

Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Smart Ear Care Device

Test Model: Earsight Ultra

Environmental Conditions

Temperature:	23.4°C
Relative Humidity:	52.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Fengliu Tang

C.1 DTS Bandwidth

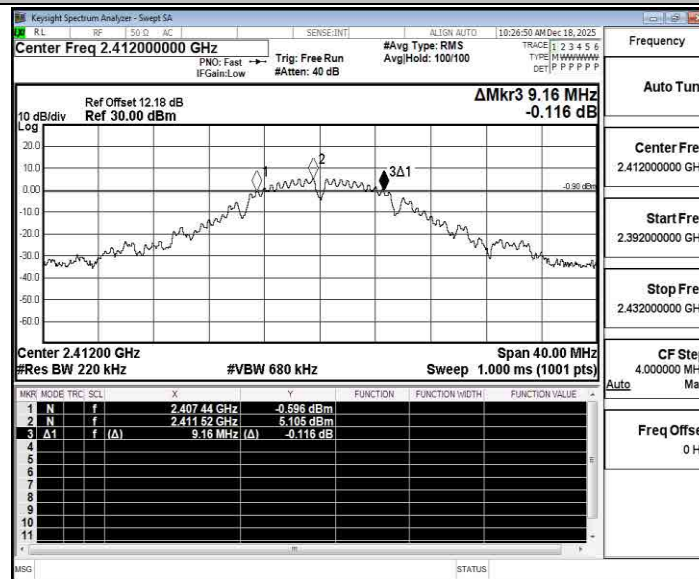
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.160	2407.440	2416.600	0.5	PASS
		2437	9.160	2432.400	2441.560	0.5	PASS
		2462	9.160	2457.440	2466.600	0.5	PASS
11G	Ant1	2412	16.120	2404.040	2420.160	0.5	PASS
		2437	16.240	2428.840	2445.080	0.5	PASS
		2462	16.080	2454.040	2470.120	0.5	PASS
11N20SISO	Ant1	2412	16.360	2403.960	2420.320	0.5	PASS
		2437	17.120	2428.240	2445.360	0.5	PASS
		2462	16.160	2454.360	2470.520	0.5	PASS
11N40SISO	Ant1	2422	32.960	2404.960	2437.920	0.5	PASS
		2437	35.920	2418.760	2454.680	0.5	PASS
		2452	36.320	2434.080	2470.400	0.5	PASS
11AX20SISO	Ant1	2412	16.280	2404.400	2420.680	0.5	PASS
		2437	17.160	2428.240	2445.400	0.5	PASS
		2462	16.760	2454.000	2470.760	0.5	PASS
11AX40SISO	Ant1	2422	34.720	2404.800	2439.520	0.5	PASS
		2437	35.680	2418.920	2454.600	0.5	PASS
		2452	35.920	2434.240	2470.160	0.5	PASS

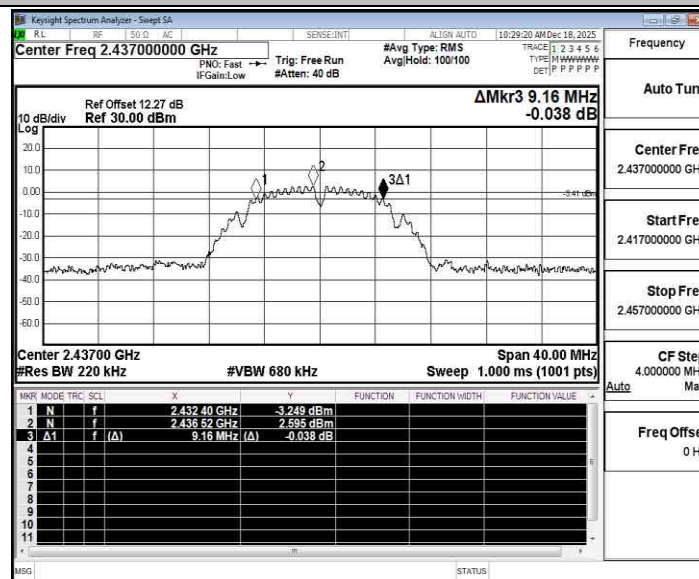
Note :offset=System attenuation +cabal loss

