CFR 47 FCC PART 15 SUBPART C

TEST REPORT

For

DJI RC Plus 2

MODEL NUMBER: TKPL2

REPORT NUMBER: 4790917103-3-RF-3

ISSUE DATE: June 22, 2024

FCC ID:SS3-TKPL22310

Prepared for

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Prepared by

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The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products.

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	June 22, 2024	Initial Issue	

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Summary of Test Results

Test Item	Clause	Limit/Requirement	Result
Antenna Requirement	N/A	FCC Part 15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	ANSI C63.10-2013, Clause 6.2	FCC Part 15.207	Pass
Conducted Output Power	ANSI C63.10-2013, Clause 11.9.2.3.1	FCC Part 15.247 (b)(3)	Pass
6dB Bandwidth and 99% Occupied Bandwidth	ANSI C63.10-2013, Clause 11.8.1	FCC Part 15.247 (a)(2)	Pass
Power Spectral Density	ANSI C63.10-2013, Clause 11.10.5	FCC Part 15.247 (e)	Pass
Conducted Band edge and spurious emission	ANSI C63.10-2013, Clause 11.11	FCC Part 15.247(d)	Pass
Radiated Band edge and Spurious Emission	ANSI C63.10-2013, Clause 11.12 & Clause 11.13	FCC Part 15.247 (d) FCC Part 15.205/15.209	Pass
Duty Cycle	ANSI C63.10-2013, Clause 11.6	None; for reporting purposes only.	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> when <Simple Acceptance> decision rule is applied.

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CONTENTS

1. ATTESTATION OF TEST RESULTS 6

2. TEST METHODOLOGY 7

3. FACILITIES AND ACCREDITATION 7

4. CALIBRATION AND UNCERTAINTY 8

4.1. MEASURING INSTRUMENT CALIBRATION 8

4.2. MEASUREMENT UNCERTAINTY 8

5. EQUIPMENT UNDER TEST 9

5.1. DESCRIPTION OF EUT 9

5.2. CHANNEL LIST 9

5.3. MAXIMUM POWER 9

5.4. TEST CHANNEL CONFIGURATION 10

5.5. THE WORSE CASE POWER SETTING PARAMETER 10

5.6. WORST-CASE CONFIGURATIONS 11

5.7. DESCRIPTION OF AVAILABLE ANTENNAS 12

5.8. SUPPORT UNITS FOR SYSTEM TEST 13

6. MEASURING EQUIPMENT AND SOFTWARE USED 14

7. ANTENNA PORT TEST RESULTS 17

7.1. CONDUCTED OUTPUT POWER 17

7.2. 6DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH 18

7.3. POWER SPECTRAL DENSITY 20

7.4. CONDUCTED BAND EDGE AND SPURIOUS EMISSION 22

7.5. DUTY CYCLE 24

8. RADIATED TEST RESULTS 25

8.1. RESTRICTED BANDEDGE 33

8.2. SPURIOUS EMISSIONS(1 GHZ~3 GHZ) 56

8.3. SPURIOUS EMISSIONS(3 GHZ~18 GHZ) 62

8.4. SPURIOUS EMISSIONS(9 KHZ~30 MHZ) 98

8.5. SPURIOUS EMISSIONS(18 GHZ~26 GHZ) 101

8.6. SPURIOUS EMISSIONS(30 MHZ~1 GHZ) 103

9. ANTENNA REQUIREMENT 105

10. AC POWER LINE CONDUCTED EMISSION 106

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11. TEST DATA 110

11.1. APPENDIX A: DTS BANDWIDTH 110
11.1.1. Test Result 110
11.1.2. Test Graphs 111

11.2. APPENDIX B: OCCUPIED CHANNEL BANDWIDTH 123
11.2.1. Test Result 123
11.2.2. Test Graphs 124

11.3. APPENDIX C: MAXIMUM CONDUCTED OUTPUT POWER 136
11.3.1. Test Result 136

11.4. APPENDIX D: MAXIMUM POWER SPECTRAL DENSITY 137
11.4.1. Test Result 137
11.4.2. Test Graphs 138

11.5. APPENDIX E: BAND EDGE MEASUREMENTS 150
11.5.1. Test Result 150
11.5.2. Test Graphs 151

11.6. APPENDIX F: CONDUCTED SPURIOUS EMISSION 159
11.6.1. Test Result 159
11.6.2. Test Graphs 161

11.7. APPENDIX G: DUTY CYCLE 197
11.7.1. Test Result 197
11.7.2. Test Graphs 198

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	SZ DJI TECHNOLOGY CO.,LTD.
Address:	Lobby of T2, DJI Sky City, No. 53 Xianyuan Road, Xili Community, Xili Street, Nanshan District, Shenzhen

Manufacturer Information

Company Name:	SZ DJI TECHNOLOGY CO.,LTD.
Address:	Lobby of T2, DJI Sky City, No. 53 Xianyuan Road, Xili Community, Xili Street, Nanshan District, Shenzhen

EUT Information

EUT Name:	DJI RC Plus 2
Model:	TKPL2
Sample Received Date:	April 26, 2024
Sample Status:	Normal
Sample ID:	7160783
Date of Tested:	April 26, 2024 to June 22, 2024

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART C	**Pass**

Prepared By:

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Engineer Project Associate

Checked By:

Kebo Zhang

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Approved By:

Stephen Guo

Operations Manager

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2. TEST METHODOLOGY

All tests were performed in accordance with the standard CFR 47 FCC PART 15 SUBPART C, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, KDB 662911 D01 Multiple Transmitter Output v02r01, CFR 47 FCC Part 2, 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. **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 **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. **VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202)** 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-20192 and R-20202 Shielding Room B, the VCCI registration No. is C-20153 and T-20155

Note 1:
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.

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 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.

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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)
Duty Cycle	±0.028%
DTS and 99% Occupied Bandwidth	±0.0196%
Maximum Conducted Output Power	±0.686 dB
Maximum Power Spectral Density Level	±0.743 dB
Conducted Band-edge Compliance	±1.328 dB
Conducted Unwanted Emissions In Non-restricted Frequency Bands	±0.746 dB (9 kHz ~ 1 GHz)
	±1.328dB (1 GHz ~ 26 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	DJI RC Plus 2
Model	TKPL2

Frequency Range:	2412 MHz to 2462 MHz
Type of Modulation:	IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11ax: OFDMA(1024-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Radio Technology:	IEEE 802.11b/g/n HT20/11n HT40/ax HE20/ax HE40
Normal Test Voltage:	DC 7.2 V

5.2. CHANNEL LIST

Channel List For Bandwidth=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 Bandwidth=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 POWER

IEEE Std. 802.11	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)	Maximum AVG EIRP (dBm)
b	2412 ~ 2462	1-11[11]	17.09	21.65
g	2412 ~ 2462	1-11[11]	16.98	21.54
n HT20	2412 ~ 2462	1-11[11]	16.25	20.81
n HT40	2422 ~ 2452	3-9[7]	15.78	20.34
ax HE20	2412 ~ 2462	1-11[11]	16.47	21.03
ax HE40	2422 ~ 2452	3-9[7]	15.44	20.00

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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
ax HE20	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
ax HE40	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 ~ 2483.5MHz Band							
Test Software		QRCT					
Modulation Mode	Transmit Antenna Number	Test Channel					
		NCB: 20MHz			NCB: 40MHz		
		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9
802.11b	2	16	16	16	/		
	3	16	16	16			
802.11g	2	16	16	15			
	3	16	16	15			
802.11n HT20	2	13	13	13			
	3	13	13	13			
802.11n HT40	2	/			11	12	11
	3	/			11	12	11
802.11ax HE20	2	13	13	13	/		
	3	13	13	13			
802.11ax HE40	2	/			11	12	11
	3	/			11	12	11

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5.6. WORST-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
802.11g mode: 6 Mbps
802.11n HT20 mode: MCS0
802.11n HT40 mode: MCS0
802.11ax HE20 mode: MCS0
802.11ax HE40 mode: MCS0

802.11b/g only support SISO mode.
802.11n HT20/HT40/ax HE20/HE40 support SISO and MIMO mode.

802.11b/g SISO mode, Antenna 2 and Antenna 3 has the same power setting, so only Antenna 2 worst case test data were recorded in the report.

802.11n/ax SISO mode and MIMO mode have the same power setting, so only the worst case power mode(MIMO) will be record in the report.

The EUT has 6 separate antennas which correspond to 6 separate antenna ports, core ANT 0, core ANT 1, core ANT 2, core ANT 3, core ANT 4, core ANT 5 correspond to antenna 0, antenna 1, antenna 2, antenna 3, antenna 4, antenna 5 respectively. Antenna 2 and antenna 3 support WIFI 2.4G and WIFI 5G and antenna 2 also support BT. Antenna 0,1,4,5 support SRD. For SRD, the EUT support 1TX4RX and 2TX4RX mode. 1TX4RX and 2TX4RX have the same power setting, so only the worst data for 2TX4RX mode were recorded in the report. For 2T4R mode, antenna 0 and antenna 1/ antenna 0 and antenna 5/ antenna 4 and antenna 1/ antenna 4 and antenna 5 used as transmit antennas and all the 4 antennas can use as receive antennas, all the transmit combination(ANT0 and ANT1 / ANT0 and ANT5 / ANT4 and ANT1 / ANT4 and ANT5) had been tested, but only the worst data was recorded in the report.

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.

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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.

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
2	2412-2462	Dipole	4.56
3	2412-2462	Dipole	2.30

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

For output power measurements:
Directional gain= G_{ANT} + Array Gain = 4.56 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} + Array Gain = 4.56 dBi
G_{ANT}: equal to the gain of the antenna having the highest gain
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	☒2TX, 2RX	ANT 2 and ANT 3 can be used as transmitting/receiving antenna.
IEEE 802.11g	☒2TX, 2RX	ANT 2 and ANT 3 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	☒2TX, 2RX	ANT 2 and ANT 3 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	☒2TX, 2RX	ANT 2 and ANT 3 can be used as transmitting/receiving antenna.
IEEE 802.11ax HE20	☒2TX, 2RX	ANT 2 and ANT 3 can be used as transmitting/receiving antenna.
IEEE 802.11ax HE40	☒2TX, 2RX	ANT 2 and ANT 3 can be used as transmitting/receiving antenna.
Note: 1. Only SRD 2.4G & WIFI 5G & BT and SRD 5G & WIFI 2.4G & BT can transmit simultaneously. (declare by manufacturer)		

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5.8. SUPPORT UNITS FOR SYSTEM TEST

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	Lenovo	E42-80	/

I/O CABLES

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

ACCESSORIES

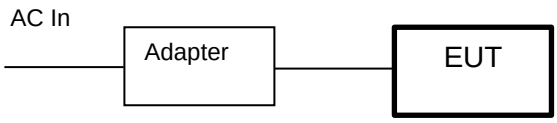
Item	Accessory	Brand Name	Model Name	Description
1	Adapter	/	PD-30CN	Input: AC 100 ~ 240 V, 50/60 Hz Output: DC 5 V, 3 A

TEST SETUP

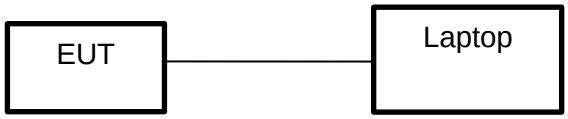
The EUT can work in engineering mode with a software through a laptop.

SETUP DIAGRAM FOR TESTS

For Conducted Emission Test for AC Power Port Test:



For other tests:



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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	Mar.25,2024	Mar.24,2025
Vector Signal Generator	R&S	SMBV100A	261637	Oct.12, 2023	Oct.11, 2024
Signal Generator	R&S	SMB100A	178553	Oct.12, 2023	Oct.11, 2024
Signal Analyzer	R&S	FSV40	101118	Oct.12, 2023	Oct.11, 2024

Software			
Description	Manufacturer	Name	Version
For R&S TS 8997 Test System	Rohde & Schwarz	EMC 32	10.60.10

Tonsend RF Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Wideband Radio Communication Tester	R&S	CMW500	155523	Oct.12, 2023	Oct.11, 2024
Wireless Connectivity Tester	R&S	CMW270	1201.0002N75-102	Sep.25, 2023	Sep.24, 2024
PXA Signal Analyzer	Keysight	N9030A	MY55410512	Oct.12, 2023	Oct.11, 2024
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.12, 2023	Oct.11, 2024
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Oct.12, 2023	Oct.11, 2024
DC power supply	Keysight	E3642A	MY55159130	Oct.12, 2023	Oct.11, 2024
Temperature & Humidity Chamber	SANMOOD	SG-80-CC-2	2088	Oct.12, 2023	Oct.11, 2024
Attenuator	Aglient	8495B	2814a12853	Oct.12, 2023	Oct.11, 2024
RF Control Unit	Tonscend	JS0806-2	23B80620666	Mar.25,2024	Mar.24,2025

Software			
Description	Manufacturer	Name	Version
Tonsend SRD Test System	Tonsend	JS1120-3 RF Test System	V3.2.22

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Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Oct.13, 2023	Oct.12, 2024
Two-Line V-Network	R&S	ENV216	101983	Oct.13, 2023	Oct.12, 2024
Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Oct.13, 2023	Oct.12, 2024
Software					
Description			Manufacturer	Name	Version
Test Software for Conducted Emissions			Farad	EZ-EMC	Ver. UL-3A1

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.12, 2023	Oct.11, 2024
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.12, 2023	Oct.11, 2024
EMI Measurement Receiver	R&S	ESR26	101377	Oct.12, 2023	Oct.11, 2024
Horn Antenna	TDK	HRN-0118	130940	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.12, 2023	Oct.11, 2024
Horn Antenna	Schwarzbeck	BBHA9170	697	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.12, 2023	Oct.11, 2024
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct.12, 2023	Oct.11, 2024
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.12, 2023	Oct.11, 2024
High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Oct.12, 2023	Oct.11, 2024
Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	Oct.12, 2023	Oct.11, 2024
Software					
Description			Manufacturer	Name	Version
Test Software for Radiated Emissions			Farad	EZ-EMC	Ver. UL-3A1

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Other Instrument					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Temperature humidity probe	OMEGA	ITHX-SD-5	18470007	Oct.21, 2023	Oct.20, 2024
Barometer	Yiyi	Baro	N/A	Oct.19, 2023	Oct.18, 2024
Attenuator	Agilent	8495B	2814a12853	Oct.12, 2023	Oct.11, 2024

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7. ANTENNA PORT TEST RESULTS

7.1. CONDUCTED OUTPUT POWER

LIMITS

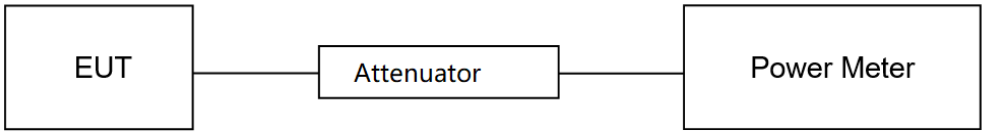
CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3)	AVG Output Power	1 watt or 30 dBm	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.9.2.3.1.

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.
The test result in dBm by adding [10 log (1 / D)], where D is the duty cycle.

TEST SETUP



TEST ENVIRONMENT

Temperature	26.5℃	Relative Humidity	54.2%
Atmosphere Pressure	101kPa	Test Voltage	DC 7.2 V

TEST DATE / ENGINEER

Test Date	May 10, 2024	Test By	Johnson Liu

TEST RESULTS

Please refer to section "Test Data" - Appendix C

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7.2. 6DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	None; for reporting purposes only.	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth and clause 6.9 for Occupied Bandwidth.

Connect the EUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Frequency Span	For 6 dB Bandwidth: Enough to capture all products of the modulation carrier emission For 99 % Occupied Bandwidth: Between 1.5 times and 5.0 times the OBW
Detector	Peak
RBW	For 6 dB Bandwidth: 100 kHz For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth
VBW	For 6 dB Bandwidth: ≥3 × RBW For 99 % Occupied Bandwidth: ≥3 × RBW
Trace	Max hold
Sweep	Auto couple

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) 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.

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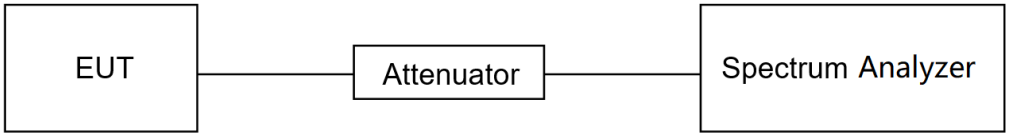
TEST SETUP



TEST ENVIRONMENT

Temperature	26.5℃	Relative Humidity	54.2%
Atmosphere Pressure	101kPa	Test Voltage	DC 7.2 V

TEST DATE / ENGINEER

Test Date	May 10, 2024	Test By	Johnson Liu

TEST RESULTS

Please refer to section "Test Data" - Appendix A&B

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7.3. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.247 (e)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5

TEST PROCEDURE

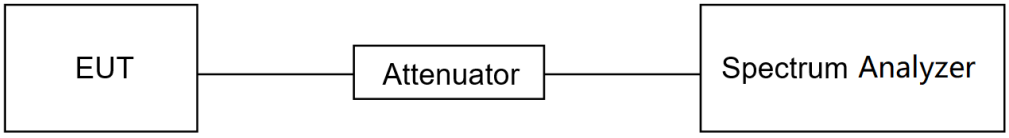
Refer to ANSI C63.10-2013 clause 11.10.2.

Connect the EUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	power averaging (rms)
RBW	3 kHz ≤ RBW ≤ 100 kHz
VBW	≥3 × RBW
Span	1.5 x OBW bandwidth
Trace	Employ trace averaging(rms)mode over a minimum of 100 traces
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



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TEST ENVIRONMENT

Temperature	26.5℃	Relative Humidity	54.2%
Atmosphere Pressure	101kPa	Test Voltage	DC 7.2 V

TEST DATE / ENGINEER

Test Date	May 10, 2024	Test By	Johnson Liu

TEST RESULTS

Please refer to section "Test Data" - Appendix D

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7.4. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.11 and 11.13.

Connect the EUT to the spectrum analyzer and use the following settings for reference level measurement:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × 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 PSD level.
Change the settings for emission level measurement:

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11.

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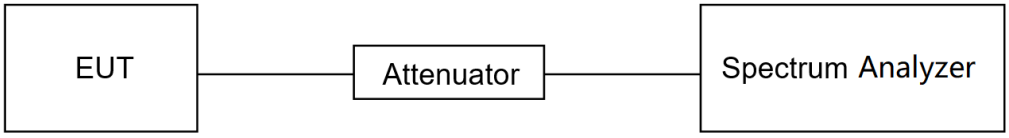
TEST SETUP



TEST ENVIRONMENT

Temperature	26.5℃	Relative Humidity	54.2%
Atmosphere Pressure	101kPa	Test Voltage	DC 7.2 V

TEST DATE / ENGINEER

Test Date	May 9, 2024	Test By	Johnson Liu

TEST RESULTS

Please refer to section "Test Data" - Appendix E&F

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7.5. DUTY CYCLE

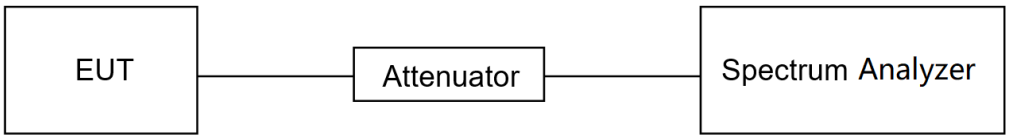
LIMITS

None; for reporting purposes only.

TEST PROCEDURE

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

TEST SETUP



TEST ENVIRONMENT

Temperature	26.5℃	Relative Humidity	54.2%
Atmosphere Pressure	101kPa	Test Voltage	DC 7.2 V

TEST DATE / ENGINEER

Test Date	May 9, 2024	Test By	Johnson Liu

TEST RESULTS

Please refer to section "Test Data" - Appendix G

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8. RADIATED TEST RESULTS

LIMITS

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

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

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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: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6c

TEST PROCEDURE

Below 30 MHz

The setting of the spectrum analyzer

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.

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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.

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Below 1 GHz and above 30 MHz

The setting of the spectrum analyzer

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.

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Above 1 GHz

The setting of the spectrum analyzer

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.

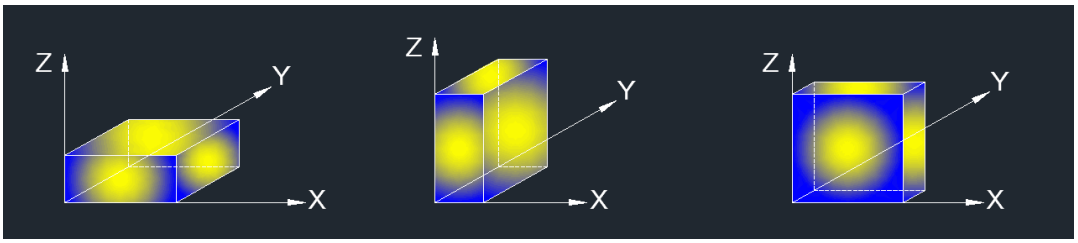
3. The EUT was placed on a turntable with 1.5 m above ground.

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.

Note 2: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

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For Restricted Bandedge:
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. PK=Peak: Peak detector.
4. AV=Average: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.5.
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 have been tested, but 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 the peak values are less than the QP limit, the QP result is deemed to comply with QP 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 have been tested, but only the worst data was recorded in the report.
5. dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5

For Radiate Spurious Emission (30 MHz ~ 1 GHz):
Note:
1. Result Level = Read Level + Correct Factor.
2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP limit.
3. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious Emission (1 GHz ~ 3 GHz):
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average 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 7.5.
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 have been tested, but only the worst data was recorded in the report.

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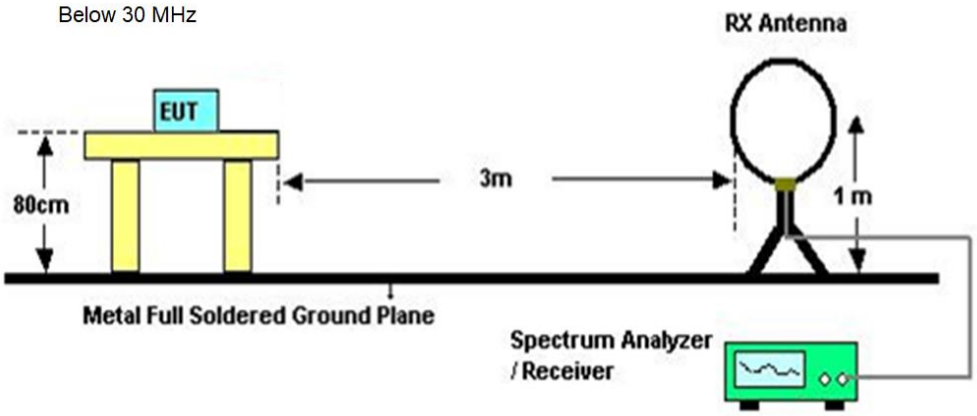
For Radiate Spurious Emission (3 GHz ~ 18 GHz):
Note:
1. Peak Result = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.5.
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 have been tested, but 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 the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. All modes have been tested, but only the worst data was recorded in the report.

TEST SETUP



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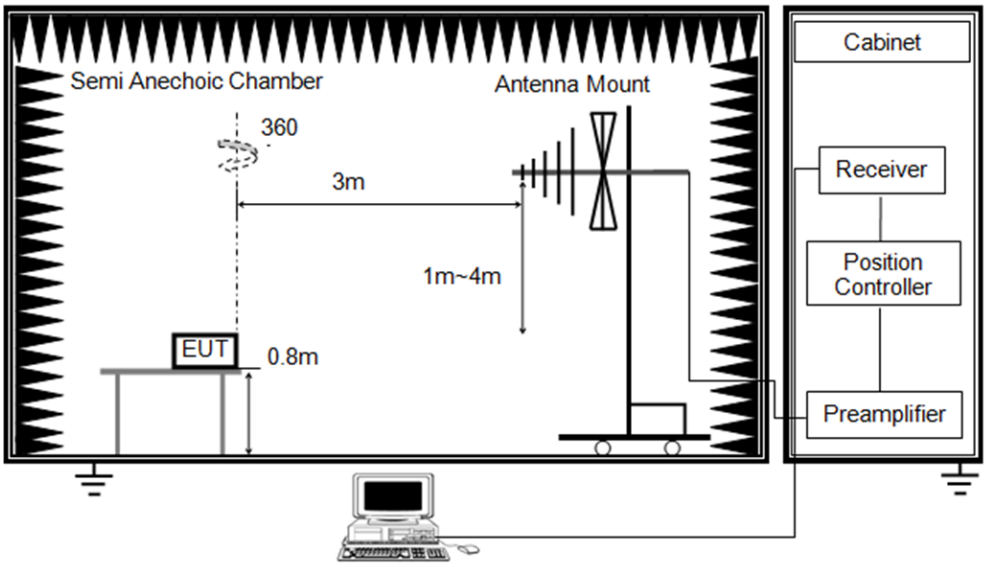
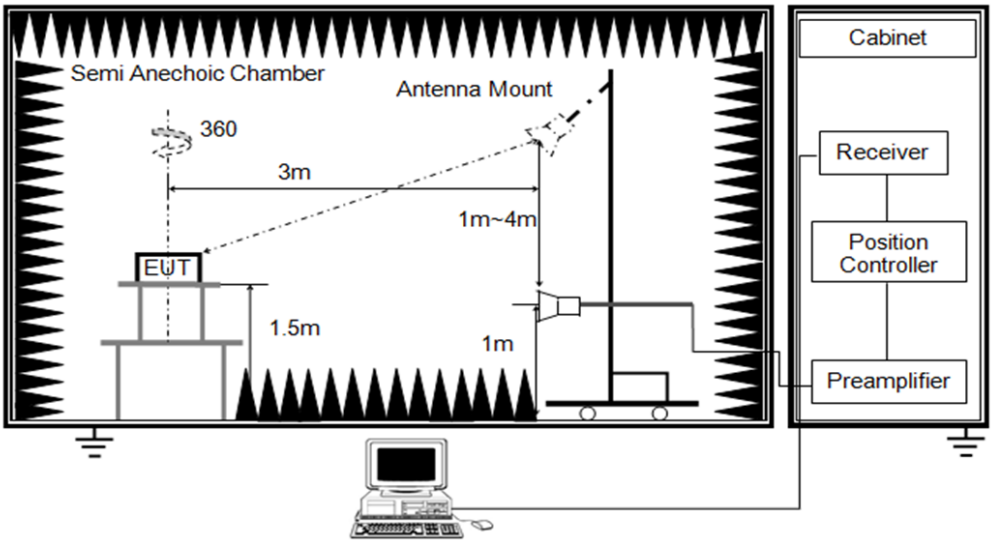
Below 1 GHz and above 30 MHz



Above 1 GHz



TEST ENVIRONMENT

Temperature	22.4℃	Relative Humidity	62.3%
Atmosphere Pressure	101kPa	Test Voltage	

TEST DATE / ENGINEER

Test Date	June 18, 2024	Test By	Mason Wang

TEST RESULTS

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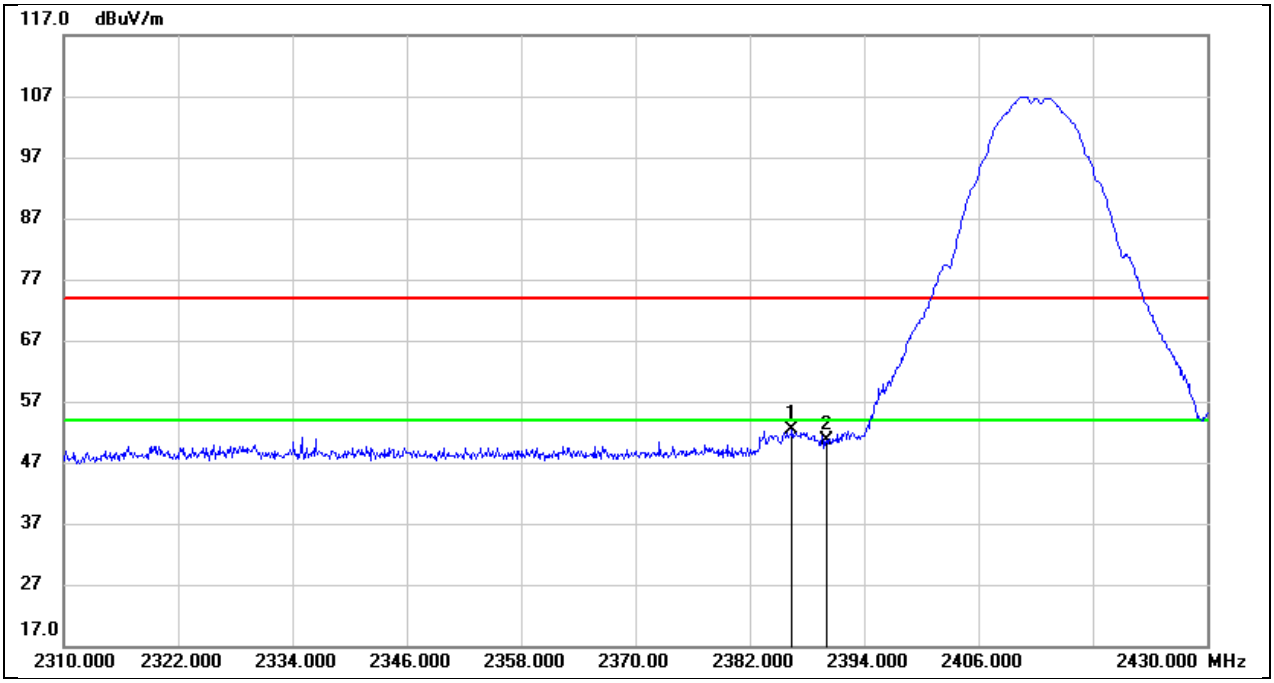
8.1. RESTRICTED BANDEDGE

Test Mode:	802.11b PK	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.440	19.42	32.90	52.32	74.00	-21.68	peak
2	2390.000	17.61	32.92	50.53	74.00	-23.47	peak

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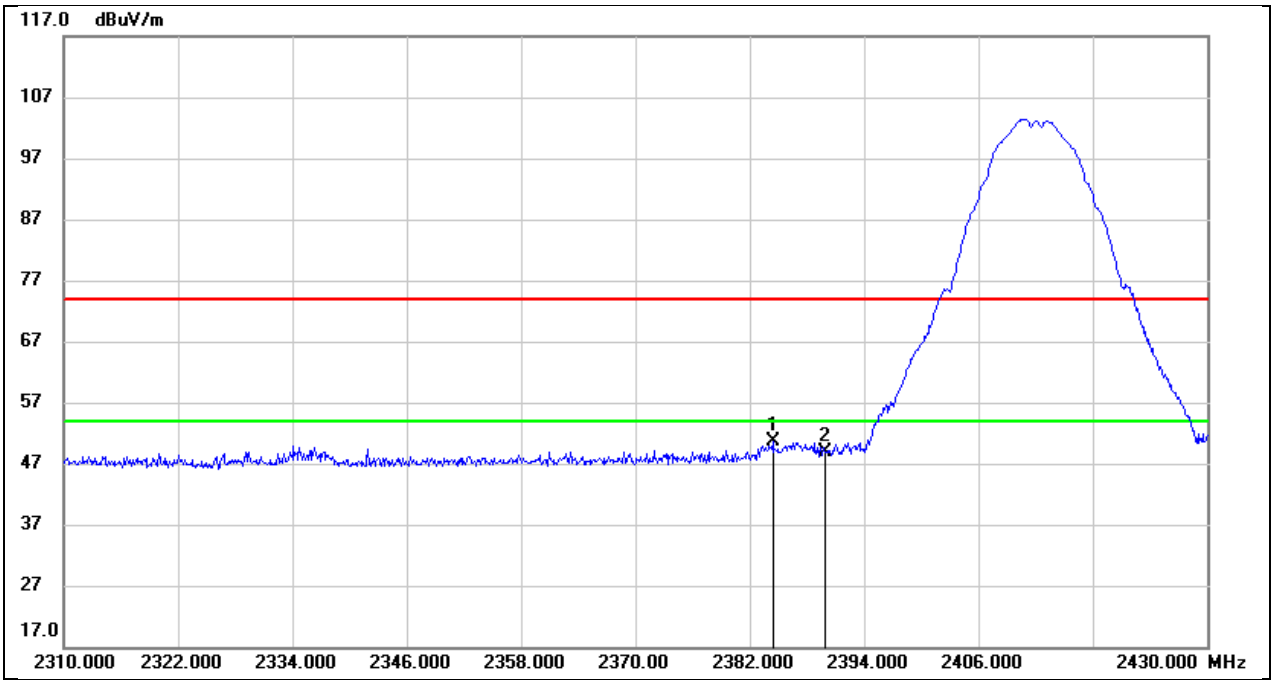
Test Mode:	802.11b PK	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2384.400	17.71	32.89	50.60	74.00	-23.40	peak
2	2390.000	15.95	32.92	48.87	74.00	-25.13	peak

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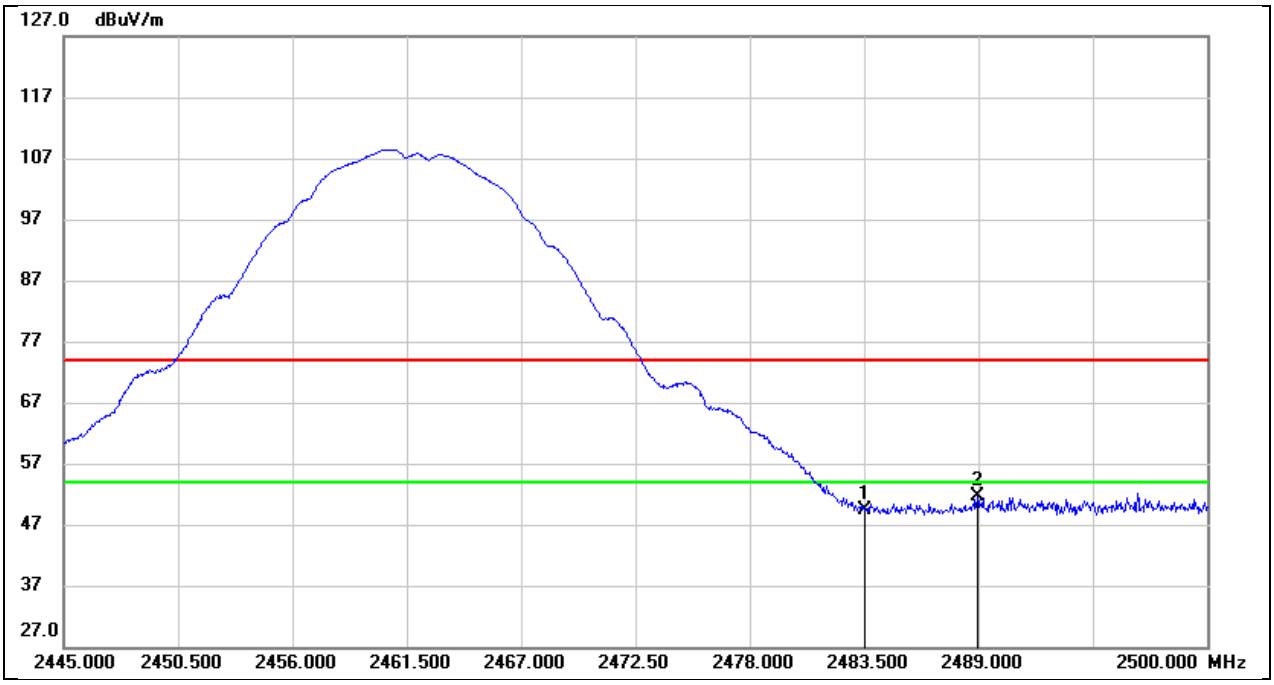
Test Mode:	802.11b PK	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	16.56	32.94	49.50	74.00	-24.50	peak
2	2488.945	18.59	32.93	51.52	74.00	-22.48	peak

