



11N40SISO_Ant1_2452



11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437

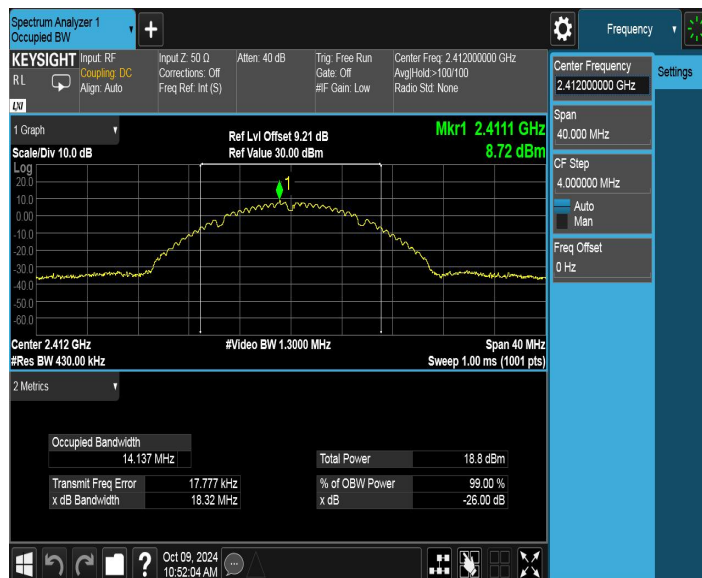


11AX40SISO_Ant1_2452



Test Graphs of Occupied Channel Bandwidth

11B_Ant1_2412



11B_Ant1_2437



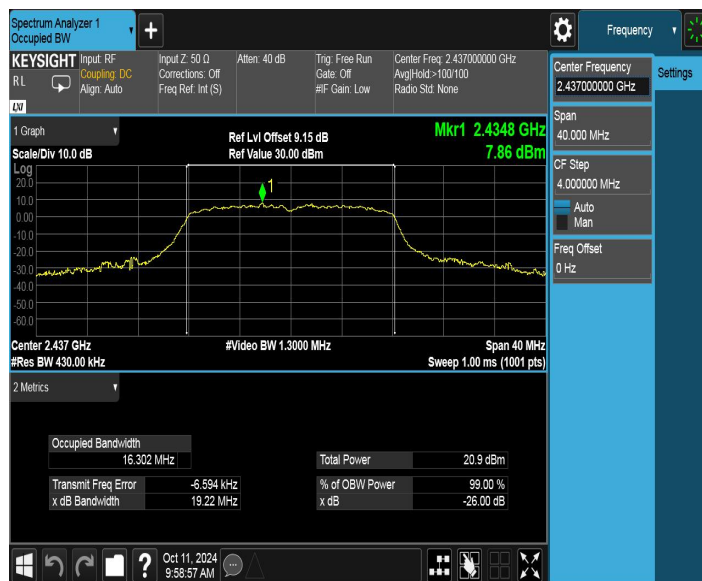
11B_Ant1_2462



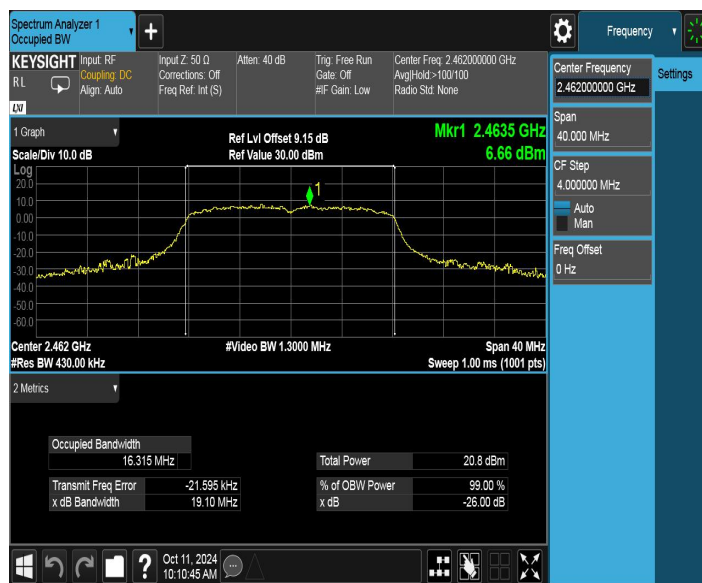
11G_Ant1_2412



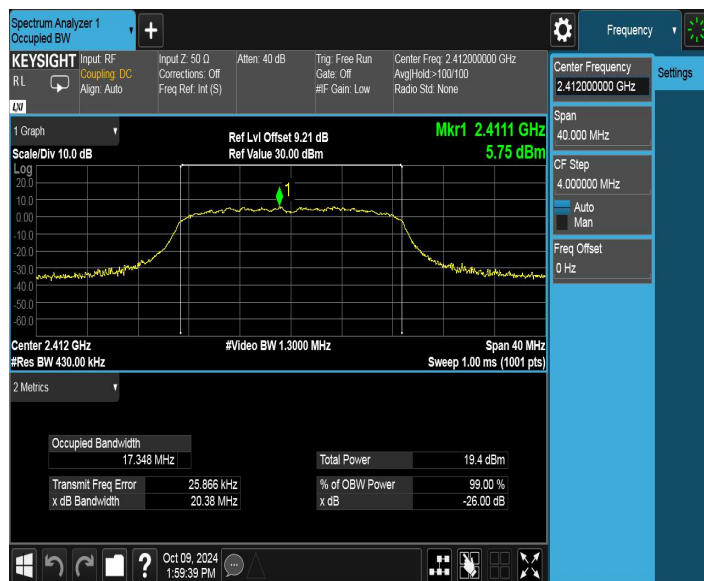
11G_Ant1_2437



11G_Ant1_2462



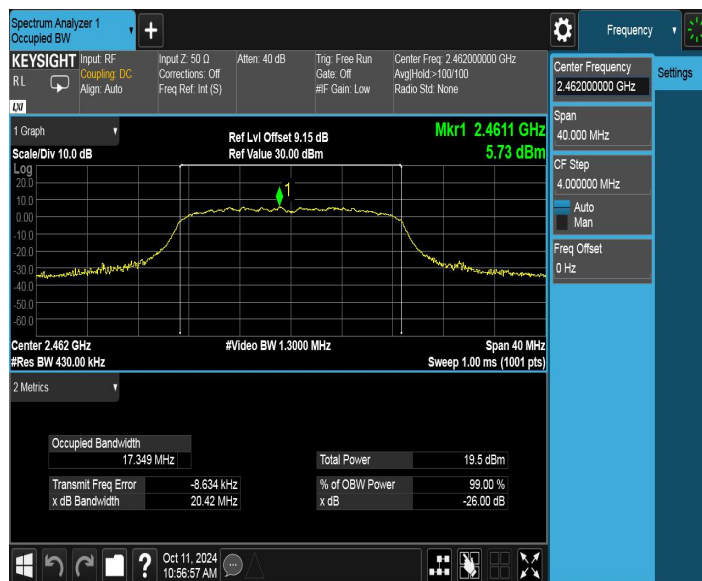
11N20SISO_Ant1_2412



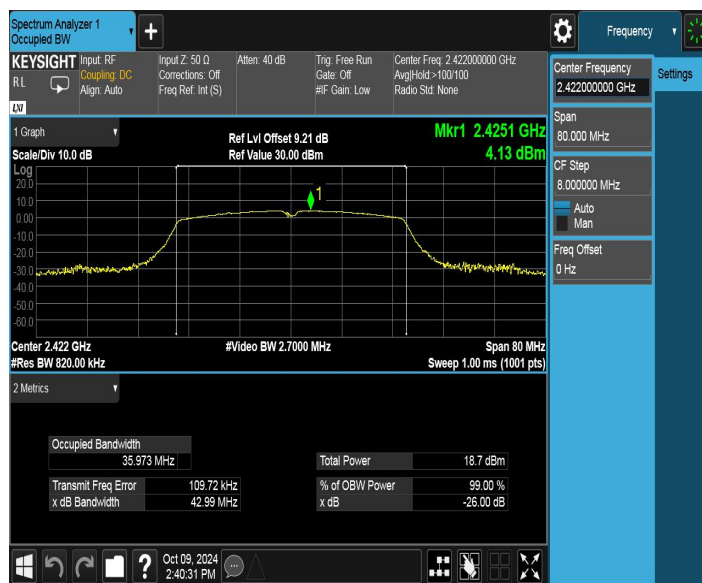
