ACCREDITED
Certificate #4312.01

TEST REPORT

Product Name:	5-Port SMB UC/Networking Convergence Wireless Gateway
Trade Mark:	GRANDSTREAM
Model No.:	GCC6010W
Report Number:	24031410094RFC-2
Test Standards:	FCC 47 CFR Part 15 Subpart E
FCC ID:	YZZGCC6010W
Test Result:	PASS
Date of Issue:	June 18, 2024

Prepared for:

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

Prepared by:

Shenzhen UnionTrust Quality and Technology Co., Ltd.
Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China
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Prepared by:	David Chen David Chen Senior Project Engineer	Reviewed by:	Robben chen Robben Chen Assistant Manager
Approved by:	Billy Li Technical Director	Date:	June 18, 2024

UnionTrust Quality Assurance Laboratories UnionTrust *Certified*

Version

Version No.	Date	Description
V1.0	June 18, 2024	Original

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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:	5-Port SMB UC/Networking Convergence Wireless Gateway		
Model No.:	GCC6010W		
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:	0.3.13.1(Provided by the customer)		
Hardware Version:	V1.2(Provided by the customer)		
Sample Received Date:	March 14, 2024		
Sample Tested Date:	March 14, 2024 to May 31, 2024		
Remark: The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.			

1.2.2 Description of Accessories

Adapter(1)	
Model No.:	DCT24W120150US-A3
Input:	100-240 V~50/60 Hz 0.7 A Max
Output:	12.0 V ⎓ 1.5 A
DC Cable:	1.5 Meter, Unshielded without ferrite

Adapter(2)	
Model No.:	GQ24-120150-DU
Input:	100-240 V~50/60 Hz 1.0 A Max
Output:	12.0 V ⎓ 1.5 A
DC Cable:	2.5 Meter, Unshielded without ferrite

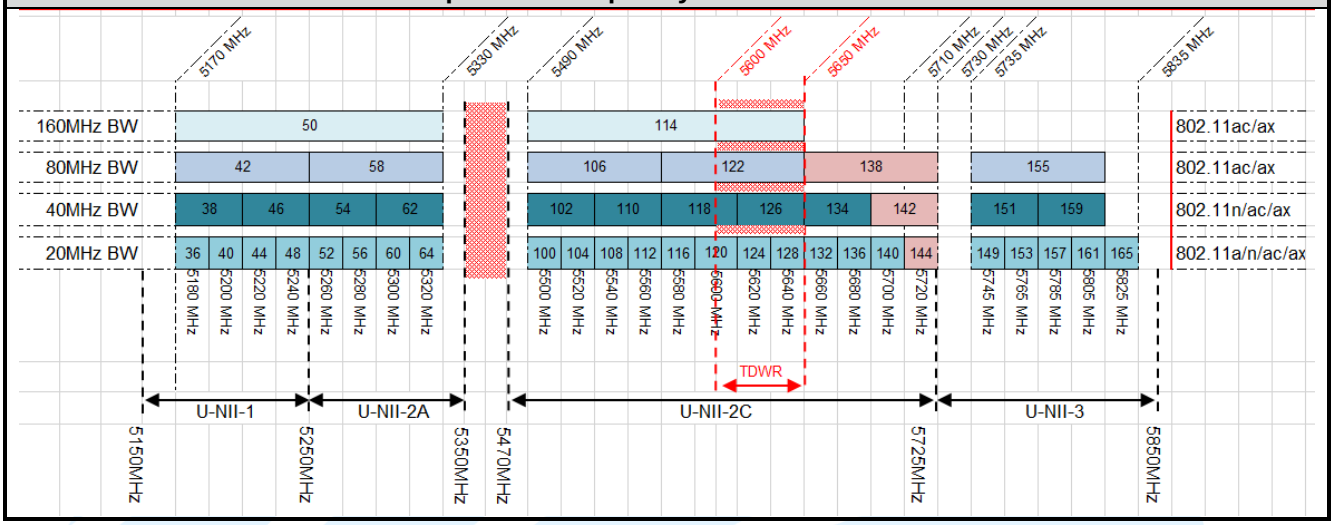
Cable	
Connector:	Ethernet cable
Cable Type:	Unshielded without ferrite
Length:	1.5 Meter, Unshielded without ferrite

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 5720 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: OFDM/OFDMA[Note1] (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 MCS23				
	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:	6.5	6.5	6.5	6.5
	Antenna 1:	5.67	5.67	5.67	5.67
	Antenna 2:	4.5	4.5	4.5	4.5
Normal Test Voltage:	12 Vdc				
Note 1: For IEEE 802.11ax, the customer declaration the product supports only the SU mode.					

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
Key-Press Attenuator	Huaxin	KT2.5-90/1S-2S	UTTL-EN023	N/A	UnionTrust
4 Way Divider	WOKEN	0120A040560002 D	UTTL-EN028	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	S2022120907-ZJ C12/12	N/A	UnionTrust

2) Support Cable

Cable No.	Description	Connector	Length(Meter)	Supplied by
1	Ethernet Cable*2	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

Tests were sub-contracted. (Radiated Emissions and Band Edge Measurement)
Dongguan DN Testing Co., Ltd.

Address: No. 1, West 4th Street, Xingfa South Road, Wusha Community, Chang'an Town, Dongguan, People's Republic of China
Telephone: +86-769-88087383
Email: joise.yang@dn-testing.com

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

Dongguan DN Testing Co., Ltd.

A2LA-Lab Certificate No.: 7050.01

CAB identifier: CN0149

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
99% Occupied Bandwidth	N/A	KDB 789033 D02 v02r01 Section D	N/A Note 3
Maximum conducted output power & Transmit Power Control	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)& (h)(1)	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.: 24031410094RFC-3 for DFS Test report.
3) No test requirement, for reporting purposes only.

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

Dongguan DN Testing Co., Ltd.

Test Equipment for Radiated Emission(30MHz-1000MHz)						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☒	Receiver	R&S	ESR7	102497	2023-10-24	2024-10-23
☒	Test Software	Tonscend	JS32-RE V5.0.0	NA	NA	NA
☒	RF Cable	ETS-LINDGREN	RFC-NMS-100-NMS-350-IN	DNT-001	2023-10-24	2024-10-23
☒	Log periodic antenna	ETS-LINDGREN	VULB 9168	01475	2023-10-24	2024-10-23
☒	Pre-amplifier	Schwarzbeck	BBV9743B	00423	2023-10-24	2024-10-23

Test Equipment for Radiated Emission(Above 1000MHz)						
☒	Frequency analyser	Keysight	N9010A	MY52221458	2023-10-24	2024-10-23
☒	RF Cable	ETS-LINDGREN	RFC-NMS-100-NMS-350-IN	DNT-002	2023-10-24	2024-10-23
☒	Horn Antenna	ETS-LINDGREN	3117	00252567	2023-10-24	2024-10-23
☒	Double ridged waveguide antenna	ETS-LINDGREN	3116C	00251780	2023-10-24	2024-10-23
☒	Test Software	Tonscend	JS32-RE V5.0.0	NA	NA	NA
☒	Pre-amplifier	ETS-LINDGREN	3117-PA	252567	2023-10-24	2024-10-23
☒	Pre-amplifier	ETS-LINDGREN	3116C-PA	251780	2023-10-24	2024-10-23

Shenzhen UnionTrust Quality and Technology Co., Ltd.

AC Power Line Conducted Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☒	Receiver	R&S	ESR7	101181	27-Oct-2023	26-Oct-2024
☒	Pulse Limiter	R&S	ESH3-Z2	0357.8810.54	27-Oct-2023	26-Oct-2024
☒	LISN	R&S	ESH2-Z5	860014/024	27-Oct-2023	26-Oct-2024
☒	LISN	ETS-Lindgren	3816/2SH	00201088	27-Oct-2023	26-Oct-2024
☒	Shielding room	ETS-Lindgren	843	Euroshiedpn-CT001270-1246	5-Nov-2021	4-Nov-2024
☒	Test Software	EZ-EMC	EZ-CON	Software Version: EMC-CON 3A1.1		

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
					29-Mar-2024	28-Mar-2025
☒	USB Wideband Power Sensor	KEYSIGHT	U2021XA	MY55430035	27-Oct-2023	26-Oct-2024
☒	EXG-B RF Analog Signal Generator	KEYSIGHT	N5171B	MY53051777	27-Oct-2023	26-Oct-2024
☒	MXG X-Series RF Vector Signal Generator	KEYSIGHT	N5182B	MY51350267	27-Oct-2023	26-Oct-2024
☒	Spectrum Analyzer	R&S	FSV40-N	101653	14-Apr-2023	13-Apr-2024
					29-Mar-2024	28-Mar-2025

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	12Vdc	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	23.0	51.9	100.6	S202403142876-ZJA03/4	Linson Xie
26 dB emission bandwidth	23.5	46.9	100.4	S202403142876-ZJA01/4	Allen Zhou
Maximum conducted output power					
Peak Power Spectral Density					
6 dB bandwidth					
Dynamic Frequency Selection					
Radiated Emissions and Band Edge Measurement	25	60	100.6	S202403142876-ZJA02/4	Wayne Lin

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 120	Channel 140/ Channel 144
		5500 MHz	5600 MHz	5700 MHz/ 5720MHz
	5725 - 5850 MHz	Channel 144/ Channel 149	Channel 157	Channel 165
		5720MHz/ 5745 MHz	5785 MHz	5825 MHz
IEEE 802.11n-HT40 IEEE 802.11ac-VHT40 IEEE 802.11ax-HE4 0	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 118	Channel 134/ Channel 142
		5510 MHz	5590 MHz	5670 MHz/ 5710MHz

	5725 - 5850 MHz	Channel 142/ Channel 151	--	Channel 159
		5710MHz/ 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	--	Channel 138
		5530 MHz	--	5610 MHz/ 5569 MHz
	5725 - 5850 MHz	Channel 138	Channel 155	--
		5610 MHz/	5775 MHz	--
IEEE 802.11ac-VHT160 IEEE 802.11ax-HE160	5150 - 5350 MHz	Channel 50		
		5250 MHz		
	5470 - 5725 MHz	Channel 114		
		5570 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	

Power Setting (Provided by the customer)												
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	18.5	18.5	18.5	18	17	16	18	18	18
							18.5	18.5	18.5			
							16	15	15			
							18	18	18			
IEEE 802.11n-HT20	18	18	18	11.5	11.5	11.5	11	11	11	18	18	18
										20	20	20
										18	18	18
IEEE 802.11n-HT40	15	15	15	15	15	15	10	10	10	18	18	18
							15	15	15			
							13	13	13	15	15	15
							14	14	14			
IEEE 802.11ac-VHT20	17	17	17	12	11.5	11.5	11.5	11.5	11.5	18	18	18
										20	20	20
										18	18	18
IEEE 802.11ac-VHT40	14	14	14	14	14	14	10	10	10	18	18	18
							14	14	14			
							13	13	13	15	15	15
							13	13	13			
IEEE 802.11ac-VHT80	14	14	14	14	14	14	8	8	8	15	15	15
							14	14	14			
IEEE 802.11ac-VHT160	14	14	14	14	14	14	6	6	6	4	4	4
IEEE 802.11ax-HE20 (SU)	17	17.5	17.5	11.5	11.5	11.5	11.5	11.5	11.5	18	18	18
							11.5	11.5	11.5			
							11.5	11.5	11.5			
							11	11	11			
IEEE 802.11ax-HE40 (SU)	13	13	13	13	13	13	10	10	10	18	18	18
							13	13	13			
							12	12	12			
							13	13	13			
IEEE 802.11ax-HE80 (SU)	10	10	10	12	12	12	7	7	7	14	14	14
							13	13	13			
IEEE 802.11ax-HE160(SU)	13	13	13	13	13	13	6	6	6	6	6	6

Test Software (Provided by the customer)
Test software name: 7986_0007 QA 0.0.2.97;

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	MCS16
IEEE 802.11n-HT40	MCS16
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

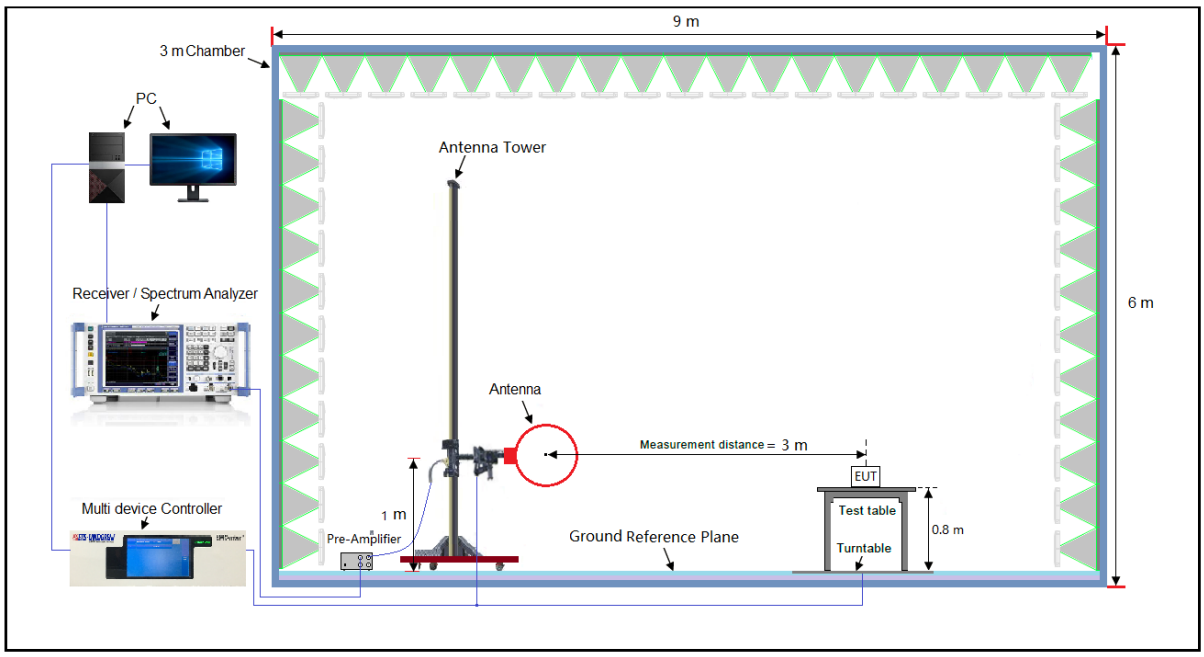


Figure 2. 30MHz to 1GHz

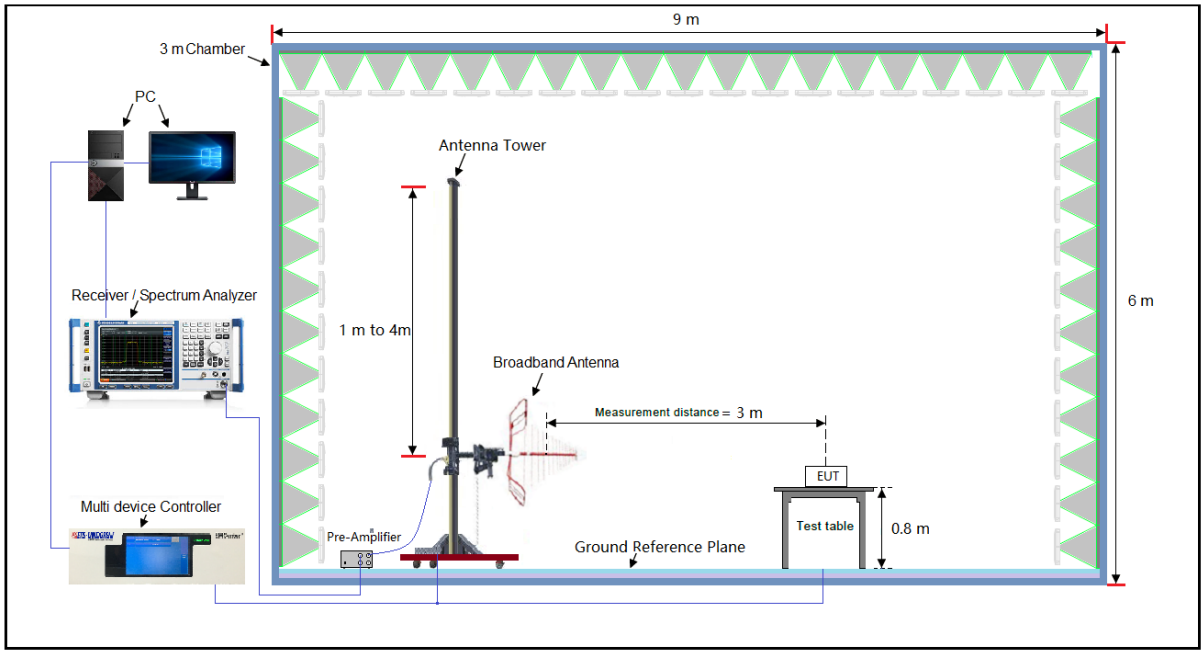
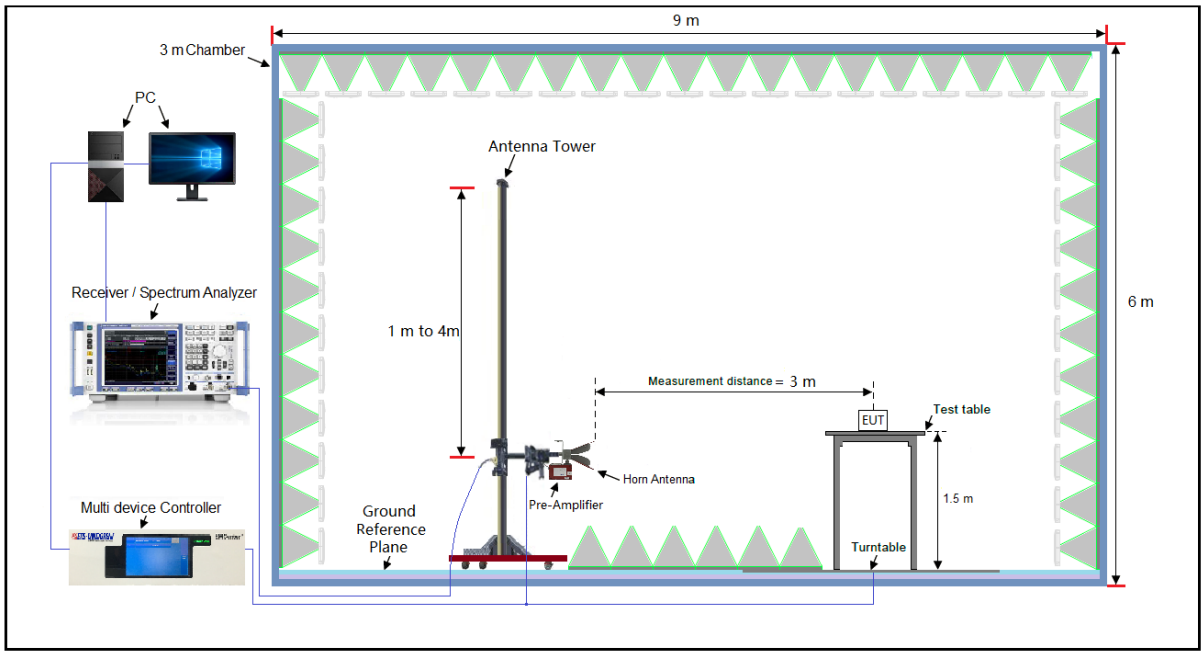
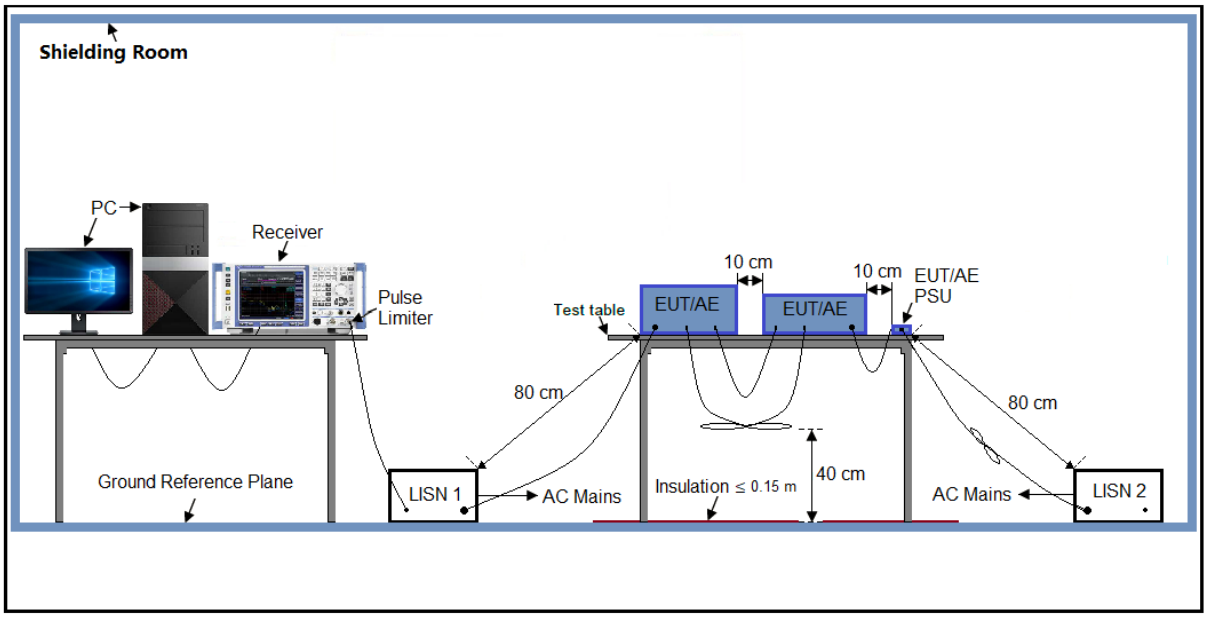


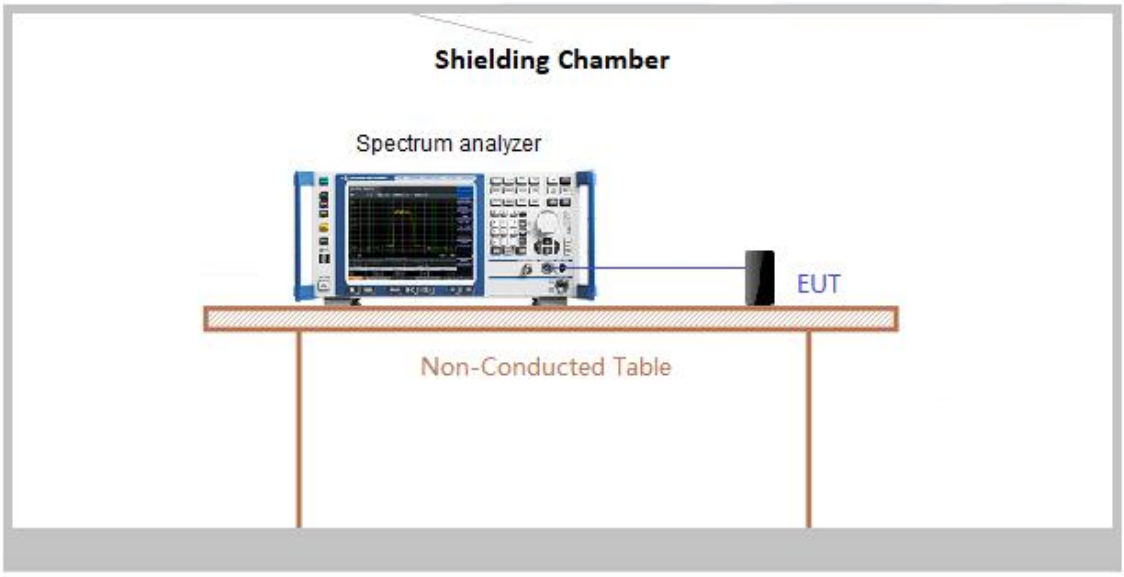
Figure 3. Above 1GHz



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.

