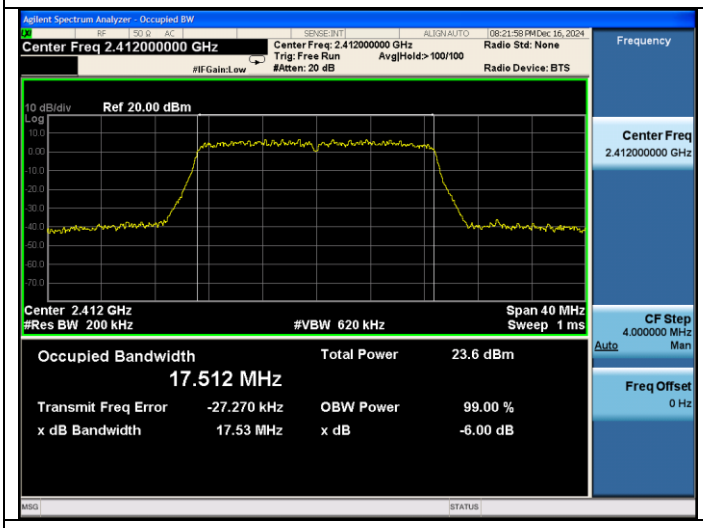
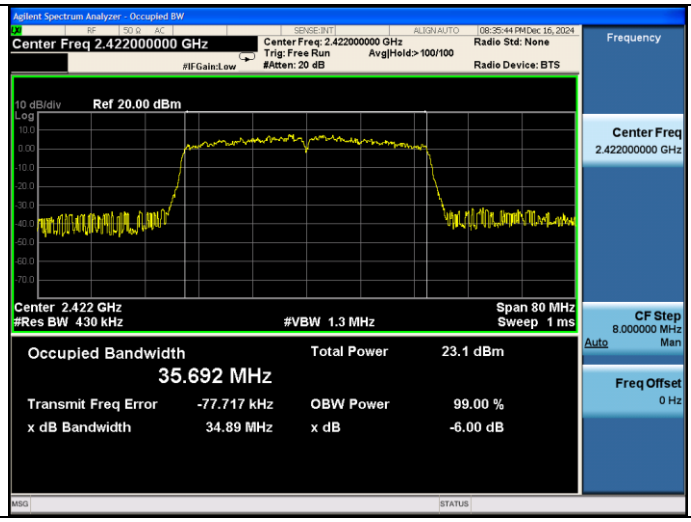
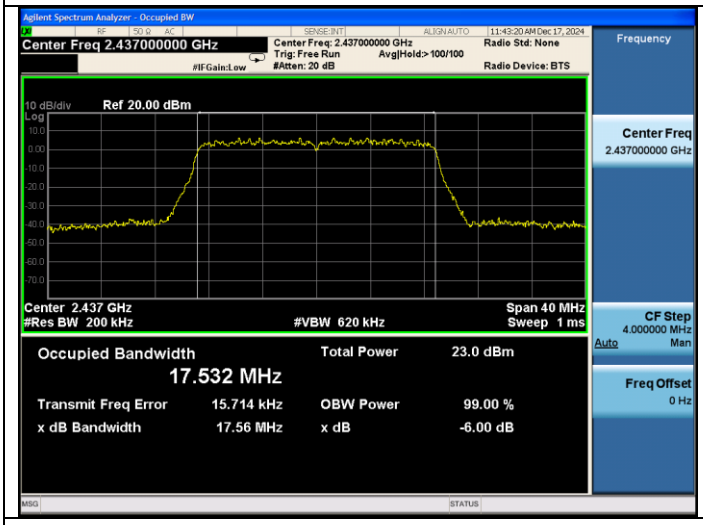
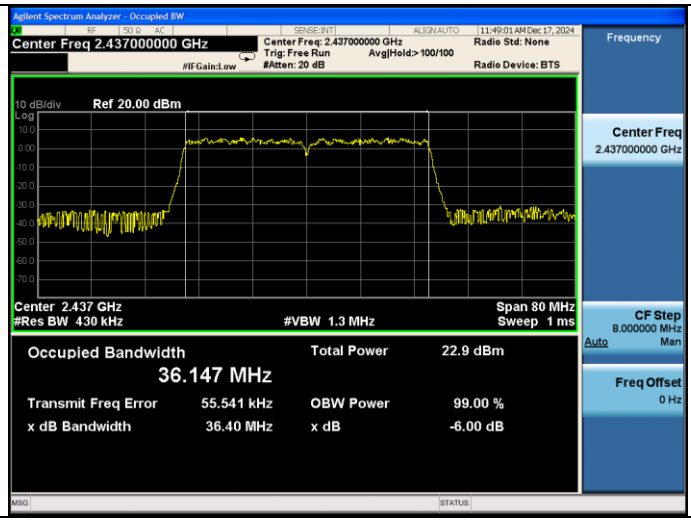
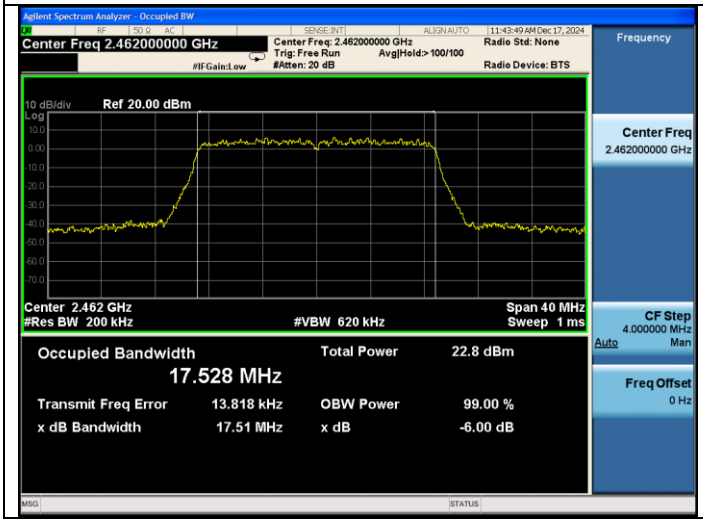
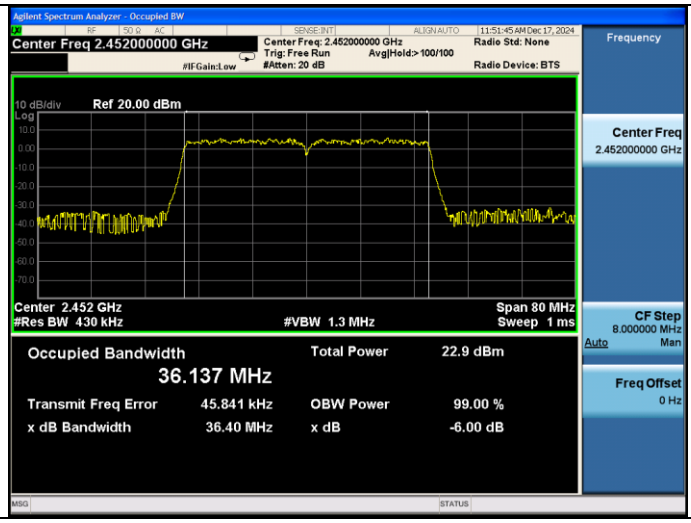
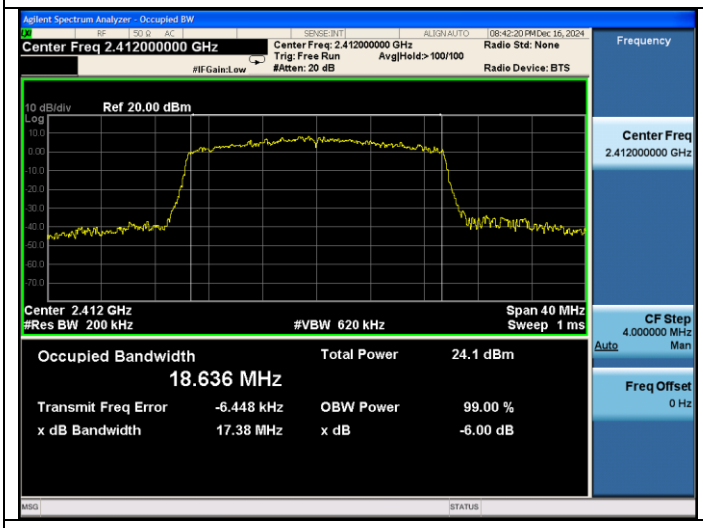
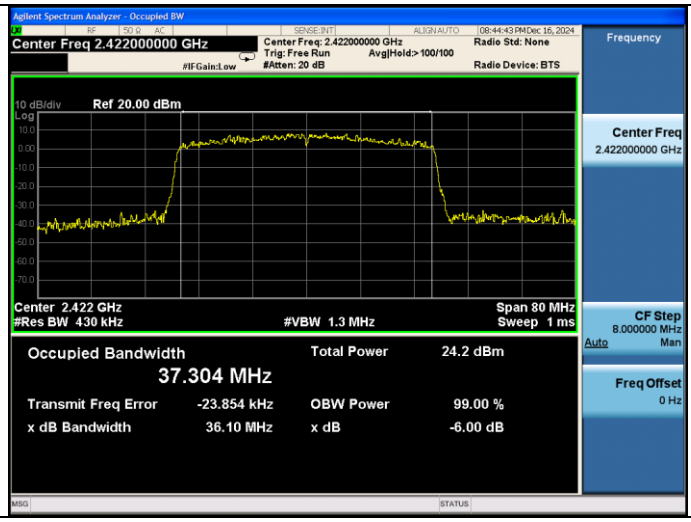