11N20SISO_Ant1_2437



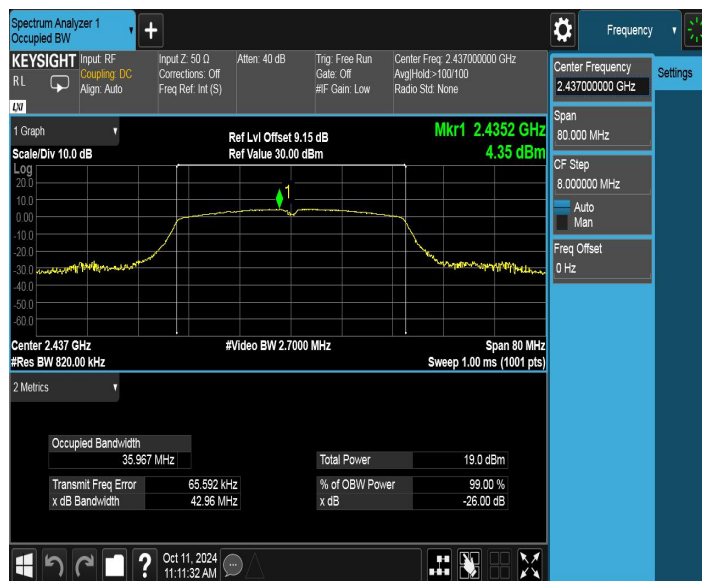
11N20SISO_Ant1_2462



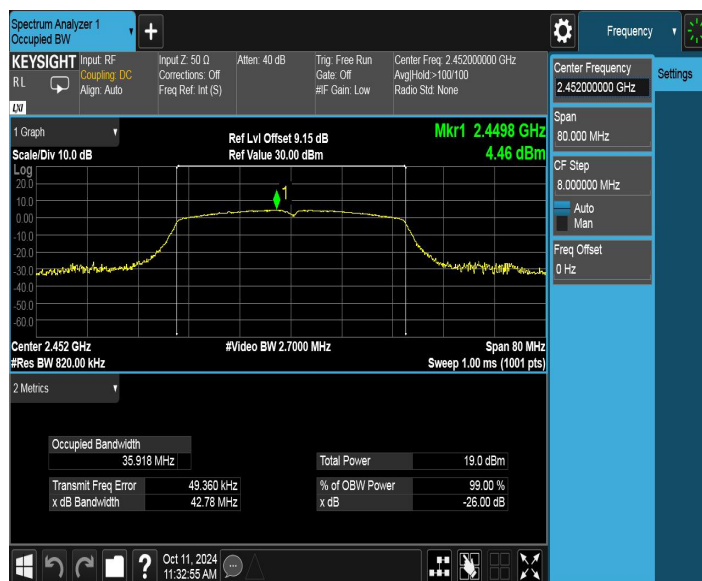
11N40SISO_Ant1_2422



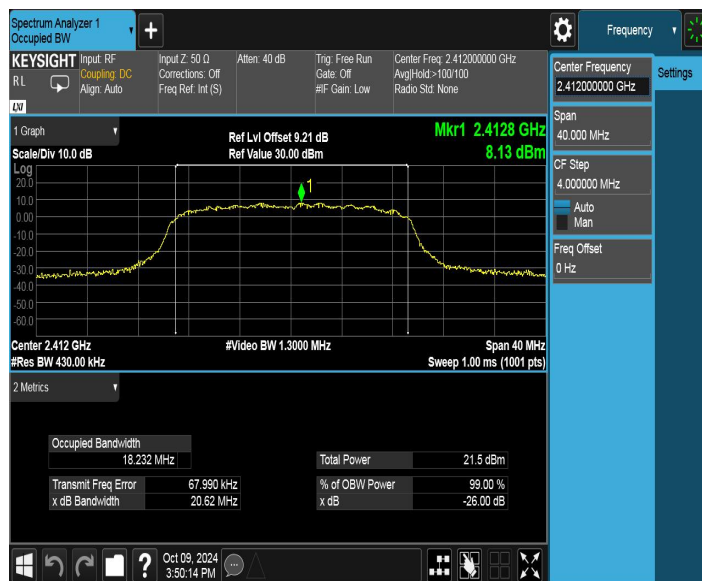
11N40SISO_Ant1_2437



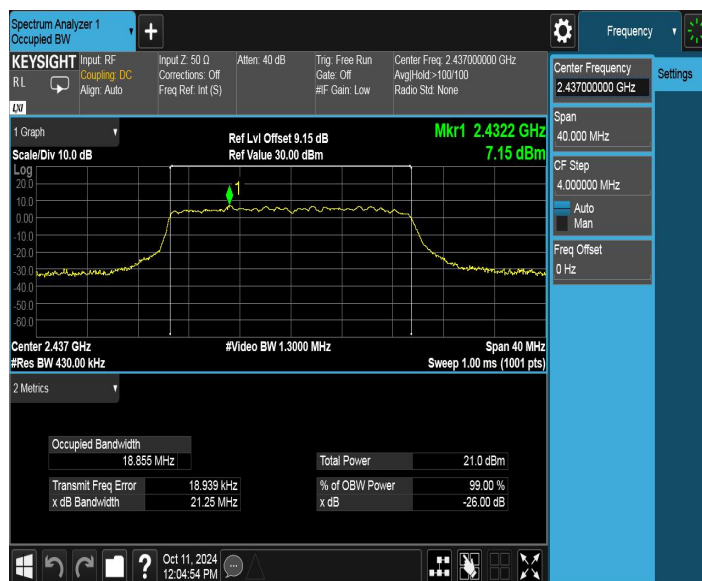
11N40SISO_Ant1_2452



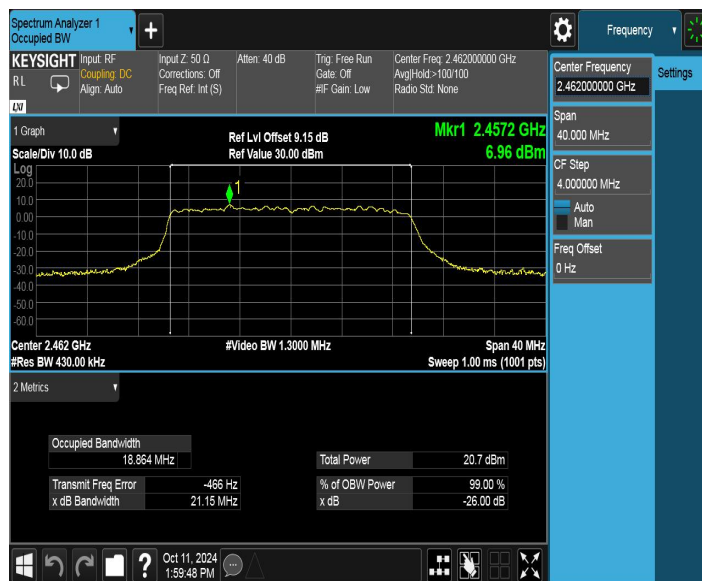
11AX20SISO_Ant1_2412



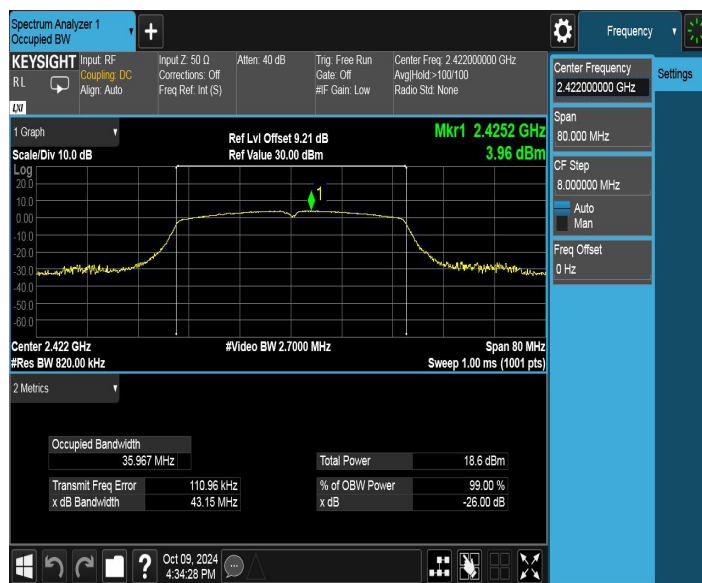
11AX20SISO_Ant1_2437



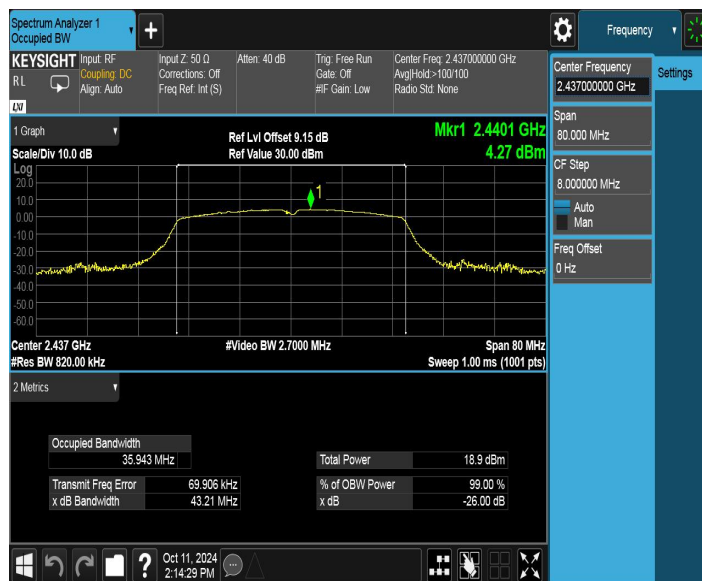
11AX20SISO_Ant1_2462



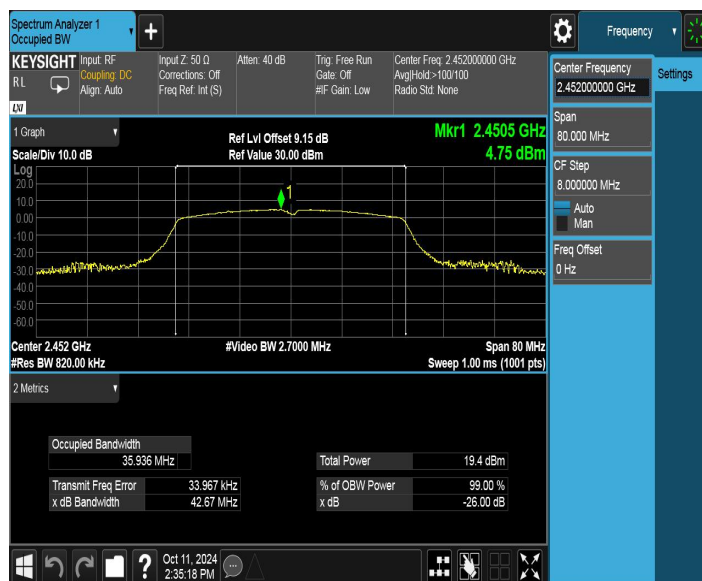
