FCC Test Report

Product Name	AX3200 SMART ROUTER
Model No	R32
FCC ID.	KA2R32A1

Applicant	D-Link Corporation
Address	14420 Myford Road Suite 100 Irvine California 92606 United States

Date of Receipt	Nov. 15, 2021
Issued Date	Mar. 30, 2022
Report No.	21B0548R-RFUSWL5V01-A
Report Version	V1.0

Testing Laboratory
3023

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
This report must not be used to claim product endorsement by TAF or any agency of the government.
The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

Issued Date: Mar. 30, 2022
Report No.: 21B0548R-RFUSWL5V01-A

Product Name	AX3200 SMART ROUTER
Applicant	D-Link Corporation
Address	14420 Myford Road Suite 100 Irvine California 92606 United States
Manufacturer	D-Link Corporation
Model No.	R32
FCC ID.	KA2R32A1
EUT Rated Voltage	AC 100-240V / 50-60Hz
EUT Test Voltage	AC 120V / 60Hz
Trade Name	D-Link
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E ANSI C63.4: 2014, ANSI C63.10: 2013 KDB Publication 789033
Test Result	Complied

Documented By : April Chen

(Senior Project Specialist / April Chen)

Tested By : Ivan Chuang

(Senior Engineer / Ivan Chuang)

Approved By : Jack Hsu

(Senior Engineer / Jack Hsu)

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Appendix 1: EUT Test Photographs
Appendix 2: Product Photos-Please refer to the file: 21B0548R-Product Photos

Revision History

Report No.	Version	Description	Issued Date
21B0548R-RFUSWL5V01-A	V1.0	Initial issue of report.	Mar. 30, 2022

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	AX3200 SMART ROUTER
Trade Name	D-Link
Model No.	R32
Frequency Range	802.11a/n/ac/ax-20: 5180-5240MHz, 5745-5825MHz 802.11n/ac/ax-40: 5190-5230MHz, 5755-5795MHz 802.11ac/ax-80: 5210MHz, 5775MHz
Number of Channels	802.11a/n/ac/ax-20: 9CH; 802.11n/ac/ax-40: 4CH, 802.11ac/ax-80: 2CH
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 800Mbps 802.11ac: up to 1733.3Mbps 802.11ax: up to 2402Mbps
Type of Modulation	802.11a/n/ac/ax: OFDM, OFDMA, BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Channel Control	Auto
Antenna type	Dipole antenna
Antenna Gain	Refer to the table “Antenna List”
LAN Cable	Non -shielded, 1.0m
Power Adapter#1	MFR: AMIGO, M/N: AMS200-1202000FU Input: AC 100-240V~50-60Hz 0.8A Output: 12V⎓2A Cable Out: Non-shielded, 1.2m
Power Adapter#5	MFR: AMIGO, M/N: AMS200-1202000F Input: AC 100-240V~50-60Hz 0.8A Output: 12V⎓2A Cable Out: Non-shielded, 1.2m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain	Directional Gain
1.	LYNwave	AOX21X-221051-00	Dipole antenna	5.3dBi for 5GHz	11.32dBi for 5GHz
2.	LYNwave	AOX21X-221051-00	Dipole antenna	5.3dBi for 5GHz	
3.	LYNwave	AOX21X-221051-00	Dipole antenna	5.3dBi for 5GHz	
4.	LYNwave	AOX21X-221051-00	Dipole antenna	5.3dBi for 5GHz	

Note: The antenna of EUT is conform to FCC 15.203.

802.11a/n/ac/ax-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz
Channel 149:	5745 MHz	Channel 153:	5765 MHz	Channel 157:	5785 MHz	Channel 161:	5805 MHz
Channel 165:	5825 MHz						

802.11n/ac/ax-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 38:	5190 MHz	Channel 46:	5230 MHz	Channel 151:	5755 MHz	Channel 159:	5795 MHz

802.11ac/ax-80MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency
Channel 42:	5210 MHz	Channel 155:	5775 MHz

Note:

1. This device is a AX3200 SMART ROUTER with built-in WLAN(802.11a/b/g/n/ac/ax) transceiver, this report for 5GHz WLAN.
2. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.
3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report.
4. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance of 802.11a/n/ac/ax transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

Test Mode	Mode 1: Transmit (802.11a-6Mbps) Mode 2: Transmit (802.11ax-20BW 34.4Mbps) Mode 3: Transmit (802.11ax-40MBW 68.8Mbps) Mode 4: Transmit (802.11ax-80MBW 144Mbps)

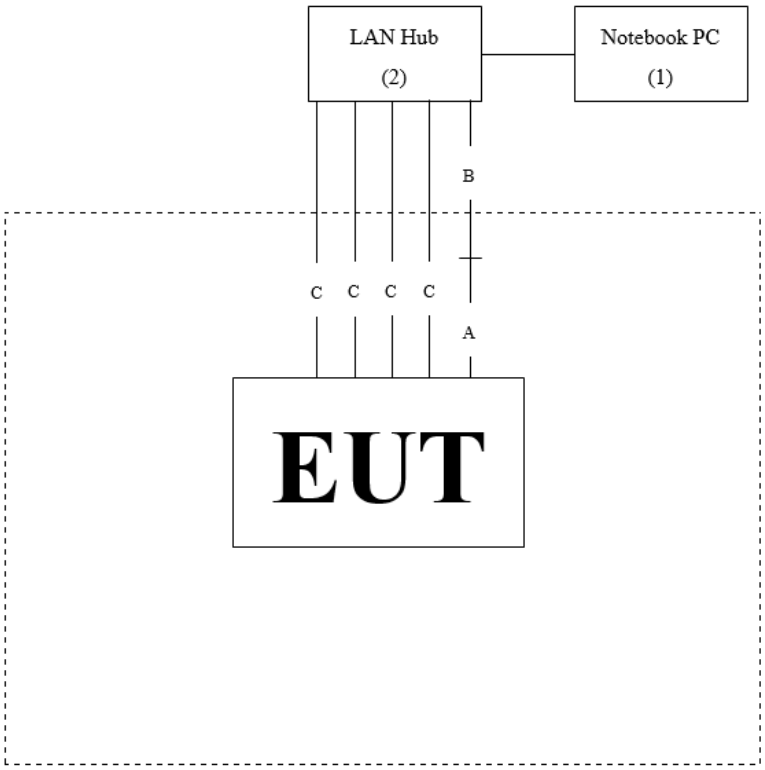
1.2. Tested System Datails

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1.	Notebook PC	DELL	Latitude E5440	FS9TK32	N/A
2.	LAN Hub	TP-LINK	TL-SG108	2161597000480	Non-Shielded, 1.5m

Signal Cable Type		Signal cable Description
A	LAN Cable	Non-shielded, 1.0m
B	LAN Cable	Non-shielded, 2.0m
C	LAN Cable	Non-shielded, 3.0m

1.3. Configuration of Tested System



1.4. EUT Exercise Software

1. Setup the EUT as shown in Section 1.3.
2. Execute software “QA v0.0.2.33” on the EUT.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous transmit.
5. Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 °C	22.3 °C
	Humidity (%RH)	10~90 %	59.9 %
Radiated Emission	Temperature (°C)	10~40 °C	25.1 °C
	Humidity (%RH)	10~90 %	66.7 %
Conductive	Temperature (°C)	10~40 °C	22 °C
	Humidity (%RH)	10~90 %	55 %

USA : FCC Registration Number: TW0033

Canada : IC Registration Number: 26930

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan
Performed Location : No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone number : +886-3-275-7255
Fax number : +866-3-327-8031
Email address : info.tw@dekra.com
Website : http://www.dekra.com.tw

1.6. List of Test Equipment

For Conduction measurements /SH1

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	EMI Test Receiver	R&S	ESR7	101601	2021.06.19	2022.06.18
X	Two-Line V-Network	R&S	ENV216	101306	2021.04.08	2022.04.07
X	Two-Line V-Network	R&S	ENV216	101307	2021.05.04	2022.05.03
X	Coaxial Cable	SUHNER	RG400_BNC	RF001	2021.05.24	2022.05.23

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : AUDIX e3 V9

For Conducted measurements /SH2

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV40	101149	2021.02.04	2022.02.03
X	Peak Power Analyzer	KEYSIGHT	8900B	MY51000539	2021.06.07	2022.06.06
X	Power Sensor	KEYSIGHT	N1923A	MY59240002	2021.05.17	2022.05.16
X	Power Sensor	KEYSIGHT	N1923A	MY59240003	2021.05.17	2022.05.16

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Conduction Test System V9.0.5

For Radiated measurements /966-3

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
X	Loop Antenna	AMETEK	HLA6121	56736	2021.04.14	2022.04.13
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-675	2021.08.11	2022.08.10
X	Horn Antenna	ETS-Lindgren	3117	00227700	2021.10.12	2022.10.11
X	Horn Antenna	Com-Power	AH-840	101100	2021.10.04	2022.10.03
X	Pre-Amplifier	EMCI	EMC001330	980254	2021.01.20	2022.01.19
X	Pre-Amplifier	SGH	PRAMP118	20200202	2021.03.25	2022.03.24
X	Pre-Amplifier	EMCI	EMC05820SE	980310	2021.07.07	2022.07.06
	Pre-Amplifier	EMCI	EMC184045SE	980369		
X	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314	2021.04.27	2022.04.26
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
	Filter	MICRO TRONICS	BRM50702	G251	2021.09.16	2022.09.15
X	Filter	MICRO TRONICS	BRM50716	G188	2021.09.16	2022.09.15
X	EMI Test Receiver	R&S	ESR	102793	2021.12.15	2022.12.14
X	Spectrum Analyzer	R&S	FSV3044	101113	2021.02.03	2022.02.02
	Coaxial Cable	SGH	HA800	GD20110222-3		
	Coaxial Cable	SGH	SGH18	20110223-1		
X	Coaxial Cable	SGH	SGH18	2021001-1	2021.03.05	2022.03.04
	Coaxial Cable	SGH	SGH18	2021001-18		

Note:
1. Loop Antenna is calibrated every two year, the other equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : AUDIX e3 V9

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

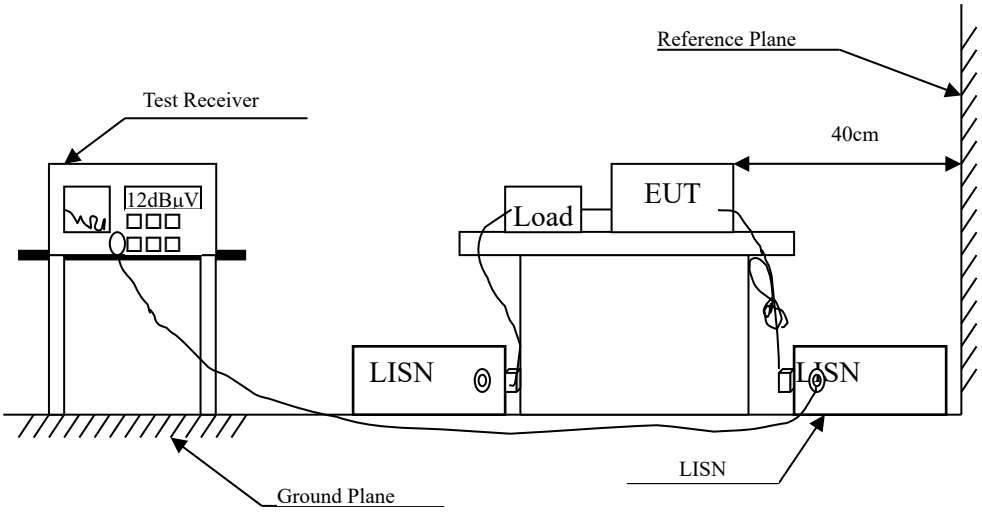
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	**Uncertainty**	
Conducted Emission	±3.42 dB	
Maximun conducted output power	Power Meter ±0.91 dB	Spectrum Analyzer ±2.53 dB
Peak Power Spectral Density	±2.53 dB	
Radiated Emission	Under 1GHz ±4.06 dB	Above 1GHz ±3.73 dB
Band Edge	Under 1GHz ±4.06 dB	Above 1GHz ±3.73 dB
Occupied Bandwidth	±682.83 Hz	
Duty Cycle	±2.31msec	

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBµV) Limit		
Frequency	Limits	
MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

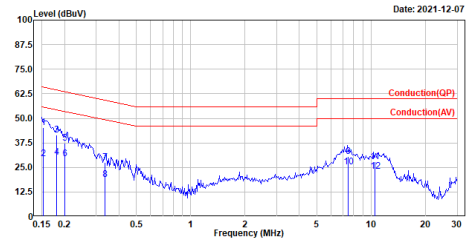
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling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

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.4. Test Result of Conducted Emission

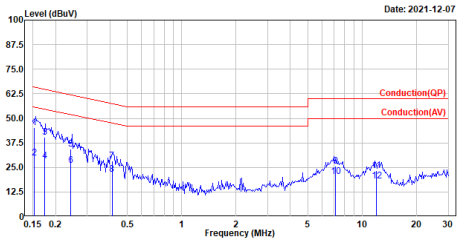
Site :SH1
Condition :Line
Mode :ax80_5775MHz_TX
test by :Gerry



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.152	45.40	65.89	-20.49	35.70	9.70	QP
2	0.152	29.33	55.89	-26.56	19.63	9.70	Average
3	0.181	41.36	64.44	-23.08	31.67	9.69	QP
4	0.181	30.34	54.44	-24.10	20.65	9.69	Average
5	0.201	37.45	63.56	-26.11	27.76	9.69	QP
6	0.201	29.54	53.56	-24.02	19.85	9.69	Average
7	0.336	27.57	59.29	-31.72	17.87	9.70	QP
8	0.336	18.87	49.29	-30.42	9.17	9.70	Average
9	7.473	30.47	60.00	-29.53	19.63	10.84	QP
10	7.473	25.35	50.00	-24.65	14.51	10.84	Average
11	10.494	28.08	60.00	-31.92	17.26	10.82	QP
12	10.494	22.95	50.00	-27.05	12.13	10.82	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

Site :SH1
Condition :Neutral
Mode :ax80_5775MHz_TX
test by :Gerry



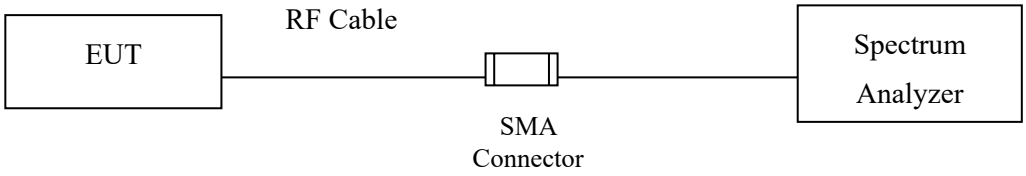
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.153	45.22	65.85	-20.63	35.51	9.71	QP
2	0.153	29.67	55.85	-26.18	19.96	9.71	Average
3	0.175	40.35	64.73	-24.38	30.64	9.71	QP
4	0.175	28.16	54.73	-26.57	18.45	9.71	Average
5	0.242	34.24	62.01	-27.77	24.53	9.71	QP
6	0.242	26.15	52.01	-25.86	16.44	9.71	Average
7	0.411	28.38	57.62	-29.24	18.67	9.71	QP
8	0.411	21.61	47.62	-26.01	11.90	9.71	Average
9	7.112	25.54	60.00	-34.46	14.68	10.86	QP
10	7.112	20.47	50.00	-29.53	9.61	10.86	Average
11	11.939	23.31	60.00	-36.69	12.45	10.86	QP
12	11.939	18.01	50.00	-31.99	7.15	10.86	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

3. Maximun conducted output power

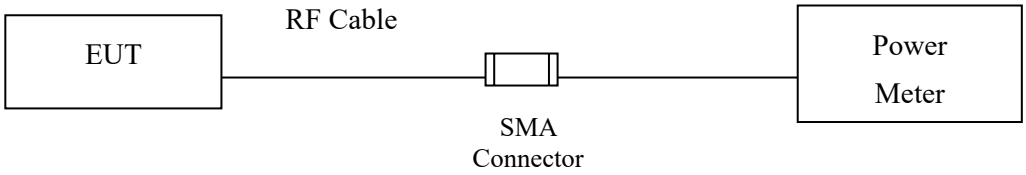
3.1. Test Setup

99% Occupied Bandwidth

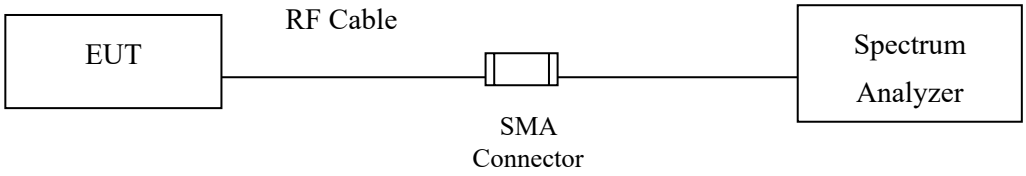


Conduction Power Measurement

Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



3.2. Limits

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. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power 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. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power 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. Fixed point-topoint U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. 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 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 mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 99% emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII 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.

The maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11an (BW≦40MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)
Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.

