

Appendix A

RF Test Data for 2.4GWIFI (Conducted Measurement)

Aston Martin Valkyrie

Test Model: Aston Martin Valkyrie

Environmental Conditions

Temperature:	24.8° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang Hai
Supervised by:	Fengliu Tang

A.1 DTS Bandwidth

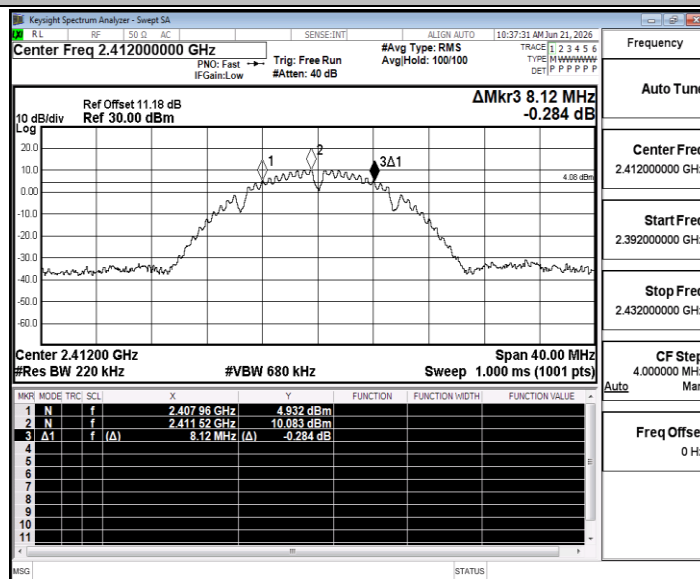
Test Result

TestMode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	8.120	2407.960	2416.080	0.5	PASS
		2437	8.160	2432.920	2441.080	0.5	PASS
		2462	8.120	2457.960	2466.080	0.5	PASS
11G	Ant1	2412	16.200	2403.920	2420.120	0.5	PASS
		2437	16.240	2428.880	2445.120	0.5	PASS
		2462	16.120	2453.880	2470.000	0.5	PASS
11N20SISO	Ant1	2412	17.120	2403.440	2420.560	0.5	PASS
		2437	16.800	2428.400	2445.200	0.5	PASS
		2462	17.400	2453.280	2470.680	0.5	PASS
11N40SISO	Ant1	2422	35.520	2404.160	2439.680	0.5	PASS
		2437	36.080	2418.920	2455.000	0.5	PASS
		2452	35.760	2434.080	2469.840	0.5	PASS
11AX20SISO	Ant1	2412	17.000	2403.600	2420.600	0.5	PASS
		2437	17.160	2428.320	2445.480	0.5	PASS
		2462	17.400	2453.280	2470.680	0.5	PASS
11AX40SISO	Ant1	2422	36.000	2404.080	2440.080	0.5	PASS
		2437	35.520	2419.080	2454.600	0.5	PASS
		2452	35.920	2434.000	2469.920	0.5	PASS

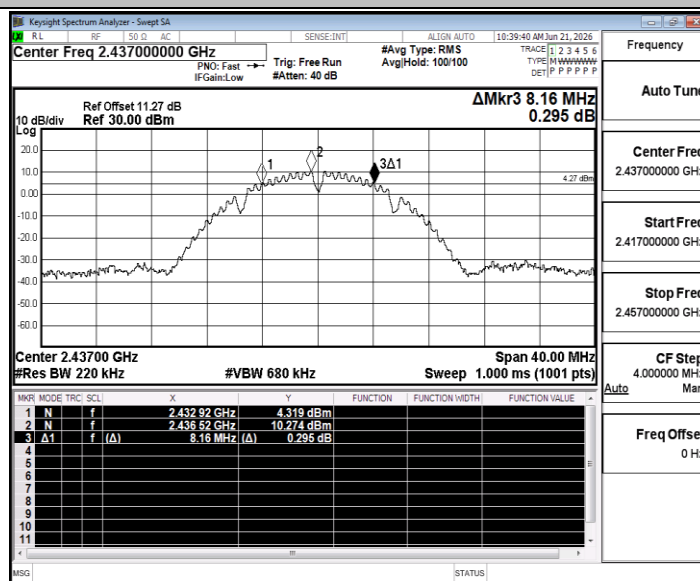
Note: offset=System attenuation +caba loss

