CFR 47 FCC PART 15 SUBPART E

CERTIFICATION TEST REPORT

For

AXE7800 Tri-Band Wi-Fi 6E Router

MODEL NUMBER: EX920

REPORT NUMBER: 4790653203-RF-2

ISSUE DATE: January 12, 2023

Prepared for

TP-Link Corporation Limited
Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	January 12, 2023	Initial Issue	

Summary of Test Results			
Clause	Test Items	FCC Rules	Test Results
1	6dB/26dB Bandwidth	FCC 15.407 (a)&(e)	PASS
2	99% Occupied Bandwidth	/	PASS
3	Conducted Output Power	FCC 15.407 (a)	PASS
4	Power Spectral Density	FCC 15.407 (a)	PASS
5	Radiated Bandedge and Spurious Emission	FCC 15.407 (b) FCC 15.209 FCC 15.205	PASS
6	Conducted Emission Test for AC Power Port	FCC 15.207	PASS
7	Frequency Stability	FCC 15.407 (g)	PASS
8	Antenna Requirement	FCC 15.203	PASS

Note:
1.This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C > when <Accuracy Method> decision rule is applied.

CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	TP-Link Corporation Limited
Address:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

Manufacturer Information

Company Name:	TP-Link Corporation Limited
Address:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

EUT Information

EUT Name:	AXE7800 Tri-Band Wi-Fi 6E Router
Model:	EX920
Sample Received Date:	November 28, 2022
Sample Status:	Normal
Sample ID:	5571490
Date of Tested:	December 1, 2022 ~ January 12, 2023

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART E	**PASS**

Prepared By:

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Stephen Guo

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2. TEST METHODOLOGY

All tests were performed in accordance with the standard CFR 47 FCC PART 15 SUBPART E ISED RSS-247 ISSUE 2, ANSI C63.10-2013, CFR 47 FCC Part 2, KDB 789033 D02 v02r01, KDB414788 D01 Radiated Test Site v01, KDB 662911 D01 Multiple Transmitter Output v02r01.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules **ISED (Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046. **VCCI (Registration No.: G-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, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China.

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Equipment	AXE7800 Tri-Band Wi-Fi 6E Router
Model Name	EX920
Radio Technology	WLAN (IEEE 802.11a 20/n HT20/n HT40/ac VHT20/ac VHT40/ac VHT 80/ax HE20/ax HE40/ax HE80)
Modulation	IEEE 802.11a 20: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac VHT20: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac VHT40: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac VHT80: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax HE20: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax HE40: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax HE80: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Operation Frequency	UNII-1/UNII-3
Power Supply	DC 12 V

5.2. MAXIMUM EIRP

UNII-1 BAND

IEEE Std. 802.11	Frequency (MHz)	Maximum Average Conducted Power (dBm)
a 20	5150 ~ 5250	24.41
ax HE20		23.65
ax HE40		26.16
ax HE80		24.44
ax HE160		22.93

UNII-3 BAND

IEEE Std. 802.11	Frequency (MHz)	Maximum Average Conducted Power (dBm)
a 20	5725 ~ 5850	23.63
ax HE20		29.10
ax HE40		28.70
ax HE80		26.24

5.3. CHANNEL LIST

UNII-1 (For Bandwidth=20 MHz)		UNII-1 (For Bandwidth=40 MHz)		UNII-1 (For Bandwidth=80 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

UNII-3 (For Bandwidth=20 MHz)		UNII-3 (For Bandwidth=40 MHz)		UNII-3 (For Bandwidth=80 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

5.4. TEST CHANNEL CONFIGURATION

UNII-1 Test Channel Configuration		
IEEE Std.	Test Channel Number	Frequency
802.11a 20	CH 36(Low Channel), CH 40(MID Channel), CH 48(High Channel)	5180 MHz, 5200 MHz, 5240 MHz
802.11n HT20	CH 36(Low Channel), CH 40(MID Channel), CH 48(High Channel)	5180 MHz, 5200 MHz, 5240 MHz
802.11n HT40	CH 38(Low Channel), CH 46(High Channel)	5190 MHz, 5230 MHz
802.11ac VHT80	CH 42(Low Channel)	5210 MHz
802.11ax HE20	CH 36(Low Channel), CH 40(MID Channel), CH 48(High Channel)	5180 MHz, 5200 MHz, 5240 MHz
802.11ax HE40	CH 38(Low Channel), CH 46(High Channel)	5190 MHz, 5230 MHz
802.11ax HE80	CH 42(Low Channel)	5210 MHz
802.11ax HE160	CH 50(Low Channel)	5250 MHz

UNII-3 Test Channel Configuration		
IEEE Std.	Test Channel Number	Frequency
802.11a 20	CH 149(Low Channel), CH 157(MID Channel), CH 165(High Channel)	5745 MHz, 5785 MHz, 5825 MHz
802.11n HT20	CH 149(Low Channel), CH 157(MID Channel), CH 165(High Channel)	5745 MHz, 5785 MHz, 5825 MHz
802.11n HT40	CH 151(Low Channel), CH 159(High Channel)	5755MHz, 5795MHz
802.11ac VHT80	CH 155(Low Channel)	5775 MHz
802.11ax HE20	CH 149(Low Channel), CH 157(MID Channel), CH 165(High Channel)	5745 MHz, 5785 MHz, 5825 MHz
802.11ax HE40	CH 151(Low Channel), CH 159(High Channel)	5755MHz, 5795MHz
802.11ax HE80	CH 155(Low Channel)	5775 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter	
Test Software	QA tool

UNII-1

IEEE Std.	Rate	Channel	Soft set value			
			ANT 1	ANT 2	ANT 3	ANT 4
802.11a 20	6M	36	21	21	21	21
		40	22	21	21	21
		48	19	19	19	19
802.11n HT20	MCS0	36	Cover by 802.11ax HE20			
		40				
		48				
802.11n HT40	MCS0	38	Cover by 802.11ax HE40			
		46				
802.11ac VHT20	MCS0	36	Cover by 802.11ax HE20			
		40				
		48				
802.11ac VHT40	MCS0	38	Cover by 802.11ax HE40			
		46				
802.11ac VHT80	MCS0	42	Cover by 802.11ax HE80			
802.11ax HE20	MCS0	36	14	14	14	14
		40	14	14	14	14
		48	13	13	13	13
802.11ax HE40	MCS0	38	17	17	17	17
		46	15	15	15	15
802.11ax HE80	MCS0	42	15	15	15	15
802.11ax HE160	MCS0	50	16	16	16	16

UNII-3

IEEE Std.	Rate	Channel	Soft set value			
			ANT 1	ANT 2	ANT 3	ANT 4
11a 20	6M	149	20	20	20	21
		157	20	20	20	21
		165	20	20	20	24
11n HT20	MCS0	149	Cover by 802.11ax HE20			
		157				
		165				
11n HT40	MCS0	151	Cover by 802.11ax HE40			
		159				
11ac VHT20	MCS0	149	Cover by 802.11ax HE20			
		157				
		165				
11ac VHT40	MCS0	151	Cover by 802.11ax HE40			
		159				
11ac VHT80	MCS0	155	Cover by 802.11ax HE80			
11ax HE20	MCS0	149	18	18	18	18
		157	18	18	18	18
		165	20	20	20	20
11ax HE40	MCS0	151	19	19	19	19
		159	19	19	19	19
11ax HE80	MCS0	155	18	18	18	18

5.6. THE WORSE CASE CONFIGURATIONS

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

Test channels referring to section 5.4.

Maximum power setting referring to section 5.5.

Worst case Data Rates declared by the customer:

IEEE 802.11a / SISO – BPSK / 6 Mbps
IEEE 802.11ax HE20 / MIMO / STBC / CDD / TxBF – BPSK / MCS0
IEEE 802.11ax HE40 / MIMO / STBC / CDD / TxBF – BPSK / MCS0
IEEE 802.11ax HE80 / MIMO / STBC / CDD / TxBF – BPSK / MCS0
IEEE 802.11ax HE160 / MIMO / STBC / CDD / TxBF – BPSK / MCS0

The EUT support STBC, CDD and TxBF (Tx Beamforming) modes, all the modes had been tested, but only the worst data was recorded in the report.

The EUT has 4 separate antennas which correspond to 4 separate antenna ports. Core 1 to Core 4 correspond to antenna 1 to antenna 4 respectively.

802.11ac VHT20/VHT40/VHT80 mode, 802.11n HT20/HT40 and 802.11ax HE20/HE40/HE80 were performed on the worst case (802.11ax HE20/HE40/HE80) mode and only the worst data was recorded in this report.

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

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

Duty cycle and 6 dB / 26 dB DTS bandwidth/occupied channel bandwidth tests, only SISO mode and one chain were tested since the duty cycle and bandwidth does not change depending on chains used.

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 5 GHz beamforming function is enabled by test program, the carrier wave will be under radio chip phase control and sent to the antennas through the test program.

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna No.	Frequency Band	Antenna Type	Maximum Antenna Gain (dBi)
1	5180 ~ 5825	PCB	2
2	5180 ~ 5825	PCB	2
3	5180 ~ 5825	PCB	2
4	5180 ~ 5825	PCB	2

The EUT support Cyclic Shift Diversity (CDD) mode.
MIMO output power port and MIMO PSD port summing was performed in accordance with KDB 662911 D01. For the CDD mode results the Directional Gain was calculated in accordance with the following mothed.
For output power measurements:
Directional gain= G_{ANT} + Array Gain = 2 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 = 8 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

The EUT support Tx beamforming mode.
MIMO output power port and MIMO PSD port summing was performed in accordance with KDB 662911 D01. For the Tx beamforming mode results the Directional Gain was calculated in accordance with the following mothed.
For output power measurements:
Directional gain= G_{ANT} + 10 log (N_{ANT}) dBi = 8 dBi
G_{ANT}: equal to the gain of the antenna having the highest gain
For power spectral density (PSD) measurements:
Directional gain= G_{ANT} + 10 log (N_{ANT}) dBi = 8 dBi
G_{ANT}: equal to the gain of the antenna having the highest gain

The EUT support Space Time Block Codes (STBC) mode.
MIMO output power port and MIMO PSD port summing was performed in accordance with KDB 662911 D01. For the STBC mode results the Directional Gain was calculated in accordance with the following mothed.
For output power measurements:
Directional gain= G_{ANT} dBi = 2 dBi
G_{ANT}: equal to the gain of the antenna having the highest gain
For power spectral density (PSD) measurements:
Directional gain= G_{ANT} dBi = 2 dBi
G_{ANT}: equal to the gain of the antenna having the highest gain

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	ThinkPad	X230i	/

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB	Unshielded	1.0 m	/
2	LAN1	RJ45	Unshielded	1.0 m	/
3	LAN2	RJ45	Unshielded	1.0 m	/
4	LAN3	RJ45	Unshielded	1.0 m	/
5	POWER	/	Unshielded	1.5 m	/

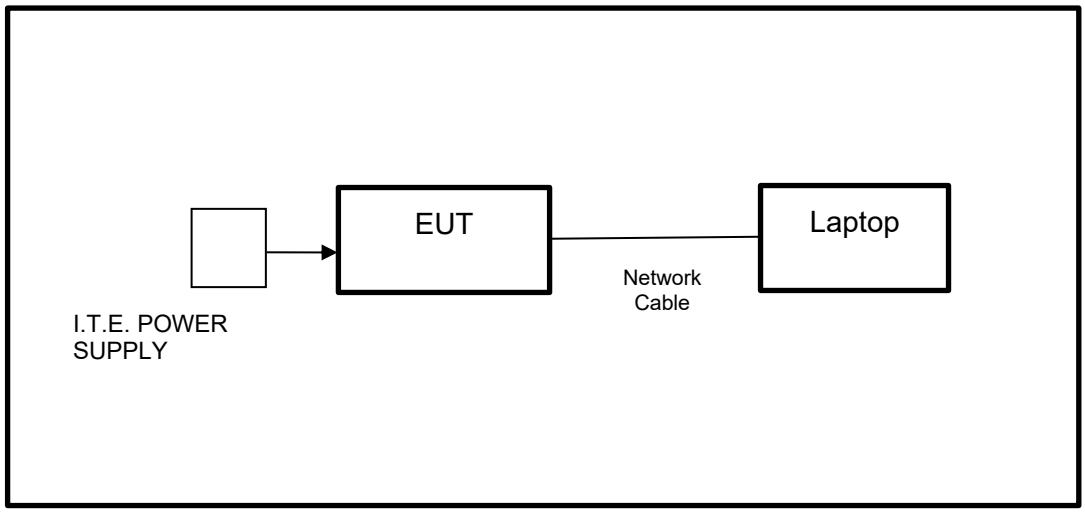
ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
1	I.T.E. POWER SUPPLY	Tp-link	T120330-2B4	Input: AC 100-240 V, 50 / 60 Hz, 1 A Output: DC 12.0 V, 3.3 A

TEST SETUP

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

SETUP DIAGRAM FOR TESTS



6. MEASURING EQUIPMENT AND SOFTWARE USED

R&S TS 8997 Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Power sensor, Power Meter	R&S	OSP120	100921	Apr.02,2022	Apr.01,2023
Vector Signal Generator	R&S	SMBV100A	261637	Oct.17, 2022	Oct.16, 2023
Signal Generator	R&S	SMB100A	178553	Oct.17, 2022	Oct.16, 2023
Signal Analyzer	R&S	FSV40	101118	Oct.17, 2022	Oct.16, 2023
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.17, 2022	Oct.16, 2023
Wireless Connectivity Tester	R&S	CMW270	1201.0002N75-102	Sep.28, 2022	Sep.27, 2023
PXA Signal Analyzer	Keysight	N9030A	MY55410512	Oct.17, 2022	Oct.16, 2023
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.17, 2022	Oct.16, 2023
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Oct.17, 2022	Oct.16, 2023
Attenuator	Agilent	8495B	2814a12853	Oct.18, 2022	Oct.17, 2023
Temperature & Humidity Chamber	SANMOOD	SG-80-CC-2	2088	Oct.17, 2022	Oct.16, 2023
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.17, 2022	Oct.16, 2023
Two-Line V-Network	R&S	ENV216	101983	Oct.17, 2022	Oct.16, 2023
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.17, 2022	Oct.16, 2023
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.17, 2022	Oct.16, 2023
EMI Measurement Receiver	R&S	ESR26	101377	Oct.17, 2022	Oct.16, 2023
Horn Antenna	TDK	HRN-0118	130940	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.17, 2022	Oct.16, 2023
Horn Antenna	Schwarzbeck	BBHA9170	697	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.17, 2022	Oct.16, 2023
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct.17, 2022	Oct.16, 2023
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.17, 2022	Oct.16, 2023
Highpass Filter	Wainwright	WHKX10-5850-6500-1800-40SS	4	/	/
Band Reject Filter	Wainwright	WRCJV12-5695-5725-5850-5880-40SS	4	/	/
Band Reject Filter	Wainwright	WRCJV20-5120-5150-5350-5380-60SS	2	/	/
Band Reject Filter	Wainwright	WRCJV20-5440-5470-5725-5755-60SS	1	/	/

Software			
Description	Manufacturer	Name	Version
Test Software for Radiated Emissions	Farad	EZ-EMC	Ver. UL-3A1

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

LIMITS

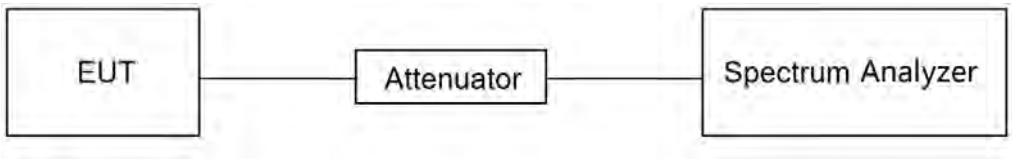
None; for reporting purposes only.

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.B.

The zero-span mode on a spectrum analyzer or EMI receiver, if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set RBW ≥ EBW if possible; otherwise, set RBW to the largest available value. Set VBW ≥ RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if T ≤ 16.7 microseconds.)

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2 °C	Relative Humidity	53.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 12 V

TEST RESULTS

Please refer to section "Test Data" - Appendix F

7.2. 6DB AND 26DB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
26 dB Emission Bandwidth	For reporting purposes only.	5150 ~ 5250
26 dB Emission Bandwidth	For reporting purposes only.	5250 ~ 5350
26 dB Emission Bandwidth	For reporting purposes only.	5470 ~ 5725 (For FCC) 5470 ~ 5600 (For ISED) 5650 ~ 5725 (For ISED)
6 dB Emission Bandwidth	The minimum 6 dB emission bandwidth shall be 500 kHz.	5725 ~ 5850
99 % Occupied Bandwidth	For reporting purposes only.	5150 ~ 5825 (For ISED)

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.C1. for 26 dB Emission Bandwidth; section II.C2. for 6 dB Emission Bandwidth; section II.D. for 99 % Occupied Bandwidth.
Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Emission Bandwidth: RBW=100 kHz For 26 dB Emission bandwidth: approximately 1 % of the EBW. For 99 % Occupied Bandwidth: approximately 1 % ~ 5 % of the OBW.
VBW	For 6 dB Bandwidth: ≥ 3*RBW For 26 dB Bandwidth: >3*RBW For 99 % 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 6/26 dB relative to the maximum level measured in the fundamental emission.

Calculation for 99 % Bandwidth of UNII-2C and UNII-3 Straddle Channel:

For Example: Fundamental Frequency: 5720 MHz

99 % OBW: 21.00 MHz

Turning Frequency: 5725 MHz

99 % Bandwidth of UNII-2C Band Portion = (5725-(5720-(21.00/2)) = 15.50 MHz

99 % Bandwidth of UNII-3 Band Portion = (5720+(21.00/2)-5725) = 5.50 MHz

Calculation for 26 dB Bandwidth of UNII-2C Straddle Channel:

For Example: Fundamental frequency: 5720 MHz

26 dB BW: 20.00 MHz

FL: 5710.16 MHz

FH: 5730.16 MHz

Turning Frequency: 5725 MHz

26 dB Bandwidth of UNII-2C Band Portion = 5725-5710.16=14.84 MHz

Calculation for 6dB Bandwidth of UNII-3 Straddle Channel:

For Example: Fundamental frequency: 5720 MHz

6 dB BW: 16.44 MHz

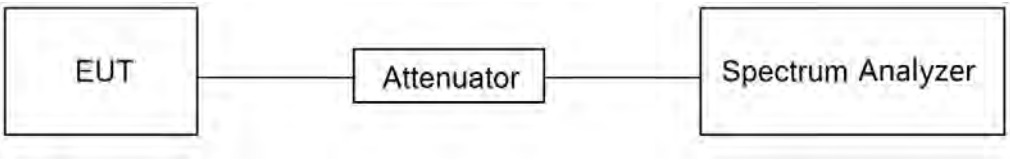
FL: 5711.76 MHz

FH: 5728.2 MHz

Turning Frequency: 5725 MHz

6 dB Bandwidth of UNII-3 band Portion = 5728.2-5725=3.2 MHz

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2 °C	Relative Humidity	53.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 12 V

TEST RESULTS

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

7.3. CONDUCTED OUTPUT POWER

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	☐ Outdoor Access Point: 1 W (30 dBm) ☒ Indoor Access Point: 1 W (30 dBm) ☐ Fixed Point-To-Point Access Points: 1 W (30 dBm) ☐ Client Devices: 250 mW (24 dBm)	5150 ~ 5250
	Shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.	5250 ~ 5350 5470 ~ 5725
	Shall not exceed 1 Watt (30 dBm).	5725 ~ 5850

Note:
The above limits are based upon the maximum antenna gain does not exceed 6 dBi.
If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

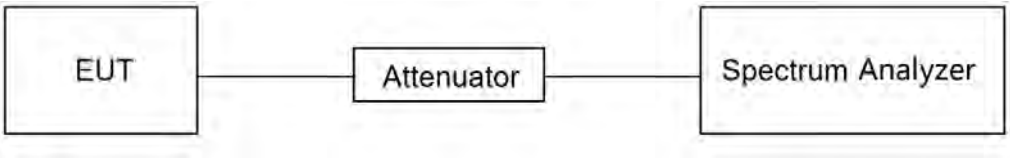
TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.E.

Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep):
(i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
(ii) Set RBW = 1 MHz.
(iii) Set VBW ≥ 3 MHz.
(iv) Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
(v) Sweep time = auto.
(vi) Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
(vii) If transmit duty cycle < 98 %, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 %, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run.”
(viii) Trace average at least 100 traces in power averaging (rms) mode.
(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

Method PM (Measurement using an RF average power meter):
(i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
a. The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
b. At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.
c. The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
(ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in II.B.
(iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
(iv) Adjust the measurement in dBm by adding 10 log (1/x) where x is the duty cycle (e.g., 10 log (1/0.25) if the duty cycle is 25 %).

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2 °C	Relative Humidity	53.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 12 V

TEST RESULTS

Please refer to section "Test Data" - Appendix D

7.4. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	☐ Outdoor Access Point: 17 dBm/MHz ☒ Indoor Access Point: 17 dBm/MHz ☐ Fixed Point-To-Point Access Points: 17 dBm/MHz ☐ Client Devices: 11 dBm/MHz	5150 ~ 5250
	11 dBm/MHz	5250 ~ 5350 5470 ~ 5725
	30 dBm/500kHz	5725 ~ 5850

Note:
The above limits are based upon the maximum antenna gain does not exceed 6 dBi.
If transmitting antennas of directional gain greater than 6 dBi are used, maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.F.

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

For U-NII-1, U-NII-2A and U-NII-2C band:

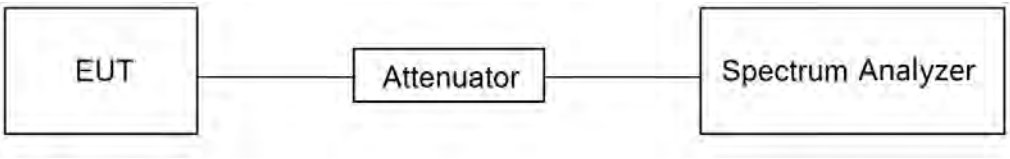
Center Frequency	The center frequency of the channel under test
Detector	RMS
RBW	1 MHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

For U-NII-3:

Center Frequency	The center frequency of the channel under test
Detector	RMS
RBW	500 kHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

Allow trace to fully stabilize and Use the peak search function on the instrument to find the peak of the spectrum and record its value.
Add 10 log (1/x), where x is the duty cycle, to the peak of the spectrum, the result is the Maximum PSD over 1 MHz / 500 kHz reference bandwidth.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2 °C	Relative Humidity	53.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 12 V

TEST RESULTS

Please refer to section "Test Data" - Appendix E

7.5. FREQUENCY STABILITY

LIMITS

The frequency of the carrier signal shall be maintained within band of operation.

TEST PROCEDURE

1. The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between 0 °C ~ 40 °C (declared by customer).

2. The temperature was incremented by 10 °C intervals and the unit allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

3. The primary supply voltage is varied from 85 % to 115 % of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

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

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	10 kHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

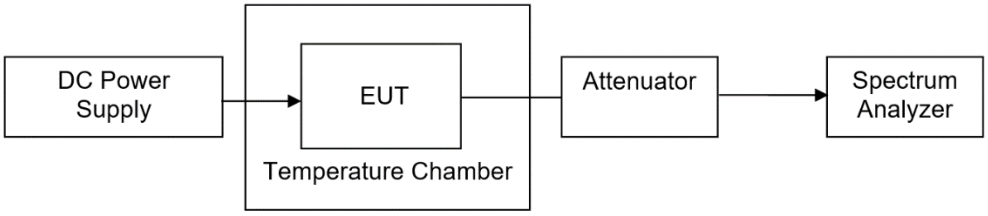
4. While maintaining a constant temperature inside the environmental chamber, turn the EUT on and record the operating frequency at startup, and at 2 minutes, 5minutes, and 10 minutes after the EUT is energized.

5. Allow the trace to stabilize, find the peak value of the power envelope and record the frequency, then calculated the frequency drift.

TEST ENVIRONMENT

	Normal Test Conditions	Extreme Test Conditions
Relative Humidity	20 % - 75 %	/
Atmospheric Pressure	100 kPa ~ 102 kPa	/
Temperature	T_N (Normal Temperature): 25.1 °C	T_L (Low Temperature): 0 °C
		T_H (High Temperature): 40 °C
Supply Voltage	V_N (Normal Voltage): DC 12 V	V_L (Low Voltage): DC 10.20 V
		V_H (High Voltage): DC 13.80 V

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2 °C	Relative Humidity	53.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 12 V

TEST RESULTS

Please refer to section "Test Data" - Appendix G

8. RADIATED TEST RESULTS

LIMITS

Refer to CFR 47 FCC §15.205, §15.209 and §15.407 (b).
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

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

Limits of unwanted/undesirable emission out of the restricted bands refer to CFR 47 FCC §15.407 (b) and ISED RSS-247 6.2.

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1GHz)		
Frequency Range (MHz)	EIRP Limit	Field Strength Limit (dBuV/m) at 3 m
5150~5250 MHz	PK: -27 (dBm/MHz)	PK:68.2(dBμV/m)
5250~5350 MHz		
5470~5725 MHz		
5725~5850 MHz	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK: 105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK: 122.2 (dBμV/m) *4
Note: *1 beyond 75 MHz or more above of the band edge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

TEST PROCEDURE

Below 30 MHz

The setting of the spectrum analyser

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

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

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

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

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

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

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

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

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

Below 1 GHz and above 30 MHz

The setting of the spectrum analyser

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

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

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

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

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

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

Above 1 GHz

The setting of the spectrum analyser

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

1. The testing follows the guidelines in KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.G.3 ~ II.G.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 7.1. ON TIME AND DUTY CYCLE.

For Restricted Bandedge:
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
7. Both horizontal and vertical have been tested, only the worst data was recorded in the report.
8. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission (9 kHz ~ 30 MHz):
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP limit.
3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
4. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

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

For Radiate Spurious Emission (1 GHz ~ 7 GHz):
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.
9. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

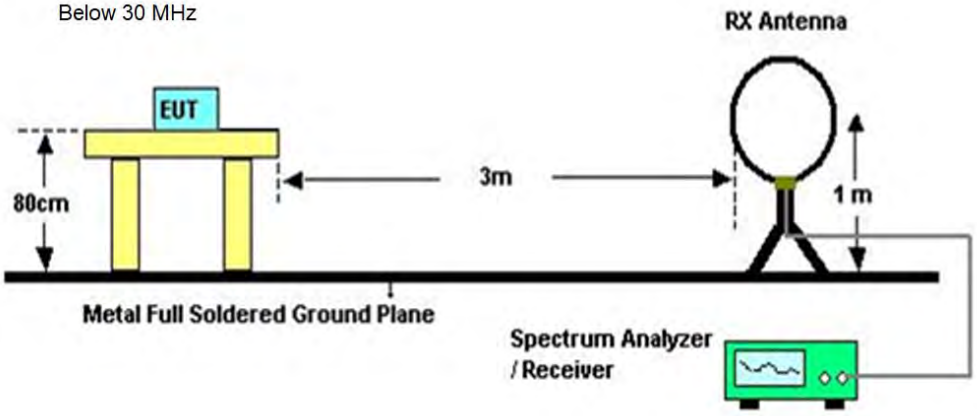
For Radiate Spurious Emission (7 GHz ~ 18 GHz):
Note:
1. Peak Result = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.
9. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission (18 GHz ~ 26 GHz):
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

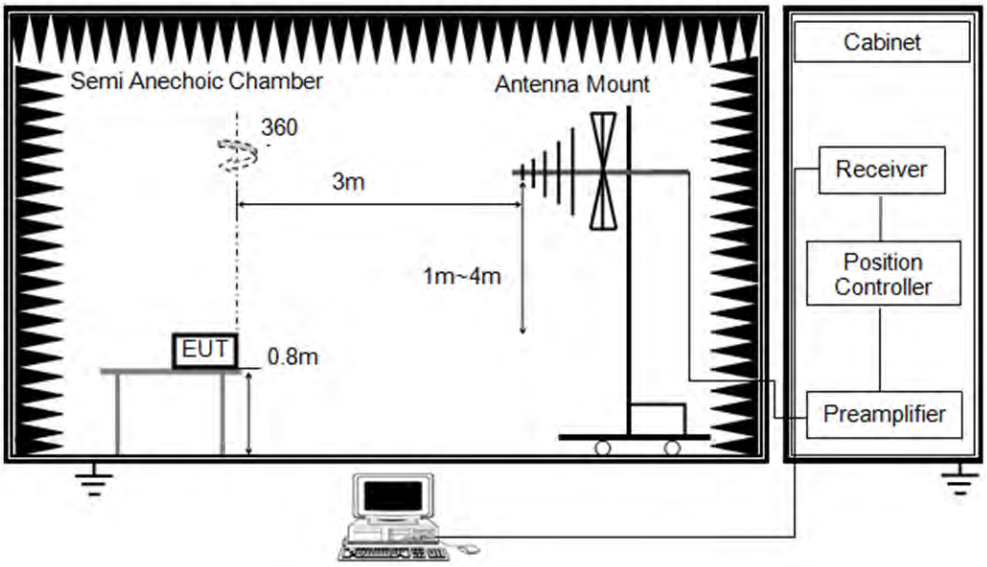
For Radiate Spurious emission (26 GHz ~ 40 GHz):
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

TEST SETUP

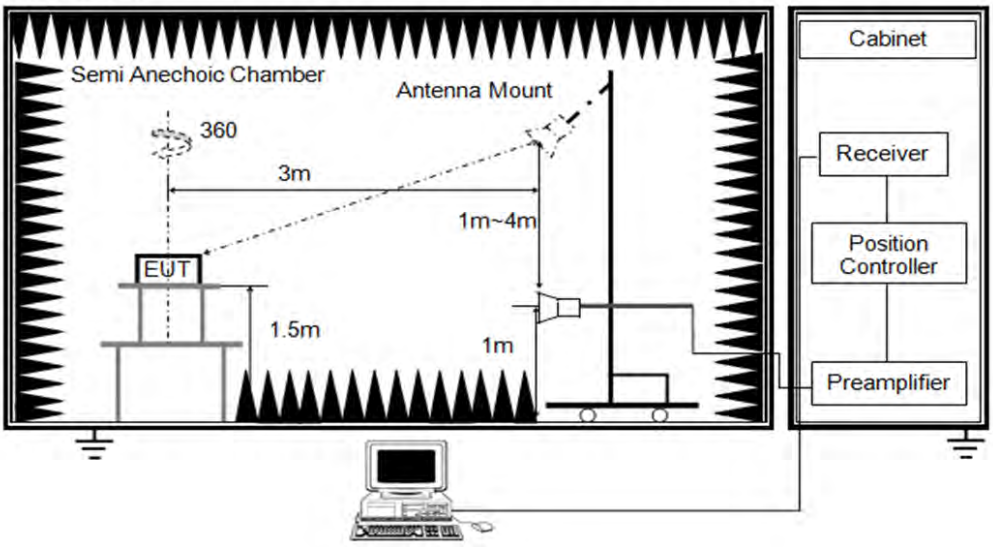
Below 30 MHz



Below 1 GHz and above 30 MHz



Above 1 GHz



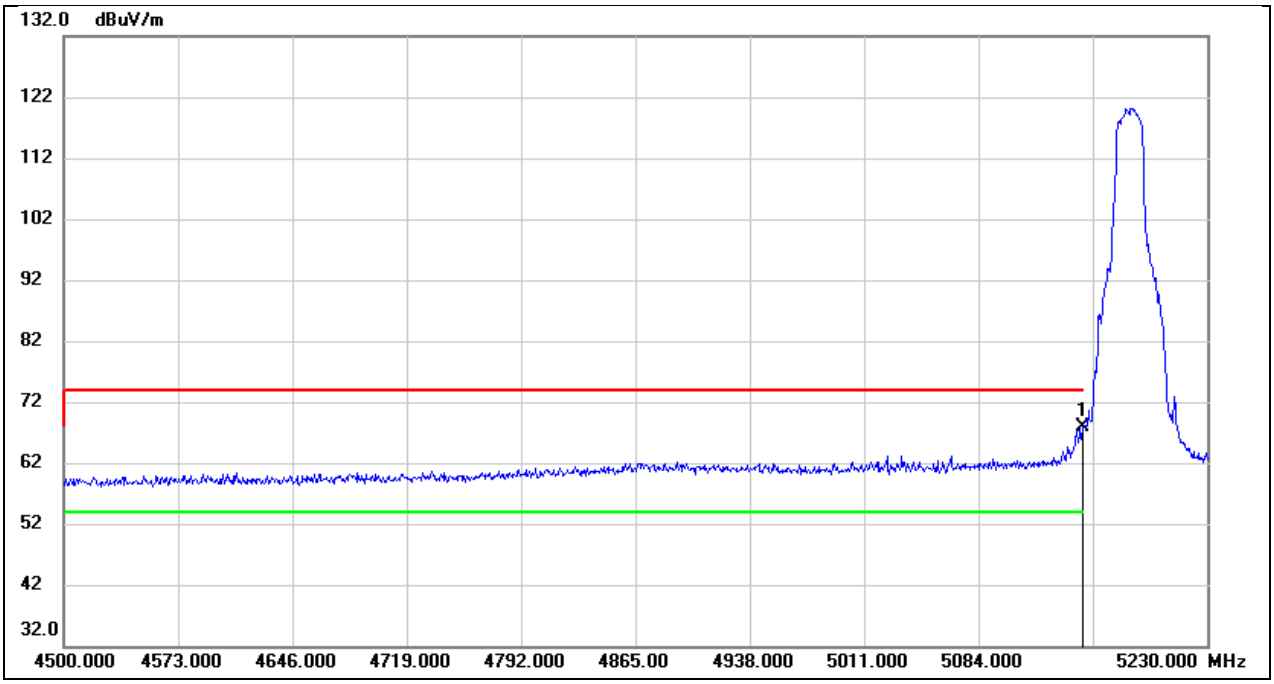
TEST ENVIRONMENT

Temperature	24.3 °C	Relative Humidity	61%
Atmosphere Pressure	101 kPa	Test Voltage	DC 12 V

TEST RESULTS

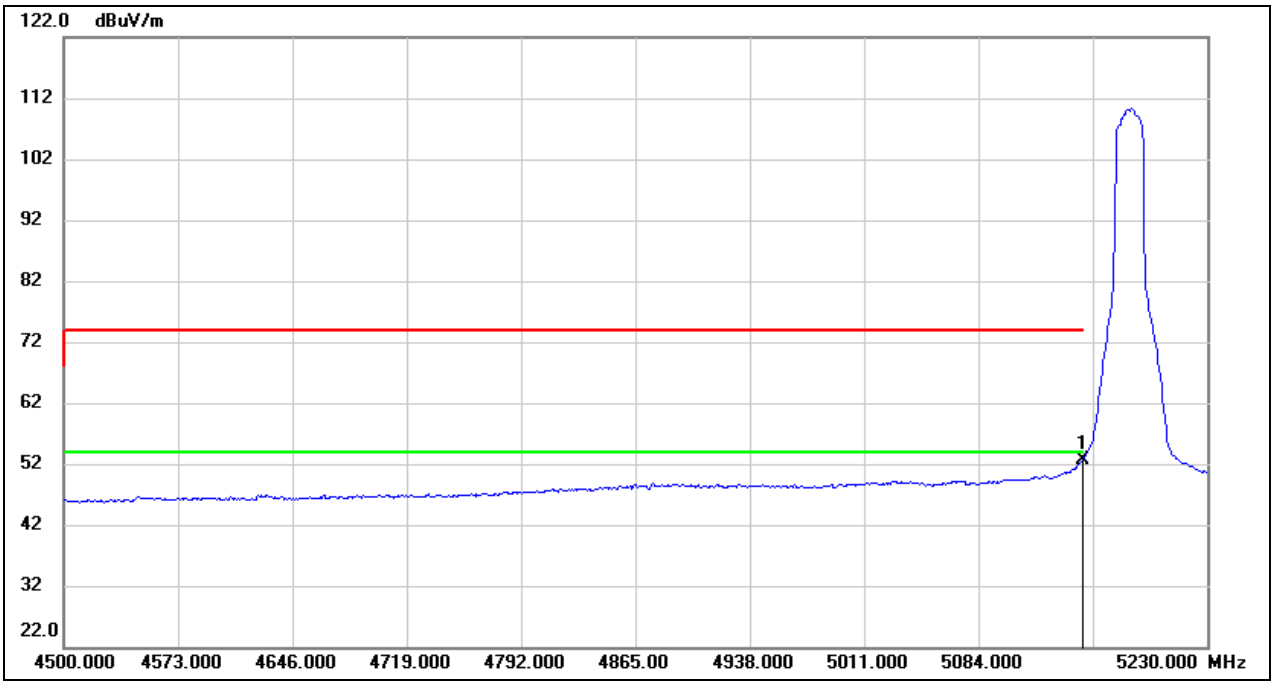
8.1. RESTRICTED BANDEDGE

Test Mode:	802.11a 20 Peak	Channel:	5180 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



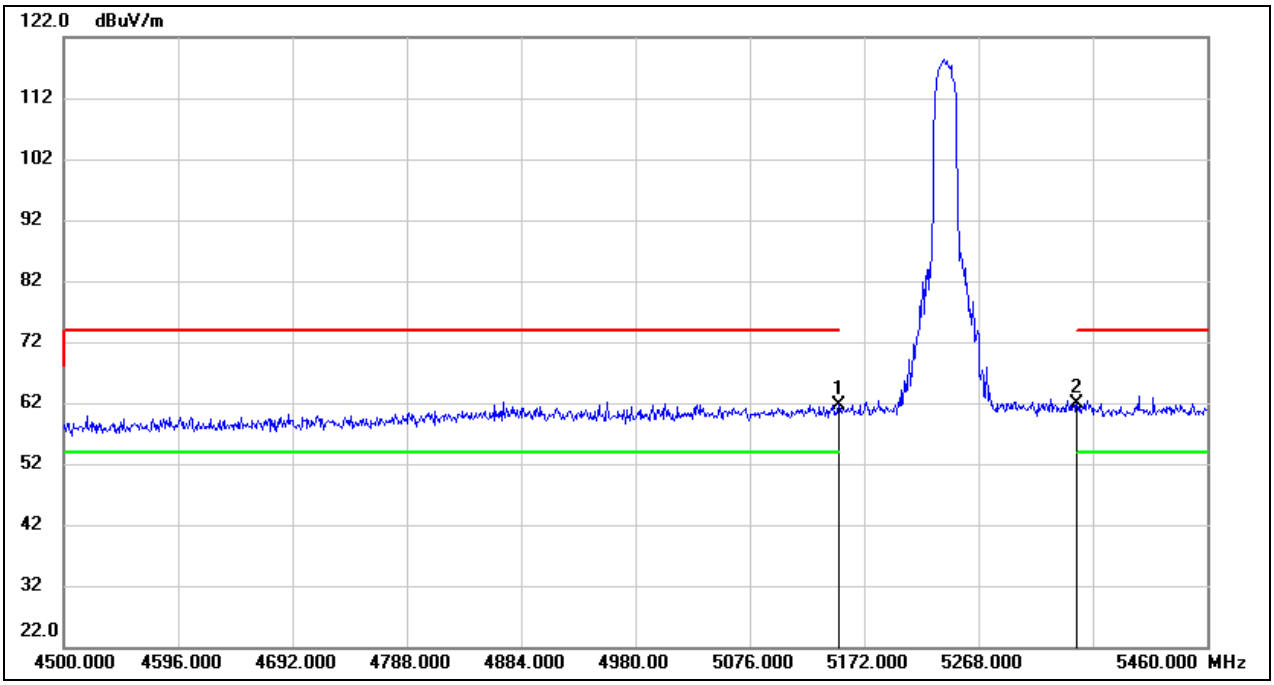
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	27.50	40.27	67.77	74.00	-6.23	peak

Test Mode:	802.11a 20 Average	Channel:	5180 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