Test Graphs

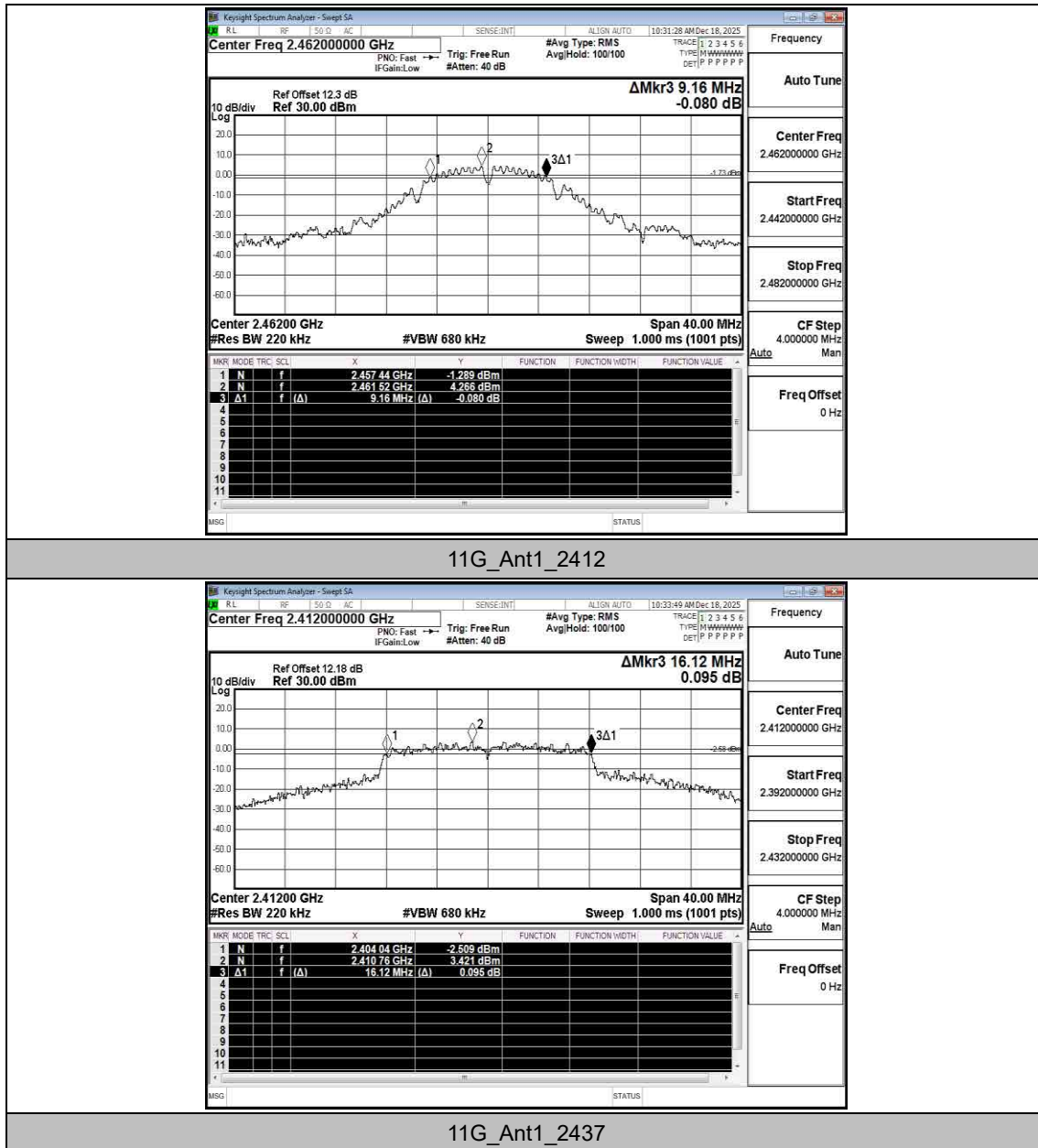
11B_Ant1_2412

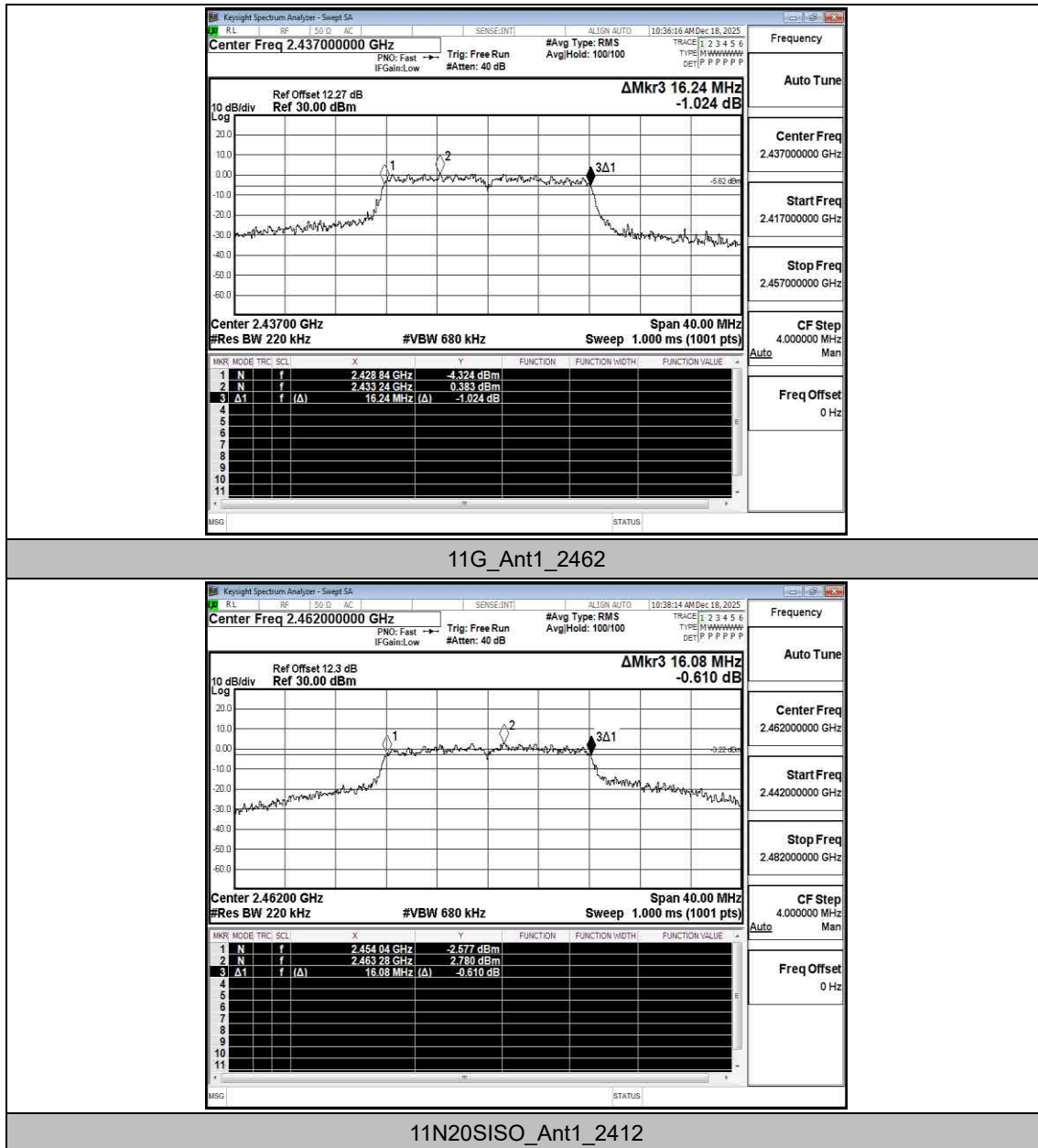


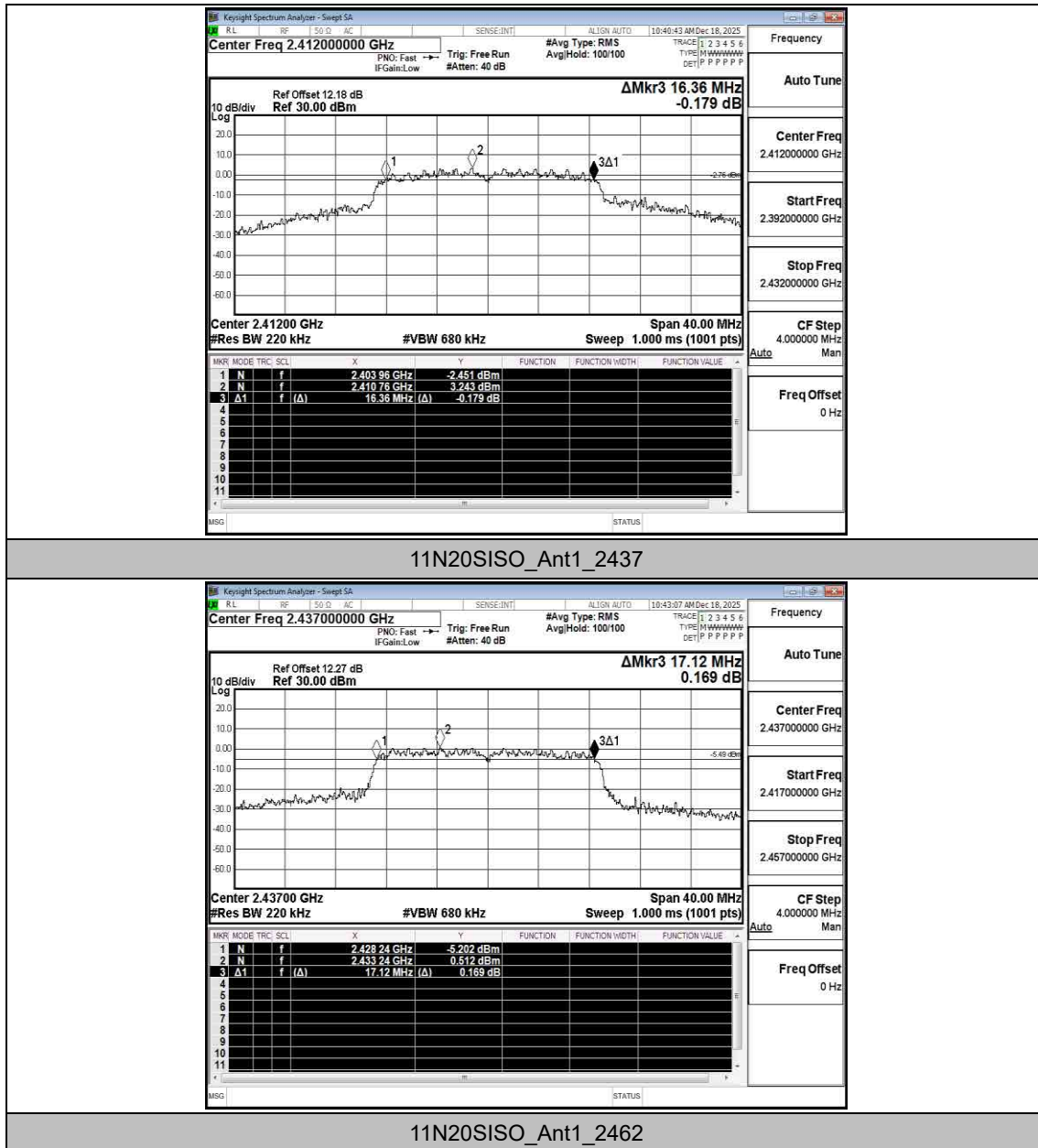
11B_Ant1_2437

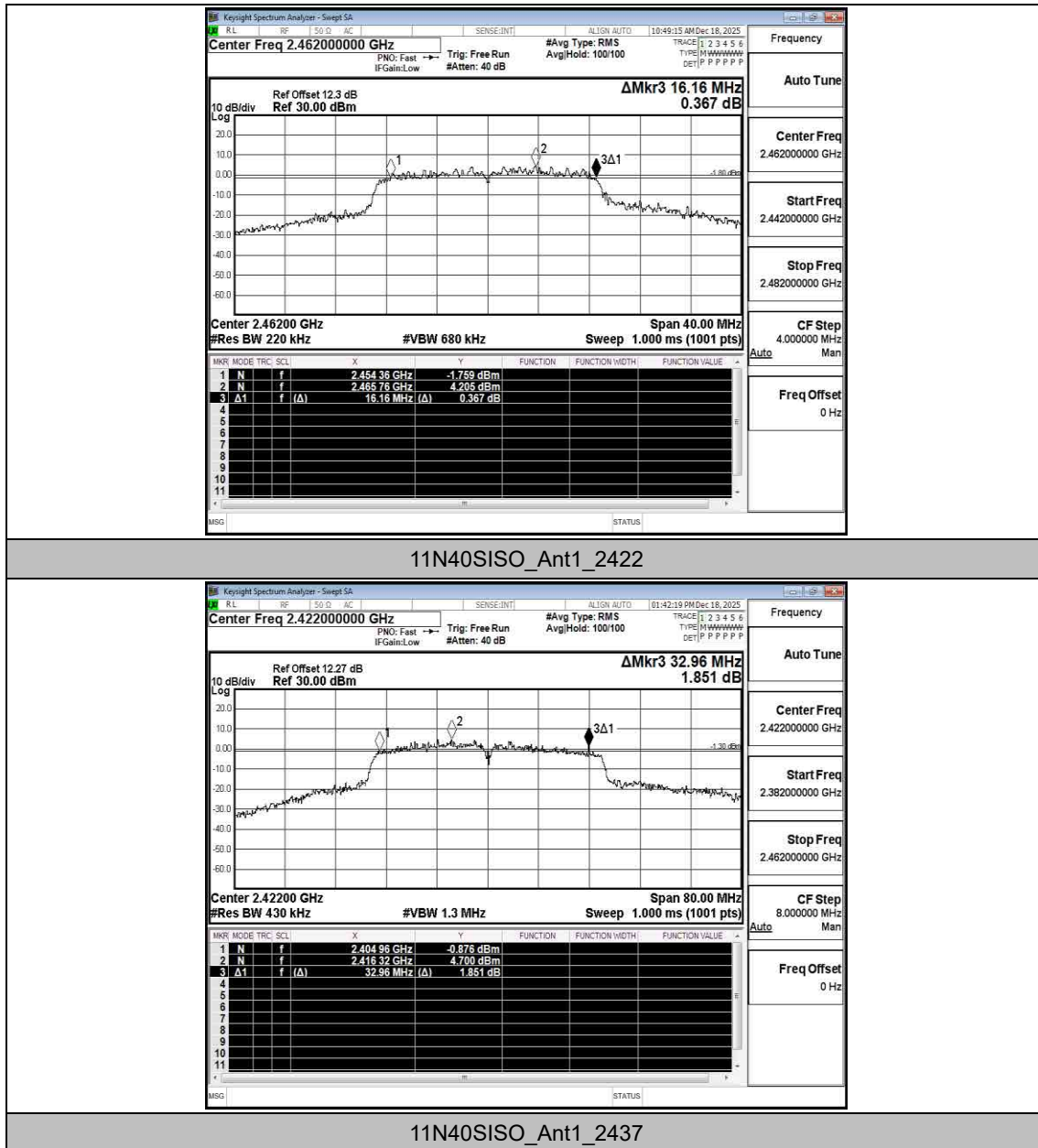


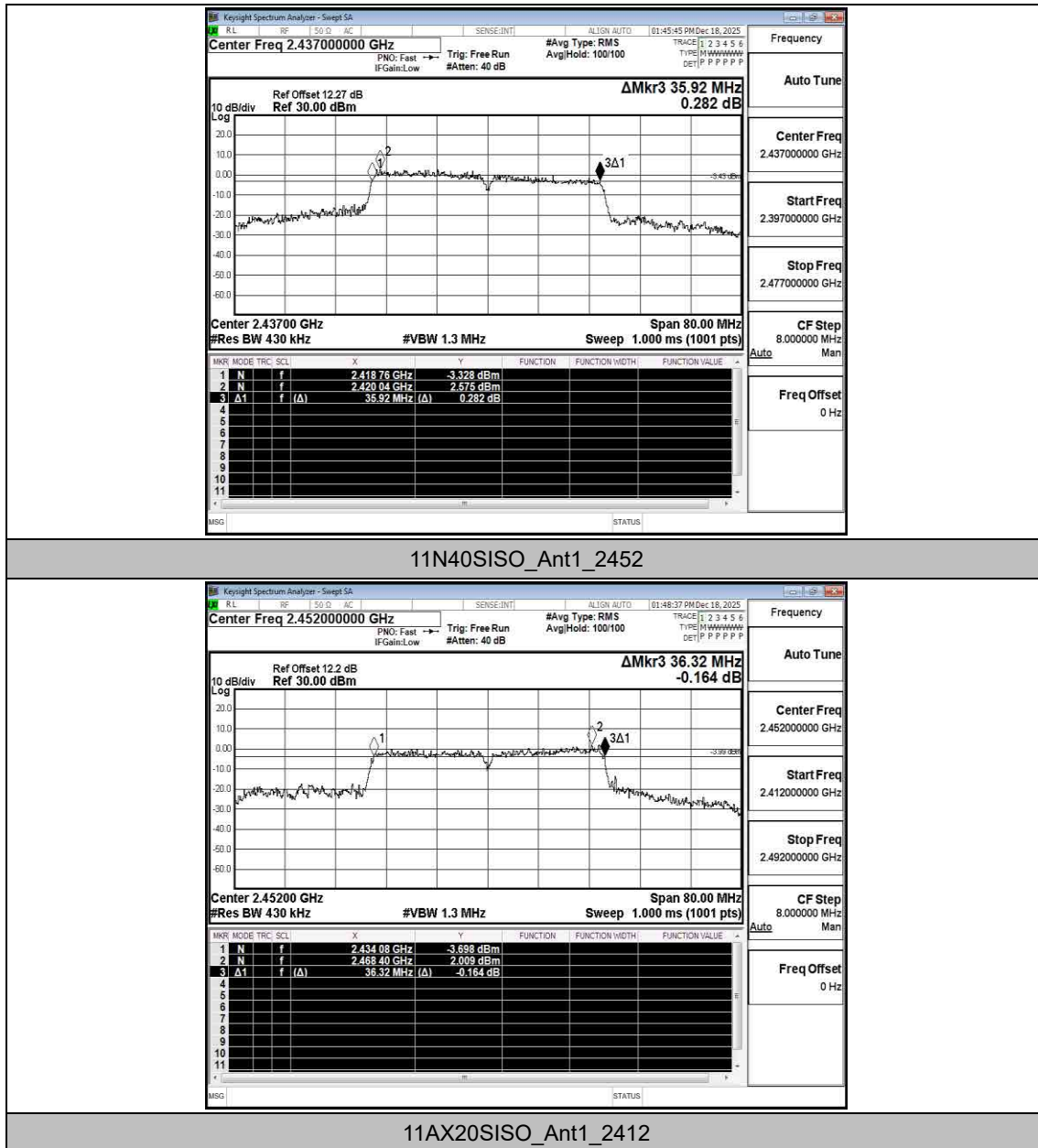
11B_Ant1_2462

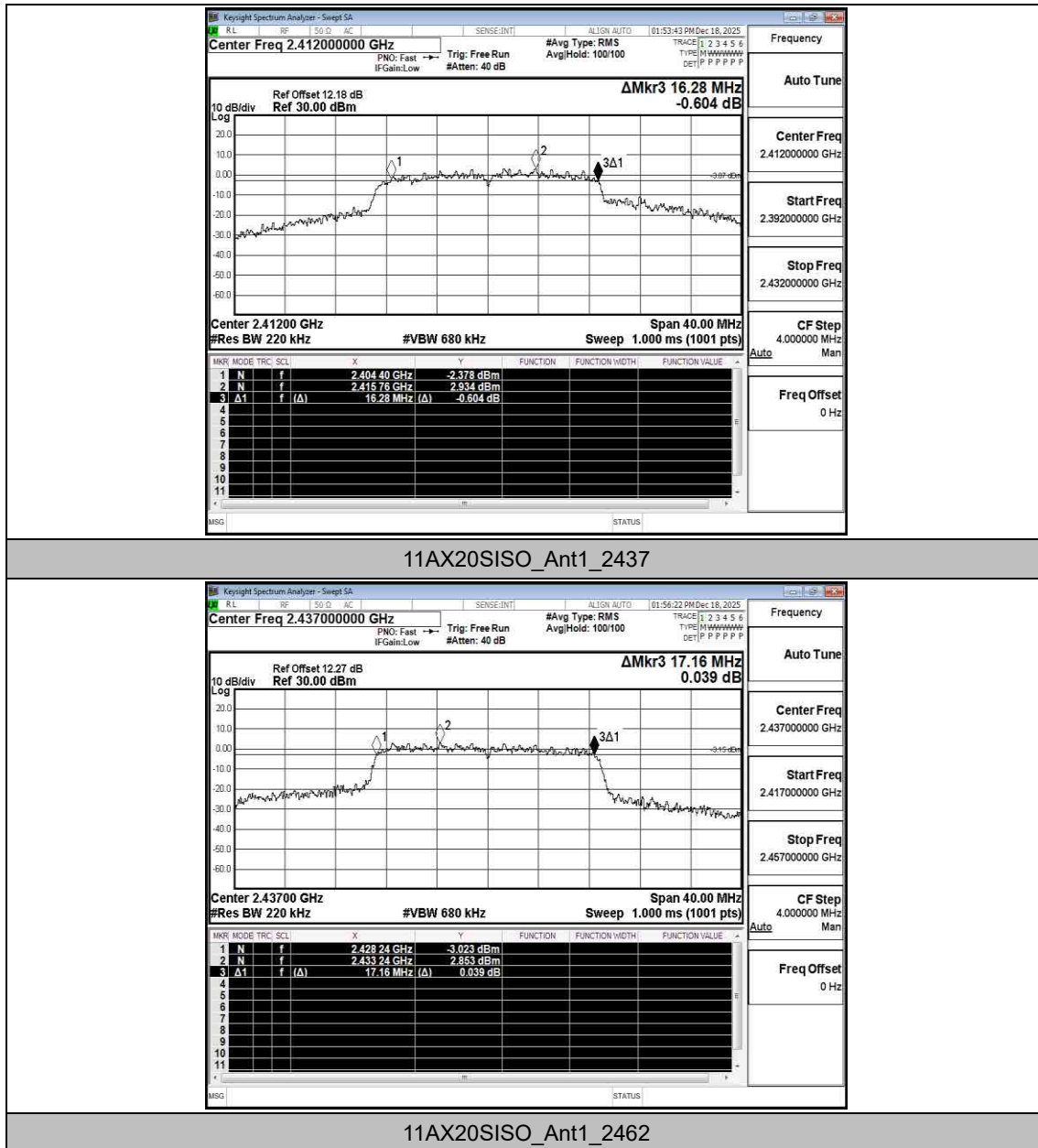


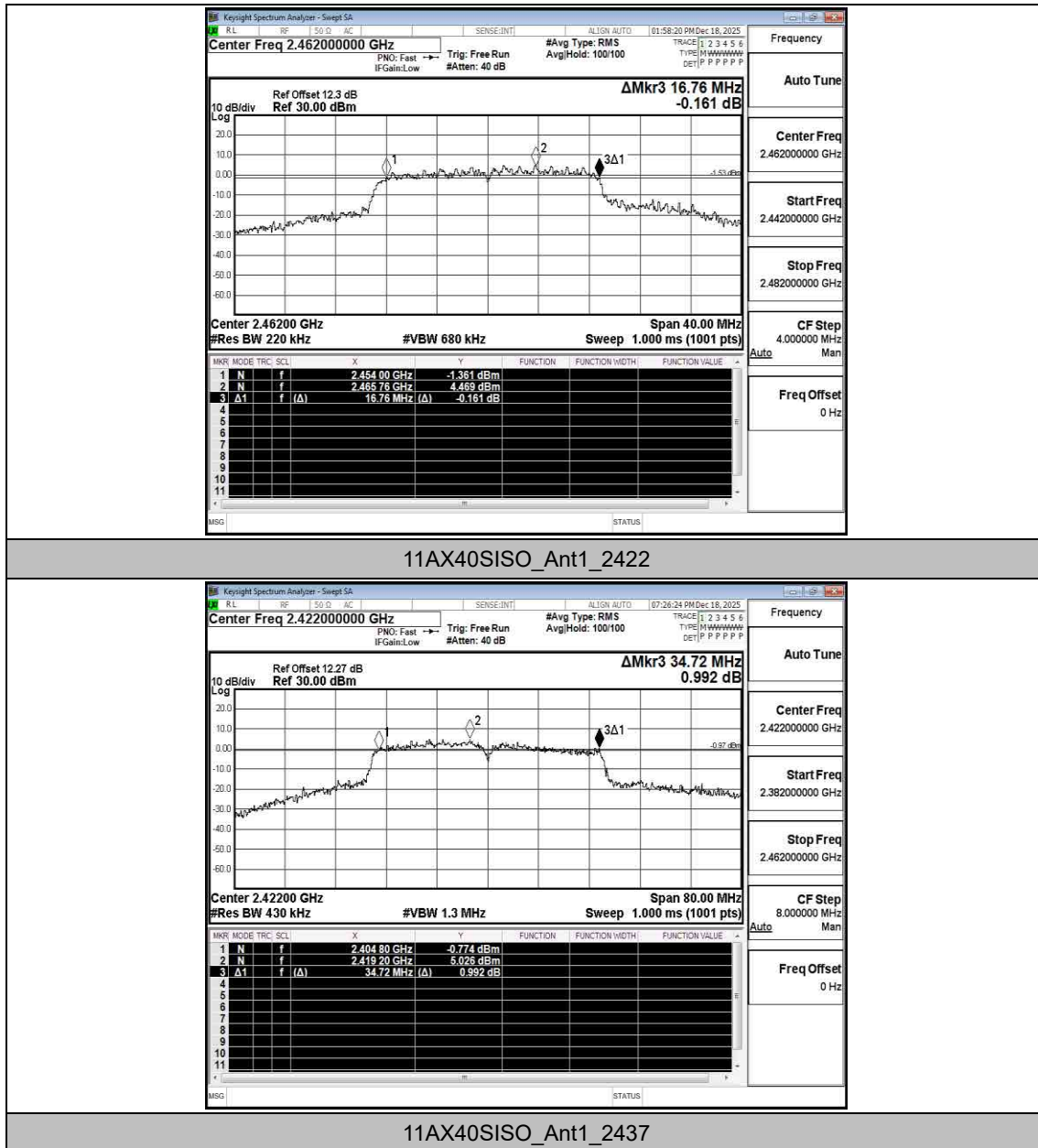


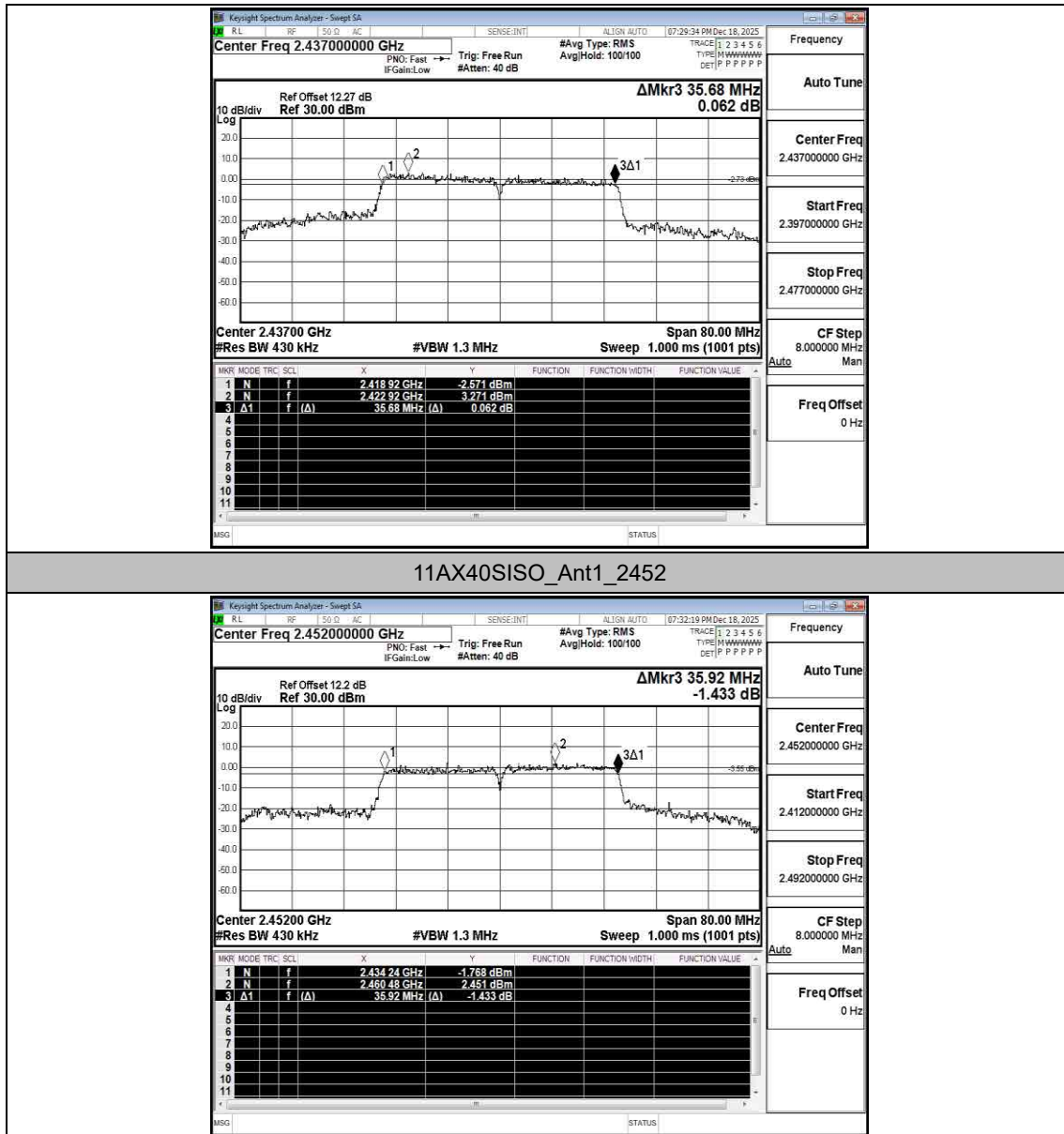












C.2 Maximum Average Conducted Output Power

Test Result Average

Test Mode	Antenna	Frequency[MHz]	Average power	Limit [dBm]	Verdict
11B	Ant1	2412	8.39	≤30.00	PASS
		2437	6.81	≤30.00	PASS
		2462	8.67	≤30.00	PASS
11G	Ant1	2412	8.45	≤30.00	PASS
		2437	6.46	≤30.00	PASS
		2462	8.68	≤30.00	PASS
11N20SISO	Ant1	2412	8.52	≤30.00	PASS
		2437	6.45	≤30.00	PASS
		2462	8.71	≤30.00	PASS
11N40SISO	Ant1	2422	8.34	≤30.00	PASS
		2437	8.62	≤30.00	PASS
		2452	6.73	≤30.00	PASS
11AX20SISO	Ant1	2412	8.34	≤30.00	PASS
		2437	8.53	≤30.00	PASS
		2462	8.90	≤30.00	PASS
11AX40SISO	Ant1	2422	8.83	≤30.00	PASS
		2437	8.17	≤30.00	PASS
		2452	8.19	≤30.00	PASS

Note :offset=System attenuation +cabel loss

Note: The Duty Cycle Factor is compensated in the data.

