Case No. : CTA24090900403	
Ambient Condition: 23 ℃, 52 %RH,	
Test Date: 2024.9.19	**Test Engineer:** Lushan Kong

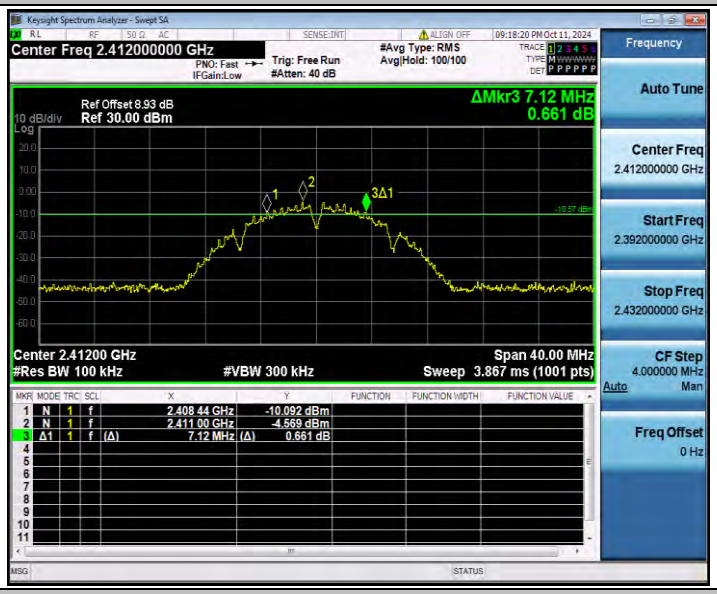
Appendix C.1: DTS Bandwidth

Test Result

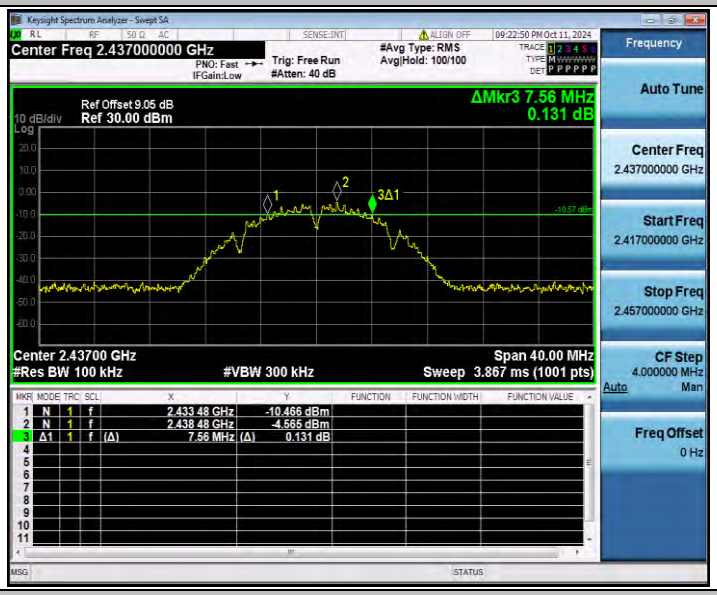
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.120	2408.440	2415.560	0.5	PASS
		2437	7.560	2433.480	2441.040	0.5	PASS
		2462	8.520	2457.520	2466.040	0.5	PASS
11G	Ant1	2412	15.080	2404.480	2419.560	0.5	PASS
		2437	15.080	2429.480	2444.560	0.5	PASS
		2462	15.720	2453.840	2469.560	0.5	PASS
11N20SISO	Ant1	2412	15.080	2404.480	2419.560	0.5	PASS
		2437	13.400	2431.920	2445.320	0.5	PASS
		2462	16.120	2453.400	2469.520	0.5	PASS
11N40SISO	Ant1	2422	35.520	2404.400	2439.920	0.5	PASS
		2437	33.760	2419.480	2453.240	0.5	PASS
		2452	30.080	2439.440	2469.520	0.5	PASS

