TEST REPORT

Applicant Name :	Grandstream Networks, Inc.
Address :	126 Brookline Ave, 3rd Floor Boston, MA 02215, USA
Manufacturer Name :	Grandstream Networks, Inc.
Address :	126 Brookline Ave, 3rd Floor Boston, MA 02215, USA
Report Number :	SZNS220110-01446E-RF-00B
FCC ID:	YZZGWN7625

Test Standard (s)

FCC PART 15.407

Sample Description

Product Type:	Indoor Wi-Fi Access Point
Model No.:	GWN7625
Trade Mark:	GRANDSTREAM
Date Received:	2022/01/10
Date of Test:	2022/01/22~2022/04/01
Report Date:	2022/04/01

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ting Lü
EMC Engineer

Approved By:

Candy Li
EMC Engineer

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	5G Wi-Fi: 5150-5250MHz; 5250-5350MHz; 5470-5725MHz; 5725-5850MHz
Mode	802.11a/n20/n40/ac20/ac40/ac80
Maximum Conducted Average Ouput Power	5150-5250 MHz: 20.0dBm 5250-5350MHz: 15.44dBm 5470-5725MHz: 14.8dBm 5725-5850 MHz: 25.31dBm
Modulation Technique	OFDM
Antenna Specification*	Antenna gain:4.5dBi
Voltage Range	DC 48V from POE
Sample serial number	CE&RE:SZNS220110-01446E-RF-S1 RF conducted:SZNS220110-01446E-RF-S2 (Assigned by ATC)
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB789033 D02 General U-NII Test Procedures New Rules v02r01.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF output power, conducted		0.73dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	30MHz - 1GHz	4.28dB
	1GHz- 18GHz	4.98dB
	18GHz- 26.5GHz	5.06dB
	26.5GHz- 40GHz	4.72dB
Temperature		1℃
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

For 5150-5250MHz Band, 7 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
42	5210	/	/

For 802.11a, 802.11n20/ac20 mode: channel 36, 40, 48 were tested; For 802.11n40/ac40 mode: channel 38, 46 were tested. For 802.11ac80 mode, channel 42 was tested.

For 5250-5350MHz Band, 7 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
54	5270	62	5310
56	5280	64	5320
58	5290	/	/

For 802.11a, 802.11n20/ac20 mode: channel 52, 56, 64 were tested; For 802.11n40/ac40 mode: channel 54, 62 were tested. For 802.11ac80 mode, channel 58 was tested.

For 5470-5725MHz Band, 18 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	120	5600
102	5510	122	5610
104	5520	124	5620
106	5530	126	5630
108	5540	128	5640
110	5550	132	5660
112	5560	134	5670
116	5580	136	5680
118	5590	140	5700

For 802.11a, 802.11n20/ac20 mode: channel 100, 116, 140 were tested; For 802.11n40/ac40 mode: channel 102, 110, 134 were tested. For 802.11ac80 mode, channel 106, 122 was tested.

For 5725-5850MHz Band, 8 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785
151	5755	159	5795
153	5765	161	5805
155	5775	165	5825

For 802.11a, 802.11n20/ac20 mode: channel 149, 157, 165 were tested; For 802.11n40/ac40 mode: channel 151, 159 were tested. For 802.11ac80 mode, channel 155 was tested.

EUT Exercise Software

"QRCT 4"* exercise software was used. The software and power level was provided by the manufacturer.

The worst case was performed under:

U-NII	Mode	Frequency (MHz)	Data Rate	Power Level*
5150 – 5250MHz	802.11 a	5180	6Mbps	24
		5200	6Mbps	24
		5240	6Mbps	24
	802.11 n20	5180	MCS0	18
		5200	MCS0	18
		5240	MCS0	18
	802.11 n40	5190	MCS0	1D
		5230	MCS0	1D
	802.11 ac20	5180	MCS0	16
		5200	MCS0	16
		5240	MCS0	16
	802.11 ac40	5190	MCS0	18
		5230	MCS0	18
	802.11 ac80	5210	MCS0	14

U-NII	Mode	Frequency (MHz)	Data Rate	Power Level*
5250 – 5350MHz	802.11 a	5260	6Mbps	1D
		5280	6Mbps	1D
		5320	6Mbps	1D
	802.11 n20	5260	MCS0	0B
		5280	MCS0	0B
		5320	MCS0	0B
	802.11 n40	5270	MCS0	0E
		5310	MCS0	0E
	802.11 ac20	5260	MCS0	0A
		5280	MCS0	0A
		5320	MCS0	0A
	802.11 ac40	5270	MCS0	0B
		5310	MCS0	0B
	802.11 ac80	5290	MCS0	0B

U-NII	Mode	Frequency (MHz)	Data Rate set	Power Level*
5470 – 5725MHz	802.11 a	5500	6Mbps	1D
		5580	6Mbps	1D
		5700	6Mbps	1D
	802.11 n20	5500	MCS0	0B
		5580	MCS0	0B
		5700	MCS0	0B
	802.11 n40	5510	MCS0	0E
		5550	MCS0	0E
		5670	MCS0	0E
	802.11 ac20	5500	MCS0	0A
		5580	MCS0	0A
		5700	MCS0	0A
	802.11 ac40	5510	MCS0	0B
		5550	MCS0	0B
		5670	MCS0	0B
	802.11 ac80	5530	MCS0	0B
		5610	MCS0	0B

U-NII	Mode	Frequency (MHz)	Data Rate	Power Level*
5725 – 5850MHz	802.11 a	5745	6Mbps	24
		5785	6Mbps	24
		5825	6Mbps	24
	802.11 n20	5745	MCS0	24
		5785	MCS0	24
		5825	MCS0	24
	802.11 n40	5755	MCS0	24
		5795	MCS0	24
	802.11 ac20	5745	MCS0	24
		5785	MCS0	24
		5825	MCS0	24
	802.11 ac40	5755	MCS0	24
		5795	MCS0	24
	802.11 ac80	5775	MCS0	24

The worse-case data rates are determined to be as above for each mode based upon investigations by measuring the output power and PSD across all data rates, bandwidths and modulations.

For 802.11 a mode, the device only support SISO mode.

For 802.11 n/ac mode, the device support SISO and MIMO, for MIMO mode support beamforming, the SISO/MIMO and beamforming/nonbeamforming modes have same parameter, which was declared by applicant. The MIMO with beamforming was the worst mode which was selected to test.

All the antenna ports have the same power level.

Duty cycle

Test Result: Pass. Please refer to the Appendix.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

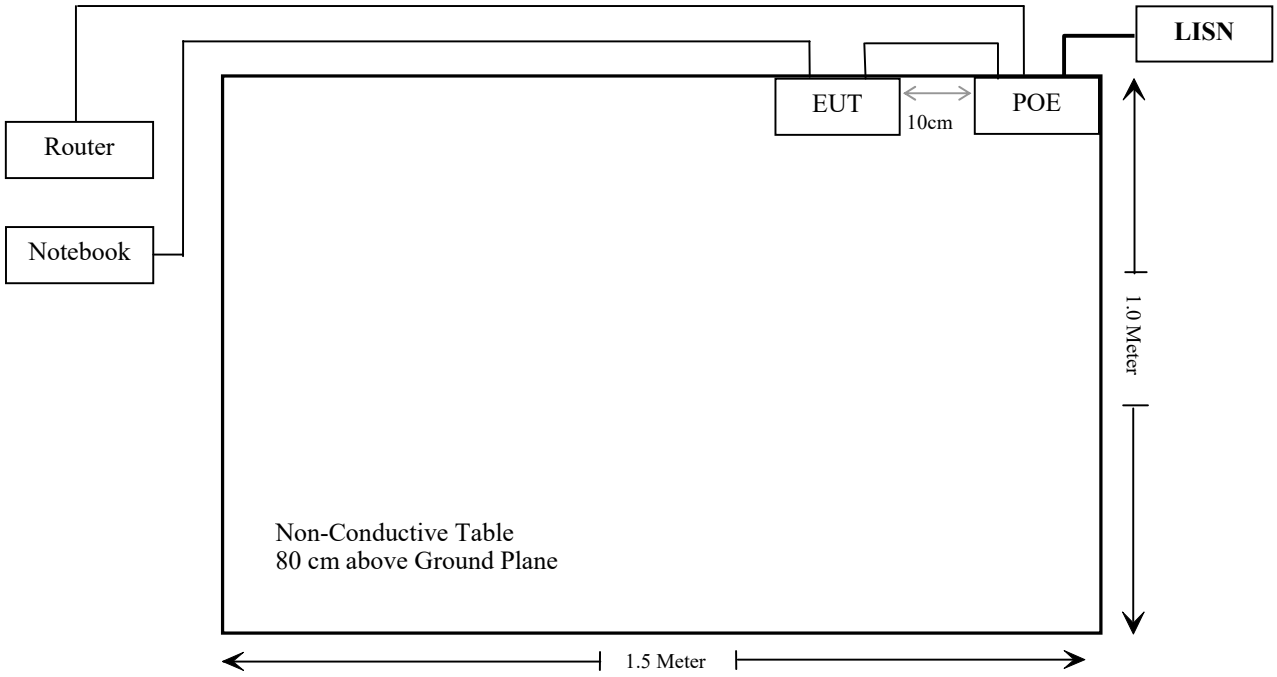
Manufacturer	Description	Model	Serial Number
GOSPELL	POE	G0720-480-050	G0720-480-050
DELL	Notebook	Latitude E6410	11429208685
HIKVISION	Router	DS-3WR03-E	10021642429

External I/O Cable

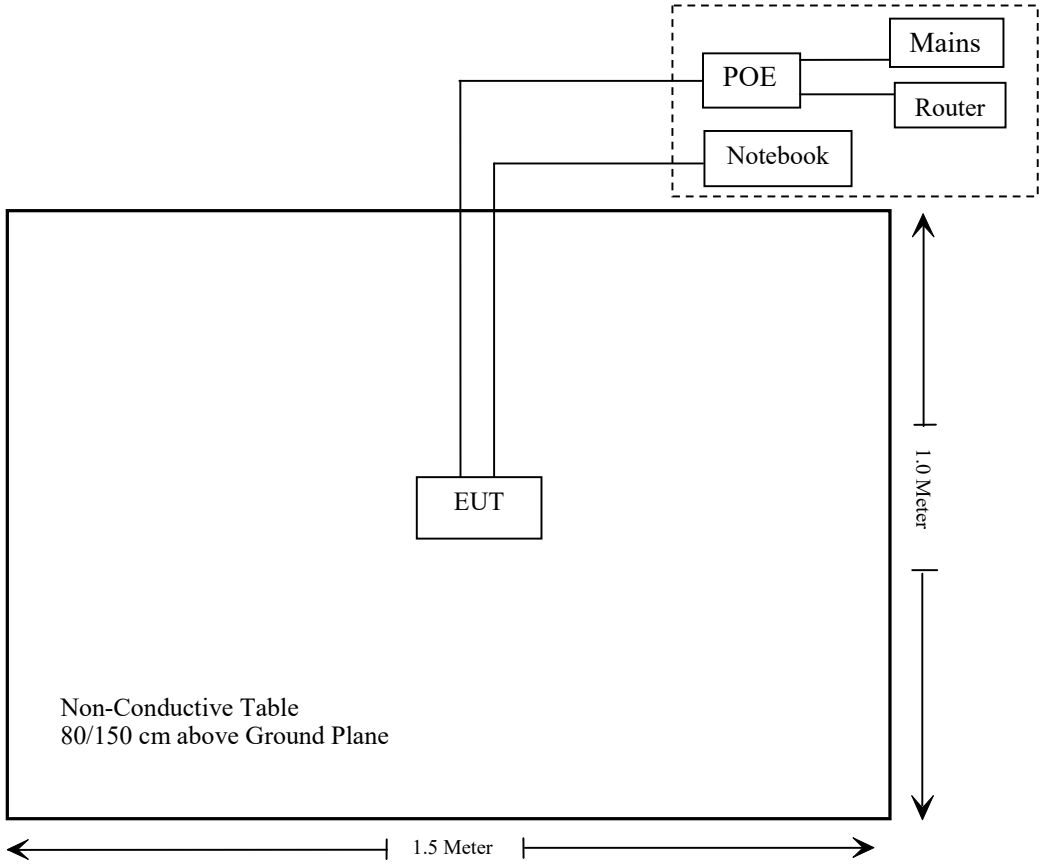
Cable Description	Length (m)	From Port	To
Unshielded detachable RJ45 Cable	1.5	POE	EUT
Un-Shielding Detachable RJ45 Cable	5.0	EUT	Notebook
Un-shielded Un-detachable AC Cable	1.2	LISN	POE
Unshielded detachable RJ45 cable	5.0	POE	Router

Block Diagram of Test Setup

For conducted emission:



For radiated emission:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (1) & §2.1091	MaximuM Permissible exposure (MPE)	Compliant
§15.203	Antenna Requirement	Compliant
§15.407(b)(9)& §15.207(a)	Conducted Emissions	Compliant
§15.205& §15.209 &§15.407(b)	Undesirable Emission& Restricted Bands	Compliant
§15.407(a) (e)	26 dB Emission Bandwidth & 6dB Bandwidth	Compliant
§15.407(a)	Conducted Transmitter Output Power	Compliant
§15.407 (a)	Power Spectral Density	Compliant
§15.407 (h)	Transmit Power Control (TPC)	Not Applicable
§15.407 (h)	Dynamic Frequency Selection (DFS)	Compliant*

Not Applicable: the EUT has no TPC function which was declarded by the applicant.
Compliant*: Please refer to the DFS report: SZNS220110-01446E-RFB.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2021/12/13	2022/12/12
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2021/12/13	2022/12/12
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2021/12/13	2022/12/12
Unknown	RF Coaxial Cable	No.17	N0350	2021/12/14	2022/12/13
Conducted Emission Test Software: e3 19821b (V9)					
Radiated Emissions Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2021/11/11	2022/11/10
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
CD	Band Reject Filter	BRM-5.47/5.725G-45	075	2021/12/14	2022/12/13
CD	Band Reject Filter	BRM-5.725/5.875G-45	065	2021/12/14	2022/12/13
Radiated Emission Test Software: e3 19821b (V9)					

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2021/12/13	2022/12/12
Tonscend	RF Control Unit	JS0806-2	19G8060182	2021/07/06	2022/07/05
Unknown	RF Cable	Unknown	Unknown	Each time	/
Unknown	RF Coaxial Cable	No.31	RF-01	Each time	/

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 1.1307 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (Minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density
a)

Result

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \le 1$$

Frequency (MHz)	Antenna Gain		Tune up conducted power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
	(dBi)	(numeric)	(dBm)	(mW)			
2412-2462	6.5	4.47	27.0	501.19	27	0.245	1
5150-5250	10.5	11.22	20.5	112.20	27	0.137	1
5250-5350	10.5	11.22	16.0	39.81	27	0.049	1
5470-5725	10.5	11.22	15.0	31.62	27	0.039	1
5725-5850	10.5	11.22	26.0	398.11	27	0.488	1

Note: 1. The tune up conducted power was declared by the applicant.
2. The 2.4G Wi-Fi can transmit at the same time with the 5G Wi-Fi.
3. For the 2.4G Wi-Fi, as it can support the beam-forming function, so the directional antenna gain should add the 10lg2, 3.5dBi+10lg2=6.5dBi.
4. For the 5G Wi-Fi, as it can support the beam-forming function, so the directional antenna gain should add the 10lg4, 4.5dBi+10lg4=10.5dBi.

Simultaneous transmitting consideration (worst case):

The ratio=$MPE_{2.4G\ Wi\text{-}Fi}$/limit+$MPE_{5G\ Wi\text{-}Fi}$/limit=0.245+0.488=0.733＜1.0, so simultaneous exposure is compliant.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 27cm from nearby persons.

Result: Compliant.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

b. Antenna must be permanently attached to the unit.
c. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.407 (a), if the transmitting antennas of directional gain greater than 6dBi are used, the transmit power and power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has four internal antennas arrangement for 5G Wi-Fi, which were permanently attached to the EUT. Please refer to the EUT photos.

Type	Antenna Gain	Impedance	Frequency Range
PIFA	4.5dBi	50 Ω	5150-5850MHz

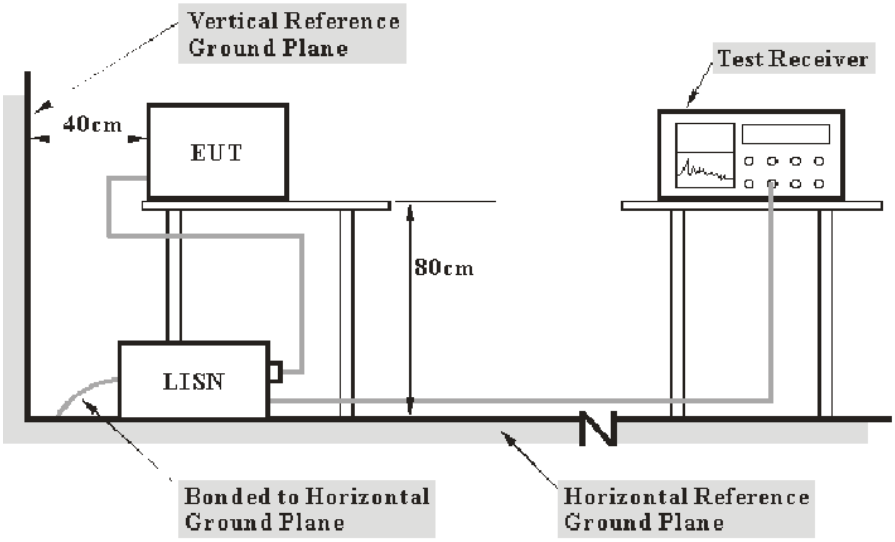
Result: Compliant.

FCC §15.407 (b) (6) §15.207 (a) – CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (6)

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and Average detection mode.

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss

The "Over Limit" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Over Limit = Level – Limit
Level = Reading level + Factor

Test Data

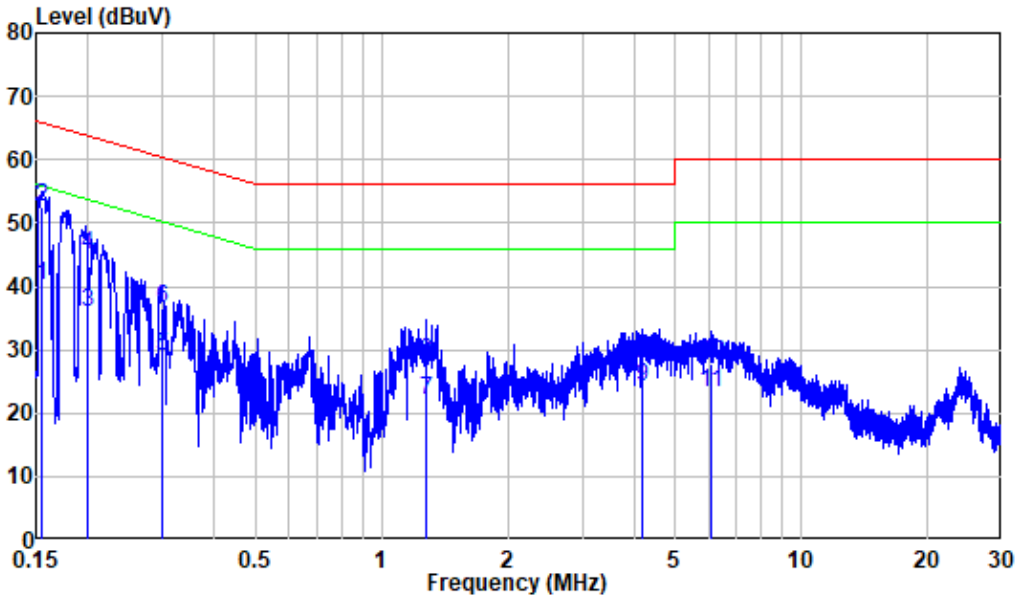
Environmental Conditions

Temperature:	22 ℃
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Bin Duan on 2022-02-10.

