

RF Test Report

Applicant : Xiaomi Communications Co., Ltd.
Product Name : Tablet Computer
Trade Name : REDMI
Model Number : 2603ARP14G
Applicable Standard : FCC 47 CFR PART 15 SUBPART E
ANSI C63.10:2020
Received Date : Mar. 24, 2026
Test Period : Mar. 24, 2026
Issued Date : Apr. 07, 2026

Issued by

Eurofins E&E Wireless Taiwan Co., Ltd.
No. 140-1, Changan Street, Bade District,
Taoyuan City, Taiwan (R.O.C.)
Tel : +886-3-2710188 / Fax : +886-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330
Frequency Range: 9 kHz to 40 GHz
Bade test site :
Test Firm Registration Number: 226252
Test Firm Designation Number: TW0010
Wugu test site :
Test Firm Registration Number: 191812
Test Firm Designation Number: TW0034

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

Rev.	Issued Date	Description	Revised By
00	Apr. 07, 2026	Initial Issue	Rowan Hsieh

Verification of Compliance

Applicant : Xiaomi Communications Co., Ltd.

Product Name : Tablet Computer

Trade Name : REDMI

Model Number : 2603ARP14G

FCC ID : 2AFZZRP14G

Applicable Standard : FCC 47 CFR PART 15 SUBPART E
ANSI C63.10:2020

Test Result : Complied

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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 / RF Supervisor

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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	Note
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	PASS	---
15.407(a)	Maximum Power Spectral Density	PASS	---
15.407(c)	Automatically discontinue transmission	PASS	---
15.407(a) 15.203	Antenna Requirement	PASS	---

Note : The test data refer to the report number : USRC261407004.

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: 2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB789033: D02 v02r01	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

Lab Name: Eurofins E&E Wireless Taiwan Co., Ltd.
Site Address: ☒ No. 140-1, Changan Street, Bade District, Taoyuan City, 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	Uncertainty				
		BD		WG		
Conducted Output Power		1.1 dB		1.1 dB		
RF Bandwidth		4.5 %		4.5 %		
Power Spectral Density		1.1 dB		1.1 dB		
Duty Cycle		0.3 %		0.3 %		
Time Occupancy		0.2 %		0.1 %		
Test Item	Frequency	Uncertainty				
		96601-BD	96603-BD	96602-WG	96603-WG	96604-WG
Radiated Emission	9 kHz ~ 30 MHz	1.8 dB	1.8 dB	1.6 dB	1.6 dB	1.7 dB
	30 MHz ~ 1000 MHz	4.7 dB	4.6 dB	4.7 dB	4.7 dB	4.5 dB
	1000 MHz ~ 18000 MHz	4.4 dB	4.5 dB	4.5 dB	4.7 dB	5.0 dB
	18000 MHz ~ 26500 MHz	3.6 dB	3.8 dB	3.8 dB	4.0 dB	4.3 dB
	26500 MHz ~ 40000 MHz	3.9 dB	3.9 dB	4.0 dB	4.0 dB	4.4 dB

1.4. Test Site Environment

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

(*)The measurement ambient temperature is within this range.

2 EUT Description

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity(except Max. RF Output Power).

Applicant	Xiaomi Communications Co., Ltd. #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085		
Product Name	Tablet Computer		
Trade Name	REDMI		
Model Number	2603ARP14G		
FCC ID	2AFZZRP14G		
Operate Frequency	Frequency Band		Frequency Range (MHz)
	802.11a	U-NII Band 1	5180 – 5240
		U-NII Band 2-A	5260 – 5320
		U-NII Band 2-C	5500 – 5700
		Straddle band	5720
		U-NII Band 3	5745 – 5825
	802.11n HT20 / 802.11ac VHT20	U-NII Band 1	5180 – 5240
		U-NII Band 2-A	5260 – 5320
		U-NII Band 2-C	5500 – 5700
		Straddle band	5720
		U-NII Band 3	5745 – 5825
	802.11n HT40 / 802.11ac VHT40	U-NII Band 1	5190 – 5230
		U-NII Band 2-A	5270 – 5310
		U-NII Band 2-C	5510 – 5670
		Straddle band	5710
		U-NII Band 3	5755 – 5795
	802.11ac VHT80	U-NII Band 1	5210
		U-NII Band 2-A	5290
		U-NII Band 2-C	5530 – 5610
		Straddle band	5690
		U-NII Band 3	5775
Modulation Type	OFDM		

Antenna information	Antenna	Type	Max. Gain (dBi)	
	ANT-0	PIFA Antenna	U-NII Band 1	-0.11
			U-NII Band 2-A	0.29
			U-NII Band 2-C	0.17
			U-NII Band 3	-0.63
Antenna Delivery	Reference section 3.1			
Operate Temp. Range	0 ~ +40 °C			
EUT Power Rating	DC 5 V, 3 A DC 9 V, 2 A (Fast Charging Mode)			

Testing Sample No.		
Test Item		Sample Number
Radiated Emissions	Below 1 GHz	---
	Above 1 GHz	C261407_A004
Conducted		C261407_A001
Conducted Emission		---

EUT Modify Description :

Modify Description:

For marketing purposes, the software enabled straddle channel, there is no difference in the hardware, and nothing else has changed.

After the evaluation, all test items of straddle channel must be retested.

Frequency Band		Max. RF Output Power (W)
802.11a	U-NII Band 1	0.048
	U-NII Band 2-A	0.051
	U-NII Band 2-C	0.046
	U-NII Band 3	0.017
802.11n HT20	U-NII Band 1	0.039
	U-NII Band 2-A	0.042
	U-NII Band 2-C	0.042
	U-NII Band 3	0.017
802.11n HT40	U-NII Band 1	0.029
	U-NII Band 2-A	0.029
	U-NII Band 2-C	0.043
	U-NII Band 3	0.016
802.11ac VHT20	U-NII Band 1	0.038
	U-NII Band 2-A	0.041
	U-NII Band 2-C	0.040
	U-NII Band 3	0.017
802.11ac VHT40	U-NII Band 1	0.028
	U-NII Band 2-A	0.028
	U-NII Band 2-C	0.042
	U-NII Band 3	0.015
802.11ac VHT80	U-NII Band 1	0.023
	U-NII Band 2-A	0.016
	U-NII Band 2-C	0.040
	U-NII Band 3	0.007

設備類型		
Outdoor access point	point-to-point	---
	point-to-multipoint	---
Indoor access point		---
Fixed point-to-point access points		---
Master devices		---
MESH Master (Note 1)		---
MESH Slave (Note 2)		---
Client devices		V

5150 MHz ~5250 MHz(UNII-1):

BW 20M	CH	36	40	44	48
	Freq. (MHz)	5180	5200	5220	5240
BW 40M	CH	38		46	
	Freq. (MHz)	5190		5230	
BW 80M	CH	42			
	Freq. (MHz)	5210			

5250 MHz ~5350 MHz(UNII-2A):

BW 20M	CH	52	56	60	64
	Freq. (MHz)	5260	5280	5300	5320
BW 40M	CH	54		62	
	Freq. (MHz)	5270		5310	
BW 80M	CH	58			
	Freq. (MHz)	5290			

5470 MHz ~5725 MHz(UNII-2C):

BW 20M	CH	100	104	108	112	116	120	124	128	132	136	140	144
	Freq. (MHz)	5500	5520	5540	5560	5580	5600	5620	5640	5660	5680	5700	5720
BW 40M	CH	102		110		118		126		134		142	
	Freq. (MHz)	5510		5550		5590		5630		5670		5710	
BW 80M	CH	106				122				138			
	Freq. (MHz)	5530				5610				5690			

5725 MHz ~5850 MHz(UNII-3):

BW 20M	CH	149	153	157	161	165
	Freq. (MHz)	5745	5765	5785	5805	5825
BW 40M	CH	151		159		NA
	Freq. (MHz)	5755		5795		
BW 80M	CH	155				
	Freq. (MHz)	5775				

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	Final-Test Mode
802.11a	V
802.11n HT20	V
802.11n HT40	V
802.11ac VHT20	
802.11ac VHT40	
802.11ac VHT80	V

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.

By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "X axis" position was the worst, then the final test was executed the worst condition and test data were recorded in this report.