3.4. Test Result of Maximum conducted output power

Product : AX3200 SMART ROUTER
Test Item : Maximum conducted output power
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-CDD
Test Date : 2021/12/10

Chain A

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
36	5180	15.52	--	--	--	--	--	--	--
44	5220	15.76	15.72	15.64	15.55	15.51	15.42	15.37	15.28
48	5240	16.06	--	--	--	--	--	--	--
149	5745	19.1	--	--	--	--	--	--	--
157	5785	19.05	18.95	18.86	18.8	18.77	18.74	18.7	18.65
165	5825	19.49	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
36	5180	15.48	--	--	--	--	--	--	--
44	5220	16.13	16.1	16.03	15.96	15.92	15.83	15.74	15.71
48	5240	16.09	--	--	--	--	--	--	--
149	5745	19.89	--	--	--	--	--	--	--
157	5785	19.9	19.82	19.78	19.73	19.69	19.62	19.52	19.48
165	5825	20.55	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
36	5180	16.01	--	--	--	--	--	--	--
44	5220	16.11	16.04	15.97	15.92	15.86	15.8	15.73	15.7
48	5240	15.87	--	--	--	--	--	--	--
149	5745	20.08	--	--	--	--	--	--	--
157	5785	19.79	19.69	19.66	19.63	19.56	19.5	19.46	19.39
165	5825	20.4	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power							
Channel No.	Frequency (MHz)	For different Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
		Measurement Level (dBm)							
36	5180	15.67	--	--	--	--	--	--	--
44	5220	15.82	15.78	15.68	15.64	15.61	15.54	15.44	15.41
48	5240	15.97	--	--	--	--	--	--	--
149	5745	20.22	--	--	--	--	--	--	--
157	5785	20.31	20.27	20.22	20.14	20.1	20	19.9	19.83
165	5825	21.05	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Duty factor (dB)	Output Power Limit	
									(dBm)	dBm+10log(BW)
36	5180	--	15.52	15.48	16.01	15.67	21.70	--	30	--
44	5220	--	15.76	16.13	16.11	15.82	21.98	--	30	--
48	5240	--	16.06	16.09	15.87	15.97	22.02	--	30	--
149	5745	--	19.10	19.89	20.08	20.22	25.86	--	30	--
157	5785	--	19.05	19.90	19.79	20.31	25.81	--	30	--
165	5825	--	19.49	20.55	20.40	21.05	26.43	--	30	--

Note:

1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 99% Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

Product : AX3200 SMART ROUTER
Test Item : Maximum conducted output power
Test Mode : Mode 2: Transmit (802.11ax-20BW 34.4Mbps) -CDD
Test Date : 2021/12/10

Chain A

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	15.16	--	--	--	--	--	--	--	--	--	--	--
44	5220	16.03	15.97	15.91	15.87	15.8	15.76	15.73	15.63	15.53	15.43	15.34	15.24
48	5240	16.63	--	--	--	--	--	--	--	--	--	--	--
149	5745	15.75	--	--	--	--	--	--	--	--	--	--	--
157	5785	15.56	15.51	15.47	15.37	15.34	15.29	15.24	15.2	15.17	15.07	15	14.92
165	5825	16.01	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	15.22	--	--	--	--	--	--	--	--	--	--	--
44	5220	16.16	16.12	16.02	15.92	15.84	15.76	15.71	15.62	15.52	15.49	15.44	15.35
48	5240	16.8	--	--	--	--	--	--	--	--	--	--	--
149	5745	16.39	10.67	10.62	10.53	10.49	10.46	10.37	10.34	10.27	10.21	10.17	10.09
157	5785	16.77	--	--	--	--	--	--	--	--	--	--	--
165	5825	16.98	16.7	16.67	16.63	16.6	16.51	16.44	16.4	16.34	16.27	16.2	16.11

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	15.7	--	--	--	--	--	--	--	--	--	--	--
44	5220	16.48	16.42	16.34	16.31	16.23	16.19	16.09	16.03	15.93	15.9	15.86	15.76
48	5240	16.58	--	--	--	--	--	--	--	--	--	--	--
149	5745	16.89	--	--	--	--	--	--	--	--	--	--	--
157	5785	16.86	16.83	16.74	16.7	16.61	16.58	16.54	16.49	16.46	16.4	16.3	16.21
165	5825	16.97	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	15.18	--	--	--	--	--	--	--	--	--	--	--
44	5220	15.95	15.86	15.83	15.74	15.69	15.63	15.59	15.53	15.49	15.41	15.37	15.3
48	5240	16.48	--	--	--	--	--	--	--	--	--	--	--
149	5745	16.76	--	--	--	--	--	--	--	--	--	--	--
157	5785	16.78	16.69	16.63	16.6	16.52	16.44	16.36	16.26	16.21	16.14	16.11	16.08
165	5825	17.69	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Duty factor (dBm)	Output Power Limit	
									(dBm)	dBm+10log(BW)
36	5180	--	15.16	15.22	15.70	15.18	21.34	--	30.00	--
44	5220	--	16.03	16.16	16.48	15.95	22.18	--	30.00	--
48	5240	--	16.63	16.80	16.58	16.48	22.64	--	30.00	--
149	5745	--	15.75	16.39	16.89	16.76	22.49	--	30.00	--
157	5785	--	15.56	16.77	16.86	16.78	22.55	--	30.00	--
165	5825	--	16.01	16.98	16.97	17.69	22.97	--	30.00	--

Note:

1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 99% Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

Product : AX3200 SMART ROUTER
Test Item : Maximum conducted output power
Test Mode : Mode 3: Transmit (802.11ax-40MBW 68.8Mbps) -CDD
Test Date : 2021/12/10

Chain A

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	13.04	--	--	--	--	--	--	--	--	--	--	--
46	5230	19.06	19.03	18.94	18.87	18.84	18.8	18.76	18.68	18.63	18.57	18.48	18.4
151	5755	18.11	--	--	--	--	--	--	--	--	--	--	--
159	5795	19.95	19.86	19.76	19.68	19.64	19.58	19.51	19.42	19.39	19.34	19.25	19.19

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	12.35	--	--	--	--	--	--	--	--	--	--	--
46	5230	18.91	18.84	18.77	18.74	18.71	18.68	18.65	18.55	18.51	18.48	18.44	18.41
151	5755	18.9	--	--	--	--	--	--	--	--	--	--	--
159	5795	20.84	20.76	20.72	20.62	20.59	20.54	20.44	20.4	20.36	20.26	20.2	20.12

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	12.69	--	--	--	--	--	--	--	--	--	--	--
46	5230	18.6	18.53	18.45	18.36	18.27	18.24	18.15	18.11	18.06	18	17.9	17.81
151	5755	18.87	--	--	--	--	--	--	--	--	--	--	--
159	5795	20.78	20.74	20.71	20.62	20.59	20.53	20.45	20.35	20.25	20.17	20.1	20.02

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	12.46	--	--	--	--	--	--	--	--	--	--	--
46	5230	18.63	18.58	18.55	18.46	18.42	18.38	18.29	18.23	18.17	18.11	18.02	17.92
151	5755	19.01	--	--	--	--	--	--	--	--	--	--	--
159	5795	20.97	20.9	20.81	20.77	20.68	20.65	20.59	20.55	20.48	20.44	20.36	20.3

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Duty factor (dBm)	Output Power Limit	
									(dBm)	dBm+10log(BW)
38	5190	--	13.04	12.35	12.69	12.46	18.66	--	30.00	--
46	5230	--	19.06	18.91	18.60	18.63	24.82	--	30.00	--
151	5755	--	18.11	18.90	18.87	19.01	24.76	--	30.00	--
159	5795	--	19.95	20.84	20.78	20.97	26.67	--	30.00	--

Note:

1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 99% Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

Product : AX3200 SMART ROUTER
Test Item : Maximum conducted output power
Test Mode : Mode 4: Transmit (802.11ax-80MBW 144Mbps) -CDD
Test Date : 2021/12/10

Chain A

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	8.68	--	--	--	--	--	--	--	--	--	--	--
155	5775	15.48	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	8.14	--	--	--	--	--	--	--	--	--	--	--
155	5775	16.45	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	8.17	--	--	--	--	--	--	--	--	--	--	--
155	5775	16.6	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	8.35	--	--	--	--	--	--	--	--	--	--	--
155	5775	16.7	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Maximum conducted output power Measurement

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Duty factor (dBm)	Output Power Limit	
									(dBm)	dBm+10log(BW)
42	5210	--	8.68	8.14	8.17	8.35	14.36	--	30.00	--
155	5775	--	15.48	16.45	16.60	16.70	22.35	--	30.00	--

Note:
1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 99% Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

Product : AX3200 SMART ROUTER
Test Item : Maximum conducted output power
Test Mode : Mode 2: Transmit (802.11ax-20BW 34.4Mbps) -Beforming
Test Date : 2021/12/10

Chain A

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	9.14	--	--	--	--	--	--	--	--	--	--	--
44	5220	10.01	9.97	9.94	9.89	9.85	9.79	9.75	9.69	9.63	9.57	9.54	9.50
48	5240	10.61	--	--	--	--	--	--	--	--	--	--	--
149	5745	9.73	--	--	--	--	--	--	--	--	--	--	--
157	5785	9.54	9.47	9.43	9.37	9.32	9.27	9.20	9.15	9.11	9.06	9.02	8.96
165	5825	9.99	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	9.20	--	--	--	--	--	--	--	--	--	--	--
44	5220	10.14	10.08	10.01	9.97	9.90	9.86	9.81	9.74	9.67	9.62	9.56	9.52
48	5240	10.78	--	--	--	--	--	--	--	--	--	--	--
149	5745	10.37	--	--	--	--	--	--	--	--	--	--	--
157	5785	10.75	10.70	10.65	10.62	10.58	10.54	10.50	10.45	10.40	10.34	10.27	10.20
165	5825	10.96	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	9.68	--	--	--	--	--	--	--	--	--	--	--
44	5220	10.46	10.40	10.35	10.29	10.23	10.17	10.11	10.07	10.01	9.94	9.88	9.85
48	5240	10.56	--	--	--	--	--	--	--	--	--	--	--
149	5745	10.87	--	--	--	--	--	--	--	--	--	--	--
157	5785	10.84	10.79	10.74	10.70	10.64	10.61	10.56	10.49	10.43	10.39	10.34	10.30
165	5825	10.95	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
36	5180	9.16	--	--	--	--	--	--	--	--	--	--	--
44	5220	9.93	9.87	9.81	9.76	9.70	9.66	9.62	9.58	9.52	9.46	9.42	9.38
48	5240	10.46	--	--	--	--	--	--	--	--	--	--	--
149	5745	10.74	--	--	--	--	--	--	--	--	--	--	--
157	5785	10.76	10.69	10.64	10.60	10.53	10.49	10.43	10.37	10.34	10.30	10.25	10.21
165	5825	11.67	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Duty factor (dBm)	Output Power Limit	
									(dBm)	dBm+10log(BW)
36	5180	--	9.14	9.20	9.68	9.16	15.32	--	24.68	--
44	5220	--	10.01	10.14	10.46	9.93	16.16	--	24.68	--
48	5240	--	10.61	10.78	10.56	10.46	16.62	--	24.68	--
149	5745	--	9.73	10.37	10.87	10.74	16.47	--	24.68	--
157	5785	--	9.54	10.75	10.84	10.76	16.53	--	24.68	--
165	5825	--	9.99	10.96	10.95	11.67	16.95	--	24.68	--

Note:

1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 99% Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

Product : AX3200 SMART ROUTER
Test Item : Maximum conducted output power
Test Mode : Mode 3: Transmit (802.11ax-40MBW 68.8Mbps) -Beforming
Test Date : 2021/12/10

Chain A

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	7.02	--	--	--	--	--	--	--	--	--	--	--
46	5230	13.04	13.00	12.95	12.91	12.87	12.82	12.78	12.73	12.69	12.65	12.59	12.54
151	5755	12.09	--	--	--	--	--	--	--	--	--	--	--
159	5795	13.93	13.88	13.82	13.76	13.72	13.66	13.63	13.57	13.50	13.44	13.39	13.33

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	6.33	--	--	--	--	--	--	--	--	--	--	--
46	5230	12.89	12.84	12.78	12.72	12.66	12.61	12.56	12.50	12.45	12.41	12.36	12.31
151	5755	12.88	--	--	--	--	--	--	--	--	--	--	--
159	5795	14.82	14.77	14.70	14.67	14.63	14.58	14.53	14.50	14.43	14.38	14.35	14.31

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	6.67	--	--	--	--	--	--	--	--	--	--	--
46	5230	12.58	12.52	12.48	12.43	12.37	12.34	12.28	12.24	12.20	12.13	12.09	12.03
151	5755	12.85	--	--	--	--	--	--	--	--	--	--	--
159	5795	14.76	14.71	14.67	14.62	14.56	14.50	14.46	14.43	14.39	14.32	14.26	14.22

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
38	5190	6.44	--	--	--	--	--	--	--	--	--	--	--
46	5230	12.61	12.54	12.51	12.47	12.41	12.36	12.32	12.28	12.25	12.21	12.14	12.08
151	5755	12.99	--	--	--	--	--	--	--	--	--	--	--
159	5795	14.95	14.92	14.87	14.82	14.77	14.71	14.67	14.61	14.55	14.51	14.45	14.42

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Duty factor (dBm)	Output Power Limit	
									(dBm)	dBm+10log(BW)
38	5190	--	7.02	6.33	6.67	6.44	12.64	--	24.68	--
46	5230	--	13.04	12.89	12.58	12.61	18.80	--	24.68	--
151	5755	--	12.09	12.88	12.85	12.99	18.74	--	24.68	--
159	5795	--	13.93	14.82	14.76	14.95	20.65	--	24.68	--

Note:

1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 99% Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

Product : AX3200 SMART ROUTER
Test Item : Maximum conducted output power
Test Mode : Mode 4: Transmit (802.11ax-80MBW 144Mbps) -Beforming
Test Date : 2021/12/10

Chain A

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	2.66	--	--	--	--	--	--	--	--	--	--	--
155	5775	9.46	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	2.12	--	--	--	--	--	--	--	--	--	--	--
155	5775	10.43	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	2.15	--	--	--	--	--	--	--	--	--	--	--
155	5775	10.58	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power											
Channel No.	Frequency (MHz)	For different Data Rate (MCS index)											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
		Measurement Level (dBm)											
42	5210	2.33	--	--	--	--	--	--	--	--	--	--	--
155	5775	10.68	--	--	--	--	--	--	--	--	--	--	--

Note: Maximum conducted output power Value =Reading value on Spectrum Analyzer + cable loss

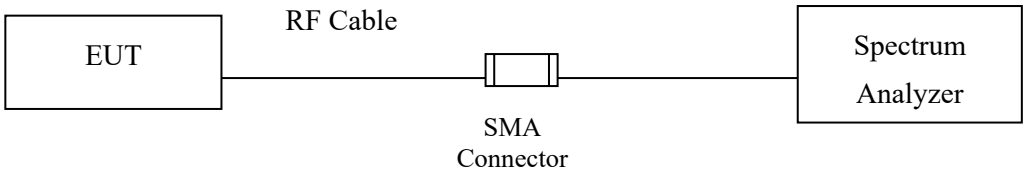
Maximum conducted output power Measurement

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Duty factor (dBm)	Output Power Limit	
									(dBm)	dBm+10log(BW)
42	5210	--	2.66	2.12	2.15	2.33	8.34	--	24.68	--
155	5775	--	9.46	10.43	10.58	10.68	16.33	--	24.68	--

Note:
1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW)+ Chain C(mW)+ Chain D(mW))
2. 99% Bandwidth is the bandwidth of chain A or B or C or D whichever is less bandwidth, output power limitation is more stringent.

4. Peak Power Spectral Density

4.1. Test Setup



4.2. Limits

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 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, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, 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, 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. Fixed point-topoint 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 mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.+

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum 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, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, 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, 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 UNII 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.

The maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.3. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.
The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.
SA-1 method is selected to run the test.
For the band 5.725-5.85 GHz, Scale the observed power level to an equivalent value in 500 kHz by adjusting (increase) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (500 kHz/100 kHz) = 6.98 dB.

4.4. Test Result of Peak Power Spectral Density

Product : AX3200 SMART ROUTER
Test Item : Peak Power Spectral Density
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-CDD

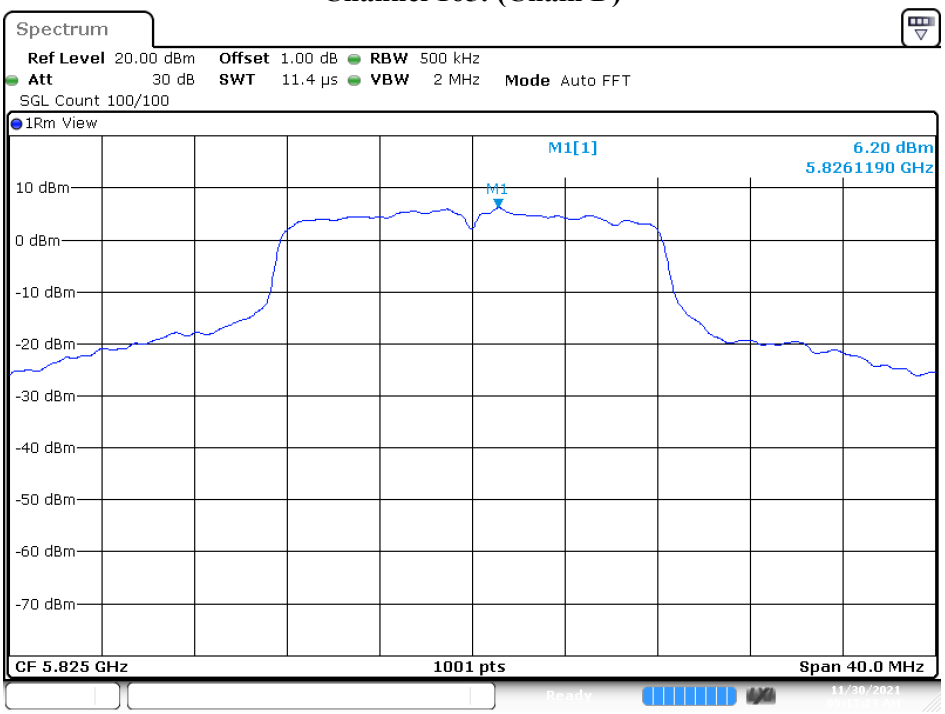
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
36	5180	A	4.33	0.71	11.06	11.68	Pass
		B	4.37	0.71	11.10		Pass
		C	4.04	0.71	10.77		Pass
		D	4.11	0.71	10.84		Pass
44	5220	A	4.54	0.71	11.27	11.68	Pass
		B	4.61	0.71	11.34		Pass
		C	4.56	0.71	11.29		Pass
		D	4.00	0.71	10.73		Pass
48	5240	A	4.63	0.71	11.36	11.68	Pass
		B	4.44	0.71	11.17		Pass
		C	4.39	0.71	11.12		Pass
		D	4.82	0.71	11.55		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	A	4.24	0.00	0.71	10.97	24.68	Pass
		B	5.22	0.00	0.71	11.95		Pass
		C	4.80	0.00	0.71	11.53		Pass
		D	5.55	0.00	0.71	12.28		Pass
157	5785	A	3.89	0.00	0.71	10.62	24.68	Pass
		B	4.52	0.00	0.71	11.25		Pass
		C	4.66	0.00	0.71	11.39		Pass
		D	5.24	0.00	0.71	11.97		Pass
165	5825	A	4.65	0.00	0.71	11.38	24.68	Pass
		B	5.87	0.00	0.71	12.60		Pass
		C	5.51	0.00	0.71	12.24		Pass
		D	6.20	0.00	0.71	12.93		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 165: (Chain D)



