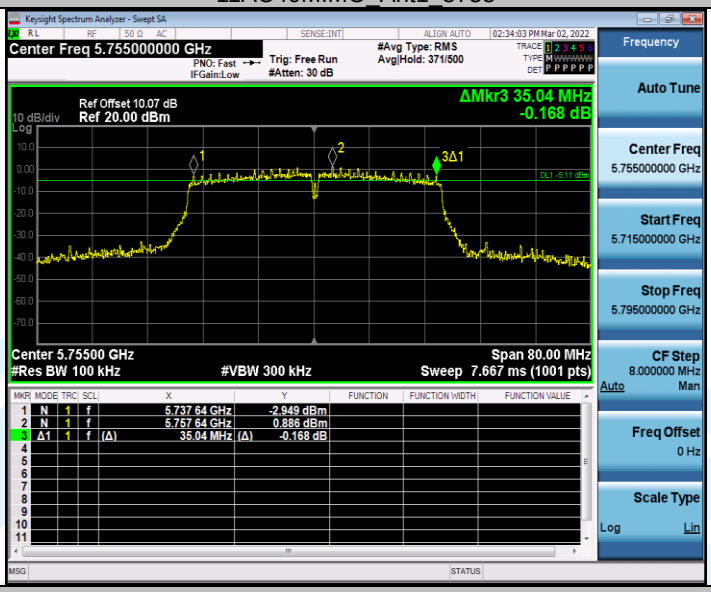
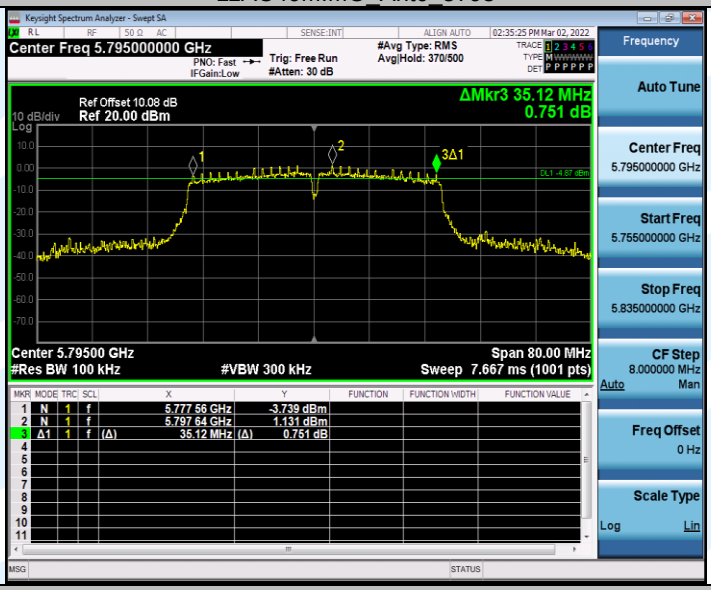
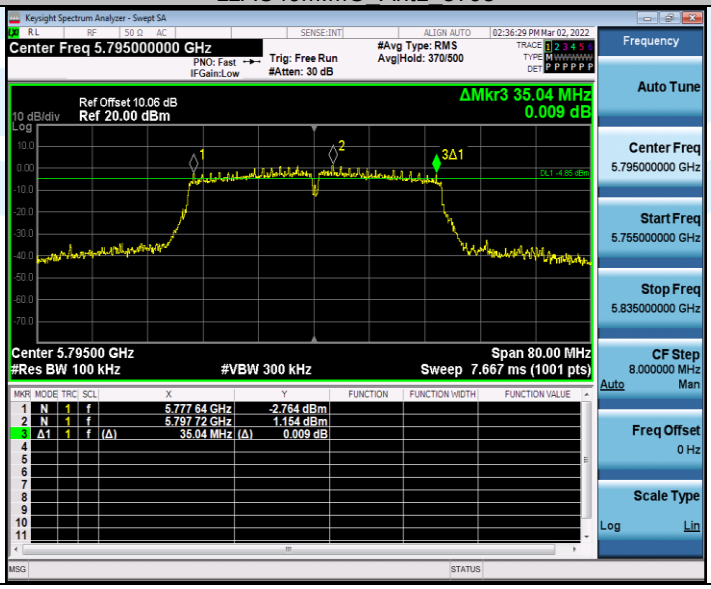
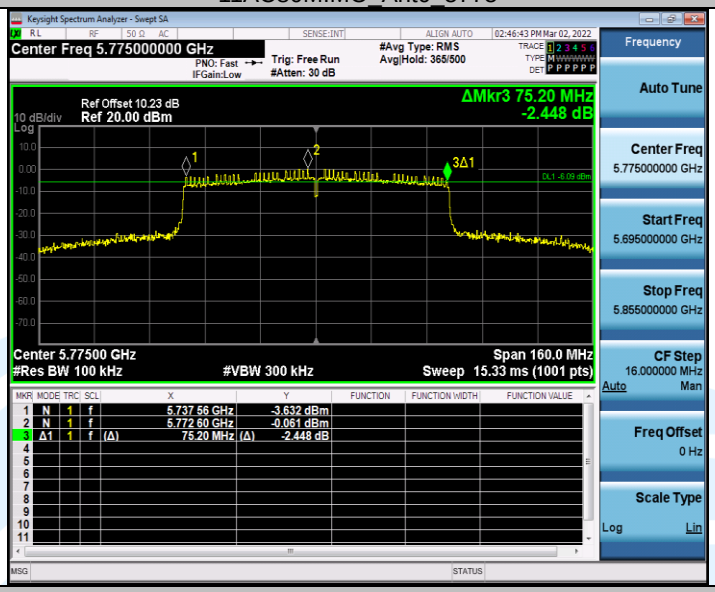
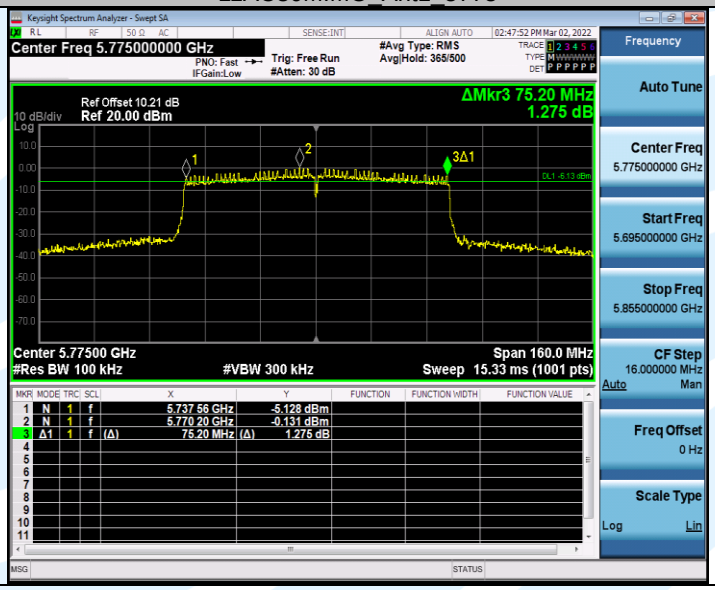
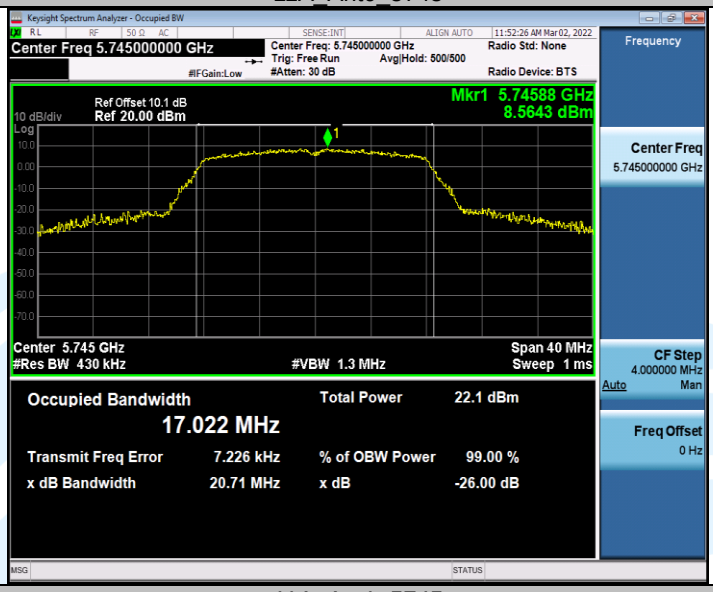
11AC40MIMO_Ant1_5755

