Case No. : CTA24081600202	
Ambient Condition: 22 ℃, 53 %RH **According Standard:** ■Part15C	
Test Date: 2024.08.17	**Test Engineer:** Lushan Kong

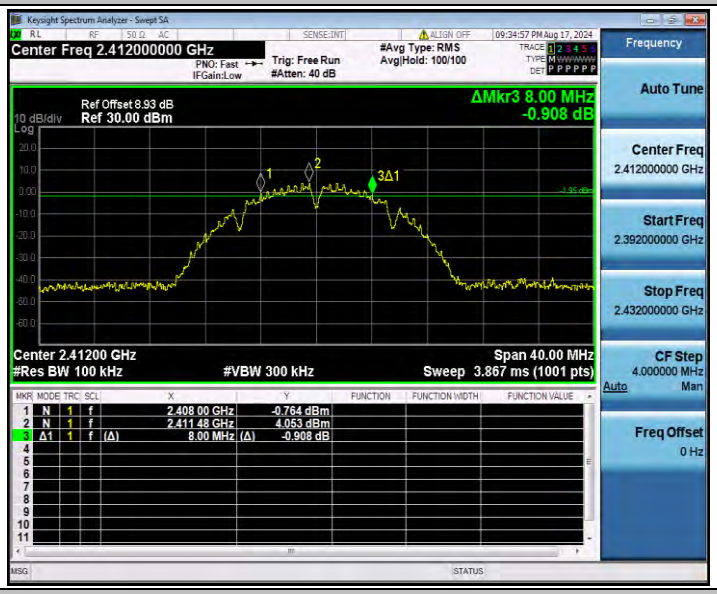
Appendix B.1: DTS Bandwidth

Test Result

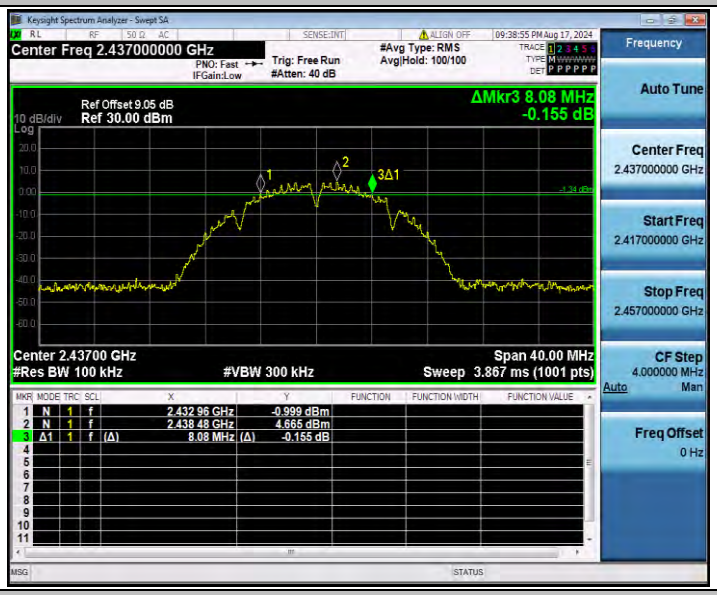
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.000	2408.000	2416.000	0.5	PASS
		2437	8.080	2432.960	2441.040	0.5	PASS
		2462	7.560	2458.000	2465.560	0.5	PASS
11G	Ant1	2412	15.040	2404.480	2419.520	0.5	PASS
		2437	15.640	2429.480	2445.120	0.5	PASS
		2462	16.080	2454.080	2470.160	0.5	PASS
11N20SISO	Ant1	2412	15.120	2404.440	2419.560	0.5	PASS
		2437	14.880	2430.640	2445.520	0.5	PASS
		2462	15.080	2454.480	2469.560	0.5	PASS
11N40SISO	Ant1	2422	34.080	2405.680	2439.760	0.5	PASS
		2437	35.040	2419.480	2454.520	0.5	PASS
		2452	33.760	2435.760	2469.520	0.5	PASS

