

Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Car Radio

Test Model: A5

Environmental Conditions

Temperature:	26.2°C
Relative Humidity:	57.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

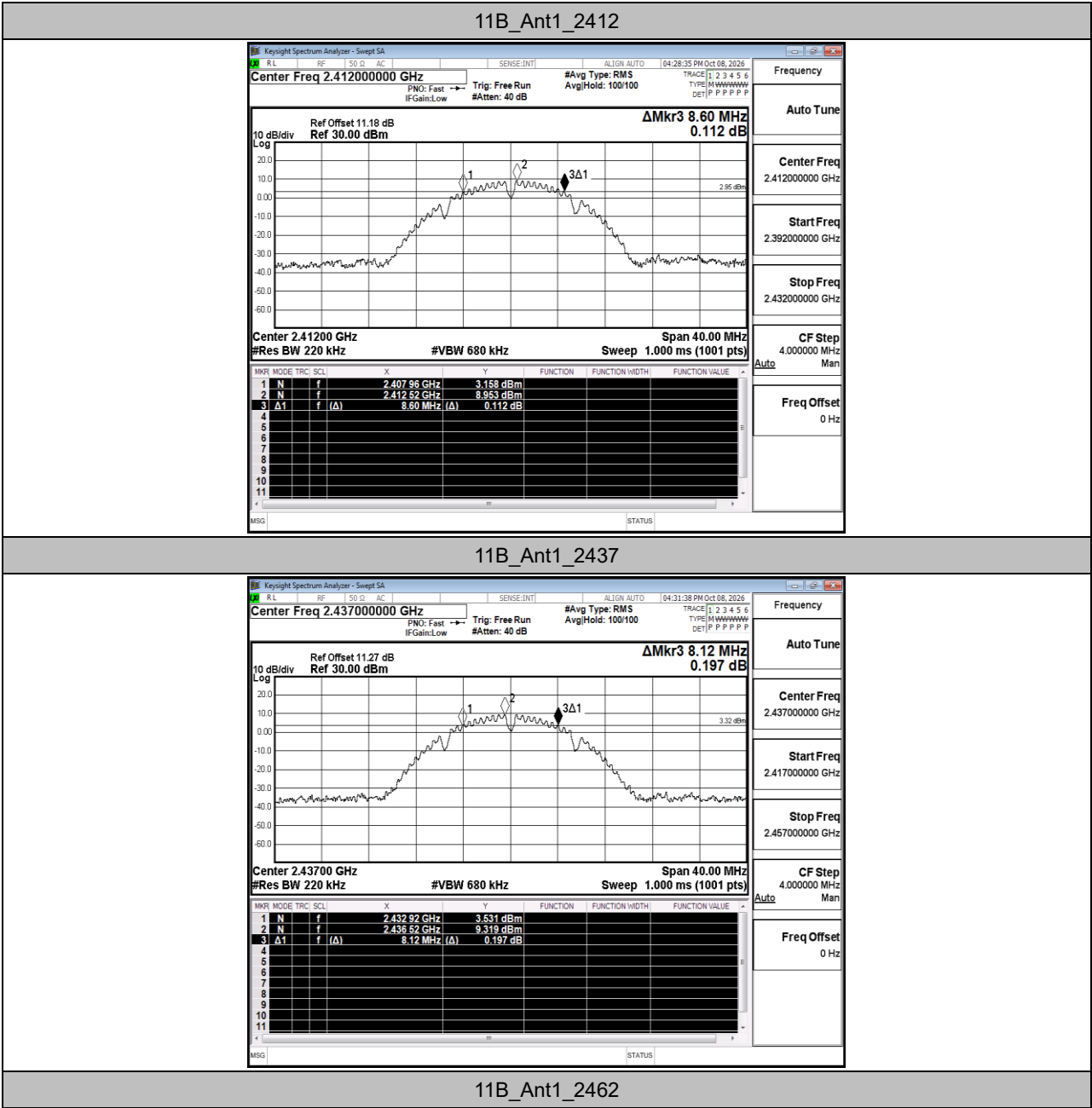
C.1 DTS Bandwidth

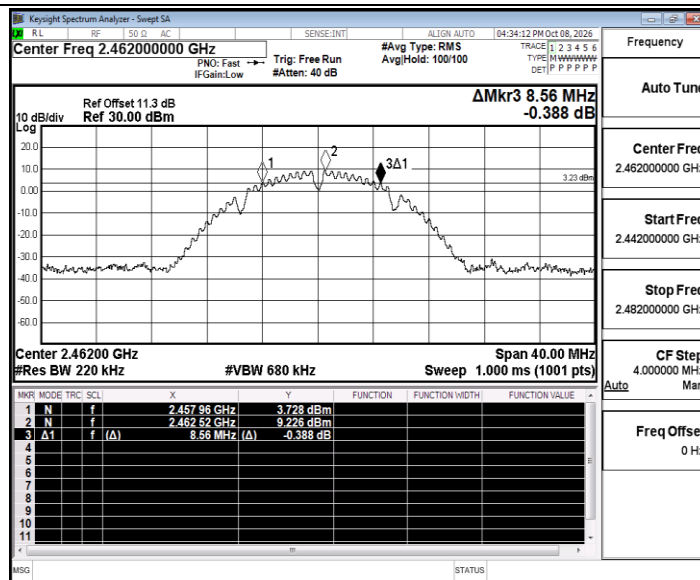
Test Result

TestMode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	8.600	2407.960	2416.560	0.5	PASS
		2437	8.120	2432.920	2441.040	0.5	PASS
		2462	8.560	2457.960	2466.520	0.5	PASS
11G	Ant1	2412	15.880	2404.280	2420.160	0.5	PASS
		2437	15.840	2429.120	2444.960	0.5	PASS
		2462	16.080	2454.040	2470.120	0.5	PASS
11N20SISO	Ant1	2412	17.360	2403.440	2420.800	0.5	PASS
		2437	16.720	2428.280	2445.000	0.5	PASS
		2462	16.960	2453.600	2470.560	0.5	PASS
11N40SISO	Ant1	2422	28.080	2411.680	2439.760	0.5	PASS
		2437	33.120	2420.920	2454.040	0.5	PASS
		2452	36.240	2433.920	2470.160	0.5	PASS

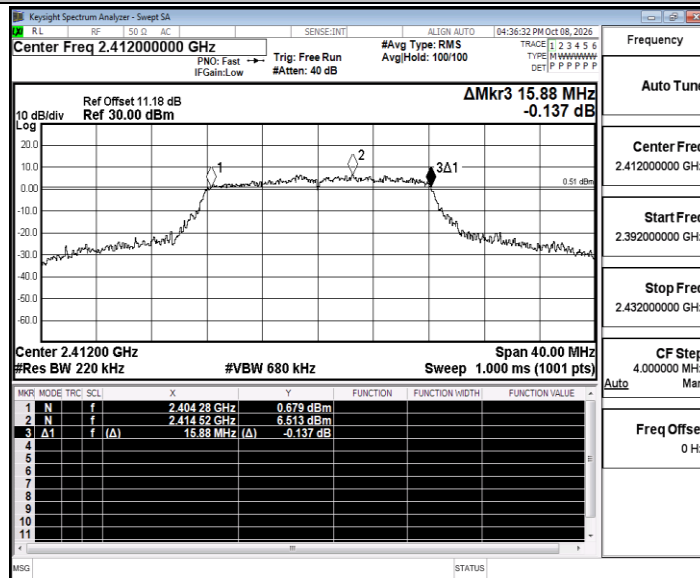
Note: offset=System attenuation +cabal loss