11AC40MIMO_Ant0_5795

11AC40MIMO_Ant1_5795


11AC80MIMO_Ant0_5775

11AC80MIMO_Ant1_5775


99% Occupied Bandwidth

11A_Ant0_5745



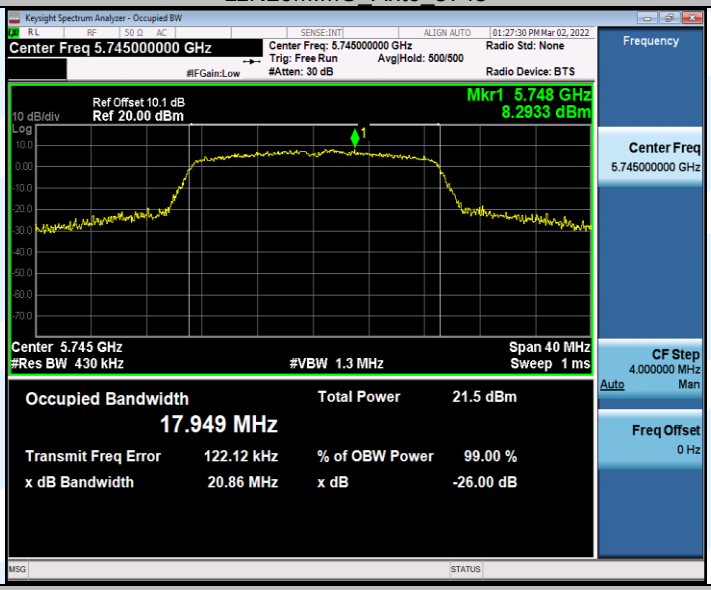
11A_Ant1_5745

11A_Ant0_5785

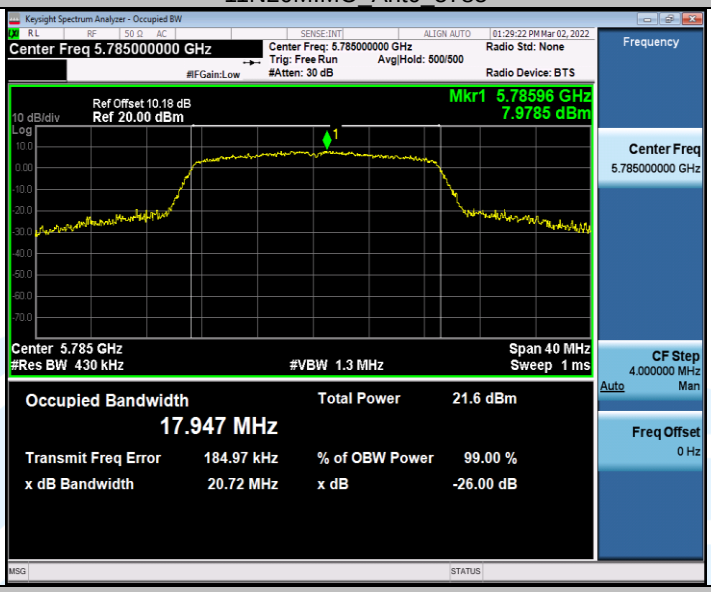
11A_Ant1_5785

11A_Ant0_5825

11A_Ant1_5825

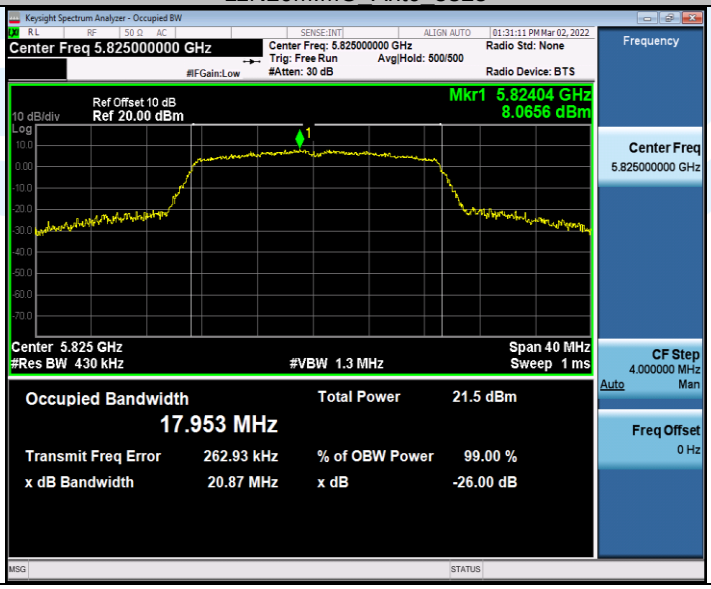
11N20MIMO_Ant0_5745

11N20MIMO_Ant1_5745

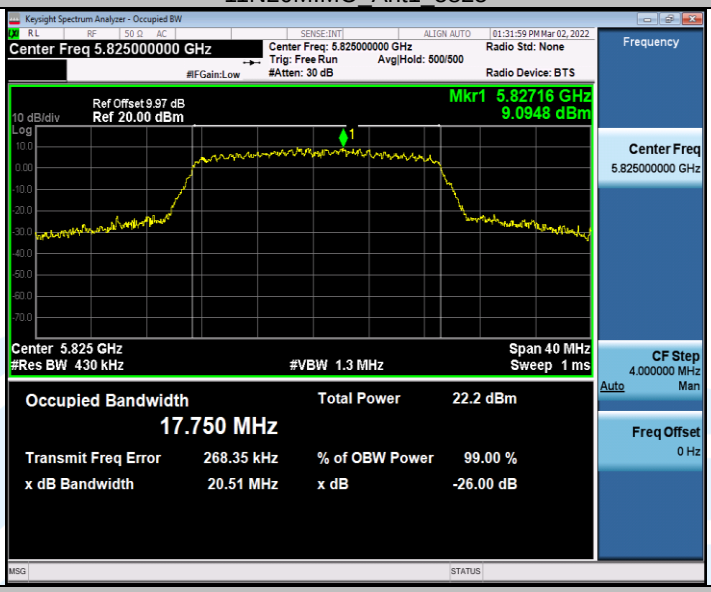
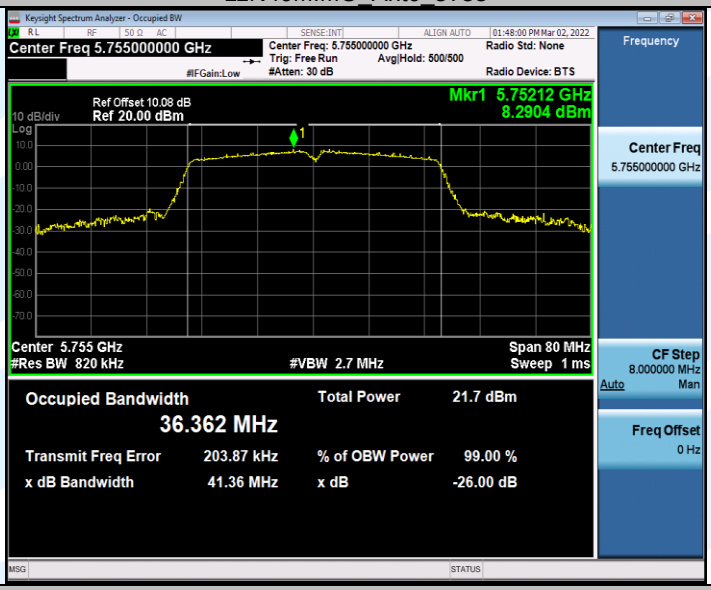
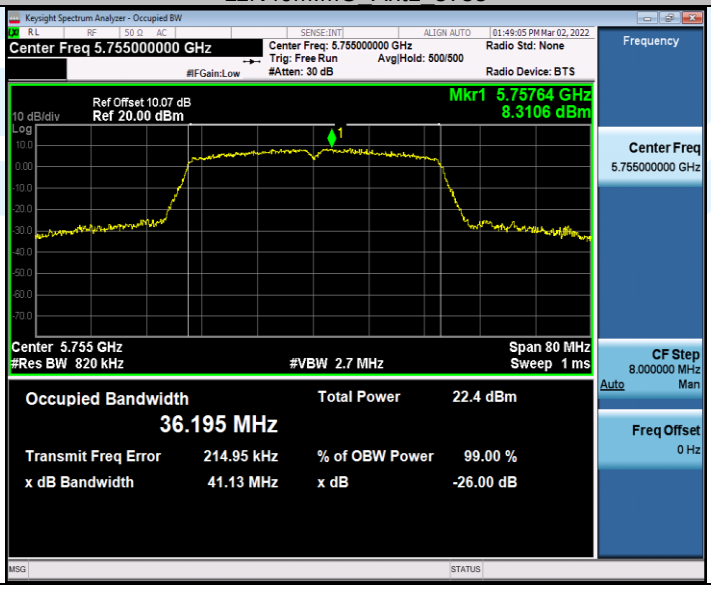