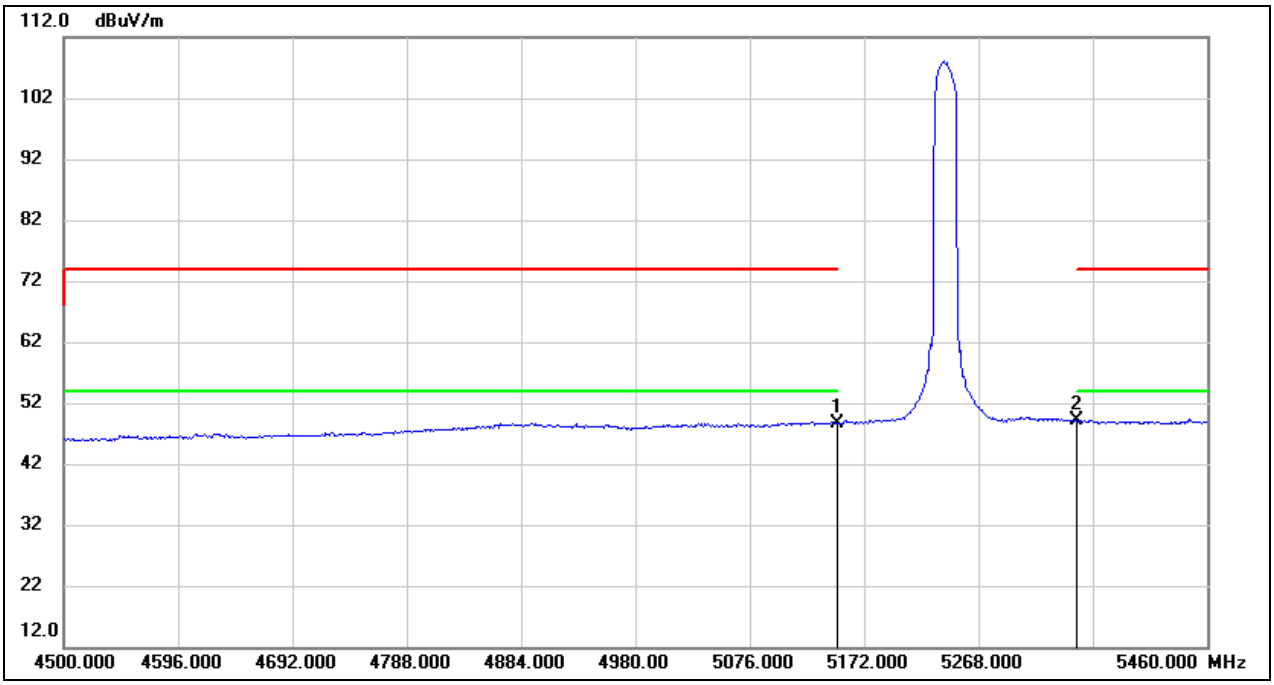
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	12.29	40.27	52.56	54.00	-1.44	AVG

Test Mode:	802.11a 20 Peak	Channel:	5240 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



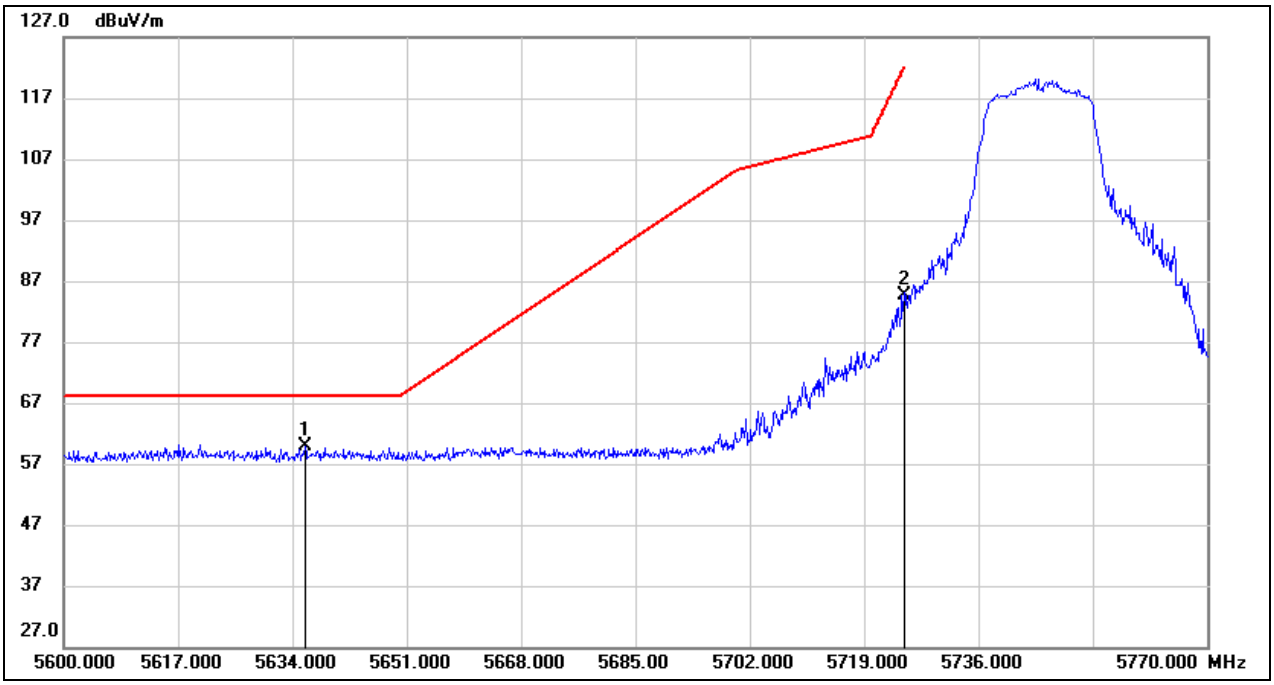
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	21.48	40.27	61.75	74.00	-12.25	peak
2	5350.000	21.27	40.49	61.76	74.00	-12.24	peak

Test Mode:	802.11a 20 Average	Channel:	5240 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



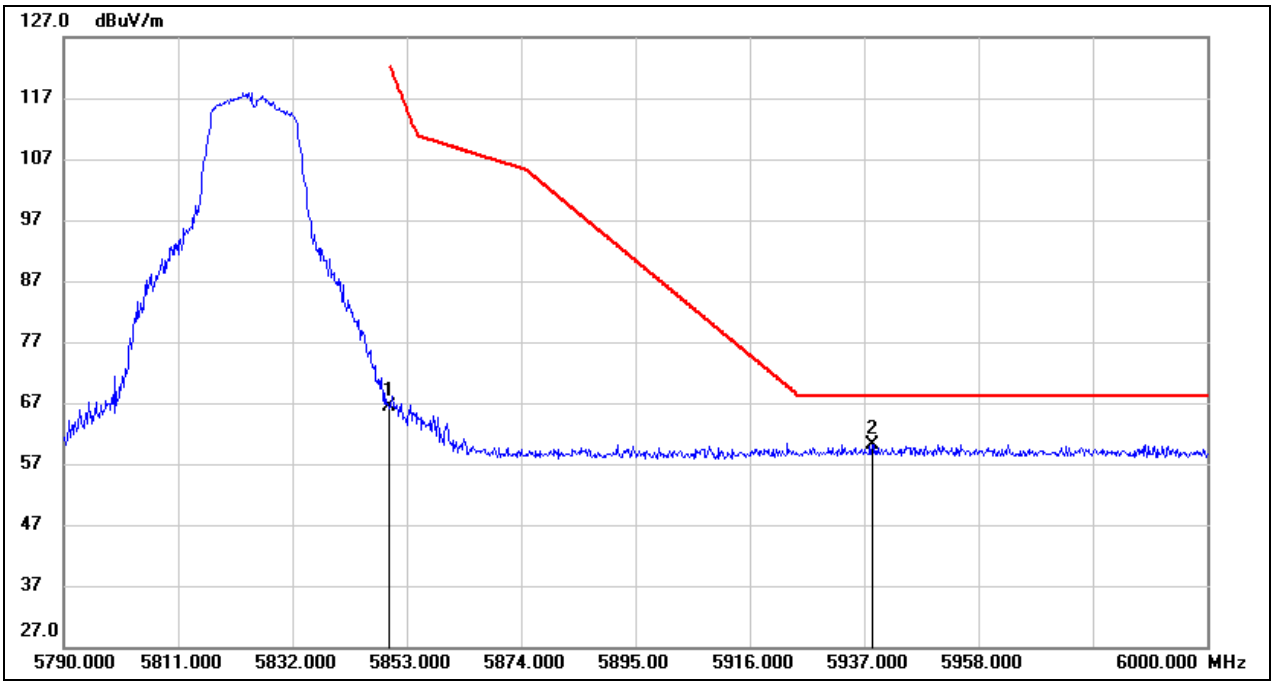
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	8.29	40.27	48.56	54.00	-5.44	AVG
2	5350.000	8.64	40.49	49.13	54.00	-4.87	AVG

Test Mode:	802.11a 20 Peak	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



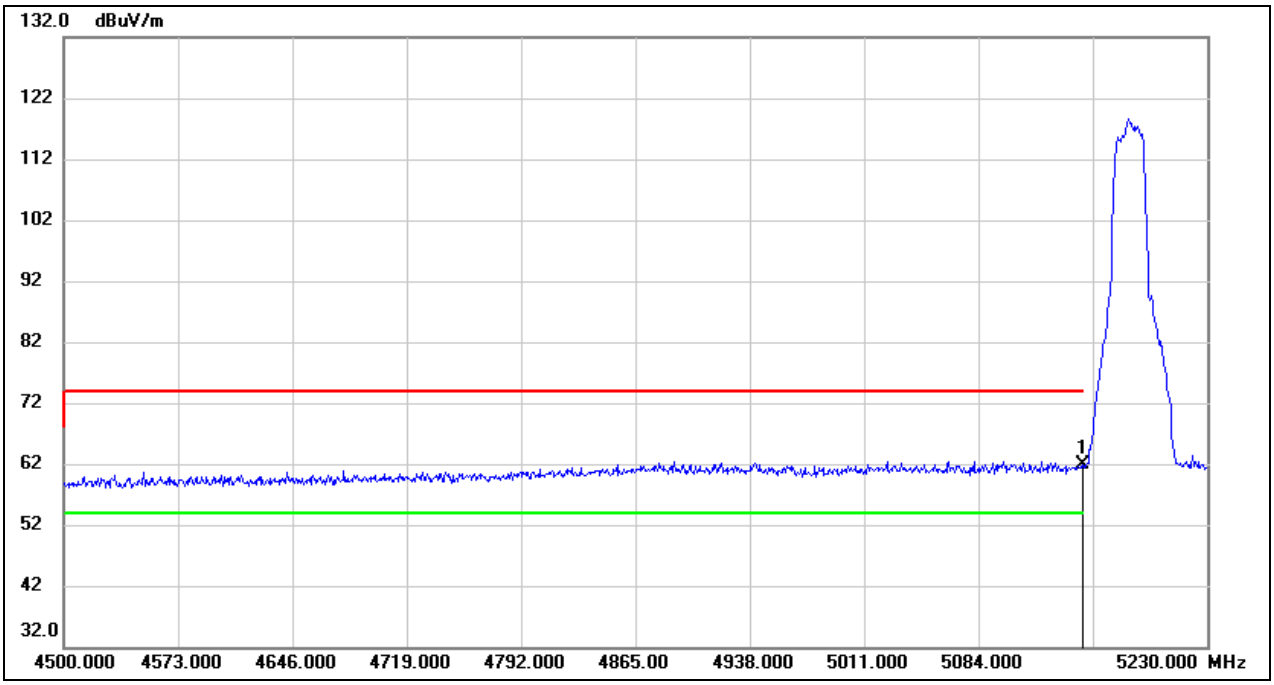
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5635.870	18.79	41.03	59.82	68.20	-8.38	peak
2	5725.000	43.37	41.27	84.64	122.20	-37.56	peak

Test Mode:	802.11a 20 Peak	Channel:	5825 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



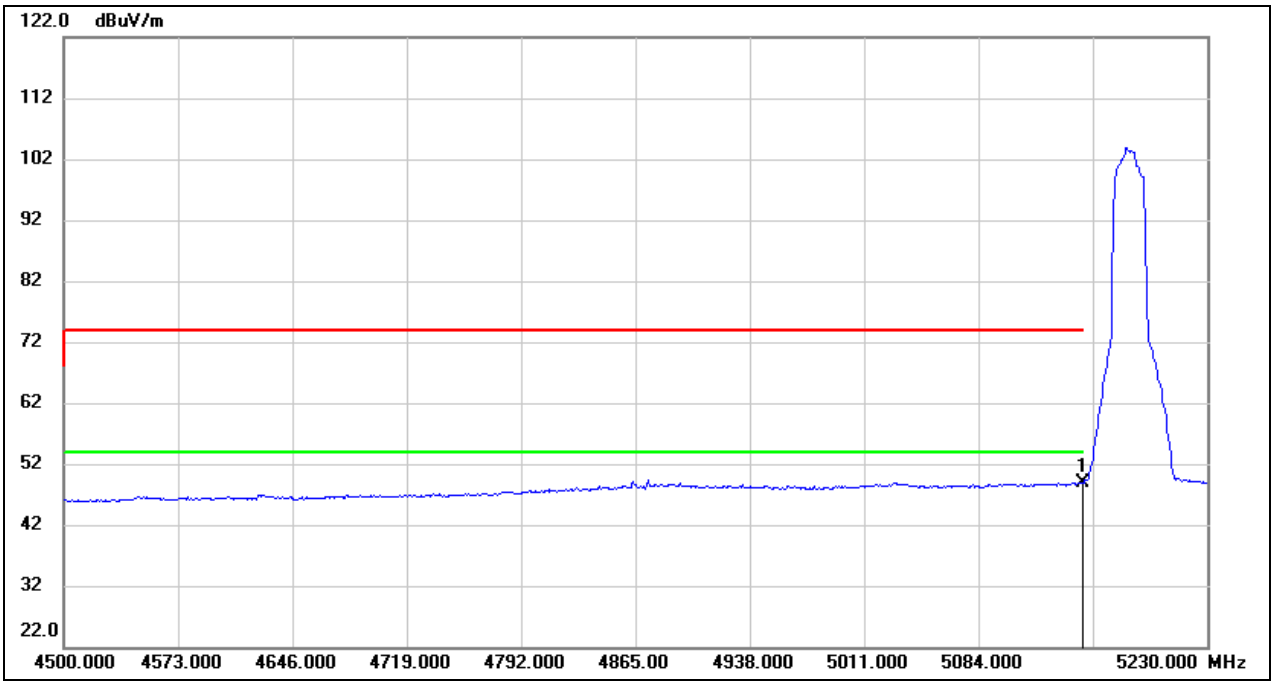
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	24.72	41.60	66.32	122.20	-55.88	peak
2	5938.470	18.30	41.84	60.14	68.20	-8.06	peak

Test Mode:	802.11ax HE20 Peak	Channel:	5180 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



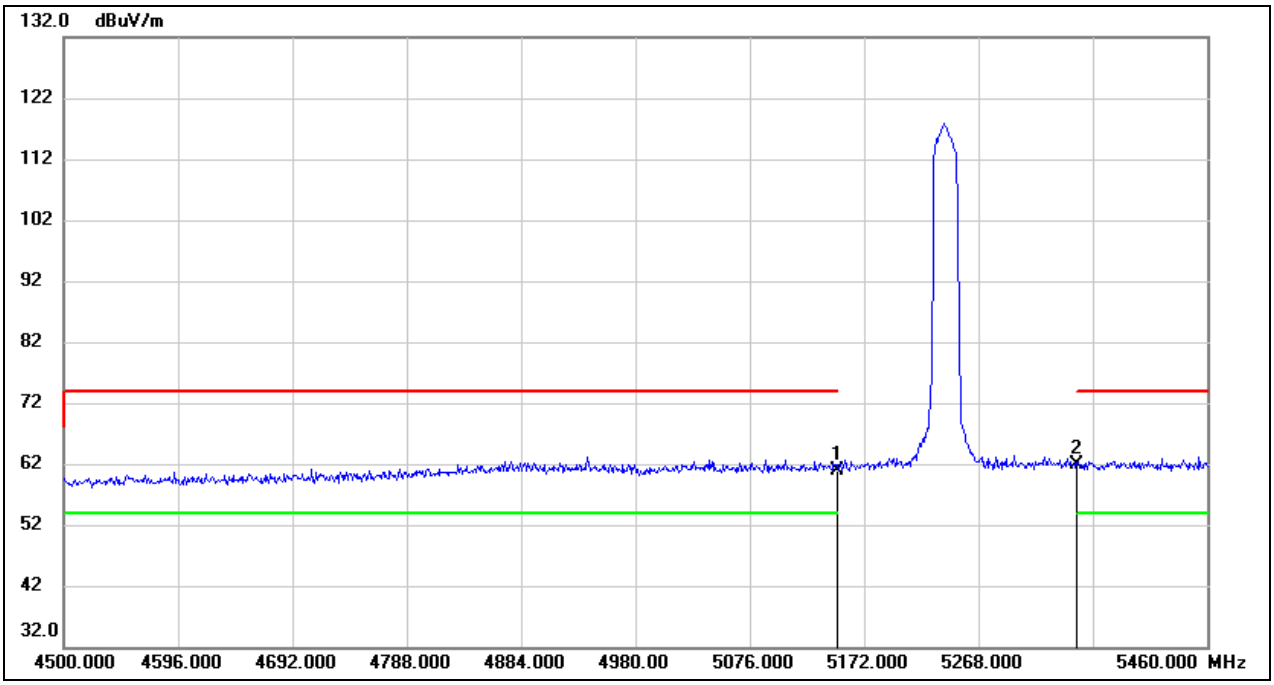
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	21.72	40.27	61.99	74.00	-12.01	peak

Test Mode:	802.11ax HE20 Average	Channel:	5180 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



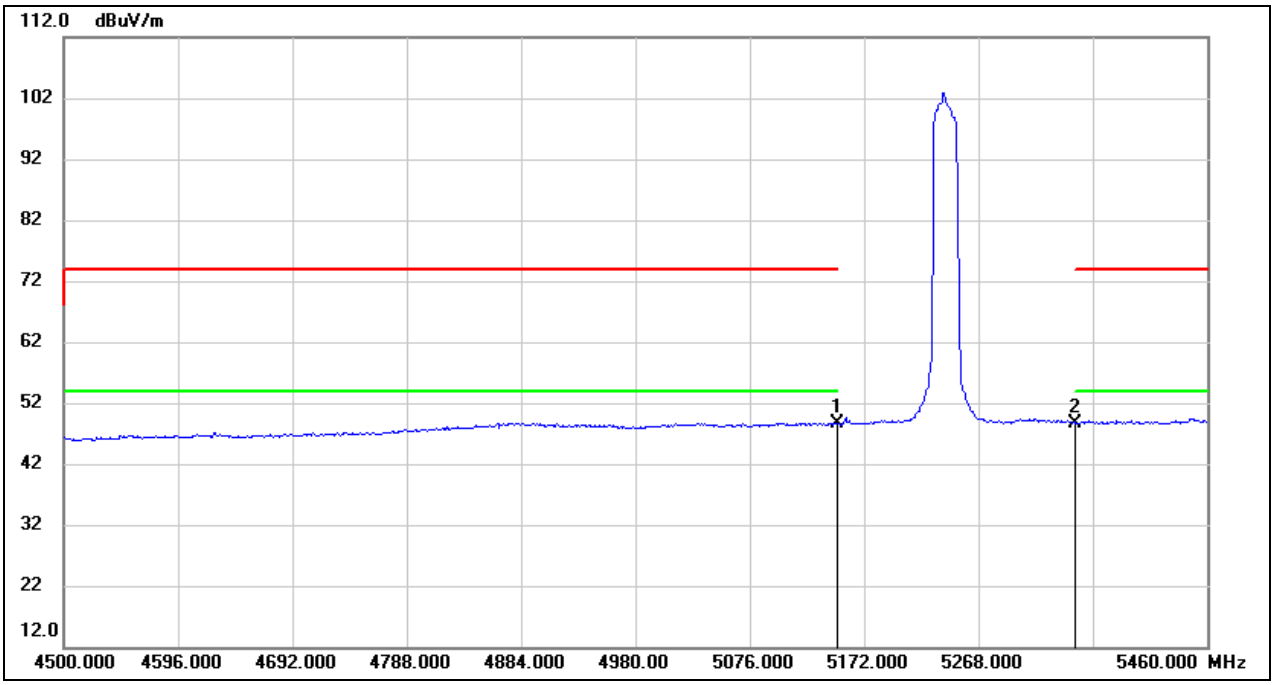
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	8.71	40.27	48.98	54.00	-5.02	AVG

Test Mode:	802.11ax HE20 Peak	Channel:	5240 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



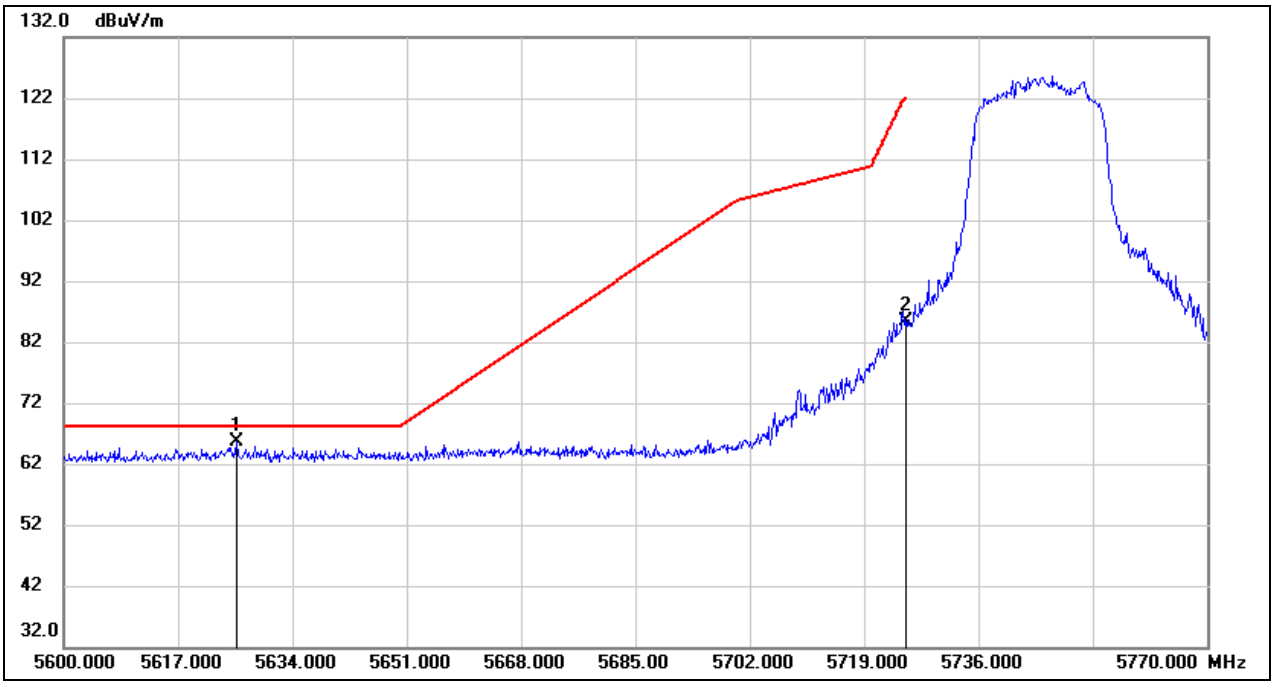
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	20.61	40.27	60.88	74.00	-13.12	peak
2	5350.000	21.37	40.49	61.86	74.00	-12.14	peak

Test Mode:	802.11ax HE20 Average	Channel:	5240 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



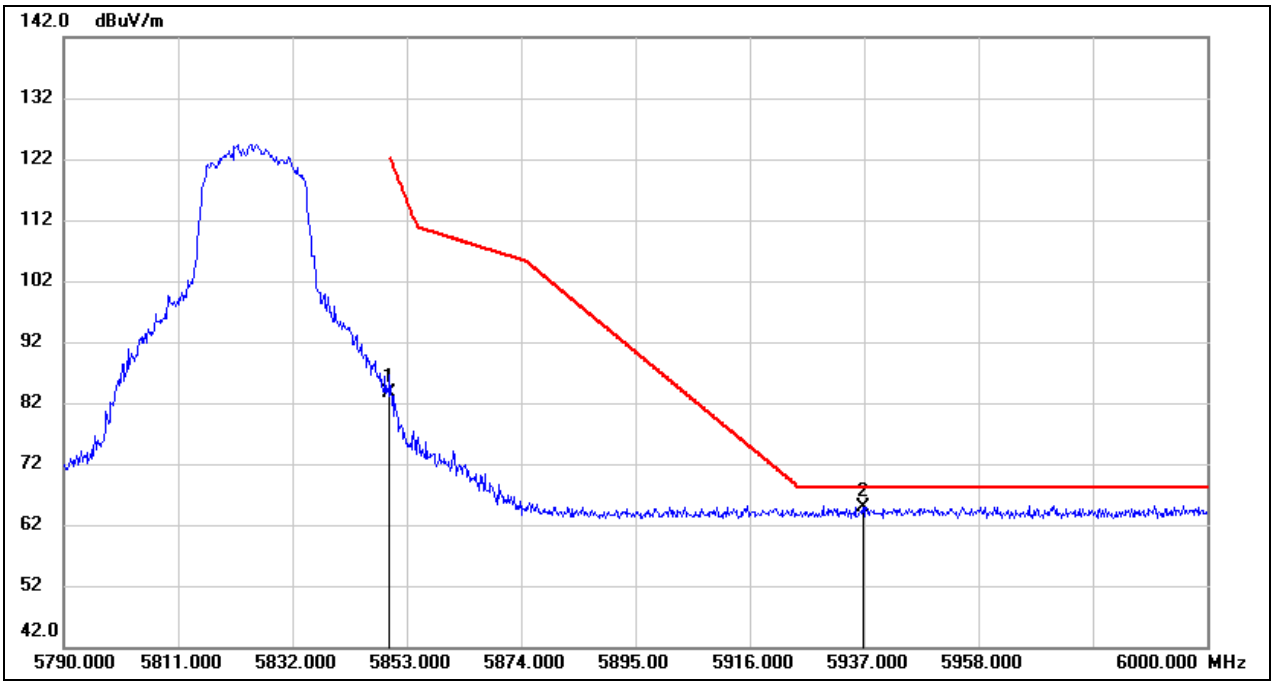
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	8.24	40.27	48.51	54.00	-5.49	AVG
2	5350.000	8.25	40.49	48.74	54.00	-5.26	AVG

Test Mode:	802.11ax HE20 PK	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



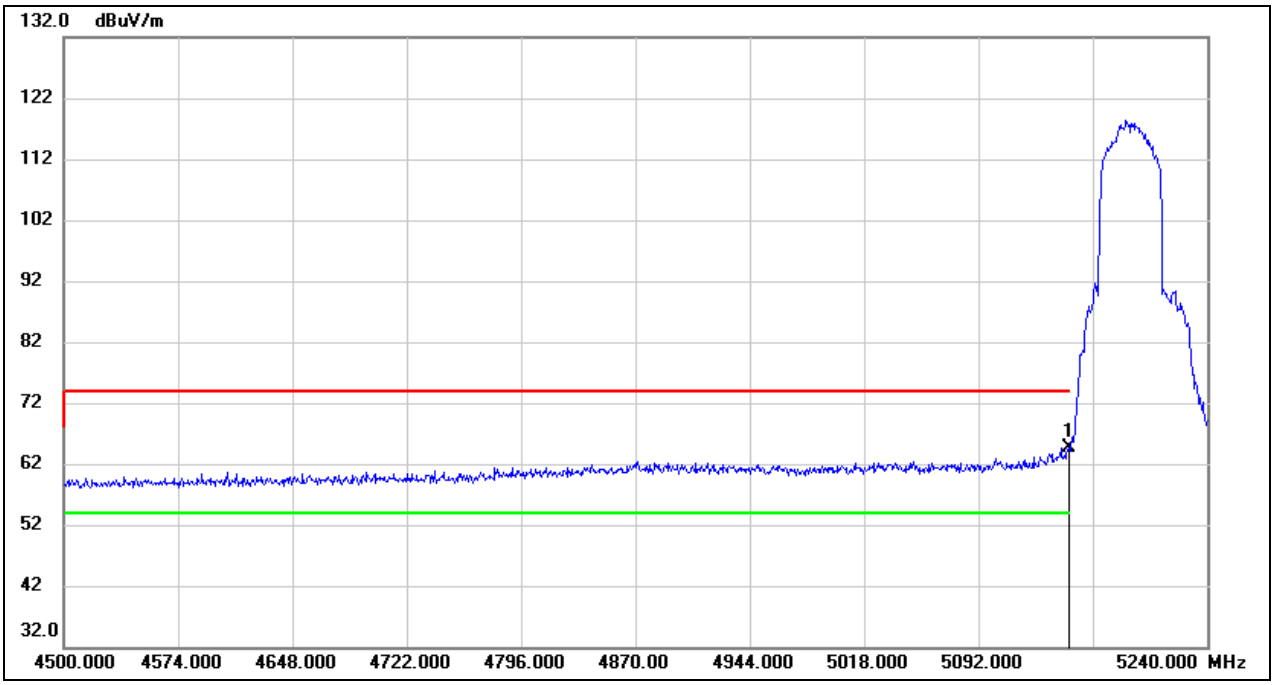
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5625.670	24.52	41.00	65.52	68.20	-2.68	peak
2	5725.000	44.06	41.27	85.33	122.20	-36.87	peak

Test Mode:	802.11ax HE20 Peak	Channel:	5825 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



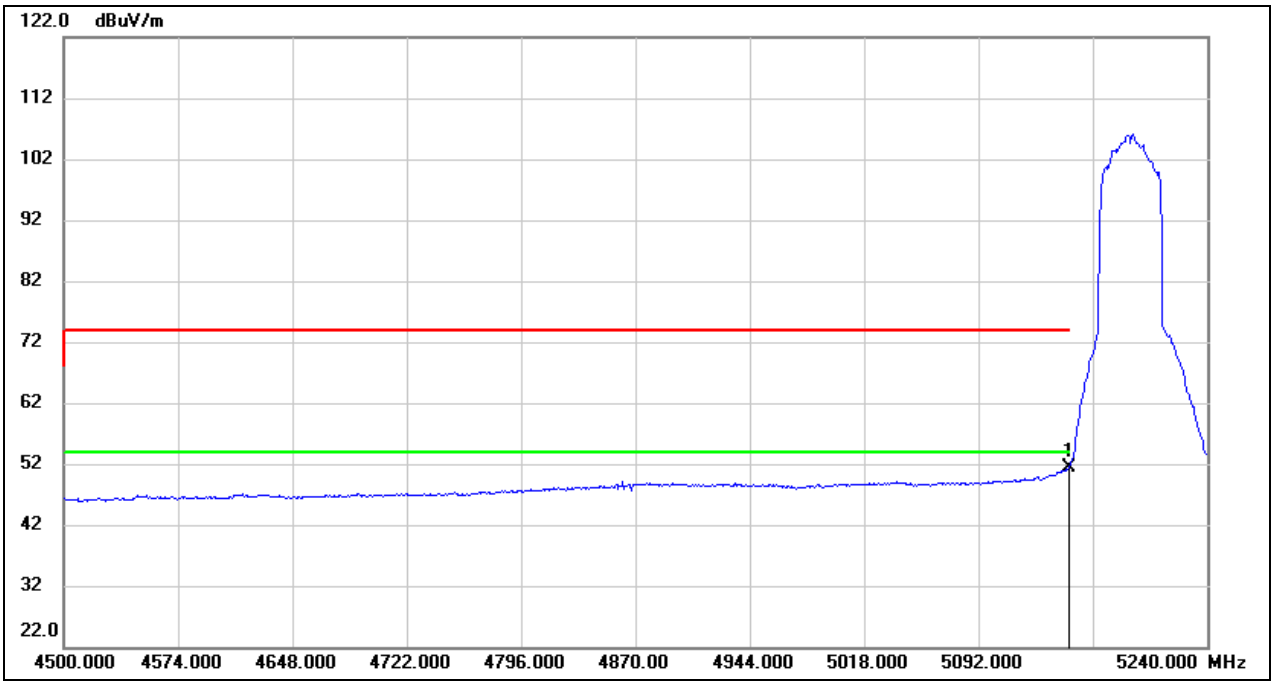
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	41.97	41.60	83.57	122.20	-38.63	peak
2	5936.790	23.16	41.83	64.99	68.20	-3.21	peak

Test Mode:	802.11ax HE40 Peak	Channel:	5190 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



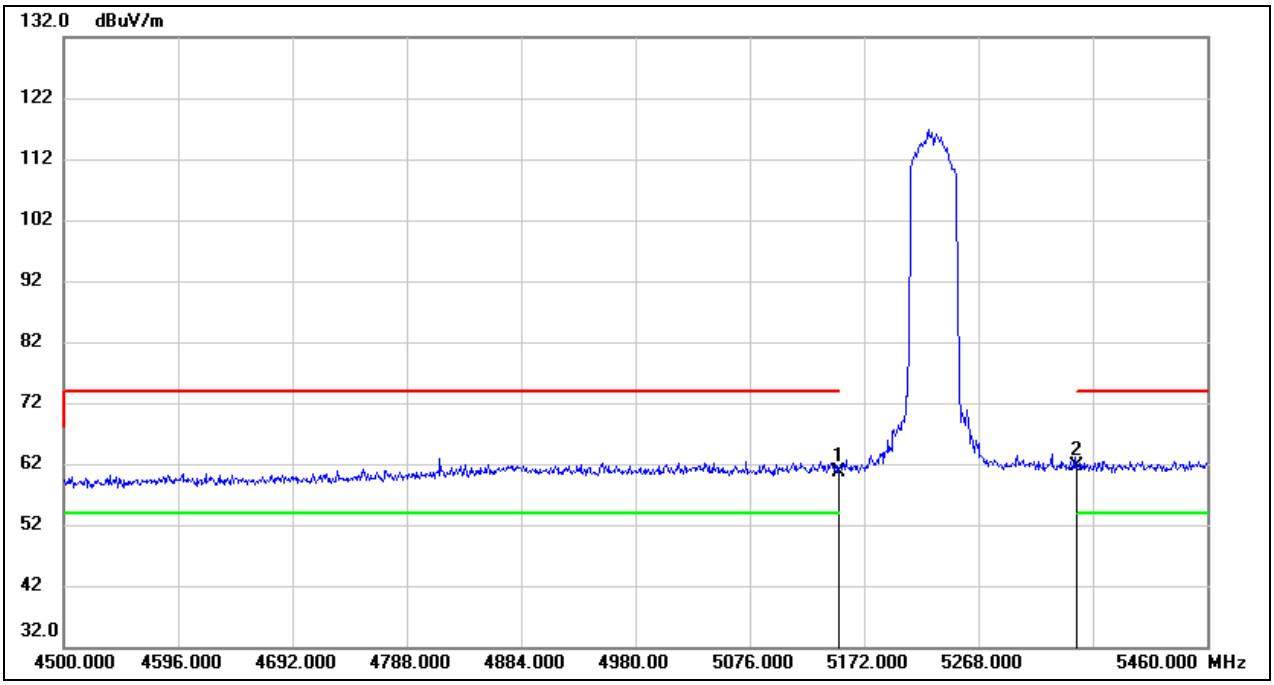
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	24.34	40.27	64.61	74.00	-9.39	peak

Test Mode:	802.11ax HE40 Average	Channel:	5190 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



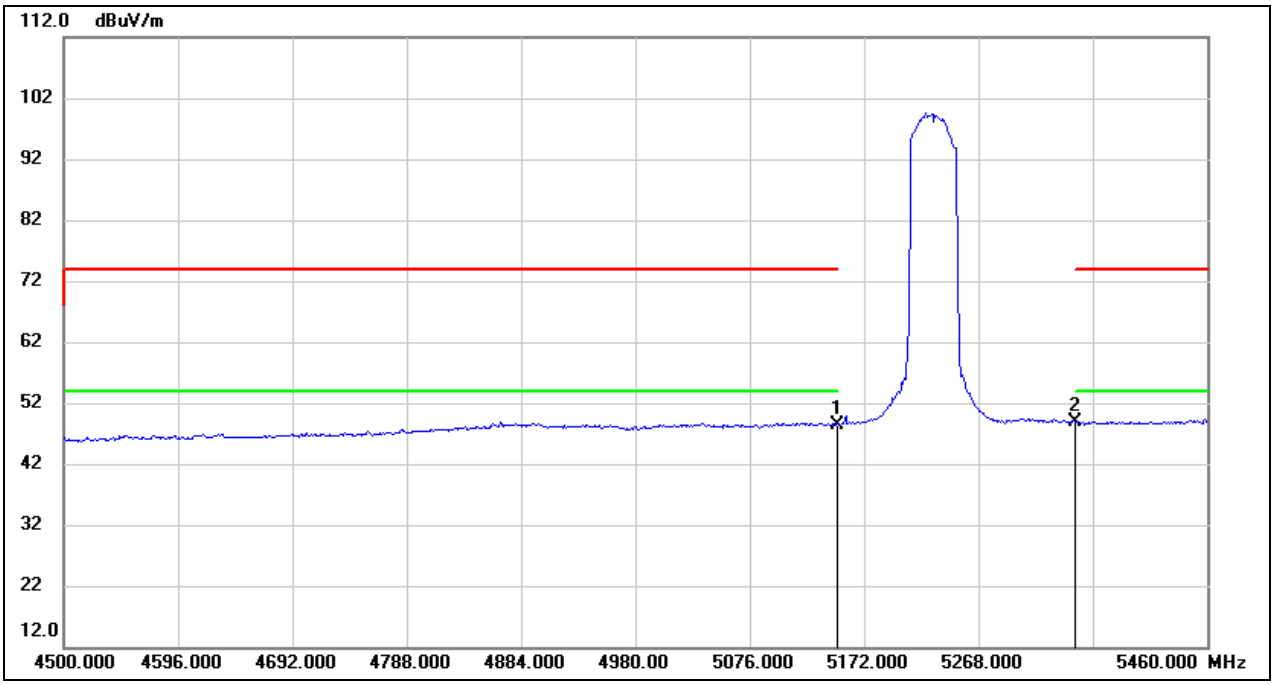
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	11.04	40.27	51.31	54.00	-2.69	AVG

Test Mode:	802.11ax HE40 Peak	Channel:	5230 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



