



**CFR 47 FCC PART 15 SUBPART C
ISED RSS-247 ISSUE 2**

TEST REPORT

For

IEEE 802.11a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1+EDR/4.2/5.1

MODEL NUMBER: SKI.WB663U.2

REPORT NUMBER: 4790553410-RF-3

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	September 15, 2022	Initial Issue	

Note: This is a C2PC test report. The applicant added three types of antennas and applied for C2PC on December 18, 2021, the antennas information showed in table 1. Now the applicant wants to add one more type of antenna and the antenna information showed in table 2. Spot check had been done for the conducted output power, the power of module remained unchanged, so we retest all radiated band edge and spurious emission and show in this report, for more data and information, please refer to the original report 4790010773.1-3.

Table 1						
Antenna	Antenna Model	Frequency (MHz)	Antenna Type	Cable Loss (dB)	Maximum Antenna Gain without Cable (dBi)	Final Antenna Gain (dBi)
1	INNO-EWFDKT-237	2412-2462	Dipole Antenna	1.5	2.44	0.94
2	A100-0062	2412-2462	Dipole Antenna	1.5	3.17	1.67
3	3D0504BK07-001	2412-2462	Dipole Antenna	1.5	2.97	1.47

Table 2			
Antenna	Frequency (MHz)	Antenna Type	Maximum Antenna Gain (dBi)
1	2412-2462	FPC	4.41
2	2412-2462	FPC	4.23

Note: The antenna information showed in table 1 comes from report 4790176872-3.



Summary of Test Results

Test Item	Clause	Limit/Requirement	Result
Radiated Band Edge and Spurious Emission	ANSI C63.10-2013, Clause 11.12 & Clause 11.13	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9	Pass

*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

*The measurement result for the sample received is <Pass> according to <CFR 47 FCC PART 15 SUBPART C and ISED RSS-247 ISSUE 2> when <Accuracy Method> decision rule is applied.



CONTENTS

1. ATTESTATION OF TEST RESULTS.....	5
2. TEST METHODOLOGY.....	6
3. FACILITIES AND ACCREDITATION.....	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	<i>7</i>
4.2. <i>MEASUREMENT UNCERTAINTY.....</i>	<i>7</i>
5. EQUIPMENT UNDER TEST	8
5.1. <i>DESCRIPTION OF EUT</i>	<i>8</i>
5.2. <i>CHANNEL LIST</i>	<i>8</i>
5.3. <i>MAXIMUM EIRP</i>	<i>8</i>
5.4. <i>TEST CHANNEL CONFIGURATION.....</i>	<i>9</i>
5.5. <i>THE WORSE CASE POWER SETTING PARAMETER.....</i>	<i>9</i>
5.6. <i>THE WORSE CASE CONFIGURATIONS.....</i>	<i>10</i>
5.7. <i>DESCRIPTION OF AVAILABLE ANTENNAS</i>	<i>11</i>
5.8. <i>DESCRIPTION OF TEST SETUP.....</i>	<i>12</i>
6. MEASURING EQUIPMENT AND SOFTWARE USED.....	13
7. ANTENNA PORT TEST RESULTS	14
7.1. <i>ON TIME AND DUTY CYCLE.....</i>	<i>14</i>
7.2. <i>AVERAGE CONDUCTED OUTPUT POWER.....</i>	<i>17</i>
7.3. <i>POWER SPECTRAL DENSITY</i>	<i>20</i>
8. RADIATED TEST RESULTS.....	28
8.1. <i>RESTRICTED BANDEDGE</i>	<i>37</i>
8.2. <i>SPURIOUS EMISSIONS (1 GHZ ~ 3 GHZ)</i>	<i>52</i>
8.3. <i>SPURIOUS EMISSIONS (3 GHZ ~ 18 GHZ)</i>	<i>58</i>
8.4. <i>SPURIOUS EMISSIONS (9 KHZ ~ 30 MHZ).....</i>	<i>82</i>
8.5. <i>SPURIOUS EMISSIONS (30 MHZ ~ 1 GHZ)</i>	<i>85</i>
8.6. <i>SPURIOUS EMISSIONS (18 GHZ ~ 26 GHZ)</i>	<i>87</i>
9. ANTENNA REQUIREMENTS.....	89



1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Guangzhou Shikun Electronics Co., Ltd
Address: NO.6 Liankun Road, Huangpu District, Guangzhou, China

Manufacturer Information

Company Name: Guangzhou Shikun Electronics Co., Ltd
Address: NO.6 Liankun Road, Huangpu District, Guangzhou, China

EUT Information

EUT Name: IEEE 802.11a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated
Bluetooth 2.1+EDR/4.2/5.1
Model: SKI.WB663U.2
Sample Received Date: September 2, 2022
Sample Status: Normal
Sample ID: 5303796
Date of Tested: September 5, 2022 ~ September 9, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 15 SUBPART C	PASS
ISED RSS-247 Issue 2	PASS
ISED RSS-GEN Issue 5	PASS

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 662911 D01 Multiple Transmitter Output v02r01, KDB 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 2, CFR 47 FCC Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 2 and ISED RSS-GEN Issue 5.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>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.</p> <p>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</p> <p>ISED (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 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p>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</p>
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Note1:

All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China.

Note2:

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.

Note3:

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



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 recognized 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
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
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

EUT Name	IEEE 802.11a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1+EDR/4.2/5.1
Model Name	SKI.WB663U.2
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	DC 3.3 V

5.2. CHANNEL LIST

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

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

5.3. MAXIMUM EIRP

IEEE Std. 802.11	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)	Maximum AVG EIRP (dBm)
b	2412 ~ 2462	1-11[11]	11.19	15.60
g	2412 ~ 2462	1-11[11]	11.29	15.70
n HT20	2412 ~ 2462	1-11[11]	13.47	17.88
n HT40	2422 ~ 2452	3-9[7]	10.68	15.09

**5.4. TEST CHANNEL CONFIGURATION**

IEEE Std. 802.11	Test Channel Number	Frequency
b	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
g	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
n HT20	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
n HT40	CH 3(Low Channel), CH 6(MID Channel), CH 9(High Channel)	2422 MHz, 2437 MHz, 2452 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5 MHz Band							
Test Software		QA Tool					
Modulation Mode	Transmit Antenna Number	Test Channel					
		NCB: 20 MHz			NCB: 40 MHz		
		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9
802.11b	1	1A	1A	1A	/		
	2	1A	1A	1A			
802.11g	1	1C	1C	1C			
	2	1C	1C	1C			
802.11n HT20	1	1C	1C	1C			
	2	1C	1C	1C			
802.11n HT40	1	/			16	16	16
	2	/			16	16	16

5.6. THE WORSE CASE CONFIGURATIONS

The EUT was tested in the following configuration(s):

Controlled in test mode using a software application on the EUT supplied by customer. The application was used to enable a continuous transmission and to select the mode, test channels, bandwidth, data rates as required.

Test channels referring to section 5.4.

Maximum power setting referring to section 5.5.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps

802.11b mode: 6 Mbps

802.11n HT20 mode: MCS0

802.11n HT40 mode: MCS0

The EUT has 2 separate antennas which correspond to 2 separate antenna ports. Core 0 and Core 1 correspond to antenna 0 and antenna 1 respectively.

The measured additional path loss was included in any path loss calculations for all RF cable used during tested.

Conducted output power, power spectral density tests separately on each port with all supported SISO & MIMO port combinations.

Conducted bandedge and spurious emissions tests were performed with SISO mode, as this port was found to have the worst case in terms of power settings amongst all supported possible SISO & MIMO port combinations.

Radiated emissions tests were performed with the MIMO modes. These were found to be the worst modulation scheme with regards to emissions after preliminary investigations and, as this mode emits the highest conducted output power level, it was deemed to be the worst case.

The EUT support Cyclic Shift Diversity (CDD), Space Time Coding (STBC), Spatial Division Multiplexing (SDM) modes. They use the same conducted power per chain in any given mode, so we only chose the worst case mode CDD for final testing.



5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	Maximum Antenna Gain (dBi)
1	2412-2462	FPC	4.41
2	2412-2462	FPC	4.23

The EUT support Cyclic Shift Diversity (CDD) mode.

MIMO output power port and MIMO PSD port summing were performed in accordance with KDB 662911 D01. For the CDD results the Directional Gain was calculated in accordance with the following method.

For output power measurements:

Directional gain = $G_{ANT} + \text{Array Gain} = 4.41 \text{ dBi}$

G_{ANT} : equal to the gain of the antenna having the highest gain

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$

For power spectral density (PSD) measurements:

Directional gain = $G_{ANT} + \text{Array Gain} = 7.42 \text{ dBi}$

Array Gain = $10 \log(N_{ANT}/N_{SS}) \text{ dB}$.

N_{ANT} : number of transmit antennas

N_{SS} : number of spatial streams, The worst case directional gain will occur when $N_{SS} = 1$

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11g	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.

Note: The value of the antenna gain was declared by customer.

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	Dell	Vostro 3902	/
2	Laptop	ThinkPad	E480	/
3	Test fixture	/	/	/
4	Switching Adapter	FLYPOWER	PS65IBCAY5000H	Input: AC 100-240 V, 50/60 Hz, 1.5A Output: DC 12.0 V, 5000 mA

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB	Unshielded	1.0	/

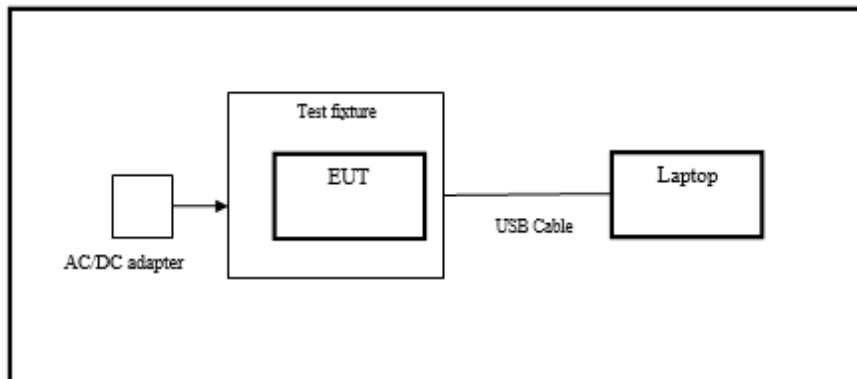
ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
/	/	/	/	/

TEST SETUP

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

SETUP DIAGRAM FOR TESTS



**6. MEASURING EQUIPMENT AND SOFTWARE USED**

R&S TS 8997 Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Power sensor, Power Meter	R&S	OSP120	100921	Apr.02,2022	Apr.01,2023
Signal Analyzer	R&S	FSV40	101118	Oct.30, 2021	Oct.29, 2022
Software					
Description	Manufacturer	Name	Version		
For R&S TS 8997 Test System	Rohde & Schwarz	EMC 32	10.60.10		

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.30, 2021	Oct.29, 2022
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.30, 2021	Oct.29, 2022
EMI Measurement Receiver	R&S	ESR26	101377	Oct.30, 2021	Oct.29, 2022
Horn Antenna	TDK	HRN-0118	130940	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.30, 2021	Oct.29, 2022
Horn Antenna	Schwarzbeck	BBHA9170	697	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.31, 2021	Oct.30, 2022
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct.31, 2021	Oct.30, 2022
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.31, 2021	Oct.30, 2022
High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Oct.31, 2021	Oct.30, 2022
Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	Oct.31, 2021	Oct.30, 2022
Software					
Description	Manufacturer	Name	Version		
Test Software for Radiated Emissions	Farad	EZ-EMC	Ver. UL-3A1		

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

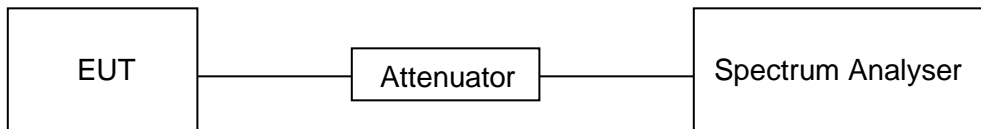
LIMITS

None; for reporting purposes only

PROCEDURE

Refer to ANSI C63.10-2013 clause 11.6 Zero – Span Spectrum Analyzer method.

TEST SETUP



TEST 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	8.38	8.42	0.9952	99.52	0.02	0.12	0.01
11G	1.39	1.44	0.9653	96.53	0.15	0.72	1
11N20MIMO	1.30	1.34	0.9701	97.01	0.13	0.77	1
11N40MIMO	0.64	0.69	0.9275	92.75	0.33	1.56	2

Note:

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

Where: x is Duty Cycle (Linear)

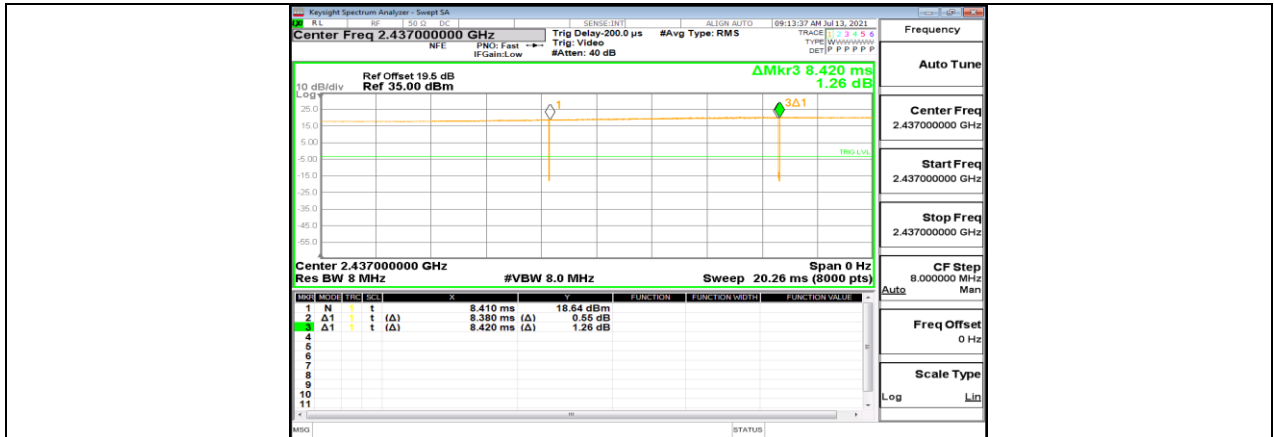
Where: T is On Time

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

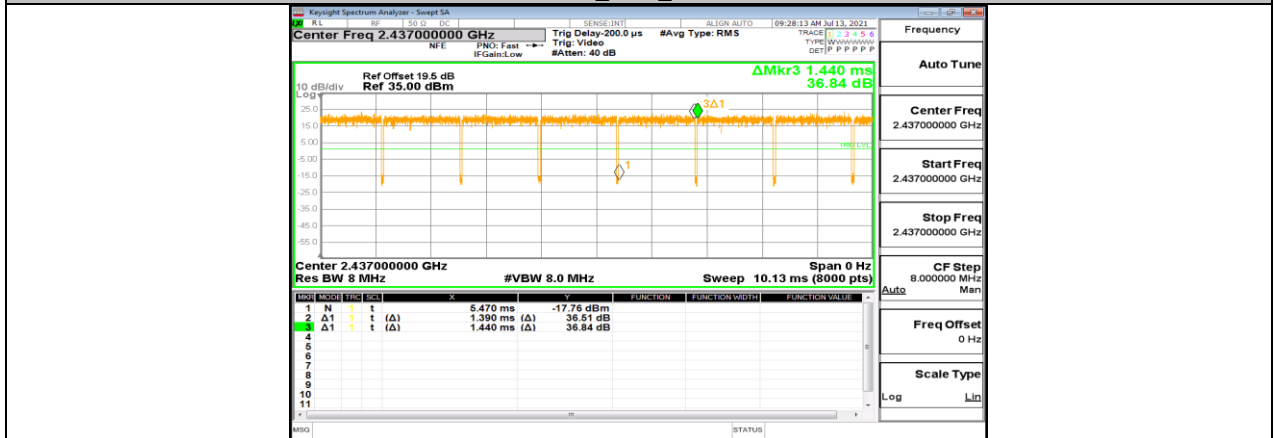
Note: All the test result comes from the original test report.



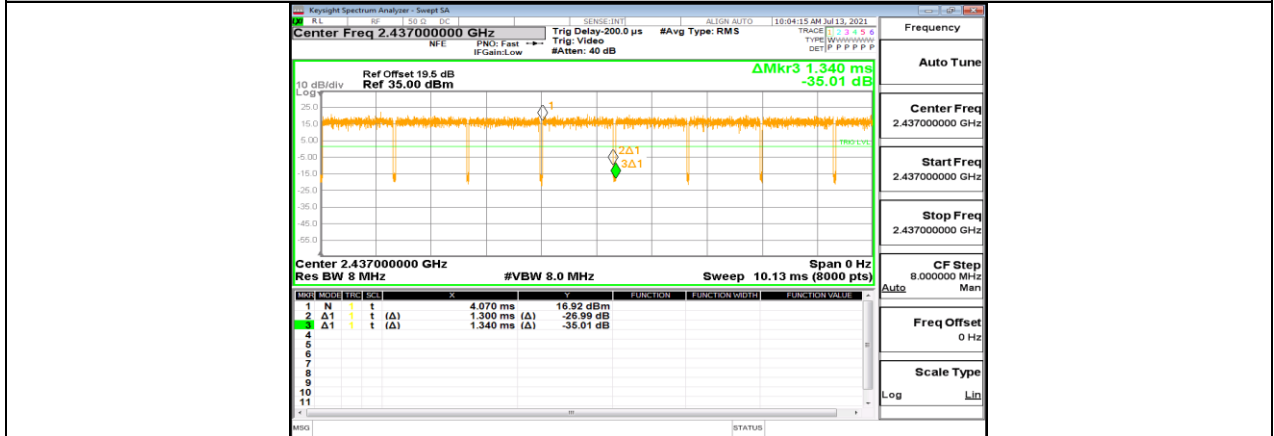
TEST GRAPHS



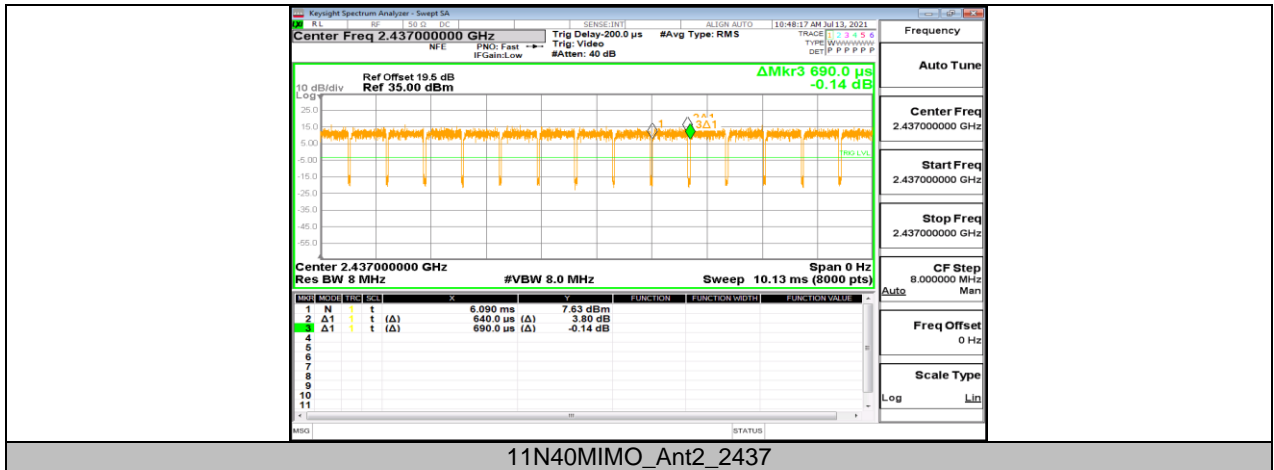
11B_Ant2_2437



11G_Ant2_2437



11N20MIMO_Ant2_2437



11N40MIMO_Ant2_2437

Note: All the test result comes from the original test report.

7.2. AVERAGE CONDUCTED OUTPUT POWER

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3)	AVG Output Power	1 watt or 30 dBm	2400-2483.5

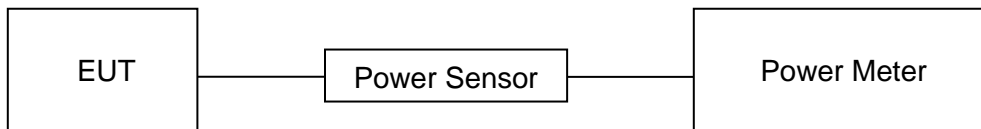
TEST PROCEDURE

Refer to ANSI C63.10-2013 clause in 11.9.2.

Connect the EUT to a low loss RF cable from the antenna port to the power sensor (video bandwidth is greater than the occupied bandwidth).

Measure peak emission level, the indicated level is the average output power, after any corrections for external attenuators and cables.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.3 °C	Relative Humidity	55.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 3.3 V

**RESULTS**

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	10.11	<=30	PASS
	Ant2	2412	10.90	<=30	PASS
	Ant1	2437	10.49	<=30	PASS
	Ant2	2437	11.21	<=30	PASS
	Ant1	2462	10.72	<=30	PASS
	Ant2	2462	10.97	<=30	PASS
11G	Ant1	2412	10.63	<=30	PASS
	Ant2	2412	11.21	<=30	PASS
	Ant1	2437	10.65	<=30	PASS
	Ant2	2437	11.20	<=30	PASS
	Ant1	2462	10.68	<=30	PASS
	Ant2	2462	11.23	<=30	PASS
11N20MIMO	Ant1	2412	10.10	<=30	PASS
	Ant2	2412	10.63	<=30	PASS
	total	2412	13.38	<=30	PASS
	Ant1	2437	10.10	<=30	PASS
	Ant2	2437	10.45	<=30	PASS
	total	2437	13.29	<=30	PASS
	Ant1	2462	10.13	<=30	PASS
	Ant2	2462	10.51	<=30	PASS
total	2462	13.33	<=30	PASS	
11N40MIMO	Ant1	2422	7.29	<=30	PASS
	Ant2	2422	7.80	<=30	PASS
	total	2422	10.56	<=30	PASS
	Ant1	2437	7.30	<=30	PASS
	Ant2	2437	7.92	<=30	PASS
	total	2437	10.63	<=30	PASS
	Ant1	2452	7.36	<=30	PASS
	Ant2	2452	7.81	<=30	PASS
total	2452	10.60	<=30	PASS	

Note: All the test result comes from the original test report.

**SPOT CHECK TEST RESULTS**

Test Mode	Antenna	Channel	Result [dBm]	Original Report Test Result[dBm]	Deviation [dB]
11B	Ant1	2437	10.54	10.49	0.05
	Ant2	2437	11.19	11.21	-0.02
11G	Ant1	2462	10.57	10.68	-0.11
	Ant2	2462	11.29	11.23	0.06
11N20MIMO	Ant1	2412	10.21	10.10	0.11
	Ant2	2412	10.69	10.63	0.06
	total	2412	13.47	13.38	0.09
11N40MIMO	Ant1	2437	7.43	7.30	0.13
	Ant2	2437	7.89	7.92	-0.03
	total	2437	10.68	10.63	0.05

7.3. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.247 (e) ISED RSS-247 5.2 (b)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5

TEST PROCEDURE

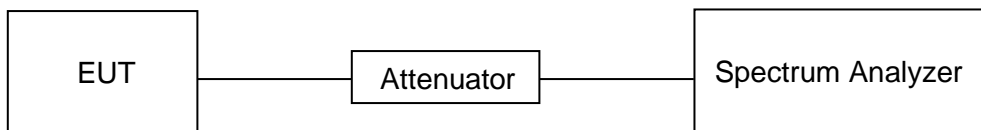
Refer to ANSI C63.10-2013 clause 11.10.

Connect the EUT 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 x 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



**TEST RESULTS**

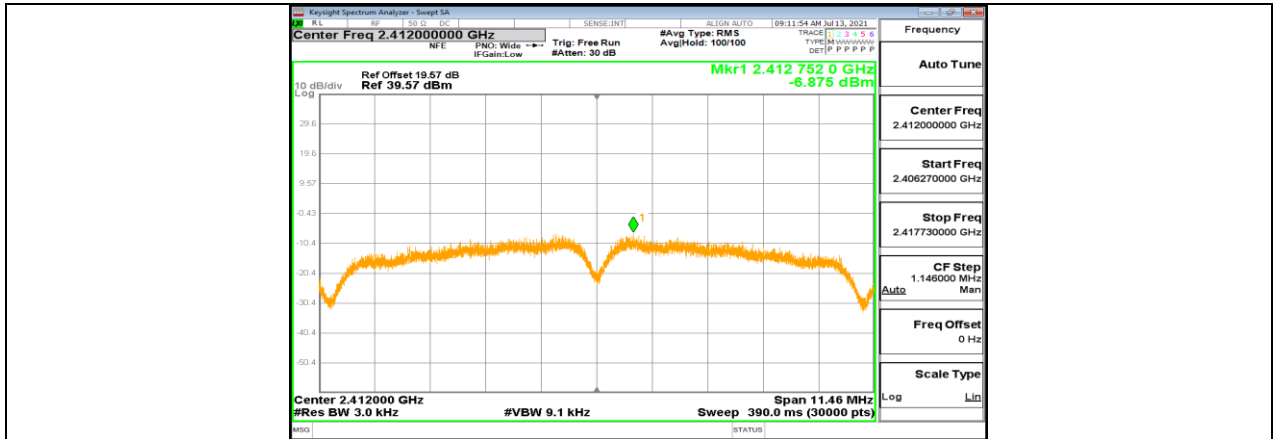
Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant2	2412	-6.88	<=8	PASS
		2437	-6.8	<=8	PASS
		2462	-7.36	<=8	PASS
11G	Ant2	2412	-9.28	<=8	PASS
		2437	-8.29	<=8	PASS
		2462	-9.37	<=8	PASS
11N20MIMO	Ant1	2412	-9.25	<=6.58	PASS
	Ant2	2412	-9.2	<=6.58	PASS
	total	2412	-6.21	<=6.58	PASS
	Ant1	2437	-9.03	<=6.58	PASS
	Ant2	2437	-10.1	<=6.58	PASS
	total	2437	-6.52	<=6.58	PASS
	Ant1	2462	-9.19	<=6.58	PASS
	Ant2	2462	-9.42	<=6.58	PASS
	total	2462	-6.29	<=6.58	PASS
11N40MIMO	Ant1	2422	-16.13	<=6.58	PASS
	Ant2	2422	-15.58	<=6.58	PASS
	total	2422	-12.84	<=6.58	PASS
	Ant1	2437	-15.75	<=6.58	PASS
	Ant2	2437	-15.01	<=6.58	PASS
	total	2437	-12.35	<=6.58	PASS
	Ant1	2452	-15.29	<=6.58	PASS
	Ant2	2452	-14	<=6.58	PASS
total	2452	-11.59	<=6.58	PASS	

Note: 1. All the test result comes from the original test report and correct the limit according to the new antenna gain.

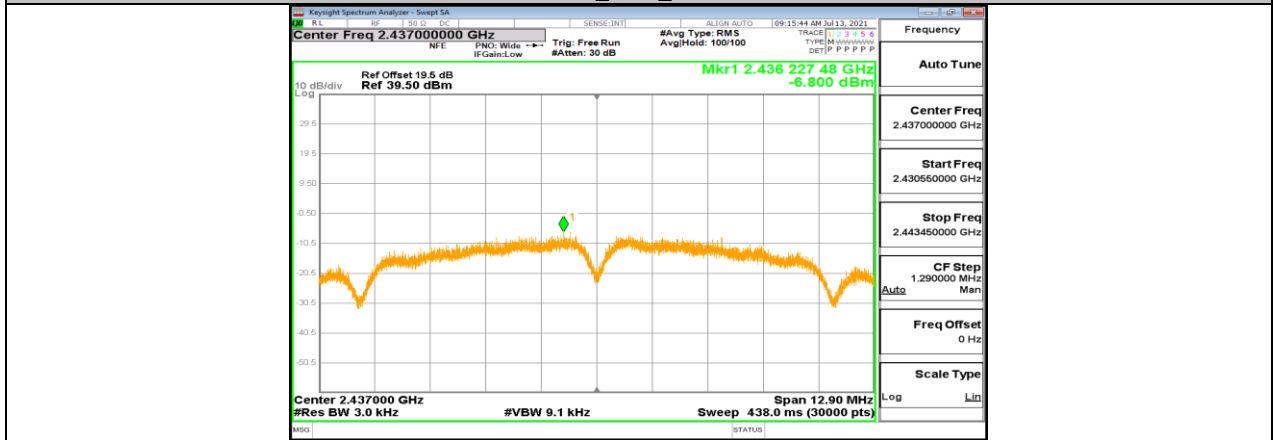
2. For power spectral density (PSD) measurements, the directional gain is 7.42 dBi for 802.11n mode and exceed 1.42 when comparing to 6 dBi, so the limit shall be $8-1.24=6.58$ dBm/3kHz.