Test Graphs

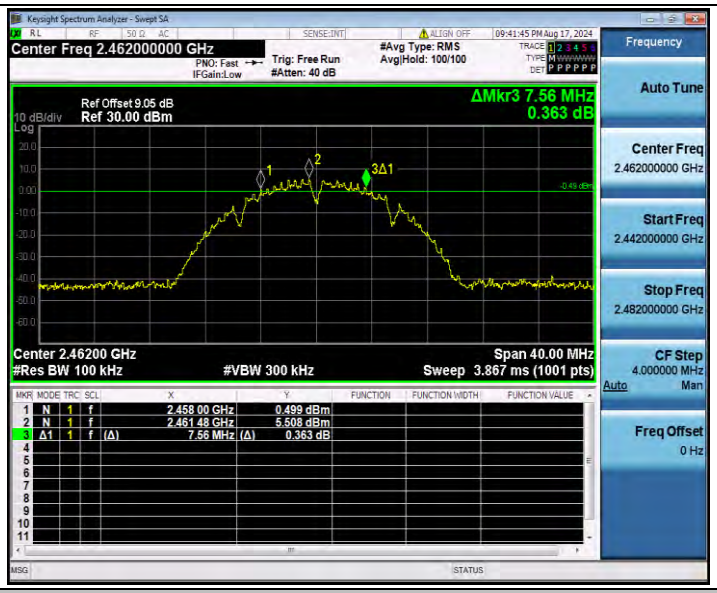
11B_Ant1_2412



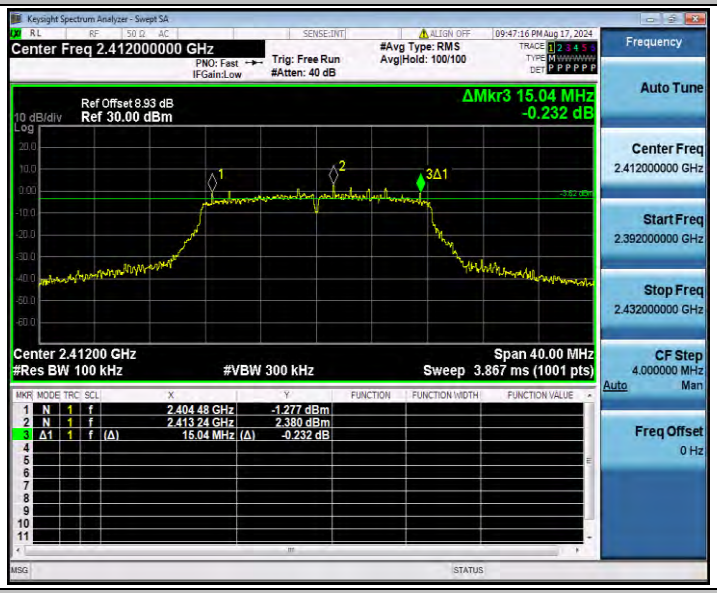
11B_Ant1_2437



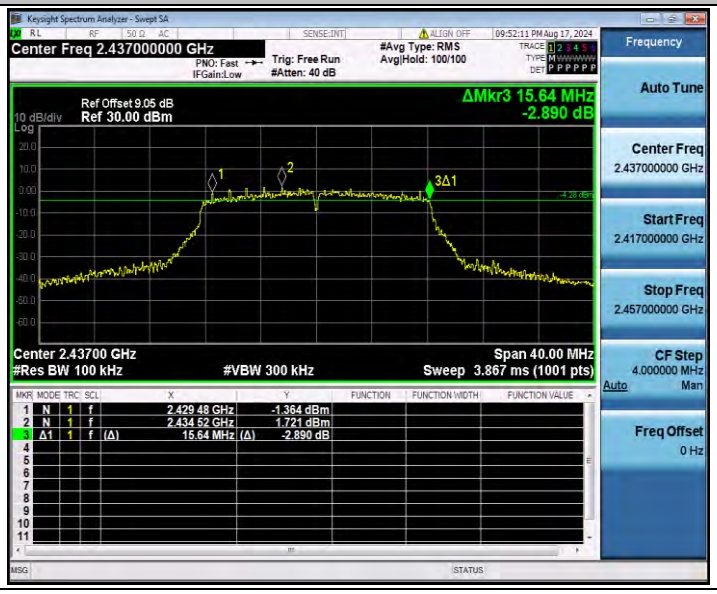
11B_Ant1_2462



11G_Ant1_2412

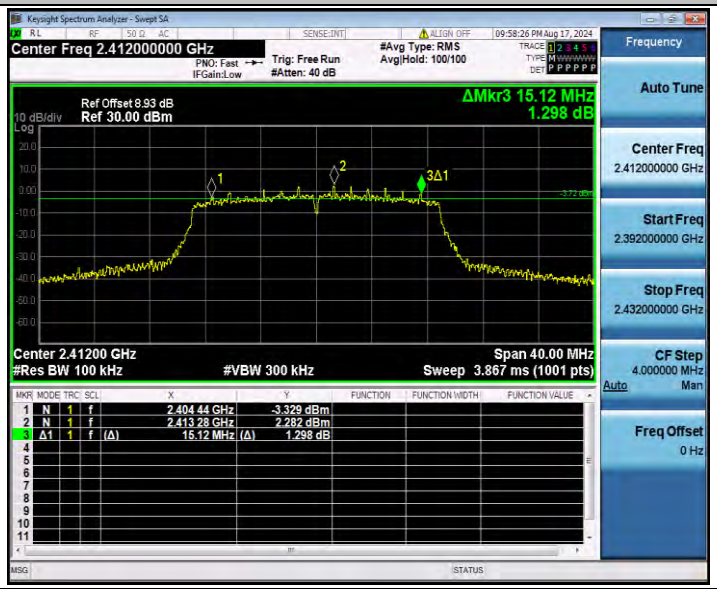


11G_Ant1_2437

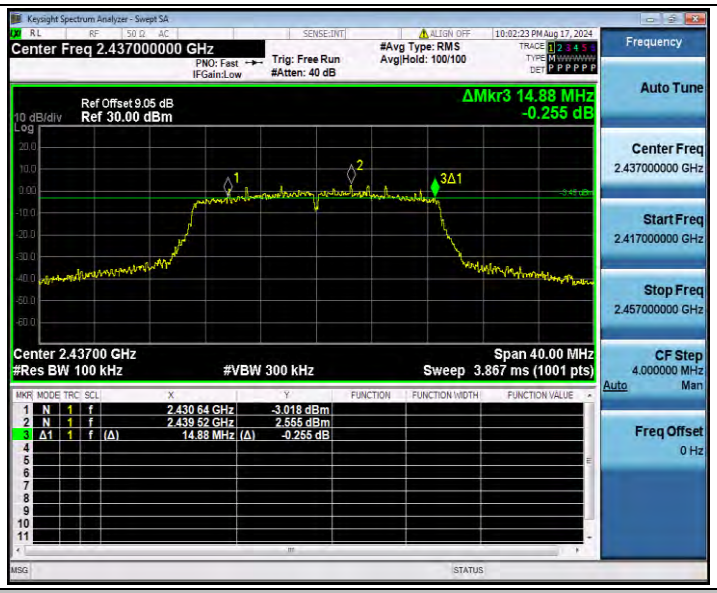


11G_Ant1_2462

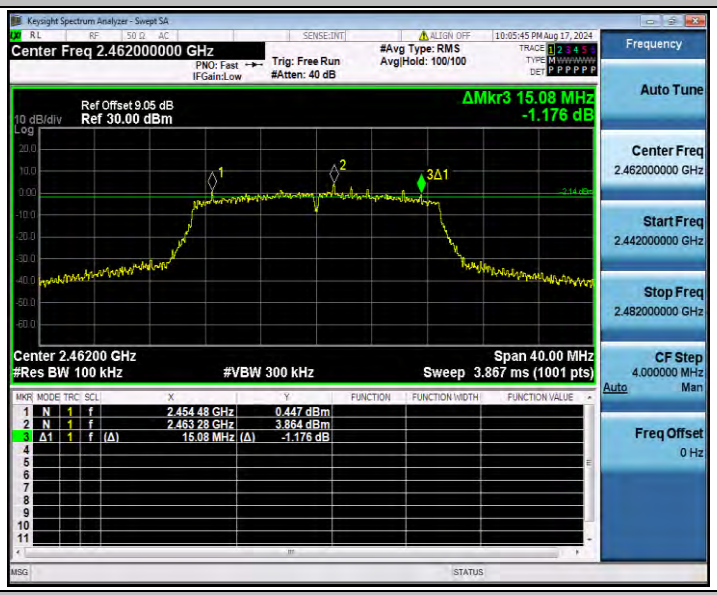
11N20SISO_Ant1_2412



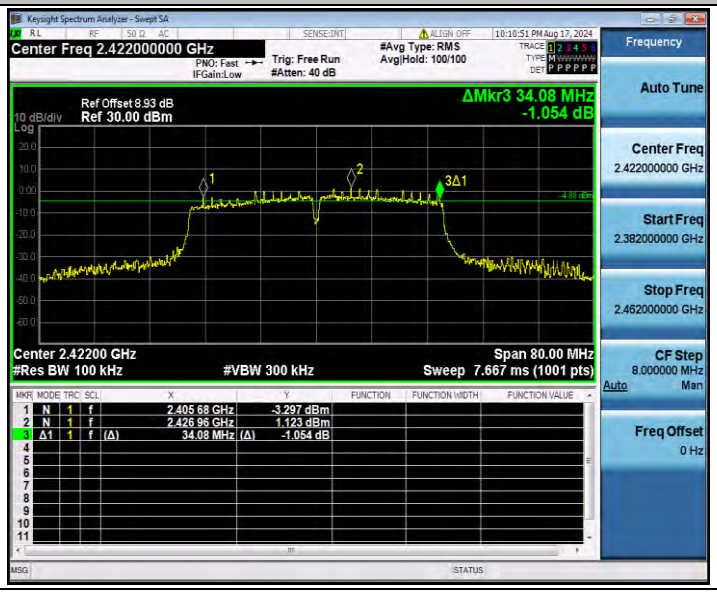
11N20SISO_Ant1_2437

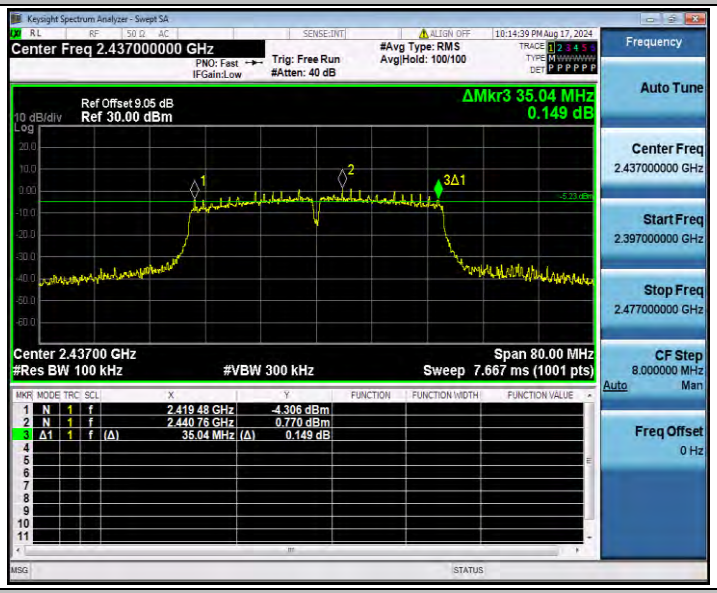


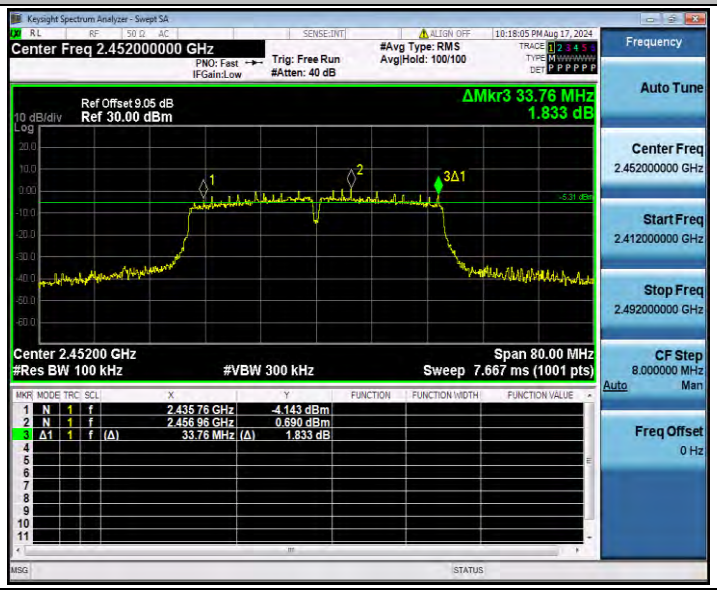
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437


11N40SISO_Ant1_2452


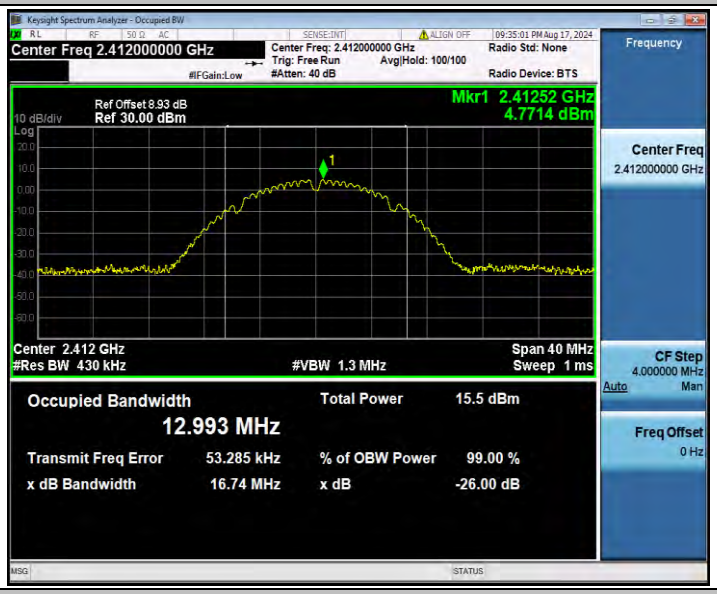
Appendix B.2: Occupied Channel Bandwidth

Test Result

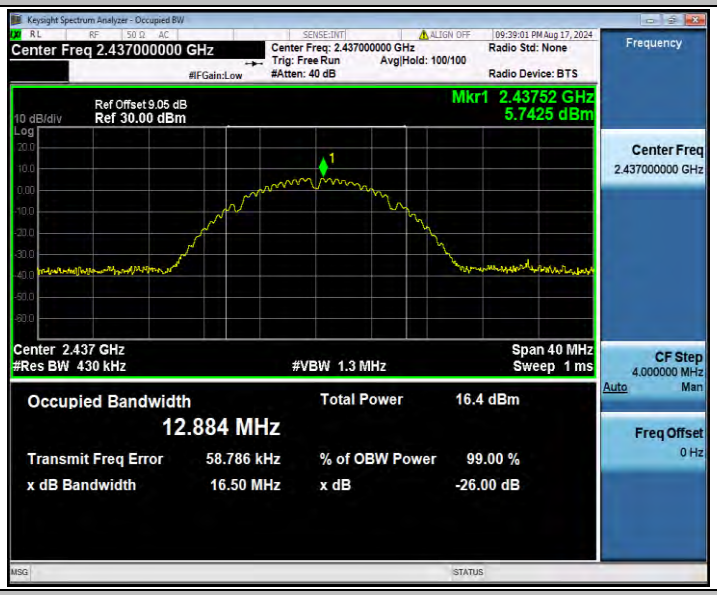
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.993	2405.5568	2418.5498	---	---
		2437	12.884	2430.6168	2443.5008	---	---
		2462	12.883	2455.5952	2468.4782	---	---
11G	Ant1	2412	16.909	2403.5860	2420.4950	---	---
		2437	16.790	2428.6466	2445.4366	---	---
		2462	16.845	2453.5881	2470.4331	---	---
11N20SISO	Ant1	2412	17.870	2403.1022	2420.9722	---	---
		2437	17.783	2428.1557	2445.9387	---	---
		2462	17.831	2453.1164	2470.9474	---	---
11N40SISO	Ant1	2422	36.274	2404.0536	2440.3276	---	---
		2437	36.096	2419.0903	2455.1863	---	---
		2452	36.134	2434.0133	2470.1473	---	---

Test Graphs

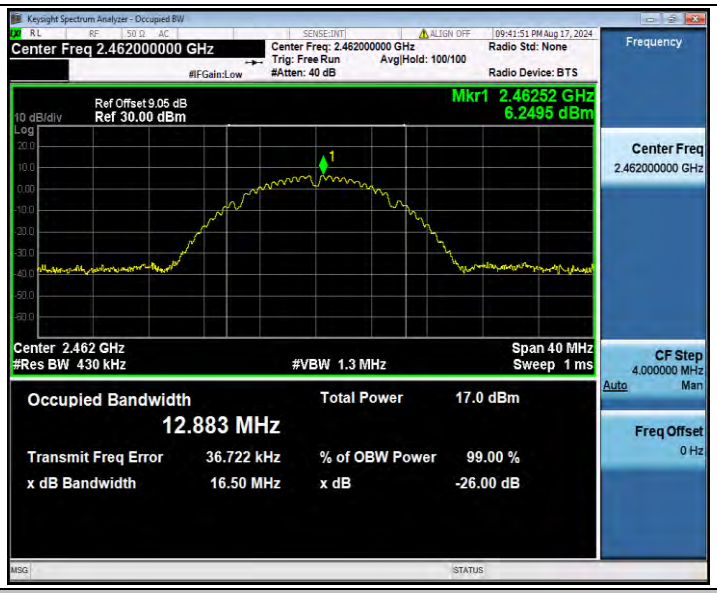
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412

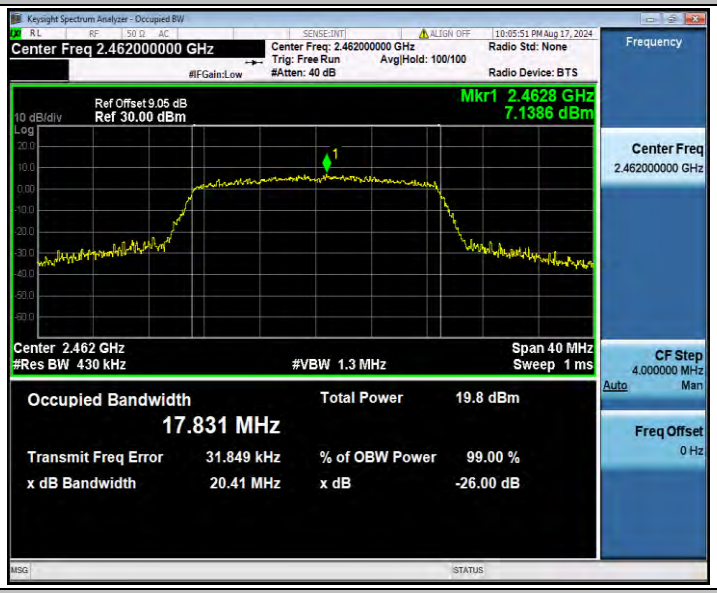
11G_Ant1_2437

11G_Ant1_2462

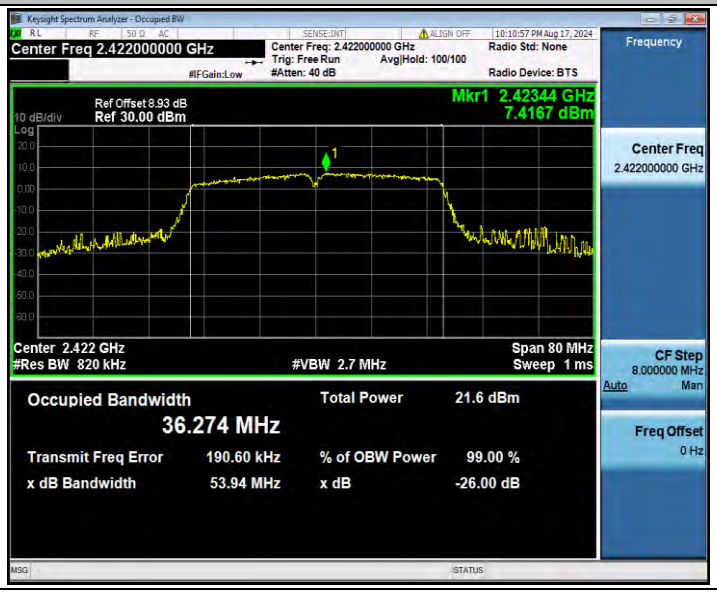
11N20SISO_Ant1_2412

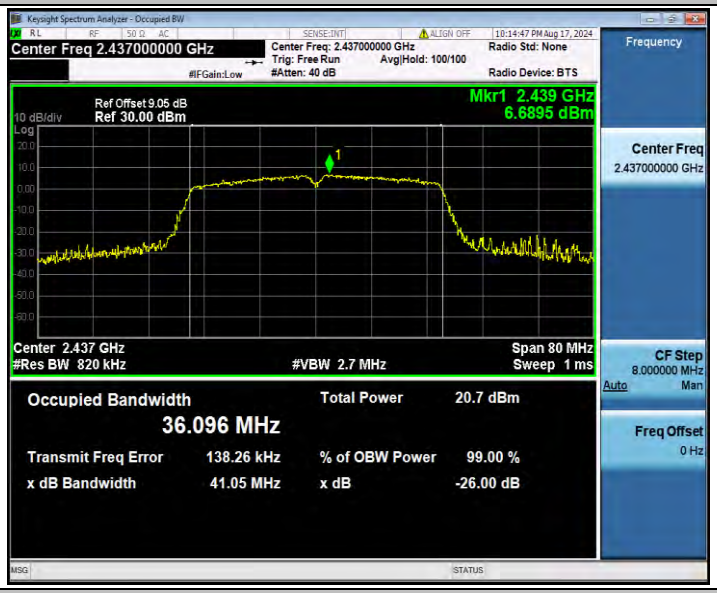
11N20SISO_Ant1_2437

11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437


11N40SISO_Ant1_2452

Appendix B.3: Maximum conducted output power

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	15.53	≤30.00	PASS
		2437	16.46	≤30.00	PASS
		2462	17.00	≤30.00	PASS
11G	Ant1	2412	19.49	≤30.00	PASS
		2437	20.69	≤30.00	PASS
		2462	21.01	≤30.00	PASS
11N20SISO	Ant1	2412	19.56	≤30.00	PASS
		2437	20.57	≤30.00	PASS
		2462	20.94	≤30.00	PASS
11N40SISO	Ant1	2422	21.89	≤30.00	PASS
		2437	21.00	≤30.00	PASS
		2452	21.18	≤30.00	PASS

.

