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

TEST REPORT

For

WIFI+BT Module

MODEL NUMBER: WXT05R2601

FCC ID: 2AC23-WXT05

IC: 12290A-WXT05

REPORT NUMBER: 4790390611.2-1-RF-3

ISSUE DATE: June 8, 2022

Prepared for

Hui Zhou Gaoshengda Technology Co.,LTD
No.2,Jin-da Road,Huinan High-tech Industrial Park, Huizhou, Guangdong, China

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

Tel: +86 769 22038881
Fax: +86 769 33244054
Website: www.ul.com

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	June 8, 2022	Initial Issue	

Summary of Test Results

Summary of Test Results			
Test Item	**Clause**	**Limit/Requirement**	**Result**
Antenna Requirement	N/A	FCC Part 15.203/15.247 (c) RSS-GEN Clause 6.8	Pass
AC Power Line Conducted Emission	ANSI C63.10-2013, Clause 6.2	FCC Part 15.207 RSS-GEN Clause 8.8	Pass
Conducted Output Power	ANSI C63.10-2013, Clause 11.9.1.3	FCC Part 15.247 (b)(3) RSS-247 Clause 5.4 (d)	Pass
6dB Bandwidth and 99% Occupied Bandwidth	ANSI C63.10-2013, Clause 11.8.1	FCC Part 15.247 (a)(2) RSS-247 Clause 5.2 (a) ISED RSS-Gen Clause 6.7	Pass
Power Spectral Density	ANSI C63.10-2013, Clause 11.10.2	FCC Part 15.247 (e) RSS-247 Clause 5.2 (b)	Pass
Conducted Band edge and spurious emission	ANSI C63.10-2013, Clause 11.11	FCC Part 15.247(d) RSS-247 Clause 5.5	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 RSS-247 Clause 5.5 RSS-GEN Clause 8.9	
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
ISED RSS-247 ISSUE 2> when <Accuracy Method> decision rule is applied.

CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Hui Zhou Gaoshengda Technology Co.,LTD
Address:	No.2,Jin-da Road,Huinan High-tech Industrial Park, Huizhou, Guangdong, China

Manufacturer Information

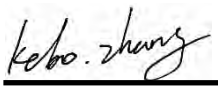
Company Name:	Hui Zhou Gaoshengda Technology Co.,LTD
Address:	No.2,Jin-da Road,Huinan High-tech Industrial Park, Huizhou, Guangdong, China

EUT Information

EUT Name:	WIFI+BT Module
Model:	WXT05R2601
Brand:	GSD
Sample Received Date:	May 7, 2022
Sample Status:	Normal
Sample ID:	4932467
Date of Tested:	May 9, 2022 to June 7, 2022

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART C **ISED RSS-247 ISSUE 2**	**Pass**

Prepared By:



Kebo Zhang

Senior Project Engineer

Checked By:

Shawn Wen

Laboratory Leader

Approved By:

Stephen Guo

Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 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, CFR 47 FCC Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 2 and ISED RSS-GEN Issue 5.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**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 Delcaration 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-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. MEASUREMENT UNCERTAINTY

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

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.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	WIFI+BT Module
Model	WXT05R2601

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(256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Normal Test Voltage:	DC 3.3 V

5.2. CHANNEL LIST

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

Channel List for 802.11n/ax (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 AVERAGE EIRP

IEEE Std. 802.11	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)	Maximum AVG EIRP (dBm)
b	2412 ~ 2462	1-11[11]	15.87	18.85
g	2412 ~ 2462	1-11[11]	16.37	19.35
n HT20	2412 ~ 2462	1-11[11]	19.22	22.20
n HT40	2422 ~ 2452	3-9[7]	16.62	19.60
ax HE20	2412 ~ 2462	1-11[11]	18.73	21.71
ax HE40	2422 ~ 2452	3-9[7]	19.22	22.20

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		MP Tool						
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	1	16	16	16	/			
	2	16	16	16				
802.11g	1	16	16	16				
	2	16	16	16				
802.11n HT20	1	16	16	16				
	2	16	16	16				
802.11n HT40	1	/			14	14	14	
	2	/			14	14	14	
802.11ax HE20	1	16	16	16	/			
	2	16	16	16				
802.11ax HE40	1	/			16	16	15	
	2	/			16	16	15	

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 1 and Antenna 2 has the same power setting, so only Antenna 1 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 2 separate antennas which correspond to 2 separate antenna ports. Core 1 and Core 2 correspond to antenna 1 and antenna 2 respectively.

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

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

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

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

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

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
1	2412-2462	PIFA antenna	2
2	2412-2462	PIFA antenna	2.98

The EUT support Cyclic Shift Diversity(CDD) mode.

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

For output power measurements:
Directional gain= G_{ANT} + Array Gain = 2.98 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 = 5.99 dBi
Array Gain = 10 log(N_{ANT}/N_{SS}) dB.
N_{ANT} : number of transmit antennas
N_{SS} : number of spatial streams, The worst case directional gain will occur when N_{SS} = 1

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	☒2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11g	☒2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	☒2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	☒2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11ax HE20	☒2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
IEEE 802.11ax HE40	☒2TX, 2RX	ANT 1 and ANT 2 can be used as transmitting/receiving antenna.
Note: 1.BT&WLAN 2.4G, BT & WLAN 5G, WLAN 2.4G & WLAN 5G can't transmit simultaneously. (declared by client)		

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

5.7. SUPPORT UNITS FOR SYSTEM TEST

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	Lenovo	T460S	SL10K24796 JS
2	Adapter	Lenovo	ADLX65YCC3D	Input: 100~240 Vac, 50-60Hz Output:20 Vdc, 3.25 A, 65W

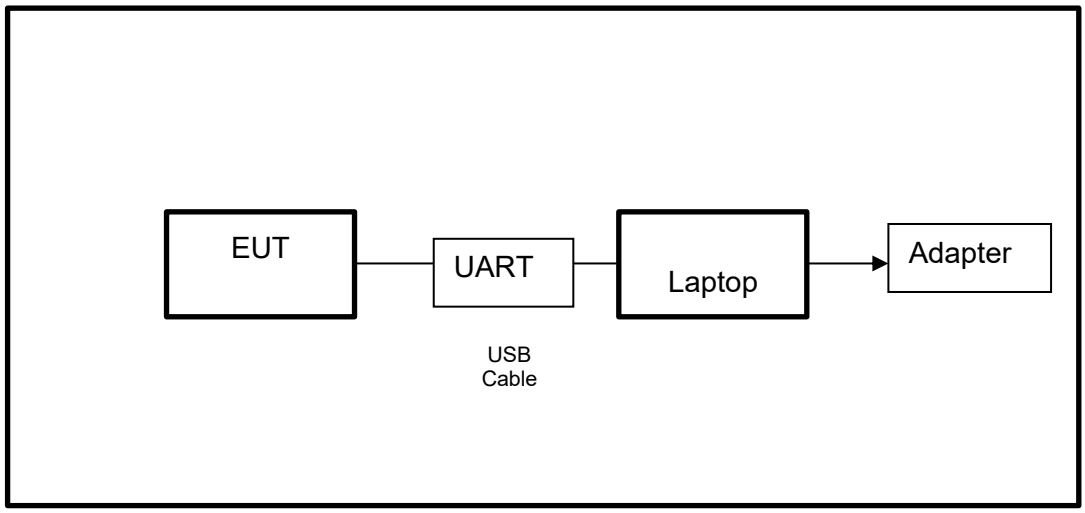
I/O CABLES

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

ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
1	/	/	/	/

5.1. SETUP DIAGRAM



Note: AC adapter only use for AC POWER LINE CONDUCTED EMISSIONS testing.

6. MEASURING EQUIPMENT AND SOFTWARE USED

R&S TS 8997 Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Vector Signal Generator	R&S	SMBV100A	261637	Oct.30, 2021	Oct.29, 2022
Signal Generator	R&S	SMB100A	178553	Oct.30, 2021	Oct.29, 2022
Signal Analyzer	R&S	FSV40	101118	Oct.30, 2021	Oct.29, 2022
Software					
Description	Manufacturer	Name	Version		
For R&S TS 8997 Test System	Rohde & Schwarz	EMC 32	10.60.10		

Tonsend RF Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Wideband Radio Communication Tester	R&S	CMW500	155523	Oct.30, 2021	Oct.29, 2022
Wireless Connectivity Tester	R&S	CMW270	1201.0002N75-102	Sep.29, 2021	Sep.28, 2022
PXA Signal Analyzer	Keysight	N9030A	MY55410512	Oct.30, 2021	Oct.29, 2022
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.30, 2021	Oct.29, 2022
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Oct.30, 2021	Oct.29, 2022
DC power supply	Keysight	E3642A	MY55159130	Oct.30, 2021	Oct.29, 2022
Temperature & Humidity Chamber	SANMOOD	SG-80-CC-2	2088	Nov.20,2020	Nov.19,2022
Software					
Description	Manufacturer	Name	Version		
Tonsend SRD Test System	Tonsend	JS1120-3 RF Test System	2.6.77.0518		

Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Oct.30, 2021	Oct.29, 2022
Two-Line V-Network	R&S	ENV216	101983	Oct.30, 2021	Oct.29, 2022
Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Oct.30, 2021	Oct.29, 2022
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.30, 2021	Oct.29, 2022
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.30, 2021	Oct.29, 2022
EMI Measurement Receiver	R&S	ESR26	101377	Oct.30, 2021	Oct.29, 2022
Horn Antenna	TDK	HRN-0118	130940	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.30, 2021	Oct.29, 2022
Horn Antenna	Schwarzbeck	BBHA9170	697	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.31, 2021	Oct.30, 2022
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct.31, 2021	Oct.30, 2022
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.31, 2021	Oct.30, 2022
Preamplifier	Mini-Circuits	ZX60-83LN-S+	SUP01201941	Oct.31, 2021	Oct.30, 2022
High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Oct.31, 2021	Oct.30, 2022
Highpass Filter	Wainwright	WHKX10-5850-6500-1800-40SS	4	Oct.31, 2021	Oct.30, 2022
Band Reject Filter	Wainwright	WRCJV12-5695-5725-5850-5880-40SS	4	Oct.31, 2021	Oct.30, 2022
Band Reject Filter	Wainwright	WRCJV20-5120-5150-5350-5380-60SS	2	Oct.31, 2021	Oct.30, 2022
Band Reject Filter	Wainwright	WRCJV20-5440-5470-5725-5755-60SS	1	Oct.31, 2021	Oct.30, 2022
Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	Oct.31, 2021	Oct.30, 2022
Band Reject Filter	Wainwright	WRCD5-1879-	1	Oct.31, 2021	Oct.30, 2022

		1879.85-1880.15-1881-40SS			
Notch Filter	Wainwright	WHJ10-882-980-7000-40SS	1	Oct.31, 2021	Oct.30, 2022
Software					
Description			Manufacturer	Name	Version
Test Software for Radiated Emissions			Farad	EZ-EMC	Ver. UL-3A1
Other Instrument					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Temperature humidity probe	OMEGA	ITHX-SD-5	18470007	Nov. 4, 2021	Nov. 3, 2022
Barometer	Yiyi	Baro	N/A	Nov. 15, 2021	Nov. 14, 2022
Power Sensor	Keysight	USB Wideband Power Sensor	MY5100022	Oct.30, 2021	Oct.29, 2022

7. ANTENNA PORT TEST RESULTS

7.1. CONDUCTED OUTPUT POWER

LIMITS

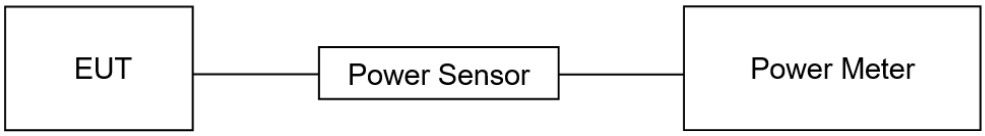
CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3) ISED RSS-247 5.4 (d)	AVG Conduct Output Power	1 watt or 30 dBm	2400-2483.5

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	23.7℃	Relative Humidity	63%
Atmosphere Pressure	101.7kPa	Test Voltage	DC 3.3 V

TEST RESULTS

Please refer to section "Test Data" - Appendix C

7.2. 6DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2) ISED RSS-247 5.2 (a)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	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.

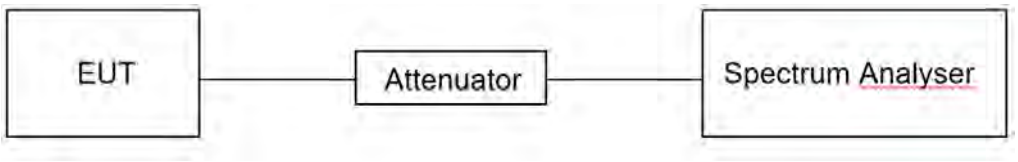
Connect the EUT to the spectrum analyser and use the following settings:

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.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.7℃	Relative Humidity	63%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3 V

TEST RESULTS

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

7.3. POWER SPECTRAL DENSITY

LIMITS

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

TEST PROCEDURE

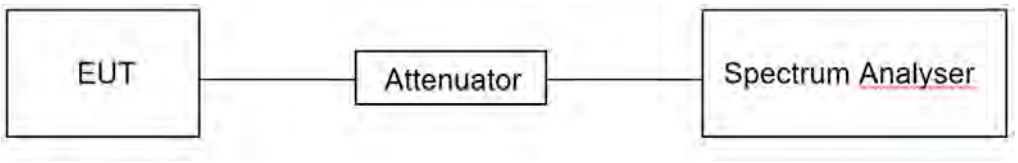
Refer to ANSI C63.10-2013 clause 11.10.5.

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

Center Frequency	The center frequency of the channel under test
Detector	power averaging (rms) or sample detector
RBW	3 kHz ≤ RBW ≤ 100 kHz
VBW	≥3 × RBW
Span	1.5 x OBW bandwidth
Trace	Average
Sweep time	Auto couple

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.7℃	Relative Humidity	63%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3 V

TEST RESULTS

Please refer to section "Test Data" - Appendix D

7.4. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d) ISED RSS-247 5.5	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 analyser and use the following settings for reference level measurement:

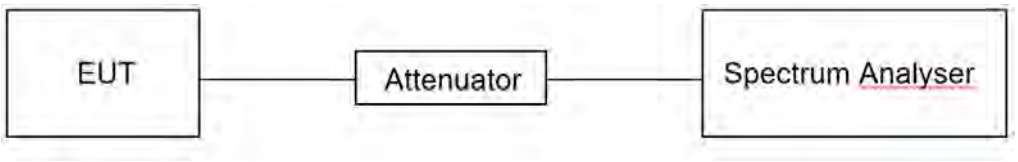
Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

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.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.7℃	Relative Humidity	63%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3 V

TEST RESULTS

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

7.5. DUTY CYCLE

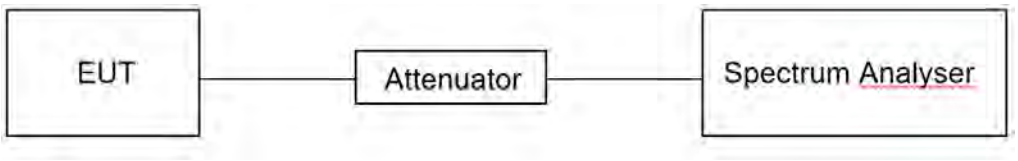
LIMITS

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	23.7℃	Relative Humidity	63%
Atmosphere Pressure	101.2kPa	Test Voltage	DC 3.3 V

TEST RESULTS

Please refer to section "Test Data" - Appendix G

8. RADIATED TEST RESULTS

LIMITS

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

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

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

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

FCC Emissions radiated outside of the specified frequency bands below 30 MHz		
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

ISED General field strength limits at frequencies below 30 MHz

Table 6 – General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) (µA/m)	Measurement distance (m)
9 - 490 kHz[Note 1]	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

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

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

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

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

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

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

Note: [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 analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.

5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.

7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.

8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Below 1 GHz and above 30 MHz

The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Above 1G

The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.6.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

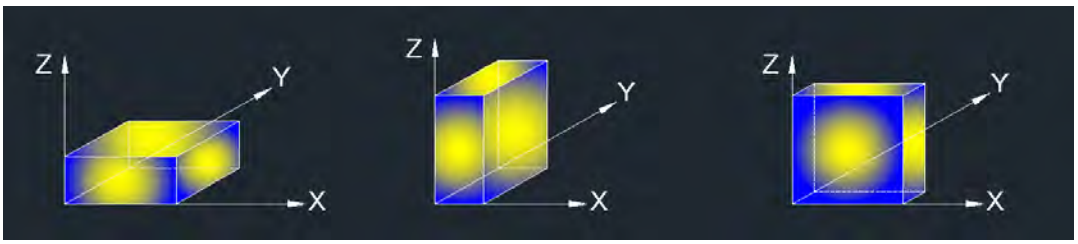
3. The EUT was placed on a turntable with 1.5 m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1 GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.5.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

For bandedge note:

1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.5.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
7. Horizontal and Vertical have been tested, only the worst data was recorded in the report.
8. All modes, channels and antenna have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 1GHz-3GHz note:

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.5.
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, channels and antenna have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 3GHz-18GHz note:

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.5.
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, channels and antenna have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 9kHz-30MHz note:

1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
4. All modes, channels and antenna have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 18GHz-26GHz note:

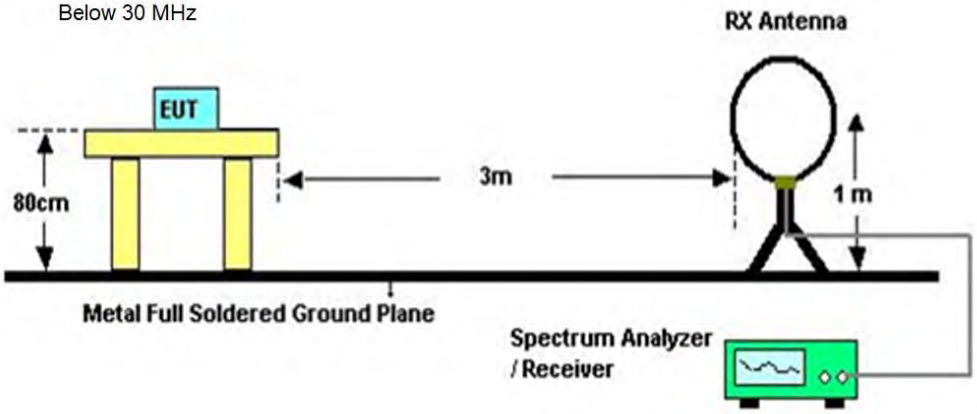
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. All modes, channels and antenna have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 30MHz-1GHz note:

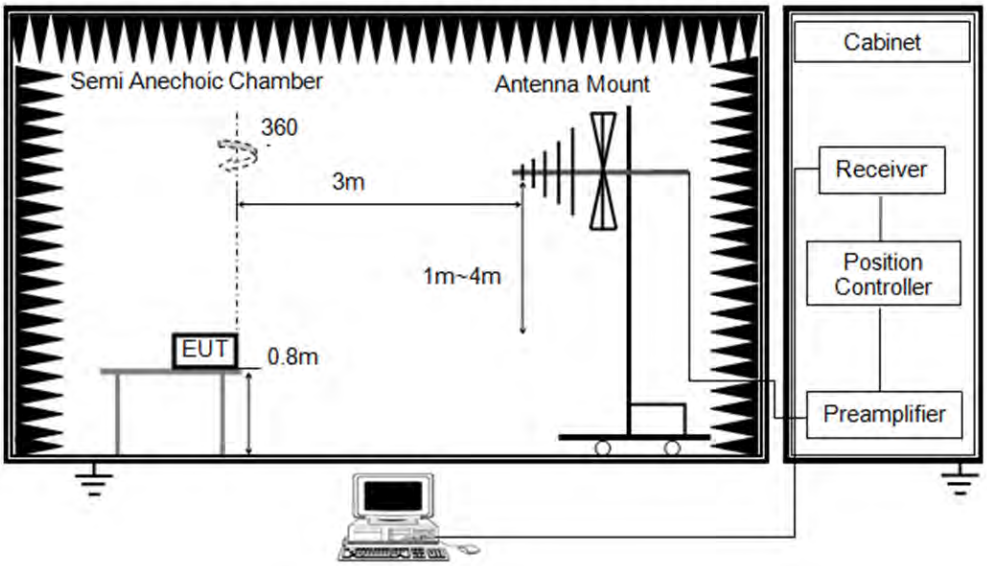
1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
4. All modes, channels and antenna have been tested, only the worst data was recorded in the report.

TEST SETUP

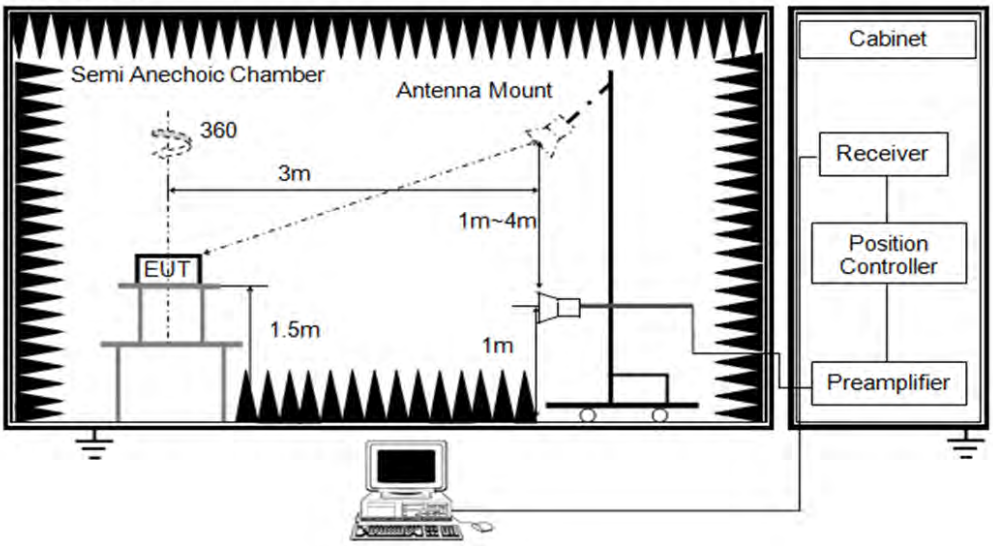
Below 30 MHz



Below 1 GHz and above 30 MHz



Above 1 GHz



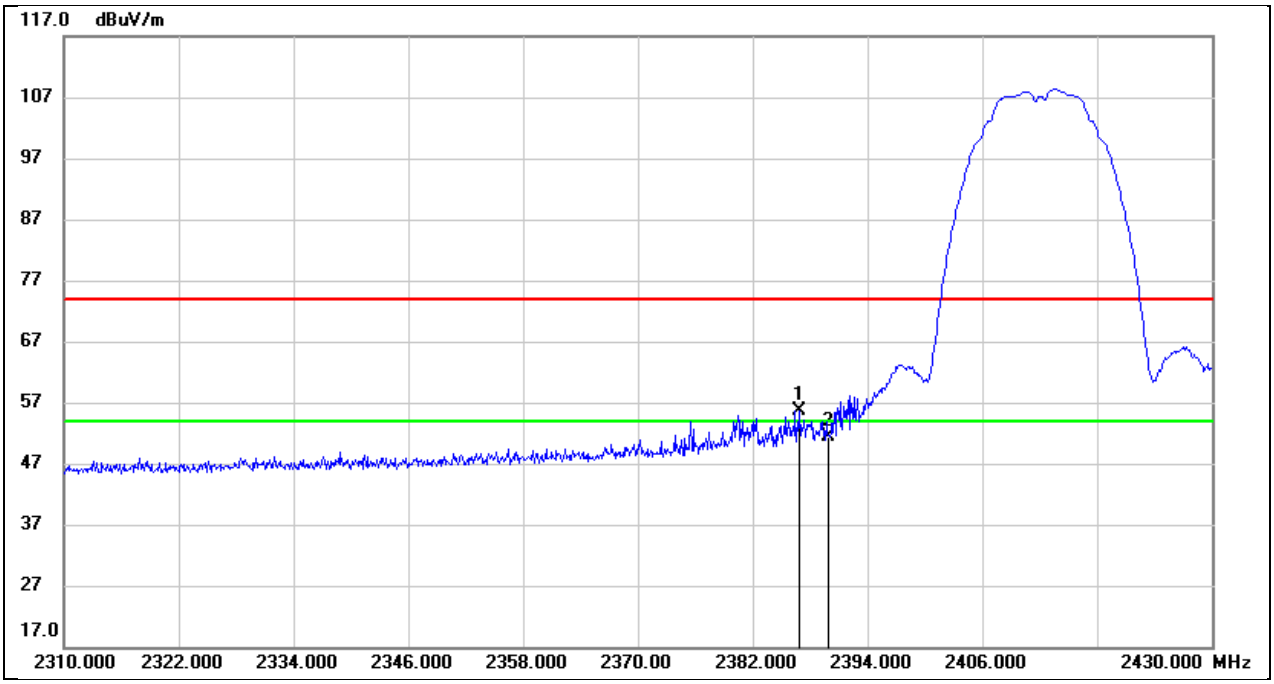
TEST ENVIRONMENT

Temperature	24.3℃	Relative Humidity	61%
Atmosphere Pressure	1010kPa	Test Voltage	DC 3.3 V

TEST RESULTS

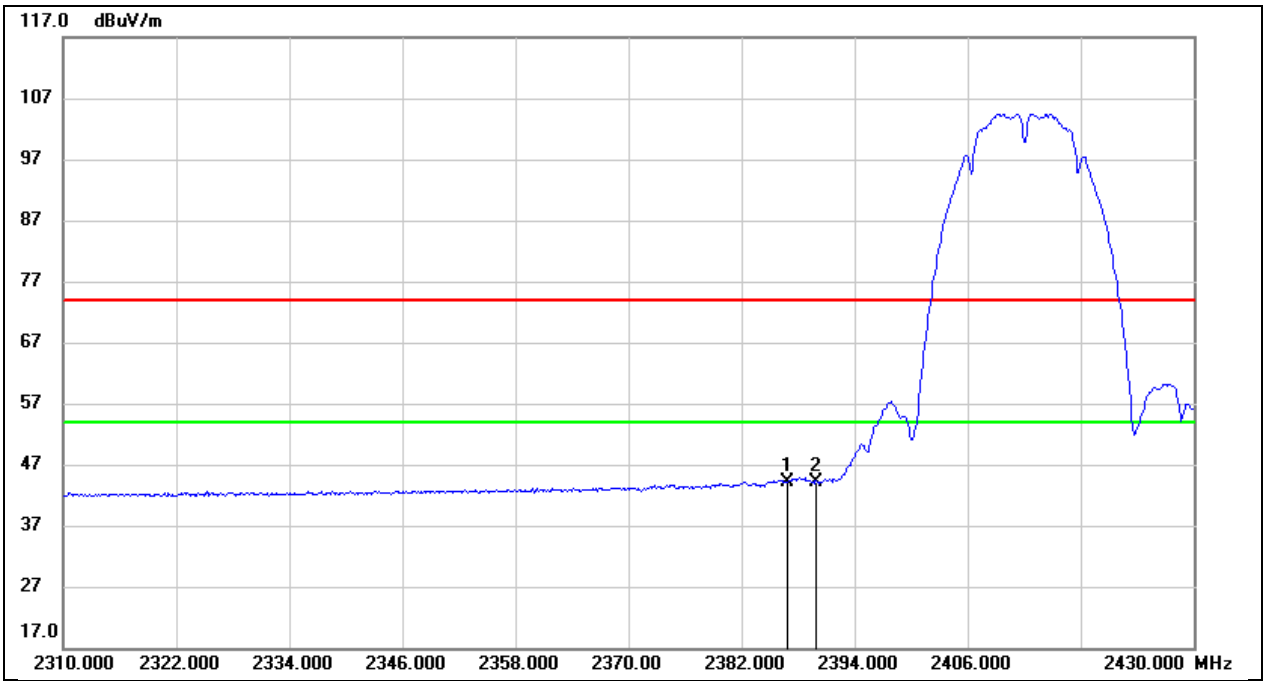
8.1. BANDEDGE

Test Mode:	802.11b PK	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



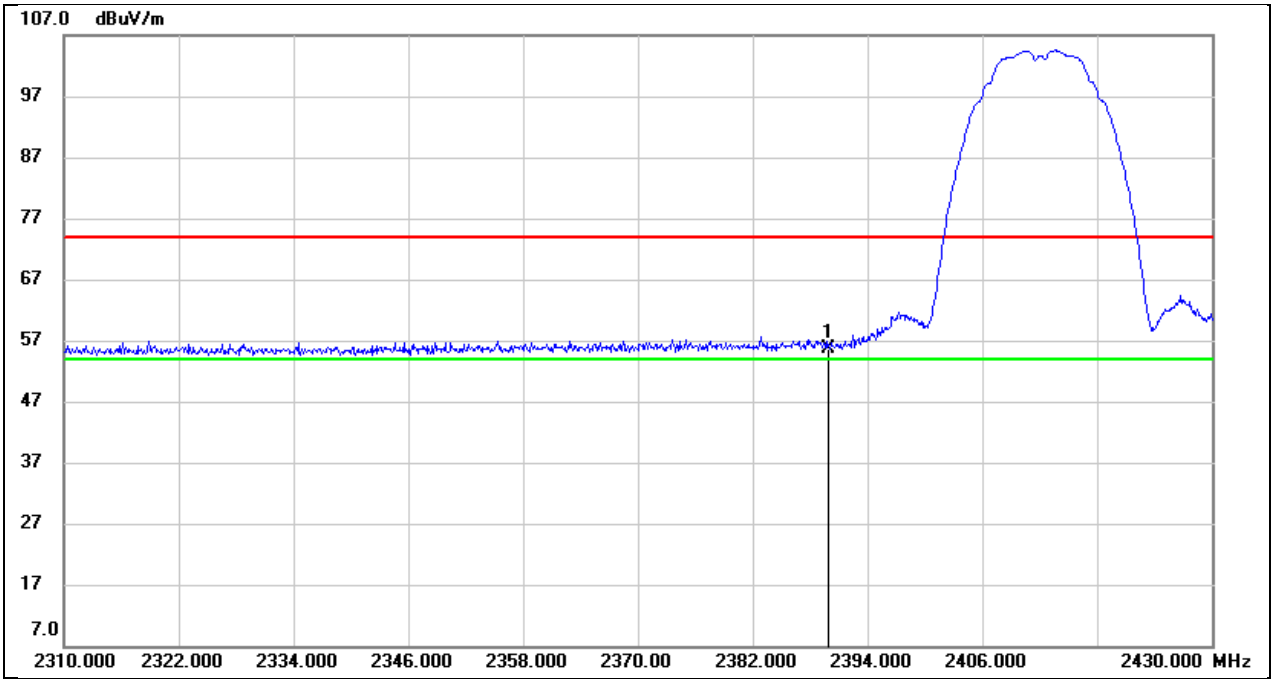
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.920	23.46	32.15	55.61	74.00	-18.39	peak
2	2390.000	19.28	32.16	51.44	74.00	-22.56	peak

Test Mode:	802.11b AV	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



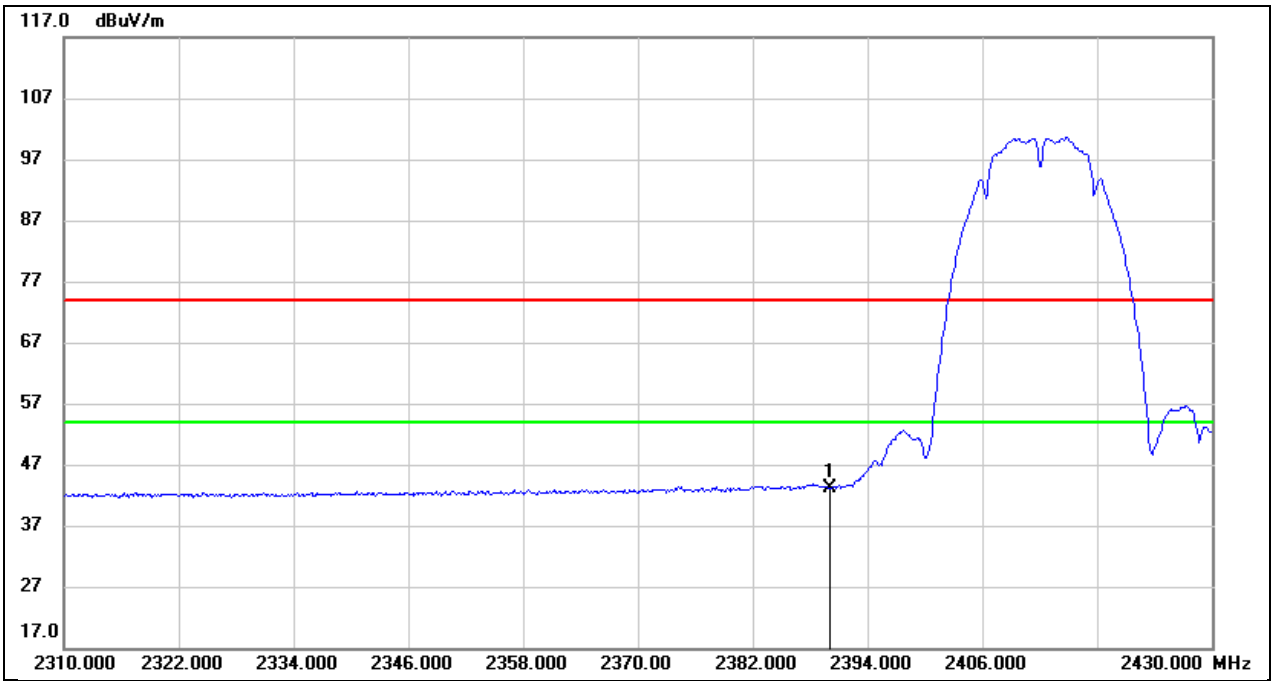
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.920	12.02	32.15	44.17	54.00	-9.83	AVG
2	2390.000	11.94	32.16	44.10	54.00	-9.90	AVG

Test Mode:	802.11b PK	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



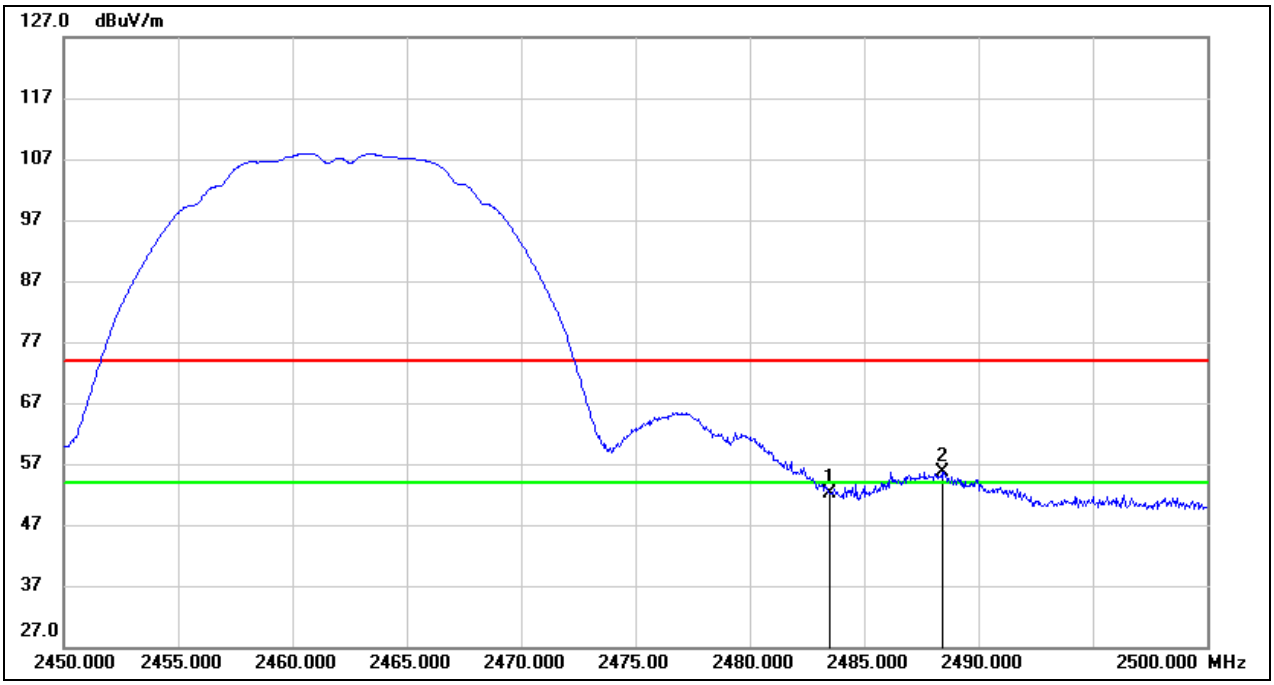
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	23.55	32.16	55.71	74.00	-18.29	peak

Test Mode:	802.11b AV	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



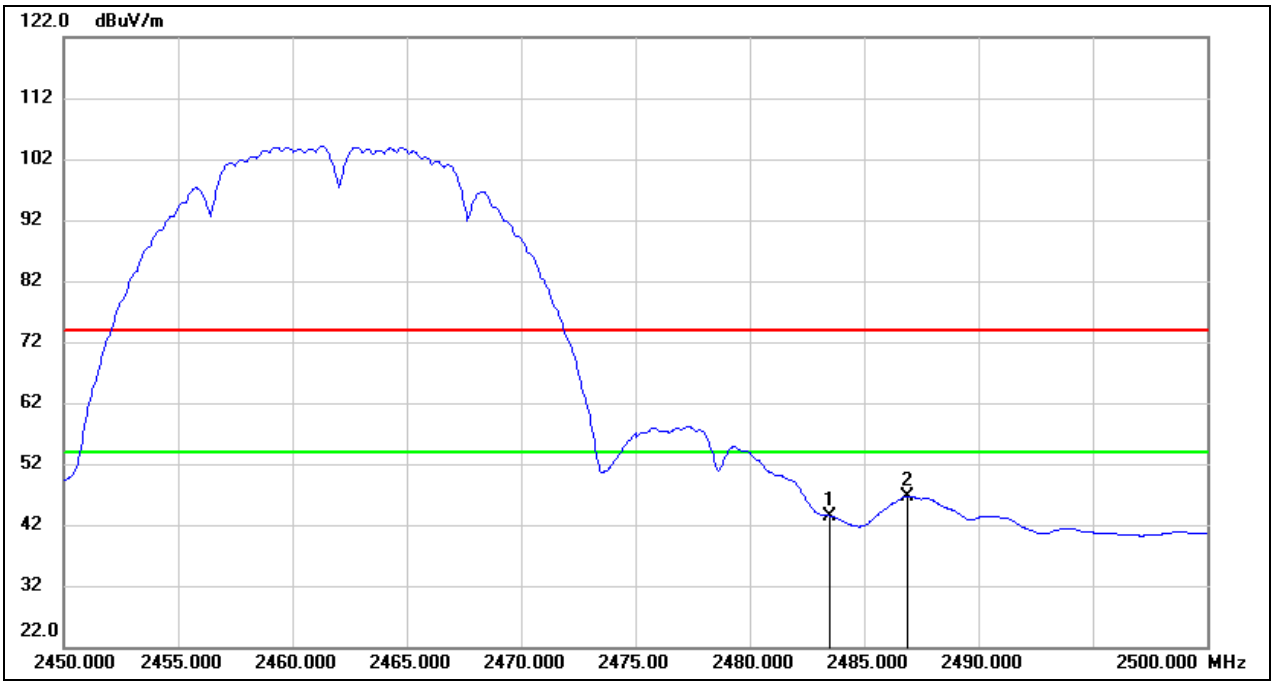
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	11.08	32.16	43.24	54.00	-10.76	AVG