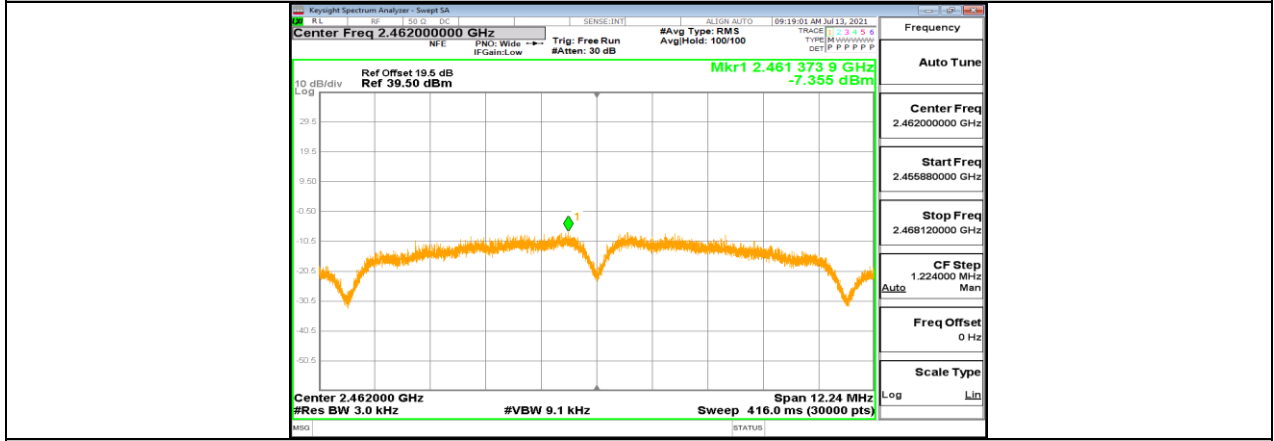
TEST GRAPHS



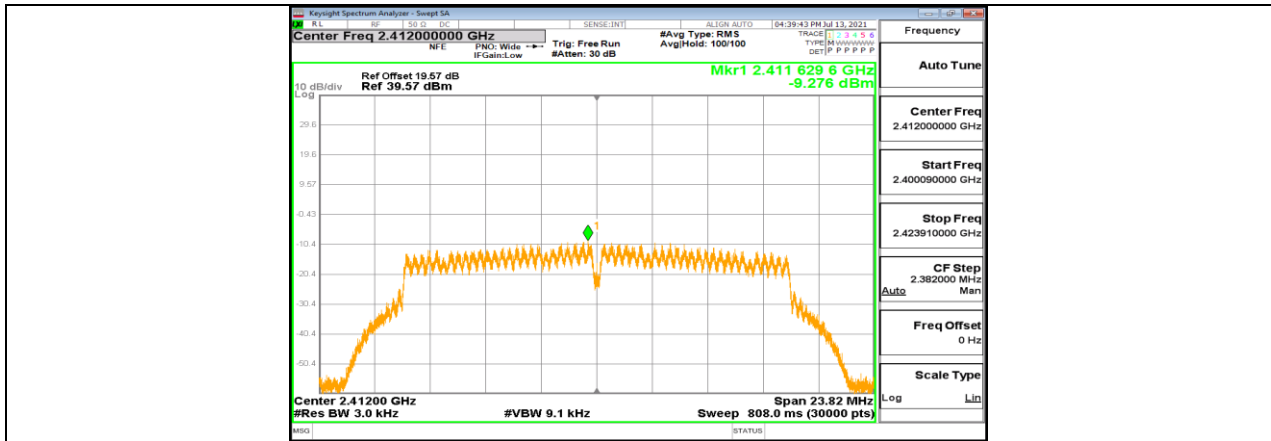
11B_Ant2_2412



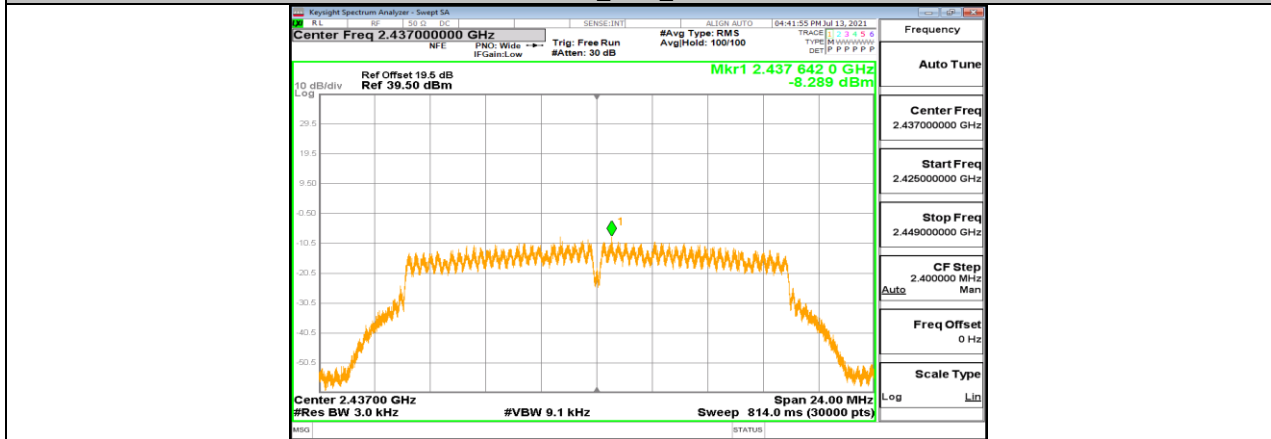
11B_Ant2_2437



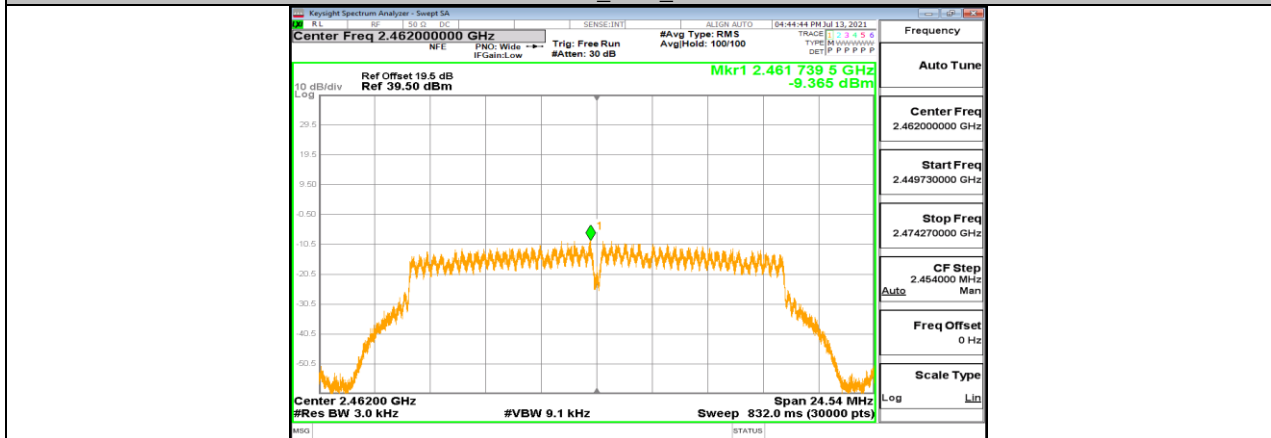
11B_Ant2_2462



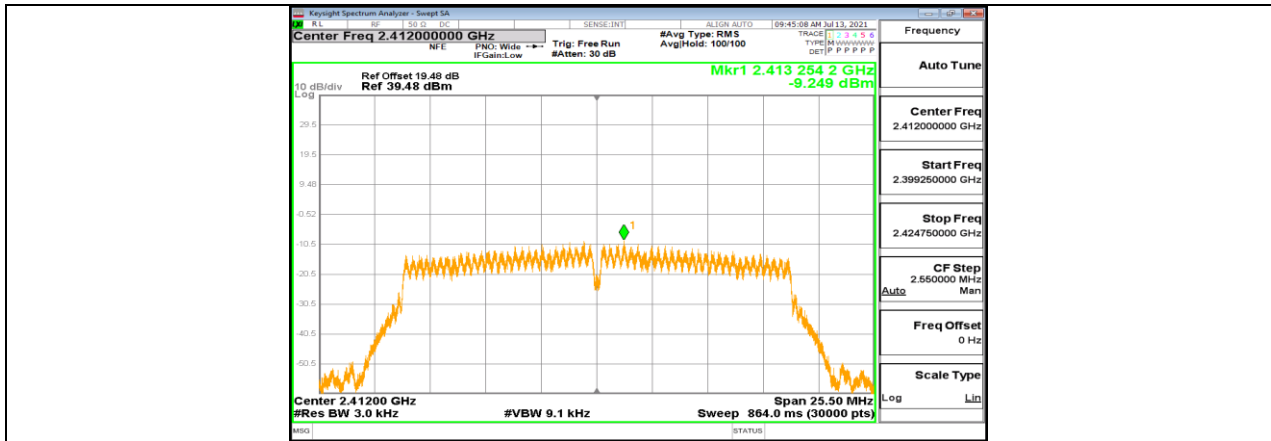
11G_Ant2_2412



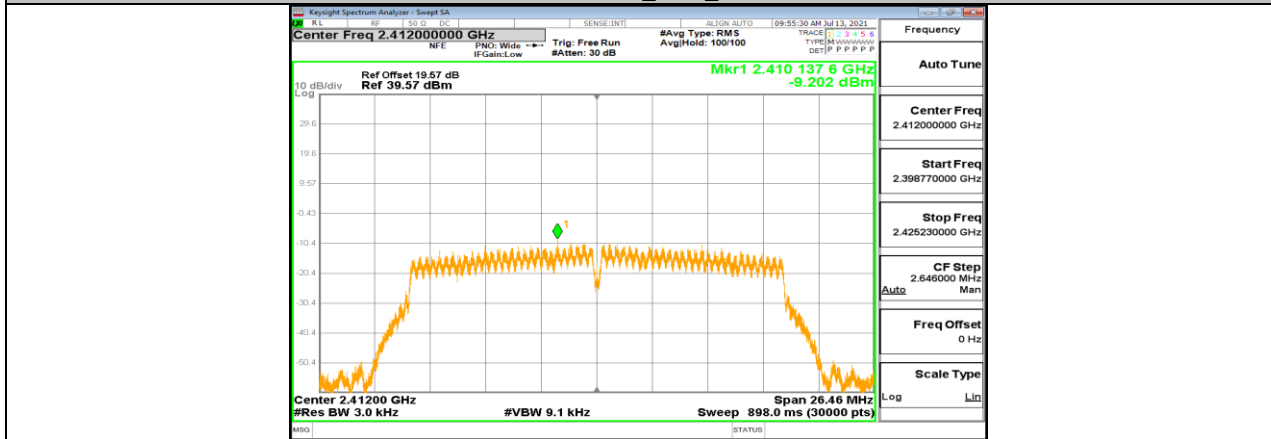
11G_Ant2_2437



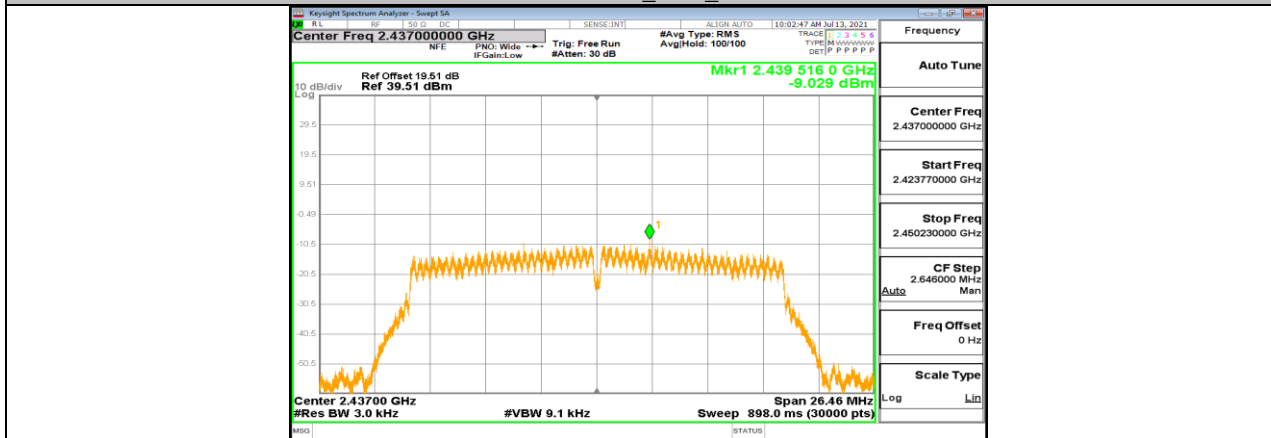
11G_Ant2_2462



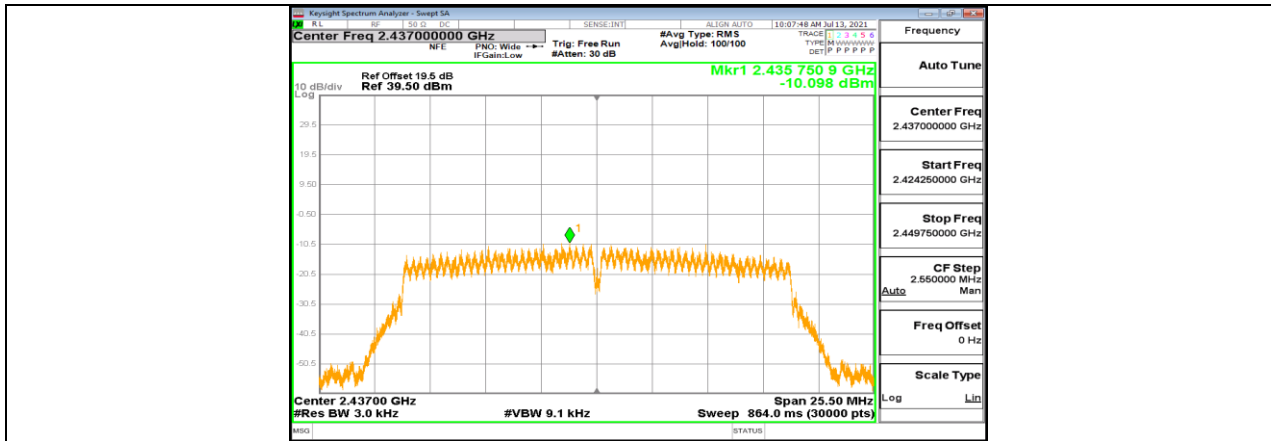
11N20MIMO_Ant1_2412



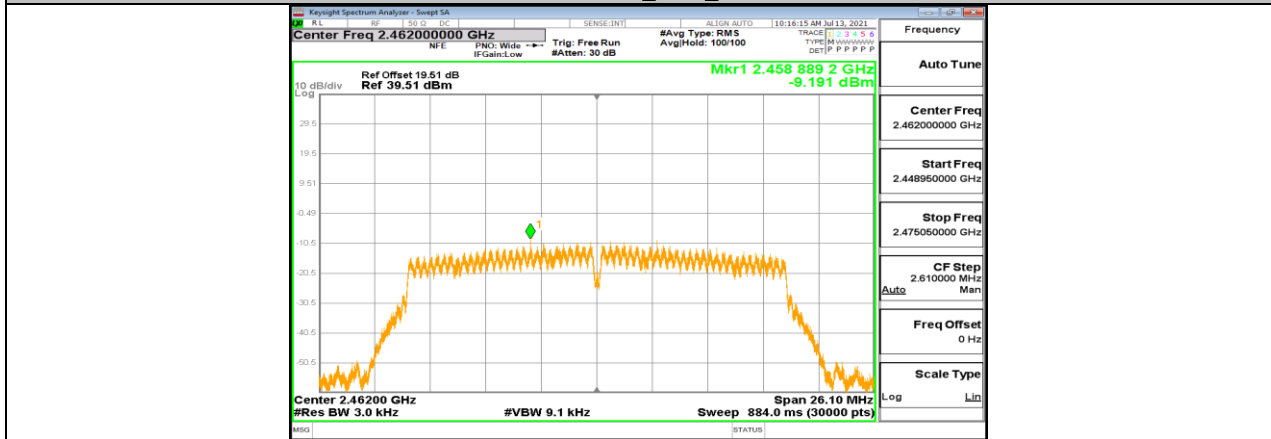
11N20MIMO_Ant2_2412



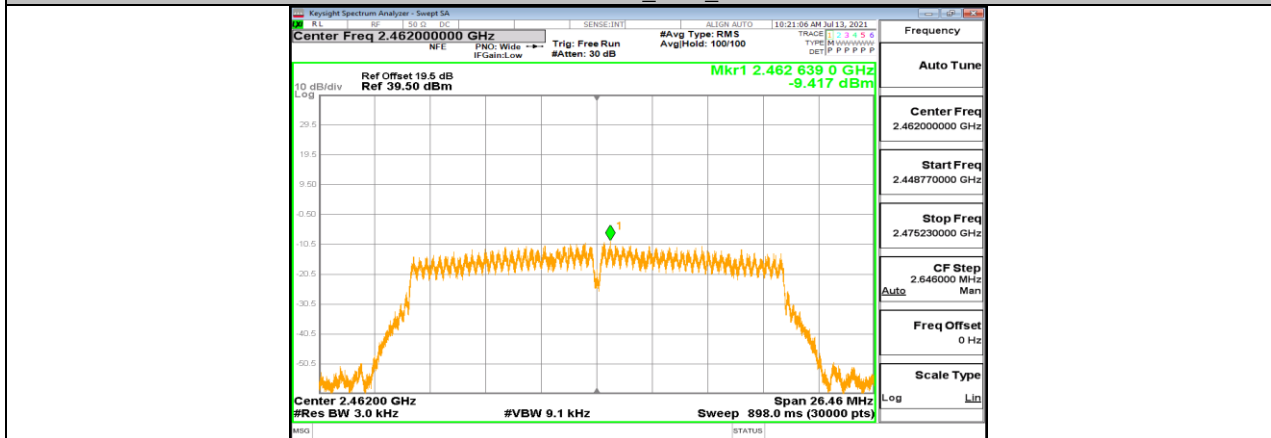
11N20MIMO_Ant1_2437



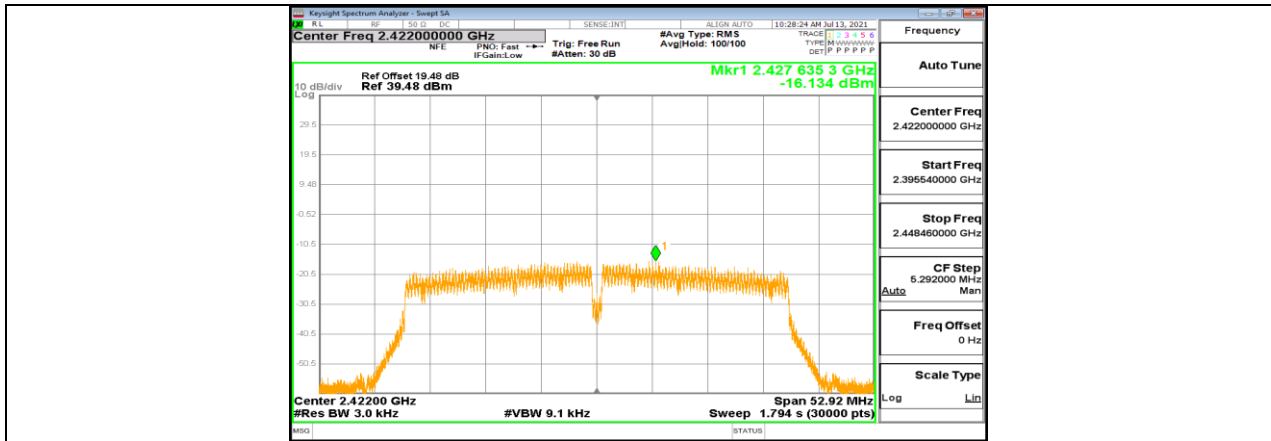
11N20MIMO_Ant2_2437



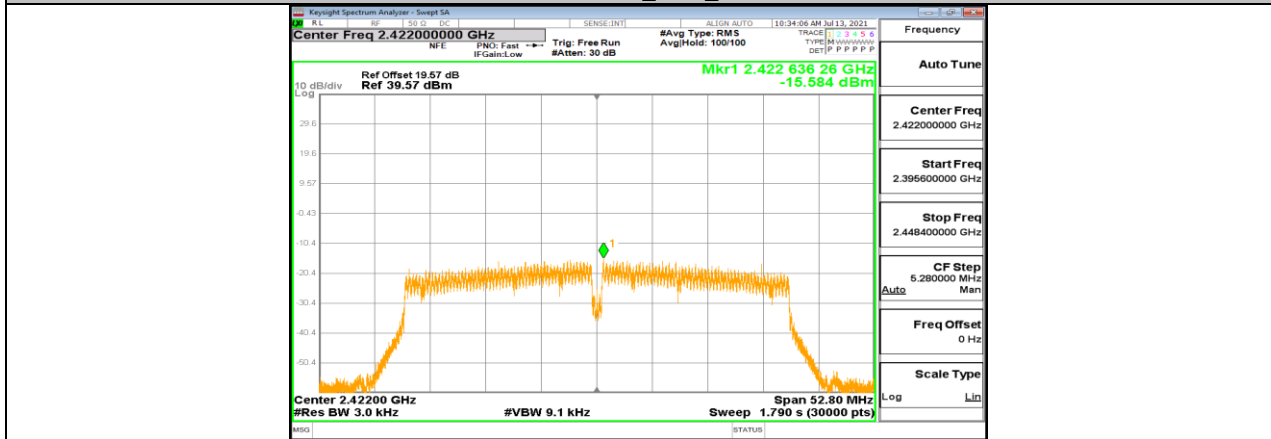
11N20MIMO_Ant1_2462



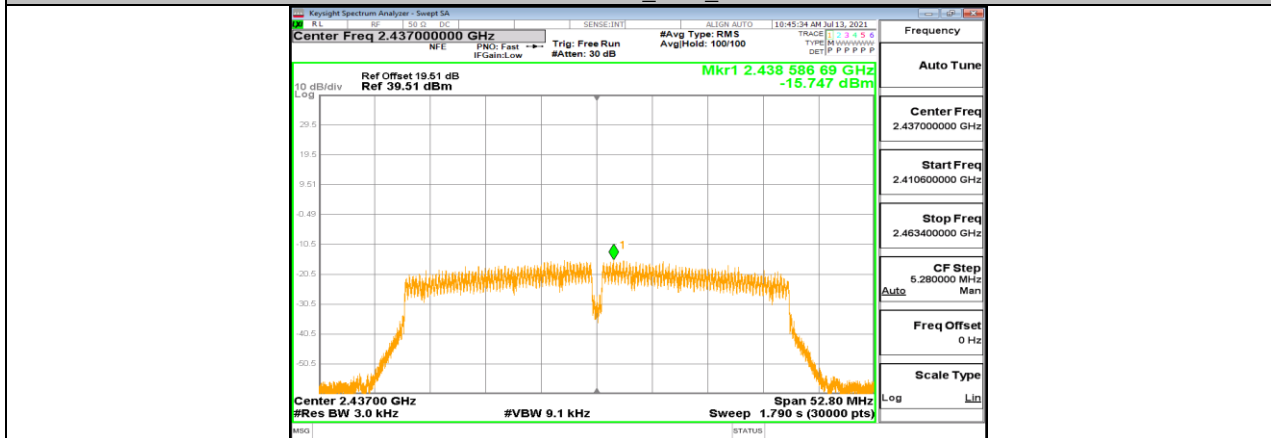
11N20MIMO_Ant2_2462



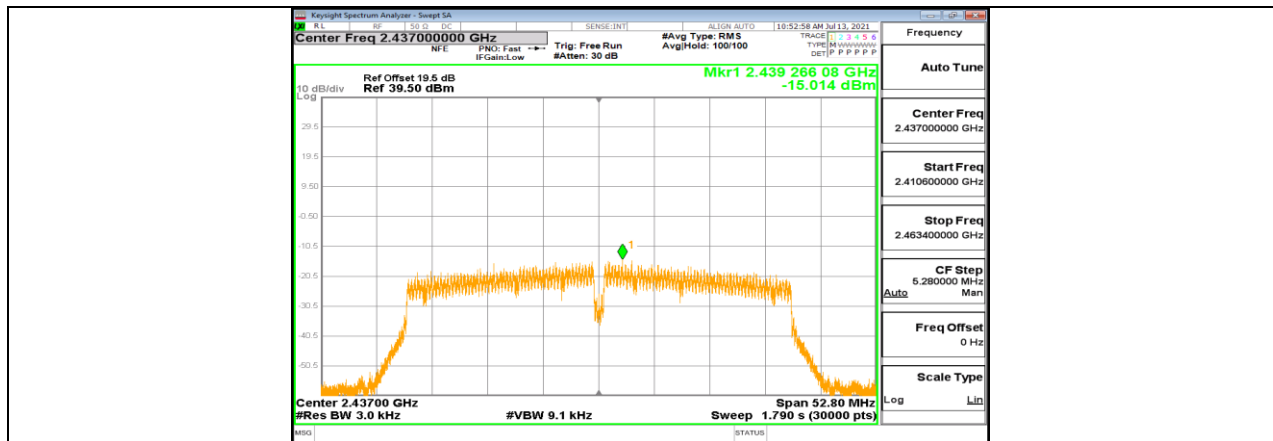
11N40MIMO_Ant1_2422



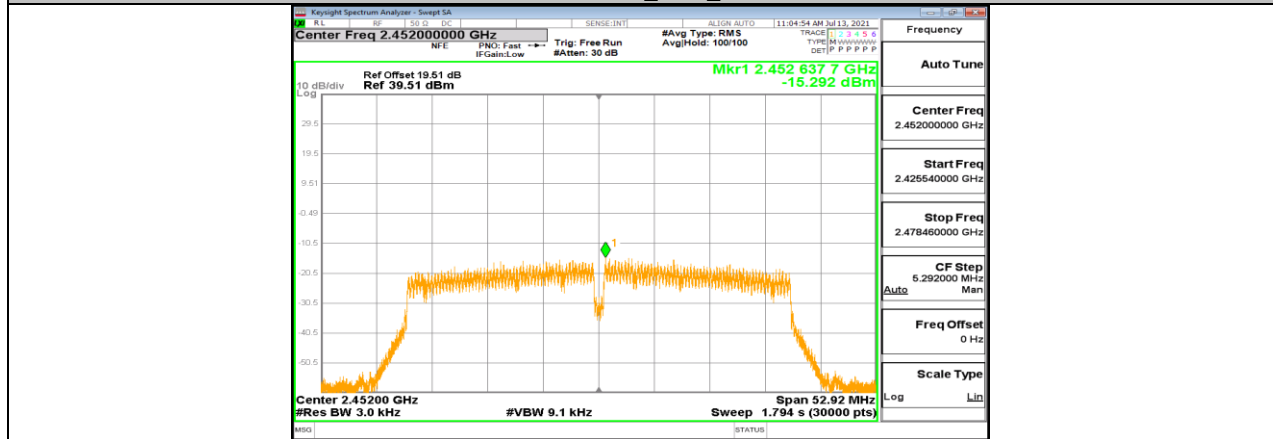
11N40MIMO_Ant2_2422



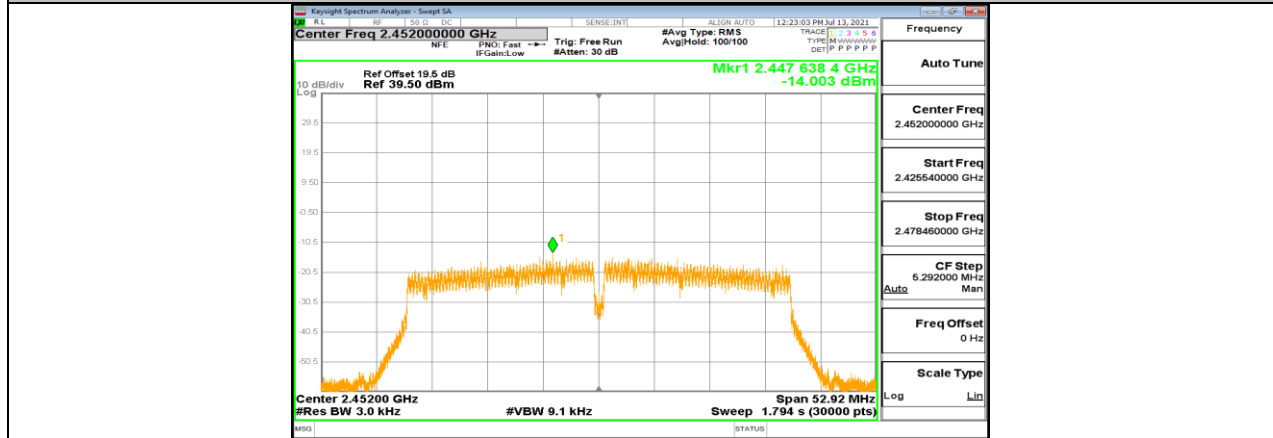
11N40MIMO_Ant1_2437



11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452

Note: All the test result comes from the original test report.



8. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209.

Please refer to ISED RSS-GEN Clause 8.9 and Clause 8.10.