Test Graphs

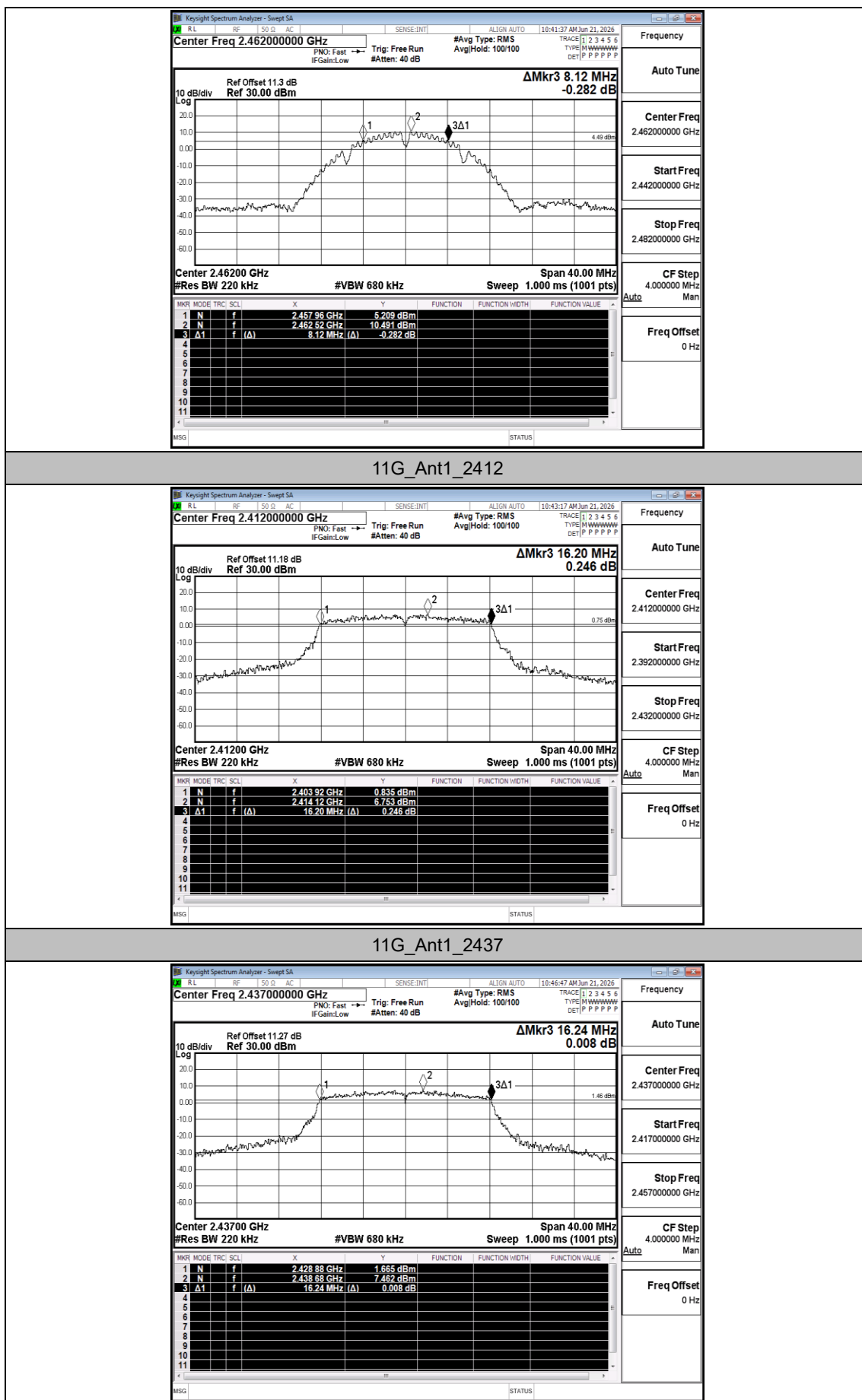
11B_Ant1_2412



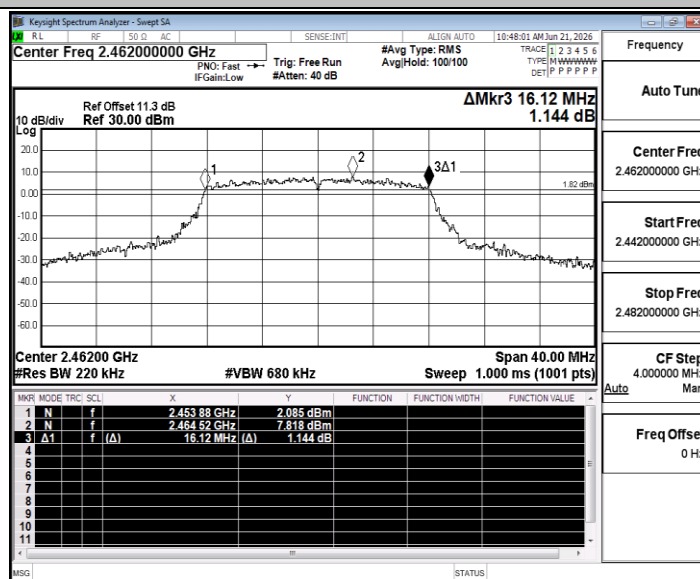
11B_Ant1_2437



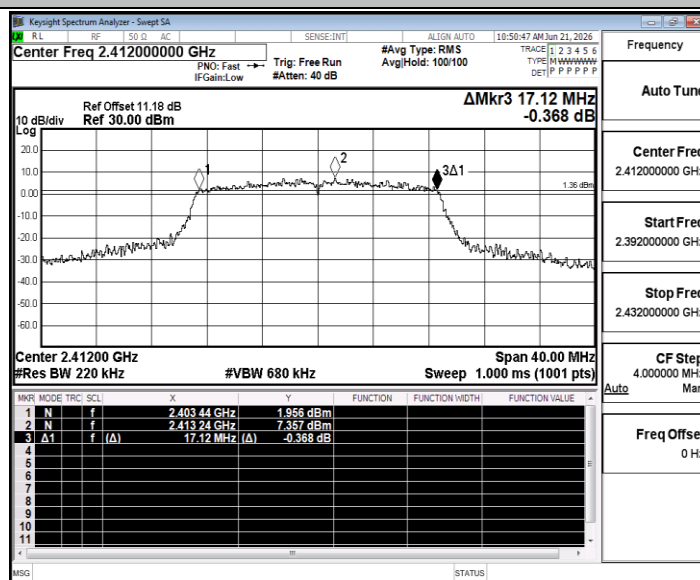
11B_Ant1_2462



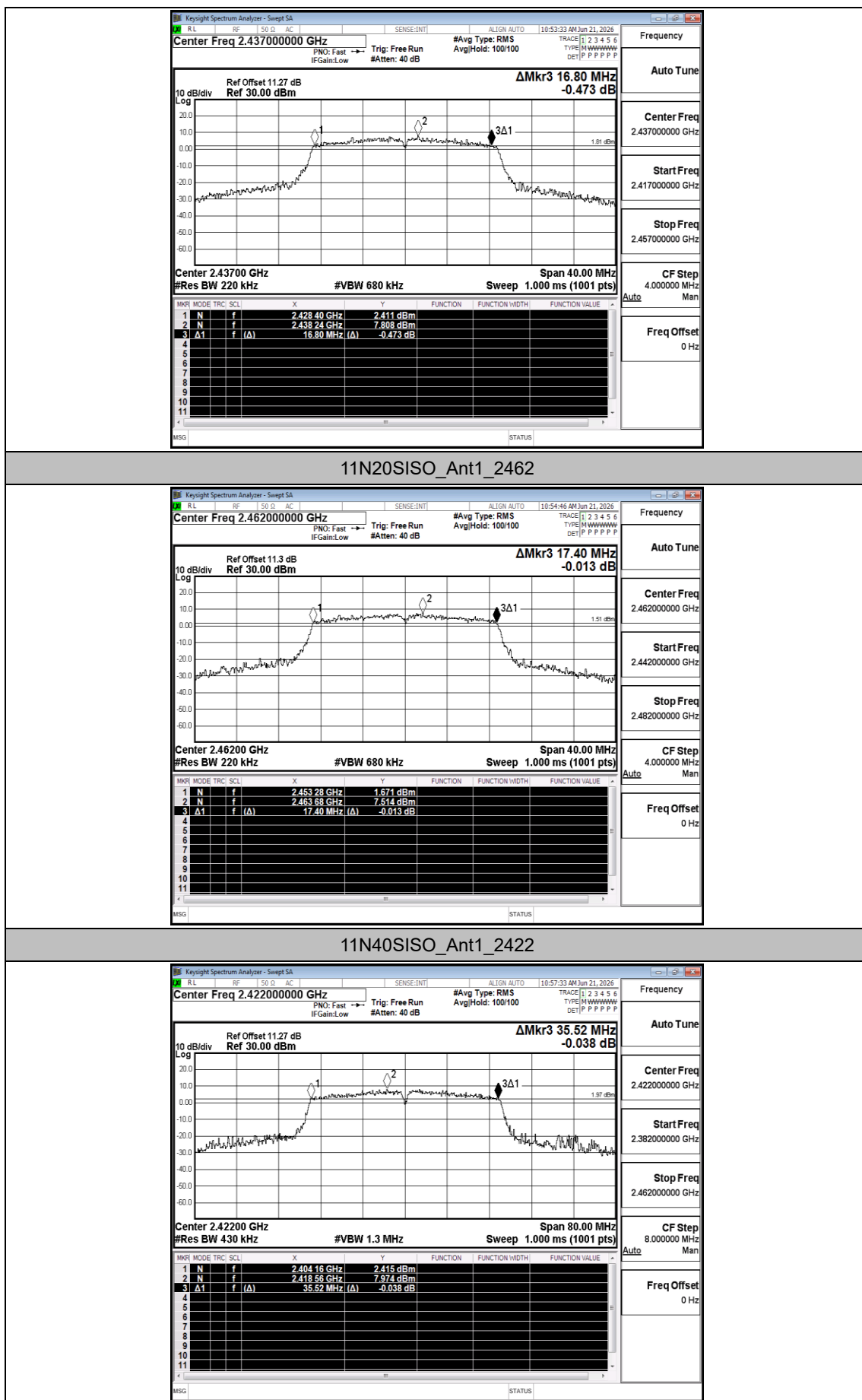
11G_Ant1_2462



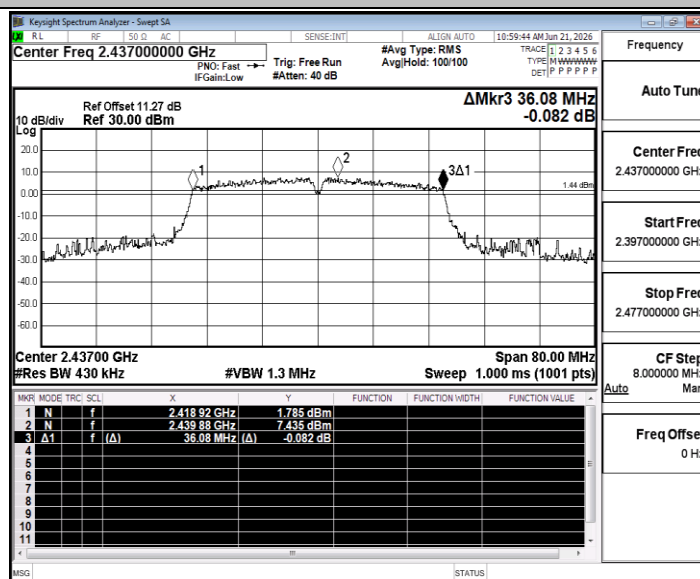
11N20SISO_Ant1_2412



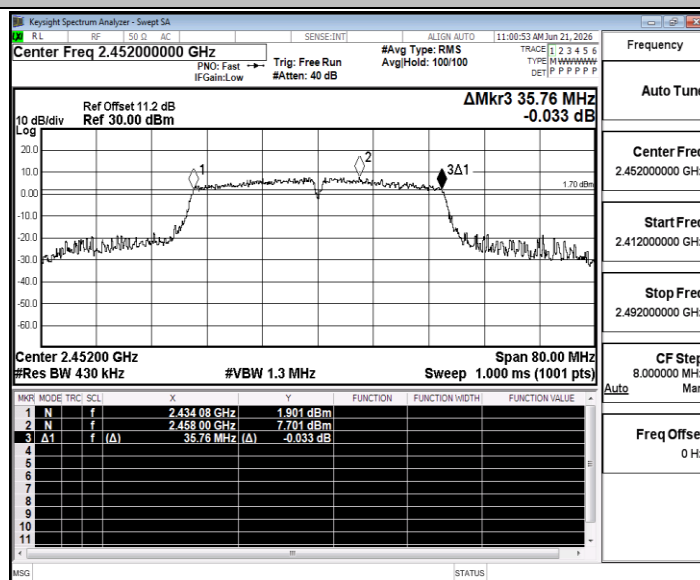
11N20SISO_Ant1_2437



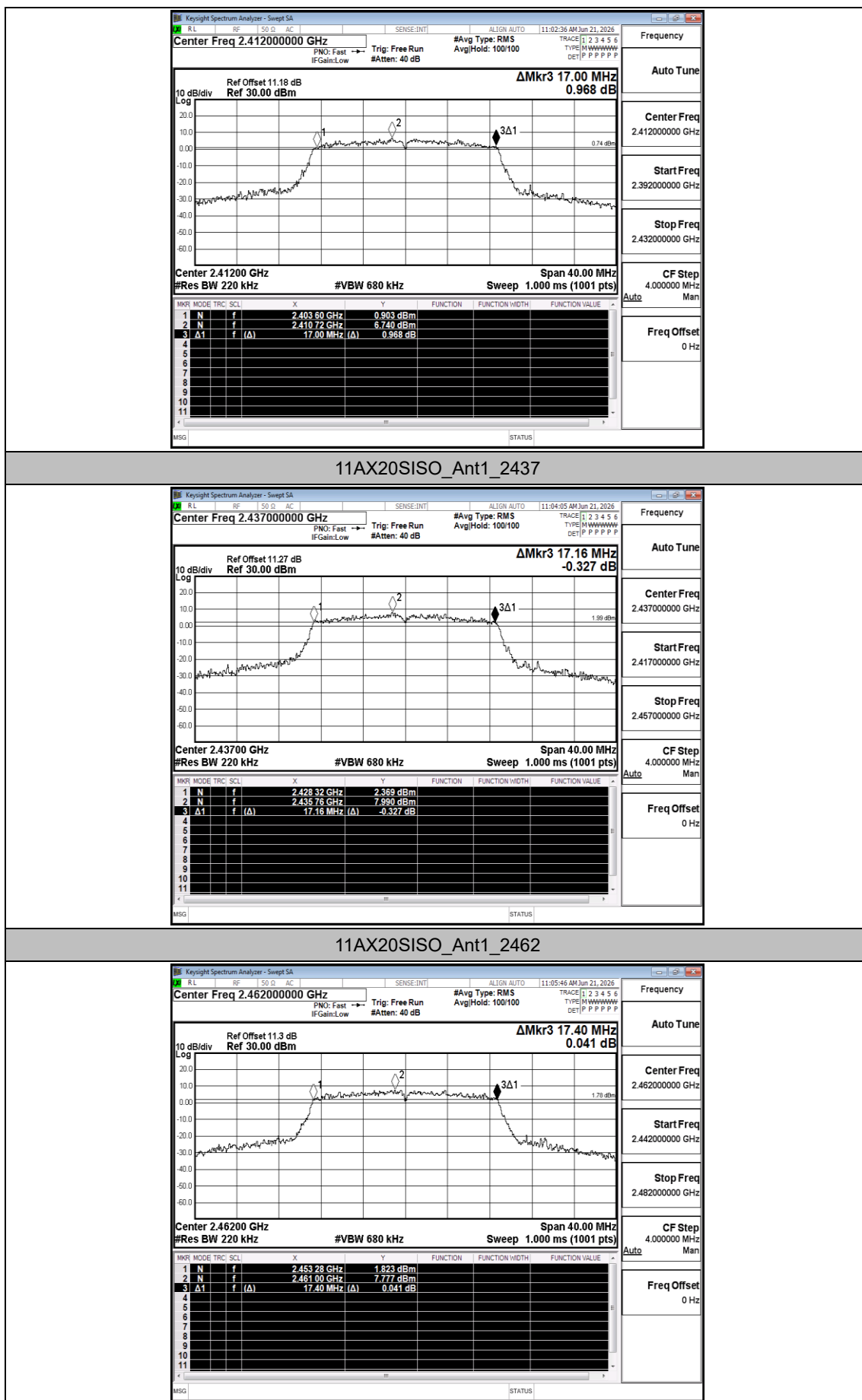
11N40SISO_Ant1_2437



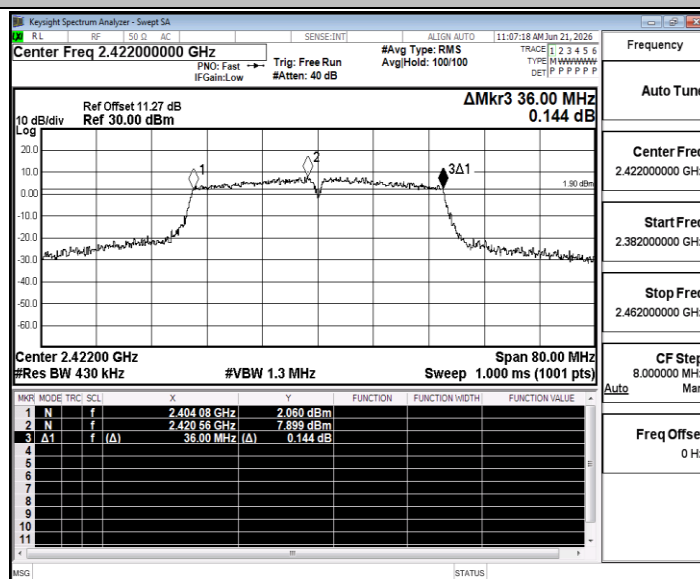
11N40SISO_Ant1_2452



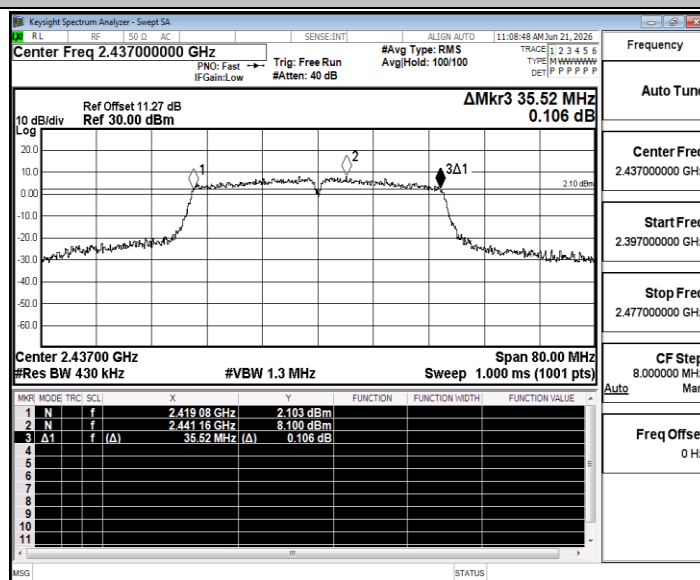
11AX20SISO_Ant1_2412



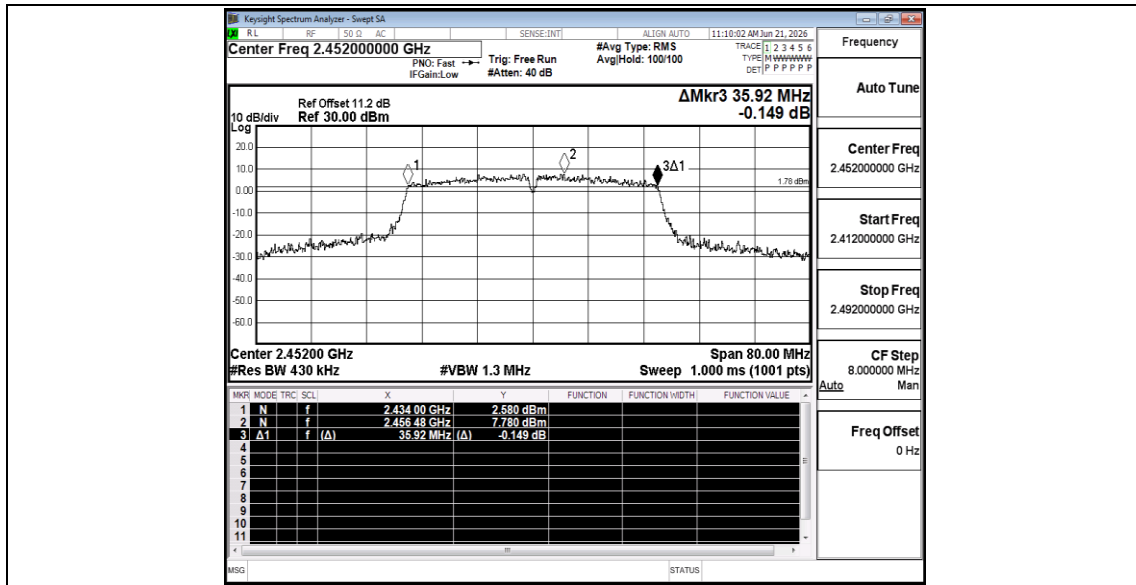
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452



A.2 Maximum conducted output power