11N20MIMO_Ant0_5785



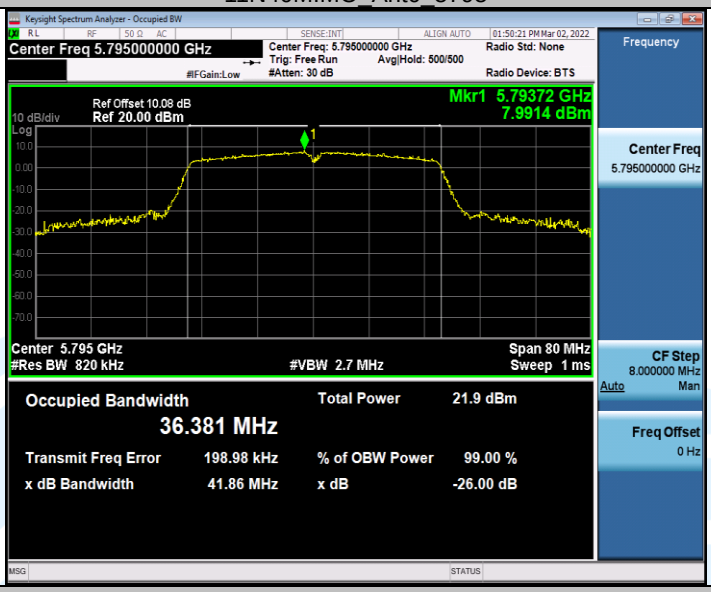
11N20MIMO_Ant1_5785

11N20MIMO_Ant0_5825



11N20MIMO_Ant1_5825

11N40MIMO_Ant0_5755

11N40MIMO_Ant1_5755


11N40MIMO_Ant0_5795



11N40MIMO_Ant1_5795

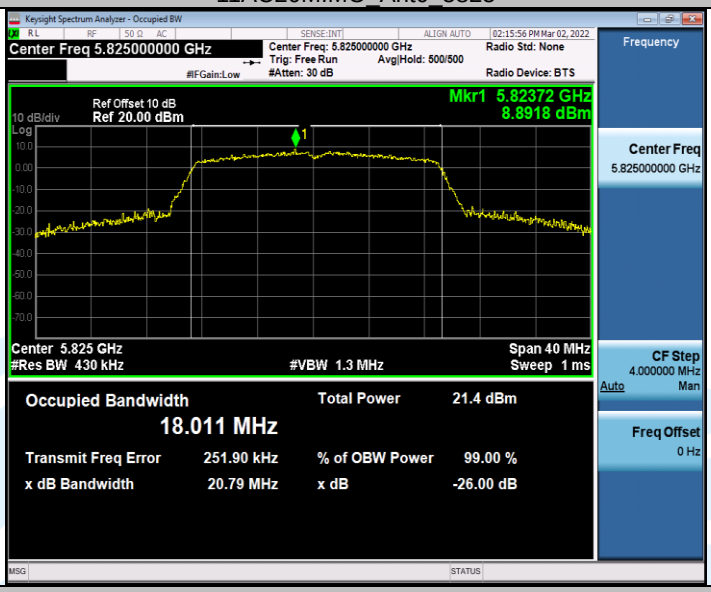
11AC20MIMO_Ant0_5745

11AC20MIMO_Ant1_5745

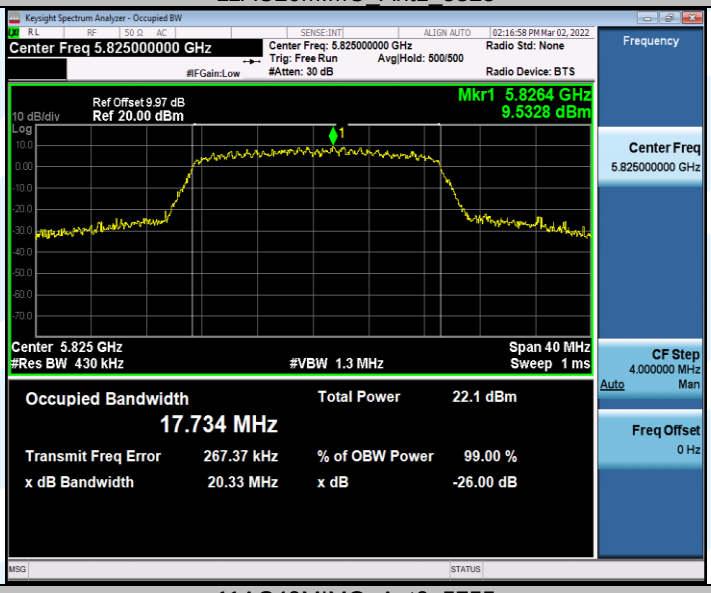
11AC20MIMO_Ant0_5785

11AC20MIMO_Ant1_5785

11AC20MIMO_Ant0_5825

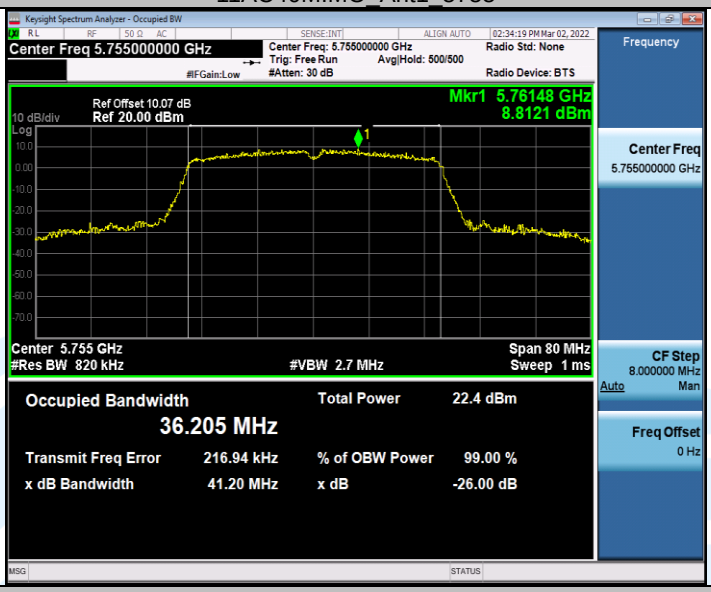


11AC20MIMO_Ant1_5825



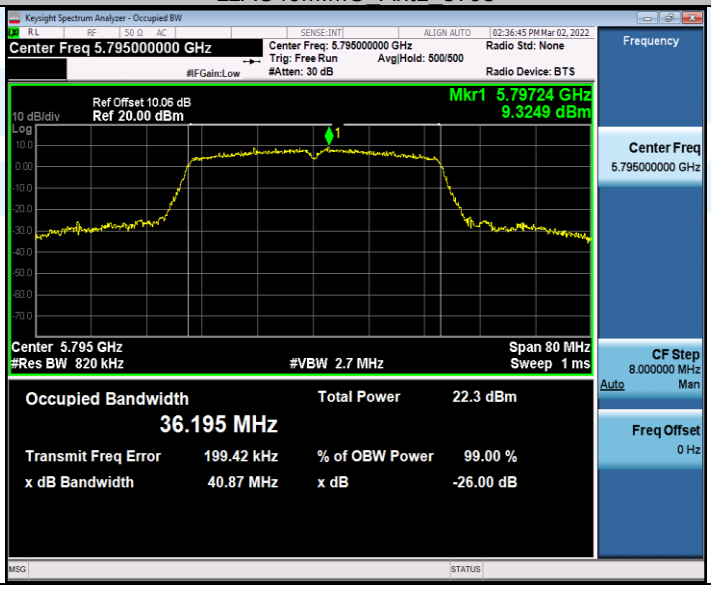
11AC40MIMO_Ant0_5755

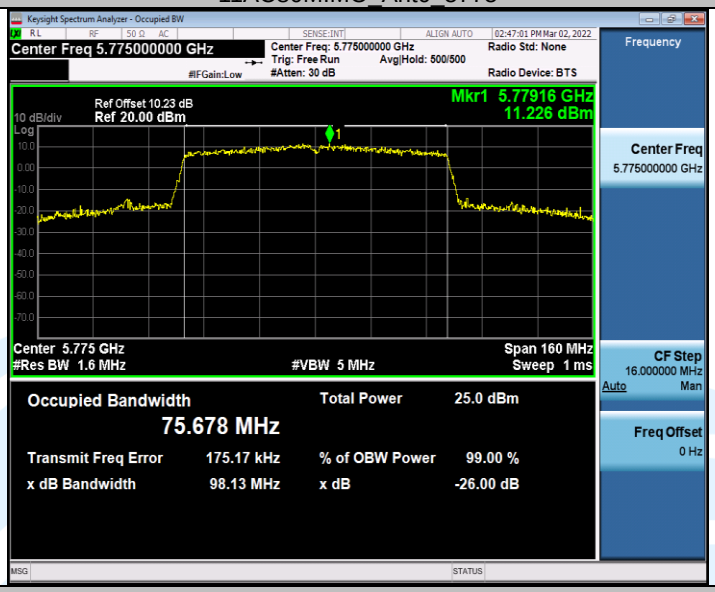
11AC40MIMO_Ant1_5755



11AC40MIMO_Ant0_5795

11AC40MIMO_Ant1_5795



11AC80MIMO_Ant0_5775

11AC80MIMO_Ant1_5775


5.5 MAXIMUM CONDUCTED OUTPUT POWER OR E.I.R.P

Test Requirement:	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3) RSS-247 Issue 2 Section 6.2.1.1/6.2.2.1/6.2.3.1/6.2.4.1
Test Method:	KDB 789033 D02 v02r01 Section E.2 (Method SA)
Limits:	FCC 47 CFR Part 15 Subpart E

1. For the band 5.15-5.25 GHz.
   (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

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

   (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

   (iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

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

Limits: RSS-247 Issue 2

1. **Frequency band 5150-5250 MHz**

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 $\log_{10}$B, dBm, whichever is less. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 $\log_{10}$B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