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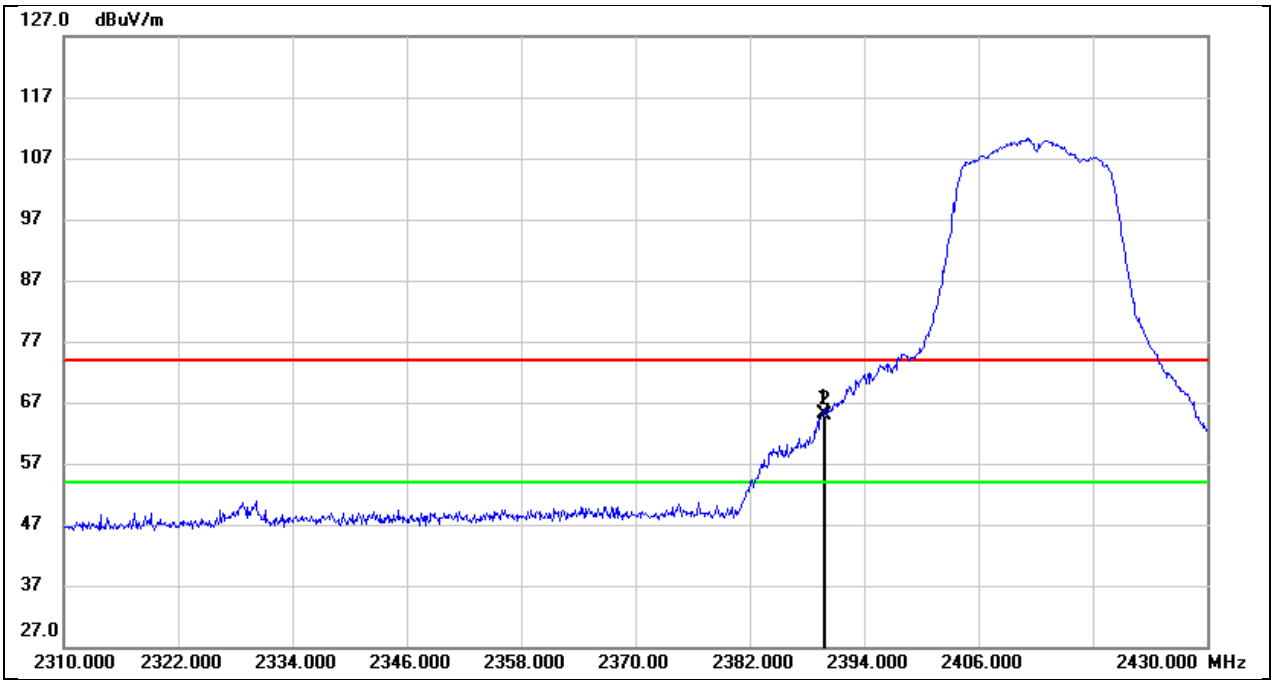
Test Mode:	802.11g PK	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.680	32.14	32.92	65.06	74.00	-8.94	peak
2	2390.000	31.99	32.92	64.91	74.00	-9.09	peak

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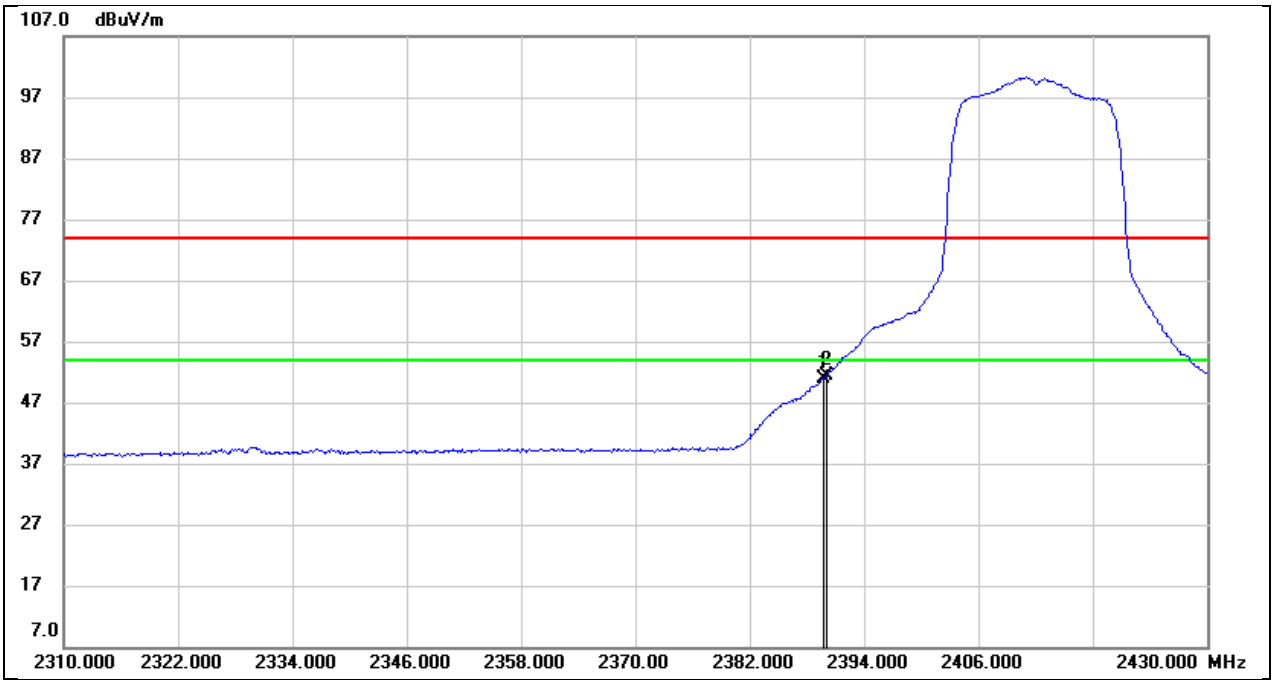
Test Mode:	802.11g AV	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.680	17.94	32.92	50.86	54.00	-3.14	AVG
2	2390.000	18.48	32.92	51.40	54.00	-2.60	AVG

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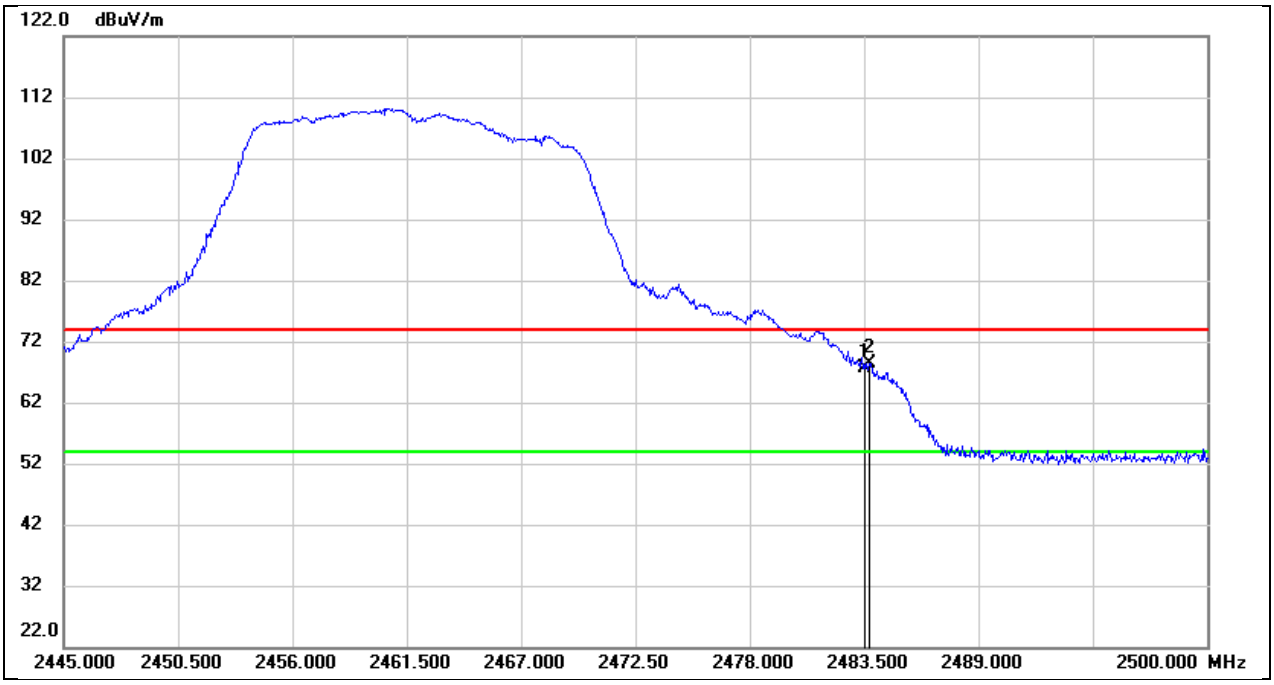
Test Mode:	802.11g PK	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	34.80	32.94	67.74	74.00	-6.26	peak
2	2483.720	35.54	32.94	68.48	74.00	-5.52	peak

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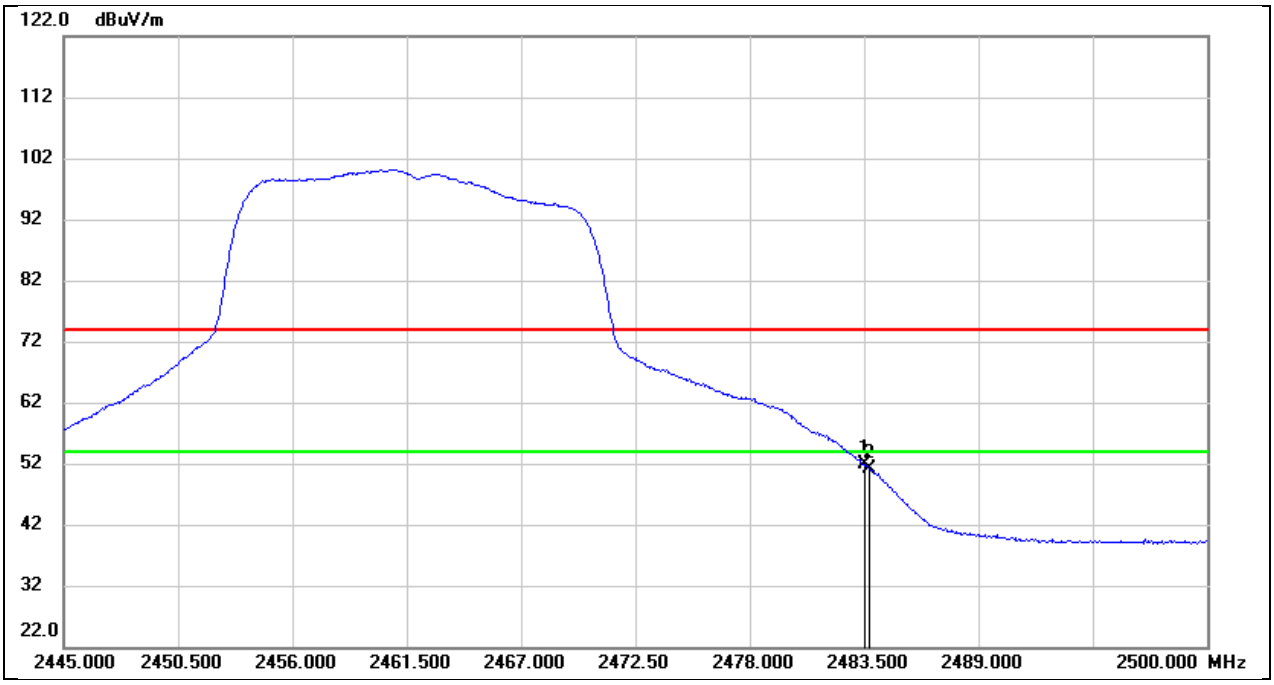
Test Mode:	802.11g AV	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.83	32.94	51.77	54.00	-2.23	AVG
2	2483.720	18.23	32.94	51.17	54.00	-2.83	AVG

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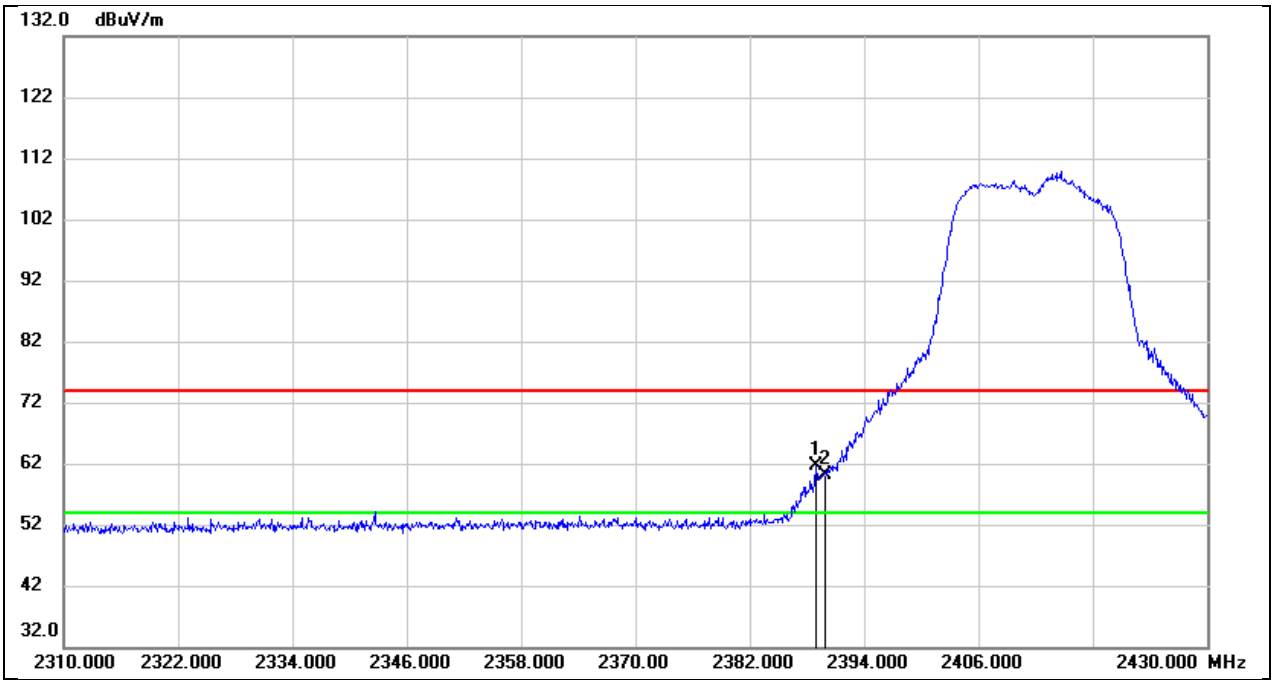
Test Mode:	802.11n HT20 PK	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.960	28.74	32.92	61.66	74.00	-12.34	peak
2	2390.000	27.14	32.92	60.06	74.00	-13.94	peak

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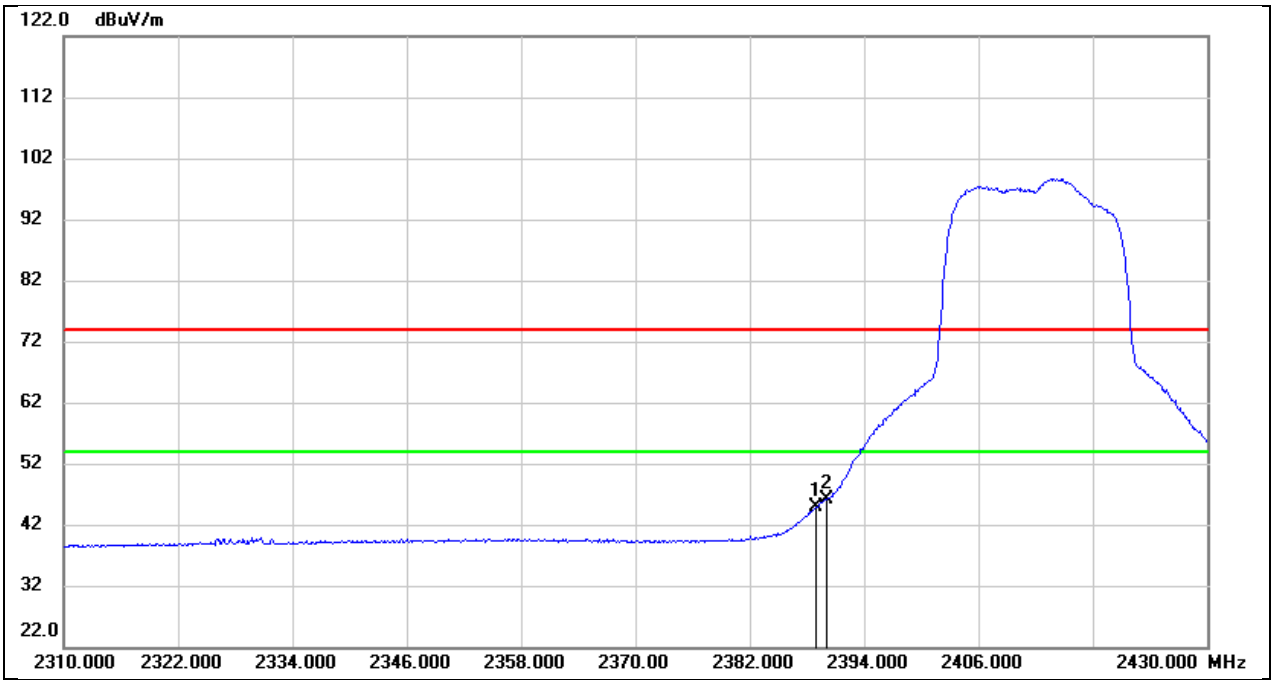
Test Mode:	802.11n HT20 AV	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.960	11.94	32.92	44.86	54.00	-9.14	AVG
2	2390.000	13.28	32.92	46.20	54.00	-7.80	AVG

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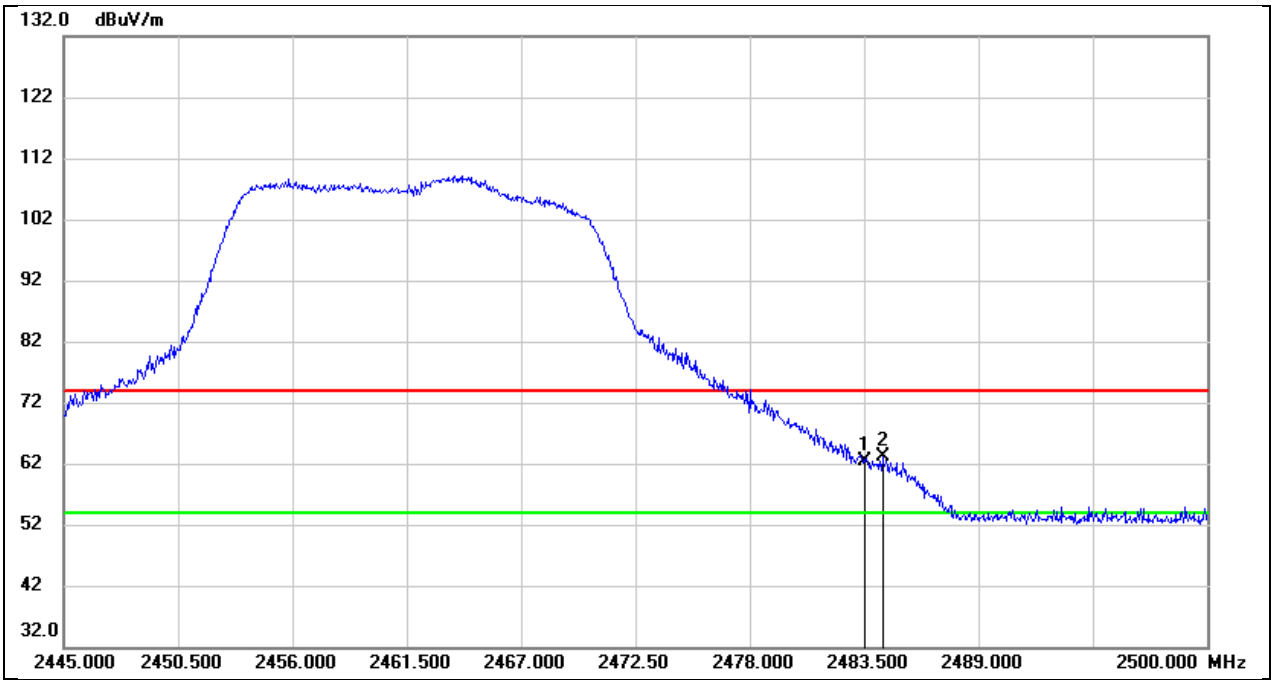
Test Mode:	802.11n HT20 PK	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	29.45	32.94	62.39	74.00	-11.61	peak
2	2484.380	30.15	32.94	63.09	74.00	-10.91	peak

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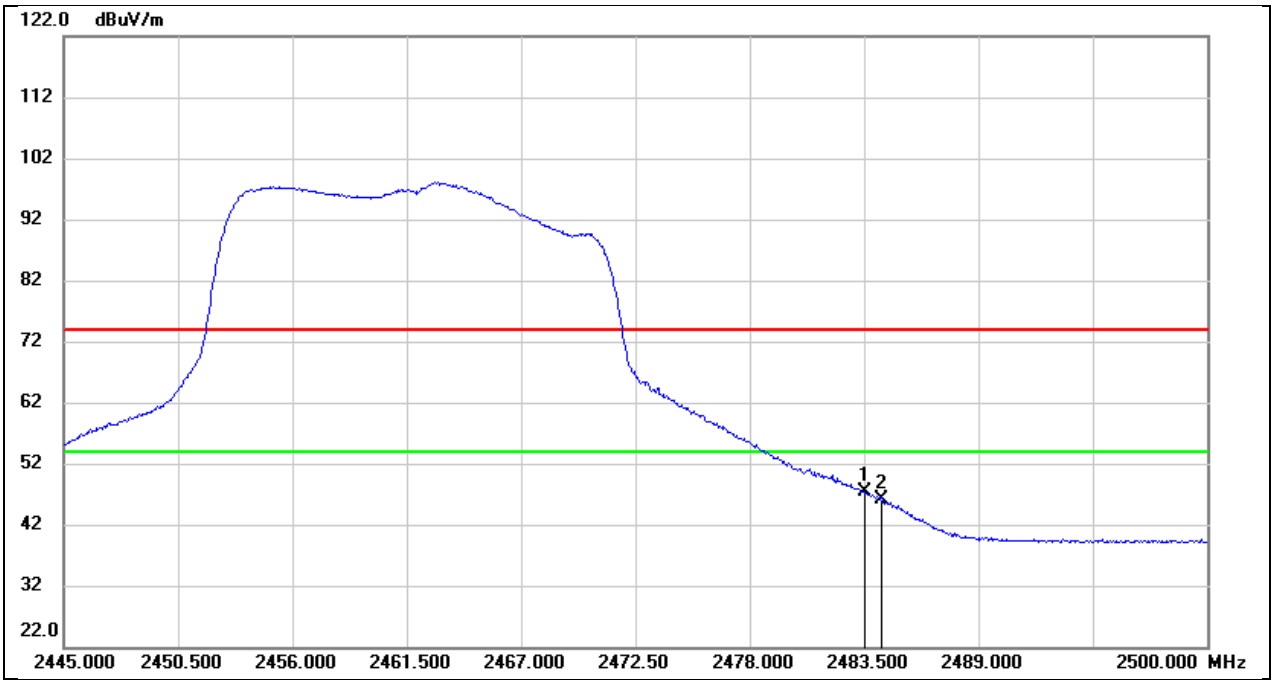
Test Mode:	802.11n HT20 AV	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	14.36	32.94	47.30	54.00	-6.70	AVG
2	2484.380	13.09	32.94	46.03	54.00	-7.97	AVG

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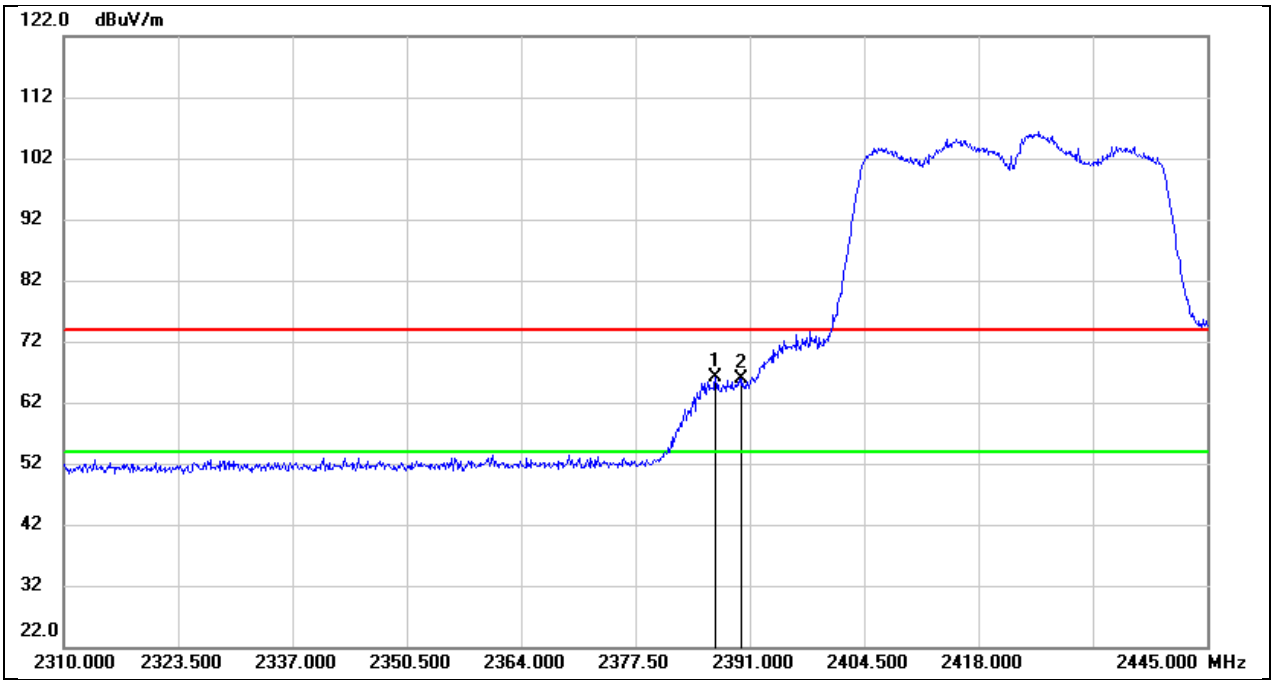
Test Mode:	802.11n HT40 PK	Frequency(MHz):	2422
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.950	33.18	32.91	66.09	74.00	-7.91	peak
2	2390.000	33.08	32.92	66.00	74.00	-8.00	peak

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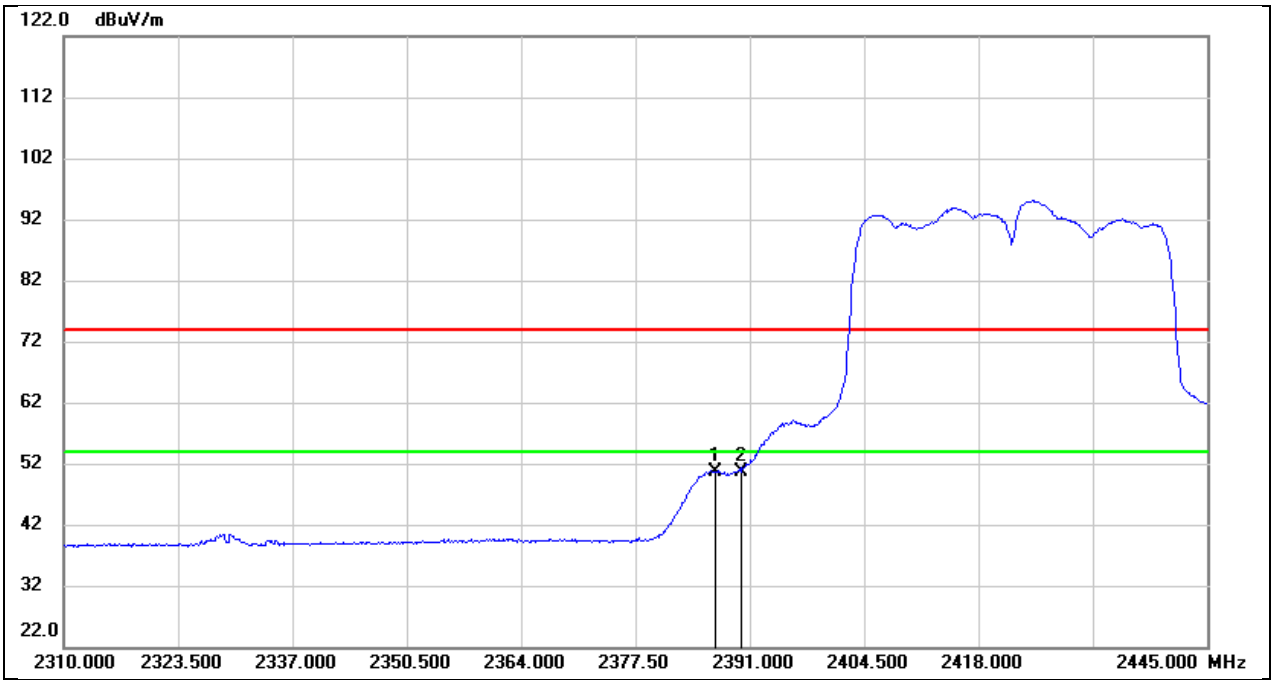
Test Mode:	802.11n HT40 AV	Frequency(MHz):	2422
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.950	17.78	32.91	50.69	54.00	-3.31	AVG
2	2390.000	17.81	32.92	50.73	54.00	-3.27	AVG

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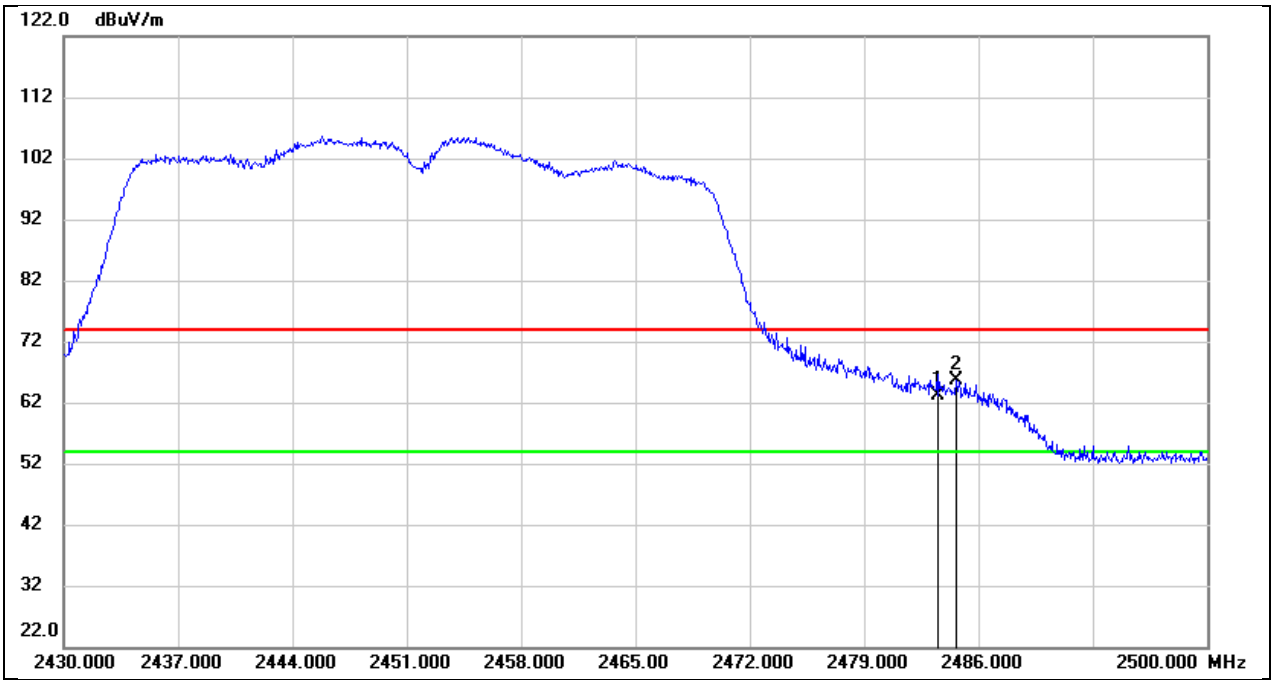
Test Mode:	802.11n HT40 PK	Frequency(MHz):	2452
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	30.11	32.94	63.05	74.00	-10.95	peak
2	2484.670	32.72	32.94	65.66	74.00	-8.34	peak

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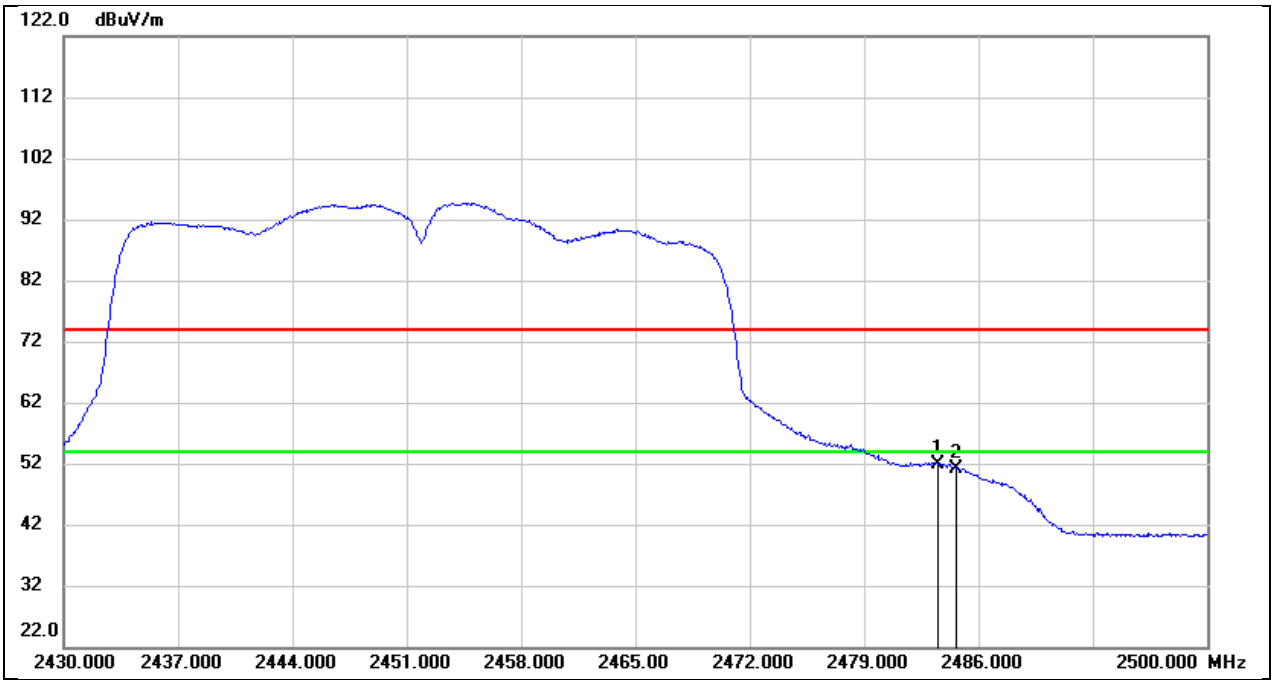
Test Mode:	802.11n HT40 AV	Frequency(MHz):	2452
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.94	32.94	51.88	54.00	-2.12	AVG
2	2484.670	18.22	32.94	51.16	54.00	-2.84	AVG

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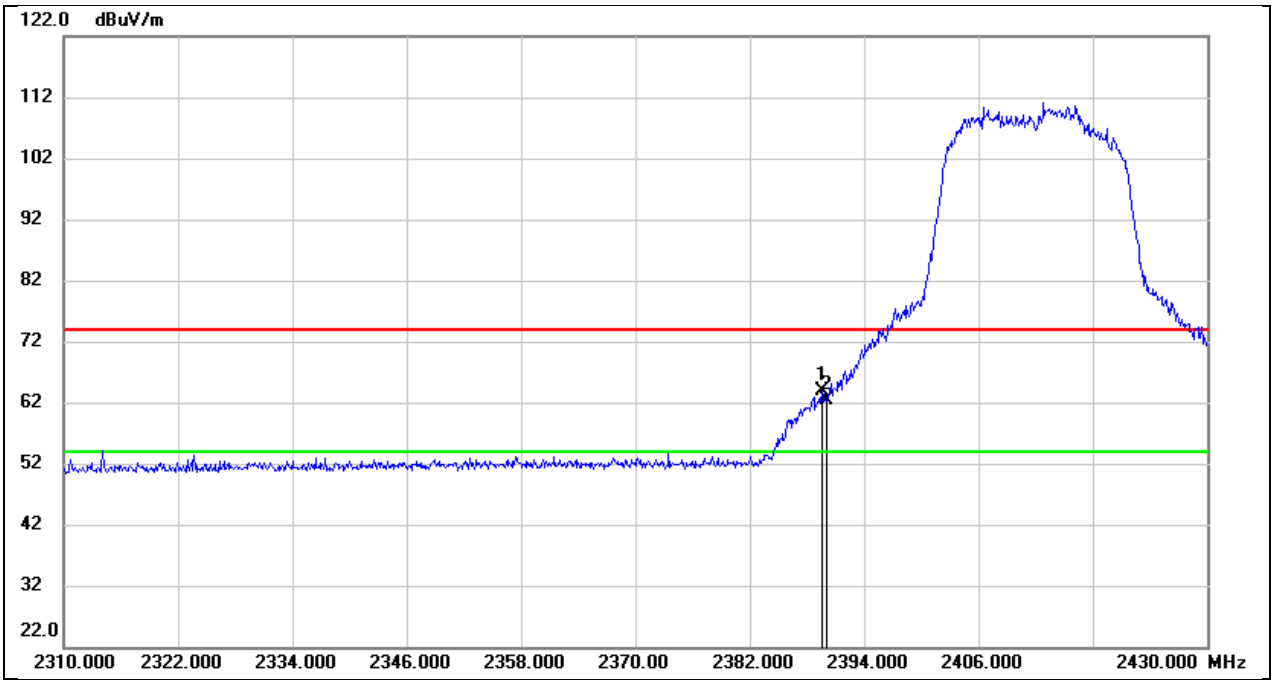
Test Mode:	802.11ax HE20 PK	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.560	31.03	32.92	63.95	74.00	-10.05	peak
2	2390.000	29.49	32.92	62.41	74.00	-11.59	peak