Test Graphs

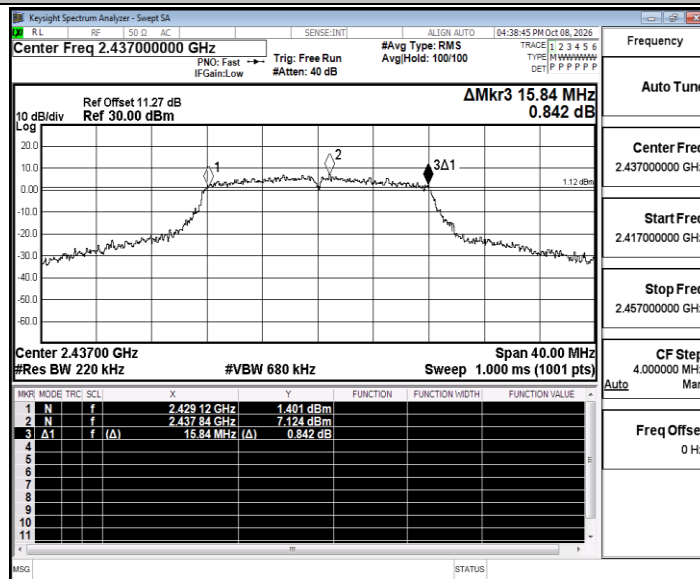




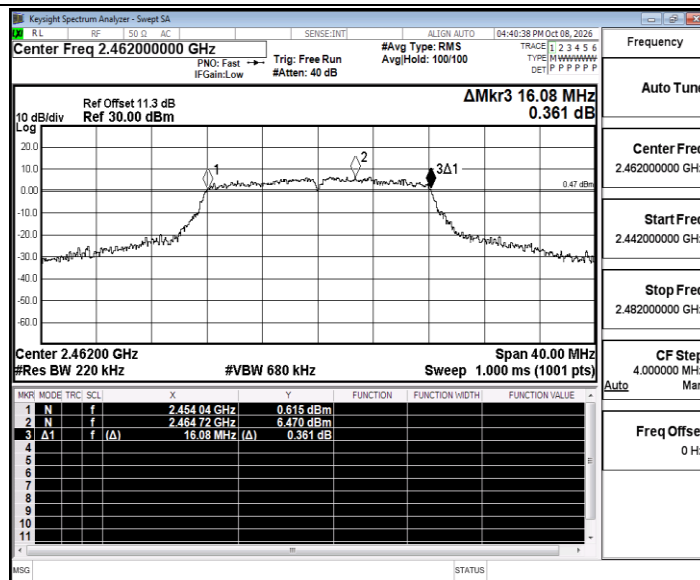
11G_Ant1_2412



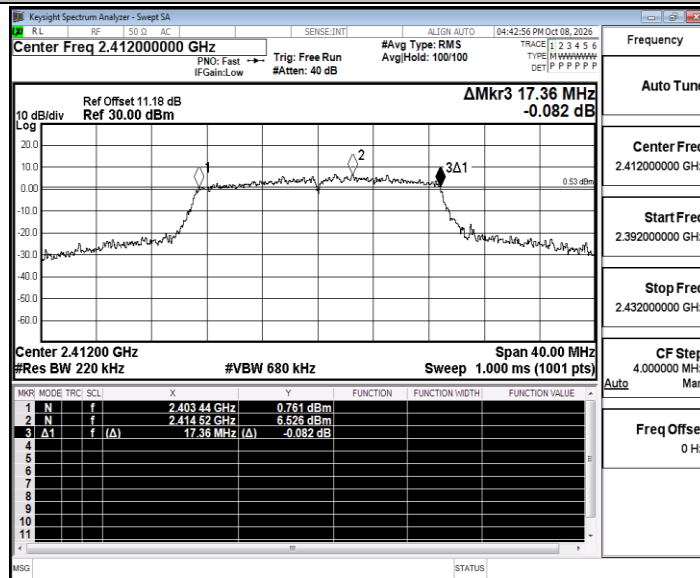
11G_Ant1_2437



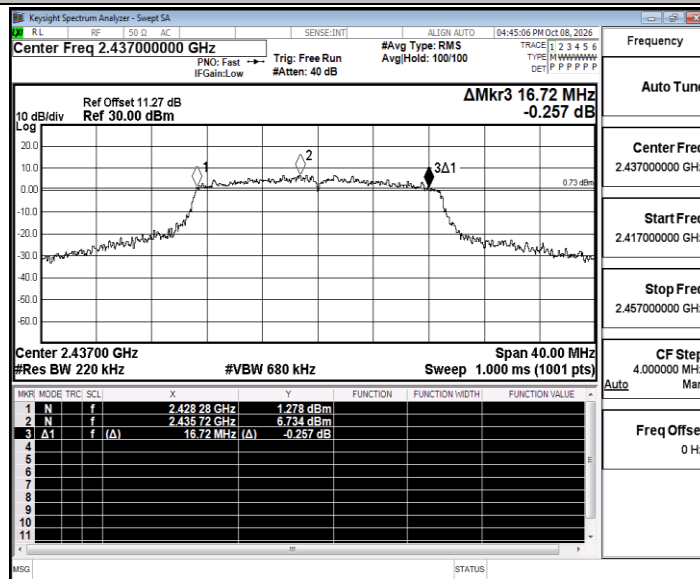
11G_Ant1_2462



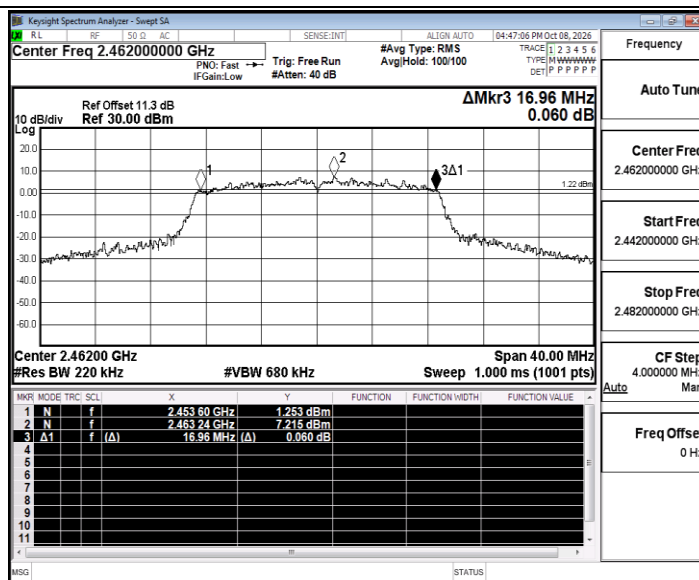
11N20SISO_Ant1_2412



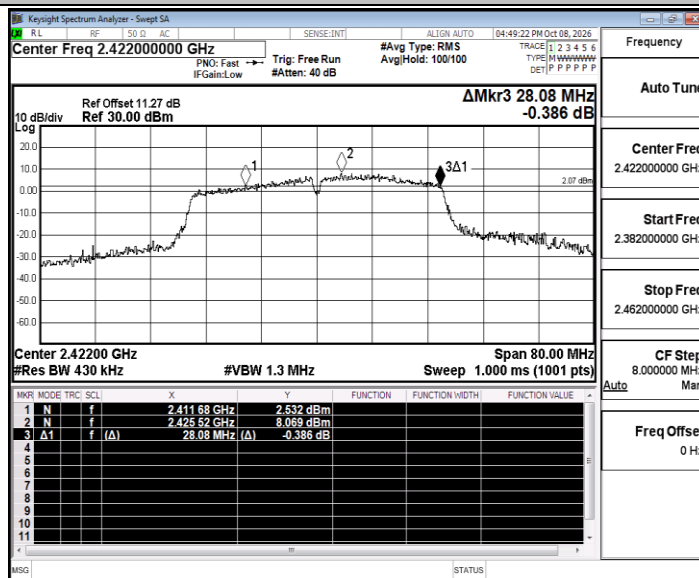
11N20SISO_Ant1_2437



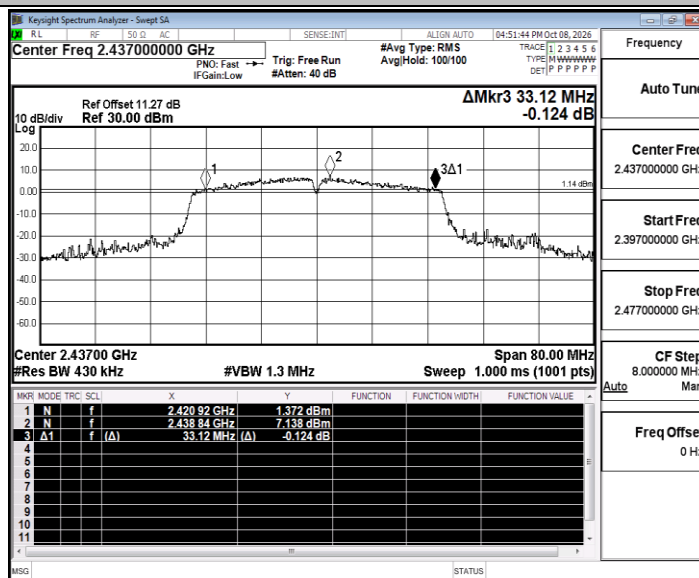
11N20SISO_Ant1_2462



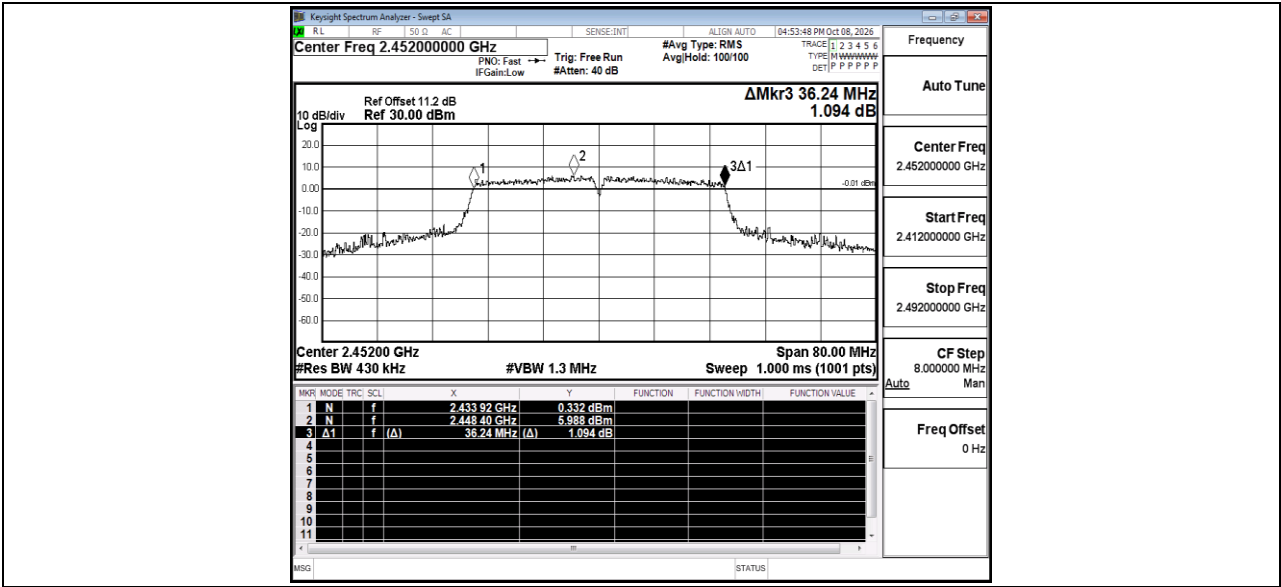
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



C.2 Maximum Average conducted output power

Test Result Average

TestMode	Antenna	Frequency [MHz]	Measured Power	DC Factor [dB]	AV Power [dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	15.41	0.02	15.43	≤30.00	PASS
		2437	16.51	0.02	16.53	≤30.00	PASS
		2462	16.33	0.02	16.35	≤30.00	PASS
11G	Ant1	2412	15.96	0.15	16.11	≤30.00	PASS
		2437	16.21	0.12	16.33	≤30.00	PASS
		2462	16.09	0.12	16.21	≤30.00	PASS
11N20SISO	Ant1	2412	15.96	0.16	16.12	≤30.00	PASS
		2437	16.18	0.17	16.35	≤30.00	PASS
		2462	15.8	0.13	15.93	≤30.00	PASS
11N40SISO	Ant1	2422	16.34	0.32	16.66	≤30.00	PASS
		2437	16.3	0.33	16.63	≤30.00	PASS
		2452	16.26	0.26	16.52	≤30.00	PASS