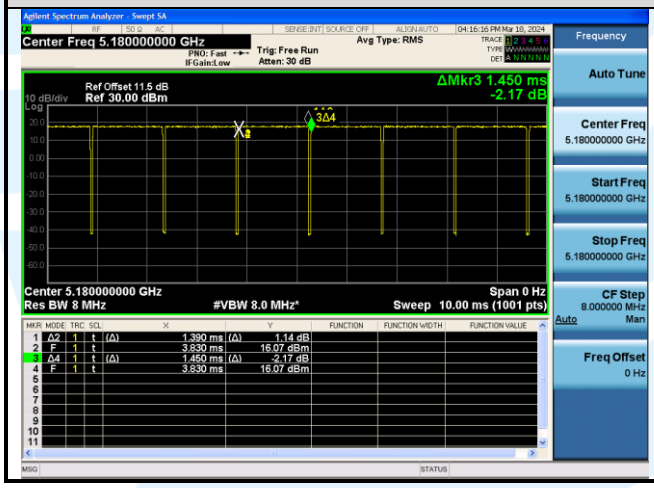
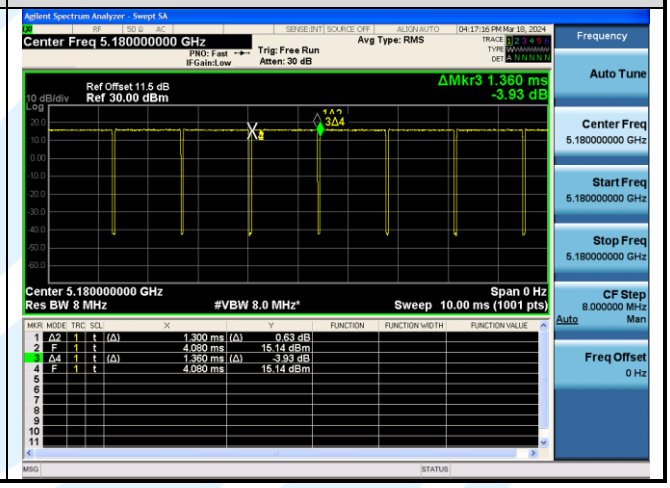
Test Results

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	1.390	1.450	0.96	95.86	0.18	0.72
IEEE 802.11n-HT20	N/A	MCS 16	1.300	1.360	0.96	95.59	0.20	0.77
IEEE 802.11n-HT40	N/A	MCS 16	0.645	0.705	0.91	91.49	0.39	1.55
IEEE 802.11ac-VHT20	N/A	MCS 0	0.372	0.428	0.87	86.92	0.61	2.69
IEEE 802.11ac-VHT40	N/A	MCS 0	0.260	0.320	0.81	81.25	0.90	3.85
IEEE 802.11ac-VHT80	N/A	MCS 0	0.148	0.204	0.73	72.55	1.39	6.76
IEEE 802.11ac-VHT160	N/A	MCS 0	0.100	0.156	0.64	64.10	1.93	10.00
IEEE 802.11ax-HE20	SU	MCS 0	0.430	0.485	0.89	88.66	0.52	2.33
IEEE 802.11ax-HE40	SU	MCS 0	0.425	0.480	0.89	88.54	0.53	2.35
IEEE 802.11ax-HE80	SU	MCS 0	0.415	0.470	0.88	88.30	0.54	2.41
IEEE 802.11ax-HE160	SU	MCS 0	0.410	0.465	0.88	88.17	0.55	2.44

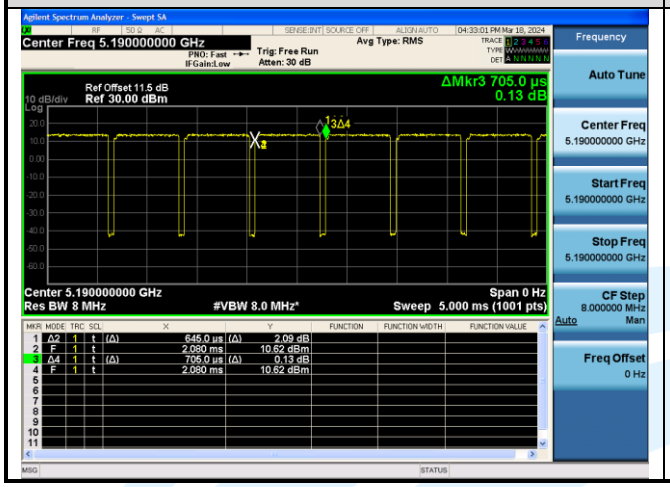
Remark:

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

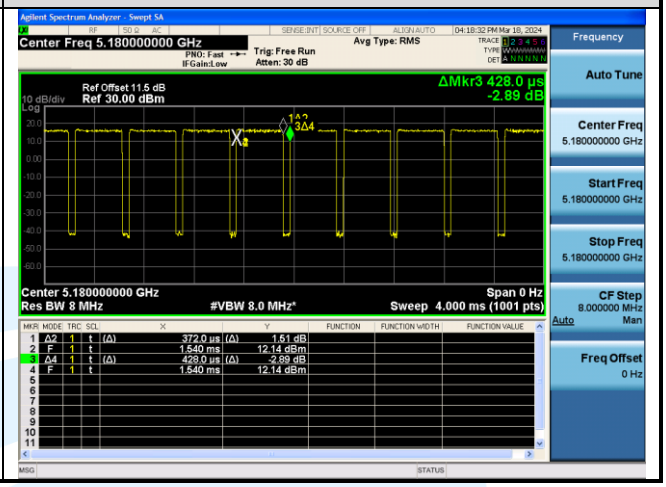
The test plots as follows

IEEE 802.11a	IEEE 802.11n-HT20
	

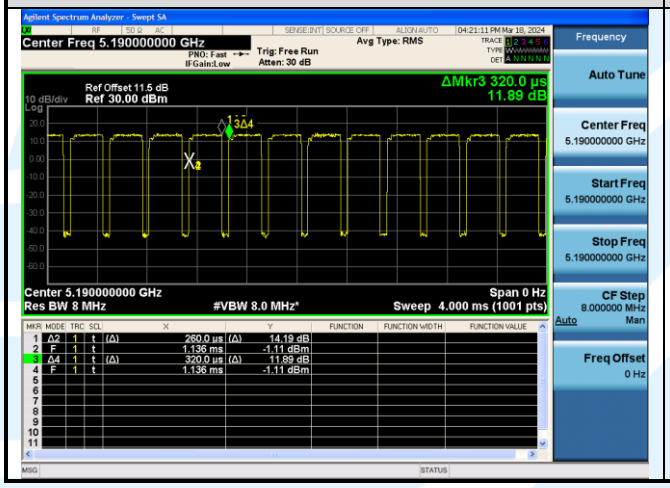
IEEE 802.11n-HT40



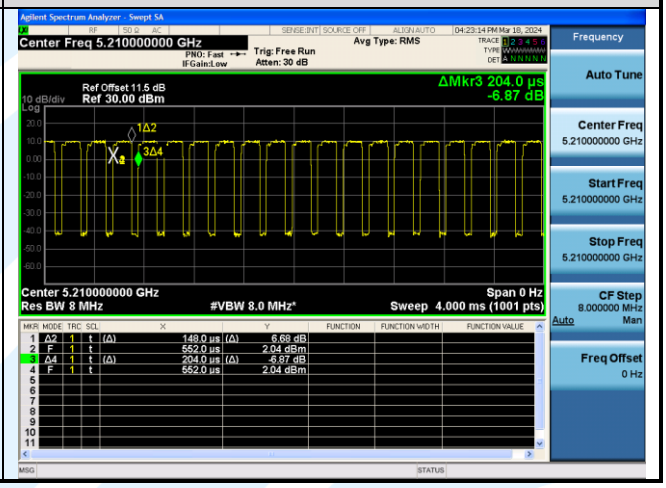
IEEE 802.11ac-VHT20



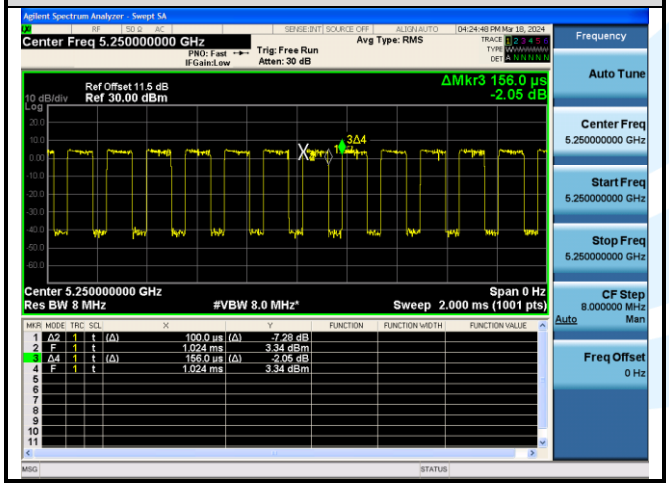
IEEE 802.11ac-VHT40

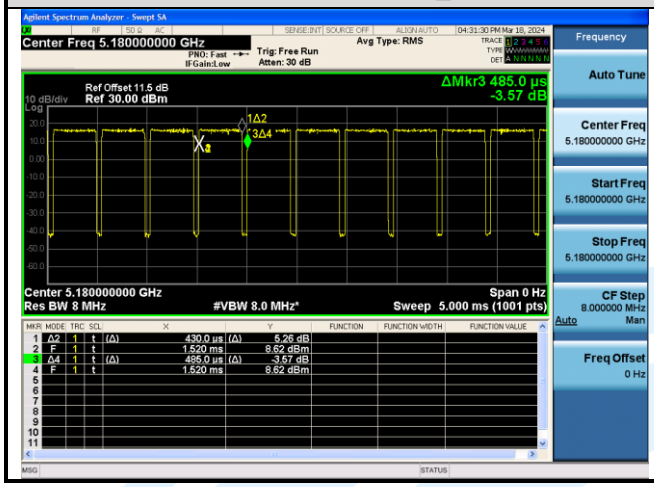
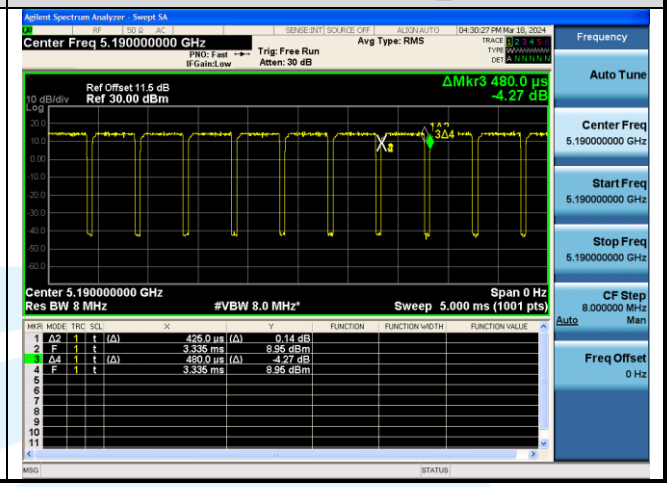
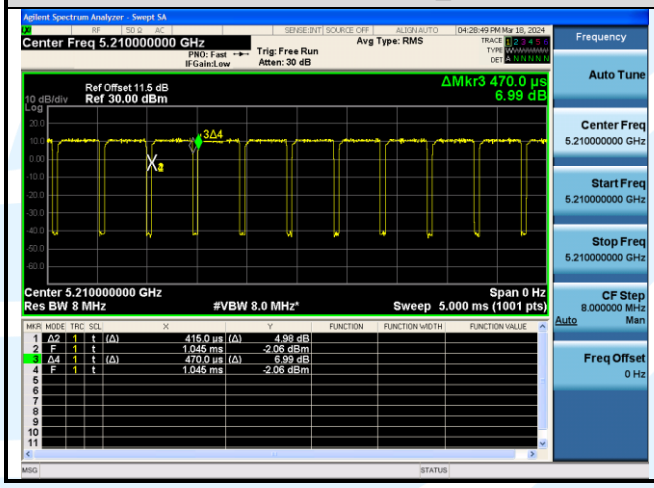
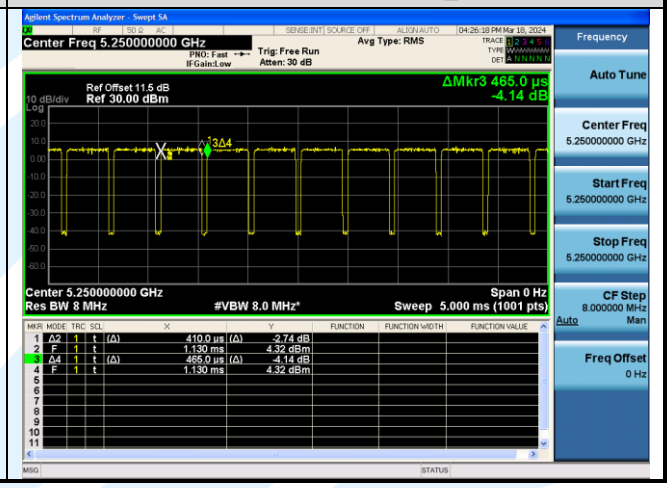


IEEE 802.11ac-VHT80



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:
Three antenna 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 10.37 dBi. (See section 5.5).

5.3 26 DB BANDWIDTH & 99% OCCUPIED 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 %.

Occupied Bandwidth

a) Set center frequency to the nominal EUT channel center frequency.
b) Set span = 1.5 times to 5.0 times the OBW.
c) Set RBW = 1% to 5% of the OBW
d) Set VBW ≥ 3 x RBW
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available).
g) If the instrument does not have a 99% power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

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 & 99% OCCUPIED 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.

Occupied Bandwidth

a) Set center frequency to the nominal EUT channel center frequency.
b) Set span = 1.5 times to 5.0 times the OBW.
c) Set RBW = 1% to 5% of the OBW
d) Set VBW ≥ 3 x RBW
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available).
g) If the instrument does not have a 99% power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

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 & TRANSMIT POWER CONTROL

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3) & (h)(1)

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	6.5	5.67	4.5	10.37	10.37	25.63	12.63
U-NII-2A	6.5	5.67	4.5	10.37	10.37	19.63	6.63
U-NII-2C	6.5	5.67	4.5	10.37	10.37	19.63	6.63
U-NII-3	6.5	5.67	4.5	10.37	10.37	25.63	25.63
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 20.05 MHz

11 dBm + $10\log_{10}$ (20.05) = 24.02 dBm

24.02 dBm>19.63 dBm

So the 19.63 dBm limit applicable

For U-NII-2C Band:

IEEE 802.11a: the minimum 26 dB emission bandwidth is 20.46 MHz

11 dBm + 10log10 (20.46) = 24.11 dBm

24.11 dBm > 19.63 dBm

So the 19.63 dBm limit applicable

Maximum output power(TPC Highest Power)

Mode	Band	Channel	Freq. (MHz)	CONDUCTED AVG POWER								
				Meas Value (dBm)			Corr'd Value (dBm)				FCC Limit (dBm)	FCC Result
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11a	U-NII-1	36	5180	21.16	21.94	21.14	21.34	22.12	21.32	N/A	29.50	Pass
		44	5220	21.46	22.11	21.56	21.64	22.29	21.74	N/A	29.50	Pass
		48	5240	21.52	22.19	21.66	21.70	22.37	21.84	N/A	29.50	Pass
	U-NII-2A	52	5260	20.08	20.14	20.06	20.26	20.32	20.24	N/A	23.50	Pass
		60	5300	20.05	20.03	20.01	20.23	20.21	20.19	N/A	23.50	Pass
		64	5320	19.95	19.97	19.91	20.13	20.15	20.09	N/A	23.50	Pass
	U-NII-2C	100	5500	18.17	18.90	16.01	18.35	19.08	16.19	N/A	23.50	Pass
		116	5580	20.37	20.71	20.23	20.55	20.89	20.41	N/A	23.50	Pass
		140	5700	16.11	16.61	15.54	16.29	16.79	15.72	N/A	23.50	Pass
		144	5720	20.63	20.08	20.13	20.81	20.26	20.31	N/A	23.50	Pass
	U-NII-3	149	5745	19.55	19.44	19.41	19.73	19.62	19.59	N/A	29.50	Pass
		157	5785	19.78	19.74	19.62	19.96	19.92	19.80	N/A	29.50	Pass
		165	5825	19.57	19.49	19.69	19.75	19.67	19.87	N/A	29.50	Pass
IEEE 802.11n-HT20	U-NII-1	36	5180	17.73	18.32	17.77	17.93	18.52	17.97	22.92	25.63	Pass
		44	5220	17.88	18.44	18.33	18.08	18.64	18.53	23.19	25.63	Pass
		48	5240	18.02	18.49	18.31	18.22	18.69	18.51	23.24	25.63	Pass
	U-NII-2A	52	5260	11.61	11.75	11.67	11.81	11.95	11.87	16.64	19.63	Pass
		60	5300	11.84	11.81	11.32	12.04	12.01	11.52	16.63	19.63	Pass
		64	5320	11.08	11.22	11.13	11.28	11.42	11.33	16.11	19.63	Pass
	U-NII-2C	100	5500	10.77	10.25	10.31	10.97	10.45	10.51	15.42	19.63	Pass
		116	5580	10.03	10.58	10.21	10.23	10.78	10.41	15.25	19.63	Pass
		140	5700	11.28	11.04	11.09	11.48	11.24	11.29	16.11	19.63	Pass
		144	5720	14.11	14.45	13.62	14.31	14.65	13.82	19.04	19.63	Pass
	U-NII-3	149	5745	17.96	18.07	17.97	18.16	18.27	18.17	22.97	25.63	Pass
		157	5785	19.88	20.32	19.08	20.08	20.52	19.28	24.76	25.63	Pass
		165	5825	16.15	18.19	17.16	16.35	18.39	17.36	22.21	25.63	Pass

IEEE 802.11n-HT40	U-NII-1	38	5190	14.23	14.94	14.51	14.62	15.33	14.90	19.73	25.63	Pass
		46	5230	14.38	14.95	14.73	14.77	15.34	15.12	19.85	25.63	Pass
	U-NII-2A	54	5270	14.31	14.62	13.35	14.70	15.01	13.74	19.28	19.63	Pass
		62	5310	14.13	14.53	14.37	14.52	14.92	14.76	19.50	19.63	Pass
	U-NII-2C	102	5510	9.19	10.02	9.51	9.58	10.41	9.90	14.74	19.63	Pass
		110	5550	14.38	14.87	13.75	14.77	15.26	14.14	19.51	19.63	Pass
		134	5670	12.27	12.96	12.54	12.66	13.35	12.93	17.76	19.63	Pass
		142	5710	13.49	13.03	13.78	13.88	13.42	14.17	18.60	19.63	Pass
	U-NII-3	151	5755	17.24	17.69	17.52	17.63	18.08	17.91	22.64	25.63	Pass
		159	5795	14.31	14.96	14.44	14.70	15.35	14.83	19.74	25.63	Pass
IEEE 802.11ac-VHT20	U-NII-1	36	5180	16.62	17.33	16.75	17.23	17.94	17.36	22.29	25.63	Pass
		44	5220	16.85	17.56	17.15	17.46	18.17	17.76	22.58	25.63	Pass
		48	5240	16.83	17.32	17.46	17.44	17.93	18.07	22.59	25.63	Pass
	U-NII-2A	52	5260	12.06	12.11	12.01	12.67	12.72	12.62	17.44	19.63	Pass
		60	5300	11.05	11.45	11.14	11.66	12.06	11.75	16.60	19.63	Pass
		64	5320	11.12	11.65	11.15	11.73	12.26	11.76	16.69	19.63	Pass
	U-NII-2C	100	5500	11.04	11.58	11.29	11.65	12.19	11.90	16.69	19.63	Pass
		116	5580	11.53	11.42	11.32	12.14	12.03	11.93	16.80	19.63	Pass
		140	5700	11.57	11.26	11.14	12.18	11.87	11.75	16.71	19.63	Pass
		144	5720	10.58	10.64	10.49	11.19	11.25	11.10	15.95	19.63	Pass
	U-NII-3	149	5745	17.57	18.09	16.62	18.18	18.70	17.23	22.85	25.63	Pass
		157	5785	19.31	20.42	18.46	19.92	21.03	19.07	24.85	25.63	Pass
		165	5825	17.05	18.19	16.34	17.66	18.80	16.95	22.64	25.63	Pass
IEEE 802.11ac-VHT40	U-NII-1	38	5190	13.31	14.04	13.52	14.21	14.94	14.42	19.31	25.63	Pass
		46	5230	13.41	13.93	13.73	14.31	14.83	14.63	19.37	25.63	Pass
	U-NII-2A	54	5270	13.54	13.45	13.24	14.44	14.35	14.14	19.08	19.63	Pass
		62	5310	13.92	13.55	13.21	14.82	14.45	14.11	19.24	19.63	Pass
	U-NII-2C	102	5510	8.75	9.95	9.67	9.65	10.85	10.57	15.16	19.63	Pass
		110	5550	13.62	13.21	13.69	14.52	14.11	14.59	19.18	19.63	Pass
		134	5670	12.55	12.91	12.67	13.45	13.81	13.57	18.39	19.63	Pass
		142	5710	12.37	12.96	12.41	13.27	13.86	13.31	18.26	19.63	Pass
	U-NII-3	151	5755	17.44	17.76	17.53	18.34	18.66	18.43	23.25	25.63	Pass
		159	5795	14.42	14.89	14.71	15.32	15.79	15.61	20.35	25.63	Pass
IEEE 802.11ac-VHT80	U-NII-1	42	5210	12.19	12.82	12.13	13.58	14.21	13.52	18.56	25.63	Pass
	U-NII-2A	58	5290	12.02	12.13	12.07	13.41	13.52	13.46	18.24	19.63	Pass
	U-NII-2C	106	5530	6.61	6.80	6.52	8.00	8.19	7.91	12.81	19.63	Pass

		138	5690	12.27	12.68	12.82	13.66	14.07	14.21	18.76	19.63	Pass
	U-NII-3	155	5775	13.15	13.77	13.28	14.54	15.16	14.67	19.57	25.63	Pass
IEEE 802.11ac-VHT160	U-NII-1	50	5250	9.52	10.21	10.01	11.45	12.14	11.94	16.63	19.63	Pass
	U-NII-2C	114	5570	5.19	5.58	4.64	7.12	7.51	6.57	11.86	19.63	Pass

Mode	Band	Channel	RU & Index	CONDUCTED AVG POWER								
				Meas Value (dBm)			Corr'd Value (dBm)				FCC Limit (dBm)	Result
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11ax-HE20	U-NII-1	36	SU	16.63	17.62	16.89	17.15	18.14	17.41	22.36	25.63	Pass
		44	SU	17.41	17.32	17.24	17.93	17.84	17.76	22.62	25.63	Pass
		48	SU	17.55	17.64	17.43	18.07	18.16	17.95	22.83	25.63	Pass
	U-NII-2A	52	SU	11.77	11.83	11.65	12.29	12.35	12.17	17.04	19.63	Pass
		60	SU	11.25	11.19	11.42	11.77	11.71	11.94	16.58	19.63	Pass
		64	SU	11.24	11.11	11.38	11.76	11.63	11.90	16.54	19.63	Pass
	U-NII-2C	100	SU	11.42	11.32	11.51	11.94	11.84	12.03	16.71	19.63	Pass
		116	SU	11.89	11.93	11.47	12.41	12.45	11.99	17.06	19.63	Pass
		140	SU	11.87	12.01	11.79	12.39	12.53	12.31	17.18	19.63	Pass
		144	SU	11.58	11.79	11.75	12.10	12.31	12.27	17.00	19.63	Pass
	U-NII-3	149	SU	18.09	18.02	18.26	18.61	18.54	18.78	23.42	25.63	Pass
		157	SU	18.68	18.42	18.31	19.20	18.94	18.83	23.77	25.63	Pass
		165	SU	18.07	18.66	18.43	18.59	19.18	18.95	23.69	25.63	Pass
IEEE 802.11ax-HE40	U-NII-1	38	SU	12.88	13.82	13.23	13.41	14.35	13.76	18.63	25.63	Pass
		46	SU	13.01	13.47	13.44	13.54	14.00	13.97	18.61	25.63	Pass
	U-NII-2A	54	SU	13.12	13.50	13.26	13.65	14.03	13.79	18.60	19.63	Pass
		62	SU	12.87	13.22	13.11	13.40	13.75	13.64	18.37	19.63	Pass
	U-NII-2C	102	SU	9.97	10.50	10.11	10.50	11.03	10.64	15.50	19.63	Pass
		110	SU	13.17	13.79	13.26	13.70	14.32	13.79	18.72	19.63	Pass
		134	SU	12.29	12.67	12.37	12.82	13.20	12.90	17.75	19.63	Pass
		142	SU	13.59	13.78	13.54	14.12	14.31	14.07	18.94	19.63	Pass
	U-NII-3	151	SU	18.17	18.21	18.15	18.70	18.74	18.68	23.48	25.63	Pass
		159	SU	18.39	18.41	18.31	18.92	18.94	18.84	23.67	25.63	Pass
IEEE 802.11ax-HE80	U-NII-1	42	SU	9.31	9.67	10.01	9.85	10.21	10.55	14.98	25.63	Pass
	U-NII-2A	58	SU	11.21	11.38	11.41	11.75	11.92	11.95	16.65	19.63	Pass
	U-NII-2C	106	SU	6.25	6.85	6.64	6.79	7.39	7.18	11.90	19.63	Pass
		138	SU	12.95	13.20	12.96	13.49	13.74	13.50	18.35	19.63	Pass
	U-NII-3	155	SU	13.83	13.98	13.64	14.37	14.52	14.18	19.13	25.63	Pass