TestMode	Antenna	Conducted Power (dBm)	Total Conducted Power (dBm)	Duty Factor (dB)	Conducted Power (dBm)	Limit Conducted (dBm)	Verdict
11B	Ant1	2412	9.33	0.02	9.35	≤30.00	PASS
		2437	9.38	0.02	9.40	≤30.00	PASS
		2462	9.45	0.03	9.48	≤30.00	PASS
11G	Ant1	2412	8.55	0.12	8.67	≤30.00	PASS
		2437	8.98	0.15	9.13	≤30.00	PASS
		2462	8.91	0.15	9.06	≤30.00	PASS
11N20SISO	Ant1	2412	8.48	0.13	8.61	≤30.00	PASS
		2437	9.14	0.16	9.30	≤30.00	PASS
		2462	8.92	0.13	9.05	≤30.00	PASS
11N40SISO	Ant1	2422	9.21	0.26	9.47	≤30.00	PASS
		2437	9.10	0.26	9.36	≤30.00	PASS
		2452	9.16	0.32	9.48	≤30.00	PASS
11AX20SISO	Ant1	2412	8.06	0.13	8.19	≤30.00	PASS
		2437	8.89	0.13	9.02	≤30.00	PASS
		2462	8.85	0.13	8.98	≤30.00	PASS
11AX40SISO	Ant1	2422	9.18	0.26	9.44	≤30.00	PASS
		2437	9.15	0.32	9.47	≤30.00	PASS
		2452	9.15	0.26	9.41	≤30.00	PASS