Date: 30.NOV.2021 09:13:24

Product : AX3200 SMART ROUTER
Test Item : Peak Power Spectral Density
Test Mode : Mode 2: Transmit (802.11ax-20BW 34.4Mbps) -CDD

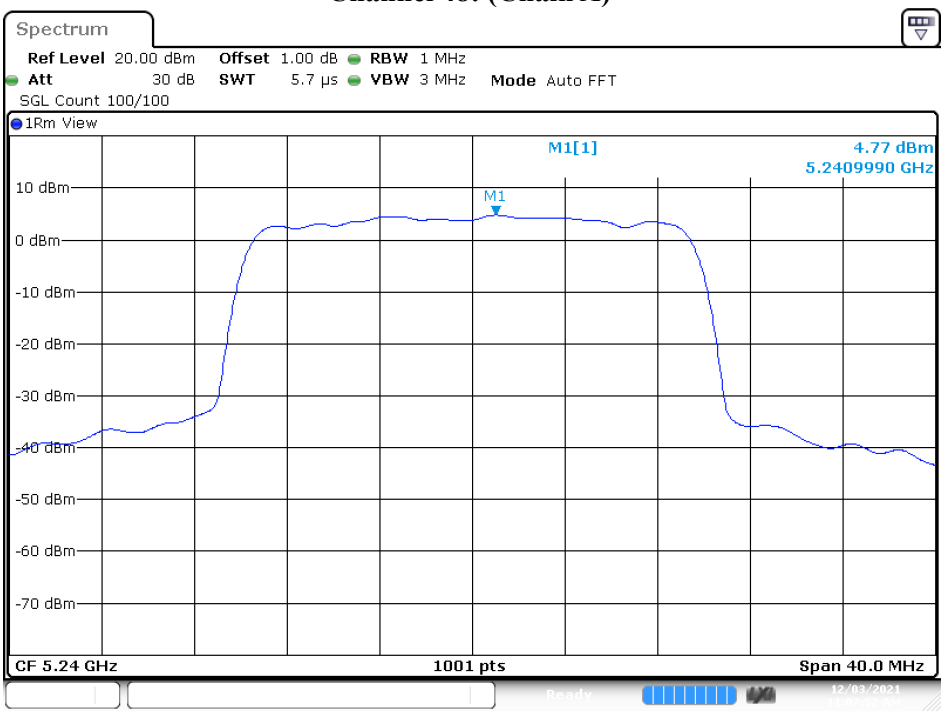
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
36	5180	A	2.80	0.86	9.68	11.68	Pass
		B	2.86	0.86	9.74		Pass
		C	3.32	0.86	10.20		Pass
		D	2.99	0.86	9.87		Pass
44	5220	A	4.19	0.86	11.07	11.68	Pass
		B	4.28	0.86	11.16		Pass
		C	4.45	0.86	11.33		Pass
		D	3.92	0.86	10.80		Pass
48	5240	A	4.77	0.86	11.65	11.68	Pass
		B	4.38	0.86	11.26		Pass
		C	4.27	0.86	11.15		Pass
		D	4.41	0.86	11.29		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	A	0.05	0.00	0.86	6.93	24.68	Pass
		B	0.17	0.00	0.86	7.05		Pass
		C	1.22	0.00	0.86	8.10		Pass
		D	1.17	0.00	0.86	8.05		Pass
157	5785	A	-0.42	0.00	0.86	6.46	24.68	Pass
		B	-0.90	0.00	0.86	5.98		Pass
		C	-1.67	0.00	0.86	5.21		Pass
		D	-3.40	0.00	0.86	3.48		Pass
165	5825	A	1.04	0.00	0.86	7.92	24.68	Pass
		B	1.19	0.00	0.86	8.07		Pass
		C	2.08	0.00	0.86	8.96		Pass
		D	1.69	0.00	0.86	8.57		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 48: (Chain A)



Date: 3.DEC.2021 11:07:53

Product : AX3200 SMART ROUTER
Test Item : Peak Power Spectral Density
Test Mode : Mode 3: Transmit (802.11ax-40MBW 68.8Mbps) -CDD

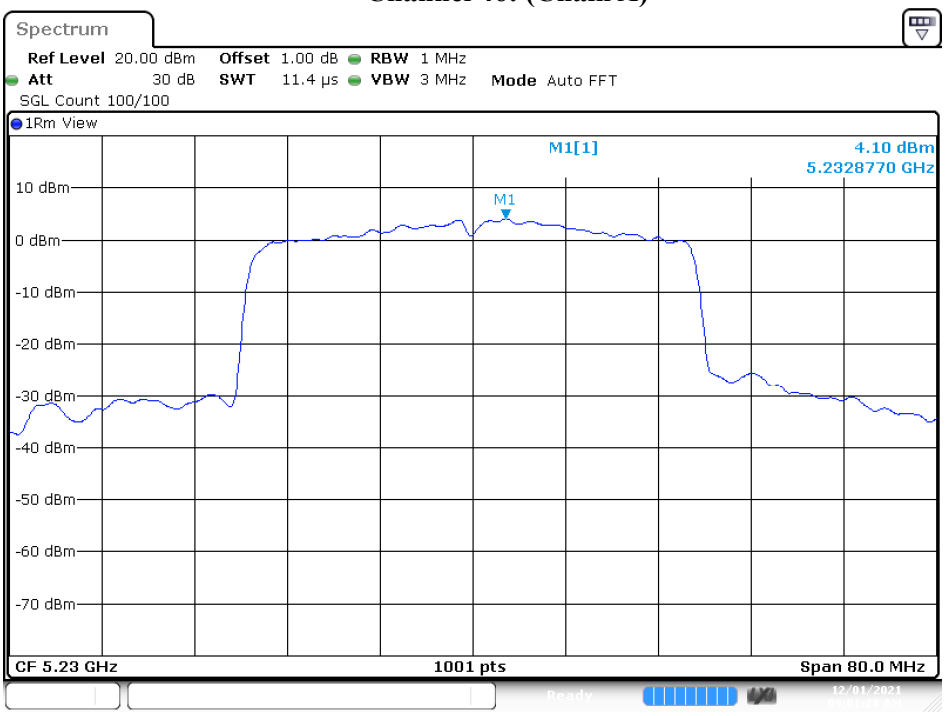
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
38	5190	A	-2.61	1.40	4.81	11.68	Pass
		B	-3.44	1.40	3.98		Pass
		C	-2.34	1.40	5.08		Pass
		D	-2.63	1.40	4.79		Pass
46	5230	A	4.10	1.40	11.52	11.68	Pass
		B	3.62	1.40	11.04		Pass
		C	3.63	1.40	11.05		Pass
		D	3.89	1.40	11.31		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
151	5755	A	-0.31	0.00	1.40	7.11	24.68	Pass
		B	-0.69	0.00	1.40	6.73		Pass
		C	-0.50	0.00	1.40	6.92		Pass
		D	0.27	0.00	1.40	7.69		Pass
159	5795	A	1.60	0.00	1.40	9.02	24.68	Pass
		B	1.36	0.00	1.40	8.78		Pass
		C	1.41	0.00	1.40	8.83		Pass
		D	1.54	0.00	1.40	8.96		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 46: (Chain A)



Date: 1.DEC.2021 09:01:28

Product : AX3200 SMART ROUTER
Test Item : Peak Power Spectral Density
Test Mode : Mode 4: Transmit (802.11ax-80MBW 144Mbps) -CDD

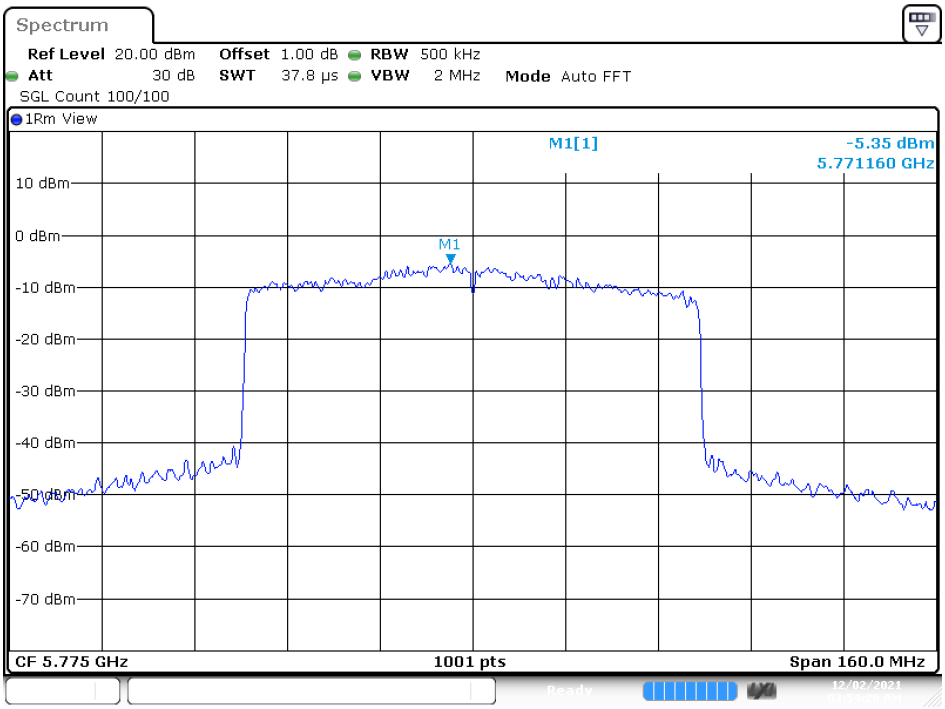
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
42	5210	A	-9.63	2.29	-1.32	11.68	Pass
		B	-10.45	2.29	-2.14		Pass
		C	-11.11	2.29	-2.80		Pass
		D	-11.31	2.29	-3.00		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Duty factor (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
155	5775	A	-6.21	0.00	2.29	2.10	24.68	Pass
		B	-5.87	0.00	2.29	2.44		Pass
		C	-6.05	0.00	2.29	2.26		Pass
		D	-5.35	0.00	2.29	2.96		Pass

Note:
The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 155: (Chain D)

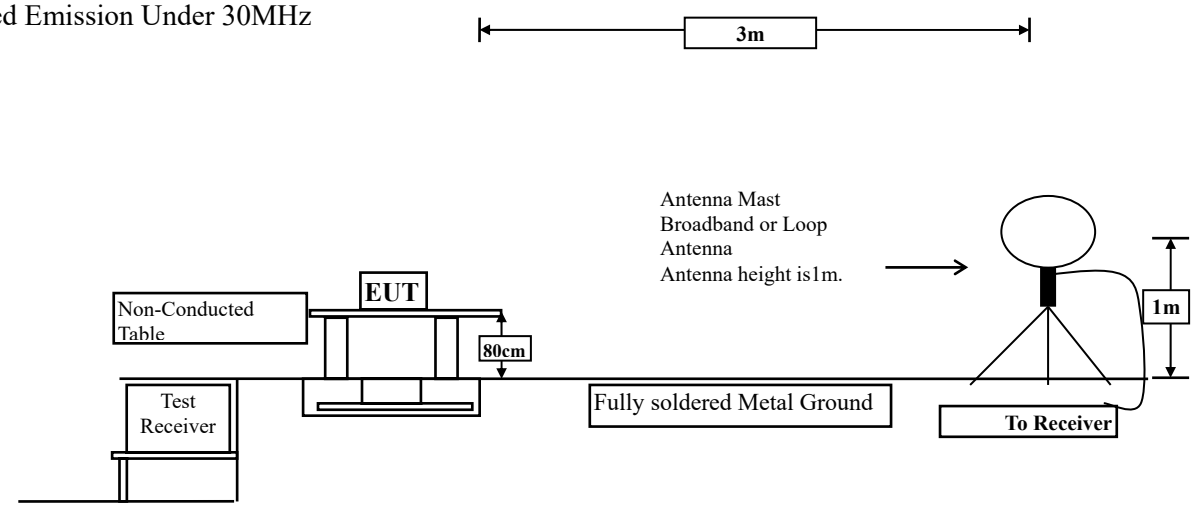


Date: 2.DEC.2021 03:54:29

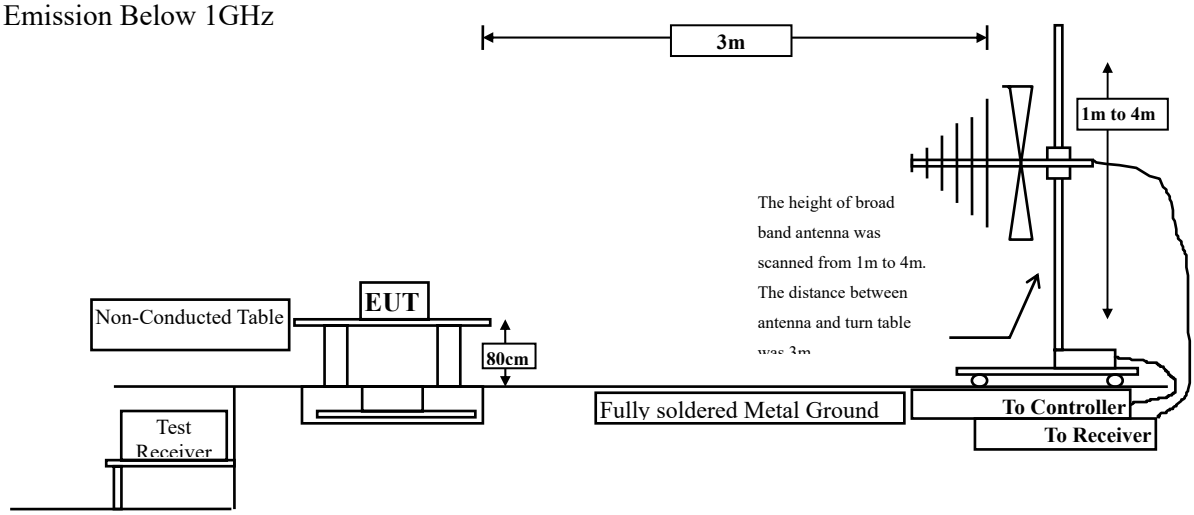
5. Radiated Emission

5.1. Test Setup

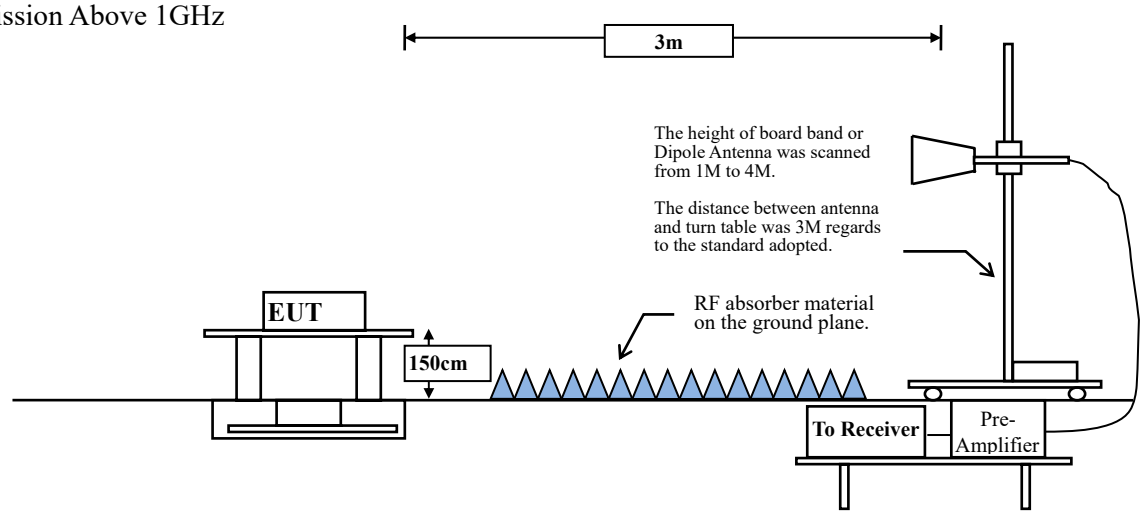
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



5.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV/m) = 20 log E field strength (uV/m)

5.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW ≥ 3MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW = 10Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

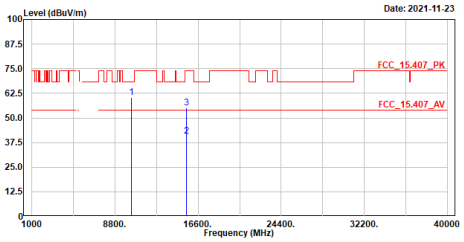
5GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 a	85.00	1.3600	735	1000
802.11 ax20	81.97	1.0000	1000	2000
802.11 ax40	72.48	0.5400	1852	2000
802.11 ax80	59.04	0.2940	3401	5000

Note: Duty Cycle Refer to Section 8

5.4. Test Result of Radiated Emission

CDD:

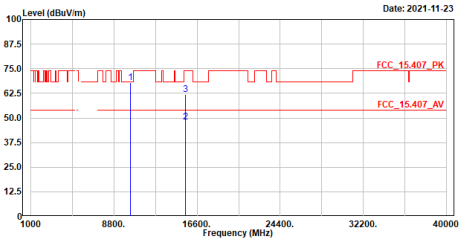
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_a_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10360.000	60.55	68.22	-7.67	63.62	-3.07	Peak
2	15540.000	40.59	54.00	-13.41	37.75	2.84	Average
3	15540.000	54.96	74.00	-19.04	52.11	2.85	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

