RF Test Report

Applicant	:	Plume Design, Inc.
Product Name	:	SuperPod with WiFi 6
Trade Name	:	Plume Design, Inc.
Model Number	:	F3A
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART E ANSI C63.10:2013
Received Date	:	Sep. 30, 2022
Test Period	:	Oct. 04 - Oct. 06, 2022
Issued Date	:	Oct. 27, 2022

Issued by

Eurofins E&E Wireless Taiwan Co., Ltd.
No. 140-1, Changan Street, Bade District,
Taoyuan City 334025, Taiwan (R.O.C.)
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Taiwan Accreditation Foundation accreditation number: 1330
Frequency Range : 9 kHz to 40 GHz
Test Firm MRA designation number: TW0010

Note:
1.The test results are valid only for samples provided by customers and under the test conditions described in this report.
2.This report shall not be reproduced except in full, without the written approval of Eurofins E&E Wireless Taiwan Co., Ltd.
3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Version	Issued Date	Revisions	Revised By
00	Oct. 27, 2022	Initial Issue	Snow Wang

Verification of Compliance

Applicant	:	Plume Design, Inc.
Product Name	:	SuperPod with WiFi 6
Trade Name	:	Plume Design, Inc.
Model Number	:	F3A
FCC ID	:	2AG7G-F3A
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART E ANSI C63.10:2013
Test Result	:	Complied
Performing Lab.	:	Eurofins E&E Wireless Taiwan Co., Ltd. No. 140-1, Changan Street, Bade District, Taoyuan City 334025, Taiwan (R.O.C.) Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330

Eurofins E&E Wireless Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Eurofins E&E Wireless Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By : Kai Yu Yang

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1 General Information

1.1. Summary of Test Result

Standard	Item	Result	Remark
15.407(b)(9) 15.207	AC Power Conducted Emission	PASS	---
15.407(b) 15.205 / 15.209	Transmitter Radiated Emissions	PASS	---
15.407(a)	Maximum Conducted Output Power	PASS	---
15.407(a)	26 dB RF Bandwidth	Reference	---
15.407(e)	6 dB RF Bandwidth	N/A	---
15.407(a)	Maximum Power Spectral Density	PASS	---
15.407(c)	Automatically discontinue transmission	PASS	---
15.407(a) 15.203	Antenna Requirement	PASS	---

Decision Rule

■ Uncertainty is not included.

□ Uncertainty is included.

Standard	Description
CFR47, Part 15, Subpart C	Intentional Radiators
CFR47, Part 15, Subpart E	Unlicensed National Information Infrastructure Devices
ANSI C63. 10: 2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB789033: D02	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
KDB 662911 D01 v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)

1.2. Testing Location

Site Name: Eurofins E&E Wireless Taiwan Co., Ltd.

Site Address: ■ No. 140-1, Changan Street, Bade District, Taoyuan City 334025, Taiwan (R.O.C.)

Site Address: ☐ No. 2, Wuquan 5th Rd. Wugu Dist., New Taipei City, Taiwan (R.O.C.)

1.3. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conducted Emission	150 kHz ~ 30 MHz	2.7 dB
Radiated Emission	9 kHz ~ 30 MHz	2.2 dB
	30 MHz ~ 1000 MHz	5.1 dB
	1000 MHz ~ 18000 MHz	5.2 dB
	18000 MHz ~ 26500 MHz	4.6 dB
	26500 MHz ~ 40000 MHz	4.6 dB
Conducted Output Power		1.1 dB
RF Bandwidth		4.7 %
Power Spectral Density		1.1 dB
Frequency Stability		1.3 x 10^-7
Duty Cycle		1.1 %
Time Occupancy		1.5 %

2 EUT Description

Applicant	Plume Design, Inc. 325 Lytton Ave., Palo Alto, CA 94301			
Product Name	SuperPod with WiFi 6			
Trade Name	Plume Design, Inc.			
Model Number	F3A			
FCC ID	2AG7G-F3A			
Operate Frequency	Frequency Band		Frequency Range (MHz)	Number of Channels
	802.11a / 802.11n HT20 / 802.11ac VHT20 / 802.11ax HE20	U-NII Band 1	5180 – 5240	4
		U-NII Band 2-A	5260 – 5320	4
		U-NII Band 2-C	5500 – 5700	11
		Straddle band	5720	1
		U-NII Band 3	5745 – 5825	5
	802.11n HT40 / 802.11ac VHT40 / 802.11ax HE40	U-NII Band 1	5190 – 5230	2
		U-NII Band 2-A	5270 – 5310	2
		U-NII Band 2-C	5510 – 5670	5
		Straddle band	5710	1
		U-NII Band 3	5755 – 5795	2
	802.11ac VHT80 / 802.11ax HE80	U-NII Band 1	5210	1
		U-NII Band 2-A	5290	1
		U-NII Band 2-C	5530 –5610	2
		Straddle band	5690	1
		U-NII Band 3	5775	1
	802.11ac VHT160 / 802.11ax HE160	U-NII Band 1	5250	1
		U-NII Band 2-A		
		U-NII Band 2-C	5570	1
Modulation Type	OFDM/OFDMA			
Antenna Delivery	Reference section 3.1			
Operate Temp. Range	-30 ~ +50 ℃			
EUT Power Rating	100-240 V, 50-60 Hz, 0.45 A			

Antenna information				
Type	Antenna		Frequency	Max. Gain (dBi)
PIFA Antenna	5G L1	ANT-0	U-NII Band 1	3.30
			U-NII Band 2-A	3.20
	5G L2	ANT-1	U-NII Band 1	2.20
			U-NII Band 2-A	2.10
	5G L3	ANT-2	U-NII Band 1	3.00
			U-NII Band 2-A	3.10
	5G L4	ANT-3	U-NII Band 1	3.70
			U-NII Band 2-A	3.70
	5G H1	ANT-0	U-NII Band 2-C	4.10
			U-NII Band 3	2.80
	5G H2	ANT-1	U-NII Band 2-C	2.30
			U-NII Band 3	2.40

Equipment Type		
Outdoor access point	point-to-point	---
	point-to-multipoint	---
Indoor access point		V
Fixed point-to-point access points		---
Client devices		---

EUT Modify Description：

Modify Description:
1. In order to improve the de-sense issue, added 3 gaskets on F3A.
2. To enable the bandwidth up to 160 MHz for U-NII-2c by software.

The difference will influence the test results. Therefore, all test items need to be re-evaluated.

Frequency Band		RF Output Power (W)
802.11ac VHT160	U-NII Band 2-C	0.106
802.11ax HE160	U-NII Band 2-C	0.109

Beamforming on

Frequency Band		RF Output Power (W)
802.11ac VHT160	U-NII Band 2-C	0.053
802.11ax HE160	U-NII Band 2-C	0.054

3 Test Methodology

3.1. Mode of Operation

Decision of Test Eurofins has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode
Transmit mode
802.11ac VHT160
802.11ax HE160

Final-Test Mode
Transmit mode
802.11ax HE160

Software used to control the EUT for staying in continuous transmitting mode was programmed.
After verification, all tests were carried out with the worst case test modes.

Note 1: This product supports normal mode and Beamforming on mode. According to power table, the normal mode is worst power. So, normal mode has to test and record results for Conducted.

Note 2: Investigation has been done on all the possible configurations for searching the worst cases (HE160 covers VHT160). The table is a list of the test modes show in this test report.

Note 3: IEEE 802.11ax test results only support Full RU.

High Band B2C			
Test Mode	ANT-0	ANT-1	ANT-0+1
802.11ac VHT160	V	V	V
802.11ax HE160	V	V	V

Test Mode	Antenna Delivery	Data Rate (Mbps)	Band	Test Channel
802.11ac VHT160	2TX (CDD/Beamforming on)	117	U-NII Band 2-C	114
802.11ax HE160	2TX (CDD/Beamforming on)	MCS0	U-NII Band 2-C	114

High Band B2C 1X1

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ax HE160	5570	0.457	0.482	0.949	0.228	2.189

Duty Cycle Graphs

802.11ax HE160	
On+off time	

High Band B2C 2X2

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ax HE160	5570	0.457	0.482	0.949	0.228	2.189

Duty Cycle Graphs

802.11ax HE160	
On+off time	

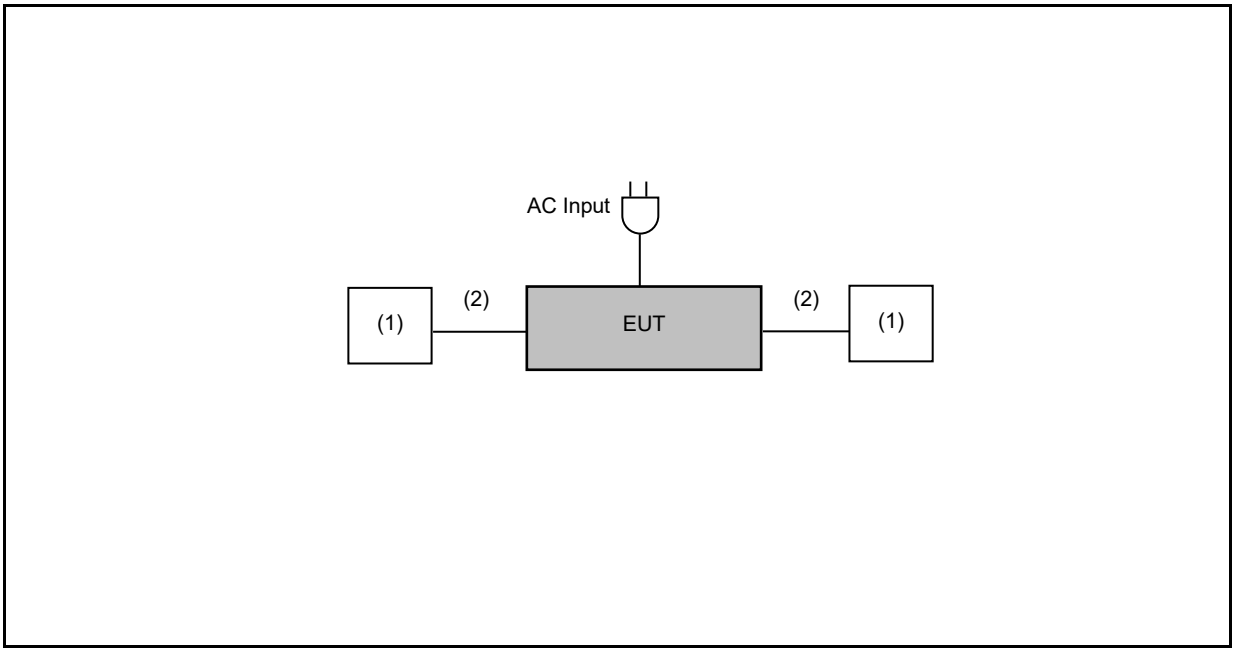
3.2. EUT Test Step

The EUT is operated in the engineering mode to fix the TX frequency for the purposes of measurement. According to its specifications, the EUT must comply with the requirements of Section 15.407 under the FCC Rules Part 15 Subpart E.

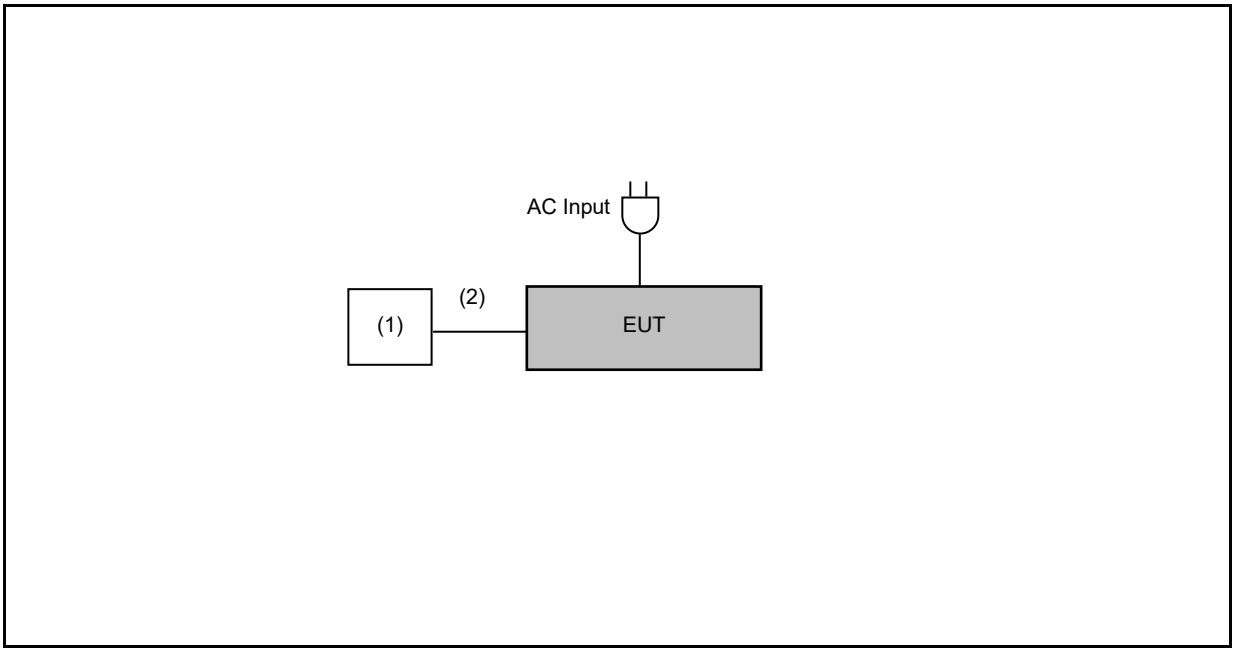
1.	Setup the EUT shown on “Configuration of Test System Details”.
2.	Turn on the power of all equipment.
3.	Turn on TX function.
4.	EUT run test program.