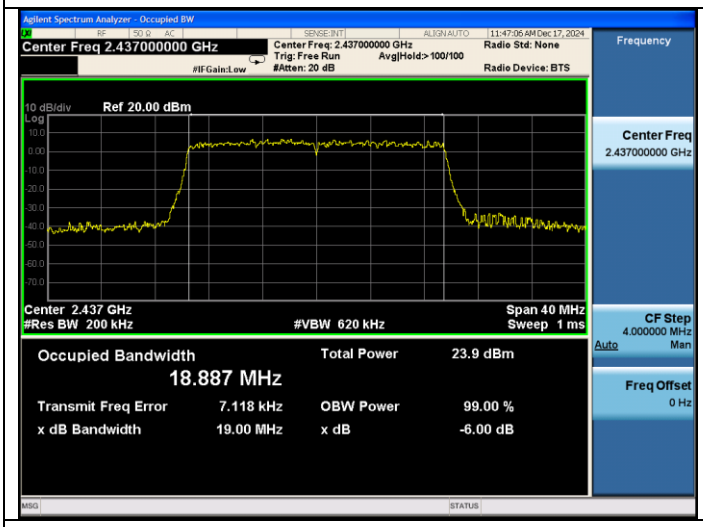
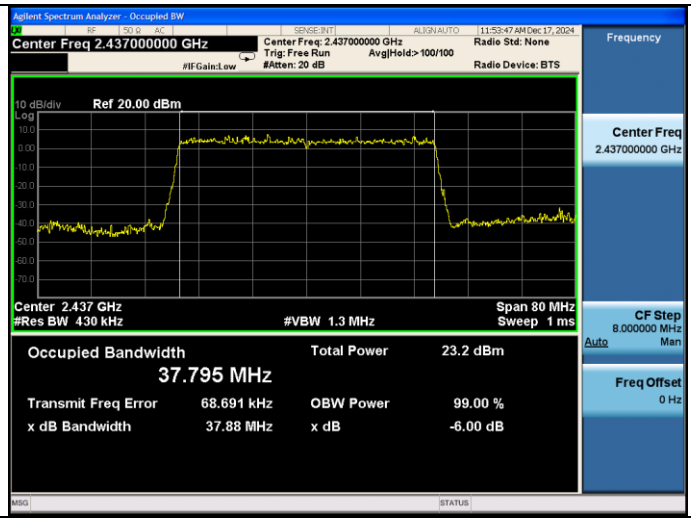
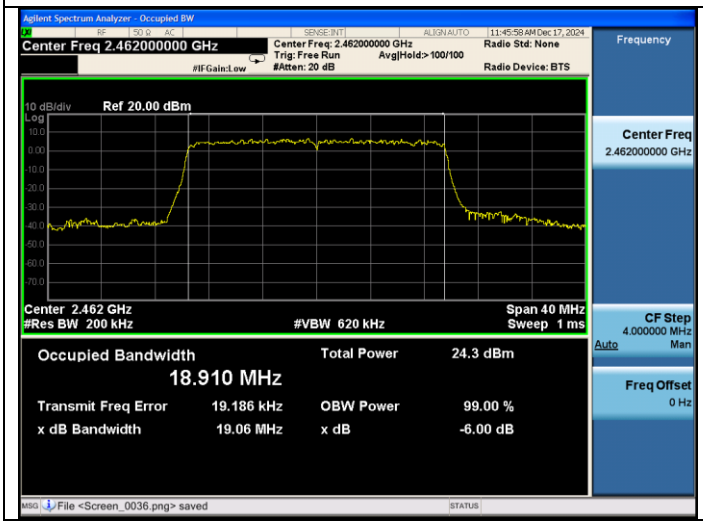
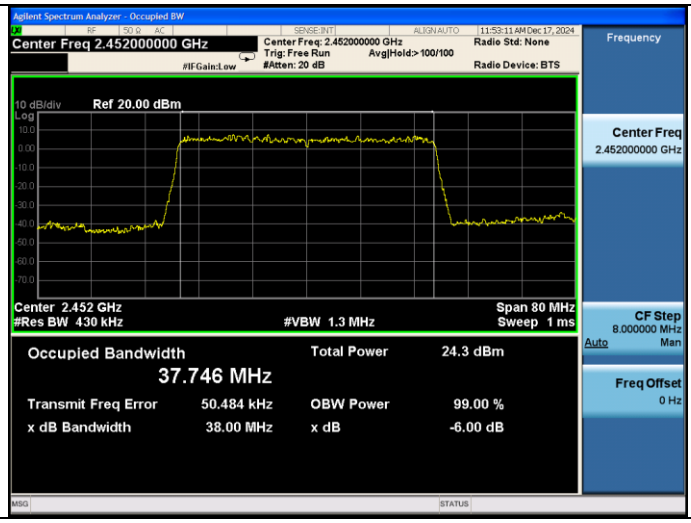
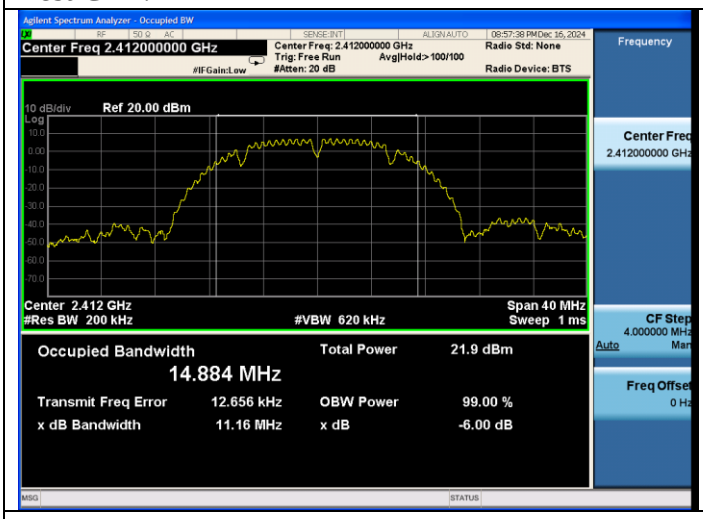
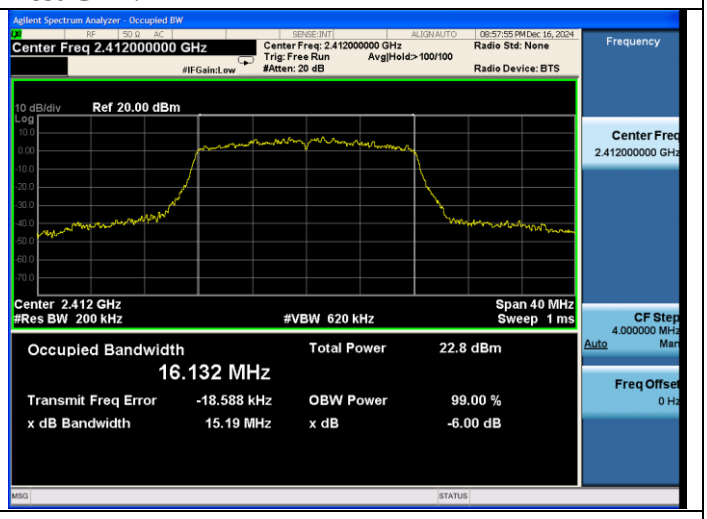
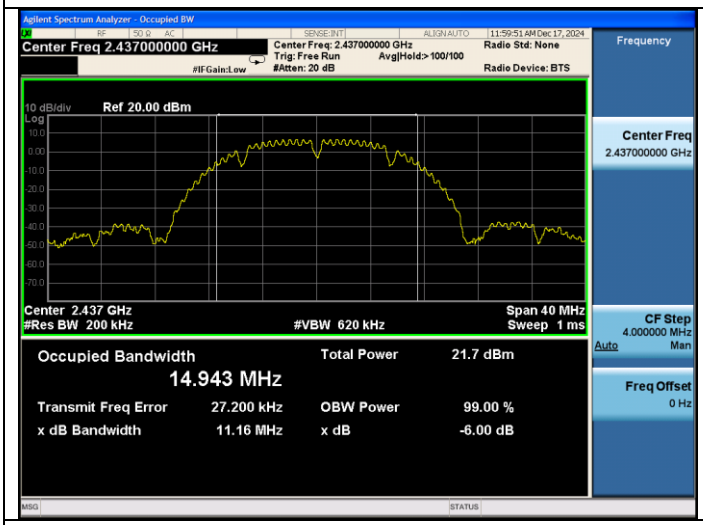
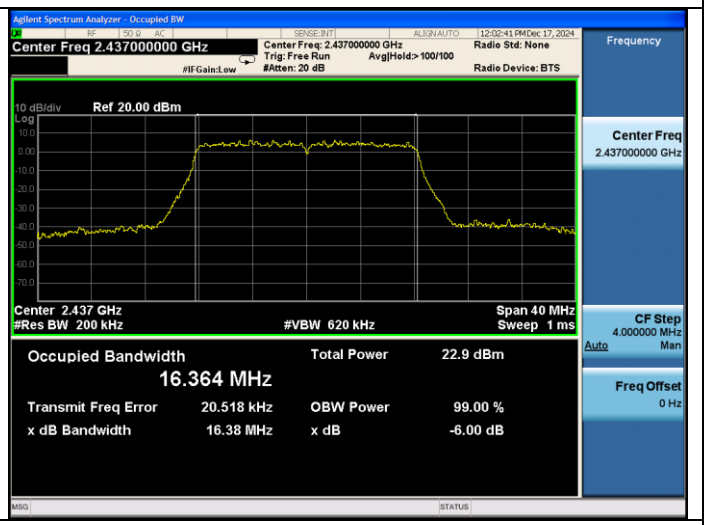
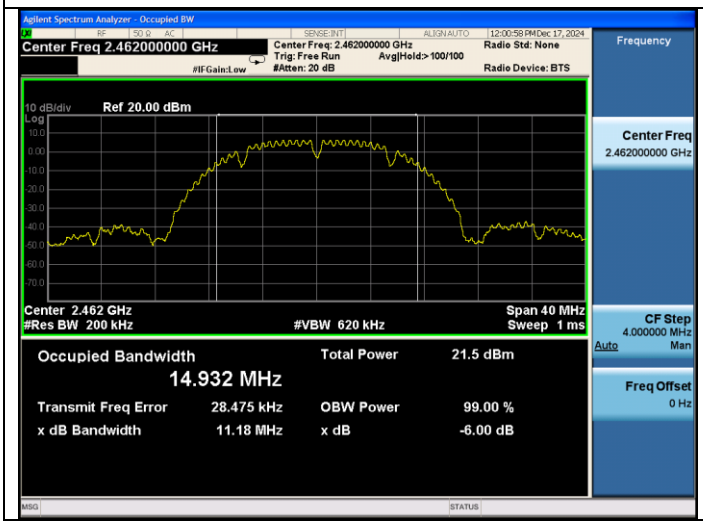
