

Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Laptop

Test Model: H729AE

Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

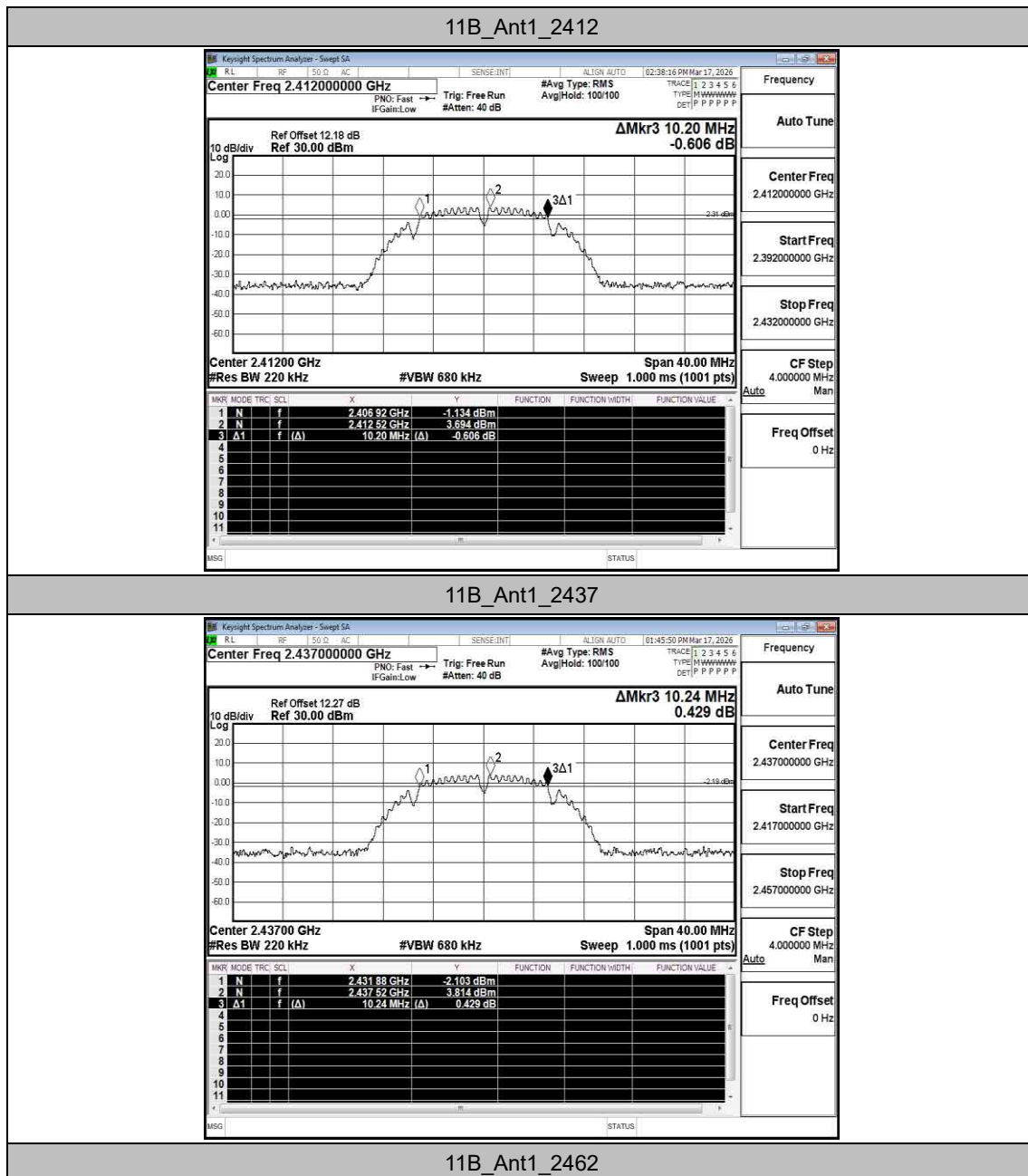
C.1 DTS Bandwidth

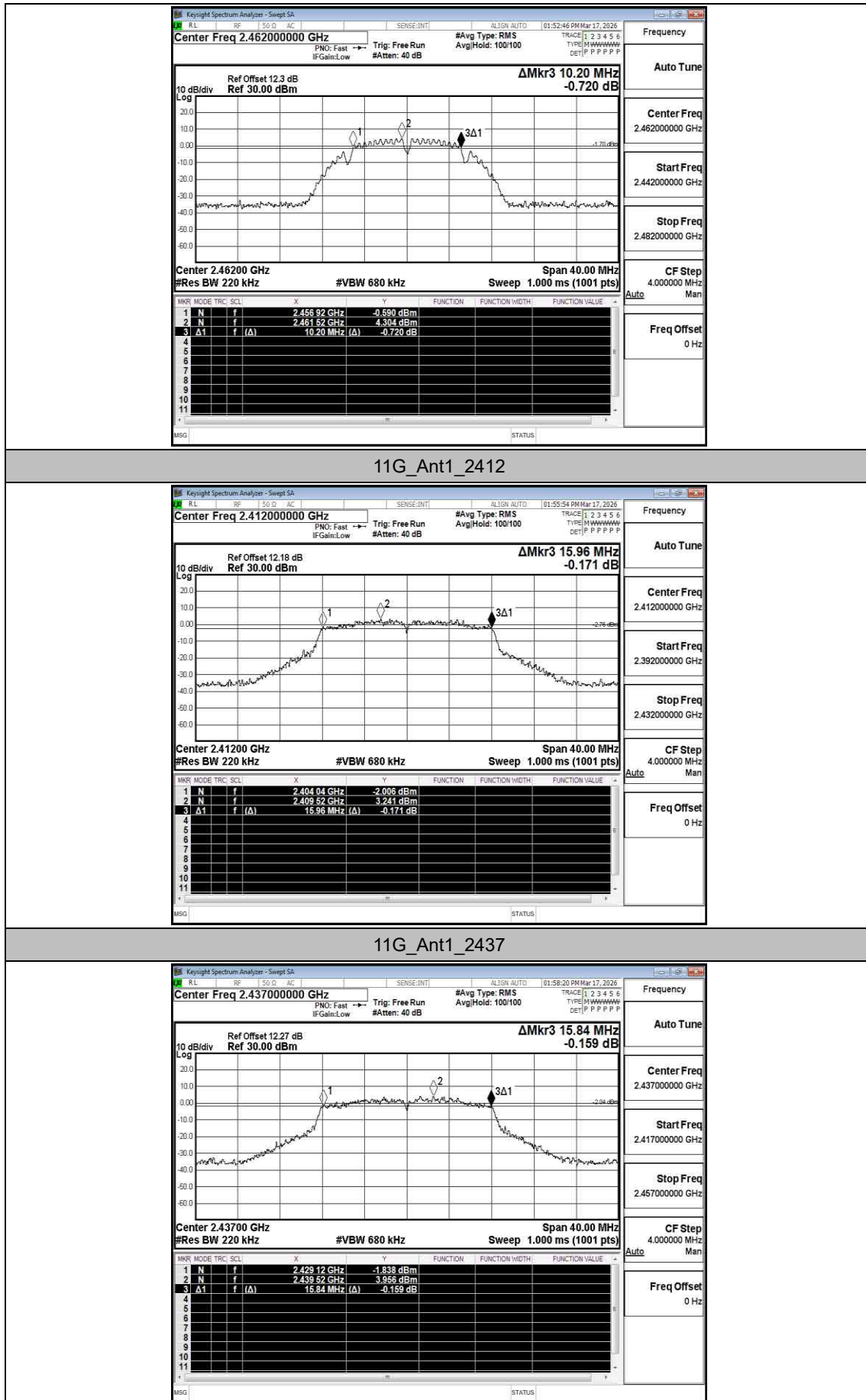
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.200	2406.920	2417.120	0.5	PASS
		2437	10.240	2431.880	2442.120	0.5	PASS
		2462	10.200	2456.920	2467.120	0.5	PASS
11G	Ant1	2412	15.960	2404.040	2420.000	0.5	PASS
		2437	15.840	2429.120	2444.960	0.5	PASS
		2462	15.760	2454.160	2469.920	0.5	PASS
11N20SISO	Ant1	2412	17.360	2403.280	2420.640	0.5	PASS
		2437	17.040	2428.440	2445.480	0.5	PASS
		2462	17.080	2453.480	2470.560	0.5	PASS
11N40SISO	Ant1	2422	35.120	2404.640	2439.760	0.5	PASS
		2437	35.280	2419.560	2454.840	0.5	PASS
		2452	35.680	2434.400	2470.080	0.5	PASS