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

Test Mode	ANT-0
802.11a	V
802.11n HT20	V
802.11n HT40	V
802.11ac VHT20	V
802.11ac VHT40	V
802.11ac VHT80	V

Test Mode	Antenna Delivery	Data Rate (Mbps)	Band	Test Channel
802.11a	1TX	6	U-NII Band 2-C	144
			U-NII Band 3	144
802.11n HT20	1TX	6.5	U-NII Band 2-C	144
			U-NII Band 3	144
802.11n HT40	1TX	13.5	U-NII Band 2-C	142
			U-NII Band 3	142
802.11ac VHT20	1TX	MCS0	U-NII Band 2-C	144
			U-NII Band 3	144
802.11ac VHT40	1TX	MCS0	U-NII Band 2-C	142
			U-NII Band 3	142
802.11ac VHT80	1TX	MCS0	U-NII Band 2-C	138
			U-NII Band 3	138

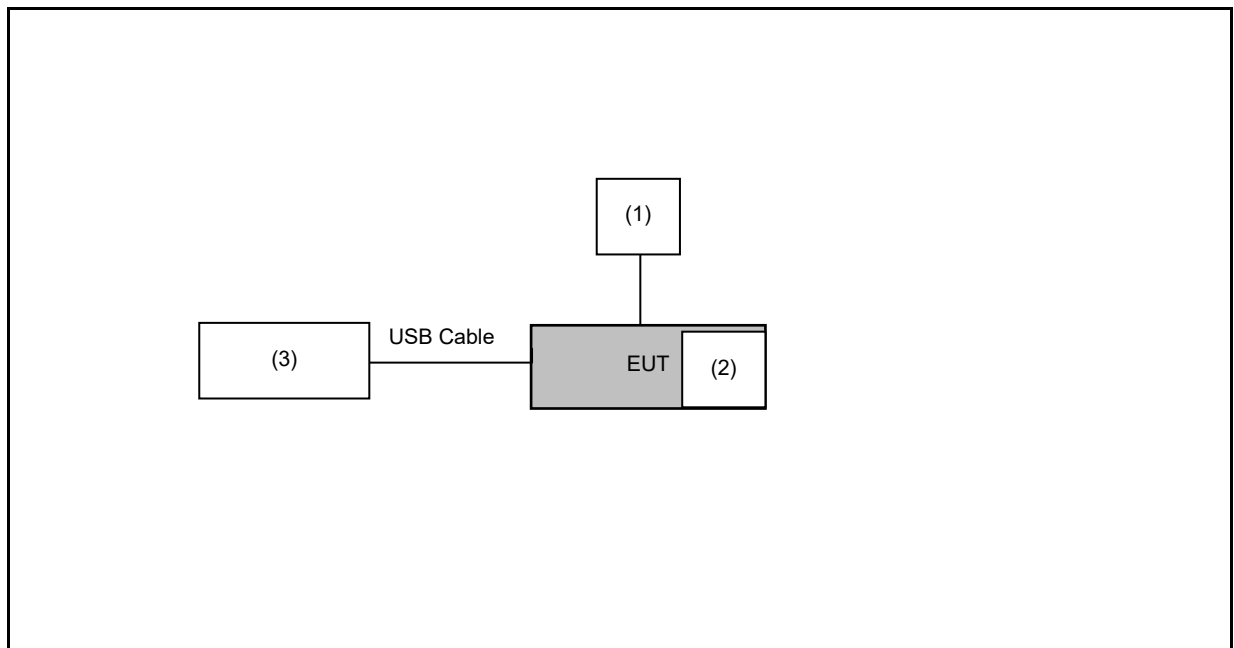
3.2. EUT Test Step

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

Radiated Emissions



Devices Description					
	Product	Manufacturer	Model Number	Serial Number	Remark
(1)	Earphone	MI	EM023	---	---
(2)	Micro SD Card	Transcend	9153BA 8G 07DS1	---	---
(3)	Notebook	ASUS	P1448U	---	---

3.4. Test Instruments

For Conducted

Test Period: Mar. 24, 2026

Testing Engineer: Brian Lin

Test Site		RF01-BD				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Power Sensor	Anritsu	MA2411B	1126022	Aug. 28, 2025	1 year
☒	Power Meter	Anritsu	ML2495A	1135009	Aug. 28, 2025	1 year
☒	Spectrum Analyzer (10 Hz~26.5 GHz)	Keysight	N9010B	MY59071418	Apr. 14, 2025	1 year

For Radiated Emissions

Test Period: Mar. 24, 2026

Testing Engineer: Eason Lee

Test Site		96603-BD				
Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9020B	MY60112363	Jan. 09, 2026	1 year
☒	Broadband Amplifier (1 GHz~26.5 GHz)	Titan	T0912E01263025 A1F	002	Aug. 07, 2025	1 year
☒	Preamplifier (26.5 GHz~40 GHz)	EMCI	EMC2654045	980028	Sep. 01, 2025	1 year
☒	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	02207	Aug. 29, 2025	1 year
☒	Broadband Horn Antenna (18 GHz~40 GHz)	Schwarzbeck Mess-Elektronik	9170	9170-320	Jul. 31, 2025	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 100	J11005	Aug. 06, 2025	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 900	J11003	Aug. 06, 2025	1 year
☒	Coaxial Cable	Titan	CFD400NL-LW	171219	Aug. 06, 2025	1 year
☒	Software	R_RAM	1.4	N/A	N.C.R.	---

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

4 Measurement Procedure

4.1. 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

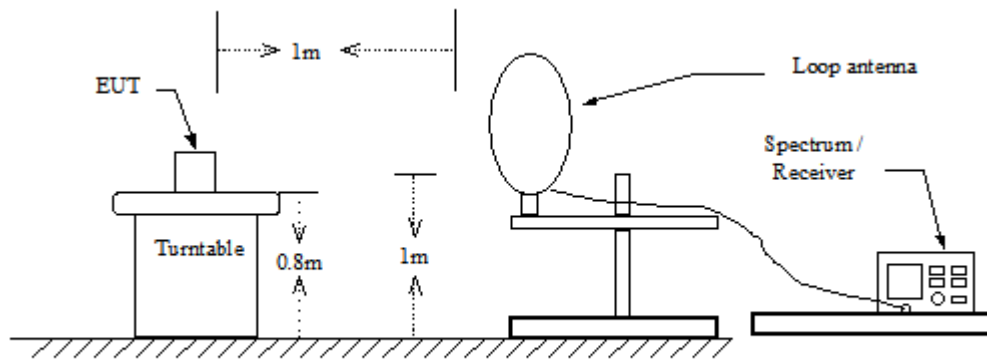
Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

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

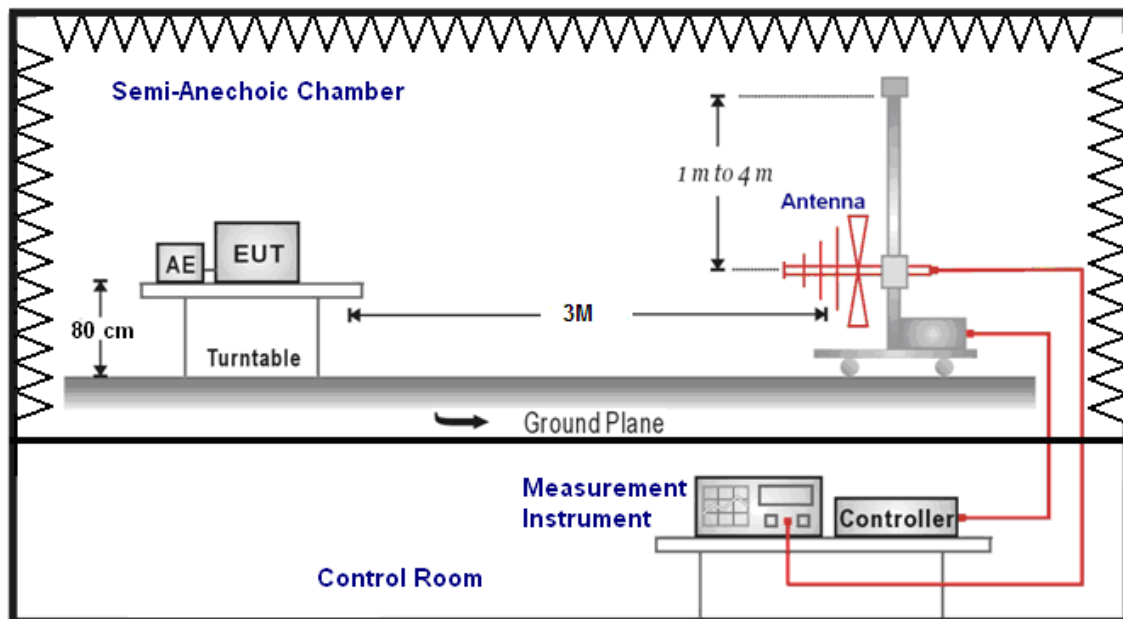
Note: 1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed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

■ Setup

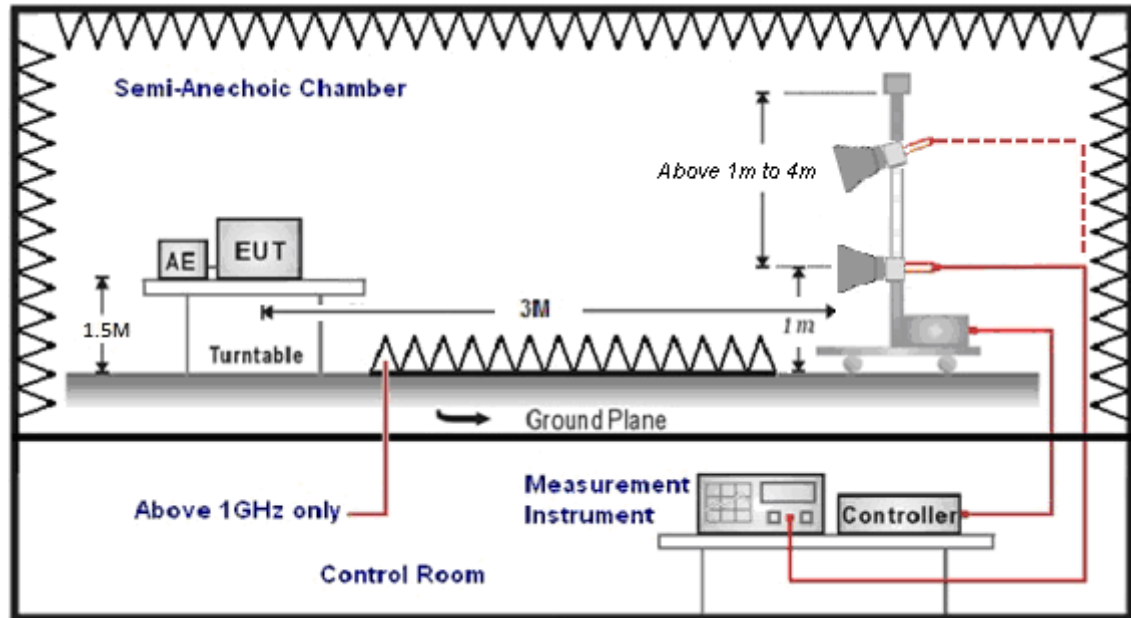
9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



Above 1 GHz



■ 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 30 MHz the resolution bandwidth is set to 10 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements. The video bandwidth is 3 times of the resolution bandwidth.