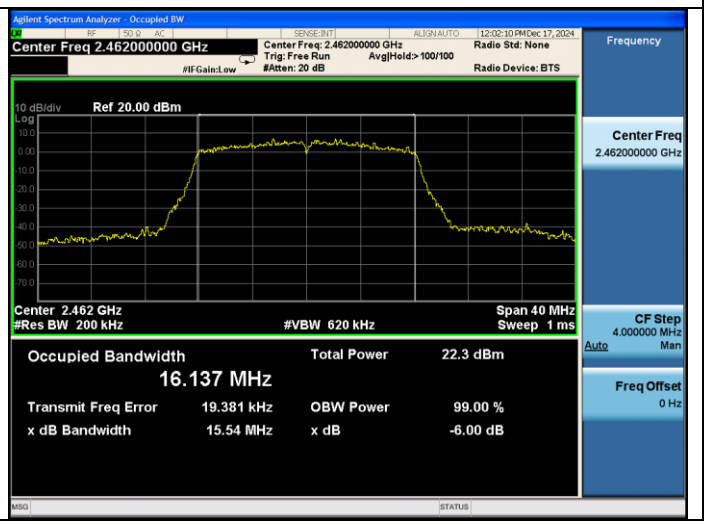
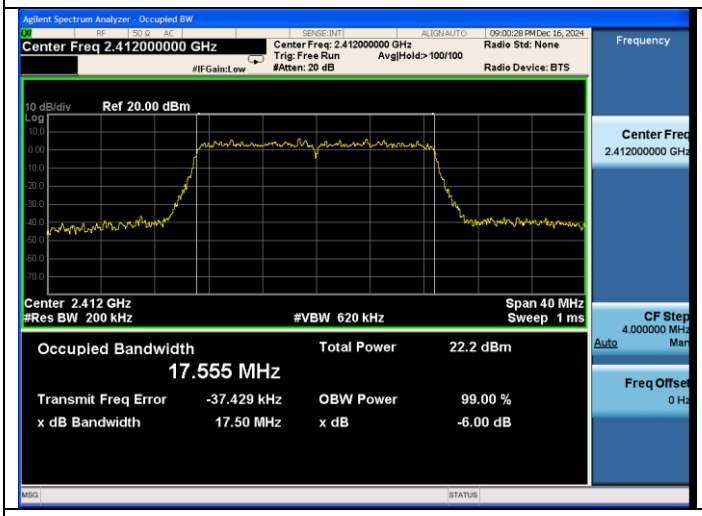
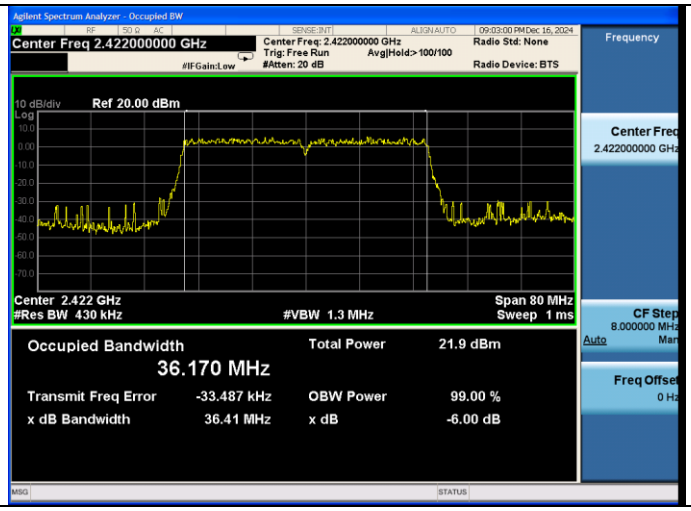
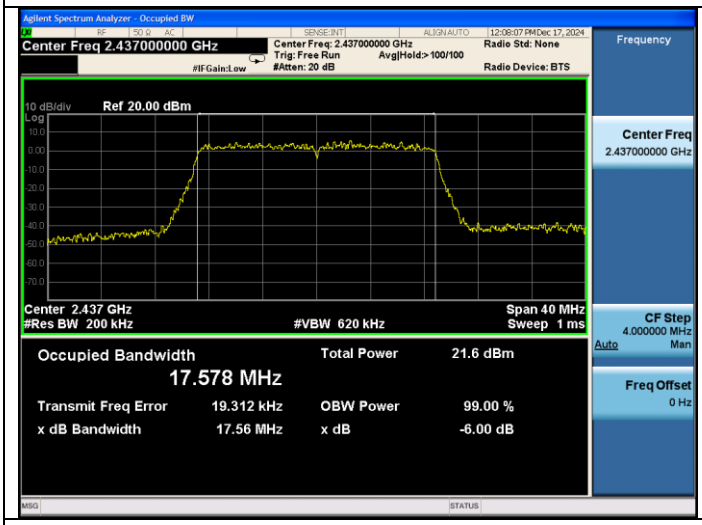
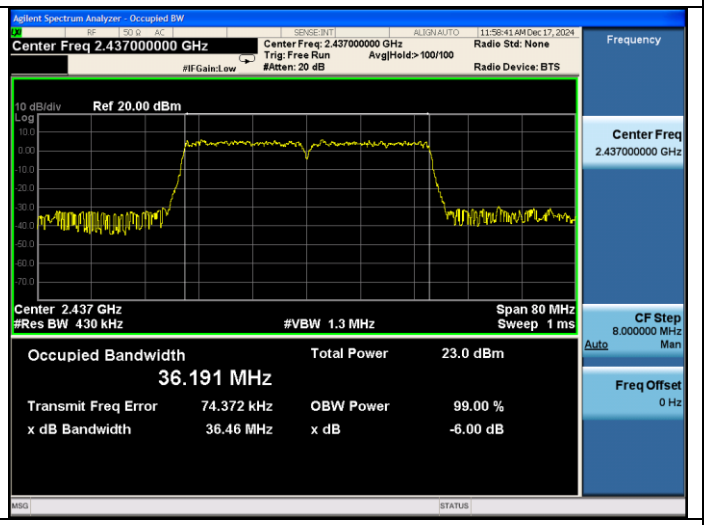
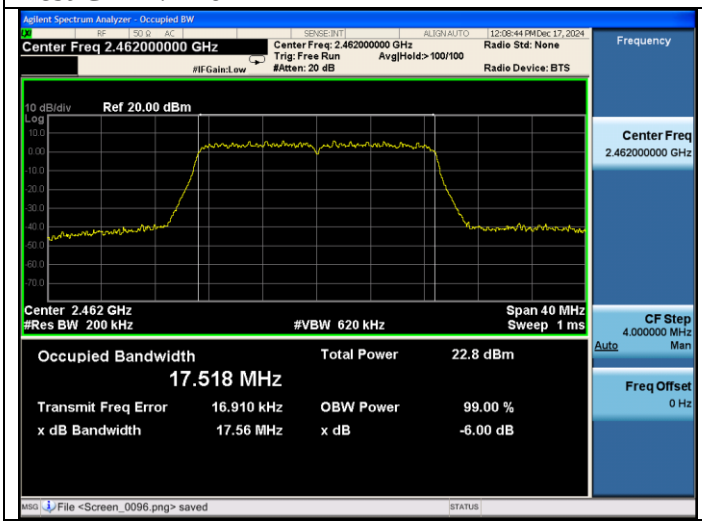
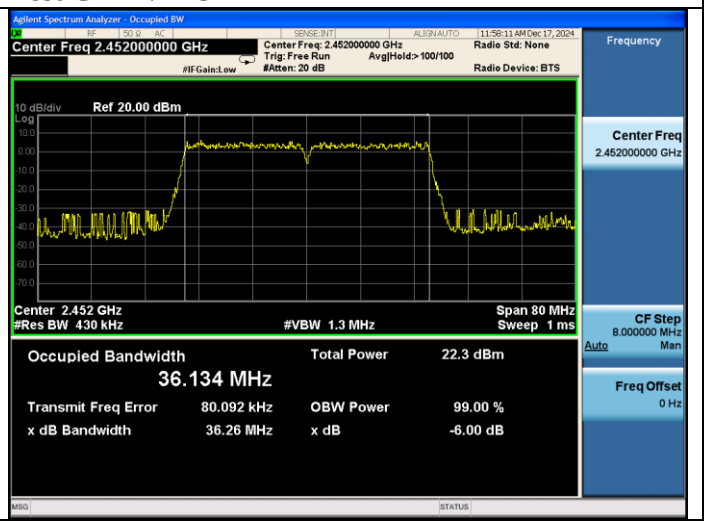
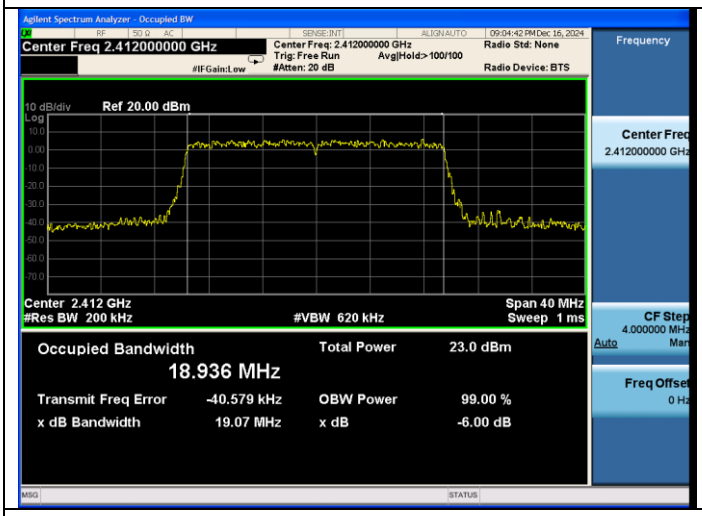