2. **Frequency band 5250-5350 MHz**

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 $\log_{10}$B, dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

Devices, other than devices installed in vehicles, shall comply with the following:

a) The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band;

b) The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Additional requirements

In addition to the above requirements, devices shall comply with the following, where applicable:

a) Outdoor fixed devices with a maximum e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below:

i. -13 dBW/MHz for $0^o \leq \theta < 8^o$
ii. -13 − 0.716 (θ-8) dBW/MHz for $8^o \leq \theta < 40^o$
iii. -35.9 − 1.22 (θ-40) dBW/MHz for $40^o \leq \theta \leq 45^o$
iv. -42 dBW/MHz for $\theta > 45^o$

The measurement procedure defined in Annex A of this document shall be used to verify the compliance to the e.i.r.p. at different elevations.

b) Devices, other than outdoor fixed devices, having an e.i.r.p. greater than 200 mW shall comply with either i. or ii. below:

i. devices shall comply with the e.i.r.p. elevation mask in 6.2.2.3(a); or
ii. devices shall implement a method to permanently reduce their e.i.r.p. via a firmwarefeature in the event that the Department requires it. The test report must demonstratehow the device's power table can be updated to meet this firmware requirement. Themanufacturer shall provide this firmware to update all systems automatically incompliance with the directions received from the Department.