Note: offset=System attenuation +cabal loss

Test Graphs



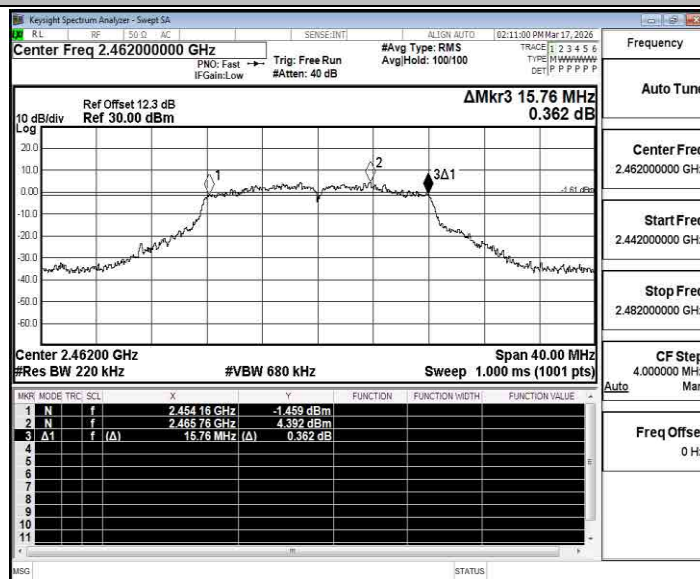


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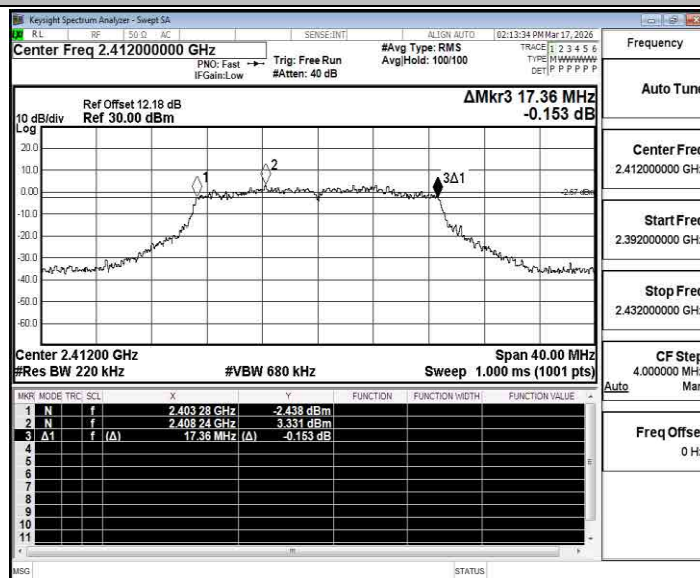
Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