Test Graphs

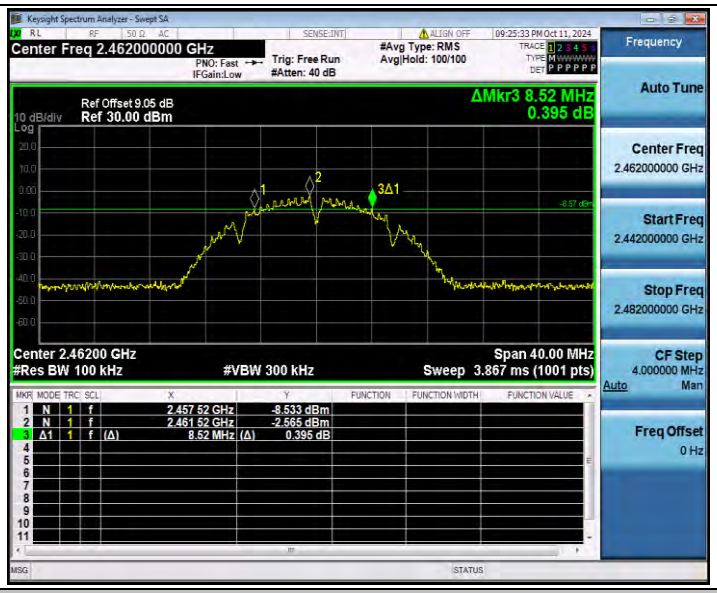
11B_Ant1_2412



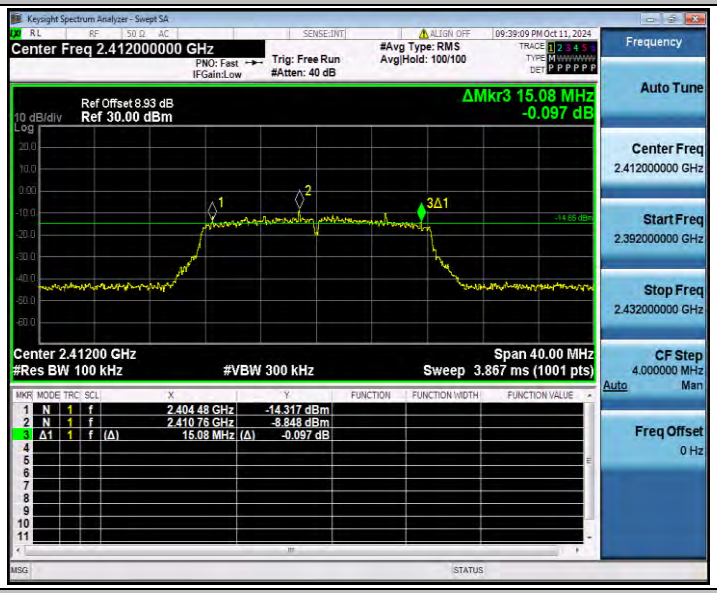
11B_Ant1_2437



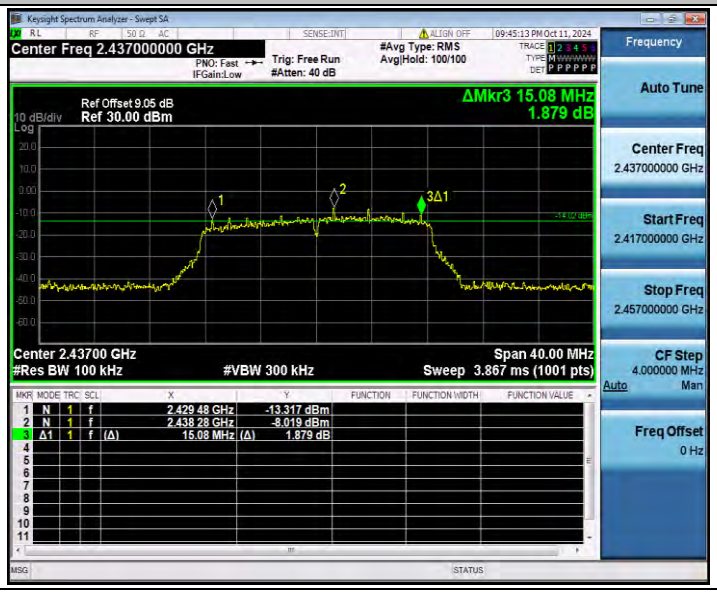
11B_Ant1_2462



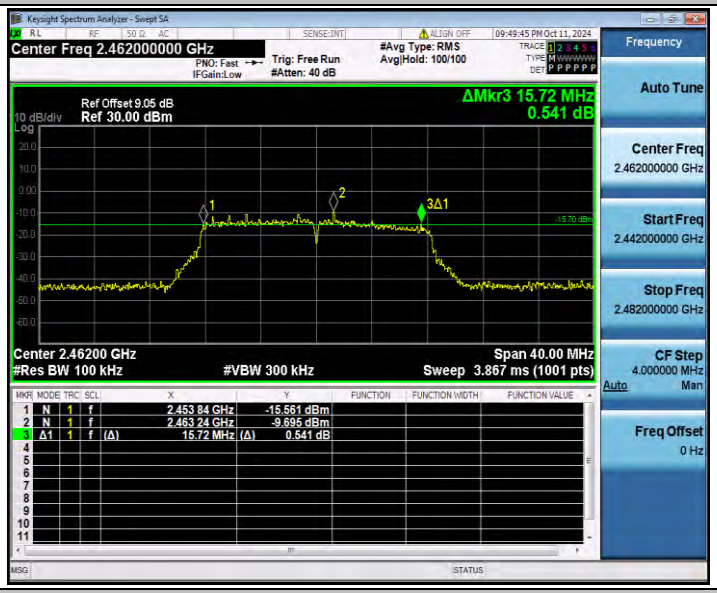
11G_Ant1_2412



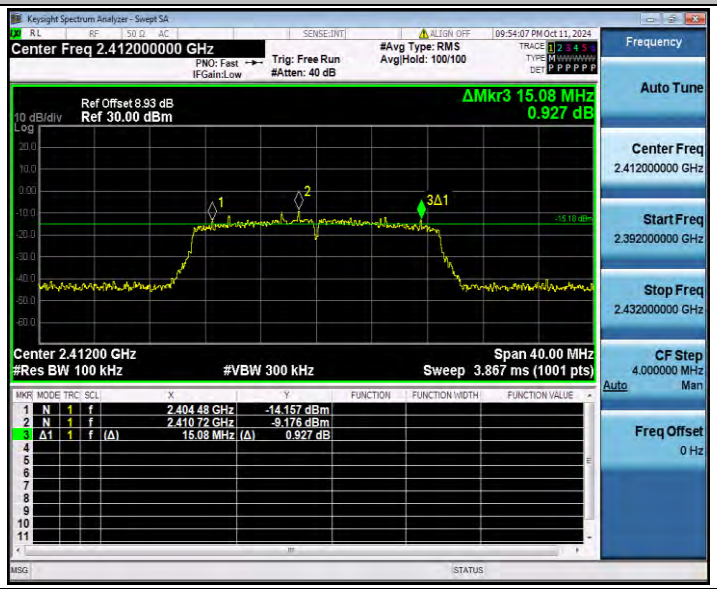
11G_Ant1_2437



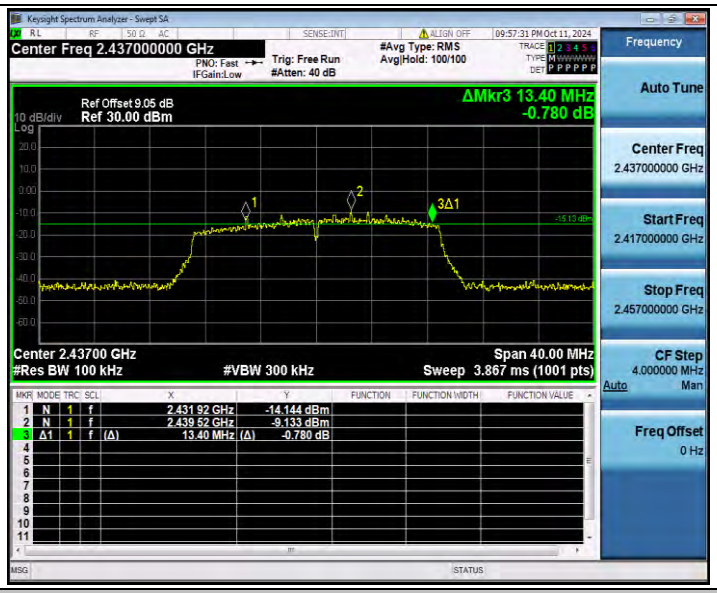
11G_Ant1_2462



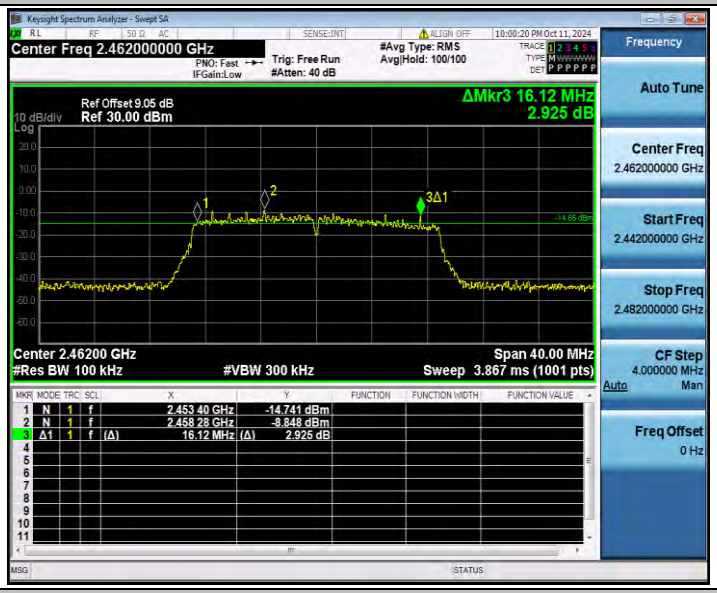
11N20SISO_Ant1_2412



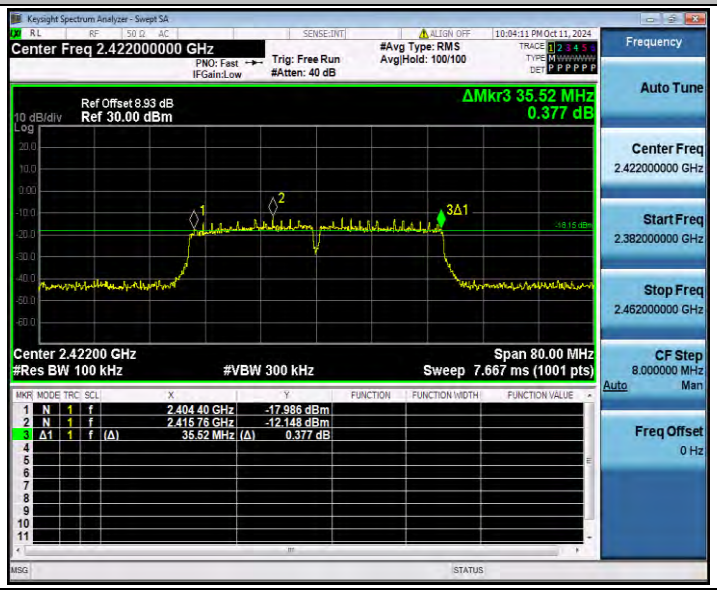
11N20SISO_Ant1_2437

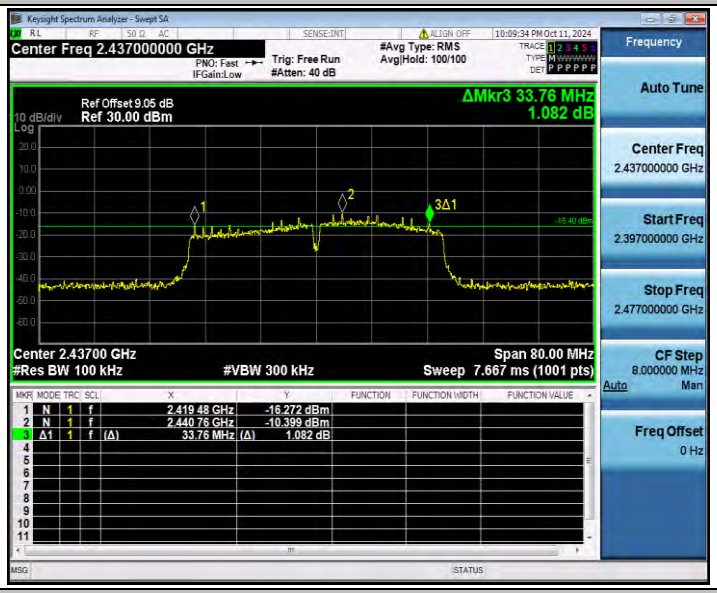


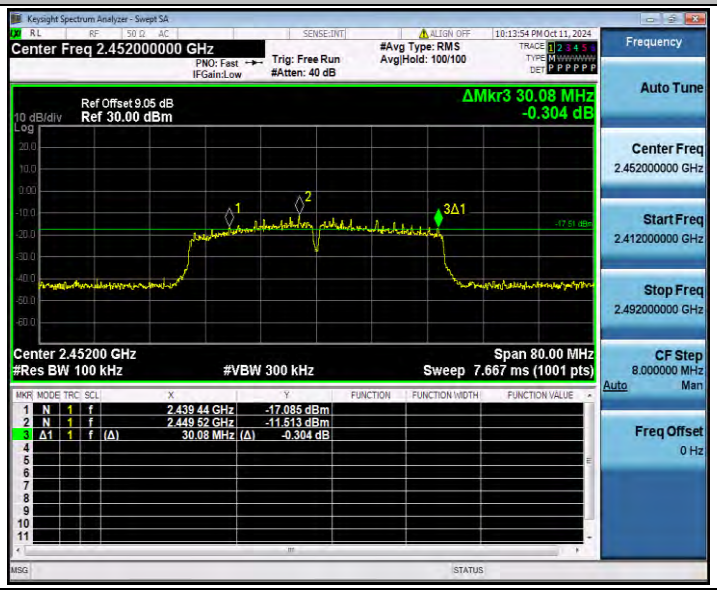
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437


11N40SISO_Ant1_2452


Appendix C.2: Occupied Channel Bandwidth

Test Result

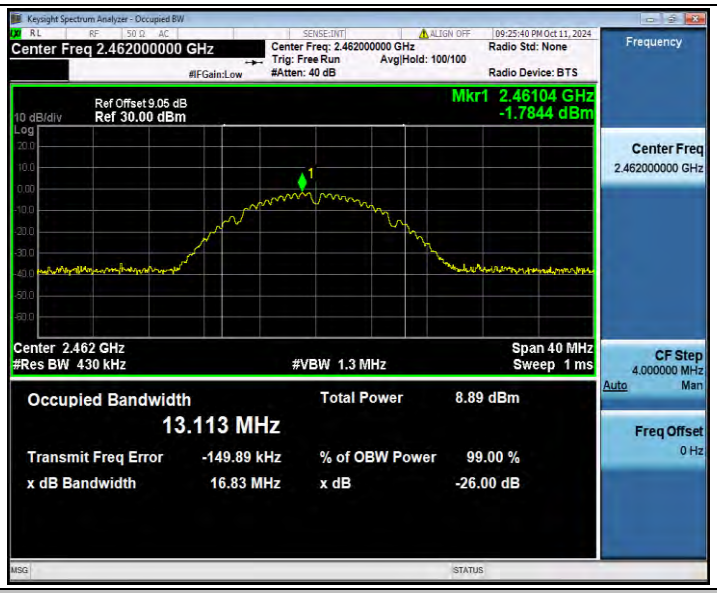
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.190	2405.3996	2418.5896	---	---
		2437	13.102	2430.4908	2443.5928	---	---
		2462	13.113	2455.2936	2468.4066	---	---
11G	Ant1	2412	16.923	2403.5185	2420.4415	---	---
		2437	17.035	2428.6881	2445.7231	---	---
		2462	17.013	2453.4042	2470.4172	---	---
11N20SISO	Ant1	2412	17.891	2403.1119	2421.0029	---	---
		2437	17.901	2428.1991	2446.1001	---	---
		2462	18.040	2452.8924	2470.9324	---	---
11N40SISO	Ant1	2422	36.661	2403.8181	2440.4791	---	---
		2437	36.097	2419.0736	2455.1706	---	---
		2452	36.130	2434.1264	2470.2564	---	---

Test Graphs

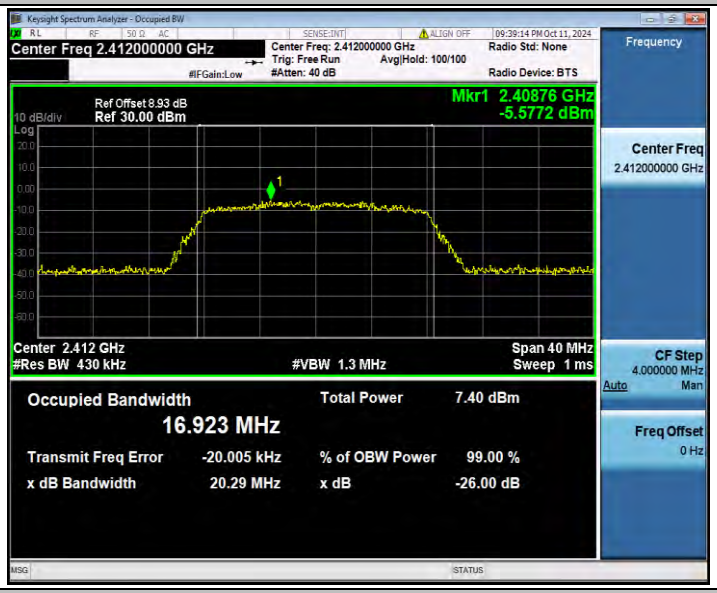
11B_Ant1_2412

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 C.3: Maximum conducted output power

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	7.06	≤30.00	PASS
		2437	6.67	≤30.00	PASS
		2462	8.93	≤30.00	PASS
11G	Ant1	2412	8.52	≤30.00	PASS
		2437	8.86	≤30.00	PASS
		2462	7.79	≤30.00	PASS
11N20SISO	Ant1	2412	8.16	≤30.00	PASS
		2437	8.44	≤30.00	PASS
		2462	8.24	≤30.00	PASS
11N40SISO	Ant1	2422	8.32	≤30.00	PASS
		2437	8.94	≤30.00	PASS
		2452	8.20	≤30.00	PASS

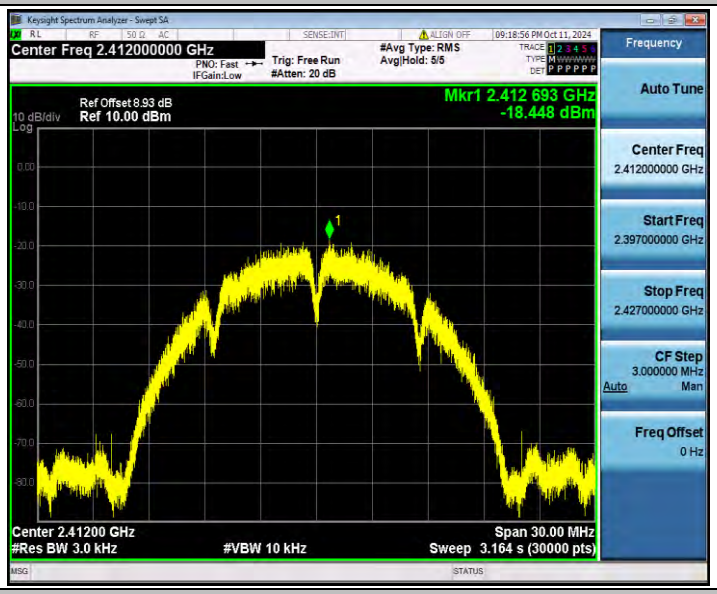
Appendix C.4: Maximum power spectral density

Test Result

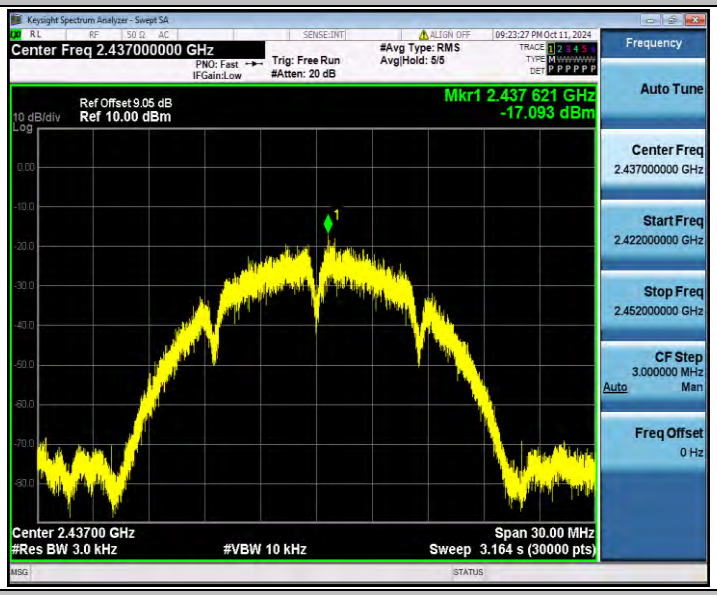
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-18.45	≤8.00	PASS
		2437	-17.09	≤8.00	PASS
		2462	-16.85	≤8.00	PASS
11G	Ant1	2412	-23.53	≤8.00	PASS
		2437	-22.34	≤8.00	PASS
		2462	-24.84	≤8.00	PASS
11N20SISO	Ant1	2412	-23.54	≤8.00	PASS
		2437	-23.43	≤8.00	PASS
		2462	-23.11	≤8.00	PASS
11N40SISO	Ant1	2422	-26.83	≤8.00	PASS
		2437	-23.42	≤8.00	PASS
		2452	-25.89	≤8.00	PASS