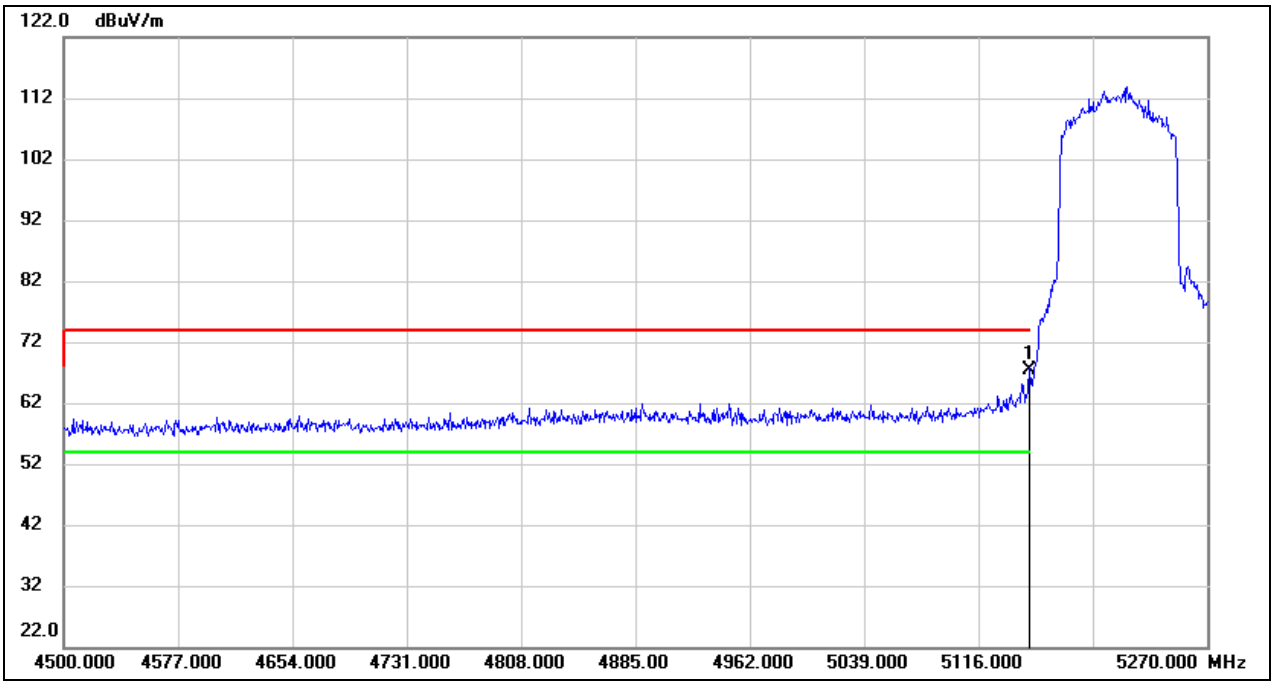
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	20.47	40.27	60.74	74.00	-13.26	peak
2	5350.000	21.02	40.49	61.51	74.00	-12.49	peak

Test Mode:	802.11ax HE40 Average	Channel:	5230 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



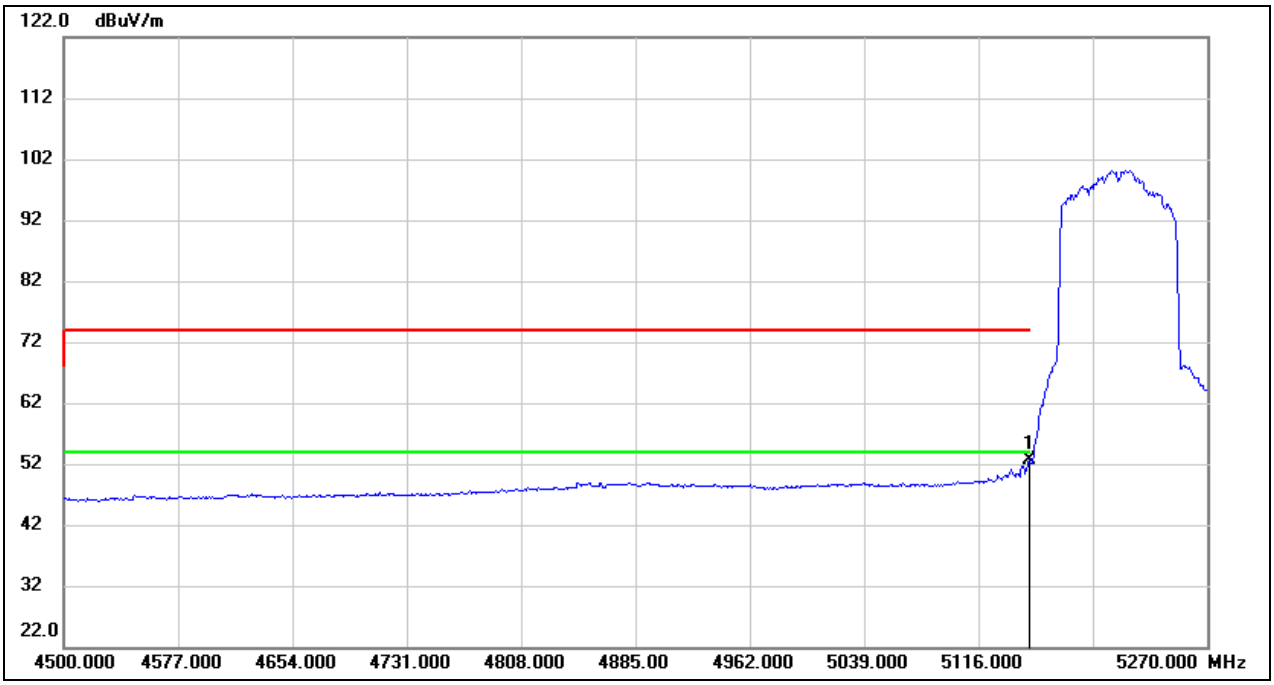
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	8.19	40.27	48.46	54.00	-5.54	AVG
2	5350.000	8.36	40.49	48.85	54.00	-5.15	AVG

Test Mode:	802.11ax HE80 Peak	Channel:	5210 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



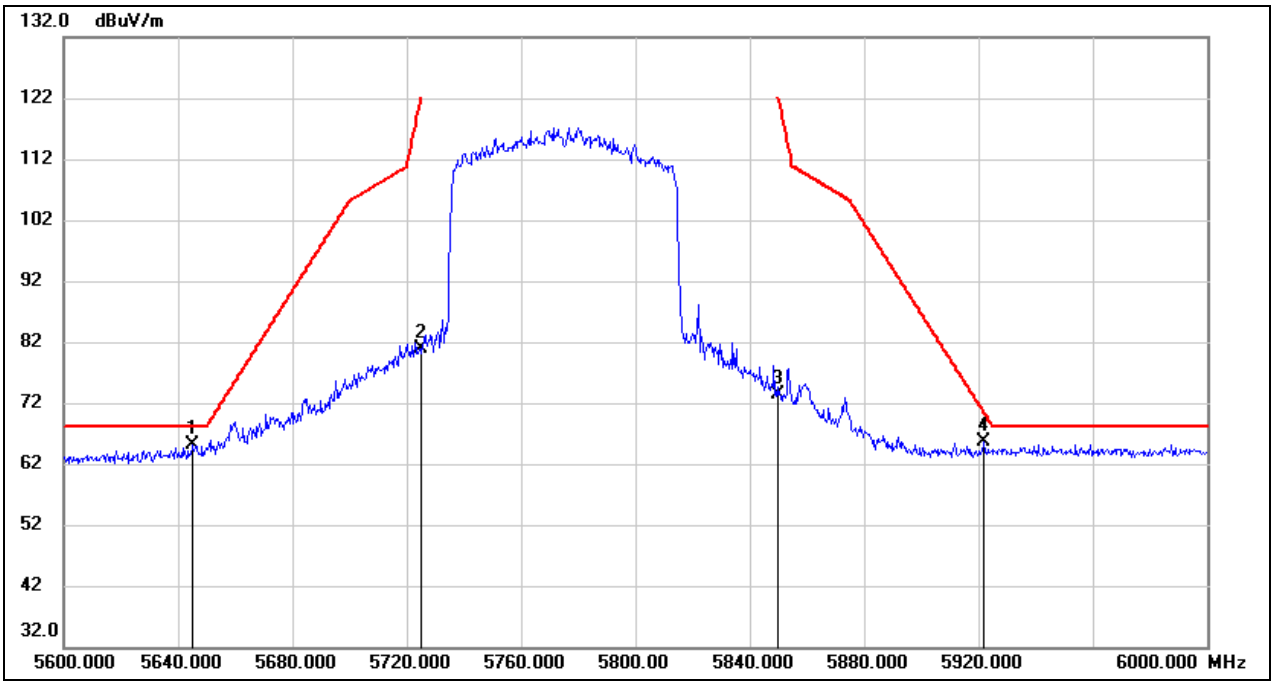
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	27.04	40.27	67.31	74.00	-6.69	peak

Test Mode:	802.11ax HE80 Average	Channel:	5210 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	12.44	40.27	52.71	54.00	-1.29	AVG

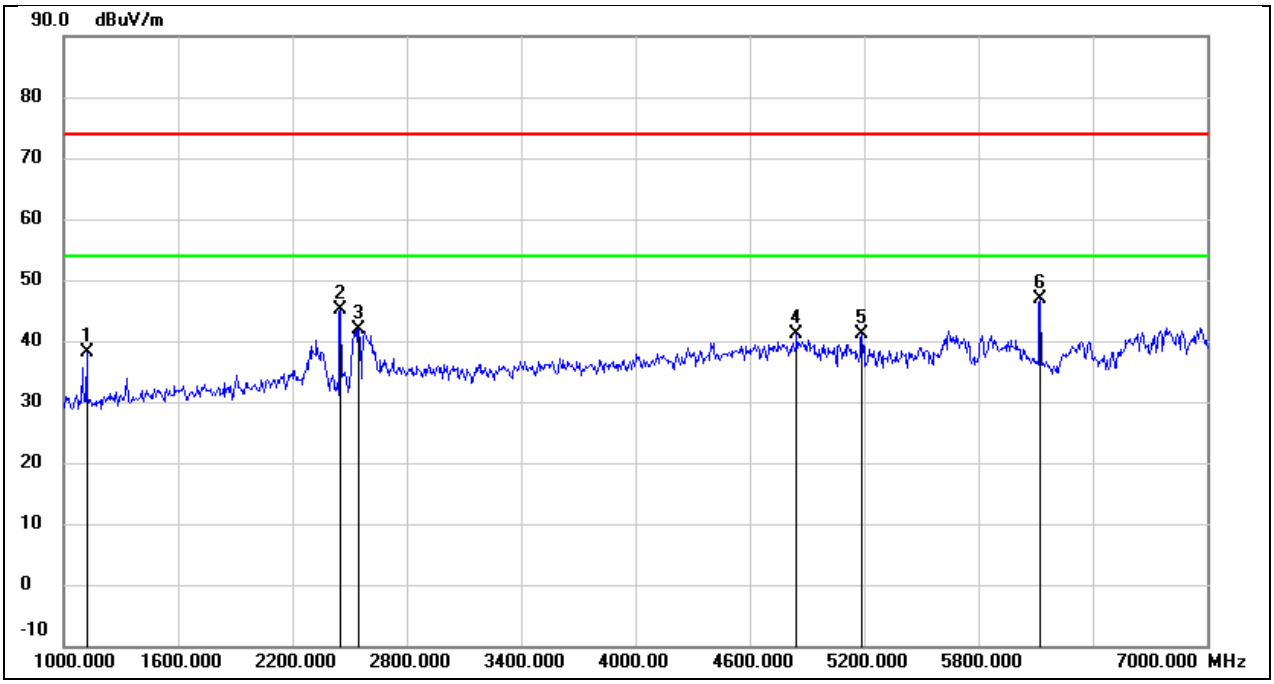
Test Mode:	802.11ax HE80 Peak	Channel:	5775 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5645.200	24.04	41.05	65.09	68.20	-3.11	peak
2	5725.000	39.67	41.27	80.94	122.20	-41.26	peak
3	5850.000	31.87	41.60	73.47	122.20	-48.73	peak
4	5922.000	23.84	41.79	65.63	70.41	-4.78	peak

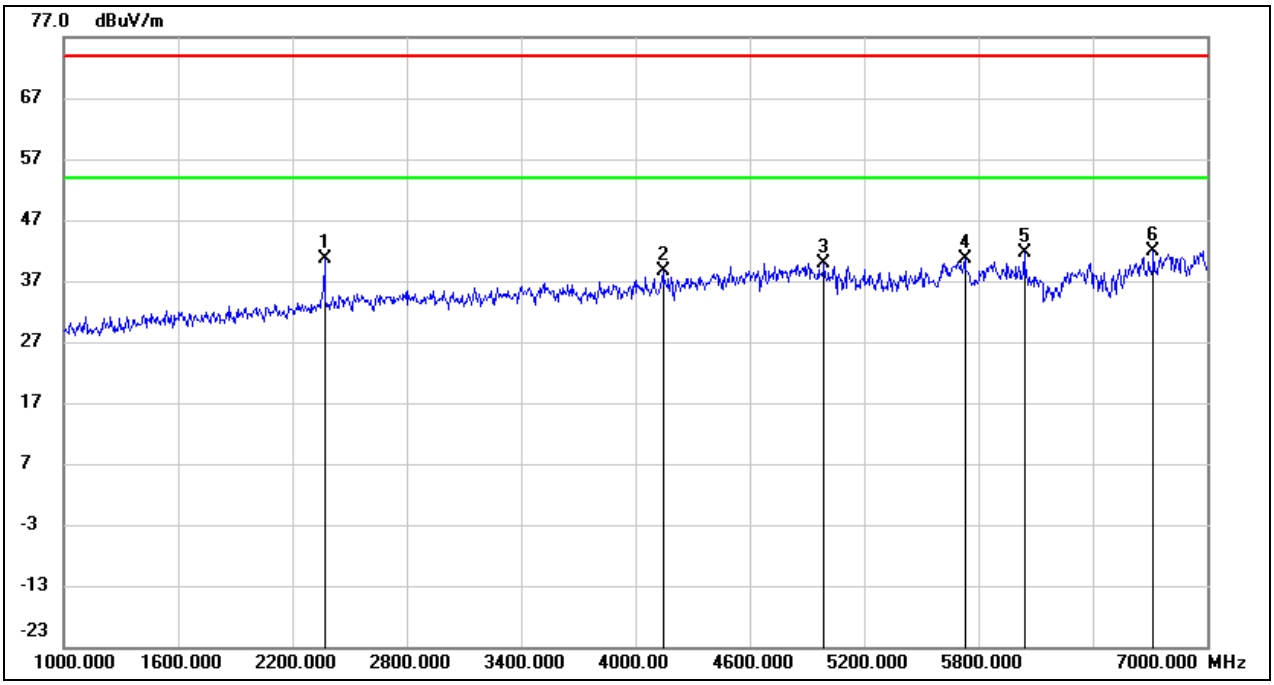
8.2. SPURIOUS EMISSIONS (1 GHZ ~ 7 GHZ)

Test Mode:	802.11ax HE20	Channel:	5180 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



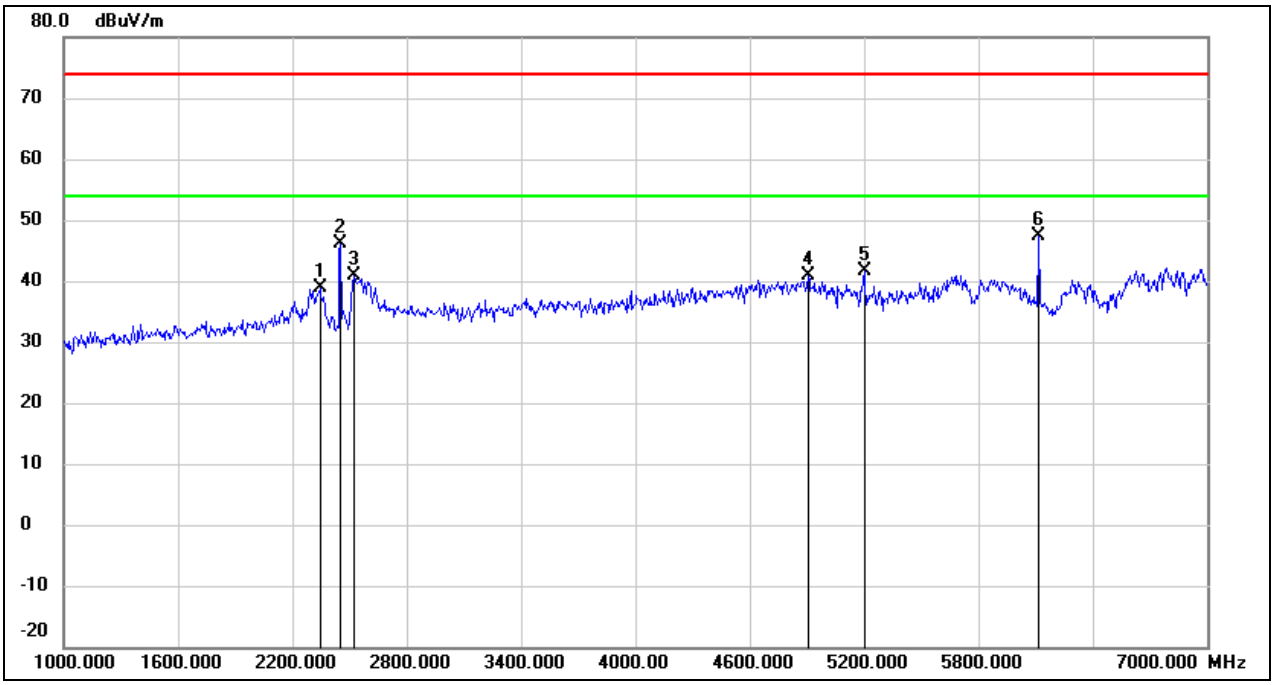
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1120.000	52.60	-14.47	38.13	74.00	-35.87	peak
2	2452.000	53.88	-8.73	45.15	74.00	-28.85	peak
3	2548.000	50.33	-8.35	41.98	74.00	-32.02	peak
4	4846.000	41.89	-0.77	41.12	74.00	-32.88	peak
5	5188.000	41.18	0.07	41.25	74.00	-32.75	peak
6	6124.000	44.66	2.31	46.97	74.00	-27.03	peak

Test Mode:	802.11ax HE20	Channel:	5180 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



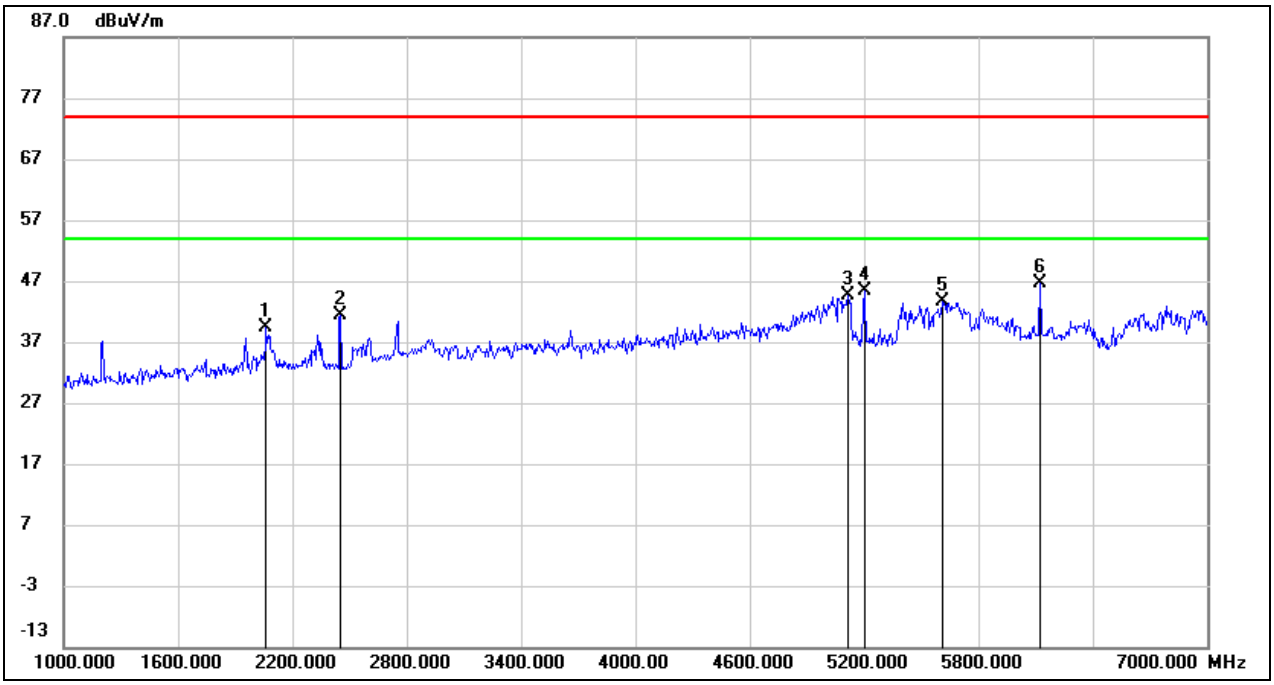
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2368.000	49.68	-9.16	40.52	74.00	-33.48	peak
2	4144.000	42.39	-3.80	38.59	74.00	-35.41	peak
3	4990.000	40.05	-0.19	39.86	74.00	-34.14	peak
4	5728.000	39.48	1.07	40.55	74.00	-33.45	peak
5	6040.000	39.72	1.99	41.71	74.00	-32.29	peak
6	6718.000	37.15	4.80	41.95	74.00	-32.05	peak

Test Mode:	802.11ax HE20	Channel:	5200 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



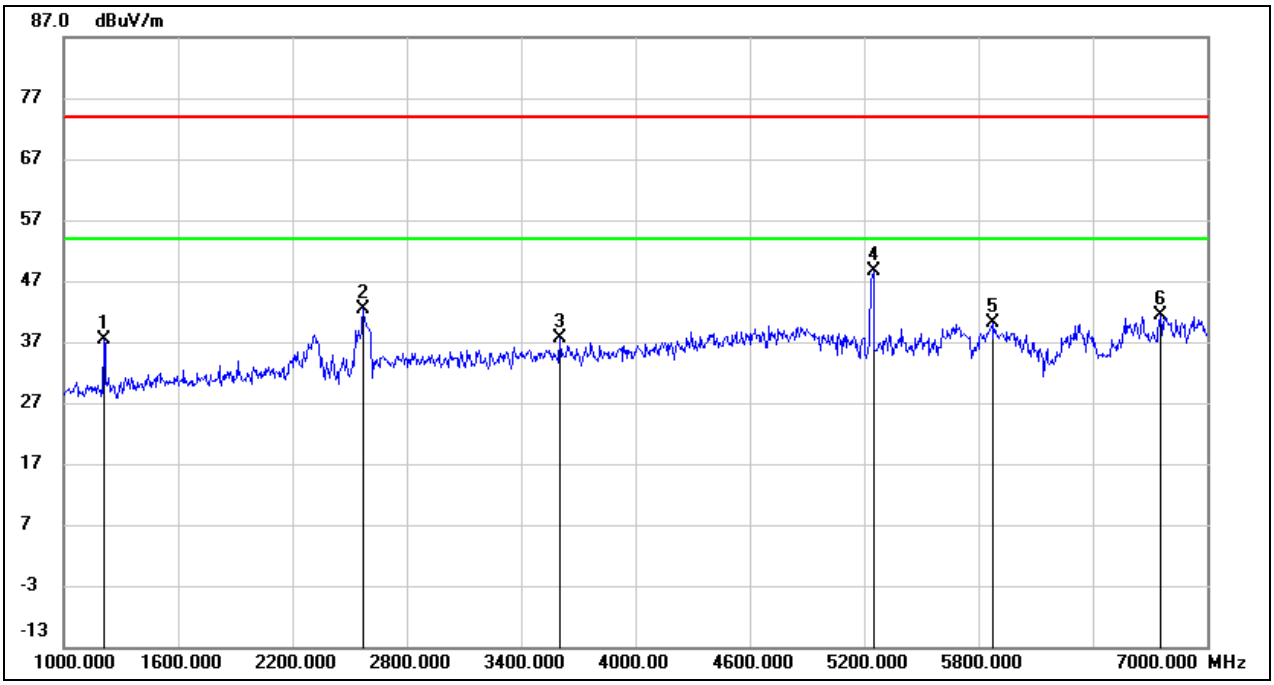
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2344.000	48.22	-9.30	38.92	74.00	-35.08	peak
2	2452.000	54.76	-8.73	46.03	74.00	-27.97	peak
3	2524.000	49.41	-8.42	40.99	74.00	-33.01	peak
4	4906.000	41.40	-0.53	40.87	74.00	-33.13	peak
5	5200.000	41.47	0.08	41.55	74.00	-32.45	peak
6	6118.000	44.98	2.29	47.27	74.00	-26.73	peak

Test Mode:	802.11ax HE20	Channel:	5200 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



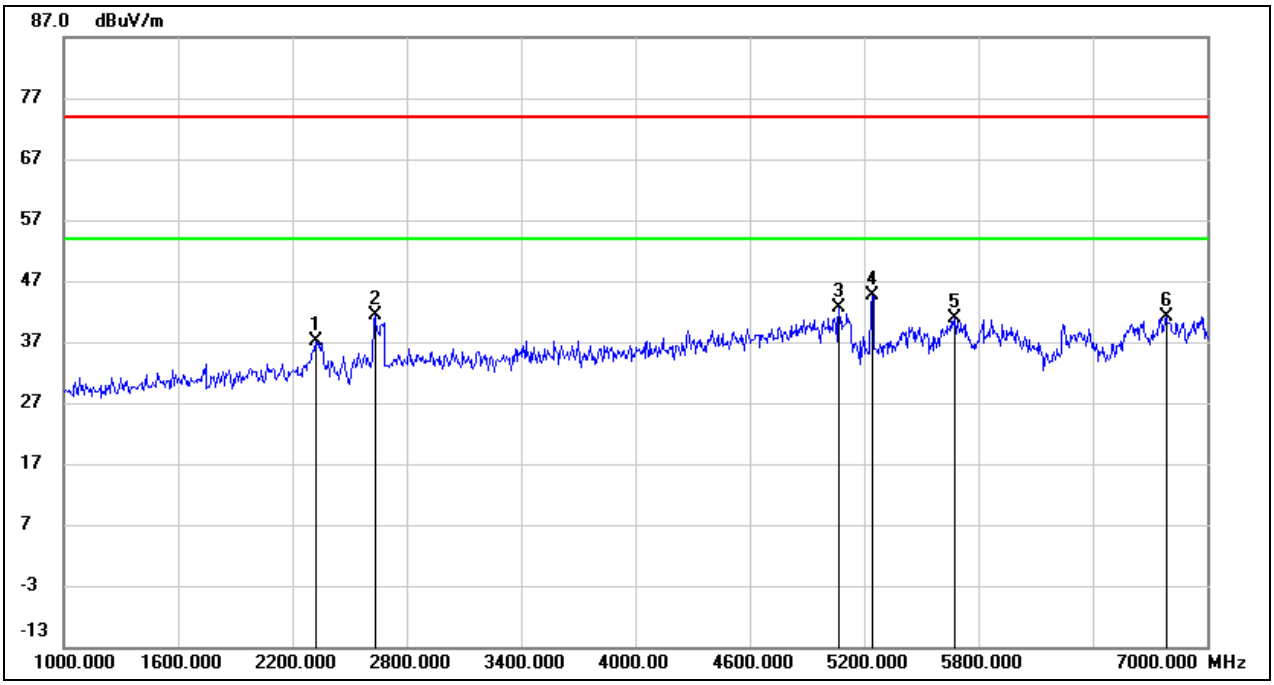
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2062.000	50.14	-10.75	39.39	74.00	-34.61	peak
2	2452.000	50.16	-8.73	41.43	74.00	-32.57	peak
3	5116.000	44.66	-0.02	44.64	74.00	-29.36	peak
4	5200.000	45.29	0.08	45.37	74.00	-28.63	peak
5	5608.000	42.92	0.73	43.65	74.00	-30.35	peak
6	6124.000	44.39	2.31	46.70	74.00	-27.30	peak

Test Mode:	802.11ax HE20	Channel:	5240 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



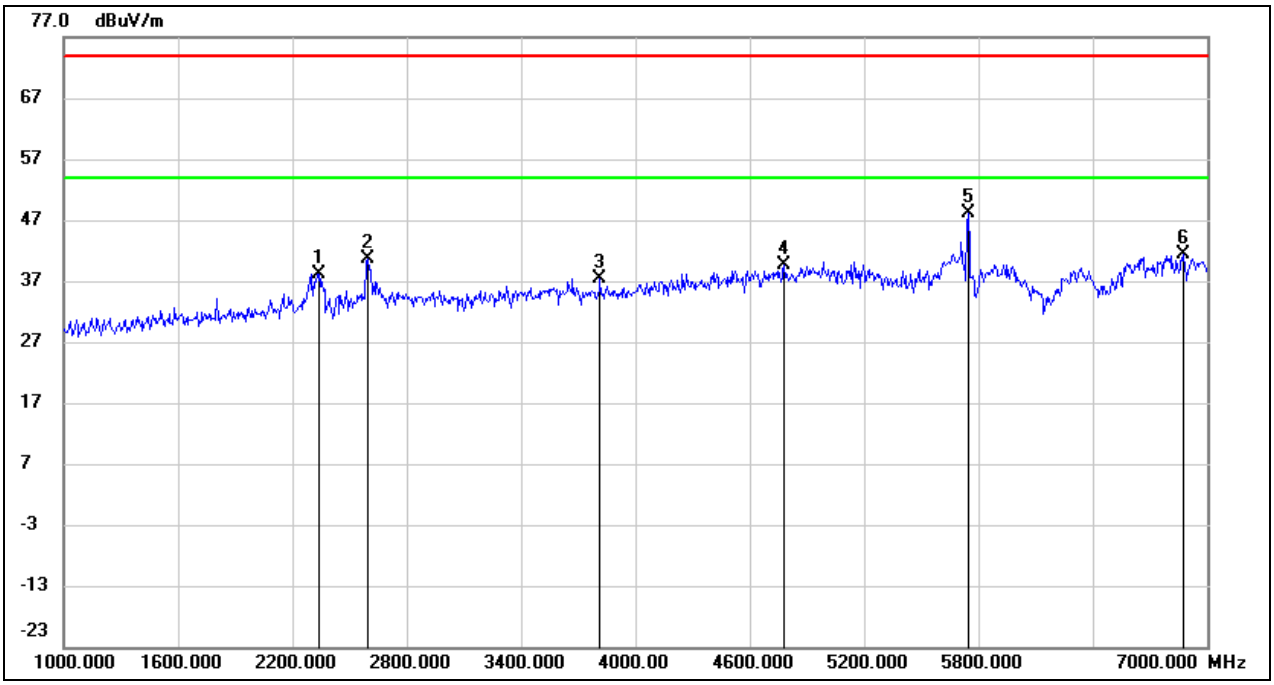
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1210.000	51.42	-14.06	37.36	74.00	-36.64	peak
2	2572.000	50.59	-8.27	42.32	74.00	-31.68	peak
3	3604.000	43.11	-5.56	37.55	74.00	-36.45	peak
4	5248.000	48.57	0.13	48.70	74.00	-25.30	peak
5	5872.000	38.53	1.48	40.01	74.00	-33.99	peak
6	6754.000	36.30	4.98	41.28	74.00	-32.72	peak

Test Mode:	802.11ax HE20	Channel:	5240 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



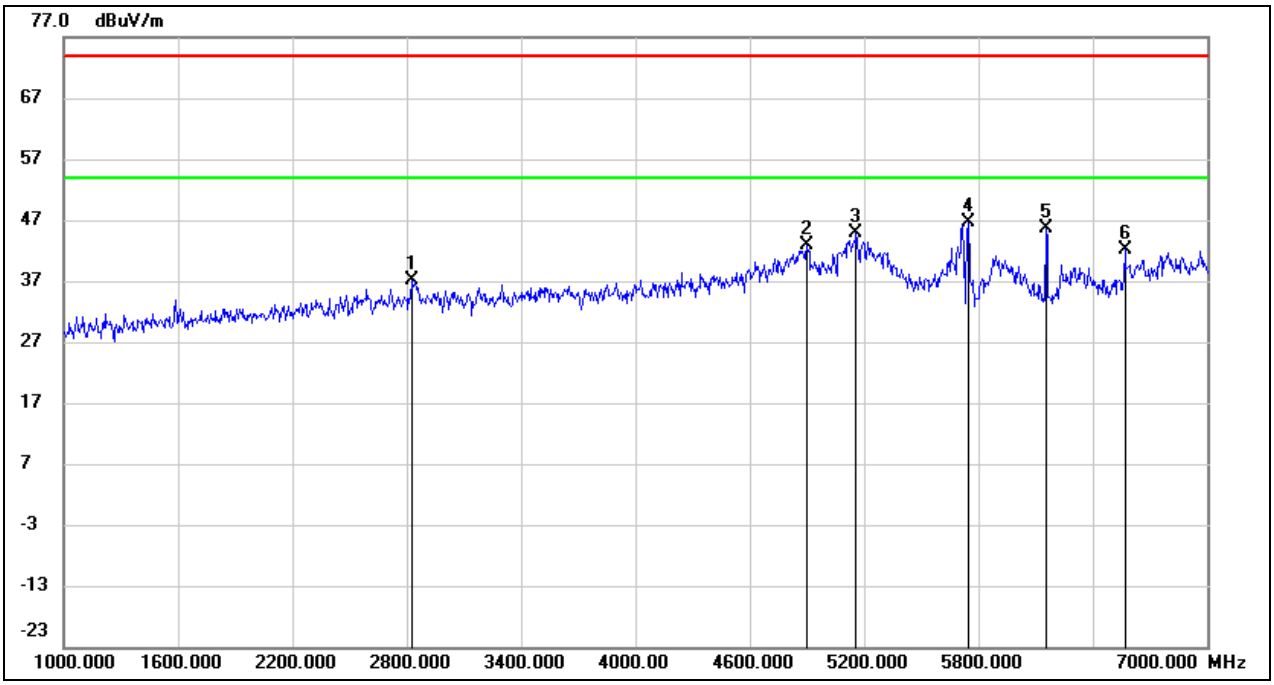
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2320.000	46.56	-9.42	37.14	74.00	-36.86	peak
2	2632.000	49.59	-8.09	41.50	74.00	-32.50	peak
3	5068.000	42.60	-0.07	42.53	74.00	-31.47	peak
4	5242.000	44.57	0.12	44.69	74.00	-29.31	peak
5	5674.000	39.87	0.92	40.79	74.00	-33.21	peak
6	6784.000	35.89	5.13	41.02	74.00	-32.98	peak

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



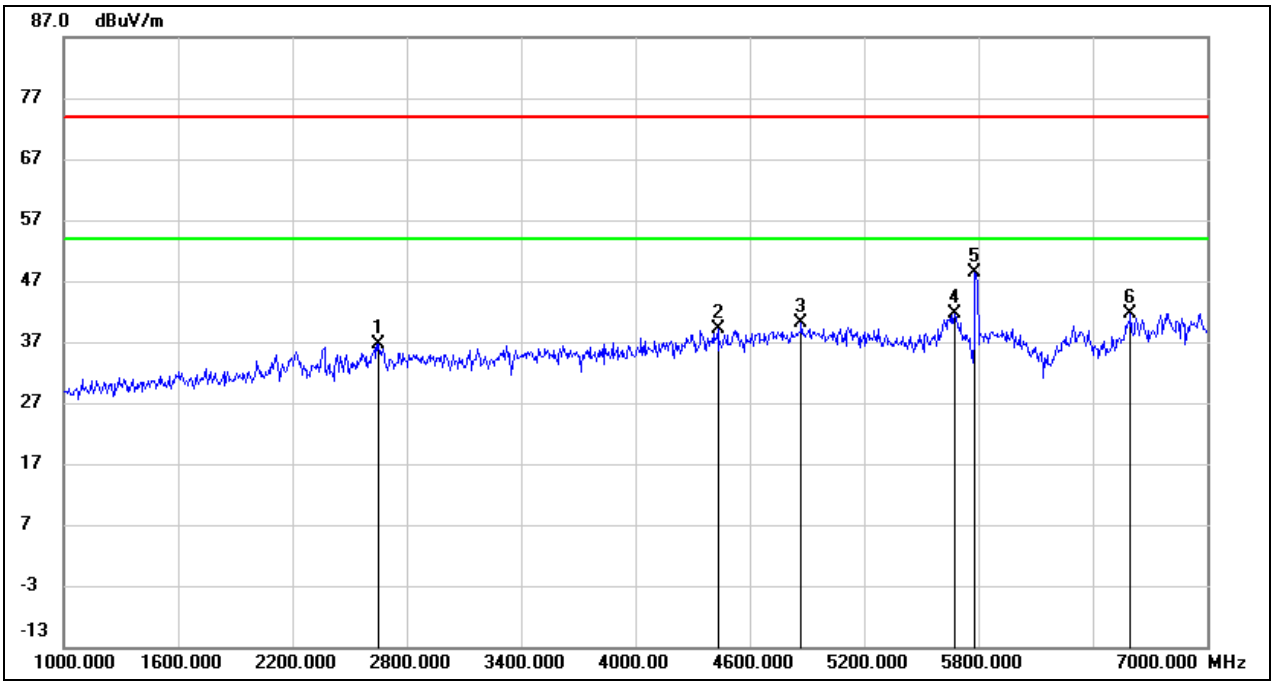
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2338.000	47.54	-9.32	38.22	74.00	-35.78	peak
2	2596.000	48.73	-8.20	40.53	74.00	-33.47	peak
3	3814.000	42.32	-4.99	37.33	74.00	-36.67	peak
4	4780.000	40.53	-1.02	39.51	74.00	-34.49	peak
5	5746.000	47.06	1.12	48.18	74.00	-25.82	peak
6	6874.000	35.86	5.57	41.43	74.00	-32.57	peak

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



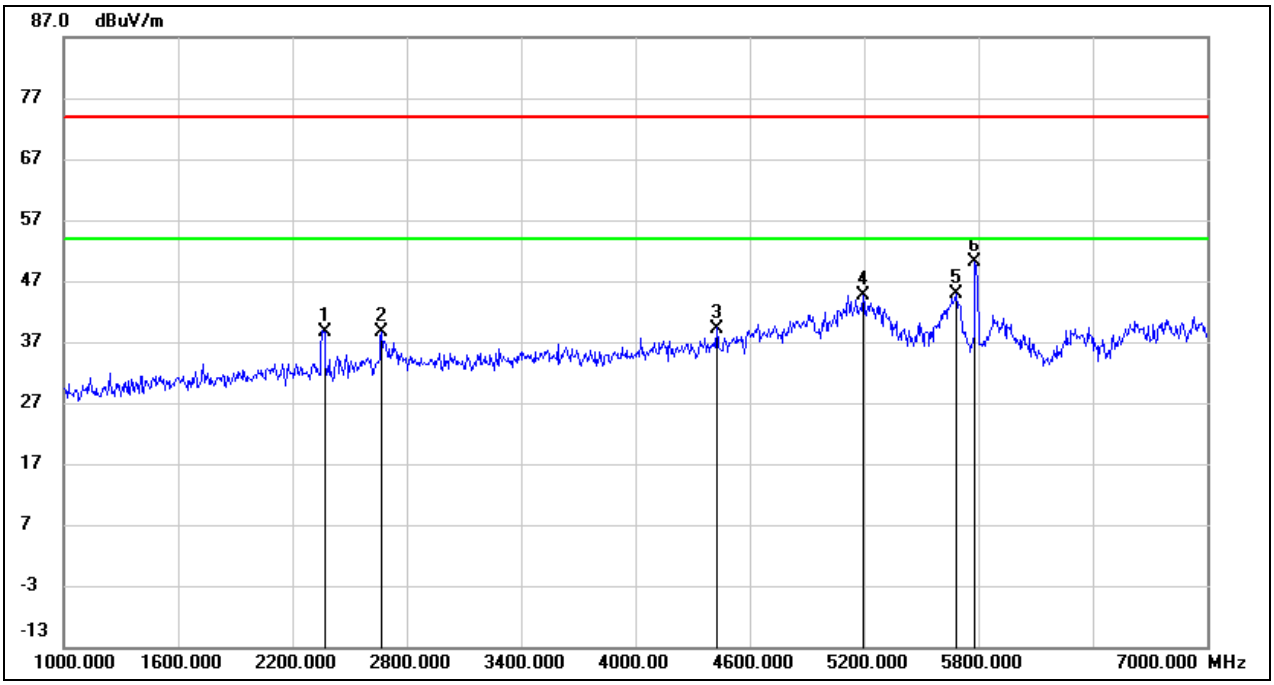
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2824.000	44.68	-7.51	37.17	74.00	-36.83	peak
2	4900.000	43.36	-0.55	42.81	74.00	-31.19	peak
3	5158.000	44.83	0.04	44.87	74.00	-29.13	peak
4	5746.000	45.51	1.12	46.63	74.00	-27.37	peak
5	6154.000	43.23	2.43	45.66	74.00	-28.34	peak
6	6568.000	38.14	4.05	42.19	74.00	-31.81	peak