3. **Frequency bands 5470-5600 MHz and 5650-5725 MHz**

The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

4. **Frequency band 5725-5850 MHz**

The maximum conducted output power shall not exceed 1 W. The output 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 output 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 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[3] systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

Test Procedure:

Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99% occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with Section 15.407(a).

a) The test method shall be selected as follows:
(i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

The EUT transmits continuously (or with a duty cycle ≥ 98%).

Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, i.e., II.E.2.b)) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2%.

(iii) Method SA-3 (power averaging (rms) detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep):
(i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
(ii) Set RBW = 1 MHz.
(iii) Set VBW ≥ 3 MHz.
(iv) Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
(v) Sweep time = auto.
(vi) Detector = power averaging (rms), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run."

(viii) Trace average at least 100 traces in power averaging (rms) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

Test Setup:	Refer to section 4.5.3 for details.
Instruments Used:	Refer to section 3 for details
Test Mode:	Transmitter mode
Test Results:	Pass

Directional gain and the maximum output power limit.
RSS-247 Issue 2

Frequency Band	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Peak Power Limits (dBm)
U-NII-1	0.50	0.45	3.49	23.00
U-NII-2A	0.50	0.45	3.49	24.00
U-NII-2C	0.38	0.32	3.36	24.00
U-NII-3	0.44	0.30	3.38	30.00
Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows:				
If transmit signals are correlated, then				
Directional gain = 10 log[(10^G1 /20 + 10^G2 /20 + … + 10^GN /20)^2 /NANT] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]				

FCC 47 CFR Part 15 Subpart E

Frequency Band	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Peak Power Limits (dBm)
U-NII-1	0.50	0.45	3.49	24.00
U-NII-2A	0.50	0.45	3.49	24.00
U-NII-2C	0.38	0.32	3.36	24.00
U-NII-3	0.44	0.30	3.38	30.00
Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows:				
If transmit signals are correlated, then				
Directional gain = 10 log[(10^G1 /20 + 10^G2 /20 + … + 10^GN /20)^2 /NANT] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]				

Frequency band 5150-5250 MHz
RSS-247 Issue 2:
For IEEE 802.11 a, the minimum 99% emission bandwidth is 16.888 MHz
10 dBm + $10\log_{10}$ (16.888) = 22.28 dBm < 23 dBm
So the 22.28 dB limit applicable

For IEEE 802.11 n-HT20/ac-VHT20, the minimum 99% emission bandwidth is 17.714 MHz
10 dBm + $10\log_{10}$ (17.714) = 22.48 dBm < 23 dBm
So the 22.48 dB limit applicable

For IEEE 802.11 n-HT40/ac-VHT40/ac-VHT80, the minimum 99% emission bandwidth is 36.135 MHz
10 dBm + $10\log_{10}$ (36.135) = 25.58 dBm > 23 dBm
So the 23 dB limit applicable

Frequency band 5250-5350 MHz
RSS-247 Issue 2:
For IEEE 802.11 a, the minimum 99% emission bandwidth is 16.872 MHz
11 dBm + $10\log_{10}$ (16.872) = 23.27 dBm < 24dBm
So the 23.27 dB limit applicable

For IEEE 802.11 n-HT20/ac-VHT20, the minimum 99% emission bandwidth is 17.691 MHz
11 dBm + $10\log_{10}$ (17.691) = 23.48 dBm < 24 dBm
So the 23.48 dB limit applicable

For IEEE 802.11 n-HT40/ac-VHT40/ac-VHT80, the minimum 99% emission bandwidth is 36.151 MHz
11 dBm + $10\log_{10}$ (36.151) = 26.58 dBm > 24 dBm (200mW)
So the 24 dB limit applicable

FCC 47 CFR Part 15 Subpart E:
For IEEE 802.11 a/n/ac, the minimum 26 dB emission bandwidth is 20.08 MHz
11 dBm + $10\log_{10}$ (20.08) = 24.03 dBm > 24 dBm (200mW)
So the 24 dB limit applicable

Frequency bands 5470-5725 MHz (RSS-247 Issue 2 Not including 5600-5650 MHz)
RSS-247 Issue 2:
For IEEE 802.11 a, the minimum 99% emission bandwidth is 16.871 MHz
11 dBm + $10\log_{10}$ (16.546) = 23.27 dBm < 24 dBm
So the 23.27 dB limit applicable

For IEEE 802.11 n-HT20/ac-VHT20, the minimum 99% emission bandwidth is 17.695 MHz
11 dBm + $10\log_{10}$ (17.695) = 23.48 dBm < 24 dBm
So the 23.48 dB limit applicable

For IEEE 802.11 n-HT40/ac-VHT40/ac-VHT80, the minimum 99% emission bandwidth is 36.123 MHz
11 dBm + $10\log_{10}$ (36.123) = 26.58 dBm > 24 dBm (200mW)
So the 24 dB limit applicable

FCC 47 CFR Part 15 Subpart E:
For IEEE 802.11 a/n/ac, the minimum 26 dB emission bandwidth is 19.96 MHz
11 dBm + $10\log_{10}$ (19.96) = 24.00 dBm = 24 dBm
So the 24 dB limit applicable