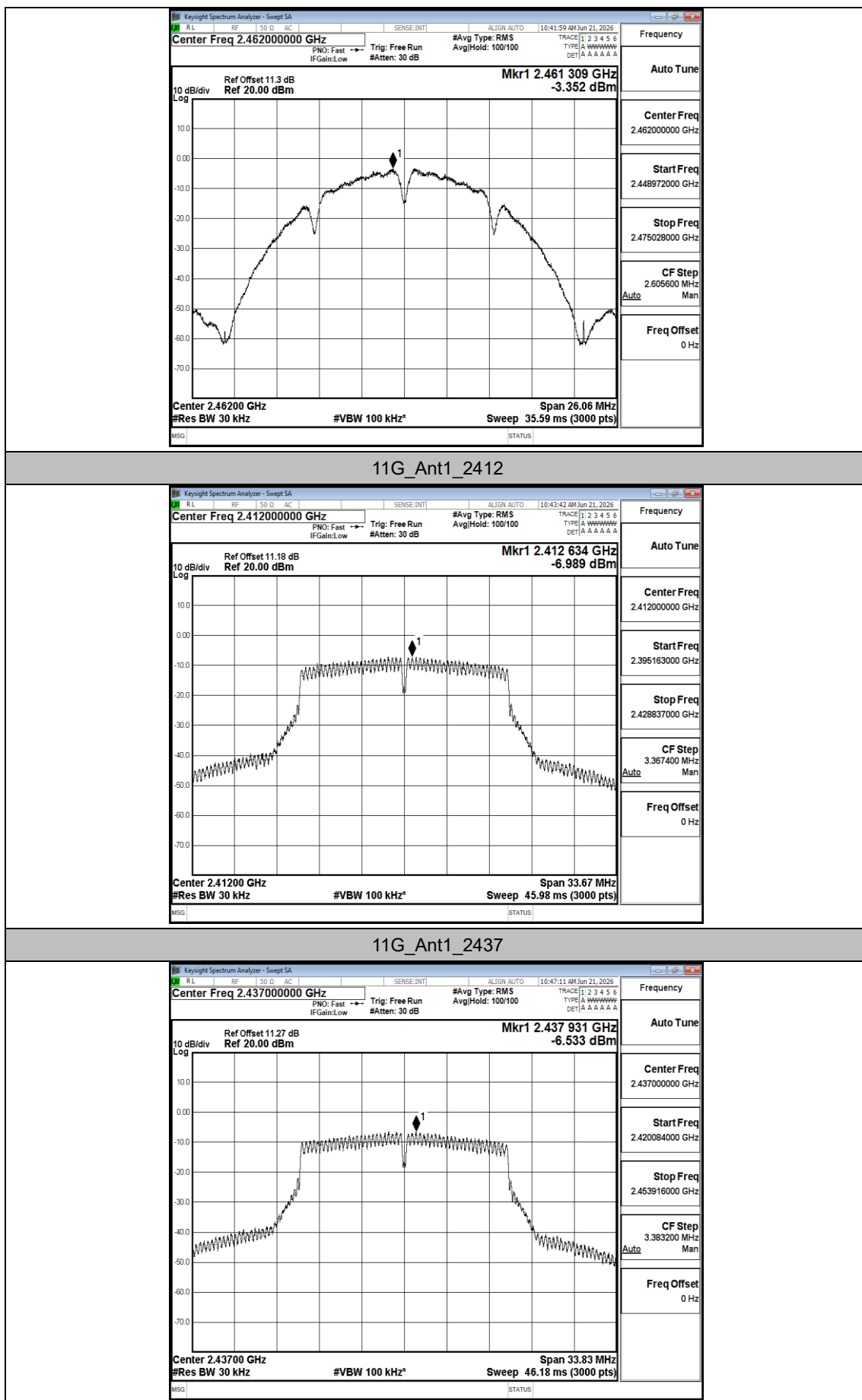
Note: offset=System attenuation +cabel loss

A.3 Maximum Power Spectral Density Level

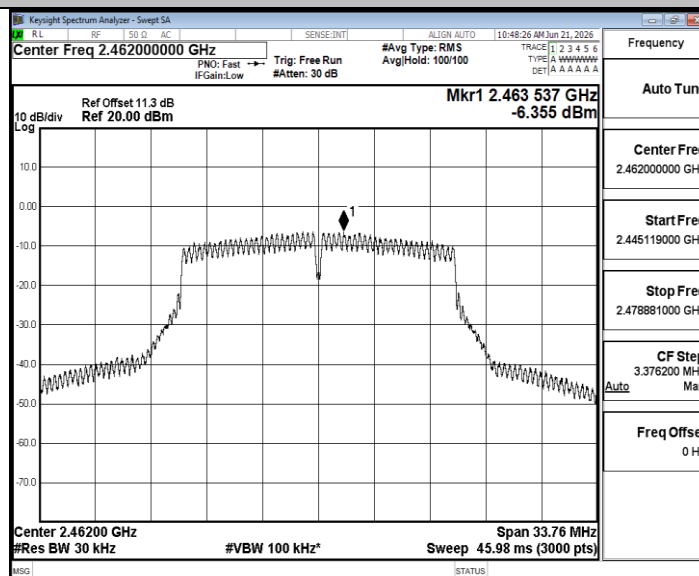
Test Result

TestMode	Antenna	Frequency [MHz]	Measured PSD [dBm/30kHz]	DC Factor [dB]	Result[dBm/30kHz]	Limit[dBm/30kHz]	Verdict
11B	Ant1	2412	-3.81	0.02	-3.79	≤8.00	PASS
		2437	-3.49	0.02	-3.47	≤8.00	PASS
		2462	-3.35	0.03	-3.32	≤8.00	PASS
11G	Ant1	2412	-6.99	0.12	-6.87	≤8.00	PASS
		2437	-6.53	0.15	-6.38	≤8.00	PASS
		2462	-6.36	0.15	-6.21	≤8.00	PASS
11N20SISO	Ant1	2412	-7.35	0.13	-7.22	≤8.00	PASS
		2437	-6.41	0.16	-6.25	≤8.00	PASS
		2462	-6.27	0.13	-6.14	≤8.00	PASS
11N40SISO	Ant1	2422	-9.3	0.26	-9.04	≤8.00	PASS
		2437	-9.2	0.26	-8.94	≤8.00	PASS
		2452	-9.6	0.32	-9.28	≤8.00	PASS
11AX20SISO	Ant1	2412	-7.71	0.13	-7.58	≤8.00	PASS
		2437	-6.82	0.13	-6.69	≤8.00	PASS
		2462	-6.84	0.13	-6.71	≤8.00	PASS
11AX40SISO	Ant1	2422	-9	0.26	-8.74	≤8.00	PASS
		2437	-9.37	0.32	-9.05	≤8.00	PASS
		2452	-9.55	0.26	-9.29	≤8.00	PASS

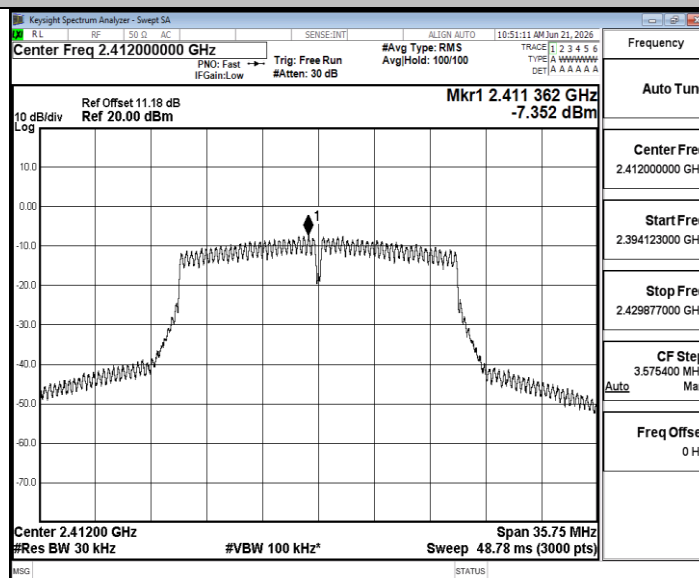
Note: offset=System attenuation +cable loss