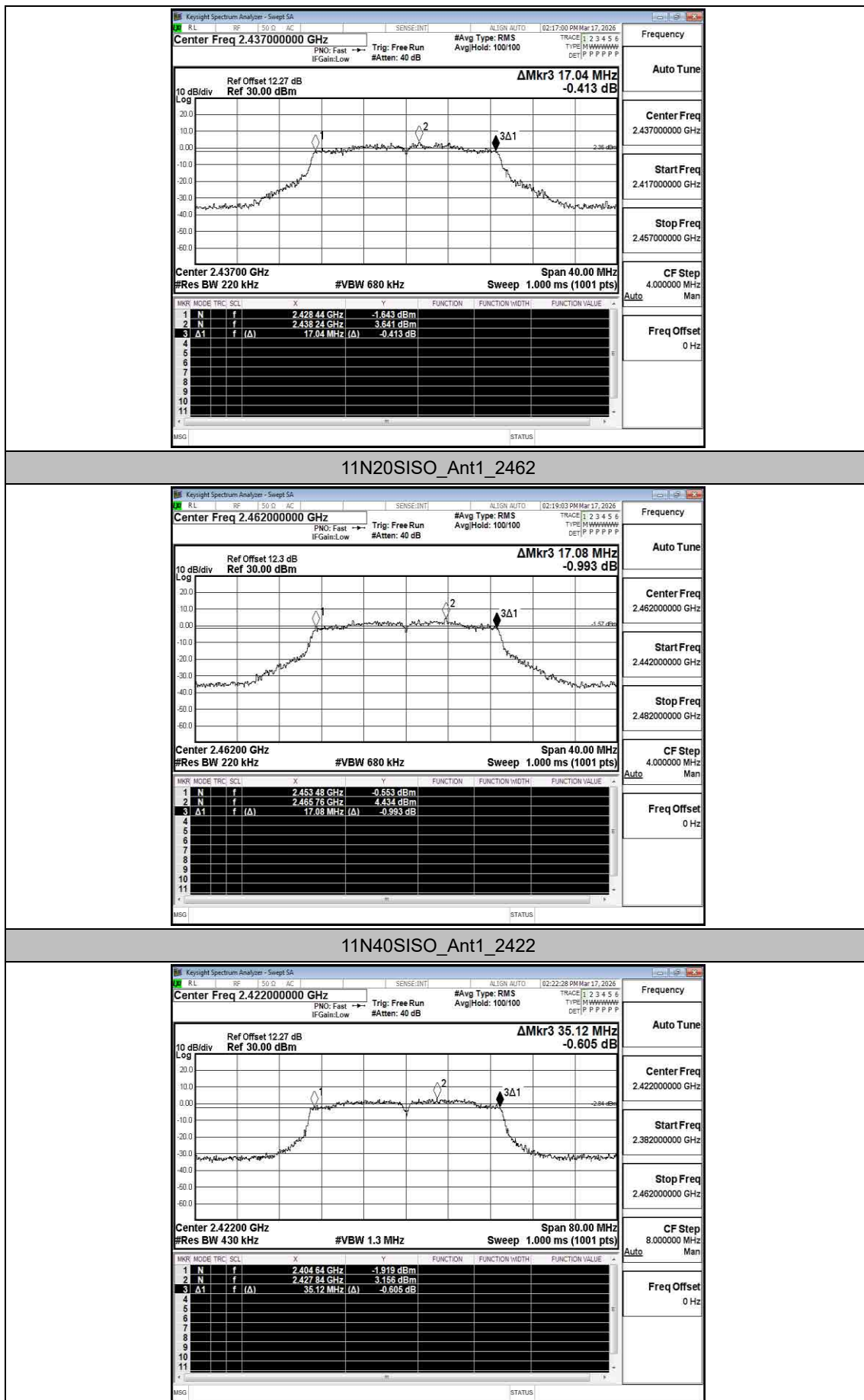
11G_Ant1_2462



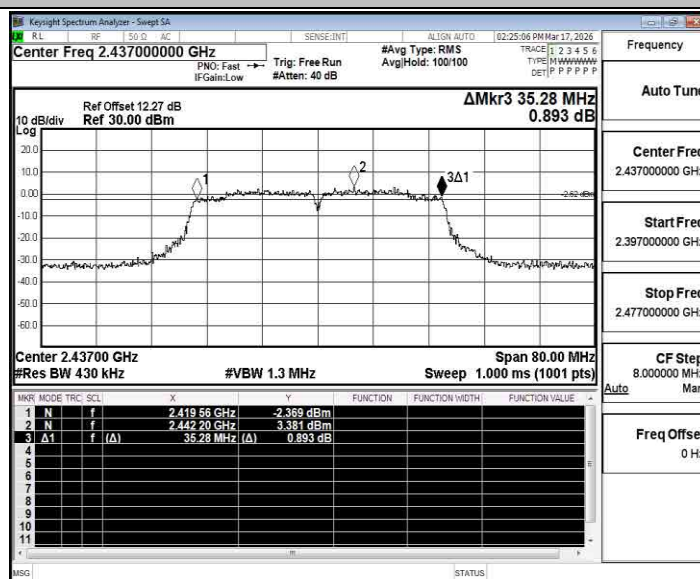
11N20SISO_Ant1_2412



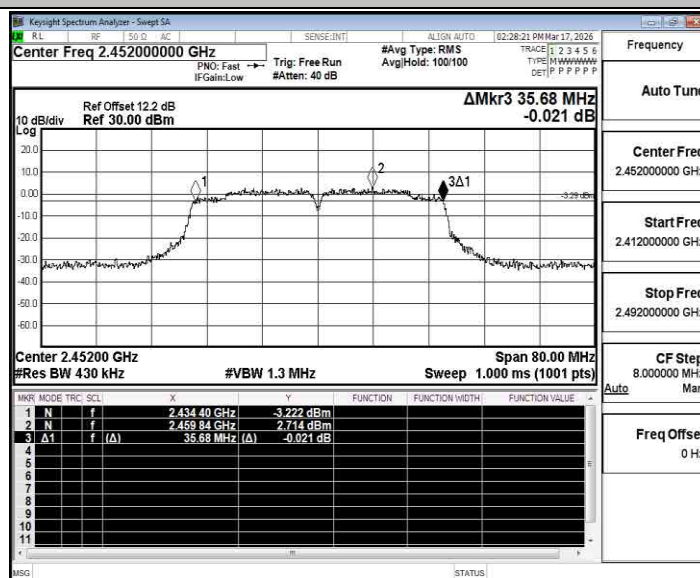
11N20SISO_Ant1_2437



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

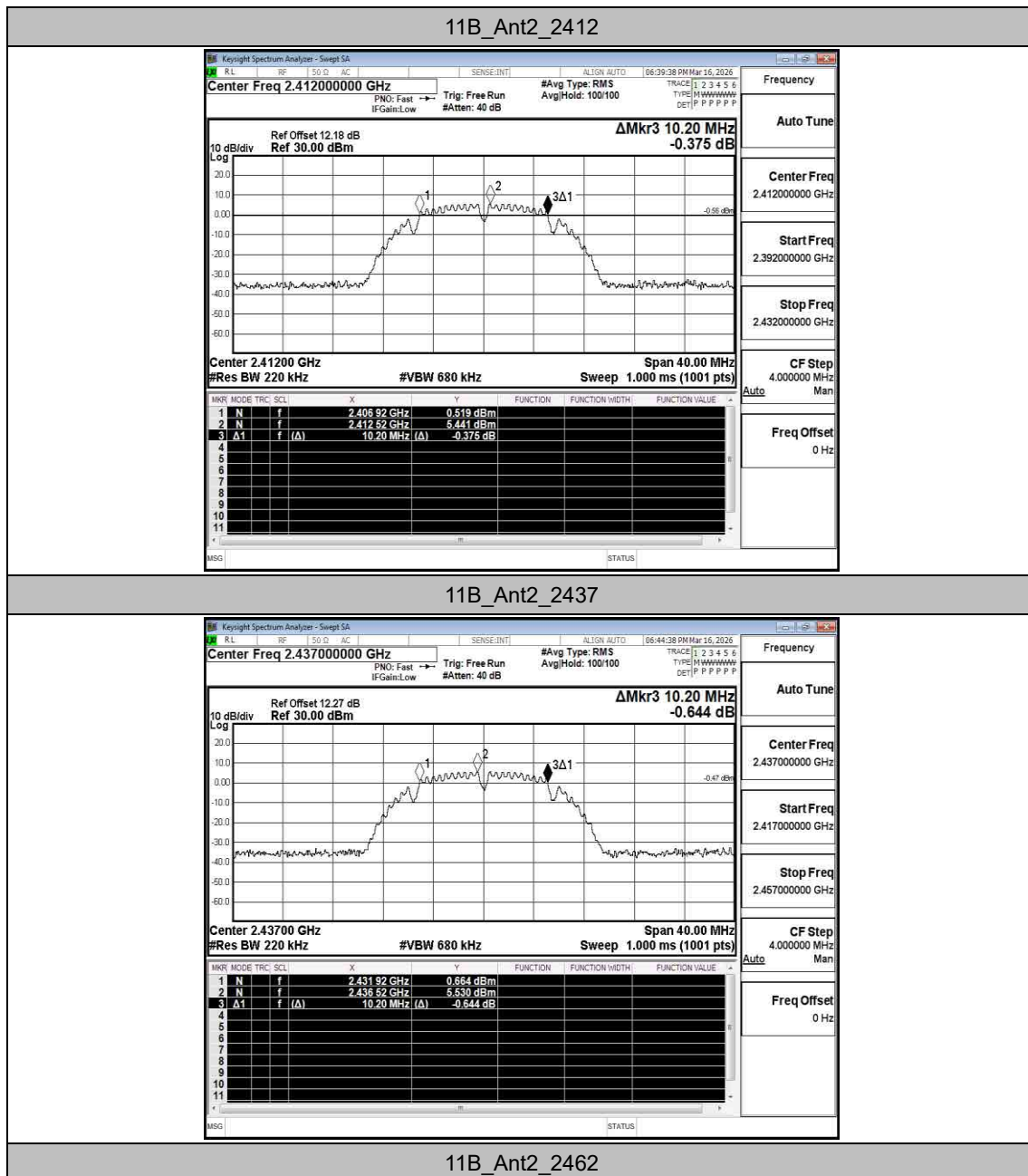


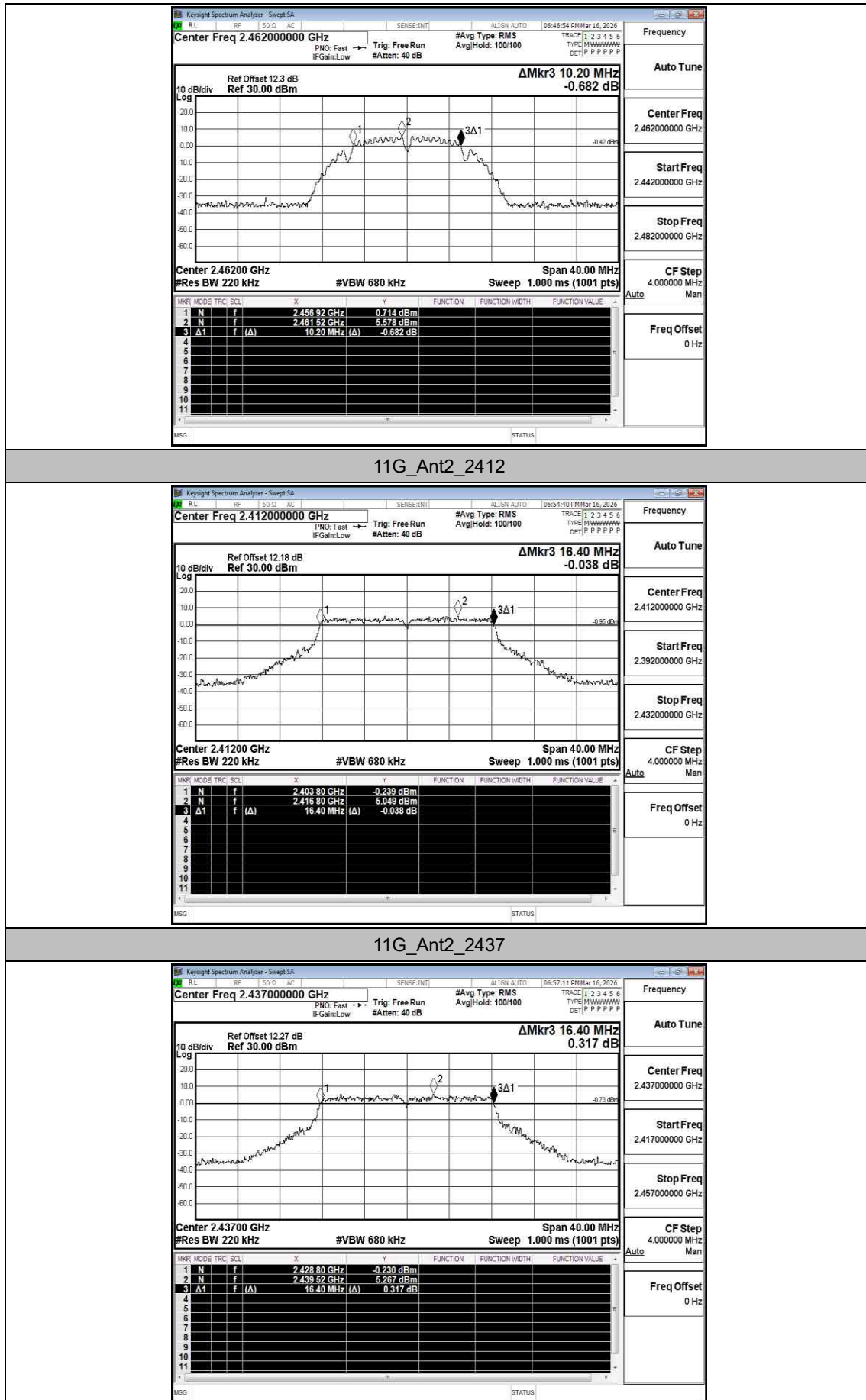
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant2	2412	10.200	2406.920	2417.120	0.5	PASS
		2437	10.200	2431.920	2442.120	0.5	PASS
		2462	10.200	2456.920	2467.120	0.5	PASS