Radiation Disturbance Test Limit for FCC (Class B) (9 kHz ~ 1 GHz)

Emissions radiated outside of the specified frequency bands above 30 MHz			
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m	
		Quasi-Peak	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
		74	54

FCC Emissions radiated outside of the specified frequency bands below 30 MHz		
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

ISED General field strength limits at frequencies below 30 MHz

Table 6 – General field strength limits at frequencies below 30 MHz		
Frequency	Magnetic field strength (H-Field) (uA/m)	Measurement distance (m)
9 - 490 kHz ^{Note 1}	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.



ISED Restricted bands please refer to ISED RSS-GEN Clause 8.10

Table 7 – Restricted frequency bands ^{Note 1}		
MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138		

Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

FCC Restricted bands of operation refer to FCC §15.205 (a):

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 PROCEDURE

Below 30 MHz

The setting of the spectrum analyser

RBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.
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, Face-on and Face-off polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.
6. For measurement below 1 GHz, 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 and average 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 and average detector and reported.
7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field 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 site based on KDB 414788.
8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω . For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to $Y-51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.



Below 1 GHz and above 30 MHz

The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.
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 80 cm 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 1 GHz, 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.



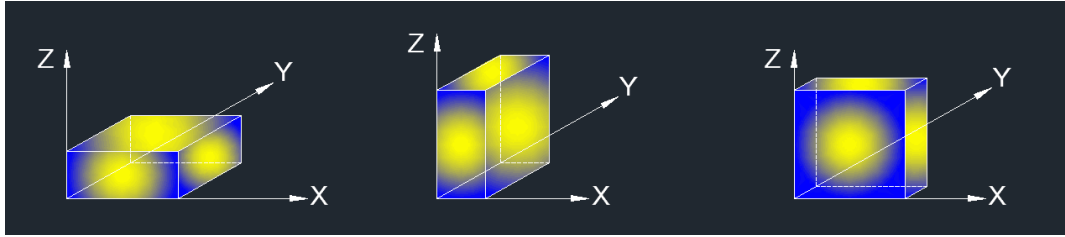
Above 1 GHz

The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.6.
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 1.5 m 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 1 GHz, 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 average measurements. For the Duty Cycle please refer to clause 7.5.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



Note 1: 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.

For Restricted Bandedge:

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 the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
7. Both horizontal and vertical have been tested, only the worst data was recorded in the report.
8. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission (9 kHz ~ 30 MHz):

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.
3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
4. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious Emission (30 MHz ~ 1 GHz):

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. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious Emission (1 GHz ~ 3 GHz):

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 the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. All modes, channels and antennas have been tested, only the worst data was recorded in the report.



For Radiate Spurious Emission (3 GHz ~ 18 GHz):

Note:

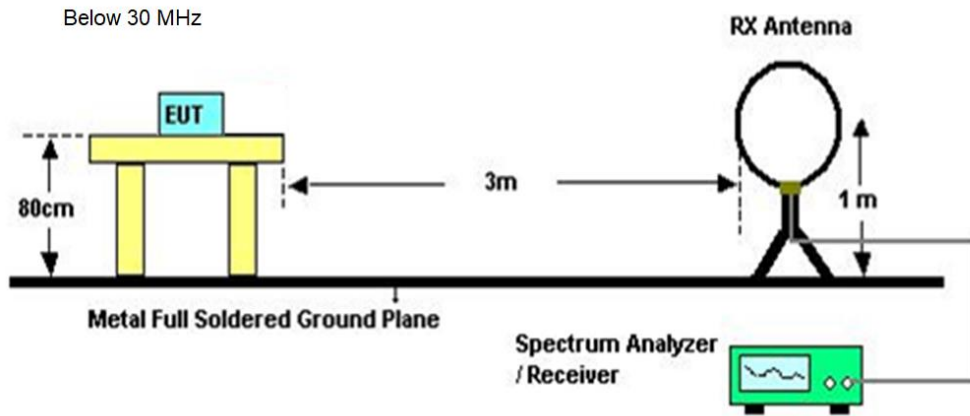
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission (18 GHz ~ 26 GHz):

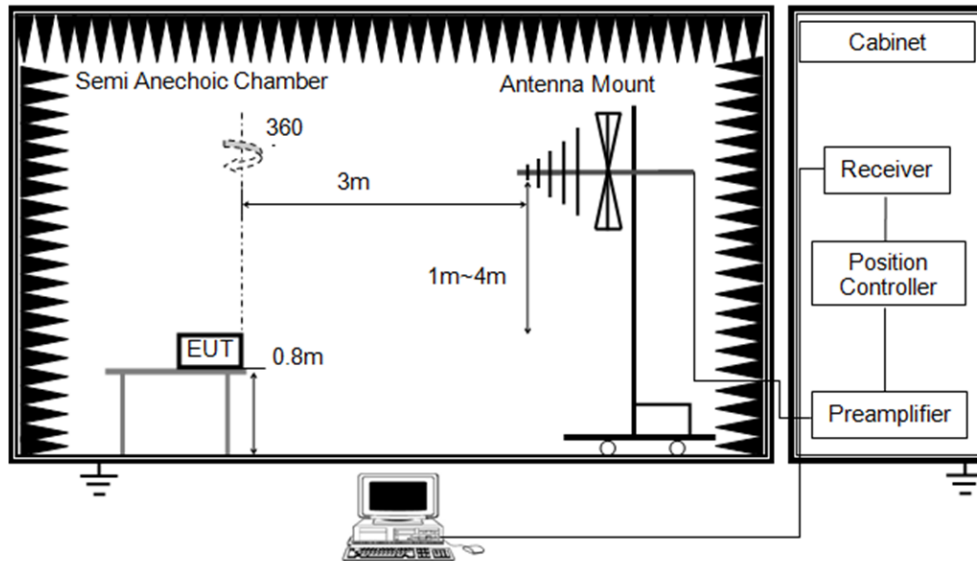
Note:

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. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

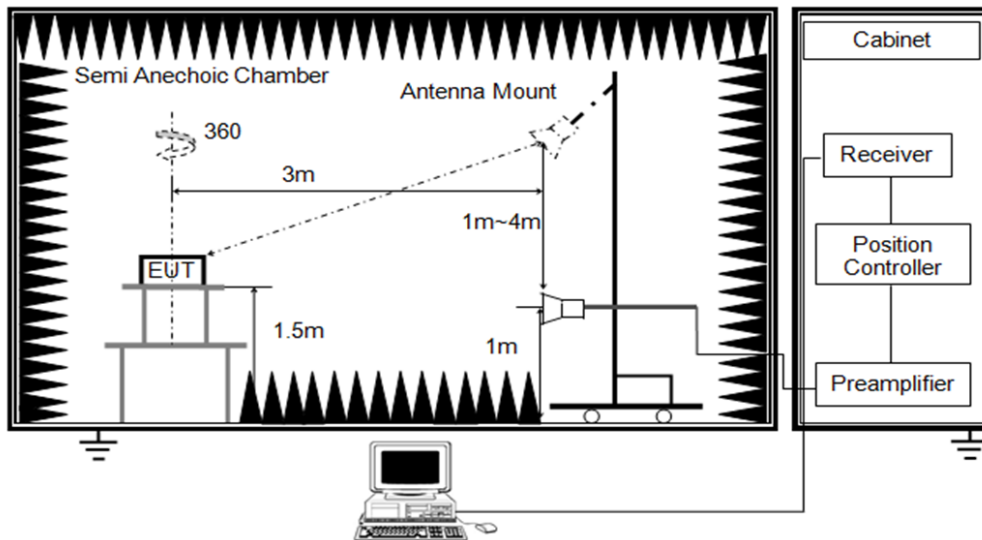
TEST SETUP



Below 1 GHz and above 30 MHz



Above 1 GHz





TEST ENVIRONMENT

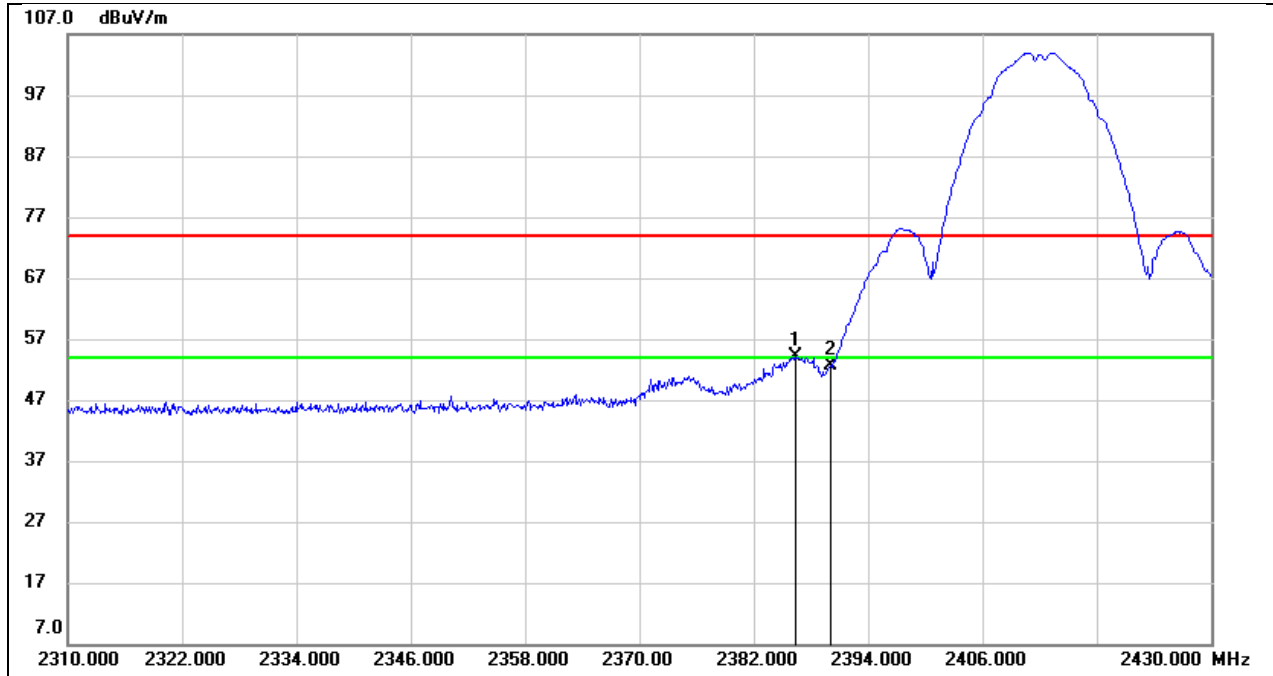
Temperature	25.3 °C	Relative Humidity	65%
Atmosphere Pressure	101 kPa	Test Voltage	DC 3.3 V

TEST RESULTS



8.1. RESTRICTED BANDEDGE

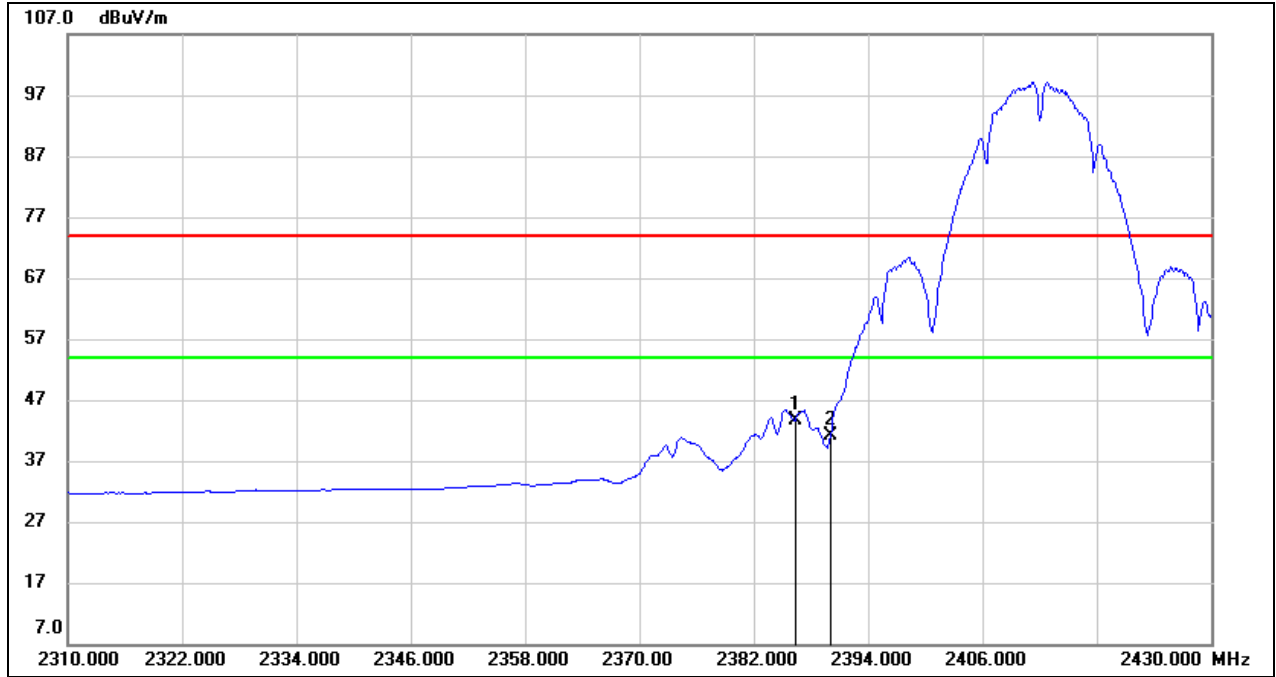
Test Mode:	802.11b Peak	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.320	21.95	32.14	54.09	74.00	-19.91	peak
2	2390.000	20.42	32.16	52.58	74.00	-21.42	peak



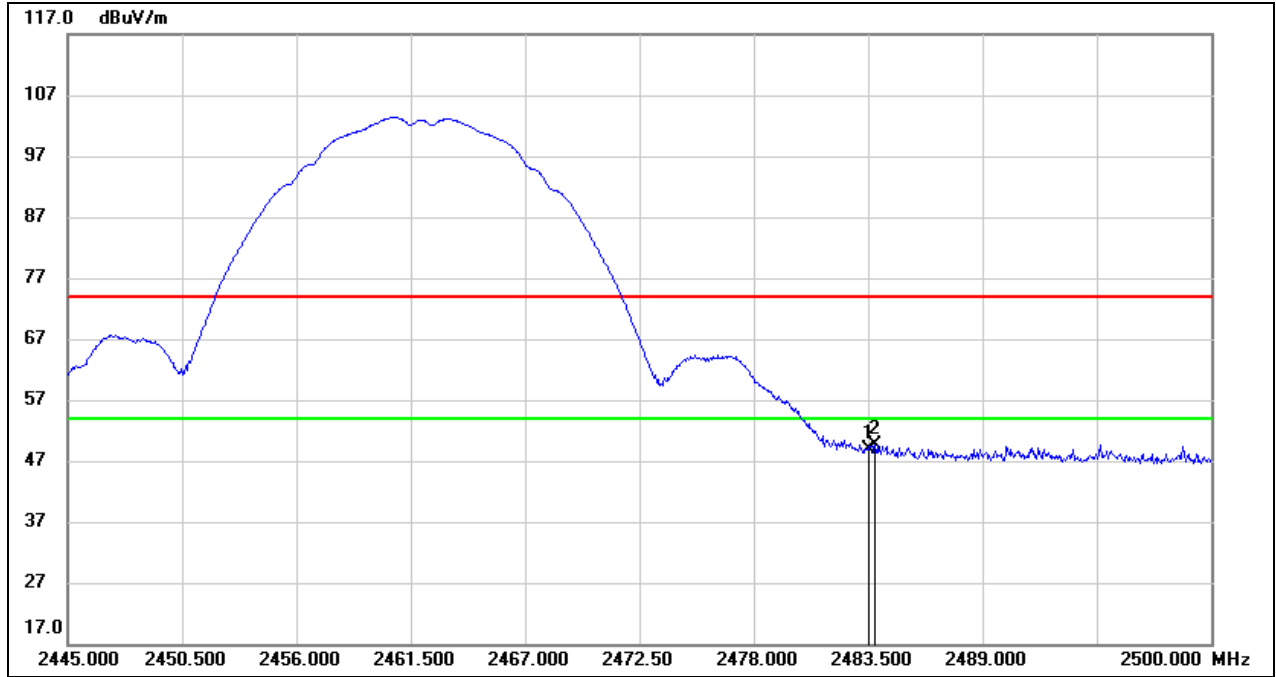
Test Mode:	802.11b Average	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.320	11.58	32.14	43.72	54.00	-10.28	AVG
2	2390.000	8.91	32.16	41.07	54.00	-12.93	AVG



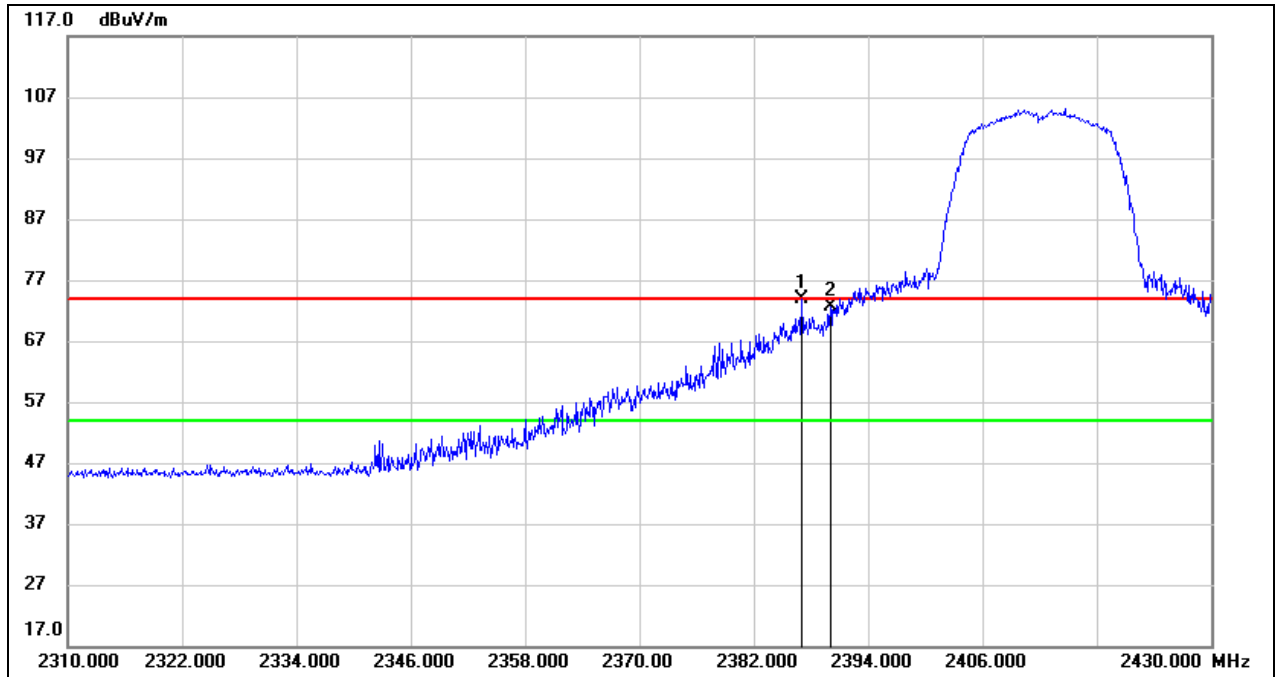
Test Mode:	802.11b Peak	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	16.33	32.44	48.77	74.00	-25.23	peak
2	2483.830	17.29	32.44	49.73	74.00	-24.27	peak



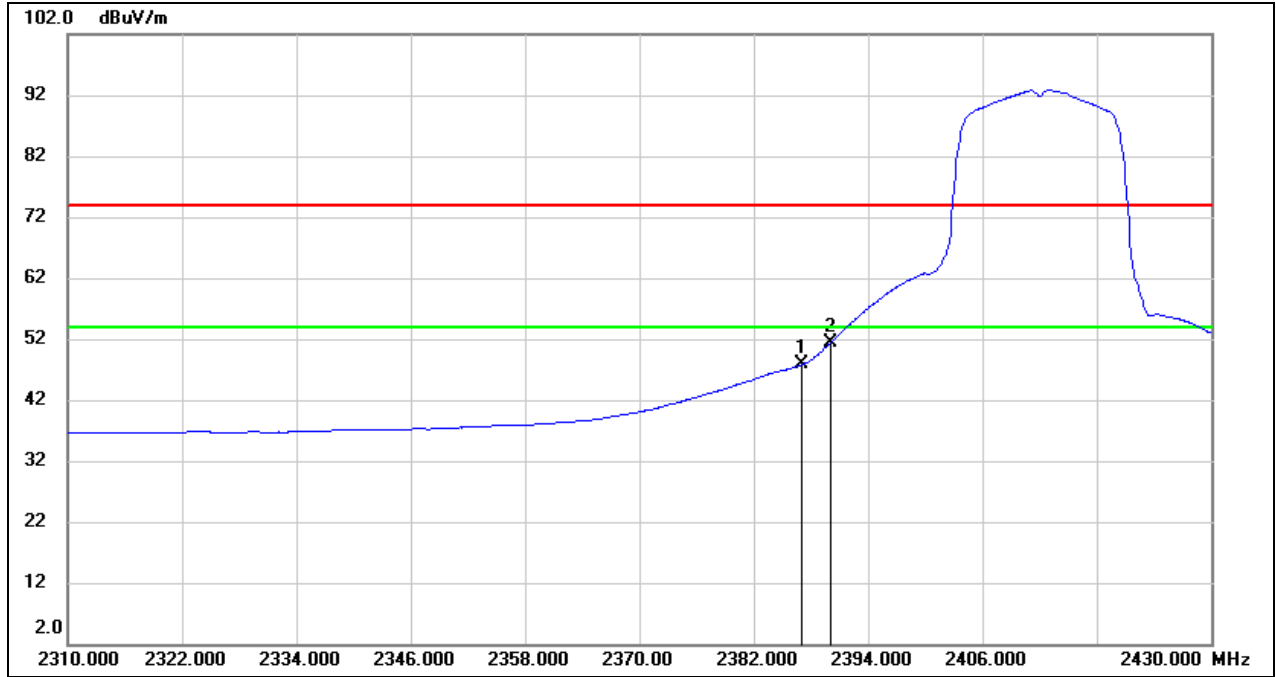
Test Mode:	802.11g Peak	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.040	41.80	32.15	73.95	74.00	-0.05	peak
2	2390.000	40.52	32.16	72.68	74.00	-1.32	peak



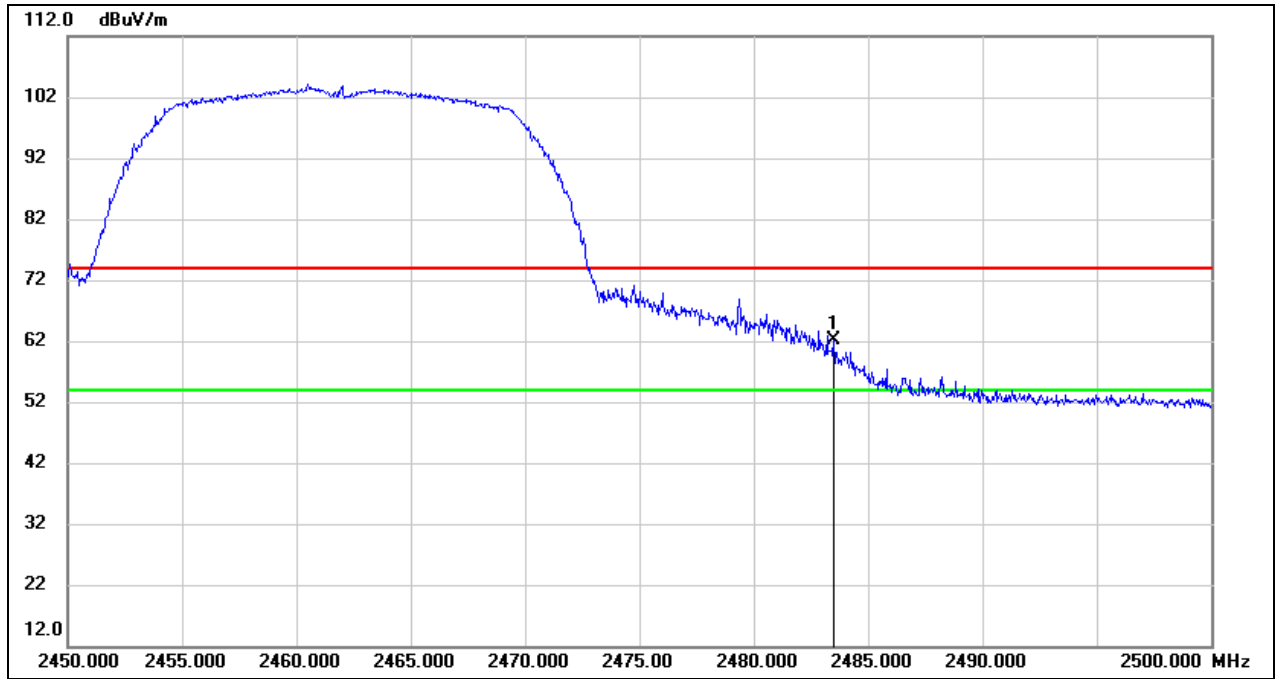
Test Mode:	802.11g Average	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.040	15.64	32.15	47.79	54.00	-6.21	AVG
2	2390.000	19.23	32.16	51.39	54.00	-2.61	AVG



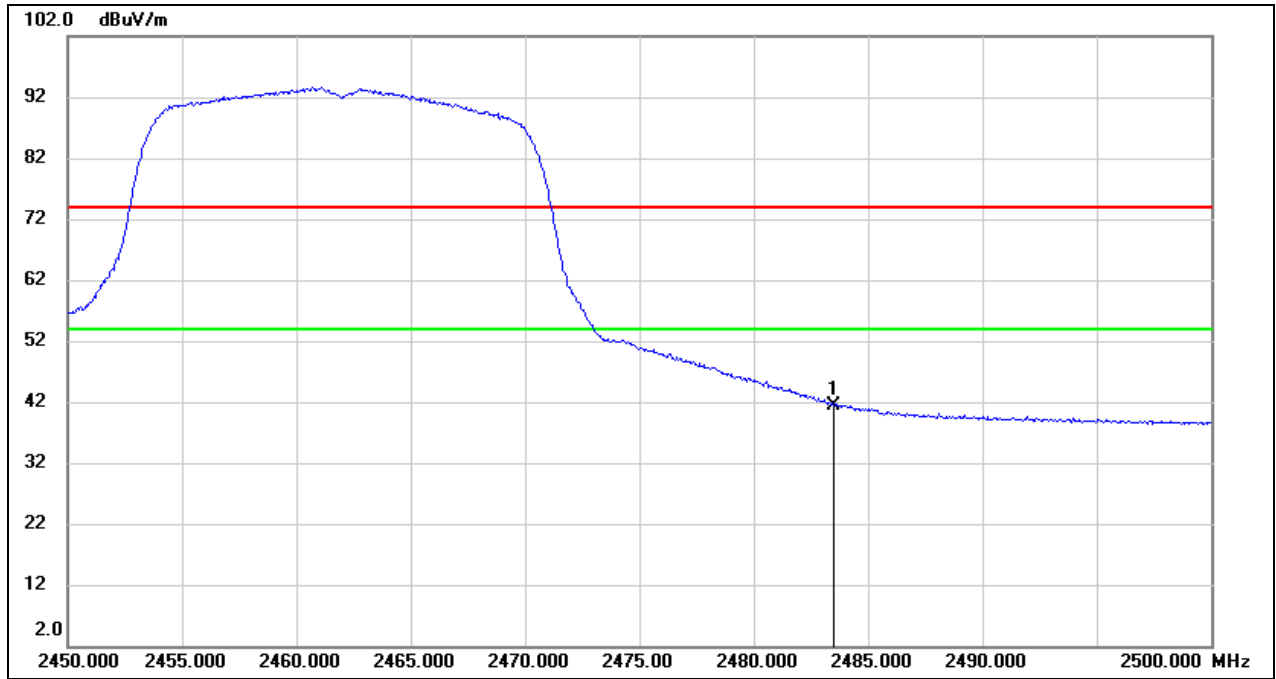
Test Mode:	802.11g Peak	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	29.58	32.44	62.02	74.00	-11.98	peak



