

Case No. : <u>GTS20250304004-1-05</u>	
Ambient Condition: <u>22</u> °C, <u>56</u> %RH,	
Test Date: <u>2025.3.6</u>	Test Engineer: <u>Evan ouyang</u>

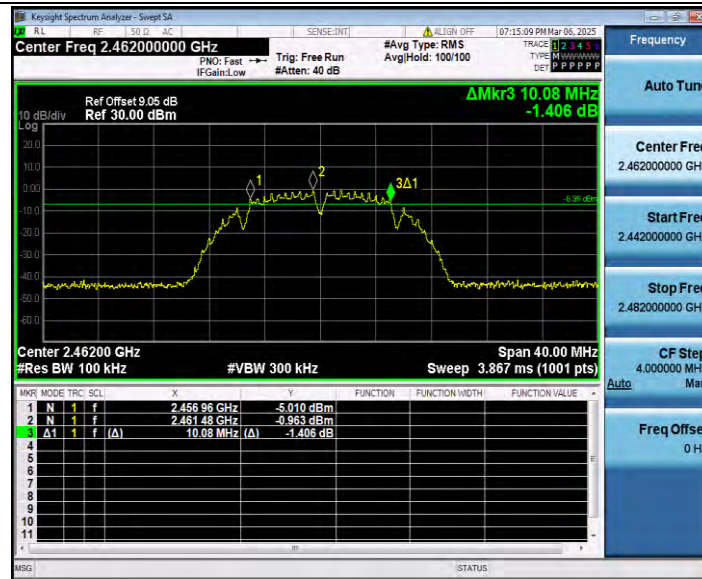
Appendix A.1: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
		2437	10.040	2432.000	2442.040	0.5	PASS
		2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	15.120	2404.440	2419.560	0.5	PASS
		2437	15.120	2429.440	2444.560	0.5	PASS
		2462	15.120	2454.440	2469.560	0.5	PASS
11N20SISO	Ant1	2412	15.080	2404.480	2419.560	0.5	PASS
		2437	15.120	2429.440	2444.560	0.5	PASS
		2462	15.120	2454.440	2469.560	0.5	PASS
11N40SISO	Ant1	2422	35.040	2404.480	2439.520	0.5	PASS
		2437	35.040	2419.480	2454.520	0.5	PASS
		2452	33.840	2435.680	2469.520	0.5	PASS

Test Graphs





11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



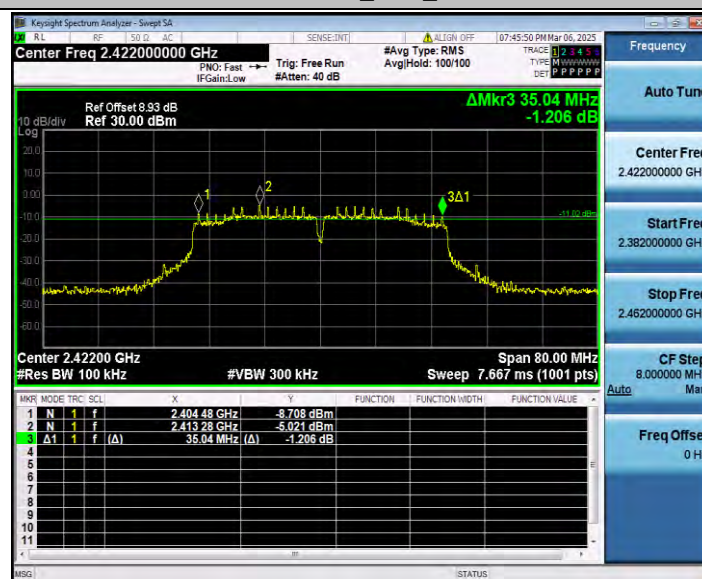
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



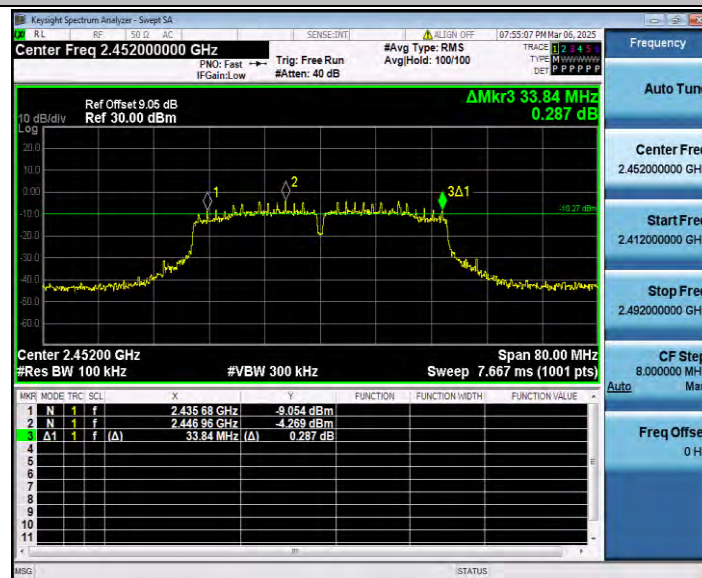
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



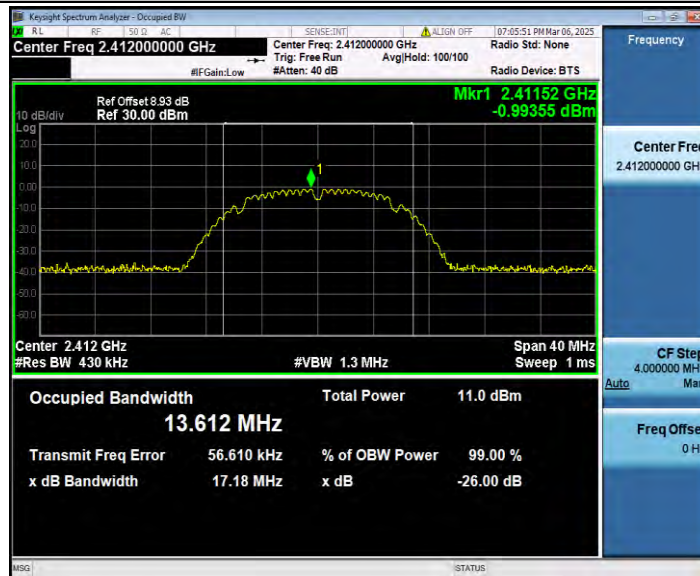
Appendix A.2: Occupied Channel Bandwidth

Test Result

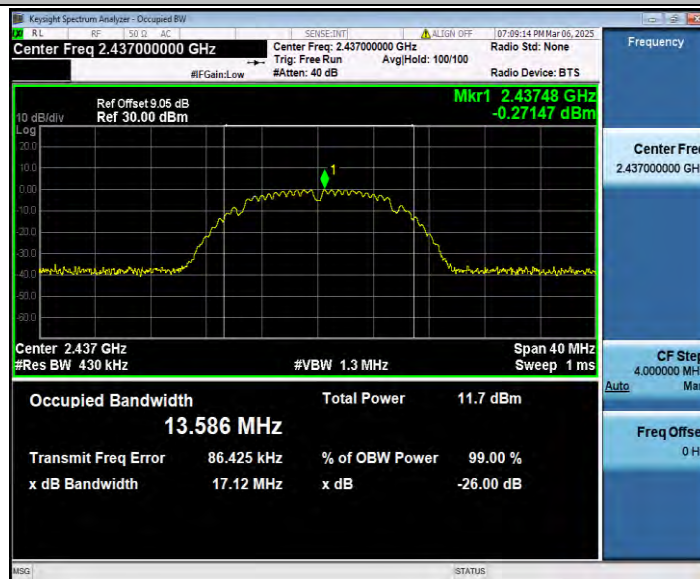
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.612	2405.2506	2418.8626	---	---
		2437	13.586	2430.2934	2443.8794	---	---
		2462	13.525	2455.2584	2468.7834	---	---
11G	Ant1	2412	16.942	2403.5637	2420.5057	---	---
		2437	16.822	2428.6774	2445.4994	---	---
		2462	16.781	2453.6316	2470.4126	---	---
11N20SISO	Ant1	2412	17.956	2403.0989	2421.0549	---	---
		2437	17.968	2428.0901	2446.0581	---	---
		2462	17.883	2453.0682	2470.9512	---	---
11N40SISO	Ant1	2422	36.083	2403.9183	2440.0013	---	---
		2437	36.061	2419.0050	2455.0660	---	---
		2452	36.005	2434.0563	2470.0613	---	---

Test Graphs

11B_Ant1_2412



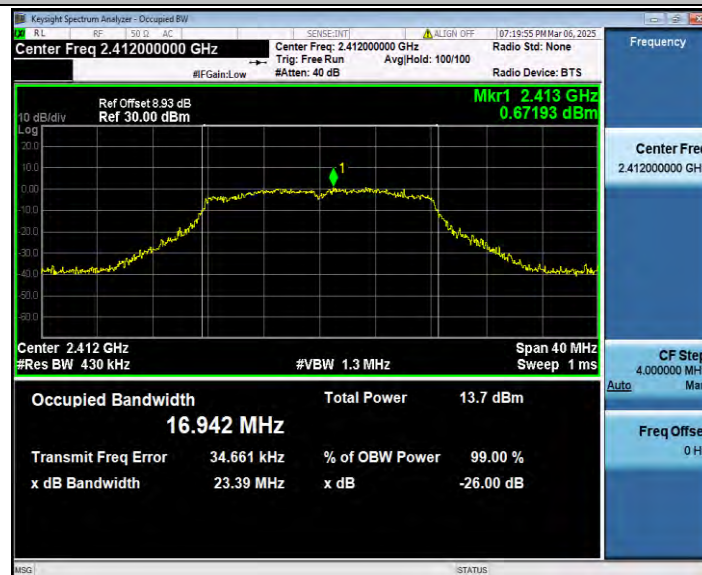
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



