

Radio Test Report

Report No.: STS2310303W05

Issued for

Mikrotiks SIA

Unijas 2, Riga, LV-1039 Latvia

Product Name: Chateau Pro ax

Brand Name: MikroTik

Model Name: H53UiG-5HaxQ2HaxQ-US

Series Model(s): N/A

FCC ID: TV7H53U52HAX

Test Standards: FCC Part15.407

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.



TEST REPORT

Applicant's Name: Mikrotikls SIA
 Address: Unijas 2, Riga, LV-1039 Latvia
Manufacturer's Name.....: Mikrotikls SIA
 Address: Unijas 2, Riga, LV-1039 Latvia

Product Description

Product Name.....: Chateau Pro ax
 Brand Name.....: MikroTik
 Model Name: H53UiG-5HaxQ2HaxQ-US
 Series Model(s): N/A

Test Standards: FCC Part15.407

Test Procedure..... ANSI C63.10-2013

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

Date of Test

Date of receipt of test item.....: 11 Oct. 2023
 Date (s) of performance of tests: 11 Oct. 2023 ~ 14 Mar. 2024
 Date of Issue.....: 14 Mar. 2024
 Test Result.....: **Pass**

Testing Engineer : Aaron Bu

 (Aaron Bu)

Technical Manager : Chris Chen

 (Chris Chen)

Authorized Signatory : Bovey Yang

 (Bovey Yang)



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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	14 Mar. 2024	STS2310303W05	ALL	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

§ 15.407, KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

FCC Part 15.407		
FCC standard	Test Item	Results
15.207	AC Conducted Emission	PASS
15.407 (a) /15.407 (e)	26dB/6dB &99% Bandwidth	PASS
15.407(a)	Maximum Conducted Output Power	PASS
15.407(b)/15.205/15.209	Radiated Emission And (bandedge Emissions) Measurement	PASS
15.407(a)	Power Spectral Density	PASS
15.407(c)	Automatically Discontinue Transmission	PASS
15.203/15.204	Antenna Requirement	PASS

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2013.



1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.755\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.874\text{dB}$
3	All emissions, radiated 9K-30MHz	$\pm 3.80\text{dB}$
4	All emissions, radiated 30M-1GHz	$\pm 4.18\text{dB}$
5	All emissions, radiated 1G-6GHz	$\pm 4.90\text{dB}$
6	All emissions, radiated >6G	$\pm 5.24\text{dB}$
7	Conducted Emission (9KHz-150KHz)	$\pm 2.19\text{dB}$
8	Conducted Emission (150KHz-30MHz)	$\pm 2.53\text{dB}$
9	Occupied Channel Bandwidth	$\pm 3.5\%$
10	Power Spectral Density, conducted	$\pm 1.245\text{dB}$
11	Duty Cycle	$\pm 3.2\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Chateau Pro ax	
Brand Name	MikroTik	
Model Name	H53UiG-5HaxQ2HaxQ-US	
Series Model(s)	N/A	
Model Difference	N/A	
Product Description	The EUT is a Chateau Pro ax	
	Operation Frequency:	IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20): 5.180GHz-5.240GHz
		IEEE 802.11n(HT40)/ac(VHT40)/ax(HE40): 5.190GHz-5.230GHz
		IEEE 802.11ac(VHT80)/ax(HE80):5.210GHz
		IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20): 5.260GHz-5.320GHz
		IEEE 802.11 n(HT40)/ac(VHT40)/ax(HE40): 5.270GHz-5.310GHz
		IEEE 802.11ac(VHT80)/ax(HE80): 5.290GHz
		IEEE 802.11a/ n(HT20)/ac(VHT20) /ax(HE20): 5.500GHz-5.700GHz
		IEEE 802.11 n(HT40)/ac(VHT40)/ax(HE40): 5.510GHz-5.670GHz
		IEEE 802.11ac(VHT80)/ax(HE80): 5.530GHz-5.610GHz
IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20): 5.745GHz-5.825GHz		
IEEE 802.11a/ n(HT40)/ac(VHT40)/ax(HE40): 5.755GHz-5.795GHz		
IEEE 802.11ac(VHT80)/ax(HE80):5.775GHz		
IEEE 802.11a/ n(HT20)/ac(VHT20))/ax(HE20): 5.845GHz -5.885GHz		
IEEE 802.11a/ n(HT40)/ac(VHT40)/ax(HE40): 5835GHz -5875GHz		
IEEE 802.11ac(VHT80)/ax(HE80):5855 GHz		
Modulation Type:	802.11a(OFDM): BPSK,QPSK,16-QAM,64-QAM	
	802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM	
Antenna Type:	802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM	
	802.11ax(OFDM, OFDMA): BPSK,QPSK,16-QAM,64-QAM,256-QAM, 1024QAM	
Antenna Gain (dBi):	Omni	
Max.Output Power(Conducted):	ANT 1: 5.70 dBi	
	ANT 2: 6.01 dBi ANT 3: 3.99 dBi ANT 4: 6.01 dBi MIMO: 11.49 dBi	
Max.Output Power(Conducted):	23.82 dBm	
More details of EUT technical specification, please refer to the User Manual.		
Test Channel	Please refer to the Note 3.	



Adapter	Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 48V 1.35A
Hardware version number	r3
Software version number	RouterOS V7
Connecting I/O Port(s)	Please refer to the Note 1.

Note

- For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
- The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

3.

Operation Frequency of channel			
5.180GHz-5.240GHz		5.500GHz-5.720GHz	
Channel	Frequency	Channel	Frequency
36	5180	100	5500
38	5190	102	5510
40	5200	104	5520
42	5210	106	5530
44	5220	108	5540
46	5230	110	5550
48	5240	112	5560
		116	5580
		118	5590
5.260GHz-5.320GHz			
Channel	Frequency		
52	5260	120	5600
54	5270	122	5610
56	5280	124	5620
58	5290	126	5630
60	5300	128	5640
62	5310	132	5660
64	5320	134	5670
		136	5680
		140	5700
5.745GHz-5.825GHz		5.845 GHz -5.885 GHz	
Channel	Frequency	Channel	Frequency
149	5745	167	5835
151	5755	169	5845
153	5765	171	5855
157	5785	173	5865
159	5795	175	5875
161	5805	177	5885
165	5825		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Carrier Frequency Channel



5GHz:

For 802.11a/n(HT20)/ac(VHT20) /ax(HE20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
36	5180	52	5260
40	5200	60	5300
48	5240	64	5320

For 802.11a/n(HT20)/ac(VHT20) /ax(HE20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
100	5500	149	5745
116	5580	157	5785
140	5700	165	5825

For 802.11a/n(HT20)/ac(VHT20)/ax(HE20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
169	5845	177	5885
173	5865		

For 802.11 n(HT40)/ac(VHT40) /ax(HE40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
38	5190	54	5270
46	5230	62	5310

For 802.11 n(HT40)/ac(VHT40) /ax(HE40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
102	5510	151	5755
110	5550	159	5795
134	5670		

For 802.11 n(HT40)/ac(VHT40) /ax(HE40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
167	5835	175	5875

For 802.11ac (VHT80) /ax(HE80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
42	5210	58	5290

For 802.11ac (VHT80) /ax(HE80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
106	5530	155	5775
122	5610	171	5855

3. KDB 662911 D01 Multiple Transmitter Output v02r01

2) Directional Gain Calculations for In-Band Measurements

a) Basic methodology with NANT transmit antennas, each with the same directional gain GANT dBi, being driven by NANT transmitter outputs of equal power. Directional gain is to be computed as follows:

(i) If any transmit signals are correlated with each other,

$$\text{Directional gain} = GANT + 10 \log(NANT) \text{ dBi}$$

(ii) If all transmit signals are completely uncorrelated with each other,

$$\text{Directional gain} = GANT$$

ANT 1: 5.70 dBi

ANT 2: 6.01 dBi

ANT 3: 3.99 dBi

ANT 4: 6.01 dBi

MIMO: 11.49 dBi

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11a HT20 CH36&CH40&CH48	6 Mbps
Mode 2	TX IEEE 802.11a HT20 CH52&CH60&CH64	6 Mbps
Mode 3	TX IEEE 802.11a HT20 CH100&CH116&CH140	6 Mbps
Mode 4	TX IEEE 802.11a HT20 CH149&CH157&CH165	6 Mbps
Mode 5	TX IEEE 802.11a HT20 CH169&CH173&CH177	6 Mbps
Mode 6	TX IEEE 802.11n HT20 CH36&CH40&CH48	MCS 0
Mode 7	TX IEEE 802.11ac VHT20 CH36&CH40&CH48	NSS1 MCS0
Mode 8	TX IEEE 802.11ax HE20 CH36&CH40&CH48	NSS1 MCS0
Mode 9	TX IEEE 802.11n HT20 CH52&CH60&CH64	MCS 0
Mode 10	TX IEEE 802.11ac VHT20 CH52&CH60&CH64	NSS1 MCS0
Mode 11	TX IEEE 802.11ax HE20 CH52&CH60&CH64	NSS1 MCS0
Mode 12	TX IEEE 802.11n HT20 CH100&CH116&CH140	MCS 0
Mode 13	TX IEEE 802.11ac VHT20 CH100&CH116&CH140	NSS1 MCS0
Mode 14	TX IEEE ax HE20 CH100&CH116&CH140	NSS1 MCS0
Mode 15	TX IEEE 802.11n HT20 CH149&CH157&CH165	MCS 0
Mode 16	TX IEEE 802.11ac VHT20 CH149&CH157&CH165	NSS1 MCS0



Mode 17	TX IEEE 802.11ax HE20 CH149&CH157&CH165	NSS1 MCS0
Mode 18	TX IEEE 802.11n HT20 CH169&CH173&CH177	MCS 0
Mode 19	TX IEEE 802.11ac HT20 CH169&CH173&CH177	NSS1 MCS0
Mode 20	TX IEEE 802.11ax HE20 CH169&CH173&CH177	NSS1 MCS0
Mode 21	TX IEEE 802.11n HT40 CH38&CH46	MCS 0
Mode 22	TX IEEE 802.11ac VHT40 CH38&CH46	NSS1 MCS0
Mode 23	TX IEEE 802.11ax HE40 CH38&CH46	NSS1 MCS0
Mode 24	TX IEEE 802.11n HT40 CH54 &CH62	MCS 0
Mode 25	TX IEEE 802.11ac VHT40 CH54 &CH62	NSS1 MCS0
Mode 26	TX IEEE 802.11ax HE40 CH54 &CH62	NSS1 MCS0
Mode 27	TX IEEE 802.11n HT40 CH102&CH110&CH134	MCS 0
Mode 28	TX IEEE 802.11ac VHT40 CH102&CH110&CH134	NSS1 MCS0
Mode 29	TX IEEE 802.11ax HE40 CH102&CH110&CH134	NSS1 MCS0
Mode 30	TX IEEE 802.11n HT40 CH151&CH159	MCS 0
Mode 31	TX IEEE 802.11ac VHT40 CH151&CH159	NSS1 MCS0
Mode 32	TX IEEE 802.11ax HE40 CH151&CH159	NSS1 MCS0
Mode 33	TX IEEE 802.11n HT40 CH167&CH175	MCS 0
Mode 34	TX IEEE 802.11ac VHT40 CH167&CH175	NSS1 MCS0
Mode 35	TX IEEE 802.11ax HE40 CH167&CH175	NSS1 MCS0
Mode 36	TX IEEE 802.11ac VHT80 CH42	NSS1 MCS0
Mode 37	TX IEEE 802.11ax HE80 CH42	NSS1 MCS0
Mode 38	TX IEEE 802.11ac VHT80 CH58	NSS1 MCS0
Mode 39	TX IEEE 802.11ax HE80 CH58	NSS1 MCS0
Mode 40	TX IEEE 802.11ac VHT80 CH106&122	NSS1 MCS0
Mode 41	TX IEEE 802.11ax HE80 CH106&122	NSS1 MCS0
Mode 42	TX IEEE 802.11ac VHT80 CH155	NSS1 MCS0
Mode 43	TX IEEE 802.11ax HE80 CH155	NSS1 MCS0
Mode 44	TX IEEE 802.11ac VHT80 CH171	NSS1 MCS0
Mode 45	TX IEEE 802.11ax HE80 CH171	NSS1 MCS0

- Note: (1) The measurements are performed at the highest, middle, lowest available channels.
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.
(3) We have be tested for all available U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.
(4) The battery is fully-charged during the radited and RF conducted test.



AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 46: Keeping TX + WLAN Link

2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	ANT_3 Power Class	ANT_4 Power Class
WIFI(5G)	U-NII-1 (5150MHz-5250MHz)	802.11a	ANT A : 5.70 ANT B : 6.01 ANT C : 3.99 ANT D : 6.01 MIMO : 11.49	Low : 12	Low : 12	Low : 12	Low : 12
				Middle : 15	Middle : 15	Middle : 15	Middle : 15
				High : 14	High : 14	High : 14	High : 14
		802.11n(HT20)		Low : 12	Low : 12	Low : 12	Low : 12
				Middle : 16	Middle : 16	Middle : 16	Middle : 16
				High : 14	High : 14	High : 14	High : 14
		802.11n(HT40)		Low : 6	Low : 6	Low : 6	Low : 6
				High : 17	High : 17	High : 17	High : 17
		802.11ac(VHT20)		Low : 12	Low : 12	Low : 12	Low : 12
				Middle : 17	Middle : 17	Middle : 17	Middle : 17
				High : 14	High : 14	High : 14	High : 14
		802.11ac(VHT40)		Low : 6	Low : 6	Low : 6	Low : 6
				High : 18	High : 18	High : 18	High : 18
		802.11ac(VHT80)		4	4	4	4
		802.11ax(HE20)		Low : 12	Low : 12	Low : 12	Low : 12
				Middle : 17	Middle : 17	Middle : 17	Middle : 17
High : 15	High : 15		High : 15	High : 15			
802.11ax(HE40)	Low : 6	Low : 6	Low : 6	Low : 6			
	High : 18	High : 18	High : 18	High : 18			
802.11ax(HE80)	4	4	4	4			
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	ANT_3 Power Class	ANT_4 Power Class
WIFI(5G)	U-NII-2A (5250MHz-5350MHz)	802.11a	ANT A : 5.70 ANT B : 6.01 ANT C : 3.99 ANT D : 6.01 MIMO : 11.49	Low : 9	Low : 9	Low : 9	Low : 9
				Middle : 8	Middle : 8	Middle : 8	Middle : 8
				High : 8	High : 8	High : 8	High : 8
		802.11n(HT20)		Low : 10	Low : 10	Low : 10	Low : 10
				Middle : 9	Middle : 9	Middle : 9	Middle : 9
				High : 9	High : 9	High : 9	High : 9



		802.11n(HT40)	Low : 12	Low : 12	Low : 12	Low : 12
			High : 5	High : 5	High : 5	High : 5
		802.11ac(VHT20)	Low : 8	Low : 8	Low : 8	Low : 8
			Middle : 9	Middle : 9	Middle : 9	Middle : 9
		802.11ac(VHT40)	High : 8	High : 8	High : 8	High : 8
			Low : 12	Low : 12	Low : 12	Low : 12
		802.11ac(VHT80)	High : 5	High : 5	High : 5	High : 5
			4	4	4	4
		802.11ax(HE20)	Low : 9	Low : 9	Low : 9	Low : 9
			Middle : 9	Middle : 9	Middle : 9	Middle : 9
			High : 8	High : 8	High : 8	High : 8
		802.11ax(HE40)	Low : 12	Low : 12	Low : 12	Low : 12
			High : 4	High : 4	High : 4	High : 4
		802.11ax(HE80)	4	4	4	4

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	ANT_3 Power Class	ANT_4 Power Class
WIFI(5G)	U-NII-2C (5470MHz-5725MHz)	802.11a	ANT A : 5.70 ANT B : 6.01 ANT C : 3.99 ANT D : 6.01 MIMO : 11.49	Low : 8	Low : 8	Low : 8	Low : 8
				Middle : 10	Middle : 10	Middle : 10	Middle : 10
				High : 9	High : 9	High : 9	High : 9
		802.11n(HT20)		Low : 9	Low : 9	Low : 9	Low : 9
				Middle : 10	Middle : 10	Middle : 10	Middle : 10
				High : 9	High : 9	High : 9	High : 9
		802.11n(HT40)		Low : 6	Low : 6	Low : 6	Low : 6
				Middle : 12	Middle : 12	Middle : 12	Middle : 12
				High : 11	High : 11	High : 11	High : 11
		802.11ac(VHT20)		Low : 9	Low : 9	Low : 9	Low : 9
				Middle : 10	Middle : 10	Middle : 10	Middle : 10
				High : 9	High : 9	High : 9	High : 9
		802.11ac(VHT40)		Low : 6	Low : 6	Low : 6	Low : 6
				Middle : 12	Middle : 12	Middle : 12	Middle : 12
				High : 11	High : 11	High : 11	High : 11
		802.11ac(VHT80)		Low : 6	Low : 6	Low : 6	Low : 6
High : 13	High : 13		High : 13	High : 13			
802.11ax(HE20)	Low : 9	Low : 9	Low : 9	Low : 9			
	Middle : 9	Middle : 9	Middle : 9	Middle : 9			
	High : 9	High : 9	High : 9	High : 9			



		802.11ax(HE40)	Low : 6	Low : 6	Low : 6	Low : 6
		802.11ax(HE80)	Middle : 12	Middle : 12	Middle : 12	Middle : 12
			High : 11	High : 11	High : 11	High : 11
			Low : 6	Low : 6	Low : 6	Low : 6
			High : 13	High : 13	High : 13	High : 13

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	ANT_3 Power Class	ANT_4 Power Class
WIFI(5.8G)	U-NII-3 (5725MHz-5895MHz)	802.11a	ANT A : 5.70	20	20	20	20
		802.11n(HT20)		20	20	20	20
		802.11n(HT40)		20	20	20	20
		802.11ac(VHT20)	ANT B : 6.01	20	20	20	20
		802.11ac(VHT40)		20	20	20	20
		802.11ac(VHT80)	ANT D : 6.01	15	15	15	15
		802.11ax(HE20)		20	20	20	20
		802.11ax(HE40)	MIMO : 11.49	20	20	20	20
		802.11ax(HE80)		15	15	15	15



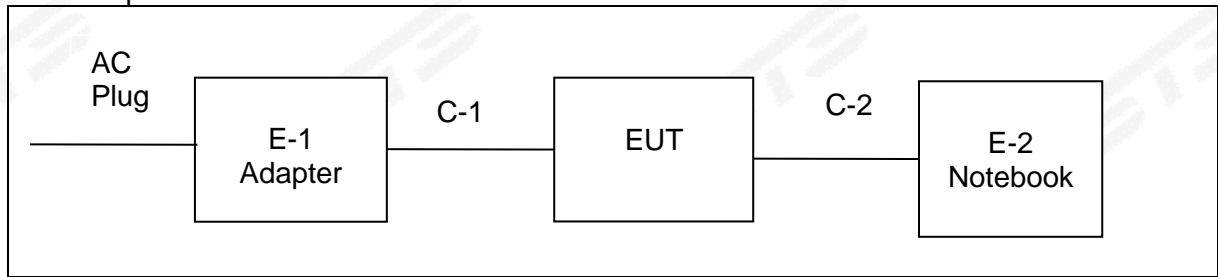


RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	ANT_3 Power Class	ANT_4 Power Class
WIFI(5.9G)	U-NII-4 (5725MHz-5895MHz)	802.11a	ANT A : 5.70 ANT B : 6.01 ANT C : 3.99 ANT D : 6.01 MIMO : 11.49	Low : 20	Low : 20	Low : 20	Low : 20
				Middle : 20	Middle : 20	Middle : 20	Middle : 20
				High : 10	High : 10	High : 10	High : 10
		802.11n(HT20)		Low : 20	Low : 20	Low : 20	Low : 20
				Middle : 20	Middle : 20	Middle : 20	Middle : 20
				High : 10	High : 10	High : 10	High : 10
		802.11n(HT40)		Low : 19	Low : 19	Low : 19	Low : 19
				High : 11	High : 11	High : 11	High : 11
		802.11ac(VHT20)		Low : 20	Low : 20	Low : 20	Low : 20
				Middle : 20	Middle : 20	Middle : 20	Middle : 20
				High : 10	High : 10	High : 10	High : 10
		802.11ac(VHT40)		Low : 19	Low : 19	Low : 19	Low : 19
				High : 11	High : 11	High : 11	High : 11
		802.11ac(VHT80)		8	8	8	8
		802.11ax(HE20)		Low : 20	Low : 20	Low : 20	Low : 20
				Middle : 20	Middle : 20	Middle : 20	Middle : 20
				High : 10	High : 10	High : 10	High : 10
		802.11ax(HE40)		Low : 19	Low : 19	Low : 19	Low : 19
				High : 11	High : 11	High : 11	High : 11
		802.11ax(HE80)		8	8	8	8

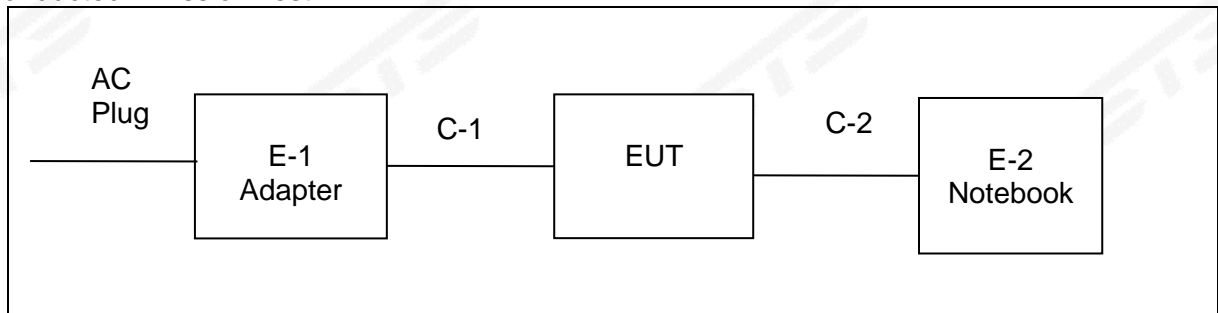


2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test



2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
	Adapter	N/A	SAW65C-480-1350U	N/A	N/A
	DC Cable	N/A	N/A	150cm	NO

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
	USB Cable	N/A	N/A	150cm	N/A
	Notebook	LENOVO	Think Pad E470	N/A	N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

RF Radiation Test Equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Temperature & Humidity	SW-108	SuWei	N/A	2024.02.23	2025.02.22
Pre-Amplifier(0.1M-3GHz)	EM	EM330	060665	2024.02.23	2025.02.22
Pre-Amplifier(1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2023.09.26	2024.09.25
Pre-Amplifier(18G-40GHz)	SKET	LNPA_1840-50	SK2018101801	2024.02.23	2025.02.22
Active loop Antenna	ZHINAN	ZN30900C	16035	2023.02.28	2025.02.27
Bilog Antenna	TESEQ	CBL6111D	34678	2022.09.30	2024.09.29
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2023.09.24	2025.09.23
Horn Antenna	A-INFOMW	LB-180400-KF	J211020657	2023.10.10	2025.10.09
Positioning Controller	MF	MF-7802	MF-780208587	N/A	N/A
Signal Analyzer	R&S	FSV 40-N	101823	2023.09.26	2024.09.25
Switch Control Box	N/A	N/A	N/A	N/A	N/A
Filter Box	BALUN Technology	SU319E	BL-SZ1530051	N/A	N/A
Antenna Mast	MF	MFA-440H	N/A	N/A	N/A
Turn Table	MF	SC100_1	60531	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N/A	N/A
DC power supply	HONGSHENGFENG	DPS-305AF	17064939	2023.09.26	2024.09.25
Test SW	EZ-EMC	Ver.STSLAB-03A1 RE			
Conduction Test equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2023.09.25	2024.09.24
Limtter	CYBERTEK	EM5010	N/A	2023.09.25	2024.09.24
LISN	R&S	ENV216	101242	2023.09.25	2024.09.24
LISN	EMCO	3810/2NM	23625	2023.09.25	2024.09.24
Temperature & Humidity	SW-108	SuWei	N/A	2024.02.23	2025.02.22
Test SW	EZ-EMC	Ver.STSLAB-03A1 CE			
RF Connected Test					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Analyzer	Agilent	N9020A	MY51510623	2024.02.23	2025.02.22
Switch control box	MW	MW100-RFCB	N/A	N/A	N/A
Temperature & Humidity	SW-108	SuWei	N/A	2024.02.23	2025.02.22
Test SW	MW	MTS 8310_2.0.0.0			

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

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

0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

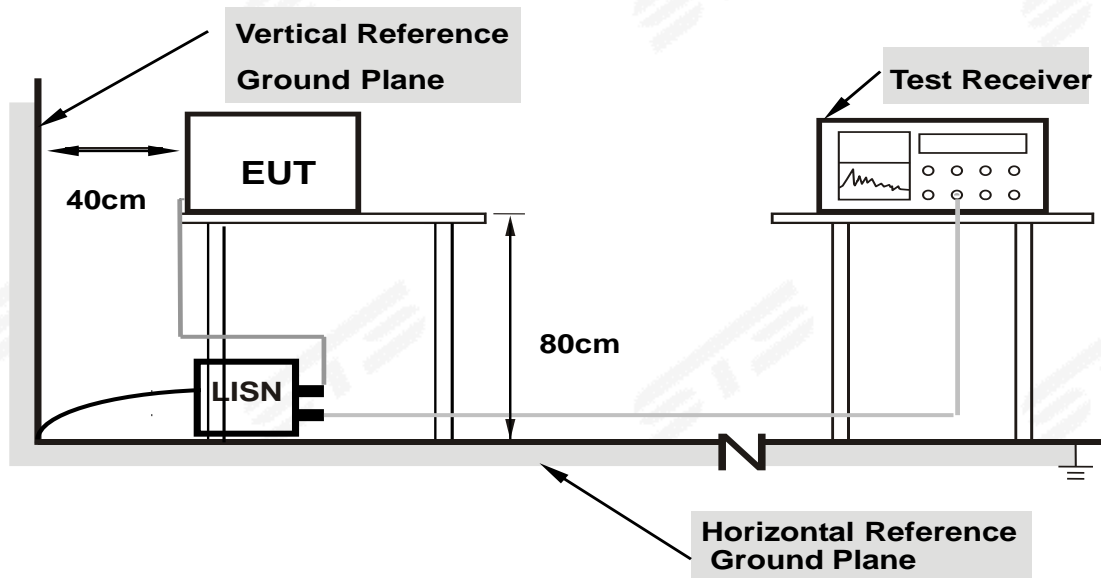
3.1.2 TEST PROCEDURE

- The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN is at least 80 cm from the nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1. Support units were connected to second LISN.

- Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.**

3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

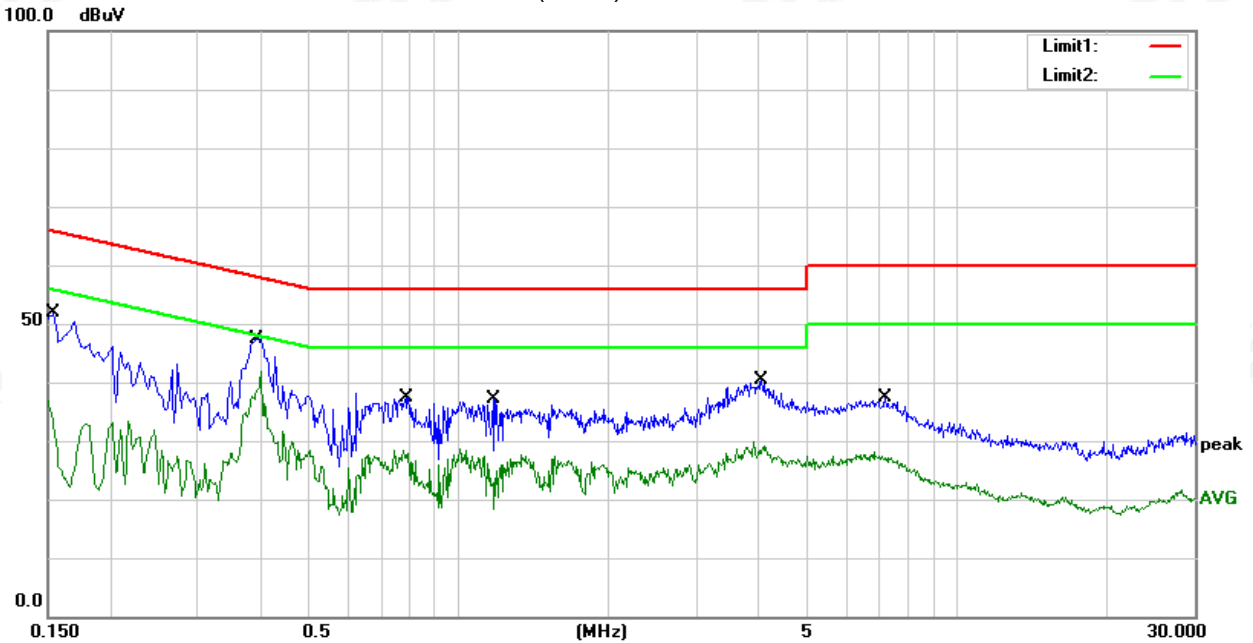
3.1.6 TEST RESULTS

Temperature:	26.2(C)	Relative Humidity:	54%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode :	Mode 46		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1540	32.09	19.77	51.86	65.78	-13.92	QP
2	0.1540	17.20	19.77	36.97	55.78	-18.81	AVG
3	0.3940	27.47	20.01	47.48	57.98	-10.50	QP
4	0.3940	21.79	20.01	41.80	47.98	-6.18	AVG
5	0.7860	17.52	19.80	37.32	56.00	-18.68	QP
6	0.7860	8.63	19.80	28.43	46.00	-17.57	AVG
7	1.1780	17.31	19.76	37.07	56.00	-18.93	QP
8	1.1780	8.88	19.76	28.64	46.00	-17.36	AVG
9	4.0620	20.50	19.81	40.31	56.00	-15.69	QP
10	4.0620	10.17	19.81	29.98	46.00	-16.02	AVG
11	7.1860	17.34	19.91	37.25	60.00	-22.75	QP
12	7.1860	8.10	19.91	28.01	50.00	-21.99	AVG

Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor=LISN factor+Cable loss+Limiter (10dB)



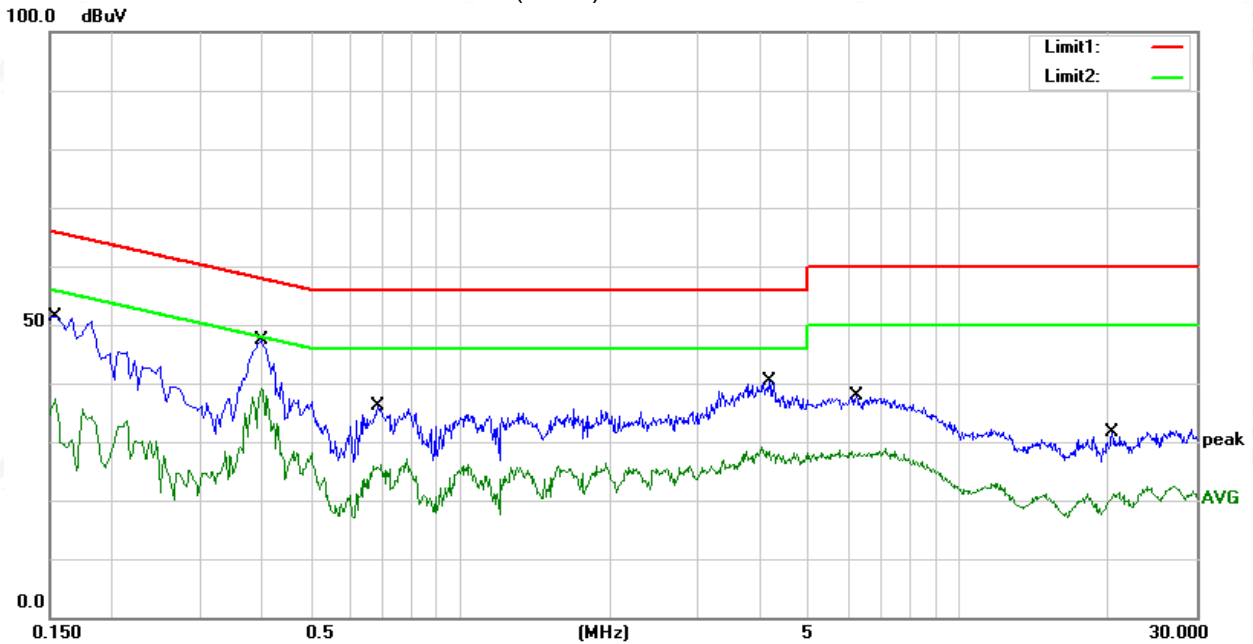


Temperature:	26.2(C)	Relative Humidity:	54%RH
Test Voltage	AC 120V/60Hz	Phase:	N
Test Mode	Mode 46		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1540	31.67	19.77	51.44	65.78	-14.34	QP
2	0.1540	17.72	19.77	37.49	55.78	-18.29	AVG
3	0.3980	27.26	20.00	47.26	57.90	-10.64	QP
4	0.3980	19.24	20.00	39.24	47.90	-8.66	AVG
5	0.6860	16.35	19.82	36.17	56.00	-19.83	QP
6	0.6860	7.42	19.82	27.24	46.00	-18.76	AVG
7	4.1580	20.47	19.81	40.28	56.00	-15.72	QP
8	4.1580	9.37	19.81	29.18	46.00	-16.82	AVG
9	6.2340	18.09	19.84	37.93	60.00	-22.07	QP
10	6.2340	9.03	19.84	28.87	50.00	-21.13	AVG
11	20.3220	11.06	20.48	31.54	60.00	-28.46	QP
12	20.3220	0.79	20.48	21.27	50.00	-28.73	AVG

Remark:

- 1. All readings are Quasi-Peak and Average values
- 2. Margin = Result (Result =Reading + Factor)–Limit
- 3. Factor=LISN factor+Cable loss+Limiter (10dB)



3.2 RADIATED EMISSION AND (BANDEDGE) MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.407(b)7&15.205/209(a), then the limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	68.2	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15E.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
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	Above 38.6
13.36-13.41			

Note: In case the emission radiated emission above 1000MHz fall within the restricted band the restricted frequency bands, the peak limit is 74 dBuV/m.

LIMITS OF EMISSIONS OUTSIDE OF THE FREQUENCY BANDS

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
 - (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note: dBuV/m(at 3M) = EIRP(dBm) + 95.2.

Peak Limit = -27dBm/MHz + 95.2 = 68.2 dBuV/m.

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier harmonic (Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- d. 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 QuasiPeak detector mode will be re-measured.
- e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

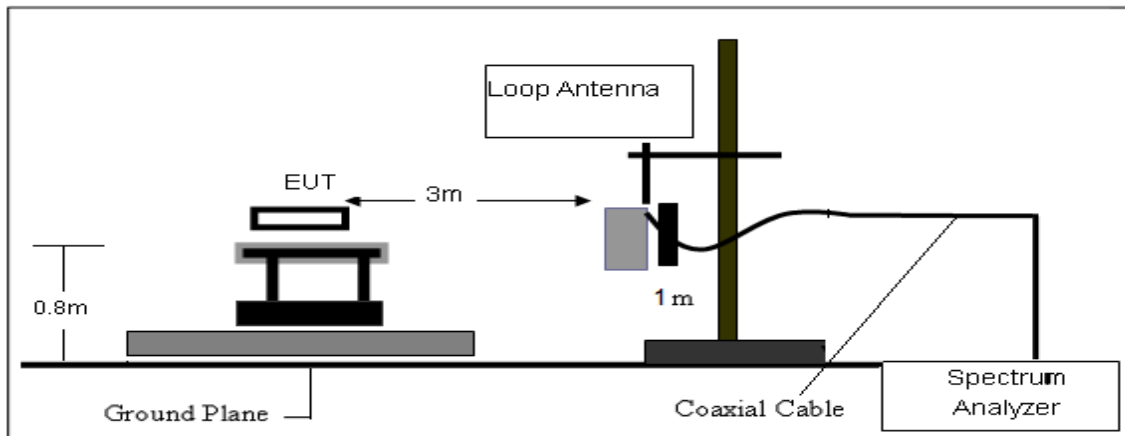
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.2 DEVIATION FROM TEST STANDARD

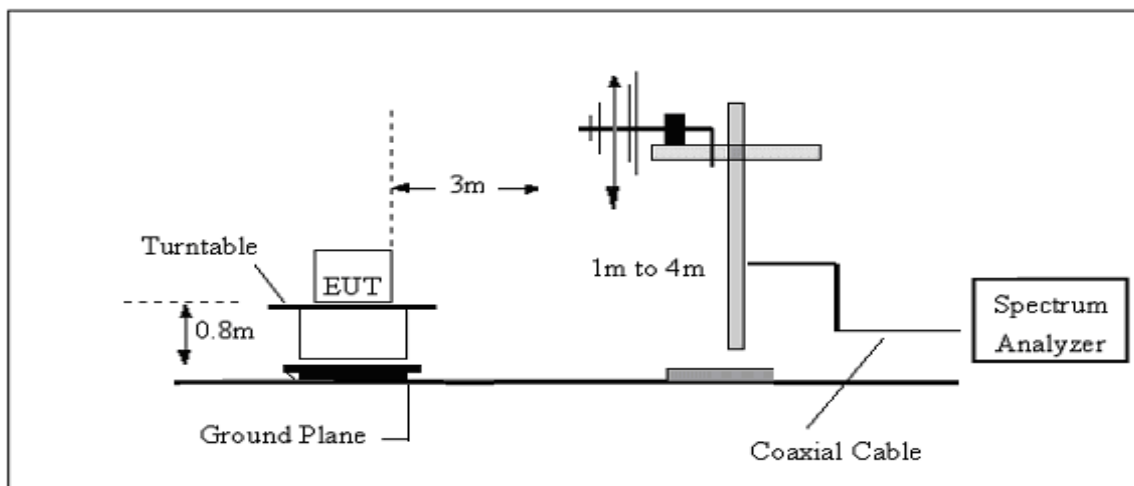
No deviation

3.2.3 TEST SETUP

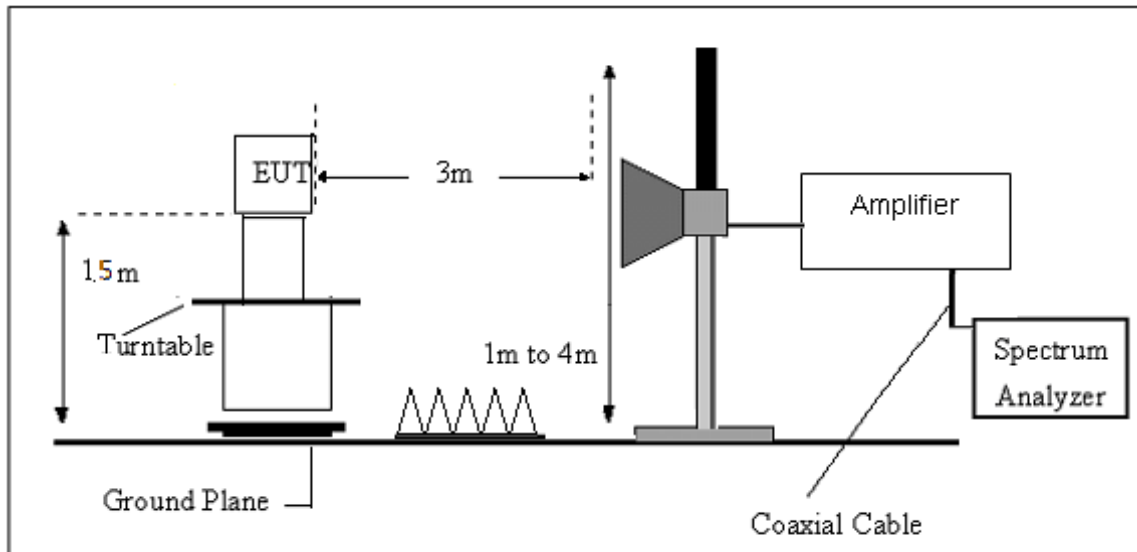
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency (MHz)	FS (dB μ V/m)	RA (dB μ V/m)	AF (dB)	CL (dB)	AG (dB)	Factor (dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$

**3.2.6 TEST RESULTS (Between 9KHz – 30 MHz)**

Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	AC 120V/60Hz	Polarization :	--
Test Mode:	TX Mode		

Freq. (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	State P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (Between 30MHz – 1GHz)

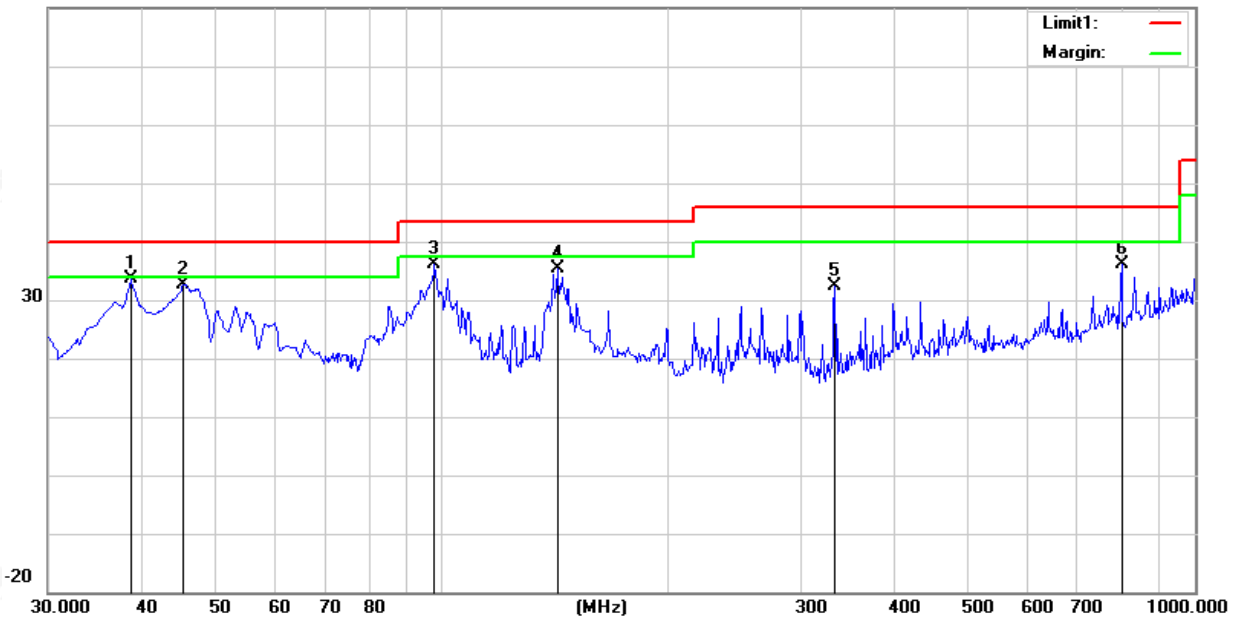
Temperature	23.1(C)	Relative Humidity:	60%RH
Test Voltage	AC 120V/60Hz	Polarization:	Horizontal
Test Mode	Mode 1~45(Mode 30 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	38.7300	50.92	-17.36	33.56	40.00	-6.44	peak
2	45.5200	53.64	-20.91	32.73	40.00	-7.27	peak
3	97.9000	56.52	-20.46	36.06	43.50	-7.44	peak
4	142.5200	53.62	-18.18	35.44	43.50	-8.06	peak
5	332.6400	46.07	-13.62	32.45	46.00	-13.55	peak
6	799.2100	38.28	-2.04	36.24	46.00	-9.76	peak

Remark:

1. Margin = Result (Result =Reading + Factor)-Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m



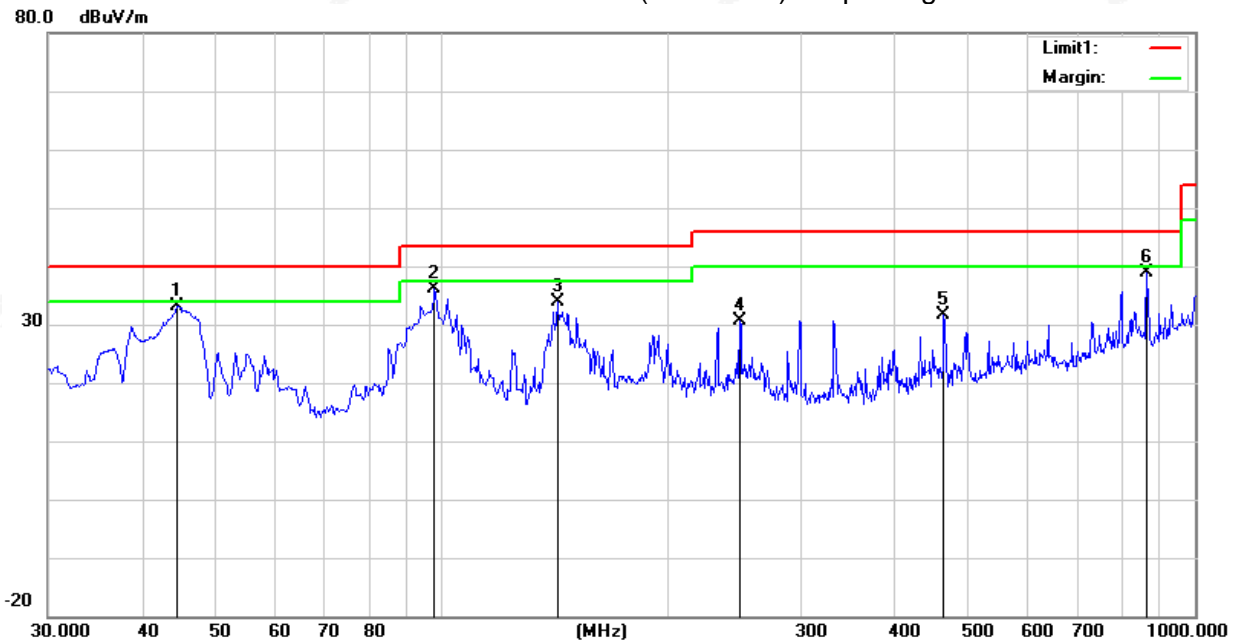


Temperature	23.1(C)	Relative Humidity:	60%RH
Test Voltage	AC 120V/60Hz	Polarization:	Vertical
Test Mode	Mode 1~45(Mode 30 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	44.5500	53.66	-20.43	33.23	40.00	-6.77	peak
2	97.9000	56.51	-20.46	36.05	43.50	-7.45	peak
3	142.5200	52.05	-18.18	33.87	43.50	-9.63	peak
4	249.2200	46.89	-16.27	30.62	46.00	-15.38	peak
5	465.5300	40.86	-9.21	31.65	46.00	-14.35	peak
6	864.2000	39.33	-0.46	38.87	46.00	-7.13	peak

Remark:

- 1. $Margin = Result (Result = Reading + Factor) - Limit$
- 2. $Factor = Antenna\ factor + Cable\ attenuation\ factor(cable\ loss) - Amplifier\ gain$





3.2.8 TEST RESULTS (Above 1000 MHz)

U-NII-1 5150-5250MHz

U-NII 1										
Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11ax40/ 5190 MHz)										
3254.43	43.98	44.70	6.70	28.20	-9.80	34.18	68.20	-34.02	Pk	Vertical
3254.43	42.19	44.70	6.70	28.20	-9.80	32.39	54.00	-21.61	AV	Vertical
3259.65	43.76	44.70	6.70	28.20	-9.80	33.96	68.20	-34.24	Pk	Horizontal
3259.65	41.04	44.70	6.70	28.20	-9.80	31.24	54.00	-22.76	AV	Horizontal
3985.90	39.34	44.20	7.90	29.70	-6.60	32.74	74.00	-41.26	Pk	Vertical
3985.90	36.13	44.20	7.90	29.70	-6.60	29.53	54.00	-24.47	AV	Vertical
3995.36	39.17	44.20	7.90	29.70	-6.60	32.57	74.00	-41.43	Pk	Horizontal
3995.36	35.64	44.20	7.90	29.70	-6.60	29.04	54.00	-24.96	AV	Horizontal
7235.14	37.71	43.50	11.40	35.50	3.40	41.11	68.20	-27.09	Pk	Vertical
7235.14	33.92	43.50	11.40	35.50	3.40	37.32	54.00	-16.68	AV	Vertical
7236.21	37.13	43.50	11.40	35.50	3.40	40.53	68.20	-27.67	Pk	Horizontal
7236.21	33.75	43.50	11.40	35.50	3.40	37.15	54.00	-16.85	AV	Horizontal
10360.41	39.00	44.50	13.80	38.80	8.10	47.10	68.20	-21.10	Pk	Vertical
10360.41	36.77	44.50	13.80	38.80	8.10	44.87	54.00	-9.13	AV	Vertical
10360.02	39.24	44.50	13.80	38.80	8.10	47.34	68.20	-20.86	Pk	Horizontal
10360.02	36.90	44.50	13.80	38.80	8.10	45.00	54.00	-9.00	AV	Horizontal
11020.19	33.71	43.60	14.30	39.50	10.20	43.91	74.00	-30.09	Pk	Vertical
11020.19	31.10	43.60	14.30	39.50	10.20	41.30	54.00	-12.70	AV	Vertical
11025.50	33.49	43.60	14.30	39.50	10.20	43.69	74.00	-30.31	Pk	Horizontal
11025.50	29.90	43.60	14.30	39.50	10.20	40.10	54.00	-13.90	AV	Horizontal
13294.96	32.58	42.60	15.90	38.90	12.20	44.78	74.00	-29.22	Pk	Vertical
13294.96	28.63	42.60	15.90	38.90	12.20	40.83	54.00	-13.17	AV	Vertical
13282.83	32.57	42.60	15.90	38.90	12.20	44.77	74.00	-29.23	Pk	Horizontal
13282.83	29.80	42.60	15.90	38.90	12.20	42.00	54.00	-12.00	AV	Horizontal
High Channel (802.11ax40/ 5230 MHz)										
3245.67	44.00	44.70	6.70	28.20	-9.80	34.20	68.20	-34.00	Pk	Vertical
3245.67	40.95	44.70	6.70	28.20	-9.80	31.15	54.00	-22.85	AV	Vertical
3251.90	44.86	44.70	6.70	28.20	-9.80	35.06	68.20	-33.14	Pk	Horizontal
3251.90	40.99	44.70	6.70	28.20	-9.80	31.19	54.00	-22.81	AV	Horizontal
3995.10	39.65	44.20	7.90	29.70	-6.60	33.05	74.00	-40.95	Pk	Vertical
3995.10	36.33	44.20	7.90	29.70	-6.60	29.73	54.00	-24.27	AV	Vertical
3982.31	40.00	44.20	7.90	29.70	-6.60	33.40	74.00	-40.60	Pk	Horizontal
3982.31	36.53	44.20	7.90	29.70	-6.60	29.93	54.00	-24.07	AV	Horizontal
7231.77	36.65	43.50	11.40	35.50	3.40	40.05	68.20	-28.15	Pk	Vertical
7231.77	34.40	43.50	11.40	35.50	3.40	37.80	54.00	-16.20	AV	Vertical
7232.51	36.85	43.50	11.40	35.50	3.40	40.25	68.20	-27.95	Pk	Horizontal
7232.51	33.95	43.50	11.40	35.50	3.40	37.35	54.00	-16.65	AV	Horizontal
10480.37	38.98	44.50	13.80	38.80	8.10	47.08	68.20	-21.12	Pk	Vertical
10480.37	36.62	44.50	13.80	38.80	8.10	44.72	54.00	-9.28	AV	Vertical
10480.29	39.55	44.50	13.80	38.80	8.10	47.65	68.20	-20.55	Pk	Horizontal
10480.29	36.35	44.50	13.80	38.80	8.10	44.45	54.00	-9.55	AV	Horizontal
11020.32	33.30	43.60	14.30	39.50	10.20	43.50	74.00	-30.50	Pk	Vertical
11020.32	30.28	43.60	14.30	39.50	10.20	40.48	54.00	-13.52	AV	Vertical
11033.90	34.02	43.60	14.30	39.50	10.20	44.22	74.00	-29.78	Pk	Horizontal
11033.90	29.88	43.60	14.30	39.50	10.20	40.08	54.00	-13.92	AV	Horizontal
13283.73	32.33	42.60	15.90	38.90	12.20	44.53	74.00	-29.47	Pk	Vertical
13283.73	28.57	42.60	15.90	38.90	12.20	40.77	54.00	-13.23	AV	Vertical
13294.77	31.84	42.60	15.90	38.90	12.20	44.04	74.00	-29.96	Pk	Horizontal
13294.77	29.84	42.60	15.90	38.90	12.20	42.04	54.00	-11.96	AV	Horizontal



U-NII-2A 5250-5350MHz

U-NII 2A										
Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11ax40/ 5270 MHz)										
3259.57	43.81	44.70	6.70	28.20	-9.80	34.01	68.20	-34.19	Pk	Vertical
3259.57	41.04	44.70	6.70	28.20	-9.80	31.24	54.00	-22.76	AV	Vertical
3254.03	44.02	44.70	6.70	28.20	-9.80	34.22	68.20	-33.98	Pk	Horizontal
3254.03	40.82	44.70	6.70	28.20	-9.80	31.02	54.00	-22.98	AV	Horizontal
3981.85	39.62	44.20	7.90	29.70	-6.60	33.02	74.00	-40.98	Pk	Vertical
3981.85	36.82	44.20	7.90	29.70	-6.60	30.22	54.00	-23.78	AV	Vertical
3989.85	39.35	44.20	7.90	29.70	-6.60	32.75	74.00	-41.25	Pk	Horizontal
3989.85	36.50	44.20	7.90	29.70	-6.60	29.90	54.00	-24.10	AV	Horizontal
7220.51	37.58	43.50	11.40	35.50	3.40	40.98	68.20	-27.22	Pk	Vertical
7220.51	34.68	43.50	11.40	35.50	3.40	38.08	54.00	-15.92	AV	Vertical
7219.68	37.93	43.50	11.40	35.50	3.40	41.33	68.20	-26.87	Pk	Horizontal
7219.68	33.96	43.50	11.40	35.50	3.40	37.36	54.00	-16.64	AV	Horizontal
10360.27	39.18	44.50	13.80	38.80	8.10	47.28	68.20	-20.92	Pk	Vertical
10360.27	37.13	44.50	13.80	38.80	8.10	45.23	54.00	-8.77	AV	Vertical
10360.08	38.71	44.50	13.80	38.80	8.10	46.81	68.20	-21.39	Pk	Horizontal
10360.08	36.66	44.50	13.80	38.80	8.10	44.76	54.00	-9.24	AV	Horizontal
11033.46	34.18	43.60	14.30	39.50	10.20	44.38	74.00	-29.62	Pk	Vertical
11033.46	31.04	43.60	14.30	39.50	10.20	41.24	54.00	-12.76	AV	Vertical
11026.03	33.85	43.60	14.30	39.50	10.20	44.05	74.00	-29.95	Pk	Horizontal
11026.03	30.07	43.60	14.30	39.50	10.20	40.27	54.00	-13.73	AV	Horizontal
13298.56	32.96	42.60	15.90	38.90	12.20	45.16	74.00	-28.84	Pk	Vertical
13298.56	29.44	42.60	15.90	38.90	12.20	41.64	54.00	-12.36	AV	Vertical
13280.00	32.71	42.60	15.90	38.90	12.20	44.91	74.00	-29.09	Pk	Horizontal
13280.00	29.53	42.60	15.90	38.90	12.20	41.73	54.00	-12.27	AV	Horizontal
High Channel (802.11ax40/ 5310 MHz)										
3259.65	43.97	44.70	6.70	28.20	-9.80	34.17	68.20	-34.03	Pk	Vertical
3259.65	41.27	44.70	6.70	28.20	-9.80	31.47	54.00	-22.53	AV	Vertical
3248.01	44.90	44.70	6.70	28.20	-9.80	35.10	68.20	-33.10	Pk	Horizontal
3248.01	40.81	44.70	6.70	28.20	-9.80	31.01	54.00	-22.99	AV	Horizontal
3994.14	39.00	44.20	7.90	29.70	-6.60	32.40	74.00	-41.60	Pk	Vertical
3994.14	36.96	44.20	7.90	29.70	-6.60	30.36	54.00	-23.64	AV	Vertical
3988.68	39.89	44.20	7.90	29.70	-6.60	33.29	74.00	-40.71	Pk	Horizontal
3988.68	36.12	44.20	7.90	29.70	-6.60	29.52	54.00	-24.48	AV	Horizontal
7232.56	37.07	43.50	11.40	35.50	3.40	40.47	68.20	-27.73	Pk	Vertical
7232.56	34.18	43.50	11.40	35.50	3.40	37.58	54.00	-16.42	AV	Vertical
7225.53	37.80	43.50	11.40	35.50	3.40	41.20	68.20	-27.00	Pk	Horizontal
7225.53	34.33	43.50	11.40	35.50	3.40	37.73	54.00	-16.27	AV	Horizontal
10480.12	39.06	44.50	13.80	38.80	8.10	47.16	68.20	-21.04	Pk	Vertical
10480.12	36.68	44.50	13.80	38.80	8.10	44.78	54.00	-9.22	AV	Vertical
10480.34	38.71	44.50	13.80	38.80	8.10	46.81	68.20	-21.39	Pk	Horizontal
10480.34	36.47	44.50	13.80	38.80	8.10	44.57	54.00	-9.43	AV	Horizontal
11021.84	33.63	43.60	14.30	39.50	10.20	43.83	74.00	-30.17	Pk	Vertical
11021.84	31.14	43.60	14.30	39.50	10.20	41.34	54.00	-12.66	AV	Vertical
11023.04	33.76	43.60	14.30	39.50	10.20	43.96	74.00	-30.04	Pk	Horizontal
11023.04	29.75	43.60	14.30	39.50	10.20	39.95	54.00	-14.05	AV	Horizontal
13294.70	32.42	42.60	15.90	38.90	12.20	44.62	74.00	-29.38	Pk	Vertical
13294.70	29.26	42.60	15.90	38.90	12.20	41.46	54.00	-12.54	AV	Vertical
13295.34	31.97	42.60	15.90	38.90	12.20	44.17	74.00	-29.83	Pk	Horizontal
13295.34	29.21	42.60	15.90	38.90	12.20	41.41	54.00	-12.59	AV	Horizontal

Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (VHT-20), 802.11ax(HE20),802.11ax(HE40),802.11ac (VHT-40), 802.11ac (VHT-80),802.11ax(HE80) the worst case is 802.11ax(HE40).
- The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.