Test Graphs

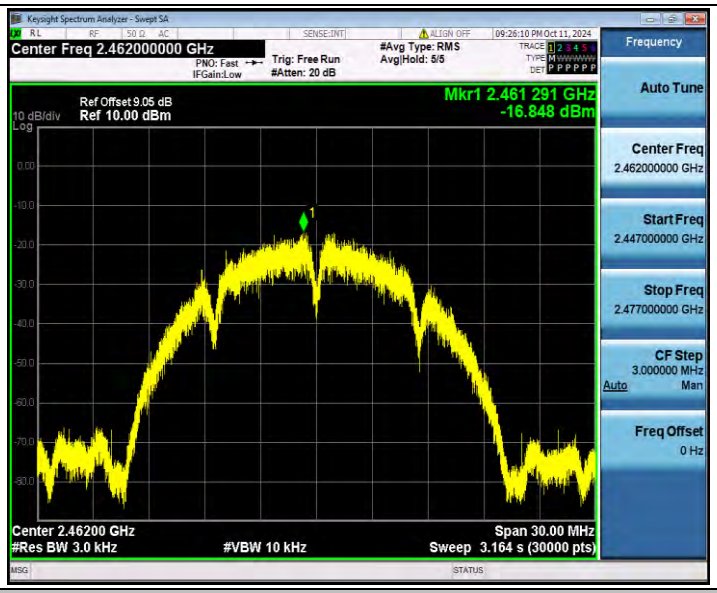
11B_Ant1_2412



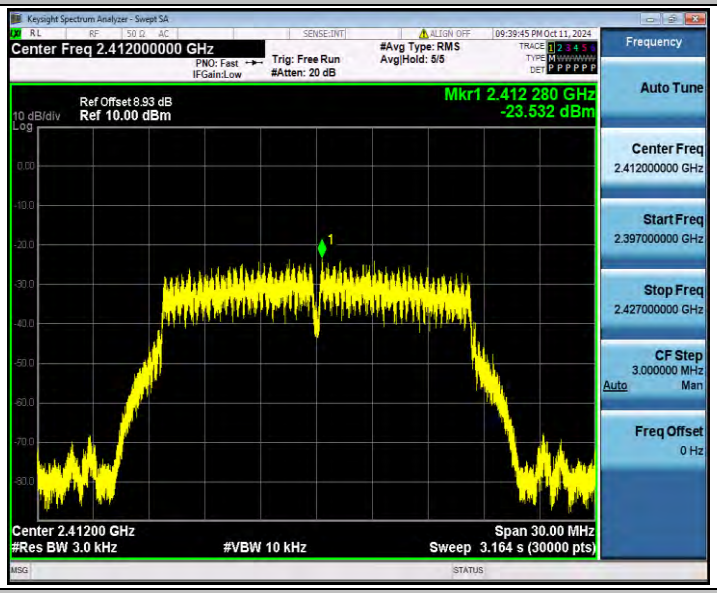
11B_Ant1_2437



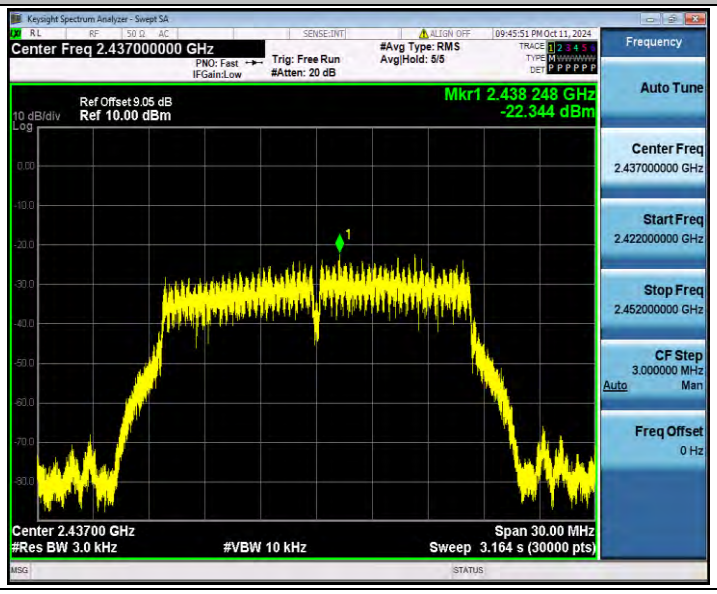
11B_Ant1_2462



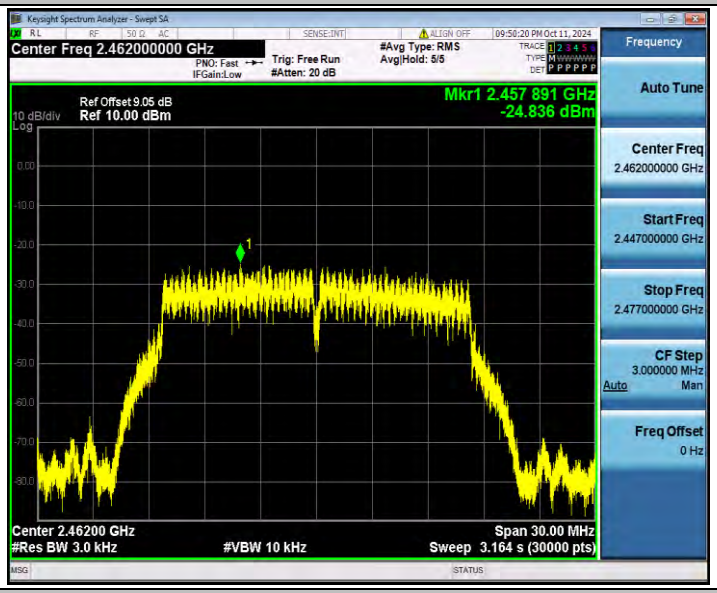
11G_Ant1_2412



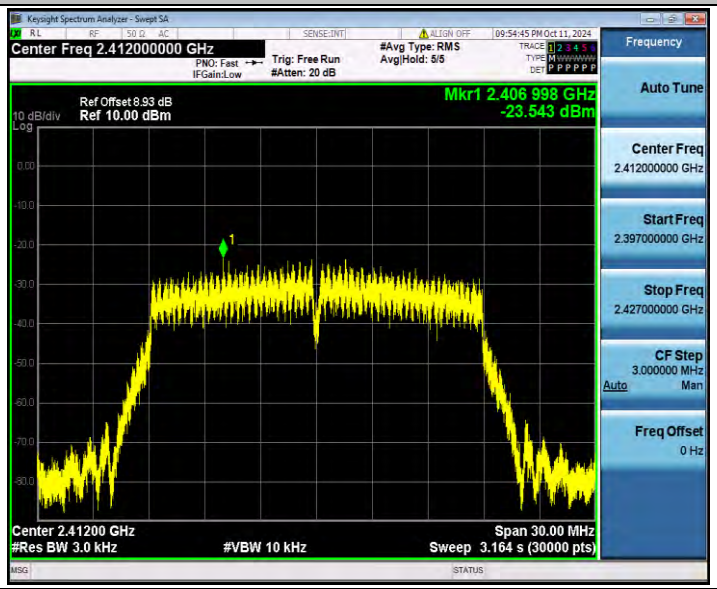
11G_Ant1_2437



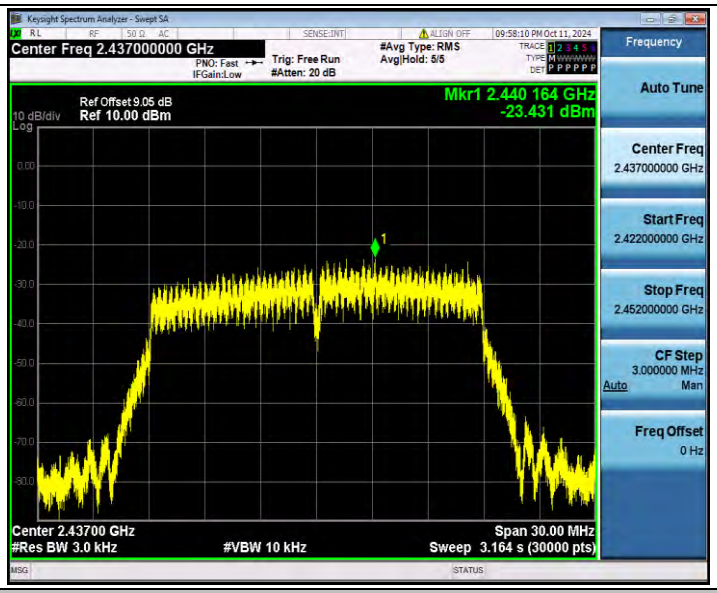
11G_Ant1_2462



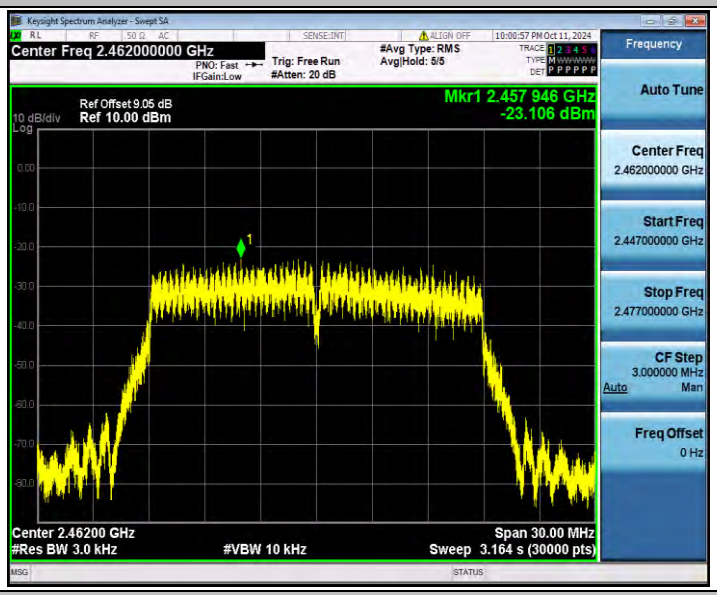
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422

11N40SISO_Ant1_2437

11N40SISO_Ant1_2452

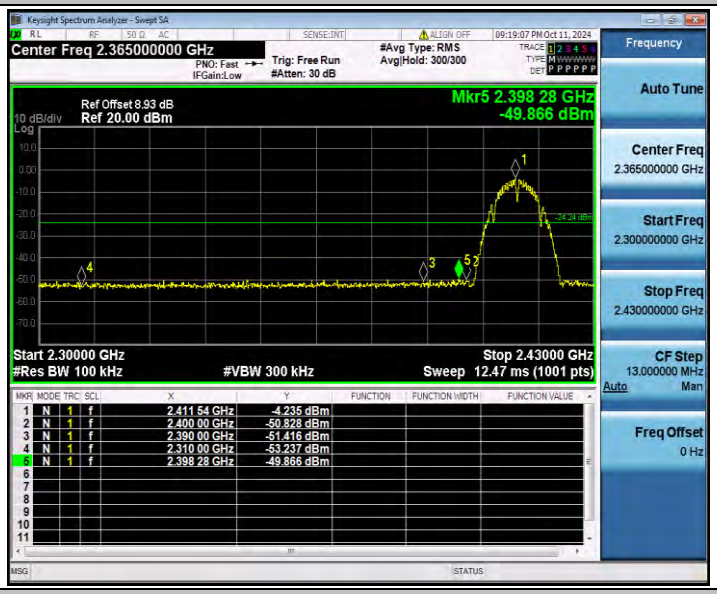
Appendix C.5: Band edge measurements

Test Result

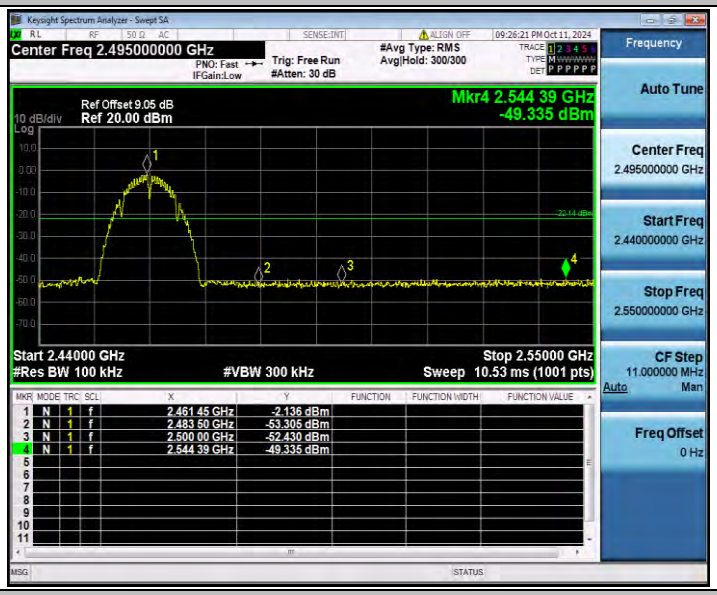
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-4.24	-49.87	≤-24.24	PASS
		High	2462	-2.14	-49.34	≤-22.14	PASS
11G	Ant1	Low	2412	-8.46	-49.39	≤-28.46	PASS
		High	2462	-10.23	-48.77	≤-30.23	PASS
11N20SISO	Ant1	Low	2412	-9.31	-49.26	≤-29.31	PASS
		High	2462	-8.04	-48.96	≤-28.04	PASS
11N40SISO	Ant1	Low	2422	-12.07	-48.63	≤-32.07	PASS
		High	2452	-11.46	-49.34	≤-31.46	PASS