Test Mode:	802.11b PK	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.93	33.10	52.03	74.00	-21.97	peak
2	2488.400	22.61	33.11	55.72	74.00	-18.28	peak

Test Mode:	802.11b AV	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V

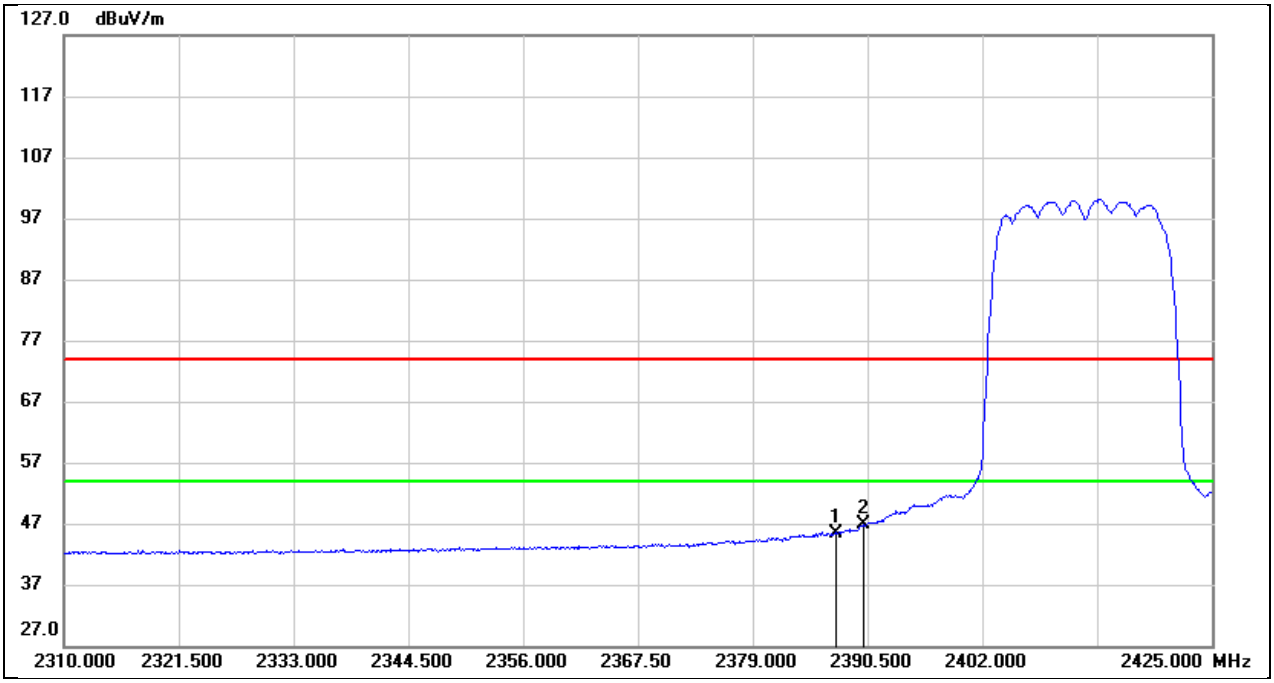


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	10.37	33.10	43.47	54.00	-10.53	AVG
2	2488.400	13.58	33.11	46.69	54.00	-7.31	AVG

Test Mode:	802.11g PK	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V

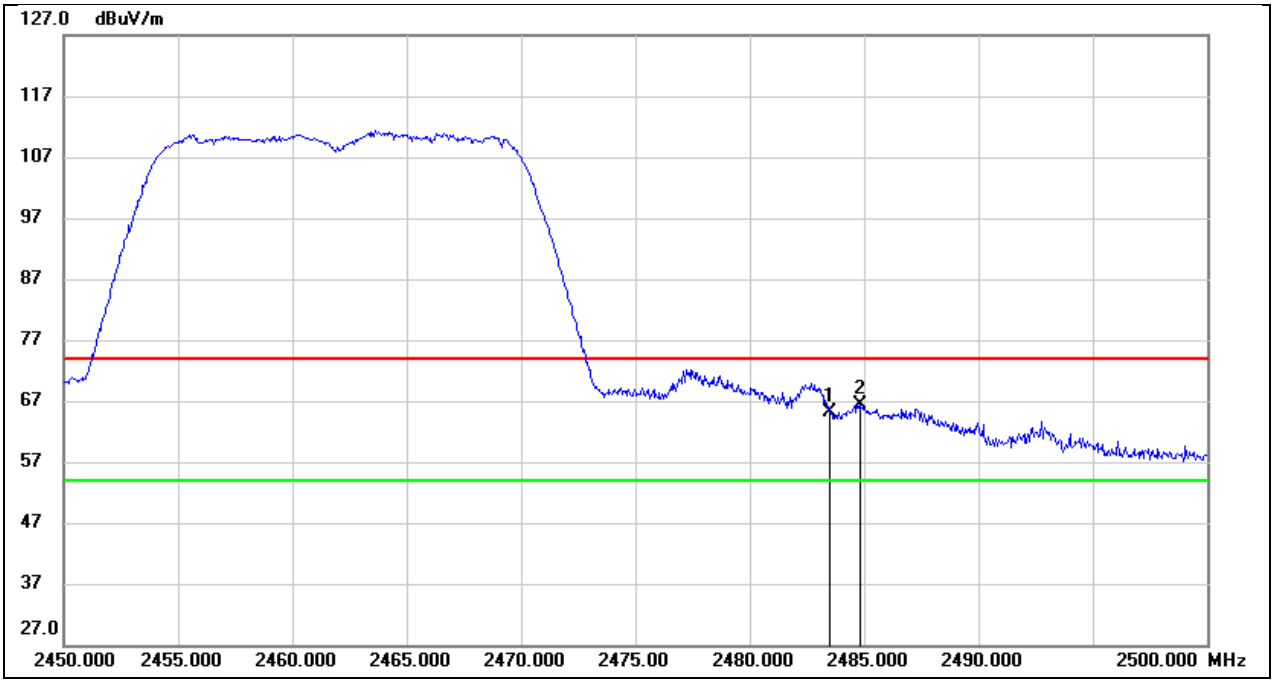
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.165	36.63	32.64	69.27	74.00	-4.73	peak
2	2390.000	34.53	32.66	67.19	74.00	-6.81	peak

Test Mode:	802.11g AV	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



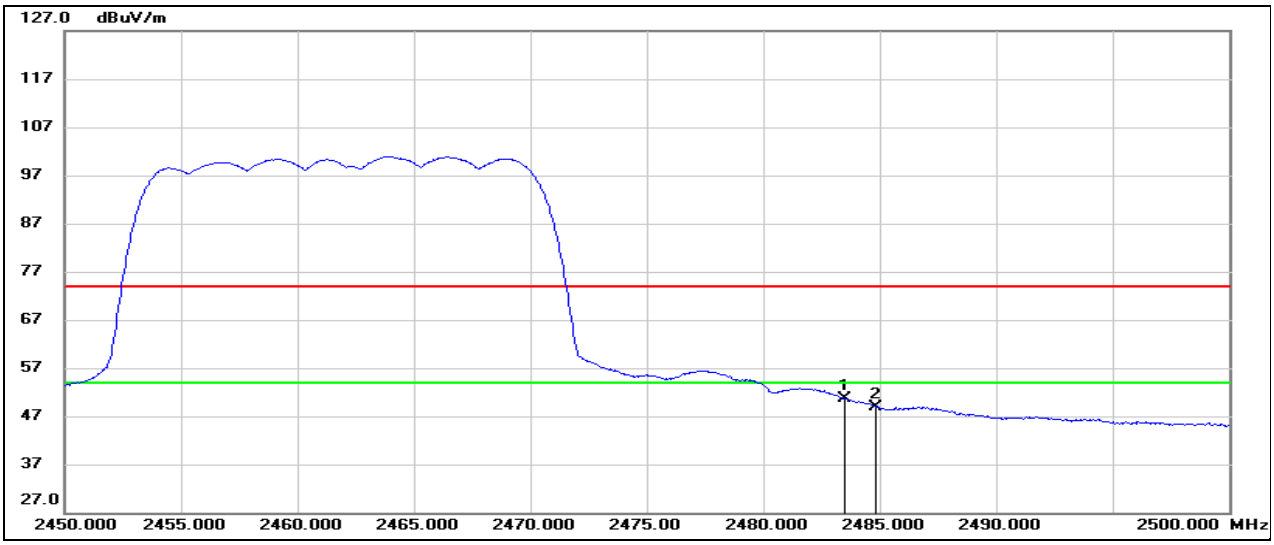
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.165	12.72	32.64	45.36	54.00	-8.64	AVG
2	2390.000	14.29	32.66	46.95	54.00	-7.05	AVG

Test Mode:	802.11g PK	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



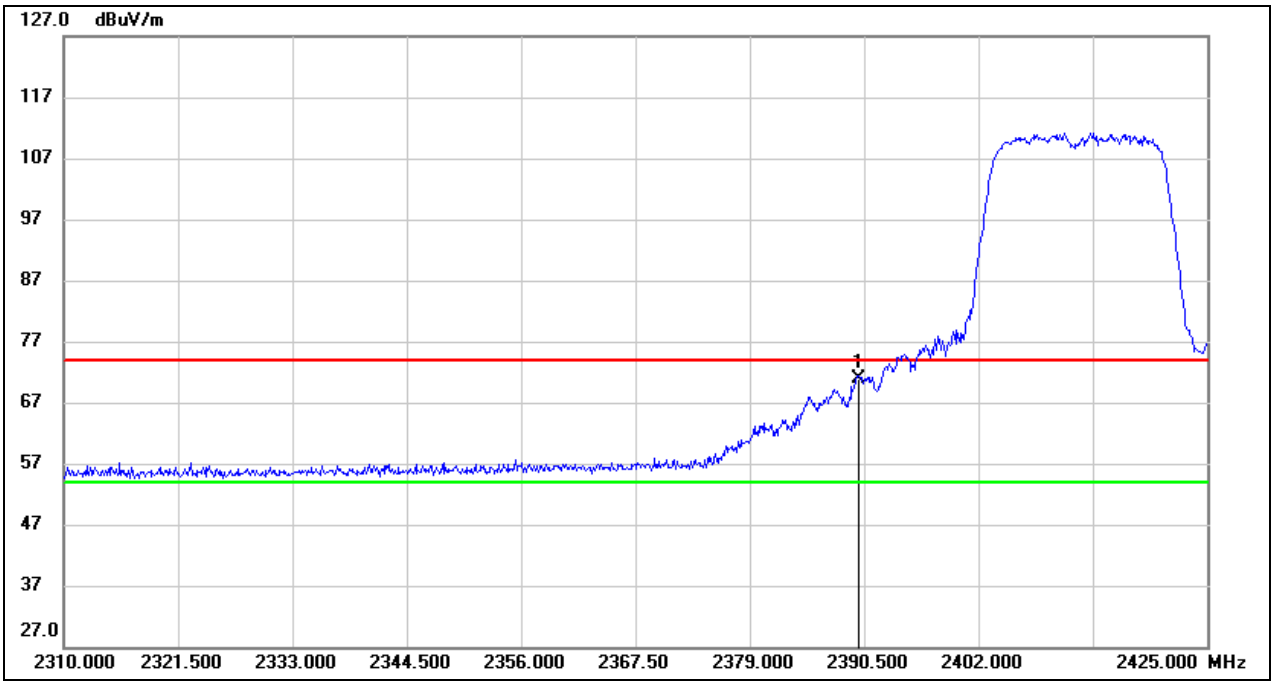
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	31.91	33.10	65.01	74.00	-8.99	peak
2	2484.850	33.28	33.10	66.38	74.00	-7.62	peak

Test Mode:	802.11g AV	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



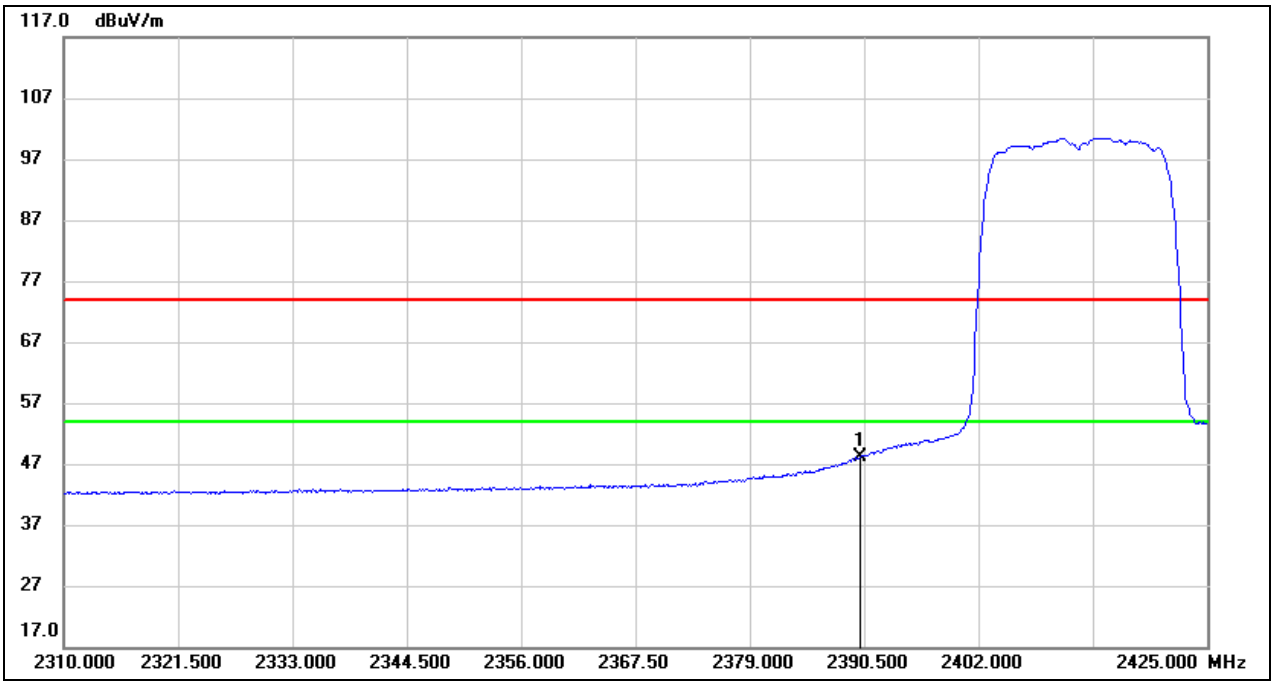
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	17.47	33.10	50.57	54.00	-3.43	AVG
2	2484.850	15.83	33.10	48.93	54.00	-5.07	AVG

Test Mode:	802.11n HT20 PK	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



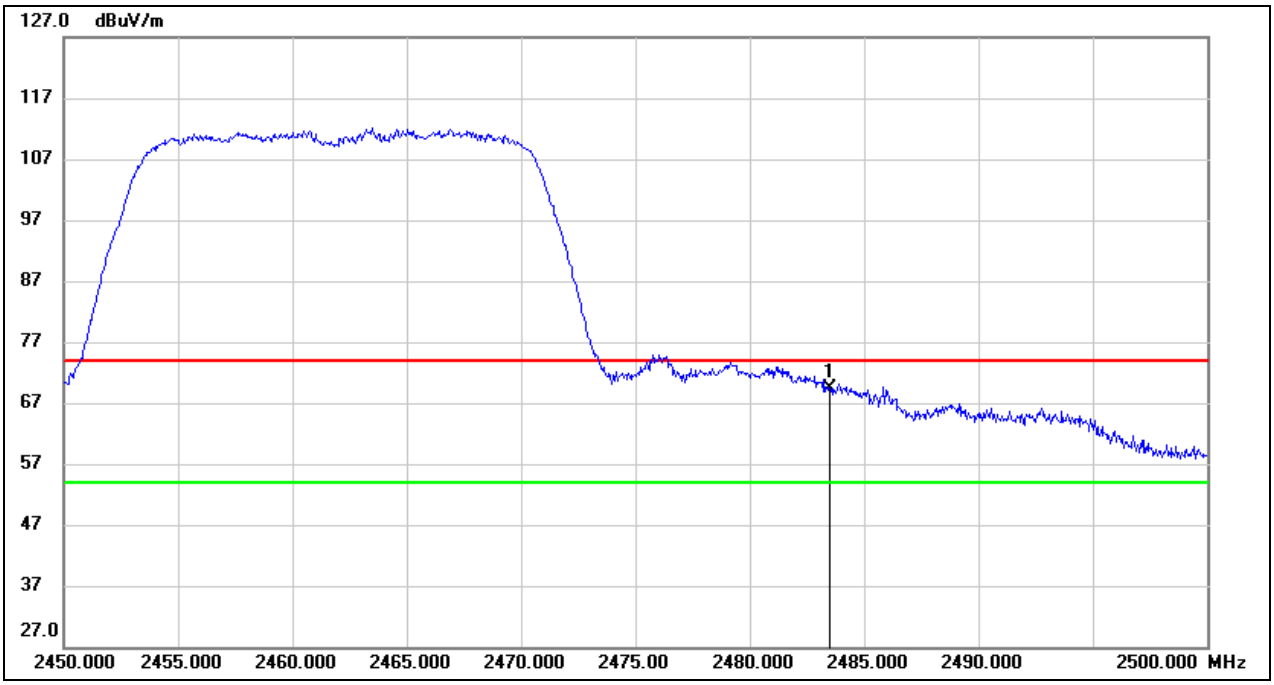
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	38.34	32.66	71.00	74.00	-3.00	peak

Test Mode:	802.11n HT20 AV	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



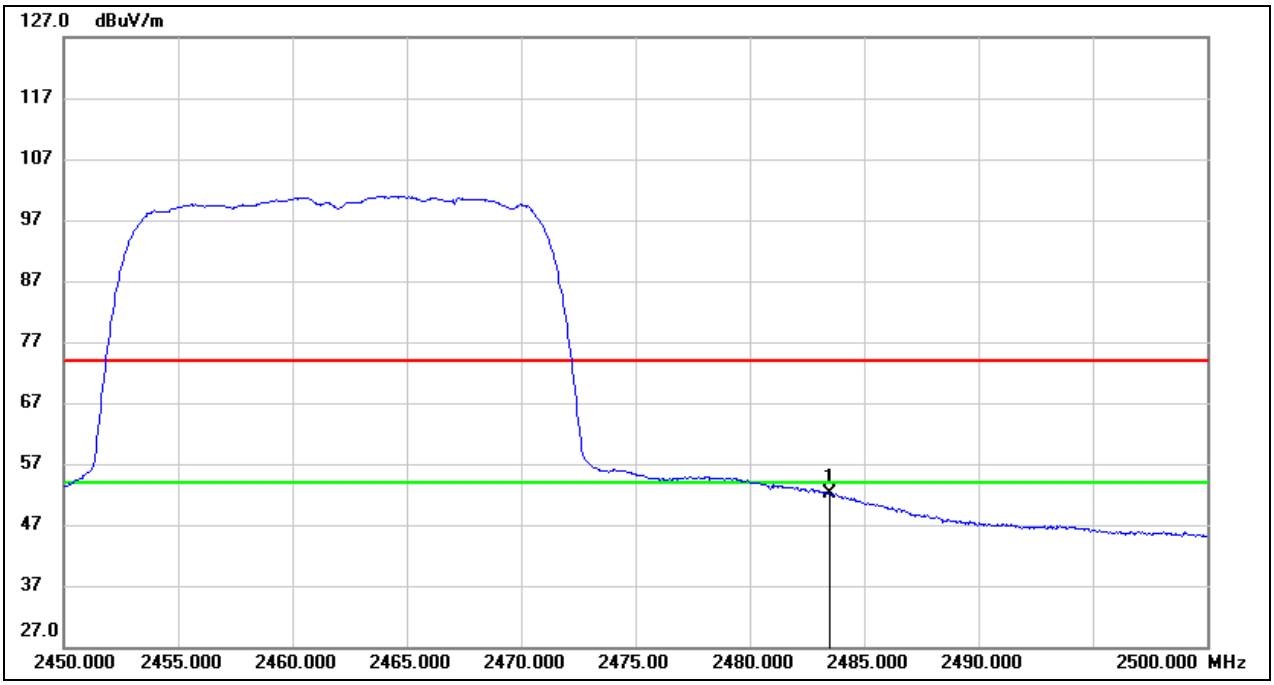
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	15.48	32.66	48.14	54.00	-5.86	AVG

Test Mode:	802.11n HT20 PK	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



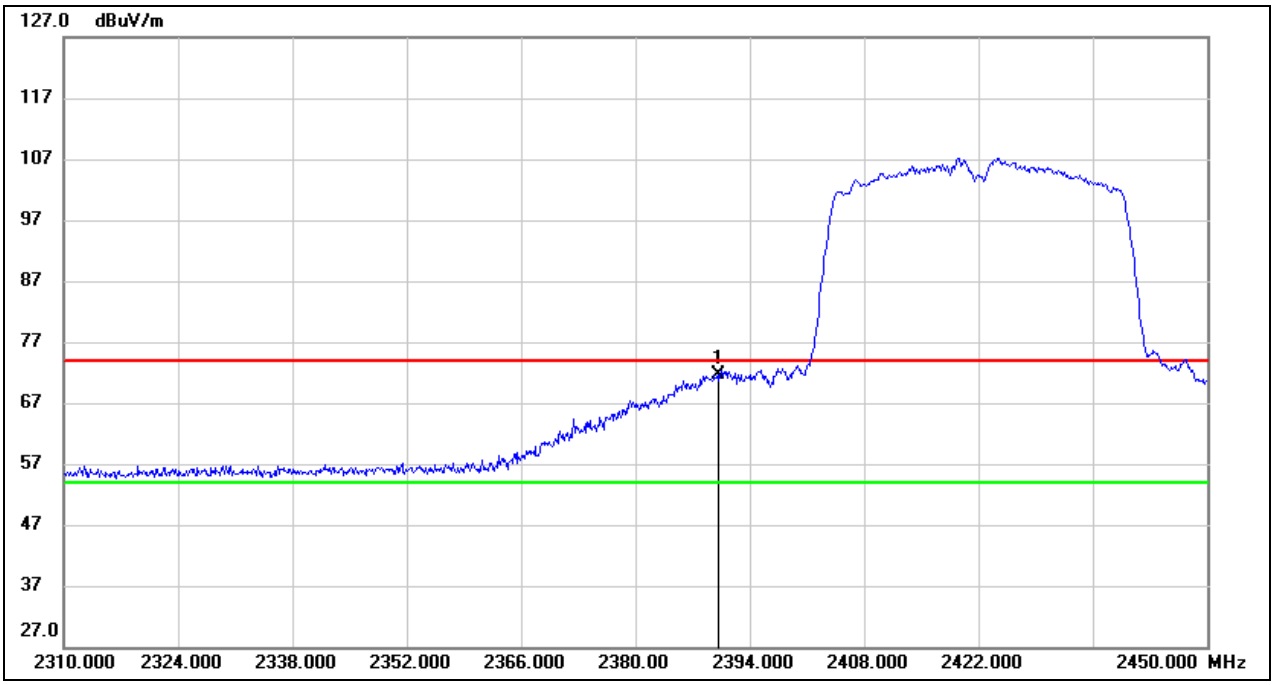
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	36.30	33.10	69.40	74.00	-4.60	peak

Test Mode:	802.11n HT20 AV	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



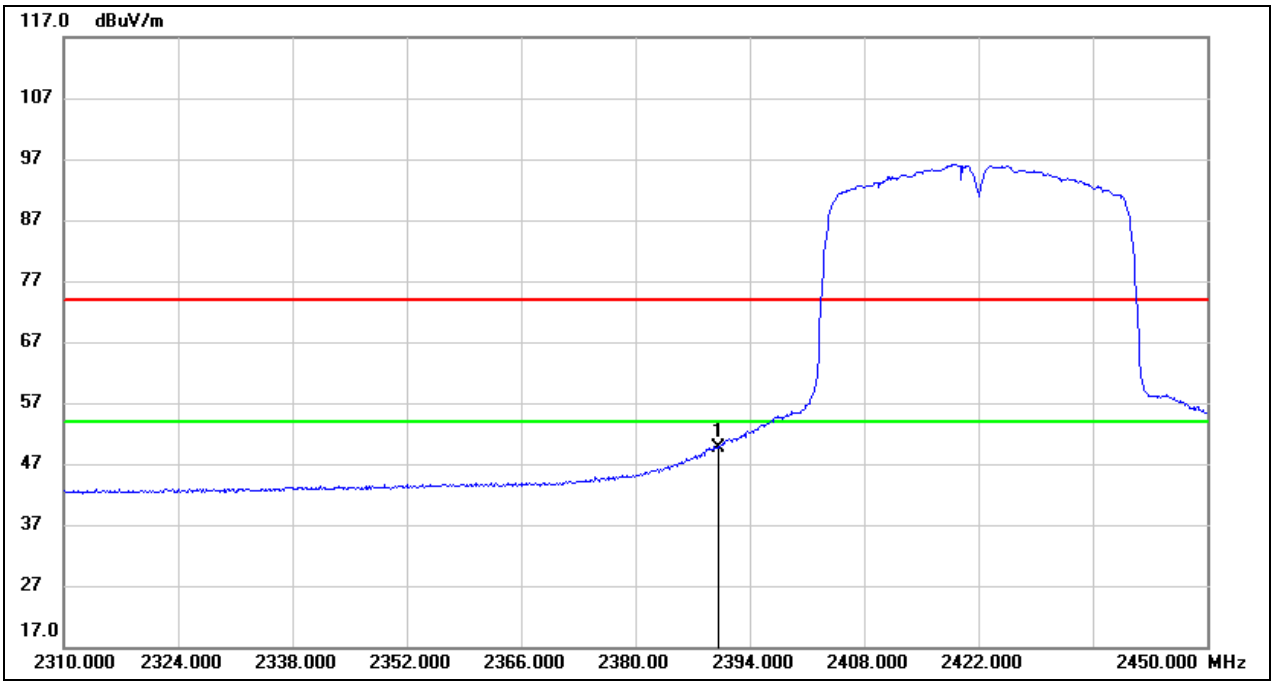
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.99	33.10	52.09	54.00	-1.91	AVG

Test Mode:	802.11n HT40 PK	Channel:	2422
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



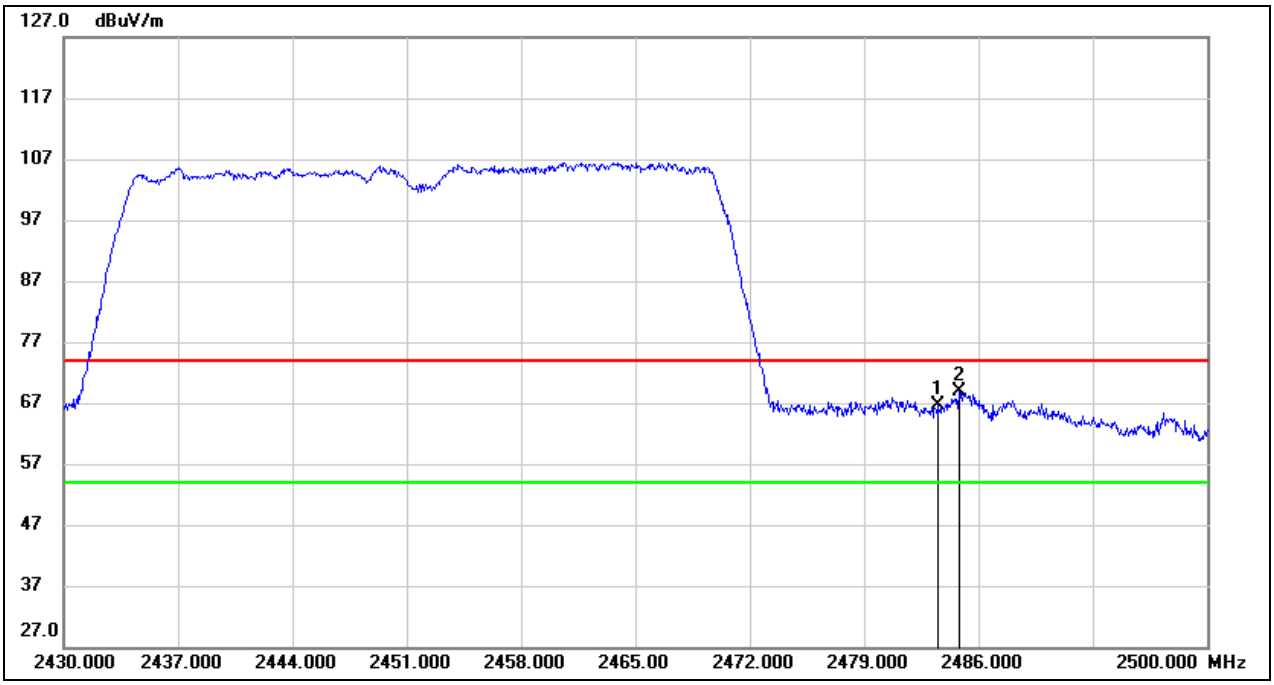
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	38.92	32.66	71.58	74.00	-2.42	peak

Test Mode:	802.11n HT40 AV	Channel:	2422
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



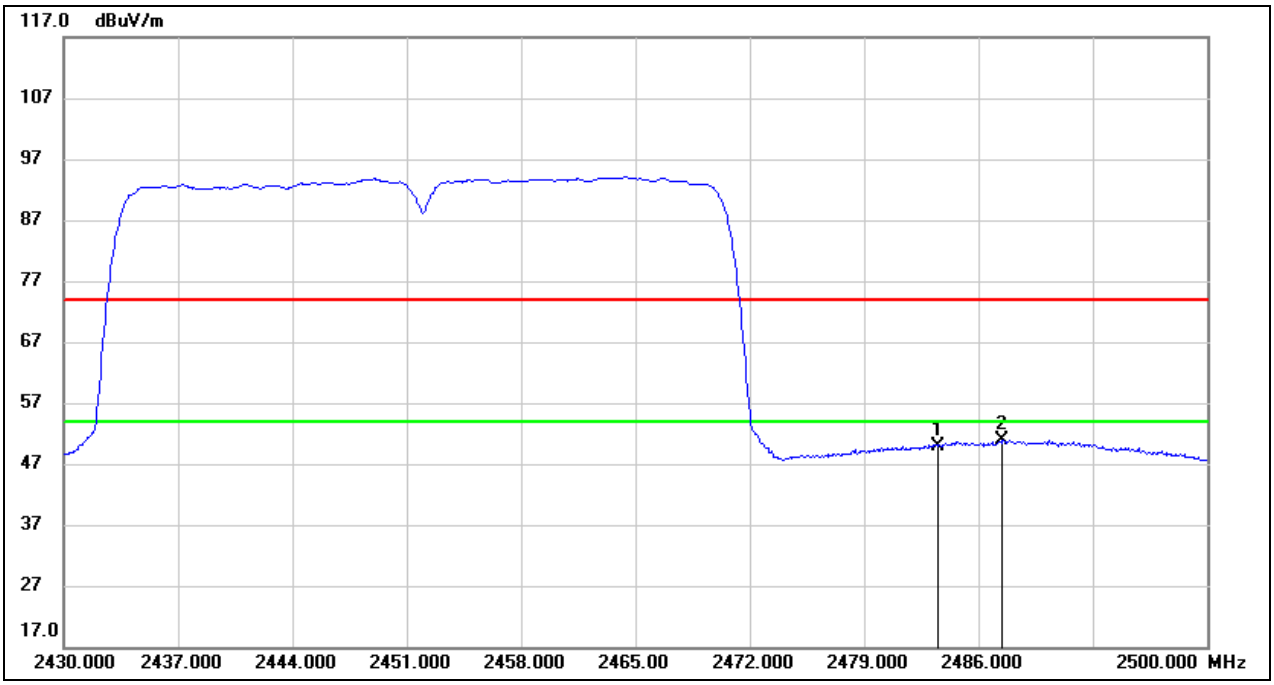
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	17.09	32.66	49.75	54.00	-4.25	AVG

Test Mode:	802.11n HT40 PK	Channel:	2452
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



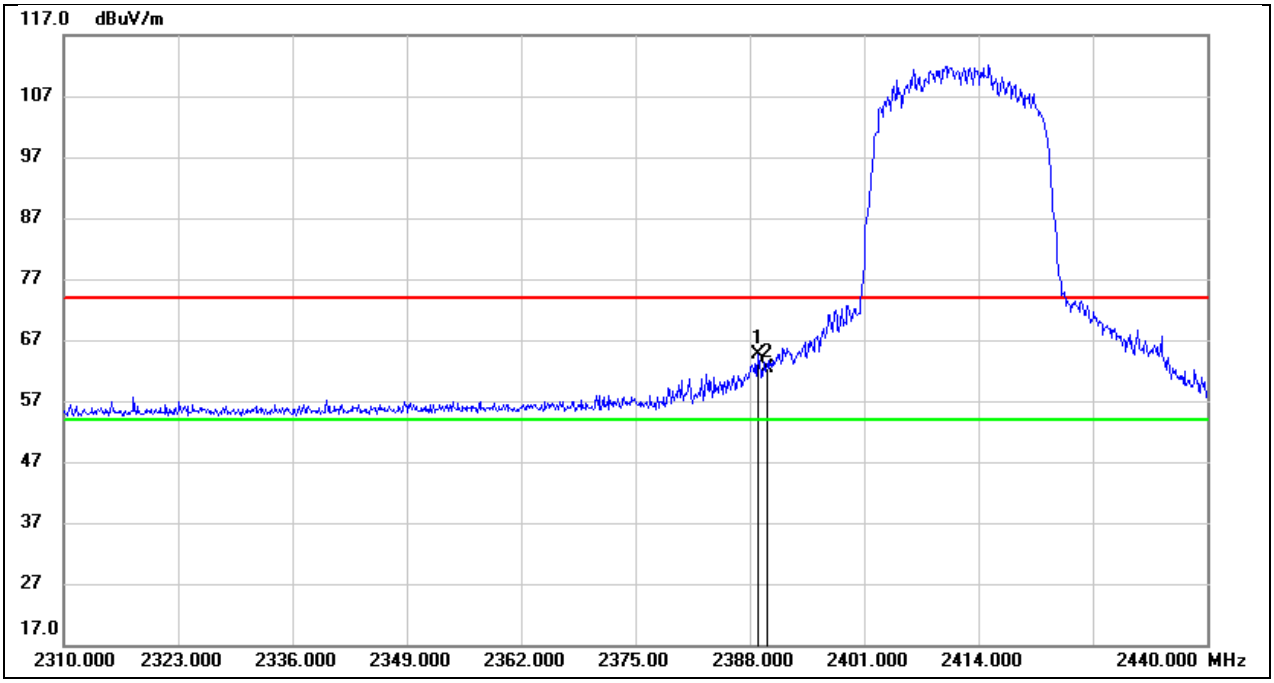
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	33.47	33.10	66.57	74.00	-7.43	peak
2	2484.810	35.71	33.10	68.81	74.00	-5.19	peak

Test Mode:	802.11n HT40 AV	Channel:	2452
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



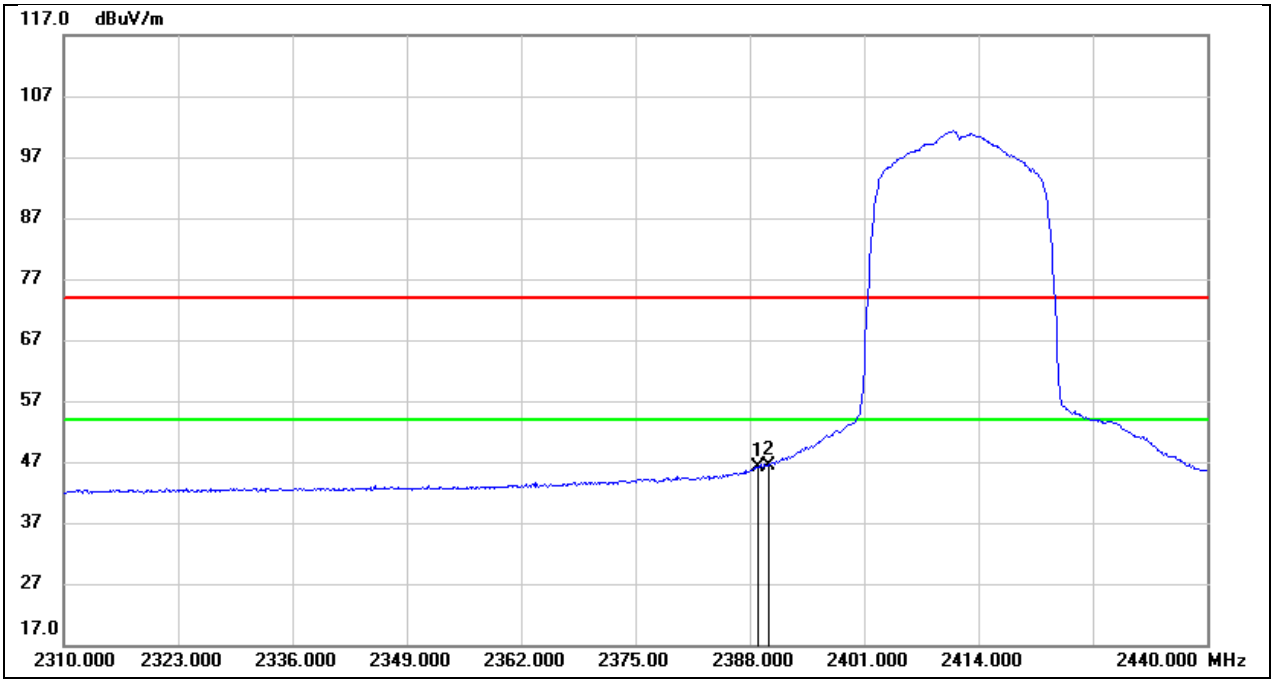
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	16.89	33.10	49.99	54.00	-4.01	AVG
2	2484.810	17.82	33.11	50.93	54.00	-3.07	AVG