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 three 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.

Trilog-Broadband Antenna at 3 Meter and the Horn antenna was used in frequencies 1 – 40 GHz at a distance of 3 meter (above 18 GHz at 1 m). 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 per meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts 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

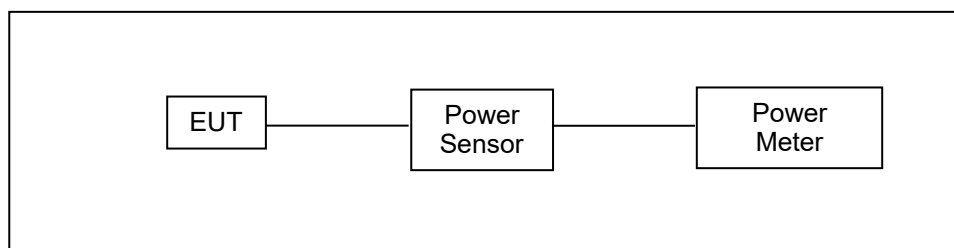
4.2. Maximum Conducted Output Power Measurement

■ Limit

Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
	Client
5.150 ~ 5.250 GHz	The lesser of 250 mW (24 dBm)
5.250 ~ 5.350 GHz	The lesser of 250 mW (24 dBm) or 11 dBm + 10 log (B)
5.470 ~ 5.725 GHz	The lesser of 250 mW (24 dBm) or 11 dBm + 10 log (B)
5.725 ~ 5.850 GHz	The lesser of 1 W (30 dBm)

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

■ Test Setup



■ Test Procedure

The test is performed in accordance with ANSI C63.10:2020 section 12.4.3.2, 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)

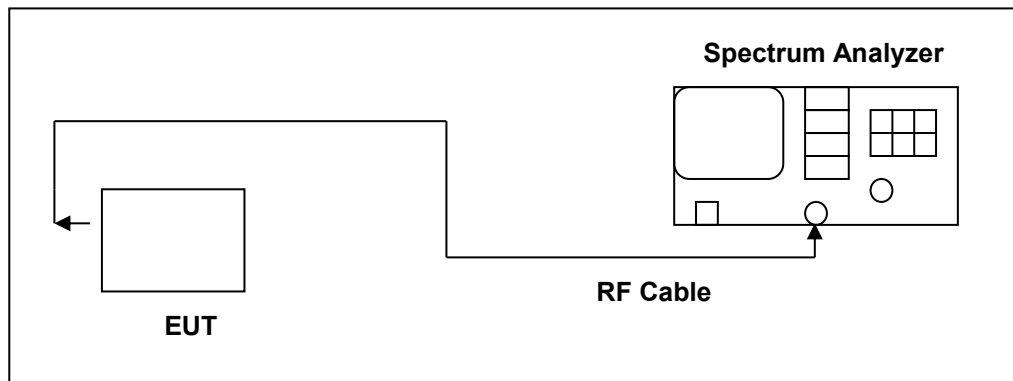
For Straddle channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the Power of the devices are uniform and comply with the lower limits specified for the Bands, a single measurement over the entire emission bandwidth can be preformed to show compliance.

4.3. 26 dB RF Bandwidth Measurement

■ **Limit**

N/A

■ **Test Setup**



■ **Test Procedure**

The test is performed in accordance with ANSI C63.10:2020 section 12.5.2, 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 % to 5 % of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

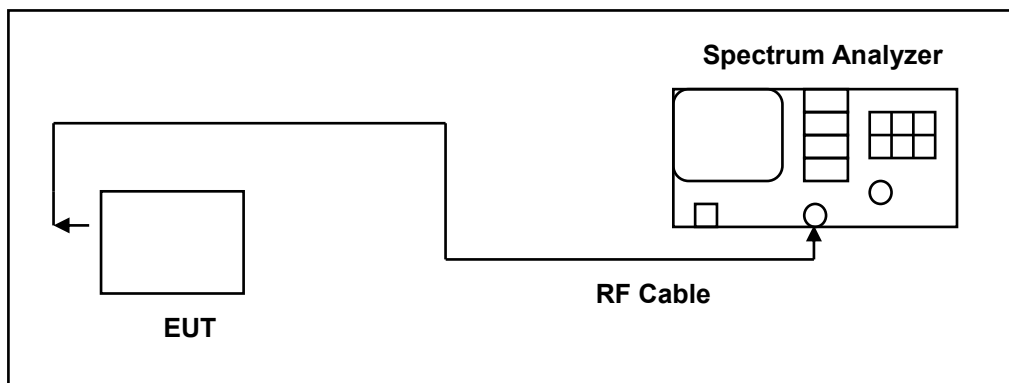
4.4. 6 dB RF Bandwidth Measurement

■ Limit

6 dB RF Bandwidth

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

■ Test Setup



■ Test Procedure

6 dB RF Bandwidth

The EUT tested to UNII test procedure of ANSI C63.10:2020 section 12.5.1 for compliance to FCC 47CFR 15.407 requirements.

Spectrum Parameter	Setting
RBW	Set RBW = 100 kHz
VBW	Set the video bandwidth (VBW) $\geq 3 \times$ RBW
Detector	Peak
Trace	Max Hold
Sweep Time	No faster than coupled (auto) time
Bandwidth measurement	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.

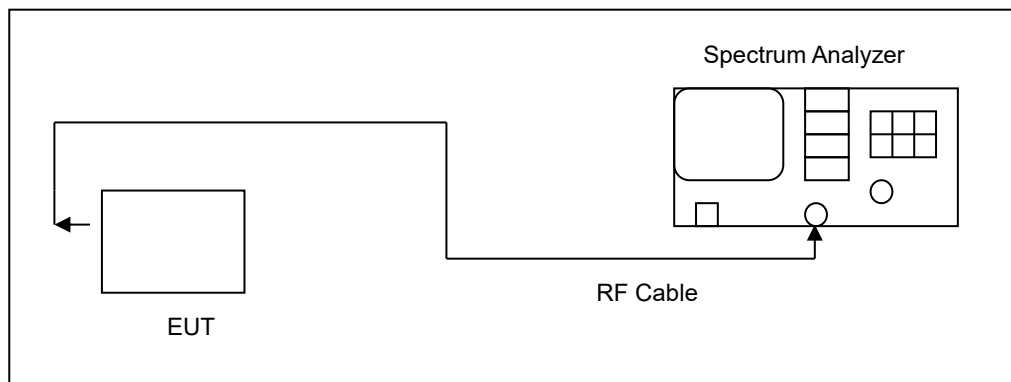
4.5. Maximum Power Spectral Density Measurement

■ Limit

Frequency Range (MHz)	FCC Limit
	Client
5.150 ~ 5.250 GHz	11 dBm/MHz
5.250 ~ 5.350 GHz	11 dBm/MHz
5.470 ~ 5.725 GHz	11 dBm/MHz
5.725 ~ 5.850 GHz	30 dBm/500 kHz

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

■ Test Setup



■ Test Procedure

The test is performed in accordance with ANSI C63.10:2020 section 12.6, 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 $10 \log(500 \text{ kHz}/100 \text{ kHz})$ to the measured result.	

4.6. 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.

4.7. 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

Test mode	Band	Transmission Type	Antenna				Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
			Ant-0 (dBi)	Ant-1 (dBi)	Ant-2 (dBi)	Ant-3 (dBi)				
802.11a	Band 1	Ant-0	-0.11	-	-	-	-	-	0.00	0.00
	Band 2-A		0.29	-	-	-	-	-	0.00	0.00
	Band 2-C		0.17	-	-	-	-	-	0.00	0.00
	Band 3		-0.63	-	-	-	-	-	0.00	0.00
802.11n HT20 802.11n HT40 802.11ac VHT20 802.11ac VHT40 802.11ac VHT80	Band 1	Ant-0	-0.11	-	-	-	-	-	0.00	0.00
	Band 2-A		0.29	-	-	-	-	-	0.00	0.00
	Band 2-C		0.17	-	-	-	-	-	0.00	0.00
	Band 3		-0.63	-	-	-	-	-	0.00	0.00

If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_{1/20}} + 10^{G_{2/20}} + \dots + 10^{G_{N/20}}) 2 / NANT]$

If all transmit signals are completely uncorrelated, then Directional gain = $10 \log[(10^{G_{1/10}} + 10^{G_{2/10}} + \dots + 10^{G_{N/10}}) / NANT]$