Test Mode:	802.11ax HE20	Channel:	5785 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



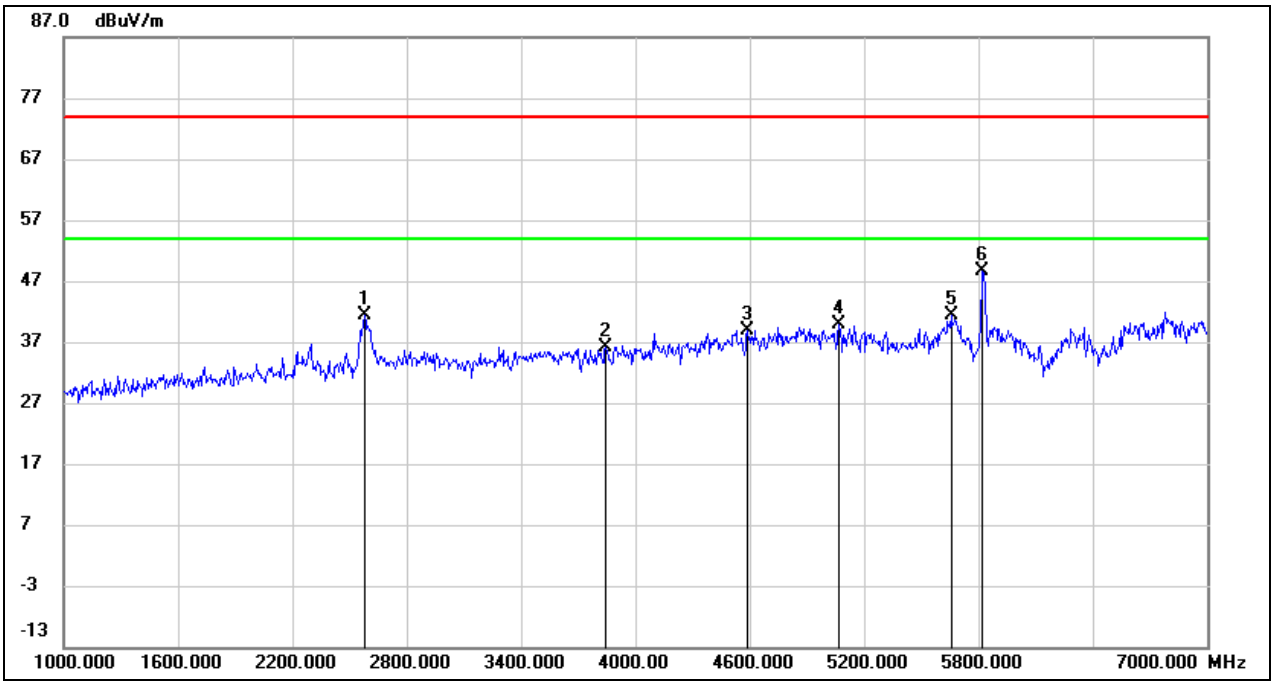
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2650.000	44.77	-8.03	36.74	74.00	-37.26	peak
2	4432.000	41.55	-2.46	39.09	74.00	-34.91	peak
3	4870.000	40.84	-0.66	40.18	74.00	-33.82	peak
4	5674.000	40.66	0.92	41.58	74.00	-32.42	peak
5	5782.000	47.22	1.23	48.45	74.00	-25.55	peak
6	6598.000	37.54	4.21	41.75	74.00	-32.25	peak

Test Mode:	802.11ax HE20	Channel:	5785 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



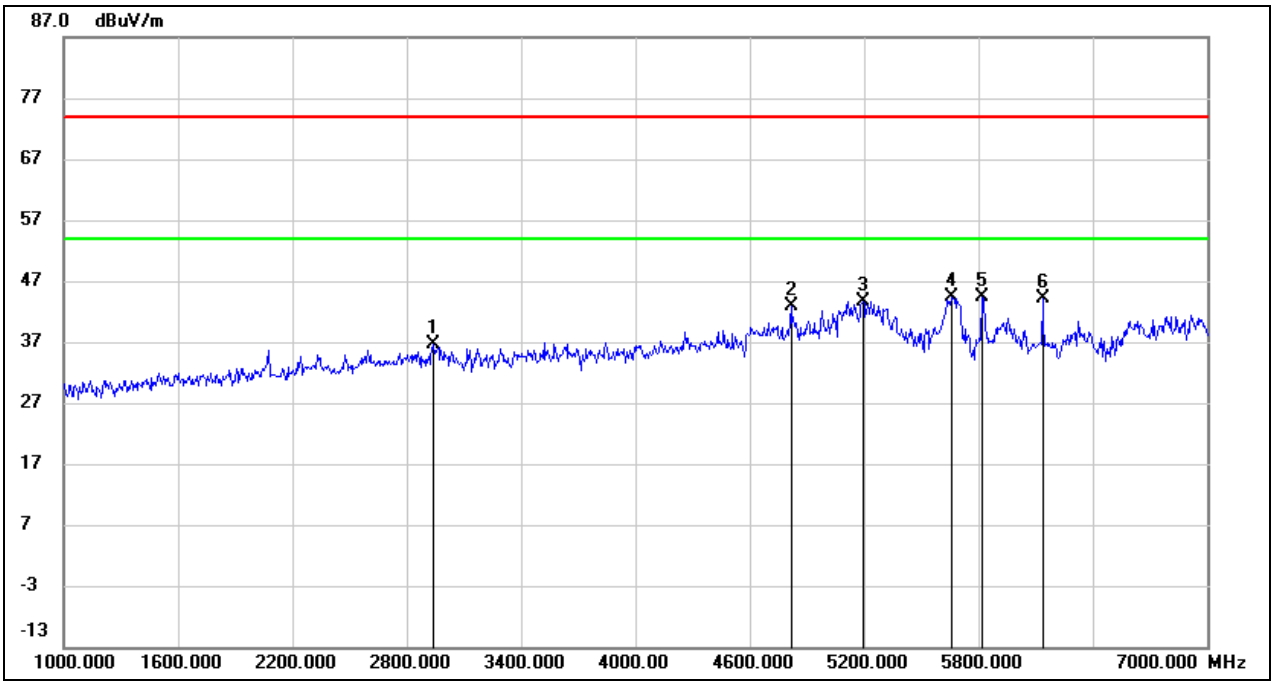
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2368.000	47.78	-9.16	38.62	74.00	-35.38	peak
2	2668.000	46.51	-7.98	38.53	74.00	-35.47	peak
3	4426.000	41.74	-2.49	39.25	74.00	-34.75	peak
4	5194.000	44.50	0.07	44.57	74.00	-29.43	peak
5	5680.000	44.03	0.94	44.97	74.00	-29.03	peak
6	5782.000	48.86	1.23	50.09	74.00	-23.91	peak

Test Mode:	802.11ax HE20	Channel:	5825 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2578.000	49.61	-8.26	41.35	74.00	-32.65	peak
2	3844.000	41.15	-4.91	36.24	74.00	-37.76	peak
3	4588.000	40.61	-1.79	38.82	74.00	-35.18	peak
4	5068.000	39.99	-0.07	39.92	74.00	-34.08	peak
5	5656.000	40.55	0.87	41.42	74.00	-32.58	peak
6	5818.000	47.41	1.33	48.74	74.00	-25.26	peak

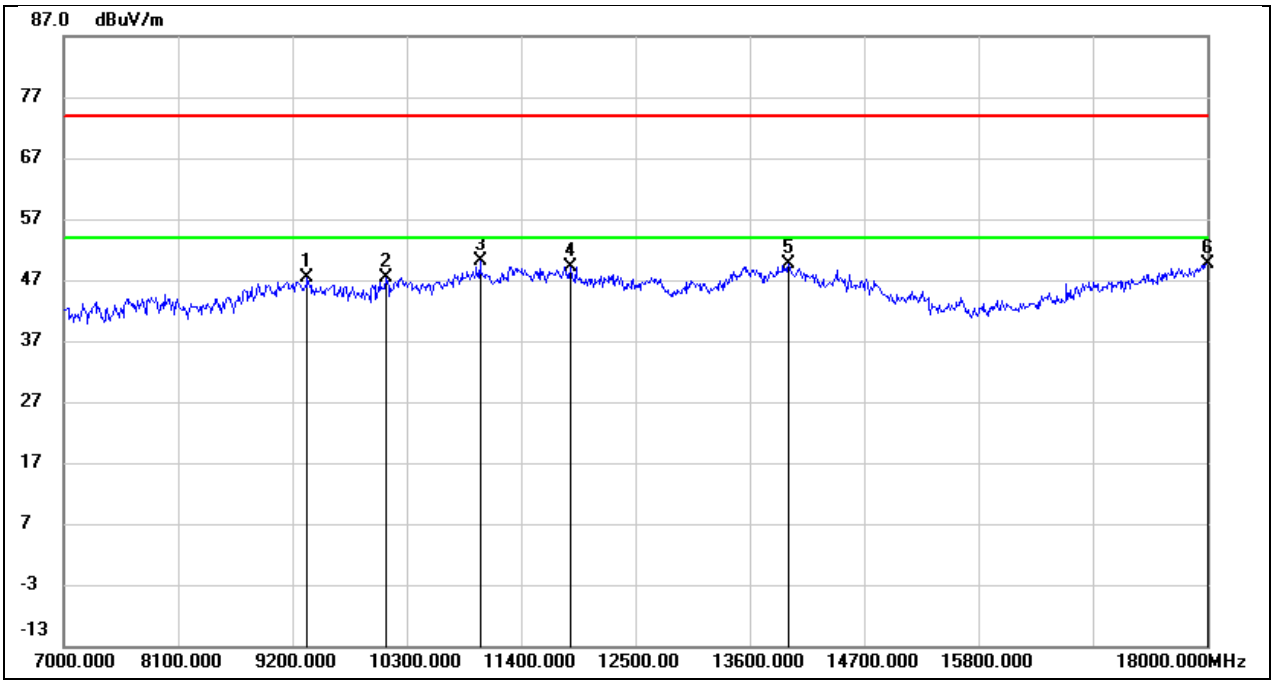
Test Mode:	802.11ax HE20	Channel:	5825 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2938.000	43.82	-7.16	36.66	74.00	-37.34	peak
2	4816.000	43.65	-0.89	42.76	74.00	-31.24	peak
3	5194.000	43.59	0.07	43.66	74.00	-30.34	peak
4	5662.000	43.41	0.89	44.30	74.00	-29.70	peak
5	5818.000	42.93	1.33	44.26	74.00	-29.74	peak
6	6136.000	41.87	2.35	44.22	74.00	-29.78	peak

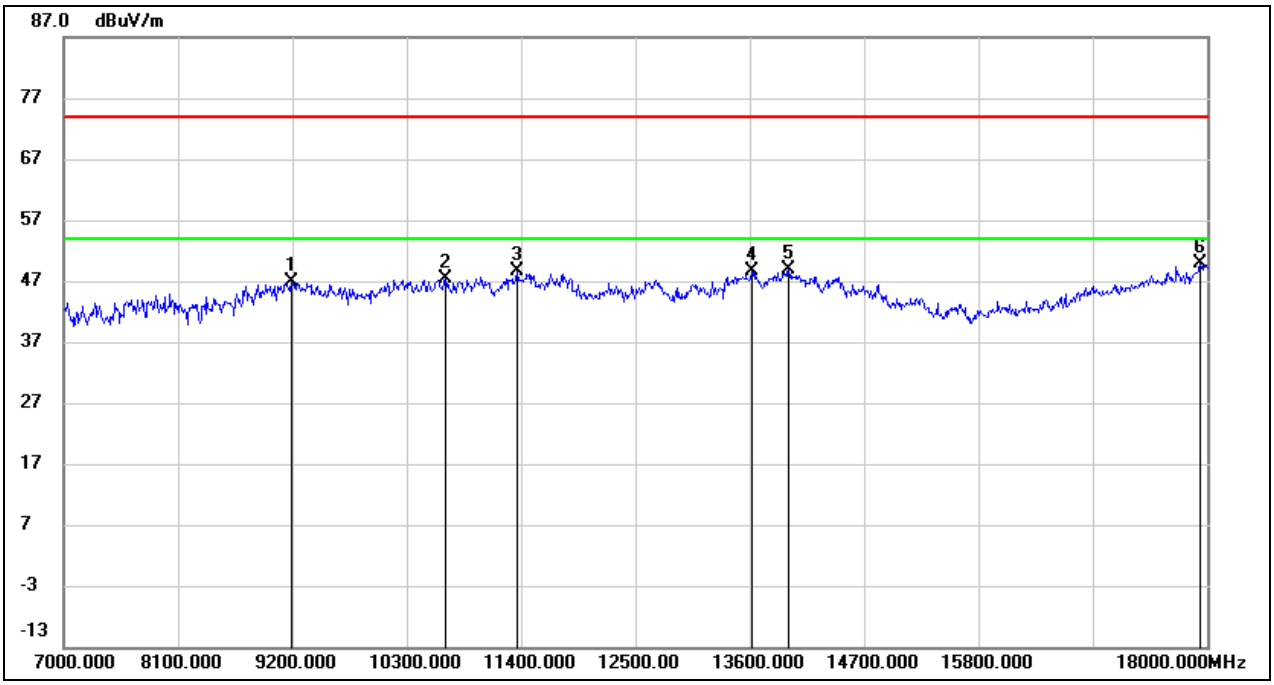
8.3. SPURIOUS EMISSIONS (7 GHZ ~ 18 GHZ)

Test Mode:	802.11a 20	Channel:	5180 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



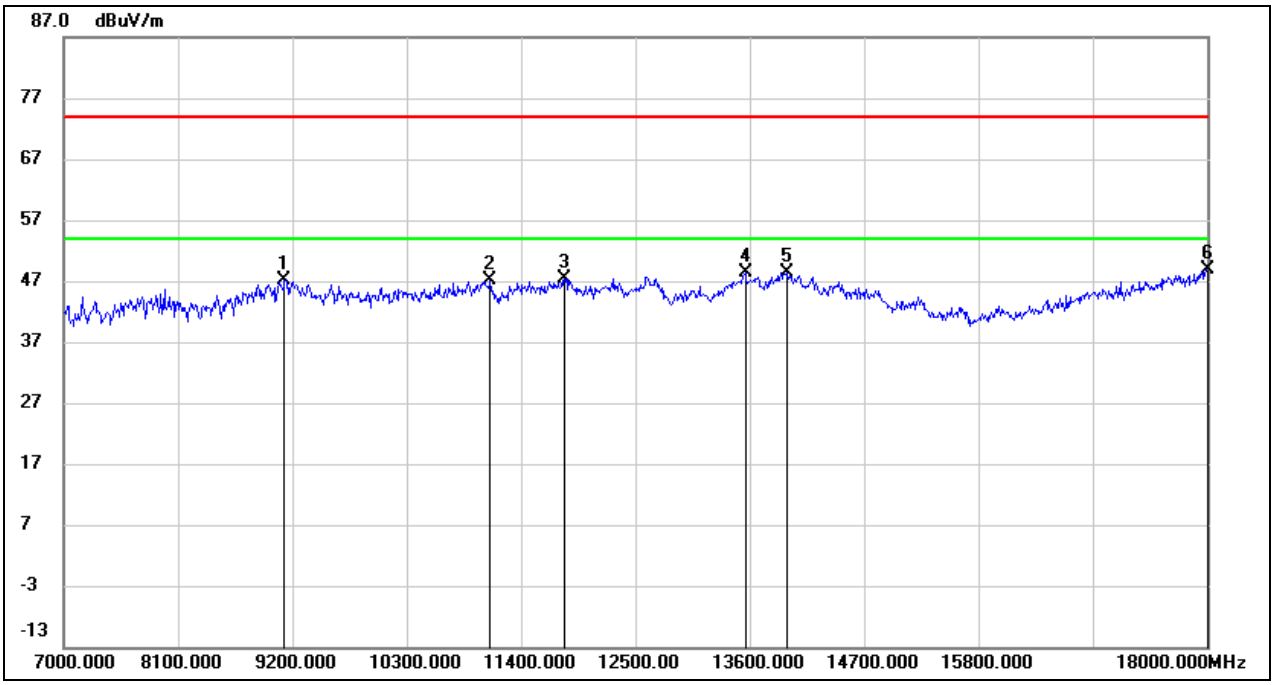
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9343.000	36.76	10.55	47.31	74.00	-26.69	peak
2	10102.000	35.39	11.98	47.37	74.00	-26.63	peak
3	11004.000	35.32	14.74	50.06	74.00	-23.94	peak
4	11873.000	31.70	17.46	49.16	74.00	-24.84	peak
5	13974.000	27.85	21.82	49.67	74.00	-24.33	peak
6	18000.000	23.50	26.12	49.62	74.00	-24.38	peak

Test Mode:	802.11a 20	Channel:	5180 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



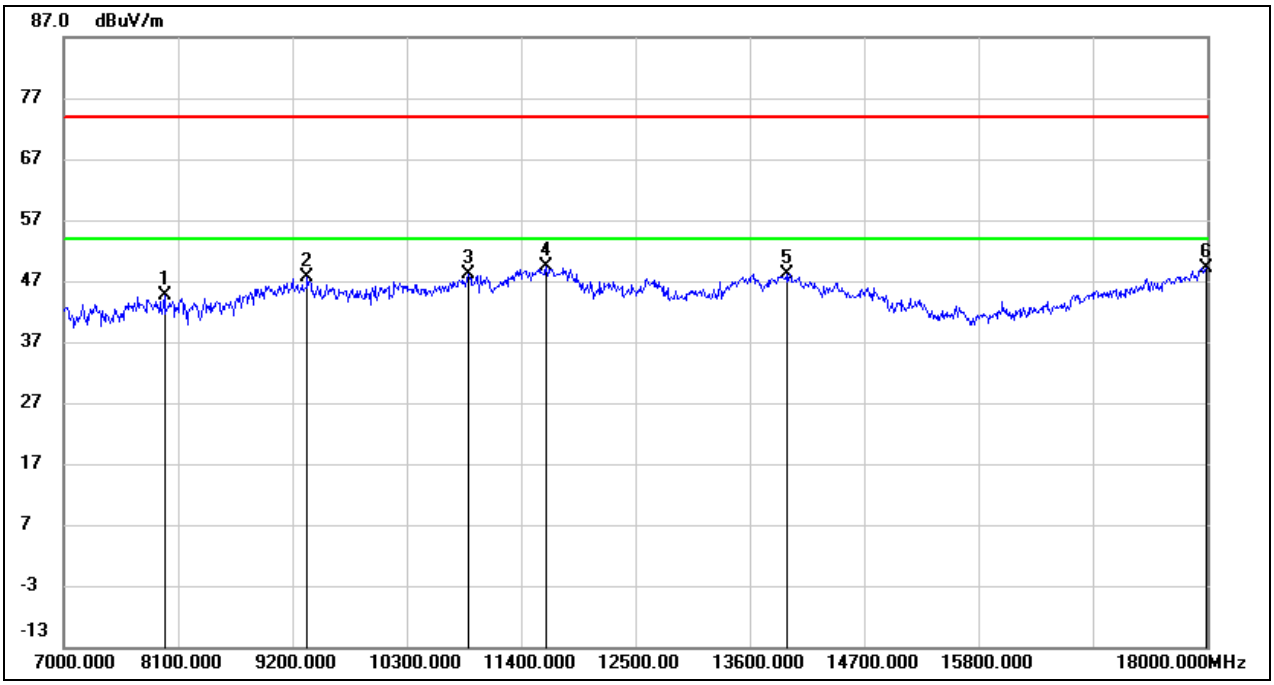
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9189.000	36.48	10.46	46.94	74.00	-27.06	peak
2	10674.000	33.84	13.48	47.32	74.00	-26.68	peak
3	11367.000	32.50	16.22	48.72	74.00	-25.28	peak
4	13622.000	27.60	20.95	48.55	74.00	-25.45	peak
5	13974.000	27.08	21.82	48.90	74.00	-25.10	peak
6	17934.000	24.09	25.67	49.76	74.00	-24.24	peak

Test Mode:	802.11a 20	Channel:	5200 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



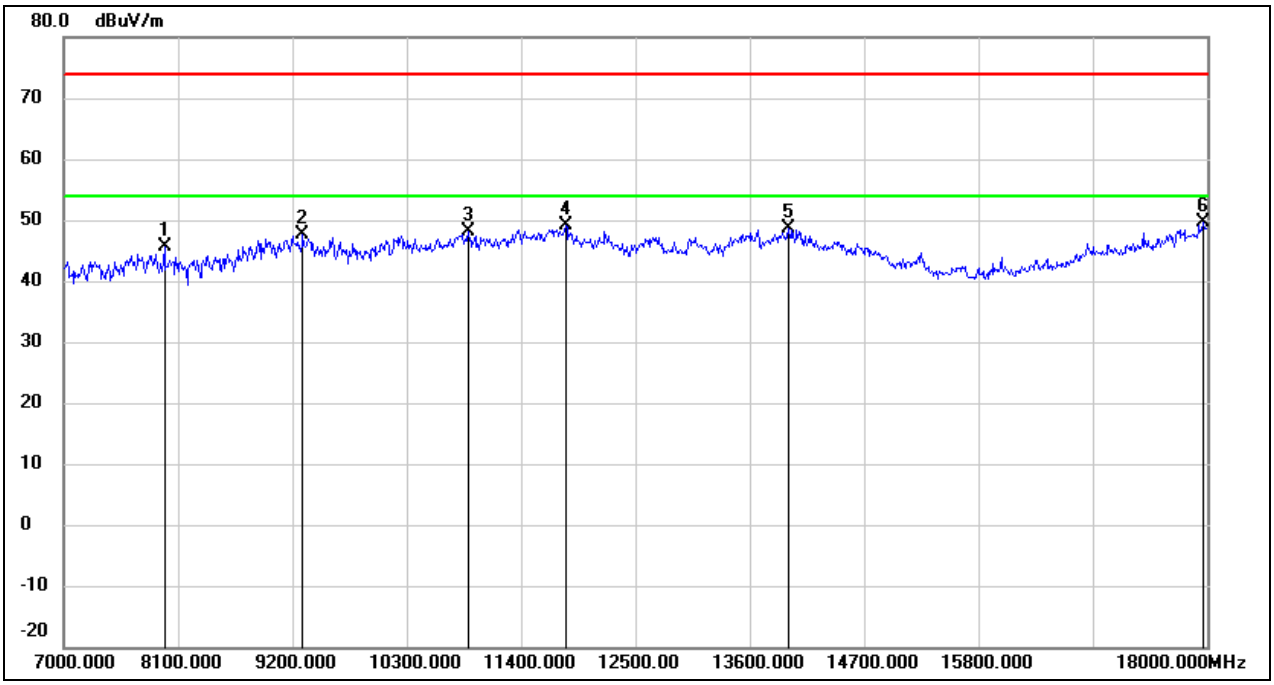
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9123.000	36.82	10.42	47.24	74.00	-26.76	peak
2	11103.000	31.99	15.15	47.14	74.00	-26.86	peak
3	11818.000	30.01	17.36	47.37	74.00	-26.63	peak
4	13556.000	27.48	20.78	48.26	74.00	-25.74	peak
5	13952.000	26.64	21.76	48.40	74.00	-25.60	peak
6	18000.000	22.78	26.12	48.90	74.00	-25.10	peak

Test Mode:	802.11a 20	Channel:	5200 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



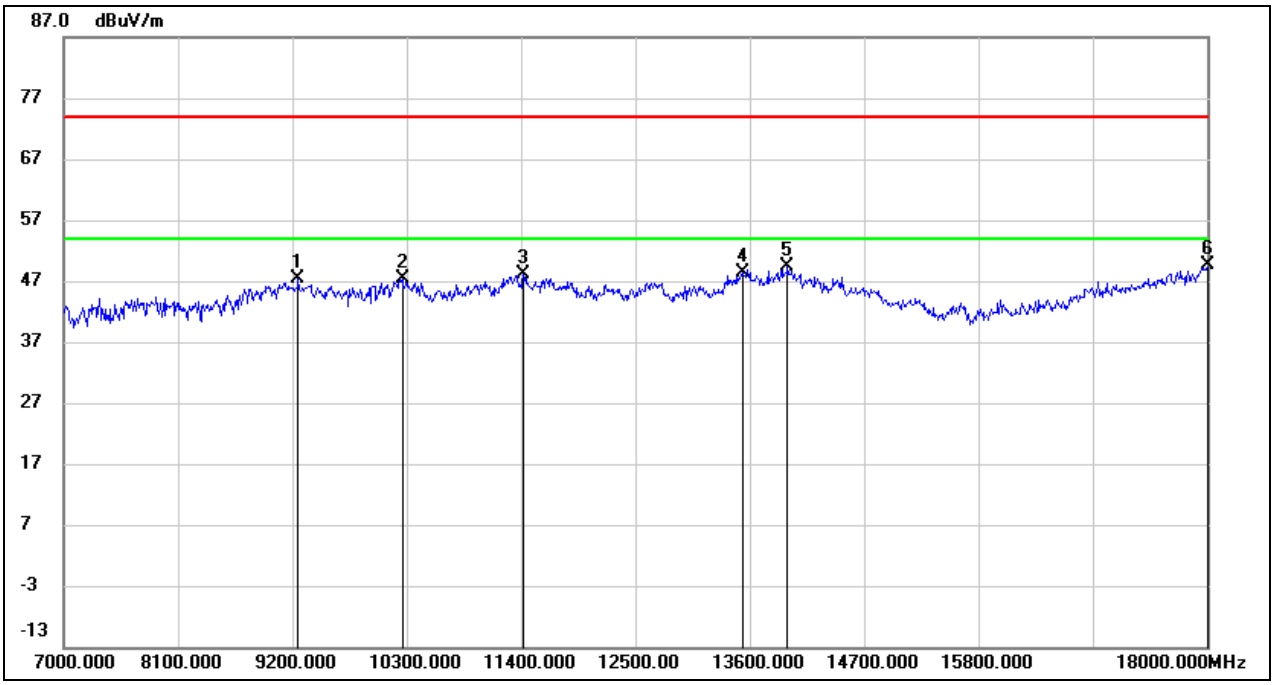
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7968.000	38.28	6.45	44.73	74.00	-29.27	peak
2	9343.000	37.03	10.55	47.58	74.00	-26.42	peak
3	10894.000	33.69	14.32	48.01	74.00	-25.99	peak
4	11642.000	32.42	17.03	49.45	74.00	-24.55	peak
5	13963.000	26.31	21.78	48.09	74.00	-25.91	peak
6	17989.000	23.20	26.04	49.24	74.00	-24.76	peak

Test Mode:	802.11a 20	Channel:	5240 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



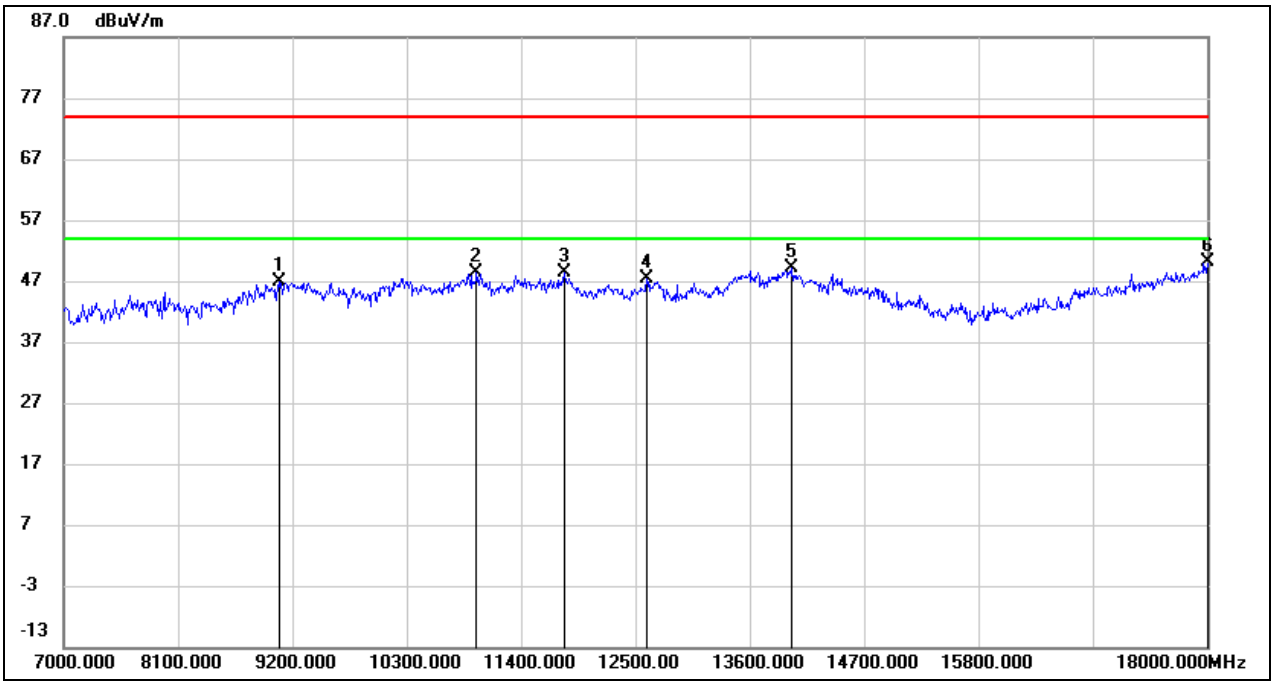
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7968.000	39.13	6.45	45.58	74.00	-28.42	peak
2	9299.000	37.10	10.53	47.63	74.00	-26.37	peak
3	10894.000	33.77	14.32	48.09	74.00	-25.91	peak
4	11829.000	31.87	17.38	49.25	74.00	-24.75	peak
5	13974.000	26.73	21.82	48.55	74.00	-25.45	peak
6	17956.000	23.93	25.82	49.75	74.00	-24.25	peak

Test Mode:	802.11a 20	Channel:	5240 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



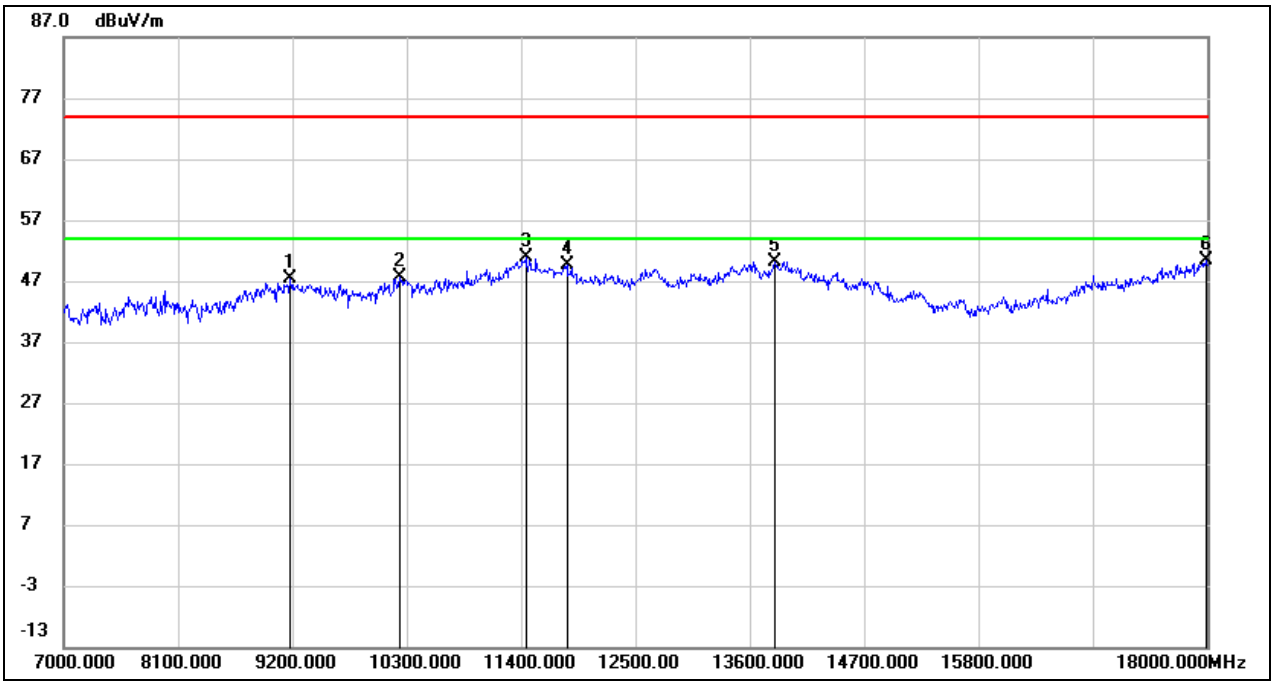
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9255.000	36.76	10.51	47.27	74.00	-26.73	peak
2	10256.000	34.99	12.31	47.30	74.00	-26.70	peak
3	11422.000	31.68	16.46	48.14	74.00	-25.86	peak
4	13534.000	27.53	20.73	48.26	74.00	-25.74	peak
5	13963.000	27.67	21.78	49.45	74.00	-24.55	peak
6	18000.000	23.40	26.12	49.52	74.00	-24.48	peak

Test Mode:	802.11a 20	Channel:	5745 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



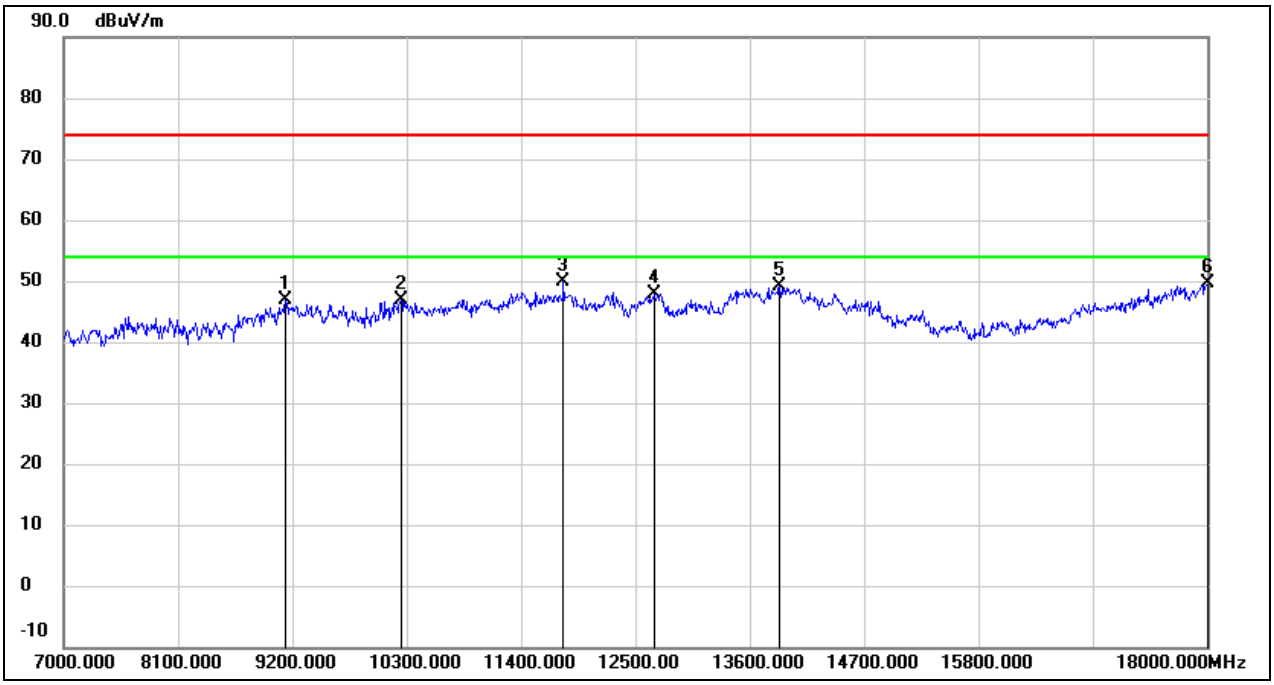
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9079.000	36.39	10.39	46.78	74.00	-27.22	peak
2	10971.000	33.81	14.61	48.42	74.00	-25.58	peak
3	11818.000	31.12	17.36	48.48	74.00	-25.52	peak
4	12610.000	29.30	17.97	47.27	74.00	-26.73	peak
5	14007.000	27.40	21.85	49.25	74.00	-24.75	peak
6	18000.000	24.06	26.12	50.18	74.00	-23.82	peak

Test Mode:	802.11a 20	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



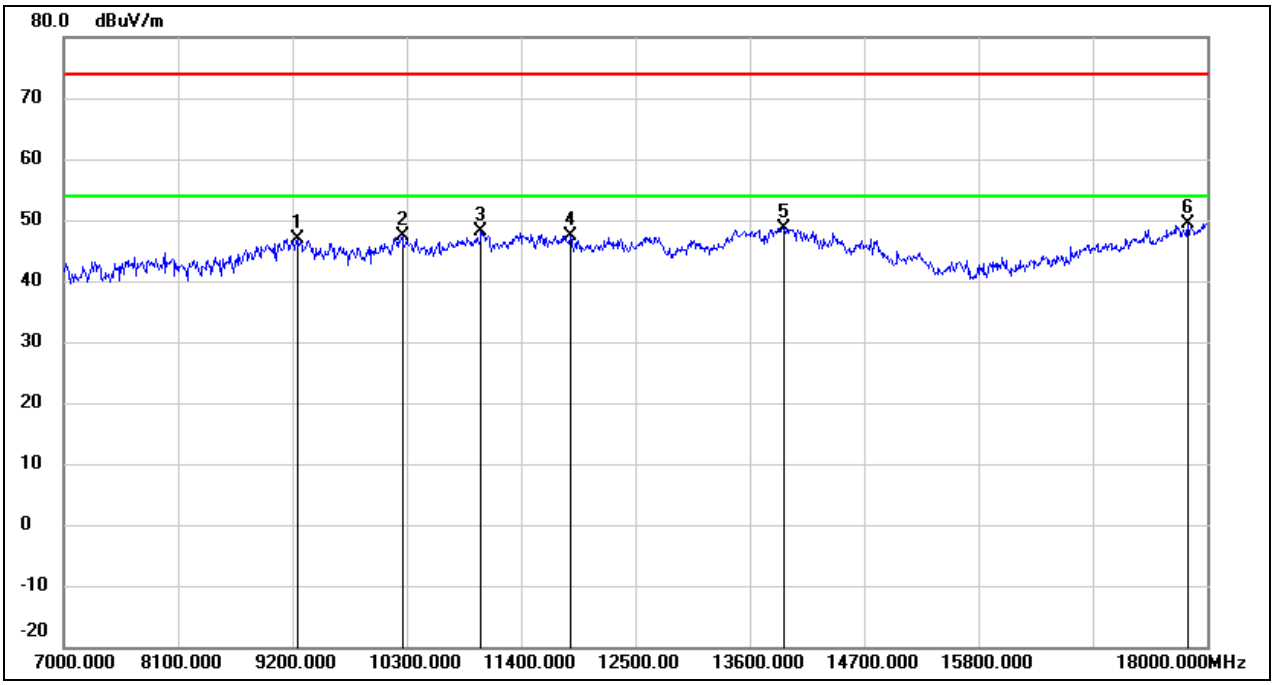
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9178.000	36.90	10.45	47.35	74.00	-26.65	peak
2	10234.000	35.31	12.26	47.57	74.00	-26.43	peak
3	11444.000	34.39	16.53	50.92	74.00	-23.08	peak
4	11840.000	32.27	17.40	49.67	74.00	-24.33	peak
5	13842.000	28.72	21.49	50.21	74.00	-23.79	peak
6	17989.000	24.25	26.04	50.29	74.00	-23.71	peak

Test Mode:	802.11a 20	Channel:	5785 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