Test Mode:	802.11ax HE20 PK	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



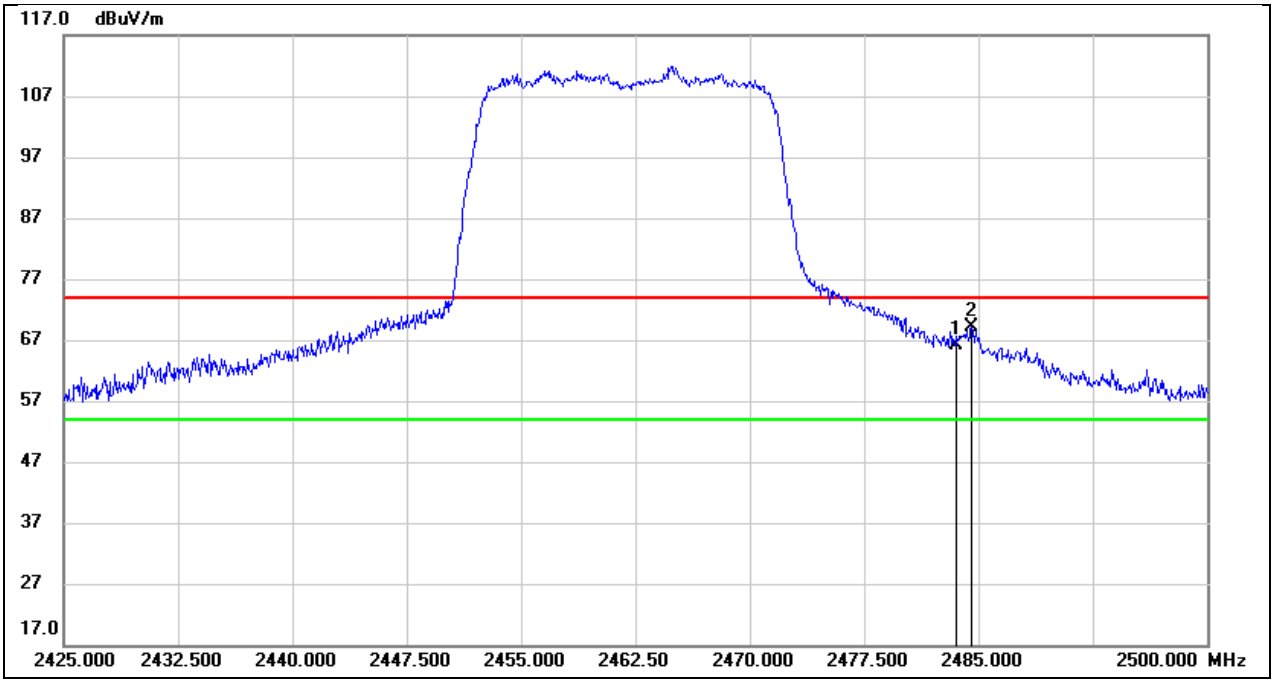
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.910	31.89	32.65	64.54	74.00	-9.46	peak
2	2390.000	29.67	32.66	62.33	74.00	-11.67	peak

Test Mode:	802.11ax HE20 AV	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



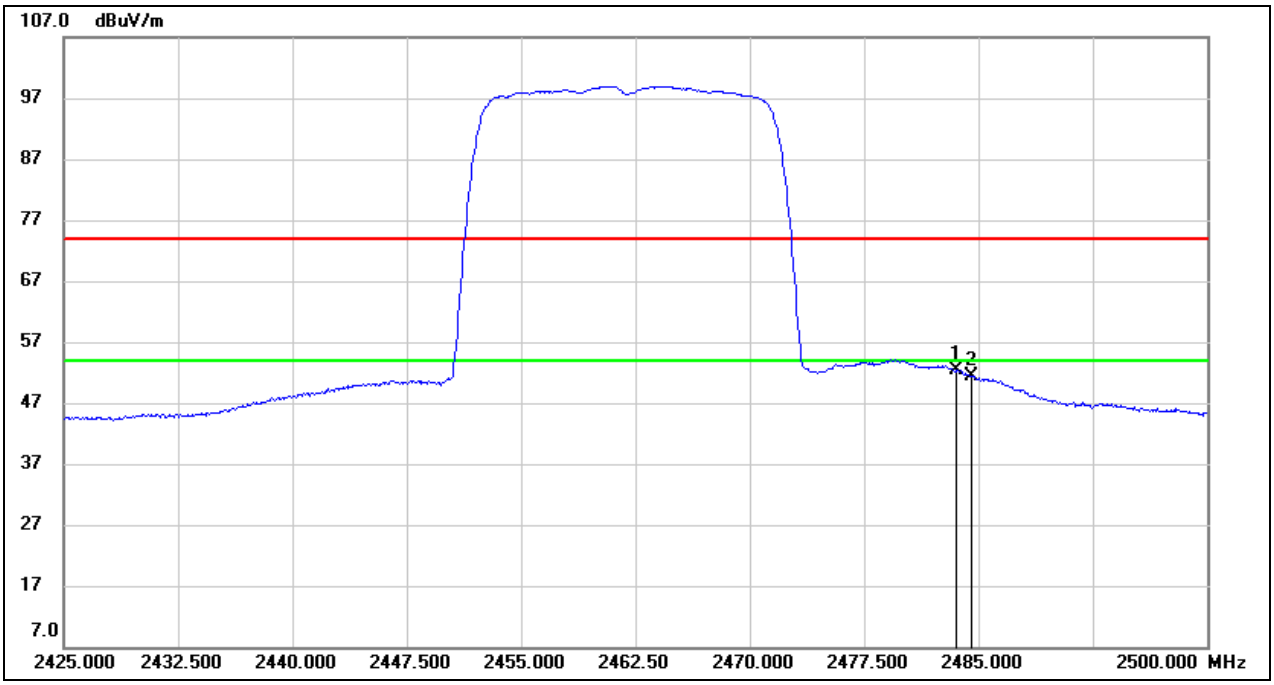
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.910	13.56	32.65	46.21	54.00	-7.79	AVG
2	2390.000	13.78	32.66	46.44	54.00	-7.56	AVG

Test Mode:	802.11ax HE20 PK	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



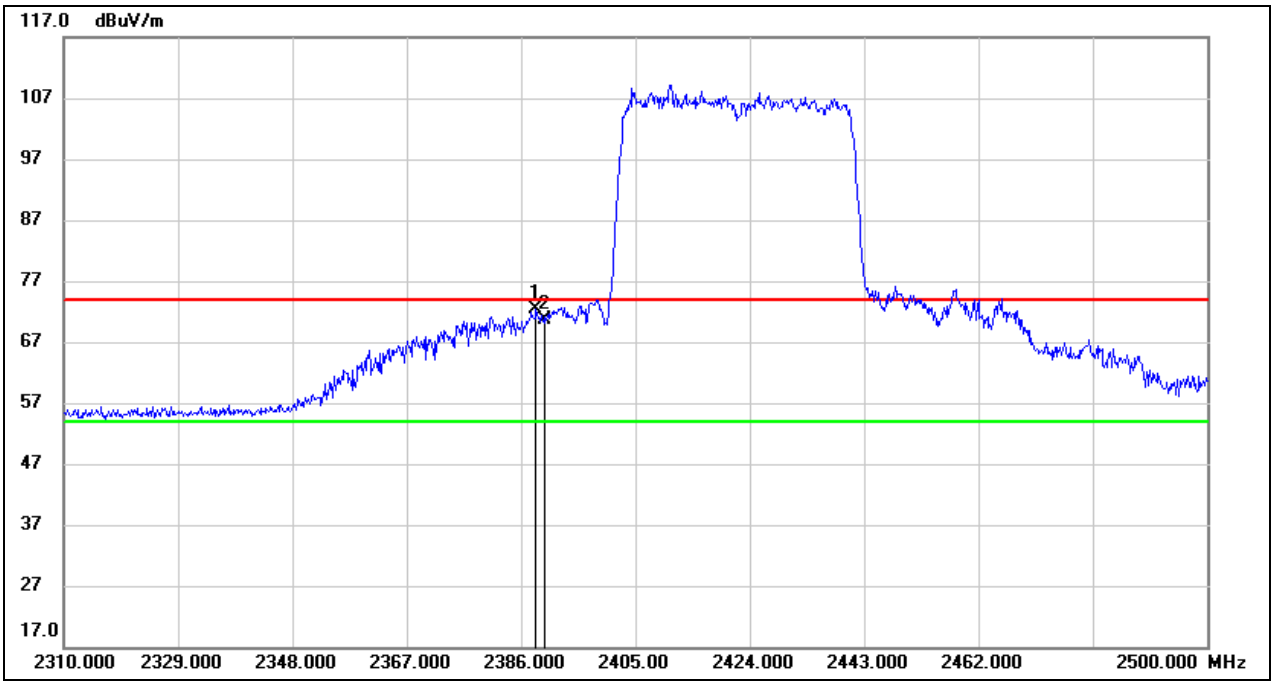
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	33.08	33.10	66.18	74.00	-7.82	peak
2	2484.550	36.00	33.10	69.10	74.00	-4.90	peak

Test Mode:	802.11ax HE20 AV	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



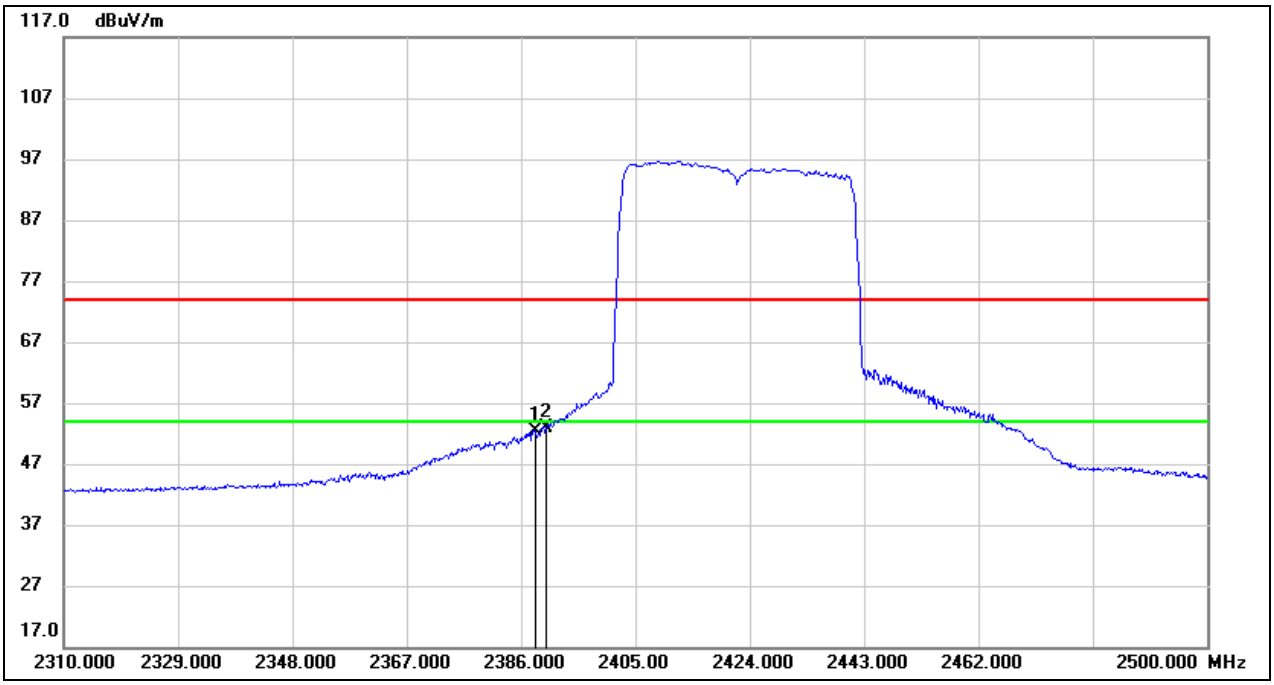
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.17	33.10	52.27	54.00	-1.73	AVG
2	2484.550	18.29	33.10	51.39	54.00	-2.61	AVG

Test Mode:	802.11ax HE40 PK	Channel:	2422
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



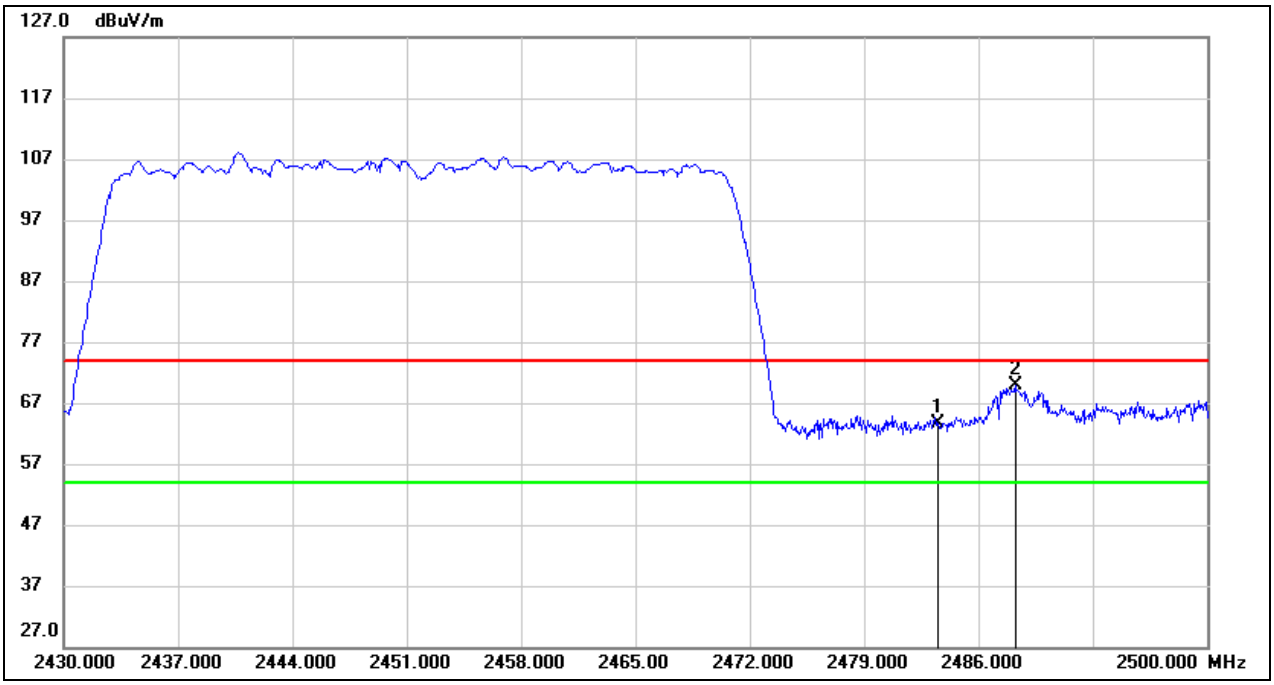
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.470	39.83	32.65	72.48	74.00	-1.52	peak
2	2390.000	38.07	32.66	70.73	74.00	-3.27	peak

Test Mode:	802.11ax HE40 AV	Channel:	2422
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



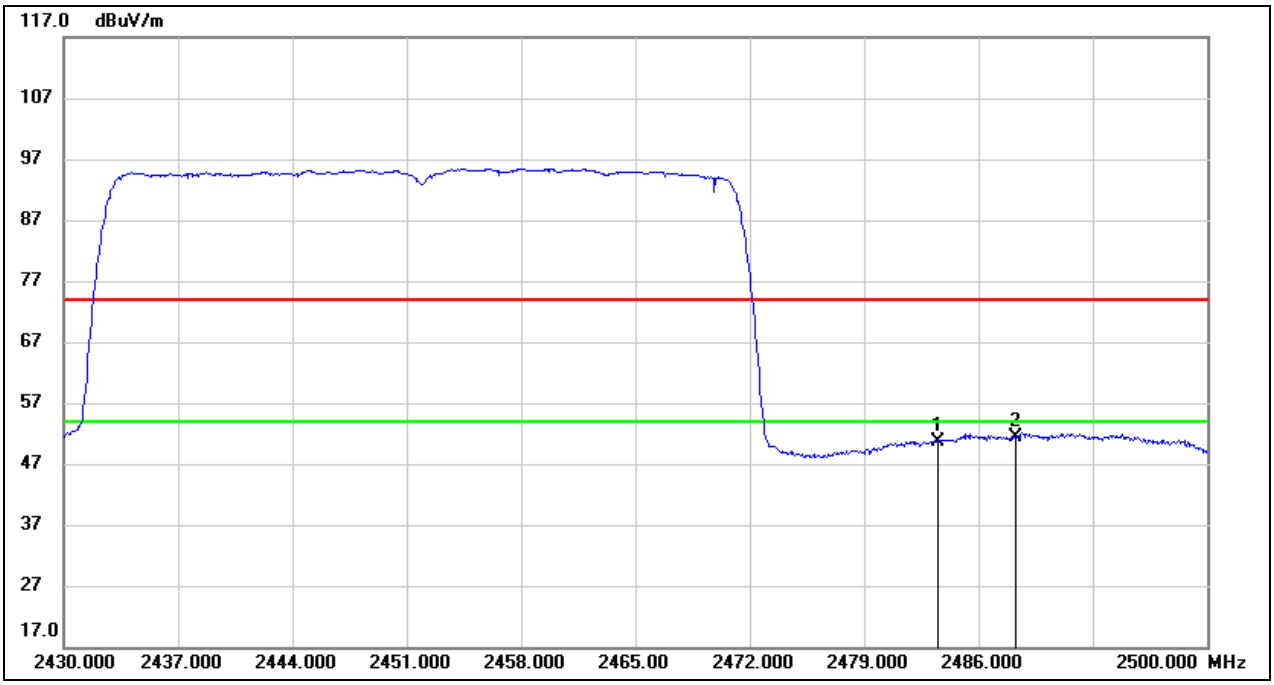
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.470	19.73	32.65	52.38	54.00	-1.62	AVG
2	2390.000	20.30	32.66	52.96	54.00	-1.04	AVG

Test Mode:	802.11ax HE40 PK	Channel:	2452
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	30.62	33.10	63.72	74.00	-10.28	peak
2	2488.240	36.65	33.11	69.76	74.00	-4.24	peak

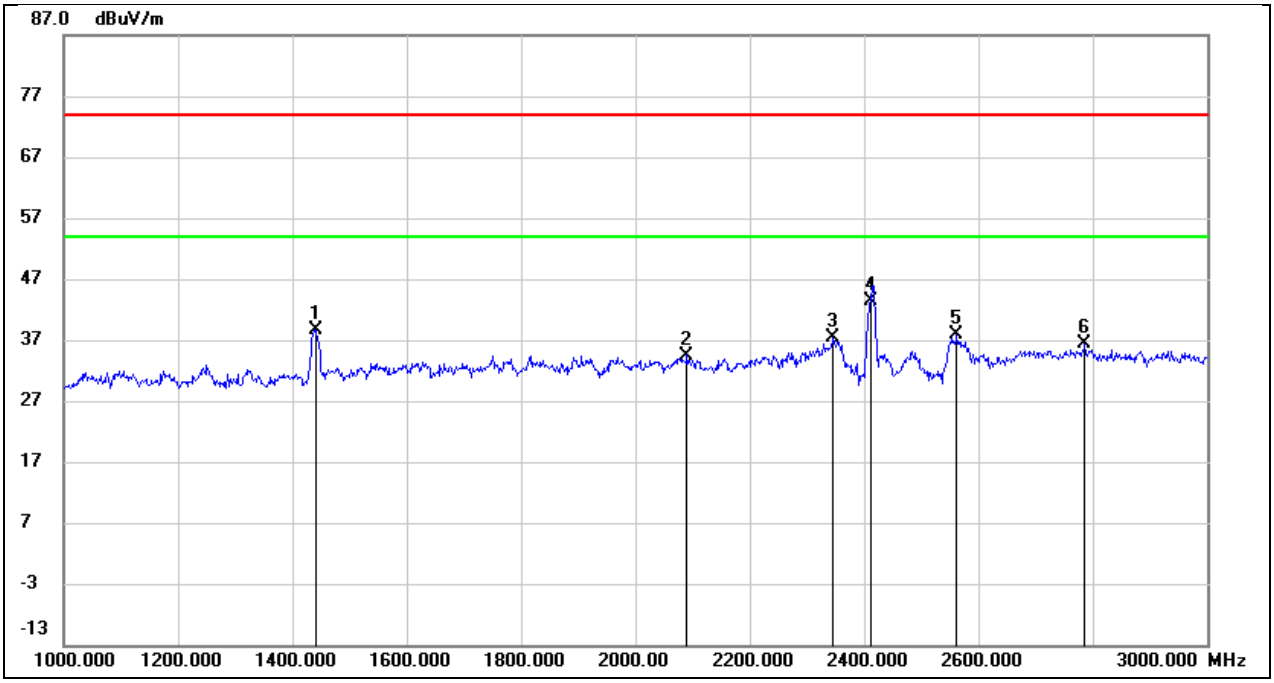
Test Mode:	802.11ax HE40 AV	Channel:	2452
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	17.60	33.10	50.70	54.00	-3.30	AVG
2	2488.240	18.26	33.11	51.37	54.00	-2.63	AVG

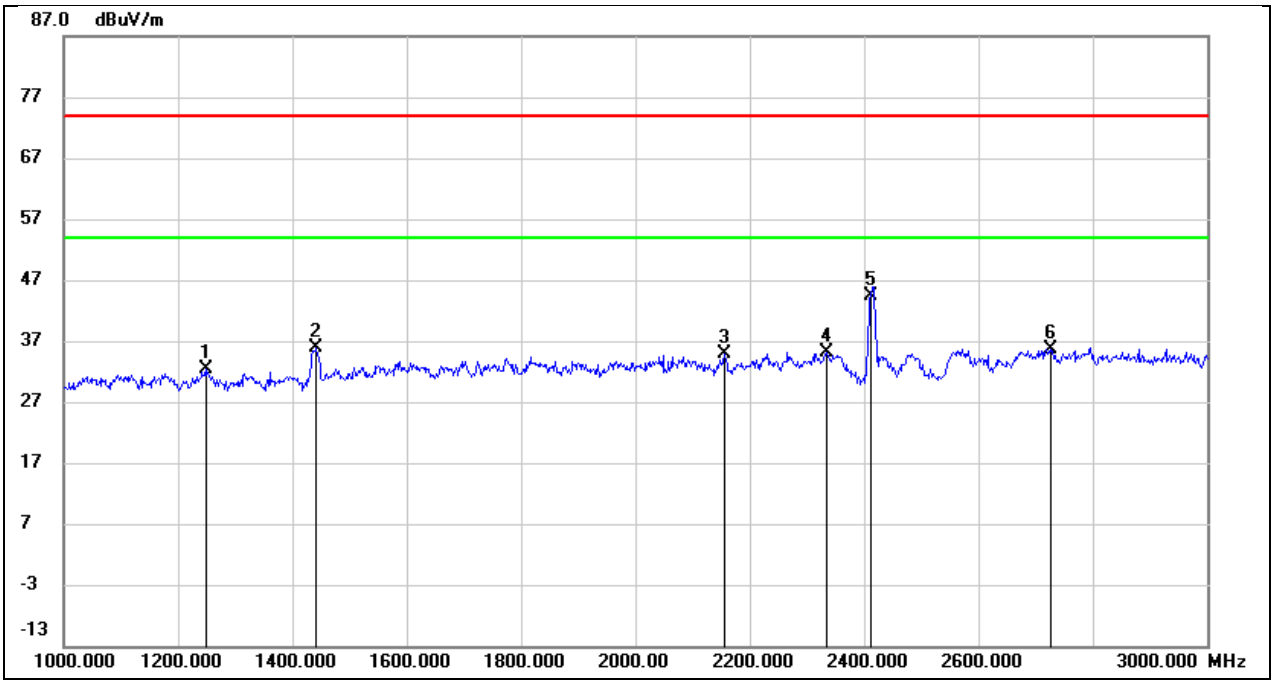
8.2. SPURIOUS

1GHz-3GHz			
Test Mode:	802.11b	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



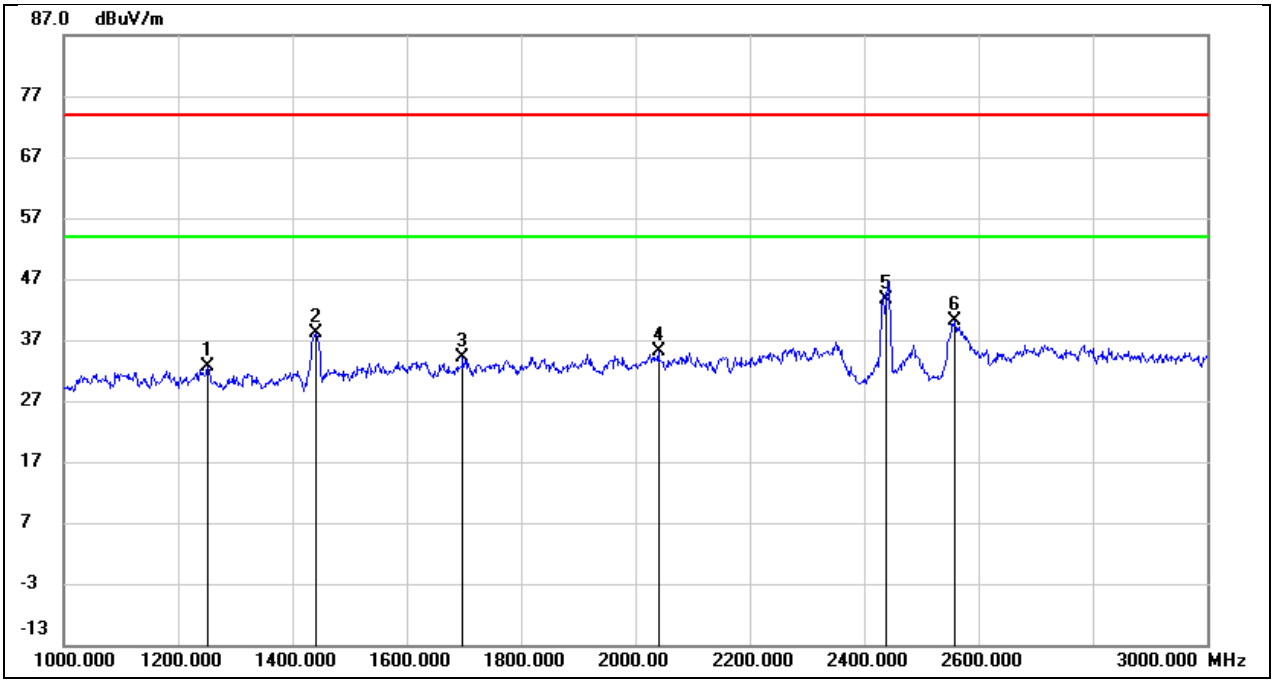
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	51.44	-12.79	38.65	74.00	-35.35	peak
2	2090.000	44.90	-10.40	34.50	74.00	-39.50	peak
3	2346.000	46.63	-9.16	37.47	74.00	-36.53	peak
4	2412.000	52.24	-8.92	43.32	/	/	Fundamental
5	2562.000	46.41	-8.63	37.78	74.00	-36.22	peak
6	2786.000	44.17	-7.74	36.43	74.00	-37.57	peak

1GHz-3GHz			
Test Mode:	802.11b	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



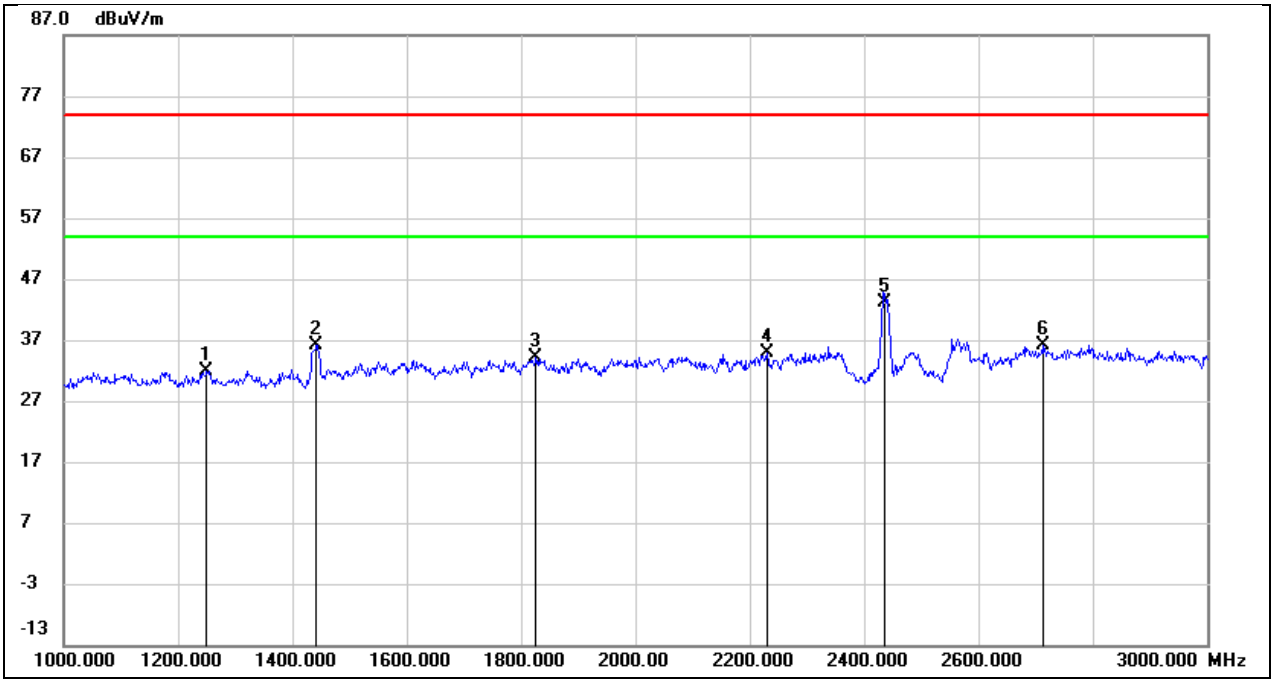
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1248.000	45.89	-13.56	32.33	74.00	-41.67	peak
2	1442.000	48.70	-12.79	35.91	74.00	-38.09	peak
3	2156.000	44.84	-9.98	34.86	74.00	-39.14	peak
4	2334.000	44.29	-9.20	35.09	74.00	-38.91	peak
5	2412.000	53.24	-8.92	44.32	/	/	Fundamental
6	2726.000	43.73	-8.00	35.73	74.00	-38.27	peak

1GHz-3GHz			
Test Mode:	802.11b	Channel:	2437
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



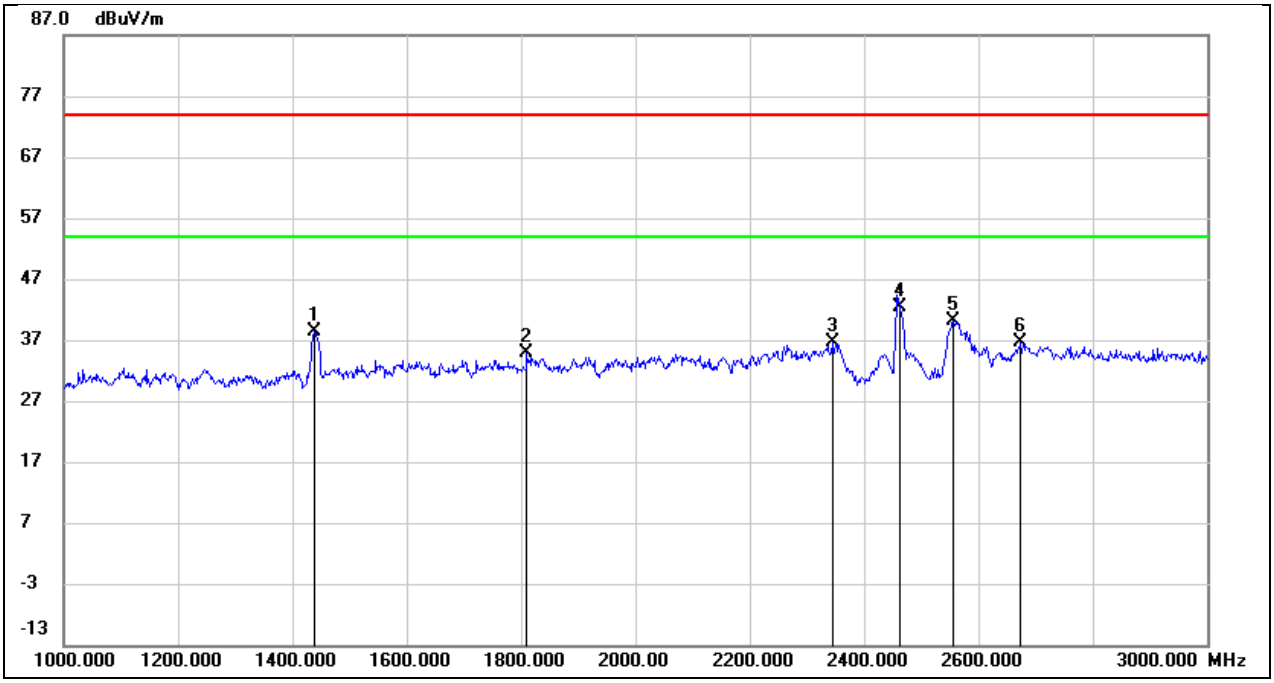
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1252.000	46.09	-13.54	32.55	74.00	-41.45	peak
2	1440.000	50.85	-12.79	38.06	74.00	-35.94	peak
3	1698.000	45.35	-11.22	34.13	74.00	-39.87	peak
4	2040.000	45.74	-10.71	35.03	74.00	-38.97	peak
5	2437.000	52.48	-8.86	43.62	/	/	Fundamental
6	2558.000	48.76	-8.64	40.12	74.00	-33.88	peak

1GHz-3GHz			
Test Mode:	802.11b	Channel:	2437
Polarity:	Vertical	Test Voltage:	DC 3.3 V



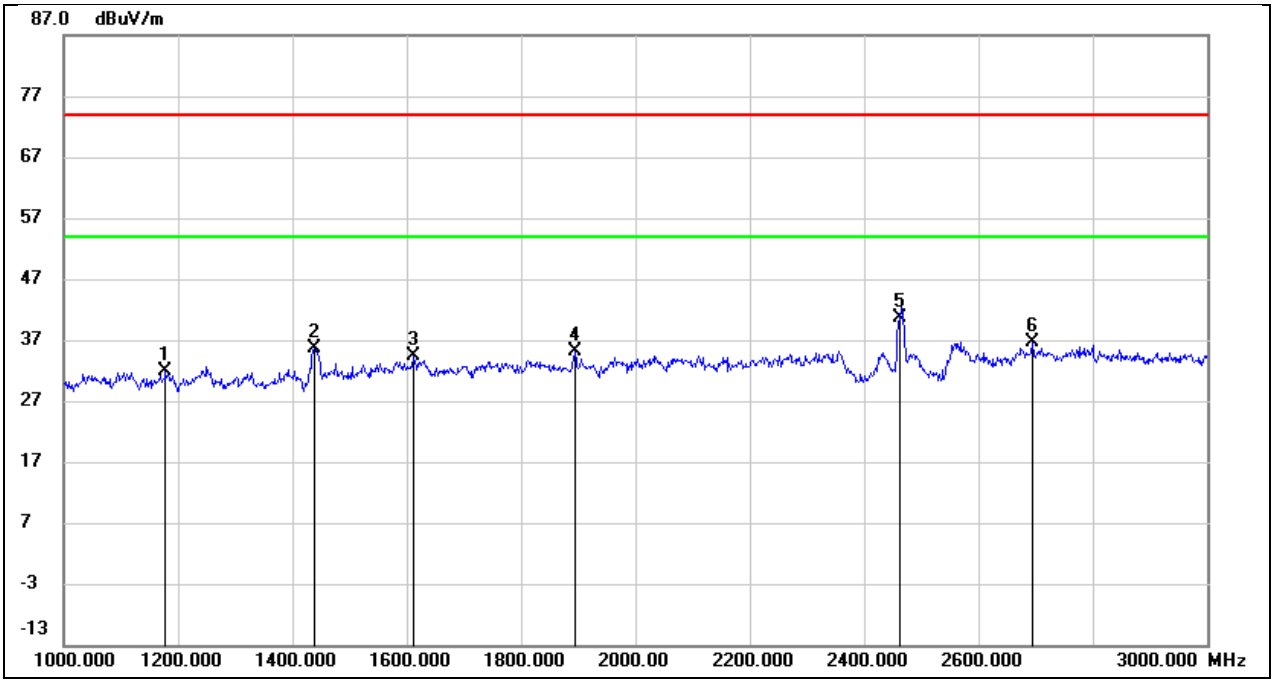
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1250.000	45.51	-13.55	31.96	74.00	-42.04	peak
2	1442.000	48.86	-12.79	36.07	74.00	-37.93	peak
3	1826.000	44.69	-10.63	34.06	74.00	-39.94	peak
4	2230.000	44.40	-9.60	34.80	74.00	-39.20	peak
5	2437.000	51.95	-8.86	43.09	/	/	Fundamental
6	2712.000	44.27	-8.07	36.20	74.00	-37.80	peak

1GHz-3GHz			
Test Mode:	802.11b	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