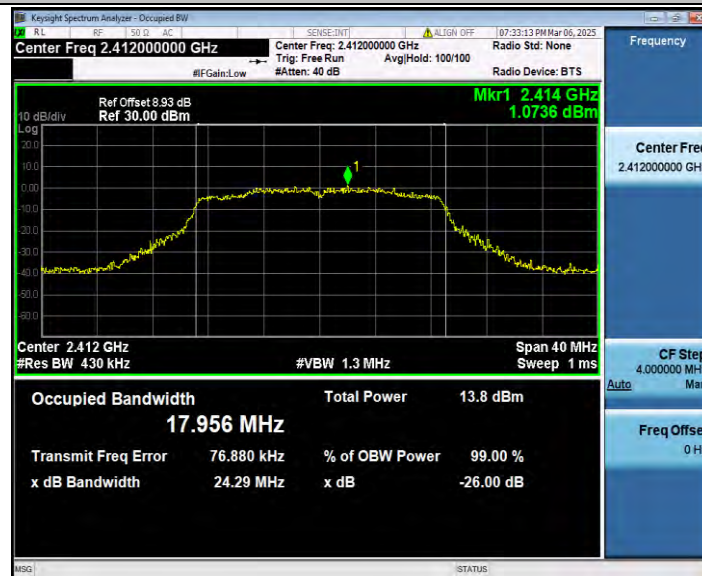
11G_Ant1_2437



11G_Ant1_2462



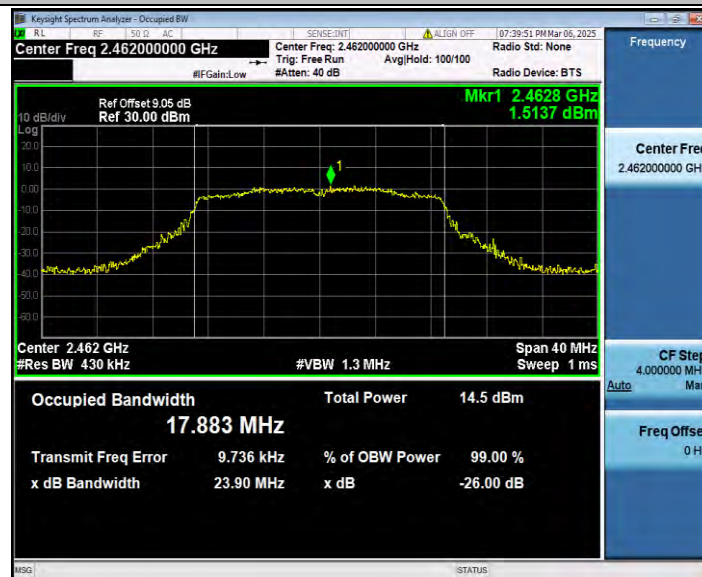
11N20SISO_Ant1_2412



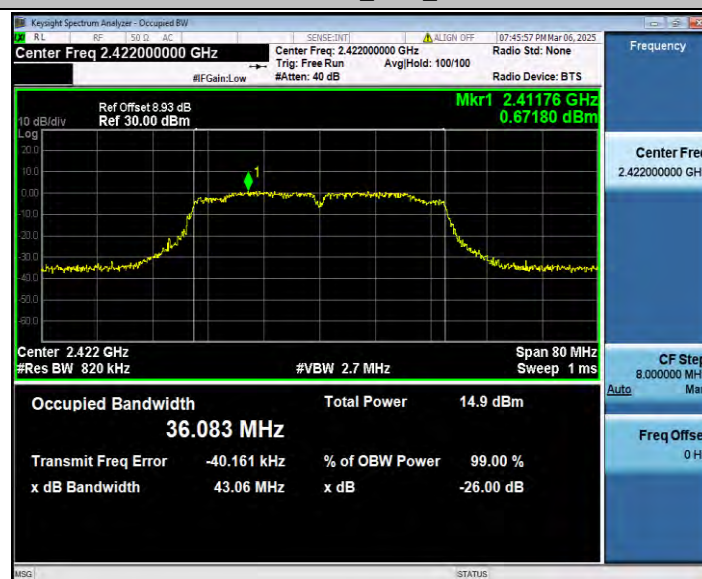
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



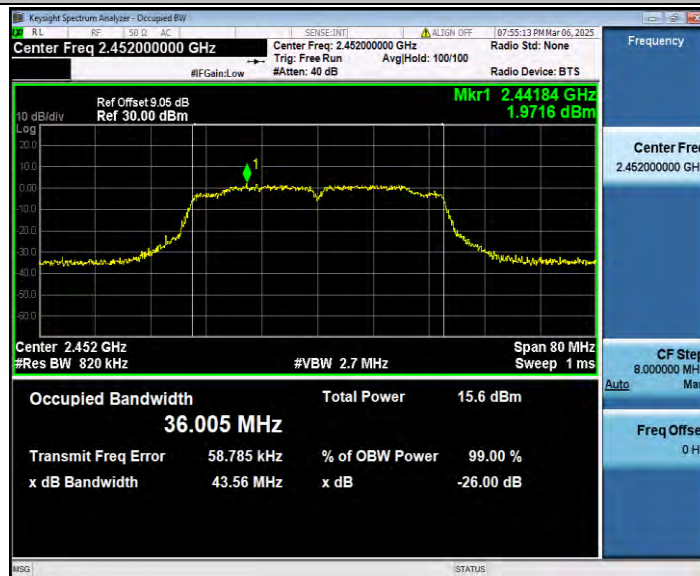
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix A.3: Maximum conducted output power

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]
11B	Ant1	2412	11.07	≤30.00
		2437	11.70	≤30.00
		2462	11.98	≤30.00
11G	Ant1	2412	14.81	≤30.00
		2437	15.42	≤30.00
		2462	15.79	≤30.00
11N20SISO	Ant1	2412	14.73	≤30.00
		2437	15.31	≤30.00
		2462	15.57	≤30.00
11N40SISO	Ant1	2422	15.24	≤30.00
		2437	15.42	≤30.00
		2452	15.86	≤30.00

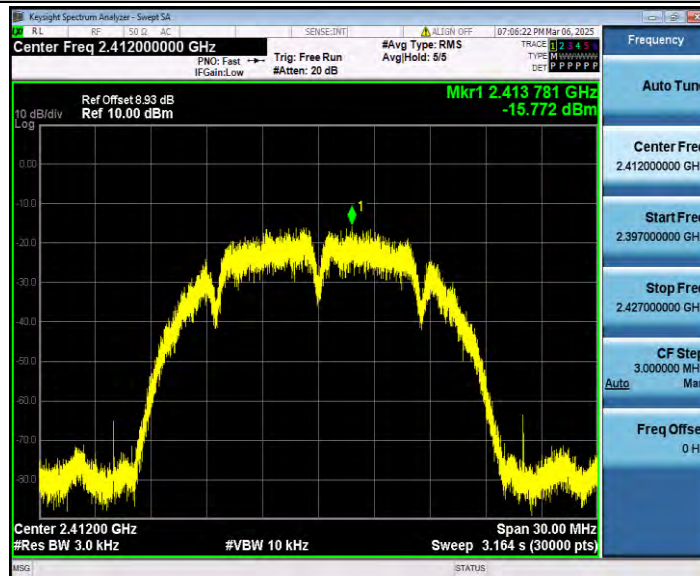
Appendix A.4: Maximum power spectral density

Test Result

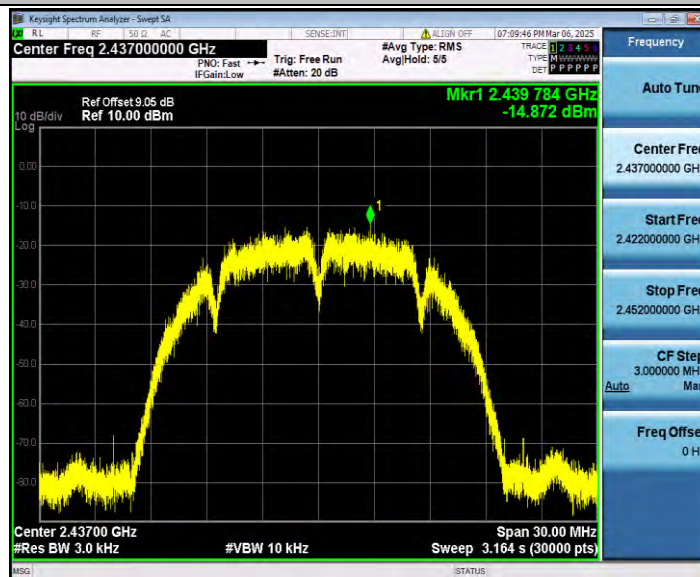
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-15.77	≤8.00	PASS
		2437	-14.87	≤8.00	PASS
		2462	-13.79	≤8.00	PASS
11G	Ant1	2412	-16.33	≤8.00	PASS
		2437	-16.07	≤8.00	PASS
		2462	-17.03	≤8.00	PASS
11N20SISO	Ant1	2412	-16.99	≤8.00	PASS
		2437	-16.88	≤8.00	PASS
		2462	-15.80	≤8.00	PASS
11N40SISO	Ant1	2422	-20.04	≤8.00	PASS
		2437	-19.85	≤8.00	PASS
		2452	-18.48	≤8.00	PASS