EUT operation mode: Transmitting (worst case for 802.11 ac20 5745MHz)

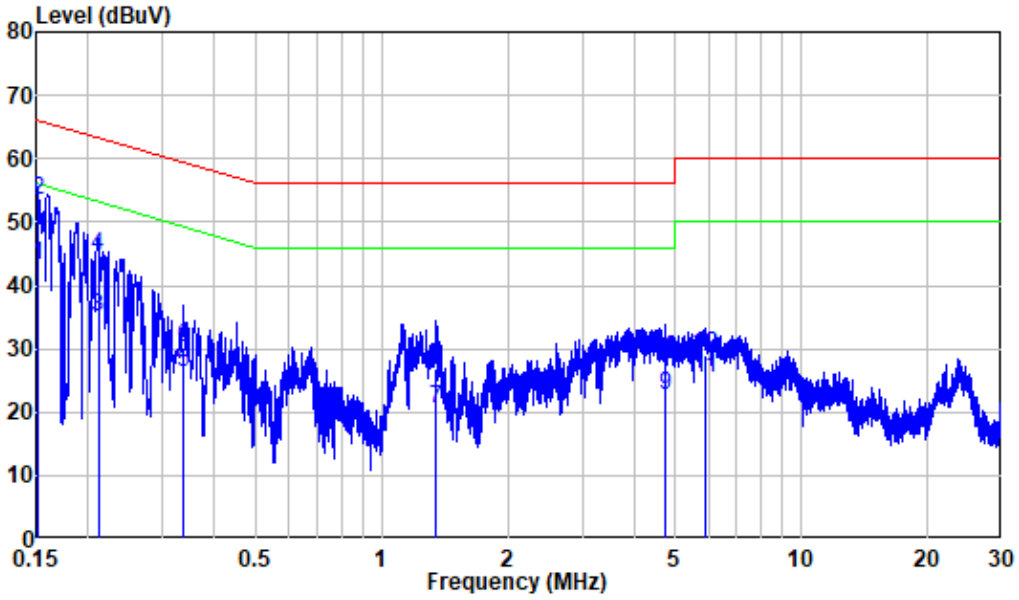
AC 120V/60 Hz, Line:



Site : Shielding Room
Condition: Line
Mode : 5G WIFI
Model : GWN7625
Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.154	9.80	30.29	40.09	55.76	-15.67	Average
2	0.154	9.80	42.60	52.40	65.76	-13.36	QP
3	0.200	9.80	26.13	35.93	53.62	-17.69	Average
4	0.200	9.80	35.25	45.05	63.62	-18.57	QP
5	0.300	9.80	19.21	29.01	50.25	-21.24	Average
6	0.300	9.80	26.59	36.39	60.25	-23.86	QP
7	1.276	9.81	12.16	21.97	46.00	-24.03	Average
8	1.276	9.81	18.26	28.07	56.00	-27.93	QP
9	4.160	9.84	14.29	24.13	46.00	-21.87	Average
10	4.160	9.84	17.98	27.82	56.00	-28.18	QP
11	6.084	9.86	13.26	23.12	50.00	-26.88	Average
12	6.084	9.86	17.88	27.74	60.00	-32.26	QP

AC 120V/60 Hz, Neutral:



Site : Shielding Room
Condition: Neutral
Mode : 5G WIFI
Model : GWN7625
Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.151	9.80	33.25	43.05	55.94	-12.89	Average
2	0.151	9.80	43.75	53.55	65.94	-12.39	QP
3	0.211	9.80	25.17	34.97	53.17	-18.20	Average
4	0.211	9.80	35.00	44.80	63.17	-18.37	QP
5	0.338	9.80	16.47	26.27	49.26	-22.99	Average
6	0.338	9.80	20.29	30.09	59.26	-29.17	QP
7	1.339	9.81	10.62	20.43	46.00	-25.57	Average
8	1.339	9.81	17.17	26.98	56.00	-29.02	QP
9	4.712	9.88	12.89	22.77	46.00	-23.23	Average
10	4.712	9.88	18.52	28.40	56.00	-27.60	QP
11	5.875	9.93	15.43	25.36	50.00	-24.64	Average
12	5.875	9.93	18.96	28.89	60.00	-31.11	QP

§15.205 & §15.209 & §15.407(B)– UNDESIRABLE EMISSION

Applicable Standard

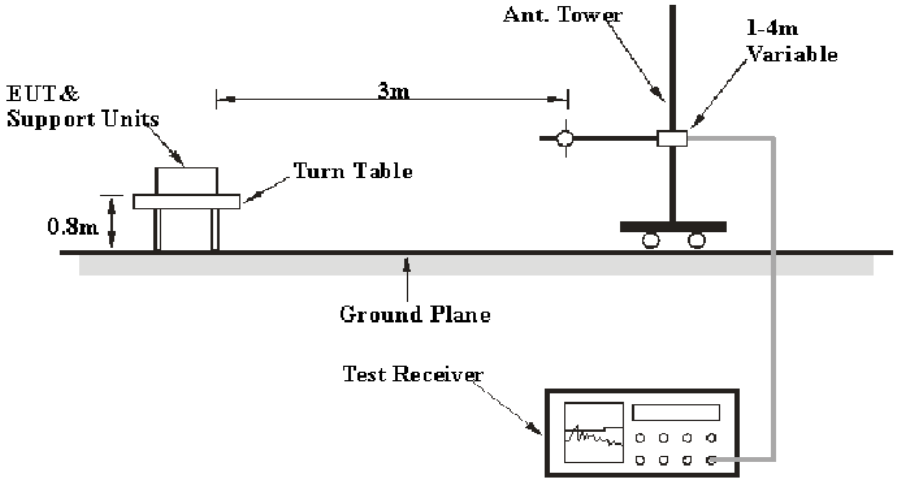
FCC §15.407 (b); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:
(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

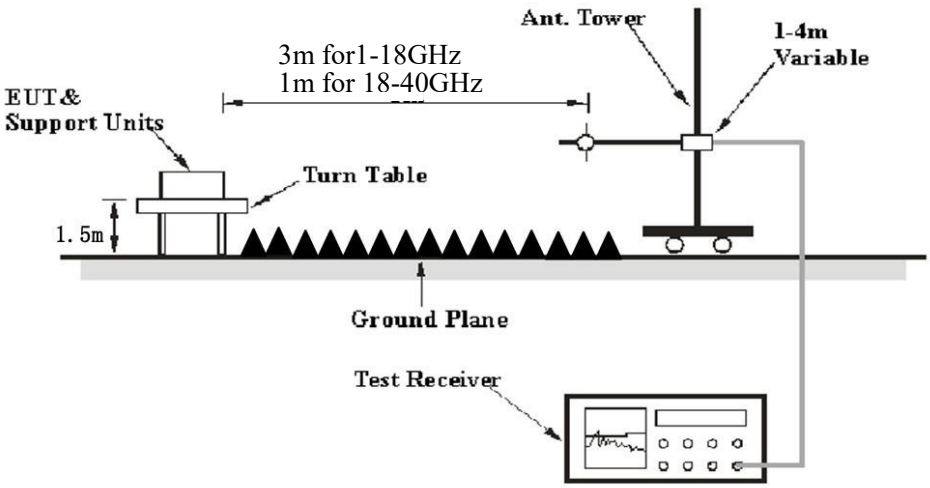
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

EUT Setup

Below 1 GHz:



Above 1 GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	PK
	1MHz	10 Hz Note 1	/	Average
	1MHz	＞1/T Note 2	/	Average

Note 1: when duty cycle is no less than 98%
Note 2: when duty cycle is less than 98%

Test Procedure

Radiated Spurious Emission

During the radiated emission test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all the installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to ANSI C63.10-2013,9.4: For field strength measurements made at other than the distance at which the applicable limit is specified,extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance). In some cases, a different distance correction factor may be required;

$$E_{\mathrm{SpecLimit}} = E_{\mathrm{Meas}} + 20\log\left(\frac{d_{\mathrm{Meas}}}{d_{\mathrm{SpecLimit}}}\right)$$

where

$E_{\mathrm{SpecLimit}}$	is the field strength of the emission at the distance specified by the limit, in dBμV/m
E_{Meas}	is the field strength of the emission at the measurement distance, in dBμV/m
d_{Meas}	is the measurement distance, in m
$d_{\mathrm{SpecLimit}}$	is the distance specified by the limit, in m

So the extrapolation factor of 1m is 20*log(1/3)= -9.5 dB, for 18-40GHz range, the limit of 1m distance was added by 9.5dB from limit of 3m to compared with the result measurement at 1m distance.

Corrected Factor & Margin Calculation

The Corrected Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Corrected Amplitude = Antenna Factor + Cable Loss - Amplifier Gain

The "**Margin/Over Limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin/over limit of -7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin/Over limit = Corrected Amplitude/Level - Limit
Corrected Amplitude/Level = Reading + Factor

Test Data

Environmental Conditions

Temperature:	19~25.1 ℃
Relative Humidity:	52~59 %
ATM Pressure:	101.0 kPa

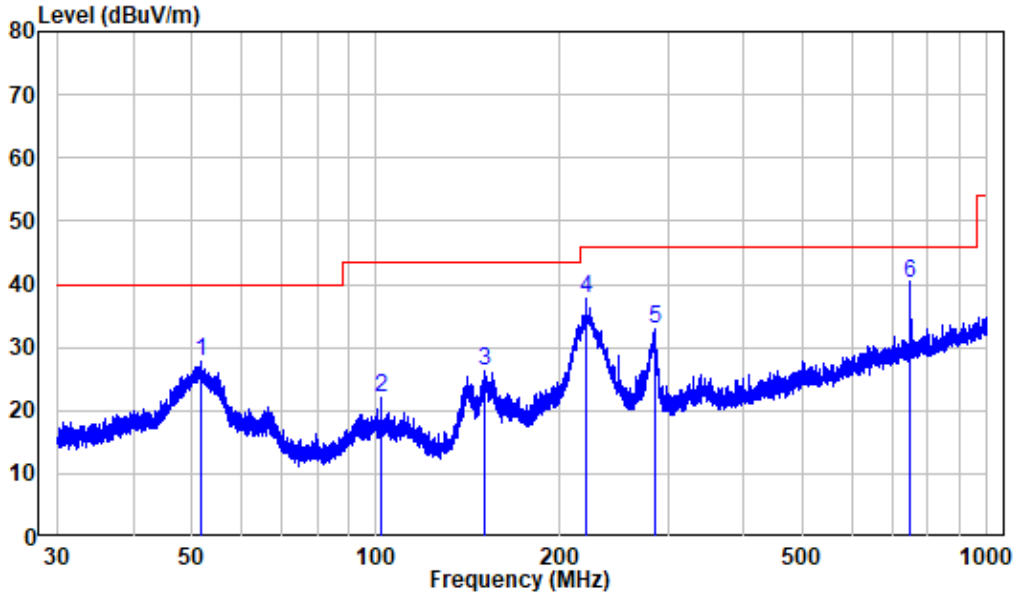
The testing was performed by Chao Mo on 2022-02-11 for below 1GHz and by Chao Mo on 2022-01-22 for above 1GHz.

Test mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case Z-axis of orientation was recorded)

30MHz-1GHz: (worst case for 802.11 ac20 5745MHz)

Note: When the test result of Peak was less than the limit of QP, just the peak value was recorded.

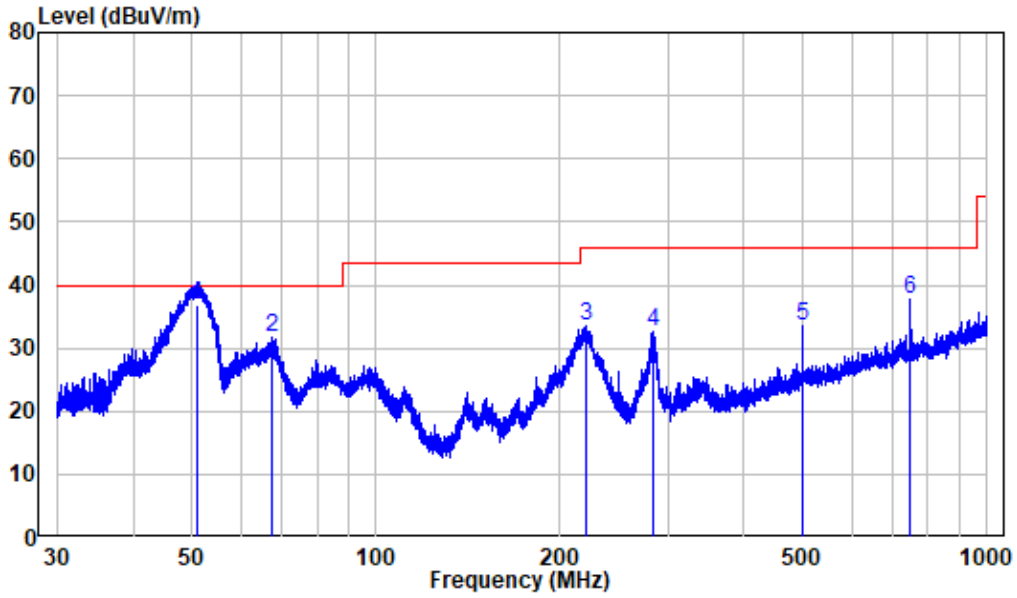
Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No. : SZNS220110-01446E-RF
Test Mode: 5G Wifi Transmitting

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	51.548	-9.96	37.61	27.65	40.00	-12.35	Peak
2	102.046	-11.57	33.59	22.02	43.50	-21.48	Peak
3	150.736	-15.23	41.51	26.28	43.50	-17.22	Peak
4	221.295	-11.37	48.97	37.60	46.00	-8.40	Peak
5	285.477	-9.43	42.37	32.94	46.00	-13.06	Peak
6	750.108	-0.87	40.90	40.03	46.00	-5.97	QP

Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : SZNS220110-01446E-RF
Test Mode: 5G Wifi Transmitting

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	50.808	-9.94	46.70	36.76	40.00	-3.24	QP
2	67.705	-13.70	45.29	31.59	40.00	-8.41	Peak
3	220.714	-11.39	44.84	33.45	46.00	-12.55	Peak
4	283.979	-9.47	42.22	32.75	46.00	-13.25	Peak
5	500.082	-4.25	37.63	33.38	46.00	-12.62	Peak
6	750.108	-0.87	38.73	37.86	46.00	-8.14	Peak

5150-5250 MHz:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11A (worst case ANT 1)									
5180 MHz									
4500	63.46	PK	233	1.1	H	-4.72	58.74	74	-15.26
4500	49.91	AV	233	1.1	H	-4.72	45.19	54	-8.81
4500	63.07	PK	249	2.2	V	-4.72	58.35	74	-15.65
4500	50.09	AV	249	2.2	V	-4.72	45.37	54	-8.63
5150	62.77	PK	47	1.4	H	-2.73	60.04	74	-13.96
5150	50.70	AV	47	1.4	H	-2.73	47.97	54	-6.03
5150	68.51	PK	273	1	V	-2.73	65.78	74	-8.22
5150	54.39	AV	273	1	V	-2.73	51.66	54	-2.34
10360	50.10	PK	262	1	H	8.10	58.20	68.2	-10.00
10360	53.78	PK	62	1	V	8.10	61.88	68.2	-6.32
15540	47.56	PK	252	1.4	H	6.45	54.01	74	-19.99
15540	33.25	AV	252	1.4	H	6.45	39.7	54	-14.30
15540	48.42	PK	330	1.4	V	6.45	54.87	74	-19.13
15540	33.61	AV	330	1.4	V	6.45	40.06	54	-13.94
5200 MHz									
10400	52.22	PK	206	2.3	H	8.24	60.46	68.2	-7.74
10400	54.68	PK	124	2.3	V	8.24	62.92	68.2	-5.28
15600	47.71	PK	335	1.7	H	6.57	54.28	74	-19.72
15600	34.51	AV	335	1.7	H	6.57	41.08	54	-12.92
15600	48.21	PK	73	2.5	V	6.57	54.78	74	-19.22
15600	35.01	AV	73	2.5	V	6.57	41.58	54	-12.42
5240 MHz									
5350	65.73	PK	353	1.6	H	-2.33	63.4	74	-10.60
5350	51.17	AV	353	1.6	H	-2.33	48.84	54	-5.16
5350	65.06	PK	132	1	V	-2.33	62.73	74	-11.27
5350	51.19	AV	132	1	V	-2.33	48.86	54	-5.14
5460	64.04	PK	52	1.2	H	-2.3	61.74	74	-12.26
5460	50.91	AV	52	1.2	H	-2.3	48.61	54	-5.39
5460	64.97	PK	137	1.5	V	-2.3	62.67	74	-11.33
5460	50.84	AV	137	1.5	V	-2.3	48.54	54	-5.46
10480	50.51	PK	249	1.7	H	8.6	59.11	68.2	-9.09
10480	53.97	PK	344	1.7	V	8.6	62.57	68.2	-5.63
15720	45.68	PK	321	1.1	H	6.69	52.37	74	-21.63
15720	46.33	PK	345	1.6	V	6.69	53.02	74	-20.98

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n20									
5180 MHz									
4500	63.14	PK	5	1.6	H	-4.72	58.42	74	-15.58
4500	49.86	AV	5	1.6	H	-4.72	45.14	54	-8.86
4500	63.60	PK	215	1.1	V	-4.72	58.88	74	-15.12
4500	50.00	AV	215	1.1	V	-4.72	45.28	54	-8.72
5150	62.13	PK	291	2	H	-2.73	59.40	74	-14.60
5150	50.48	AV	291	2	H	-2.73	47.75	54	-6.25
5150	63.33	PK	237	1.7	V	-2.73	60.60	74	-13.40
5150	51.31	AV	237	1.7	V	-2.73	48.58	54	-5.42
10360	50.96	PK	197	1.3	H	8.10	59.06	68.2	-9.14
10360	47.10	PK	5	1.3	V	8.10	55.20	68.2	-13.00
5200 MHz									
10400	50.11	PK	38	1.7	H	8.24	58.35	68.2	-9.85
10400	51.42	PK	128	1.7	V	8.24	59.66	68.2	-8.54
5240 MHz									
5350	63.82	PK	22	1.5	H	-2.33	61.49	74	-12.51
5350	50.72	AV	22	1.5	H	-2.33	48.39	54	-5.61
5350	64.50	PK	231	2	V	-2.33	62.17	74	-11.83
5350	50.68	AV	231	2	V	-2.33	48.35	54	-5.65
5460	64.58	PK	228	1.5	H	-2.3	62.28	74	-11.72
5460	50.88	AV	228	1.5	H	-2.3	48.58	54	-5.42
5460	64.19	PK	228	1.9	V	-2.3	61.89	74	-12.11
5460	50.85	AV	228	1.9	V	-2.3	48.55	54	-5.45
10480	48.87	PK	188	1.7	H	8.6	57.47	68.2	-10.73
10480	51.22	PK	161	1.7	V	8.6	59.82	68.2	-8.38

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11N40									
5190 MHz									
4500	63.26	PK	164	1.2	H	-4.72	58.54	74	-15.46
4500	50.54	AV	164	1.2	H	-4.72	45.82	54	-8.18
4500	63.35	PK	233	2.2	V	-4.72	58.63	74	-15.37
4500	50.31	AV	233	2.2	V	-4.72	45.59	54	-8.41
5150	62.90	PK	213	1.4	H	-2.73	60.17	74	-13.83
5150	50.99	AV	213	1.4	H	-2.73	48.26	54	-5.74
5150	63.92	PK	158	1.5	V	-2.73	61.19	74	-12.81
5150	52.06	AV	158	1.5	V	-2.73	49.33	54	-4.67
10380	43.83	PK	76	1.1	H	8.20	52.03	68.2	-16.17
10380	44.78	PK	102	1.1	V	8.20	52.98	68.2	-15.22
5230 MHz									
5350	65.12	PK	79	2.5	H	-2.33	62.79	74	-11.21
5350	51.29	AV	79	2.5	H	-2.33	48.96	54	-5.04
5350	64.09	PK	128	1.5	V	-2.33	61.76	74	-12.24
5350	51.27	AV	128	1.5	V	-2.33	48.94	54	-5.06
5460	64.15	PK	85	2.4	H	-2.3	61.85	74	-12.15
5460	51.14	AV	85	2.4	H	-2.3	48.84	54	-5.16
5460	64.18	PK	218	1.7	V	-2.3	61.88	74	-12.12
5460	51.18	AV	218	1.7	V	-2.3	48.88	54	-5.12
10460	43.24	PK	36	1.7	H	8.43	51.67	68.2	-16.53
10460	43.57	PK	287	1.7	V	8.43	52.00	68.2	-16.20

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC20									
5180 MHz									
4500	63.32	PK	290	1.7	H	-4.72	58.60	74	-15.40
4500	50.82	AV	290	1.7	H	-4.72	46.10	54	-7.90
4500	63.28	PK	57	1.6	V	-4.72	58.56	74	-15.44
4500	50.69	AV	57	1.6	V	-4.72	45.97	54	-8.03
5150	63.53	PK	266	2.2	H	-2.73	60.80	74	-13.20
5150	51.45	AV	266	2.2	H	-2.73	48.72	54	-5.28
5150	65.70	PK	360	2.4	V	-2.73	62.97	74	-11.03
5150	53.39	AV	360	2.4	V	-2.73	50.66	54	-3.34
10360	47.53	PK	114	2.2	H	8.10	55.63	68.2	-12.57
10360	51.84	PK	316	2.2	V	8.10	59.94	68.2	-8.26
15540	46.44	PK	350	1.3	H	6.45	52.89	74	-21.11
15540	54.68	PK	251	2.4	V	6.45	61.13	74	-12.87
15540	38.01	AV	251	2.4	V	6.45	44.46	54	-9.54
5200 MHz									
10400	49.36	PK	318	2.3	H	8.24	57.6	68.2	-10.60
10400	52.89	PK	8	2.3	V	8.24	61.13	68.2	-7.07
15600	52.06	PK	83	1.4	H	6.57	58.63	74	-15.37
15600	36.21	AV	83	1.4	H	6.57	42.78	54	-11.22
15600	56.81	PK	202	1.6	V	6.57	63.38	74	-10.62
15600	39.83	AV	202	1.6	V	6.57	46.4	54	-7.60
5240 MHz									
5350	64.71	PK	154	1.4	H	-2.33	62.38	74	-11.62
5350	51.83	AV	154	1.4	H	-2.33	49.5	54	-4.50
5350	63.78	PK	324	2.3	V	-2.33	61.45	74	-12.55
5350	51.81	AV	324	2.3	V	-2.33	49.48	54	-4.52
5460	63.77	PK	35	1.6	H	-2.3	61.47	74	-12.53
5460	51.69	AV	35	1.6	H	-2.3	49.39	54	-4.61
5460	65.40	PK	301	2.4	V	-2.3	63.1	74	-10.90
5460	51.64	AV	301	2.4	V	-2.3	49.34	54	-4.66
10480	48.50	PK	338	1.7	H	8.6	57.10	68.2	-11.10
10480	51.24	PK	313	1.7	V	8.6	59.84	68.2	-8.36
15720	49.51	PK	258	1.2	H	6.69	56.2	74	-17.80
15720	36.57	AV	258	1.2	H	6.69	43.26	54	-10.74
15720	49.06	PK	121	2.1	V	6.69	55.75	74	-18.25
15720	35.36	AV	121	2.1	V	6.69	42.05	54	-11.95

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC40									
5190 MHz									
4500	63.40	PK	41	2.1	H	-4.72	58.68	74	-15.32
4500	51.00	AV	41	2.1	H	-4.72	46.28	54	-7.72
4500	64.03	PK	12	2.3	V	-4.72	59.31	74	-14.69
4500	51.25	AV	12	2.3	V	-4.72	46.53	54	-7.47
5150	62.73	PK	255	1.1	H	-2.73	60.00	74	-14.00
5150	51.79	AV	255	1.1	H	-2.73	49.06	54	-4.94
5150	68.64	PK	167	2	V	-2.73	65.91	74	-8.09
5150	53.98	AV	167	2	V	-2.73	51.25	54	-2.75
10380	46.71	PK	20	1.4	H	8.20	54.91	68.2	-13.29
10380	47.30	PK	275	1.4	V	8.20	55.50	68.2	-12.70
5230 MHz									
5350	65.71	PK	243	2.5	H	-2.33	63.38	74	-10.62
5350	52.04	AV	243	2.5	H	-2.33	49.71	54	-4.29
5350	64.97	PK	181	1.4	V	-2.33	62.64	74	-11.36
5350	52.42	AV	181	1.4	V	-2.33	50.09	54	-3.91
5460	65.54	PK	70	2.1	H	-2.3	63.24	74	-10.76
5460	52.18	AV	70	2.1	H	-2.3	49.88	54	-4.12
5460	65.42	PK	256	1.6	V	-2.3	63.12	74	-10.88
5460	52.15	AV	256	1.6	V	-2.3	49.85	54	-4.15
10460	47.59	PK	270	1.7	H	8.43	56.02	68.2	-12.18
10460	50.12	PK	46	1.7	V	8.43	58.55	68.2	-9.65