C.3 Maximum power spectral density

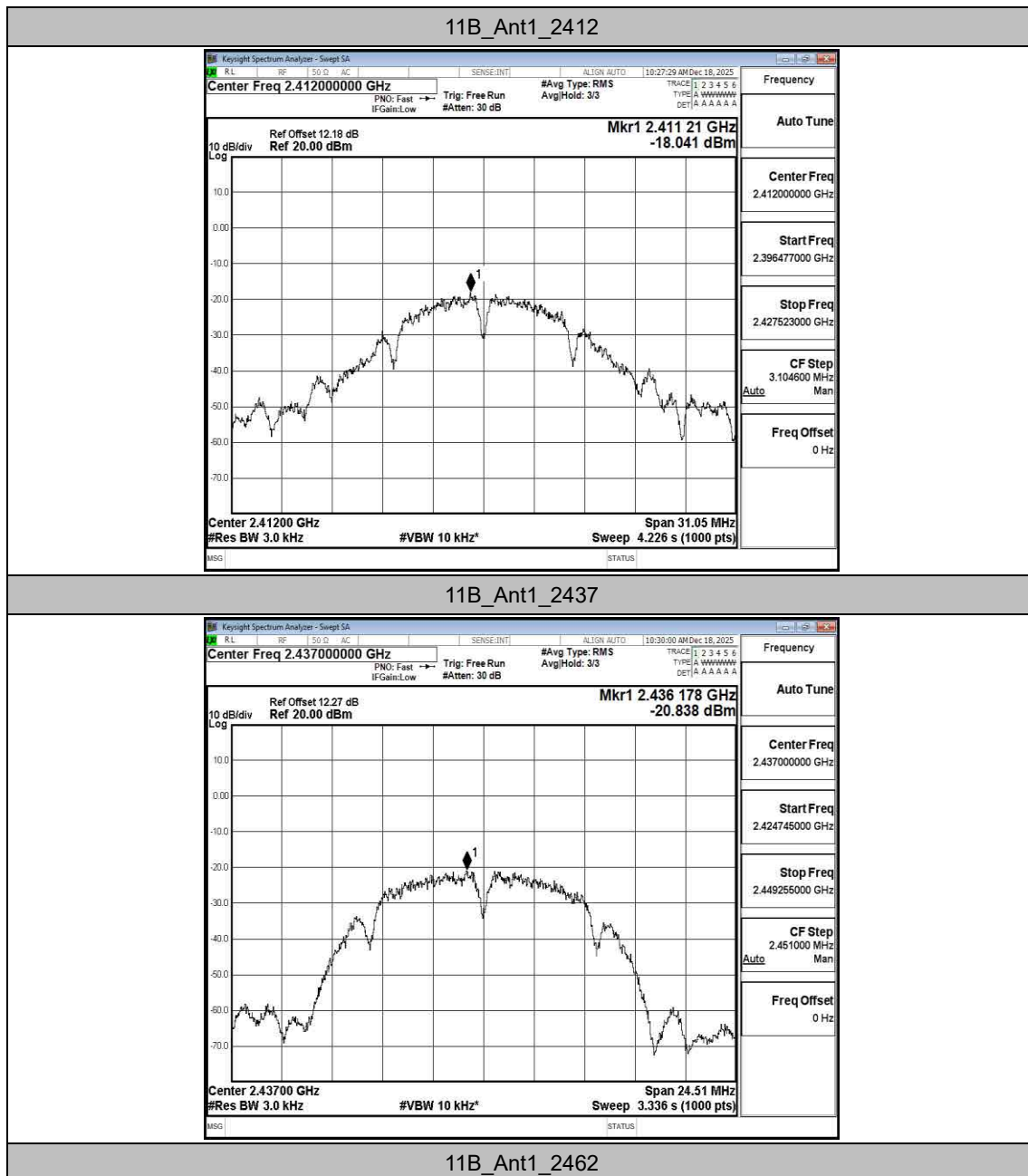
Test Result

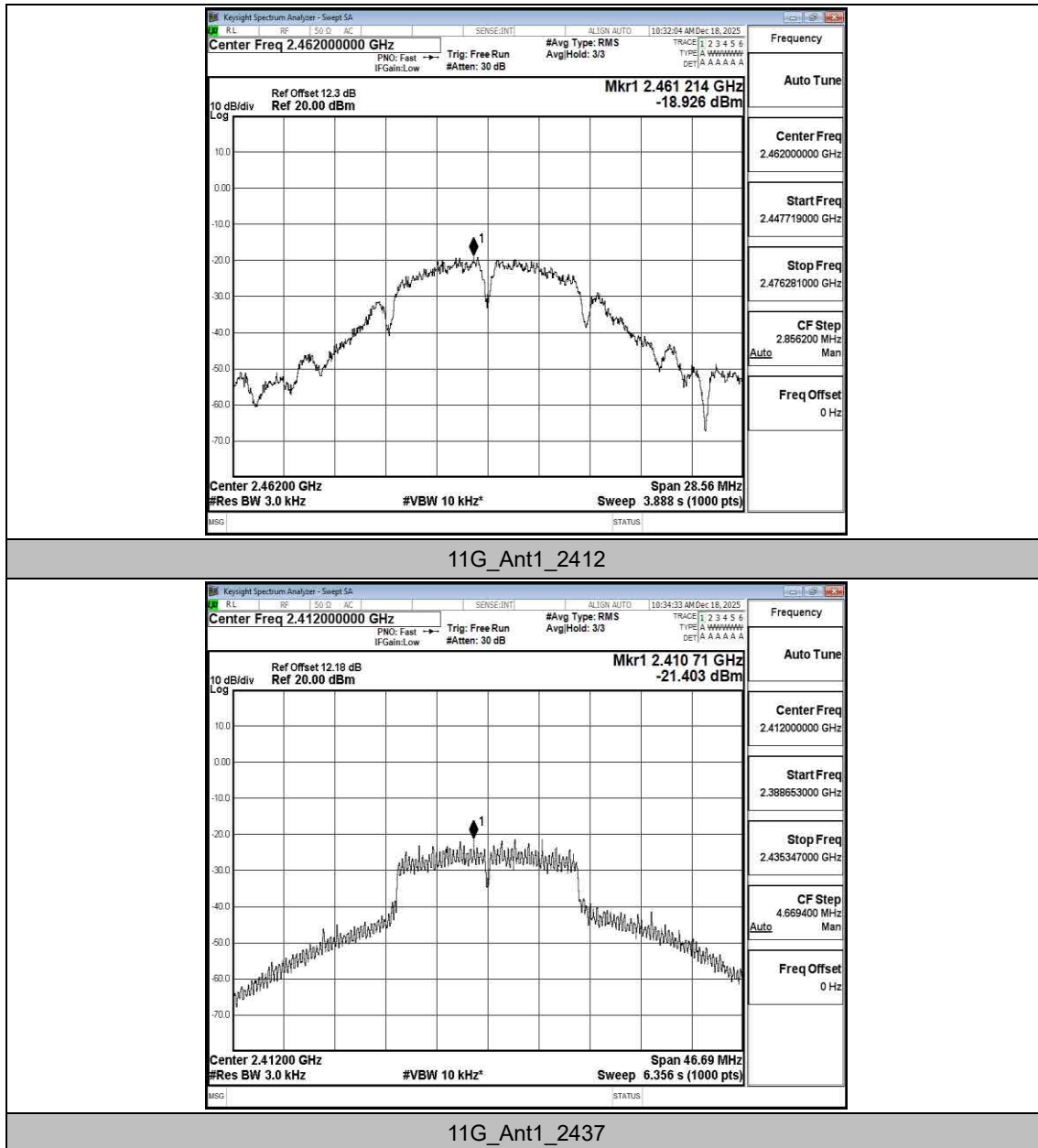
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-17.70	≤8.00	PASS
		2437	-20.56	≤8.00	PASS
		2462	-18.59	≤8.00	PASS
11G	Ant1	2412	-19.64	≤8.00	PASS
		2437	-21.62	≤8.00	PASS
		2462	-19.52	≤8.00	PASS
11N20SISO	Ant1	2412	-18.90	≤8.00	PASS
		2437	-21.79	≤8.00	PASS
		2462	-17.98	≤8.00	PASS
11N40SISO	Ant1	2422	-20.08	≤8.00	PASS
		2437	-21.04	≤8.00	PASS
		2452	-24.86	≤8.00	PASS
11AX20SISO	Ant1	2412	-19.38	≤8.00	PASS
		2437	-19.25	≤8.00	PASS
		2462	-17.85	≤8.00	PASS
11AX40SISO	Ant1	2422	-19.86	≤8.00	PASS
		2437	-20.77	≤8.00	PASS
		2452	-22.20	≤8.00	PASS

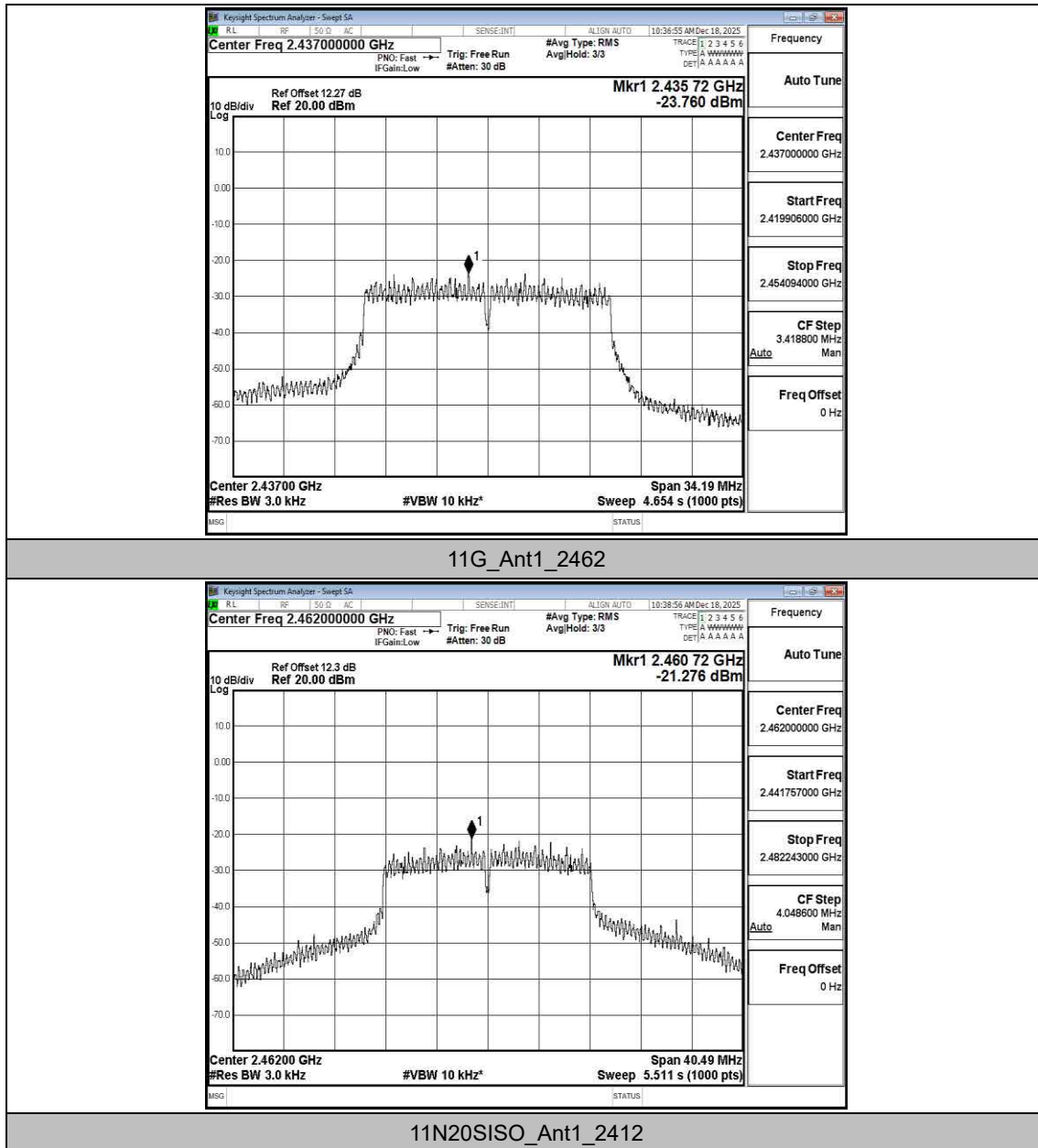
Note :offset=System attenuation +cable loss