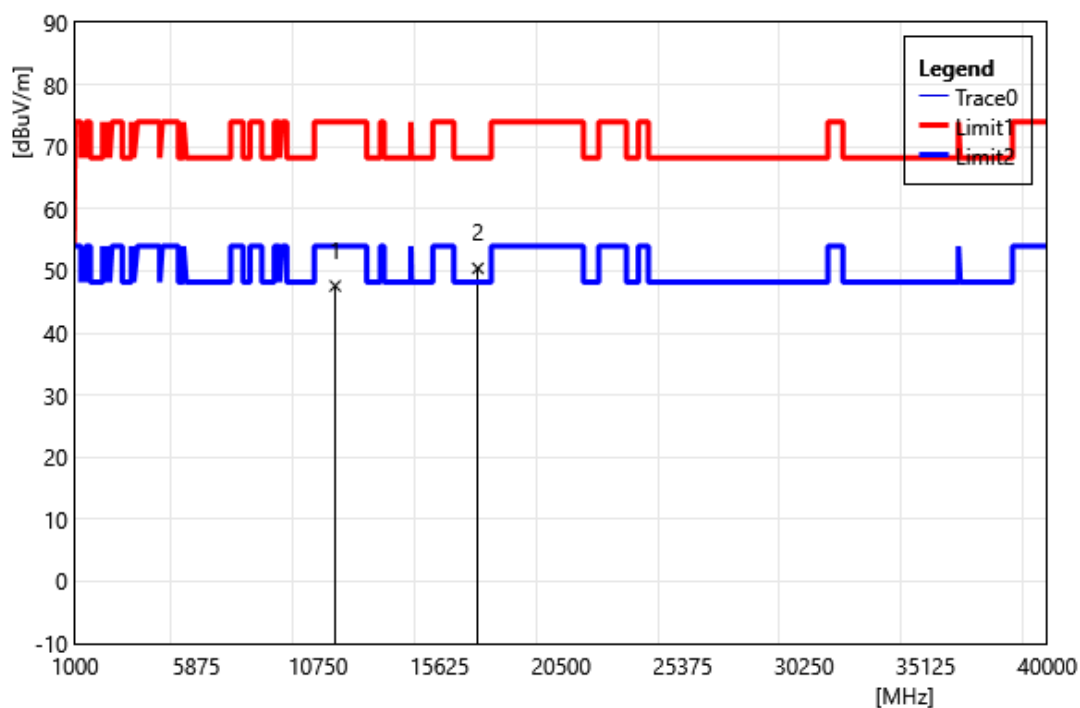
5 Test Results

5.1. Radiated Emission Measurement

Harmonic

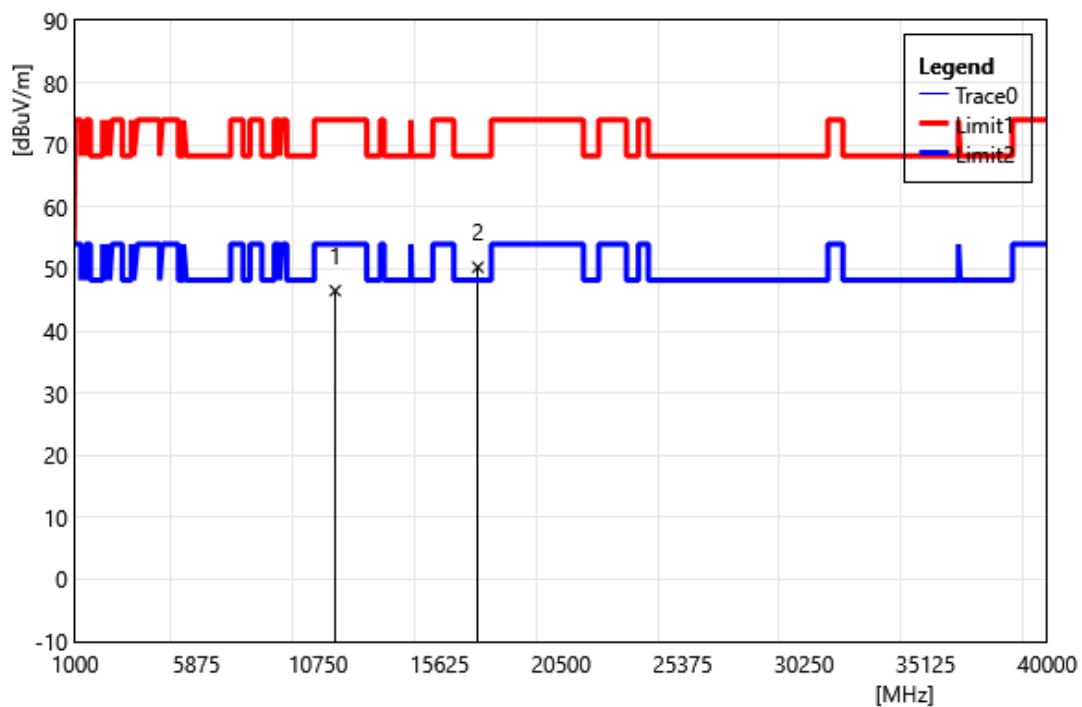
Above 1 GHz

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11a 5720 MHz		
Polarization:	Vertical		
Remark:			



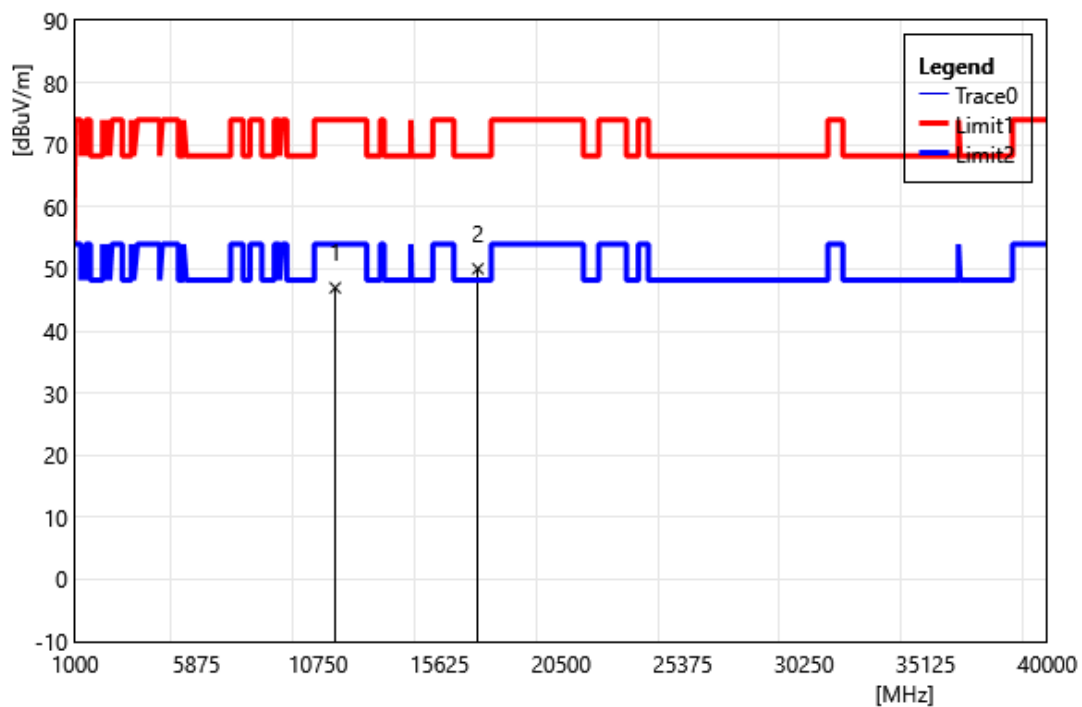
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11440.00	35.02	12.56	47.58	74.00	-26.42	PEAK
2	17160.00	32.73	17.69	50.42	68.20	-17.78	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11a 5720 MHz		
Polarization:	Horizontal		
Remark:			



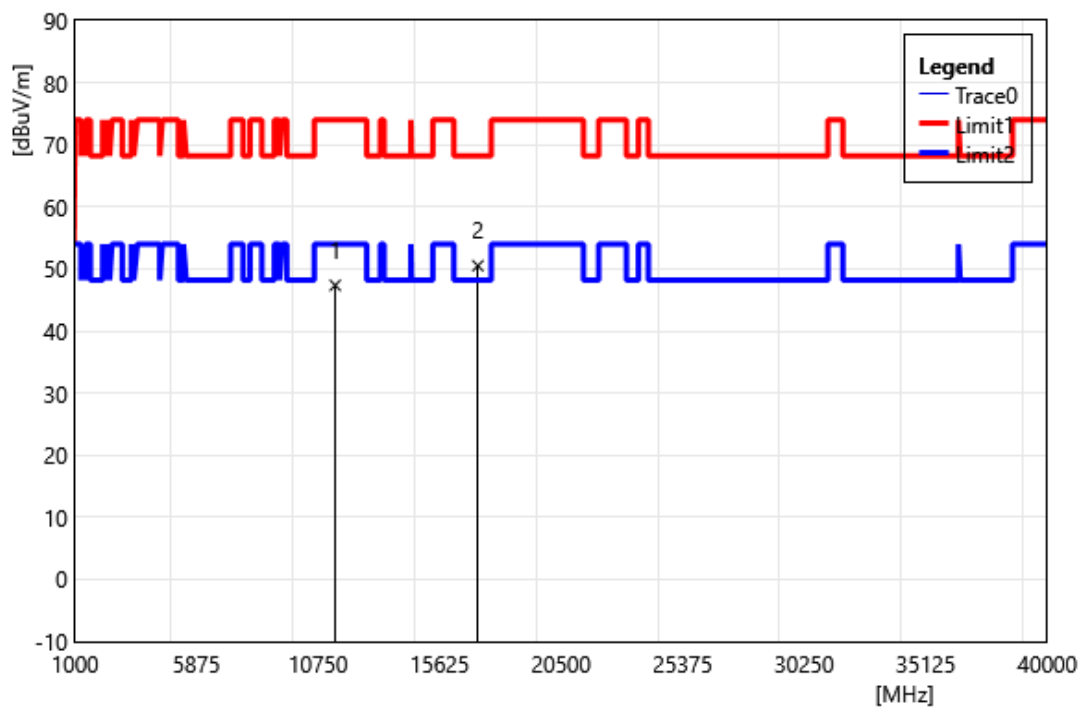
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11440.00	33.94	12.56	46.50	74.00	-27.50	PEAK
2	17160.00	32.58	17.69	50.27	68.20	-17.93	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT20 5720 MHz		
Polarization:	Vertical		
Remark:			