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC80									
5210MHz									
4500	63.36	PK	129	2.5	H	-4.72	58.64	74	-15.36
4500	52.37	AV	129	2.5	H	-4.72	47.65	54	-6.35
4500	64.03	PK	207	2.3	V	-4.72	59.31	74	-14.69
4500	52.17	AV	207	2.3	V	-4.72	47.45	54	-6.55
5150	65.21	PK	173	2.2	H	-2.73	62.48	74	-11.52
5150	52.57	AV	173	2.2	H	-2.73	49.84	54	-4.16
5150	74.01	PK	269	1.3	V	-2.73	71.28	74	-2.72
5150	54.31	AV	269	1.3	V	-2.73	51.58	54	-2.42
5350	64.14	PK	177	2.2	H	-2.33	61.81	74	-12.19
5350	53.24	AV	177	2.2	H	-2.33	50.91	54	-3.09
5350	68.18	PK	276	1.4	V	-2.33	65.85	74	-8.15
5350	53.49	AV	276	1.4	V	-2.33	51.16	54	-2.84
5460	63.83	PK	40	2.5	H	-2.3	61.53	74	-12.47
5460	52.89	AV	40	2.5	H	-2.3	50.59	54	-3.41
5460	64.51	PK	250	1.4	V	-2.3	62.21	74	-11.79
5460	52.90	AV	250	1.4	V	-2.3	50.6	54	-3.40
10420	43.80	PK	34	1.7	H	8.32	52.12	68.2	-16.08
10420	44.02	PK	272	1.7	V	8.32	52.34	68.2	-15.86

5250-5350 MHz:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11A (worst case ANT 1)									
5260 MHz									
4500	63.55	PK	14	2.2	H	-4.72	58.83	74	-15.17
4500	50.07	AV	14	2.2	H	-4.72	45.35	54	-8.65
4500	63.29	PK	202	2.1	V	-4.72	58.57	74	-15.43
4500	49.87	AV	202	2.1	V	-4.72	45.15	54	-8.85
5150	63.32	PK	9	2.2	H	-2.73	60.59	74	-13.41
5150	50.38	AV	9	2.2	H	-2.73	47.65	54	-6.35
5150	63.91	PK	333	2.2	V	-2.73	61.18	74	-12.82
5150	51.32	AV	333	2.2	V	-2.73	48.59	54	-5.41
10520	48.30	PK	120	2.2	H	8.65	56.95	68.2	-11.25
10520	53.57	PK	70	2.2	V	8.65	62.22	68.2	-5.98
15780	46.89	PK	291	1.9	H	6.77	53.66	74	-20.34
15780	49.46	PK	347	1.2	V	6.77	56.23	74	-17.77
15780	34.65	AV	347	1.2	V	6.77	41.42	54	-12.58
5280 MHz									
10560	49.98	PK	358	1.1	H	8.65	58.63	68.2	-9.57
10560	53.89	PK	277	1.1	V	8.65	62.54	68.2	-5.66
15840	46.02	PK	259	2.4	H	6.84	52.86	74	-21.14
15840	50.44	PK	32	1.3	V	6.84	57.28	74	-16.72
15840	34.97	AV	32	1.3	V	6.84	41.81	54	-12.19
5320 MHz									
5350	64.40	PK	3	1.5	H	-2.33	62.07	74	-11.93
5350	50.85	AV	3	1.5	H	-2.33	48.52	54	-5.48
5350	68.10	PK	315	1.6	V	-2.33	65.77	74	-8.23
5350	53.48	AV	315	1.6	V	-2.33	51.15	54	-2.85
5460	65.11	PK	53	1.3	H	-2.3	62.81	74	-11.19
5460	50.68	AV	53	1.3	H	-2.3	48.38	54	-5.62
5460	64.38	PK	19	1.3	V	-2.3	62.08	74	-11.92
5460	51.45	AV	19	1.3	V	-2.3	49.15	54	-4.85
10640	48.44	PK	5	1.8	H	8.9	57.34	74	-16.66
10640	33.29	AV	5	1.8	H	8.9	42.19	54	-11.81
10640	54.39	PK	326	2	V	8.9	63.29	74	-10.71
10640	40.54	AV	326	2	V	8.9	49.44	54	-4.56
15960	49.05	PK	274	1.2	H	7.09	56.14	74	-17.86
15960	33.95	AV	274	1.2	H	7.09	41.04	54	-12.96
15960	46.16	PK	54	2.4	V	7.09	53.25	74	-20.75

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n20									
5260 MHz									
4500	64.57	PK	6	1.5	H	-4.72	59.85	74	-14.15
4500	49.89	AV	6	1.5	H	-4.72	45.17	54	-8.83
4500	63.60	PK	197	1.2	V	-4.72	58.88	74	-15.12
4500	49.84	AV	197	1.2	V	-4.72	45.12	54	-8.88
5150	62.73	PK	31	1.7	H	-2.73	60.00	74	-14
5150	50.39	AV	31	1.7	H	-2.73	47.66	54	-6.34
5150	62.84	PK	312	2.3	V	-2.73	60.11	74	-13.89
5150	50.55	AV	312	2.3	V	-2.73	47.82	54	-6.18
10520	45.69	PK	346	2.4	H	8.65	54.34	68.2	-13.86
10520	48.41	PK	135	2.4	V	8.65	57.06	68.2	-11.14
5280 MHz									
10560	50.56	PK	143	2	H	8.65	59.21	68.2	-8.99
10560	46.35	PK	14	2	V	8.65	55	68.2	-13.2
5320 MHz									
5350	63.98	PK	202	1.3	H	-2.33	61.65	74	-12.35
5350	50.93	AV	202	1.3	H	-2.33	48.6	54	-5.4
5350	64.64	PK	179	1.5	V	-2.33	62.31	74	-11.69
5350	51.53	AV	179	1.5	V	-2.33	49.2	54	-4.8
5460	63.83	PK	197	1.3	H	-2.3	61.53	74	-12.47
5460	50.63	AV	197	1.3	H	-2.3	48.33	54	-5.67
5460	64.98	PK	97	1.1	V	-2.3	62.68	74	-11.32
5460	51.11	AV	97	1.1	V	-2.3	48.81	54	-5.19
10640	44.19	PK	60	1.2	H	8.9	53.09	74	-20.91
10640	48.54	PK	313	1.8	V	8.9	57.44	74	-16.56
10640	33.80	AV	313	1.8	V	8.9	42.70	54	-11.3

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11N40									
5270 MHz									
4500	62.83	PK	60	2.2	H	-4.72	58.11	74	-15.89
4500	50.41	AV	60	2.2	H	-4.72	45.69	54	-8.31
4500	63.29	PK	132	2.2	V	-4.72	58.57	74	-15.43
4500	50.31	AV	132	2.2	V	-4.72	45.59	54	-8.41
5150	62.69	PK	162	1.1	H	-2.73	59.96	74	-14.04
5150	50.80	AV	162	1.1	H	-2.73	48.07	54	-5.93
5150	62.65	PK	182	2.5	V	-2.73	59.92	74	-14.08
5150	50.95	AV	182	2.5	V	-2.73	48.22	54	-5.78
10540	44.09	PK	68	2.4	H	8.65	52.74	68.2	-15.46
10540	45.03	PK	237	2.4	V	8.65	53.68	68.2	-14.52
5310 MHz									
5350	64.07	PK	353	2.4	H	-2.33	61.74	74	-12.26
5350	51.31	AV	353	2.4	H	-2.33	48.98	54	-5.02
5350	64.78	PK	231	2.4	V	-2.33	62.45	74	-11.55
5350	52.03	AV	231	2.4	V	-2.33	49.7	54	-4.3
5460	64.25	PK	18	1.6	H	-2.3	61.95	74	-12.05
5460	51.07	AV	18	1.6	H	-2.3	48.77	54	-5.23
5460	64.08	PK	246	2.1	V	-2.3	61.78	74	-12.22
5460	51.52	AV	246	2.1	V	-2.3	49.22	54	-4.78
10620	44.58	PK	219	2.4	H	8.8	53.38	74	-20.62
10620	45.39	PK	305	2.4	V	8.8	54.19	74	-19.81
10620	31.81	AV	305	2.4	V	8.8	40.61	54	-13.39

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC20									
5260 MHz									
4500	63.70	PK	147	1.8	H	-4.72	58.98	74	-15.02
4500	50.48	AV	147	1.8	H	-4.72	45.76	54	-8.24
4500	63.95	PK	21	1.7	V	-4.72	59.23	74	-14.77
4500	50.68	AV	21	1.7	V	-4.72	45.96	54	-8.04
5150	62.68	PK	241	1.9	H	-2.73	59.95	74	-14.05
5150	51.14	AV	241	1.9	H	-2.73	48.41	54	-5.59
5150	63.82	PK	159	1.2	V	-2.73	61.09	74	-12.91
5150	51.81	AV	159	1.2	V	-2.73	49.08	54	-4.92
10520	49.66	PK	147	2	H	8.65	58.31	68.2	-9.89
10520	52.94	PK	86	2	V	8.65	61.59	68.2	-6.61
15780	46.19	PK	125	1.7	H	6.77	52.96	74	-21.04
15780	47.75	PK	259	1.1	V	6.77	54.52	74	-19.48
15780	33.06	AV	259	1.1	V	6.77	39.83	54	-14.17
5280 MHz									
10560	49.35	PK	336	2.3	H	8.65	58	68.2	-10.2
10560	52.83	PK	102	2.3	V	8.65	61.48	68.2	-6.72
15840	46.62	PK	77	1.6	H	6.84	53.46	74	-20.54
15840	47.88	PK	105	2.1	V	6.84	54.72	74	-19.28
15840	32.48	AV	105	2.1	V	6.84	39.32	54	-14.68
5320 MHz									
5350	64.05	PK	212	1.3	H	-2.33	61.72	74	-12.28
5350	51.73	AV	212	1.3	H	-2.33	49.4	54	-4.6
5350	65.27	PK	293	1.7	V	-2.33	62.94	74	-11.06
5350	52.48	AV	293	1.7	V	-2.33	50.15	54	-3.85
5460	63.78	PK	212	1.3	H	-2.3	61.48	74	-12.52
5460	51.42	AV	212	1.3	H	-2.3	49.12	54	-4.88
5460	66.52	PK	4	1.1	V	-2.3	64.22	74	-9.78
5460	52.09	AV	4	1.1	V	-2.3	49.79	54	-4.21
10640	47.52	PK	261	1.8	H	8.9	56.42	74	-17.58
10640	33.56	AV	262	1.8	H	8.9	42.46	54	-11.54
10640	53.84	PK	308	1.8	V	8.9	62.74	74	-11.26
10640	39.34	AV	204	1.8	V	8.9	48.24	54	-5.76
15960	44.98	PK	77	1.3	H	7.09	52.07	74	-21.93
15960	47.31	PK	201	2.1	V	7.09	54.4	74	-19.60
15960	32.13	AV	201	2.1	V	7.09	39.22	54	-14.78

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC40									
5270 MHz									
4500	63.31	PK	123	1.7	H	-4.72	58.59	74	-15.41
4500	51.33	AV	123	1.7	H	-4.72	46.61	54	-7.39
4500	64.05	PK	148	1.3	V	-4.72	59.33	74	-14.67
4500	51.41	AV	148	1.3	V	-4.72	46.69	54	-7.31
5150	62.97	PK	194	1.5	H	-2.73	60.24	74	-13.76
5150	51.65	AV	148	1.5	H	-2.73	48.92	54	-5.08
5150	62.99	PK	186	1.1	V	-2.73	60.26	74	-13.74
5150	52.26	AV	186	1.1	V	-2.73	49.53	54	-4.47
10540	44.27	PK	77	2	H	8.65	52.92	68.2	-15.28
10540	48.74	PK	211	2	V	8.65	57.39	68.2	-10.81
5310 MHz									
5350	64.71	PK	146	2.3	H	-2.33	62.38	74	-11.62
5350	52.26	AV	146	2.3	H	-2.33	49.93	54	-4.07
5350	65.36	PK	131	1.8	V	-2.33	63.03	74	-10.97
5350	53.60	AV	131	1.8	V	-2.33	51.27	54	-2.73
5460	64.85	PK	354	1.4	H	-2.3	62.55	74	-11.45
5460	52.08	AV	354	1.4	H	-2.3	49.78	54	-4.22
5460	63.80	PK	252	1.4	V	-2.3	61.5	74	-12.5
5460	52.35	AV	252	1.4	V	-2.3	50.05	54	-3.95
10620	45.46	PK	256	1.8	H	8.8	54.26	74	-19.74
10620	31.93	AV	256	1.8	H	8.8	40.73	54	-13.27
10620	50.27	PK	303	2	V	8.8	59.07	74	-14.93
10620	36.26	AV	303	2	V	8.8	45.06	54	-8.94

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC80									
5290 MHz									
4500	63.87	PK	306	1	H	-4.72	59.15	74	-14.85
4500	52.60	AV	306	1	H	-4.72	47.88	54	-6.12
4500	64.06	PK	240	1.3	V	-4.72	59.34	74	-14.66
4500	52.17	AV	240	1.3	V	-4.72	47.45	54	-6.55
5150	62.87	PK	216	1.3	H	-2.73	60.14	74	-13.86
5150	52.64	AV	216	1.3	H	-2.73	49.91	54	-4.09
5150	64.38	PK	138	1.8	V	-2.73	61.65	74	-12.35
5150	53.12	AV	138	1.8	V	-2.73	50.39	54	-3.61
5350	64.21	PK	47	1.8	H	-2.33	61.88	74	-12.12
5350	53.53	AV	47	1.8	H	-2.33	51.2	54	-2.8
5350	73.60	PK	77	2	V	-2.33	71.27	74	-2.73
5350	54.05	AV	77	2	V	-2.33	51.72	54	-2.28
5460	64.29	PK	289	1.2	H	-2.3	61.99	74	-12.01
5460	53.02	AV	289	1.2	H	-2.3	50.72	54	-3.28
5460	69.91	PK	28	1.7	V	-2.3	67.61	74	-6.39
5460	53.38	AV	28	1.7	V	-2.3	51.08	54	-2.92
10580	43.99	PK	106	2.2	H	8.7	52.69	68.2	-15.51
10580	44.21	PK	263	2.2	V	8.7	52.91	68.2	-15.29

5470-5725MHz:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11A (worst case ANT 1)									
5500 MHz									
5400	64.53	PK	258	2.4	H	-2.29	62.24	74	-11.76
5400	51.20	AV	258	2.4	H	-2.29	48.91	54	-5.09
5400	64.48	PK	278	1.2	V	-2.29	62.19	74	-11.81
5400	51.29	AV	278	1.2	V	-2.29	49.00	54	-5.00
5470	65.47	PK	327	1.2	H	-2.2	63.27	68.2	-4.93
5470	66.33	PK	168	1.2	V	-2.2	64.13	68.2	-4.07
11000	42.58	PK	148	1.2	H	9.67	52.25	74	-21.75
11000	43.75	PK	332	1.8	V	9.67	53.42	74	-20.58
5580 MHz									
11160	43.43	PK	291	2.2	H	8.60	52.03	74	-21.97
11160	23.97	PK	347	2.2	V	8.60	32.57	54	-21.43
5700 MHz									
5725	65.96	PK	40	1.5	H	-2.02	63.94	68.2	-4.26
5725	66.15	AV	40	1.5	H	-2.02	64.13	68.2	-4.07
5745	65.68	PK	234	2.1	V	-1.9	63.78	68.2	-4.42
5745	65.52	AV	234	2.1	V	-1.9	63.62	68.2	-4.58
11400	45.04	PK	139	1.7	H	7.26	52.3	74	-21.70
11400	45.49	PK	238	1.6	V	7.26	52.75	74	-21.25
802.11n20									
5500 MHz									
5400	64.41	PK	269	1.4	H	-2.29	62.12	74	-11.88
5400	51.40	AV	269	1.4	H	-2.29	49.11	54	-4.89
5400	64.20	PK	87	1.2	V	-2.29	61.91	74	-12.09
5400	51.28	AV	87	1.2	V	-2.29	48.99	54	-5.01
5470	65.21	PK	298	1.3	H	-2.2	63.01	68.2	-5.19
5470	65.81	PK	89	2.2	V	-2.2	63.61	68.2	-4.59
11000	40.49	PK	185	2.2	H	9.67	50.16	74	-23.84
11000	41.64	PK	76	1.5	V	9.67	51.31	74	-22.69
5580 MHz									
11160	41.54	PK	167	1.5	H	8.60	50.14	74	-23.86
11160	21.32	PK	160	1.5	V	8.60	29.92	54	-24.08
5700 MHz									
5725	65.67	PK	240	1.1	H	-2.02	63.65	68.2	-4.55
5725	65.67	AV	240	1.1	H	-2.02	63.65	68.2	-4.55
5745	65.61	PK	276	1.3	V	-1.9	63.71	68.2	-4.49
5745	65.79	AV	276	1.3	V	-1.9	63.89	68.2	-4.31
11400	43.25	PK	42	1.8	H	7.26	50.51	74	-23.49
11400	43.18	PK	117	2.3	V	7.26	50.44	74	-23.56

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n40									
5510 MHz									
5400	64.52	PK	310	2.2	H	-2.29	62.23	74	-11.77
5400	51.35	AV	310	2.2	H	-2.29	49.06	54	-4.94
5400	64.62	PK	196	1.7	V	-2.29	62.33	74	-11.67
5400	51.35	AV	196	1.7	V	-2.29	49.06	54	-4.94
5470	65.94	PK	124	2.2	H	-2.2	63.74	68.2	-4.46
5470	66.16	PK	234	2.3	V	-2.2	63.96	68.2	-4.24
11020	40.72	PK	202	1	H	9.6	50.32	74	-23.68
11020	41.75	PK	98	1.9	V	9.6	51.35	74	-22.65
5550 MHz									
11100	41.57	PK	116	2.4	H	9.12	50.69	74	-23.31
11100	21.74	PK	148	2.4	V	9.12	30.86	54	-23.14
5670 MHz									
5725	65.93	PK	95	1.3	H	-2.02	63.91	68.2	-4.29
5725	66.62	AV	95	1.3	H	-2.02	64.6	68.2	-3.60
5745	65.48	PK	36	1.4	V	-1.9	63.58	68.2	-4.62
5745	65.70	AV	36	1.4	V	-1.9	63.8	68.2	-4.40
11340	43.04	PK	7	2.2	H	7.6	50.64	74	-23.36
11340	42.92	PK	59	1.5	V	7.6	50.52	74	-23.48

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBµV/m)	FCC Part 15.407	
	Reading (dBµV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBµV/m)	Margin (dB)
802.11AC20									
5500 MHz									
5400	64.46	PK	340	2.1	H	-2.29	62.17	74	-11.83
5400	51.23	AV	340	2.1	H	-2.29	48.94	54	-5.06
5400	64.53	PK	63	1.4	V	-2.29	62.24	74	-11.76
5400	51.20	AV	63	1.4	V	-2.29	48.91	54	-5.09
5470	65.71	PK	153	1.3	H	-2.2	63.51	68.2	-4.69
5470	65.85	PK	298	1.1	V	-2.2	63.65	68.2	-4.55
11000	43.74	PK	238	2.2	H	9.67	53.41	74	-20.59
11000	47.64	PK	52	2.1	V	9.67	57.31	74	-16.69
11000	33.55	AV	52	2.1	V	9.67	43.22	54	-10.78
5580 MHz									
11160	44.31	PK	143	2.1	H	8.60	52.91	74	-21.09
11160	50.46	PK	44	1.1	H	8.60	59.06	74	-14.94
11160	36.41	PK	297	1.1	V	8.60	45.01	54	-8.99
5700 MHz									
5725	65.97	PK	247	2.5	H	-2.02	63.95	68.2	-4.25
5725	66.70	AV	247	2.5	H	-2.02	64.68	68.2	-3.52
5745	65.57	PK	291	2.2	V	-1.9	63.67	68.2	-4.53
5745	65.81	AV	291	2.2	V	-1.9	63.91	68.2	-4.29
11400	46.23	PK	328	1.1	H	7.26	53.49	74	-20.51
11400	52.11	PK	210	1.9	V	7.26	59.37	74	-14.63
11400	39.21	AV	210	1.9	V	7.26	46.47	54	-7.53
802.11AC40									
5510 MHz									
5400	64.40	PK	336	2.3	H	-2.29	62.11	74	-11.89
5400	52.16	AV	336	2.3	H	-2.29	49.87	54	-4.13
5400	64.60	PK	75	1.6	V	-2.29	62.31	74	-11.69
5400	52.43	AV	75	1.6	V	-2.29	50.14	54	-3.86
5470	65.94	PK	132	1.7	H	-2.2	63.74	68.2	-4.46
5470	66.55	PK	185	1.2	V	-2.2	64.35	68.2	-3.85
11020	43.08	PK	100	1.9	H	9.6	52.68	74	-21.32
11020	46.85	PK	172	1.8	V	9.6	56.45	74	-17.55
11020	32.83	AV	172	1.8	V	9.6	42.43	54	-11.57
5550 MHz									
11100	40.24	PK	313	1.5	H	9.12	49.36	74	-24.64
11100	45.30	PK	165	2.2	H	9.12	54.42	74	-19.58
11100	31.38	PK	233	2.2	V	9.12	40.50	54	-13.50
5670 MHz									
5725	65.64	PK	68	2	H	-2.02	63.62	68.2	-4.58
5725	65.71	AV	68	2	H	-2.02	63.69	68.2	-4.51
5745	65.68	PK	26	1.1	V	-1.9	63.78	68.2	-4.42
5745	66.15	AV	26	1.1	V	-1.9	64.25	68.2	-3.95
11340	41.72	PK	1	1.3	H	7.6	49.32	74	-24.68
11340	42.41	PK	216	1.3	V	7.6	50.01	74	-23.99