Note: offset=System attenuation +cabal loss

C.3 Maximum power spectral density

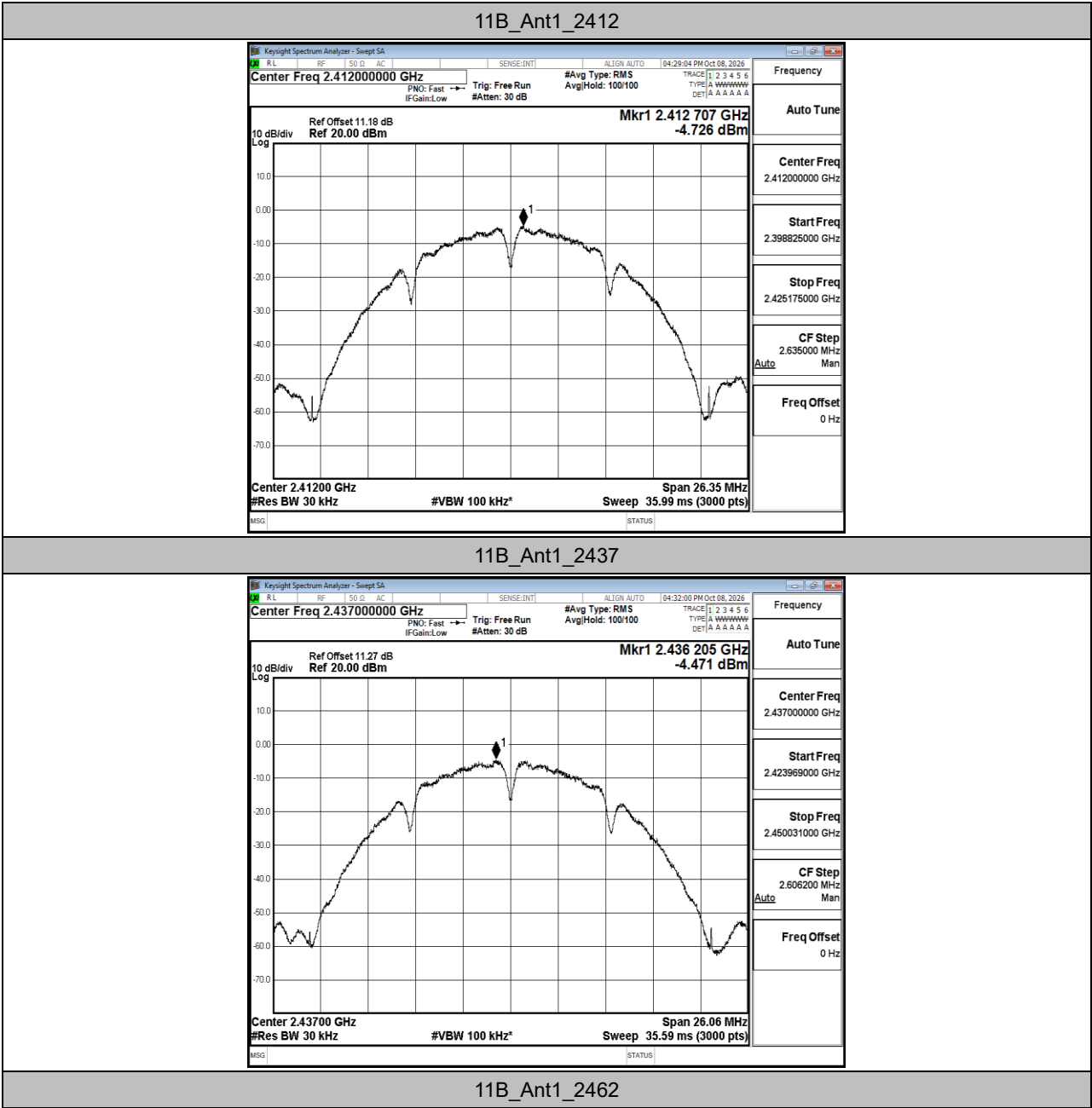
Test Result

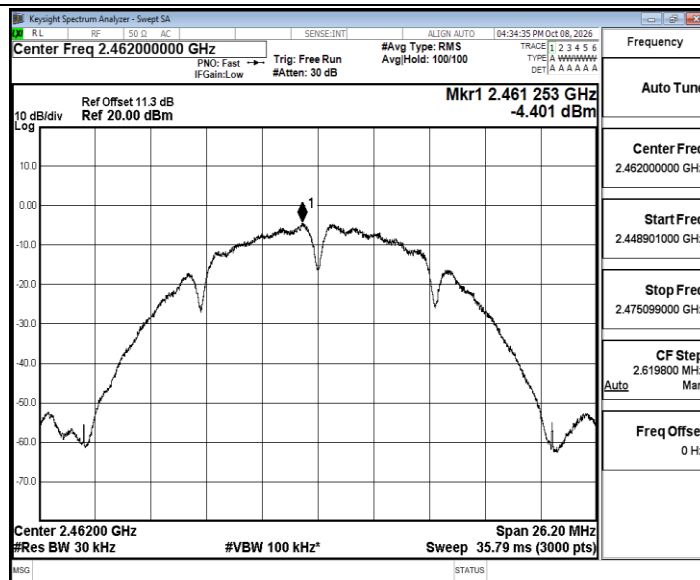
TestMode	Antenna	Frequency [MHz]	Measured PSD [dBm/30kHz]	DC Factor [dB]	Result [dBm/30kHz]	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
11B	Ant1	2412	-4.73	0.02	-4.71	-14.71	≤8.00	PASS
		2437	-4.47	0.02	-4.45	-14.45	≤8.00	PASS
		2462	-4.4	0.02	-4.38	-14.38	≤8.00	PASS
11G	Ant1	2412	-7.85	0.15	-7.7	-17.7	≤8.00	PASS
		2437	-7.7	0.12	-7.58	-17.58	≤8.00	PASS
		2462	-7.54	0.12	-7.42	-17.42	≤8.00	PASS
11N20SISO	Ant1	2412	-8.21	0.16	-8.05	-18.05	≤8.00	PASS
		2437	-7.56	0.17	-7.39	-17.39	≤8.00	PASS
		2462	-7.14	0.13	-7.01	-17.01	≤8.00	PASS
11N40SISO	Ant1	2422	-9.61	0.32	-9.29	-19.29	≤8.00	PASS
		2437	-9.72	0.33	-9.39	-19.39	≤8.00	PASS
		2452	-11.17	0.26	-10.91	-20.91	≤8.00	PASS

Note: offset=System attenuation +cabal loss

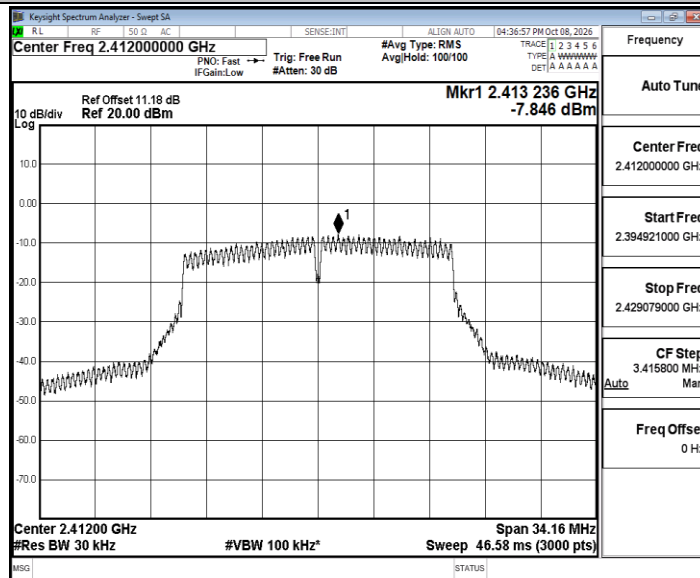
Result[dBm/3kHz]=Result[dBm/30kHz]+10*Log(3/30)