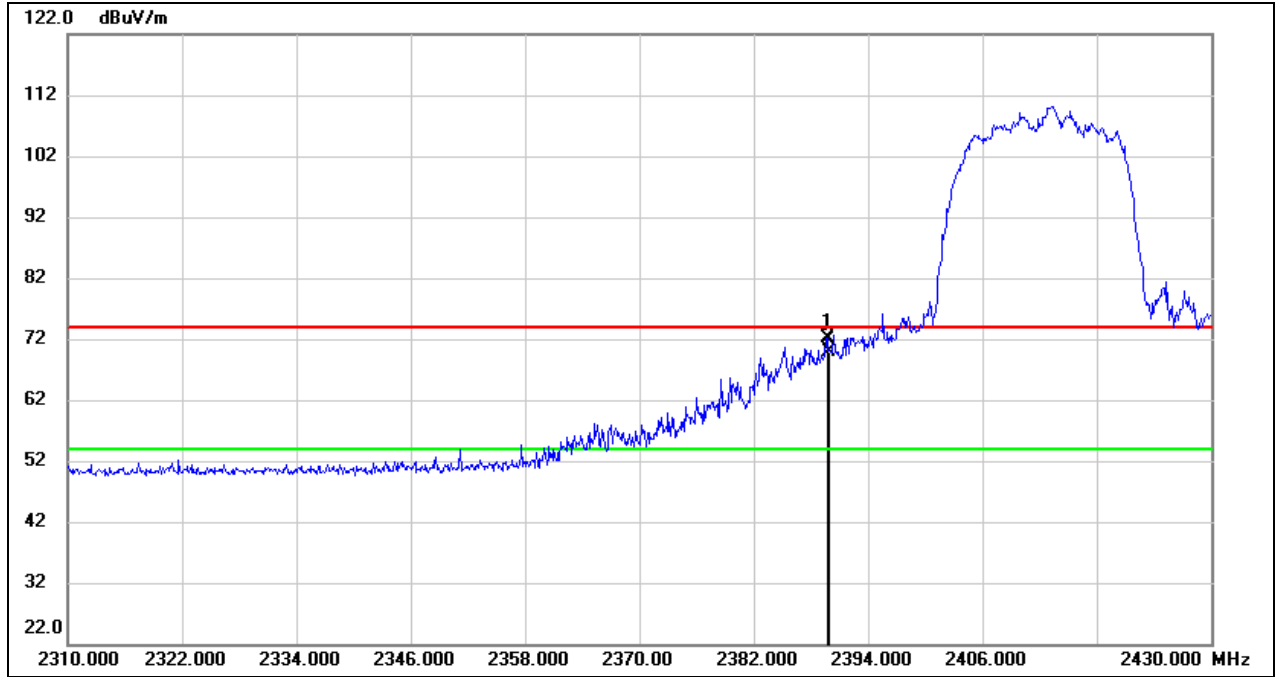
Test Mode:	802.11g Average	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	9.02	32.44	41.46	54.00	-12.54	AVG



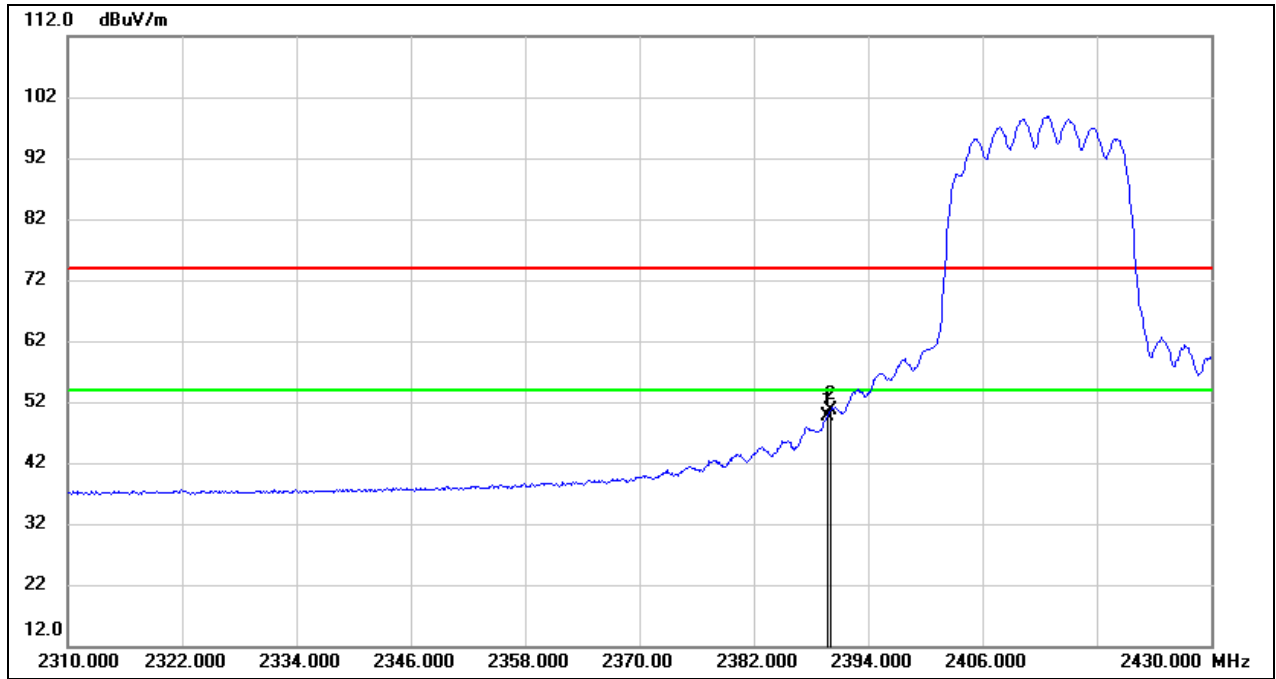
Test Mode:	802.11n HT20 Peak	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.680	40.07	32.16	72.23	74.00	-1.77	peak
2	2390.000	37.69	32.16	69.85	74.00	-4.15	peak



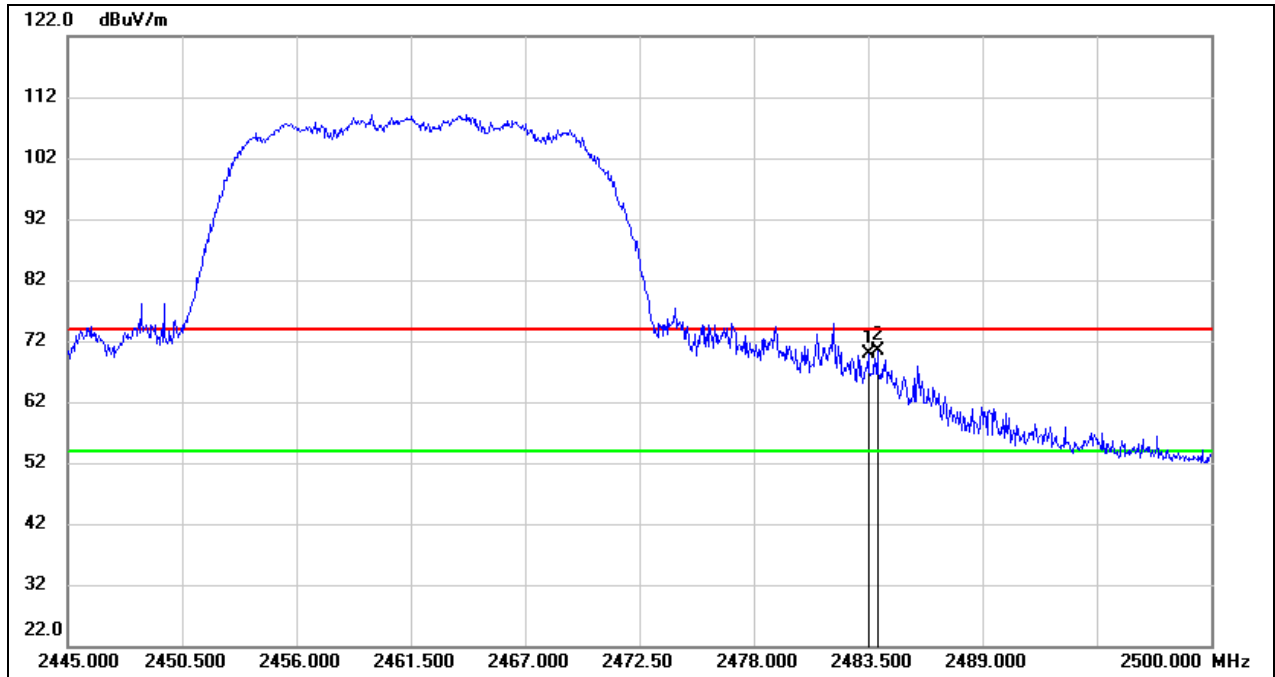
Test Mode:	802.11n HT20 Average	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.680	17.48	32.16	49.64	54.00	-4.36	AVG
2	2390.000	18.54	32.16	50.70	54.00	-3.30	AVG



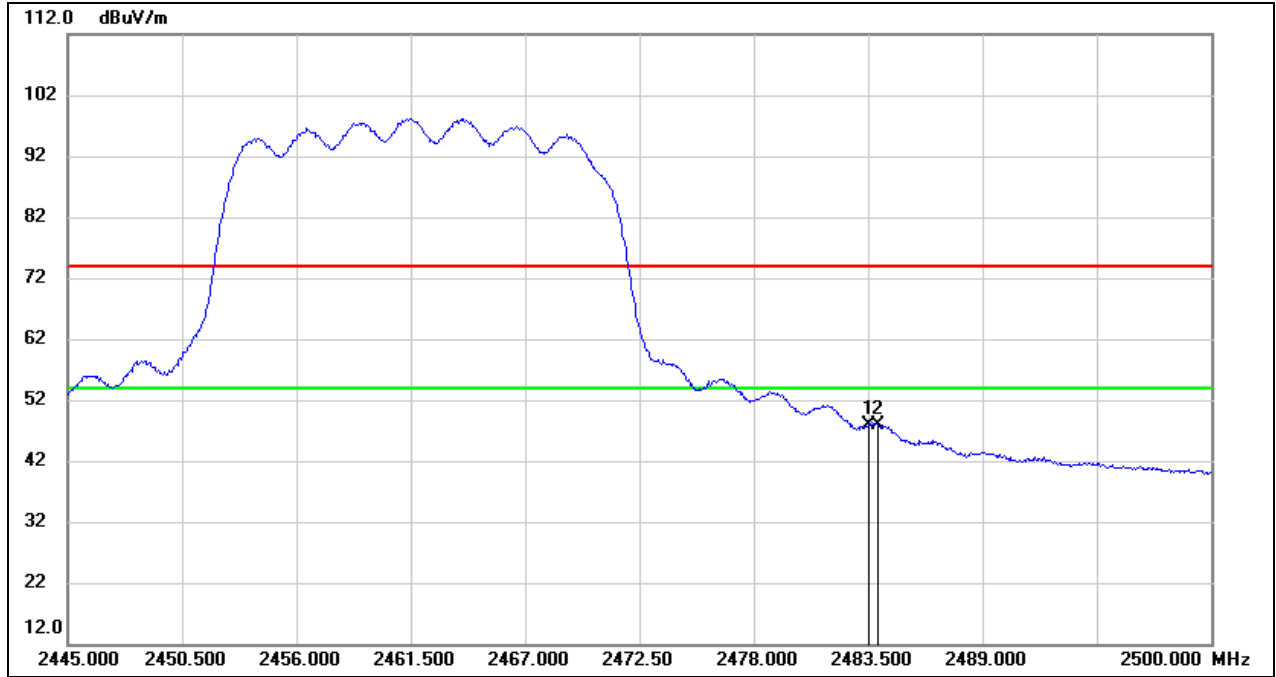
Test Mode:	802.11n HT20 Peak	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	37.51	32.44	69.95	74.00	-4.05	peak
2	2483.940	37.94	32.44	70.38	74.00	-3.62	peak



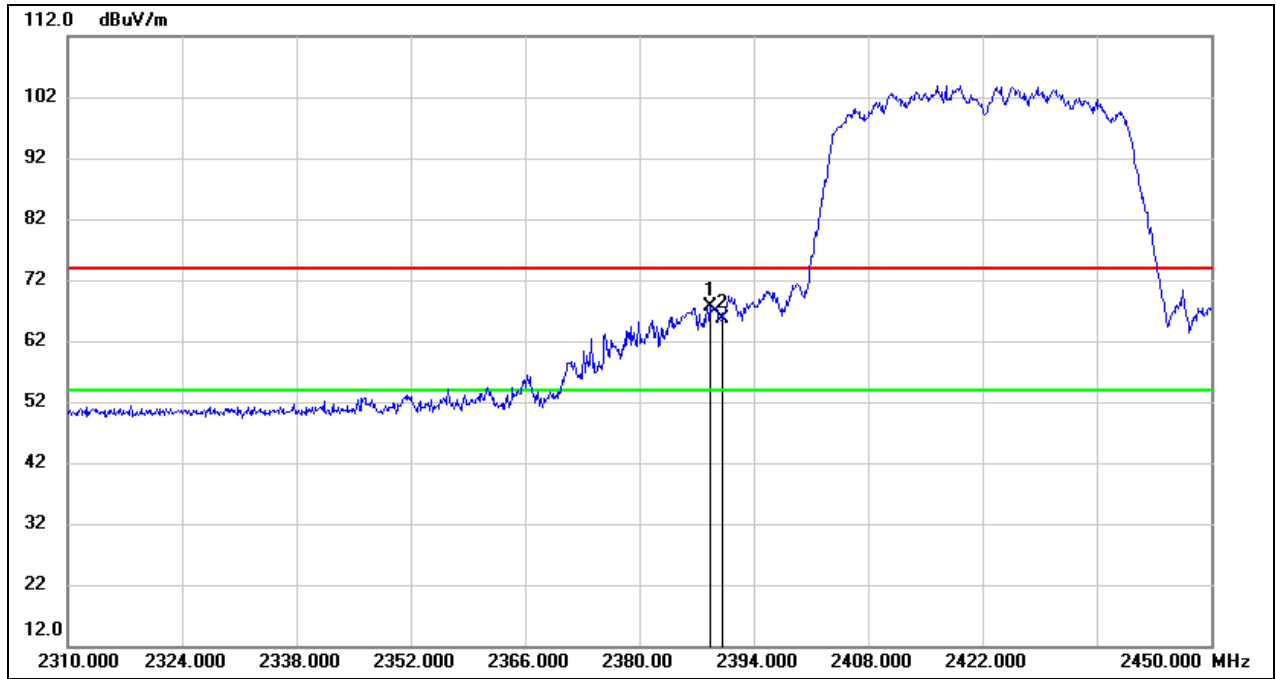
Test Mode:	802.11n HT20 Average	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	15.56	32.44	48.00	54.00	-6.00	AVG
2	2483.940	15.53	32.44	47.97	54.00	-6.03	AVG



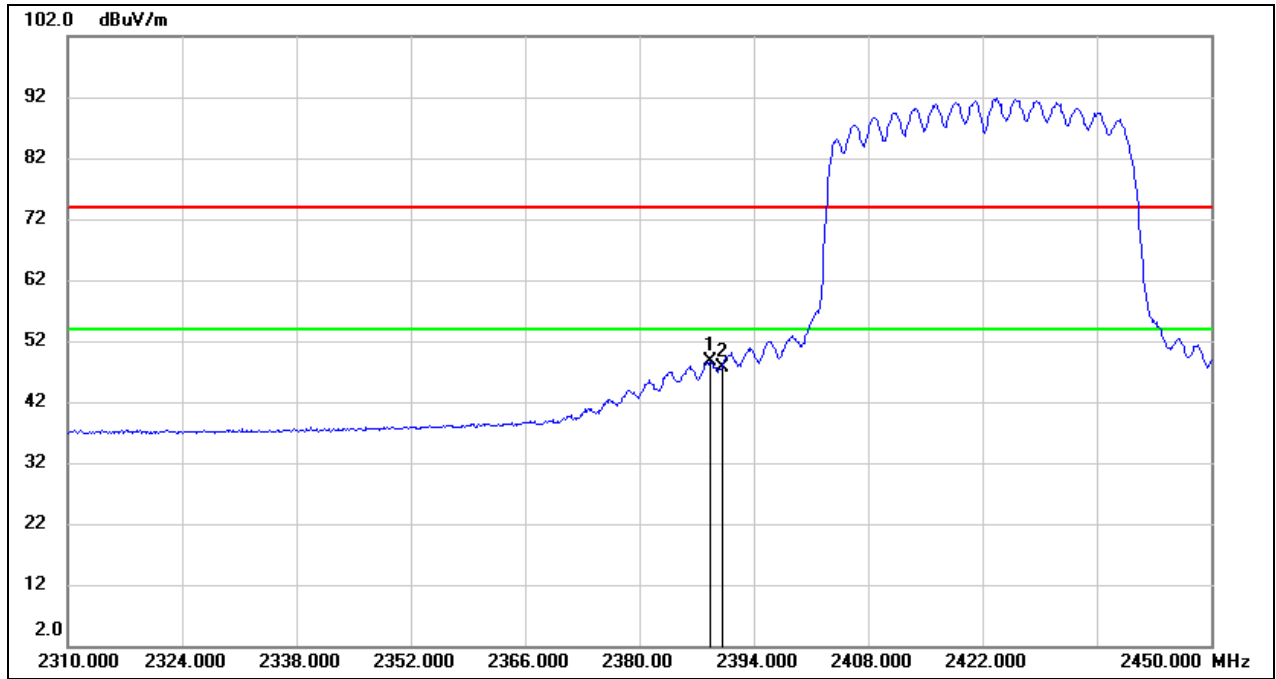
Test Mode:	802.11n HT40 Peak	Channel:	2422 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.680	35.42	32.16	67.58	74.00	-6.42	peak
2	2390.000	33.50	32.16	65.66	74.00	-8.34	peak



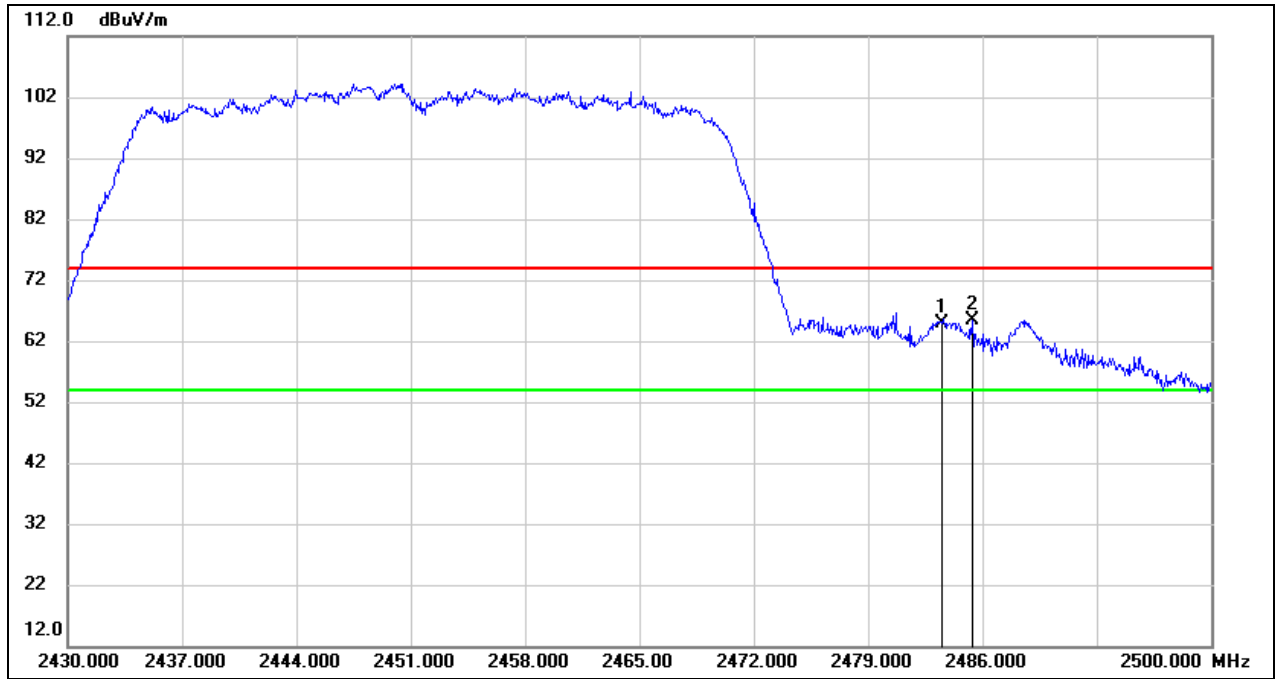
Test Mode:	802.11n HT40 Average	Channel:	2422 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.680	16.51	32.16	48.67	54.00	-5.33	AVG
2	2390.000	15.55	32.16	47.71	54.00	-6.29	AVG



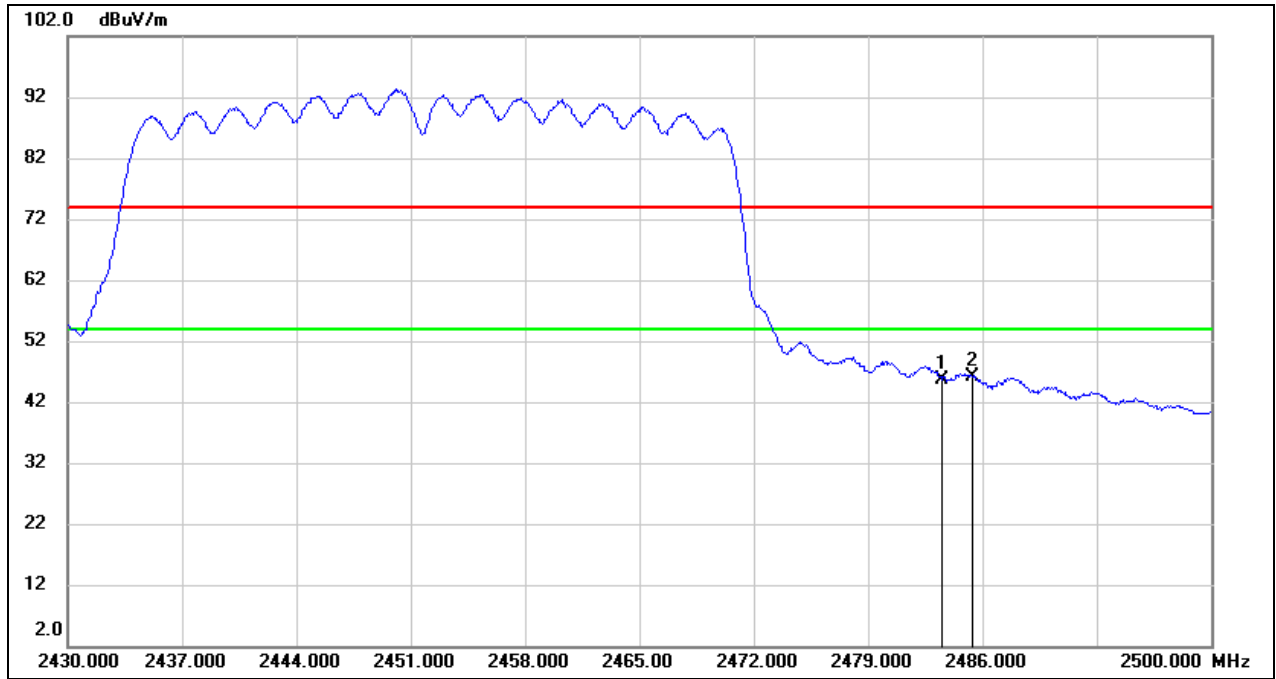
Test Mode:	802.11n HT40 Peak	Channel:	2452 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	32.44	32.44	64.88	74.00	-9.12	peak
2	2485.370	32.89	32.44	65.33	74.00	-8.67	peak



Test Mode:	802.11n HT40 Average	Channel:	2452 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V

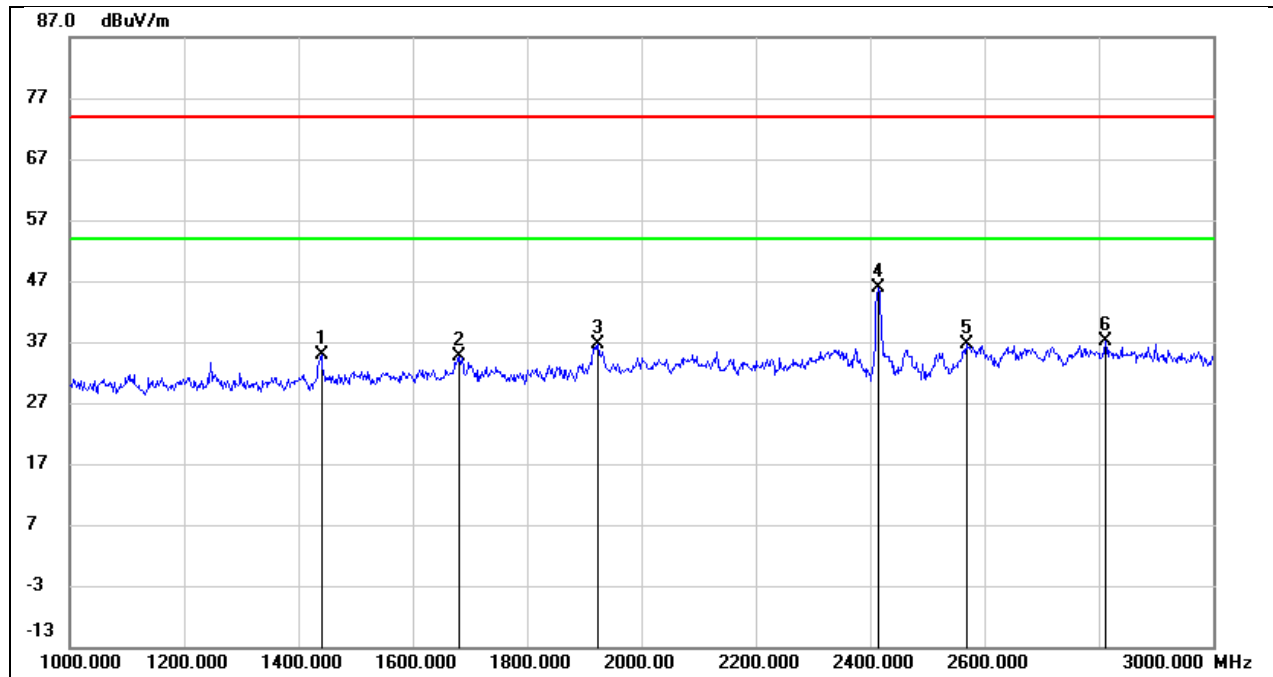


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	13.22	32.44	45.66	54.00	-8.34	AVG
2	2485.370	13.62	32.44	46.06	54.00	-7.94	AVG



8.2. SPURIOUS EMISSIONS (1 GHZ ~ 3 GHZ)

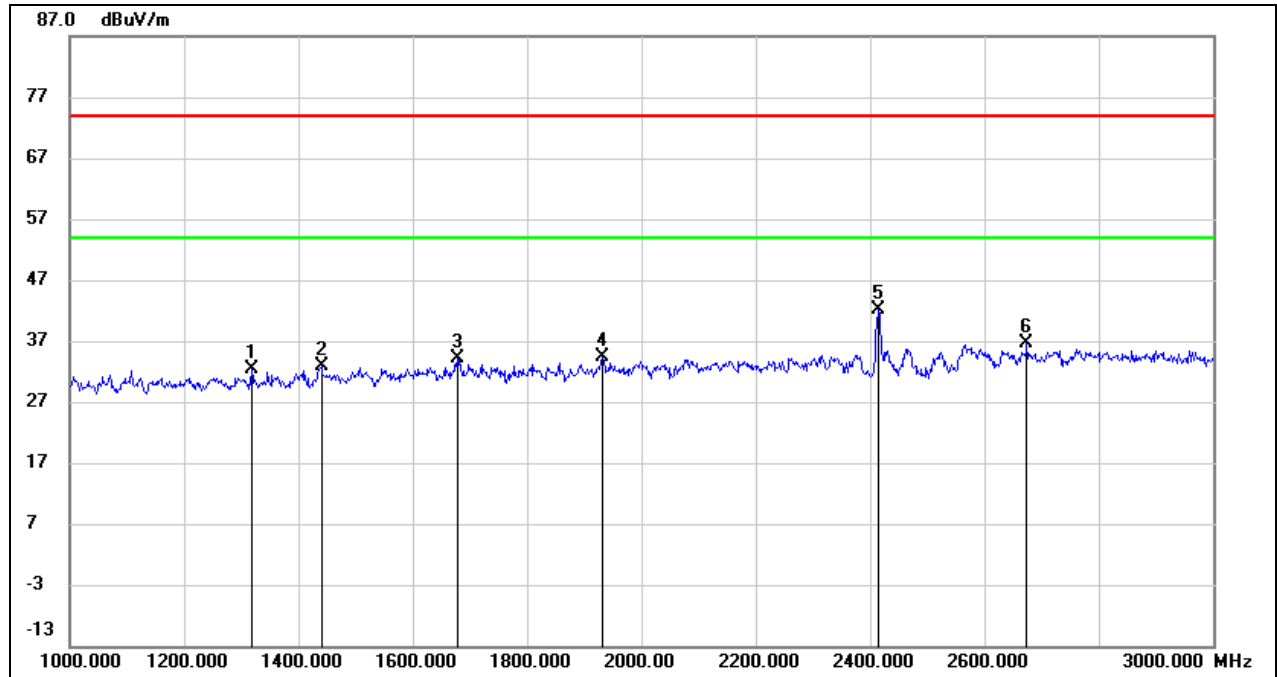
Test Mode:	802.11b	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	47.86	-12.98	34.88	74.00	-39.12	peak
2	1680.000	46.86	-12.12	34.74	74.00	-39.26	peak
3	1924.000	47.95	-11.31	36.64	74.00	-37.36	peak
4	2412.000	54.78	-8.93	45.85	/	/	Fundamental
5	2568.000	44.81	-8.28	36.53	74.00	-37.47	peak
6	2812.000	44.78	-7.55	37.23	74.00	-36.77	peak