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC80									
5530 MHz									
5400	64.45	PK	87	2.4	H	-2.29	62.16	74	-11.84
5400	52.58	AV	87	2.4	H	-2.29	50.29	54	-3.71
5400	64.20	PK	254	2.4	V	-2.29	61.91	74	-12.09
5400	52.65	AV	254	2.4	V	-2.29	50.36	54	-3.64
5470	66.35	PK	296	2	H	-2.2	64.15	68.2	-4.05
5470	67.18	PK	88	1.7	V	-2.2	64.98	68.2	-3.22
11060	39.91	PK	72	1.2	H	9.40	49.31	74	-24.69
11060	39.83	PK	167	1.2	V	9.40	49.23	74	-24.77
5610 MHz									
5725	65.63	PK	227	1.6	H	-2.02	63.61	68.2	-4.59
5725	65.57	AV	227	1.6	H	-2.02	63.55	68.2	-4.65
5745	65.55	PK	110	1.4	V	-1.9	63.65	68.2	-4.55
5745	66.12	AV	110	1.4	V	-1.9	64.22	68.2	-3.98
11220	42.08	PK	158	1.5	H	8.40	50.48	74	-23.52
11220	42.01	PK	122	1.5	V	8.40	50.41	74	-23.59

5725-5850 MHz:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11A (worst case ANT 1)									
5745 MHz									
5650	65.31	PK	124	2.1	H	-1.95	63.36	68.2	-4.84
5650	65.20	PK	207	1.6	V	-1.95	63.25	68.2	-4.95
5700	66.17	PK	85	1.4	H	-2.02	64.15	105.2	-41.05
5700	66.46	PK	263	1.3	V	-2.02	64.44	105.2	-40.76
5720	72.37	PK	261	2.3	H	-2	70.37	110.8	-40.43
5720	76.13	PK	92	1.2	V	-2	74.13	110.8	-36.67
5725	82.41	PK	308	1.7	H	-2	80.41	122.2	-41.79
5725	85.26	PK	252	1.7	V	-2	83.26	122.2	-38.94
11490	52.66	PK	29	2.4	H	6.58	59.24	74	-14.76
11490	39.14	AV	29	2.4	H	6.58	45.72	54	-8.28
11490	55.78	PK	143	1.5	V	6.58	62.36	74	-11.64
11490	41.59	AV	143	1.5	V	6.58	48.17	54	-5.83
5785 MHz									
11570	46.47	PK	254	1.7	H	6.6	53.07	74	-20.93
11570	48.89	PK	81	1.7	V	6.6	55.49	74	-18.51
11570	35.83	AV	81	1.7	V	6.6	42.43	54	-11.57
5825 MHz									
5850	76.03	PK	19	1.1	H	-1.81	74.22	122.2	-47.98
5850	76.04	PK	212	1.4	V	-1.81	74.23	122.2	-47.97
5855	73.48	PK	157	2.2	H	-1.82	71.66	110.8	-39.14
5855	73.41	PK	223	2.3	V	-1.82	71.59	110.8	-39.21
5875	65.39	PK	208	2.4	H	-1.84	63.55	105.2	-41.65
5875	66.14	PK	298	1.2	V	-1.84	64.3	105.2	-40.9
5925	65.99	PK	117	1.7	H	-1.8	64.19	68.2	-4.01
5925	65.32	PK	355	1.7	V	-1.8	63.52	68.2	-4.68
11650	45.37	PK	37	2.2	H	6.77	52.14	74	-21.86
11650	47.63	PK	153	2.1	V	6.77	54.40	74	-19.6
11650	34.02	AV	153	2.1	V	6.77	40.79	54	-13.21

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11N20									
5745 MHz									
5650	65.26	PK	81	2	H	-1.95	63.31	68.2	-4.89
5650	65.12	PK	334	2.2	V	-1.95	63.17	68.2	-5.03
5700	65.42	PK	97	1.1	H	-2.02	63.4	105.2	-41.8
5700	65.51	PK	1	2.3	V	-2.02	63.49	105.2	-41.71
5720	65.21	PK	286	2.3	H	-2	63.21	110.8	-47.59
5720	65.34	PK	132	2.3	V	-2	63.34	110.8	-47.46
5725	66.81	PK	222	1.7	H	-2	64.81	122.2	-57.39
5725	66.99	PK	323	1.7	V	-2	64.99	122.2	-57.21
11490	44.58	PK	1	1.1	H	6.58	51.16	74	-22.84
11490	45.41	PK	56	1.9	V	6.58	51.99	74	-22.01
5785 MHz									
11570	44.82	PK	211	1.7	H	6.6	51.42	74	-22.58
11570	45.67	PK	252	1.7	V	6.6	52.27	74	-21.73
5825 MHz									
5850	66.48	PK	144	2.4	H	-1.81	64.67	122.2	-57.53
5850	66.41	PK	13	1.5	V	-1.81	64.60	122.2	-57.6
5855	65.97	PK	317	2.4	H	-1.82	64.15	110.8	-46.65
5855	65.47	PK	33	1.9	V	-1.82	63.65	110.8	-47.15
5875	66.15	PK	247	1	H	-1.84	64.31	105.2	-40.89
5875	66.17	PK	328	1.2	V	-1.84	64.33	105.2	-40.87
5925	65.69	PK	329	1.7	H	-1.8	63.89	68.2	-4.31
5925	65.94	PK	206	1.7	V	-1.8	64.14	68.2	-4.06
11650	43.03	PK	317	2.3	H	6.77	49.80	74	-24.2
11650	44.18	PK	253	2.4	V	6.77	50.95	74	-23.05

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11N40									
5755 MHz									
5650	63.96	PK	133	1.9	H	-1.95	62.01	68.2	-6.19
5650	64.27	PK	169	1.8	V	-1.95	62.32	68.2	-5.88
5700	65.15	PK	92	1.2	H	-2.02	63.13	105.2	-42.07
5700	65.36	PK	16	2.2	V	-2.02	63.34	105.2	-41.86
5720	67.25	PK	106	1.5	H	-2	65.25	110.8	-45.55
5720	68.00	PK	286	2	V	-2	66	110.8	-44.8
5725	68.16	PK	197	1.7	H	-2	66.16	122.2	-56.04
5725	70.32	PK	127	1.7	V	-2	68.32	122.2	-53.88
11510	44.12	PK	67	2.4	H	6.5	50.62	74	-23.38
11510	47.23	PK	229	1.2	V	6.5	53.73	74	-20.27
5795 MHz									
5850	67.76	PK	120	2.1	H	-1.81	65.95	122.2	-56.25
5850	67.71	PK	98	1.3	V	-1.81	65.90	122.2	-56.3
5855	66.42	PK	30	2.4	H	-1.82	64.6	110.8	-46.2
5855	65.75	PK	121	1.7	V	-1.82	63.93	110.8	-46.87
5875	65.52	PK	167	1.5	H	-1.84	63.68	105.2	-41.52
5875	65.27	PK	226	1.2	V	-1.84	63.43	105.2	-41.77
5925	65.44	PK	77	1.7	H	-1.8	63.64	68.2	-4.56
5925	65.91	PK	38	1.7	V	-1.8	64.11	68.2	-4.09
11590	44.14	PK	323	1.1	H	6.58	50.72	74	-23.28
11590	47.45	PK	138	1.6	V	6.58	54.03	74	-19.97
11590	35.78	AV	138	1.6	V	6.58	42.36	54	-11.64

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC20									
5745 MHz									
5650	64.56	PK	31	1.3	H	-1.95	62.61	68.2	-5.59
5650	64.45	PK	274	1.1	V	-1.95	62.50	68.2	-5.7
5700	65.80	PK	34	2.2	H	-2.02	63.78	105.2	-41.42
5700	66.00	PK	26	1.1	V	-2.02	63.98	105.2	-41.22
5720	66.39	PK	284	1.5	H	-2	64.39	110.8	-46.41
5720	68.17	PK	275	1.7	V	-2	66.17	110.8	-44.63
5725	68.27	PK	291	1.7	H	-2	66.27	122.2	-55.93
5725	72.10	PK	42	1.7	V	-2	70.10	122.2	-52.1
11490	48.94	PK	257	1.1	H	6.58	55.52	74	-18.48
11490	33.61	AV	257	1.1	H	6.58	40.19	54	-13.81
11490	51.99	PK	128	1.4	V	6.58	58.57	74	-15.43
11490	39.26	AV	128	1.4	V	6.58	45.84	54	-8.16
5785 MHz									
11570	49.28	PK	115	1.7	H	6.6	55.88	74	-18.12
11570	33.78	AV	115	1.7	H	6.6	40.38	54	-13.62
11570	52.94	PK	134	1.7	V	6.6	59.54	74	-14.46
11570	38.95	AV	134	1.7	V	6.6	45.55	54	-8.45
5825 MHz									
5850	70.68	PK	6	1.7	H	-1.81	68.87	122.2	-53.33
5850	73.61	PK	229	2.3	V	-1.81	71.80	122.2	-50.4
5855	66.93	PK	296	1.6	H	-1.82	65.11	110.8	-45.69
5855	67.87	PK	118	1.1	V	-1.82	66.05	110.8	-44.75
5875	66.32	PK	152	1.3	H	-1.84	64.48	105.2	-40.72
5875	65.79	PK	71	1.3	V	-1.84	63.95	105.2	-41.25
5925	66.14	PK	184	1.7	H	-1.8	64.34	68.2	-3.86
5925	65.92	PK	7	1.7	V	-1.8	64.12	68.2	-4.08
11650	49.11	PK	58	1.5	H	6.77	55.88	74	-18.12
11650	33.72	AV	58	1.5	H	6.77	40.49	54	-13.51
11650	52.96	PK	231	2.3	V	6.77	59.73	74	-14.27
11650	38.75	AV	231	2.3	V	6.77	45.52	54	-8.48

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC40									
5755 MHz									
5650	65.86	PK	311	2.2	H	-1.95	63.91	68.2	-4.29
5650	65.55	PK	11	1.4	V	-1.95	63.60	68.2	-4.6
5700	65.87	PK	265	2.4	H	-2.02	63.85	105.2	-41.35
5700	70.26	PK	185	2.4	V	-2.02	68.24	105.2	-36.96
5720	66.49	PK	234	1.5	H	-2	64.49	110.8	-46.31
5720	74.64	PK	207	1.5	V	-2	72.64	110.8	-38.16
5725	68.12	PK	37	1.7	H	-2	66.12	122.2	-56.08
5725	74.65	PK	205	1.7	V	-2	72.65	122.2	-49.55
11510	47.38	PK	161	2	H	6.5	53.88	74	-20.12
11510	50.40	PK	88	1.5	V	6.5	56.90	74	-17.1
11510	37.32	AV	88	1.5	V	6.5	43.82	54	-10.18
5795 MHz									
5850	68.09	PK	278	1.6	H	-1.81	66.28	122.2	-55.92
5850	67.82	PK	68	1.2	V	-1.81	66.01	122.2	-56.19
5855	66.71	PK	147	1.9	H	-1.82	64.89	110.8	-45.91
5855	66.72	PK	199	1.5	V	-1.82	64.9	110.8	-45.9
5875	66.14	PK	268	2.2	H	-1.84	64.3	105.2	-40.9
5875	66.65	PK	283	1.9	V	-1.84	64.81	105.2	-40.39
5925	65.87	PK	322	1.7	H	-1.8	64.07	68.2	-4.13
5925	66.23	PK	6	1.7	V	-1.8	64.43	68.2	-3.77
11590	47.10	PK	298	1.2	H	6.58	53.68	74	-20.32
11590	50.24	PK	202	2	V	6.58	56.82	74	-17.18
11590	37.12	AV	202	2	V	6.58	43.70	54	-10.3

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	Detector (PK/QP/Ave.)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11AC80									
5775 MHz									
5650	65.06	PK	20	2.1	H	-1.95	63.11	68.2	-5.09
5650	67.05	PK	46	1.2	V	-1.95	65.10	68.2	-3.1
5700	65.23	PK	176	2.4	H	-2.02	63.21	105.2	-41.99
5700	70.61	PK	48	1.2	V	-2.02	68.59	105.2	-36.61
5720	67.08	PK	114	1.1	H	-2	65.08	110.8	-45.72
5720	72.30	PK	306	2.4	V	-2	70.3	110.8	-40.5
5725	68.16	PK	330	1.7	H	-2	66.16	122.2	-56.04
5725	72.01	PK	63	1.7	V	-2	70.01	122.2	-52.19
5850	69.78	PK	309	2.4	H	-1.81	67.97	122.2	-54.23
5850	71.52	PK	55	1.9	V	-1.81	69.71	122.2	-52.49
5855	67.23	PK	32	2.4	H	-1.82	65.41	110.8	-45.39
5855	68.00	PK	75	2.2	V	-1.82	66.18	110.8	-44.62
5875	67.96	PK	120	2.1	H	-1.84	66.12	105.2	-39.08
5875	69.06	PK	105	2.1	V	-1.84	67.22	105.2	-37.98
5925	66.11	PK	177	1.7	H	-1.8	64.31	68.2	-3.89
5925	66.20	PK	311	1.7	V	-1.8	64.40	68.2	-3.8
11550	44.12	PK	35	2.2	H	6.61	50.73	74	-23.27
11550	44.36	PK	181	2.4	V	6.61	50.97	74	-23.03

Simultaneously transmission:

Worst case is 2.4G Wi-Fi (802.11b mode, 2462MHz) & 5G Wi-Fi (802.11ac20 mode, 5320MHz)

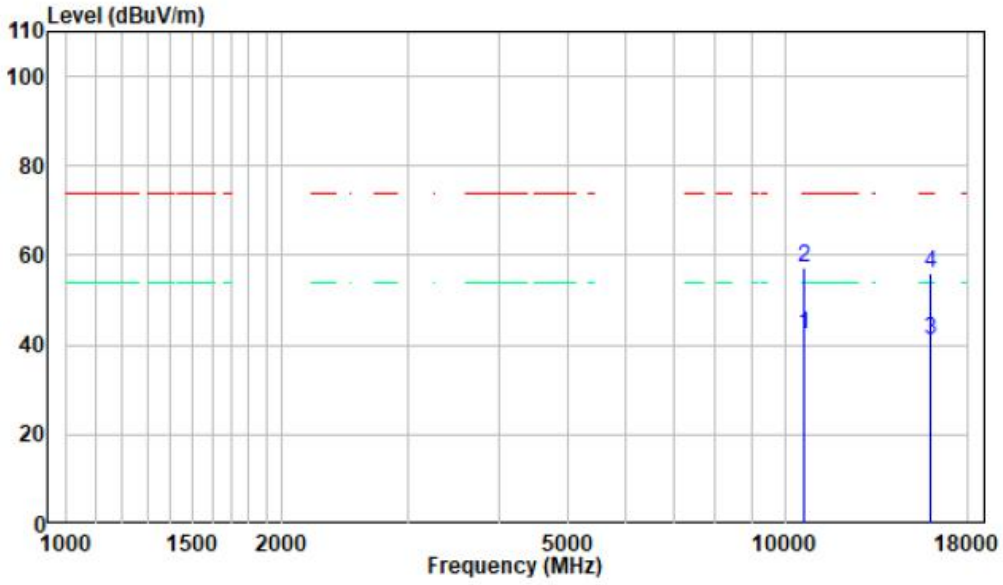
Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/QP/Ave.		Height (m)	Polar (H/V)				
750.2	41.06	QP	135	2.2	H	-0.87	40.19	46	-5.81
52.6	45.6	QP	135	2.2	V	-9.96	35.64	40	-4.36
4924	57.00	PK	118	1.8	H	-3.12	53.88	74	-20.12
4924	58.37	PK	42	2.2	V	-3.12	55.25	74	-18.75
4924	51.93	AV	42	2.2	V	-3.12	48.81	54	-5.19
10640	47.52	PK	261	1.8	H	8.9	56.42	74	-17.58
10640	33.56	AV	262	1.8	H	8.9	42.46	54	-11.54
10640	53.84	PK	308	1.8	V	8.9	62.74	74	-11.26
10640	39.34	AV	204	1.8	V	8.9	48.24	54	-5.76

Note:
Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Absolute Level (Corrected Amplitude)= Factor + Reading
Margin = Absolute Level (Corrected Amplitude) - Limit
The other spurious emission which is 20dB below to the limit or in the noise floor was not recorded.
The test result of peak was less than the limit of average, so just peak values were recorded.

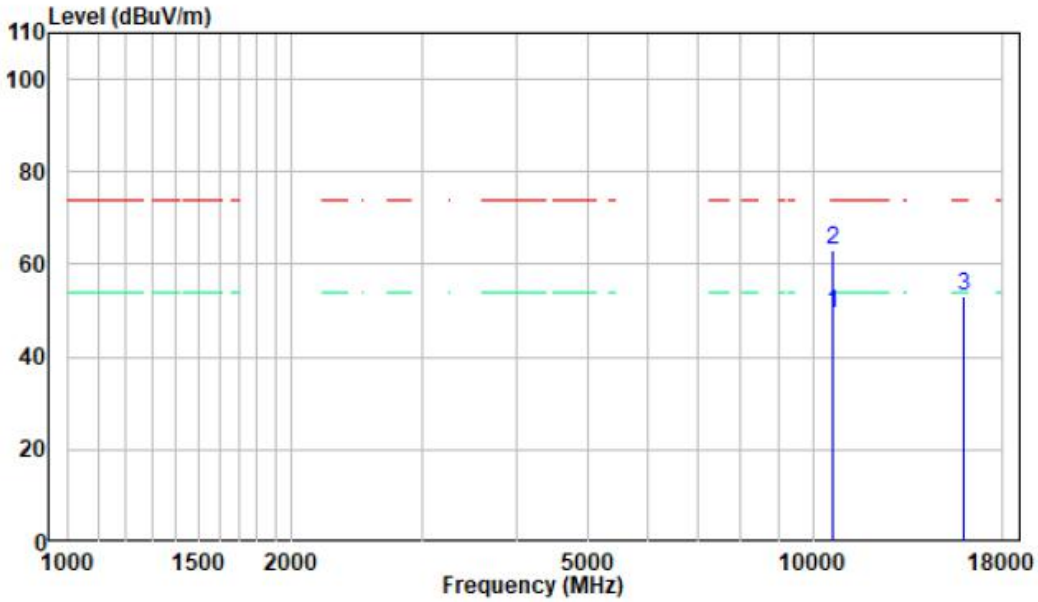
1-18 GHz:

Pre-scan Plots:

802.11 a 5320MHz
Horizontal



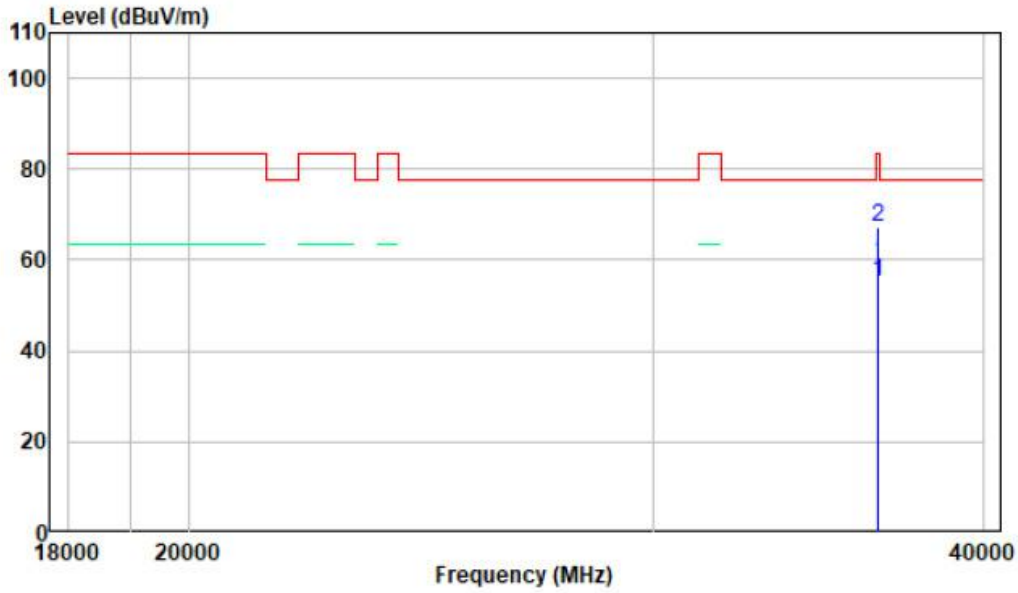
Vertical



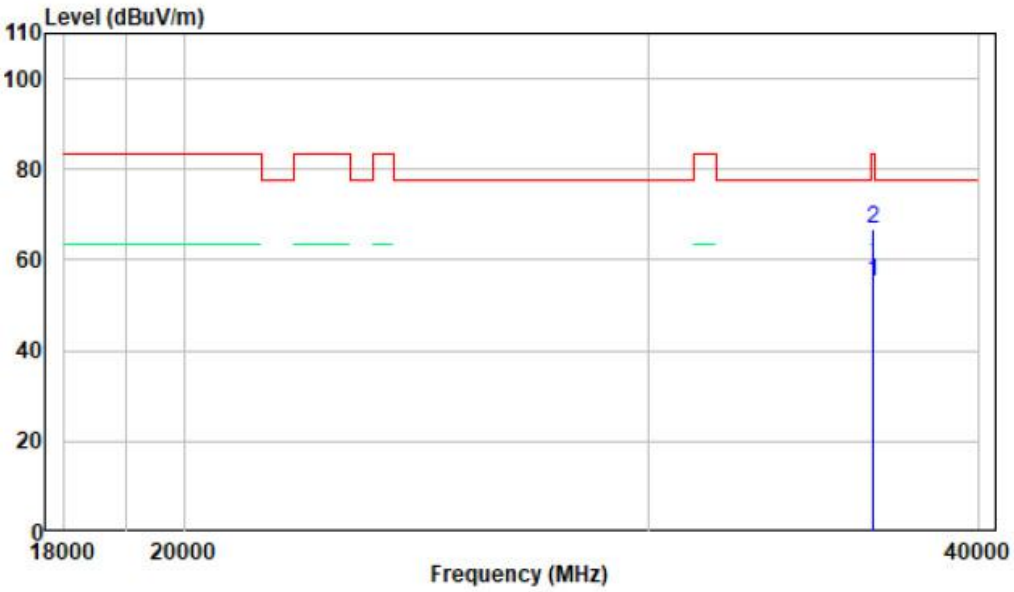
18 -40GHz:

Pre-scan Plots:

802.11 a 5320MHz
Horizontal



Vertical



FCC §15.407(a),(e) – 26 dB & 6dB EMISSION BANDWIDTH

Applicable Standard

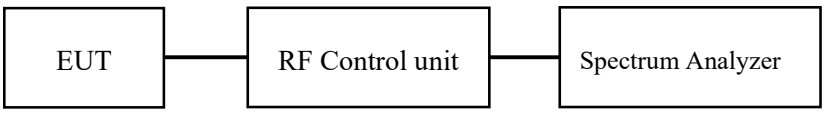
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

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

Test Procedure

1. Emission Bandwidth (EBW)
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. **Minimum Emission Bandwidth for the band 5.725-5.85 GHz**
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



Test Data

Environmental Conditions

Temperature:	24~27 ℃
Relative Humidity:	50~57 %
ATM Pressure:	100.2~101.0 kPa

The testing was performed by Paul Liu and Kei Pei from 2022-02-09 to 2022-04-01.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

Note: the worst case ANT 1 was tested.