Test Mode	Antenna	Channel	Power	FCC Part 15E	RSS-247			Verdict
				Limit	Limit	EIRP	EIRP Limit	
			[dBm]	[dBm]	[dBm]	[dBm]	[dBm]	
IEEE 802.11a	Ant0	5180	15.71	24.00	---	16.21	22.28	PASS
	Ant1	5180	15.71	24.00	---	16.16	22.28	PASS
	Ant0	5220	15.51	24.00	---	16.01	22.28	PASS
	Ant1	5220	15.44	24.00	---	15.89	22.28	PASS
	Ant0	5240	15.77	24.00	---	16.27	22.28	PASS
	Ant1	5240	15.59	24.00	---	16.04	22.28	PASS
	Ant0	5260	16.49	24.00	23.27	---	---	PASS
	Ant1	5260	15.47	24.00	23.27	---	---	PASS
	Ant0	5300	15.63	24.00	23.27	---	---	PASS
	Ant1	5300	15.60	24.00	23.27	---	---	PASS
	Ant0	5320	15.49	24.00	23.27	---	---	PASS
	Ant1	5320	15.34	24.00	23.27	---	---	PASS
	Ant0	5500	15.55	24.00	23.27	---	---	PASS
	Ant1	5500	15.63	24.00	23.27	---	---	PASS
	Ant0	5580	15.74	24.00	23.27	---	---	PASS
	Ant1	5580	15.38	24.00	23.27	---	---	PASS
	Ant0	5700	15.23	24.00	23.27	---	---	PASS
	Ant1	5700	15.11	24.00	23.27	---	---	PASS
	Ant0	5745	15.34	30.00	30.00	15.78	27.00	PASS
	Ant1	5745	15.19	30.00	30.00	15.49	27.00	PASS
	Ant0	5785	15.33	30.00	30.00	15.77	27.00	PASS
	Ant1	5785	15.07	30.00	30.00	15.37	27.00	PASS
	Ant0	5825	15.14	30.00	30.00	15.58	27.00	PASS
	Ant1	5825	14.76	30.00	30.00	15.06	27.00	PASS

Note：1. The Duty Cycle Factor is compensated in the graph.

2. The maximum ERP/EIRP is calculated from max output power and antenna gain, the antenna gain provided by the customer, and the customer takes all the responsibilities for the accuracy of antenna gain.

Test Mode	Antenna	Channel	Power	FCC Part 15E	RSS-247			Verdict
				Limit	Limit	EIRP	EIRP Limit	
			[dBm]	[dBm]	[dBm]	[dBm]	[dBm]	
IEEE 802.11n20 MIMO	Ant0	5180	14.68	24.00	---	15.18	22.48	PASS
	Ant1	5180	14.95	24.00	---	15.40	22.48	PASS
	total	5180	17.83	24.00	---	18.33	22.48	PASS
	Ant0	5220	14.79	24.00	---	15.29	22.48	PASS
	Ant1	5220	15.02	24.00	---	15.47	22.48	PASS
	total	5220	17.92	24.00	---	18.42	22.48	PASS
	Ant0	5240	15.07	24.00	---	15.57	22.48	PASS
	Ant1	5240	15.12	24.00	---	15.57	22.48	PASS
	total	5240	18.11	24.00	---	18.61	22.48	PASS
	Ant0	5260	15.02	24.00	23.48	---	---	PASS
	Ant1	5260	14.99	24.00	23.48	---	---	PASS
	total	5260	18.02	24.00	23.48	---	---	PASS
	Ant0	5300	15.05	24.00	23.48	---	---	PASS
	Ant1	5300	15.15	24.00	23.48	---	---	PASS
	total	5300	18.11	24.00	23.48	---	---	PASS
	Ant0	5320	14.99	24.00	23.48	---	---	PASS
	Ant1	5320	15.20	24.00	23.48	---	---	PASS
	total	5320	18.11	24.00	23.48	---	---	PASS
	Ant0	5500	14.04	24.00	23.48	---	---	PASS
	Ant1	5500	14.32	24.00	23.48	---	---	PASS
	total	5500	17.19	24.00	23.48	---	---	PASS
	Ant0	5580	14.15	24.00	23.48	---	---	PASS
	Ant1	5580	14.23	24.00	23.48	---	---	PASS
	total	5580	17.20	24.00	23.48	---	---	PASS
	Ant0	5700	13.75	24.00	23.48	---	---	PASS
	Ant1	5700	13.73	24.00	23.48	---	---	PASS
	total	5700	16.75	24.00	23.48	---	---	PASS
	Ant0	5745	14.68	30.00	30.00	15.12	27.00	PASS
	Ant1	5745	14.63	30.00	30.00	14.93	27.00	PASS
	total	5745	17.67	30.00	30.00	18.11	27.00	PASS
	Ant0	5785	14.82	30.00	30.00	15.26	27.00	PASS
	Ant1	5785	14.68	30.00	30.00	14.98	27.00	PASS
	total	5785	17.76	30.00	30.00	18.2	27.00	PASS
	Ant0	5825	14.70	30.00	30.00	15.14	27.00	PASS
	Ant1	5825	14.48	30.00	30.00	14.78	27.00	PASS
	total	5825	17.60	30.00	30.00	18.04	27.00	PASS

Note：1. The Duty Cycle Factor is compensated in the graph.

2. The maximum ERP/EIRP is calculated from max output power and antenna gain, the antenna gain provided by the customer, and the customer takes all the responsibilities for the accuracy of antenna gain.

Test Mode	Antenna	Channel	Power	FCC Part 15E	RSS-247			Verdict
				Limit	Limit	EIRP	EIRP Limit	
			[dBm]	[dBm]	[dBm]	[dBm]	[dBm]	
IEEE 802.11n40 MIMO	Ant0	5190	11.86	24.00	---	12.36	23.00	PASS
	Ant1	5190	12.12	24.00	---	12.57	23.00	PASS
	total	5190	15.00	24.00	---	15.50	23.00	PASS
	Ant0	5230	11.97	24.00	---	12.47	23.00	PASS
	Ant1	5230	12.06	24.00	---	12.51	23.00	PASS
	total	5230	15.03	24.00	---	15.53	23.00	PASS
	Ant0	5270	11.87	24.00	24.00	---	---	PASS
	Ant1	5270	11.88	24.00	24.00	---	---	PASS
	total	5270	14.89	24.00	24.00	---	---	PASS
	Ant0	5310	15.16	24.00	24.00	---	---	PASS
	Ant1	5310	15.26	24.00	24.00	---	---	PASS
	total	5310	18.22	24.00	24.00	---	---	PASS
	Ant0	5510	7.03	24.00	24.00	---	---	PASS
	Ant1	5510	6.61	24.00	24.00	---	---	PASS
	total	5510	9.84	24.00	24.00	---	---	PASS
	Ant0	5550	7.27	24.00	24.00	---	---	PASS
	Ant1	5550	6.67	24.00	24.00	---	---	PASS
	total	5550	9.99	24.00	24.00	---	---	PASS
	Ant0	5670	14.08	24.00	24.00	---	---	PASS
	Ant1	5670	14.18	24.00	24.00	---	---	PASS
	total	5670	17.14	24.00	24.00	---	---	PASS
	Ant0	5755	14.36	30.00	30.00	14.80	27.00	PASS
	Ant1	5755	14.22	30.00	30.00	14.52	27.00	PASS
	total	5755	17.30	30.00	30.00	17.74	27.00	PASS
	Ant0	5795	14.51	30.00	30.00	14.95	27.00	PASS
	Ant1	5795	14.31	30.00	30.00	14.61	27.00	PASS
	total	5795	17.42	30.00	30.00	17.86	27.00	PASS

Note：1. The Duty Cycle Factor is compensated in the graph.

2. The maximum ERP/EIRP is calculated from max output power and antenna gain, the antenna gain provided by the customer, and the customer takes all the responsibilities for the accuracy of antenna gain.