11G	Ant2	2412	16.400	2403.800	2420.200	0.5	PASS
		2437	16.400	2428.800	2445.200	0.5	PASS
		2462	16.400	2453.800	2470.200	0.5	PASS
11N20SISO	Ant2	2412	17.680	2403.160	2420.840	0.5	PASS
		2437	17.640	2428.160	2445.800	0.5	PASS
		2462	17.640	2453.200	2470.840	0.5	PASS
11N40SISO	Ant2	2422	36.400	2403.840	2440.240	0.5	PASS
		2437	36.480	2418.760	2455.240	0.5	PASS
		2452	36.400	2433.840	2470.240	0.5	PASS

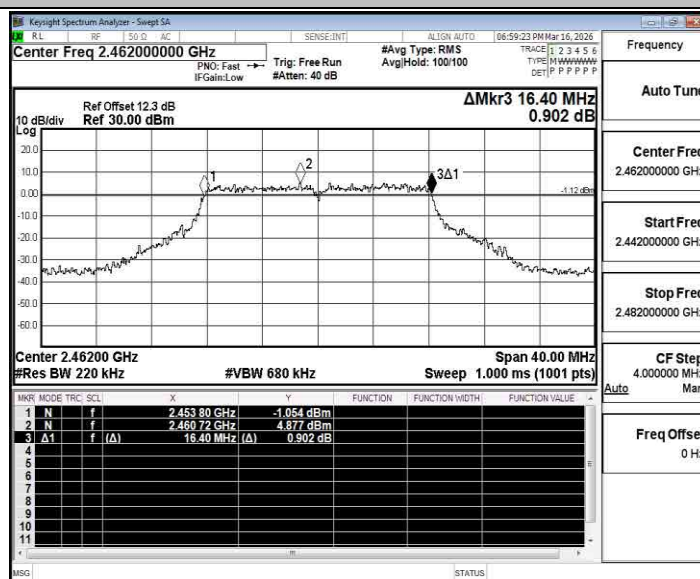
Note: offset=System attenuation +cabel loss