IEEE 802.11ax-HE160	U-NII-1	50	SU	11.39	12.07	11.72	11.94	12.62	12.27	17.05	19.63	Pass
	U-NII-2C	114	SU	6.97	7.43	6.31	7.52	7.98	6.86	12.25	19.63	Pass

Maximum output power (TPC Lowest Power)

Mode	Band	Channel	Freq. (MHz)	CONDUCTED AVG POWER								
				Meas Value (dBm)			Corr'd Value (dBm)				FCC Limit (dBm)	FCC Result
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11a	U-NII-2A	52	5260	13.78	13.95	13.97	13.96	14.13	14.15	N/A	23.50	Pass
		60	5300	13.89	13.89	13.88	14.07	14.07	14.06	N/A	23.50	Pass
		64	5320	13.88	13.76	13.64	14.06	13.94	13.82	N/A	23.50	Pass
	U-NII-2C	100	5500	12.05	12.65	9.89	12.23	12.83	10.07	N/A	23.50	Pass
		116	5580	14.15	14.52	14.02	14.33	14.70	14.20	N/A	23.50	Pass
		140	5700	10.02	10.55	9.78	10.20	10.73	9.96	N/A	23.50	Pass
		144	5720	14.43	13.97	13.42	14.61	14.15	13.60	N/A	23.50	Pass
IEEE 802.11n-HT20	U-NII-2A	52	5260	5.44	5.65	5.41	5.64	5.85	5.61	10.47	19.63	Pass
		60	5300	5.68	5.77	5.28	5.88	5.97	5.48	10.55	19.63	Pass
		64	5320	5.01	5.12	5.11	5.21	5.32	5.31	10.05	19.63	Pass
	U-NII-2C	100	5500	4.64	4.19	4.21	4.84	4.39	4.41	9.32	19.63	Pass
		116	5580	4.01	4.42	4.11	4.21	4.62	4.31	9.15	19.63	Pass
		140	5700	5.14	5.22	5.04	5.34	5.42	5.24	10.10	19.63	Pass
		144	5720	5.02	5.33	5.51	5.22	5.53	5.71	10.26	19.63	Pass
IEEE 802.11n-HT40	U-NII-2A	54	5270	8.21	8.55	7.31	8.60	8.94	7.70	13.21	19.63	Pass
		62	5310	8.11	8.44	8.25	8.50	8.83	8.64	13.43	19.63	Pass
	U-NII-2C	102	5510	3.15	3.98	3.41	3.54	4.37	3.80	8.68	19.63	Pass
		110	5550	8.32	8.78	8.65	8.71	9.17	9.04	13.75	19.63	Pass
		134	5670	6.21	6.89	6.44	6.60	7.28	6.83	11.68	19.63	Pass
		142	5710	7.33	7.01	7.68	7.72	7.40	8.07	12.51	19.63	Pass
IEEE 802.11ac-VHT20	U-NII-2A	52	5260	5.92	5.98	5.58	6.53	6.59	6.19	11.21	19.63	Pass
		60	5300	5.01	5.24	5.03	5.62	5.85	5.64	10.47	19.63	Pass
		64	5320	5.02	5.14	5.11	5.63	5.75	5.72	10.47	19.63	Pass
	U-NII-2C	100	5500	4.98	5.42	5.22	5.59	6.03	5.83	10.59	19.63	Pass
		116	5580	5.24	5.33	5.21	5.85	5.94	5.82	10.64	19.63	Pass
		140	5700	5.42	5.16	5.02	6.03	5.77	5.63	10.58	19.63	Pass
		144	5720	4.44	4.52	4.39	5.05	5.13	5.00	9.83	19.63	Pass

Mode	Band	Channel	Freq. (MHz)	CONDUCTED AVG POWER								
				Meas Value (dBm)			Corr'd Value (dBm)				FCC Limit (dBm)	FCC Result
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11ac-VHT40	U-NII-2A	54	5270	7.42	7.41	7.21	8.32	8.31	8.11	13.02	19.63	Pass
		62	5310	7.88	7.49	7.19	8.78	8.39	8.09	13.20	19.63	Pass
	U-NII-2C	102	5510	3.71	3.67	3.55	4.61	4.57	4.45	9.32	19.63	Pass
		110	5550	7.52	7.15	7.66	8.42	8.05	8.56	13.12	19.63	Pass
		134	5670	6.52	6.89	6.53	7.42	7.79	7.43	12.32	19.63	Pass
		142	5710	6.31	6.84	6.22	7.21	7.74	7.12	12.14	19.63	Pass
IEEE 802.11ac-VHT80	U-NII-2A	58	5290	6.01	6.11	6.06	7.40	7.50	7.45	12.23	19.63	Pass
	U-NII-2C	106	5530	0.51	0.78	0.51	1.90	2.17	1.90	6.77	19.63	Pass
		138	5690	6.27	6.55	6.79	7.66	7.94	8.18	12.71	19.63	Pass
IEEE 802.11ac-VHT160	U-NII-2A	50	5250	3.67	4.01	3.99	5.60	5.94	5.92	10.60	19.63	Pass
	U-NII-2C	114	5570	-0.87	-0.41	-1.32	1.06	1.52	0.61	5.85	19.63	Pass

Mode	Band	Channel	RU & Index	CONDUCTED AVG POWER								
				Meas Value (dBm)			Corr'd Value (dBm)				FCC Limit (dBm)	Result
				Ant. 0	Ant. 1	Ant. 2	Ant. 0	Ant. 1	Ant. 2	Total		
IEEE 802.11ax-HE20	U-NII-2A	52	SU	5.71	5.68	5.59	6.23	6.20	6.11	10.95	19.63	Pass
		60	SU	5.21	5.11	5.33	5.73	5.63	5.85	10.51	19.63	Pass
		64	SU	5.22	5.05	5.38	5.74	5.57	5.90	10.51	19.63	Pass
	U-NII-2C	100	SU	5.37	5.29	5.44	5.89	5.81	5.96	10.66	19.63	Pass
		116	SU	5.78	5.89	5.41	6.30	6.41	5.93	10.99	19.63	Pass
		140	SU	5.74	5.95	5.77	6.26	6.47	6.29	11.11	19.63	Pass
		144	SU	5.43	5.72	5.62	5.95	6.24	6.14	10.89	19.63	Pass
IEEE 802.11ax-HE40	U-NII-2A	54	SU	7.11	7.42	7.22	7.64	7.95	7.75	12.55	19.63	Pass
		62	SU	7.77	7.21	7.05	8.30	7.74	7.58	12.65	19.63	Pass
	U-NII-2C	102	SU	3.95	4.44	4.02	4.48	4.97	4.55	9.44	19.63	Pass
		110	SU	7.02	7.45	7.21	7.55	7.98	7.74	12.53	19.63	Pass
		134	SU	6.19	6.57	6.33	6.72	7.10	6.86	11.67	19.63	Pass
		142	SU	7.55	7.71	7.45	8.08	8.24	7.98	12.87	19.63	Pass
IEEE 802.11ax-HE80	U-NII-2A	58	SU	5.11	5.28	5.35	5.65	5.82	5.89	10.56	19.63	Pass

	U-NII-2C	106	SU	1.21	0.84	0.61	1.75	1.38	1.15	6.21	19.63	Pass
		138	SU	6.85	7.11	6.95	7.39	7.65	7.49	12.28	19.63	Pass
IEEE 802.11ax-HE160	U-NII-2A	50	SU	4.98	5.77	5.37	5.53	6.32	5.92	10.70	19.63	Pass
	U-NII-2C	114	SU	0.88	1.32	0.28	1.43	1.87	0.83	6.17	19.63	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	6.5	5.67	4.5	10.37	10.37	25.63	12.63
U-NII-2A	6.5	5.67	4.5	10.37	10.37	19.63	6.63
U-NII-2C	6.5	5.67	4.5	10.37	10.37	19.63	6.63
U-NII-3	6.5	5.67	4.5	10.37	10.37	25.63	25.63
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.

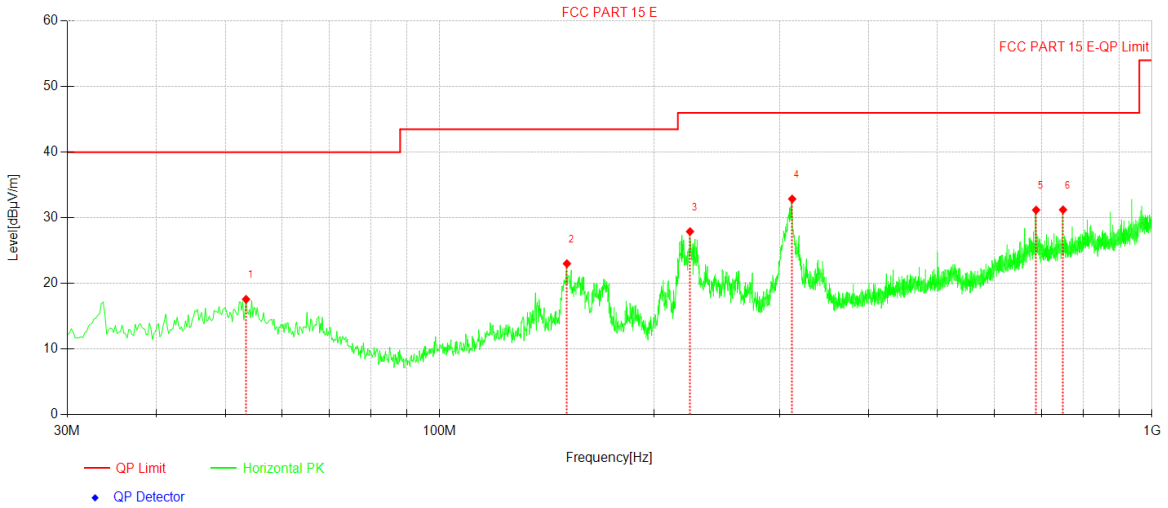
Test Result: Pass

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.

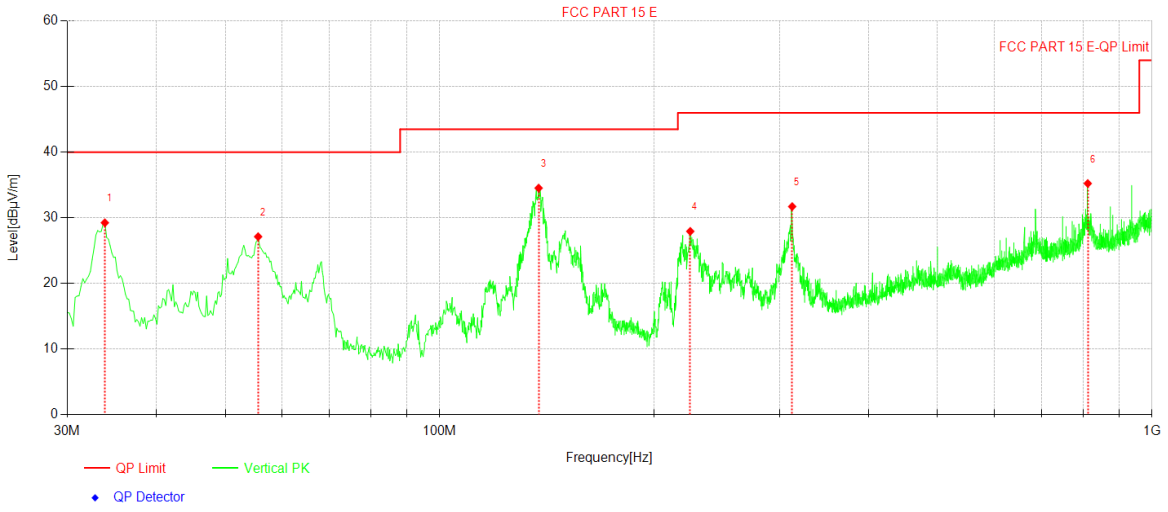
Radiated Emission Test Data (30 MHz ~ 1 GHz):
Worst-Case Configuration(IEEE 802.11ac-VHT20_5785MHz)

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	53.4787	24.25	-6.68	17.57	40.00	22.43	Peak
2	150.8862	30.87	-7.86	23.01	43.50	20.49	Peak
3	224.6209	38.97	-11.07	27.90	46.00	18.10	Peak
4	312.5205	39.45	-6.58	32.87	46.00	13.13	Peak
5	687.5975	29.02	2.17	31.19	46.00	14.81	Peak
6	750.078	27.79	3.43	31.22	46.00	14.78	Peak

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	33.8808	38.66	-9.42	29.24	40.00	10.76	Peak
2	55.6131	34.31	-7.19	27.12	40.00	12.88	Peak
3	137.6915	43.40	-8.87	34.53	43.50	8.97	Peak
4	224.815	38.99	-11.06	27.93	46.00	18.07	Peak
5	312.5205	38.29	-6.58	31.71	46.00	14.29	Peak
6	812.5585	30.57	4.66	35.23	46.00	10.77	Peak

