Certificate #4312.01

TEST REPORT

Product Name:	802.11ax Wi-Fi 6 Access Point
Trade Mark:	GRANDSTREAM
Model No.:	GWN7660E
Report Number:	2307186039RFC-2
Test Standards:	FCC 47 CFR Part 15 Subpart E
FCC ID:	YZZGWN7660E
Test Result:	PASS
Date of Issue:	September 6, 2023

Prepared for:

Grandstream Networks, Inc.
126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

Prepared by:

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Prepared by:	Kieron Luo Project Engineer	Reviewed by:	Henry Lu Team Leader
Approved by:	Kevin Liang Assistant Manager	Date:	September 6, 2023

Version

Version No.	Date	Description
V1.0	September 6, 2023	Original

CONTENTS

1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Grandstream Networks, Inc.
Address of Applicant:	126 Brookline Ave., 3rd Floor Boston, MA 02215, USA
Manufacturer:	Grandstream Networks, Inc.
Address of Manufacturer:	126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	802.11ax Wi-Fi 6 Access Point		
Model No.:	GWN7660E		
Trade Mark:	GRANDSTREAM		
DUT Stage:	Identical Prototype		
EUT Supports Function: (Provided by the customer)	2.4 GHz ISM Band:	IEEE 802.11b/g/n/ax	
	U-NII 5 GHz Bands:	5 150 MHz to 5 250 MHz	IEEE 802.11a/n/ac/ax
		5 250 MHz to 5 350 MHz	IEEE 802.11a/n/ac/ax
		5 470 MHz to 5 725 MHz	IEEE 802.11a/n/ac/ax
		5 725 MHz to 5 850 MHz	IEEE 802.11a/n/ac/ax
Software Version:	0.8.4.1 (Provided by the customer)		
Hardware Version:	V1.2 (Provided by the customer)		
Sample Received Date:	July 17, 2023		
Sample Tested Date:	July 17, 2023 to August 18, 2023		

1.2.2 Description of Accessories

Others
1x Mounting Bracket, 1x Ceiling Mounting Bracket

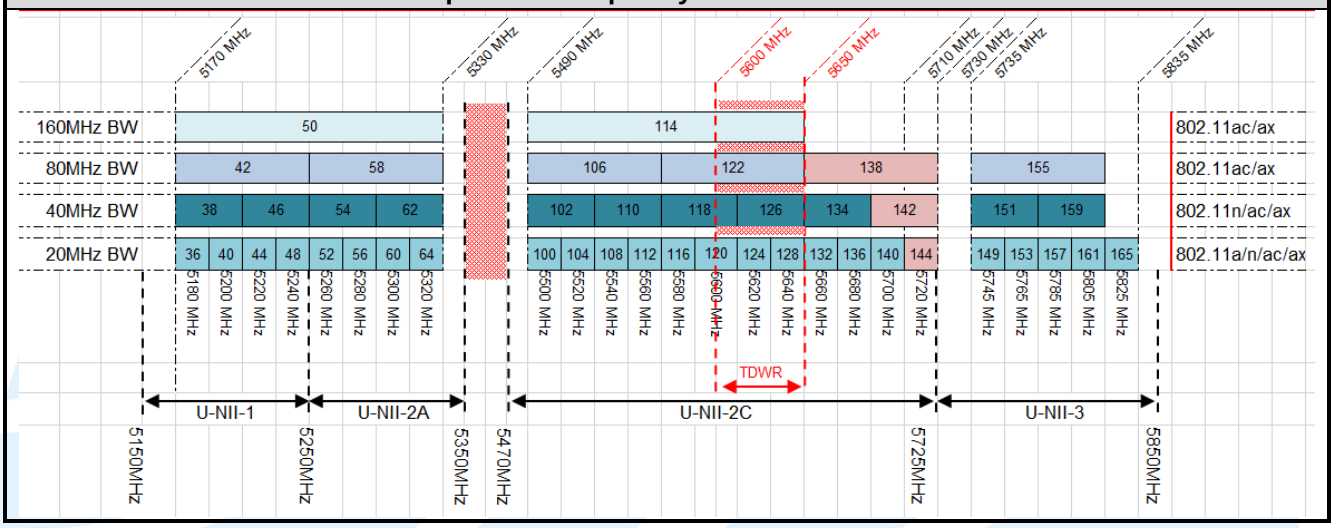
1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Frequency Bands:	5150 MHz to 5250 MHz (U-NII-1)				
	5250 MHz to 5350 MHz (U-NII-2A)				
	5470 MHz to 5725 MHz (U-NII-2C)				
	5725 MHz to 5850 MHz (U-NII-3)				
Frequency Ranges:	5180 MHz to 5240 MHz				
	5260 MHz to 5320 MHz				
	5500 MHz to 5700 MHz				
	5745 MHz to 5825 MHz				
Support Standards:	IEEE 802.11a/n/ac/ax				
TPC Function:	Support				
DFS Operational mode:	Master				
Type of Modulation:	IEEE 802.11a/n: OFDM (64QAM, 16QAM, QPSK, BPSK)				
	IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)				
	IEEE 802.11ax:OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)				
Channel Spacing:	IEEE 802.11a/n-HT20/ac-VHT20/ax-HE20: 20 MHz				
	IEEE 802.11n-HT40/ac-VHT40/ax-HE40: 40 MHz				
	IEEE 802.11ac-VHT80/ax-HE80: 80 MHz				
	IEEE 802.11ac-VHT160/ax-HE160: 160 MHz				
Data Rate:	IEEE 802.11a: Up to 54 Mbps				
	IEEE 802.11n: Up to MCS15				
	IEEE 802.11ac-VHT20: Up to MCS8				
	IEEE 802.11ac-VHT40/VHT80/VHT160: Up to MCS9				
	IEEE 802.11ax-HE20/HE40/HE80/HE160: Up to MCS11				
Number of Channels:	5150 MHz to 5350 MHz: 8 for 802.11a/n-HT20/ac-VHT20/ax-HE20 4 for 802.11n-HT40)/ac-VHT40/ax-HE40 2 for 802.11ac-VHT80/ax-HE80 1 for 802.11ac-VHT160/ax-HE160				
	5470 MHz to 5725 MHz: 11 for 802.11a/n-HT20/ac-VHT20/ax-HE20 5 for 802.11n-HT40)/ac-VHT40/ax-HE40 2 for 802.11ac-VHT80/ax-HE80 1 for 802.11ac-VHT160/ax-HE160				
	5725 MHz to 5850 MHz: 5 for IEEE 802.11a/n-HT20/ac-VHT20/ax-HE20 2 for IEEE 802.11n-HT40/ac-VHT40/ax-HE40 1 for IEEE 802.11ac-VHT80/ax-HE80				
Antenna Type: (Provided by the customer)	Antenna 0:	PCB Antenna			
	Antenna 1:	PCB Antenna			
	Antenna 2:	PCB Antenna			
Antenna Gain (dBi): (Provided by the customer)	**Antenna**	**U-NII-1**	**U-NII-2A**	**U-NII-2C**	**U-NII-3**
	Antenna 0:	4.76	4.76	4.76	4.76
	Antenna 1:	5.21	5.21	5.21	5.21
	Antenna 2:	5.31	5.31	5.31	5.31
Maximum conducted output power (dBm):	**Mode**	**U-NII-1**	**U-NII-2A**	**U-NII-2C**	**U-NII-3**
	IEEE 802.11a:	21.20	20.93	20.70	20.51
	IEEE 802.11n-HT20:	23.97	17.42	17.15	24.01
	IEEE 802.11n-HT40:	21.41	19.16	19.17	24.08
	IEEE 802.11ac-VHT20	24.24	17.77	17.41	24.29
	IEEE 802.11ac-VHT40	21.99	19.14	18.65	24.44

	IEEE 802.11ac-VHT80:	24.03	18.84	18.65	23.67
	IEEE 802.11ac-VHT160	/	17.66	17.57	/
	IEEE 802.11ax-HE20:	24.39	17.84	17.68	24.07
	IEEE 802.11ax-HE40:	24.24	18.49	18.40	23.81
	IEEE 802.11ax-HE80:	23.24	17.35	17.59	22.96
	IEEE 802.11ax-HE160:	/	15.50	15.48	/
Normal Test Voltage:	48 Vdc				

1.4 OTHER INFORMATION

Operation Frequency Each of Channel



1.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

Description	Manufacturer	Model No.	Serial Number	FCC ID	Supplied by
POE	Gospower	G0720-480-050	N/A	N/A	Applicant
Key-Press Attenuator	Huaxin	KT2.5-90/1S-2S	N/A	N/A	UnionTrust
4 Way Divider	WOKEN	0120A040560002 D	N/A	N/A	UnionTrust
Wireless Router	SAGEMCOM	RAC2V1S	253703944	VW3FAST5280	UnionTrust
Notebook	DELL	Latitude 3400	16238087894	N/A	UnionTrust
Mouse	DELL	MS111	CN-011D3V-738	N/A	UnionTrust
Enterprise Full Touch Handheld Computer	Bluebird Inc.	EF551	N/A	N/A	UnionTrust

2) Support Cable

Cable No.	Description	Connector	Length(Meter)	Supplied by
1	Ethernet Cable	RJ45	1.5 Unshielded without ferrite	UnionTrust
2	Antenna Cable*2	SMA	0.1	UnionTrust

1.6 TEST LOCATION

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China 518109
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

1.7 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L9069
The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01
Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories
CAB identifier: CN0032

FCC Accredited Lab.
Designation Number: CN1194
Test Firm Registration Number: 259480

1.8 DEVIATION FROM STANDARDS

None.

1.9 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.10 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.11 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Measurement Uncertainty
1	Conducted emission 9KHz-150KHz	±3.2 dB
2	Conducted emission 150KHz-30MHz	±2.7 dB
3	Radiated emission 9KHz-30MHz	± 4.7 dB
4	Radiated emission 30MHz-1GHz	± 4.9 dB
5	Radiated emission 1GHz-18GHz	± 4.8 dB
6	Radiated emission 18GHz-26GHz	± 5.1 dB
7	Radiated emission 26GHz-40GHz	± 5.1 dB
8	Conducted spurious emissions	± 2.7 dB
9	RF Power, Conducted	± 0.68 dB
10	Occupied Bandwidth	± 1.86 %
11	Radio Frequency	5.6 GHz: ± 6.4 x 10^{-8}
12	Transmission Time	± 0.19 %

2. TEST SUMMARY

FCC 47 CFR Part 15 Subpart E Test Cases			
Test Item	**Test Requirement**	**Test Method**	**Result**
Antenna Requirement	FCC 47 CFR Part 15 Subpart C Section 15.203 FCC 47 CFR Part 15 Subpart E Section 15.407(a)(1) (2)	N/A	PASS
26 dB emission bandwidth	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(2)(5)	KDB 789033 D02 v02r01 Section C.1	PASS
6 dB bandwidth	FCC 47 CFR Part 15 Subpart E Section 15.407 (e)	KDB 789033 D02 v02r01 Section C.2	PASS
Maximum conducted output power	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)	KDB 789033 D02 v02r01 Section E.3.a (Method PM)	PASS
Peak Power Spectral Density	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)	KDB 789033 D02 v02r01 Section F	PASS
Radiated Emissions and Band Edge Measurement	FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(1)(2)(3)(4)(6) FCC 47 CFR Part 15 Subpart C Section 15.209/205	KDB 789033 D02 v02r01 Section G.3, G.4, G.5, and G.6	PASS
Dynamic Frequency Selection	FCC 47 CFR Part 15 Subpart E Section 15.407 (h)	KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02	PASS Note2
AC Power Line Conducted Emission	FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(6) FCC 47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013, Section 6.2.	PASS

Note:

1) N/A: In this whole report not applicable.
2) Please refer to Report No.: 2307186039RFC-3 for DFS Test report.

Disclaimer and Explanations:

The declared of product specification and data (e.g., antenna gain, RF specification, etc) for EUT presented in the report are provided by the customer, and the customer takes all the responsibilities for the accuracy of product specification.

3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☑	3m SAC	ETS-LINDGREN	3M	Euroshiedpn-CT001270-1317	22-Jan-2021	21-Jan-2024
☑	Receiver	R&S	ESIB26	100114	3-Nov-2022	2-Nov-2023
☑	EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY51440197	14-Apr-2023	13-Apr-2024
☑	Loop Antenna	ETS-LINDGREN	6502	00202525	21-Nov-2022	20-Nov-2023
☑	Broadband Antenna	ETS-LINDGREN	3142E	00201566	13-Dec-2022	12-Dec-2023
☑	6dB Attenuator	Talent	RA6A5-N-18	18103001	13-Dec-2022	12-Dec-2023
☑	Preamplifier	HP	8447F	2805A02960	1-Nov-2022	31-Oct-2023
☑	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3117-PA	00201541	16-Apr-2023	15-Apr-2025
☑	Pre-amplifier	ETS-LINDGREN	00118385	00201874	1-Nov-2022	31-Oct-2023
☑	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	21-Nov-2022	20-Nov-2023
☑	Pre-amplifier	ETS-LINDGREN	00118384	00202652	21-Nov-2022	20-Nov-2023
☑	Band Rejection Filter (5150MHz~5880MHz)	Micro-Tronics	BRM50716	G186	2-Nov-2022	1-Nov-2023
☑	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
☑	Test Software	Audix	e3	Software Version: 9.160323		

Conducted Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☑	Receiver	R&S	ESR7	101181	1-Nov-2022	31-Oct-2023
☑	Pulse Limiter	R&S	ESH3-Z2	0357.8810.54	1-Nov-2022	31-Oct-2023
☑	LISN	R&S	ESH2-Z5	860014/024	1-Nov-2022	31-Oct-2023
☐	LISN	ETS-Lindgren	3816/2SH	00201088	1-Nov-2022	31-Oct-2023
☑	Test Software	Audix	e3	Software Version: 9 20151119i		

Conducted RF test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☑	EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY51440197	14-Apr-2023	13-Apr-2024
☑	USB Wideband Power Sensor	KEYSIGHT	U2021XA	MY55430035	3-Nov-2022	2-Nov-2023
☐	EXG-B RF Analog Signal Generator	KEYSIGHT	N5171B	MY53051777	1-Nov-2022	31-Oct-2023
☑	MXG X-Series RF Vector Signal Generator	KEYSIGHT	N5182B	MY51350267	1-Nov-2022	31-Oct-2023
☑	Spectrum Analyzer	R&S	FSV40-N	101653	14-Apr-2023	13-Apr-2024

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

4.1.1 Normal or Extreme Test Conditions

Environment Parameter	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage	Relative Humidity (%)
NT/NV	+15 to +35	48Vdc	20 to 75
Remark: 1) NV: Normal Voltage; NT: Normal Temperature			

4.1.2 Record of Normal Environment and Test Sample

Test Item	Temp. (°C)	Relative Humidity (%)	Pressure (kPa)	Sample No.	Tested by
AC Power Line Conducted Emission	21.2	62.2	98.8	S202307171813-ZJA03/5	Lucas Ouyang
26 dB emission bandwidth	22.4	54.3	98.8	S202307171813-ZJA01/5	Allen Zhou
Maximum conducted output power					
Peak Power Spectral Density					
6 dB bandwidth					
Dynamic Frequency Selection	22.4	54.3	98.8	S202307171813-ZJA01/5	Allen Zhou
Radiated Emissions and Band Edge Measurement	21.9	57.5	98.1	S202307171813-ZJA03/5	Fire Huo

4.2 TEST CHANNELS

Mode	Tx/Rx Frequency	Test RF Channel Lists		
		Lowest(L)	Middle(M)	Highest(H)
IEEE 802.11a IEEE 802.11n-HT20 IEEE 802.11ac-VHT20 IEEE 802.11ax-HE20	5150 - 5250 MHz	Channel 36	Channel 44	Channel 48
		5180 MHz	5220 MHz	5240 MHz
	5250 - 5350 MHz	Channel 52	Channel 60	Channel 64
		5260 MHz	5300 MHz	5320 MHz
	5470 - 5725 MHz	Channel 100	Channel 116	Channel 140
		5500 MHz	5580 MHz	5700 MHz
	5725 - 5850 MHz	Channel 149	Channel 157	Channel 165
		5745 MHz	5785 MHz	5825 MHz
IEEE 802.11n-HT40 IEEE 802.11ac-VHT40 IEEE 802.11ax-HE40	5150 - 5250 MHz	Channel 38	--	Channel 46
		5190 MHz	--	5230 MHz
	5250 - 5350 MHz	Channel 54	--	Channel 62
		5270 MHz	--	5310 MHz
	5470 - 5725 MHz	Channel 102	Channel 110	Channel 134
		5510 MHz	5550 MHz	5670 MHz
	5725 - 5850 MHz	Channel 151	--	Channel 159
		5755 MHz	--	5795 MHz
IEEE 802.11ac-VHT80 IEEE 802.11ax-HE80	5150 - 5250 MHz	--	Channel 42	--
		--	5210 MHz	--
	5250 - 5350 MHz	--	Channel 58	--
		--	5290 MHz	--
	5470 - 5725 MHz	Channel 106	--	--
		5530 MHz	--	--
	5725 - 5850 MHz	--	Channel 155	--
		--	5775 MHz	--
IEEE 802.11ac-VHT160 IEEE IEEE 802.11ax-HE160	5150 - 5350 MHz	Channel 50		
		5250 MHz		
	5470 - 5725 MHz	Channel 114		
		5570 MHz		
	5725 - 5850 MHz			

4.3 EUT TEST STATUS

Mode	Tx/Rx Function	Description
IEEE 802.11a	1Tx/1Rx	1. Keep the EUT in continuously transmitting or receiving with modulation and data rates test single. 2. Keep the equipment in normal operation and achieve a certain throughput.
IEEE 802.11n IEEE 802.11ac IEEE 802.11ax	3Tx/3Rx	

Mode	U-NII-1			U-NII-2A			U-NII-2C			U-NII-3		
	Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2
IEEE 802.11a	20	20	20	19	19	19	19	19	19	20	20	20
IEEE 802.11n-HT20	19	19	19	12.5	12.5	12.5	12.5	12.5	12.5	20	20	20
IEEE 802.11n-HT40	17	17	17	14.5	14.5	14.5	14.5	14.5	14.5	20	20	20
IEEE 802.11ac-VHT20	19	19	19	12.5	12.5	12.5	12.5	12.5	12.5	20	20	20
IEEE 802.11ac-VHT40	17	17	17	14	14	14	13.5	13.5	13.5	20	20	20
IEEE 802.11ac-VHT80	20	20	20	14.5	14.5	14.5	14.5	14.5	14.5	20	20	20
IEEE 802.11ac-VHT160	15	15	15	15	15	15	15	15	15	/	/	/
IEEE 802.11ax-HE20 (SU)	19	19	19	12.5	12.5	12.5	12.5	12.5	12.5	20	20	20
IEEE 802.11ax-HE40 (SU)	20	20	20	14	14	14	14	14	14	20	20	20
IEEE 802.11ax-HE80 (SU)	20	20	20	14	14	14	14	14	14	20	20	20
IEEE 802.11ax-HE160 (SU)	14	14	14	14	14	14	14	14	14	/	/	/
IEEE 802.11ax only supports SU Mode.												

Test Software (Provided by the customer)
Test software name: MT7981 QA 0.0.2.78;

4.4 PRE-SCAN

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and data rate. Following data rate was (were) selected for the final test as listed below

Mode	Worst-case data rates
IEEE 802.11a	6 Mbps
IEEE 802.11n-HT20	MCS0
IEEE 802.11n-HT40	MCS0
IEEE 802.11ac-VHT20	MCS0
IEEE 802.11ac-VHT40	MCS0
IEEE 802.11ac-VHT80	MCS0
IEEE 802.11ac-VHT160	MCS0
IEEE 802.11ax-HE20	MCS0
IEEE 802.11ax-HE40	MCS0
IEEE 802.11ax-HE80	MCS0
IEEE 802.11ax-HE160	MCS0

4.5 TEST SETUP

4.5.1 For Radiated Emissions test setup

Figure 1. Below 30MHz

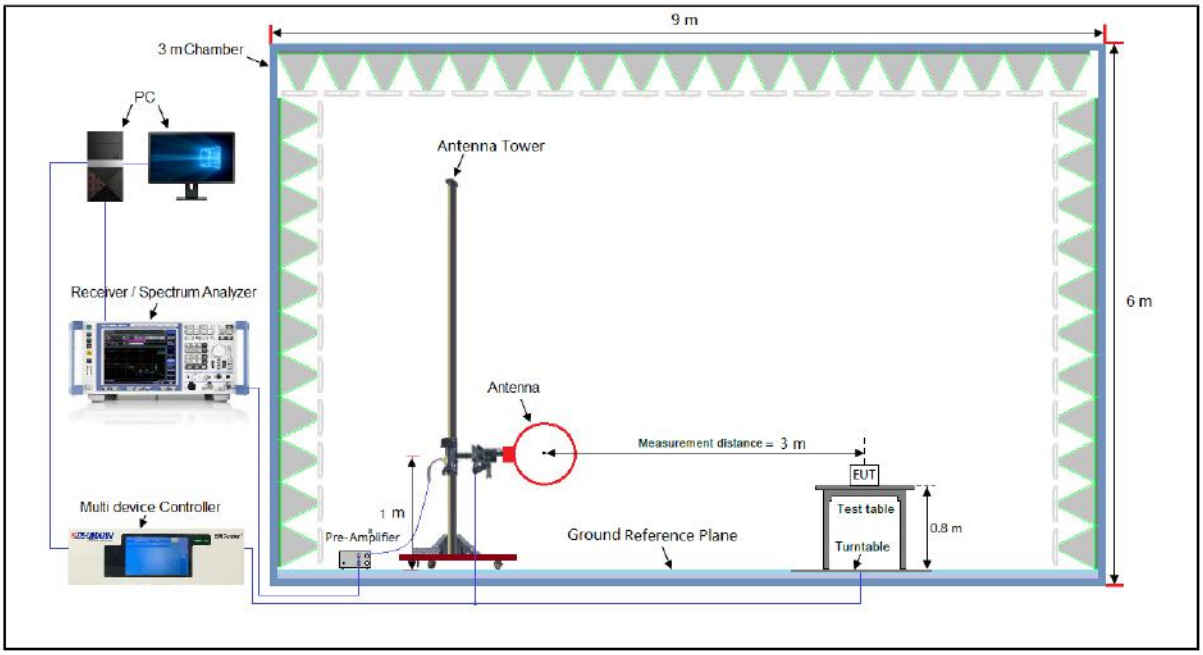


Figure 2. 30MHz to 1GHz

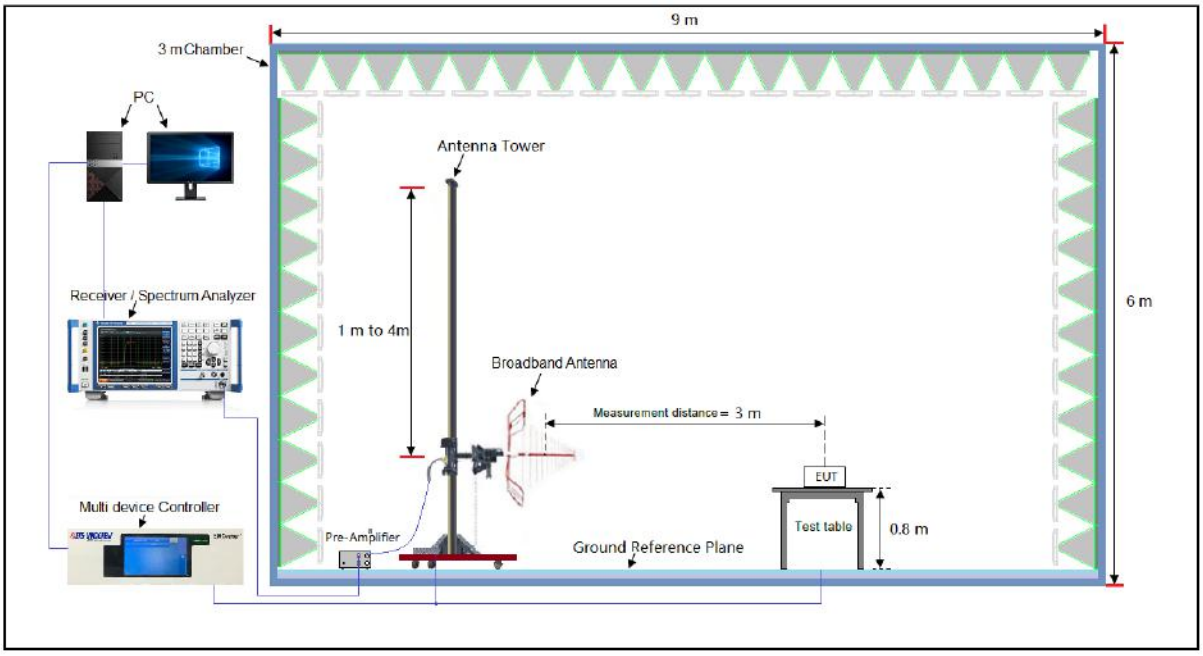
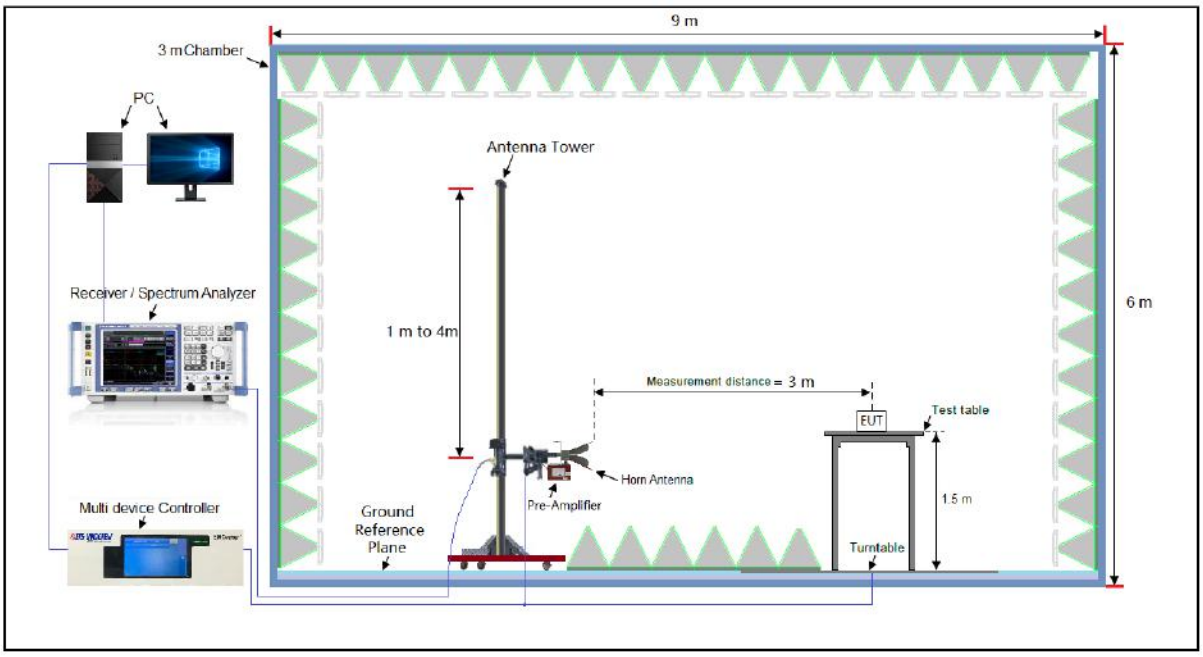
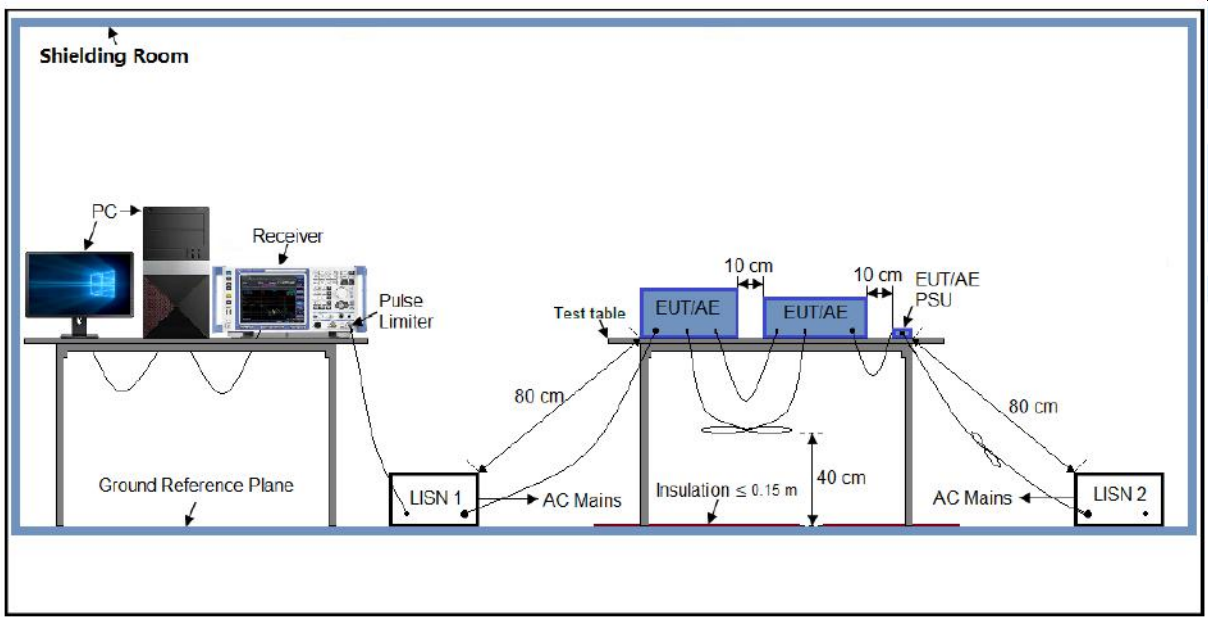


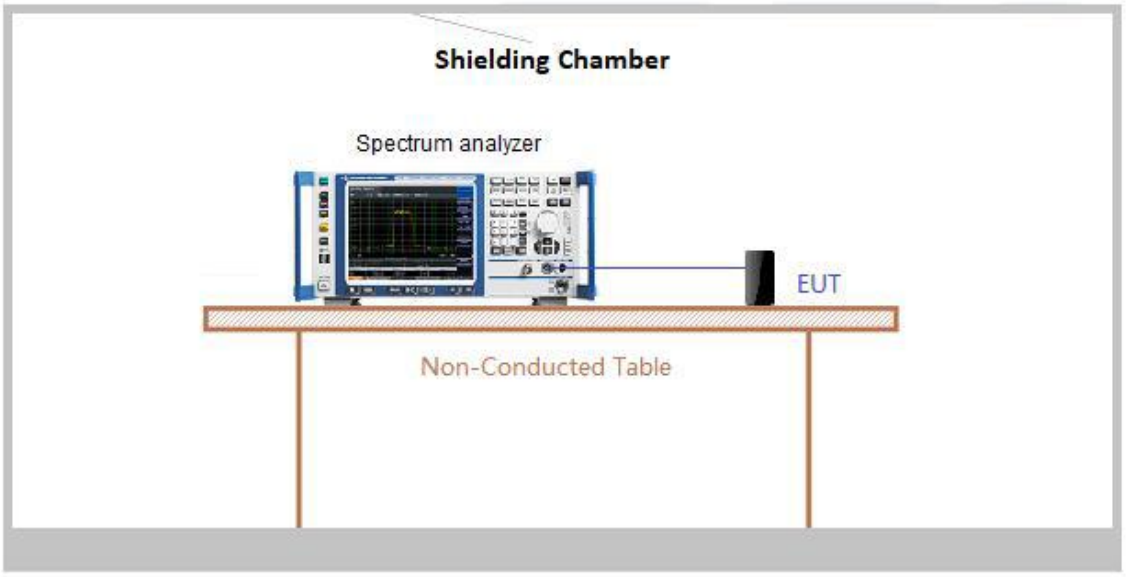
Figure 3. Above 1GHz



4.5.2 For Conducted Emissions test setup



4.5.3 For Conducted RF test setup



Normal Environment

4.6 SYSTEM TEST CONFIGURATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. Only the worst case data were recorded in this test report.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. Therefore, all final radiated testing was performed with the EUT in orientation.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4.7 DUTY CYCLE

Test Procedure: ANSI C63.10-2013 Clause 12.2.

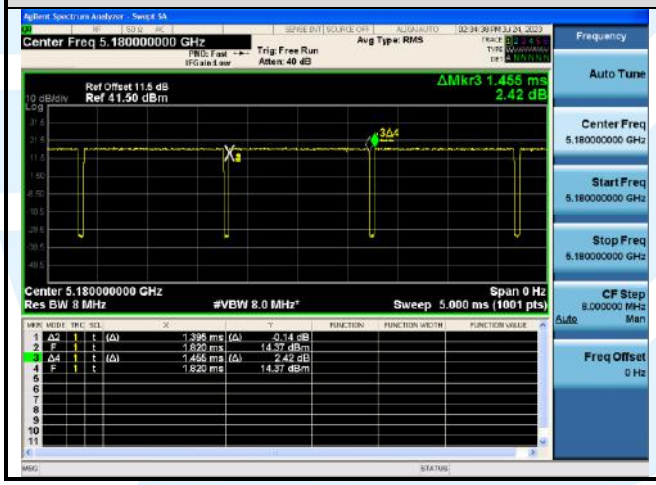
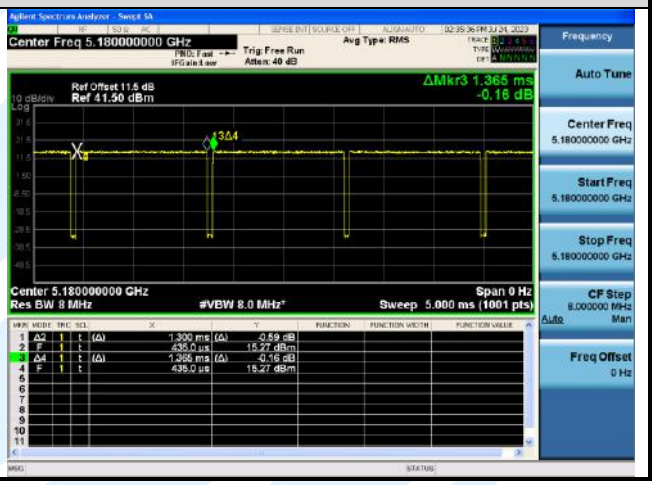
Test Results

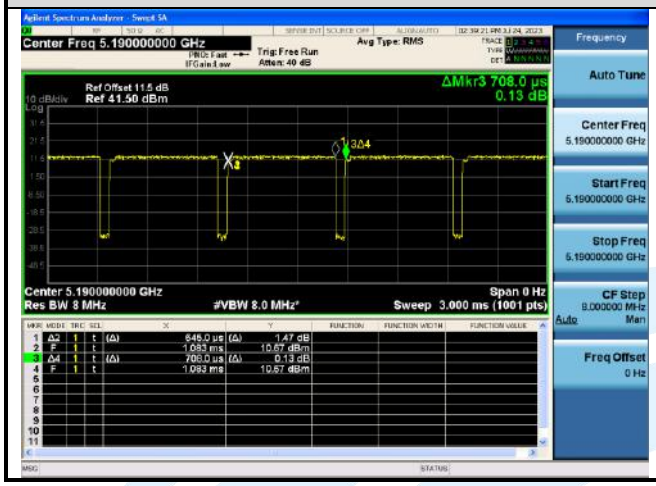
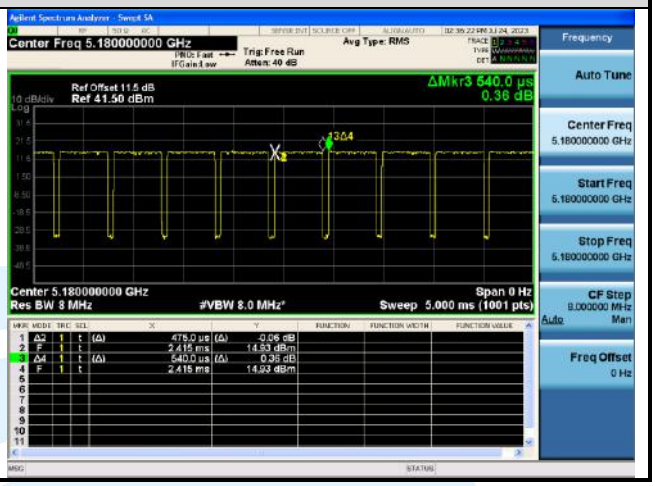
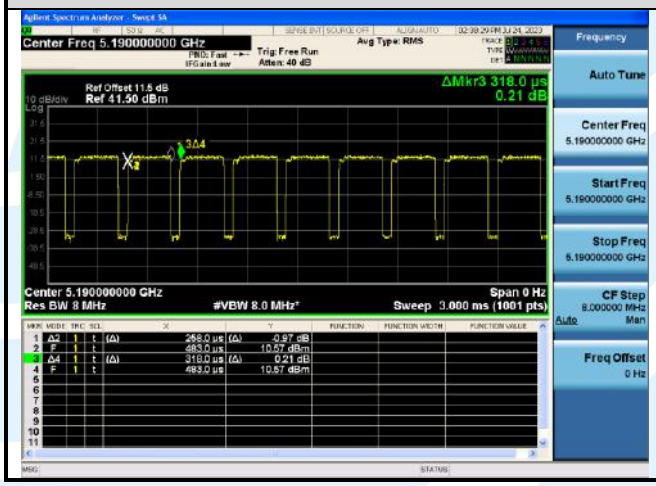
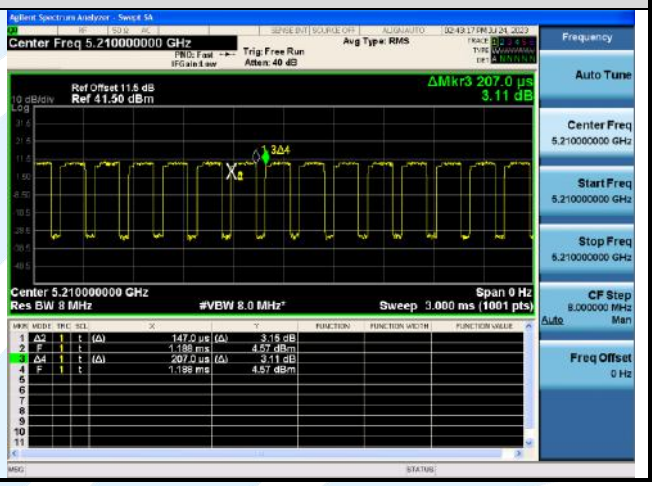
Mode	RU	Data Rates	On Time (msec)	Period (msec)	Duty Cycle (linear)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/T Minimum VBW (kHz)
IEEE 802.11a	N/A	6 Mbps	1.395	1.455	0.96	95.88	0.18	0.72
IEEE 802.11n-HT20	N/A	MCS 0	1.300	1.365	0.95	95.24	0.21	0.77
IEEE 802.11n-HT40	N/A	MCS 0	0.645	0.708	0.91	91.10	0.40	1.55
IEEE 802.11ac-VHT20	N/A	MCS 0	0.475	0.540	0.88	87.96	0.56	2.11
IEEE 802.11ac-VHT40	N/A	MCS 0	0.258	0.318	0.81	81.13	0.91	3.88
IEEE 802.11ac-VHT80	N/A	MCS 0	0.147	0.207	0.71	71.01	1.49	6.80
IEEE 802.11ac-VHT160	N/A	MCS 0	0.098	0.150	0.65	65.33	1.85	10.20
IEEE 802.11ax-HE20	SU	MCS 0	0.425	0.485	0.88	87.63	0.57	2.35
IEEE 802.11ax-HE40	SU	MCS 0	0.423	0.483	0.88	87.58	0.58	2.36
IEEE 802.11ax-HE80	SU	MCS 0	0.411	0.471	0.87	87.26	0.59	2.43
IEEE 802.11ax-HE160	SU	MCS 0	0.412	0.464	0.89	88.79	0.52	2.43

Remark:

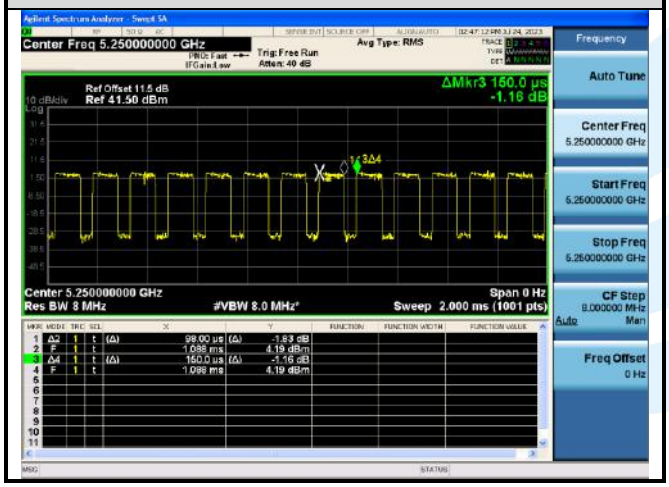
1) Duty cycle= On Time/ Period;
2) Duty Cycle factor = 10 * log(1/ Duty cycle)

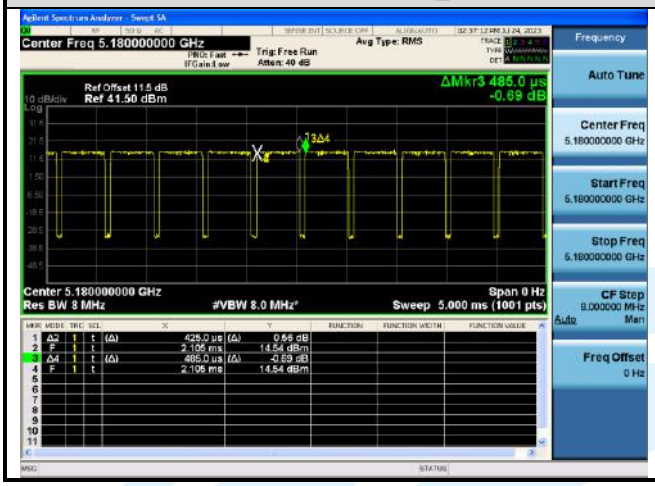
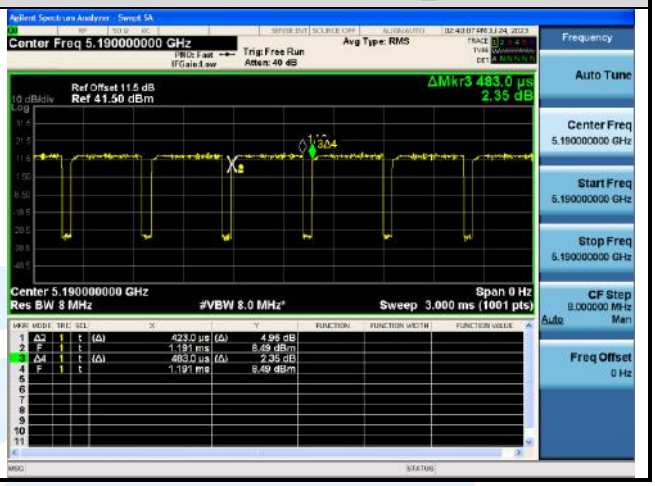
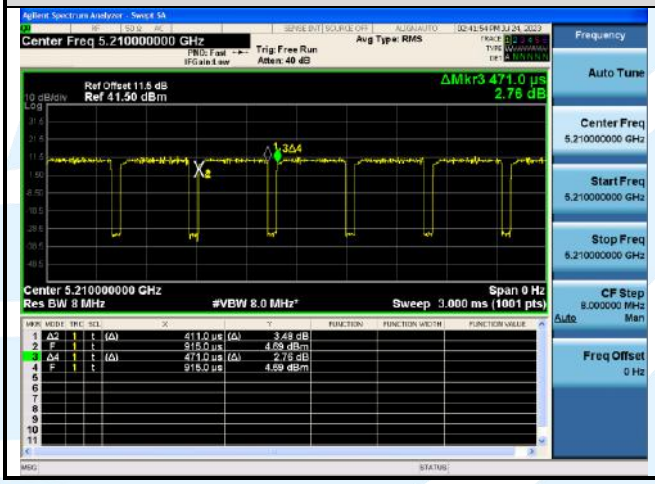
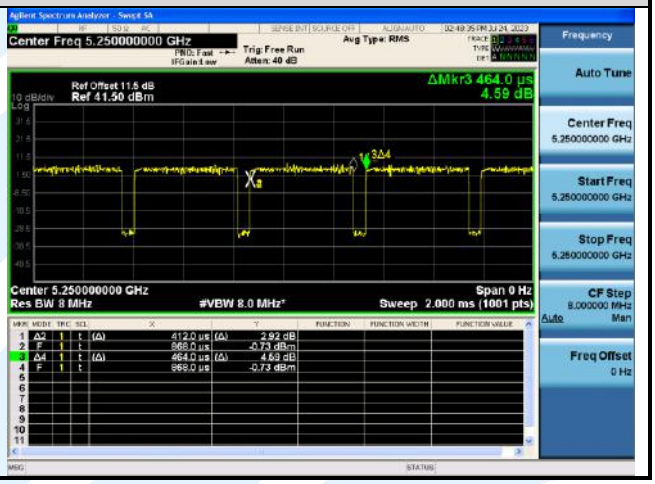
The test plots as follows

IEEE 802.11a	IEEE 802.11n-HT20
	

IEEE 802.11n-HT40	IEEE 802.11ac-VHT20
	
IEEE 802.11ac-VHT40	**IEEE 802.11ac-VHT80**
	

IEEE 802.11ac-VHT160



IEEE 802.11ax-HE20_SU	IEEE 802.11ax-HE40_SU
	
IEEE 802.11ax-HE80_SU	**IEEE 802.11ax-HE160_SU**
	

5. RADIO TECHNICAL REQUIREMENTS SPECIFICATION

5.1 REFERENCE DOCUMENTS FOR TESTING

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicesed Wireless Devices
4	KDB 789033 D02 General UNII Test Procedures New Rules v02r01	Guidelines for compliance testing of unlicensed national information infrastructure (U-NII) device part 15, subpart E
5	KDB 905462 D06 802.11 Channel Plans New Rules v02	Operation in U-NII bands -802.11 channel PLAN(§15.407)
6	KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02	Compliance measurement procedures for Unlicensed –National Information Infrastructure devices operates in the frequency bands 5250 MHz to 5350 MHz and 5470 MHz to 5725 MHz bands incorporating dynamic frequency selection
7	KDB 662911 D01 Multiple Transmitter Output v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band

5.2 ANTENNA REQUIREMENT

Standard Requirement
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. **15.407(a)(1) (2) requirement:** The conducted output power limit specified in paragraph (a) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (a) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power and the peak power spectral density shall be reduced by the by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
EUT Antenna:
All antennas (3 Antennas) in the interior of the equipment and no consideration of replacement. The transmit signals are correlated with each other, the best case directional gain of the antenna is 9.87 dBi. (See section 5.5).

5.3 26 DB BANDWIDTH

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (a) (2)(5)

Test Method: KDB 789033 D02 v02r01 Section C.1

Limit: None; for reporting purposes only.

Test Procedure:

The output from the transmitter was connected to an attenuator and then to the input of the RF Spectrum analyzer.

Spectrum analyzer according to the following Settings:
a) Set RBW = approximately 1 % of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) 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 %.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Results: Pass

Test Results: **Please refer to Appendix A**

5.46 DB BANDWIDTH

Test Requirement: FCC 47 CFR Part 15 Subpart C Section 15.407 (e)

Test Method: KDB 789033 D02 v02r01Section C.2

Limit: Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure:

The output from the transmitter was connected to an attenuator and then to the input of the RF Spectrum Analyzer.

Spectrum analyzer according to the following Settings:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 * 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.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: Pass

Test Results: **Please refer to Appendix A**

5.5 MAXIMUM CONDUCTED OUTPUT POWER

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)
Test Method: KDB 789033 D02 v02r01 Section E.3.a(Method PM)
Limits:

1. For the band 5.15-5.25 GHz.
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For 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. In addition, 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 conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, 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 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure:

1. Connected the EUT's antenna port to measure device by 10dB attenuator.
2. Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of Tx on burst.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: Pass

Test Data:

Directional gain and the maximum output power limit.

Frequency (MHz)	Antenna Gain (dBi)			Directional gain (dBi)		Limit	
	Ant .0	Ant .1	Ant .2	Power	PSD	Power (dBm)	PSD (dBm/MHz or dBm/500kHz)
U-NII-1	4.76	5.21	5.31	9.87	9.87	26.13	13.13
U-NII-2A	4.76	5.21	5.31	9.87	9.87	20.13	7.13
U-NII-2C	4.76	5.21	5.31	9.87	9.87	20.13	7.13
U-NII-3	4.76	5.21	5.31	9.87	9.87	26.13	26.13
Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows: If transmit signals are correlated, then Directional gain = 10 log[(10^G1 /20 + 10^G2 /20 + … + 10^GN /20)^2 /NANT] dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]							

For U-NII-2A :

IEEE 802.11a/n/ac/ax: the minimum 26 dB emission bandwidth is 19.77 MHz

11 dBm + $10\log_{10}$ (19.77) = 23.96 dBm

20.13 dBm<23.96 dBm < 24 dBm

So the 20.13 dBm limit applicable

For U-NII-2C Band:

IEEE 802.11a: the minimum 26 dB emission bandwidth is 21.08 MHz

11 dBm + 10log10 (21.08) = 24.24 dBm

24.24 dBm > 24 dBm >20.13 dBm

So the 20.13 dBm limit applicable

Maximum output power

Mode	Band	Freq. (MHz)	RU	CONDUCTED AVG POWER							Limit (dBm)	Result
				Meas Value (dBm)			Corr'd Value (dBm)					
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11a	U-NII-1	5180	N/A	20.18	20.67	20.49	20.36	20.85	20.67	N/A	30.00	Pass
		5220	N/A	20.67	20.94	20.77	20.85	21.12	20.95	N/A	30.00	Pass
		5240	N/A	20.61	21.02	20.84	20.79	21.20	21.02	N/A	30.00	Pass
	U-NII-2A	5260	N/A	20.15	20.75	20.31	20.33	20.93	20.49	N/A	23.96	Pass
		5300	N/A	19.95	20.31	20.23	20.13	20.49	20.41	N/A	23.96	Pass
		5320	N/A	20.06	20.66	20.31	20.24	20.84	20.49	N/A	23.96	Pass
	U-NII-2C	5500	N/A	20.21	20.14	19.76	20.39	20.32	19.94	N/A	24.00	Pass
		5580	N/A	20.51	20.52	19.83	20.69	20.70	20.01	N/A	24.00	Pass
		5700	N/A	19.26	19.74	19.15	19.44	19.92	19.33	N/A	24.00	Pass
	U-NII-3	5745	N/A	19.15	20.12	19.56	19.33	20.30	19.74	N/A	30.00	Pass
		5785	N/A	19.17	20.33	20.06	19.35	20.51	20.24	N/A	30.00	Pass
		5825	N/A	18.74	20.03	20.21	18.92	20.21	20.39	N/A	30.00	Pass
IEEE 802.11n -HT20	U-NII-1	5180	N/A	18.33	18.25	18.21	18.54	18.46	18.42	23.25	26.13	Pass
		5220	N/A	18.61	19.32	18.69	18.82	19.53	18.90	23.87	26.13	Pass
		5240	N/A	18.77	19.43	18.71	18.98	19.64	18.92	23.97	26.13	Pass
	U-NII-2A	5260	N/A	12.33	12.62	12.36	12.54	12.83	12.57	17.42	20.13	Pass
		5300	N/A	12.04	12.34	12.06	12.25	12.55	12.27	17.13	20.13	Pass
		5320	N/A	12.08	12.48	12.19	12.29	12.69	12.40	17.24	20.13	Pass
	U-NII-2C	5500	N/A	12.38	12.12	11.61	12.59	12.33	11.82	17.03	20.13	Pass
		5580	N/A	12.44	12.26	11.76	12.65	12.47	11.97	17.15	20.13	Pass
		5700	N/A	11.38	11.52	10.99	11.59	11.73	11.20	16.29	20.13	Pass
	U-NII-3	5745	N/A	18.63	18.89	18.45	18.84	19.10	18.66	23.64	26.13	Pass
		5785	N/A	18.79	19.24	19.03	19.00	19.45	19.24	24.01	26.13	Pass
		5825	N/A	18.38	18.85	19.17	18.59	19.06	19.38	23.80	26.13	Pass
IEEE 802.11n -HT40	U-NII-1	5190	N/A	15.85	16.03	15.93	16.25	16.43	16.33	21.11	26.13	Pass
		5230	N/A	16.12	16.54	16.02	16.52	16.94	16.42	21.41	26.13	Pass
	U-NII-2A	5270	N/A	13.88	14.16	13.87	14.28	14.56	14.27	19.15	20.13	Pass
		5310	N/A	13.81	14.22	13.91	14.21	14.62	14.31	19.16	20.13	Pass
	U-NII-2C	5510	N/A	14.24	14.25	13.43	14.64	14.65	13.83	19.17	20.13	Pass
		5550	N/A	14.11	14.16	13.22	14.51	14.56	13.62	19.03	20.13	Pass
		5670	N/A	13.37	13.67	12.95	13.77	14.07	13.35	18.52	20.13	Pass
	U-NII-3	5755	N/A	18.74	19.07	18.51	19.14	19.47	18.91	23.96	26.13	Pass

Mode	Band	Freq. (MHz)	RU	CONDUCTED AVG POWER							Limit (dBm)	Result
				Meas Value (dBm)			Corr'd Value (dBm)					
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
		5795	N/A	18.79	19.03	18.89	19.19	19.43	19.29	24.08	26.13	Pass
IEEE 802.11ac -VHT20	U-NII-1	5180	N/A	18.28	18.17	18.13	18.84	18.73	18.69	23.52	26.13	Pass
		5220	N/A	18.54	19.31	18.62	19.10	19.87	19.18	24.17	26.13	Pass
		5240	N/A	18.68	19.38	18.65	19.24	19.94	19.21	24.24	26.13	Pass
	U-NII-2A	5260	N/A	12.38	12.61	12.32	12.94	13.17	12.88	17.77	20.13	Pass
		5300	N/A	12.04	12.37	12.03	12.60	12.93	12.59	17.48	20.13	Pass
		5320	N/A	12.10	12.44	12.17	12.66	13.00	12.73	17.57	20.13	Pass
	U-NII-2C	5500	N/A	12.33	12.12	11.72	12.89	12.68	12.28	17.39	20.13	Pass
		5580	N/A	12.43	12.16	11.61	12.99	12.72	12.17	17.41	20.13	Pass
		5700	N/A	11.38	11.69	11.01	11.94	12.25	11.57	16.70	20.13	Pass
	U-NII-3	5745	N/A	18.92	18.31	18.63	19.48	18.87	19.19	23.96	26.13	Pass
		5785	N/A	19.16	18.54	19.17	19.72	19.10	19.73	24.29	26.13	Pass
		5825	N/A	18.83	18.29	19.34	19.39	18.85	19.90	24.17	26.13	Pass
IEEE 802.11ac -VHT40	U-NII-1	5190	N/A	15.91	16.08	16.02	16.82	16.99	16.93	21.68	26.13	Pass
		5230	N/A	16.11	16.63	16.17	17.02	17.54	17.08	21.99	26.13	Pass
	U-NII-2A	5270	N/A	13.52	13.49	13.29	14.43	14.40	14.20	19.11	20.13	Pass
		5310	N/A	13.46	13.65	13.27	14.37	14.56	14.18	19.14	20.13	Pass
	U-NII-2C	5510	N/A	13.27	13.21	12.39	14.18	14.12	13.30	18.65	20.13	Pass
		5550	N/A	13.22	13.18	12.45	14.13	14.09	13.36	18.64	20.13	Pass
		5670	N/A	12.38	12.58	11.96	13.29	13.49	12.87	17.99	20.13	Pass
	U-NII-3	5755	N/A	18.89	18.84	18.17	19.80	19.75	19.08	24.32	26.13	Pass
		5795	N/A	18.91	18.91	18.44	19.82	19.82	19.35	24.44	26.13	Pass
IEEE 802.11ac -VHT80	U-NII-1	5210	N/A	17.22	17.67	18.35	18.71	19.16	19.84	24.03	26.13	Pass
	U-NII-2A	5290	N/A	12.08	12.48	13.13	13.57	13.97	14.62	18.84	20.13	Pass
	U-NII-2C	5530	N/A	12.42	12.34	12.41	13.91	13.83	13.90	18.65	20.13	Pass
	U-NII-3	5775	N/A	17.22	17.14	17.84	18.71	18.63	19.33	23.67	26.13	Pass
IEEE 802.11ac -VHT160	U-NII-2A	5250	N/A	10.61	11.36	11.11	12.46	13.21	12.96	17.66	20.13	Pass
	U-NII-2C	5570	N/A	11.49	11.02	10.26	13.34	12.87	12.11	17.57	20.13	Pass

Mode	Band	Freq. (MHz)	RU	CONDUCTED AVG POWER							Limit (dBm)	Result
				Meas Value (dBm)			Corr'd Value (dBm)					
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11ax -HE20	U-NII-1	5180	SU	18.35	18.44	18.22	18.92	19.01	18.79	23.68	26.13	Pass
		5220	SU	18.55	19.23	18.76	19.12	19.80	19.33	24.20	26.13	Pass
		5240	SU	18.83	19.46	18.81	19.40	20.03	19.38	24.39	26.13	Pass
	U-NII-2A	5260	SU	12.26	12.79	12.42	12.83	13.36	12.99	17.84	20.13	Pass
		5300	SU	12.18	12.42	12.16	12.75	12.99	12.73	17.60	20.13	Pass
		5320	SU	12.27	12.56	12.33	12.84	13.13	12.90	17.73	20.13	Pass
	U-NII-2C	5500	SU	12.44	12.36	11.72	13.01	12.93	12.29	17.53	20.13	Pass
		5580	SU	12.49	12.52	11.97	13.06	13.09	12.54	17.68	20.13	Pass
		5700	SU	11.49	11.62	11.16	12.06	12.19	11.73	16.77	20.13	Pass
	U-NII-3	5745	SU	18.85	18.21	18.15	19.42	18.78	18.72	23.76	26.13	Pass
		5785	SU	19.08	18.46	18.62	19.65	19.03	19.19	24.07	26.13	Pass
		5825	SU	18.86	18.11	18.68	19.43	18.68	19.25	23.91	26.13	Pass
IEEE 802.11ax -HE40	U-NII-1	5190	SU	18.36	18.51	18.91	18.94	19.09	19.49	23.95	26.13	Pass
		5230	SU	18.68	18.89	19.11	19.26	19.47	19.69	24.24	26.13	Pass
	U-NII-2A	5270	SU	12.98	13.21	13.24	13.56	13.79	13.82	18.49	20.13	Pass
		5310	SU	12.87	13.12	13.18	13.45	13.70	13.76	18.41	20.13	Pass
	U-NII-2C	5510	SU	13.34	13.09	12.71	13.92	13.67	13.29	18.40	20.13	Pass
		5550	SU	13.41	13.21	12.46	13.99	13.79	13.04	18.39	20.13	Pass
		5670	SU	12.55	12.58	12.01	13.13	13.16	12.59	17.74	20.13	Pass
	U-NII-3	5755	SU	18.35	18.42	18.02	18.93	19.00	18.60	23.61	26.13	Pass
		5795	SU	18.46	18.61	18.32	19.04	19.19	18.90	23.81	26.13	Pass
IEEE 802.11ax -HE80	U-NII-1	5210	SU	17.51	18.05	18.04	18.10	18.64	18.63	23.24	26.13	Pass
	U-NII-2A	5290	SU	11.91	12.01	12.04	12.50	12.60	12.63	17.35	20.13	Pass
	U-NII-2C	5530	SU	12.41	12.54	11.68	13.00	13.13	12.27	17.59	20.13	Pass
	U-NII-3	5775	SU	17.48	17.98	17.29	18.07	18.57	17.88	22.96	26.13	Pass
IEEE 802.11ax -HE160	U-NII-1	5250	SU	10.52	9.92	10.17	11.04	10.44	10.69	15.50	20.13	Pass
	U-NII-2C	5570	SU	10.92	10.13	9.41	11.44	10.65	9.93	15.48	20.13	Pass

TPC Function:

Mode	Band	Freq. (MHz)	RU	CONDUCTED AVG POWER							Limit (dBm)	Result
				Meas Value (dBm)			Corr'd Value (dBm)					
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11a	U-NII-2A	5260	N/A	14.23	14.33	14.17	14.41	14.51	14.35	N/A	23.96	Pass
		5300	N/A	13.97	14.21	14.06	14.15	14.39	14.24	N/A	23.96	Pass
		5320	N/A	14.01	14.23	14.15	14.19	14.41	14.33	N/A	23.96	Pass
	U-NII-2C	5500	N/A	14.08	14.09	13.65	14.26	14.27	13.83	N/A	24.00	Pass
		5580	N/A	14.16	14.18	13.78	14.34	14.36	13.96	N/A	24.00	Pass
		5700	N/A	13.24	13.61	13.02	13.42	13.79	13.20	N/A	24.00	Pass
IEEE 802.11n -HT20	U-NII-2A	5260	N/A	6.17	6.49	6.31	6.38	6.70	6.52	11.31	20.13	Pass
		5300	N/A	6.03	6.29	6.01	6.24	6.50	6.22	11.09	20.13	Pass
		5320	N/A	6.04	5.77	6.41	6.25	5.98	6.62	11.06	20.13	Pass
	U-NII-2C	5500	N/A	6.18	6.24	5.25	6.39	6.45	5.46	10.90	20.13	Pass
		5580	N/A	6.15	6.88	5.19	6.36	7.09	5.40	11.11	20.13	Pass
		5700	N/A	4.87	5.11	4.35	5.08	5.32	4.56	9.77	20.13	Pass
IEEE 802.11n -HT40	U-NII-2A	5270	N/A	7.87	7.98	7.82	8.27	8.38	8.22	13.07	20.13	Pass
		5310	N/A	7.66	8.12	7.78	8.06	8.52	8.18	13.03	20.13	Pass
	U-NII-2C	5510	N/A	8.08	8.21	7.33	8.48	8.61	7.73	13.07	20.13	Pass
		5550	N/A	8.04	8.15	7.21	8.44	8.55	7.61	13.00	20.13	Pass
		5670	N/A	7.29	7.44	6.96	7.69	7.84	7.36	12.41	20.13	Pass
IEEE 802.11ac -VHT20	U-NII-2A	5260	N/A	6.01	6.57	6.22	6.57	7.13	6.78	11.60	20.13	Pass
		5300	N/A	6.05	6.31	6.02	6.61	6.87	6.58	11.46	20.13	Pass
		5320	N/A	6.08	6.36	6.12	6.64	6.92	6.68	11.52	20.13	Pass
	U-NII-2C	5500	N/A	6.31	6.09	5.71	6.87	6.65	6.27	11.37	20.13	Pass
		5580	N/A	6.41	6.05	5.54	6.97	6.61	6.10	11.34	20.13	Pass
		5700	N/A	5.28	5.66	5.01	5.84	6.22	5.57	10.65	20.13	Pass
IEEE 802.11ac -VHT40	U-NII-2A	5270	N/A	7.45	7.31	7.22	8.36	8.22	8.13	13.01	20.13	Pass
		5310	N/A	7.42	7.63	7.18	8.33	8.54	8.09	13.09	20.13	Pass
	U-NII-2C	5510	N/A	6.89	6.97	6.11	7.80	7.88	7.02	12.35	20.13	Pass
		5550	N/A	6.21	6.13	6.42	7.12	7.04	7.33	11.93	20.13	Pass
		5670	N/A	6.34	6.16	5.98	7.25	7.07	6.89	11.84	20.13	Pass
IEEE 802.11ac -VHT80	U-NII-2A	5290	N/A	6.58	6.41	7.01	8.07	7.90	8.50	12.93	20.13	Pass
	U-NII-2C	5530	N/A	6.38	6.31	6.22	7.87	7.80	7.71	12.56	20.13	Pass
IEEE 802.11ac -VHT160	U-NII-2A	5250	N/A	4.77	4.66	4.78	6.62	6.51	6.63	11.36	20.13	Pass
	U-NII-2C	5570	N/A	4.97	4.89	4.02	6.82	6.74	5.87	11.27	20.13	Pass

Mode	Band	Freq. (MHz)	RU	CONDUCTED AVG POWER							Limit (dBm)	Result
				Meas Value (dBm)			Corr'd Value (dBm)					
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11ax -HE20	U-NII-2A	5260	SU	6.01	6.71	6.32	6.58	7.28	6.89	11.70	20.13	Pass
		5300	SU	6.16	6.38	6.11	6.73	6.95	6.68	11.56	20.13	Pass
		5320	SU	6.22	6.54	6.31	6.79	7.11	6.88	11.70	20.13	Pass
	U-NII-2C	5500	SU	6.28	6.19	5.78	6.85	6.76	6.35	11.43	20.13	Pass
		5580	SU	6.24	6.41	5.79	6.81	6.98	6.36	11.50	20.13	Pass
		5700	SU	5.43	6.44	5.11	6.00	7.01	5.68	11.04	20.13	Pass
IEEE 802.11ax -HE40	U-NII-2A	5270	SU	6.61	6.78	6.96	7.19	7.36	7.54	12.13	20.13	Pass
		5310	SU	6.55	7.08	7.01	7.13	7.66	7.59	12.23	20.13	Pass
	U-NII-2C	5510	SU	6.97	6.99	6.21	7.55	7.57	6.79	12.09	20.13	Pass
		5550	SU	7.06	7.04	6.11	7.64	7.62	6.69	12.11	20.13	Pass
		5670	SU	6.33	6.28	6.01	6.91	6.86	6.59	11.56	20.13	Pass
IEEE 802.11ax -HE80	U-NII-2A	5290	SU	5.54	5.87	5.91	6.13	6.46	6.50	11.14	20.13	Pass
	U-NII-2C	5530	SU	5.84	5.76	5.12	6.43	6.35	5.71	10.95	20.13	Pass
IEEE 802.11ax -HE160	U-NII-1	5250	SU	4.65	4.05	3.73	5.17	4.57	4.25	9.45	20.13	Pass
	U-NII-2C	5570	SU	4.76	4.11	3.86	5.28	4.63	4.38	9.55	20.13	Pass

5.6 PEAK POWER SPECTRAL DENSITY

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)
Test Method: KDB 789033 D02 v02r01 Section F
Limits:

1. For the band 5.15-5.25 GHz.
   (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

   (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

   (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

   (iv) For 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. In addition, 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 conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, 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 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure:

The output from the transmitter was connected to an attenuator and then to the input of the RF Spectrum Analyzer.