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452



7.3. Output Power Measurement

7.3.1. Test Limit

The maximum conducted output power is 1 Watt. And for antenna gain greater than 6dBi the limit shall reduce by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

7.3.2. Test Procedure Used

ANSI C63.10-2013 – Section 11.9.2.2.4

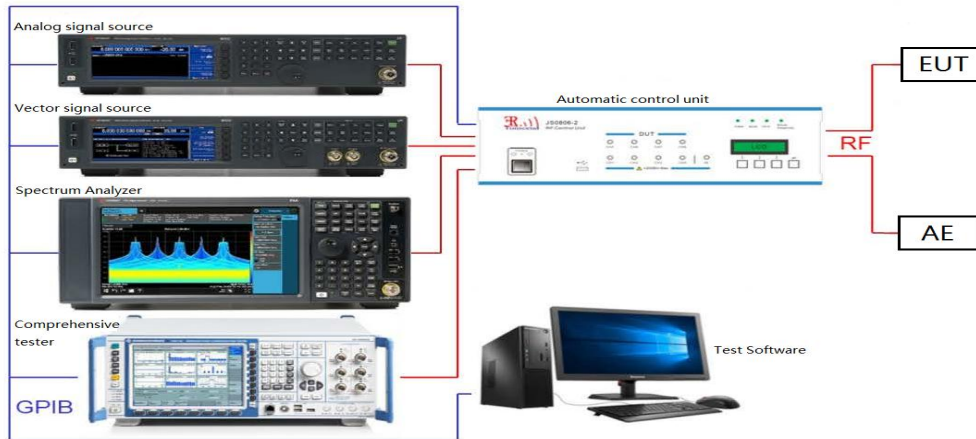
KDB 558074 D01 v05r02 – Section 8.3.2.2

7.3.3. Test Setting

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 $\geq [3 \times \text{RBW}]$.
4. Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\text{RBW} / 2$, 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. Do not use sweep triggering. Allow the sweep to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
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, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum. 10. Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both

the ON and OFF times of the transmission). For example, add $[10 \log (1/0.25)] = 6 \text{ dB}$ if the duty cycle is 25%.