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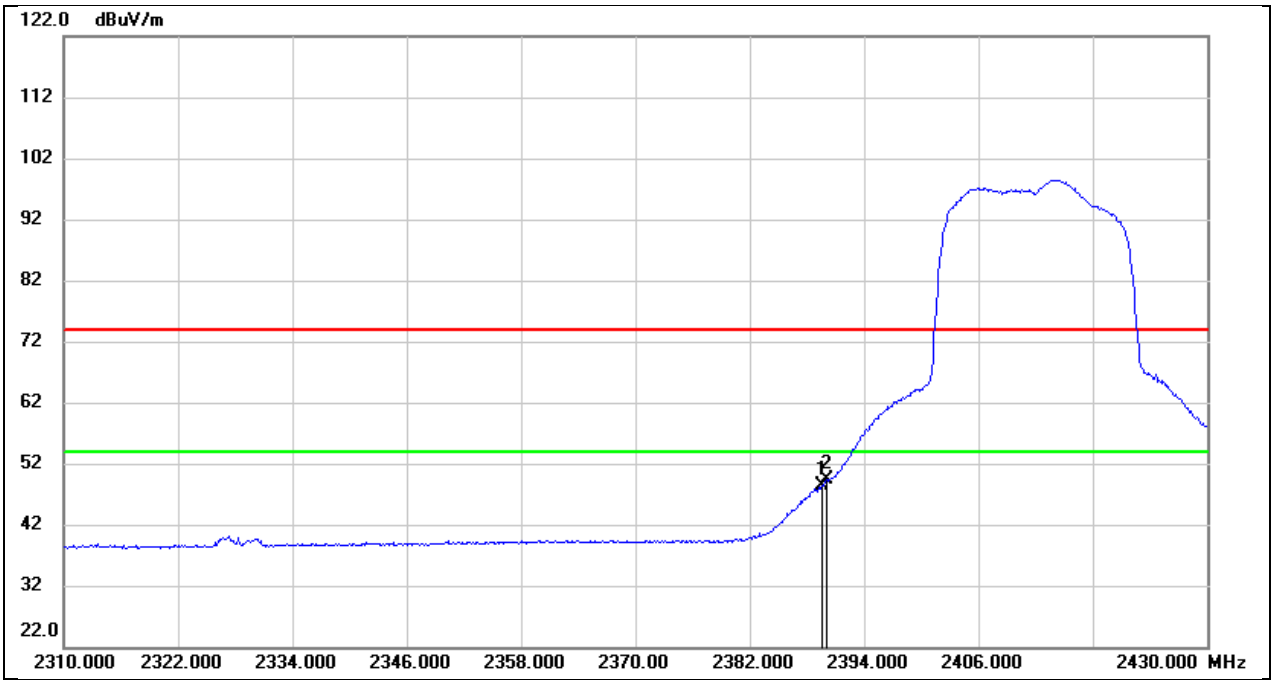
Test Mode:	802.11ax HE20 AV	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.560	15.49	32.92	48.41	54.00	-5.59	AVG
2	2390.000	16.39	32.92	49.31	54.00	-4.69	AVG

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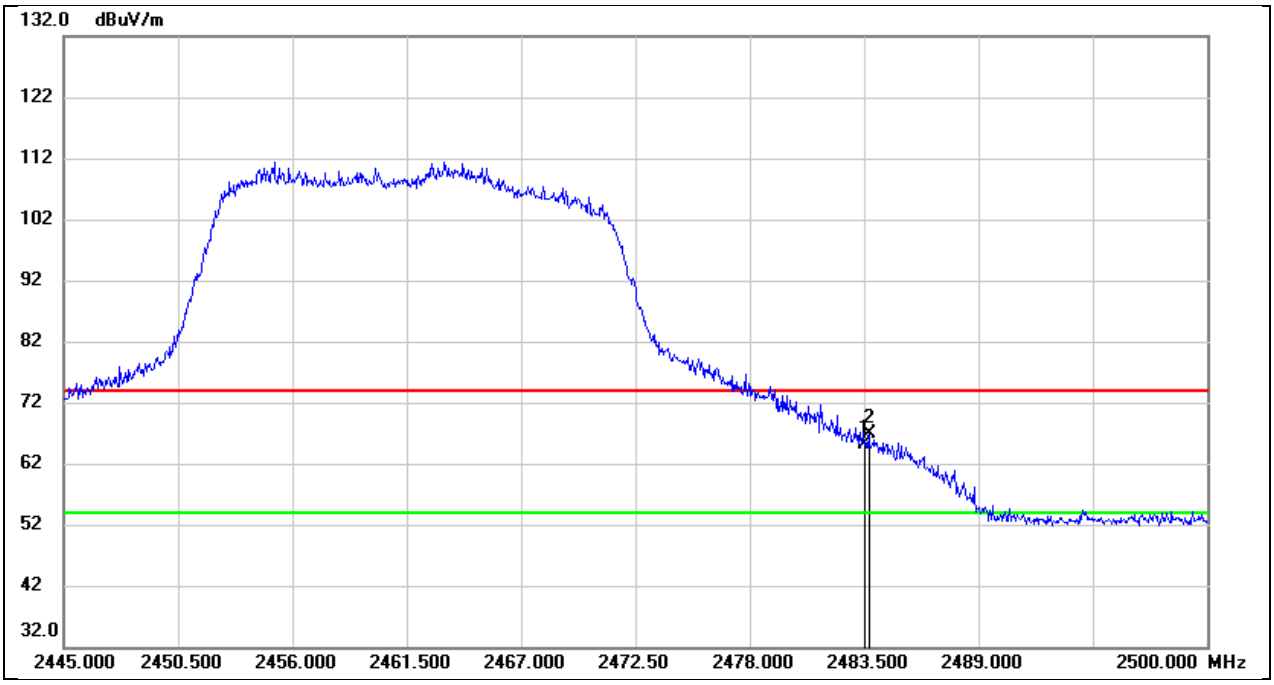
Test Mode:	802.11ax HE20 PK	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	32.16	32.94	65.10	74.00	-8.90	peak
2	2483.720	33.92	32.94	66.86	74.00	-7.14	peak

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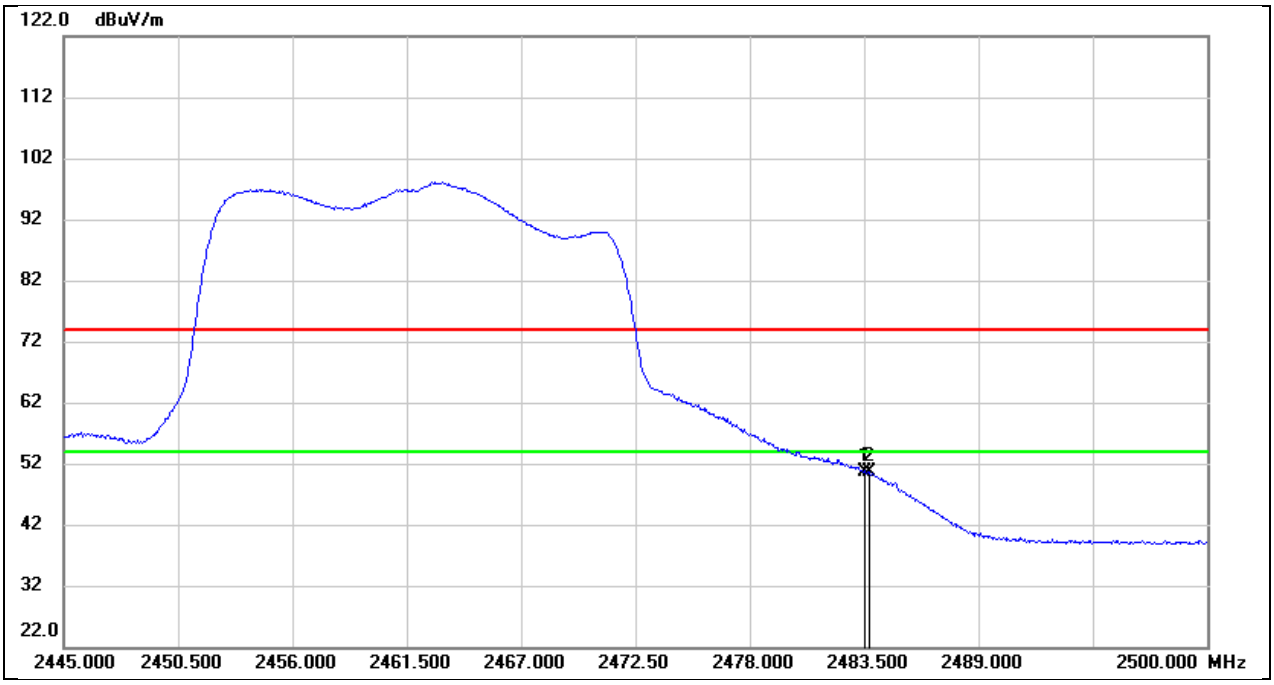
Test Mode:	802.11ax HE20 AV	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	17.73	32.94	50.67	54.00	-3.33	AVG
2	2483.720	17.60	32.94	50.54	54.00	-3.46	AVG

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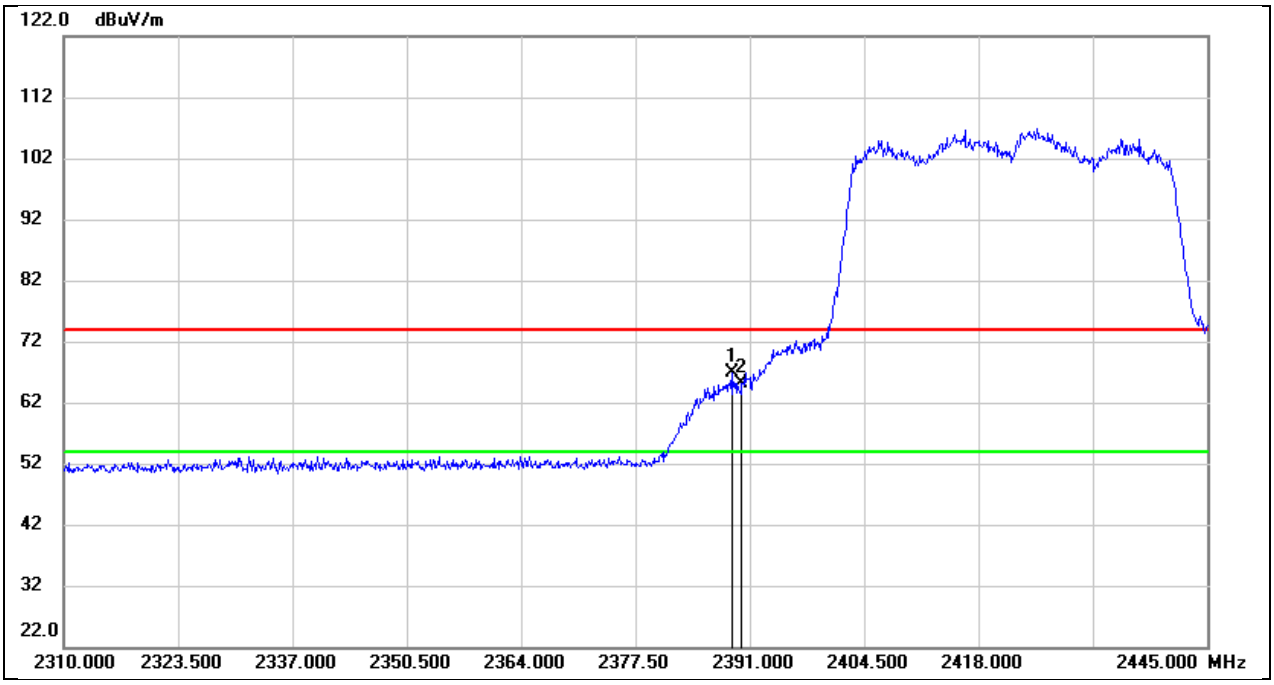
Test Mode:	802.11ax HE40 PK	Frequency(MHz):	2422
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.840	33.87	32.92	66.79	74.00	-7.21	peak
2	2390.000	32.31	32.92	65.23	74.00	-8.77	peak

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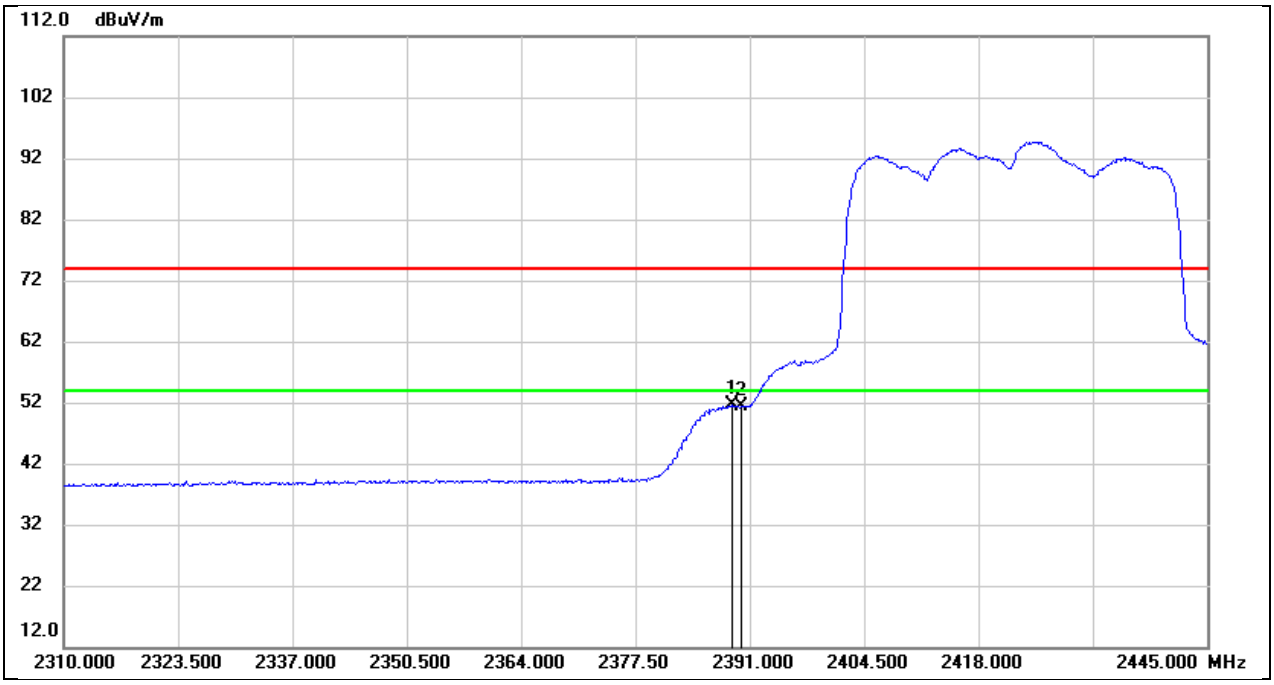
Test Mode:	802.11ax HE40 AV	Frequency(MHz):	2422
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.840	18.63	32.92	51.55	54.00	-2.45	AVG
2	2390.000	18.39	32.92	51.31	54.00	-2.69	AVG

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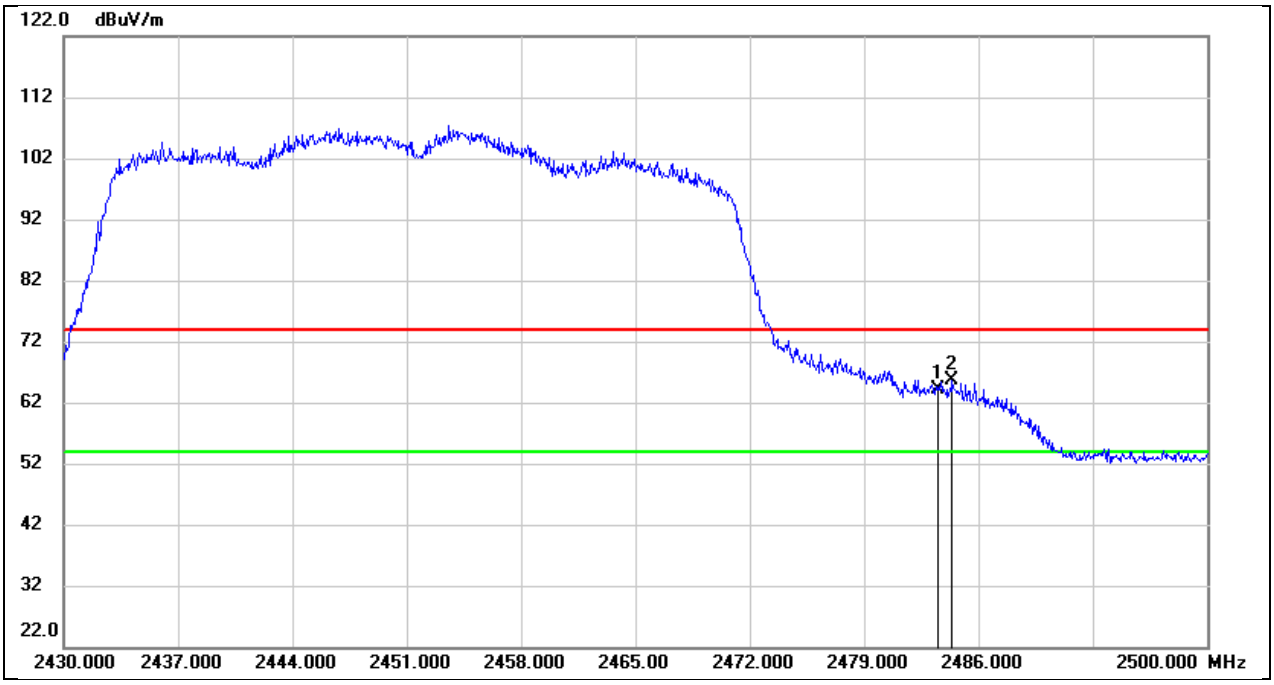
Test Mode:	802.11ax HE40 PK	Frequency(MHz):	2452
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	31.19	32.94	64.13	74.00	-9.87	peak
2	2484.390	32.65	32.94	65.59	74.00	-8.41	peak

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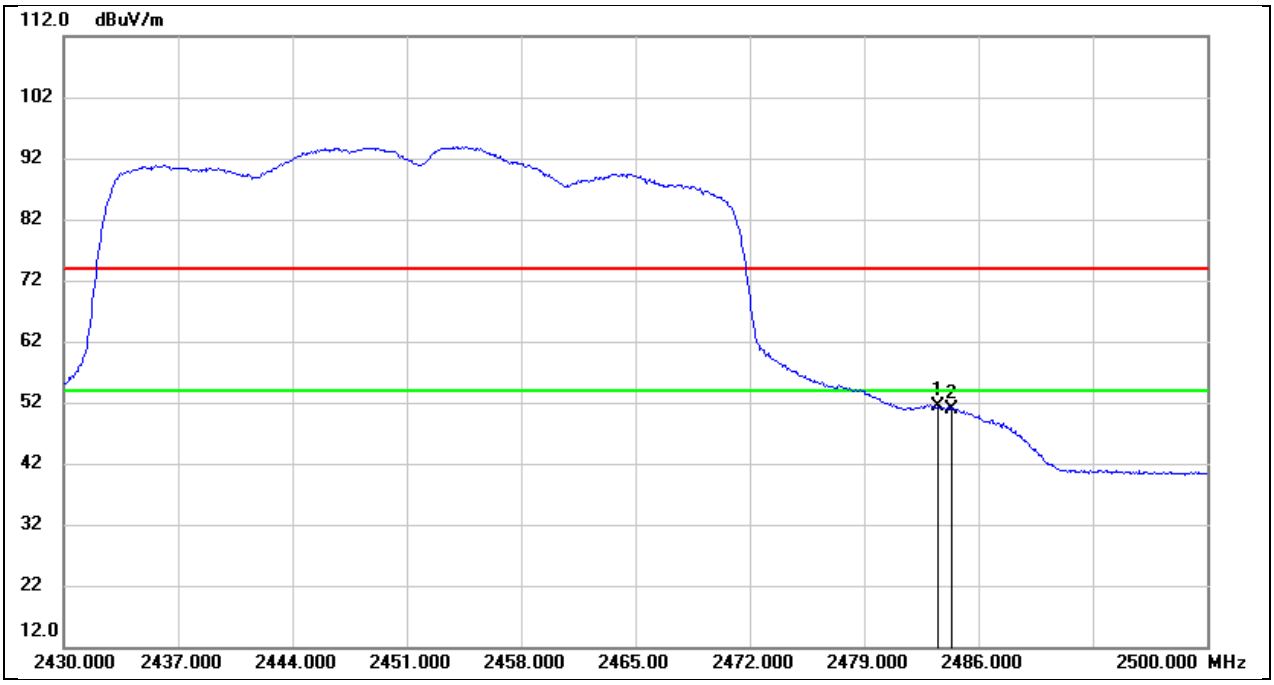
Test Mode:	802.11ax HE40 AV	Frequency(MHz):	2452
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	18.49	32.94	51.43	54.00	-2.57	AVG
2	2484.390	18.04	32.94	50.98	54.00	-3.02	AVG

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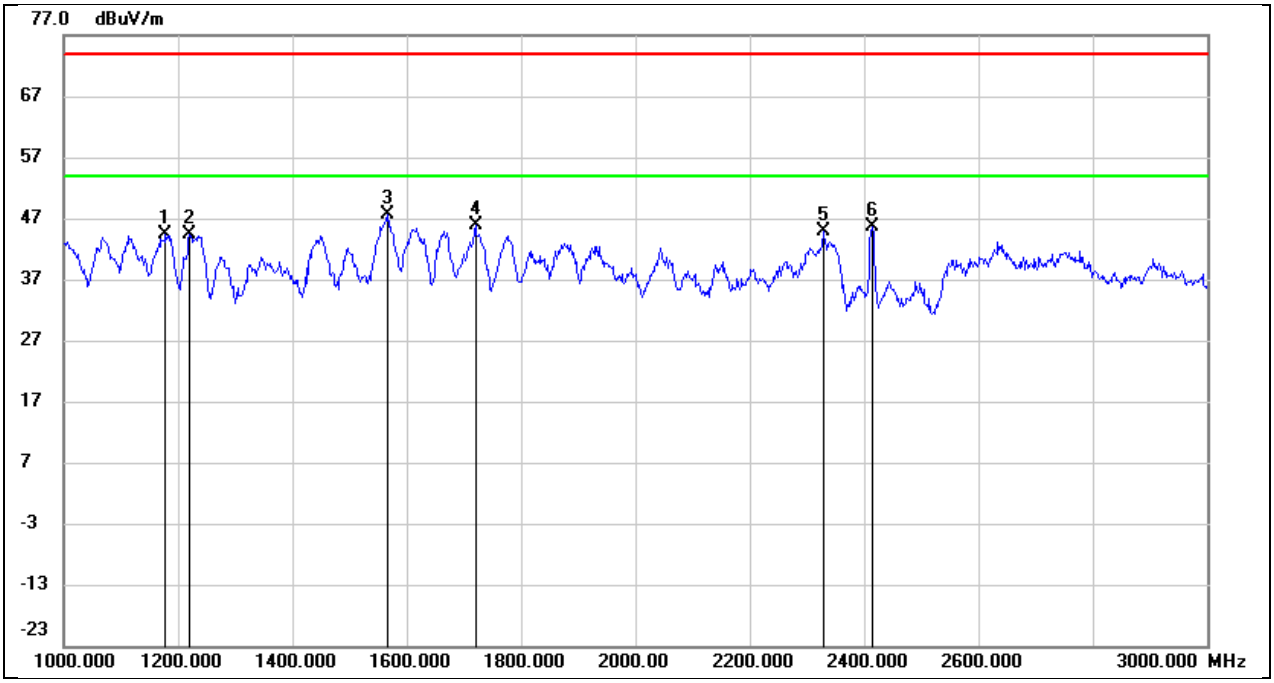
8.2. SPURIOUS EMISSIONS(1 GHZ~3 GHZ)

Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1178.000	57.14	-12.83	44.31	74.00	-29.69	peak
2	1220.000	56.95	-12.61	44.34	74.00	-29.66	peak
3	1566.000	58.90	-11.36	47.54	74.00	-26.46	peak
4	1720.000	56.45	-10.61	45.84	74.00	-28.16	peak
5	2328.000	52.81	-7.94	44.87	74.00	-29.13	peak
6	2412.000	53.08	-7.41	45.67	/	/	fundamental

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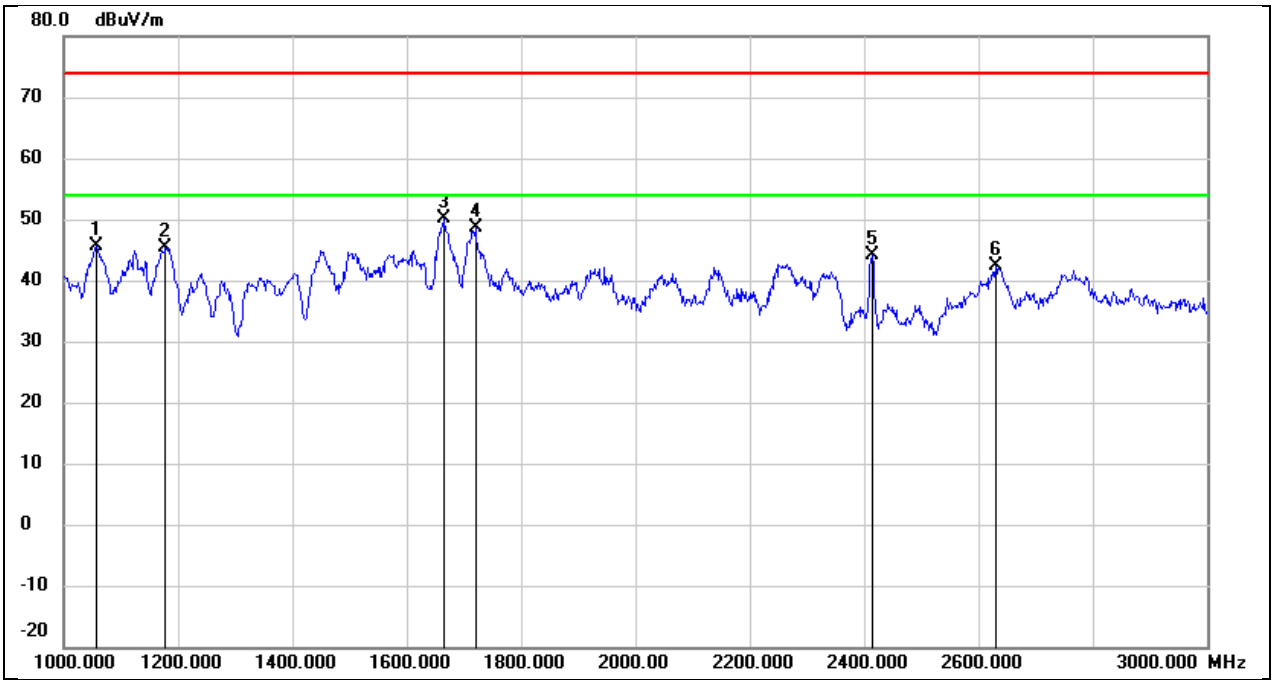
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1058.000	59.61	-13.89	45.72	74.00	-28.28	peak
2	1178.000	58.19	-12.83	45.36	74.00	-28.64	peak
3	1666.000	60.90	-10.86	50.04	74.00	-23.96	peak
4	1720.000	59.24	-10.61	48.63	74.00	-25.37	peak
5	2412.000	51.42	-7.41	44.01	/	/	fundamental
6	2630.000	49.90	-7.55	42.35	74.00	-31.65	peak

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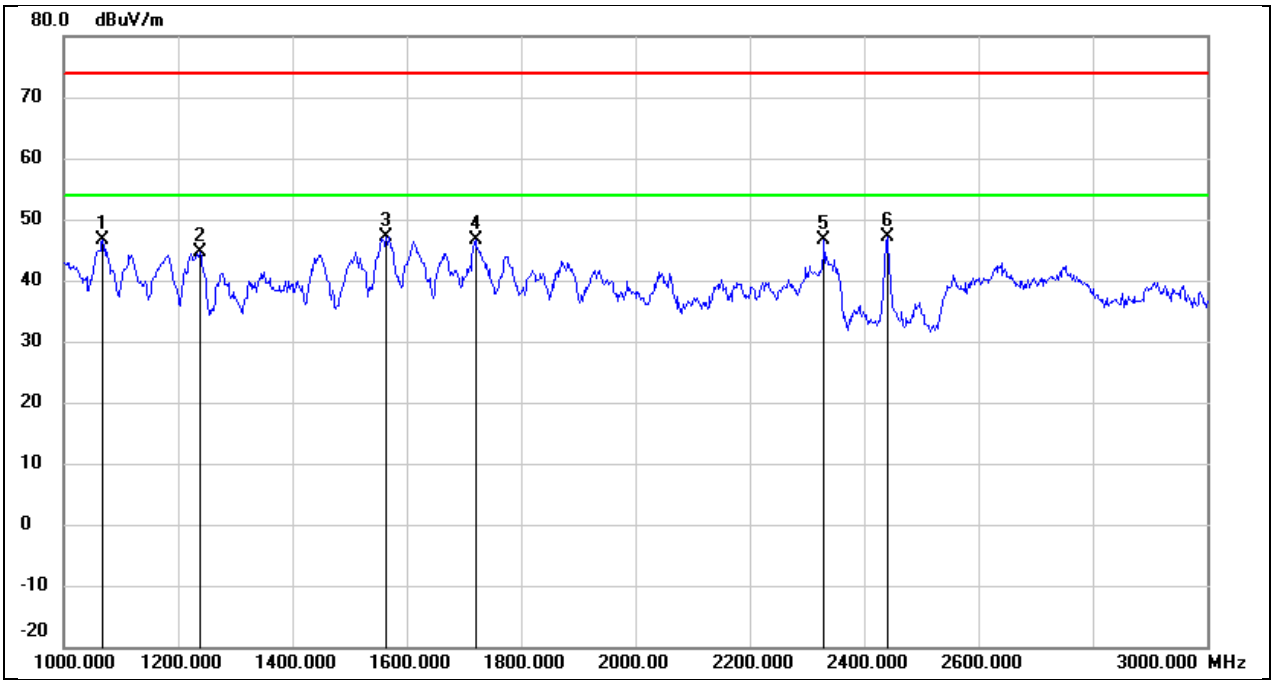
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1068.000	60.32	-13.81	46.51	74.00	-27.49	peak
2	1238.000	57.12	-12.60	44.52	74.00	-29.48	peak
3	1564.000	58.57	-11.38	47.19	74.00	-26.81	peak
4	1720.000	57.17	-10.61	46.56	74.00	-27.44	peak
5	2330.000	54.59	-7.92	46.67	74.00	-27.33	peak
6	2437.000	54.61	-7.44	47.17	/	/	fundamental

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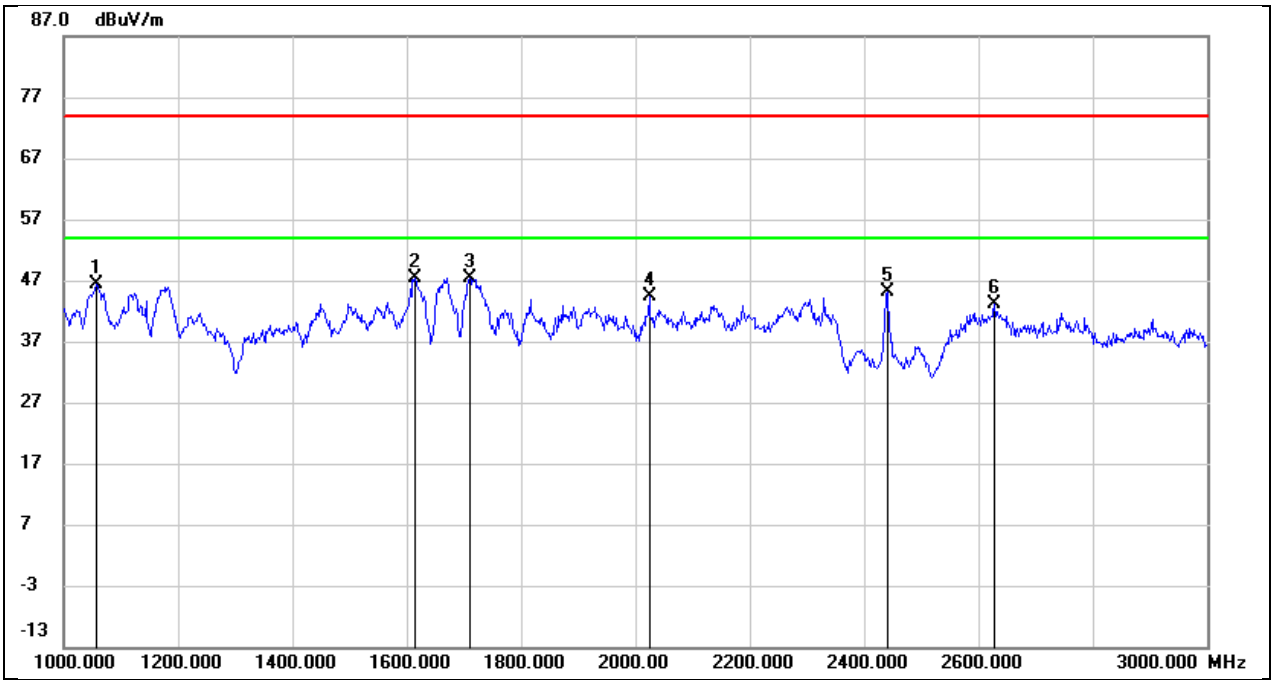
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1058.000	60.16	-13.89	46.27	74.00	-27.73	peak
2	1614.000	58.50	-11.11	47.39	74.00	-26.61	peak
3	1710.000	58.10	-10.66	47.44	74.00	-26.56	peak
4	2024.000	54.25	-9.96	44.29	74.00	-29.71	peak
5	2437.000	52.49	-7.44	45.05	/	/	fundamental
6	2628.000	50.66	-7.56	43.10	74.00	-30.90	peak

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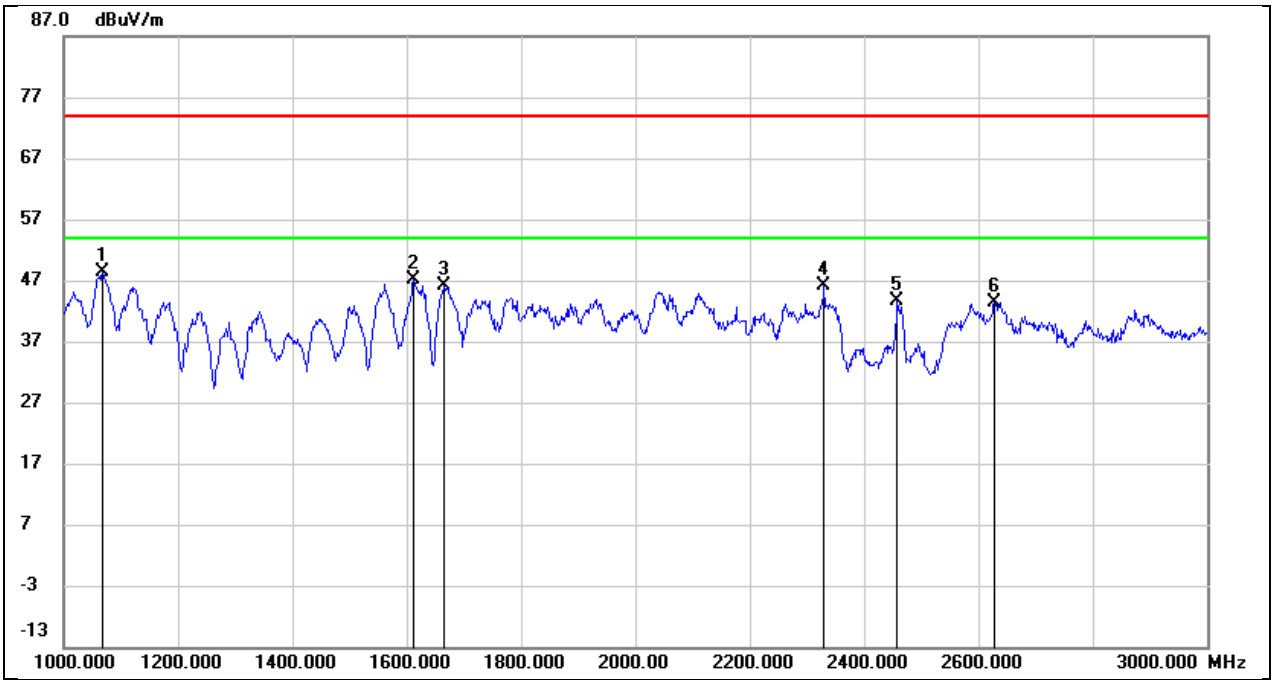
Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1068.000	62.17	-13.81	48.36	74.00	-25.64	peak
2	1612.000	58.14	-11.11	47.03	74.00	-26.97	peak
3	1666.000	57.02	-10.86	46.16	74.00	-27.84	peak
4	2330.000	54.05	-7.92	46.13	74.00	-27.87	peak
5	2462.000	51.02	-7.46	43.56	/	/	fundamental
6	2628.000	50.96	-7.56	43.40	74.00	-30.60	peak