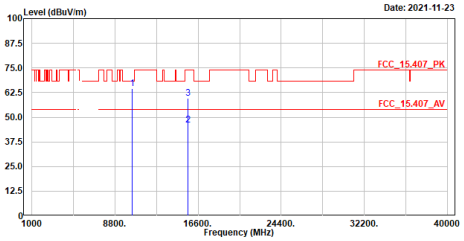
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_a_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10360.000	67.83	68.22	-0.39	70.90	-3.07	Peak
2	15540.000	48.05	54.00	-5.95	45.21	2.84	Average
3	15540.000	61.84	74.00	-12.16	59.01	2.83	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

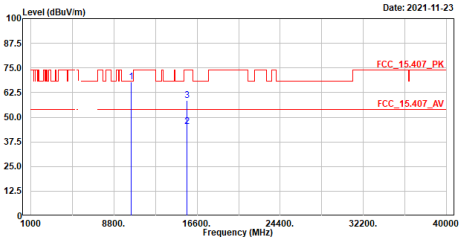
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_a_5220MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10440.000	64.44	68.22	-3.78	67.34	-2.90	Peak
2	15660.000	45.96	54.00	-8.04	42.67	3.29	Average
3	15660.000	59.80	74.00	-14.20	56.51	3.29	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

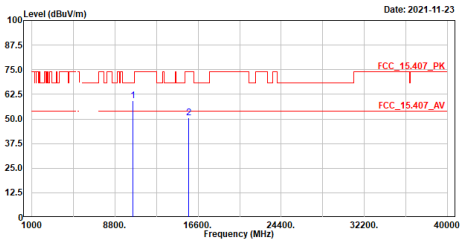
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_a_5220MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10440.000	67.85	68.22	-0.37	70.75	-2.90	Peak
2	15660.000	45.25	54.00	-8.75	41.96	3.29	Average
3	15660.000	58.51	74.00	-15.49	55.22	3.29	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

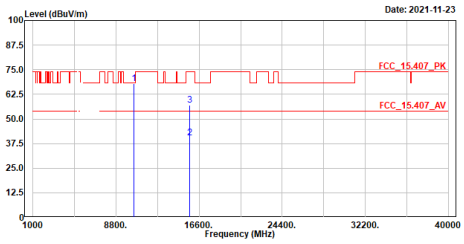
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5240MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10480.000	59.14	68.22	-9.08	62.04	-2.90	Peak
2	15720.000	50.66	74.00	-23.34	47.24	3.42	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

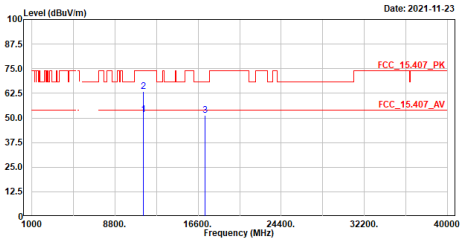
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5240MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10480.000	67.95	68.22	-0.27	70.85	-2.90	Peak
2	15720.000	40.46	54.00	-13.54	37.06	3.40	Average
3	15720.000	57.09	74.00	-16.91	53.69	3.40	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

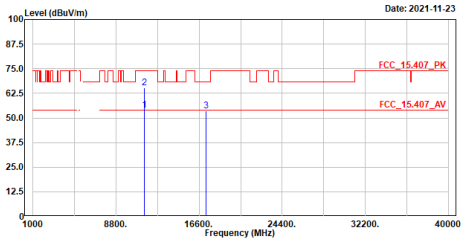
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5745MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11490.000	51.82	54.00	-2.18	53.22	-1.40	Average
2	11490.000	63.41	74.00	-10.59	64.81	-1.40	Peak
3	17235.000	51.32	68.22	-16.90	45.09	6.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

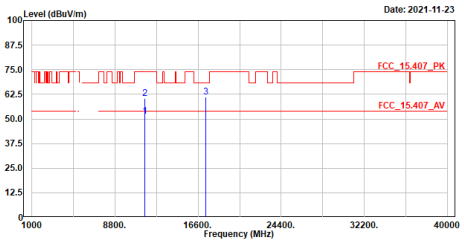
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5745MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11490.000	53.86	54.00	-0.14	55.26	-1.40	Average
2	11490.000	65.22	74.00	-8.78	66.62	-1.40	Peak
3	17235.000	53.76	68.22	-14.46	47.53	6.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

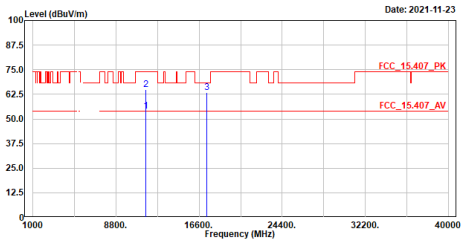
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5785MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11570.000	51.48	54.00	-2.52	52.67	-1.19	Average
2	11570.000	60.48	74.00	-13.52	61.67	-1.19	Peak
3	17355.000	61.28	68.22	-6.94	54.93	6.35	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

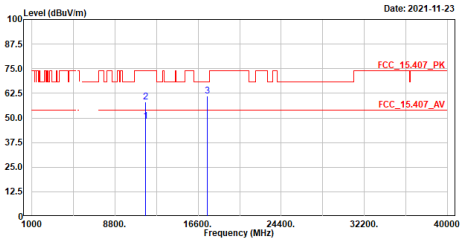
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5785MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11570.000	53.83	54.00	-0.17	55.02	-1.19	Average
2	11570.000	64.73	74.00	-9.27	65.92	-1.19	Peak
3	17355.000	63.29	68.22	-4.93	56.94	6.35	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

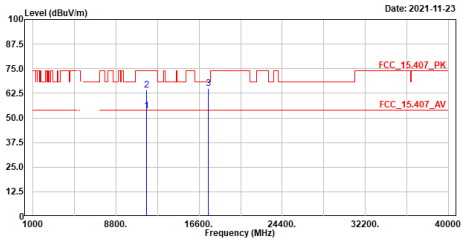
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5825MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11650.000	48.22	54.00	-5.78	49.18	-0.96	Average
2	11650.000	58.17	74.00	-15.83	59.13	-0.96	Peak
3	17475.000	61.19	68.22	-7.03	54.78	6.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

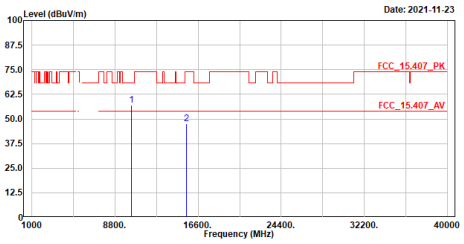
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5825MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11650.000	53.73	54.00	-0.27	54.69	-0.96	Average
2	11650.000	64.09	74.00	-9.91	65.04	-0.95	Peak
3	17475.000	64.89	68.22	-3.33	58.49	6.40	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

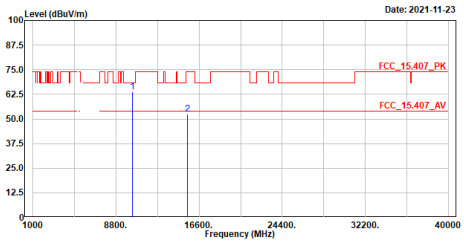
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5180MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10360.000	56.95	68.22	-11.27	60.04	-3.09	Peak
2	15540.000	47.69	74.00	-26.31	44.84	2.85	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

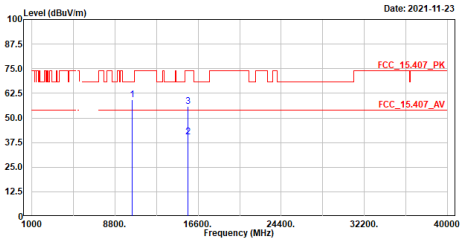
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5180MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10360.000	63.73	68.22	-4.49	66.81	-3.08	Peak
2	15540.000	52.55	74.00	-21.45	49.71	2.84	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

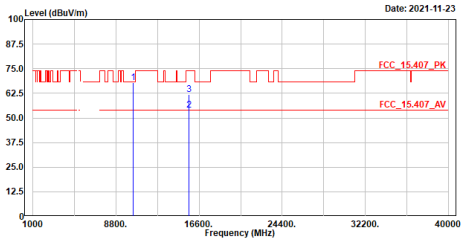
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5220MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10440.000	59.19	68.22	-9.03	62.09	-2.90	Peak
2	15660.000	40.30	54.00	-13.70	37.01	3.29	Average
3	15660.000	55.97	74.00	-18.03	52.69	3.28	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

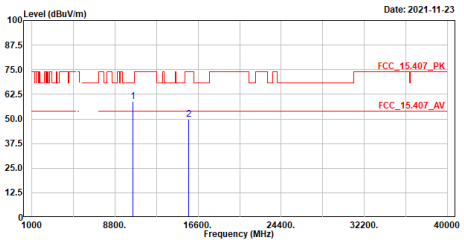
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_ax20_5220MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10440.000	67.85	68.22	-0.37	70.75	-2.90	Peak
2	15660.000	53.88	54.00	-0.12	50.59	3.29	Average
3	15660.000	61.73	74.00	-12.27	58.44	3.29	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

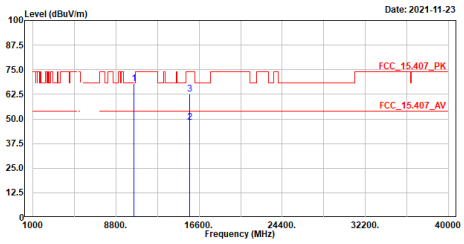
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5240MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10480.000	58.89	68.22	-9.33	61.79	-2.90	Peak
2	15720.000	49.73	74.00	-24.27	46.33	3.40	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

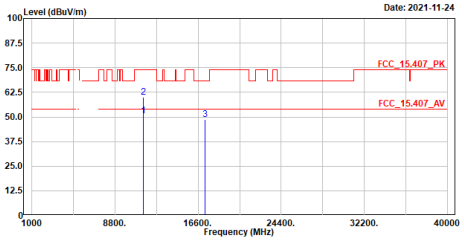
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5240MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10480.000	68.01	68.22	-0.21	70.91	-2.90	Peak
2	15720.000	48.43	54.00	-5.57	45.03	3.40	Average
3	15720.000	62.64	74.00	-11.36	59.24	3.40	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

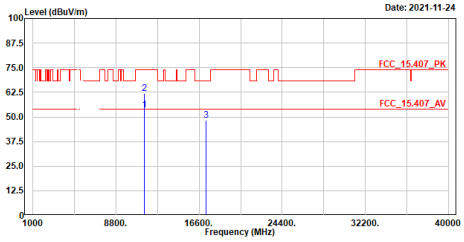
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5745MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11490.000	50.59	54.00	-3.41	51.99	-1.40	Average
2	11490.000	59.94	74.00	-14.06	61.34	-1.40	Peak
3	17235.000	48.50	68.22	-19.72	42.26	6.24	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

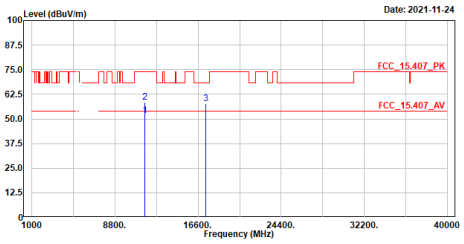
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5745MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11490.000	53.71	54.00	-0.29	55.11	-1.40	Average
2	11490.000	61.83	74.00	-12.17	63.24	-1.41	Peak
3	17235.000	48.27	68.22	-19.95	41.83	6.44	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

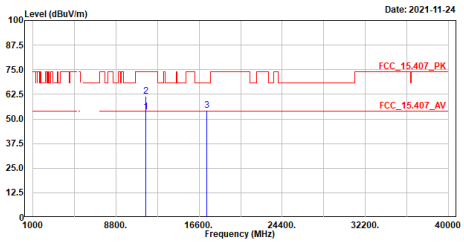
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5785MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11570.000	51.70	54.00	-2.30	52.89	-1.19	Average
2	11570.000	58.67	74.00	-15.33	59.86	-1.19	Peak
3	17355.000	57.87	68.22	-10.35	51.52	6.35	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

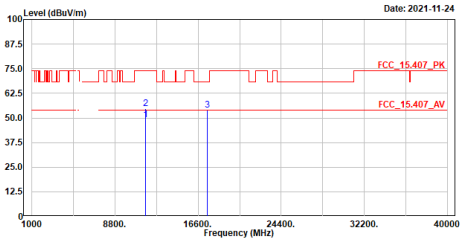
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5785MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11570.000	53.58	54.00	-0.42	54.77	-1.19	Average
2	11570.000	61.51	74.00	-12.49	62.71	-1.20	Peak
3	17355.000	54.17	68.22	-14.05	47.82	6.35	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

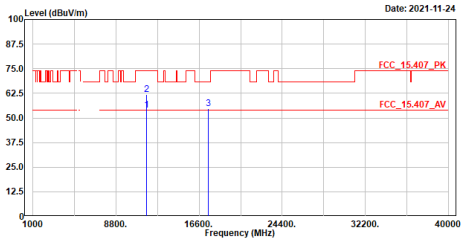
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5825MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11650.000	49.02	54.00	-4.98	49.98	-0.96	Average
2	11650.000	54.82	74.00	-19.18	55.77	-0.95	Peak
3	17475.000	54.08	68.22	-14.14	47.67	6.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

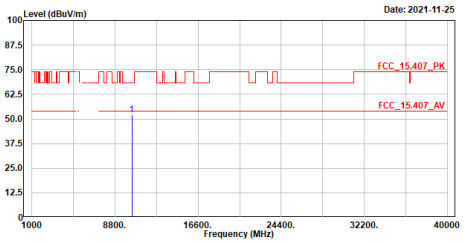
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5825MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11650.000	53.97	54.00	-0.03	54.93	-0.96	Average
2	11650.000	61.82	74.00	-12.18	62.78	-0.96	Peak
3	17475.000	54.56	68.22	-13.66	48.17	6.39	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

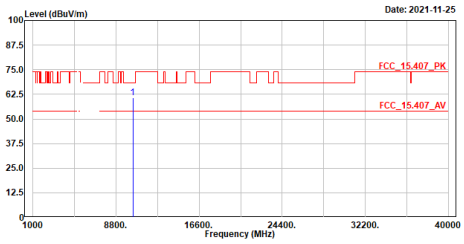
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5190MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10380.000	52.08	68.22	-16.14	55.08	-3.00	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

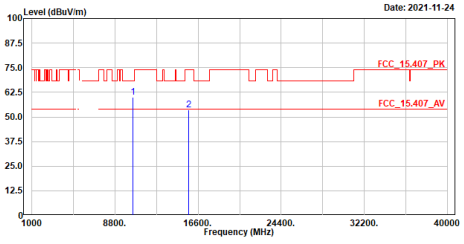
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_ax40_5190MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10380.000	60.59	68.22	-7.63	63.57	-2.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

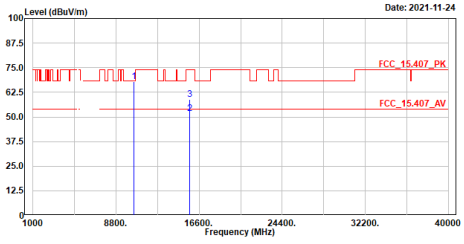
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5230MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10460.000	60.18	68.22	-8.04	63.08	-2.90	Peak
2	15690.000	53.51	74.00	-20.49	50.14	3.37	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

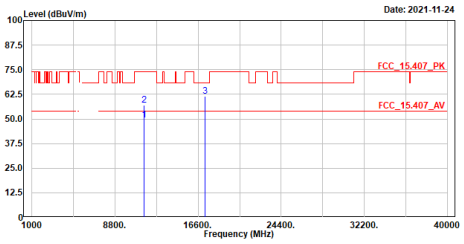
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5230MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10460.000	67.96	68.22	-0.26	70.86	-2.90	Peak
2	15690.000	51.58	54.00	-2.42	48.21	3.37	Average
3	15690.000	59.05	74.00	-14.95	55.72	3.33	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

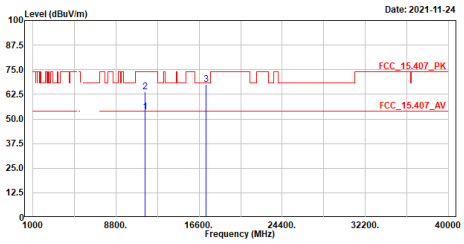
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5755MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11510.000	49.25	54.00	-4.75	50.61	-1.36	Average
2	11510.000	57.07	74.00	-16.93	58.45	-1.38	Peak
3	17265.000	61.50	68.22	-6.72	55.20	6.30	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

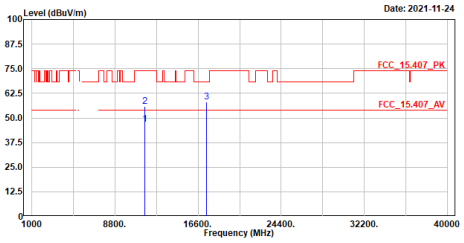
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_ax40_5755MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11510.000	53.56	54.00	-0.44	54.92	-1.36	Average
2	11510.000	63.86	74.00	-10.14	65.18	-1.32	Peak
3	17265.000	67.47	68.22	-0.75	61.18	6.29	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

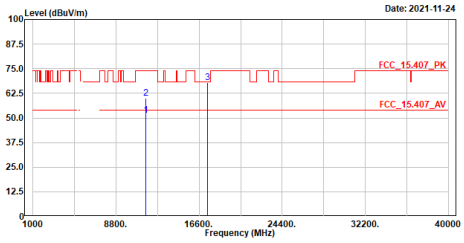
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5795MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11590.000	46.90	54.00	-7.10	48.02	-1.12	Average
2	11590.000	55.66	74.00	-18.34	56.78	-1.12	Peak
3	17385.000	57.96	68.22	-10.26	51.63	6.33	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