FCC §15.407(a) – CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

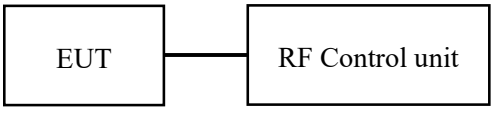
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

d. Place the EUT on a bench and set it in transmitting mode.

e. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.

f. Add a correction factor to the display.



Note: the RF control unit has built-in power sensor.

Test Data

Environmental Conditions

Temperature:	24~27 ℃
Relative Humidity:	50~57 %
ATM Pressure:	100.2~101.0 kPa

The testing was performed by Paul Liu from 2022-02-09 to 2022-02-22.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

FCC §15.407(a) - POWER SPECTRAL DENSITY

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

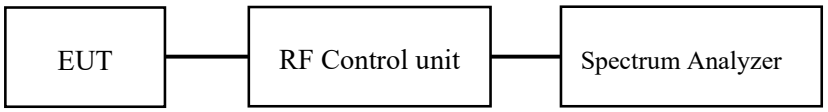
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW $\geqslant$ 1/T, where T is defined in section II.B.l.a).
b) Set VBW $\geqslant$ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.



Test Data

Environmental Conditions

Temperature:	24~27 ℃
Relative Humidity:	50~57 %
ATM Pressure:	100.2~101.0 kPa

The testing was performed by Paul Liu from 2022-02-09 to 2022-03-29.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

APPENDIX

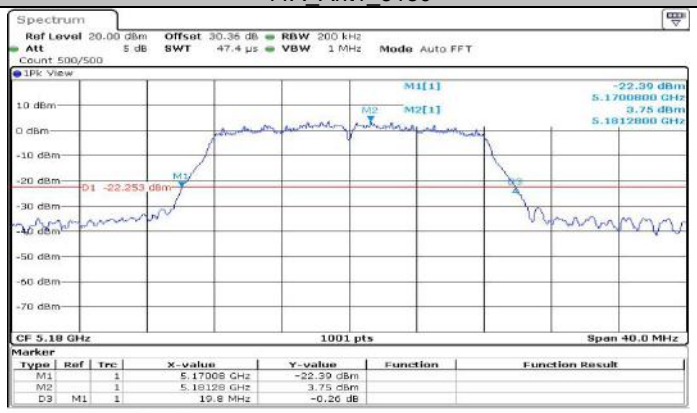
Appendix A1: Emission Bandwidth

Test Result

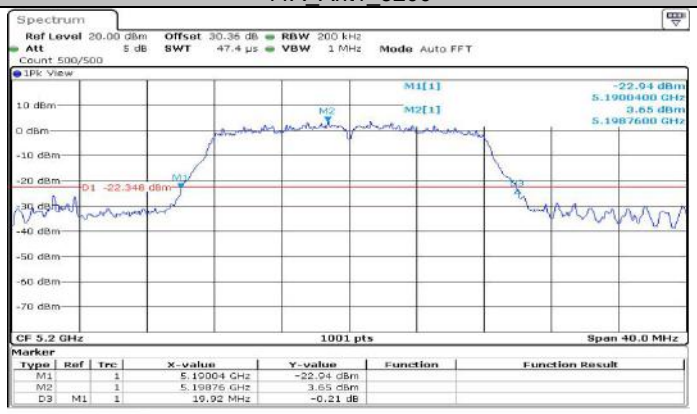
Test Mode	Antenna	Channel	26db EBW [MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.800	---	PASS
	Ant1	5200	19.920	---	PASS
	Ant1	5240	19.480	---	PASS
	Ant1	5260	19.800	---	PASS
	Ant1	5280	19.720	---	PASS
	Ant1	5320	19.760	---	PASS
	Ant1	5500	19.960	---	PASS
	Ant1	5580	19.880	---	PASS
	Ant1	5700	19.760	---	PASS
11N20MIMO	Ant1	5180	20.080	---	PASS
	Ant1	5200	20.080	---	PASS
	Ant1	5240	20.120	---	PASS
	Ant1	5260	20.240	---	PASS
	Ant1	5280	20.160	---	PASS
	Ant1	5320	20.040	---	PASS
	Ant1	5500	20.000	---	PASS
	Ant1	5580	20.120	---	PASS
	Ant1	5700	20.160	---	PASS
11N40MIMO	Ant1	5190	40.800	---	PASS
	Ant1	5230	40.640	---	PASS
	Ant1	5270	41.120	---	PASS
	Ant1	5310	40.800	---	PASS
	Ant1	5510	40.720	---	PASS
	Ant1	5550	40.640	---	PASS
	Ant1	5670	40.720	---	PASS
11AC20MIMO	Ant1	5180	20.000	---	PASS
	Ant1	5200	20.040	---	PASS
	Ant1	5240	19.960	---	PASS
	Ant1	5260	20.120	---	PASS
	Ant1	5280	20.000	---	PASS
	Ant1	5320	20.040	---	PASS
	Ant1	5500	20.080	---	PASS
	Ant1	5580	20.120	---	PASS
	Ant1	5700	20.080	---	PASS
11AC40MIMO	Ant1	5190	40.480	---	PASS
	Ant1	5230	40.400	---	PASS
	Ant1	5270	40.640	---	PASS
	Ant1	5310	40.560	---	PASS
	Ant1	5510	40.400	---	PASS
	Ant1	5550	40.320	---	PASS
	Ant1	5670	40.400	---	PASS
11AC80MIMO	Ant1	5210	80.800	---	PASS
	Ant1	5290	80.640	---	PASS
	Ant1	5530	80.480	---	PASS
	Ant1	5610	80.480	---	PASS

Test Graphs

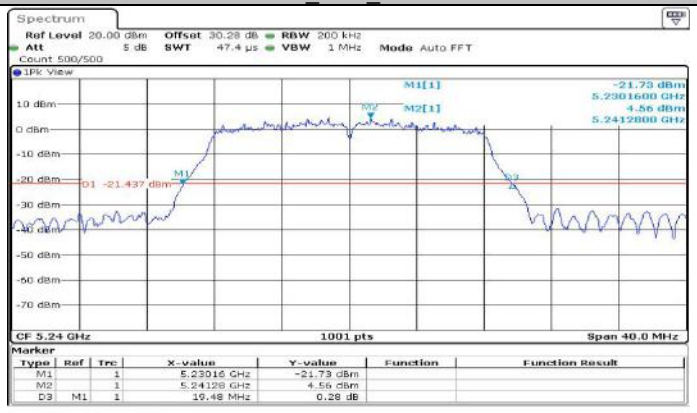
11A_Ant1_5180



11A_Ant1_5200



11A_Ant1_5240



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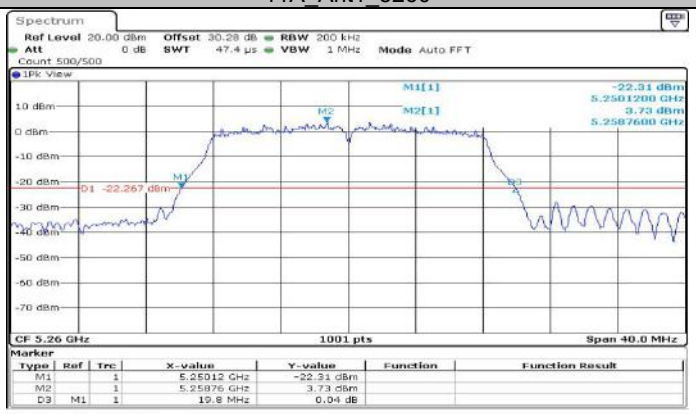
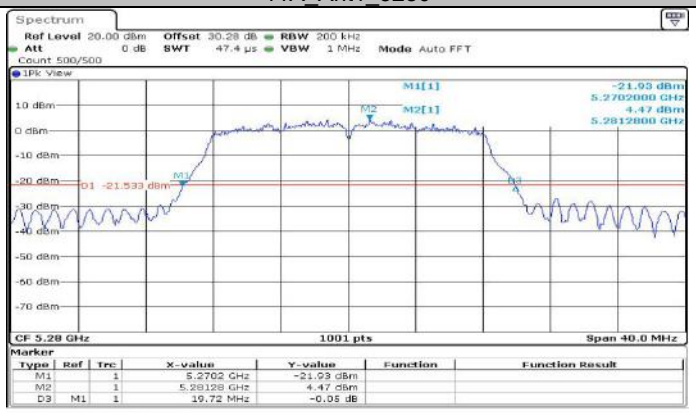


11A_Ant1_5280



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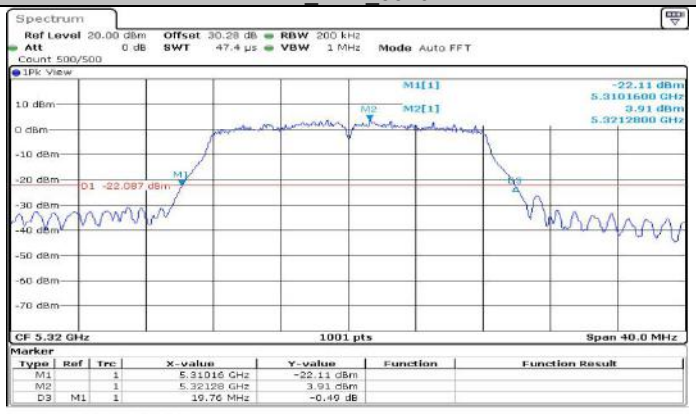

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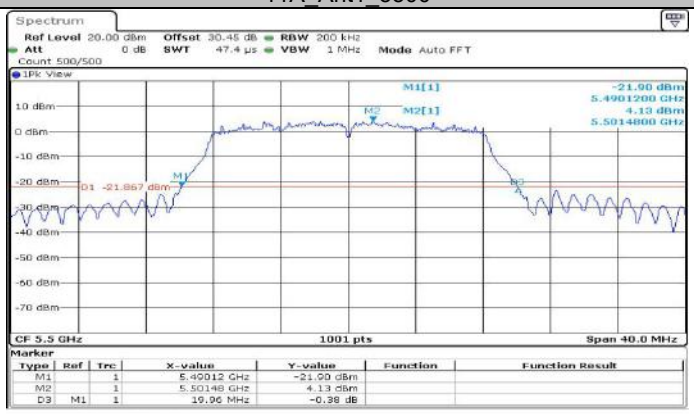

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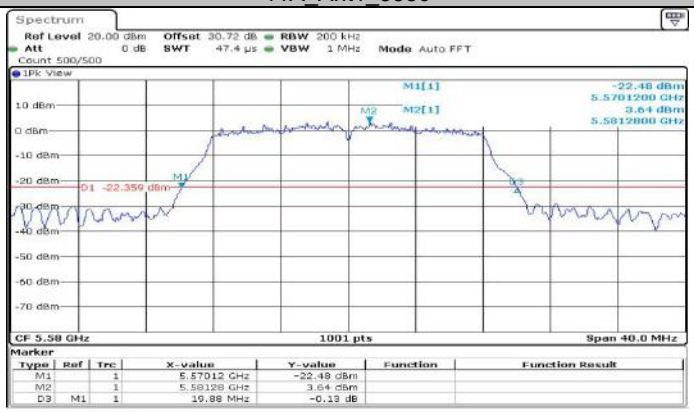
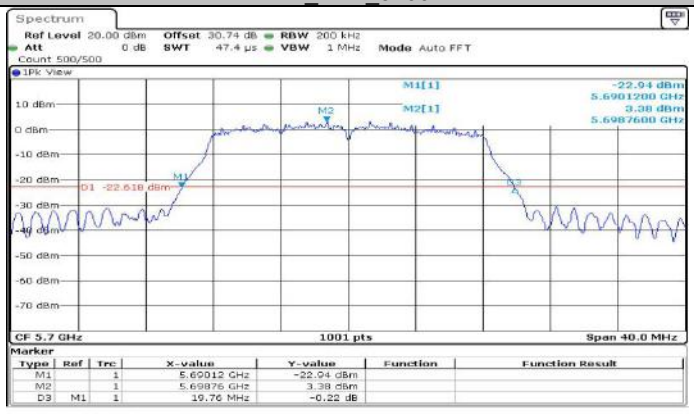


11A_Ant1_5700



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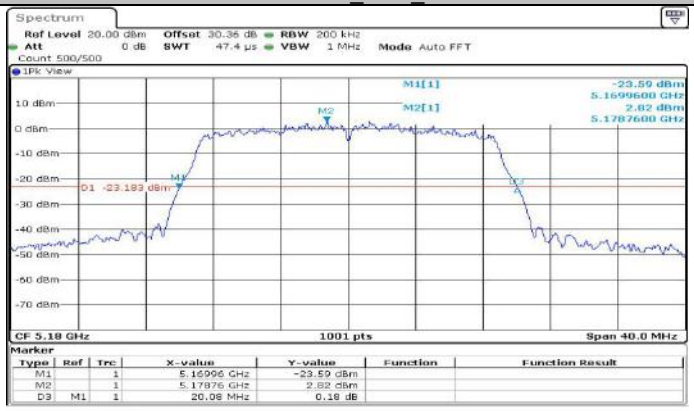

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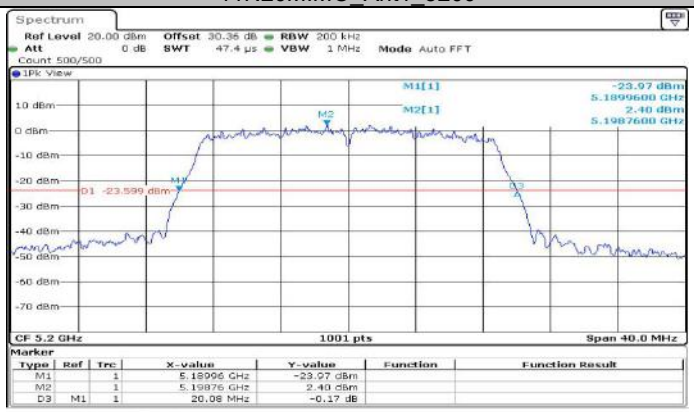

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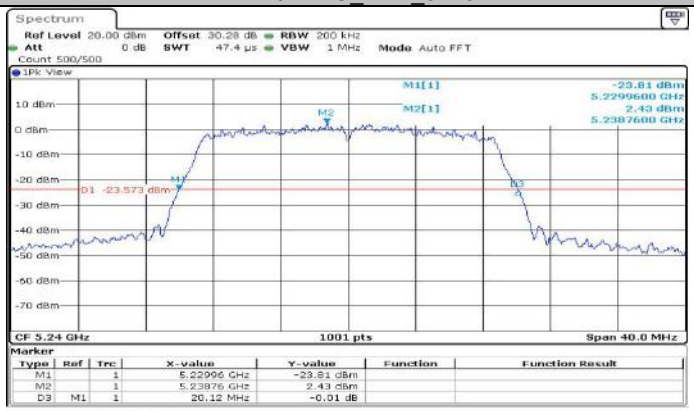

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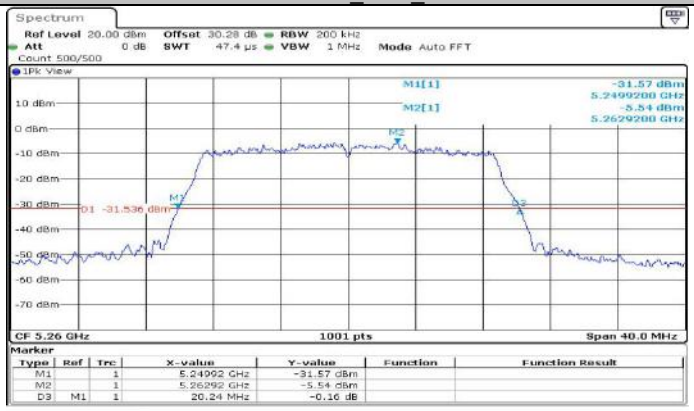

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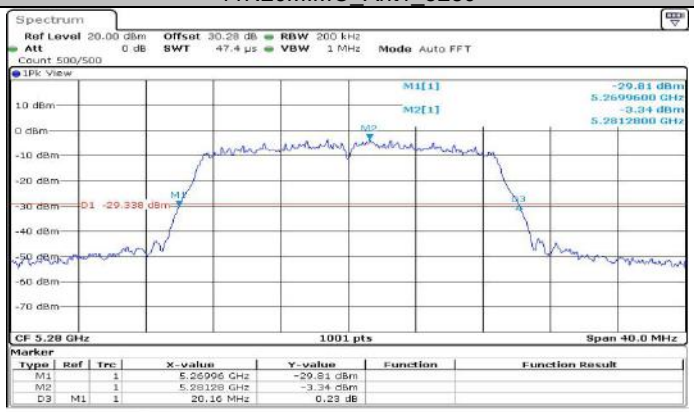

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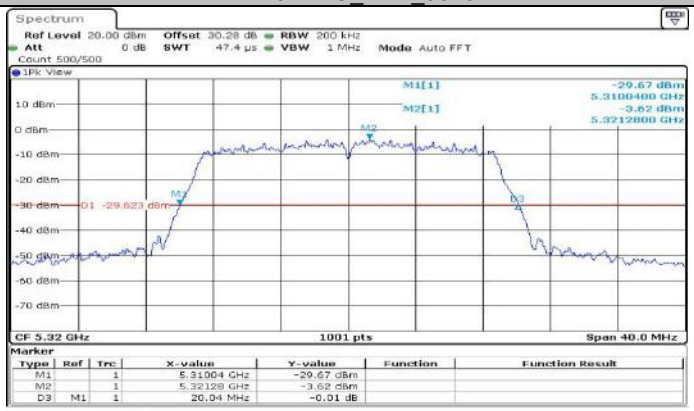

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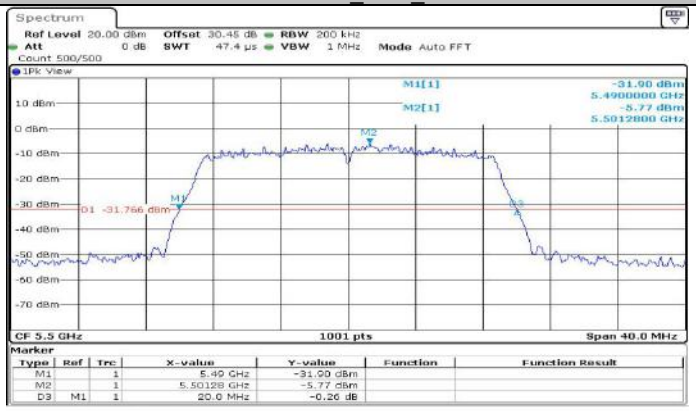

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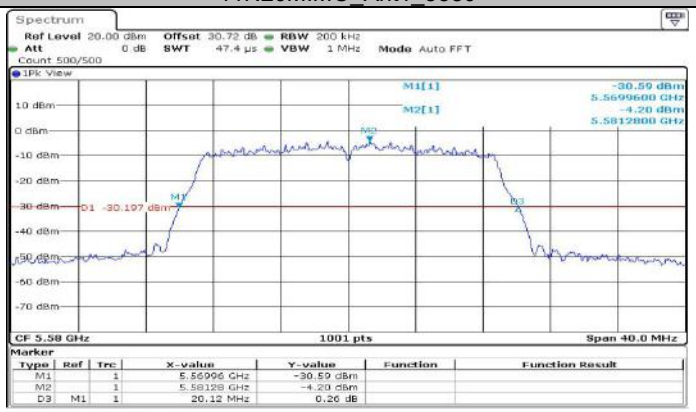

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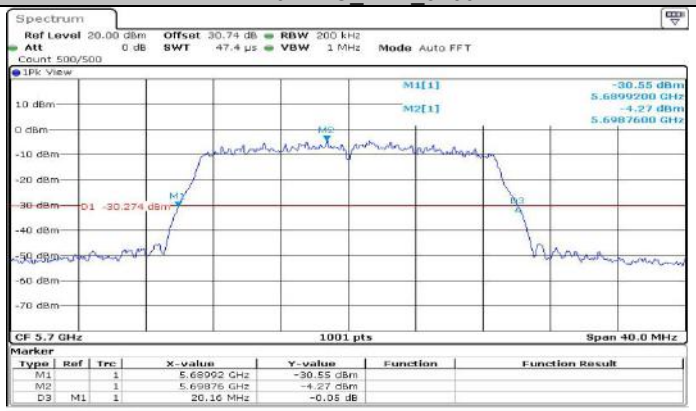
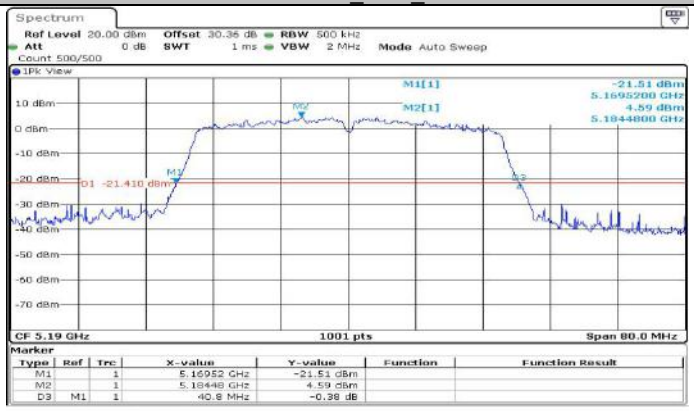