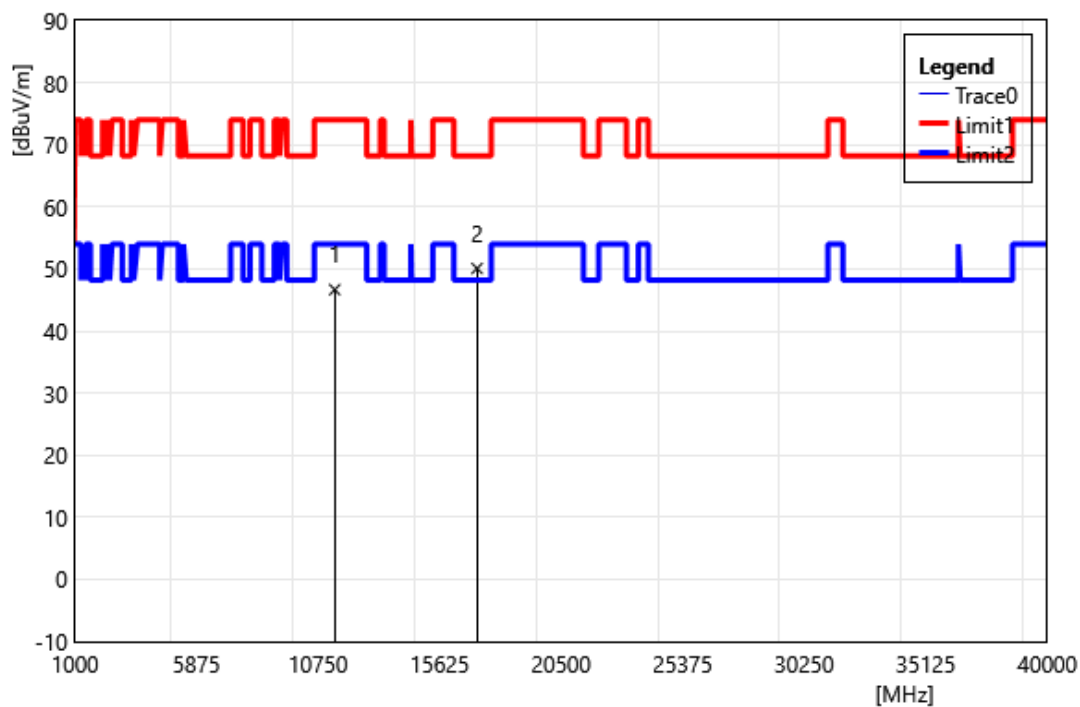
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11440.00	34.41	12.56	46.97	74.00	-27.03	PEAK
2	17160.00	32.34	17.69	50.03	68.20	-18.17	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT20 5720 MHz		
Polarization:	Horizontal		
Remark:			



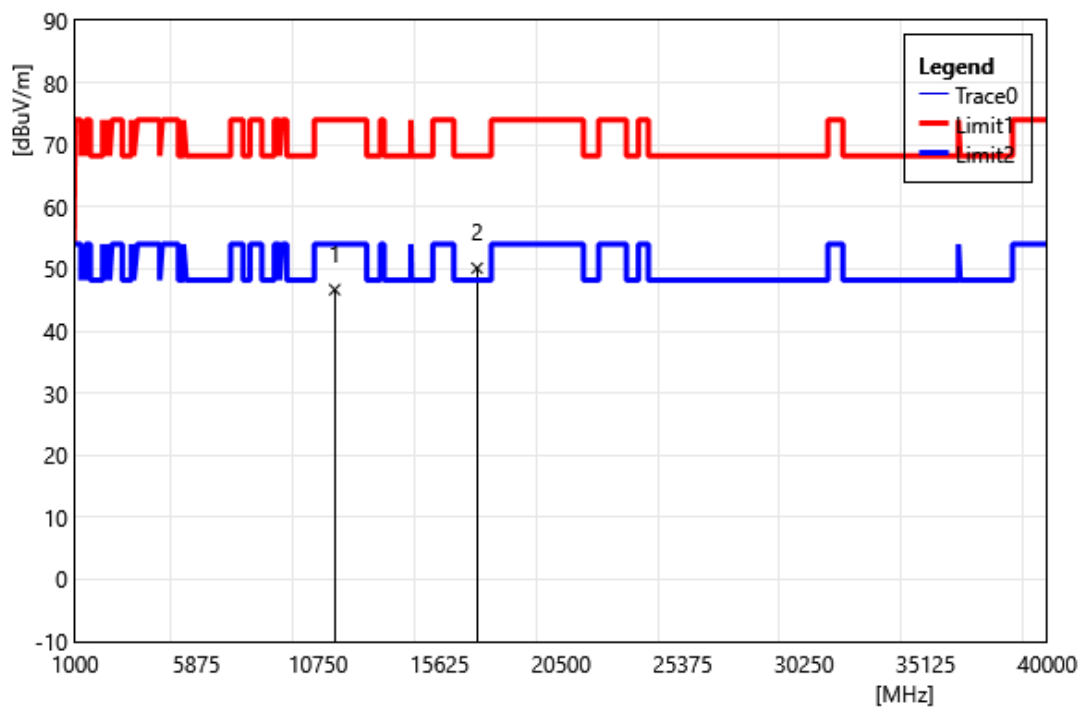
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11440.00	34.81	12.56	47.37	74.00	-26.63	PEAK
2	17160.00	32.84	17.69	50.53	68.20	-17.67	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT40 5710 MHz		
Polarization:	Vertical		
Remark:			



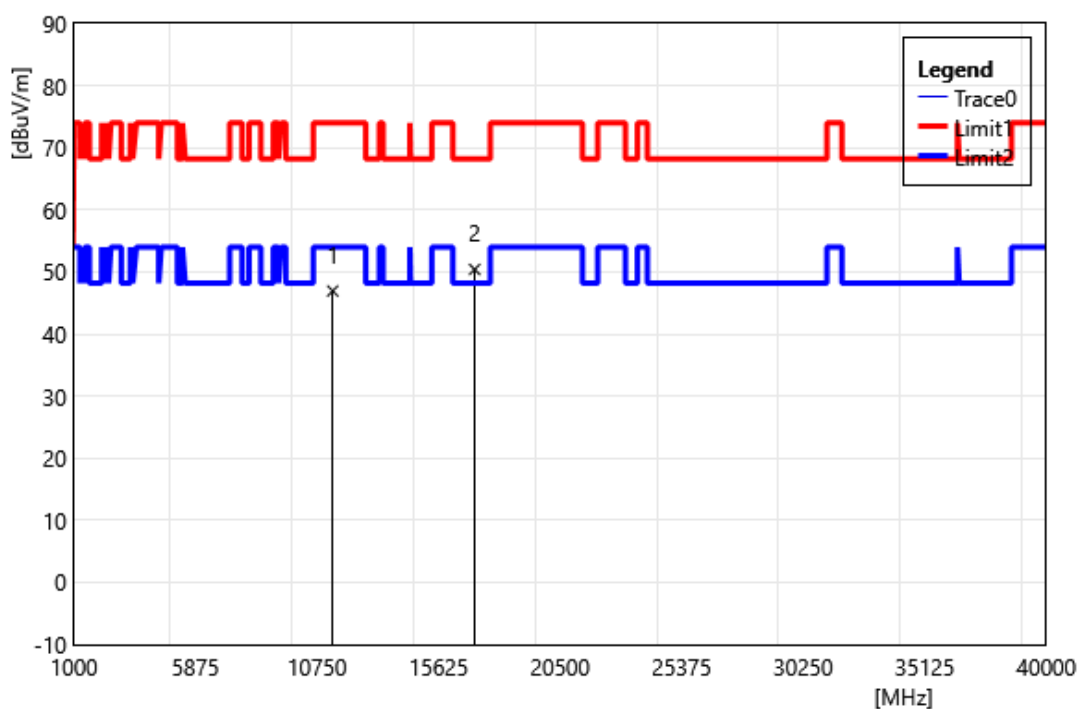
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11420.00	34.22	12.46	46.68	74.00	-27.32	PEAK
2	17130.00	32.62	17.46	50.08	68.20	-18.13	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT40 5710 MHz		
Polarization:	Horizontal		
Remark:			