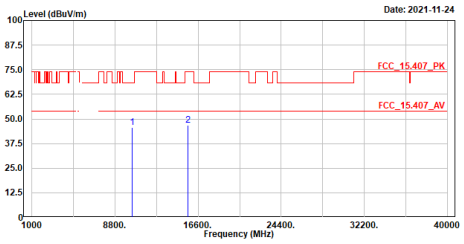
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_ax40_5795MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11590.000	51.37	54.00	-2.63	52.49	-1.12	Average
2	11590.000	60.11	74.00	-13.89	61.23	-1.12	Peak
3	17385.000	67.94	68.22	-0.28	61.62	6.32	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

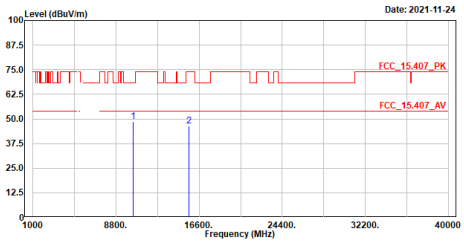
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_ax80_5210MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10420.000	45.47	68.22	-22.75	48.37	-2.90	Peak
2	15630.000	46.67	74.00	-27.33	43.53	3.14	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

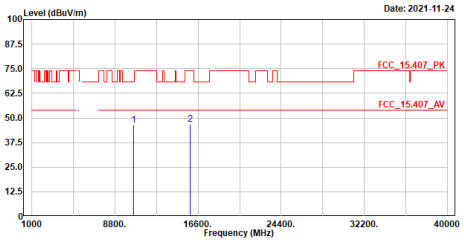
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_ax80_5210MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10420.000	48.79	68.22	-19.43	51.69	-2.90	Peak
2	15630.000	46.50	74.00	-27.50	43.30	3.20	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

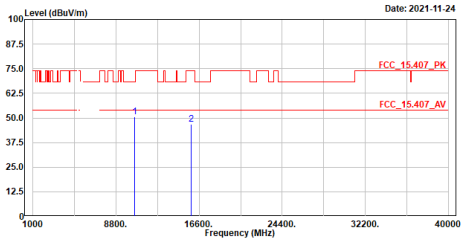
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_ax80_5290MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10580.000	46.29	68.22	-21.93	48.89	-2.60	Peak
2	15870.000	46.82	74.00	-27.18	43.19	3.63	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

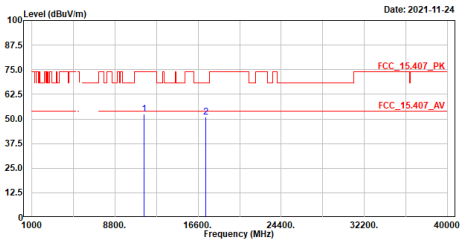
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_ax80_5290MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10580.000	50.60	68.22	-17.62	53.23	-2.63	Peak
2	15870.000	46.65	74.00	-27.35	43.03	3.62	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

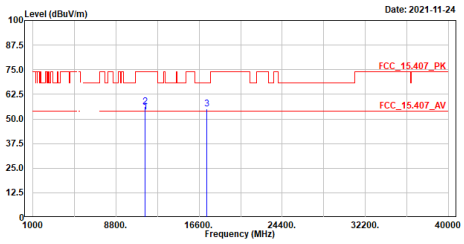
Site :966-3
Condition :3m ,HORIZONTAL
Mode :TX_ax80_5775MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11550.000	52.53	74.00	-21.47	53.73	-1.20	Peak
2	17325.000	51.03	68.22	-17.19	44.69	6.34	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

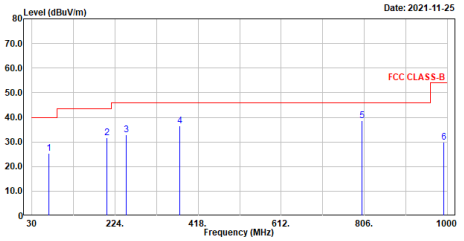
Site :966-3
Condition :3m ,VERTICAL
Mode :TX_ax80_5775MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11550.000	53.54	54.00	-0.46	54.79	-1.25	Average
2	11550.000	56.32	74.00	-17.68	57.63	-1.31	Peak
3	17325.000	55.13	68.22	-13.09	48.78	6.35	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

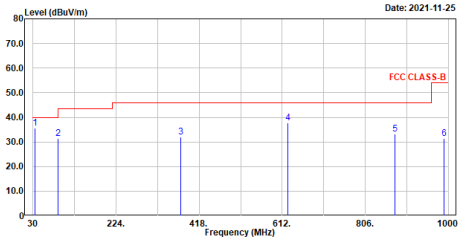
Site :966-1
Condition :3m ,Horizontal
Mode :TX_ax80_5775MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	69.770	25.23	40.00	-14.77	39.41	-14.18	QP
2	204.600	31.72	43.50	-11.78	46.19	-14.47	QP
3	250.190	32.80	46.00	-13.20	45.62	-12.82	QP
4	375.320	36.51	46.00	-9.49	45.92	-9.41	QP
5	800.180	38.77	46.00	-7.23	40.58	-1.81	QP
6	992.240	29.88	54.00	-24.12	29.69	0.19	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :966-1
Condition :3m ,Vertical
Mode :TX_ax80_5775MHz
TEST BY :Ashton Chiu



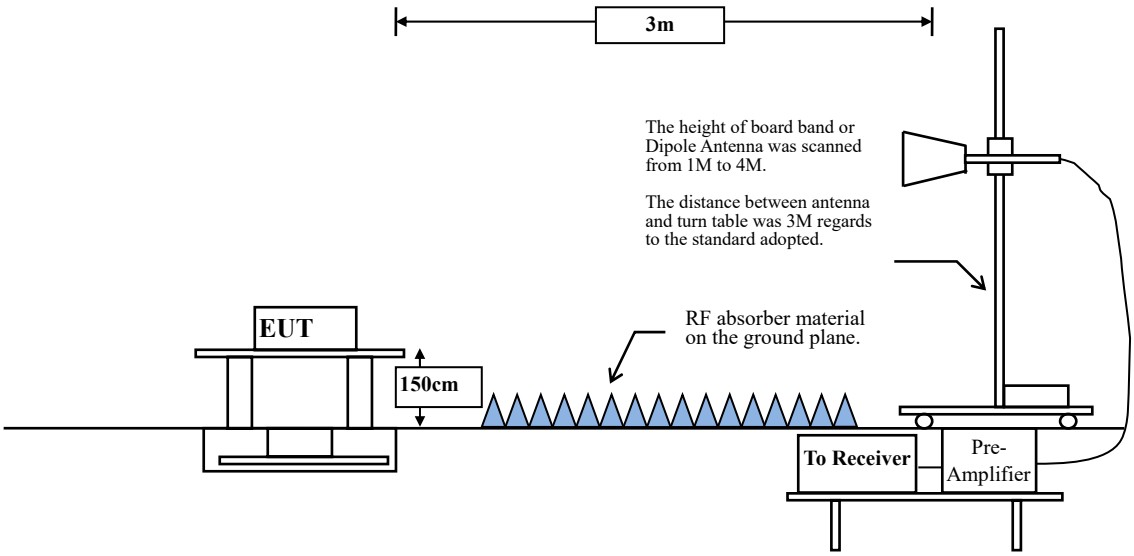
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	34.850	35.73	40.00	-4.27	48.46	-12.73	QP
2	89.170	31.43	43.50	-12.07	49.27	-17.84	QP
3	375.320	32.00	46.00	-14.00	41.41	-9.41	QP
4	625.580	37.87	46.00	-8.13	42.09	-4.22	QP
5	875.840	33.35	46.00	-12.65	34.54	-1.19	QP
6	990.300	31.28	54.00	-22.72	31.06	0.22	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

6. Band Edge

6.1. Test Setup

RF Radiated Measurement:



6.2. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	uV/m @3m	dBμV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dBμV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

6.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.
The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW ≥ 3MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1MHz.

VBW = 10Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

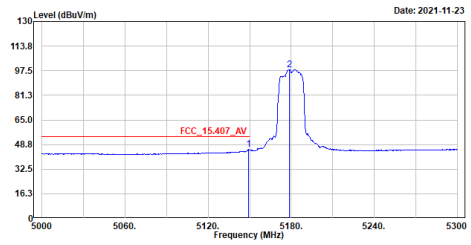
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

5GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 a	85.00	1.3600	735	1000
802.11 ax20	81.97	1.0000	1000	2000
802.11 ax40	72.48	0.5400	1852	2000
802.11 ax80	59.04	0.2940	3401	5000

6.3.1. Test Result of Band Edge

CDD:

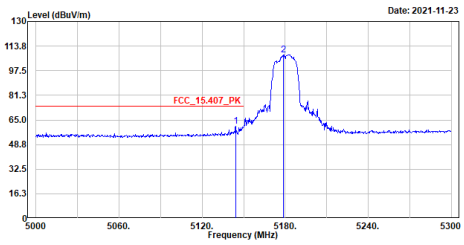
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5149.100	45.50	54.00	-8.50	25.14	20.36	Average
2	5178.800	98.29	------	------	77.82	20.47	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

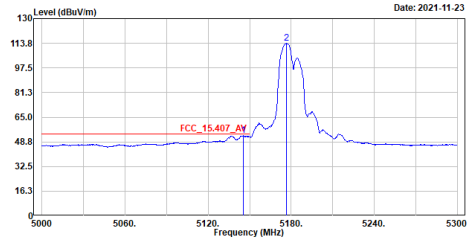
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5144.300	60.63	74.00	-13.37	40.28	20.35	Peak
2	5178.500	108.06	------	------	87.59	20.47	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

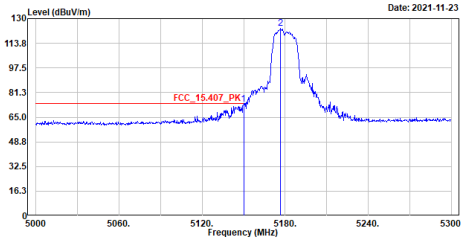
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5145.500	52.75	54.00	-1.25	32.40	20.35	Average
2	5176.700	113.72	------	------	93.26	20.46	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

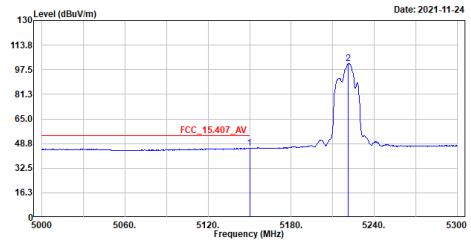
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5150.000	73.60	74.00	-0.40	53.24	20.36	Peak
2	5176.700	123.59	------	------	103.13	20.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

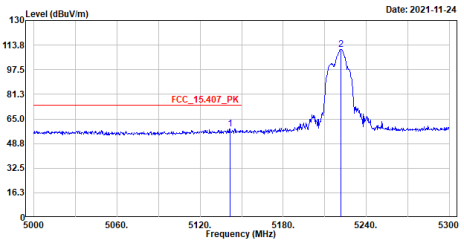
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5150.000	45.64	54.00	-8.36	25.28	20.36	Average
2	5221.100	101.57	------	------	80.90	20.67	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

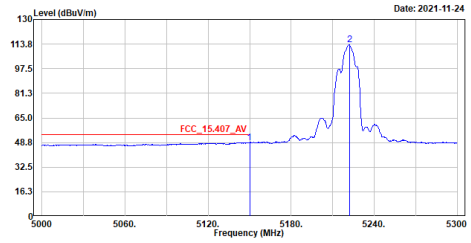
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5141.600	58.61	74.00	-15.39	38.27	20.34	Peak
2	5221.700	111.07	------	------	90.39	20.68	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

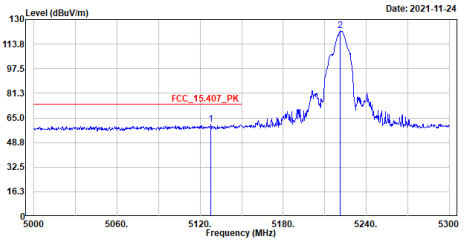
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5150.000	48.69	54.00	-5.31	28.33	20.36	Average
2	5222.000	113.19	------	------	92.51	20.68	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

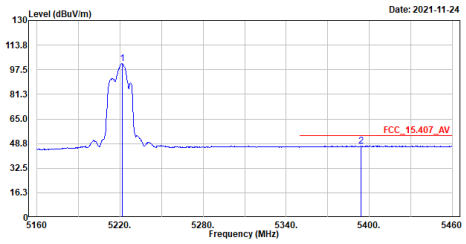
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5127.800	60.60	74.00	-13.40	40.30	20.30	Peak
2	5221.400	122.42	------	------	101.74	20.68	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

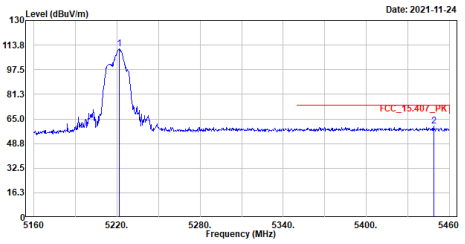
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5221.500	101.43	------	------	80.75	20.68	Average
2	5394.000	47.18	54.00	-6.82	25.90	21.28	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

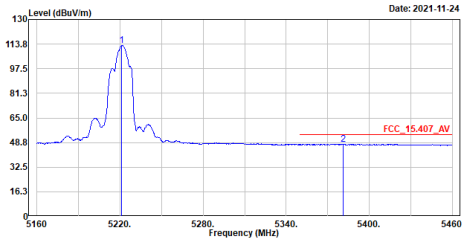
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5221.800	111.20	------	------	90.52	20.68	Peak
2	5448.600	60.49	74.00	-13.51	39.27	21.22	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

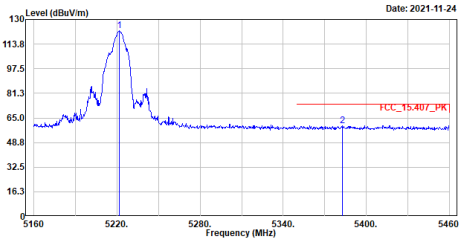
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5220.900	112.88	------	------	92.21	20.67	Average
2	5381.100	47.62	54.00	-6.38	26.42	21.20	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

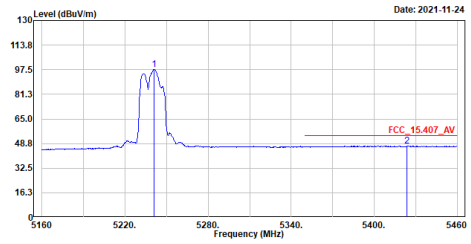
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5221.500	122.47	------	------	101.79	20.68	Peak
2	5382.900	59.90	74.00	-14.10	38.69	21.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

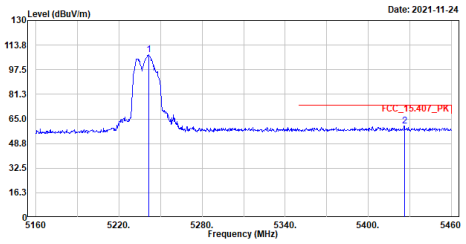
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5241.000	97.76	------	------	76.97	20.79	Average
2	5423.700	47.25	54.00	-6.75	25.98	21.27	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

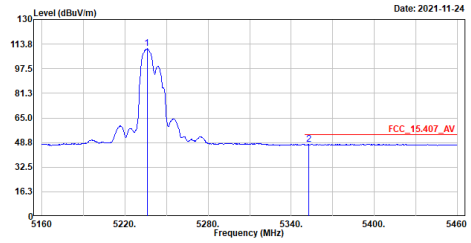
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5241.300	107.29	------	------	86.49	20.80	Peak
2	5426.100	60.14	74.00	-13.86	38.87	21.27	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

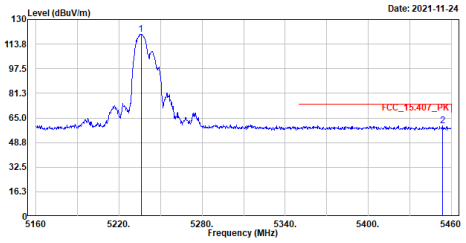
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5235.900	110.66	------	------	89.90	20.76	Average
2	5352.600	47.54	54.00	-6.46	26.50	21.04	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

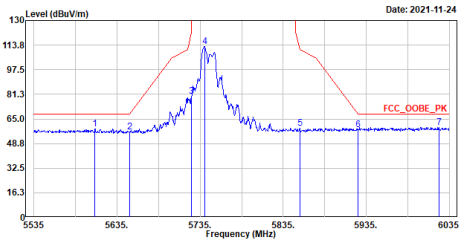
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5235.900	120.36	------	------	99.60	20.76	Peak
2	5453.700	59.93	74.00	-14.07	38.70	21.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

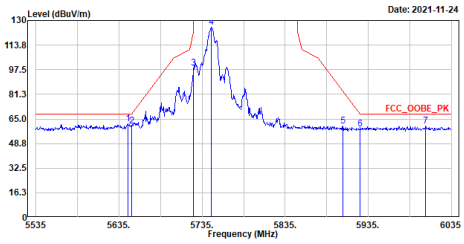
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5745MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5608.500	58.55	68.20	-9.65	36.99	21.56	Peak
2	5650.000	56.63	68.21	-11.58	35.36	21.27	Peak
3	5724.500	79.85	121.06	-41.21	58.10	21.75	Peak
4	5740.500	112.88	------	------	91.05	21.83	Peak
5	5855.000	58.93	110.80	-51.87	36.87	22.06	Peak
6	5925.000	57.93	68.21	-10.28	35.45	22.48	Peak
7	6022.500	59.53	68.20	-8.67	36.79	22.74	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

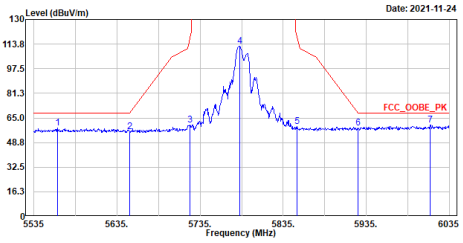
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5745MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5646.000	61.81	68.20	-6.39	40.51	21.30	Peak
2	5650.000	60.40	68.21	-7.81	39.13	21.27	Peak
3	5725.000	98.37	122.20	-23.83	76.62	21.75	Peak
4	5746.500	125.48	------	------	103.62	21.86	Peak
5	5904.500	60.32	83.37	-23.05	37.91	22.41	Peak
6	5925.000	58.42	68.21	-9.79	35.94	22.48	Peak
7	6004.000	60.51	68.20	-7.69	37.85	22.66	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