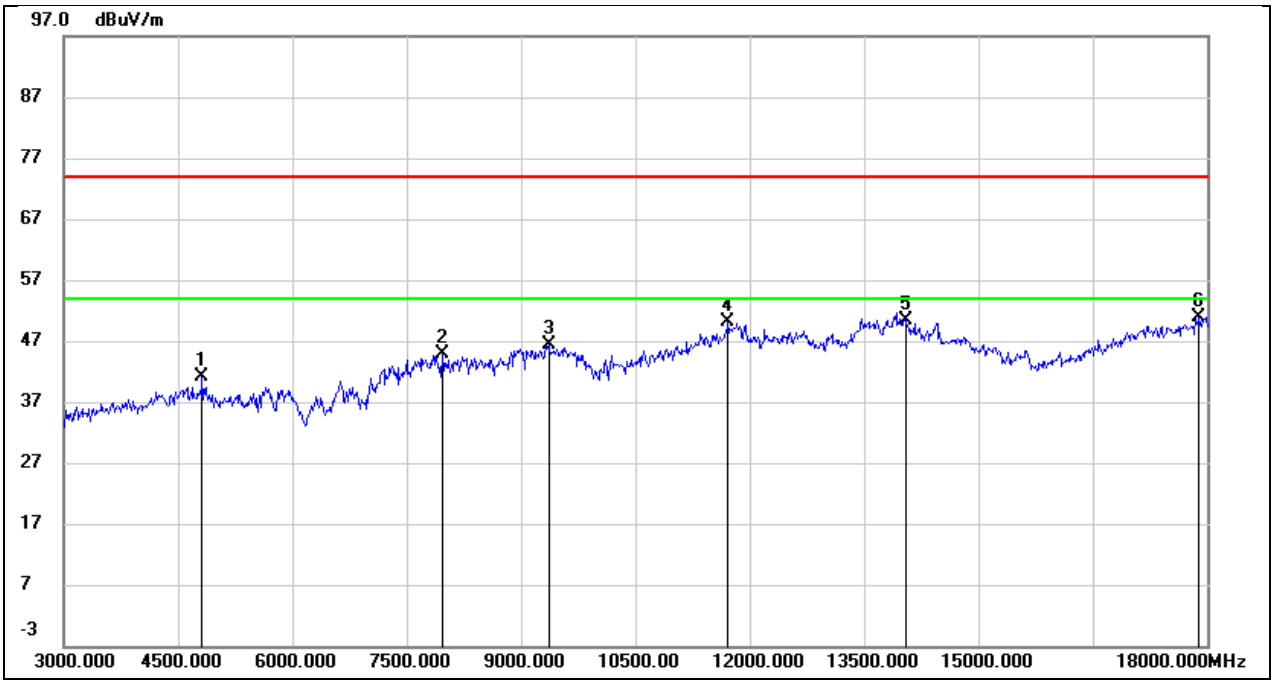
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1438.000	51.24	-12.81	38.43	74.00	-35.57	peak
2	1810.000	45.44	-10.60	34.84	74.00	-39.16	peak
3	2344.000	45.69	-9.17	36.52	74.00	-37.48	peak
4	2462.000	51.09	-8.81	42.28	/	/	Fundamental
5	2556.000	48.88	-8.64	40.24	74.00	-33.76	peak
6	2674.000	44.79	-8.24	36.55	74.00	-37.45	peak

1GHz-3GHz			
Test Mode:	802.11b	Channel:	2462
Polarity:	Vertical	Test Voltage:	DC 3.3 V



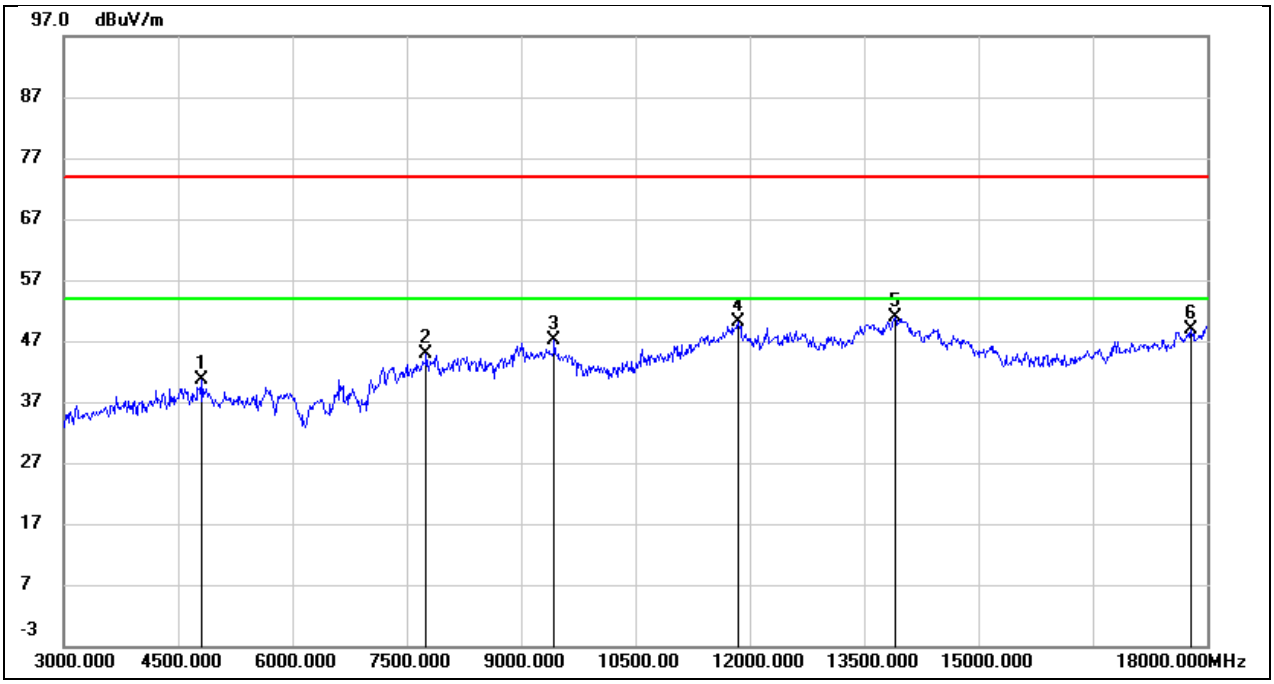
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1178.000	45.71	-13.85	31.86	74.00	-42.14	peak
2	1438.000	48.52	-12.81	35.71	74.00	-38.29	peak
3	1612.000	46.10	-11.77	34.33	74.00	-39.67	peak
4	1894.000	45.77	-10.75	35.02	74.00	-38.98	peak
5	2462.000	49.33	-8.81	40.52	/	/	Fundamental
6	2694.000	44.81	-8.14	36.67	74.00	-37.33	peak

3GHz-18GHz			
Test Mode:	802.11b	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



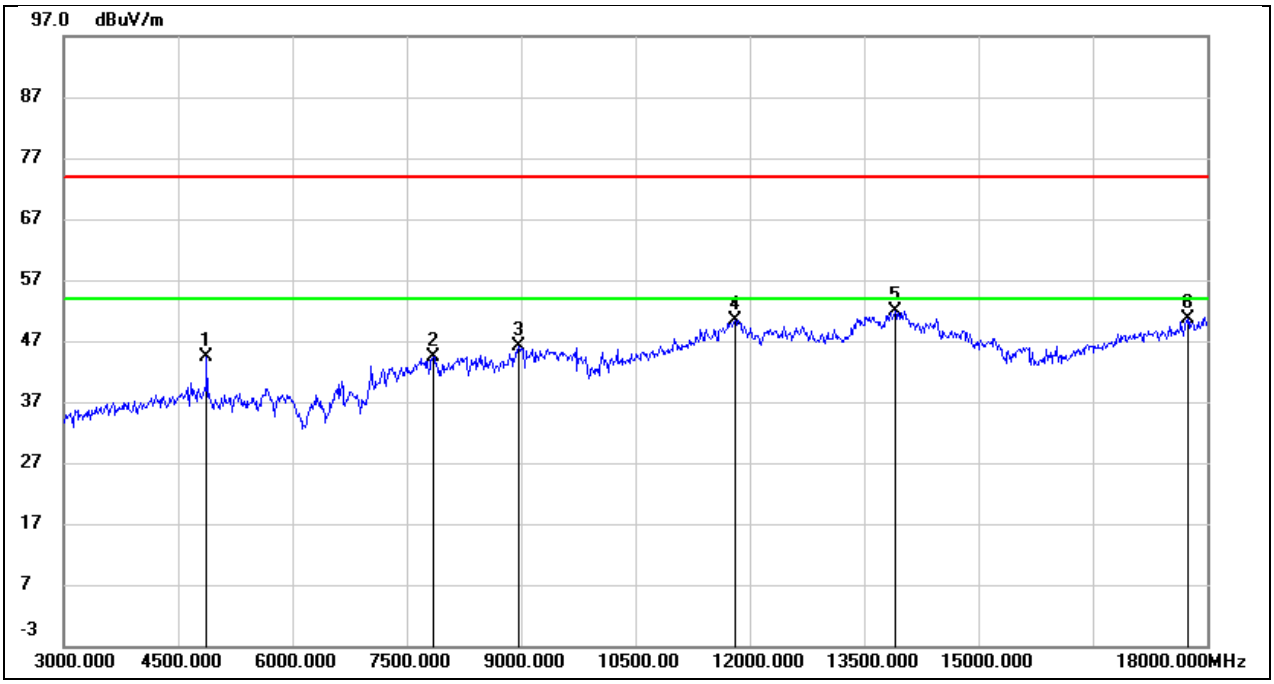
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	42.35	-1.14	41.21	74.00	-32.79	peak
2	7965.000	39.47	5.48	44.95	74.00	-29.05	peak
3	9360.000	36.93	9.43	46.36	74.00	-27.64	peak
4	11715.000	33.48	16.68	50.16	74.00	-23.84	peak
5	14055.000	30.11	20.36	50.47	74.00	-23.53	peak
6	17895.000	27.55	23.42	50.97	74.00	-23.03	peak

3GHz-18GHz			
Test Mode:	802.11b	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



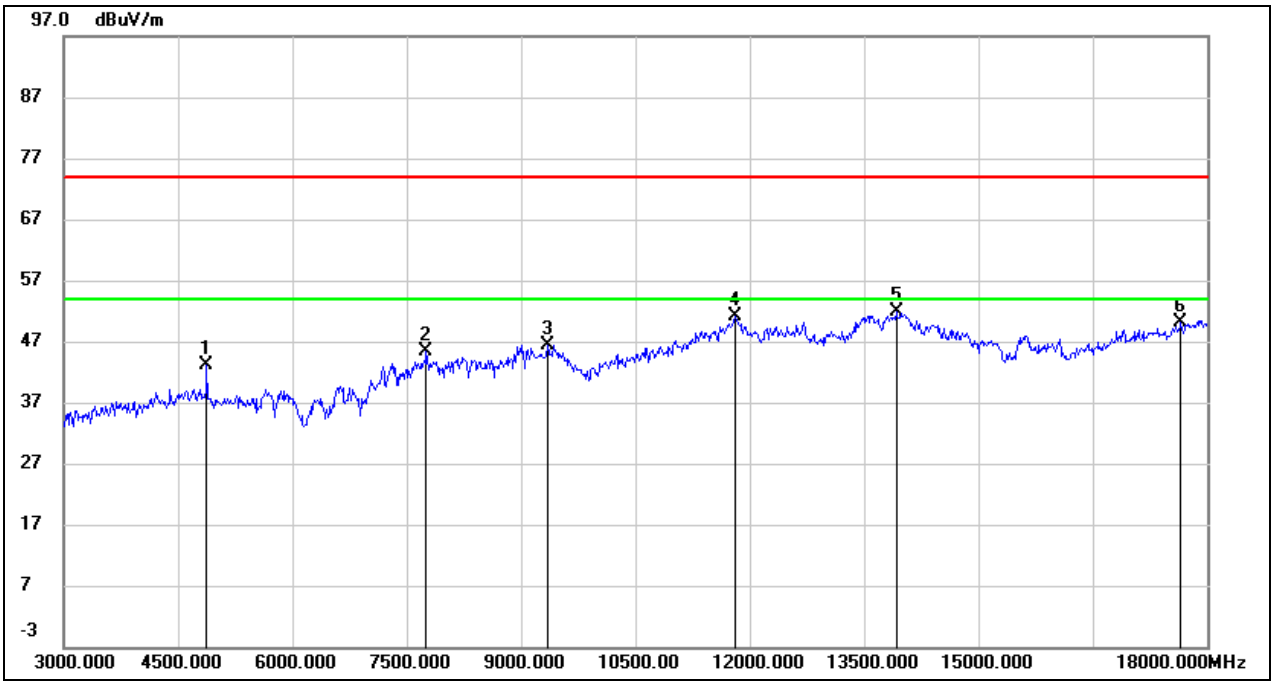
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	41.80	-1.14	40.66	74.00	-33.34	peak
2	7755.000	38.87	5.93	44.80	74.00	-29.20	peak
3	9435.000	37.28	9.78	47.06	74.00	-26.94	peak
4	11850.000	33.06	17.19	50.25	74.00	-23.75	peak
5	13905.000	30.40	20.57	50.97	74.00	-23.03	peak
6	17790.000	25.84	23.08	48.92	74.00	-25.08	peak

3GHz-18GHz			
Test Mode:	802.11b	Channel:	2437
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



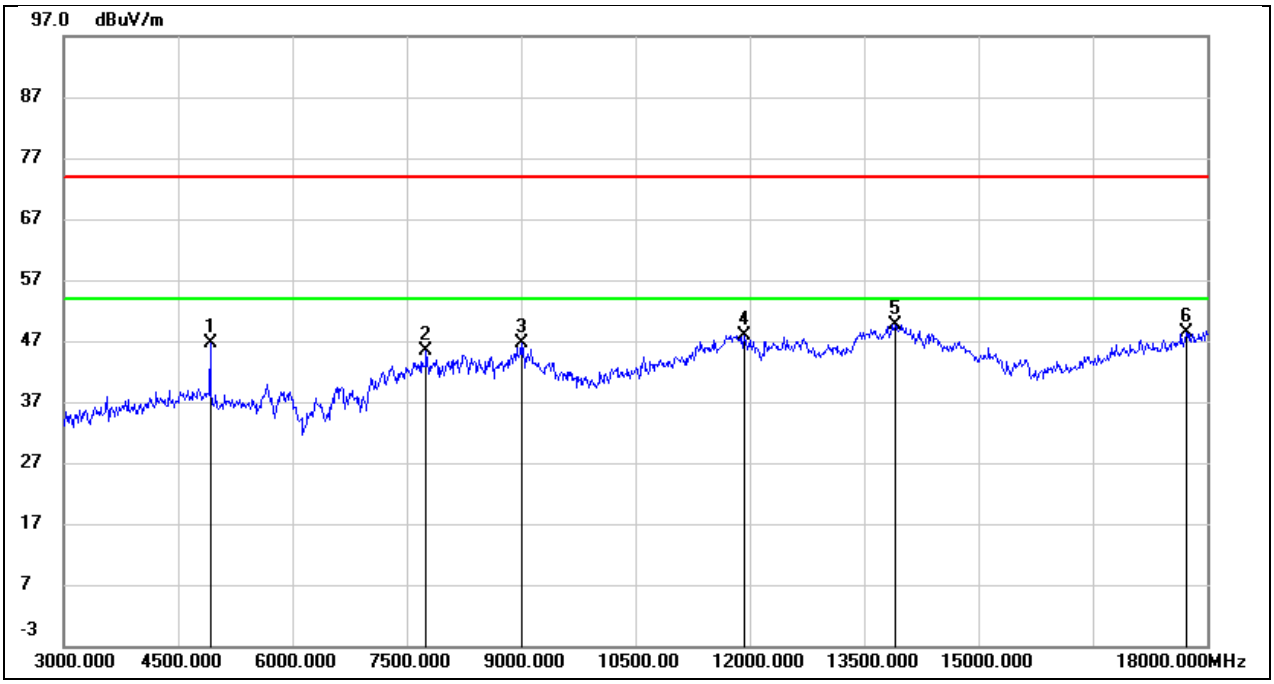
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	45.61	-1.13	44.48	74.00	-29.52	peak
2	7845.000	38.51	5.92	44.43	74.00	-29.57	peak
3	8970.000	36.90	9.17	46.07	74.00	-27.93	peak
4	11805.000	33.16	17.21	50.37	74.00	-23.63	peak
5	13905.000	31.39	20.57	51.96	74.00	-22.04	peak
6	17745.000	28.11	22.62	50.73	74.00	-23.27	peak

3GHz-18GHz			
Test Mode:	802.11b	Channel:	2437
Polarity:	Vertical	Test Voltage:	DC 3.3 V



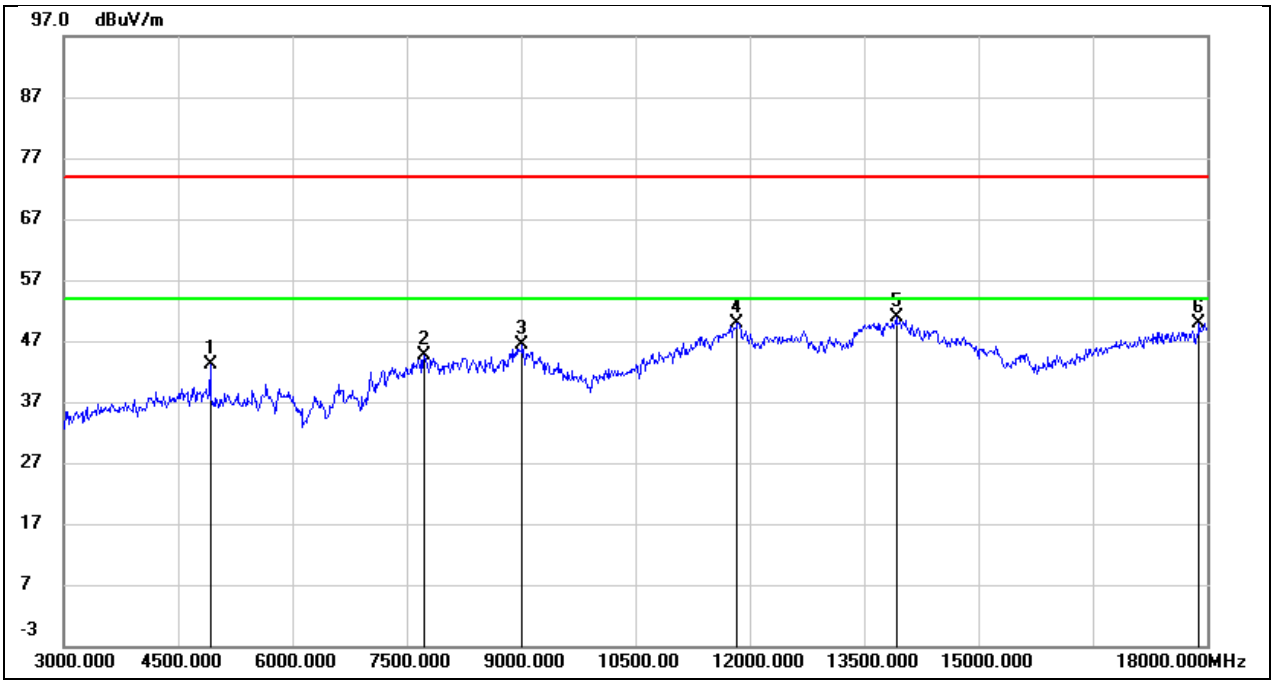
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	44.19	-1.13	43.06	74.00	-30.94	peak
2	7755.000	39.46	5.93	45.39	74.00	-28.61	peak
3	9345.000	37.09	9.34	46.43	74.00	-27.57	peak
4	11805.000	33.81	17.21	51.02	74.00	-22.98	peak
5	13920.000	31.21	20.58	51.79	74.00	-22.21	peak
6	17655.000	28.34	21.68	50.02	74.00	-23.98	peak

3GHz-18GHz			
Test Mode:	802.11b	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



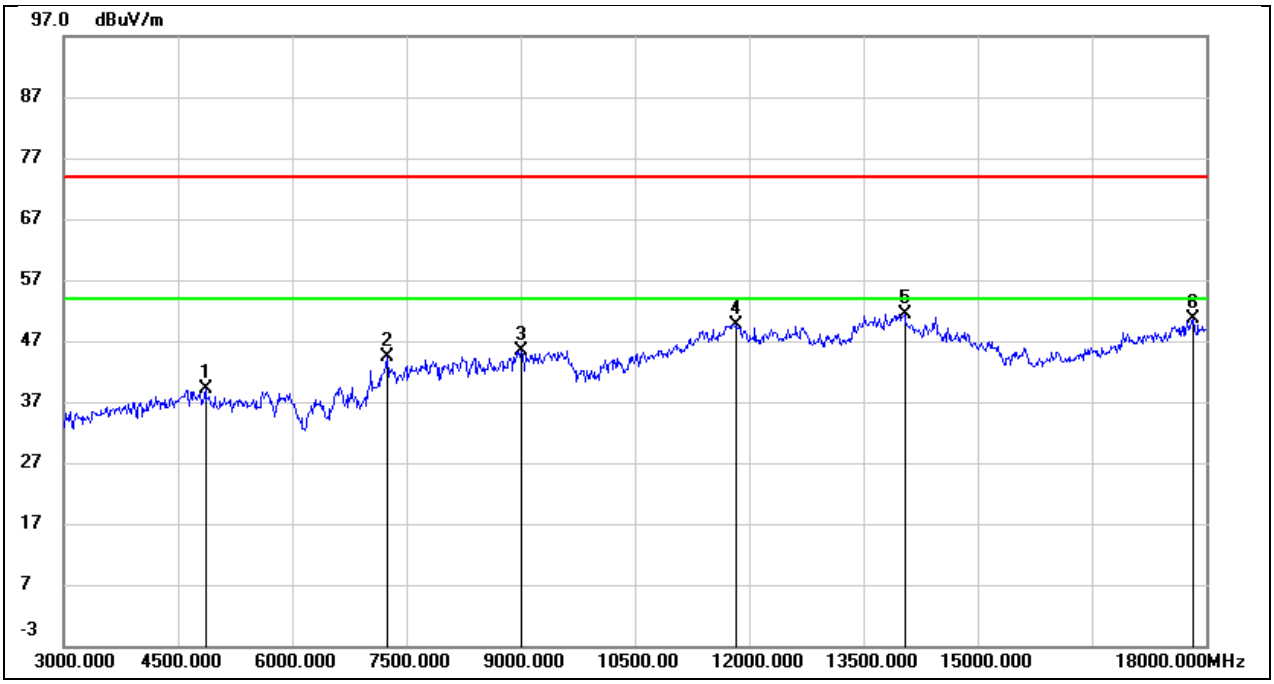
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	47.64	-1.13	46.51	74.00	-27.49	peak
2	7755.000	39.48	5.93	45.41	74.00	-28.59	peak
3	9000.000	37.01	9.53	46.54	74.00	-27.46	peak
4	11925.000	30.79	17.14	47.93	74.00	-26.07	peak
5	13905.000	29.00	20.57	49.57	74.00	-24.43	peak
6	17730.000	25.85	22.46	48.31	74.00	-25.69	peak

3GHz-18GHz			
Test Mode:	802.11b	Channel:	2462
Polarity:	Vertical	Test Voltage:	DC 3.3 V



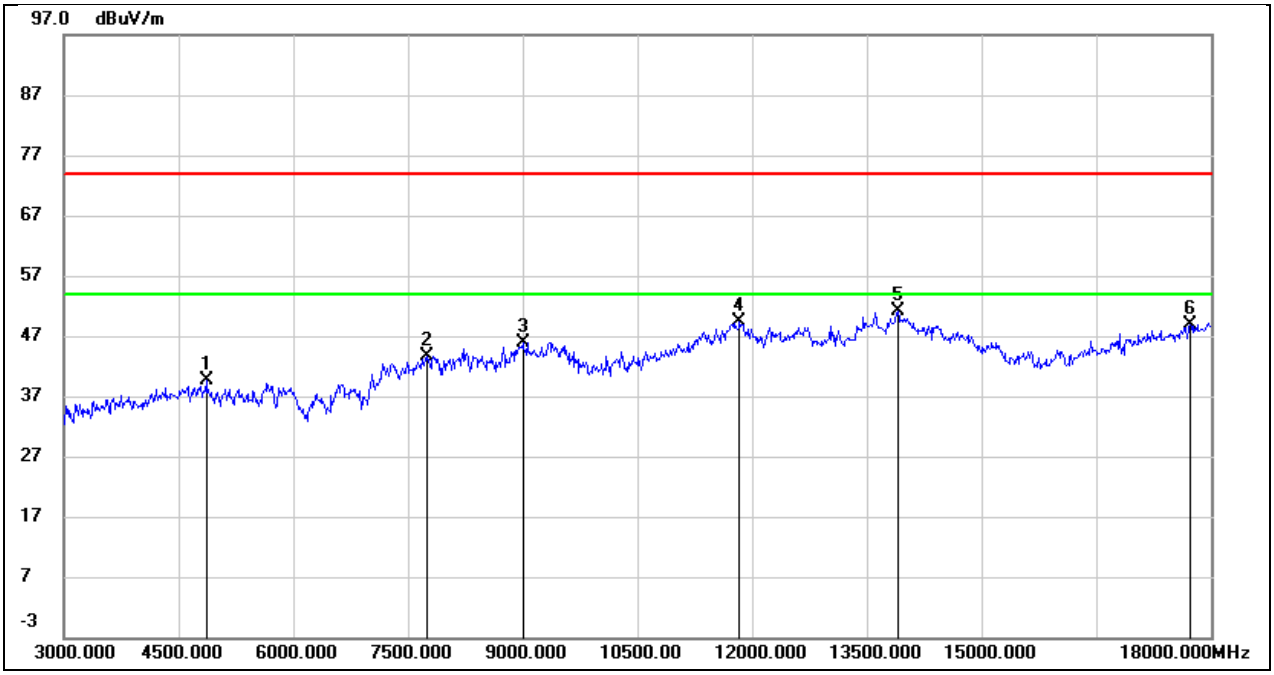
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	44.22	-1.13	43.09	74.00	-30.91	peak
2	7725.000	38.68	5.84	44.52	74.00	-29.48	peak
3	9015.000	36.97	9.45	46.42	74.00	-27.58	peak
4	11835.000	32.65	17.20	49.85	74.00	-24.15	peak
5	13920.000	30.36	20.58	50.94	74.00	-23.06	peak
6	17895.000	26.51	23.42	49.93	74.00	-24.07	peak

3GHz-18GHz			
Test Mode:	802.11g	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



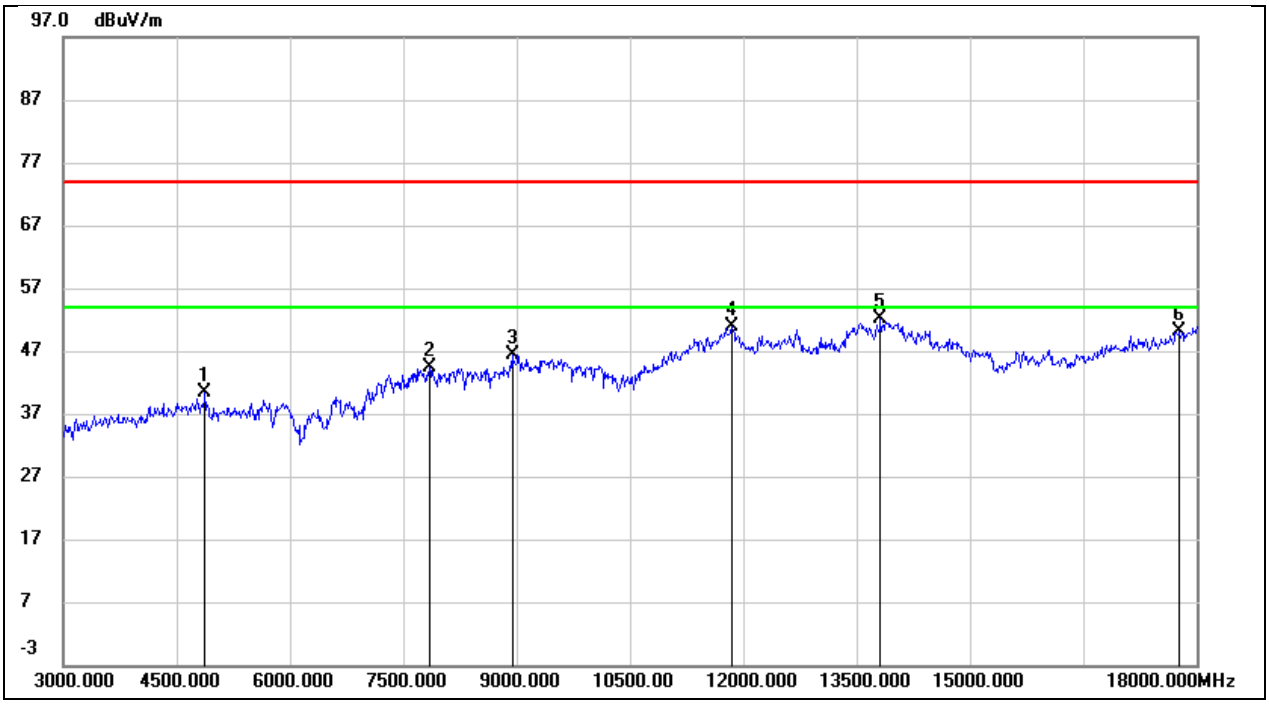
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	40.23	-1.14	39.09	74.00	-34.91	peak
2	7245.000	39.15	5.26	44.41	74.00	-29.59	peak
3	9015.000	36.04	9.45	45.49	74.00	-28.51	peak
4	11835.000	32.55	17.20	49.75	74.00	-24.25	peak
5	14040.000	31.01	20.44	51.45	74.00	-22.55	peak
6	17820.000	27.46	23.24	50.70	74.00	-23.30	peak

3GHz-18GHz			
Test Mode:	802.11g	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



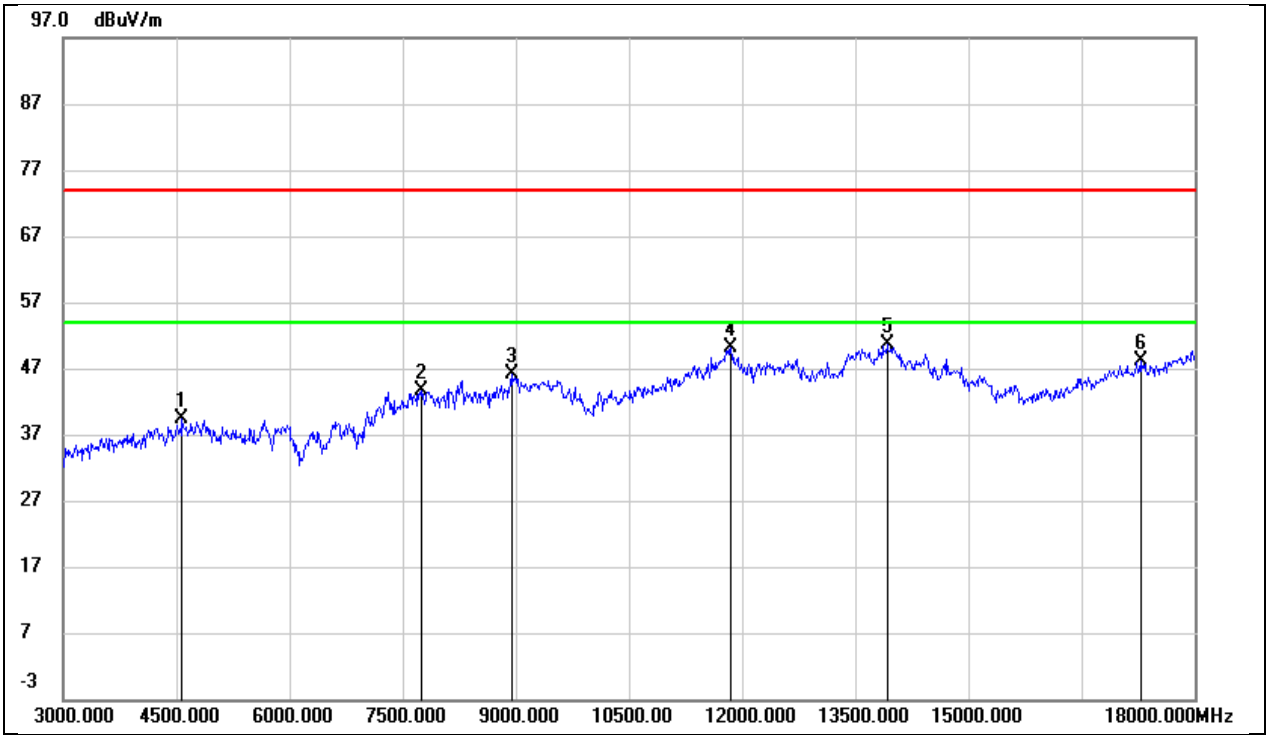
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	40.79	-1.14	39.65	74.00	-34.35	peak
2	7740.000	37.73	5.89	43.62	74.00	-30.38	peak
3	9000.000	36.41	9.53	45.94	74.00	-28.06	peak
4	11835.000	32.09	17.20	49.29	74.00	-24.71	peak
5	13905.000	30.48	20.57	51.05	74.00	-22.95	peak
6	17730.000	26.53	22.46	48.99	74.00	-25.01	peak

3GHz-18GHz			
Test Mode:	802.11g	Channel:	2437
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



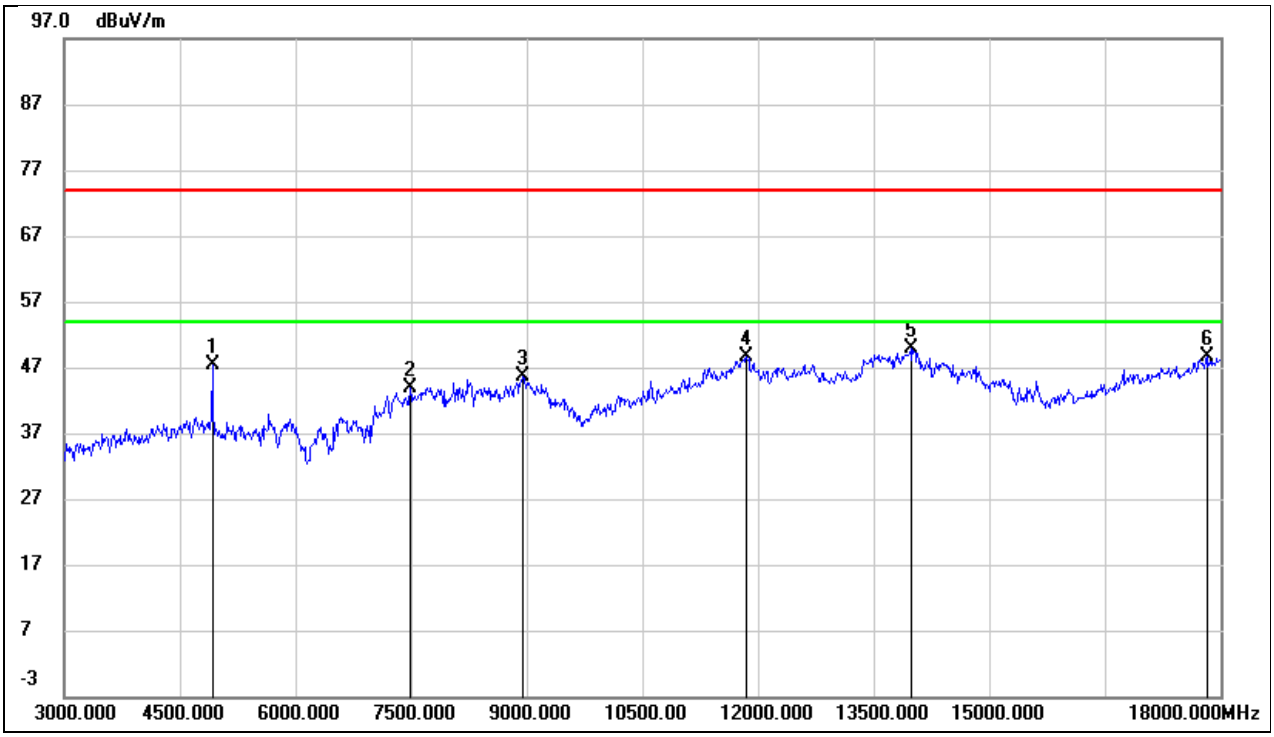
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	41.48	-1.13	40.35	74.00	-33.65	peak
2	7845.000	38.43	5.92	44.35	74.00	-29.65	peak
3	8940.000	37.62	8.80	46.42	74.00	-27.58	peak
4	11850.000	33.75	17.19	50.94	74.00	-23.06	peak
5	13815.000	31.75	20.50	52.25	74.00	-21.75	peak
6	17775.000	27.23	22.93	50.16	74.00	-23.84	peak

3GHz-18GHz			
Test Mode:	802.11g	Channel:	2437
Polarity:	Vertical	Test Voltage:	DC 3.3 V



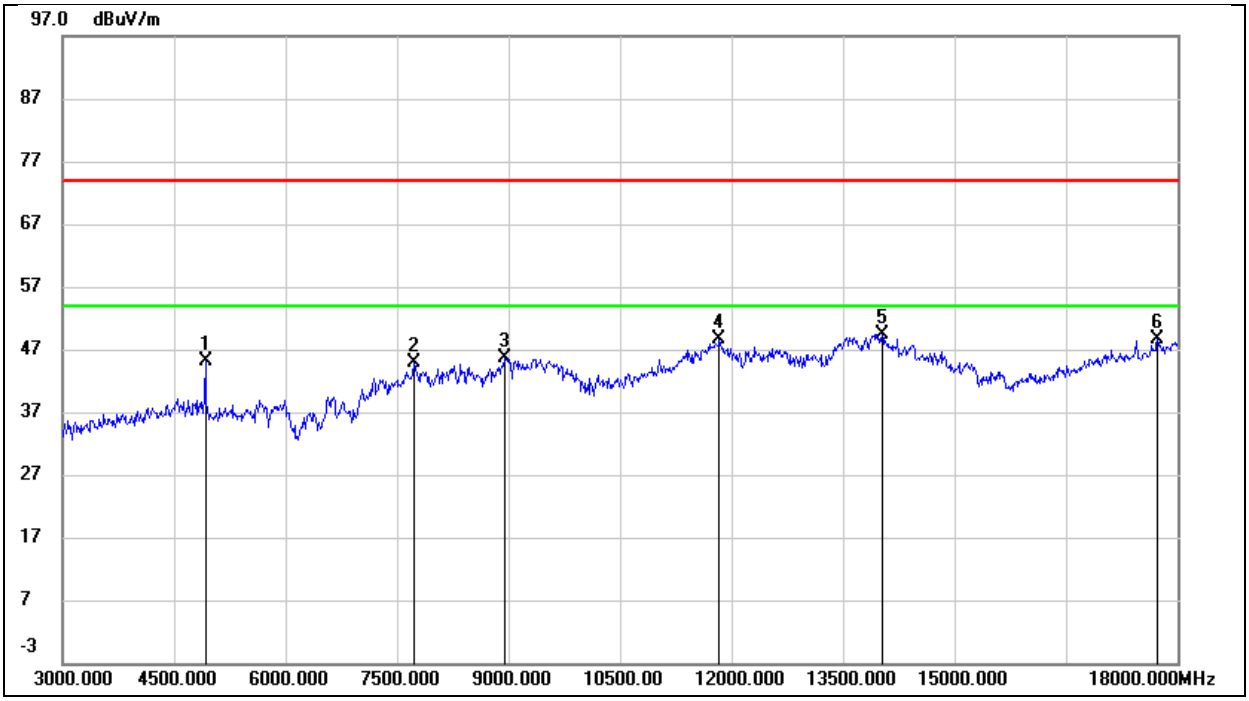
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4575.000	41.56	-2.13	39.43	74.00	-34.57	peak
2	7755.000	37.73	5.93	43.66	74.00	-30.34	peak
3	8940.000	37.40	8.80	46.20	74.00	-27.80	peak
4	11850.000	32.83	17.19	50.02	74.00	-23.98	peak
5	13920.000	30.04	20.58	50.62	74.00	-23.38	peak
6	17280.000	28.03	20.17	48.20	74.00	-25.80	peak