U-NII-2C 5470-5725MHz

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Corrected Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11ac80/ 5530 MHz)										
3256.23	44.50	44.70	6.70	28.20	-9.80	34.70	68.20	-33.50	Pk	Vertical
3256.23	41.89	44.70	6.70	28.20	-9.80	32.09	54.00	-21.91	AV	Vertical
3250.12	44.11	44.70	6.70	28.20	-9.80	34.31	68.20	-33.89	Pk	Horizontal
3250.12	41.02	44.70	6.70	28.20	-9.80	31.22	54.00	-22.78	AV	Horizontal
3994.35	39.98	44.20	7.90	29.70	-6.60	33.38	74.00	-40.62	Pk	Vertical
3994.35	35.71	44.20	7.90	29.70	-6.60	29.11	54.00	-24.89	AV	Vertical
3982.85	39.88	44.20	7.90	29.70	-6.60	33.28	74.00	-40.72	Pk	Horizontal
3982.85	36.53	44.20	7.90	29.70	-6.60	29.93	54.00	-24.07	AV	Horizontal
7223.14	37.02	43.50	11.40	35.50	3.40	40.42	68.20	-27.78	Pk	Vertical
7223.14	33.63	43.50	11.40	35.50	3.40	37.03	54.00	-16.97	AV	Vertical
7223.53	37.40	43.50	11.40	35.50	3.40	40.80	68.20	-27.40	Pk	Horizontal
7223.53	33.77	43.50	11.40	35.50	3.40	37.17	54.00	-16.83	AV	Horizontal
10360.40	40.11	44.50	13.80	38.80	8.10	48.21	68.20	-19.99	Pk	Vertical
10360.40	37.13	44.50	13.80	38.80	8.10	45.23	54.00	-8.77	AV	Vertical
10359.99	40.08	44.50	13.80	38.80	8.10	48.18	68.20	-20.02	Pk	Horizontal
10359.99	36.01	44.50	13.80	38.80	8.10	44.11	54.00	-9.89	AV	Horizontal
11032.92	33.91	43.60	14.30	39.50	10.20	44.11	74.00	-29.89	Pk	Vertical
11032.92	30.81	43.60	14.30	39.50	10.20	41.01	54.00	-12.99	AV	Vertical
11035.42	33.74	43.60	14.30	39.50	10.20	43.94	74.00	-30.06	Pk	Horizontal
11035.42	31.00	43.60	14.30	39.50	10.20	41.20	54.00	-12.80	AV	Horizontal
13296.37	32.35	42.60	15.90	38.90	12.20	44.55	74.00	-29.45	Pk	Vertical
13296.37	29.05	42.60	15.90	38.90	12.20	41.25	54.00	-12.75	AV	Vertical
13287.22	32.47	42.60	15.90	38.90	12.20	44.67	74.00	-29.33	Pk	Horizontal
13287.22	29.51	42.60	15.90	38.90	12.20	41.71	54.00	-12.29	AV	Horizontal
High Channel (802.11ac80/ 5610 MHz)										
3261.02	44.25	44.70	6.70	28.20	-9.80	34.45	74.00	-39.55	Pk	Vertical
3261.02	41.29	44.70	6.70	28.20	-9.80	31.49	54.00	-22.51	AV	Vertical
3250.43	44.39	44.70	6.70	28.20	-9.80	34.59	68.20	-33.61	Pk	Horizontal
3250.43	41.13	44.70	6.70	28.20	-9.80	31.33	54.00	-22.67	AV	Horizontal
3983.75	39.62	44.20	7.90	29.70	-6.60	33.02	74.00	-40.98	Pk	Vertical
3983.75	36.24	44.20	7.90	29.70	-6.60	29.64	54.00	-24.36	AV	Vertical
3987.57	39.37	44.20	7.90	29.70	-6.60	32.77	74.00	-41.23	Pk	Horizontal
3987.57	35.76	44.20	7.90	29.70	-6.60	29.16	54.00	-24.84	AV	Horizontal
7227.27	37.19	43.50	11.40	35.50	3.40	40.59	68.20	-27.61	Pk	Vertical
7227.27	34.63	43.50	11.40	35.50	3.40	38.03	54.00	-15.97	AV	Vertical
7226.81	37.24	43.50	11.40	35.50	3.40	40.64	68.20	-27.56	Pk	Horizontal
7226.81	34.32	43.50	11.40	35.50	3.40	37.72	54.00	-16.28	AV	Horizontal
10480.04	39.82	44.50	13.80	38.80	8.10	47.92	68.20	-20.28	Pk	Vertical
10480.04	36.46	44.50	13.80	38.80	8.10	44.56	54.00	-9.44	AV	Vertical
10480.30	39.05	44.50	13.80	38.80	8.10	47.15	68.20	-21.05	Pk	Horizontal
10480.30	36.45	44.50	13.80	38.80	8.10	44.55	54.00	-9.45	AV	Horizontal
11034.49	33.95	43.60	14.30	39.50	10.20	44.15	74.00	-29.85	Pk	Vertical
11034.49	31.15	43.60	14.30	39.50	10.20	41.35	54.00	-12.65	AV	Vertical
11030.91	33.47	43.60	14.30	39.50	10.20	43.67	74.00	-30.33	Pk	Horizontal
11030.91	30.27	43.60	14.30	39.50	10.20	40.47	54.00	-13.53	AV	Horizontal
13291.91	32.73	42.60	15.90	38.90	12.20	44.93	74.00	-29.07	Pk	Vertical
13291.91	29.68	42.60	15.90	38.90	12.20	41.88	54.00	-12.12	AV	Vertical
13294.76	31.99	42.60	15.90	38.90	12.20	44.19	74.00	-29.81	Pk	Horizontal
13294.76	29.11	42.60	15.90	38.90	12.20	41.31	54.00	-12.69	AV	Horizontal

Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (VHT-20), 802.11ax(HE20),802.11ax(HE40),802.11ac (VHT-40), 802.11ac (VHT-80),802.11ax(HE80) the worst case is 802.11ac (VHT-80).
- The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.



U-NII-3 5745-5825MHz

U-NII 3										
Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11ax40/ 5755 MHz)										
3246.59	44.06	44.70	6.70	28.20	-9.80	34.26	68.20	-33.94	Pk	Vertical
3246.59	41.16	44.70	6.70	28.20	-9.80	31.36	54.00	-22.64	AV	Vertical
3252.50	45.04	44.70	6.70	28.20	-9.80	35.24	68.20	-32.96	Pk	Horizontal
3252.50	42.00	44.70	6.70	28.20	-9.80	32.20	54.00	-21.80	AV	Horizontal
3988.11	38.80	44.20	7.90	29.70	-6.60	32.20	74.00	-41.80	Pk	Vertical
3988.11	36.26	44.20	7.90	29.70	-6.60	29.66	54.00	-24.34	AV	Vertical
3997.98	39.35	44.20	7.90	29.70	-6.60	32.75	74.00	-41.25	Pk	Horizontal
3997.98	36.24	44.20	7.90	29.70	-6.60	29.64	54.00	-24.36	AV	Horizontal
7226.75	36.99	43.50	11.40	35.50	3.40	40.39	68.20	-27.81	Pk	Vertical
7226.75	33.85	43.50	11.40	35.50	3.40	37.25	54.00	-16.75	AV	Vertical
7232.23	37.21	43.50	11.40	35.50	3.40	40.61	68.20	-27.59	Pk	Horizontal
7232.23	34.57	43.50	11.40	35.50	3.40	37.97	54.00	-16.03	AV	Horizontal
10360.25	39.90	44.50	13.80	38.80	8.10	48.00	68.20	-20.20	Pk	Vertical
10360.25	36.40	44.50	13.80	38.80	8.10	44.50	54.00	-9.50	AV	Vertical
10360.02	39.09	44.50	13.80	38.80	8.10	47.19	68.20	-21.01	Pk	Horizontal
10360.02	35.99	44.50	13.80	38.80	8.10	44.09	54.00	-9.91	AV	Horizontal
11033.07	32.85	43.60	14.30	39.50	10.20	43.05	74.00	-30.95	Pk	Vertical
11033.07	30.30	43.60	14.30	39.50	10.20	40.50	54.00	-13.50	AV	Vertical
11017.63	33.59	43.60	14.30	39.50	10.20	43.79	74.00	-30.21	Pk	Horizontal
11017.63	29.92	43.60	14.30	39.50	10.20	40.12	54.00	-13.88	AV	Horizontal
13286.77	32.45	42.60	15.90	38.90	12.20	44.65	74.00	-29.35	Pk	Vertical
13286.77	29.35	42.60	15.90	38.90	12.20	41.55	54.00	-12.45	AV	Vertical
13286.03	31.88	42.60	15.90	38.90	12.20	44.08	74.00	-29.92	Pk	Horizontal
13286.03	28.59	42.60	15.90	38.90	12.20	40.79	54.00	-13.21	AV	Horizontal
High Channel (802.11ax40/ 5795 MHz)										
3259.30	43.96	44.70	6.70	28.20	-9.80	34.16	68.20	-34.04	Pk	Vertical
3259.30	41.69	44.70	6.70	28.20	-9.80	31.89	54.00	-22.11	AV	Vertical
3247.73	43.77	44.70	6.70	28.20	-9.80	33.97	68.20	-34.23	Pk	Horizontal
3247.73	40.95	44.70	6.70	28.20	-9.80	31.15	54.00	-22.85	AV	Horizontal
3983.07	40.02	44.20	7.90	29.70	-6.60	33.42	74.00	-40.58	Pk	Vertical
3983.07	36.56	44.20	7.90	29.70	-6.60	29.96	54.00	-24.04	AV	Vertical
3994.97	39.55	44.20	7.90	29.70	-6.60	32.95	74.00	-41.05	Pk	Horizontal
3994.97	36.37	44.20	7.90	29.70	-6.60	29.77	54.00	-24.23	AV	Horizontal
7233.07	37.05	43.50	11.40	35.50	3.40	40.45	68.20	-27.75	Pk	Vertical
7233.07	33.97	43.50	11.40	35.50	3.40	37.37	54.00	-16.63	AV	Vertical
7226.43	37.37	43.50	11.40	35.50	3.40	40.77	68.20	-27.43	Pk	Horizontal
7226.43	34.62	43.50	11.40	35.50	3.40	38.02	54.00	-15.98	AV	Horizontal
10480.07	39.06	44.50	13.80	38.80	8.10	47.16	68.20	-21.04	Pk	Vertical
10480.07	36.81	44.50	13.80	38.80	8.10	44.91	54.00	-9.09	AV	Vertical
10480.18	38.69	44.50	13.80	38.80	8.10	46.79	68.20	-21.41	Pk	Horizontal
10480.18	37.10	44.50	13.80	38.80	8.10	45.20	54.00	-8.80	AV	Horizontal
11026.40	32.82	43.60	14.30	39.50	10.20	43.02	74.00	-30.98	Pk	Vertical
11026.40	30.58	43.60	14.30	39.50	10.20	40.78	54.00	-13.22	AV	Vertical
11035.27	33.05	43.60	14.30	39.50	10.20	43.25	74.00	-30.75	Pk	Horizontal
11035.27	30.96	43.60	14.30	39.50	10.20	41.16	54.00	-12.84	AV	Horizontal
13286.19	32.47	42.60	15.90	38.90	12.20	44.67	74.00	-29.33	Pk	Vertical
13286.19	28.53	42.60	15.90	38.90	12.20	40.73	54.00	-13.27	AV	Vertical
13294.03	31.70	42.60	15.90	38.90	12.20	43.90	74.00	-30.10	Pk	Horizontal
13294.03	29.88	42.60	15.90	38.90	12.20	42.08	54.00	-11.92	AV	Horizontal

Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (VHT-20), 802.11ax(HE20),802.11ax(HE40),802.11ac (VHT-40), 802.11ac (VHT-80),802.11ax(HE80) the worst case is 802.11ax(HE40).
- The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.



U-NII-4 (5.845-5.885) GHz

U-NII 3										
Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Corrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11ax40/ 5835 MHz)										
3256.80	44.85	44.70	6.70	28.20	-9.80	35.05	68.20	-33.15	Pk	Vertical
3256.80	41.66	44.70	6.70	28.20	-9.80	31.86	54.00	-22.14	AV	Vertical
3257.61	44.07	44.70	6.70	28.20	-9.80	34.27	68.20	-33.93	Pk	Horizontal
3257.61	42.21	44.70	6.70	28.20	-9.80	32.41	54.00	-21.59	AV	Horizontal
3986.21	40.03	44.20	7.90	29.70	-6.60	33.43	74.00	-40.57	Pk	Vertical
3986.21	36.55	44.20	7.90	29.70	-6.60	29.95	54.00	-24.05	AV	Vertical
3982.11	39.30	44.20	7.90	29.70	-6.60	32.70	74.00	-41.30	Pk	Horizontal
3982.11	36.49	44.20	7.90	29.70	-6.60	29.89	54.00	-24.11	AV	Horizontal
7219.78	37.49	43.50	11.40	35.50	3.40	40.89	68.20	-27.31	Pk	Vertical
7219.78	34.80	43.50	11.40	35.50	3.40	38.20	54.00	-15.80	AV	Vertical
7230.45	37.21	43.50	11.40	35.50	3.40	40.61	68.20	-27.59	Pk	Horizontal
7230.45	34.26	43.50	11.40	35.50	3.40	37.66	54.00	-16.34	AV	Horizontal
10360.06	39.34	44.50	13.80	38.80	8.10	47.44	68.20	-20.76	Pk	Vertical
10360.06	35.95	44.50	13.80	38.80	8.10	44.05	54.00	-9.95	AV	Vertical
10360.07	38.85	44.50	13.80	38.80	8.10	46.95	68.20	-21.25	Pk	Horizontal
10360.07	36.71	44.50	13.80	38.80	8.10	44.81	54.00	-9.19	AV	Horizontal
11035.41	33.98	43.60	14.30	39.50	10.20	44.18	74.00	-29.82	Pk	Vertical
11035.41	30.65	43.60	14.30	39.50	10.20	40.85	54.00	-13.15	AV	Vertical
11019.36	34.10	43.60	14.30	39.50	10.20	44.30	74.00	-29.70	Pk	Horizontal
11019.36	30.49	43.60	14.30	39.50	10.20	40.69	54.00	-13.31	AV	Horizontal
13281.67	32.66	42.60	15.90	38.90	12.20	44.86	74.00	-29.14	Pk	Vertical
13281.67	29.07	42.60	15.90	38.90	12.20	41.27	54.00	-12.73	AV	Vertical
13298.99	32.01	42.60	15.90	38.90	12.20	44.21	74.00	-29.79	Pk	Horizontal
13298.99	29.60	42.60	15.90	38.90	12.20	41.80	54.00	-12.20	AV	Horizontal



High Channel (802.11ax40/ 5875 MHz)										
3264.09	45.01	44.70	6.70	28.20	-9.80	35.21	74.00	-38.79	Pk	Vertical
3264.09	42.19	44.70	6.70	28.20	-9.80	32.39	54.00	-21.61	AV	Vertical
3251.97	44.60	44.70	6.70	28.20	-9.80	34.80	68.20	-33.40	Pk	Horizontal
3251.97	40.82	44.70	6.70	28.20	-9.80	31.02	54.00	-22.98	AV	Horizontal
3981.94	40.09	44.20	7.90	29.70	-6.60	33.49	74.00	-40.51	Pk	Vertical
3981.94	36.93	44.20	7.90	29.70	-6.60	30.33	54.00	-23.67	AV	Vertical
3986.59	39.13	44.20	7.90	29.70	-6.60	32.53	74.00	-41.47	Pk	Horizontal
3986.59	36.04	44.20	7.90	29.70	-6.60	29.44	54.00	-24.56	AV	Horizontal
7234.22	37.39	43.50	11.40	35.50	3.40	40.79	68.20	-27.41	Pk	Vertical
7234.22	34.76	43.50	11.40	35.50	3.40	38.16	54.00	-15.84	AV	Vertical
7227.98	37.44	43.50	11.40	35.50	3.40	40.84	68.20	-27.36	Pk	Horizontal
7227.98	34.62	43.50	11.40	35.50	3.40	38.02	54.00	-15.98	AV	Horizontal
10479.98	40.07	44.50	13.80	38.80	8.10	48.17	68.20	-20.03	Pk	Vertical
10479.98	37.03	44.50	13.80	38.80	8.10	45.13	54.00	-8.87	AV	Vertical
10480.04	39.13	44.50	13.80	38.80	8.10	47.23	68.20	-20.97	Pk	Horizontal
10480.04	37.13	44.50	13.80	38.80	8.10	45.23	54.00	-8.77	AV	Horizontal
11029.53	33.02	43.60	14.30	39.50	10.20	43.22	74.00	-30.78	Pk	Vertical
11029.53	30.14	43.60	14.30	39.50	10.20	40.34	54.00	-13.66	AV	Vertical
11021.20	33.39	43.60	14.30	39.50	10.20	43.59	74.00	-30.41	Pk	Horizontal
11021.20	30.03	43.60	14.30	39.50	10.20	40.23	54.00	-13.77	AV	Horizontal
13297.75	31.56	42.60	15.90	38.90	12.20	43.76	74.00	-30.24	Pk	Vertical
13297.75	29.01	42.60	15.90	38.90	12.20	41.21	54.00	-12.79	AV	Vertical
13297.04	32.32	42.60	15.90	38.90	12.20	44.52	74.00	-29.48	Pk	Horizontal
13297.04	28.88	42.60	15.90	38.90	12.20	41.08	54.00	-12.92	AV	Horizontal

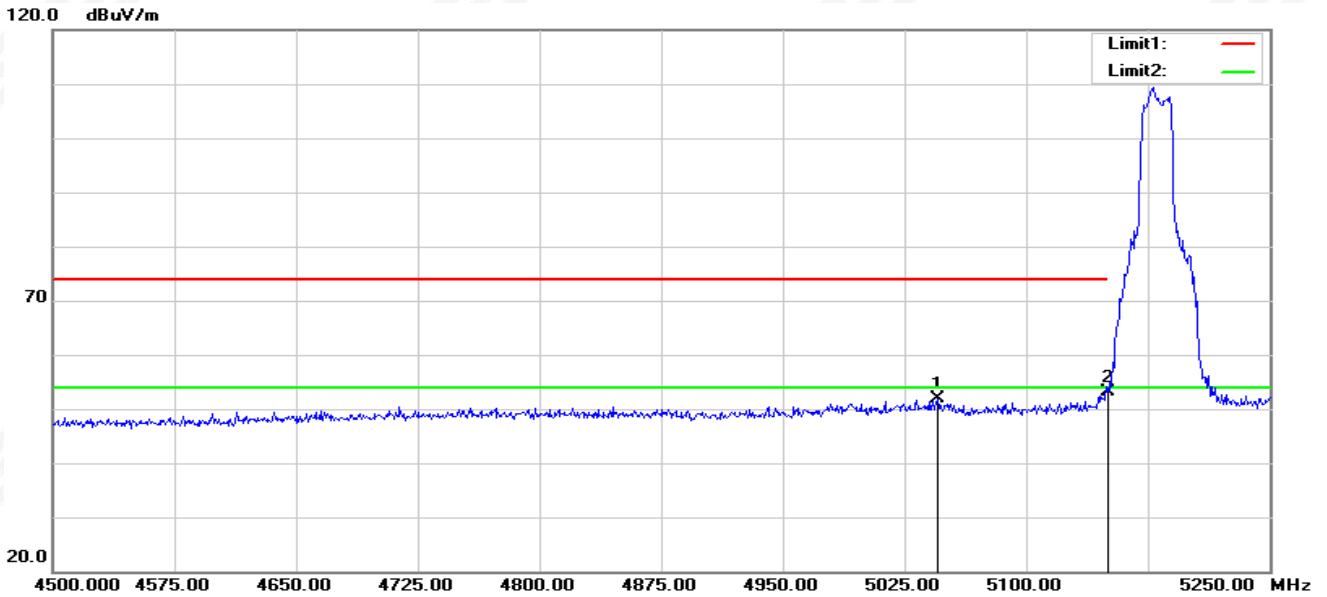
Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (VHT-20), 802.11ax(HE20),802.11ax(HE40),802.11ac (VHT-40), 802.11ac (VHT-80),802.11ax(HE80) the worst case is 802.11ax(HE40).
3. The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

3.2.9 RESTRICTED FREQUENCY BANDS AND BAND EDGE

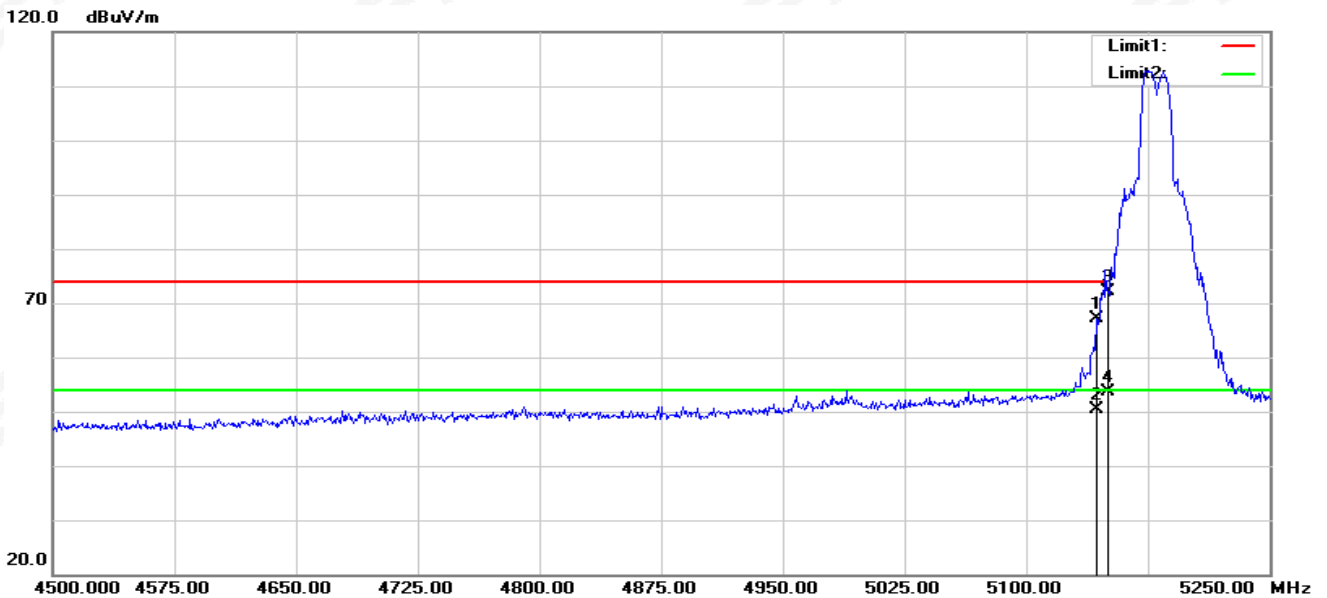
U-NII-1 5150-5250MHz

802.11ax20-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5045.250	57.86	-5.98	51.88	74.00	-22.12	peak
2	5150.000	58.85	-5.73	53.12	74.00	-20.88	peak

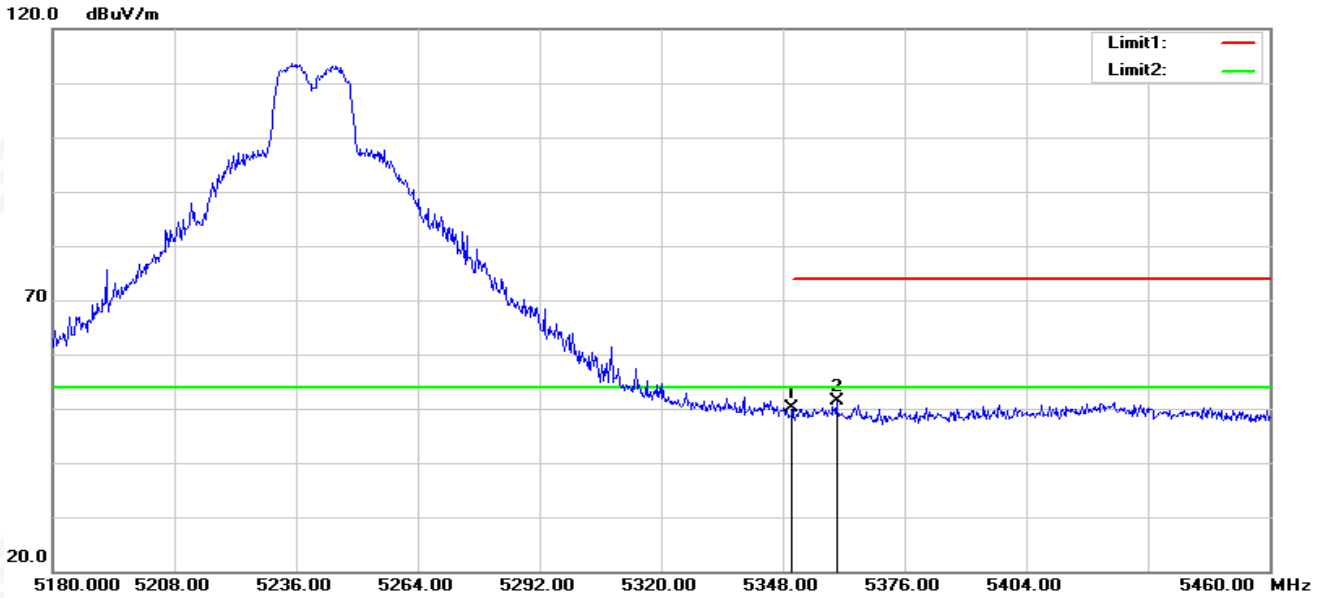
802.11ax20-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5143.500	72.99	-5.74	67.25	74.00	-6.75	peak
2	5143.500	56.21	-5.74	50.47	54.00	-3.53	AVG
3	5150.000	77.91	-5.73	72.18	74.00	-1.82	peak
4	5150.000	59.39	-5.73	53.66	54.00	-0.34	AVG

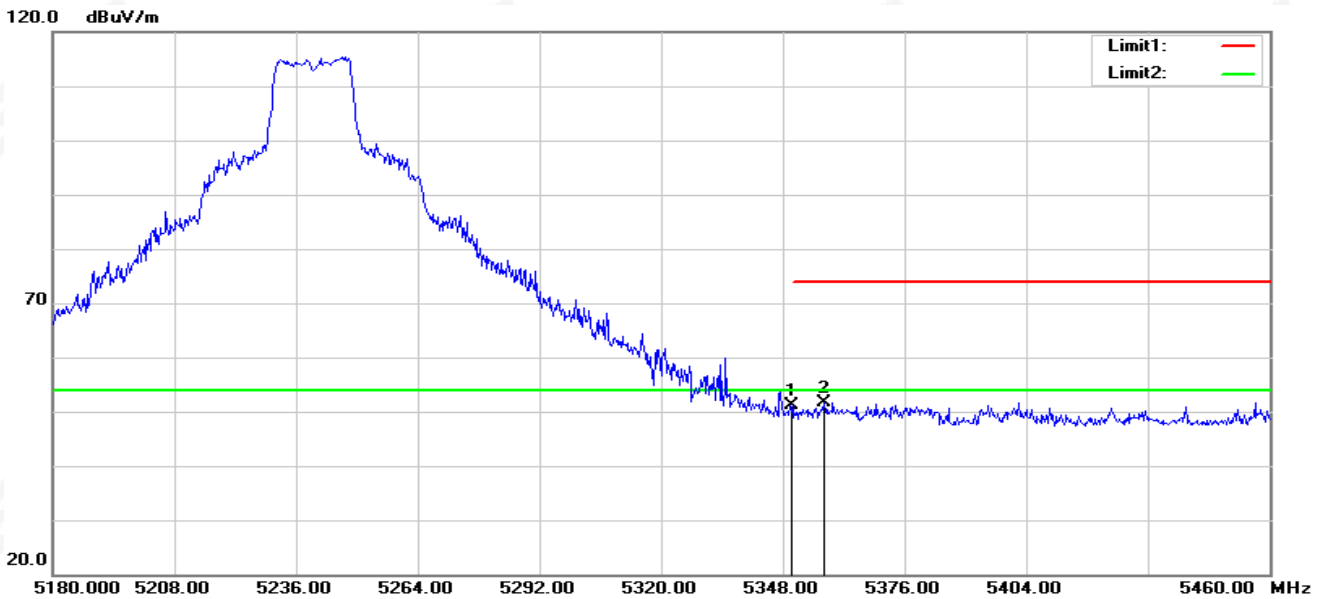


802.11ax20-H-H



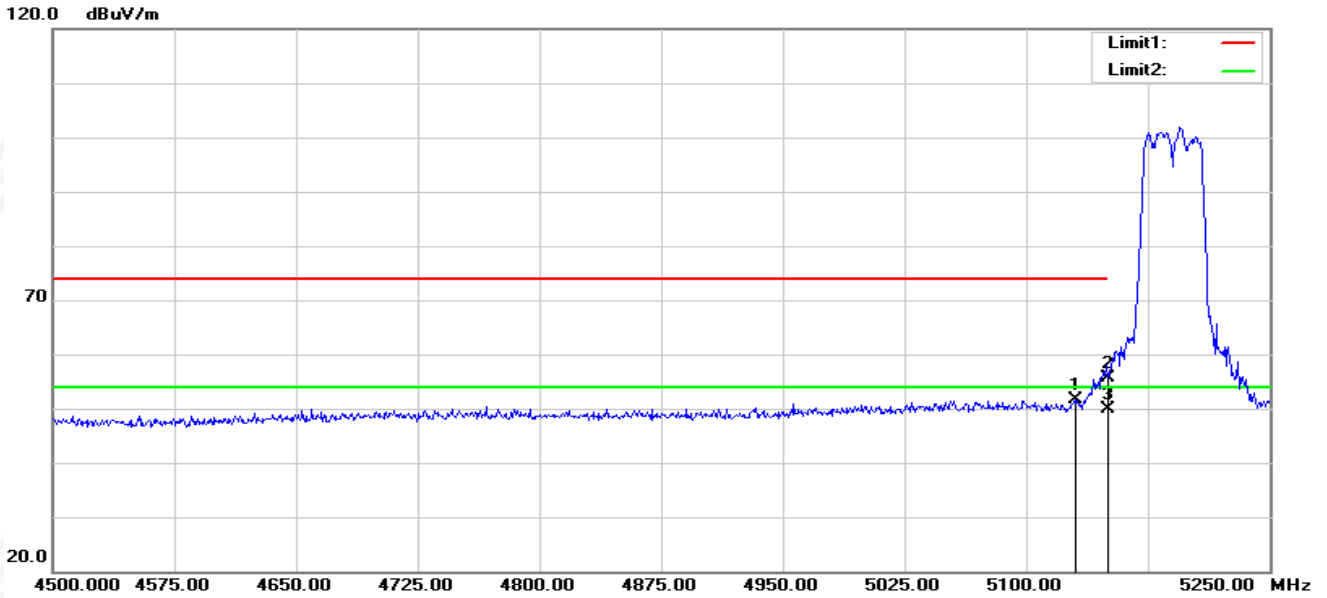
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	55.32	-5.23	50.09	74.00	-23.91	peak
2	5360.320	56.51	-5.23	51.28	74.00	-22.72	peak