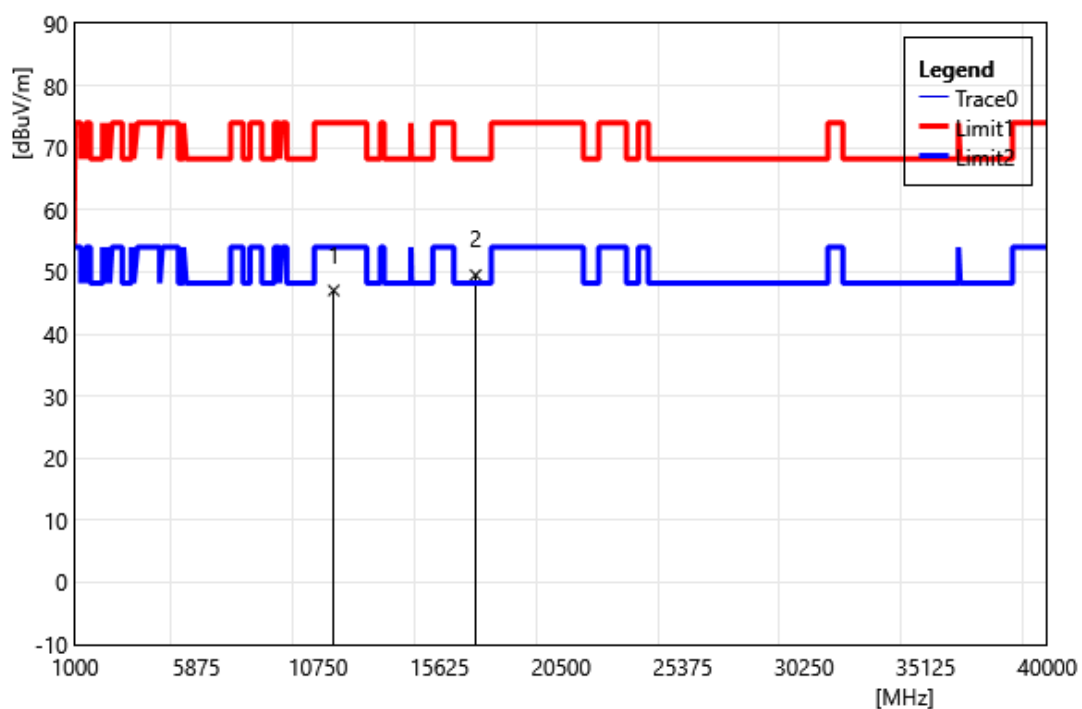
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11420.00	34.21	12.46	46.67	74.00	-27.33	PEAK
2	17130.00	32.68	17.46	50.14	68.20	-18.06	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11ac VHT80 5690		
	MHz		
Polarization:	Vertical		
Remark:			



ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11380.00	34.63	12.30	46.93	74.00	-27.07	PEAK
2	17070.00	33.32	17.09	50.41	68.20	-17.79	PEAK

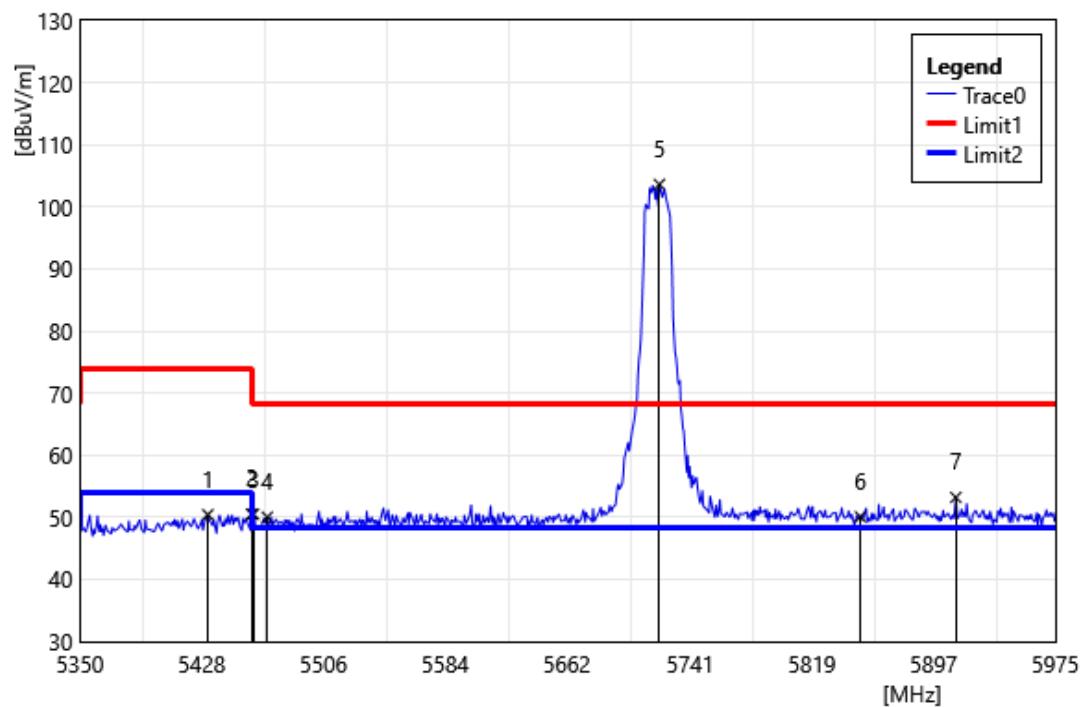
Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11ac VHT80 5690		
	MHz		
Polarization:	Horizontal		
Remark:			



ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	11380.00	34.72	12.30	47.02	74.00	-26.98	PEAK
2	17070.00	32.41	17.09	49.50	68.20	-18.70	PEAK

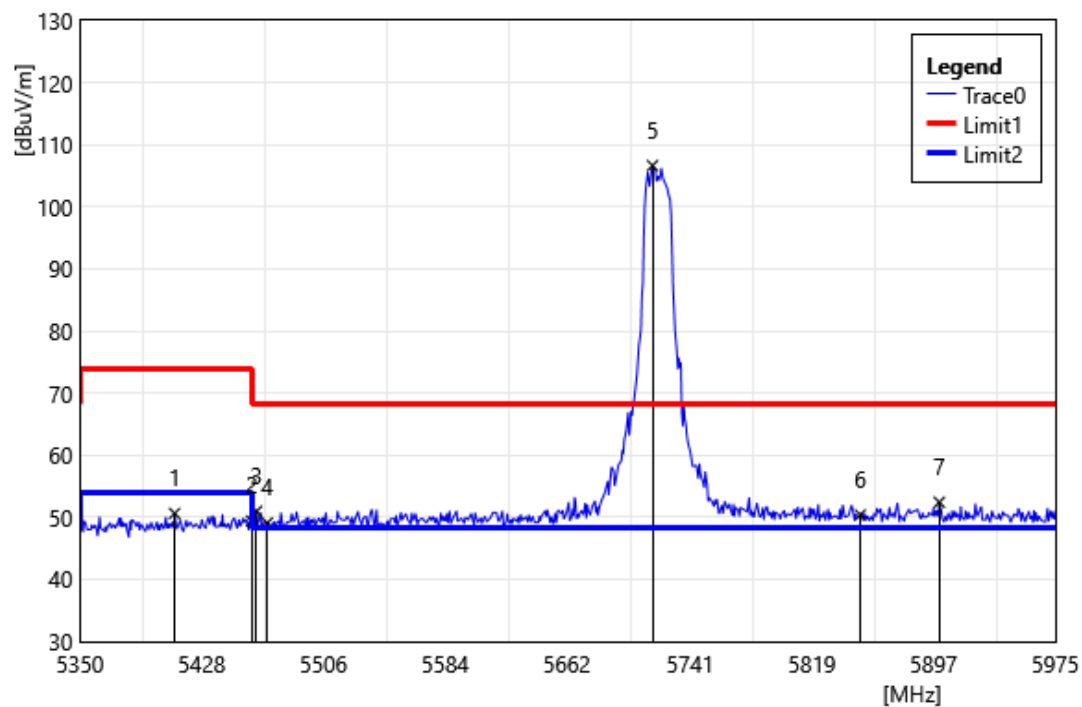
Band Edge

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11a 5720 MHz		
Polarization:	Vertical		
Remark:			



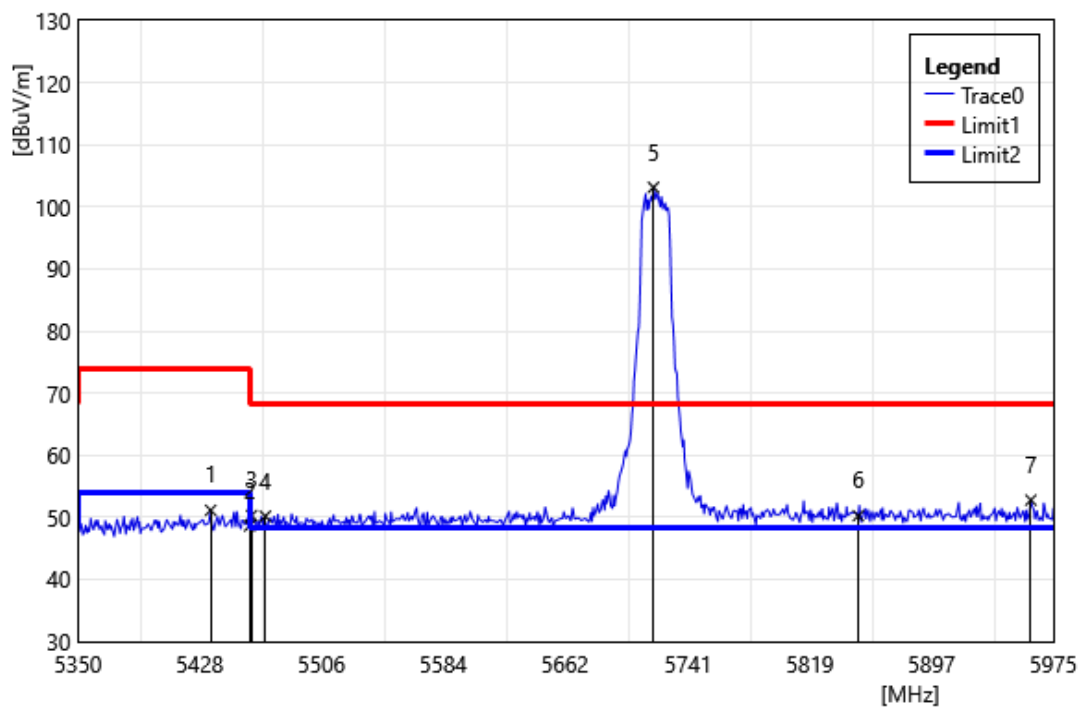
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5431.88	50.95	-0.53	50.42	74.00	-23.58	PEAK
2	5460.00	50.93	-0.41	50.52	74.00	-23.48	PEAK
3	5461.25	50.91	-0.41	50.50	68.20	-17.70	PEAK
4	5470.00	50.46	-0.42	50.04	68.20	-18.16	PEAK
5	5721.25	103.80	-0.19	103.61	68.20	35.41	PEAK
6	5850.00	49.65	0.45	50.10	68.20	-18.10	PEAK
7	5911.25	52.54	0.67	53.22	68.20	-14.99	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11a 5720 MHz		
Polarization:	Horizontal		
Remark:			