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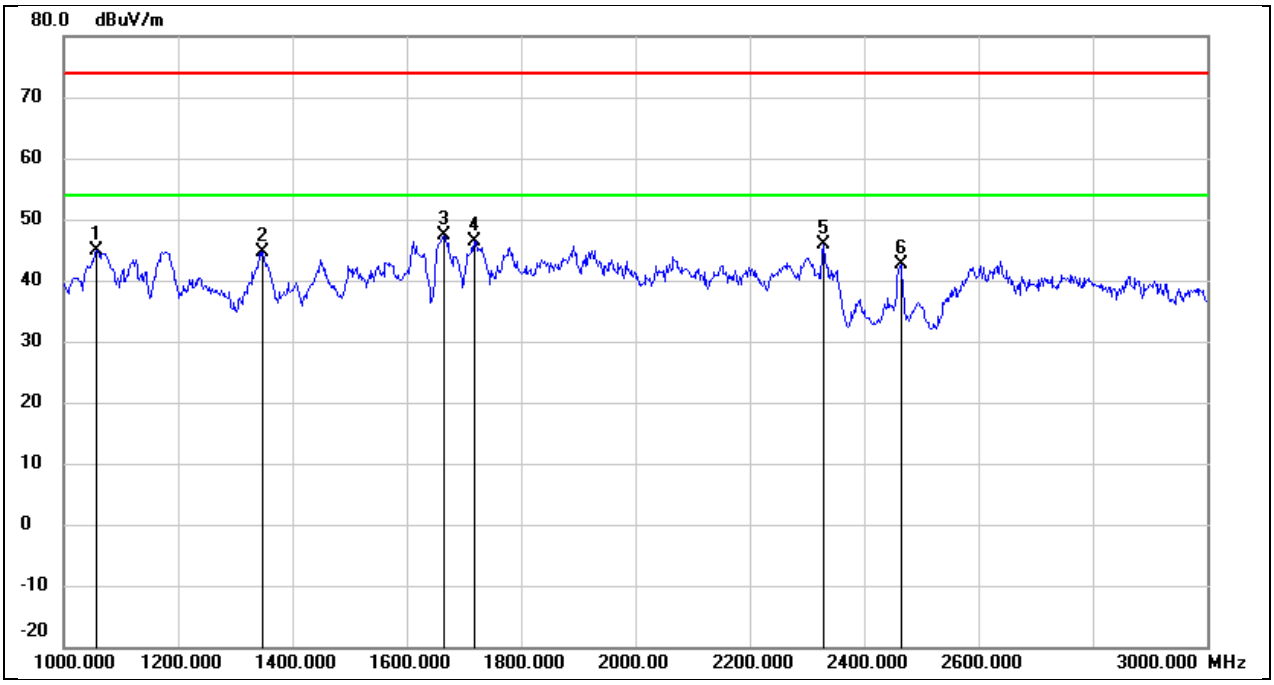
Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1056.000	58.90	-13.91	44.99	74.00	-29.01	peak
2	1348.000	57.21	-12.47	44.74	74.00	-29.26	peak
3	1664.000	58.33	-10.88	47.45	74.00	-26.55	peak
4	1718.000	56.96	-10.62	46.34	74.00	-27.66	peak
5	2330.000	53.87	-7.92	45.95	74.00	-28.05	peak
6	2462.000	50.06	-7.47	42.59	/	/	fundamental

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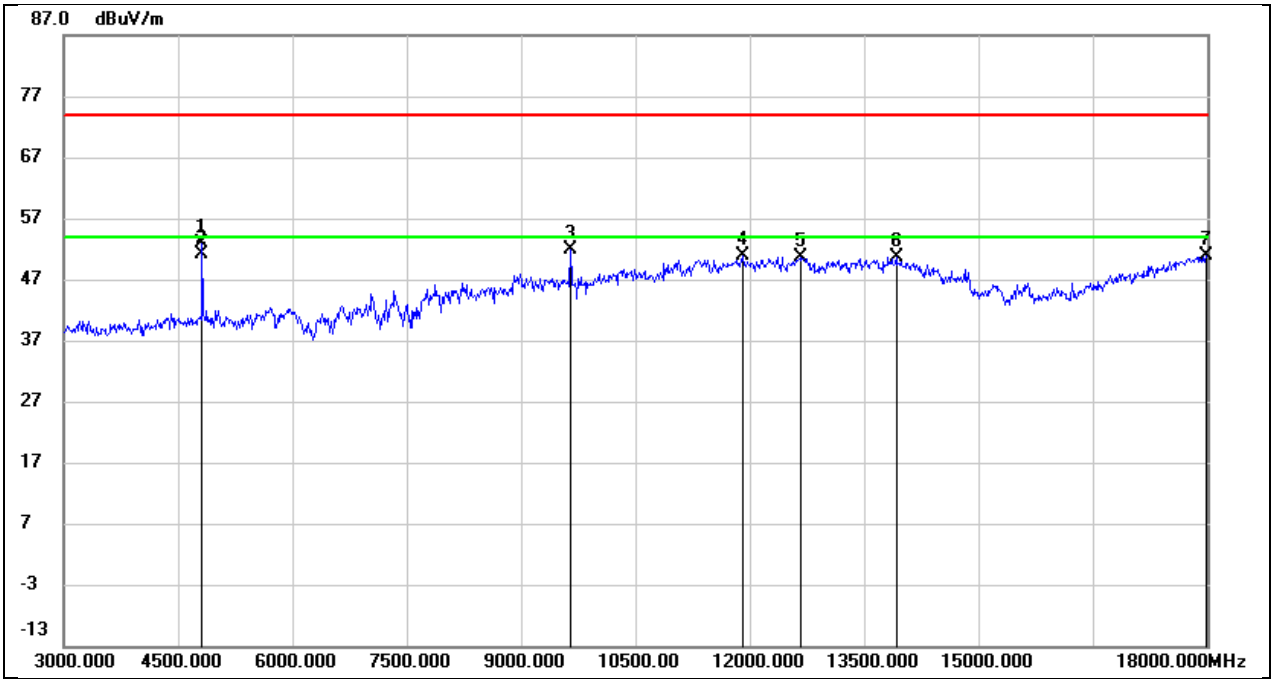
8.3. SPURIOUS EMISSIONS(3 GHZ~18 GHZ)

Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	52.46	0.49	52.95	74.00	-21.05	peak
2	4815.000	50.66	0.49	51.15	54.00	-2.85	AVG
3	9645.000	40.78	11.17	51.95	74.00	-22.05	peak
4	11910.000	32.68	18.11	50.79	74.00	-23.21	peak
5	12675.000	32.16	18.54	50.70	74.00	-23.30	peak
6	13920.000	27.96	22.71	50.67	74.00	-23.33	peak
7	17985.000	24.05	26.77	50.82	74.00	-23.18	peak

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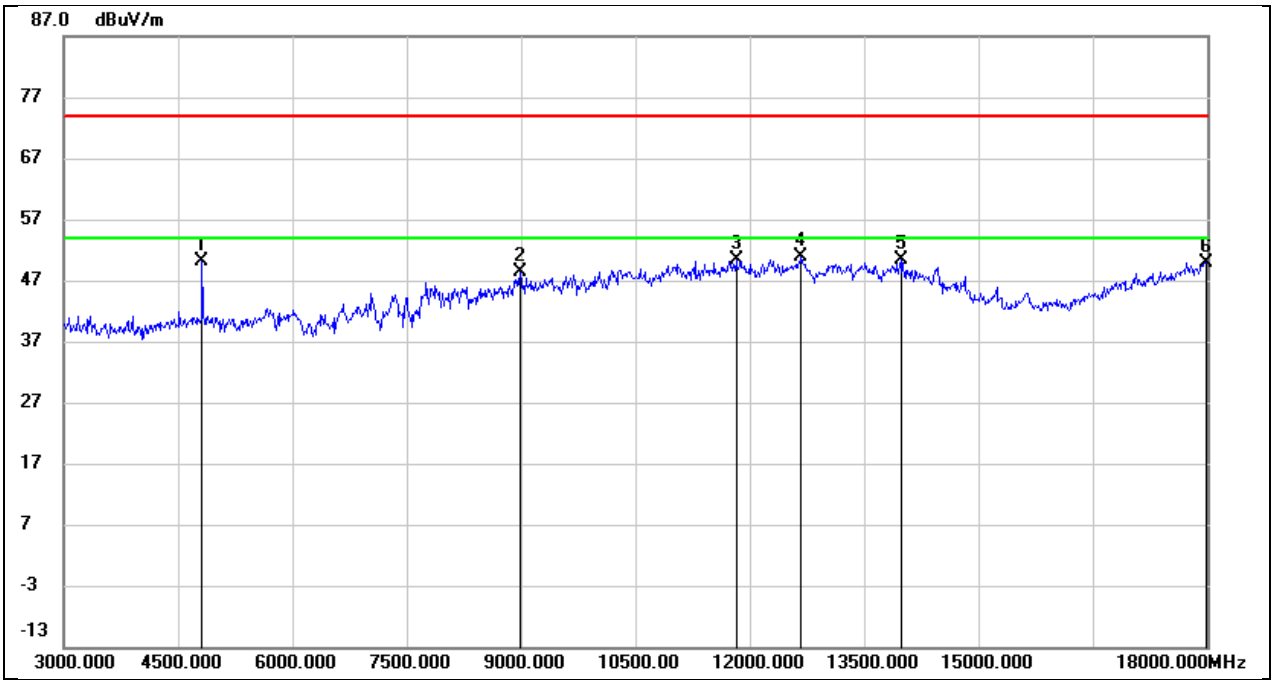
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.54	0.49	50.03	74.00	-23.97	peak
2	8985.000	37.35	10.97	48.32	74.00	-25.68	peak
3	11820.000	32.55	17.73	50.28	74.00	-23.72	peak
4	12675.000	32.38	18.54	50.92	74.00	-23.08	peak
5	13995.000	27.50	22.76	50.26	74.00	-23.74	peak
6	17985.000	23.17	26.77	49.94	74.00	-24.06	peak

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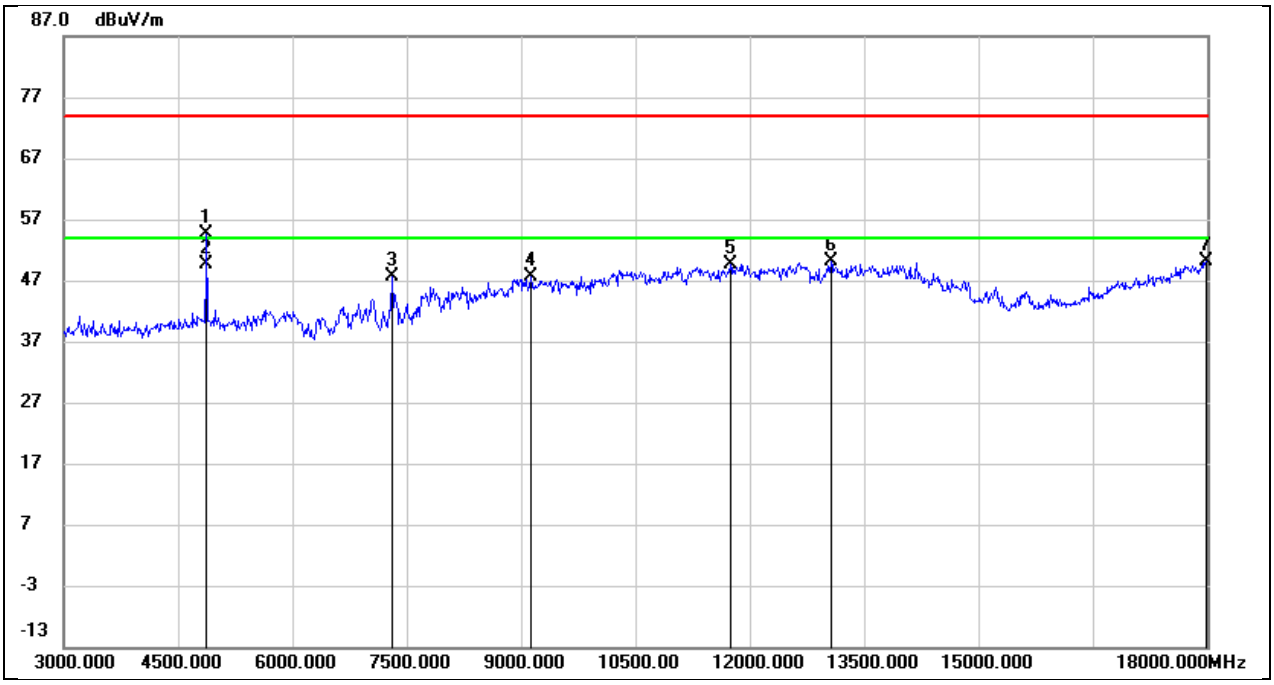
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	54.02	0.61	54.63	74.00	-19.37	peak
2	4875.000	48.99	0.61	49.60	54.00	-4.40	AVG
3	7305.000	40.83	6.89	47.72	74.00	-26.28	peak
4	9135.000	37.28	10.39	47.67	74.00	-26.33	peak
5	11745.000	32.06	17.47	49.53	74.00	-24.47	peak
6	13065.000	30.65	19.42	50.07	74.00	-23.93	peak
7	17985.000	23.24	26.77	50.01	74.00	-23.99	peak

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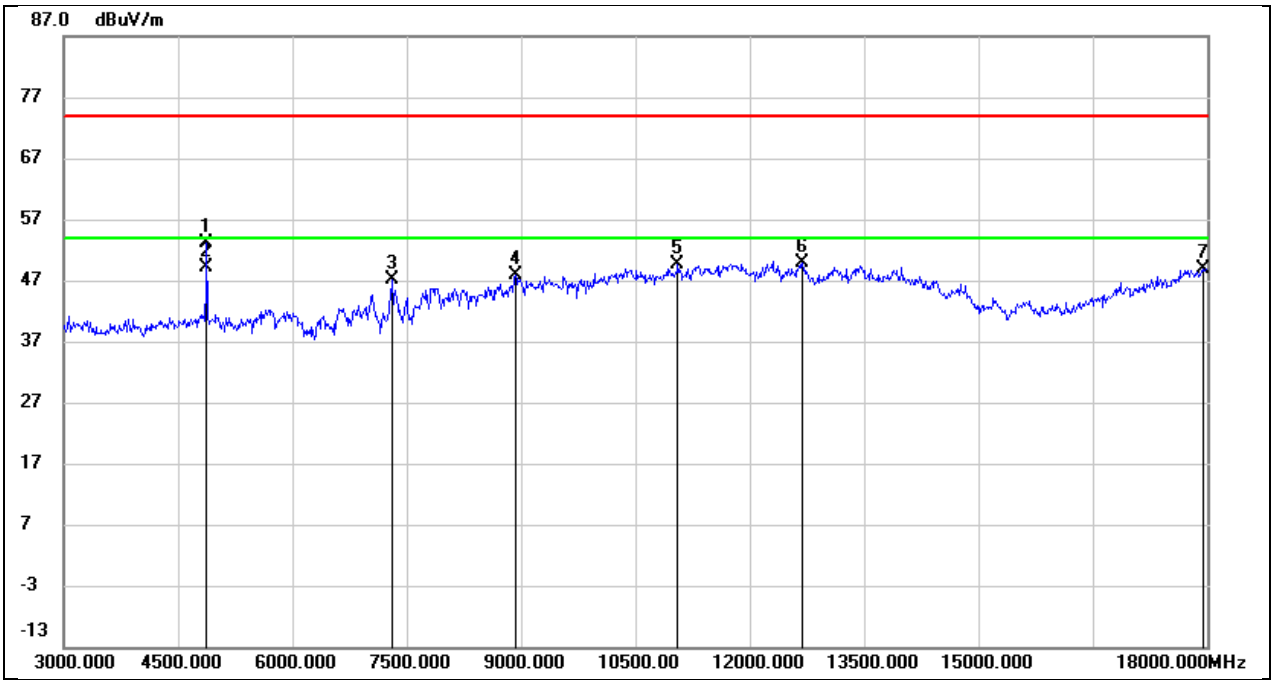
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	52.48	0.61	53.09	74.00	-20.91	peak
2	4875.000	48.51	0.61	49.12	54.00	-4.88	AVG
3	7305.000	40.28	6.89	47.17	74.00	-26.83	peak
4	8925.000	37.80	10.14	47.94	74.00	-26.06	peak
5	11055.000	34.51	15.04	49.55	74.00	-24.45	peak
6	12690.000	31.39	18.60	49.99	74.00	-24.01	peak
7	17940.000	22.36	26.61	48.97	74.00	-25.03	peak

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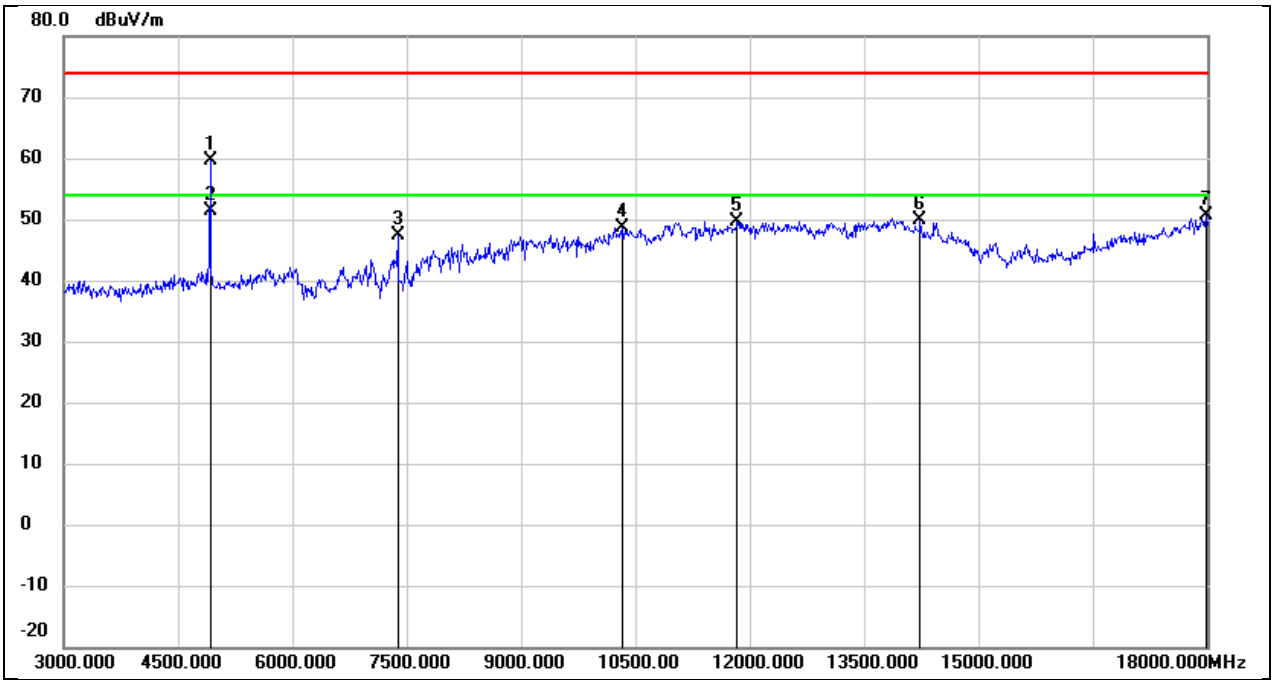
Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	58.85	0.69	59.54	74.00	-14.46	peak
2	4920.000	50.57	0.69	51.26	54.00	-2.74	AVG
3	7380.000	40.15	7.34	47.49	74.00	-26.51	peak
4	10335.000	35.60	13.14	48.74	74.00	-25.26	peak
5	11835.000	31.89	17.79	49.68	74.00	-24.32	peak
6	14235.000	27.85	21.95	49.80	74.00	-24.20	peak
7	17985.000	23.74	26.77	50.51	74.00	-23.49	peak

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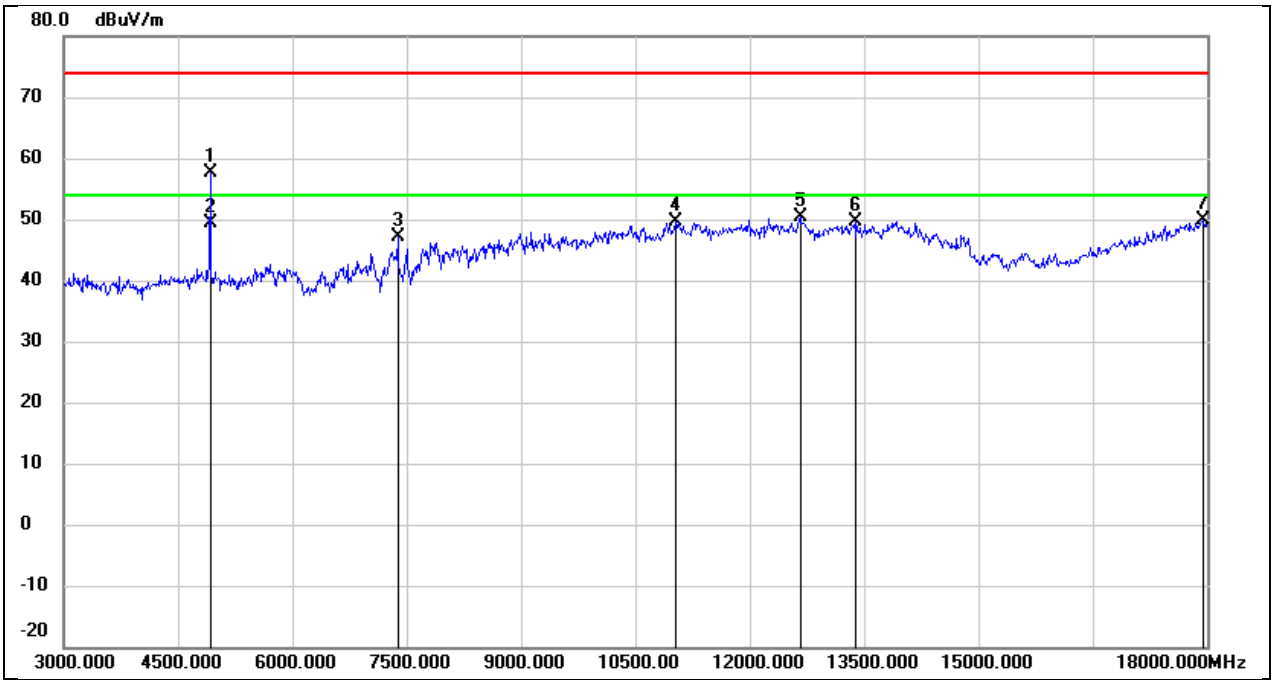
Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	56.97	0.69	57.66	74.00	-16.34	peak
2	4920.000	48.75	0.69	49.44	54.00	-4.56	AVG
3	7380.000	39.86	7.34	47.20	74.00	-26.80	peak
4	11025.000	34.62	14.97	49.59	74.00	-24.41	peak
5	12660.000	31.84	18.49	50.33	74.00	-23.67	peak
6	13380.000	28.34	21.33	49.67	74.00	-24.33	peak
7	17955.000	23.22	26.66	49.88	74.00	-24.12	peak

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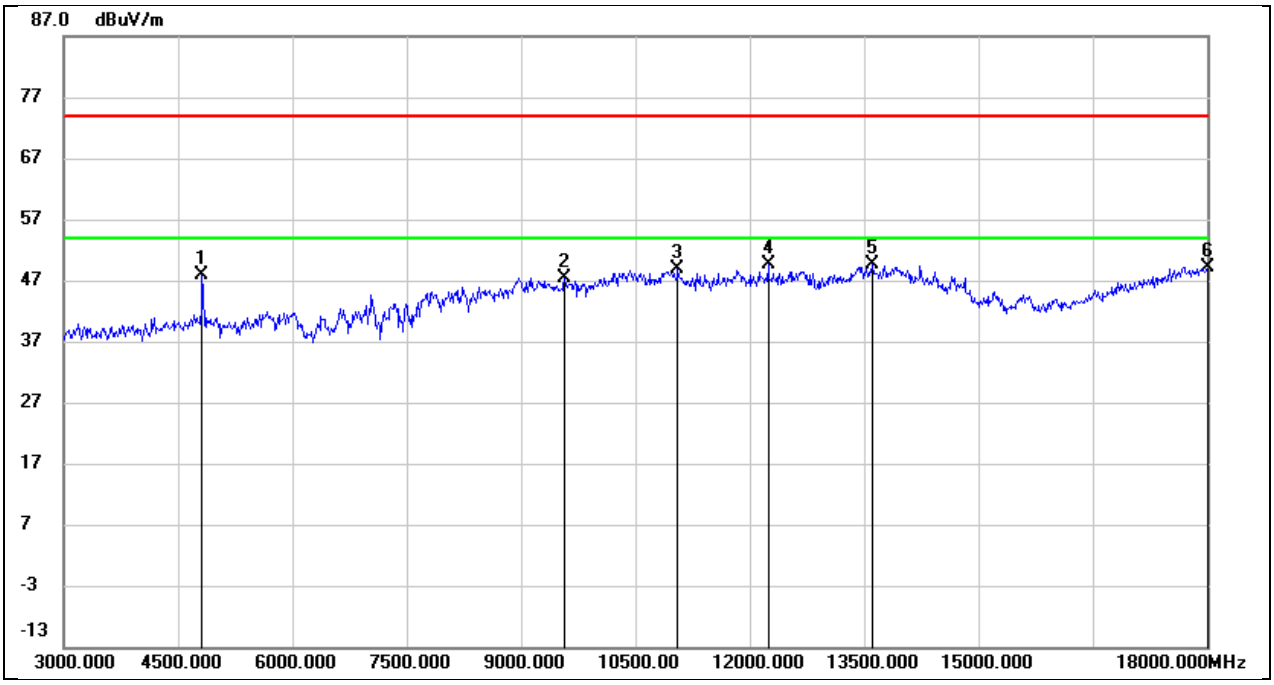
Test Mode:	802.11g	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	47.31	0.49	47.80	74.00	-26.20	peak
2	9570.000	36.49	10.98	47.47	74.00	-26.53	peak
3	11055.000	33.80	15.04	48.84	74.00	-25.16	peak
4	12240.000	31.07	18.46	49.53	74.00	-24.47	peak
5	13605.000	28.00	21.68	49.68	74.00	-24.32	peak
6	18000.000	22.42	26.83	49.25	74.00	-24.75	peak

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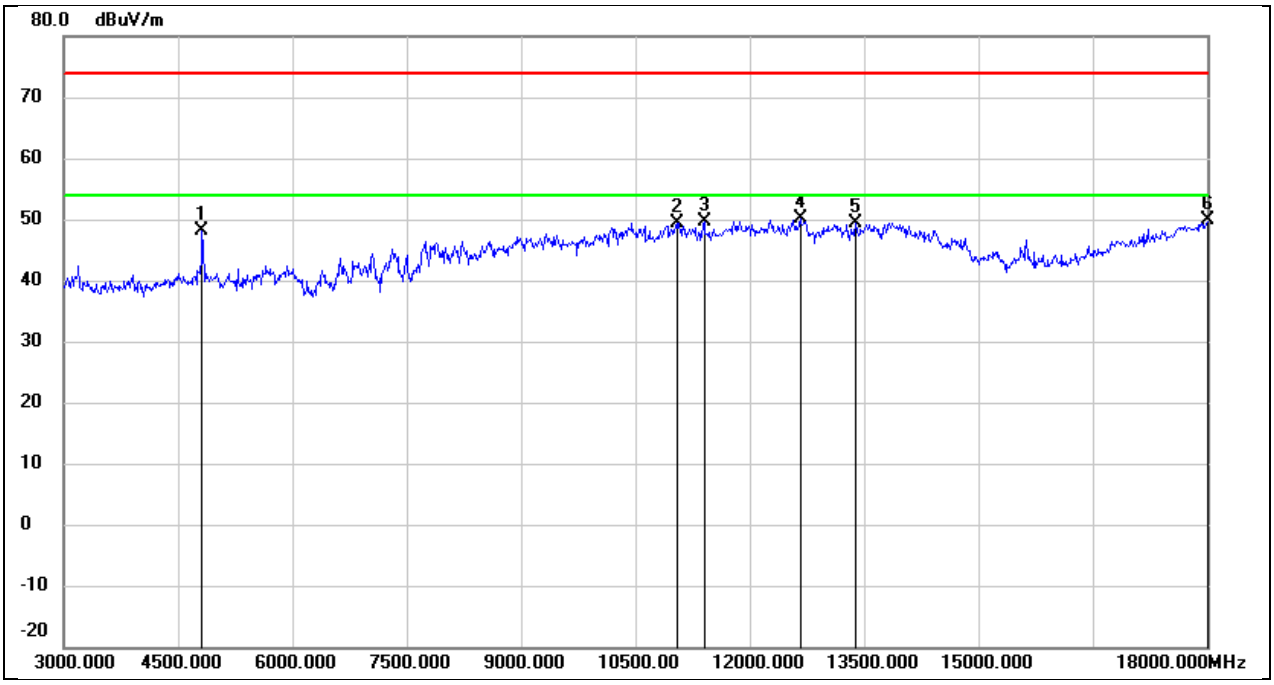
Test Mode:	802.11g	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	47.62	0.49	48.11	74.00	-25.89	peak
2	11055.000	34.45	15.04	49.49	74.00	-24.51	peak
3	11400.000	33.14	16.54	49.68	74.00	-24.32	peak
4	12660.000	31.55	18.49	50.04	74.00	-23.96	peak
5	13380.000	28.10	21.33	49.43	74.00	-24.57	peak
6	18000.000	22.94	26.83	49.77	74.00	-24.23	peak

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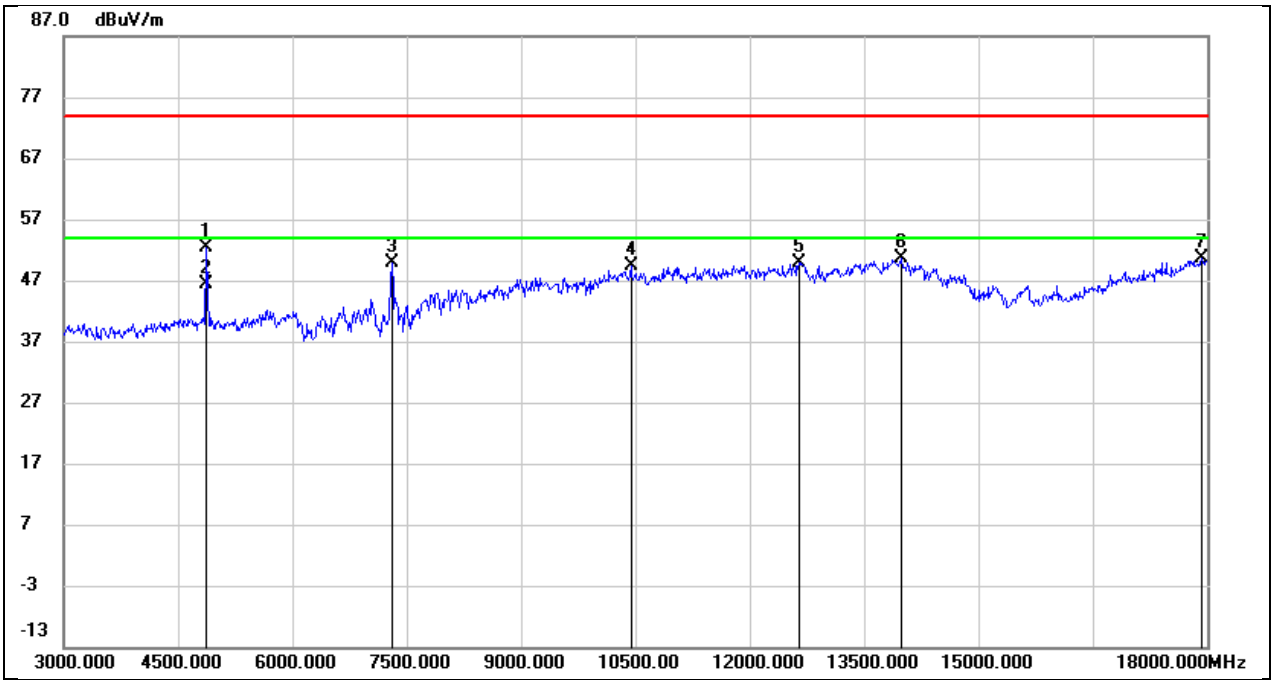
Test Mode:	802.11g	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	51.85	0.61	52.46	74.00	-21.54	peak
2	4875.000	45.71	0.61	46.32	54.00	-7.68	AVG
3	7305.000	42.87	6.89	49.76	74.00	-24.24	peak
4	10440.000	35.81	13.56	49.37	74.00	-24.63	peak
5	12645.000	31.42	18.44	49.86	74.00	-24.14	peak
6	13995.000	27.90	22.76	50.66	74.00	-23.34	peak
7	17925.000	24.17	26.55	50.72	74.00	-23.28	peak

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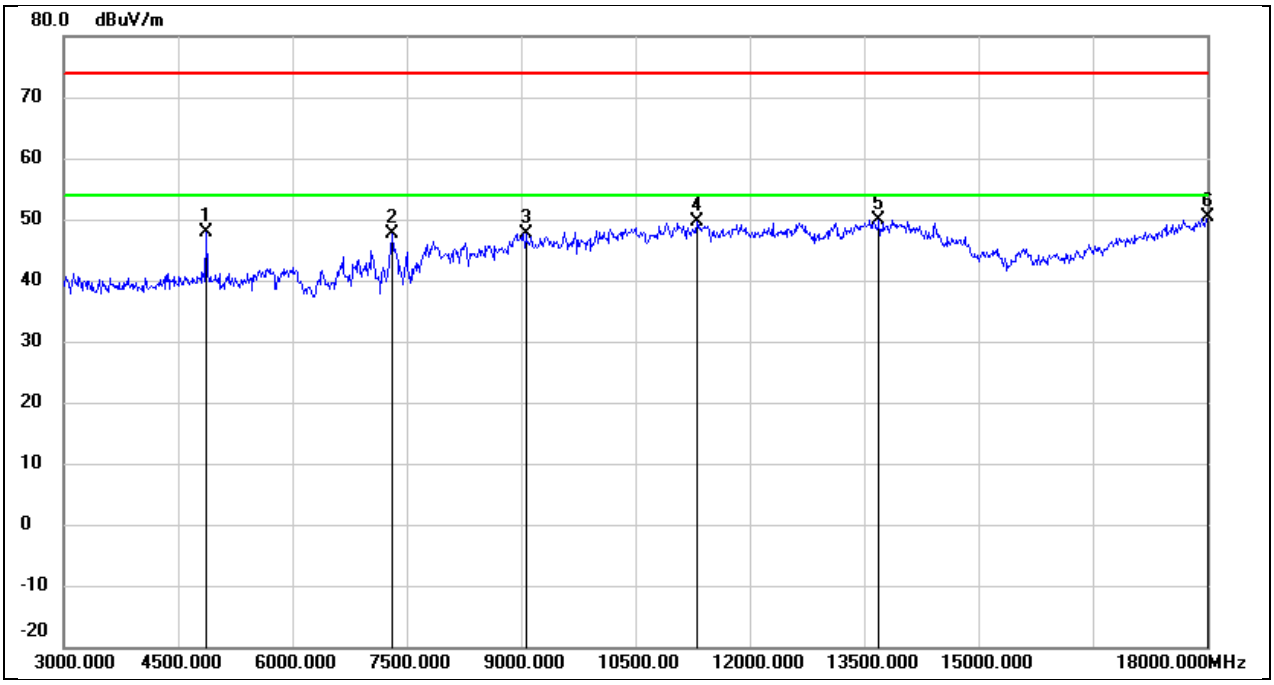
Test Mode:	802.11g	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	47.32	0.61	47.93	74.00	-26.07	peak
2	7305.000	40.74	6.89	47.63	74.00	-26.37	peak
3	9060.000	36.91	10.82	47.73	74.00	-26.27	peak
4	11310.000	33.65	16.02	49.67	74.00	-24.33	peak
5	13695.000	27.86	22.13	49.99	74.00	-24.01	peak
6	18000.000	23.47	26.83	50.30	74.00	-23.70	peak