11N40MIMO_Ant1_5190



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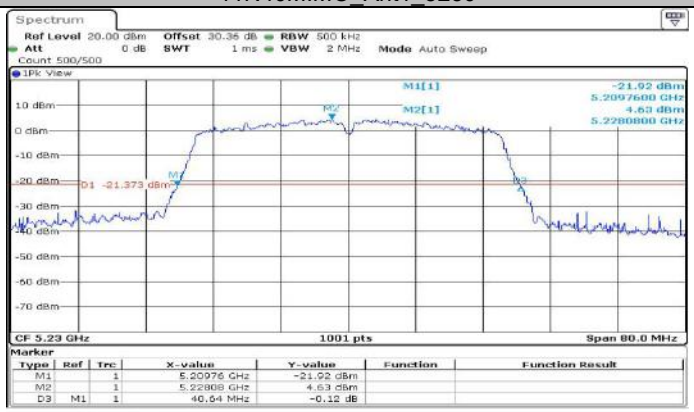

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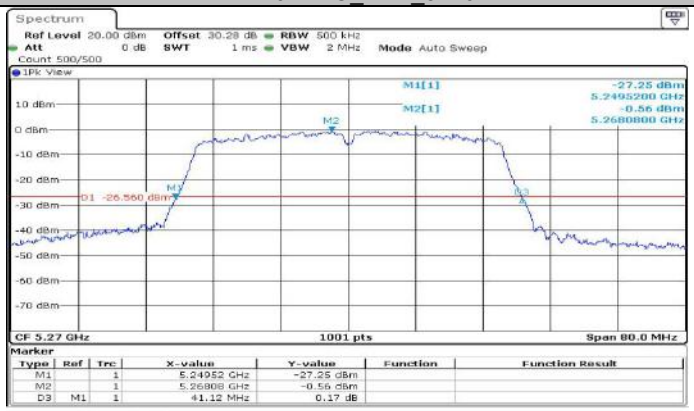

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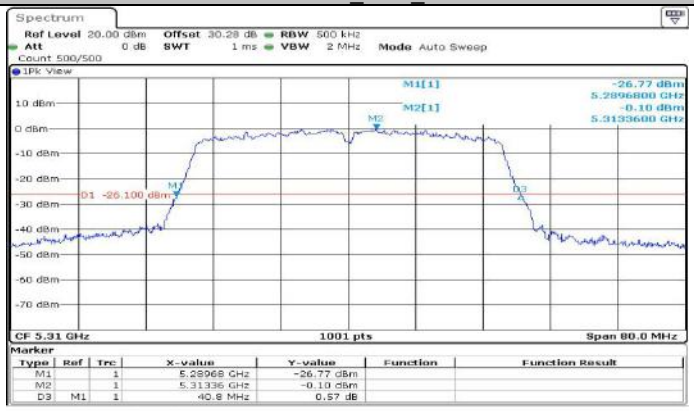
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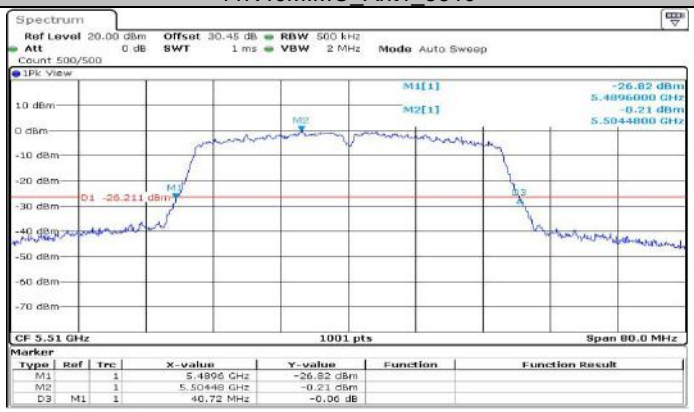
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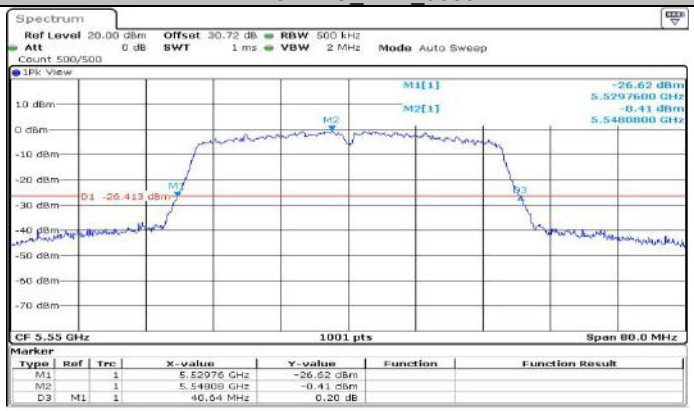

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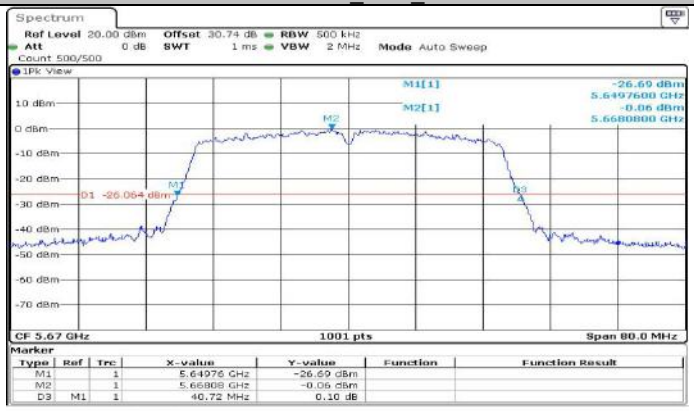
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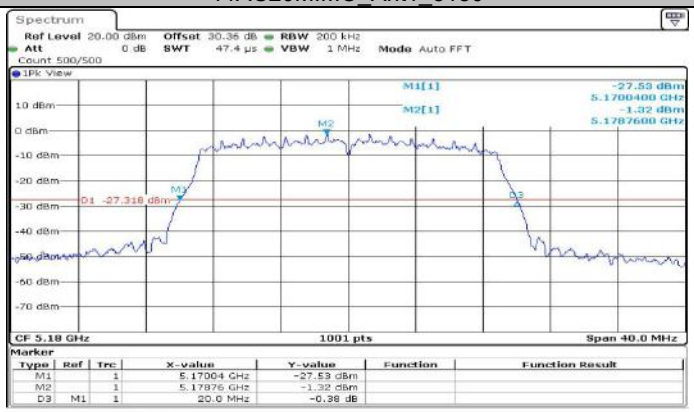
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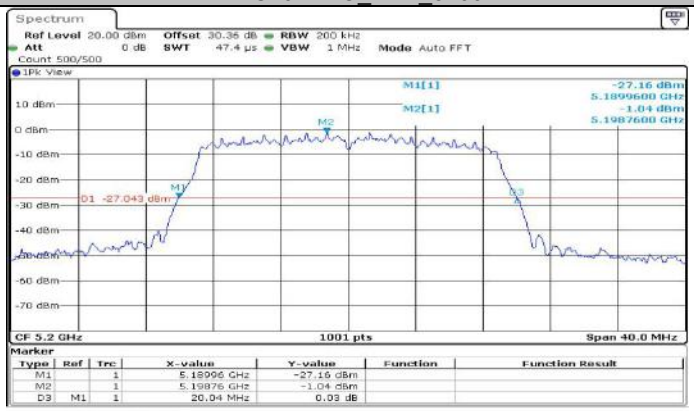

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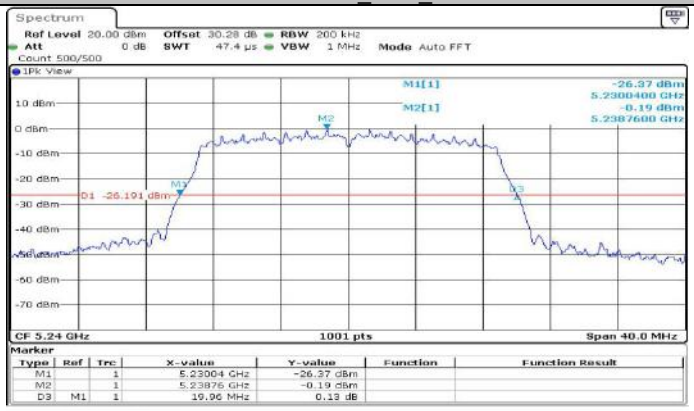

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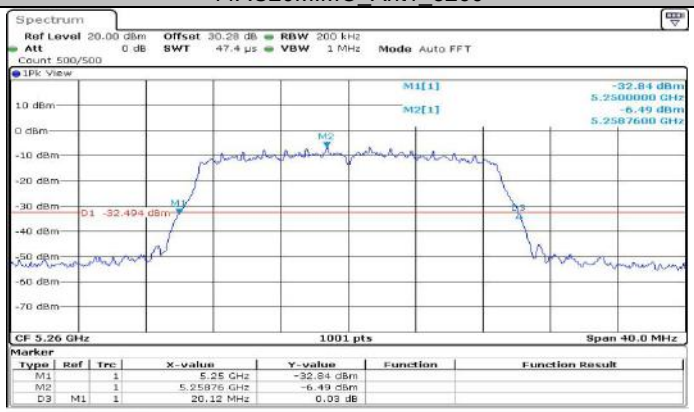
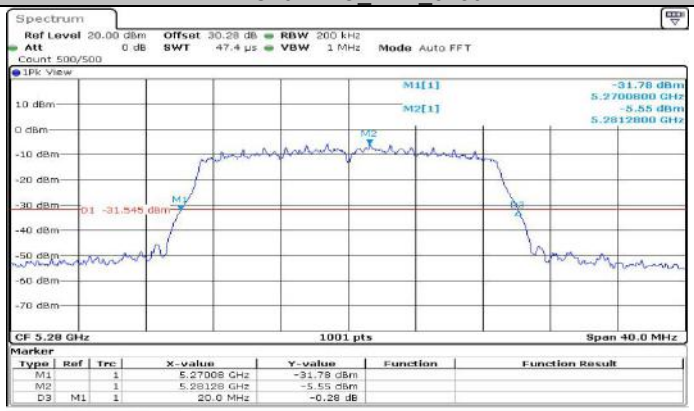
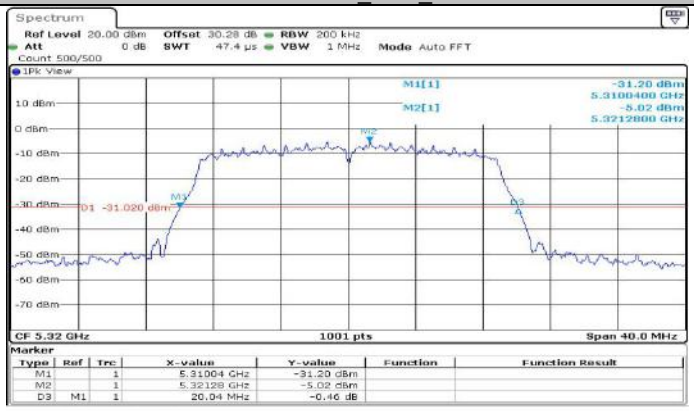