3.3. Configuration of Test System Details

Conduction Emission



Radiated Emission



Product		Manufacturer	Model Number	Serial Number	Power Cord
(1)	Notebook	acer	N19C1	---	---
(2)	RJ45	---	---	---	---

3.4. Test Instruments

For Conducted Emission
Test Period: Oct. 10, 2022
Testing Engineer: Louis Shen

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Test Receiver	R&S	ESCI	100367	May 19, 2022	1 year
☒	LISN	R&S	ENV216	101040	Apr. 06, 2022	1 year
☒	LISN	R&S	ENV216	101140	Jan. 25, 2022	1 year
☒	RF Cable	Woken	00100D1380194M	TE-02-03	May 27, 2022	1 year
☒	Software	EZ EMC	1.1.4.3	N/A	N.C.R.	---

For Conducted
Test Period: Oct. 06, 2022
Testing Engineer: Brian Lin

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Power Sensor	Anritsu	MA2411B	1126022	Sep. 04, 2022	1 year
☒	Power Meter	Anritsu	ML2495A	1135009	Sep. 04, 2022	1 year
☒	Spectrum Analyzer (10 Hz~26.5 GHz)	Keysight	N9010B	MY59071418	Mar. 16, 2022	1 year
☐	Signal Generator	Keysight	N5182B	MY53052569	Apr. 16, 2022	1 year
☐	Signal Generator	Keysight	N5182BX07	MY59360221	Apr. 16, 2022	1 year

Note: N.C.R. = No Calibration Request

For Radiated Emissions
Test Period: Oct. 04 - Oct. 05, 2022
Testing Engineer: Hung Chou, Marc Yeh

Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☐	Spectrum Analyzer (2 Hz~50 GHz)	Keysight	N9030B	MY57143537	Apr. 14, 2022	1 year
☒	Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9020B	MY60112363	Feb. 27, 2022	1 year
☐	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	Jan. 14, 2022	1 year
☒	Broadband Amplifier (1 GHz~26.5 GHz)	Titan	T0912E01263025 A1F	002	Jul. 21, 2022	1 year
☒	Preamplifier (18 GHz~40 GHz)	EMCI	EMC184045SE	980861	Dec. 28, 2021	1 year
☐	Trilog Broadband Antenna (30 MHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	01146	Jul. 22, 2022	1 year
☒	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	02207	Jul. 13, 2022	1 year
☒	Horn Antenna (18 GHz~40 GHz)	ETS	3116	00086467	Dec. 03, 2021	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 100	J11005	Aug. 05, 2022	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 900	J11004	Aug. 05, 2022	1 year
☒	Coaxial Cable	Titan	CFD400NL-LW	001	Aug. 05, 2022	1 year
☒	Bluetooth Tester	R&S	CBT	100350	Mar. 17, 2021	2 years
☒	Software	EZ EMC	1.1.4.4	N/A	N.C.R.	---

Note: N.C.R. = No Calibration Request.

3.5. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	20-30
Humidity (%RH)	25-75	45-75

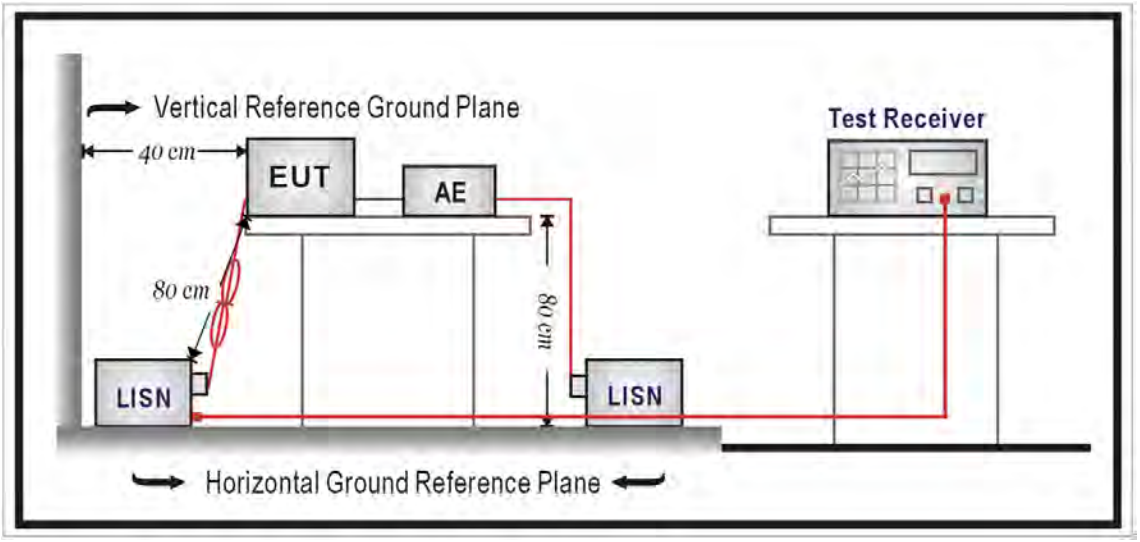
4 Measurement Procedure

4.1. AC Power Conducted Emission Measurement

■ **Limit**

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

■ **Test Setup**



■ **Test Procedure**

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 Ω// 50 uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 Ω// 50 uH coupling impedance with 50 ohm termination.

Tabletop device shall be placed on a non-conducting platform, of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The wall of screened room shall be located 40 cm to the rear of the EUT. Other surfaces of tabletop or floor standing EUT shall be at least 80 cm from any other ground conducting surface including one or more LISNs. For floor-standing device shall be placed under the EUT with a 12 mm insulating material.

Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a resolution bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. When all of peak value were complied with quasi-peak and average limit from 150 kHz to 30 MHz then quasi-peak and average measurement was unnecessary.

The AMN shall be placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for AMNs mounted on top of the ground reference plane. This distance is between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8 m from the AMN. If the mains power cable is longer than 1 m then the cable shall be folded back and forth at the centre of the lead to form a bundle no longer than 0.4 m. All of interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long. All of EUT and AE shall be separate place more than 0.1 m. All 50 Ω ports of the LISN shall be resistively terminated into 50 Ω loads when not connected to the measuring instrument.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored

4.2. Transmitter Radiated Emissions Measurement

■ **Limit**

(1)Undesirable emission limits. Except as shown in paragraph (b)(9) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(a)For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(b)For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(c)For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(d)For transmitters operating in the 5.725-5.85 GHz band:

(i)All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

EIRP (dBm)	Field Strength at 3 m(dBuV/m)
-27	68.3

(2)Limits of Radiated Emission Measurement

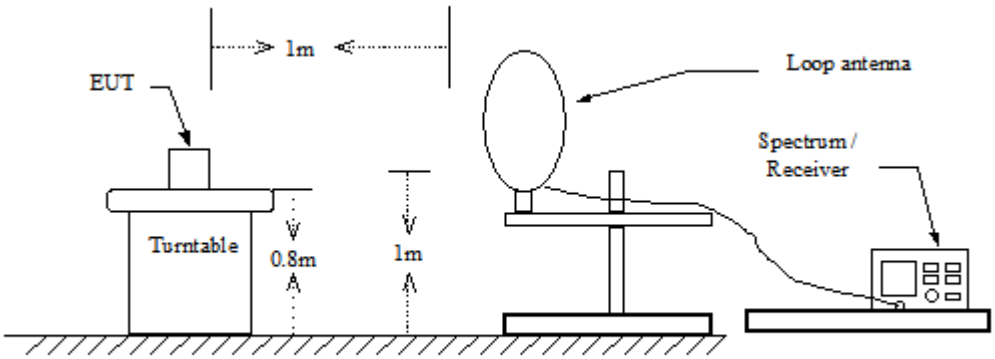
Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequency Range (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	10	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

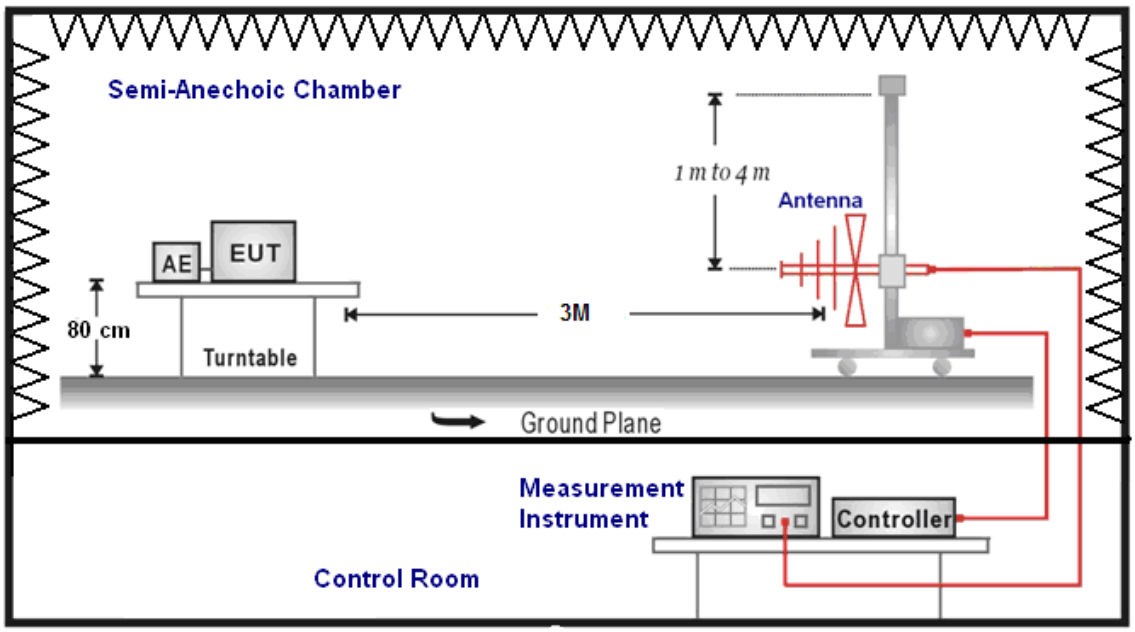
Note: 1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

■ **Setup**

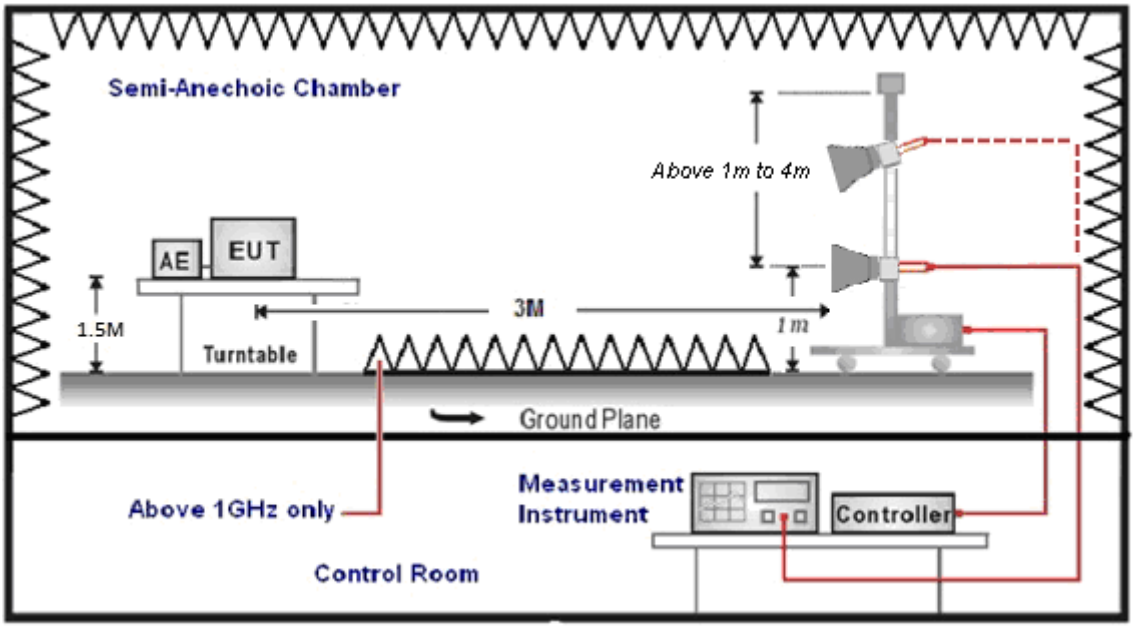
9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



Above 1 GHz


Semi-Anechoic Chamber
Above 1m to 4m
AE
EUT
1.5M
3M
1m
Turntable
Ground Plane
Above 1GHz only
Measurement
Instrument
Controller
Control Room

■ **Test Procedure**

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 or 1.5 meters height(below 1 GHz use 0.8 m turntable / above 1 GHz use 1.5 m turntable), top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 40 GHz is investigated.
For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.
For restricted measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 3 MHz for peak measurements and 10 Hz for average measurements when Duty cycle > 0.98 / 1/T for average measurements when Duty cycle < 0.98.
For out of band measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 3 MHz for peak measurements.
A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.
SCHWARZBECK MESS-ELEKTRONIK Trilog-Broadband Antenna at 3 Meter and the ETS-Lindgren Double-Ridged Waveguide Horn antnna Schwarzbeck Mess-Elektronik Broadband Horn Antenna was used in frequencies 1 – 40 GHz at a distance of 3 meter. The antenna at an angle toward the source of the emission.All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20 dB/decade).

For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.
The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.
The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).
The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).