Test Graphs

11B_Ant1_2412



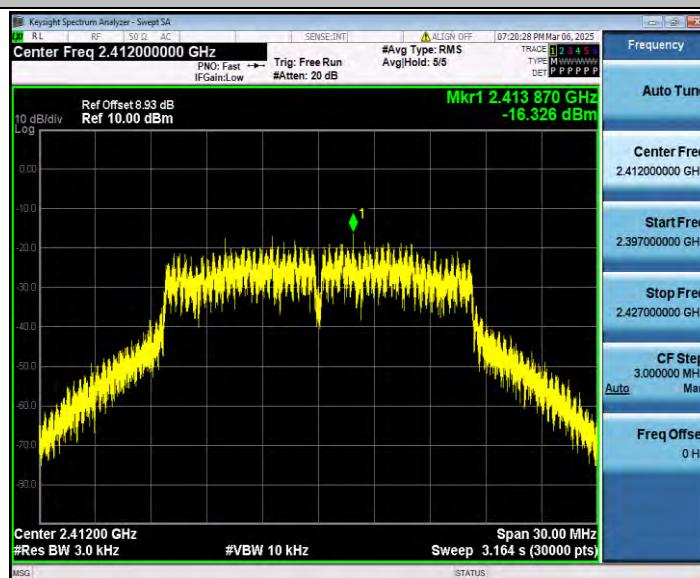
11B_Ant1_2437



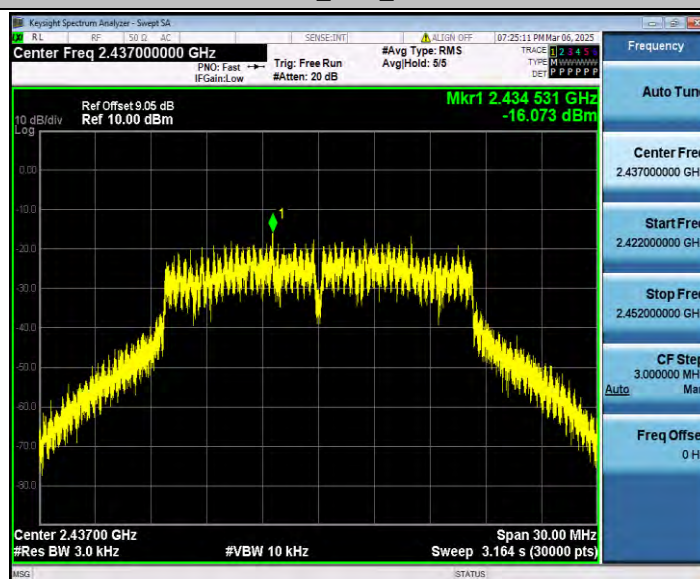
11B_Ant1_2462



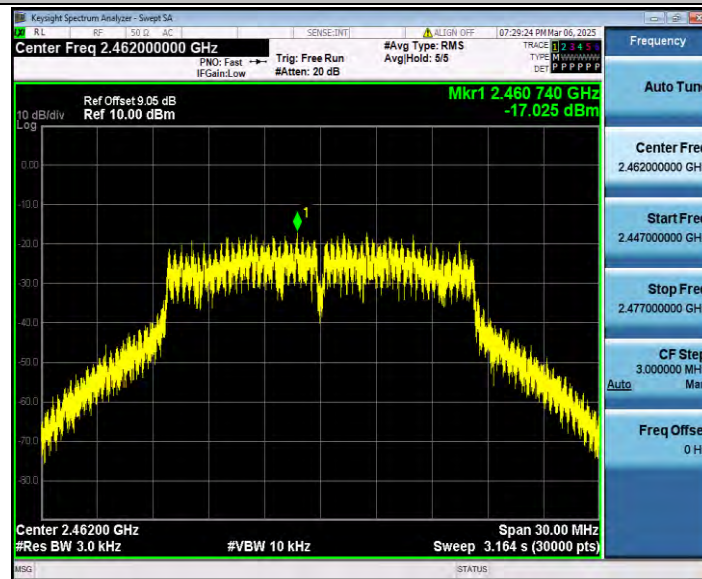
11G_Ant1_2412



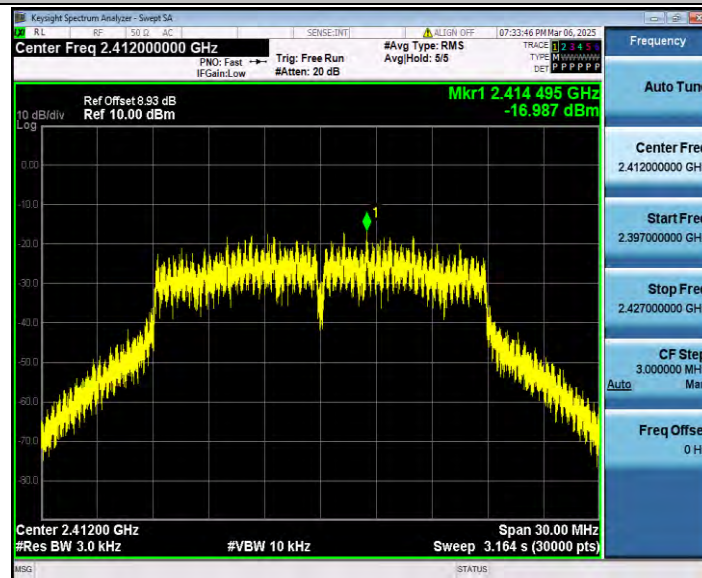
11G_Ant1_2437



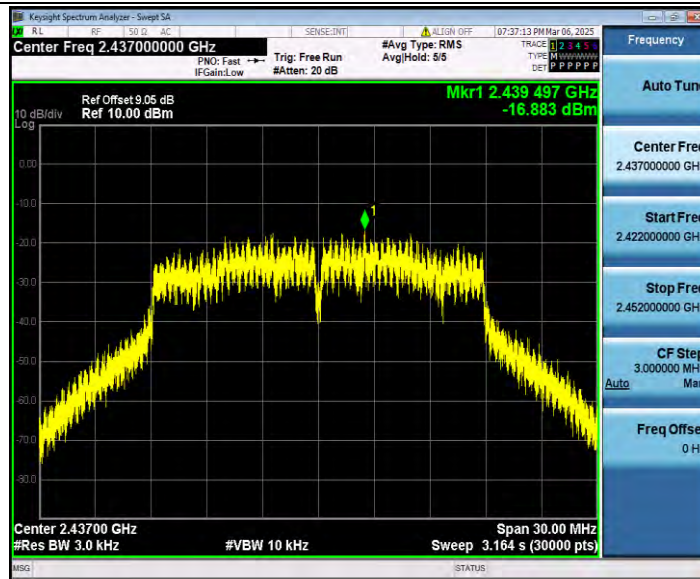
11G_Ant1_2462



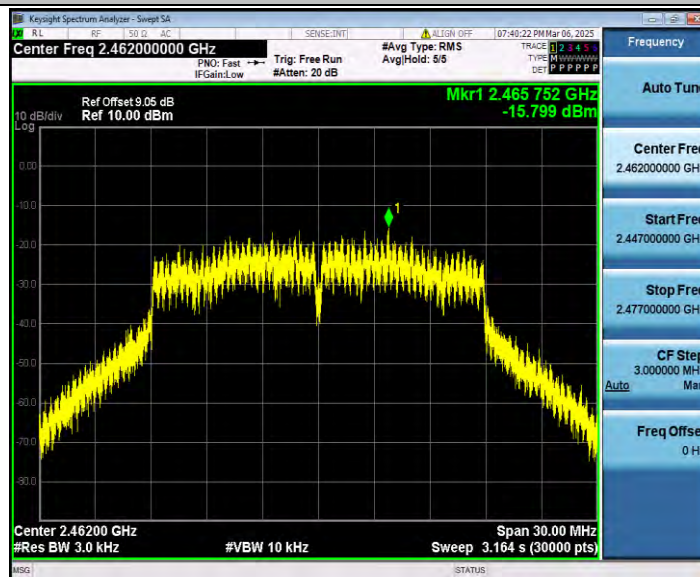
11N20SISO_Ant1_2412



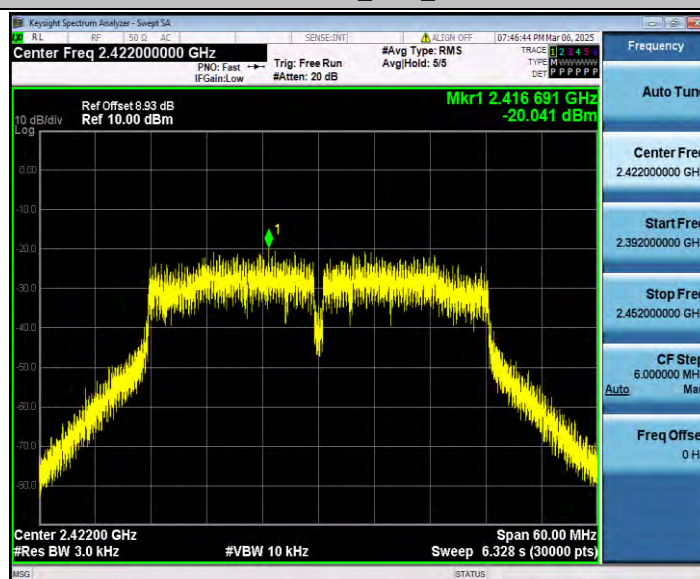
11N20SISO_Ant1_2437



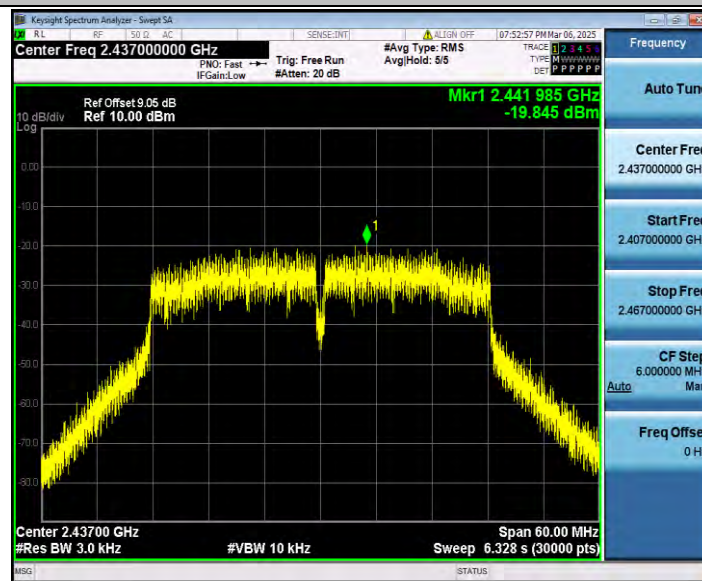
11N20SISO_Ant1_2462



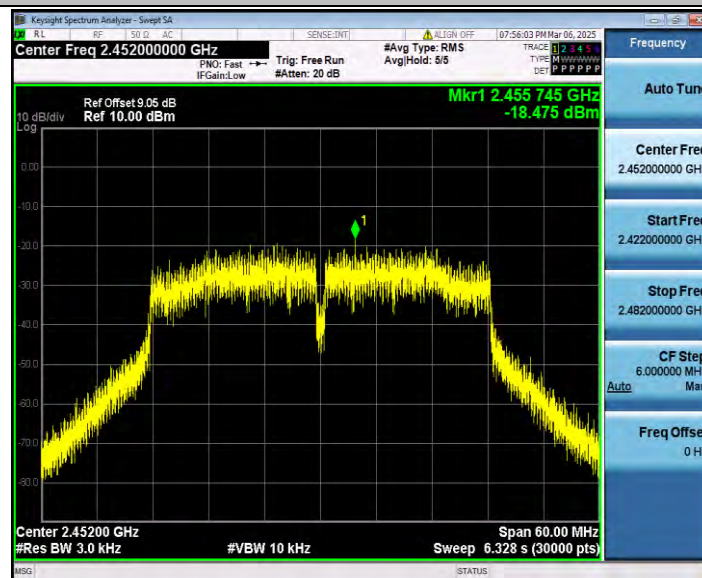
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



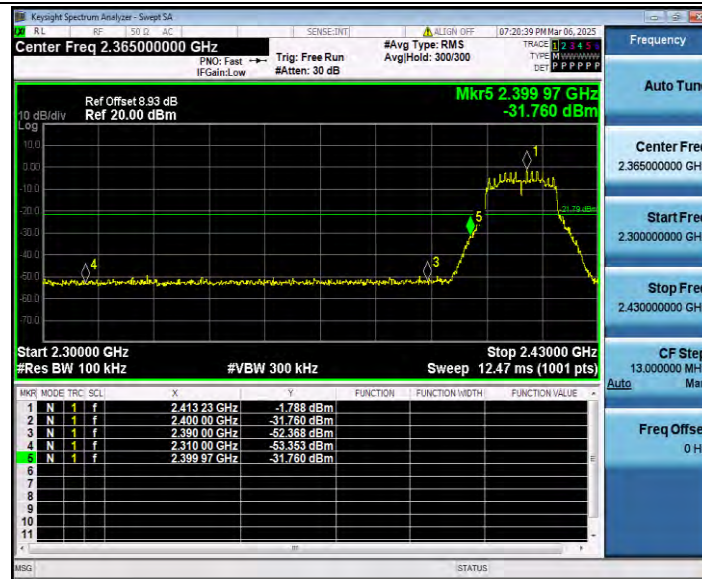
Appendix A.5: Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-1.28	-49.14	≤ -21.28	PASS
		High	2462	-0.31	-49.21	≤ -20.31	PASS
11G	Ant1	Low	2412	-1.79	-31.76	≤ -21.79	PASS
		High	2462	-0.74	-49.48	≤ -20.74	PASS
11N20SISO	Ant1	Low	2412	-1.75	-32.57	≤ -21.75	PASS
		High	2462	-0.82	-49.74	≤ -20.82	PASS
11N40SISO	Ant1	Low	2422	-4.81	-31.53	≤ -24.81	PASS
		High	2452	-4.25	-47.06	≤ -24.25	PASS