Appendix B.4: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-9.27	≤8.00	PASS
		2437	-9.12	≤8.00	PASS
		2462	-8.52	≤8.00	PASS
11G	Ant1	2412	-12.71	≤8.00	PASS
		2437	-11.23	≤8.00	PASS
		2462	-9.57	≤8.00	PASS
11N20SISO	Ant1	2412	-10.03	≤8.00	PASS
		2437	-11.43	≤8.00	PASS
		2462	-11.02	≤8.00	PASS
11N40SISO	Ant1	2422	-12.87	≤8.00	PASS
		2437	-12.08	≤8.00	PASS
		2452	-13.41	≤8.00	PASS

Note：

1. The Duty Cycle Factor and RBW Factor is compensated in the graph.

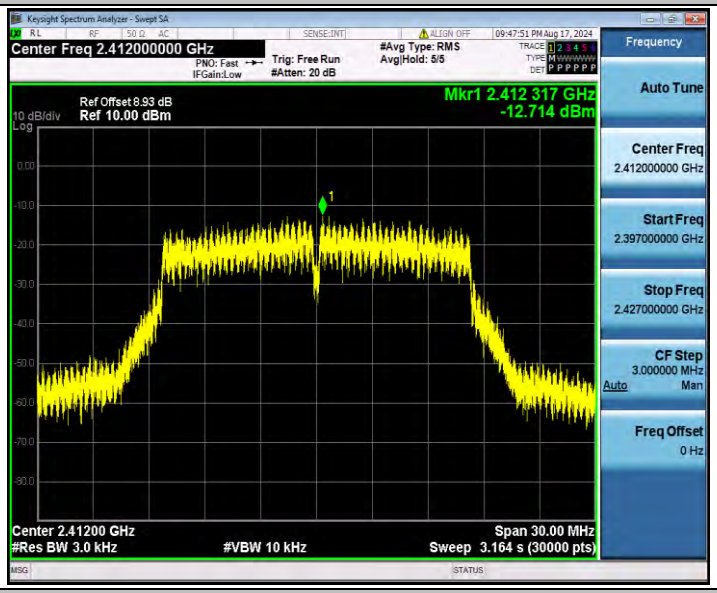
Test Graphs

11B_Ant1_2412

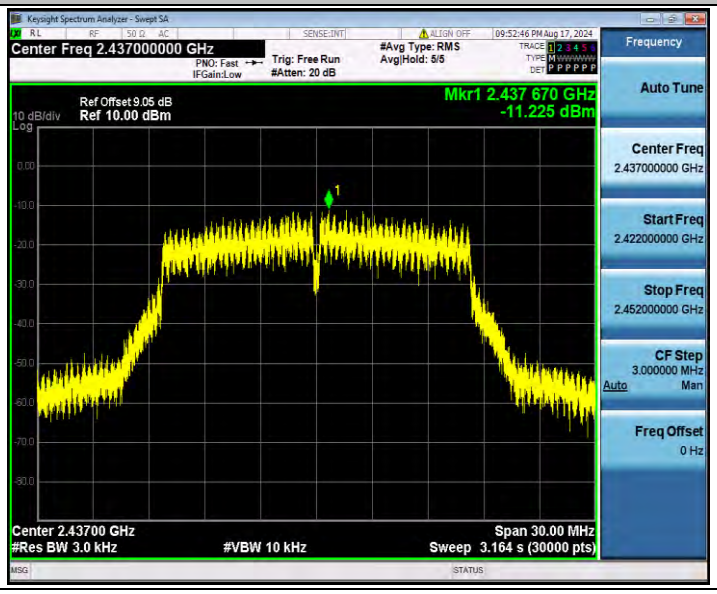
11B_Ant1_2437

11B_Ant1_2462

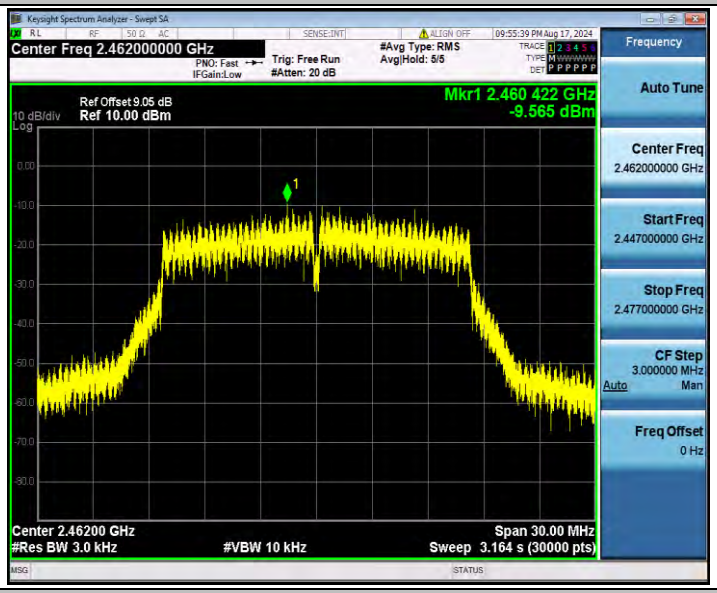
11G_Ant1_2412



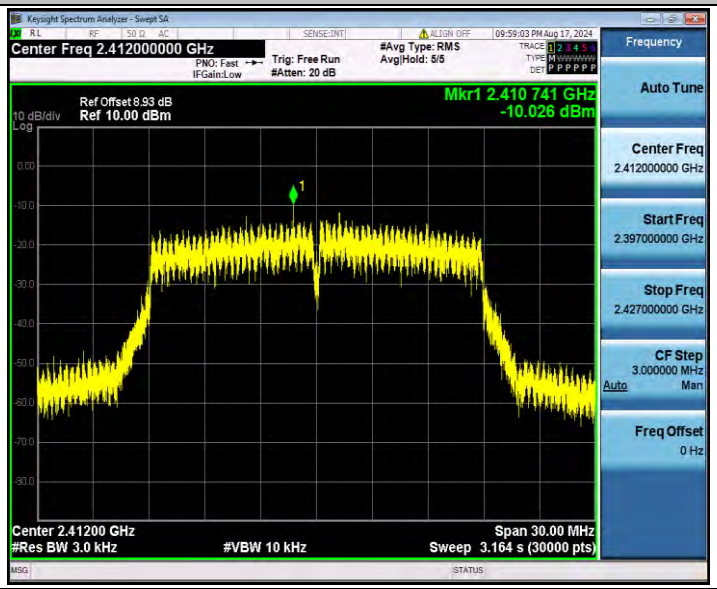
11G_Ant1_2437



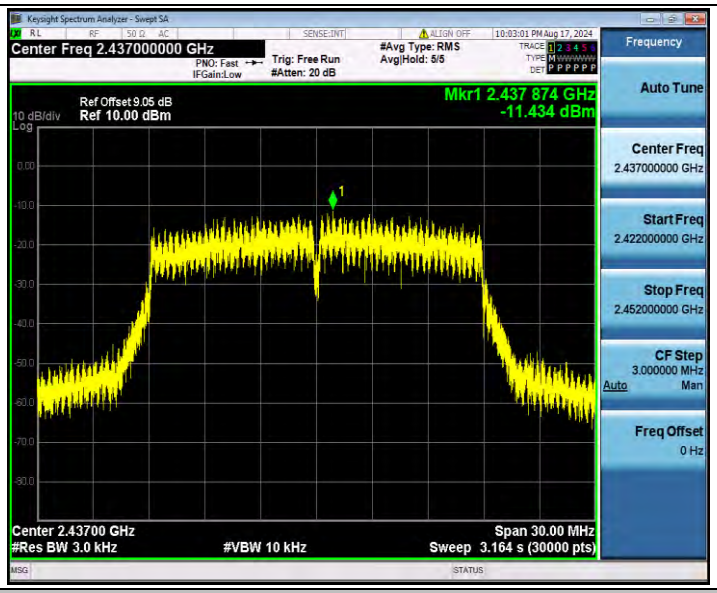
11G_Ant1_2462



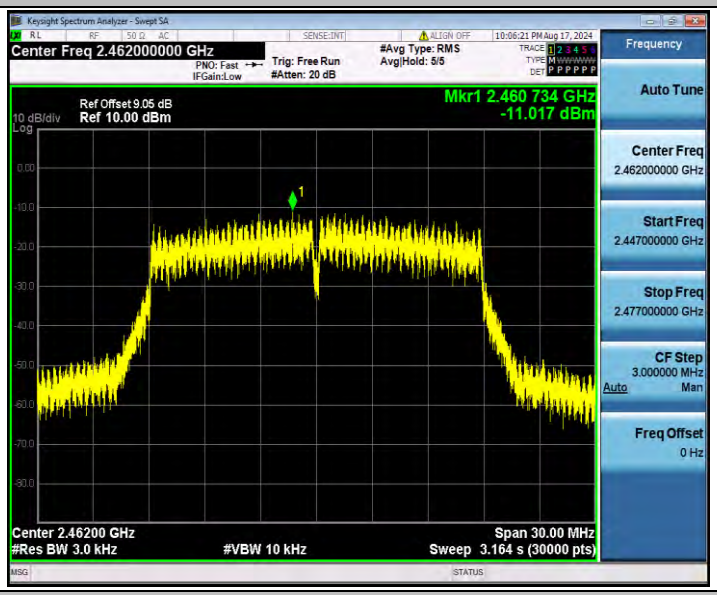
11N20SISO_Ant1_2412



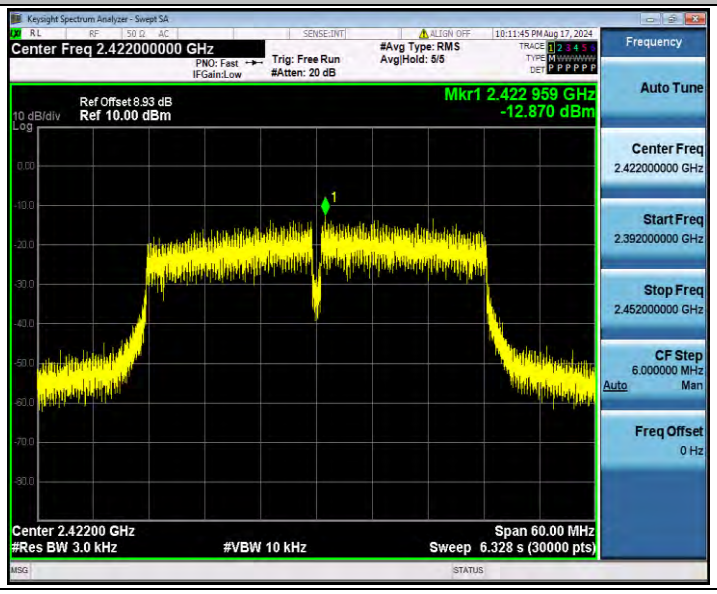
11N20SISO_Ant1_2437

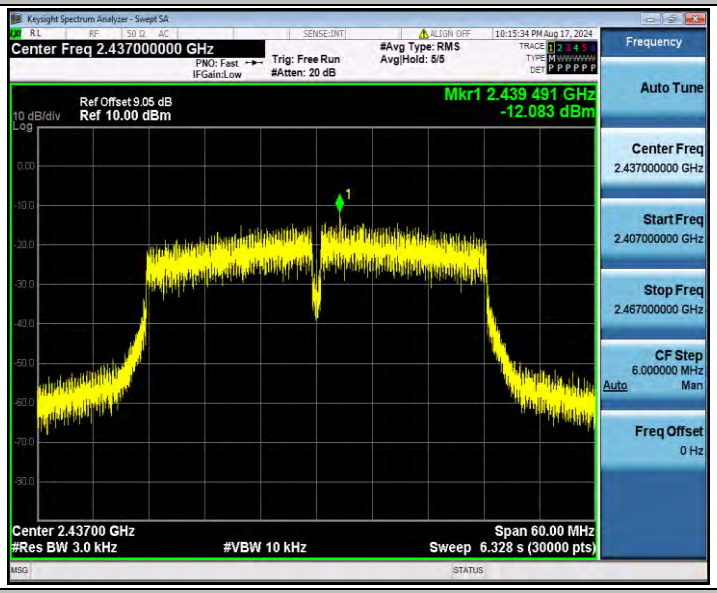


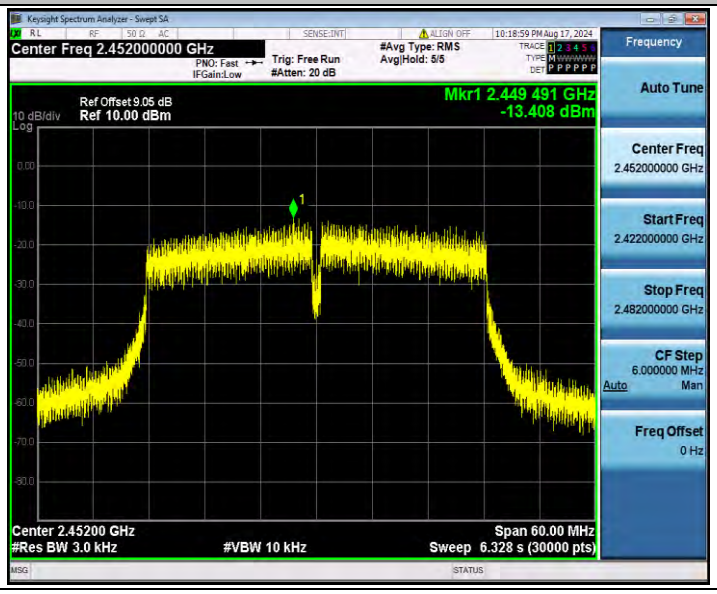
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437