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	10356.9452	45.14	6.79	51.93	68.20	16.27	Peak	Horizontal
2	15540.318	41.69	13.32	55.01	74.00	18.99	Peak	Horizontal
4	15540.318	32.93	13.32	46.25	54.00	7.75	Average	Horizontal
5	10362.4454	42.94	6.70	49.64	68.20	18.56	Peak	Vertical
6	15540.318	39.72	13.32	53.04	74.00	20.96	Peak	Vertical
8	15540.318	32.35	13.32	45.67	54.00	8.33	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 44								
1	10439.8147	44.94	5.95	50.89	68.20	17.31	Peak	Horizontal
2	15660.222	40.52	13.99	54.51	74.00	19.49	Peak	Horizontal
4	15660.222	32.32	13.99	46.31	54.00	7.69	Average	Horizontal
5	10438.7146	45.03	5.95	50.98	68.20	17.22	Peak	Vertical
6	15665.3555	42.75	14.22	56.97	74.00	17.03	Peak	Vertical
8	15660.222	35.45	13.99	49.44	54.00	4.56	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 48								
1	10477.9493	44.76	6.19	50.95	68.20	17.25	Peak	Horizontal
2	15720.3573	39.55	14.84	54.39	74.00	19.61	Peak	Horizontal
4	15720.3573	31.81	14.84	46.65	54.00	7.35	Average	Horizontal
5	10476.4825	45.05	6.17	51.22	68.20	16.98	Peak	Vertical
6	15720.3573	39.95	14.84	54.79	74.00	19.21	Peak	Vertical
8	15720.3573	31.15	14.84	45.99	54.00	8.01	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 52								
1	10527.0842	44.31	6.52	50.83	68.20	17.37	Peak	Horizontal
2	15780.126	39.21	14.41	53.62	74.00	20.38	Peak	Horizontal
4	15780.126	32.33	14.41	46.74	54.00	7.26	Average	Horizontal
5	10520.484	43.52	6.66	50.18	68.20	18.02	Peak	Vertical
6	15780.126	38.77	14.41	53.18	74.00	20.82	Peak	Vertical
8	15780.126	31.80	14.41	46.21	54.00	7.79	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	10599.32	45.01	6.18	51.19	68.20	17.01	Peak	Horizontal
2	15900.03	38.17	14.64	52.81	74.00	21.19	Peak	Horizontal
3	10600.7867	37.53	6.17	43.70	54.00	10.30	Average	Horizontal
4	15900.03	30.94	14.64	45.58	54.00	8.42	Average	Horizontal
5	10602.9868	44.56	6.17	50.73	74.00	23.27	Peak	Vertical
6	15900.03	39.05	14.64	53.69	74.00	20.31	Peak	Vertical
8	15900.03	31.70	14.64	46.34	54.00	7.66	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 64								
1	10640.7547	44.87	6.44	51.31	74.00	22.69	Peak	Horizontal
2	15960.1653	39.70	14.41	54.11	74.00	19.89	Peak	Horizontal
3	10644.0548	37.12	6.44	43.56	54.00	10.44	Average	Horizontal
4	15960.1653	31.78	14.41	46.19	54.00	7.81	Average	Horizontal
5	10646.6216	44.51	6.44	50.95	74.00	23.05	Peak	Vertical
6	15960.1653	38.76	14.41	53.17	74.00	20.83	Peak	Vertical
7	10639.6547	36.13	6.44	42.57	54.00	11.43	Average	Vertical
8	15960.1653	30.96	14.41	45.37	54.00	8.63	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 100								
1	10996.0665	48.20	6.33	54.53	74.00	19.47	Peak	Horizontal
2	16500.2833	43.39	16.08	59.47	68.20	8.73	Peak	Horizontal
3	10996.4332	39.08	6.33	45.41	54.00	8.59	Average	Horizontal
5	11002.6668	45.09	6.33	51.42	74.00	22.58	Peak	Vertical
6	16500.2833	42.13	16.08	58.21	68.20	9.99	Peak	Vertical
7	11000.8334	37.12	6.34	43.46	54.00	10.54	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 116								
1	11161.4387	45.60	6.59	52.19	74.00	21.81	Peak	Horizontal
2	16740.0913	42.35	15.94	58.29	68.20	9.91	Peak	Horizontal
3	11166.2055	37.57	6.37	43.94	54.00	10.06	Average	Horizontal
4	16740.0913	35.64	15.94	51.58	54.00	2.42	Average	Horizontal
5	11162.5388	46.30	6.54	52.84	74.00	21.16	Peak	Vertical
6	16740.0913	41.01	15.94	56.95	68.20	11.25	Peak	Vertical
7	11160.7054	38.36	6.63	44.99	54.00	9.01	Average	Vertical
8	16740.0913	33.45	15.94	49.39	54.00	4.61	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	11400.5134	46.13	6.66	52.79	74.00	21.21	Peak	Horizontal
2	17096.8699	47.06	15.73	62.79	68.20	5.41	Peak	Horizontal
3	11399.78	39.30	6.64	45.94	54.00	8.06	Average	Horizontal
5	11397.9466	47.52	6.60	54.12	74.00	19.88	Peak	Vertical
6	17100.17	42.82	15.75	58.57	68.20	9.63	Peak	Vertical
7	11406.3802	40.04	6.64	46.68	54.00	7.32	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 144								
1	11440.5647	47.24	6.80	54.04	74.00	19.96	Peak	Horizontal
2	17160.0887	45.68	15.76	61.44	68.20	6.76	Peak	Horizontal
3	11440.948	36.68	6.81	43.49	54.00	10.51	Average	Horizontal
4	11447.8483	48.37	6.77	55.14	74.00	18.86	Peak	Vertical
5	17160.0887	41.05	15.76	56.81	68.20	11.39	Peak	Vertical
6	11437.1146	39.02	6.76	45.78	54.00	8.22	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 149								
1	11490.2796	47.45	6.68	54.13	74.00	19.87	Peak	Horizontal
2	17235.4494	44.33	16.00	60.33	68.20	7.87	Peak	Horizontal
3	11490.7396	38.94	6.68	45.62	54.00	8.38	Average	Horizontal
5	11488.4395	48.45	6.69	55.14	74.00	18.86	Peak	Vertical
6	17235.4494	38.98	16.00	54.98	68.20	13.22	Peak	Vertical
7	11489.3596	39.92	6.69	46.61	54.00	7.39	Average	Vertical
SISO_ Ant. 0_IEEE 802.11a_Channel 157								
1	11563.4225	46.46	6.61	53.07	74.00	20.93	Peak	Horizontal
2	17350.454	44.90	14.67	59.57	68.20	8.63	Peak	Horizontal
3	11568.0227	38.37	6.62	44.99	54.00	9.01	Average	Horizontal
5	11574.923	48.86	6.63	55.49	74.00	18.51	Peak	Vertical
6	17350.454	42.69	14.67	57.36	68.20	10.84	Peak	Vertical
7	11572.6229	39.95	6.63	46.58	54.00	7.42	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	11647.6059	49.28	6.74	56.02	74.00	17.98	Peak	Horizontal
2	17475.119	44.58	14.61	59.19	68.20	9.01	Peak	Horizontal
3	11649.446	39.22	6.74	45.96	54.00	8.04	Average	Horizontal
5	11646.6859	52.07	6.73	58.80	74.00	15.20	Peak	Vertical
6	17477.8791	45.31	14.69	60.00	68.20	8.20	Peak	Vertical
7	11650.826	43.08	6.74	49.82	54.00	4.18	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 36								
1	10362.0787	51.18	6.71	57.89	68.20	10.31	Peak	Horizontal
2	15532.9844	45.43	13.36	58.79	74.00	15.21	Peak	Horizontal
4	15538.1179	36.74	13.35	50.09	54.00	3.91	Average	Horizontal
5	10362.0787	47.67	6.71	54.38	68.20	13.82	Peak	Vertical
6	15538.1179	44.49	13.35	57.84	74.00	16.16	Peak	Vertical
8	15542.5181	36.22	13.29	49.51	54.00	4.49	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 44								
1	10434.6812	52.80	5.94	58.74	68.20	9.46	Peak	Horizontal
2	15664.9888	44.55	14.21	58.76	74.00	15.24	Peak	Horizontal
4	15663.1554	36.40	14.14	50.54	54.00	3.46	Average	Horizontal
5	10444.5815	52.24	5.95	58.19	68.20	10.01	Peak	Vertical
6	15660.222	41.19	13.99	55.18	74.00	18.82	Peak	Vertical
8	15660.222	33.17	13.99	47.16	54.00	6.84	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 48								
1	10483.4494	52.55	6.43	58.98	68.20	9.22	Peak	Horizontal
2	15726.2242	42.75	14.76	57.51	74.00	16.49	Peak	Horizontal
4	15717.4239	34.20	14.89	49.09	54.00	4.91	Average	Horizontal
5	10482.3494	51.29	6.38	57.67	68.20	10.53	Peak	Vertical
6	15720.3573	40.47	14.84	55.31	74.00	18.69	Peak	Vertical
8	15720.3573	31.58	14.84	46.42	54.00	7.58	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	10524.8842	52.23	6.56	58.79	68.20	9.41	Peak	Horizontal
2	15780.126	39.54	14.41	53.95	74.00	20.05	Peak	Horizontal
4	15780.126	32.43	14.41	46.84	54.00	7.16	Average	Horizontal
5	10519.384	49.50	6.67	56.17	68.20	12.03	Peak	Vertical
6	15780.126	39.42	14.41	53.83	74.00	20.17	Peak	Vertical
8	15780.126	31.86	14.41	46.27	54.00	7.73	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 60								
1	10599.32	53.80	6.18	59.98	68.20	8.22	Peak	Horizontal
2	15900.03	38.75	14.64	53.39	74.00	20.61	Peak	Horizontal
4	15900.03	31.73	14.64	46.37	54.00	7.63	Average	Horizontal
5	10598.9533	51.20	6.18	57.38	68.20	10.82	Peak	Vertical
6	15900.03	38.76	14.64	53.40	74.00	20.60	Peak	Vertical
7	10602.6201	44.78	6.17	50.95	54.00	3.05	Average	Vertical
8	15900.03	30.82	14.64	45.46	54.00	8.54	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 64								
1	10632.6878	53.50	6.43	59.93	74.00	14.07	Peak	Horizontal
2	15960.1653	40.54	14.41	54.95	74.00	19.05	Peak	Horizontal
3	10639.288	45.48	6.44	51.92	54.00	2.08	Average	Horizontal
4	15960.1653	31.59	14.41	46.00	54.00	8.00	Average	Horizontal
5	10646.9882	50.64	6.44	57.08	74.00	16.92	Peak	Vertical
6	15960.1653	37.97	14.41	52.38	74.00	21.62	Peak	Vertical
7	10643.3214	42.90	6.44	49.34	54.00	4.66	Average	Vertical
8	15960.1653	30.96	14.41	45.37	54.00	8.63	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 100								
1	10999.3666	48.05	6.34	54.39	74.00	19.61	Peak	Horizontal
2	16500.2833	39.75	16.08	55.83	68.20	12.37	Peak	Horizontal
3	10996.0665	40.03	6.33	46.36	54.00	7.64	Average	Horizontal
5	11002.3001	53.97	6.33	60.30	74.00	13.70	Peak	Vertical
6	16500.2833	40.62	16.08	56.70	68.20	11.50	Peak	Vertical
7	11002.6668	46.19	6.33	52.52	54.00	1.48	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 140								
1	11401.2467	45.48	6.68	52.16	74.00	21.84	Peak	Horizontal
2	17100.17	39.13	15.75	54.88	68.20	13.32	Peak	Horizontal
3	11399.0466	37.71	6.62	44.33	54.00	9.67	Average	Horizontal
5	11399.0466	47.25	6.62	53.87	74.00	20.13	Peak	Vertical
6	17100.17	40.23	15.75	55.98	68.20	12.22	Peak	Vertical
7	11401.6134	38.96	6.69	45.65	54.00	8.35	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 144								
1	11440.1813	41.74	6.80	48.54	74.00	25.46	Peak	Horizontal
2	17160.472	40.64	15.76	56.40	68.20	11.80	Peak	Horizontal
3	11442.8648	37.22	6.83	44.05	54.00	9.95	Average	Vertical
4	11440.1813	44.95	6.80	51.75	74.00	22.25	Peak	Horizontal
5	17160.0887	38.65	15.76	54.41	68.20	13.79	Peak	Horizontal
6	11438.2646	37.99	6.77	44.76	54.00	9.24	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 149								
1	11487.0595	45.11	6.69	51.80	74.00	22.20	Peak	Horizontal
2	17235.4494	39.33	16.00	55.33	68.20	12.87	Peak	Horizontal
3	11489.8196	35.27	6.68	41.95	54.00	12.05	Average	Horizontal
5	11485.6794	46.21	6.68	52.89	74.00	21.11	Peak	Vertical
6	17235.4494	38.60	16.00	54.60	68.20	13.60	Peak	Vertical
7	11487.0595	37.39	6.69	44.08	54.00	9.92	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 157								
1	11569.4028	43.97	6.62	50.59	74.00	23.41	Peak	Horizontal
2	17350.454	40.08	14.67	54.75	68.20	13.45	Peak	Horizontal
3	11568.9428	34.38	6.62	41.00	54.00	13.00	Average	Horizontal
5	11572.6229	46.86	6.63	53.49	74.00	20.51	Peak	Vertical
6	17350.454	39.82	14.67	54.49	68.20	13.71	Peak	Vertical
7	11568.0227	36.91	6.62	43.53	54.00	10.47	Average	Vertical
SISO_ Ant. 1_IEEE 802.11a_Channel 165								
1	11652.2061	45.33	6.74	52.07	74.00	21.93	Peak	Horizontal
2	17475.119	39.83	14.61	54.44	68.20	13.76	Peak	Horizontal
3	11649.446	35.36	6.74	42.10	54.00	11.90	Average	Horizontal
5	11651.7461	49.47	6.74	56.21	74.00	17.79	Peak	Vertical
6	17475.119	39.97	14.61	54.58	68.20	13.62	Peak	Vertical
7	11652.6661	38.49	6.74	45.23	54.00	8.77	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
SISO_ Ant. 2_IEEE 802.11a_Channel 36								
1	10356.9452	45.26	6.79	52.05	68.20	16.15	Peak	Horizontal
2	15540.318	43.25	13.32	56.57	74.00	17.43	Peak	Horizontal
4	15540.318	33.24	13.32	46.56	54.00	7.44	Average	Horizontal
5	10358.7786	44.98	6.76	51.74	68.20	16.46	Peak	Vertical
6	15540.318	42.26	13.32	55.58	74.00	18.42	Peak	Vertical
8	15540.318	32.53	13.32	45.85	54.00	8.15	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 44								
1	10439.8147	46.94	5.95	52.89	68.20	15.31	Peak	Horizontal
2	15659.8553	45.09	13.98	59.07	74.00	14.93	Peak	Horizontal
4	15660.222	36.00	13.99	49.99	54.00	4.01	Average	Horizontal
5	10433.9478	44.58	5.96	50.54	68.20	17.66	Peak	Vertical
6	15660.222	40.09	13.99	54.08	74.00	19.92	Peak	Vertical
8	15660.222	32.02	13.99	46.01	54.00	7.99	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 48								
1	10482.3494	46.86	6.38	53.24	68.20	14.96	Peak	Horizontal
2	15720.3573	40.40	14.84	55.24	74.00	18.76	Peak	Horizontal
4	15720.3573	33.49	14.84	48.33	54.00	5.67	Average	Horizontal
5	10475.7492	45.56	6.17	51.73	68.20	16.47	Peak	Vertical
6	15720.3573	38.95	14.84	53.79	74.00	20.21	Peak	Vertical
8	15720.3573	31.36	14.84	46.20	54.00	7.80	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	10517.9173	47.36	6.68	54.04	68.20	14.16	Peak	Horizontal
2	15780.126	40.30	14.41	54.71	74.00	19.29	Peak	Horizontal
4	15780.126	31.60	14.41	46.01	54.00	7.99	Average	Horizontal
5	10515.3505	44.63	6.69	51.32	68.20	16.88	Peak	Vertical
6	15780.126	39.22	14.41	53.63	74.00	20.37	Peak	Vertical
8	15780.126	31.08	14.41	45.49	54.00	8.51	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 60								
1	10600.0533	48.33	6.17	54.50	74.00	19.50	Peak	Horizontal
2	15900.03	38.98	14.64	53.62	74.00	20.38	Peak	Horizontal
4	15900.03	30.86	14.64	45.50	54.00	8.50	Average	Horizontal
5	10607.0202	44.41	6.18	50.59	74.00	23.41	Peak	Vertical
6	15900.03	39.33	14.64	53.97	74.00	20.03	Peak	Vertical
8	15900.03	31.06	14.64	45.70	54.00	8.30	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 64								
1	10641.1214	50.04	6.44	56.48	74.00	17.52	Peak	Horizontal
2	15960.1653	38.74	14.41	53.15	74.00	20.85	Peak	Horizontal
3	10640.7547	40.64	6.44	47.08	54.00	6.92	Average	Horizontal
4	15960.1653	30.57	14.41	44.98	54.00	9.02	Average	Horizontal
5	10643.3214	46.04	6.44	52.48	74.00	21.52	Peak	Vertical
6	15960.1653	39.13	14.41	53.54	74.00	20.46	Peak	Vertical
7	10643.6881	37.18	6.44	43.62	54.00	10.38	Average	Vertical
8	15960.1653	31.26	14.41	45.67	54.00	8.33	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 100								
1	11000.8334	46.61	6.34	52.95	74.00	21.05	Peak	Horizontal
2	16500.2833	40.69	16.08	56.77	68.20	11.43	Peak	Horizontal
3	11003.7668	38.58	6.33	44.91	54.00	9.09	Average	Horizontal
5	11003.0334	46.73	6.33	53.06	74.00	20.94	Peak	Vertical
6	16500.2833	39.95	16.08	56.03	68.20	12.17	Peak	Vertical
7	11003.0334	37.38	6.33	43.71	54.00	10.29	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	11164.3721	45.21	6.45	51.66	74.00	22.34	Peak	Horizontal
2	16740.0913	40.64	15.94	56.58	68.20	11.62	Peak	Horizontal
3	11164.0055	37.93	6.47	44.40	54.00	9.60	Average	Horizontal
5	11156.3052	45.38	6.75	52.13	74.00	21.87	Peak	Vertical
6	16740.0913	39.56	15.94	55.50	68.20	12.70	Peak	Vertical
7	11162.5388	38.05	6.54	44.59	54.00	9.41	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 140								
1	11403.8135	45.73	6.67	52.40	74.00	21.60	Peak	Horizontal
2	17100.17	38.51	15.75	54.26	68.20	13.94	Peak	Horizontal
3	11399.4133	38.10	6.63	44.73	54.00	9.27	Average	Horizontal
5	11402.3467	46.36	6.69	53.05	74.00	20.95	Peak	Vertical
6	17100.17	38.58	15.75	54.33	68.20	13.87	Peak	Vertical
7	11399.0466	38.82	6.62	45.44	54.00	8.56	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 144								
1	11440.1813	43.90	6.80	50.70	74.00	23.30	Peak	Horizontal
2	17160.472	39.19	15.76	54.95	68.20	13.25	Peak	Horizontal
3	11440.1813	34.90	6.80	41.70	54.00	12.30	Average	Horizontal
4	11440.1813	43.42	6.80	50.22	74.00	23.78	Peak	Vertical
5	17160.0887	39.10	15.76	54.86	68.20	13.34	Peak	Vertical
6	11440.1813	36.15	6.80	42.95	54.00	11.05	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 149								
1	11487.0595	45.48	6.69	52.17	74.00	21.83	Peak	Horizontal
2	17235.4494	38.59	16.00	54.59	68.20	13.61	Peak	Horizontal
3	11493.0397	34.92	6.67	41.59	54.00	12.41	Average	Horizontal
5	11489.3596	44.17	6.69	50.86	74.00	23.14	Peak	Vertical
6	17235.4494	38.78	16.00	54.78	68.20	13.42	Peak	Vertical
7	11486.5995	34.02	6.69	40.71	54.00	13.29	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 157								
1	11567.5627	44.79	6.62	51.41	74.00	22.59	Peak	Horizontal
2	17356.4343	39.58	14.64	54.22	68.20	13.98	Peak	Horizontal
3	11568.9428	35.31	6.62	41.93	54.00	12.07	Average	Horizontal
5	11566.6427	45.16	6.61	51.77	74.00	22.23	Peak	Vertical
6	17356.4343	38.81	14.64	53.45	68.20	14.75	Peak	Vertical
7	11567.5627	35.73	6.62	42.35	54.00	11.65	Average	Vertical
SISO_ Ant. 2_IEEE 802.11a_Channel 165								
1	11649.446	46.21	6.74	52.95	74.00	21.05	Peak	Horizontal
2	17475.119	39.91	14.61	54.52	68.20	13.68	Peak	Horizontal
3	11651.2861	37.22	6.74	43.96	54.00	10.04	Average	Horizontal
5	11648.0659	44.95	6.74	51.69	74.00	22.31	Peak	Vertical
6	17475.119	40.76	14.61	55.37	68.20	12.83	Peak	Vertical
7	11651.2861	35.46	6.74	42.20	54.00	11.80	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 802.11n-HT20_Channel 36								
1	8605.9642	41.67	3.53	45.20	68.20	23.00	Peak	Horizontal
2	10353.5741	43.37	6.85	50.22	68.20	17.98	Peak	Horizontal
3	12534.5214	39.74	8.75	48.49	74.00	25.51	Peak	Horizontal
4	14057.1823	40.76	11.85	52.61	68.20	15.59	Peak	Horizontal
5	15540.2816	40.66	13.32	53.98	74.00	20.02	Peak	Horizontal
6	16508.6203	42.93	16.12	59.05	68.20	9.15	Peak	Horizontal
7	15540.2816	31.08	13.32	44.40	54.00	9.60	Average	Horizontal
8	9037.9215	41.64	4.71	46.35	74.00	27.65	Peak	Vertical
9	10361.3945	43.93	6.72	50.65	68.20	17.55	Peak	Vertical
10	11134.2254	40.84	6.71	47.55	74.00	26.45	Peak	Vertical
11	13694.2278	40.06	12.44	52.50	68.20	15.70	Peak	Vertical
12	15540.2816	39.98	13.32	53.30	74.00	20.70	Peak	Vertical
13	16584.0634	42.20	16.60	58.80	68.20	9.40	Peak	Vertical
14	15540.2816	30.91	13.32	44.23	54.00	9.77	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 802.11n-HT20_Channel 44								
1	8208.9684	42.56	3.29	45.85	74.00	28.15	Peak	Horizontal
2	10440.9776	45.40	5.95	51.35	68.20	16.85	Peak	Horizontal
3	11019.6808	40.88	6.53	47.41	74.00	26.59	Peak	Horizontal
4	13284.3514	40.97	12.29	53.26	74.00	20.74	Peak	Horizontal
5	15660.3464	39.43	14.00	53.43	74.00	20.57	Peak	Horizontal
6	16455.2582	42.91	15.92	58.83	68.20	9.37	Peak	Horizontal
7	15660.3464	30.39	14.00	44.39	54.00	9.61	Average	Horizontal
8	8599.524	43.16	3.27	46.43	68.20	21.77	Peak	Vertical
9	10440.0576	41.15	5.95	47.10	68.20	21.10	Peak	Vertical
10	12569.0228	42.68	8.97	51.65	74.00	22.35	Peak	Vertical
11	13812.4525	40.66	12.19	52.85	68.20	15.35	Peak	Vertical
12	15660.3464	40.31	14.00	54.31	74.00	19.69	Peak	Vertical
13	16825.113	44.21	15.66	59.87	68.20	8.33	Peak	Vertical
14	15660.3464	30.09	14.00	44.09	54.00	9.91	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT20_Channel 48								
1	8597.2239	42.50	3.17	45.67	68.20	22.53	Peak	Horizontal
2	10474.099	43.46	6.18	49.64	68.20	18.56	Peak	Horizontal
3	12394.2158	41.46	7.80	49.26	74.00	24.74	Peak	Horizontal
4	13264.5706	40.51	12.49	53.00	74.00	21.00	Peak	Horizontal
5	14492.8197	41.49	13.27	54.76	74.00	19.24	Peak	Horizontal
6	15720.1488	39.48	14.84	54.32	74.00	19.68	Peak	Horizontal
7	15720.1488	29.82	14.84	44.66	54.00	9.34	Average	Horizontal
8	8589.8636	42.47	3.08	45.55	68.20	22.65	Peak	Vertical
9	10480.0792	42.55	6.28	48.83	68.20	19.37	Peak	Vertical
10	12871.2548	42.34	9.76	52.10	68.20	16.10	Peak	Vertical
11	14322.6129	40.70	12.58	53.28	68.20	14.92	Peak	Vertical
12	15720.1488	39.34	14.84	54.18	74.00	19.82	Peak	Vertical
13	16588.6635	42.46	16.67	59.13	68.20	9.07	Peak	Vertical
14	15720.1488	30.05	14.84	44.89	54.00	9.11	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_ IEEE 802.11n-HT20_Channel 52								
1	8863.1145	42.29	3.81	46.10	68.20	22.10	Peak	Horizontal
2	10524.241	43.49	6.58	50.07	68.20	18.13	Peak	Horizontal
3	12581.4433	41.93	9.04	50.97	74.00	23.03	Peak	Horizontal
4	15027.8211	42.50	12.70	55.20	68.20	13.00	Peak	Horizontal
5	15780.4112	38.98	14.41	53.39	74.00	20.61	Peak	Horizontal
6	16983.8194	43.12	15.65	58.77	68.20	9.43	Peak	Horizontal
7	15780.4112	30.03	14.41	44.44	54.00	9.56	Average	Horizontal
8	9088.0635	41.40	4.57	45.97	74.00	28.03	Peak	Vertical
9	10514.1206	43.30	6.70	50.00	68.20	18.20	Peak	Vertical
10	12588.8036	42.87	9.05	51.92	74.00	22.08	Peak	Vertical
11	14189.2076	40.60	13.19	53.79	68.20	14.41	Peak	Vertical
12	15780.4112	39.15	14.41	53.56	74.00	20.44	Peak	Vertical
13	16446.5179	42.99	15.76	58.75	68.20	9.45	Peak	Vertical
14	15780.4112	30.46	14.41	44.87	54.00	9.13	Average	Vertical
MIMO_ Ant. 0+1_ IEEE 802.11n-HT20_Channel 60								
1	9019.5208	41.67	4.18	45.85	74.00	28.15	Peak	Horizontal
2	10603.8242	51.80	6.18	57.98	74.00	16.02	Peak	Horizontal
3	12182.6073	41.06	7.31	48.37	74.00	25.63	Peak	Horizontal
4	13630.2852	40.49	12.25	52.74	68.20	15.46	Peak	Horizontal
5	15900.016	39.11	14.64	53.75	74.00	20.25	Peak	Horizontal
6	16634.6654	41.88	16.64	58.52	68.20	9.68	Peak	Horizontal
7	15900.016	30.74	14.64	45.38	54.00	8.62	Average	Horizontal
8	9508.5203	41.47	6.02	47.49	68.20	20.71	Peak	Vertical
9	10596.4639	51.39	6.18	57.57	68.20	10.63	Peak	Vertical
10	13083.7834	40.24	12.19	52.43	68.20	15.77	Peak	Vertical
11	14513.5205	41.44	13.04	54.48	68.20	13.72	Peak	Vertical
12	15900.016	38.58	14.64	53.22	74.00	20.78	Peak	Vertical
13	16434.5574	42.55	15.67	58.22	68.20	9.98	Peak	Vertical
14	15900.016	30.11	14.64	44.75	54.00	9.25	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 802.11n-HT20_Channel 64								
1	9460.6784	40.86	6.11	46.97	74.00	27.03	Peak	Horizontal
2	10637.8655	44.72	6.43	51.15	74.00	22.85	Peak	Horizontal
3	12637.1055	41.75	9.22	50.97	74.00	23.03	Peak	Horizontal
4	14496.4999	40.67	13.28	53.95	74.00	20.05	Peak	Horizontal
5	15960.2784	38.88	14.41	53.29	74.00	20.71	Peak	Horizontal
6	17044.0818	42.56	16.08	58.64	68.20	9.56	Peak	Horizontal
7	10642.0057	35.73	6.44	42.17	54.00	11.83	Average	Horizontal
8	8153.3061	42.99	2.89	45.88	74.00	28.12	Peak	Vertical
9	9474.479	41.33	6.22	47.55	74.00	26.45	Peak	Vertical
10	10640.1656	46.15	6.44	52.59	74.00	21.41	Peak	Vertical
11	12768.6707	41.61	9.50	51.11	68.20	17.09	Peak	Vertical
12	14571.0228	41.70	11.92	53.62	68.20	14.58	Peak	Vertical
13	15960.2784	39.56	14.41	53.97	74.00	20.03	Peak	Vertical
14	10640.1656	34.03	6.44	40.47	54.00	13.53	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ac-VHT20_Channel 100								
1	8620.6848	41.70	3.55	45.25	68.20	22.95	Peak	Horizontal
2	10205.9082	40.68	7.08	47.76	68.20	20.44	Peak	Horizontal
3	11000.82	42.39	6.34	48.73	74.00	25.27	Peak	Horizontal
4	13272.8509	40.66	12.34	53.00	74.00	21.00	Peak	Horizontal
5	15120.2848	41.01	13.49	54.50	68.20	13.70	Peak	Horizontal
6	16664.5666	42.19	16.43	58.62	68.20	9.58	Peak	Horizontal
7	11000.82	33.30	6.34	39.64	54.00	14.36	Average	Horizontal
8	9475.399	41.12	6.24	47.36	74.00	26.64	Peak	Vertical
9	11000.82	48.88	6.34	55.22	74.00	18.78	Peak	Vertical
10	12781.0912	42.58	9.58	52.16	68.20	16.04	Peak	Vertical
11	14174.487	39.55	13.09	52.64	68.20	15.56	Peak	Vertical
12	16500.34	39.50	16.08	55.58	68.20	12.62	Peak	Vertical
13	17015.1006	43.63	15.89	59.52	68.20	8.68	Peak	Vertical
14	11000.82	36.87	6.34	43.21	54.00	10.79	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 802.11n-HT20_Channel 116								
1	9487.8195	41.14	6.22	47.36	74.00	26.64	Peak	Horizontal
2	11157.2263	47.93	6.77	54.70	74.00	19.30	Peak	Horizontal
3	13265.9506	40.81	12.46	53.27	74.00	20.73	Peak	Horizontal
4	14420.5968	41.21	12.59	53.80	68.20	14.40	Peak	Horizontal
5	15014.9406	41.57	12.26	53.83	68.20	14.37	Peak	Horizontal
6	16741.8497	47.14	15.94	63.08	68.20	5.12	Peak	Horizontal
7	11157.6863	39.11	6.77	45.88	54.00	8.12	Average	Horizontal
8	9479.5392	40.86	6.32	47.18	74.00	26.82	Peak	Vertical
9	11158.6063	51.32	6.73	58.05	74.00	15.95	Peak	Vertical
10	12229.9892	41.28	7.49	48.77	74.00	25.23	Peak	Vertical
11	13737.9295	40.68	13.08	53.76	68.20	14.44	Peak	Vertical
12	15169.5068	41.25	13.68	54.93	68.20	13.27	Peak	Vertical
13	16740.0096	42.82	15.94	58.76	68.20	9.44	Peak	Vertical
14	11153.5461	42.51	6.65	49.16	54.00	4.84	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT20_Channel 140								
1	9474.939	40.98	6.23	47.21	74.00	26.79	Peak	Horizontal
2	11400.116	41.72	6.65	48.37	74.00	25.63	Peak	Horizontal
3	12419.5168	41.59	7.68	49.27	74.00	24.73	Peak	Horizontal
4	14371.8349	41.07	12.68	53.75	68.20	14.45	Peak	Horizontal
5	16577.1631	42.44	16.40	58.84	68.20	9.36	Peak	Horizontal
6	17100.204	38.96	15.76	54.72	68.20	13.48	Peak	Horizontal
7	11400.116	32.17	6.65	38.82	54.00	15.18	Average	Horizontal
8	9135.4454	42.19	4.27	46.46	74.00	27.54	Peak	Vertical
9	10311.7125	41.34	6.09	47.43	68.20	20.77	Peak	Vertical
10	11398.7359	42.60	6.62	49.22	74.00	24.78	Peak	Vertical
11	12961.4185	41.09	10.70	51.79	68.20	16.41	Peak	Vertical
12	14390.6956	41.10	12.76	53.86	68.20	14.34	Peak	Vertical
13	17100.204	39.57	15.76	55.33	68.20	12.87	Peak	Vertical
14	11398.2759	33.85	6.60	40.45	54.00	13.55	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 802.11n-HT20_Channel 144								
1	11430.981	46.27	6.79	53.06	74.00	20.94	Peak	Horizontal
2	17160.472	41.88	15.76	57.64	68.20	10.56	Peak	Horizontal
3	11431.3644	39.85	6.78	46.63	54.00	7.37	Average	Horizontal
4	11440.1813	46.72	6.80	53.52	74.00	20.48	Peak	Vertical
5	17160.0887	40.49	15.76	56.25	68.20	11.95	Peak	Vertical
6	11440.5647	39.12	6.80	45.92	54.00	8.08	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT20_Channel 149								
1	9042.0617	41.62	4.72	46.34	74.00	27.66	Peak	Horizontal
2	10482.8393	41.67	6.40	48.07	68.20	20.13	Peak	Horizontal
3	11489.8196	47.24	6.68	53.92	74.00	20.08	Peak	Horizontal
4	13997.8399	40.42	11.49	51.91	68.20	16.29	Peak	Horizontal
5	15503.0201	41.72	12.88	54.60	74.00	19.40	Peak	Horizontal
6	17235.4494	39.20	16.00	55.20	68.20	13.00	Peak	Horizontal
7	11488.8996	37.37	6.69	44.06	54.00	9.94	Average	Horizontal
8	9142.3457	41.12	4.39	45.51	74.00	28.49	Peak	Vertical
9	11493.0397	48.27	6.67	54.94	74.00	19.06	Peak	Vertical
10	13728.2691	40.24	12.91	53.15	68.20	15.05	Peak	Vertical
11	15254.6102	40.75	13.88	54.63	68.20	13.57	Peak	Vertical
12	16425.817	42.22	15.63	57.85	68.20	10.35	Peak	Vertical
13	17235.4494	39.11	16.00	55.11	68.20	13.09	Peak	Vertical
14	11487.5195	38.52	6.70	45.22	54.00	8.78	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT20_Channel 157								
1	9767.0507	40.22	7.07	47.29	68.20	20.91	Peak	Horizontal
2	11577.2231	47.93	6.65	54.58	74.00	19.42	Peak	Horizontal
3	13626.6051	40.50	12.26	52.76	68.20	15.44	Peak	Horizontal
4	14695.6878	40.94	12.60	53.54	68.20	14.66	Peak	Horizontal
5	15695.3078	40.89	15.11	56.00	74.00	18.00	Peak	Horizontal
6	17354.1342	50.18	14.66	64.84	68.20	3.36	Peak	Horizontal
7	11568.9428	39.02	6.62	45.64	54.00	8.36	Average	Horizontal
8	8932.5773	42.41	3.90	46.31	68.20	21.89	Peak	Vertical
9	11569.8628	51.73	6.62	58.35	74.00	15.65	Peak	Vertical
10	13140.3656	40.81	12.18	52.99	68.20	15.21	Peak	Vertical
11	14484.5394	40.66	13.08	53.74	74.00	20.26	Peak	Vertical
12	15368.6947	41.27	13.11	54.38	74.00	19.62	Peak	Vertical
13	17358.7343	47.25	14.60	61.85	68.20	6.35	Peak	Vertical
14	11561.5825	41.69	6.60	48.29	54.00	5.71	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 802.11n-HT20_Channel 165								
1	9855.3742	41.34	6.03	47.37	68.20	20.83	Peak	Horizontal
2	11652.2061	48.12	6.74	54.86	74.00	19.14	Peak	Horizontal
3	13607.7443	41.08	12.21	53.29	68.20	14.91	Peak	Horizontal
4	15287.7315	40.75	13.84	54.59	68.20	13.61	Peak	Horizontal
5	16472.7389	43.66	16.26	59.92	68.20	8.28	Peak	Horizontal
6	17475.119	41.73	14.61	56.34	68.20	11.86	Peak	Horizontal
7	11649.906	38.28	6.74	45.02	54.00	8.98	Average	Horizontal
8	8662.5465	41.86	3.52	45.38	68.20	22.82	Peak	Vertical
9	11649.906	51.82	6.74	58.56	74.00	15.44	Peak	Vertical
10	12678.9672	41.96	9.54	51.50	74.00	22.50	Peak	Vertical
11	14177.7071	39.74	13.16	52.90	68.20	15.30	Peak	Vertical
12	15088.0835	42.45	13.63	56.08	68.20	12.12	Peak	Vertical
13	17475.119	40.36	14.61	54.97	68.20	13.23	Peak	Vertical
14	11652.6661	41.85	6.74	48.59	54.00	5.41	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 802.11n-HT40_Channel 38								
1	10380.2552	39.73	6.56	46.29	68.20	21.91	Peak	Horizontal
2	15570.1828	40.06	13.54	53.60	74.00	20.40	Peak	Horizontal
3	17923.6369	42.55	16.35	58.90	74.00	15.10	Peak	Horizontal
4	15570.1828	30.55	13.54	44.09	54.00	9.91	Average	Horizontal
5	10380.2552	40.37	6.56	46.93	68.20	21.27	Peak	Vertical
6	15570.1828	38.75	13.54	52.29	74.00	21.71	Peak	Vertical
7	15570.1828	30.40	13.54	43.94	54.00	10.06	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT40_Channel 46								
1	10460.2984	40.74	6.06	46.80	68.20	21.40	Peak	Horizontal
2	15690.2476	39.07	15.02	54.09	74.00	19.91	Peak	Horizontal
3	15690.2476	29.89	15.02	44.91	54.00	9.09	Average	Horizontal
4	10460.2984	40.69	6.06	46.75	68.20	21.45	Peak	Vertical
5	15690.2476	38.48	15.02	53.50	74.00	20.50	Peak	Vertical
6	15690.2476	29.75	15.02	44.77	54.00	9.23	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 802.11n-HT40_Channel 54								
1	10535.7414	49.70	6.39	56.09	68.20	12.11	Peak	Horizontal
2	15810.3124	38.32	14.78	53.10	74.00	20.90	Peak	Horizontal
3	15810.3124	30.74	14.78	45.52	54.00	8.48	Average	Horizontal
4	10555.0622	49.05	6.15	55.20	68.20	13.00	Peak	Vertical
5	15810.3124	38.95	14.78	53.73	74.00	20.27	Peak	Vertical
6	15810.3124	31.05	14.78	45.83	54.00	8.17	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT40_Channel 62								
1	10616.2446	51.77	6.23	58.00	74.00	16.00	Peak	Horizontal
2	15930.3772	38.53	14.58	53.11	74.00	20.89	Peak	Horizontal
3	15930.3772	30.56	14.58	45.14	54.00	8.86	Average	Horizontal
4	10613.9446	50.38	6.22	56.60	74.00	17.40	Peak	Vertical
5	15930.3772	39.58	14.58	54.16	74.00	19.84	Peak	Vertical
6	10629.1252	40.74	6.43	47.17	54.00	6.83	Average	Vertical
7	15930.3772	30.08	14.58	44.66	54.00	9.34	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT40_Channel 102								
1	11020.1408	45.35	6.52	51.87	74.00	22.13	Peak	Horizontal
2	16530.2412	40.36	15.95	56.31	68.20	11.89	Peak	Horizontal
3	11020.1408	33.40	6.52	39.92	54.00	14.08	Average	Horizontal
4	11016.4607	45.19	6.47	51.66	74.00	22.34	Peak	Vertical
5	16530.2412	39.79	15.95	55.74	68.20	12.46	Peak	Vertical
6	11012.7805	38.40	6.40	44.80	54.00	9.20	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT40_Channel 110								
1	11096.5039	44.92	6.86	51.78	74.00	22.22	Peak	Horizontal
2	16650.306	40.45	16.57	57.02	68.20	11.18	Peak	Horizontal
3	11093.7438	35.46	6.87	42.33	54.00	11.67	Average	Horizontal
4	11098.804	45.38	6.85	52.23	74.00	21.77	Peak	Vertical
5	16650.306	39.94	16.57	56.51	68.20	11.69	Peak	Vertical
6	11094.2038	35.78	6.86	42.64	54.00	11.36	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT40_Channel 134								
1	11348.5939	45.36	6.40	51.76	74.00	22.24	Peak	Horizontal
2	17010.0404	41.24	15.85	57.09	68.20	11.11	Peak	Horizontal
3	11331.5733	36.34	6.47	42.81	54.00	11.19	Average	Horizontal
4	11333.4133	45.55	6.48	52.03	74.00	21.97	Peak	Vertical
5	17010.0404	40.75	15.85	56.60	68.20	11.60	Peak	Vertical
6	11333.4133	37.18	6.48	43.66	54.00	10.34	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 802.11n-HT40 _Channel 142								
1	11423.6975	44.70	7.01	51.71	74.00	22.29	Peak	Horizontal
2	17130.1877	39.44	15.94	55.38	68.20	12.82	Peak	Horizontal
3	11427.5309	37.08	6.90	43.98	54.00	10.02	Average	Horizontal
4	11416.4139	47.19	6.73	53.92	74.00	20.08	Peak	Vertical
5	17130.1877	38.67	15.94	54.61	68.20	13.59	Peak	Vertical
6	11421.3974	39.58	6.95	46.53	54.00	7.47	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT40_Channel 151								
1	11507.7603	45.85	6.61	52.46	74.00	21.54	Peak	Horizontal
2	17265.3506	42.24	15.60	57.84	68.20	10.36	Peak	Horizontal
3	11522.9409	36.89	6.55	43.44	54.00	10.56	Average	Horizontal
4	11503.6201	48.29	6.63	54.92	74.00	19.08	Peak	Vertical
5	17265.3506	41.97	15.60	57.57	68.20	10.63	Peak	Vertical
6	11503.6201	38.37	6.63	45.00	54.00	9.00	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT40_Channel 159								
1	11586.8835	48.30	6.67	54.97	74.00	19.03	Peak	Horizontal
2	17385.4154	43.92	14.62	58.54	68.20	9.66	Peak	Horizontal
3	11583.6633	39.55	6.66	46.21	54.00	7.79	Average	Horizontal
4	11597.0039	47.03	6.71	53.74	74.00	20.26	Peak	Vertical
5	17385.4154	43.69	14.62	58.31	68.20	9.89	Peak	Vertical
6	11584.1234	38.95	6.66	45.61	54.00	8.39	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	10460.2984	40.35	6.06	46.41	68.20	21.79	Peak	Horizontal
2	15690.2476	39.12	15.02	54.14	74.00	19.86	Peak	Horizontal
3	15690.2476	29.85	15.02	44.87	54.00	9.13	Average	Horizontal
4	10444.1978	46.73	5.95	52.68	68.20	15.52	Peak	Vertical
5	15690.2476	39.02	15.02	54.04	74.00	19.96	Peak	Vertical
6	15690.2476	29.33	15.02	44.35	54.00	9.65	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 58								
1	10596.4639	48.10	6.18	54.28	68.20	13.92	Peak	Horizontal
2	15870.1148	38.17	14.29	52.46	74.00	21.54	Peak	Horizontal
3	10606.5843	38.76	6.18	44.94	54.00	9.06	Average	Horizontal
4	10607.0443	47.61	6.18	53.79	74.00	20.21	Peak	Vertical
5	15870.1148	39.35	14.29	53.64	74.00	20.36	Peak	Vertical
6	10607.5043	39.62	6.18	45.80	54.00	8.20	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 106								
1	11082.2433	44.38	7.00	51.38	74.00	22.62	Peak	Horizontal
2	16590.0436	38.97	16.68	55.65	68.20	12.55	Peak	Horizontal
3	11074.423	35.09	6.75	41.84	54.00	12.16	Average	Horizontal
4	11061.5425	44.31	6.78	51.09	74.00	22.91	Peak	Vertical
5	16590.0436	40.82	16.68	57.50	68.20	10.70	Peak	Vertical
6	11081.7833	35.02	6.99	42.01	54.00	11.99	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 138								
1	11402.6134	44.80	6.68	51.48	74.00	22.52	Peak	Horizontal
2	17130.1877	38.80	15.94	54.74	68.20	13.46	Peak	Horizontal
3	11394.1798	35.47	6.49	41.96	54.00	12.04	Average	Horizontal
4	11407.2136	45.18	6.62	51.80	74.00	22.20	Peak	Vertical
5	17130.571	38.23	15.93	54.16	68.20	14.04	Peak	Vertical
6	11389.1963	37.35	6.44	43.79	54.00	10.21	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT80_Channel 155								
1	11568.4827	44.79	6.62	51.41	74.00	22.59	Peak	Horizontal
2	17325.153	39.80	14.62	54.42	68.20	13.78	Peak	Horizontal
3	11564.3426	36.66	6.61	43.27	54.00	10.73	Average	Horizontal
4	11566.1826	44.65	6.61	51.26	74.00	22.74	Peak	Vertical
5	17325.153	40.46	14.62	55.08	68.20	13.12	Peak	Vertical
6	11563.8826	37.00	6.61	43.61	54.00	10.39	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	10521.0208	43.81	6.65	50.46	68.20	17.74	Peak	Horizontal
2	15750.05	38.04	14.66	52.70	74.00	21.30	Peak	Horizontal
3	15750.05	29.85	14.66	44.51	54.00	9.49	Average	Horizontal
4	10516.4207	45.27	6.69	51.96	68.20	16.24	Peak	Vertical
5	15750.05	38.05	14.66	52.71	74.00	21.29	Peak	Vertical
6	15750.05	29.88	14.66	44.54	54.00	9.46	Average	Vertical
MIMO_ Ant. 0+1+2_IEEE 802.11ac-VHT160_Channel 114								
1	11140.2056	37.95	6.63	44.58	74.00	29.42	Peak	Horizontal
2	16710.1084	39.58	15.95	55.53	68.20	12.67	Peak	Horizontal
3	11140.2056	29.65	6.63	36.28	54.00	17.72	Average	Horizontal
4	11140.2056	38.42	6.63	45.05	74.00	28.95	Peak	Vertical
5	16710.1084	40.57	15.95	56.52	68.20	11.68	Peak	Vertical
6	11140.2056	29.46	6.63	36.09	54.00	17.91	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	10358.6343	45.46	6.76	52.22	68.20	15.98	Peak	Horizontal
2	15540.2816	39.35	13.32	52.67	74.00	21.33	Peak	Horizontal
3	15540.2816	31.79	13.32	45.11	54.00	8.89	Average	Horizontal
4	10354.4942	45.18	6.83	52.01	68.20	16.19	Peak	Vertical
5	15540.2816	39.79	13.32	53.11	74.00	20.89	Peak	Vertical
6	15540.2816	32.29	13.32	45.61	54.00	8.39	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 44								
1	10440.9776	51.21	5.95	57.16	68.20	11.04	Peak	Horizontal
2	15653.4461	44.47	13.64	58.11	74.00	15.89	Peak	Horizontal
3	15664.4866	35.62	14.18	49.80	54.00	4.20	Average	Horizontal
4	10443.2777	48.69	5.95	54.64	68.20	13.56	Peak	Vertical
5	15560.0624	39.96	13.42	53.38	74.00	20.62	Peak	Vertical
6	15560.0624	31.00	13.42	44.42	54.00	9.58	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 48								
1	10486.0594	51.38	6.54	57.92	68.20	10.28	Peak	Horizontal
2	15720.1488	40.91	14.84	55.75	74.00	18.25	Peak	Horizontal
3	15720.1488	33.20	14.84	48.04	54.00	5.96	Average	Horizontal
4	10485.5994	51.80	6.52	58.32	68.20	9.88	Peak	Vertical
5	15720.1488	41.66	14.84	56.50	74.00	17.50	Peak	Vertical
6	15720.1488	33.61	14.84	48.45	54.00	5.55	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 52								
1	10521.9409	52.14	6.62	58.76	68.20	9.44	Peak	Horizontal
2	15780.4112	40.68	14.41	55.09	74.00	18.91	Peak	Horizontal
3	15780.4112	33.32	14.41	47.73	54.00	6.27	Average	Horizontal
4	10524.241	52.33	6.58	58.91	68.20	9.29	Peak	Vertical
5	15780.4112	40.90	14.41	55.31	74.00	18.69	Peak	Vertical
6	15780.4112	31.69	14.41	46.10	54.00	7.90	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 60								
1	10596.9239	51.57	6.18	57.75	68.20	10.45	Peak	Horizontal
2	15900.016	39.80	14.64	54.44	74.00	19.56	Peak	Horizontal
3	15900.016	31.16	14.64	45.80	54.00	8.20	Average	Horizontal
4	10601.064	50.91	6.17	57.08	74.00	16.92	Peak	Vertical
5	15900.016	40.33	14.64	54.97	74.00	19.03	Peak	Vertical
6	15900.016	31.19	14.64	45.83	54.00	8.17	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 64								
1	10642.0057	49.40	6.44	55.84	74.00	18.16	Peak	Horizontal
2	15960.2784	40.25	14.41	54.66	74.00	19.34	Peak	Horizontal
3	10637.4055	43.08	6.43	49.51	54.00	4.49	Average	Horizontal
4	15960.2784	31.06	14.41	45.47	54.00	8.53	Average	Horizontal
5	10645.6858	47.72	6.43	54.15	74.00	19.85	Peak	Vertical
6	15960.2784	38.65	14.41	53.06	74.00	20.94	Peak	Vertical
7	10642.0057	40.99	6.44	47.43	54.00	6.57	Average	Vertical
8	15960.2784	30.51	14.41	44.92	54.00	9.08	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 100								
1	10999.9	44.75	6.34	51.09	74.00	22.91	Peak	Horizontal
2	16500.34	39.79	16.08	55.87	68.20	12.33	Peak	Horizontal
3	11001.7401	37.07	6.33	43.40	54.00	10.60	Average	Horizontal
4	10997.1399	48.29	6.34	54.63	74.00	19.37	Peak	Vertical
5	16500.34	40.51	16.08	56.59	68.20	11.61	Peak	Vertical
6	10993.4597	40.61	6.31	46.92	54.00	7.08	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 116								
1	11153.8218	49.22	6.66	55.88	74.00	18.12	Peak	Horizontal
2	16740.3247	42.75	15.94	58.69	68.20	9.51	Peak	Horizontal
3	11154.2051	43.15	6.67	49.82	54.00	4.18	Average	Horizontal
4	11160.722	52.11	6.63	58.74	74.00	15.26	Peak	Vertical
5	16740.708	44.46	15.94	60.40	68.20	7.80	Peak	Vertical
6	11154.2051	44.27	6.67	50.94	54.00	3.06	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	11400.3133	39.08	6.66	45.74	74.00	28.26	Peak	Horizontal
2	17100.2867	39.26	15.76	55.02	68.20	13.18	Peak	Horizontal
3	11400.3133	31.72	6.66	38.38	54.00	15.62	Average	Horizontal
4	11392.2631	43.24	6.44	49.68	74.00	24.32	Peak	Vertical
5	17100.2867	38.36	15.76	54.12	68.20	14.08	Peak	Vertical
6	11401.8467	34.85	6.69	41.54	54.00	12.46	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 144								
1	11433.2811	46.60	6.72	53.32	74.00	20.68	Peak	Horizontal
2	17160.0887	41.18	15.76	56.94	68.20	11.26	Peak	Horizontal
3	11433.6645	41.93	6.71	48.64	54.00	5.36	Average	Horizontal
4	11441.3314	49.57	6.81	56.38	74.00	17.62	Peak	Vertical
5	17160.0887	41.66	15.76	57.42	68.20	10.78	Peak	Vertical
6	11441.3314	41.14	6.81	47.95	54.00	6.05	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 149								
1	11483.4994	47.64	6.67	54.31	74.00	19.69	Peak	Horizontal
2	17235.2245	40.44	16.00	56.44	68.20	11.76	Peak	Horizontal
3	11483.4994	41.27	6.67	47.94	54.00	6.06	Average	Horizontal
4	11488.8663	47.52	6.69	54.21	74.00	19.79	Peak	Vertical
5	17355.2118	39.09	14.64	53.73	68.20	14.47	Peak	Vertical
6	11493.8498	40.55	6.66	47.21	54.00	6.79	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 157								
1	11562.0854	46.39	6.60	52.99	74.00	21.01	Peak	Horizontal
2	17354.8285	48.36	14.65	63.01	68.20	5.19	Peak	Horizontal
3	11563.2354	40.83	6.61	47.44	54.00	6.56	Average	Horizontal
4	11573.5858	48.43	6.63	55.06	74.00	18.94	Peak	Vertical
5	17346.7782	44.93	14.66	59.59	68.20	8.61	Peak	Vertical
6	11567.4522	41.32	6.62	47.94	54.00	6.06	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE20_Channel 165								
1	11647.1882	48.48	6.73	55.21	74.00	18.79	Peak	Horizontal
2	17475.1992	40.61	14.61	55.22	68.20	12.98	Peak	Horizontal
3	11647.1882	42.82	6.73	49.55	54.00	4.45	Average	Horizontal
4	11647.1882	50.20	6.73	56.93	74.00	17.07	Peak	Vertical
5	17475.5825	41.25	14.62	55.87	68.20	12.33	Peak	Vertical
6	11647.9549	44.32	6.74	51.06	54.00	2.94	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	10380.2293	39.10	6.56	45.66	68.20	22.54	Peak	Horizontal
2	15570.3523	39.75	13.54	53.29	74.00	20.71	Peak	Horizontal
3	15570.3523	31.86	13.54	45.40	54.00	8.60	Average	Horizontal
4	10380.2293	40.42	6.56	46.98	68.20	21.22	Peak	Vertical
5	15570.3523	39.62	13.54	53.16	74.00	20.84	Peak	Vertical
6	15570.3523	31.43	13.54	44.97	54.00	9.03	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 46								
1	10467.6323	47.41	6.20	53.61	68.20	14.59	Peak	Horizontal
2	15690.3397	38.85	15.02	53.87	74.00	20.13	Peak	Horizontal
3	15690.3397	31.75	15.02	46.77	54.00	7.23	Average	Horizontal
4	10463.4154	47.70	6.13	53.83	68.20	14.37	Peak	Vertical
5	15690.723	38.61	15.03	53.64	74.00	20.36	Peak	Vertical
6	15690.723	31.23	15.03	46.26	54.00	7.74	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 54								
1	10555.0352	48.02	6.14	54.16	68.20	14.04	Peak	Horizontal
2	15810.327	39.57	14.78	54.35	74.00	19.65	Peak	Horizontal
3	15810.327	30.79	14.78	45.57	54.00	8.43	Average	Horizontal
4	10553.5018	46.23	6.12	52.35	68.20	15.85	Peak	Vertical
5	15810.327	38.77	14.78	53.55	74.00	20.45	Peak	Vertical
6	15810.327	30.63	14.78	45.41	54.00	8.59	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 62								
1	10620.204	40.21	6.31	46.52	74.00	27.48	Peak	Horizontal
2	15930.3143	39.35	14.58	53.93	74.00	20.07	Peak	Horizontal
3	10620.204	33.16	6.31	39.47	54.00	14.53	Average	Horizontal
4	15930.3143	31.42	14.58	46.00	54.00	8.00	Average	Horizontal
5	10620.204	39.92	6.31	46.23	74.00	27.77	Peak	Vertical
6	15930.3143	38.89	14.58	53.47	74.00	20.53	Peak	Vertical
7	10620.204	32.73	6.31	39.04	54.00	14.96	Average	Vertical
8	15930.3143	30.64	14.58	45.22	54.00	8.78	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 102								
1	11020.034	39.75	6.52	46.27	74.00	27.73	Peak	Horizontal
2	16530.251	41.48	15.95	57.43	68.20	10.77	Peak	Horizontal
3	11020.034	31.32	6.52	37.84	54.00	16.16	Average	Horizontal
4	11020.034	39.04	6.52	45.56	74.00	28.44	Peak	Vertical
5	16530.251	39.84	15.95	55.79	68.20	12.41	Peak	Vertical
6	11020.034	31.76	6.52	38.28	54.00	15.72	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 110								
1	11096.3199	48.37	6.86	55.23	74.00	18.77	Peak	Horizontal
2	16650.2383	40.70	16.57	57.27	68.20	10.93	Peak	Horizontal
3	11094.4031	39.90	6.86	46.76	54.00	7.24	Average	Horizontal
4	11096.3199	50.90	6.86	57.76	74.00	16.24	Peak	Vertical
5	16650.2383	40.95	16.57	57.52	68.20	10.68	Peak	Vertical
6	11092.8698	43.20	6.88	50.08	54.00	3.92	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 134								
1	11340.128	41.39	6.49	47.88	74.00	26.12	Peak	Horizontal
2	17010.2003	40.78	15.85	56.63	68.20	11.57	Peak	Horizontal
3	11340.128	30.83	6.49	37.32	54.00	16.68	Average	Horizontal
4	11340.128	40.35	6.49	46.84	74.00	27.16	Peak	Vertical
5	17010.2003	40.11	15.85	55.96	68.20	12.24	Peak	Vertical
6	11340.128	31.56	6.49	38.05	54.00	15.95	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 142								
1	11408.747	45.06	6.60	51.66	74.00	22.34	Peak	Horizontal
2	17130.571	40.58	15.93	56.51	68.20	11.69	Peak	Horizontal
3	11409.1303	38.11	6.59	44.70	54.00	9.30	Average	Horizontal
4	11427.1476	47.79	6.91	54.70	74.00	19.30	Peak	Vertical
5	17130.1877	39.37	15.94	55.31	68.20	12.89	Peak	Vertical
6	11413.3471	40.07	6.58	46.65	54.00	7.35	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 151								
1	11523.3674	44.41	6.54	50.95	74.00	23.05	Peak	Horizontal
2	17265.1255	39.69	15.60	55.29	68.20	12.91	Peak	Horizontal
3	11499.2166	38.42	6.65	45.07	54.00	8.93	Average	Horizontal
4	11508.8003	47.15	6.60	53.75	74.00	20.25	Peak	Vertical
5	17265.1255	39.54	15.60	55.14	68.20	13.06	Peak	Vertical
6	11518.7673	40.40	6.58	46.98	54.00	7.02	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE40_Channel 159								
1	11598.5033	47.00	6.72	53.72	74.00	20.28	Peak	Horizontal
2	17385.1128	40.33	14.62	54.95	68.20	13.25	Peak	Horizontal
3	11598.8866	40.17	6.72	46.89	54.00	7.11	Average	Horizontal
4	11598.8866	48.38	6.72	55.10	74.00	18.90	Peak	Vertical
5	17385.1128	39.84	14.62	54.46	68.20	13.74	Peak	Vertical
6	11601.9534	39.54	6.73	46.27	54.00	7.73	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	10460.3487	38.79	6.06	44.85	68.20	23.35	Peak	Horizontal
2	15690.3397	38.53	15.02	53.55	74.00	20.45	Peak	Horizontal
3	15690.3397	30.68	15.02	45.70	54.00	8.30	Average	Horizontal
4	10460.3487	38.76	6.06	44.82	68.20	23.38	Peak	Vertical
5	15690.3397	38.75	15.02	53.77	74.00	20.23	Peak	Vertical
6	15690.3397	30.73	15.02	45.75	54.00	8.25	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE80_Channel 58								
1	10580.336	38.26	6.06	44.32	68.20	23.88	Peak	Horizontal
2	15870.129	38.13	14.29	52.42	74.00	21.58	Peak	Horizontal
3	15870.129	30.37	14.29	44.66	54.00	9.34	Average	Horizontal
4	10580.336	38.30	6.06	44.36	68.20	23.84	Peak	Vertical
5	15870.129	39.10	14.29	53.39	74.00	20.61	Peak	Vertical
6	15870.129	30.70	14.29	44.99	54.00	9.01	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE80_Channel 106								
1	11060.2853	37.77	6.74	44.51	74.00	29.49	Peak	Horizontal
2	16590.053	39.71	16.68	56.39	68.20	11.81	Peak	Horizontal
3	11060.2853	30.59	6.74	37.33	54.00	16.67	Average	Horizontal
4	11060.2853	39.11	6.74	45.85	74.00	28.15	Peak	Vertical
5	16590.053	40.60	16.68	57.28	68.20	10.92	Peak	Vertical
6	11060.2853	30.68	6.74	37.42	54.00	16.58	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE80_Channel 138								
1	11380.3793	40.46	6.51	46.97	74.00	27.03	Peak	Horizontal
2	17070.0023	39.31	15.83	55.14	68.20	13.06	Peak	Horizontal
3	11380.3793	34.05	6.51	40.56	54.00	13.44	Average	Horizontal
4	11380.3793	40.31	6.51	46.82	74.00	27.18	Peak	Vertical
5	17070.0023	41.72	15.83	57.55	68.20	10.65	Peak	Vertical
6	11380.3793	33.44	6.51	39.95	54.00	14.05	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	11550.2017	39.54	6.59	46.13	74.00	27.87	Peak	Horizontal
2	17325.3108	38.70	14.62	53.32	68.20	14.88	Peak	Horizontal
3	11550.2017	31.54	6.59	38.13	54.00	15.87	Average	Horizontal
4	11550.585	39.73	6.59	46.32	74.00	27.68	Peak	Vertical
5	17325.3108	38.38	14.62	53.00	68.20	15.20	Peak	Vertical
6	11550.585	31.43	6.59	38.02	54.00	15.98	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	10500.2167	38.38	6.68	45.06	68.20	23.14	Peak	Horizontal
2	15750.1417	38.59	14.66	53.25	74.00	20.75	Peak	Horizontal
3	15750.1417	30.96	14.66	45.62	54.00	8.38	Average	Horizontal
4	10500.2167	38.09	6.68	44.77	68.20	23.43	Peak	Vertical
5	15750.525	38.36	14.65	53.01	74.00	20.99	Peak	Vertical
6	15750.525	30.35	14.65	45.00	54.00	9.00	Average	Vertical
MIMO_ Ant. 0+1+2_ IEEE 802.11ax-HE160_Channel 114								
1	11140.0213	39.95	6.64	46.59	74.00	27.41	Peak	Horizontal
2	16710.0403	41.41	15.95	57.36	68.20	10.84	Peak	Horizontal
3	11140.0213	30.51	6.64	37.15	54.00	16.85	Average	Horizontal
4	11140.0213	39.47	6.64	46.11	74.00	27.89	Peak	Vertical
5	16710.0403	41.68	15.95	57.63	68.20	10.57	Peak	Vertical
6	11140.0213	30.14	6.64	36.78	54.00	17.22	Average	Vertical