802.11ax20-H-V



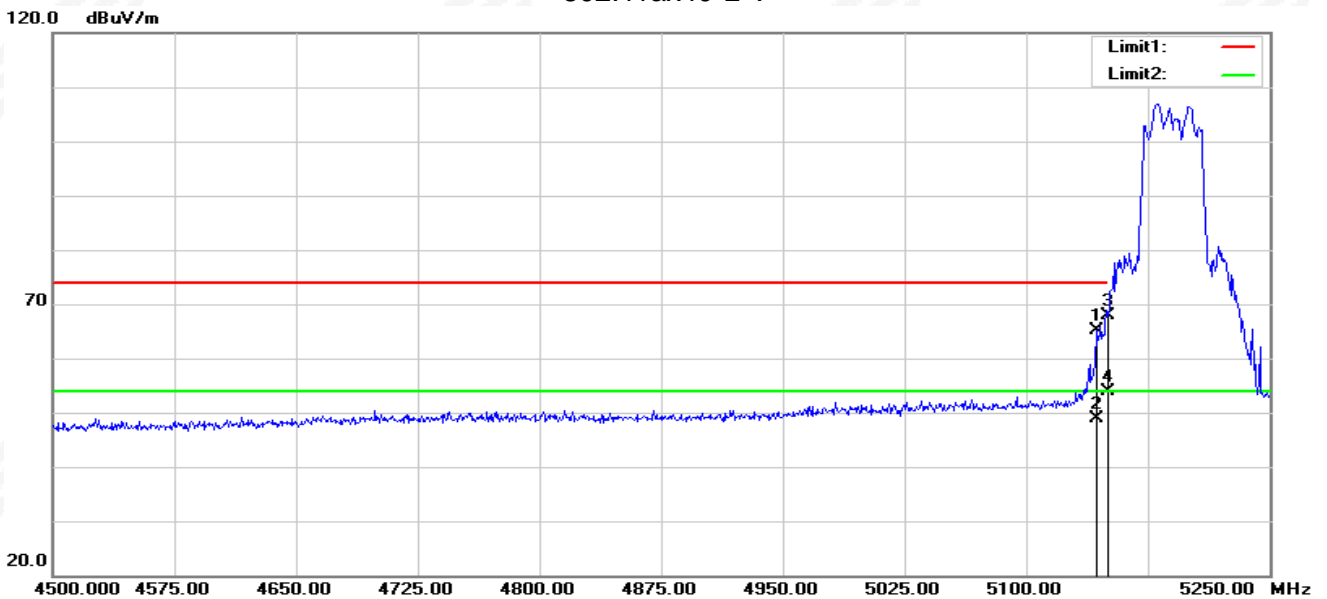
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	56.25	-5.23	51.02	74.00	-22.98	peak
2	5357.520	56.87	-5.23	51.64	74.00	-22.36	peak

802.11ax40-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5130.000	57.26	-5.74	51.52	74.00	-22.48	peak
2	5150.000	61.26	-5.73	55.53	74.00	-18.47	peak
3	5150.000	55.51	-5.73	49.78	54.00	-4.22	AVG

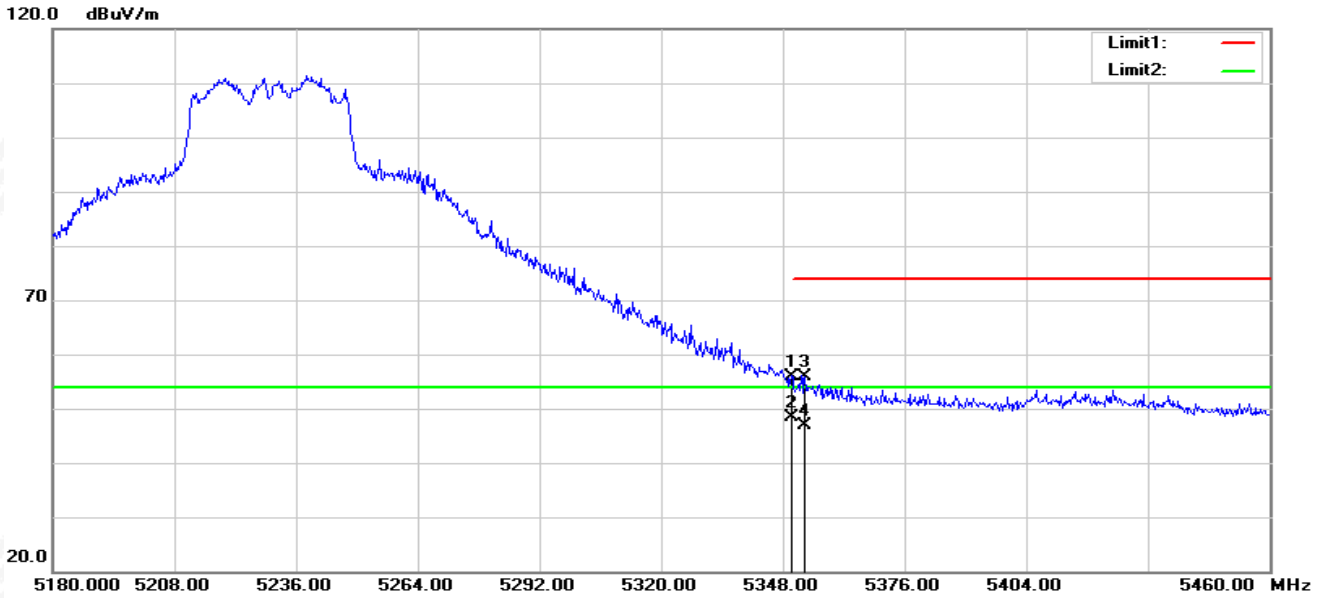
802.11ax40-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5143.500	70.91	-5.74	65.17	74.00	-8.83	peak
2	5143.500	54.57	-5.74	48.83	54.00	-5.17	AVG
3	5150.000	73.52	-5.73	67.79	74.00	-6.21	peak
4	5150.000	59.69	-5.73	53.96	54.00	-0.04	AVG

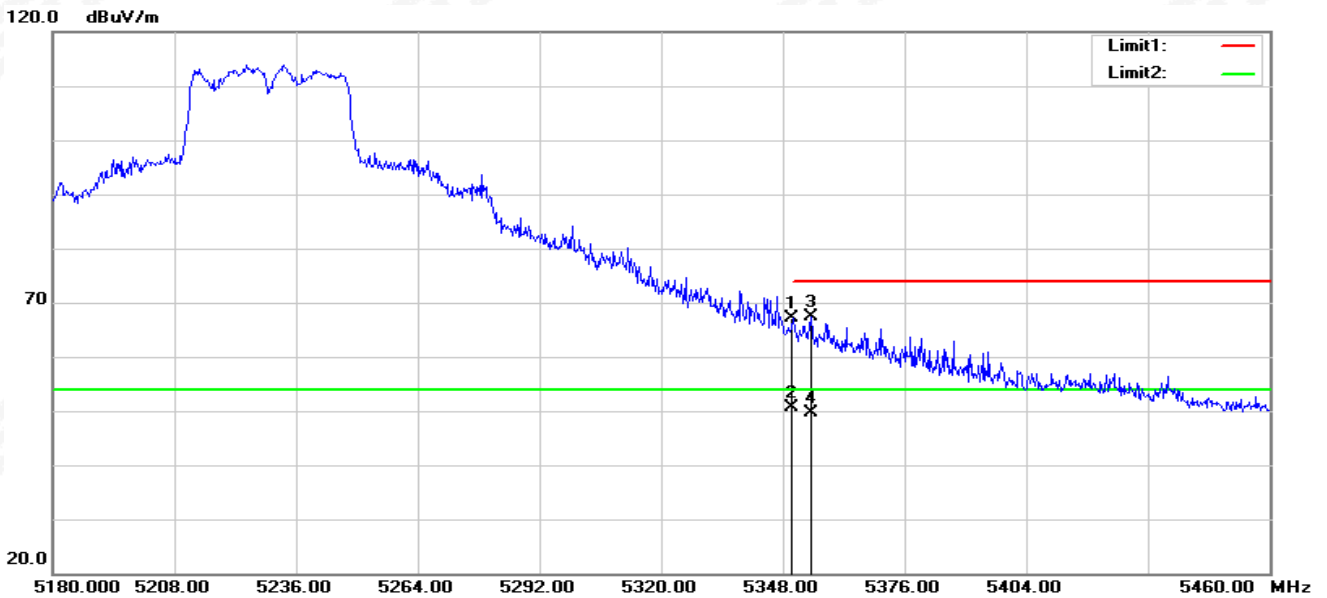


802.11ax40-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	61.11	-5.23	55.88	74.00	-18.12	peak
2	5350.000	53.62	-5.23	48.39	54.00	-5.61	AVG
3	5353.040	61.08	-5.23	55.85	74.00	-18.15	peak
4	5353.040	52.08	-5.23	46.85	54.00	-7.15	AVG

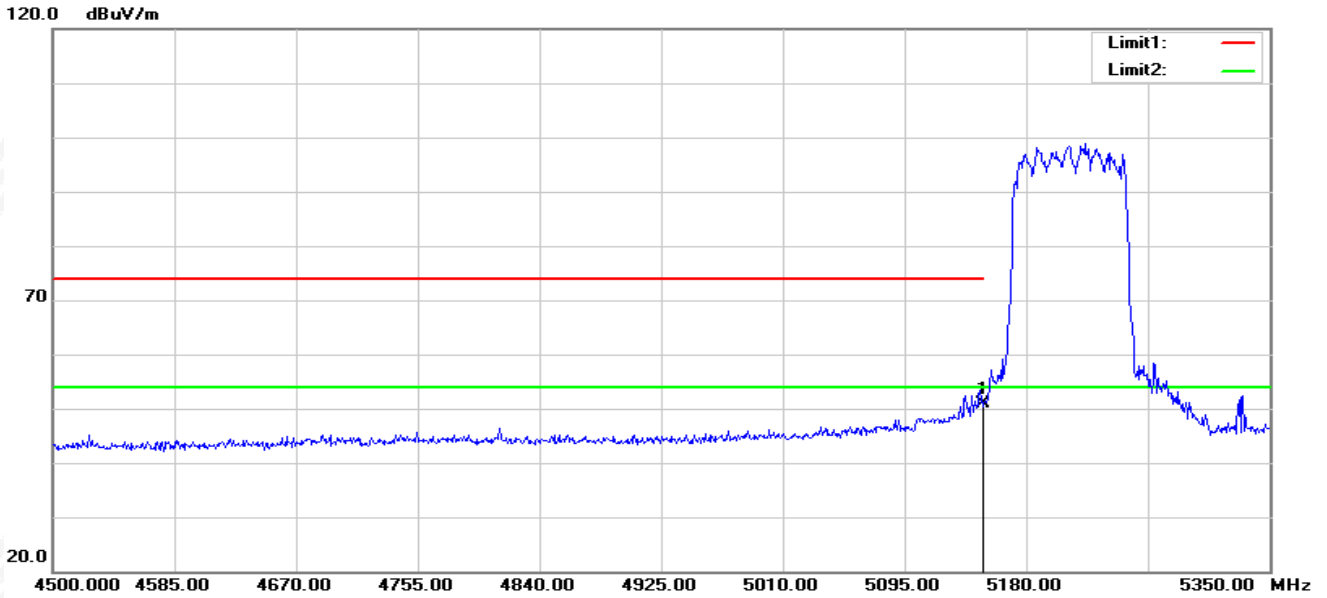
802.11ax40-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	72.26	-5.23	67.03	74.00	-6.97	peak
2	5350.000	55.98	-5.23	50.75	54.00	-3.25	AVG
3	5354.440	72.52	-5.24	67.28	74.00	-6.72	peak
4	5354.440	54.79	-5.24	49.55	54.00	-4.45	AVG

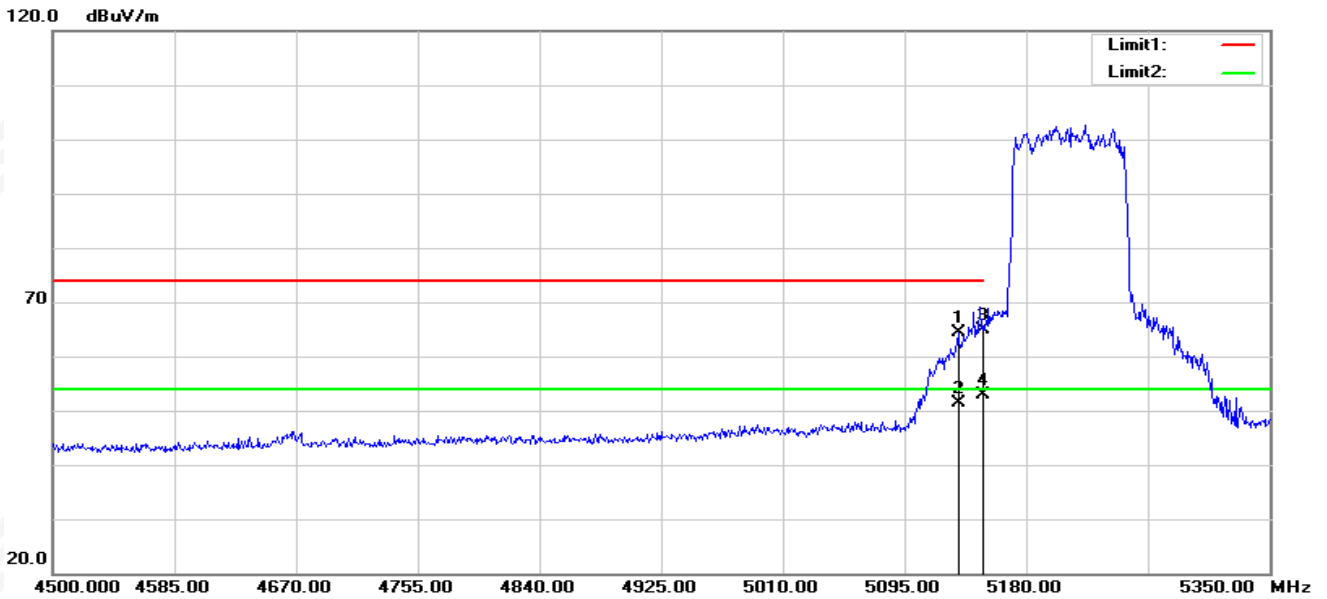


802.11ax80-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5150.000	56.49	-5.73	50.76	74.00	-23.24	peak

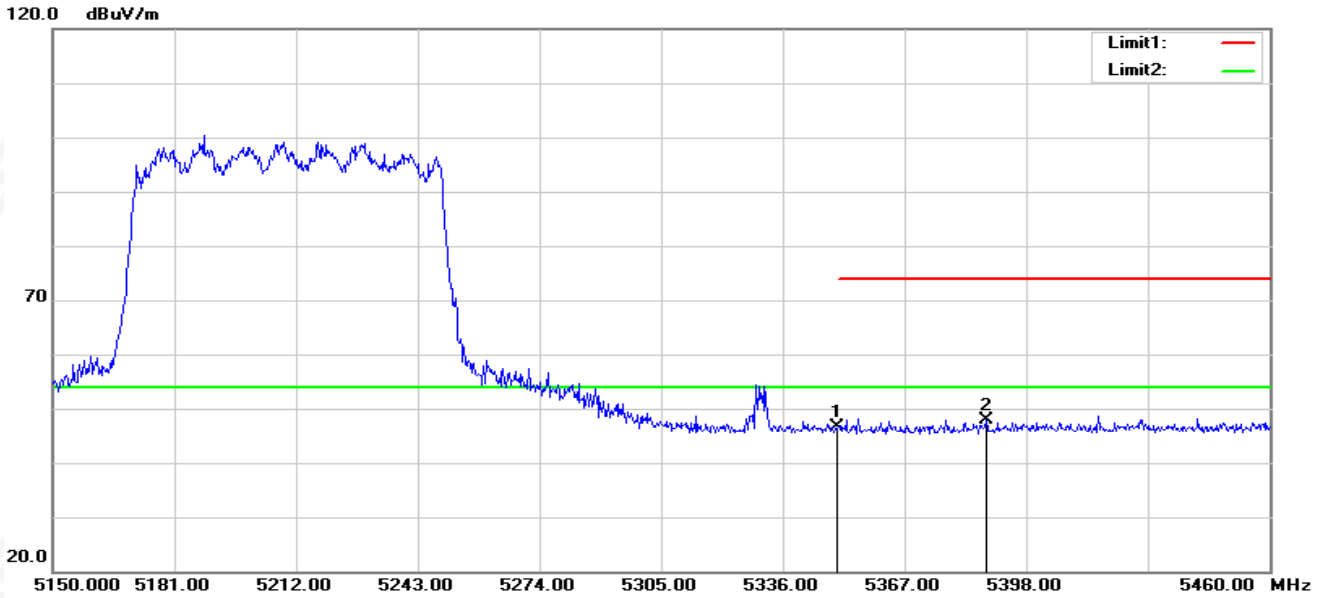
802.11ax80-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5132.400	70.15	-5.73	64.42	74.00	-9.58	peak
2	5132.400	57.02	-5.73	51.29	54.00	-2.71	AVG
3	5150.000	70.72	-5.73	64.99	74.00	-9.01	peak
4	5150.000	58.54	-5.73	52.81	54.00	-1.19	AVG

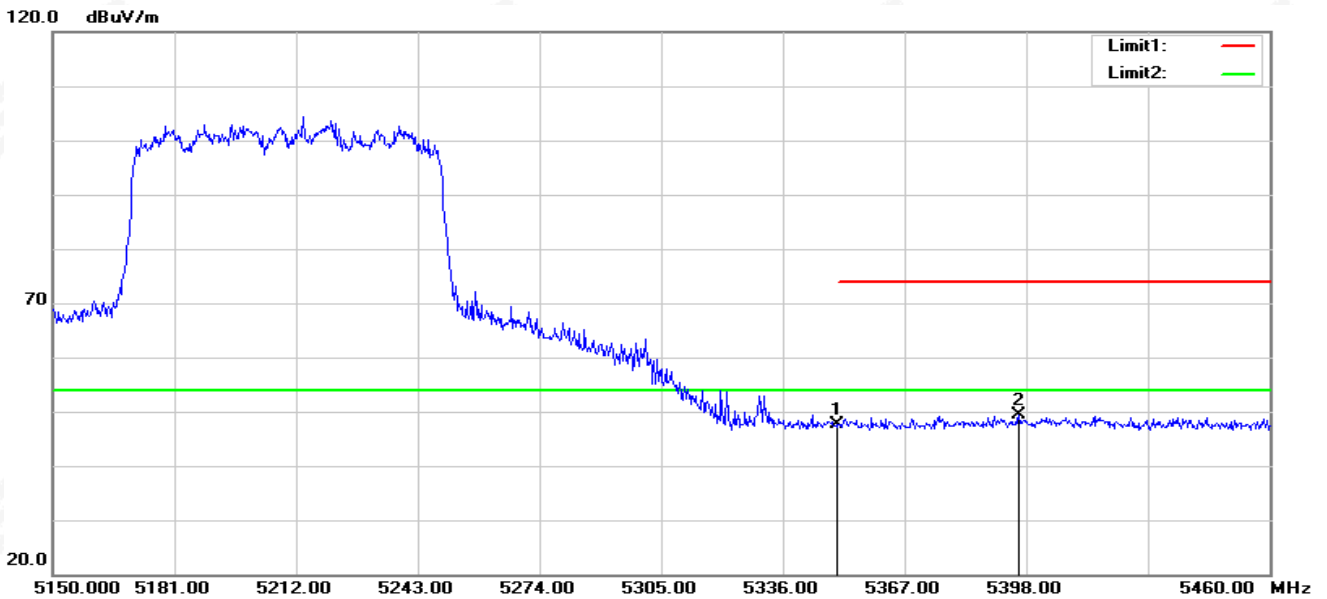


802.11ax80-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	51.76	-5.23	46.53	74.00	-27.47	peak
2	5387.770	53.18	-5.25	47.93	74.00	-26.07	peak

802.11ax80-H-V

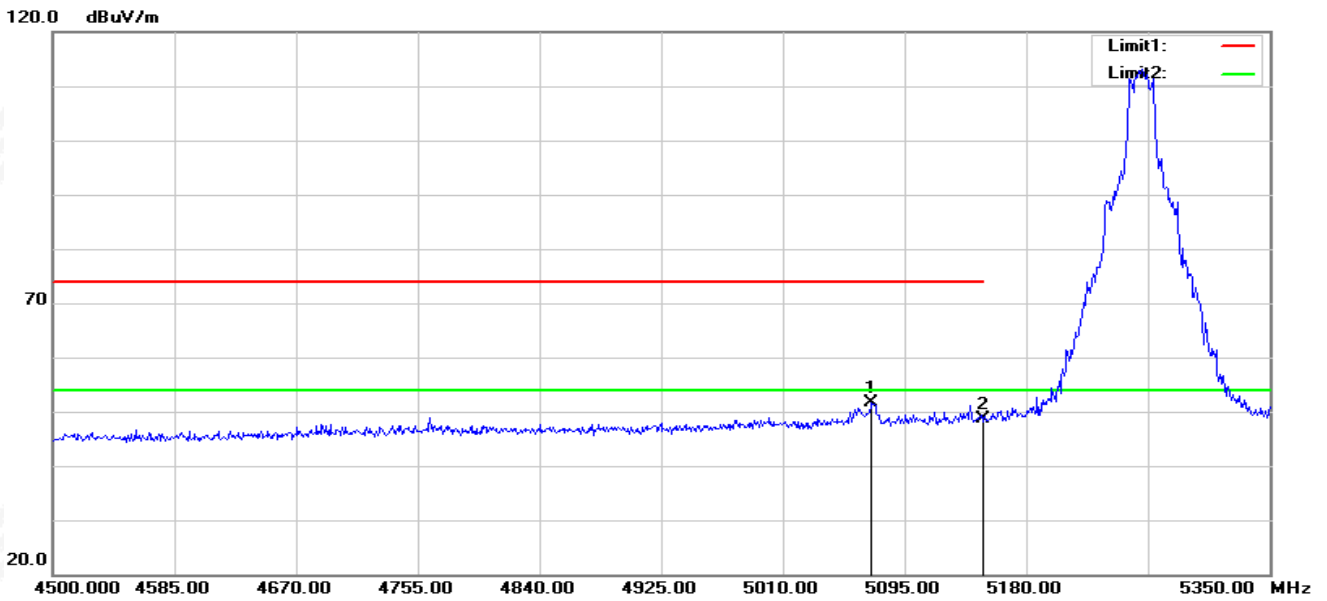


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	52.82	-5.23	47.59	74.00	-26.41	peak
2	5396.140	54.58	-5.25	49.33	74.00	-24.67	peak

Note: All modes have been tested. Only the worst mode shown in the report.

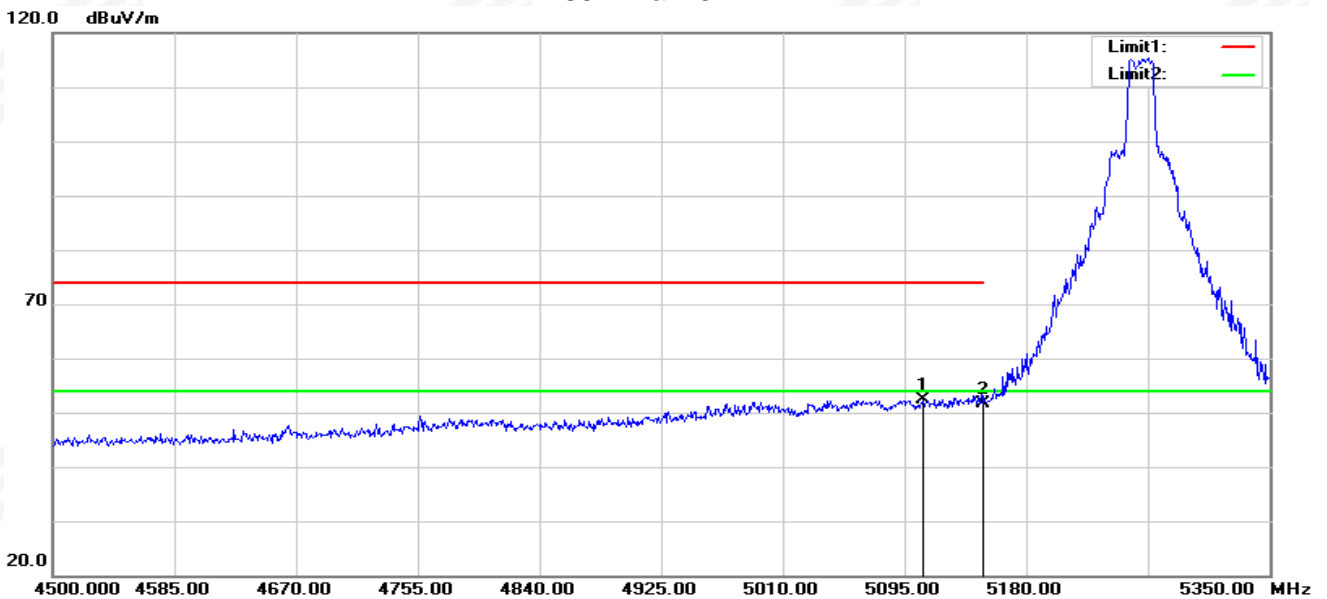
U-NII-2A 5250-5350MHz

802.11ax20-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5072.050	57.44	-5.86	51.58	74.00	-22.42	peak
2	5150.000	54.43	-5.73	48.70	74.00	-25.30	peak

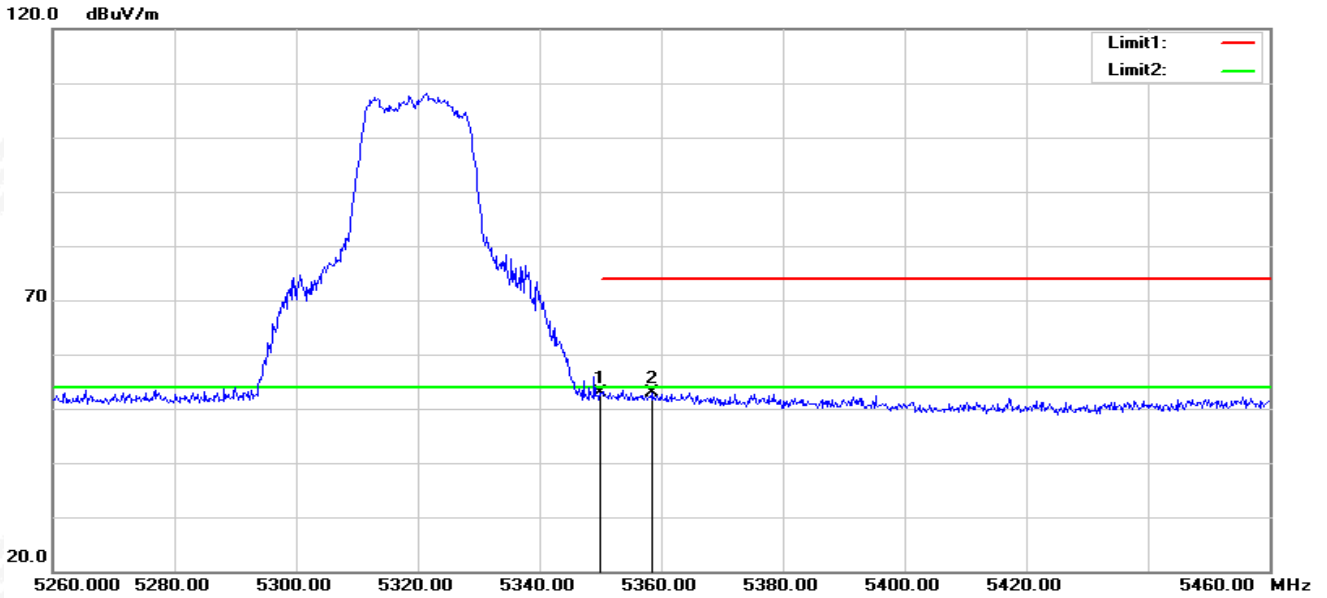
802.11ax20-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5107.750	58.11	-5.74	52.37	74.00	-21.63	peak
2	5150.000	57.44	-5.73	51.71	74.00	-22.29	peak