11N40SISO_Ant1_2452


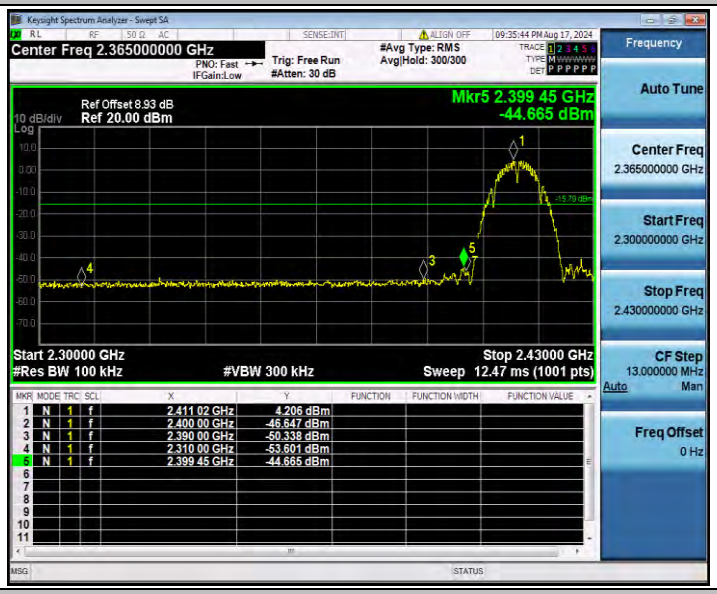
Appendix B.5: Band edge measurements

Test Result

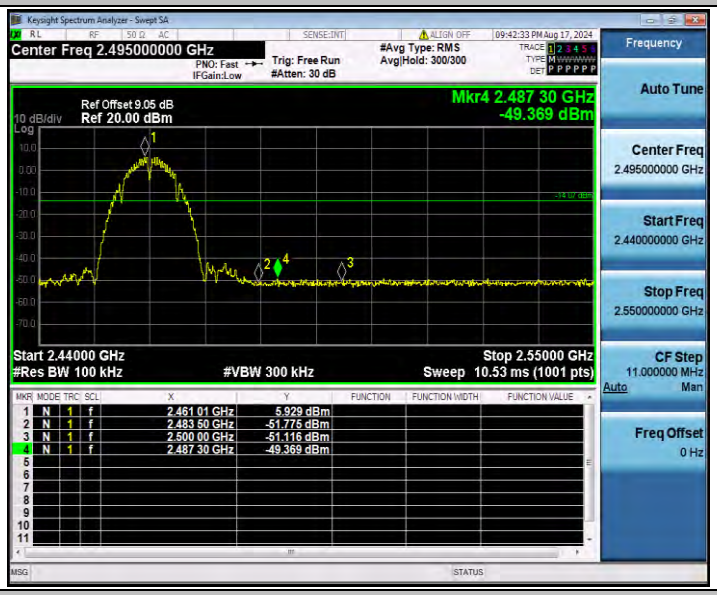
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.21	-44.67	≤-15.79	PASS
		High	2462	5.93	-49.37	≤-14.07	PASS
11G	Ant1	Low	2412	1.55	-32.03	≤-18.45	PASS
		High	2462	3.29	-46.76	≤-16.71	PASS
11N20SISO	Ant1	Low	2412	2.47	-31.55	≤-17.53	PASS
		High	2462	3.27	-45.04	≤-16.73	PASS
11N40SISO	Ant1	Low	2422	1.58	-29.31	≤-18.42	PASS
		High	2452	0.81	-36.81	≤-19.19	PASS

Test Graphs

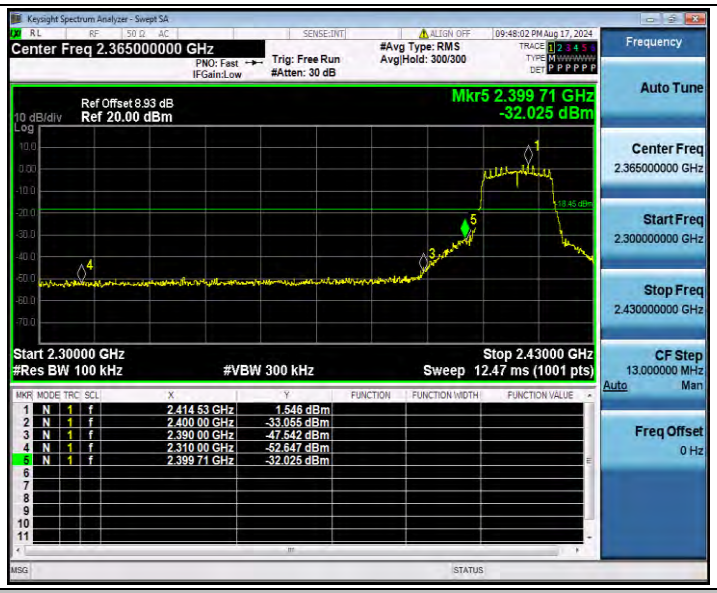
11B_Ant1_Low_2412



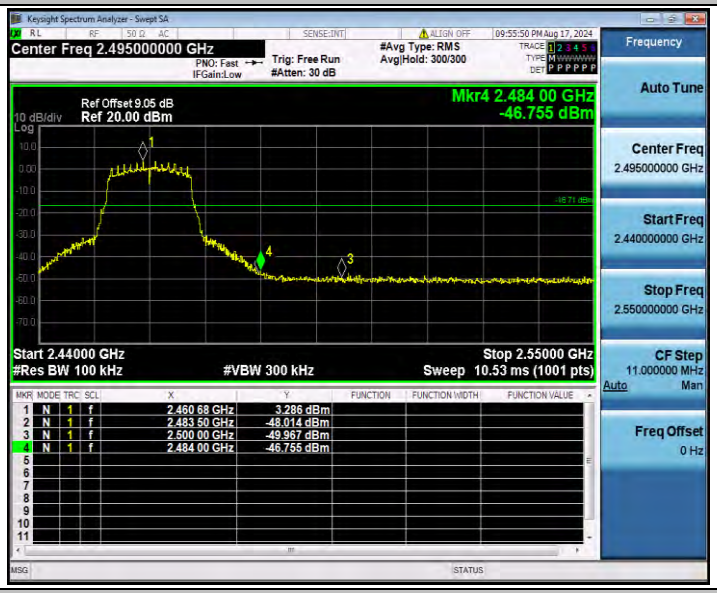
11B_Ant1_High_2462



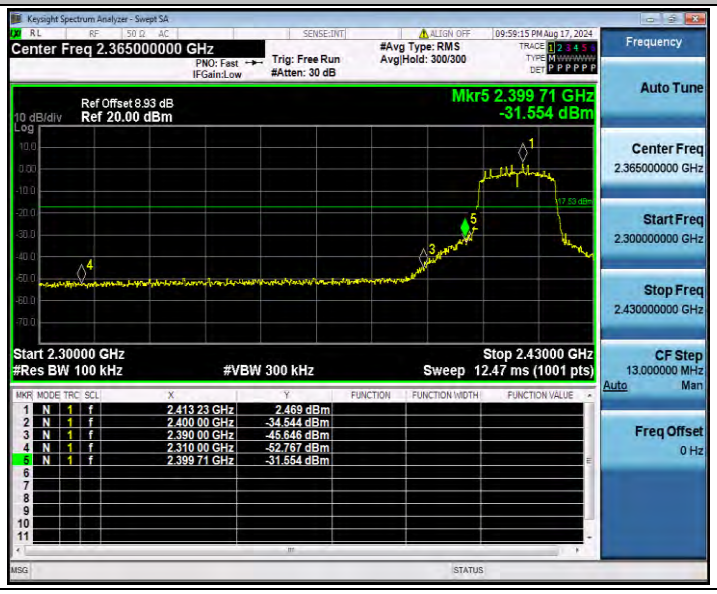
11G_Ant1_Low_2412



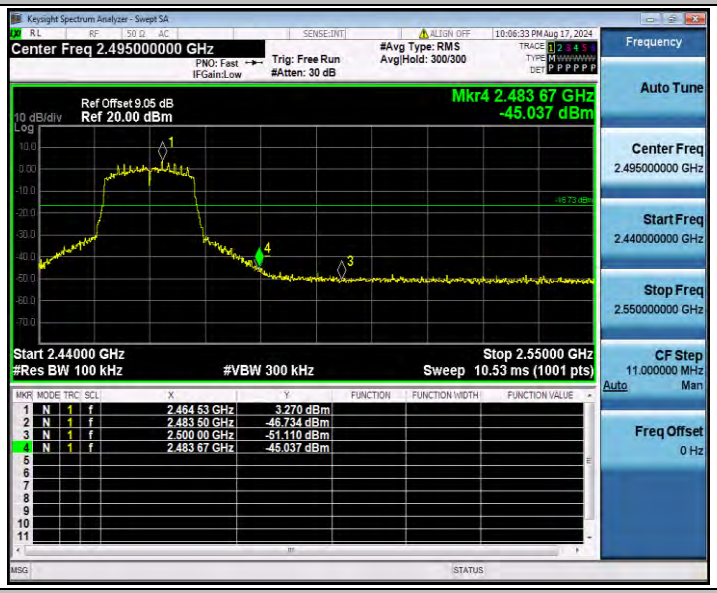
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422

11N40SISO_Ant1_High_2452

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.495000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 300/300
10:19:10 PM Aug 17, 2024
Ref Offset 9.05 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.487 63 GHz
-36.806 dBm
Start 2.44000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
Sweep 10.53 ms (1001 pts)
1 N 1 f 2.449 46 GHz 0.806 dBm
2 N 1 f 2.483 50 GHz -41.811 dBm
3 N 1 f 2.500 00 GHz -49.663 dBm
4 N 1 f 2.487 63 GHz -36.806 dBm
Frequency
Auto Tune
Center Freq
2.495000000 GHz
Start Freq
2.440000000 GHz
Stop Freq
2.550000000 GHz
CF Step
11.000000 MHz
Auto
Man
Freq Offset
0 Hz

Appendix B.6: Conducted Spurious Emission

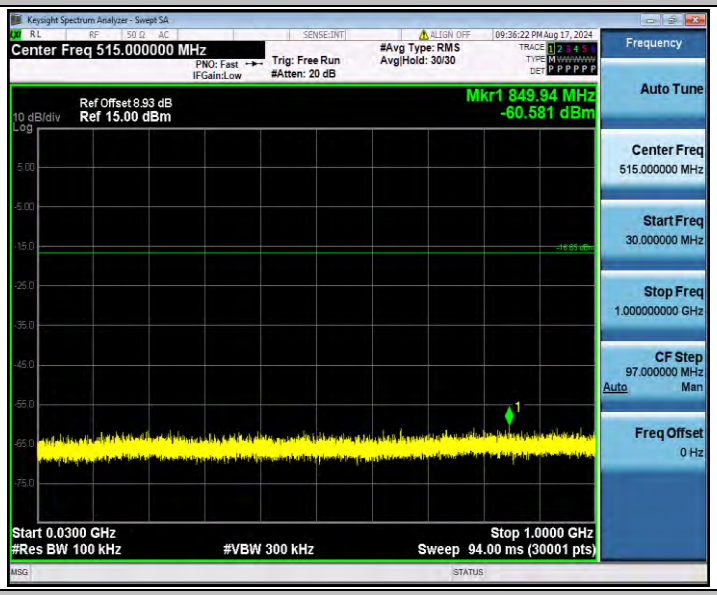
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.35	3.35	---	PASS
			30~1000	3.35	-60.58	≤-16.65	PASS
			1000~26500	3.35	-45.41	≤-16.65	PASS
		2437	Reference	2.90	2.90	---	PASS
			30~1000	2.90	-60.38	≤-17.1	PASS
			1000~26500	2.90	-45.62	≤-17.1	PASS
		2462	Reference	4.98	4.98	---	PASS
			30~1000	4.98	-60.22	≤-15.02	PASS
			1000~26500	4.98	-46.96	≤-15.02	PASS
11G	Ant1	2412	Reference	-1.62	-1.62	---	PASS
			30~1000	-1.62	-60.67	≤-21.62	PASS
			1000~26500	-1.62	-47.33	≤-21.62	PASS
		2437	Reference	-0.20	-0.20	---	PASS
			30~1000	-0.20	-60.44	≤-20.2	PASS
			1000~26500	-0.20	-47.14	≤-20.2	PASS
		2462	Reference	3.95	3.95	---	PASS
			30~1000	3.95	-59.77	≤-16.05	PASS
			1000~26500	3.95	-47.86	≤-16.05	PASS
11N20SISO	Ant1	2412	Reference	1.51	1.51	---	PASS
			30~1000	1.51	-60.65	≤-18.49	PASS
			1000~26500	1.51	-47.84	≤-18.49	PASS
		2437	Reference	1.58	1.58	---	PASS
			30~1000	1.58	-59.57	≤-18.42	PASS
			1000~26500	1.58	-46.8	≤-18.42	PASS
		2462	Reference	0.92	0.92	---	PASS
			30~1000	0.92	-60.06	≤-19.08	PASS
			1000~26500	0.92	-47.32	≤-19.08	PASS
11N40SISO	Ant1	2422	Reference	0.71	0.71	---	PASS
			30~1000	0.71	-60.69	≤-19.29	PASS
			1000~26500	0.71	-47.93	≤-19.29	PASS
		2437	Reference	-2.66	-2.66	---	PASS
			30~1000	-2.66	-60.68	≤-22.66	PASS
			1000~26500	-2.66	-43.96	≤-22.66	PASS
		2452	Reference	-0.33	-0.33	---	PASS
			30~1000	-0.33	-60.34	≤-20.33	PASS
			1000~26500	-0.33	-41.14	≤-20.33	PASS