3GHz-18GHz			
Test Mode:	802.11g	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



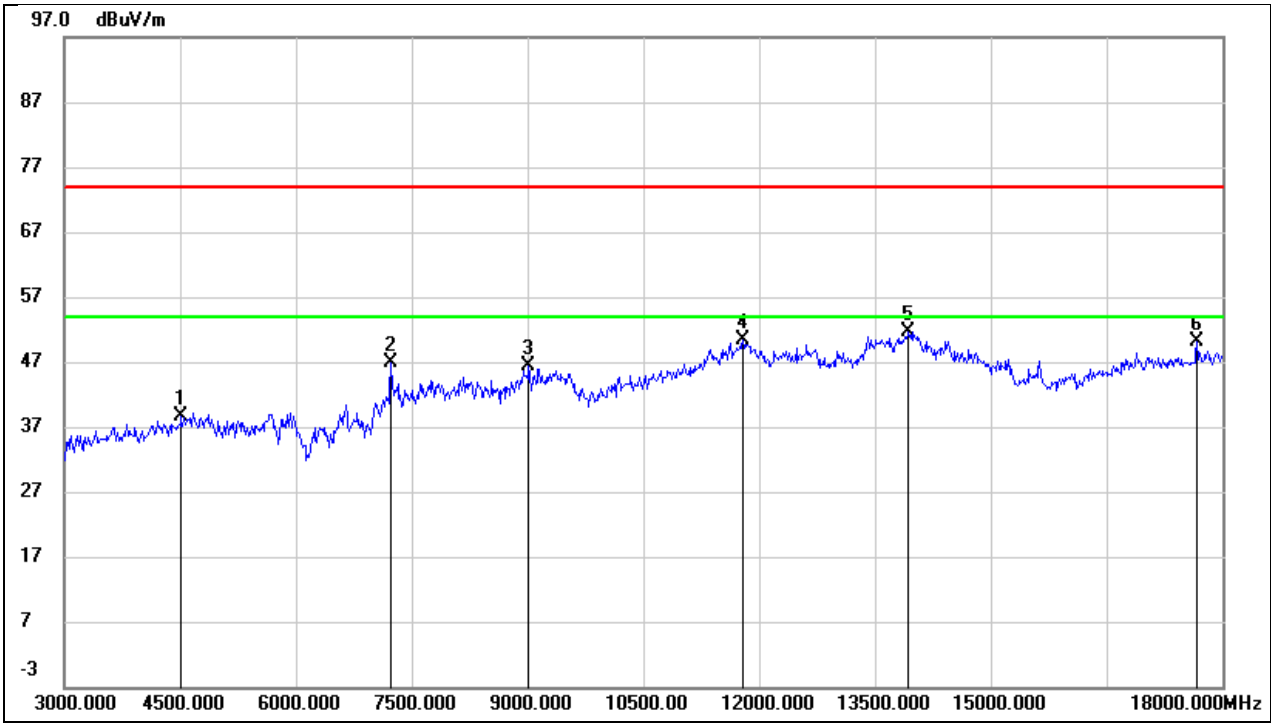
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.39	-1.13	47.26	74.00	-26.74	peak
2	7485.000	38.32	5.67	43.99	74.00	-30.01	peak
3	8955.000	36.63	8.99	45.62	74.00	-28.38	peak
4	11850.000	31.38	17.19	48.57	74.00	-25.43	peak
5	13980.000	29.15	20.63	49.78	74.00	-24.22	peak
6	17820.000	25.40	23.24	48.64	74.00	-25.36	peak

3GHz-18GHz			
Test Mode:	802.11g	Channel:	2462
Polarity:	Vertical	Test Voltage:	DC 3.3 V



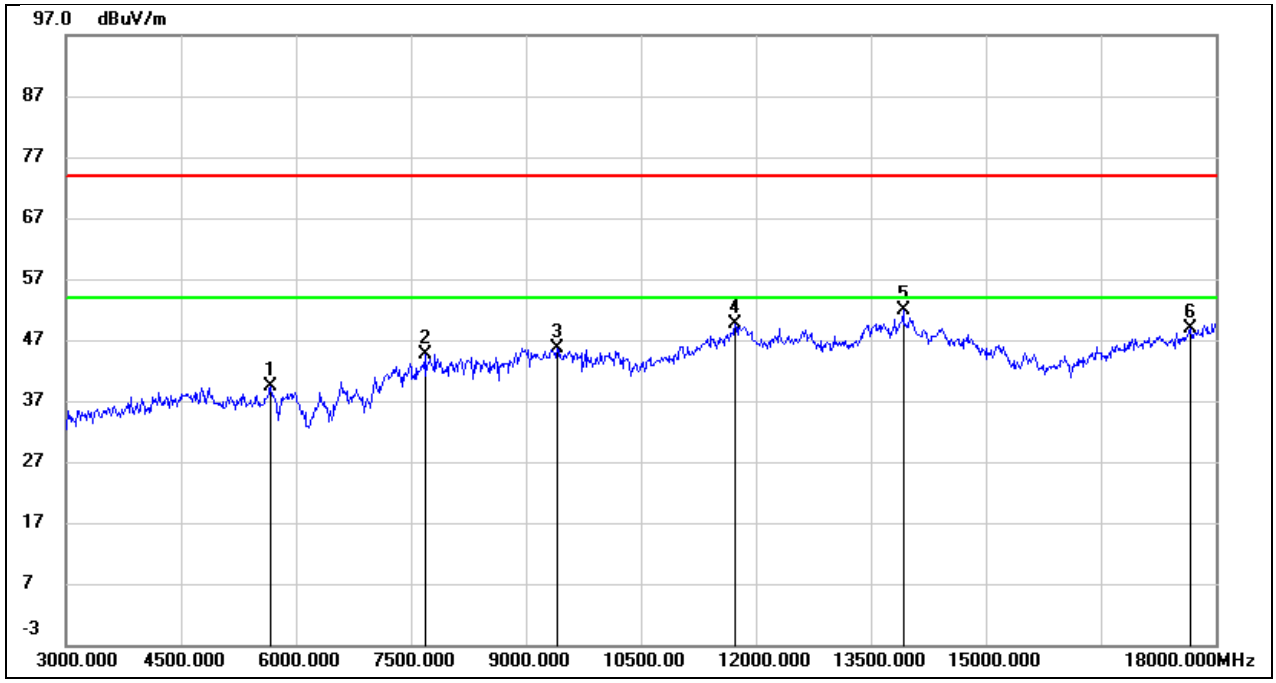
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	46.20	-1.13	45.07	74.00	-28.93	peak
2	7725.000	39.01	5.84	44.85	74.00	-29.15	peak
3	8940.000	36.71	8.80	45.51	74.00	-28.49	peak
4	11835.000	31.36	17.20	48.56	74.00	-25.44	peak
5	14025.000	28.94	20.52	49.46	74.00	-24.54	peak
6	17730.000	26.19	22.46	48.65	74.00	-25.35	peak

3GHz-18GHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



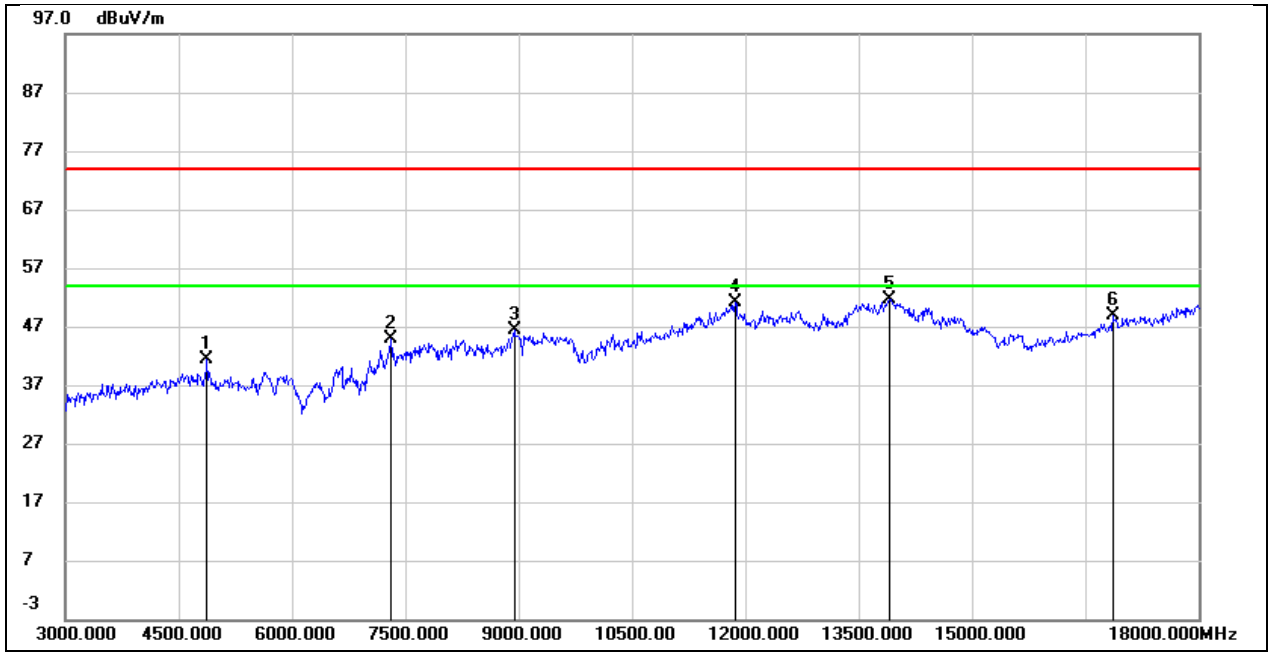
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4515.000	40.99	-2.45	38.54	74.00	-35.46	peak
2	7230.000	41.60	5.21	46.81	74.00	-27.19	peak
3	9015.000	36.83	9.45	46.28	74.00	-27.72	peak
4	11790.000	33.32	17.15	50.47	74.00	-23.53	peak
5	13935.000	31.05	20.59	51.64	74.00	-22.36	peak
6	17670.000	28.22	21.83	50.05	74.00	-23.95	peak

3GHz-18GHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



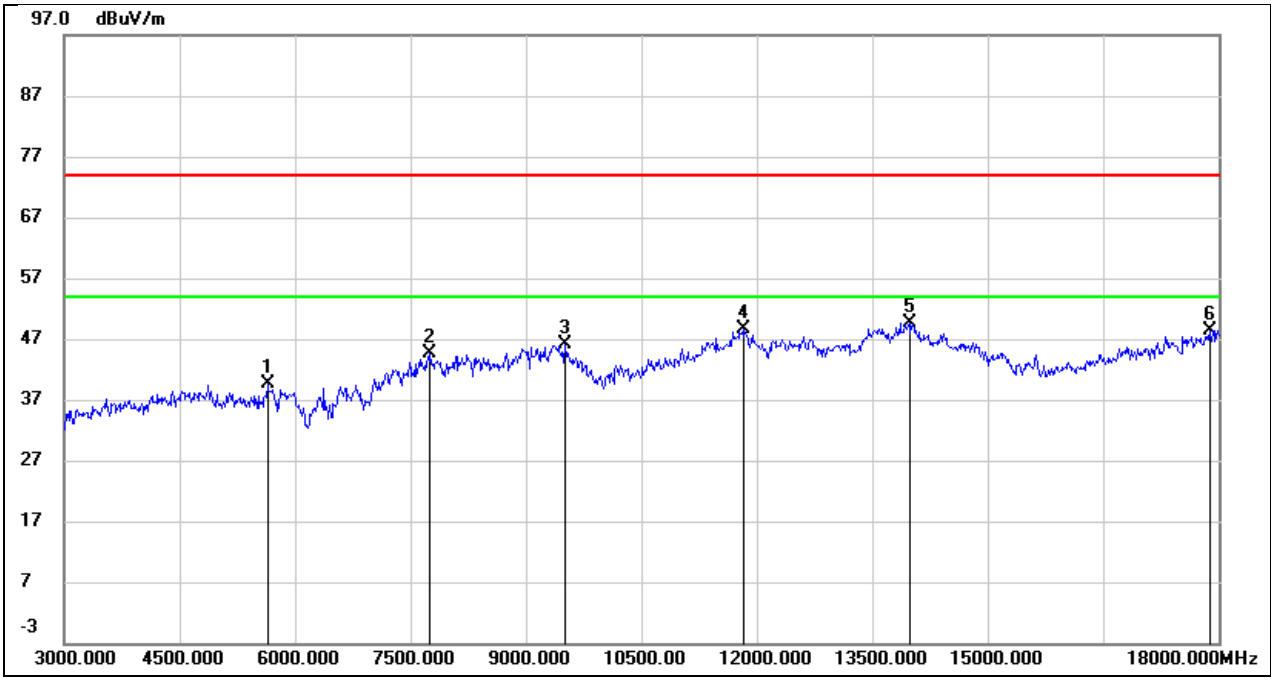
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5670.000	38.63	0.68	39.31	74.00	-34.69	peak
2	7680.000	38.93	5.70	44.63	74.00	-29.37	peak
3	9405.000	36.01	9.70	45.71	74.00	-28.29	peak
4	11730.000	32.77	16.77	49.54	74.00	-24.46	peak
5	13920.000	31.39	20.58	51.97	74.00	-22.03	peak
6	17670.000	27.13	21.83	48.96	74.00	-25.04	peak

3GHz-18GHz			
Test Mode:	802.11n HT20	Channel:	2437
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



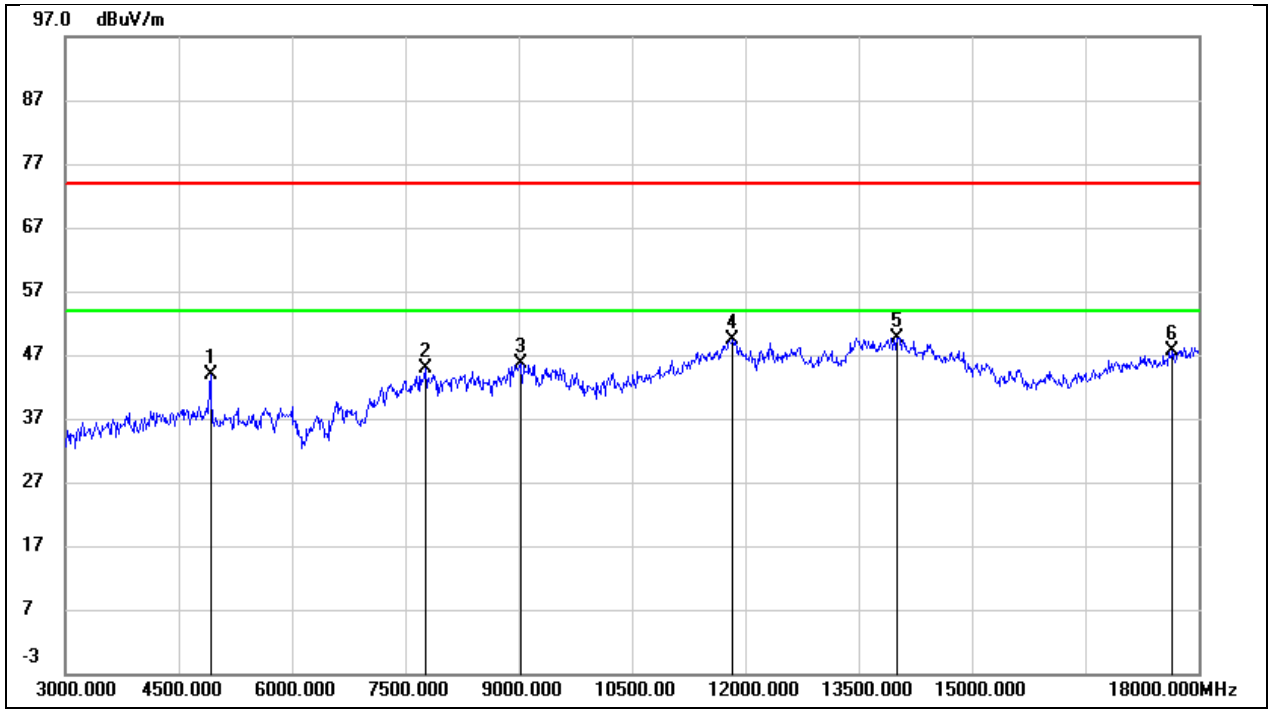
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	42.48	-1.13	41.35	74.00	-32.65	peak
2	7305.000	39.39	5.48	44.87	74.00	-29.13	peak
3	8940.000	37.48	8.80	46.28	74.00	-27.72	peak
4	11865.000	33.94	17.18	51.12	74.00	-22.88	peak
5	13905.000	31.13	20.57	51.70	74.00	-22.30	peak
6	16860.000	30.30	18.48	48.78	74.00	-25.22	peak

3GHz-18GHz			
Test Mode:	802.11n HT20	Channel:	2437
Polarity:	Vertical	Test Voltage:	DC 3.3 V



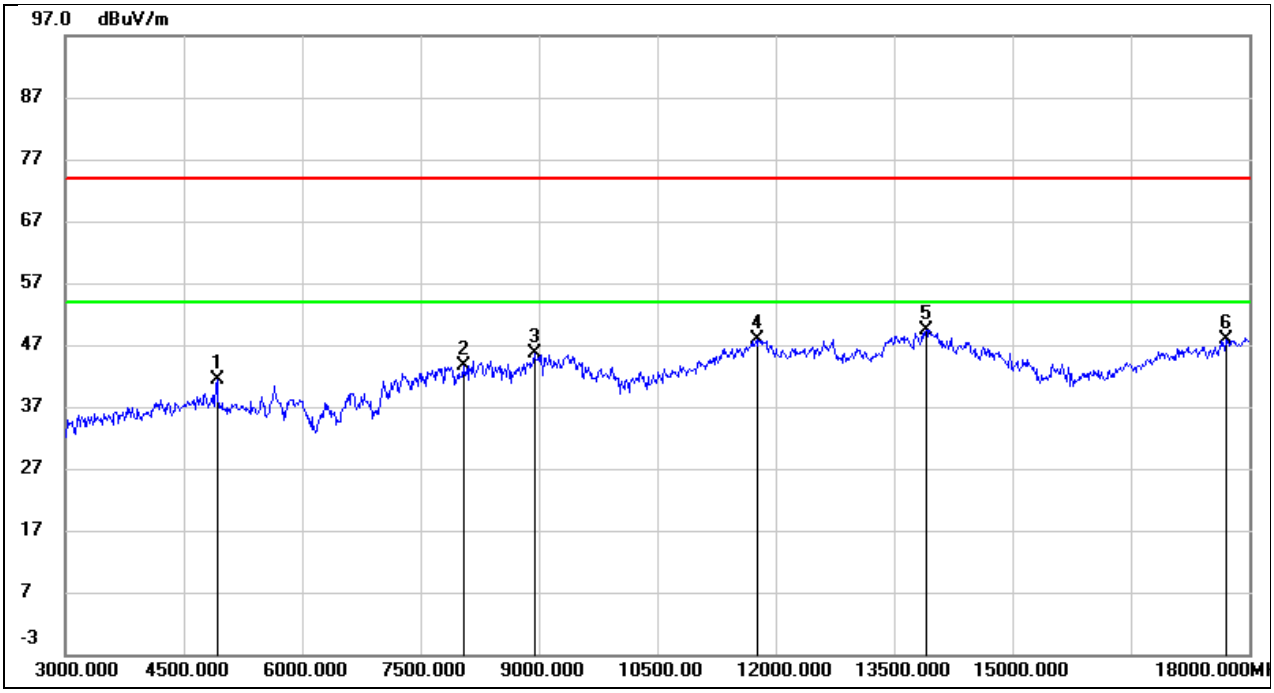
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5640.000	38.87	0.68	39.55	74.00	-34.45	peak
2	7755.000	38.76	5.93	44.69	74.00	-29.31	peak
3	9510.000	36.12	9.95	46.07	74.00	-27.93	peak
4	11835.000	31.50	17.20	48.70	74.00	-25.30	peak
5	13980.000	29.09	20.63	49.72	74.00	-24.28	peak
6	17880.000	24.98	23.38	48.36	74.00	-25.64	peak

3GHz-18GHz			
Test Mode:	802.11n HT20	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



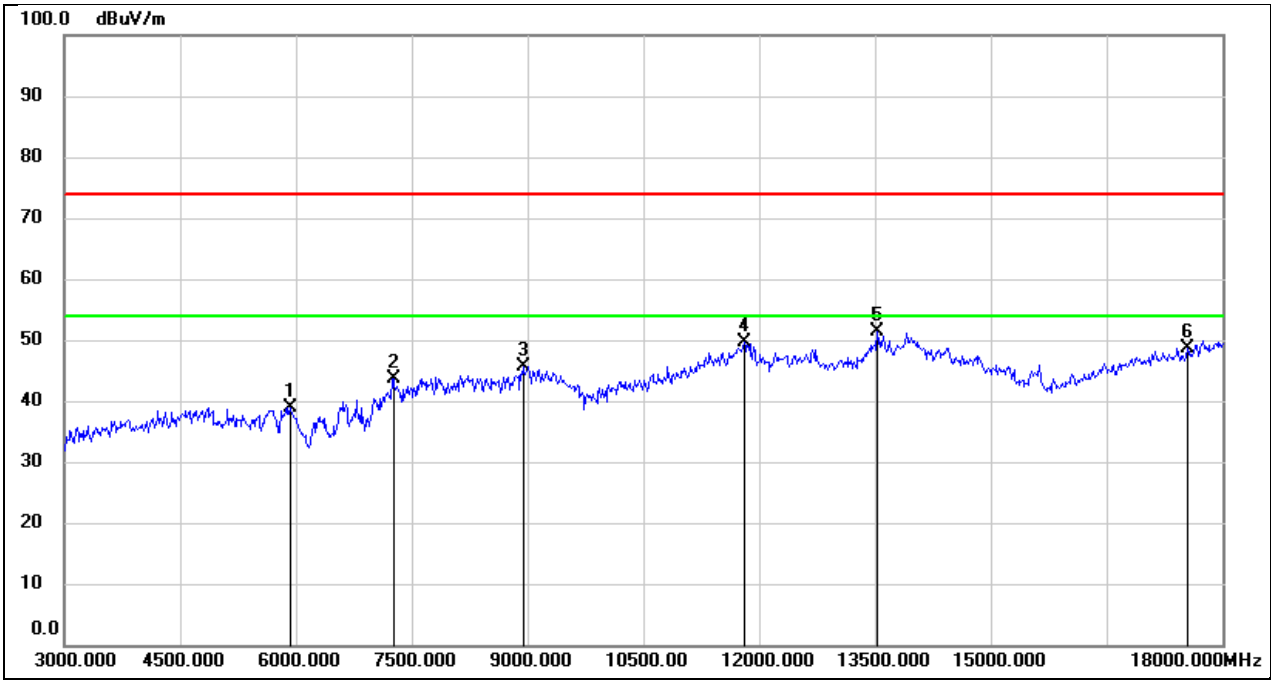
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	45.02	-1.13	43.89	74.00	-30.11	peak
2	7770.000	38.88	5.98	44.86	74.00	-29.14	peak
3	9030.000	36.31	9.37	45.68	74.00	-28.32	peak
4	11835.000	32.28	17.20	49.48	74.00	-24.52	peak
5	14010.000	29.12	20.60	49.72	74.00	-24.28	peak
6	17655.000	25.83	21.68	47.51	74.00	-26.49	peak

3GHz-18GHz			
Test Mode:	802.11n HT20	Channel:	2462
Polarity:	Vertical	Test Voltage:	DC 3.3 V



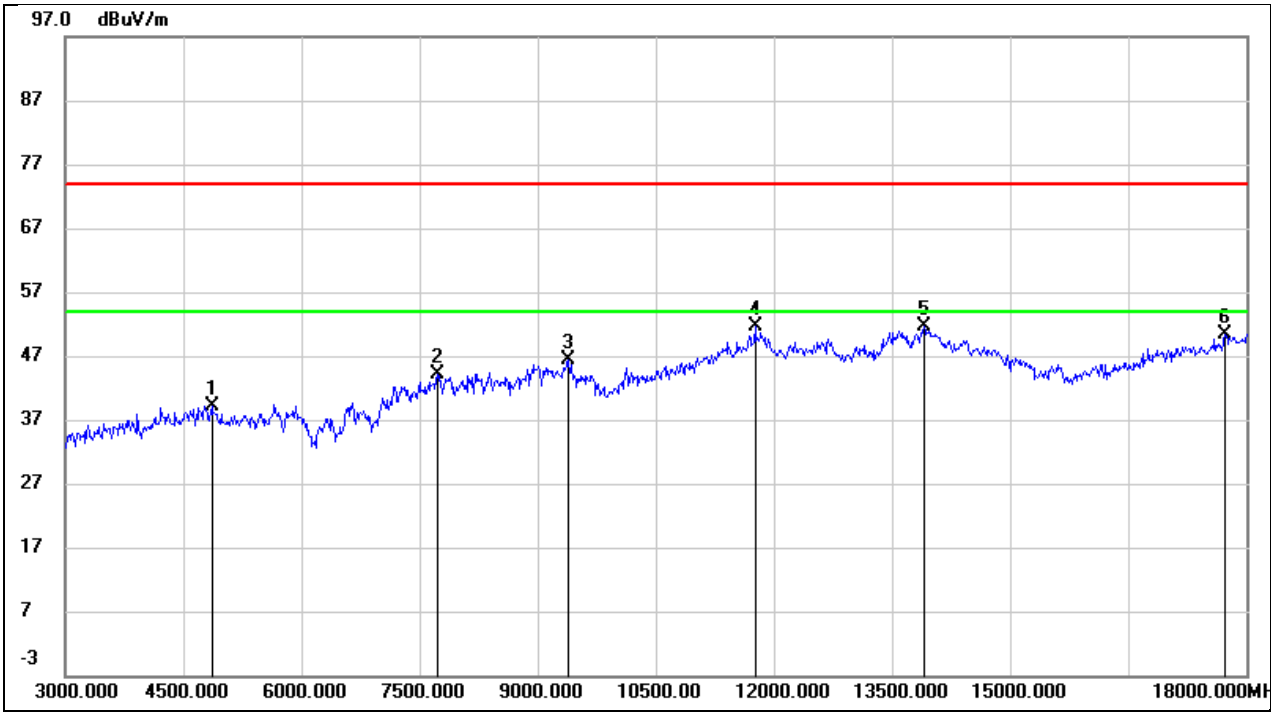
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	42.59	-1.13	41.46	74.00	-32.54	peak
2	8040.000	37.86	5.72	43.58	74.00	-30.42	peak
3	8940.000	36.93	8.80	45.73	74.00	-28.27	peak
4	11775.000	30.73	17.06	47.79	74.00	-26.21	peak
5	13905.000	28.84	20.57	49.41	74.00	-24.59	peak
6	17700.000	25.65	22.15	47.80	74.00	-26.20	peak

3GHz-18GHz			
Test Mode:	802.11n HT40	Channel:	2422
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



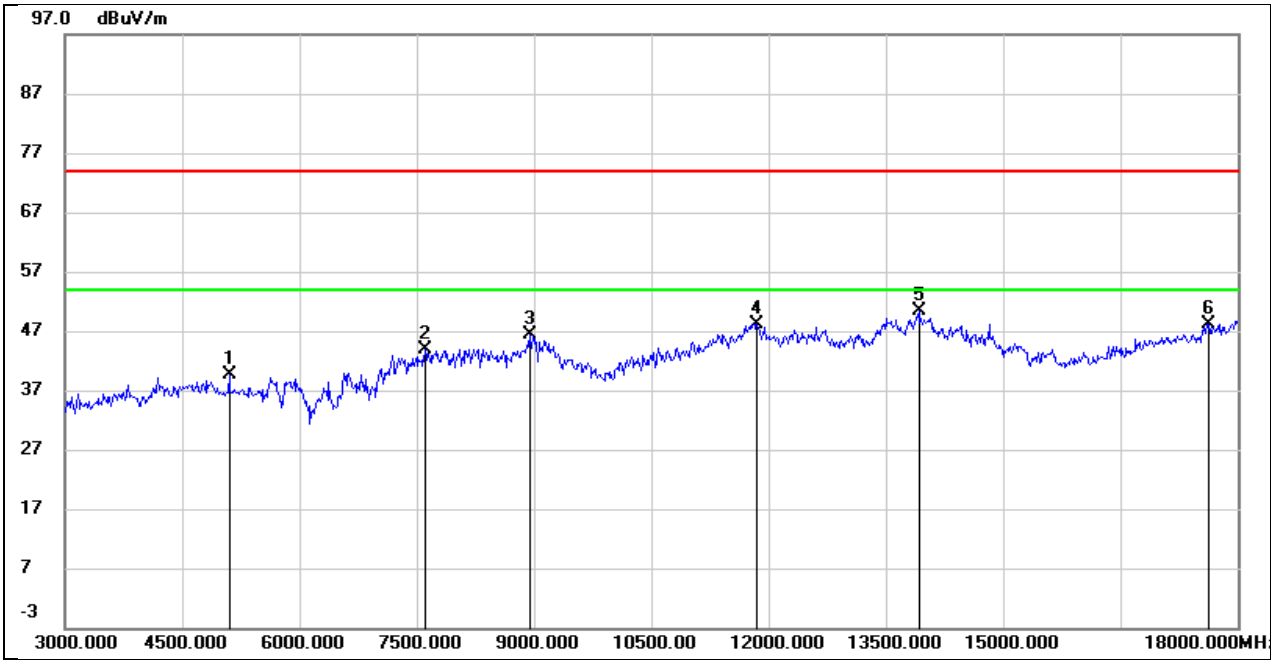
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5925.000	37.86	1.11	38.97	74.00	-35.03	peak
2	7260.000	38.34	5.31	43.65	74.00	-30.35	peak
3	8940.000	36.73	8.80	45.53	74.00	-28.47	peak
4	11805.000	32.32	17.21	49.53	74.00	-24.47	peak
5	13530.000	31.65	19.62	51.27	74.00	-22.73	peak
6	17550.000	27.81	20.81	48.62	74.00	-25.38	peak

3GHz-18GHz			
Test Mode:	802.11n HT40	Channel:	2422
Polarity:	Vertical	Test Voltage:	DC 3.3 V



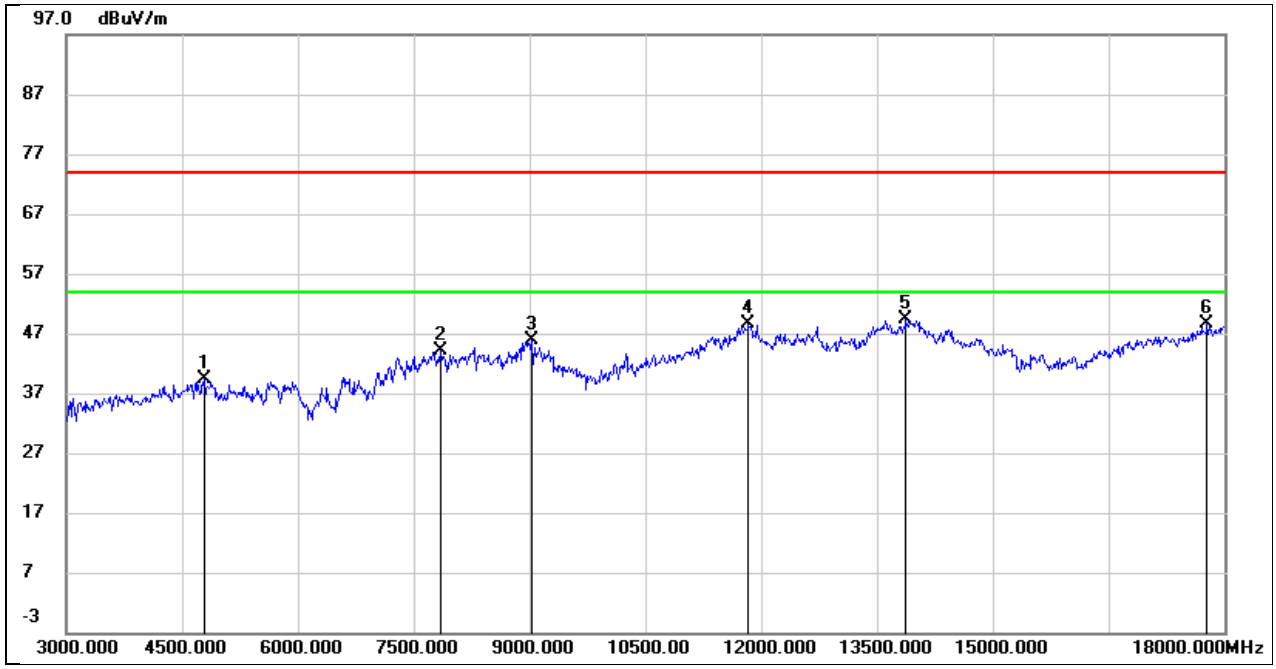
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	40.16	-1.14	39.02	74.00	-34.98	peak
2	7725.000	38.17	5.84	44.01	74.00	-29.99	peak
3	9390.000	36.77	9.61	46.38	74.00	-27.62	peak
4	11760.000	34.55	16.97	51.52	74.00	-22.48	peak
5	13905.000	31.13	20.57	51.70	74.00	-22.30	peak
6	17730.000	27.85	22.46	50.31	74.00	-23.69	peak

3GHz-18GHz			
Test Mode:	802.11n HT40	Channel:	2437
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



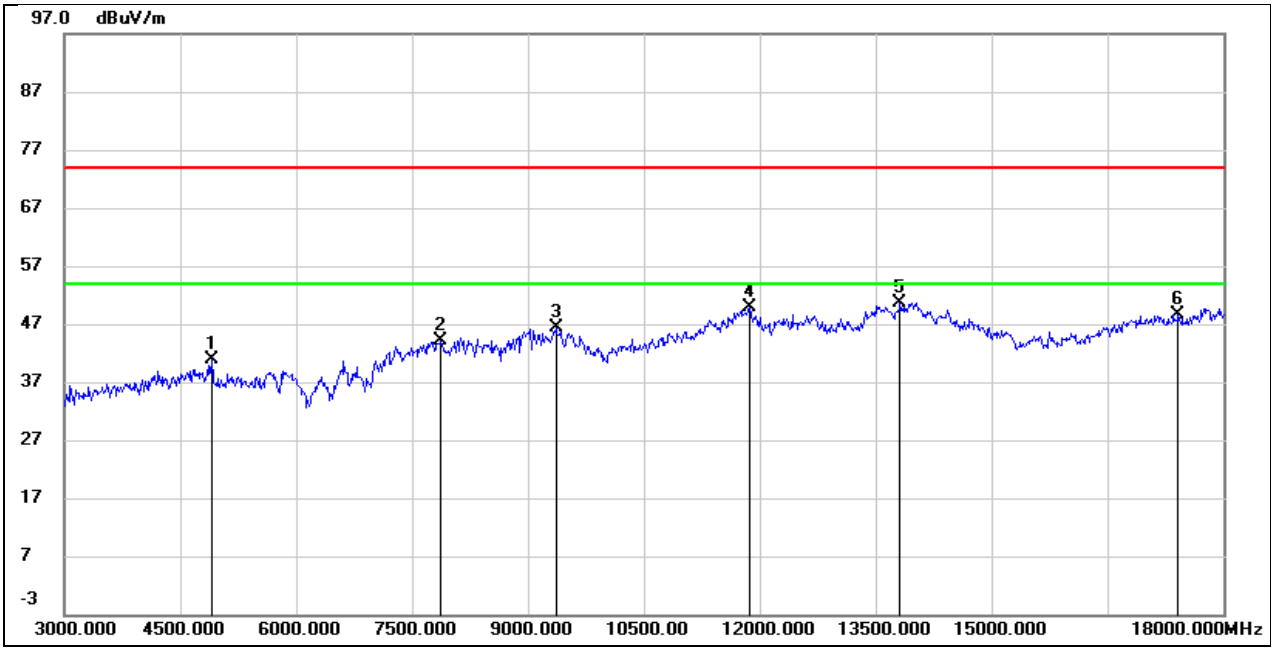
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5100.000	40.00	-0.46	39.54	74.00	-34.46	peak
2	7605.000	38.48	5.45	43.93	74.00	-30.07	peak
3	8940.000	37.55	8.80	46.35	74.00	-27.65	peak
4	11850.000	30.95	17.19	48.14	74.00	-25.86	peak
5	13920.000	29.76	20.58	50.34	74.00	-23.66	peak
6	17625.000	26.79	21.37	48.16	74.00	-25.84	peak

3GHz-18GHz			
Test Mode:	802.11n HT40	Channel:	2437
Polarity:	Vertical	Test Voltage:	DC 3.3 V