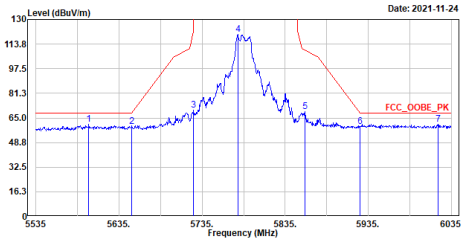
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5785MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5563.500	58.34	68.20	-9.86	36.83	21.51	Peak
2	5650.000	56.03	68.21	-12.18	34.76	21.27	Peak
3	5723.000	60.20	117.64	-57.44	38.46	21.74	Peak
4	5782.500	112.34	------	------	90.42	21.92	Peak
5	5851.500	59.31	118.78	-59.47	37.27	22.04	Peak
6	5925.000	58.18	68.21	-10.03	35.70	22.48	Peak
7	6011.500	60.52	68.20	-7.68	37.82	22.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

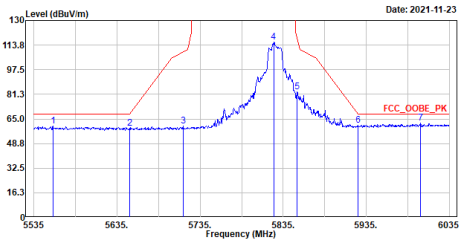
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5785MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5598.500	60.59	68.20	-7.61	38.97	21.62	Peak
2	5650.000	59.12	68.21	-9.09	37.85	21.27	Peak
3	5725.000	70.21	122.20	-51.99	48.46	21.75	Peak
4	5778.000	120.10	------	------	98.19	21.91	Peak
5	5858.500	69.06	109.82	-40.76	46.98	22.08	Peak
6	5925.000	59.58	68.21	-8.63	37.10	22.48	Peak
7	6019.000	60.92	68.20	-7.28	38.19	22.73	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

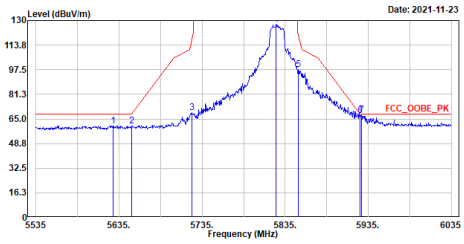
Site :966-3
Condition :3m ,Horizontal
Mode :TX_a_5825MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5558.000	60.37	68.20	-7.83	38.87	21.50	Peak
2	5650.000	58.92	68.21	-9.29	37.65	21.27	Peak
3	5715.000	60.17	109.40	-49.23	38.48	21.69	Peak
4	5823.500	115.73	------	------	93.74	21.99	Peak
5	5852.000	82.84	117.64	-34.80	60.80	22.04	Peak
6	5925.000	60.64	68.21	-7.57	38.16	22.48	Peak
7	6000.000	62.11	68.20	-6.09	39.47	22.64	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

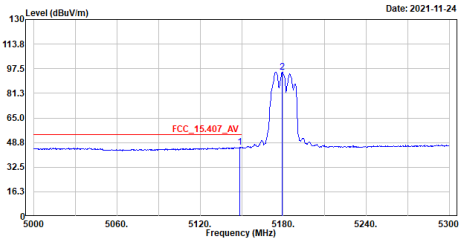
Site :966-3
Condition :3m ,Vertical
Mode :TX_a_5825MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5628.000	60.53	68.20	-7.67	39.10	21.43	Peak
2	5650.000	60.15	68.21	-8.06	38.88	21.27	Peak
3	5722.500	69.26	116.50	-47.24	47.52	21.74	Peak
4	5824.000	127.37	------	------	105.38	21.99	Peak
5	5851.000	97.62	119.92	-22.30	75.58	22.04	Peak
6	5925.000	67.32	68.21	-0.89	44.84	22.48	Peak
7	5926.500	67.92	68.20	-0.28	45.44	22.48	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

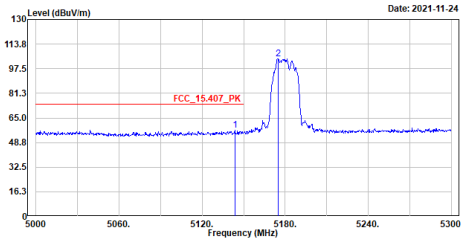
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5148.800	45.72	54.00	-8.28	25.36	20.36	Average
2	5179.100	95.23	------	------	74.76	20.47	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

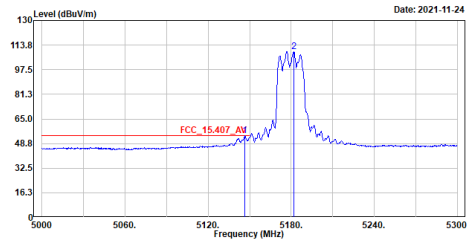
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5143.700	56.81	74.00	-17.19	36.46	20.35	Peak
2	5174.900	104.12	------	------	83.66	20.46	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

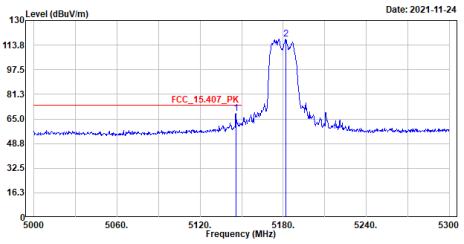
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.700	53.72	54.00	-0.28	33.37	20.35	Average
2	5181.800	109.61	------	------	89.13	20.48	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

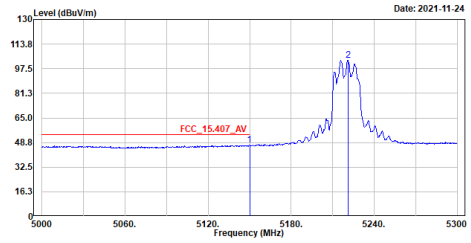
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5180MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5145.800	68.72	74.00	-5.28	48.37	20.35	Peak
2	5181.800	117.69	------	------	97.21	20.48	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

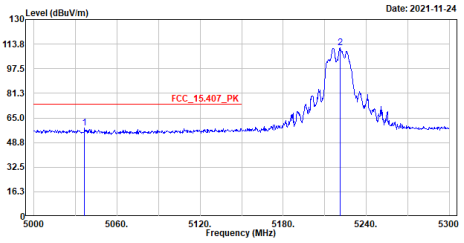
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5150.000	47.00	54.00	-7.00	26.64	20.36	Average
2	5221.100	103.12	------	------	82.45	20.67	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

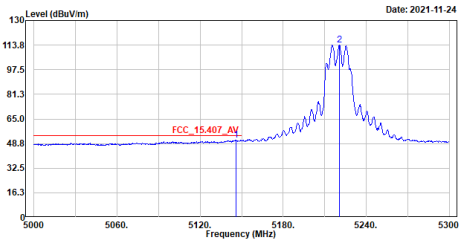
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5036.600	58.47	74.00	-15.53	38.35	20.12	Peak
2	5221.100	111.24	------	------	90.57	20.67	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

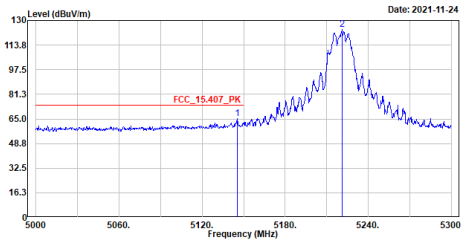
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5145.800	51.17	54.00	-2.83	30.82	20.35	Average
2	5220.800	113.89	------	------	93.22	20.67	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

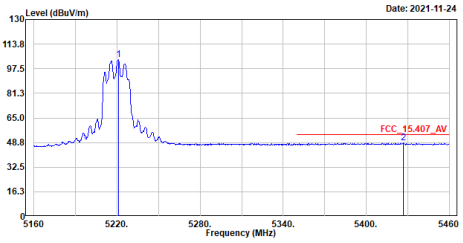
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5220MHz_B1
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5145.500	65.44	74.00	-8.56	45.09	20.35	Peak
2	5221.100	124.15	------	------	103.48	20.67	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

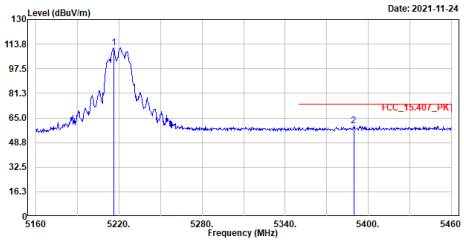
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5220.900	103.43	------	------	82.76	20.67	Average
2	5426.700	48.49	54.00	-5.51	27.23	21.26	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

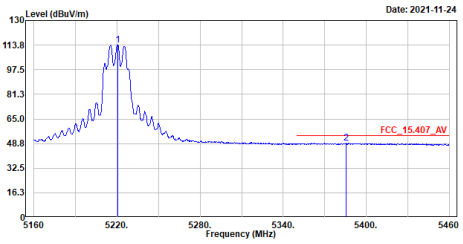
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5216.100	111.28	------	------	90.64	20.64	Peak
2	5389.500	59.84	74.00	-14.16	38.58	21.26	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

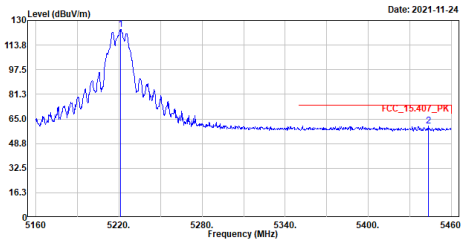
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5220.600	113.71	------	------	93.04	20.67	Average
2	5385.600	48.92	54.00	-5.08	27.69	21.23	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

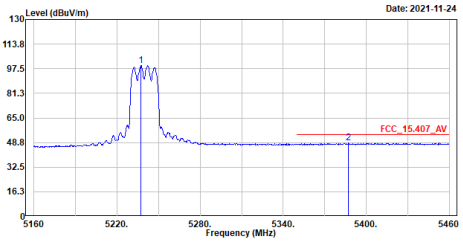
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5220MHz_B2
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5221.200	124.11	------	------	103.44	20.67	Peak
2	5443.500	60.36	74.00	-13.64	39.13	21.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

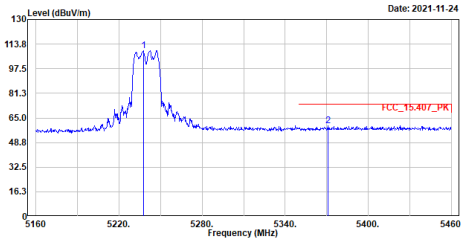
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5237.400	99.49	------	------	78.72	20.77	Average
2	5387.100	48.35	54.00	-5.65	27.10	21.25	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

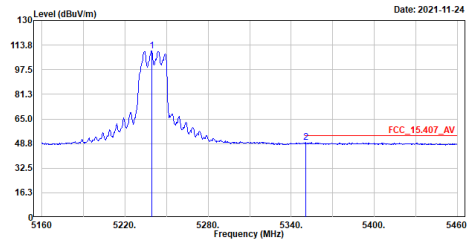
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5237.700	109.29	------	------	88.52	20.77	Peak
2	5370.900	59.96	74.00	-14.04	38.82	21.14	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

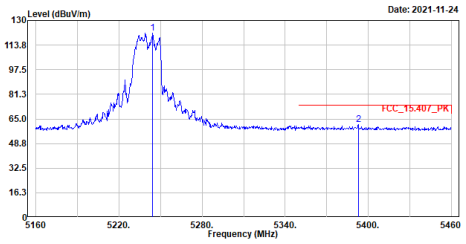
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5239.200	110.09	------	------	89.30	20.79	Average
2	5350.500	49.39	54.00	-4.61	28.36	21.03	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

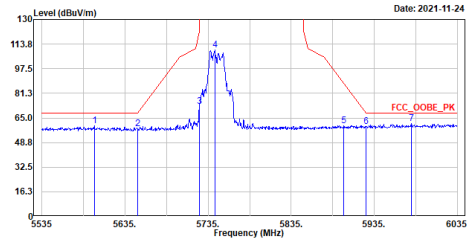
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5240MHz
TEST BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5244.300	121.61	------	------	100.80	20.81	Peak
2	5392.800	61.34	74.00	-12.66	40.07	21.27	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

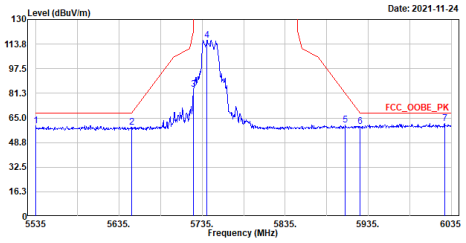
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5745MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5598.000	59.67	68.20	-8.53	38.05	21.62	Peak
2	5650.000	57.89	68.21	-10.32	36.62	21.27	Peak
3	5725.000	72.41	122.20	-49.79	50.66	21.75	Peak
4	5743.000	109.87	------	------	88.03	21.84	Peak
5	5898.000	60.06	88.18	-28.12	37.68	22.38	Peak
6	5925.000	59.32	68.21	-8.89	36.84	22.48	Peak
7	5979.500	61.13	68.20	-7.07	38.52	22.61	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

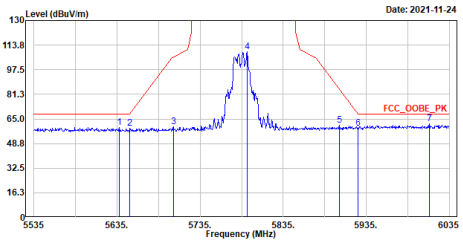
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5745MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5535.000	59.87	68.20	-8.33	38.42	21.45	Peak
2	5650.000	58.74	68.21	-9.47	37.47	21.27	Peak
3	5725.000	83.68	122.20	-38.52	61.93	21.75	Peak
4	5741.000	116.37	------	------	94.54	21.83	Peak
5	5907.500	60.17	81.15	-20.98	37.75	22.42	Peak
6	5925.000	59.30	68.21	-8.91	36.82	22.48	Peak
7	6027.000	61.43	68.20	-6.77	38.66	22.77	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

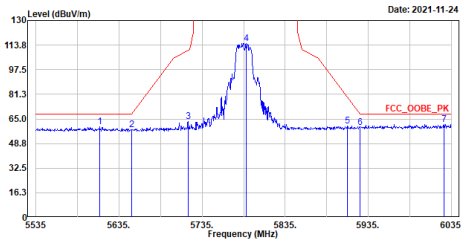
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5785MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5638.000	59.36	68.20	-8.84	38.00	21.36	Peak
2	5650.000	59.06	68.21	-9.15	37.79	21.27	Peak
3	5703.000	59.94	106.04	-46.10	38.30	21.64	Peak
4	5791.500	109.25	------	------	87.32	21.93	Peak
5	5903.000	60.61	84.48	-23.87	38.21	22.40	Peak
6	5925.000	58.99	68.21	-9.22	36.51	22.48	Peak
7	6011.000	61.65	68.20	-6.55	38.96	22.69	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

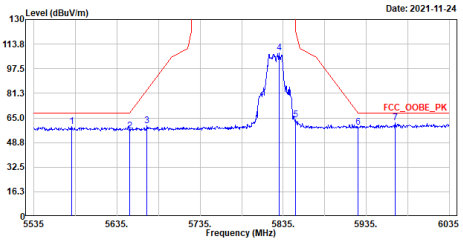
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5785MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5612.000	59.82	68.20	-8.38	38.29	21.53	Peak
2	5650.000	57.89	68.21	-10.32	36.62	21.27	Peak
3	5718.000	63.21	110.24	-47.03	41.50	21.71	Peak
4	5788.000	114.93	------	------	93.00	21.93	Peak
5	5910.000	60.34	79.31	-18.97	37.91	22.43	Peak
6	5925.000	59.45	68.21	-8.76	36.97	22.48	Peak
7	6026.000	61.30	68.20	-6.90	38.54	22.76	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

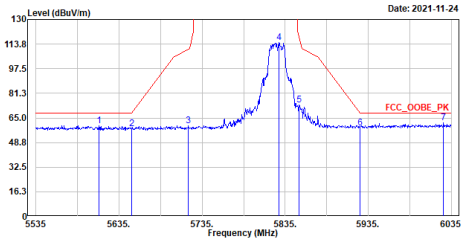
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax20_5825MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5580.500	59.57	68.20	-8.63	38.01	21.56	Peak
2	5650.000	56.53	68.21	-11.68	35.26	21.27	Peak
3	5671.000	59.62	83.74	-24.12	38.20	21.42	Peak
4	5830.500	107.94	------	------	85.95	21.99	Peak
5	5850.000	63.79	122.20	-58.41	41.77	22.02	Peak
6	5925.000	58.88	68.21	-9.33	36.40	22.48	Peak
7	5970.000	61.92	68.20	-6.28	39.32	22.60	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

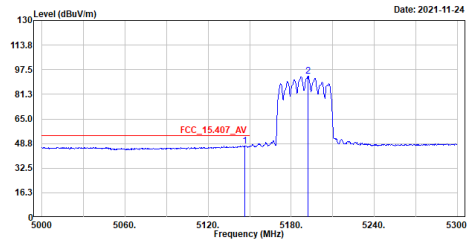
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax20_5825MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5611.000	59.81	68.20	-8.39	38.27	21.54	Peak
2	5650.000	57.65	68.21	-10.56	36.38	21.27	Peak
3	5718.500	60.05	110.38	-50.33	38.34	21.71	Peak
4	5827.500	114.67	------	------	92.68	21.99	Peak
5	5852.000	73.38	117.64	-44.26	51.34	22.04	Peak
6	5925.000	58.48	68.21	-9.73	36.00	22.48	Peak
7	6025.500	61.65	68.20	-6.55	38.89	22.76	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