Test Graphs

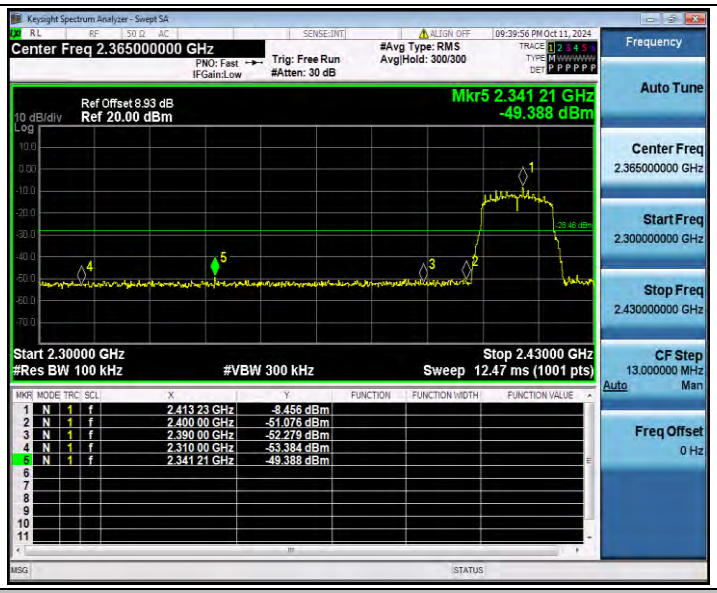
11B_Ant1_Low_2412



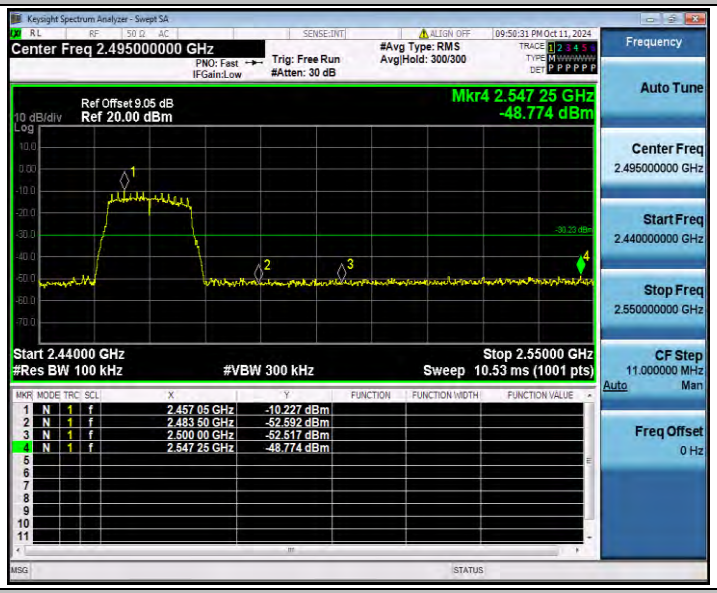
11B_Ant1_High_2462



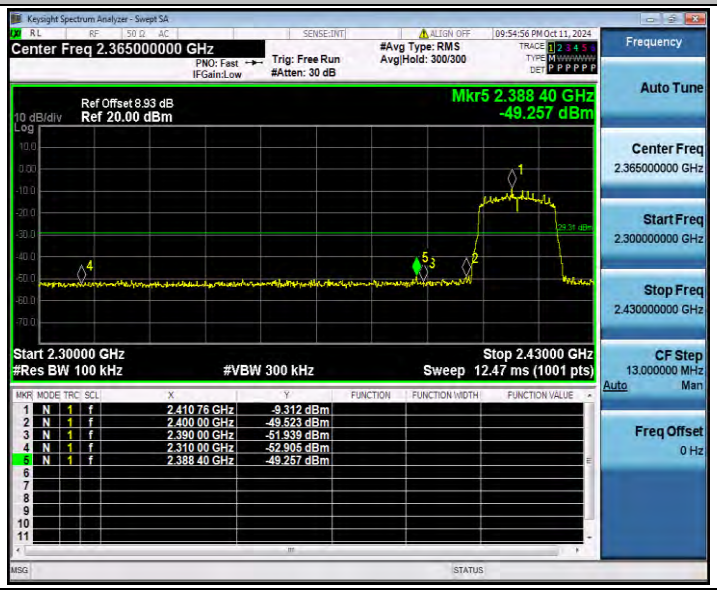
11G_Ant1_Low_2412



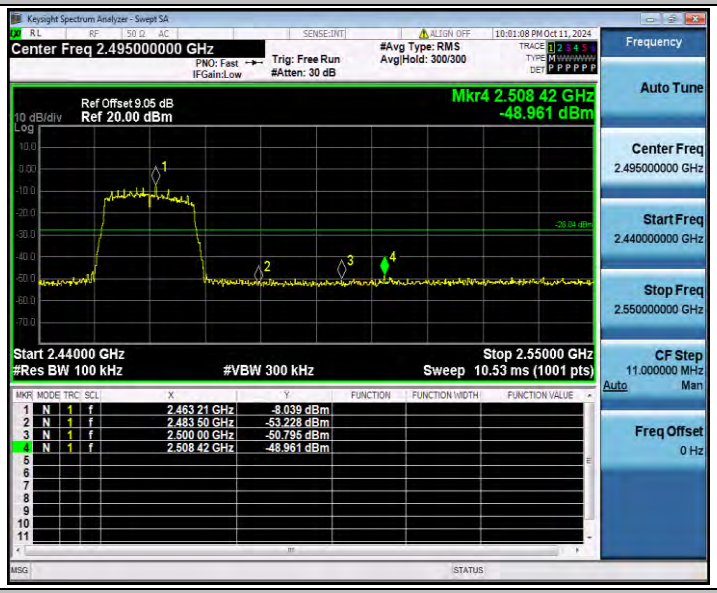
11G_Ant1_High_2462



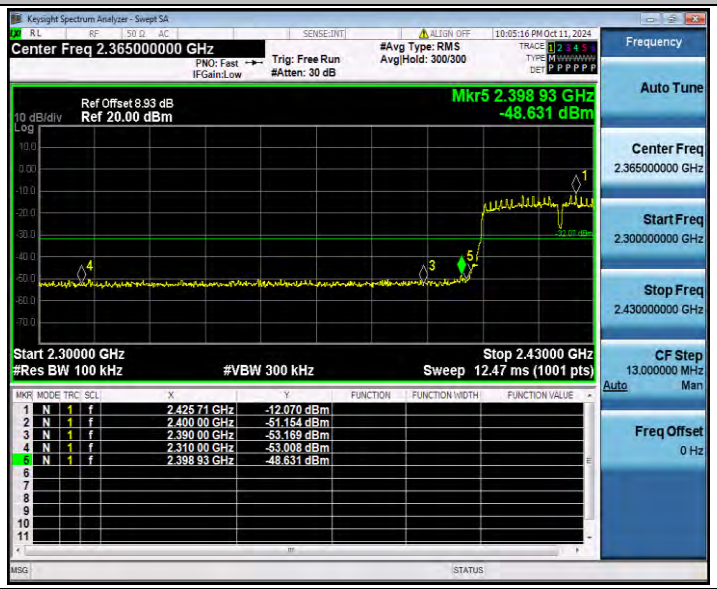
11N20SISO_Ant1_Low_2412



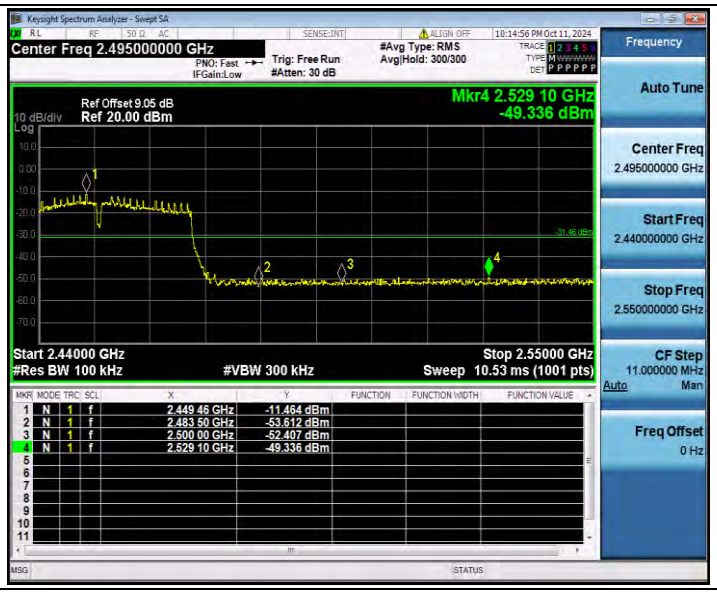
11N20SISO_Ant1_High_2462



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
10:14:56 PM Oct 11, 2024
Ref Offset 9.05 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.529 10 GHz
-49.336 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 -11.464 dBm
2 N 1 f 2.483 50 GHz -53.612 dBm
3 N 1 f 2.500 00 GHz -52.407 dBm
4 N 1 f 2.529 10 GHz -49.336 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 C.6: Conducted Spurious Emission

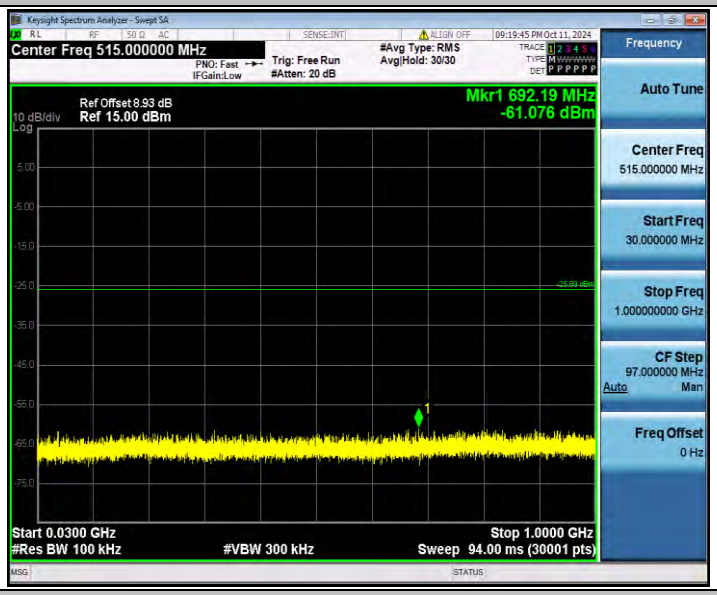
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-5.89	-5.89	---	PASS
			30~1000	-5.89	-61.08	≤-25.89	PASS
			1000~26500	-5.89	-46.66	≤-25.89	PASS
		2437	Reference	-6.22	-6.22	---	PASS
			30~1000	-6.22	-60.83	≤-26.22	PASS
			1000~26500	-6.22	-47.64	≤-26.22	PASS
		2462	Reference	-4.26	-4.26	---	PASS
			30~1000	-4.26	-60.29	≤-24.26	PASS
			1000~26500	-4.26	-47.58	≤-24.26	PASS
11G	Ant1	2412	Reference	-12.29	-12.29	---	PASS
			30~1000	-12.29	-60.8	≤-32.29	PASS
			1000~26500	-12.29	-47.68	≤-32.29	PASS
		2437	Reference	-11.46	-11.46	---	PASS
			30~1000	-11.46	-47.85	≤-31.46	PASS
			1000~26500	-11.46	-47.02	≤-31.46	PASS
		2462	Reference	-10.97	-10.97	---	PASS
			30~1000	-10.97	-60.54	≤-30.97	PASS
			1000~26500	-10.97	-47.2	≤-30.97	PASS
11N20SISO	Ant1	2412	Reference	-11.29	-11.29	---	PASS
			30~1000	-11.29	-59.9	≤-31.29	PASS
			1000~26500	-11.29	-47.1	≤-31.29	PASS
		2437	Reference	-11.06	-11.06	---	PASS
			30~1000	-11.06	-59.83	≤-31.06	PASS
			1000~26500	-11.06	-47.78	≤-31.06	PASS
		2462	Reference	-9.78	-9.78	---	PASS
			30~1000	-9.78	-60.27	≤-29.78	PASS
			1000~26500	-9.78	-47.7	≤-29.78	PASS
11N40SISO	Ant1	2422	Reference	-12.66	-12.66	---	PASS
			30~1000	-12.66	-60.78	≤-32.66	PASS
			1000~26500	-12.66	-47.59	≤-32.66	PASS
		2437	Reference	-12.35	-12.35	---	PASS
			30~1000	-12.35	-38.15	≤-32.35	PASS
			1000~26500	-12.35	-47.37	≤-32.35	PASS
		2452	Reference	-11.47	-11.47	---	PASS
			30~1000	-11.47	-60.63	≤-31.47	PASS
			1000~26500	-11.47	-47.9	≤-31.47	PASS