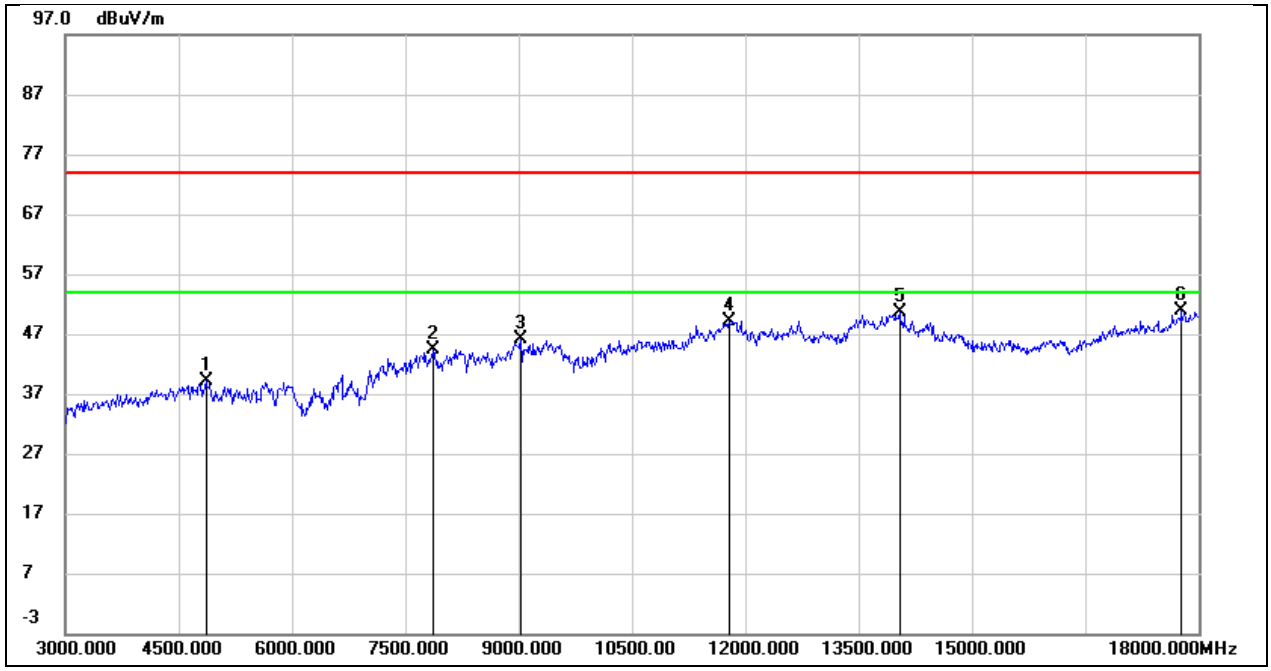
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4785.000	40.48	-1.20	39.28	74.00	-34.72	peak
2	7845.000	38.29	5.92	44.21	74.00	-29.79	peak
3	9030.000	36.47	9.37	45.84	74.00	-28.16	peak
4	11835.000	31.44	17.20	48.64	74.00	-25.36	peak
5	13875.000	28.76	20.55	49.31	74.00	-24.69	peak
6	17775.000	25.78	22.93	48.71	74.00	-25.29	peak

3GHz-18GHz			
Test Mode:	802.11n HT40	Channel:	2452
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



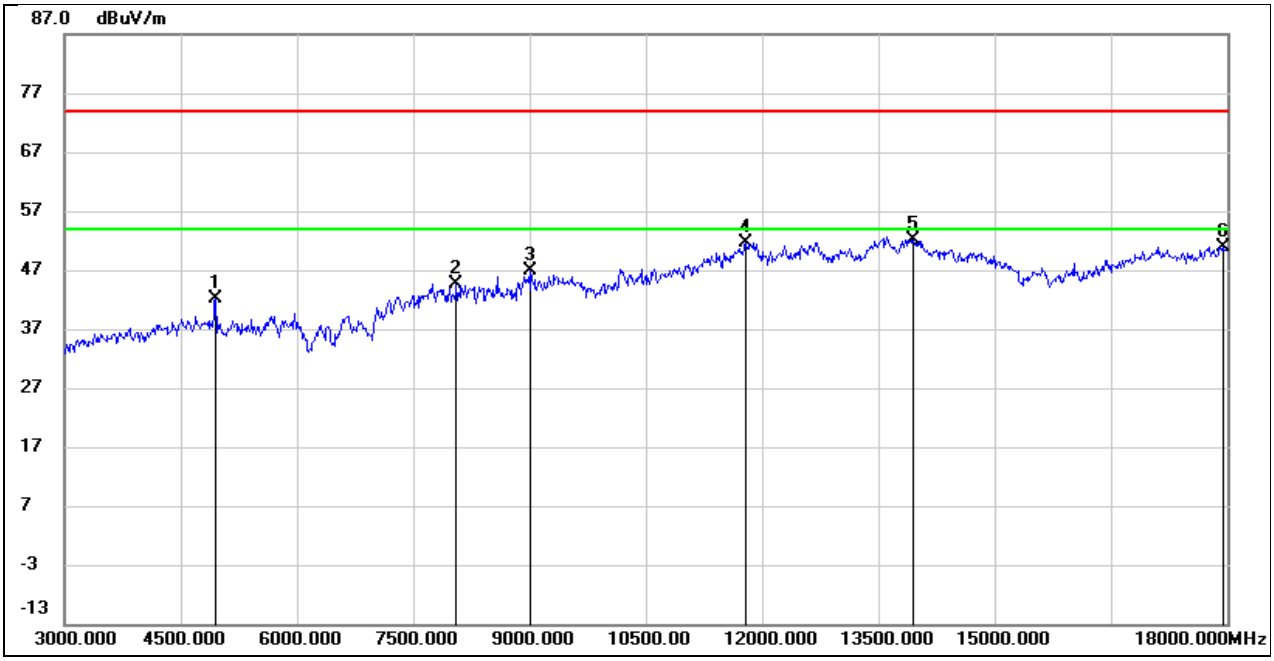
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	42.10	-1.13	40.97	74.00	-33.03	peak
2	7875.000	38.32	5.80	44.12	74.00	-29.88	peak
3	9360.000	36.92	9.43	46.35	74.00	-27.65	peak
4	11865.000	32.71	17.18	49.89	74.00	-24.11	peak
5	13815.000	30.11	20.50	50.61	74.00	-23.39	peak
6	17415.000	28.48	20.25	48.73	74.00	-25.27	peak

3GHz-18GHz			
Test Mode:	802.11n HT40	Channel:	2452
Polarity:	Vertical	Test Voltage:	DC 3.3 V



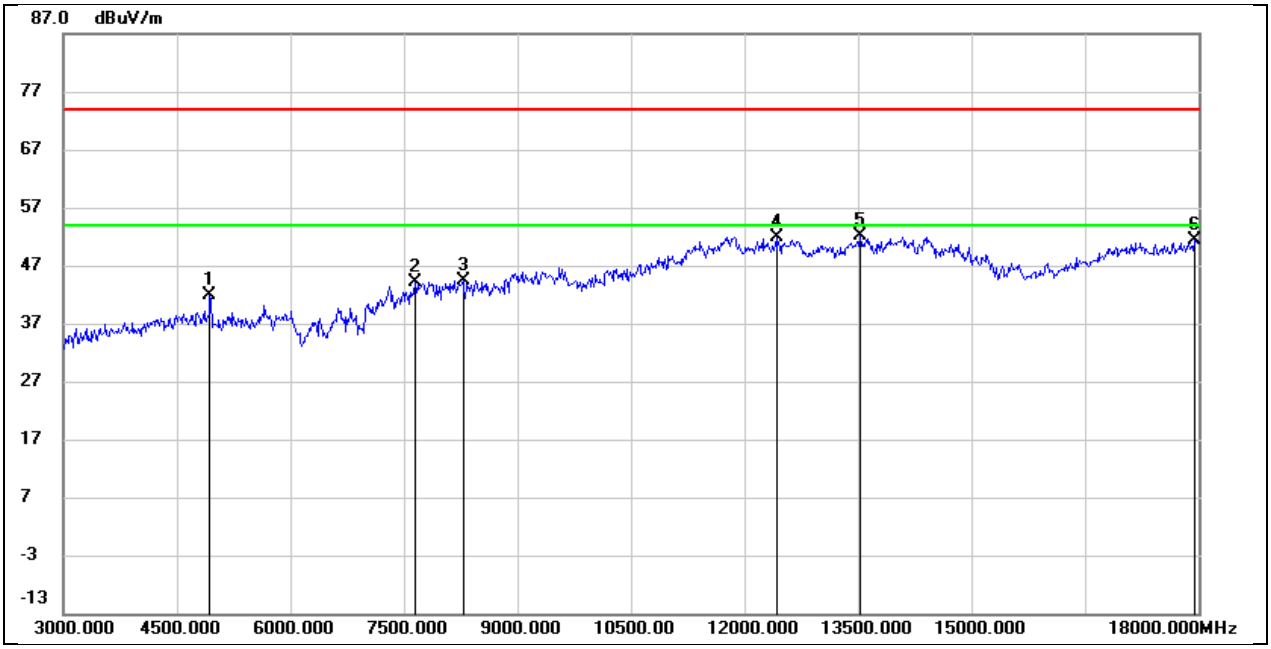
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	40.19	-1.14	39.05	74.00	-34.95	peak
2	7875.000	38.47	5.80	44.27	74.00	-29.73	peak
3	9030.000	36.83	9.37	46.20	74.00	-27.80	peak
4	11790.000	31.98	17.15	49.13	74.00	-24.87	peak
5	14040.000	30.30	20.44	50.74	74.00	-23.26	peak
6	17775.000	27.89	22.93	50.82	74.00	-23.18	peak

3GHz-18GHz			
Test Mode:	802.11ax HE20	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



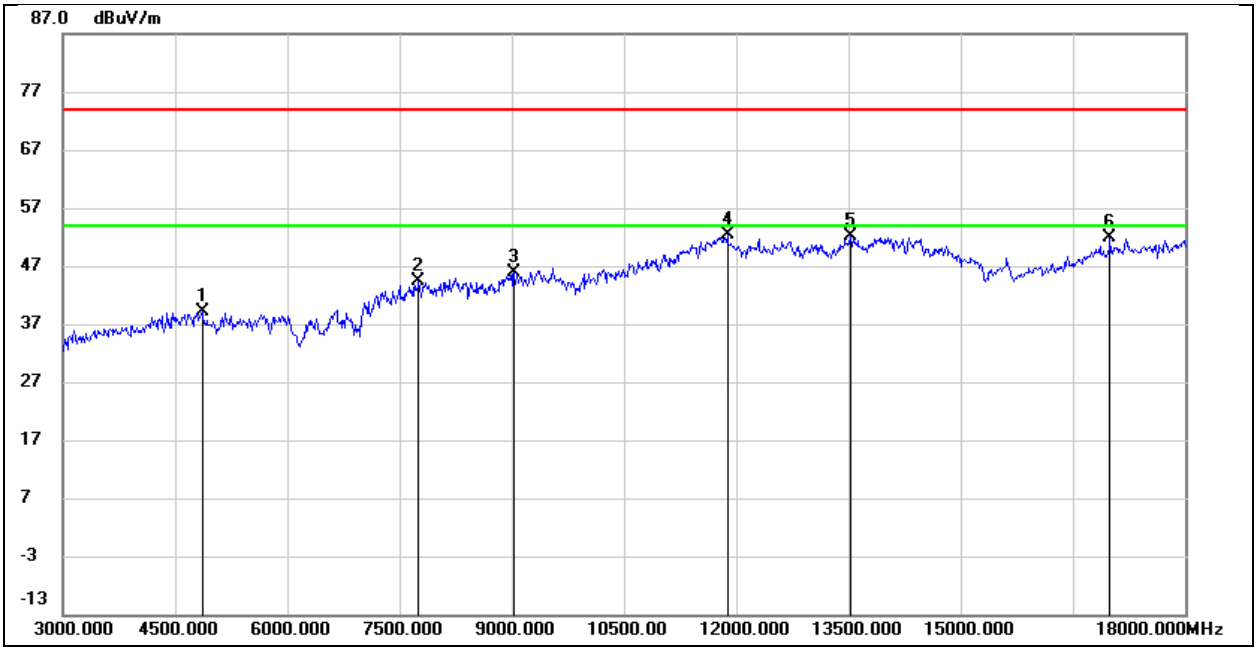
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4950.000	43.29	-1.12	42.17	74.00	-31.83	peak
2	8055.000	38.82	5.87	44.69	74.00	-29.31	peak
3	9022.500	37.35	9.41	46.76	74.00	-27.24	peak
4	11797.500	34.44	17.21	51.65	74.00	-22.35	peak
5	13950.000	31.46	20.61	52.07	74.00	-21.93	peak
6	17940.000	27.35	23.54	50.89	74.00	-23.11	peak

3GHz-18GHz			
Test Mode:	802.11ax HE20	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



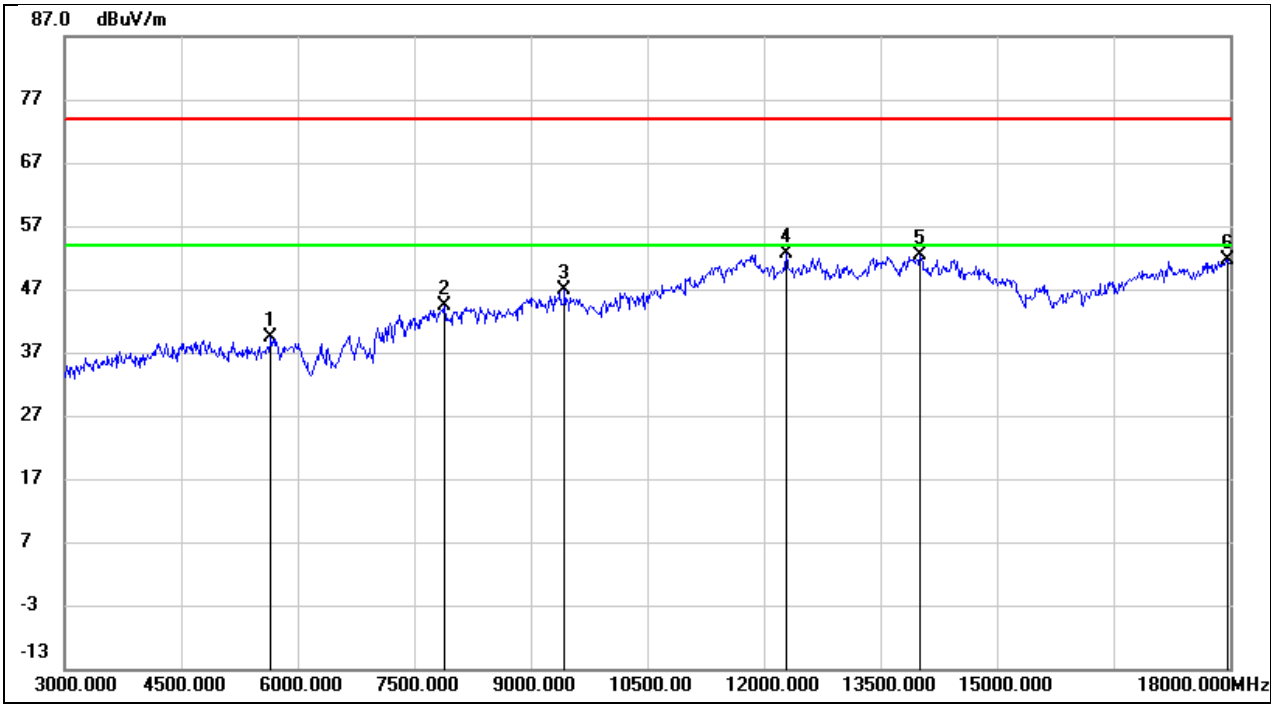
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4942.500	42.99	-1.13	41.86	74.00	-32.14	peak
2	7657.500	38.49	5.62	44.11	74.00	-29.89	peak
3	8280.000	37.49	7.00	44.49	74.00	-29.51	peak
4	12420.000	34.91	17.00	51.91	74.00	-22.09	peak
5	13530.000	32.49	19.62	52.11	74.00	-21.89	peak
6	17947.500	27.92	23.56	51.48	74.00	-22.52	peak

3GHz-18GHz			
Test Mode:	802.11ax HE20	Channel:	2437
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



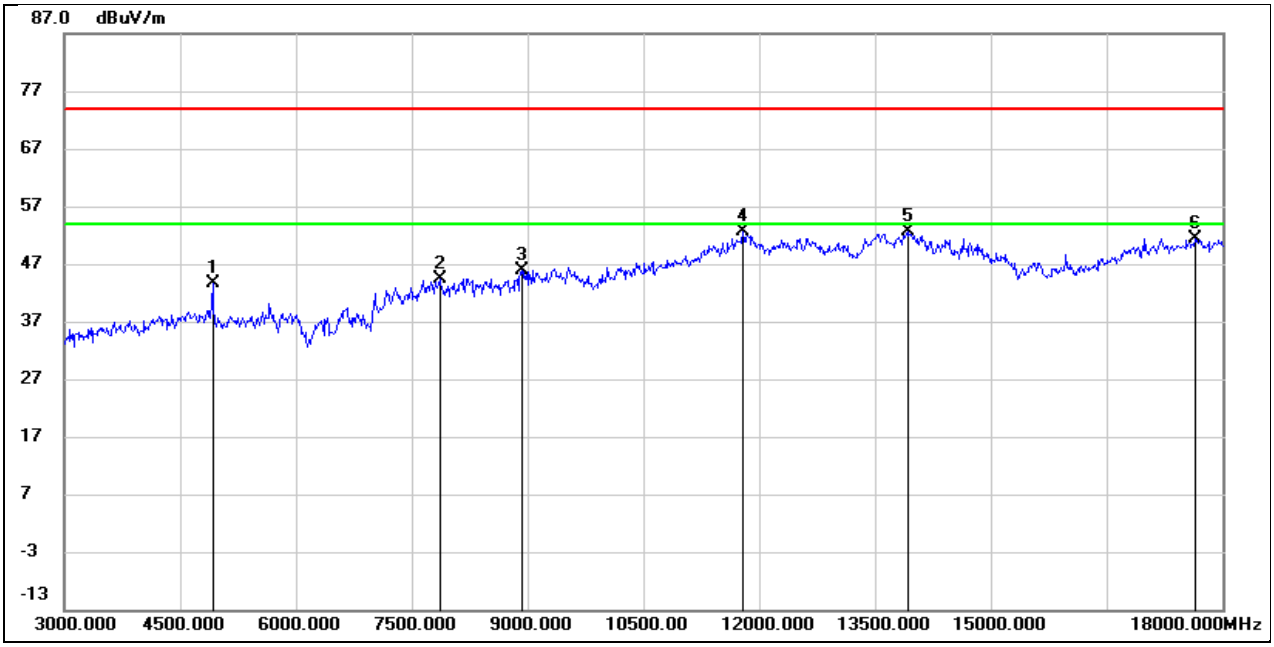
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4867.500	40.36	-1.14	39.22	74.00	-34.78	peak
2	7755.000	38.40	5.93	44.33	74.00	-29.67	peak
3	9030.000	36.57	9.37	45.94	74.00	-28.06	peak
4	11880.000	35.11	17.17	52.28	74.00	-21.72	peak
5	13537.500	32.47	19.63	52.10	74.00	-21.90	peak
6	17002.500	32.89	18.98	51.87	74.00	-22.13	peak

3GHz-18GHz			
Test Mode:	802.11ax HE20	Channel:	2437
Polarity:	Vertical	Test Voltage:	DC 3.3 V



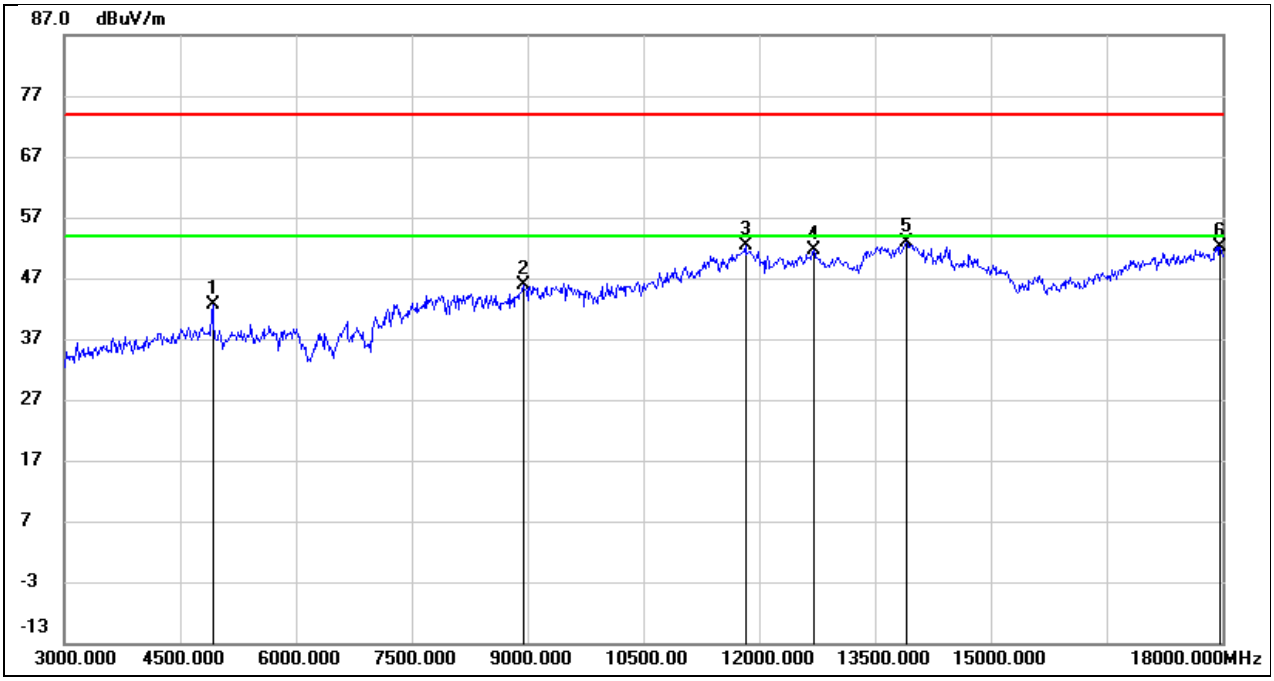
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5662.500	38.65	0.68	39.33	74.00	-34.67	peak
2	7897.500	38.62	5.73	44.35	74.00	-29.65	peak
3	9435.000	37.12	9.78	46.90	74.00	-27.10	peak
4	12292.500	35.63	16.88	52.51	74.00	-21.49	peak
5	14010.000	31.80	20.60	52.40	74.00	-21.60	peak
6	17970.000	28.12	23.60	51.72	74.00	-22.28	peak

3GHz-18GHz			
Test Mode:	802.11ax HE20	Channel:	2462
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



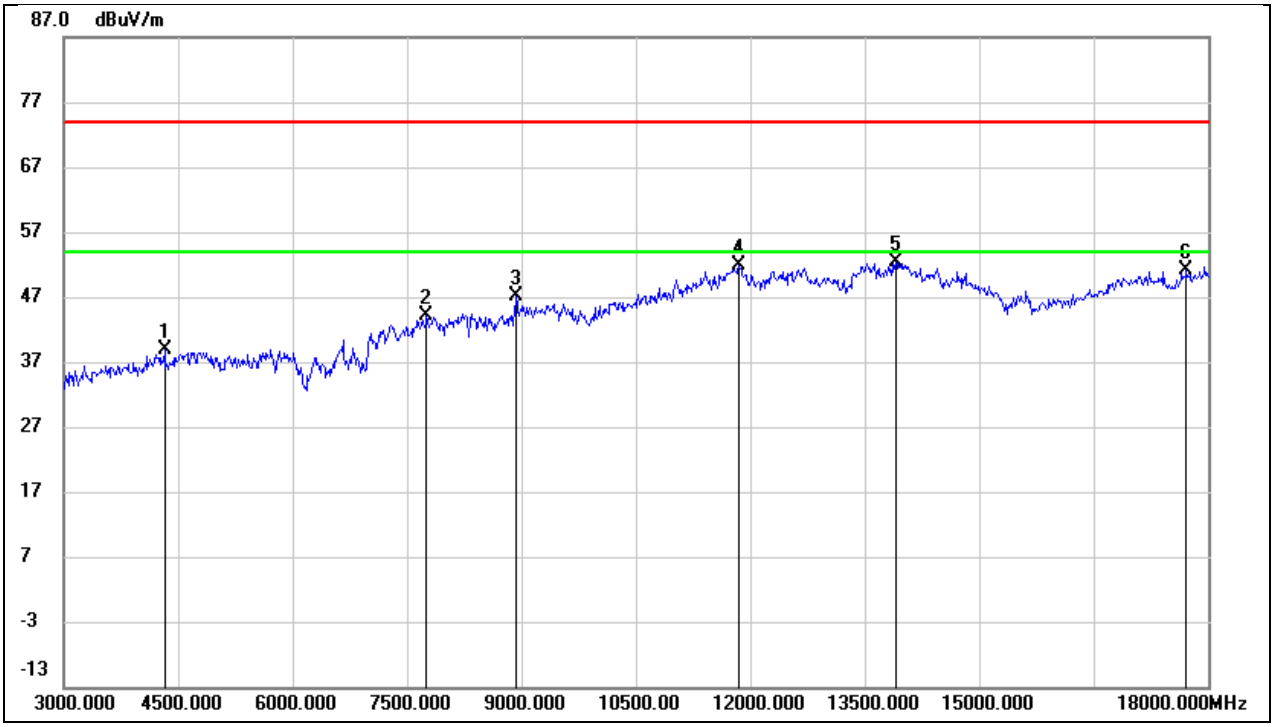
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	44.74	-1.13	43.61	74.00	-30.39	peak
2	7860.000	38.52	5.86	44.38	74.00	-29.62	peak
3	8932.500	37.19	8.72	45.91	74.00	-28.09	peak
4	11790.000	35.39	17.15	52.54	74.00	-21.46	peak
5	13920.000	32.07	20.58	52.65	74.00	-21.35	peak
6	17640.000	29.81	21.53	51.34	74.00	-22.66	peak

3GHz-18GHz			
Test Mode:	802.11ax HE20	Channel:	2462
Polarity:	Vertical	Test Voltage:	DC 3.3 V



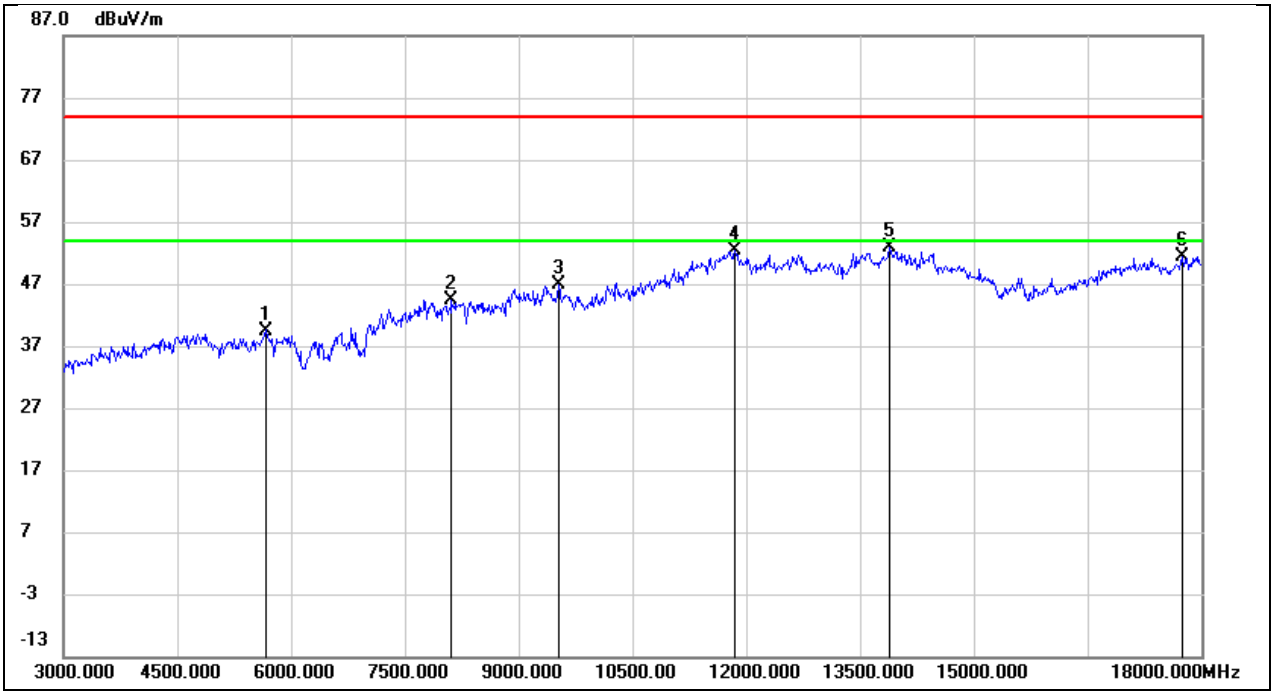
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4927.500	43.80	-1.13	42.67	74.00	-31.33	peak
2	8940.000	37.17	8.80	45.97	74.00	-28.03	peak
3	11820.000	35.26	17.21	52.47	74.00	-21.53	peak
4	12712.500	34.44	17.08	51.52	74.00	-22.48	peak
5	13912.500	32.23	20.58	52.81	74.00	-21.19	peak
6	17977.500	28.61	23.63	52.24	74.00	-21.76	peak

3GHz-18GHz			
Test Mode:	802.11ax HE40	Channel:	2422
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



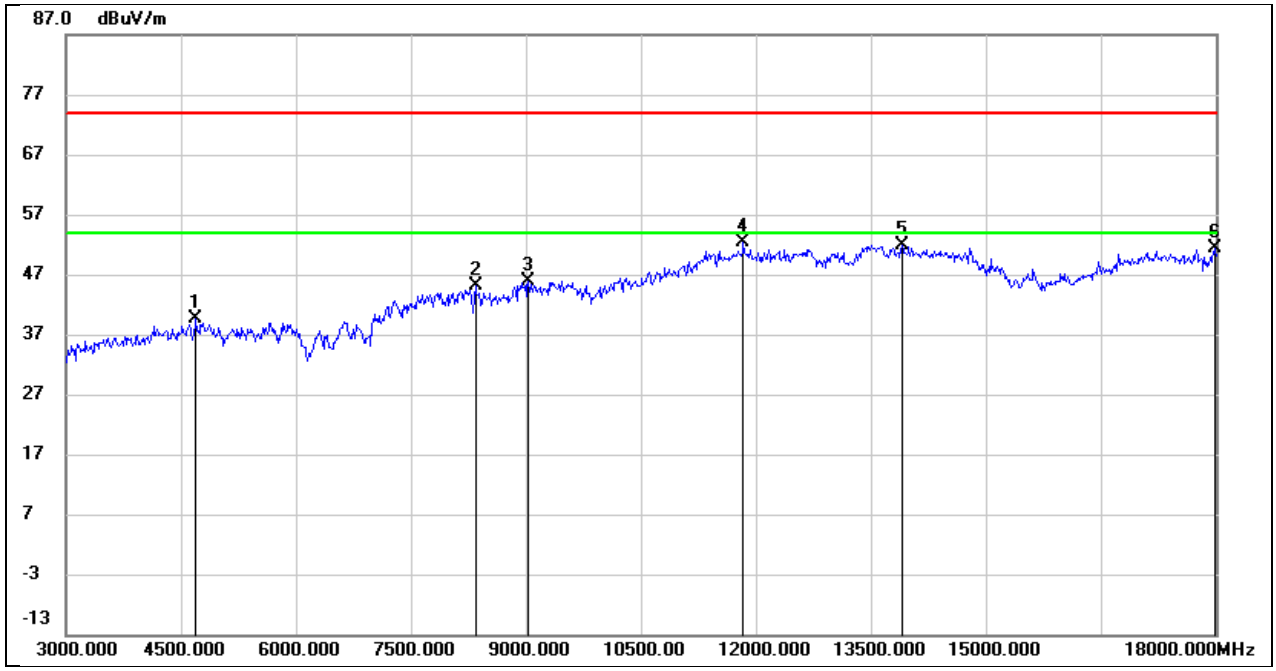
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4320.000	41.92	-3.00	38.92	74.00	-35.08	peak
2	7755.000	38.08	5.93	44.01	74.00	-29.99	peak
3	8932.500	38.44	8.72	47.16	74.00	-26.84	peak
4	11850.000	34.63	17.19	51.82	74.00	-22.18	peak
5	13912.500	31.87	20.58	52.45	74.00	-21.55	peak
6	17722.500	28.73	22.39	51.12	74.00	-22.88	peak

3GHz-18GHz			
Test Mode:	802.11ax HE40	Channel:	2422
Polarity:	Vertical	Test Voltage:	DC 3.3 V



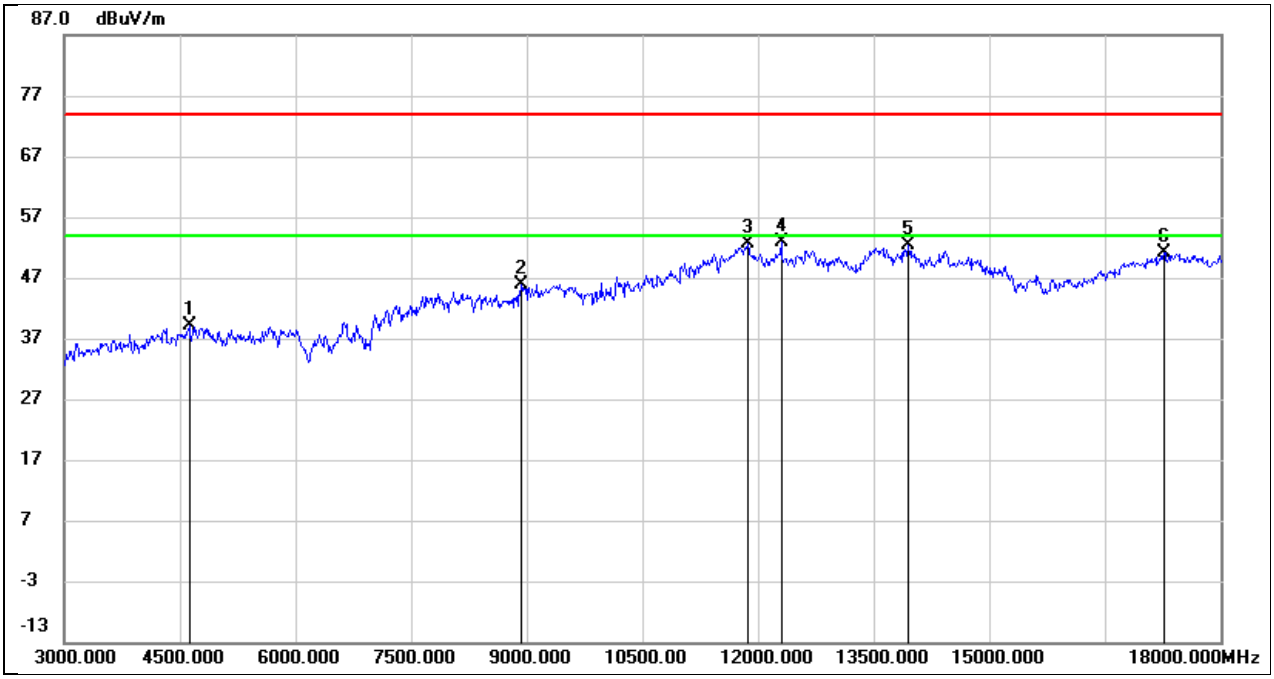
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5670.000	38.82	0.68	39.50	74.00	-34.50	peak
2	8115.000	38.06	6.43	44.49	74.00	-29.51	peak
3	9532.500	36.93	9.99	46.92	74.00	-27.08	peak
4	11850.000	35.12	17.19	52.31	74.00	-21.69	peak
5	13890.000	32.30	20.56	52.86	74.00	-21.14	peak
6	17745.000	28.83	22.62	51.45	74.00	-22.55	peak

3GHz-18GHz			
Test Mode:	802.11ax HE40	Channel:	2437
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



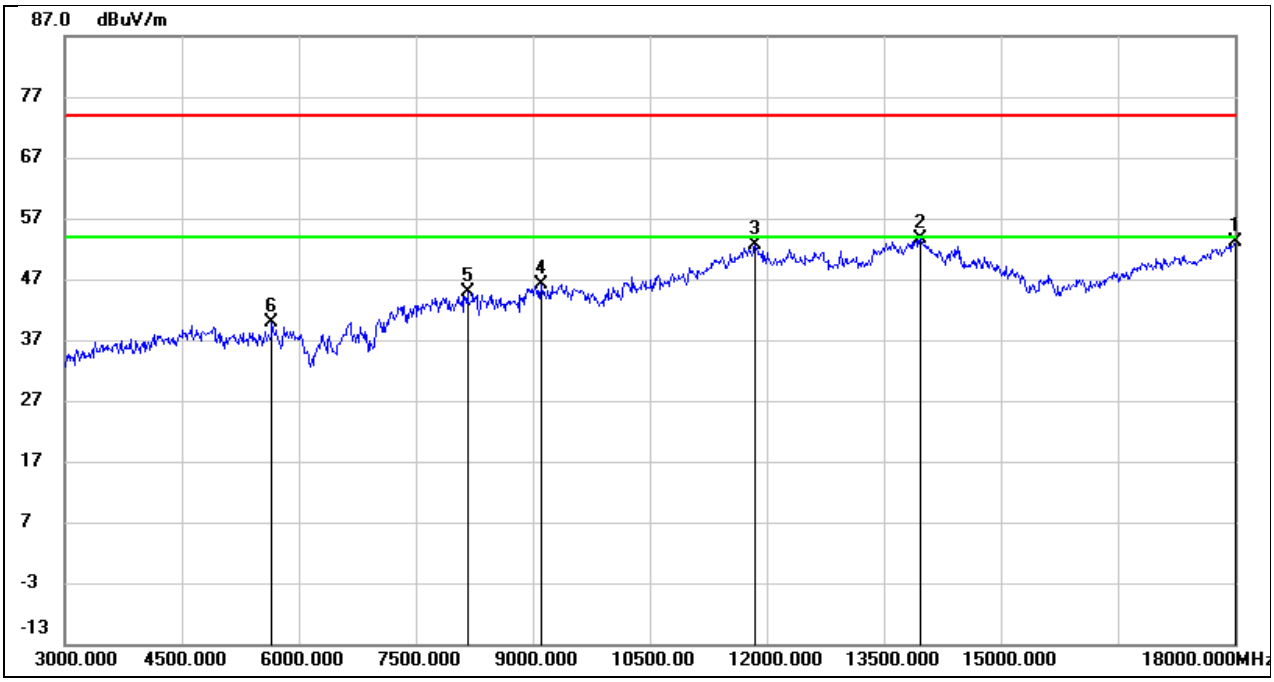
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4695.000	41.12	-1.59	39.53	74.00	-34.47	peak
2	8340.000	38.40	6.81	45.21	74.00	-28.79	peak
3	9030.000	36.47	9.37	45.84	74.00	-28.16	peak
4	11842.500	35.28	17.19	52.47	74.00	-21.53	peak
5	13912.500	31.41	20.58	51.99	74.00	-22.01	peak
6	17992.500	27.65	23.66	51.31	74.00	-22.69	peak

3GHz-18GHz			
Test Mode:	802.11ax HE40	Channel:	2437
Polarity:	Vertical	Test Voltage:	DC 3.3 V