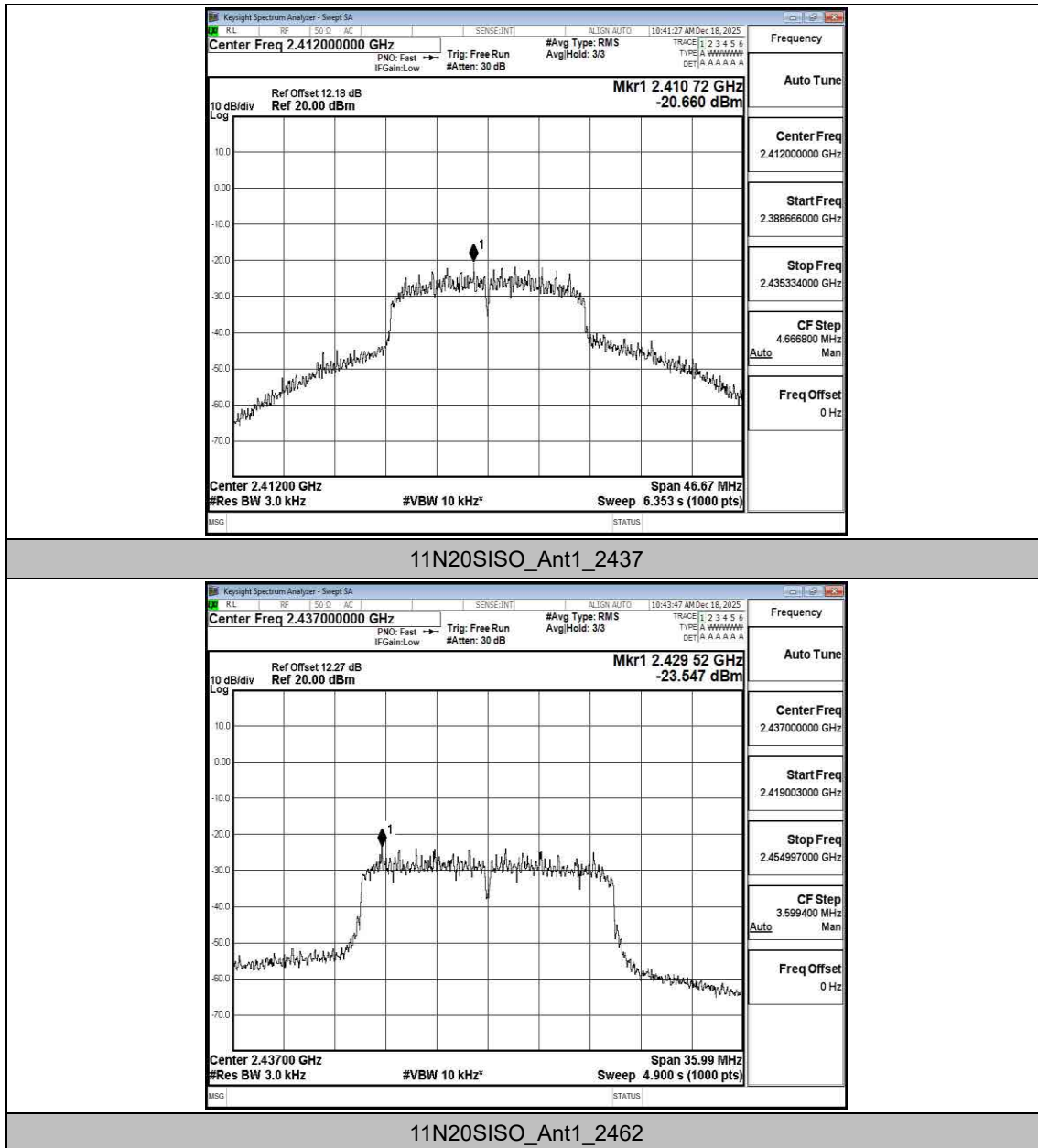
Note: The Duty Cycle Factor is compensated in the data.