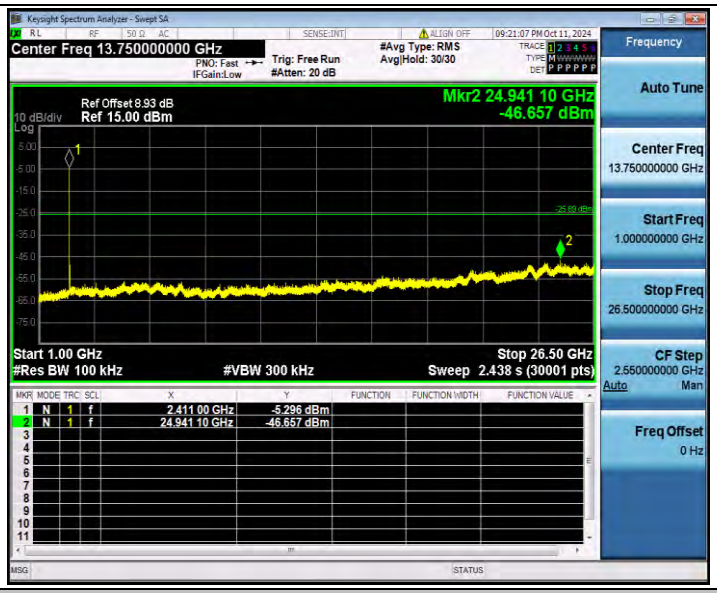
Test Graphs

11B_Ant1_2412_0~Reference

11B_Ant1_2412_30~1000

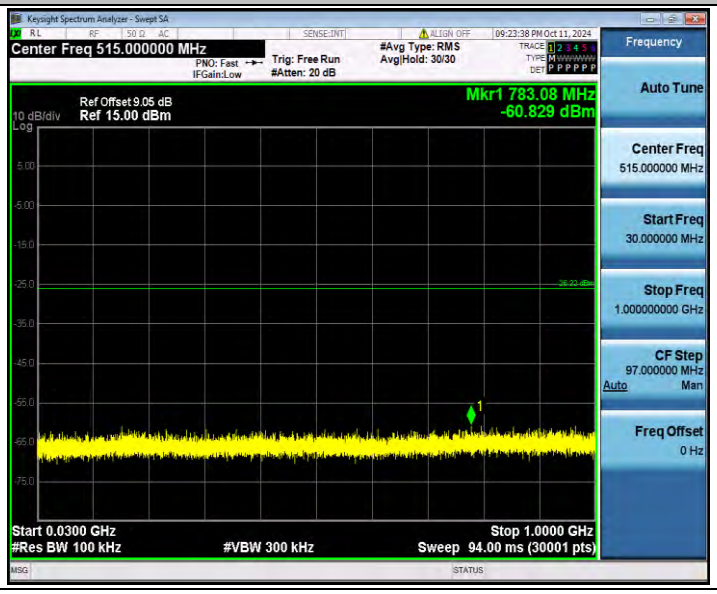


11B_Ant1_2412_1000~26500

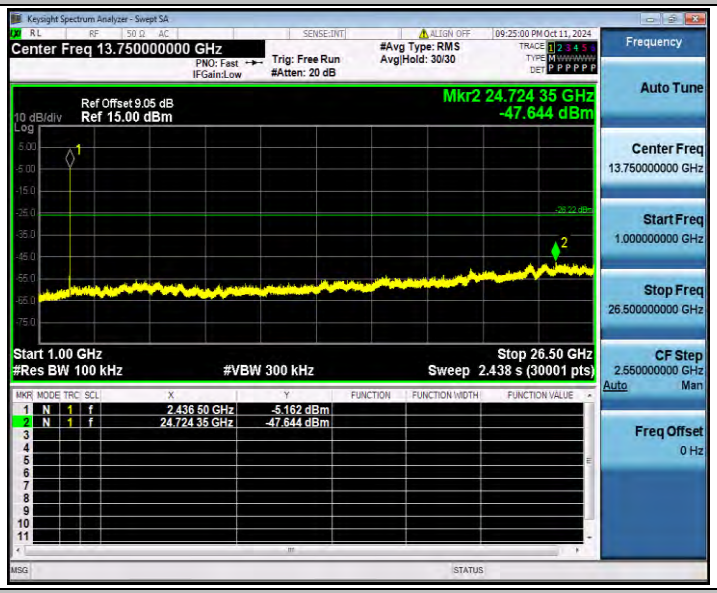


11B_Ant1_2437_0~Reference

11B_Ant1_2437_30~1000



11B_Ant1_2437_1000~26500



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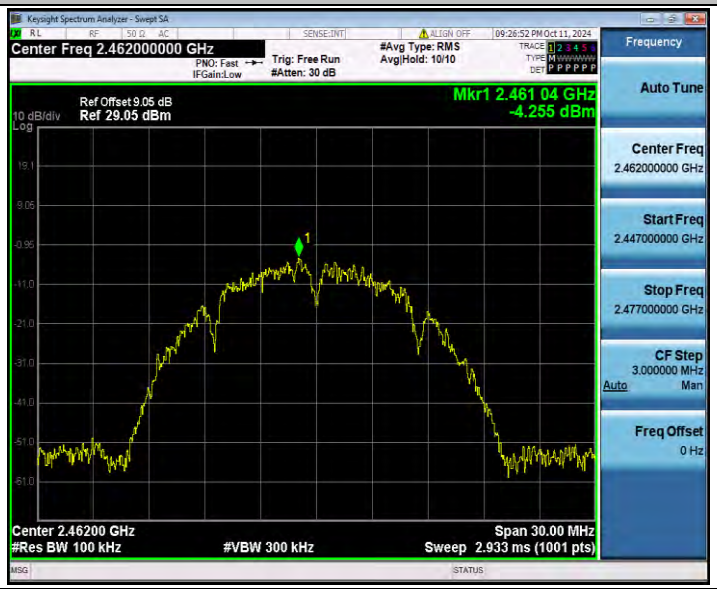

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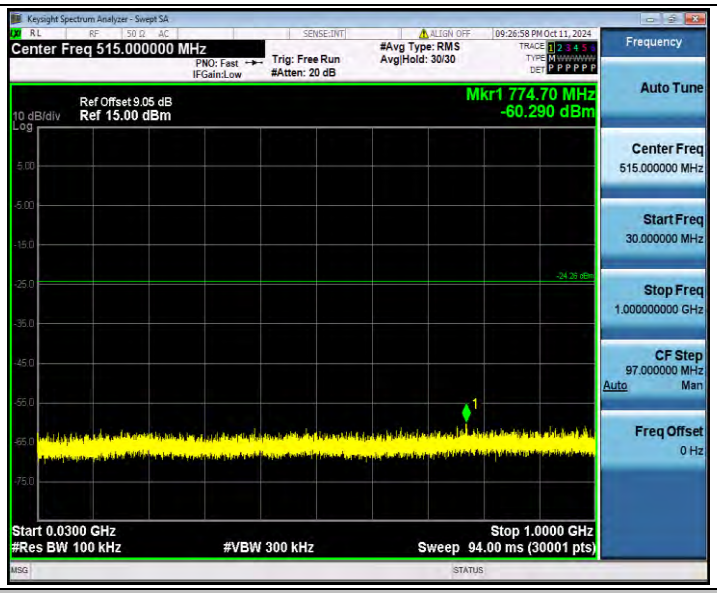

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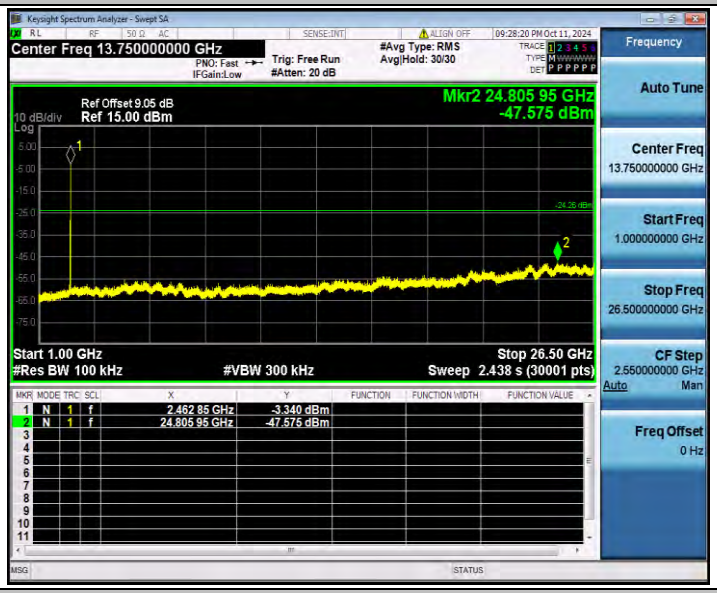
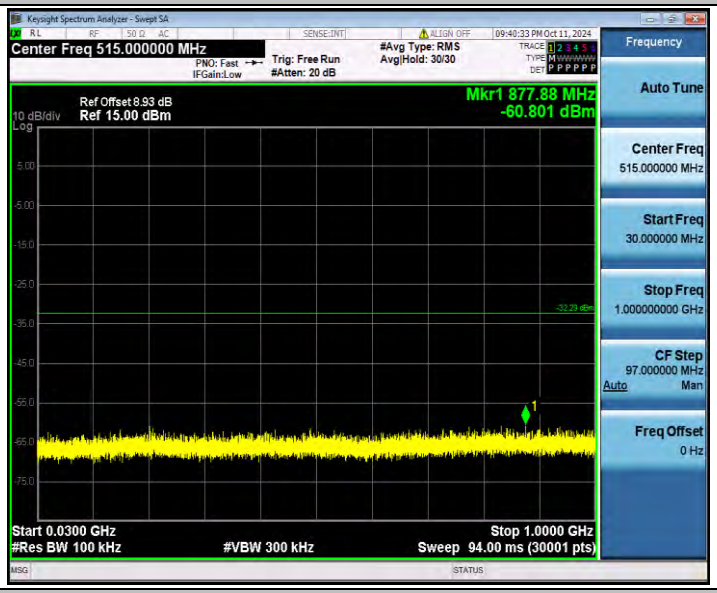


11G_Ant1_2412_0~Reference

11G_Ant1_2412_30~1000

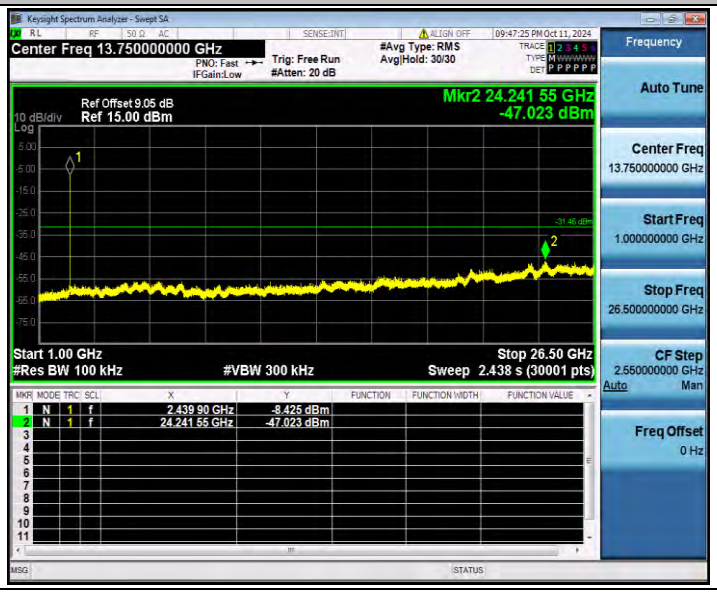


11G_Ant1_2412_1000~26500

11G_Ant1_2437_0~Reference

11G_Ant1_2437_30~1000

11G_Ant1_2437_1000~26500



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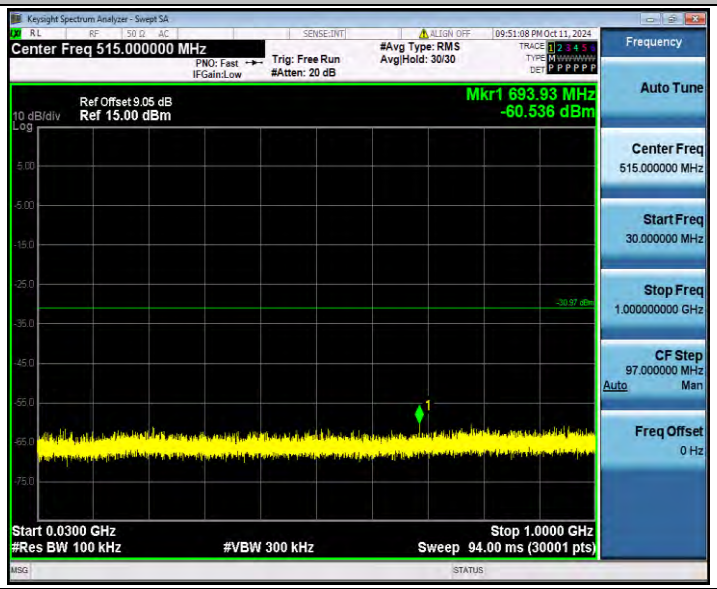
11G_Ant1_2462_30~1000



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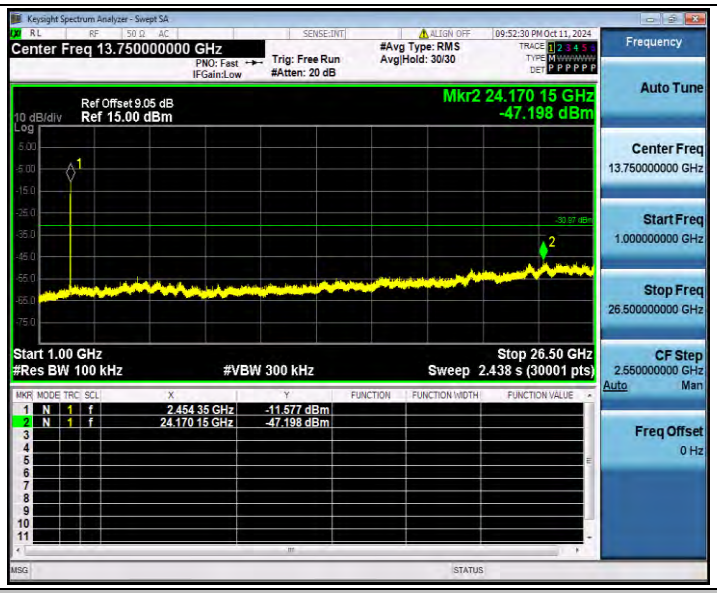
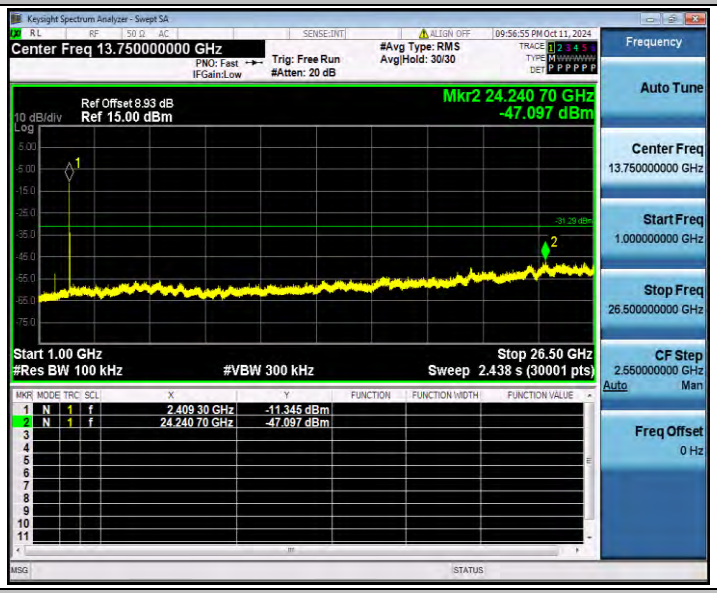