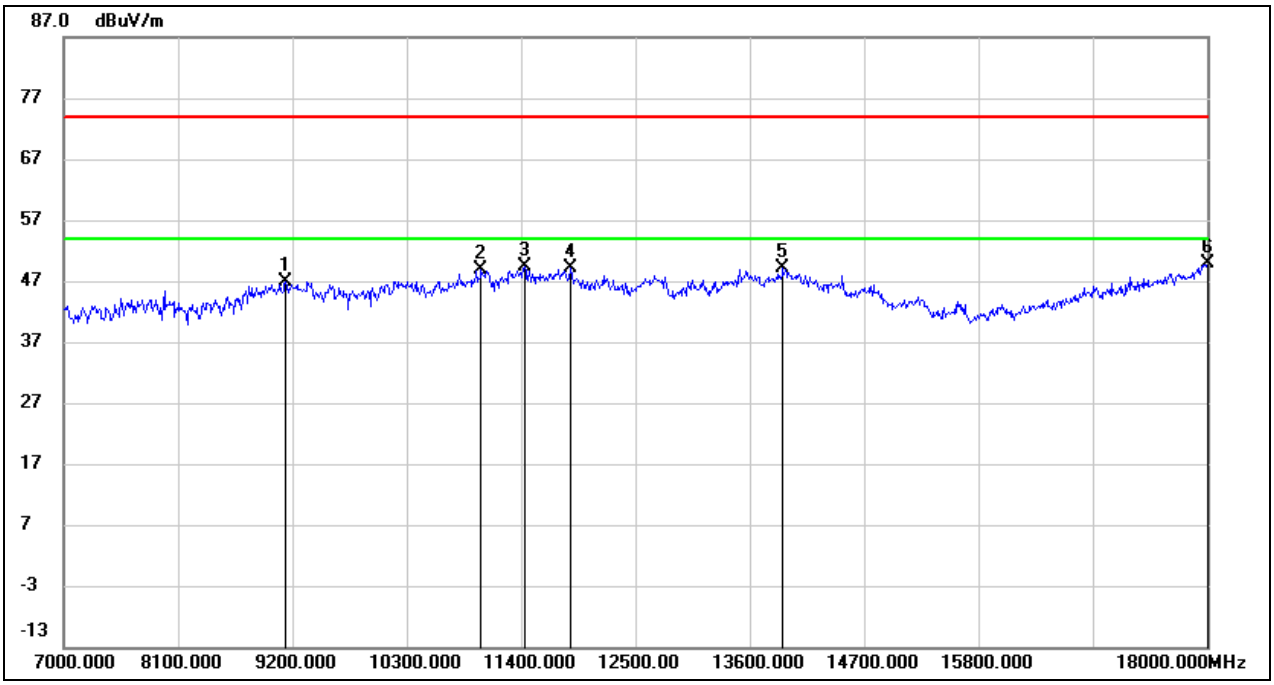
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9134.000	36.43	10.41	46.84	74.00	-27.16	peak
2	10245.000	34.55	12.28	46.83	74.00	-27.17	peak
3	11807.000	32.45	17.34	49.79	74.00	-24.21	peak
4	12676.000	29.89	18.05	47.94	74.00	-26.06	peak
5	13886.000	27.48	21.60	49.08	74.00	-24.92	peak
6	18000.000	23.43	26.12	49.55	74.00	-24.45	peak

Test Mode:	802.11a 20	Channel:	5785 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



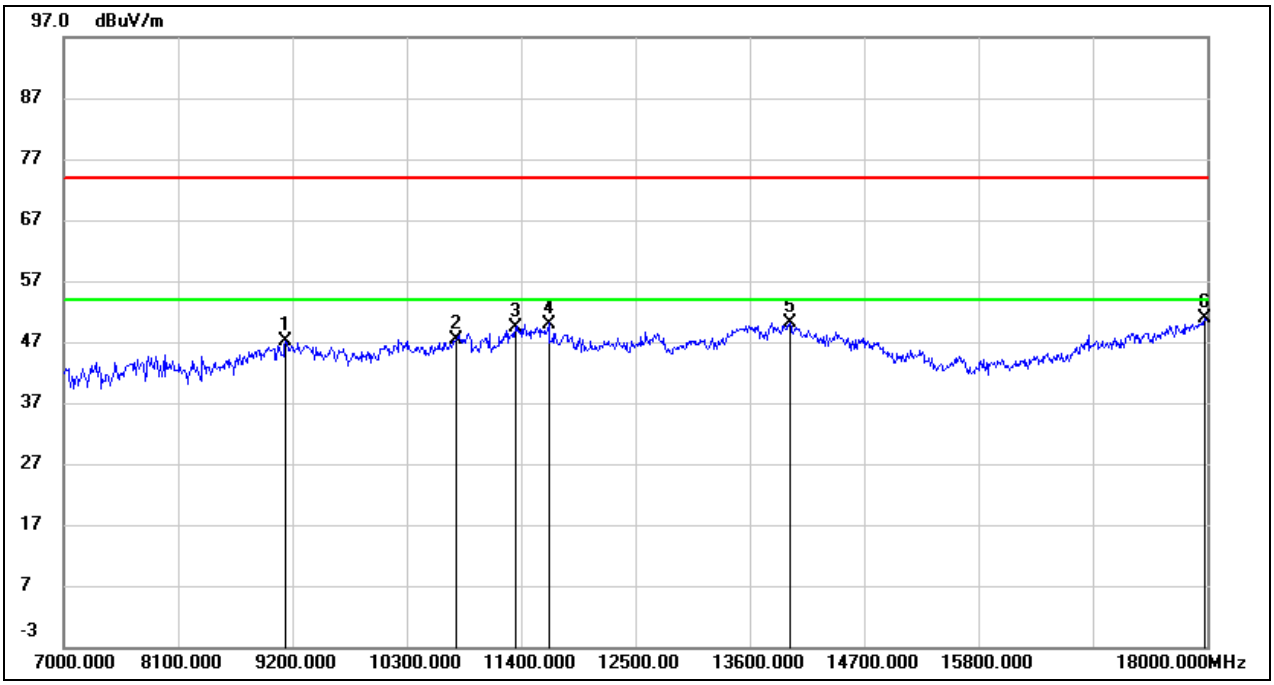
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9244.000	36.33	10.49	46.82	74.00	-27.18	peak
2	10256.000	35.10	12.31	47.41	74.00	-26.59	peak
3	11015.000	33.33	14.79	48.12	74.00	-25.88	peak
4	11873.000	29.98	17.46	47.44	74.00	-26.56	peak
5	13930.000	27.00	21.71	48.71	74.00	-25.29	peak
6	17813.000	24.42	24.84	49.26	74.00	-24.74	peak

Test Mode:	802.11a 20	Channel:	5825 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



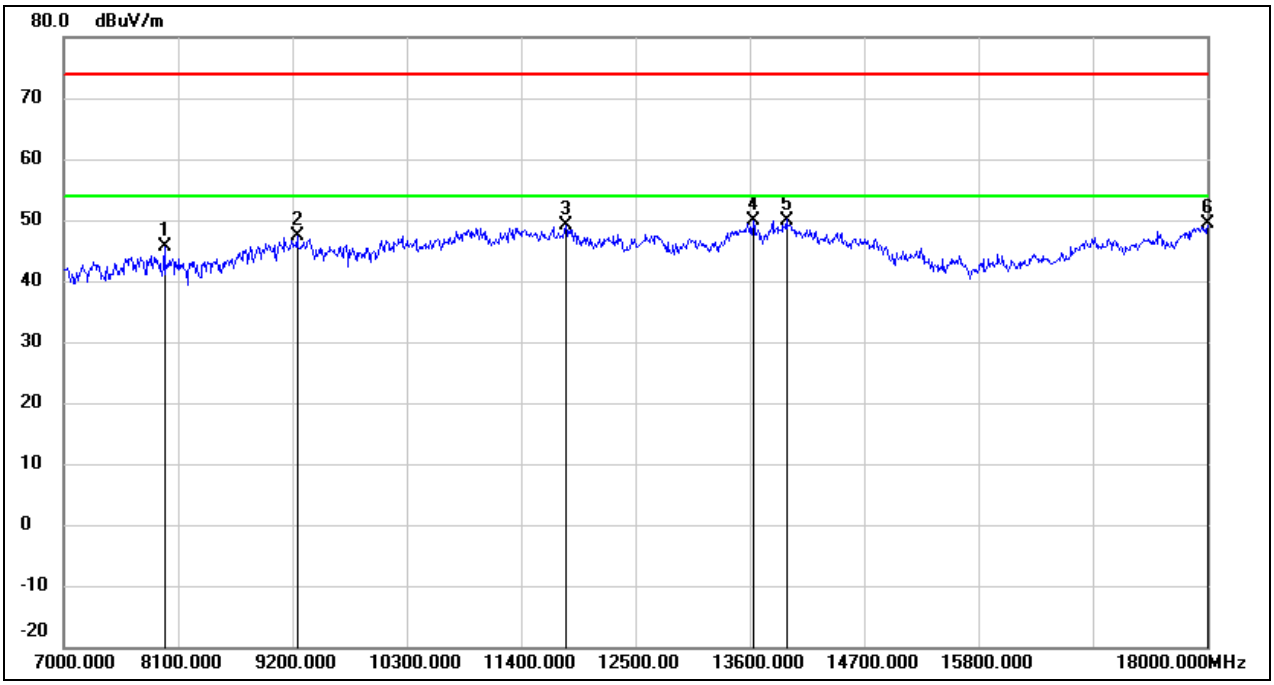
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9134.000	36.57	10.41	46.98	74.00	-27.02	peak
2	11015.000	34.16	14.79	48.95	74.00	-25.05	peak
3	11433.000	32.98	16.50	49.48	74.00	-24.52	peak
4	11873.000	31.60	17.46	49.06	74.00	-24.94	peak
5	13919.000	27.41	21.68	49.09	74.00	-24.91	peak
6	18000.000	23.66	26.12	49.78	74.00	-24.22	peak

Test Mode:	802.11a 20	Channel:	5825 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



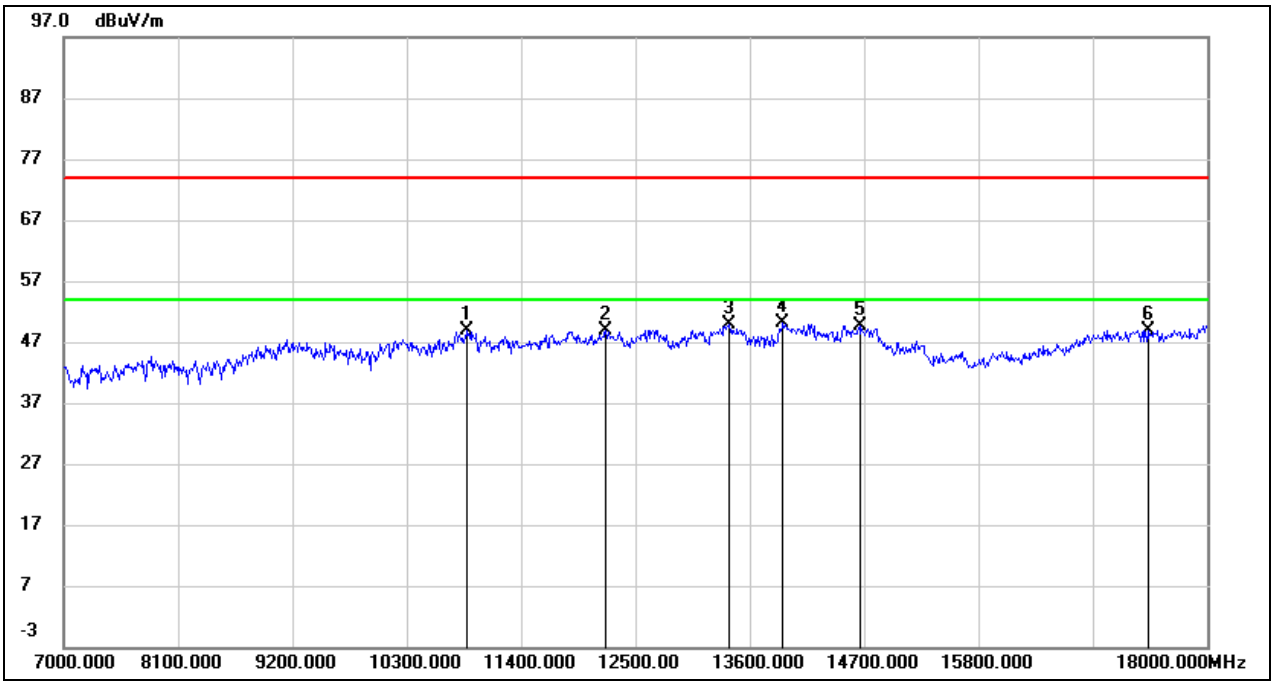
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9134.000	36.81	10.41	47.22	74.00	-26.78	peak
2	10773.000	33.56	13.85	47.41	74.00	-26.59	peak
3	11345.000	33.12	16.14	49.26	74.00	-24.74	peak
4	11664.000	32.92	17.08	50.00	74.00	-24.00	peak
5	13985.000	28.25	21.85	50.10	74.00	-23.90	peak
6	17978.000	24.91	25.97	50.88	74.00	-23.12	peak

Test Mode:	802.11ax HE20	Channel:	5180 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



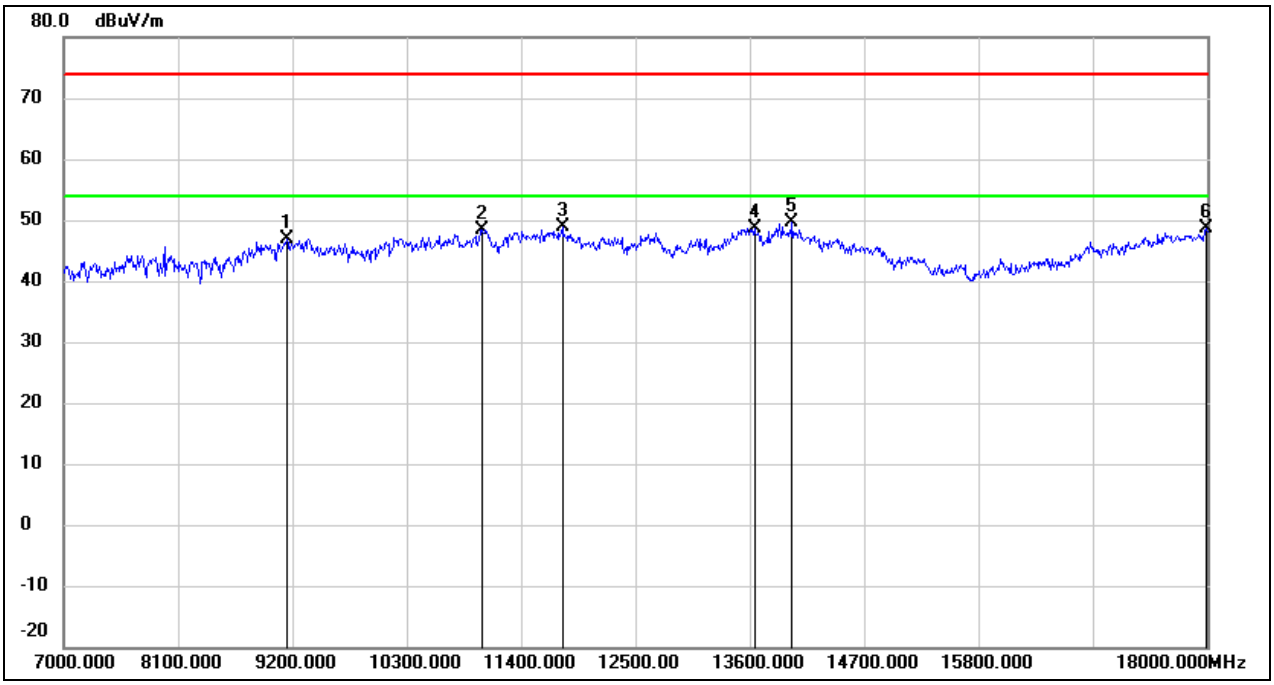
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7968.000	39.16	6.45	45.61	74.00	-28.39	peak
2	9244.000	36.84	10.49	47.33	74.00	-26.67	peak
3	11829.000	31.83	17.38	49.21	74.00	-24.79	peak
4	13633.000	28.97	20.97	49.94	74.00	-24.06	peak
5	13952.000	28.24	21.76	50.00	74.00	-24.00	peak
6	18000.000	23.21	26.12	49.33	74.00	-24.67	peak

Test Mode:	802.11ax HE20	Channel:	5180 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



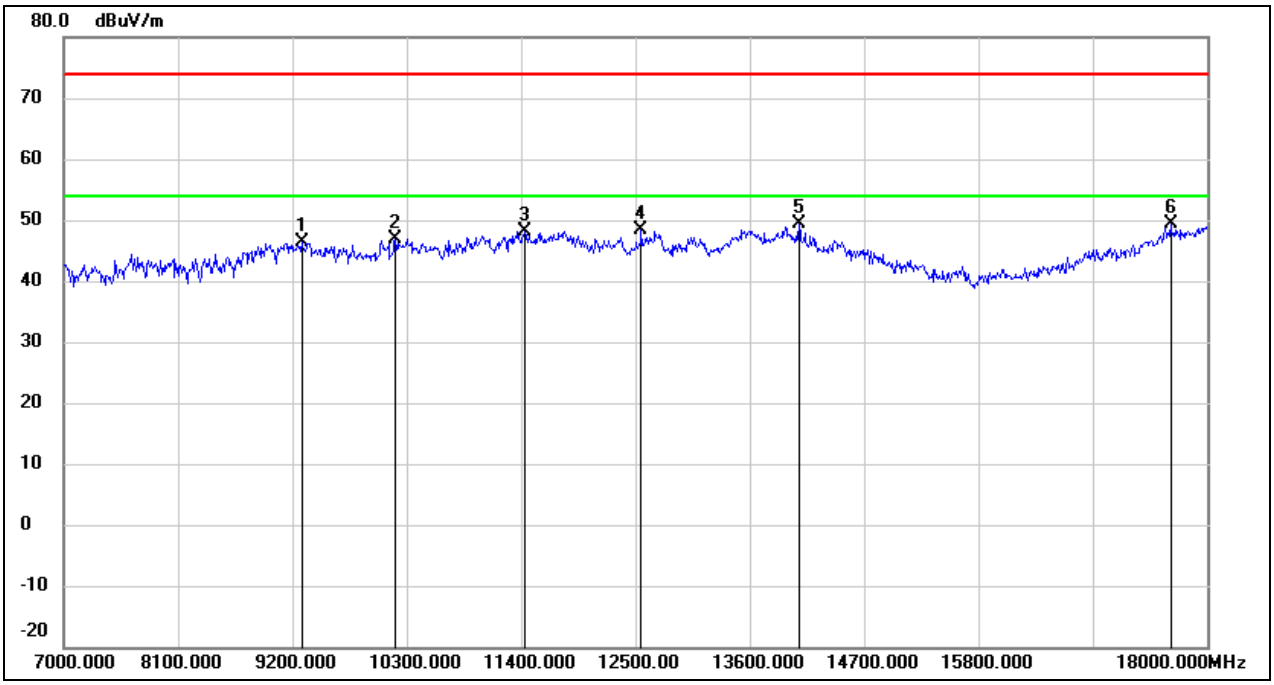
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10883.000	34.52	14.27	48.79	74.00	-25.21	peak
2	12214.000	31.10	17.76	48.86	74.00	-25.14	peak
3	13402.000	29.70	20.20	49.90	74.00	-24.10	peak
4	13919.000	28.57	21.68	50.25	74.00	-23.75	peak
5	14656.000	30.61	19.12	49.73	74.00	-24.27	peak
6	17428.000	26.58	22.40	48.98	74.00	-25.02	peak

Test Mode:	802.11ax HE20	Channel:	5200 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



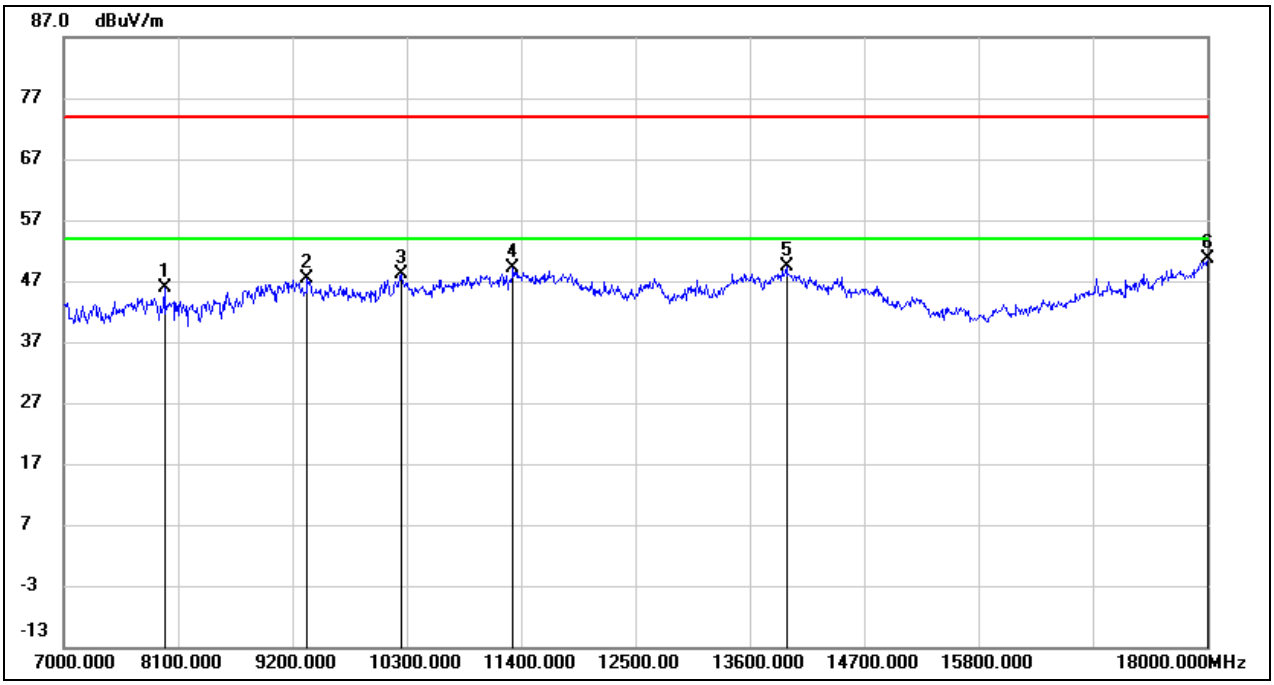
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9145.000	36.37	10.43	46.80	74.00	-27.20	peak
2	11026.000	33.65	14.82	48.47	74.00	-25.53	peak
3	11796.000	31.59	17.32	48.91	74.00	-25.09	peak
4	13644.000	27.60	20.99	48.59	74.00	-25.41	peak
5	14007.000	27.73	21.85	49.58	74.00	-24.42	peak
6	17989.000	22.53	26.04	48.57	74.00	-25.43	peak

Test Mode:	802.11ax HE20	Channel:	5200 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



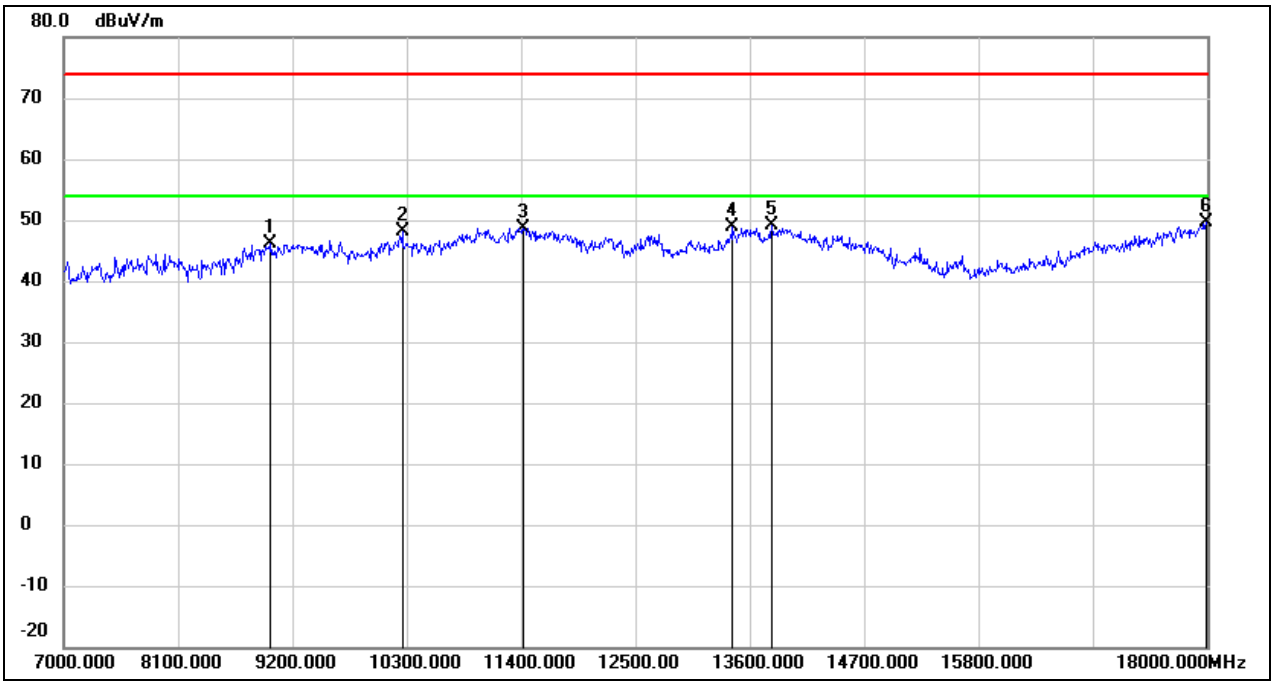
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9288.000	35.82	10.52	46.34	74.00	-27.66	peak
2	10190.000	34.67	12.18	46.85	74.00	-27.15	peak
3	11433.000	31.64	16.50	48.14	74.00	-25.86	peak
4	12555.000	30.37	17.90	48.27	74.00	-25.73	peak
5	14073.000	27.77	21.57	49.34	74.00	-24.66	peak
6	17648.000	25.66	23.72	49.38	74.00	-24.62	peak

Test Mode:	802.11ax HE20	Channel:	5240 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



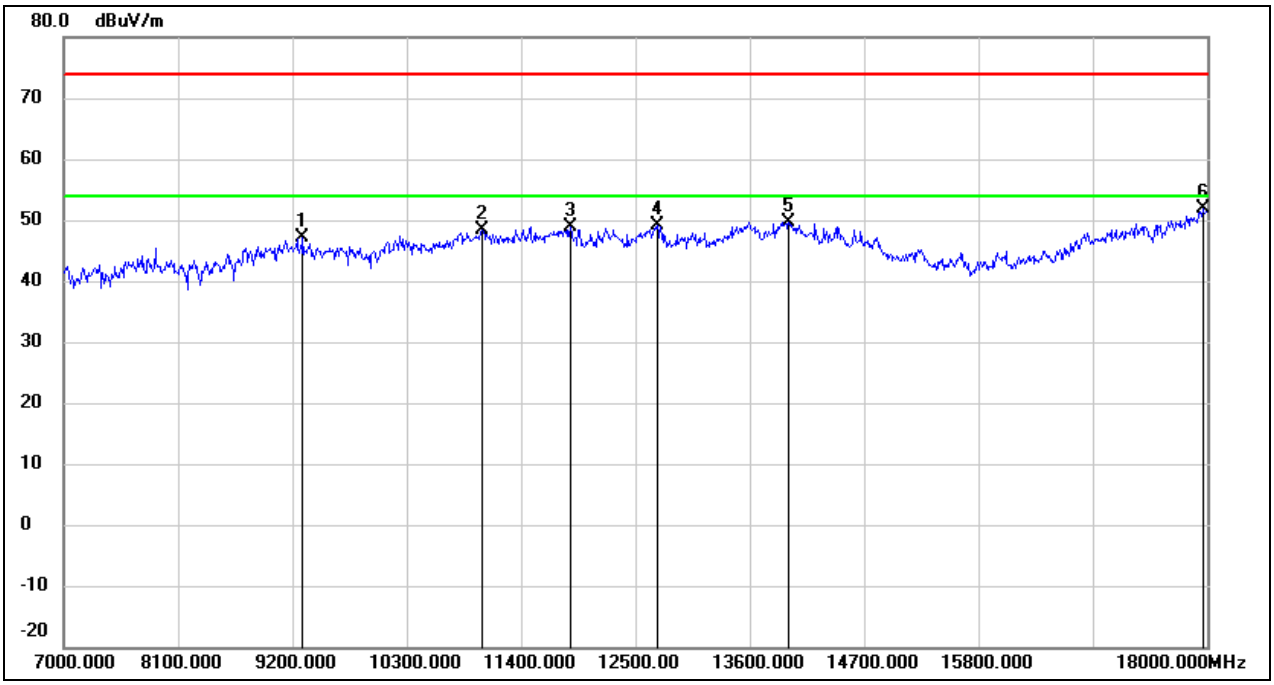
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7968.000	39.35	6.45	45.80	74.00	-28.20	peak
2	9343.000	36.92	10.55	47.47	74.00	-26.53	peak
3	10245.000	35.95	12.28	48.23	74.00	-25.77	peak
4	11323.000	33.15	16.05	49.20	74.00	-24.80	peak
5	13952.000	27.68	21.76	49.44	74.00	-24.56	peak
6	18000.000	24.46	26.12	50.58	74.00	-23.42	peak

Test Mode:	802.11ax HE20	Channel:	5240 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



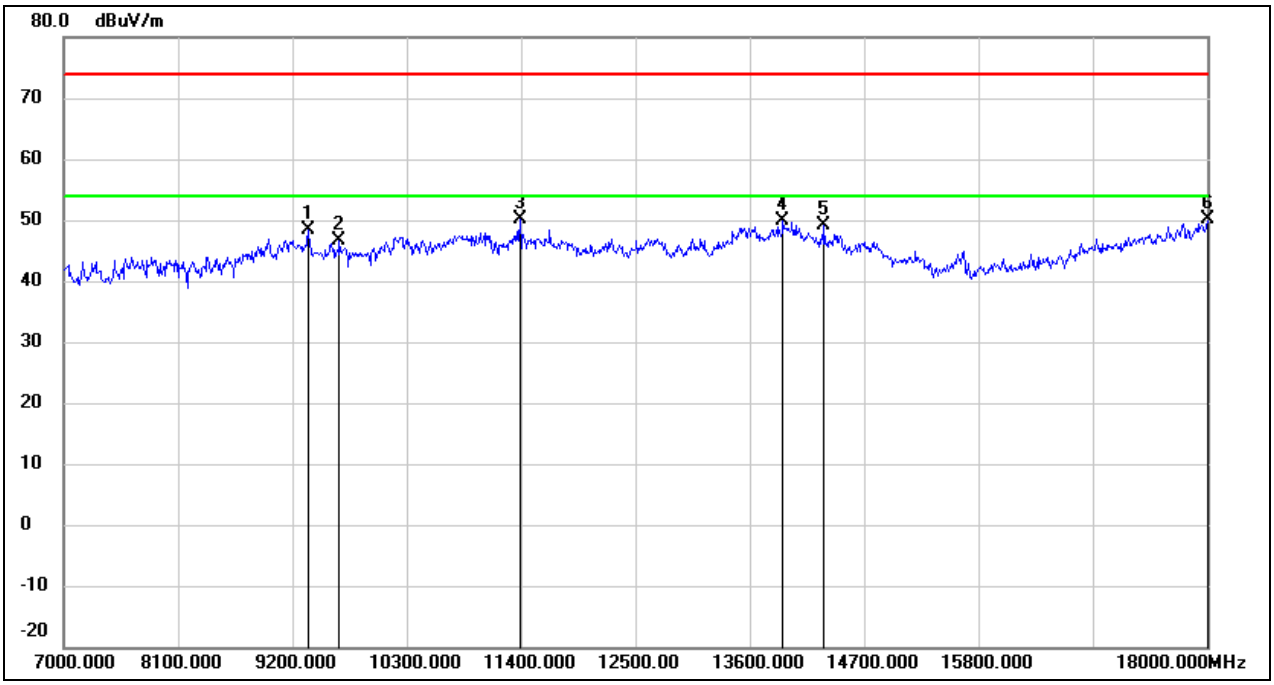
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8991.000	35.91	10.28	46.19	74.00	-27.81	peak
2	10256.000	35.82	12.31	48.13	74.00	-25.87	peak
3	11422.000	32.19	16.46	48.65	74.00	-25.35	peak
4	13435.000	28.59	20.35	48.94	74.00	-25.06	peak
5	13809.000	27.62	21.41	49.03	74.00	-24.97	peak
6	17989.000	23.67	26.04	49.71	74.00	-24.29	peak

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



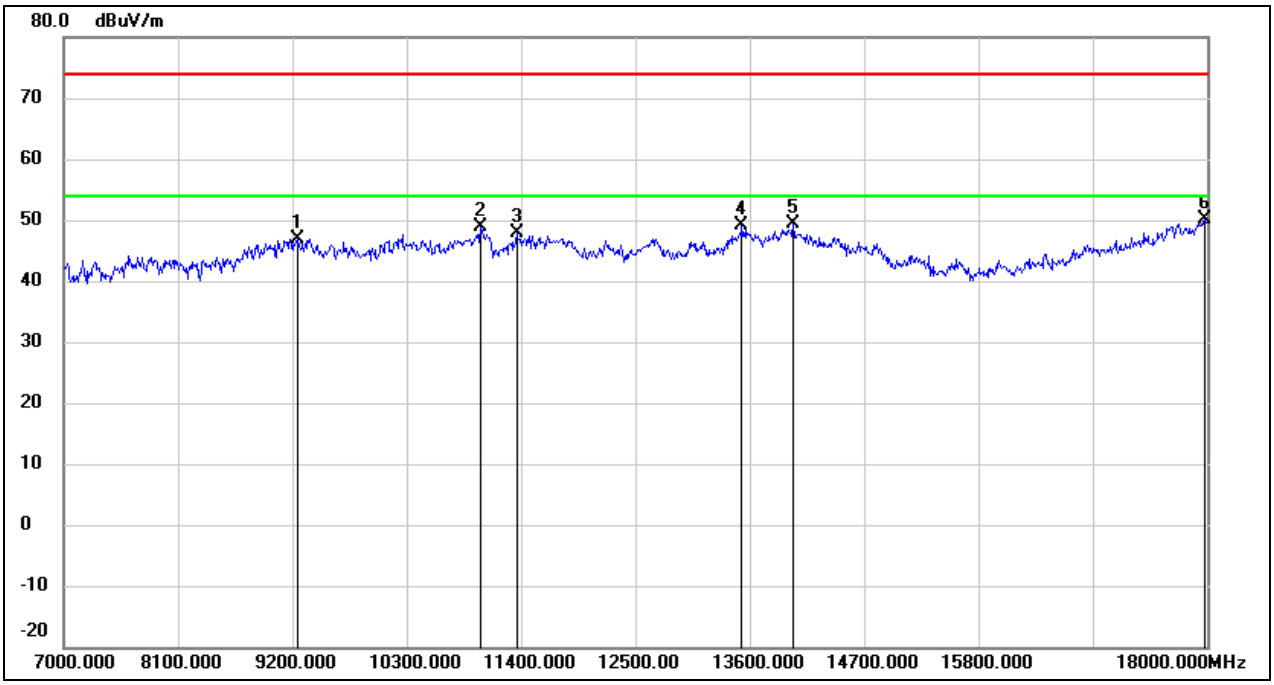
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9299.000	36.57	10.53	47.10	74.00	-26.90	peak
2	11026.000	33.48	14.82	48.30	74.00	-25.70	peak
3	11873.000	31.39	17.46	48.85	74.00	-25.15	peak
4	12709.000	31.02	18.09	49.11	74.00	-24.89	peak
5	13974.000	27.72	21.82	49.54	74.00	-24.46	peak
6	17956.000	26.00	25.82	51.82	74.00	-22.18	peak

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



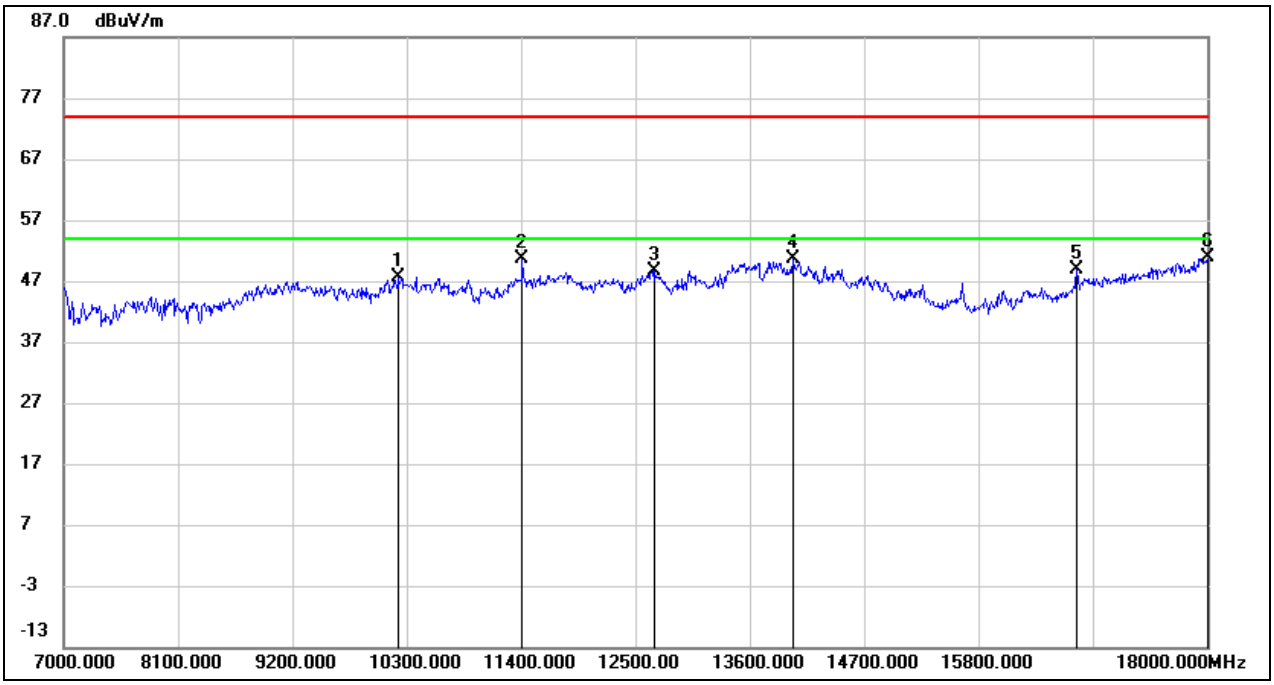
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9354.000	37.76	10.56	48.32	74.00	-25.68	peak
2	9651.000	35.60	10.99	46.59	74.00	-27.41	peak
3	11389.000	33.93	16.31	50.24	74.00	-23.76	peak
4	13919.000	28.28	21.68	49.96	74.00	-24.04	peak
5	14315.000	28.49	20.56	49.05	74.00	-24.95	peak
6	18000.000	23.94	26.12	50.06	74.00	-23.94	peak

Test Mode:	802.11ax HE20	Channel:	5785 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