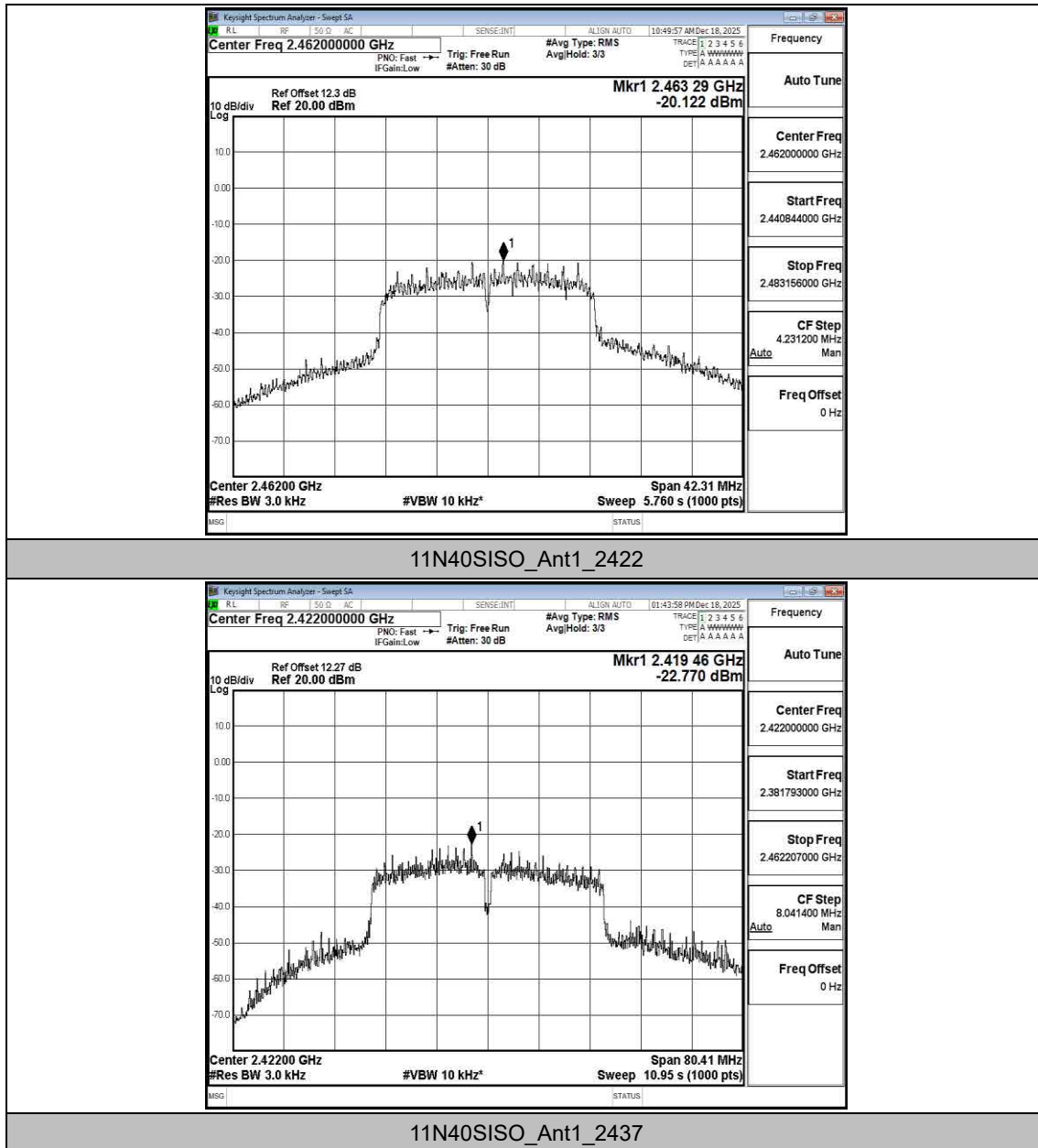
Test Graphs

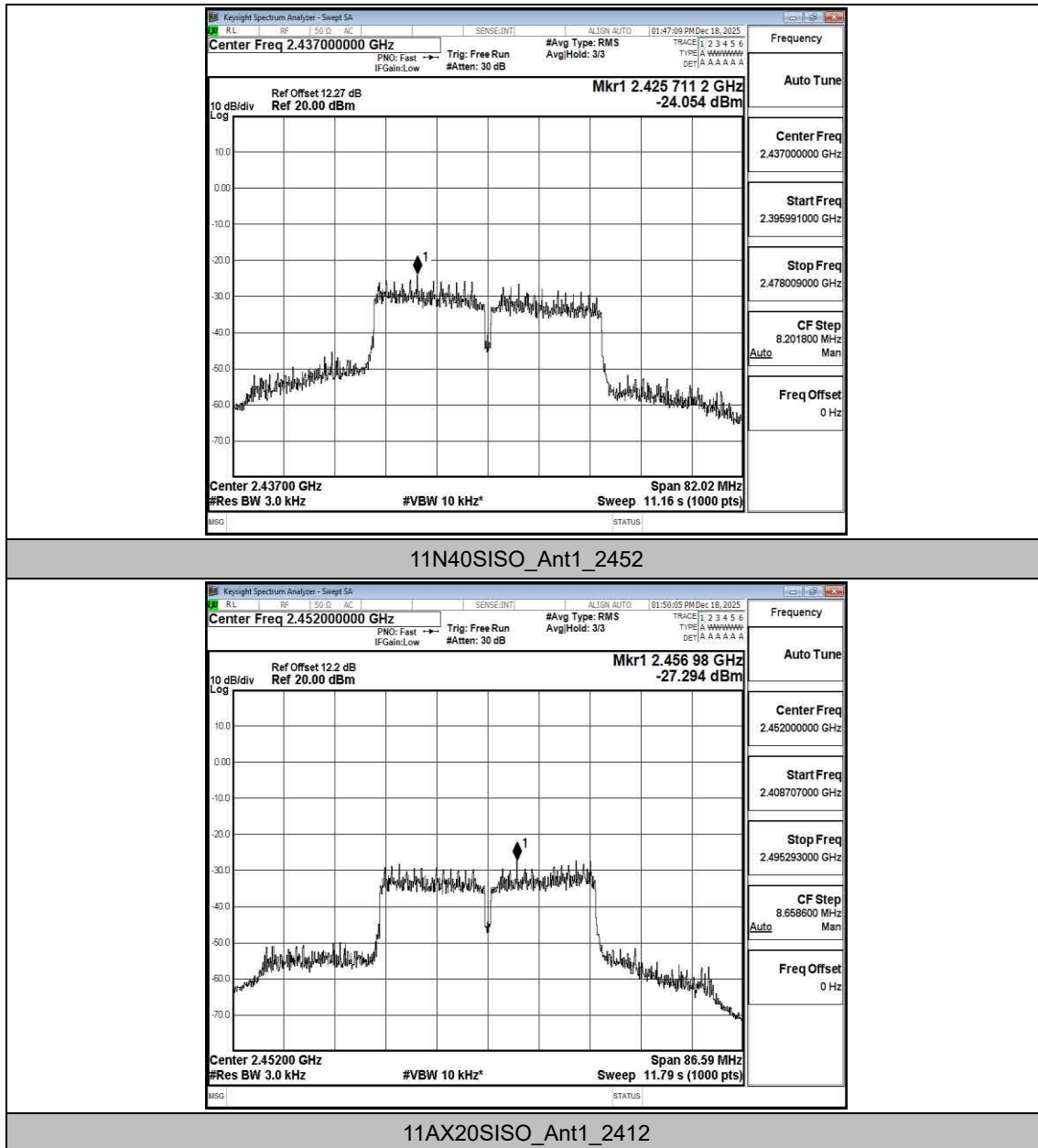


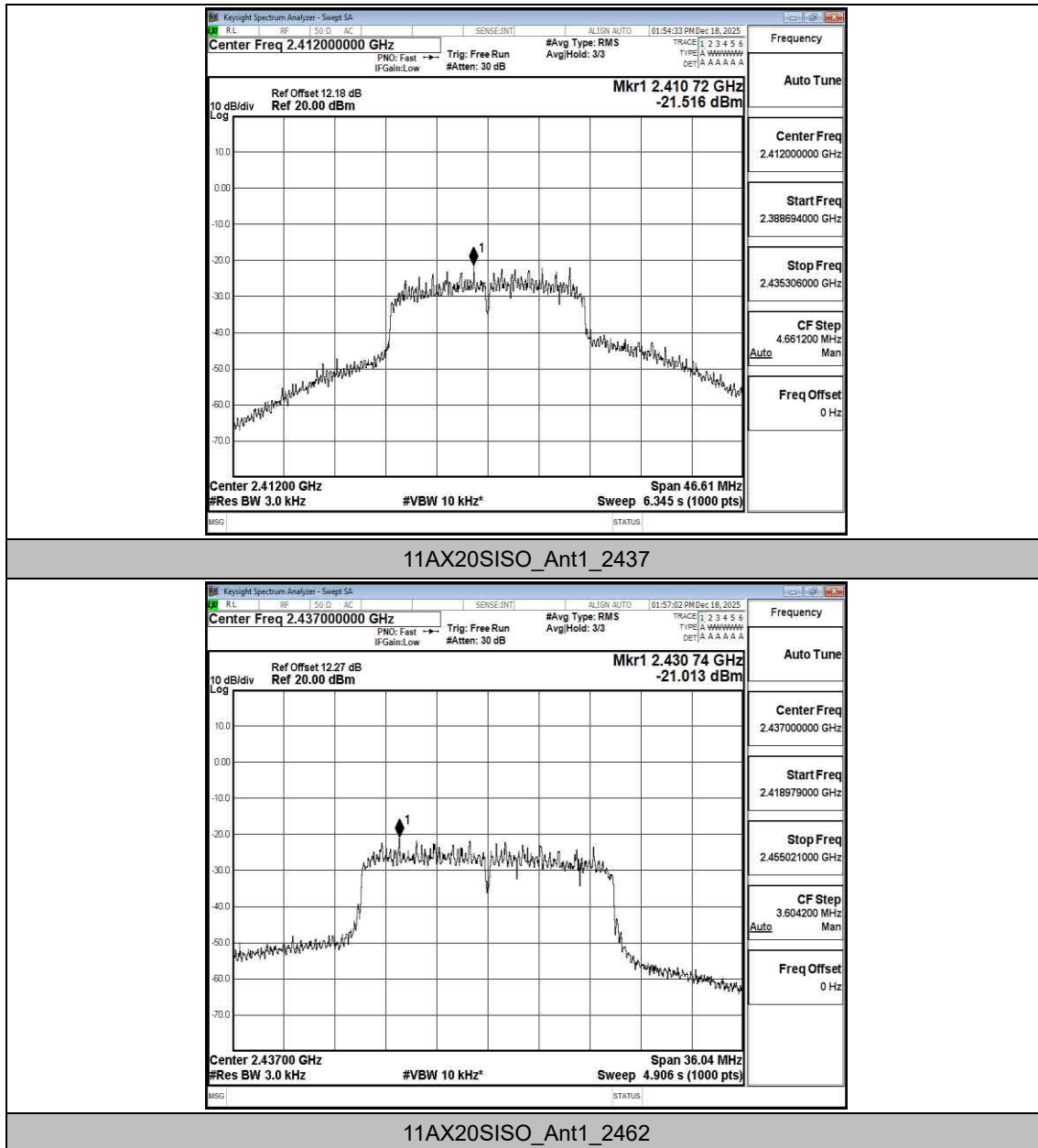


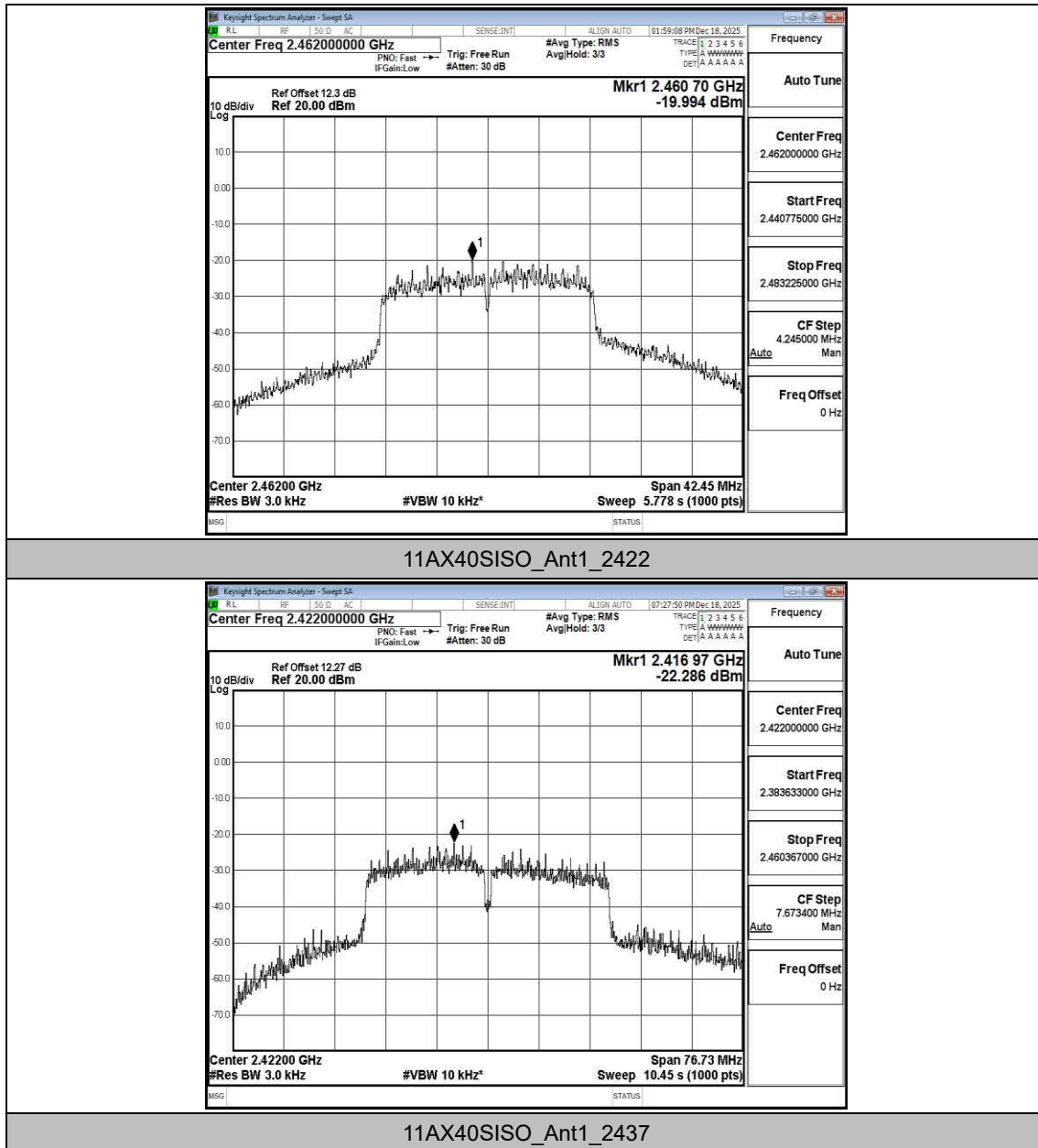


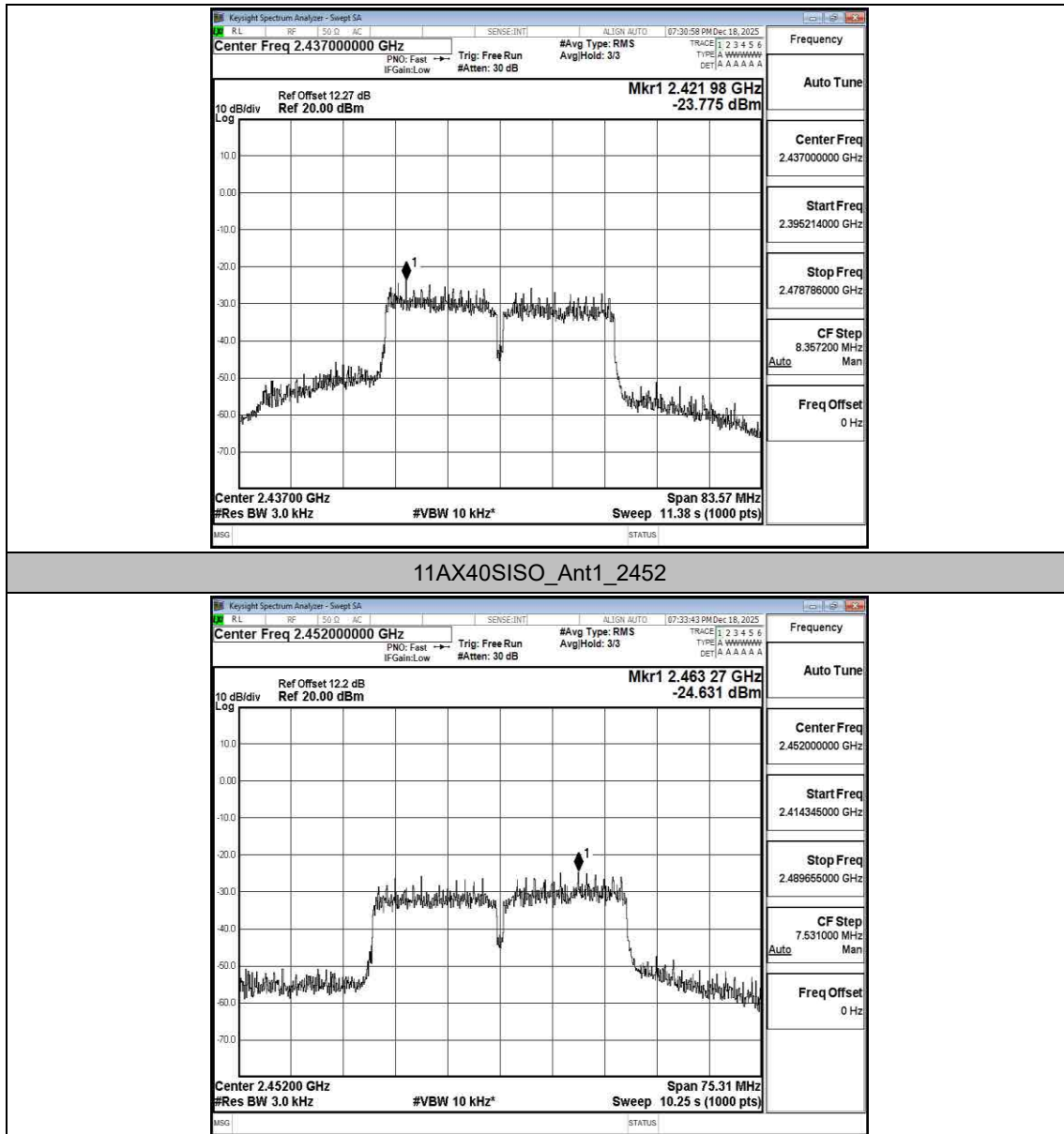












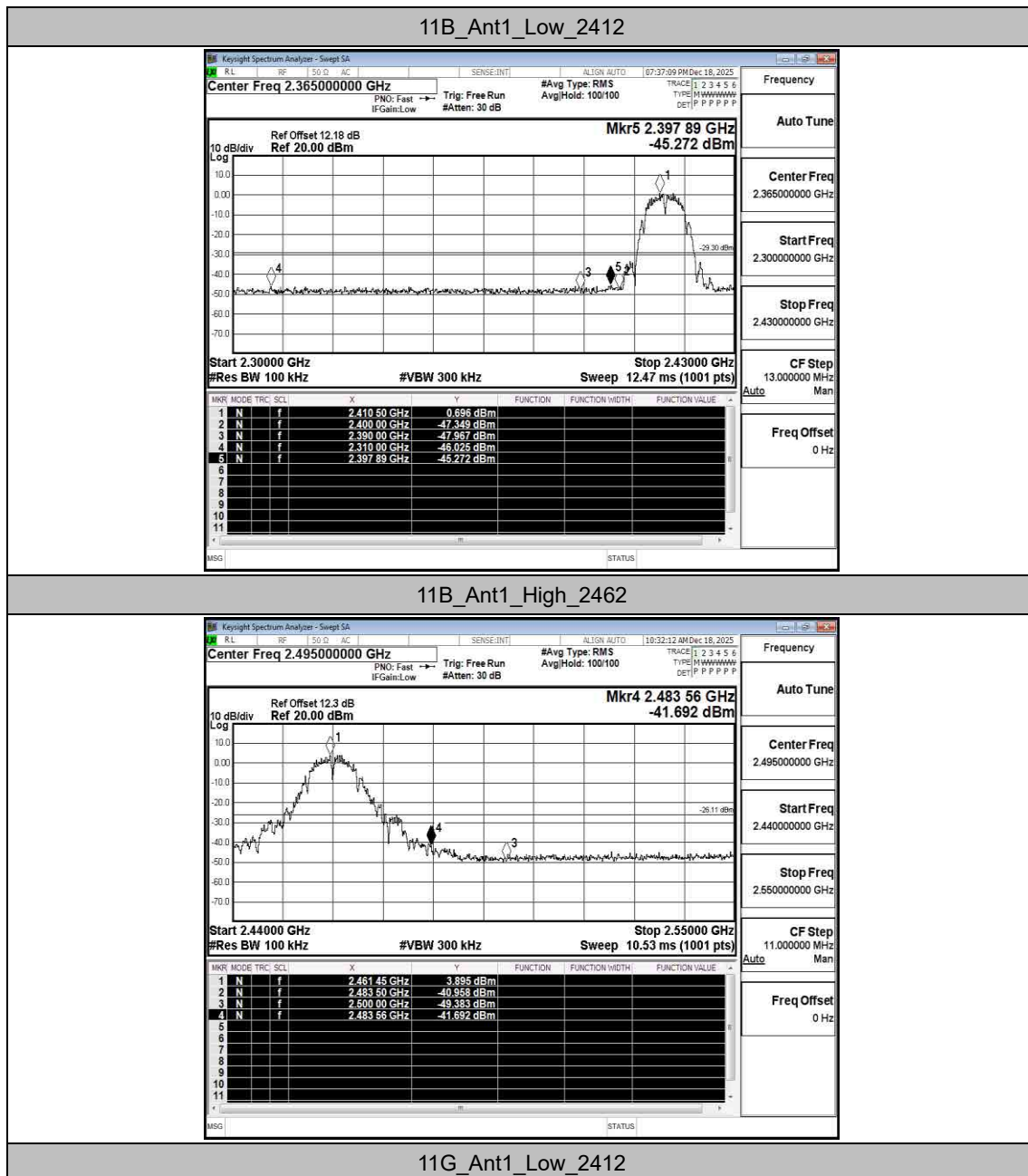
C.4 Band edge measurements

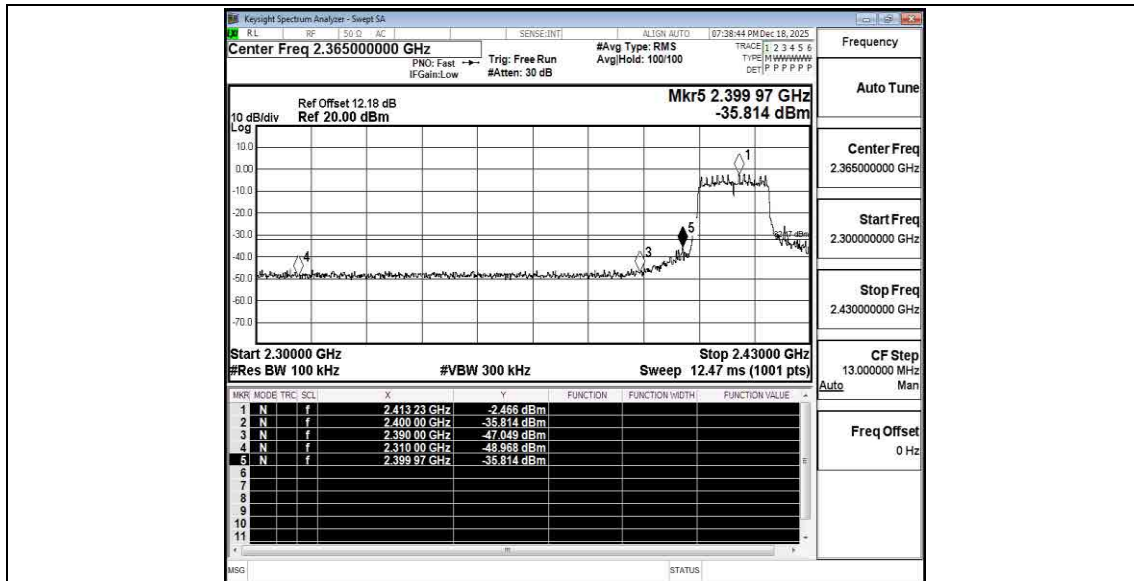
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	0.70	-45.27	≤-29.3	PASS
		High	2462	3.90	-41.69	≤-26.11	PASS
11G	Ant1	Low	2412	-2.47	-35.81	≤-32.47	PASS