Test Graphs

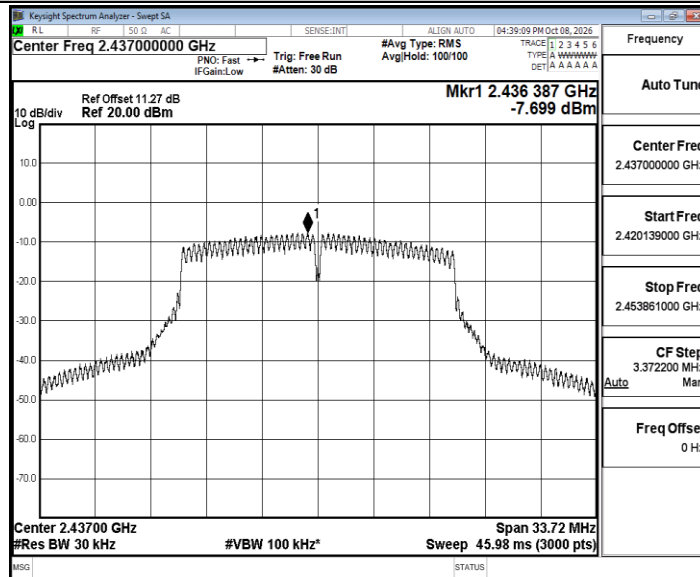




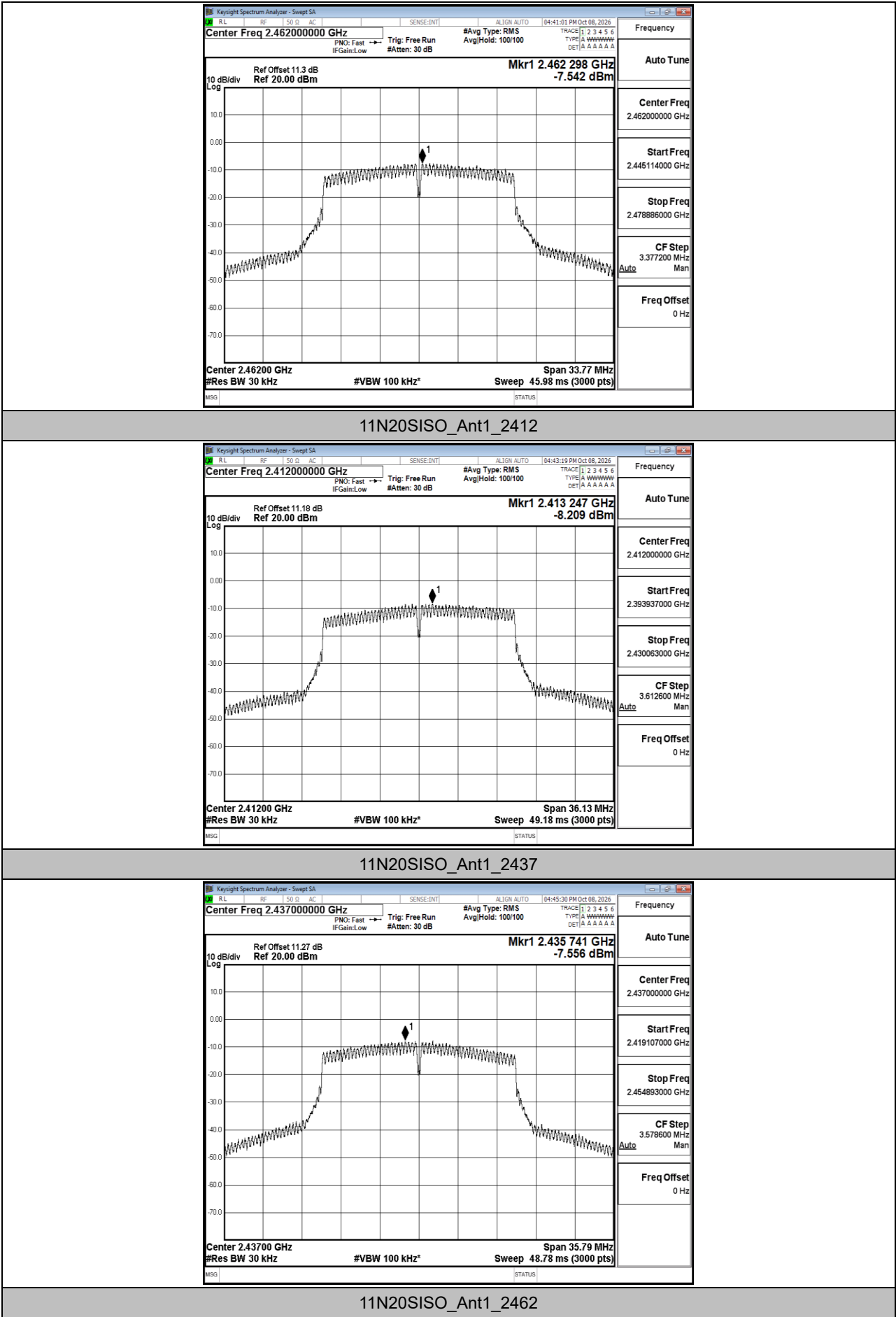
11G_Ant1_2412

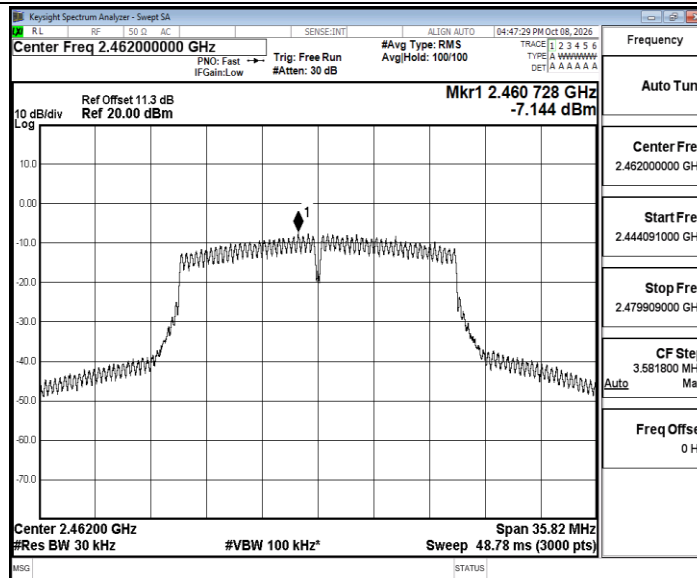


11G_Ant1_2437

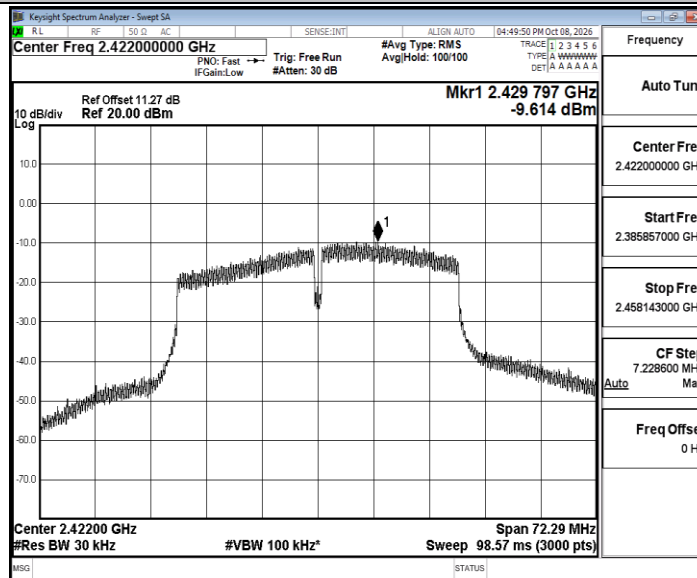


11G_Ant1_2462

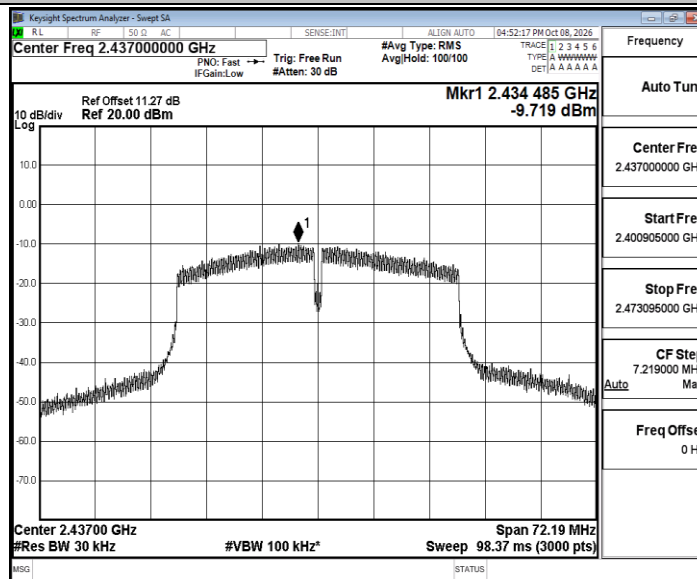




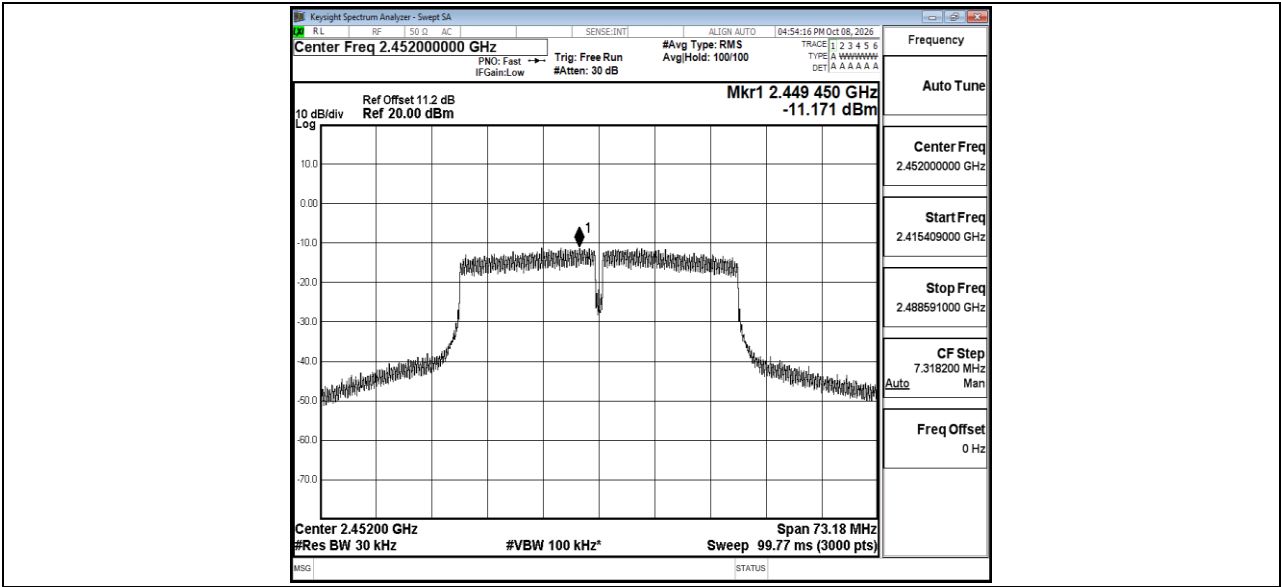
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