11AC20MIMO_Ant1_5280

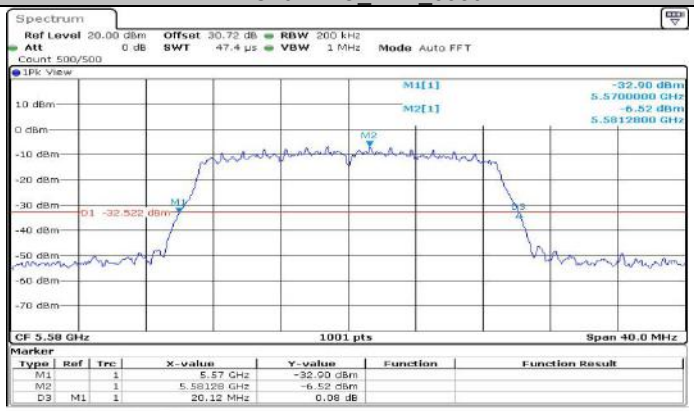


11AC20MIMO_Ant1_5320

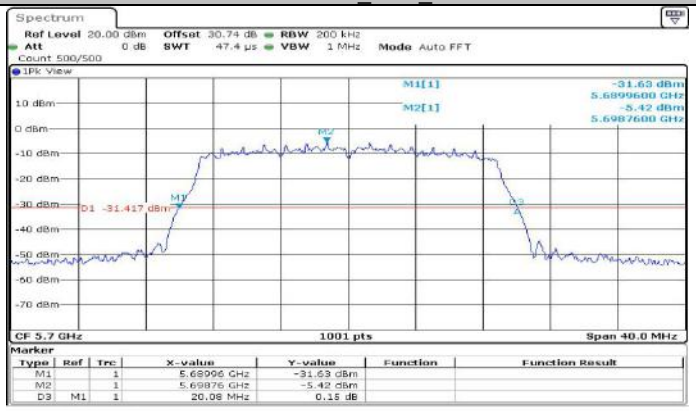


11AC20MIMO_Ant1_5500

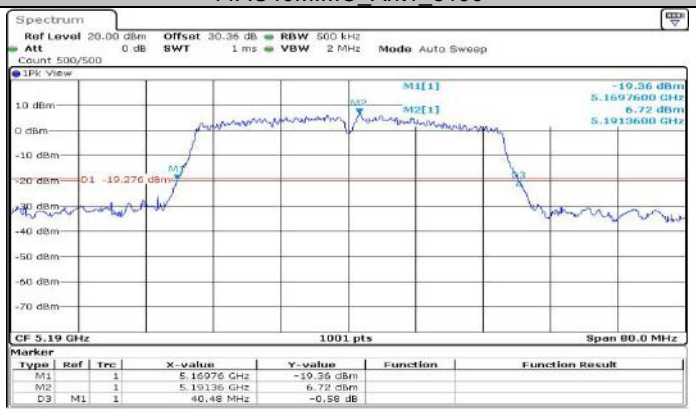
11AC20MIMO_Ant1_5580



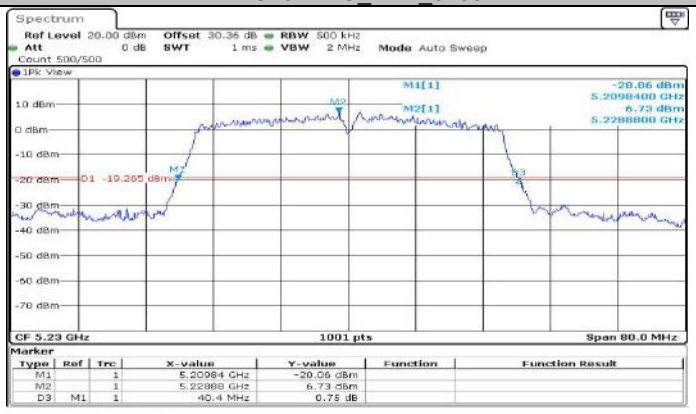
11AC20MIMO_Ant1_5700



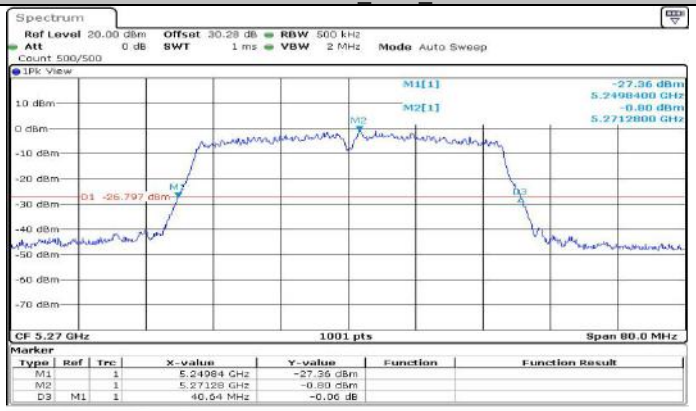
11AC40MIMO_Ant1_5190



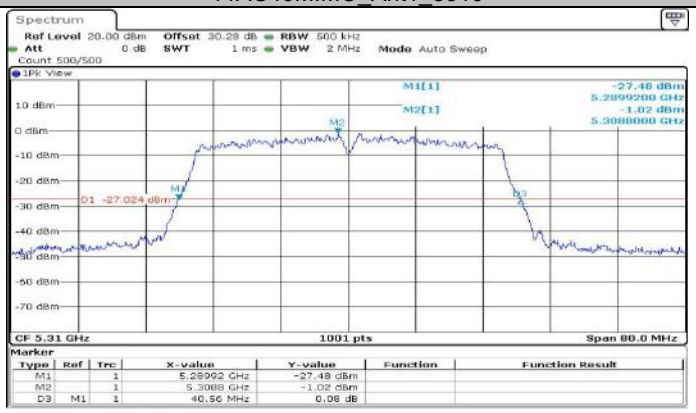
11AC40MIMO_Ant1_5230



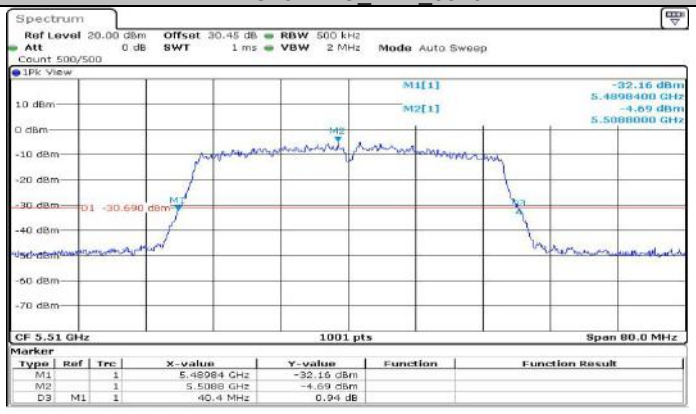
11AC40MIMO_Ant1_5270



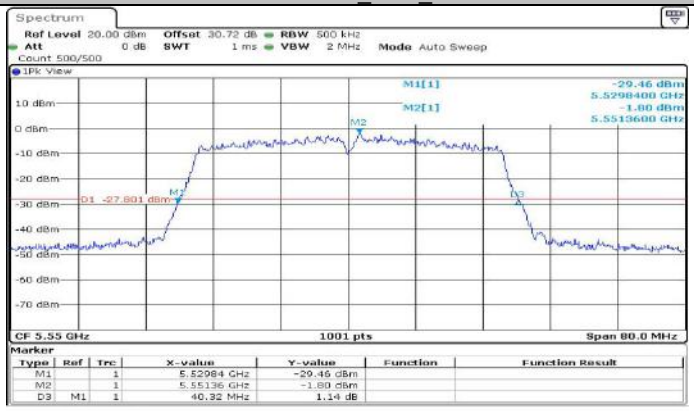
11AC40MIMO_Ant1_5310



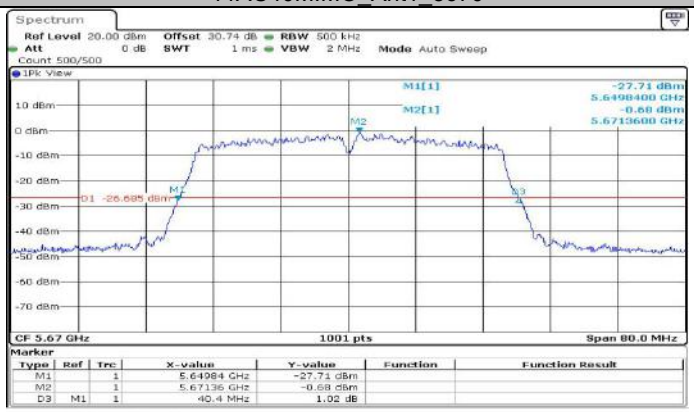
11AC40MIMO_Ant1_5510



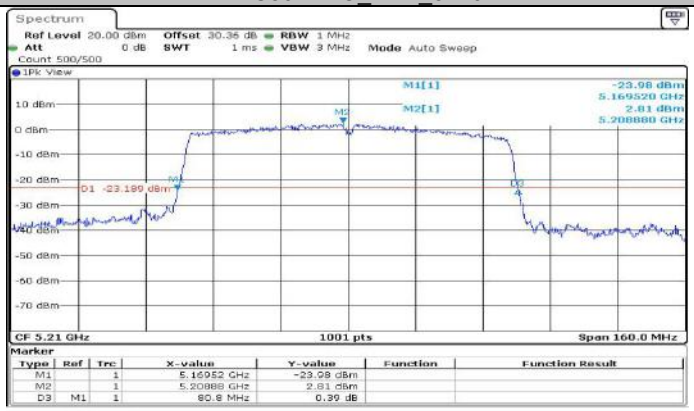
11AC40MIMO_Ant1_5550



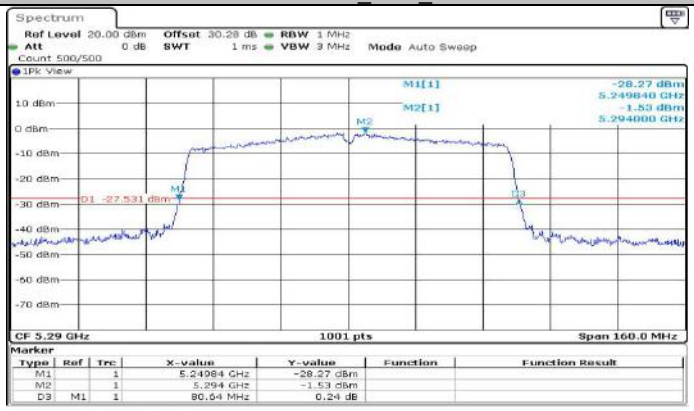
11AC40MIMO_Ant1_5670



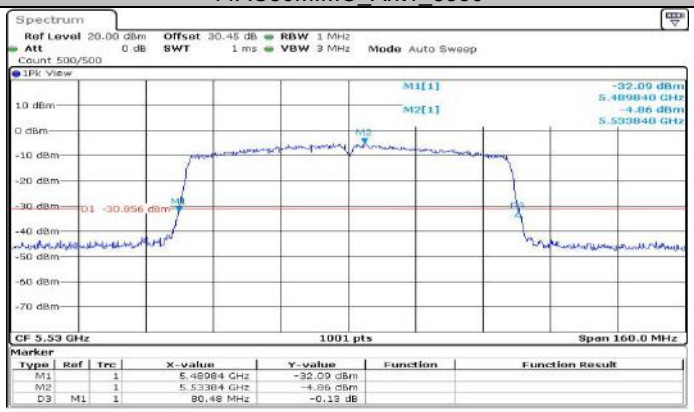
11AC80MIMO_Ant1_5210



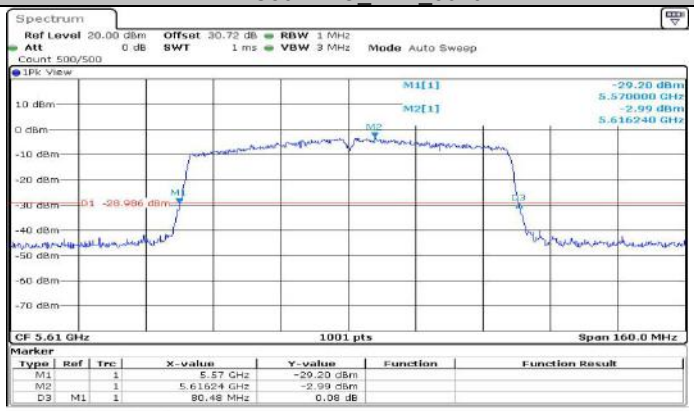
11AC80MIMO_Ant1_5290



11AC80MIMO_Ant1_5530



11AC80MIMO_Ant1_5610



Appendix A2: Occupied channel bandwidth

Test Result

Test Mode	Antenna	Channel	OCB [MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	20.420	---	PASS
	Ant1	5200	20.899	---	PASS
	Ant1	5240	18.701	---	PASS
	Ant1	5260	17.143	---	PASS
	Ant1	5280	17.183	---	PASS
	Ant1	5320	17.103	---	PASS
	Ant1	5500	17.223	---	PASS
	Ant1	5580	17.183	---	PASS
	Ant1	5700	17.183	---	PASS
	Ant1	5745	17.223	---	PASS
	Ant1	5785	17.223	---	PASS
	Ant1	5825	17.143	---	PASS
11N20MIMO	Ant1	5180	18.022	---	PASS
	Ant1	5200	18.022	---	PASS
	Ant1	5240	18.022	---	PASS
	Ant1	5260	18.182	---	PASS
	Ant1	5280	18.142	---	PASS
	Ant1	5320	18.142	---	PASS
	Ant1	5500	18.382	---	PASS
	Ant1	5580	18.222	---	PASS
	Ant1	5700	18.262	---	PASS
	Ant1	5745	17.982	---	PASS
	Ant1	5785	17.982	---	PASS
	Ant1	5825	18.022	---	PASS
11N40MIMO	Ant1	5190	36.284	---	PASS
	Ant1	5230	36.284	---	PASS
	Ant1	5270	36.444	---	PASS
	Ant1	5310	36.444	---	PASS
	Ant1	5510	36.364	---	PASS
	Ant1	5550	36.523	---	PASS
	Ant1	5670	36.523	---	PASS
	Ant1	5755	36.444	---	PASS
	Ant1	5795	36.444	---	PASS
11AC20MIMO	Ant1	5180	17.862	---	PASS
	Ant1	5200	17.862	---	PASS
	Ant1	5240	17.862	---	PASS
	Ant1	5260	18.062	---	PASS
	Ant1	5280	17.982	---	PASS
	Ant1	5320	17.982	---	PASS
	Ant1	5500	18.422	---	PASS
	Ant1	5580	18.142	---	PASS
	Ant1	5700	18.102	---	PASS
	Ant1	5745	17.822	---	PASS
	Ant1	5785	17.822	---	PASS
	Ant1	5825	17.782	---	PASS
11AC40MIMO	Ant1	5190	36.603	---	PASS
	Ant1	5230	36.444	---	PASS
	Ant1	5270	36.843	---	PASS
	Ant1	5310	36.923	---	PASS
	Ant1	5510	38.122	---	PASS
	Ant1	5550	37.163	---	PASS
	Ant1	5670	36.843	---	PASS
	Ant1	5755	36.603	---	PASS
	Ant1	5795	36.683	---	PASS
11AC80MIMO	Ant1	5210	75.604	---	PASS
	Ant1	5290	76.563	---	PASS

	Ant1	5530	75.125	---	PASS
	Ant1	5610	78.482	---	PASS
	Ant1	5775	75.604	---	PASS

Note: For 5150-5250MHz band, EUT not operating with any part of OBW fall with 5250-5350MHz range.
For 5725-5850MHz band, EUT not operating with any part of OBW fall with 5470-5725MHz range.