Spectrum analyzer according to the following Settings:

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

Using method SA-2

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Sweep time = auto, trigger set to “free run”.
d) Trace average at least 100 traces in power averaging mode.
e) Record the max value and add 10 log (1/duty cycle)

2. For U-NII-3 band:

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 500 kHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Use the peak marker function to determine the maximum power level in any 500 kHz band segment within the fundamental EBW.
d) Sweep time = auto, trigger set to “free run”.
e) Trace average at least 100 traces in power averaging mode.
f) Record the max value and add 10 log (1/duty cycle)

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: **Please refer to Appendix A**

Directional gain and the maximum power spectral density limit.

Frequency (MHz)	Antenna Gain (dBi)			Directional gain (dBi)		Limit	
	Ant .0	Ant .1	Ant .2	Power	PSD	Power (dBm)	PSD (dBm/MHz or dBm/500kHz)
U-NII-1	4.76	5.21	5.31	9.87	9.87	26.13	13.13
U-NII-2A	4.76	5.21	5.31	9.87	9.87	20.13	7.13
U-NII-2C	4.76	5.21	5.31	9.87	9.87	20.13	7.13
U-NII-3	4.76	5.21	5.31	9.87	9.87	26.13	26.13
Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows: If transmit signals are correlated, then Directional gain = 10 log[(10^G1 /20 + 10^G2 /20 + … + 10^GN /20)^2 /NANT] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]							

5.7 RADIATED EMISSIONS AND BAND EDGE MEASUREMENT

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(1)(2)(3)(4)(6)
FCC 47 CFR Part 15 Subpart C Section 15.209/205

Test Method: KDB 789033 D02 v02r01 Section G.3, G.4, G.5, and G.6

Receiver Setup:

Frequency	RBW
0.009 MHz-0.150 MHz	200/300 kHz
0.150 MHz -30 MHz	9/10 kHz
30 MHz-1 GHz	100/120 kHz
Above 1 GHz	1 MHz

Limits:

1. Limits of Radiated Emission and Band edge Measurement

Radiated emissions that fall in the restricted bands must comply with the general emissions limits in 15.209(a) as below table. Other emissions shall be at least 20 dB below the highest level of the desired power.

Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009 MHz-0.490 MHz	2400/F(kHz)	--	--	300
0.490 MHz-1.705 MHz	24000/F(kHz)	--	--	30
1.705 MHz-30 MHz	30	--	--	30
30 MHz-88 MHz	100	40.0	Quasi-peak	3
88 MHz-216 MHz	150	43.5	Quasi-peak	3
216 MHz-960 MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1 GHz	500	54.0	Average	3

Remark:

a. The lower limit shall apply at the transition frequencies.
b. Emission level (dBuV/m) = 20 log Emission level (uV/m).
c. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

2. Limits of Unwanted Emission Out of the Restricted Bands

Applicable To	Limit	
789033 D02 General U-NII Test Procedures New Rules v01r04	Field Strength at 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
FCC Part 15.407 (b)(1)	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
FCC Part 15.407 (b)(2)	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
FCC Part 15.407 (b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
FCC Part 15.407 (b)(4)	27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;	PK: 68.2 (dBμV/m)
	15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;	
	10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges;	
	-27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.	

Test Setup: Refer to section 4.5.1 for details.

Test Procedures:

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
6. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Remark:

a) The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
b) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
c) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for RMS Average (Duty cycle < 98 %) for Average detection (AV) at frequency above 1 GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
d) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) or ≥ 1/T(duty cycle is < 98%) for Average detection (AV) at frequency above 1 GHz.
e) All modes of operation were investigated and the worst-case emissions are reported.

Equipment Used: Refer to section 3 for details.

Test Result: Pass

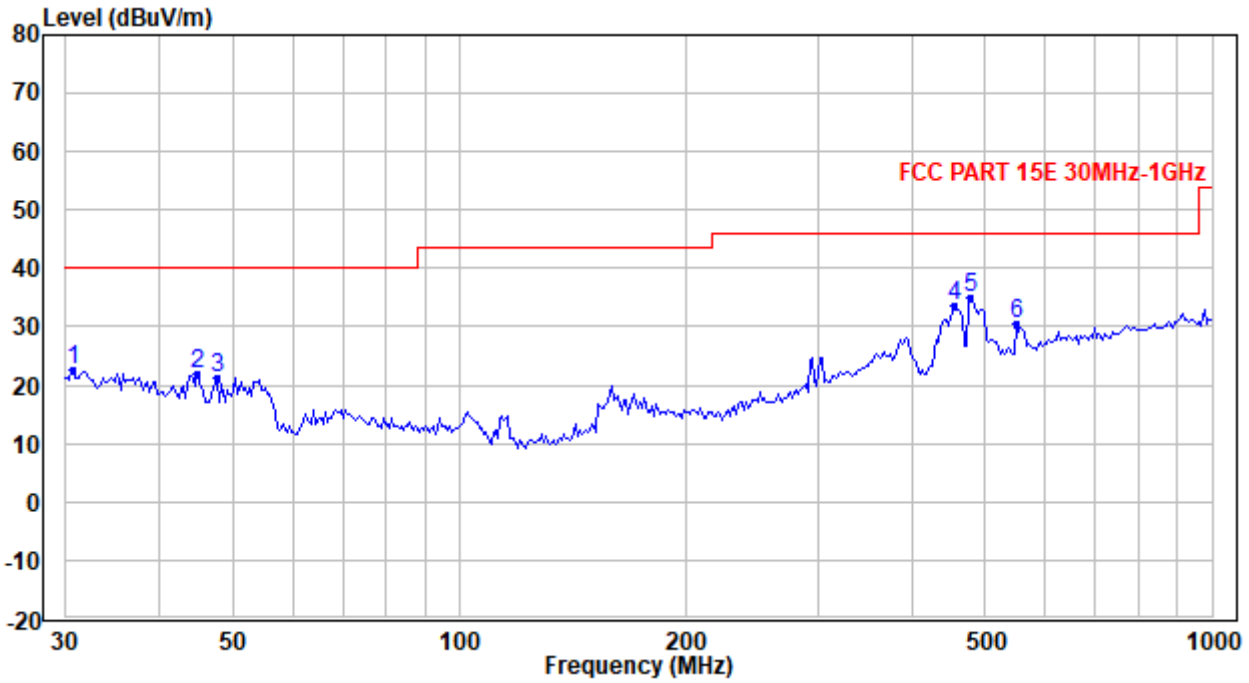
The measurement data as follows:

Radiated Emission Test Data (9 KHz ~ 30 MHz):
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Radiated Emission Test Data (30 MHz ~ 1 GHz):

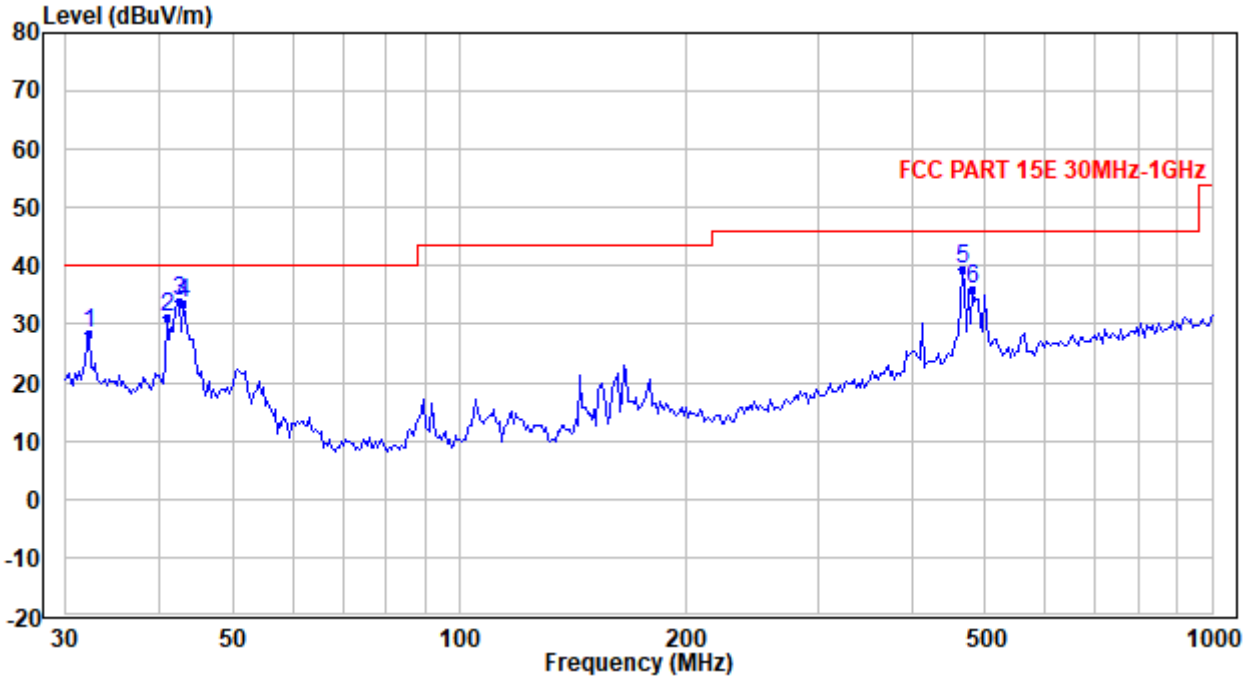
Worst-Case Configuration(MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 159)

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.639	27.7	-4.9	22.8	40.0	-17.2	QP
2	44.779	33.1	-11.3	21.9	40.0	-18.2	QP
3	47.703	34.6	-13.3	21.4	40.0	-18.7	QP
4	455.189	36.9	-3.3	33.6	46.0	-12.4	QP
5	478.139	38.0	-3.1	35.0	46.0	-11.0	QP
6	550.29	31.7	-1.0	30.7	46.0	-15.3	QP

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	32.184	33.7	-5.1	28.6	40.0	-11.4	QP
2	40.87	39.5	-8.3	31.2	40.0	-8.8	QP
3	42.331	42.8	-9.0	33.8	40.0	-6.2	QP
4	42.931	43.1	-9.4	33.7	40.0	-6.3	QP
5	464.887	42.7	-3.3	39.5	46.0	-6.5	QP
6	481.511	38.9	-3.1	35.9	46.0	-10.2	QP

Radiated Emission Test Data (Above 1GHz):								
No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 0_IEEE 802.11a_Channel 36								
1	10360	39.3	7.2	46.4	68.2	-21.8	Peak	Horizontal
2	10360	27.2	7.2	34.4	54	-19.6	Average	Horizontal
3	15540	35.6	11.9	47.5	74	-26.5	Peak	Horizontal
4	15540	23.8	11.9	35.7	54	-18.3	Average	Horizontal
5	10360	39.0	7.2	46.2	68.2	-22.0	Peak	Vertical
6	10360	27.6	7.2	34.8	54	-19.2	Average	Vertical
7	15540	35.3	11.9	47.3	74	-26.7	Peak	Vertical
8	15540	23.7	11.9	35.6	54	-18.4	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 44								
1	10440	40.1	7.2	47.4	68.2	-20.8	Peak	Horizontal
2	10440	26.7	7.2	33.9	54	-20.1	Average	Horizontal
3	15660	36.2	11.9	48.2	74	-25.8	Peak	Horizontal
4	15660	24.0	11.9	35.9	54	-18.1	Average	Horizontal
5	10440	38.5	7.2	45.7	68.2	-22.5	Peak	Vertical
6	10440	26.9	7.2	34.1	54	-19.9	Average	Vertical
7	15660	35.8	11.9	47.7	74	-26.3	Peak	Vertical
8	15660	24.0	11.9	35.9	54	-18.1	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 48								
1	10480	38.1	7.2	45.3	68.2	-22.9	Peak	Horizontal
2	10480	27.3	7.2	34.5	54	-19.5	Average	Horizontal
3	15720	35.0	12.0	47.0	74	-27.0	Peak	Horizontal
4	15720	23.1	12.0	35.1	54	-18.9	Average	Horizontal
5	10480	38.6	7.2	45.8	68.2	-22.4	Peak	Vertical
6	10480	25.4	7.2	32.6	54	-21.4	Average	Vertical
7	15720	34.3	12.0	46.3	74	-27.7	Peak	Vertical
8	15720	23.2	12.0	35.2	54	-18.8	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 52								
1	10520	39.7	7.3	47.0	68.2	-21.2	Peak	Horizontal
2	10520	28.5	7.3	35.8	54	-18.2	Average	Horizontal
3	15780	34.8	12.0	46.8	74	-27.2	Peak	Horizontal
4	15780	23.5	12.0	35.5	54	-18.5	Average	Horizontal
5	10520	39.8	7.3	47.1	68.2	-21.1	Peak	Vertical
6	10520	27.6	7.3	34.9	54	-19.1	Average	Vertical
7	15780	37.2	12.0	49.2	74	-24.8	Peak	Vertical
8	15780	23.5	12.0	35.5	54	-18.5	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 0_IEEE 802.11a_Channel 60								
1	10600	38.2	7.4	45.7	74	-28.3	Peak	Horizontal
2	10600	27.5	7.4	34.9	54	-19.1	Average	Horizontal
3	15900	34.8	12.0	46.8	74	-27.2	Peak	Horizontal
4	15900	23.1	12.0	35.1	54	-18.9	Average	Horizontal
5	10600	39.6	7.4	47.1	74	-26.9	Peak	Vertical
6	10600	27.5	7.4	34.9	54	-19.1	Average	Vertical
7	15900	34.9	12.0	46.9	74	-27.1	Peak	Vertical
8	15900	23.1	12.0	35.1	54	-18.9	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 64								
1	10640	39.5	7.5	47.1	74	-26.9	Peak	Horizontal
2	10640	27.3	7.5	34.8	54	-19.2	Average	Horizontal
3	15960	34.9	12.0	47.0	74	-27.0	Peak	Horizontal
4	15960	23.0	12.0	35.0	54	-19.0	Average	Horizontal
5	10640	38.8	7.5	46.3	74	-27.7	Peak	Vertical
6	10640	24.4	7.5	31.9	54	-22.1	Average	Vertical
7	15960	35.3	12.0	47.3	74	-26.7	Peak	Vertical
8	15960	23.1	12.0	35.1	54	-18.9	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 100								
1	11000	39.3	8.2	47.5	74	-26.5	Peak	Horizontal
2	11000	26.9	8.2	35.1	54	-18.9	Average	Horizontal
3	16500	35.0	12.8	47.7	68.2	-20.5	Peak	Horizontal
4	16500	22.9	12.8	35.7	54	-18.3	Average	Horizontal
5	11000	39.1	8.2	47.3	74	-26.7	Peak	Vertical
6	11000	26.9	8.2	35.1	54	-18.9	Average	Vertical
7	16500	34.0	12.8	46.8	68.2	-21.4	Peak	Vertical
8	16500	22.8	12.8	35.6	54	-18.4	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 116								
1	11160	39.0	8.1	47.1	74	-26.9	Peak	Horizontal
2	11160	27.8	8.1	35.9	54	-18.1	Average	Horizontal
3	16740	36.0	12.9	48.9	68.2	-19.3	Peak	Horizontal
4	16740	23.0	12.9	35.9	54	-18.1	Average	Horizontal
5	11160	39.5	8.1	47.6	74	-26.4	Peak	Vertical
6	11160	27.8	8.1	35.9	54	-18.1	Average	Vertical
7	16740	34.6	12.9	47.4	68.2	-20.8	Peak	Vertical
8	16740	23.0	12.9	35.9	54	-18.1	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 0_IEEE 802.11a_Channel 140								
1	11400	39.4	7.8	47.2	74	-26.8	Peak	Horizontal
2	11400	27.4	7.8	35.2	54	-18.8	Average	Horizontal
3	17100	34.9	13.3	48.1	68.2	-20.1	Peak	Horizontal
4	17100	23.0	13.3	36.3	54	-17.7	Average	Horizontal
5	11400	39.4	7.8	47.2	74	-26.8	Peak	Vertical
6	11400	24.4	7.8	32.2	54	-21.8	Average	Vertical
7	17100	34.5	13.3	47.8	68.2	-20.4	Peak	Vertical
8	17100	23.0	13.3	36.3	54	-17.7	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 149								
1	11490	37.9	7.7	45.6	74	-28.4	Peak	Horizontal
2	11490	26.4	7.7	34.1	54	-19.9	Average	Horizontal
3	17235	36.8	13.7	50.4	68.2	-17.8	Peak	Horizontal
4	17235	22.0	13.7	35.7	54	-18.3	Average	Horizontal
5	11490	39.3	7.7	47.0	74	-27.0	Peak	Vertical
6	11490	26.4	7.7	34.1	54	-19.9	Average	Vertical
7	17235	34.1	13.7	47.8	68.2	-20.4	Peak	Vertical
8	17235	22.0	13.7	35.7	54	-18.3	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 157								
1	11570	38.5	7.8	46.3	74	-27.7	Peak	Horizontal
2	11570	26.5	7.8	34.3	54	-19.7	Average	Horizontal
3	17355	33.3	14.0	47.3	68.2	-20.9	Peak	Horizontal
4	17355	23.3	14.0	37.3	54	-16.7	Average	Horizontal
5	11570	39.2	7.8	47.0	74	-27.0	Peak	Vertical
6	11570	26.7	7.8	34.5	54	-19.5	Average	Vertical
7	17355	35.5	14.0	49.5	68.2	-18.7	Peak	Vertical
8	17355	23.4	14.0	37.4	54	-16.6	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 0_IEEE 802.11a_Channel 165								
1	11650	37.4	7.9	45.4	74	-28.6	Peak	Horizontal
2	11650	25.8	7.9	33.7	54	-20.3	Average	Horizontal
3	17475	34.4	14.3	48.7	68.2	-19.5	Peak	Horizontal
4	17475	22.7	14.3	37.0	54	-17.0	Average	Horizontal
5	11650	37.2	7.9	45.1	74	-28.9	Peak	Vertical
6	11650	26.0	7.9	33.9	54	-20.1	Average	Vertical
7	17475	34.3	14.3	48.6	68.2	-19.6	Peak	Vertical
8	17475	22.9	14.3	37.2	54	-16.8	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 36								
1	10360	38.6	7.2	45.8	68.2	-22.4	Peak	Horizontal
2	10360	27.4	7.2	34.6	54	-19.4	Average	Horizontal
3	15540	35.2	11.9	47.1	74	-26.9	Peak	Horizontal
4	15540	23.7	11.9	35.6	54	-18.4	Average	Horizontal
5	10360	39.8	7.2	47.0	68.2	-21.2	Peak	Vertical
6	10360	27.0	7.2	34.2	54	-19.8	Average	Vertical
7	15540	35.0	11.9	46.9	74	-27.1	Peak	Vertical
8	15540	23.7	11.9	35.6	54	-18.4	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 44								
1	10440	38.4	7.2	45.6	68.2	-22.6	Peak	Horizontal
2	10440	26.9	7.2	34.1	54	-19.9	Average	Horizontal
3	15660	36.3	11.9	48.3	74	-25.7	Peak	Horizontal
4	15660	24.0	11.9	35.9	54	-18.1	Average	Horizontal
5	10440	38.3	7.2	45.6	68.2	-22.6	Peak	Vertical
6	10440	27.1	7.2	34.3	54	-19.7	Average	Vertical
7	15660	37.3	11.9	49.2	74	-24.8	Peak	Vertical
8	15660	23.8	11.9	35.7	54	-18.3	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 48								
1	10480	39.5	7.2	46.8	68.2	-21.4	Peak	Horizontal
2	10480	28.5	7.2	35.7	54	-18.3	Average	Horizontal
3	15720	36.5	12.0	48.5	74	-25.5	Peak	Horizontal
4	15720	23.2	12.0	35.2	54	-18.8	Average	Horizontal
5	10480	38.0	7.2	45.2	68.2	-23.0	Peak	Vertical
6	10480	27.6	7.2	34.8	54	-19.2	Average	Vertical
7	15720	37.8	12.0	49.8	74	-24.2	Peak	Vertical
8	15720	25.2	12.0	37.2	54	-16.8	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 1_IEEE 802.11a_Channel 52								
1	10520	39.8	7.3	47.1	68.2	-21.1	Peak	Horizontal
2	10520	27.2	7.3	34.5	54	-19.5	Average	Horizontal
3	15780	35.2	12.0	47.2	74	-26.8	Peak	Horizontal
4	15780	23.1	12.0	35.1	54	-18.9	Average	Horizontal
5	10520	38.6	7.3	45.8	68.2	-22.4	Peak	Vertical
6	10520	27.2	7.3	34.5	54	-19.5	Average	Vertical
7	15780	37.1	12.0	49.0	74	-25.0	Peak	Vertical
8	15780	23.2	12.0	35.2	54	-18.8	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 60								
1	10600	38.3	7.4	45.8	74	-28.2	Peak	Horizontal
2	10600	26.3	7.4	33.7	54	-20.3	Average	Horizontal
3	15900	36.9	12.0	48.9	74	-25.1	Peak	Horizontal
4	15900	22.8	12.0	34.8	54	-19.2	Average	Horizontal
5	10600	37.2	7.4	44.6	74	-29.4	Peak	Vertical
6	10600	27.4	7.4	34.8	54	-19.2	Average	Vertical
7	15900	38.2	12.0	50.2	74	-23.8	Peak	Vertical
8	15900	22.8	12.0	34.8	54	-19.2	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 64								
1	10640	38.0	7.5	45.5	74	-28.5	Peak	Horizontal
2	10640	26.3	7.5	33.8	54	-20.2	Average	Horizontal
3	15960	36.0	12.0	48.0	74	-26.0	Peak	Horizontal
4	15960	22.9	12.0	34.9	54	-19.1	Average	Horizontal
5	10640	38.4	7.5	45.9	74	-28.1	Peak	Vertical
6	10640	26.4	7.5	33.9	54	-20.1	Average	Vertical
7	15960	36.1	12.0	48.1	74	-25.9	Peak	Vertical
8	15960	23.0	12.0	35.0	54	-19.0	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 100								
1	11000	37.6	8.2	45.8	74	-28.2	Peak	Horizontal
2	11000	26.7	8.2	34.9	54	-19.1	Average	Horizontal
3	16500	34.9	12.8	47.6	68.2	-20.6	Peak	Horizontal
4	16500	22.7	12.8	35.5	54	-18.5	Average	Horizontal
5	11000	38.6	8.2	46.8	74	-27.2	Peak	Vertical
6	11000	27.1	8.2	35.3	54	-18.7	Average	Vertical
7	16500	35.8	12.8	48.5	68.2	-19.7	Peak	Vertical
8	16500	22.7	12.8	35.5	54	-18.5	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 1_IEEE 802.11a_Channel 116								
1	11160	38.3	8.1	46.4	74	-27.6	Peak	Horizontal
2	11160	27.8	8.1	35.9	54	-18.1	Average	Horizontal
3	16740	35.1	12.9	48.0	68.2	-20.2	Peak	Horizontal
4	16740	22.9	12.9	35.8	54	-18.2	Average	Horizontal
5	11160	39.1	8.1	47.1	74	-26.9	Peak	Vertical
6	11160	26.8	8.1	34.9	54	-19.1	Average	Vertical
7	16740	33.5	12.9	46.4	68.2	-21.8	Peak	Vertical
8	16740	23.0	12.9	35.9	54	-18.1	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 140								
1	11400	37.9	7.8	45.7	74	-28.3	Peak	Horizontal
2	11400	27.2	7.8	35.0	54	-19.0	Average	Horizontal
3	17100	35.4	13.3	48.7	68.2	-19.5	Peak	Horizontal
4	17100	22.7	13.3	36.0	54	-18.0	Average	Horizontal
5	11400	37.6	7.8	45.4	74	-28.6	Peak	Vertical
6	11400	24.4	7.8	32.2	54	-21.8	Average	Vertical
7	17100	35.5	13.3	48.8	68.2	-19.4	Peak	Vertical
8	17100	22.7	13.3	36.0	54	-18.0	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 149								
1	11490	38.6	7.7	46.3	74	-27.7	Peak	Horizontal
2	11490	26.3	7.7	34.0	54	-20.0	Average	Horizontal
3	17235	35.6	13.7	49.2	68.2	-19.0	Peak	Horizontal
4	17235	21.9	13.7	35.6	54	-18.4	Average	Horizontal
5	11490	37.8	7.7	45.5	74	-28.5	Peak	Vertical
6	11490	27.3	7.7	35.0	54	-19.0	Average	Vertical
7	17235	35.9	13.7	49.6	68.2	-18.6	Peak	Vertical
8	17235	21.9	13.7	35.6	54	-18.4	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 157								
1	11570	38.4	7.8	46.1	74	-27.9	Peak	Horizontal
2	11570	26.6	7.8	34.4	54	-19.6	Average	Horizontal
3	17355	35.4	14.0	49.4	68.2	-18.8	Peak	Horizontal
4	17355	23.2	14.0	37.2	54	-16.8	Average	Horizontal
5	11570	38.7	7.8	46.5	74	-27.5	Peak	Vertical
6	11570	27.5	7.8	35.3	54	-18.7	Average	Vertical
7	17355	34.3	14.0	48.3	68.2	-19.9	Peak	Vertical
8	17355	23.3	14.0	37.3	54	-16.7	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 1_IEEE 802.11a_Channel 165								
1	11650	38.8	7.9	46.7	74	-27.3	Peak	Horizontal
2	11650	25.8	7.9	33.7	54	-20.3	Average	Horizontal
3	17475	35.7	14.3	50.0	68.2	-18.2	Peak	Horizontal
4	17475	22.8	14.3	37.1	54	-16.9	Average	Horizontal
5	11650	37.3	7.9	45.2	74	-28.8	Peak	Vertical
6	11650	25.8	7.9	33.7	54	-20.3	Average	Vertical
7	17475	35.1	14.3	49.5	68.2	-18.7	Peak	Vertical
8	17475	22.8	14.3	37.1	54	-16.9	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 2_IEEE 802.11a_Channel 36								
1	10360	38.2	7.2	45.4	68.2	-22.8	Peak	Horizontal
2	10360	27.3	7.2	34.5	54	-19.5	Average	Horizontal
3	15540	36.3	11.9	48.2	74	-25.8	Peak	Horizontal
4	15540	23.7	11.9	35.6	54	-18.4	Average	Horizontal
5	10360	38.4	7.2	45.6	68.2	-22.6	Peak	Vertical
6	10360	27.3	7.2	34.5	54	-19.5	Average	Vertical
7	15540	35.4	11.9	47.3	74	-26.7	Peak	Vertical
8	15540	23.6	11.9	35.5	54	-18.5	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 44								
1	10440	38.0	7.2	45.3	68.2	-22.9	Peak	Horizontal
2	10440	26.7	7.2	33.9	54	-20.1	Average	Horizontal
3	15660	36.4	11.9	48.3	74	-25.7	Peak	Horizontal
4	15660	23.8	11.9	35.7	54	-18.3	Average	Horizontal
5	10440	38.3	7.2	45.5	68.2	-22.7	Peak	Vertical
6	10440	26.5	7.2	33.7	54	-20.3	Average	Vertical
7	15660	35.4	11.9	47.3	74	-26.7	Peak	Vertical
8	15660	23.8	11.9	35.7	54	-18.3	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 48								
1	10480	38.8	7.2	46.0	68.2	-22.2	Peak	Horizontal
2	10480	27.4	7.2	34.6	54	-19.4	Average	Horizontal
3	15720	34.4	12.0	46.3	74	-27.7	Peak	Horizontal
4	15720	23.0	12.0	35.0	54	-19.0	Average	Horizontal
5	10480	39.1	7.2	46.3	68.2	-21.9	Peak	Vertical
6	10480	27.2	7.2	34.4	54	-19.6	Average	Vertical
7	15720	36.4	12.0	48.4	74	-25.6	Peak	Vertical
8	15720	23.0	12.0	35.0	54	-19.0	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 2_IEEE 802.11a_Channel 52								
1	10520	39.7	7.3	47.0	68.2	-21.2	Peak	Horizontal
2	10520	28.2	7.3	35.5	54	-18.5	Average	Horizontal
3	15780	35.1	12.0	47.1	74	-26.9	Peak	Horizontal
4	15780	23.1	12.0	35.1	54	-18.9	Average	Horizontal
5	10520	37.5	7.3	44.8	68.2	-23.4	Peak	Vertical
6	10520	28.1	7.3	35.4	54	-18.6	Average	Vertical
7	15780	34.2	12.0	46.2	74	-27.8	Peak	Vertical
8	15780	23.1	12.0	35.1	54	-18.9	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 60								
1	10600	39.2	7.4	46.6	74	-27.4	Peak	Horizontal
2	10600	27.2	7.4	34.6	54	-19.4	Average	Horizontal
3	15900	34.7	12.0	46.7	74	-27.3	Peak	Horizontal
4	15900	22.6	12.0	34.6	54	-19.4	Average	Horizontal
5	10600	38.6	7.4	46.1	74	-27.9	Peak	Vertical
6	10600	27.4	7.4	34.8	54	-19.3	Average	Vertical
7	15900	34.0	12.0	46.1	74	-27.9	Peak	Vertical
8	15900	22.7	12.0	34.7	54	-19.3	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 64								
1	10640	39.8	7.5	47.4	74	-26.6	Peak	Horizontal
2	10640	26.3	7.5	33.8	54	-20.3	Average	Horizontal
3	15960	35.7	12.0	47.7	74	-26.3	Peak	Horizontal
4	15960	22.7	12.0	34.7	54	-19.3	Average	Horizontal
5	10640	38.8	7.5	46.3	74	-27.7	Peak	Vertical
6	10640	27.4	7.5	34.9	54	-19.1	Average	Vertical
7	15960	34.2	12.0	46.3	74	-27.7	Peak	Vertical
8	15960	22.8	12.0	34.8	54	-19.2	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 100								
1	11000	39.6	8.2	47.8	74	-26.2	Peak	Horizontal
2	11000	26.7	8.2	34.9	54	-19.1	Average	Horizontal
3	16500	36.7	12.8	49.4	68.2	-18.8	Peak	Horizontal
4	16500	22.6	12.8	35.4	54	-18.6	Average	Horizontal
5	11000	38.9	8.2	47.1	74	-26.9	Peak	Vertical
6	11000	26.7	8.2	34.9	54	-19.1	Average	Vertical
7	16500	35.1	12.8	47.9	68.2	-20.3	Peak	Vertical
8	16500	22.6	12.8	35.4	54	-18.6	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 2_IEEE 802.11a_Channel 116								
1	11160	38.5	8.1	46.5	74	-27.5	Peak	Horizontal
2	11160	27.6	8.1	35.7	54	-18.3	Average	Horizontal
3	16740	34.4	12.9	47.3	68.2	-20.9	Peak	Horizontal
4	16740	22.7	12.9	35.6	54	-18.4	Average	Horizontal
5	11160	40.0	8.1	48.0	74	-26.0	Peak	Vertical
6	11160	24.6	8.1	32.7	54	-21.3	Average	Vertical
7	16740	34.4	12.9	47.2	68.2	-21.0	Peak	Vertical
8	16740	22.7	12.9	35.6	54	-18.4	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 140								
1	11400	37.9	7.8	45.7	74	-28.3	Peak	Horizontal
2	11400	27.2	7.8	35.0	54	-19.0	Average	Horizontal
3	17100	34.5	13.3	47.7	68.2	-20.5	Peak	Horizontal
4	17100	22.6	13.3	35.9	54	-18.1	Average	Horizontal
5	11400	37.5	7.8	45.3	74	-28.7	Peak	Vertical
6	11400	27.3	7.8	35.1	54	-18.9	Average	Vertical
7	17100	34.0	13.3	47.3	68.2	-20.9	Peak	Vertical
8	17100	22.6	13.3	35.9	54	-18.1	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 149								
1	11490	38.2	7.7	45.9	74	-28.1	Peak	Horizontal
2	11490	26.3	7.7	34.0	54	-20.0	Average	Horizontal
3	17235	34.3	13.7	48.0	68.2	-20.2	Peak	Horizontal
4	17235	21.7	13.7	35.4	54	-18.6	Average	Horizontal
5	11490	38.9	7.7	46.6	74	-27.4	Peak	Vertical
6	11490	23.2	7.7	30.9	54	-23.1	Average	Vertical
7	17235	33.5	13.7	47.1	68.2	-21.1	Peak	Vertical
8	17235	21.7	13.7	35.4	54	-18.6	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 157								
1	11570	37.8	7.8	45.6	74	-28.4	Peak	Horizontal
2	11570	26.5	7.8	34.3	54	-19.7	Average	Horizontal
3	17355	34.3	14.0	48.3	68.2	-19.9	Peak	Horizontal
4	17355	23.0	14.0	37.0	54	-17.0	Average	Horizontal
5	11570	38.3	7.8	46.1	74	-27.9	Peak	Vertical
6	11570	26.5	7.8	34.3	54	-19.7	Average	Vertical
7	17355	34.4	14.0	48.4	68.2	-19.8	Peak	Vertical
8	17355	23.0	14.0	37.0	54	-17.0	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
SISO_ Ant. 2_IEEE 802.11a_Channel 165								
1	11650	37.5	7.9	45.4	74	-28.6	Peak	Horizontal
2	11650	25.5	7.9	33.4	54	-20.6	Average	Horizontal
3	17475	33.6	14.3	47.9	68.2	-20.3	Peak	Horizontal
4	17475	22.4	14.3	36.7	54	-17.3	Average	Horizontal
5	11650	37.2	7.9	45.1	74	-28.9	Peak	Vertical
6	11650	25.8	7.9	33.7	54	-20.3	Average	Vertical
7	17475	34.1	14.3	48.4	68.2	-19.8	Peak	Vertical
8	17475	22.4	14.3	36.7	54	-17.3	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 36								
1	10360	39.5	7.2	46.7	68.2	-21.5	Peak	Horizontal
2	10360	28.0	7.2	35.2	54	-18.8	Average	Horizontal
3	15540	35.3	11.9	47.2	74	-26.8	Peak	Horizontal
4	15540	23.5	11.9	35.4	54	-18.6	Average	Horizontal
5	10360	43.7	7.2	50.9	68.2	-17.3	Peak	Vertical
6	10360	27.1	7.2	34.3	54	-19.7	Average	Vertical
7	15540	37.5	11.9	49.5	74	-24.5	Peak	Vertical
8	15540	23.5	11.9	35.4	54	-18.6	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 44								
1	10440	38.5	7.2	45.7	68.2	-22.5	Peak	Horizontal
2	10440	26.6	7.2	33.8	54	-20.2	Average	Horizontal
3	15660	35.6	11.9	47.5	74	-26.5	Peak	Horizontal
4	15660	23.9	11.9	35.8	54	-18.2	Average	Horizontal
5	10440	43.9	7.2	51.1	68.2	-17.1	Peak	Vertical
6	10440	28.4	7.2	35.6	54	-18.4	Average	Vertical
7	15660	35.1	11.9	47.0	74	-27.0	Peak	Vertical
8	15660	23.9	11.9	35.8	54	-18.2	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 48								
1	10480	40.5	7.2	47.8	68.2	-20.4	Peak	Horizontal
2	10480	26.8	7.2	34.0	54	-20.0	Average	Horizontal
3	15720	34.1	12.0	46.1	74	-27.9	Peak	Horizontal
4	15720	23.0	12.0	35.0	54	-19.0	Average	Horizontal
5	10480	40.5	7.2	47.7	68.2	-20.5	Peak	Vertical
6	10480	27.8	7.2	35.0	54	-19.0	Average	Vertical
7	15720	35.2	12.0	47.1	74	-26.9	Peak	Vertical
8	15720	23.1	12.0	35.1	54	-18.9	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 52								
1	10520	38.5	7.3	45.8	68.2	-22.4	Peak	Horizontal
2	10520	27.8	7.3	35.1	54	-18.9	Average	Horizontal
3	15780	36.3	12.0	48.2	74	-25.8	Peak	Horizontal
4	15780	23.0	12.0	35.0	54	-19.0	Average	Horizontal
5	10520	39.9	7.3	47.2	68.2	-21.0	Peak	Vertical
6	10520	27.3	7.3	34.6	54	-19.4	Average	Vertical
7	15780	36.2	12.0	48.2	74	-25.8	Peak	Vertical
8	15780	23.0	12.0	35.0	54	-19.0	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 60								
1	10600	37.3	7.4	44.7	74	-29.3	Peak	Horizontal
2	10600	27.2	7.4	34.6	54	-19.4	Average	Horizontal
3	15900	36.2	12.0	48.2	74	-25.8	Peak	Horizontal
4	15900	24.3	12.0	36.3	54	-17.7	Average	Horizontal
5	10600	38.2	7.4	45.6	74	-28.4	Peak	Vertical
6	10600	26.4	7.4	33.8	54	-20.3	Average	Vertical
7	15900	34.0	12.0	46.0	74	-28.0	Peak	Vertical
8	15900	22.4	12.0	34.4	54	-19.6	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 64								
1	10640	37.9	7.5	45.4	74	-28.6	Peak	Horizontal
2	10640	27.0	7.5	34.5	54	-19.5	Average	Horizontal
3	15960	33.9	12.0	45.9	74	-28.1	Peak	Horizontal
4	15960	22.3	12.0	34.3	54	-19.7	Average	Horizontal
5	10640	39.0	7.5	46.5	74	-27.5	Peak	Vertical
6	10640	26.2	7.5	33.7	54	-20.3	Average	Vertical
7	15960	36.2	12.0	48.2	74	-25.8	Peak	Vertical
8	15960	22.4	12.0	34.4	54	-19.6	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 100								
1	11000	38.2	8.2	46.4	74	-27.6	Peak	Horizontal
2	11000	26.5	8.2	34.7	54	-19.3	Average	Horizontal
3	16500	35.1	12.8	47.8	68.2	-20.4	Peak	Horizontal
4	16500	22.9	12.8	35.7	54	-18.3	Average	Horizontal
5	11000	37.1	8.2	45.4	74	-28.6	Peak	Vertical
6	11000	26.7	8.2	34.9	54	-19.1	Average	Vertical
7	16500	33.4	12.8	46.2	68.2	-22.0	Peak	Vertical
8	16500	23.0	12.8	35.8	54	-18.2	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 116								
1	11160	39.0	8.1	47.0	74	-27.0	Peak	Horizontal
2	11160	27.3	8.1	35.4	54	-18.6	Average	Horizontal
3	16740	34.2	12.9	47.1	68.2	-21.1	Peak	Horizontal
4	16740	21.8	12.9	34.7	54	-19.3	Average	Horizontal
5	11160	39.3	8.1	47.3	74	-26.7	Peak	Vertical
6	11160	27.4	8.1	35.5	54	-18.5	Average	Vertical
7	16740	33.8	12.9	46.6	68.2	-21.6	Peak	Vertical
8	16740	22.0	12.9	34.9	54	-19.1	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 140								
1	11400	37.6	7.8	45.4	74	-28.6	Peak	Horizontal
2	11400	24.8	7.8	32.6	54	-21.4	Average	Horizontal
3	17100	34.8	13.3	48.1	68.2	-20.1	Peak	Horizontal
4	17100	22.3	13.3	35.6	54	-18.4	Average	Horizontal
5	11400	38.4	7.8	46.2	74	-27.8	Peak	Vertical
6	11400	24.9	7.8	32.7	54	-21.3	Average	Vertical
7	17100	36.0	13.3	49.3	68.2	-18.9	Peak	Vertical
8	17100	22.2	13.3	35.5	54	-18.5	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 149								
1	11490	37.3	7.7	45.0	74	-29.0	Peak	Horizontal
2	11490	25.9	7.7	33.6	54	-20.4	Average	Horizontal
3	17235	33.8	13.7	47.4	68.2	-20.8	Peak	Horizontal
4	17235	22.1	13.7	35.8	54	-18.2	Average	Horizontal
5	11490	37.6	7.7	45.3	74	-28.7	Peak	Vertical
6	11490	25.9	7.7	33.6	54	-20.4	Average	Vertical
7	17235	35.4	13.7	49.1	68.2	-19.1	Peak	Vertical
8	17235	22.1	13.7	35.8	54	-18.2	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 157								
1	11570	37.0	7.8	44.8	74	-29.2	Peak	Horizontal
2	11570	23.8	7.8	31.6	54	-22.4	Average	Horizontal
3	17355	33.9	14.0	47.9	68.2	-20.3	Peak	Horizontal
4	17355	22.8	14.0	36.8	54	-17.2	Average	Horizontal
5	11570	38.2	7.8	46.0	74	-28.0	Peak	Vertical
6	11570	23.9	7.8	31.7	54	-22.3	Average	Vertical
7	17355	33.5	14.0	47.5	68.2	-20.7	Peak	Vertical
8	17355	22.8	14.0	36.8	54	-17.2	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 165								
1	11650	38.2	7.9	46.1	74	-27.9	Peak	Horizontal
2	11650	24.8	7.9	32.7	54	-21.3	Average	Horizontal
3	17475	34.5	14.3	48.8	68.2	-19.4	Peak	Horizontal
4	17475	22.0	14.3	36.3	54	-17.7	Average	Horizontal
5	11650	38.8	7.9	46.7	74	-27.3	Peak	Vertical
6	11650	25.0	7.9	32.9	54	-21.1	Average	Vertical
7	17475	33.8	14.3	48.1	68.2	-20.1	Peak	Vertical
8	17475	22.0	14.3	36.3	54	-17.7	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 38								
1	10380	38.4	7.2	45.6	68.2	-22.6	Peak	Horizontal
2	10380	26.8	7.2	34.0	54	-20.0	Average	Horizontal
3	15570	34.1	11.9	46.1	74	-27.9	Peak	Horizontal
4	15570	23.5	11.9	35.4	54	-18.6	Average	Horizontal
5	10380	41.5	7.2	48.7	68.2	-19.5	Peak	Vertical
6	10380	27.8	7.2	35.0	54	-19.0	Average	Vertical
7	15570	35.3	11.9	47.2	74	-26.8	Peak	Vertical
8	15570	23.3	11.9	35.2	54	-18.8	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 46								
1	10460	37.7	7.2	44.9	68.2	-23.3	Peak	Horizontal
2	10460	26.4	7.2	33.6	54	-20.4	Average	Horizontal
3	15690	35.4	12.0	47.4	74	-26.6	Peak	Horizontal
4	15690	23.7	12.0	35.7	54	-18.3	Average	Horizontal
5	10460	40.4	7.2	47.7	68.2	-20.5	Peak	Vertical
6	10460	28.2	7.2	35.4	54	-18.6	Average	Vertical
7	15690	36.0	12.0	48.0	74	-26.0	Peak	Vertical
8	15690	23.7	12.0	35.7	54	-18.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 54								
1	10540	38.3	7.3	45.6	68.2	-22.6	Peak	Horizontal
2	10540	26.1	7.3	33.4	54	-20.6	Average	Horizontal
3	15810	33.3	12.0	45.3	74	-28.7	Peak	Horizontal
4	15810	22.3	12.0	34.3	54	-19.7	Average	Horizontal
5	10540	38.1	7.3	45.4	68.2	-22.8	Peak	Vertical
6	10540	26.1	7.3	33.4	54	-20.6	Average	Vertical
7	15810	34.9	12.0	46.9	74	-27.1	Peak	Vertical
8	15810	22.4	12.0	34.4	54	-19.6	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 62								
1	10620	38.3	7.5	45.8	74	-28.2	Peak	Horizontal
2	10620	23.9	7.5	31.4	54	-22.6	Average	Horizontal
3	15930	33.6	12.0	45.6	74	-28.4	Peak	Horizontal
4	15930	22.3	12.0	34.3	54	-19.7	Average	Horizontal
5	10620	37.8	7.5	45.3	74	-28.7	Peak	Vertical
6	10620	24.3	7.5	31.8	54	-22.2	Average	Vertical
7	15930	36.6	12.0	48.6	74	-25.4	Peak	Vertical
8	15930	22.3	12.0	34.3	54	-19.7	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 102								
1	11020	37.4	8.2	45.6	74	-28.4	Peak	Horizontal
2	11020	26.5	8.2	34.7	54	-19.3	Average	Horizontal
3	16530	34.3	12.8	47.1	68.2	-21.1	Peak	Horizontal
4	16530	22.9	12.8	35.7	54	-18.3	Average	Horizontal
5	11020	40.0	8.2	48.2	74	-25.8	Peak	Vertical
6	11020	26.6	8.2	34.8	54	-19.2	Average	Vertical
7	16530	35.3	12.8	48.0	68.2	-20.2	Peak	Vertical
8	16530	22.9	12.8	35.7	54	-18.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 110								
1	11100	39.3	8.1	47.4	74	-26.6	Peak	Horizontal
2	11100	27.3	8.1	35.4	54	-18.6	Average	Horizontal
3	16650	33.7	12.8	46.5	68.2	-21.7	Peak	Horizontal
4	16650	21.9	12.8	34.7	54	-19.3	Average	Horizontal
5	11100	38.5	8.1	46.6	74	-27.4	Peak	Vertical
6	11100	27.4	8.1	35.5	54	-18.5	Average	Vertical
7	16650	34.3	12.8	47.1	68.2	-21.1	Peak	Vertical
8	16650	21.9	12.8	34.7	54	-19.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 134								
1	11340	38.0	7.9	45.8	74	-28.2	Peak	Horizontal
2	11340	25.1	7.9	33.0	54	-21.0	Average	Horizontal
3	17010	34.3	13.0	47.3	68.2	-20.9	Peak	Horizontal
4	17010	22.8	13.0	35.8	54	-18.2	Average	Horizontal
5	11340	37.4	7.9	45.2	74	-28.8	Peak	Vertical
6	11340	25.2	7.9	33.1	54	-20.9	Average	Vertical
7	17010	35.2	13.0	48.2	68.2	-20.0	Peak	Vertical
8	17010	22.8	13.0	35.8	54	-18.2	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40 _Channel 151								
1	11510	38.9	7.7	46.6	74	-27.4	Peak	Horizontal
2	11510	25.9	7.7	33.6	54	-20.4	Average	Horizontal
3	17265	33.3	13.7	47.0	68.2	-21.2	Peak	Horizontal
4	17265	22.3	13.7	36.0	54	-18.0	Average	Horizontal
5	11510	38.6	7.7	46.3	74	-27.7	Peak	Vertical
6	11510	27.0	7.7	34.7	54	-19.3	Average	Vertical
7	17265	33.7	13.7	47.4	68.2	-20.8	Peak	Vertical
8	17265	22.1	13.7	35.8	54	-18.2	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT40_Channel 159								
1	11590	35.1	7.8	43.0	74	-31.0	Peak	Horizontal
2	11590	23.8	7.8	31.6	54	-22.4	Average	Horizontal
3	17385	34.0	14.1	48.1	68.2	-20.1	Peak	Horizontal
4	17385	22.6	14.1	36.7	54	-17.3	Average	Horizontal
5	11590	37.5	7.8	45.4	74	-28.6	Peak	Vertical
6	11590	26.9	7.8	34.7	54	-19.3	Average	Vertical
7	17385	35.0	14.1	49.1	68.2	-19.1	Peak	Vertical
8	17385	22.6	14.1	36.7	54	-17.3	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 42								
1	10420	39.2	7.2	46.4	68.2	-21.8	Peak	Horizontal
2	10420	26.3	7.2	33.5	54	-20.5	Average	Horizontal
3	15630	34.3	12.0	46.2	74	-27.8	Peak	Horizontal
4	15630	23.8	12.0	35.8	54	-18.2	Average	Horizontal
5	10420	40.7	7.2	48.0	68.2	-20.2	Peak	Vertical
6	10420	27.9	7.2	35.1	54	-18.9	Average	Vertical
7	15630	35.2	12.0	47.2	74	-26.8	Peak	Vertical
8	15630	23.7	12.0	35.7	54	-18.3	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 58								
1	10580	39.2	7.4	46.6	68.2	-21.6	Peak	Horizontal
2	10580	22.1	7.4	29.5	54	-24.5	Average	Horizontal
3	15870	34.1	12.0	46.1	74	-27.9	Peak	Horizontal
4	15870	22.5	12.0	34.5	54	-19.5	Average	Horizontal
5	10580	37.9	7.4	45.3	68.2	-22.9	Peak	Vertical
6	10580	22.4	7.4	29.8	54	-24.2	Average	Vertical
7	15870	33.7	12.0	45.7	74	-28.3	Peak	Vertical
8	15870	22.6	12.0	34.6	54	-19.4	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 106								
1	11060	38.3	8.2	46.5	74	-27.5	Peak	Horizontal
2	11060	27.2	8.2	35.4	54	-18.6	Average	Horizontal
3	16590	33.6	12.8	46.4	68.2	-21.8	Peak	Horizontal
4	16590	21.9	12.8	34.7	54	-19.3	Average	Horizontal
5	11060	40.3	8.2	48.4	74	-25.6	Peak	Vertical
6	11060	25.4	8.2	33.6	54	-20.4	Average	Vertical
7	16590	34.0	12.8	46.8	68.2	-21.4	Peak	Vertical
8	16590	21.7	12.8	34.5	54	-19.5	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 155								
1	11550	38.9	7.8	46.6	74	-27.4	Peak	Horizontal
2	11550	22.9	7.8	30.7	54	-23.3	Average	Horizontal
3	17325	34.3	13.9	48.2	68.2	-20.0	Peak	Horizontal
4	17325	22.1	13.9	36.0	54	-18.0	Average	Horizontal
5	11550	38.9	7.8	46.7	74	-27.3	Peak	Vertical
6	11550	22.8	7.8	30.6	54	-23.4	Average	Vertical
7	17325	34.8	13.9	48.7	68.2	-19.5	Peak	Vertical
8	17325	22.1	13.9	36.0	54	-18.0	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT160_Channel 50								
1	10500	39.3	7.3	46.5	68.2	-21.7	Peak	Horizontal
2	10500	26.6	7.3	33.9	54	-20.1	Average	Horizontal
3	15750	35.5	12.0	47.5	74	-26.5	Peak	Horizontal
4	15750	23.0	12.0	35.0	54	-19.0	Average	Horizontal
5	10500	39.5	7.3	46.8	68.2	-21.4	Peak	Vertical
6	10500	25.0	7.3	32.3	54	-21.7	Average	Vertical
7	15750	36.0	12.0	48.0	74	-26.0	Peak	Vertical
8	15750	23.0	12.0	35.0	54	-19.0	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT160_Channel 114								
1	11140	37.5	8.1	45.6	74	-28.4	Peak	Horizontal
2	11140	24.2	8.1	32.3	54	-21.7	Average	Horizontal
3	16710	33.5	12.9	46.3	68.2	-21.9	Peak	Horizontal
4	16710	21.9	12.9	34.8	54	-19.2	Average	Horizontal
5	11140	38.4	8.1	46.4	74	-27.6	Peak	Vertical
6	11140	24.4	8.1	32.5	54	-21.5	Average	Vertical
7	16710	33.4	12.9	46.3	68.2	-21.9	Peak	Vertical
8	16710	21.9	12.9	34.8	54	-19.2	Average	Vertical