Test Mode	Antenna	Channel	Power	FCC Part 15E	RSS-247			Verdict
				Limit	Limit	EIRP	EIRP Limit	
			[dBm]	[dBm]	[dBm]	[dBm]	[dBm]	
IEEE 802.11ac20 MIMO	Ant0	5180	15.06	24.00	---	15.56	22.48	PASS
	Ant1	5180	15.19	24.00	---	15.64	22.48	PASS
	total	5180	18.14	24.00	---	18.64	22.48	PASS
	Ant0	5220	14.91	24.00	---	15.41	22.48	PASS
	Ant1	5220	15.13	24.00	---	15.58	22.48	PASS
	total	5220	18.03	24.00	---	18.53	22.48	PASS
	Ant0	5240	15.15	24.00	---	15.65	22.48	PASS
	Ant1	5240	15.17	24.00	---	15.62	22.48	PASS
	total	5240	18.17	24.00	---	18.67	22.48	PASS
	Ant0	5260	15.06	24.00	23.48	---	---	PASS
	Ant1	5260	14.99	24.00	23.48	---	---	PASS
	total	5260	18.04	24.00	23.48	---	---	PASS
	Ant0	5300	15.10	24.00	23.48	---	---	PASS
	Ant1	5300	15.16	24.00	23.48	---	---	PASS
	total	5300	18.14	24.00	23.48	---	---	PASS
	Ant0	5320	15.00	24.00	23.48	---	---	PASS
	Ant1	5320	15.30	24.00	23.48	---	---	PASS
	total	5320	18.16	24.00	23.48	---	---	PASS
	Ant0	5500	14.01	24.00	23.48	---	---	PASS
	Ant1	5500	14.36	24.00	23.48	---	---	PASS
	total	5500	17.20	24.00	23.48	---	---	PASS
	Ant0	5580	14.16	24.00	23.48	---	---	PASS
	Ant1	5580	14.16	24.00	23.48	---	---	PASS
	total	5580	17.17	24.00	23.48	---	---	PASS
	Ant0	5700	13.64	24.00	23.48	---	---	PASS
	Ant1	5700	13.73	24.00	23.48	---	---	PASS
	total	5700	16.70	24.00	23.48	---	---	PASS
	Ant0	5745	14.70	30.00	30.00	15.14	27.00	PASS
	Ant1	5745	14.60	30.00	30.00	14.90	27.00	PASS
	total	5745	17.66	30.00	30.00	18.10	27.00	PASS
	Ant0	5785	14.83	30.00	30.00	15.27	27.00	PASS
	Ant1	5785	14.58	30.00	30.00	14.88	27.00	PASS
	total	5785	17.72	30.00	30.00	18.16	27.00	PASS
	Ant0	5825	14.66	30.00	30.00	15.10	27.00	PASS
	Ant1	5825	14.37	30.00	30.00	14.67	27.00	PASS
	total	5825	17.53	30.00	30.00	17.97	27.00	PASS

Note：1. The Duty Cycle Factor is compensated in the graph.

2. The maximum ERP/EIRP is calculated from max output power and antenna gain, the antenna gain provided by the customer, and the customer takes all the responsibilities for the accuracy of antenna gain.

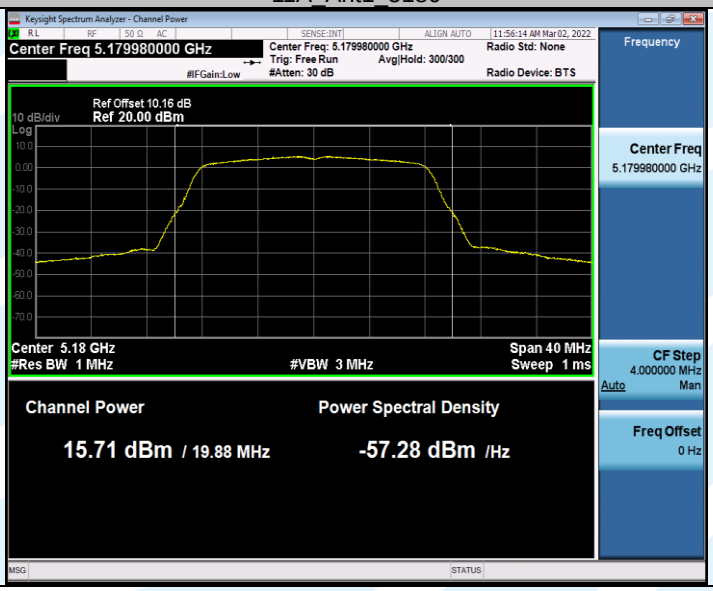
Test Mode	Antenna	Channel	Power	FCC Part 15E	RSS-247			Verdict
				Limit	Limit	EIRP	EIRP Limit	
			[dBm]	[dBm]	[dBm]	[dBm]	[dBm]	
IEEE 802.11ac40 MIMO	Ant0	5190	11.90	24.00	---	12.40	23.00	PASS
	Ant1	5190	12.03	24.00	---	12.48	23.00	PASS
	total	5190	14.98	24.00	---	15.48	23.00	PASS
	Ant0	5230	11.99	24.00	---	12.49	23.00	PASS
	Ant1	5230	12.11	24.00	---	12.56	23.00	PASS
	total	5230	15.06	24.00	---	15.56	23.00	PASS
	Ant0	5270	11.93	24.00	24.00	---	---	PASS
	Ant1	5270	11.90	24.00	24.00	---	---	PASS
	total	5270	14.93	24.00	24.00	---	---	PASS
	Ant0	5310	15.12	24.00	24.00	---	---	PASS
	Ant1	5310	15.30	24.00	24.00	---	---	PASS
	total	5310	18.22	24.00	24.00	---	---	PASS
	Ant0	5510	7.00	24.00	24.00	---	---	PASS
	Ant1	5510	6.71	24.00	24.00	---	---	PASS
	total	5510	9.87	24.00	24.00	---	---	PASS
	Ant0	5550	7.32	24.00	24.00	---	---	PASS
	Ant1	5550	6.63	24.00	24.00	---	---	PASS
	total	5550	10.00	24.00	24.00	---	---	PASS
	Ant0	5670	14.12	24.00	24.00	---	---	PASS
	Ant1	5670	14.25	24.00	24.00	---	---	PASS
	total	5670	17.20	24.00	24.00	---	---	PASS
	Ant0	5755	14.37	30.00	30.00	14.81	27.00	PASS
	Ant1	5755	14.24	30.00	30.00	14.54	27.00	PASS
	total	5755	17.32	30.00	30.00	17.76	27.00	PASS
	Ant0	5795	14.48	30.00	30.00	14.92	27.00	PASS
	Ant1	5795	14.20	30.00	30.00	14.50	27.00	PASS
	total	5795	17.35	30.00	30.00	17.79	27.00	PASS
IEEE 802.11ac80 MIMO	Ant0	5210	10.47	24.00	---	10.97	23.00	PASS
	Ant1	5210	10.51	24.00	---	10.96	23.00	PASS
	total	5210	13.50	24.00	---	14.00	23.00	PASS
	Ant0	5290	8.80	24.00	24.00	---	---	PASS
	Ant1	5290	8.76	24.00	24.00	---	---	PASS
	total	5290	11.79	24.00	24.00	---	---	PASS
	Ant0	5530	16.25	24.00	24.00	---	---	PASS
	Ant1	5530	16.39	24.00	24.00	---	---	PASS
	total	5530	19.33	24.00	24.00	---	---	PASS
	Ant0	5775	16.23	30.00	30.00	16.67	27.00	PASS
	Ant1	5775	15.98	30.00	30.00	16.28	27.00	PASS
	total	5775	19.12	30.00	30.00	19.56	27.00	PASS

Note：1. The Duty Cycle Factor is compensated in the graph.