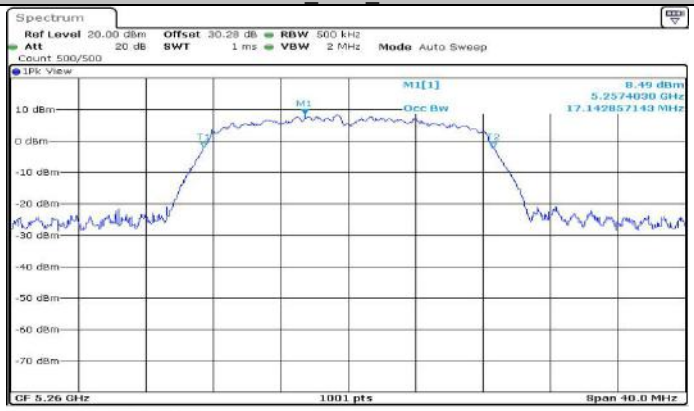
Test Graphs

11A_Ant1_5180

11A_Ant1_5200

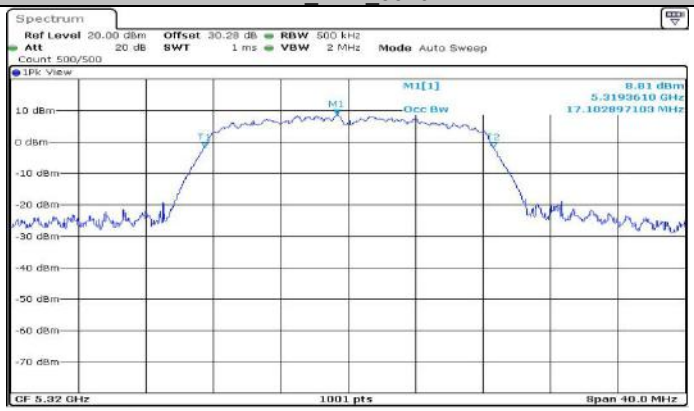
11A_Ant1_5240

11A_Ant1_5260

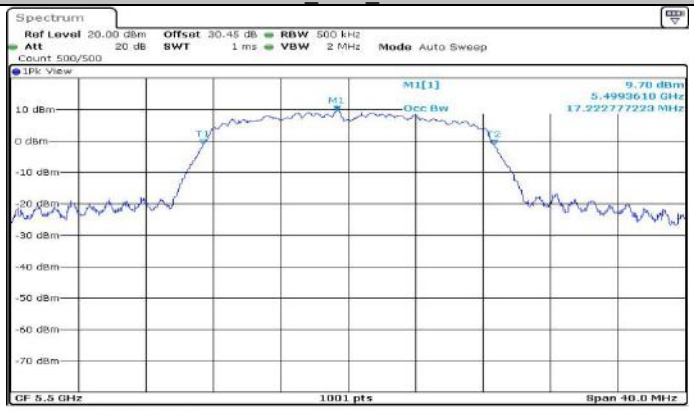


11A_Ant1_5280

11A_Ant1_5320

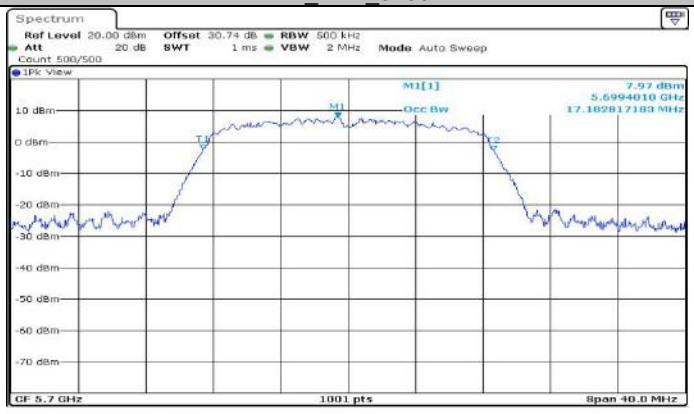


11A_Ant1_5500

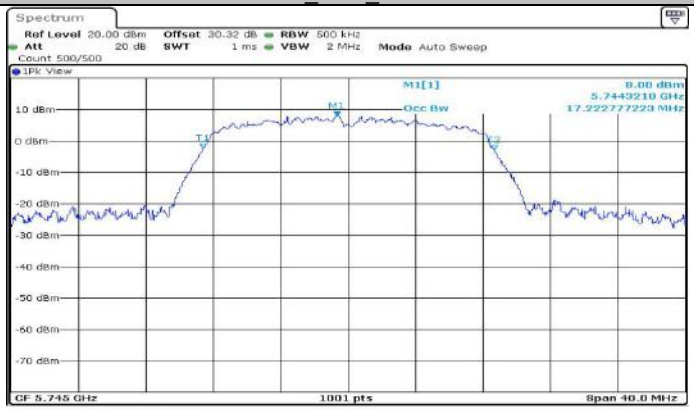


11A_Ant1_5580

11A_Ant1_5700

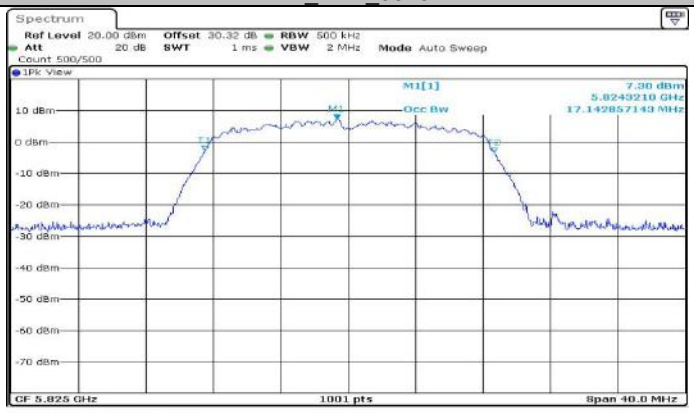


11A_Ant1_5745



11A_Ant1_5785

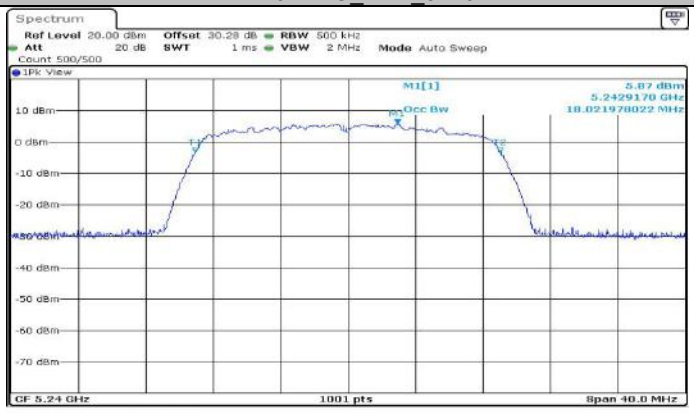
11A_Ant1_5825



11N20MIMO_Ant1_5180

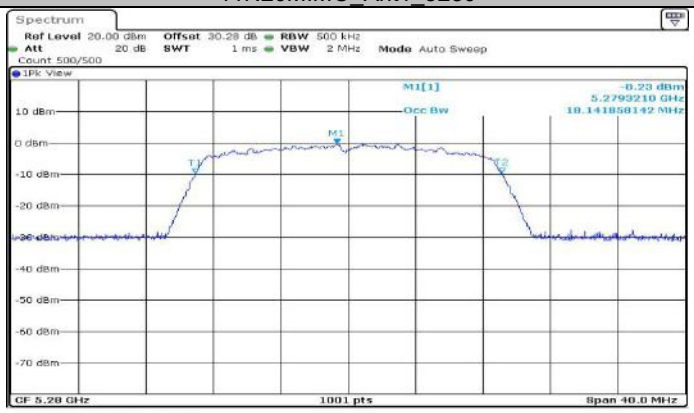
11N20MIMO_Ant1_5200

11N20MIMO_Ant1_5240

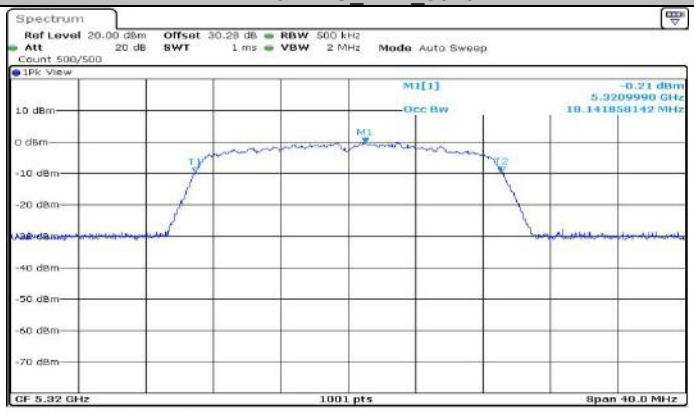


11N20MIMO_Ant1_5260

11N20MIMO_Ant1_5280

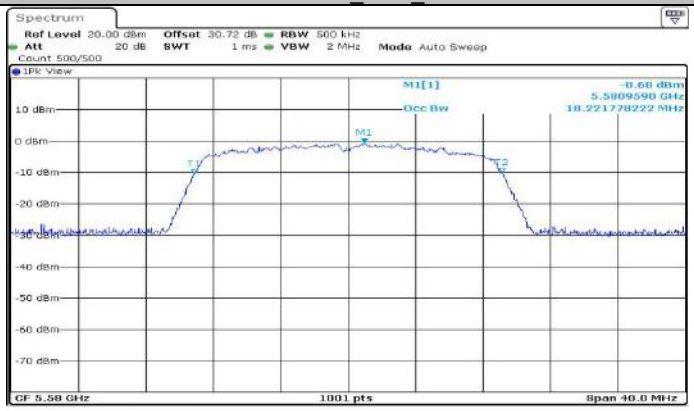


11N20MIMO_Ant1_5320

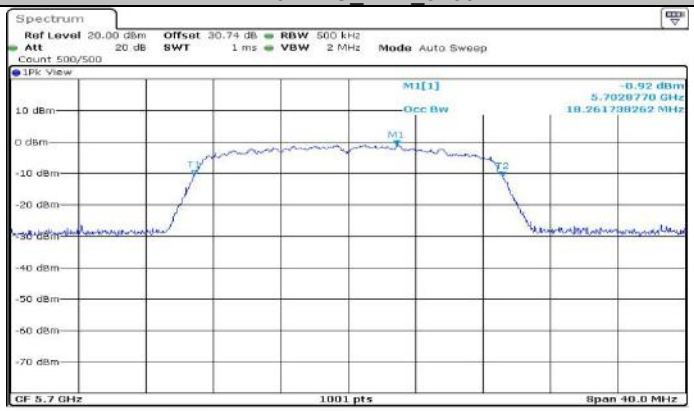


11N20MIMO_Ant1_5500

11N20MIMO_Ant1_5580

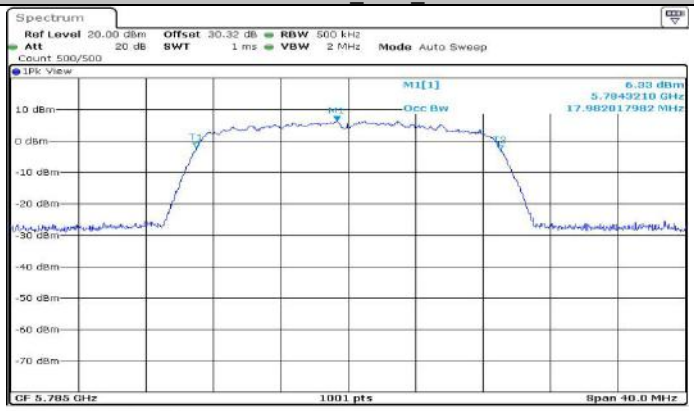


11N20MIMO_Ant1_5700

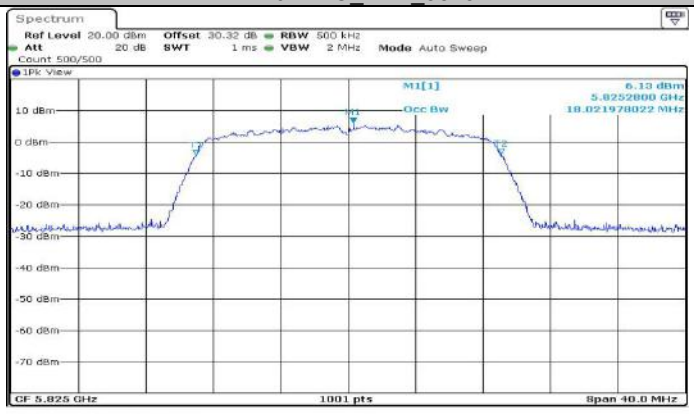


11N20MIMO_Ant1_5745

11N20MIMO_Ant1_5785



11N20MIMO_Ant1_5825



11N40MIMO_Ant1_5190

11N40MIMO_Ant1_5230

11N40MIMO_Ant1_5270

11N40MIMO_Ant1_5310

11N40MIMO_Ant1_5510

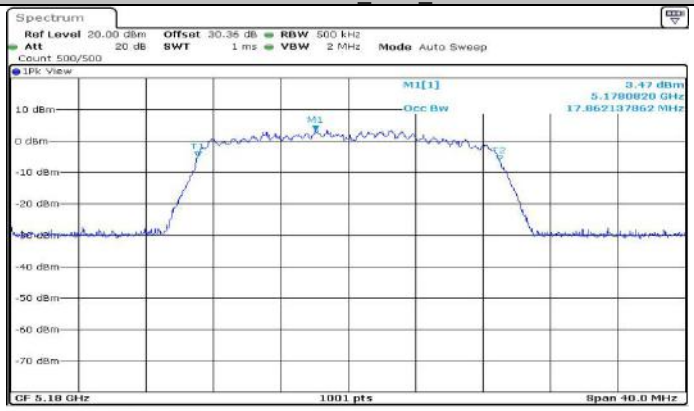
11N40MIMO_Ant1_5550

11N40MIMO_Ant1_5670

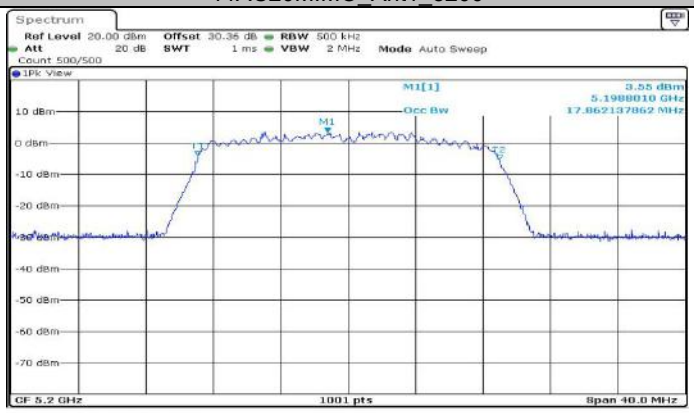
11N40MIMO_Ant1_5755

11N40MIMO_Ant1_5795

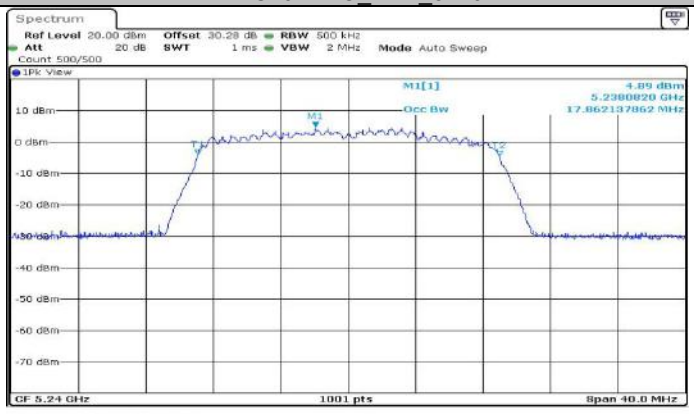

11AC20MIMO_Ant1_5180

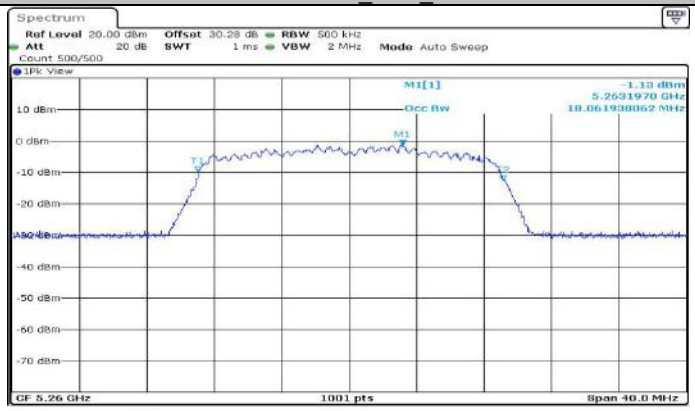


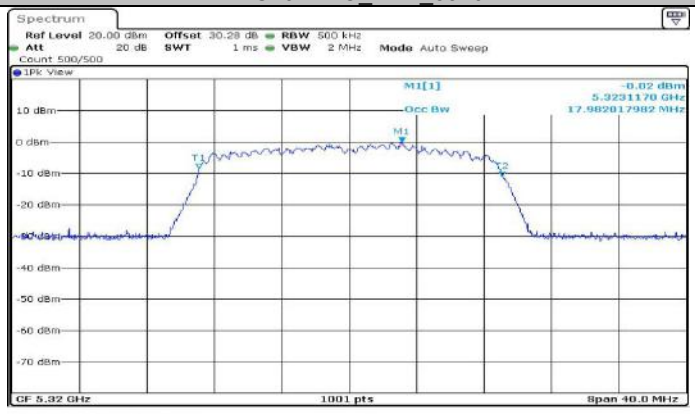
11AC20MIMO_Ant1_5200

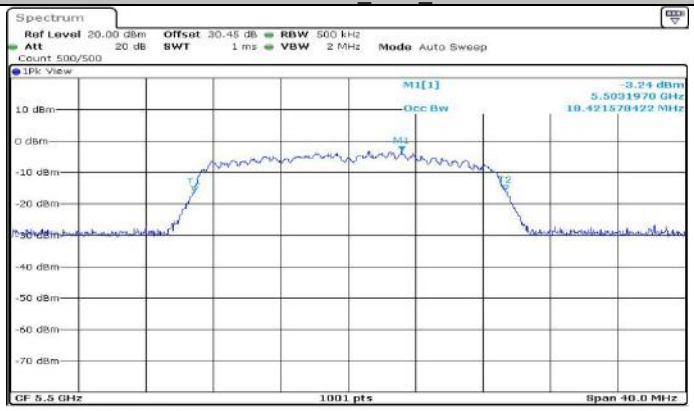


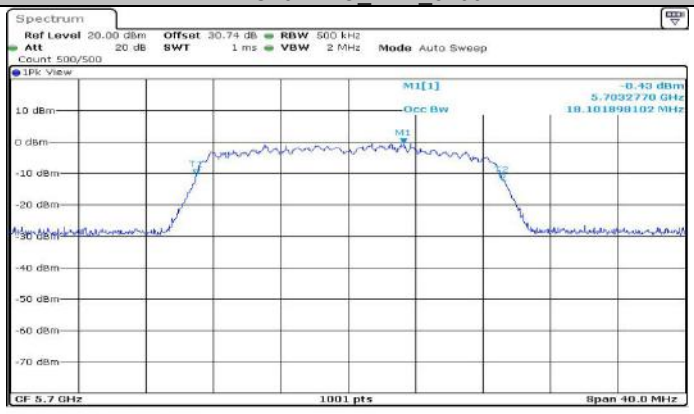
11AC20MIMO_Ant1_5240



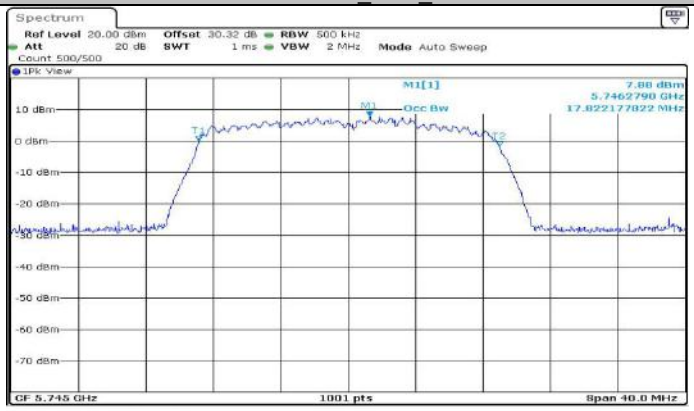
11AC20MIMO_Ant1_5260

11AC20MIMO_Ant1_5280

11AC20MIMO_Ant1_5320


11AC20MIMO_Ant1_5500

11AC20MIMO_Ant1_5580

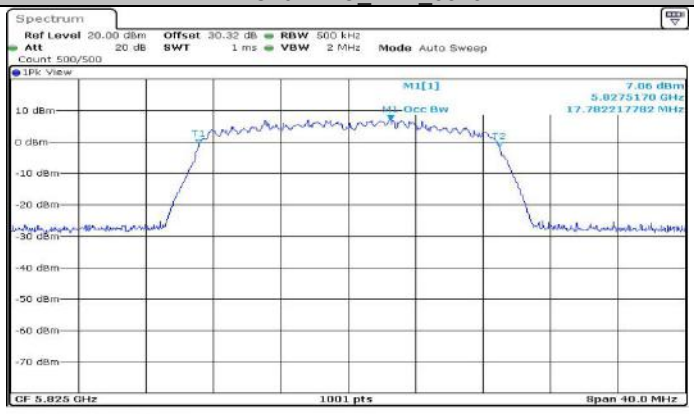
11AC20MIMO_Ant1_5700


11AC20MIMO_Ant1_5745



11AC20MIMO_Ant1_5785

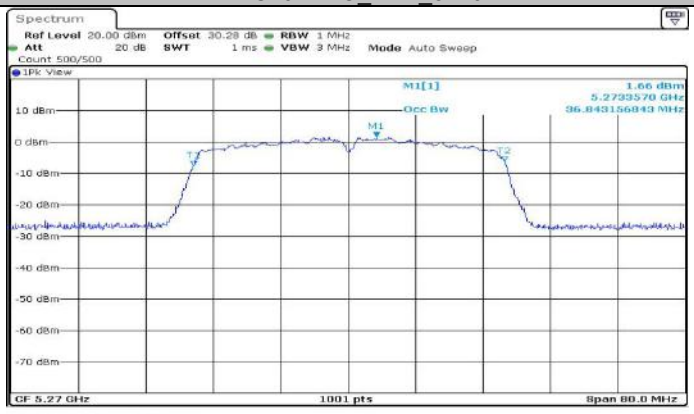
11AC20MIMO_Ant1_5825



11AC40MIMO_Ant1_5190

11AC40MIMO_Ant1_5230

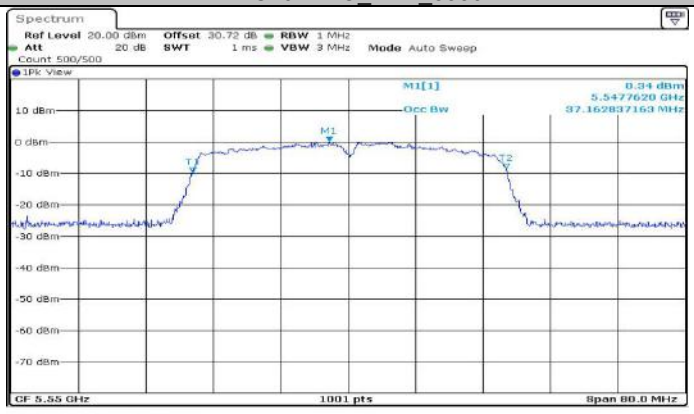
11AC40MIMO_Ant1_5270



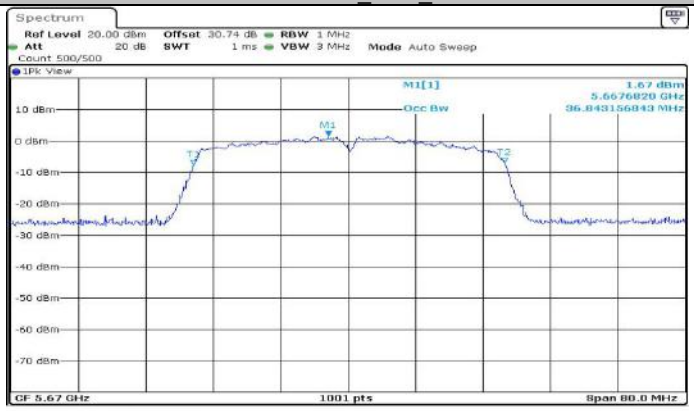
11AC40MIMO_Ant1_5310

11AC40MIMO_Ant1_5510

11AC40MIMO_Ant1_5550

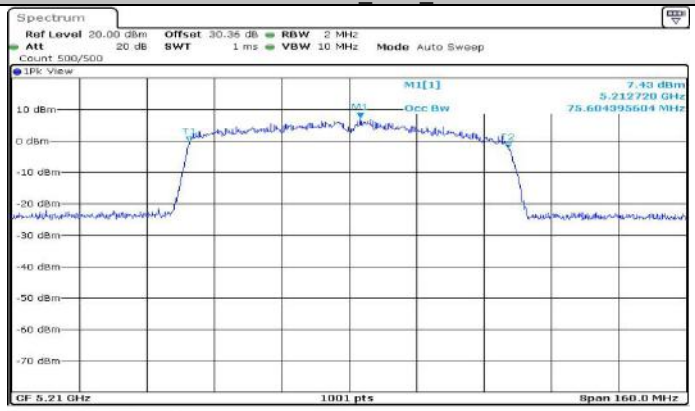
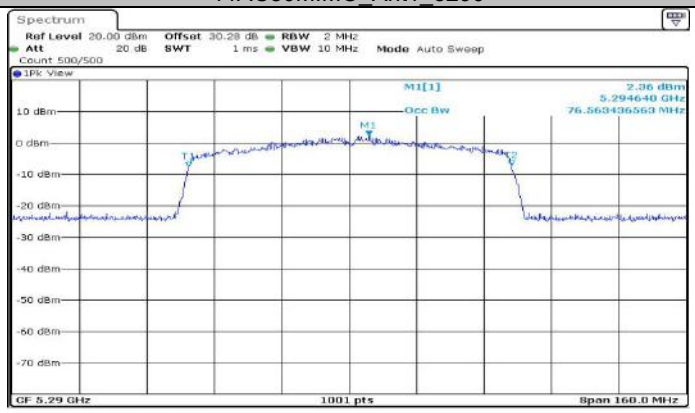


11AC40MIMO_Ant1_5670

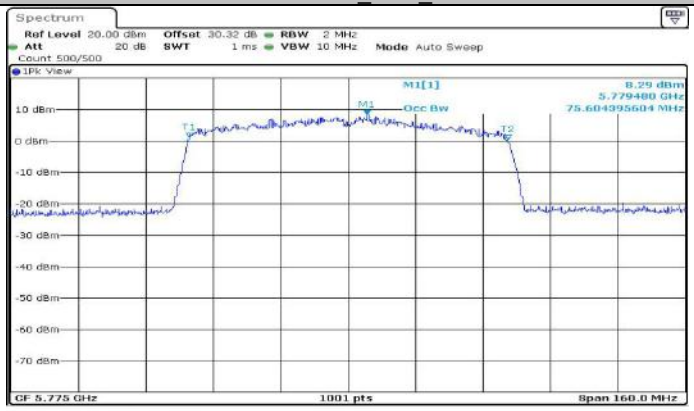


11AC40MIMO_Ant1_5755

11AC40MIMO_Ant1_5795

11AC80MIMO_Ant1_5210

11AC80MIMO_Ant1_5290

11AC80MIMO_Ant1_5530


11AC80MIMO_Ant1_5610

11AC80MIMO_Ant1_5775


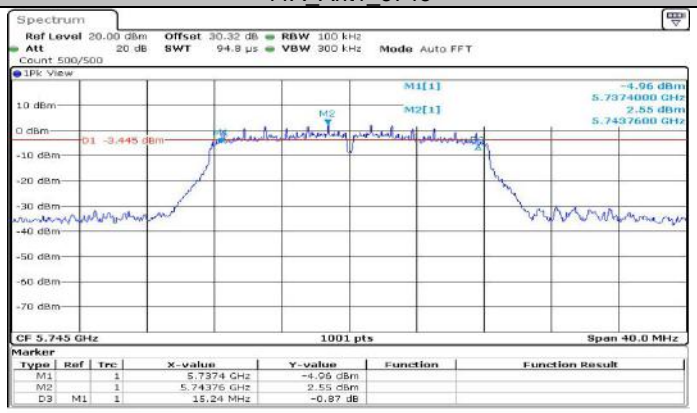
Appendix A3: Min emission bandwidth

Test Result

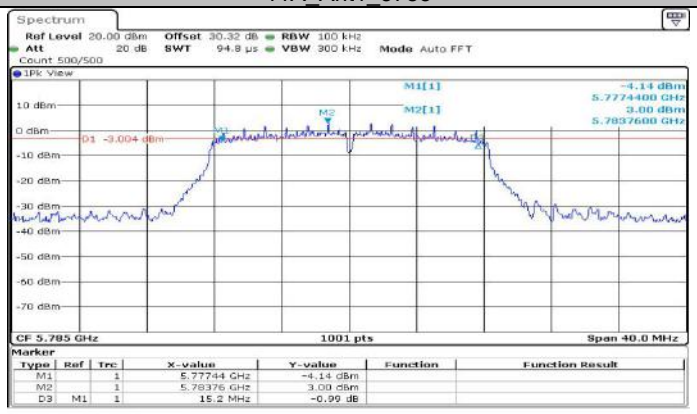
Test Mode	Antenna	Channel	6db EBW [MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	15.240	0.5	PASS
	Ant1	5785	15.200	0.5	PASS
	Ant1	5825	15.200	0.5	PASS
11N20MIMO	Ant1	5745	15.160	0.5	PASS
	Ant1	5785	15.200	0.5	PASS
	Ant1	5825	15.240	0.5	PASS
11N40MIMO	Ant1	5755	35.280	0.5	PASS
	Ant1	5795	35.280	0.5	PASS
11AC20MIMO	Ant1	5745	15.800	0.5	PASS
	Ant1	5785	15.800	0.5	PASS
	Ant1	5825	15.800	0.5	PASS
11AC40MIMO	Ant1	5755	35.280	0.5	PASS
	Ant1	5795	35.280	0.5	PASS
11AC80MIMO	Ant1	5775	75.520	0.5	PASS

Test Graphs

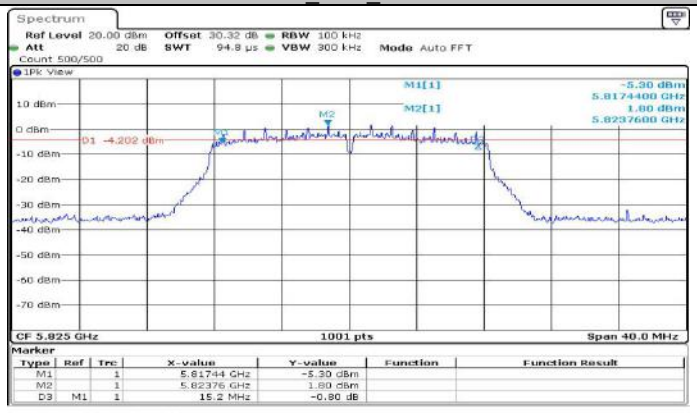
11A_Ant1_5745



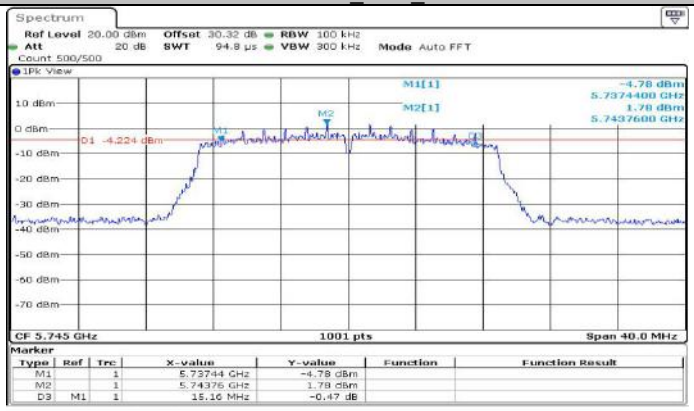
11A_Ant1_5785



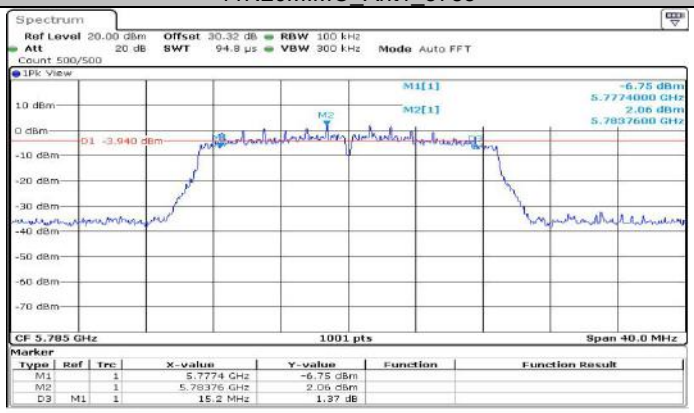
11A_Ant1_5825



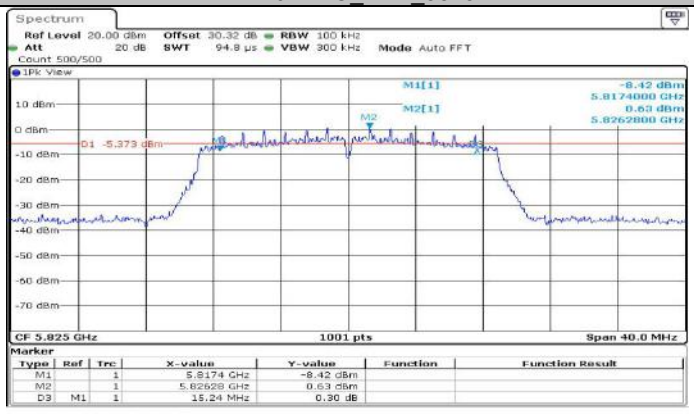
11N20MIMO_Ant1_5745



11N20MIMO_Ant1_5785



11N20MIMO_Ant1_5825



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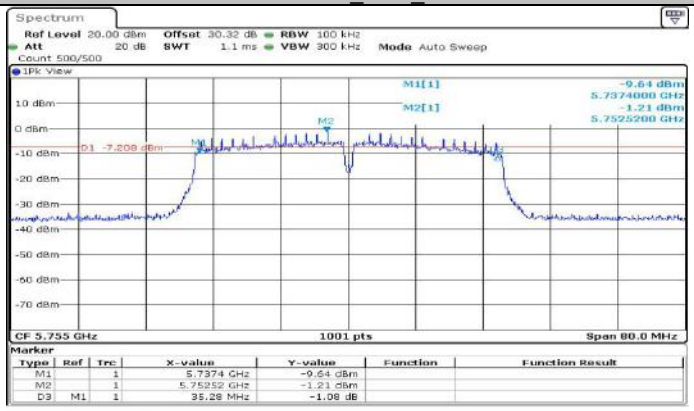

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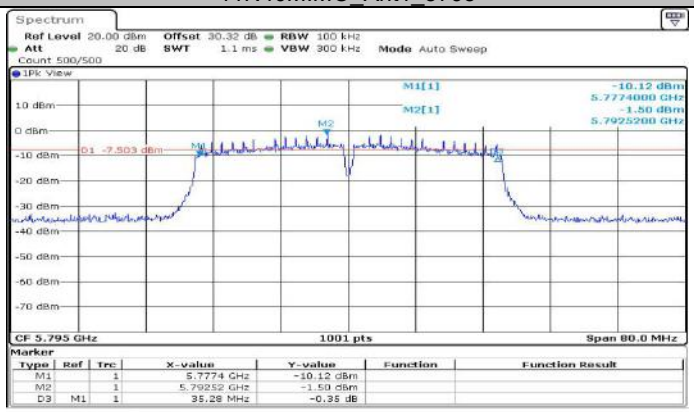

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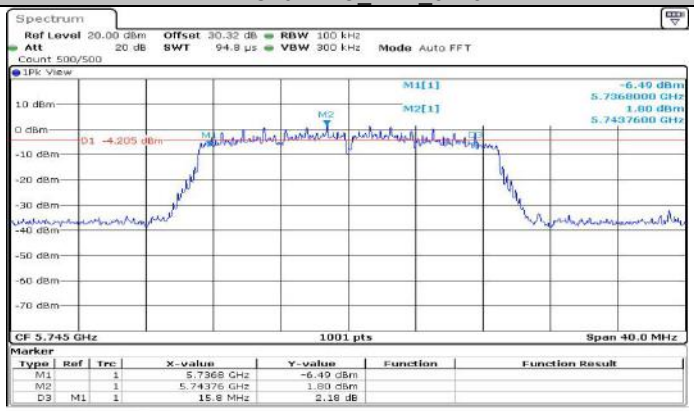

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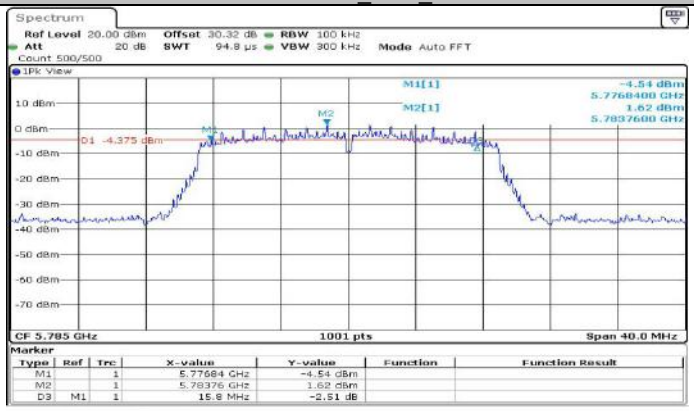

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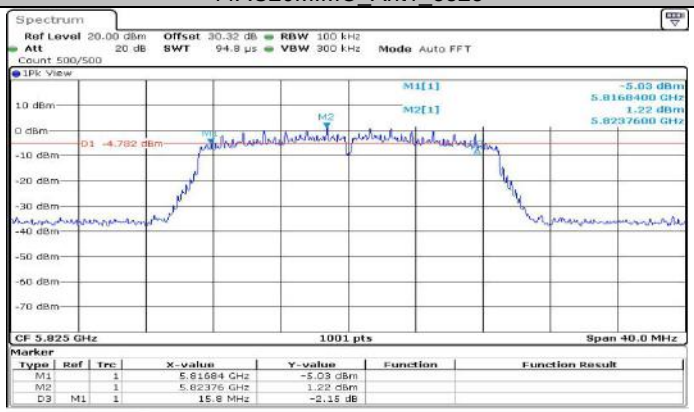

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