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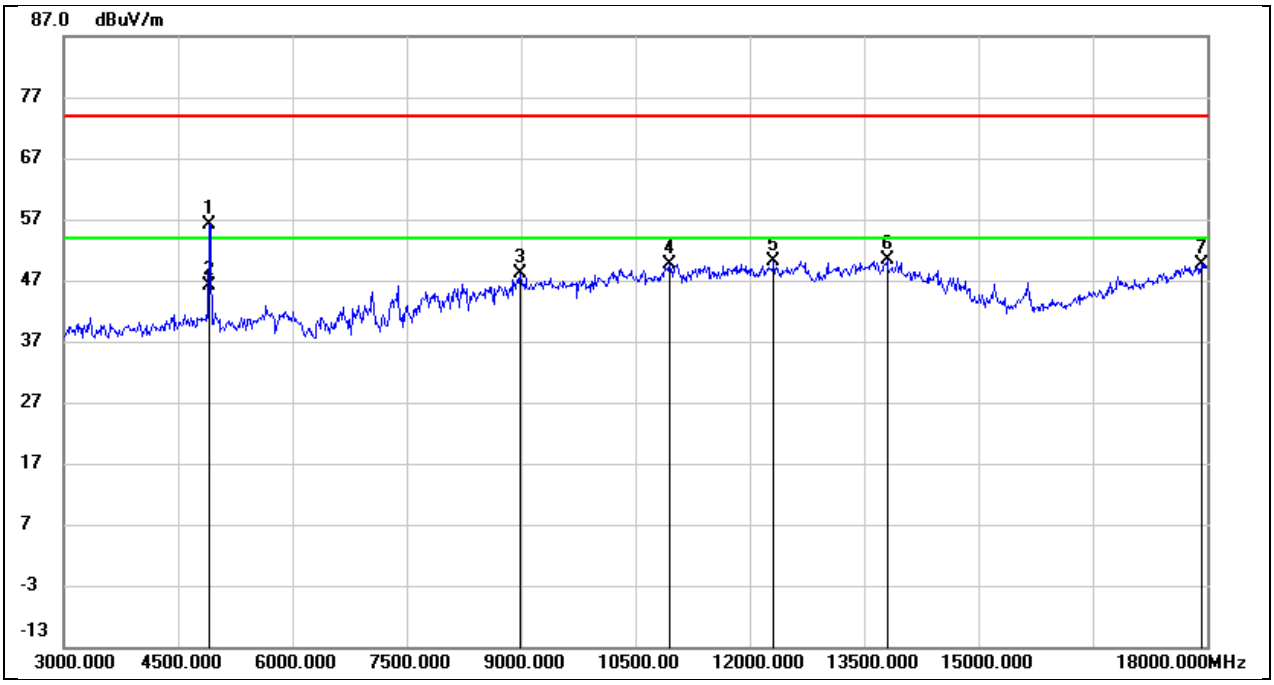
Test Mode:	802.11g	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	55.55	0.66	56.21	74.00	-17.79	peak
2	4905.000	45.57	0.66	46.23	54.00	-7.77	AVG
3	8985.000	37.08	10.97	48.05	74.00	-25.95	peak
4	10950.000	35.01	14.68	49.69	74.00	-24.31	peak
5	12315.000	31.42	18.71	50.13	74.00	-23.87	peak
6	13800.000	27.69	22.64	50.33	74.00	-23.67	peak
7	17925.000	23.20	26.55	49.75	74.00	-24.25	peak

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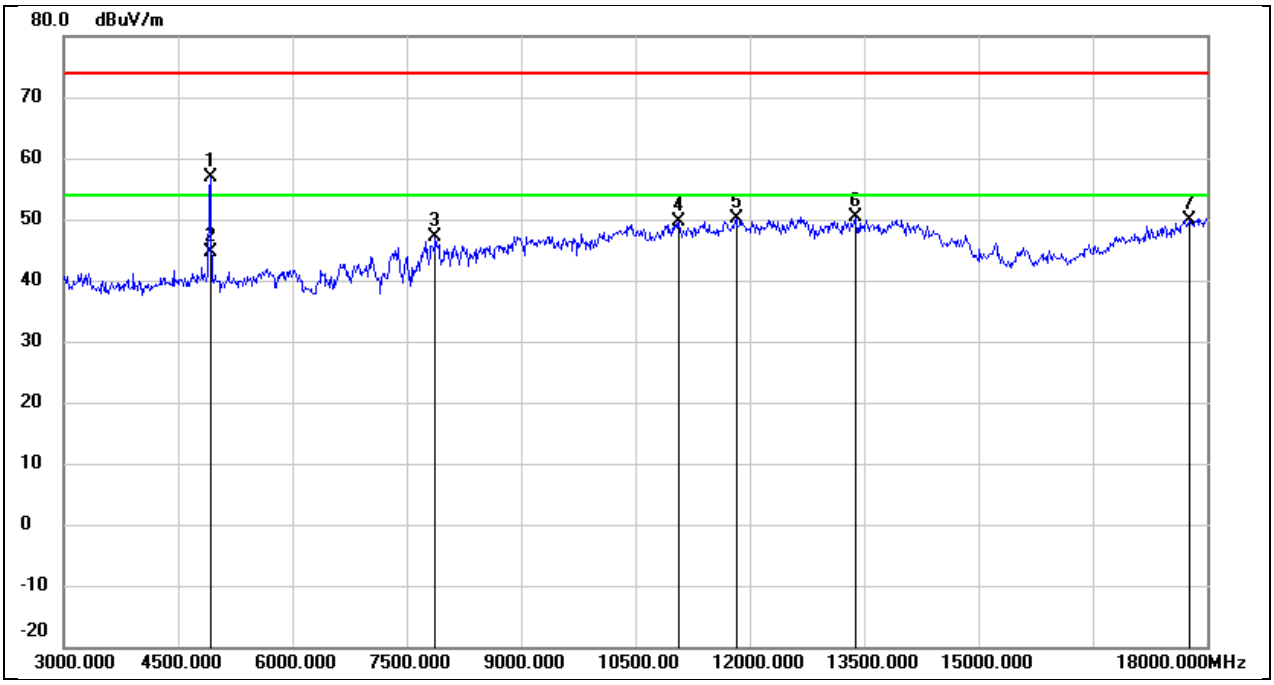
Test Mode:	802.11g	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	56.10	0.69	56.79	74.00	-17.21	peak
2	4920.000	43.83	0.69	44.52	54.00	-9.48	AVG
3	7875.000	39.79	7.33	47.12	74.00	-26.88	peak
4	11070.000	34.57	15.08	49.65	74.00	-24.35	peak
5	11820.000	32.46	17.73	50.19	74.00	-23.81	peak
6	13380.000	29.11	21.33	50.44	74.00	-23.56	peak
7	17760.000	24.25	25.72	49.97	74.00	-24.03	peak

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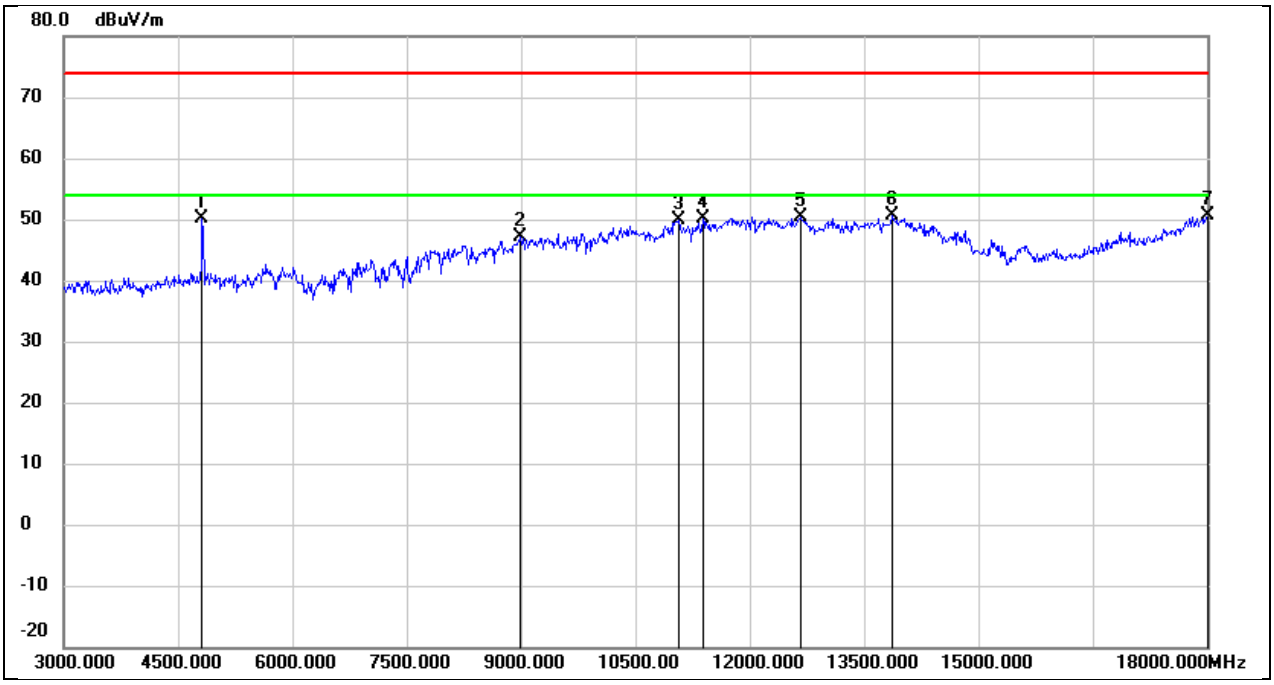
Test Mode:	802.11n HT20	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.71	0.49	50.20	74.00	-23.80	peak
2	8985.000	36.10	10.97	47.07	74.00	-26.93	peak
3	11070.000	34.84	15.08	49.92	74.00	-24.08	peak
4	11385.000	33.56	16.45	50.01	74.00	-23.99	peak
5	12660.000	31.95	18.49	50.44	74.00	-23.56	peak
6	13875.000	28.06	22.68	50.74	74.00	-23.26	peak
7	18000.000	23.83	26.83	50.66	74.00	-23.34	peak

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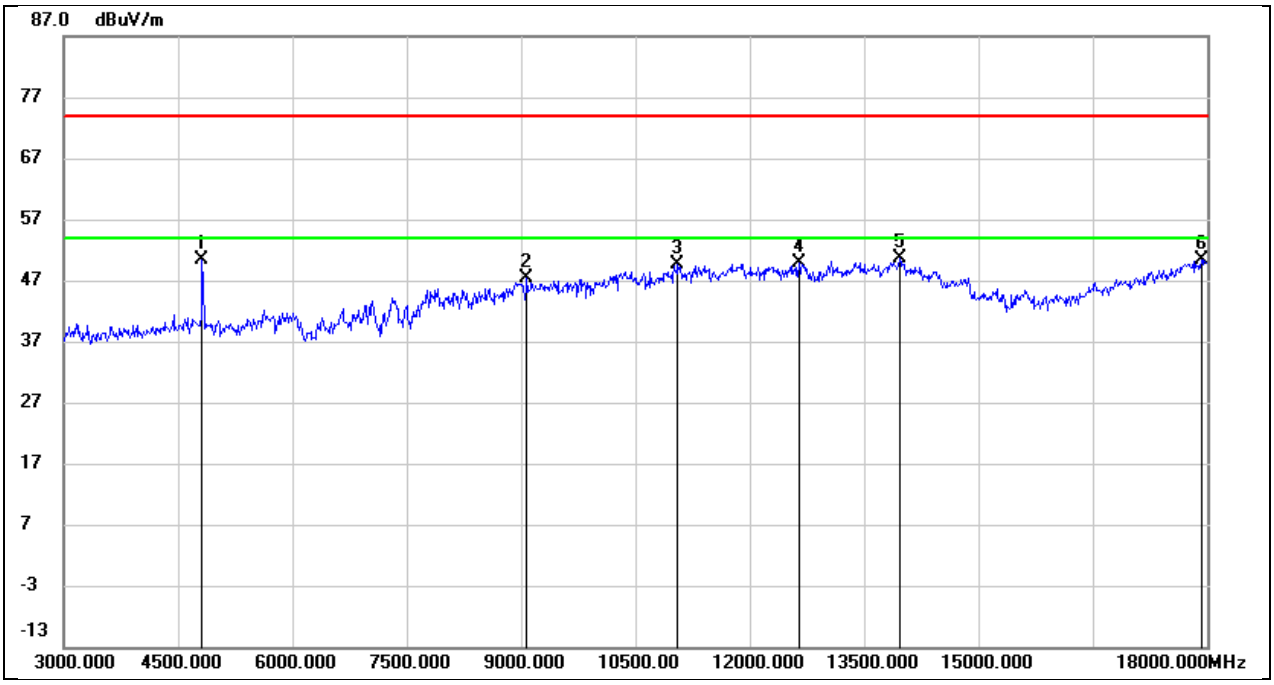
Test Mode:	802.11n HT20	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.95	0.49	50.44	74.00	-23.56	peak
2	9075.000	36.71	10.74	47.45	74.00	-26.55	peak
3	11055.000	34.70	15.04	49.74	74.00	-24.26	peak
4	12645.000	31.35	18.44	49.79	74.00	-24.21	peak
5	13965.000	27.86	22.74	50.60	74.00	-23.40	peak
6	17925.000	23.93	26.55	50.48	74.00	-23.52	peak

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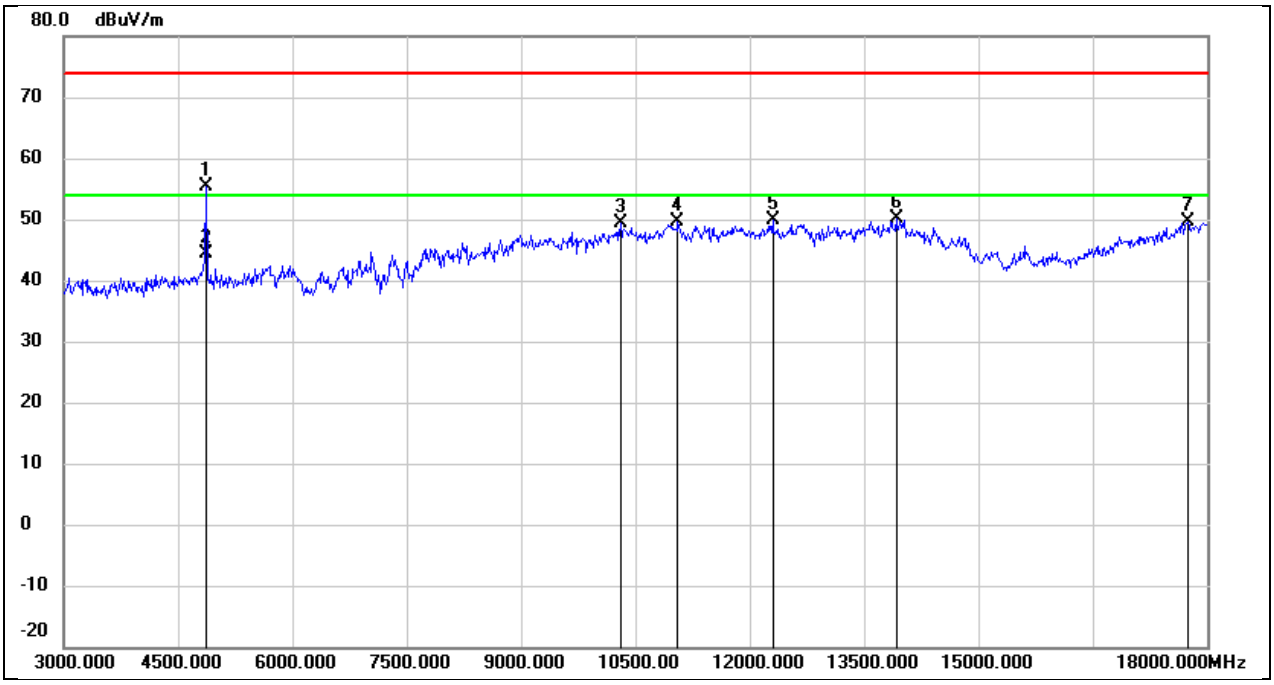
Test Mode:	802.11n HT20	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	54.65	0.61	55.26	74.00	-18.74	peak
2	4875.000	43.65	0.61	44.26	54.00	-9.74	AVG
3	10305.000	36.32	13.00	49.32	74.00	-24.68	peak
4	11055.000	34.58	15.04	49.62	74.00	-24.38	peak
5	12300.000	31.13	18.65	49.78	74.00	-24.22	peak
6	13920.000	27.52	22.71	50.23	74.00	-23.77	peak
7	17745.000	24.03	25.58	49.61	74.00	-24.39	peak

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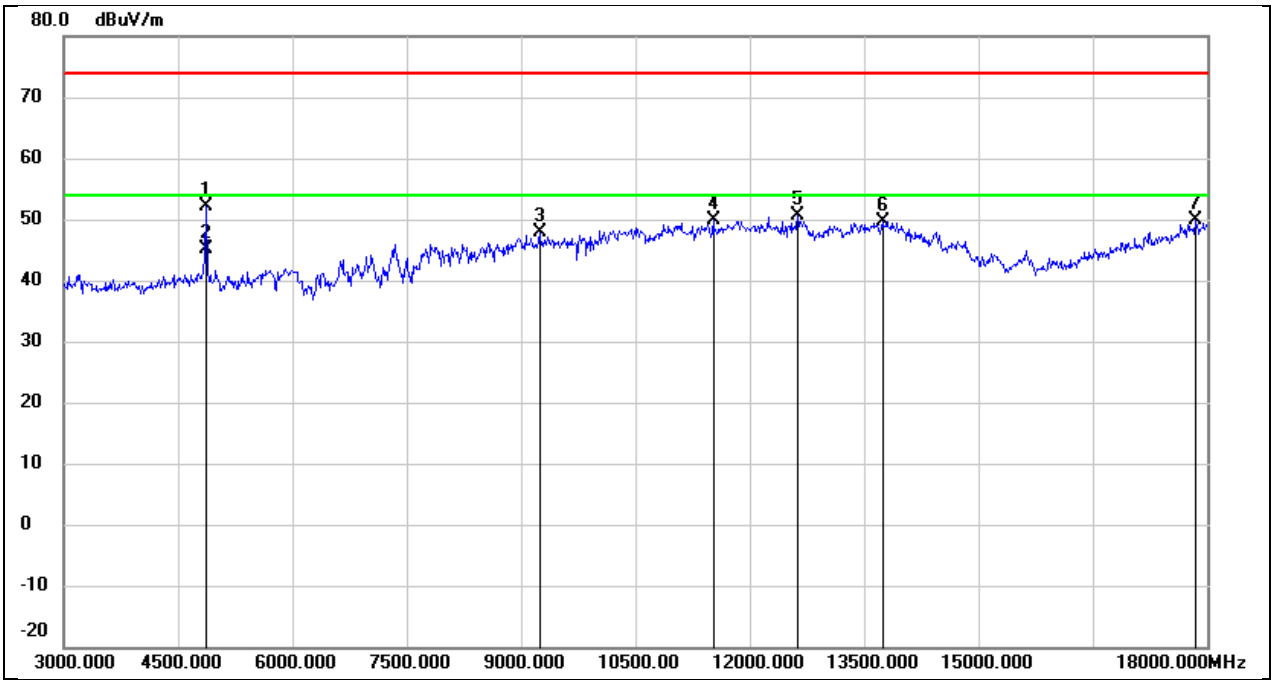
Test Mode:	802.11n HT20	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	51.49	0.61	52.10	74.00	-21.90	peak
2	4875.000	44.49	0.61	45.10	54.00	-8.90	AVG
3	9240.000	37.76	10.10	47.86	74.00	-26.14	peak
4	11520.000	33.07	16.91	49.98	74.00	-24.02	peak
5	12630.000	32.28	18.39	50.67	74.00	-23.33	peak
6	13740.000	27.36	22.35	49.71	74.00	-24.29	peak
7	17850.000	23.71	26.28	49.99	74.00	-24.01	peak

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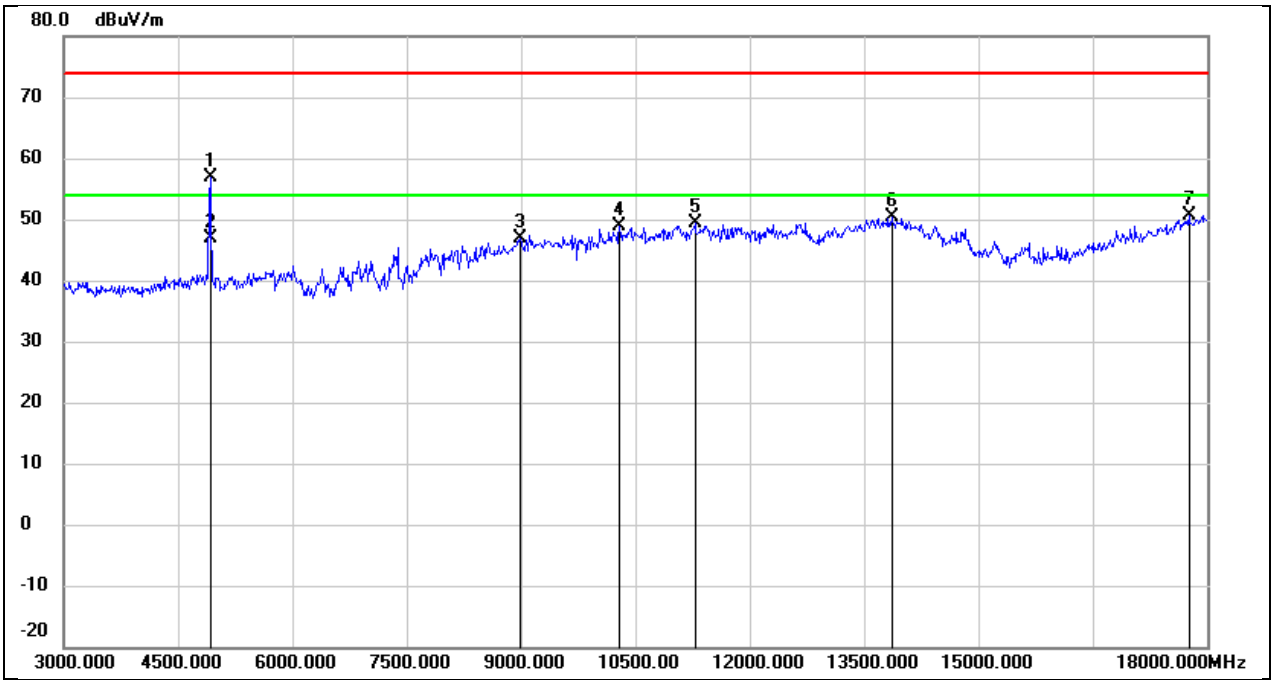
Test Mode:	802.11n HT20	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	56.23	0.69	56.92	74.00	-17.08	peak
2	4920.000	46.22	0.69	46.91	54.00	-7.09	AVG
3	8985.000	35.90	10.97	46.87	74.00	-27.13	peak
4	10290.000	35.89	12.93	48.82	74.00	-25.18	peak
5	11280.000	33.65	15.84	49.49	74.00	-24.51	peak
6	13860.000	27.70	22.68	50.38	74.00	-23.62	peak
7	17760.000	25.02	25.72	50.74	74.00	-23.26	peak

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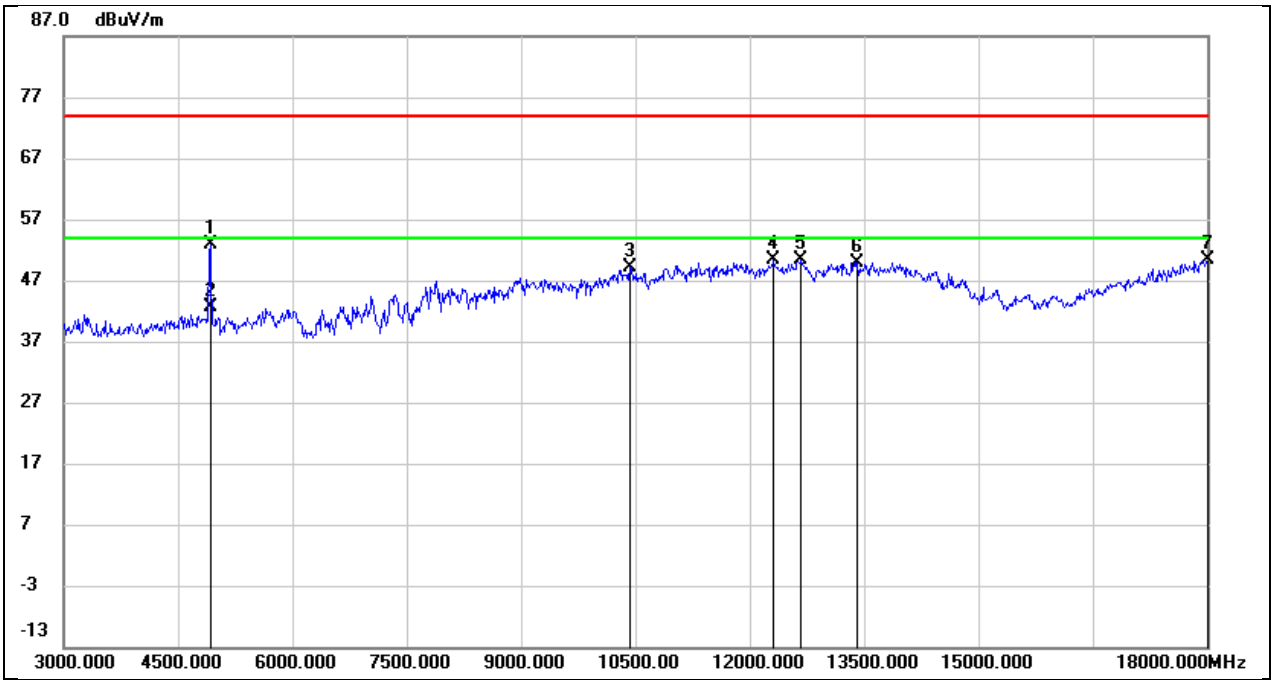
Test Mode:	802.11n HT20	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	52.31	0.69	53.00	74.00	-21.00	peak
2	4920.000	42.01	0.69	42.70	54.00	-11.30	AVG
3	10425.000	35.54	13.51	49.05	74.00	-24.95	peak
4	12315.000	31.63	18.71	50.34	74.00	-23.66	peak
5	12675.000	31.73	18.54	50.27	74.00	-23.73	peak
6	13410.000	28.45	21.48	49.93	74.00	-24.07	peak
7	18000.000	23.65	26.83	50.48	74.00	-23.52	peak

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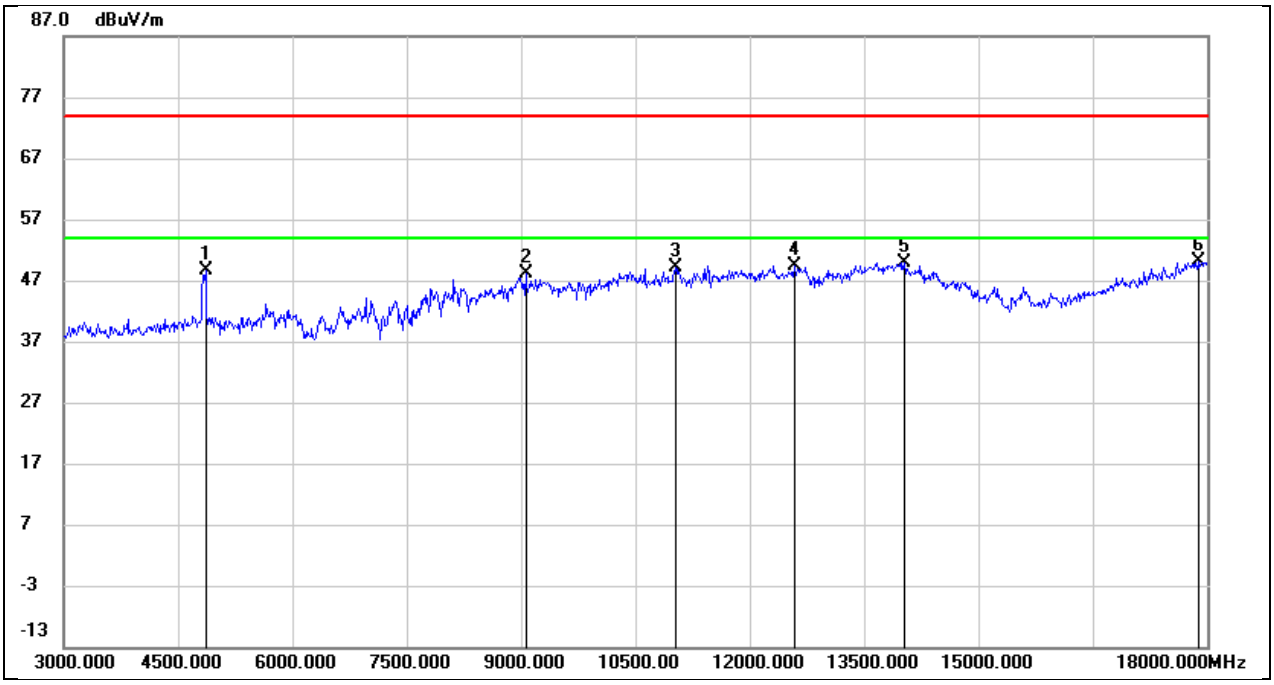
Test Mode:	802.11n HT40	Frequency(MHz):	2422
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	47.95	0.57	48.52	74.00	-25.48	peak
2	9060.000	37.39	10.82	48.21	74.00	-25.79	peak
3	11025.000	34.11	14.97	49.08	74.00	-24.92	peak
4	12585.000	31.16	18.31	49.47	74.00	-24.53	peak
5	14025.000	27.23	22.68	49.91	74.00	-24.09	peak
6	17880.000	23.82	26.39	50.21	74.00	-23.79	peak

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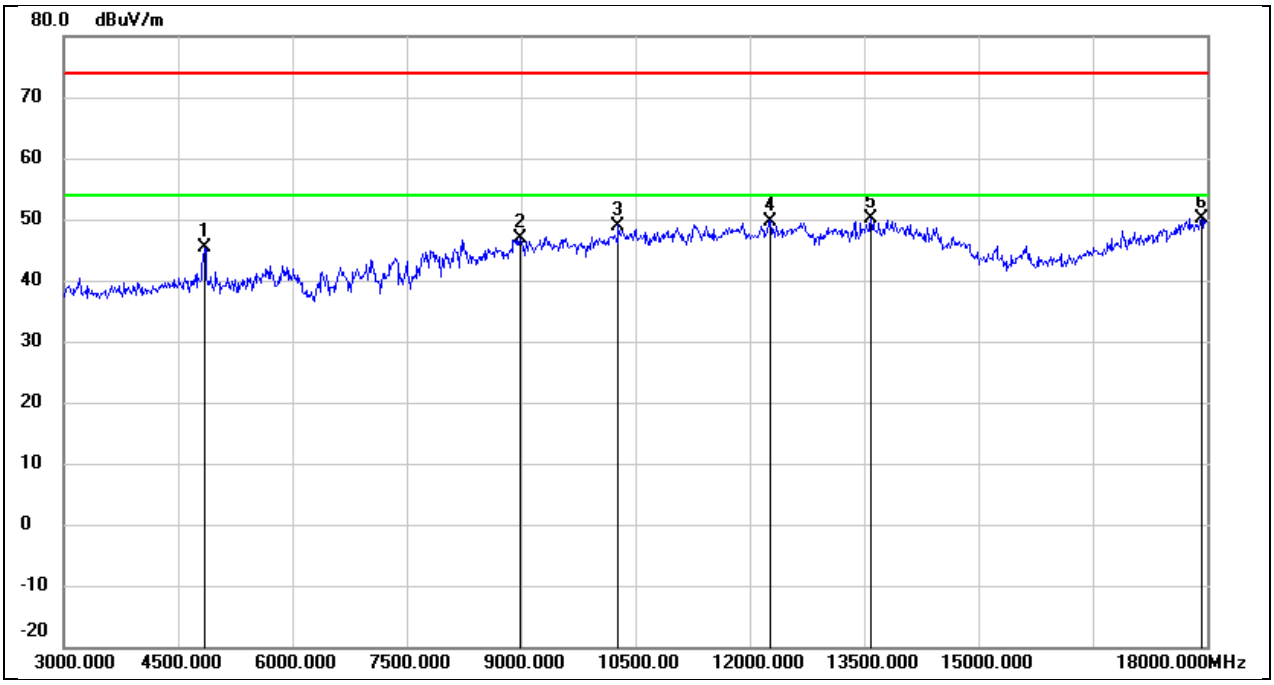
Test Mode:	802.11n HT40	Frequency(MHz):	2422
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	44.82	0.54	45.36	74.00	-28.64	peak
2	8985.000	36.02	10.97	46.99	74.00	-27.01	peak
3	10275.000	36.16	12.84	49.00	74.00	-25.00	peak
4	12270.000	31.20	18.55	49.75	74.00	-24.25	peak
5	13590.000	28.36	21.66	50.02	74.00	-23.98	peak
6	17925.000	23.67	26.55	50.22	74.00	-23.78	peak

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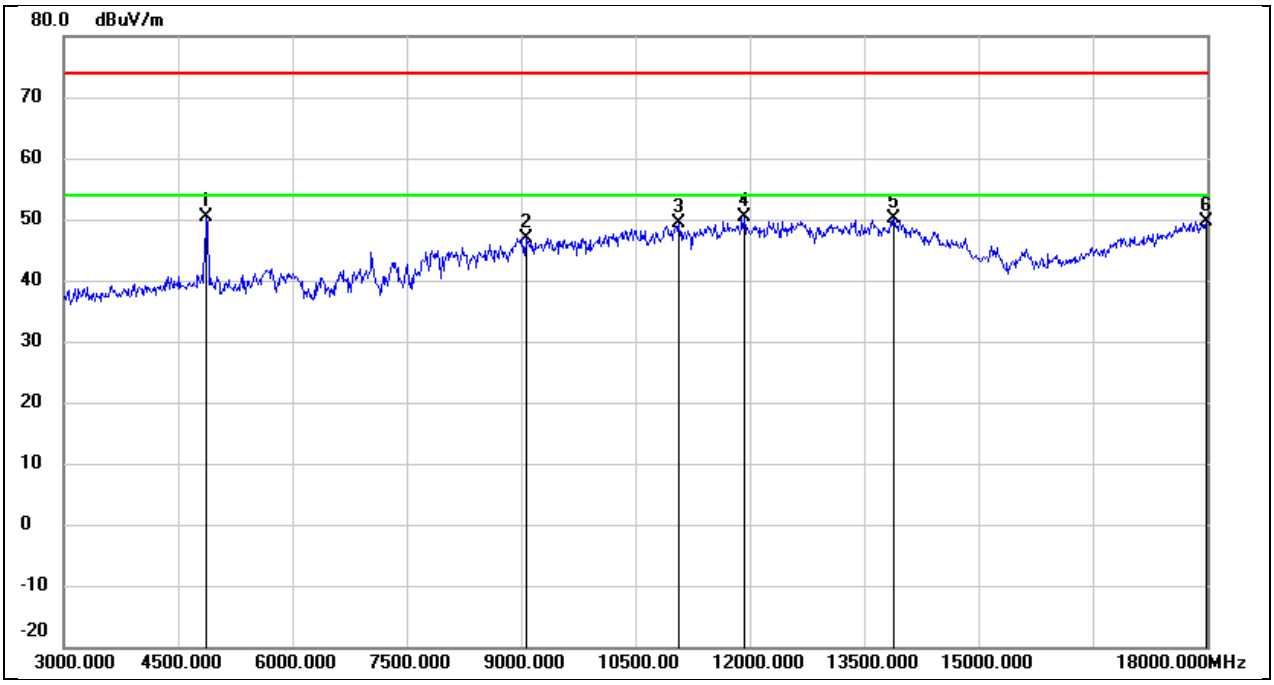
Test Mode:	802.11n HT40	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	49.69	0.61	50.30	74.00	-23.70	peak
2	9075.000	36.17	10.74	46.91	74.00	-27.09	peak
3	11070.000	34.23	15.08	49.31	74.00	-24.69	peak
4	11925.000	32.12	18.17	50.29	74.00	-23.71	peak
5	13890.000	27.32	22.69	50.01	74.00	-23.99	peak
6	17985.000	22.95	26.77	49.72	74.00	-24.28	peak

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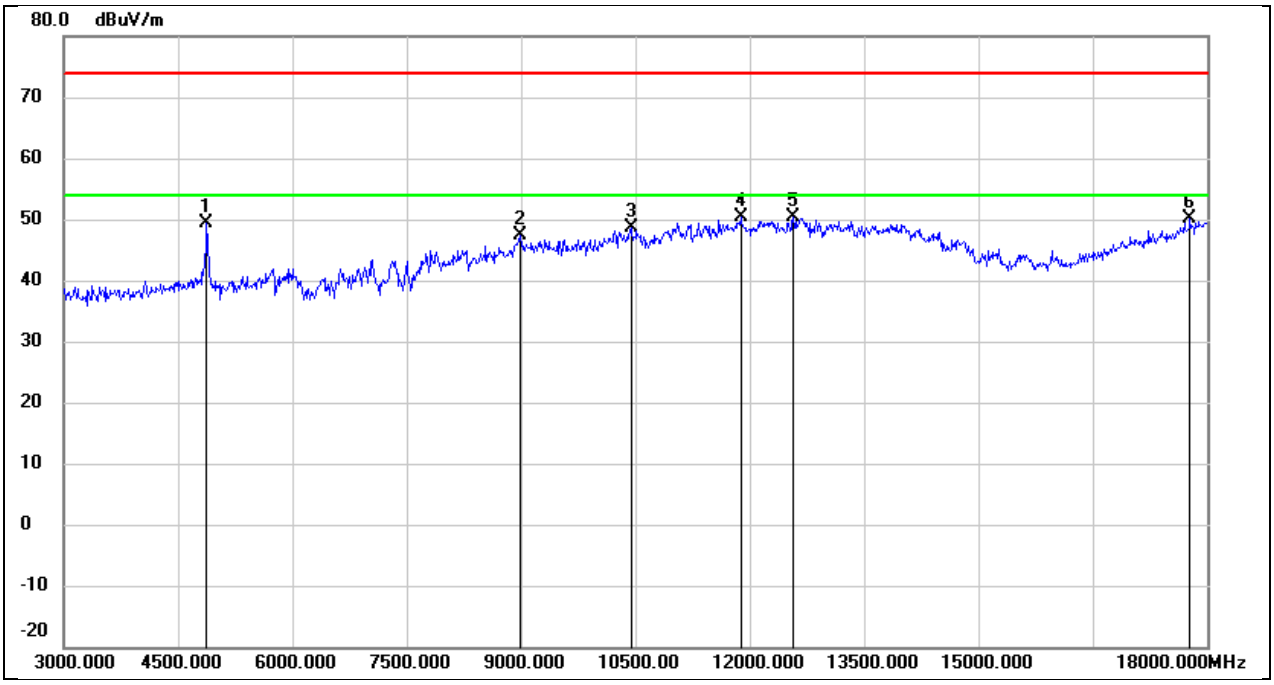
Test Mode:	802.11n HT40	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.80	0.61	49.41	74.00	-24.59	peak
2	8985.000	36.34	10.97	47.31	74.00	-26.69	peak
3	10440.000	35.17	13.56	48.73	74.00	-25.27	peak
4	11880.000	32.30	17.97	50.27	74.00	-23.73	peak
5	12570.000	31.96	18.34	50.30	74.00	-23.70	peak
6	17775.000	24.24	25.86	50.10	74.00	-23.90	peak