Radiated Emission Test Data (Above 1GHz):								
No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 36								
1	10360	38.2	7.2	45.3	68.2	-22.9	Peak	Horizontal
2	10360	25.6	7.2	32.8	54	-21.2	Average	Horizontal
3	15540	35.1	11.9	47.0	74	-27.0	Peak	Horizontal
4	15540	23.4	11.9	35.3	54	-18.7	Average	Horizontal
5	10360	39.8	7.2	47.0	68.2	-21.2	Peak	Vertical
6	10360	27.7	7.2	34.9	54	-19.1	Average	Vertical
7	15540	35.2	11.9	47.1	74	-26.9	Peak	Vertical
8	15540	23.4	11.9	35.3	54	-18.7	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 44								
1	10440	38.4	7.2	45.6	68.2	-22.6	Peak	Horizontal
2	10440	26.3	7.2	33.5	54	-20.5	Average	Horizontal
3	15660	35.2	11.9	47.1	74	-26.9	Peak	Horizontal
4	15660	23.9	11.9	35.8	54	-18.2	Average	Horizontal
5	10440	38.4	7.2	45.6	68.2	-22.6	Peak	Vertical
6	10440	26.3	7.2	33.5	54	-20.5	Average	Vertical
7	15660	36.0	11.9	48.0	74	-26.0	Peak	Vertical
8	15660	23.8	11.9	35.7	54	-18.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 48								
1	10480	37.9	7.2	45.2	68.2	-23.0	Peak	Horizontal
2	10480	26.7	7.2	33.9	54	-20.1	Average	Horizontal
3	15720	35.6	12.0	47.6	74	-26.4	Peak	Horizontal
4	15720	23.0	12.0	35.0	54	-19.0	Average	Horizontal
5	10480	38.4	7.2	45.7	68.2	-22.5	Peak	Vertical
6	10480	27.3	7.2	34.5	54	-19.5	Average	Vertical
7	15720	36.3	12.0	48.3	74	-25.7	Peak	Vertical
8	15720	25.0	12.0	37.0	54	-17.0	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 52								
1	10520	39.0	7.3	46.3	68.2	-21.9	Peak	Horizontal
2	10520	26.6	7.3	33.9	54	-20.1	Average	Horizontal
3	15780	36.0	12.0	48.0	74	-26.0	Peak	Horizontal
4	15780	25.0	12.0	37.0	54	-17.0	Average	Horizontal
5	10520	39.2	7.3	46.5	68.2	-21.7	Peak	Vertical
6	10520	27.5	7.3	34.8	54	-19.2	Average	Vertical
7	15780	35.1	12.0	47.1	74	-26.9	Peak	Vertical
8	15780	23.1	12.0	35.1	54	-18.9	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 60								
1	10600	38.2	7.4	45.7	74	-28.3	Peak	Horizontal
2	10600	26.0	7.4	33.4	54	-20.6	Average	Horizontal
3	15900	34.0	12.0	46.1	74	-27.9	Peak	Horizontal
4	15900	22.3	12.0	34.3	54	-19.7	Average	Horizontal
5	10600	38.3	7.4	45.8	74	-28.2	Peak	Vertical
6	10600	26.2	7.4	33.6	54	-20.4	Average	Vertical
7	15900	36.6	12.0	48.6	74	-25.4	Peak	Vertical
8	15900	22.3	12.0	34.3	54	-19.7	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 64								
1	10640	38.1	7.5	45.6	74	-28.4	Peak	Horizontal
2	10640	26.9	7.5	34.4	54	-19.6	Average	Horizontal
3	15960	37.2	12.0	49.3	74	-24.7	Peak	Horizontal
4	15960	22.4	12.0	34.4	54	-19.6	Average	Horizontal
5	10640	37.3	7.5	44.9	74	-29.1	Peak	Vertical
6	10640	26.0	7.5	33.5	54	-20.5	Average	Vertical
7	15960	34.0	12.0	46.0	74	-28.0	Peak	Vertical
8	15960	22.4	12.0	34.4	54	-19.6	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 100								
1	11000	38.5	8.2	46.7	74	-27.3	Peak	Horizontal
2	11000	26.5	8.2	34.7	54	-19.3	Average	Horizontal
3	16500	37.0	12.8	49.8	68.2	-18.4	Peak	Horizontal
4	16500	22.9	12.8	35.7	54	-18.3	Average	Horizontal
5	11000	38.4	8.2	46.6	74	-27.4	Peak	Vertical
6	11000	26.8	8.2	35.0	54	-19.0	Average	Vertical
7	16500	33.9	12.8	46.6	68.2	-21.6	Peak	Vertical
8	16500	22.8	12.8	35.6	54	-18.4	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 116								
1	11160	38.0	8.1	46.1	74	-27.9	Peak	Horizontal
2	11160	24.2	8.1	32.3	54	-21.7	Average	Horizontal
3	16740	36.0	12.9	48.9	68.2	-19.3	Peak	Horizontal
4	16740	21.8	12.9	34.7	54	-19.3	Average	Horizontal
5	11160	39.6	8.1	47.6	74	-26.4	Peak	Vertical
6	11160	27.4	8.1	35.5	54	-18.5	Average	Vertical
7	16740	35.5	12.9	48.4	68.2	-19.8	Peak	Vertical
8	16740	21.8	12.9	34.7	54	-19.3	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 140								
1	11400	38.0	7.8	45.8	74	-28.2	Peak	Horizontal
2	11400	24.8	7.8	32.6	54	-21.4	Average	Horizontal
3	17100	33.7	13.3	46.9	68.2	-21.3	Peak	Horizontal
4	17100	22.2	13.3	35.5	54	-18.5	Average	Horizontal
5	11400	37.8	7.8	45.6	74	-28.4	Peak	Vertical
6	11400	24.9	7.8	32.7	54	-21.3	Average	Vertical
7	17100	35.1	13.3	48.4	68.2	-19.8	Peak	Vertical
8	17100	22.2	13.3	35.5	54	-18.5	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 149								
1	11490	38.1	7.7	45.8	74	-28.2	Peak	Horizontal
2	11490	26.8	7.7	34.5	54	-19.5	Average	Horizontal
3	17235	34.0	13.7	47.6	68.2	-20.6	Peak	Horizontal
4	17235	22.3	13.7	36.0	54	-18.0	Average	Horizontal
5	11490	38.1	7.7	45.8	74	-28.2	Peak	Vertical
6	11490	26.0	7.7	33.7	54	-20.3	Average	Vertical
7	17235	33.9	13.7	47.5	68.2	-20.7	Peak	Vertical
8	17235	22.0	13.7	35.7	54	-18.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 157								
1	11570	38.0	7.8	45.8	74	-28.2	Peak	Horizontal
2	11570	23.9	7.8	31.7	54	-22.3	Average	Horizontal
3	17355	33.2	14.0	47.2	68.2	-21.0	Peak	Horizontal
4	17355	22.7	14.0	36.7	54	-17.3	Average	Horizontal
5	11570	39.2	7.8	46.9	74	-27.1	Peak	Vertical
6	11570	26.9	7.8	34.7	54	-19.3	Average	Vertical
7	17355	34.7	14.0	48.7	68.2	-19.5	Peak	Vertical
8	17355	22.7	14.0	36.7	54	-17.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 165								
1	11650	38.7	7.9	46.6	74	-27.4	Peak	Horizontal
2	11650	24.8	7.9	32.7	54	-21.3	Average	Horizontal
3	17475	32.0	14.3	46.3	68.2	-21.9	Peak	Horizontal
4	17475	22.1	14.3	36.4	54	-17.6	Average	Horizontal
5	11650	36.3	7.9	44.2	74	-29.8	Peak	Vertical
6	11650	25.0	7.9	32.9	54	-21.1	Average	Vertical
7	17475	33.4	14.3	47.7	68.2	-20.5	Peak	Vertical
8	17475	22.0	14.3	36.3	54	-17.7	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 38								
1	10380	39.3	7.2	46.5	68.2	-21.7	Peak	Horizontal
2	10380	26.7	7.2	33.9	54	-20.1	Average	Horizontal
3	15570	34.3	11.9	46.2	74	-27.8	Peak	Horizontal
4	15570	23.4	11.9	35.3	54	-18.7	Average	Horizontal
5	10380	38.7	7.2	45.9	68.2	-22.3	Peak	Vertical
6	10380	26.3	7.2	33.5	54	-20.5	Average	Vertical
7	15570	34.7	11.9	46.6	74	-27.4	Peak	Vertical
8	15570	23.4	11.9	35.3	54	-18.7	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 46								
1	10460	39.5	7.2	46.7	68.2	-21.5	Peak	Horizontal
2	10460	26.3	7.2	33.5	54	-20.5	Average	Horizontal
3	15690	34.3	12.0	46.2	74	-27.8	Peak	Horizontal
4	15690	23.8	12.0	35.8	54	-18.2	Average	Horizontal
5	10460	37.5	7.2	44.7	68.2	-23.5	Peak	Vertical
6	10460	26.4	7.2	33.6	54	-20.4	Average	Vertical
7	15690	35.1	12.0	47.0	74	-27.0	Peak	Vertical
8	15690	23.7	12.0	35.7	54	-18.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 54								
1	10540	37.7	7.3	45.0	68.2	-23.2	Peak	Horizontal
2	10540	27.0	7.3	34.3	54	-19.7	Average	Horizontal
3	15810	35.5	12.0	47.5	74	-26.5	Peak	Horizontal
4	15810	22.4	12.0	34.4	54	-19.6	Average	Horizontal
5	10540	38.0	7.3	45.3	68.2	-22.9	Peak	Vertical
6	10540	27.5	7.3	34.8	54	-19.2	Average	Vertical
7	15810	34.4	12.0	46.4	74	-27.6	Peak	Vertical
8	15810	22.4	12.0	34.4	54	-19.6	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 62								
1	10620	36.8	7.5	44.2	74	-29.8	Peak	Horizontal
2	10620	23.8	7.5	31.3	54	-22.7	Average	Horizontal
3	15930	33.3	12.0	45.3	74	-28.7	Peak	Horizontal
4	15930	22.2	12.0	34.2	54	-19.8	Average	Horizontal
5	10620	38.9	7.5	46.4	74	-27.6	Peak	Vertical
6	10620	26.0	7.5	33.5	54	-20.5	Average	Vertical
7	15930	33.7	12.0	45.8	74	-28.2	Peak	Vertical
8	15930	22.2	12.0	34.2	54	-19.8	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 102								
1	11020	37.5	8.2	45.7	74	-28.3	Peak	Horizontal
2	11020	26.4	8.2	34.6	54	-19.4	Average	Horizontal
3	16530	35.0	12.8	47.7	68.2	-20.5	Peak	Horizontal
4	16530	22.7	12.8	35.5	54	-18.5	Average	Horizontal
5	11020	38.5	8.2	46.7	74	-27.3	Peak	Vertical
6	11020	26.5	8.2	34.7	54	-19.3	Average	Vertical
7	16530	34.4	12.8	47.1	68.2	-21.1	Peak	Vertical
8	16530	22.8	12.8	35.6	54	-18.4	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 110								
1	11100	39.1	8.1	47.2	74	-26.8	Peak	Horizontal
2	11100	26.8	8.1	34.9	54	-19.1	Average	Horizontal
3	16650	34.3	12.8	47.1	68.2	-21.1	Peak	Horizontal
4	16650	23.0	12.8	35.8	54	-18.2	Average	Horizontal
5	11100	38.6	8.1	46.7	74	-27.3	Peak	Vertical
6	11100	26.6	8.1	34.7	54	-19.3	Average	Vertical
7	16650	35.0	12.8	47.8	68.2	-20.4	Peak	Vertical
8	16650	23.0	12.8	35.8	54	-18.2	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 134								
1	11340	36.7	7.9	44.6	74	-29.4	Peak	Horizontal
2	11340	24.6	7.9	32.5	54	-21.5	Average	Horizontal
3	17010	35.7	13.0	48.7	68.2	-19.5	Peak	Horizontal
4	17010	23.2	13.0	36.2	54	-17.8	Average	Horizontal
5	11340	38.3	7.9	46.1	74	-27.9	Peak	Vertical
6	11340	24.7	7.9	32.6	54	-21.4	Average	Vertical
7	17010	35.4	13.0	48.4	68.2	-19.8	Peak	Vertical
8	17010	23.2	13.0	36.2	54	-17.8	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 151								
1	11510	38.6	7.7	46.3	74	-27.7	Peak	Horizontal
2	11510	23.3	7.7	31.0	54	-23.0	Average	Horizontal
3	17265	33.9	13.7	47.7	68.2	-20.5	Peak	Horizontal
4	17265	22.4	13.7	36.1	54	-17.9	Average	Horizontal
5	11510	39.8	7.7	47.5	74	-26.5	Peak	Vertical
6	11510	23.3	7.7	31.0	54	-23.0	Average	Vertical
7	17265	34.7	13.7	48.4	68.2	-19.8	Peak	Vertical
8	17265	22.4	13.7	36.1	54	-17.9	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 159								
1	11590	37.7	7.8	45.5	74	-28.5	Peak	Horizontal
2	11590	24.4	7.8	32.2	54	-21.8	Average	Horizontal
3	17385	33.8	14.1	47.8	68.2	-20.4	Peak	Horizontal
4	17385	22.3	14.1	36.4	54	-17.6	Average	Horizontal
5	11590	39.3	7.8	47.1	74	-26.9	Peak	Vertical
6	11590	24.5	7.8	32.3	54	-21.7	Average	Vertical
7	17385	34.6	14.1	48.6	68.2	-19.6	Peak	Vertical
8	17385	22.4	14.1	36.5	54	-17.5	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE80_Channel 42								
1	10420	37.8	7.2	45.0	68.2	-23.2	Peak	Horizontal
2	10420	26.3	7.2	33.5	54	-20.5	Average	Horizontal
3	15630	35.1	12.0	47.0	74	-27.0	Peak	Horizontal
4	15630	23.9	12.0	35.9	54	-18.1	Average	Horizontal
5	10420	37.6	7.2	44.8	68.2	-23.4	Peak	Vertical
6	10420	26.6	7.2	33.8	54	-20.2	Average	Vertical
7	15630	35.9	12.0	47.8	74	-26.2	Peak	Vertical
8	15630	23.9	12.0	35.9	54	-18.1	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE80_Channel 58								
1	10580	37.8	7.4	45.2	68.2	-23.0	Peak	Horizontal
2	10580	23.2	7.4	30.6	54	-23.4	Average	Horizontal
3	15870	35.4	12.0	47.4	74	-26.6	Peak	Horizontal
4	15870	23.6	12.0	35.6	54	-18.4	Average	Horizontal
5	10580	37.7	7.4	45.1	68.2	-23.1	Peak	Vertical
6	10580	23.4	7.4	30.8	54	-23.2	Average	Vertical
7	15870	33.8	12.0	45.8	74	-28.2	Peak	Vertical
8	15870	23.8	12.0	35.8	54	-18.2	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE80_Channel 106								
1	11060	38.0	8.2	46.1	74	-27.9	Peak	Horizontal
2	11060	25.9	8.2	34.1	54	-19.9	Average	Horizontal
3	16590	34.0	12.8	46.8	68.2	-21.4	Peak	Horizontal
4	16590	22.4	12.8	35.2	54	-18.8	Average	Horizontal
5	11060	38.7	8.2	46.8	74	-27.2	Peak	Vertical
6	11060	25.9	8.2	34.1	54	-19.9	Average	Vertical
7	16590	33.7	12.8	46.5	68.2	-21.7	Peak	Vertical
8	16590	22.4	12.8	35.2	54	-18.8	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE80_Channel 155								
1	11550	37.5	7.8	45.3	74	-28.7	Peak	Horizontal
2	11550	22.9	7.8	30.7	54	-23.3	Average	Horizontal
3	17325	34.2	13.9	48.1	68.2	-20.1	Peak	Horizontal
4	17325	21.7	13.9	35.6	54	-18.4	Average	Horizontal
5	11550	38.7	7.8	46.4	74	-27.6	Peak	Vertical
6	11550	22.8	7.8	30.6	54	-23.4	Average	Vertical
7	17325	34.3	13.9	48.2	68.2	-20.0	Peak	Vertical
8	17325	21.7	13.9	35.6	54	-18.4	Average	Vertical

No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Antenna Polaxis
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE160_Channel 50								
1	10500	39.0	7.3	46.2	68.2	-22.0	Peak	Horizontal
2	10500	25.5	7.3	32.8	54	-21.2	Average	Horizontal
3	15750	35.1	12.0	47.1	74	-26.9	Peak	Horizontal
4	15750	23.8	12.0	35.8	54	-18.2	Average	Horizontal
5	10500	39.1	7.3	46.4	68.2	-21.8	Peak	Vertical
6	10500	25.5	7.3	32.8	54	-21.2	Average	Vertical
7	15750	35.0	12.0	47.0	74	-27.0	Peak	Vertical
8	15750	23.7	12.0	35.7	54	-18.3	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE160_Channel 114								
1	11140	38.1	8.1	46.2	74	-27.8	Peak	Horizontal
2	11140	26.0	8.1	34.1	54	-19.9	Average	Horizontal
3	16710	33.7	12.9	46.6	68.2	-21.6	Peak	Horizontal
4	16710	22.3	12.9	35.2	54	-18.8	Average	Horizontal
5	11140	39.8	8.1	47.9	74	-26.1	Peak	Vertical
6	11140	25.9	8.1	34.0	54	-20.0	Average	Vertical
7	16710	34.5	12.9	47.3	68.2	-20.9	Peak	Vertical
8	16710	22.2	12.9	35.1	54	-18.9	Average	Vertical

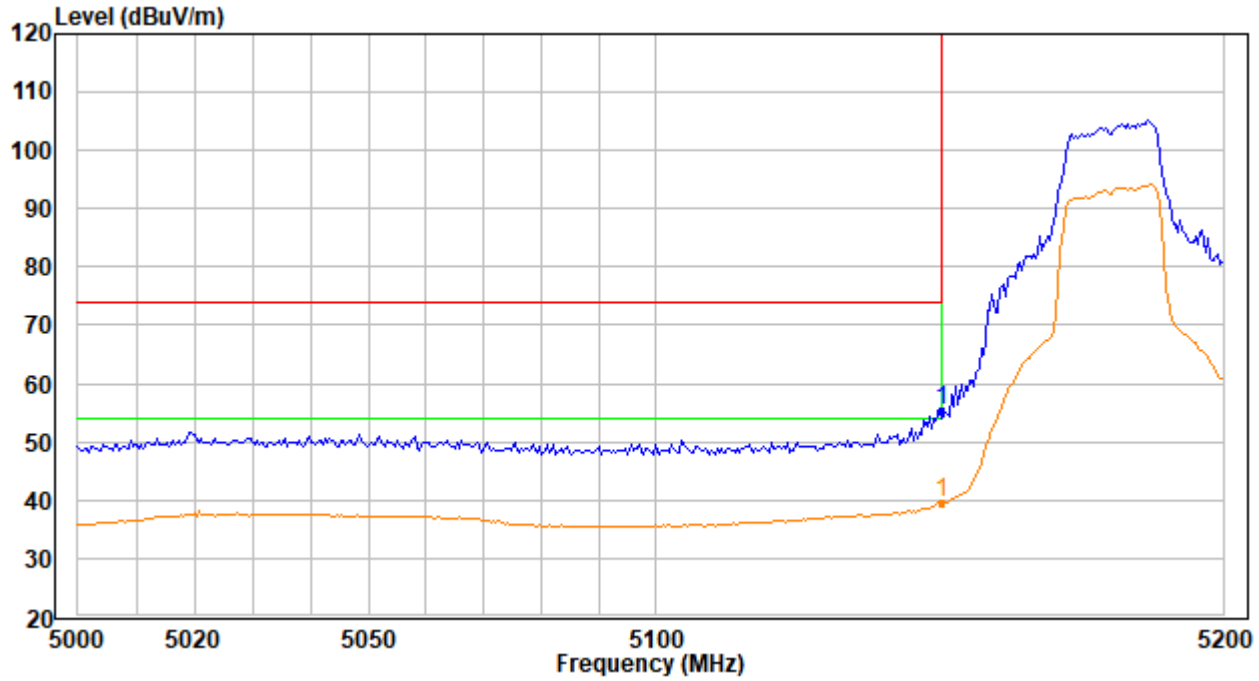
Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

Band Edge Measurements (Radiated)

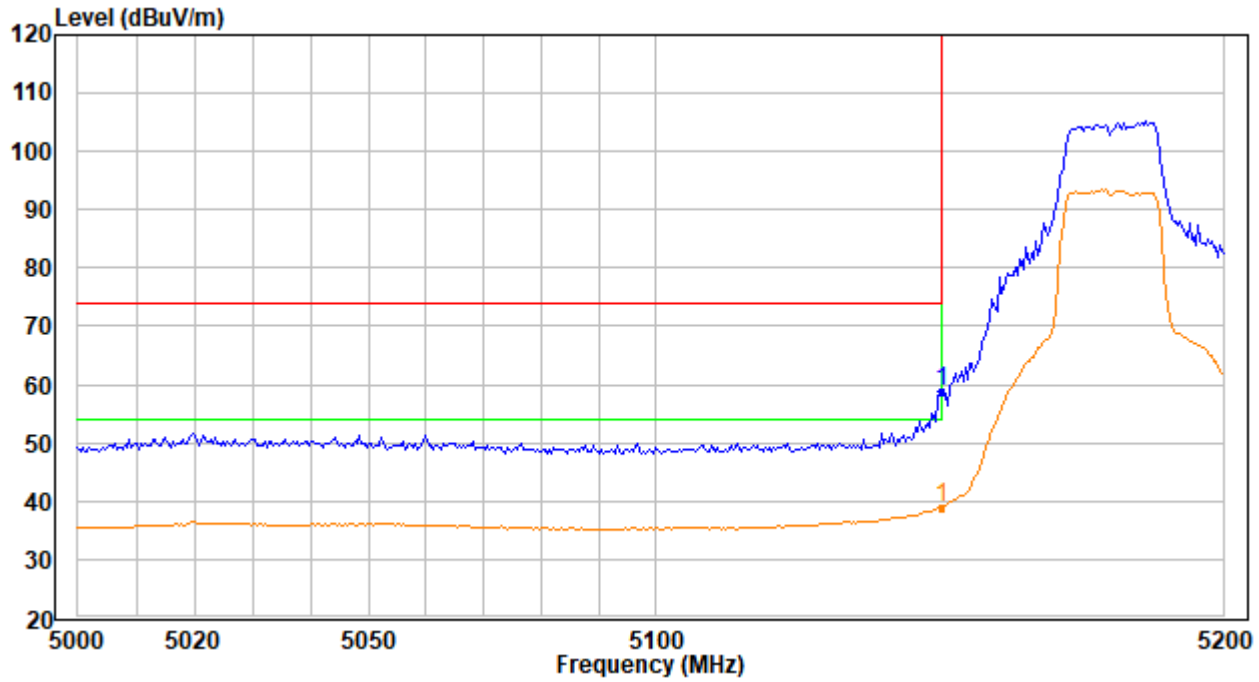
Antenna 0_IEEE 802.11a

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



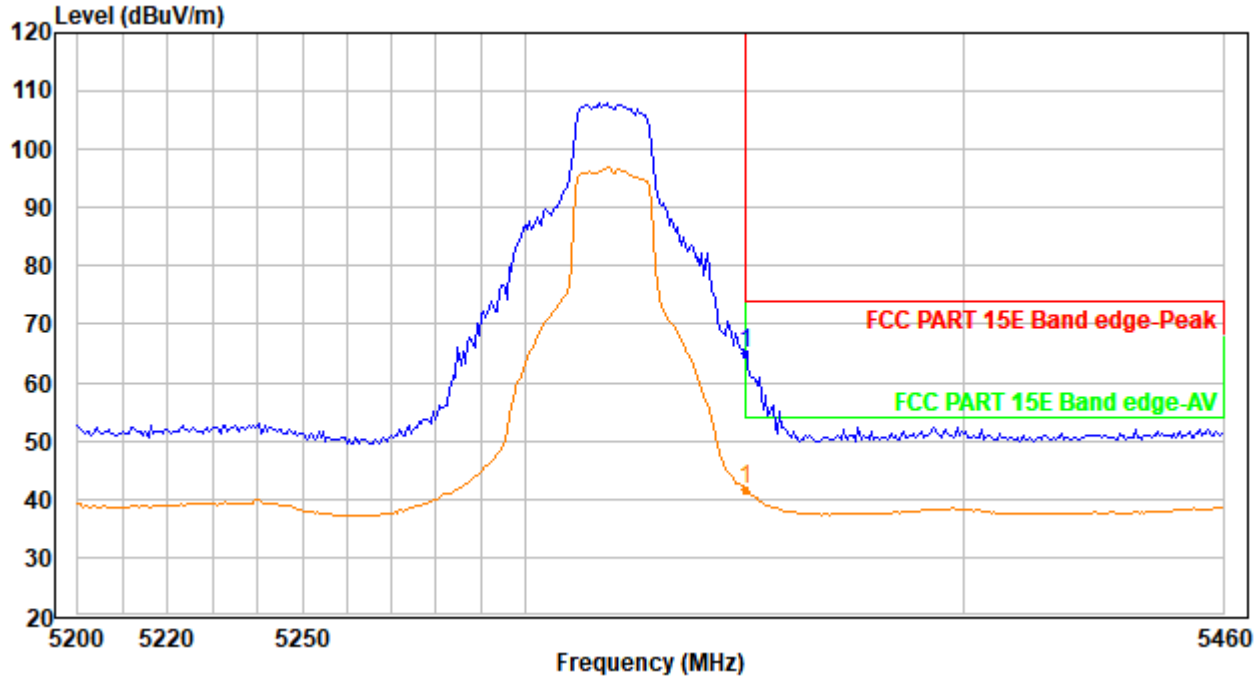
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	55.32	74.00	39.46	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



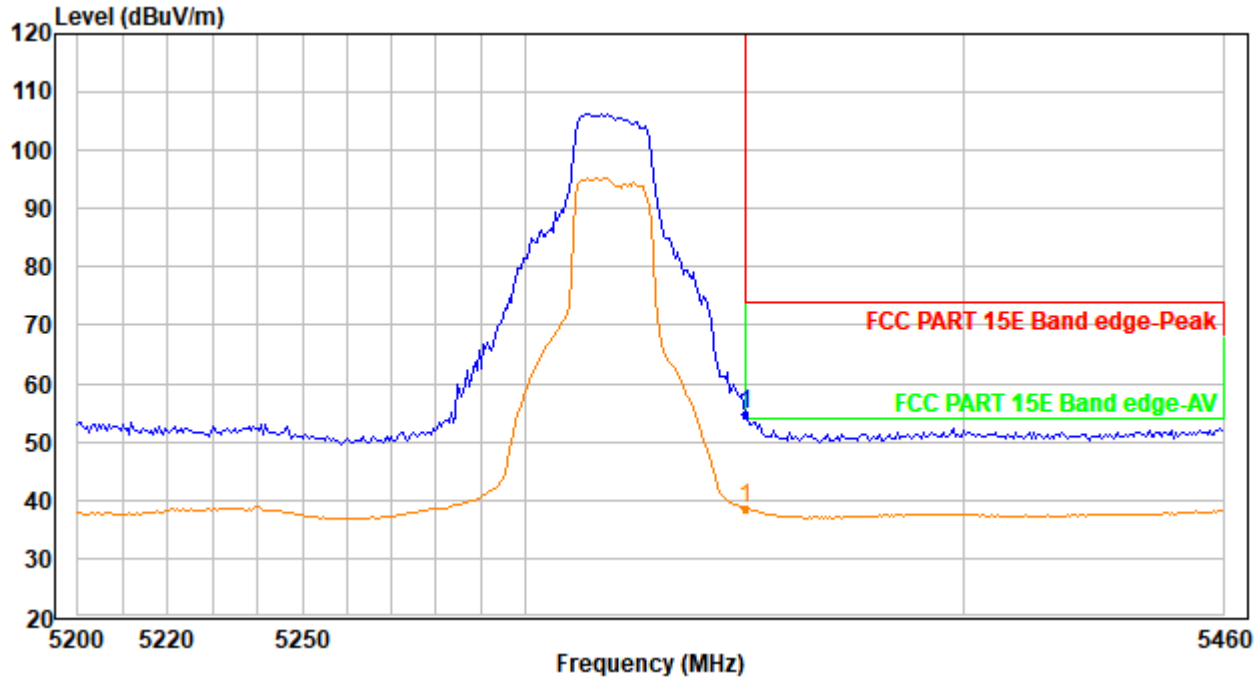
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	58.99	74.00	38.97	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



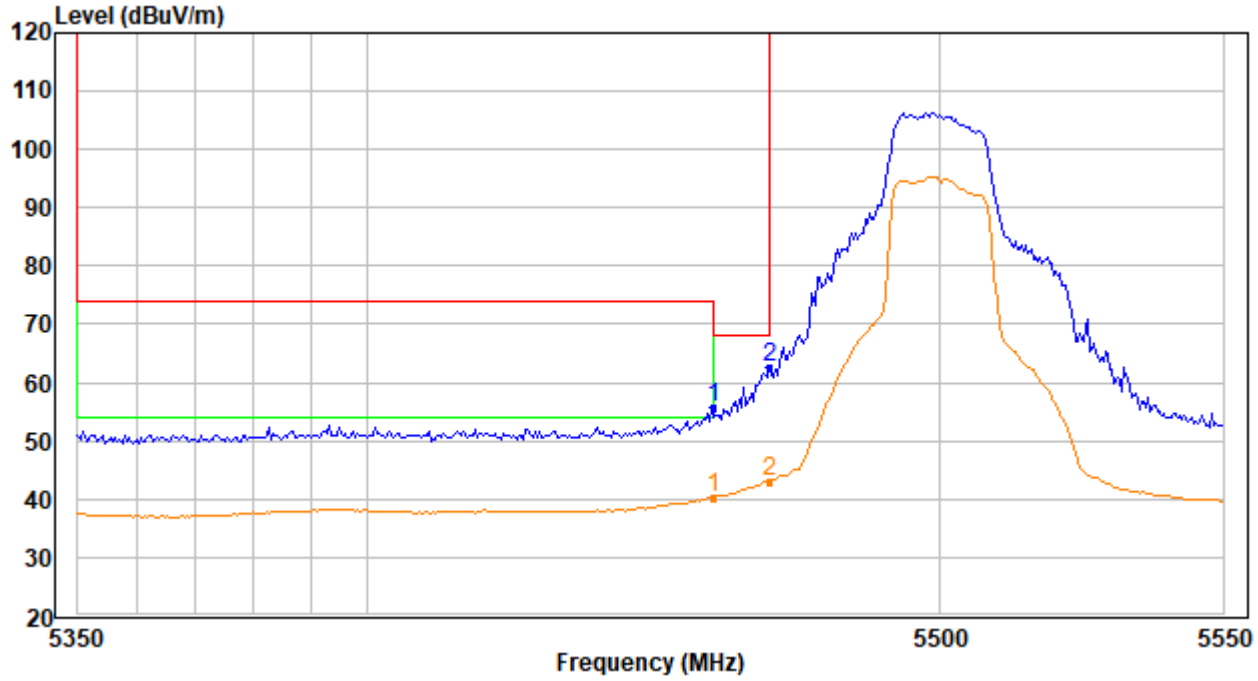
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	64.97	74.00	41.54	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



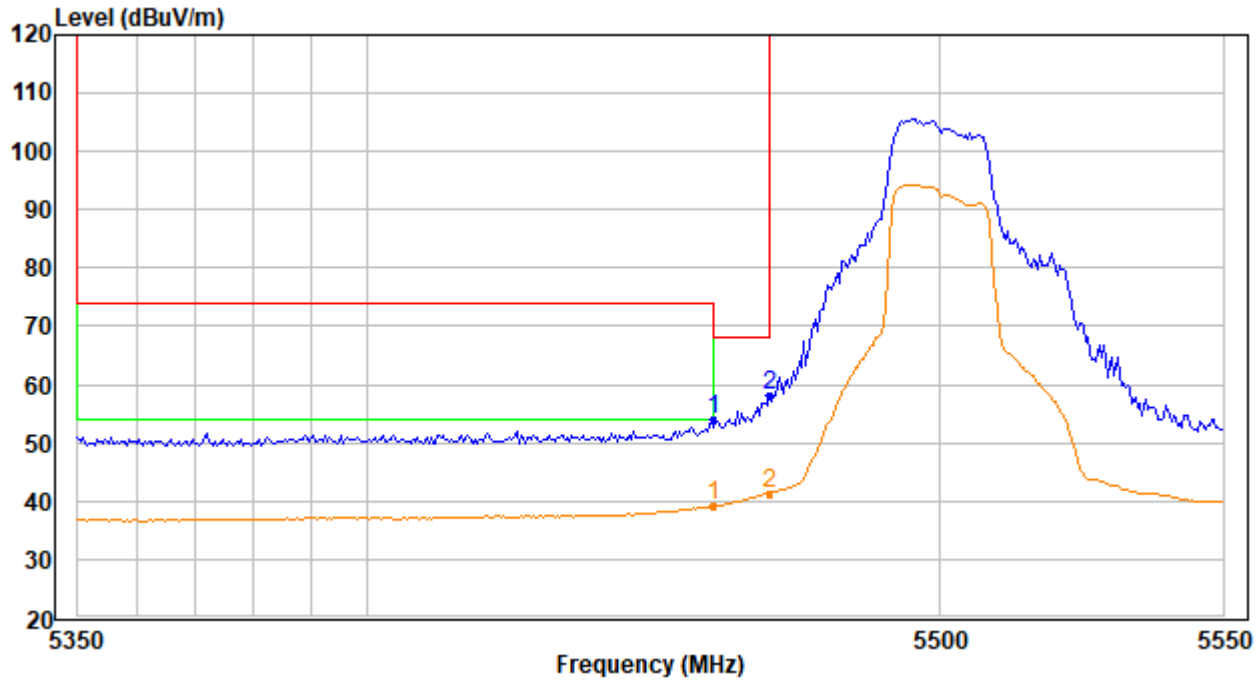
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	54.78	74.00	38.50	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



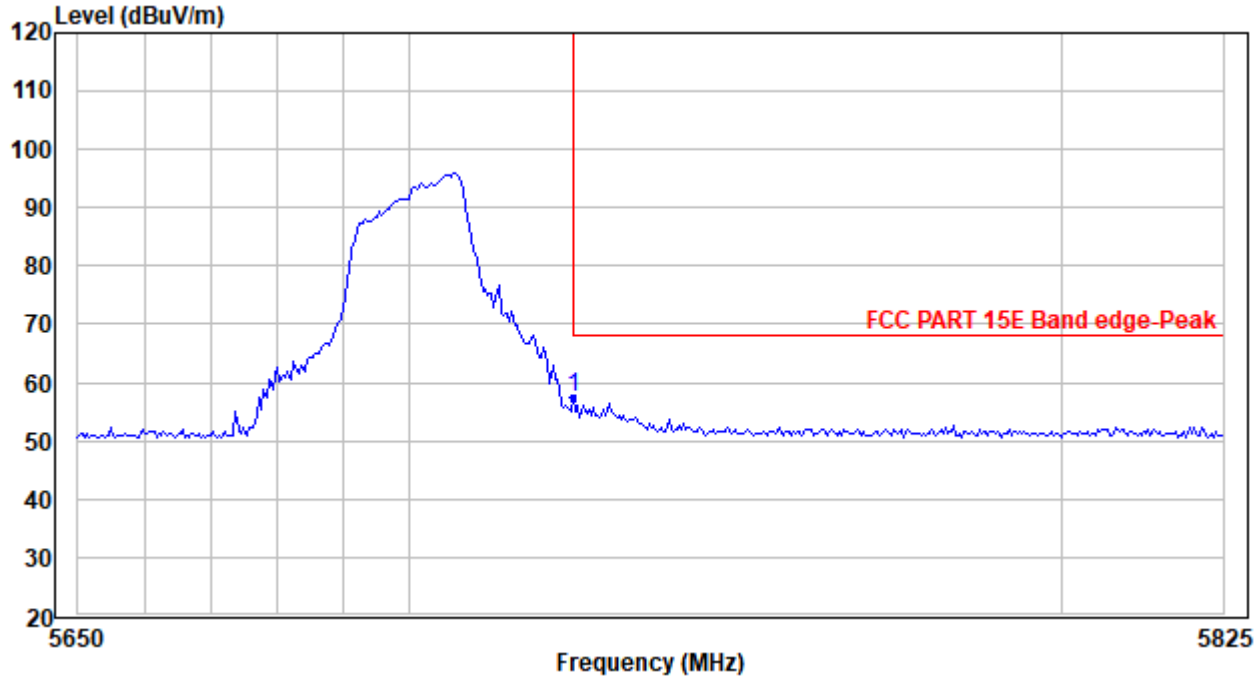
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	55.72	74.00	40.17	54.00	Pass
5470.000	62.56	68.20	43.07	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



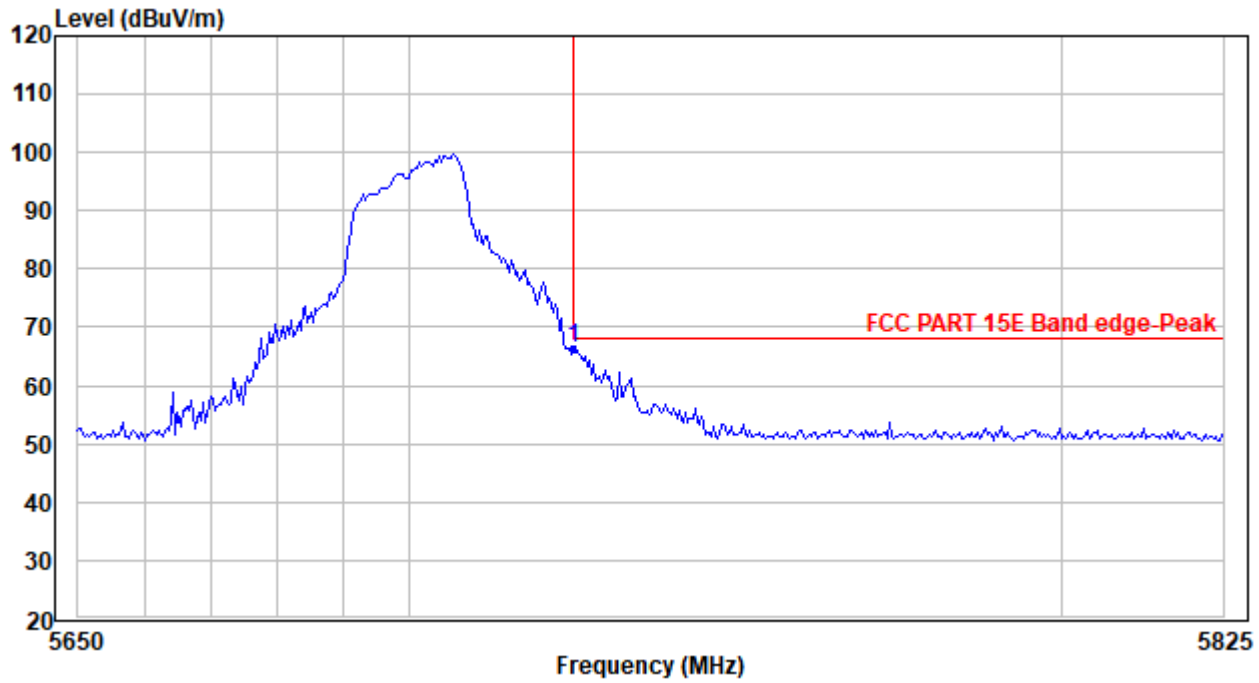
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	54.04	74.00	39.14	54.00	Pass
5470.000	58.12	68.20	41.20	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



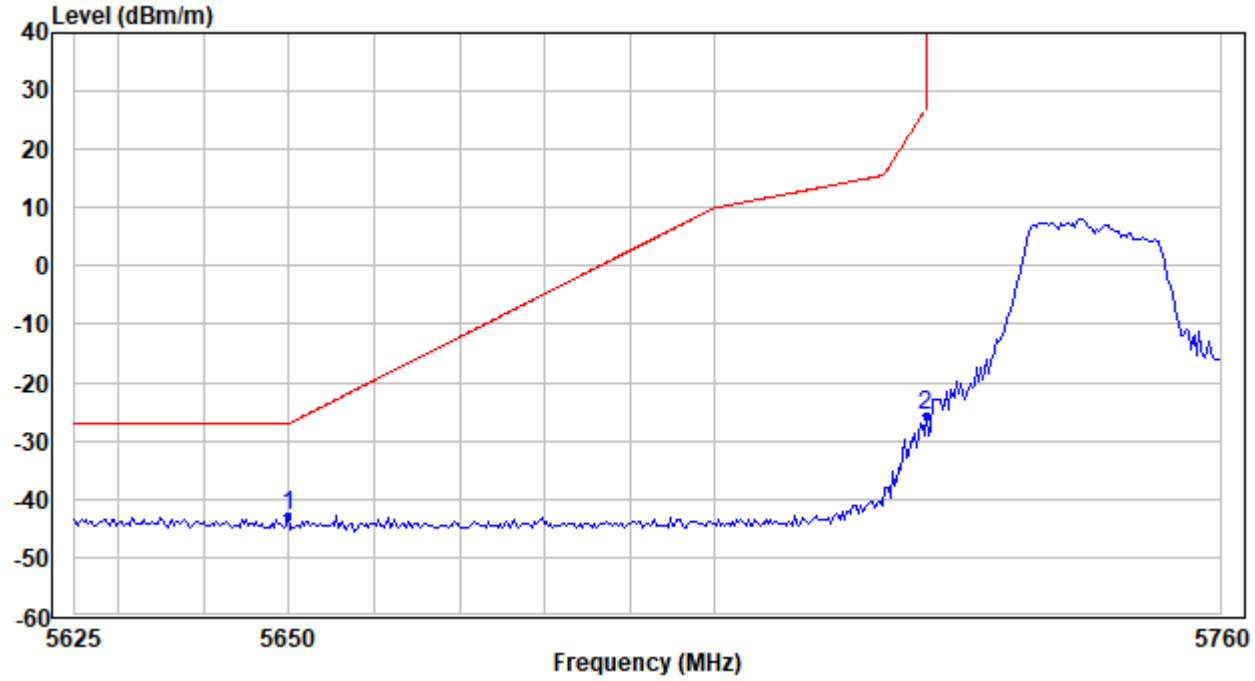
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	57.37	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



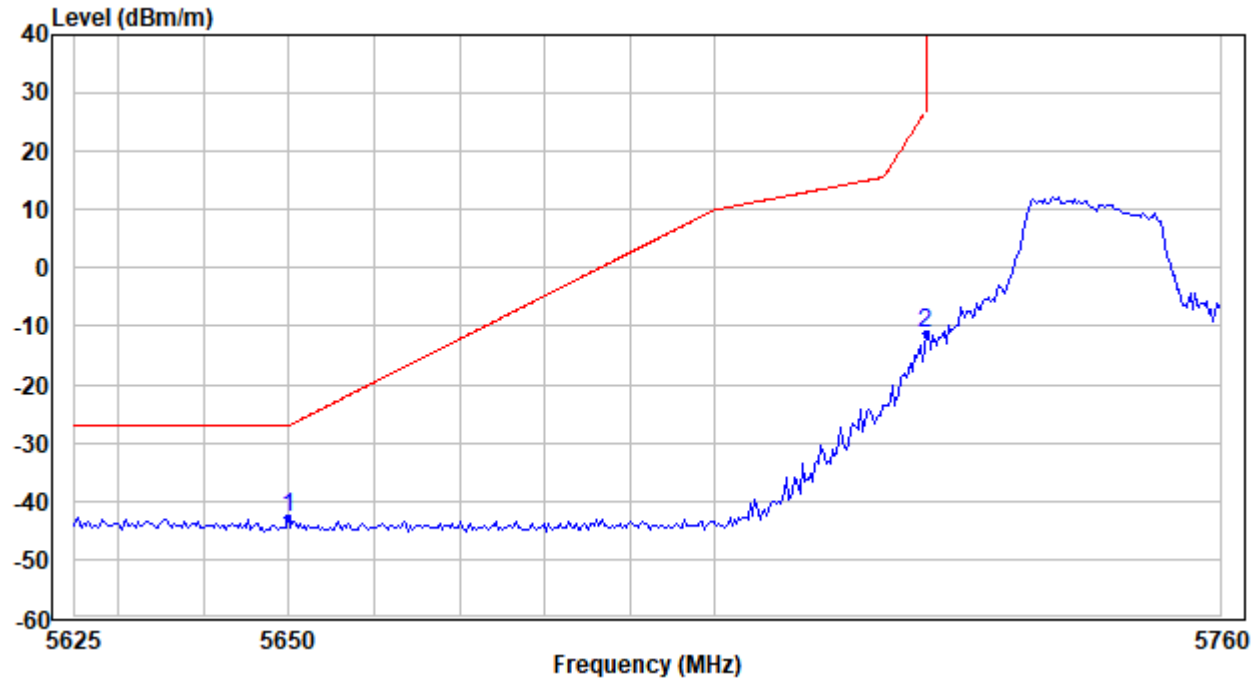
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	66.56	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



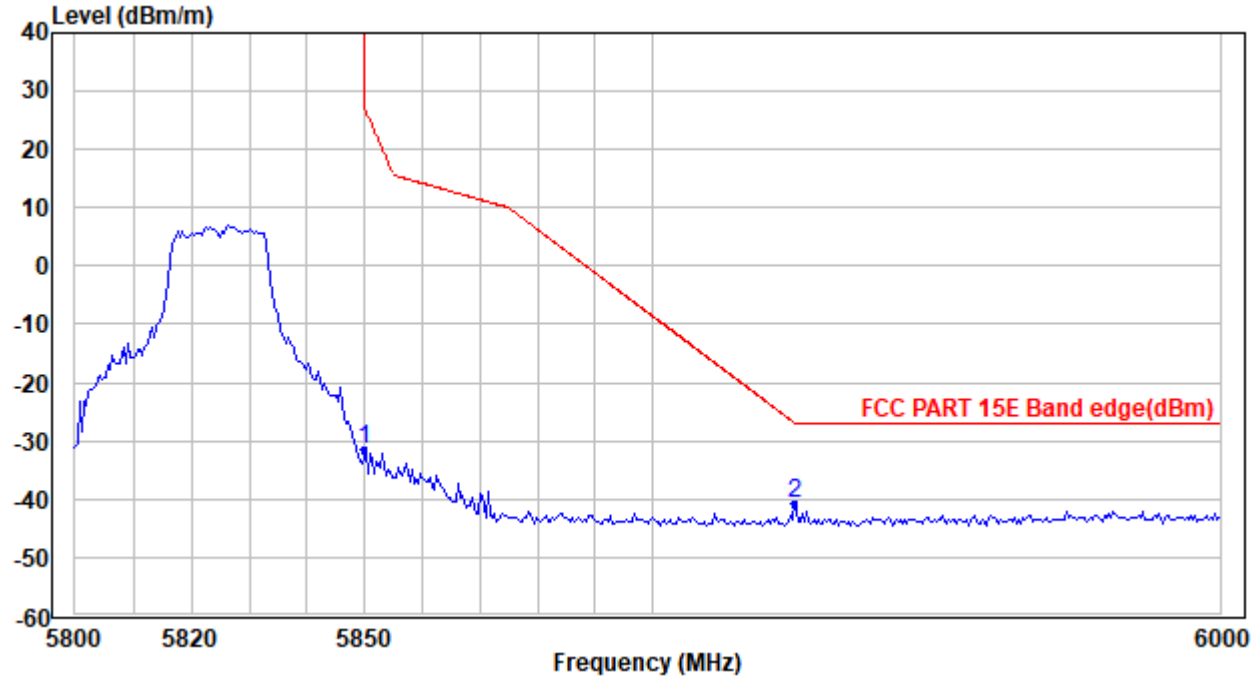
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.66	-27	Pass
5725.000	-25.57	26.97	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



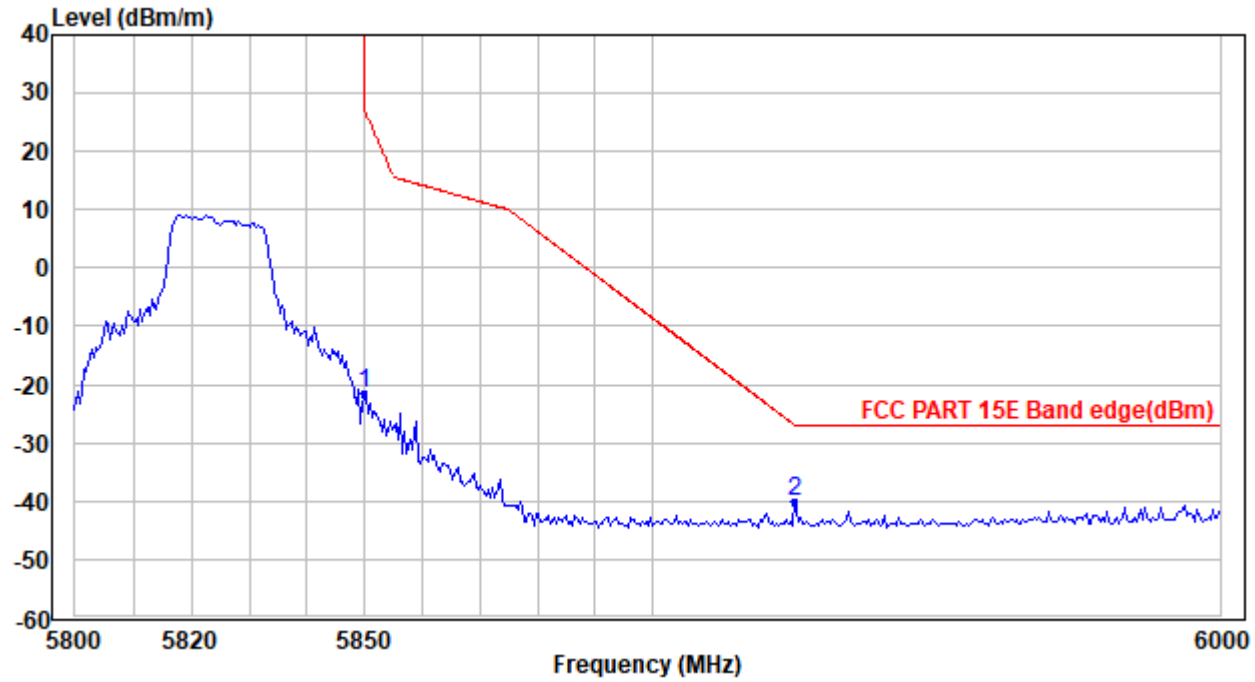
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.69	-27	Pass
5725.000	-11.07	26.97	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-31.36	26.94	Pass
5925.000	-40.91	-27	Pass

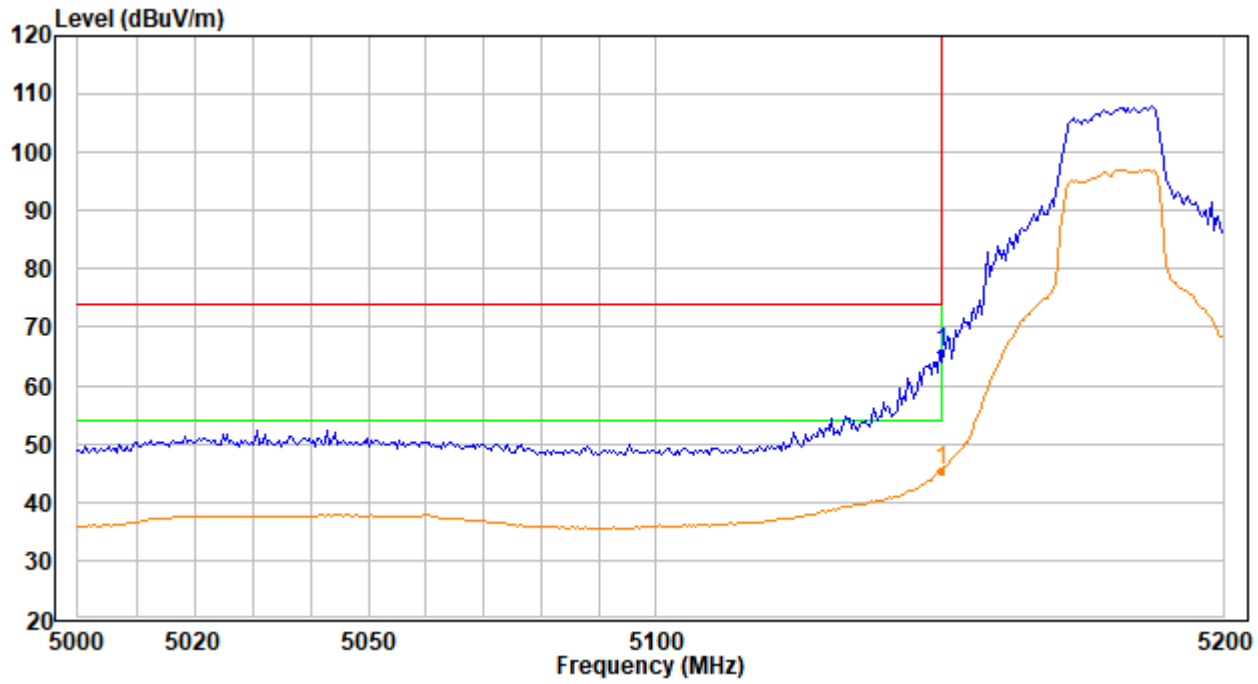
Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-21.43	26.94	Pass
5925.000	-40.17	-27	Pass

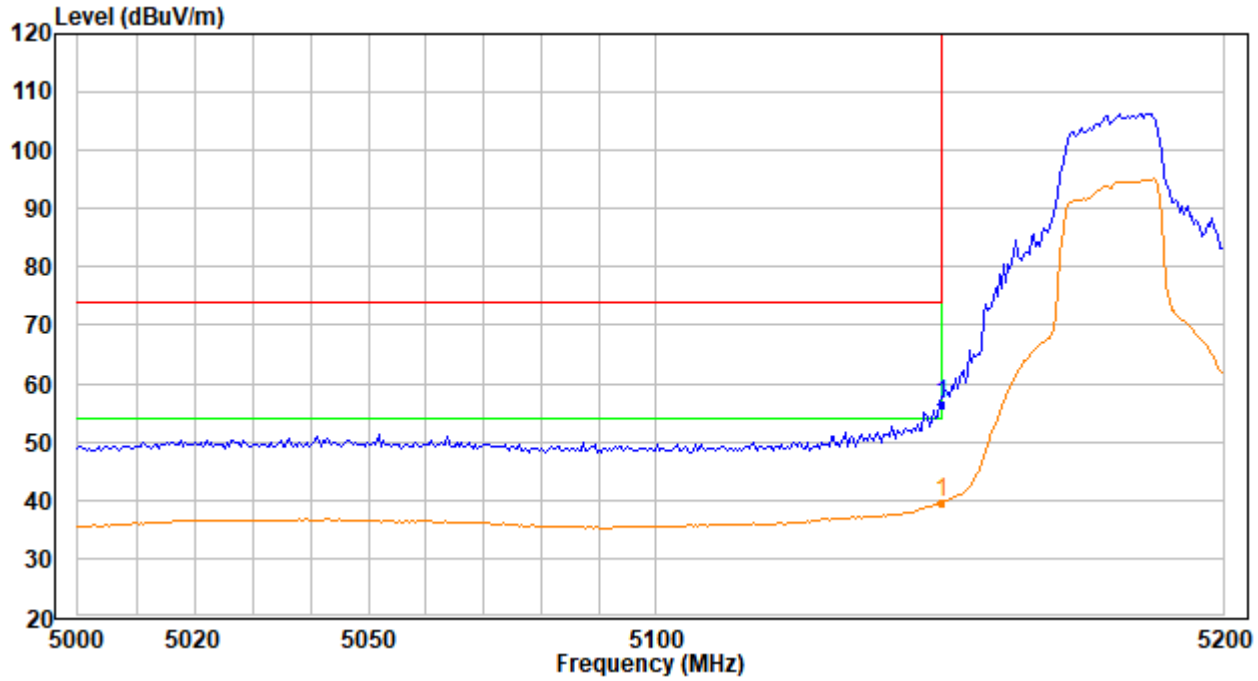
Antenna 1_IEEE 802.11a

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



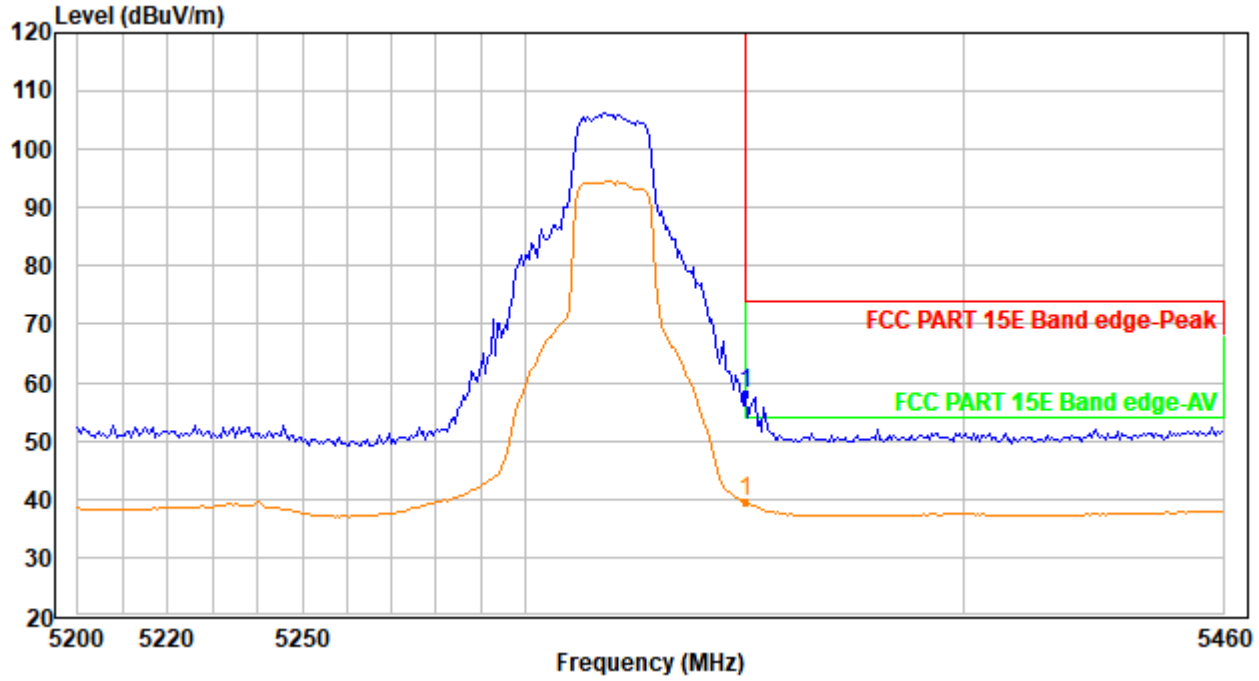
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	65.64	74.00	45.41	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



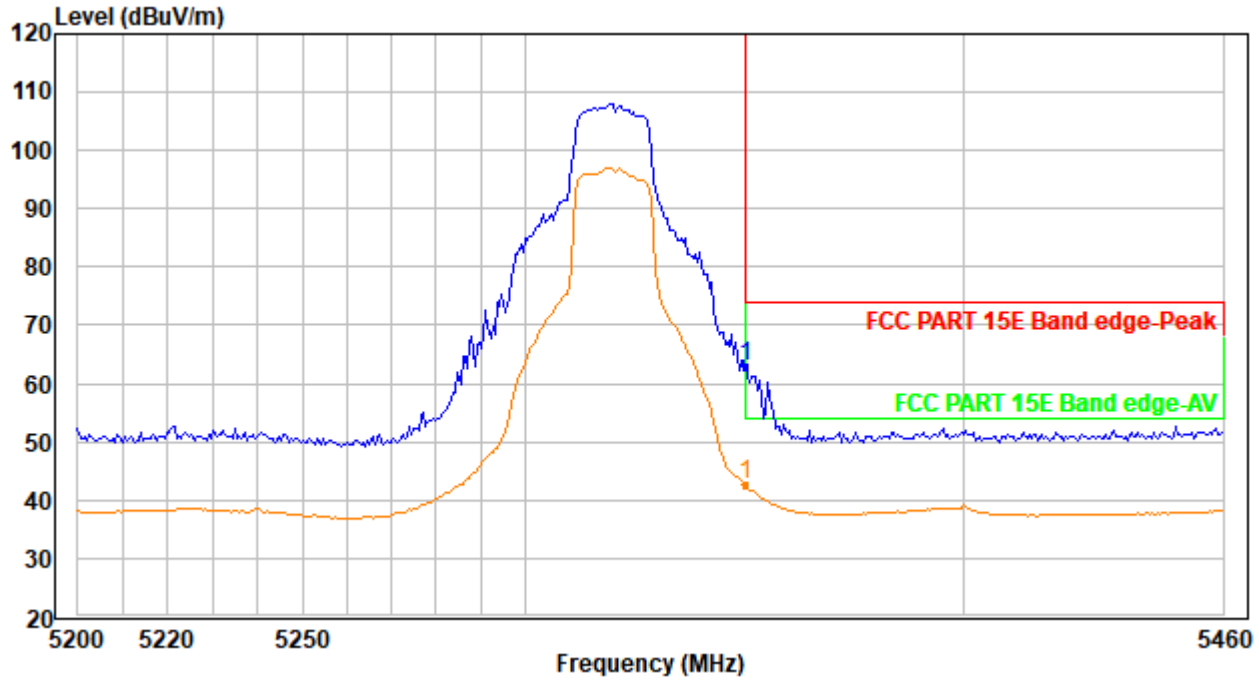
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	56.41	74.00	39.48	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



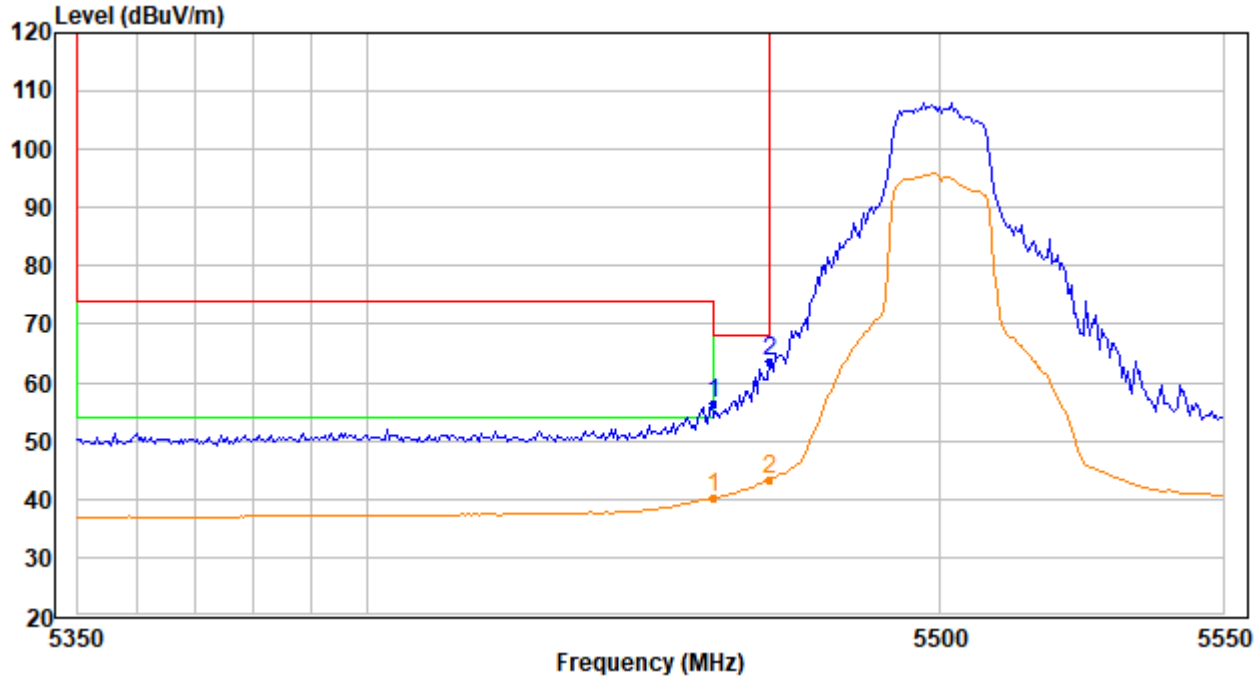
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	58.24	74.00	39.57	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



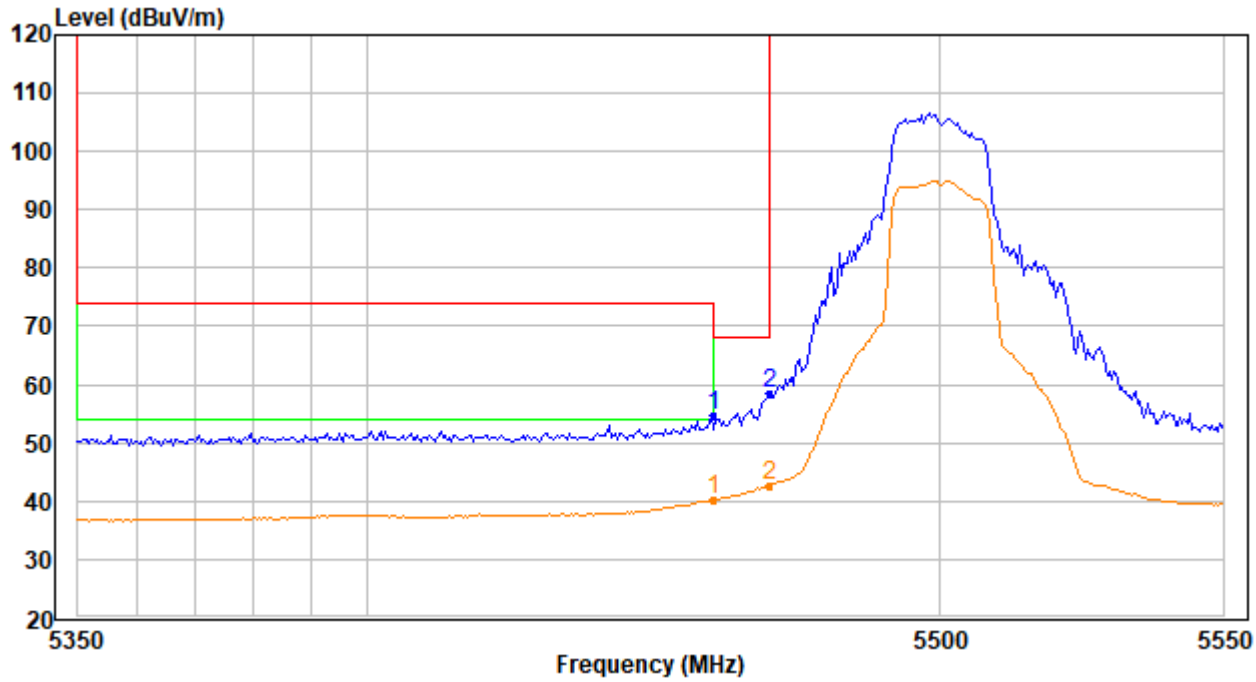
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	63.01	74.00	42.67	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



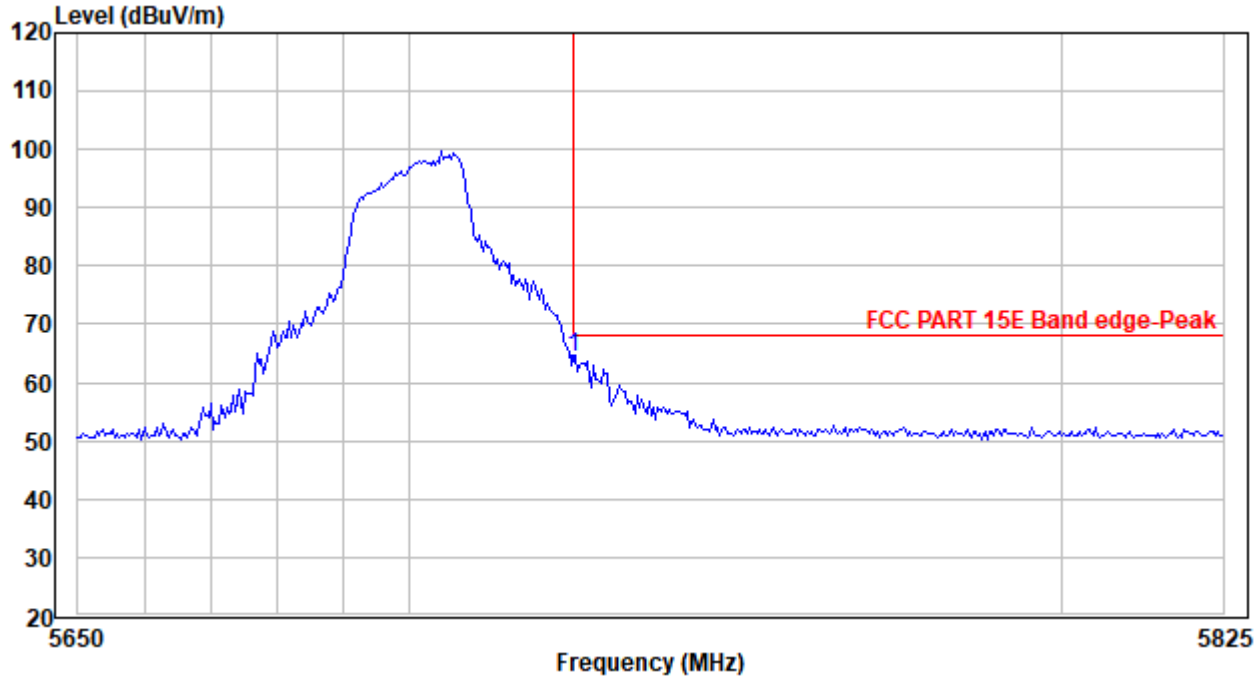
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	56.46	74.00	40.26	54.00	Pass
5470.000	63.50	68.20	43.22	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