Test Graphs

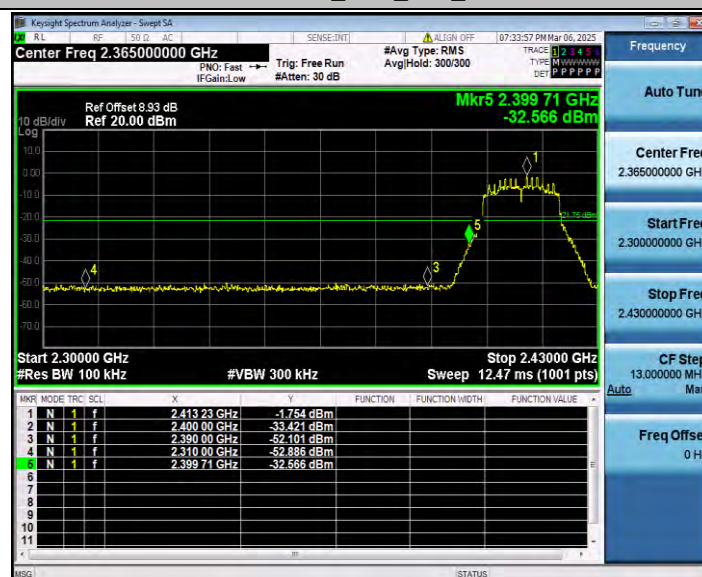




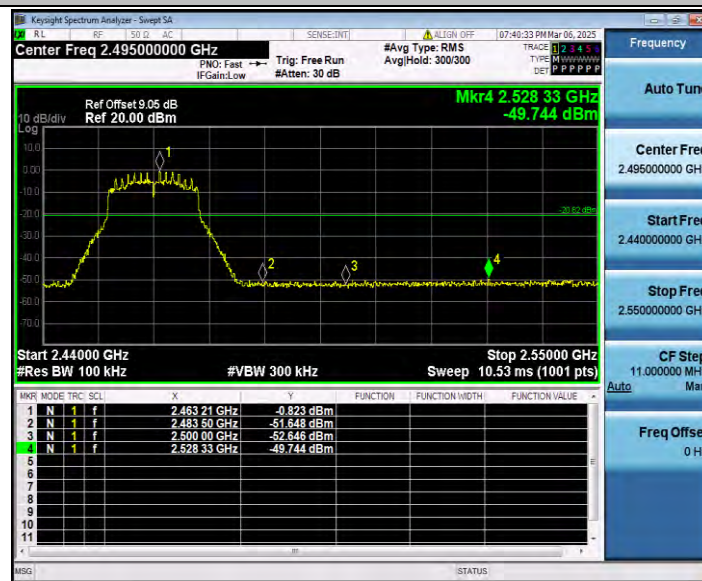
11G_Ant1_High_2462



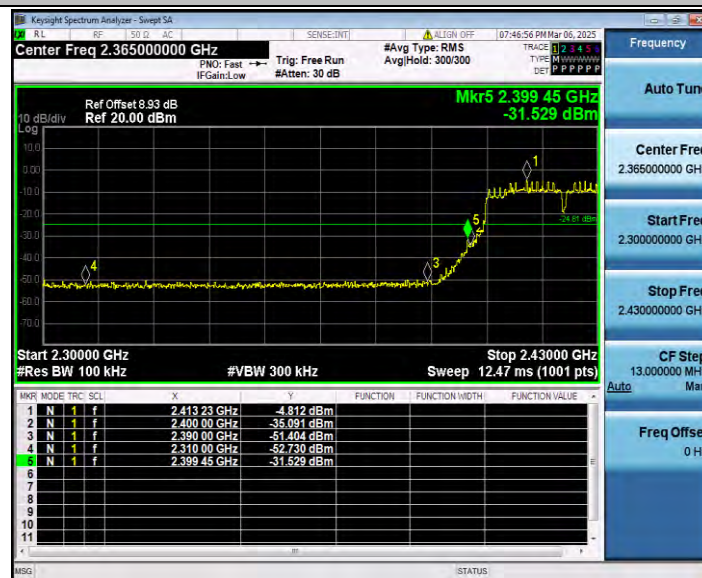
11N20SISO_Ant1_Low_2412



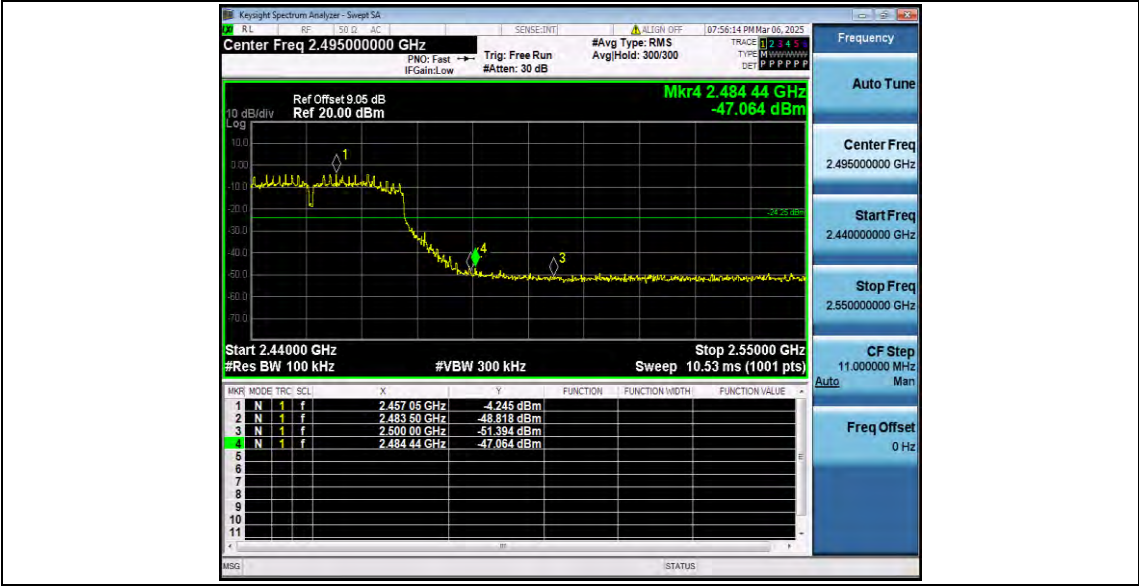
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

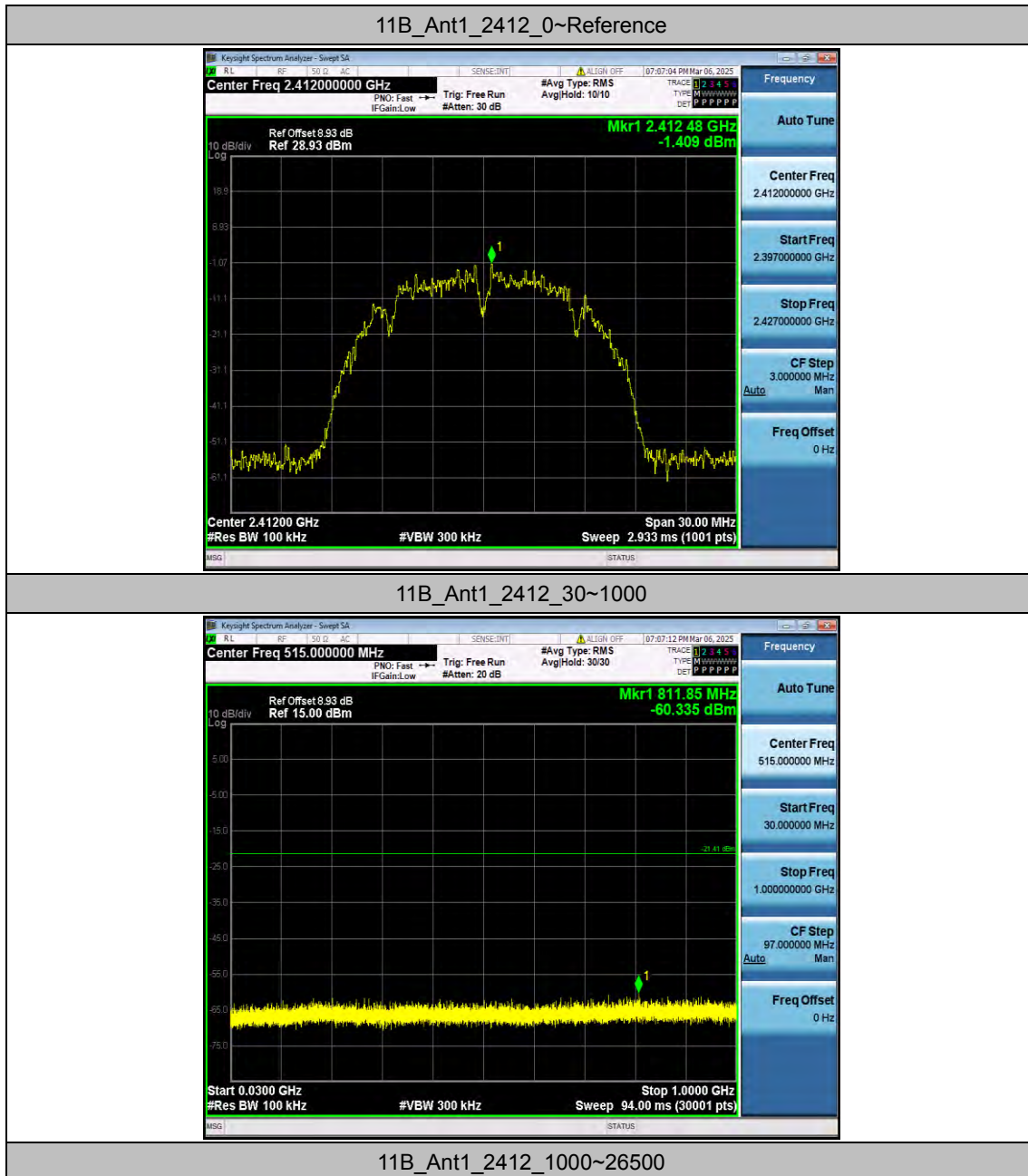


Appendix A.6: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-1.41	-1.41	---	PASS
			30~1000	-1.41	-60.34	≤ -21.41	PASS
			1000~26500	-1.41	-47.94	≤ -21.41	PASS
		2437	Reference	-1.18	-1.18	---	PASS
			30~1000	-1.18	-60.39	≤ -21.18	PASS
			1000~26500	-1.18	-48.17	≤ -21.18	PASS
		2462	Reference	-1.57	-1.57	---	PASS
			30~1000	-1.57	-60.45	≤ -21.57	PASS
			1000~26500	-1.57	-47.99	≤ -21.57	PASS
11G	Ant1	2412	Reference	-2.12	-2.12	---	PASS
			30~1000	-2.12	-60.42	≤ -22.12	PASS
			1000~26500	-2.12	-48.07	≤ -22.12	PASS
		2437	Reference	-1.44	-1.44	---	PASS
			30~1000	-1.44	-61.04	≤ -21.44	PASS
			1000~26500	-1.44	-48.11	≤ -21.44	PASS
		2462	Reference	-1.27	-1.27	---	PASS
			30~1000	-1.27	-60.24	≤ -21.27	PASS
			1000~26500	-1.27	-48.24	≤ -21.27	PASS
11N20SISO	Ant1	2412	Reference	-2.19	-2.19	---	PASS
			30~1000	-2.19	-59.5	≤ -22.19	PASS
			1000~26500	-2.19	-47.73	≤ -22.19	PASS
		2437	Reference	-1.27	-1.27	---	PASS
			30~1000	-1.27	-60.34	≤ -21.27	PASS
			1000~26500	-1.27	-47.93	≤ -21.27	PASS
		2462	Reference	-1.53	-1.53	---	PASS
			30~1000	-1.53	-60.8	≤ -21.53	PASS
			1000~26500	-1.53	-48.19	≤ -21.53	PASS
11N40SISO	Ant1	2422	Reference	-5.47	-5.47	---	PASS
			30~1000	-5.47	-60.73	≤ -25.47	PASS
			1000~26500	-5.47	-48.08	≤ -25.47	PASS
		2437	Reference	-4.95	-4.95	---	PASS
			30~1000	-4.95	-60.71	≤ -24.95	PASS
			1000~26500	-4.95	-47.73	≤ -24.95	PASS
		2452	Reference	-4.30	-4.30	---	PASS
			30~1000	-4.30	-60.99	≤ -24.3	PASS
			1000~26500	-4.30	-47.63	≤ -24.3	PASS

Test Graphs

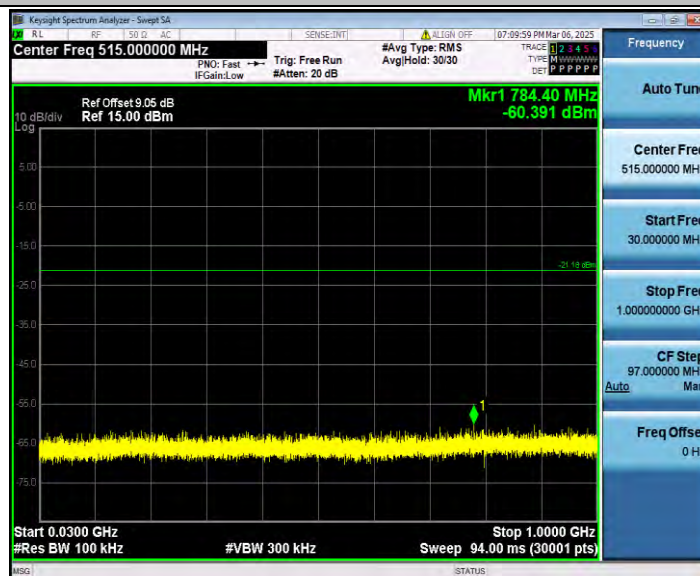




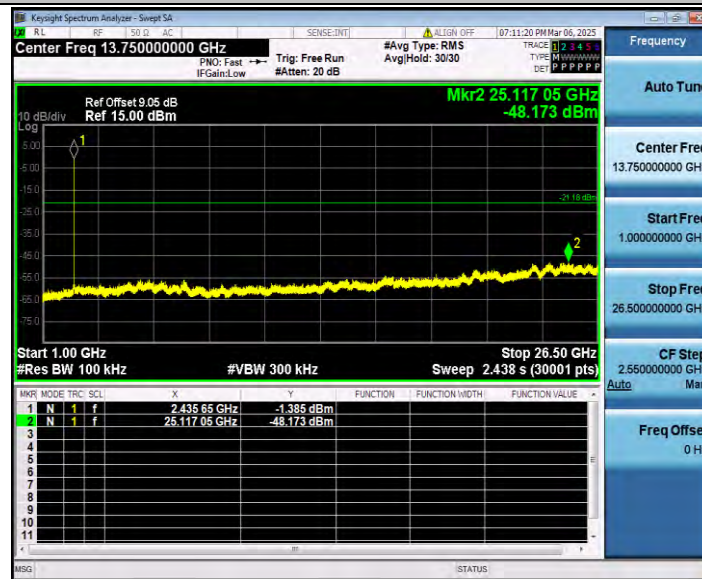
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