7.3.4. Test Setup



7.3.5. Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (yellow marker) for final test of each channel.

N _{TX}	Data Rate (Mbps)	
	802.11b	802.11g
1	1	6
1	2	9
1	5.5	12
1	11	18
1	--	24
1	--	36
1	--	48
1	--	54

N _{TX}	MCS Index for 802.11n	Data Rate (Mbps)			
		20MHz Bandwidth		40MHz Bandwidth	
		800ns GI	400ns GI	800ns GI	400ns GI
1	0	6.5	7.2	13.5	15.0
1	1	13.0	14.4	27.0	30.0
1	2	19.5	21.7	40.5	45.0
1	3	26.0	28.9	54.0	60.0
1	4	39.0	43.3	81.0	90.0
1	5	52.0	57.8	108.0	120.0
1	6	58.5	65.0	121.5	135.0
1	7	65.0	72.2	135.0	150.0

N _{TX}	MCS Index for 802.11ax	Data Rate (Mbps)					
		20MHz Bandwidth			40MHz Bandwidth		
		800ns GI	1600ns GI	3200ns GI	800ns GI	1600ns GI	3200ns GI
1	0	8.603	8.125	7.313	17.206	16.250	14.625
1	1	17.206	16.250	14.625	34.412	32.500	29.250
1	2	25.809	24.375	21.938	51.618	48.750	43.875
1	3	34.412	32.500	29.250	68.824	65.000	58.500
1	4	51.618	48.750	43.875	103.235	97.500	87.750
1	5	68.824	65.000	58.500	137.647	130.000	117.000

1	6	77.426	73.125	65.813	154.853	146.250	131.625
1	7	86.029	81.250	73.125	172.059	162.500	146.250

Note: Power output test was verified over all data rates of each mode shown as above, and then choose the maximum power output (yellow marker) for final test of each channel.

Test Result of Maximum conducted output power

Test Mode	Antenna	Frequency[MHz]	Average power [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	15.58	15.63	≤30.00	PASS
		2437	16.29	16.34	≤30.00	PASS
		2462	15.60	15.65	≤30.00	PASS
11G	Ant1	2412	14.23	14.29	≤30.00	PASS
		2437	13.99	14.05	≤30.00	PASS
		2462	14.16	14.22	≤30.00	PASS
11N20SISO	Ant1	2412	12.44	12.51	≤30.00	PASS
		2437	12.63	12.70	≤30.00	PASS
		2462	12.48	12.55	≤30.00	PASS
11N40SISO	Ant1	2422	11.37	11.37	≤30.00	PASS
		2437	11.60	11.67	≤30.00	PASS
		2452	11.65	11.72	≤30.00	PASS
11AX20SISO	Ant1	2422	12.51	12.71	≤30.00	PASS
		2437	13.15	13.30	≤30.00	PASS
		2452	12.70	13.01	≤30.00	PASS
11AX40SISO	Ant1	2422	11.26	11.39	≤30.00	PASS
		2437	11.47	11.54	≤30.00	PASS
		2452	12.00	12.13	≤30.00	PASS

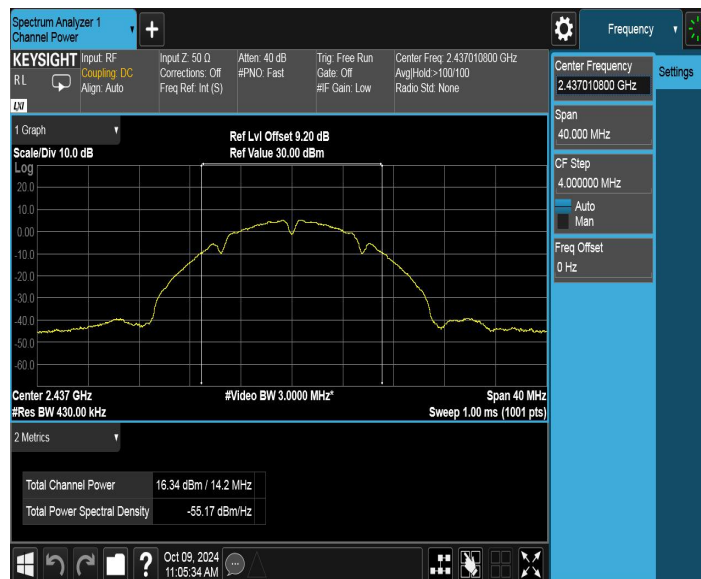
The Duty Cycle Factor is compensated in the Offset of graph.