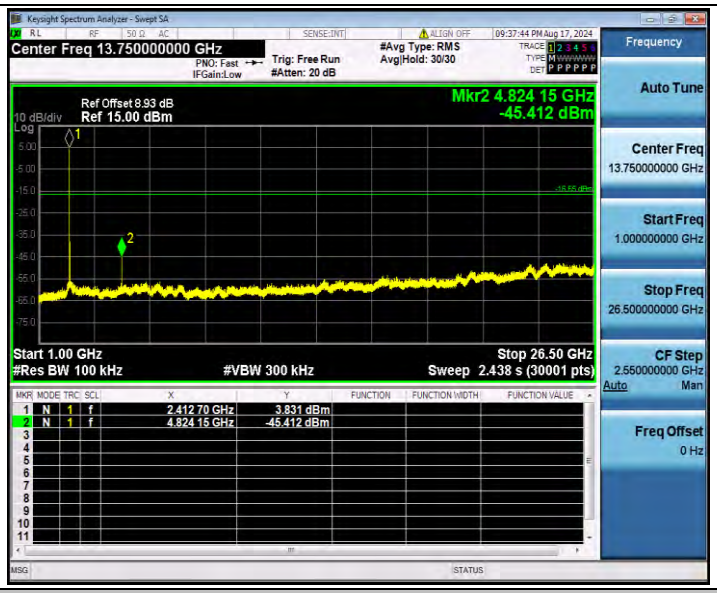
Test Graphs

11B_Ant1_2412_0~Reference

11B_Ant1_2412_30~1000

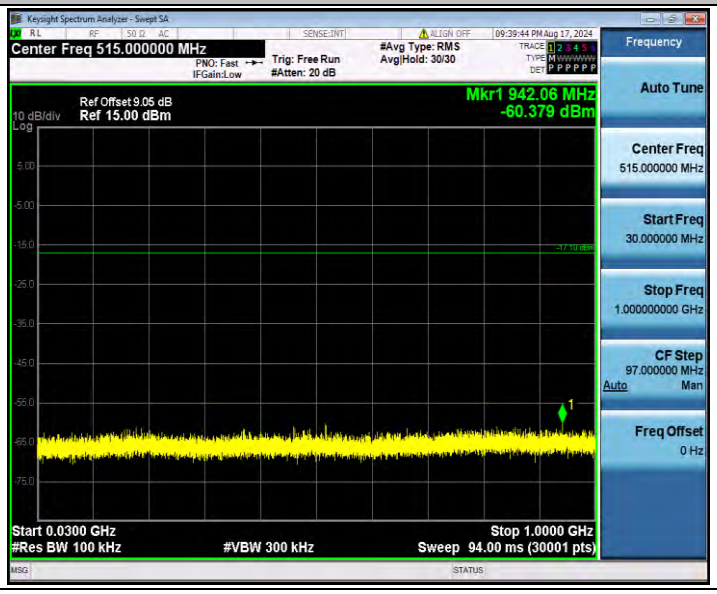


11B_Ant1_2412_1000~26500



11B_Ant1_2437_0~Reference

11B_Ant1_2437_30~1000



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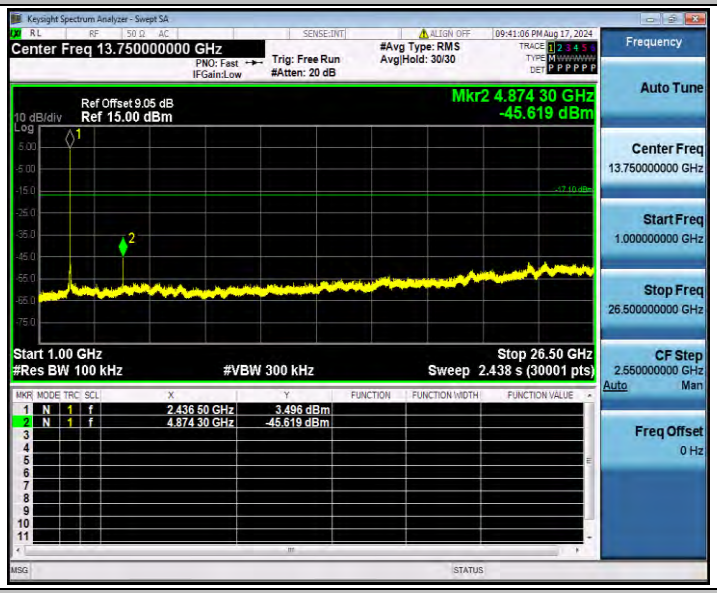

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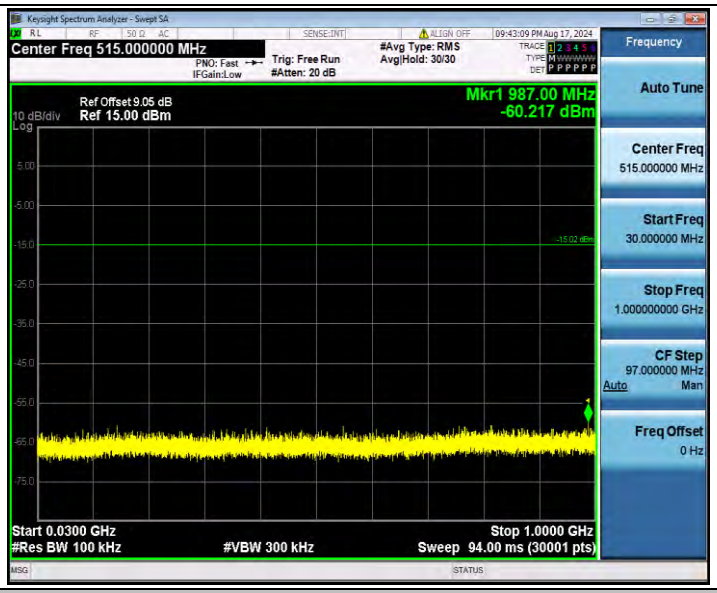

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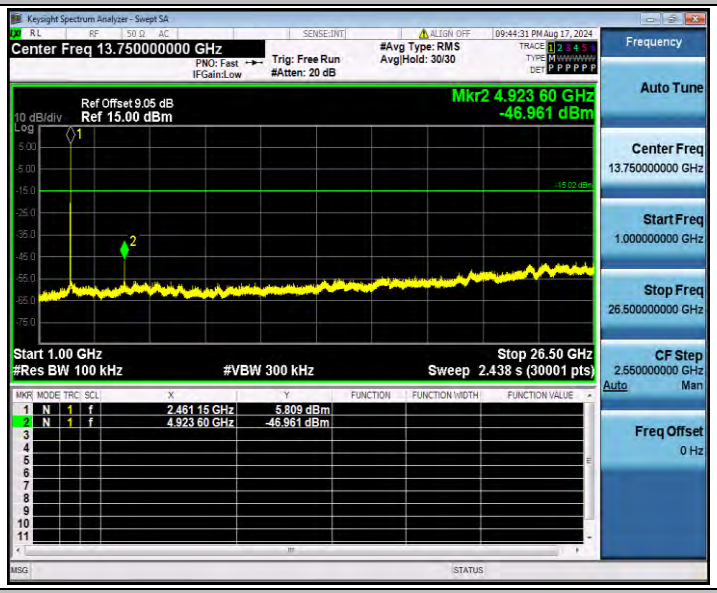

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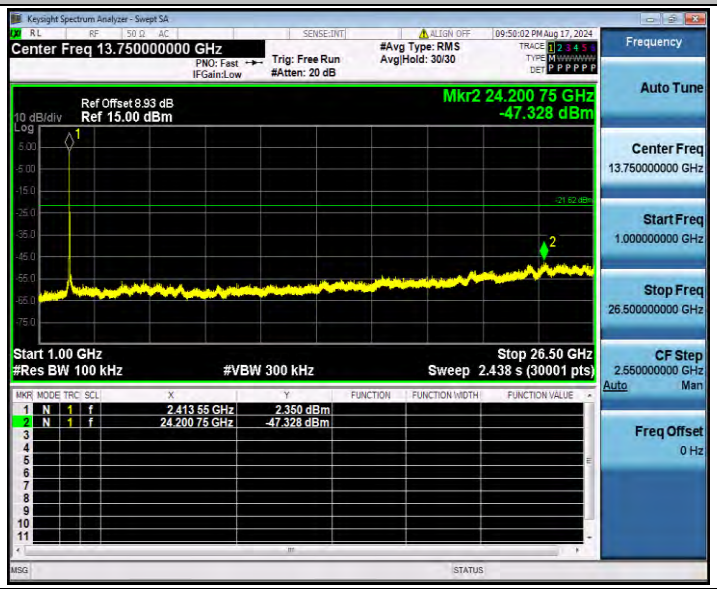
11G_Ant1_2412_30~1000

11G_Ant1_2412_1000~26500



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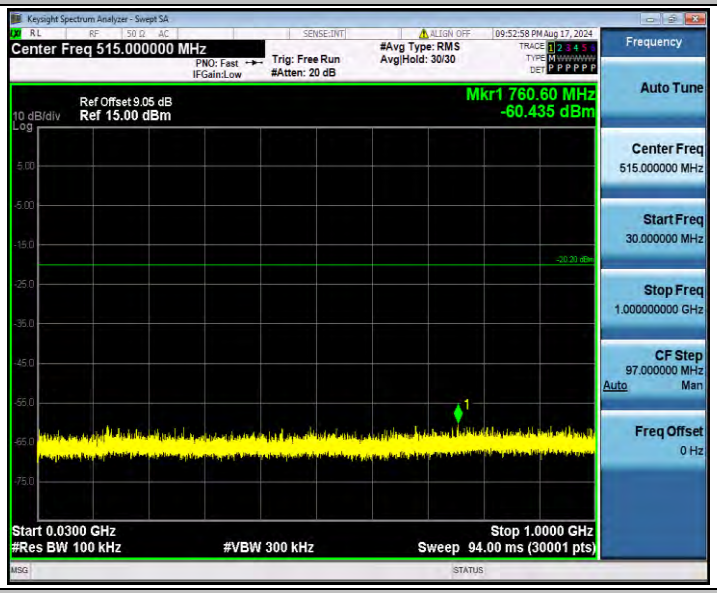
11G_Ant1_2437_30~1000



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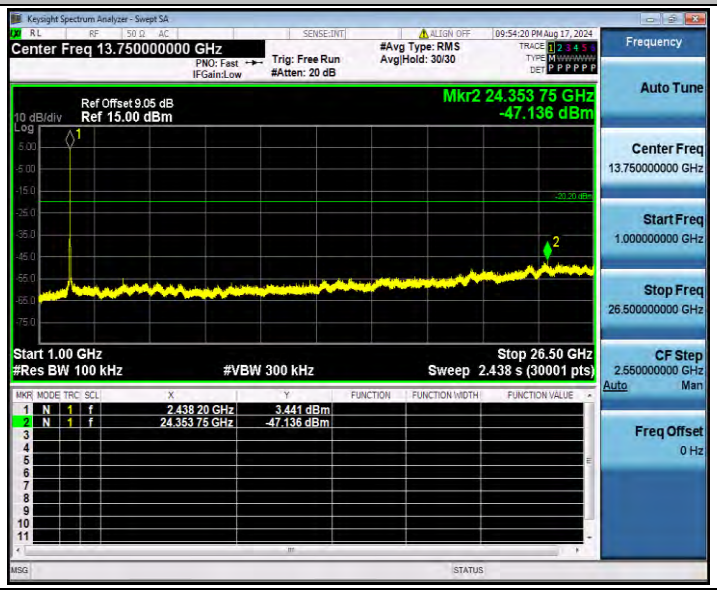

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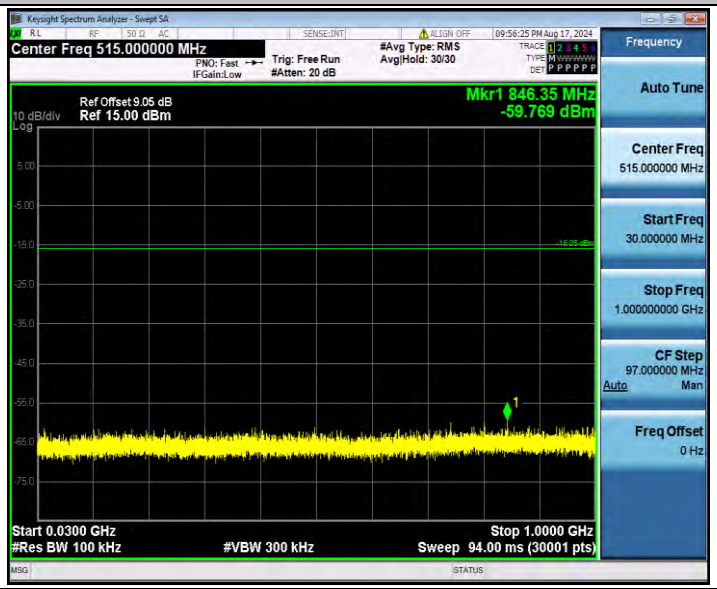