2. The maximum ERP/EIRP is calculated from max output power and antenna gain, the antenna gain provided by the customer, and the customer takes all the responsibilities for the accuracy of antenna gain.

The test plots as follows

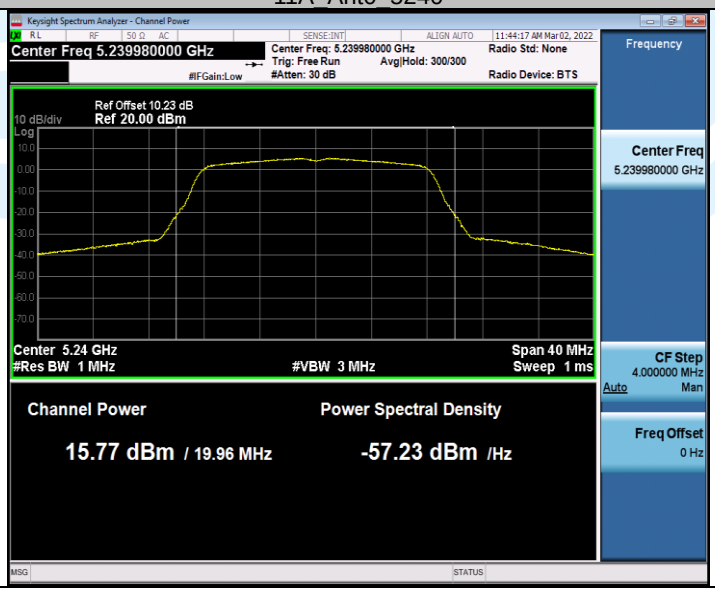
11A_Ant0_5180

11A_Ant1_5180


11A_Ant0_5220

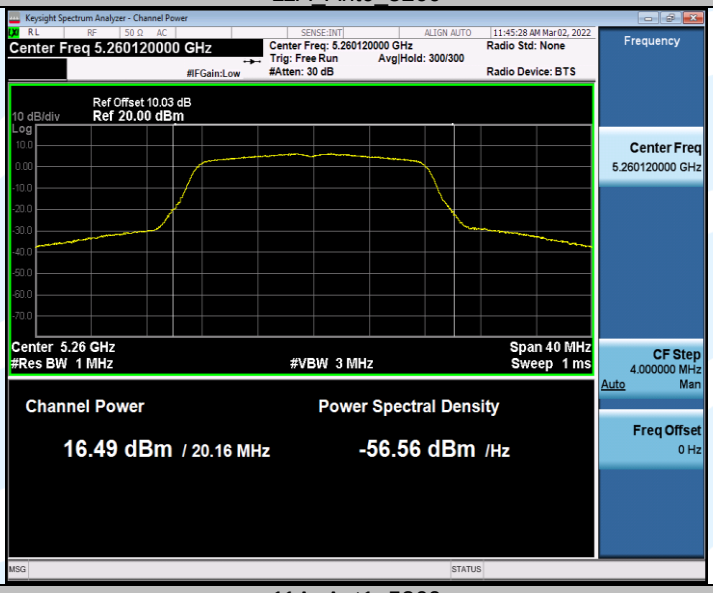
11A_Ant1_5220

11A_Ant0_5240

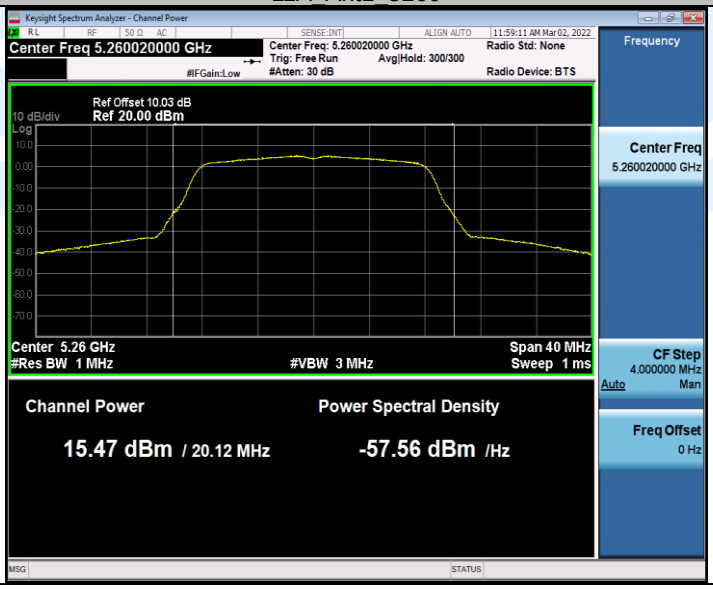


11A_Ant1_5240

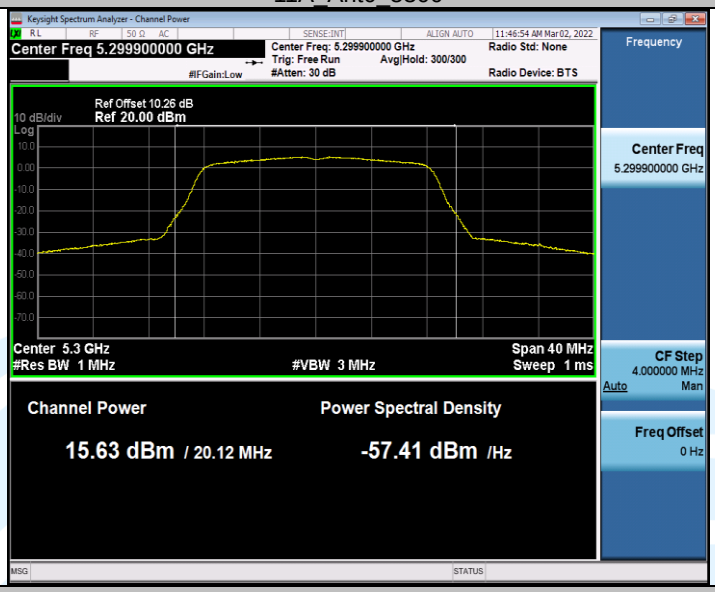
11A_Ant0_5260



11A_Ant1_5260



11A_Ant0_5300



11A_Ant1_5300

11A_Ant0_5320