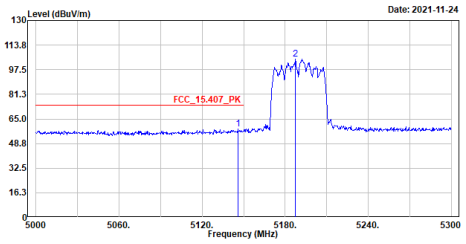
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5190MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.700	47.22	54.00	-6.78	26.87	20.35	Average
2	5192.300	93.25	------	------	72.73	20.52	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

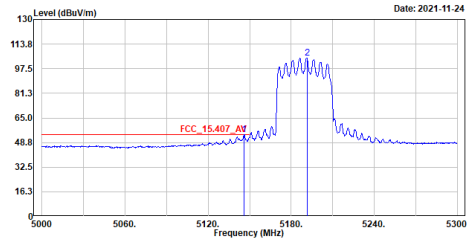
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5190MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5145.800	58.54	74.00	-15.46	38.19	20.35	Peak
2	5187.500	104.70	------	------	84.19	20.51	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

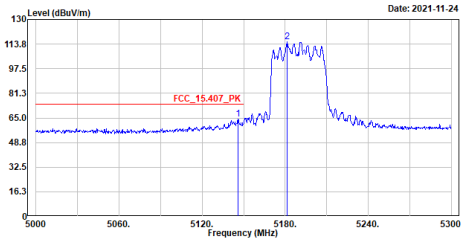
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5190MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.100	53.75	54.00	-0.25	33.40	20.35	Average
2	5191.400	104.43	------	------	83.92	20.51	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

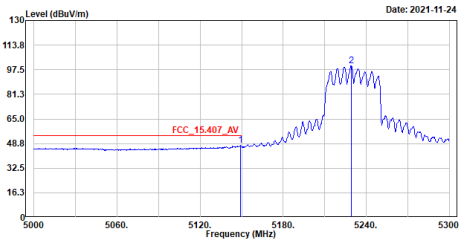
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5190MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5145.800	64.42	74.00	-9.58	44.07	20.35	Peak
2	5181.500	115.16	------	------	94.68	20.48	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

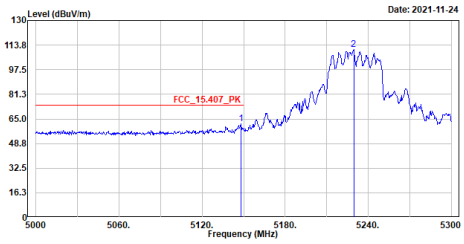
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5230MHz_B1
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5149.100	47.38	54.00	-6.62	27.02	20.36	Average
2	5229.200	100.14	------	------	79.41	20.73	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

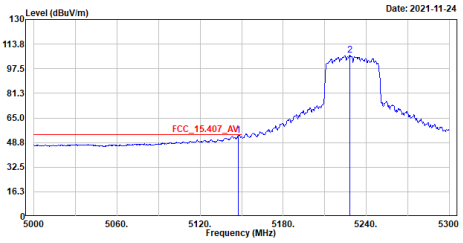
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5230MHz_B1
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5147.900	61.86	74.00	-12.14	41.50	20.36	Peak
2	5229.500	110.79	------	------	90.06	20.73	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

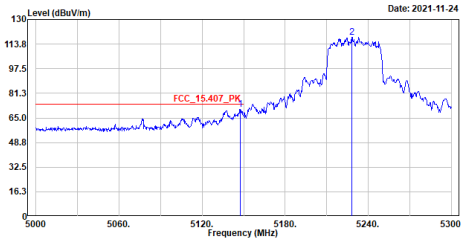
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5230MHz_B1
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5147.600	53.56	54.00	-0.44	33.20	20.36	Average
2	5228.000	106.27	------	------	85.55	20.72	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

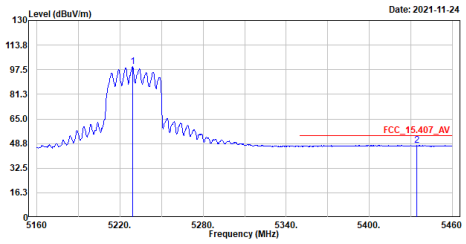
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5230MHz_B1
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5147.600	70.47	74.00	-3.53	50.11	20.36	Peak
2	5228.000	118.35	------	------	97.63	20.72	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

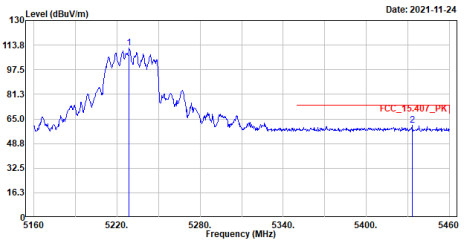
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5230MHz_B2
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5229.300	99.48	------	------	78.75	20.73	Average
2	5434.200	47.58	54.00	-6.42	26.34	21.24	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

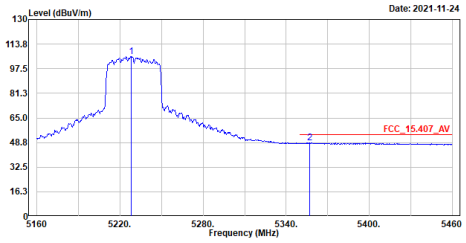
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5230MHz_B2
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5228.700	111.72	------	------	91.00	20.72	Peak
2	5433.000	60.61	74.00	-13.39	39.36	21.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

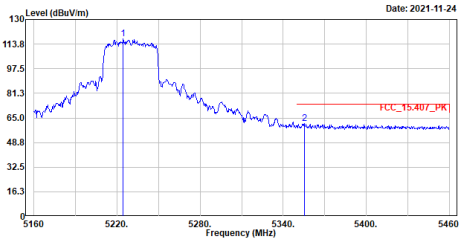
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5230MHz_B2
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5228.100	105.63	------	------	84.91	20.72	Average
2	5357.100	48.53	54.00	-5.47	27.47	21.06	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

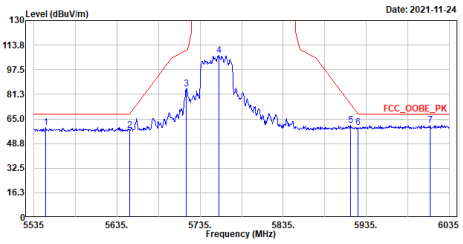
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5230MHz_B2
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5224.500	117.15	------	------	96.45	20.70	Peak
2	5355.600	61.31	74.00	-12.69	40.26	21.05	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

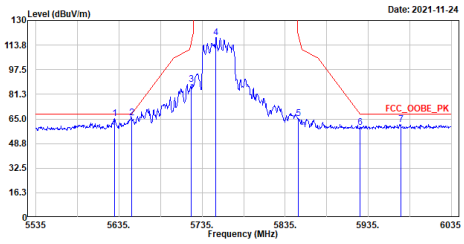
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5755MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5549.000	59.22	68.20	-8.98	37.76	21.46	Peak
2	5650.000	57.30	68.21	-10.91	36.03	21.27	Peak
3	5718.500	85.03	110.38	-25.35	63.32	21.71	Peak
4	5757.500	107.04	------	------	85.16	21.88	Peak
5	5916.500	60.72	74.50	-13.78	38.27	22.45	Peak
6	5925.000	59.18	68.21	-9.03	36.70	22.48	Peak
7	6012.000	60.86	68.20	-7.34	38.16	22.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

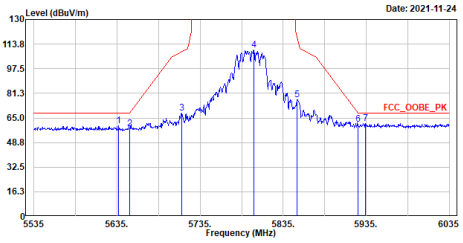
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5755MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5629.500	65.24	68.20	-2.96	43.83	21.41	Peak
2	5650.000	65.96	68.21	-2.25	44.69	21.27	Peak
3	5721.500	87.77	114.22	-26.45	66.03	21.74	Peak
4	5751.500	118.64	------	------	96.76	21.88	Peak
5	5850.500	65.36	121.06	-55.70	43.33	22.03	Peak
6	5925.000	59.11	68.21	-9.10	36.63	22.48	Peak
7	5974.000	61.34	68.20	-6.86	38.74	22.60	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

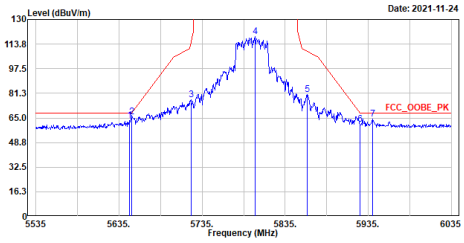
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax40_5795MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5637.000	59.73	68.20	-8.47	38.37	21.36	Peak
2	5650.000	57.93	68.21	-10.28	36.66	21.27	Peak
3	5713.000	68.24	108.84	-40.60	46.56	21.68	Peak
4	5800.000	110.06	------	------	88.12	21.94	Peak
5	5852.000	77.08	117.64	-40.56	55.04	22.04	Peak
6	5925.000	60.98	68.21	-7.23	38.50	22.48	Peak
7	5934.000	61.52	68.20	-6.68	39.01	22.51	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

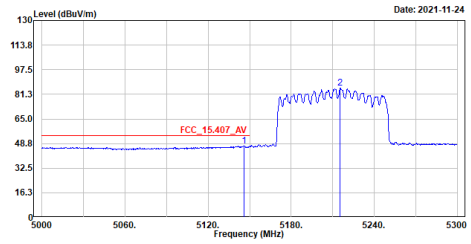
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax40_5795MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5647.500	63.14	68.20	-5.06	41.85	21.29	Peak
2	5650.000	65.51	68.21	-2.70	44.24	21.27	Peak
3	5721.500	77.01	114.22	-37.21	55.27	21.74	Peak
4	5798.500	118.72	68.22	50.50	96.78	21.94	Peak
5	5861.500	80.44	108.98	-28.54	58.33	22.11	Peak
6	5925.000	60.61	68.21	-7.60	38.13	22.48	Peak
7	5940.500	64.24	68.20	-3.96	41.71	22.53	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

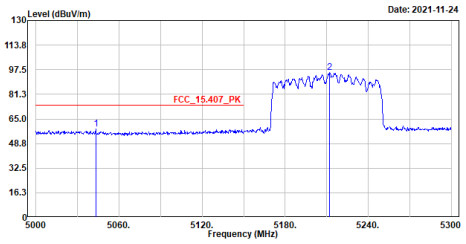
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax80_5210MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5145.800	47.16	54.00	-6.84	26.81	20.35	Average
2	5215.400	85.28	------	------	64.64	20.64	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

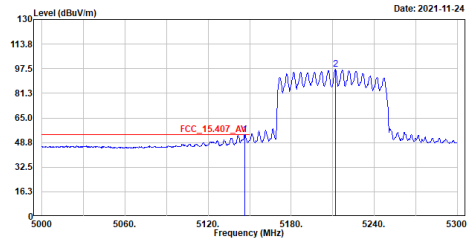
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax80_5210MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5043.200	58.29	74.00	-15.71	38.17	20.12	Peak
2	5212.100	95.43	------	------	74.81	20.62	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

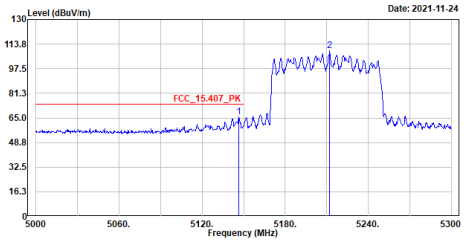
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax80_5210MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.400	53.91	54.00	-0.09	33.56	20.35	Average
2	5211.800	97.04	------	------	76.42	20.62	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

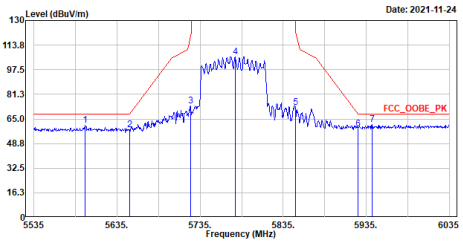
Site :966-3
Condition :3m ,Vertical
Mode :TX_ax80_5210MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.700	65.53	74.00	-8.47	45.18	20.35	Peak
2	5212.100	109.21	------	------	88.59	20.62	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

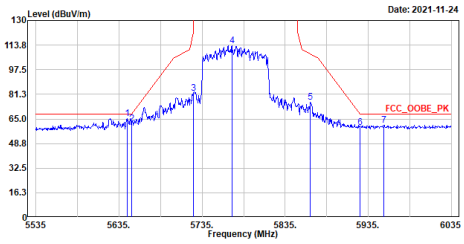
Site :966-3
Condition :3m ,Horizontal
Mode :TX_ax80_5775MHz
TEST BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5597.000	60.64	68.20	-7.56	39.03	21.61	Peak
2	5650.000	57.98	68.21	-10.23	36.71	21.27	Peak
3	5723.500	73.58	118.78	-45.20	51.84	21.74	Peak
4	5777.000	106.19	------	------	84.28	21.91	Peak
5	5850.000	72.82	122.20	-49.38	50.80	22.02	Peak
6	5925.000	58.58	68.21	-9.63	36.10	22.48	Peak
7	5942.500	61.56	68.20	-6.64	39.02	22.54	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Site :966-3
Condition :3m ,Vertical
Mode :TX_ax80_5775MHz
TEST BY :Jing Chang

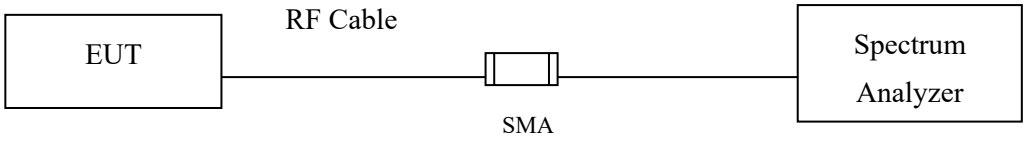


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5645.000	65.36	68.20	-2.84	44.05	21.31	Peak
2	5650.000	61.68	68.21	-6.53	40.41	21.27	Peak
3	5725.000	81.80	122.20	-40.40	60.05	21.75	Peak
4	5771.000	113.52	------	------	91.62	21.90	Peak
5	5865.500	75.84	107.86	-32.02	53.70	22.14	Peak
6	5925.000	59.36	68.21	-8.85	36.88	22.48	Peak
7	5954.000	60.82	68.20	-7.38	38.25	22.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

7. Occupied Bandwidth

7.1. Test Setup



7.2. Limits

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

7.3. .Test Procedure

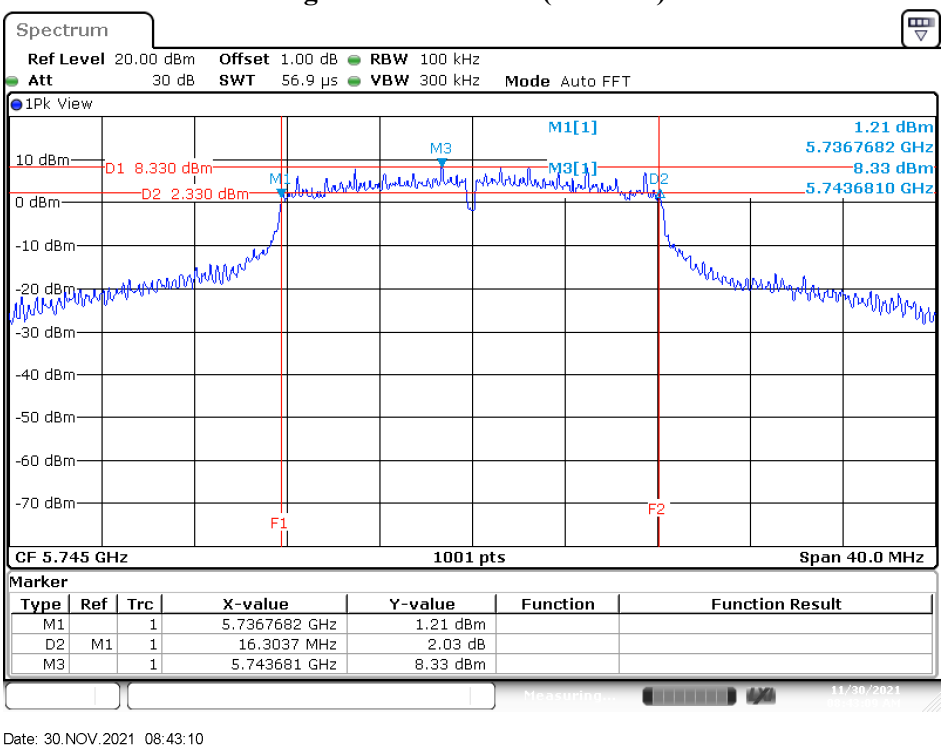
The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

7.4. Test Result of Occupied Bandwidth

Product : AX3200 SMART ROUTER
Test Item : Occupied Bandwidth Data
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-CDD
Test Date : 2021/12/10

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	A	5745	15664	>500	Pass
157	A	5785	16024	>500	Pass
165	A	5825	16024	>500	Pass
149	B	5745	15704	>500	Pass
157	B	5785	15664	>500	Pass
165	B	5825	15105	>500	Pass
149	C	5745	15704	>500	Pass
157	C	5785	15744	>500	Pass
165	C	5825	15305	>500	Pass
149	D	5745	16304	>500	Pass
157	D	5785	16264	>500	Pass
165	D	5825	15704	>500	Pass