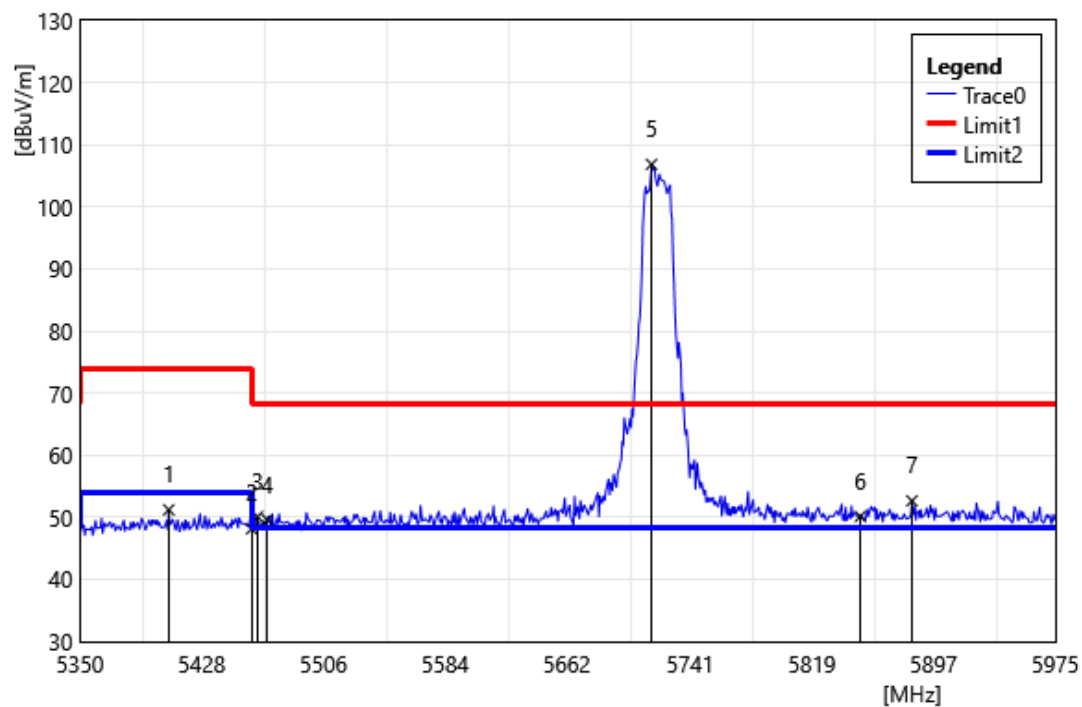
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5410.63	51.32	-0.68	50.64	74.00	-23.36	PEAK
2	5460.00	49.82	-0.41	49.41	74.00	-24.59	PEAK
3	5463.13	51.40	-0.42	50.98	68.20	-17.22	PEAK
4	5470.00	49.51	-0.42	49.09	68.20	-19.11	PEAK
5	5716.88	106.88	-0.23	106.65	68.20	38.45	PEAK
6	5850.00	49.95	0.45	50.40	68.20	-17.80	PEAK
7	5900.63	51.73	0.70	52.43	68.20	-15.77	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT20 5720 MHz		
Polarization:	Vertical		
Remark:			



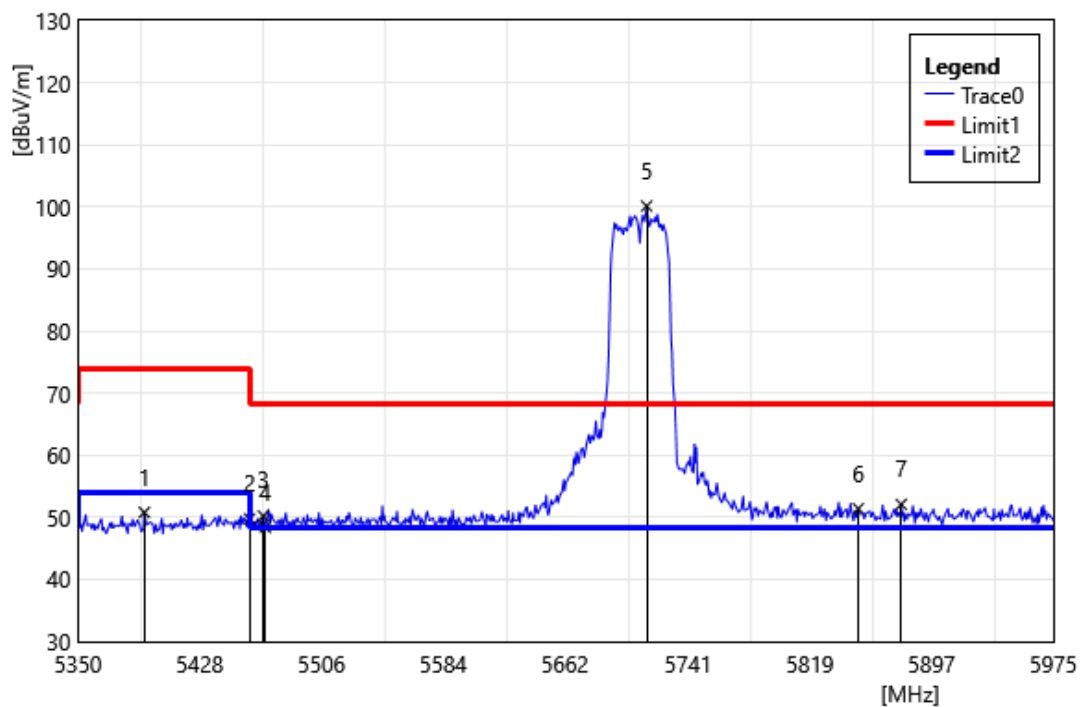
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5435.00	51.65	-0.51	51.14	74.00	-22.86	PEAK
2	5460.00	49.05	-0.41	48.64	74.00	-25.36	PEAK
3	5461.25	50.71	-0.41	50.30	68.20	-17.90	PEAK
4	5470.00	50.60	-0.42	50.18	68.20	-18.02	PEAK
5	5718.75	103.35	-0.21	103.14	68.20	34.94	PEAK
6	5850.00	49.82	0.45	50.27	68.20	-17.93	PEAK
7	5960.63	52.23	0.55	52.78	68.20	-15.42	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT20 5720 MHz		
Polarization:	Horizontal		
Remark:			



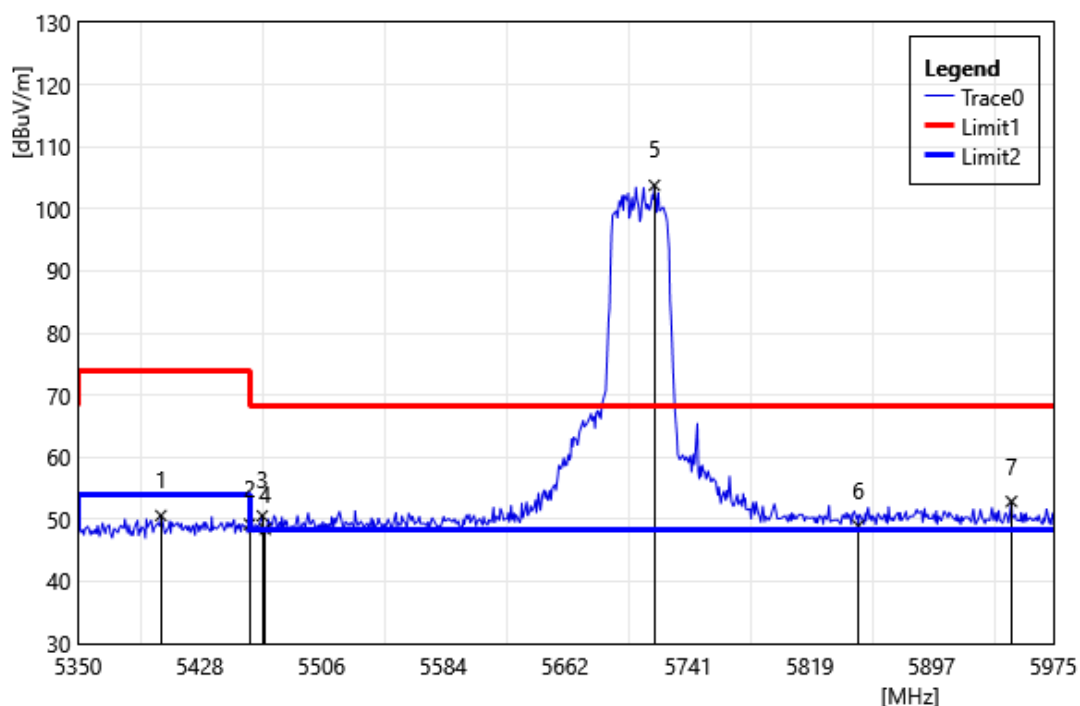
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5406.88	51.92	-0.71	51.21	74.00	-22.79	PEAK
2	5460.00	48.57	-0.41	48.16	74.00	-25.84	PEAK
3	5463.75	50.54	-0.42	50.12	68.20	-18.08	PEAK
4	5470.00	50.02	-0.42	49.60	68.20	-18.60	PEAK
5	5716.25	107.09	-0.24	106.85	68.20	38.65	PEAK
6	5850.00	49.70	0.45	50.15	68.20	-18.05	PEAK
7	5883.13	52.05	0.62	52.67	68.20	-15.53	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT40 5710 MHz		
Polarization:	Vertical		
Remark:			