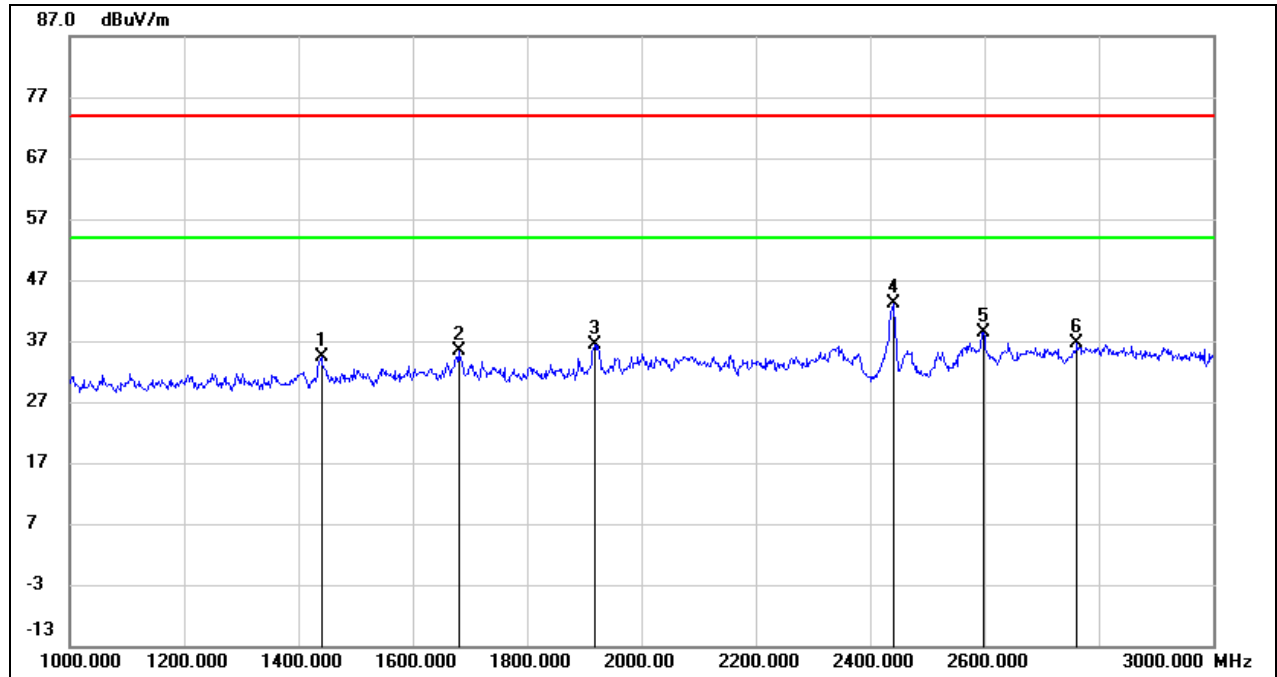
Test Mode:	802.11b	Channel:	2412 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1318.000	45.99	-13.56	32.43	74.00	-41.57	peak
2	1440.000	45.88	-12.98	32.90	74.00	-41.10	peak
3	1678.000	46.24	-12.12	34.12	74.00	-39.88	peak
4	1932.000	45.68	-11.28	34.40	74.00	-39.60	peak
5	2412.000	51.00	-8.93	42.07	/	/	Fundamental
6	2674.000	44.66	-7.97	36.69	74.00	-37.31	peak



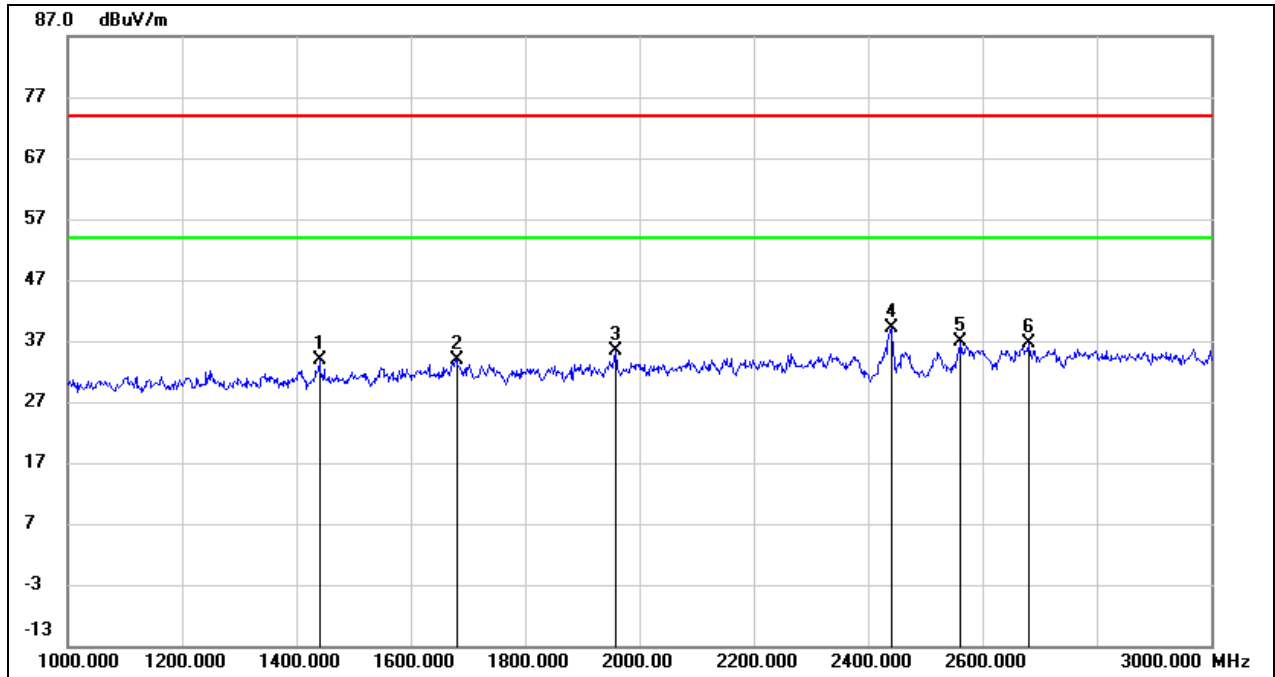
Test Mode:	802.11b	Channel:	2437 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	47.48	-12.98	34.50	74.00	-39.50	peak
2	1680.000	47.41	-12.12	35.29	74.00	-38.71	peak
3	1918.000	47.79	-11.33	36.46	74.00	-37.54	peak
4	2437.000	51.96	-8.80	43.16	/	/	Fundamental
5	2598.000	46.61	-8.19	38.42	74.00	-35.58	peak
6	2762.000	44.22	-7.70	36.52	74.00	-37.48	peak



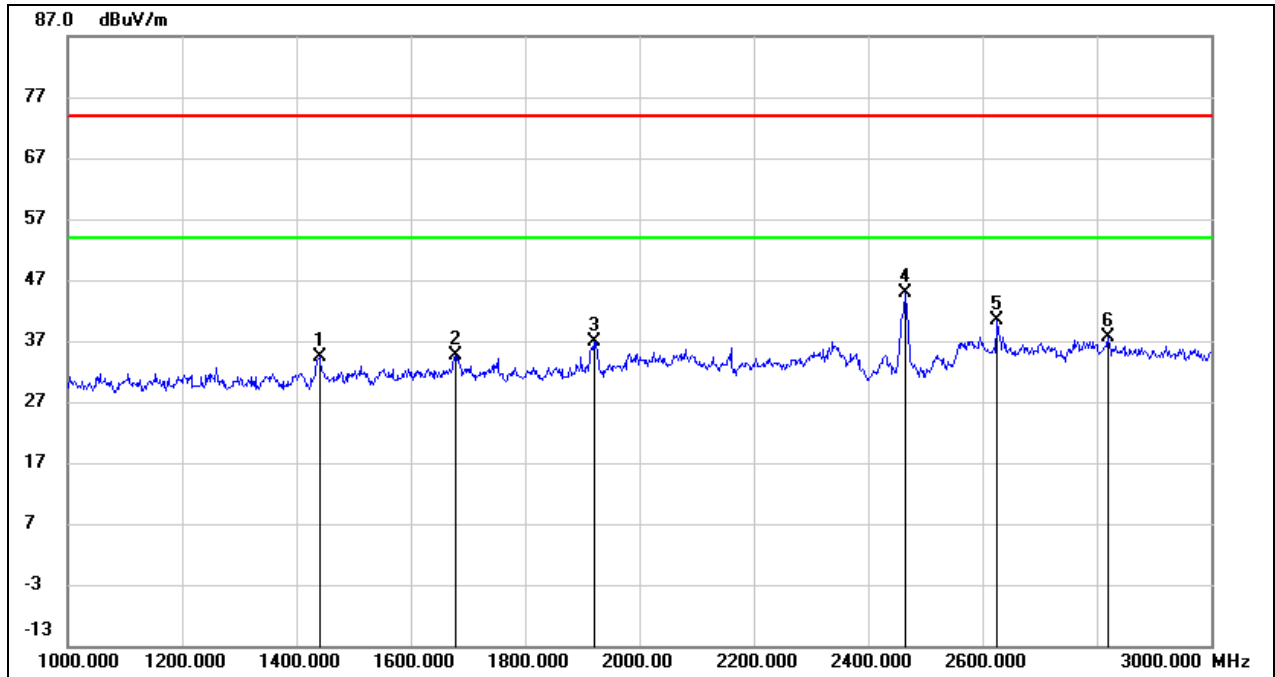
Test Mode:	802.11b	Channel:	2437 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	46.88	-12.98	33.90	74.00	-40.10	peak
2	1680.000	45.97	-12.12	33.85	74.00	-40.15	peak
3	1958.000	46.55	-11.20	35.35	74.00	-38.65	peak
4	2437.000	47.91	-8.80	39.11	/	/	Fundamental
5	2562.000	45.31	-8.31	37.00	74.00	-37.00	peak
6	2680.000	44.48	-7.95	36.53	74.00	-37.47	peak



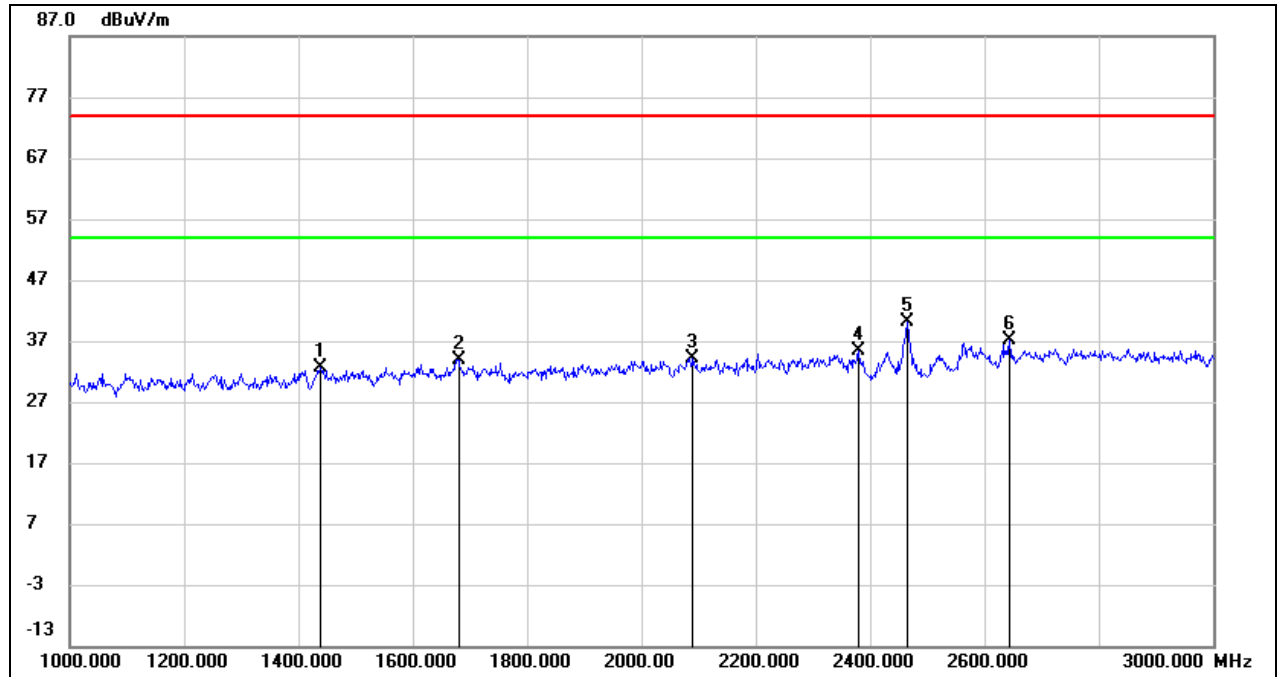
Test Mode:	802.11b	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	47.48	-12.98	34.50	74.00	-39.50	peak
2	1678.000	46.64	-12.12	34.52	74.00	-39.48	peak
3	1920.000	48.25	-11.32	36.93	74.00	-37.07	peak
4	2462.000	53.64	-8.68	44.96	/	/	Fundamental
5	2626.000	48.45	-8.10	40.35	74.00	-33.65	peak
6	2820.000	45.09	-7.52	37.57	74.00	-36.43	peak



Test Mode:	802.11b	Channel:	2462 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V

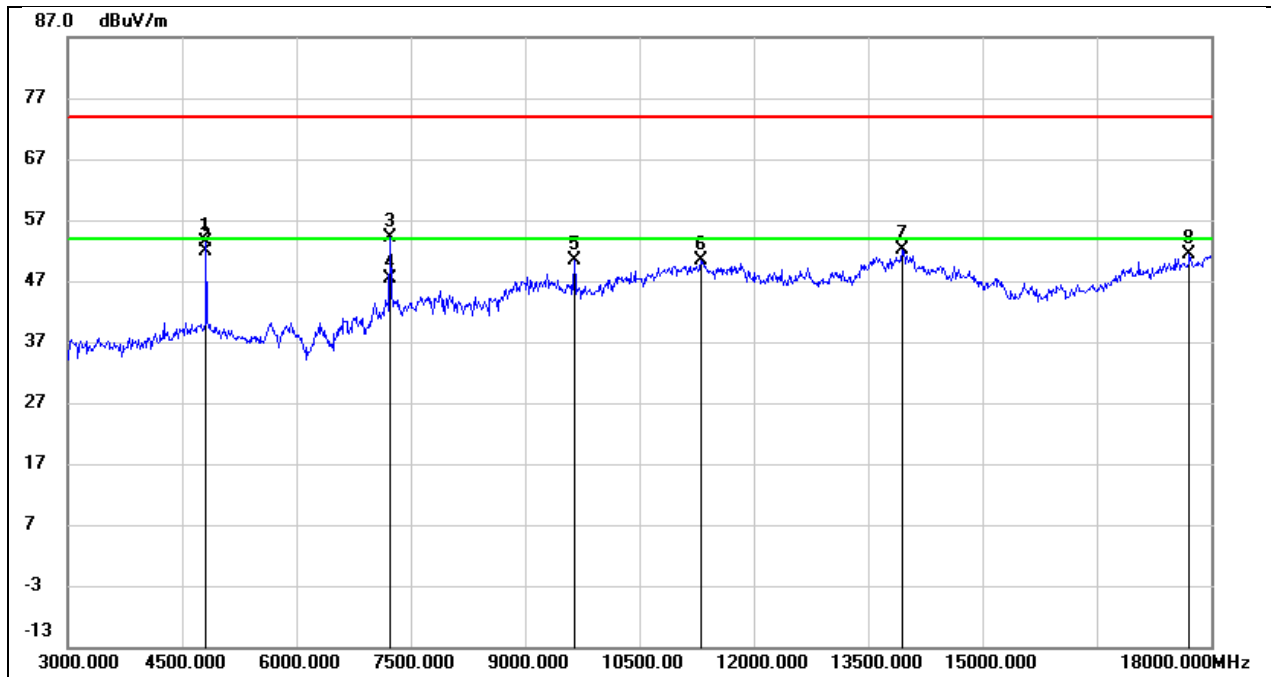


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1438.000	45.73	-13.00	32.73	74.00	-41.27	peak
2	1680.000	45.98	-12.12	33.86	74.00	-40.14	peak
3	2090.000	44.75	-10.60	34.15	74.00	-39.85	peak
4	2380.000	44.57	-9.10	35.47	74.00	-38.53	peak
5	2462.000	48.88	-8.68	40.20	/	/	Fundamental
6	2644.000	45.23	-8.06	37.17	74.00	-36.83	peak



8.3. SPURIOUS EMISSIONS (3 GHZ ~ 18 GHZ)

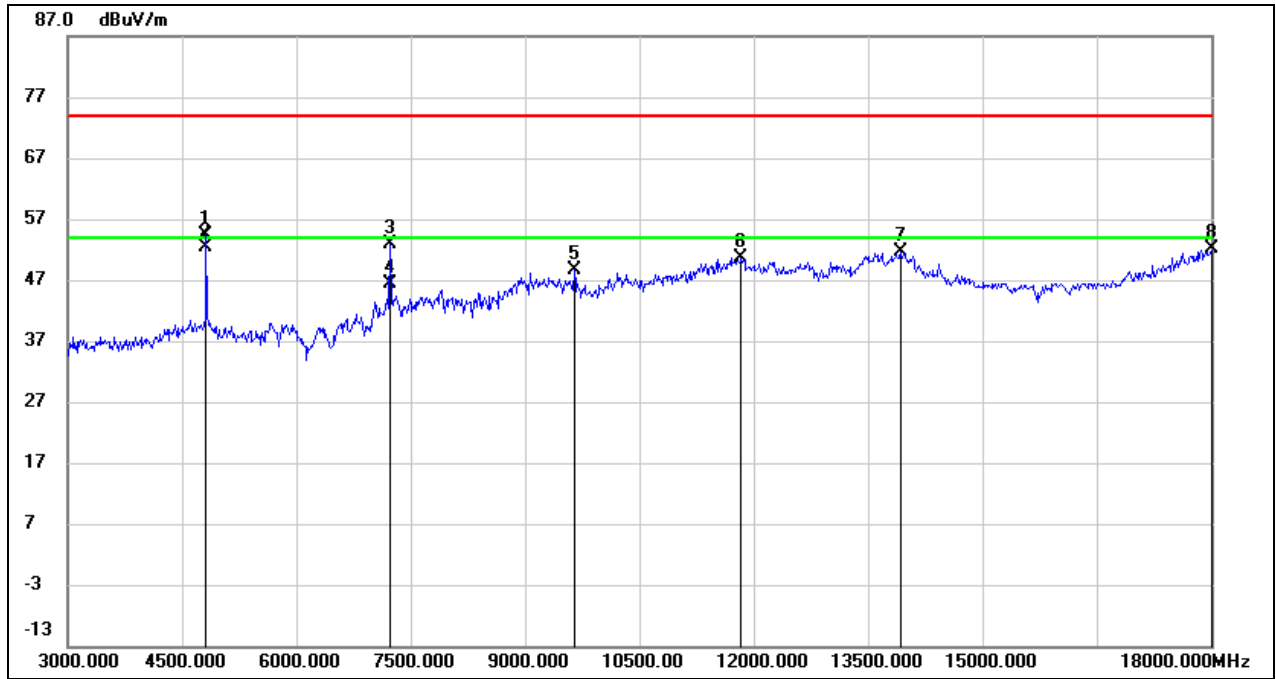
Test Mode:	802.11b	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	53.71	-0.26	53.45	74.00	-20.55	peak
2	4815.000	52.06	-0.26	51.80	54.00	-2.20	AVG
3	7230.000	47.55	6.53	54.08	74.00	-19.92	peak
4	7230.000	40.97	6.53	47.50	54.00	-6.50	AVG
5	9645.000	39.36	11.08	50.44	74.00	-23.56	peak
6	11310.000	34.45	15.91	50.36	74.00	-23.64	peak
7	13950.000	30.33	21.86	52.19	74.00	-21.81	peak
8	17715.000	27.36	24.00	51.36	74.00	-22.64	peak



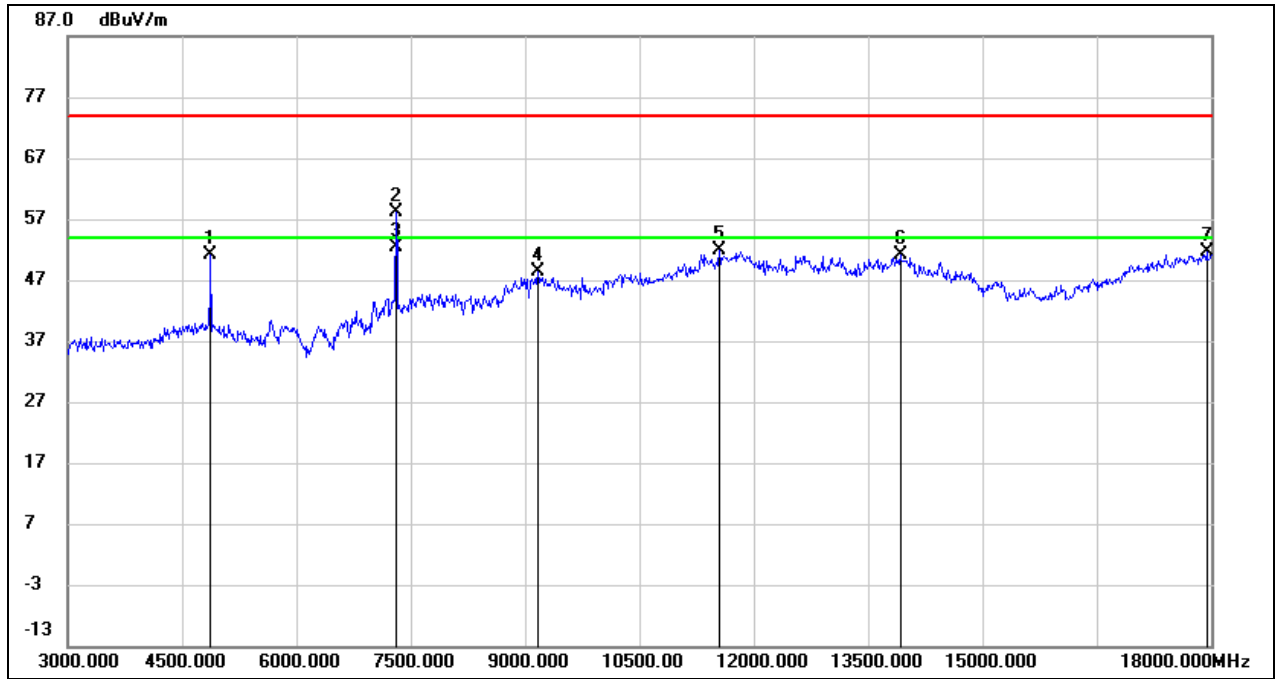
Test Mode:	802.11b	Channel:	2412 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	54.75	-0.26	54.49	74.00	-19.51	peak
2	4815.000	52.56	-0.26	52.30	54.00	-1.70	AVG
3	7230.000	46.26	6.53	52.79	74.00	-21.21	peak
4	7230.000	39.77	6.53	46.30	54.00	-7.70	AVG
5	9645.000	37.46	11.08	48.54	74.00	-25.46	peak
6	11835.000	33.21	17.51	50.72	74.00	-23.28	peak
7	13920.000	29.79	21.79	51.58	74.00	-22.42	peak
8	18000.000	26.34	25.69	52.03	74.00	-21.97	peak



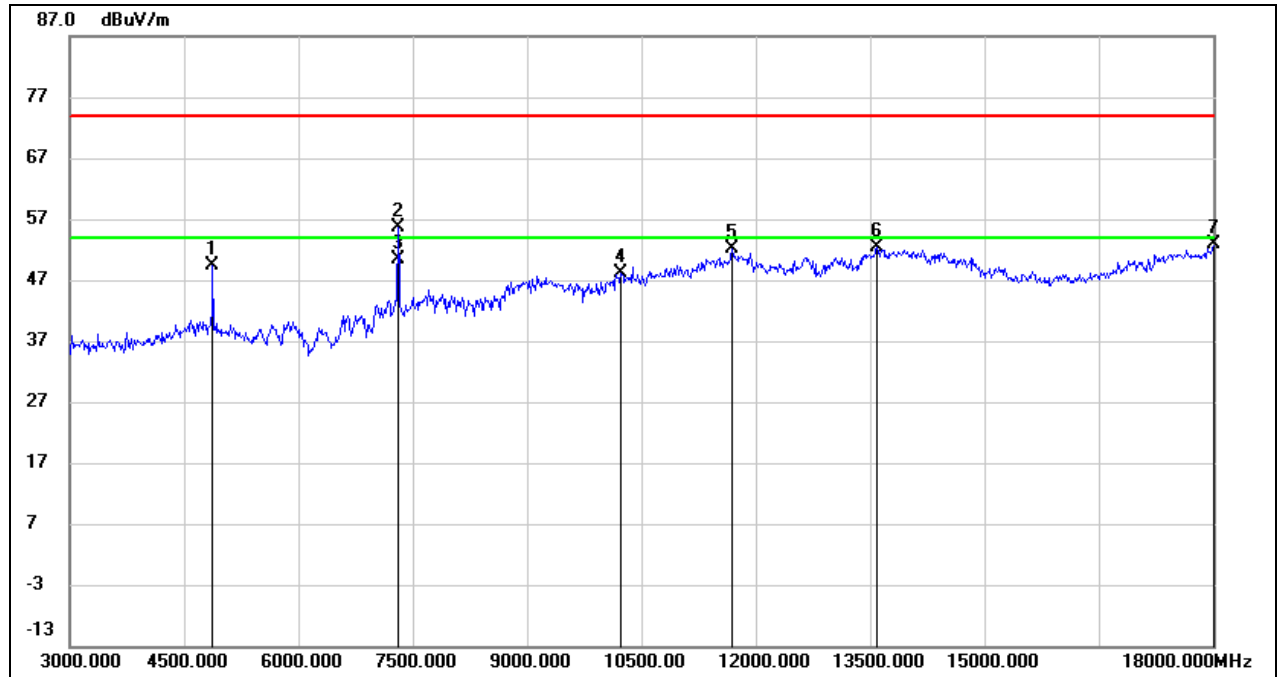
Test Mode:	802.11b	Channel:	2437 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	51.22	-0.03	51.19	74.00	-22.81	peak
2	7305.000	51.55	6.47	58.02	74.00	-15.98	peak
3	7305.000	45.93	6.47	52.40	54.00	-1.60	AVG
4	9165.000	37.74	10.55	48.29	74.00	-25.71	peak
5	11550.000	35.20	16.74	51.94	74.00	-22.06	peak
6	13920.000	29.22	21.79	51.01	74.00	-22.99	peak
7	17940.000	26.37	25.34	51.71	74.00	-22.29	peak



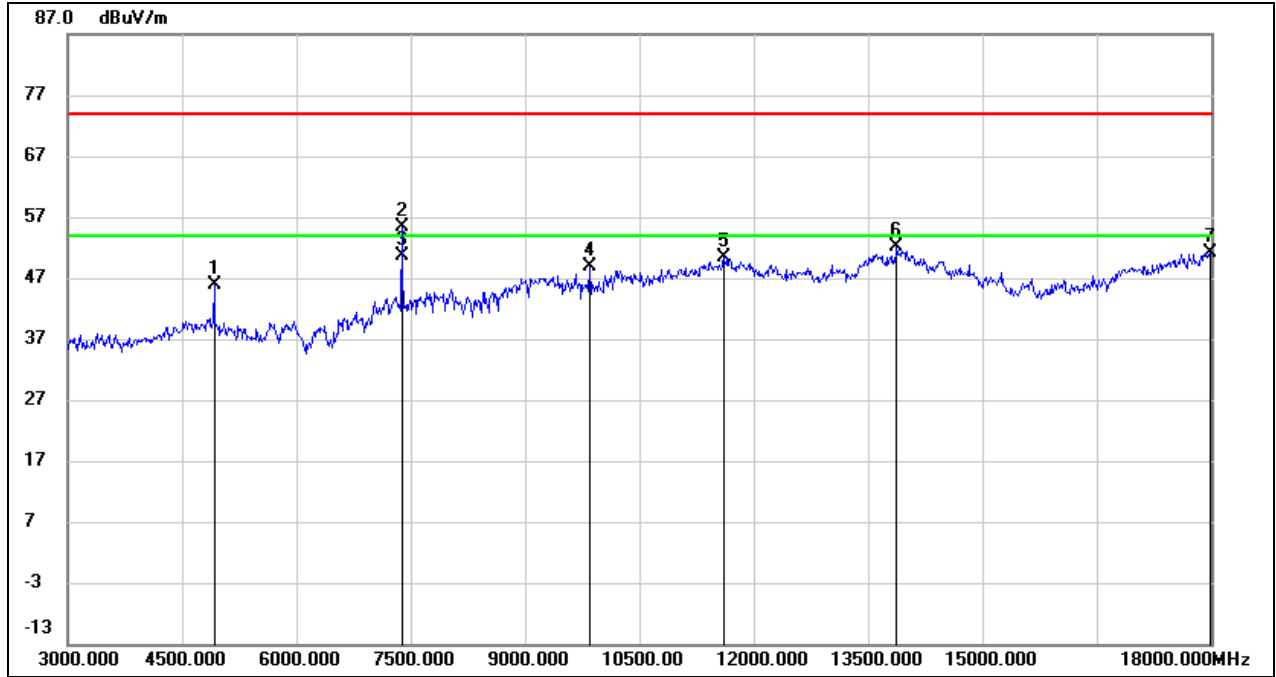
Test Mode:	802.11b	Channel:	2437 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	49.53	-0.03	49.50	74.00	-24.50	peak
2	7305.000	49.19	6.47	55.66	74.00	-18.34	peak
3	7305.000	43.79	6.47	50.26	54.00	-3.74	AVG
4	10230.000	35.67	12.46	48.13	74.00	-25.87	peak
5	11685.000	34.91	17.10	52.01	74.00	-21.99	peak
6	13590.000	31.29	21.09	52.38	74.00	-21.62	peak
7	18000.000	27.08	25.69	52.77	74.00	-21.23	peak