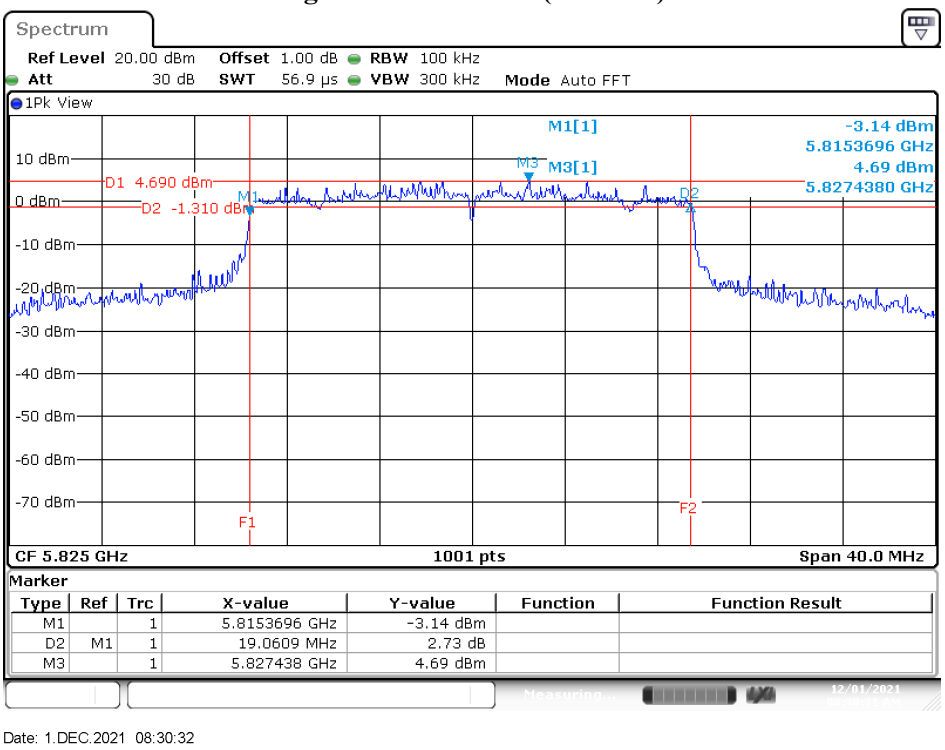
Figure Channel 149: (Chain D)



Product : AX3200 SMART ROUTER
Test Item : Occupied Bandwidth Data
Test Mode : Mode 2: Transmit (802.11ax-20BW 34.4Mbps) -CDD
Test Date : 2021/12/10

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	A	5745	18941	>500	Pass
157	A	5785	18621	>500	Pass
165	A	5825	18901	>500	Pass
149	B	5745	18661	>500	Pass
157	B	5785	18861	>500	Pass
165	B	5825	18861	>500	Pass
149	C	5745	18781	>500	Pass
157	C	5785	18981	>500	Pass
165	C	5825	19061	>500	Pass
149	D	5745	18941	>500	Pass
157	D	5785	18741	>500	Pass
165	D	5825	19061	>500	Pass

Figure Channel 149: (Chain D)

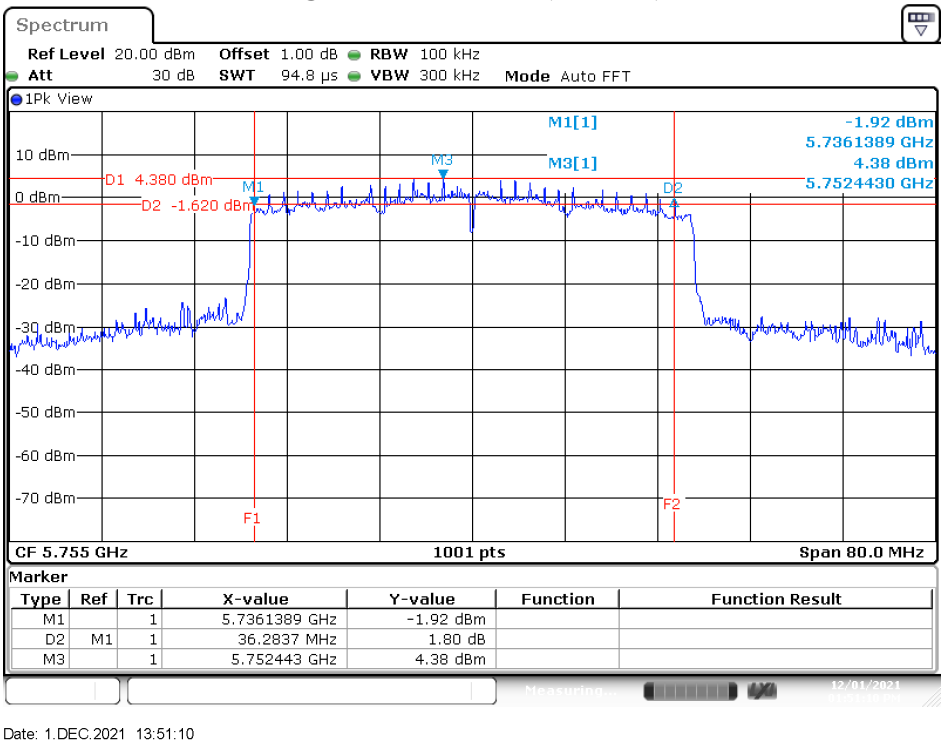


Date: 1.DEC.2021 08:30:32

Product : AX3200 SMART ROUTER
Test Item : Occupied Bandwidth Data
Test Mode : Mode 3: Transmit (802.11ax-40MBW 68.8Mbps) -CDD
Test Date : 2021/12/10

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	A	5755	35085	>500	Pass
159	A	5795	35085	>500	Pass
151	B	5755	36284	>500	Pass
159	B	5795	35085	>500	Pass
151	C	5755	35085	>500	Pass
159	C	5795	35085	>500	Pass
151	D	5755	35085	>500	Pass
159	D	5795	35085	>500	Pass

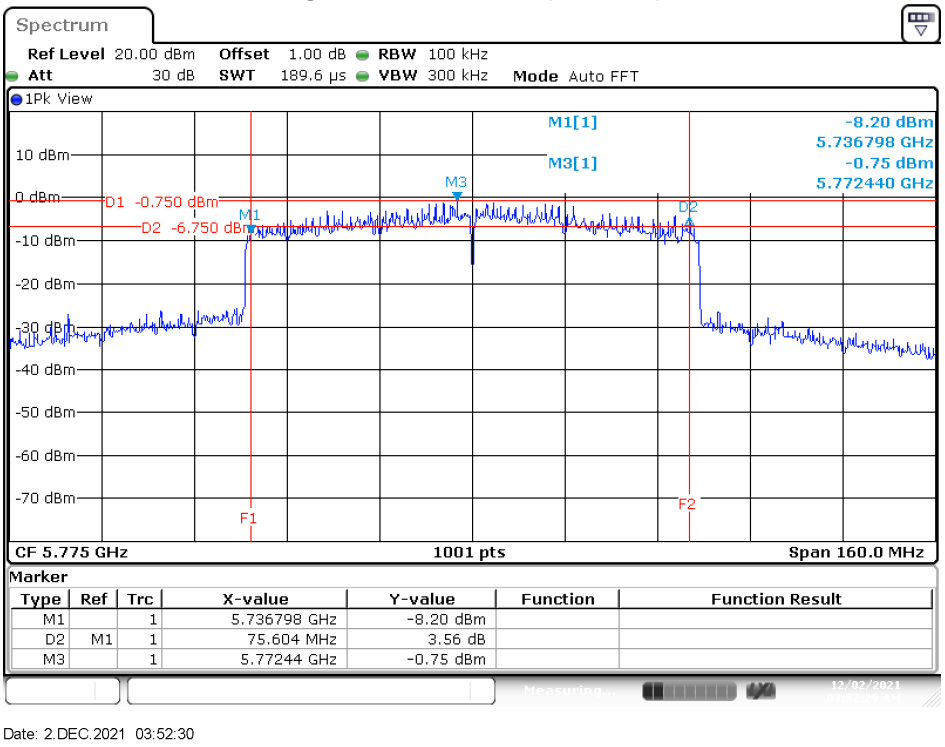
Figure Channel 151: (Chain B)



Product : AX3200 SMART ROUTER
Test Item : Occupied Bandwidth Data
Test Mode : Mode 4: Transmit (802.11ax-80MBW 144Mbps) -CDD
Test Date : 2021/12/10

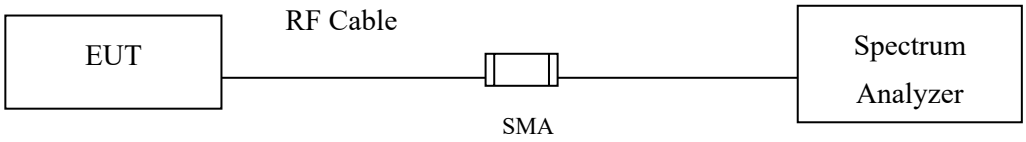
Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	A	5775	75125	>500	Pass
155	B	5775	75125	>500	Pass
155	C	5775	75604	>500	Pass
155	D	5775	74965	>500	Pass

Figure Channel 155: (Chain C)



8. Duty Cycle

8.1. Test Setup



8.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to U-NII test procedure of KDB789033 for compliance to FCC 47CFR 15.407 requirements.

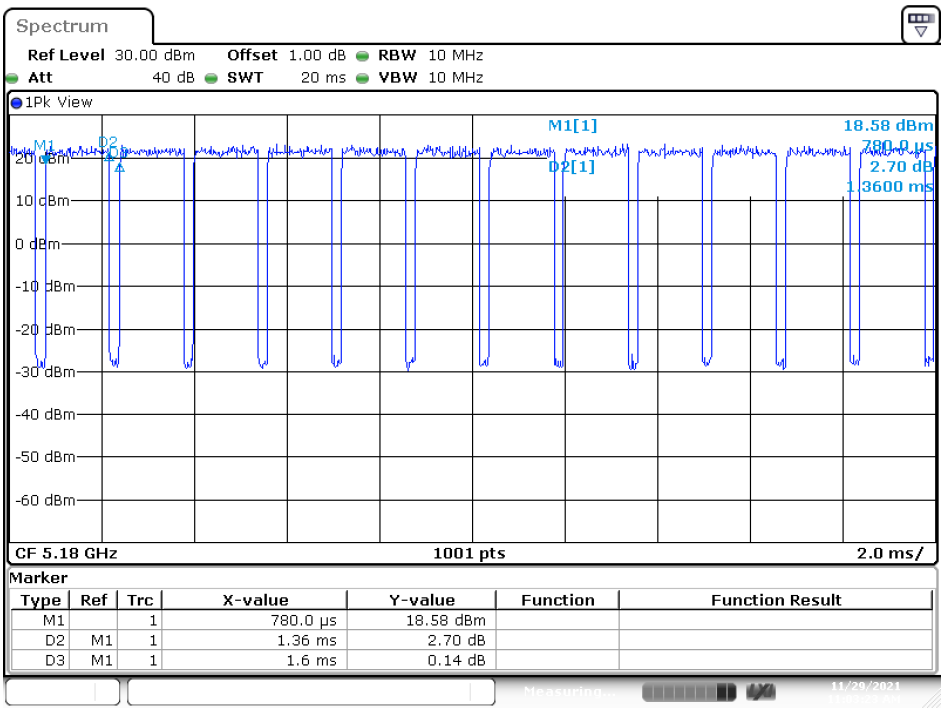
8.3. Test Result of Duty Cycle

Product : AX3200 SMART ROUTER
Test Item : Duty Cycle
Test Mode : Transmit-CDD

Duty Cycle Formula:
Duty Cycle = Ton / (Ton + Toff)
Duty Factor = 10 Log (1/Duty Cycle)
Results:

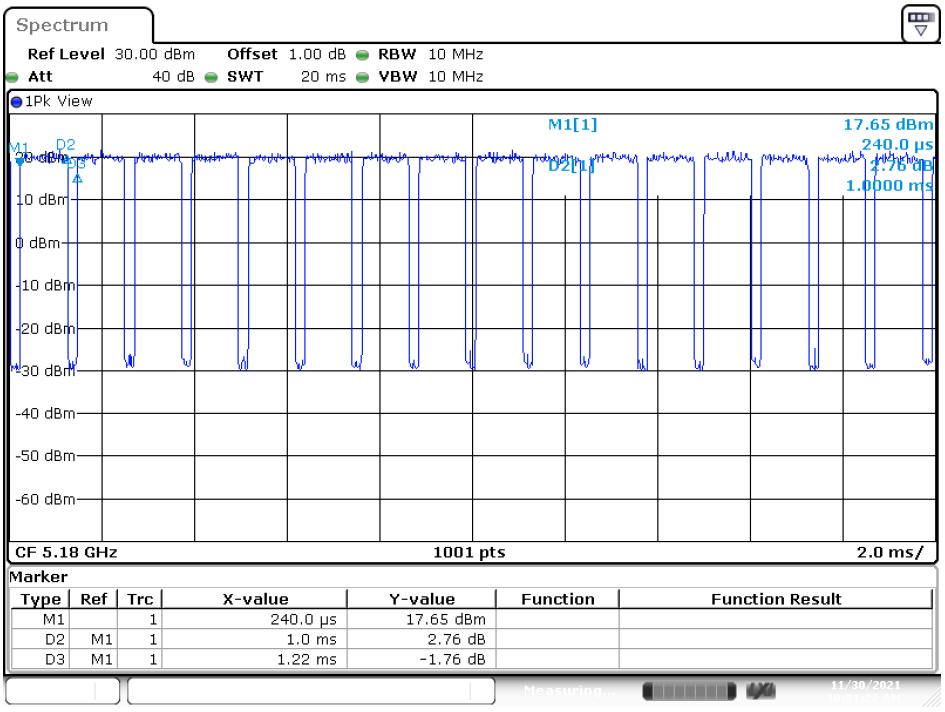
5GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11 a	1.3600	1.6000	85.00	0.71
802.11 ax20	1.0000	1.2200	81.97	0.86
802.11 ax40	0.5400	0.7450	72.48	1.40
802.11 ax80	0.2940	0.4980	59.04	2.29

802.11a



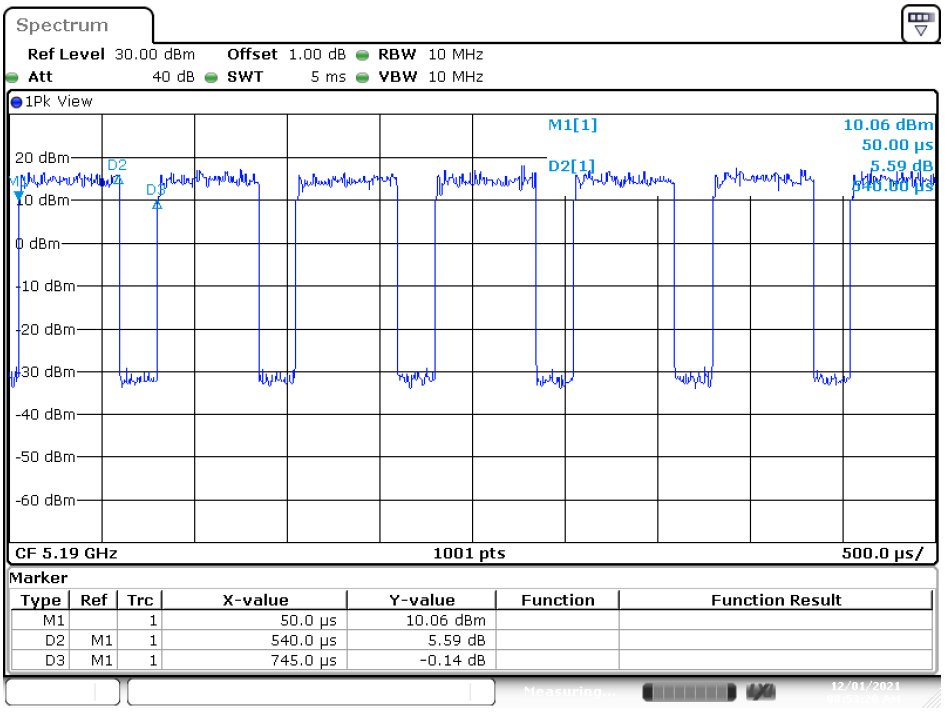
Date: 29.NOV.2021 11:03:24

802.11ax20



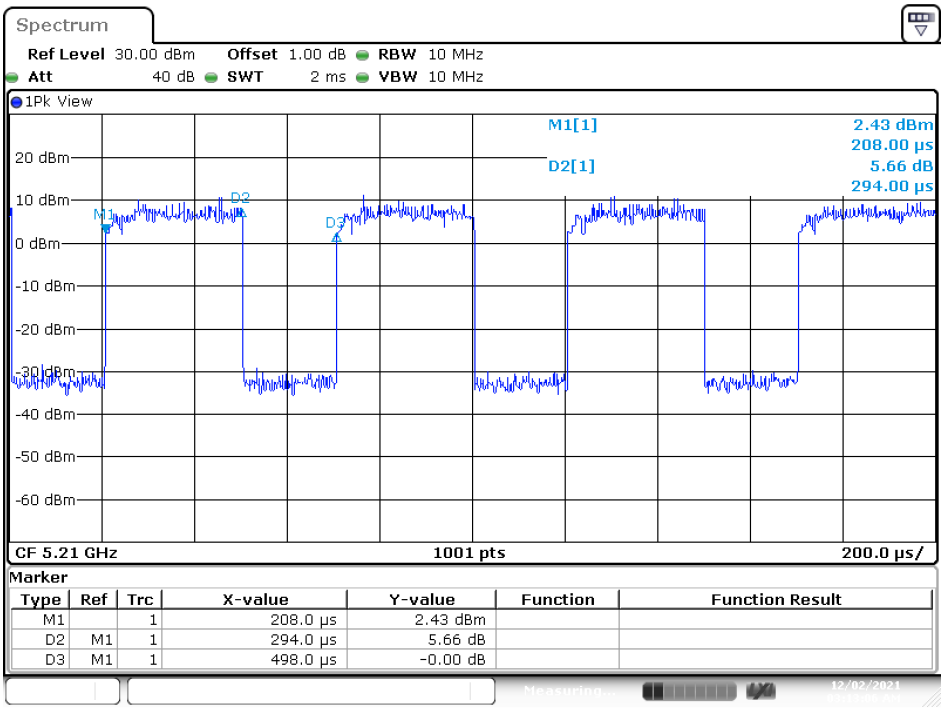
Date: 30.NOV.2021 10:21:22

802.11ax40



Date: 1.DEC.2021 08:53:20

802.11ax80



Date: 2.DEC.2021 03:13:06

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.