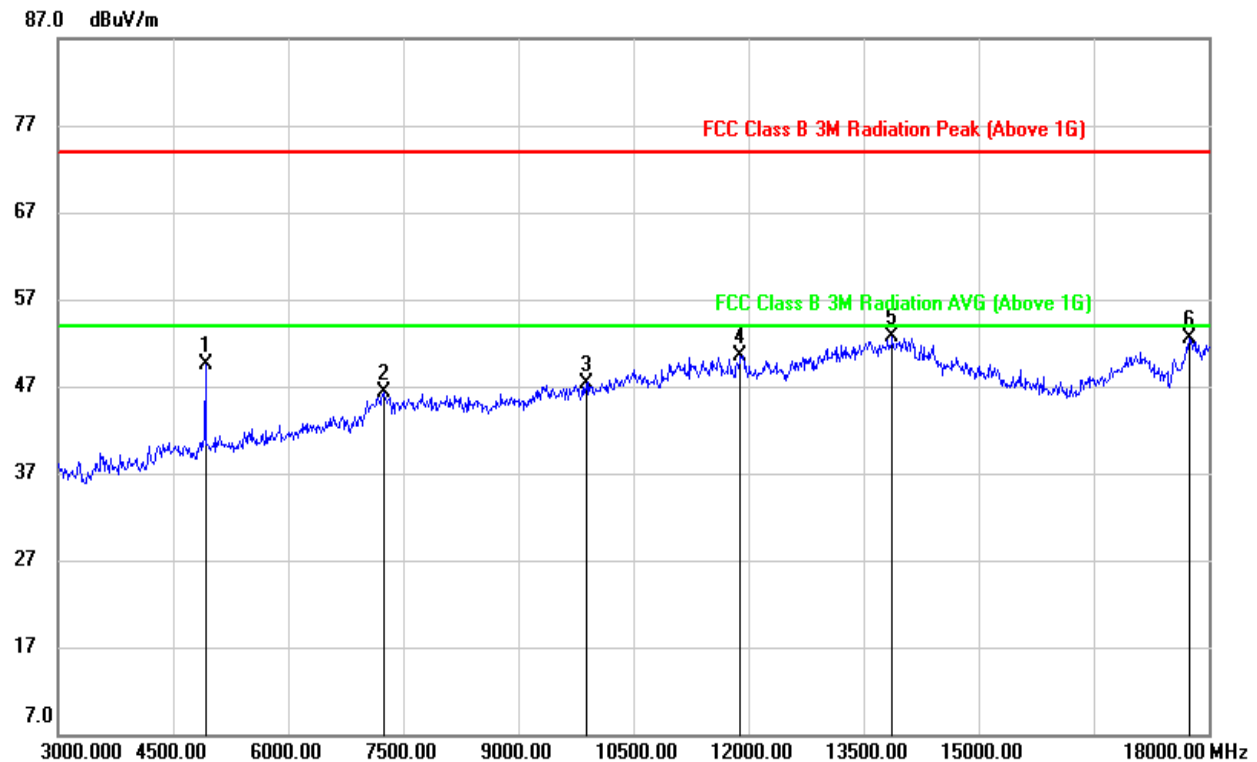
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	51.33	0.33	51.66	74.00	-22.34	peak
2	10920.000	34.97	14.09	49.06	74.00	-24.94	peak
3	11700.000	34.55	16.67	51.22	74.00	-22.78	peak
4	13530.000	32.39	20.78	53.17	74.00	-20.83	peak
5	17175.000	28.00	22.88	50.88	74.00	-23.12	peak
6	17835.000	25.74	26.33	52.07	74.00	-21.93	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

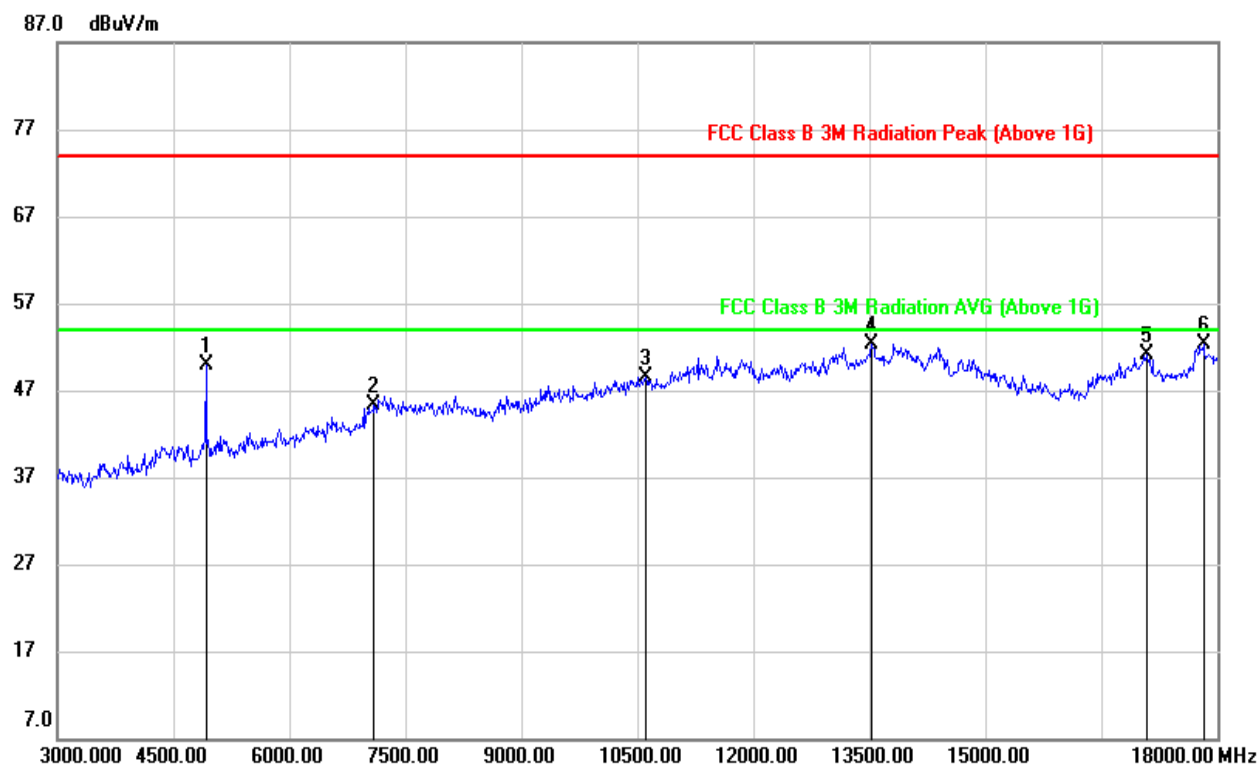
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.94	0.65	49.59	74.00	-24.41	peak
2	7245.000	38.55	7.84	46.39	74.00	-27.61	peak
3	9885.000	35.61	11.77	47.38	74.00	-26.62	peak
4	11895.000	33.48	17.04	50.52	74.00	-23.48	peak
5	13875.000	32.10	20.69	52.79	74.00	-21.21	peak
6	17745.000	26.65	25.86	52.51	74.00	-21.49	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	49.35	0.59	49.94	74.00	-24.06	peak
2	7095.000	37.83	7.42	45.25	74.00	-28.75	peak
3	10605.000	34.74	13.80	48.54	74.00	-25.46	peak
4	13530.000	31.60	20.78	52.38	74.00	-21.62	peak
5	17085.000	28.24	22.79	51.03	74.00	-22.97	peak
6	17820.000	25.70	26.56	52.26	74.00	-21.74	peak

Note: 1. Measurement = Reading Level + Correct Factor.

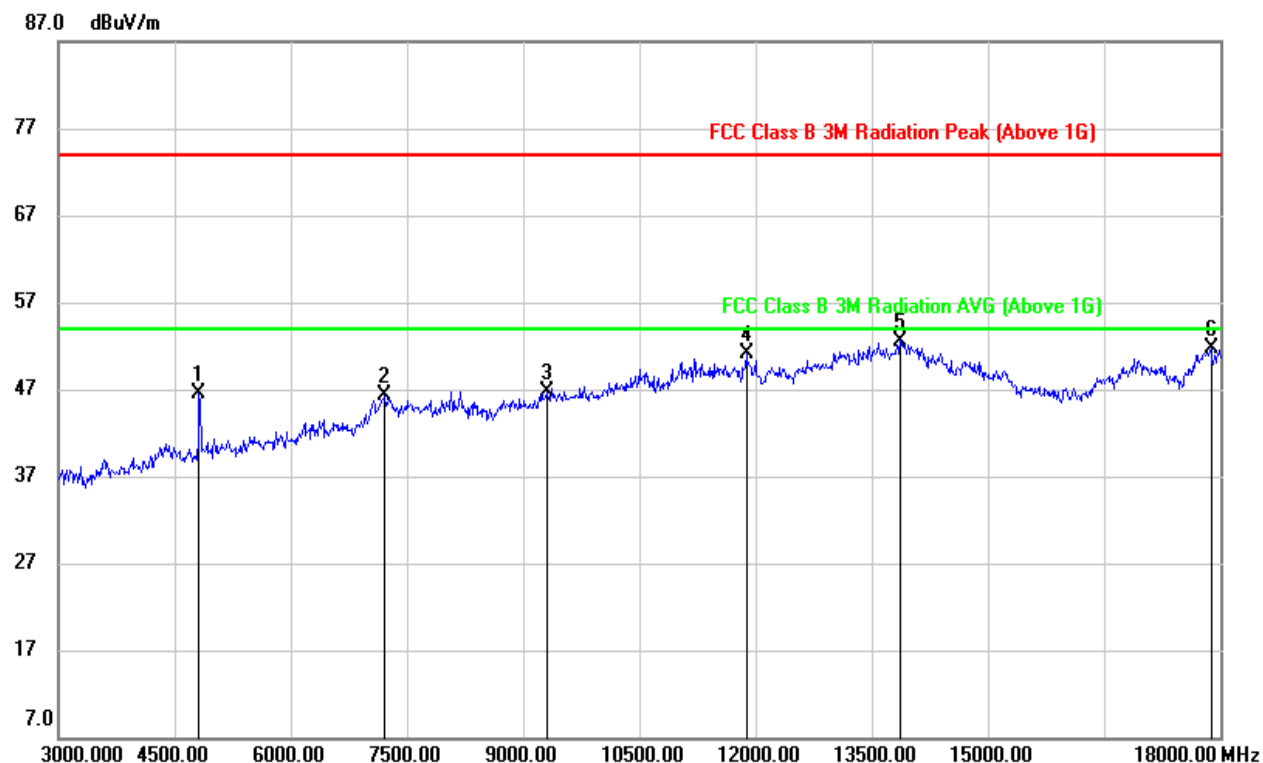
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



7.3.2. 802.11g MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

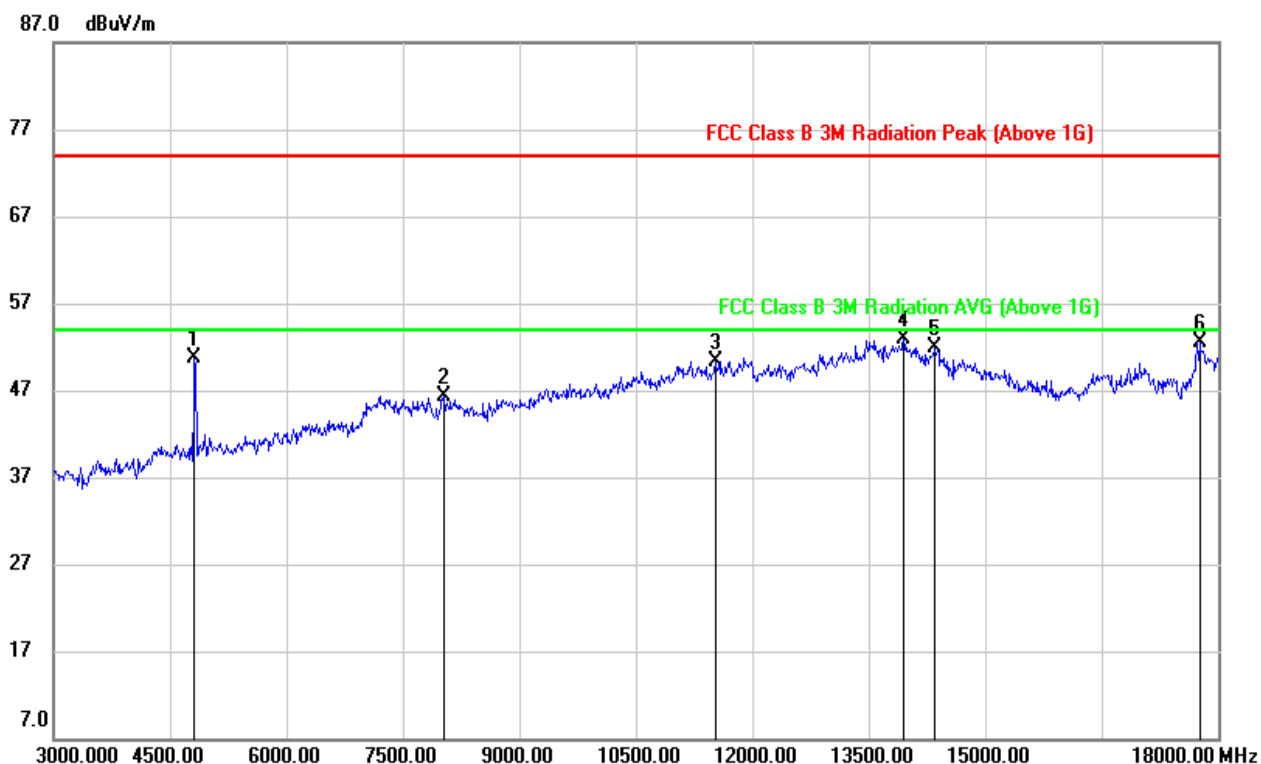


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	46.86	-0.38	46.48	74.00	-27.52	peak
2	7215.000	38.43	7.78	46.21	74.00	-27.79	peak
3	9300.000	35.99	10.66	46.65	74.00	-27.35	peak
4	11880.000	34.29	16.74	51.03	74.00	-22.97	peak
5	13860.000	31.88	20.72	52.60	74.00	-21.40	peak
6	17880.000	25.42	26.32	51.74	74.00	-22.26	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