		High	2462	2.12	-32.99	≤-27.88	PASS
11N20SISO	Ant1	Low	2412	-2.09	-34.68	≤-32.09	PASS
		High	2462	3.55	-27.72	≤-26.45	PASS
11N40SISO	Ant1	Low	2422	-3.98	-41.16	≤-33.98	PASS
		High	2452	-5.58	-44.95	≤-35.58	PASS
11AX20SISO	Ant1	Low	2412	-4.95	-40.32	≤-34.95	PASS
		High	2462	3.70	-28.89	≤-26.3	PASS
11AX40SISO	Ant1	Low	2422	-3.89	-40.77	≤-33.89	PASS
		High	2452	-5.41	-44.83	≤-35.41	PASS

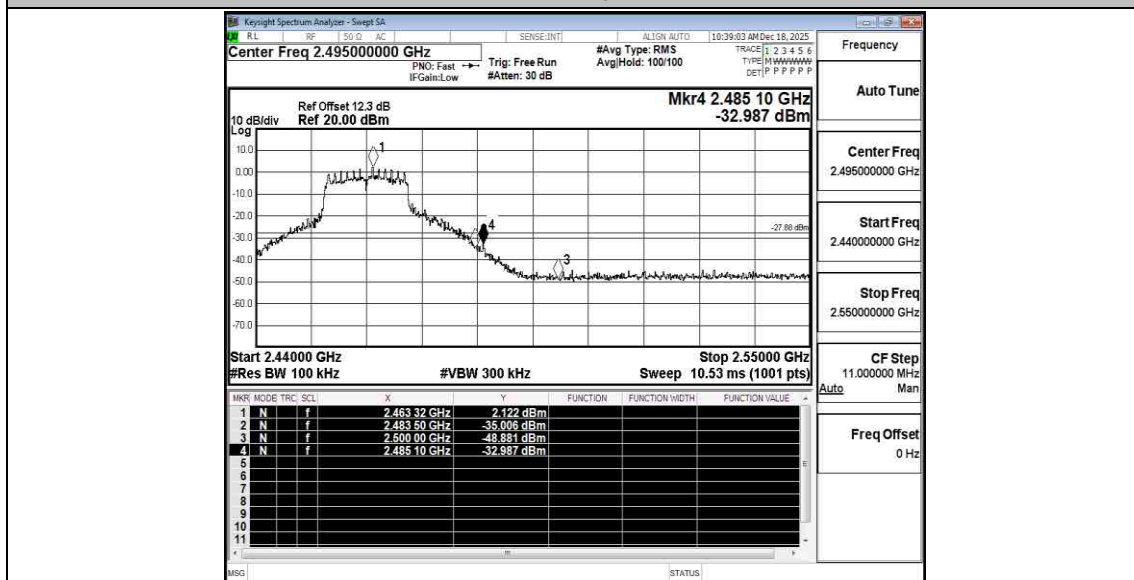
Note :offset=System attenuation +cabal loss