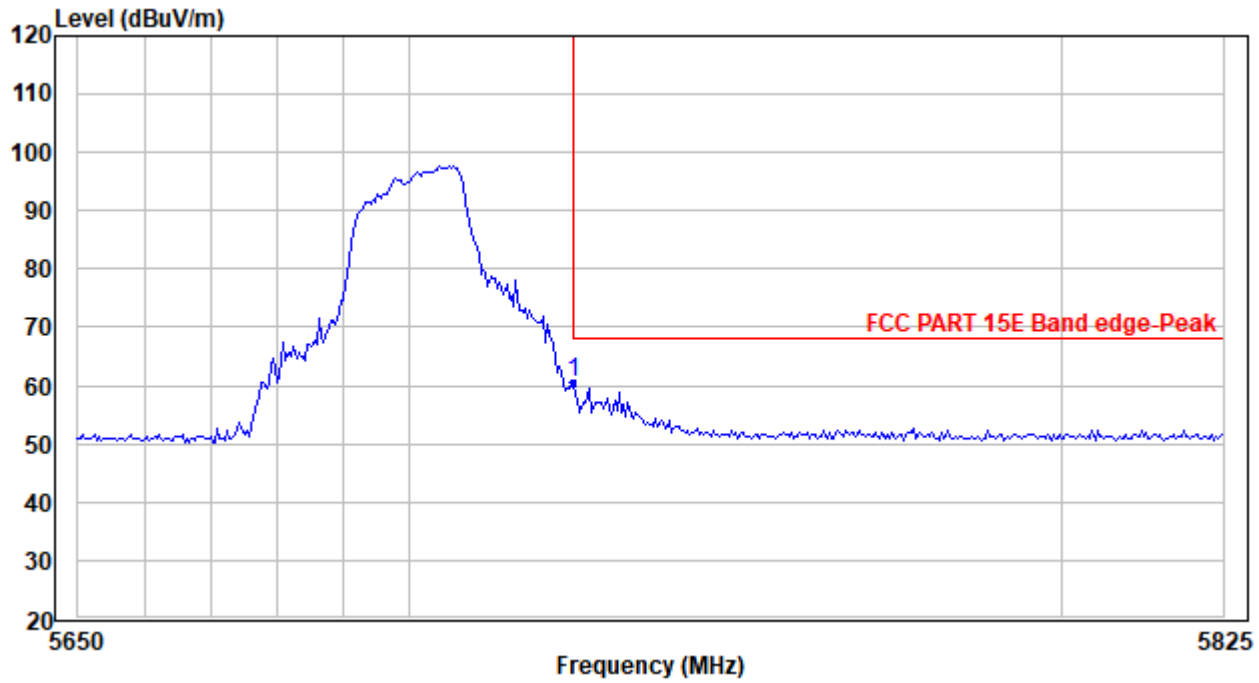
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	54.83	74.00	40.38	54.00	Pass
5470.000	58.66	68.20	42.77	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



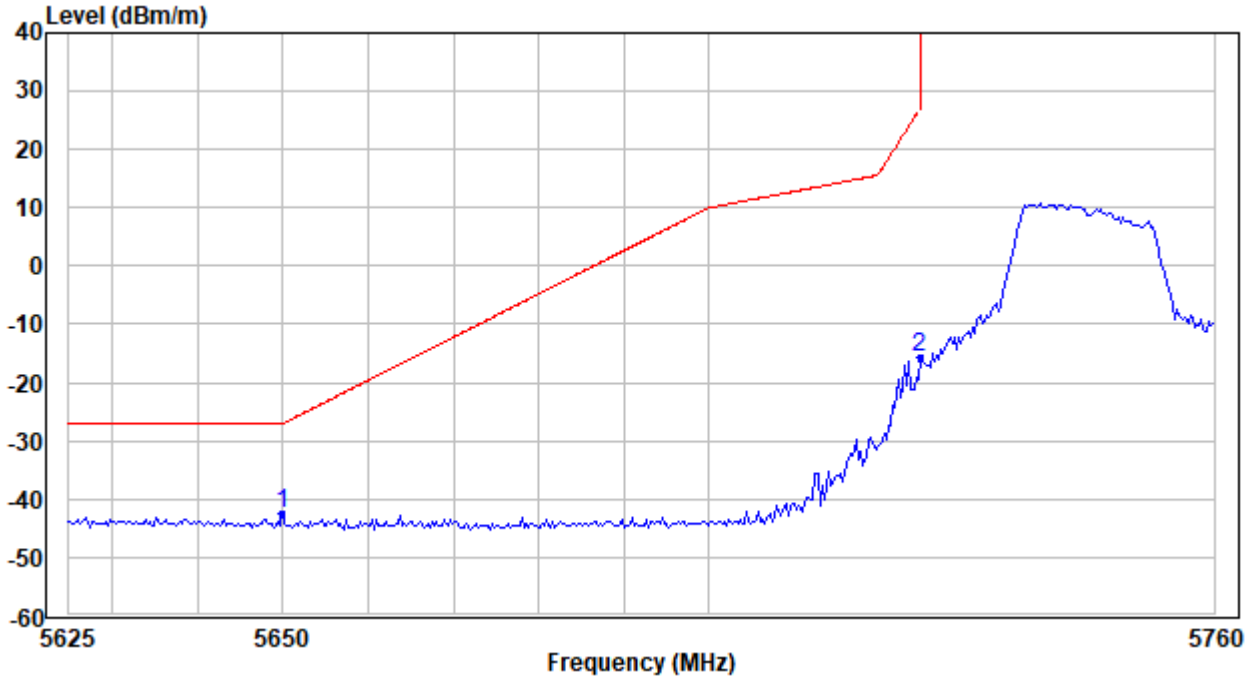
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	64.42	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



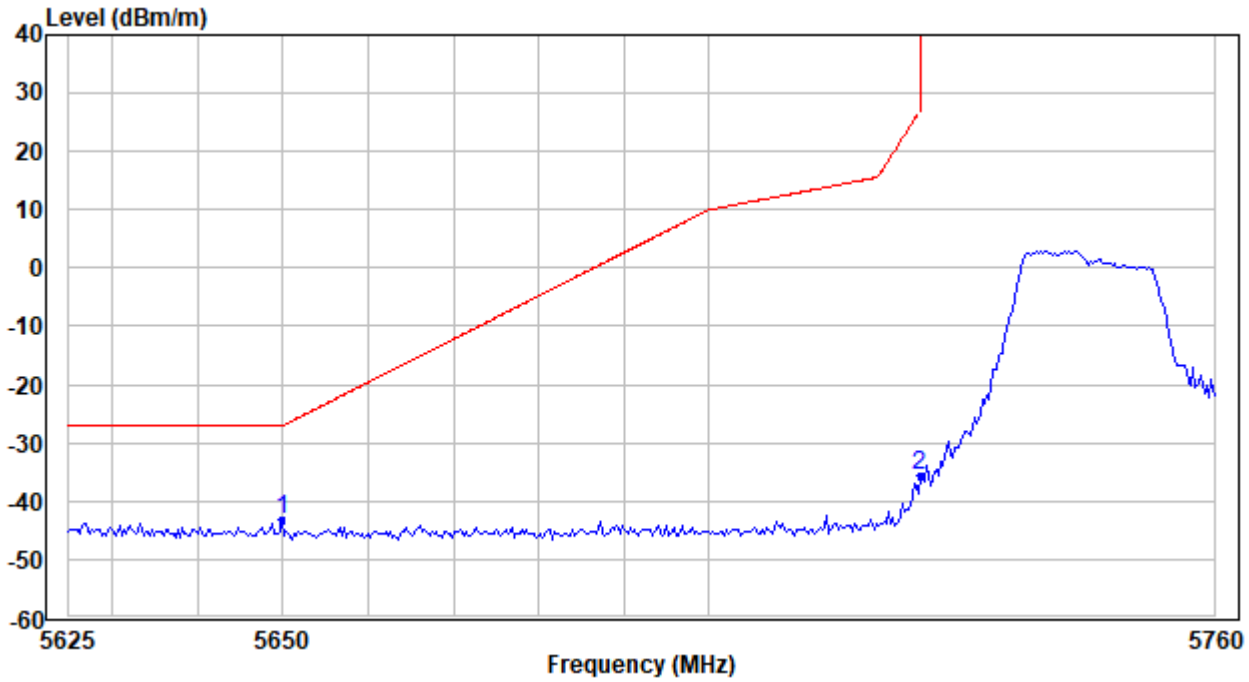
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	60.69	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



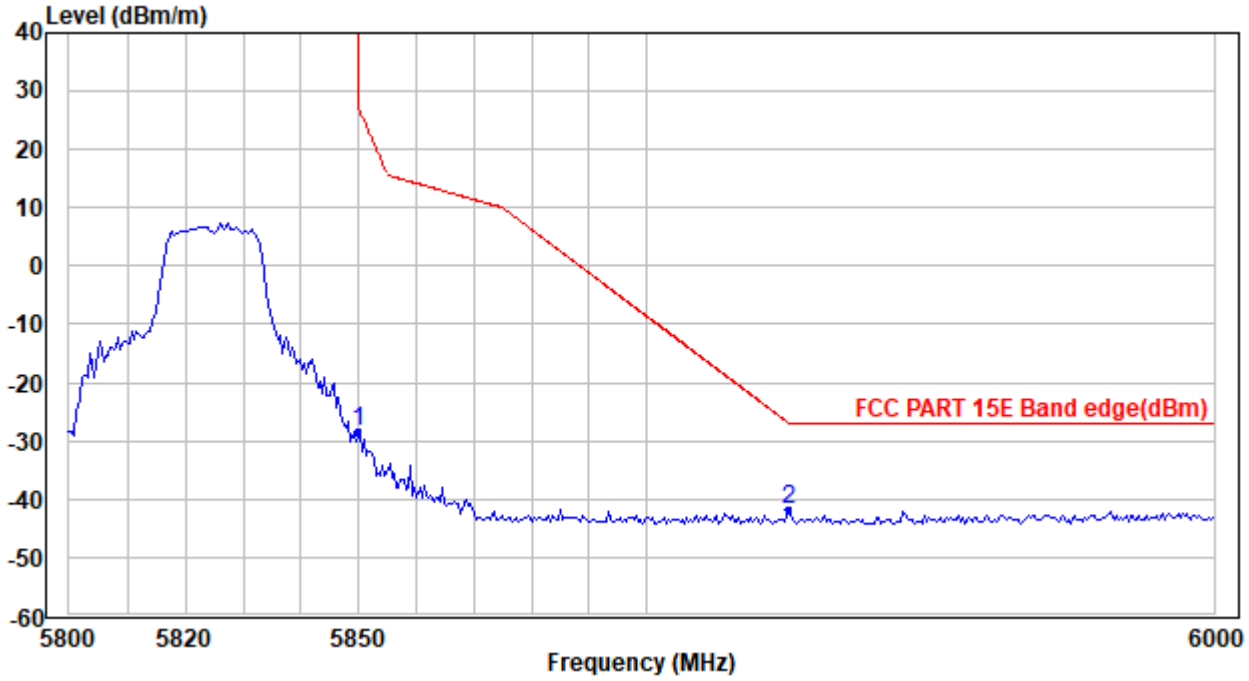
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.62	-27	Pass
5725.000	-15.50	26.97	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



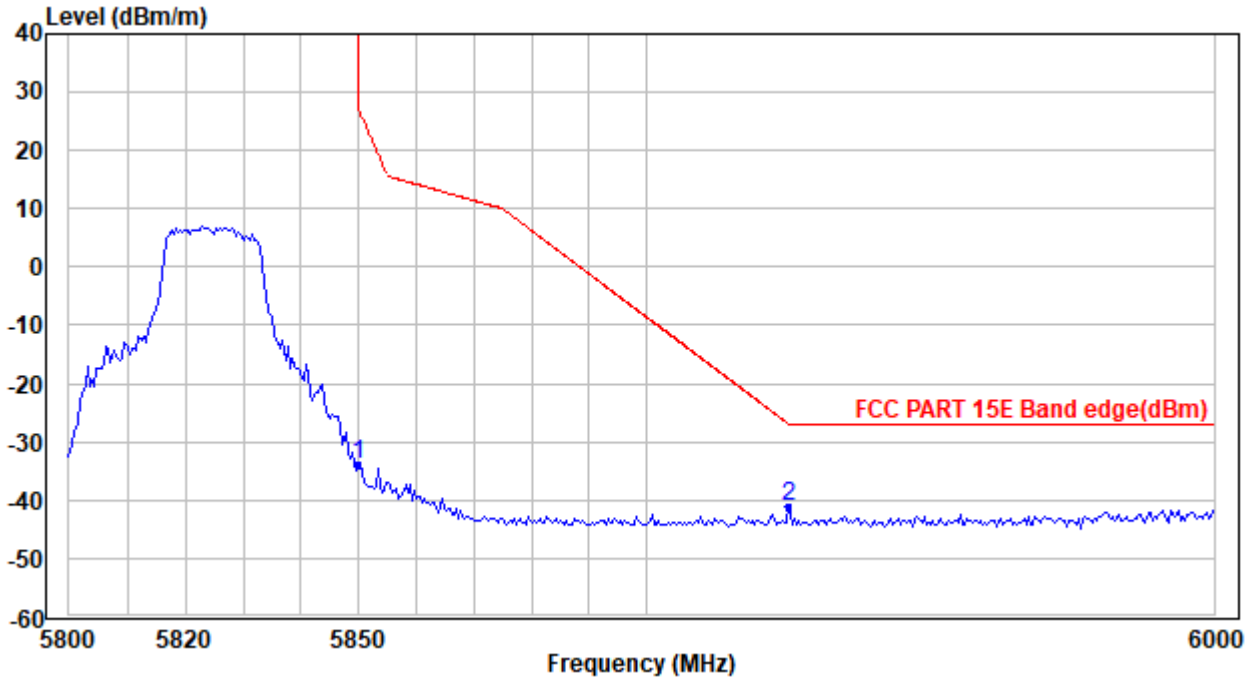
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-43.12	-27	Pass
5725.000	-35.72	26.97	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-28.48	26.94	Pass
5925.000	-41.67	-27	Pass

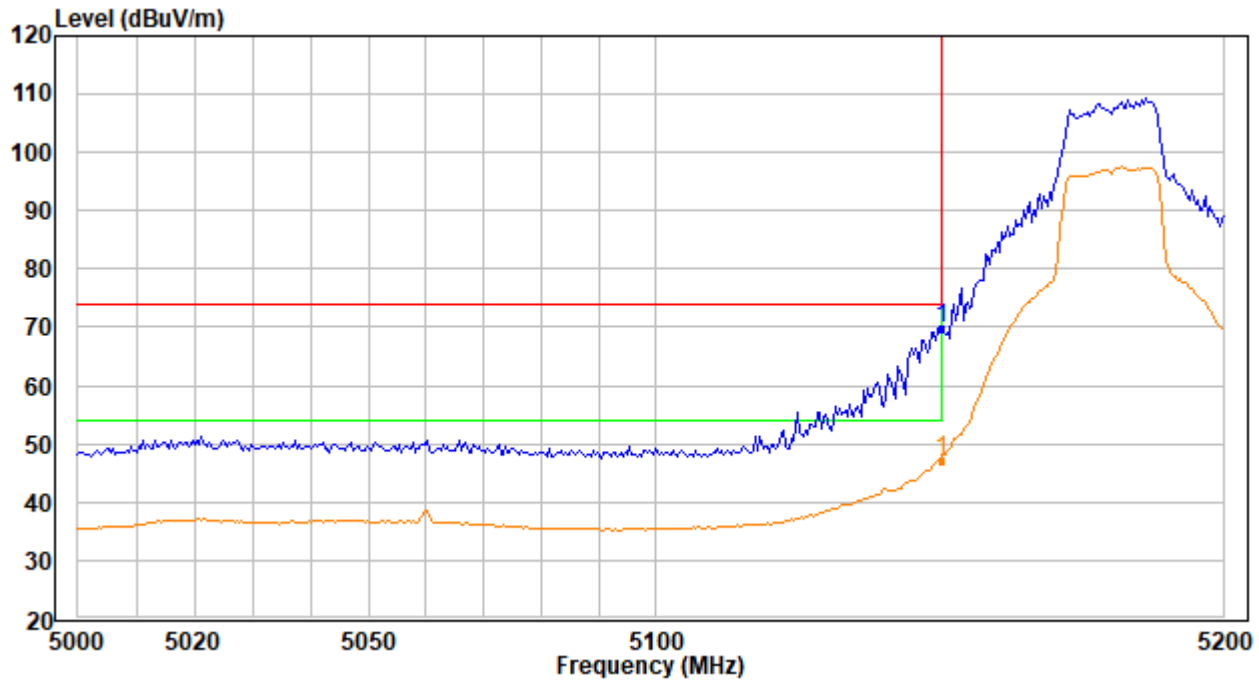
Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-33.78	26.94	Pass
5925.000	-41.24	-27	Pass

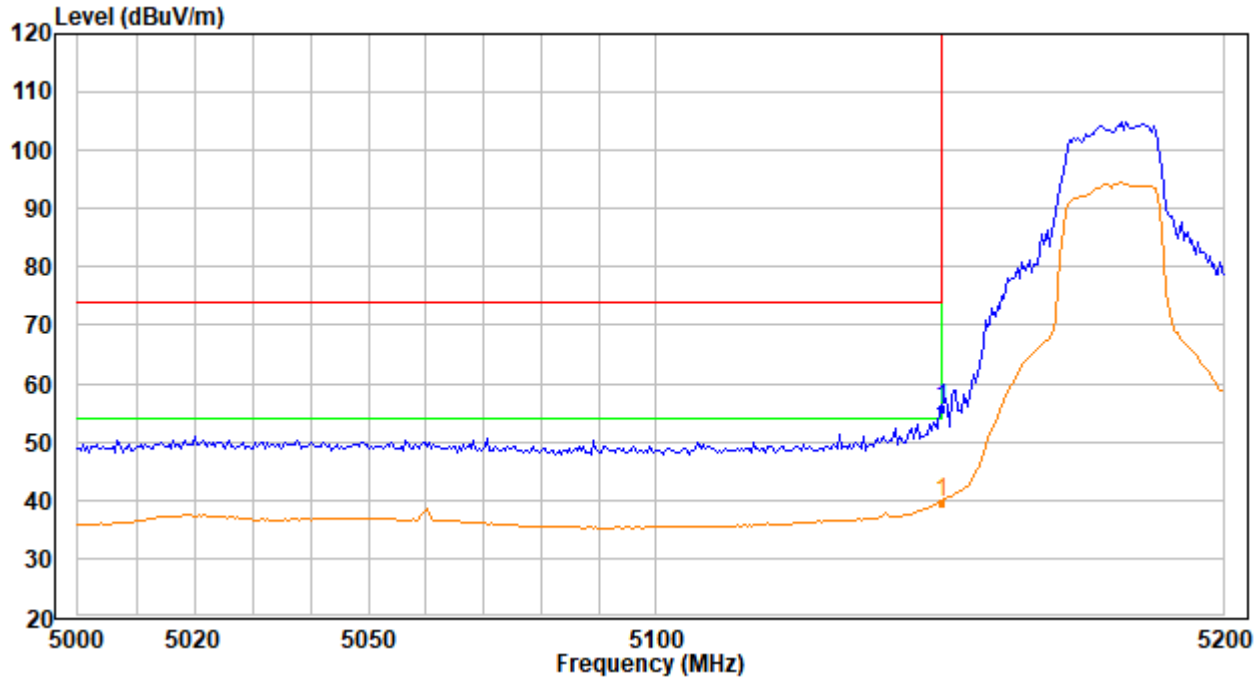
Antenna 2_IEEE 802.11a

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



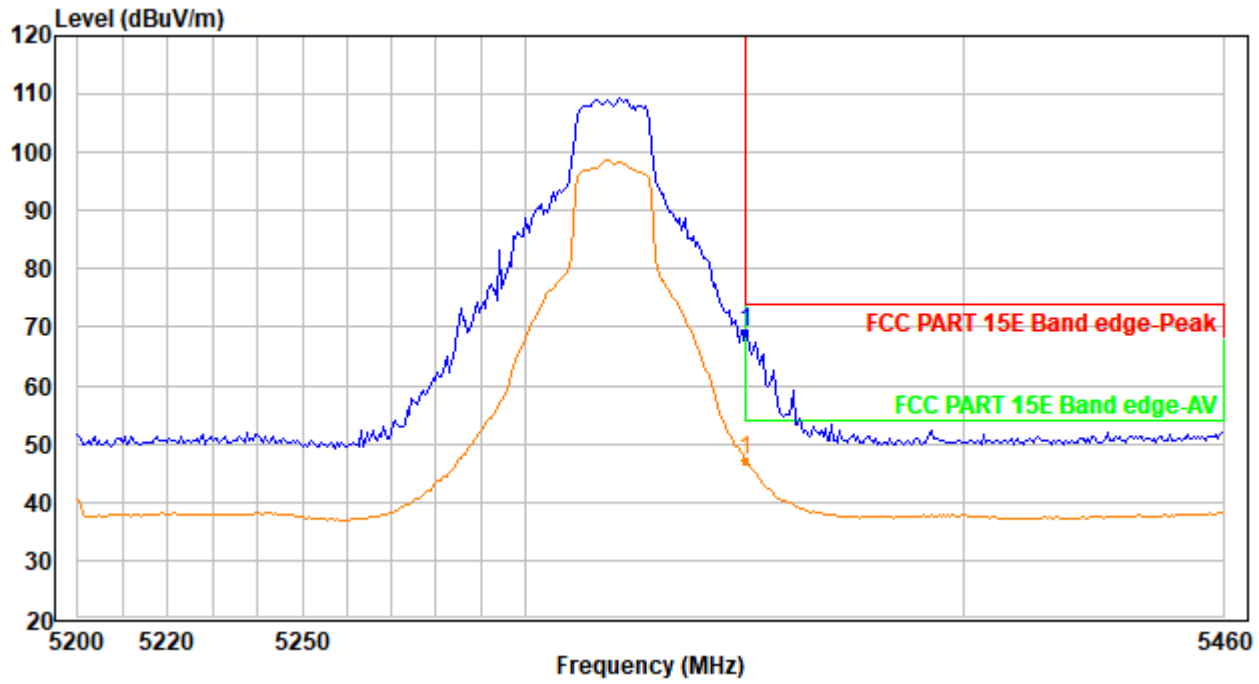
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	69.93	74.00	47.28	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



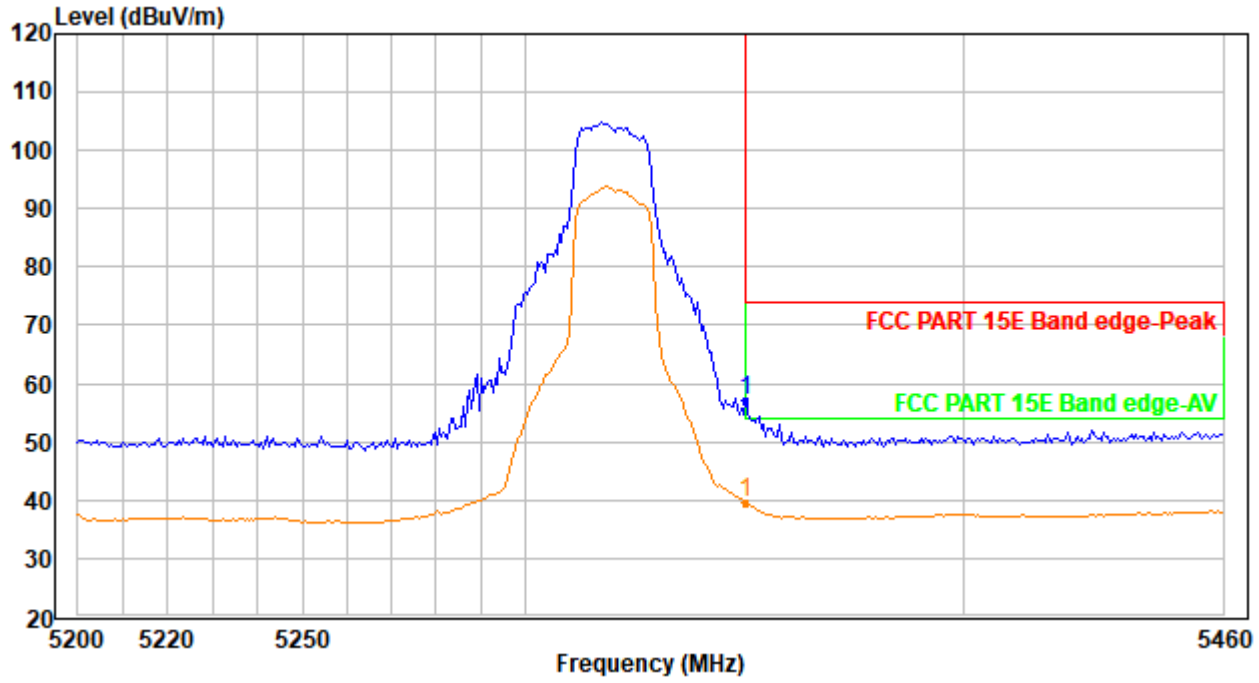
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	55.78	74.00	39.64	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



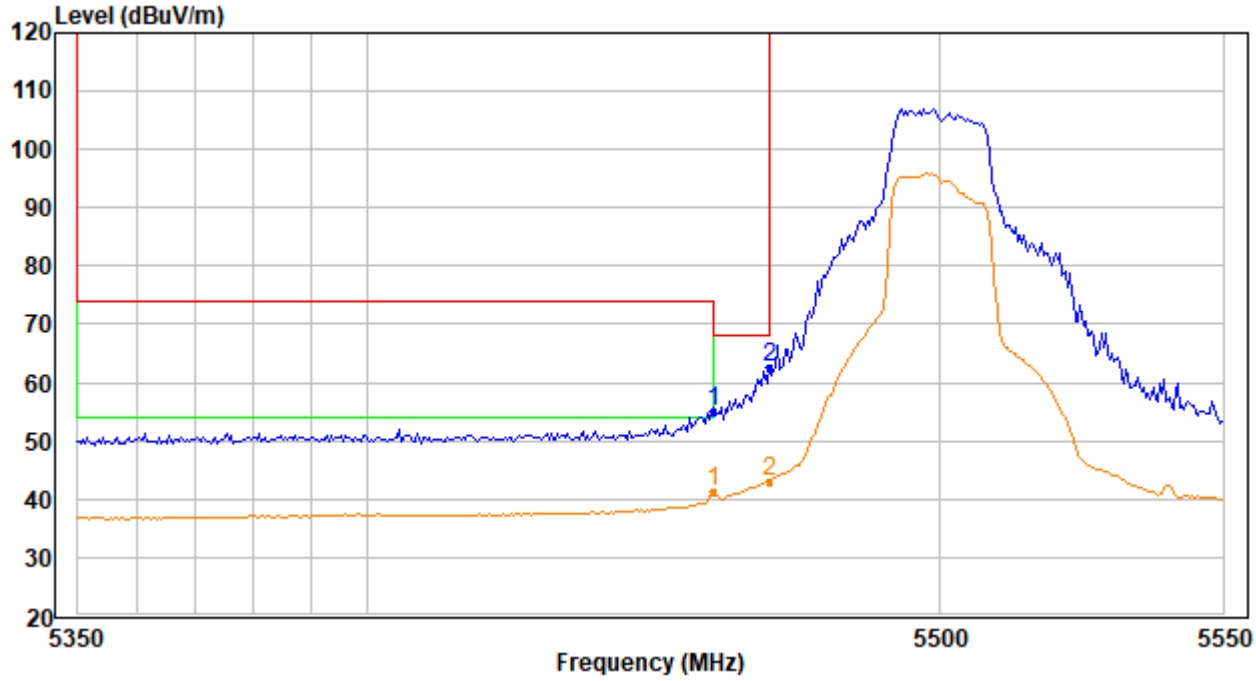
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	69.11	74.00	47.15	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



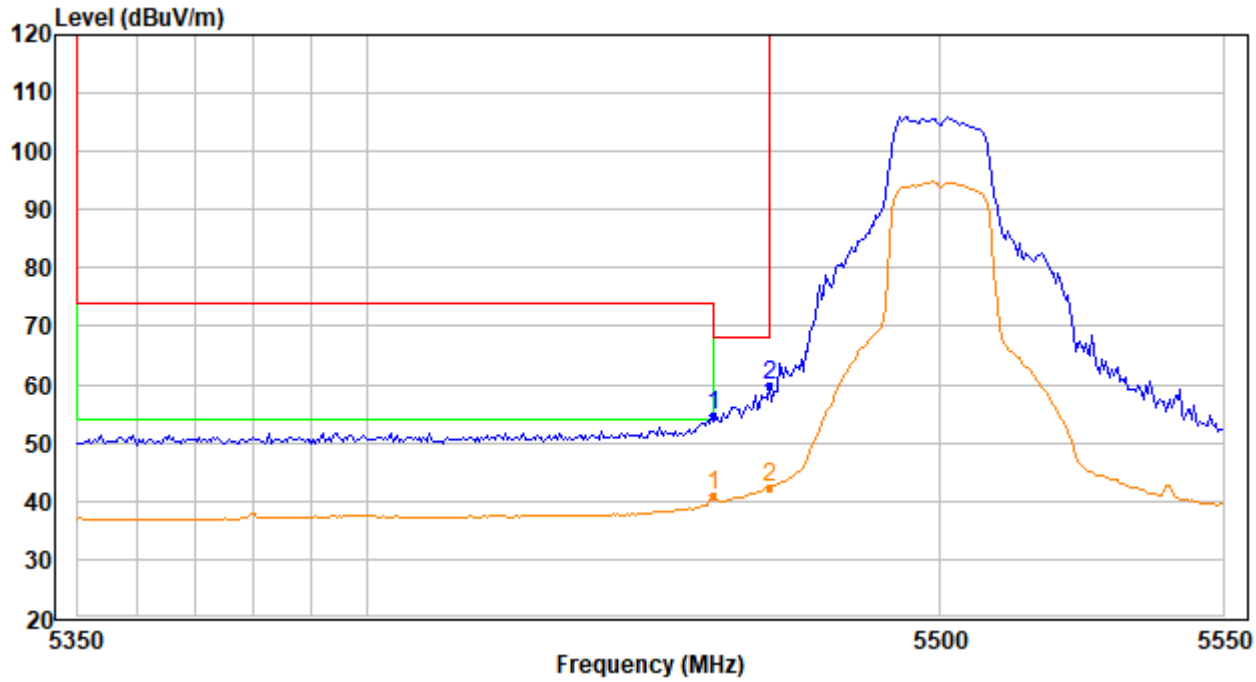
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	57.04	74.00	39.63	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



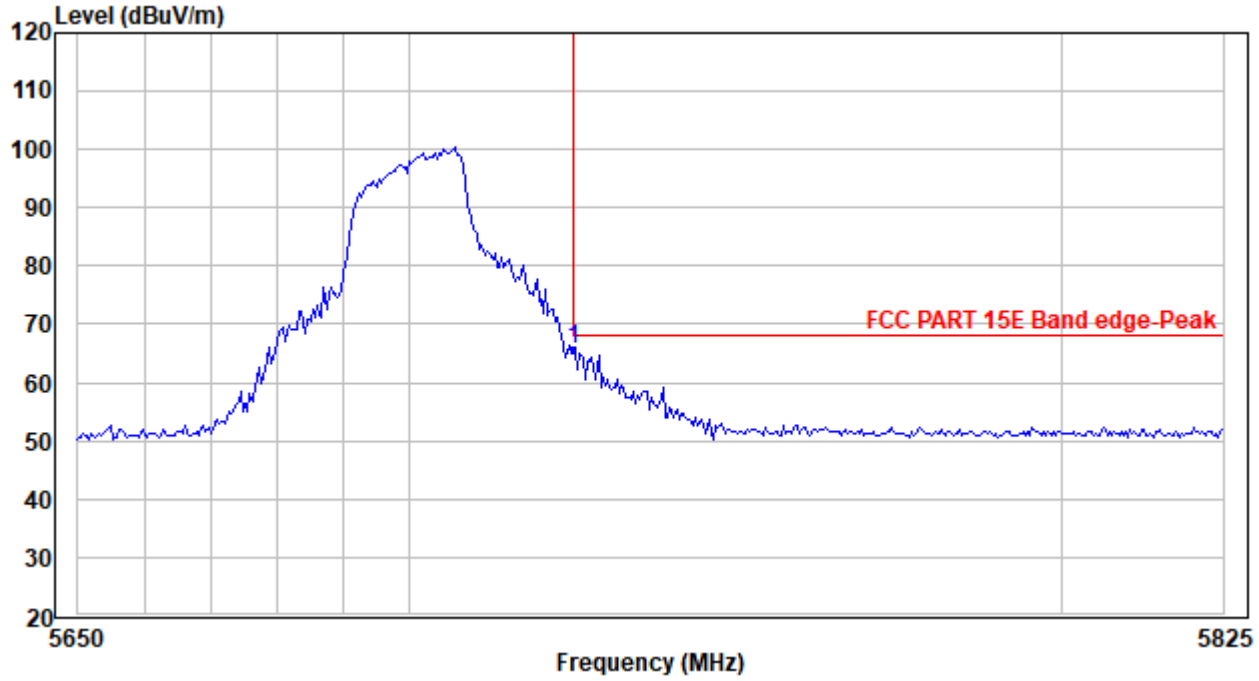
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	55.05	74.00	41.19	54.00	Pass
5470.000	62.69	68.20	43.10	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



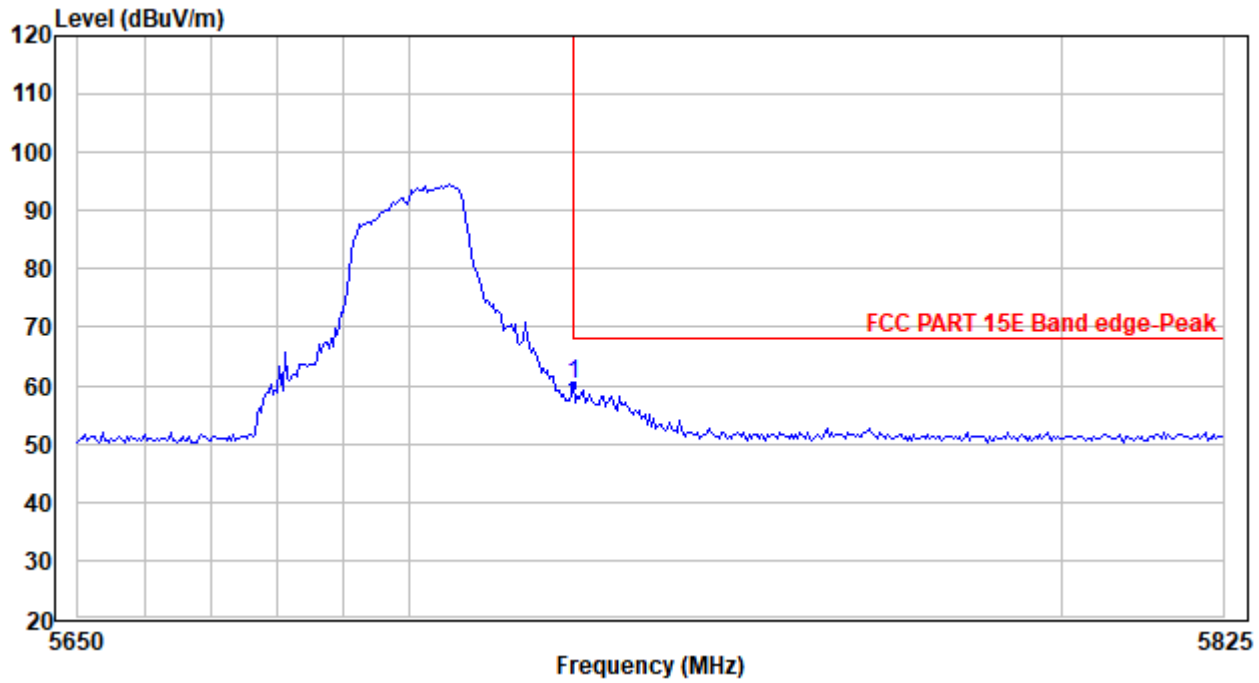
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	54.64	74.00	40.90	54.00	Pass
5470.000	59.77	68.20	42.26	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



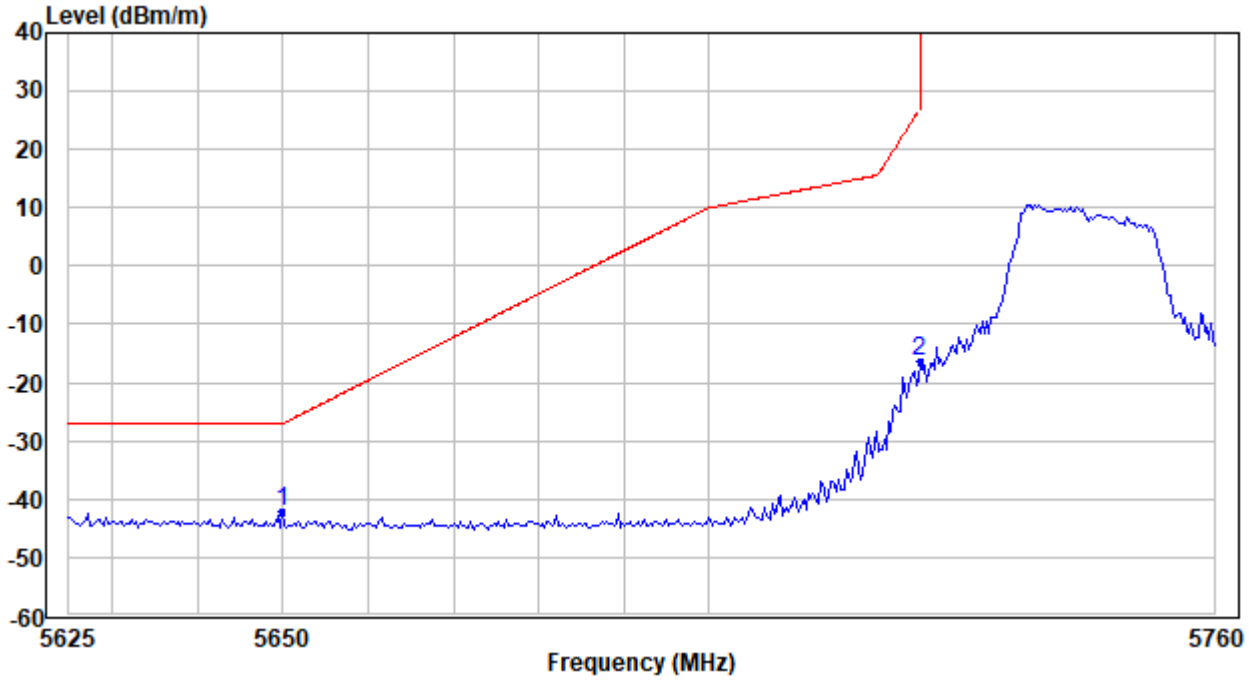
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	65.84	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



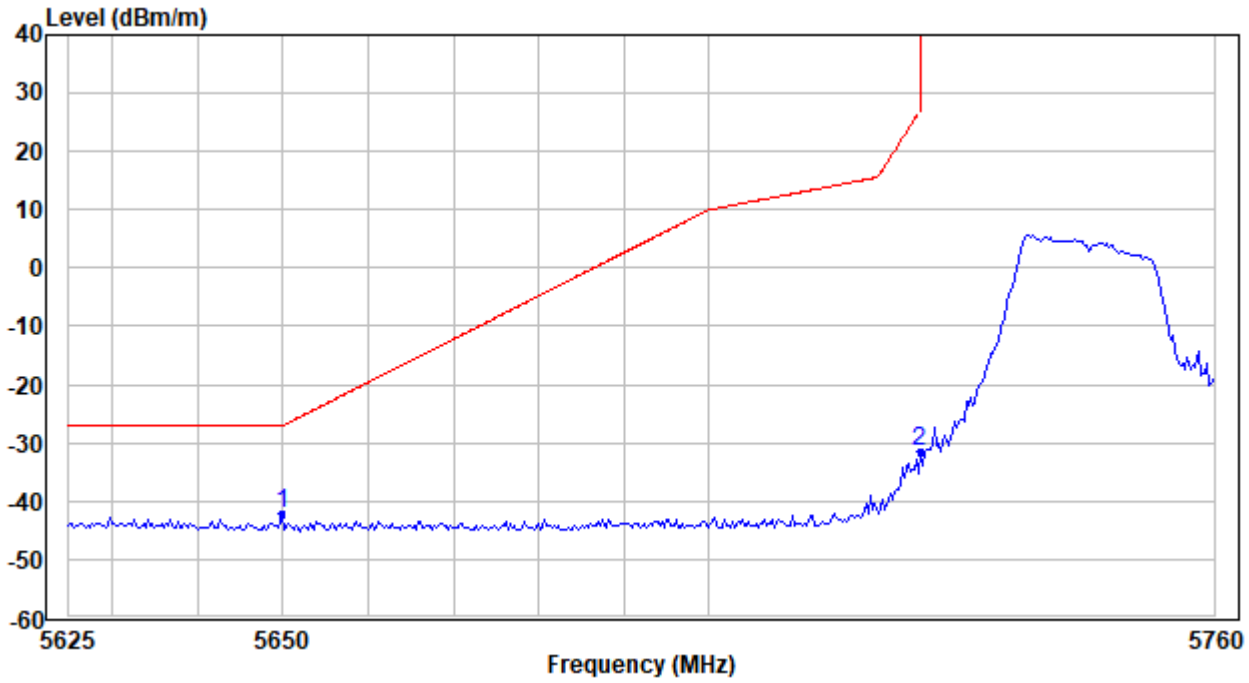
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	60.32	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



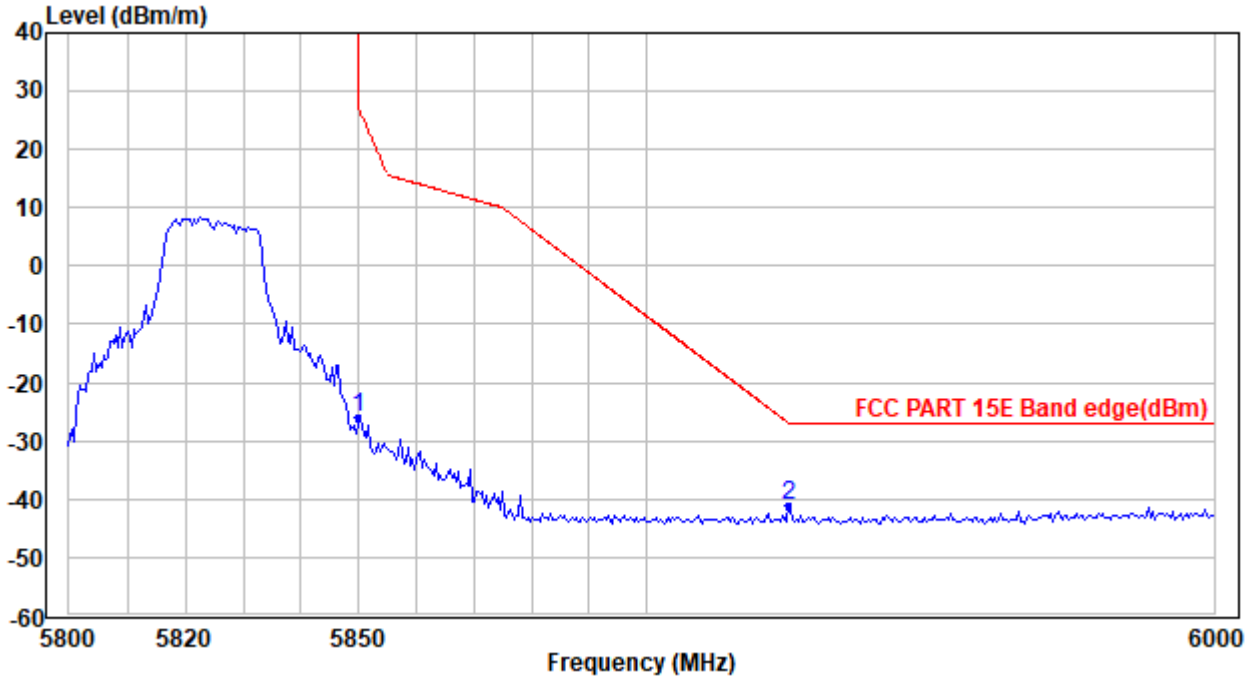
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.14	-27	Pass
5725.000	-16.25	26.97	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



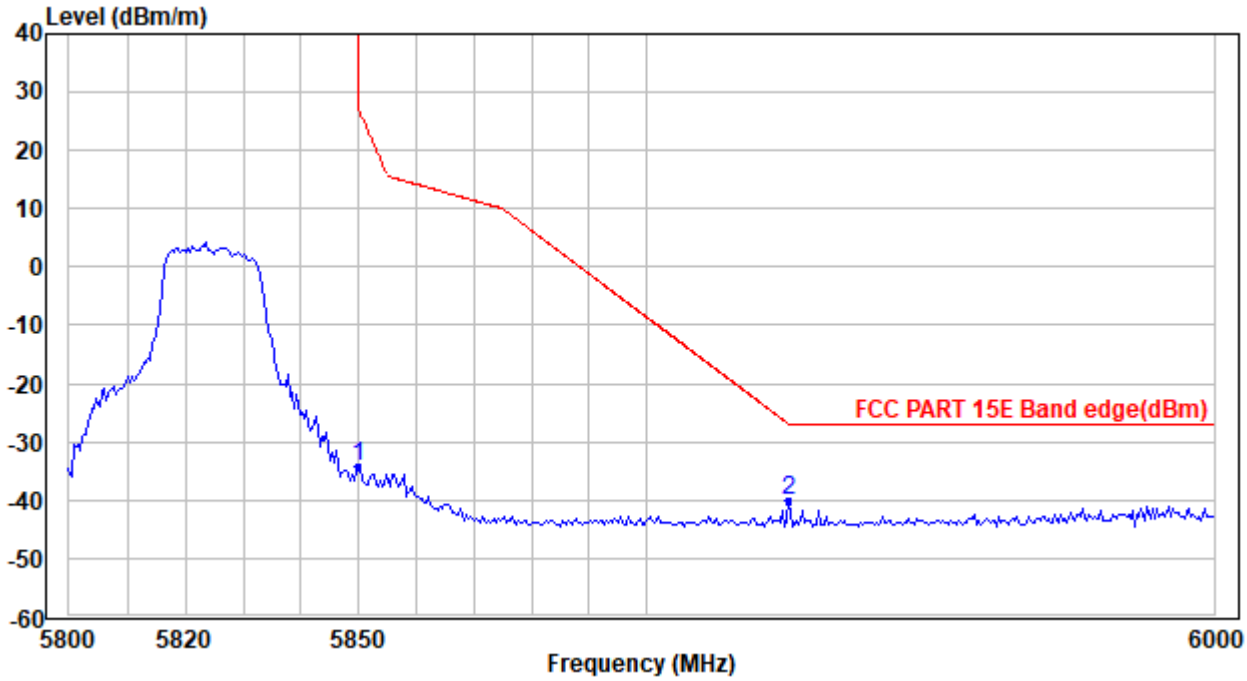
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.16	-27	Pass
5725.000	-31.35	26.97	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-25.90	26.94	Pass
5925.000	-41.15	-27	Pass

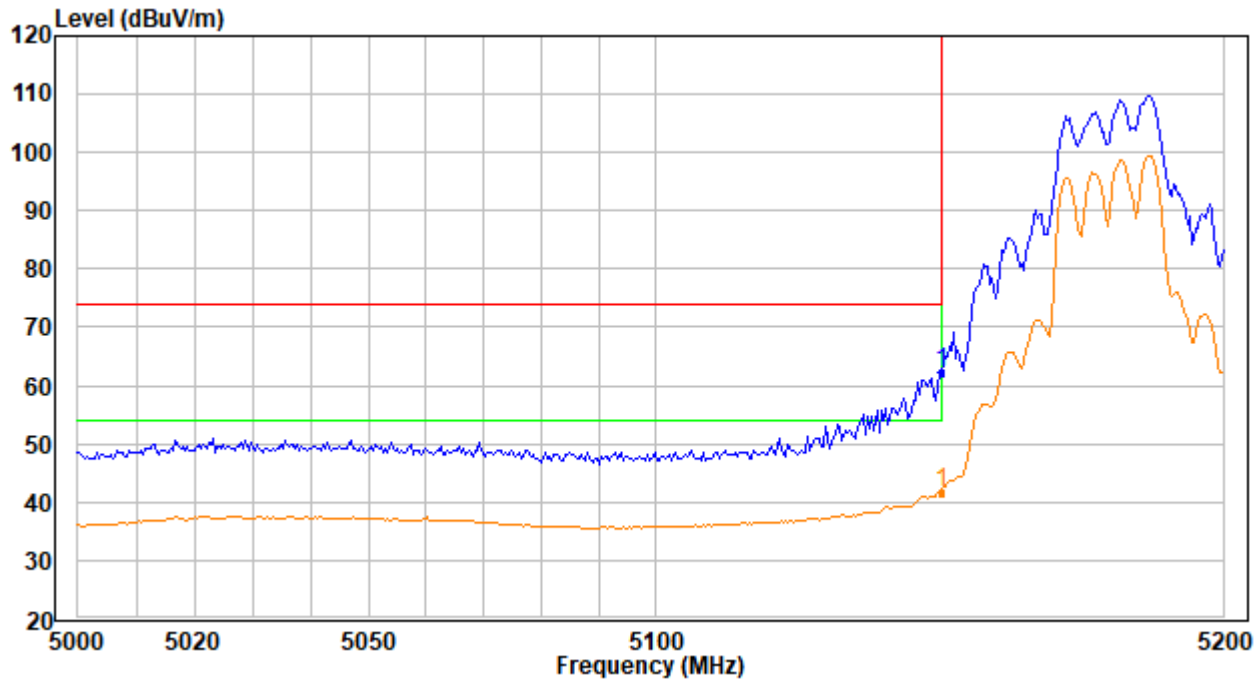
Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-34.28	26.94	Pass
5925.000	-40.16	-27	Pass

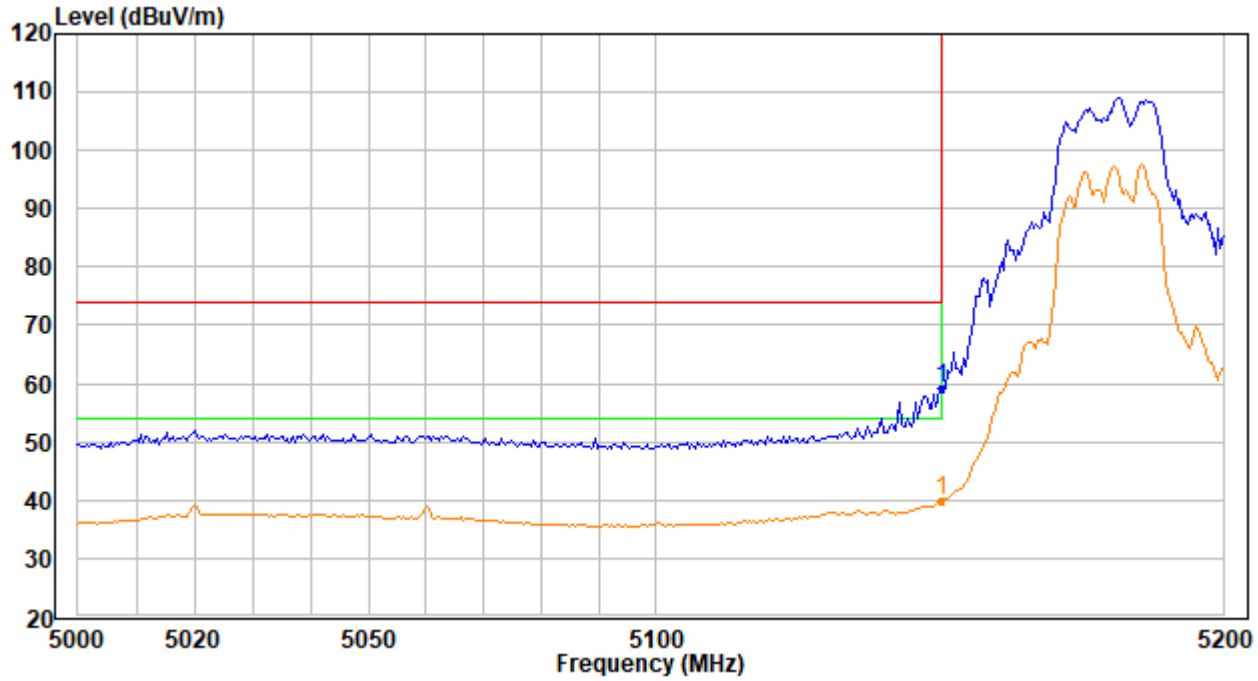
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT20

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



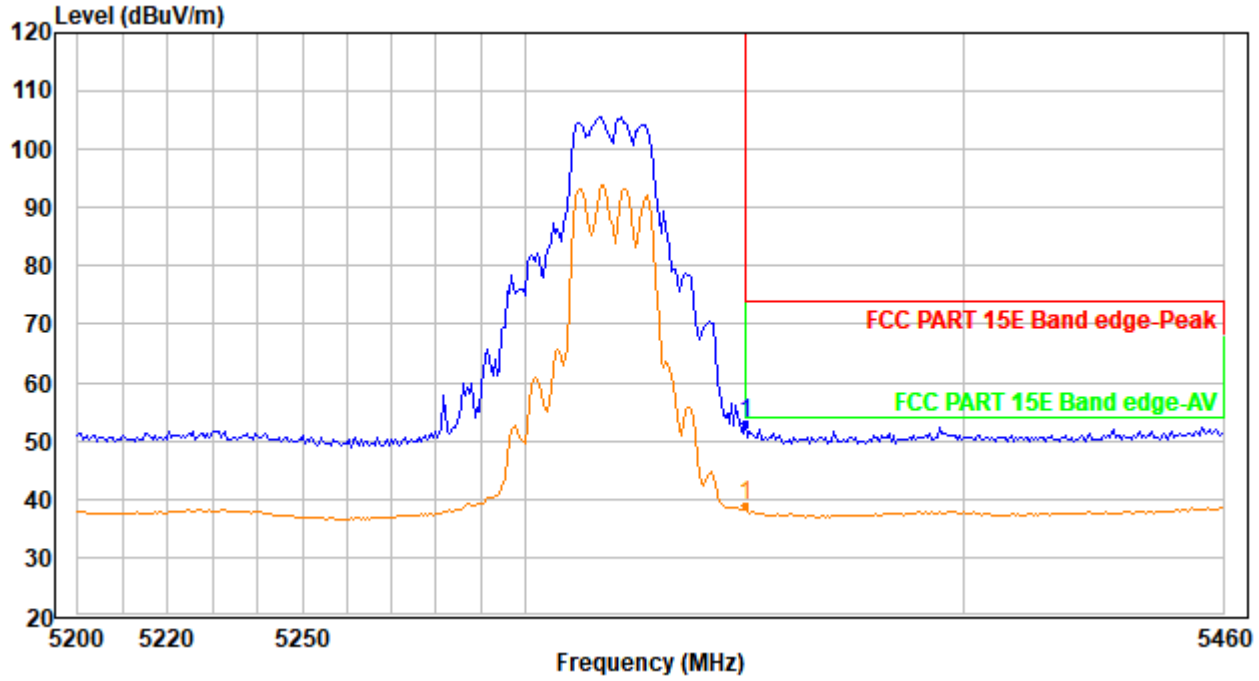
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	62.15	74.00	41.67	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



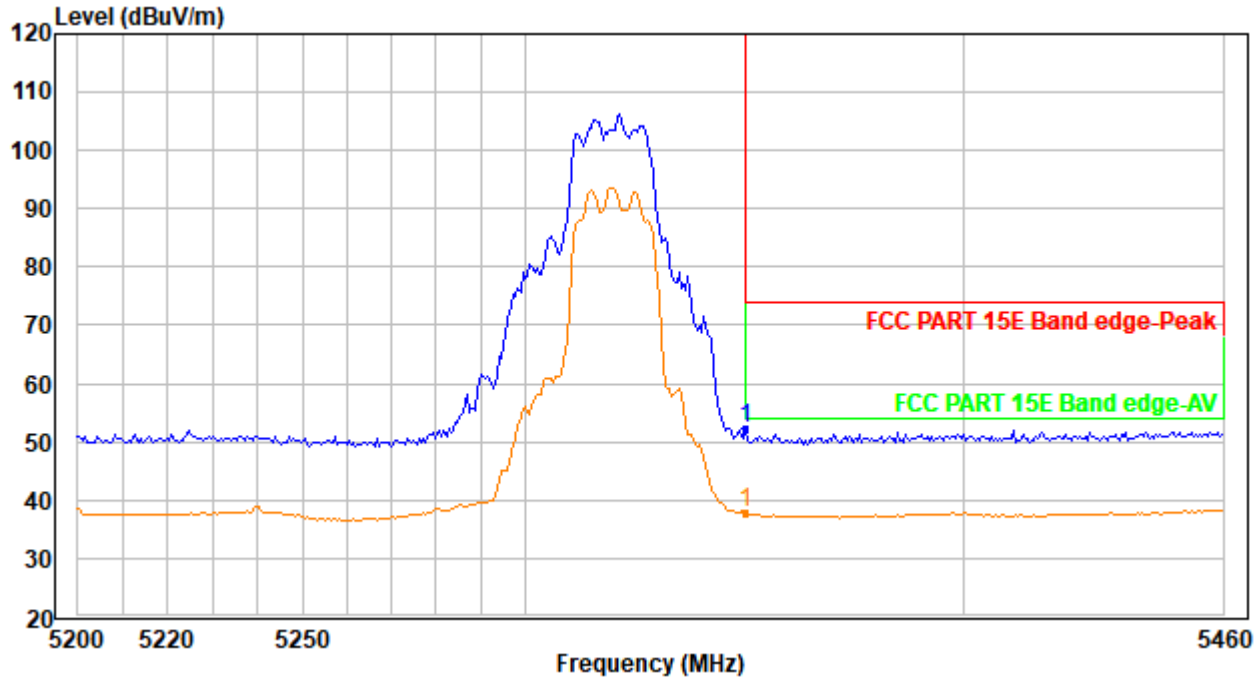
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	59.13	74.00	39.78	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



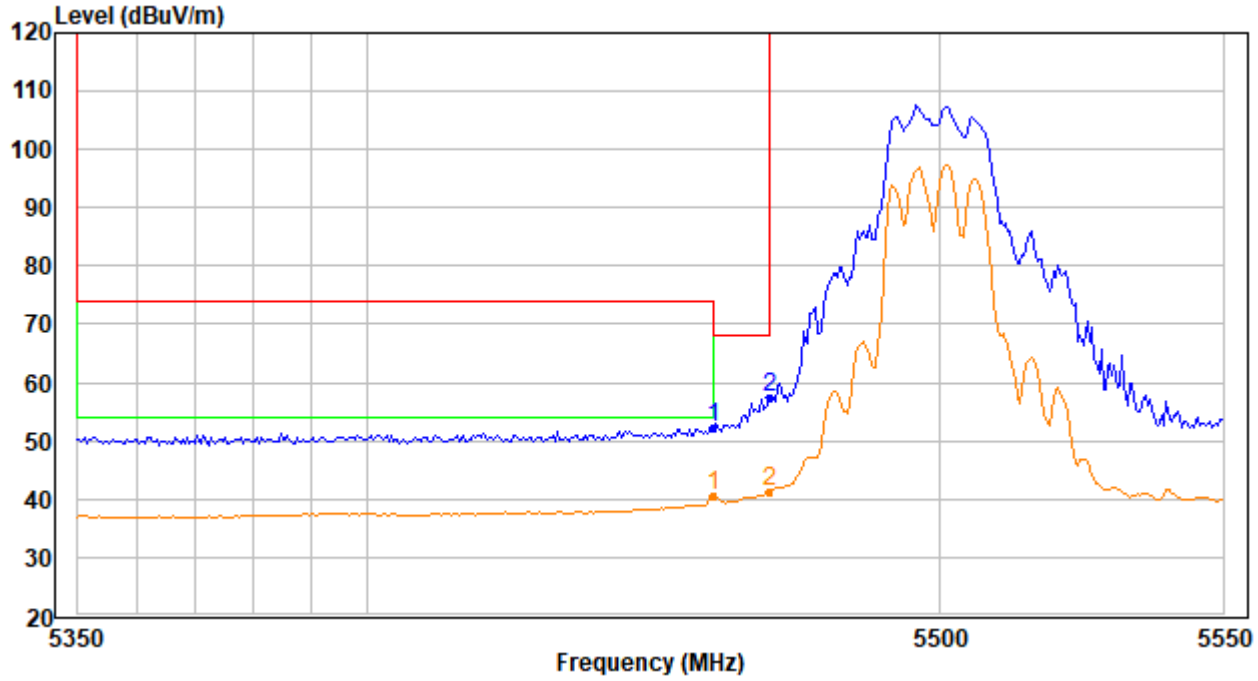
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	53.01	74.00	38.78	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