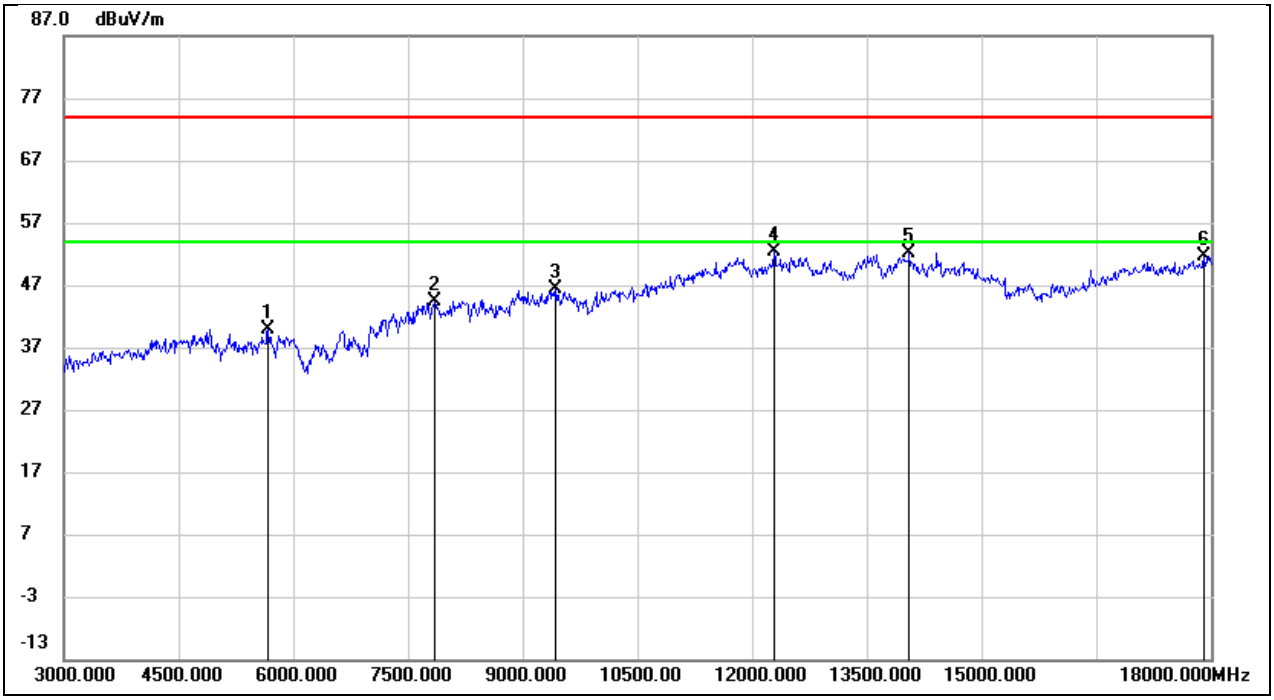
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4627.500	41.00	-1.88	39.12	74.00	-34.88	peak
2	8932.500	37.18	8.72	45.90	74.00	-28.10	peak
3	11872.500	35.46	17.18	52.64	74.00	-21.36	peak
4	12300.000	35.90	16.90	52.80	74.00	-21.20	peak
5	13957.500	31.86	20.61	52.47	74.00	-21.53	peak
6	17265.000	30.98	20.16	51.14	74.00	-22.86	peak

3GHz-18GHz			
Test Mode:	802.11ax HE40	Channel:	2452
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



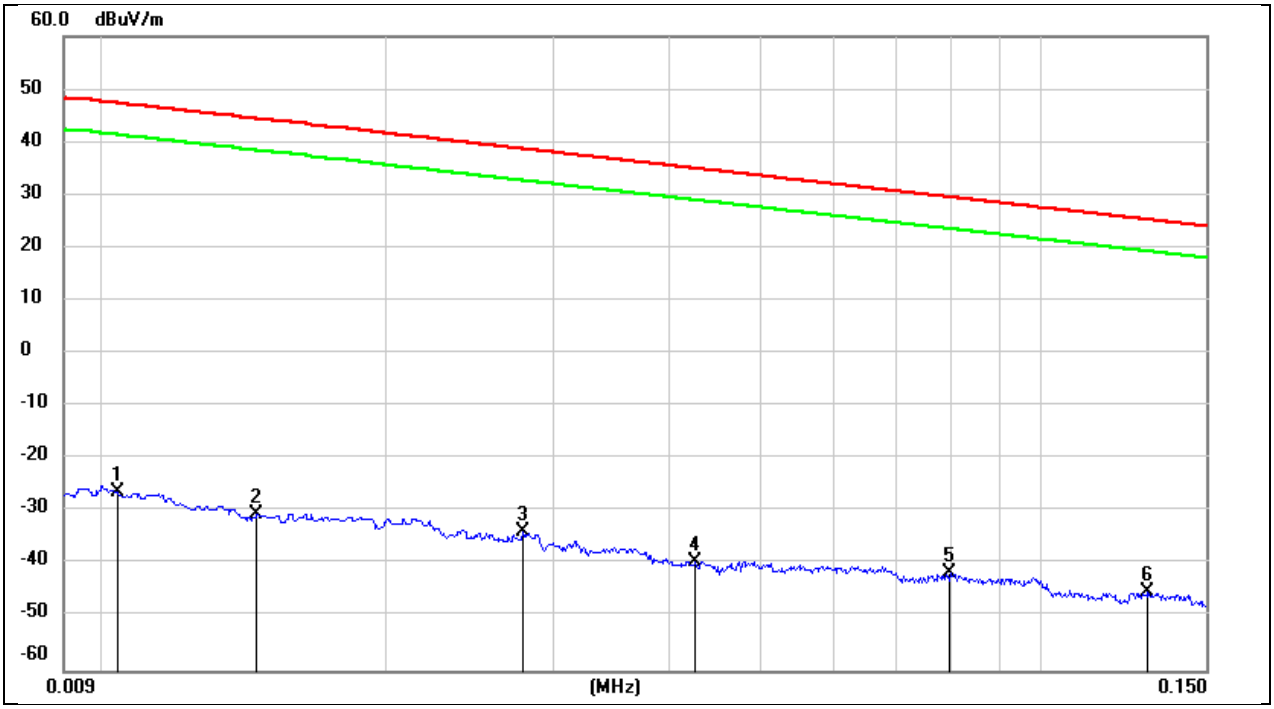
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18000.000	29.35	23.68	53.03	74.00	-20.97	peak
2	13965.000	33.00	20.61	53.61	74.00	-20.39	peak
3	11850.000	35.40	17.19	52.59	74.00	-21.41	peak
4	9105.000	37.19	8.95	46.14	74.00	-27.86	peak
5	8167.500	37.96	6.92	44.88	74.00	-29.12	peak
6	5655.000	39.16	0.69	39.85	74.00	-34.15	peak

3GHz-18GHz			
Test Mode:	802.11ax HE40	Channel:	2452
Polarity:	Vertical	Test Voltage:	DC 3.3 V



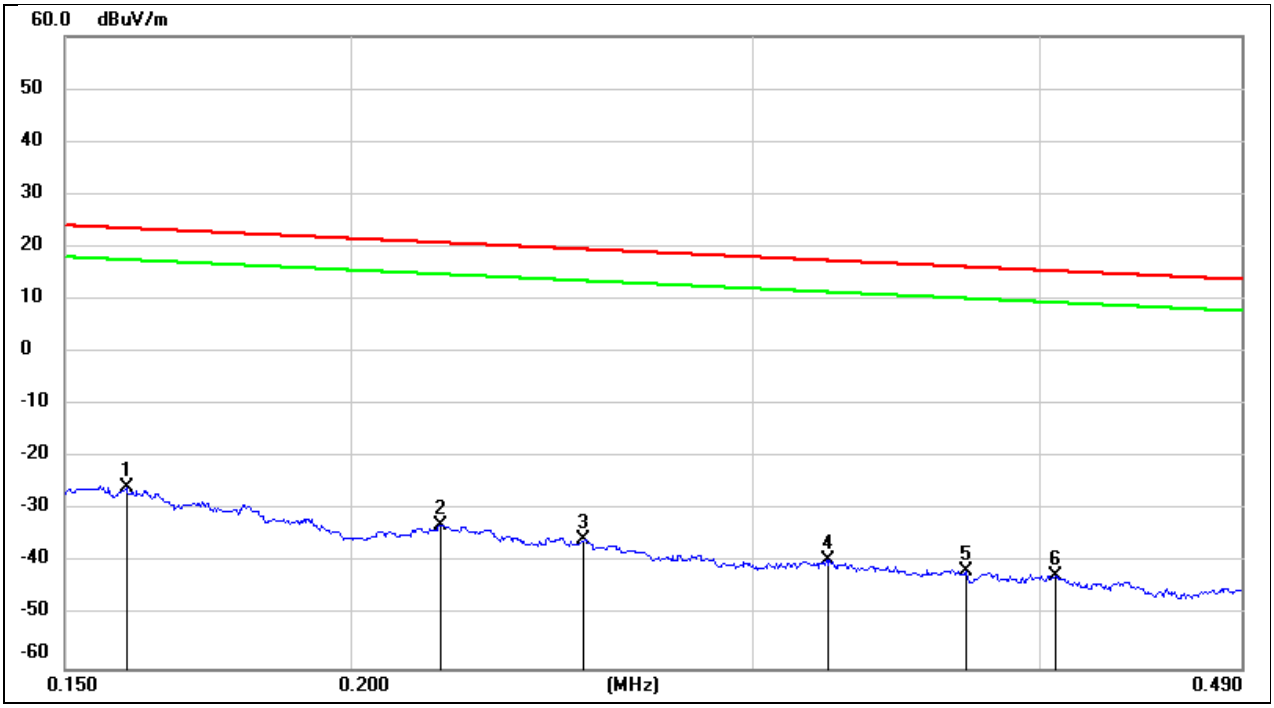
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5677.500	39.21	0.68	39.89	74.00	-34.11	peak
2	7845.000	38.42	5.92	44.34	74.00	-29.66	peak
3	9435.000	36.56	9.78	46.34	74.00	-27.66	peak
4	12292.500	35.50	16.88	52.38	74.00	-21.62	peak
5	14055.000	31.88	20.36	52.24	74.00	-21.76	peak
6	17910.000	28.28	23.46	51.74	74.00	-22.26	peak

9 kHz-150 kHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



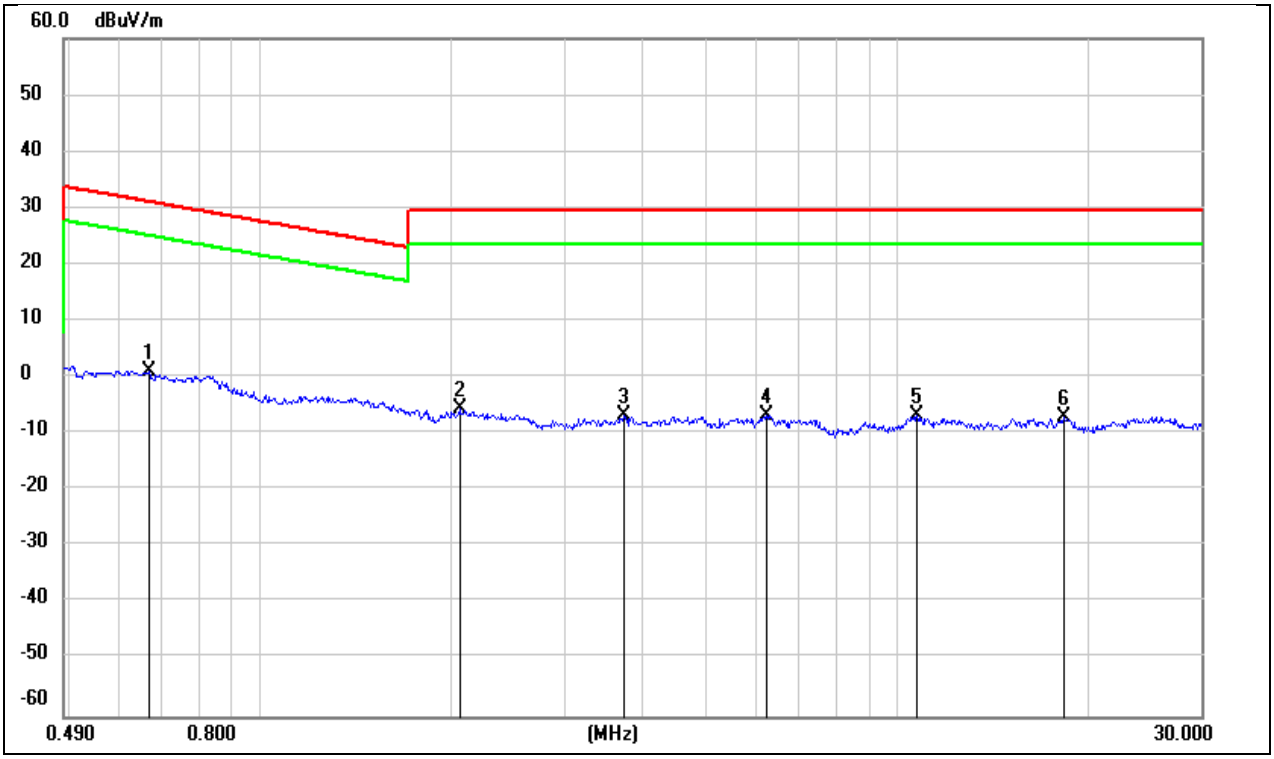
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0103	75.05	-101.40	-26.35	47.34	-77.85	-4.16	-73.69	peak
2	0.0145	71.05	-101.38	-30.33	44.37	-81.83	-7.13	-74.70	peak
3	0.0279	67.67	-101.38	-33.71	38.69	-85.21	-12.81	-72.40	peak
4	0.0427	62.14	-101.45	-39.31	34.99	-90.81	-16.51	-74.30	peak
5	0.0796	60.03	-101.63	-41.60	29.58	-93.10	-21.92	-71.18	peak
6	0.1300	56.43	-101.70	-45.27	25.33	-96.77	-26.17	-70.60	peak

150 kHz-490 kHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



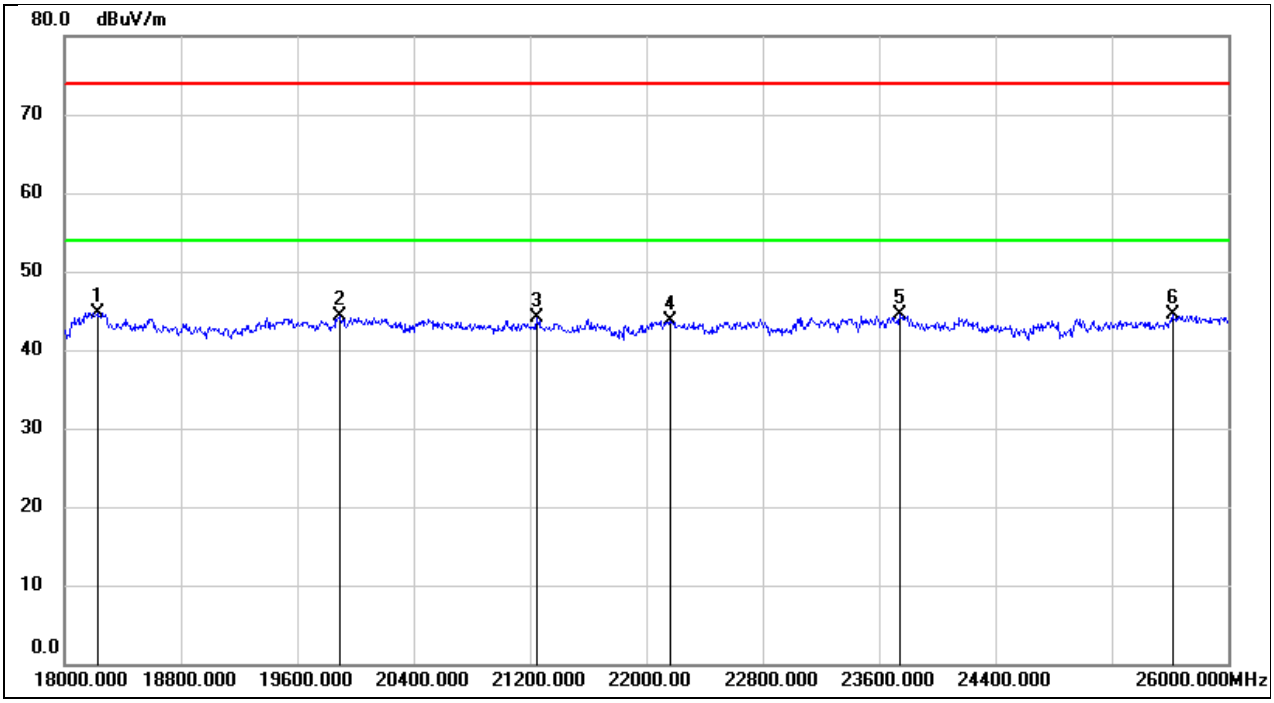
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1595	75.86	-101.65	-25.79	23.55	-77.29	-27.95	-49.34	peak
2	0.2190	68.77	-101.75	-32.98	20.79	-84.48	-30.71	-53.77	peak
3	0.2530	66.14	-101.80	-35.66	19.54	-87.16	-31.96	-55.20	peak
4	0.3234	62.48	-101.88	-39.40	17.41	-90.9	-34.09	-56.81	peak
5	0.3714	60.28	-101.93	-41.65	16.20	-93.15	-35.3	-57.85	peak
6	0.4062	59.64	-101.96	-42.32	15.43	-93.82	-36.07	-57.75	peak

490 kHz-30 MHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



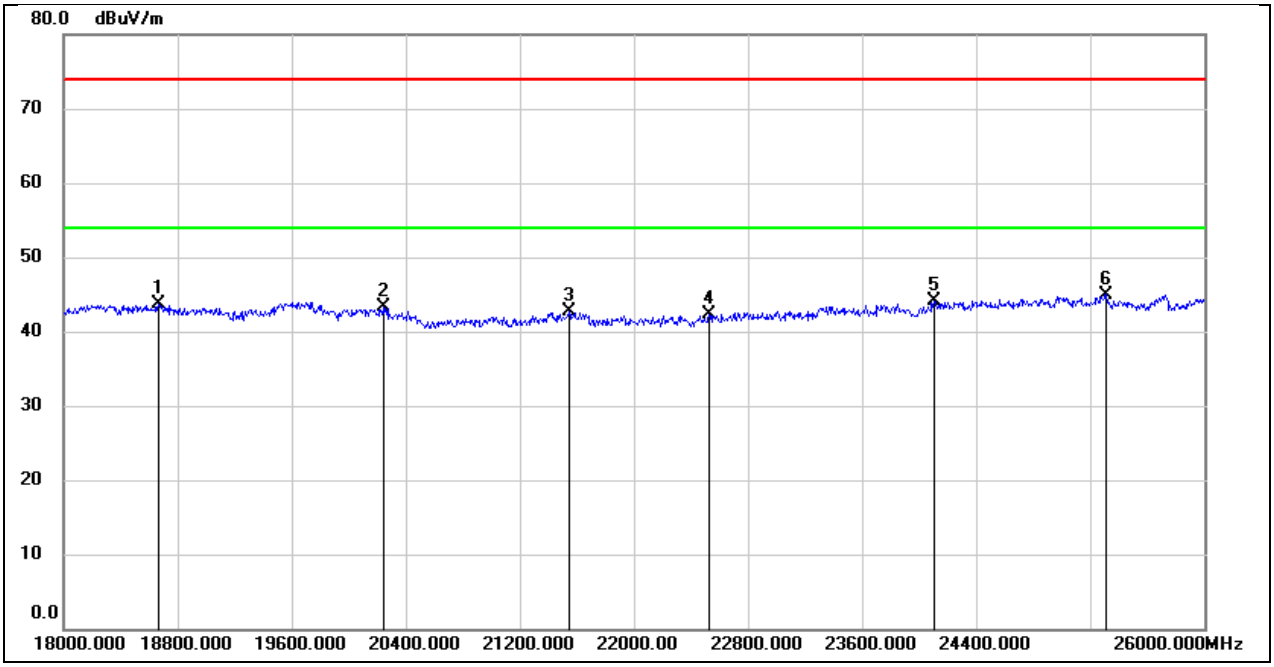
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.6671	63.25	-62.10	1.15	31.12	-50.35	-20.38	-29.97	peak
2	2.0539	56.20	-61.81	-5.61	29.54	-57.11	-21.96	-35.15	peak
3	3.7100	54.70	-61.41	-6.71	29.54	-58.21	-21.96	-36.25	peak
4	6.2445	54.63	-61.32	-6.69	29.54	-58.19	-21.96	-36.23	peak
5	10.7299	53.98	-60.83	-6.85	29.54	-58.35	-21.96	-36.39	peak
6	18.2545	53.93	-60.90	-6.97	29.54	-58.47	-21.96	-36.51	peak

18GHz-26GHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



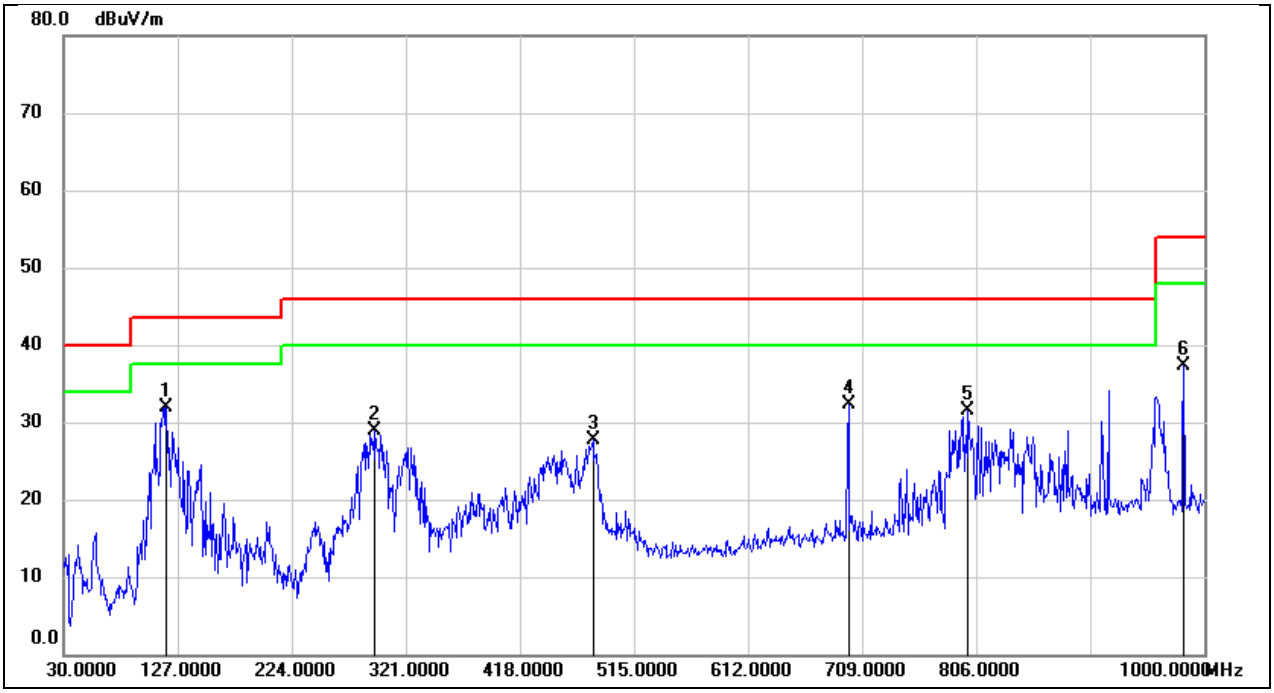
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18232.000	50.25	-5.54	44.71	74.00	-29.29	peak
2	19888.000	49.57	-5.36	44.21	74.00	-29.79	peak
3	21248.000	48.79	-4.77	44.02	74.00	-29.98	peak
4	22160.000	48.08	-4.31	43.77	74.00	-30.23	peak
5	23744.000	47.65	-3.20	44.45	74.00	-29.55	peak
6	25616.000	45.68	-1.24	44.44	74.00	-29.56	peak

18GHz-26GHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



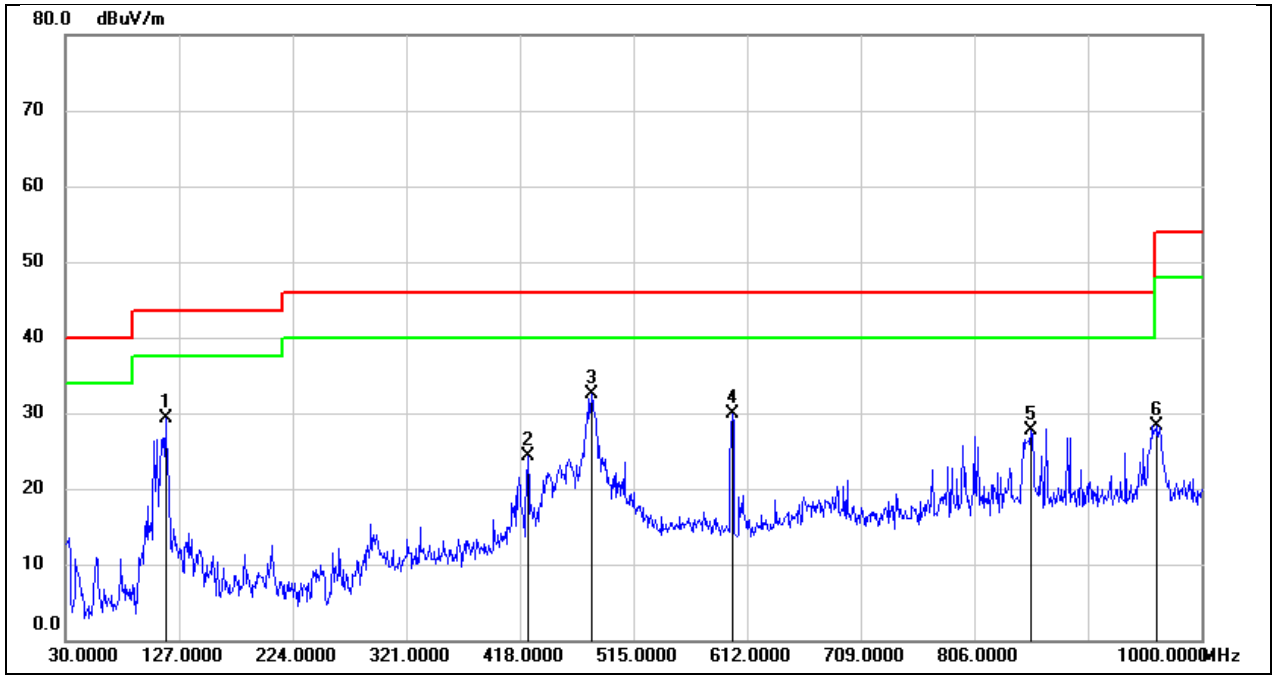
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18664.000	49.05	-5.37	43.68	74.00	-30.32	peak
2	20240.000	48.82	-5.61	43.21	74.00	-30.79	peak
3	21544.000	47.26	-4.63	42.63	74.00	-31.37	peak
4	22528.000	46.16	-3.86	42.30	74.00	-31.70	peak
5	24104.000	46.84	-2.79	44.05	74.00	-29.95	peak
6	25312.000	46.70	-1.70	45.00	74.00	-29.00	peak

30MHz-1GHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Horizontal	Test Voltage:	DC 3.3 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	117.3000	51.86	-20.03	31.83	43.50	-11.67	QP
2	294.8100	44.55	-15.61	28.94	46.00	-17.06	QP
3	480.0800	39.52	-11.79	27.73	46.00	-18.27	QP
4	697.3600	40.63	-8.32	32.31	46.00	-13.69	QP
5	799.2100	38.86	-7.33	31.53	46.00	-14.47	QP
6	982.5400	41.59	-4.33	37.26	54.00	-16.74	QP

30MHz-1GHz			
Test Mode:	802.11n HT20	Channel:	2412
Polarity:	Vertical	Test Voltage:	DC 3.3 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	115.3600	49.43	-20.15	29.28	43.50	-14.22	QP
2	424.7900	37.16	-12.86	24.30	46.00	-21.70	QP
3	479.1100	44.36	-11.82	32.54	46.00	-13.46	QP
4	599.3900	39.41	-9.56	29.85	46.00	-16.15	QP
5	854.5000	33.78	-6.14	27.64	46.00	-18.36	QP
6	961.2000	32.91	-4.52	28.39	54.00	-25.61	QP

9. ANTENNA REQUIREMENT

REQUIREMENT

Please refer to FCC §15.203
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RESULTS

Complies

10. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please refer to CFR 47 FCC §15.207 (a) and ISED RSS-Gen Clause 8.8

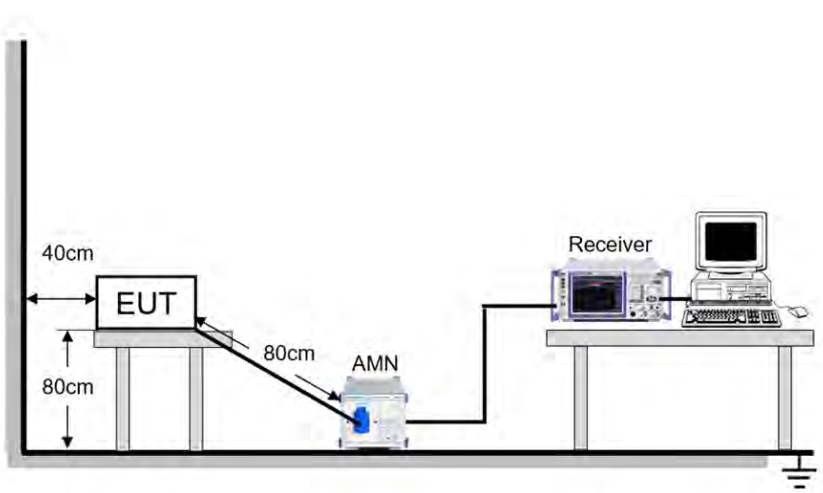
FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

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

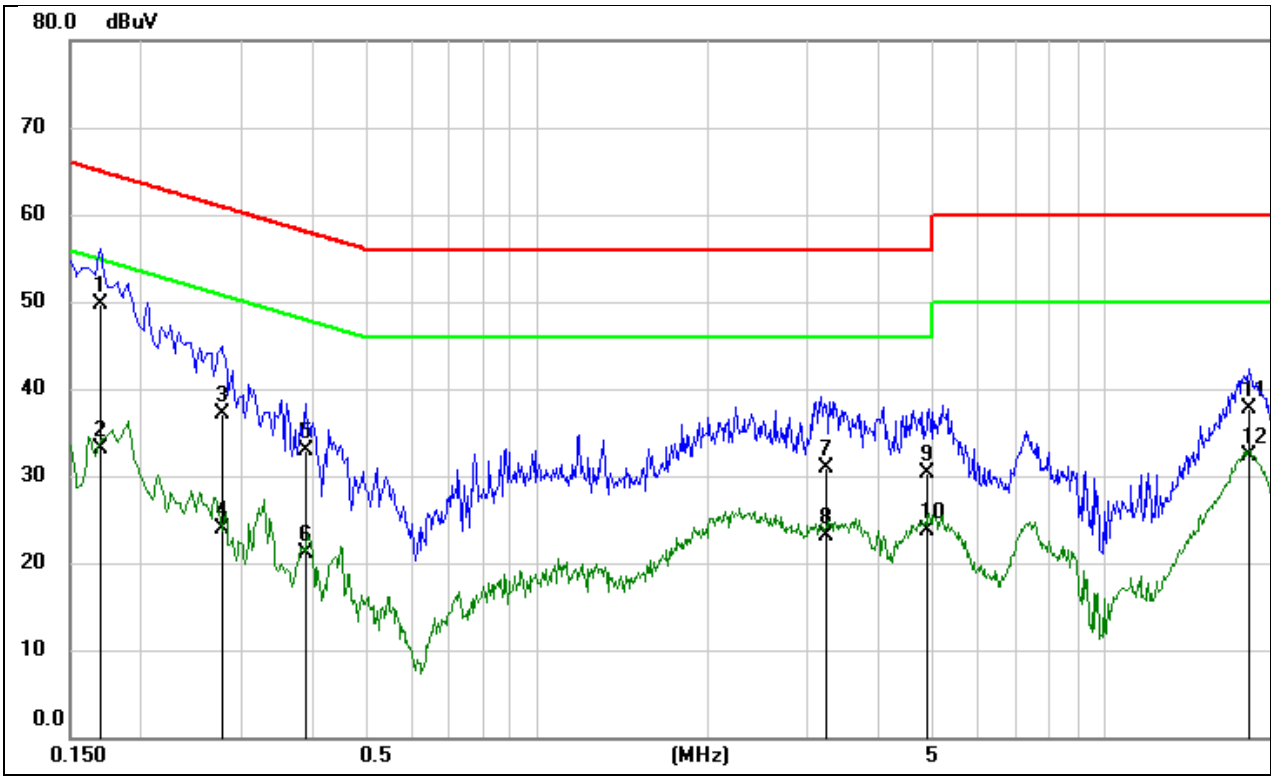


TEST ENVIRONMENT

Temperature	25.9℃	Relative Humidity	63.9%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V

TEST RESULTS

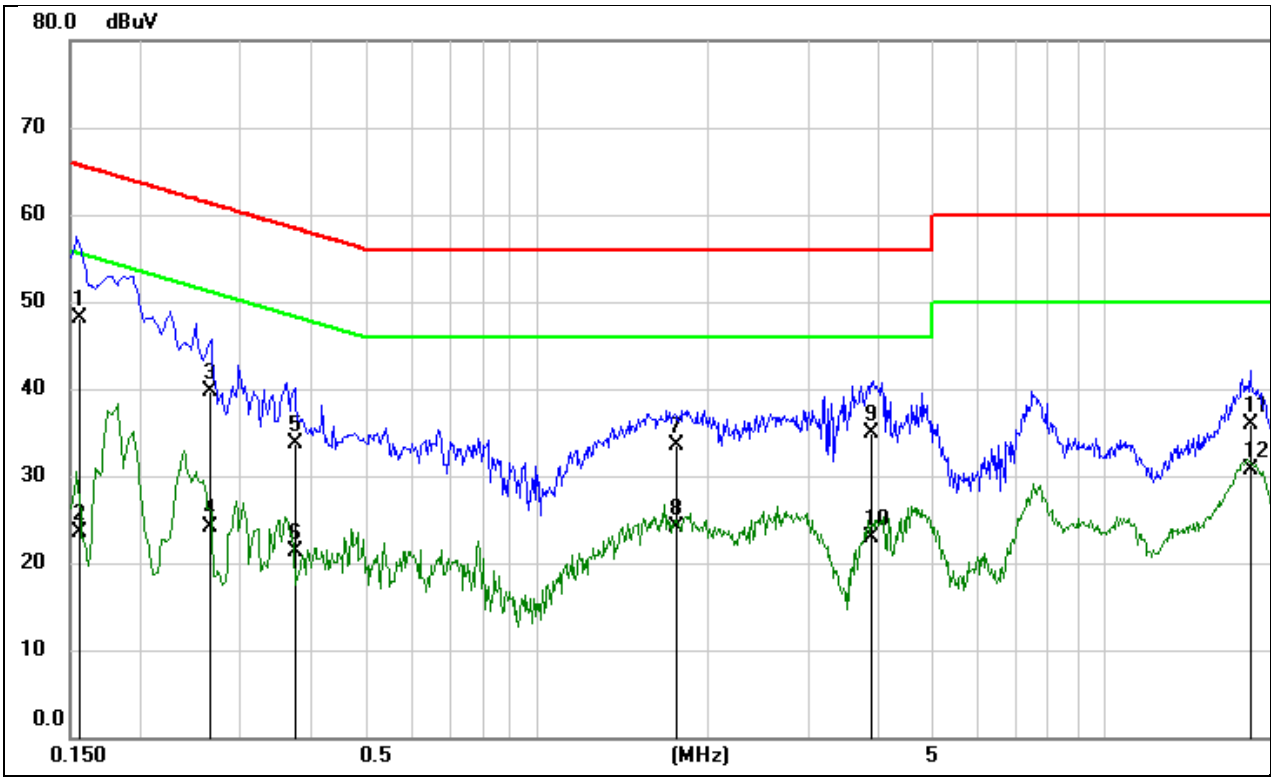
Test Mode:	802.11n HT20	Channel:	2412
Line:	Line		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1691	40.14	9.59	49.73	65.00	-15.27	QP
2	0.1691	23.47	9.59	33.06	55.00	-21.94	AVG
3	0.2797	27.62	9.51	37.13	60.82	-23.69	QP
4	0.2797	14.33	9.51	23.84	50.82	-26.98	AVG
5	0.3920	23.53	9.40	32.93	58.02	-25.09	QP
6	0.3920	11.71	9.40	21.11	48.02	-26.91	AVG
7	3.2429	21.32	9.61	30.93	56.00	-25.07	QP
8	3.2429	13.59	9.61	23.20	46.00	-22.80	AVG
9	4.8949	20.66	9.61	30.27	56.00	-25.73	QP
10	4.8949	14.04	9.61	23.65	46.00	-22.35	AVG
11	17.9650	27.94	9.74	37.68	60.00	-22.32	QP
12	17.9650	22.61	9.74	32.35	50.00	-17.65	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.

Test Mode:	802.11n HT20	Channel:	2412
Line:	Neutral		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1559	38.51	9.59	48.10	65.68	-17.58	QP
2	0.1559	13.85	9.59	23.44	55.68	-32.24	AVG
3	0.2634	30.08	9.53	39.61	61.32	-21.71	QP
4	0.2634	14.50	9.53	24.03	51.32	-27.29	AVG
5	0.3744	24.38	9.42	33.80	58.40	-24.60	QP
6	0.3744	11.95	9.42	21.37	48.40	-27.03	AVG
7	1.7637	23.92	9.62	33.54	56.00	-22.46	QP
8	1.7637	14.52	9.62	24.14	46.00	-21.86	AVG
9	3.8829	25.29	9.60	34.89	56.00	-21.11	QP
10	3.8829	13.38	9.60	22.98	46.00	-23.02	AVG
11	18.1235	26.12	9.75	35.87	60.00	-24.13	QP
12	18.1235	20.87	9.75	30.62	50.00	-19.38	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.