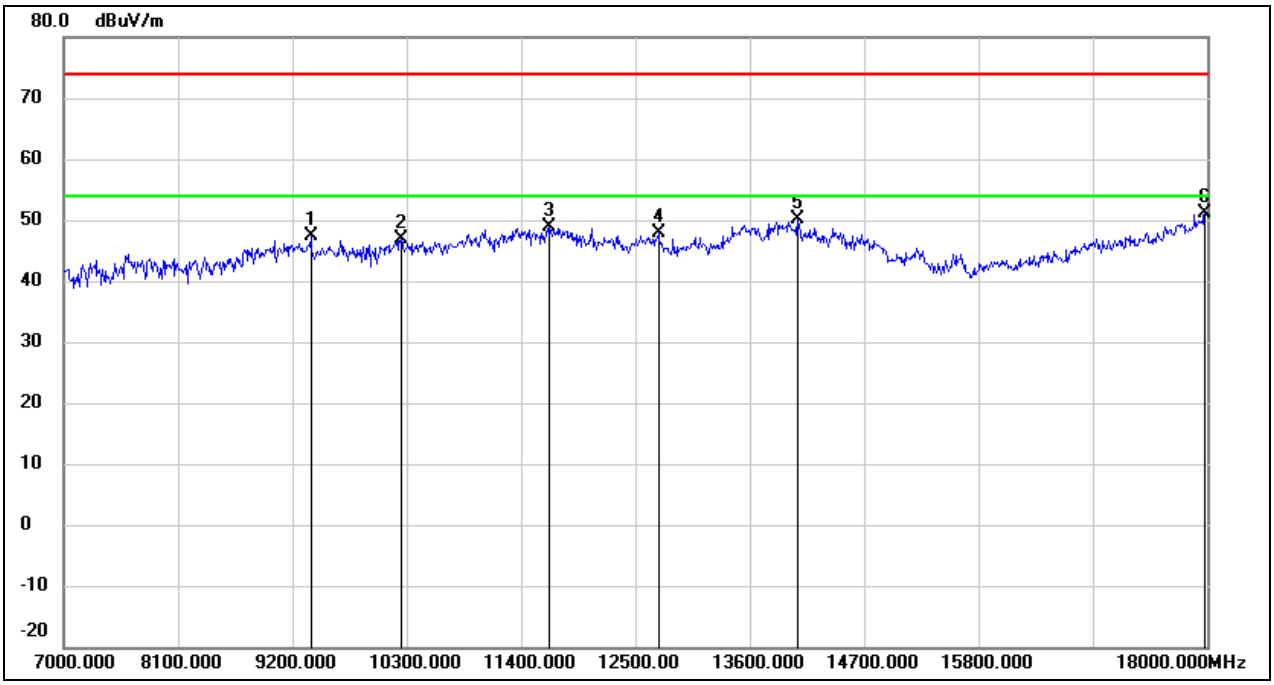
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9244.000	36.49	10.49	46.98	74.00	-27.02	peak
2	11004.000	34.02	14.74	48.76	74.00	-25.24	peak
3	11356.000	31.69	16.19	47.88	74.00	-26.12	peak
4	13523.000	28.43	20.70	49.13	74.00	-24.87	peak
5	14018.000	27.47	21.80	49.27	74.00	-24.73	peak
6	17978.000	24.28	25.97	50.25	74.00	-23.75	peak

Test Mode:	802.11ax HE20	Channel:	5785 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



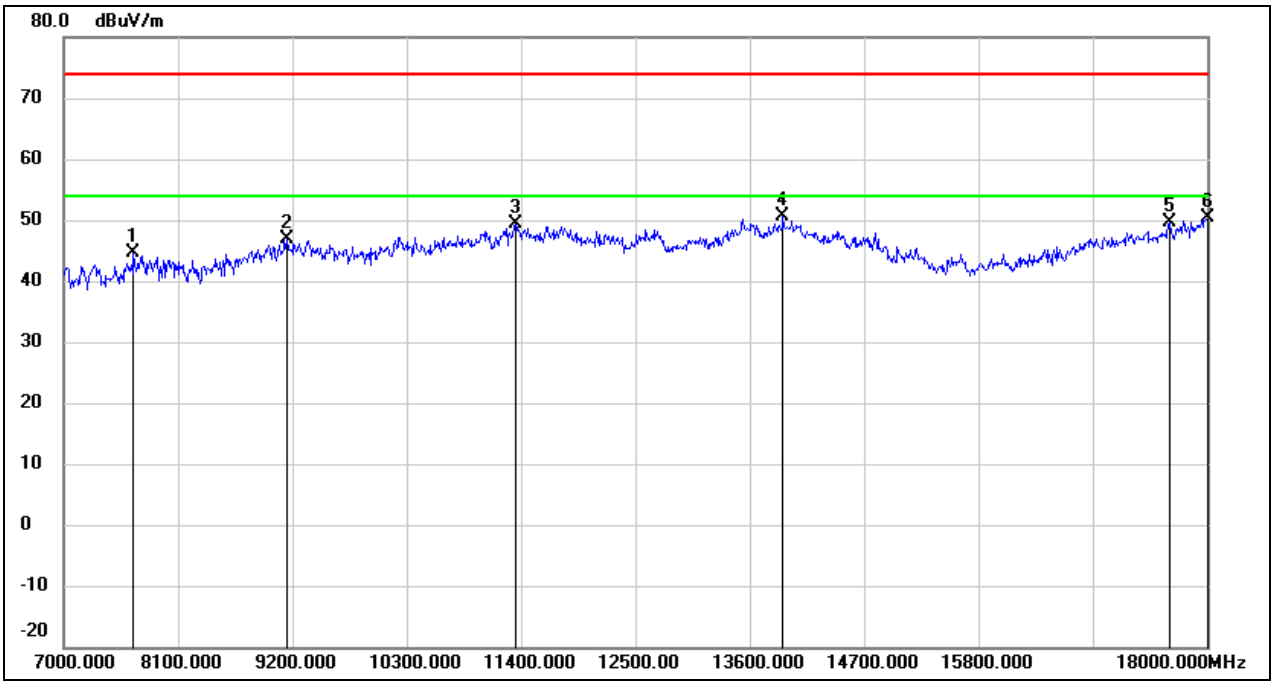
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10223.000	35.32	12.24	47.56	74.00	-26.44	peak
2	11411.000	34.25	16.41	50.66	74.00	-23.34	peak
3	12687.000	30.60	18.05	48.65	74.00	-25.35	peak
4	14018.000	28.77	21.80	50.57	74.00	-23.43	peak
5	16746.000	29.46	19.45	48.91	74.00	-25.09	peak
6	18000.000	24.71	26.12	50.83	74.00	-23.17	peak

Test Mode:	802.11ax HE20	Channel:	5825 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



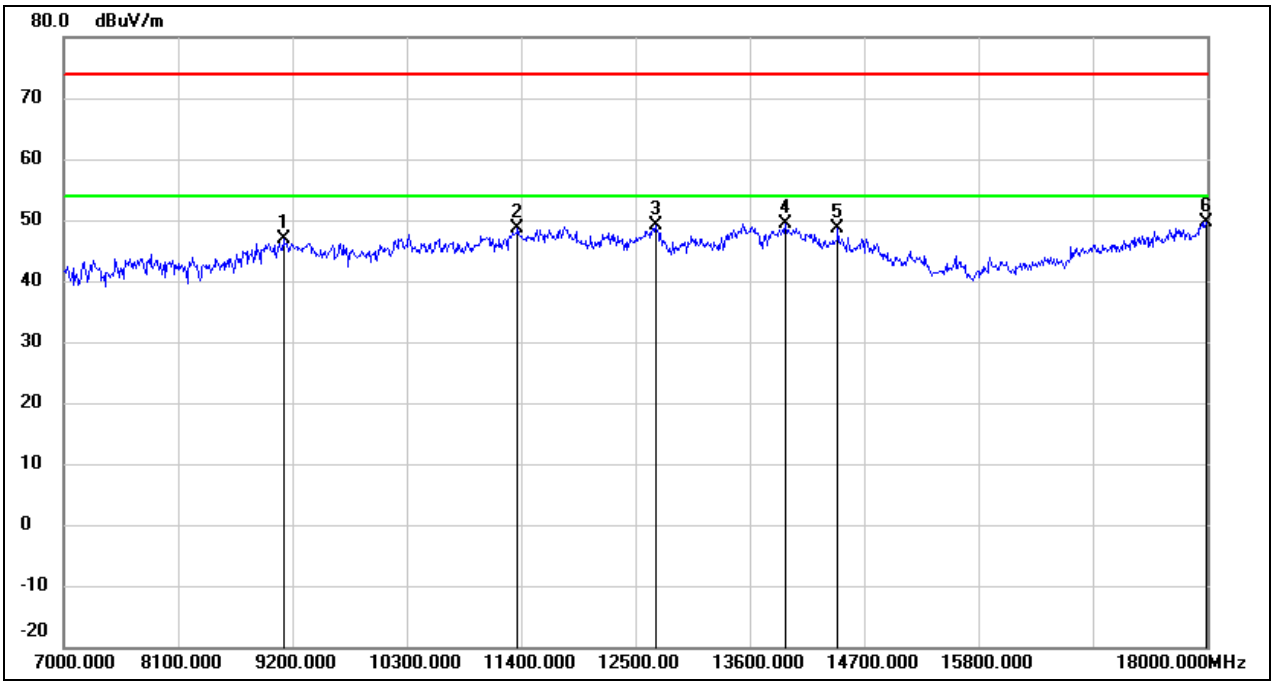
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9376.000	36.80	10.58	47.38	74.00	-26.62	peak
2	10245.000	34.49	12.28	46.77	74.00	-27.23	peak
3	11675.000	31.81	17.10	48.91	74.00	-25.09	peak
4	12720.000	29.87	18.09	47.96	74.00	-26.04	peak
5	14062.000	28.49	21.62	50.11	74.00	-23.89	peak
6	17978.000	25.21	25.97	51.18	74.00	-22.82	peak

Test Mode:	802.11ax HE20	Channel:	5825 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



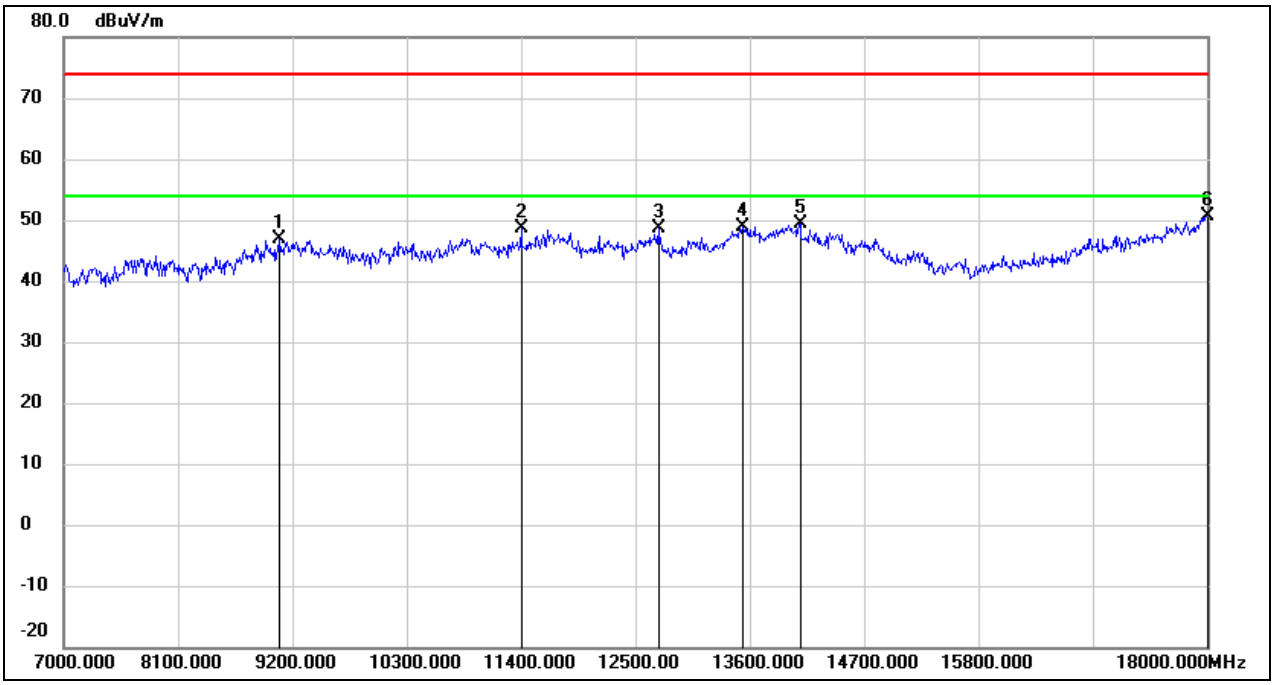
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7671.000	37.88	6.71	44.59	74.00	-29.41	peak
2	9145.000	36.40	10.43	46.83	74.00	-27.17	peak
3	11345.000	33.23	16.14	49.37	74.00	-24.63	peak
4	13919.000	28.97	21.68	50.65	74.00	-23.35	peak
5	17637.000	25.89	23.64	49.53	74.00	-24.47	peak
6	18000.000	24.36	26.12	50.48	74.00	-23.52	peak

Test Mode:	802.11ax HE40	Channel:	5190 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



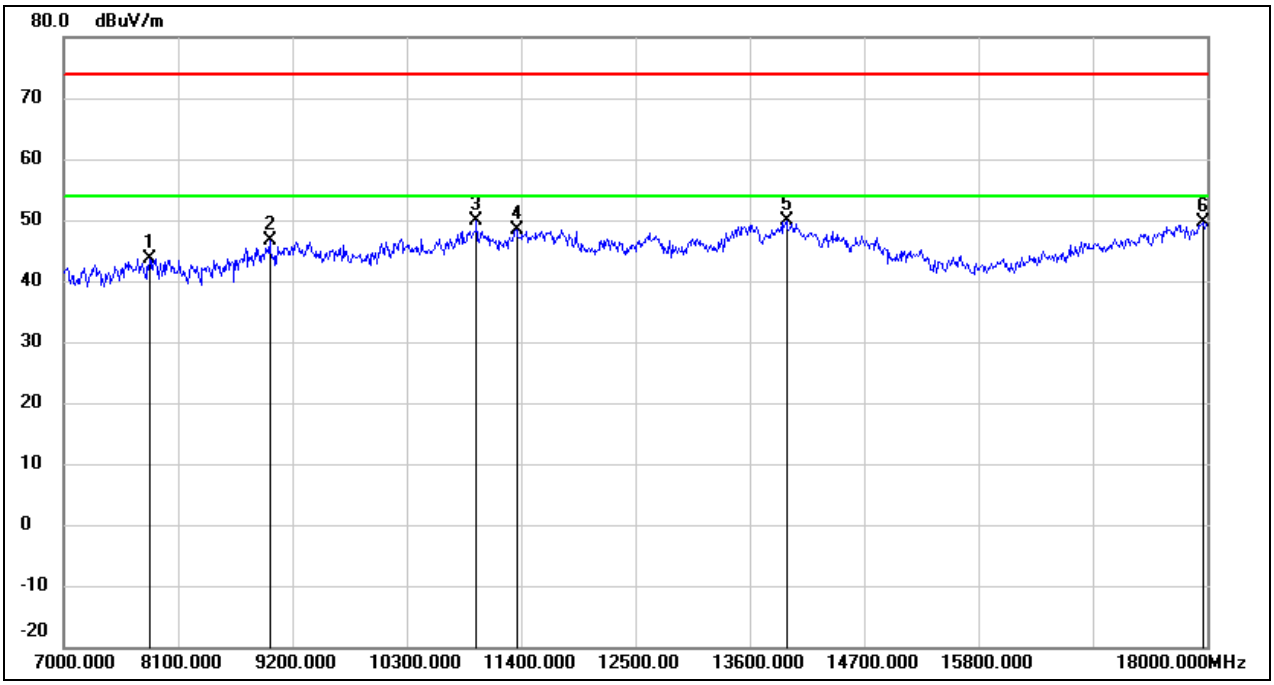
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9112.000	36.53	10.41	46.94	74.00	-27.06	peak
2	11367.000	32.50	16.22	48.72	74.00	-25.28	peak
3	12698.000	30.93	18.08	49.01	74.00	-24.99	peak
4	13941.000	27.55	21.73	49.28	74.00	-24.72	peak
5	14447.000	28.58	20.00	48.58	74.00	-25.42	peak
6	17989.000	23.61	26.04	49.65	74.00	-24.35	peak

Test Mode:	802.11ax HE40	Channel:	5190 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



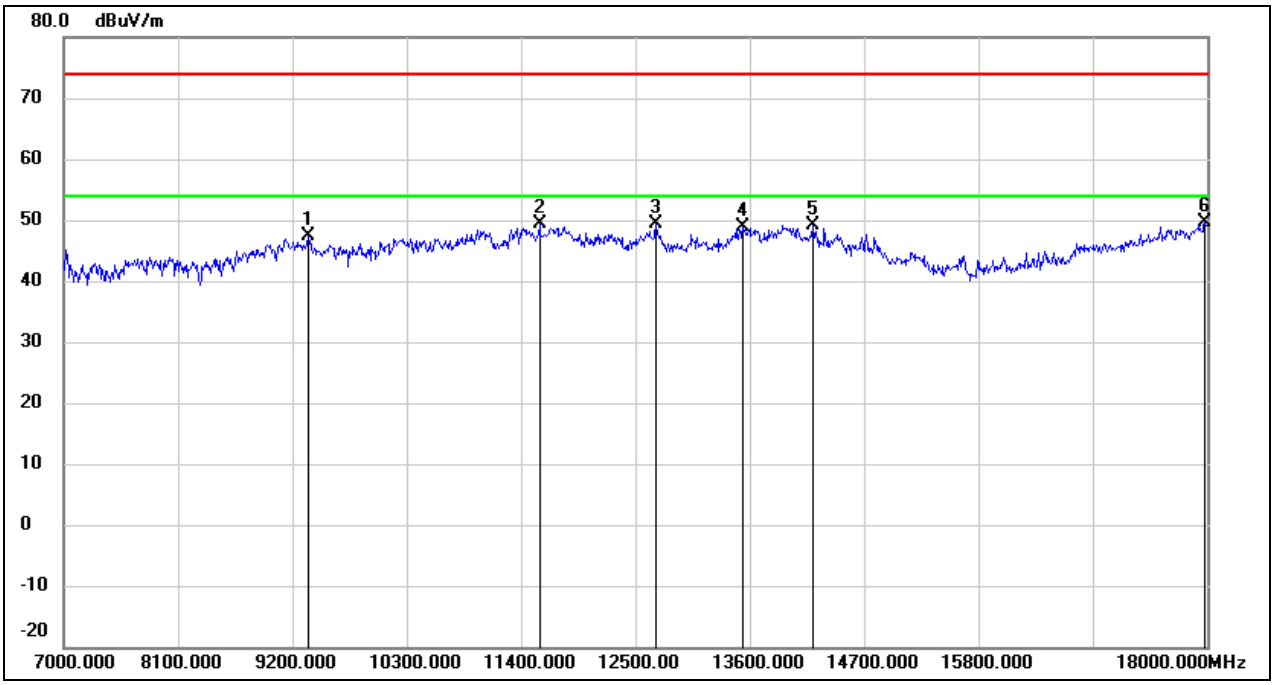
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9079.000	36.55	10.39	46.94	74.00	-27.06	peak
2	11400.000	32.38	16.36	48.74	74.00	-25.26	peak
3	12720.000	30.56	18.09	48.65	74.00	-25.35	peak
4	13534.000	28.24	20.73	48.97	74.00	-25.03	peak
5	14084.000	27.87	21.52	49.39	74.00	-24.61	peak
6	18000.000	24.61	26.12	50.73	74.00	-23.27	peak

Test Mode:	802.11ax HE40	Channel:	5230 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



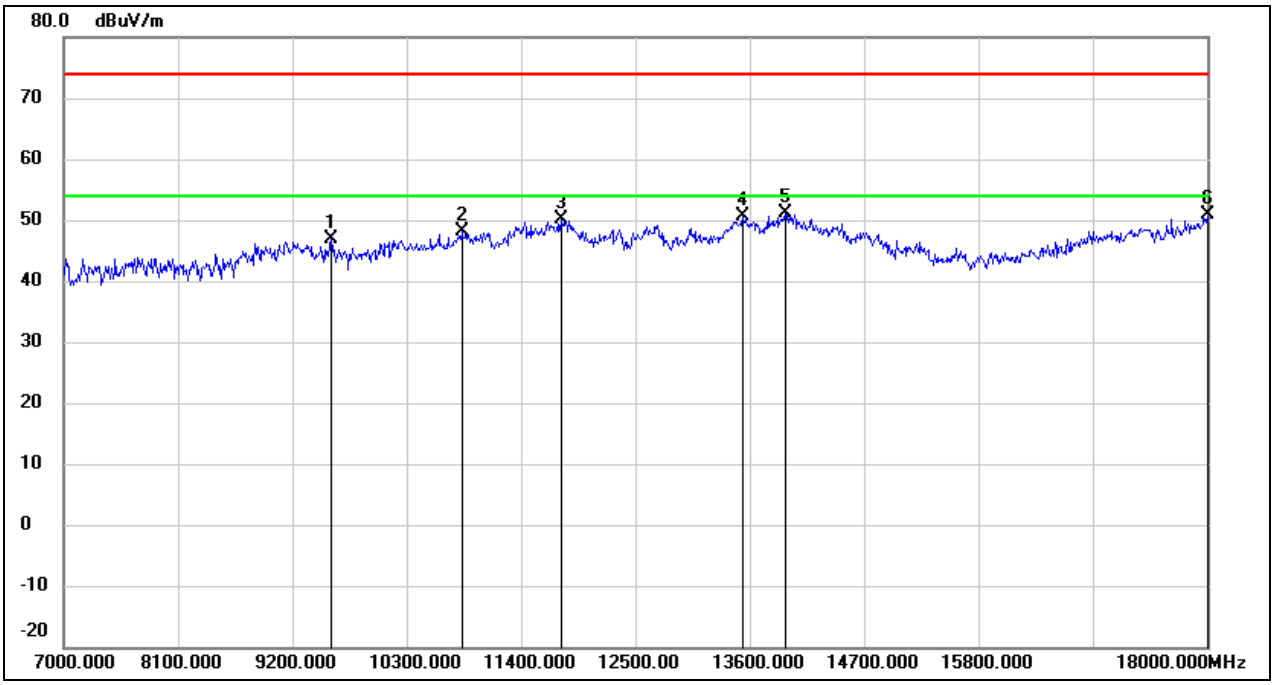
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7825.000	37.17	6.58	43.75	74.00	-30.25	peak
2	8980.000	36.47	10.21	46.68	74.00	-27.32	peak
3	10971.000	35.31	14.61	49.92	74.00	-24.08	peak
4	11356.000	32.31	16.19	48.50	74.00	-25.50	peak
5	13952.000	28.13	21.76	49.89	74.00	-24.11	peak
6	17956.000	23.85	25.82	49.67	74.00	-24.33	peak

Test Mode:	802.11ax HE40	Channel:	5230 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



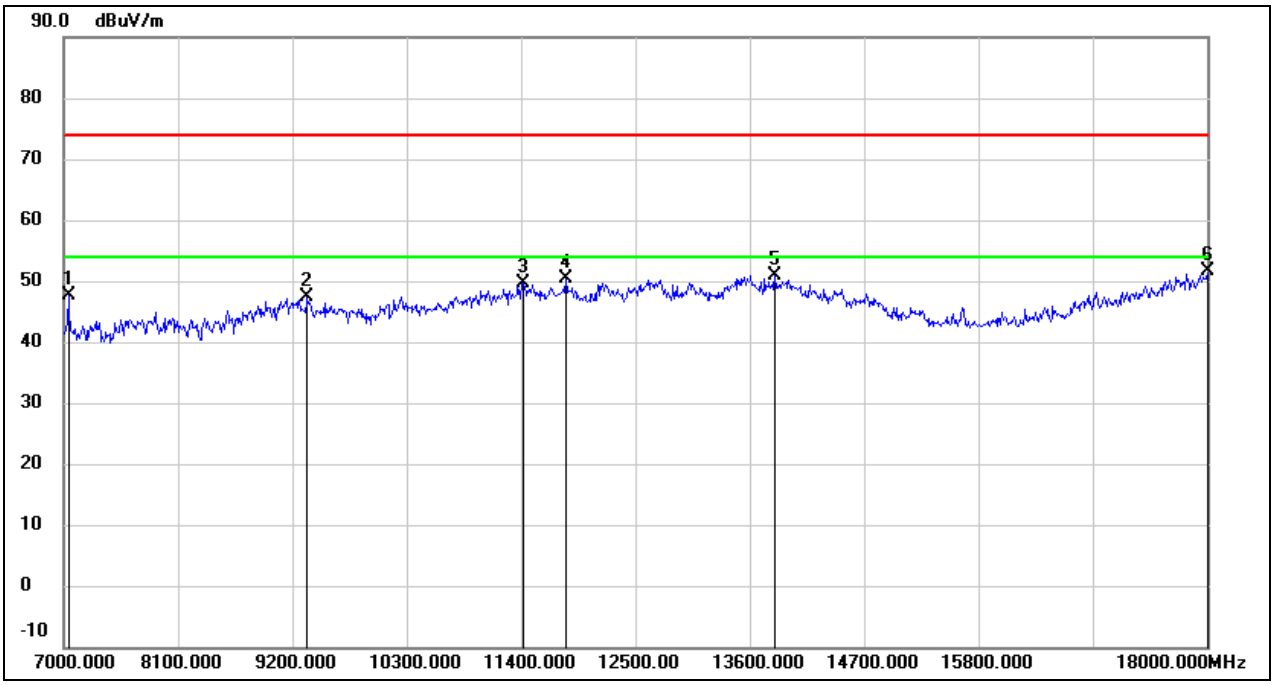
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9354.000	36.91	10.56	47.47	74.00	-26.53	peak
2	11576.000	32.39	16.91	49.30	74.00	-24.70	peak
3	12698.000	31.33	18.08	49.41	74.00	-24.59	peak
4	13534.000	28.13	20.73	48.86	74.00	-25.14	peak
5	14205.000	28.16	21.01	49.17	74.00	-24.83	peak
6	17978.000	23.75	25.97	49.72	74.00	-24.28	peak

Test Mode:	802.11ax HE40	Channel:	5755 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



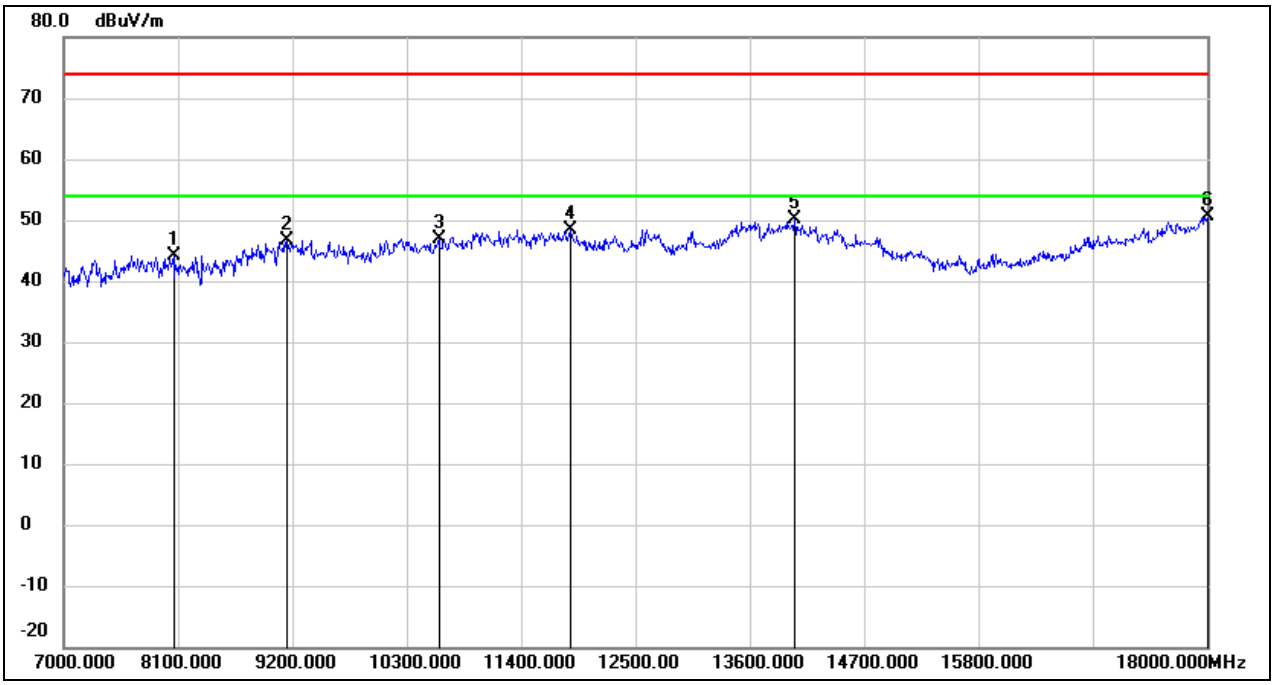
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9574.000	36.01	10.81	46.82	74.00	-27.18	peak
2	10828.000	33.99	14.07	48.06	74.00	-25.94	peak
3	11785.000	32.74	17.30	50.04	74.00	-23.96	peak
4	13534.000	29.81	20.73	50.54	74.00	-23.46	peak
5	13941.000	29.37	21.73	51.10	74.00	-22.90	peak
6	18000.000	24.83	26.12	50.95	74.00	-23.05	peak

Test Mode:	802.11ax HE40	Channel:	5755 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



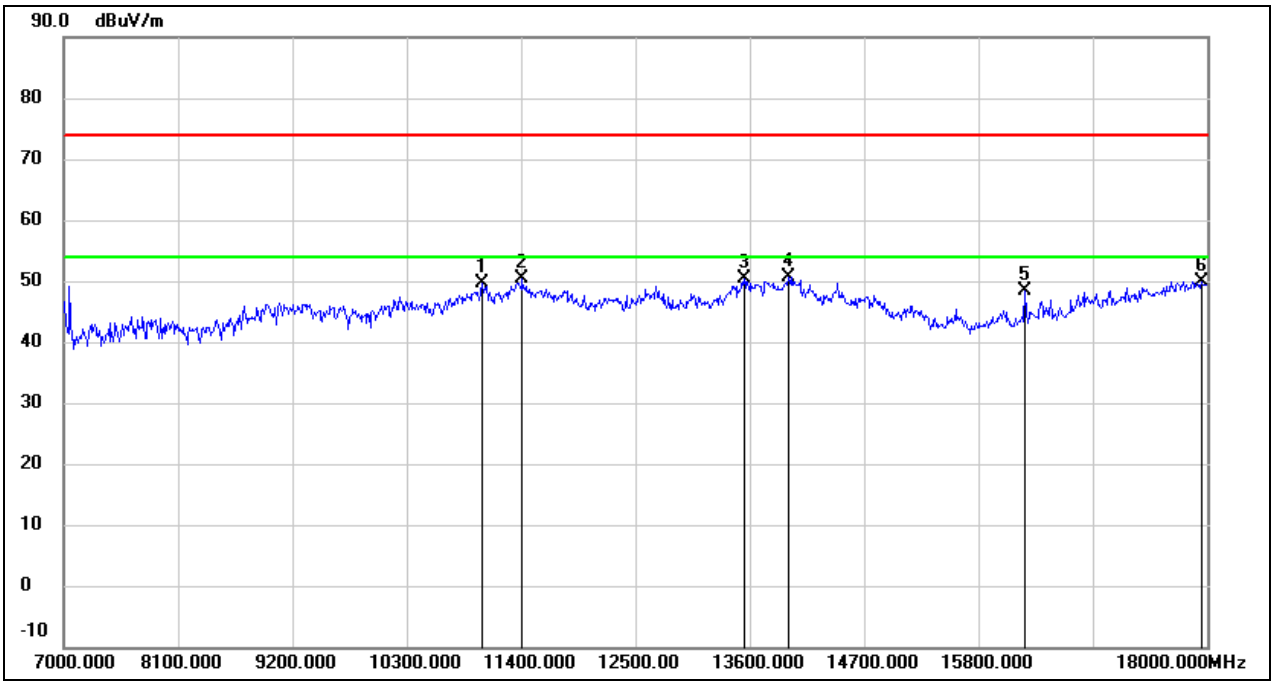
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	40.56	7.04	47.60	74.00	-26.40	peak
2	9343.000	36.81	10.55	47.36	74.00	-26.64	peak
3	11422.000	33.26	16.46	49.72	74.00	-24.28	peak
4	11829.000	32.93	17.38	50.31	74.00	-23.69	peak
5	13842.000	29.43	21.49	50.92	74.00	-23.08	peak
6	18000.000	25.52	26.12	51.64	74.00	-22.36	peak

Test Mode:	802.11ax HE40	Channel:	5795 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



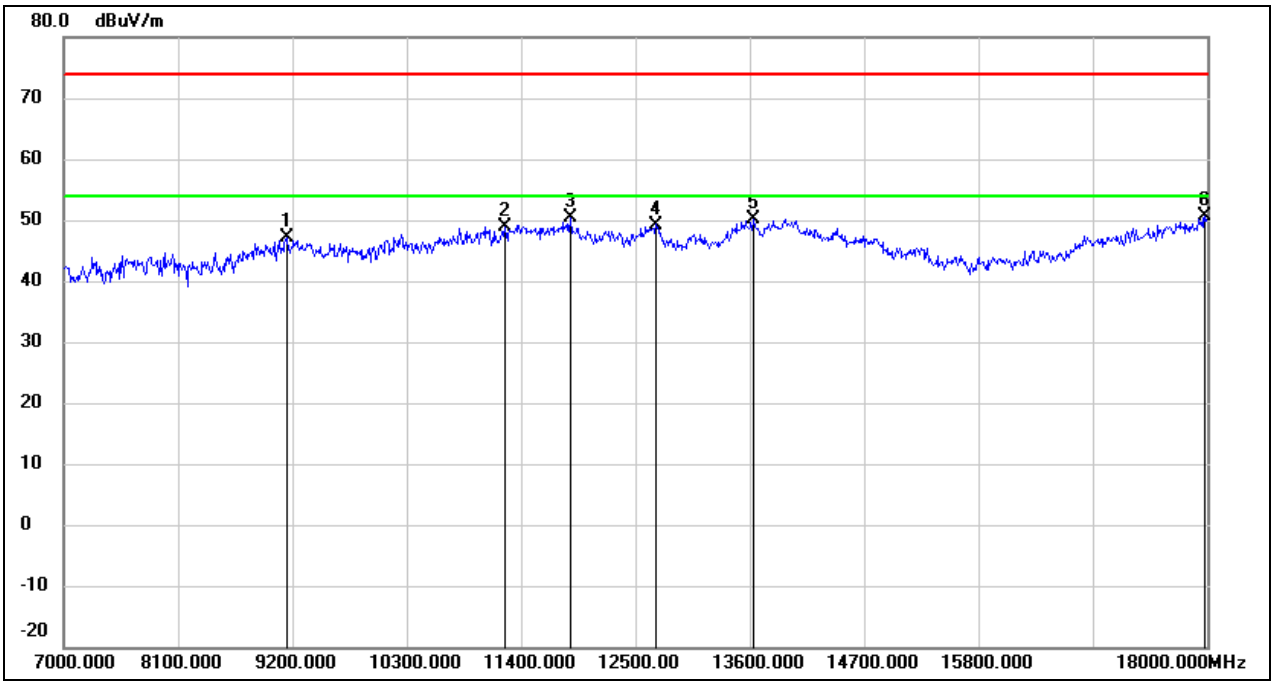
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8056.000	37.65	6.48	44.13	74.00	-29.87	peak
2	9145.000	36.32	10.43	46.75	74.00	-27.25	peak
3	10608.000	33.75	13.23	46.98	74.00	-27.02	peak
4	11873.000	30.89	17.46	48.35	74.00	-25.65	peak
5	14029.000	28.33	21.76	50.09	74.00	-23.91	peak
6	18000.000	24.54	26.12	50.66	74.00	-23.34	peak

Test Mode:	802.11ax HE40	Channel:	5795 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



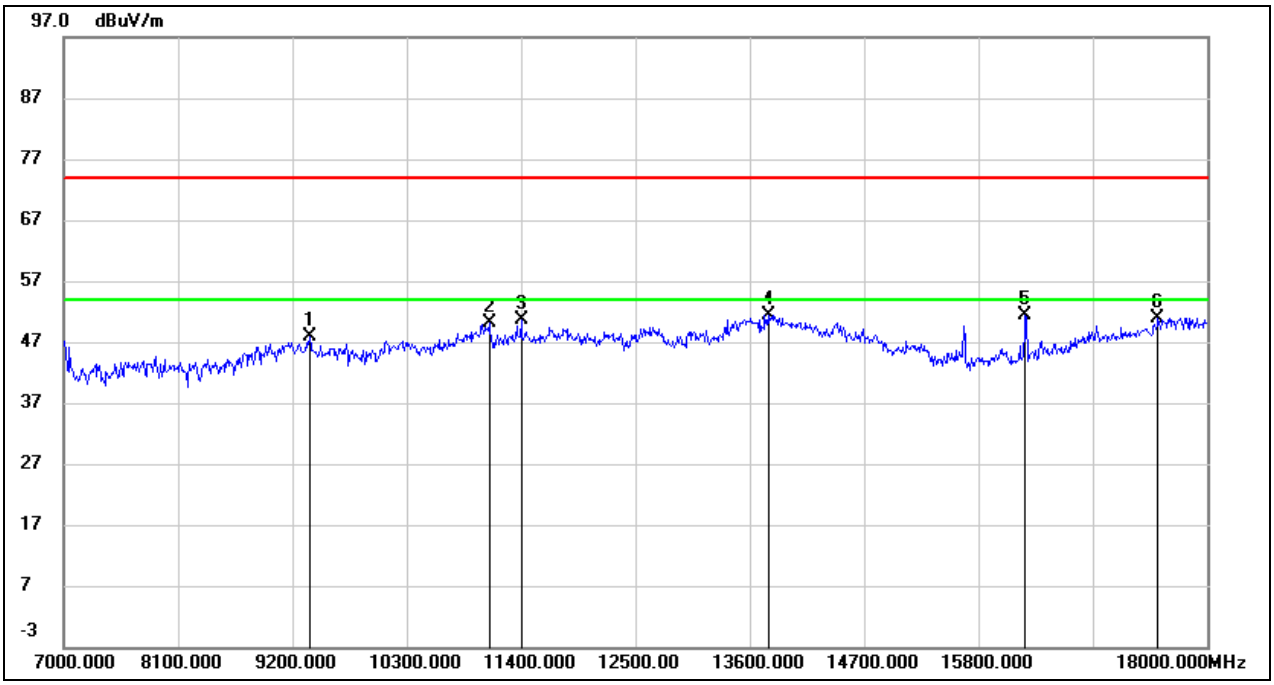
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11026.000	34.74	14.82	49.56	74.00	-24.44	peak
2	11411.000	33.94	16.41	50.35	74.00	-23.65	peak
3	13545.000	29.55	20.75	50.30	74.00	-23.70	peak
4	13974.000	28.89	21.82	50.71	74.00	-23.29	peak
5	16240.000	30.82	17.60	48.42	74.00	-25.58	peak
6	17945.000	24.18	25.75	49.93	74.00	-24.07	peak

Test Mode:	802.11ax HE80	Channel:	5210 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