11N20SISO_Ant1_2412_0~Reference

11N20SISO_Ant1_2412_30~1000

11N20SISO_Ant1_2412_1000~26500



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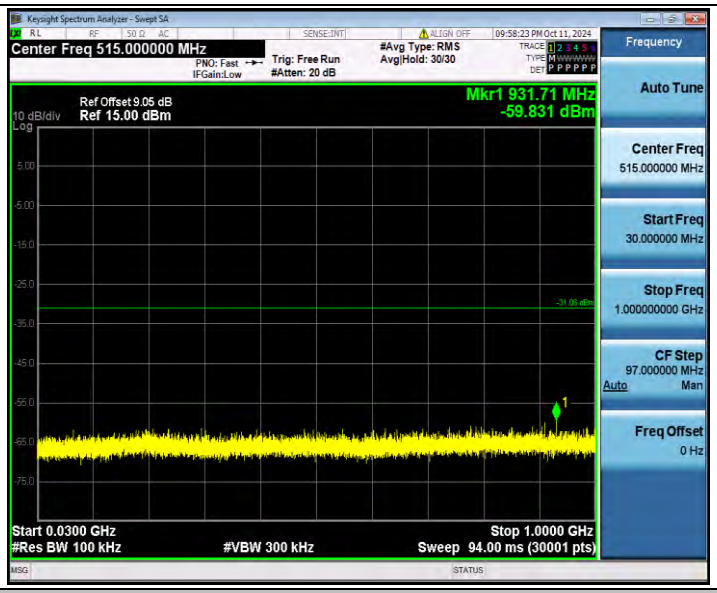
11N20SISO_Ant1_2437_30~1000



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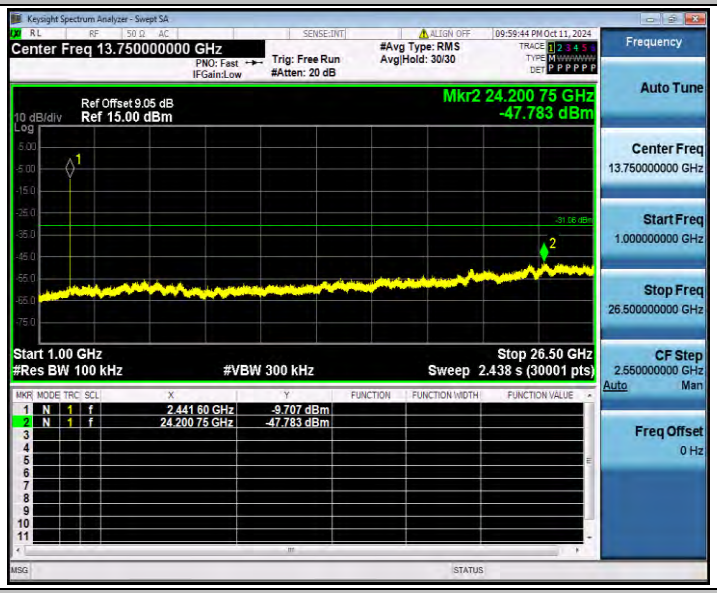

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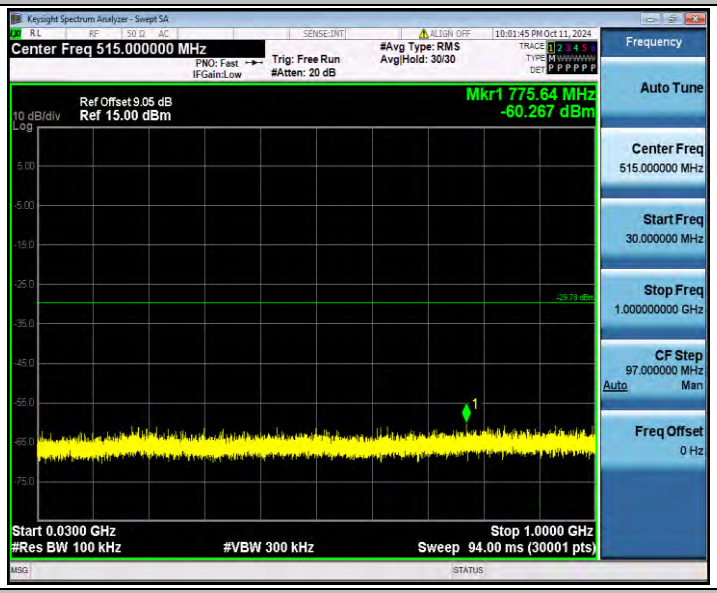
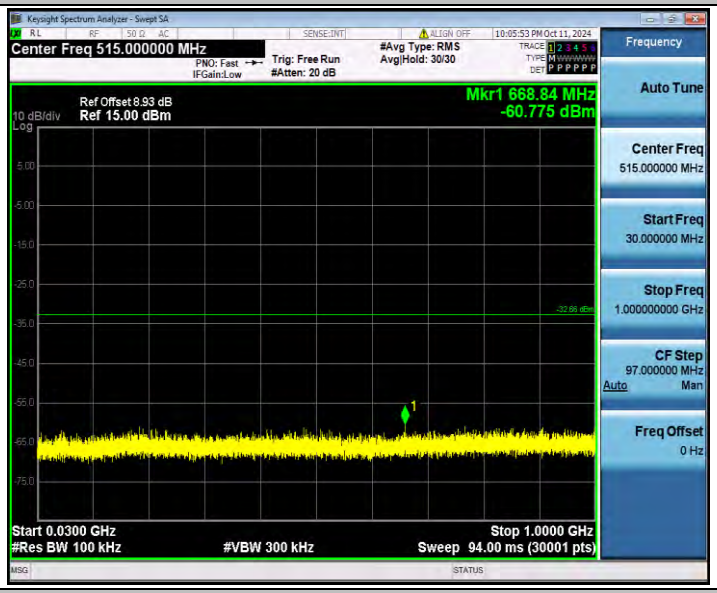
11N20SISO_Ant1_2462_30~1000



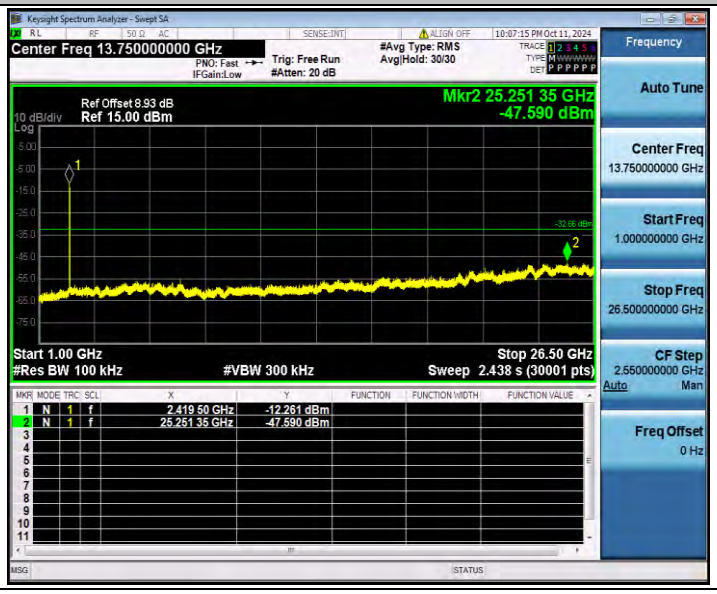
11N20SISO_Ant1_2462_1000~26500

11N40SISO_Ant1_2422_0~Reference

11N40SISO_Ant1_2422_30~1000

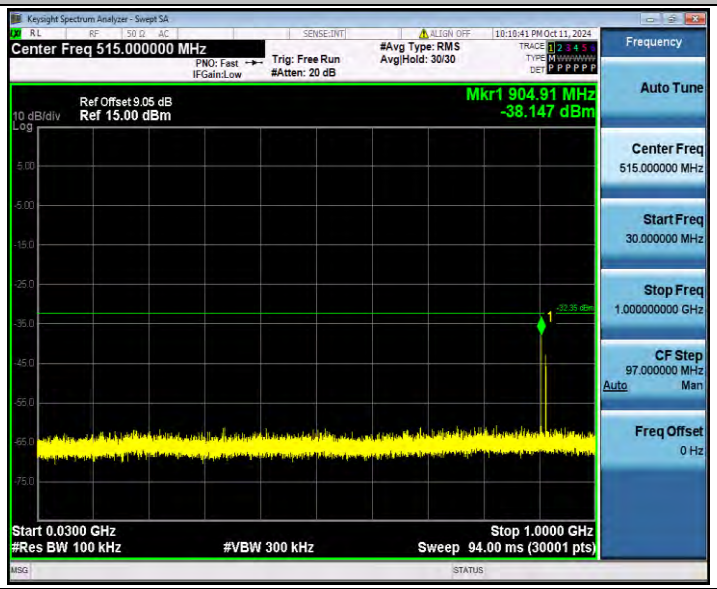


11N40SISO_Ant1_2422_1000~26500

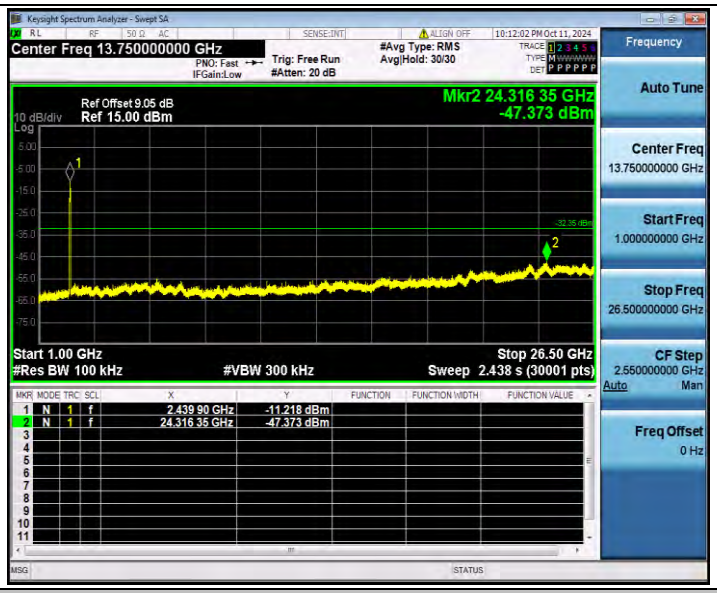


11N40SISO_Ant1_2437_0~Reference

11N40SISO_Ant1_2437_30~1000

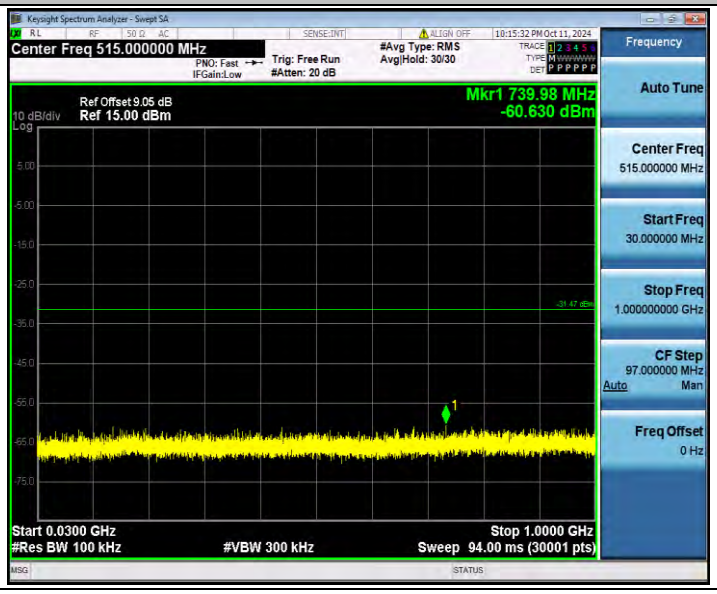


11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference

11N40SISO_Ant1_2452_30~1000



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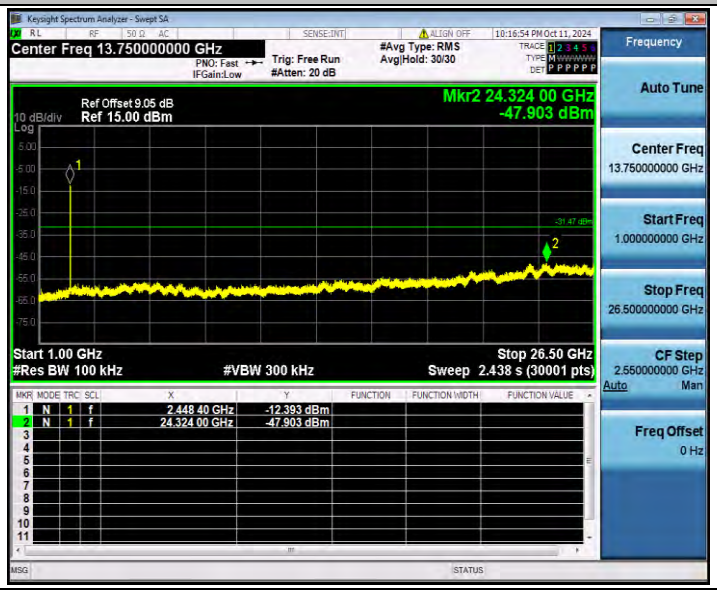