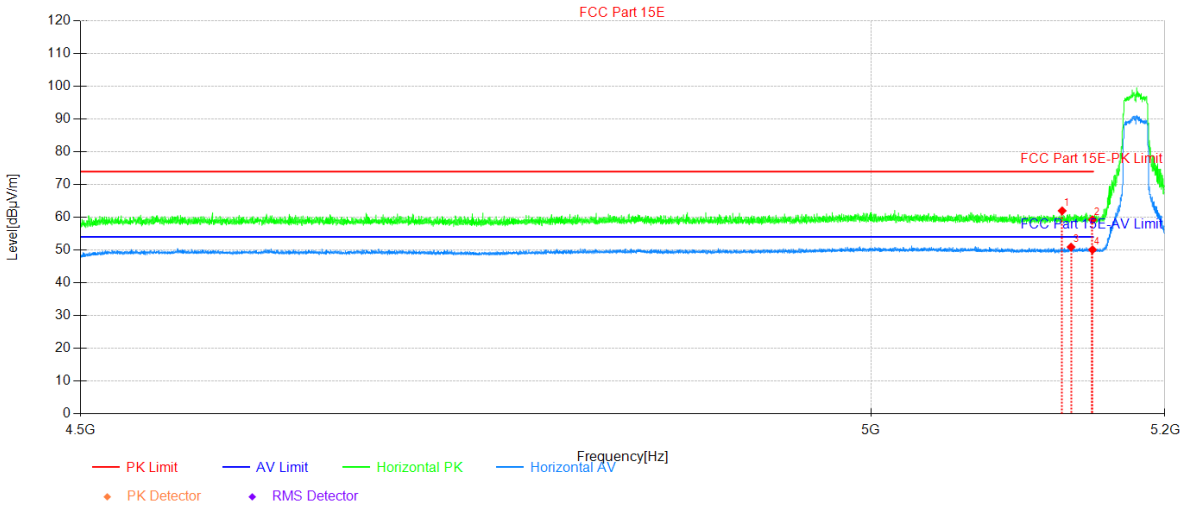
Remark:

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 = Limit - Result

Band Edge Measurements (Radiated)

Antenna 0_IEEE 802.11a

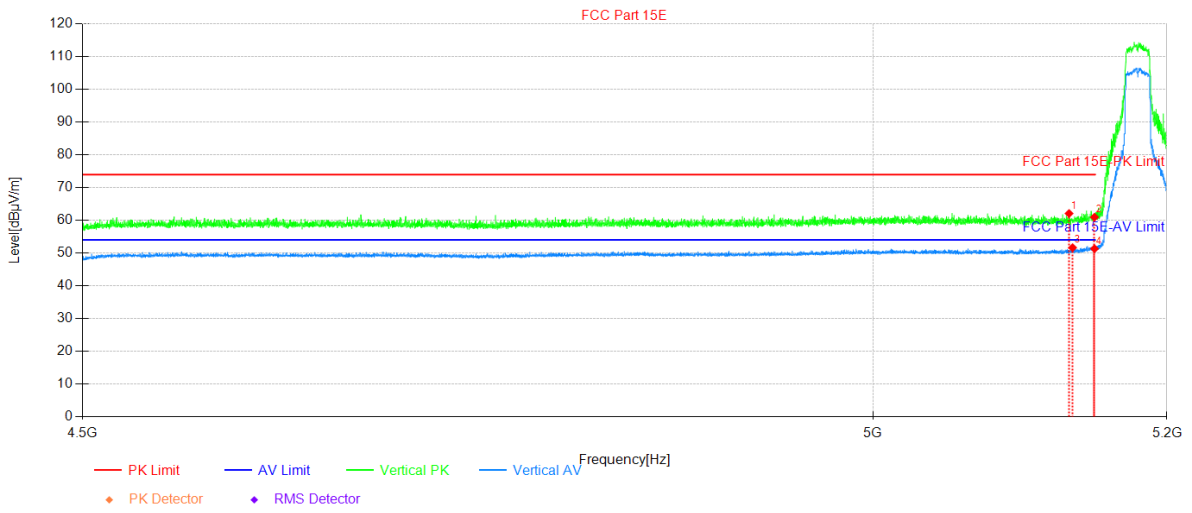
Test Channel:	Channel 36	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5129.2229	43.92	18.08	62.00	74.00	12.00	150	358	PK	Horizontal	PASS
2	5150.015	41.11	18.17	59.28	74.00	14.72	150	138	PK	Horizontal	PASS
3	5135.3135	32.82	18.11	50.93	54.00	3.07	150	249	AV	Horizontal	PASS
4	5150.015	31.92	18.17	50.09	54.00	3.91	150	359	AV	Horizontal	PASS

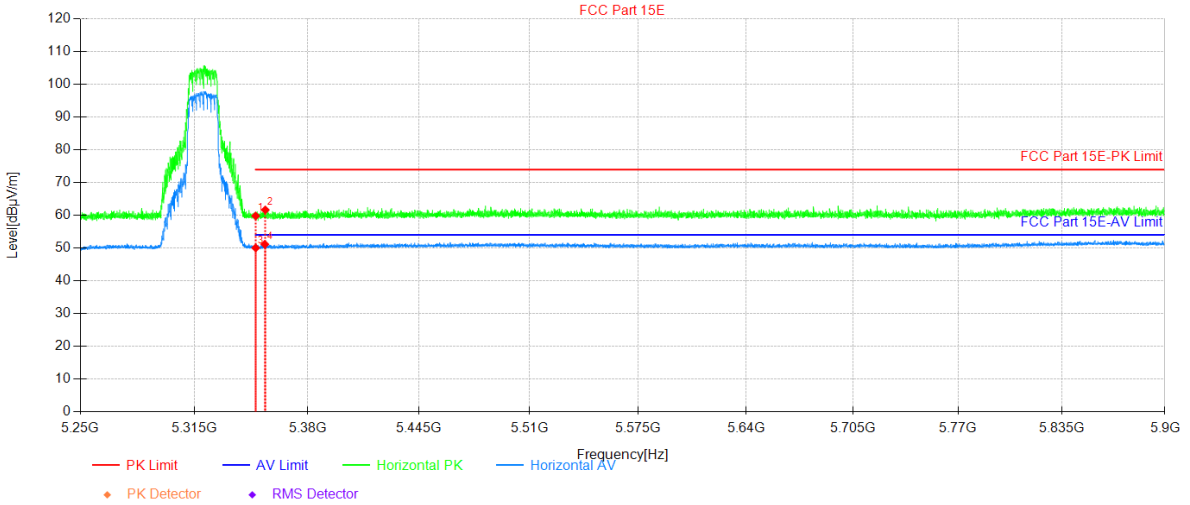
Test Channel:	Channel 36	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5132.5833	44.01	18.09	62.10	74.00	11.90	150	324	PK	Vertical	PASS
2	5150.015	42.79	18.17	60.96	74.00	13.04	150	251	PK	Vertical	PASS
3	5134.9635	33.55	18.10	51.65	54.00	2.35	150	308	AV	Vertical	PASS
4	5150.015	33.16	18.17	51.33	54.00	2.67	150	315	AV	Vertical	PASS

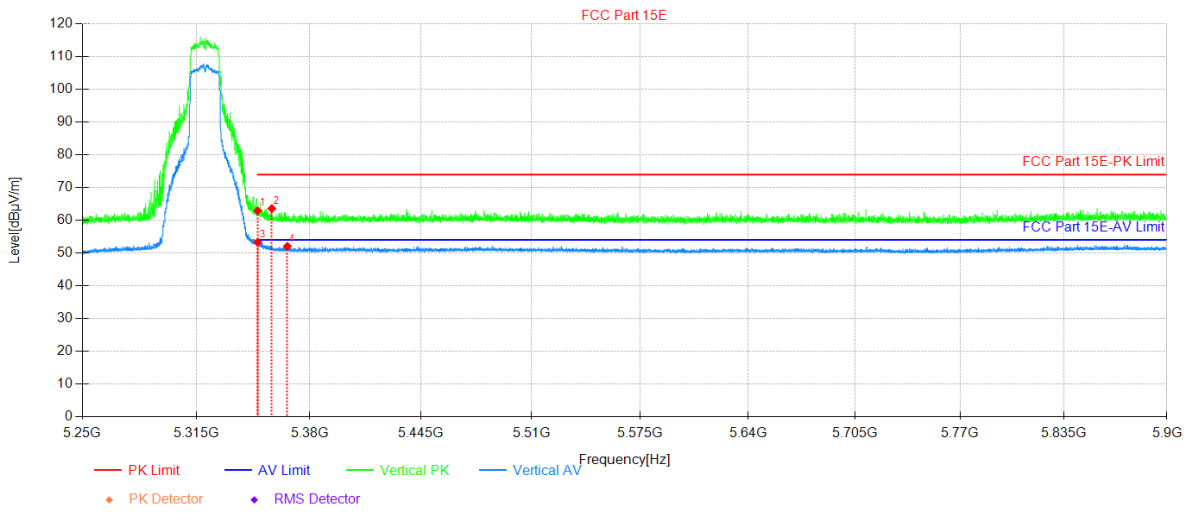
Test Channel:	Channel 64	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350.045	41.37	18.46	59.83	74.00	14.17	150	12	PK	Horizontal	PASS
2	5355.5706	43.23	18.43	61.66	74.00	12.34	150	12	PK	Horizontal	PASS
3	5350.045	31.58	18.46	50.04	54.00	3.96	150	54	AV	Horizontal	PASS
4	5355.3105	32.72	18.43	51.15	54.00	2.85	150	354	AV	Horizontal	PASS

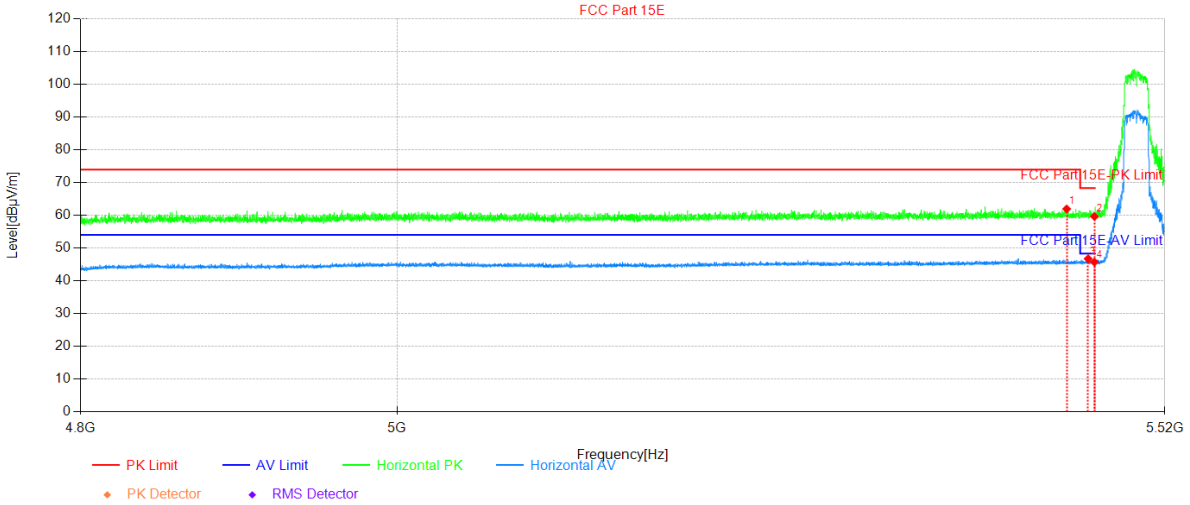
Test Channel:	Channel 64	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350.045	44.48	18.46	62.94	74.00	11.06	150	313	PK	Vertical	PASS
2	5358.1708	45.17	18.43	63.60	74.00	10.40	150	338	PK	Vertical	PASS
3	5350.045	34.88	18.46	53.34	54.00	0.66	150	234	AV	Vertical	PASS
4	5367.1417	33.57	18.49	52.06	54.00	1.94	150	338	AV	Vertical	PASS

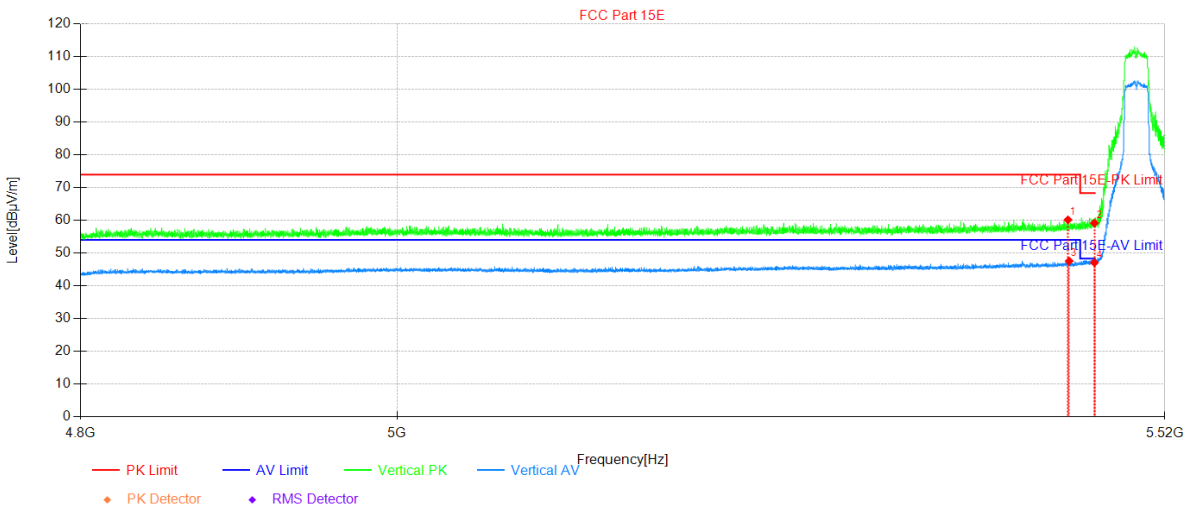
Test Channel:	Channel 100	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5450.5131	42.85	19.11	61.96	74.00	12.04	150	358	PK	Horizontal	PASS
2	5470.027	40.58	19.07	59.65	68.30	8.65	150	247	PK	Horizontal	PASS
3	5465.6346	27.65	19.08	46.73	48.30	1.57	150	207	AV	Horizontal	PASS
4	5470.027	26.64	19.07	45.71	48.30	2.59	150	247	AV	Horizontal	PASS

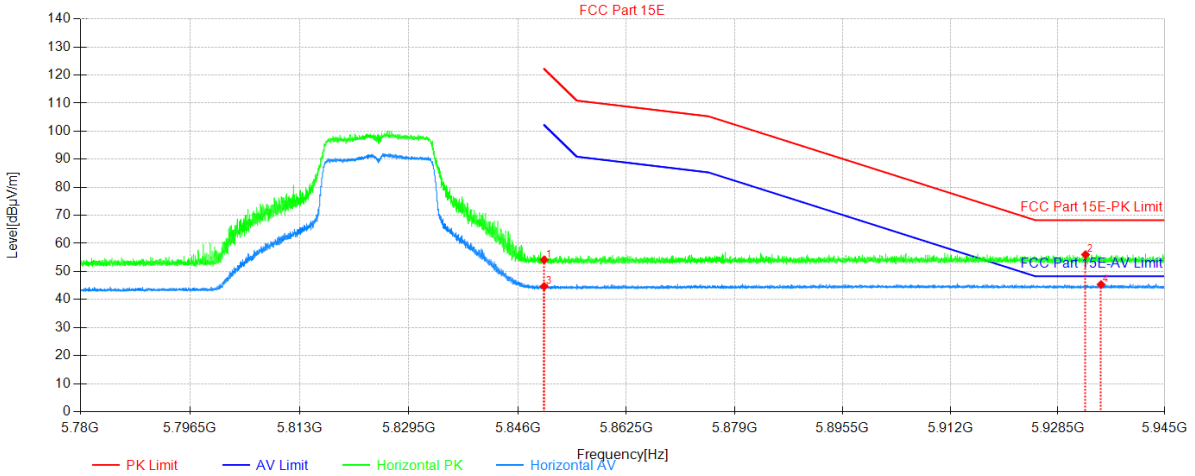
Test Channel:	Channel 100	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5451.4491	41.04	19.11	60.15	74.00	13.85	150	0	PK	Vertical	PASS
2	5470.027	40.08	19.07	59.15	68.30	6.15	150	322	PK	Vertical	PASS
3	5452.3132	28.46	19.10	47.56	54.00	6.44	150	221	AV	Vertical	PASS
4	5470.027	28.01	19.07	47.08	48.30	1.22	150	347	AV	Vertical	PASS

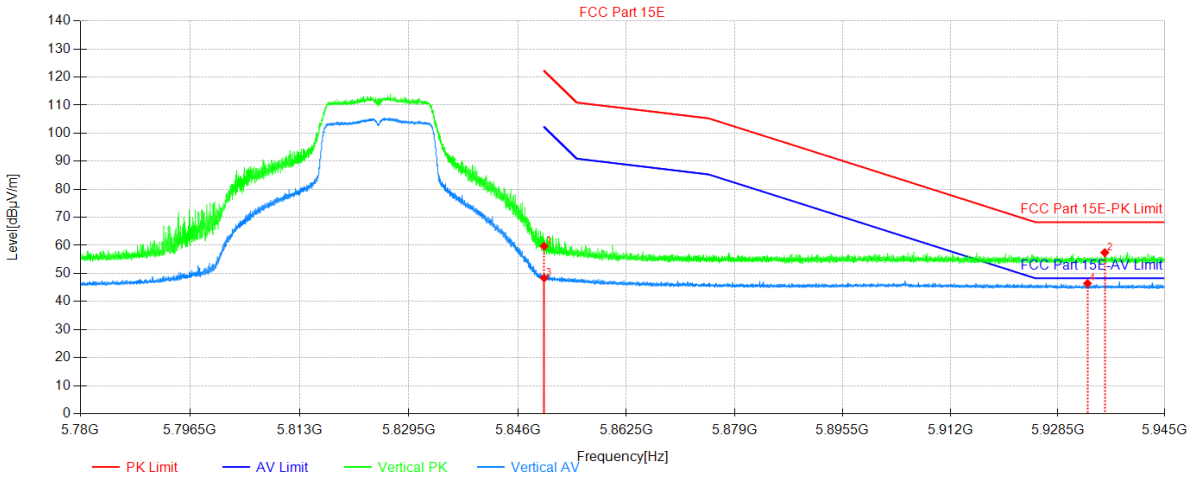
Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5850	44.31	9.83	54.14	122.30	68.16	150	346	PK	Horizontal	PASS
2	5932.7558	46.04	9.96	56.00	68.30	12.30	150	54	PK	Horizontal	PASS
3	5850	34.86	9.83	44.69	102.30	57.61	150	85	AV	Horizontal	PASS
4	5935.1485	35.38	9.95	45.33	48.30	2.97	150	78	AV	Horizontal	PASS

Test Channel:	Channel 165	Ant. Polar. :	Vertical

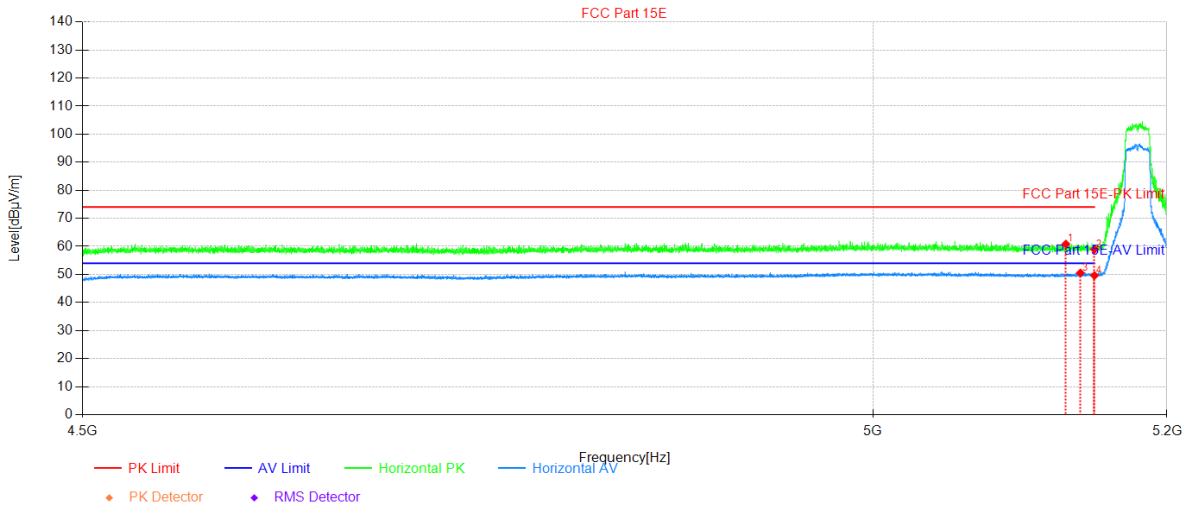


Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5850	49.88	9.83	59.71	122.30	62.59	150	330	PK	Vertical	PASS
2	5935.7261	47.49	9.95	57.44	68.30	10.86	150	0	PK	Vertical	PASS
3	5850	38.55	9.83	48.38	102.30	53.92	150	321	AV	Vertical	PASS
4	5933.0693	36.50	9.95	46.45	48.30	1.85	150	338	AV	Vertical	PASS