Data of measurement within this frequency range without mark in the table above means the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)
FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.
P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)
The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:
(a) For fundamental frequency : Transmitter Output < +30 dBm
(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

Measuring Instruments and setting

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RBW/VBW(Emission in restricted band)	1 MHz / 3 MHz for Peak 1 MHz / (1/T) for Average
RBW/VBW(Emission in non-restricted band)	1 MHz / 3 MHz for Peak

4.3. Maximum Conducted Output Power and Transmit power control Measurement

■ **Limit**

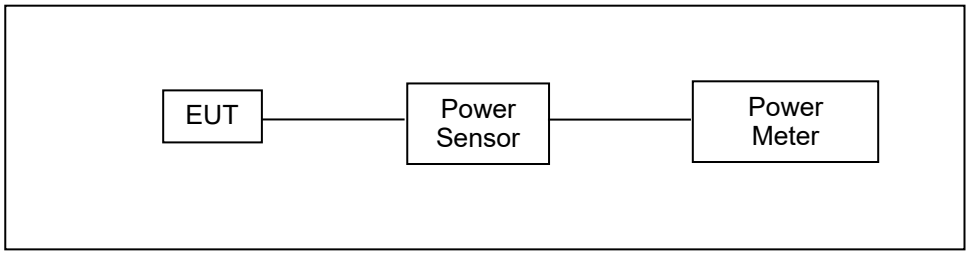
Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
	Master
5.470 ~ 5.725 GHz	The lesser of 250 mW (24 dBm) or 11 dBm + 10 log (B)

According FCC KDB 662911 D01 v02r01 – for power measurements on IEEE802.11 devices,

CDD mode
Band 2-C：
802.11ac VHT160 / 802.11ax HE160
＊ Directional Gain = 10*log{[10^(G1/10)+10^(G2/10)+…+10^(Gn/10)]/NANT} = 4.1 dBi < 6 dBi

Beamforming on mode
Band 2-C：
802.11ac VHT160 / 802.11ax HE160
＊ Directional Gain = GANT + Array Gain = 6.3 dBi > 6 dBi
＊ Power Limit = 24 - 0.3 = 23.7 dBm

■ **Test Setup**



■ **Test Procedure**

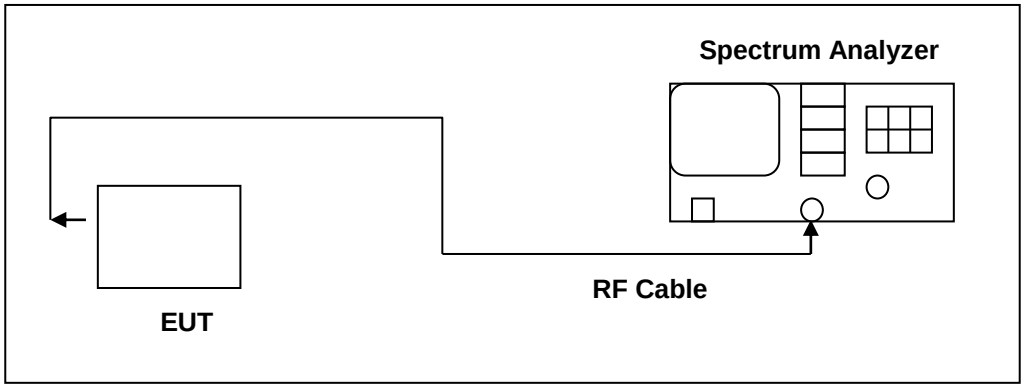
The test is performed in accordance with ANSI C63.10:2013 section 12.3.3.2, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices
Section (E) Maximum Conducted Output Power
3. Measurement using a Power Meter (PM)
b) Method PM-G (Measurement using a gated RF average power meter)

4.4. 26 dB RF Bandwidth Measurement

■ **Limit**

N/A

■ **Test Setup**



■ **Test Procedure**

The test is performed in accordance with ANSI C63.10:2013 section 12.4.1, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	>26 dB Bandwidth
RBW	Approximately 1 % of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

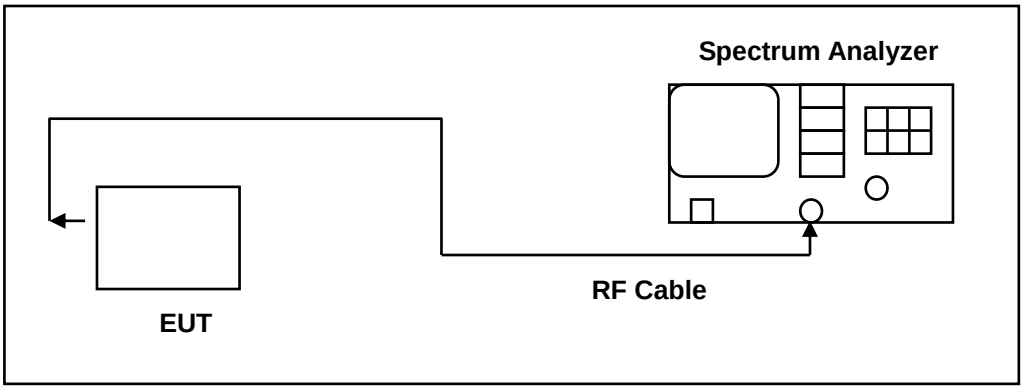
4.5. 6 dB RF Bandwidth Measurement

■ **Limit**

6 dB RF Bandwidth

Systems using digital modulation techniques may operate in the 5725~5825 MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

■ **Test Setup**



■ **Test Procedure**

6 dB RF Bandwidth

The EUT tested to UNII test procedure of ANSI C63.10:2013 section 6.9.2 for compliance to FCC 47CFR 15.407 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels.

4.6. Maximum Power Spectral Density Measurement

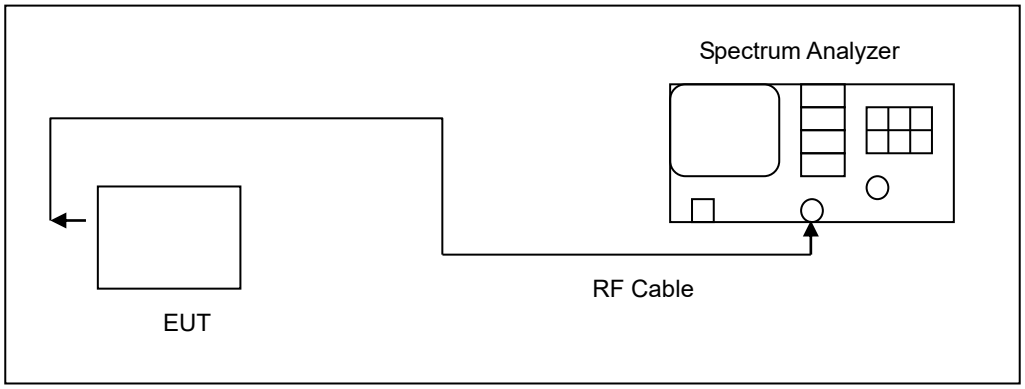
■ **Limit**

Frequency Range (MHz)	FCC Limit
	Master
5.470 ~ 5.725 GHz	11 dBm/MHz

According FCC KDB 662911 D01 v02r01 – for power spectral density measurements on IEEE802.11 devices,

CDD mode
Band 2-C：
802.11ac VHT160 / 802.11ax HE160
＊ Directional Gain = GANT + Array Gain = 6..26 dBi > 6 dBi
＊ Power spectral density Limit = 11 - 0.26 = 10.74 dBm/MHz

■ **Test Setup**



■ **Test Procedure**

The test is performed in accordance with ANSI C63.10:2013 section 12.5, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz (5725 ~ 5850 MHz use 100 kHz)
VBW	3 MHz (5725 ~ 5850 MHz use 300 kHz)
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log(500 kHz/100 kHz) to the measured result.	

4.7. Automatically discontinue transmission

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

■ **Declare**

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

4.8. Antenna Requirement

■ **Requirement**

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
And According to 15.407 (a), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ **Antenna Connector Construction**

See section 2 – antenna information.

■ **Directional Gain Calculated**

For Maximum Conducted Output Power

Directional Gain = 10*log{[10^(G1/10)+10^(G2/10)+…+10^(Gn/10)]/NANT}

Operate Freq. Band		Directional Gain (dBi)
802.11ac VHT160 / 802.11ax HE160	U-NII Band 2-C	4.10

For Maximum Power Density

Directional Gain = GANT + Array Gain

Operate Freq. Band		Directional Gain (dBi)
802.11ac VHT160 / 802.11ax HE160	U-NII Band 2-C	6.26

Beamforming on

For Maximum Conducted Output Power

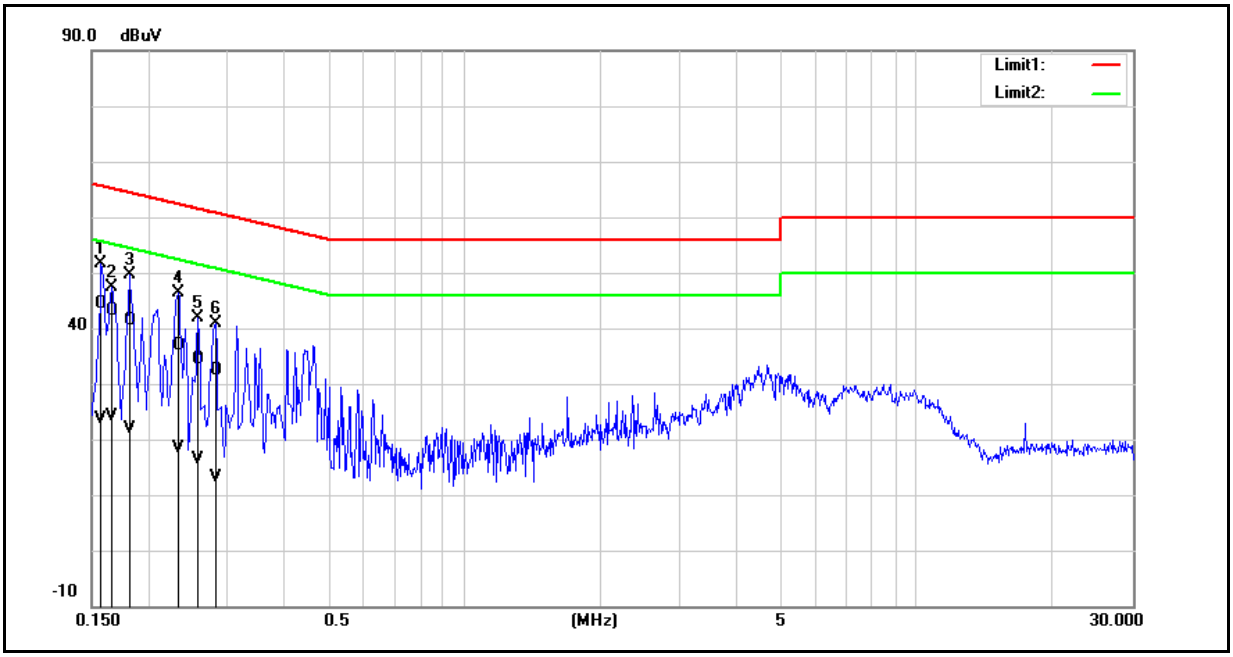
Directional Gain = GANT + Array Gain

Operate Freq. Band		Directional Gain (dBi)
802.11ac VHT160 / 802.11ax HE160	U-NII Band 2-C	6.30

5 Test Results

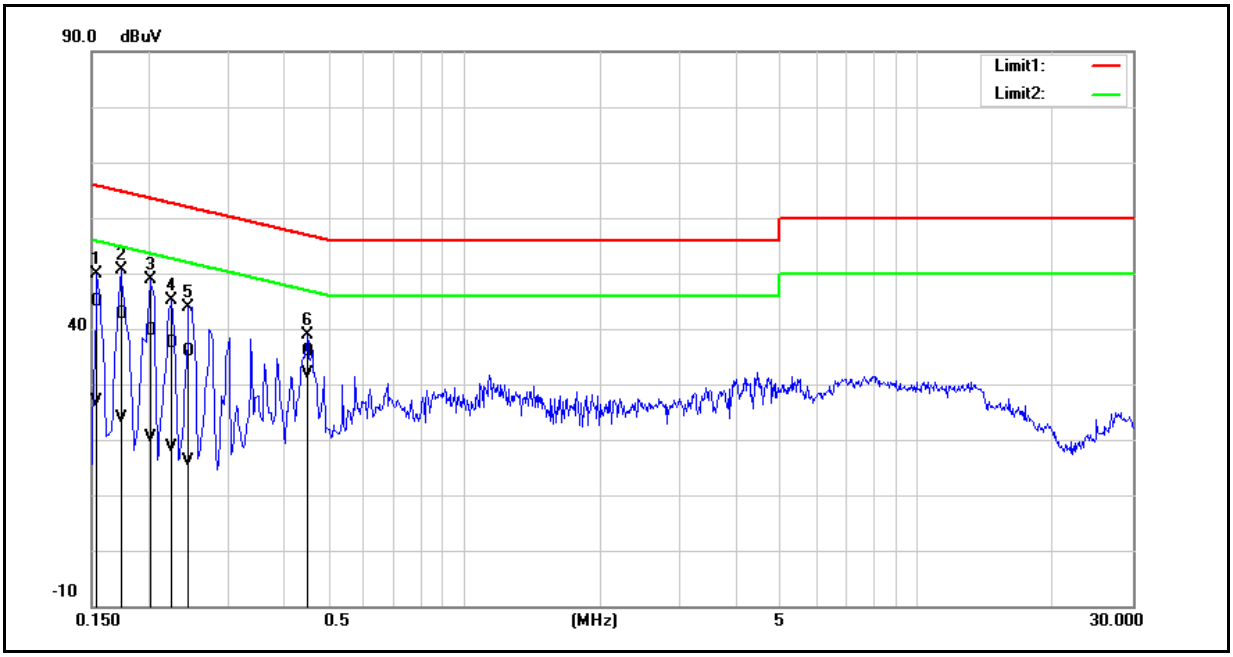
5.1. Conducted Emission

Standard:	FCC Part 15.407	Line:	L1
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Test Mode:	Transmit mode		
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	34.94	14.12	9.54	44.48	23.66	65.57	55.57	-21.09	-31.91	Pass
2	0.1660	33.56	14.60	9.54	43.10	24.14	65.16	55.16	-22.06	-31.02	Pass
3	0.1820	31.73	12.25	9.54	41.27	21.79	64.39	54.39	-23.12	-32.60	Pass
4	0.2340	27.35	8.75	9.54	36.89	18.29	62.31	52.31	-25.42	-34.02	Pass
5	0.2580	24.88	6.82	9.54	34.42	16.36	61.50	51.50	-27.08	-35.14	Pass
6	0.2820	22.94	3.63	9.54	32.48	13.17	60.76	50.76	-28.28	-37.59	Pass

Standard:	FCC Part 15.407	Line:	N
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Test Mode:	Transmit mode		
Description:			