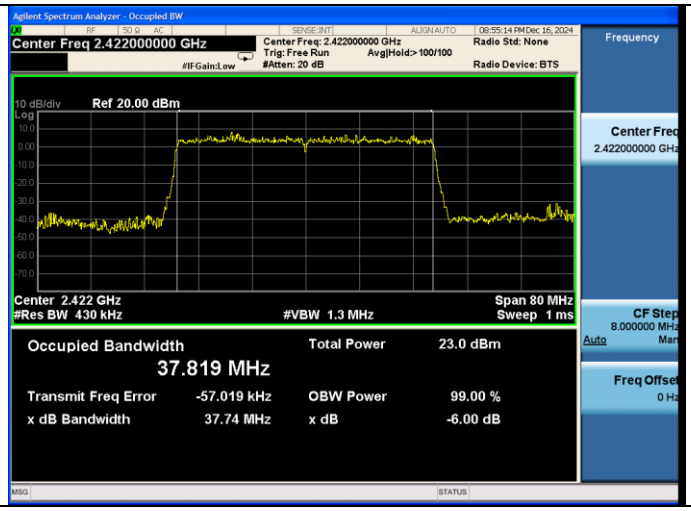
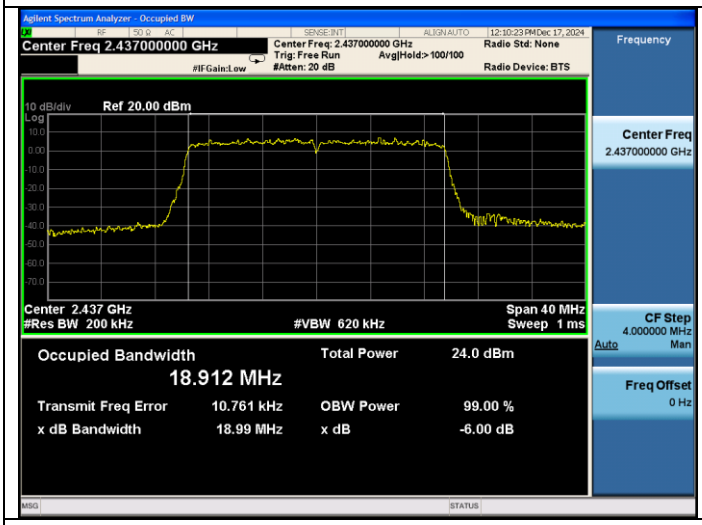
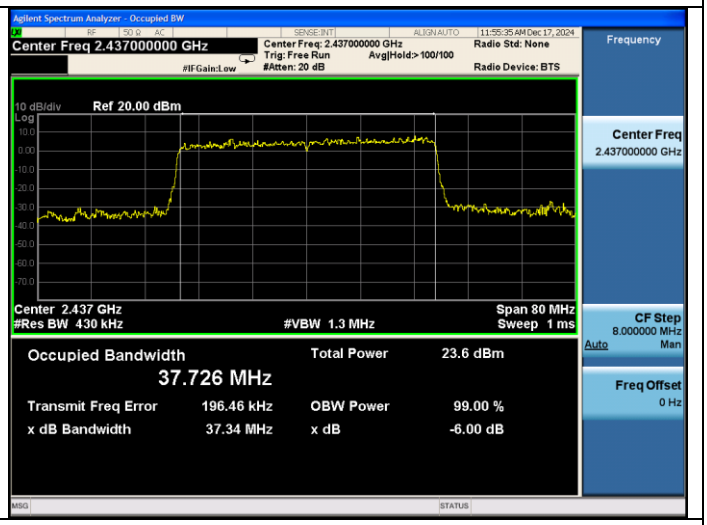
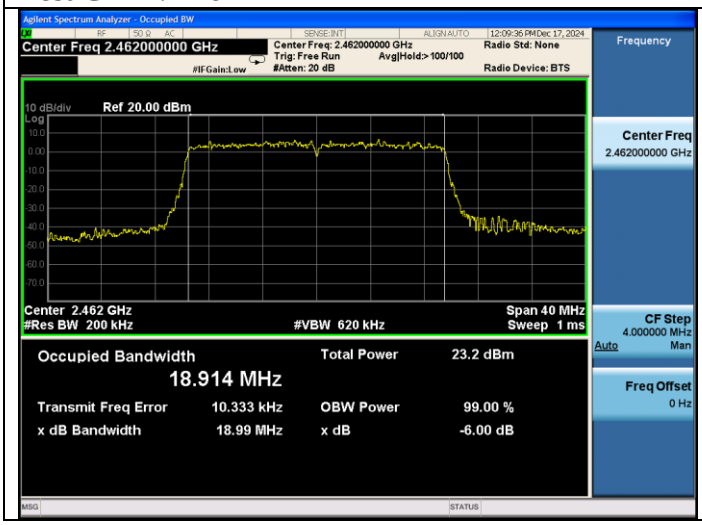
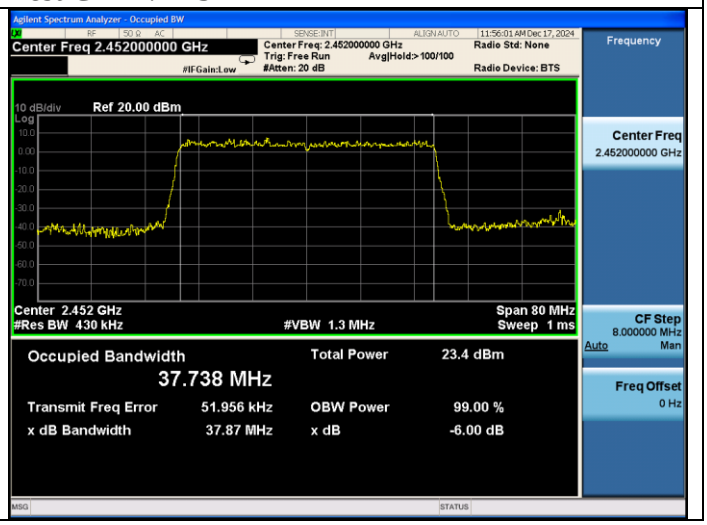
Test Mode: IEEE 802.11n HT20 Test CH1: 2412MHz	Test Mode: IEEE 802.11n HT40 Test CH1: 2422MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2452MHz
	