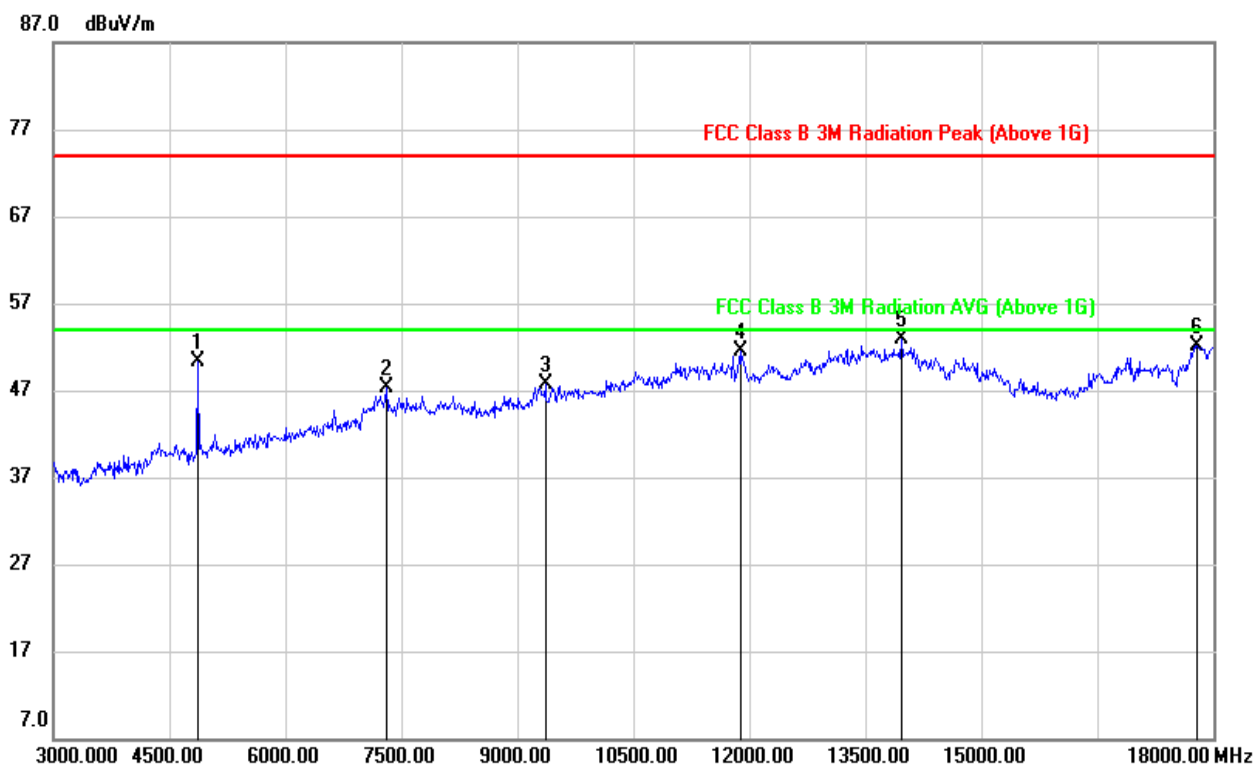
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	51.09	-0.31	50.78	74.00	-23.22	peak
2	8025.000	37.66	8.56	46.22	74.00	-27.78	peak
3	11520.000	34.13	16.25	50.38	74.00	-23.62	peak
4	13950.000	32.08	20.78	52.86	74.00	-21.14	peak
5	14355.000	31.60	20.31	51.91	74.00	-22.09	peak
6	17760.000	26.08	26.39	52.47	74.00	-21.53	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

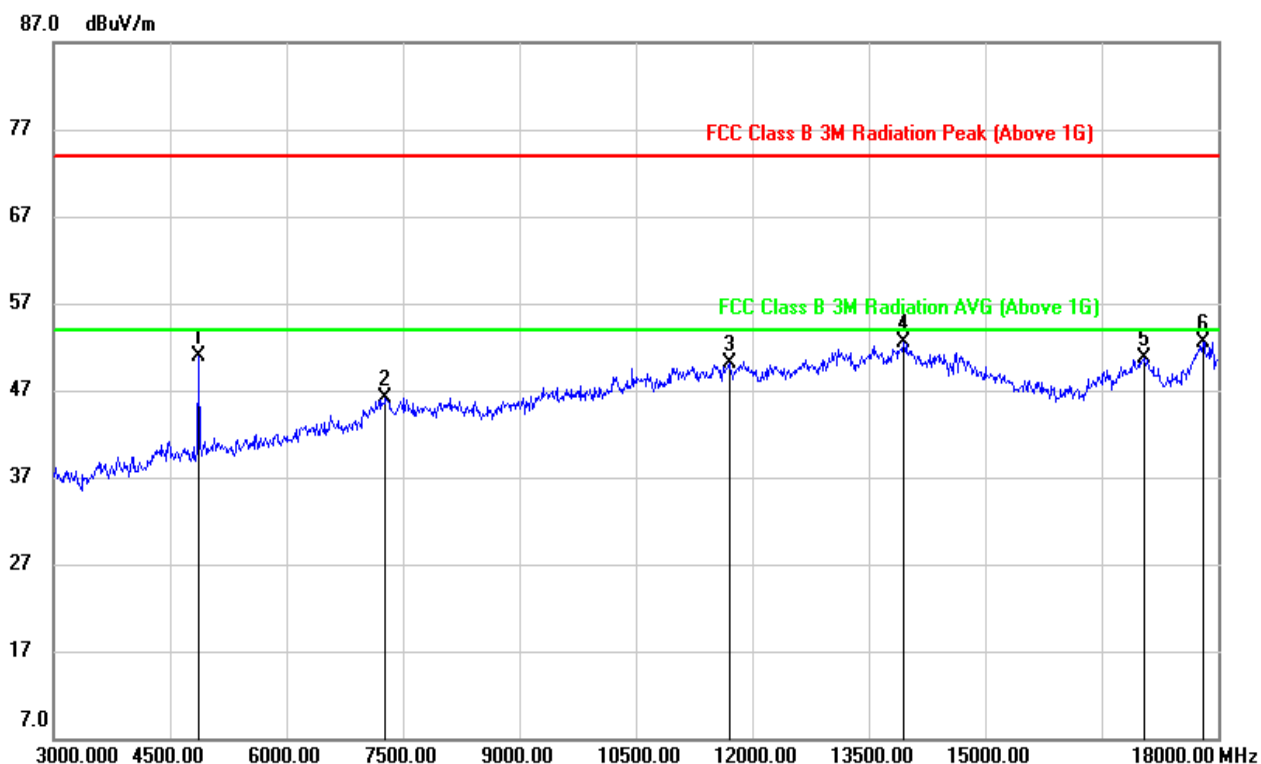
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	50.03	0.20	50.23	74.00	-23.77	peak
2	7305.000	39.53	7.80	47.33	74.00	-26.67	peak
3	9360.000	36.87	10.83	47.70	74.00	-26.30	peak
4	11880.000	34.72	16.74	51.46	74.00	-22.54	peak
5	13965.000	32.18	20.66	52.84	74.00	-21.16	peak
6	17790.000	25.84	26.36	52.20	74.00	-21.80	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

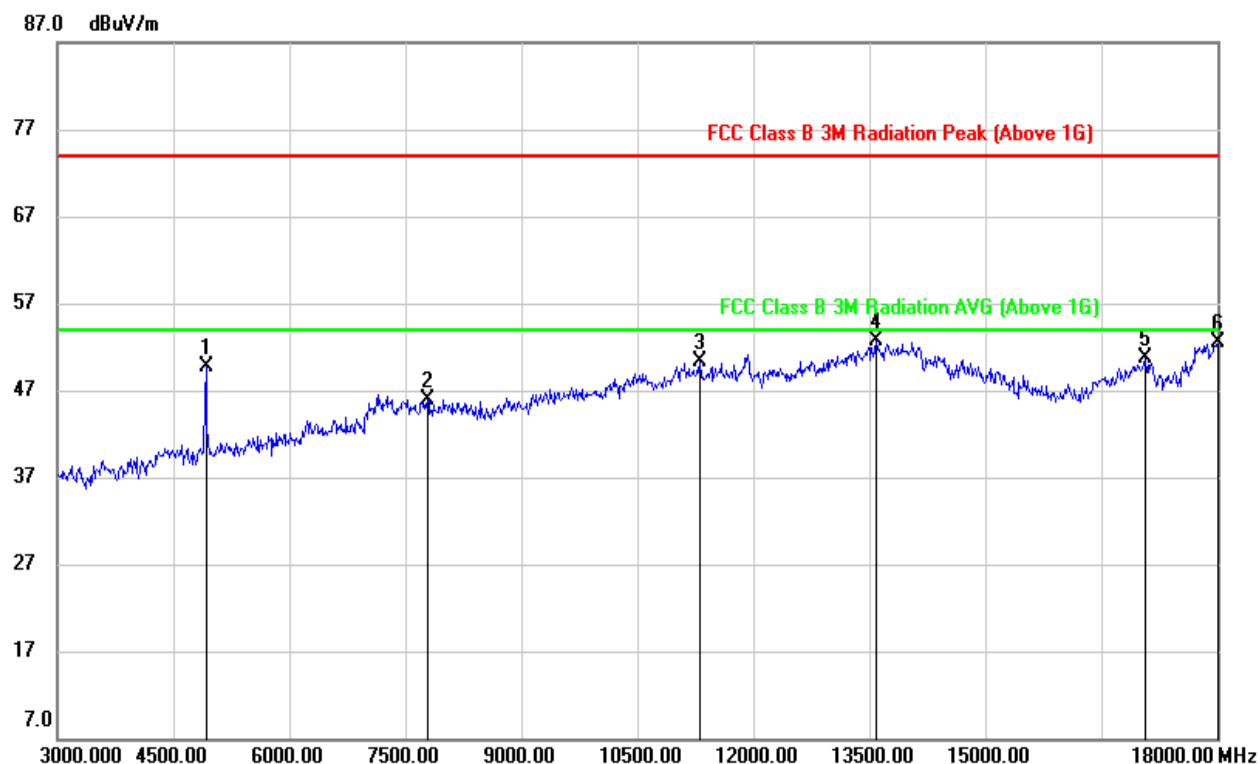
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	50.63	0.18	50.81	74.00	-23.19	peak
2	7275.000	38.33	7.81	46.14	74.00	-27.86	peak
3	11700.000	33.49	16.67	50.16	74.00	-23.84	peak
4	13950.000	31.70	20.78	52.48	74.00	-21.52	peak
5	17040.000	28.15	22.59	50.74	74.00	-23.26	peak
6	17805.000	25.76	26.80	52.56	74.00	-21.44	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

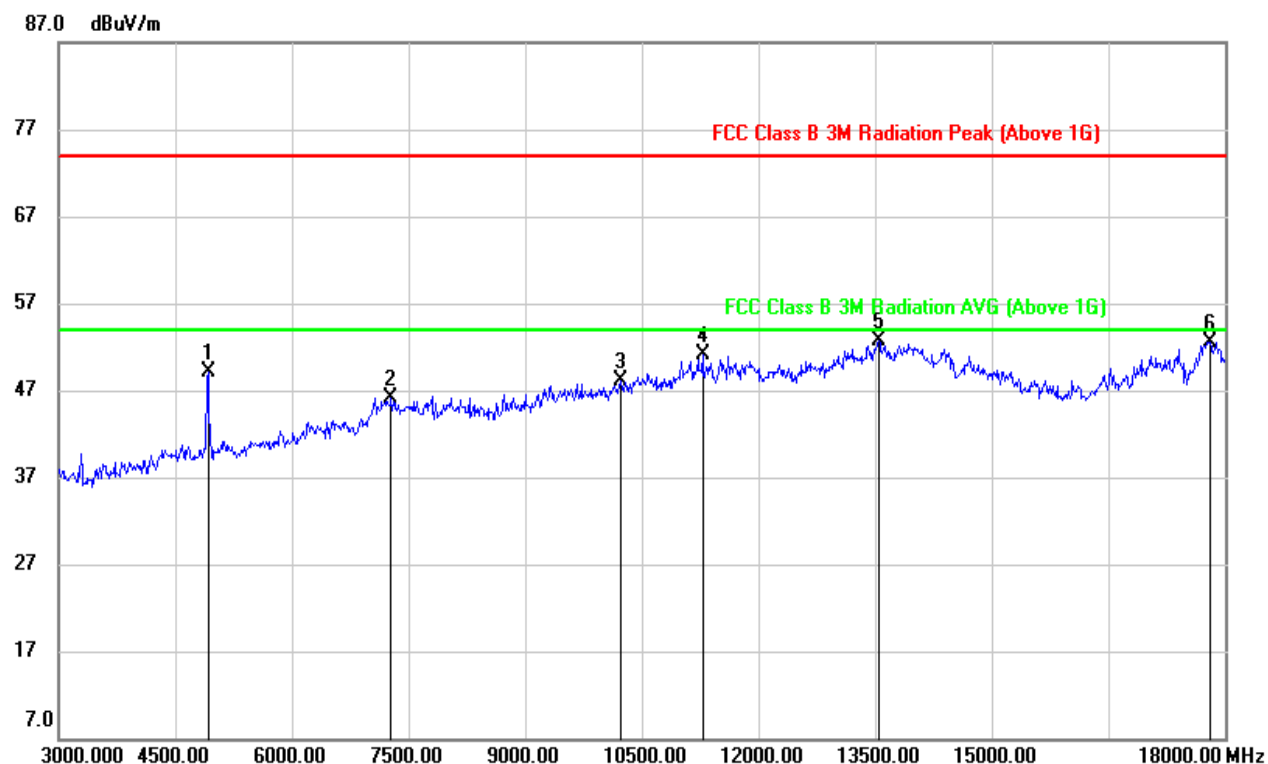
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	49.14	0.65	49.79	74.00	-24.21	peak
2	7785.000	37.70	8.28	45.98	74.00	-28.02	peak
3	11310.000	34.85	15.44	50.29	74.00	-23.71	peak
4	13590.000	32.14	20.51	52.65	74.00	-21.35	peak
5	17070.000	28.54	22.19	50.73	74.00	-23.27	peak
6	18000.000	25.49	27.06	52.55	74.00	-21.45	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.58	0.59	49.17	74.00	-24.83	peak
2	7275.000	38.38	7.81	46.19	74.00	-27.81	peak
3	10230.000	35.32	12.72	48.04	74.00	-25.96	peak
4	11280.000	35.90	15.18	51.08	74.00	-22.92	peak
5	13545.000	31.89	20.88	52.77	74.00	-21.23	peak
6	17805.000	25.73	26.80	52.53	74.00	-21.47	peak

Note: 1. Measurement = Reading Level + Correct Factor.