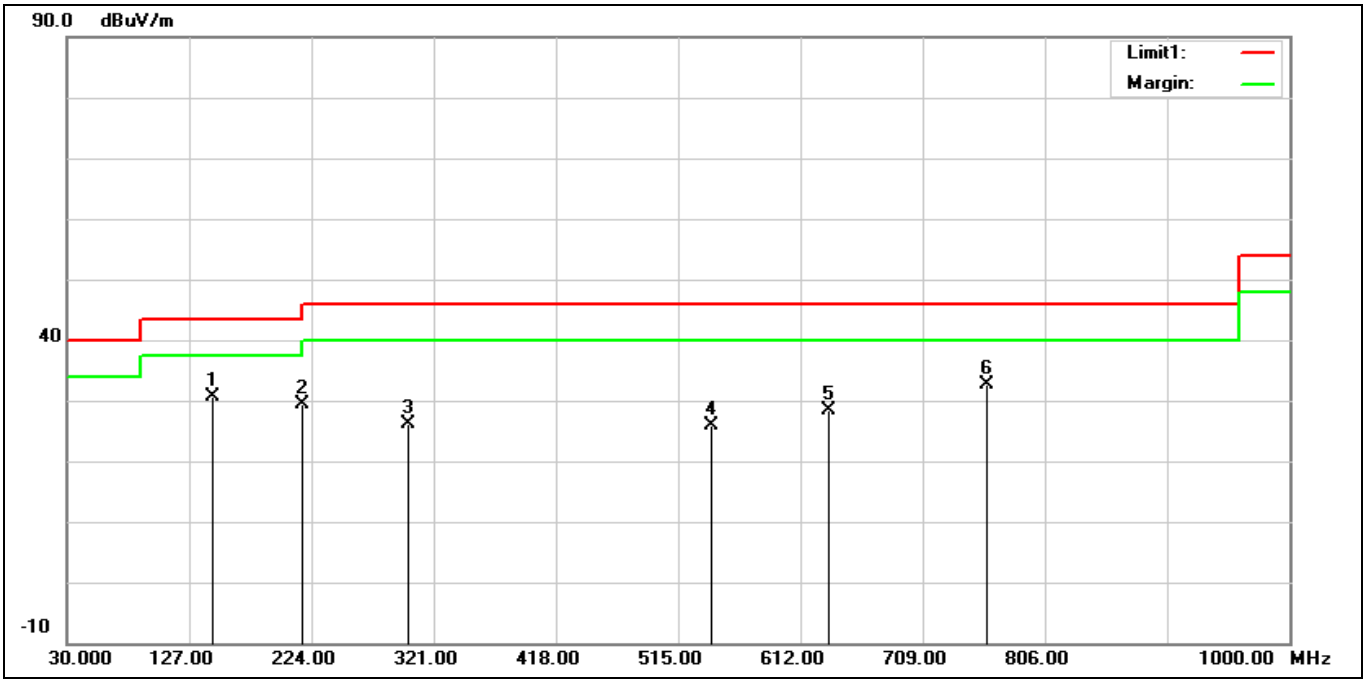
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	35.34	17.26	9.60	44.94	26.86	65.78	55.78	-20.84	-28.92	Pass
2	0.1740	32.92	14.23	9.60	42.52	23.83	64.77	54.77	-22.25	-30.94	Pass
3	0.2020	30.14	10.89	9.60	39.74	20.49	63.53	53.53	-23.79	-33.04	Pass
4	0.2260	27.89	9.07	9.60	37.49	18.67	62.60	52.60	-25.11	-33.93	Pass
5	0.2460	26.18	6.64	9.60	35.78	16.24	61.89	51.89	-26.11	-35.65	Pass
6	0.4500	26.33	22.28	9.61	35.94	31.89	56.88	46.88	-20.94	-14.99	Pass

5.2. Radiated Emission Measurement

Harmonic

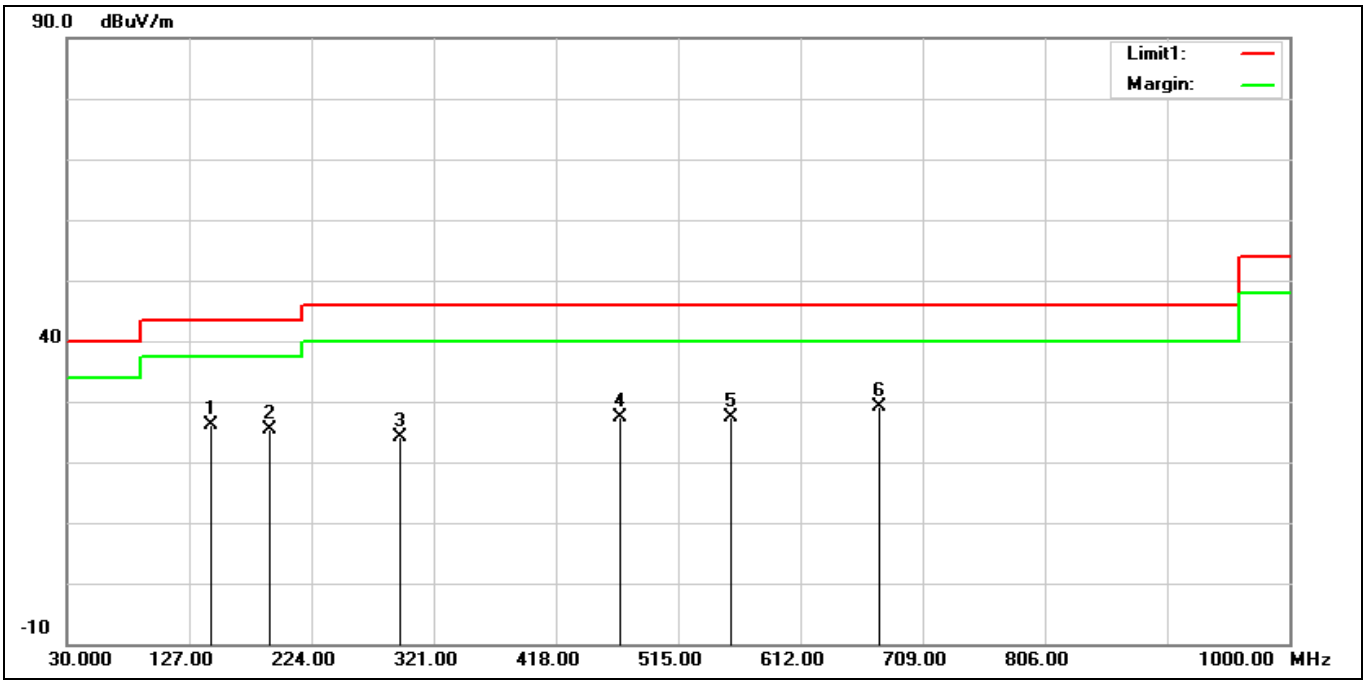
Below 1 GHz

Standard:	FCC Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	Transmit mode		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	145.4300	38.10	-7.55	30.55	43.50	-12.95	QP
2	216.2400	39.57	-10.09	29.48	46.00	-16.52	QP
3	300.6300	32.75	-6.73	26.02	46.00	-19.98	QP
4	541.1900	27.56	-1.59	25.97	46.00	-20.03	QP
5	634.3100	27.98	0.52	28.50	46.00	-17.50	QP
6	760.4100	29.47	3.12	32.59	46.00	-13.41	QP

Standard:	FCC Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	Transmit mode		
Remark:			



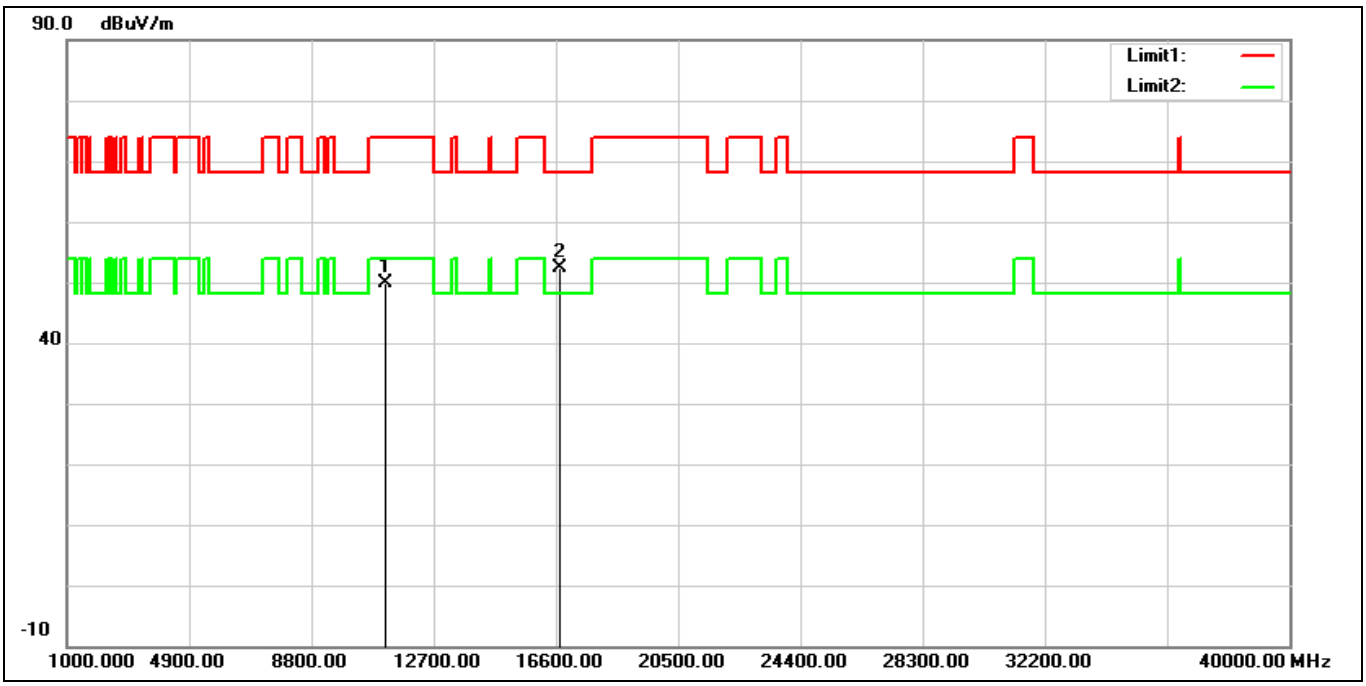
No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	144.4600	33.63	-7.62	26.01	43.50	-17.49	QP
2	191.0200	35.04	-9.61	25.43	43.50	-18.07	QP
3	294.8100	31.00	-6.79	24.21	46.00	-21.79	QP
4	468.4400	30.12	-2.70	27.42	46.00	-18.58	QP
5	556.7100	28.74	-1.26	27.48	46.00	-18.52	QP
6*	675.0500	27.92	1.17	29.09	46.00	-16.91	QP

High Band_B2C 1X1

Harmonic

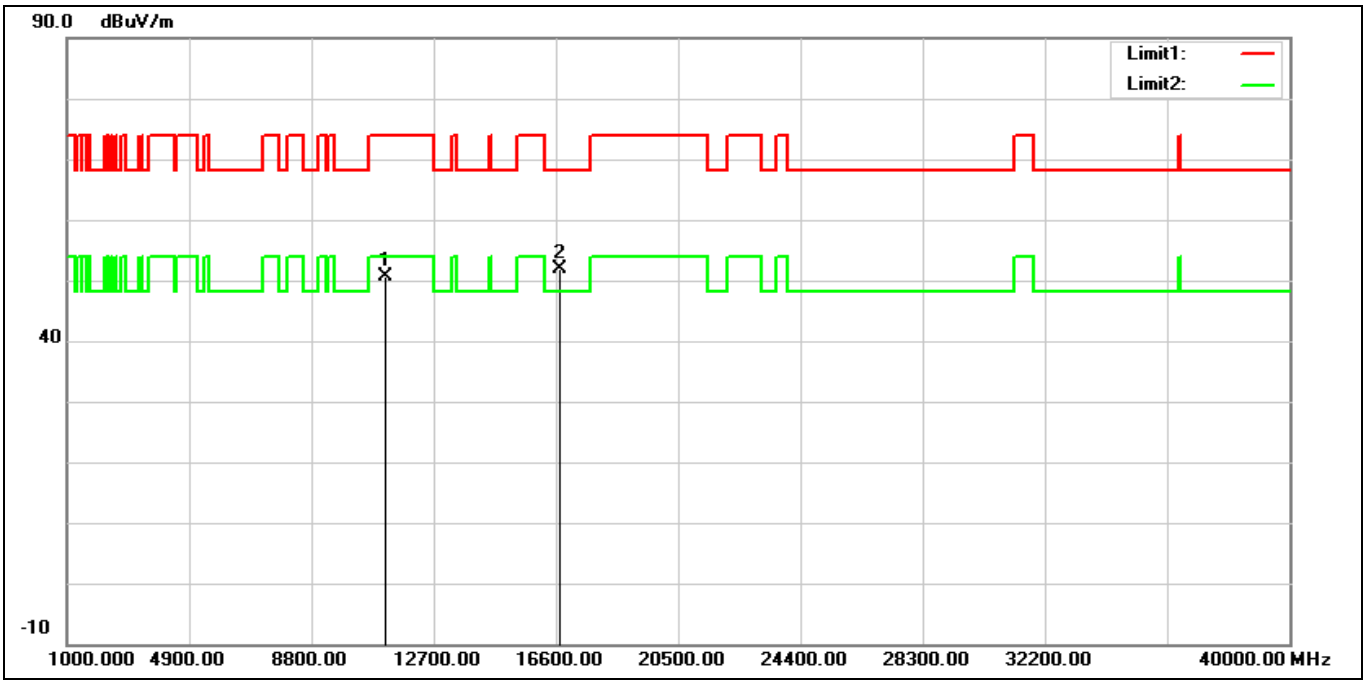
Above 1 GHz

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11140.000	35.00	14.77	49.77	74.00	-24.23	peak
2*	16710.000	33.64	18.74	52.38	68.20	-15.82	peak