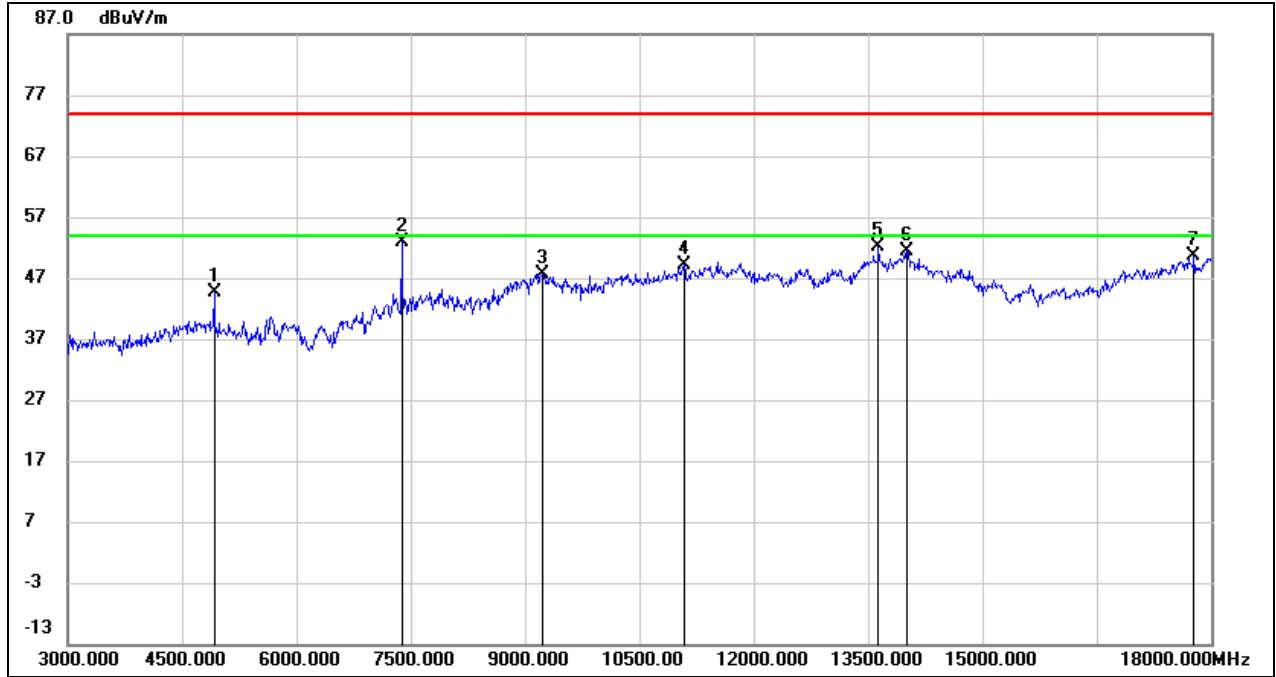
Test Mode:	802.11b	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	45.84	0.14	45.98	74.00	-28.02	peak
2	7380.000	49.04	6.42	55.46	74.00	-18.54	peak
3	7380.000	44.18	6.42	50.60	54.00	-3.40	AVG
4	9855.000	37.19	11.63	48.82	74.00	-25.18	peak
5	11610.000	33.51	16.90	50.41	74.00	-23.59	peak
6	13875.000	30.31	21.70	52.01	74.00	-21.99	peak
7	17985.000	25.57	25.60	51.17	74.00	-22.83	peak



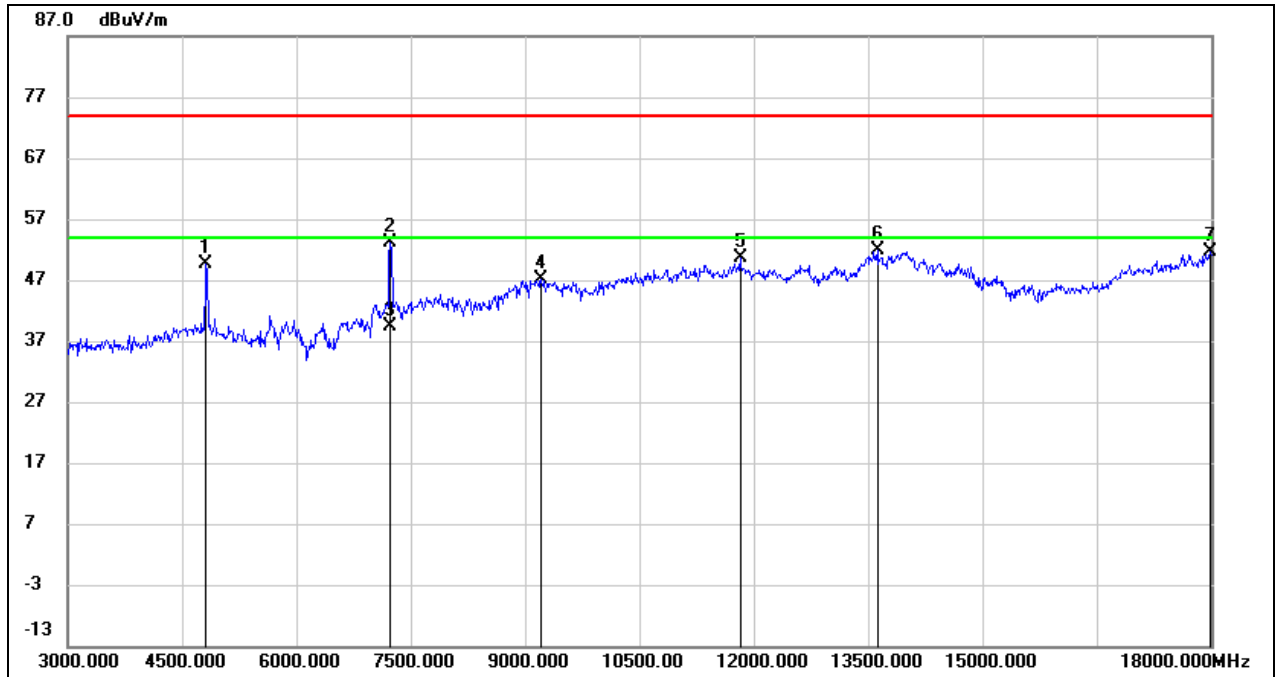
Test Mode:	802.11b	Channel:	2462 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	44.49	0.14	44.63	74.00	-29.37	peak
2	7380.000	46.42	6.42	52.84	74.00	-21.16	peak
3	9225.000	37.03	10.58	47.61	74.00	-26.39	peak
4	11085.000	34.14	15.08	49.22	74.00	-24.78	peak
5	13635.000	30.83	21.19	52.02	74.00	-21.98	peak
6	14010.000	29.36	21.93	51.29	74.00	-22.71	peak
7	17775.000	26.15	24.36	50.51	74.00	-23.49	peak



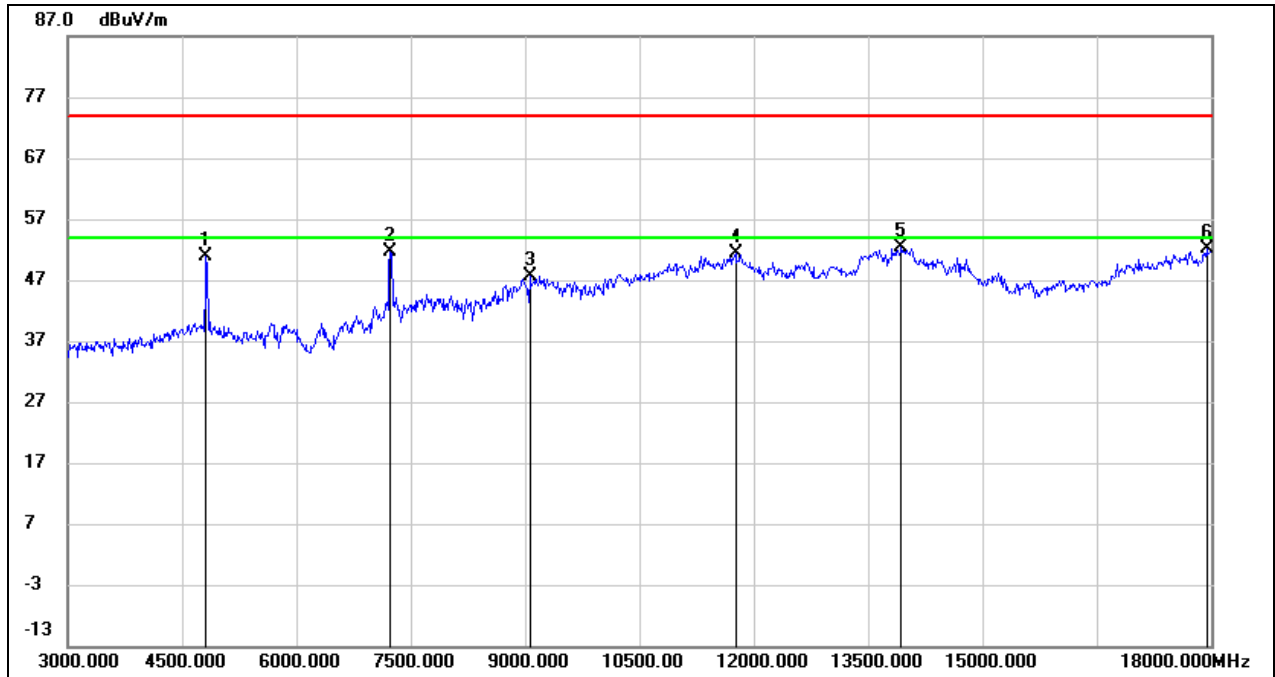
Test Mode:	802.11g	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	50.00	-0.26	49.74	74.00	-24.26	peak
2	7230.000	46.67	6.53	53.20	74.00	-20.80	peak
3	7230.000	32.73	6.53	39.26	54.00	-14.74	AVG
4	9210.000	36.60	10.57	47.17	74.00	-26.83	peak
5	11820.000	33.18	17.47	50.65	74.00	-23.35	peak
6	13620.000	30.73	21.15	51.88	74.00	-22.12	peak
7	17985.000	25.98	25.60	51.58	74.00	-22.42	peak



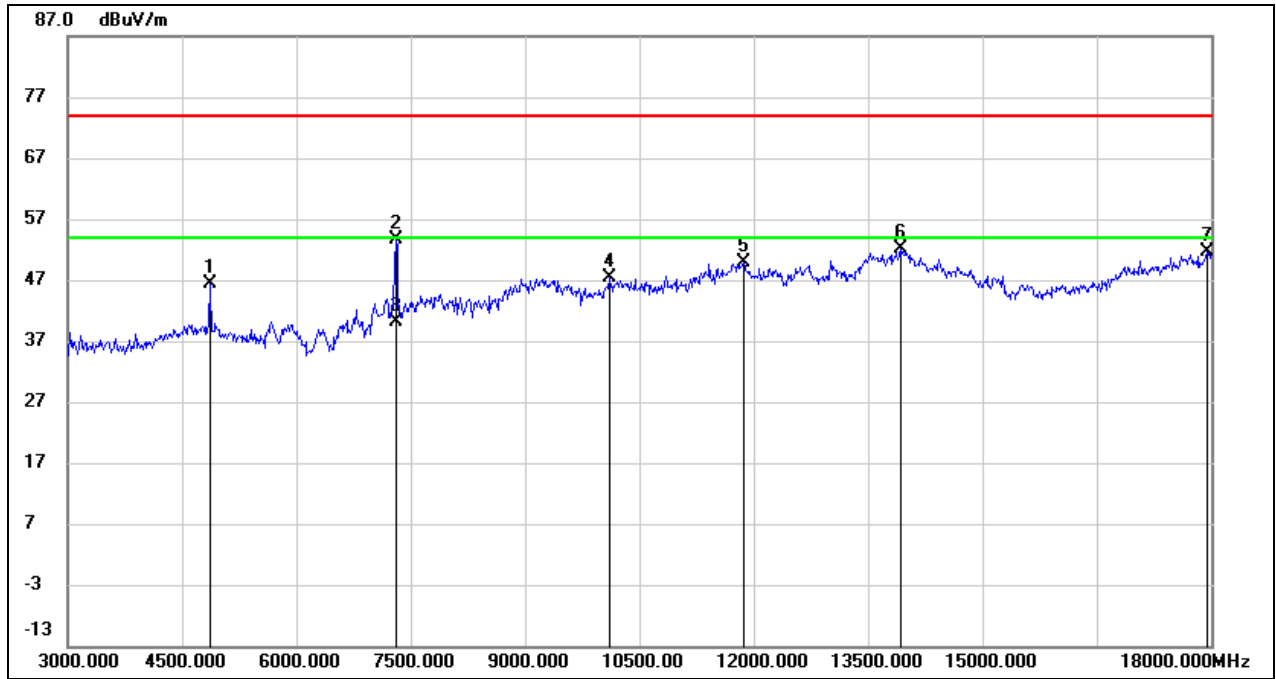
Test Mode:	802.11g	Channel:	2412 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	51.15	-0.26	50.89	74.00	-23.11	peak
2	7230.000	45.14	6.53	51.67	74.00	-22.33	peak
3	9060.000	37.03	10.51	47.54	74.00	-26.46	peak
4	11760.000	34.03	17.31	51.34	74.00	-22.66	peak
5	13935.000	30.56	21.82	52.38	74.00	-21.62	peak
6	17940.000	26.86	25.34	52.20	74.00	-21.80	peak



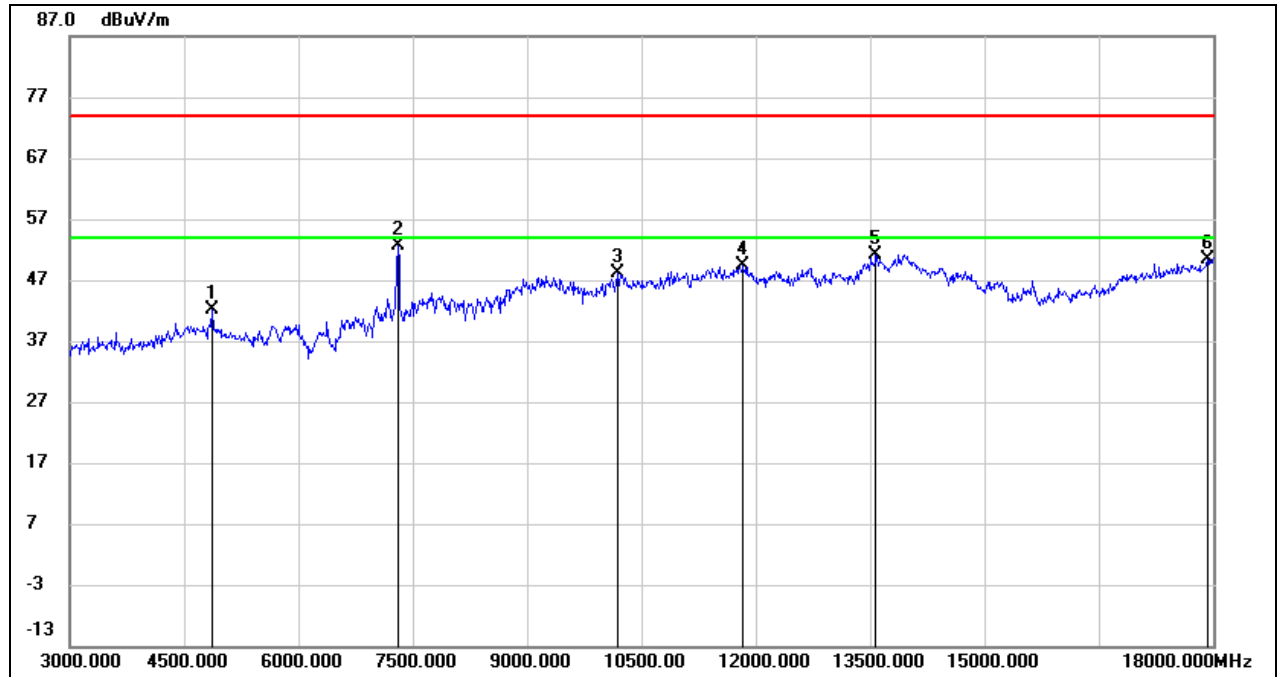
Test Mode:	802.11g	Channel:	2437 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	46.48	-0.09	46.39	74.00	-27.61	peak
2	7305.000	47.26	6.47	53.73	74.00	-20.27	peak
3	7305.000	33.72	6.47	40.19	54.00	-13.81	AVG
4	10110.000	35.04	12.22	47.26	74.00	-26.74	peak
5	11865.000	32.19	17.59	49.78	74.00	-24.22	peak
6	13920.000	30.33	21.79	52.12	74.00	-21.88	peak
7	17955.000	26.31	25.42	51.73	74.00	-22.27	peak



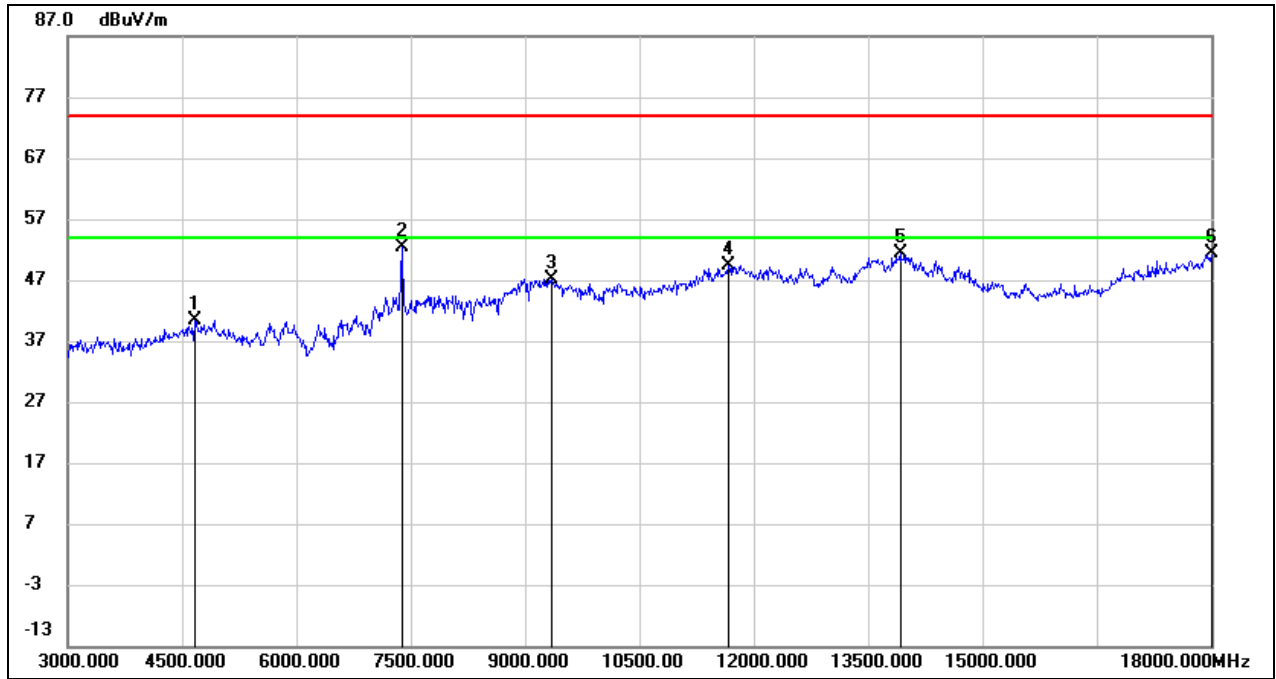
Test Mode:	802.11g	Channel:	2437 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	42.11	-0.03	42.08	74.00	-31.92	peak
2	7305.000	46.19	6.47	52.66	74.00	-21.34	peak
3	10185.000	35.67	12.38	48.05	74.00	-25.95	peak
4	11835.000	31.83	17.51	49.34	74.00	-24.66	peak
5	13575.000	30.17	21.06	51.23	74.00	-22.77	peak
6	17925.000	25.15	25.25	50.40	74.00	-23.60	peak



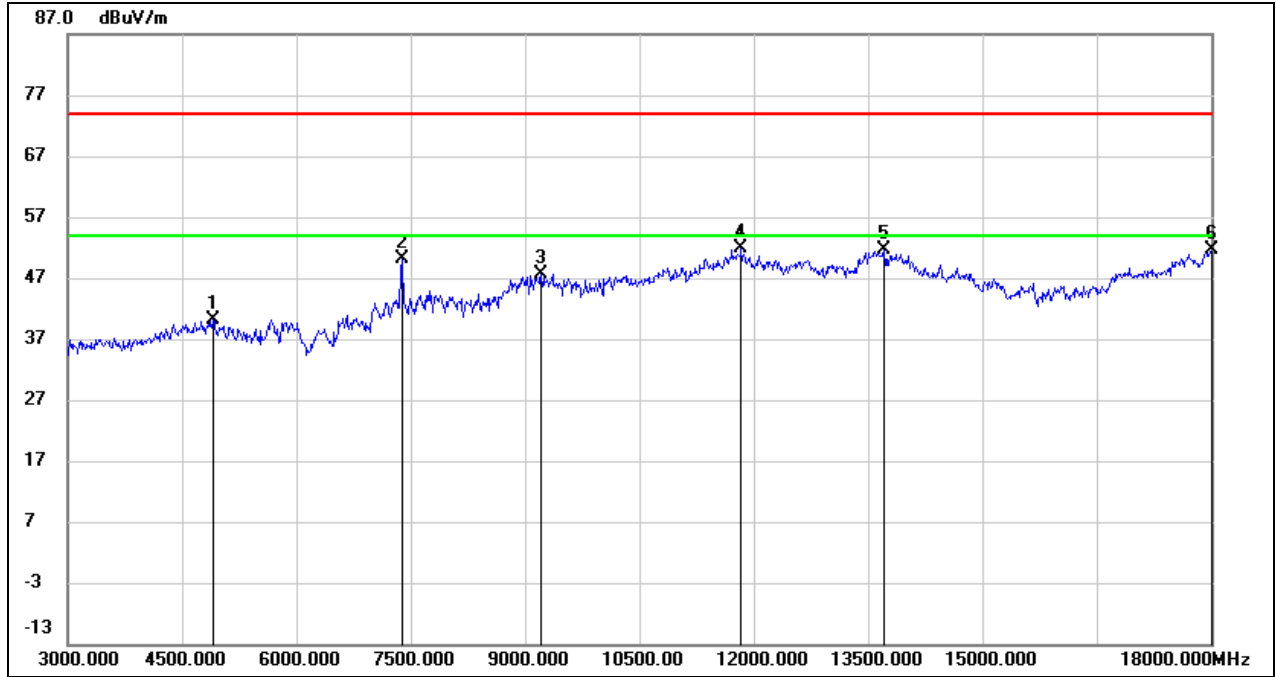
Test Mode:	802.11g	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4665.000	41.25	-0.83	40.42	74.00	-33.58	peak
2	7380.000	45.92	6.42	52.34	74.00	-21.66	peak
3	9345.000	36.60	10.63	47.23	74.00	-26.77	peak
4	11670.000	32.21	17.07	49.28	74.00	-24.72	peak
5	13920.000	29.57	21.79	51.36	74.00	-22.64	peak
6	18000.000	25.63	25.69	51.32	74.00	-22.68	peak



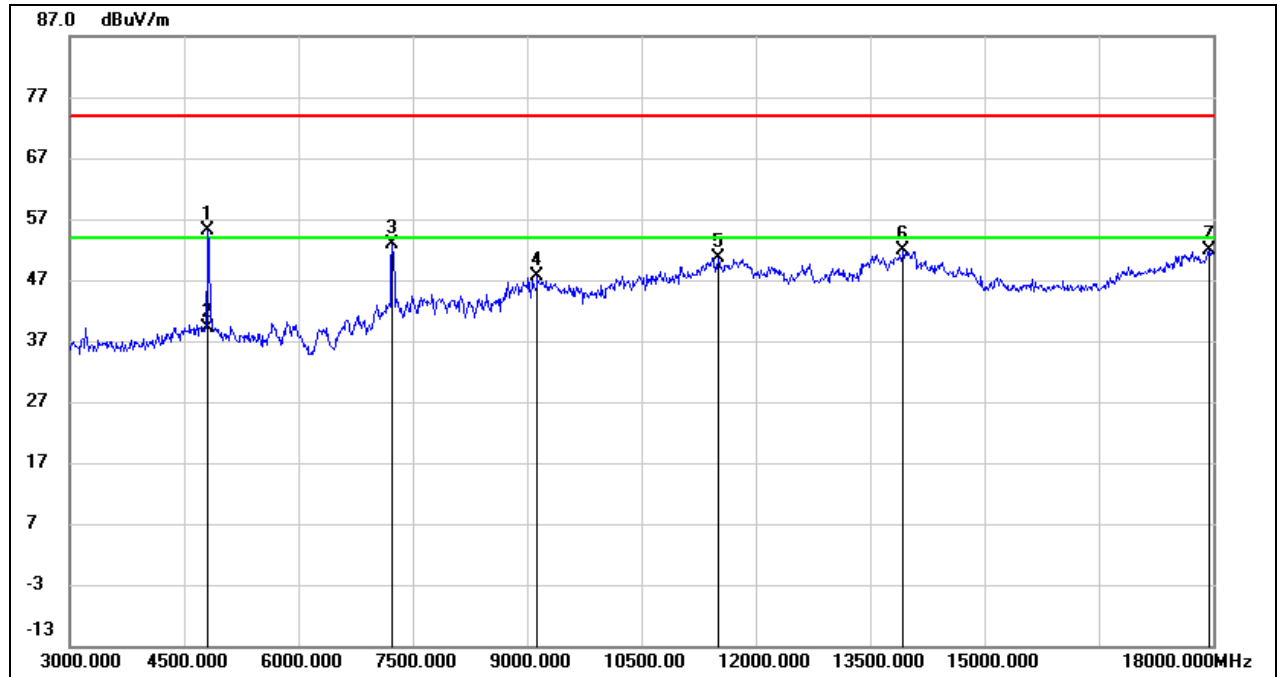
Test Mode:	802.11g	Channel:	2462 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	40.13	0.09	40.22	74.00	-33.78	peak
2	7380.000	43.69	6.42	50.11	74.00	-23.89	peak
3	9210.000	37.08	10.57	47.65	74.00	-26.35	peak
4	11835.000	34.37	17.51	51.88	74.00	-22.12	peak
5	13710.000	30.21	21.35	51.56	74.00	-22.44	peak
6	18000.000	26.01	25.69	51.70	74.00	-22.30	peak