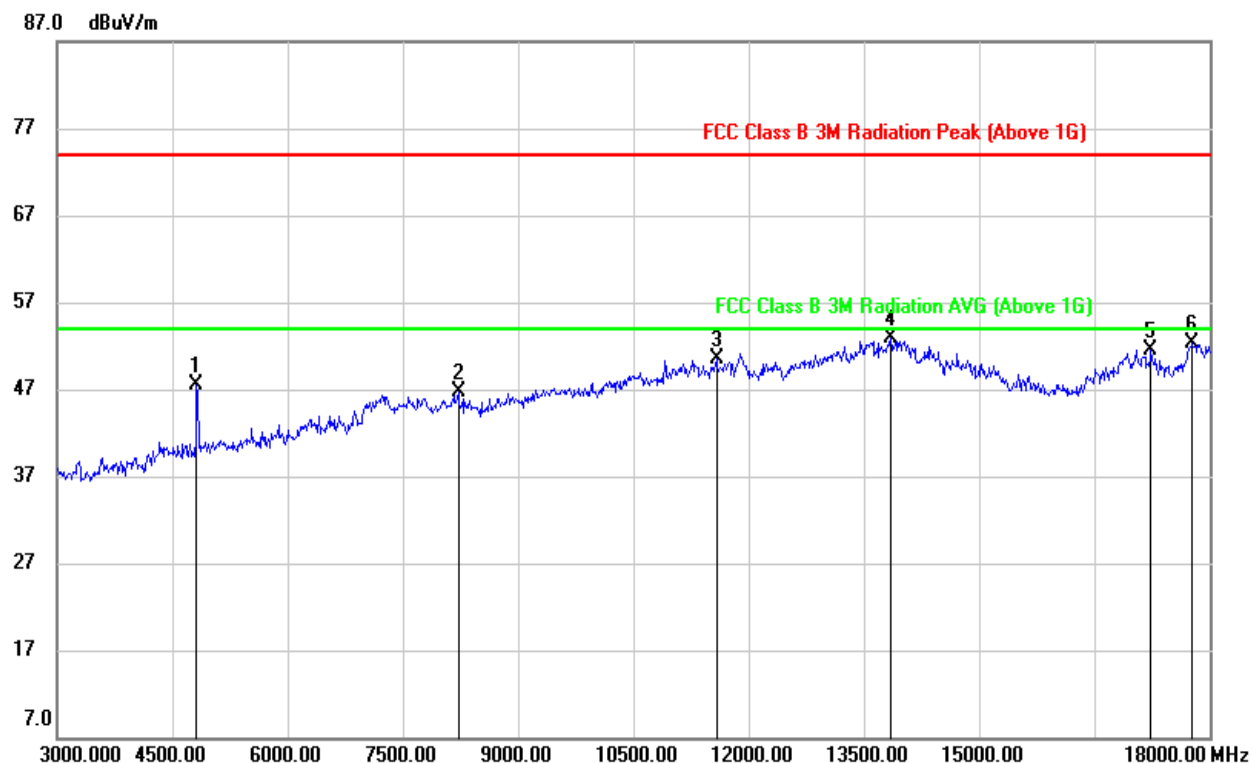
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



7.3.3. 802.11n20 MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

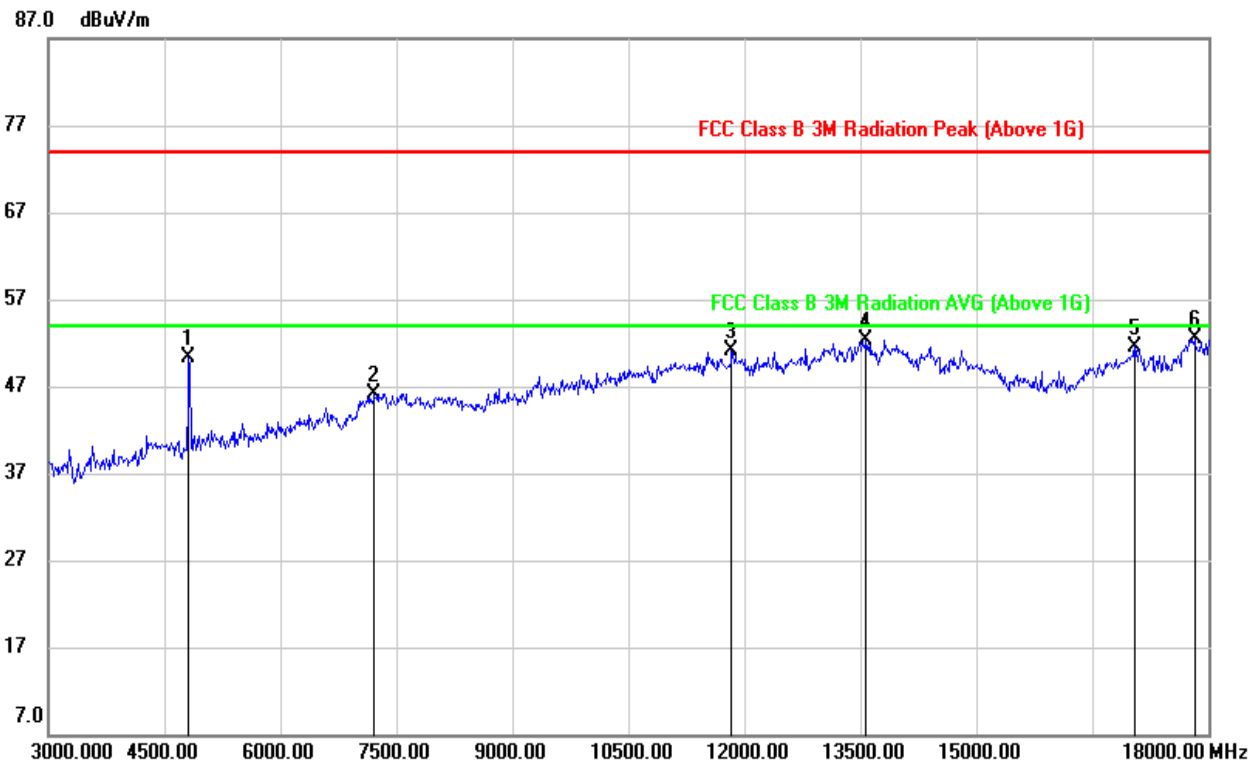


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	47.84	-0.38	47.46	74.00	-26.54	peak
2	8220.000	37.97	8.70	46.67	74.00	-27.33	peak
3	11580.000	34.40	16.09	50.49	74.00	-23.51	peak
4	13845.000	32.26	20.72	52.98	74.00	-21.02	peak
5	17235.000	28.87	22.72	51.59	74.00	-22.41	peak
6	17775.000	26.14	26.17	52.31	74.00	-21.69	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

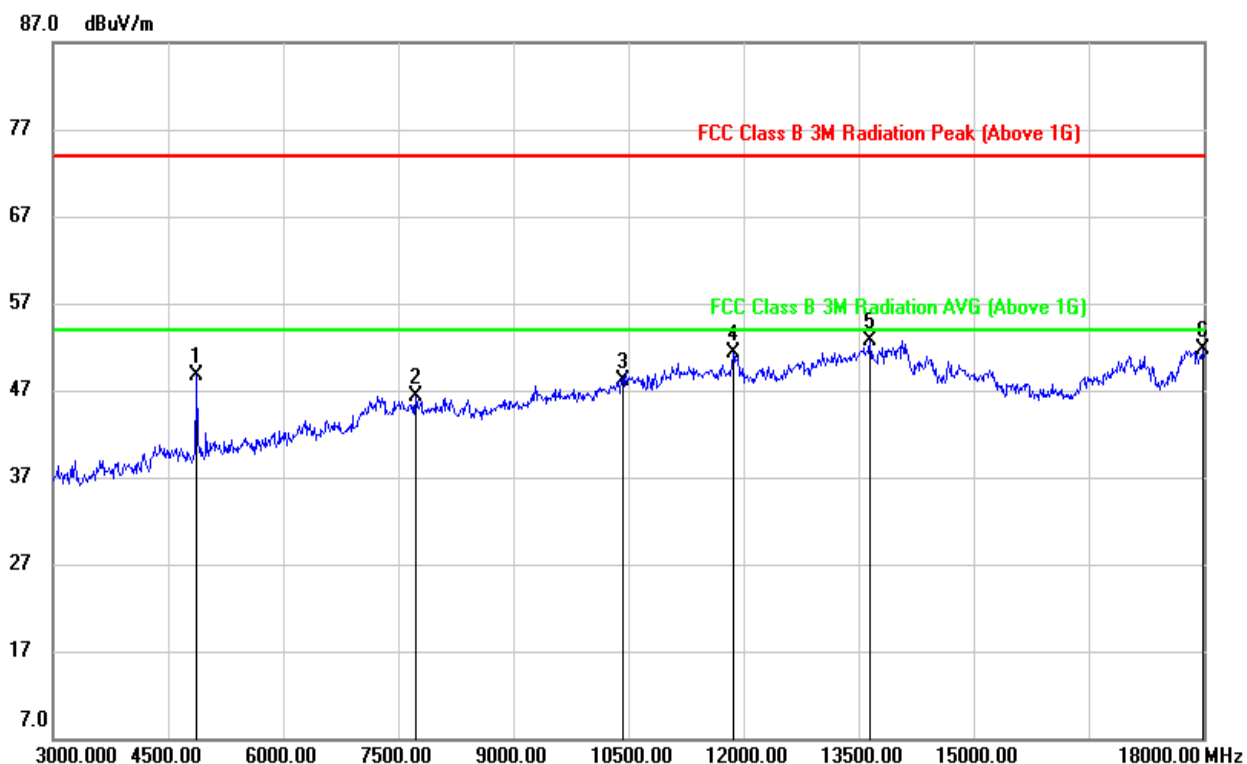
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	50.67	-0.31	50.36	74.00	-23.64	peak
2	7215.000	38.33	7.82	46.15	74.00	-27.85	peak
3	11835.000	34.50	16.61	51.11	74.00	-22.89	peak
4	13575.000	31.61	20.63	52.24	74.00	-21.76	peak
5	17040.000	29.01	22.59	51.60	74.00	-22.40	peak
6	17820.000	25.92	26.56	52.48	74.00	-21.52	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

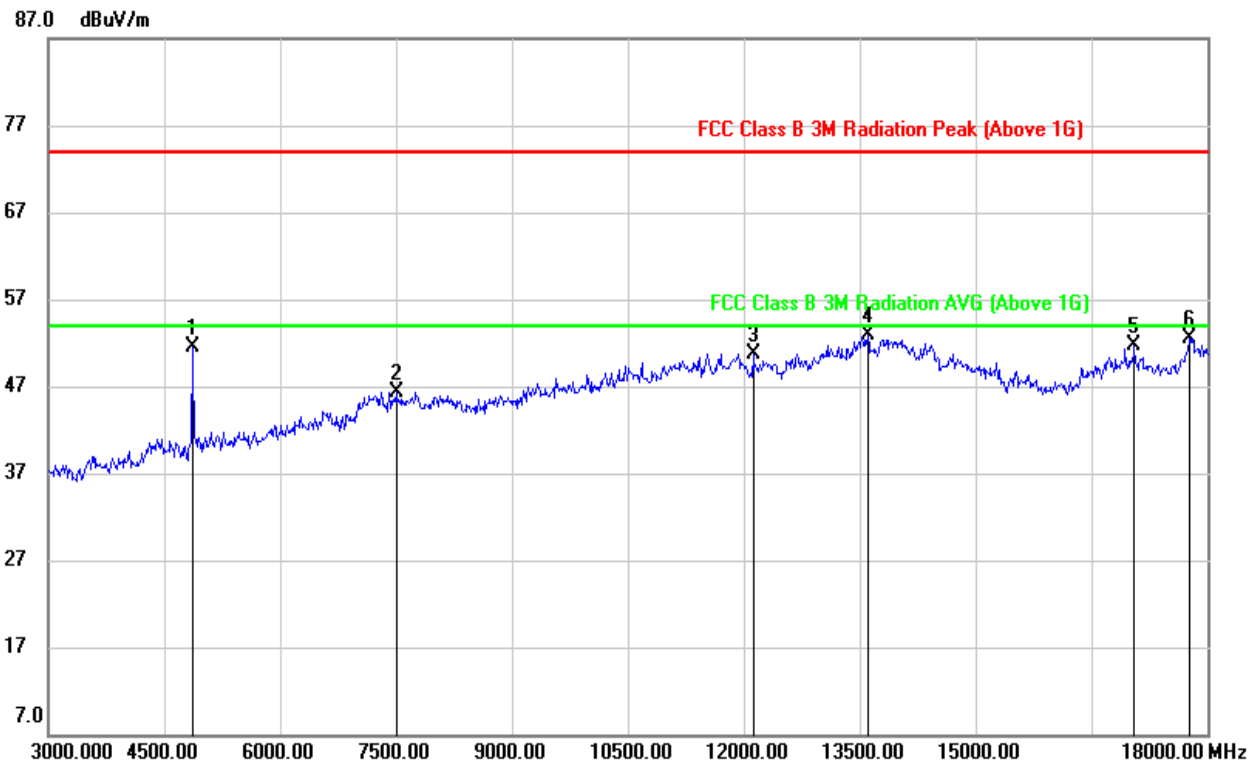
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.39	0.38	48.77	74.00	-25.23	peak
2	7725.000	38.25	8.08	46.33	74.00	-27.67	peak
3	10425.000	34.93	13.25	48.18	74.00	-25.82	peak
4	11865.000	34.92	16.44	51.36	74.00	-22.64	peak
5	13650.000	32.26	20.43	52.69	74.00	-21.31	peak
6	17985.000	24.64	27.05	51.69	74.00	-22.31	peak

Note: 1. Measurement = Reading Level + Correct Factor.