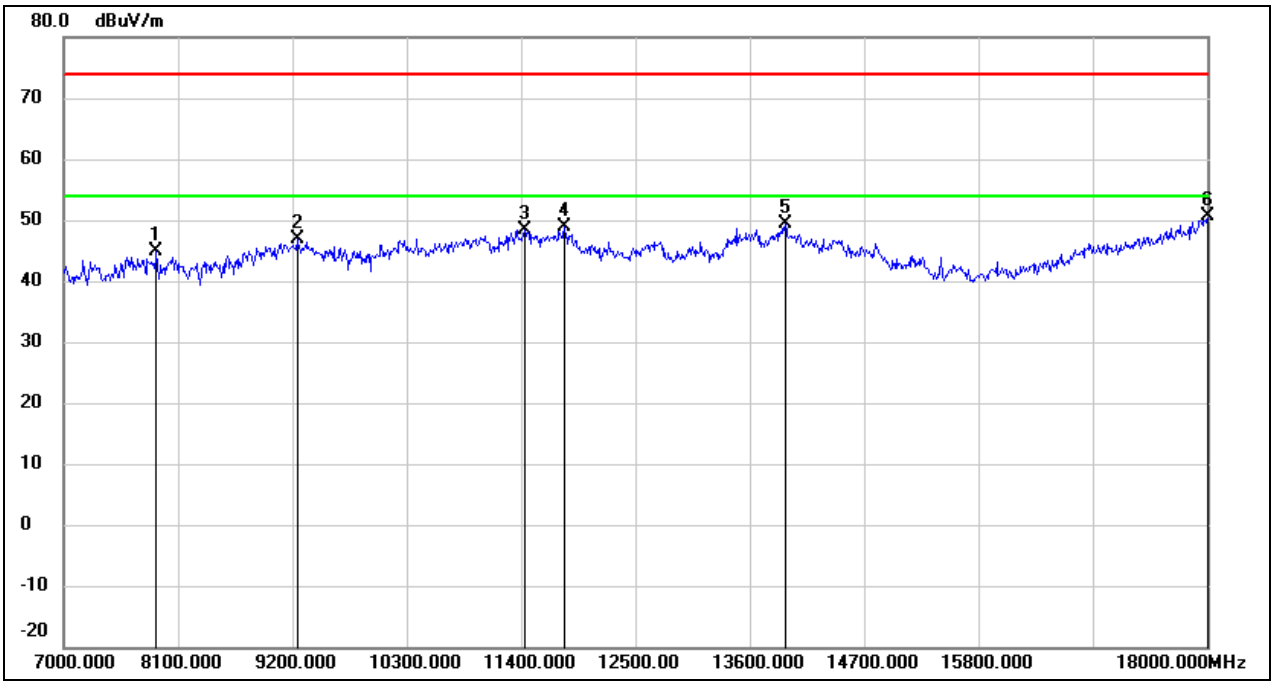
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9145.000	36.69	10.43	47.12	74.00	-26.88	peak
2	11246.000	33.08	15.73	48.81	74.00	-25.19	peak
3	11873.000	32.88	17.46	50.34	74.00	-23.66	peak
4	12698.000	31.17	18.08	49.25	74.00	-24.75	peak
5	13633.000	29.04	20.97	50.01	74.00	-23.99	peak
6	17978.000	24.67	25.97	50.64	74.00	-23.36	peak

Test Mode:	802.11ax HE80	Channel:	5210 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



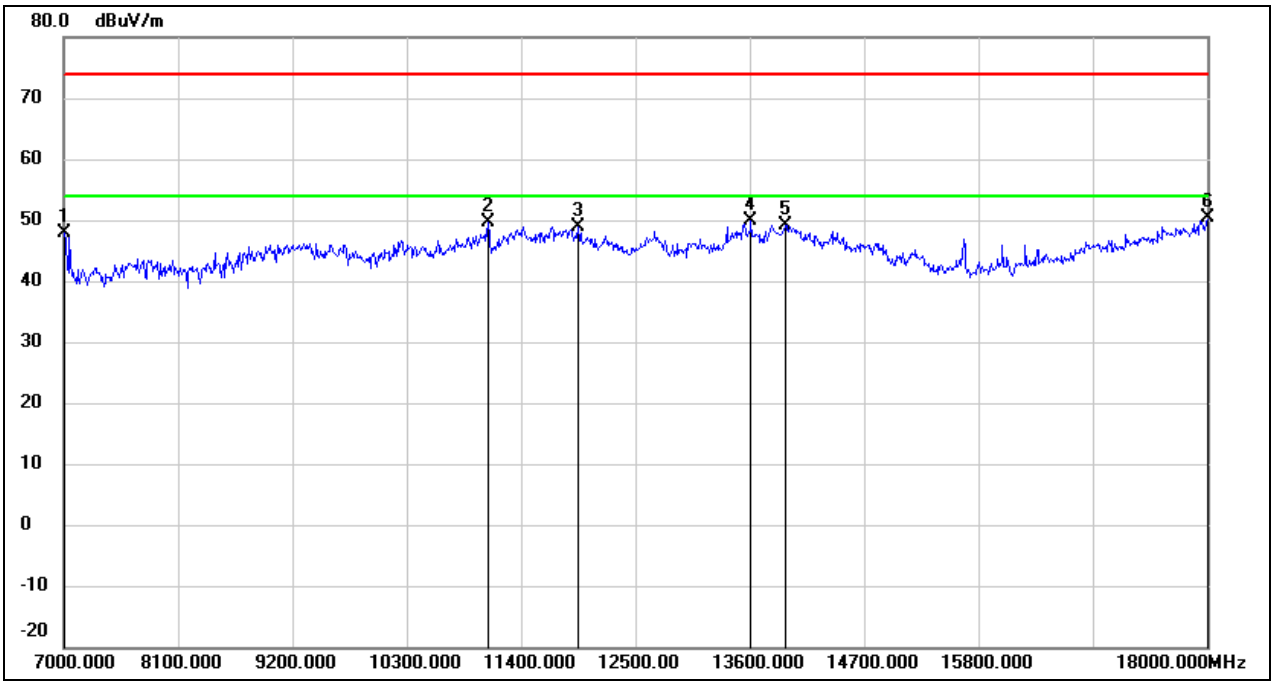
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9365.000	37.41	10.57	47.98	74.00	-26.02	peak
2	11092.000	35.11	15.10	50.21	74.00	-23.79	peak
3	11400.000	34.31	16.36	50.67	74.00	-23.33	peak
4	13776.000	30.15	21.33	51.48	74.00	-22.52	peak
5	16251.000	33.68	17.64	51.32	74.00	-22.68	peak
6	17527.000	28.09	22.89	50.98	74.00	-23.02	peak

Test Mode:	802.11ax HE80	Channel:	5775 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7891.000	38.31	6.52	44.83	74.00	-29.17	peak
2	9244.000	36.29	10.49	46.78	74.00	-27.22	peak
3	11433.000	31.87	16.50	48.37	74.00	-25.63	peak
4	11818.000	31.48	17.36	48.84	74.00	-25.16	peak
5	13941.000	27.57	21.73	49.30	74.00	-24.70	peak
6	18000.000	24.46	26.12	50.58	74.00	-23.42	peak

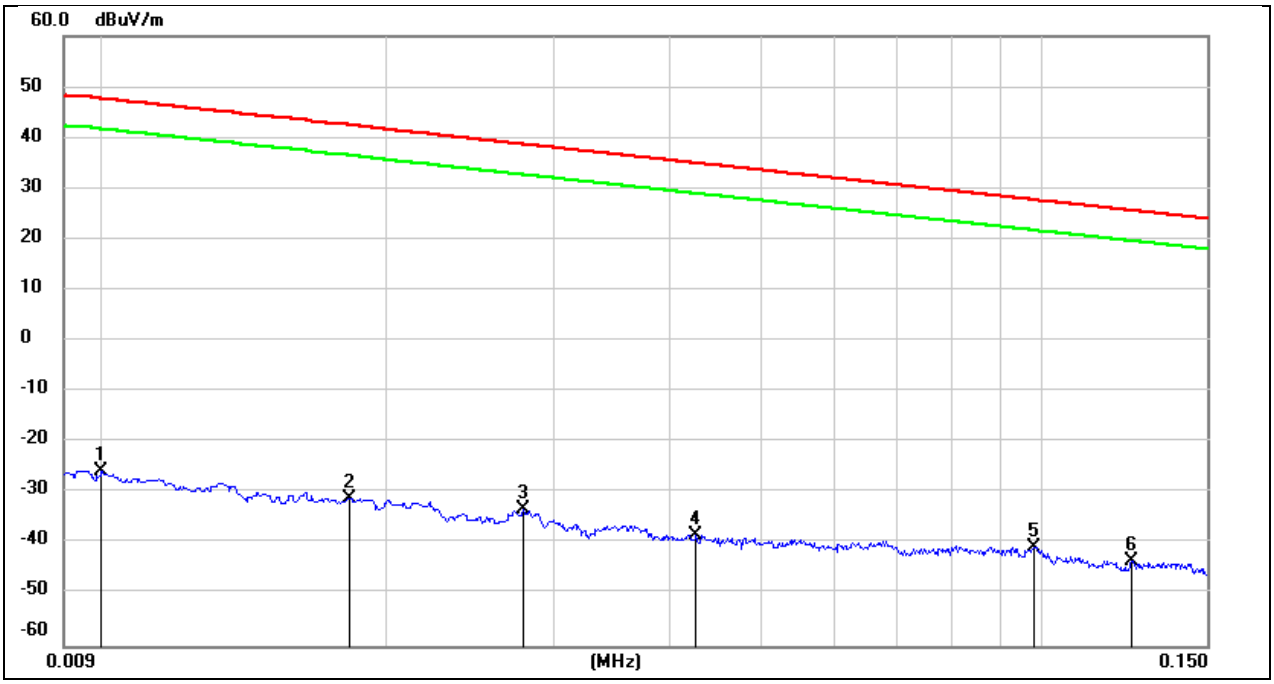
Test Mode:	802.11ax HE80	Channel:	5775 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7011.000	40.87	7.04	47.91	74.00	-26.09	peak
2	11081.000	34.50	15.05	49.55	74.00	-24.45	peak
3	11950.000	31.33	17.61	48.94	74.00	-25.06	peak
4	13611.000	28.91	20.92	49.83	74.00	-24.17	peak
5	13941.000	27.47	21.73	49.20	74.00	-24.80	peak
6	18000.000	24.16	26.12	50.28	74.00	-23.72	peak

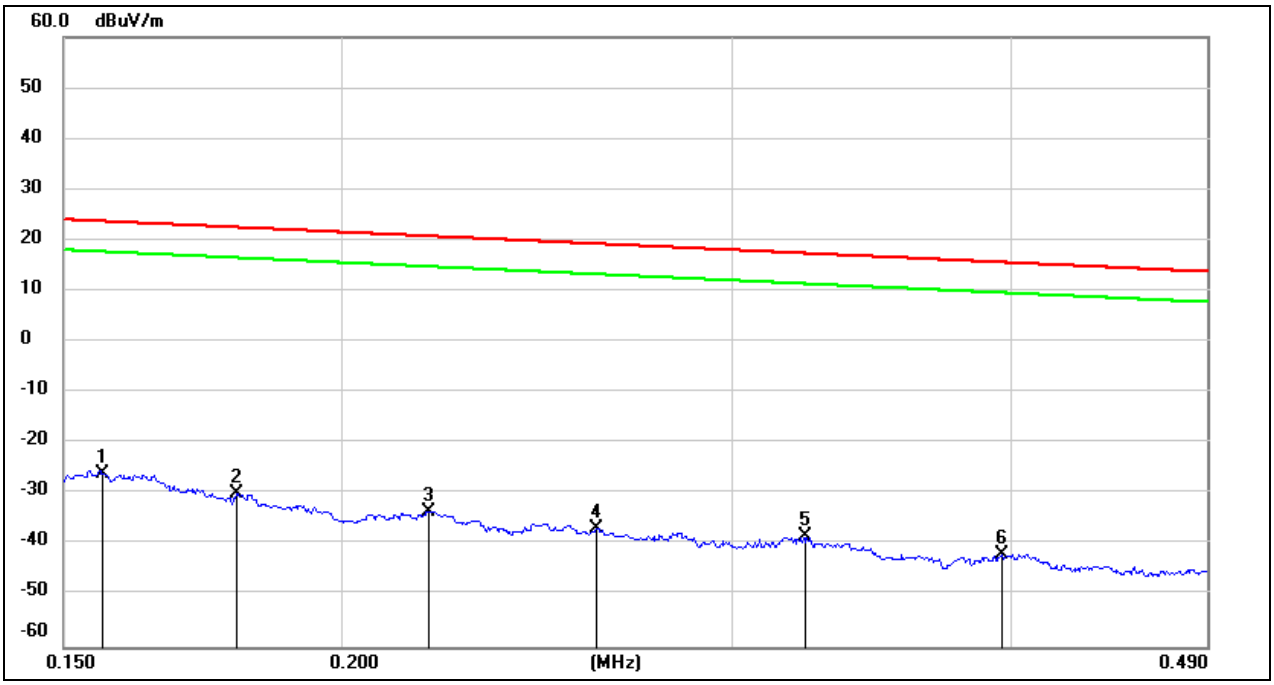
8.4. SPURIOUS EMISSIONS (9 KHZ ~ 30 MHZ)

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 12 V



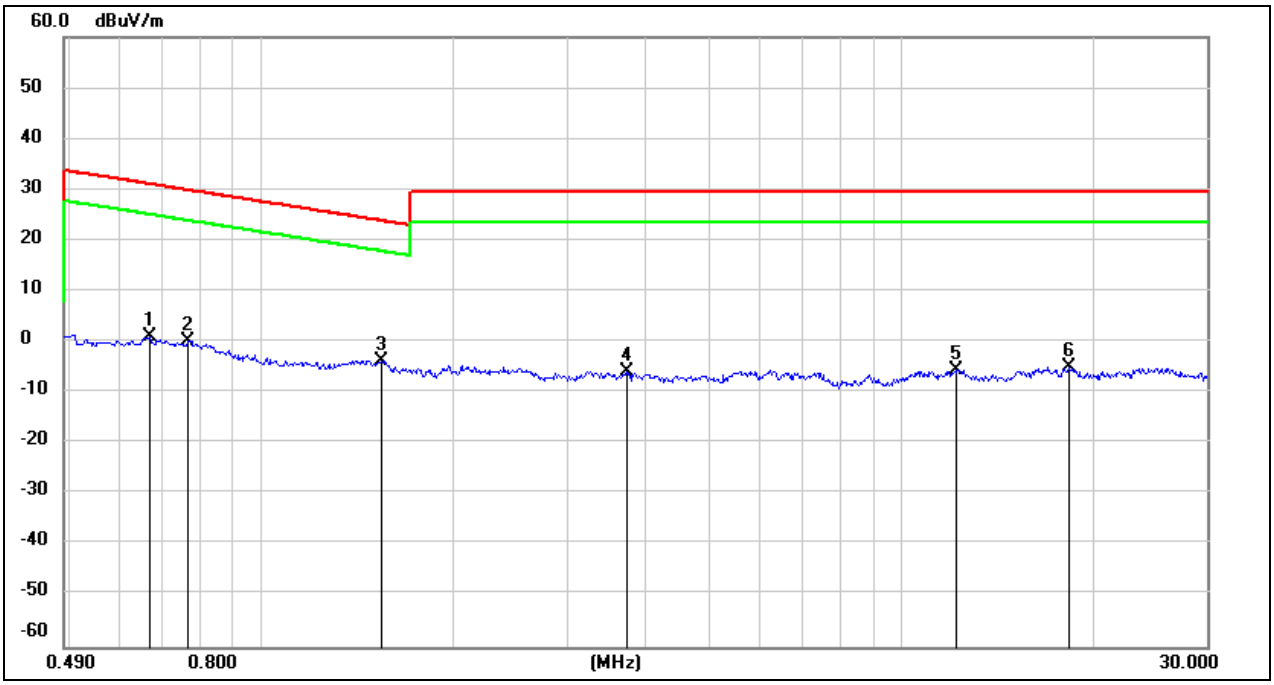
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0100	75.72	-101.40	-25.68	47.60	-73.28	peak
2	0.0182	70.35	-101.36	-31.01	42.40	-73.41	peak
3	0.0279	68.17	-101.38	-33.21	38.69	-71.90	peak
4	0.0427	63.14	-101.45	-38.31	34.99	-73.30	peak
5	0.0981	61.27	-101.78	-40.51	27.77	-68.28	peak
6	0.1246	58.39	-101.72	-43.33	25.70	-69.03	peak

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1562	75.59	-101.65	-26.06	23.73	-49.79	peak
2	0.1794	71.77	-101.68	-29.91	22.53	-52.44	peak
3	0.2190	68.27	-101.75	-33.48	20.79	-54.27	peak
4	0.2605	65.14	-101.81	-36.67	19.28	-55.95	peak
5	0.3234	63.48	-101.88	-38.40	17.41	-55.81	peak
6	0.3966	60.18	-101.96	-41.78	15.63	-57.41	peak

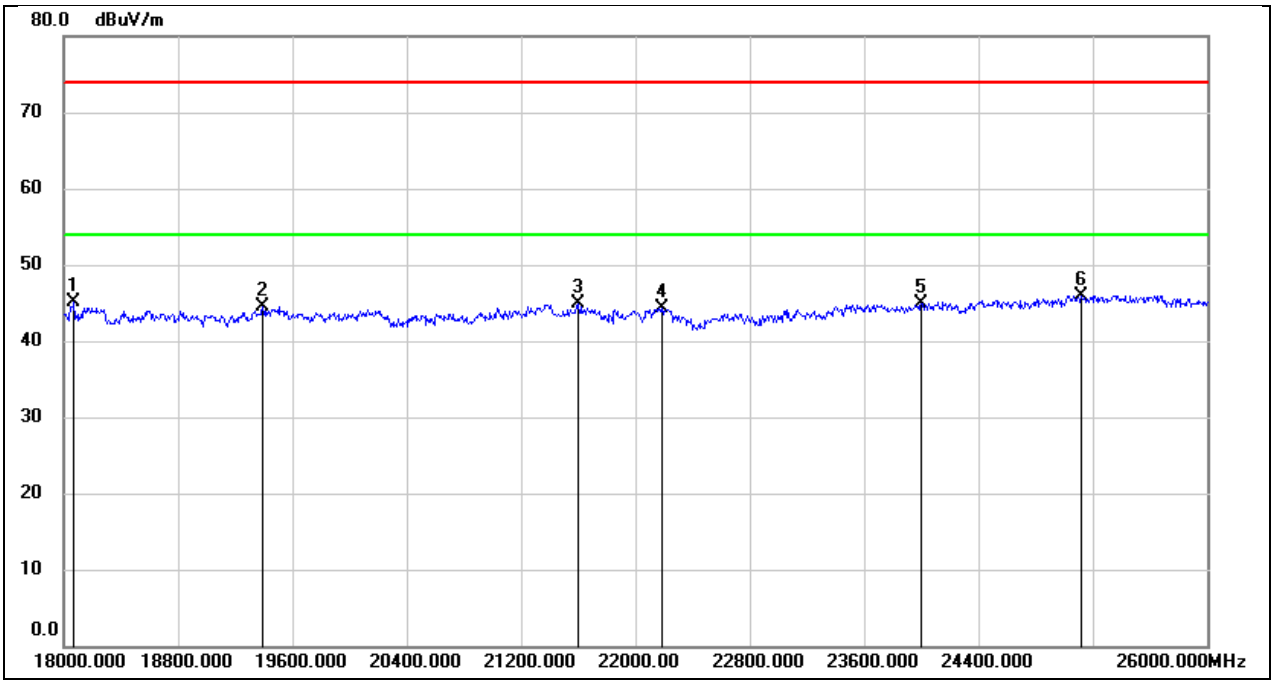
Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.6671	63.25	-62.10	1.15	31.12	-29.97	peak
2	0.7641	62.42	-62.12	0.30	29.94	-29.64	peak
3	1.5380	58.35	-62.03	-3.68	23.86	-27.54	peak
4	3.7100	55.70	-61.41	-5.71	29.54	-35.25	peak
5	12.2055	55.27	-60.90	-5.63	29.54	-35.17	peak
6	18.2545	55.93	-60.90	-4.97	29.54	-34.51	peak

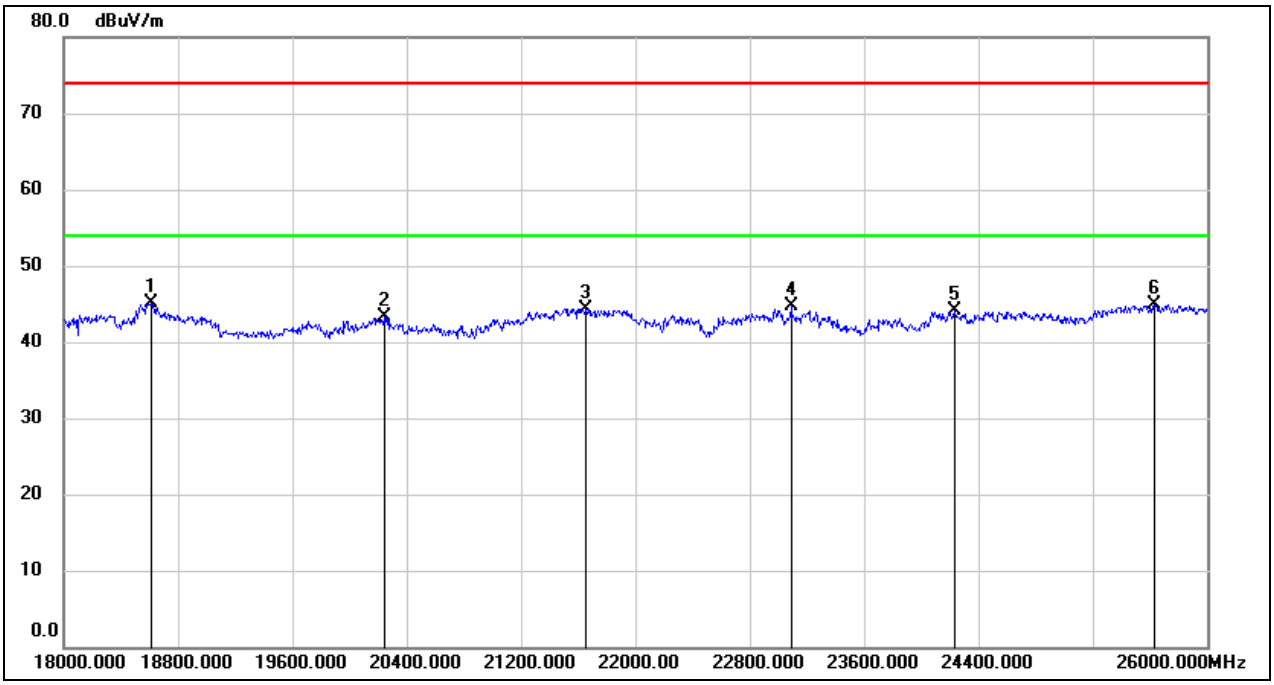
8.5. SPURIOUS EMISSIONS (18 GHZ ~ 26 GHZ)

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18072.000	50.45	-5.43	45.02	74.00	-28.98	peak
2	19392.000	50.12	-5.57	44.55	74.00	-29.45	peak
3	21600.000	49.52	-4.54	44.98	74.00	-29.02	peak
4	22184.000	48.68	-4.29	44.39	74.00	-29.61	peak
5	24000.000	47.71	-2.75	44.96	74.00	-29.04	peak
6	25120.000	47.87	-1.90	45.97	74.00	-28.03	peak

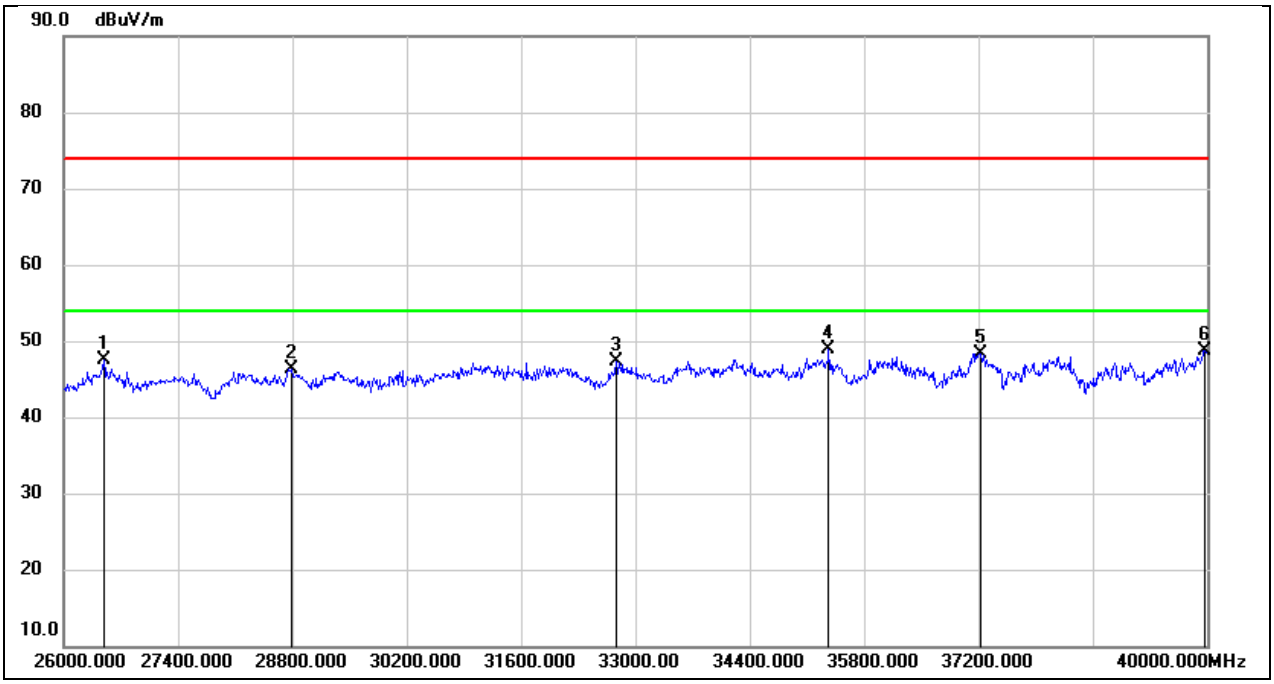
Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18616.000	50.39	-5.34	45.05	74.00	-28.95	peak
2	20240.000	48.82	-5.61	43.21	74.00	-30.79	peak
3	21656.000	48.84	-4.46	44.38	74.00	-29.62	peak
4	23088.000	48.02	-3.41	44.61	74.00	-29.39	peak
5	24232.000	46.96	-2.82	44.14	74.00	-29.86	peak
6	25632.000	46.06	-1.16	44.90	74.00	-29.10	peak

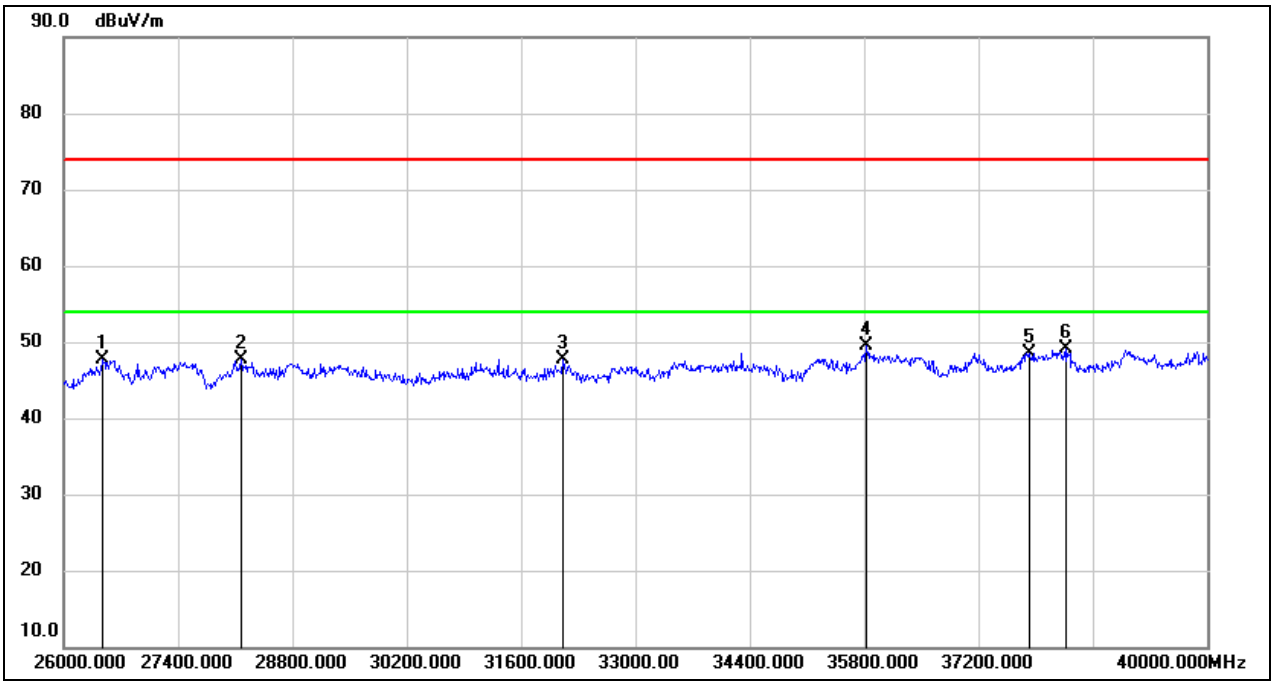
8.6. SPURIOUS EMISSIONS (26 GHZ ~ 40 GHZ)

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	26490.000	52.29	-4.74	47.55	74.00	-26.45	peak
2	28786.000	46.99	-0.64	46.35	74.00	-27.65	peak
3	32762.000	48.45	-1.21	47.24	74.00	-26.76	peak
4	35366.000	46.40	2.59	48.99	74.00	-25.01	peak
5	37228.000	45.23	3.14	48.37	74.00	-25.63	peak
6	39972.000	43.58	5.13	48.71	74.00	-25.29	peak

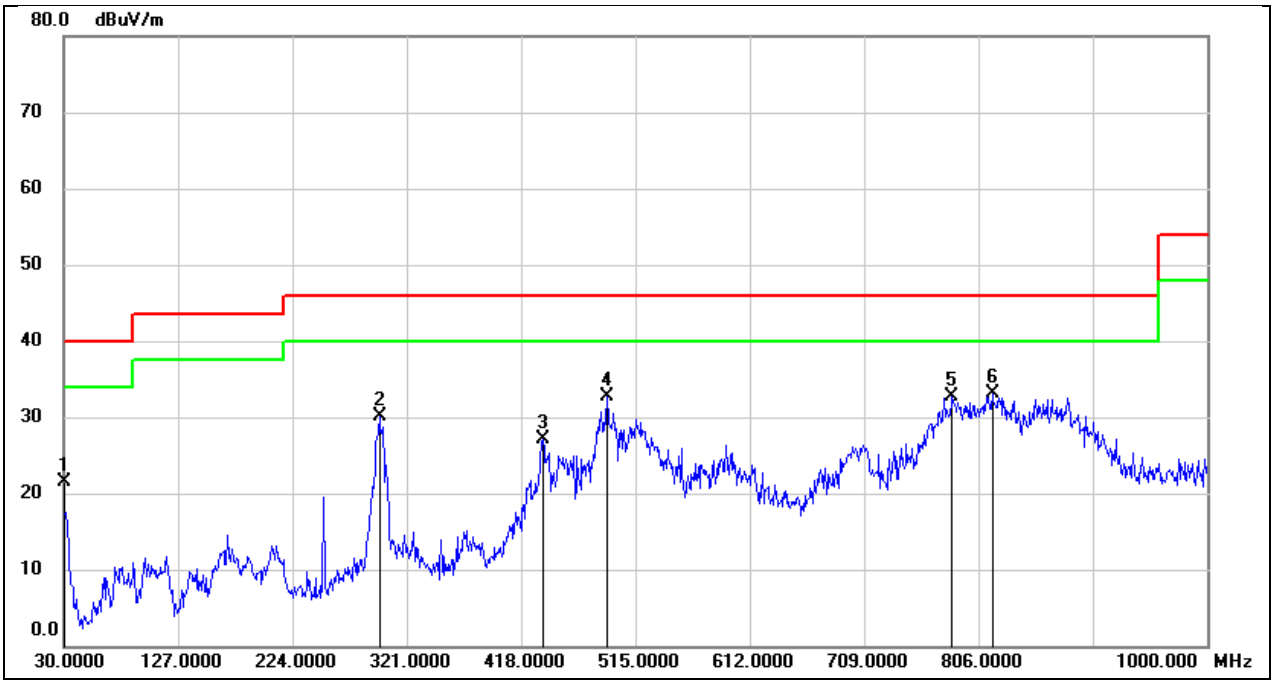
Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	26476.000	52.53	-4.78	47.75	74.00	-26.25	peak
2	28170.000	50.59	-2.92	47.67	74.00	-26.33	peak
3	32104.000	49.49	-1.75	47.74	74.00	-26.26	peak
4	35828.000	45.75	3.67	49.42	74.00	-24.58	peak
5	37816.000	44.97	3.57	48.54	74.00	-25.46	peak
6	38278.000	45.32	3.82	49.14	74.00	-24.86	peak

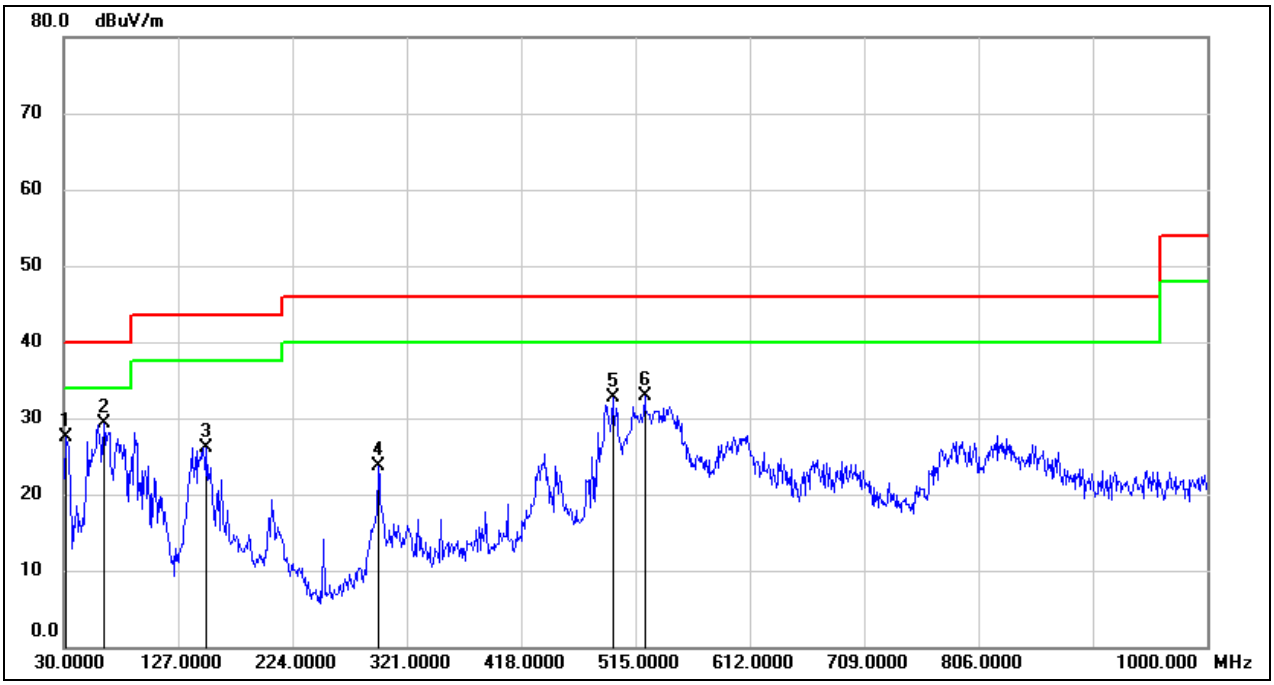
8.7. SPURIOUS EMISSIONS (30 MHZ ~ 1 GHZ)

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Horizontal	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	40.53	-18.94	21.59	40.00	-18.41	QP
2	297.7200	45.60	-15.44	30.16	46.00	-15.84	QP
3	436.4300	39.68	-12.63	27.05	46.00	-18.95	QP
4	490.7500	44.47	-11.68	32.79	46.00	-13.21	QP
5	783.6900	40.26	-7.53	32.73	46.00	-13.27	QP
6	817.6400	39.96	-6.95	33.01	46.00	-12.99	QP

Test Mode:	802.11ax HE20	Channel:	5745 MHz
Polarity:	Vertical	Test Voltage:	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.9400	46.72	-19.13	27.59	40.00	-12.41	QP
2	63.9500	49.84	-20.53	29.31	40.00	-10.69	QP
3	151.2500	44.38	-18.21	26.17	43.50	-17.33	QP
4	296.7500	39.28	-15.50	23.78	46.00	-22.22	QP
5	495.6000	44.32	-11.57	32.75	46.00	-13.25	QP
6	522.7600	44.01	-11.01	33.00	46.00	-13.00	QP

9. 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

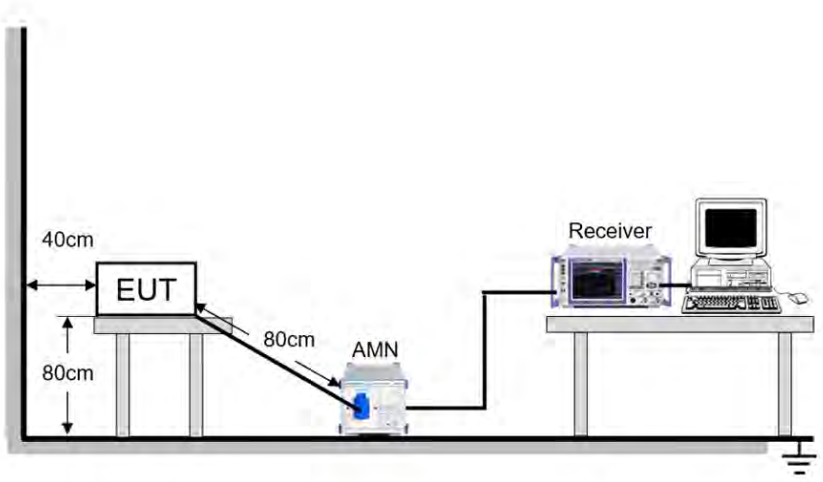
TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.