Test Mode: IEEE 802.11ax HE20 Test CH1: 2412MHz	Test Mode: IEEE 802.11ax HE40 Test CH1: 2422MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2452MHz
	

ANT1	
Test Mode: IEEE 802.11b Test CH1: 2412MHz	Test Mode: IEEE 802.11g Test CH1: 2412MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2462MHz
	

Test Mode: IEEE 802.11n HT20 Test CH1: 2412MHz	Test Mode: IEEE 802.11n HT40 Test CH1: 2422MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2452MHz
	

Test Mode: IEEE 802.11ax HE20 Test CH1: 2412MHz	Test Mode: IEEE 802.11ax HE40 Test CH1: 2422MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2452MHz
	

8. OUTPUT POWER TEST

8.1.Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak output Power shall not exceed 1W(30dBm), As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level.

8.2.Test Procedure

1, Connected the EUT's antenna port to measure device by 10dB attenuator.

2, Use the test method descried in ANSI C63.10 clause 11.9.2.2.2 Method AVGSA-1.

1) Set span to at least 1.5 times the OBW.
2) Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.
3) Set VBW ≥ [3 × RBW].
4) Number of points in sweep ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
5) Sweep time = auto.
6) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
7) If transmit duty cycle < 98%, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at the 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."
8) Trace average at least 100 traces in power averaging (rms) mode.
9) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

8.3.Test Results

EUT: Notebook Computer		
M/N: N24B4		
Test date: 2024-11-26~28	Pressure: 103.1±1.0 kpa	Humidity: 51.5±3.0%
Tested by: Evan	Test site: RF site	Temperature: 22.5±0.6℃

SISO:

Test Mode	Frequency (MHz)	Channel Power		Duty Factor		Output Power (dBm)		Limit (dBm)
		ANT0	ANT1	ANT0	ANT1	ANT0	ANT1	
11b	2412	15.680	15.780	1.106	1.106	16.786	16.886	30
	2437	15.600	15.530			16.706	16.636	
	2462	15.470	15.470			16.576	16.576	
11g	2412	12.820	12.240	4.467	4.467	17.287	16.707	30
	2437	12.410	12.400			16.877	16.867	
	2462	12.620	11.840			17.087	16.307	
11n20 SISO	2412	12.490	11.670	4.942	4.942	17.432	16.612	30
	2437	12.280	11.780			17.222	16.722	
	2462	12.220	12.070			17.162	17.012	
11n40 SISO	2422	9.780	9.660	7.162	7.162	16.942	16.822	30
	2437	9.370	9.710			16.532	16.872	
	2452	9.090	9.760			16.252	16.922	
11ax20 SISO	2412	11.620	11.070	5.387	5.387	17.007	16.457	30
	2437	11.870	11.140			17.257	16.527	
	2462	11.240	11.500			16.627	16.887	
11ax40 SISO	2422	9.350	9.220	7.462	7.462	16.812	16.682	30
	2437	8.980	8.990			16.442	16.452	
	2452	8.790	9.080			16.252	16.542	
Conclusion: Pass								

Note: 1. Directional Gain= 10 log[($10^{3.63/10}$+$10^{2.93/10}$)/2]dBi =3.29dBi＜6dBi.