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			

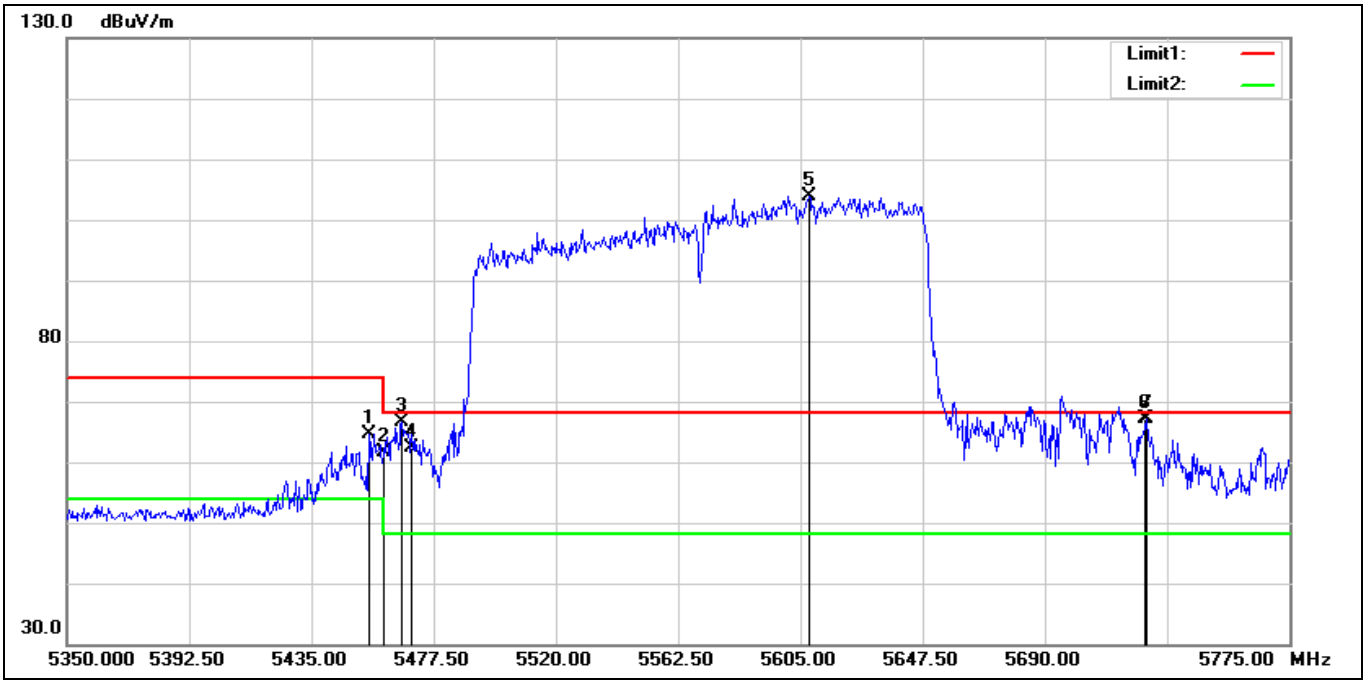


No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11140.000	35.93	14.77	50.70	74.00	-23.30	peak
2*	16710.000	33.19	18.74	51.93	68.20	-16.27	peak

Band Edge

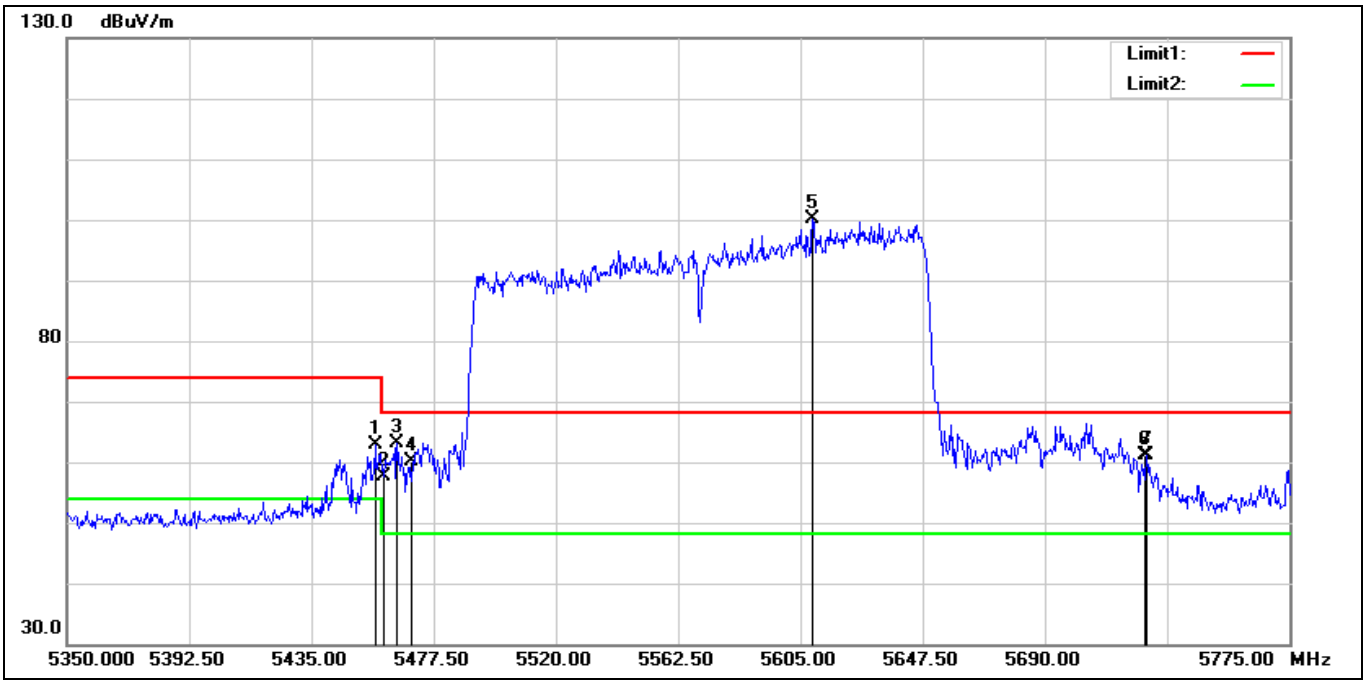
Peak

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
0	5454.975	62.92	1.72	64.64	74.00	-9.36	peak
1	5460.000	59.85	1.73	61.58	74.00	-12.42	peak
2	5466.450	64.91	1.74	66.65	68.20	-1.55	peak
3	5470.000	60.55	1.74	62.29	68.20	-5.91	peak
4*	5607.975	101.89	2.01	103.90	68.20	35.70	peak
5	5725.000	64.81	2.30	67.11	68.20	-1.09	peak
6	5725.275	64.81	2.30	67.11	68.20	-1.09	peak

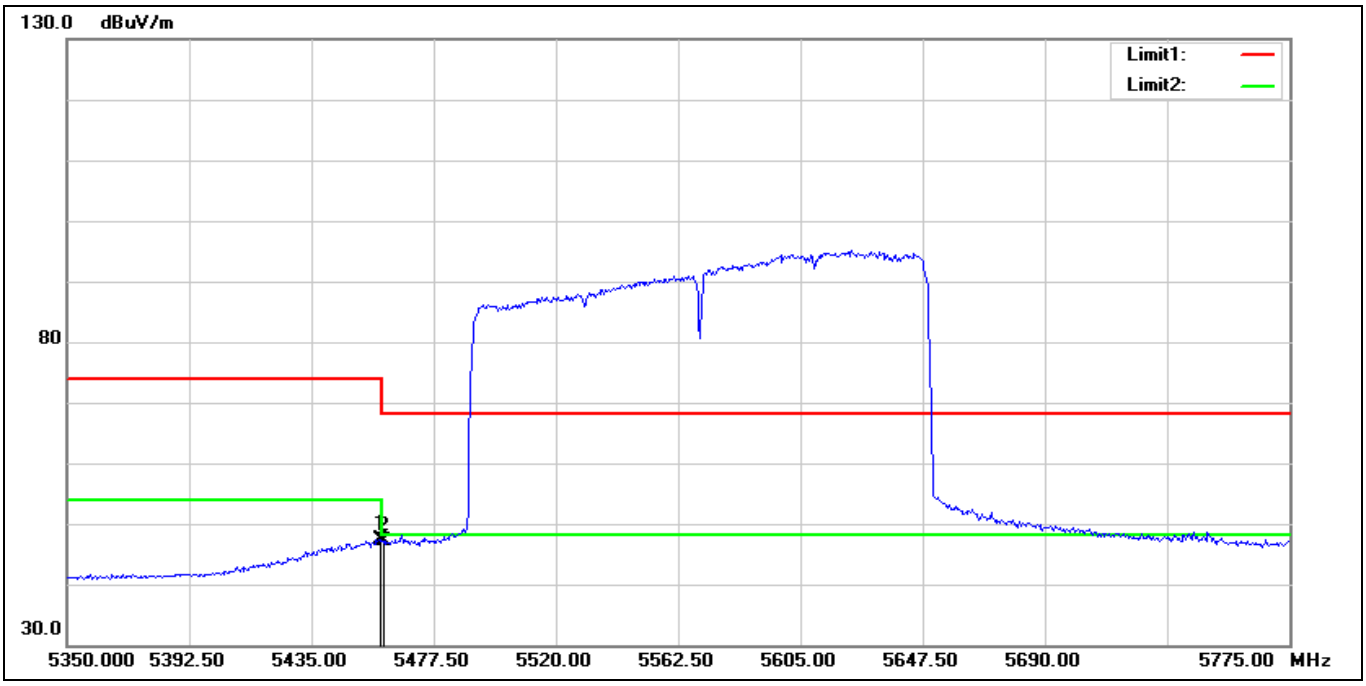
Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
0	5457.100	61.10	1.72	62.82	74.00	-11.18	peak
1	5460.000	55.83	1.73	57.56	74.00	-16.44	peak
2	5464.750	61.42	1.73	63.15	68.20	-5.05	peak
3	5470.000	58.47	1.74	60.21	68.20	-7.99	peak
4*	5609.250	98.13	2.00	100.13	68.20	31.93	peak
5	5725.000	58.76	2.30	61.06	68.20	-7.14	peak
6	5725.275	58.76	2.30	61.06	68.20	-7.14	peak

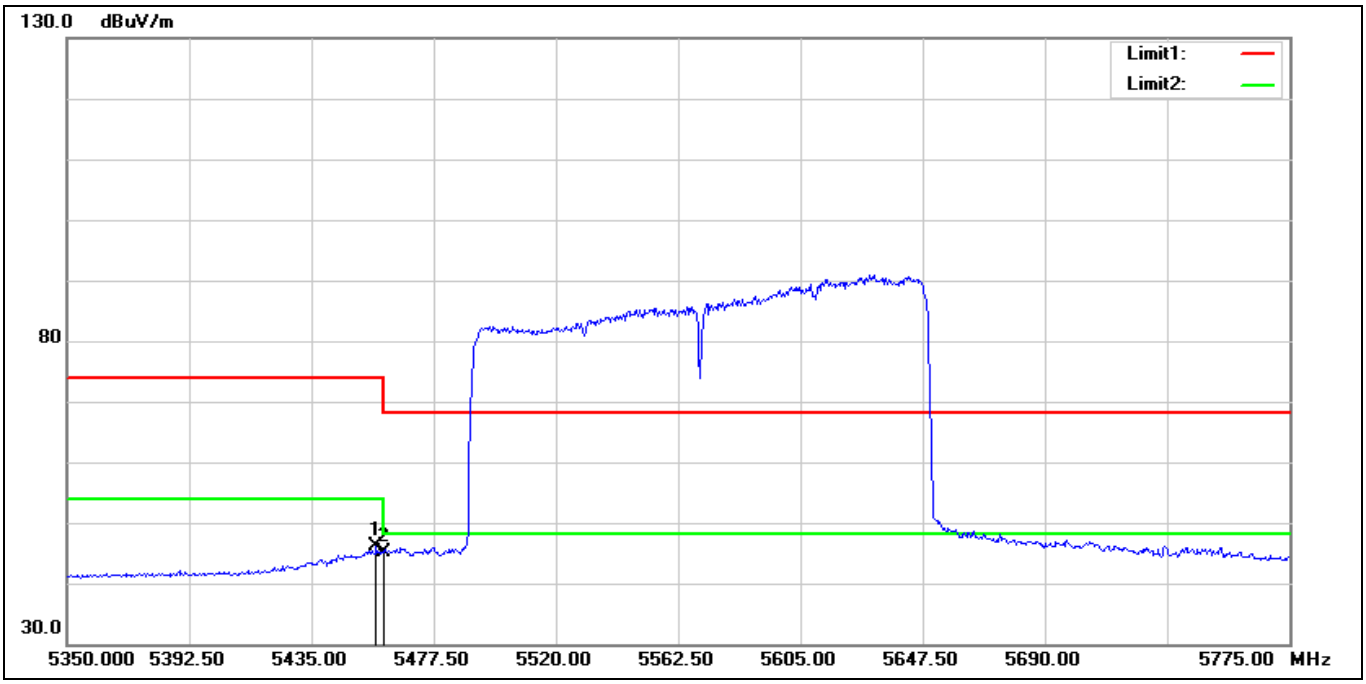
Average

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	5458.800	45.69	1.73	47.42	54.00	-6.58	AVG
2	5460.000	45.28	1.73	47.01	54.00	-6.99	AVG

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



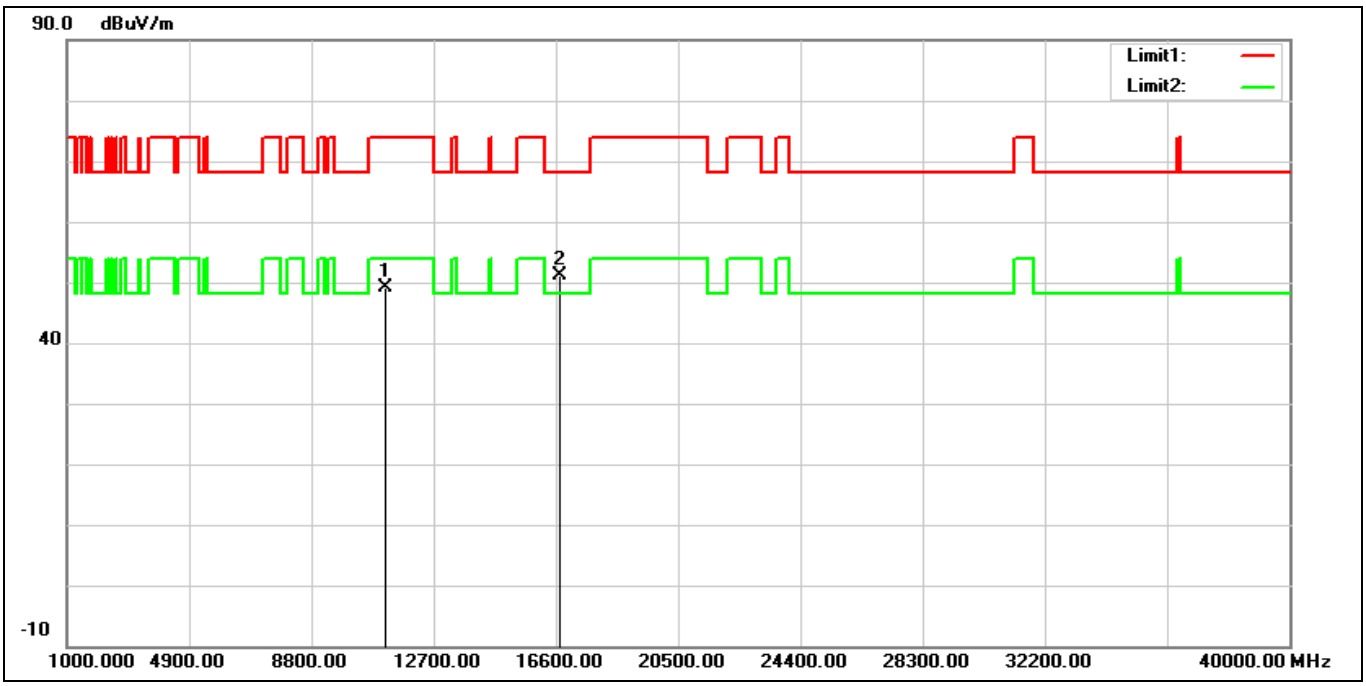
No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	5457.525	44.37	1.72	46.09	54.00	-7.91	AVG
2	5460.000	43.39	1.73	45.12	54.00	-8.88	AVG