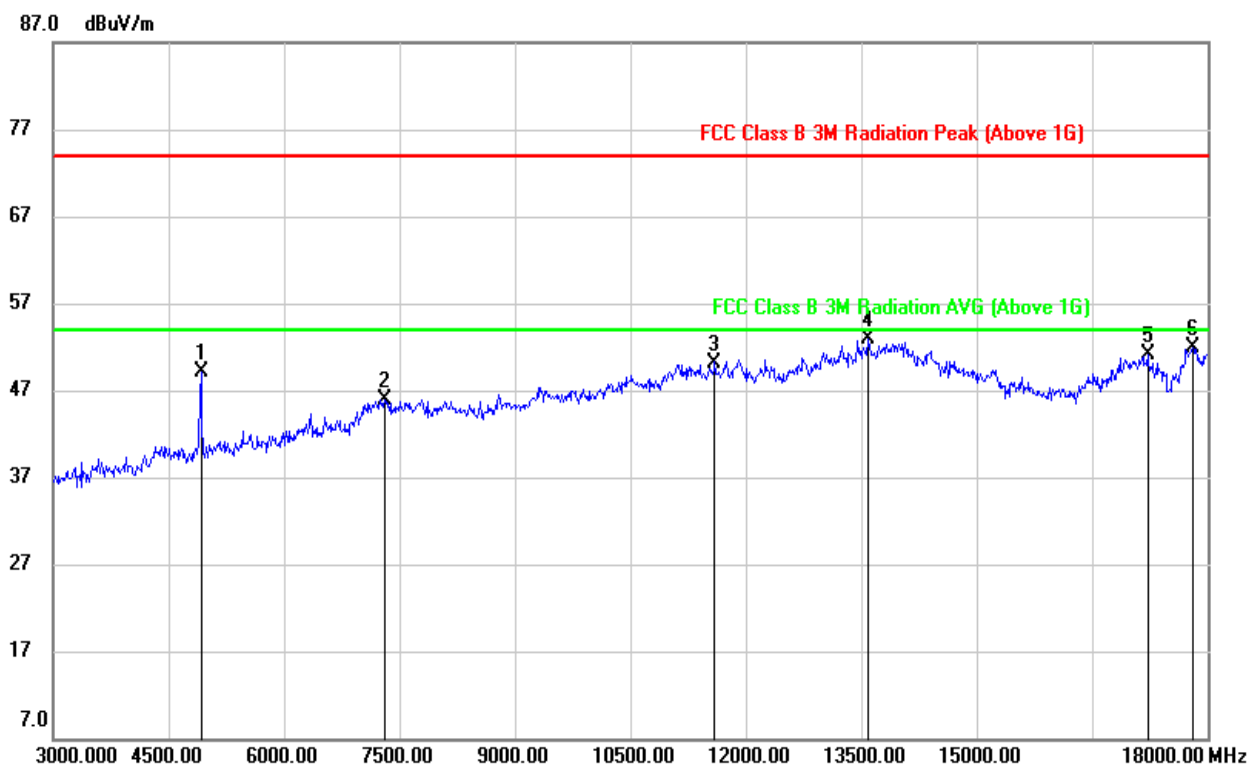
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	51.39	0.18	51.57	74.00	-22.43	peak
2	7500.000	38.08	8.32	46.40	74.00	-27.60	peak
3	12120.000	34.27	16.39	50.66	74.00	-23.34	peak
4	13605.000	32.46	20.39	52.85	74.00	-21.15	peak
5	17055.000	29.03	22.68	51.71	74.00	-22.29	peak
6	17760.000	26.12	26.39	52.51	74.00	-21.49	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

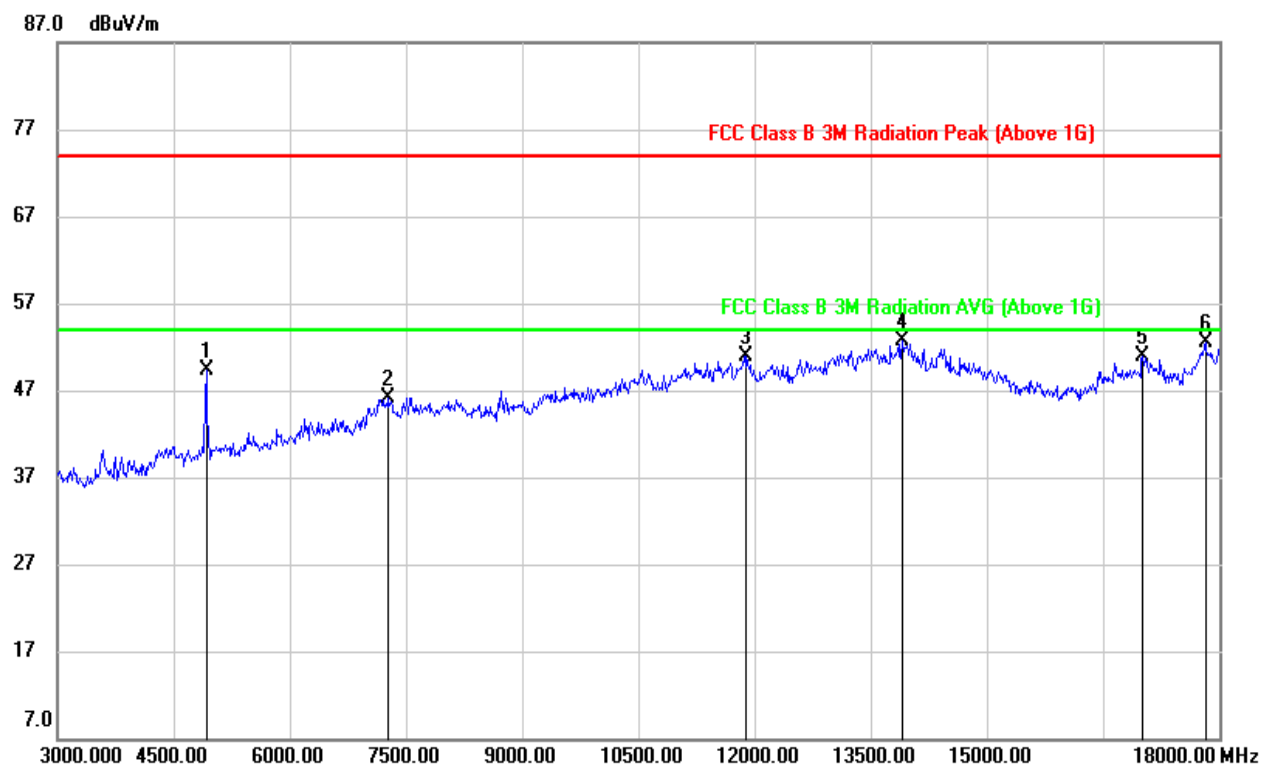
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.42	0.65	49.07	74.00	-24.93	peak
2	7305.000	38.11	7.80	45.91	74.00	-28.09	peak
3	11595.000	33.98	16.22	50.20	74.00	-23.80	peak
4	13590.000	32.48	20.51	52.99	74.00	-21.01	peak
5	17220.000	28.42	22.75	51.17	74.00	-22.83	peak
6	17805.000	25.33	26.48	51.81	74.00	-22.19	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.74	0.59	49.33	74.00	-24.67	peak
2	7275.000	38.35	7.81	46.16	74.00	-27.84	peak
3	11895.000	34.30	16.64	50.94	74.00	-23.06	peak
4	13905.000	31.84	20.84	52.68	74.00	-21.32	peak
5	17010.000	28.59	22.36	50.95	74.00	-23.05	peak
6	17820.000	26.03	26.56	52.59	74.00	-21.41	peak

Note: 1. Measurement = Reading Level + Correct Factor.

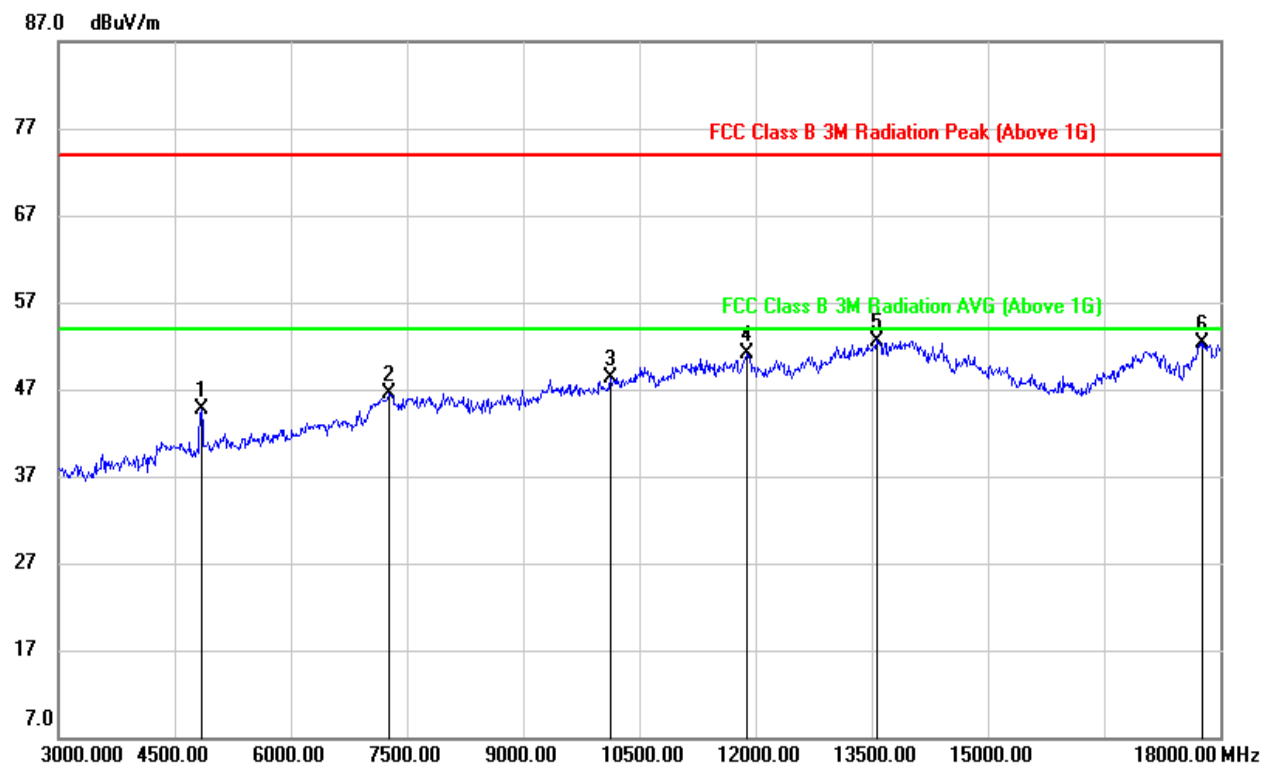
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



7.3.4. 802.11n40 MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

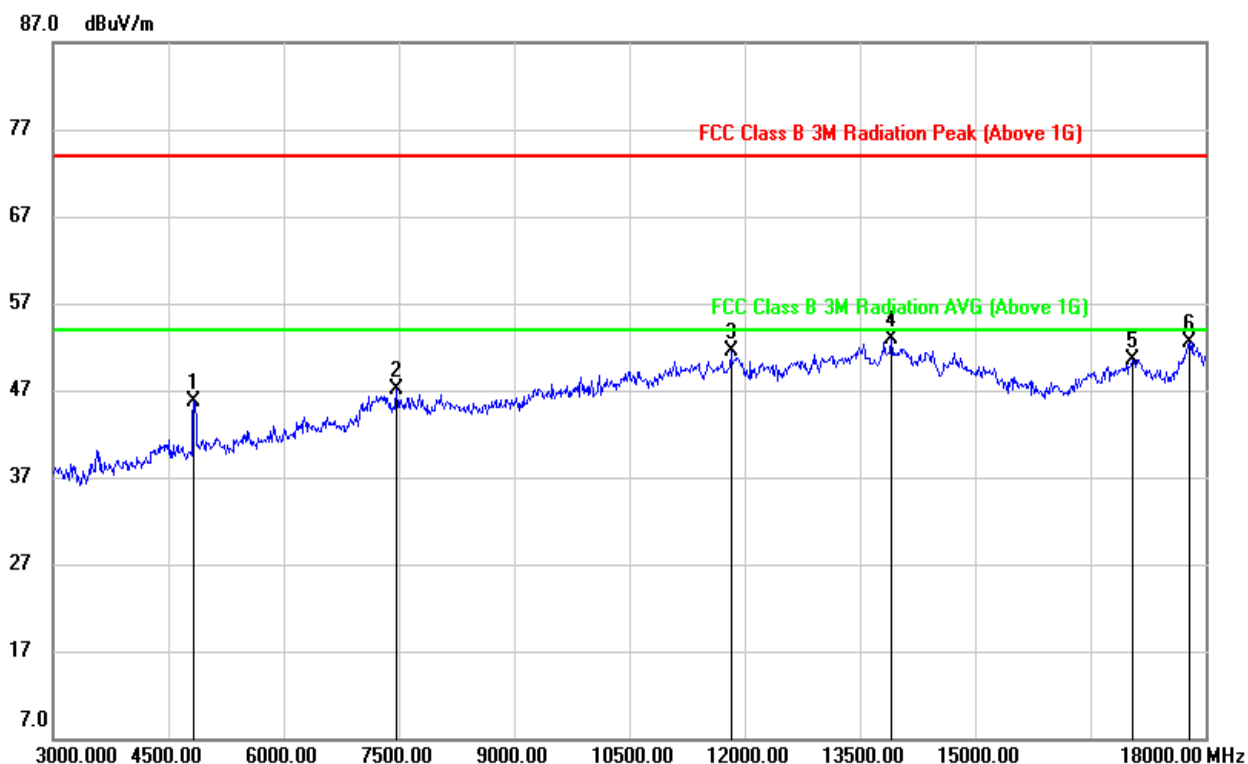


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	44.68	0.00	44.68	74.00	-29.32	peak
2	7260.000	38.56	7.86	46.42	74.00	-27.58	peak
3	10125.000	36.02	12.37	48.39	74.00	-25.61	peak
4	11880.000	34.32	16.74	51.06	74.00	-22.94	peak
5	13575.000	32.17	20.43	52.60	74.00	-21.40	peak
6	17775.000	26.23	26.17	52.40	74.00	-21.60	peak

Note: 1. Measurement = Reading Level + Correct Factor.