Test Graphs

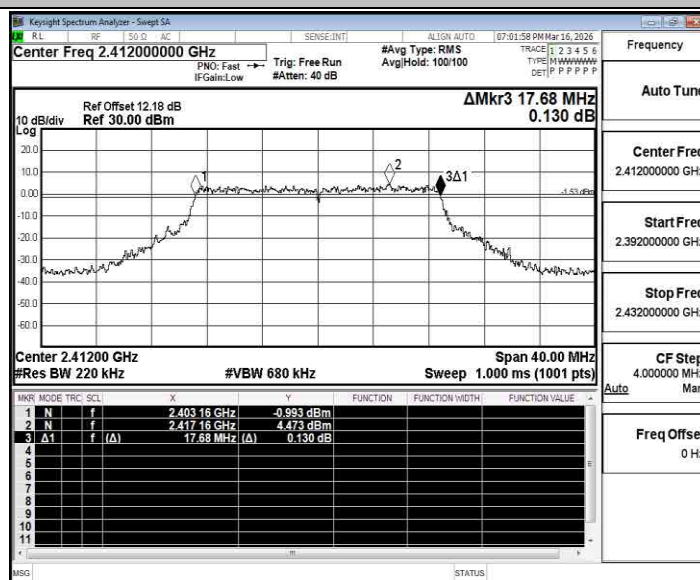




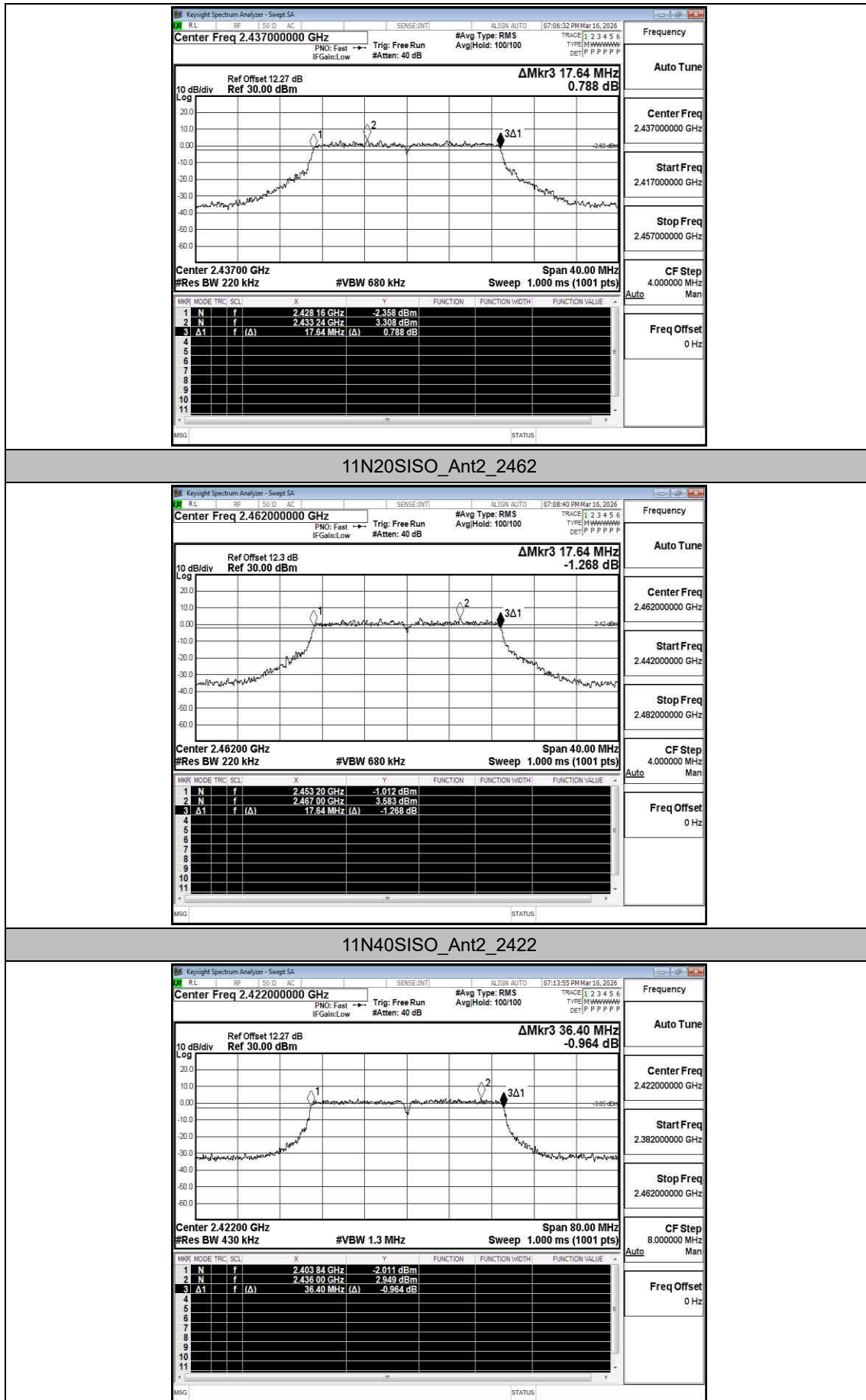
11G_Ant2_2462



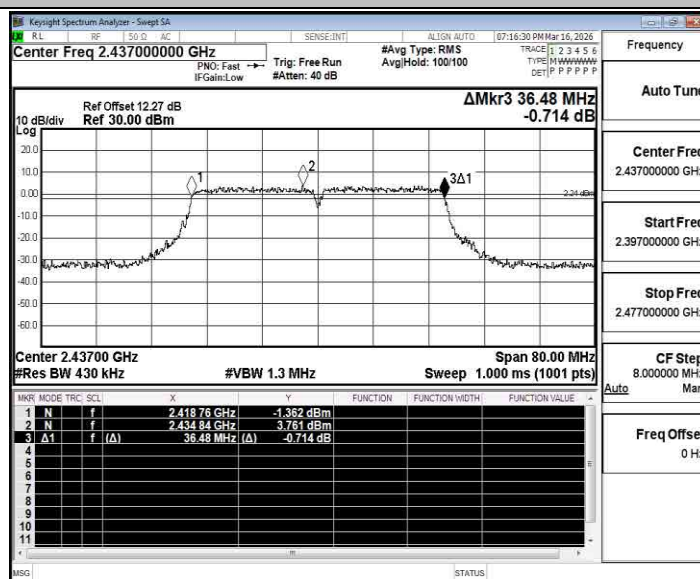
11N20SISO_Ant2_2412



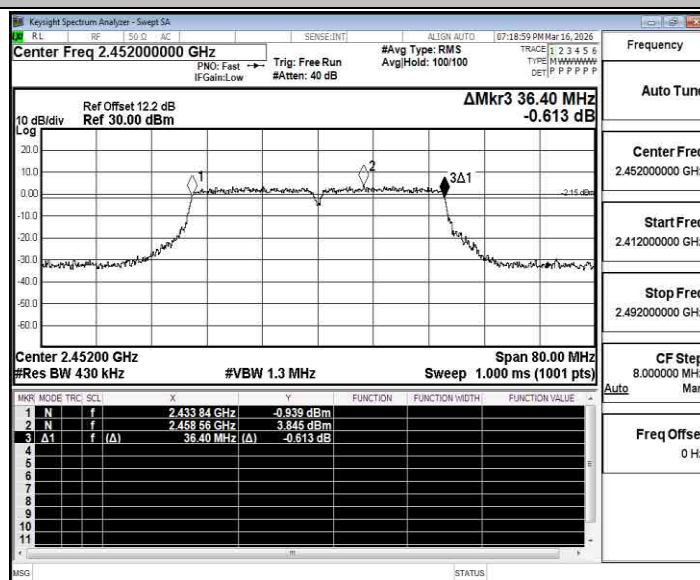
11N20SISO_Ant2_2437



11N40SISO_Ant2_2437



11N40SISO_Ant2_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	11.81	0.09	11.90	≤30.00	PASS
		2437	11.97	0.05	12.02	≤30.00	PASS
		2462	12.36	0.04	12.40	≤30.00	PASS
11G	Ant1	2412	12.62	0.14	12.76	≤30.00	PASS
		2437	12.75	0.12	12.87	≤30.00	PASS
		2462	12.98	0.10	13.08	≤30.00	PASS
11N20SISO	Ant1	2412	12.12	0.13	12.25	≤30.00	PASS
		2437	12.43	0.17	12.60	≤30.00	PASS
		2462	12.72	0.17	12.89	≤30.00	PASS
11N40SISO	Ant1	2422	12.23	0.26	12.49	≤30.00	PASS
		2437	12.75	0.26	13.01	≤30.00	PASS
		2452	12.85	0.31	13.16	≤30.00	PASS

TestMode	Antenna	Frequency [MHz]	Measured Power	DC Factor [dB]	AV Power [dBm]	Conducted Limit[dBm]	Verdict
11B	Ant2	2412	13.50	0.05	13.55	≤30.00	PASS
		2437	13.67	0.09	13.76	≤30.00	PASS
		2462	13.54	0.05	13.59	≤30.00	PASS
11G	Ant2	2412	11.39	0.10	11.49	≤30.00	PASS
		2437	11.93	0.14	12.07	≤30.00	PASS
		2462	14.25	0.14	14.39	≤30.00	PASS
11N20SISO	Ant2	2412	14.64	0.13	14.77	≤30.00	PASS
		2437	13.06	0.15	13.21	≤30.00	PASS