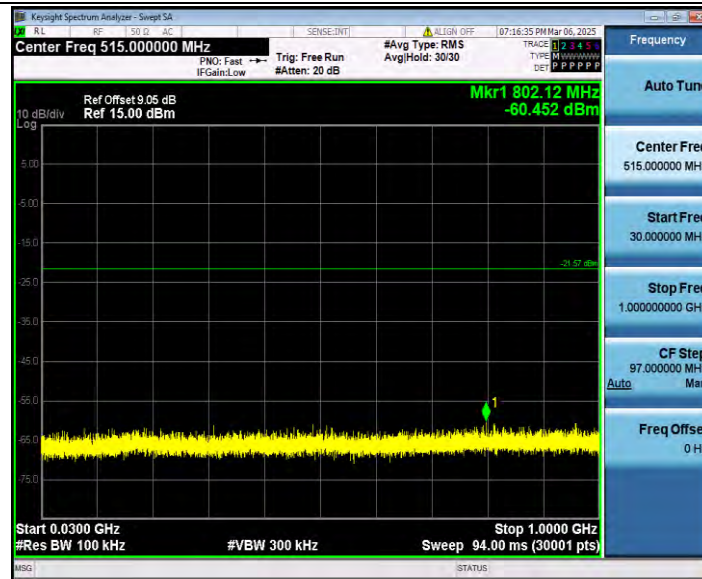
11B_Ant1_2437_1000~26500



11B_Ant1_2462_0~Reference



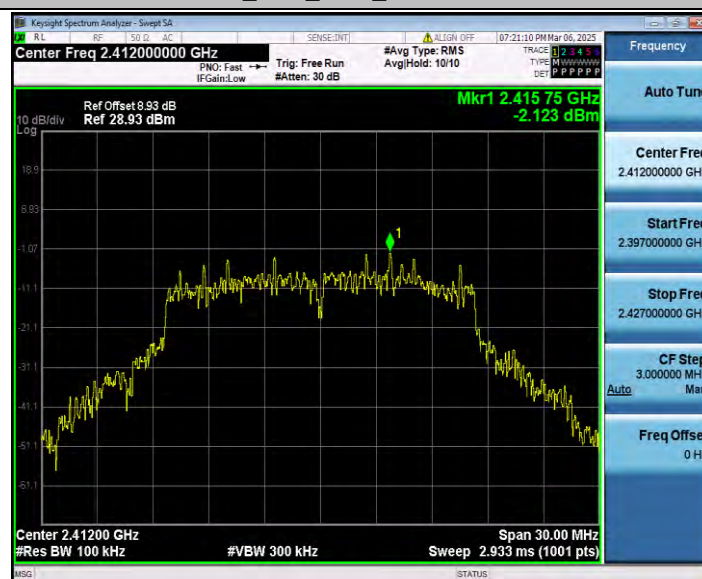
11B_Ant1_2462_30~1000

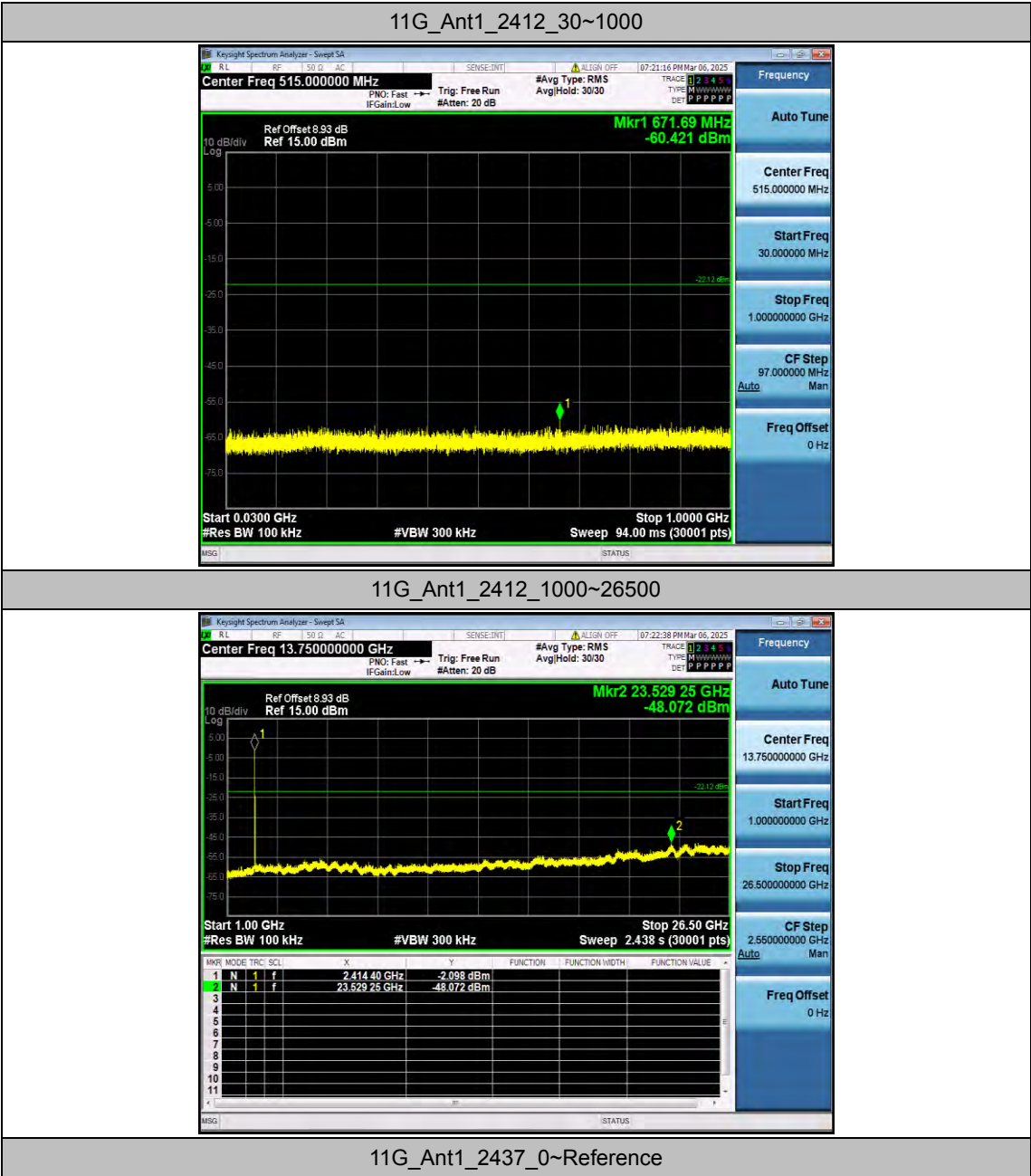


11B_Ant1_2462_1000~26500



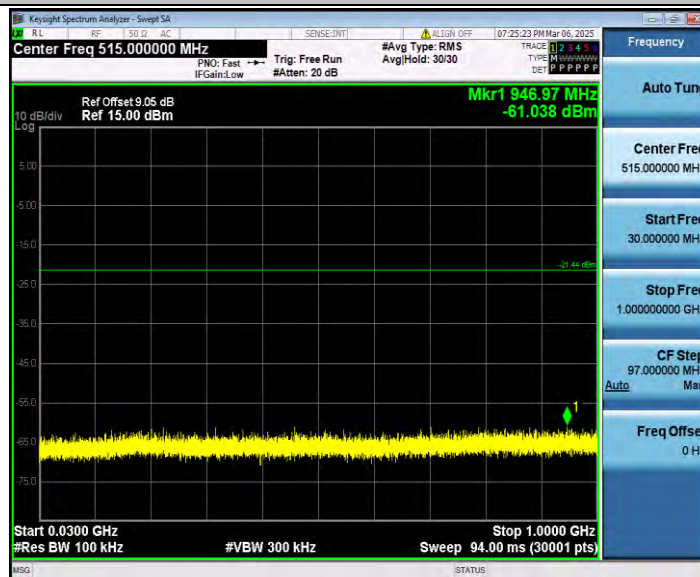
11G_Ant1_2412_0~Reference







11G_Ant1_2437_30~1000



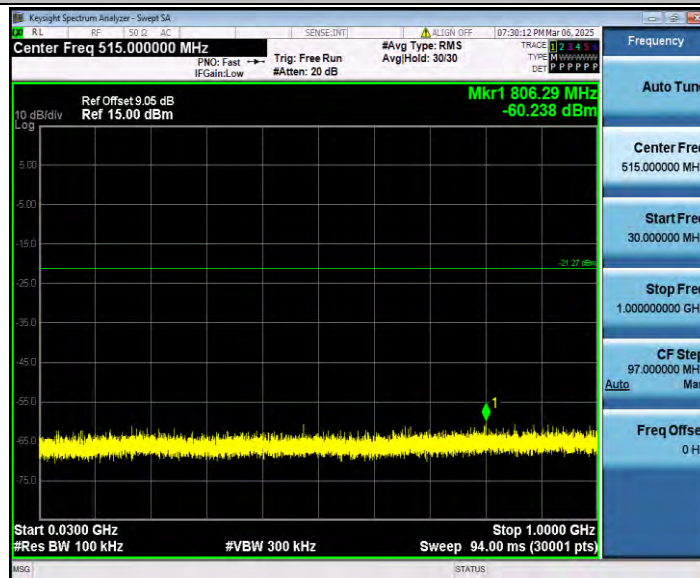
11G_Ant1_2437_1000~26500



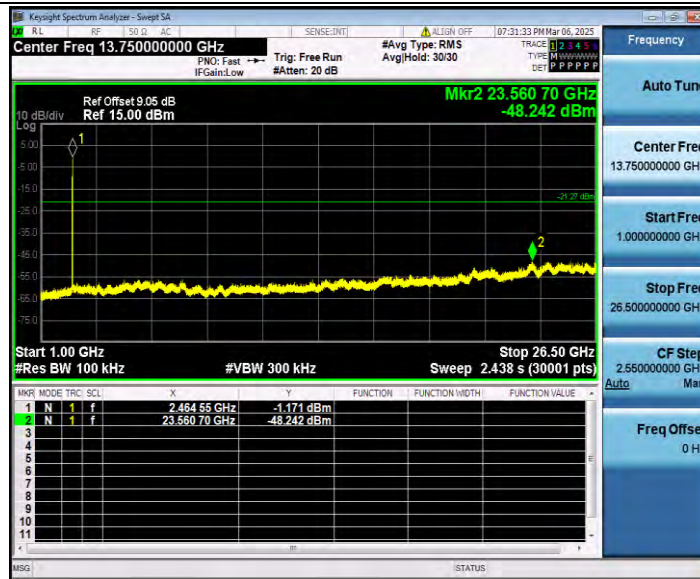
11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