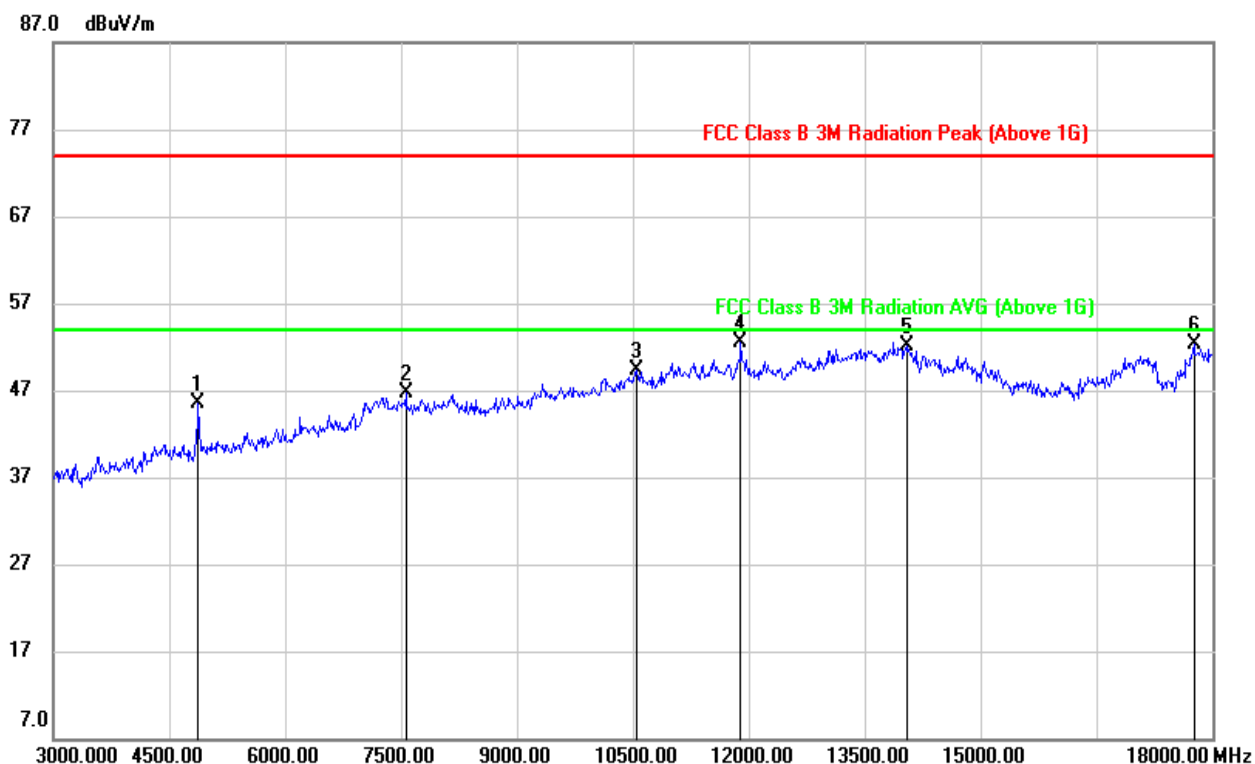
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4830.000	45.94	-0.14	45.80	74.00	-28.20	peak
2	7470.000	39.14	7.93	47.07	74.00	-26.93	peak
3	11820.000	34.91	16.58	51.49	74.00	-22.51	peak
4	13905.000	32.05	20.84	52.89	74.00	-21.11	peak
5	17040.000	27.99	22.59	50.58	74.00	-23.42	peak
6	17790.000	25.81	26.76	52.57	74.00	-21.43	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

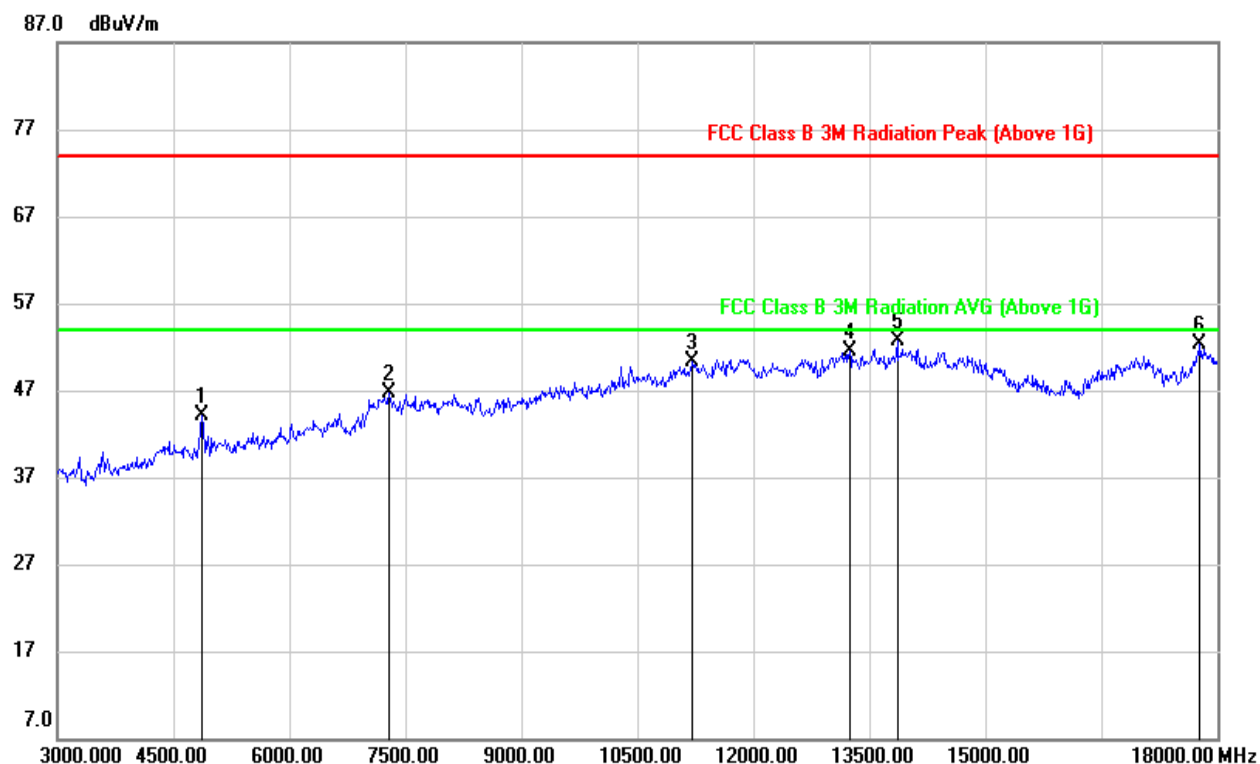
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	45.07	0.38	45.45	74.00	-28.55	peak
2	7560.000	38.50	8.18	46.68	74.00	-27.32	peak
3	10545.000	35.50	13.79	49.29	74.00	-24.71	peak
4	11895.000	35.50	17.04	52.54	74.00	-21.46	peak
5	14055.000	31.56	20.64	52.20	74.00	-21.80	peak
6	17760.000	26.35	25.99	52.34	74.00	-21.66	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

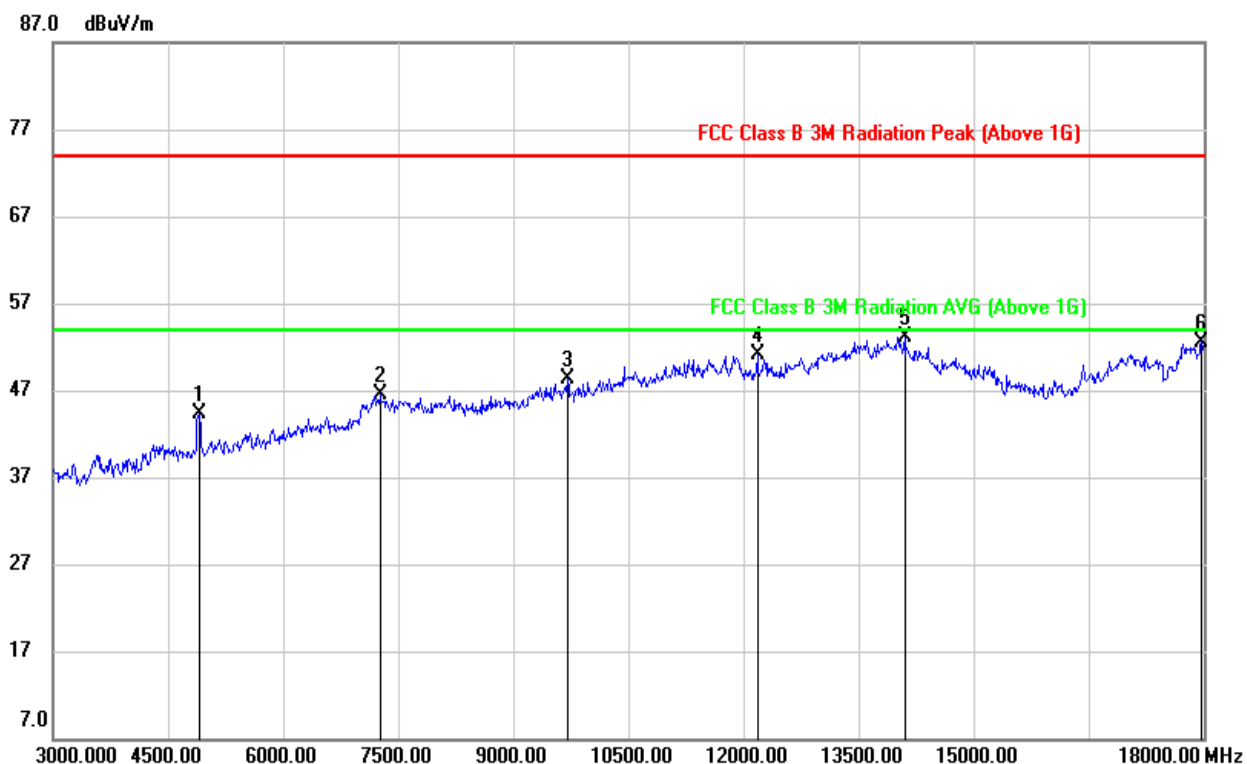
**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	43.87	0.33	44.20	74.00	-29.80	peak
2	7290.000	38.80	7.84	46.64	74.00	-27.36	peak
3	11205.000	34.85	15.40	50.25	74.00	-23.75	peak
4	13245.000	32.22	19.37	51.59	74.00	-22.41	peak
5	13860.000	31.85	20.92	52.77	74.00	-21.23	peak
6	17775.000	25.77	26.57	52.34	74.00	-21.66	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