High Band_B2C 2X2

Harmonic

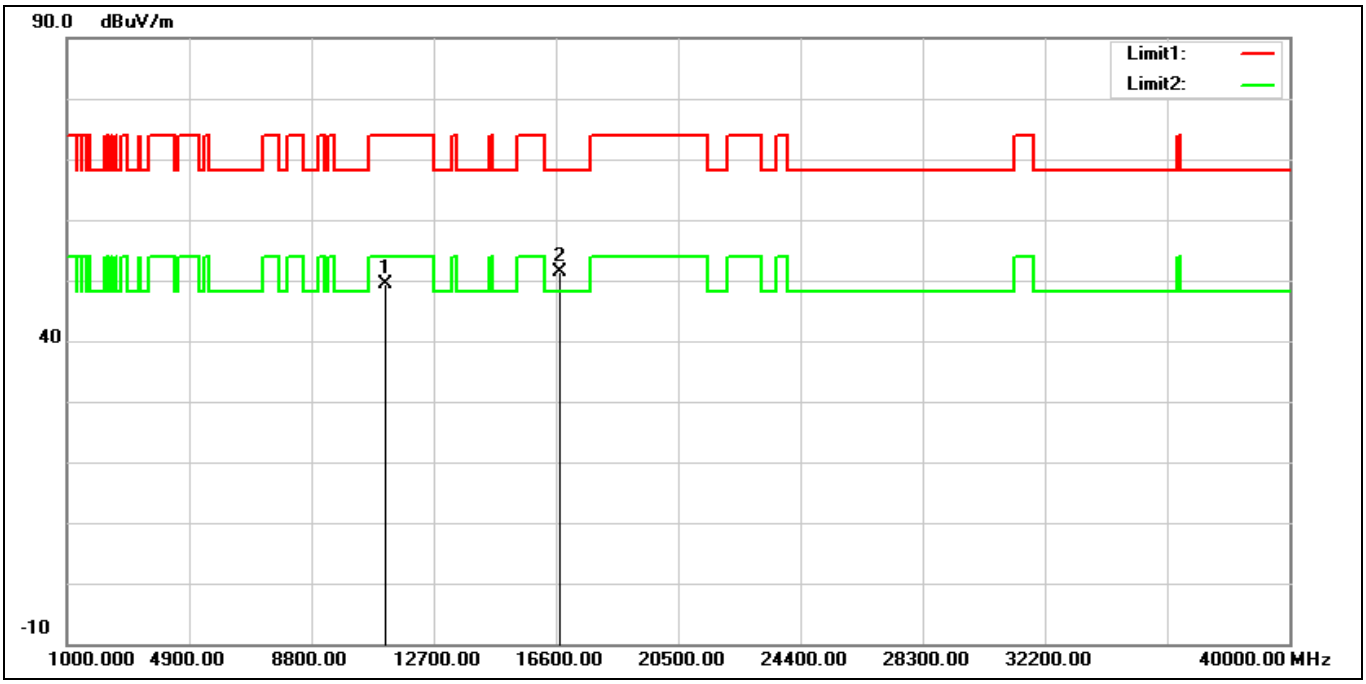
Above 1 GHz

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11140.000	34.35	14.77	49.12	74.00	-24.88	peak
2*	16710.000	32.34	18.74	51.08	68.20	-17.12	peak

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			

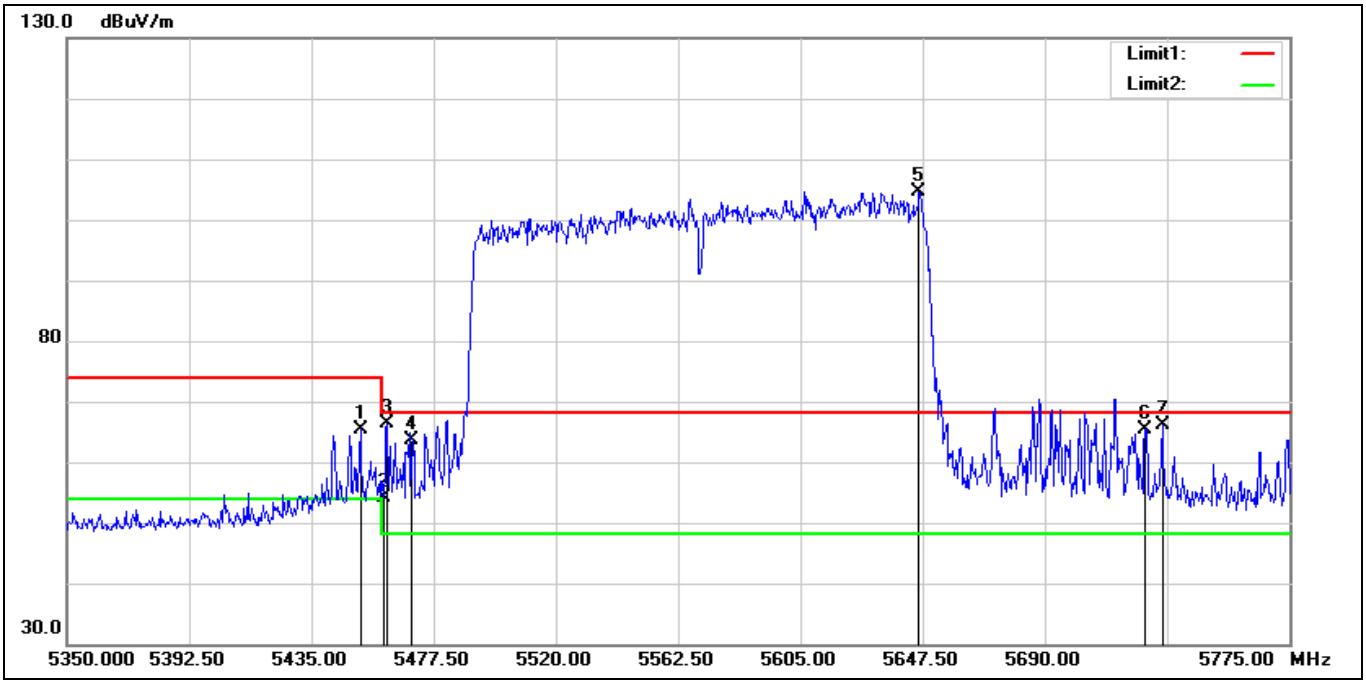


No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11140.000	34.55	14.77	49.32	74.00	-24.68	peak
2*	16710.000	32.52	18.74	51.26	68.20	-16.94	peak

Band Edge

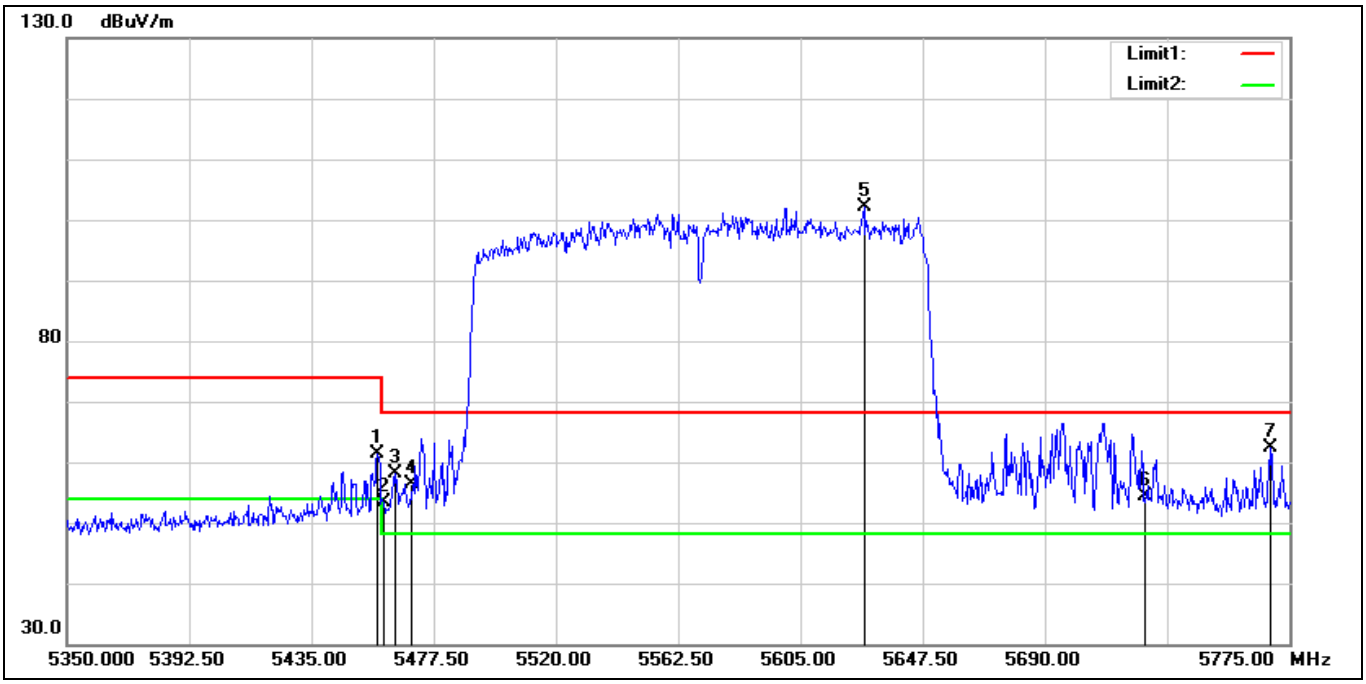
Peak

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
0	5452.000	63.63	1.72	65.35	74.00	-8.65	peak
1	5460.000	52.42	1.73	54.15	74.00	-19.85	peak
2	5461.350	64.71	1.73	66.44	68.20	-1.76	peak
3	5470.000	61.85	1.74	63.59	68.20	-4.61	peak
4*	5646.225	102.83	1.92	104.75	68.20	36.55	peak
5	5725.000	63.02	2.30	65.32	68.20	-2.88	peak
6	5730.800	63.79	2.37	66.16	68.20	-2.04	peak

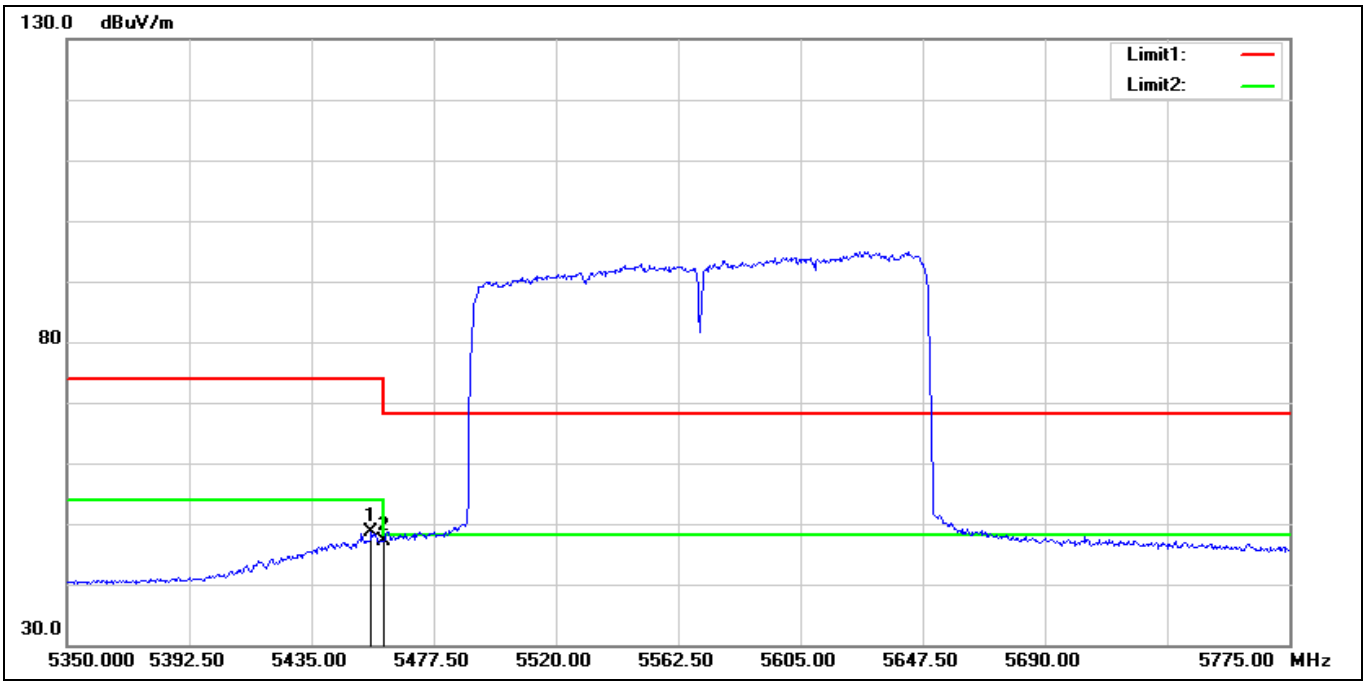
Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
0	5457.950	59.69	1.72	61.41	74.00	-12.59	peak
1	5460.000	51.59	1.73	53.32	74.00	-20.68	peak
2	5463.900	56.48	1.73	58.21	68.20	-9.99	peak
3	5470.000	54.53	1.74	56.27	68.20	-11.93	peak
4*	5627.100	100.23	1.95	102.18	68.20	33.98	peak
5	5725.000	52.07	2.30	54.37	68.20	-13.83	peak
6	5768.625	59.87	2.63	62.50	68.20	-5.70	peak