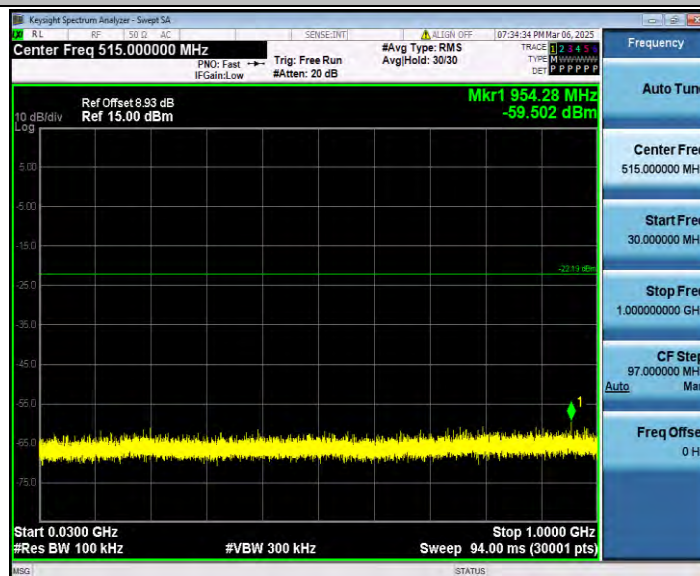
11G_Ant1_2462_1000~26500



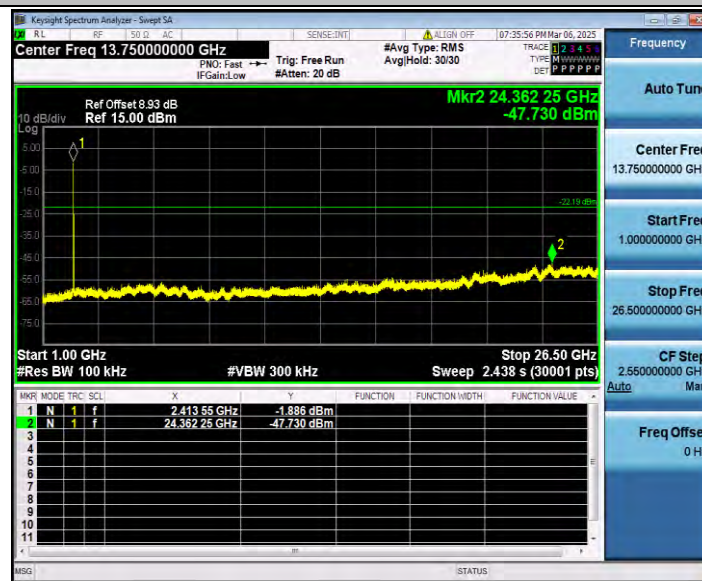
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



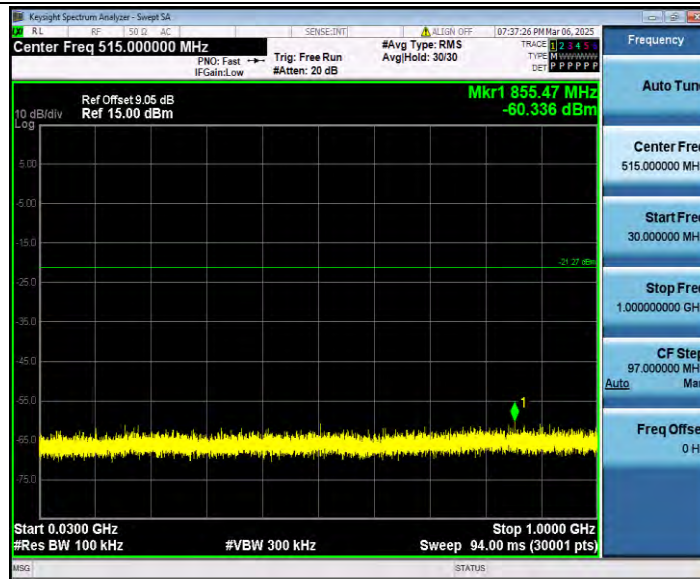
11N20SISO_Ant1_2412_1000~26500



11N20SISO_Ant1_2437_0~Reference



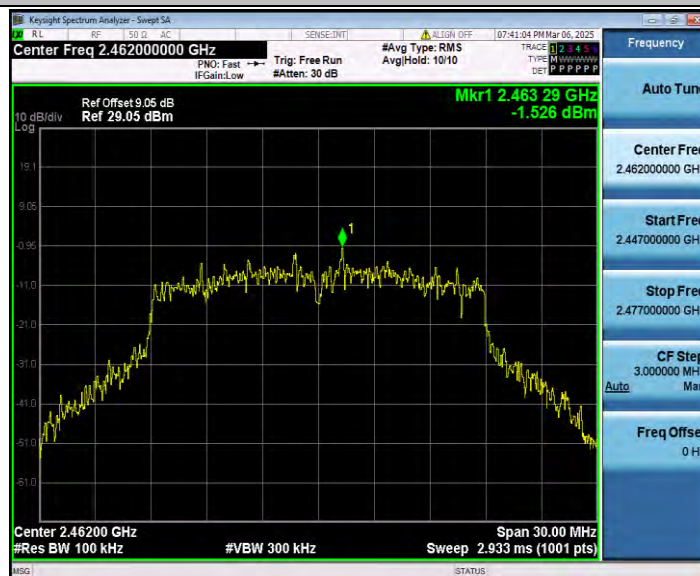
11N20SISO_Ant1_2437_30~1000



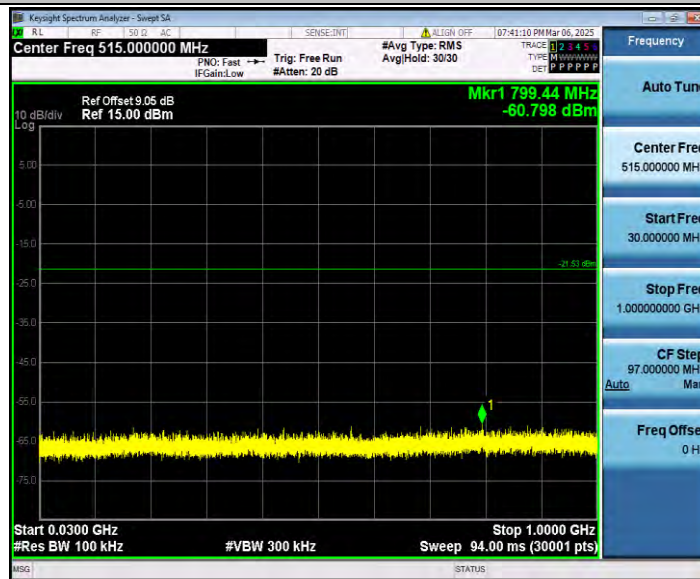
11N20SISO_Ant1_2437_1000~26500



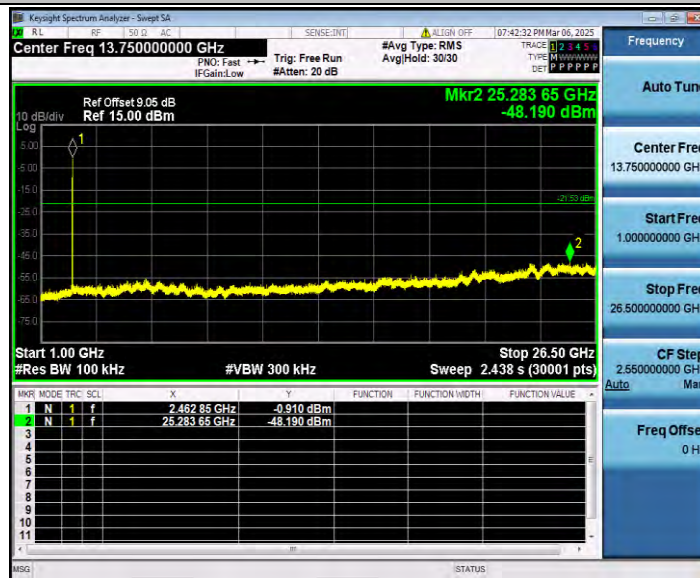
11N20SISO_Ant1_2462_0~Reference



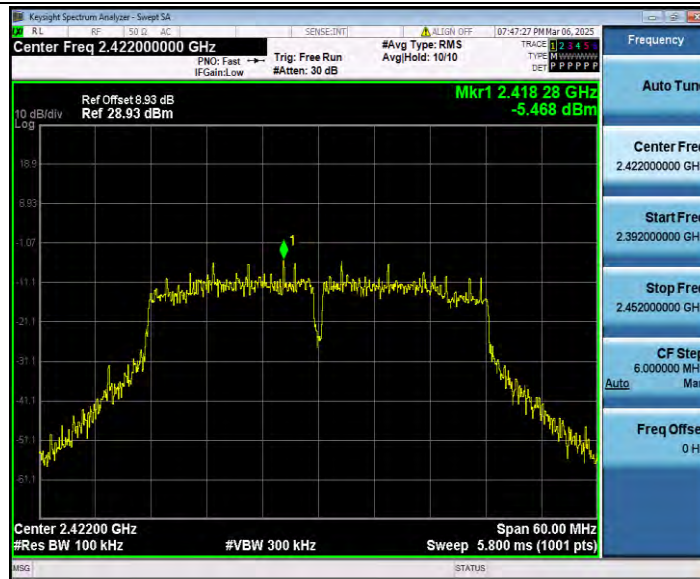
11N20SISO_Ant1_2462_30~1000



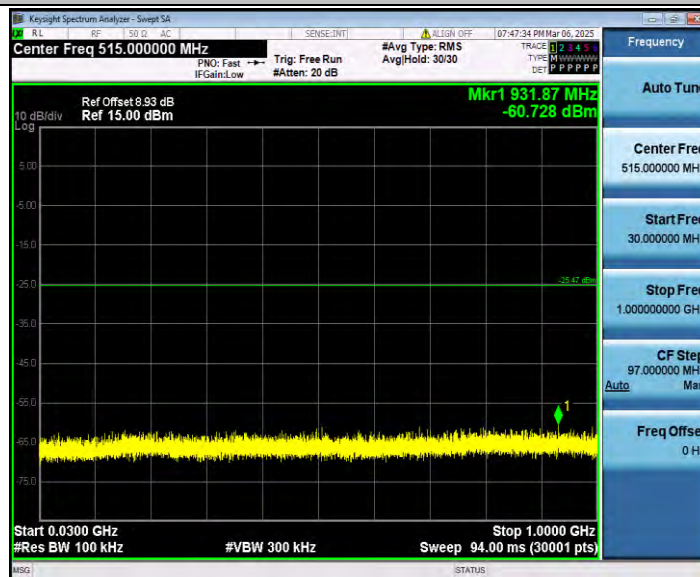
11N20SISO_Ant1_2462_1000~26500



11N40SISO_Ant1_2422_0~Reference



11N40SISO_Ant1_2422_30~1000



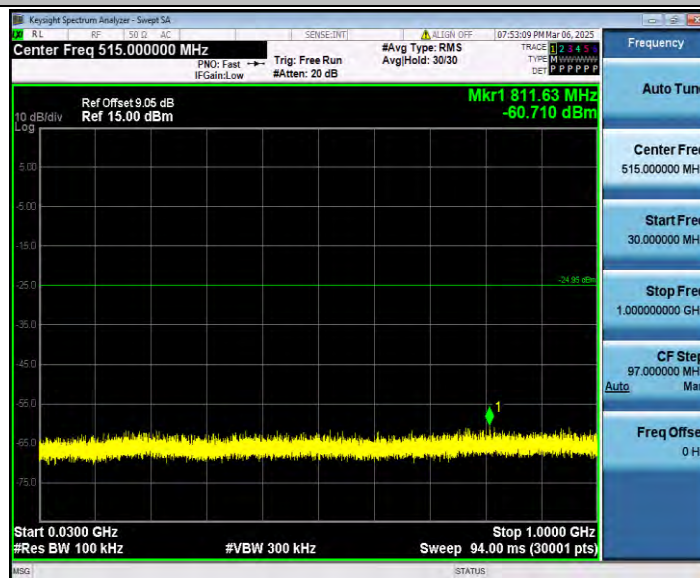
11N40SISO_Ant1_2422_1000~26500



11N40SISO_Ant1_2437_0~Reference



11N40SISO_Ant1_2437_30~1000



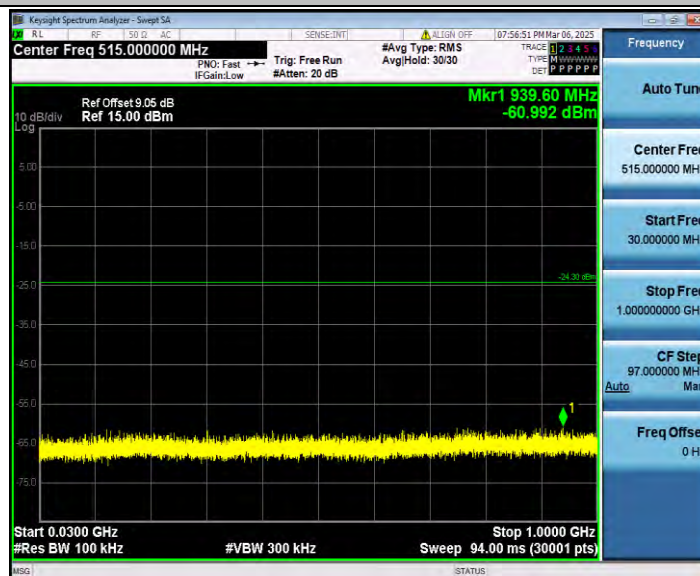
11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000