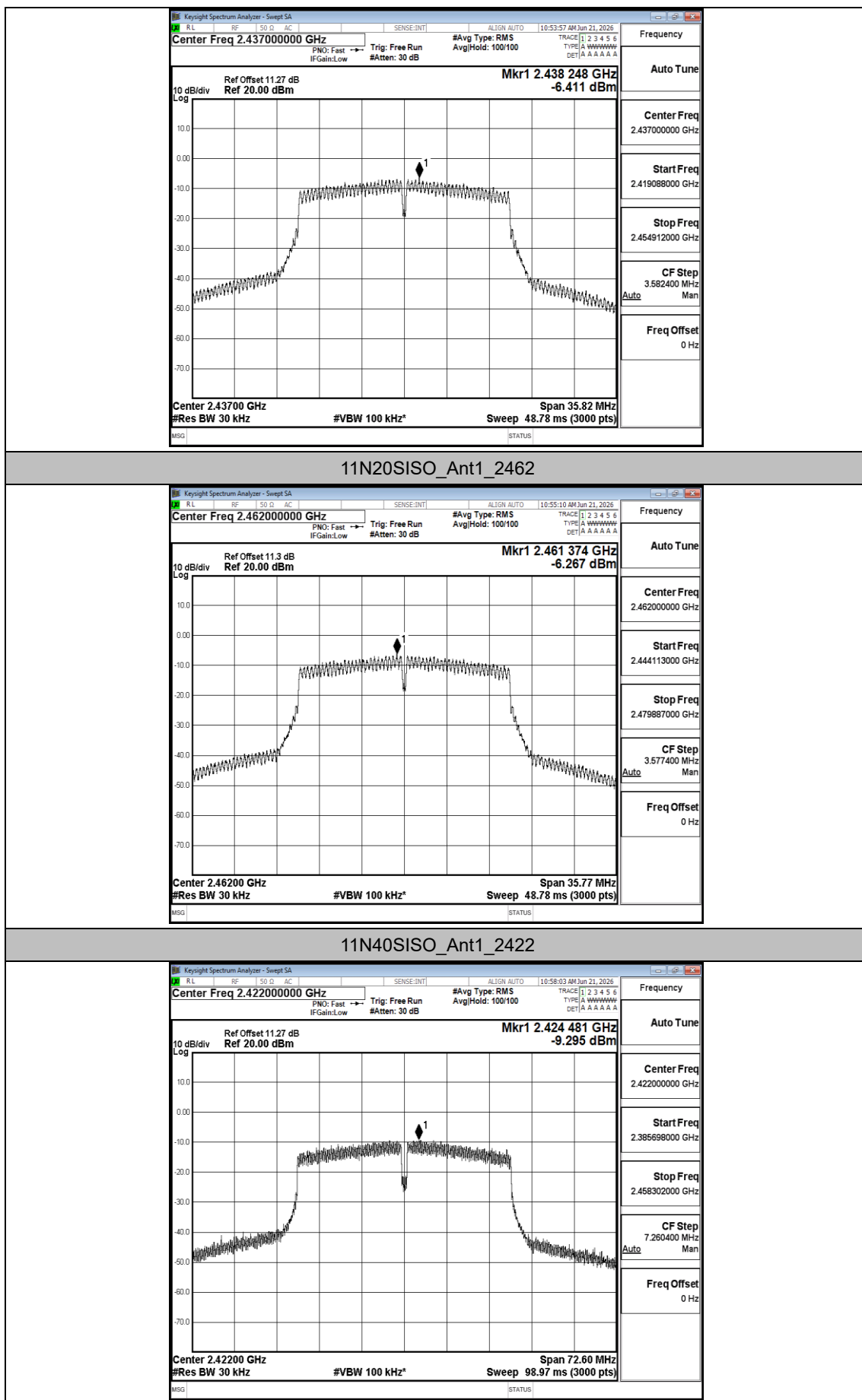
11G_Ant1_2462



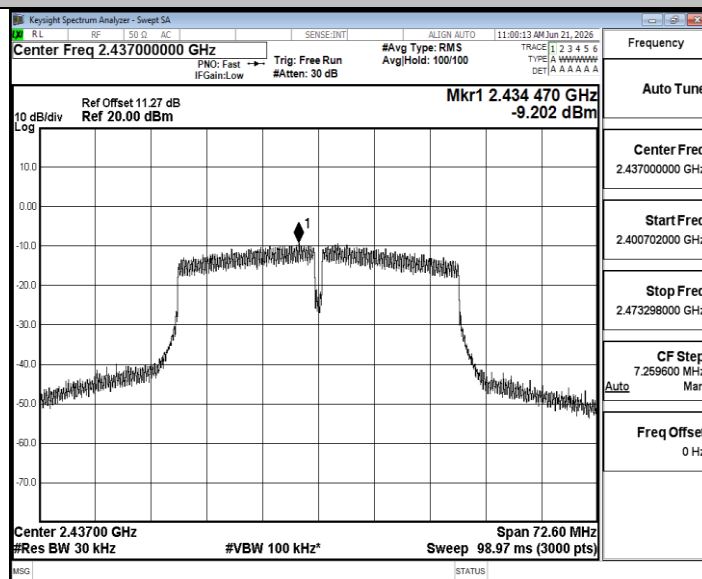
11N20SISO_Ant1_2412



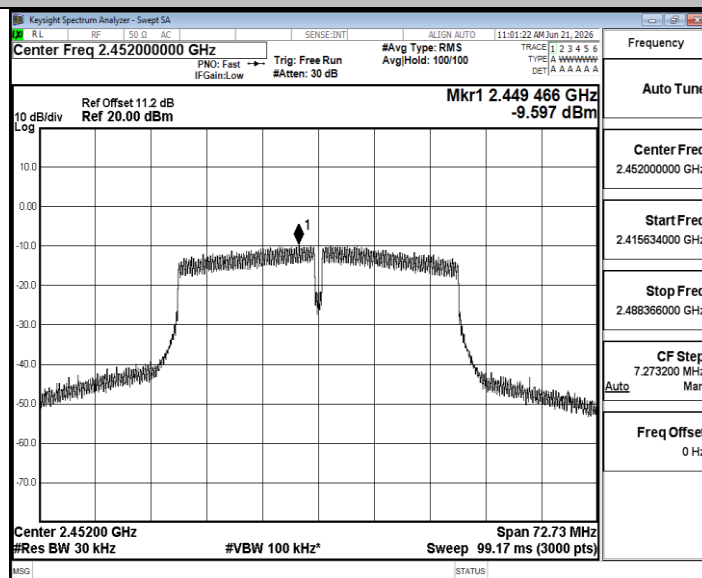
11N20SISO_Ant1_2437



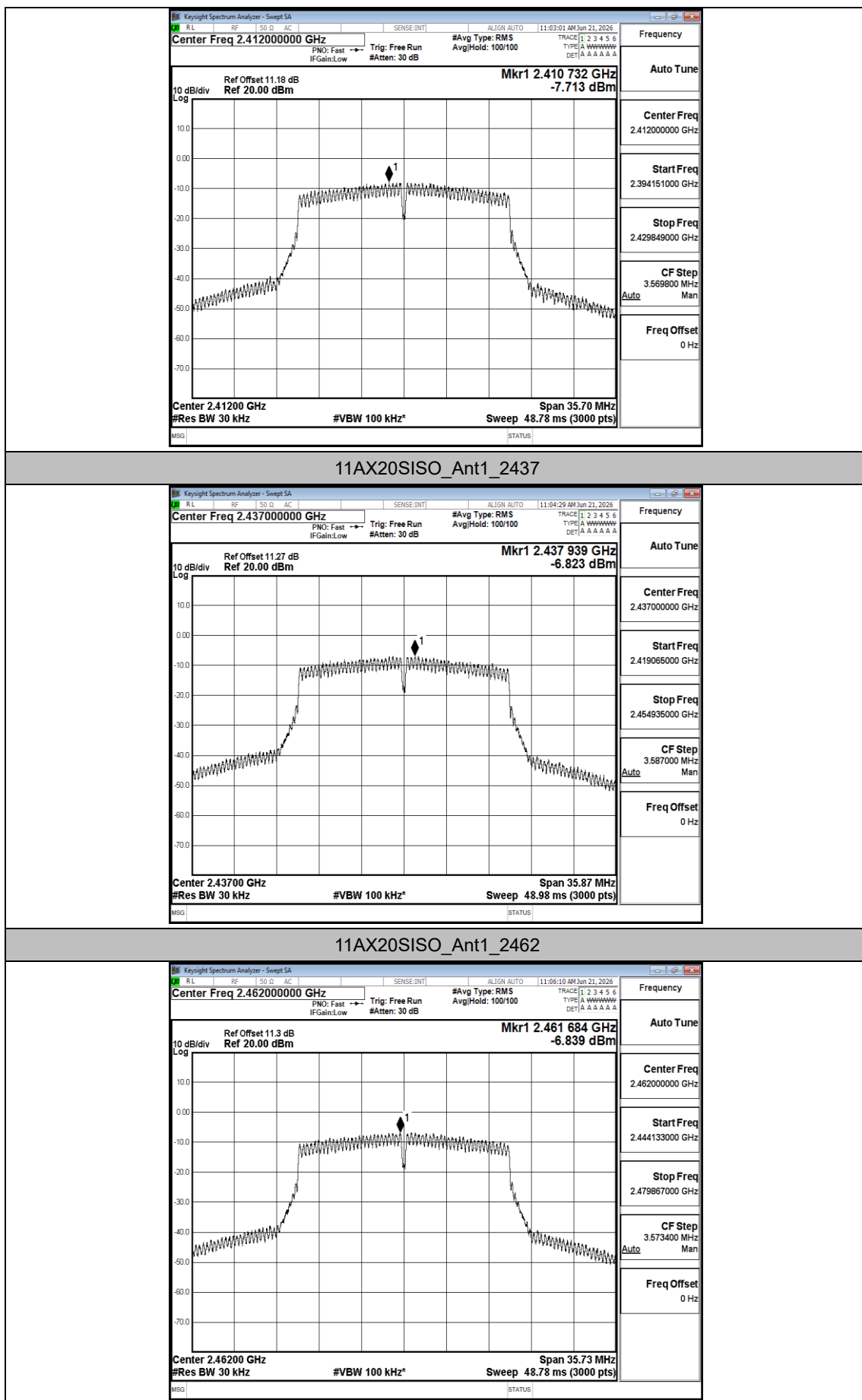
11N40SISO_Ant1_2437