		2462	12.45	0.15	12.60	≤30.00	PASS
11N40SISO	Ant2	2422	11.71	0.30	12.01	≤30.00	PASS
		2437	13.35	0.26	13.65	≤30.00	PASS
		2452	14.21	0.30	14.51	≤30.00	PASS

Note: offset=System attenuation +cable loss

MIMO

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)			Limit (dBm)	Verdict
			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	2412	12.25	14.77	16.70	30	Pass
NVNT	n20	2437	12.60	13.21	15.93	30	Pass
NVNT	n20	2462	12.89	12.60	15.76	30	Pass
NVNT	n40	2422	12.49	12.01	15.27	30	Pass
NVNT	n40	2437	13.01	13.65	16.35	30	Pass
NVNT	n40	2452	13.16	14.51	16.90	30	Pass

C.3 Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Measured PSD [dBm/30kHz]	DC Factor [dB]	Result[dBm/30kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.04	0.09	-9.95	≤8.00	PASS
		2437	-9.97	0.05	-9.92	≤8.00	PASS
		2462	-9.62	0.04	-9.58	≤8.00	PASS
11G	Ant1	2412	-11.39	0.14	-11.25	≤8.00	PASS
		2437	-11.36	0.12	-11.24	≤8.00	PASS
		2462	-11	0.10	-10.90	≤8.00	PASS
11N20SISO	Ant1	2412	-11.83	0.13	-11.70	≤8.00	PASS
		2437	-12.38	0.17	-12.21	≤8.00	PASS
		2462	-11.4	0.17	-11.23	≤8.00	PASS
11N40SISO	Ant1	2422	-15.28	0.26	-15.02	≤8.00	PASS
		2437	-15.59	0.26	-15.33	≤8.00	PASS
		2452	-15.41	0.31	-15.10	≤8.00	PASS