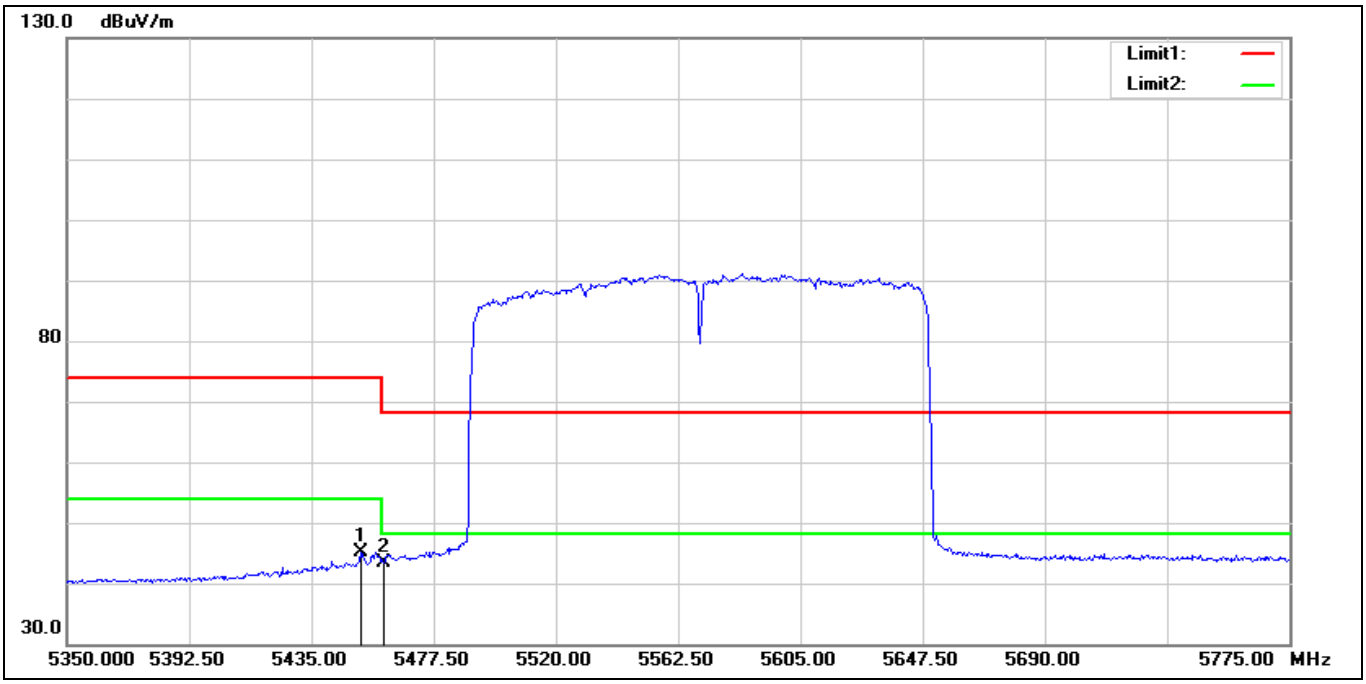
Average

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	5455.825	46.88	1.72	48.60	54.00	-5.40	AVG
2	5460.000	45.37	1.73	47.10	54.00	-6.90	AVG

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



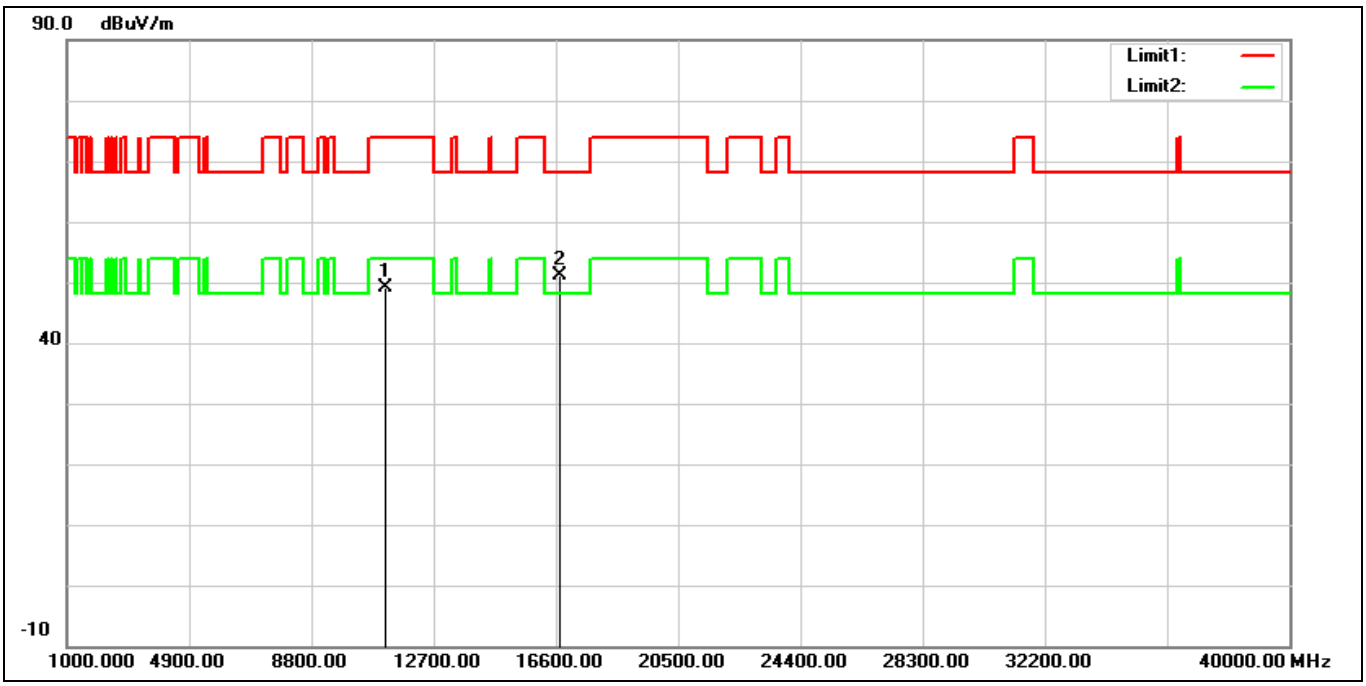
No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	5452.000	43.33	1.72	45.05	54.00	-8.95	AVG
2	5460.000	41.62	1.73	43.35	54.00	-10.65	AVG

High Band_B2C 2X2_Beamforming on

Harmonic

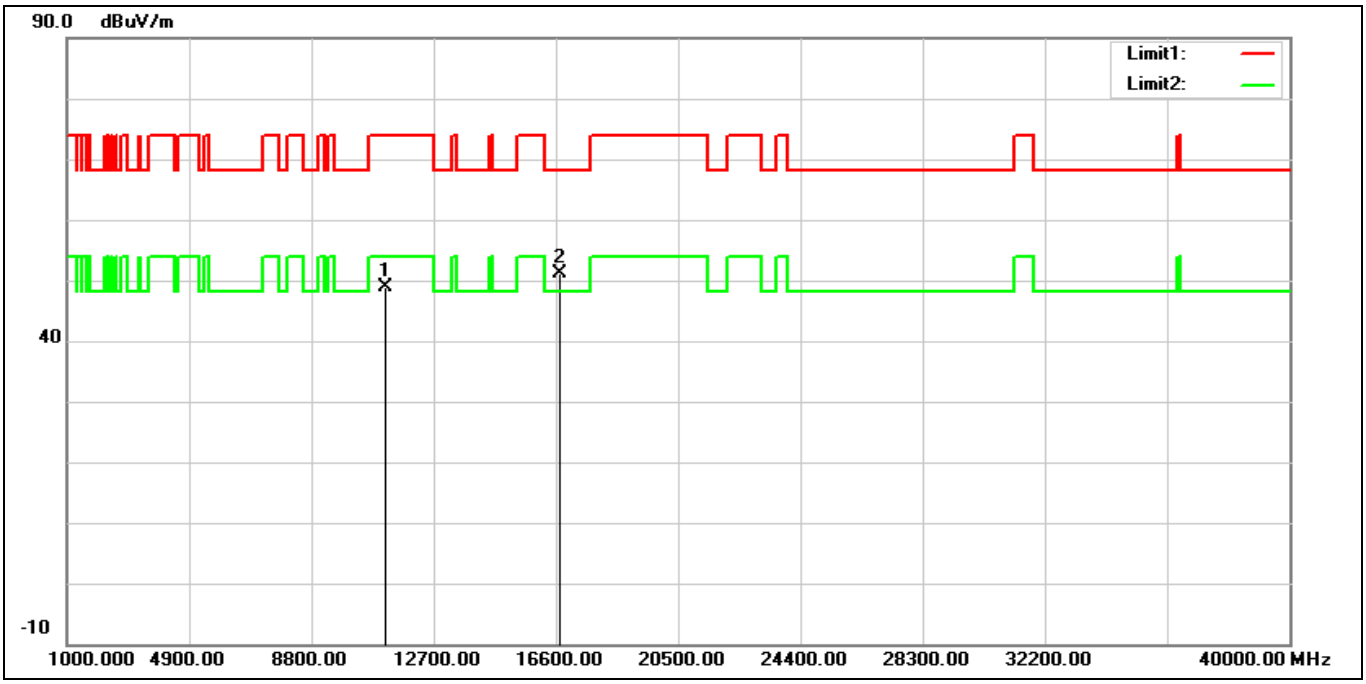
Above 1 GHz

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11140.000	34.32	14.77	49.09	74.00	-24.91	peak
2*	16710.000	32.48	18.74	51.22	68.20	-16.98	peak

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			

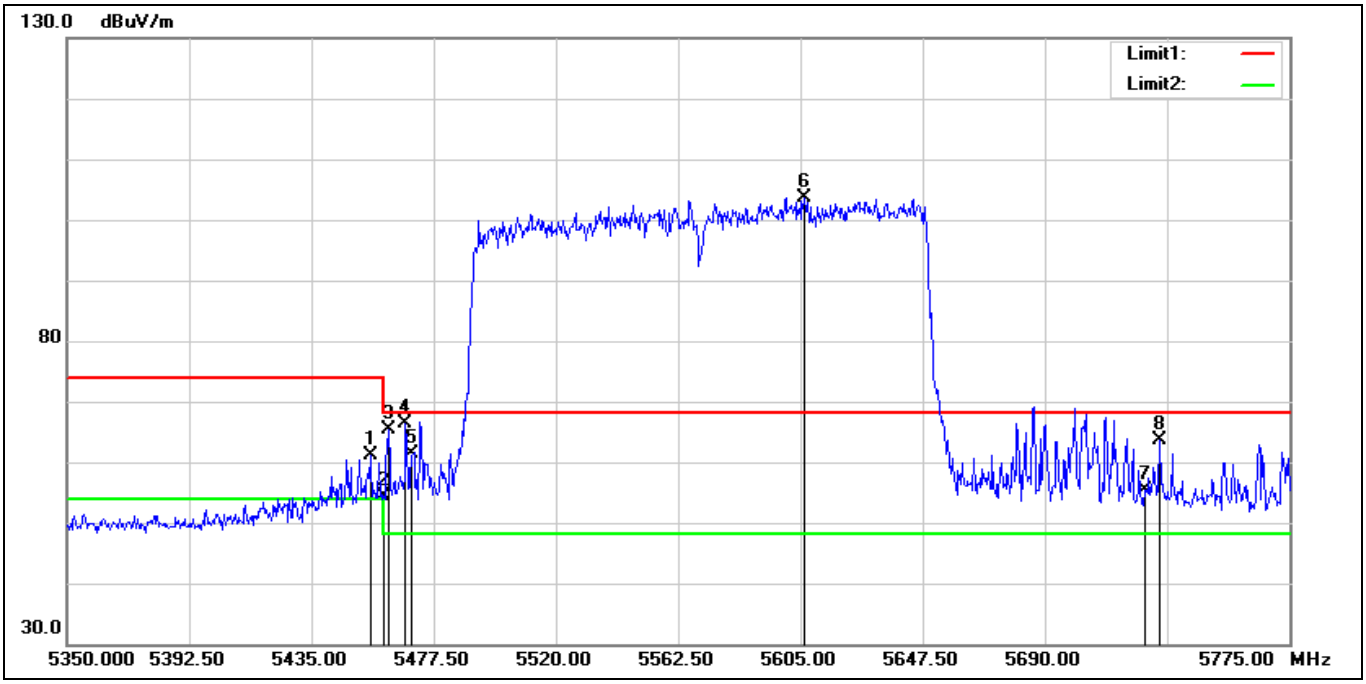


No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11140.000	34.19	14.77	48.96	74.00	-25.04	peak
2*	16710.000	32.27	18.74	51.01	68.20	-17.19	peak