2. The transmit signals are uncorrelated.

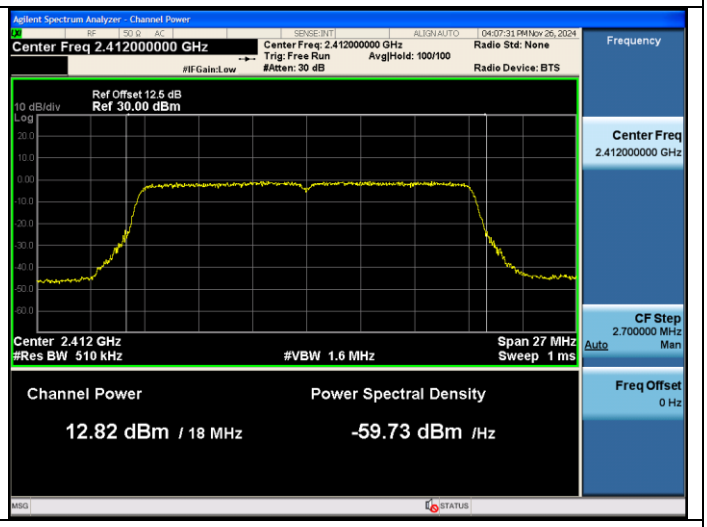
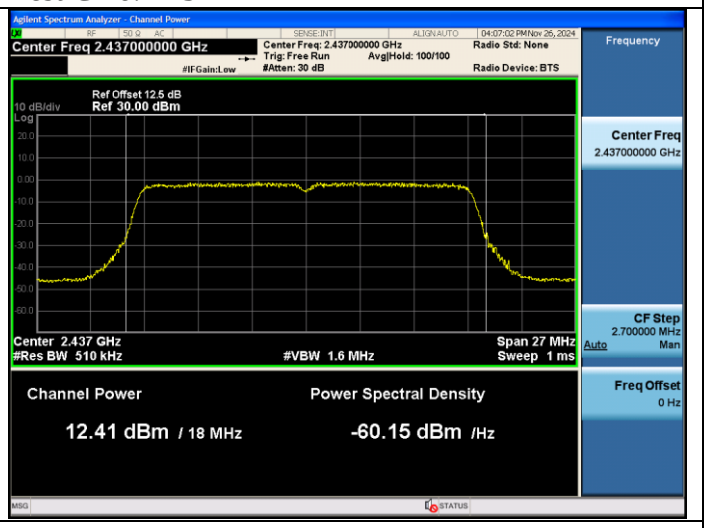
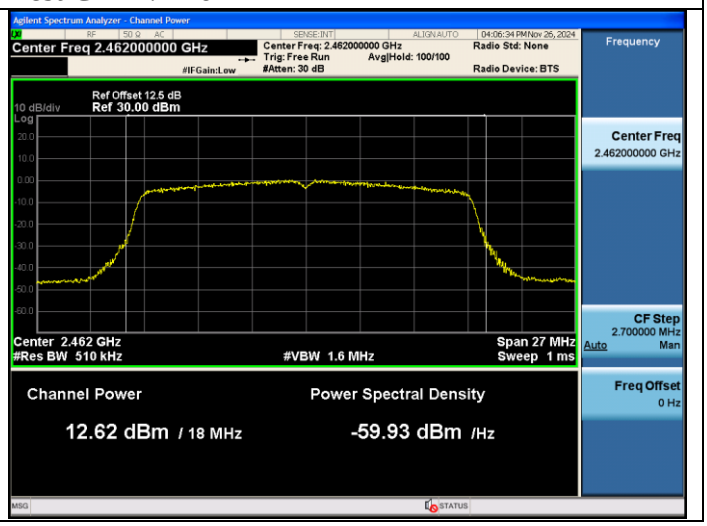
MIMO:

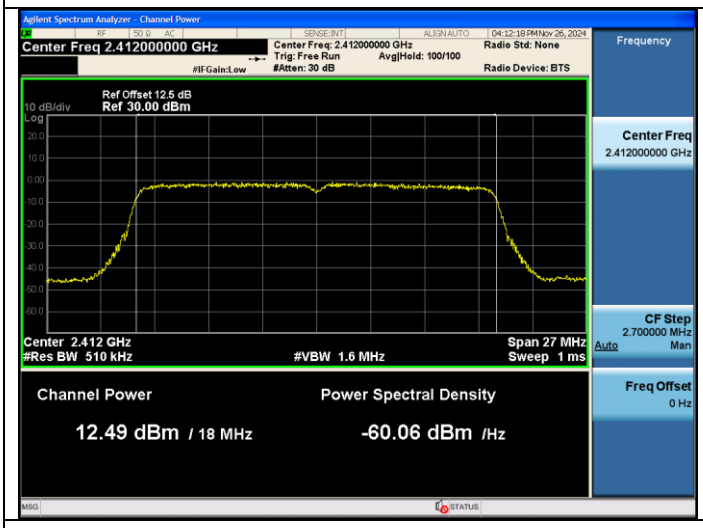
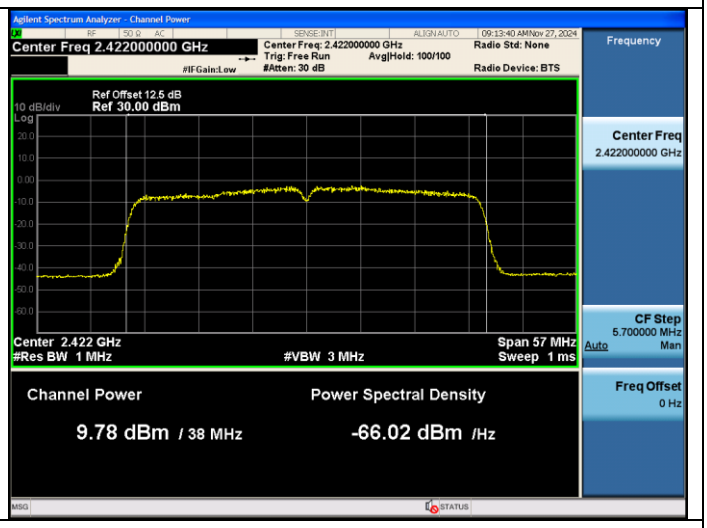
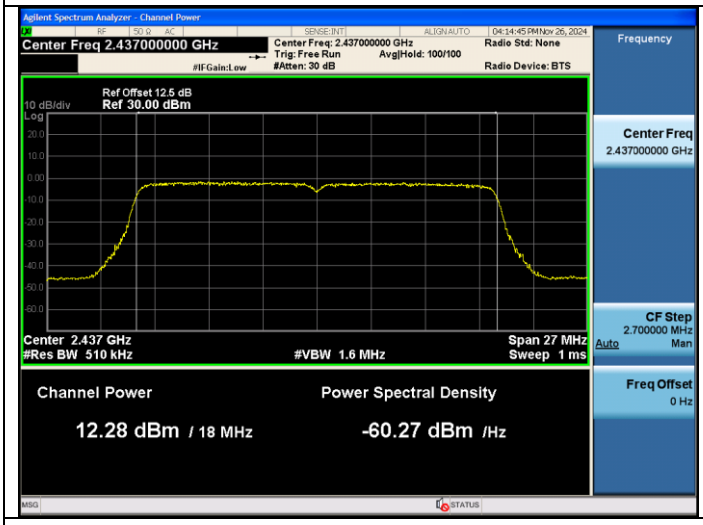
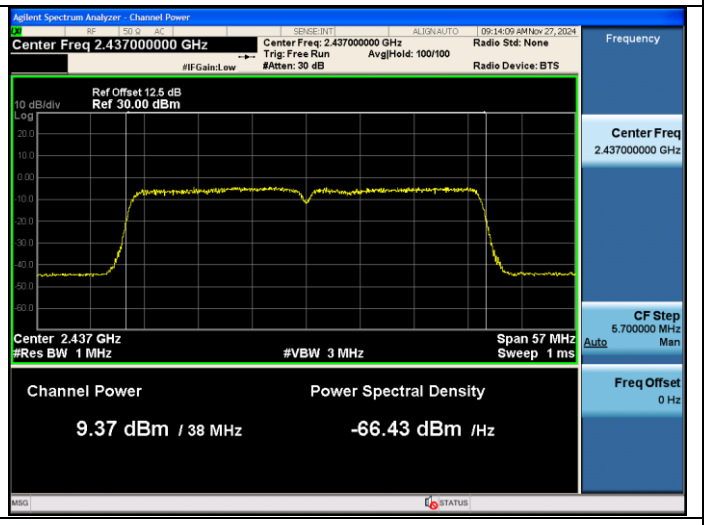
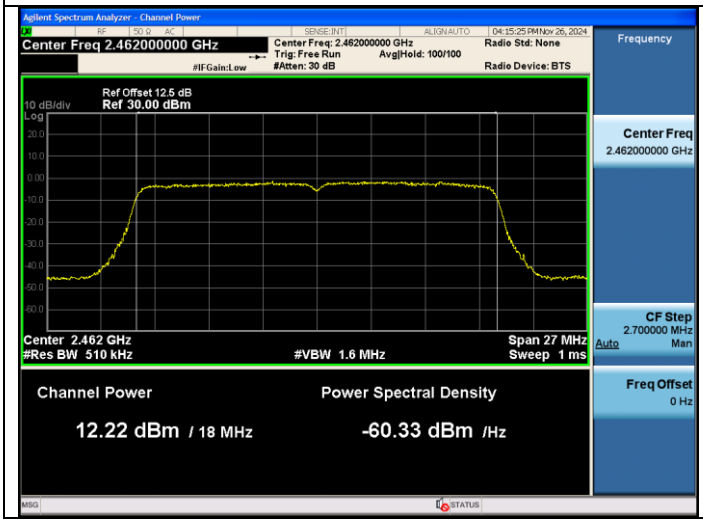
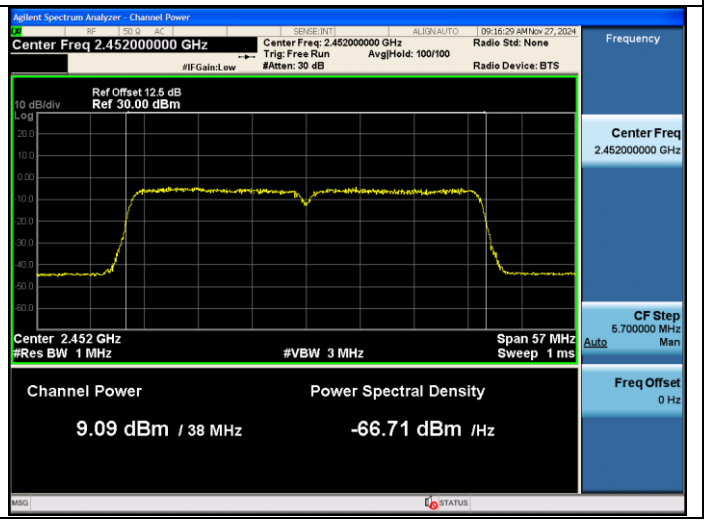
Test Mode	Frequency (MHz)	Channel Power		Duty Factor		Output Power (dBm)	Limit (dBm)
		ANT0	ANT1	ANT0	ANT1	Total	
11n20 MIMO	2412	9.780	10.740	4.928	4.928	18.225	30
	2437	10.250	9.200			17.695	
	2462	10.840	9.860			18.316	
11n40 MIMO	2422	7.700	6.670	7.115	7.115	17.341	30
	2437	7.320	7.260			17.416	
	2452	8.400	7.880			18.273	
11ax20 MIMO	2412	8.550	11.590	5.402	5.402	18.743	30
	2437	8.850	11.200			18.594	
	2462	9.030	11.380			18.774	
11ax40 MIMO	2422	7.280	8.930	7.450	7.450	18.643	30
	2437	7.570	9.420			19.053	
	2452	7.680	9.350			19.055	
Conclusion: Pass							