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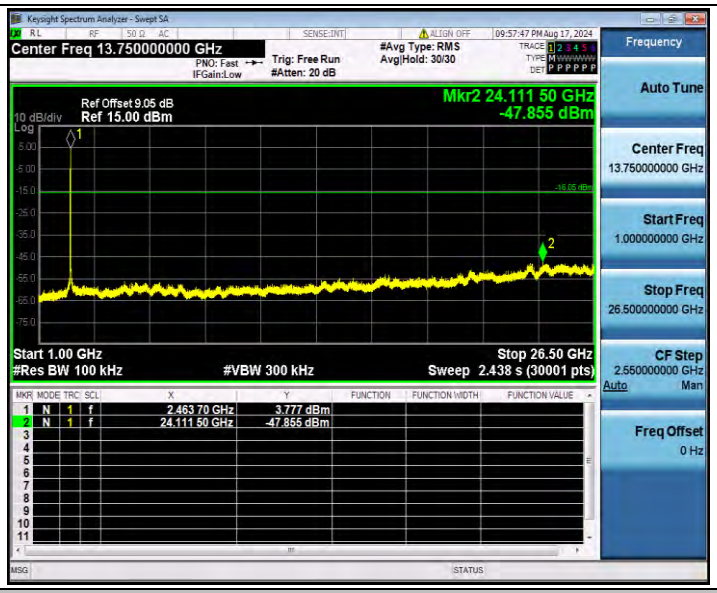

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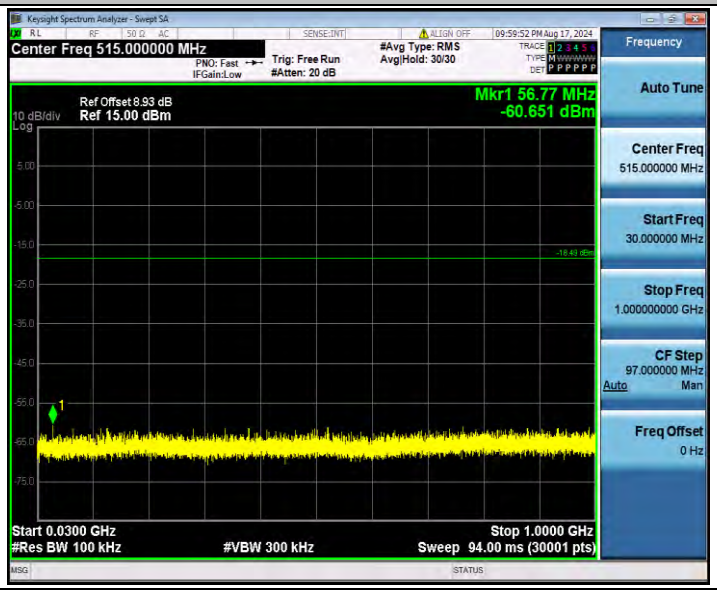
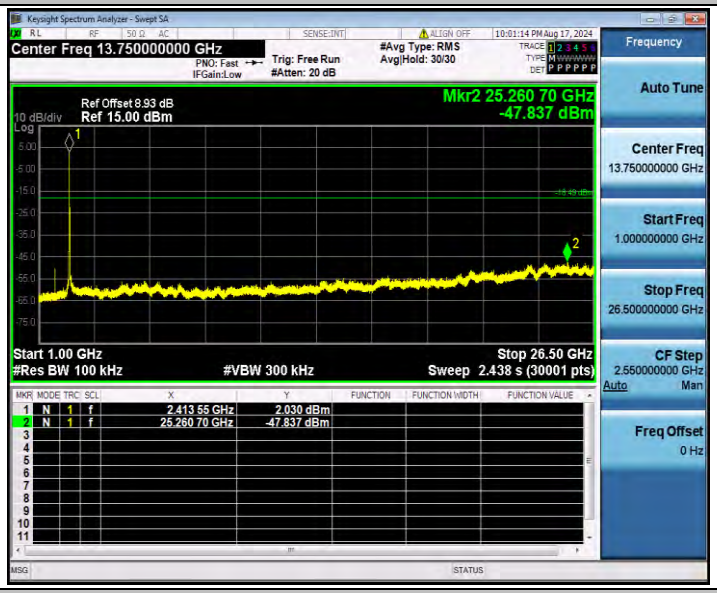


11N20SISO_Ant1_2412_1000~26500



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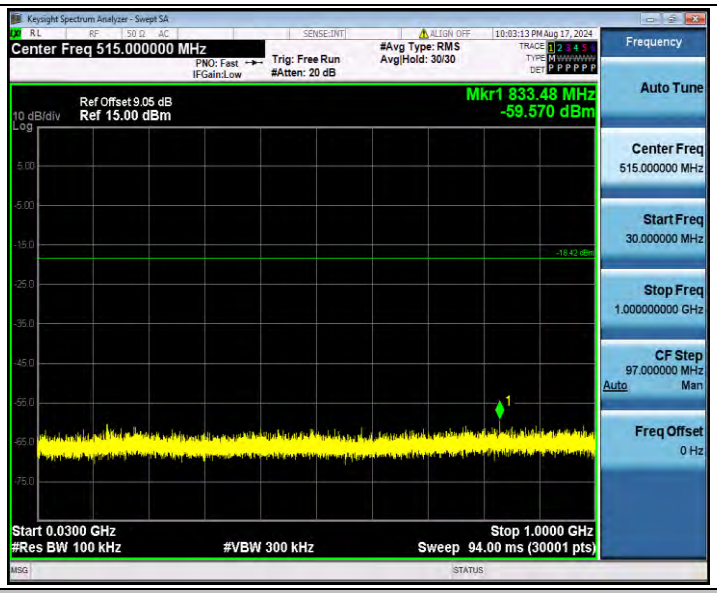
11N20SISO_Ant1_2437_30~1000



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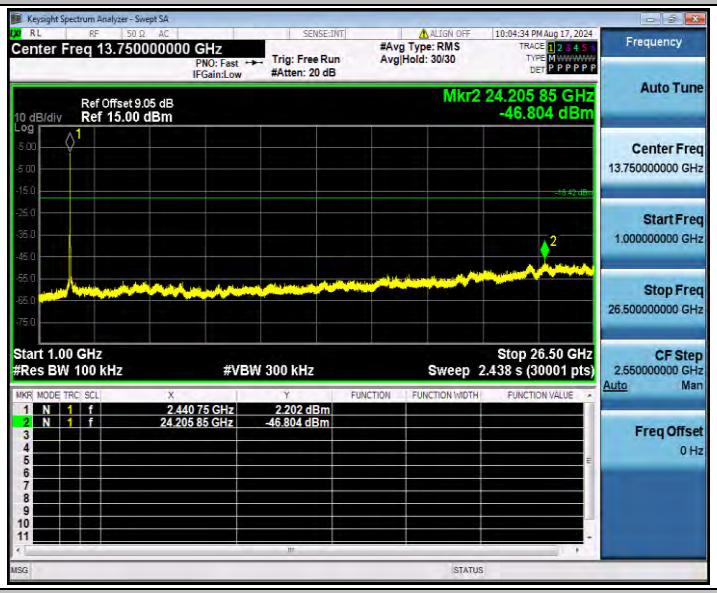

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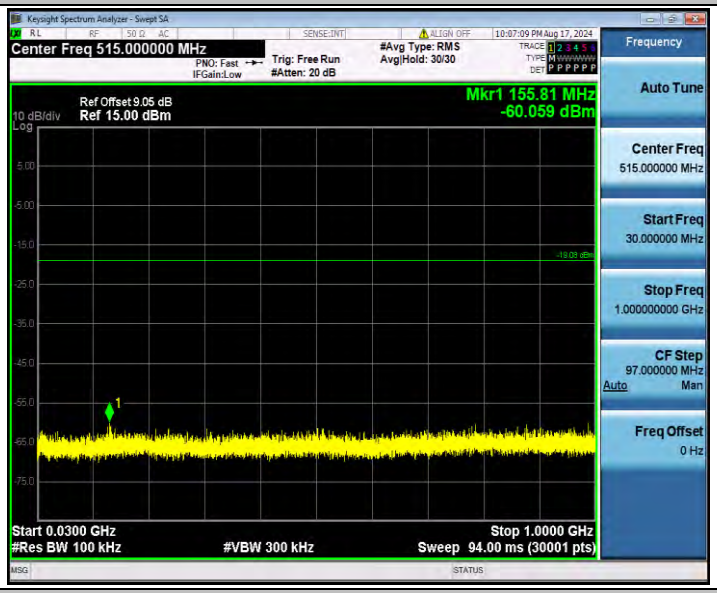
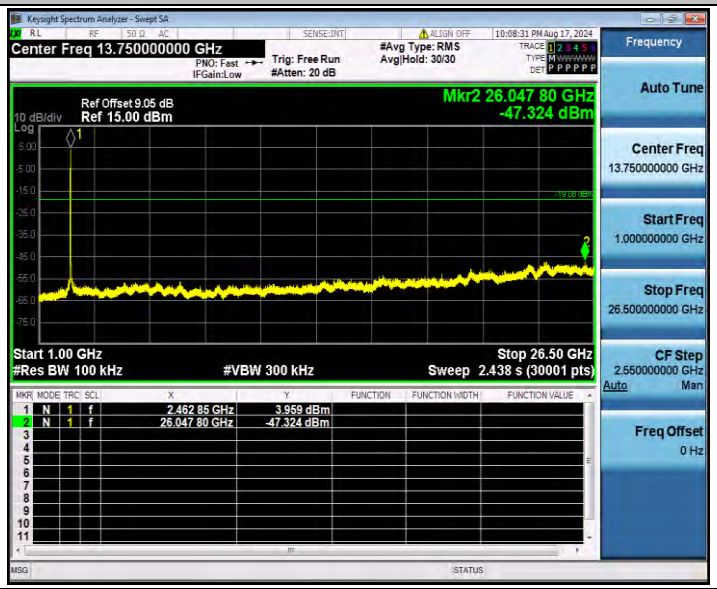
11N20SISO_Ant1_2462_30~1000

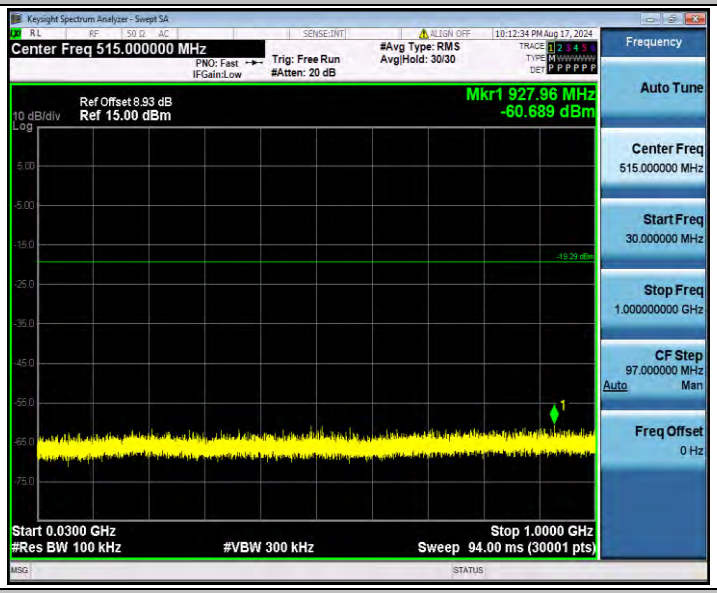


11N20SISO_Ant1_2462_1000~26500

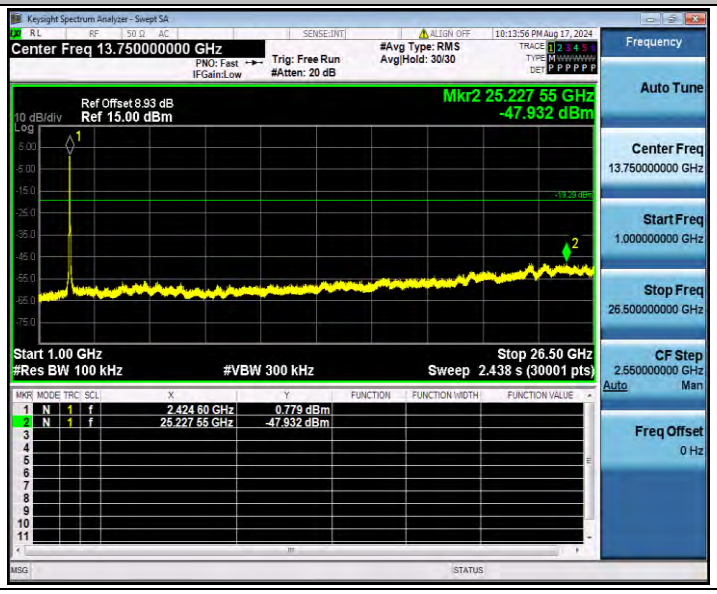


11N40SISO_Ant1_2422_0~Reference

11N40SISO_Ant1_2422_30~1000



11N40SISO_Ant1_2422_1000~26500



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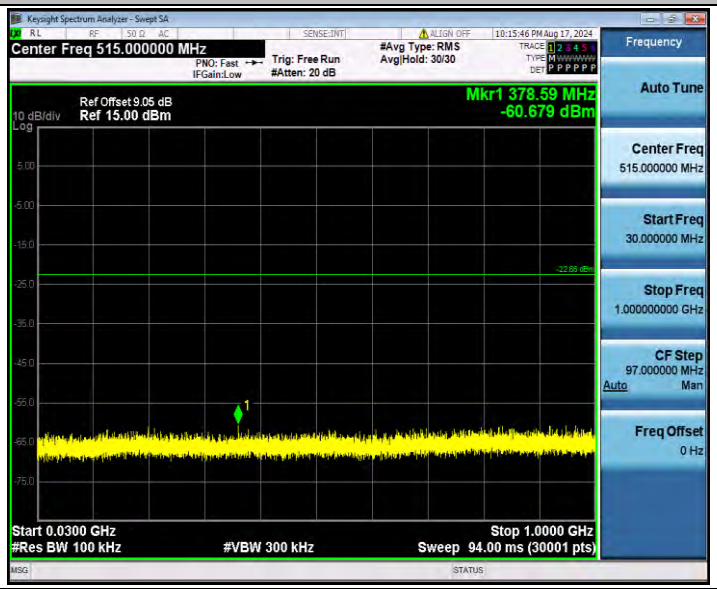
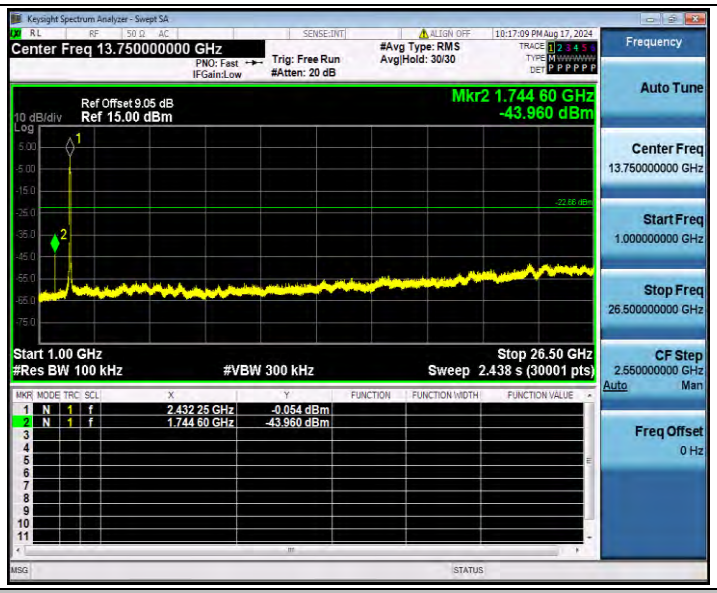
11N40SISO_Ant1_2437_30~1000