Test Graphs

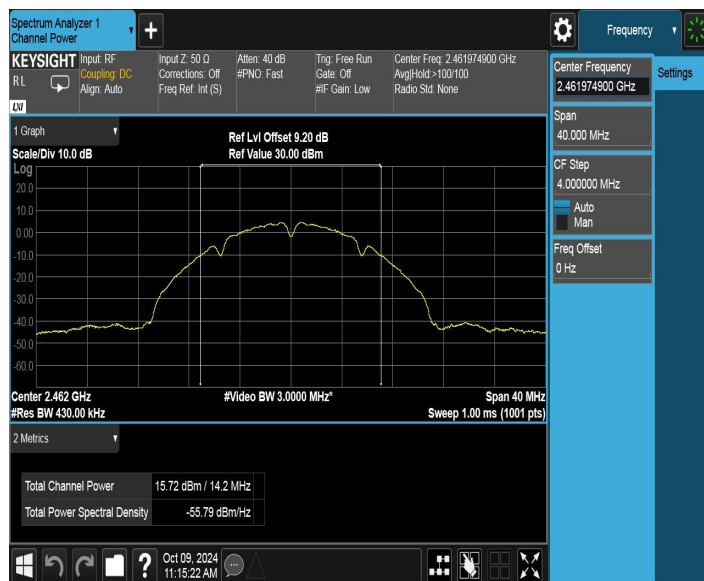
11B_Ant1_2412



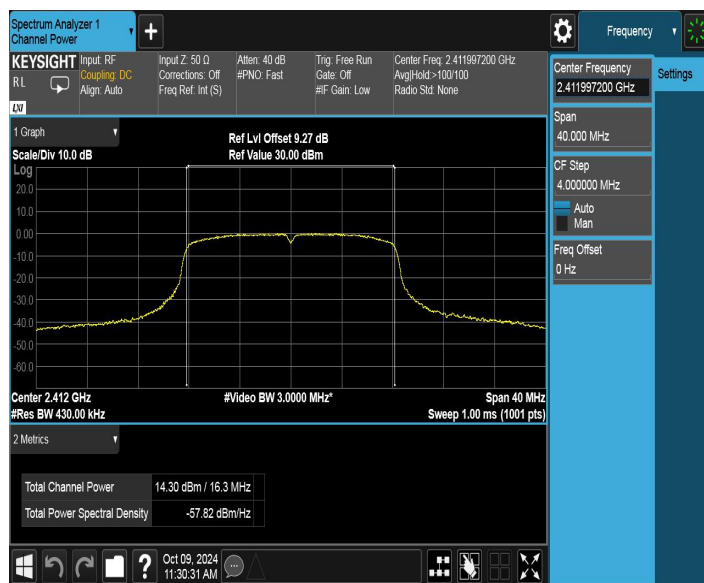
11B_Ant1_2437



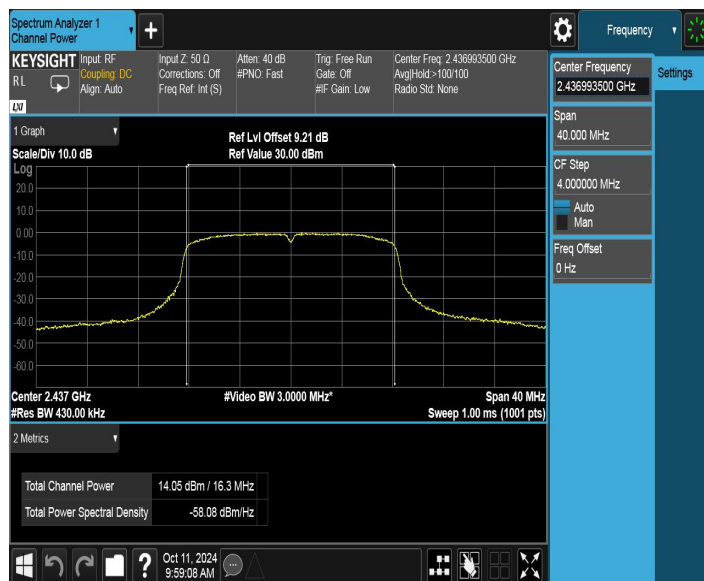
11B_Ant1_2462



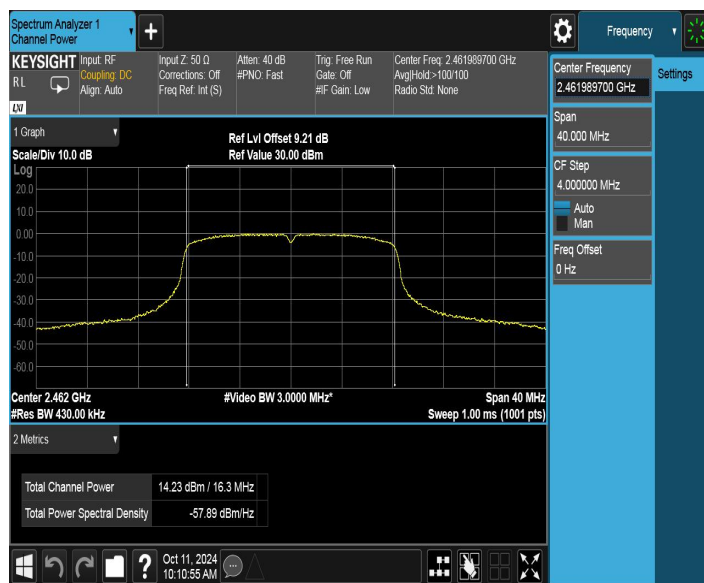
11G_Ant1_2412



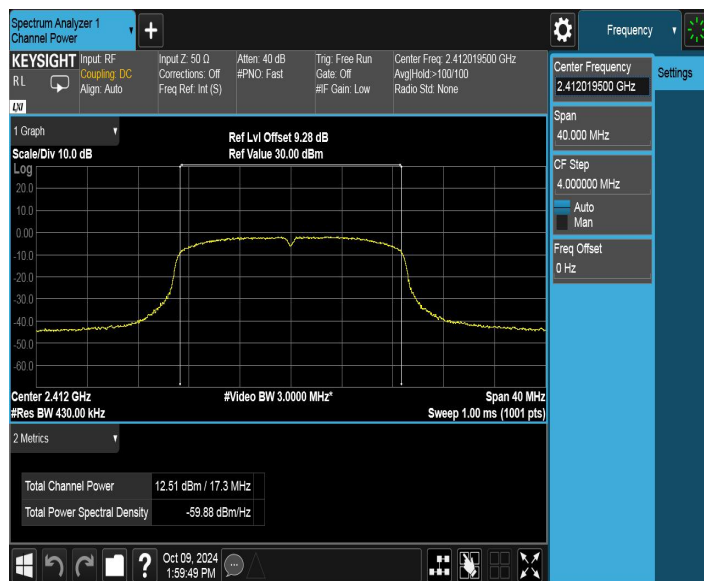