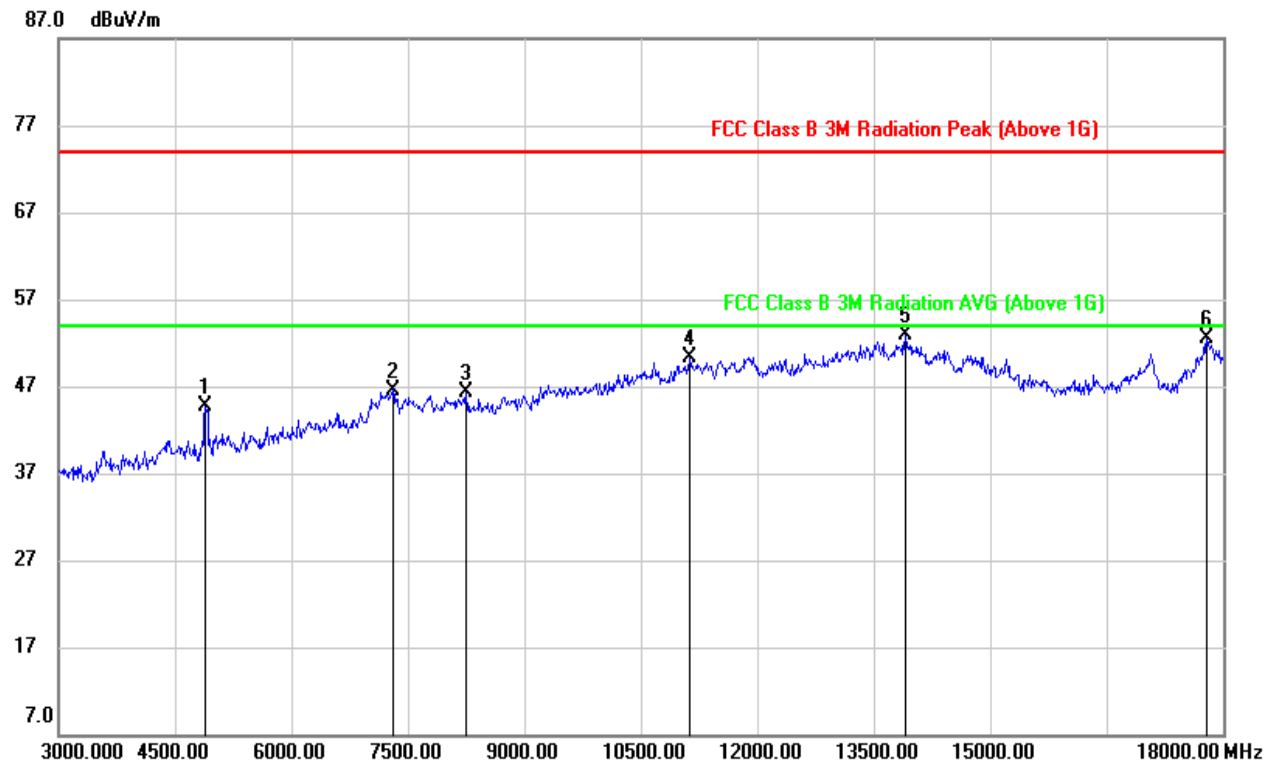
**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	43.63	0.68	44.31	74.00	-29.69	peak
2	7260.000	38.56	7.86	46.42	74.00	-27.58	peak
3	9705.000	36.92	11.46	48.38	74.00	-25.62	peak
4	12180.000	34.95	16.07	51.02	74.00	-22.98	peak
5	14100.000	32.36	20.67	53.03	74.00	-20.97	peak
6	17970.000	25.56	27.04	52.60	74.00	-21.40	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4890.000	44.24	0.49	44.73	74.00	-29.27	peak
2	7305.000	38.79	7.81	46.60	74.00	-27.40	peak
3	8250.000	37.51	8.72	46.23	74.00	-27.77	peak
4	11130.000	35.27	15.03	50.30	74.00	-23.70	peak
5	13905.000	32.16	20.84	53.00	74.00	-21.00	peak
6	17790.000	25.74	26.76	52.50	74.00	-21.50	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

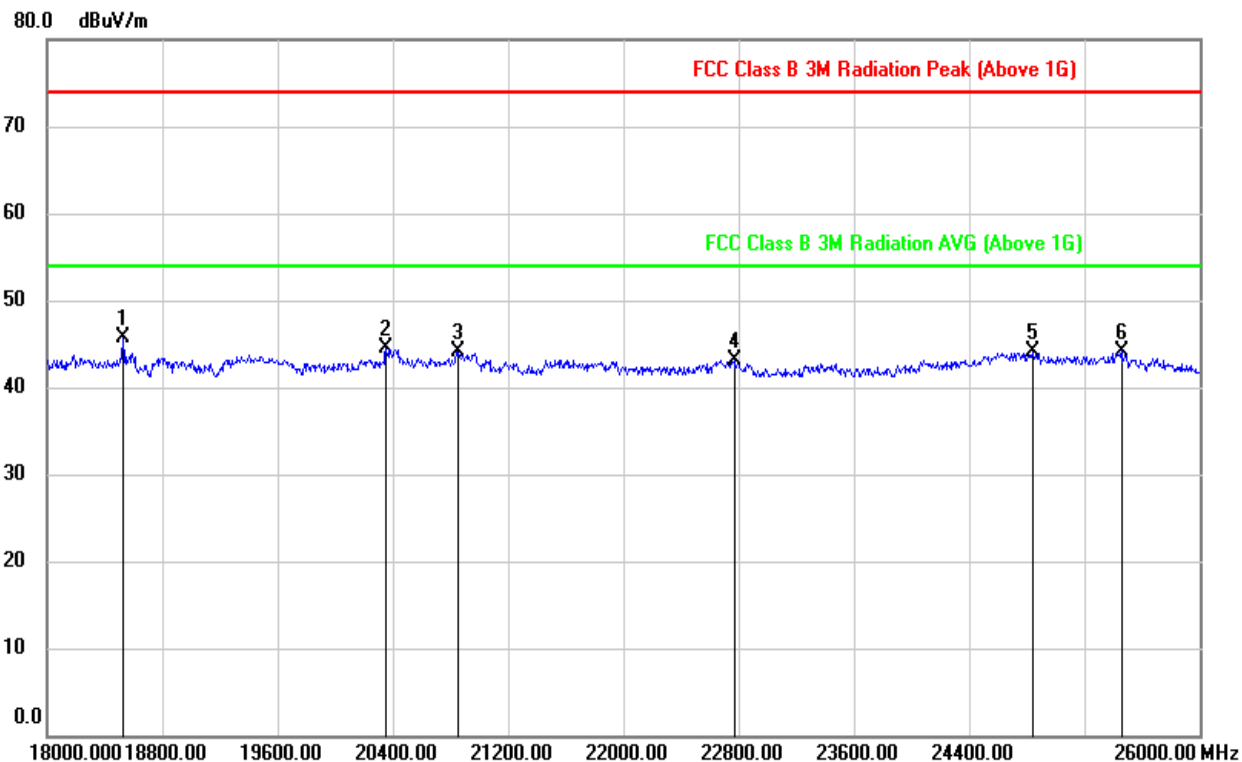
3. Peak: Peak detector.



7.4. SPURIOUS EMISSIONS 18~26GHz

7.4.1. 802.11b MODE

SPURIOUS EMISSIONS (HIGH CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

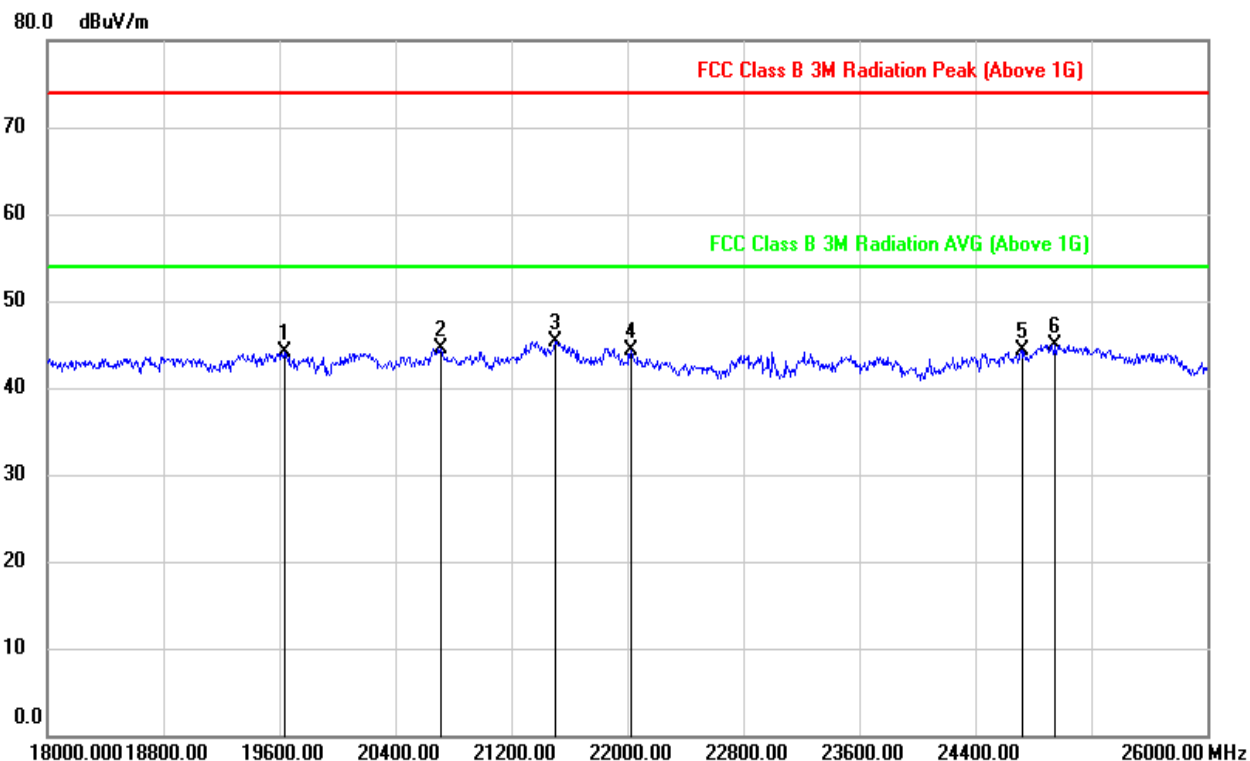


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18528.000	50.91	-5.26	45.65	74.00	-28.35	peak
2	20352.000	50.01	-5.50	44.51	74.00	-29.49	peak
3	20856.000	49.05	-5.01	44.04	74.00	-29.96	peak
4	22768.000	46.81	-3.68	43.13	74.00	-30.87	peak
5	24840.000	46.33	-2.24	44.09	74.00	-29.91	peak
6	25456.000	45.95	-1.75	44.20	74.00	-29.80	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

**SPURIOUS EMISSIONS (HIGH CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19632.000	49.45	-5.40	44.05	74.00	-29.95	peak
2	20712.000	49.71	-5.16	44.55	74.00	-29.45	peak
3	21504.000	50.03	-4.69	45.34	74.00	-28.66	peak
4	22024.000	48.78	-4.46	44.32	74.00	-29.68	peak
5	24720.000	46.72	-2.33	44.39	74.00	-29.61	peak
6	24944.000	47.05	-2.15	44.90	74.00	-29.10	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

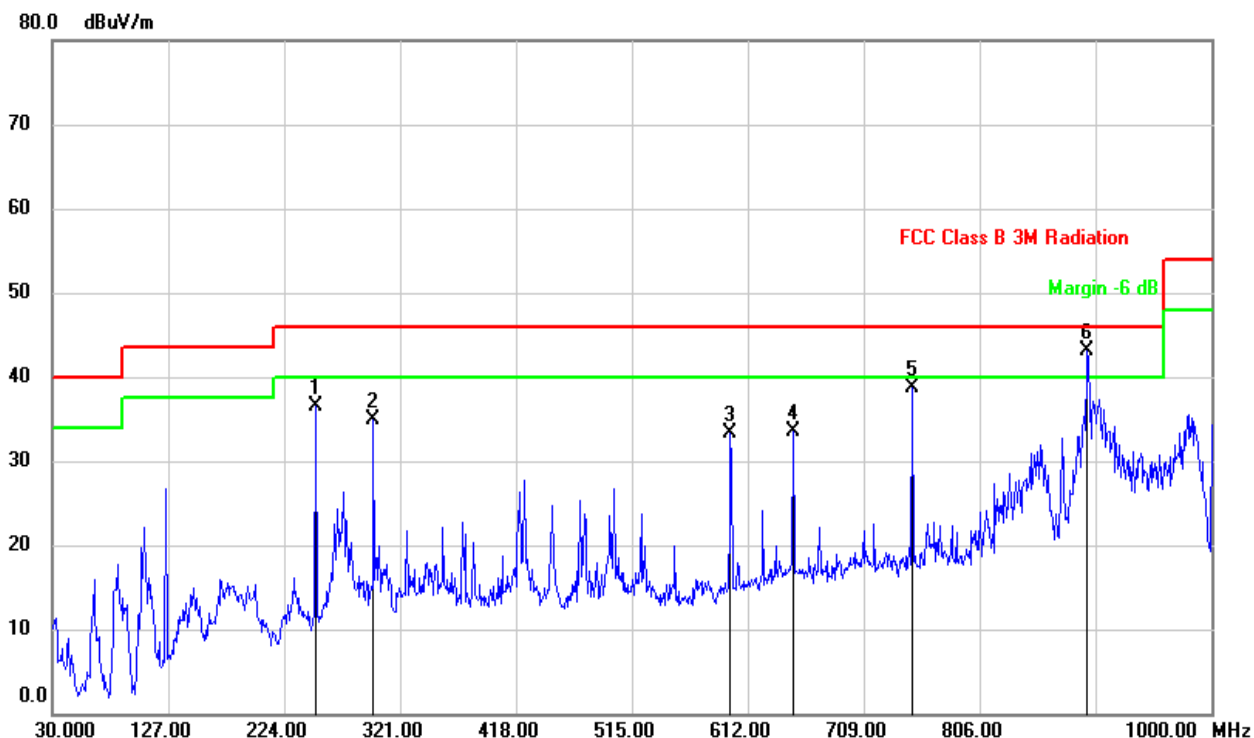
Note: All the modes had been tested, but only the worst data were recorded in the report.