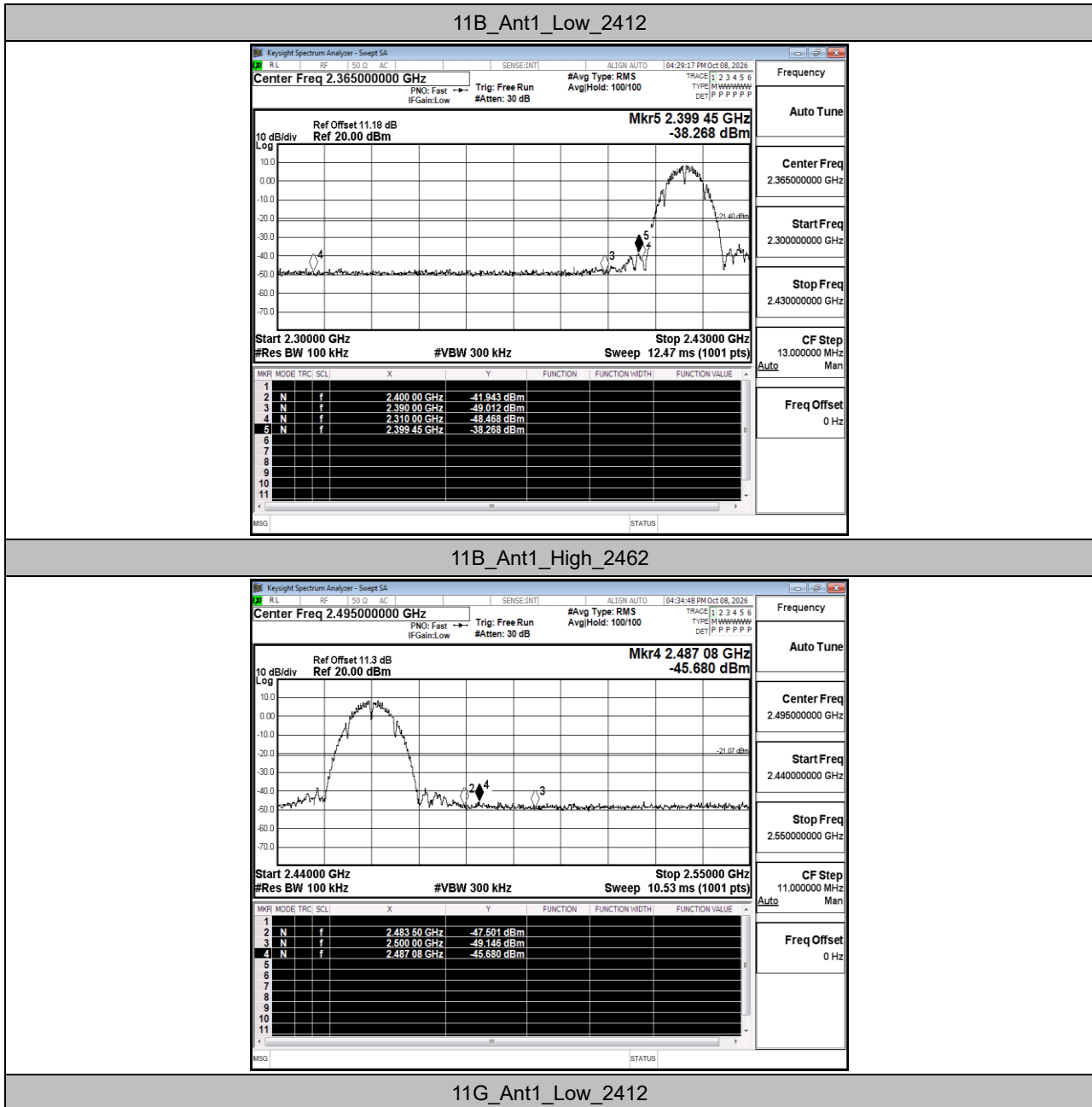
C.4 Band edge measurements

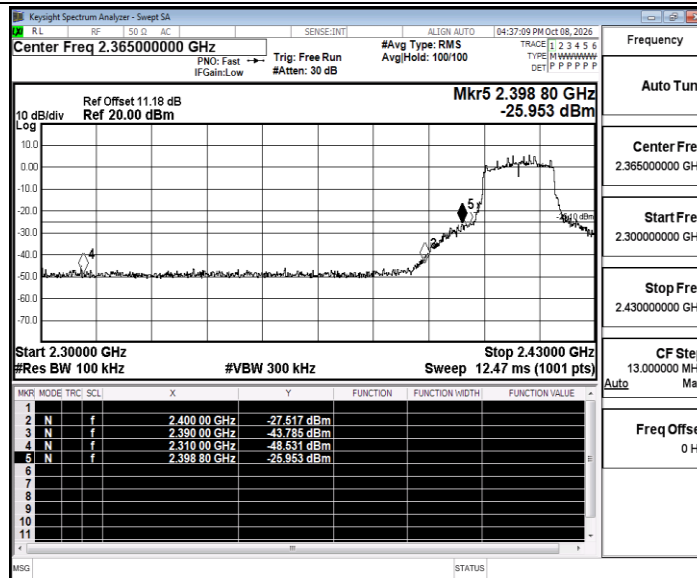
Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	8.60	-38.27	≤-21.4	PASS
		High	2462	8.93	-45.68	≤-21.07	PASS
11G	Ant1	Low	2412	4.90	-25.95	≤-25.1	PASS
		High	2462	6.53	-39.74	≤-23.47	PASS
11N20SISO	Ant1	Low	2412	5.59	-25.42	≤-24.41	PASS
		High	2462	5.89	-36.15	≤-24.11	PASS
11N40SISO	Ant1	Low	2422	4.75	-29.48	≤-25.25	PASS
		High	2452	2.77	-28.11	≤-27.23	PASS

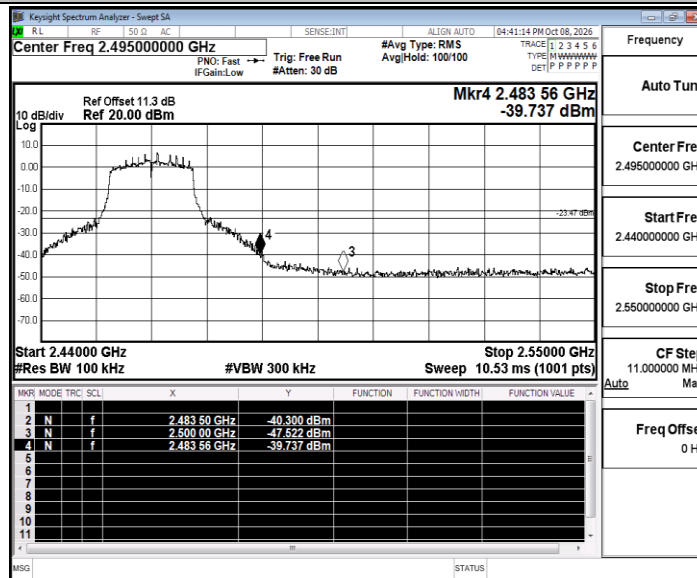
Note: offset=System attenuation +cable loss

Test Graphs

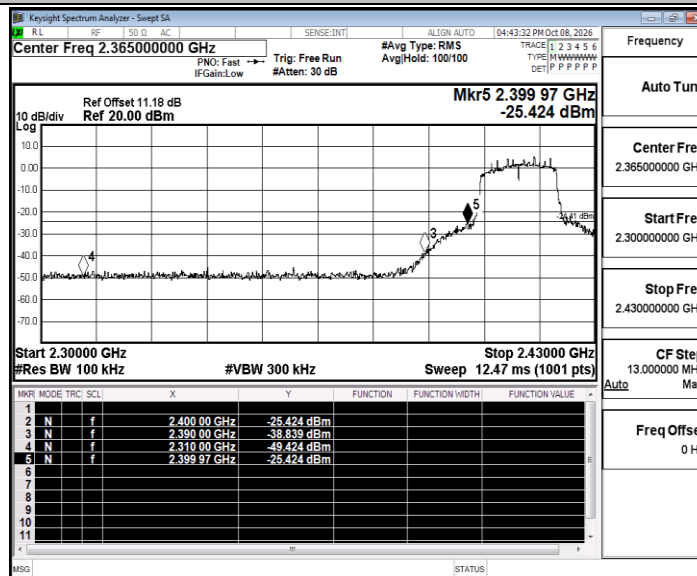




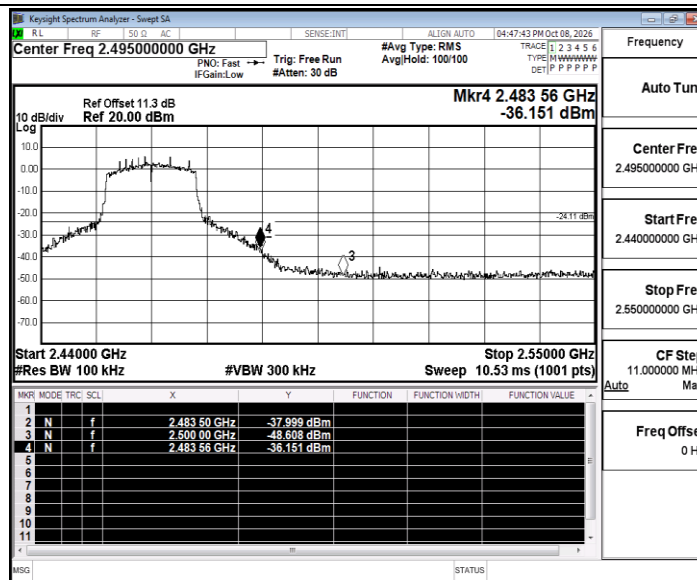
11G_Ant1_High_2462



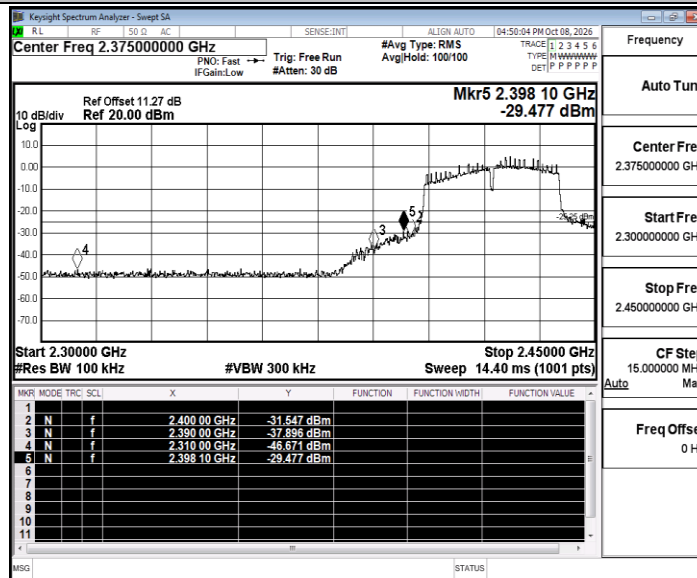
11N20SISO_Ant1_Low_2412



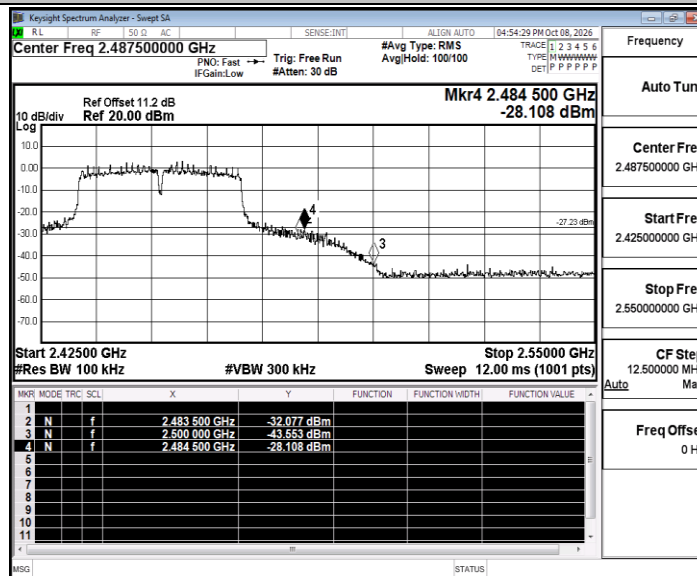
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