Test Result

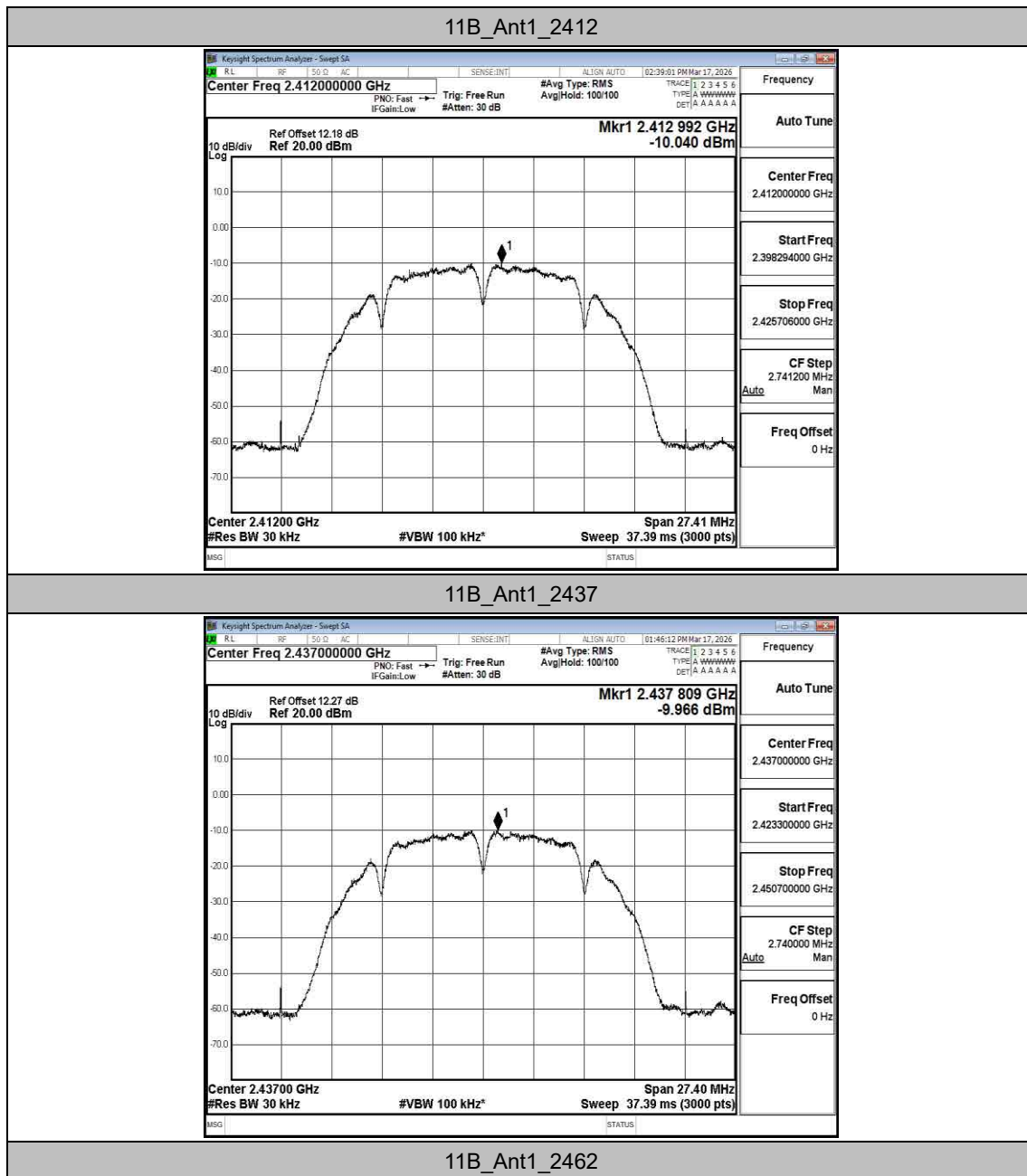
TestMode	Antenna	Frequency[MHz]	Measured PSD [dBm/30kHz]	DC Factor [dB]	Result[dBm/30kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant2	2412	-8.25	0.05	-8.20	≤8.00	PASS
		2437	-8.13	0.09	-8.04	≤8.00	PASS
		2462	-8.24	0.05	-8.19	≤8.00	PASS
11G	Ant2	2412	-9.71	0.10	-9.61	≤8.00	PASS
		2437	-11.53	0.14	-11.39	≤8.00	PASS
		2462	-10.18	0.14	-10.04	≤8.00	PASS
11N20SISO	Ant2	2412	-10.4	0.13	-10.27	≤8.00	PASS
		2437	-12.4	0.15	-12.25	≤8.00	PASS
		2462	-11.35	0.15	-11.20	≤8.00	PASS
11N40SISO	Ant2	2422	-15.33	0.30	-15.03	≤8.00	PASS
		2437	-15.21	0.26	-14.95	≤8.00	PASS
		2452	-14.91	0.30	-14.61	≤8.00	PASS

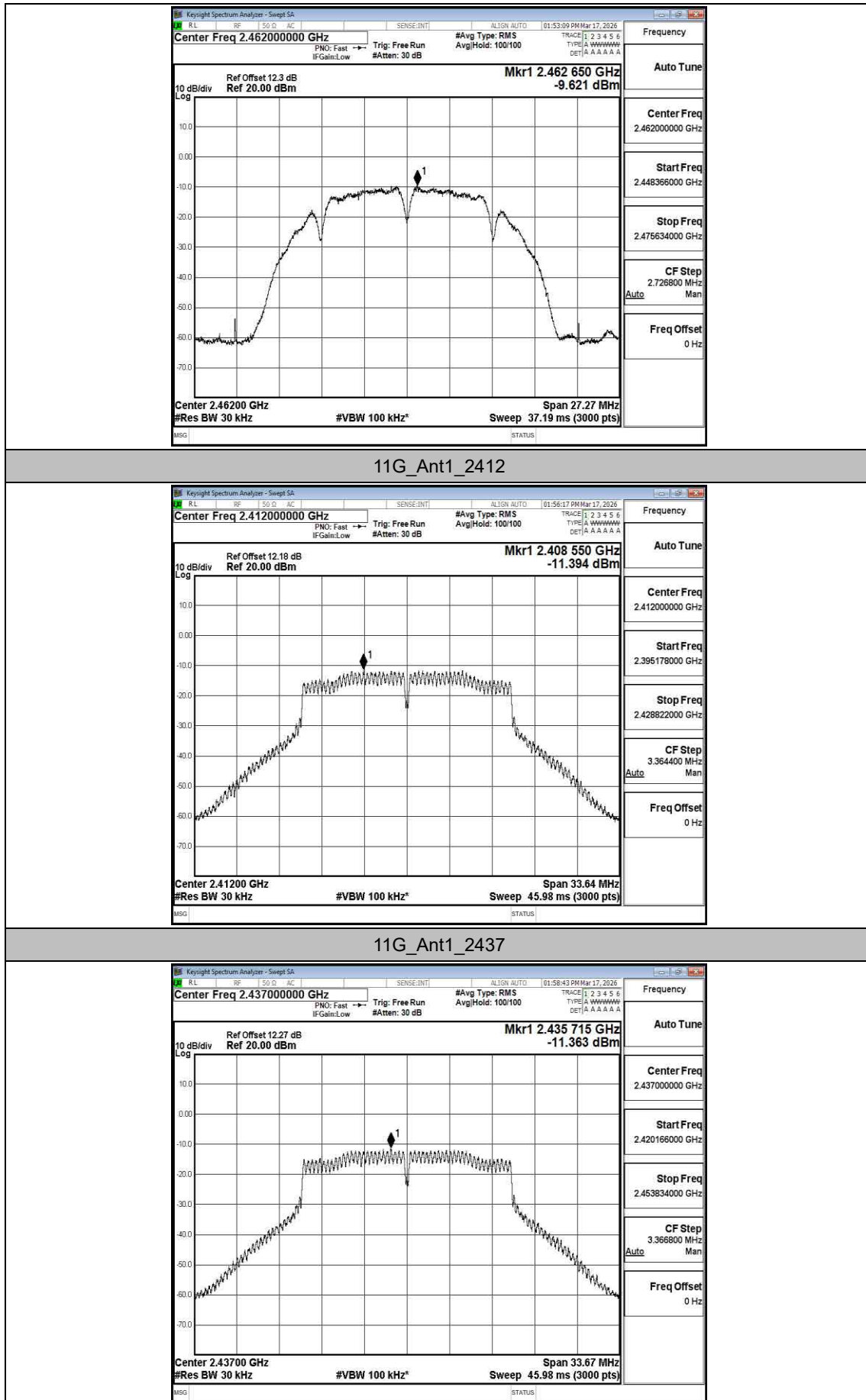
Note: offset=System attenuation +cabel loss