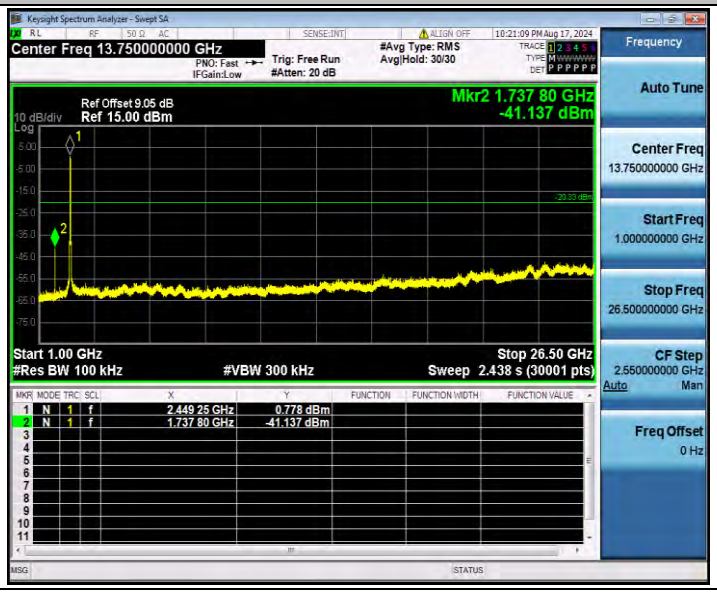


11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference

11N40SISO_Ant1_2452_30~1000

11N40SISO_Ant1_2452_1000~26500


Appendix B.7: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.35	≤-41.20	45.85	≤54	PASS
				AV	2386.320	-48.31	≤-41.20	46.89	≤54	PASS
				AV	2390.000	-48.6	≤-41.20	46.60	≤54	PASS
				Peak	2310.000	-41.53	≤-21.20	53.67	≤74	PASS
				Peak	2338.350	-40.23	≤-21.20	54.97	≤74	PASS
				Peak	2390.000	-46.09	≤-21.20	49.11	≤74	PASS
		High	2462	AV	2483.500	-48.36	≤-41.20	46.84	≤54	PASS
				AV	2487.850	-48.13	≤-41.20	47.07	≤54	PASS
				AV	2500.000	-48.13	≤-41.20	47.07	≤54	PASS
				Peak	2483.500	-44.84	≤-21.20	50.36	≤74	PASS
				Peak	2489.500	-40.87	≤-21.20	54.33	≤74	PASS
				Peak	2500.000	-47.25	≤-21.20	47.95	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.45	≤-41.20	45.75	≤54	PASS
				AV	2389.960	-44.63	≤-41.20	50.57	≤54	PASS
				AV	2390.000	-44.63	≤-41.20	50.57	≤54	PASS
				Peak	2310.000	-45.52	≤-21.20	49.68	≤74	PASS
				Peak	2389.960	-36.35	≤-21.20	58.85	≤74	PASS
				Peak	2390.000	-36.35	≤-21.20	58.85	≤74	PASS
		High	2462	AV	2483.500	-44.33	≤-41.20	50.87	≤54	PASS
				AV	2483.560	-44.49	≤-41.20	50.71	≤54	PASS
				AV	2500.000	-47.32	≤-41.20	47.88	≤54	PASS
				Peak	2483.500	-39.4	≤-21.20	55.80	≤74	PASS
				Peak	2494.670	-39.57	≤-21.20	55.63	≤74	PASS
				Peak	2500.000	-44.87	≤-21.20	50.33	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-49.47	≤-41.20	45.73	≤54	PASS
				AV	2389.960	-42.78	≤-41.20	52.42	≤54	PASS
				AV	2390.000	-42.78	≤-41.20	52.42	≤54	PASS
				Peak	2310.000	-47.1	≤-21.20	48.10	≤74	PASS
				Peak	2389.310	-34.13	≤-21.20	61.07	≤74	PASS
				Peak	2390.000	-39.77	≤-21.20	55.43	≤74	PASS
		High	2462	AV	2483.500	-43.17	≤-41.20	52.03	≤54	PASS
				AV	2483.560	-43.29	≤-41.20	51.91	≤54	PASS
				AV	2500.000	-47.26	≤-41.20	47.94	≤54	PASS
				Peak	2483.500	-42.52	≤-21.20	52.68	≤74	PASS
				Peak	2484.220	-35.43	≤-21.20	59.77	≤74	PASS

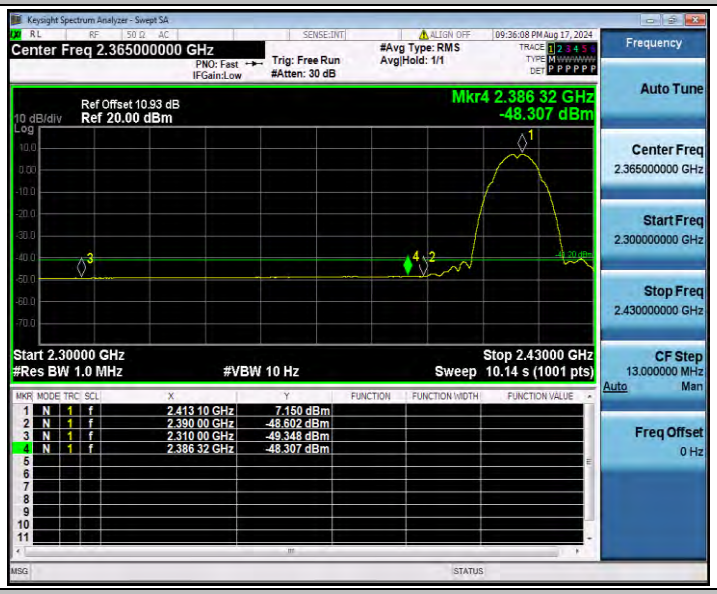
				Peak	2500.000	-44.67	≤-21.20	50.53	≤74	PASS
11N40SISO	Ant1	Low	2422	AV	2310.000	-49.21	≤-41.20	45.99	≤54	PASS
				AV	2389.960	-42.55	≤-41.20	52.65	≤54	PASS
				AV	2390.000	-42.55	≤-41.20	52.65	≤54	PASS
				Peak	2310.000	-47.12	≤-21.20	48.08	≤74	PASS
				Peak	2386.190	-28.87	≤-21.20	66.33	≤74	PASS
				Peak	2390.000	-37.56	≤-21.20	57.64	≤74	PASS
		High	2452	AV	2483.500	-41.42	≤-41.20	53.78	≤54	PASS
				AV	2483.560	-41.47	≤-41.20	53.73	≤54	PASS
				AV	2500.000	-46.61	≤-41.20	48.59	≤54	PASS
				Peak	2483.500	-43.79	≤-21.20	51.41	≤74	PASS
				Peak	2486.860	-35.5	≤-21.20	59.70	≤74	PASS
				Peak	2500.000	-45.25	≤-21.20	49.95	≤74	PASS

Note：

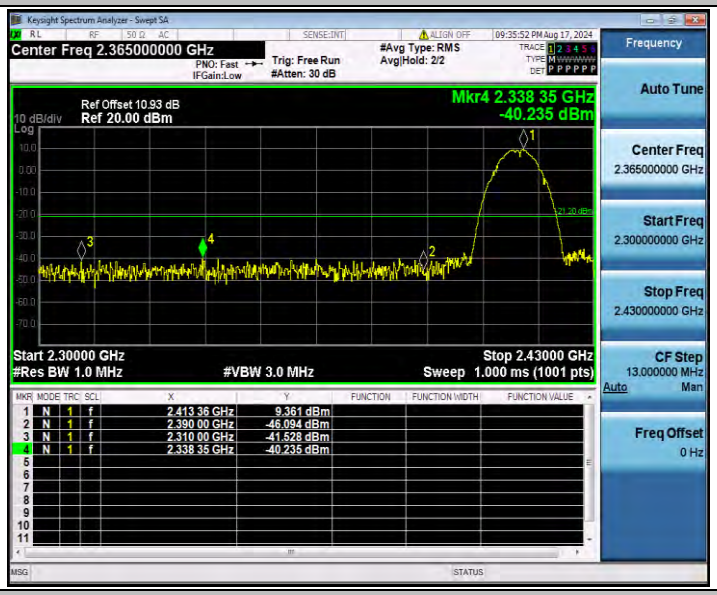
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