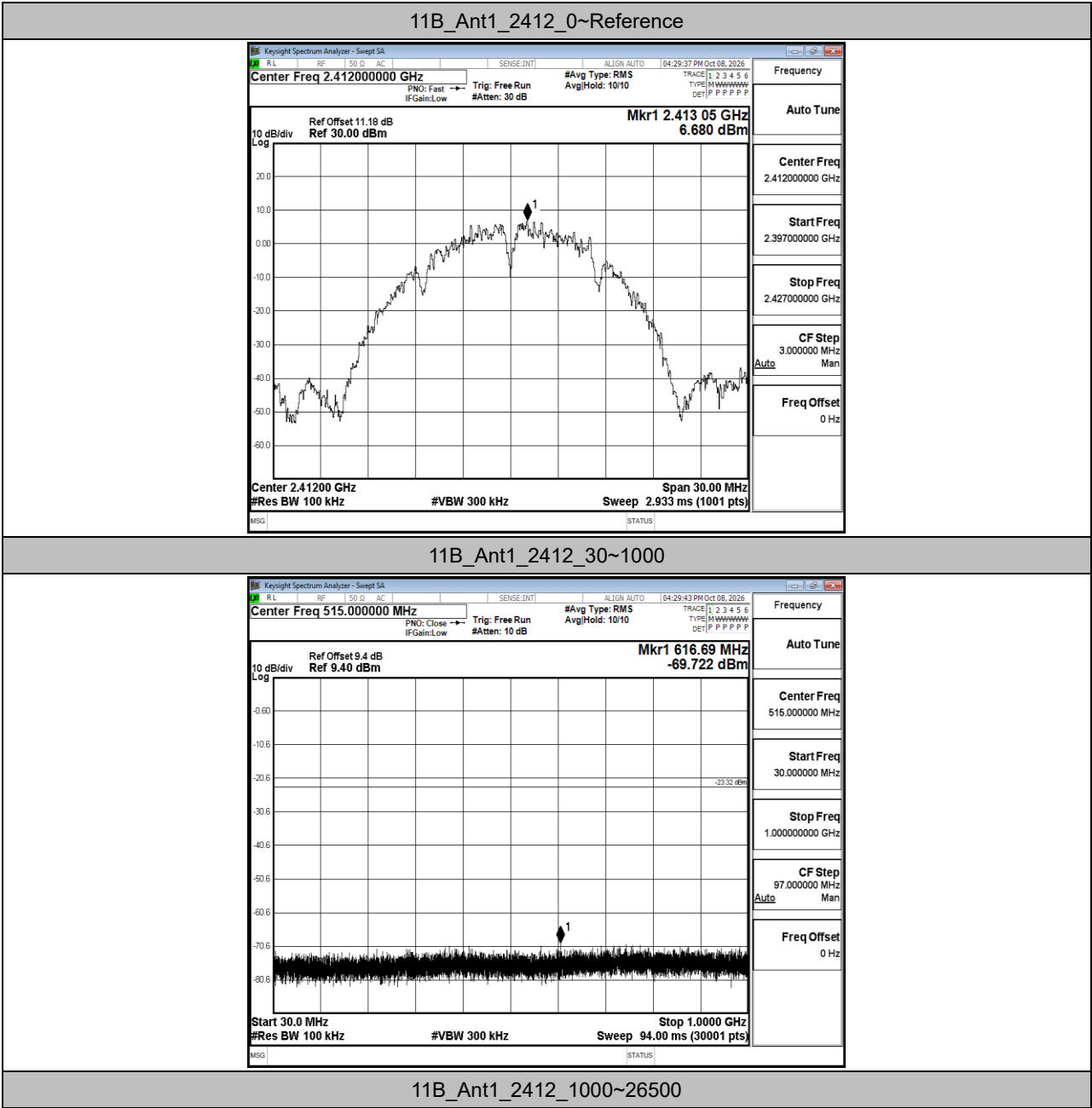
C.5 Conducted Spurious Emission

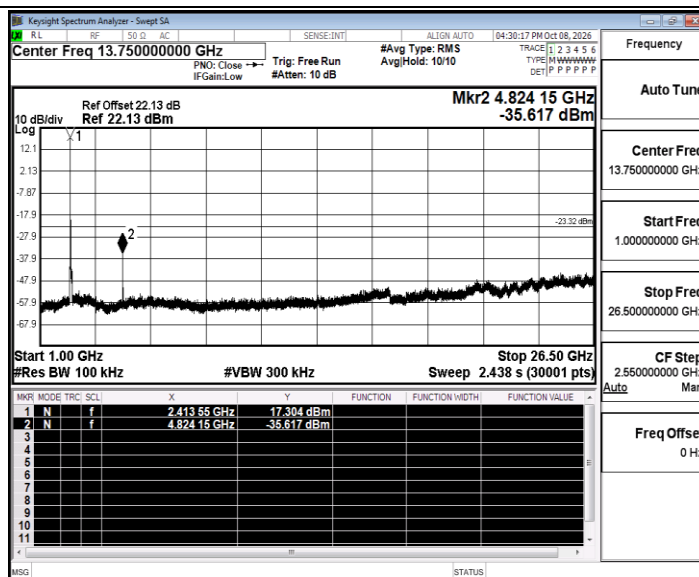
Test Result

TestMode	Antenna	Frequency [MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	6.68	6.68	---	PASS
			30~1000	6.68	-69.72	≤-23.32	PASS
			1000~26500	6.68	-35.62	≤-23.32	PASS
		2437	Reference	9.07	9.07	---	PASS
			30~1000	9.07	-70.32	≤-20.93	PASS
			1000~26500	9.07	-39.7	≤-20.93	PASS
		2462	Reference	7.08	7.08	---	PASS
			30~1000	7.08	-69.66	≤-22.92	PASS
			1000~26500	7.08	-40.15	≤-22.92	PASS
11G	Ant1	2412	Reference	2.64	2.64	---	PASS
			30~1000	2.64	-70.16	≤-27.36	PASS
			1000~26500	2.64	-40.78	≤-27.36	PASS
		2437	Reference	2.08	2.08	---	PASS
			30~1000	2.08	-70.04	≤-27.92	PASS
			1000~26500	2.08	-44.39	≤-27.92	PASS
		2462	Reference	5.44	5.44	---	PASS
			30~1000	5.44	-69.49	≤-24.56	PASS
			1000~26500	5.44	-44.74	≤-24.56	PASS
11N20SISO	Ant1	2412	Reference	2.80	2.80	---	PASS
			30~1000	2.80	-69.69	≤-27.2	PASS
			1000~26500	2.80	-44.3	≤-27.2	PASS
		2437	Reference	2.48	2.48	---	PASS
			30~1000	2.48	-70.22	≤-27.52	PASS
			1000~26500	2.48	-44.96	≤-27.52	PASS
		2462	Reference	5.76	5.76	---	PASS
			30~1000	5.76	-69.73	≤-24.24	PASS
			1000~26500	5.76	-45.02	≤-24.24	PASS
11N40SISO	Ant1	2422	Reference	3.75	3.75	---	PASS
			30~1000	3.75	-69.95	≤-26.25	PASS
			1000~26500	3.75	-44.42	≤-26.25	PASS
		2437	Reference	3.60	3.60	---	PASS
			30~1000	3.60	-70.31	≤-26.4	PASS
			1000~26500	3.60	-44.75	≤-26.4	PASS
		2452	Reference	1.99	1.99	---	PASS
			30~1000	1.99	-70.31	≤-28.01	PASS
			1000~26500	1.99	-43.71	≤-28.01	PASS

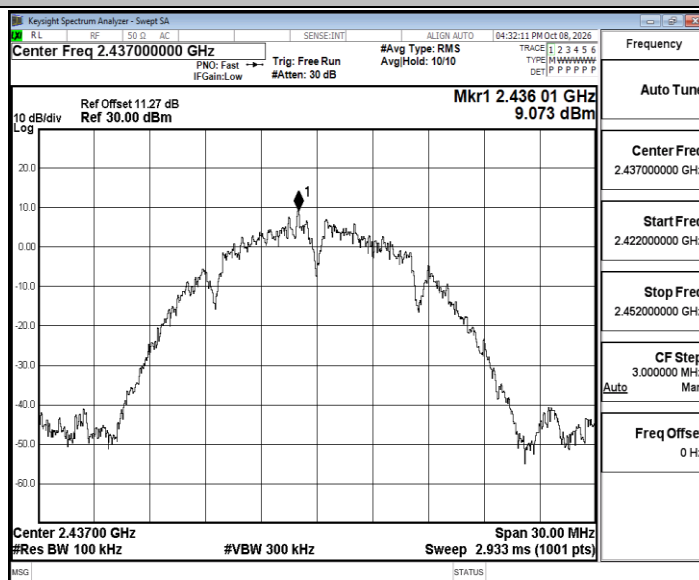
Note: Regarding the spurious emissions from 30MHz to 26.5GHz, the cable lose have been set in the CORREC' of the Spectrum Analyzer during the test.