Antenna 1_IEEE 802.11a

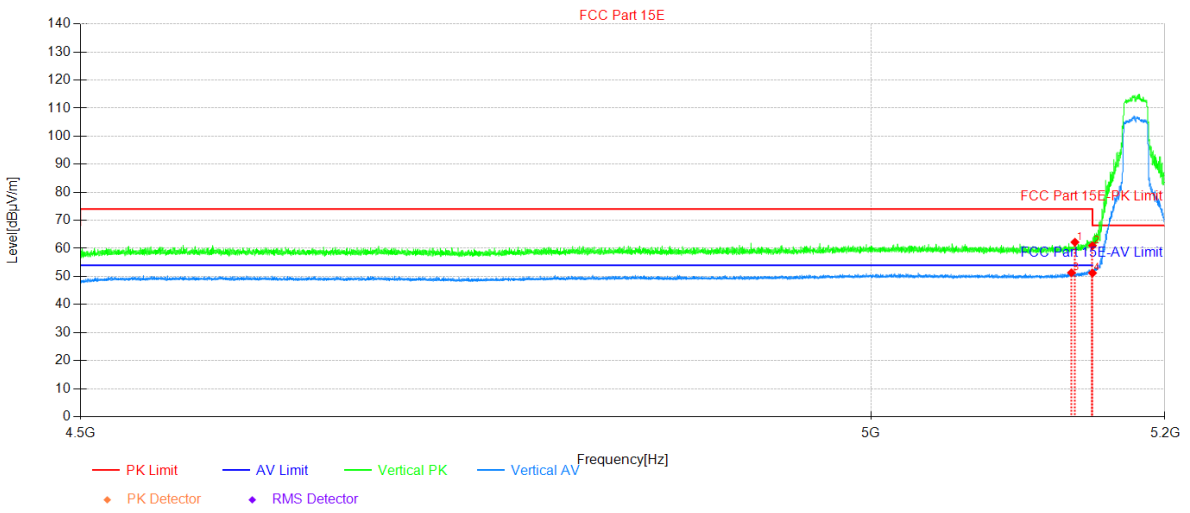
Test Channel:	Channel 36	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5130.413	42.76	18.08	60.84	74.00	13.16	150	120	PK	Horizontal	PASS
2	5150.015	40.77	18.17	58.94	-	-	150	298	PK	Horizontal	NA
3	5140.354	32.38	18.16	50.54	54.00	3.46	150	152	AV	Horizontal	PASS
4	5150.015	31.45	18.17	49.62	-	-	150	323	AV	Horizontal	NA

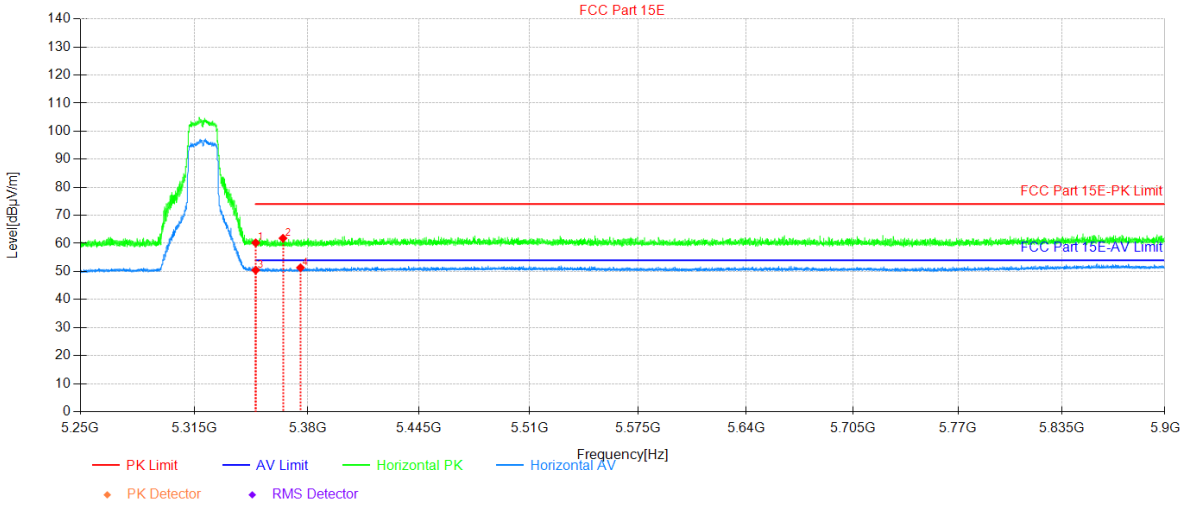
Test Channel:	Channel 36	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5137.9738	44.07	18.14	62.21	74.00	11.79	150	6	PK	Vertical	PASS
2	5150.015	42.80	18.17	60.97	68.20	7.23	150	304	PK	Vertical	PASS
3	5135.5936	33.21	18.11	51.32	54.00	2.68	150	100	AV	Vertical	PASS
4	5150.015	33.04	18.17	51.21	54.00	2.79	150	18	AV	Vertical	PASS

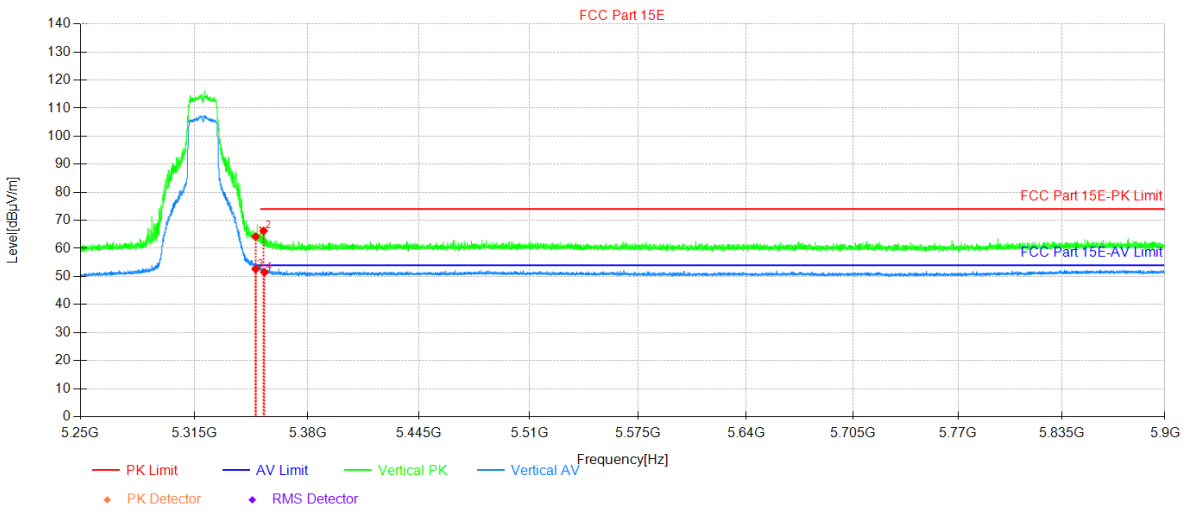
Test Channel:	Channel 64	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350.045	41.76	18.46	60.22	74.00	13.78	150	355	PK	Horizontal	PASS
2	5365.7766	43.36	18.48	61.84	74.00	12.16	150	13	PK	Horizontal	PASS
3	5350.045	32.01	18.46	50.47	54.00	3.53	150	282	AV	Horizontal	PASS
4	5375.9176	32.76	18.57	51.33	54.00	2.67	150	70	AV	Horizontal	PASS

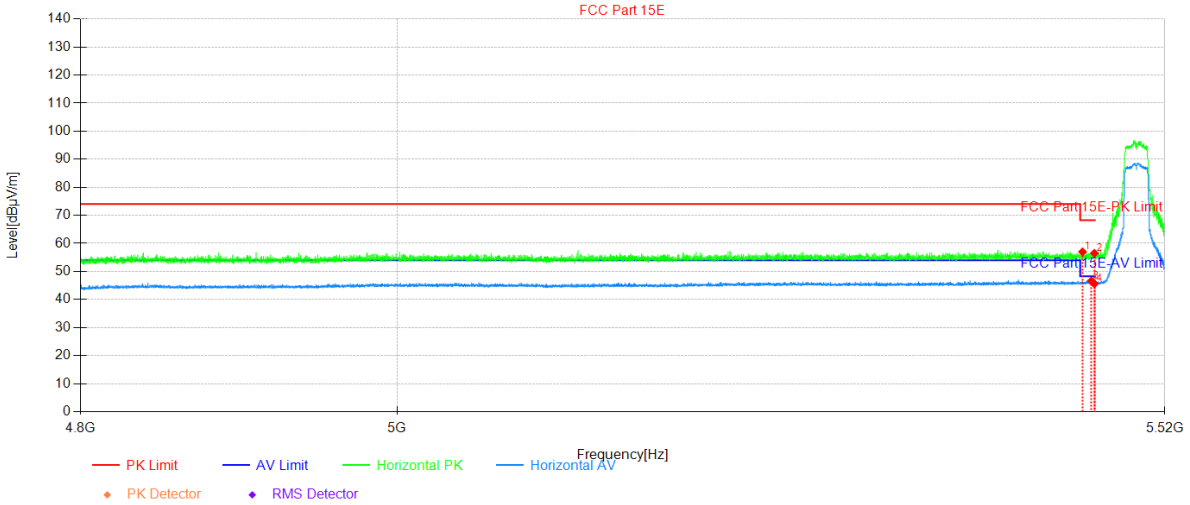
Test Channel:	Channel 64	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350.045	45.74	18.46	64.20	74.00	9.80	150	12	PK	Vertical	PASS
2	5354.6605	47.81	18.43	66.24	74.00	7.76	150	31	PK	Vertical	PASS
3	5350.045	34.18	18.46	52.64	54.00	1.36	150	12	AV	Vertical	PASS
4	5355.1155	33.08	18.43	51.51	54.00	2.49	150	22	AV	Vertical	PASS

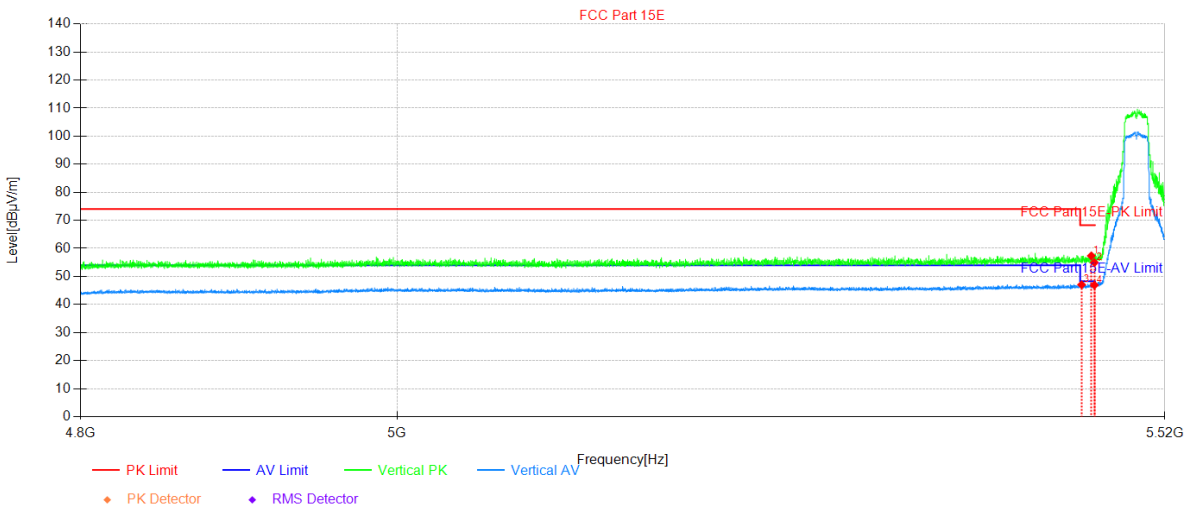
Test Channel:	Channel 100	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5461.6742	37.90	19.08	56.98	68.30	11.32	150	28	PK	Horizontal	PASS
2	5470.027	37.42	19.07	56.49	68.30	11.81	150	358	PK	Horizontal	PASS
3	5467.9388	27.60	19.07	46.67	48.30	1.63	150	124	AV	Horizontal	PASS
4	5470.027	26.52	19.07	45.59	48.30	2.71	150	69	AV	Horizontal	PASS

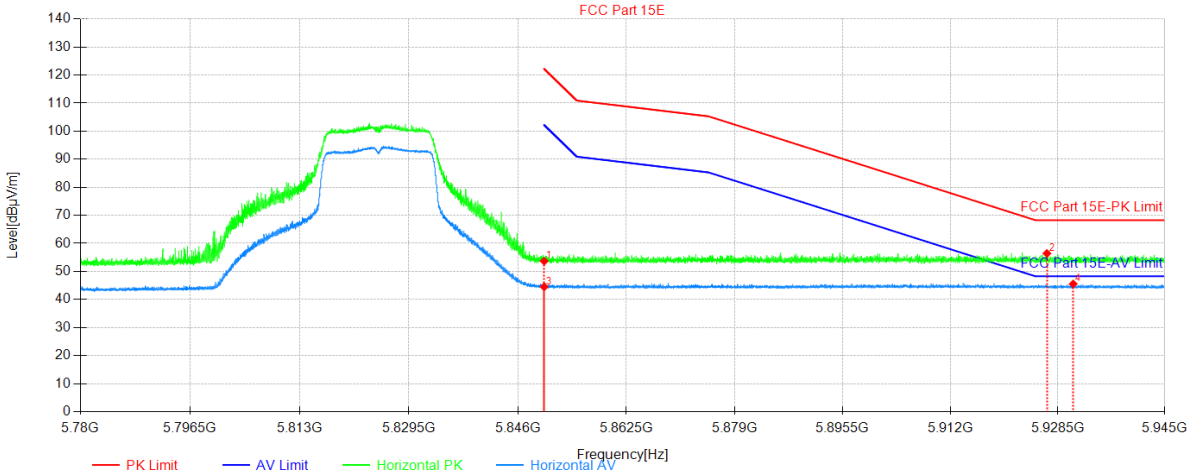
Test Channel:	Channel 100	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5467.8668	38.29	19.07	57.36	68.30	10.94	150	1	PK	Vertical	PASS
2	5470.027	35.89	19.07	54.96	68.30	13.34	150	0	PK	Vertical	PASS
3	5461.0261	27.97	19.08	47.05	48.30	1.25	150	1	AV	Vertical	PASS
4	5470.027	27.83	19.07	46.90	48.30	1.40	150	20	AV	Vertical	PASS

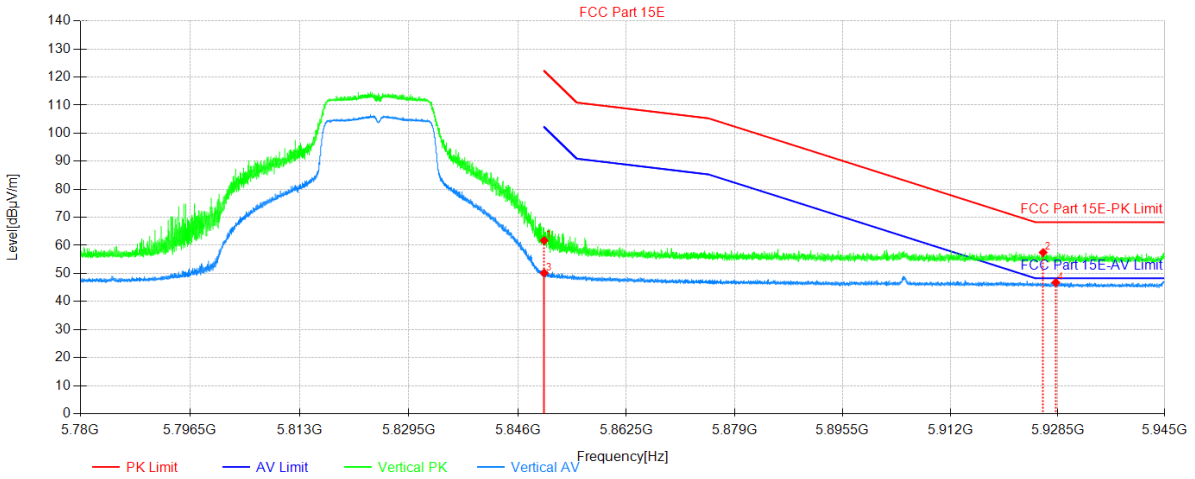
Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5850	43.85	9.83	53.68	122.30	68.62	150	21	PK	Horizontal	PASS
2	5926.8152	46.41	10.01	56.42	68.30	11.88	150	169	PK	Horizontal	PASS
3	5850	34.71	9.83	44.54	102.30	57.76	150	0	AV	Horizontal	PASS
4	5930.8581	35.56	9.97	45.53	48.30	2.77	150	248	AV	Horizontal	PASS

Test Channel:	Channel 165	Ant. Polar. :	Vertical

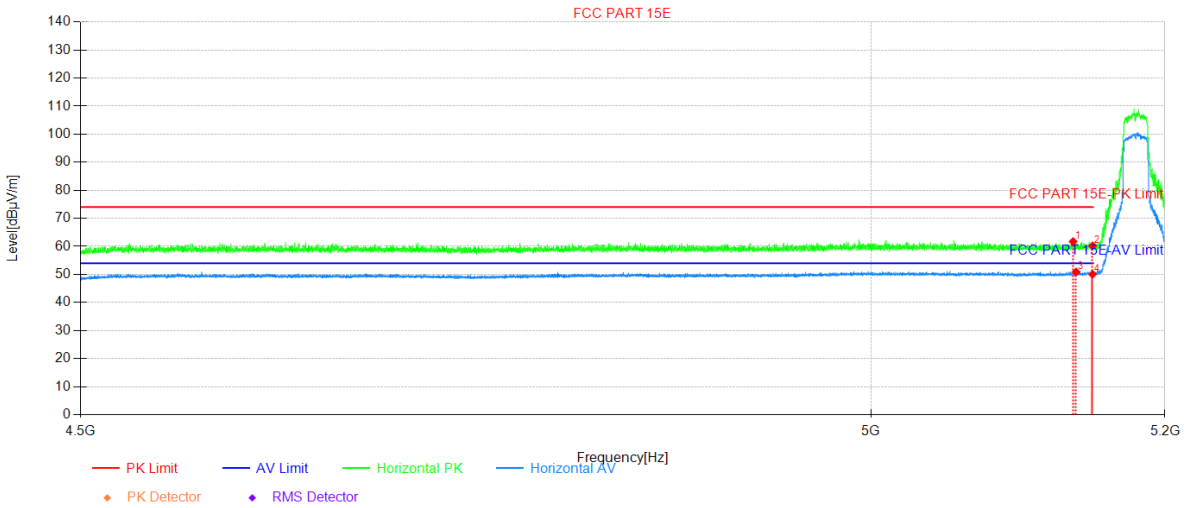


Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5850	51.91	9.83	61.74	122.30	60.56	150	0	PK	Vertical	PASS
2	5926.2376	47.48	10.01	57.49	68.30	10.81	150	359	PK	Vertical	PASS
3	5850	40.31	9.83	50.14	102.30	52.16	150	13	AV	Vertical	PASS
4	5928.1848	36.76	10.00	46.76	48.30	1.54	150	359	AV	Vertical	PASS

Antenna 2_IEEE 802.11a

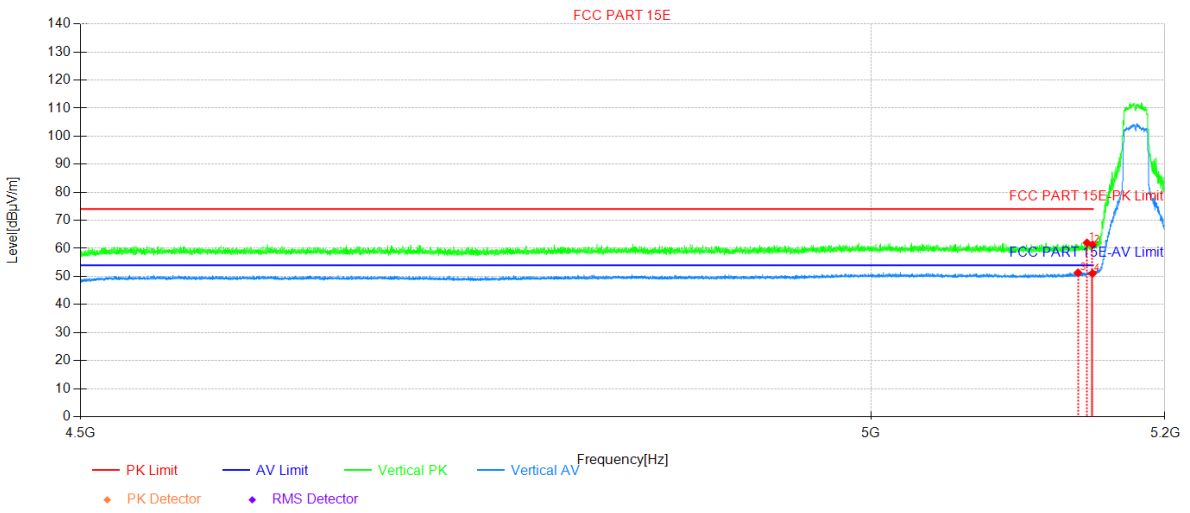
Test Channel:	Channel 36	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5136.7137	43.61	18.13	61.74	74.00	12.26	150	0	PK	Horizontal	PASS
2	5150.015	42.02	18.17	60.19	74.00	13.81	150	359	PK	Horizontal	PASS
3	5138.7439	32.74	18.15	50.89	54.00	3.11	150	12	AV	Horizontal	PASS
4	5150.015	31.89	18.17	50.06	54.00	3.94	150	358	AV	Horizontal	PASS

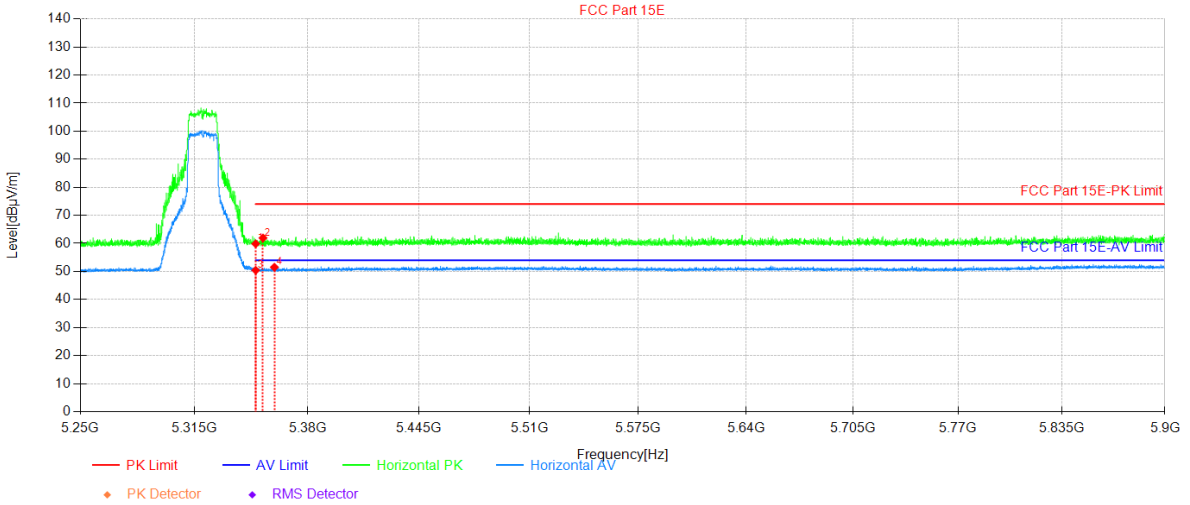
Test Channel:	Channel 36	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5146.2346	43.79	18.19	61.98	74.00	12.02	150	1	PK	Vertical	PASS
2	5150.015	43.16	18.17	61.33	74.00	12.67	150	199	PK	Vertical	PASS
3	5140.074	33.16	18.16	51.32	54.00	2.68	150	126	AV	Vertical	PASS
4	5150.015	32.89	18.17	51.06	54.00	2.94	150	101	AV	Vertical	PASS