11G_Ant1_2437



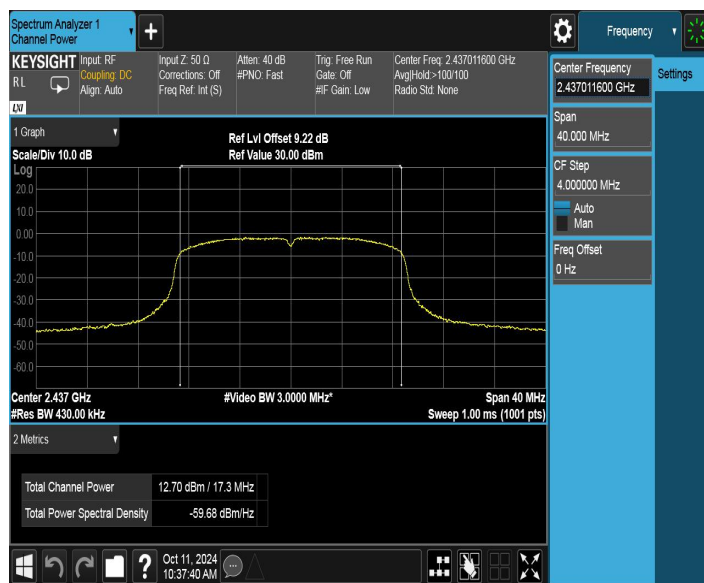
11G_Ant1_2462



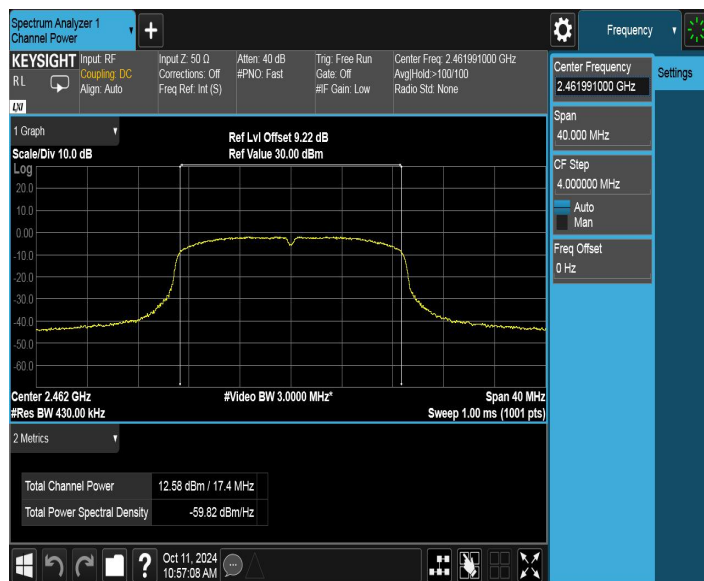
11N20SISO_Ant1_2412



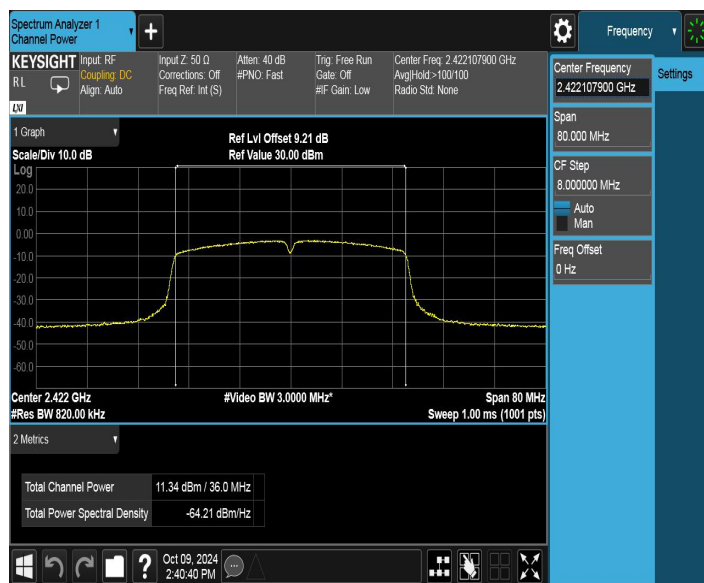
11N20SISO_Ant1_2437



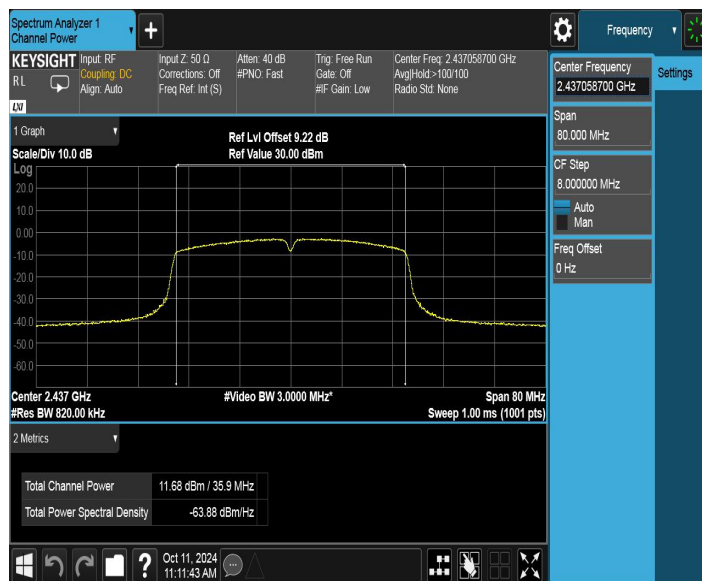