Appendix C.7: Emissions in Restricted Bands

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	-49.63	≤-41.20	45.57	≤54	PASS
				AV	2388.790	-49.22	≤-41.20	45.98	≤54	PASS
				AV	2390.000	-49.29	≤-41.20	45.91	≤54	PASS
				Peak	2310.000	-41.35	≤-21.20	53.85	≤74	PASS
				Peak	2336.010	-40.44	≤-21.20	54.76	≤74	PASS
				Peak	2390.000	-45.68	≤-21.20	49.52	≤74	PASS
		High	2462	AV	2483.500	-49.06	≤-41.20	46.14	≤54	PASS
				AV	2499.510	-48.93	≤-41.20	46.27	≤54	PASS
				AV	2500.000	-48.95	≤-41.20	46.25	≤54	PASS
				Peak	2483.500	-43.54	≤-21.20	51.66	≤74	PASS
				Peak	2484.000	-39.65	≤-21.20	55.55	≤74	PASS
				Peak	2500.000	-49.02	≤-21.20	46.18	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.62	≤-41.20	45.58	≤54	PASS
				AV	2389.960	-49.22	≤-41.20	45.98	≤54	PASS
				AV	2390.000	-49.22	≤-41.20	45.98	≤54	PASS
				Peak	2310.000	-48.22	≤-21.20	46.98	≤74	PASS
				Peak	2323.790	-39.49	≤-21.20	55.71	≤74	PASS
				Peak	2390.000	-43.49	≤-21.20	51.71	≤74	PASS
		High	2462	AV	2483.500	-49.06	≤-41.20	46.14	≤54	PASS
				AV	2499.070	-48.93	≤-41.20	46.27	≤54	PASS
				AV	2500.000	-48.95	≤-41.20	46.25	≤54	PASS
				Peak	2483.500	-44.26	≤-21.20	50.94	≤74	PASS
				Peak	2493.790	-39.77	≤-21.20	55.43	≤74	PASS
				Peak	2500.000	-50.93	≤-21.20	44.27	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-49.63	≤-41.20	45.57	≤54	PASS
				AV	2389.960	-49.23	≤-41.20	45.97	≤54	PASS
				AV	2390.000	-49.23	≤-41.20	45.97	≤54	PASS
				Peak	2310.000	-47.99	≤-21.20	47.21	≤74	PASS
				Peak	2353.690	-40.26	≤-21.20	54.94	≤74	PASS
				Peak	2390.000	-49.34	≤-21.20	45.86	≤74	PASS
		High	2462	AV	2483.500	-48.96	≤-41.20	46.24	≤54	PASS
				AV	2484.990	-48.93	≤-41.20	46.27	≤54	PASS
				AV	2500.000	-48.95	≤-41.20	46.25	≤54	PASS
				Peak	2483.500	-44.86	≤-21.20	50.34	≤74	PASS
				Peak	2497.530	-40.52	≤-21.20	54.68	≤74	PASS

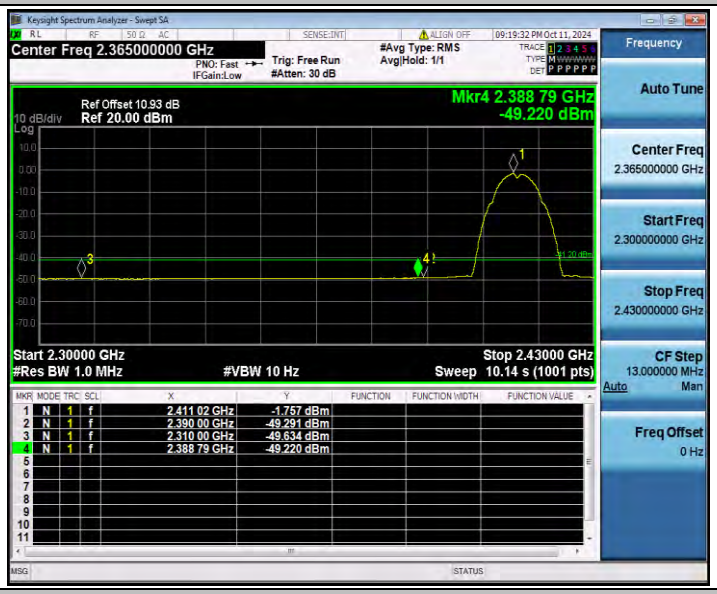
				Peak	2500.000	-47.45	≤-21.20	47.75	≤74	PASS
11N40SISO	Ant1	Low	2422	AV	2310.000	-49.63	≤-41.20	45.57	≤54	PASS
				AV	2389.960	-49.25	≤-41.20	45.95	≤54	PASS
				AV	2390.000	-49.25	≤-41.20	45.95	≤54	PASS
				Peak	2310.000	-42.47	≤-21.20	52.73	≤74	PASS
				Peak	2375.010	-41	≤-21.20	54.20	≤74	PASS
				Peak	2390.000	-47.46	≤-21.20	47.74	≤74	PASS
		High	2452	AV	2483.500	-48.95	≤-41.20	46.25	≤54	PASS
				AV	2499.840	-48.91	≤-41.20	46.29	≤54	PASS
				AV	2500.000	-48.95	≤-41.20	46.25	≤54	PASS
				Peak	2483.500	-46.99	≤-21.20	48.21	≤74	PASS
				Peak	2489.170	-41.14	≤-21.20	54.06	≤74	PASS
				Peak	2500.000	-44.48	≤-21.20	50.72	≤74	PASS

Note：

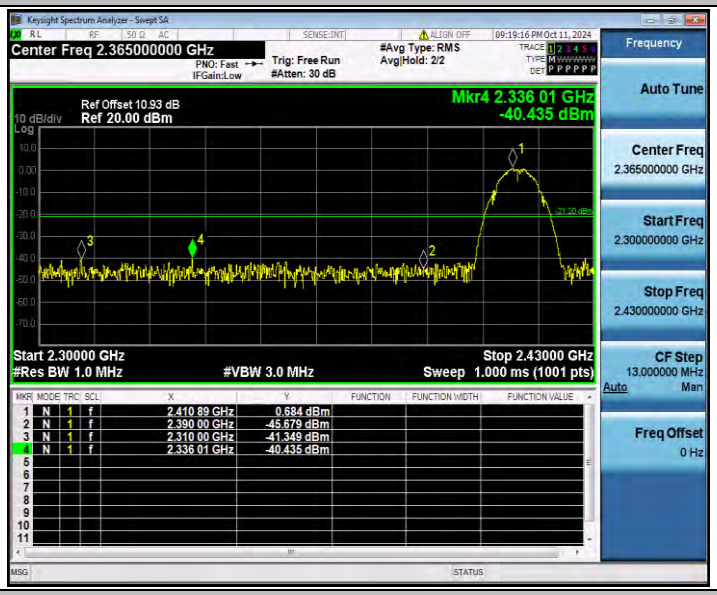
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

11B_Ant1_Low_2412_AV



11B_Ant1_Low_2412_Peak



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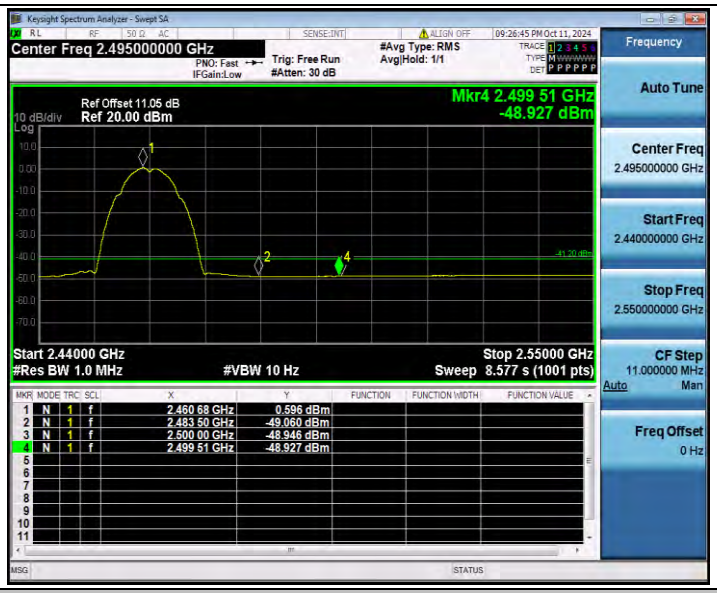
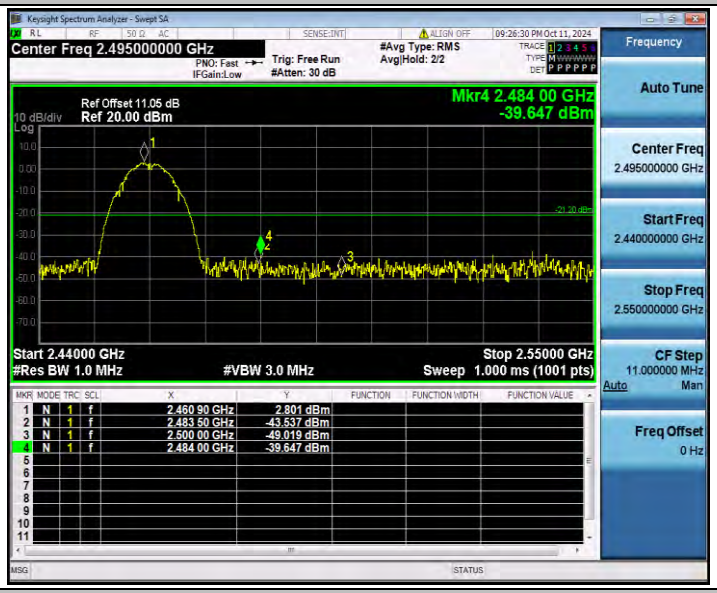


11B_Ant1_High_2462_Peak



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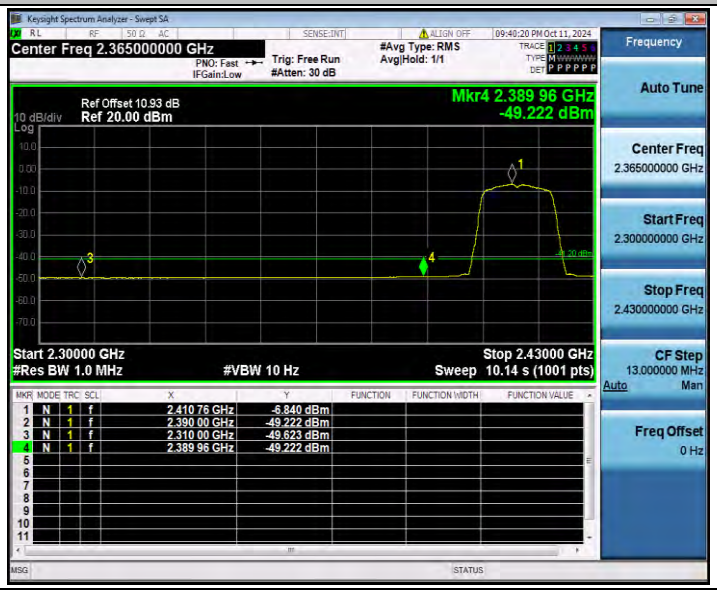

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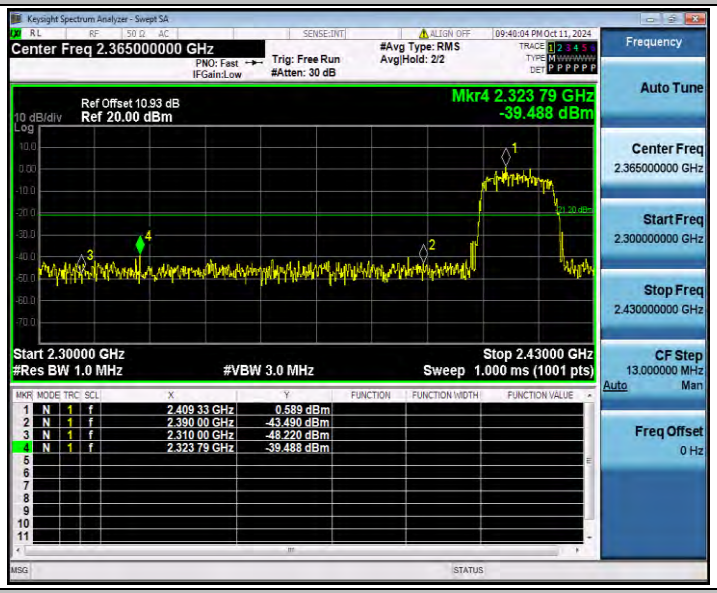