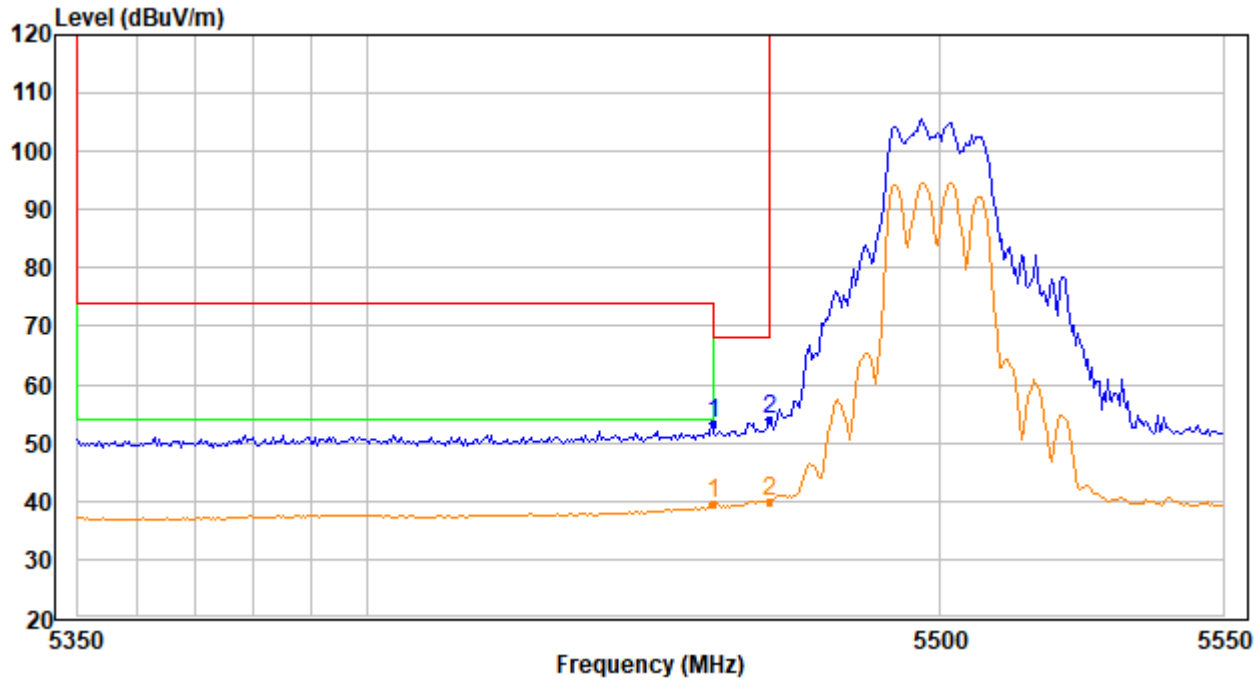
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	52.47	74.00	37.84	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



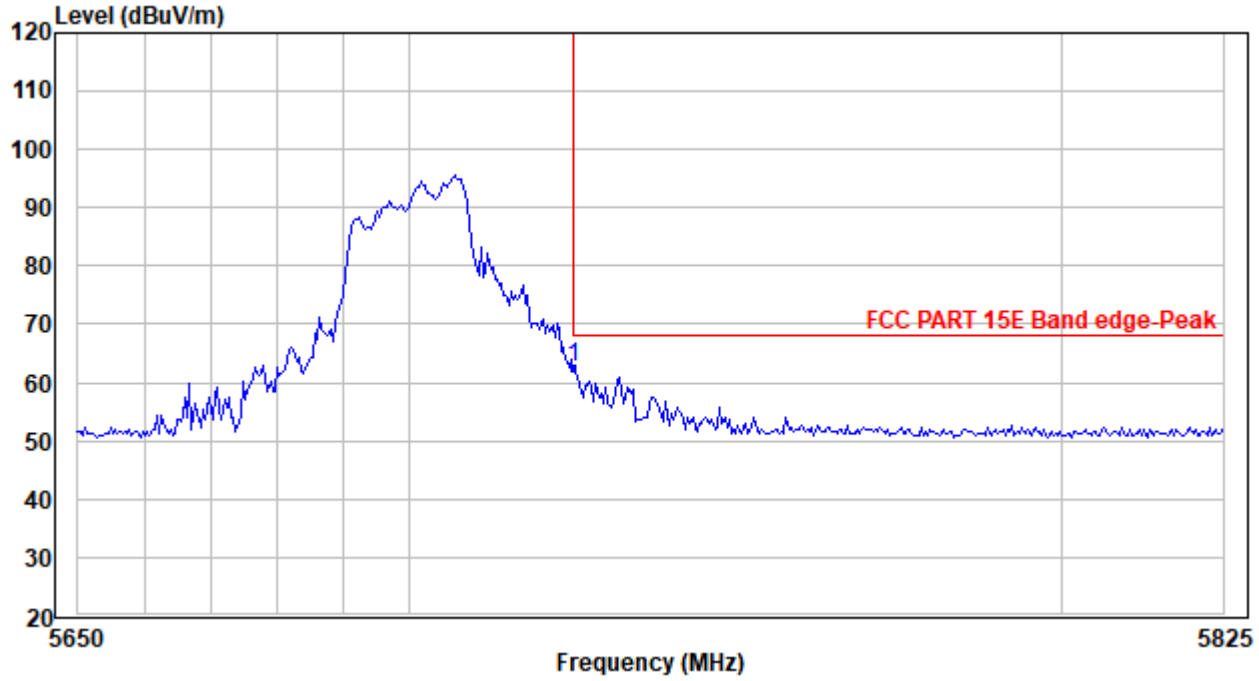
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	52.38	74.00	40.78	54.00	Pass
5470.000	57.55	68.20	41.22	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



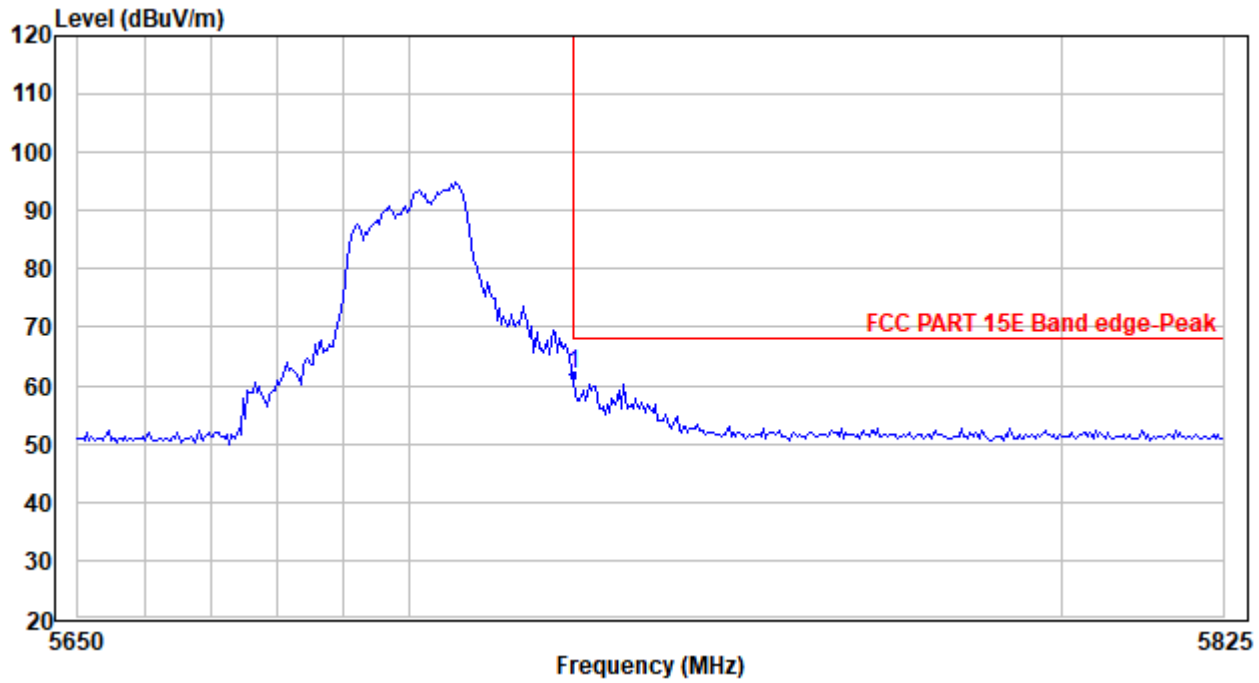
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	53.33	74.00	39.61	54.00	Pass
5470.000	54.09	68.20	39.90	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



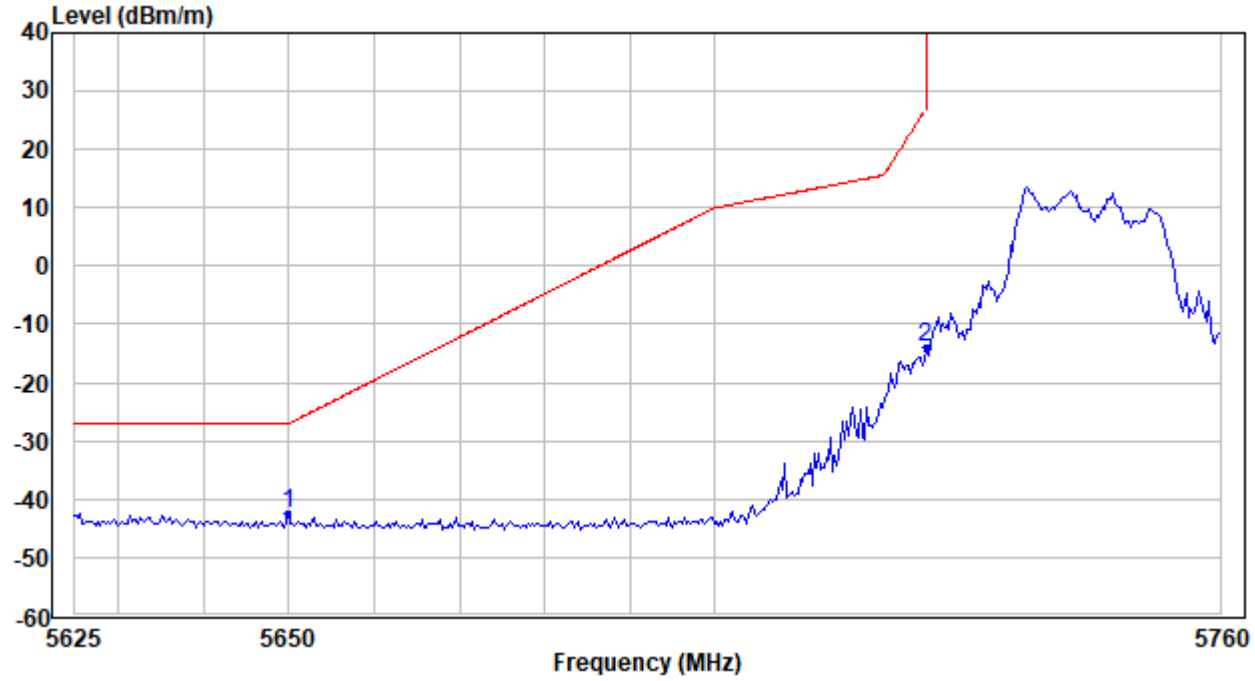
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	62.69	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



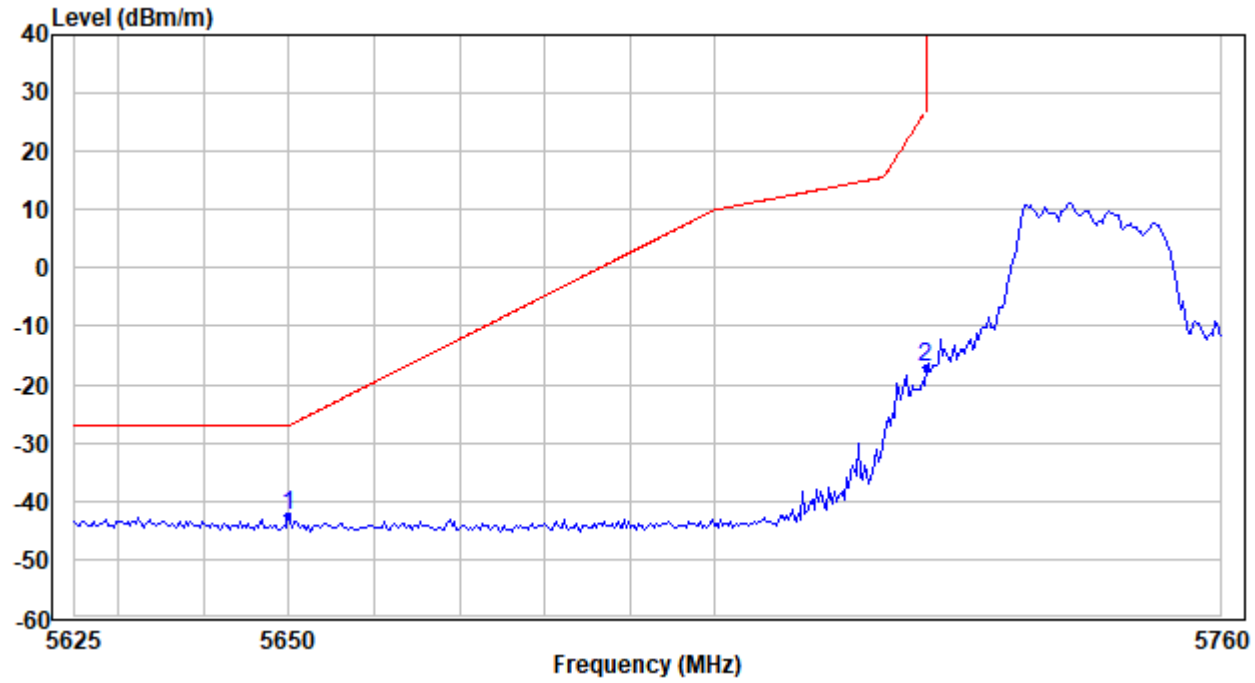
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	61.86	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



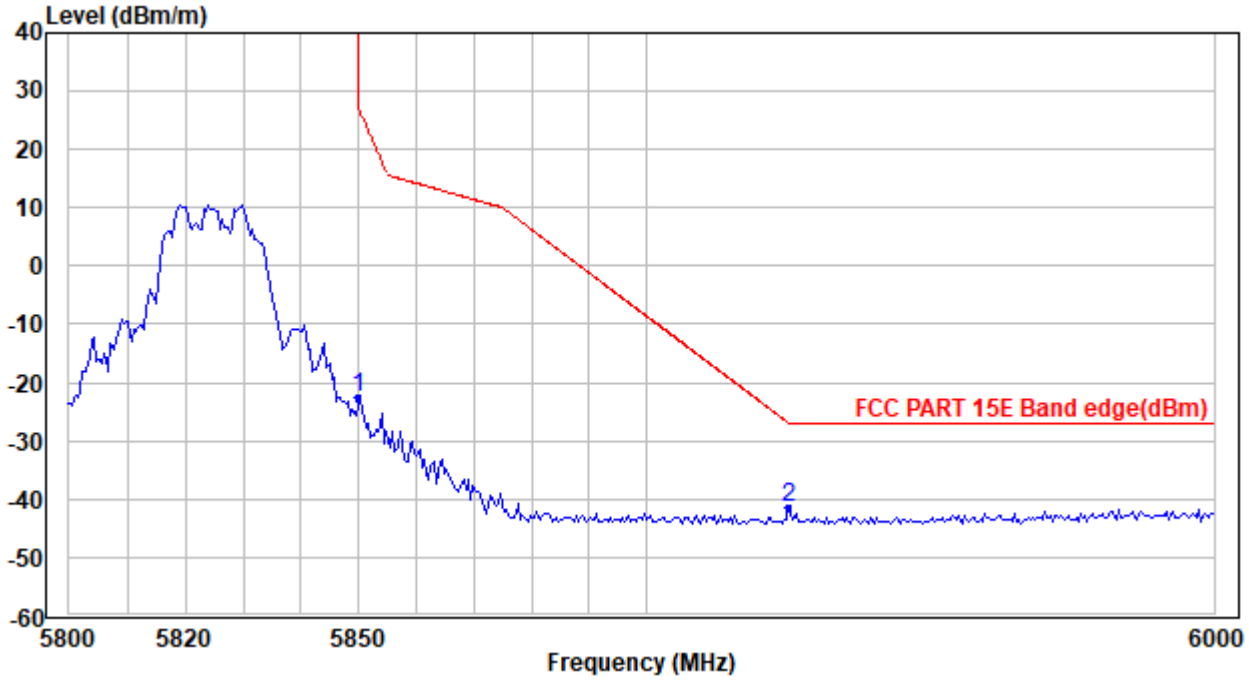
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.41	-27	Pass
5725.000	-14.09	26.97	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



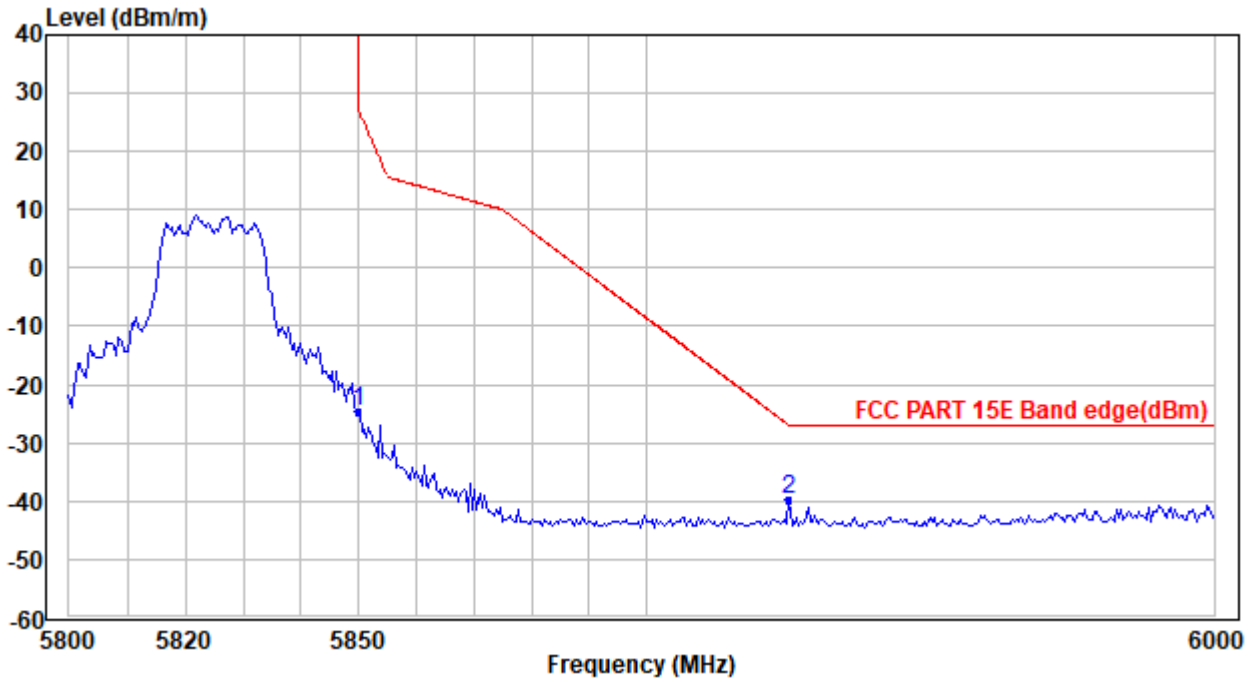
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.61	-27	Pass
5725.000	-17.07	26.97	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-22.56	26.94	Pass
5925.000	-41.38	-27	Pass

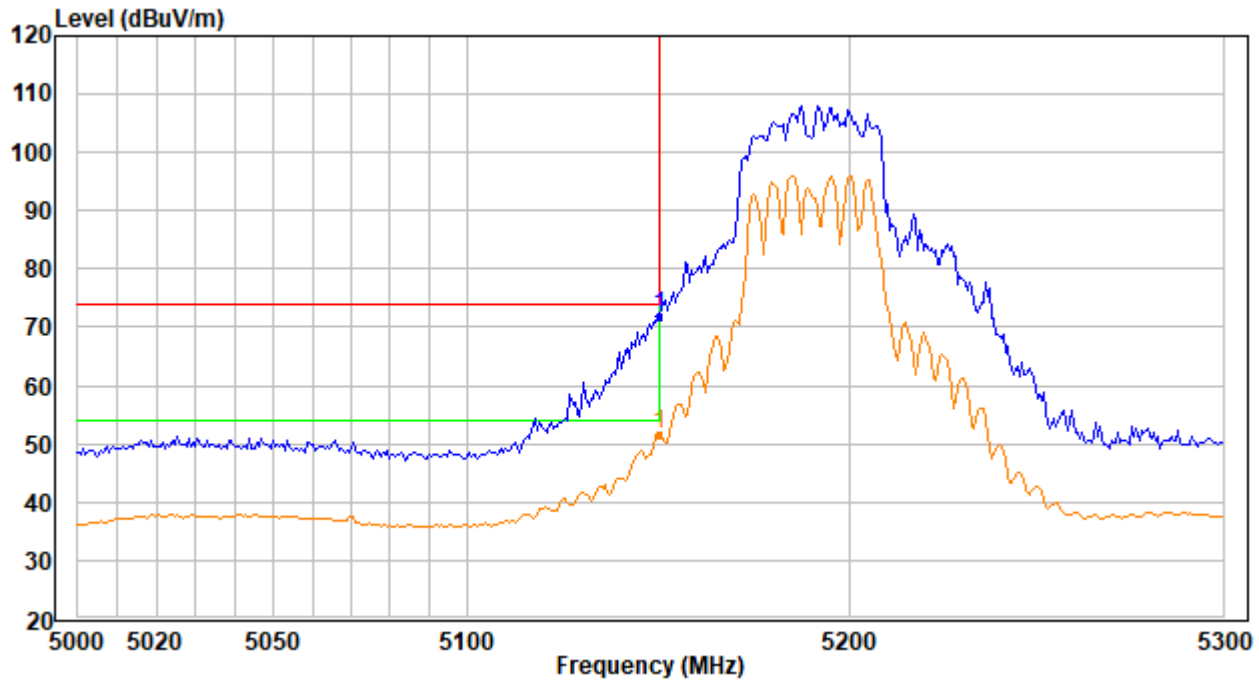
Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-24.56	26.94	Pass
5925.000	-39.82	-27	Pass

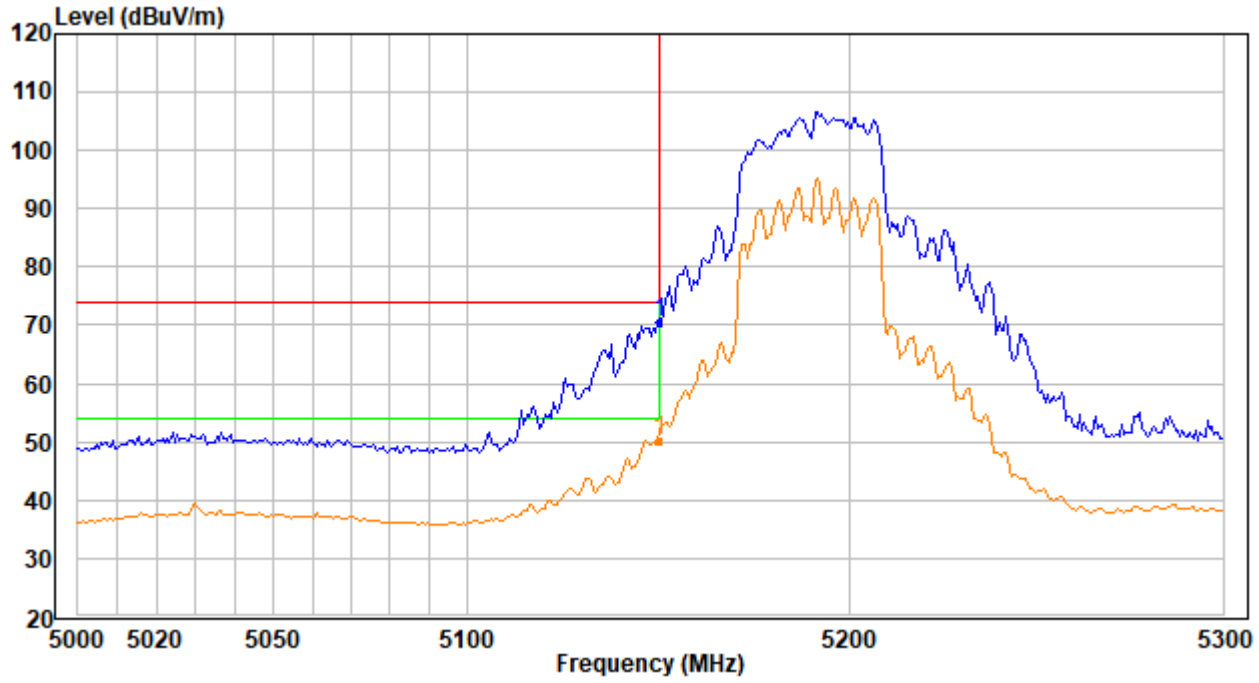
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT40

Test Channel:	Channel 38	Ant. Polar. :	Horizontal



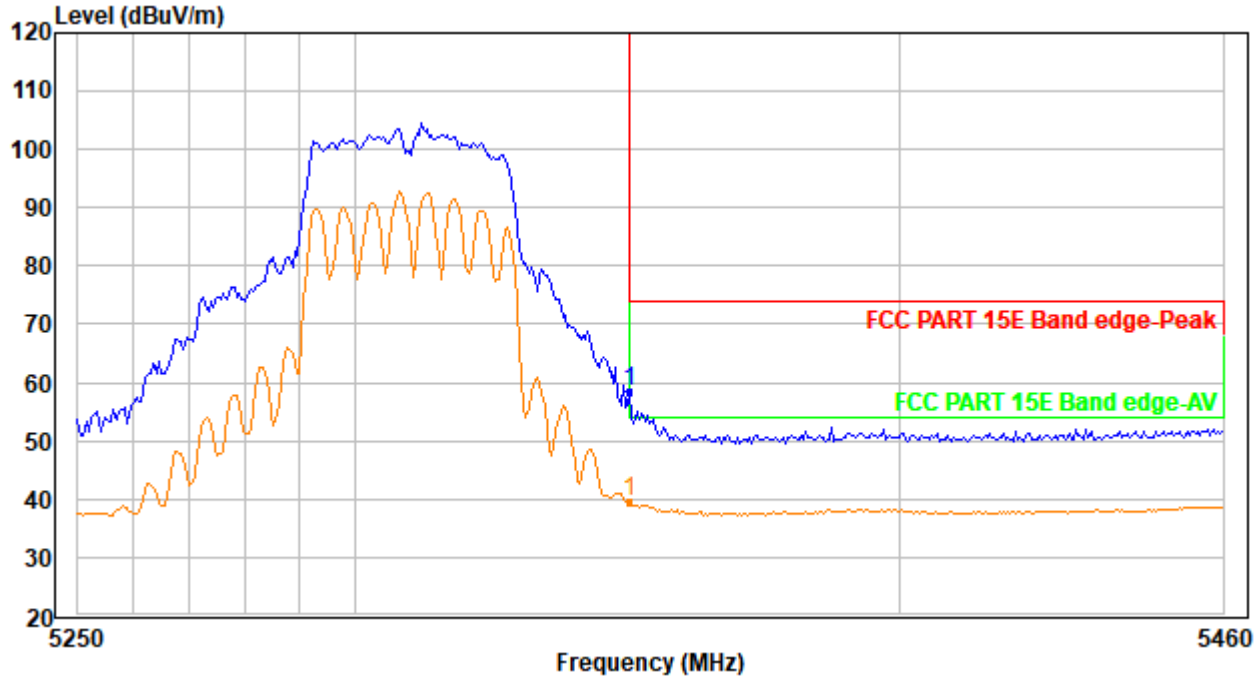
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	72.02	74.00	51.47	54.00	Pass

Test Channel:	Channel 38	Ant. Polar. :	Vertical



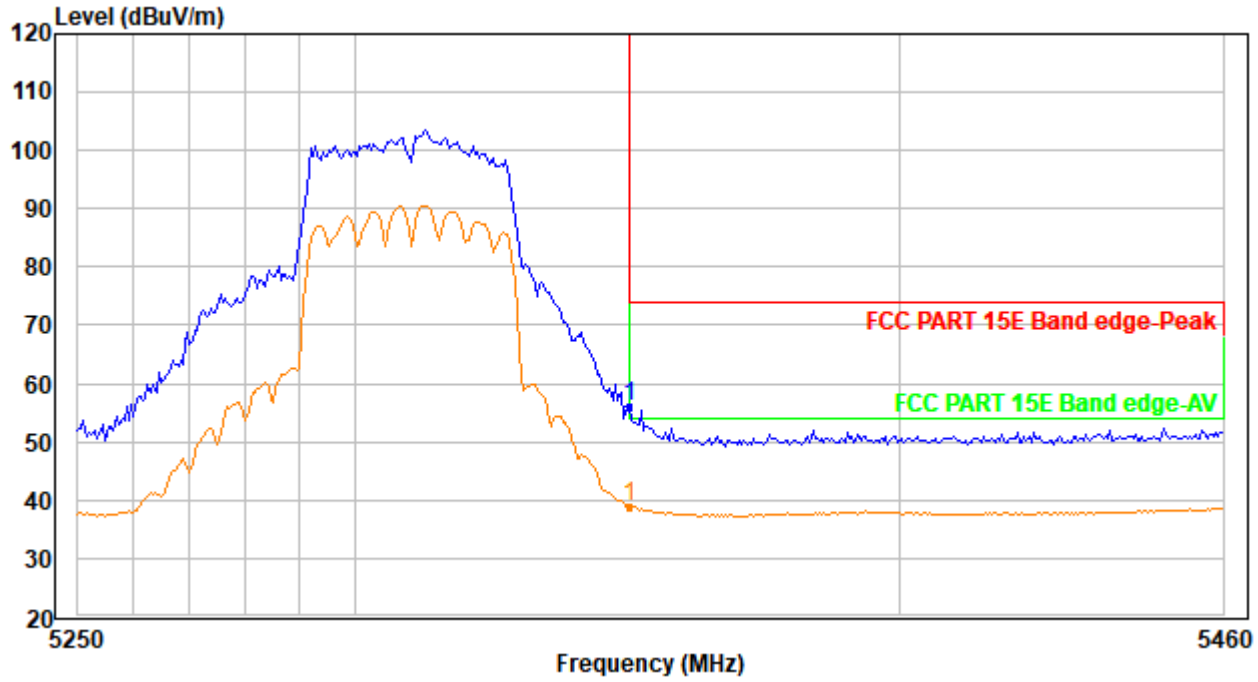
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	70.46	74.00	50.39	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Horizontal



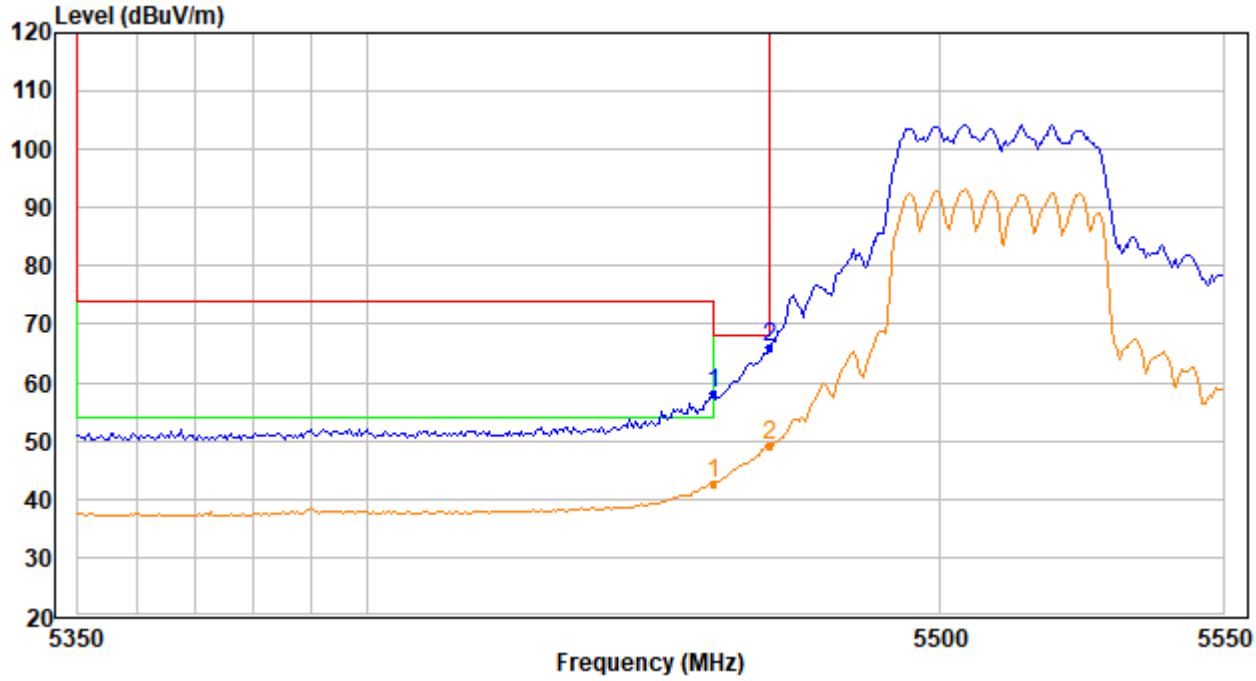
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	58.49	74.00	39.52	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Vertical



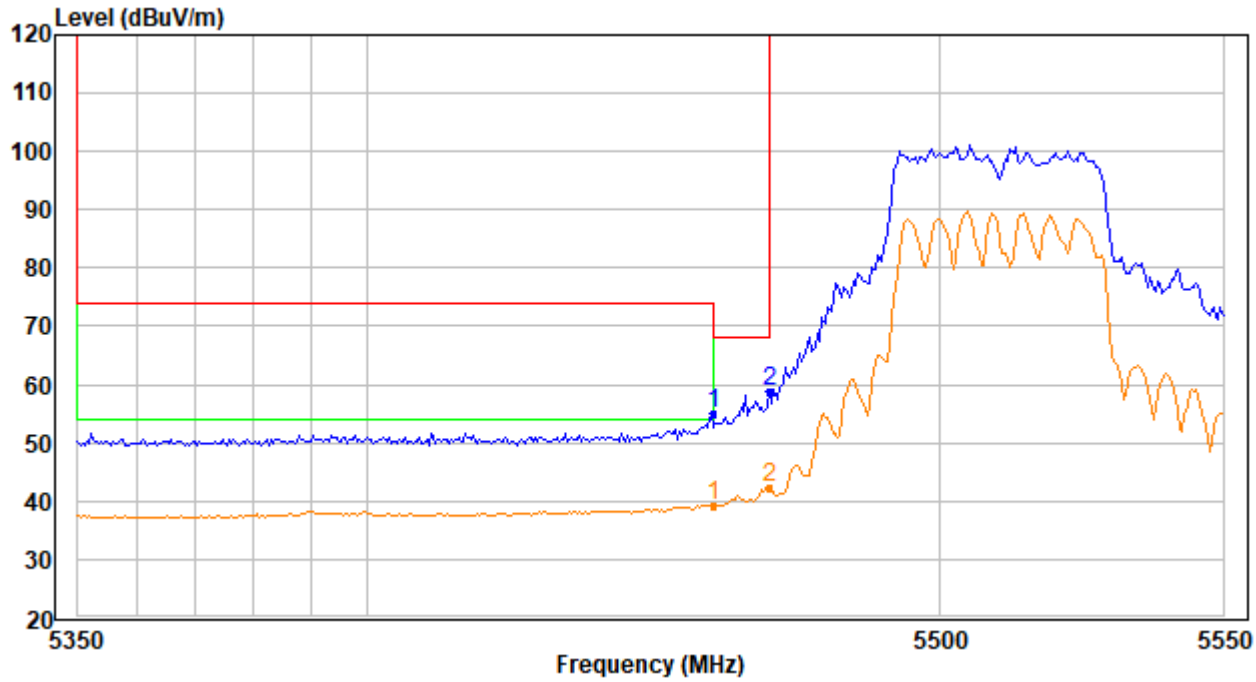
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	56.07	74.00	38.77	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Horizontal



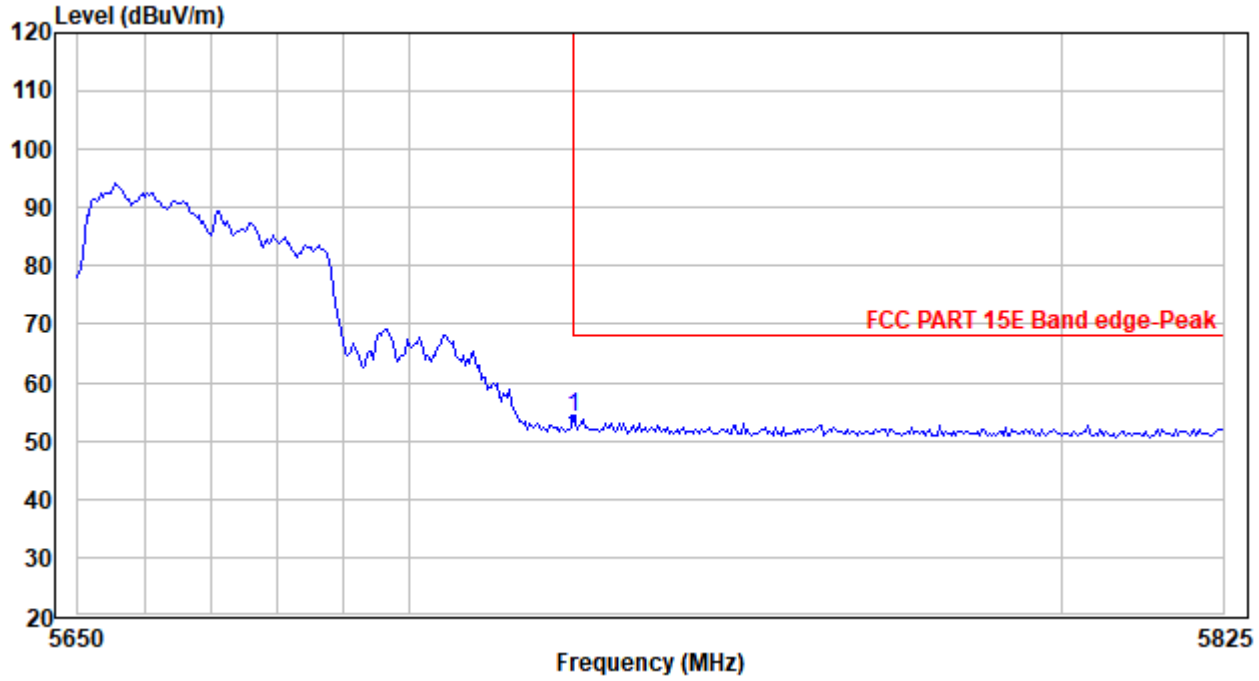
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	58.30	74.00	42.70	54.00	Pass
5470.000	65.90	68.20	49.06	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Vertical



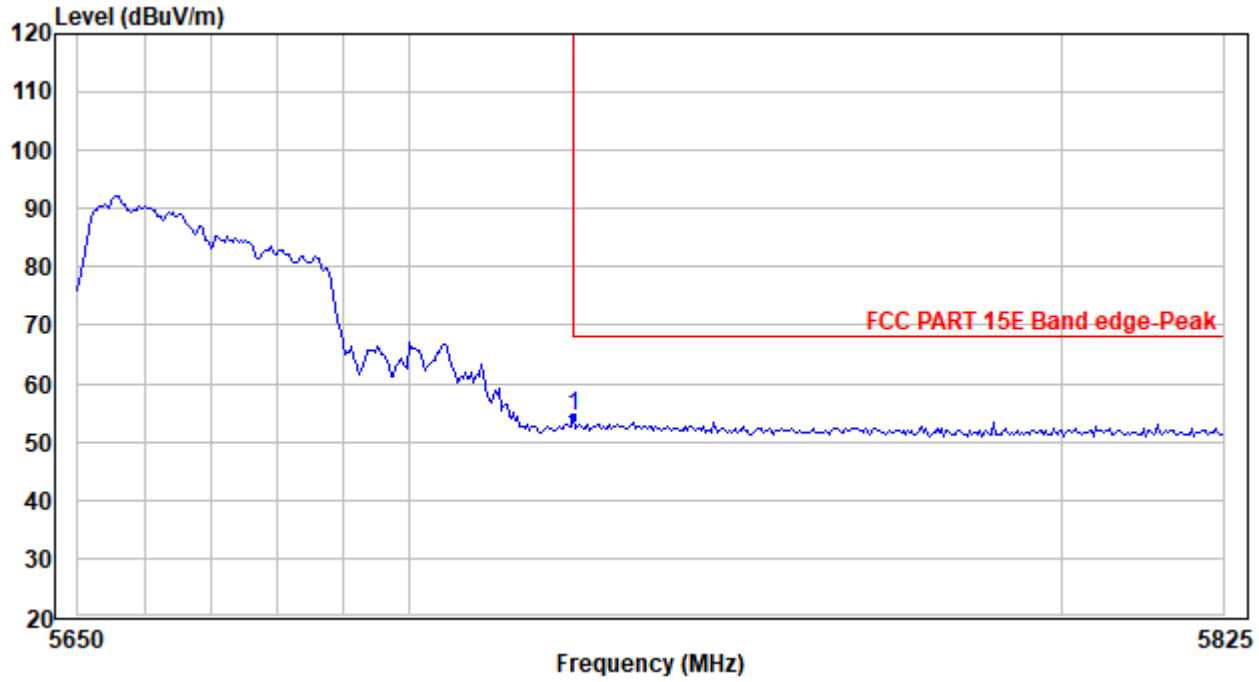
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	54.94	74.00	39.40	54.00	Pass
5470.000	58.69	68.20	42.47	54.00	Pass

Test Channel:	Channel 134	Ant. Polar. :	Horizontal



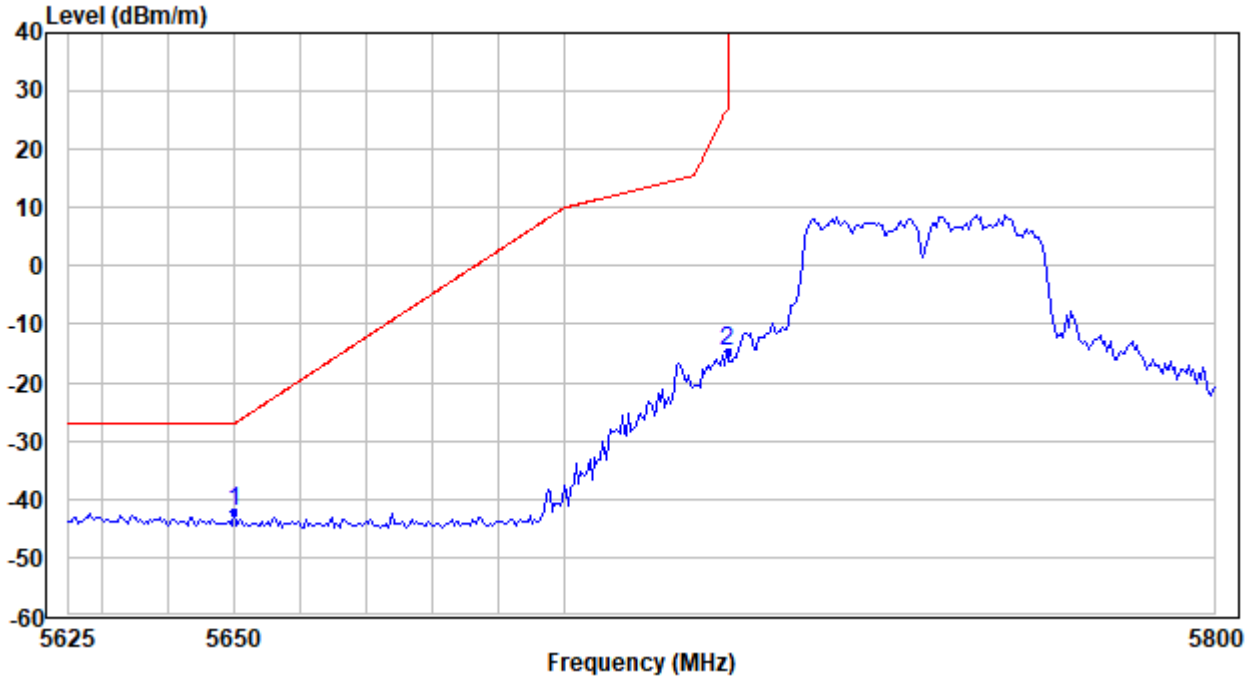
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	54.18	68.20	Pass

Test Channel:	Channel 134	Ant. Polar. :	Vertical



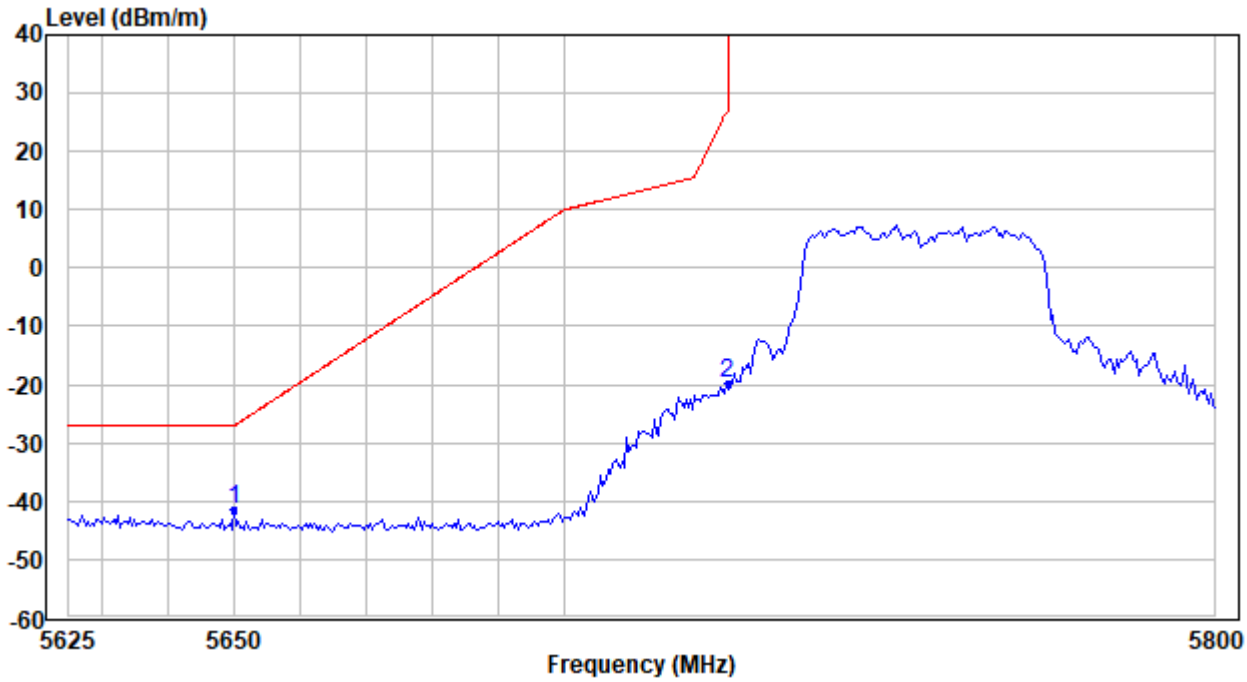
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	54.39	68.20	Pass

Test Channel:	Channel 151	Ant. Polar. :	Horizontal



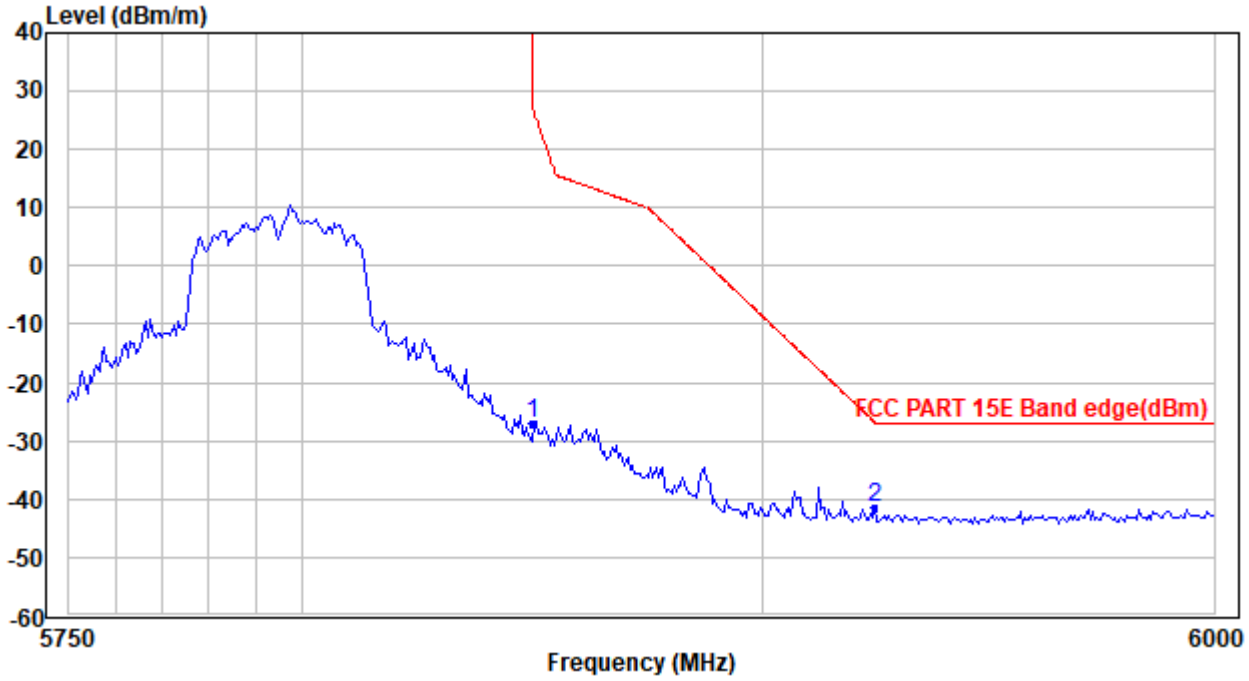
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-41.58	-27	Pass
5725.000	-19.78	26.97	Pass

Test Channel:	Channel 151	Ant. Polar. :	Vertical



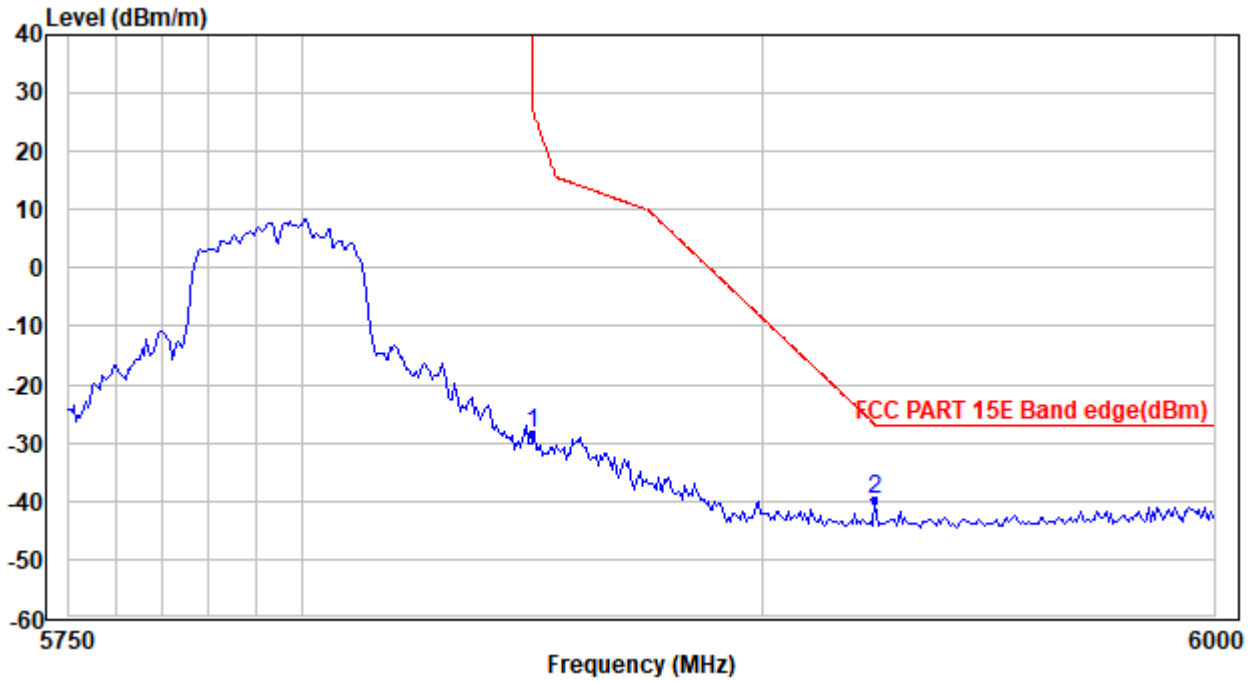
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.07	-27	Pass
5725.000	-14.67	26.97	Pass

Test Channel:	Channel 159	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-26.86	26.94	Pass
5925.000	-41.59	-27	Pass

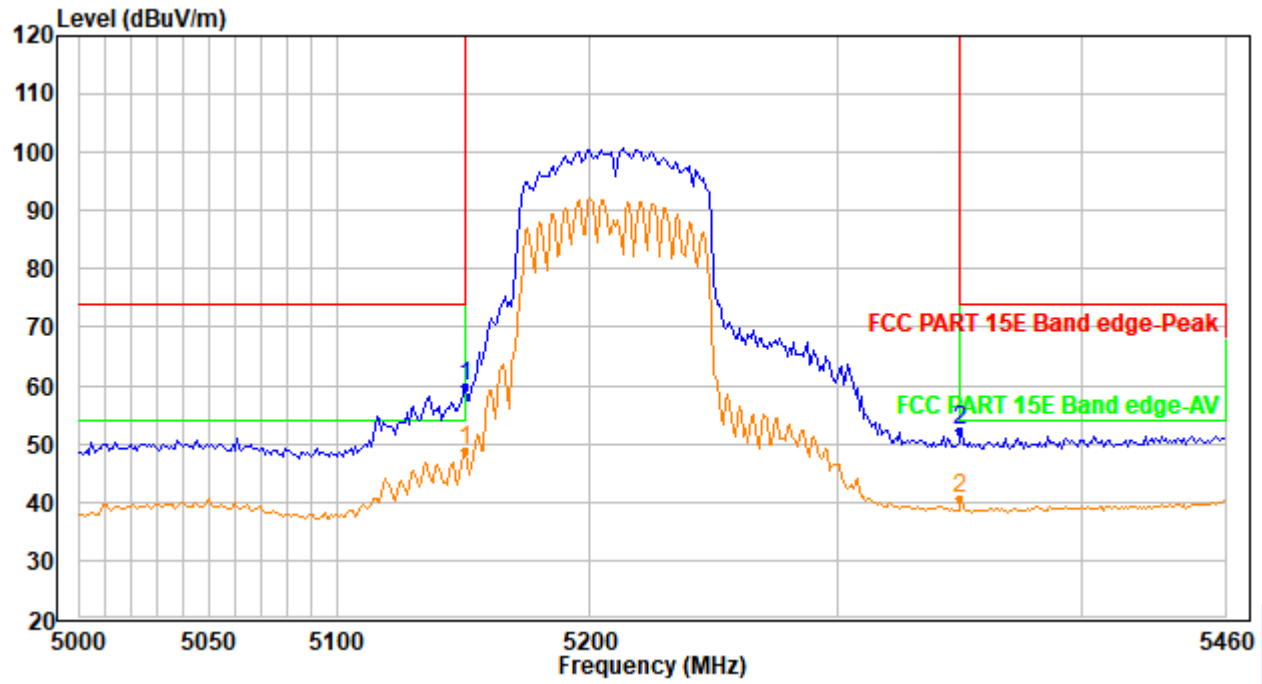
Test Channel:	Channel 159	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-28.24	26.94	Pass
5925.000	-39.84	-27	Pass

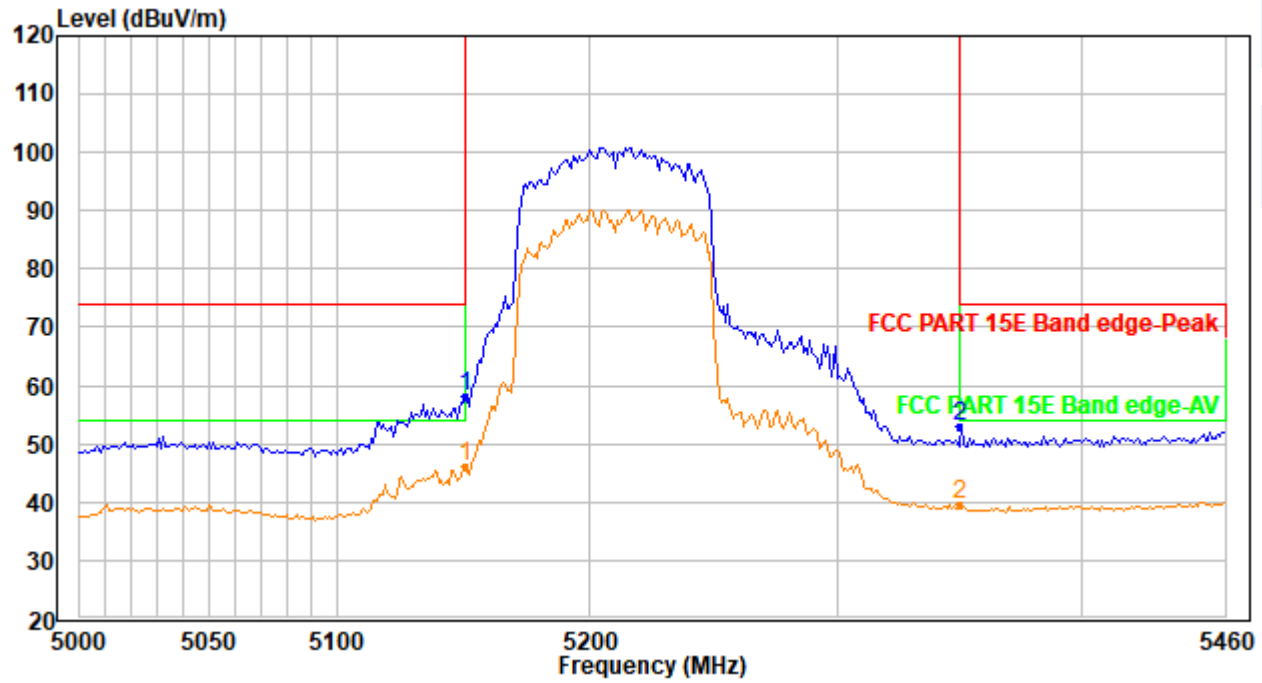
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80

Test Channel:	Channel 42	Ant. Polar. :	Horizontal



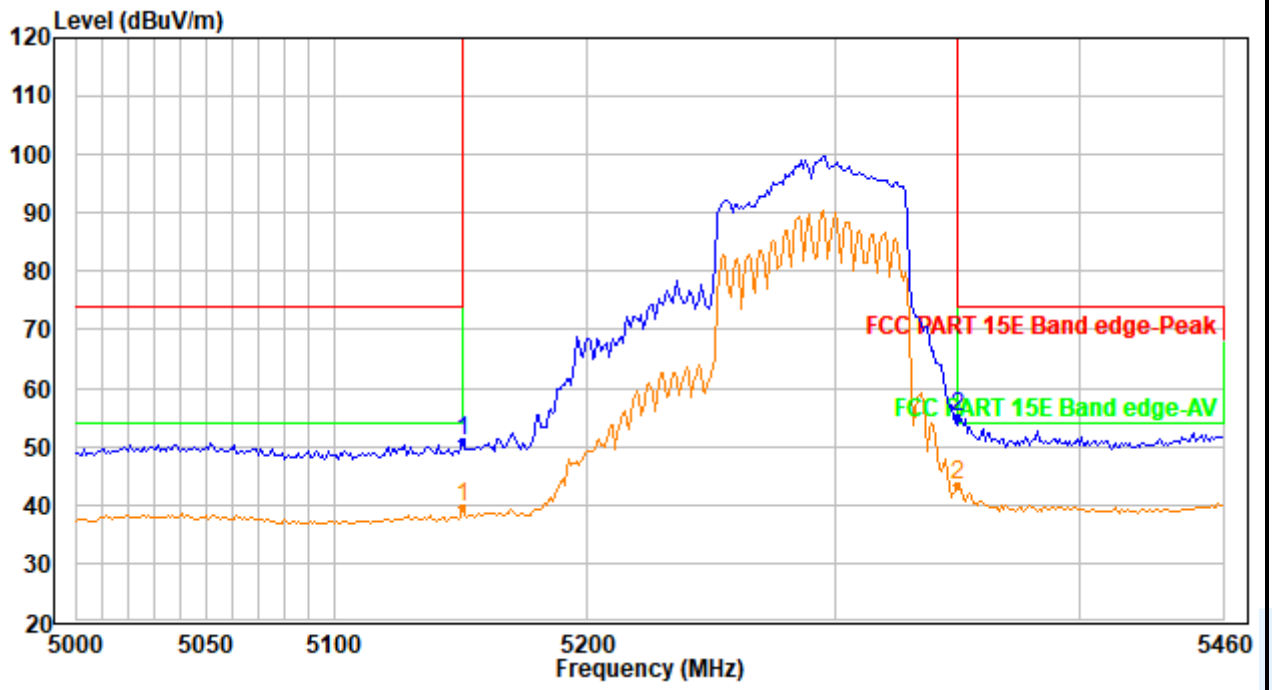
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	59.86	74.00	48.90	54.00	Pass
5350.000	52.34	74.00	40.53	54.00	Pass