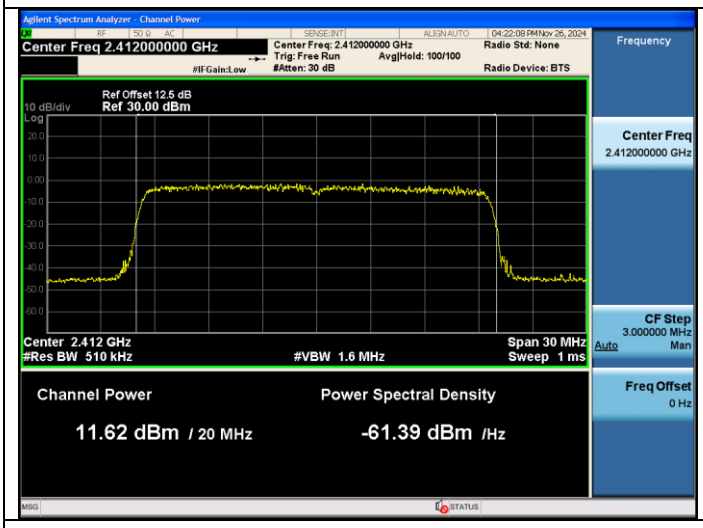
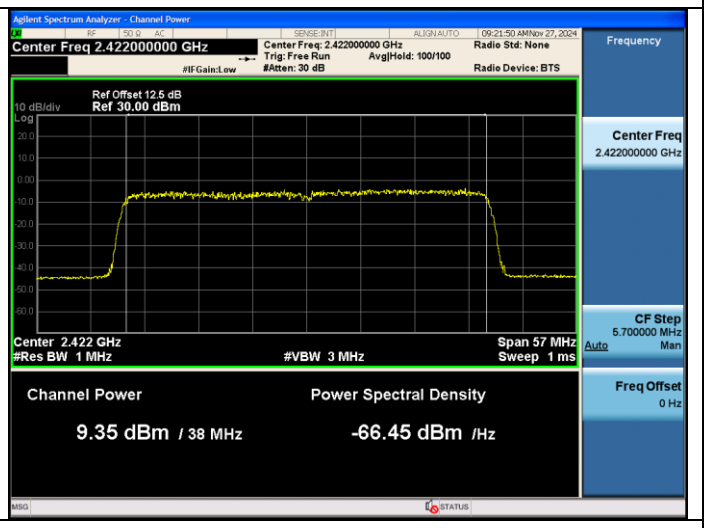
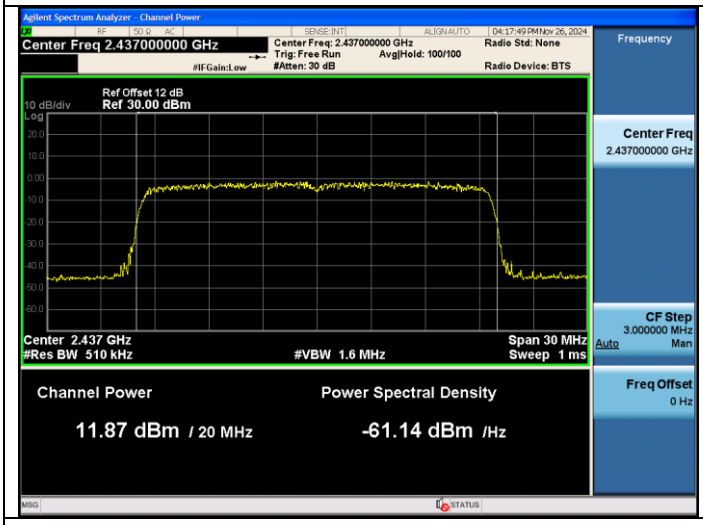
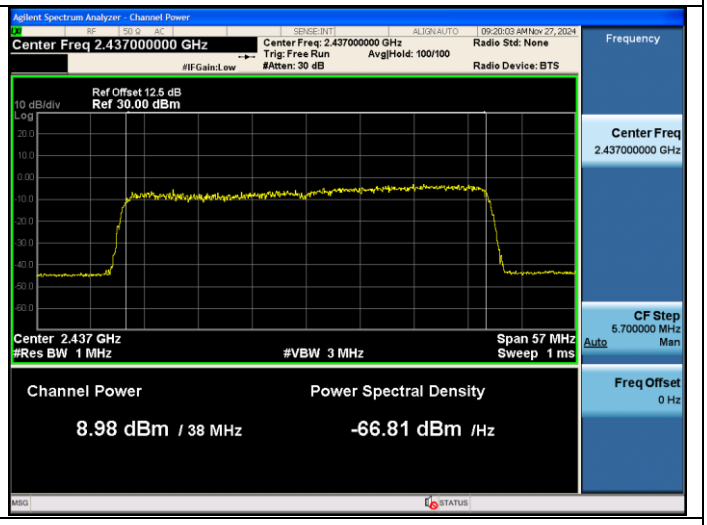
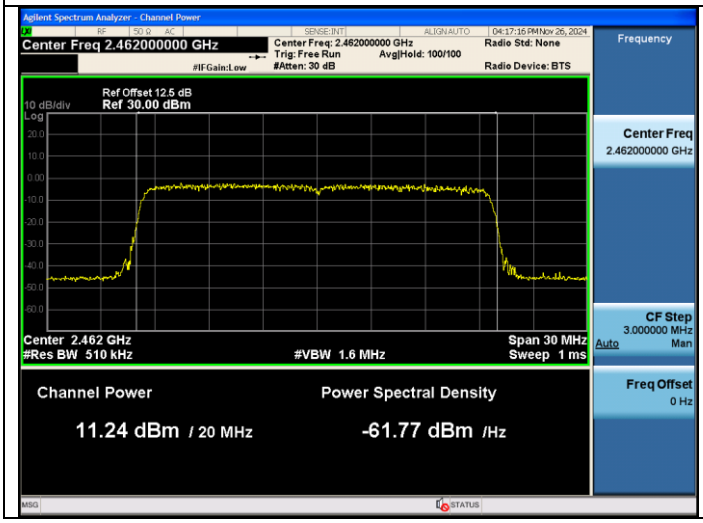
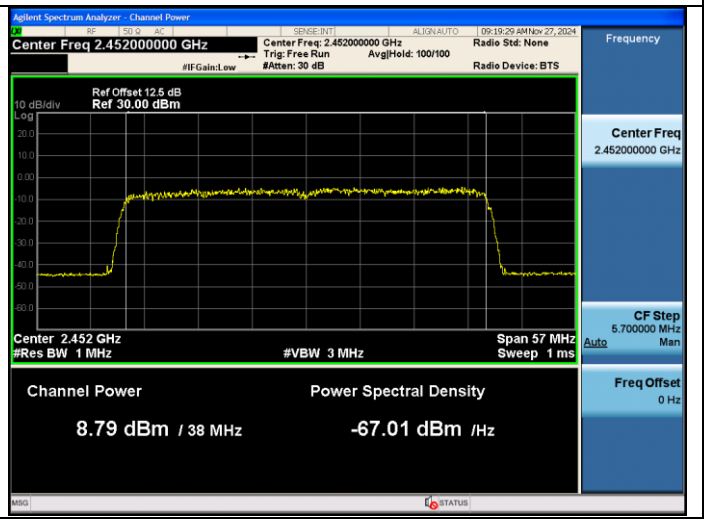
Note: 1. Directional Gain= $10\log[(10^{3.63/10}+10^{2.93/10})/2]$dBi =3.29dBi＜6dBi.