Test Graphs

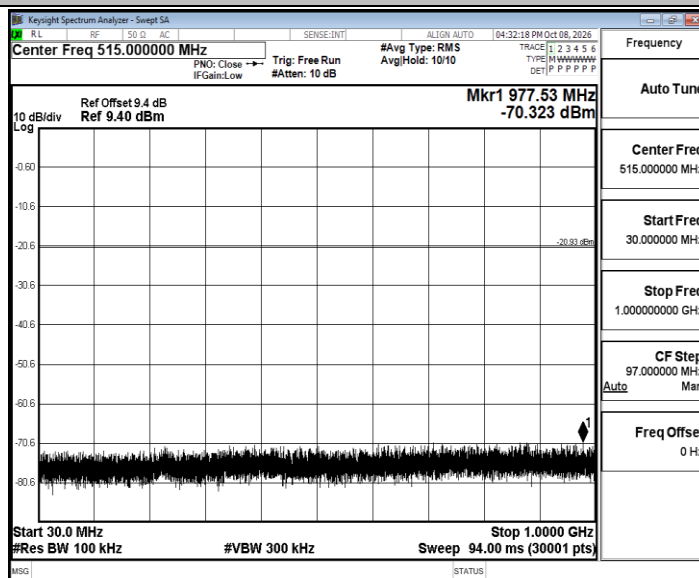




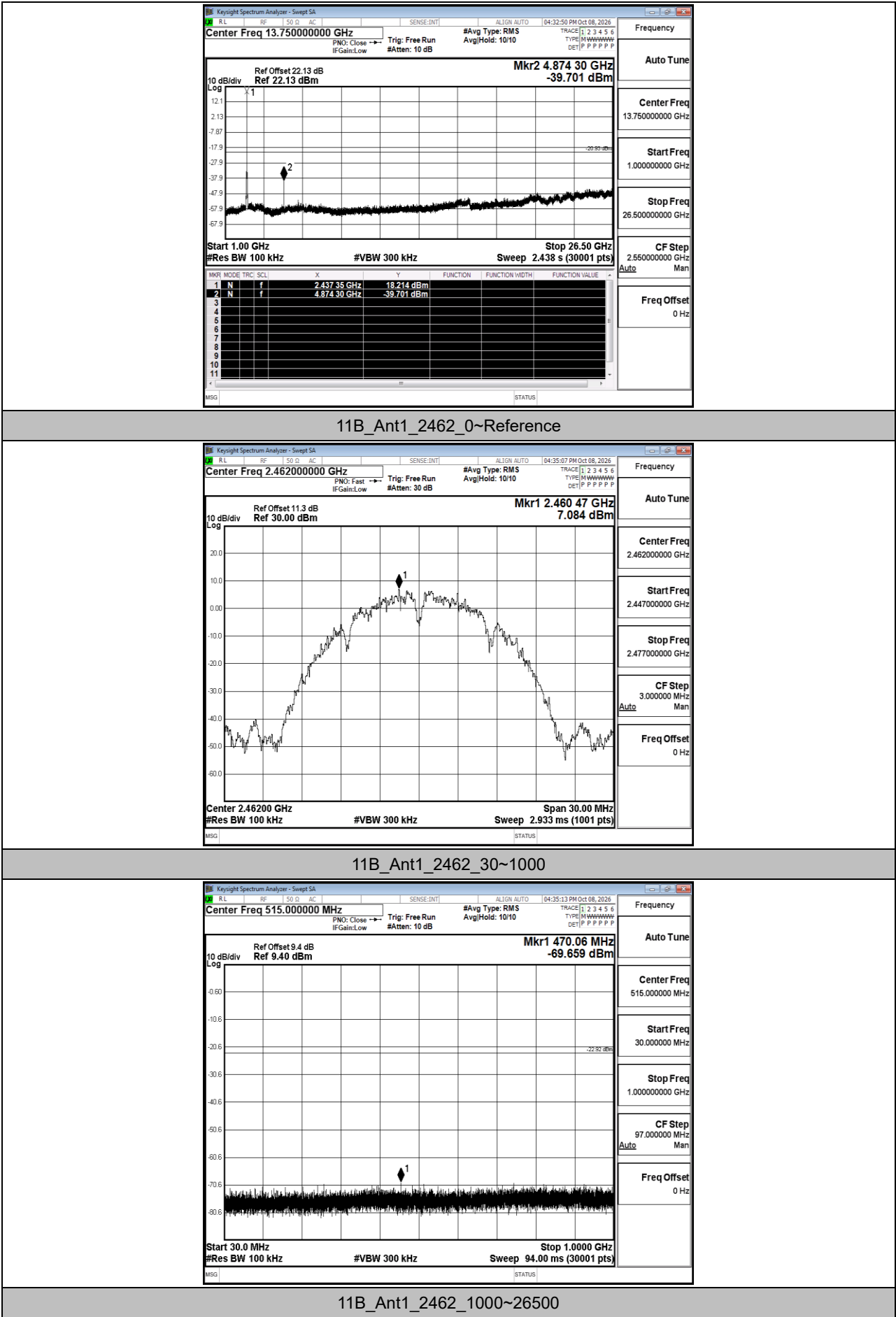
11B Ant1 2437 0~Reference

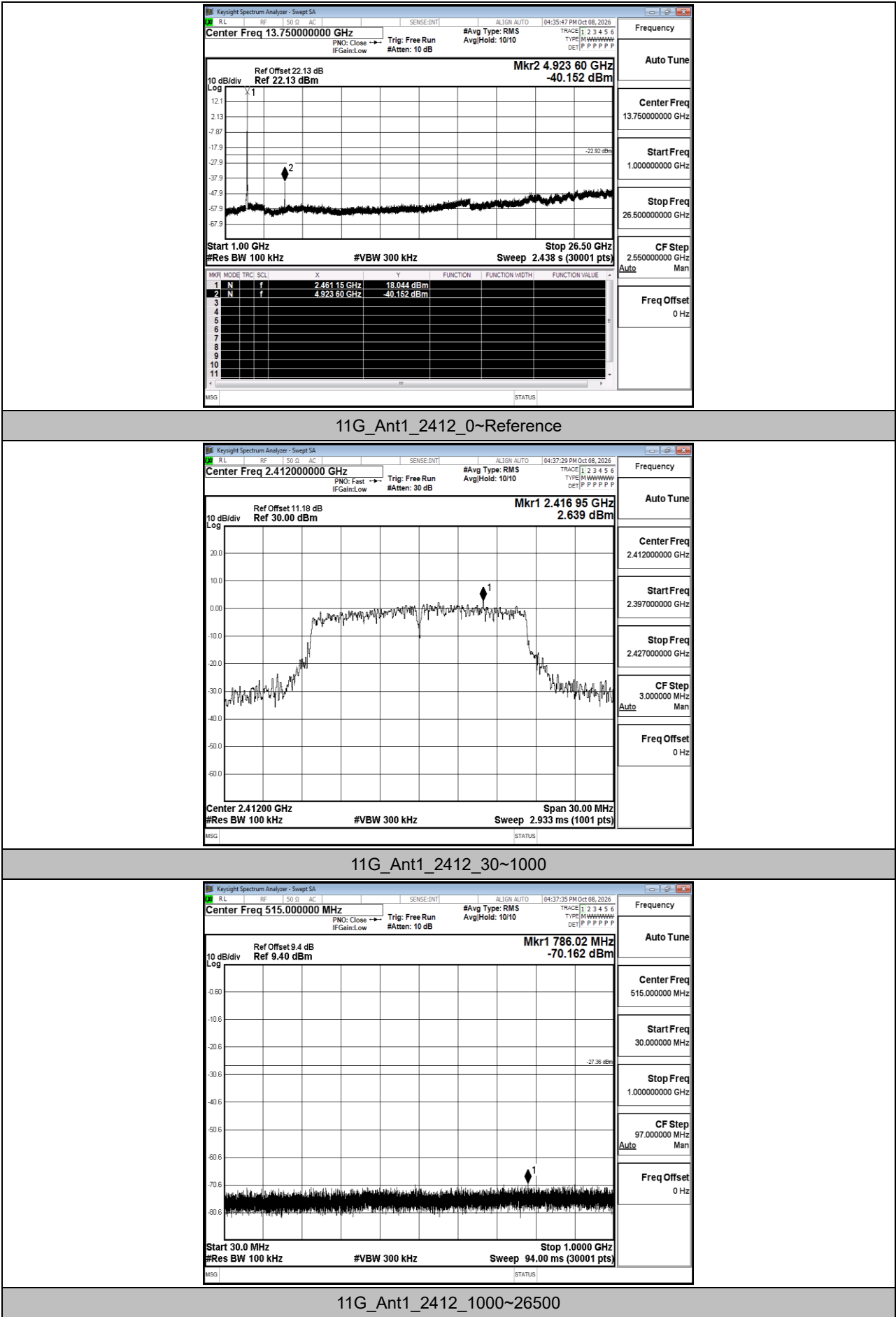


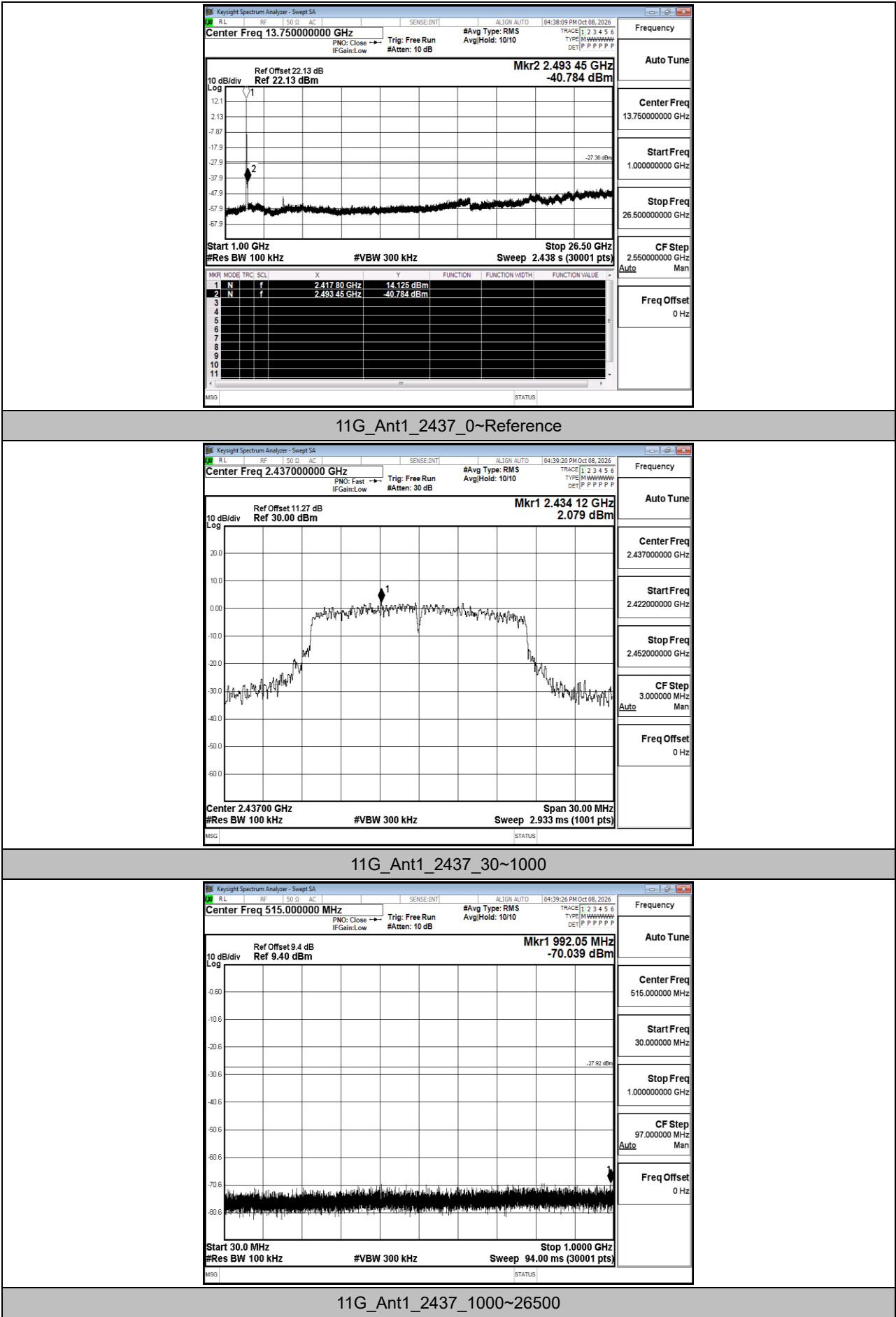
11B Ant1 2437 30~1000