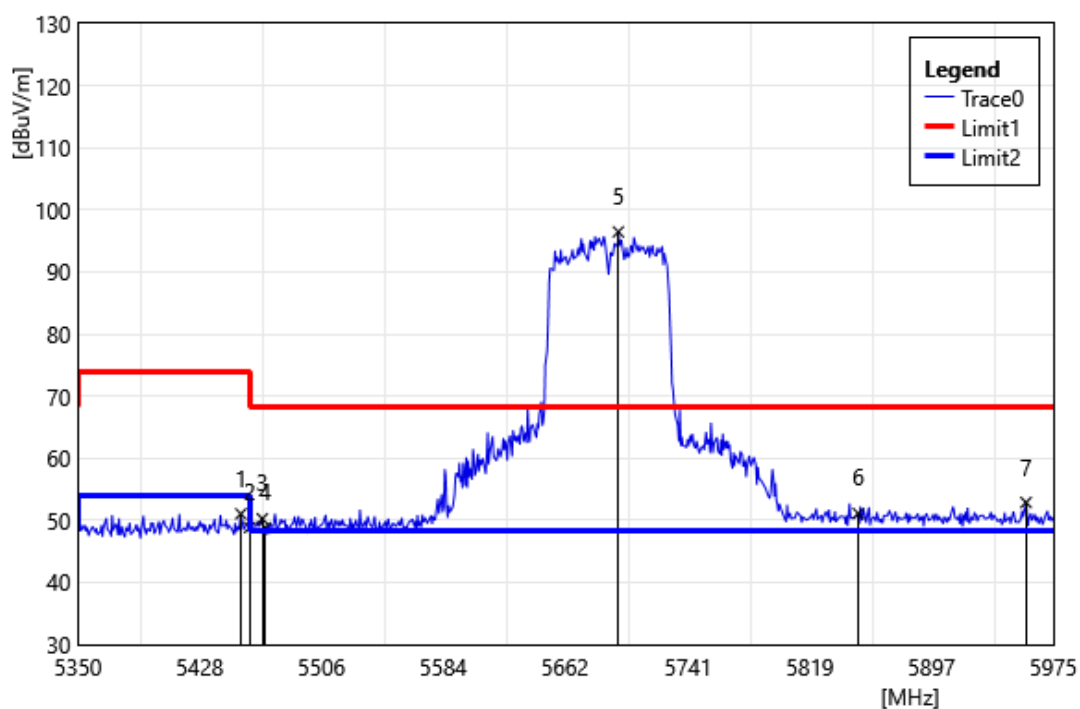
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5392.50	51.64	-0.84	50.80	74.00	-23.20	PEAK
2	5460.00	50.17	-0.41	49.76	74.00	-24.24	PEAK
3	5468.75	50.64	-0.42	50.22	68.20	-17.98	PEAK
4	5470.00	48.83	-0.42	48.41	68.20	-19.79	PEAK
5	5714.38	100.40	-0.26	100.14	68.20	31.94	PEAK
6	5850.00	50.95	0.45	51.39	68.20	-16.81	PEAK
7	5877.50	51.50	0.59	52.09	68.20	-16.11	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11n HT40 5710 MHz		
Polarization:	Horizontal		
Remark:			



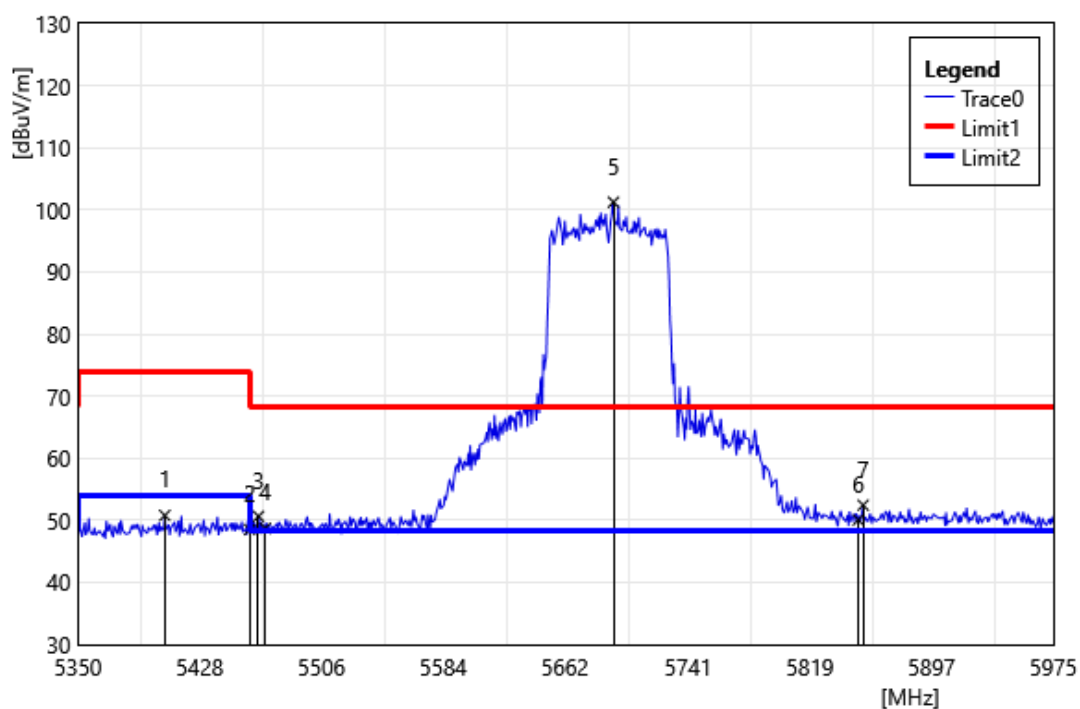
ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5403.13	51.34	-0.73	50.61	74.00	-23.39	PEAK
2	5460.00	49.62	-0.41	49.21	74.00	-24.79	PEAK
3	5468.13	50.99	-0.42	50.57	68.20	-17.63	PEAK
4	5470.00	48.83	-0.42	48.41	68.20	-19.79	PEAK
5	5719.38	104.00	-0.21	103.79	68.20	35.59	PEAK
6	5850.00	48.52	0.45	48.97	68.20	-19.23	PEAK
7	5948.13	52.30	0.57	52.88	68.20	-15.33	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11ac VHT80 5690		
	MHz		
Polarization:	Vertical		
Remark:			



ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5454.38	51.46	-0.41	51.05	74.00	-22.95	PEAK
2	5460.00	49.27	-0.41	48.86	74.00	-25.14	PEAK
3	5468.13	50.68	-0.42	50.26	68.20	-17.94	PEAK
4	5470.00	49.22	-0.42	48.80	68.20	-19.40	PEAK
5	5696.25	96.89	-0.43	96.46	68.20	28.26	PEAK
6	5850.00	50.67	0.45	51.12	68.20	-17.08	PEAK
7	5957.50	52.32	0.56	52.88	68.20	-15.32	PEAK

Test Site:	966 Chamber	Standard:	Part 15E
Test Mode:	802.11ac VHT80 5690		
	MHz		
Polarization:	Horizontal		
Remark:			



ID	Frequency MHz	Reading dBuV	Correct Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
1	5405.63	51.52	-0.72	50.80	74.00	-23.20	PEAK
2	5460.00	48.92	-0.41	48.51	74.00	-25.49	PEAK
3	5465.63	51.07	-0.42	50.65	68.20	-17.55	PEAK
4	5470.00	49.16	-0.42	48.74	68.20	-19.46	PEAK
5	5693.13	101.68	-0.44	101.24	68.20	33.04	PEAK
6	5850.00	49.61	0.45	50.06	68.20	-18.14	PEAK
7	5853.13	51.98	0.47	52.45	68.20	-15.75	PEAK

5.2. Conducted Test Results

Maximum Conducted Output Power Measurement

Reference Appendix A

26 dB RF Bandwidth Measurement & 99 % Occupied Bandwidth Measurement

Reference Appendix A / Appendix B

6 dB RF Bandwidth Measurement

Reference Appendix A / Appendix B

Maximum Power Spectral Density Measurement

Reference Appendix A / Appendix B

---END---