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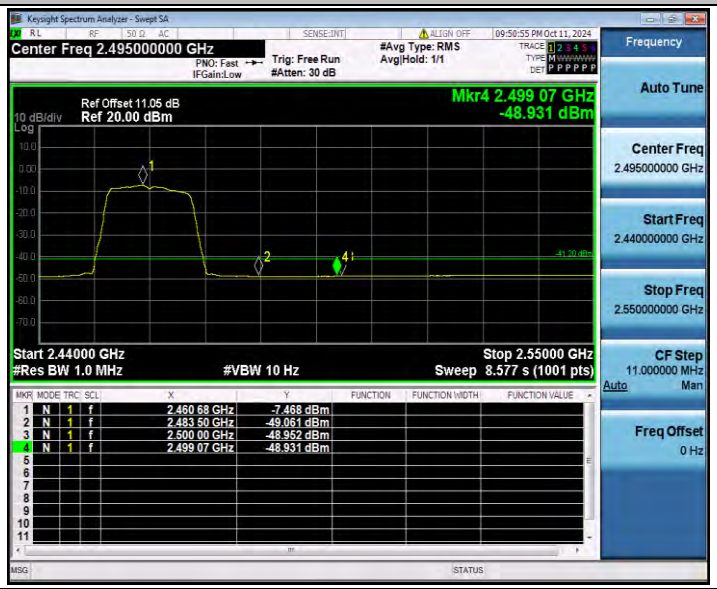
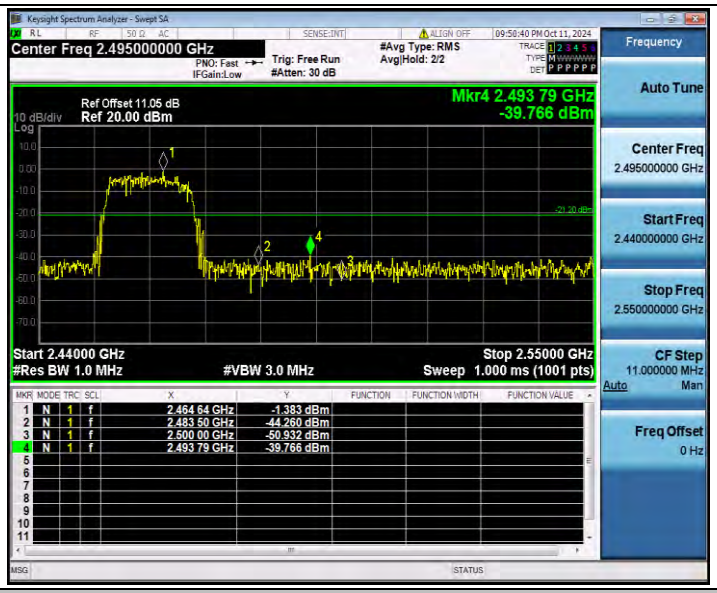
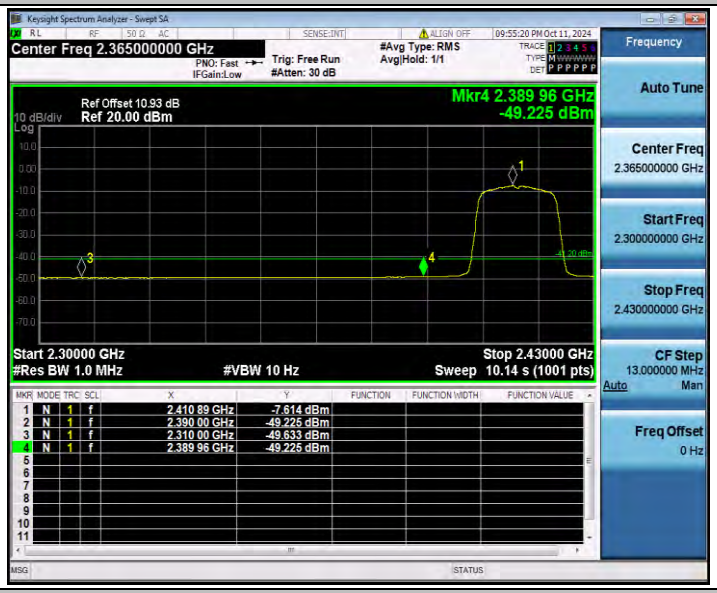


11G_Ant1_High_2462_Peak



11N20SISO_Ant1_Low_2412_AV



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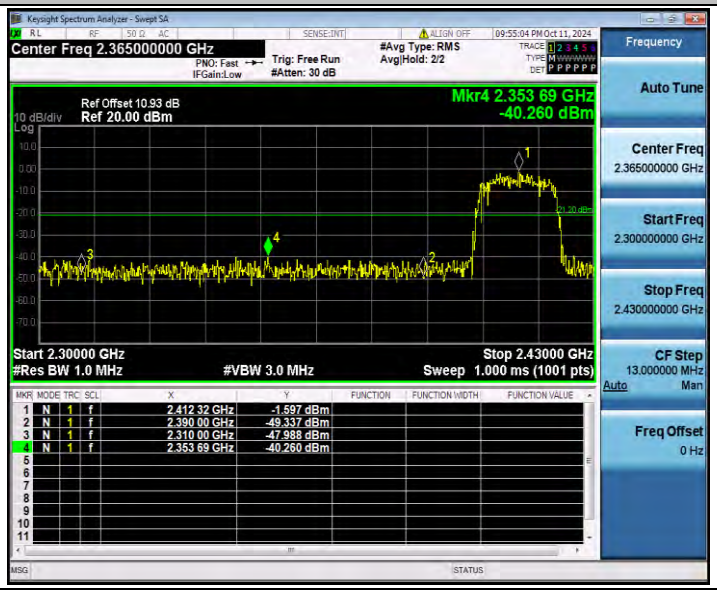

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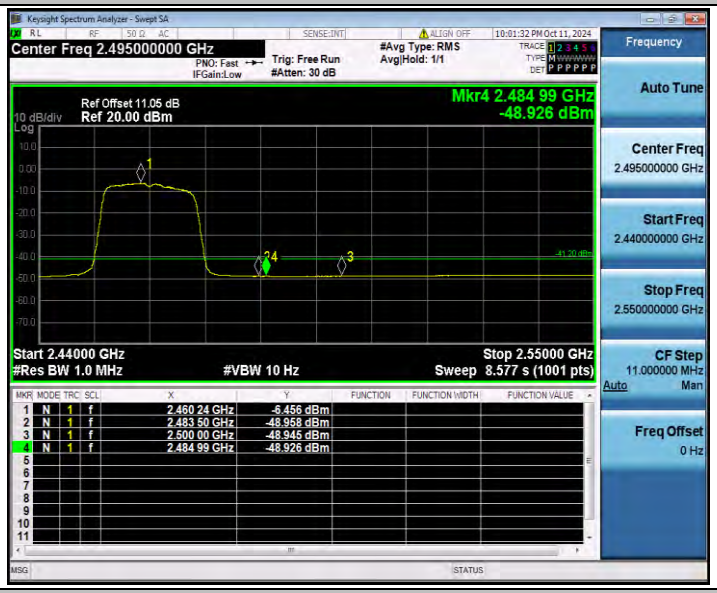
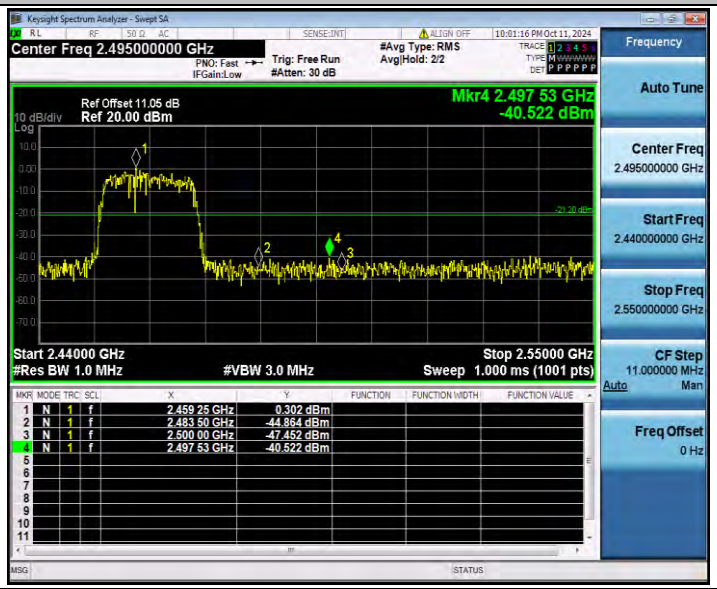


11N20SISO_Ant1_High_2462_Peak



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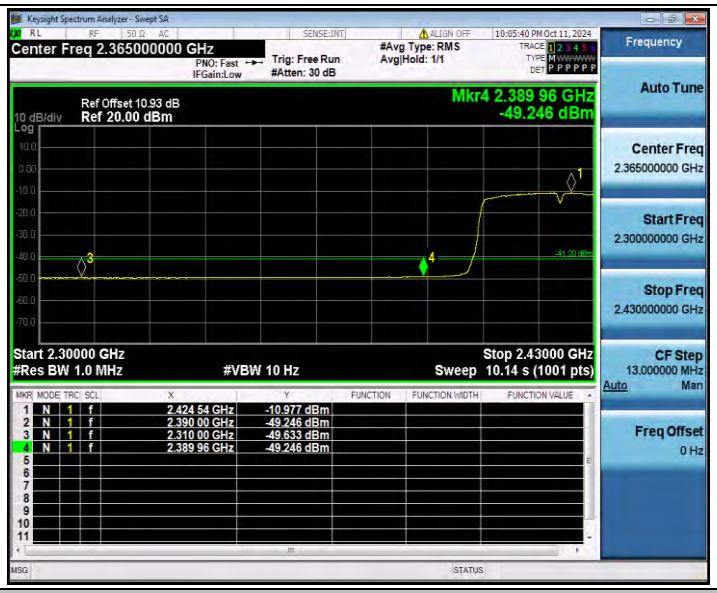
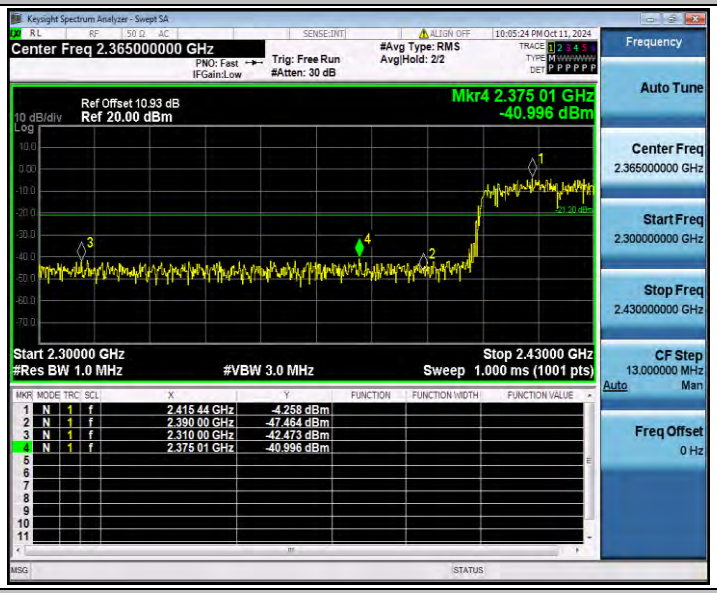


11N40SISO_Ant1_Low_2422_Peak



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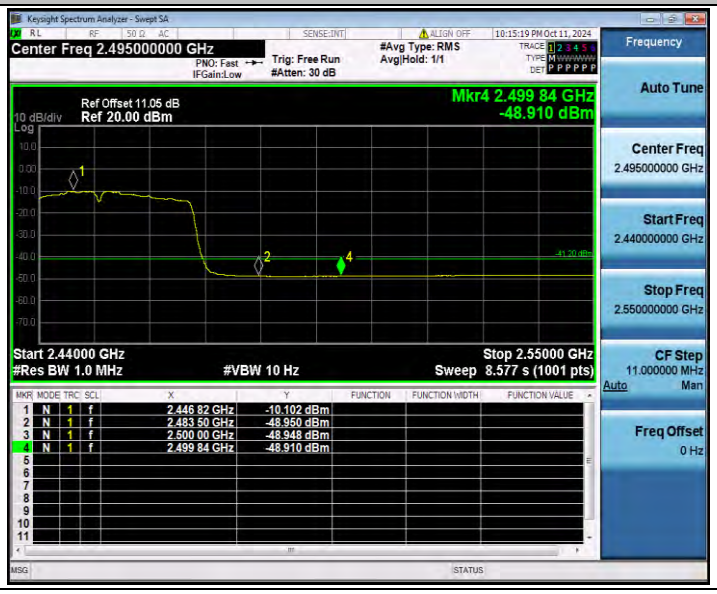
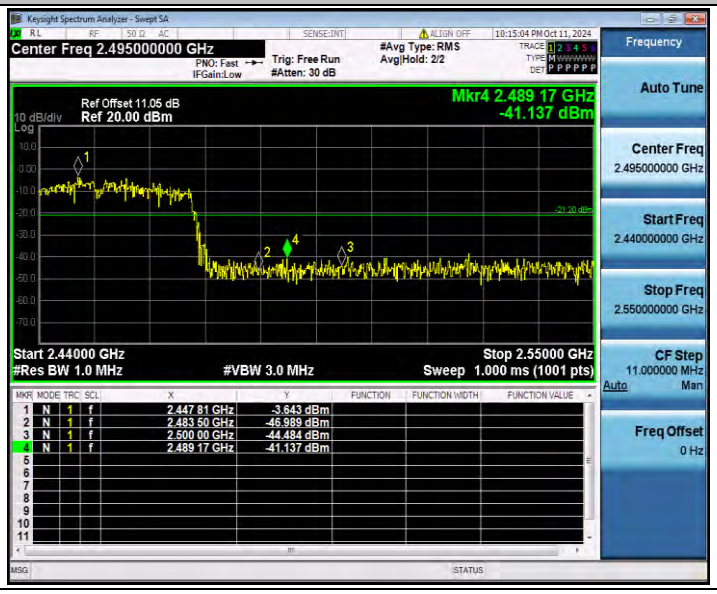
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