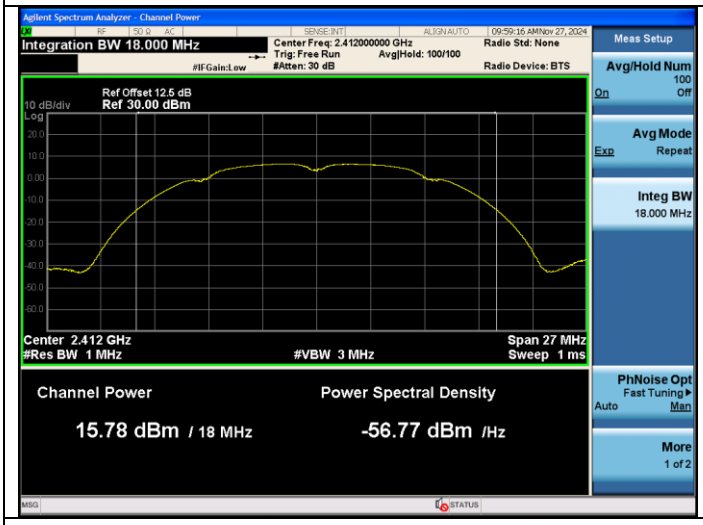
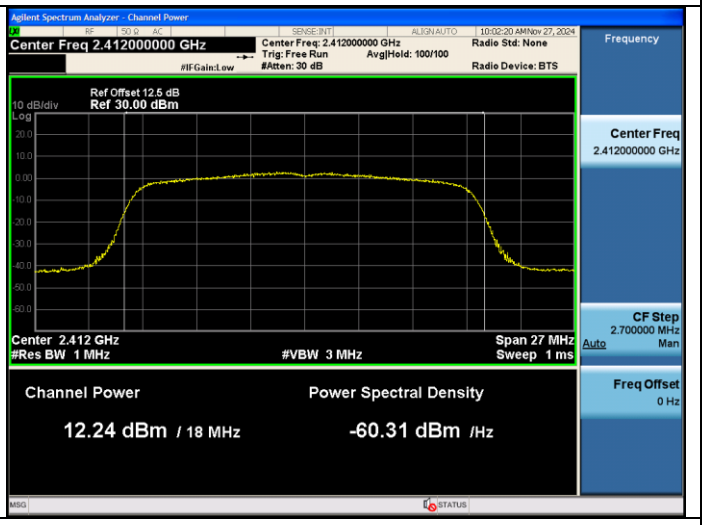
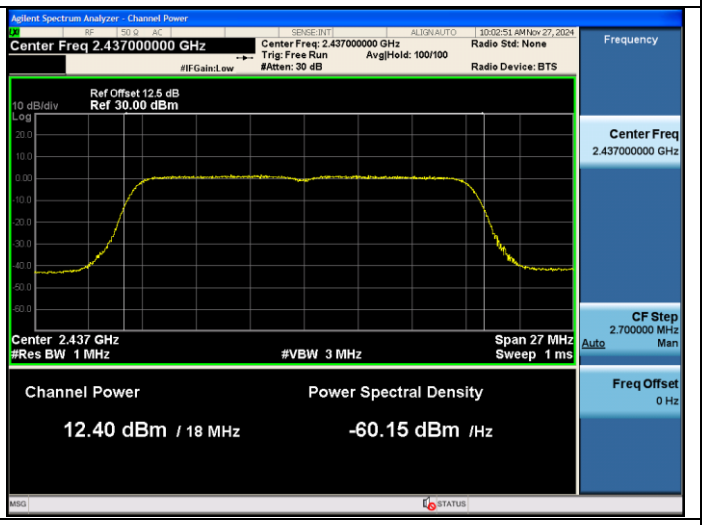
2. The transmit signals are uncorrelated.

SISO:

ANT0	
Test Mode: IEEE 802.11b Test CH1: 2412MHz	Test Mode: IEEE 802.11g Test CH1: 2412MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2462MHz
	

Test Mode: IEEE 802.11n HT20 Test CH1: 2412MHz	Test Mode: IEEE 802.11n HT40 Test CH1: 2422MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2452MHz
	

Test Mode: IEEE 802.11ax HE20 Test CH1: 2412MHz	Test Mode: IEEE 802.11ax HE40 Test CH1: 2422MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2452MHz
	

ANT1	
Test Mode: IEEE 802.11b Test CH1: 2412MHz	Test Mode: IEEE 802.11g Test CH1: 2412MHz
	
Test CH6: 2437MHz	Test CH6: 2437MHz
	
Test CH11: 2462MHz	Test CH11: 2462MHz