Test Graphs

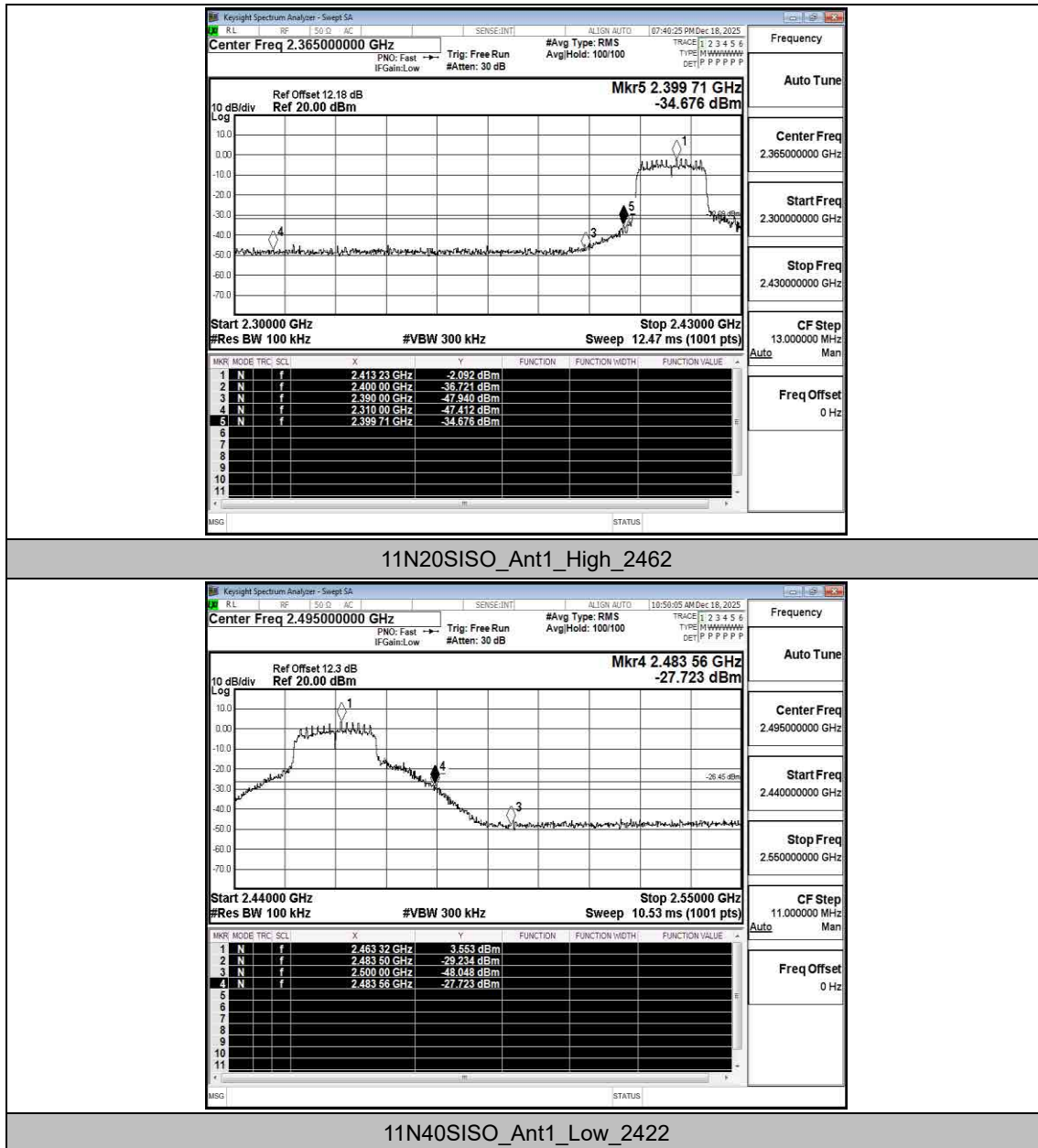


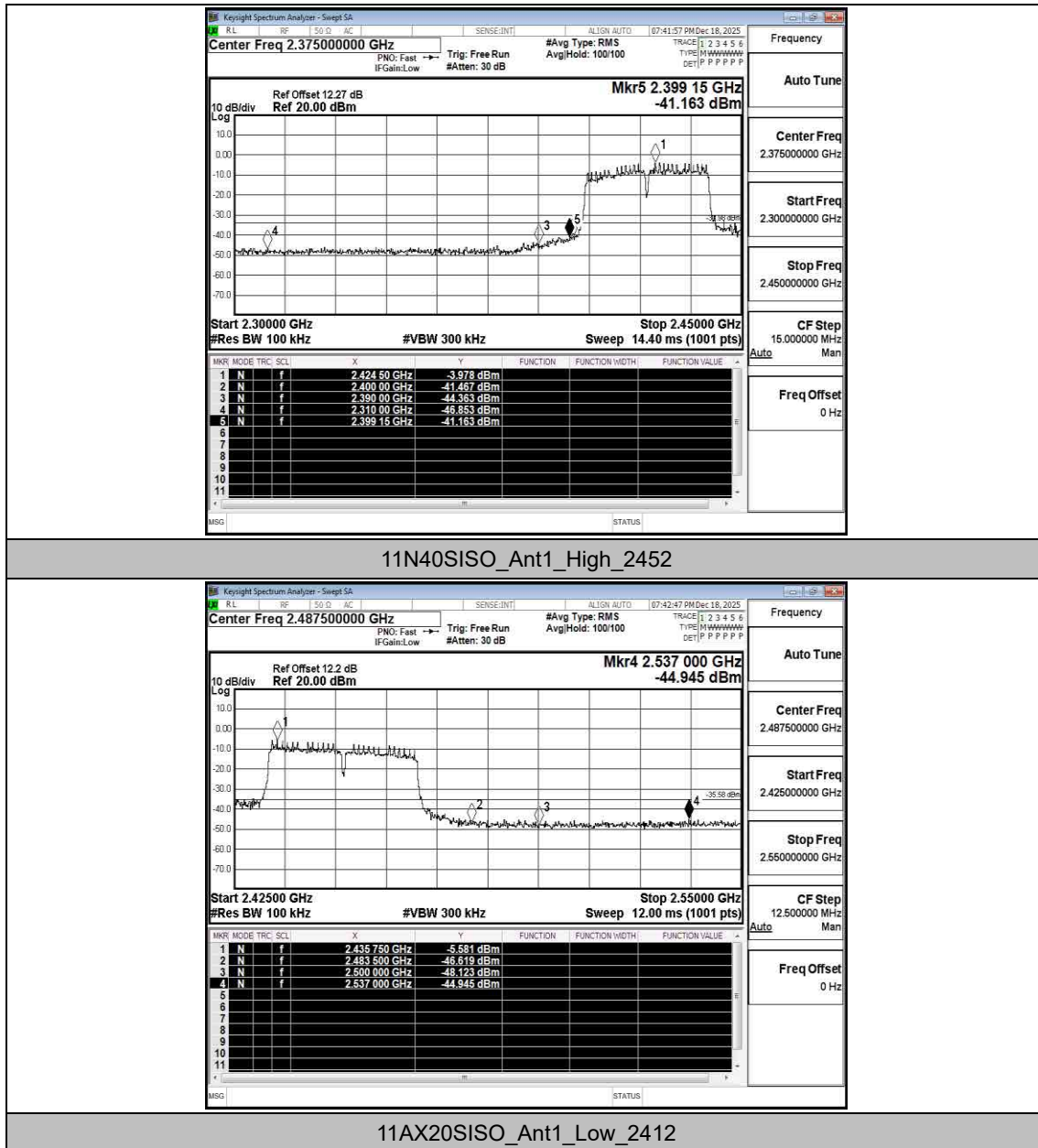


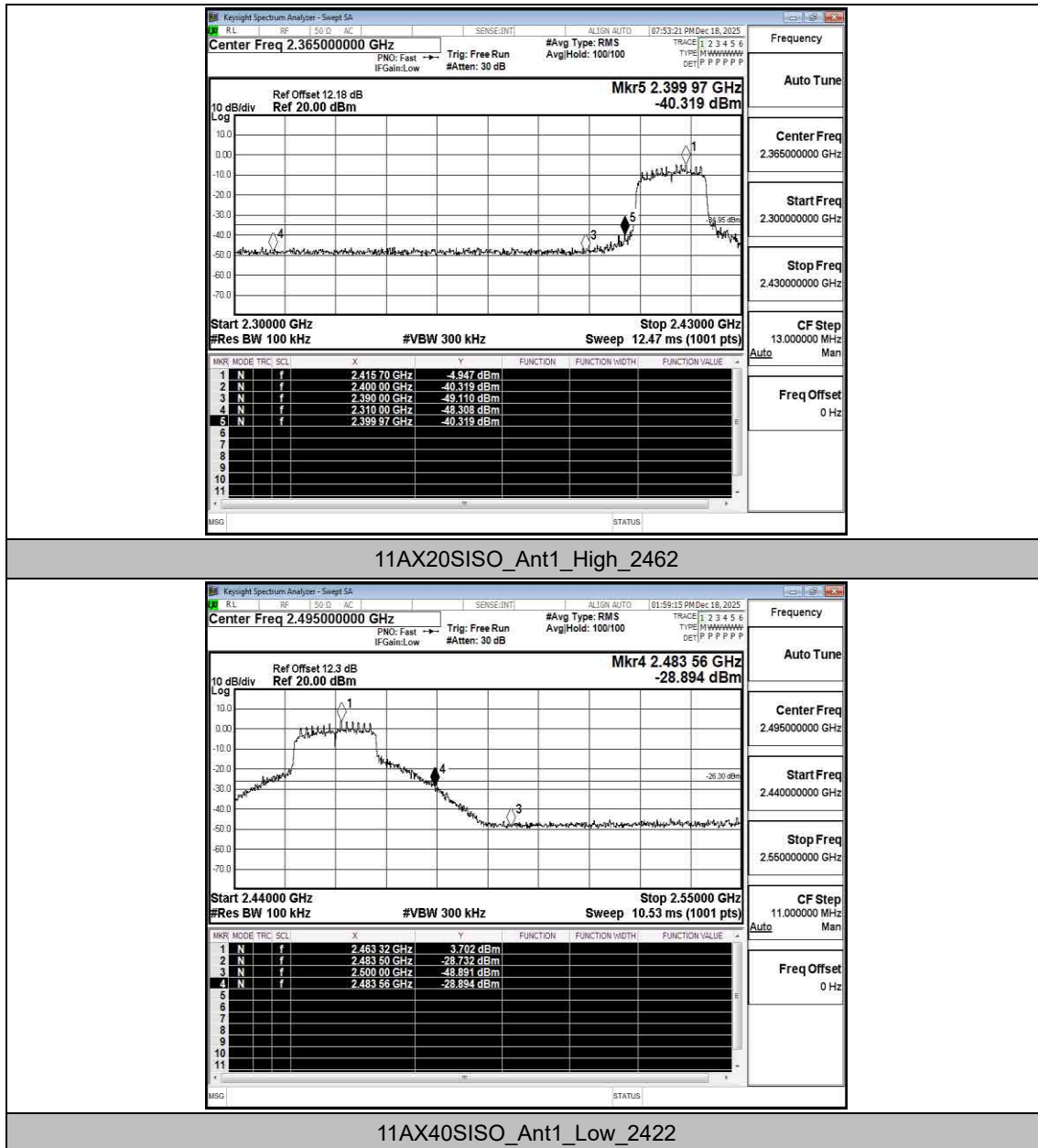
11G_Ant1_High_2462

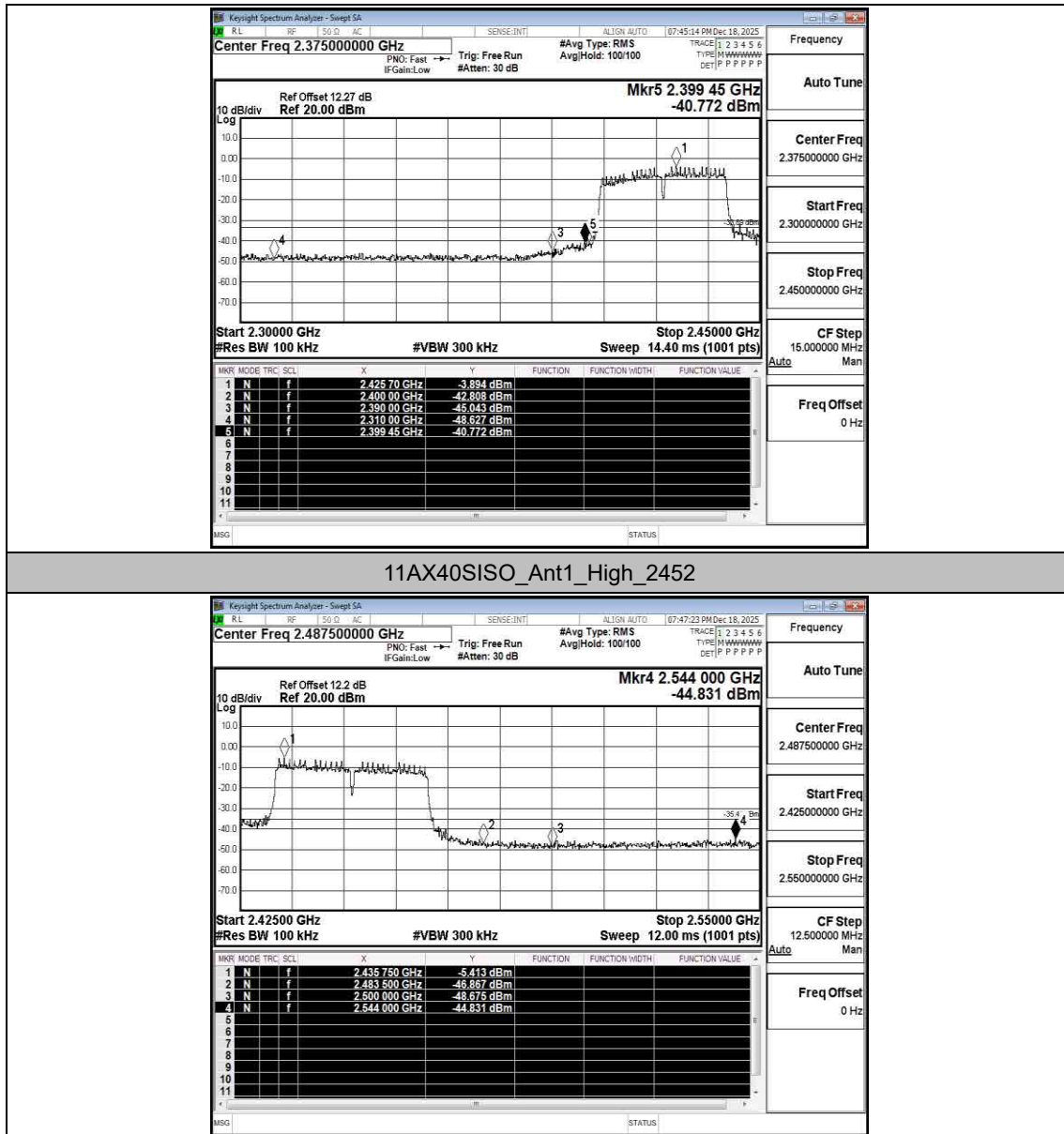


11N20SISO_Ant1_Low_2412









C.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.16	3.16	---	PASS
			30~1000	3.16	-52.18	≤-26.84	PASS
			1000~26500	3.16	-54.68	≤-26.84	PASS
		2437	Reference	1.69	1.69	---	PASS
			30~1000	1.69	-52.63	≤-28.31	PASS
			1000~26500	1.69	-54.64	≤-28.31	PASS
		2462	Reference	2.38	2.38	---	PASS
			30~1000	2.38	-53.12	≤-27.62	PASS
			1000~26500	2.38	-54.92	≤-27.62	PASS
11G	Ant1	2412	Reference	2.55	2.55	---	PASS
			30~1000	2.55	-52.44	≤-27.45	PASS
			1000~26500	2.55	-54.08	≤-27.45	PASS
		2437	Reference	-1.29	-1.29	---	PASS
			30~1000	-1.29	-53.65	≤-31.29	PASS
			1000~26500	-1.29	-54.68	≤-31.29	PASS
		2462	Reference	0.37	0.37	---	PASS
			30~1000	0.37	-52.33	≤-29.63	PASS
			1000~26500	0.37	-54.17	≤-29.63	PASS
11N20SISO	Ant1	2412	Reference	1.95	1.95	---	PASS
			30~1000	1.95	-54.43	≤-28.05	PASS
			1000~26500	1.95	-54.2	≤-28.05	PASS
		2437	Reference	-0.71	-0.71	---	PASS
			30~1000	-0.71	-52.08	≤-30.71	PASS
			1000~26500	-0.71	-54.69	≤-30.71	PASS
		2462	Reference	2.64	2.64	---	PASS
			30~1000	2.64	-53.47	≤-27.36	PASS
			1000~26500	2.64	-54.1	≤-27.36	PASS
11N40SISO	Ant1	2422	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-60.09	≤-29.15	PASS
			1000~26500	0.85	-54.87	≤-29.15	PASS
		2437	Reference	-0.53	-0.53	---	PASS
			30~1000	-0.53	-58.88	≤-30.53	PASS
			1000~26500	-0.53	-54.36	≤-30.53	PASS
		2452	Reference	-3.19	-3.19	---	PASS
			30~1000	-3.19	-56.83	≤-33.19	PASS

			1000~26500	-3.19	-54.35	≤ -33.19	PASS
11AX20SISO	Ant1	2412	Reference	1.47	1.47	---	PASS
			30~1000	1.47	-56.74	≤ -28.53	PASS
			1000~26500	1.47	-54.55	≤ -28.53	PASS
		2437	Reference	1.84	1.84	---	PASS
			30~1000	1.84	-58.91	≤ -28.16	PASS
			1000~26500	1.84	-54.91	≤ -28.16	PASS
		2462	Reference	3.67	3.67	---	PASS
			30~1000	3.67	-59.34	≤ -26.33	PASS
			1000~26500	3.67	-54.43	≤ -26.33	PASS
11AX40SISO	Ant1	2422	Reference	1.46	1.46	---	PASS
			30~1000	1.46	-51.47	≤ -28.54	PASS
			1000~26500	1.46	-42.4	≤ -28.54	PASS
		2437	Reference	-9.22	-9.22	---	PASS
			30~1000	-9.22	-51.73	≤ -39.22	PASS
			1000~26500	-9.22	-54.04	≤ -39.22	PASS
		2452	Reference	-1.73	-1.73	---	PASS
			30~1000	-1.73	-50.48	≤ -31.73	PASS
			1000~26500	-1.73	-37.73	≤ -31.73	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