11. ST DATA

11.1. APPENDIX A: DTS BANDWIDTH

11.1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.120	2406.960	2417.080	0.5	PASS
	Ant2	2412	10.120	2406.960	2417.080	0.5	PASS
	Ant1	2437	10.120	2431.960	2442.080	0.5	PASS
	Ant2	2437	11.080	2431.000	2442.080	0.5	PASS
	Ant1	2462	11.080	2456.000	2467.080	0.5	PASS
	Ant2	2462	11.080	2456.000	2467.080	0.5	PASS
11G	Ant1	2412	16.280	2403.880	2420.160	0.5	PASS
	Ant2	2412	16.280	2403.880	2420.160	0.5	PASS
	Ant1	2437	16.280	2428.880	2445.160	0.5	PASS
	Ant2	2437	16.280	2428.880	2445.160	0.5	PASS
	Ant1	2462	16.280	2453.880	2470.160	0.5	PASS
	Ant2	2462	16.280	2453.880	2470.160	0.5	PASS
11N20MIMO	Ant1	2412	17.280	2403.240	2420.520	0.5	PASS
	Ant2	2412	16.720	2403.920	2420.640	0.5	PASS
	Ant1	2437	17.200	2428.440	2445.640	0.5	PASS
	Ant2	2437	17.120	2428.520	2445.640	0.5	PASS
	Ant1	2462	17.280	2453.240	2470.520	0.5	PASS
	Ant2	2462	17.120	2453.520	2470.640	0.5	PASS
11N40MIMO	Ant1	2422	33.760	2405.760	2439.520	0.5	PASS
	Ant2	2422	33.760	2405.760	2439.520	0.5	PASS
	Ant1	2437	36.160	2418.840	2455.000	0.5	PASS
	Ant2	2437	36.160	2419.080	2455.240	0.5	PASS
	Ant1	2452	36.160	2433.840	2470.000	0.5	PASS
	Ant2	2452	36.080	2433.920	2470.000	0.5	PASS
11AX20MIMO	Ant1	2412	17.120	2403.600	2420.720	0.5	PASS
	Ant2	2412	17.360	2403.000	2420.360	0.5	PASS
	Ant1	2437	18.720	2427.680	2446.400	0.5	PASS
	Ant2	2437	18.320	2427.600	2445.920	0.5	PASS
	Ant1	2462	17.760	2452.960	2470.720	0.5	PASS
	Ant2	2462	18.920	2452.520	2471.440	0.5	PASS
11AX40MIMO	Ant1	2422	36.160	2404.480	2440.640	0.5	PASS
	Ant2	2422	36.400	2404.480	2440.880	0.5	PASS
	Ant1	2437	36.400	2418.120	2454.520	0.5	PASS
	Ant2	2437	37.920	2418.120	2456.040	0.5	PASS
	Ant1	2452	37.920	2433.120	2471.040	0.5	PASS
	Ant2	2452	37.680	2433.360	2471.040	0.5	PASS

11.1.2. Test Graphs

11B_Ant1_2412

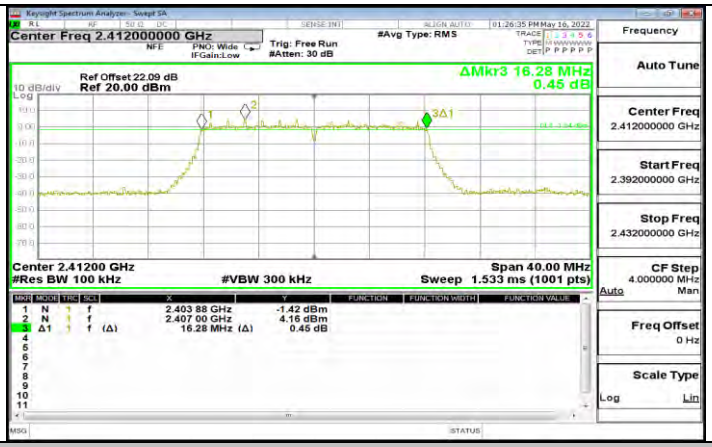
11B_Ant2_2412

11B_Ant1_2437

11B_Ant2_2437

11B_Ant1_2462

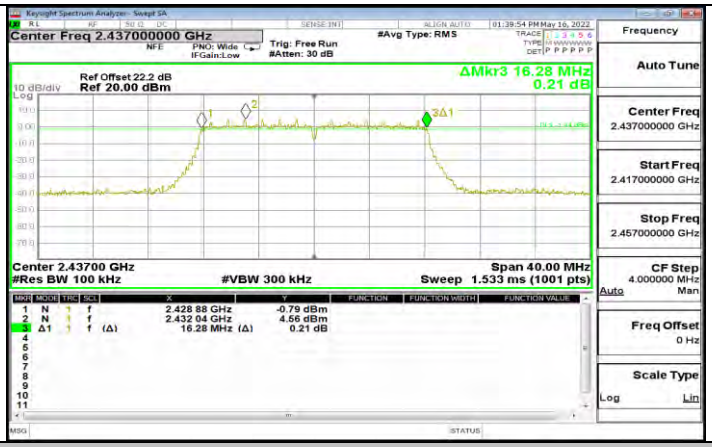
11B_Ant2_2462



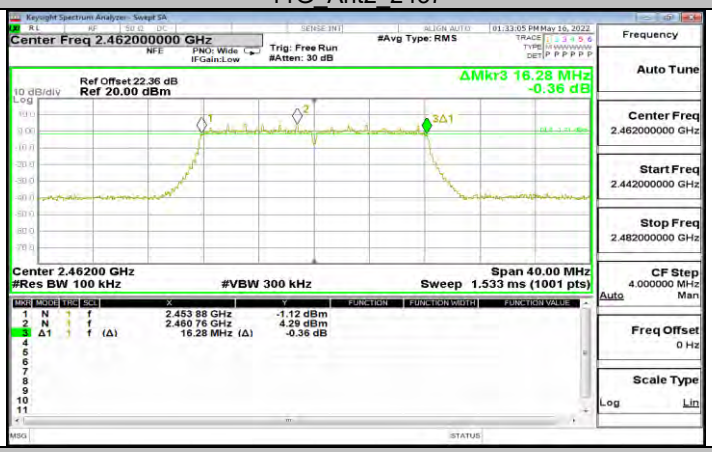
11G_Ant1_2412

11G_Ant2_2412

11G_Ant1_2437



11G_Ant2_2437

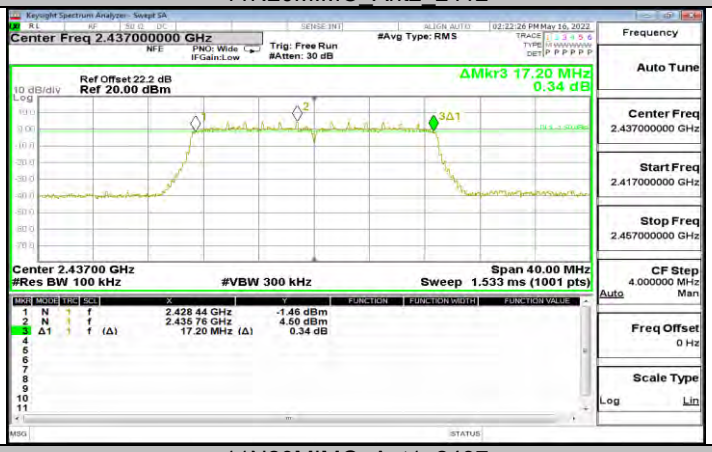


11G_Ant1_2462

11G_Ant2_2462

11N20MIMO_Ant1_2412

11N20MIMO_Ant2_2412

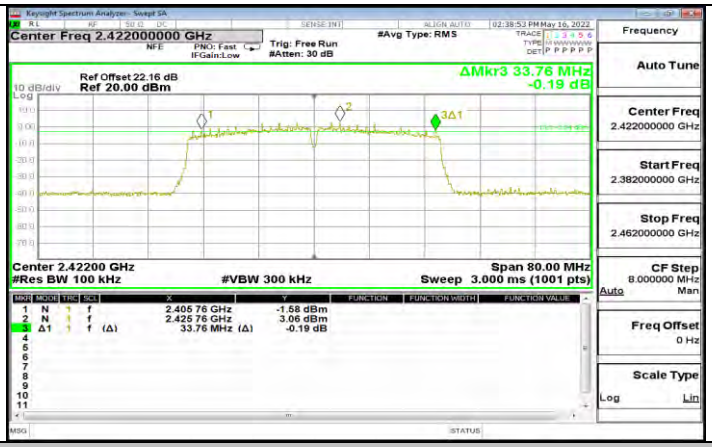


11N20MIMO_Ant1_2437

11N20MIMO_Ant2_2437

11N20MIMO_Ant1_2462

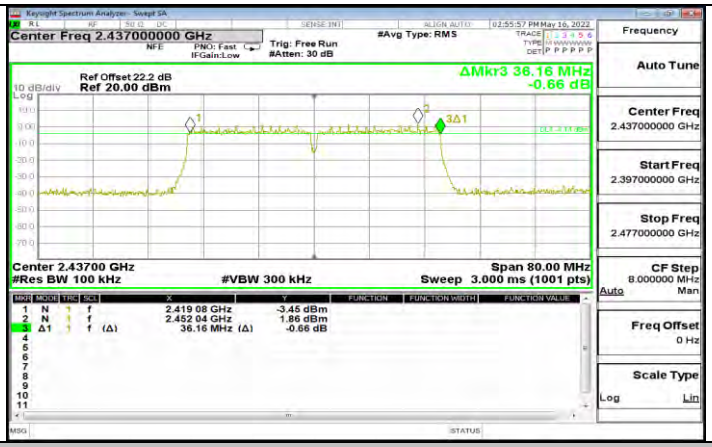
11N20MIMO_Ant2_2462



11N40MIMO_Ant1_2422

11N40MIMO_Ant2_2422

11N40MIMO_Ant1_2437



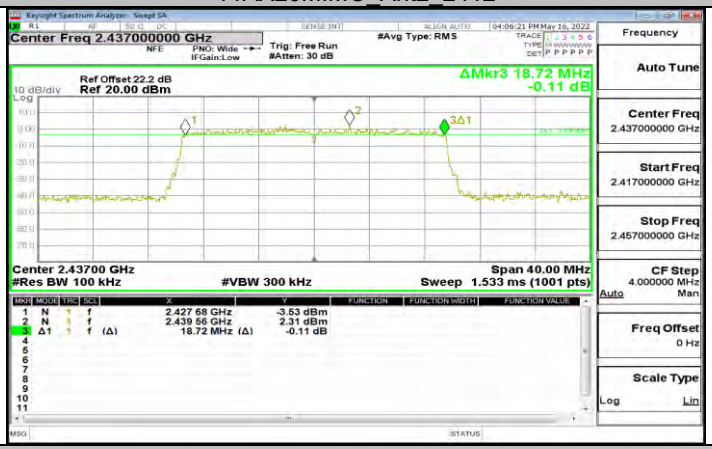
11N40MIMO_Ant2_2437

11N40MIMO_Ant1_2452

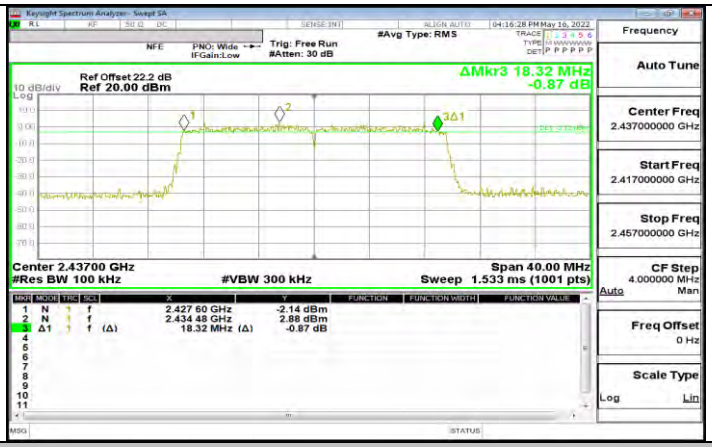
11N40MIMO_Ant2_2452

11AX20MIMO_Ant1_2412

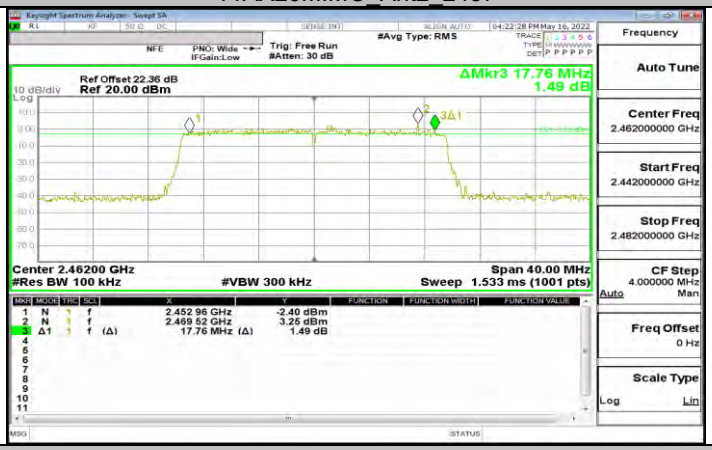
11AX20MIMO_Ant2_2412



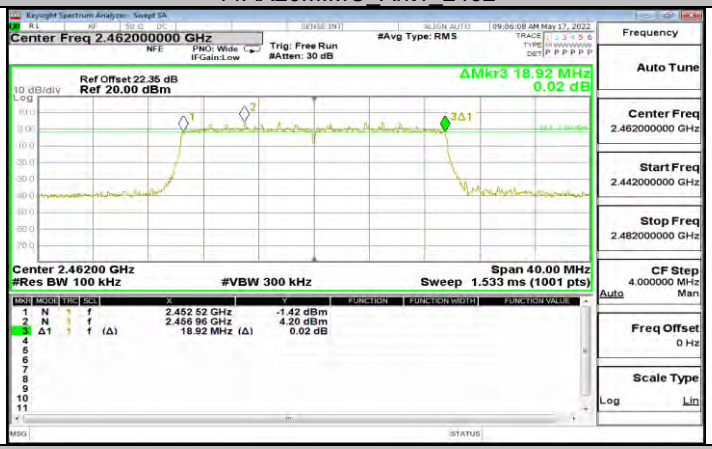
11AX20MIMO_Ant1_2437



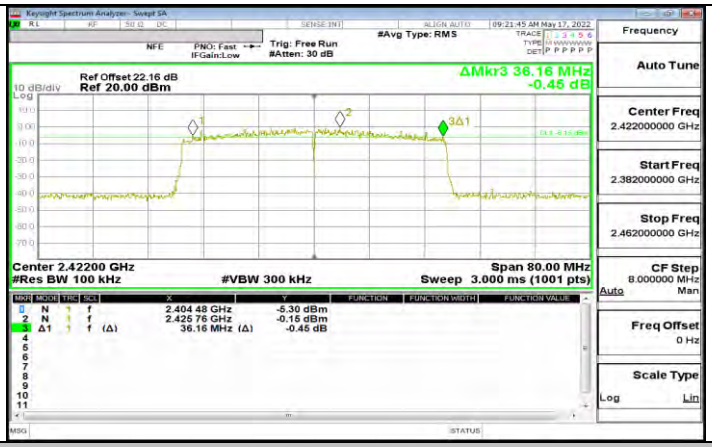
11AX20MIMO_Ant2_2437



11AX20MIMO_Ant1_2462



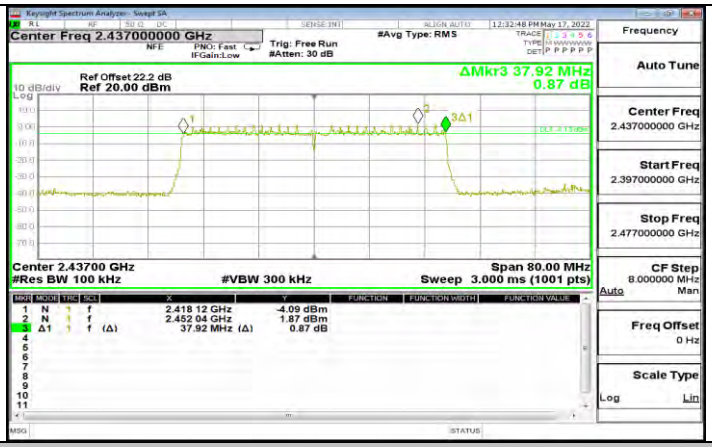
11AX20MIMO_Ant2_2462



11AX40MIMO_Ant1_2422

11AX40MIMO_Ant2_2422

11AX40MIMO_Ant1_2437



11AX40MIMO_Ant2_2437

11AX40MIMO_Ant1_2452

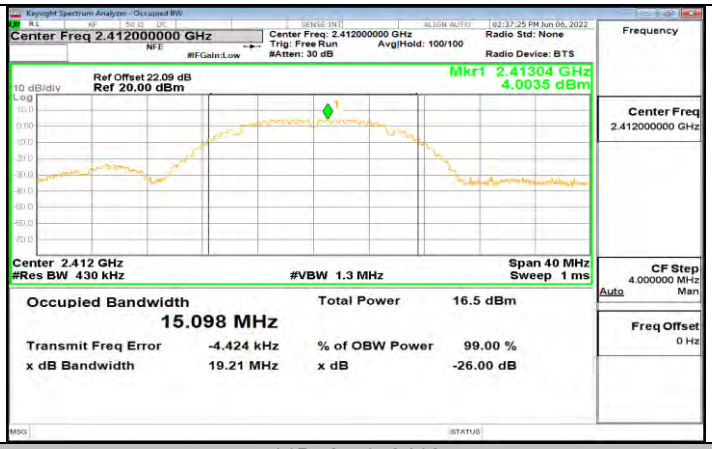
11AX40MIMO_Ant2_2452

11.2. APPENDIX B: OCCUPIED CHANNEL BANDWIDTH

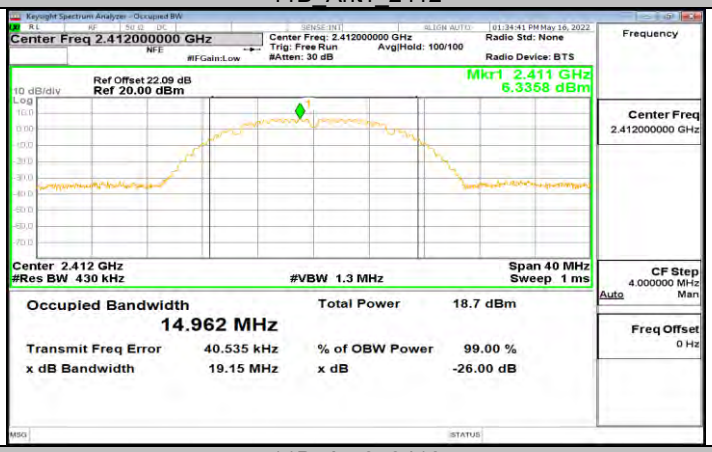
11.2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
11B	Ant1	2412	15.098	2404.447	2419.545	PASS
	Ant2	2412	14.962	2404.560	2419.522	PASS
	Ant1	2437	14.975	2429.531	2444.506	PASS
	Ant2	2437	15.007	2429.521	2444.528	PASS
	Ant1	2462	14.958	2454.517	2469.475	PASS
	Ant2	2462	15.009	2454.500	2469.509	PASS
11G	Ant1	2412	16.471	2403.800	2420.271	PASS
	Ant2	2412	16.493	2403.803	2420.296	PASS
	Ant1	2437	16.487	2428.791	2445.278	PASS
	Ant2	2437	16.470	2428.791	2445.261	PASS
	Ant1	2462	16.503	2453.764	2470.267	PASS
	Ant2	2462	16.500	2453.781	2470.281	PASS
11N20MIMO	Ant1	2412	17.639	2403.195	2420.834	PASS
	Ant2	2412	17.606	2403.206	2420.812	PASS
	Ant1	2437	17.586	2428.241	2445.827	PASS
	Ant2	2437	17.565	2428.255	2445.820	PASS
	Ant1	2462	17.626	2453.203	2470.829	PASS
	Ant2	2462	17.596	2453.223	2470.819	PASS
11N40MIMO	Ant1	2422	35.713	2404.215	2439.928	PASS
	Ant2	2422	35.784	2404.139	2439.923	PASS
	Ant1	2437	36.233	2418.963	2455.196	PASS
	Ant2	2437	36.286	2418.955	2455.241	PASS
	Ant1	2452	36.277	2433.886	2470.163	PASS
	Ant2	2452	36.320	2433.925	2470.245	PASS
11AX20MIMO	Ant1	2412	18.567	2402.757	2421.324	PASS
	Ant2	2412	18.631	2402.657	2421.288	PASS
	Ant1	2437	18.976	2427.515	2446.491	PASS
	Ant2	2437	19.000	2427.517	2446.517	PASS
	Ant1	2462	18.919	2452.489	2471.408	PASS
	Ant2	2462	18.816	2452.602	2471.418	PASS
11AX40MIMO	Ant1	2422	37.264	2403.445	2440.709	PASS
	Ant2	2422	37.303	2403.405	2440.708	PASS
	Ant1	2437	38.256	2417.868	2456.124	PASS
	Ant2	2437	37.883	2418.126	2456.009	PASS
	Ant1	2452	37.914	2433.141	2471.055	PASS
	Ant2	2452	37.845	2433.174	2471.019	PASS

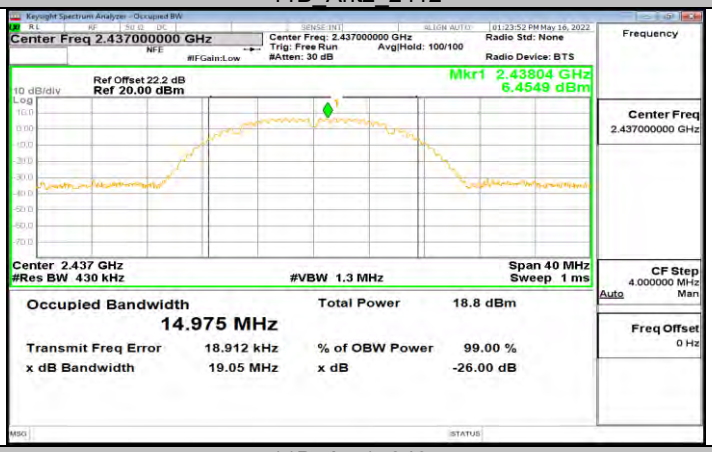
11.2.2. Test Graphs



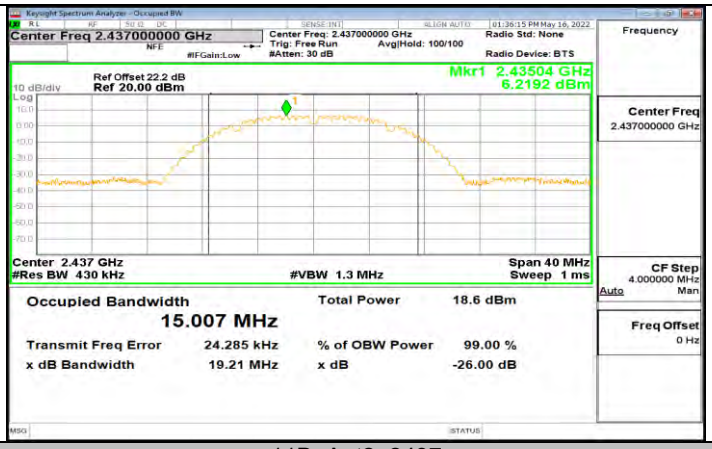
11B_Ant1_2412



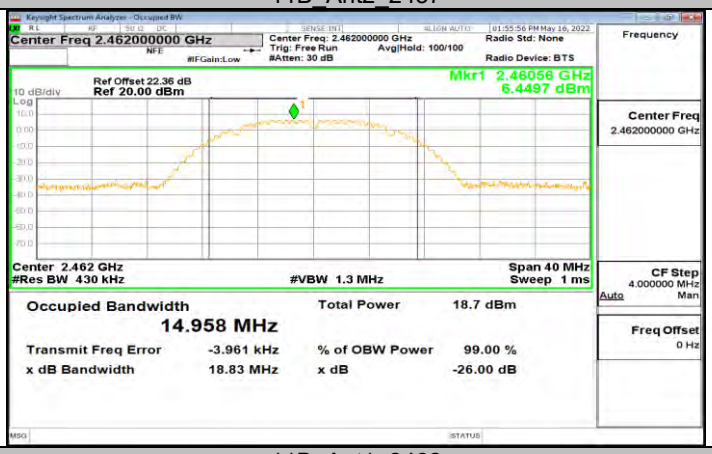
11B_Ant2_2412



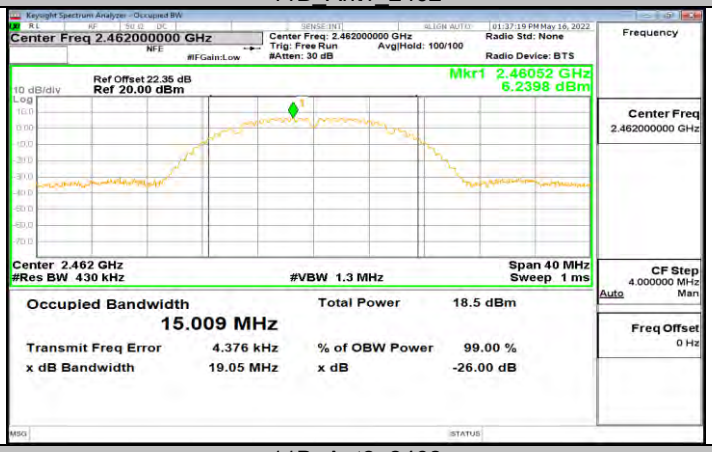
11B_Ant1_2437



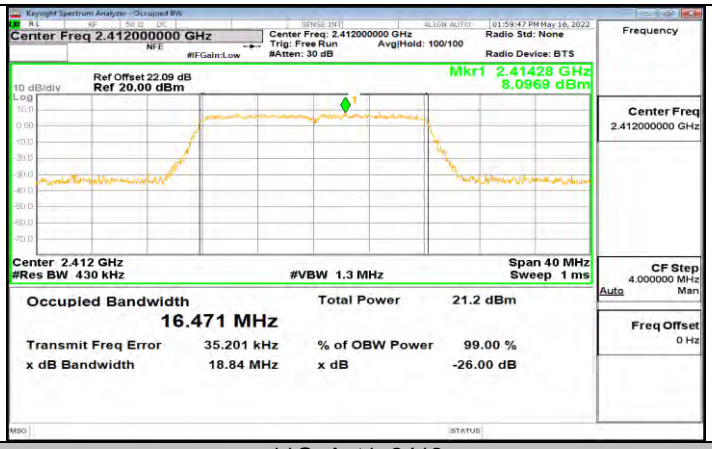
11B_Ant2_2437



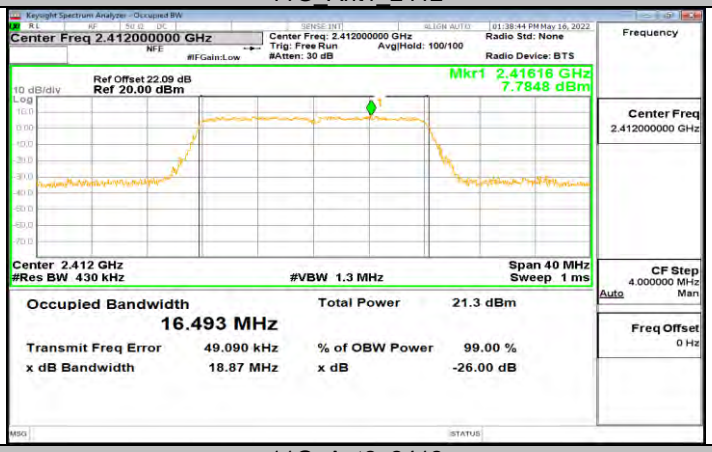
11B_Ant1_2462



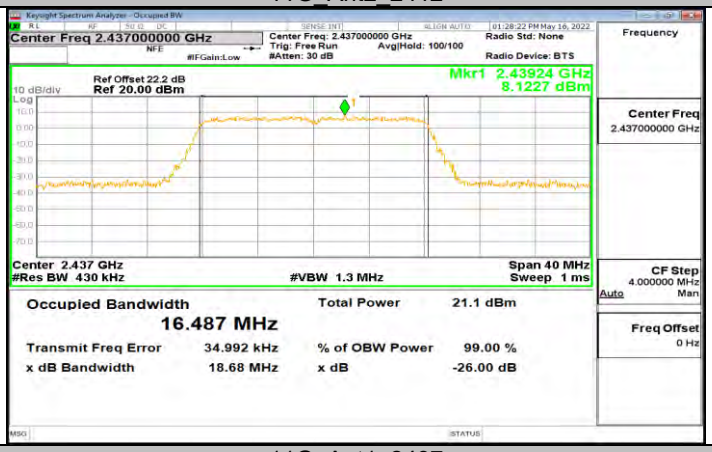
11B_Ant2_2462



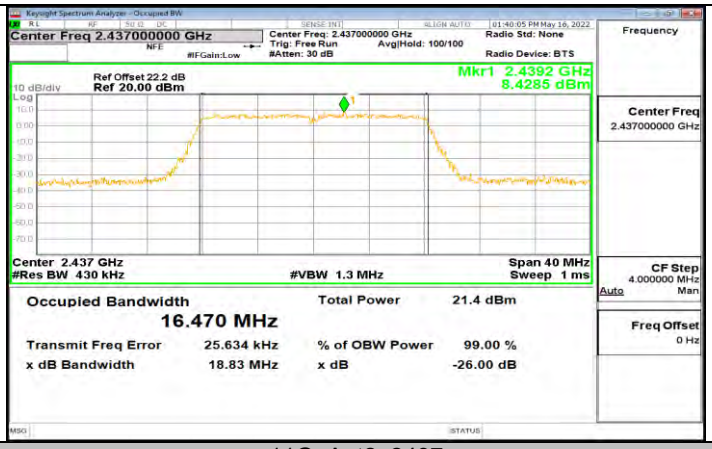
11G_Ant1_2412



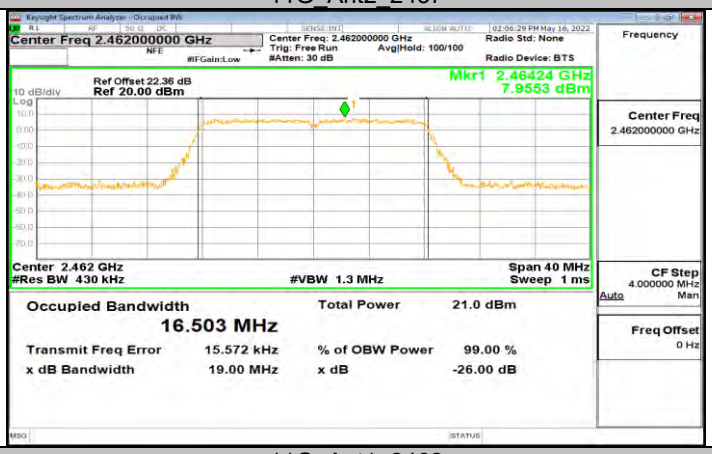
11G_Ant2_2412



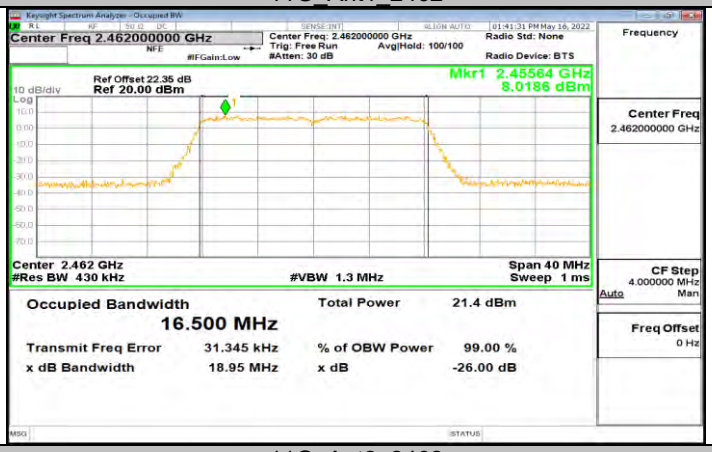
11G_Ant1_2437



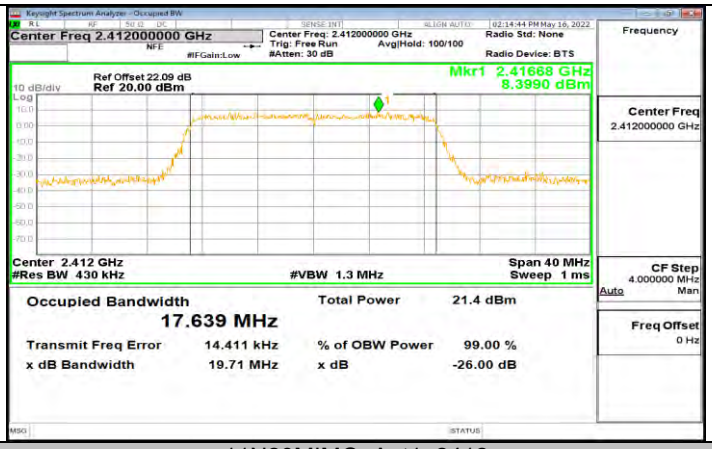
11G_Ant2_2437



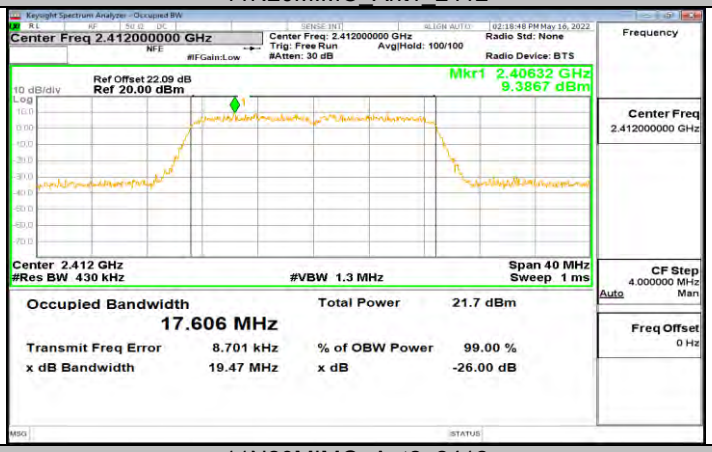
11G_Ant1_2462



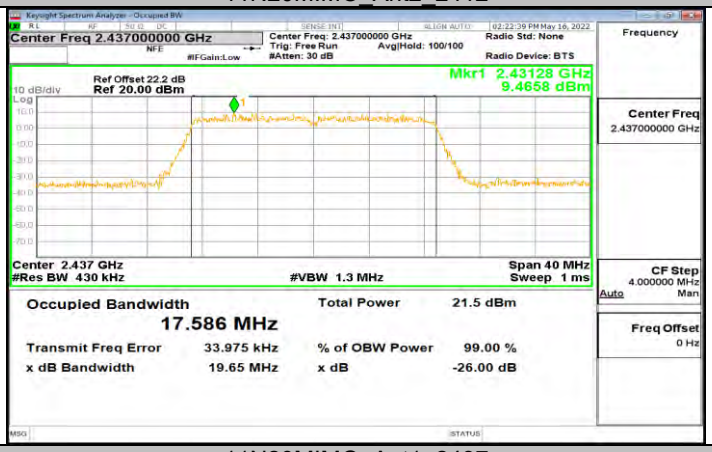
11G_Ant2_2462



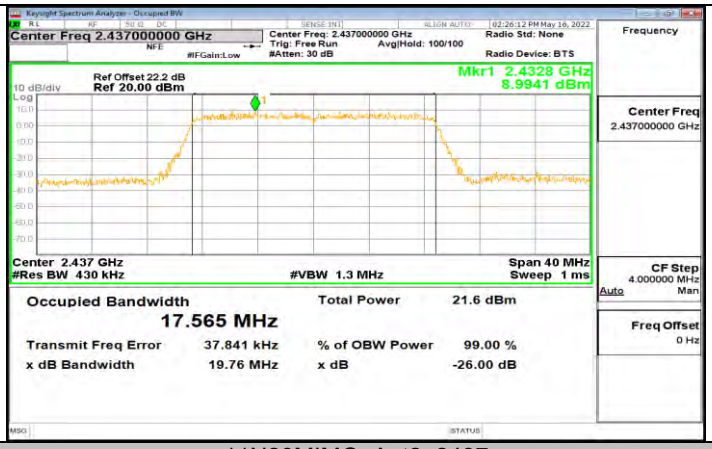
11N20MIMO_Ant1_2412



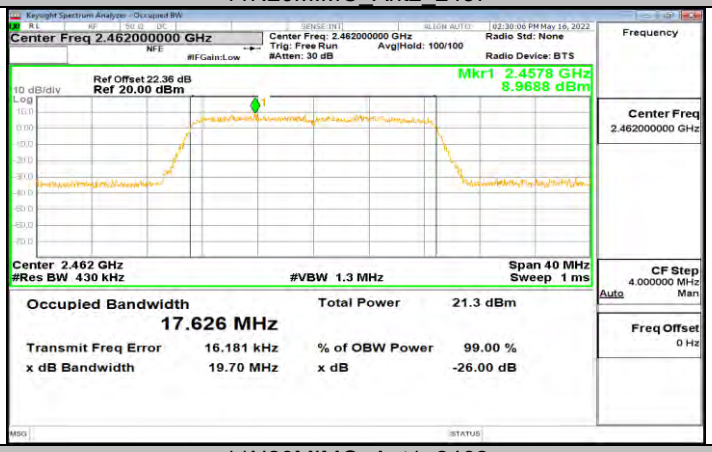
11N20MIMO_Ant2_2412



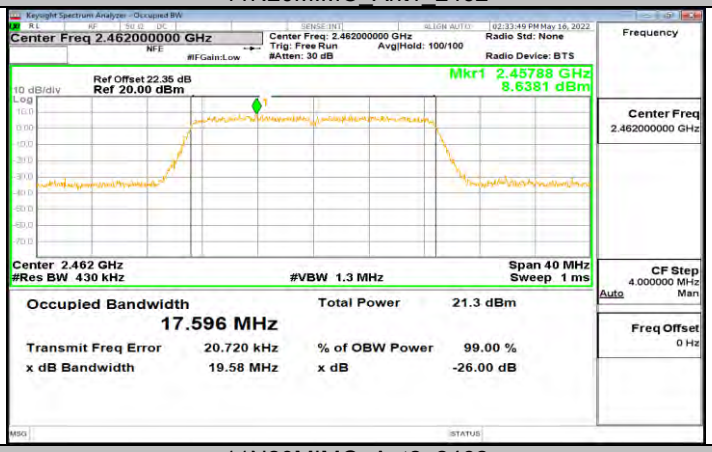
11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462