7.5. SPURIOUS EMISSIONS 30M ~ 1 GHz

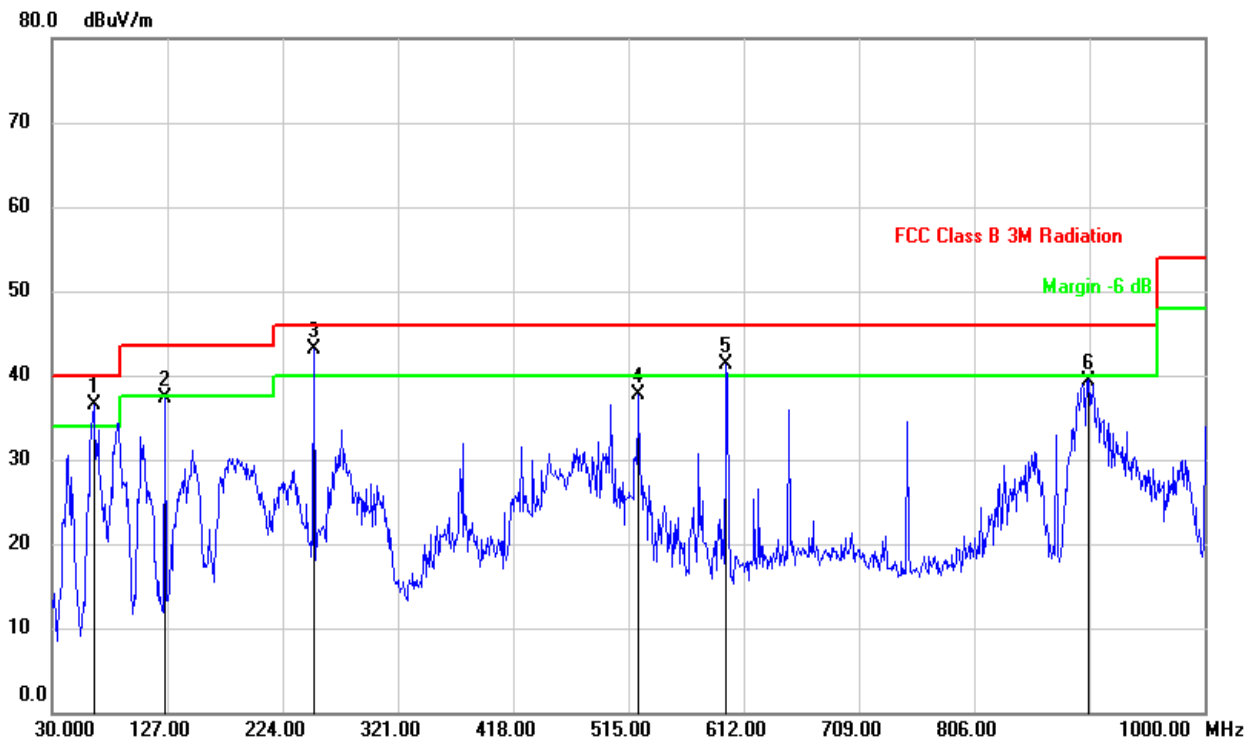
7.5.1. 802.11b MODE

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	250.1900	54.13	-17.70	36.43	46.00	-9.57	QP
2	298.6900	50.02	-15.19	34.83	46.00	-11.17	QP
3	597.4500	42.42	-9.07	33.35	46.00	-12.65	QP
4	649.8300	42.12	-8.60	33.52	46.00	-12.48	QP
5	749.7400	46.17	-7.52	38.65	46.00	-7.35	QP
6	896.2100	48.50	-5.37	43.13	46.00	-2.87	QP

- Note: 1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

**SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	64.9200	57.92	-21.39	36.53	40.00	-3.47	QP
2	125.0600	56.21	-18.82	37.39	43.50	-6.11	QP
3	250.1900	60.73	-17.70	43.03	46.00	-2.97	QP
4	523.7300	48.35	-10.64	37.71	46.00	-8.29	QP
5	597.4500	50.33	-9.07	41.26	46.00	-4.74	QP
6	902.0300	44.66	-5.26	39.40	46.00	-6.60	QP

Note: 1. Result Level = Read Level + Correct Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

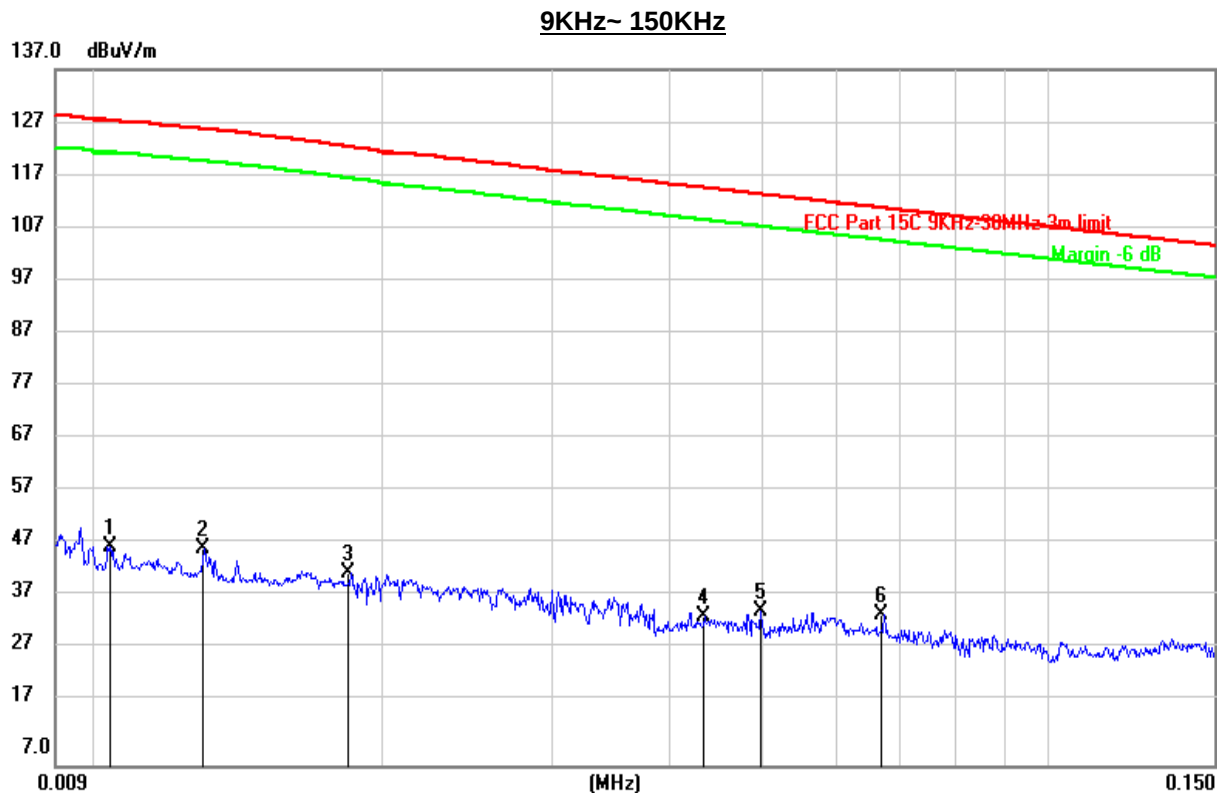
Note: All the modulation and channels had been tested, but only the worst data recorded in the report.



7.6. SPURIOUS EMISSIONS BELOW 30M

7.6.1. 802.11b MODE

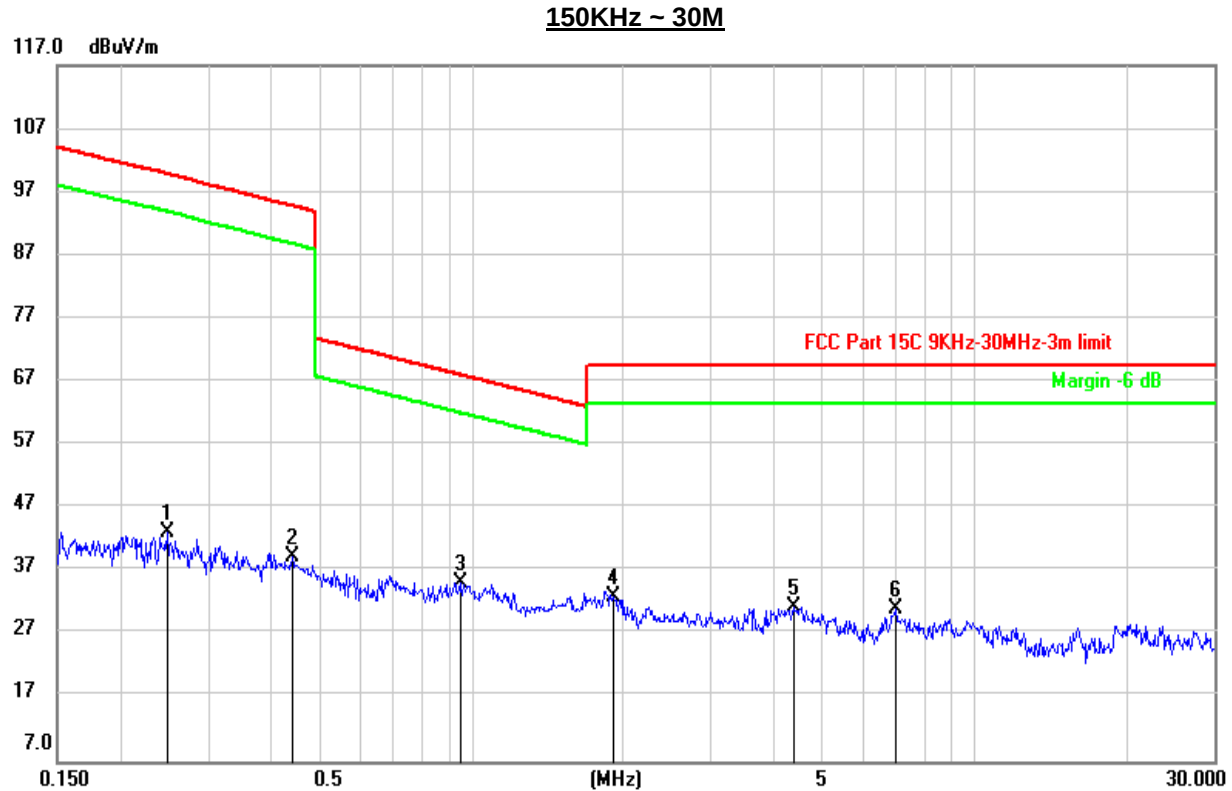
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0103	27.69	20.21	47.90	127.42	-79.52	peak
2	0.0129	27.31	20.24	47.55	125.85	-78.30	peak
3	0.0183	22.57	20.29	42.86	122.60	-79.74	peak
4	0.0434	14.63	20.31	34.94	114.90	-79.96	peak
5	0.0497	15.60	20.31	35.91	113.68	-77.77	peak
6	0.0670	14.71	20.31	35.02	111.10	-76.08	peak

Note: 1. Measurement = Reading Level + Correct Factor.

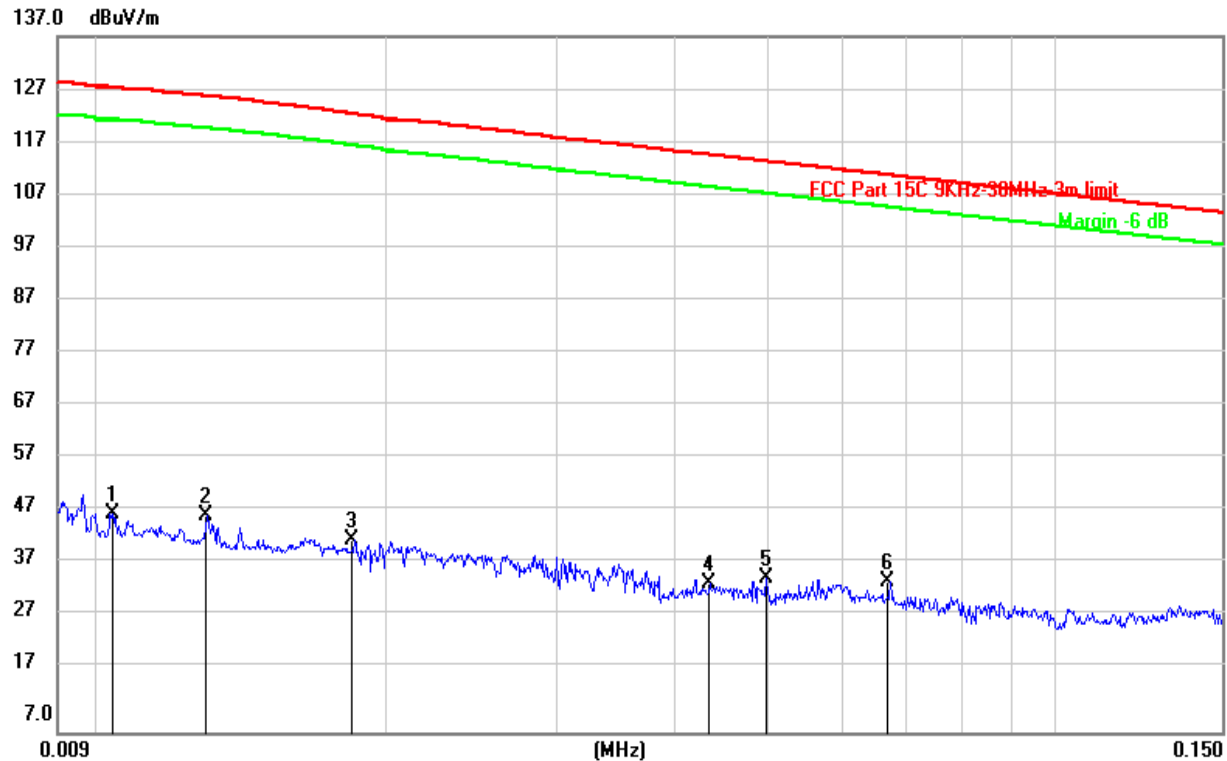
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2479	22.91	20.32	43.23	99.89	-56.66	peak
2	0.4395	18.95	20.26	39.21	94.79	-55.58	peak
3	0.9481	14.85	20.37	35.22	68.08	-32.86	peak
4	1.9072	12.35	20.70	33.05	69.54	-36.49	peak
5	4.3605	10.43	20.97	31.40	69.54	-38.14	peak
6	6.9878	10.20	20.92	31.12	69.54	-38.42	peak

Note: 1. Measurement = Reading Level + Correct Factor.