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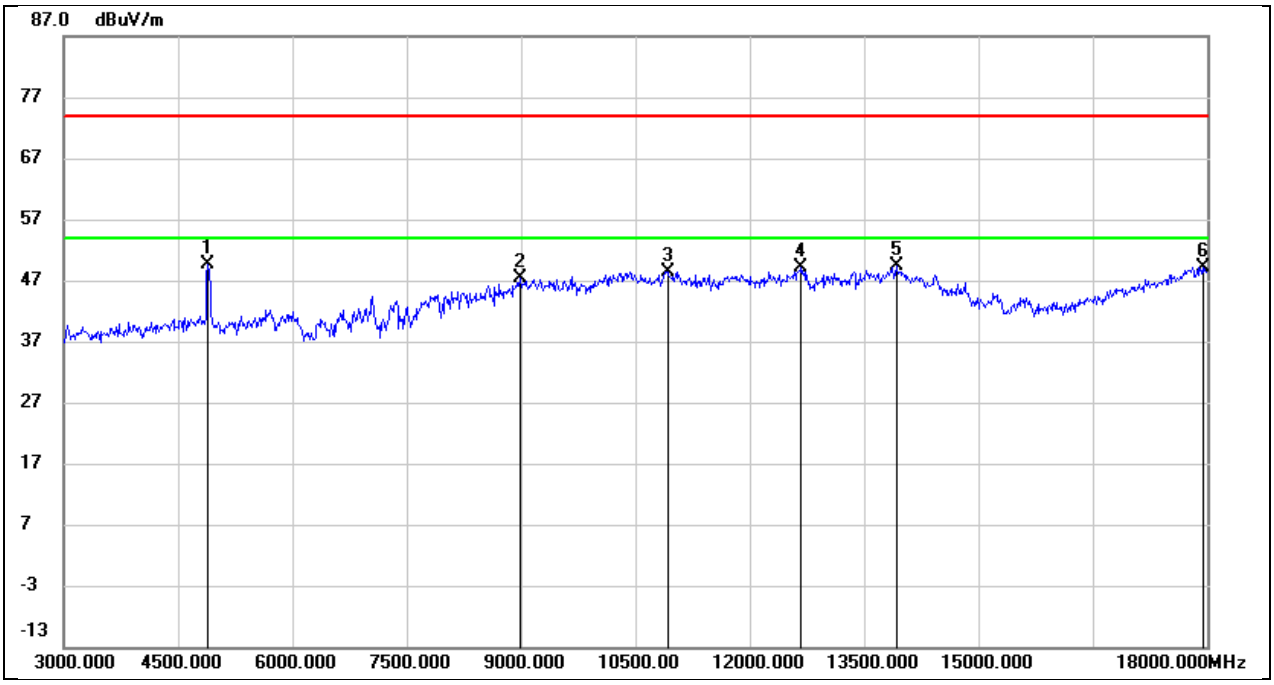
Test Mode:	802.11n HT40	Frequency(MHz):	2452
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4890.000	48.91	0.64	49.55	74.00	-24.45	peak
2	8985.000	36.36	10.97	47.33	74.00	-26.67	peak
3	10920.000	33.92	14.54	48.46	74.00	-25.54	peak
4	12675.000	30.56	18.54	49.10	74.00	-24.90	peak
5	13920.000	26.62	22.71	49.33	74.00	-24.67	peak
6	17940.000	22.53	26.61	49.14	74.00	-24.86	peak

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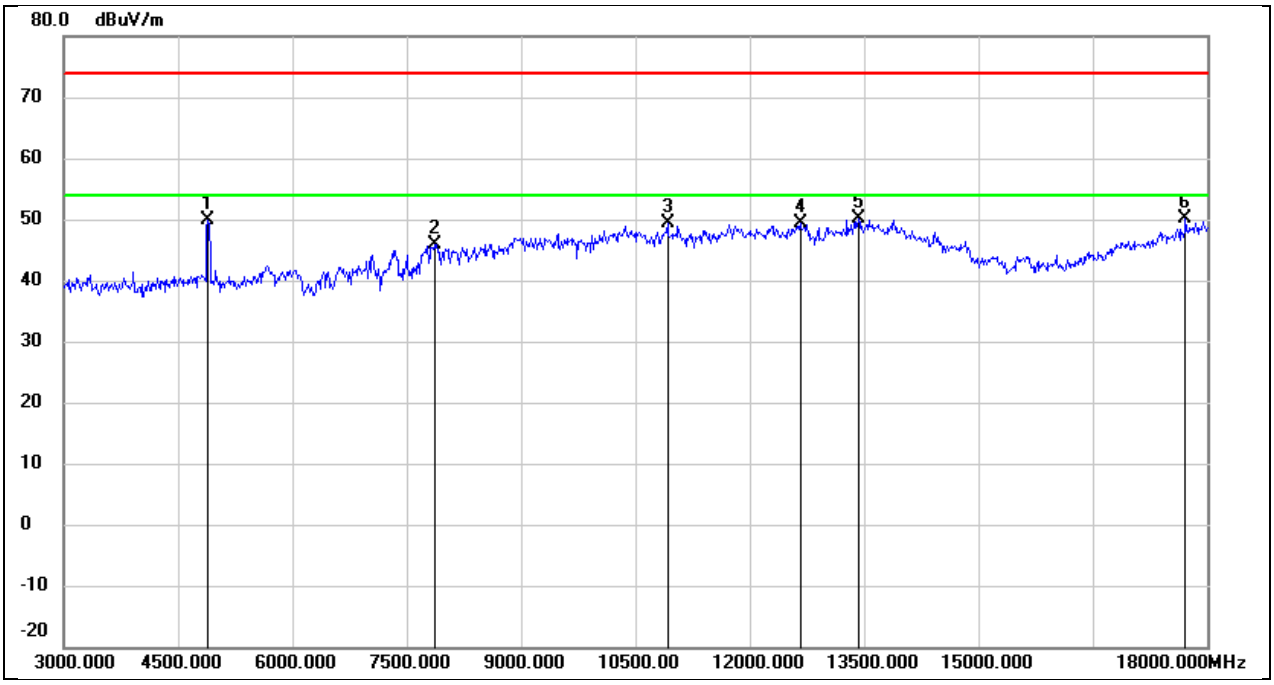
Test Mode:	802.11n HT40	Frequency(MHz):	2452
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4890.000	49.24	0.64	49.88	74.00	-24.12	peak
2	7860.000	38.43	7.37	45.80	74.00	-28.20	peak
3	10920.000	34.90	14.54	49.44	74.00	-24.56	peak
4	12660.000	30.83	18.49	49.32	74.00	-24.68	peak
5	13425.000	28.61	21.52	50.13	74.00	-23.87	peak
6	17715.000	24.73	25.31	50.04	74.00	-23.96	peak

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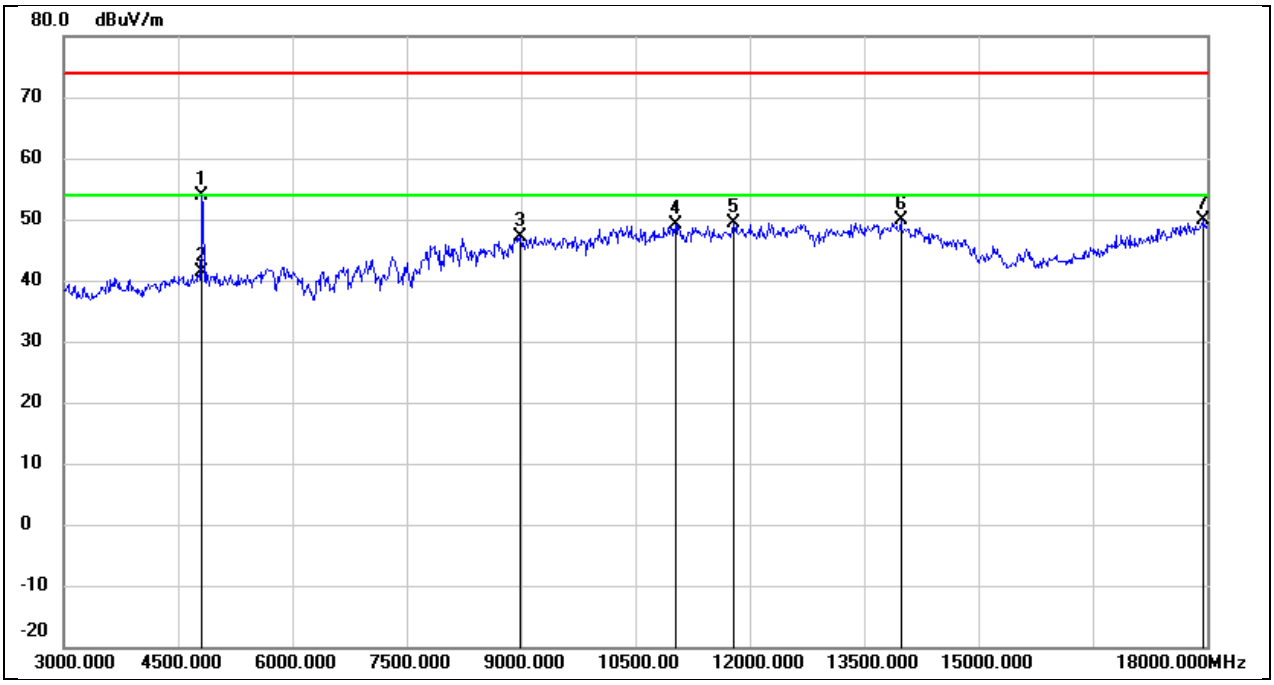
Test Mode:	802.11ax HE20	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	53.50	0.49	53.99	74.00	-20.01	peak
2	4815.000	40.81	0.49	41.30	54.00	-12.70	AVG
3	8985.000	36.25	10.97	47.22	74.00	-26.78	peak
4	11025.000	34.19	14.97	49.16	74.00	-24.84	peak
5	11790.000	31.85	17.60	49.45	74.00	-24.55	peak
6	13980.000	27.24	22.75	49.99	74.00	-24.01	peak
7	17940.000	23.17	26.61	49.78	74.00	-24.22	peak

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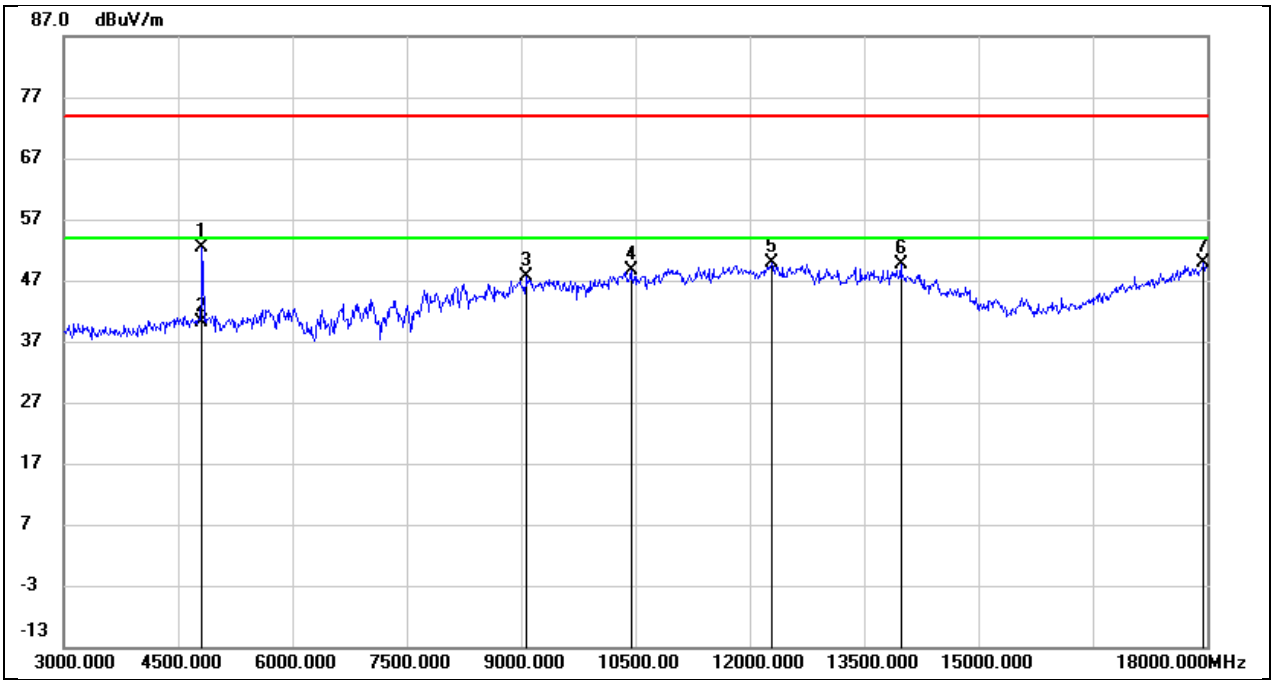
Test Mode:	802.11ax HE20	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	51.95	0.49	52.44	74.00	-21.56	peak
2	4815.000	39.64	0.49	40.13	54.00	-13.87	AVG
3	9075.000	36.93	10.74	47.67	74.00	-26.33	peak
4	10440.000	35.13	13.56	48.69	74.00	-25.31	peak
5	12285.000	31.24	18.60	49.84	74.00	-24.16	peak
6	13980.000	26.76	22.75	49.51	74.00	-24.49	peak
7	17955.000	23.14	26.66	49.80	74.00	-24.20	peak

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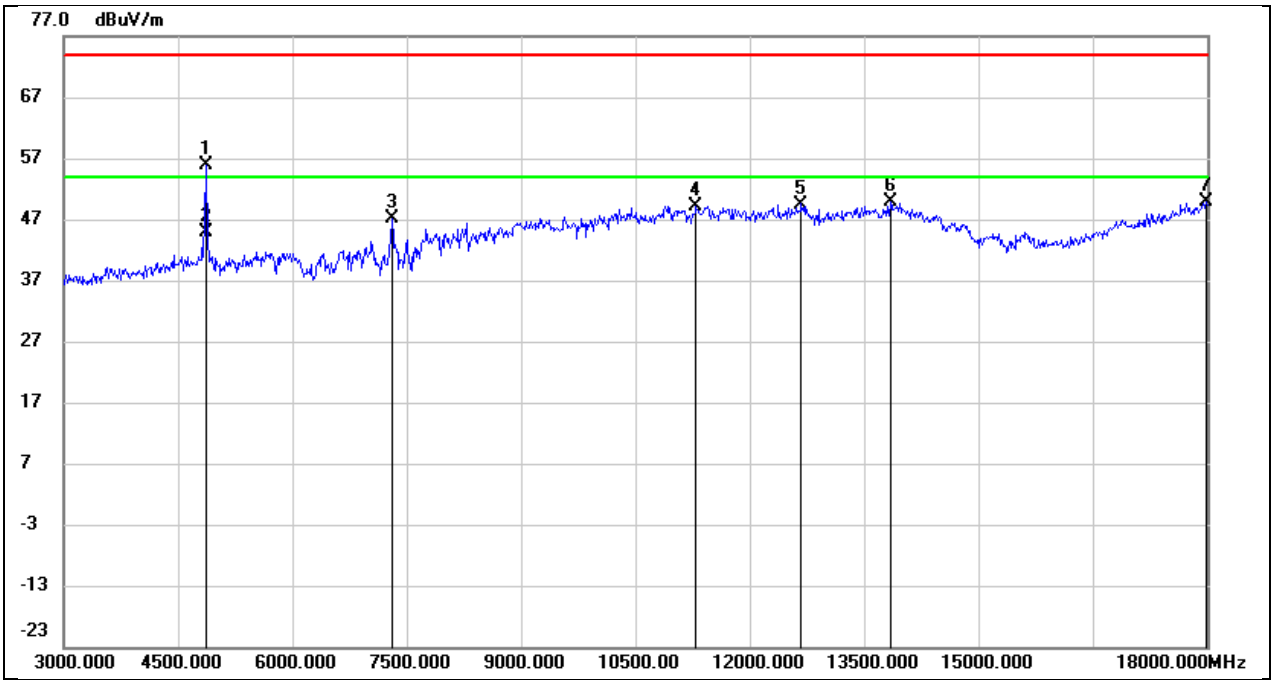
Test Mode:	802.11ax HE20	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	55.30	0.61	55.91	74.00	-18.09	peak
2	4875.000	44.17	0.61	44.78	54.00	-9.22	AVG
3	7305.000	40.17	6.89	47.06	74.00	-26.94	peak
4	11295.000	33.28	15.93	49.21	74.00	-24.79	peak
5	12675.000	30.96	18.54	49.50	74.00	-24.50	peak
6	13845.000	27.16	22.67	49.83	74.00	-24.17	peak
7	17985.000	23.22	26.77	49.99	74.00	-24.01	peak

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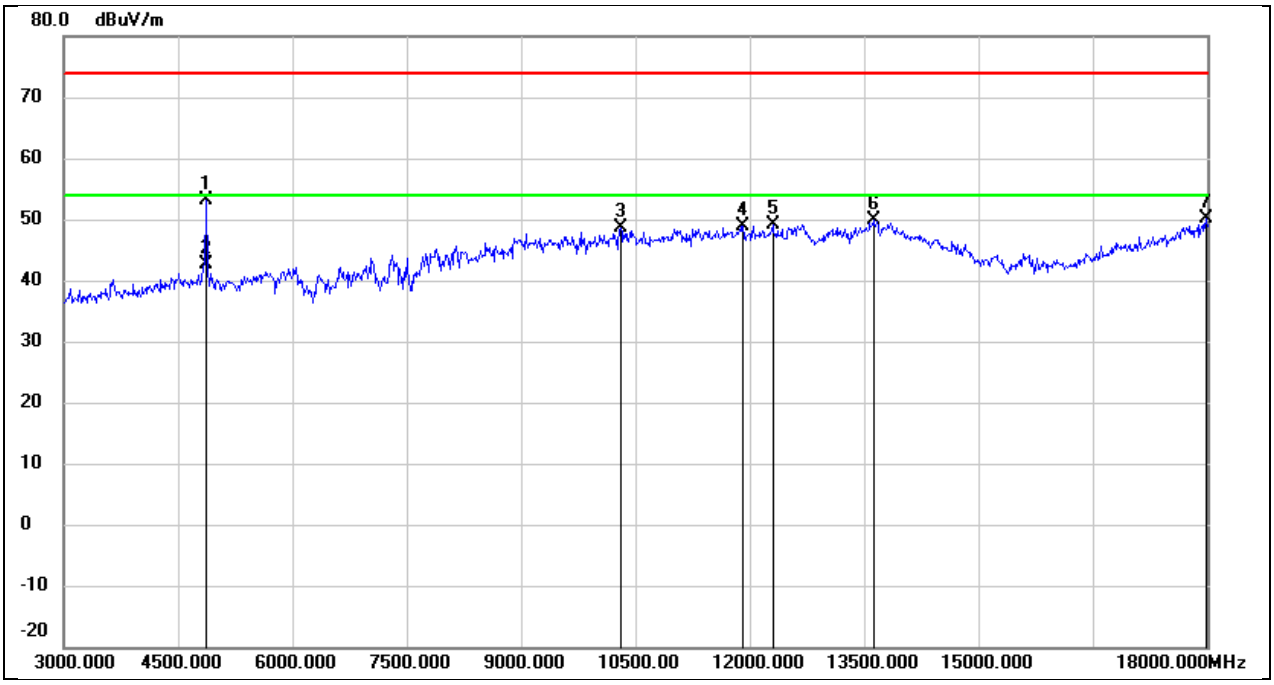
Test Mode:	802.11ax HE20	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	52.63	0.61	53.24	74.00	-20.76	peak
2	4875.000	41.90	0.61	42.51	54.00	-11.49	AVG
3	10305.000	35.57	13.00	48.57	74.00	-25.43	peak
4	11910.000	30.86	18.11	48.97	74.00	-25.03	peak
5	12300.000	30.44	18.65	49.09	74.00	-24.91	peak
6	13620.000	28.21	21.76	49.97	74.00	-24.03	peak
7	17985.000	23.40	26.77	50.17	74.00	-23.83	peak

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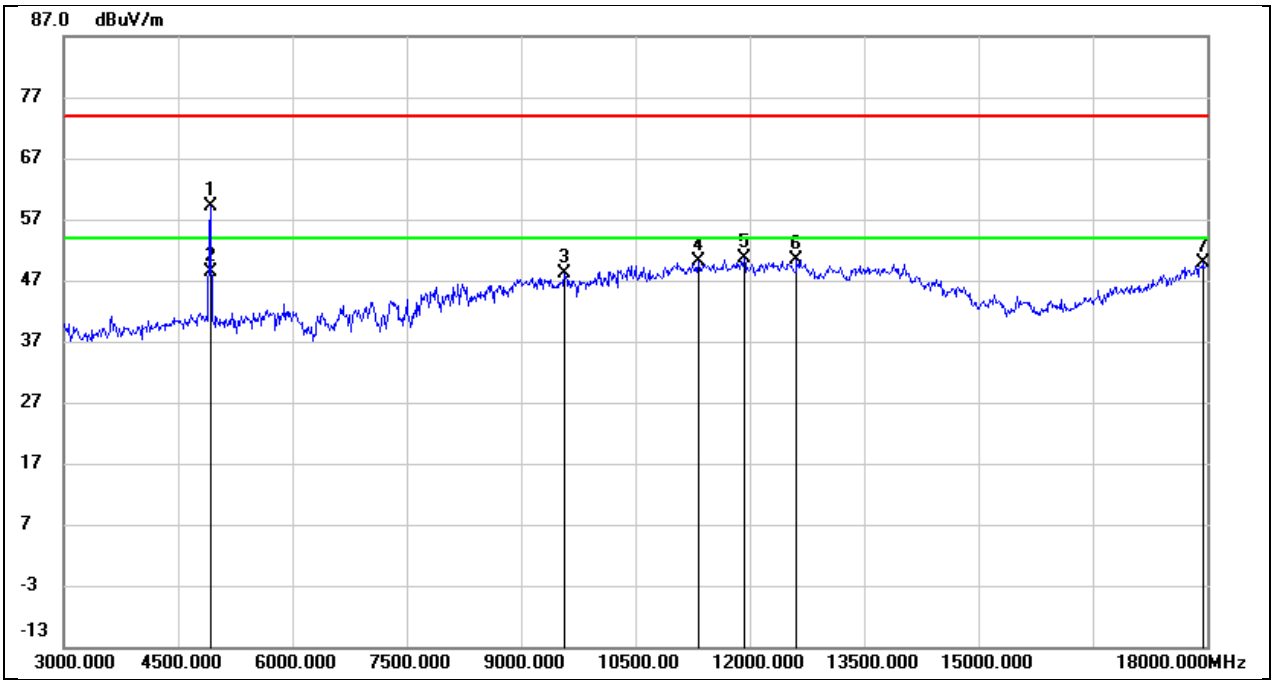
Test Mode:	802.11ax HE20	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	58.45	0.69	59.14	74.00	-14.86	peak
2	4920.000	47.68	0.69	48.37	54.00	-5.63	AVG
3	9570.000	37.05	10.98	48.03	74.00	-25.97	peak
4	11325.000	34.08	16.10	50.18	74.00	-23.82	peak
5	11925.000	32.44	18.17	50.61	74.00	-23.39	peak
6	12615.000	32.07	18.33	50.40	74.00	-23.60	peak
7	17940.000	23.20	26.61	49.81	74.00	-24.19	peak

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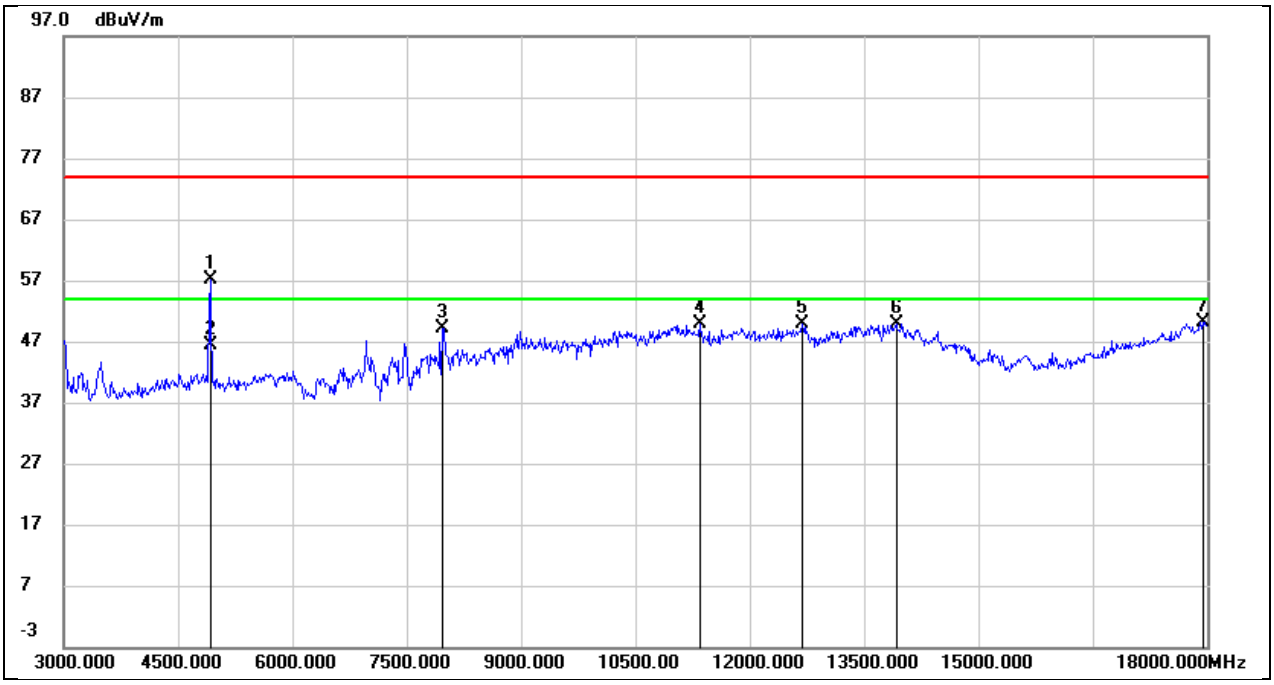
Test Mode:	802.11ax HE20	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	56.45	0.69	57.14	74.00	-16.86	peak
2	4920.000	45.76	0.69	46.45	54.00	-7.55	AVG
3	7965.000	42.13	7.08	49.21	74.00	-24.79	peak
4	11340.000	33.67	16.19	49.86	74.00	-24.14	peak
5	12690.000	31.37	18.60	49.97	74.00	-24.03	peak
6	13920.000	27.09	22.71	49.80	74.00	-24.20	peak
7	17940.000	23.46	26.61	50.07	74.00	-23.93	peak

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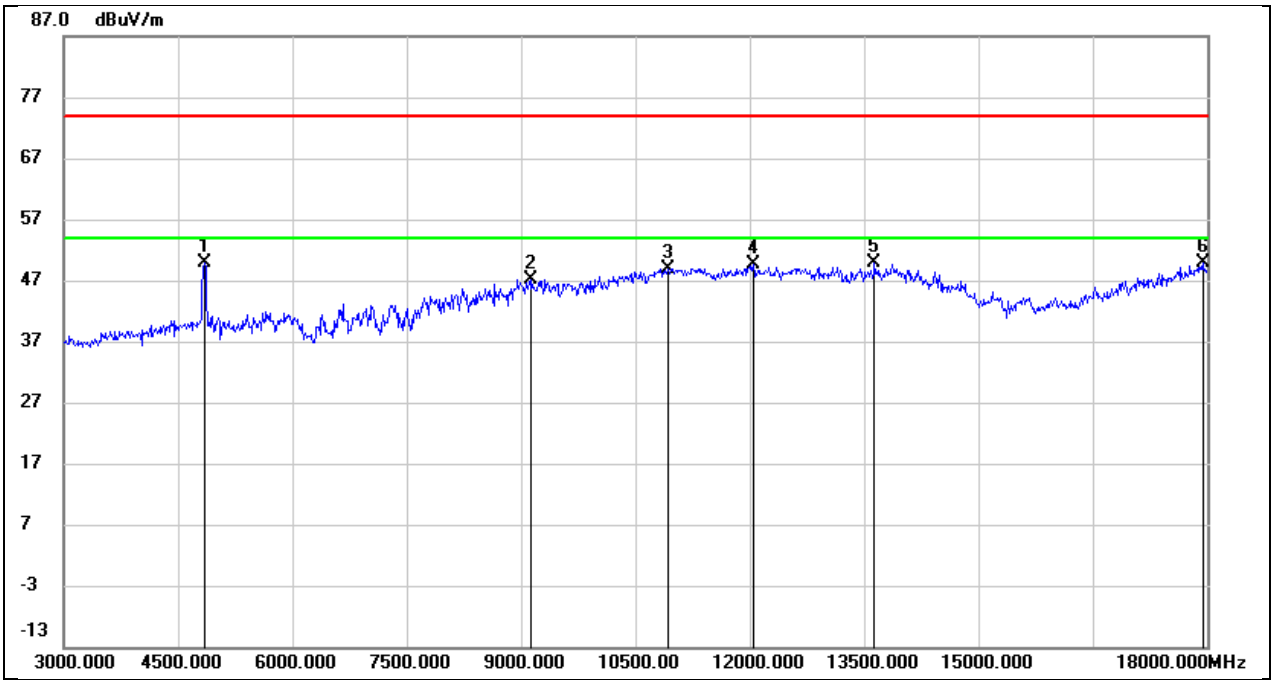
Test Mode:	802.11ax HE40	Frequency(MHz):	2422
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	49.36	0.54	49.90	74.00	-24.10	peak
2	9135.000	36.78	10.39	47.17	74.00	-26.83	peak
3	10935.000	34.32	14.60	48.92	74.00	-25.08	peak
4	12045.000	31.10	18.46	49.56	74.00	-24.44	peak
5	13635.000	28.05	21.83	49.88	74.00	-24.12	peak
6	17940.000	23.30	26.61	49.91	74.00	-24.09	peak

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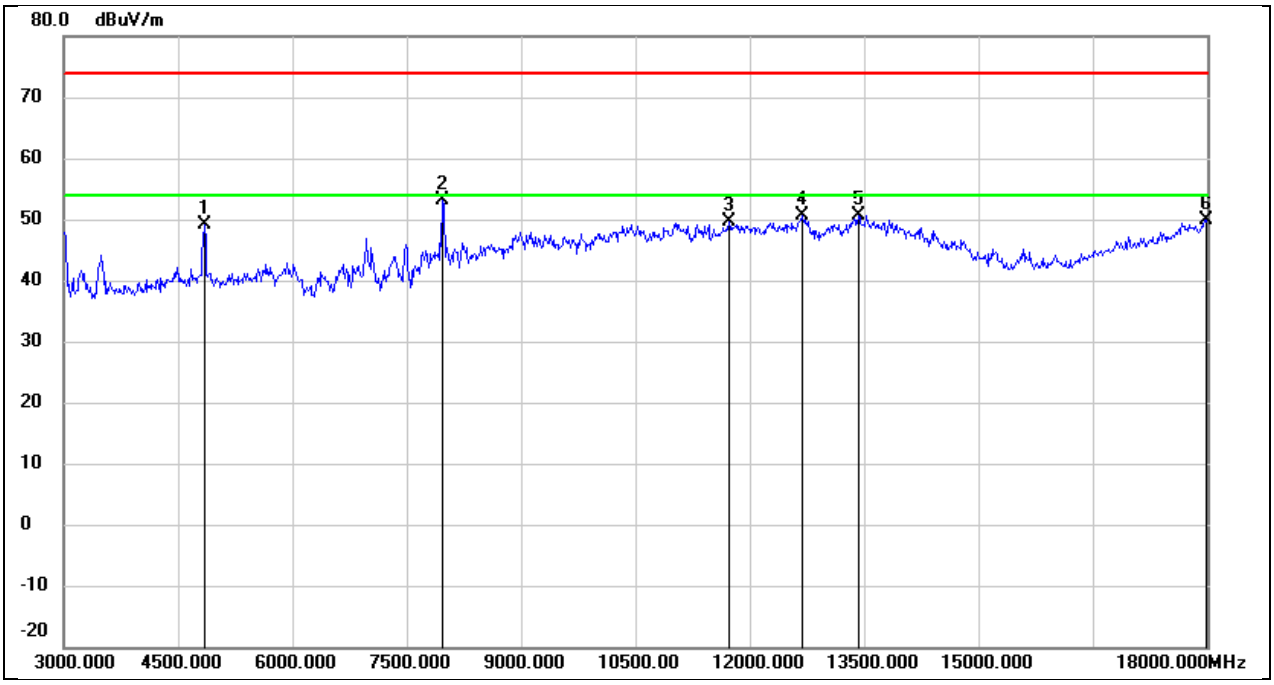
Test Mode:	802.11ax HE40	Frequency(MHz):	2422
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	48.62	0.54	49.16	74.00	-24.84	peak
2	7965.000	46.03	7.08	53.11	74.00	-20.89	peak
3	11730.000	32.16	17.41	49.57	74.00	-24.43	peak
4	12690.000	32.14	18.60	50.74	74.00	-23.26	peak
5	13425.000	29.11	21.52	50.63	74.00	-23.37	peak
6	17985.000	23.16	26.77	49.93	74.00	-24.07	peak

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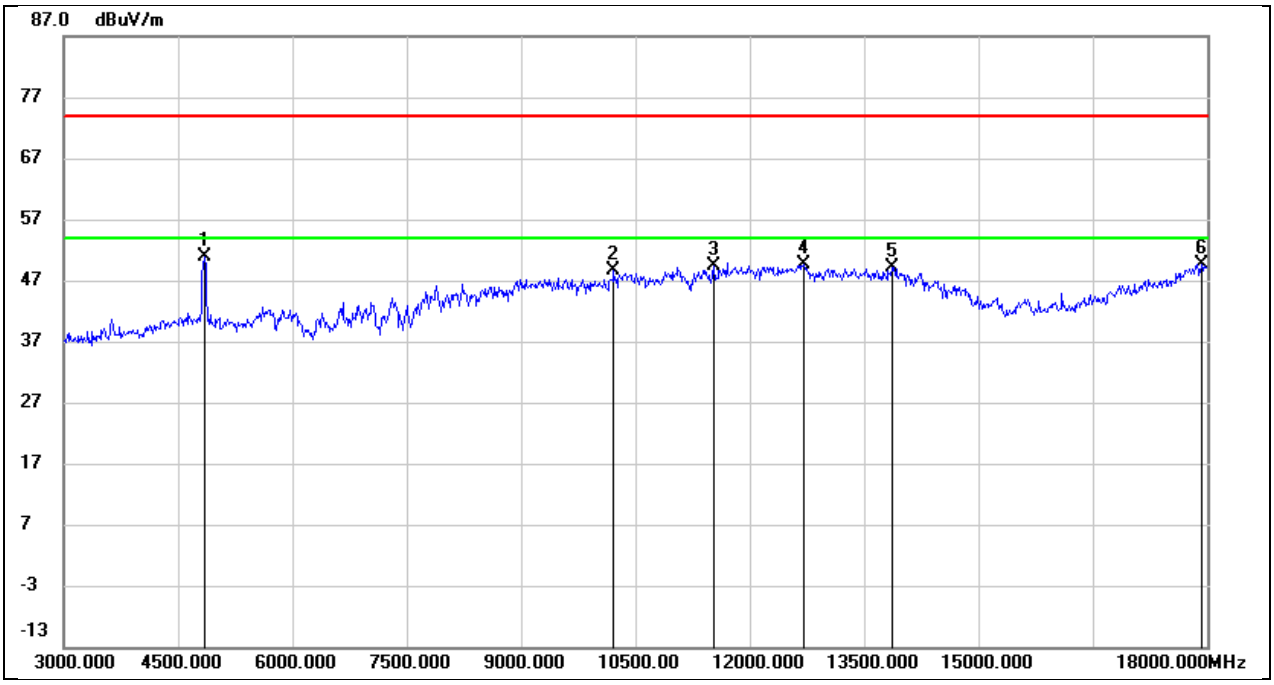
Test Mode:	802.11ax HE40	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	50.45	0.54	50.99	74.00	-23.01	peak
2	10215.000	36.06	12.56	48.62	74.00	-25.38	peak
3	11520.000	32.42	16.91	49.33	74.00	-24.67	peak
4	12705.000	30.97	18.66	49.63	74.00	-24.37	peak
5	13875.000	26.50	22.68	49.18	74.00	-24.82	peak
6	17925.000	23.04	26.55	49.59	74.00	-24.41	peak