Test Channel:	Channel 42	Ant. Polar. :	Vertical



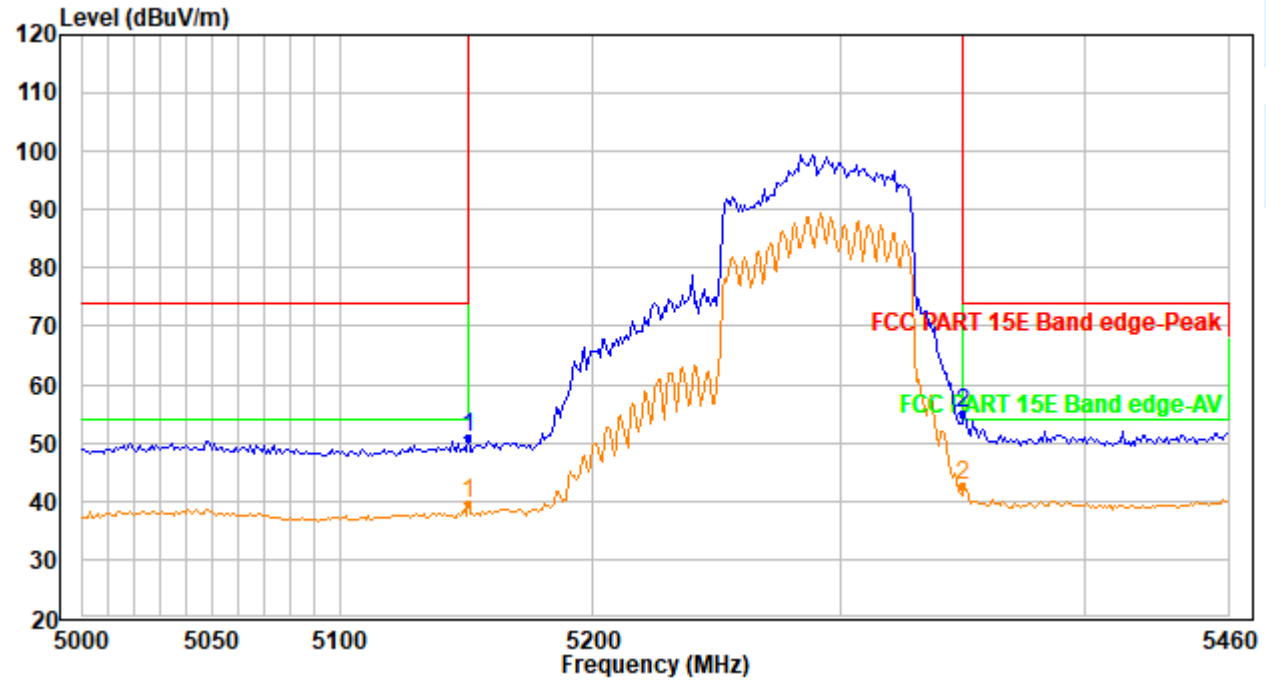
Frequency (MHz)	Peak level (dBμV/m)	Peak Limit (dBμV/m)	AV level (dBμV/m)	AV Limit (dBμV/m)	Conclusion
5150.000	58.22	74.00	46.04	54.00	Pass
5350.000	53.00	74.00	39.71	54.00	Pass

Test Channel:	Channel 58	Ant. Polar. :	Horizontal



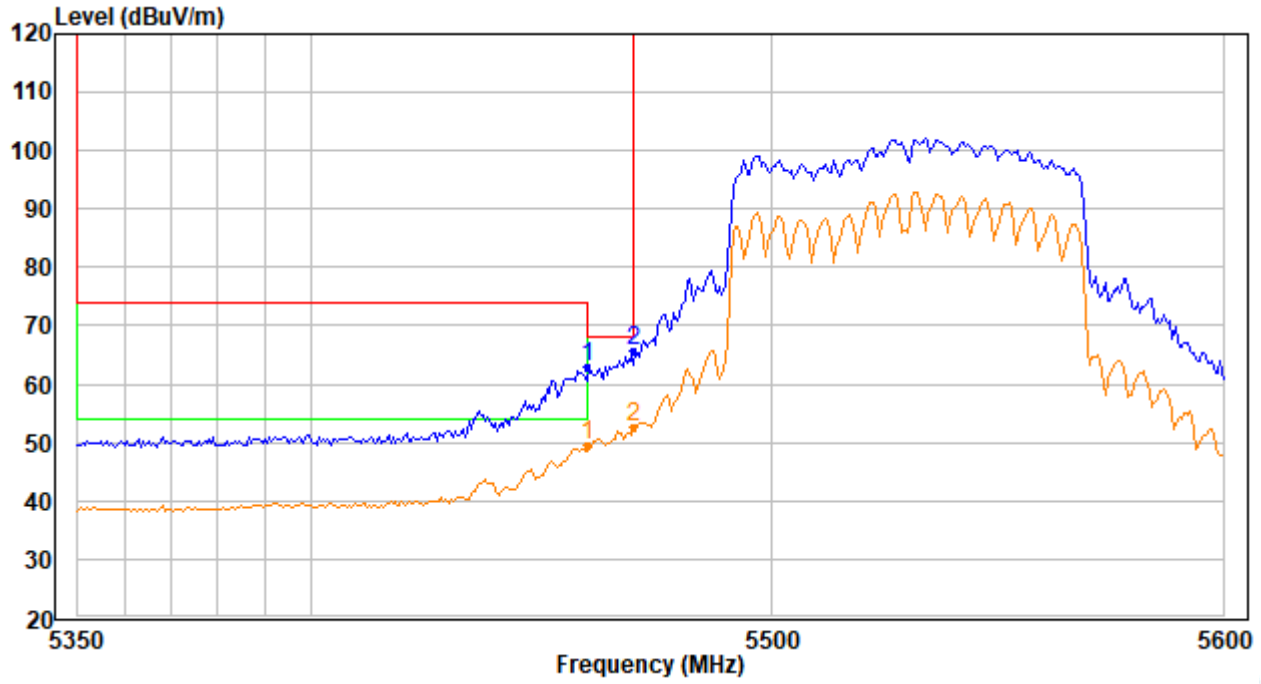
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	50.91	74.00	39.62	54.00	Pass
5350.000	55.12	74.00	43.24	54.00	Pass

Test Channel:	Channel 58	Ant. Polar. :	Vertical



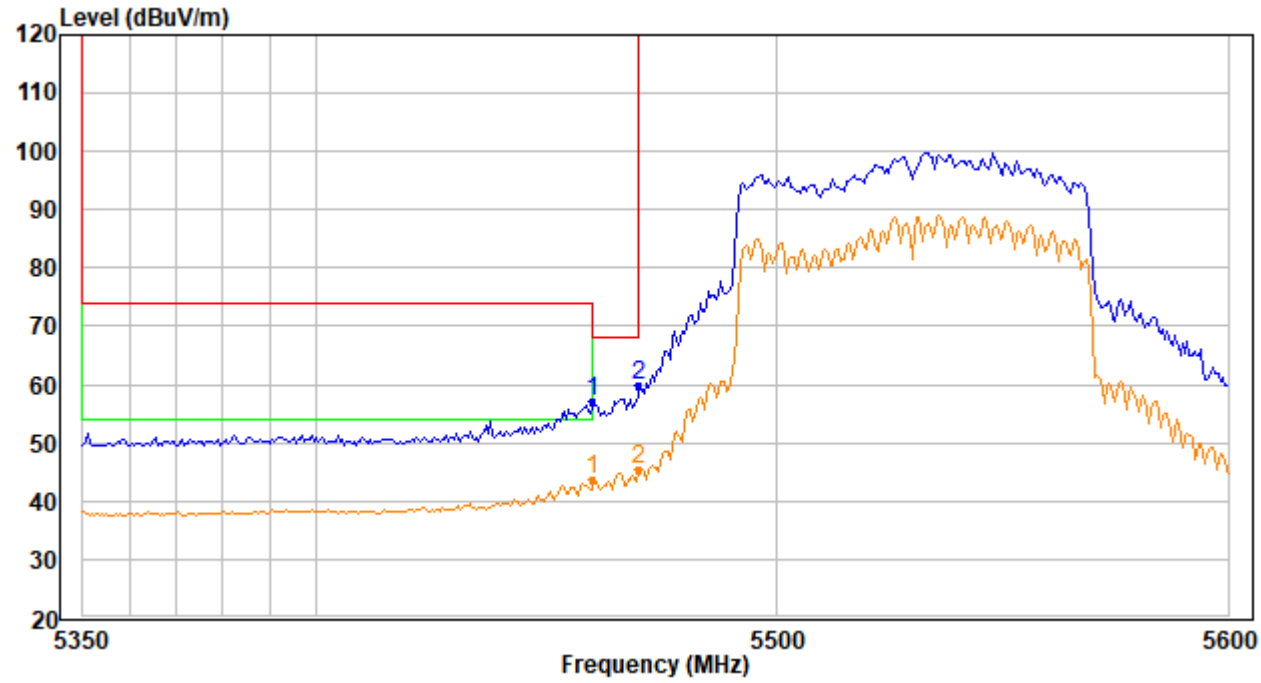
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	51.03	74.00	39.57	54.00	Pass
5350.000	54.97	74.00	42.54	54.00	Pass

Test Channel:	Channel 106	Ant. Polar. :	Horizontal



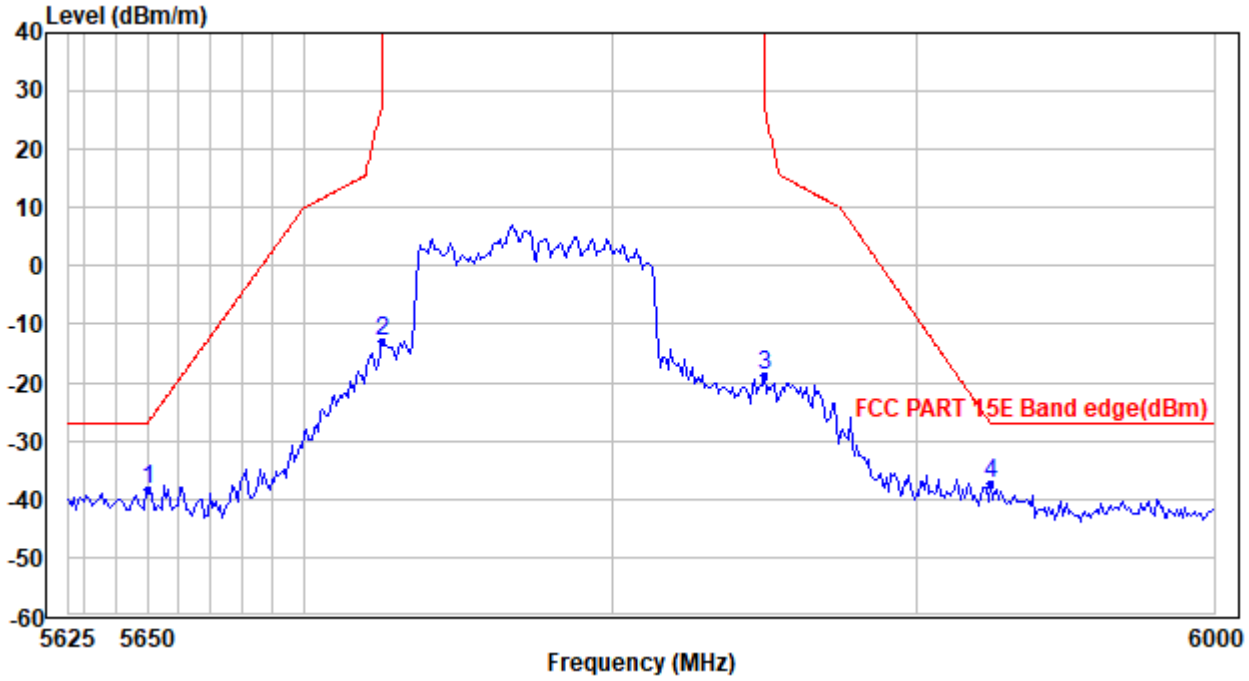
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	62.82	74.00	49.58	54.00	Pass
5470.000	65.77	68.20	52.66	54.00	Pass

Test Channel:	Channel 106	Ant. Polar. :	Vertical



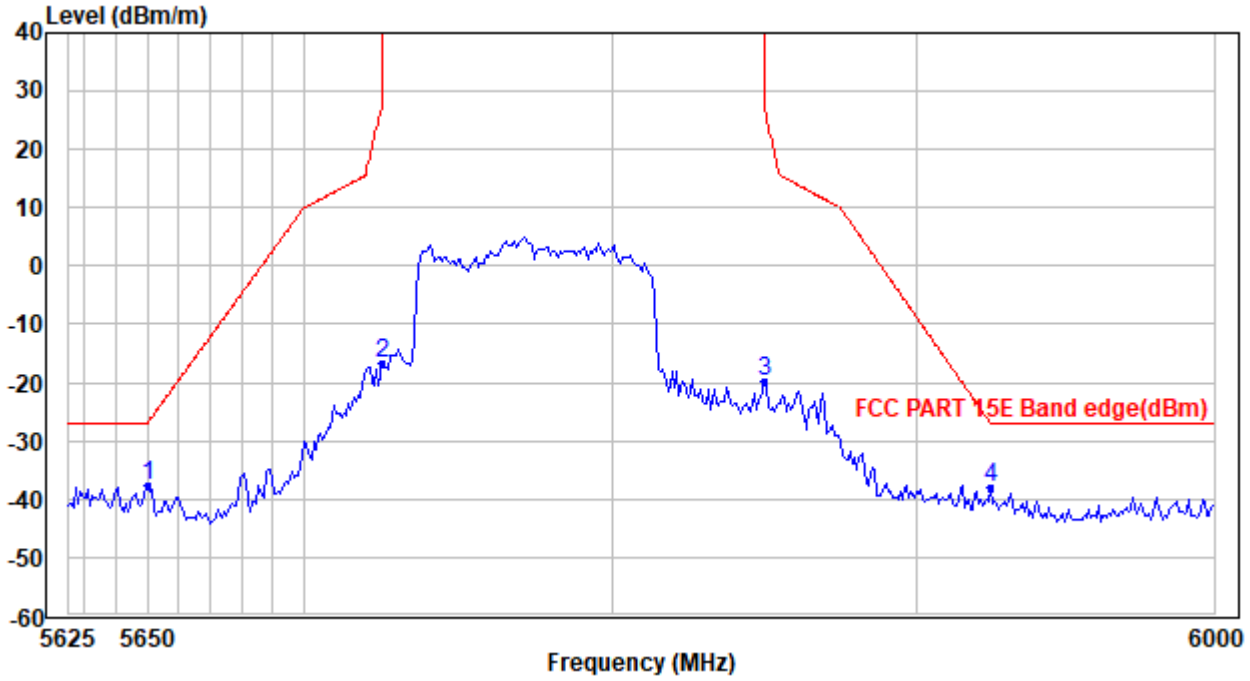
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	56.95	74.00	43.79	54.00	Pass
5470.000	60.03	68.20	45.37	54.00	Pass

Test Channel:	Channel 155	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-38.31	-27	Pass
5725.000	-12.91	27	Pass
5850.000	-18.88	27	Pass
5925.000	-37.43	-27	Pass

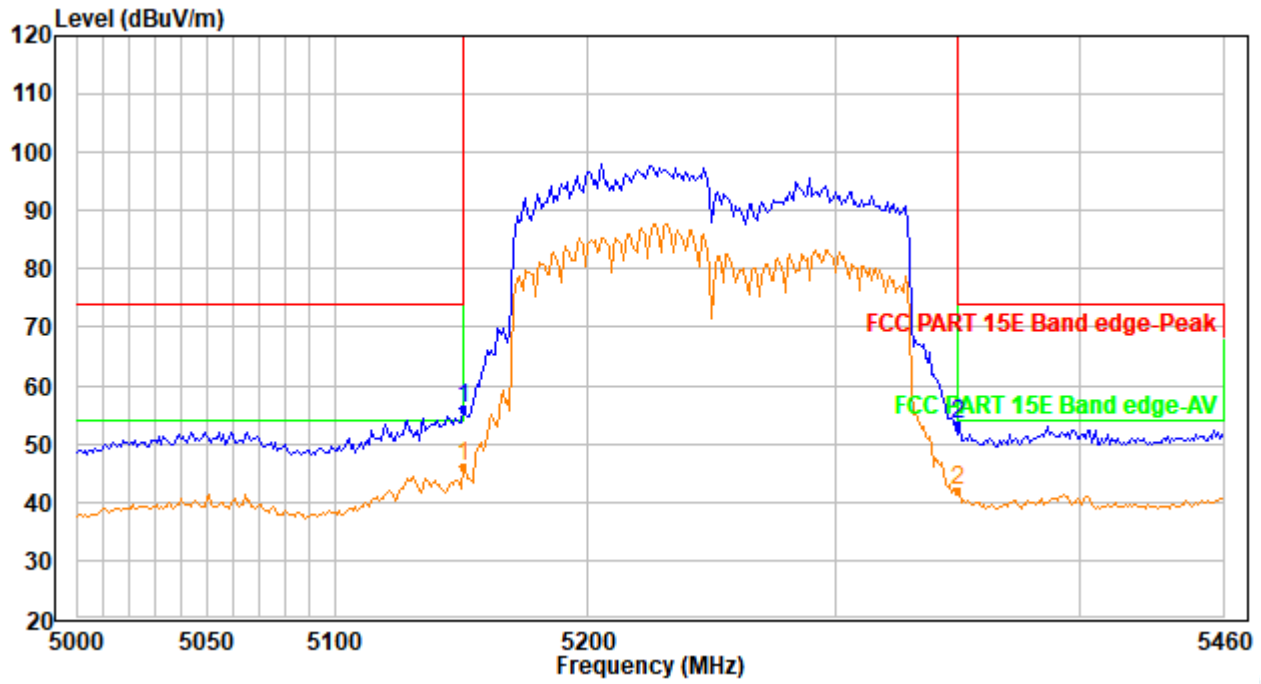
Test Channel:	Channel 155	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-37.68	-27	Pass
5725.000	-16.57	27	Pass
5850.000	-19.96	27	Pass
5925.000	-37.96	-27	Pass

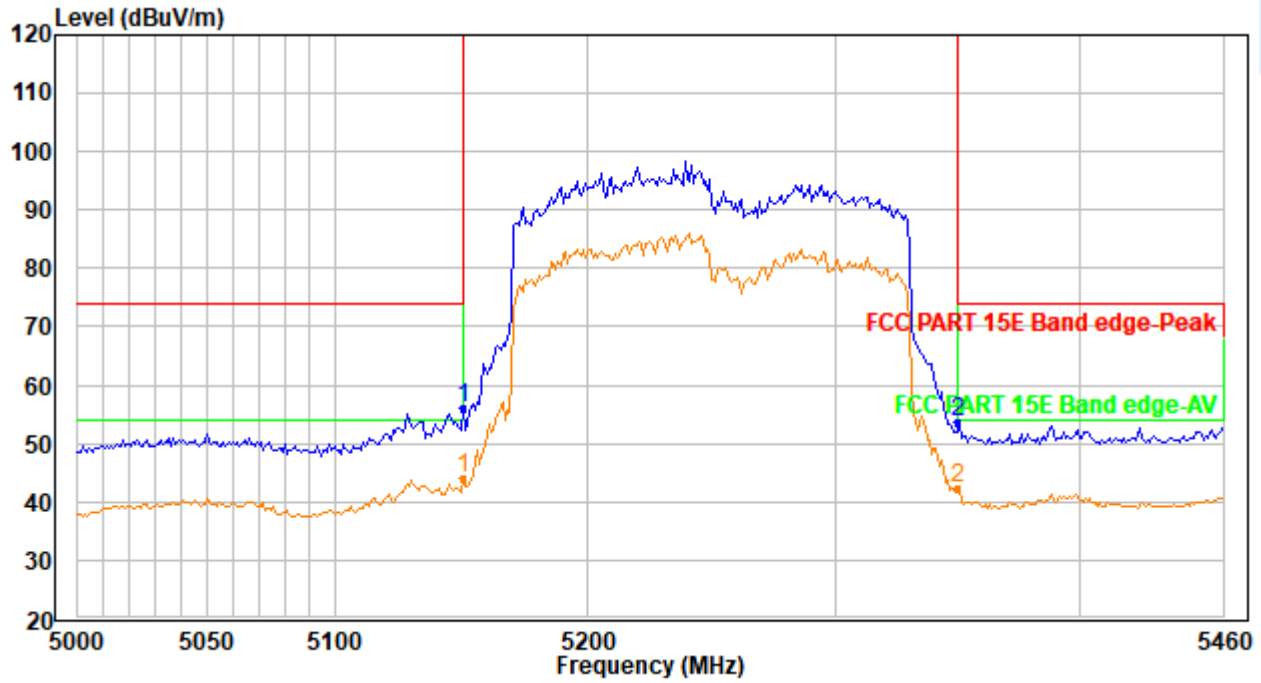
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT160

Test Channel:	Channel 50	Ant. Polar. :	Vertical



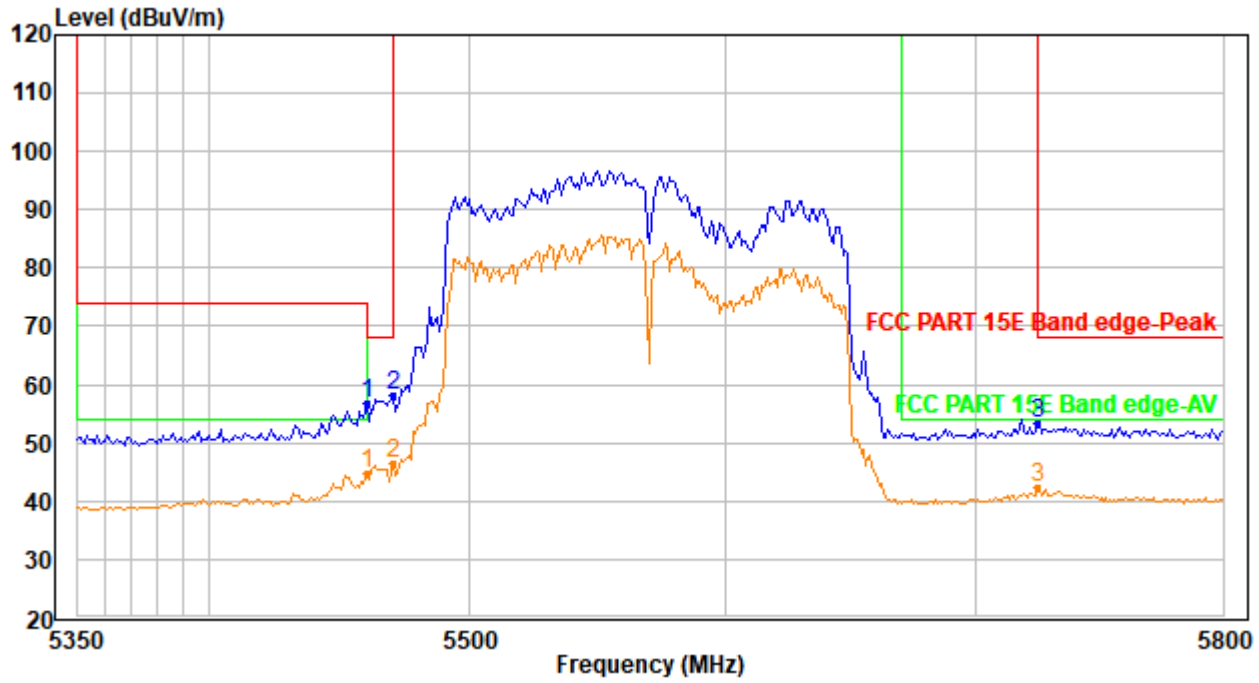
Frequency (MHz)	Peak level (dBμV/m)	Peak Limit (dBμV/m)	AV level (dBμV/m)	AV Limit (dBμV/m)	Conclusion
5150.000	55.96	74.00	46.23	54.00	Pass
5350.000	53.43	74.00	42.07	54.00	Pass

Test Channel:	Channel 50	Ant. Polar. :	Vertical



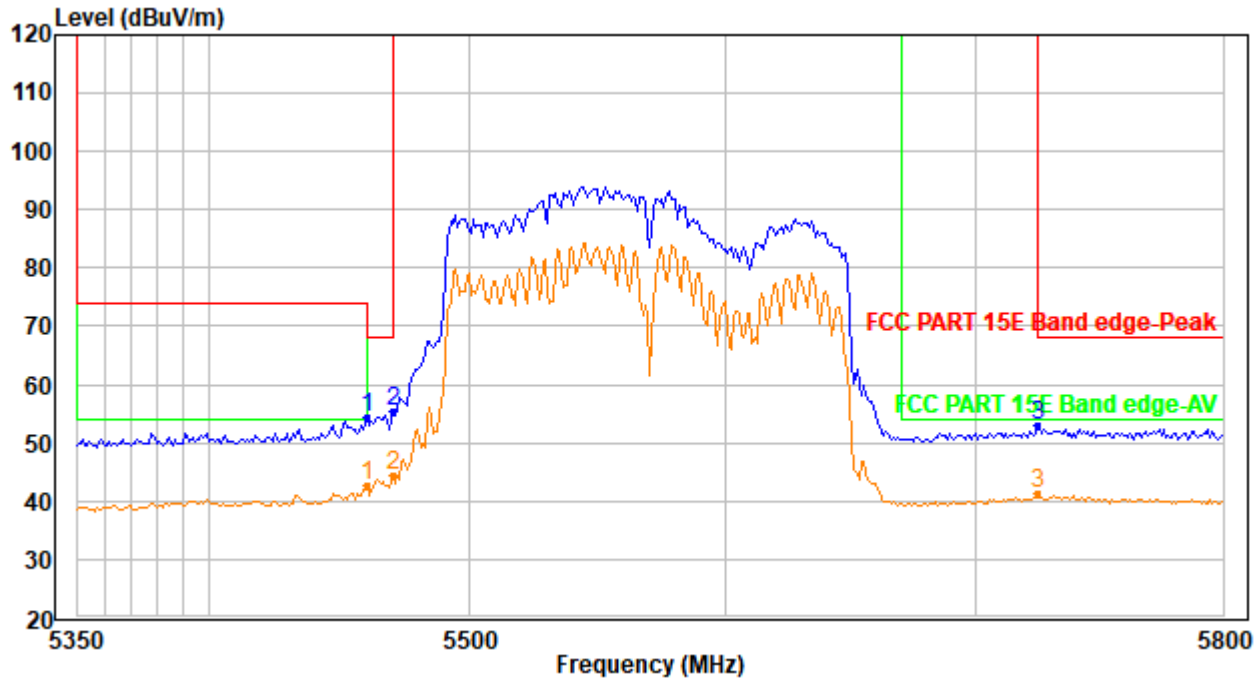
Frequency (MHz)	Peak level (dBμV/m)	Peak Limit (dBμV/m)	AV level (dBμV/m)	AV Limit (dBμV/m)	Conclusion
5150.000	56.09	74.00	44.14	54.00	Pass
5350.000	53.62	74.00	42.28	54.00	Pass

Test Channel:	Channel 114	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	54.53	74.00	42.58	54.00	Pass
5470.000	55.52	74.00	44.49	54.00	Pass
5725.000	53.00	74.00	41.37	54.00	Pass

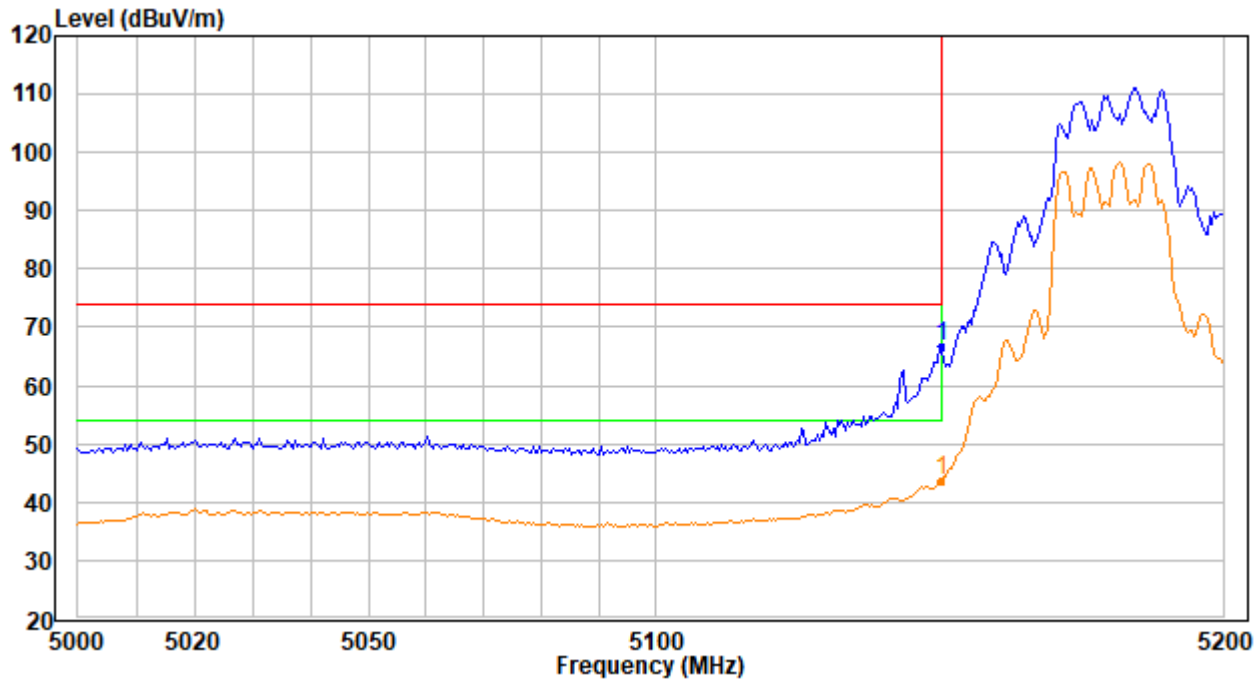
Test Channel:	Channel 114	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	56.72	74.00	44.82	54.00	Pass
5470.000	58.13	74.00	46.44	54.00	Pass
5725.000	53.30	74.00	42.29	54.00	Pass

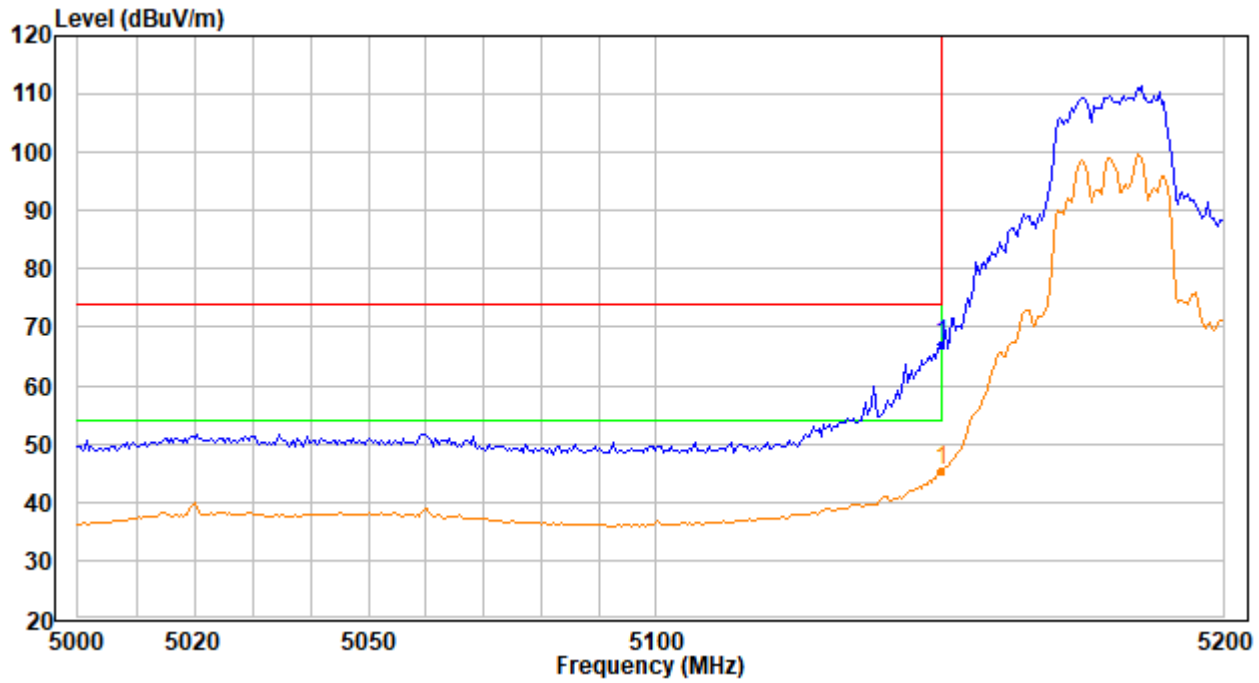
MIMO_ Ant. 0+1+2_IEEE 802.11ax-HE20_SU

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



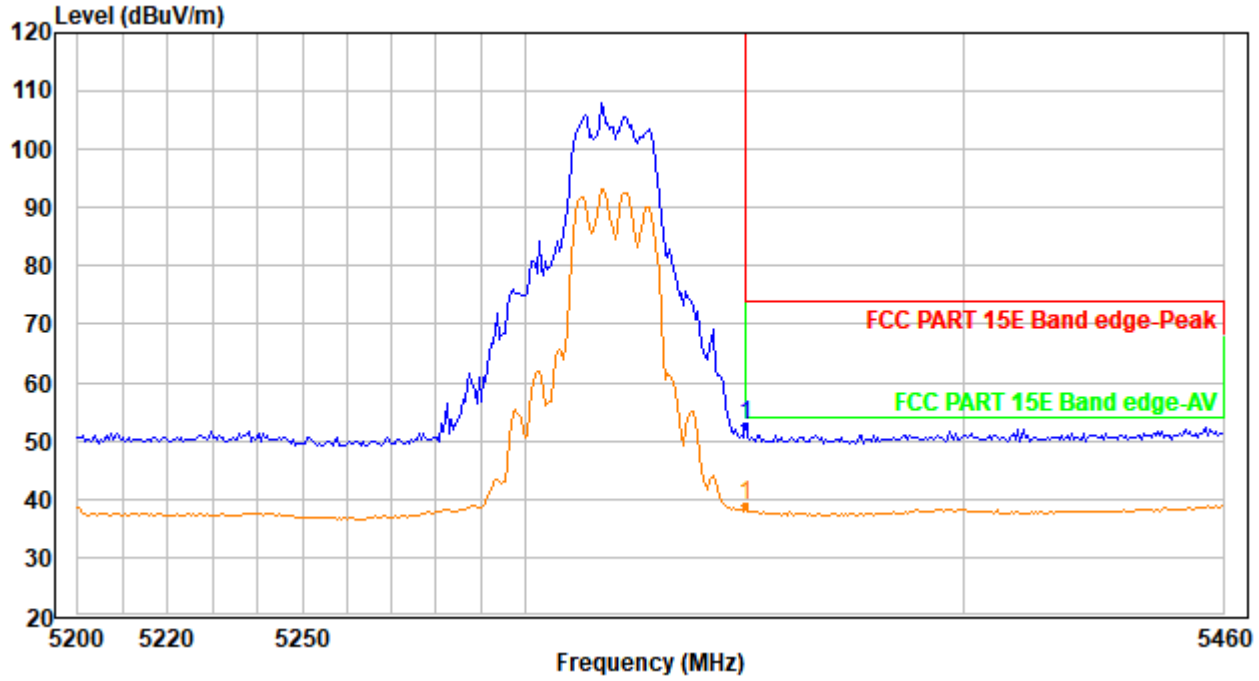
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	66.82	74.00	43.79	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



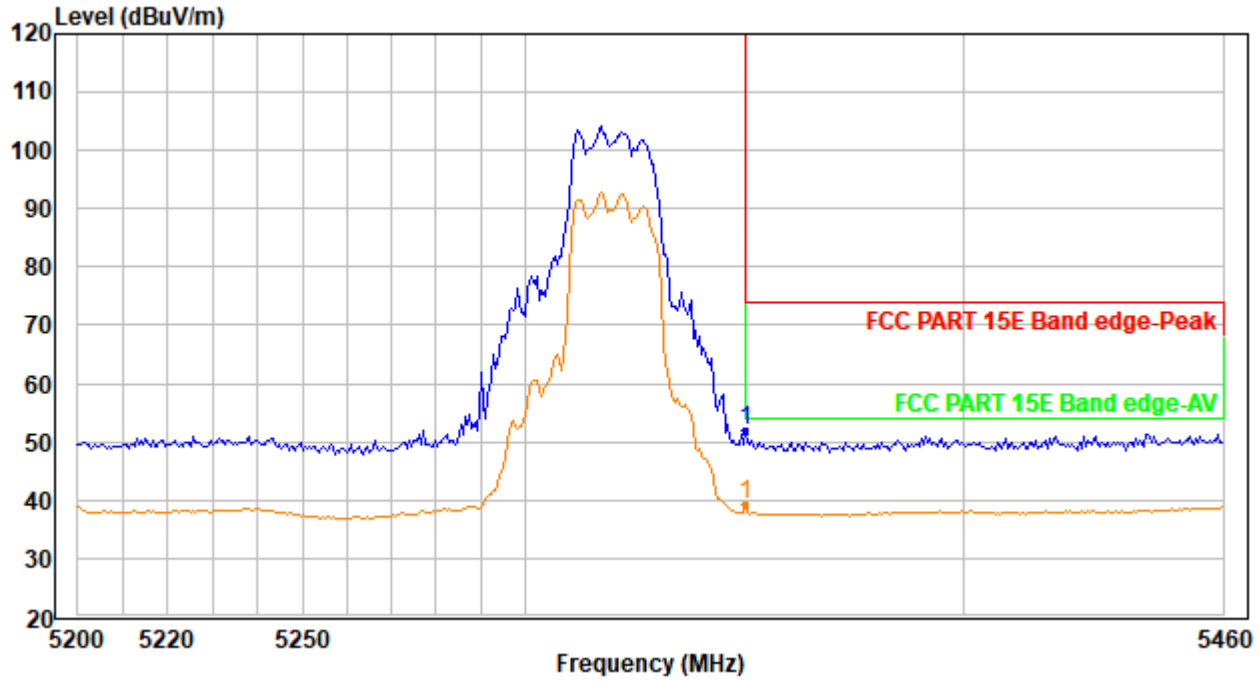
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	66.95	74.00	45.41	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



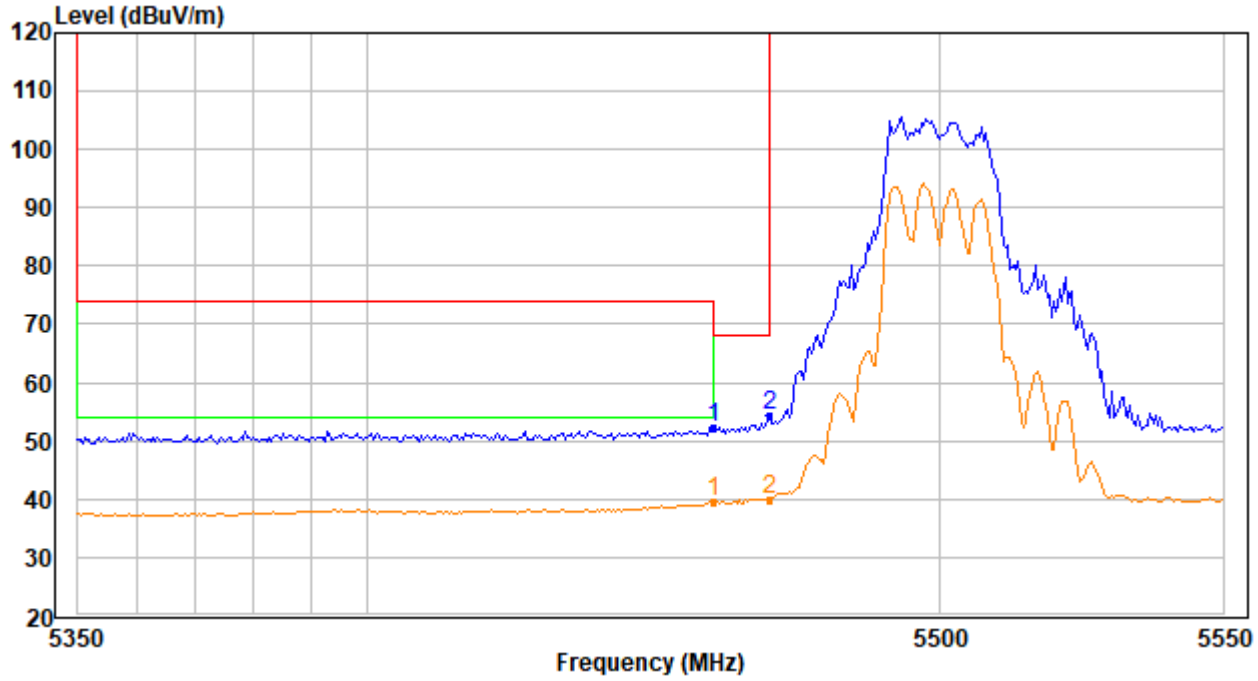
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	52.53	74.00	39.01	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



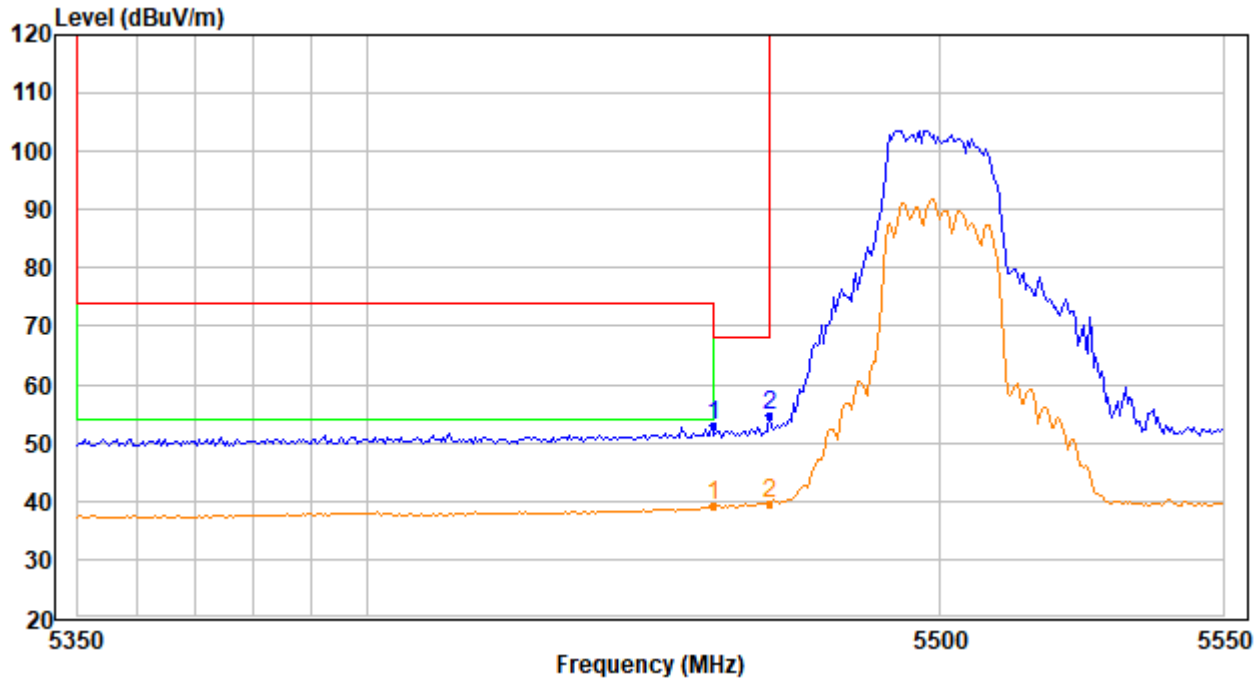
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	51.97	74.00	39.12	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



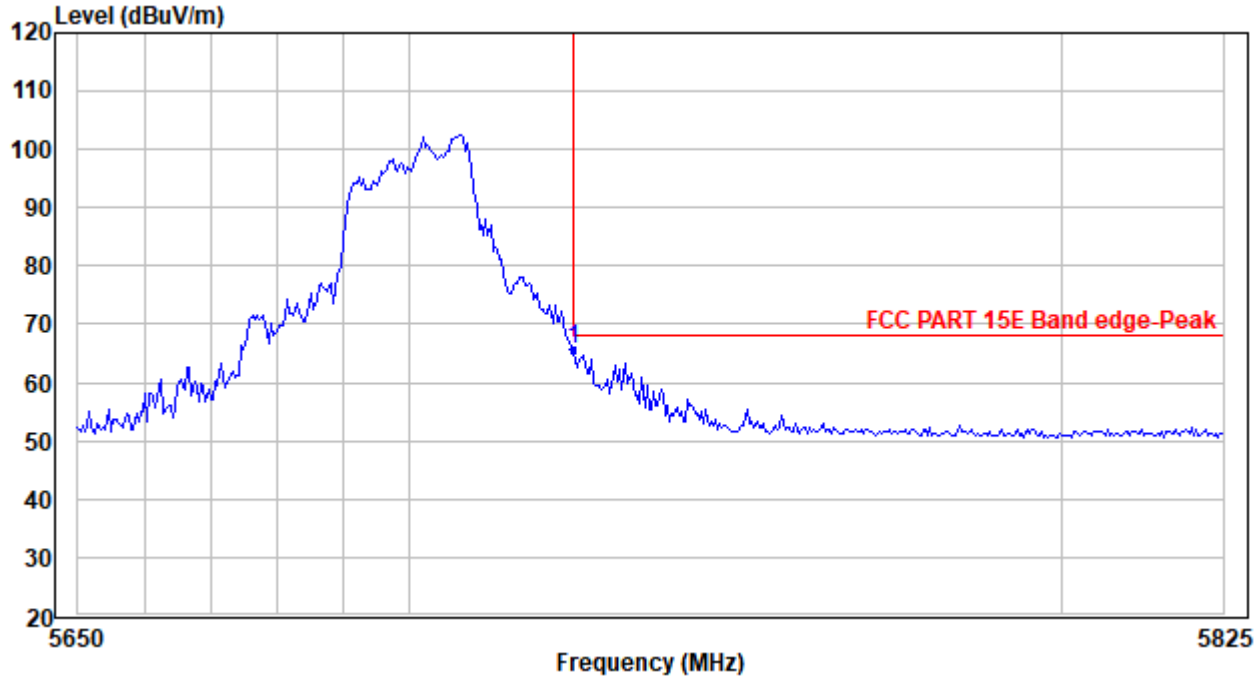
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	52.17	74.00	39.52	54.00	Pass
5470.000	54.27	68.20	40.09	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



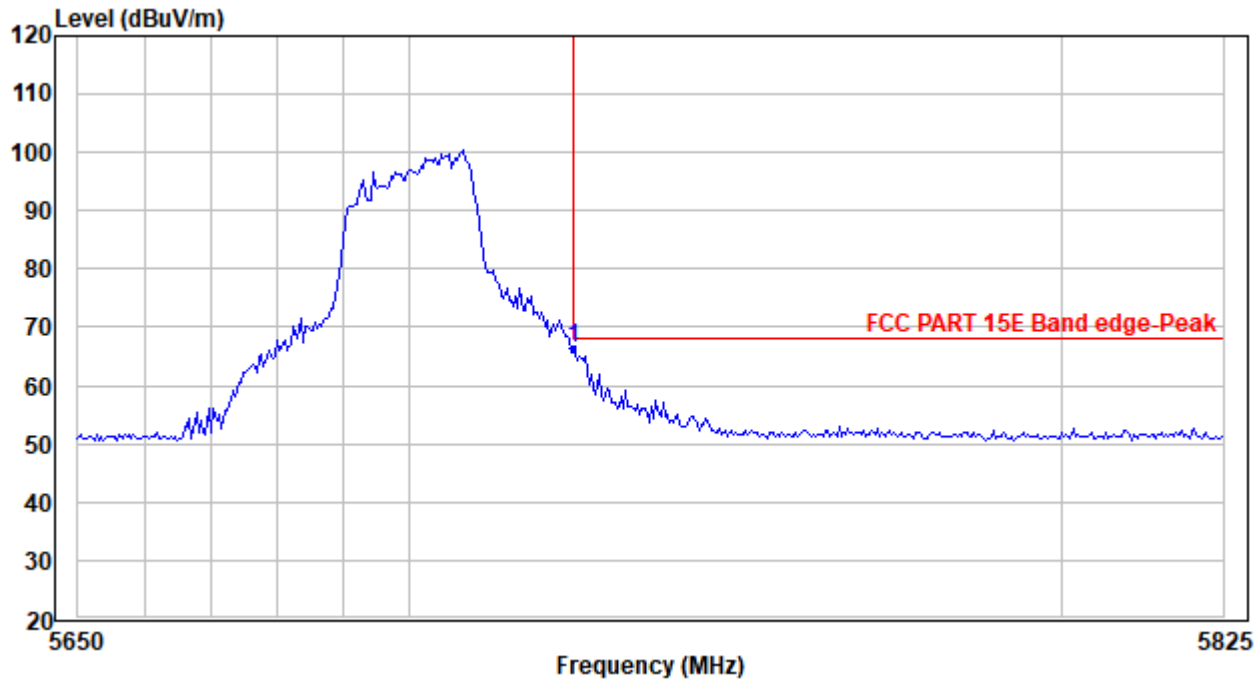
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	53.04	74.00	39.25	54.00	Pass
5470.000	54.65	68.20	39.66	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



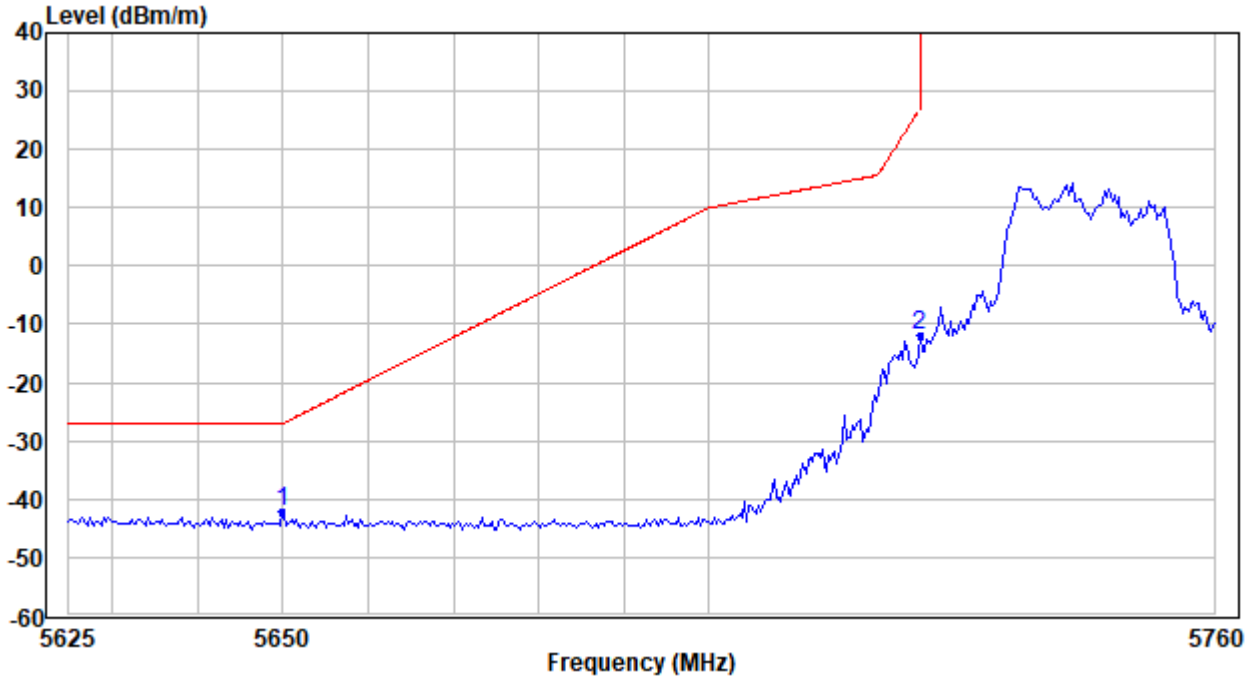
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	65.71	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



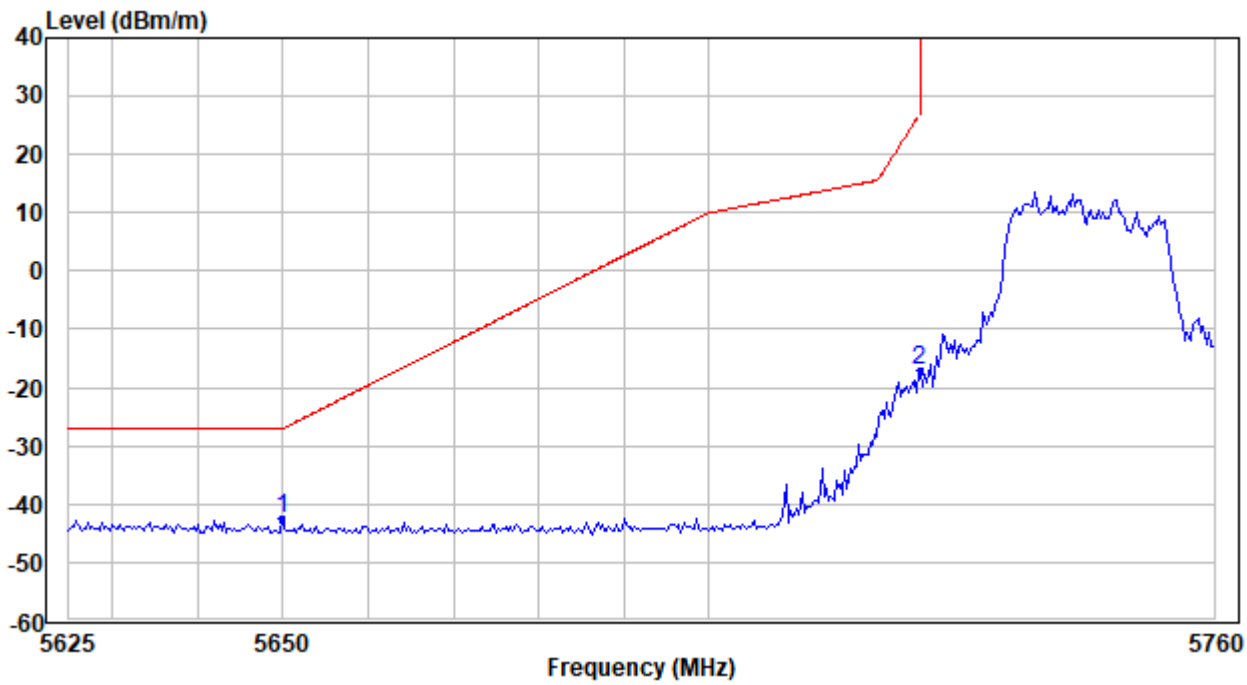
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	66.39	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



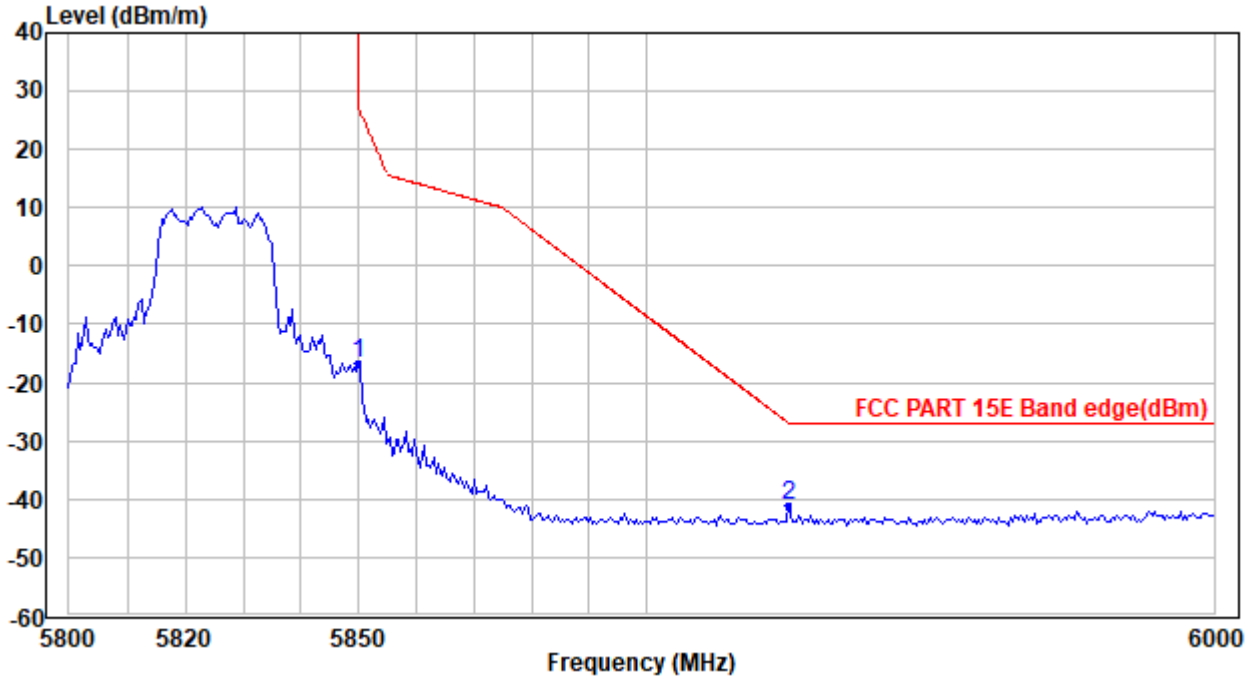
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.25	-27	Pass
5725.000	-11.74	26.97	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



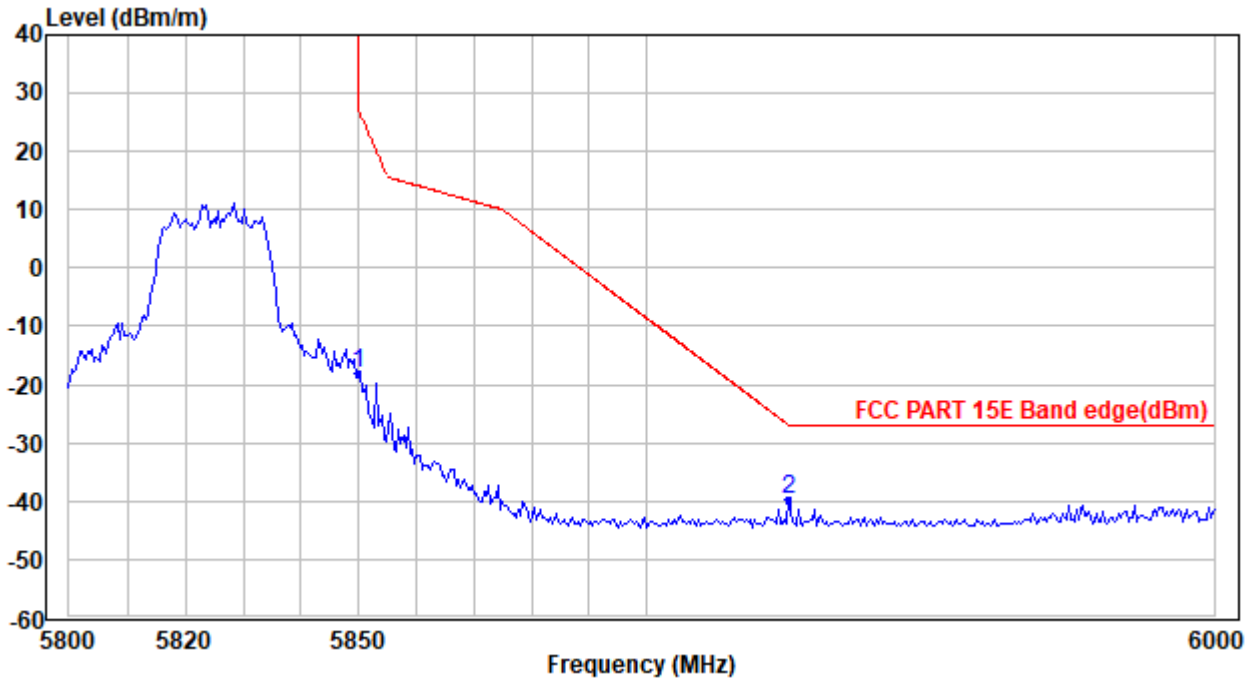
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.56	26.97	Pass
5725.000	-17.12	-27	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-16.86	26.94	Pass
5925.000	-41.07	-27	Pass

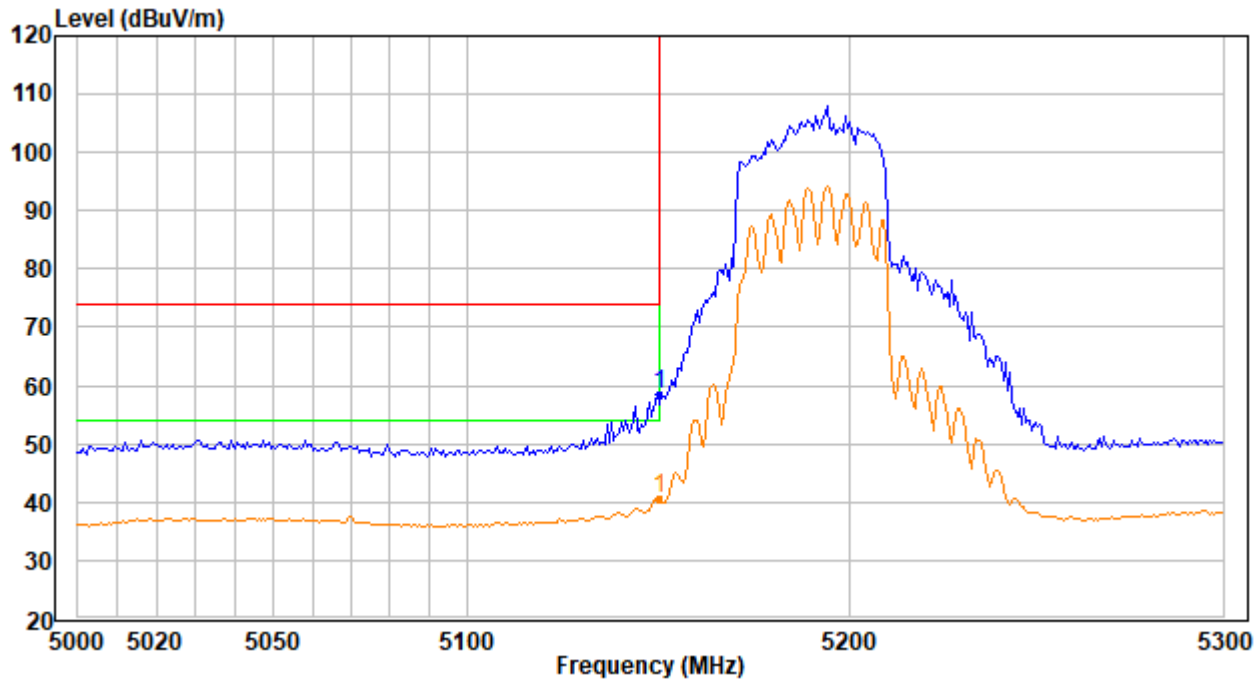
Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-18.12	26.94	Pass
5925.000	-39.83	-27	Pass