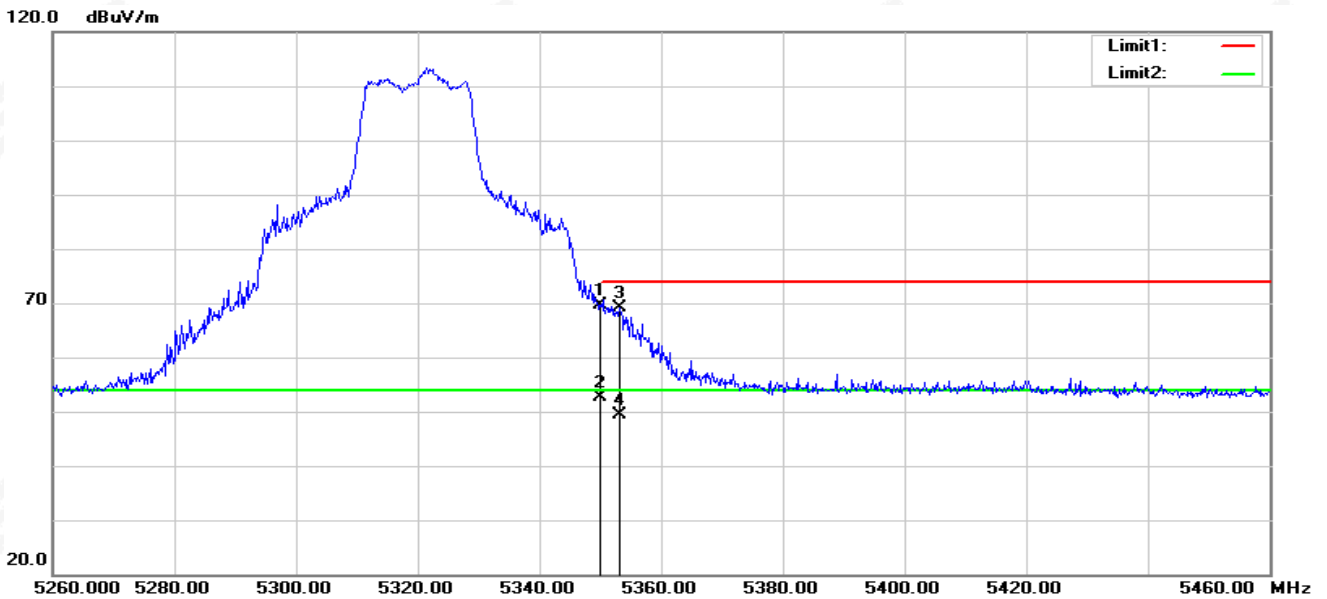


802.11ax20-H-H



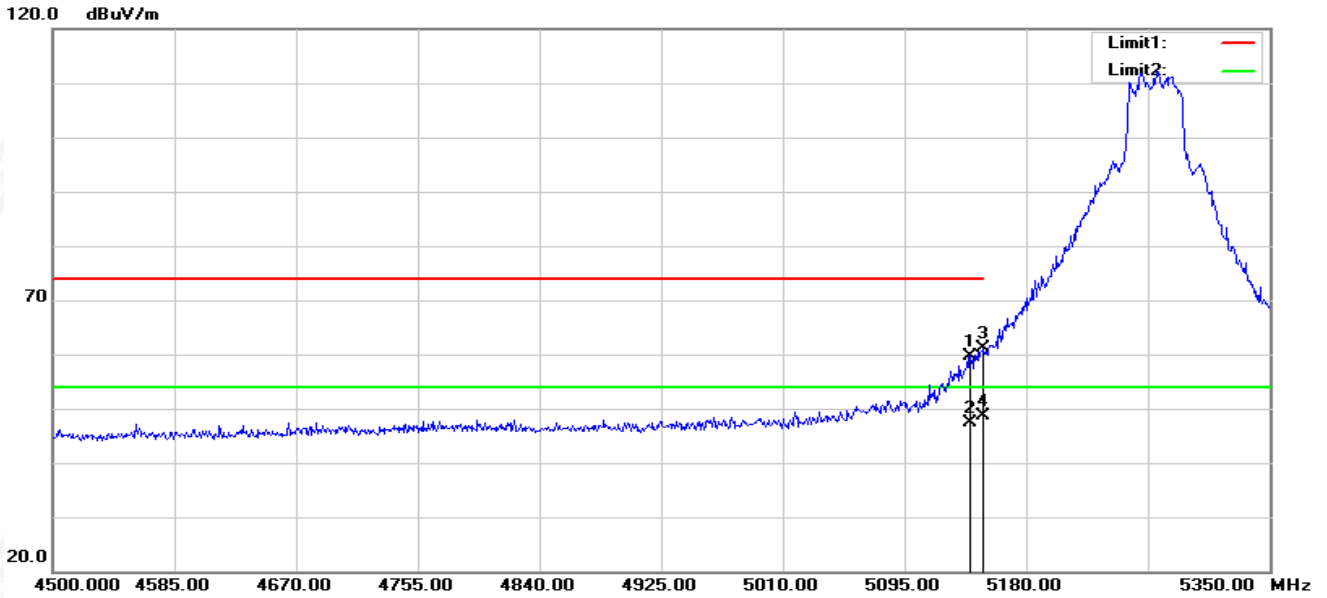
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	58.07	-5.23	52.84	74.00	-21.16	peak
2	5358.400	58.01	-5.23	52.78	74.00	-21.22	peak

802.11ax20-H-V



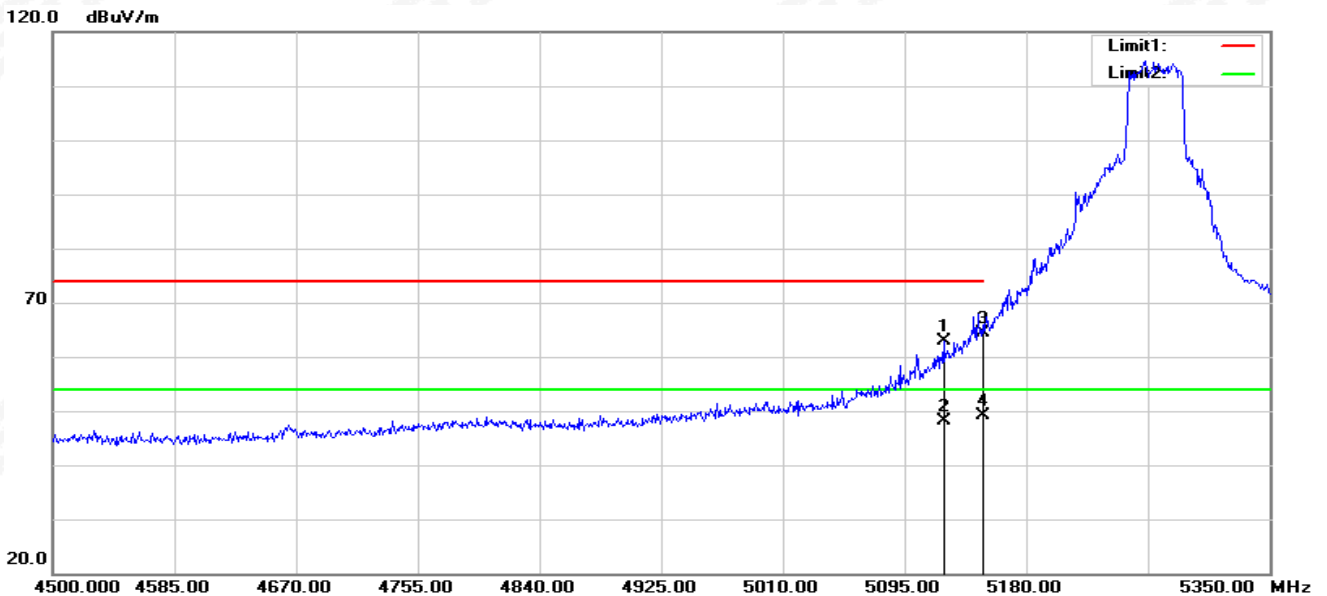
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	74.75	-5.23	69.52	74.00	-4.48	peak
2	5350.000	57.86	-5.23	52.63	54.00	-1.37	AVG
3	5353.200	74.28	-5.23	69.05	74.00	-4.95	peak
4	5353.200	54.73	-5.23	49.50	54.00	-4.50	AVG

802.11ax40-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5140.900	65.48	-5.74	59.74	74.00	-14.26	peak
2	5140.900	53.12	-5.74	47.38	54.00	-6.62	AVG
3	5150.000	66.93	-5.73	61.20	74.00	-12.80	peak
4	5150.000	54.36	-5.73	48.63	54.00	-5.37	AVG

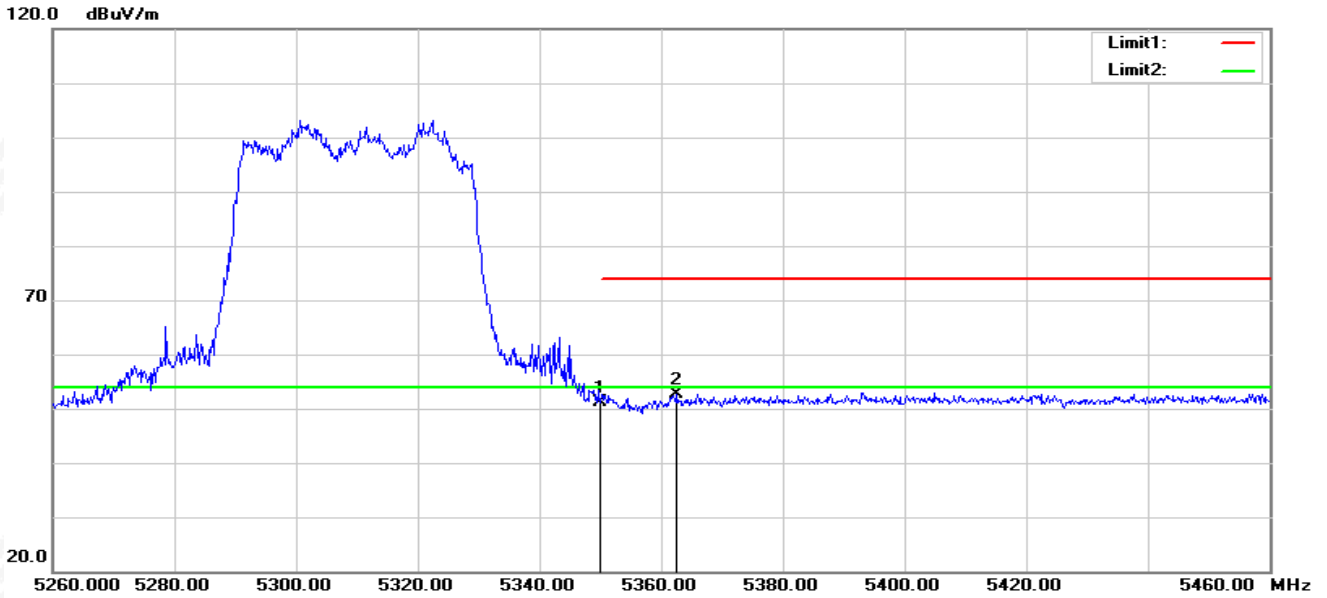
802.11ax40-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5122.200	68.55	-5.74	62.81	74.00	-11.19	peak
2	5122.200	53.93	-5.74	48.19	54.00	-5.81	AVG
3	5150.000	70.22	-5.73	64.49	74.00	-9.51	peak
4	5150.000	54.97	-5.73	49.24	54.00	-4.76	AVG

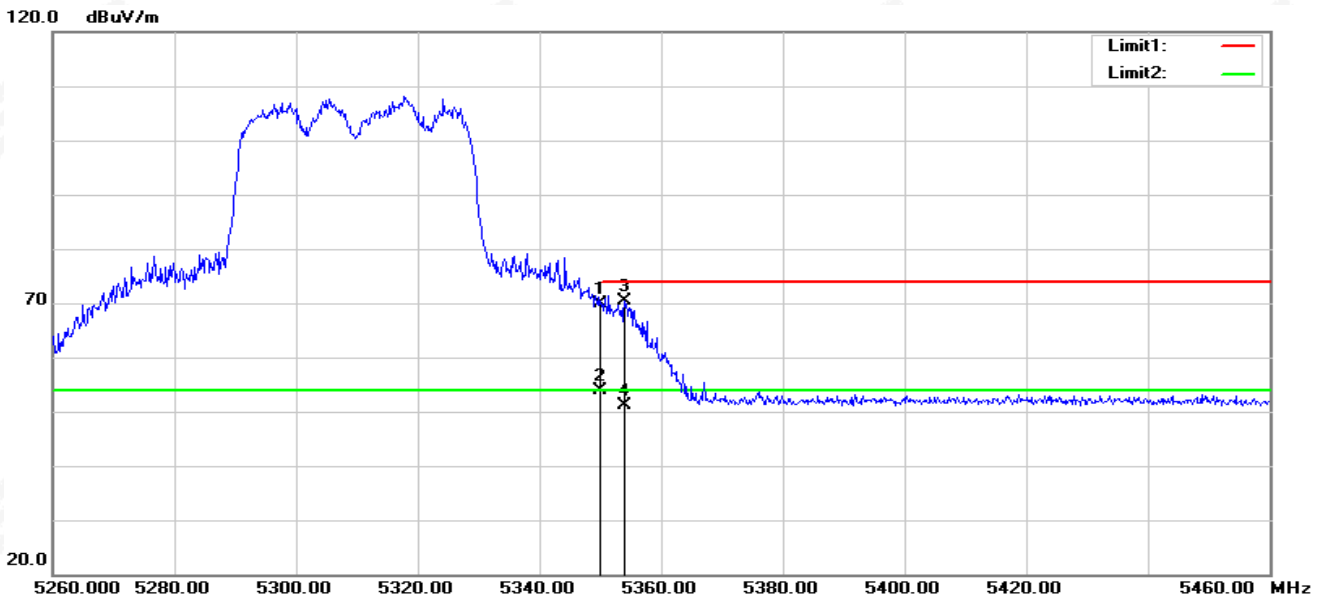


802.11ax40-H-H



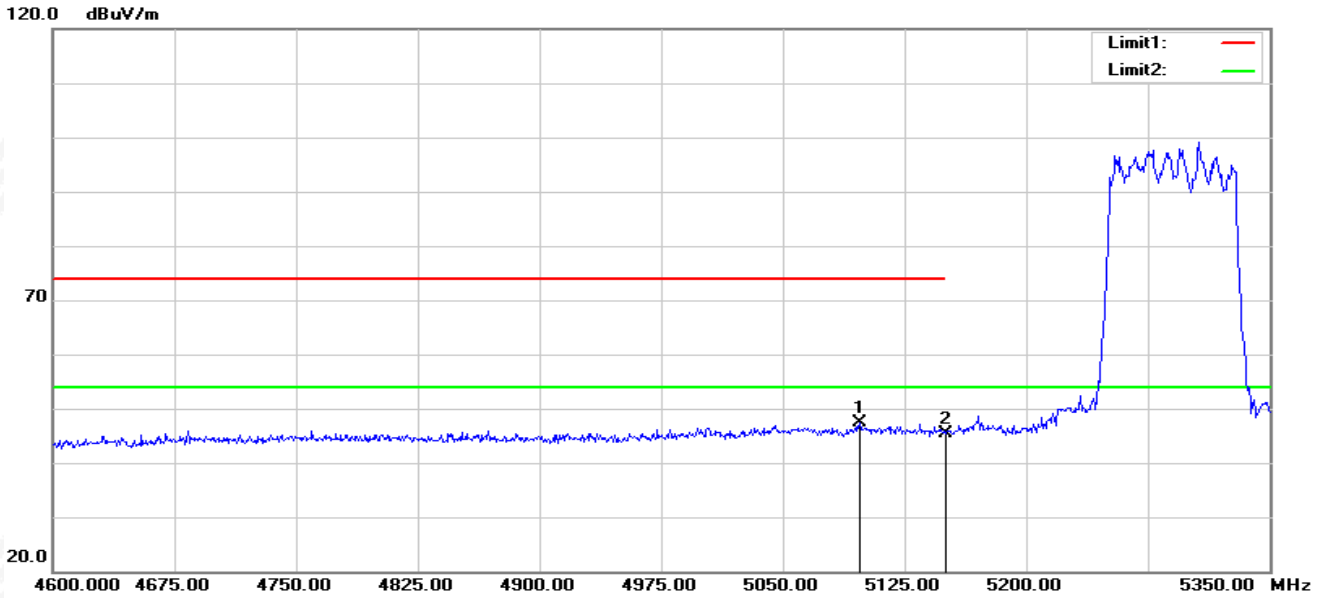
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	56.45	-5.23	51.22	74.00	-22.78	peak
2	5362.600	57.79	-5.24	52.55	74.00	-21.45	peak

802.11ax40-H-V



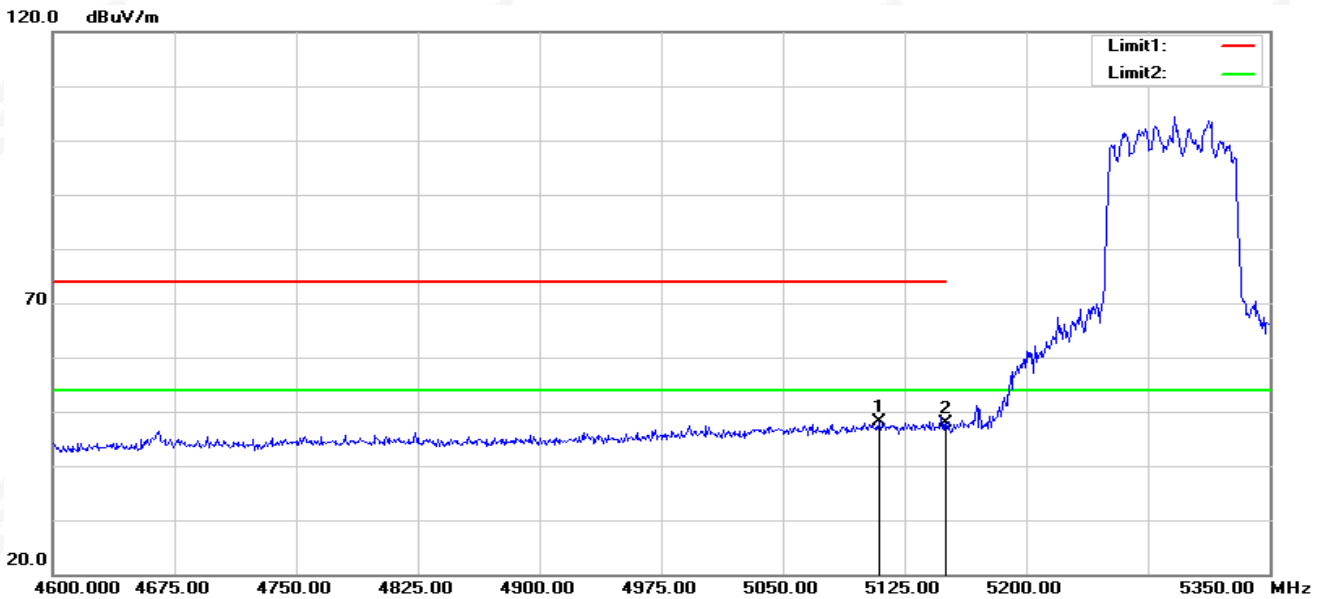
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	75.21	-5.23	69.98	74.00	-4.02	peak
2	5350.000	59.09	-5.23	53.86	54.00	-0.14	AVG
3	5354.000	75.54	-5.23	70.31	74.00	-3.69	peak
4	5354.000	56.33	-5.23	51.10	54.00	-2.90	AVG

802.11ax80-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5097.250	53.15	-5.75	47.40	74.00	-26.60	peak
2	5150.000	51.18	-5.73	45.45	74.00	-28.55	peak

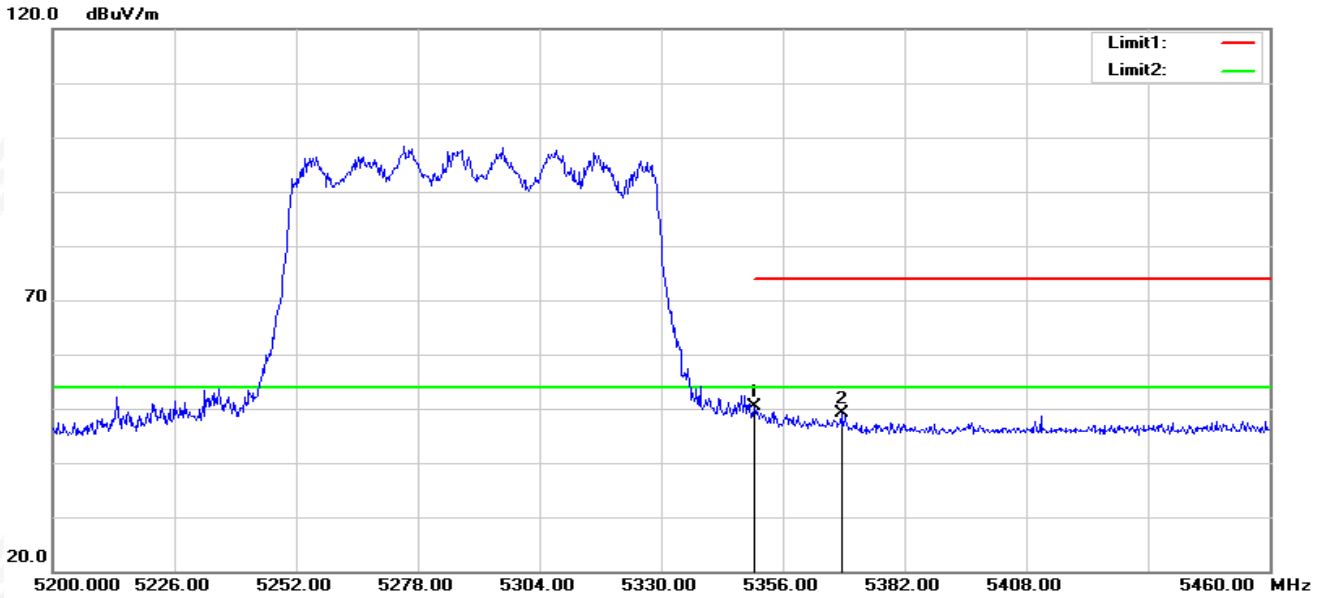
802.11ax80-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5109.250	53.76	-5.74	48.02	74.00	-25.98	peak
2	5150.000	53.51	-5.73	47.78	74.00	-26.22	peak

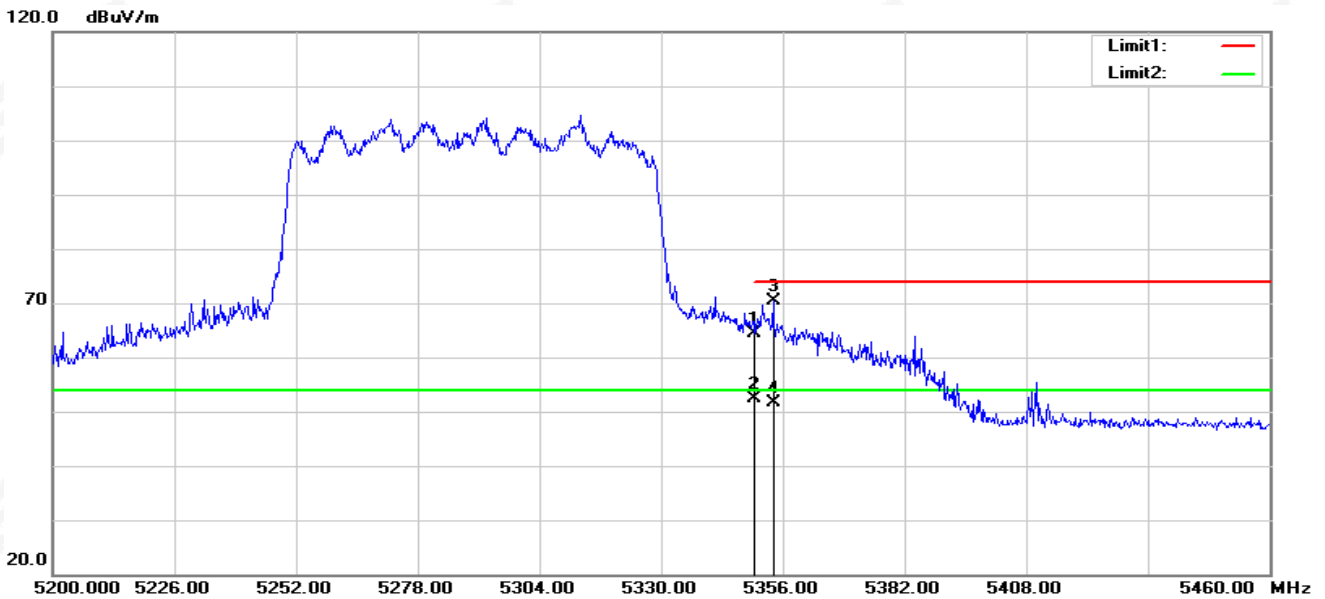


802.11ax80-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	55.59	-5.23	50.36	74.00	-23.64	peak
2	5368.480	54.39	-5.24	49.15	74.00	-24.85	peak

802.11ax80-H-V

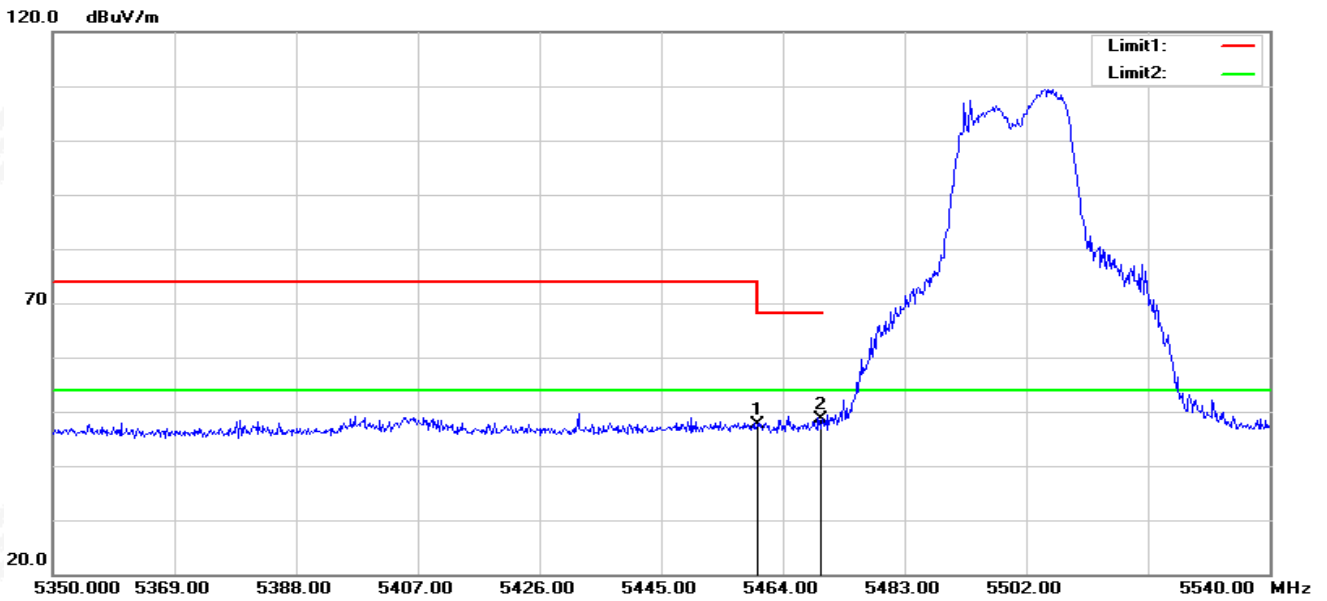


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	69.62	-5.23	64.39	74.00	-9.61	peak
2	5350.000	57.73	-5.23	52.50	54.00	-1.50	AVG
3	5353.920	75.49	-5.23	70.26	74.00	-3.74	peak
4	5353.920	56.90	-5.23	51.67	54.00	-2.33	AVG

Note: All modes have been tested. Only the worst mode shown in the report.