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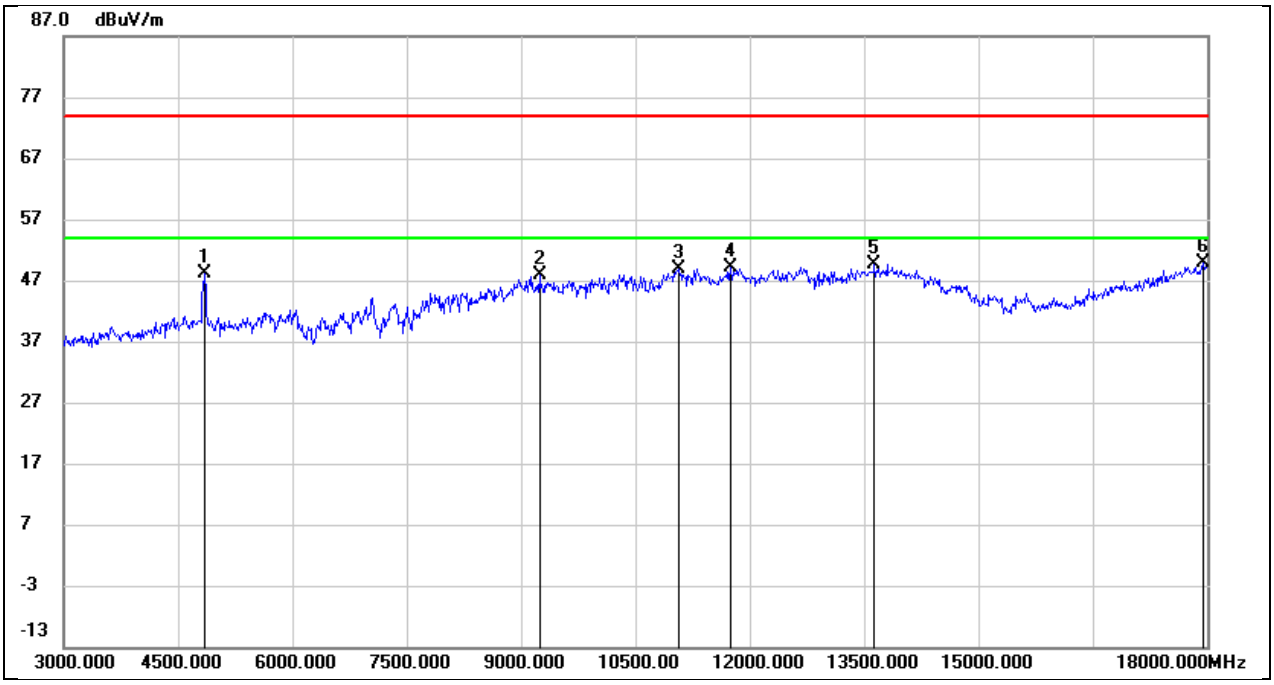
Test Mode:	802.11ax HE40	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	47.56	0.54	48.10	74.00	-25.90	peak
2	9240.000	37.69	10.10	47.79	74.00	-26.21	peak
3	11070.000	33.77	15.08	48.85	74.00	-25.15	peak
4	11745.000	31.56	17.47	49.03	74.00	-24.97	peak
5	13635.000	27.82	21.83	49.65	74.00	-24.35	peak
6	17955.000	23.15	26.66	49.81	74.00	-24.19	peak

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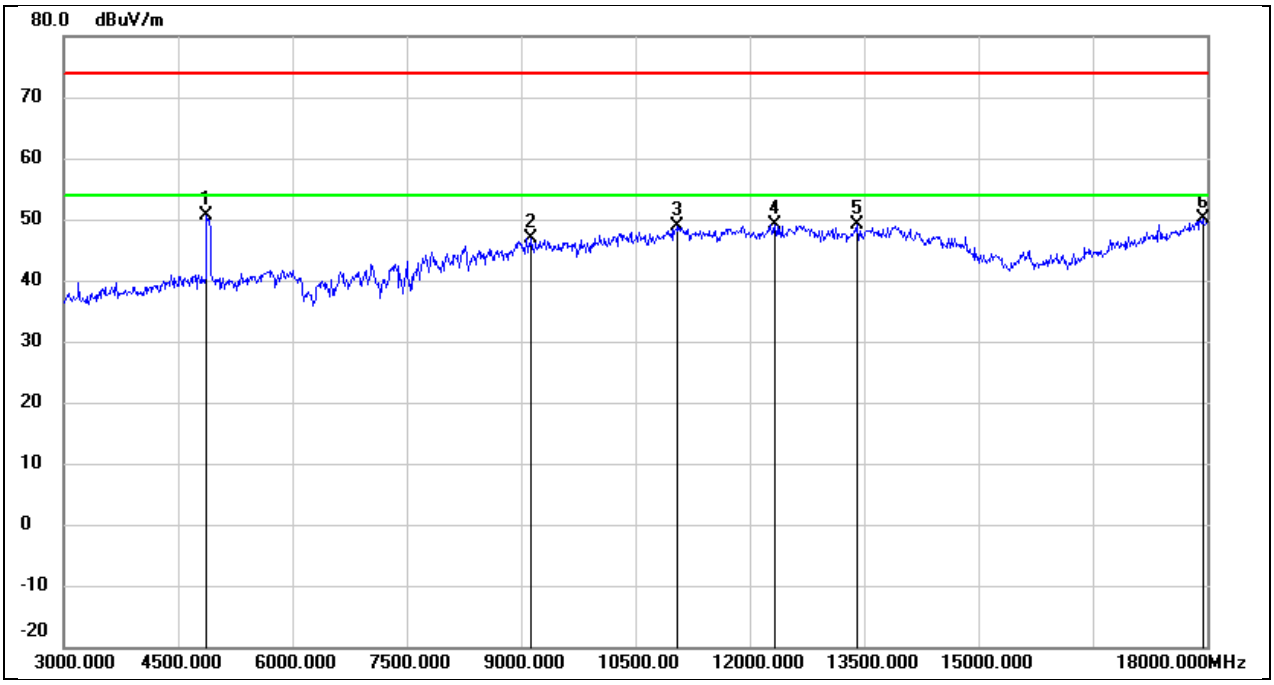
Test Mode:	802.11ax HE40	Frequency(MHz):	2452
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	49.94	0.61	50.55	74.00	-23.45	peak
2	9135.000	36.41	10.39	46.80	74.00	-27.20	peak
3	11055.000	33.79	15.04	48.83	74.00	-25.17	peak
4	12330.000	30.36	18.76	49.12	74.00	-24.88	peak
5	13410.000	27.56	21.48	49.04	74.00	-24.96	peak
6	17940.000	23.58	26.61	50.19	74.00	-23.81	peak

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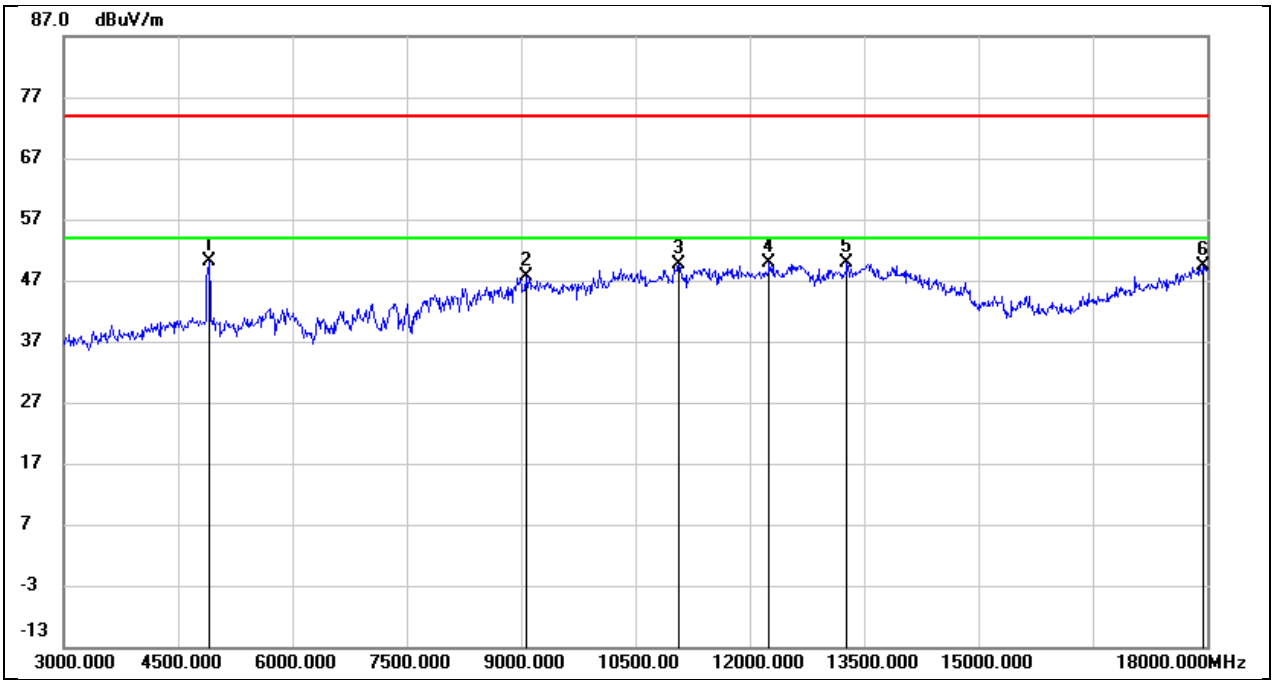
Test Mode:	802.11ax HE40	Frequency(MHz):	2452
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	49.45	0.66	50.11	74.00	-23.89	peak
2	9060.000	36.81	10.82	47.63	74.00	-26.37	peak
3	11070.000	34.48	15.08	49.56	74.00	-24.44	peak
4	12255.000	31.35	18.50	49.85	74.00	-24.15	peak
5	13275.000	29.22	20.61	49.83	74.00	-24.17	peak
6	17940.000	22.73	26.61	49.34	74.00	-24.66	peak

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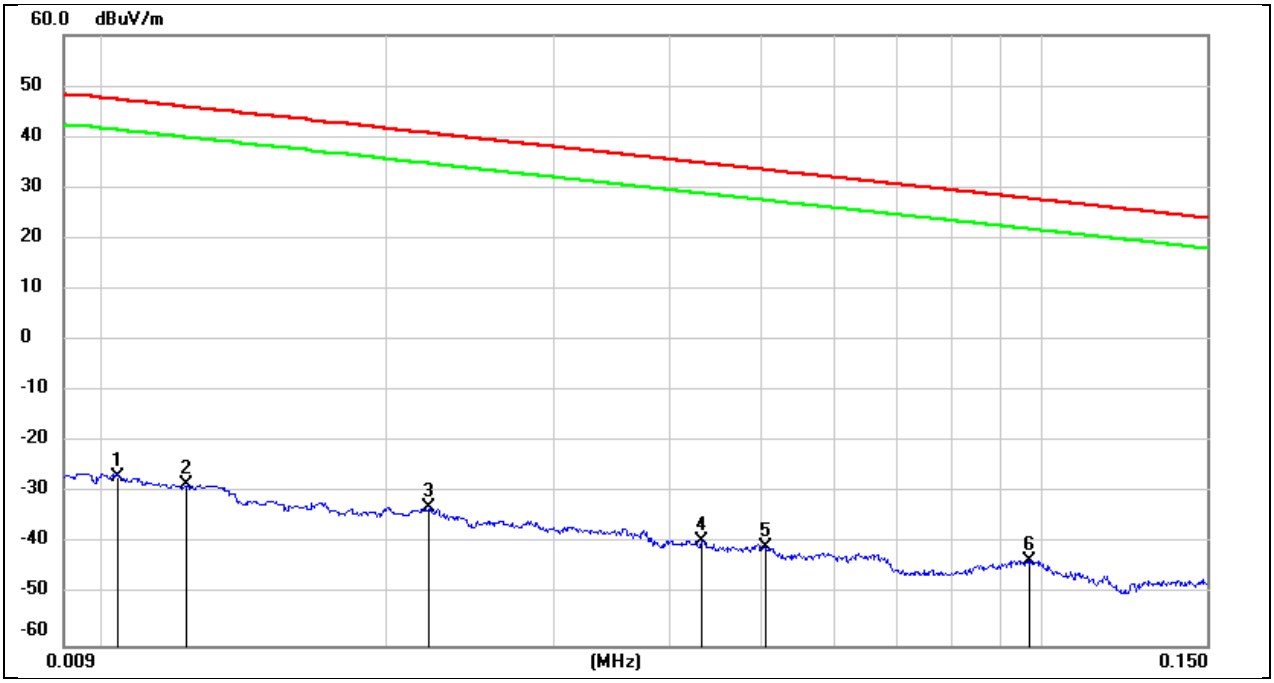
8.4. SPURIOUS EMISSIONS(9 KHZ~30 MHZ)

Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.0103	74.64	-101.40	-26.76	47.34	-74.10	peak
2	0.0122	73.00	-101.39	-28.39	45.87	-74.26	peak
3	0.0221	68.63	-101.35	-32.72	40.71	-73.43	peak
4	0.0432	62.07	-101.45	-39.38	34.89	-74.27	peak
5	0.0507	60.71	-101.48	-40.77	33.50	-74.27	peak
6	0.0970	58.56	-101.78	-43.22	27.87	-71.09	peak

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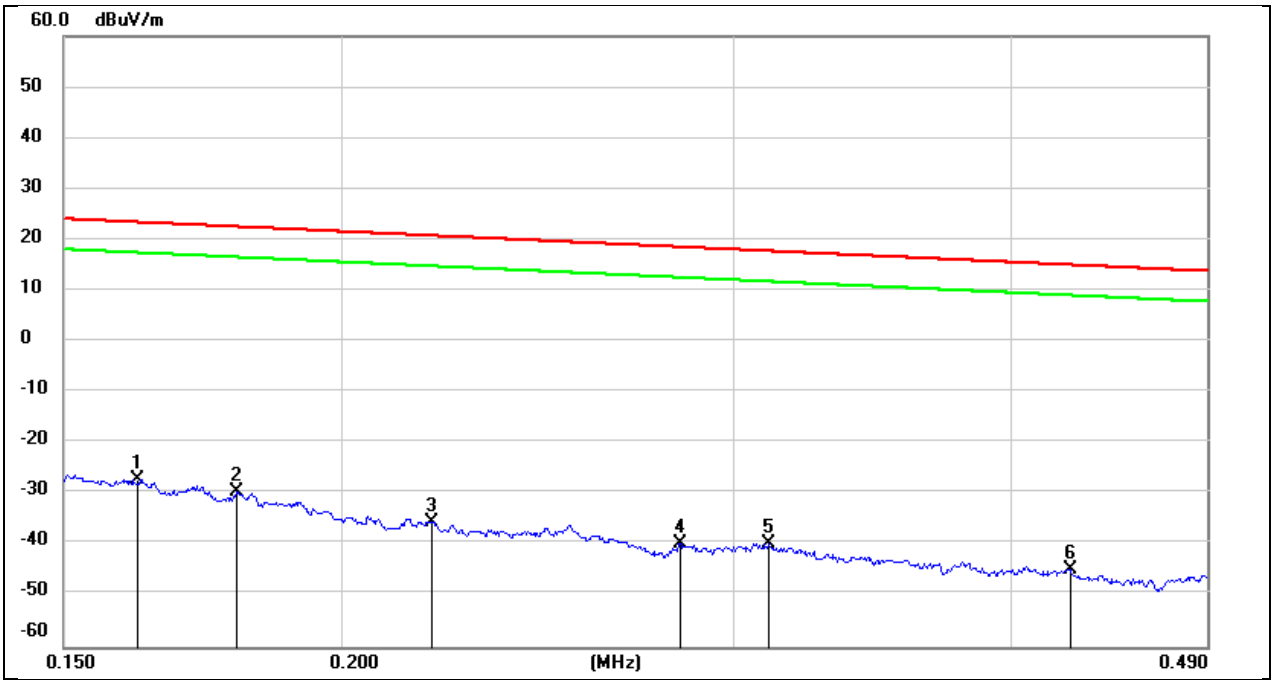
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.1621	74.42	-101.65	-27.23	23.41	-50.64	peak
2	0.1794	72.27	-101.68	-29.41	22.53	-51.94	peak
3	0.2197	66.27	-101.75	-35.48	20.76	-56.24	peak
4	0.2837	62.22	-101.83	-39.61	18.54	-58.15	peak
5	0.3109	62.05	-101.86	-39.81	17.75	-57.56	peak
6	0.4248	57.09	-101.99	-44.90	15.04	-59.94	peak

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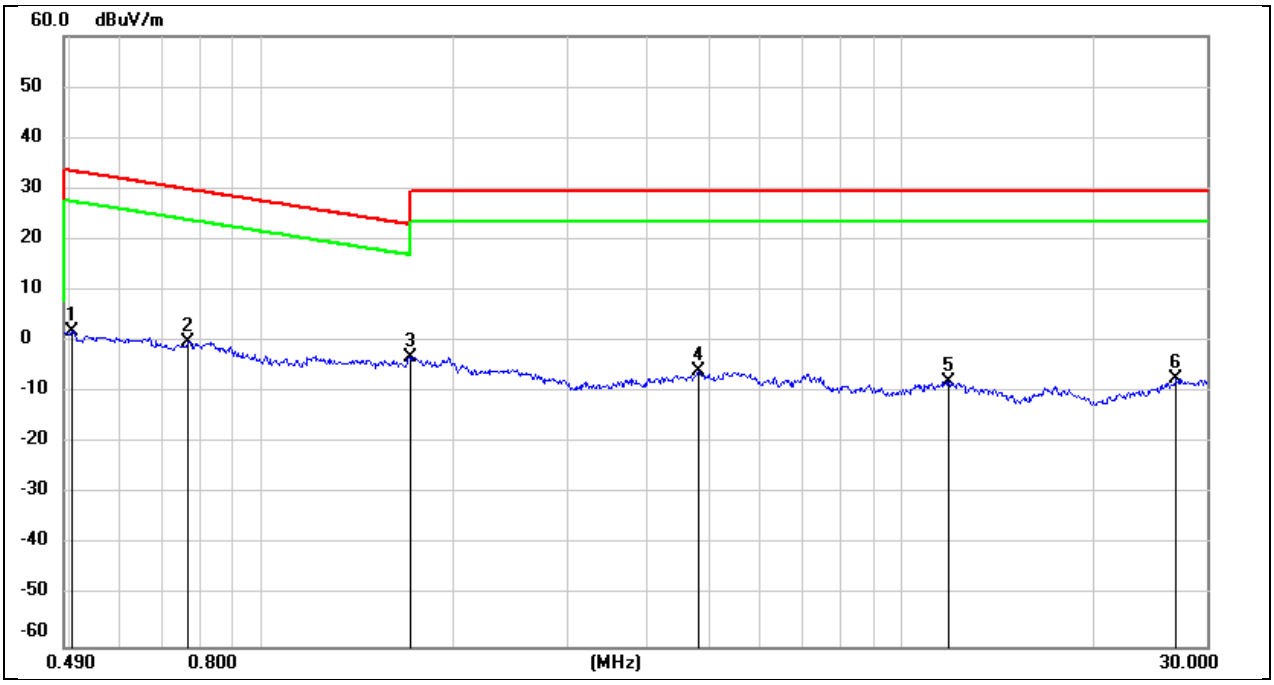
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.5039	63.93	-62.07	1.86	33.56	-31.70	peak
2	0.7641	61.92	-62.12	-0.20	29.94	-30.14	peak
3	1.7036	58.94	-61.96	-3.02	22.98	-26.00	peak
4	4.8075	55.53	-61.45	-5.92	29.54	-35.46	peak
5	11.8513	53.06	-60.88	-7.82	29.54	-37.36	peak
6	26.8719	53.04	-60.27	-7.23	29.54	-36.77	peak

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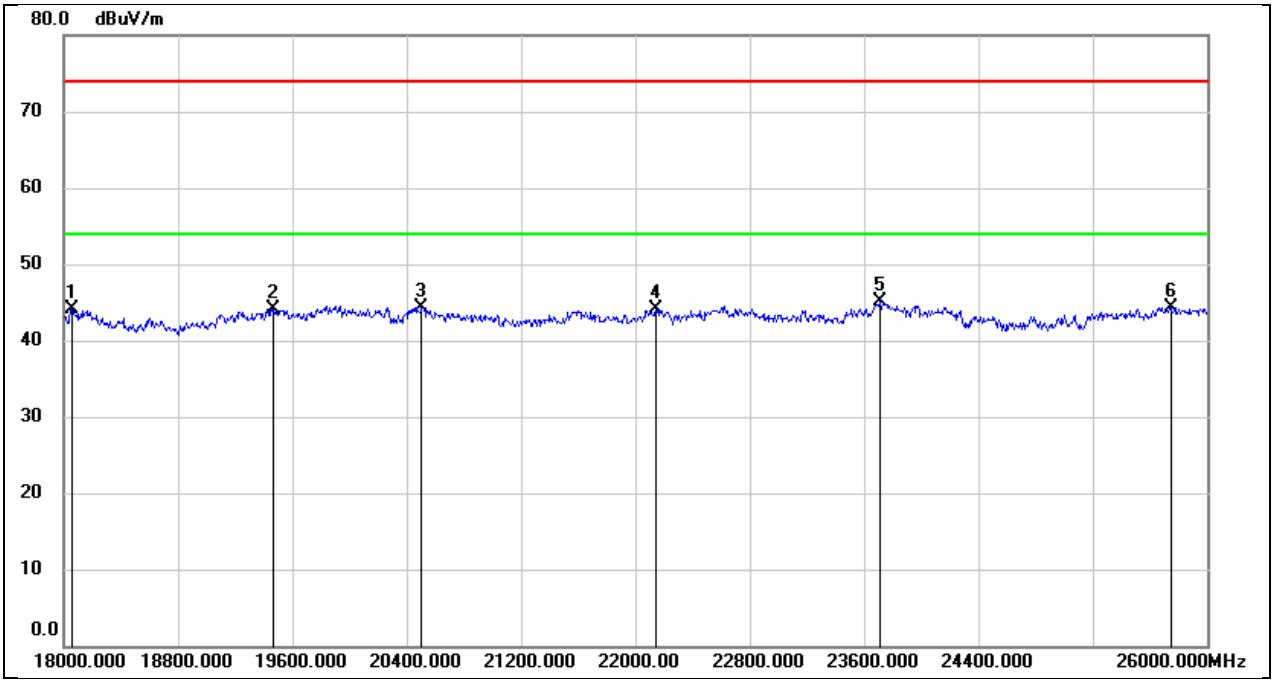
8.5. SPURIOUS EMISSIONS(18 GHZ~26 GHZ)

Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18056.000	49.49	-5.42	44.07	74.00	-29.93	peak
2	19464.000	49.64	-5.55	44.09	74.00	-29.91	peak
3	20504.000	49.71	-5.35	44.36	74.00	-29.64	peak
4	22144.000	48.37	-4.33	44.04	74.00	-29.96	peak
5	23712.000	48.21	-3.19	45.02	74.00	-28.98	peak
6	25744.000	45.00	-0.64	44.36	74.00	-29.64	peak

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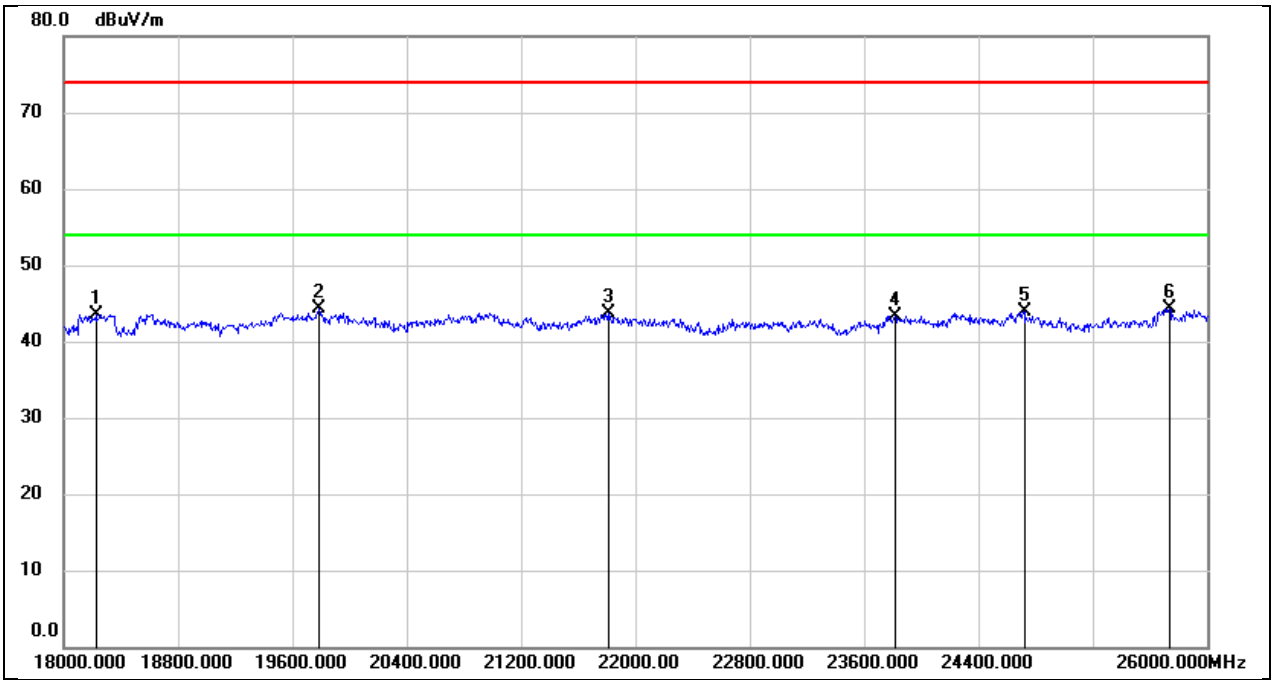
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18224.000	49.08	-5.53	43.55	74.00	-30.45	peak
2	19784.000	49.57	-5.28	44.29	74.00	-29.71	peak
3	21808.000	47.97	-4.36	43.61	74.00	-30.39	peak
4	23816.000	46.45	-3.08	43.37	74.00	-30.63	peak
5	24720.000	46.22	-2.33	43.89	74.00	-30.11	peak
6	25736.000	44.94	-0.68	44.26	74.00	-29.74	peak

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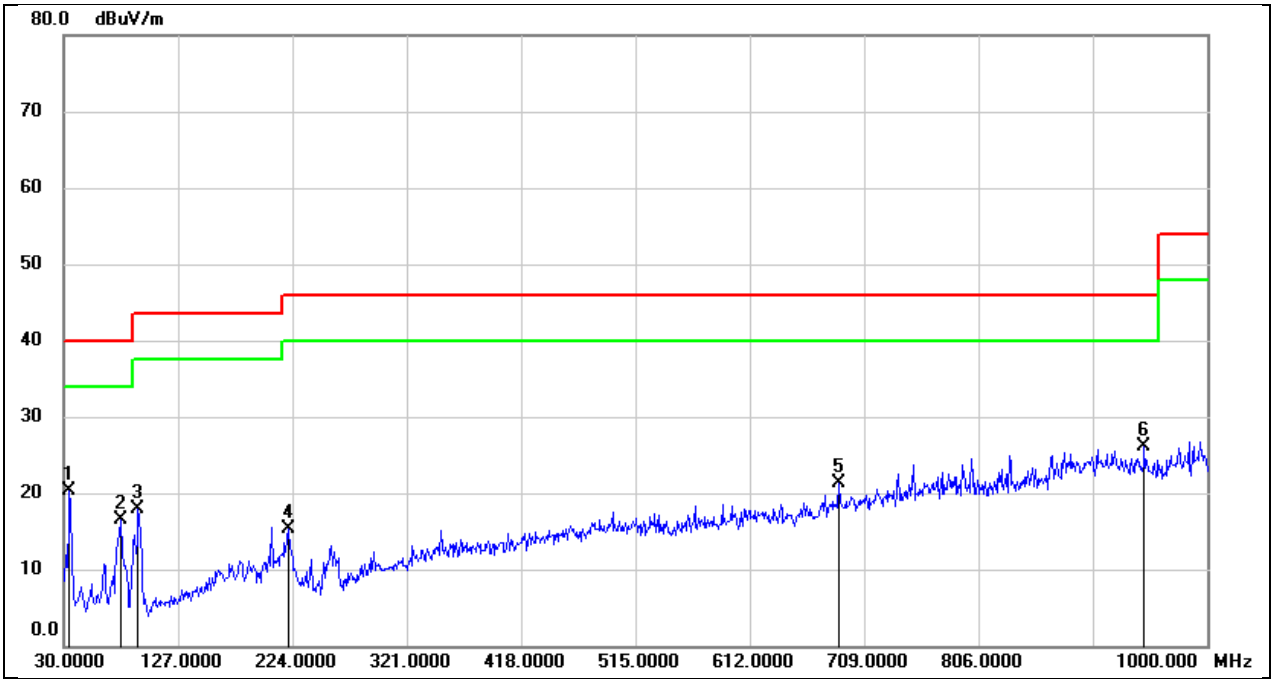
8.6. SPURIOUS EMISSIONS(30 MHZ~1 GHZ)

Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	34.8500	34.35	-14.14	20.21	40.00	-19.79	QP
2	78.5000	32.61	-16.19	16.42	40.00	-23.58	QP
3	93.0500	34.83	-17.01	17.82	43.50	-25.68	QP
4	221.0900	28.49	-13.14	15.35	46.00	-30.65	QP
5	687.6599	26.37	-4.97	21.40	46.00	-24.60	QP
6	946.6500	27.95	-1.79	26.16	46.00	-19.84	QP

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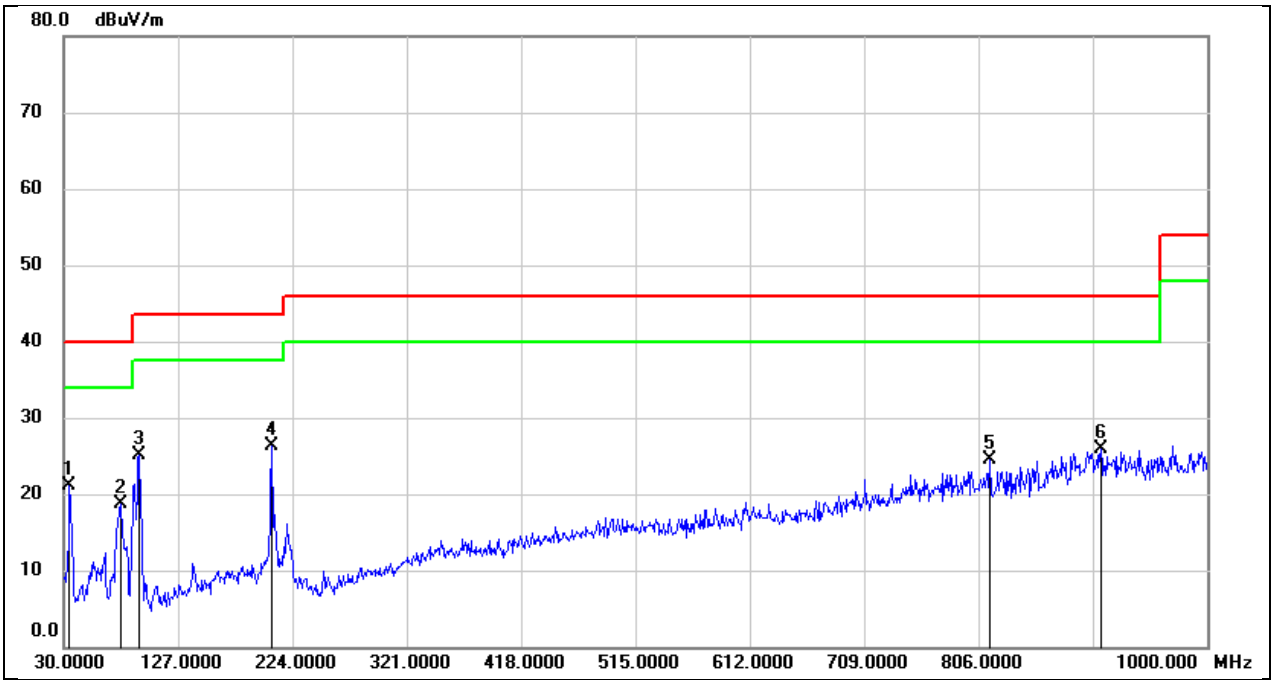
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	34.8500	35.31	-14.14	21.17	40.00	-18.83	QP
2	78.5000	34.96	-16.19	18.77	40.00	-21.23	QP
3	94.0199	42.11	-16.95	25.16	43.50	-18.34	QP
4	206.5399	38.77	-12.41	26.36	43.50	-17.14	QP
5	815.7000	27.32	-2.87	24.45	46.00	-21.55	QP
6	909.7900	27.33	-1.39	25.94	46.00	-20.06	QP

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9. ANTENNA REQUIREMENT

REQUIREMENT

Please refer to FCC part 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 part 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.

DESCRIPTION

Pass

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10. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please refer to CFR 47 FCC §15.207 (a)

FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

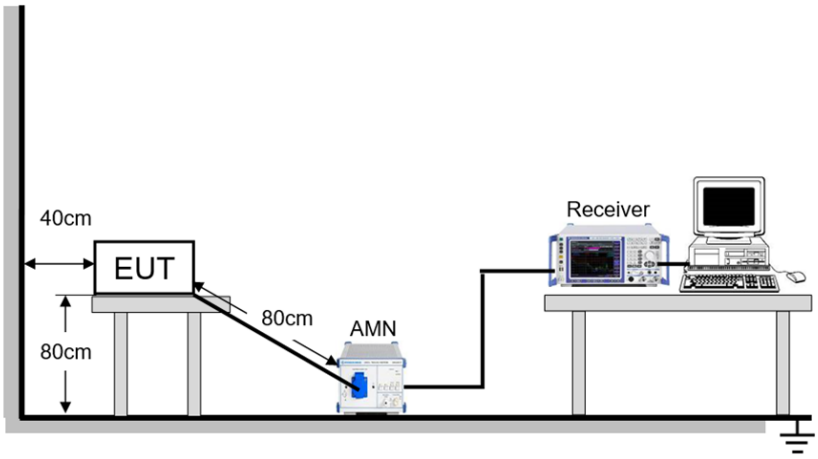
*Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm 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 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

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 SETUP



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TEST ENVIRONMENT

Temperature	25.3℃	Relative Humidity	61.3%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST DATE / ENGINEER

Test Date	June 22, 2024	Test By	Denny Huang

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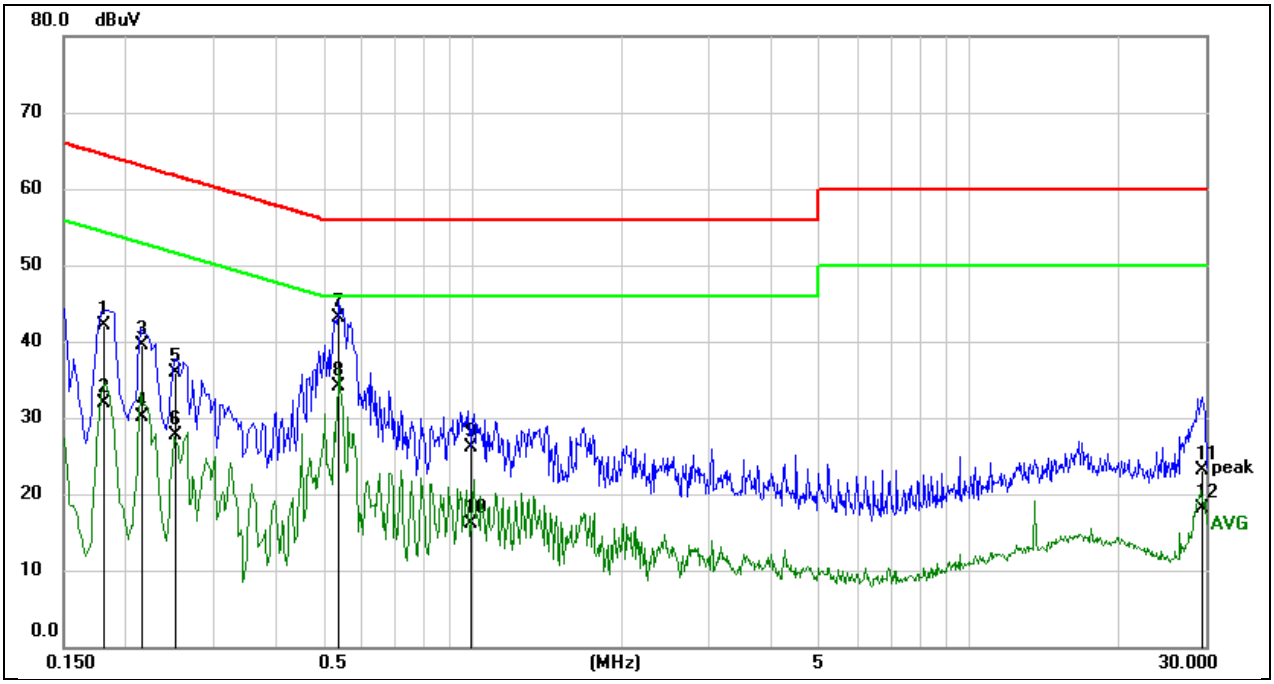
TEST RESULTS

Test Mode:	802.11b	Frequency(MHz):	2412
Line:	Neutral		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1801	31.83	10.28	42.11	64.48	-22.37	QP
2	0.1801	21.63	10.28	31.91	54.48	-22.57	AVG
3	0.2162	29.21	10.24	39.45	62.96	-23.51	QP
4	0.2162	19.86	10.24	30.10	52.96	-22.86	AVG
5	0.2518	25.70	10.24	35.94	61.70	-25.76	QP
6	0.2518	17.54	10.24	27.78	51.70	-23.92	AVG
7	0.5394	32.90	10.24	43.14	56.00	-12.86	QP
8	0.5394	23.83	10.24	34.07	46.00	-11.93	AVG
9	0.9861	16.11	10.04	26.15	56.00	-29.85	QP
10	0.9861	6.03	10.04	16.07	46.00	-29.93	AVG
11	29.3570	12.35	10.84	23.19	60.00	-36.81	QP
12	29.3570	7.33	10.84	18.17	50.00	-31.83	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: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.