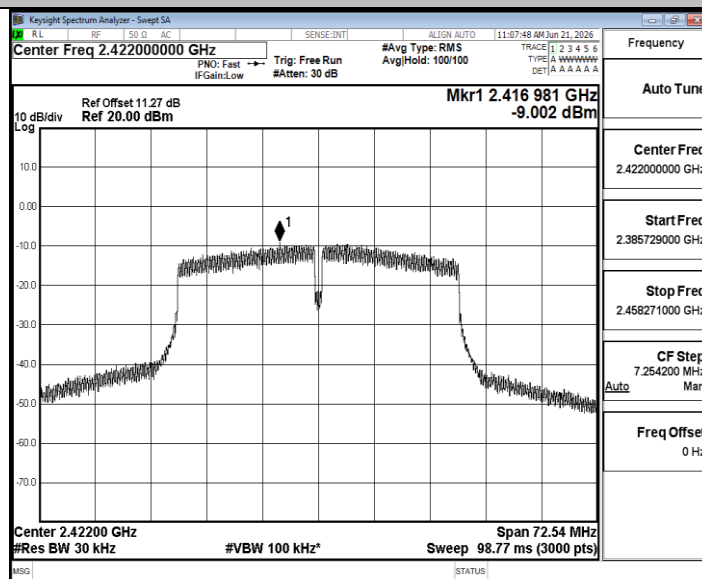
11N40SISO_Ant1_2452



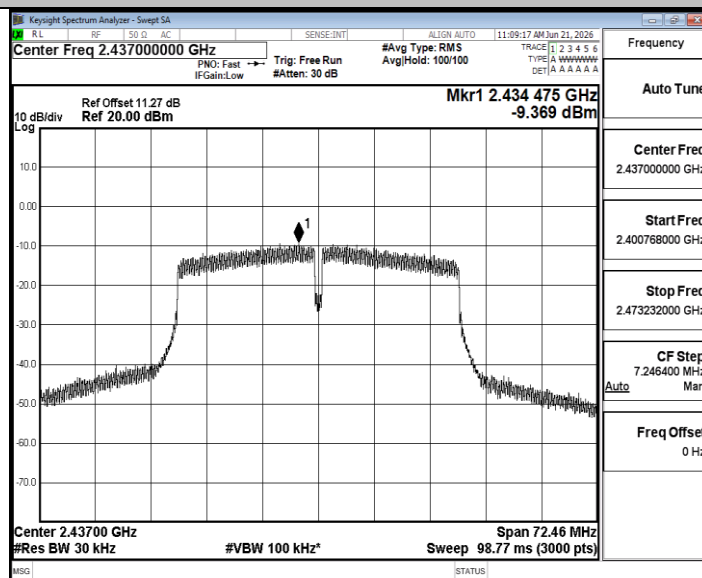
11AX20SISO_Ant1_2412



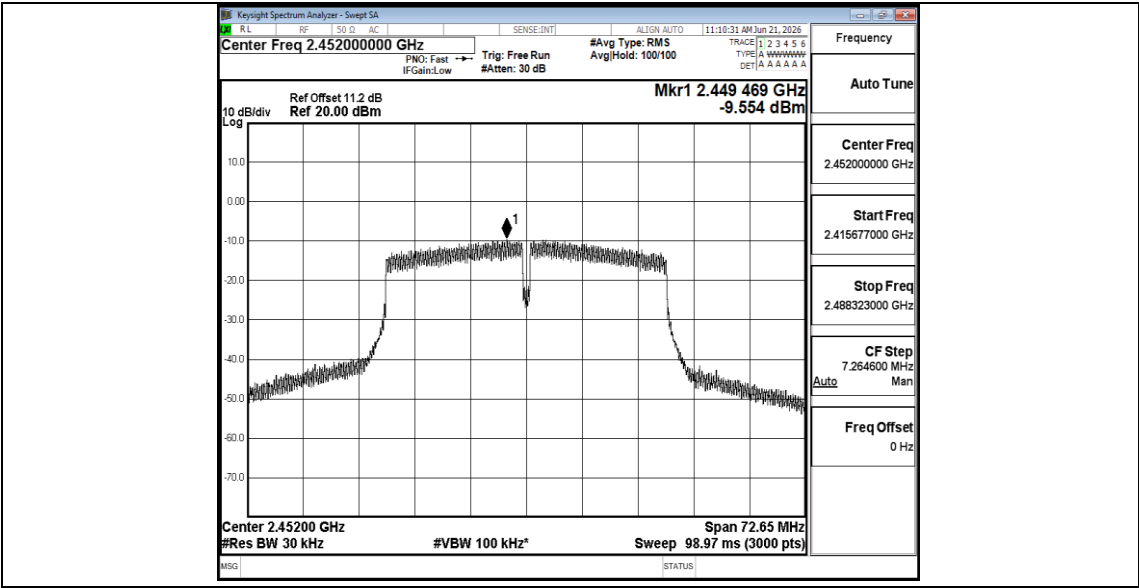
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452