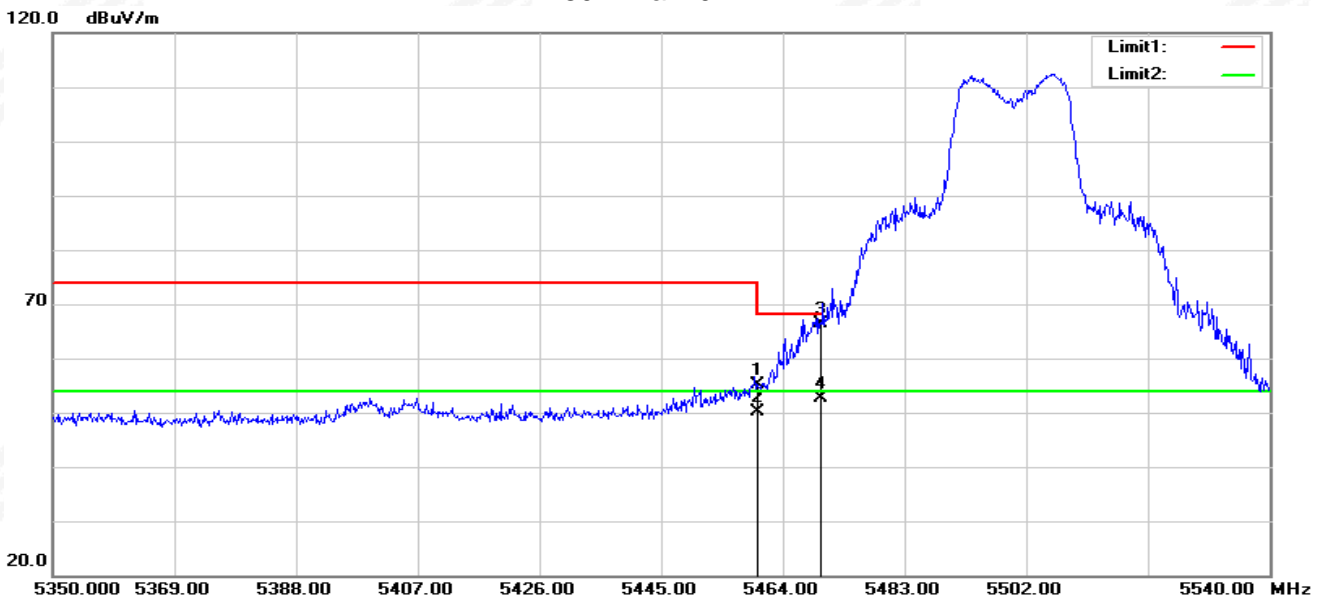
U-NII-2C 5470-5725MHz

802.11ax20-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5460.000	52.80	-5.11	47.69	68.20	-20.51	peak
2	5470.000	53.64	-5.09	48.55	68.20	-19.65	peak

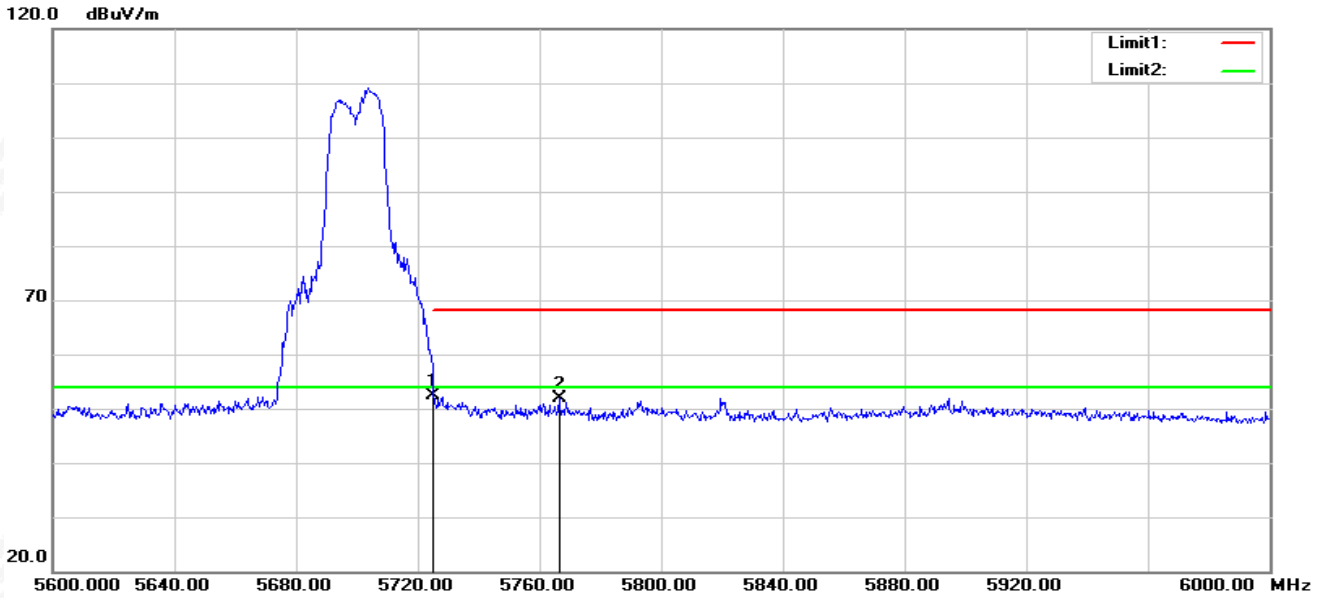
802.11ax20-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5460.000	60.12	-5.11	55.01	68.20	-13.19	peak
2	5460.000	55.31	-5.11	50.20	54.00	-3.80	AVG
3	5470.000	71.56	-5.09	66.47	68.20	-1.73	peak
4	5470.000	57.68	-5.09	52.59	54.00	-1.41	AVG

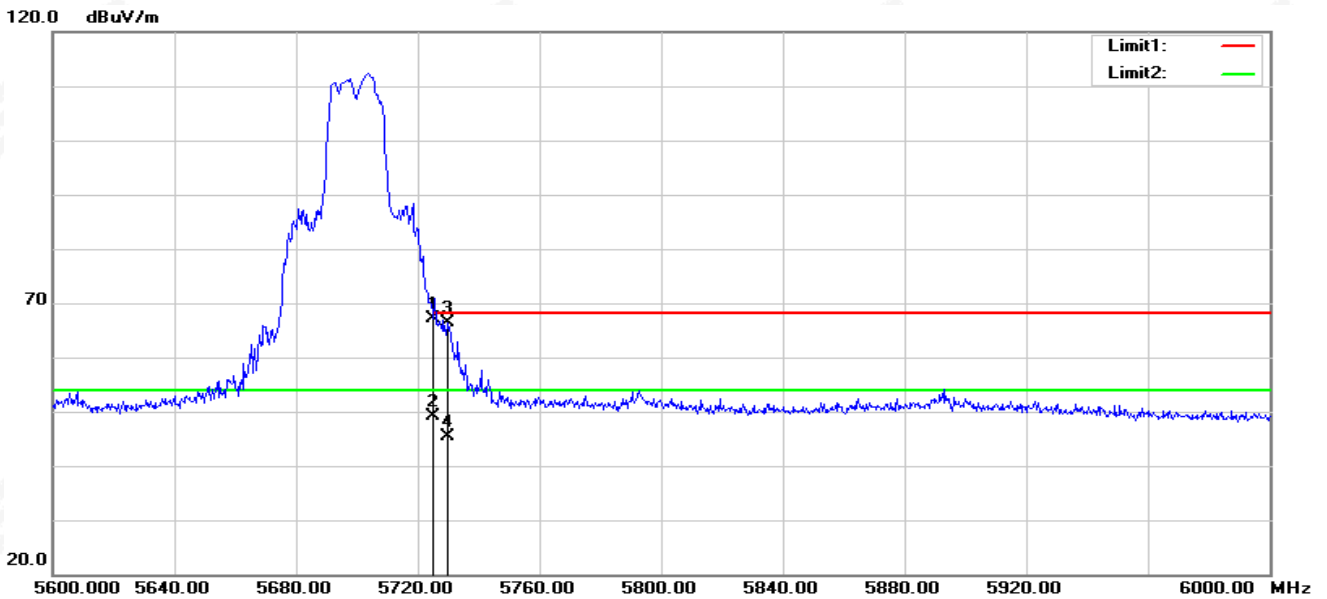


802.11ax20-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	57.05	-4.57	52.48	68.20	-15.72	peak
2	5766.400	56.32	-4.43	51.89	68.20	-16.31	peak

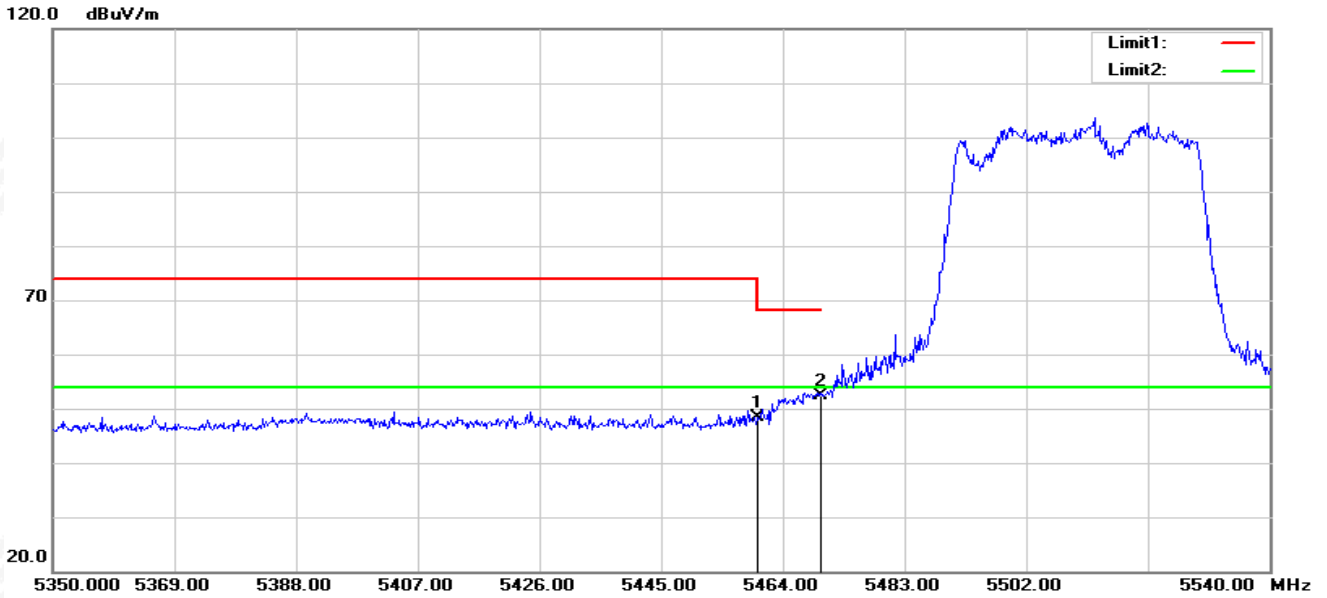
802.11ax20-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	71.65	-4.57	67.08	68.20	-1.12	peak
2	5725.000	53.59	-4.57	49.02	54.00	-4.98	AVG
3	5729.600	71.05	-4.56	66.49	68.20	-1.71	peak
4	5729.600	50.06	-4.56	45.50	54.00	-8.50	AVG

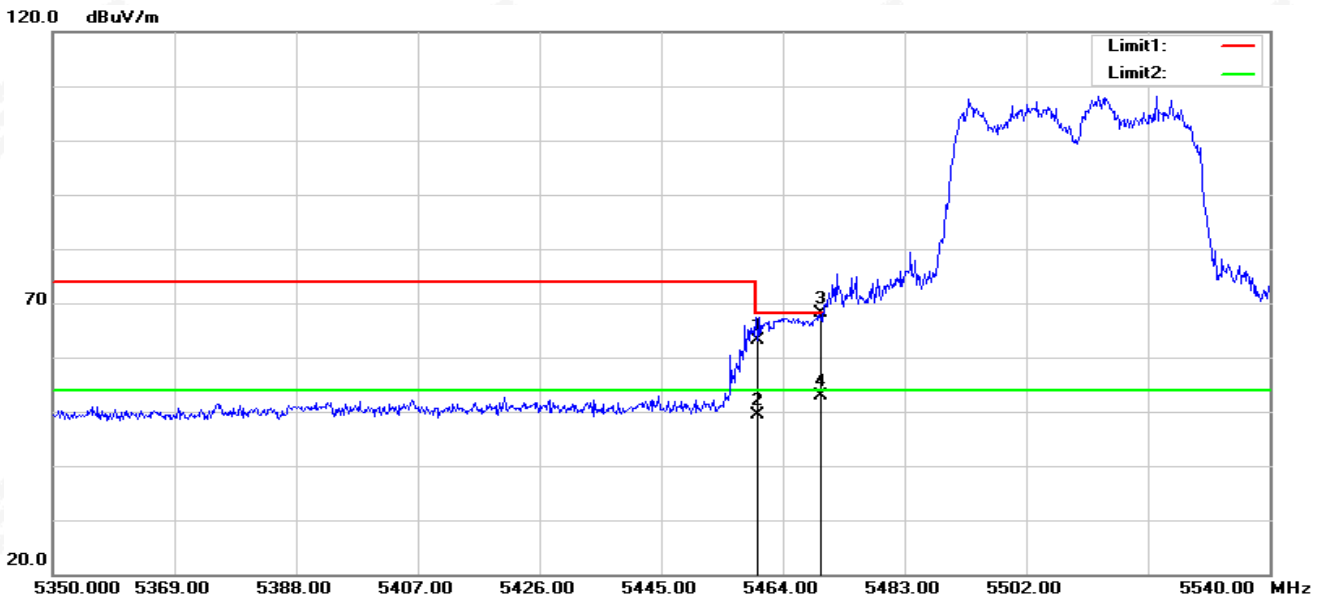


802.11ax40-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5460.000	53.40	-5.11	48.29	68.20	-19.91	peak
2	5470.000	57.36	-5.09	52.27	68.20	-15.93	peak

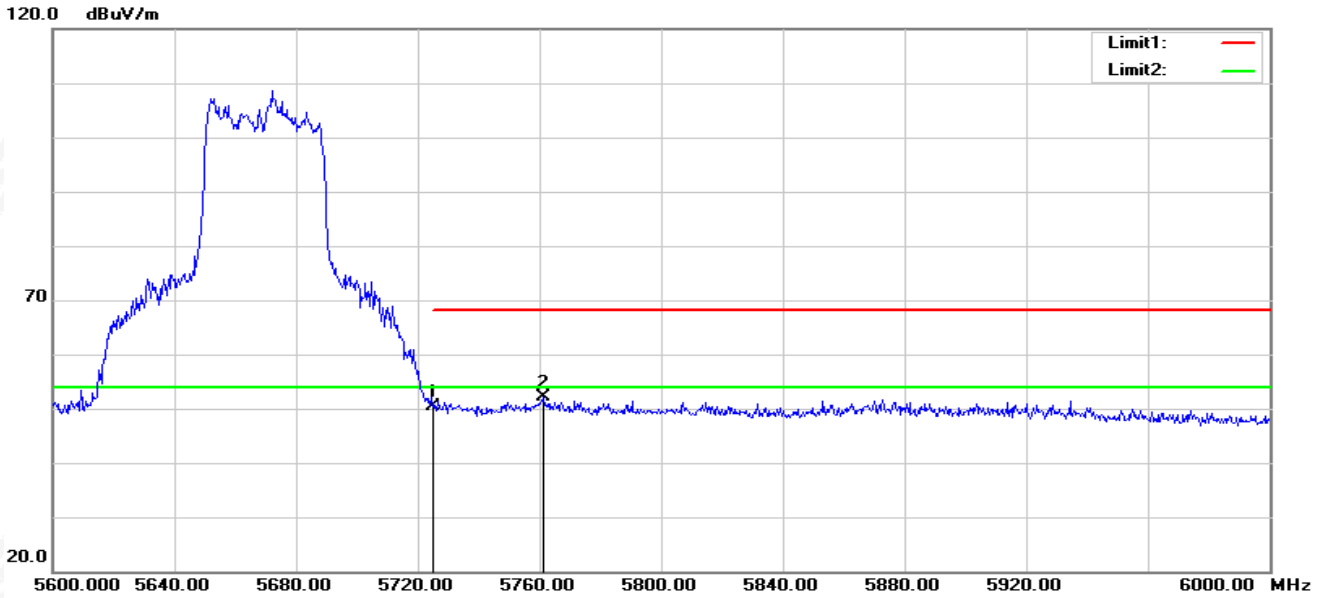
802.11ax40-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5460.000	68.36	-5.11	63.25	68.20	-4.95	peak
2	5460.000	54.40	-5.11	49.29	54.00	-4.71	AVG
3	5470.000	73.20	-5.09	68.11	68.20	-0.09	peak
4	5470.000	58.09	-5.09	53.00	54.00	-1.00	AVG

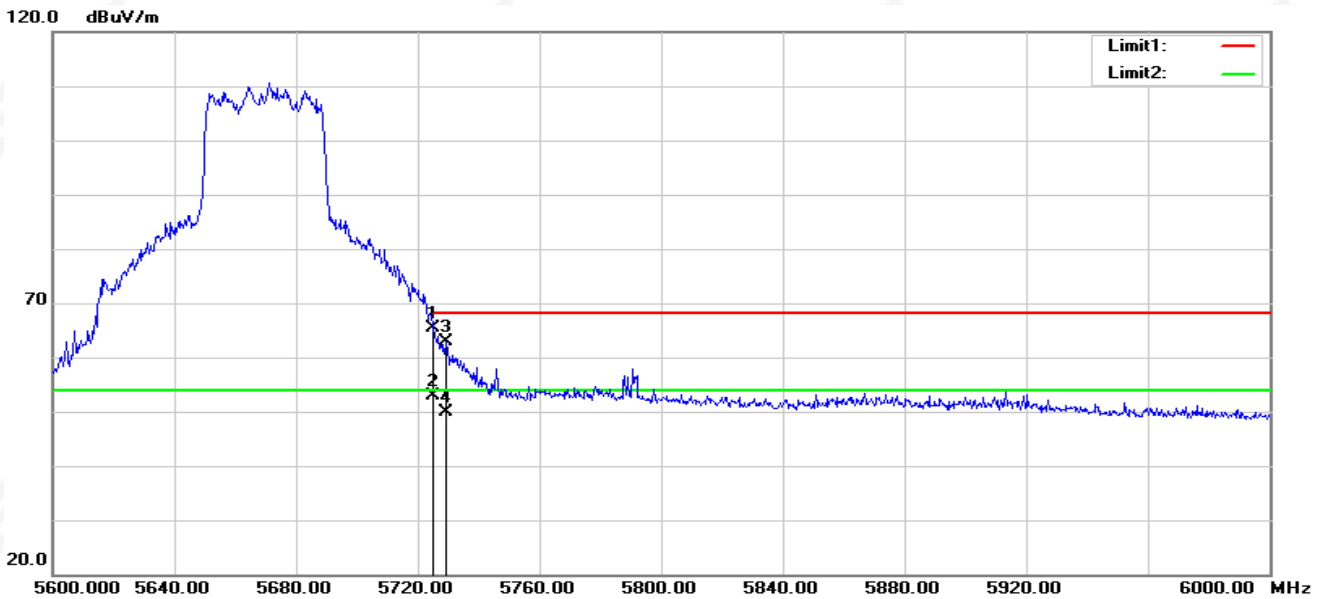


802.11ax40-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	54.88	-4.57	50.31	68.20	-17.89	peak
2	5761.200	56.47	-4.45	52.02	68.20	-16.18	peak

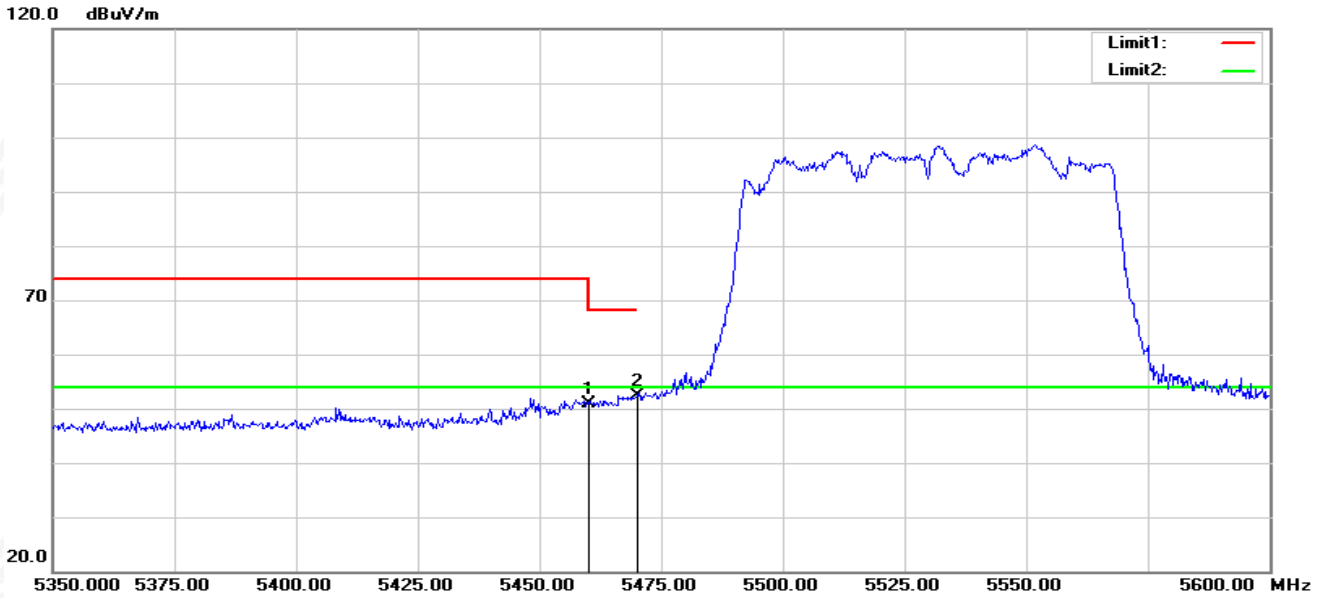
802.11ax40-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	69.90	-4.57	65.33	68.20	-2.87	peak
2	5725.000	57.44	-4.57	52.87	54.00	-1.13	AVG
3	5729.200	67.52	-4.56	62.96	68.20	-5.24	peak
4	5729.200	54.42	-4.56	49.86	54.00	-4.14	AVG

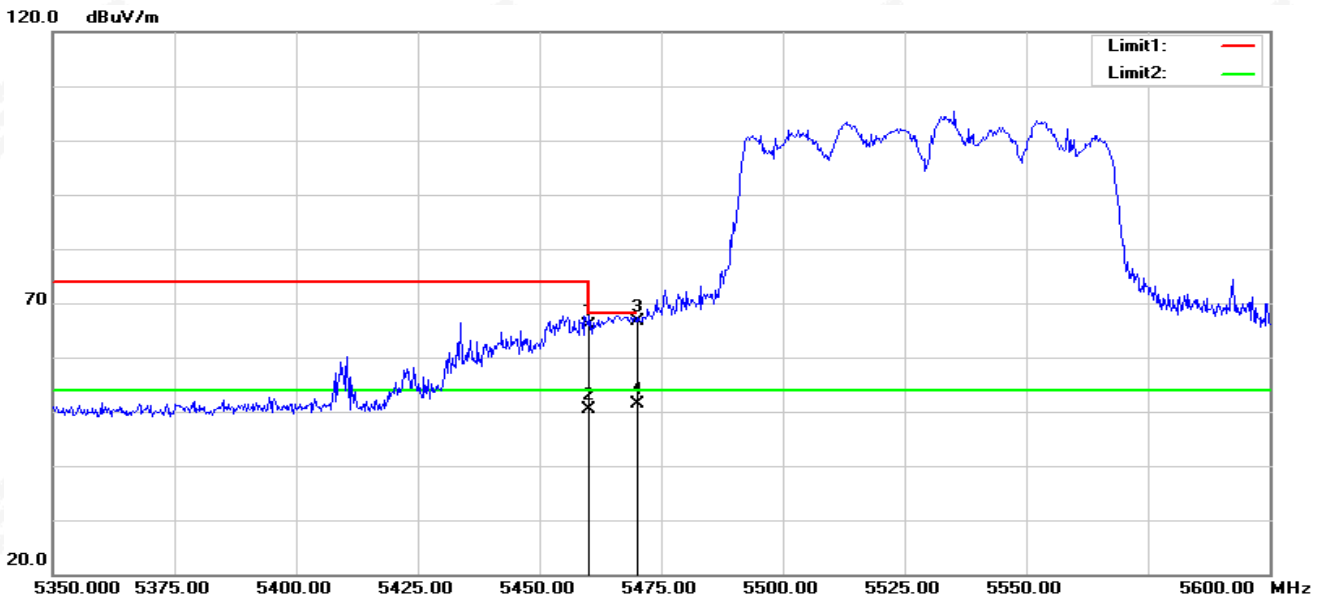


802.11ac80-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5460.000	55.91	-5.11	50.80	68.20	-17.40	peak
2	5470.000	57.37	-5.09	52.28	68.20	-15.92	peak

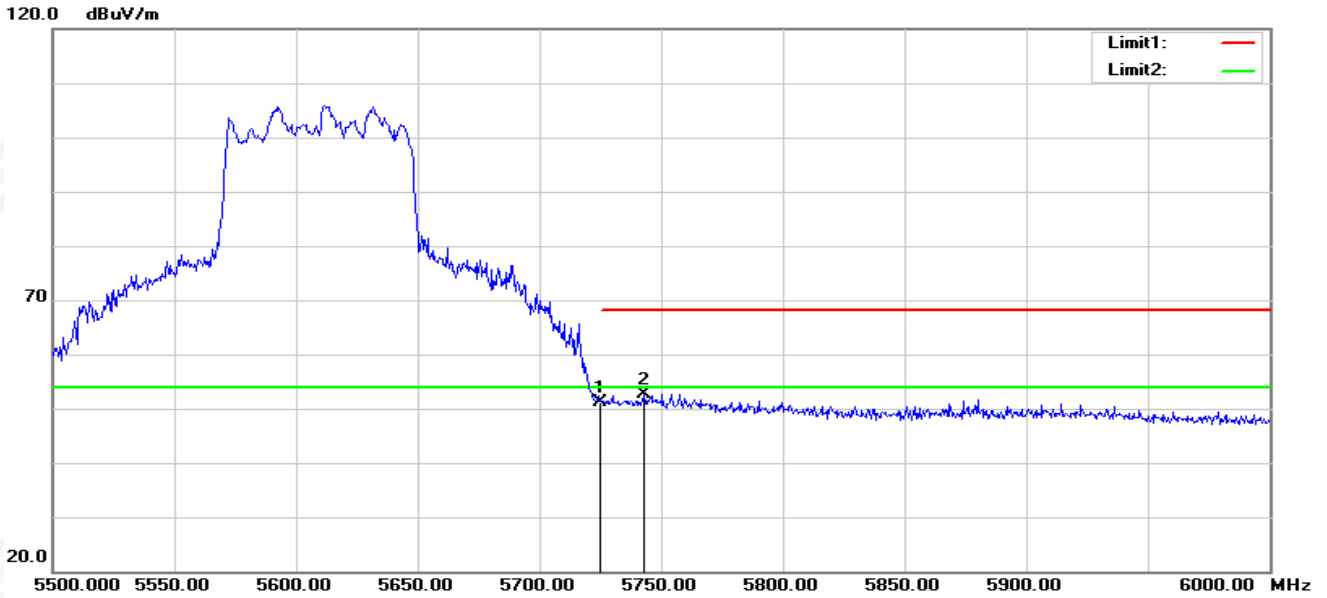
802.11ac80-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5460.000	70.90	-5.11	65.79	68.20	-2.41	peak
2	5460.000	55.39	-5.11	50.28	54.00	-3.72	AVG
3	5470.000	71.71	-5.09	66.62	68.20	-1.58	peak
4	5470.000	56.52	-5.09	51.43	54.00	-2.57	AVG

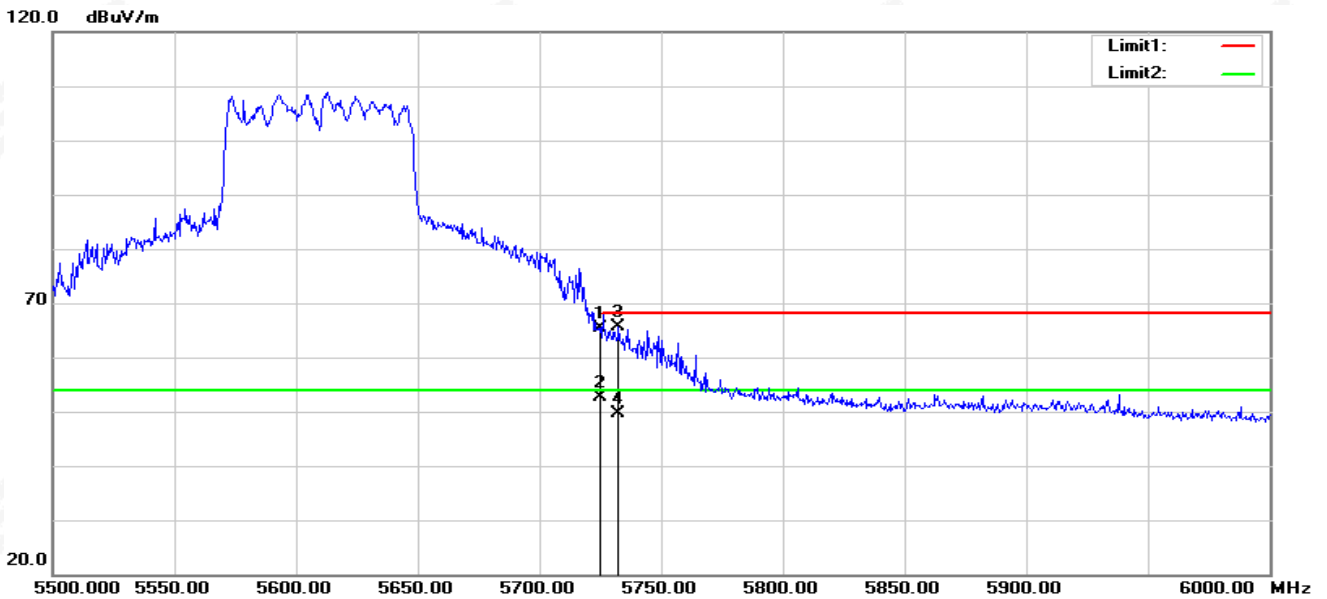


802.11ac80-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	55.82	-4.57	51.25	68.20	-16.95	peak
2	5743.000	57.14	-4.51	52.63	68.20	-15.57	peak

802.11ac80-H-V



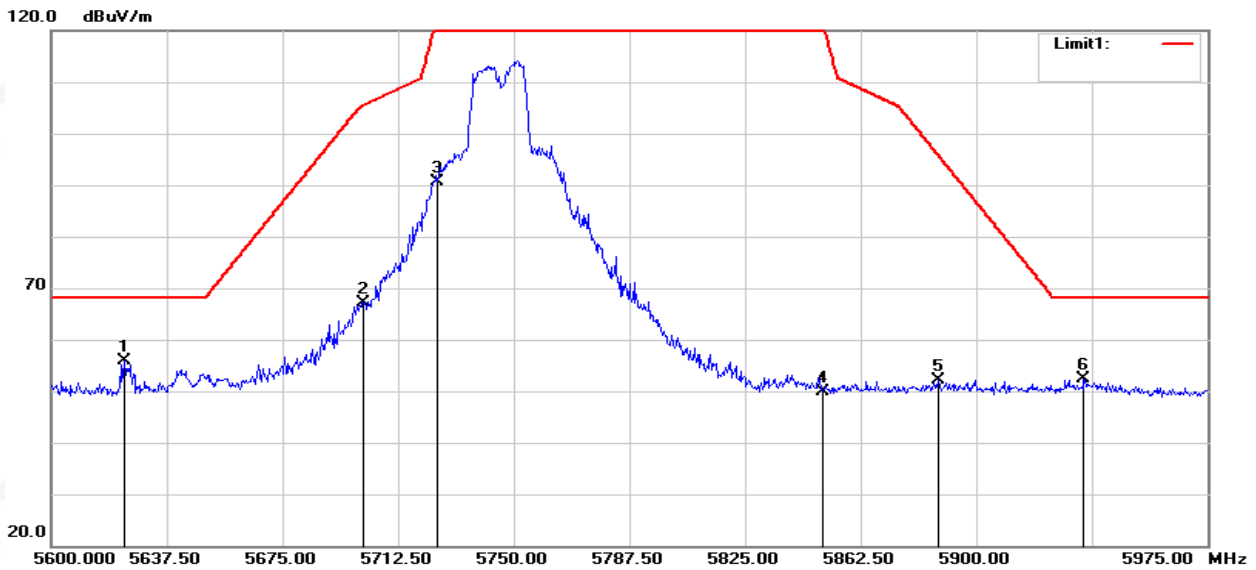
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	70.05	-4.57	65.48	68.20	-2.72	peak
2	5725.000	57.22	-4.57	52.65	54.00	-1.35	AVG
3	5732.500	70.16	-4.55	65.61	68.20	-2.59	peak
4	5732.500	54.16	-4.55	49.61	54.00	-4.39	AVG

Note: All modes have been tested. Only the worst mode shown in the report.