Appendix A.7: Emissions in Restricted Bands

Test Result

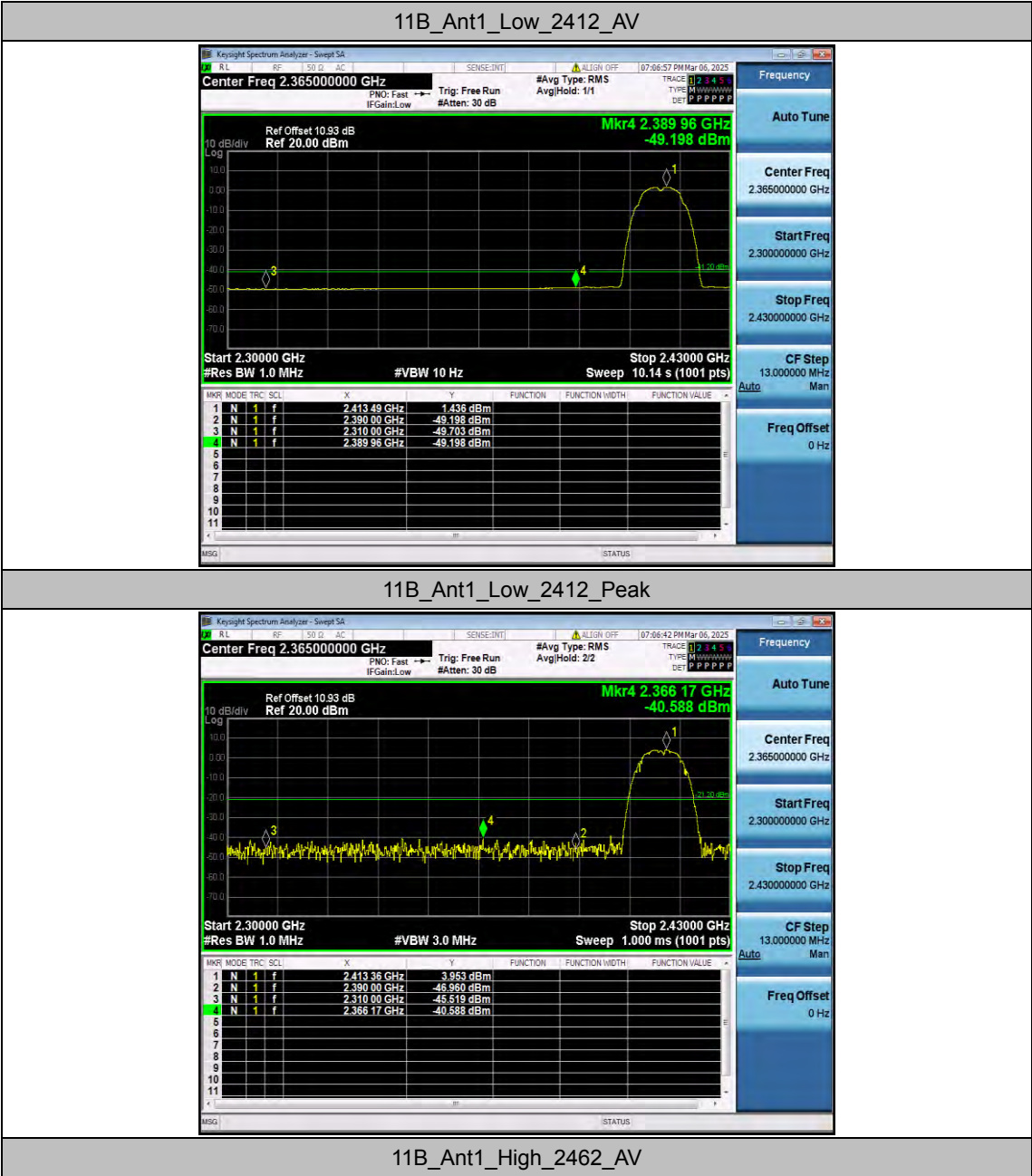
TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.7	≤-41.20	45.50	≤54	PASS
				AV	2389.960	-49.2	≤-41.20	46.00	≤54	PASS
				AV	2390.000	-49.2	≤-41.20	46.00	≤54	PASS
				Peak	2310.000	-45.52	≤-21.20	49.68	≤74	PASS
				Peak	2366.170	-40.59	≤-21.20	54.61	≤74	PASS
				Peak	2390.000	-46.96	≤-21.20	48.24	≤74	PASS
		High	2462	AV	2483.500	-49.09	≤-41.20	46.11	≤54	PASS
				AV	2498.850	-48.9	≤-41.20	46.30	≤54	PASS
				AV	2500.000	-48.92	≤-41.20	46.28	≤54	PASS
				Peak	2483.500	-42.2	≤-21.20	53.00	≤74	PASS
				Peak	2488.620	-41.56	≤-21.20	53.64	≤74	PASS
				Peak	2500.000	-45.36	≤-21.20	49.84	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.67	≤-41.20	45.53	≤54	PASS
				AV	2389.960	-49.24	≤-41.20	45.96	≤54	PASS
				AV	2390.000	-49.24	≤-41.20	45.96	≤54	PASS
				Peak	2310.000	-48.74	≤-21.20	46.46	≤74	PASS
				Peak	2310.140	-41.21	≤-21.20	53.99	≤74	PASS
				Peak	2390.000	-48.36	≤-21.20	46.84	≤74	PASS
		High	2462	AV	2483.500	-49.1	≤-41.20	46.10	≤54	PASS
				AV	2499.070	-48.91	≤-41.20	46.29	≤54	PASS
				AV	2500.000	-48.92	≤-41.20	46.28	≤54	PASS
				Peak	2483.500	-45.87	≤-21.20	49.33	≤74	PASS
				Peak	2497.200	-40.31	≤-21.20	54.89	≤74	PASS
				Peak	2500.000	-43.93	≤-21.20	51.27	≤74	PASS
11N20SIS O	Ant1	Low	2412	AV	2310.000	-49.68	≤-41.20	45.52	≤54	PASS
				AV	2389.570	-49.24	≤-41.20	45.96	≤54	PASS
				AV	2390.000	-49.28	≤-41.20	45.92	≤54	PASS
				Peak	2310.000	-45.53	≤-21.20	49.67	≤74	PASS
				Peak	2385.930	-39.89	≤-21.20	55.31	≤74	PASS
				Peak	2390.000	-46.21	≤-21.20	48.99	≤74	PASS
		High	2462	AV	2483.500	-49.12	≤-41.20	46.08	≤54	PASS
				AV	2499.950	-48.92	≤-41.20	46.28	≤54	PASS
				AV	2500.000	-48.92	≤-41.20	46.28	≤54	PASS
				Peak	2483.500	-44.21	≤-21.20	50.99	≤74	PASS
				Peak	2497.640	-39.77	≤-21.20	55.43	≤74	PASS

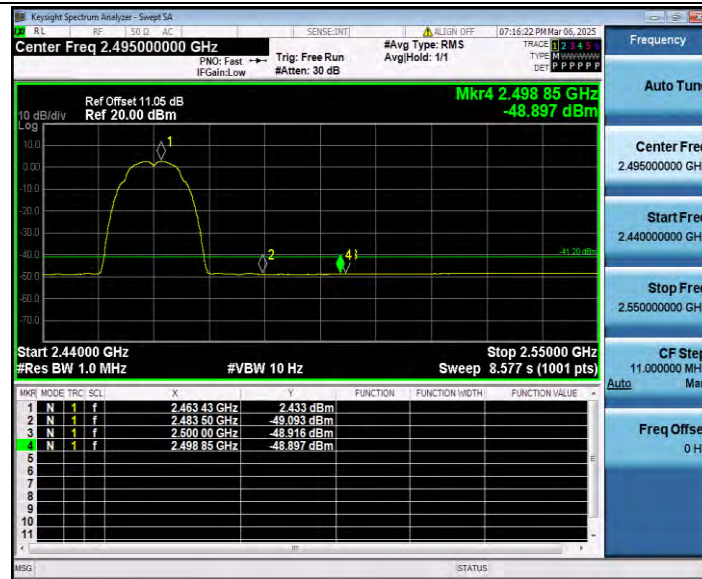
				Peak	2500.000	-44.69	≤ -21.20	50.51	≤ 74	PASS
11N40SIS O	Ant1	Low	2422	AV	2310.000	-49.68	≤ -41.20	45.52	≤ 54	PASS
				AV	2389.830	-48.72	≤ -41.20	46.48	≤ 54	PASS
				AV	2390.000	-48.73	≤ -41.20	46.47	≤ 54	PASS
				Peak	2310.000	-45.18	≤ -21.20	50.02	≤ 74	PASS
				Peak	2320.930	-41.25	≤ -21.20	53.95	≤ 74	PASS
				Peak	2390.000	-45.16	≤ -21.20	50.04	≤ 74	PASS
		High	2452	AV	2483.500	-46.62	≤ -41.20	48.58	≤ 54	PASS
				AV	2483.560	-46.65	≤ -41.20	48.55	≤ 54	PASS
				AV	2500.000	-48.57	≤ -41.20	46.63	≤ 54	PASS
				Peak	2483.500	-43.55	≤ -21.20	51.65	≤ 74	PASS
				Peak	2493.570	-40.19	≤ -21.20	55.01	≤ 74	PASS
				Peak	2500.000	-49.89	≤ -21.20	45.31	≤ 74	PASS

Note:

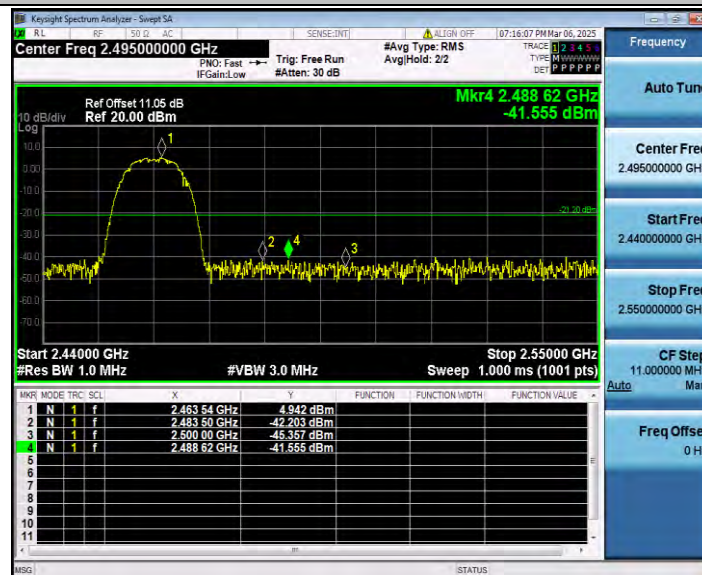
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs