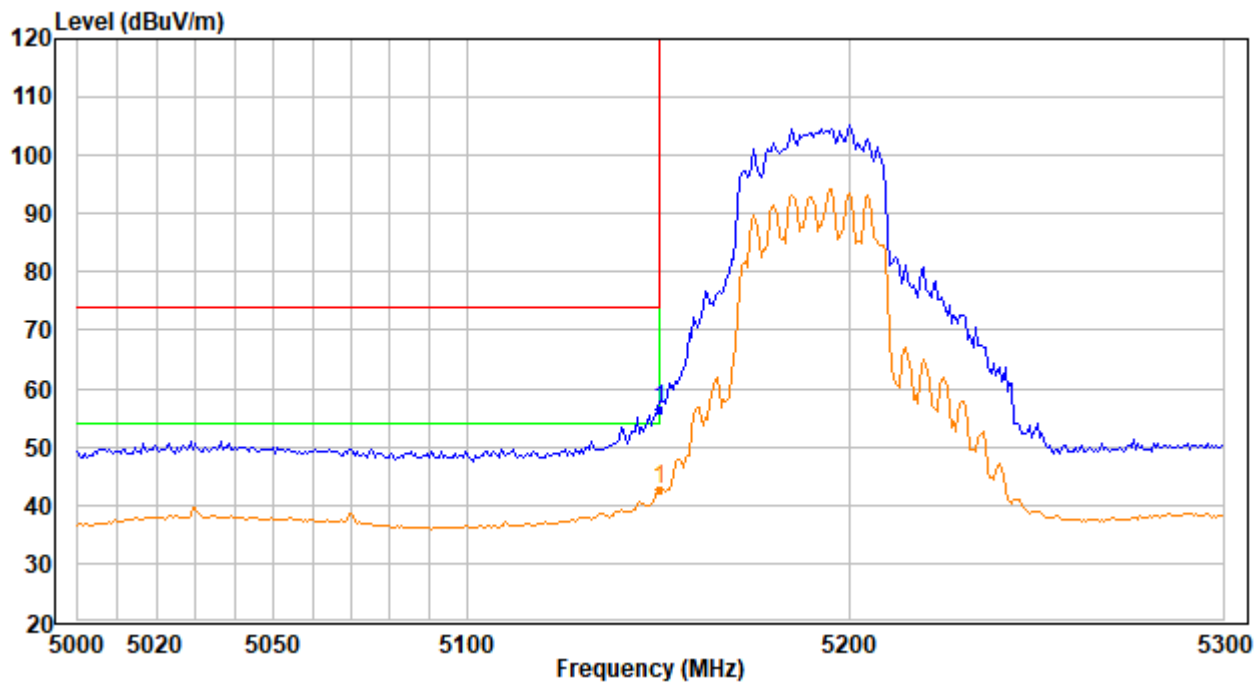
MIMO_ Ant. 0+1+2_IEEE 802.11ax-HE40_SU

Test Channel:	Channel 38	Ant. Polar. :	Horizontal



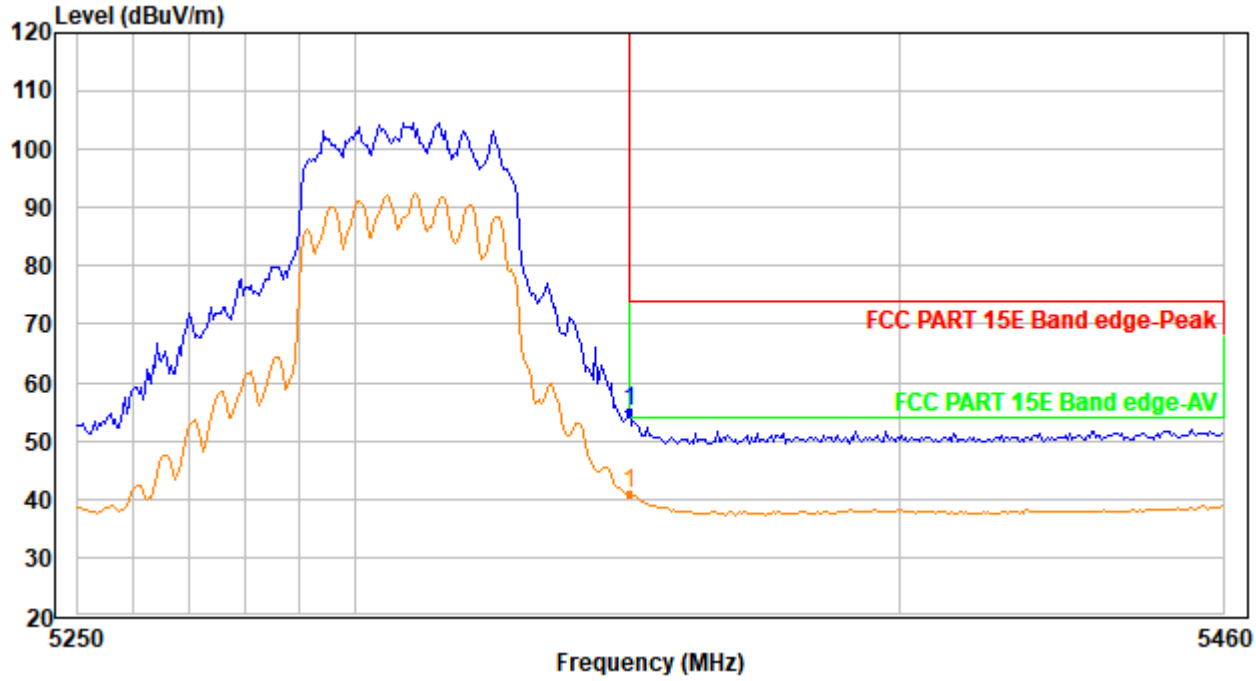
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	58.64	74.00	40.69	54.00	Pass

Test Channel:	Channel 38	Ant. Polar. :	Vertical



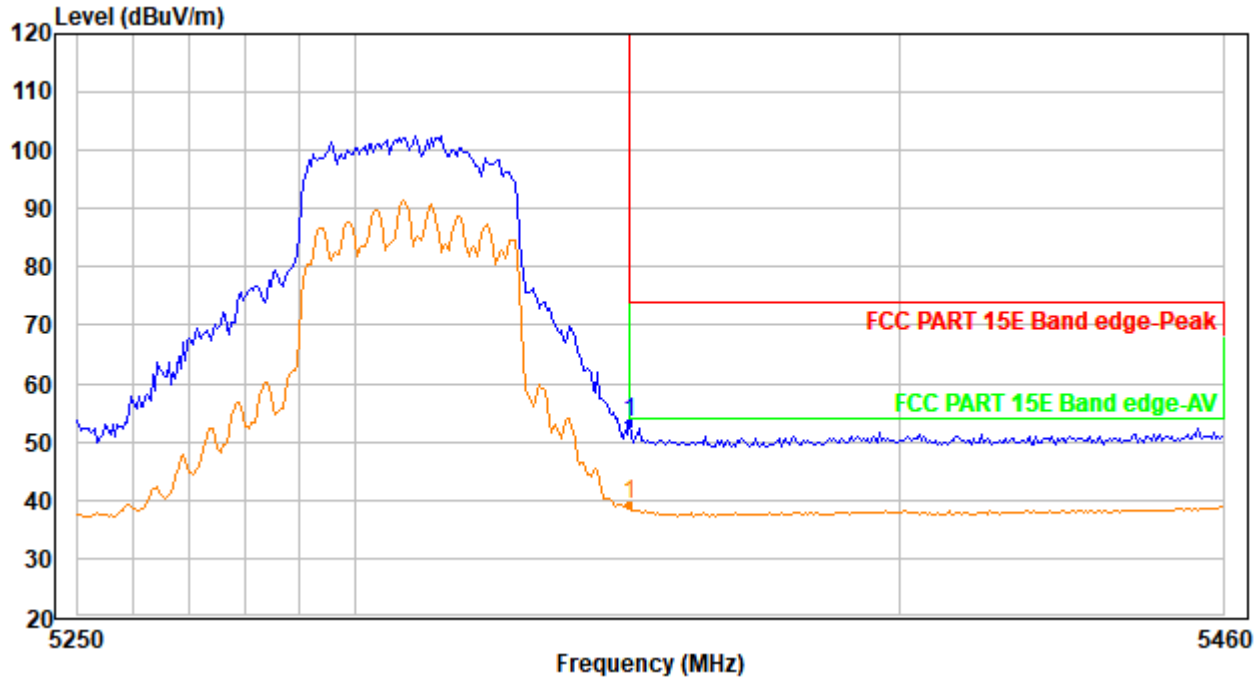
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	56.57	74.00	42.68	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Horizontal



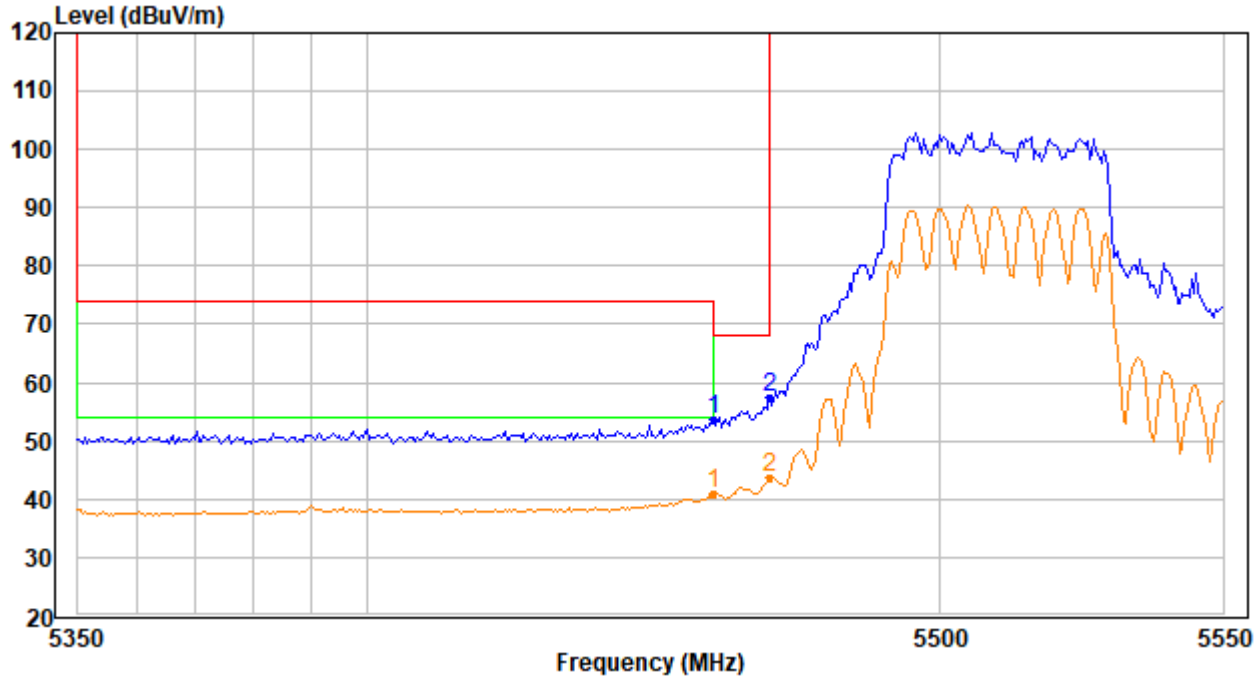
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	55.05	74.00	40.82	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Vertical



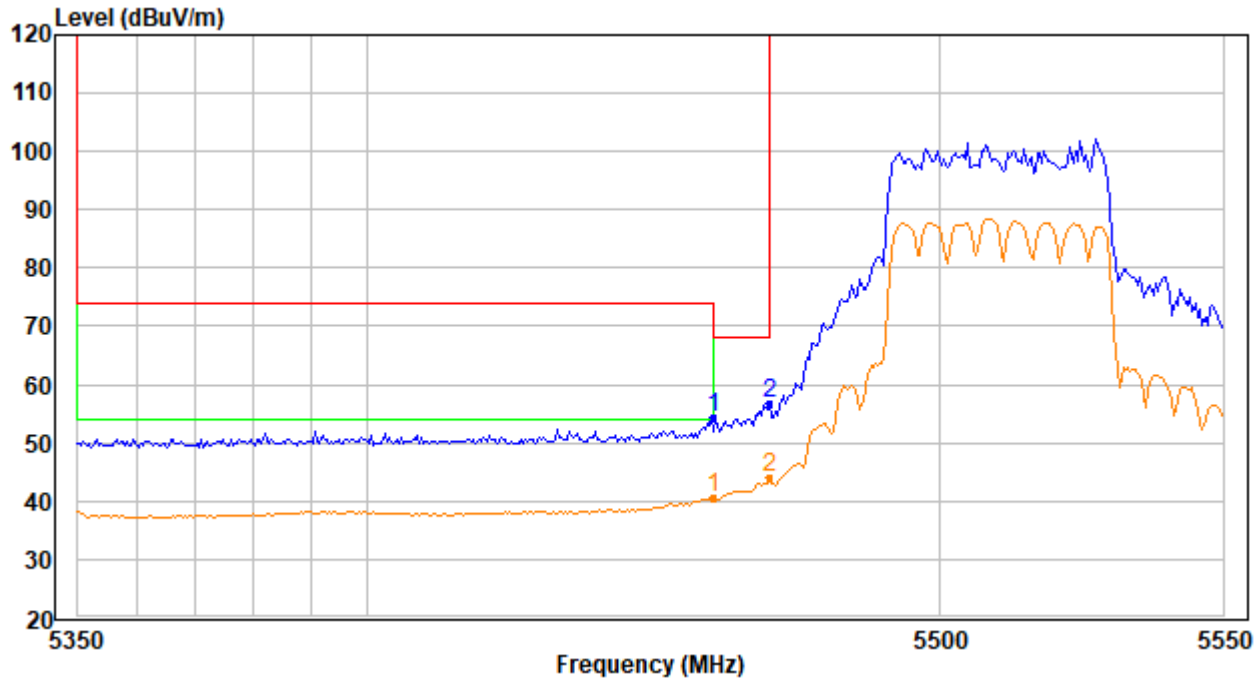
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.000	53.49	74.00	39.36	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Horizontal



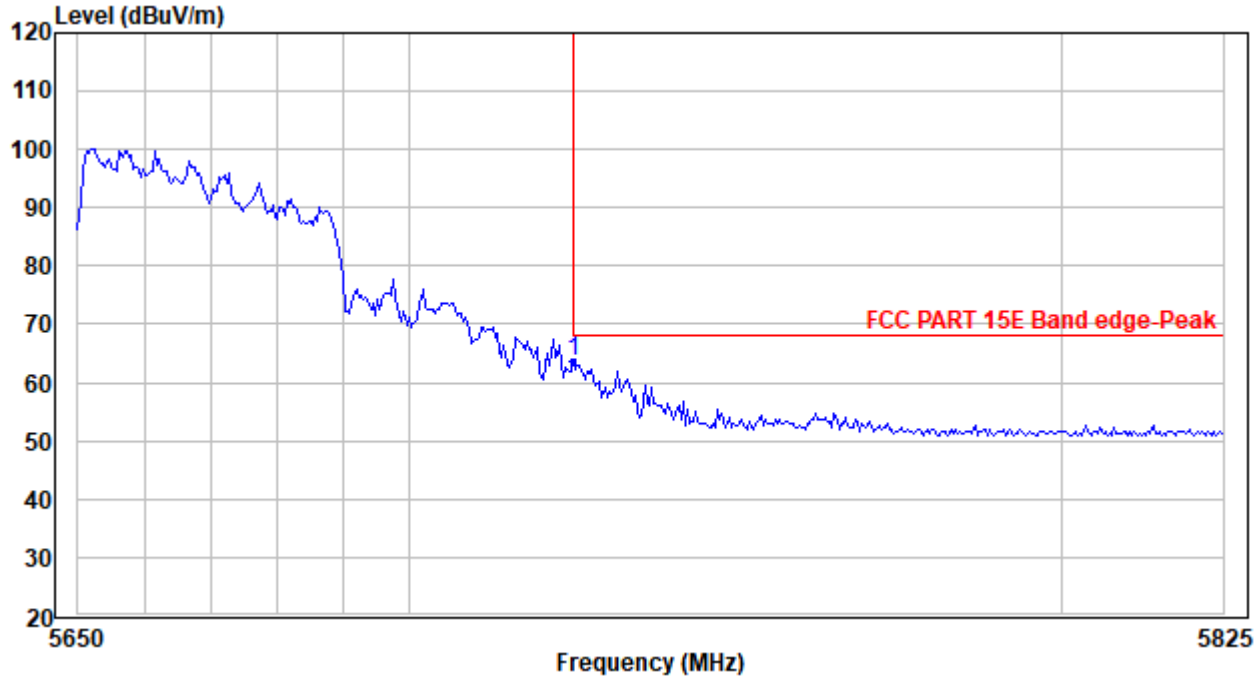
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	53.74	74.00	40.86	54.00	Pass
5470.000	57.36	68.20	43.65	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Vertical



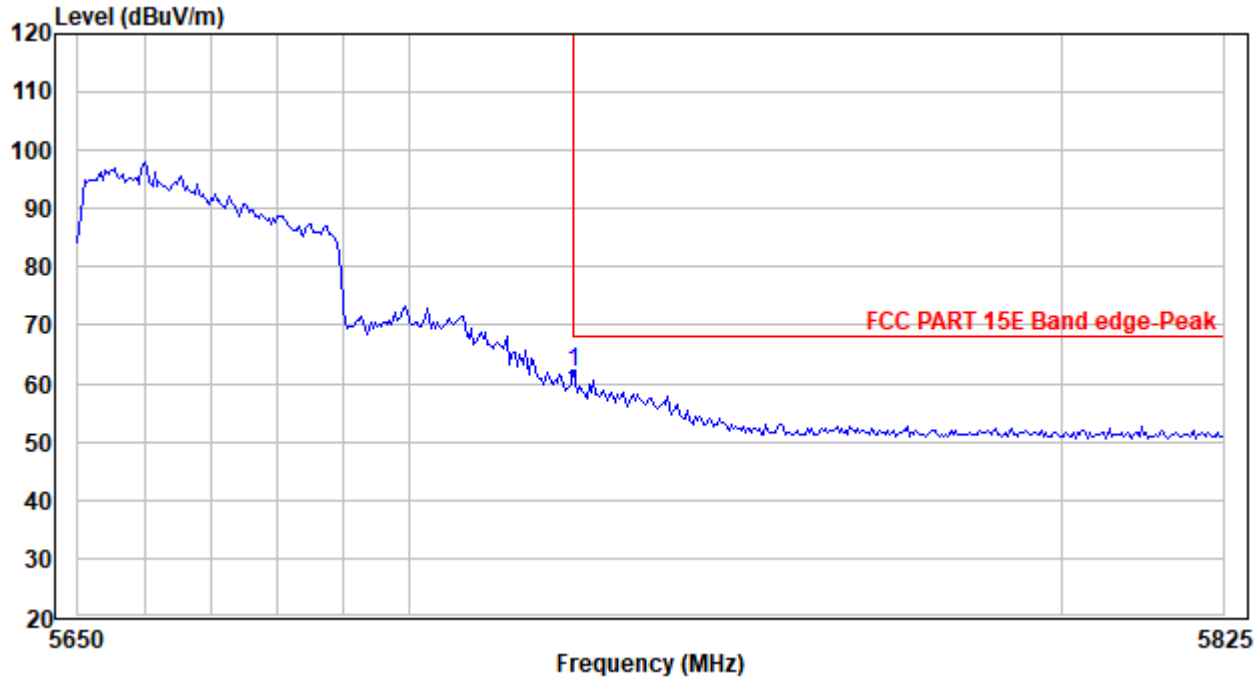
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	54.52	74.00	40.57	54.00	Pass
5470.000	56.94	68.20	44.21	54.00	Pass

Test Channel:	Channel 134	Ant. Polar. :	Horizontal



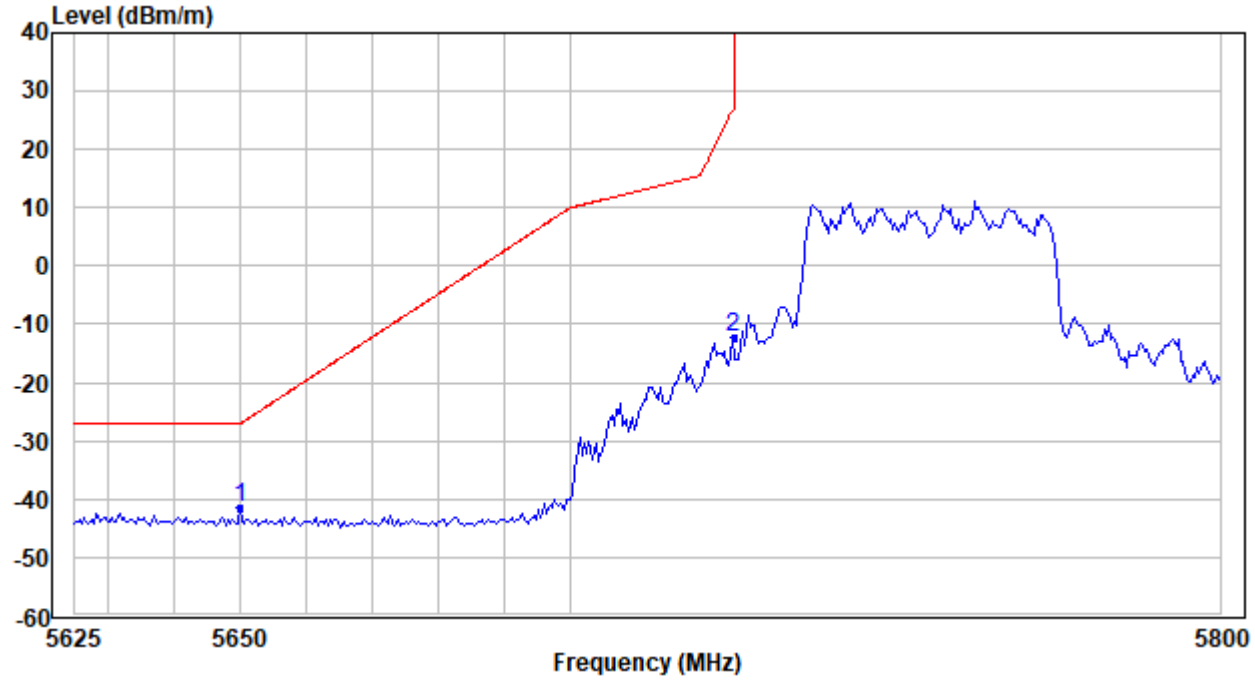
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	63.63	68.20	Pass

Test Channel:	Channel 134	Ant. Polar. :	Vertical



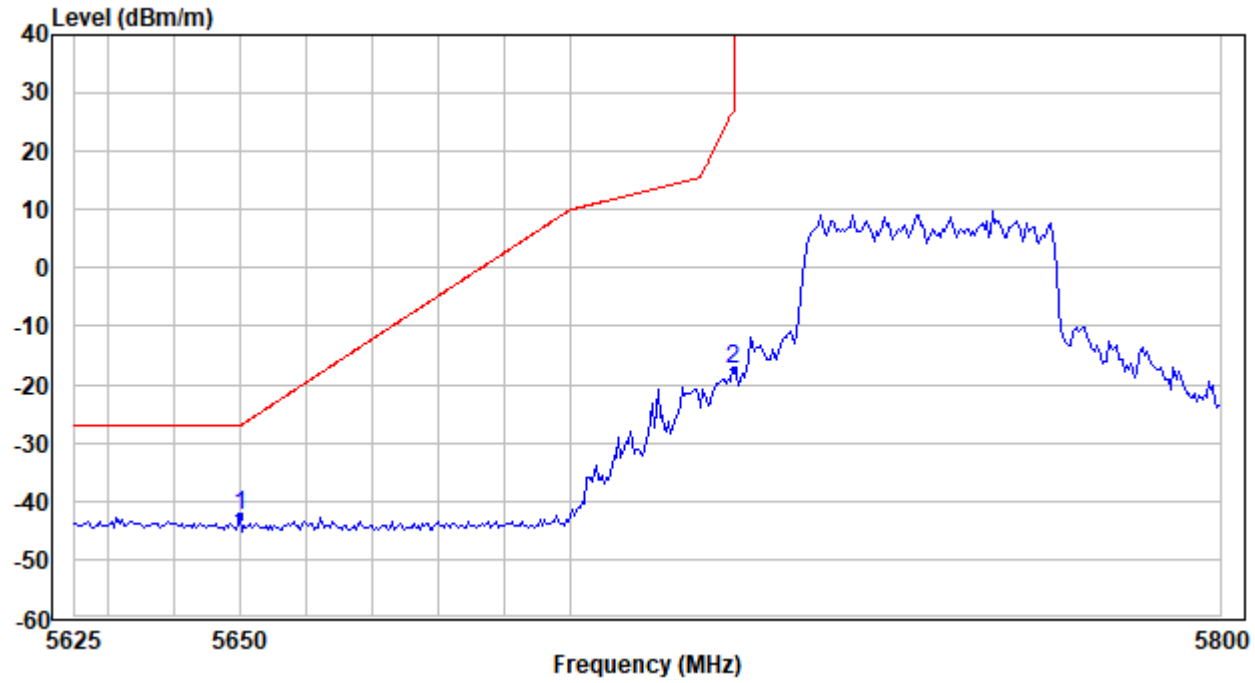
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.000	62.07	68.20	Pass

Test Channel:	Channel 151	Ant. Polar. :	Horizontal



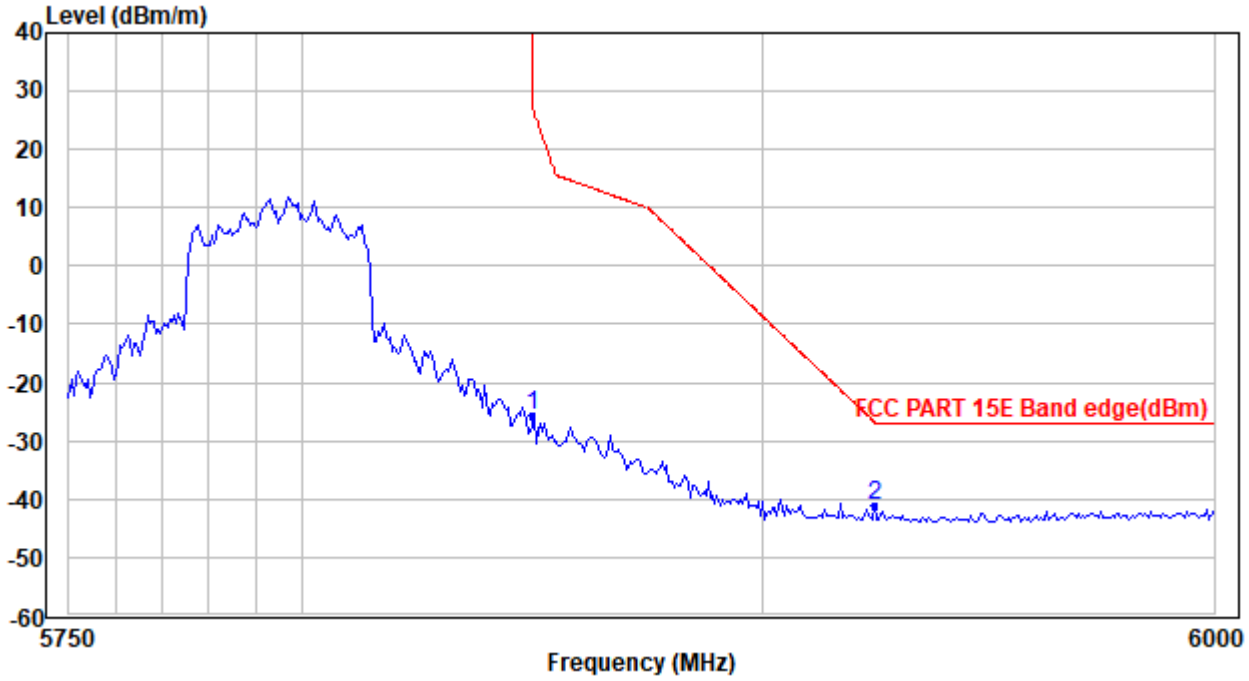
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-41.59	-27	Pass
5725.000	-12.20	26.97	Pass

Test Channel:	Channel 151	Ant. Polar. :	Vertical



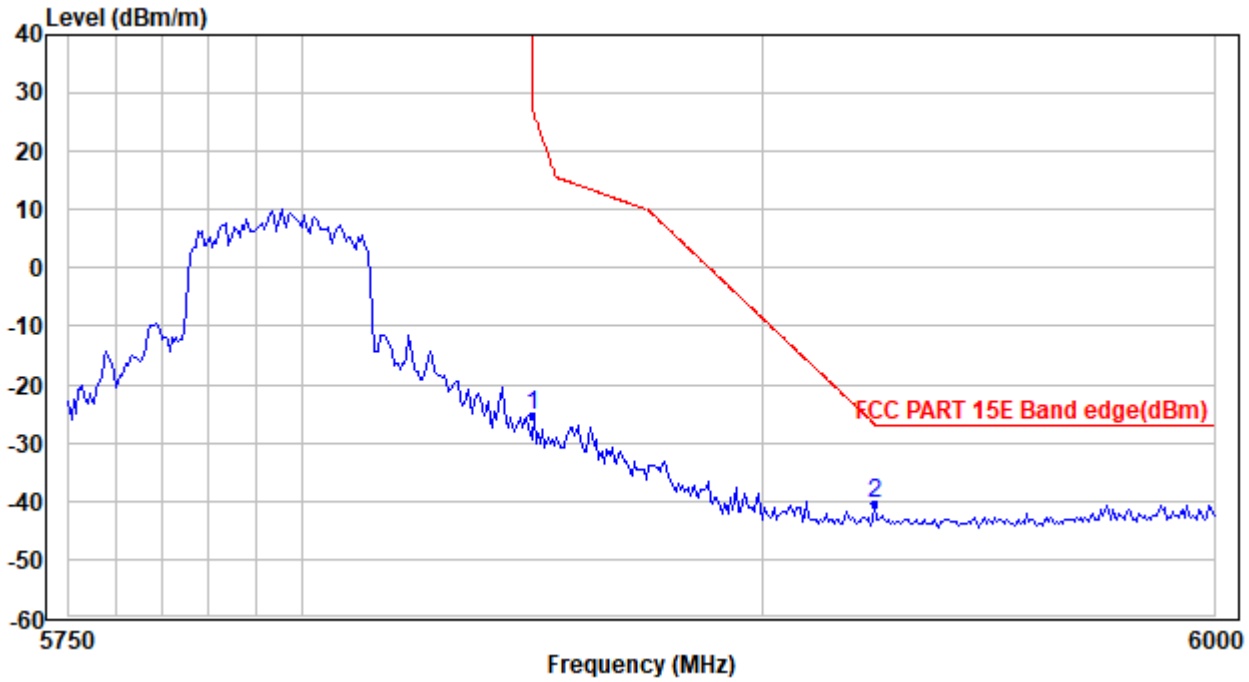
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-42.36	-27	Pass
5725.000	-17.27	26.97	Pass

Test Channel:	Channel 159	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-25.44	26.94	Pass
5925.000	-40.34	-27	Pass

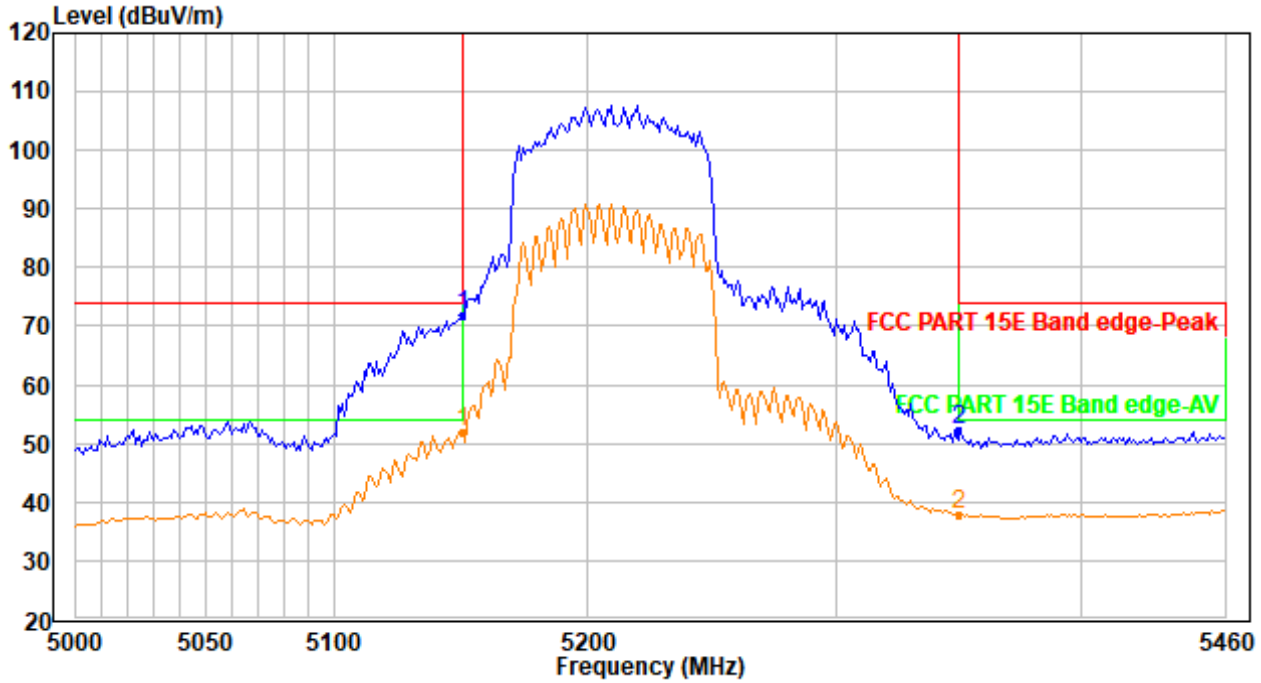
Test Channel:	Channel 159	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.000	-25.78	26.94	Pass
5925.000	-40.98	-27	Pass

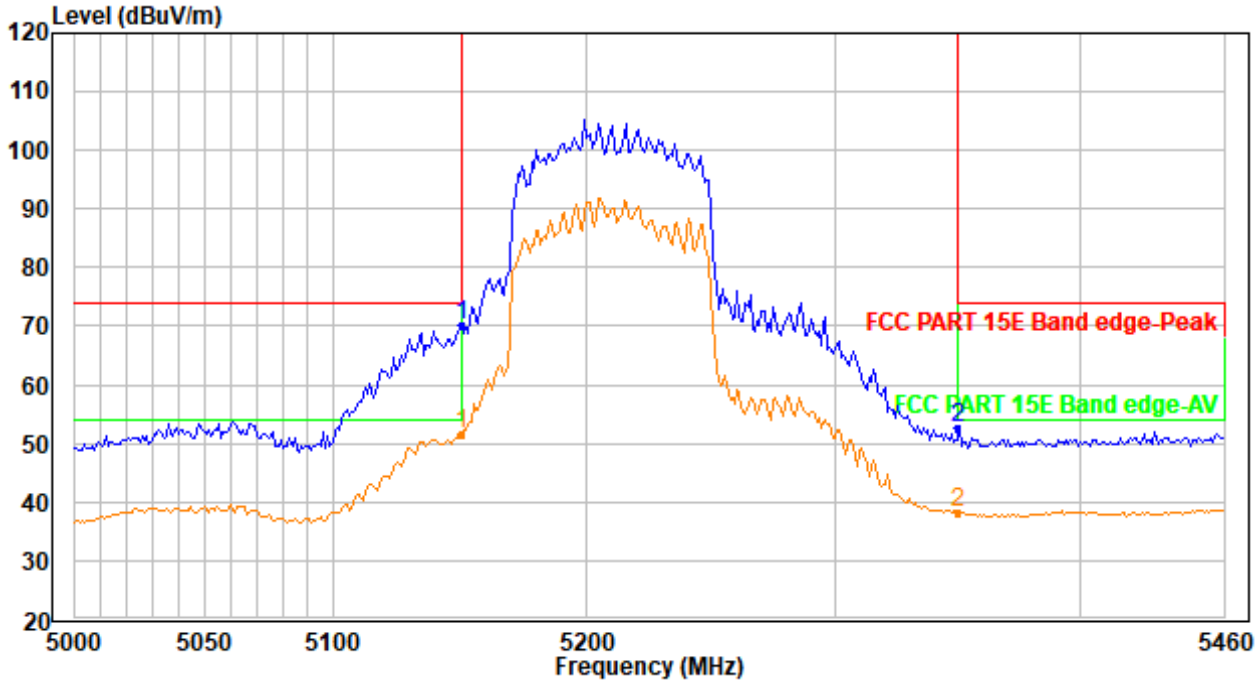
MIMO_ Ant. 0+1+2_IEEE 802.11ax-HE80

Test Channel:	Channel 42	Ant. Polar. :	Horizontal



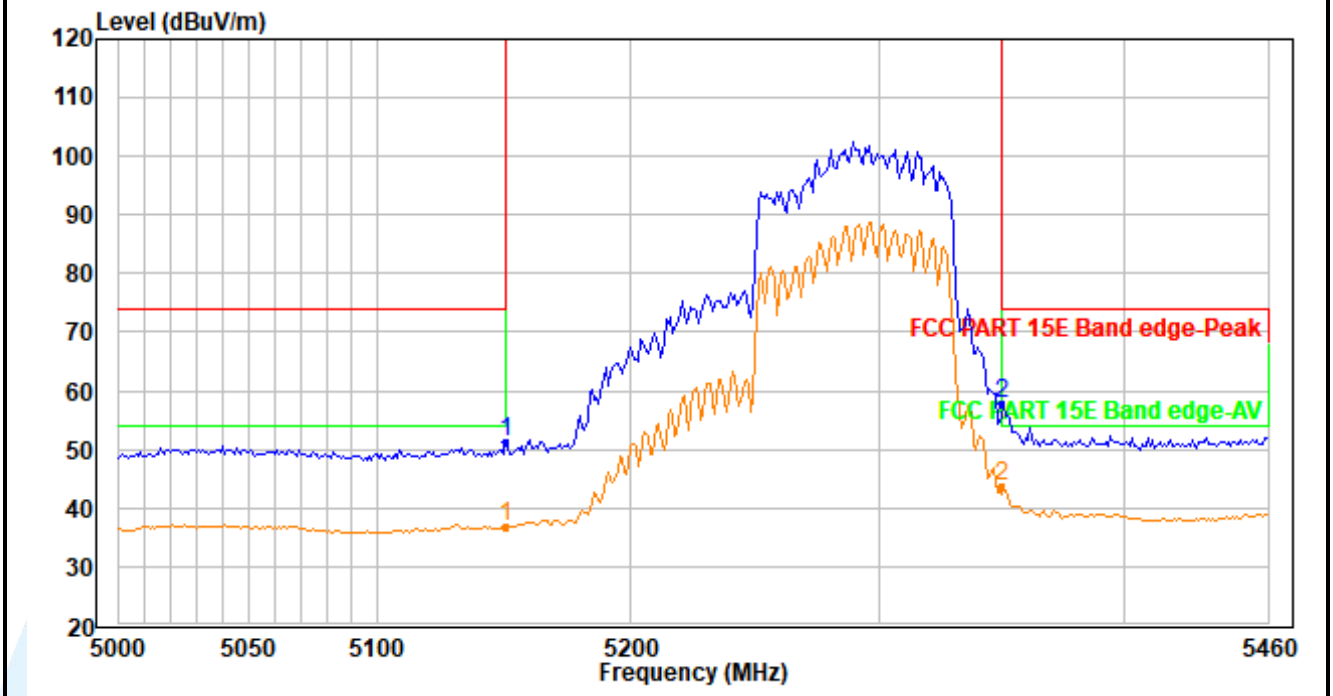
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	71.81	74.00	51.88	54.00	Pass
5350.000	52.22	74.00	37.91	54.00	Pass

Test Channel:	Channel 42	Ant. Polar. :	Vertical



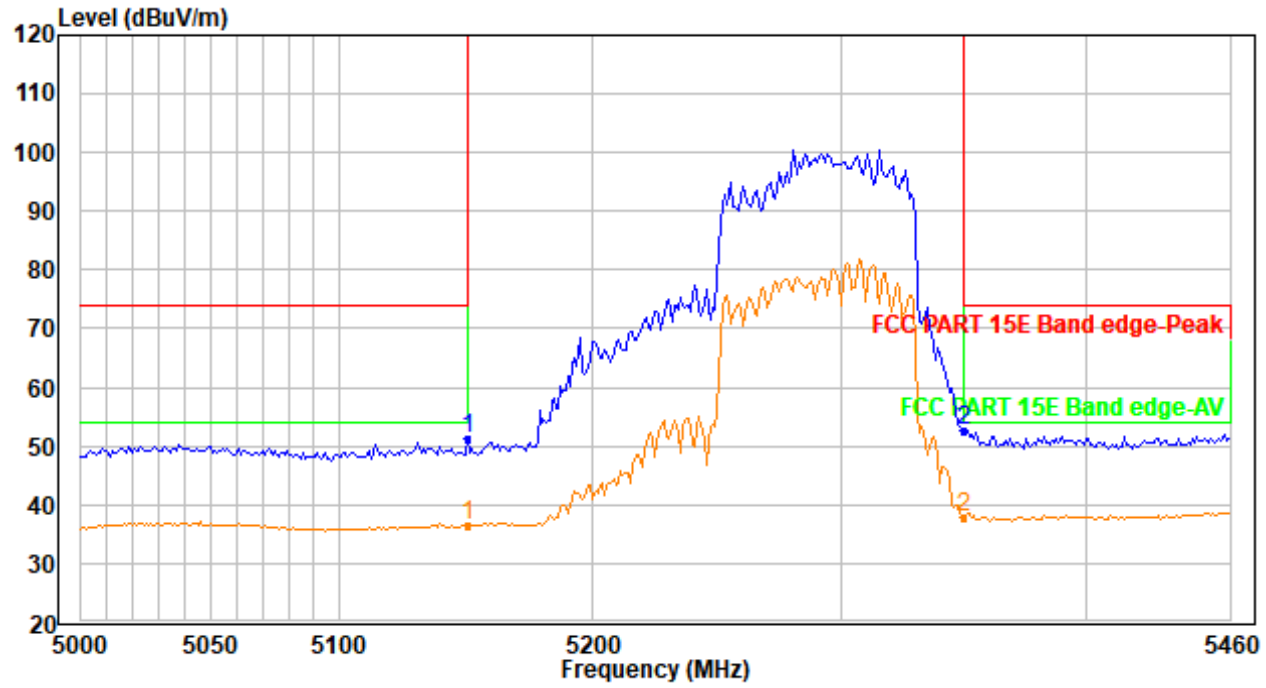
Frequency (MHz)	Peak level (dBμV/m)	Peak Limit (dBμV/m)	AV level (dBμV/m)	AV Limit (dBμV/m)	Conclusion
5150.000	70.25	74.00	51.64	54.00	Pass
5350.000	52.64	74.00	38.07	54.00	Pass

Test Channel:	Channel 58	Ant. Polar. :	Horizontal



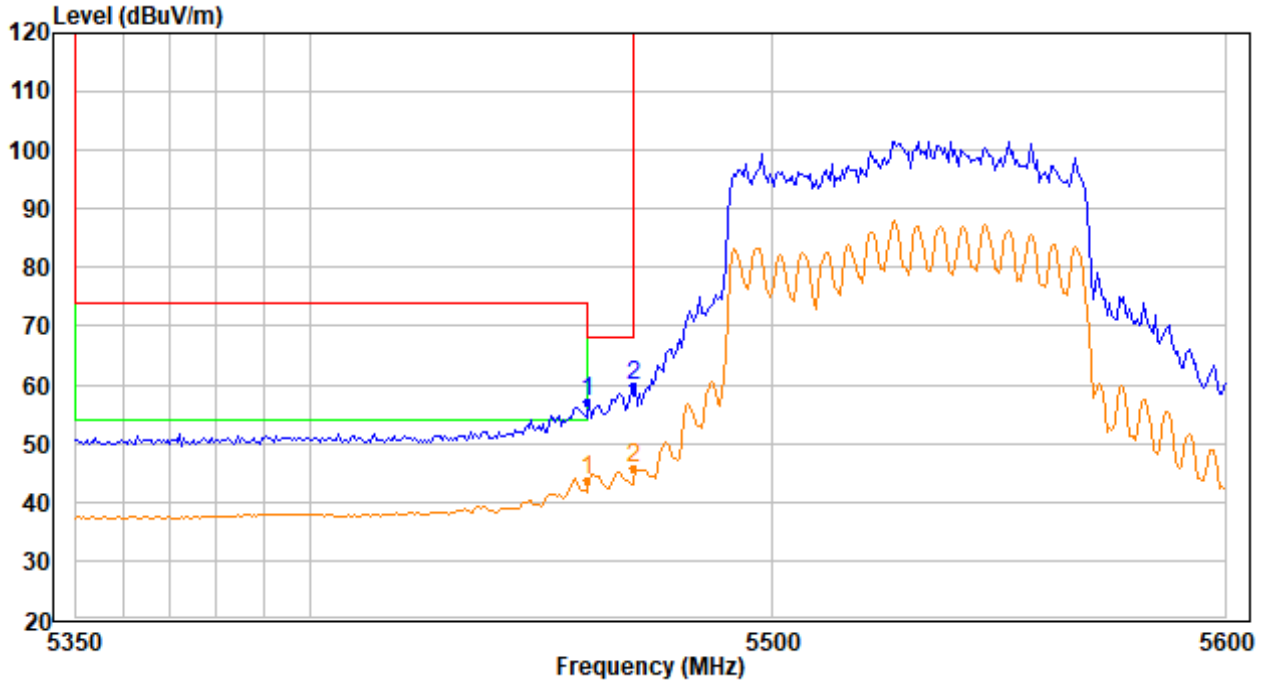
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	51.13	74.00	36.93	54.00	Pass
5350.000	57.64	74.00	43.86	54.00	Pass

Test Channel:	Channel 58	Ant. Polar. :	Vertical



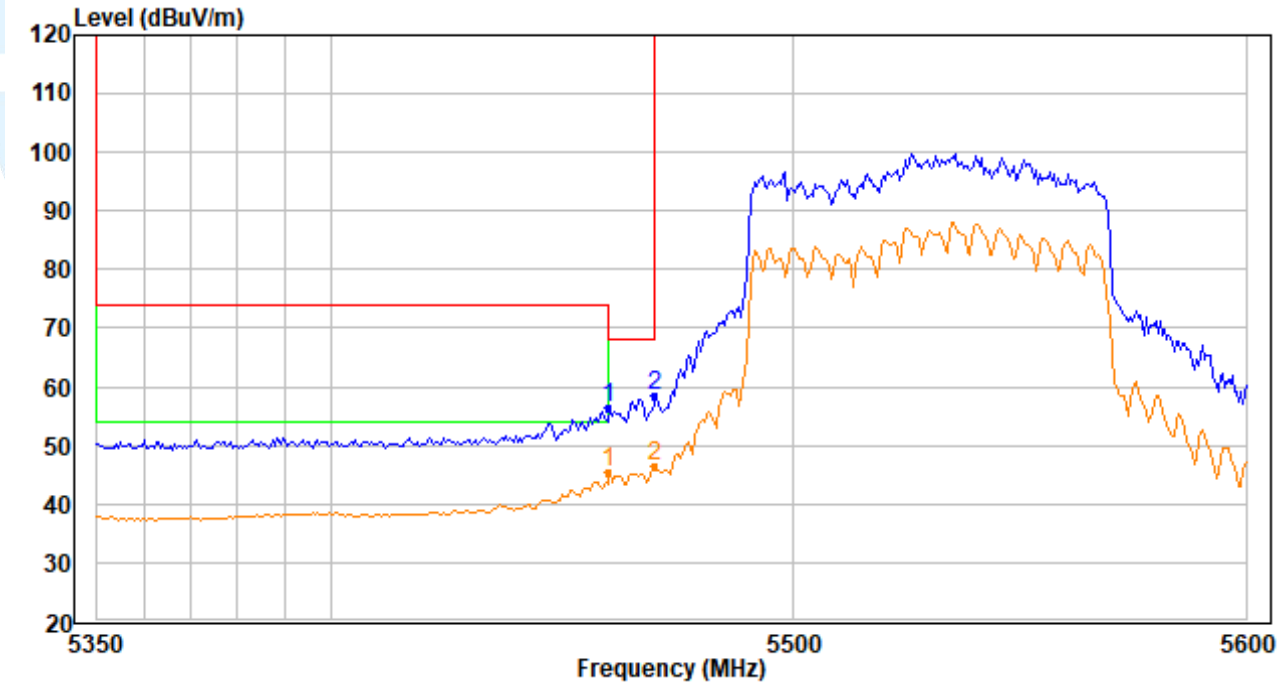
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	51.15	74.00	36.35	54.00	Pass
5350.000	52.69	74.00	37.88	54.00	Pass

Test Channel:	Channel 106	Ant. Polar. :	Horizontal



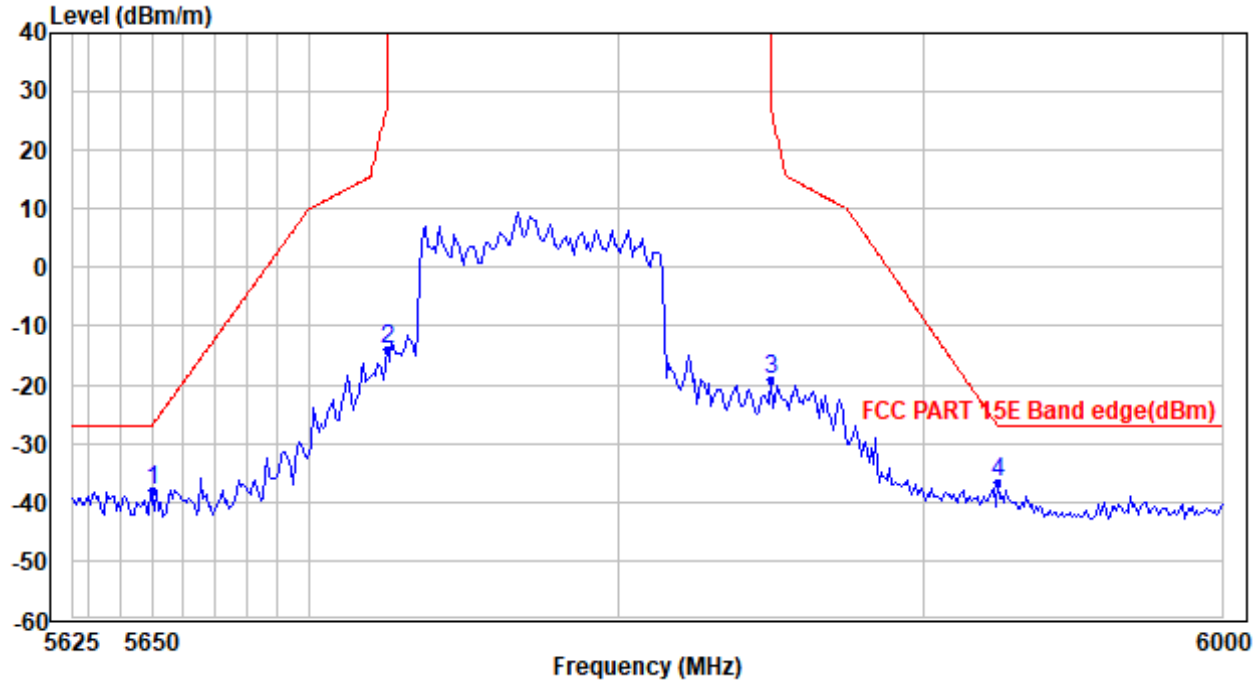
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	57.09	74.00	43.87	54.00	Pass
5470.000	59.99	68.20	45.65	54.00	Pass

Test Channel:	Channel 106	Ant. Polar. :	Vertical



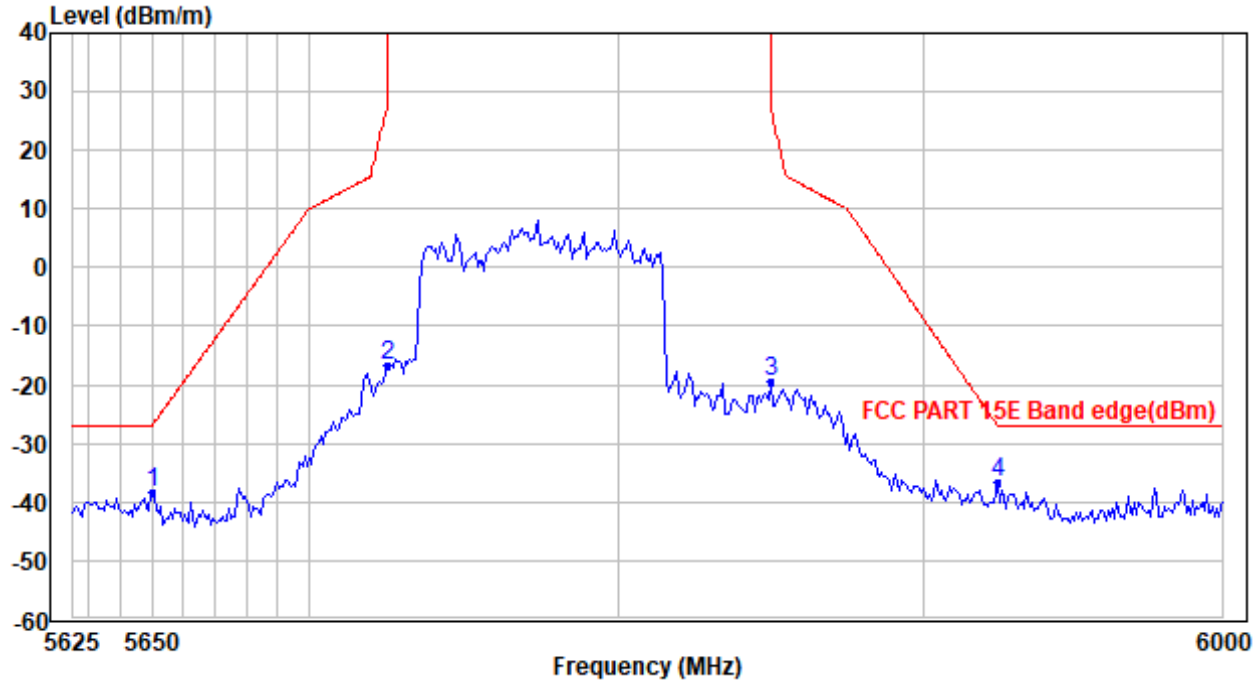
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	56.53	74.00	45.38	54.00	Pass
5470.000	58.48	68.20	46.57	54.00	Pass

Test Channel:	Channel 155	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-37.89	-27	Pass
5725.000	-14.12	26.97	Pass
5850.000	-19.18	26.94	Pass
5925.000	-36.80	-27	Pass

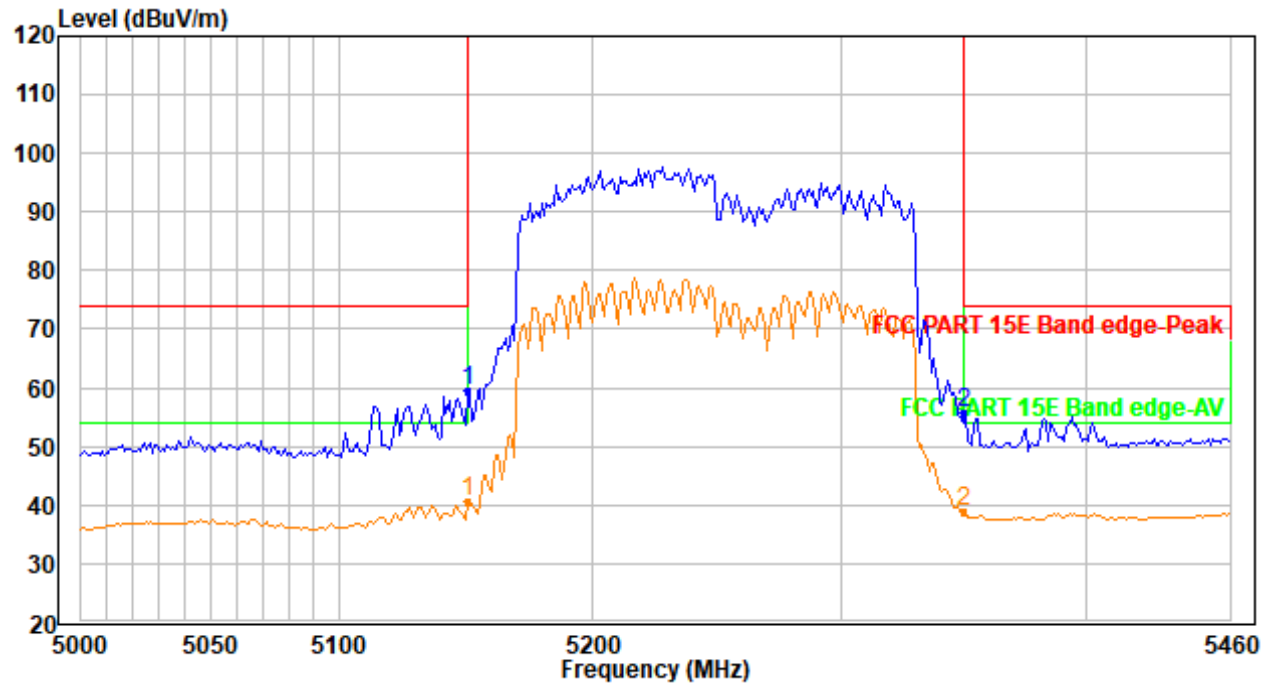
Test Channel:	Channel 155	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.000	-38.50	-27	Pass
5725.000	-16.82	26.97	Pass
5850.000	-19.38	26.94	Pass
5925.000	-36.51	-27	Pass

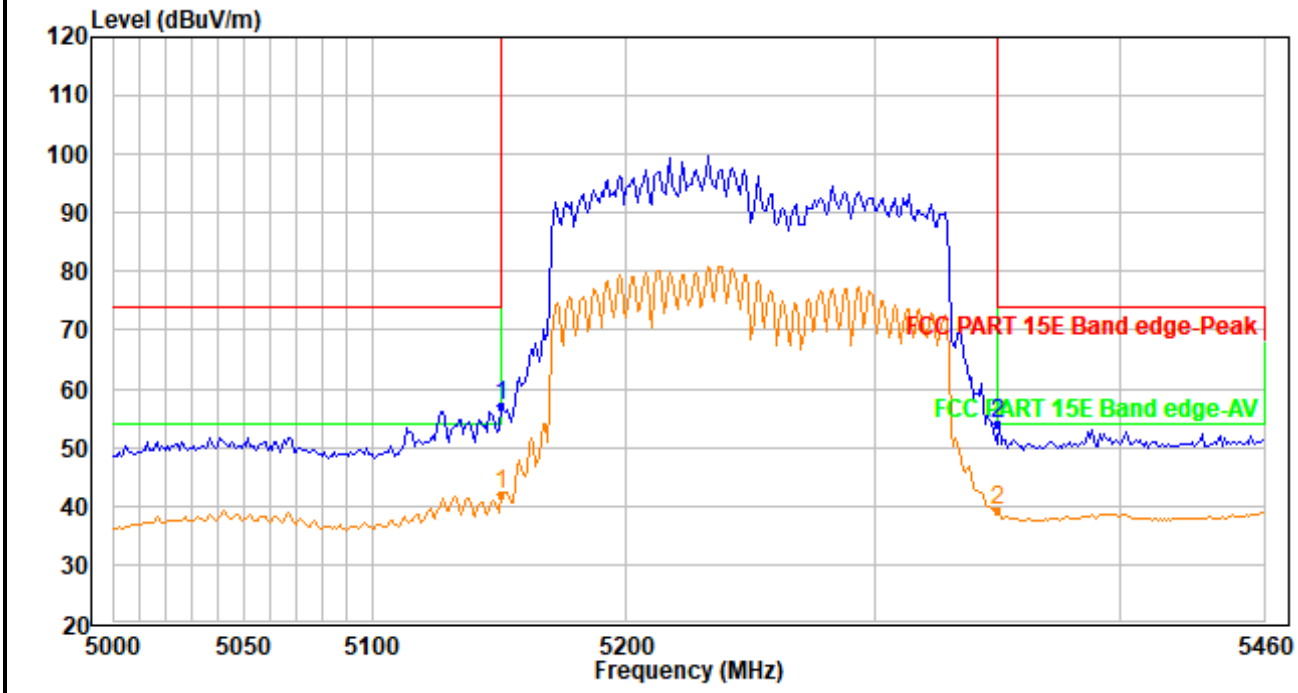
MIMO_ Ant. 0+1+2_IEEE 802.11ax-HE160

Test Channel:	Channel 50	Ant. Polar. :	Horizontal



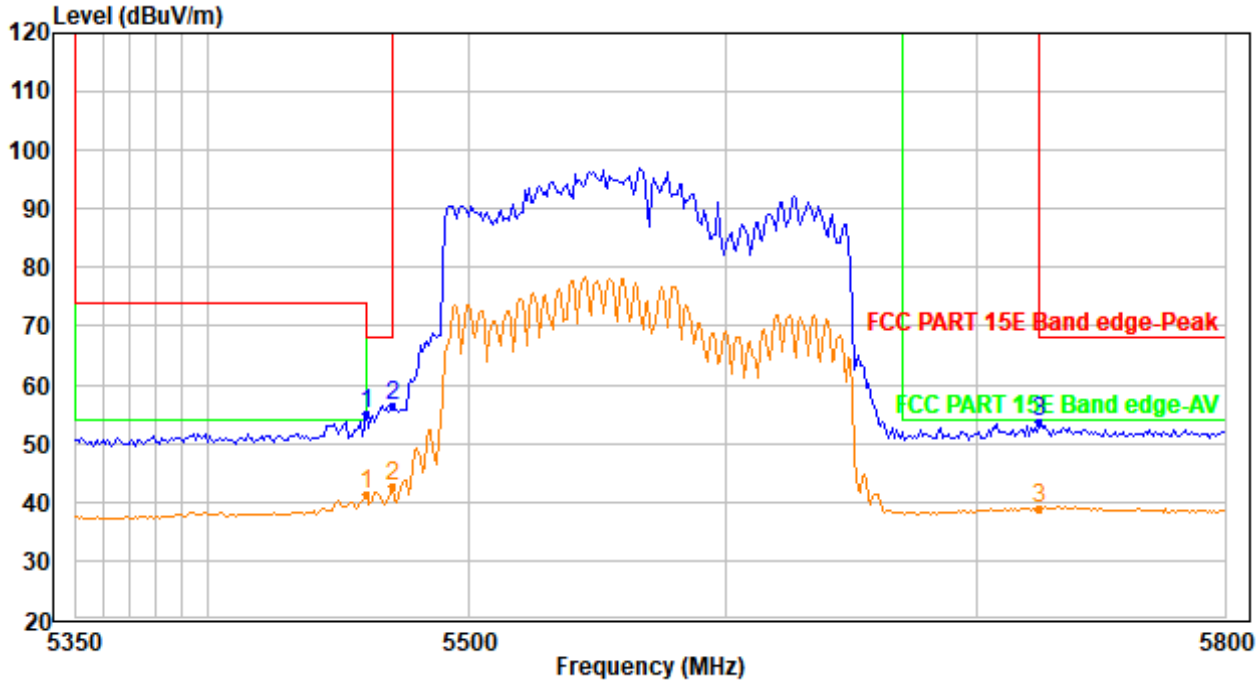
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.000	59.38	74.00	40.58	54.00	Pass
5350.000	55.61	74.00	39.01	54.00	Pass

Test Channel:	Channel 50	Ant. Polar. :	Vertical



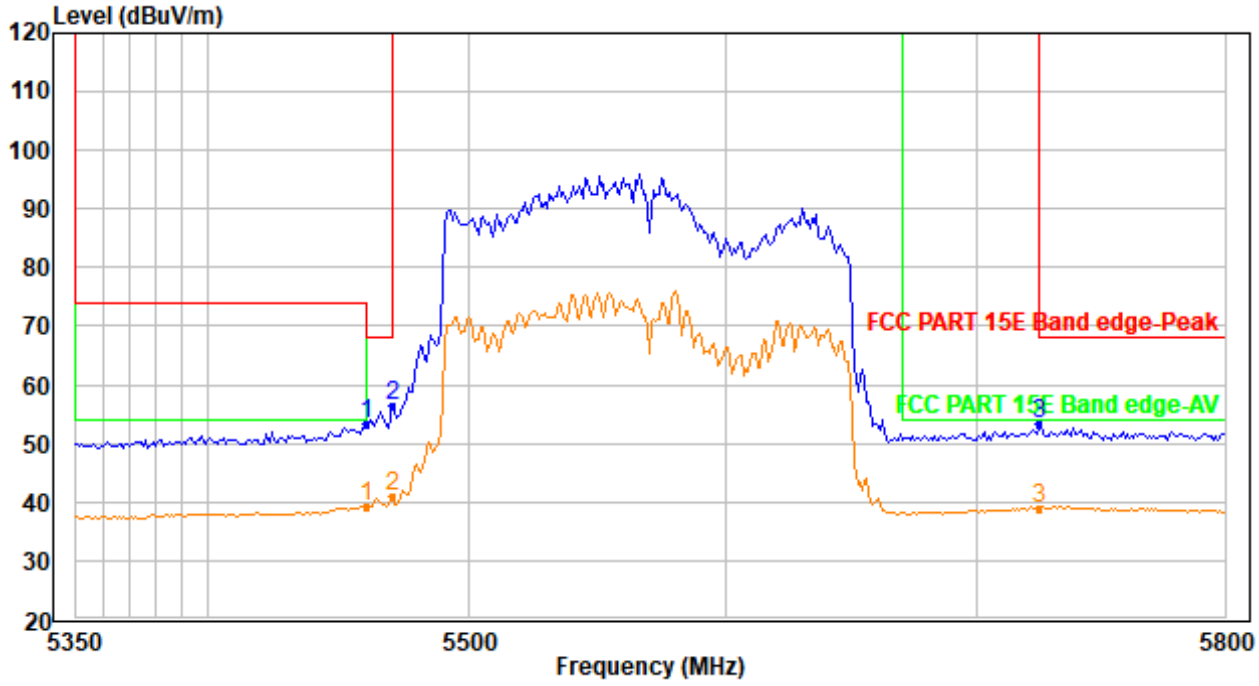
Frequency (MHz)	Peak level (dBμV/m)	Peak Limit (dBμV/m)	AV level (dBμV/m)	AV Limit (dBμV/m)	Conclusion
5150.000	57.11	74.00	42.07	54.00	Pass
5350.000	54.05	74.00	39.35	54.00	Pass

Test Channel:	Channel 114	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	54.92	74.00	41.35	54.00	Pass
5470.000	56.45	74.00	42.76	54.00	Pass
5725.000	53.77	74.00	38.97	54.00	Pass

Test Channel:	Channel 114	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.000	53.35	74.00	39.28	54.00	Pass
5470.000	56.53	74.00	40.93	54.00	Pass
5725.000	53.22	74.00	38.94	54.00	Pass

5.8 AC POWER LINE CONDUCTED EMISSION

Test Requirement: FCC 47 CFR Part 15 Subpart C Section 15.207

Test Method: ANSI C63.10-2013 Section 6.2

Limits:

Frequency range (MHz)	Limits (dB(μV))	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

Remark:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

Test Setup: Refer to section 4.4.2 for details.