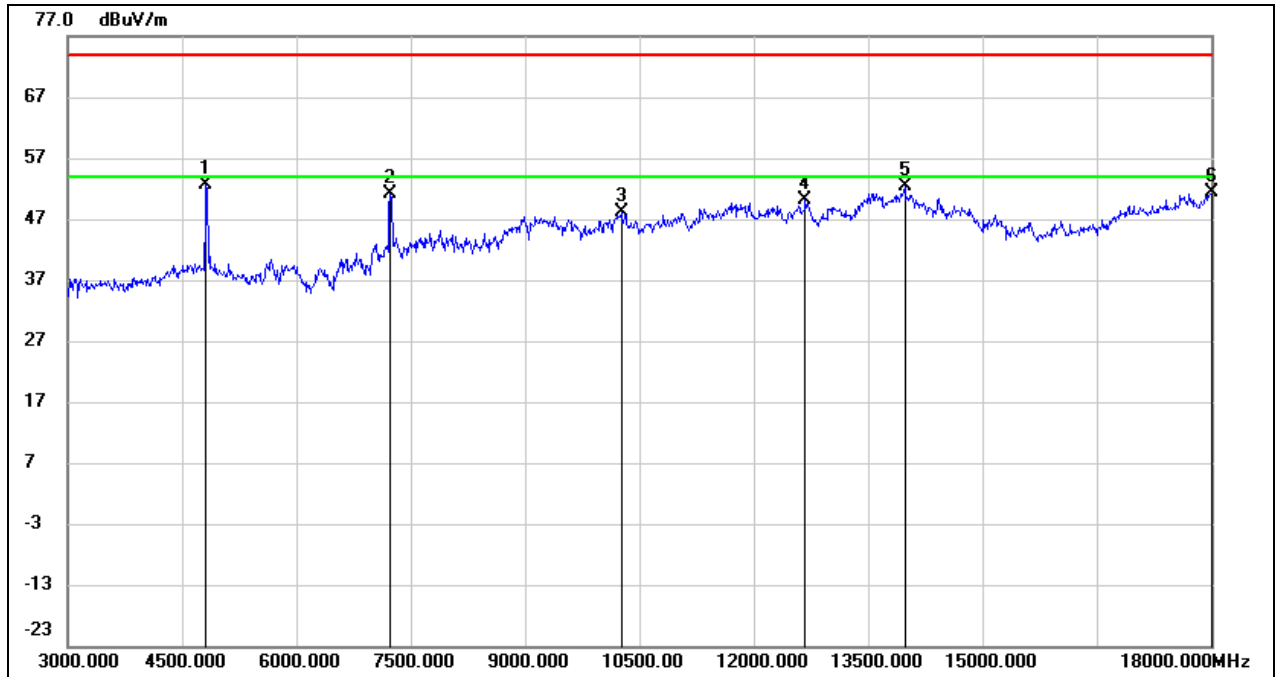
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	55.43	-0.26	55.17	74.00	-18.83	peak
2	4815.000	39.41	-0.26	39.15	54.00	-14.85	AVG
3	7230.000	46.46	6.53	52.99	74.00	-21.01	peak
4	9135.000	37.05	10.55	47.60	74.00	-26.40	peak
5	11505.000	34.05	16.61	50.66	74.00	-23.34	peak
6	13935.000	30.04	21.82	51.86	74.00	-22.14	peak
7	17955.000	26.57	25.42	51.99	74.00	-22.01	peak



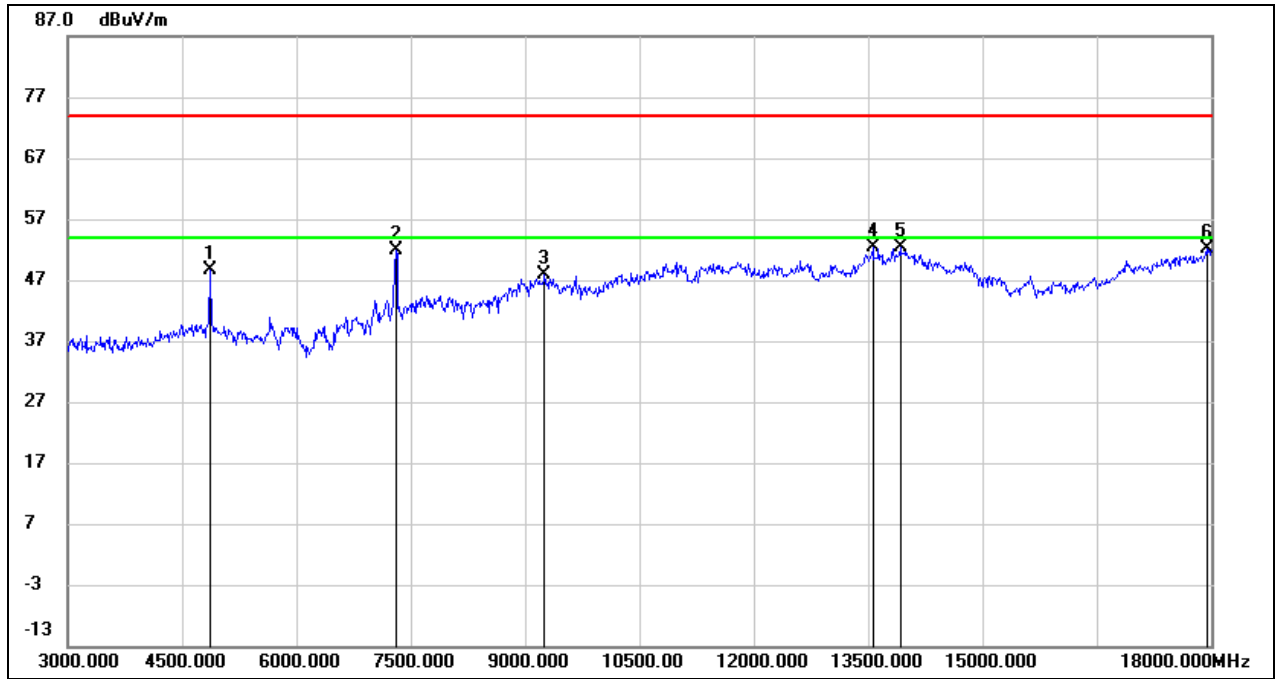
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	52.92	-0.26	52.66	74.00	-21.34	peak
2	7230.000	44.59	6.53	51.12	74.00	-22.88	peak
3	10260.000	35.73	12.52	48.25	74.00	-25.75	peak
4	12675.000	32.06	17.99	50.05	74.00	-23.95	peak
5	13980.000	30.40	21.92	52.32	74.00	-21.68	peak
6	18000.000	25.81	25.69	51.50	74.00	-22.50	peak



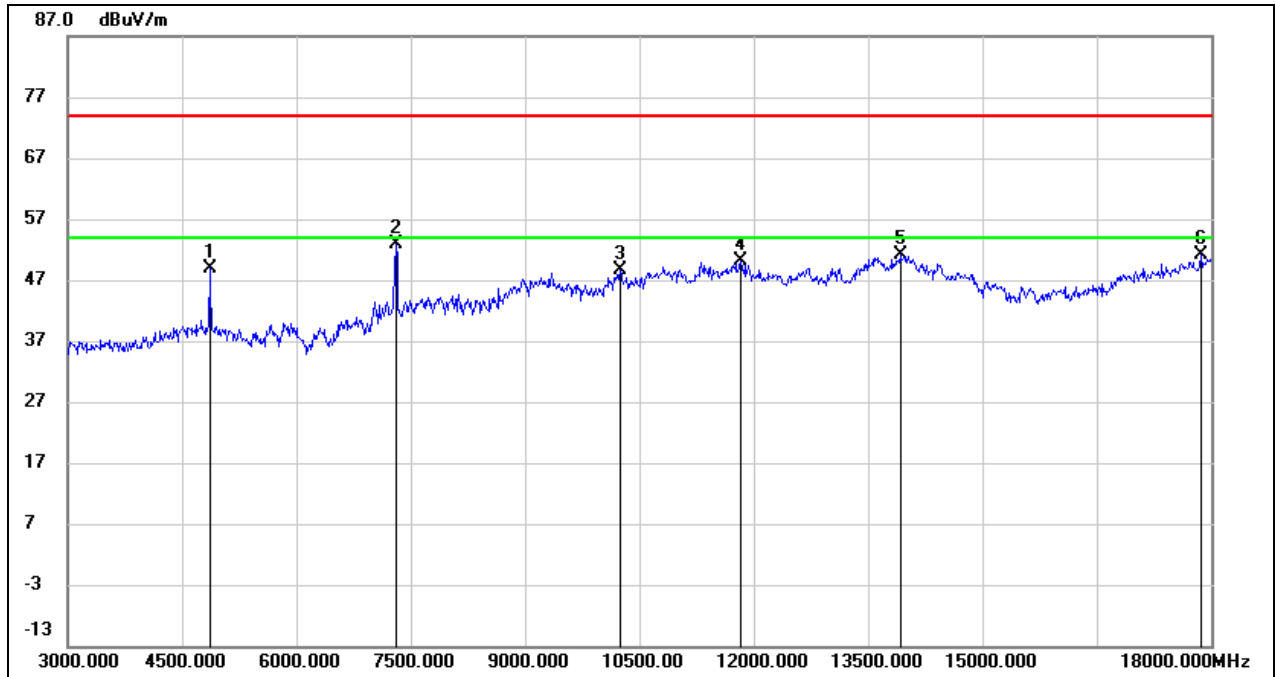
Test Mode:	802.11n HT20	Channel:	2437 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	48.61	-0.09	48.52	74.00	-25.48	peak
2	7305.000	45.39	6.47	51.86	74.00	-22.14	peak
3	9255.000	37.20	10.59	47.79	74.00	-26.21	peak
4	13560.000	31.25	21.04	52.29	74.00	-21.71	peak
5	13920.000	30.59	21.79	52.38	74.00	-21.62	peak
6	17940.000	26.91	25.34	52.25	74.00	-21.75	peak



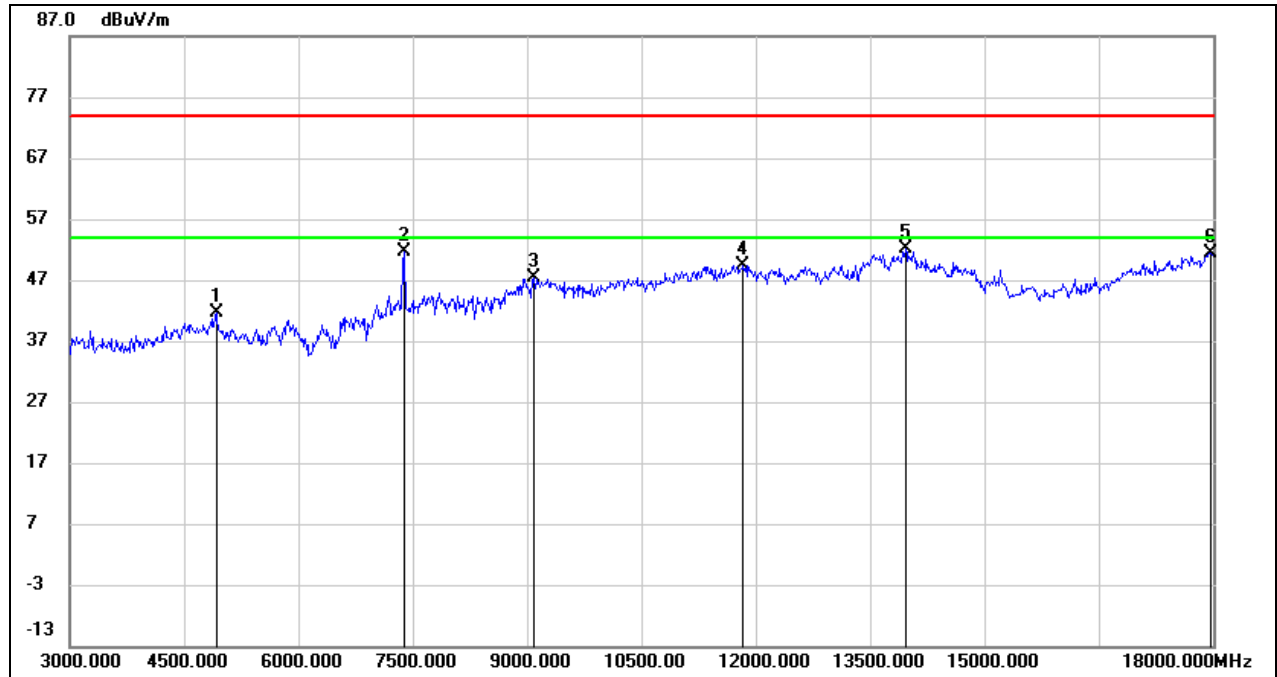
Test Mode:	802.11n HT20	Channel:	2437 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	48.87	-0.09	48.78	74.00	-25.22	peak
2	7305.000	46.30	6.47	52.77	74.00	-21.23	peak
3	10245.000	36.10	12.48	48.58	74.00	-25.42	peak
4	11820.000	32.60	17.47	50.07	74.00	-23.93	peak
5	13920.000	29.30	21.79	51.09	74.00	-22.91	peak
6	17865.000	26.34	24.89	51.23	74.00	-22.77	peak



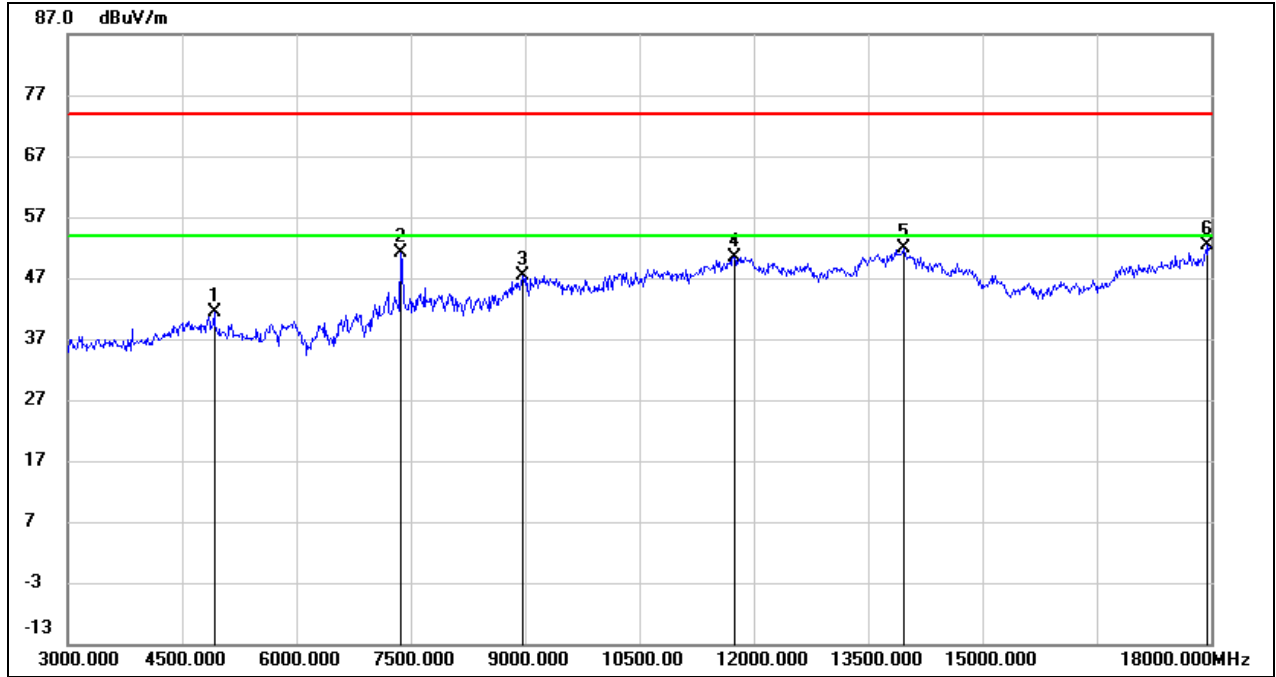
Test Mode:	802.11n HT20	Channel:	2462 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	41.52	0.14	41.66	74.00	-32.34	peak
2	7380.000	45.22	6.42	51.64	74.00	-22.36	peak
3	9090.000	36.82	10.51	47.33	74.00	-26.67	peak
4	11835.000	31.92	17.51	49.43	74.00	-24.57	peak
5	13965.000	30.12	21.89	52.01	74.00	-21.99	peak
6	17970.000	25.91	25.51	51.42	74.00	-22.58	peak



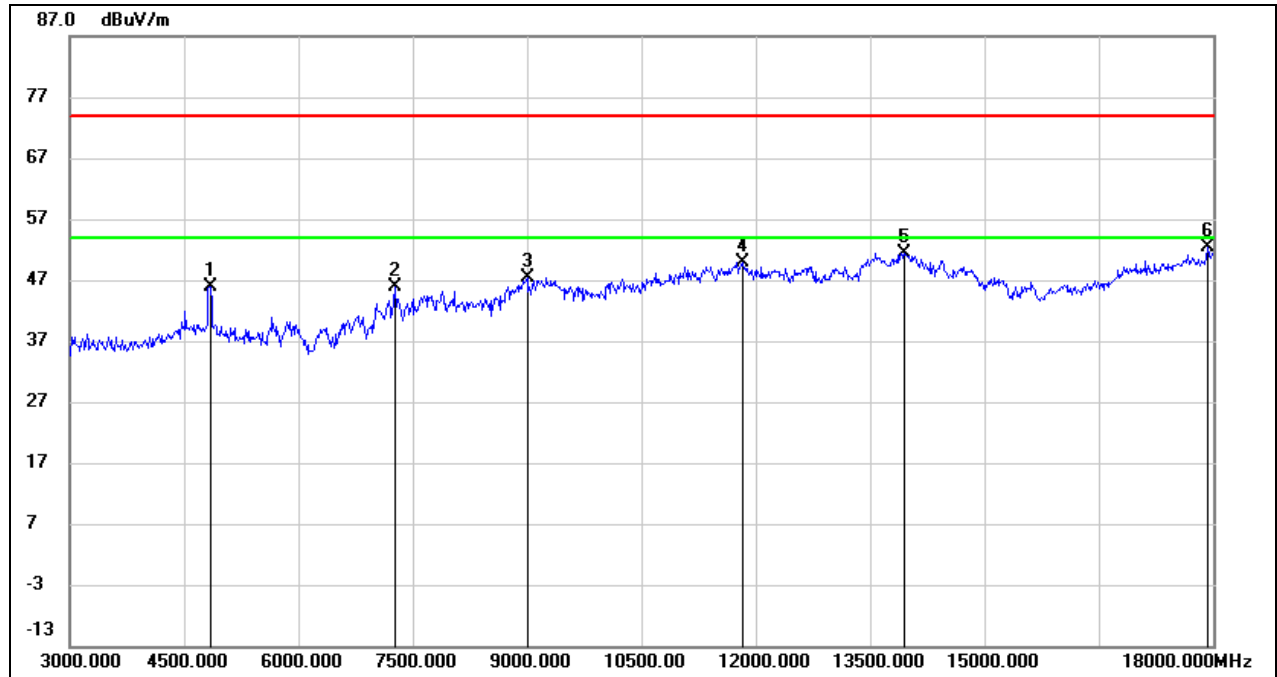
Test Mode:	802.11n HT20	Channel:	2462 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	41.30	0.14	41.44	74.00	-32.56	peak
2	7365.000	44.62	6.43	51.05	74.00	-22.95	peak
3	8970.000	37.16	10.26	47.42	74.00	-26.58	peak
4	11745.000	33.06	17.27	50.33	74.00	-23.67	peak
5	13965.000	30.02	21.89	51.91	74.00	-22.09	peak
6	17955.000	26.98	25.42	52.40	74.00	-21.60	peak



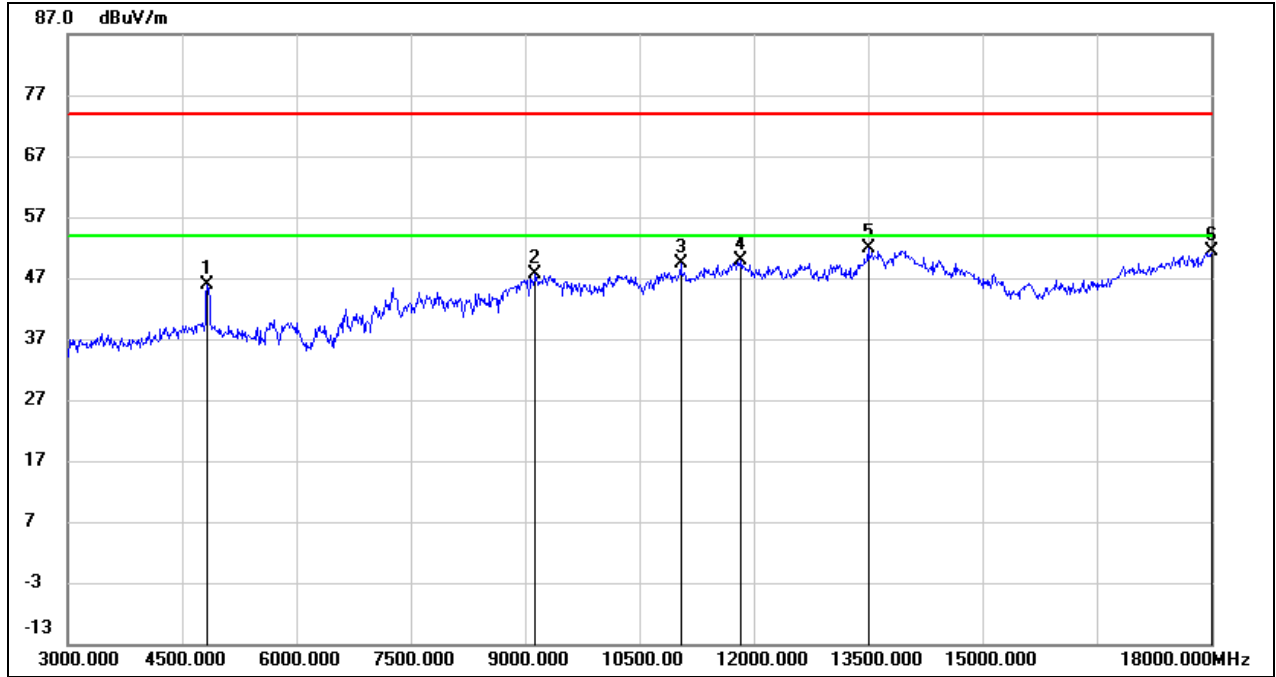
Test Mode:	802.11n HT40	Channel:	2422 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	46.13	-0.15	45.98	74.00	-28.02	peak
2	7260.000	39.46	6.50	45.96	74.00	-28.04	peak
3	9000.000	36.84	10.48	47.32	74.00	-26.68	peak
4	11835.000	32.46	17.51	49.97	74.00	-24.03	peak
5	13950.000	29.61	21.86	51.47	74.00	-22.53	peak
6	17925.000	27.01	25.25	52.26	74.00	-21.74	peak



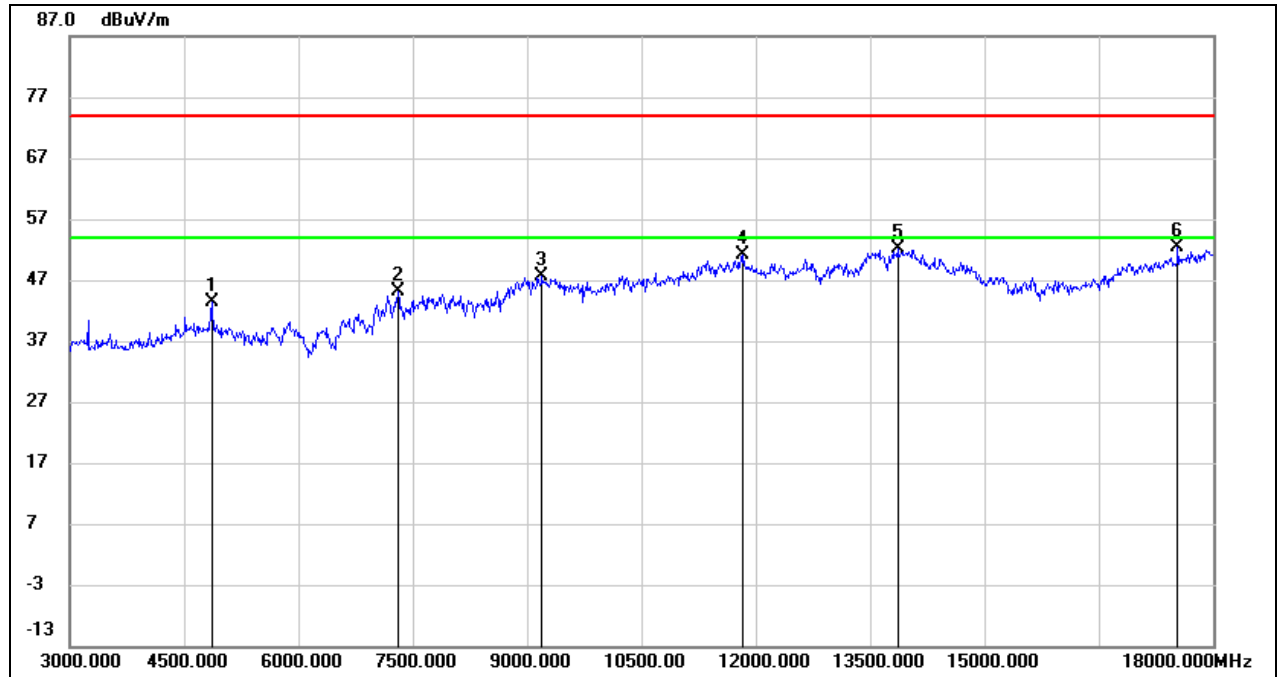
Test Mode:	802.11n HT40	Channel:	2422 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4830.000	46.07	-0.20	45.87	74.00	-28.13	peak
2	9135.000	37.11	10.55	47.66	74.00	-26.34	peak
3	11040.000	34.40	14.91	49.31	74.00	-24.69	peak
4	11835.000	32.41	17.51	49.92	74.00	-24.08	peak
5	13500.000	30.91	20.90	51.81	74.00	-22.19	peak
6	18000.000	25.61	25.69	51.30	74.00	-22.70	peak



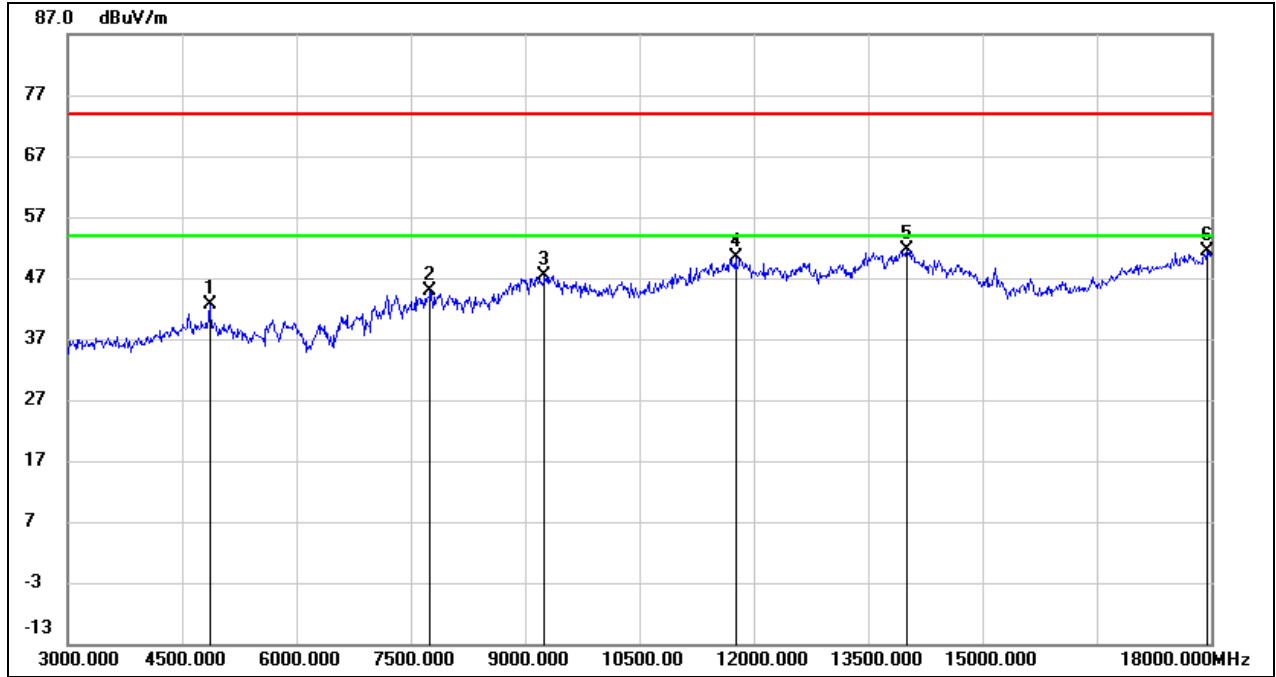
Test Mode:	802.11n HT40	Channel:	2437 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	43.50	-0.09	43.41	74.00	-30.59	peak
2	7305.000	38.77	6.47	45.24	74.00	-28.76	peak
3	9195.000	37.17	10.56	47.73	74.00	-26.27	peak
4	11835.000	33.73	17.51	51.24	74.00	-22.76	peak
5	13860.000	30.37	21.67	52.04	74.00	-21.96	peak
6	17535.000	29.50	22.94	52.44	74.00	-21.56	peak