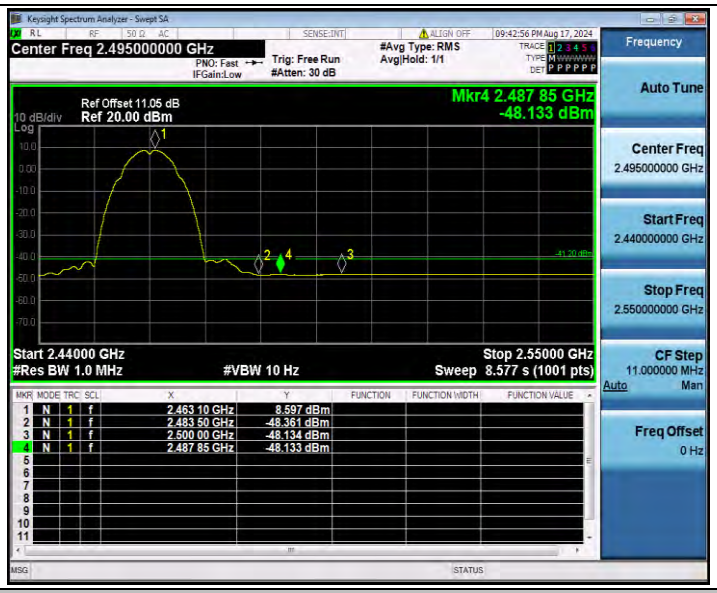
11B_Ant1_Low_2412_AV



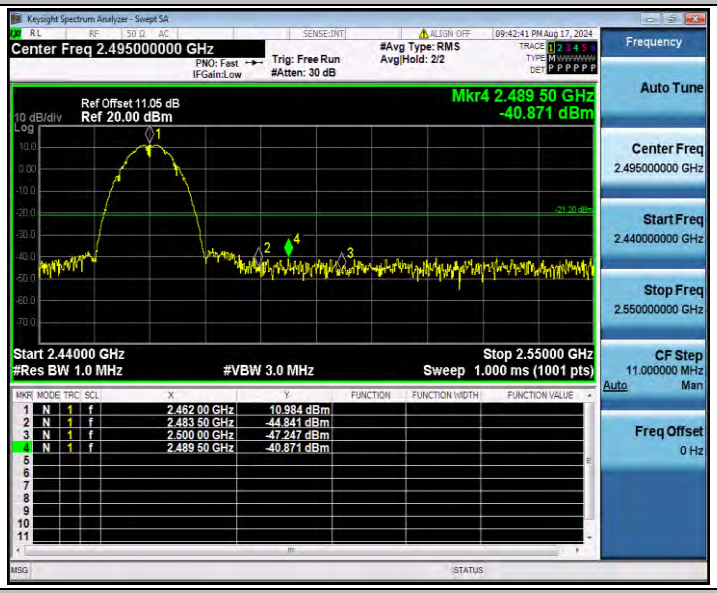
11B_Ant1_Low_2412_Peak



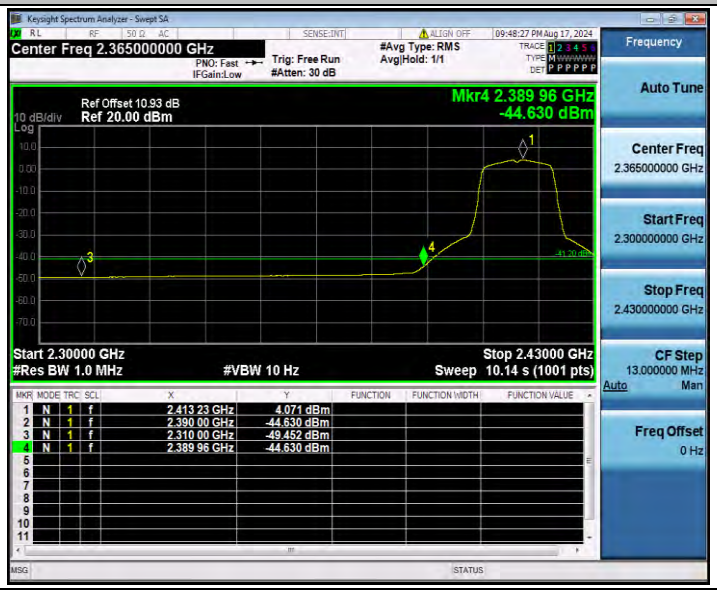
11B_Ant1_High_2462_AV



11B_Ant1_High_2462_Peak



11G_Ant1_Low_2412_AV



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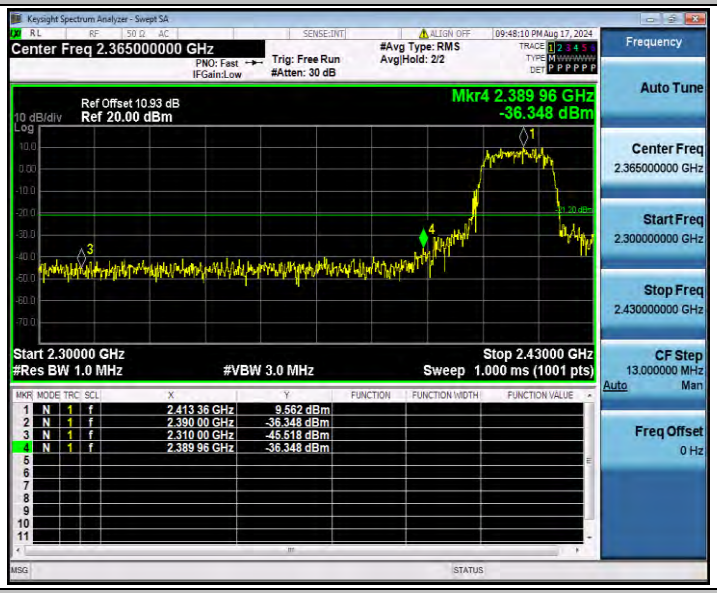

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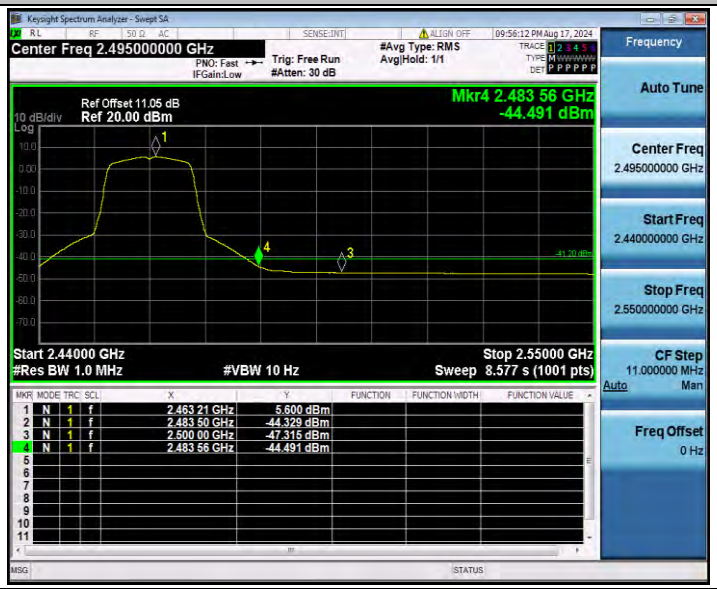
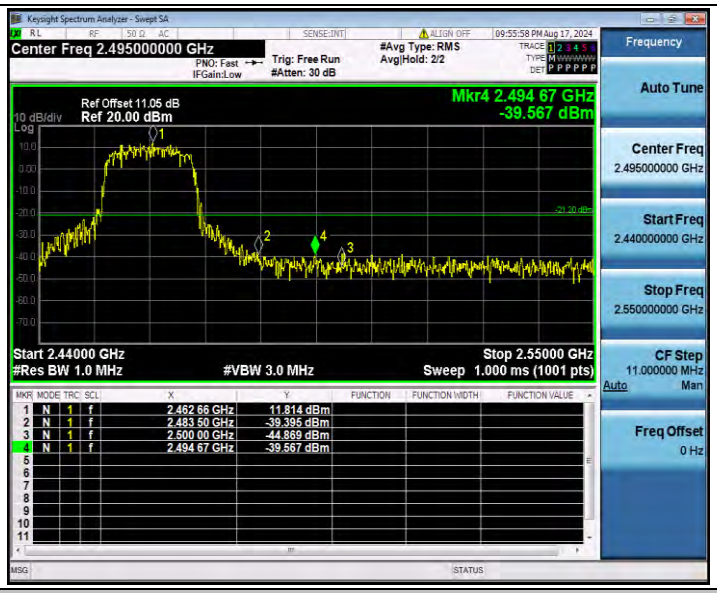
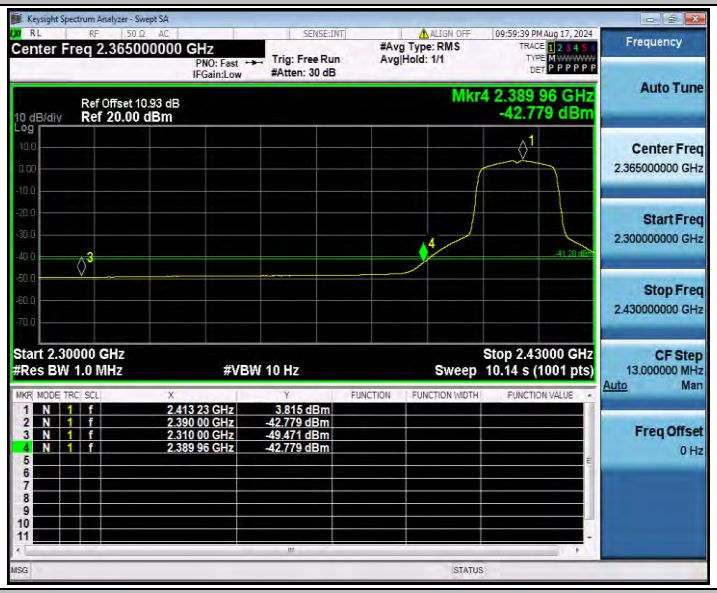


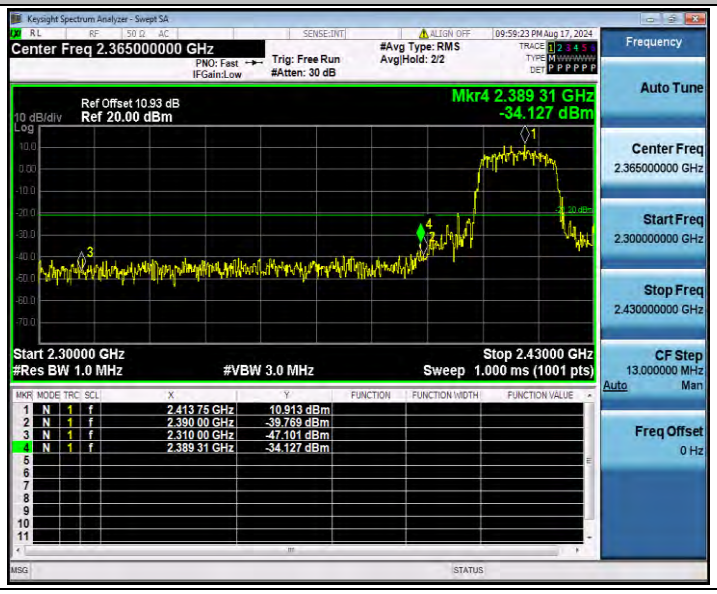
11G_Ant1_High_2462_Peak



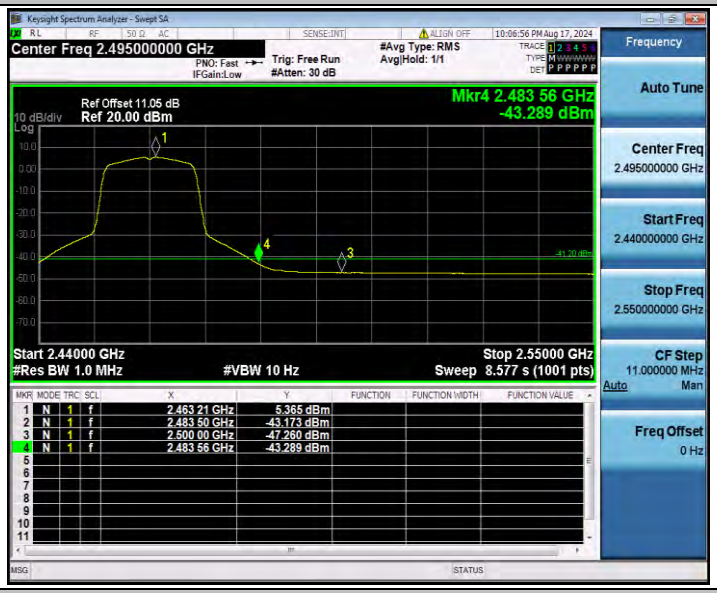
11N20SISO_Ant1_Low_2412_AV



11N20SISO_Ant1_Low_2412_Peak

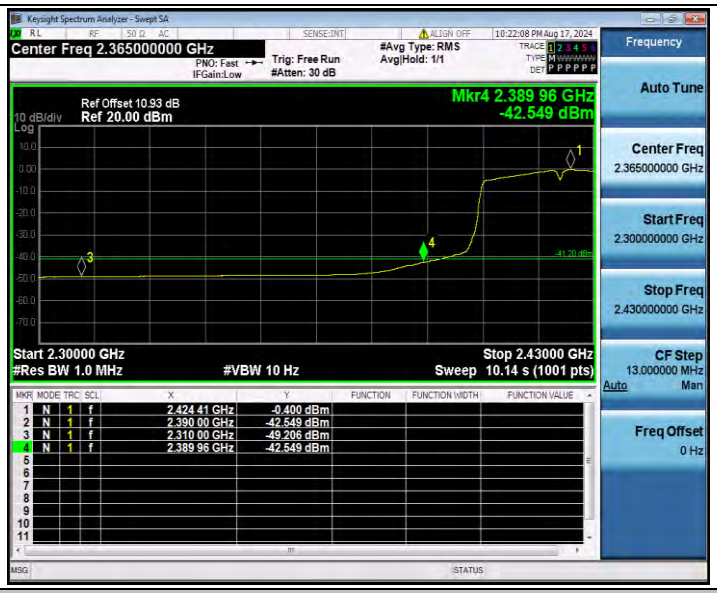


11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak

11N40SISO_Ant1_Low_2422_AV



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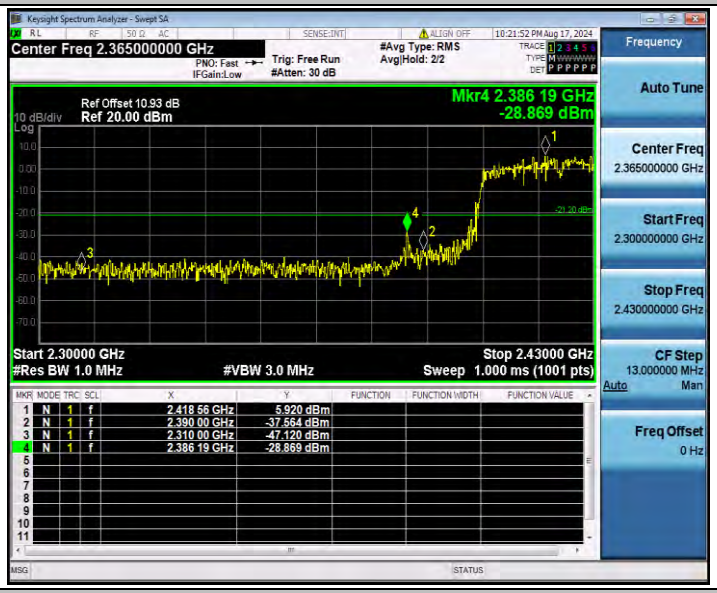

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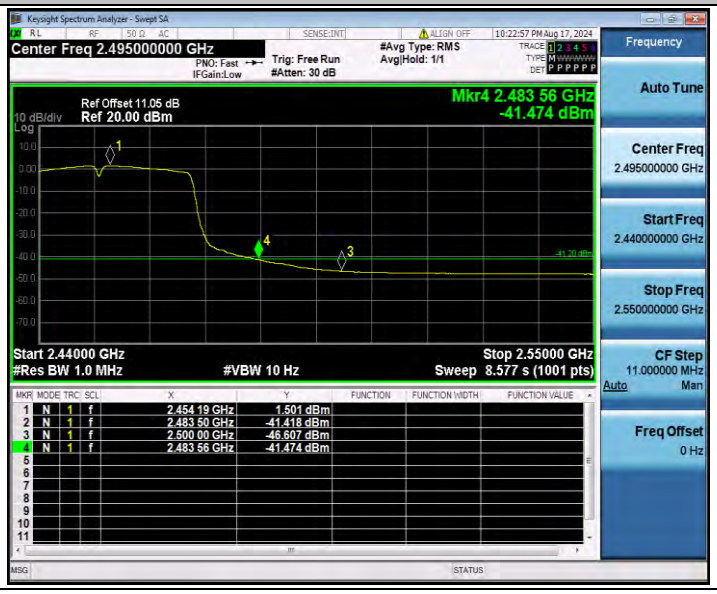

11N40SISO_Ant1_High_2452_Peak