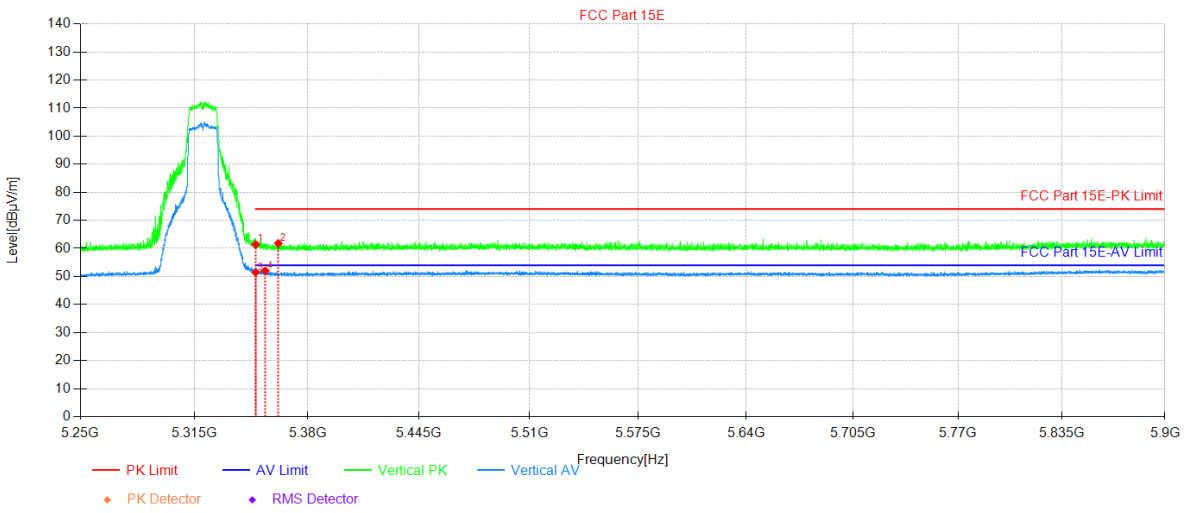
Test Channel:	Channel 64	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350.045	41.41	18.46	59.87	74.00	14.13	150	337	PK	Horizontal	PASS
2	5354.2704	43.50	18.43	61.93	74.00	12.07	150	337	PK	Horizontal	PASS
3	5350.045	31.96	18.46	50.42	54.00	3.58	150	62	AV	Horizontal	PASS
4	5360.8361	33.05	18.46	51.51	54.00	2.49	150	344	AV	Horizontal	PASS

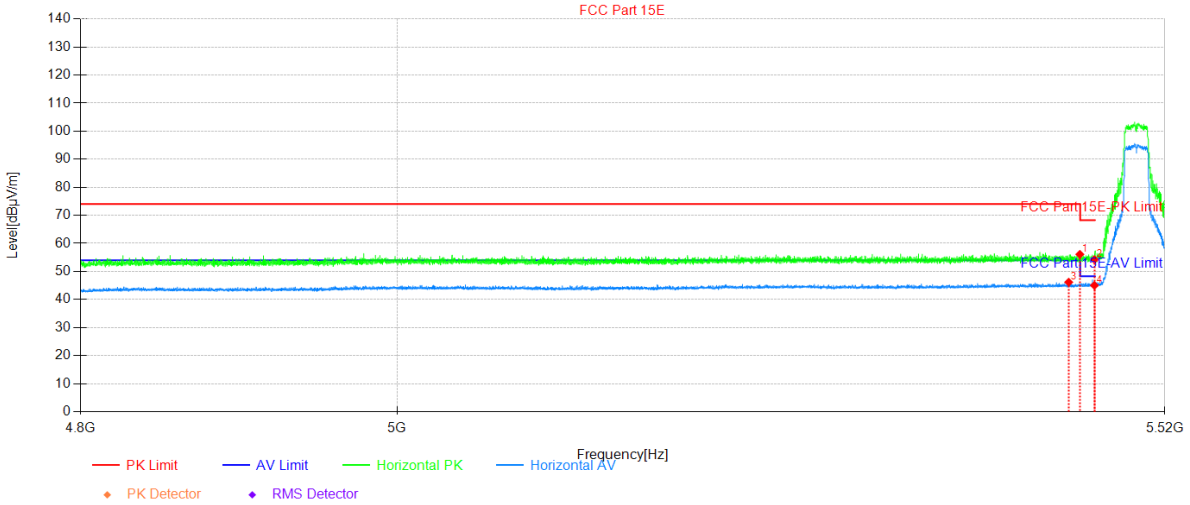
Test Channel:	Channel 64	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350.045	42.91	18.46	61.37	74.00	12.63	150	115	PK	Vertical	PASS
2	5363.1113	43.32	18.47	61.79	74.00	12.21	150	0	PK	Vertical	PASS
3	5350.045	32.98	18.46	51.44	54.00	2.56	150	147	AV	Vertical	PASS
4	5355.6356	33.56	18.43	51.99	54.00	2.01	150	139	AV	Vertical	PASS

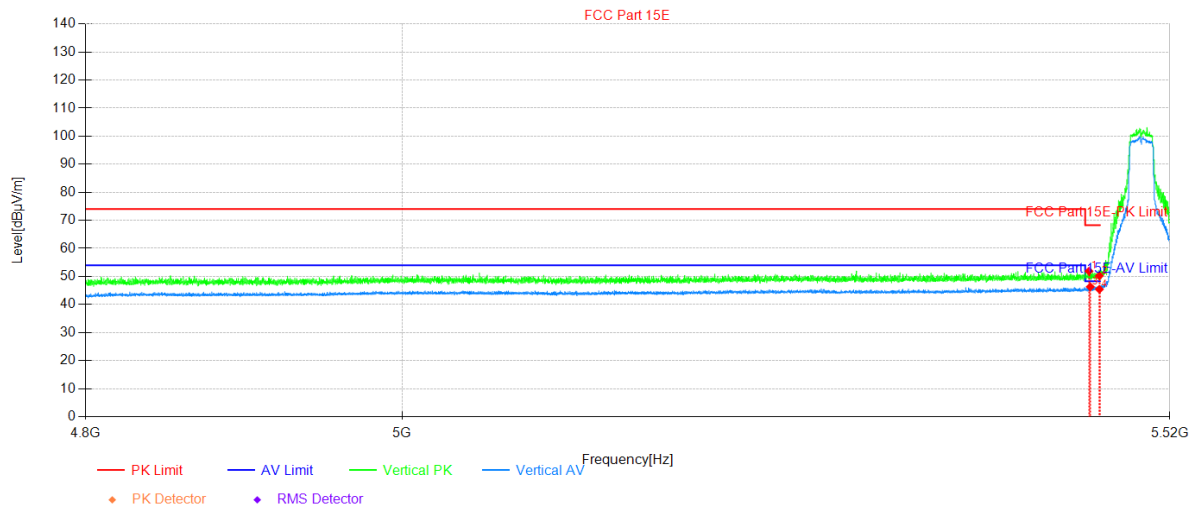
Test Channel:	Channel 100	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5459.802	37.01	19.09	56.10	74.00	17.90	150	176	PK	Horizontal	PASS
2	5470.027	35.16	19.07	54.23	68.30	14.07	150	347	PK	Horizontal	PASS
3	5451.9532	27.07	19.10	46.17	54.00	7.83	150	79	AV	Horizontal	PASS
4	5470.027	25.95	19.07	45.02	48.30	3.28	150	331	AV	Horizontal	PASS

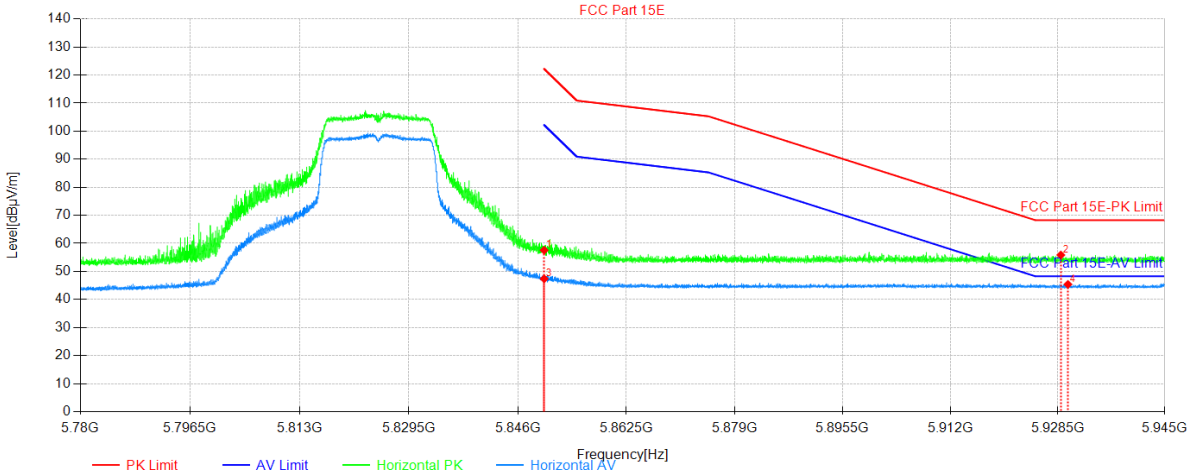
Test Channel:	Channel 100	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5462.6823	32.79	19.09	51.88	68.30	16.42	150	13	PK	Vertical	PASS
2	5470.027	31.17	19.07	50.24	68.30	18.06	150	75	PK	Vertical	PASS
3	5463.6184	27.23	19.08	46.31	48.30	1.99	150	173	AV	Vertical	PASS
4	5470.027	26.34	19.07	45.41	48.30	2.89	150	116	AV	Vertical	PASS

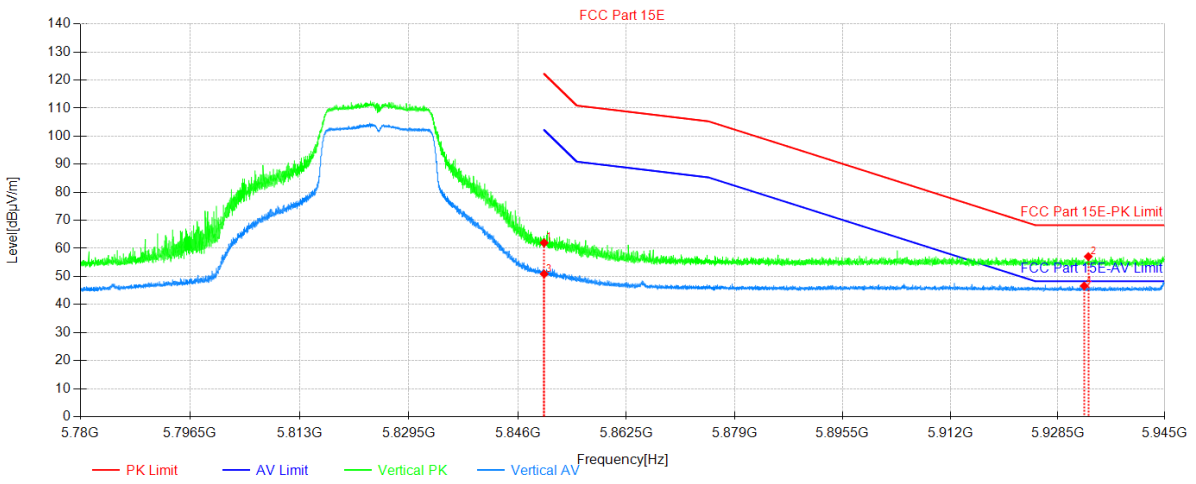
Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5850	47.72	9.83	57.55	122.30	64.75	150	87	PK	Horizontal	PASS
2	5928.9604	45.87	9.99	55.86	68.30	12.44	150	355	PK	Horizontal	PASS
3	5850	37.55	9.83	47.38	102.30	54.92	150	96	AV	Horizontal	PASS
4	5930.0495	35.42	9.97	45.39	48.30	2.91	150	80	AV	Horizontal	PASS

Test Channel:	Channel 165	Ant. Polar. :	Vertical

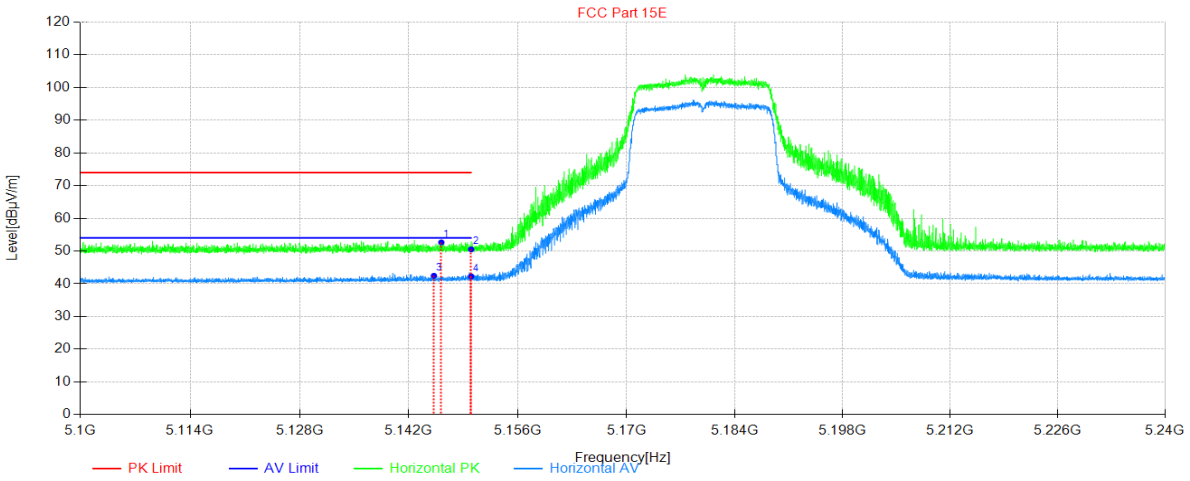


Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5850	52.18	9.83	62.01	122.30	60.29	150	119	PK	Vertical	PASS
2	5933.1848	47.15	9.95	57.10	68.30	11.20	150	276	PK	Vertical	PASS
3	5850	41.04	9.83	50.87	102.30	51.43	150	96	AV	Vertical	PASS
4	5932.5578	36.67	9.96	46.63	48.30	1.67	150	96	AV	Vertical	PASS

MIMO_ Ant. 0+1+2_ IEEE 802.11n-HT20

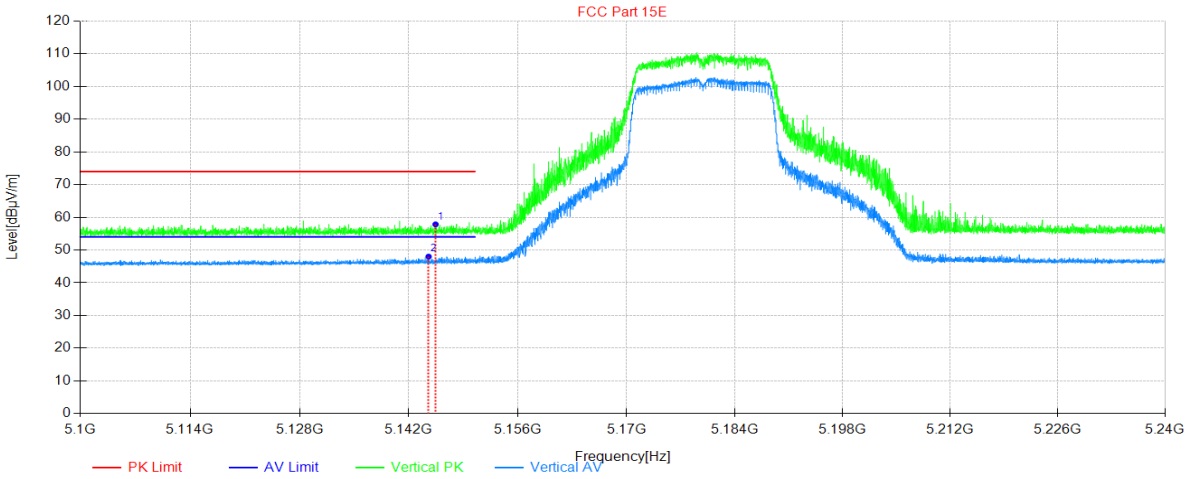
Test Channel:	Channel 36	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Correct Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5146.1766	44.27	8.39	52.66	74.00	21.34	150	348	PK	Horizontal	PASS
2	5150.013	42.14	8.38	50.52	-	-	150	343	PK	Horizontal	NA
3	5145.2245	34.06	8.40	42.46	54.00	11.54	150	343	AV	Horizontal	PASS
4	5150.013	33.89	8.38	42.27	-	-	150	343	AV	Horizontal	NA

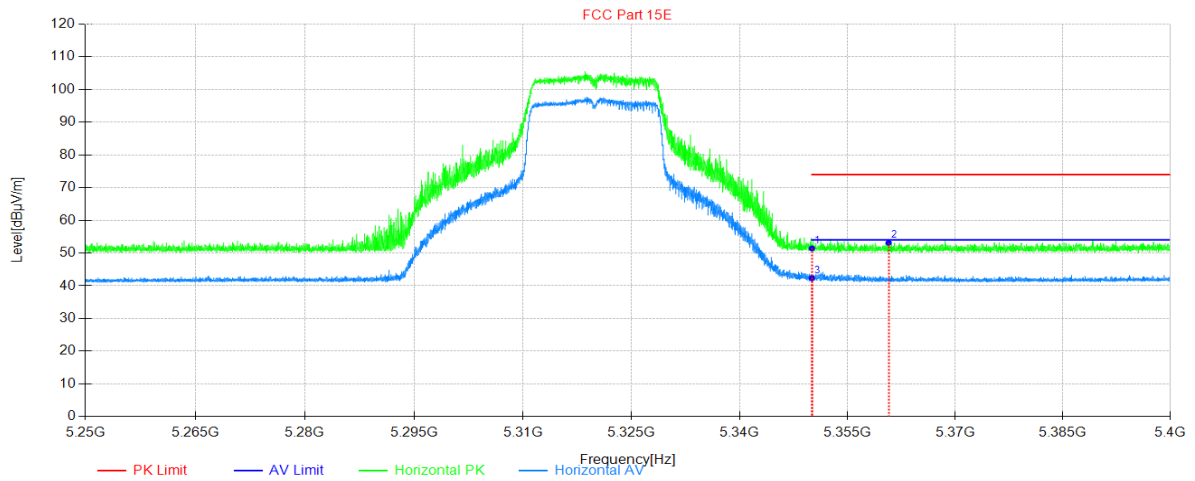
Test Channel:	Channel 36	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBμV]	Correct Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5145.4345	49.45	8.40	57.85	74.00	21.15	150	348	PK	Vertical	PASS
2	5144.5385	39.60	8.40	48.00	54.00	11.00	150	348	AV	Vertical	PASS

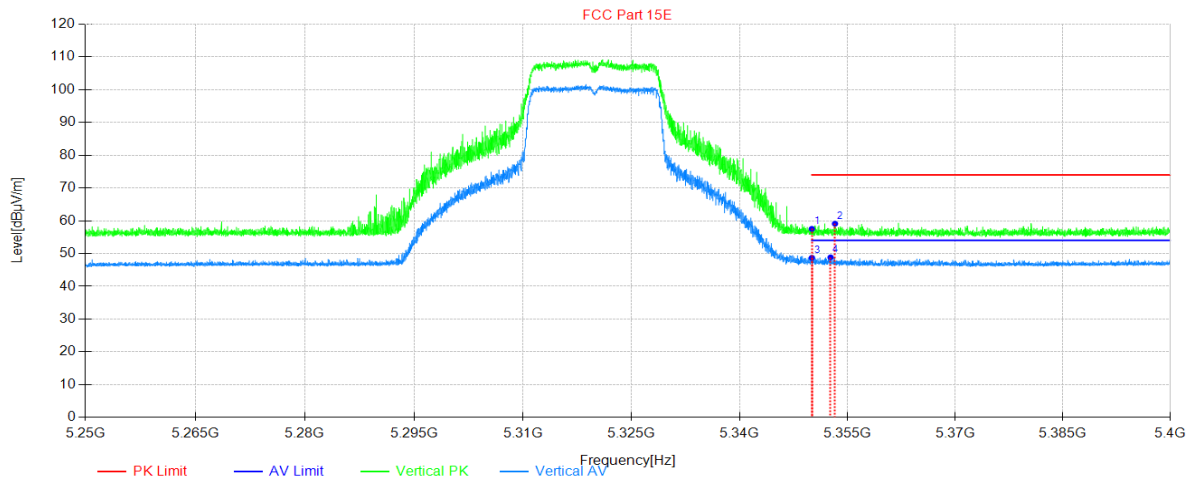
Test Channel:	Channel 64	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Correct Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350	42.68	8.75	51.43	74.00	22.57	300	54	PK	Horizontal	PASS
2	5360.6811	44.39	8.74	53.13	74.00	20.87	100	1	PK	Horizontal	PASS
3	5350	33.56	8.75	42.31	54.00	11.69	100	355	AV	Horizontal	PASS

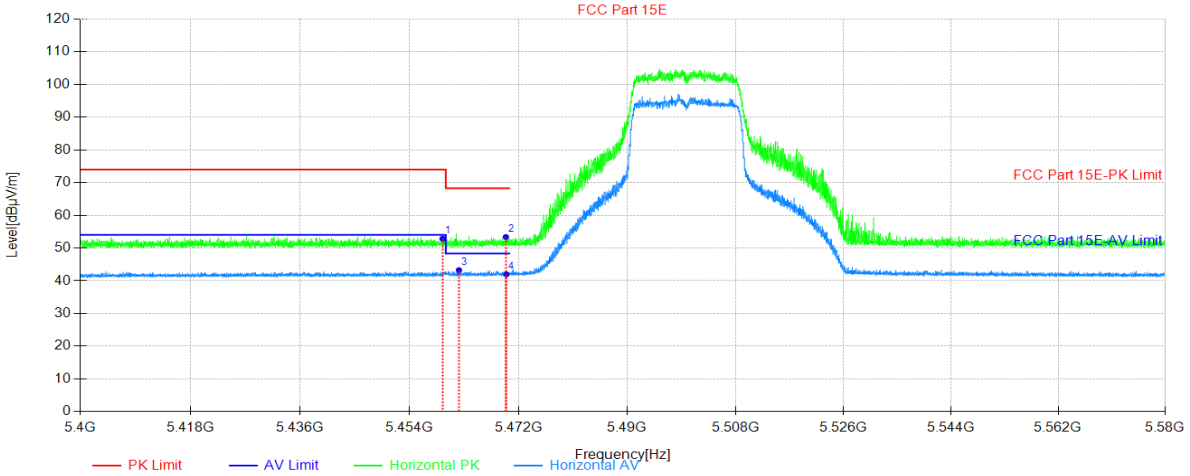
Test Channel:	Channel 64	Ant. Polar. :	Vertical



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Correct Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5350	48.79	8.75	57.54	74.00	21.46	100	349	PK	Vertical	PASS
2	5353.2253	50.39	8.72	59.11	74.00	19.89	100	349	PK	Vertical	PASS
3	5350	39.96	8.75	48.71	54.00	10.29	100	343	AV	Vertical	PASS
4	5352.6103	40.11	8.73	48.84	54.00	10.16	100	343	AV	Vertical	PASS

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



Data List

NO.	Freq. [MHz]	Reading [dBµV]	Correct Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Verdict
1	5459.4599	43.59	9.27	52.86	74.00	21.14	150	98	PK	Horizontal	PASS
2	5469.919	44.11	9.27	53.38	68.30	14.92	150	314	PK	Horizontal	PASS
3	5462.1602	34.01	9.26	43.27	48.30	5.03	150	359	AV	Horizontal	PASS
4	5470.009	32.71	9.27	41.98	48.30	6.32	150	85	AV	Horizontal	PASS