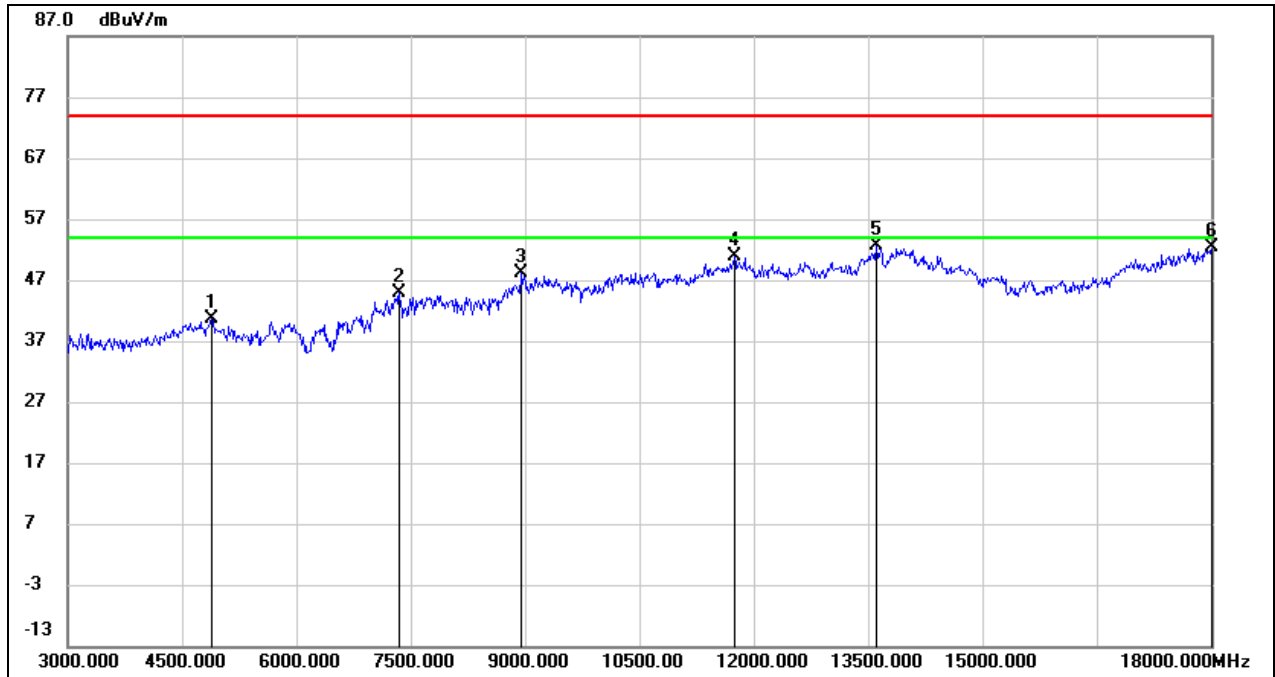
Test Mode:	802.11n HT40	Channel:	2437 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	42.80	-0.09	42.71	74.00	-31.29	peak
2	7755.000	38.47	6.31	44.78	74.00	-29.22	peak
3	9255.000	36.78	10.59	47.37	74.00	-26.63	peak
4	11760.000	32.96	17.31	50.27	74.00	-23.73	peak
5	14010.000	29.68	21.93	51.61	74.00	-22.39	peak
6	17940.000	25.94	25.34	51.28	74.00	-22.72	peak



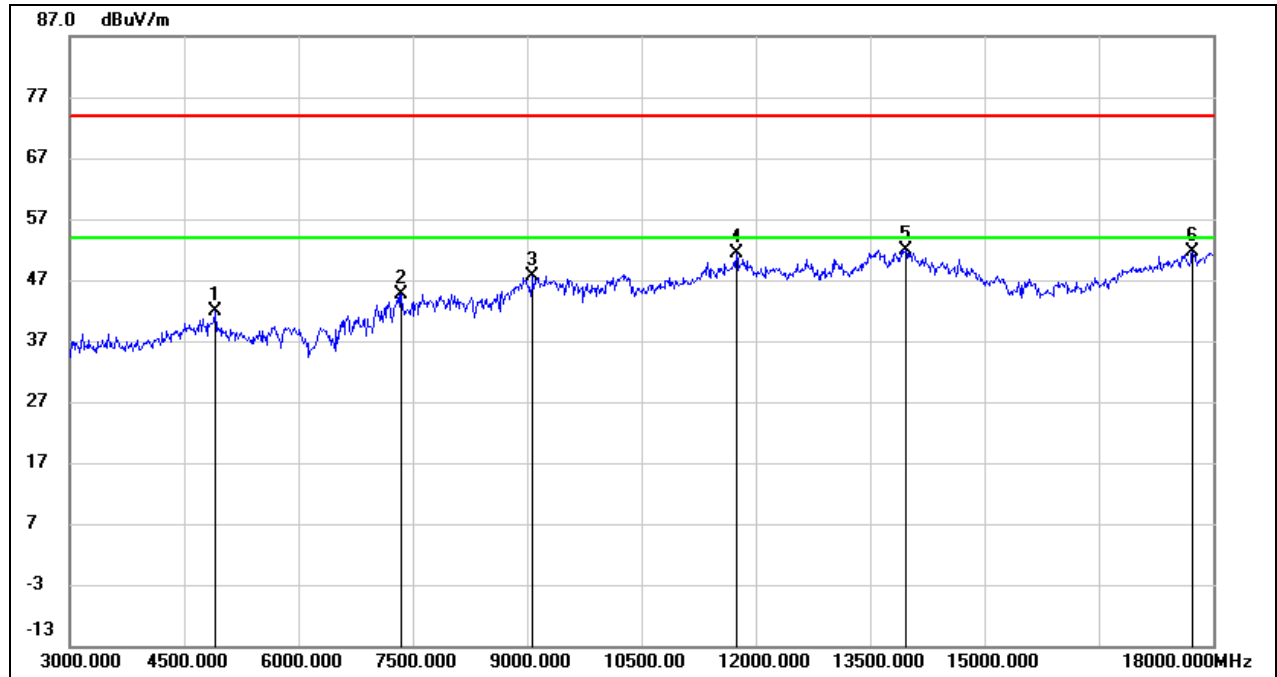
Test Mode:	802.11n HT40	Channel:	2452 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4890.000	40.60	0.03	40.63	74.00	-33.37	peak
2	7350.000	38.36	6.44	44.80	74.00	-29.20	peak
3	8955.000	38.02	10.16	48.18	74.00	-25.82	peak
4	11745.000	33.57	17.27	50.84	74.00	-23.16	peak
5	13605.000	31.57	21.12	52.69	74.00	-21.31	peak
6	18000.000	26.67	25.69	52.36	74.00	-21.64	peak



Test Mode:	802.11n HT40	Channel:	2452 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V

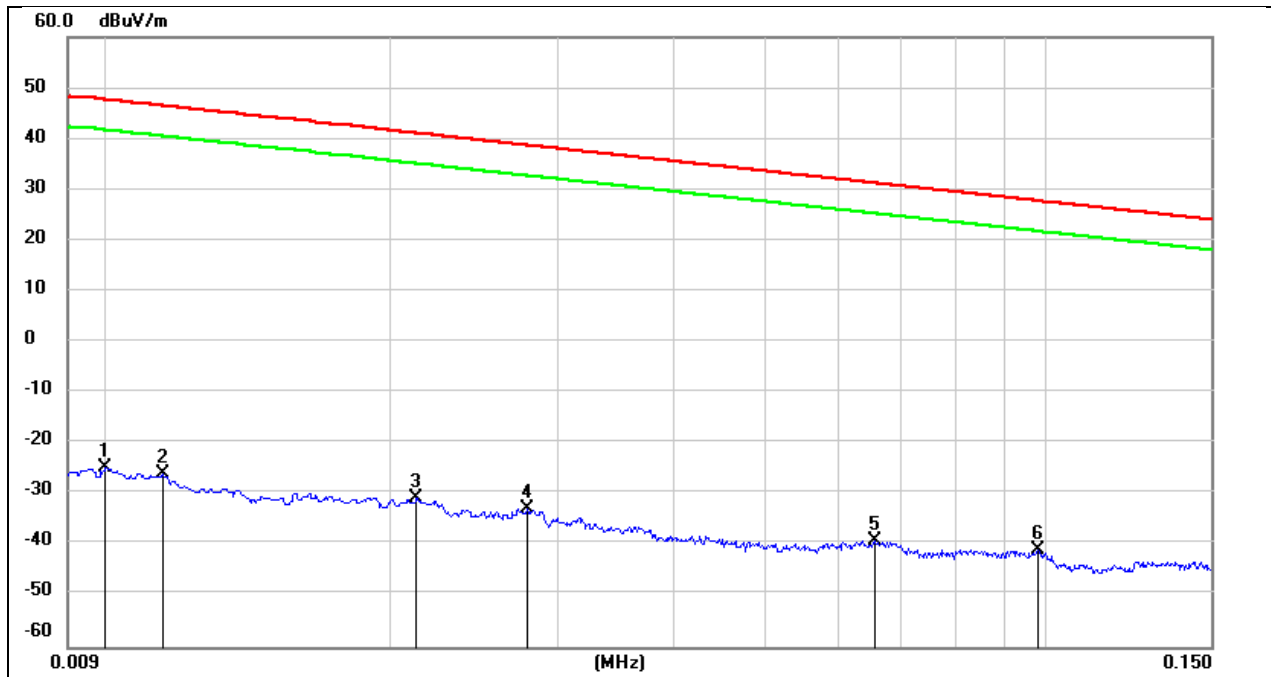


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	41.67	0.09	41.76	74.00	-32.24	peak
2	7350.000	38.29	6.44	44.73	74.00	-29.27	peak
3	9075.000	37.10	10.52	47.62	74.00	-26.38	peak
4	11745.000	33.99	17.27	51.26	74.00	-22.74	peak
5	13965.000	30.10	21.89	51.99	74.00	-22.01	peak
6	17730.000	27.44	24.09	51.53	74.00	-22.47	peak



8.4. SPURIOUS EMISSIONS (9 KHZ ~ 30 MHZ)

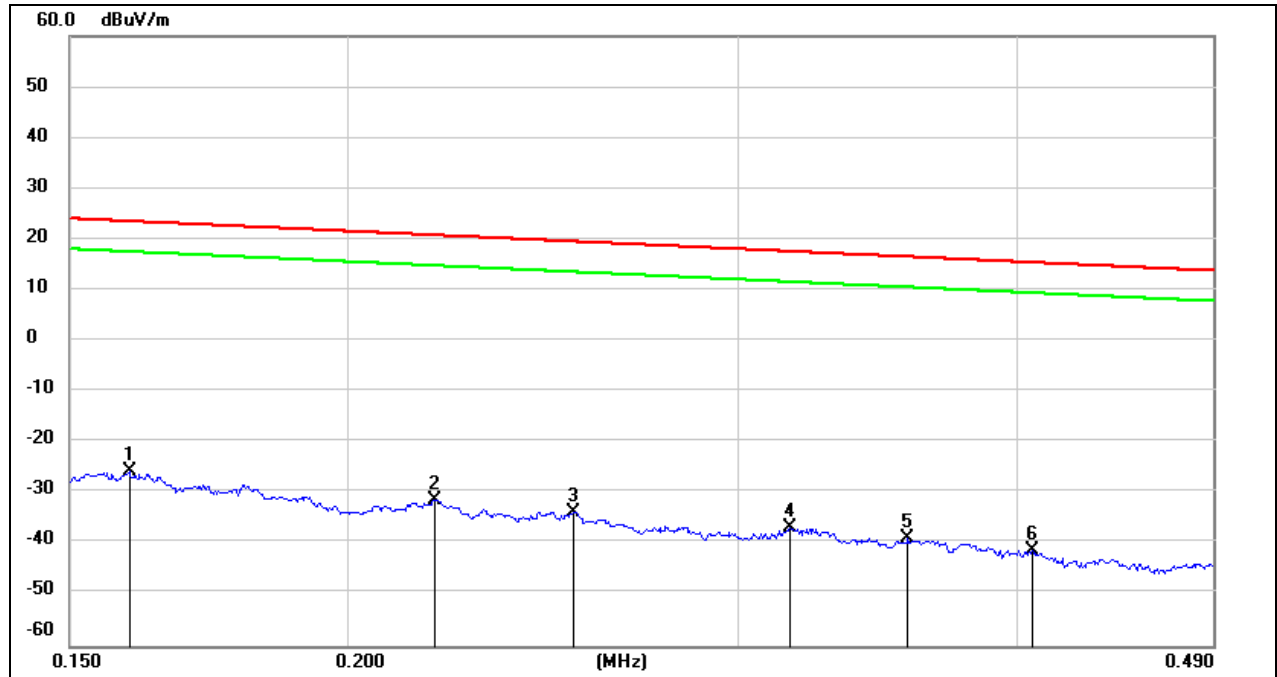
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0100	76.72	-101.40	-24.68	47.60	-72.28	peak
2	0.0114	75.38	-101.40	-26.02	46.46	-72.48	peak
3	0.0212	70.54	-101.35	-30.81	41.07	-71.88	peak
4	0.0279	68.67	-101.38	-32.71	38.69	-71.40	peak
5	0.0656	62.36	-101.55	-39.19	31.26	-70.45	peak
6	0.0981	60.77	-101.78	-41.01	27.77	-68.78	peak



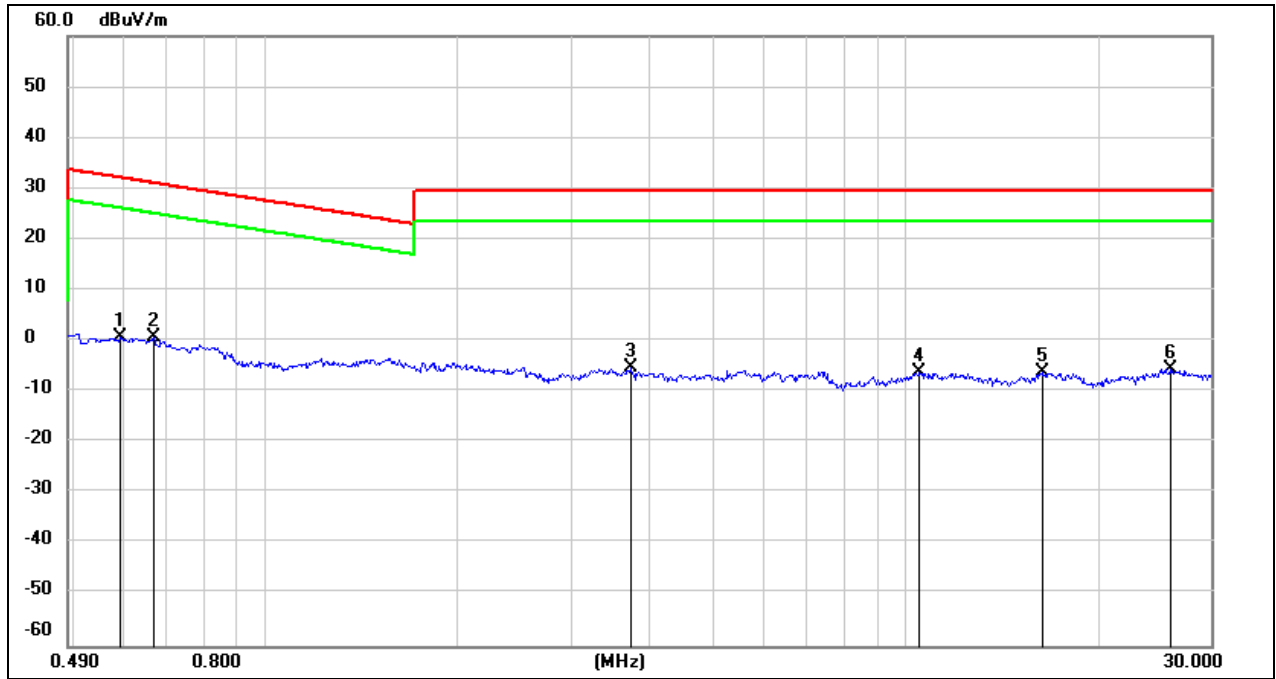
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1595	75.86	-101.65	-25.79	23.55	-49.34	peak
2	0.2190	70.27	-101.75	-31.48	20.79	-52.27	peak
3	0.2530	68.14	-101.80	-33.66	19.54	-53.20	peak
4	0.3163	65.20	-101.87	-36.67	17.60	-54.27	peak
5	0.3573	63.08	-101.91	-38.83	16.54	-55.37	peak
6	0.4062	60.64	-101.96	-41.32	15.43	-56.75	peak



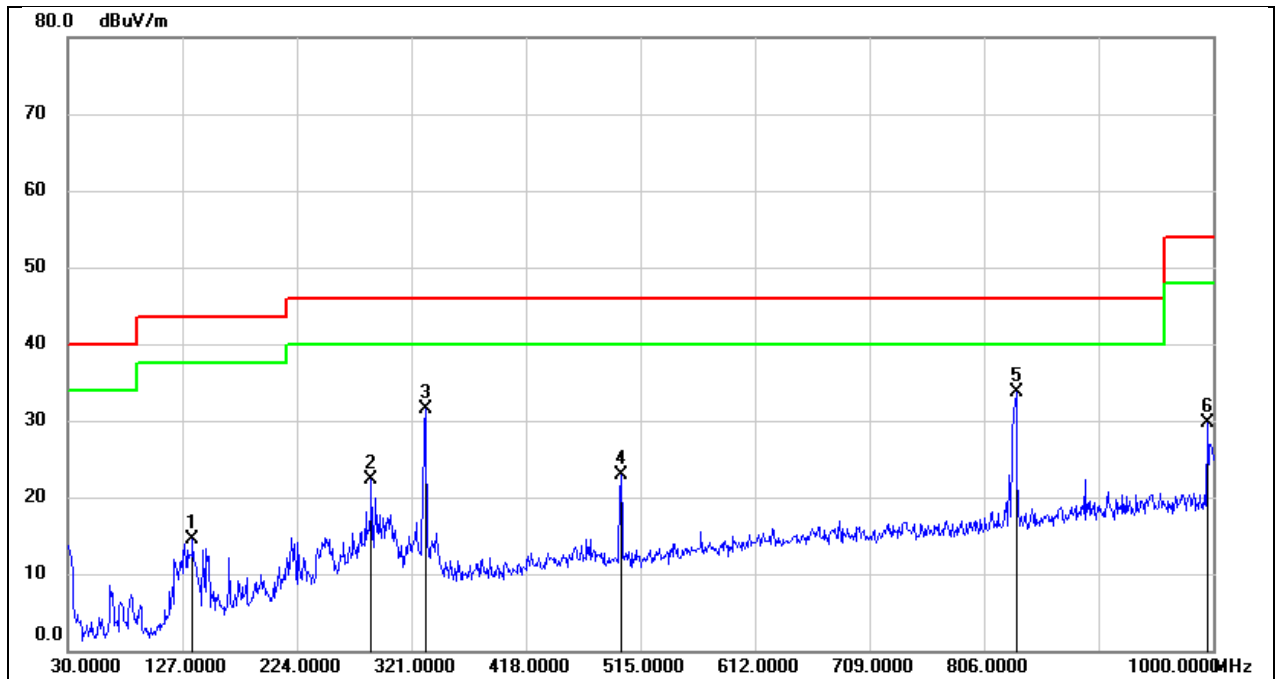
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.5917	62.74	-62.08	0.66	32.16	-31.50	peak
2	0.6671	62.75	-62.10	0.65	31.12	-30.47	peak
3	3.7100	56.20	-61.41	-5.21	29.54	-34.75	peak
4	10.5234	54.81	-60.82	-6.01	29.54	-35.55	peak
5	16.3959	54.67	-60.96	-6.29	29.54	-35.83	peak
6	25.8978	54.76	-60.36	-5.60	29.54	-35.14	peak

**8.5. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)**

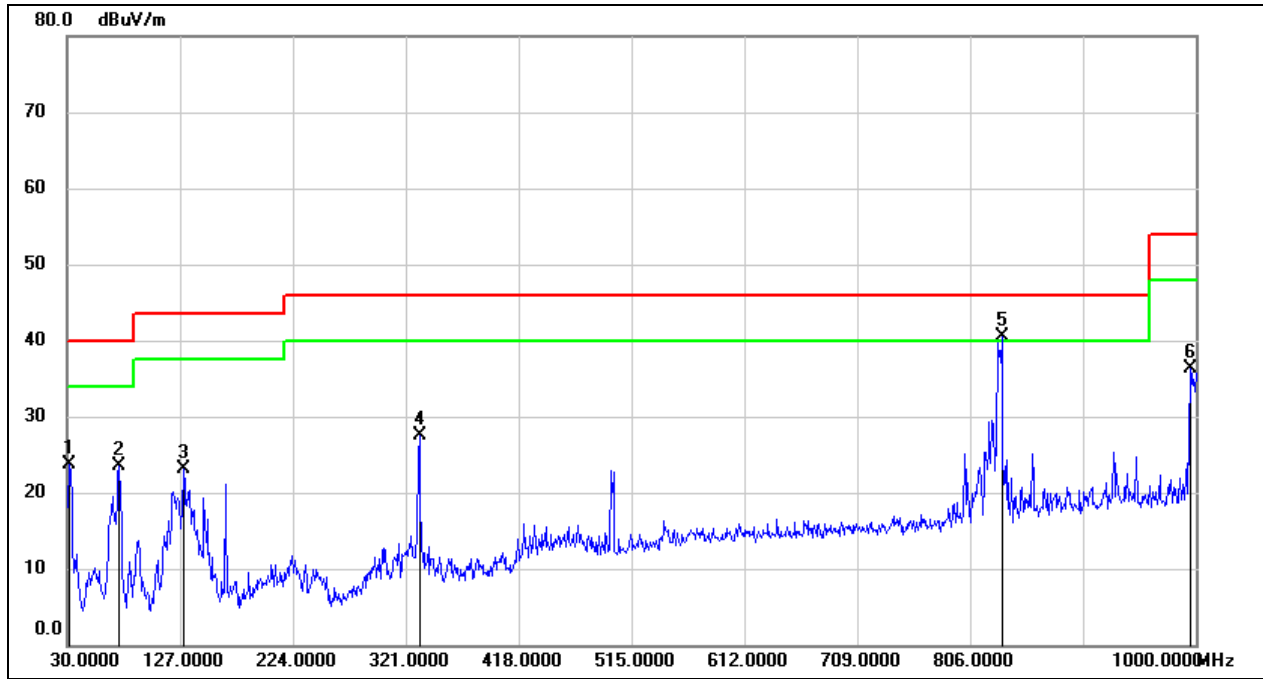
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	135.7300	33.61	-19.06	14.55	43.50	-28.95	QP
2	287.0500	38.46	-16.14	22.32	46.00	-23.68	QP
3	332.6400	46.08	-14.62	31.46	46.00	-14.54	QP
4	498.5100	34.38	-11.50	22.88	46.00	-23.12	QP
5	833.1599	40.39	-6.61	33.78	46.00	-12.22	QP
6	995.1500	34.00	-4.20	29.80	54.00	-24.20	QP



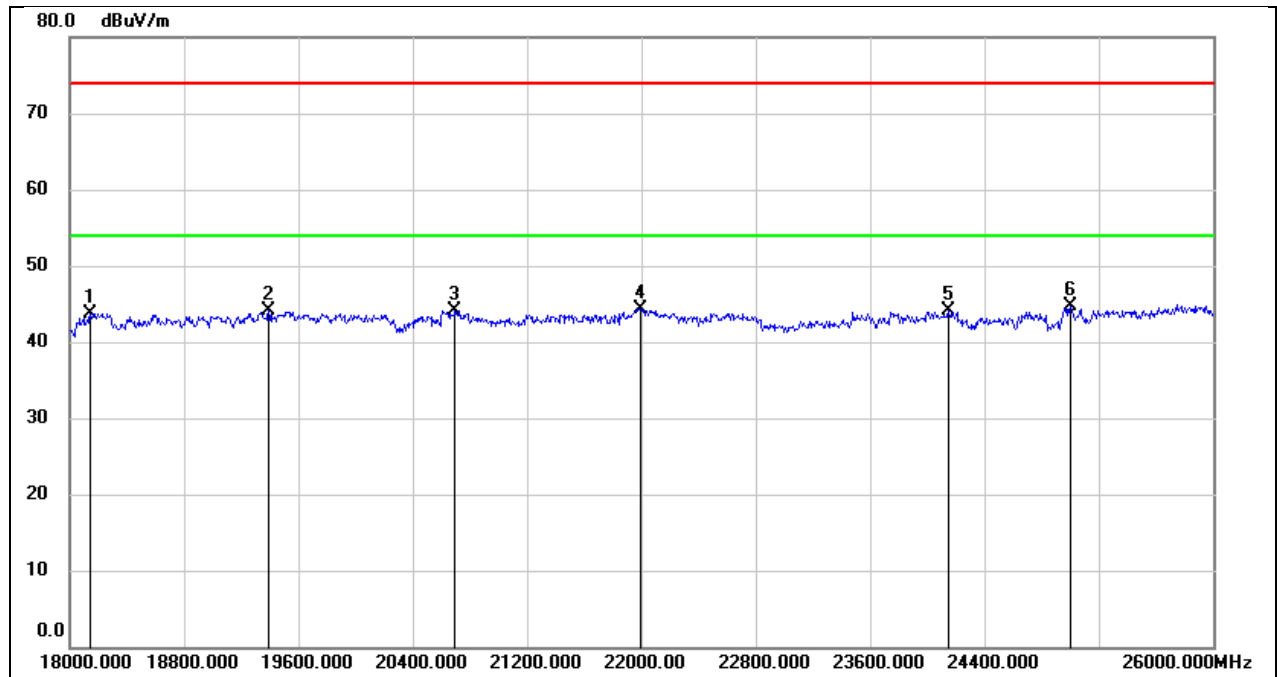
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.9400	42.87	-19.13	23.74	40.00	-16.26	QP
2	74.6200	44.37	-20.92	23.45	40.00	-16.55	QP
3	129.9100	42.42	-19.36	23.06	43.50	-20.44	QP
4	332.6400	42.11	-14.62	27.49	46.00	-18.51	QP
5	833.1599	47.15	-6.61	40.54	46.00	-5.46	QP
6	995.1500	40.58	-4.20	36.38	54.00	-17.62	QP

**8.6. SPURIOUS EMISSIONS (18 GHZ ~ 26 GHZ)**

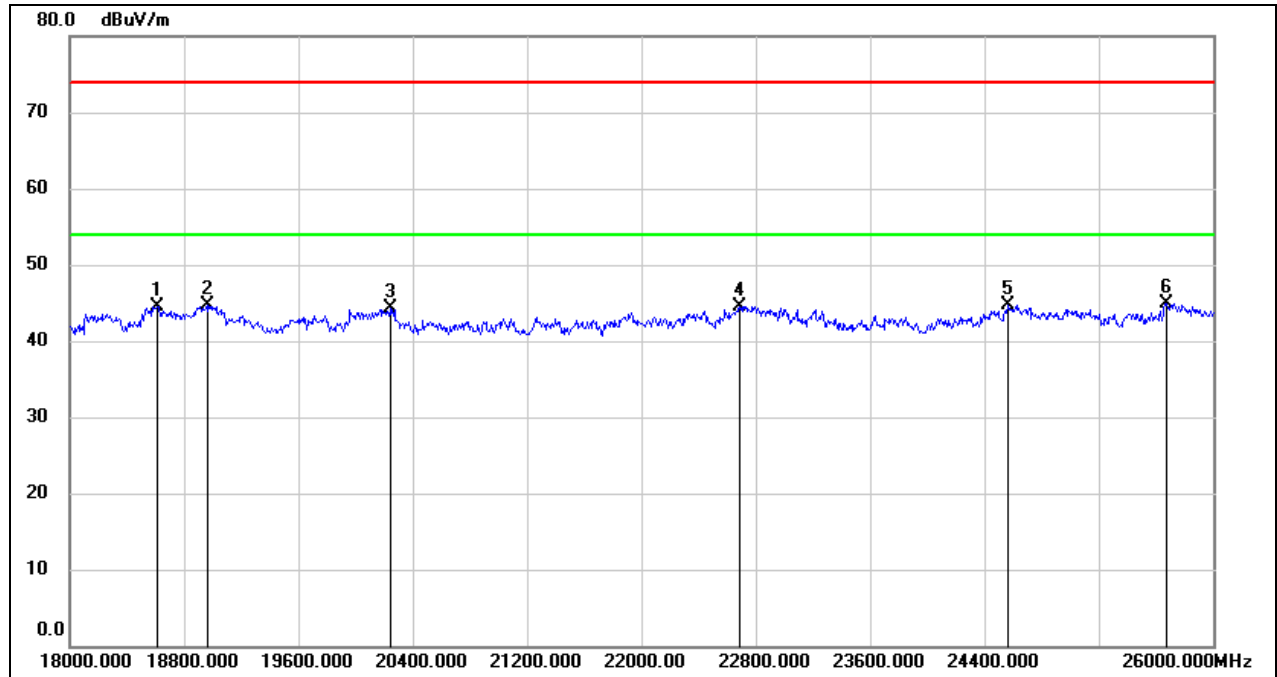
Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18144.000	49.27	-5.48	43.79	74.00	-30.21	peak
2	19392.000	49.62	-5.57	44.05	74.00	-29.95	peak
3	20696.000	49.21	-5.16	44.05	74.00	-29.95	peak
4	21992.000	48.87	-4.47	44.40	74.00	-29.60	peak
5	24144.000	46.91	-2.79	44.12	74.00	-29.88	peak
6	25000.000	46.86	-2.10	44.76	74.00	-29.24	peak



Test Mode:	802.11n HT20	Channel:	2412 MHz
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18616.000	49.89	-5.34	44.55	74.00	-29.45	peak
2	18960.000	50.01	-5.25	44.76	74.00	-29.24	peak
3	20240.000	49.82	-5.61	44.21	74.00	-29.79	peak
4	22688.000	48.32	-3.74	44.58	74.00	-29.42	peak
5	24568.000	47.10	-2.33	44.77	74.00	-29.23	peak
6	25672.000	45.87	-0.97	44.90	74.00	-29.10	peak



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.

RESULTS

Complies

END OF REPORT