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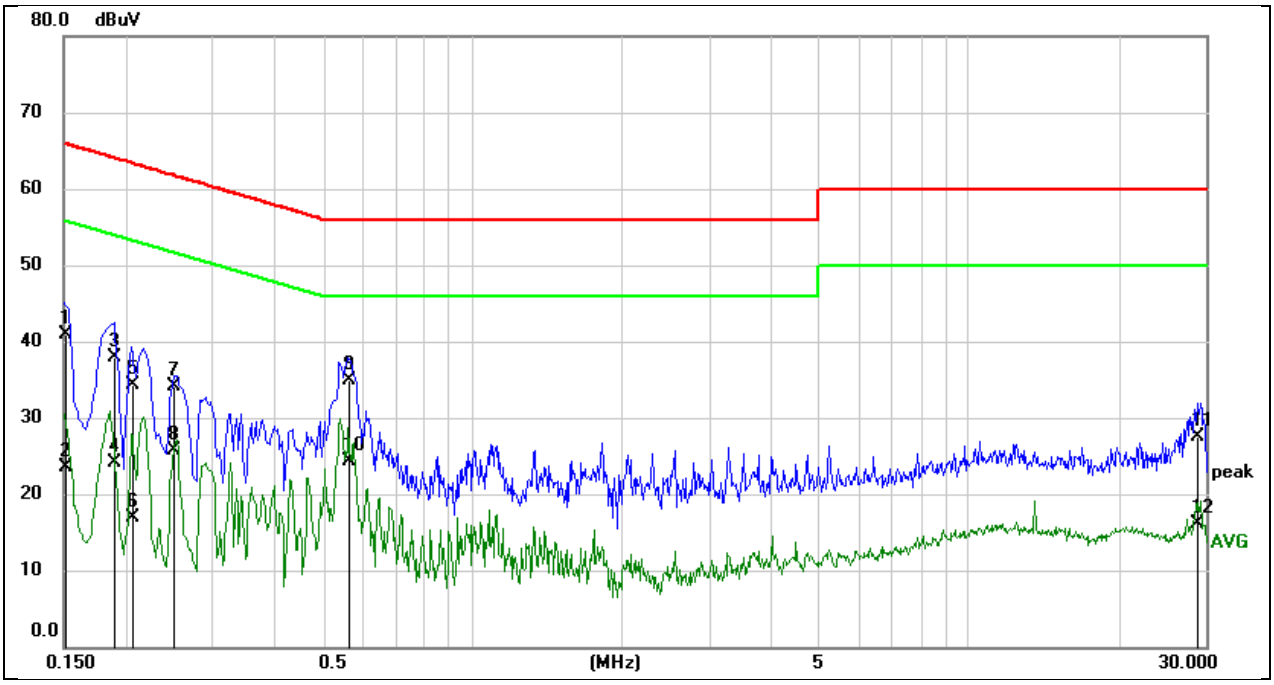
Test Mode:	802.11b	Frequency(MHz):	2412
Line:	Line		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1522	30.58	10.24	40.82	65.88	-25.06	QP
2	0.1522	13.19	10.24	23.43	55.88	-32.45	AVG
3	0.1887	27.79	10.16	37.95	64.09	-26.14	QP
4	0.1887	13.89	10.16	24.05	54.09	-30.04	AVG
5	0.2069	24.12	10.14	34.26	63.33	-29.07	QP
6	0.2069	6.79	10.14	16.93	53.33	-36.40	AVG
7	0.2508	24.08	10.12	34.20	61.73	-27.53	QP
8	0.2508	15.58	10.12	25.70	51.73	-26.03	AVG
9	0.5662	24.88	10.04	34.92	56.00	-21.08	QP
10	0.5662	14.31	10.04	24.35	46.00	-21.65	AVG
11	29.0210	16.29	11.12	27.41	60.00	-32.59	QP
12	29.0210	4.93	11.12	16.05	50.00	-33.95	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: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.

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11. TEST DATA

11.1. APPENDIX A: DTS BANDWIDTH

11.1.1. Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant2	2412	7.240	2408.440	2415.680	≥0.5	PASS
	Ant3	2412	7.560	2407.960	2415.520	≥0.5	PASS
	Ant2	2437	7.560	2432.960	2440.520	≥0.5	PASS
	Ant3	2437	7.600	2432.960	2440.560	≥0.5	PASS
	Ant2	2462	8.080	2457.480	2465.560	≥0.5	PASS
	Ant3	2462	8.520	2457.480	2466.000	≥0.5	PASS
11G	Ant2	2412	16.320	2403.840	2420.160	≥0.5	PASS
	Ant3	2412	16.280	2403.840	2420.120	≥0.5	PASS
	Ant2	2437	16.040	2428.840	2444.880	≥0.5	PASS
	Ant3	2437	15.680	2428.840	2444.520	≥0.5	PASS
	Ant2	2462	15.920	2453.840	2469.760	≥0.5	PASS
	Ant3	2462	16.320	2453.840	2470.160	≥0.5	PASS
11N20MIMO	Ant2	2412	17.320	2403.440	2420.760	≥0.5	PASS
	Ant3	2412	16.280	2404.520	2420.800	≥0.5	PASS
	Ant2	2437	16.920	2428.240	2445.160	≥0.5	PASS
	Ant3	2437	17.560	2428.240	2445.800	≥0.5	PASS
	Ant2	2462	16.920	2453.240	2470.160	≥0.5	PASS
	Ant3	2462	17.560	2453.240	2470.800	≥0.5	PASS
11N40MIMO	Ant2	2422	36.320	2403.840	2440.160	≥0.5	PASS
	Ant3	2422	36.320	2403.840	2440.160	≥0.5	PASS
	Ant2	2437	35.680	2419.480	2455.160	≥0.5	PASS
	Ant3	2437	35.440	2419.480	2454.920	≥0.5	PASS
	Ant2	2452	34.080	2434.240	2468.320	≥0.5	PASS
	Ant3	2452	35.600	2433.920	2469.520	≥0.5	PASS
11AX20MIMO	Ant2	2412	18.080	2402.880	2420.960	≥0.5	PASS
	Ant3	2412	18.320	2403.200	2421.520	≥0.5	PASS
	Ant2	2437	18.520	2427.560	2446.080	≥0.5	PASS
	Ant3	2437	18.720	2427.640	2446.360	≥0.5	PASS
	Ant2	2462	17.880	2452.520	2470.400	≥0.5	PASS
	Ant3	2462	18.520	2452.520	2471.040	≥0.5	PASS
11AX40MIMO	Ant2	2422	37.520	2403.120	2440.640	≥0.5	PASS
	Ant3	2422	37.840	2403.200	2441.040	≥0.5	PASS
	Ant2	2437	37.600	2418.280	2455.880	≥0.5	PASS
	Ant3	2437	36.560	2418.680	2455.240	≥0.5	PASS
	Ant2	2452	35.280	2434.320	2469.600	≥0.5	PASS
	Ant3	2452	36.400	2433.120	2469.520	≥0.5	PASS

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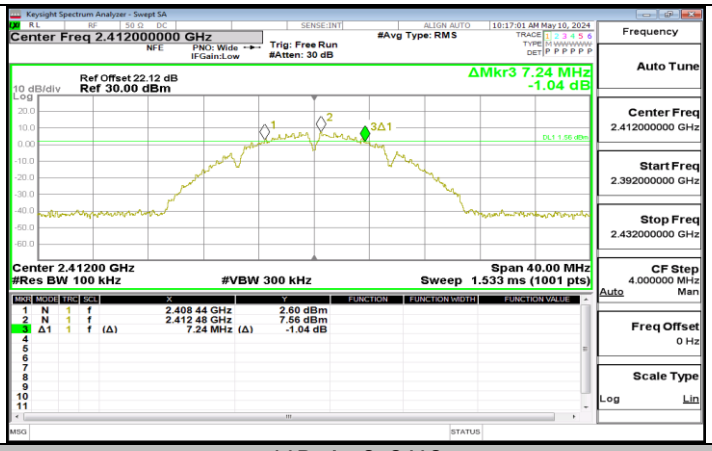
11.1.2. Test Graphs



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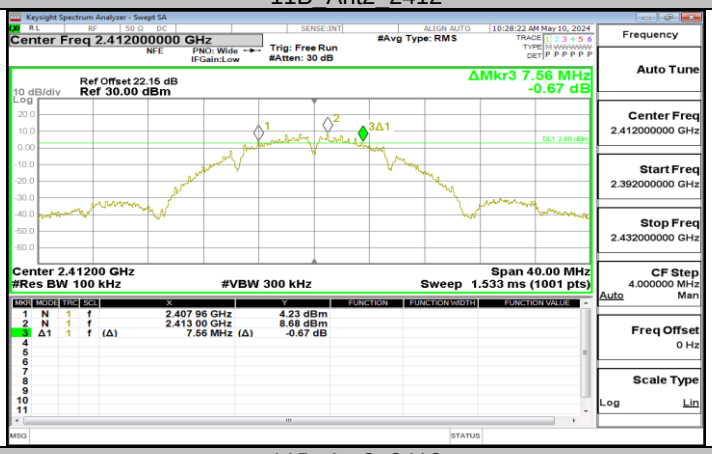

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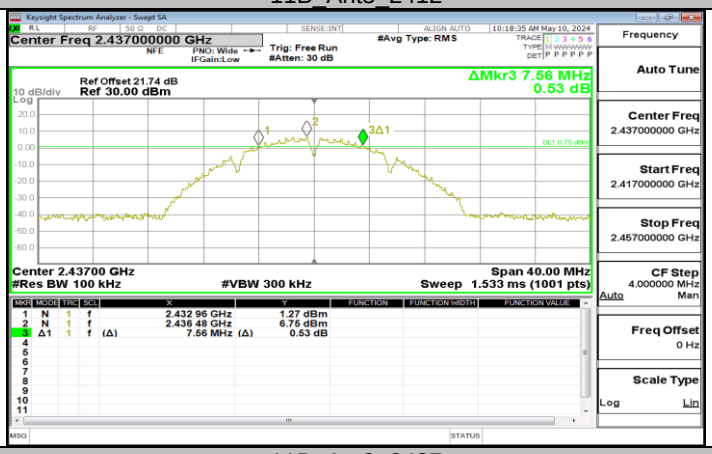

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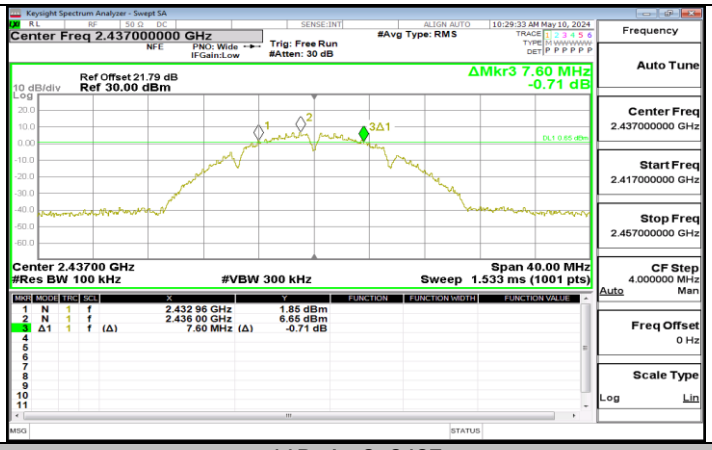

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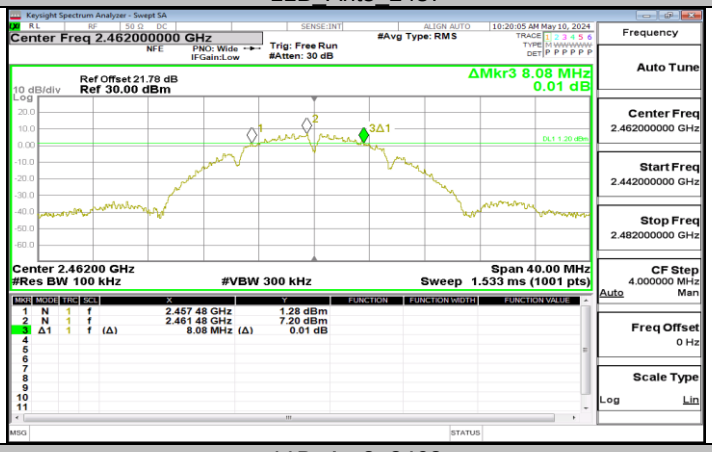

11B_Ant2_2462

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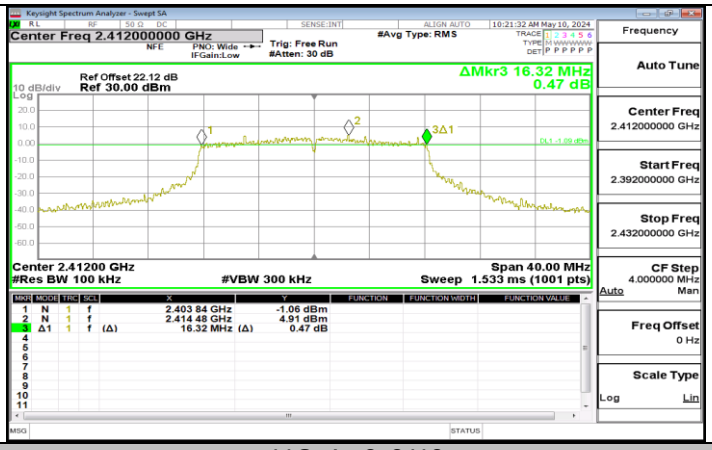

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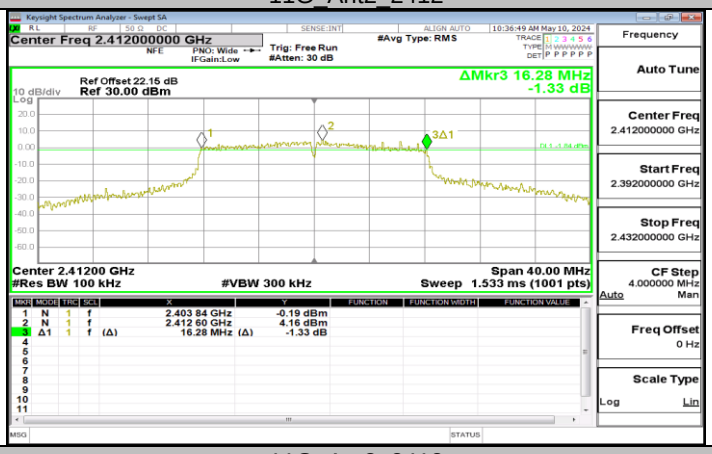

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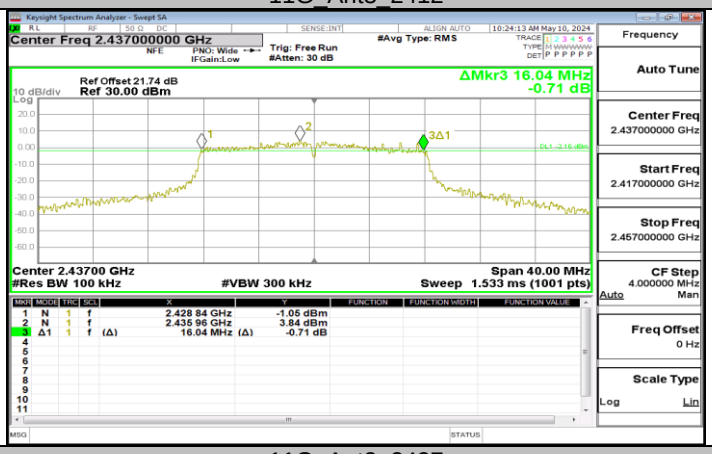

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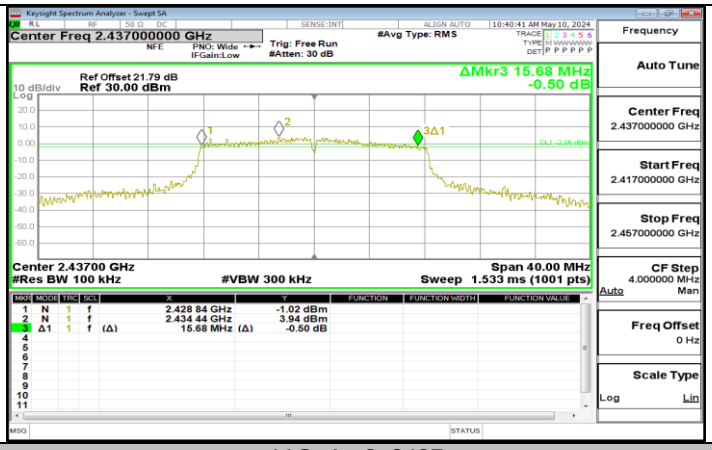

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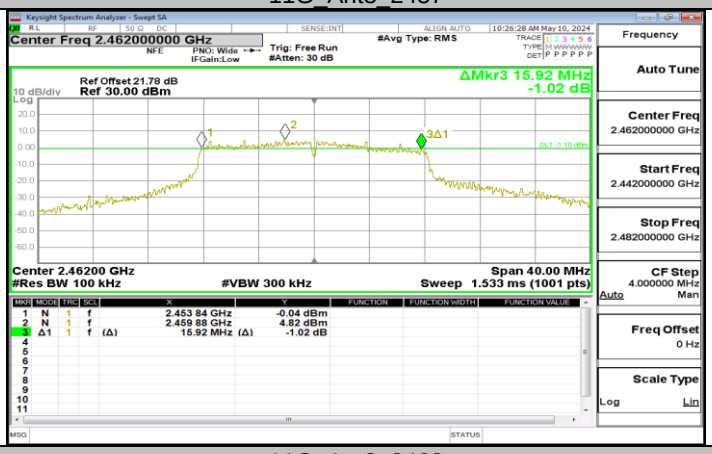

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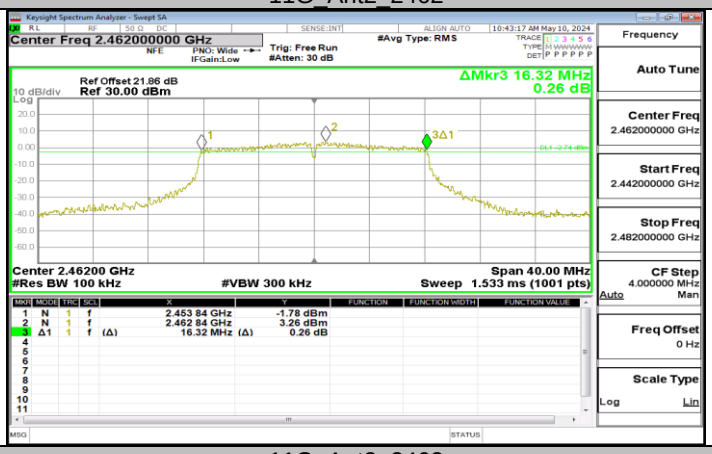

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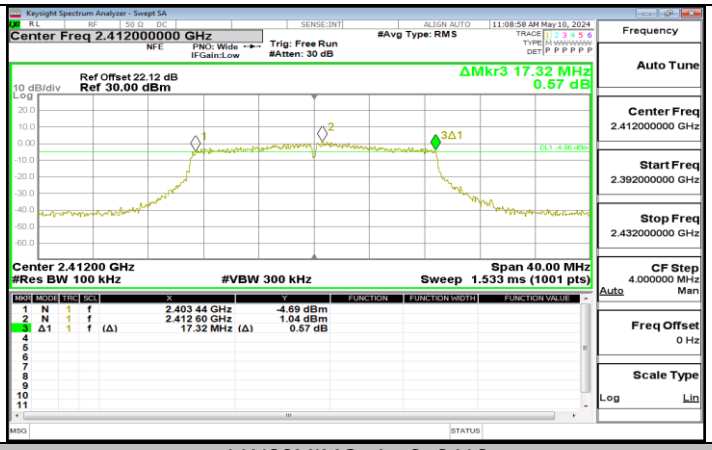

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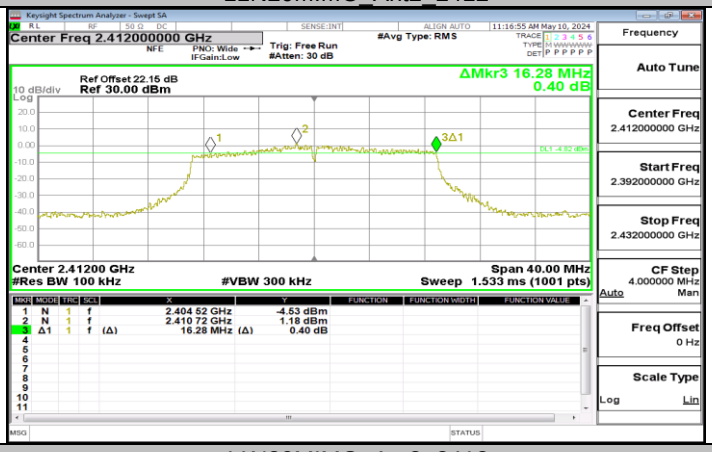

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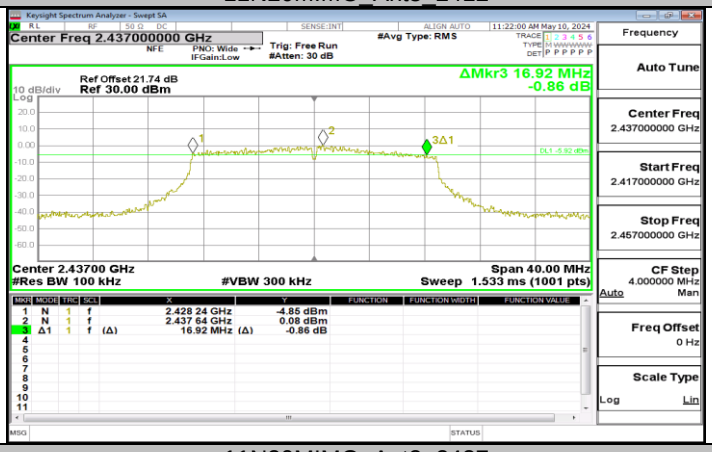

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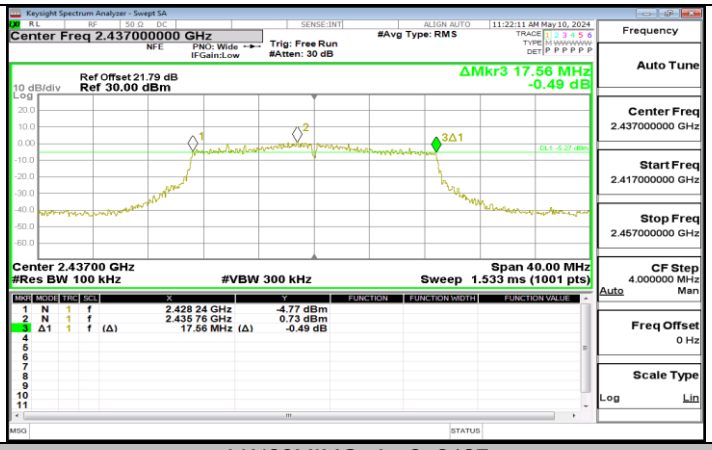

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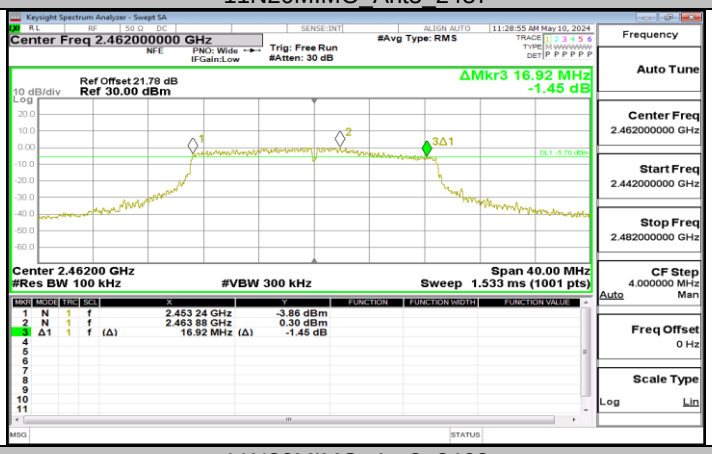

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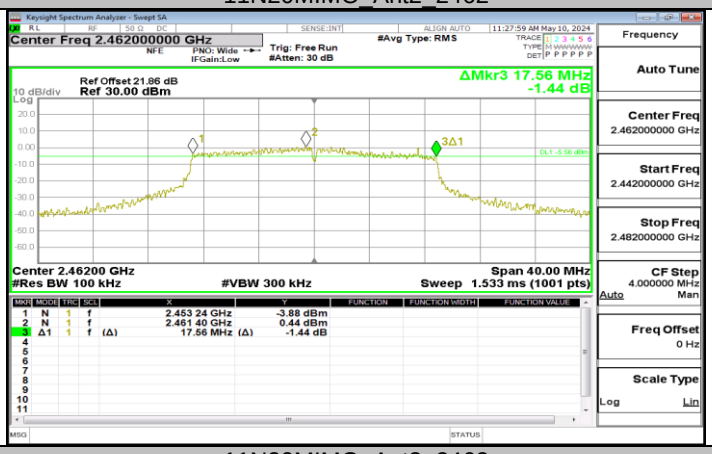

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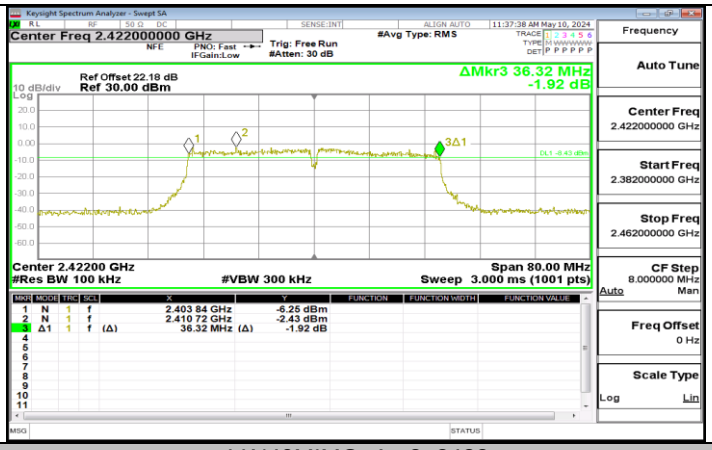

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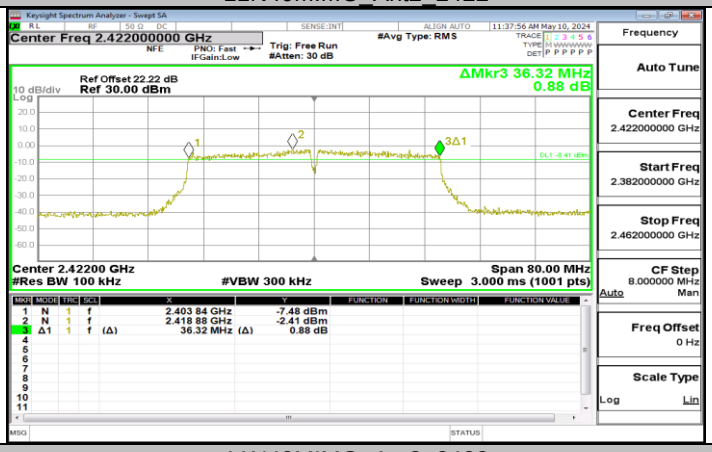

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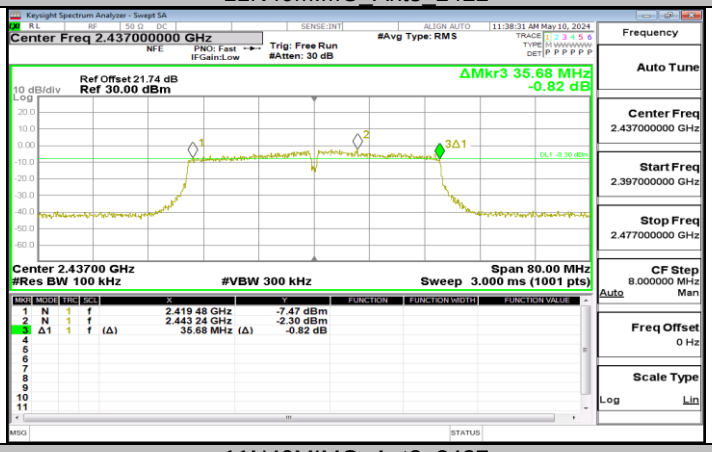

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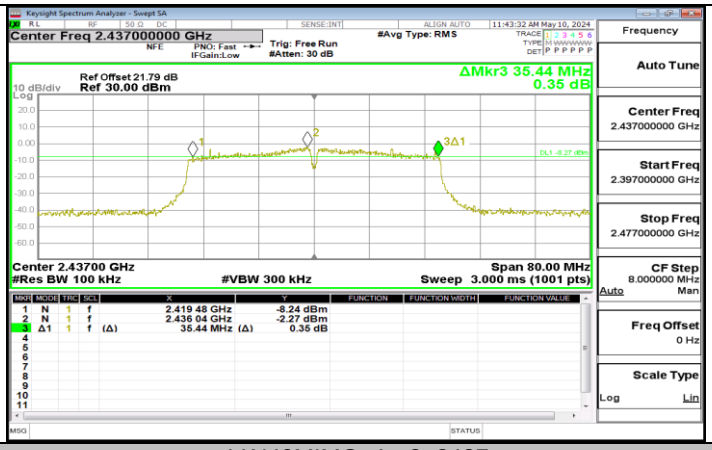

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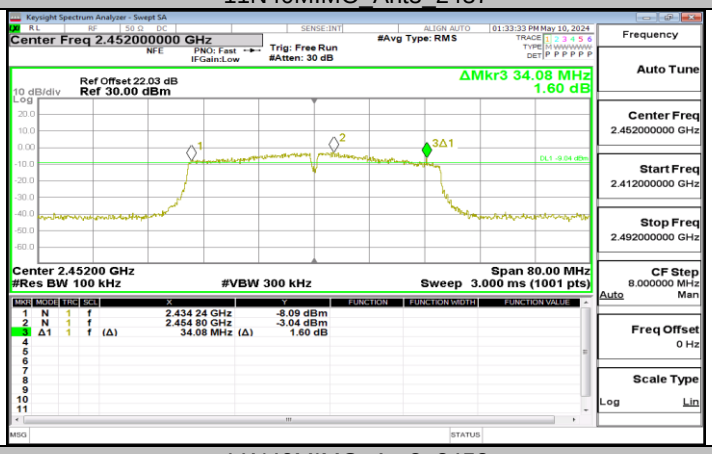

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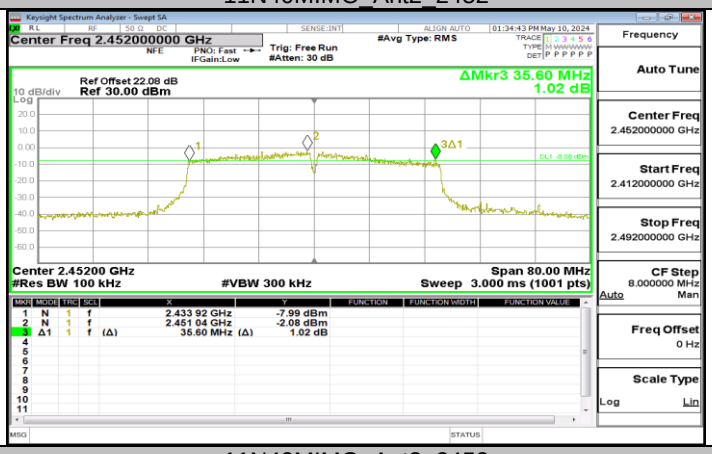

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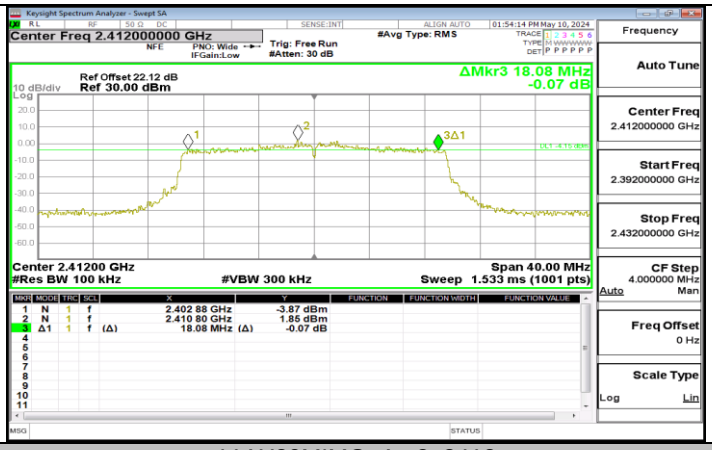

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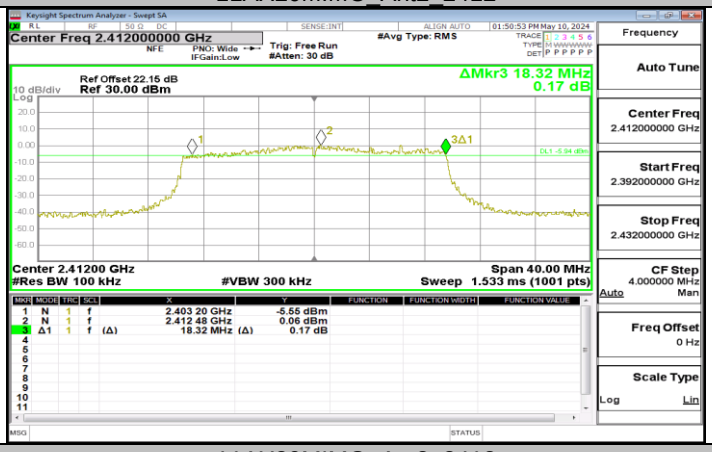

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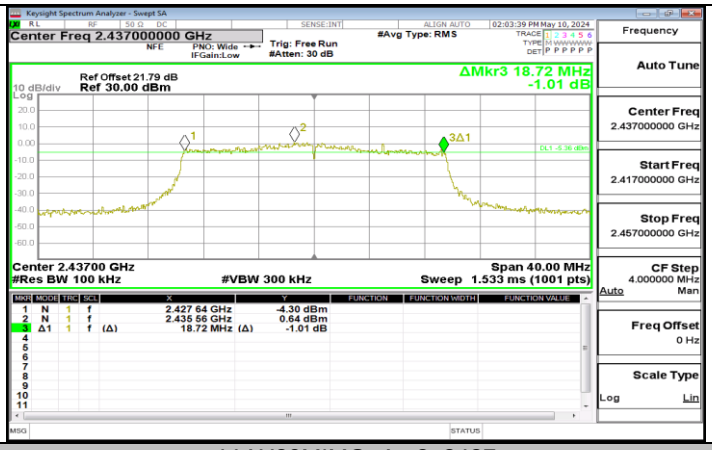

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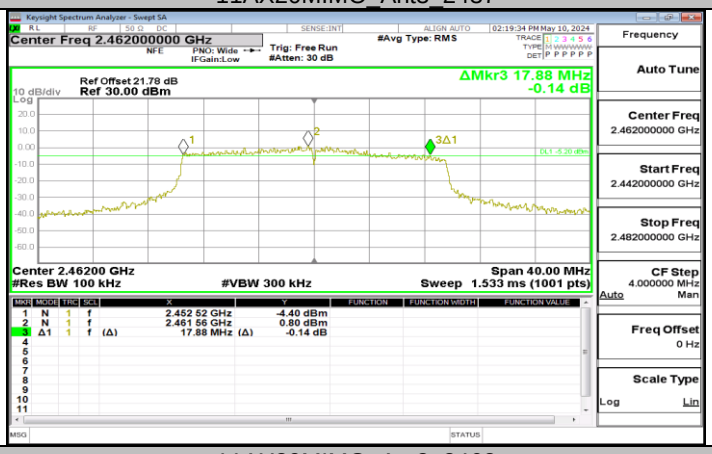

11AX20MIMO_Ant2_2462

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