Test Procedures:

Test frequency range :150KHz-30MHz

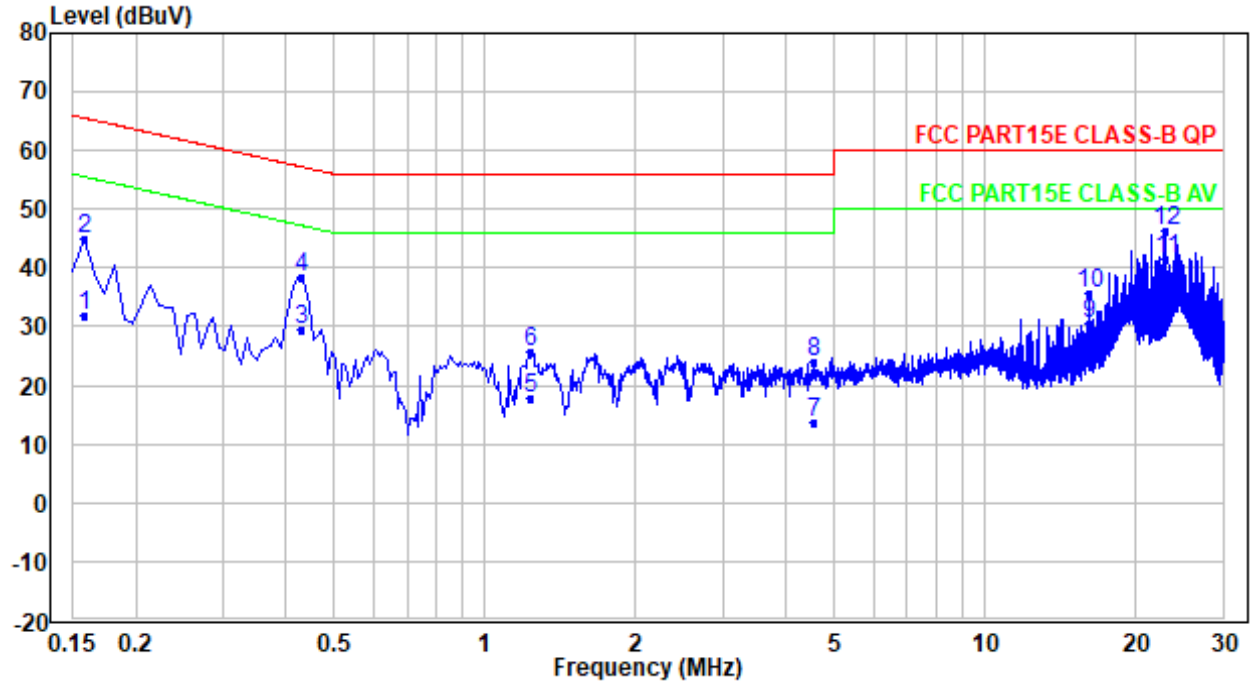
1) The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Equipment Used: Refer to section 3 for details.

Test Result: Pass

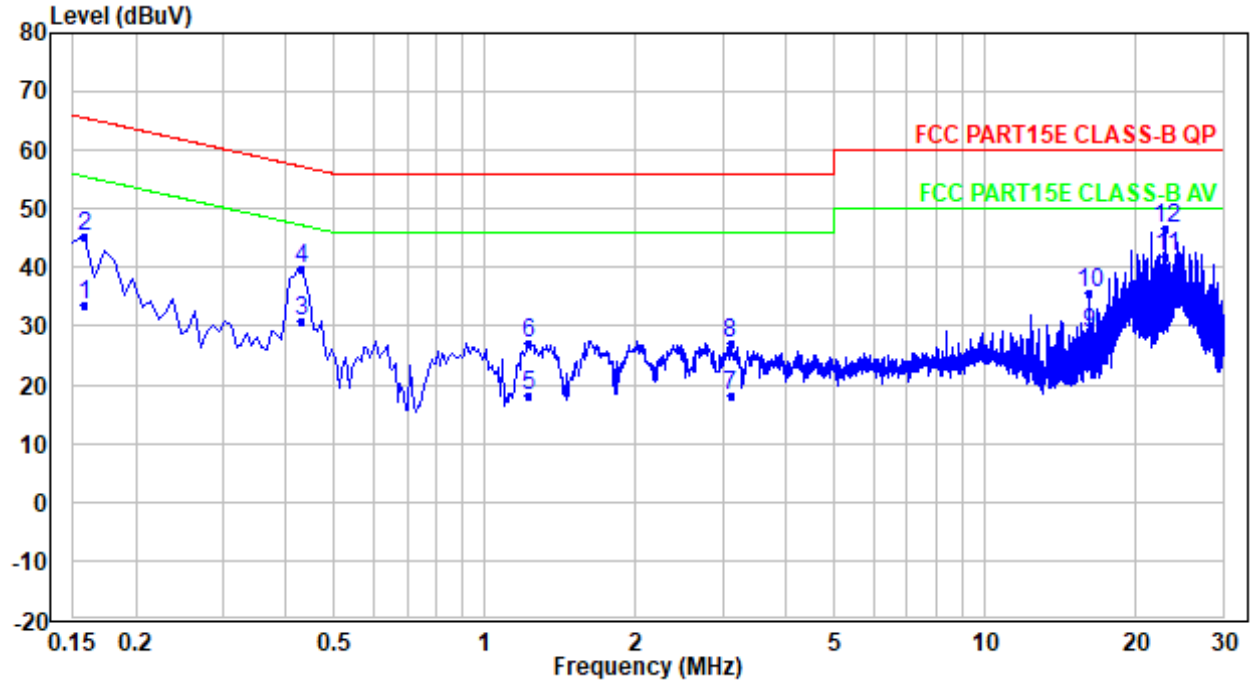
The worst measurement data as follows:
Quasi Peak and Average:
Mode: WIFI Link

Live Line



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.158	21.86	10.04	31.90	55.57	-23.67	Average
2	0.158	34.86	10.04	44.90	65.57	-20.67	QP
3	0.430	19.43	10.05	29.48	47.25	-17.77	Average
4	0.430	28.43	10.05	38.48	57.25	-18.77	QP
5	1.230	7.80	10.07	17.87	46.00	-28.13	Average
6	1.230	15.80	10.07	25.87	56.00	-30.13	QP
7	4.573	3.62	10.22	13.84	46.00	-32.16	Average
8	4.573	13.62	10.22	23.84	56.00	-32.16	QP
9	16.227	19.76	10.82	30.58	50.00	-19.42	Average
10	16.227	24.76	10.82	35.58	60.00	-24.42	QP
11	23.121	30.16	11.26	41.42	50.00	-8.58	Average
12	23.121	35.16	11.26	46.42	60.00	-13.58	QP

Neutral Line



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.158	23.43	10.03	33.46	55.57	-22.11	Average
2	0.158	35.43	10.03	45.46	65.57	-20.11	QP
3	0.430	20.68	10.03	30.71	47.25	-16.54	Average
4	0.430	29.68	10.03	39.71	57.25	-17.54	QP
5	1.222	8.02	10.06	18.08	46.00	-27.92	Average
6	1.222	17.02	10.06	27.08	56.00	-28.92	QP
7	3.101	8.07	10.14	18.21	46.00	-27.79	Average
8	3.101	17.07	10.14	27.21	56.00	-28.79	QP
9	16.227	17.85	10.80	28.65	50.00	-21.35	Average
10	16.227	24.85	10.80	35.65	60.00	-24.35	QP
11	23.121	30.53	11.17	41.70	50.00	-8.30	Average
12	23.121	35.53	11.17	46.70	60.00	-13.30	QP

Remark:

1. Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result - Limit
4. An initial pre-scan was performed on the Phase and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

APPENDIX A RF TEST DATA

A.1 99% BANDWIDTH

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

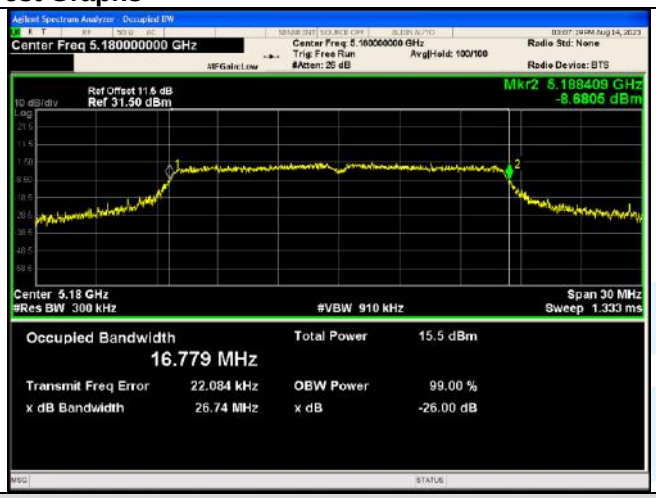
Mode	Channel	RU & Index	Ant.	99% BW (MHz)
IEEE 802.11a	36	N/A	0	16.779
			1	16.762
			2	16.701
	44		0	16.629
			1	16.609
			2	16.573
	48		0	16.691
			1	16.634
			2	16.616
	52		0	16.689
			1	16.679
			2	16.629
	60		0	16.825
			1	16.770
			2	16.748
	64		0	16.799
			1	16.792
			2	16.726
	100		0	16.818
			1	16.791
			2	16.751
	116		0	16.711
			1	16.628
			2	16.619
	140		0	16.776
			1	16.758
			2	16.723
IEEE 802.11n_20	36		0	17.947
			1	17.859
			2	17.856
	44		0	17.782
			1	17.741
			2	17.735
	48		0	17.798
			1	17.723
			2	17.740
	52		0	17.792
			1	17.693
			2	17.752
	60		0	17.929
			1	17.873
			2	17.886
	64		0	17.945
			1	17.843
			2	17.868
	100		0	17.934
			1	17.828
			2	17.871
	116		0	17.764
			1	17.759
			2	17.744
	140		0	17.891
			1	17.819
			2	17.822
IEEE 802.11n_40	38		0	36.222
			1	36.250

			2	36.248
	46		0	36.053
			1	36.140
			2	36.136
	54		0	36.093
			1	36.114
			2	36.033
	62		0	36.220
			1	36.204
			2	36.215
	102		0	36.221
			1	36.255
			2	36.139
	110		0	36.135
			1	36.118
			2	36.117
	134		0	36.231
			1	36.226
			2	36.209
IEEE 802.11ac_20	36		0	17.897
			1	17.887
			2	17.904
	44		0	17.799
			1	17.717
			2	17.733
	48		0	17.750
			1	17.689
			2	17.733
	52		0	17.784
			1	17.737
			2	17.756
	60		0	17.955
			1	17.889
			2	17.886
	64		0	17.951
			1	17.843
			2	17.870
	100		0	17.913
			1	17.838
			2	17.852
	116		0	17.765
			1	17.732
			2	17.760
	140		0	17.912
			1	17.840
			2	17.842
IEEE 802.11ac_40	38		0	36.314
			1	36.268
			2	36.212
	46		0	36.106
			1	36.034
			2	36.127
	54		0	36.097
			1	36.056
			2	36.093
	62		0	36.230
			1	36.199
			2	36.164
	102		0	36.238
			1	36.266
			2	36.203
	110		0	36.137
			1	36.160

		SU	2	36.122
	134		0	36.291
			1	36.217
			2	36.243
IEEE 802.11ac_80	42		0	75.511
			1	75.525
			2	75.490
	58		0	75.499
			1	75.368
			2	75.459
	106		0	75.512
			1	75.403
			2	75.393
IEEE 802.11ac_160	50		0	153.714
			1	153.876
			2	153.849
	114		0	153.749
			1	153.715
			2	153.956
IEEE 802.11ax_20	36		0	19.053
			1	19.046
			2	19.045
	44		0	18.974
			1	19.020
			2	18.974
	48		0	18.882
			1	18.922
			2	18.912
	52		0	18.992
			1	19.021
			2	18.991
	60		0	19.032
			1	19.051
			2	19.046
	64		0	19.036
			1	19.034
			2	19.049
	100		0	19.047
			1	19.033
			2	19.027
	116		0	18.968
			1	18.990
			2	18.971
	140		0	19.035
			1	19.035
			2	19.047
IEEE 802.11ax_40	38		0	37.674
			1	37.689
			2	37.633
	46		0	37.532
			1	37.516
			2	37.591
	54		0	37.565
			1	37.471
			2	37.547
	62		0	37.686
			1	37.715
			2	37.701
	102		0	37.594
			1	37.691
			2	37.684
	110		0	37.455
			1	37.581

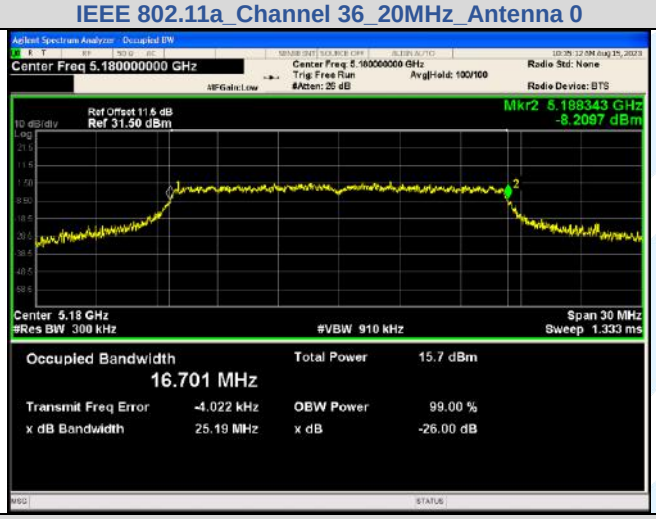
			2	37.540
	134		0	37.652
			1	37.714
			2	37.719
IEEE 802.11ax_80	42		0	77.043
			1	77.016
			2	77.082
	58		0	77.092
			1	77.069
			2	76.999
	106		0	77.038
			1	77.100
			2	77.055
IEEE 802.11ax_160	50		0	155.534
			1	155.303
			2	155.449
	114		0	155.081
			1	155.359
			2	155.683

Test Graphs

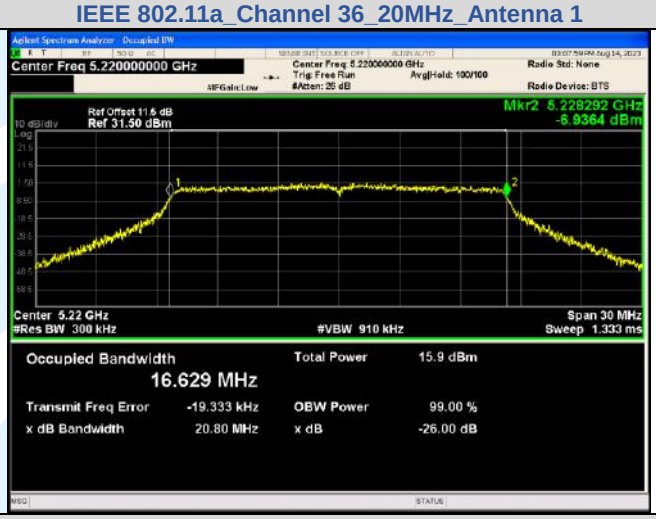


IEEE 802.11a_Channel 36_20MHz_Antenna 0

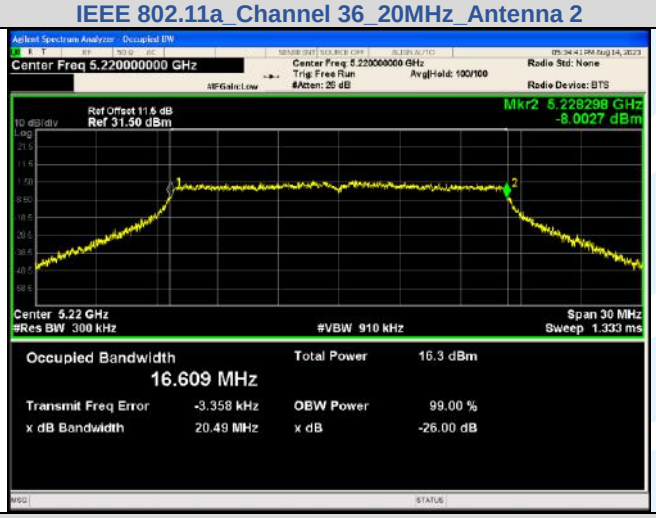
IEEE 802.11a_Channel 36_20MHz_Antenna 1



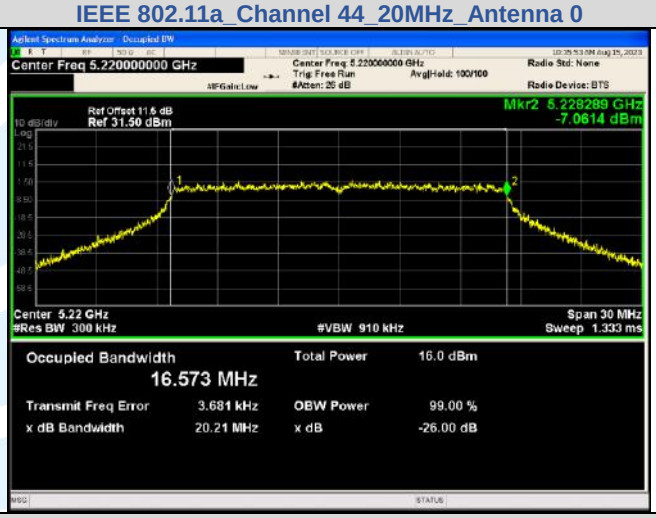
IEEE 802.11a_Channel 36_20MHz_Antenna 2



IEEE 802.11a_Channel 44_20MHz_Antenna 0



IEEE 802.11a_Channel 44_20MHz_Antenna 1

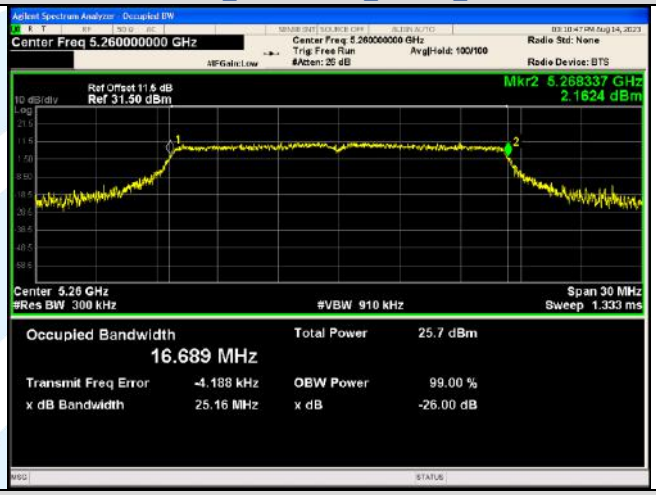


IEEE 802.11a_Channel 44_20MHz_Antenna 2

IEEE 802.11a_Channel 48_20MHz_Antenna 0

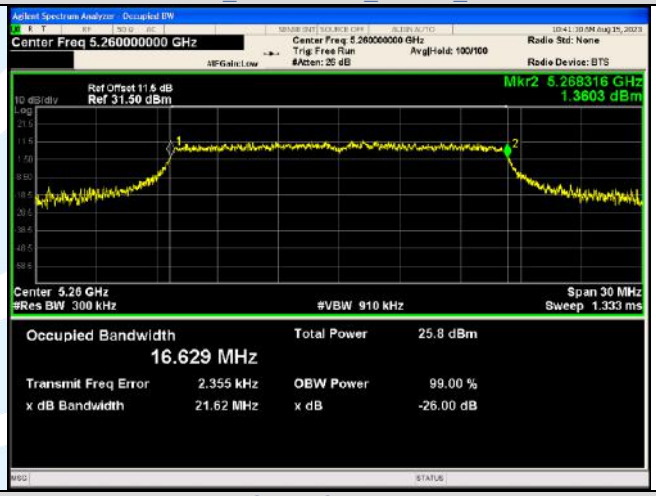
IEEE 802.11a_Channel 48_20MHz_Antenna 1

IEEE 802.11a_Channel 48_20MHz_Antenna 2



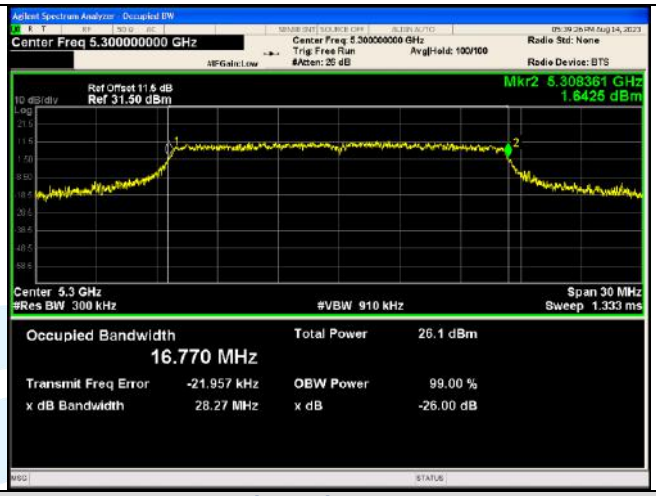
IEEE 802.11a_Channel 52_20MHz_Antenna 0

IEEE 802.11a_Channel 52_20MHz_Antenna 1

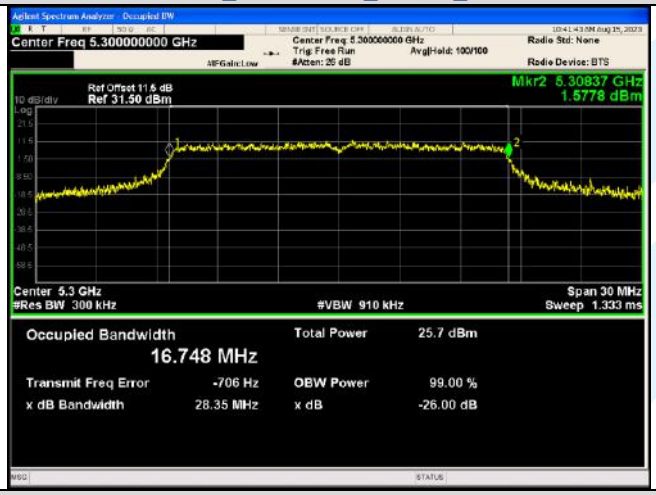


IEEE 802.11a_Channel 52_20MHz_Antenna 2

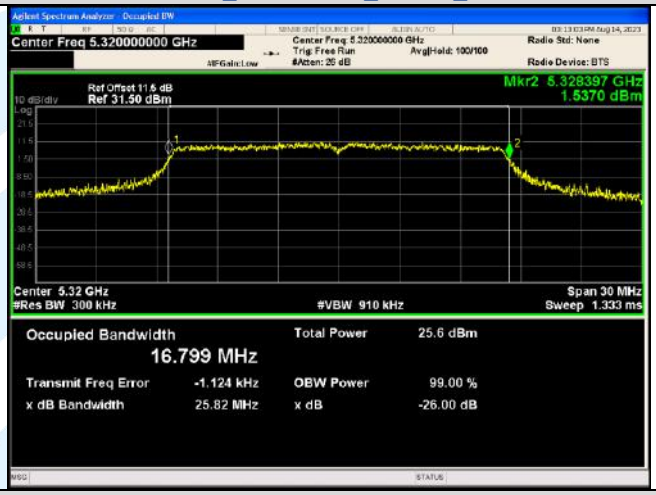
IEEE 802.11a_Channel 60_20MHz_Antenna 0



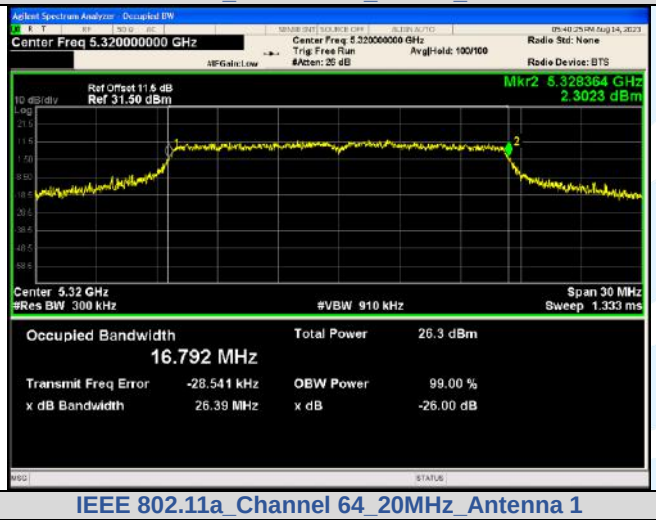
IEEE 802.11a_Channel 60_20MHz_Antenna 1



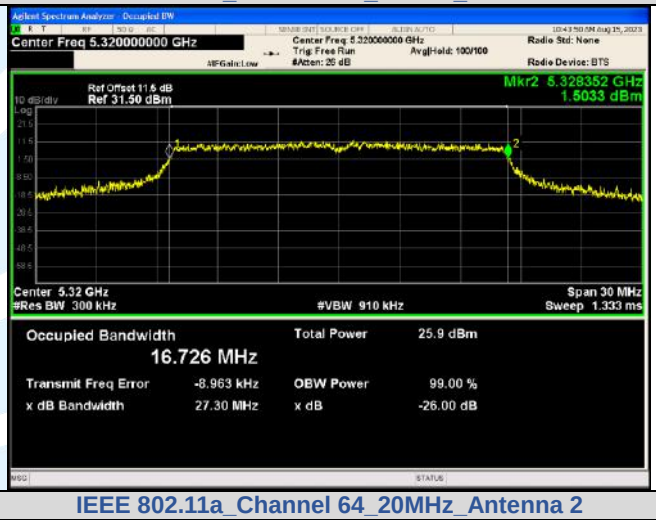
IEEE 802.11a_Channel 60_20MHz_Antenna 2



IEEE 802.11a_Channel 64_20MHz_Antenna 0

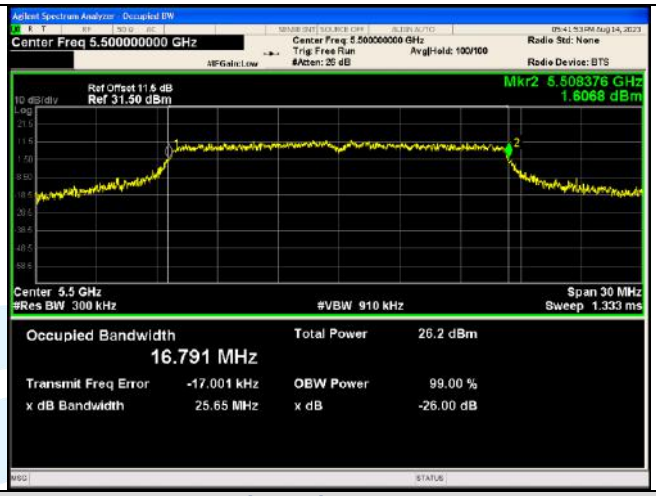


IEEE 802.11a_Channel 64_20MHz_Antenna 1

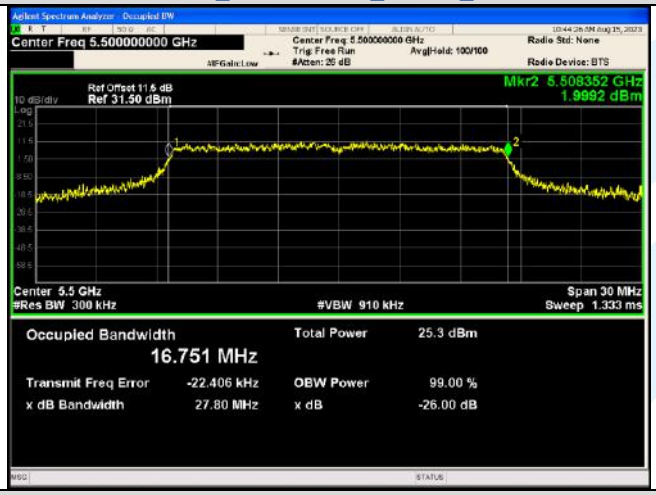


IEEE 802.11a_Channel 64_20MHz_Antenna 2

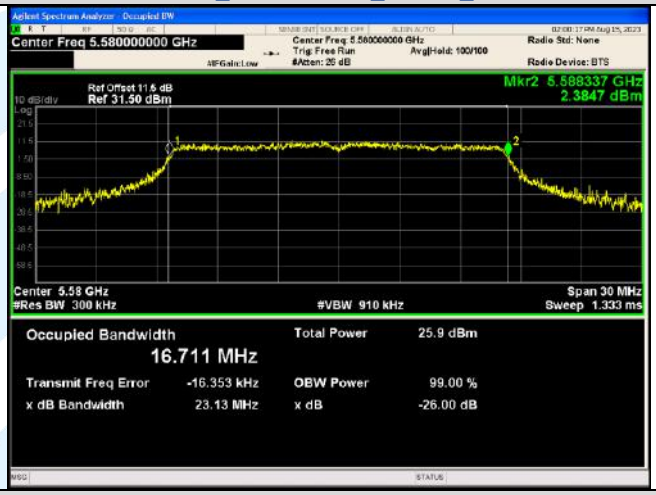
IEEE 802.11a_Channel 100_20MHz_Antenna 0



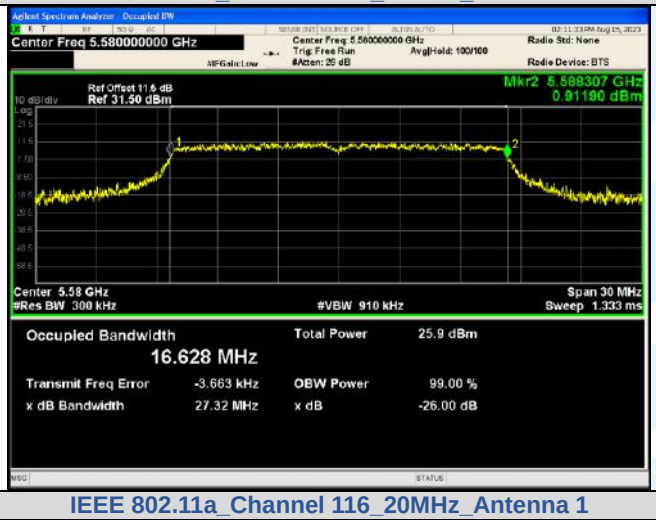
IEEE 802.11a_Channel 100_20MHz_Antenna 1



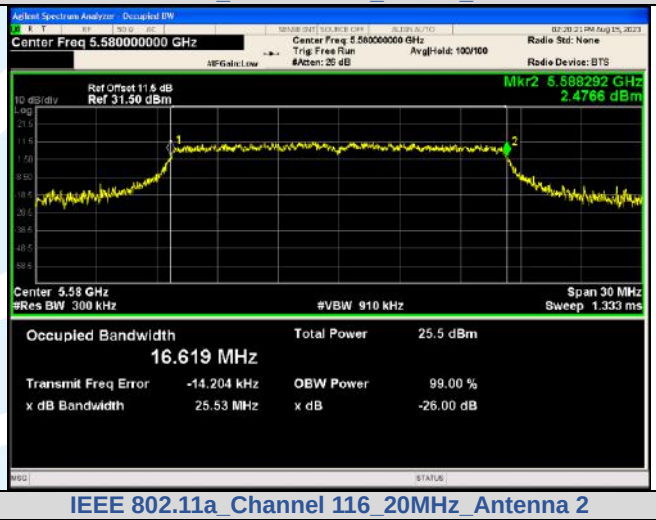
IEEE 802.11a_Channel 100_20MHz_Antenna 2



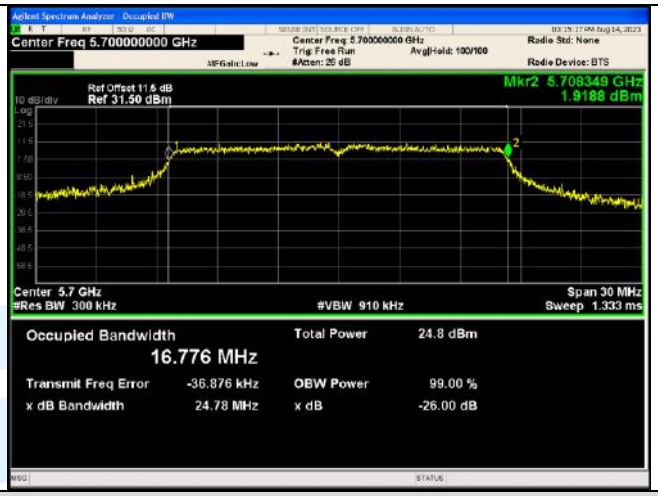
IEEE 802.11a_Channel 116_20MHz_Antenna 0



IEEE 802.11a_Channel 116_20MHz_Antenna 1



IEEE 802.11a_Channel 116_20MHz_Antenna 2

N/A	
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	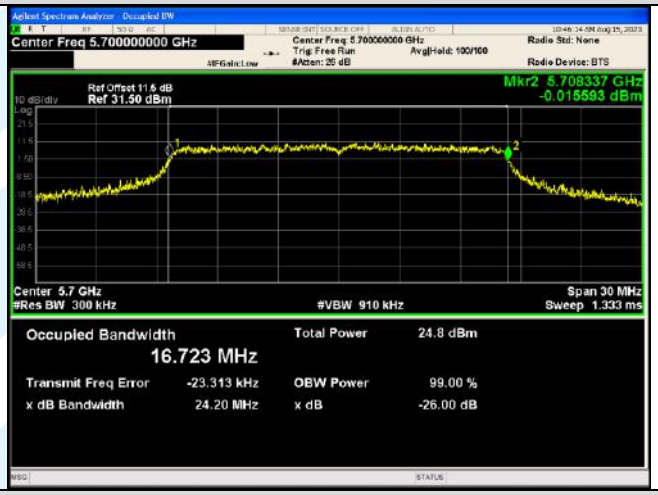
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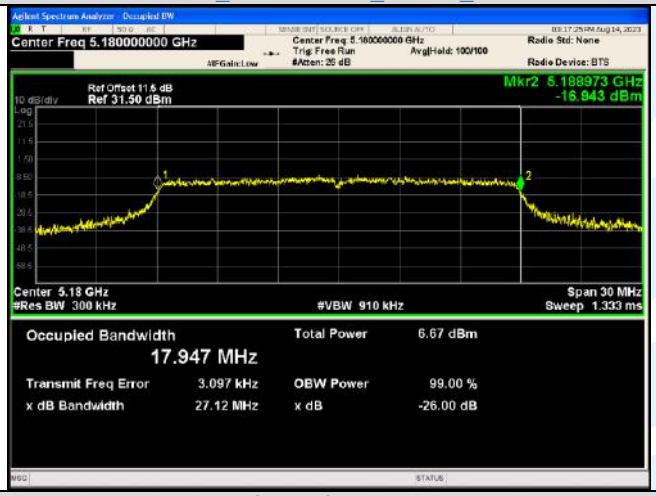
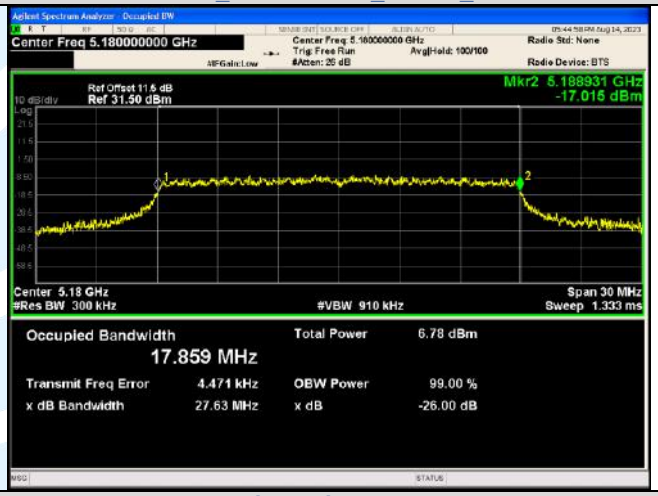
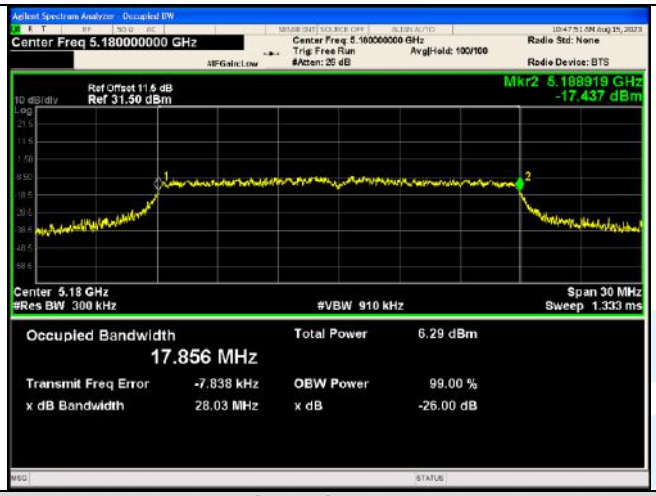
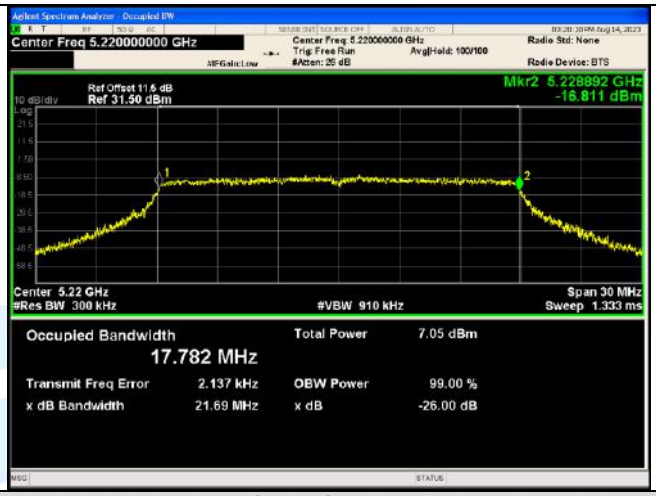
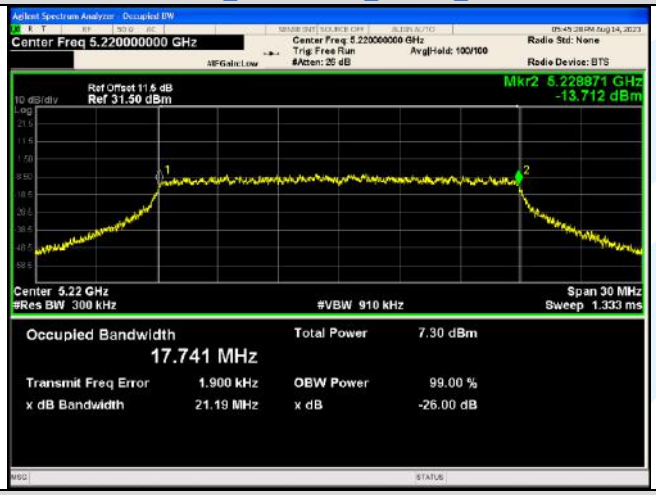
	
IEEE 802.11n_Channel 36_20MHz_Antenna 0	IEEE 802.11n_Channel 36_20MHz_Antenna 1



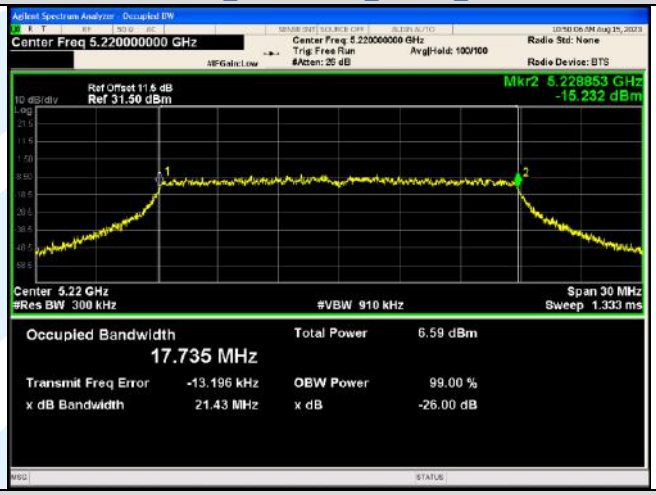
IEEE 802.11n_Channel 36_20MHz_Antenna 2



IEEE 802.11n_Channel 44_20MHz_Antenna 0

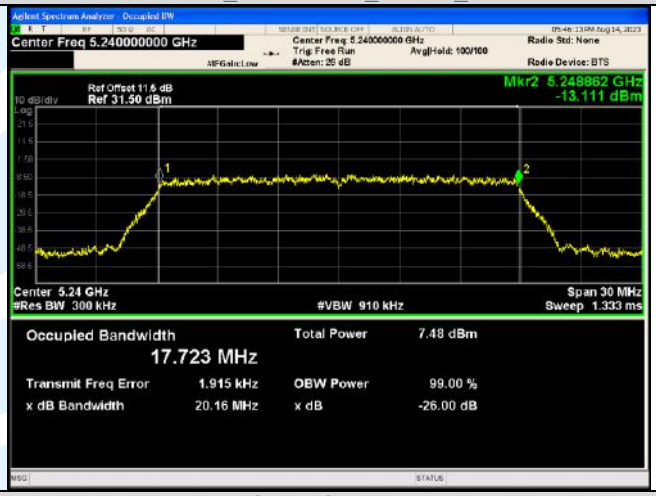


IEEE 802.11n_Channel 44_20MHz_Antenna 1

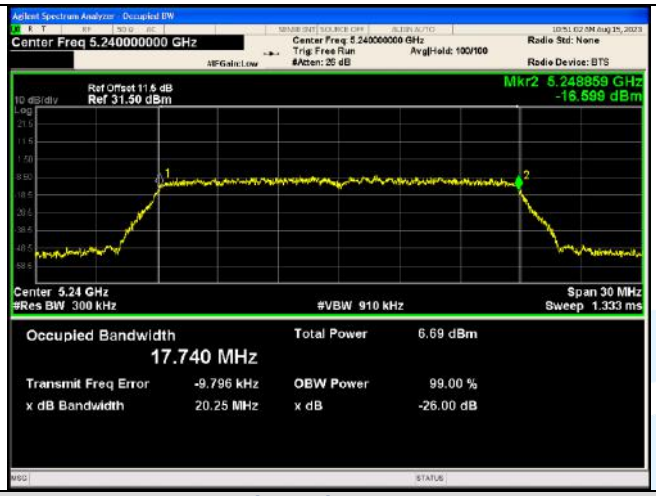


IEEE 802.11n_Channel 44_20MHz_Antenna 2

IEEE 802.11n_Channel 48_20MHz_Antenna 0

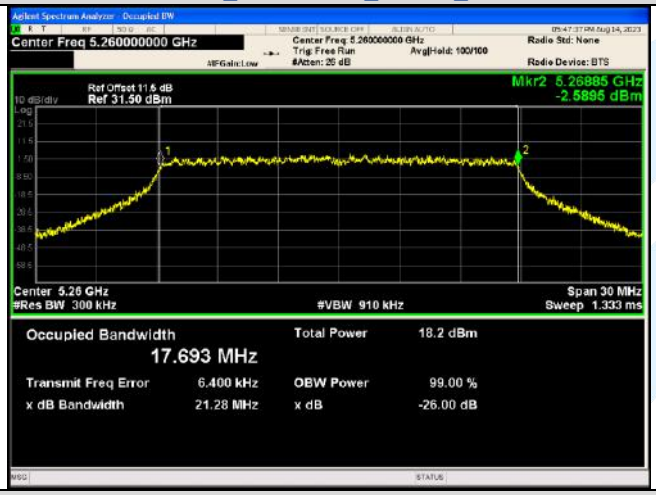


IEEE 802.11n_Channel 48_20MHz_Antenna 1

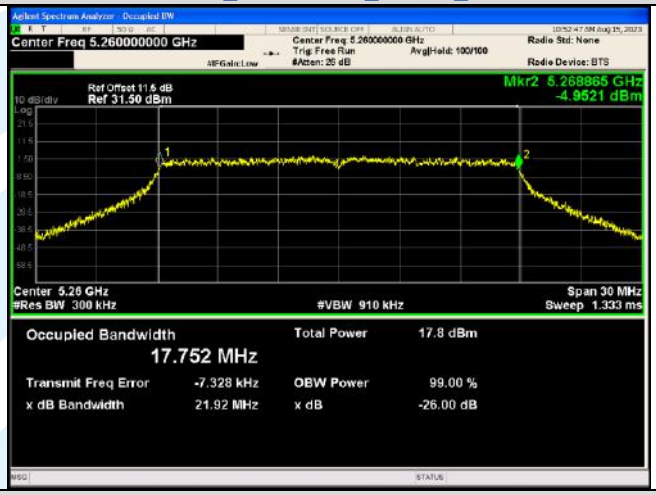


IEEE 802.11n_Channel 48_20MHz_Antenna 2

IEEE 802.11n_Channel 52_20MHz_Antenna 0

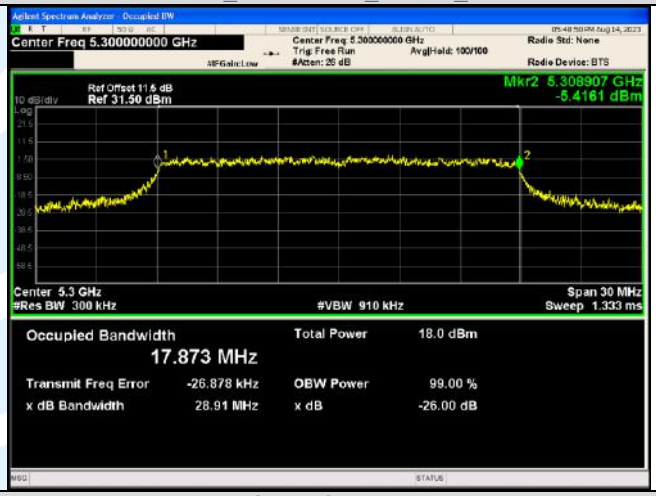


IEEE 802.11n_Channel 52_20MHz_Antenna 1



IEEE 802.11n_Channel 52_20MHz_Antenna 2

IEEE 802.11n_Channel 60_20MHz_Antenna 0

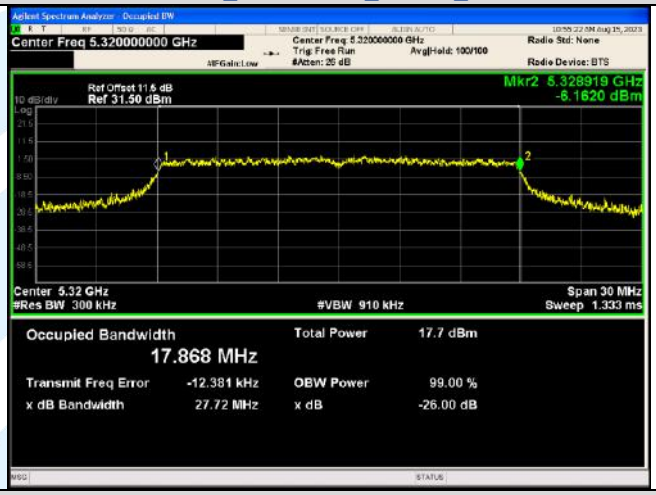


IEEE 802.11n_Channel 60_20MHz_Antenna 1

IEEE 802.11n_Channel 60_20MHz_Antenna 2

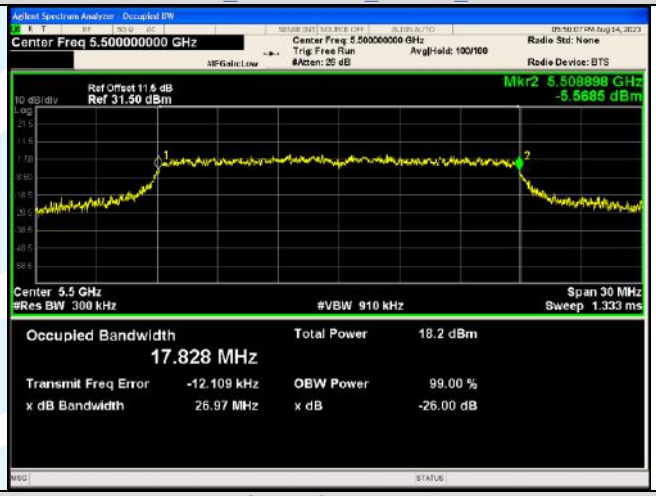
IEEE 802.11n_Channel 64_20MHz_Antenna 0

IEEE 802.11n_Channel 64_20MHz_Antenna 1

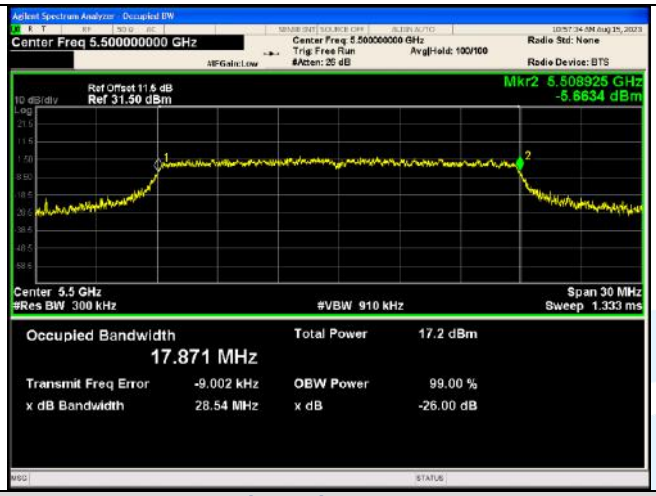


IEEE 802.11n_Channel 64_20MHz_Antenna 2

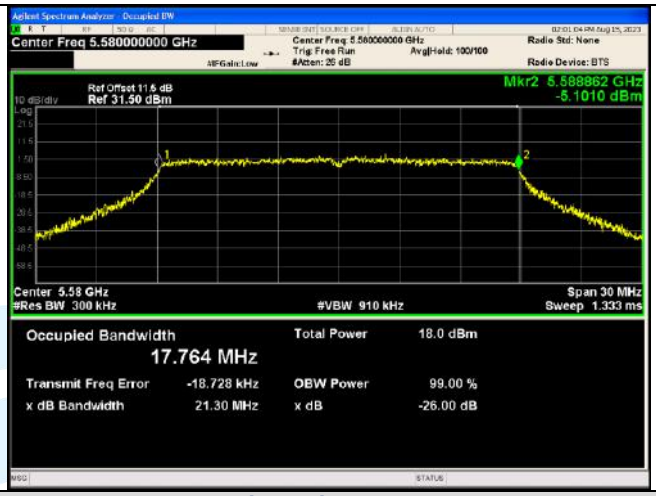
IEEE 802.11n_Channel 100_20MHz_Antenna 0



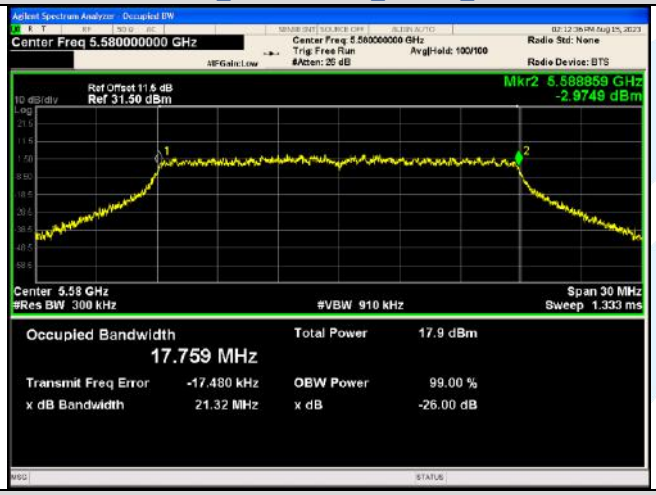
IEEE 802.11n_Channel 100_20MHz_Antenna 1



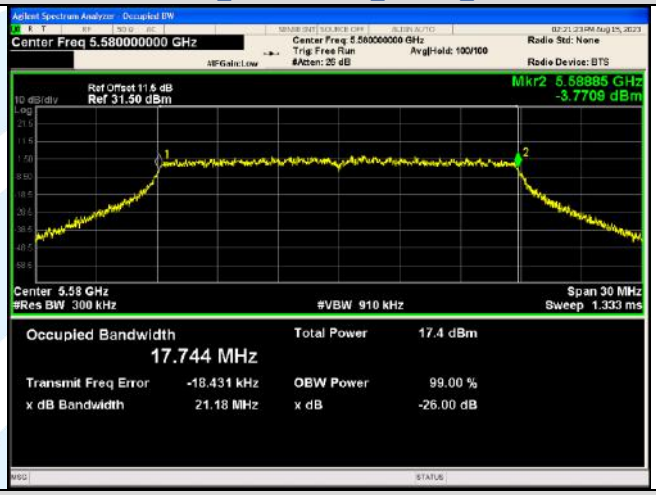
IEEE 802.11n_Channel 100_20MHz_Antenna 2



IEEE 802.11n_Channel 116_20MHz_Antenna 0



IEEE 802.11n_Channel 116_20MHz_Antenna 1



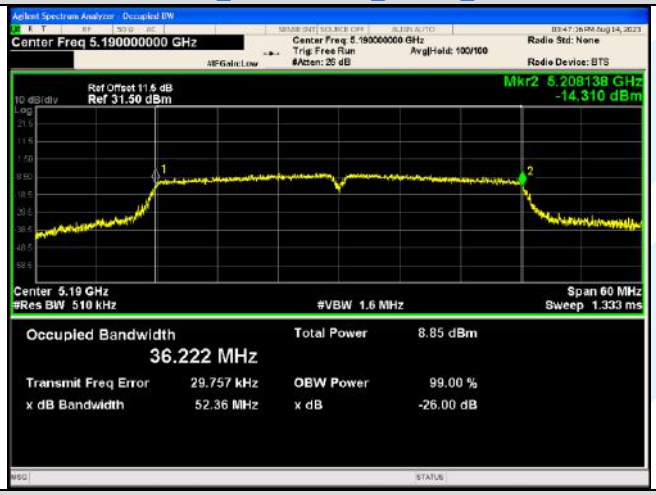
IEEE 802.11n_Channel 116_20MHz_Antenna 2

N/A

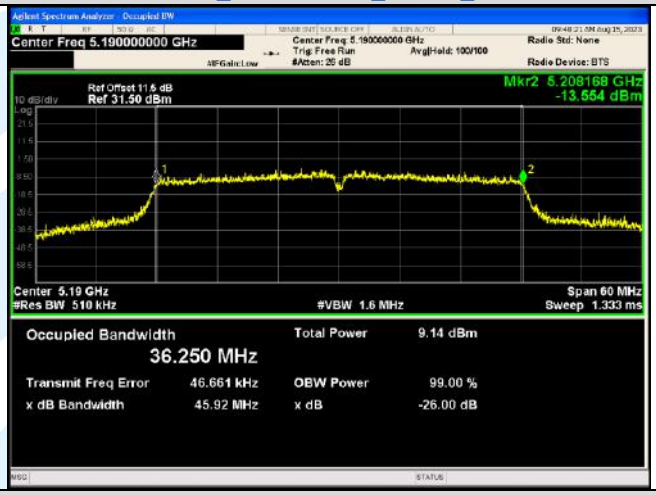
IEEE 802.11n_Channel 140_20MHz_Antenna 0

IEEE 802.11n_Channel 140_20MHz_Antenna 1

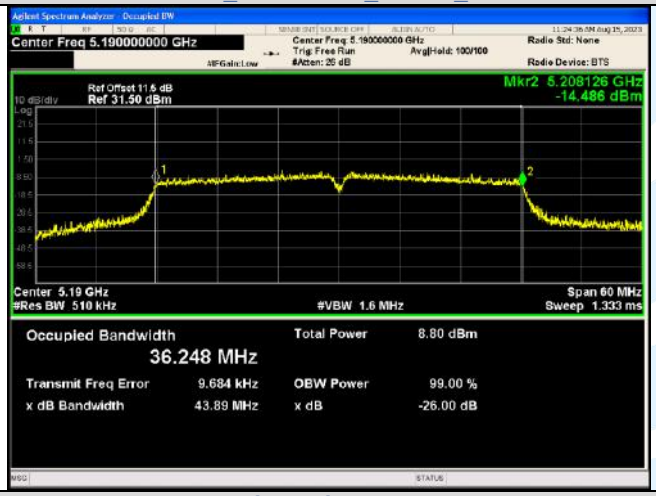
IEEE 802.11n_Channel 140_20MHz_Antenna 2



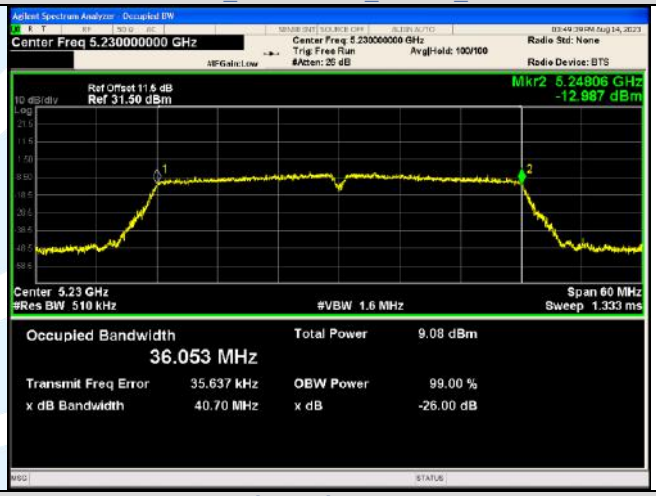
IEEE 802.11n_Channel 38_40MHz_Antenna 0



IEEE 802.11n_Channel 38_40MHz_Antenna 1



IEEE 802.11n_Channel 38_40MHz_Antenna 2



IEEE 802.11n_Channel 46_40MHz_Antenna 0