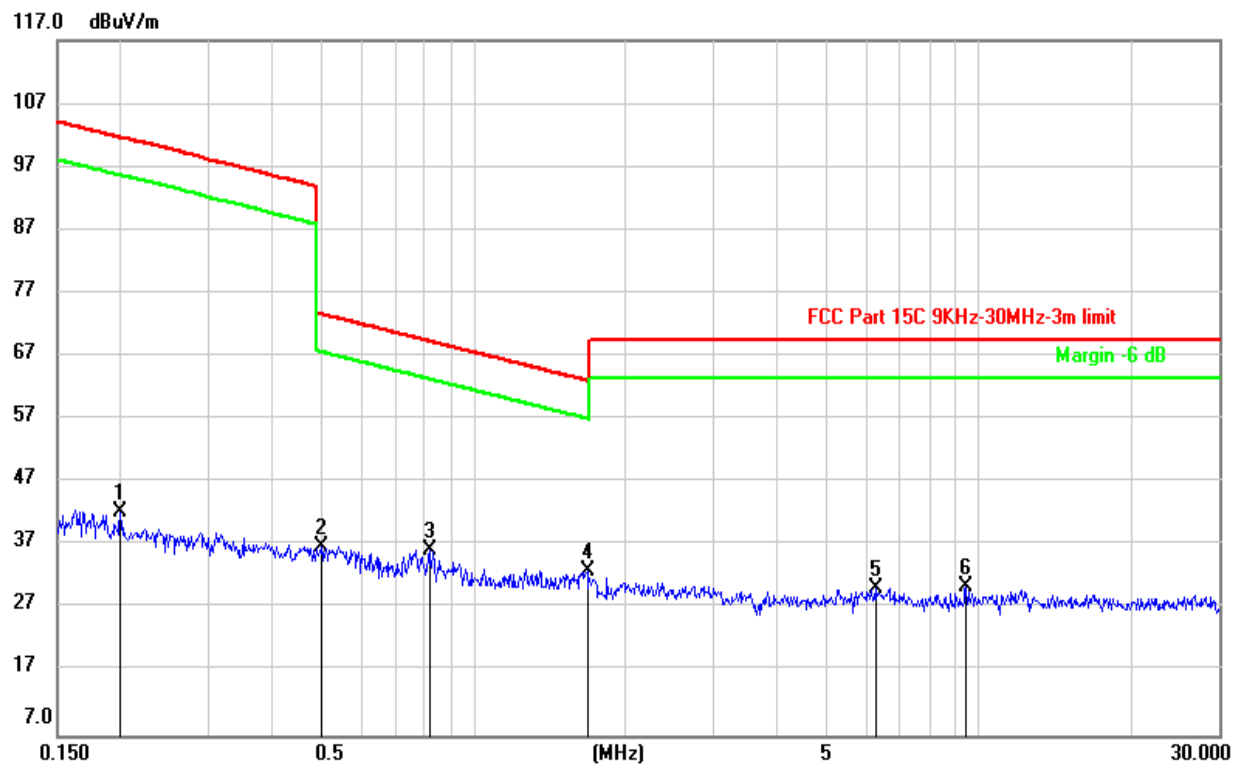
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

**SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)****9KHz~ 150KHz**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0103	27.69	20.21	47.90	127.42	-79.52	peak
2	0.0129	27.31	20.24	47.55	125.85	-78.30	peak
3	0.0183	22.57	20.29	42.86	122.60	-79.74	peak
4	0.0434	14.63	20.31	34.94	114.90	-79.96	peak
5	0.0497	15.60	20.31	35.91	113.68	-77.77	peak
6	0.0670	14.71	20.31	35.02	111.10	-76.08	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

150KHz ~ 30M

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1995	21.85	20.37	42.22	101.60	-59.38	peak
2	0.4994	16.59	20.24	36.83	73.65	-36.82	peak
3	0.8174	15.96	20.36	36.32	69.36	-33.04	peak
4	1.6800	12.41	20.61	33.02	63.10	-30.08	peak
5	6.2519	9.34	20.89	30.23	69.54	-39.31	peak
6	9.4512	9.43	21.03	30.46	69.54	-39.08	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

Note: All the modes had been tested, but only the worst data were recorded in the report.

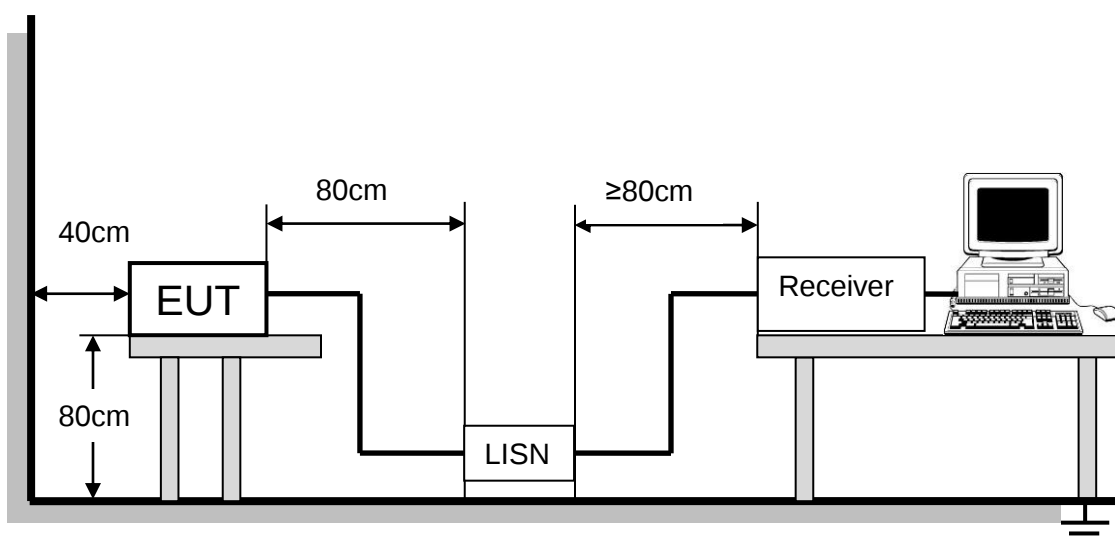
8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

Please refer to FCC §15.207 (a)

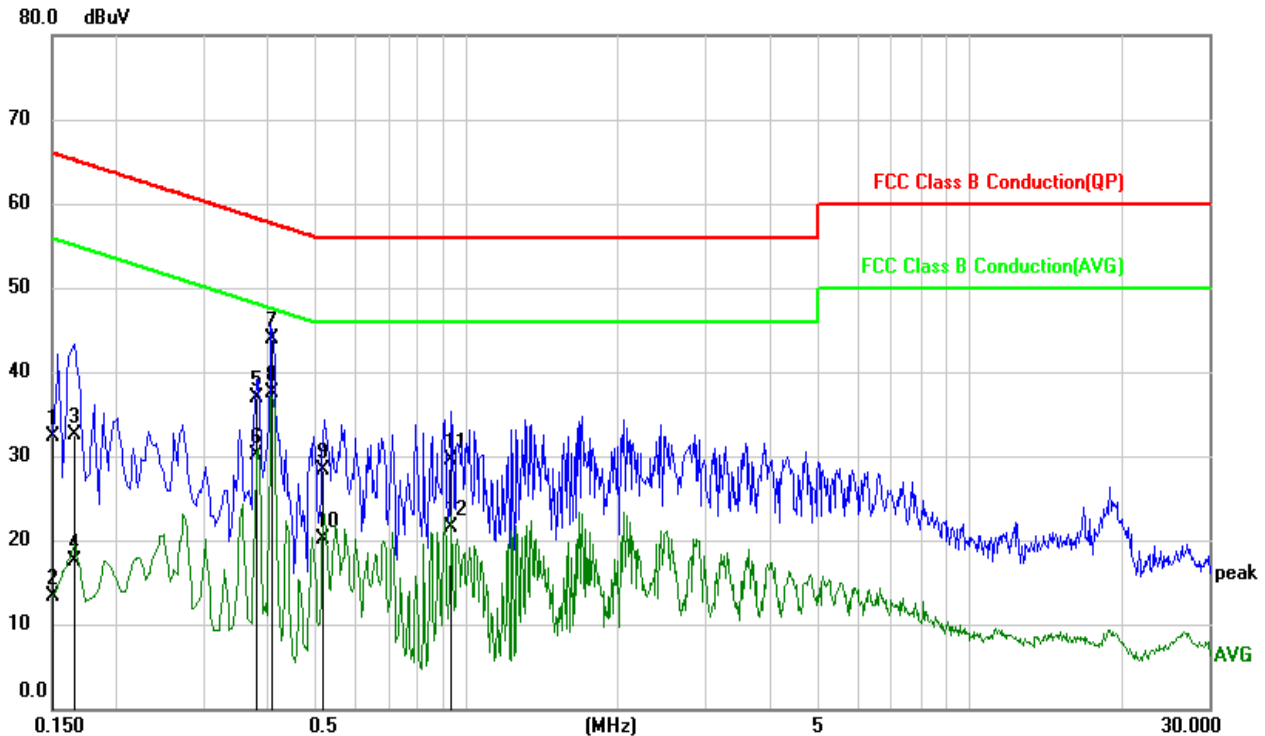
FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

TEST SETUP AND PROCEDURE



The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10 -2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

**TEST RESULTS****8.1.1. 802.11b MODE****LINE N RESULTS (LOW CHANNEL, WORST-CASE CONFIGURATION)**

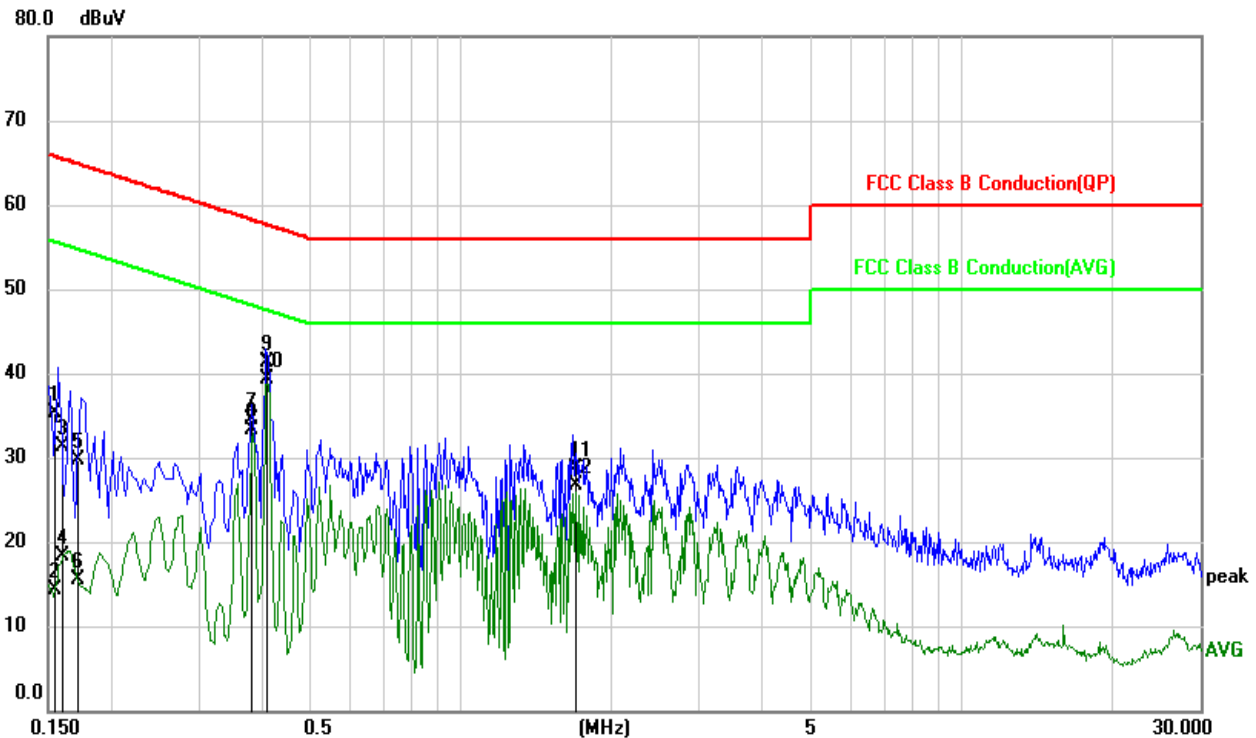
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1504	22.78	9.62	32.40	65.98	-33.58	QP
2	0.1504	3.69	9.62	13.31	55.98	-42.67	AVG
3	0.1652	22.87	9.62	32.49	65.20	-32.71	QP
4	0.1652	7.81	9.62	17.43	55.20	-37.77	AVG
5	0.3834	27.21	9.63	36.84	58.21	-21.37	QP
6	0.3834	20.47	9.63	30.10	48.21	-18.11	AVG
7	0.4122	34.18	9.63	43.81	57.60	-13.79	QP
8	0.4122	27.82	9.63	37.45	47.60	-10.15	AVG
9	0.5181	18.77	9.63	28.40	56.00	-27.60	QP
10	0.5181	10.45	9.63	20.08	46.00	-25.92	AVG
11	0.9345	19.94	9.64	29.58	56.00	-26.42	QP
12	0.9345	11.80	9.64	21.44	46.00	-24.56	AVG

Note: 1. Result = Reading +Correct Factor.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).

4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

**LINE L RESULTS (LOW CHANNEL, WORST-CASE CONFIGURATION)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1545	25.68	9.64	35.32	65.75	-30.43	QP
2	0.1545	4.69	9.64	14.33	55.75	-41.42	AVG
3	0.1619	21.76	9.63	31.39	65.37	-33.98	QP
4	0.1619	8.72	9.63	18.35	55.37	-37.02	AVG
5	0.1720	20.06	9.63	29.69	64.86	-35.17	QP
6	0.1720	5.78	9.63	15.41	54.86	-39.45	AVG
7	0.3849	24.86	9.63	34.49	58.17	-23.68	QP
8	0.3849	23.59	9.63	33.22	48.17	-14.95	AVG
9	0.4119	31.75	9.63	41.38	57.61	-16.23	QP
10	0.4119	29.65	9.63	39.28	47.61	-8.33	AVG
11	1.7032	19.15	9.65	28.80	56.00	-27.20	QP
12	1.7032	17.05	9.65	26.70	46.00	-19.30	AVG

Note: 1. Result = Reading + Correct Factor.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).

4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

Note: All the modulation and channels had been tested, but only the worst data recorded in the report.



9. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §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.

ANTENNA CONNECTOR

EUT has an internal antenna without antenna connector.

ANTENNA GAIN

The antenna gain of EUT is less than 6 dBi.

END OF REPORT