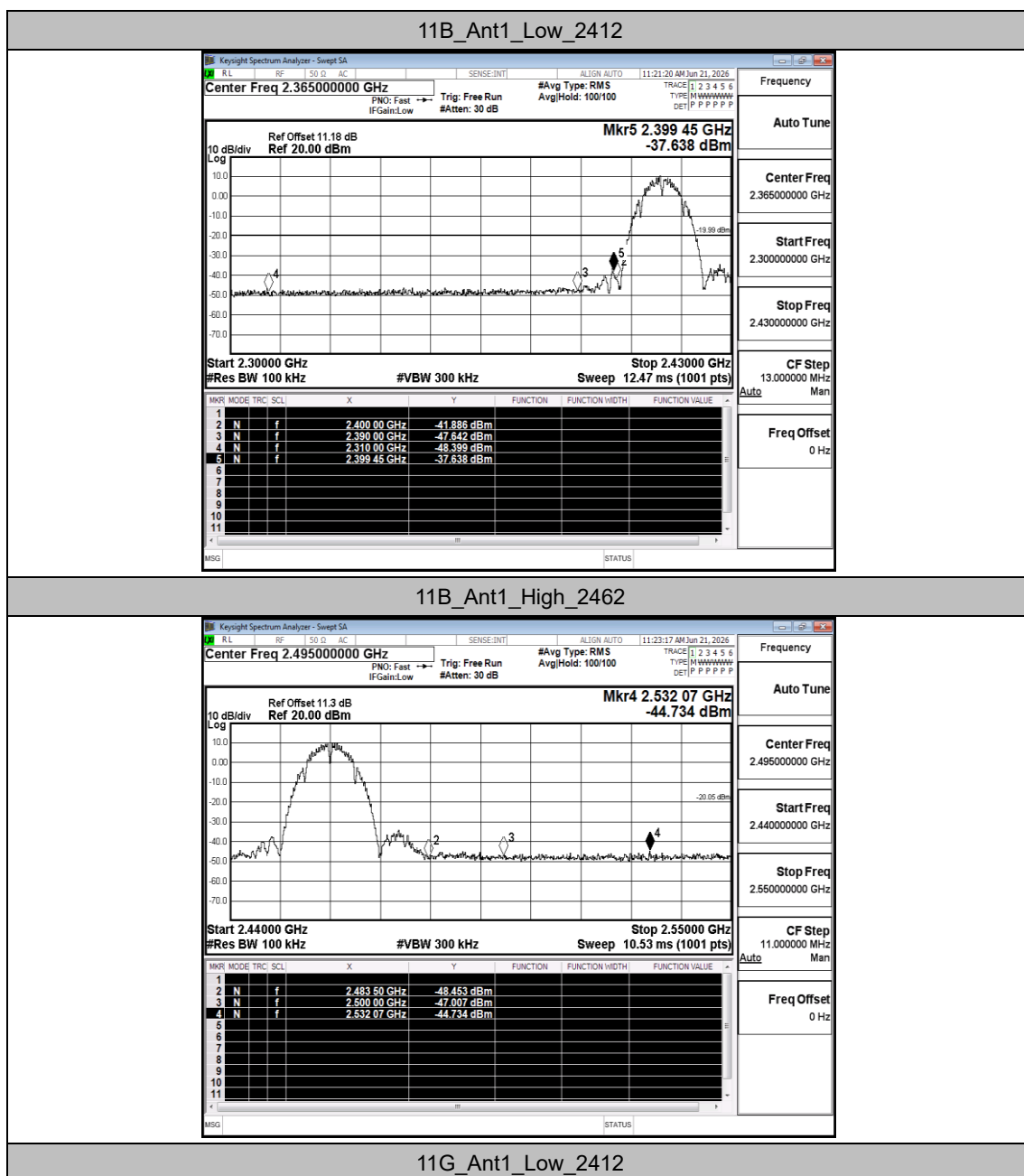
A.4 Band edge measurements

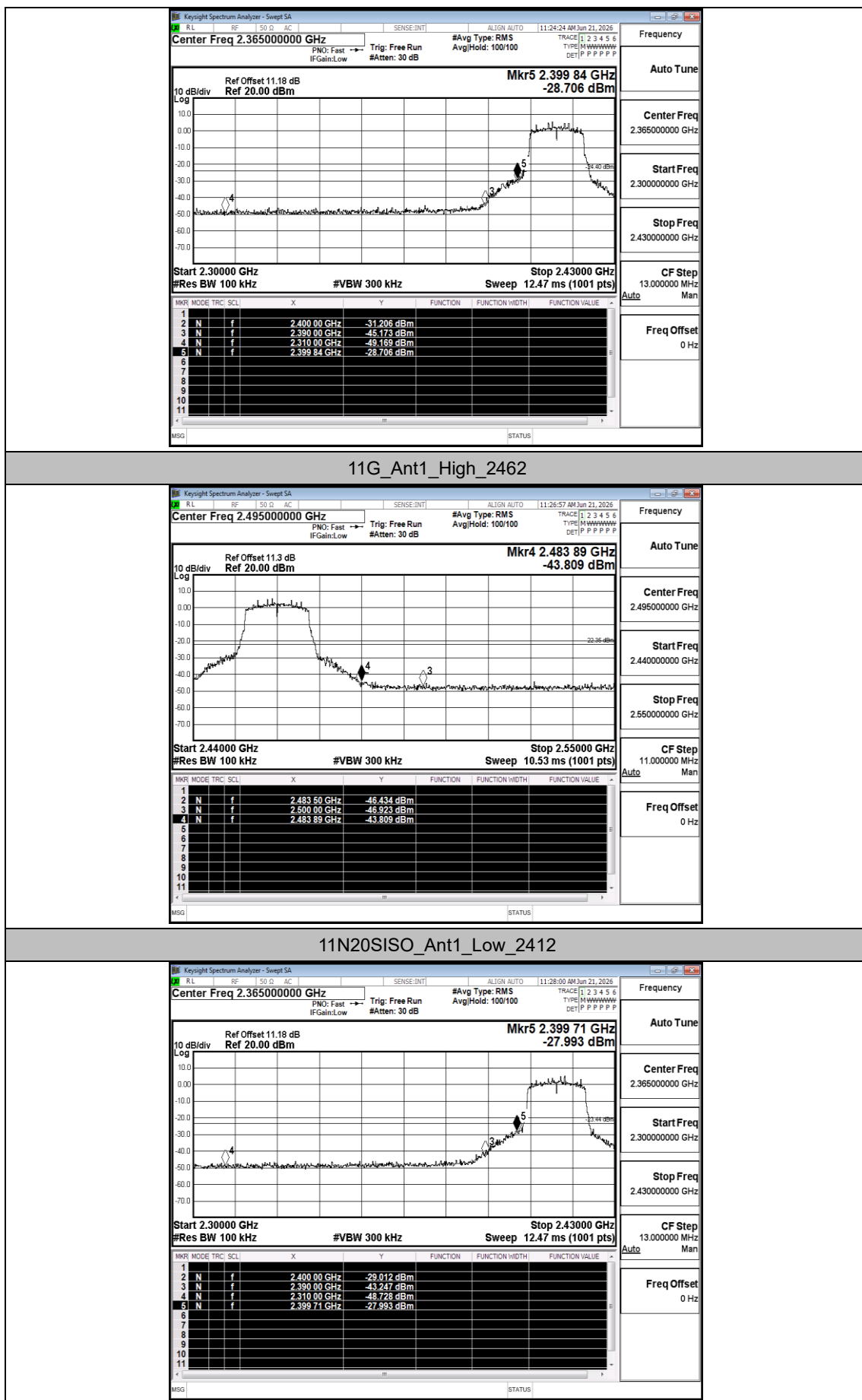
Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	10.01	-37.64	≤ -19.99	PASS
		High	2462	9.95	-44.73	≤ -20.05	PASS
11G	Ant1	Low	2412	5.60	-28.71	≤ -24.4	PASS
		High	2462	7.65	-43.81	≤ -22.35	PASS
11N20SISO	Ant1	Low	2412	6.56	-27.99	≤ -23.44	PASS
		High	2462	7.57	-42.87	≤ -22.43	PASS
11N40SISO	Ant1	Low	2422	4.69	-31.25	≤ -25.31	PASS
		High	2452	4.40	-36.53	≤ -25.6	PASS
11AX20SISO	Ant1	Low	2412	5.58	-27.28	≤ -24.42	PASS
		High	2462	5.91	-41.35	≤ -24.09	PASS
11AX40SISO	Ant1	Low	2422	4.84	-31.19	≤ -25.16	PASS
		High	2452	4.57	-39.22	≤ -25.43	PASS

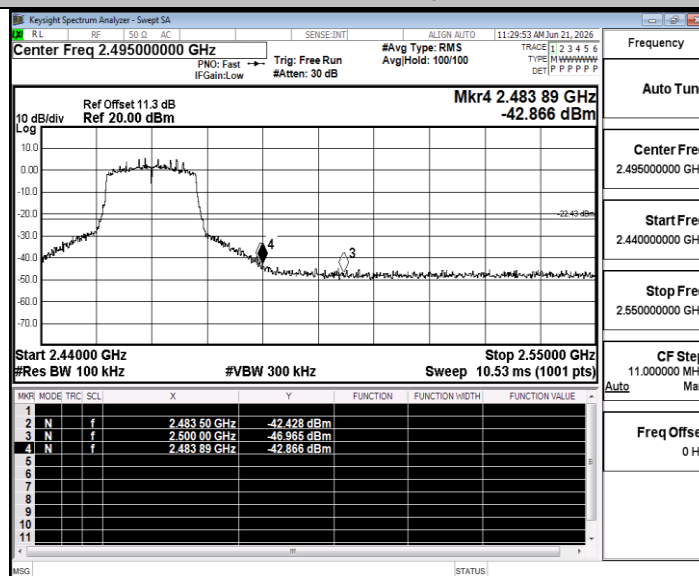
Note: offset=System attenuation +cable loss