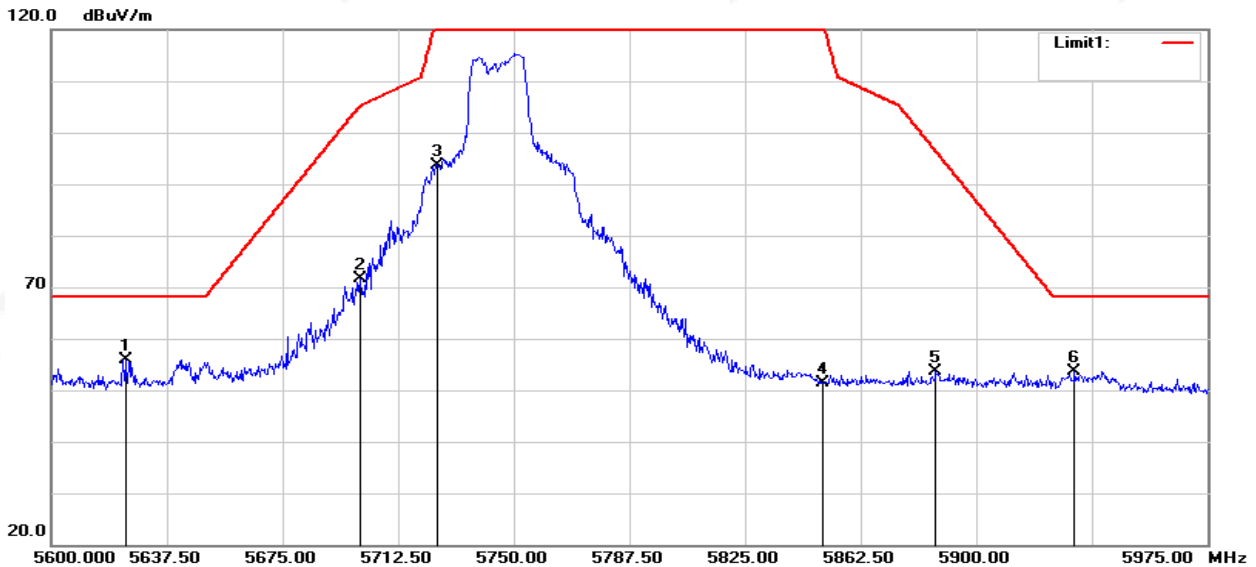
U-NII-3 (5.725-5.85 GHz)

802.11ax20-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5623.625	60.68	-4.69	55.99	68.20	-12.21	peak
2	5701.250	71.78	-4.66	67.12	105.55	-38.43	peak
3	5725.000	95.24	-4.57	90.67	122.20	-31.53	peak
4	5850.000	54.02	-4.10	49.92	122.20	-72.28	peak
5	5887.625	56.17	-3.93	52.24	95.86	-43.62	peak
6	5934.875	56.28	-3.94	52.34	68.20	-15.86	peak

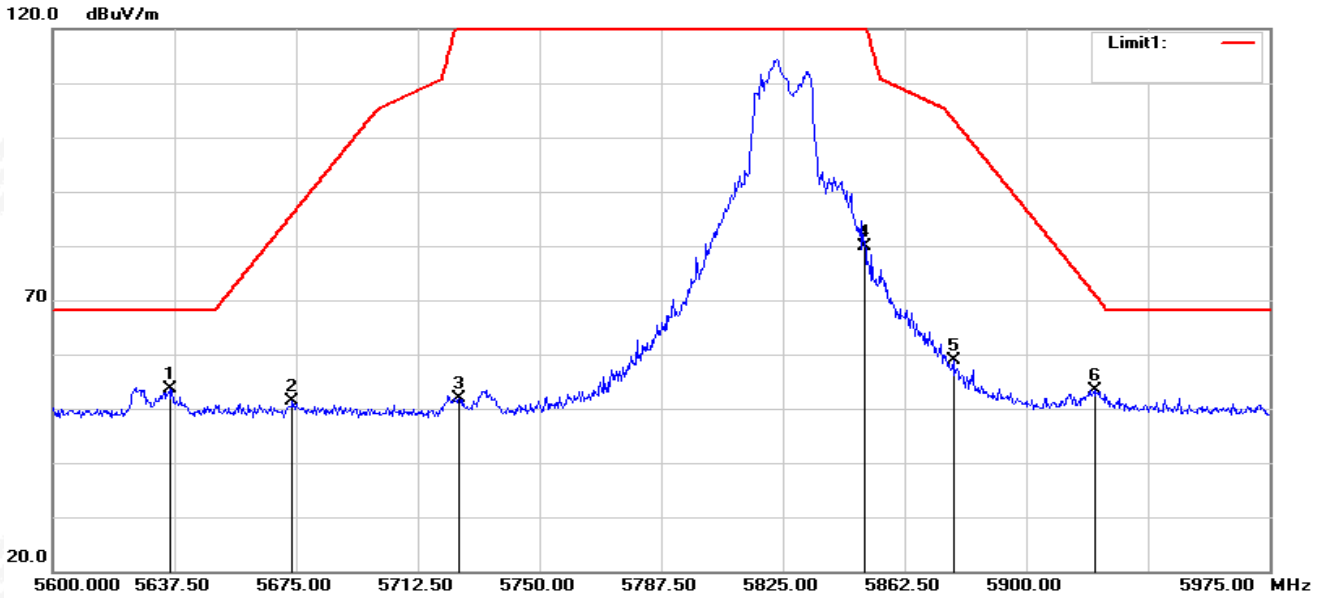
802.11ax20-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5624.000	60.66	-4.69	55.97	68.20	-12.23	peak
2	5700.125	76.41	-4.66	71.75	105.23	-33.48	peak
3	5725.000	98.14	-4.57	93.57	122.20	-28.63	peak
4	5850.000	55.59	-4.10	51.49	122.20	-70.71	peak
5	5886.875	57.51	-3.94	53.57	96.41	-42.84	peak
6	5931.875	57.61	-3.94	53.67	68.20	-14.53	peak

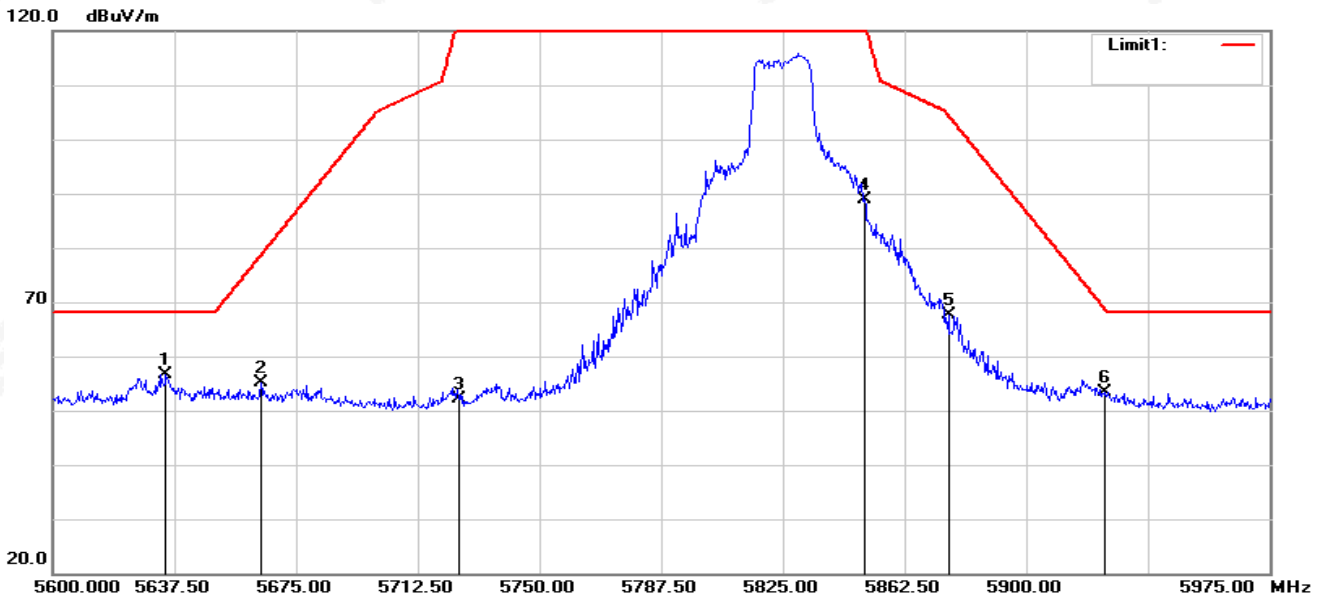


802.11ax20-H-H



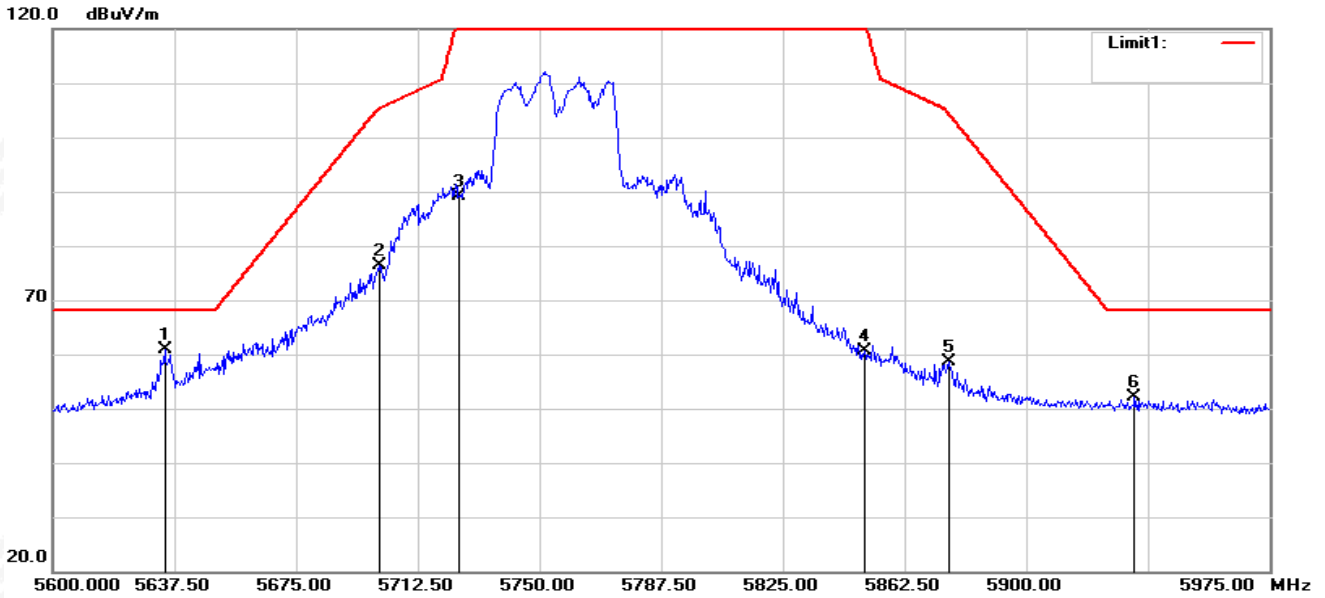
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	sRemark
1	5636.000	58.32	-4.68	53.64	68.20	-14.56	peak
2	5673.875	55.99	-4.67	51.32	85.87	-34.55	peak
3	5725.000	56.55	-4.57	51.98	122.20	-70.22	peak
4	5850.000	83.95	-4.10	79.85	122.20	-42.35	peak
5	5877.500	62.75	-3.98	58.77	103.35	-44.58	peak
6	5921.375	57.39	-3.92	53.47	70.88	-17.41	peak

802.11ax20-H-V



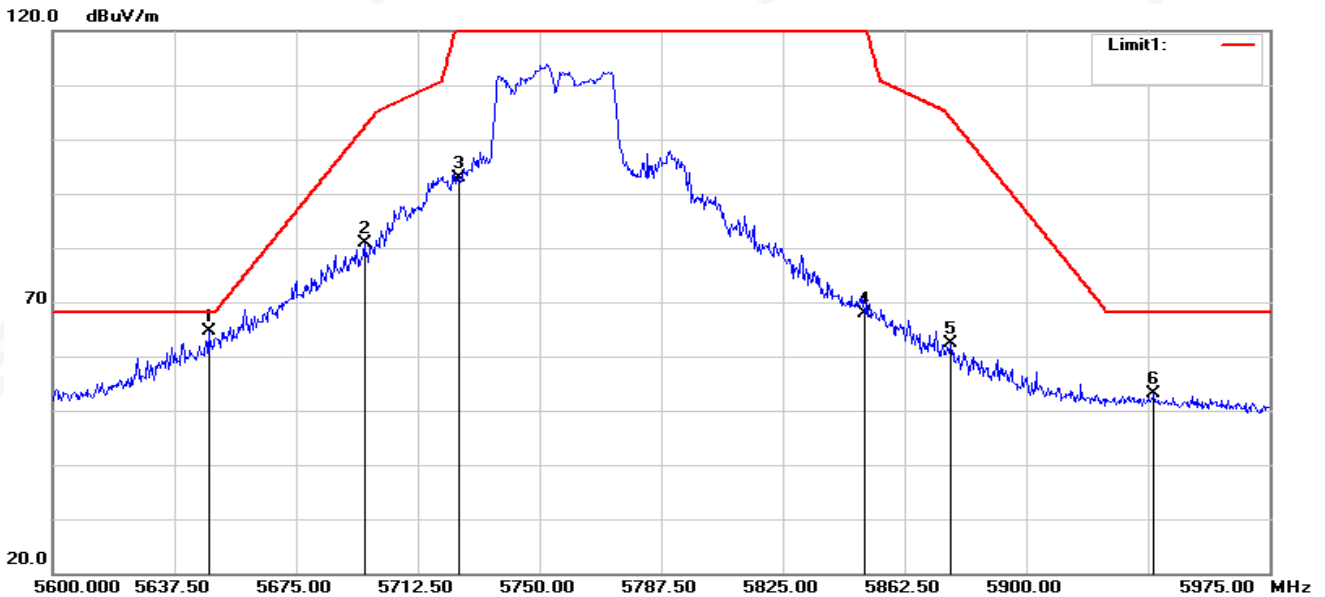
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5634.875	61.42	-4.68	56.74	68.20	-11.46	peak
2	5664.125	59.88	-4.68	55.20	78.65	-23.45	peak
3	5725.000	56.69	-4.57	52.12	122.20	-70.08	peak
4	5850.000	92.99	-4.10	88.89	122.20	-33.31	peak
5	5876.000	71.56	-3.99	67.57	104.46	-36.89	peak
6	5924.375	57.32	-3.92	53.40	68.66	-15.26	peak

802.11ax40-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5634.500	65.64	-4.68	60.96	68.20	-7.24	peak
2	5700.500	81.10	-4.66	76.44	105.34	-28.90	peak
3	5725.000	93.63	-4.57	89.06	122.20	-33.14	peak
4	5850.000	64.82	-4.10	60.72	122.20	-61.48	peak
5	5876.000	62.54	-3.99	58.55	104.46	-45.91	peak
6	5933.375	56.02	-3.94	52.08	68.20	-16.12	peak

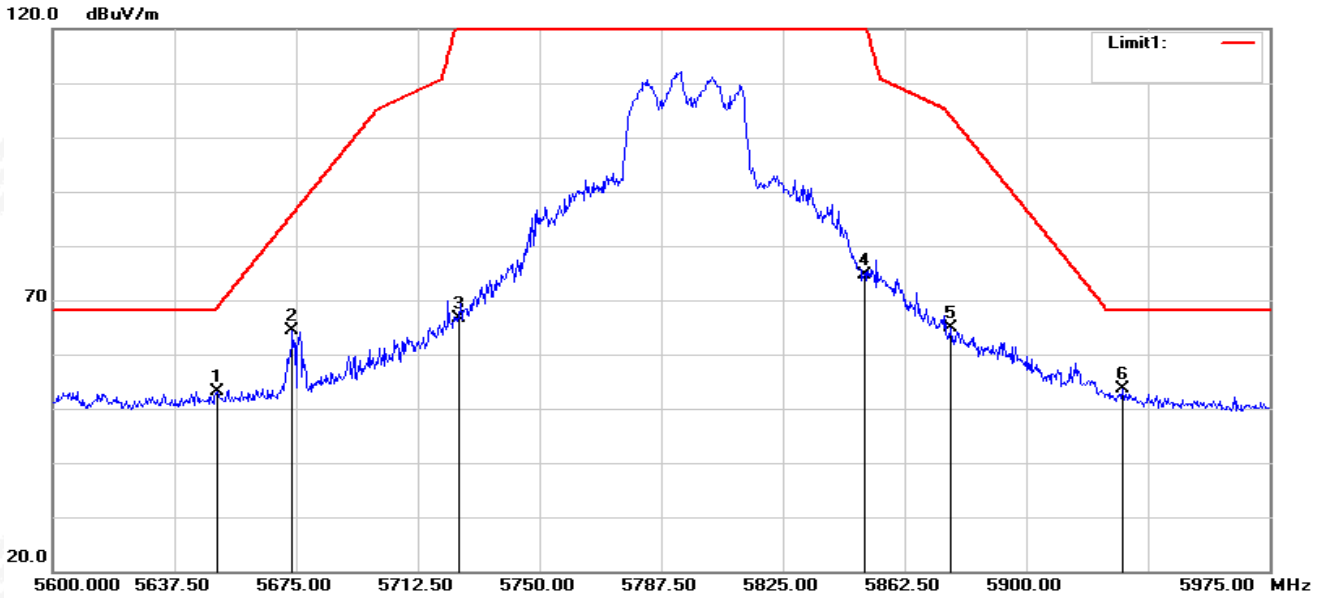
802.11ax40-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5648.000	69.30	-4.68	64.62	68.20	-3.58	peak
2	5696.000	85.56	-4.67	80.89	102.24	-21.35	peak
3	5725.000	97.34	-4.57	92.77	122.20	-29.43	peak
4	5850.000	71.89	-4.10	67.79	122.20	-54.41	peak
5	5876.750	66.32	-3.99	62.33	103.91	-41.58	peak
6	5939.375	56.96	-3.95	53.01	68.20	-15.19	peak

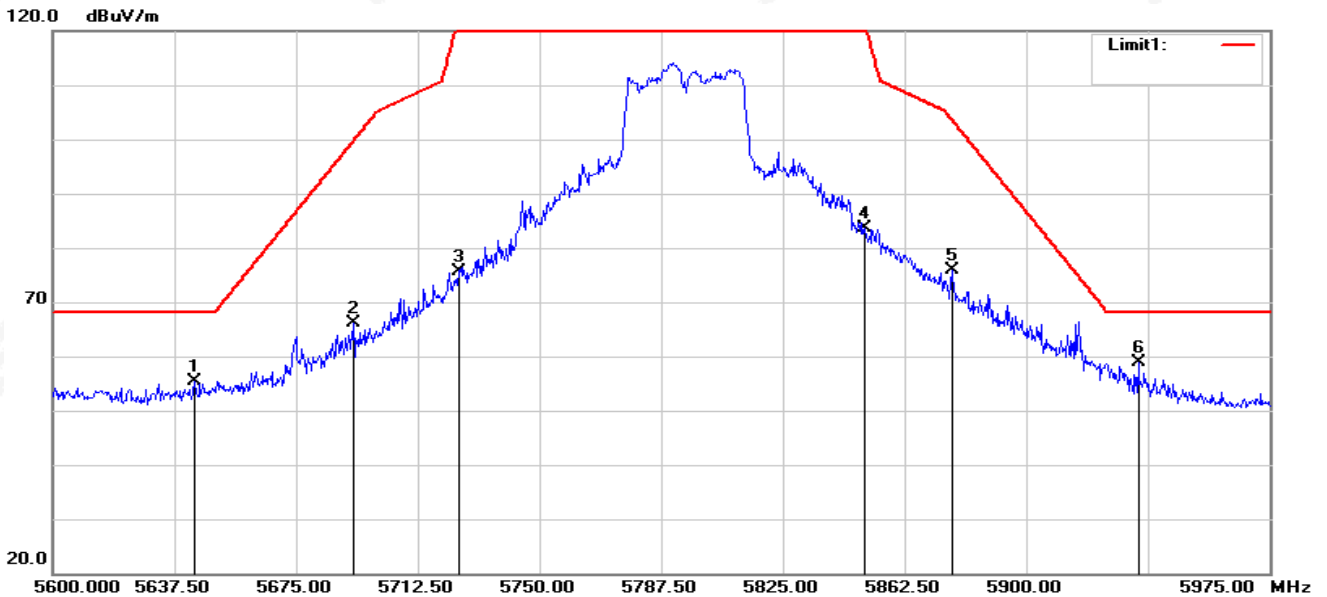


802.11ax40-H-H



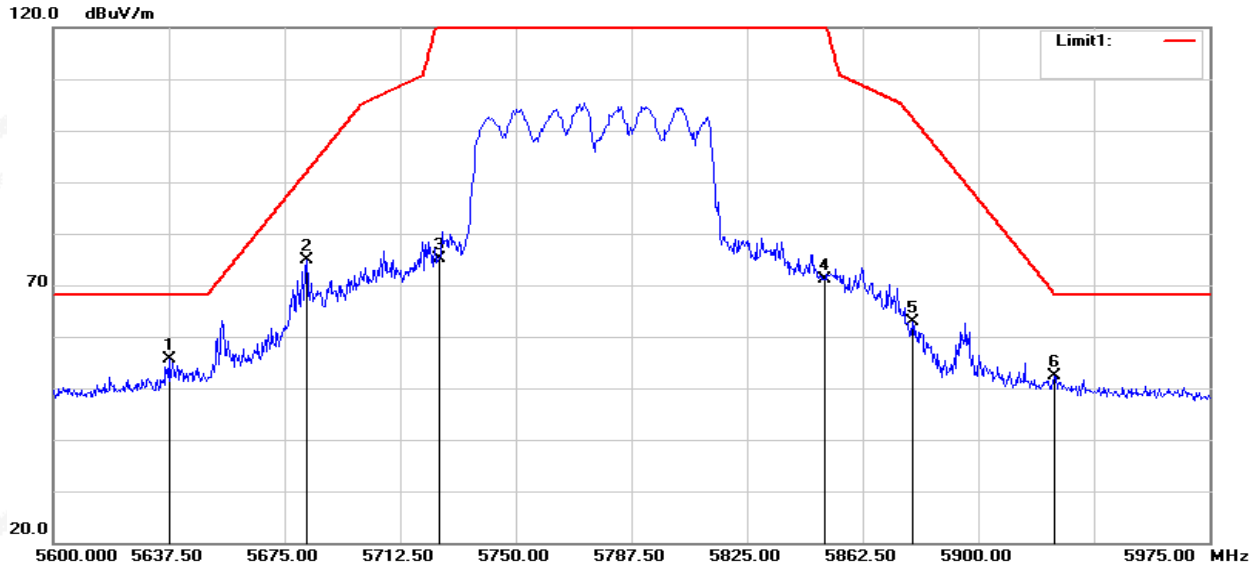
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.625	57.86	-4.68	53.18	68.66	-15.48	peak
2	5673.875	69.04	-4.67	64.37	85.87	-21.50	peak
3	5725.000	71.24	-4.57	66.67	122.20	-55.53	peak
4	5850.000	78.76	-4.10	74.66	122.20	-47.54	peak
5	5876.750	68.82	-3.99	64.83	103.91	-39.08	peak
6	5929.625	57.67	-3.93	53.74	68.20	-14.46	peak

802.11ax40-H-V



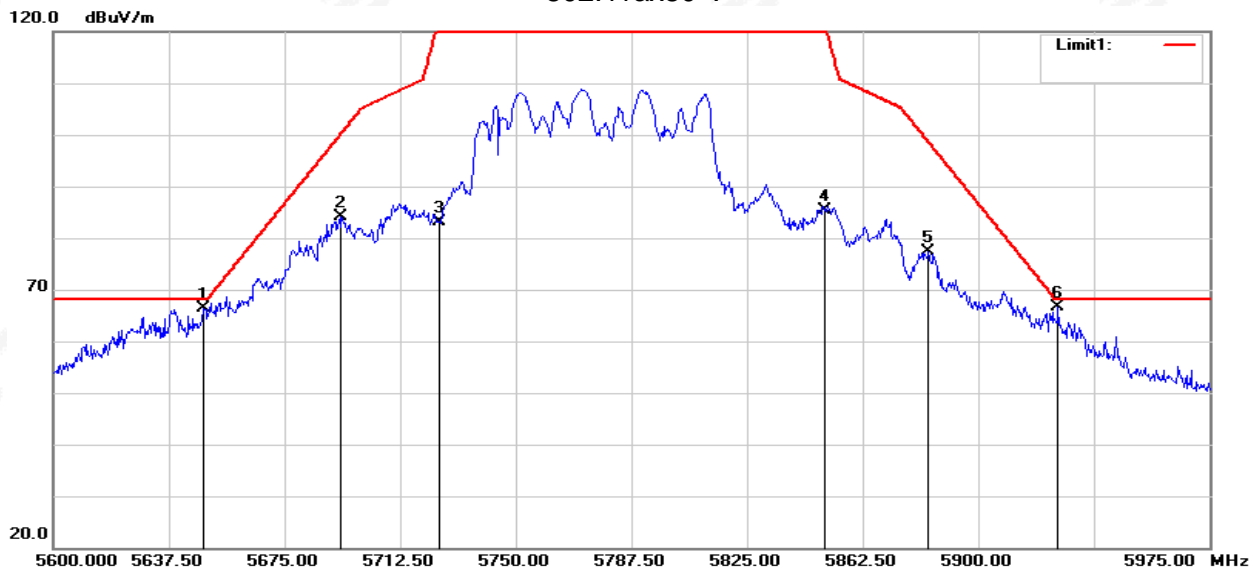
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5643.500	60.10	-4.68	55.42	68.20	-12.78	peak
2	5692.625	70.72	-4.66	66.06	99.74	-33.68	peak
3	5725.000	80.32	-4.57	75.75	122.20	-46.45	peak
4	5850.000	87.64	-4.10	83.54	122.20	-38.66	peak
5	5877.125	79.93	-3.98	75.95	103.63	-27.68	peak
6	5934.500	62.81	-3.93	58.88	68.20	-9.32	peak

802.11ax80-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5637.500	60.26	-4.69	55.57	68.20	-12.63	peak
2	5682.125	79.57	-4.67	74.90	91.97	-17.07	peak
3	5725.000	79.80	-4.57	75.23	122.20	-46.97	peak
4	5850.000	75.12	-4.10	71.02	122.20	-51.18	peak
5	5878.625	66.86	-3.97	62.89	102.52	-39.63	peak
6	5924.750	56.18	-3.92	52.26	68.39	-16.13	peak

802.11ax80-V



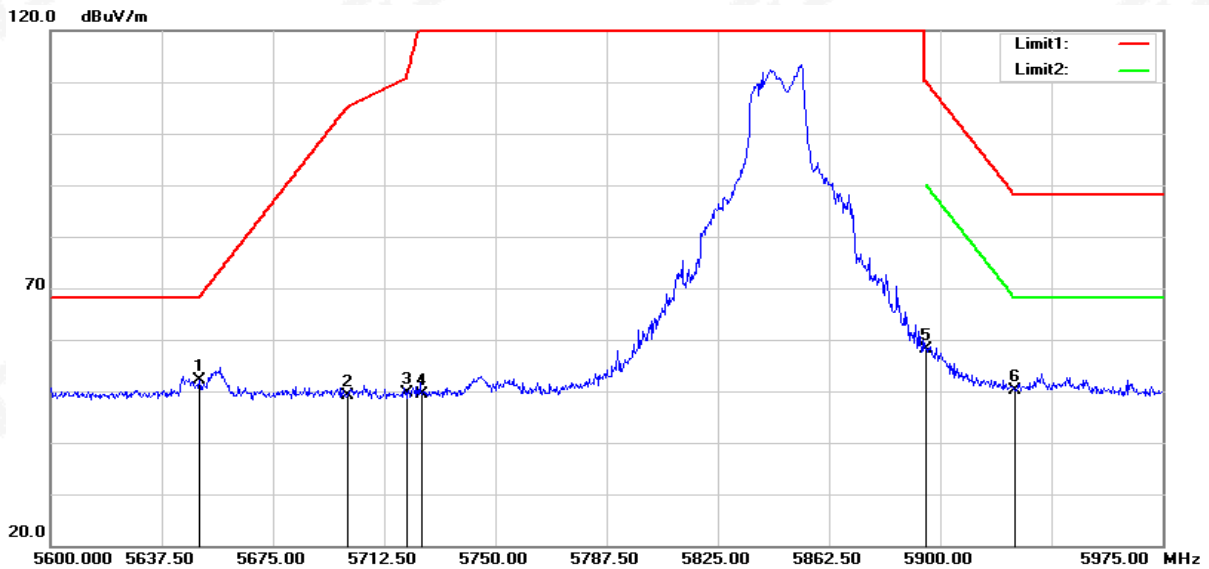
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5648.750	71.04	-4.68	66.36	68.20	-1.84	peak
2	5693.375	88.77	-4.66	84.11	100.30	-16.19	peak
3	5725.000	87.79	-4.57	83.22	122.20	-38.98	peak
4	5850.000	89.53	-4.10	85.43	122.20	-36.77	peak
5	5883.875	81.38	-3.96	77.42	98.63	-21.21	peak
6	5925.875	70.62	-3.93	66.69	68.20	-1.51	peak

Note: All modes have been tested. Only the worst mode shown in the report.