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

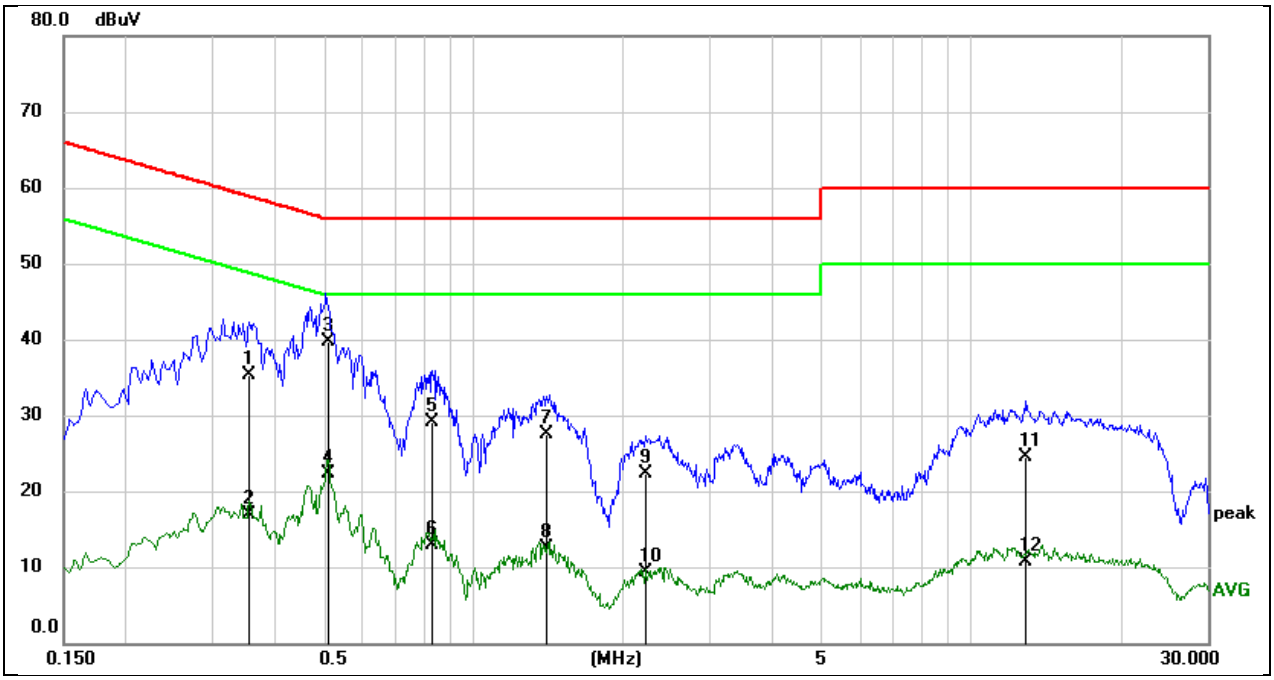


TEST ENVIRONMENT

Temperature	20.1℃	Relative Humidity	57.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 12 V

TEST RESULTS

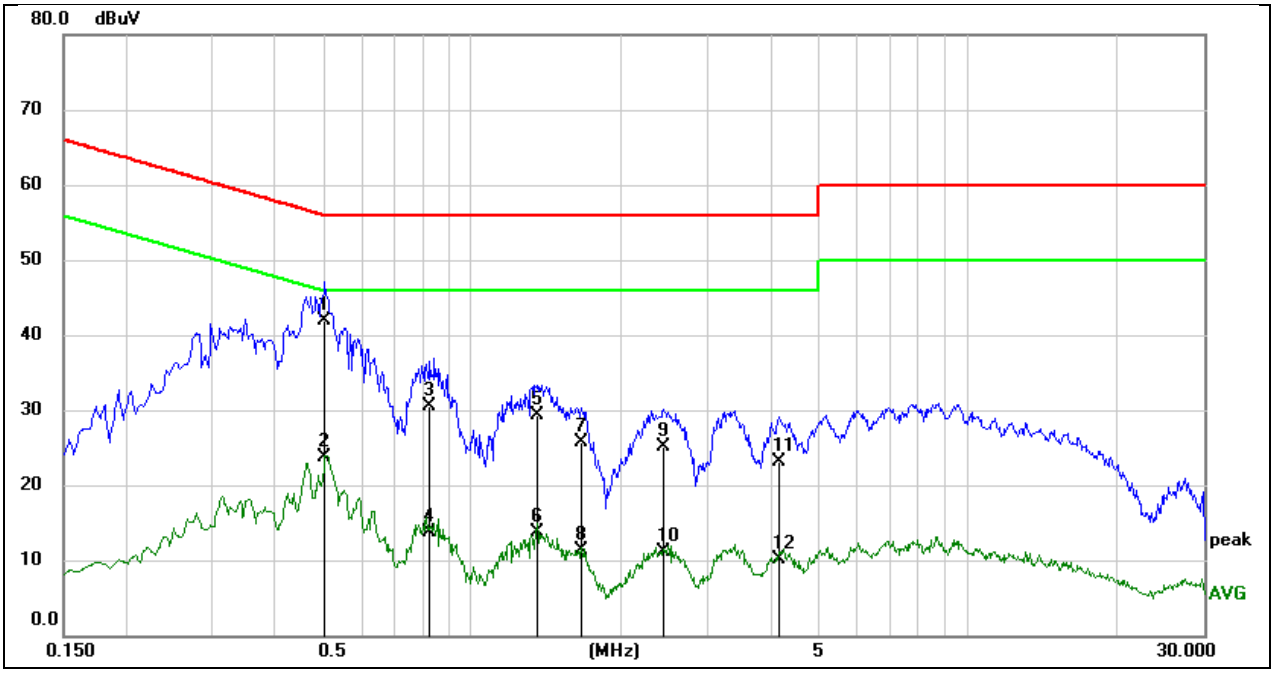
Test Mode:	802.11ax HE20	Channel:	5745 MHz
Line	N	Test Voltage	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3529	25.75	9.59	35.34	58.89	-23.55	QP
2	0.3529	7.23	9.59	16.82	48.89	-32.07	AVG
3	0.5130	30.03	9.60	39.63	56.00	-16.37	QP
4	0.5130	12.71	9.60	22.31	46.00	-23.69	AVG
5	0.8268	19.48	9.60	29.08	56.00	-26.92	QP
6	0.8268	3.36	9.60	12.96	46.00	-33.04	AVG
7	1.4175	17.86	9.62	27.48	56.00	-28.52	QP
8	1.4175	2.79	9.62	12.41	46.00	-33.59	AVG
9	2.2229	12.67	9.64	22.31	56.00	-33.69	QP
10	2.2229	-0.30	9.64	9.34	46.00	-36.66	AVG
11	12.9892	14.70	9.76	24.46	60.00	-35.54	QP
12	12.9892	1.02	9.76	10.78	50.00	-39.22	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:	802.11ax HE20	Channel:	5745 MHz
Line	N	Test Voltage	DC 12 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.5081	32.21	9.60	41.81	56.00	-14.19	QP
2	0.5081	14.11	9.60	23.71	46.00	-22.29	AVG
3	0.8277	20.83	9.60	30.43	56.00	-25.57	QP
4	0.8277	4.12	9.60	13.72	46.00	-32.28	AVG
5	1.3581	19.79	9.61	29.40	56.00	-26.60	QP
6	1.3581	4.11	9.61	13.72	46.00	-32.28	AVG
7	1.6698	16.11	9.62	25.73	56.00	-30.27	QP
8	1.6698	1.65	9.62	11.27	46.00	-34.73	AVG
9	2.4360	15.50	9.65	25.15	56.00	-30.85	QP
10	2.4360	1.44	9.65	11.09	46.00	-34.91	AVG
11	4.1700	13.43	9.70	23.13	56.00	-32.87	QP
12	4.1700	0.44	9.70	10.14	46.00	-35.86	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.

10. ANTENNA REQUIREMENT

REQUIREMENT

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

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

DESCRIPTION

Pass

11. TEST DATA

11.1. APPENDIX A: EMISSION BANDWIDTH

11.1.1. Test Result

Test Mode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A	Ant1	5180	21.720	5169.280	5191.000	PASS
	Ant2	5180	19.520	5170.560	5190.080	PASS
	Ant3	5180	19.640	5170.240	5189.880	PASS
	Ant4	5180	19.480	5170.280	5189.760	PASS
	Ant1	5200	21.680	5189.000	5210.680	PASS
	Ant2	5200	21.800	5189.680	5211.480	PASS
	Ant3	5200	20.960	5189.920	5210.880	PASS
	Ant4	5200	19.480	5190.400	5209.880	PASS
	Ant1	5240	19.800	5230.120	5249.920	PASS
	Ant2	5240	19.280	5230.480	5249.760	PASS
	Ant3	5240	18.960	5230.520	5249.480	PASS
	Ant4	5240	19.000	5230.320	5249.320	PASS
	Ant1	5745	20.560	5735.160	5755.720	PASS
	Ant2	5745	20.880	5734.800	5755.680	PASS
	Ant3	5745	19.760	5735.520	5755.280	PASS
	Ant4	5745	19.720	5735.000	5754.720	PASS
	Ant1	5785	20.840	5774.520	5795.360	PASS
	Ant2	5785	19.960	5775.000	5794.960	PASS
	Ant3	5785	19.760	5775.080	5794.840	PASS
	Ant4	5785	20.560	5775.000	5795.560	PASS
	Ant1	5825	20.880	5814.640	5835.520	PASS
	Ant2	5825	20.280	5814.640	5834.920	PASS
	Ant3	5825	20.440	5814.640	5835.080	PASS
	Ant4	5825	19.000	5815.320	5834.320	PASS
11AX20MIMO	Ant1	5180	21.400	5169.520	5190.920	PASS
	Ant2	5180	20.640	5169.840	5190.480	PASS
	Ant3	5180	21.880	5169.720	5191.600	PASS
	Ant4	5180	21.680	5169.200	5190.880	PASS
	Ant1	5200	20.000	5189.880	5209.880	PASS
	Ant2	5200	20.240	5190.040	5210.280	PASS
	Ant3	5200	20.320	5189.880	5210.200	PASS
	Ant4	5200	20.080	5189.920	5210.000	PASS
	Ant1	5240	19.680	5230.240	5249.920	PASS
	Ant2	5240	19.840	5230.040	5249.880	PASS
	Ant3	5240	19.680	5230.160	5249.840	PASS
	Ant4	5240	19.920	5230.120	5250.040	PASS
	Ant1	5745	21.720	5734.520	5756.240	PASS
	Ant2	5745	20.800	5734.680	5755.480	PASS
	Ant3	5745	20.160	5734.760	5754.920	PASS
	Ant4	5745	21.640	5734.360	5756.000	PASS
	Ant1	5785	20.680	5774.640	5795.320	PASS
	Ant2	5785	20.320	5774.800	5795.120	PASS
	Ant3	5785	20.960	5774.560	5795.520	PASS
	Ant4	5785	20.120	5775.000	5795.120	PASS
	Ant1	5825	20.280	5814.920	5835.200	PASS
	Ant2	5825	20.960	5814.760	5835.720	PASS
	Ant3	5825	20.280	5814.800	5835.080	PASS
	Ant4	5825	21.080	5814.280	5835.360	PASS
11AX40MIMO	Ant1	5190	40.400	5170.560	5210.960	PASS
	Ant2	5190	39.120	5170.560	5209.680	PASS
	Ant3	5190	40.160	5170.560	5210.720	PASS
	Ant4	5190	39.360	5170.560	5209.920	PASS
	Ant1	5230	39.280	5210.560	5249.840	PASS

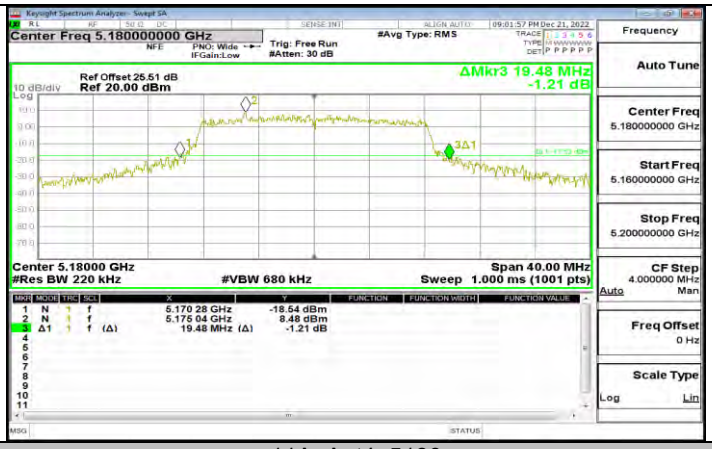
	Ant2	5230	39.120	5210.560	5249.680	PASS
	Ant3	5230	39.200	5210.560	5249.760	PASS
	Ant4	5230	39.600	5210.320	5249.920	PASS
	Ant1	5755	39.280	5735.560	5774.840	PASS
	Ant2	5755	39.120	5735.640	5774.760	PASS
	Ant3	5755	39.280	5735.560	5774.840	PASS
	Ant4	5755	39.280	5735.560	5774.840	PASS
	Ant1	5795	39.280	5775.400	5814.680	PASS
	Ant2	5795	39.280	5775.560	5814.840	PASS
	Ant3	5795	39.040	5775.560	5814.600	PASS
	Ant4	5795	39.280	5775.400	5814.680	PASS
11AX80MIMO	Ant1	5210	79.840	5170.320	5250.160	PASS
	Ant2	5210	81.280	5170.160	5251.440	PASS
	Ant3	5210	79.680	5170.320	5250.000	PASS
	Ant4	5210	80.000	5170.160	5250.160	PASS
	Ant1	5775	80.160	5735.000	5815.160	PASS
	Ant2	5775	79.680	5735.320	5815.000	PASS
	Ant3	5775	80.000	5735.160	5815.160	PASS
	Ant4	5775	80.000	5735.160	5815.160	PASS

11.1.2. Test Graphs

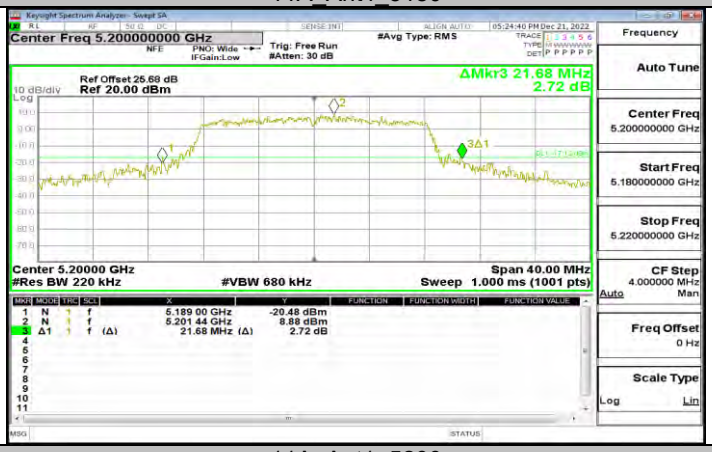
11A_Ant1_5180

11A_Ant2_5180

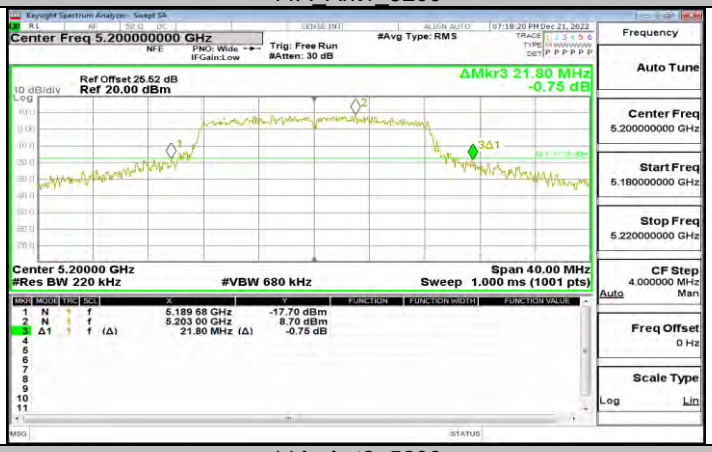
11A_Ant3_5180



11A_Ant4_5180



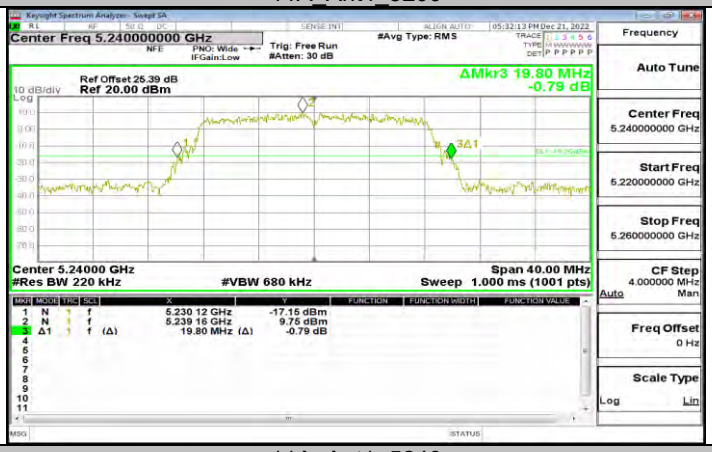
11A_Ant1_5200



11A_Ant2_5200

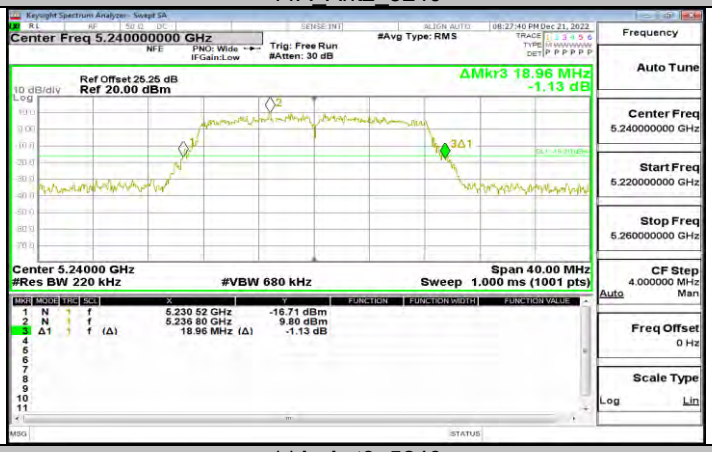
11A_Ant3_5200

11A_Ant4_5200

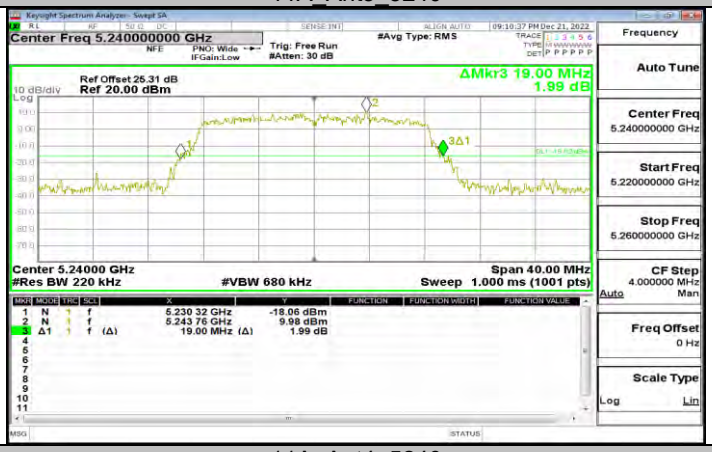


11A_Ant1_5240

11A_Ant2_5240

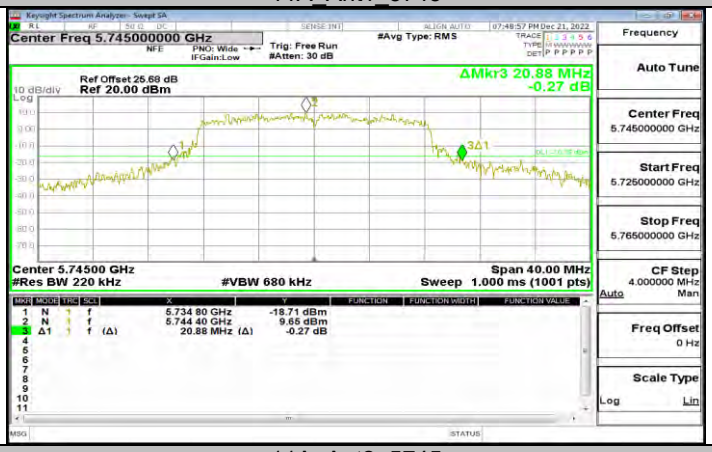


11A_Ant3_5240



11A_Ant4_5240

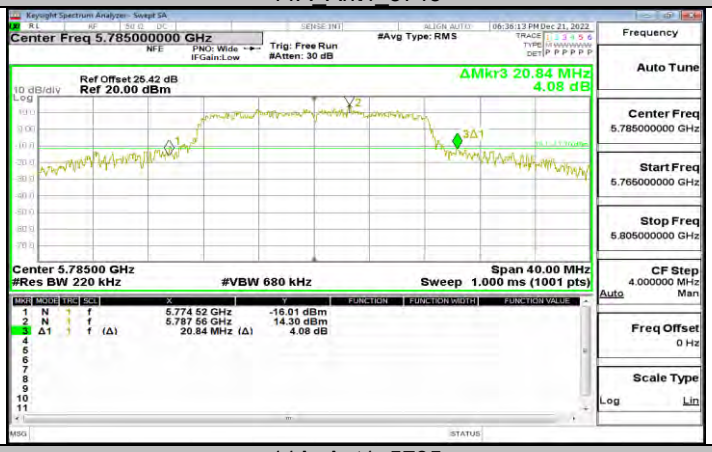
11A_Ant1_5745



11A_Ant2_5745

11A_Ant3_5745

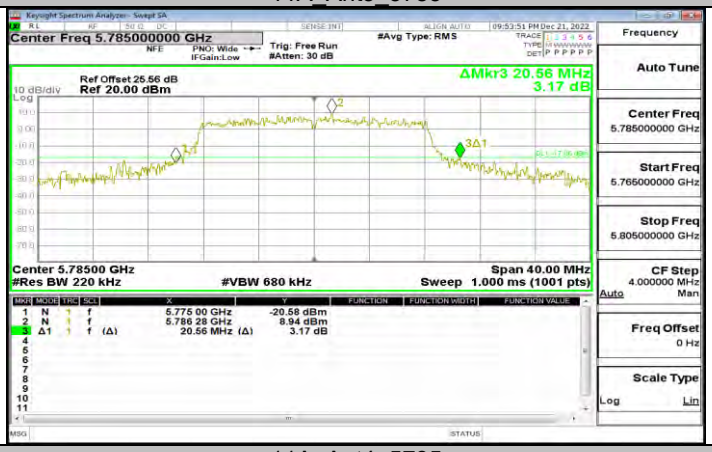
11A_Ant4_5745



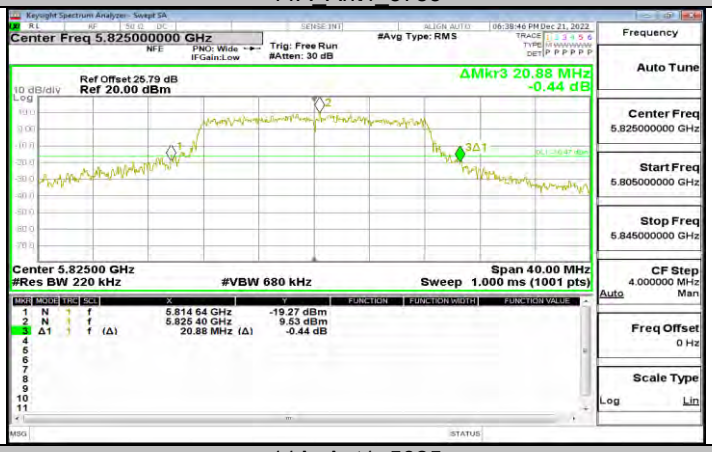
11A_Ant1_5785

11A_Ant2_5785

11A_Ant3_5785

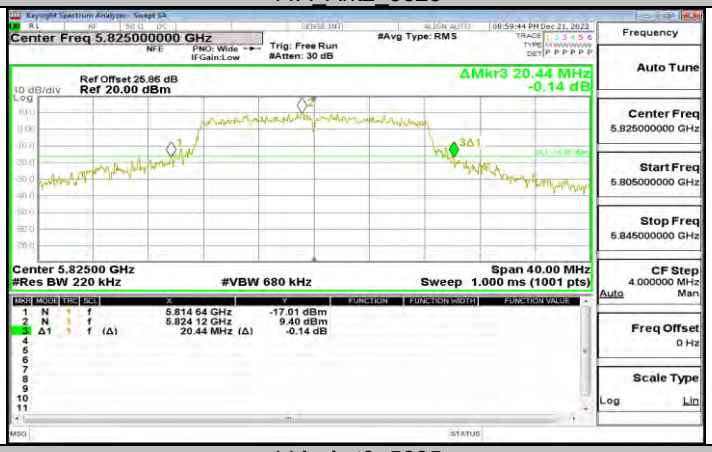


11A_Ant4_5785

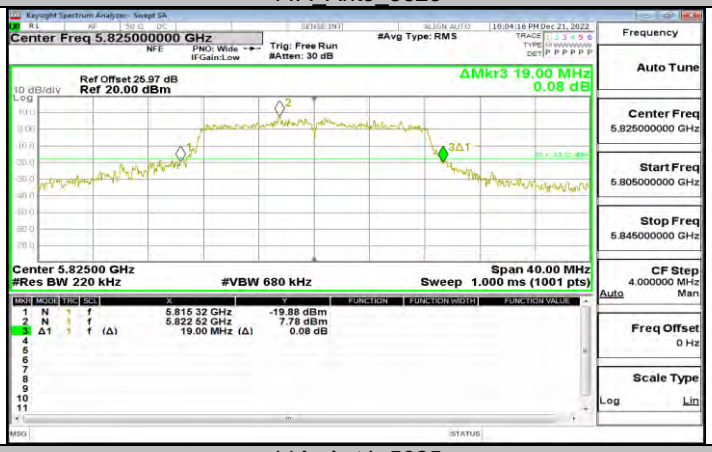


11A_Ant1_5825

11A_Ant2_5825

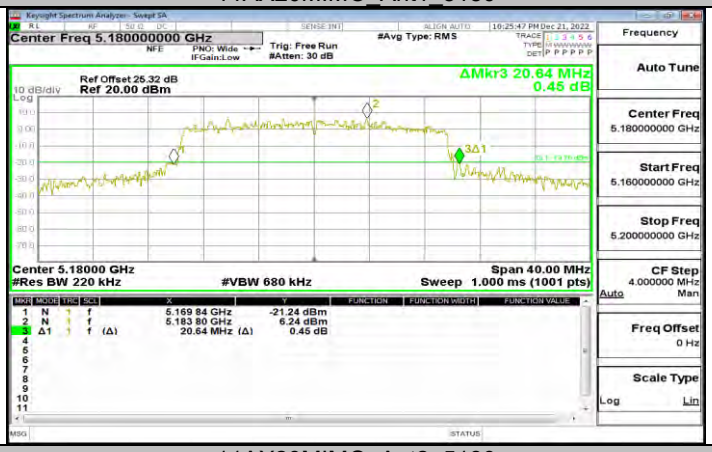


11A_Ant3_5825



11A_Ant4_5825

11AX20MIMO_Ant1_5180



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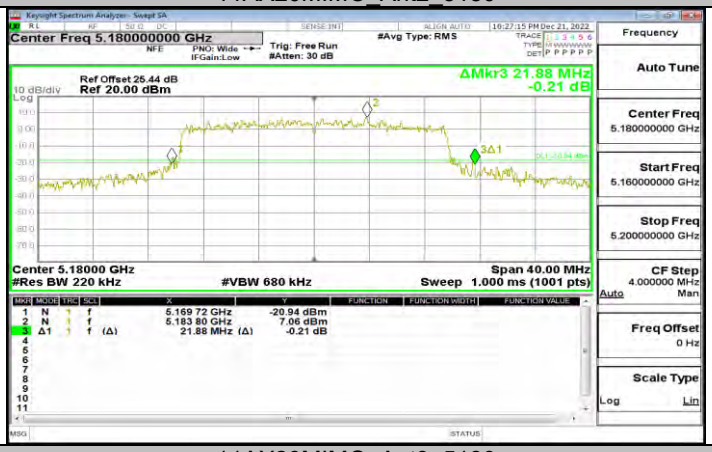

11AX20MIMO_Ant3_5180

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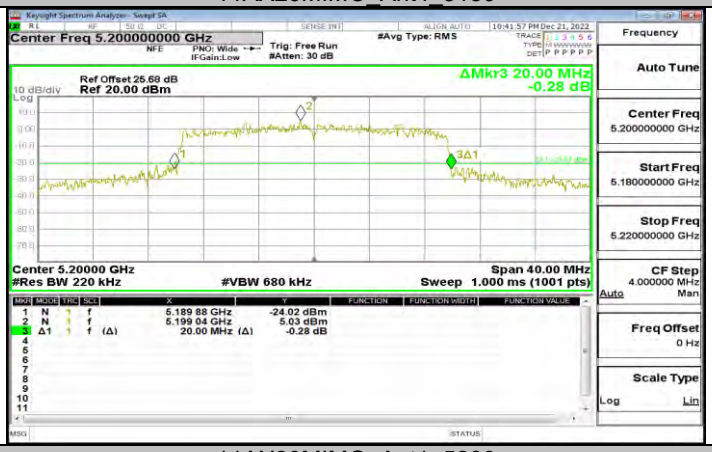


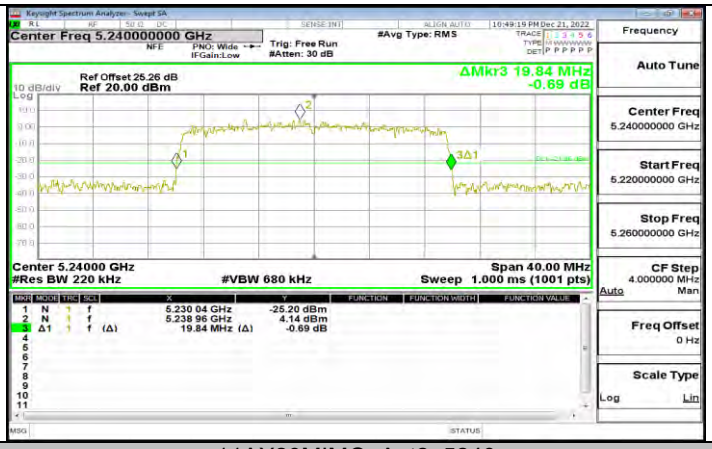
11AX20MIMO_Ant1_5200

11AX20MIMO_Ant2_5200

11AX20MIMO_Ant3_5200

11AX20MIMO_Ant4_5200

11AX20MIMO_Ant1_5240



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11AX20MIMO_Ant3_5240

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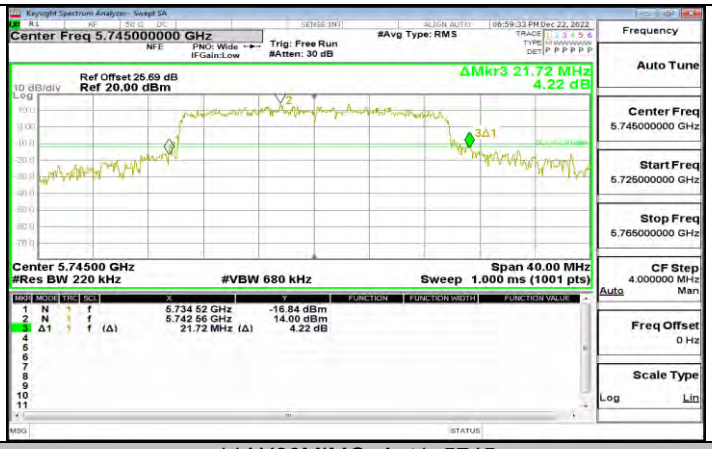
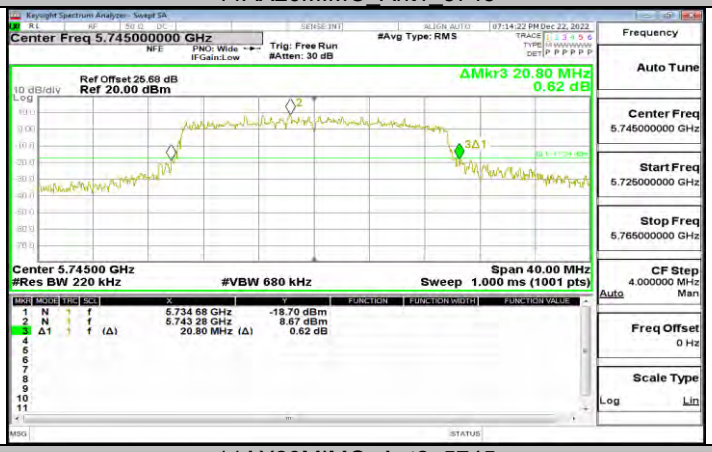


11AX20MIMO_Ant1_5745



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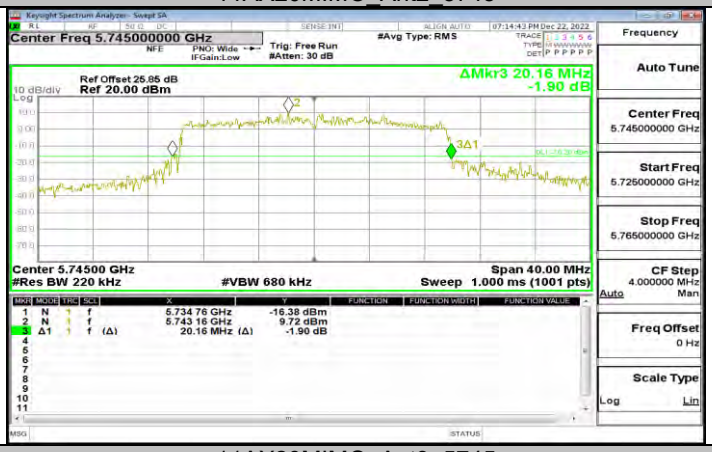

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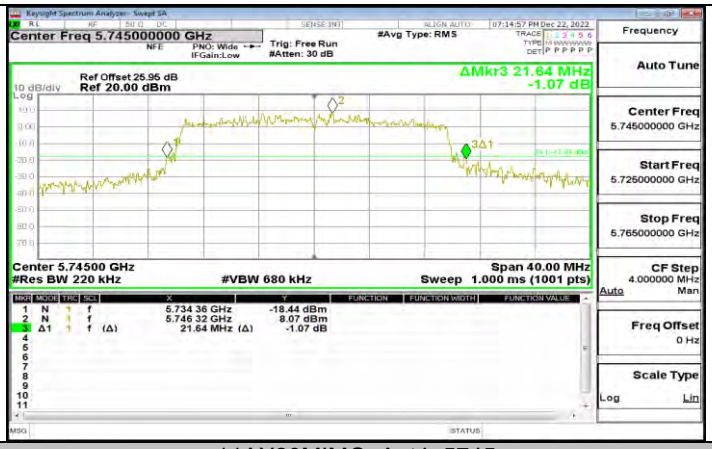
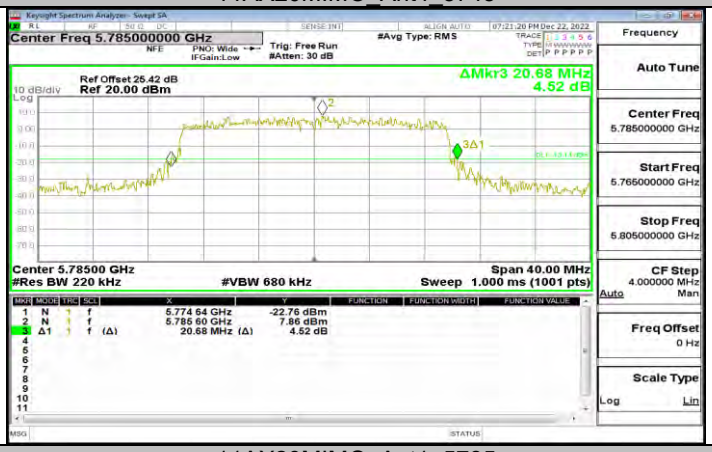
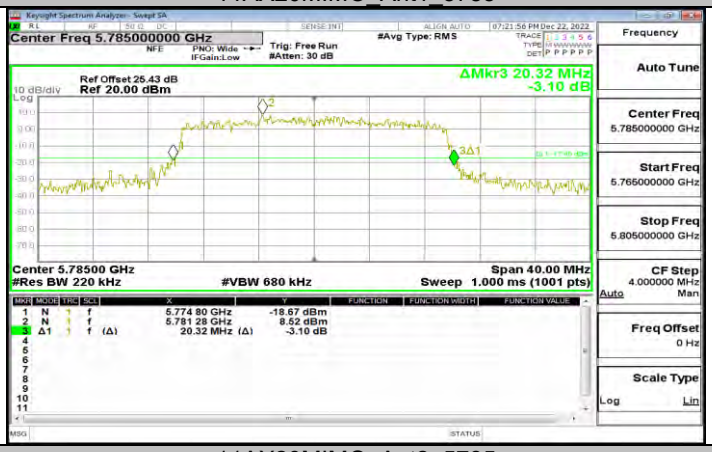


11AX20MIMO_Ant4_5745

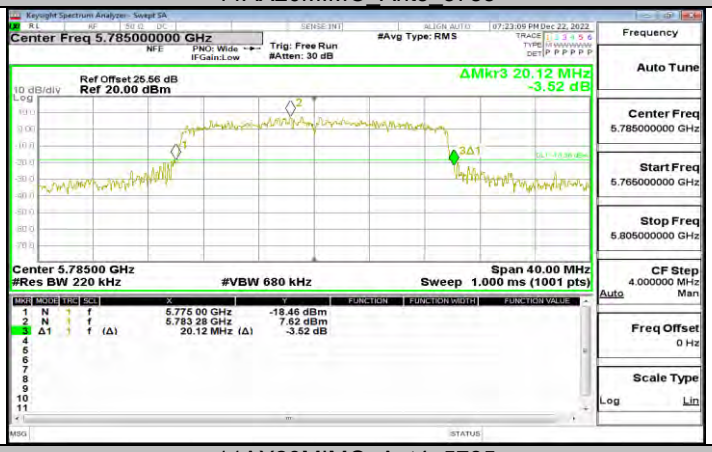


11AX20MIMO_Ant1_5785



11AX20MIMO_Ant2_5785

11AX20MIMO_Ant3_5785



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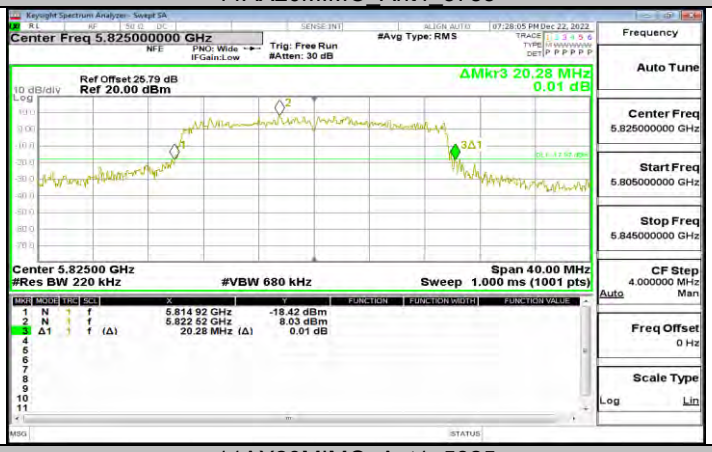
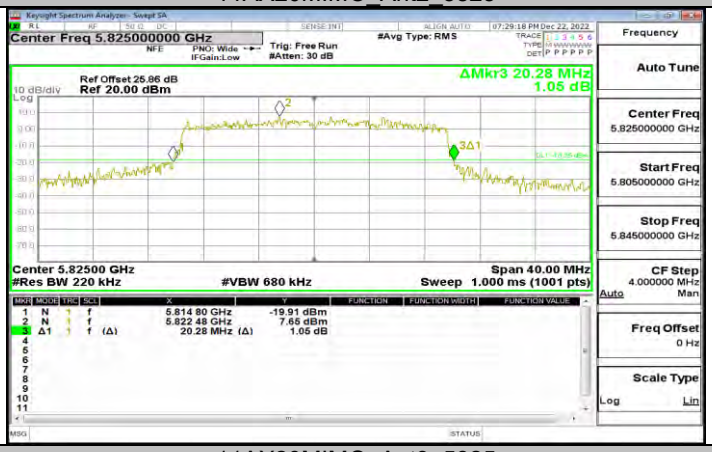


11AX20MIMO_Ant1_5825

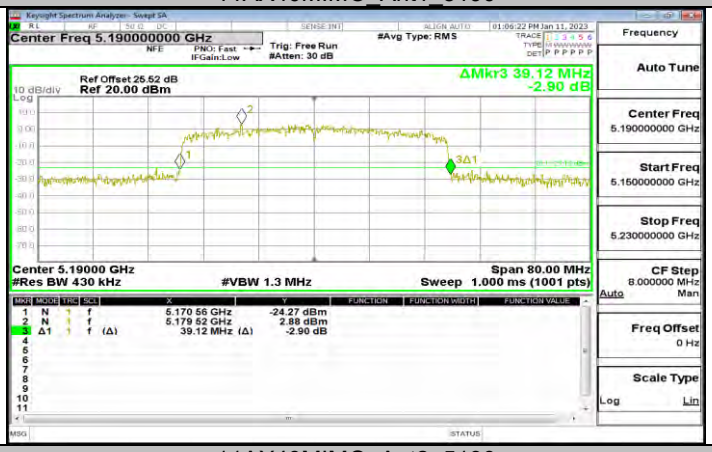
11AX20MIMO_Ant2_5825



11AX20MIMO_Ant3_5825

11AX20MIMO_Ant4_5825

11AX40MIMO_Ant1_5190



11AX40MIMO_Ant2_5190

11AX40MIMO_Ant3_5190