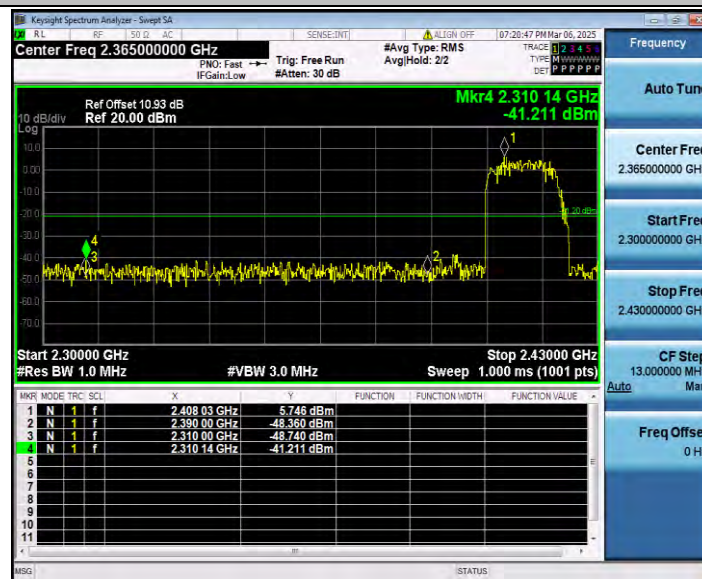
11B_Ant1_High_2462_Peak



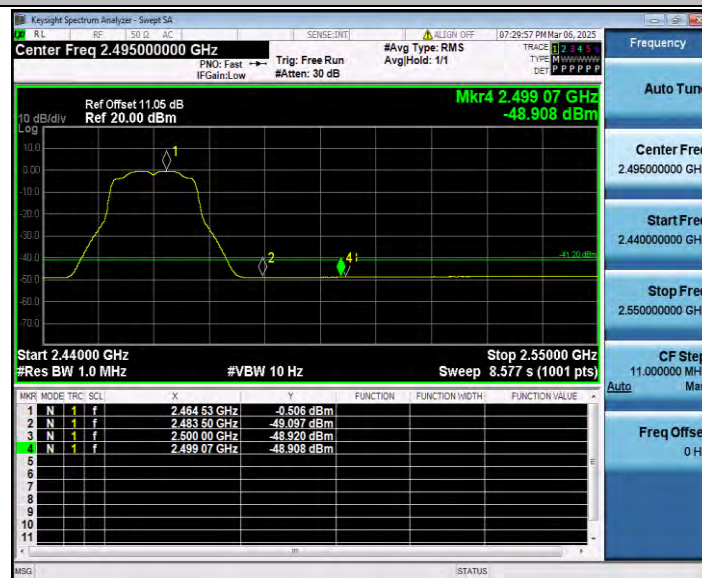
11G_Ant1_Low_2412_AV



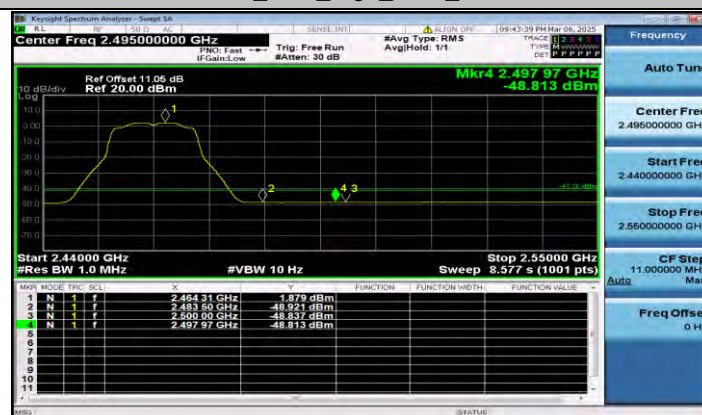
11G_Ant1_Low_2412_Peak



11G_Ant1_High_2462_AV



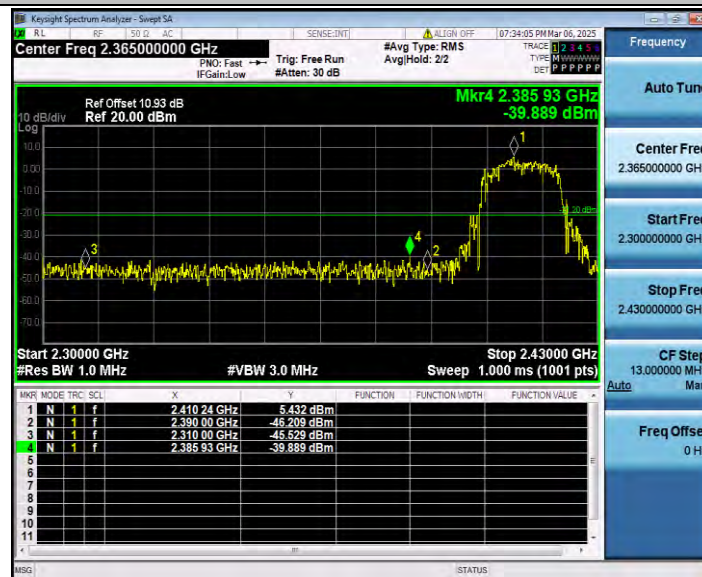
11G_Ant1_High_2462_Peak



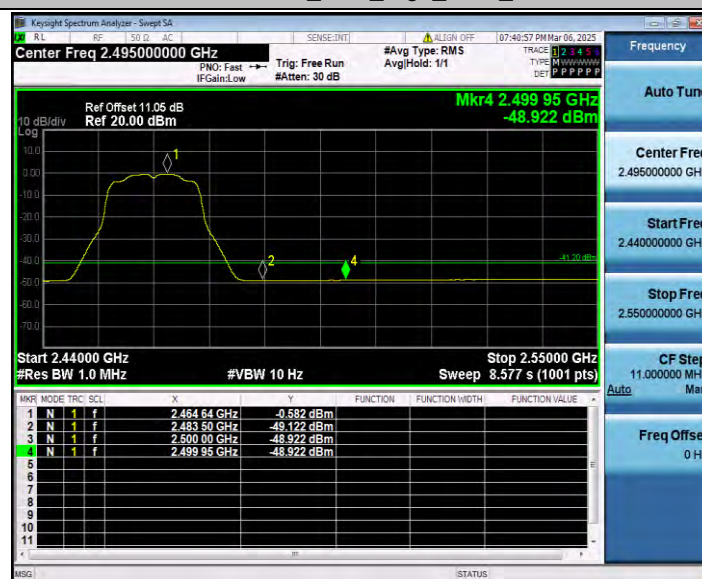
11N20SISO_Ant1_Low_2412_AV



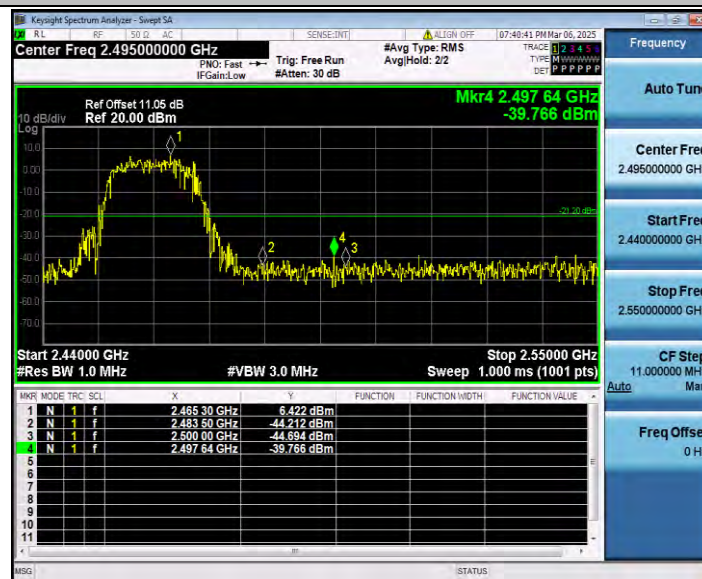
11N20SISO_Ant1_Low_2412_Peak



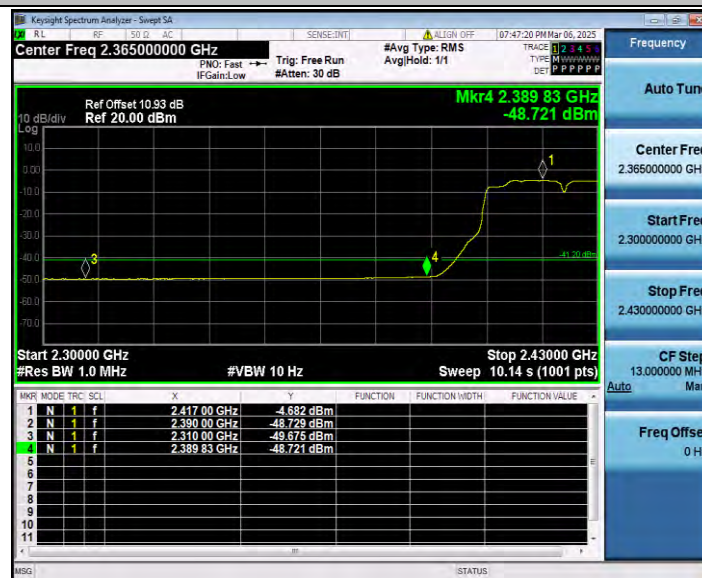
11N20SISO_Ant1_High_2462_AV



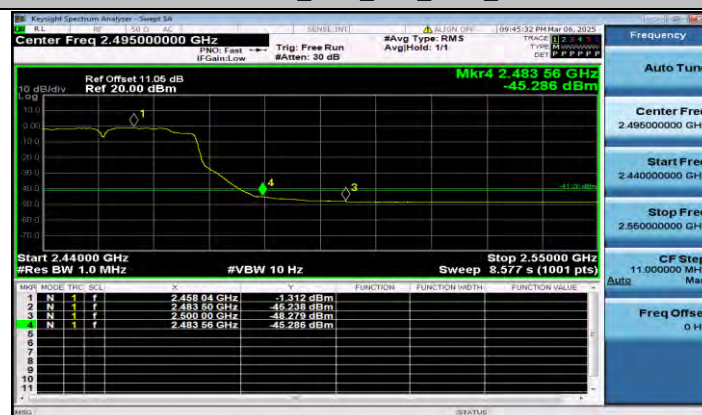
11N20SISO_Ant1_High_2462_Peak



11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV

Keylight Spectrum Analyzer - Sweep SA

RL 1.50 0.0 AC SENSE:INT ALIGN:DEF 07:56:22 PM Mar 06, 2025

Center Freq 2.495000000 GHz

Trig: Free Run #Avg Type: RMS
IFGain:Low #Atten: 30 dB AvgHld: 2/2

TRACE 1 2 3 4 5
TYPE M W W W W W W W
DET P P P P P P P

Ref Offset 11.05 dB
Ref 20.00 dBm

**Mkr4 2.493 57 GHz
-40.190 dBm**

10 dB/div
Log

Start 2.44000 GHz Stop 2.55000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.449 13 GHz	-3.577 dBm			
2	N	1	f	2.493 50 GHz	-43.547 dBm			
3	N	1	f	2.500 00 GHz	-49.892 dBm			
4	N	1	f	2.493 57 GHz	-40.190 dBm			
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
2.495000000 GHz

Start Freq
2.440000000 GHz

Stop Freq
2.550000000 GHz

CF Step
11.000000 MHz
Man

Freq Offset
0 Hz