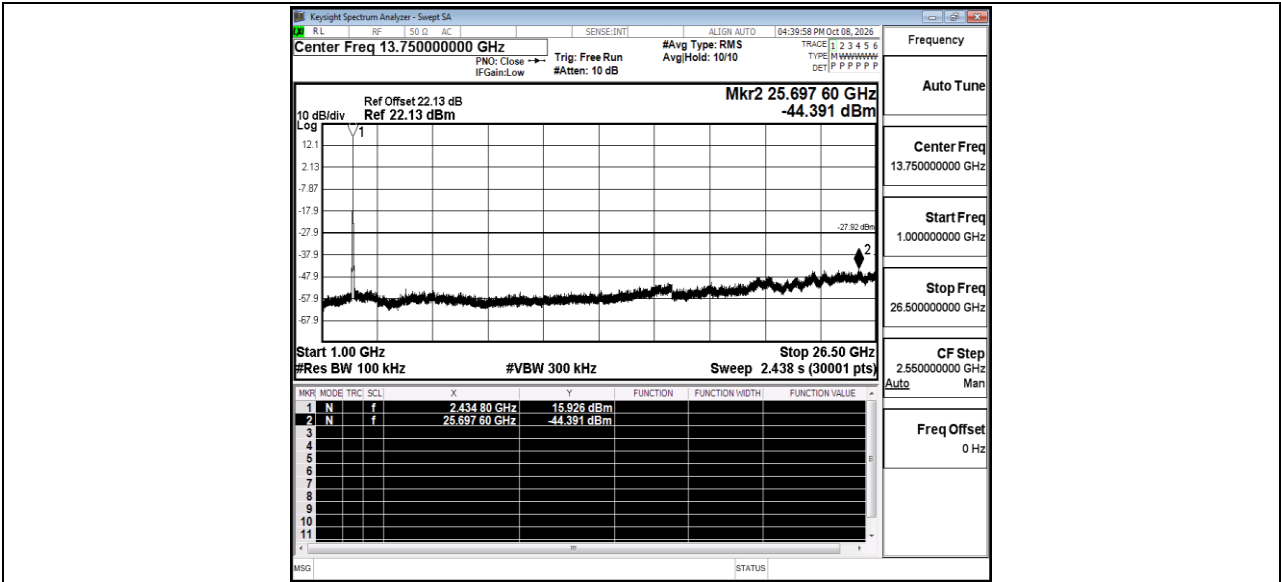


11B Ant1 2437 1000~26500

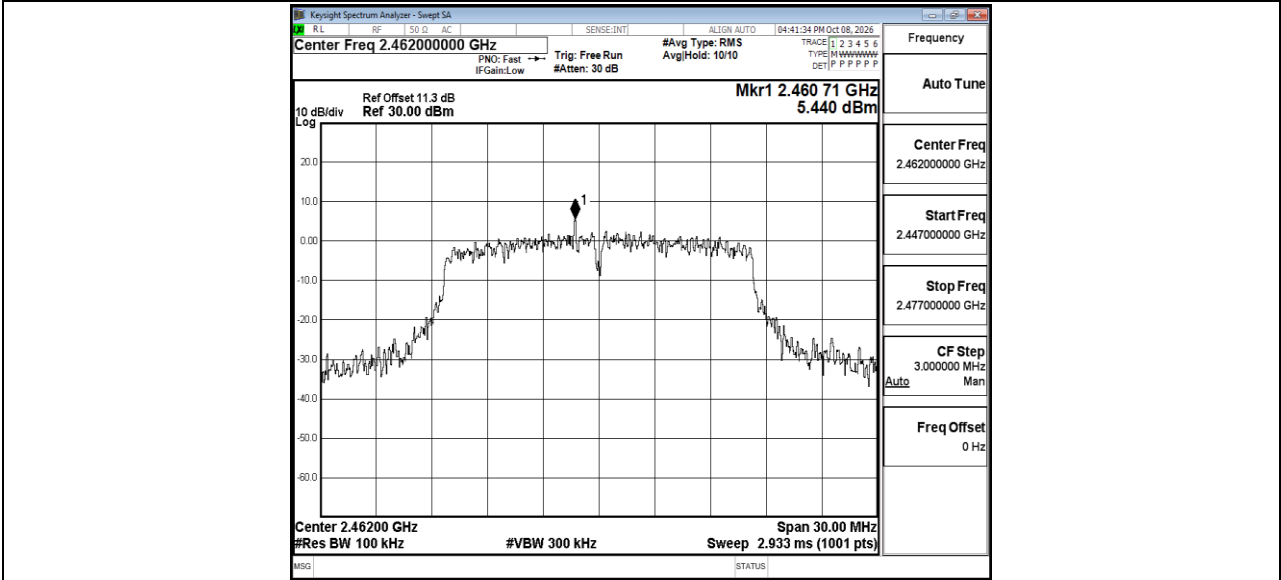




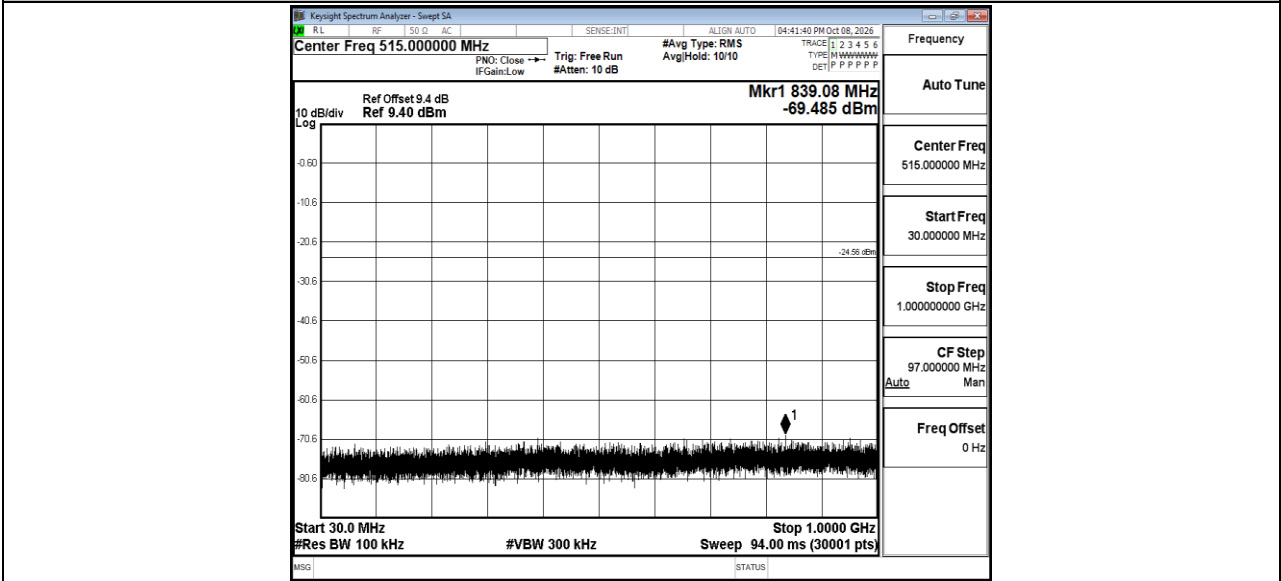




11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500