Band Edge

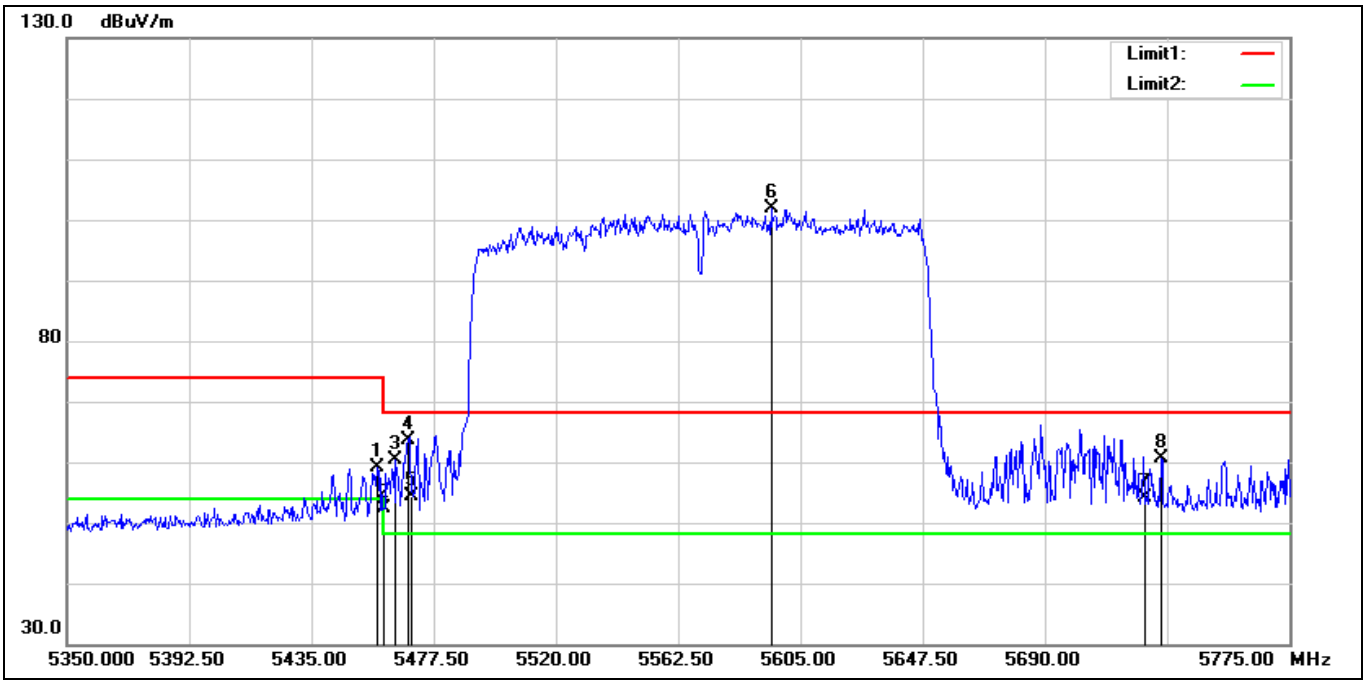
Peak

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
0	5455.400	59.29	1.72	61.01	74.00	-12.99	peak
1	5460.000	52.55	1.73	54.28	74.00	-19.72	peak
2	5461.775	63.70	1.73	65.43	68.20	-2.77	peak
3	5467.725	64.59	1.74	66.33	68.20	-1.87	peak
4	5470.000	59.73	1.74	61.47	68.20	-6.73	peak
5*	5606.275	101.65	2.01	103.66	68.20	35.46	peak
6	5725.000	53.01	2.30	55.31	68.20	-12.89	peak
7	5729.950	61.36	2.36	63.72	68.20	-4.48	peak

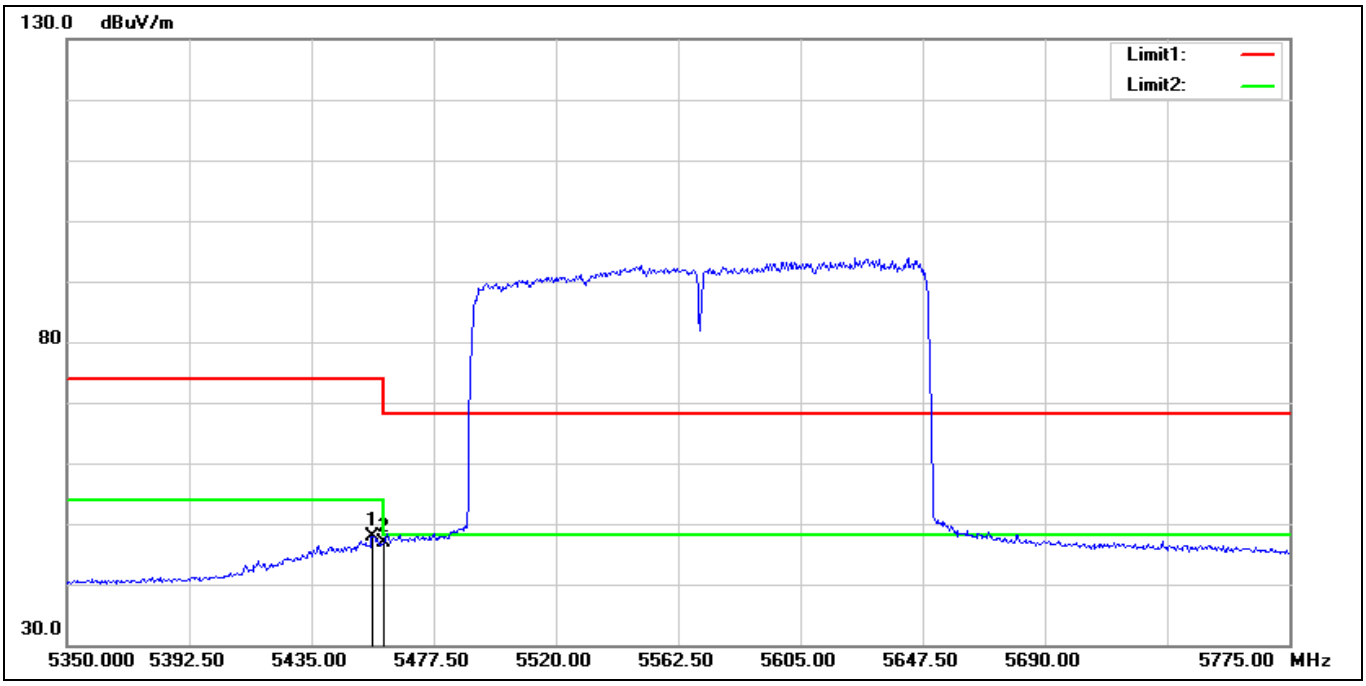
Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
0	5457.950	57.41	1.72	59.13	74.00	-14.87	peak
1	5460.000	50.75	1.73	52.48	74.00	-21.52	peak
2	5464.325	58.60	1.73	60.33	68.20	-7.87	peak
3	5468.575	61.80	1.74	63.54	68.20	-4.66	peak
4	5470.000	52.53	1.74	54.27	68.20	-13.93	peak
5*	5594.800	99.83	2.03	101.86	68.20	33.66	peak
6	5725.000	51.89	2.30	54.19	68.20	-14.01	peak
7	5730.375	58.31	2.36	60.67	68.20	-7.53	peak

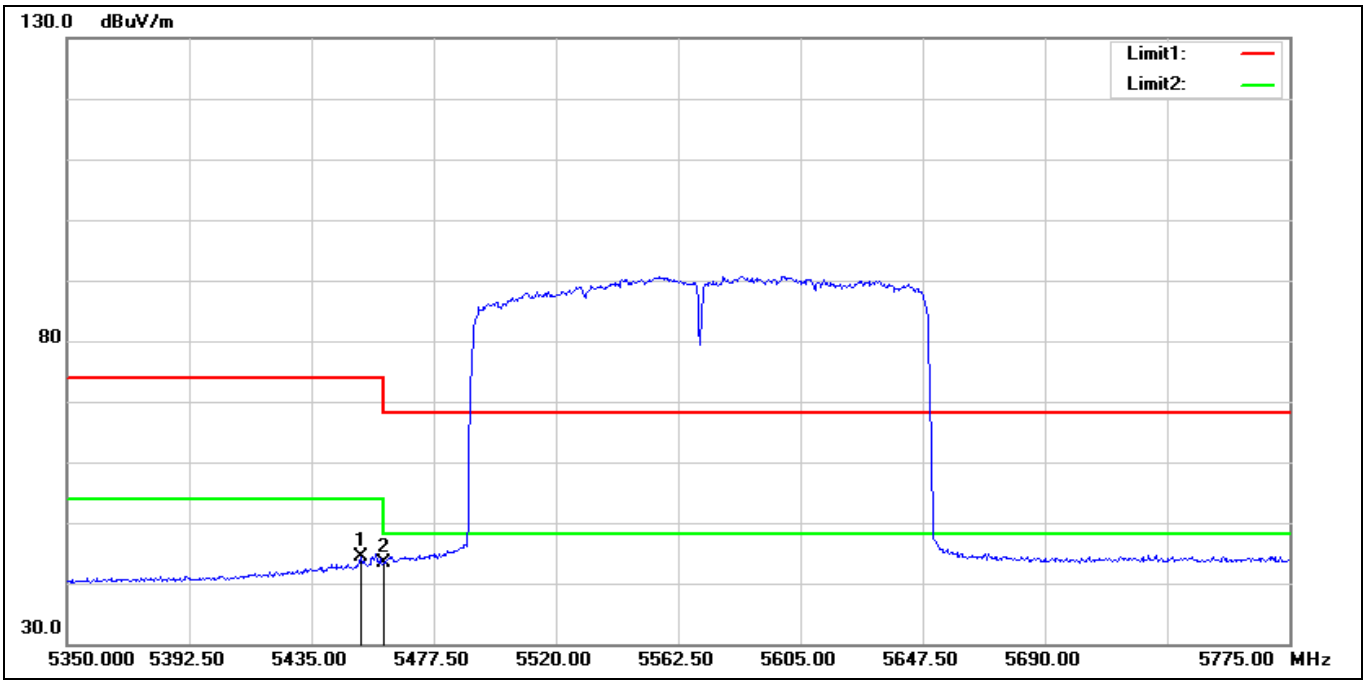
Average

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Horizontal		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	5456.250	46.25	1.72	47.97	54.00	-6.03	AVG
2	5460.000	45.27	1.73	47.00	54.00	-7.00	AVG

Standard:	Part 15.407	Test Site:	966 Chamber
Polarization:	Vertical		
Test Mode:	802.11ax HE160 5570 MHz		
Remark:			



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	5452.000	42.56	1.72	44.28	54.00	-9.72	AVG
2	5460.000	41.67	1.73	43.40	54.00	-10.60	AVG

5.3. Conducted Test Results

Maximum Conducted Output Power Measurement

High Band B2C

Test Mode	Frequency (MHz)	RF Power setting in Test Software		Test Software Version
		ANT-0	ANT-0+1	
802.11ac VHT160	5570	65.00	65.00	Putty / AccessMtool
802.11ax HE160	5570	65.00	65.00	

Beamforming on
High Band B2C

Test Mode	Frequency (MHz)	RF Power setting in Test Software		Test Software Version
		ANT-0	ANT-0+1	
802.11ac VHT160	5570	52.00	52.00	Putty / AccessMtool
802.11ax HE160	5570	52.00	52.00	

High Band B2C

Maximum Conducted Output Power									
Test Mode	Data Rate	Frequency (MHz)	ANT-0		ANT-1		ANT-0+1		Limit (dBm)
			(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
802.11ac VHT160	58.5 M	5570	18.33	0.068	---	---	---	---	≤ 24.00
802.11ax HE160	MCS0	5570	18.43	0.070	---	---	---	---	≤ 24.00

Maximum Conducted Output Power									
Test Mode	Data Rate	Frequency (MHz)	ANT-0		ANT-1		ANT-0+1		Limit (dBm)
			(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
802.11ac VHT160	58.5 M	5570	16.68	0.047	17.77	0.060	20.27	0.106	≤ 24.00
802.11ax HE160	MCS0	5570	16.81	0.048	17.88	0.061	20.39	0.109	≤ 24.00

Low TPC Power								
Test Mode	Data Rate	Frequency (MHz)	ANT-0		ANT-1		ANT-0+1	
			(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
802.11ac VHT160	58.5 M	5570	15.80	0.038	16.94	0.049	19.42	0.087
802.11ax HE160	MCS0	5570	15.89	0.039	17.02	0.050	19.50	0.089

Low TPC Power						
Test Mode	Data Rate	Frequency (MHz)	Max. Low TPC Power	Max. Gain	E.I.R.P.	Limit (dBm)
			(dBm)	(dBi)	(dBm)	
802.11ac VHT160	58.5 M	5570	19.42	4.10	23.52	≤ 24.00
802.11ax HE160	MCS0	5570	19.50	4.10	23.60	≤ 24.00

Note: The relevant measured result has the offset with cable loss already.

Beamforming on
High Band B2C

Maximum Conducted Output Power									
Test Mode	Data Rate	Frequency (MHz)	ANT-0		ANT-1		ANT-0+1		Limit (dBm)
			(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
802.11ac VHT160	58.5 M	5570	13.69	0.023	14.73	0.030	17.25	0.053	≤ 23.70
802.11ax HE160	MCS0	5570	13.77	0.024	14.81	0.030	17.33	0.054	≤ 23.70

Low TPC Power								
Test Mode	Data Rate	Frequency (MHz)	ANT-0		ANT-1		ANT-0+1	
			(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
802.11ac VHT160	58.5 M	5570	13.69	0.023	14.73	0.030	17.25	0.053
802.11ax HE160	MCS0	5570	13.77	0.024	14.81	0.030	17.33	0.054

Low TPC Power						
Test Mode	Data Rate	Frequency (MHz)	Max. Low TPC Power	Max. Gain	E.I.R.P.	Limit (dBm)
			(dBm)	(dBi)	(dBm)	
802.11ac VHT160	58.5 M	5570	17.25	6.30	23.55	≤ 24.00
802.11ax HE160	MCS0	5570	17.33	6.30	23.63	≤ 24.00

Note: The relevant measured result has the offset with cable loss already.

26 dB RF Bandwidth

High Band B2C

Test Mode	Frequency (MHz)	26 dB RF Bandwidth (MHz)	
		ANT-0	ANT-1
802.11ax HE160	5570	220.500	---

Test Mode	Frequency (MHz)	26 dB RF Bandwidth (MHz)	
		ANT-0	ANT-1
802.11ax HE160	5570	164.900	164.400

■ **Test Graphs**

High Band B2C 1X1

802.11ax HE160_ANT-0	
5570 MHz	

High Band B2C 2X2

802.11ax HE160_ANT-0	
5570 MHz	

802.11ax HE160_ANT-1	
5570 MHz	

Maximum Power Spectral Density Measurement

High Band B2C 1X1

Test Mode	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	(dBm/MHz)
802.11ax HE160	5570	-1.437	0.228	-1.209	≤ 11.00

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

High Band B2C 2X2

Test Mode	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	(dBm/MHz)
802.11ax HE160	5570	-3.558	0.228	-3.330	≤ 10.74

Test Mode	Frequency (MHz)	ANT-1			Limit
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	(dBm/MHz)
802.11ax HE160	5570	-3.206	0.228	-2.978	≤ 10.74

Test Mode	Frequency (MHz)	ANT-0+1	Limit
		Calculated (dBm/MHz)	(dBm/MHz)
802.11ax HE160	5570	-0.140	≤ 10.74

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

■ **Test Graphs**

High Band B2C 1X1

802.11ax HE160_ANT-0	
5570 MHz	

High Band B2C 2X2

802.11ax HE160_ANT-0	
5570 MHz	

802.11ax HE160_ANT-1	
5570 MHz	

---END---