U-NII-4 (5.845-5.885) GHz

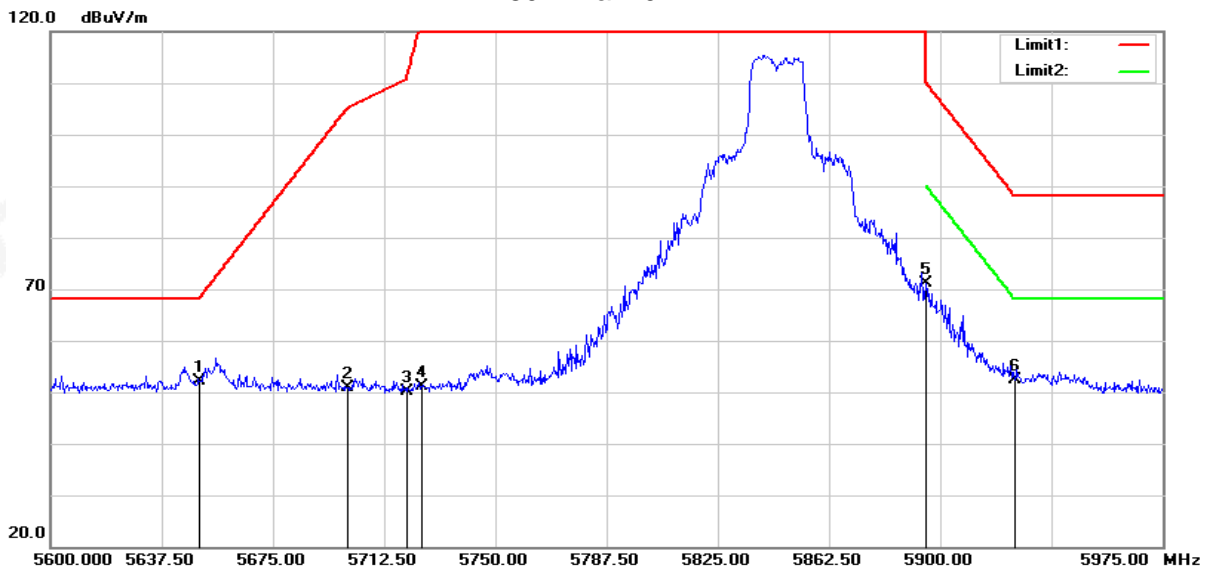
Note: The peak test value of frequencies above 5895MHz is less than the AV limit, so AV data does not need to be tested.

802.11ax20-L-H



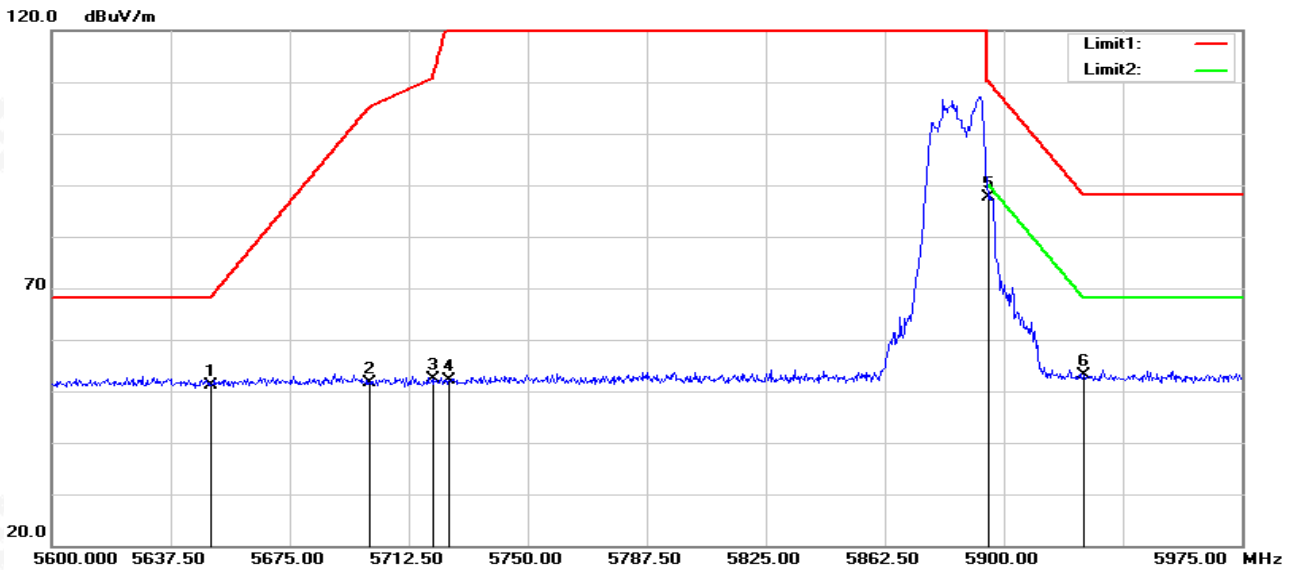
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	56.69	-4.68	52.01	68.20	-	-16.19	peak
2	5700.000	53.81	-4.66	49.15	105.20	-	-56.05	peak
3	5720.000	54.10	-4.59	49.51	110.80	-	-61.29	peak
4	5725.000	53.98	-4.57	49.41	122.20	-	-72.79	peak
5	5895.000	62.04	-3.90	58.14	110.20	90.20	-32.06	peak
6	5925.000	54.14	-3.92	50.22	98.20	68.20	-17.98	peak

802.11ax20-L-V



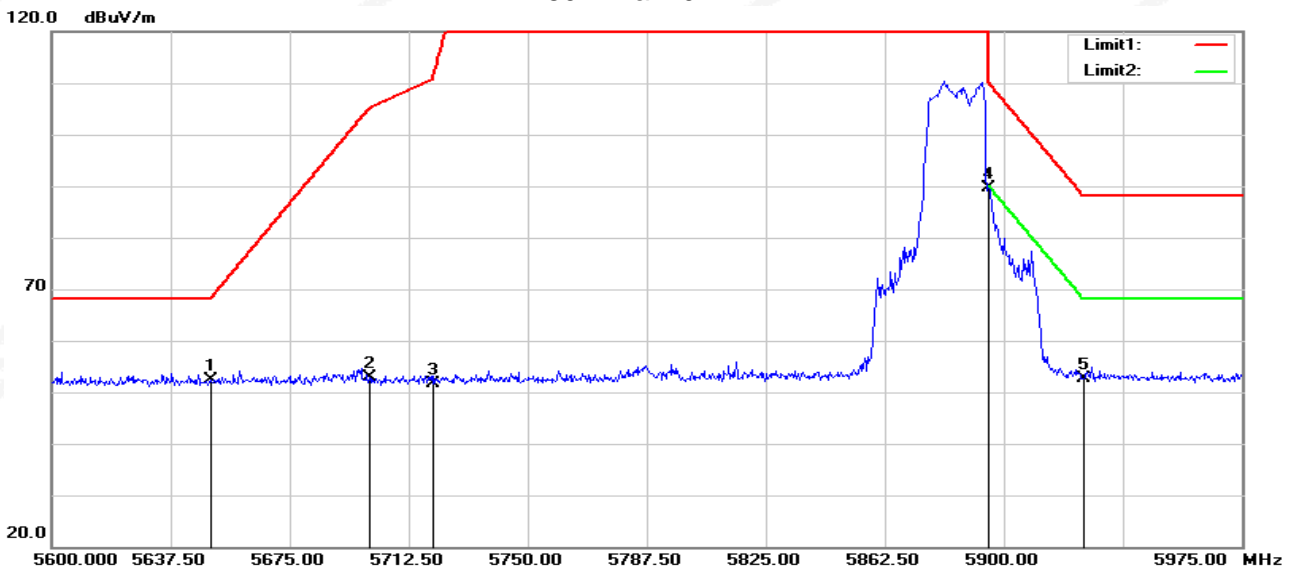
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	56.92	-4.68	52.24	68.20	-	-15.96	peak
2	5700.000	55.49	-4.66	50.83	105.20	-	-54.37	peak
3	5720.000	54.75	-4.59	50.16	110.80	-	-60.64	peak
4	5725.000	55.71	-4.57	51.14	122.20	-	-71.06	peak
5	5895.000	75.13	-3.90	71.23	110.20	90.20	-18.97	peak
6	5925.000	56.30	-3.92	52.38	88.20	68.20	-15.82	peak

802.11ax20-H-H



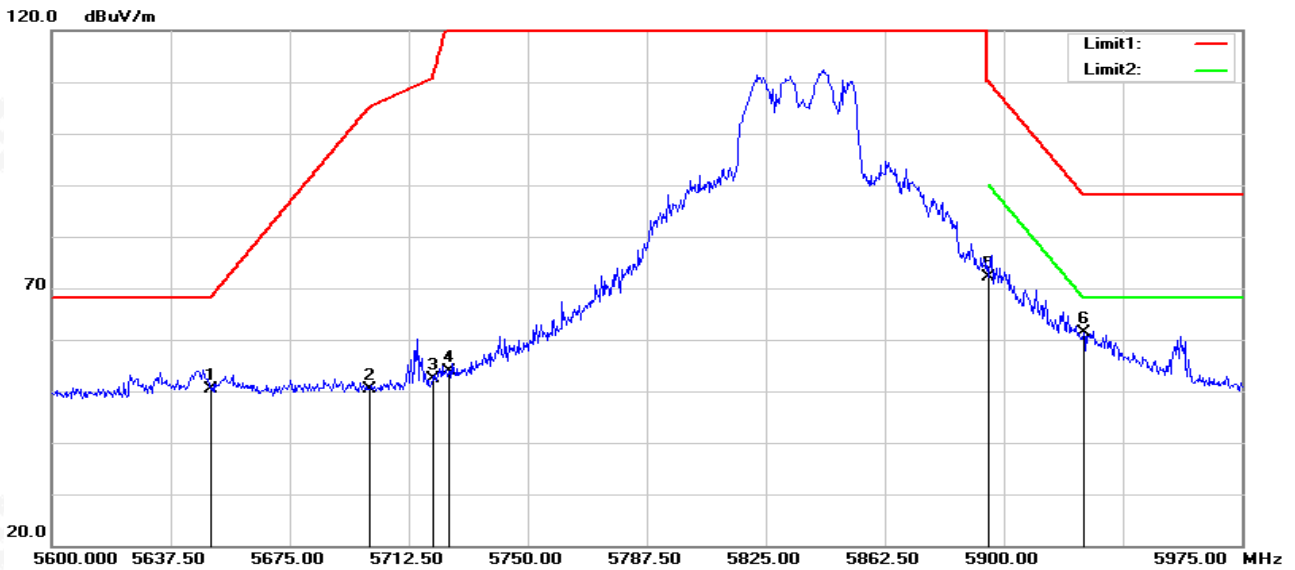
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	sRemark
1	5650.000	55.83	-4.68	51.15	68.20	-	-17.05	peak
2	5700.000	56.19	-4.66	51.53	105.20	-	-53.67	peak
3	5720.000	56.87	-4.59	52.28	110.80	-	-58.52	peak
4	5725.000	56.61	-4.57	52.04	122.20	-	-70.16	peak
5	5895.000	91.47	-3.90	87.57	110.20	90.20	-2.63	peak
6	5925.000	57.00	-3.92	53.08	88.20	68.20	-15.12	peak

802.11ax20-H-V



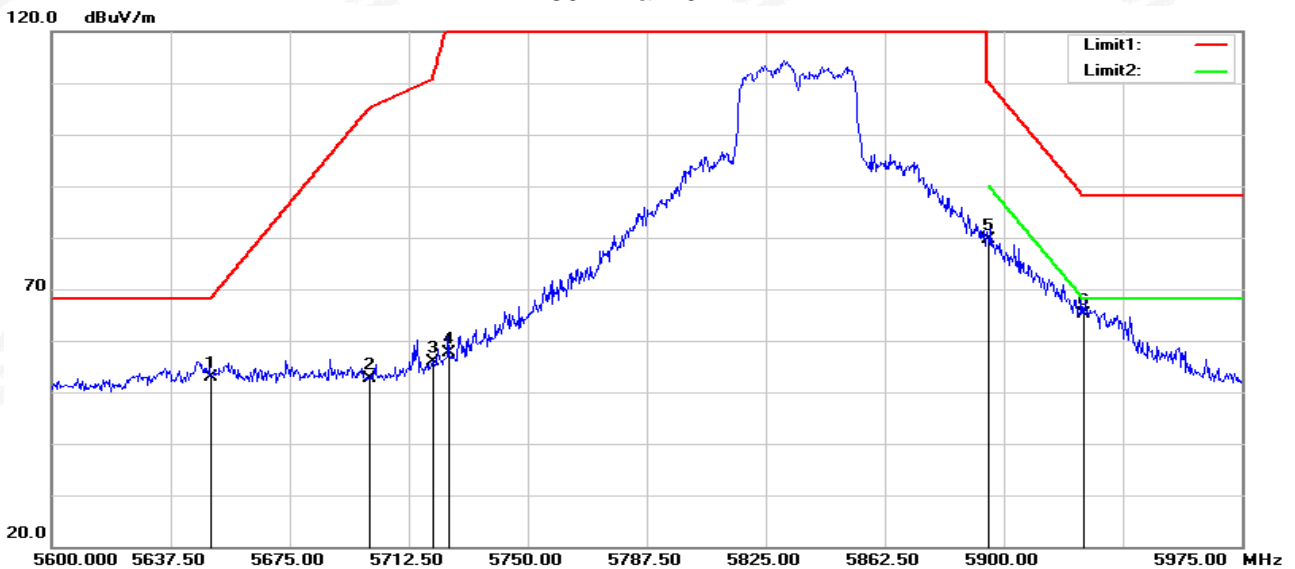
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	57.08	-4.68	52.40	68.20	-	-15.80	peak
2	5700.000	57.54	-4.66	52.88	105.20	-	-52.32	peak
3	5720.000	56.12	-4.59	51.53	110.80	-	-59.27	peak
4	5895.000	93.53	-3.90	89.63	110.20	90.20	-0.57	peak
5	5925.000	56.60	-3.92	52.68	88.20	68.20	-15.52	peak

802.11ax40-L-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	55.11	-4.68	50.43	68.20		-17.77	peak
2	5700.000	55.13	-4.66	50.47	105.20	-	-54.73	peak
3	5720.000	56.93	-4.59	52.34	110.80	-	-58.46	peak
4	5725.000	58.51	-4.57	53.94	122.20	-	-68.26	peak
5	5895.000	76.01	-3.90	72.11	110.20	90.20	-18.09	peak
6	5925.000	65.35	-3.92	61.43	88.20	68.20	-6.77	peak

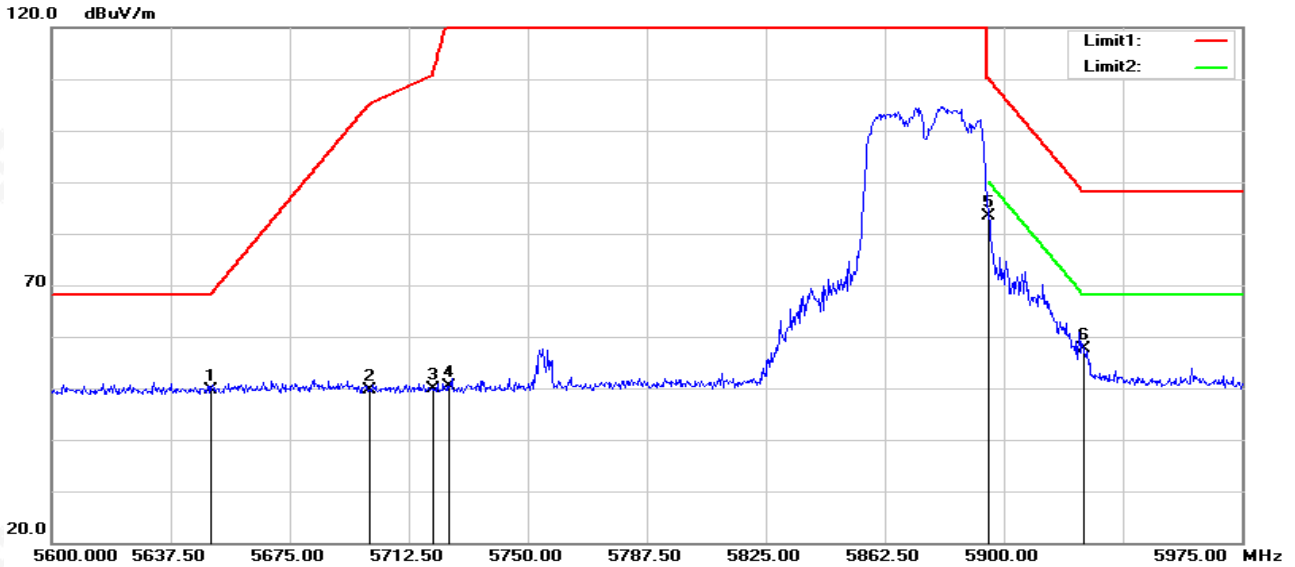
802.11ax40-L-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	57.60	-4.68	52.92	68.20		-15.28	peak
2	5700.000	57.37	-4.66	52.71	105.20	-	-52.49	peak
3	5720.000	60.52	-4.59	55.93	110.80	-	-54.87	peak
4	5725.000	62.20	-4.57	57.63	122.20	-	-64.57	peak
5	5895.000	83.57	-3.90	79.67	110.20	90.20	-10.53	peak
6	5925.000	68.97	-3.92	65.05	88.20	68.20	-3.15	peak

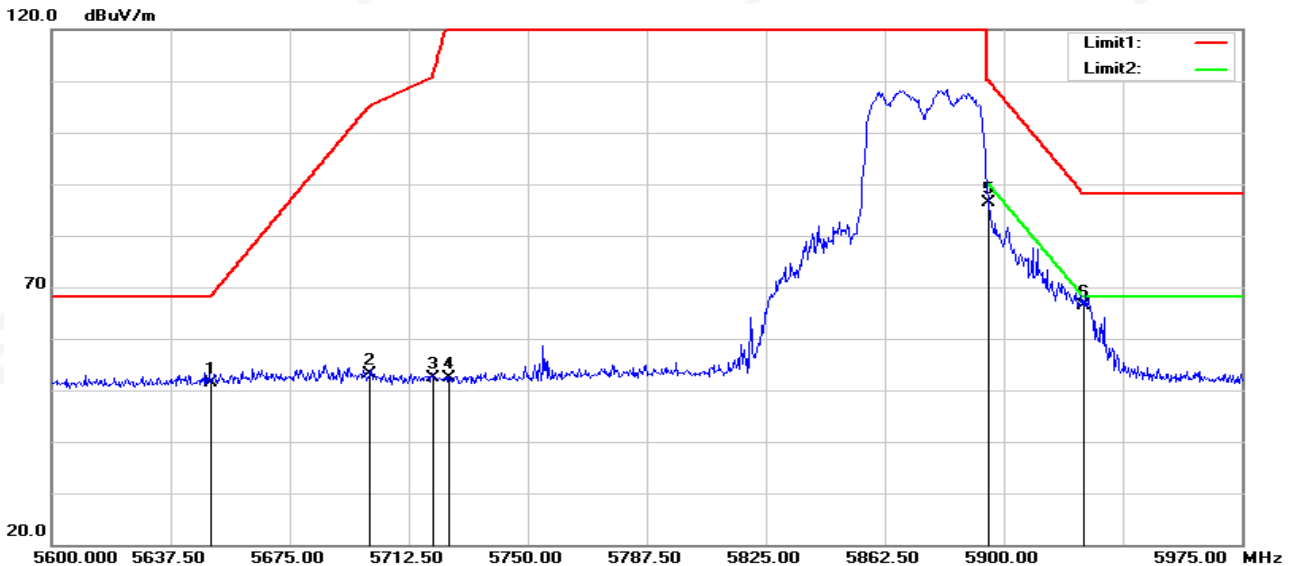


802.11ax40-H-H



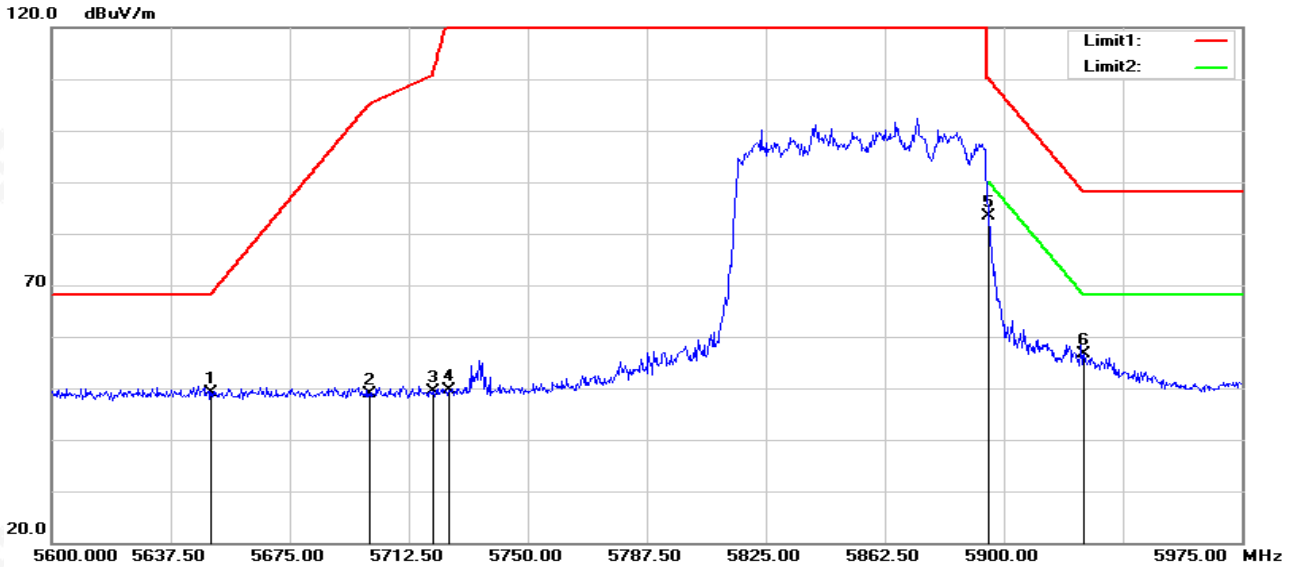
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	54.40	-4.68	49.72	68.20		-18.48	peak
2	5700.000	54.39	-4.66	49.73	105.20	-	-55.47	peak
3	5720.000	54.43	-4.59	49.84	110.80	-	-60.96	peak
4	5725.000	54.84	-4.57	50.27	122.20	-	-71.93	peak
5	5895.000	87.40	-3.90	83.50	110.20	90.20	-6.70	peak
6	5925.000	61.60	-3.92	57.68	88.20	68.20	-10.52	peak

802.11ax40-H-V



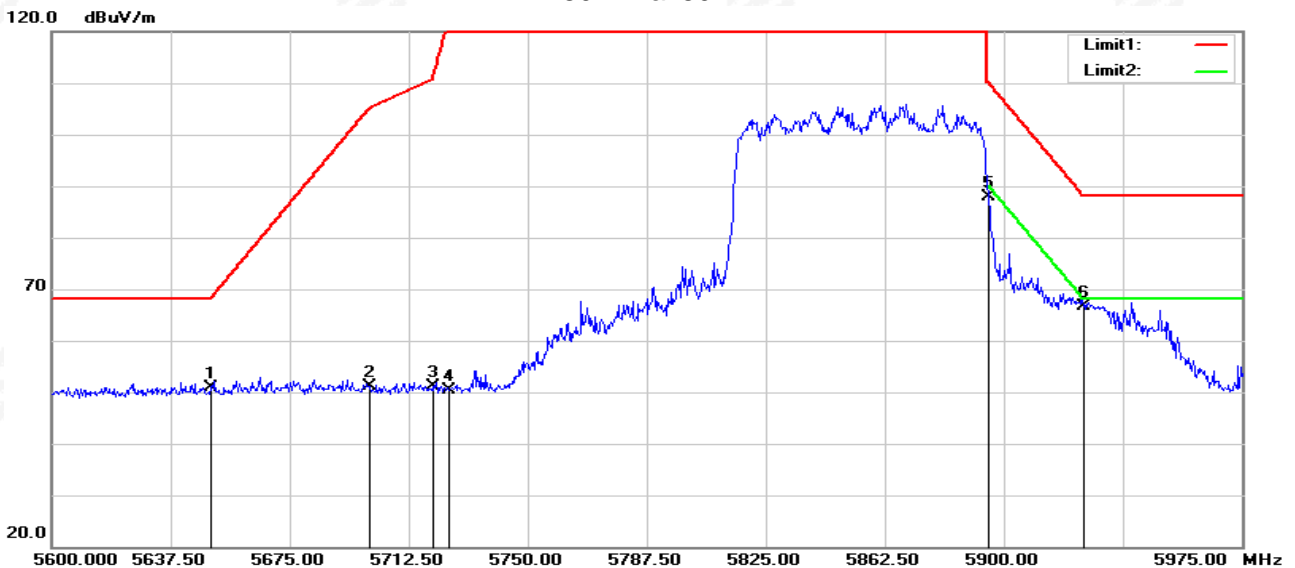
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	56.16	-4.68	51.48	68.20		-16.72	peak
2	5700.000	57.74	-4.66	53.08	105.20	-	-52.12	peak
3	5720.000	56.96	-4.59	52.37	110.80	-	-58.43	peak
4	5725.000	57.07	-4.57	52.50	122.20	-	-69.70	peak
5	5895.000	90.19	-3.90	86.29	110.20	90.20	-3.91	peak
6	5925.000	70.34	-3.92	66.42	88.20	68.20	-1.78	peak

802.11ax80-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	53.83	-4.68	49.15	68.20		-19.05	peak
2	5700.000	53.49	-4.66	48.83	105.20	-	-56.37	peak
3	5720.000	53.85	-4.59	49.26	110.80	-	-61.54	peak
4	5725.000	54.20	-4.57	49.63	122.20	-	-72.57	peak
5	5895.000	87.16	-3.90	83.26	100.20	90.20	-6.94	peak
6	5925.000	60.51	-3.92	56.59	88.20	68.20	-11.61	peak

802.11ax80-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	55.61	-4.68	50.93	68.20		-17.27	peak
2	5700.000	55.85	-4.66	51.19	105.20	-	-54.01	peak
3	5720.000	55.69	-4.59	51.10	110.80	-	-59.70	peak
4	5725.000	54.83	-4.57	50.26	122.20	-	-71.94	peak
5	5895.000	91.88	-3.90	87.98	110.20	90.20	-2.22	peak
6	5925.000	70.47	-3.92	66.55	88.20	68.20	-1.65	peak

Note: All modes have been tested. Only the worst mode shown in the report.

4. POWER SPECTRAL DENSITY TEST

4.1 LIMIT

1. For mobile and portable client devices in the 5.15-5.25 GHz band, , the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500kHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2 TEST PROCEDURE

1. The setting follows Method SA-1 of FCC KDB 789033 D02 General U-NII Test Procedures New Rules v02r01.

For devices operating in the band, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (*i.e.*, 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3 RBW$.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10 \log (500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ kHz})$ is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10 \log (1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since $RBW=100 \text{ KHZ}$ is available on nearly all spectrum analyzers.

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP**4.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS

Note: The test data please reference to attachment "STS2310303W05_Appendix 5G WIFI".

5. BANDWIDTH MEASUREMENT

5.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

The following procedure shall be used for measuring 26 bandwidth.

5.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW \geq RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

Note: The test data please reference to attachment "STS2310303W05_Appendix 5G WIFI".

5.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT

The following procedure shall be used for measuring (99 %) power bandwidth.

5.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01. The following procedure shall be used for measuring (99 %) power bandwidth:
 1. Set center frequency to the nominal EUT channel center frequency.
 2. Set span = 1.5 times to 5.0 times the OBW.
 3. Set RBW = 1 % to 5 % of the OBW
 4. Set VBW $\geq 3 \cdot$ RBW
 5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
 6. Use the 99 % power bandwidth function of the instrument (if available).
 7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

5.2.2 DEVIATION FROM STANDARD

No deviation.

5.2.3 TEST SETUP



5.2.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.2.5 TEST RESULTS

Note: The test data please reference to attachment "STS2310303W05_Appendix 5G WIFI".

5.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth.

5.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
 - a) Set RBW = 100 kHz.
 - b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
 - c) Detector = Peak.
 - d) Trace mode = max hold.
 - e) Sweep = auto couple.
 - f) Allow the trace to stabilize.
 - g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3.2 DEVIATION FROM STANDARD

No deviation.

5.3.3 TEST SETUP



5.3.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.3.5 TEST RESULTS

Note: The test data please reference to attachment "STS2310303W05_Appendix 5G WIFI".

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 LIMIT

For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz, If transmitting antennas of directional gain greater than 6 dBi are used.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

FCC Part15 (15.407) , Subpart E				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.407(a) (1) (iv)	Peak Output Power	0.25 watt	5150-5250	PASS
		The lesser of 250 mW or $11 \text{ dBm} + 10 \log (26 \text{ dB emission bandwidth})$	5250-5350 5470-5725	
15.407(a) (3)		1 watt	5725-5895	

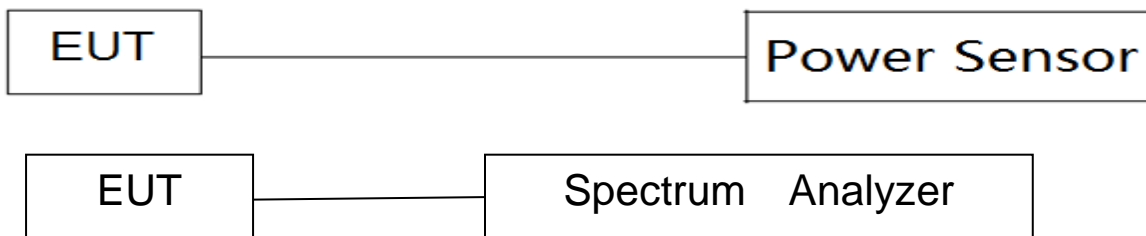
6.2 TEST PROCEDURE

The EUT was directly connected to the Power Sensor&PC

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

Note: The test data please reference to attachment "STS2310303W05_Appendix 5G WIFI".

7. AUTOMATICALLY DISCONTINUE TRANSMISSION

7.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

7.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission



8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

8.2 EUT ANTENNA

The EUT antenna is Omni Antenna. It comply with the standard requirement.



APPENDIX - PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

*****END OF THE REPORT*****