11N20SISO_Ant1_2462



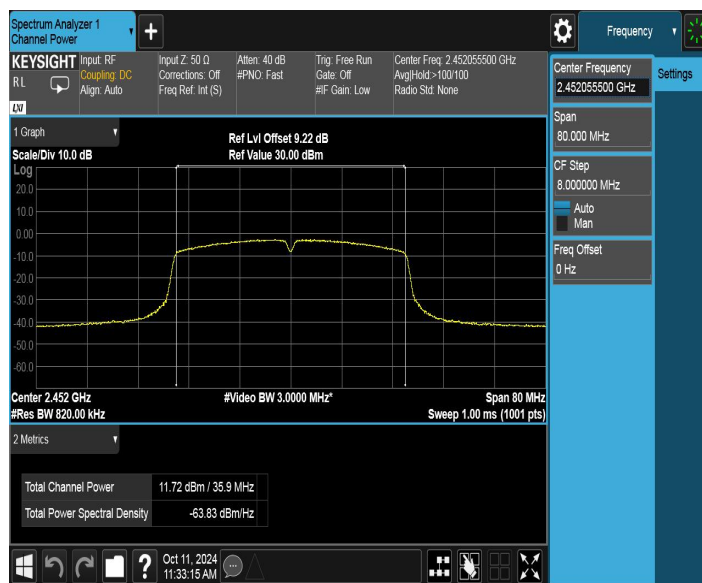
11N40SISO_Ant1_2422



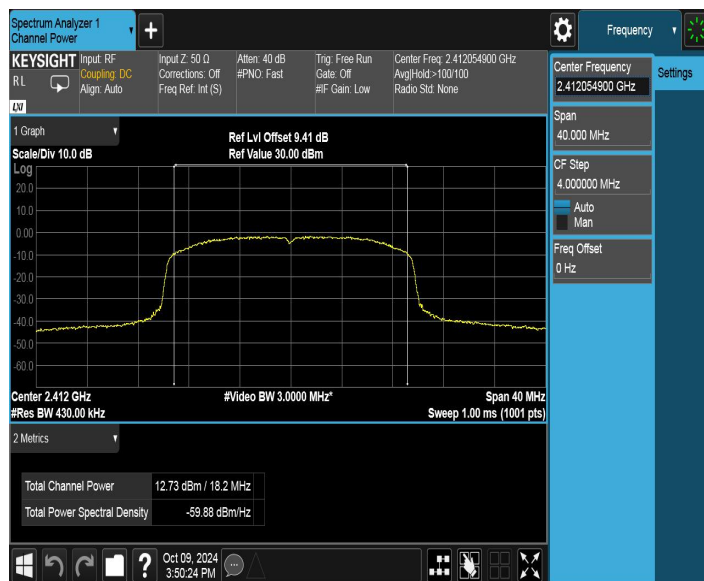
11N40SISO_Ant1_2437



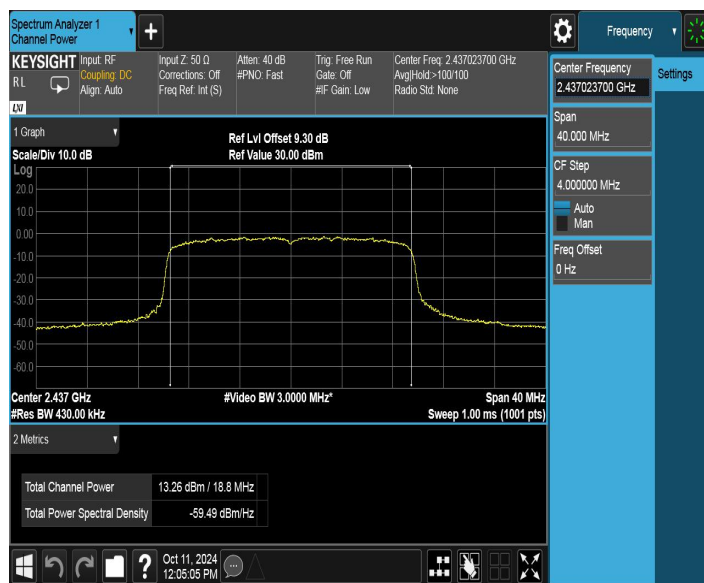
11N40SISO_Ant1_2452



11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462