Test Graphs

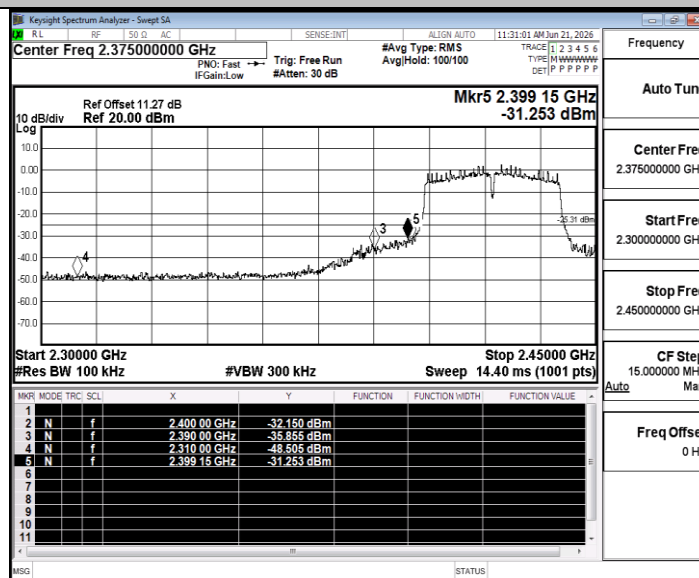




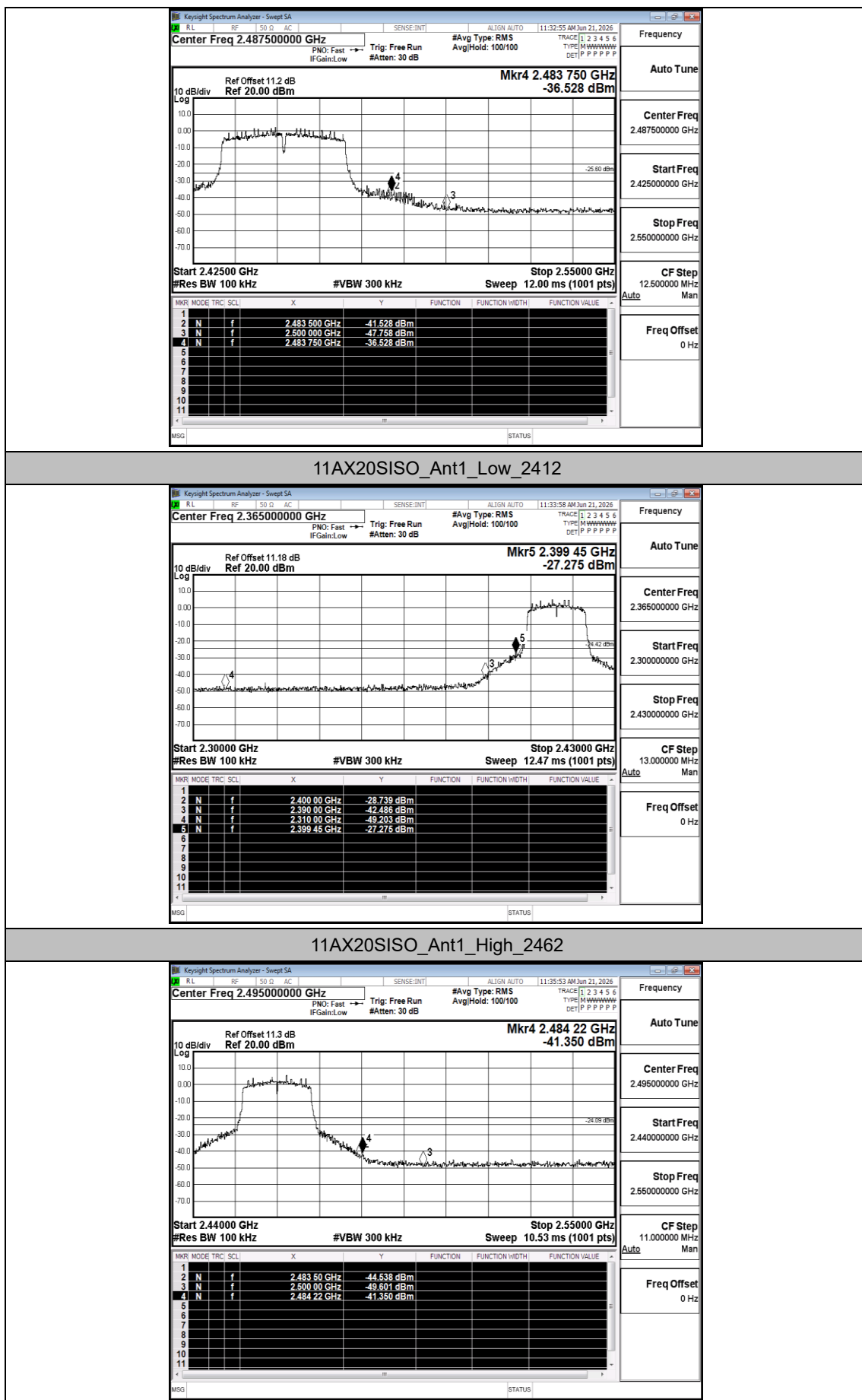
11N20SISO_Ant1_High_2462

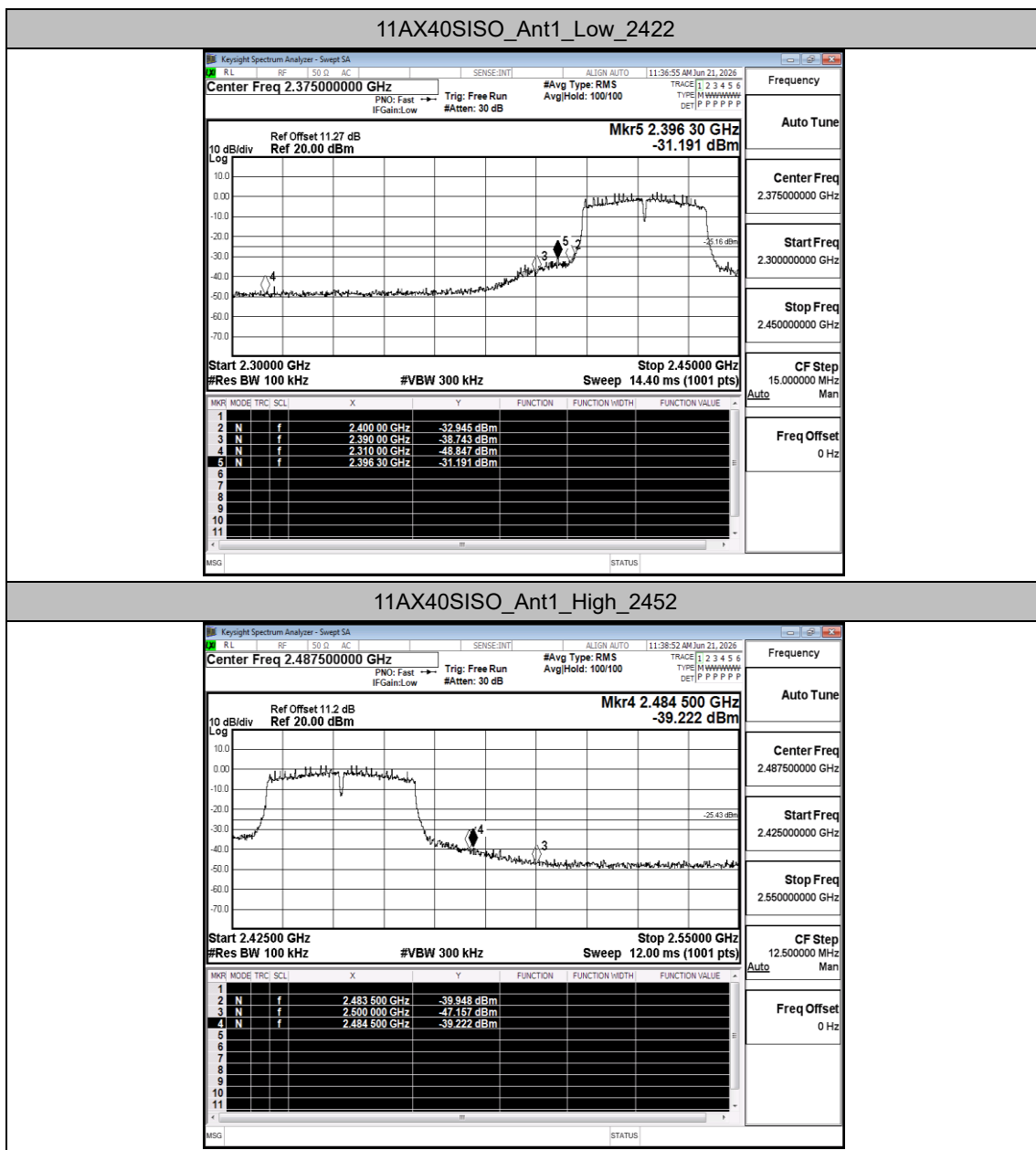


11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452





A.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency [MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	8.45	8.45	---	PASS
			30~1000	8.45	-68.07	≤-21.55	PASS
			1000~26500	8.45	-30.98	≤-21.55	PASS
		2437	Reference	8.52	8.52	---	PASS
			30~1000	8.52	-69.08	≤-21.48	PASS
			1000~26500	8.52	-30.87	≤-21.48	PASS
		2462	Reference	9.48	9.48	---	PASS
			30~1000	9.48	-69.76	≤-20.52	PASS
			1000~26500	9.48	-30.82	≤-20.52	PASS
11G	Ant1	2412	Reference	4.66	4.66	---	PASS
			30~1000	4.66	-69.46	≤-25.34	PASS
			1000~26500	4.66	-44.56	≤-25.34	PASS
		2437	Reference	3.63	3.63	---	PASS
			30~1000	3.63	-69.58	≤-26.37	PASS
			1000~26500	3.63	-43.51	≤-26.37	PASS
		2462	Reference	2.34	2.34	---	PASS
			30~1000	2.34	-69.31	≤-27.66	PASS
			1000~26500	2.34	-44.51	≤-27.66	PASS
11N20SISO	Ant1	2412	Reference	2.64	2.64	---	PASS
			30~1000	2.64	-69.51	≤-27.36	PASS
			1000~26500	2.64	-43.72	≤-27.36	PASS
		2437	Reference	1.58	1.58	---	PASS
			30~1000	1.58	-69.85	≤-28.42	PASS
			1000~26500	1.58	-43.76	≤-28.42	PASS
		2462	Reference	4.66	4.66	---	PASS
			30~1000	4.66	-69.44	≤-25.34	PASS
			1000~26500	4.66	-44.17	≤-25.34	PASS
11N40SISO	Ant1	2422	Reference	2.19	2.19	---	PASS
			30~1000	2.19	-69.41	≤-27.81	PASS
			1000~26500	2.19	-43.68	≤-27.81	PASS
		2437	Reference	0.69	0.69	---	PASS
			30~1000	0.69	-69.91	≤-29.31	PASS
			1000~26500	0.69	-44.6	≤-29.31	PASS
		2452	Reference	1.74	1.74	---	PASS
			30~1000	1.74	-70.14	≤-28.26	PASS
			1000~26500	1.74	-44.87	≤-28.26	PASS
11AX20SISO	Ant1	2412	Reference	1.87	1.87	---	PASS

			30~1000	1.87	-69.86	≤ -28.13	PASS
			1000~26500	1.87	-44.38	≤ -28.13	PASS
		2437	Reference	4.90	4.90	---	PASS
			30~1000	4.90	-70.35	≤ -25.1	PASS
			1000~26500	4.90	-43.99	≤ -25.1	PASS
		2462	Reference	2.36	2.36	---	PASS
			30~1000	2.36	-69.35	≤ -27.64	PASS
			1000~26500	2.36	-44.62	≤ -27.64	PASS
		2422	Reference	2.21	2.21	---	PASS
			30~1000	2.21	-69.56	≤ -27.79	PASS
			1000~26500	2.21	-44.46	≤ -27.79	PASS
11AX40SISO	Ant1	2437	Reference	1.43	1.43	---	PASS
			30~1000	1.43	-69.11	≤ -28.57	PASS
			1000~26500	1.43	-44.38	≤ -28.57	PASS
		2452	Reference	1.98	1.98	---	PASS
			30~1000	1.98	-70.04	≤ -28.02	PASS
			1000~26500	1.98	-44.73	≤ -28.02	PASS

Test Graphs