MIMO

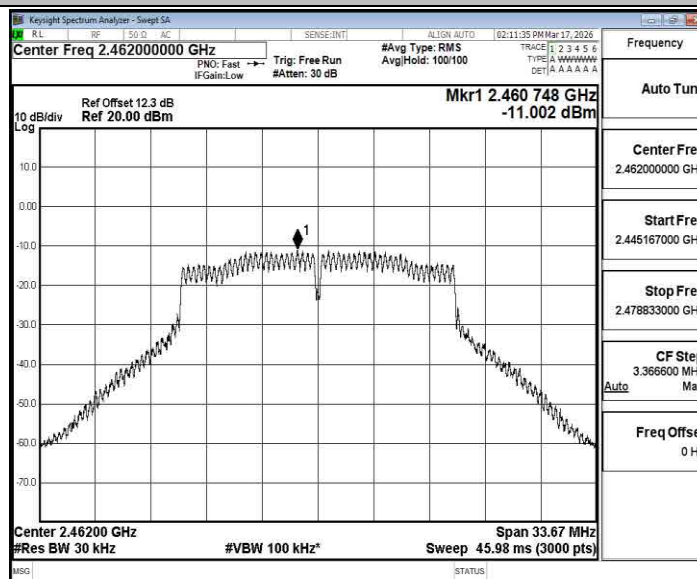
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/30kHz)			Limit (dBm)	Verdict
			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	2412	-11.70	-10.27	-7.92	7.77	Pass
NVNT	n20	2437	-12.21	-12.25	-9.22	7.77	Pass
NVNT	n20	2462	-11.23	-11.20	-8.20	7.77	Pass
NVNT	n40	2422	-15.02	-15.03	-12.01	7.77	Pass
NVNT	n40	2437	-15.33	-14.95	-12.13	7.77	Pass
NVNT	n40	2452	-15.10	-14.61	-11.84	7.77	Pass

Test Graphs

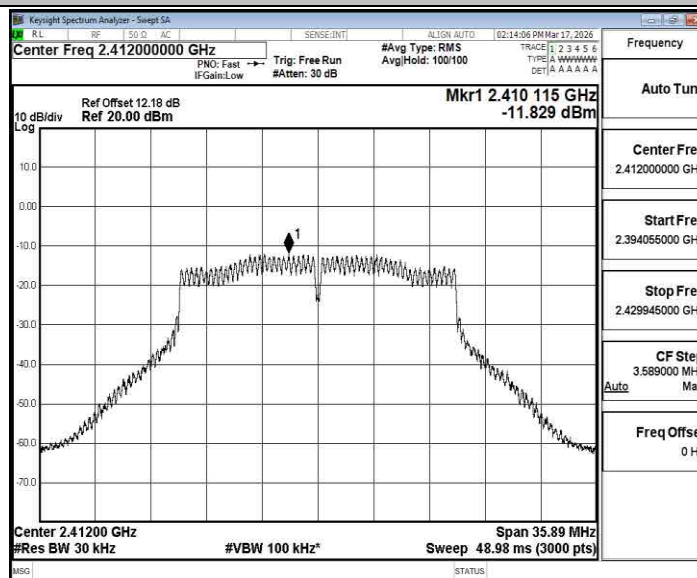




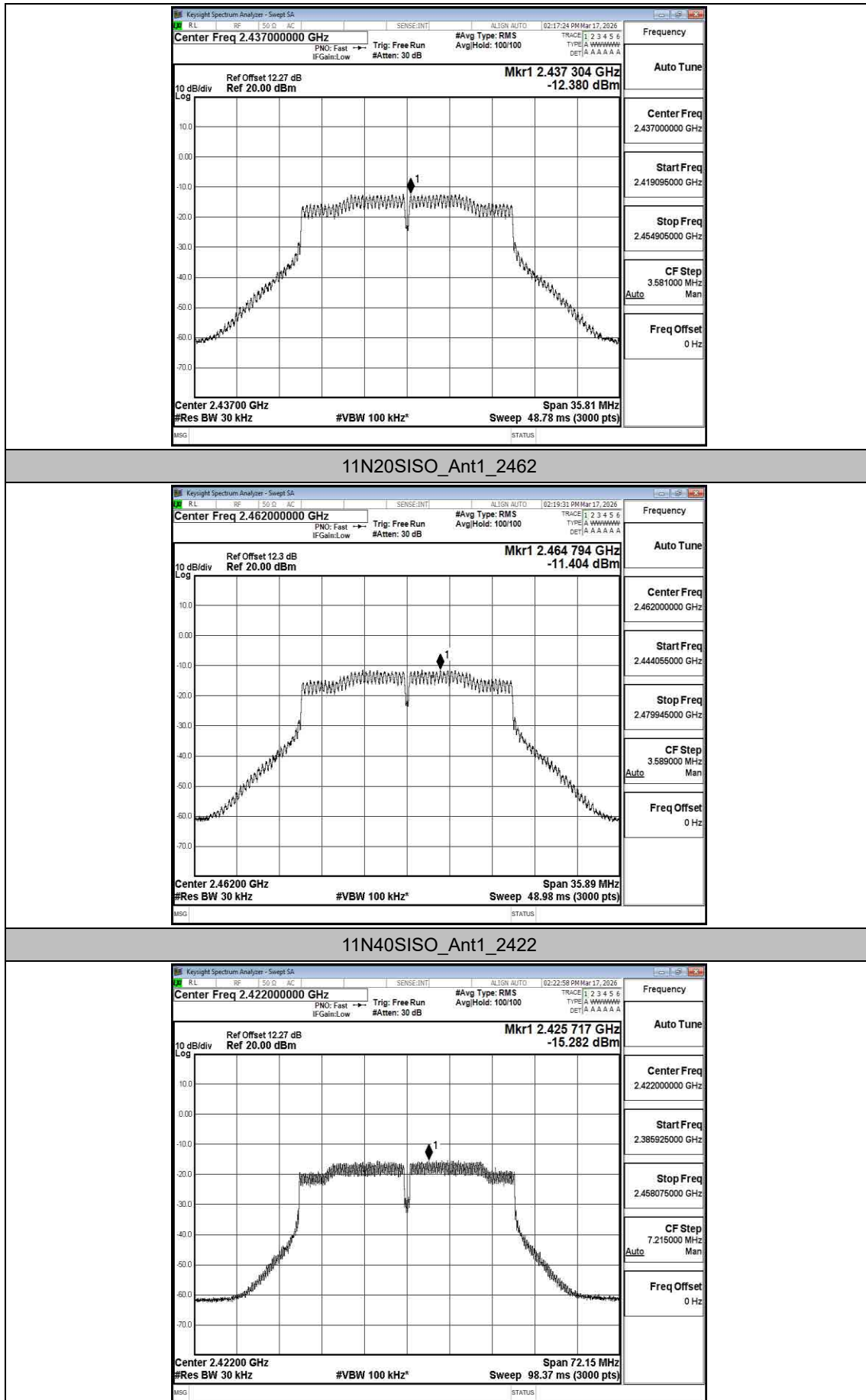
11G_Ant1_2462



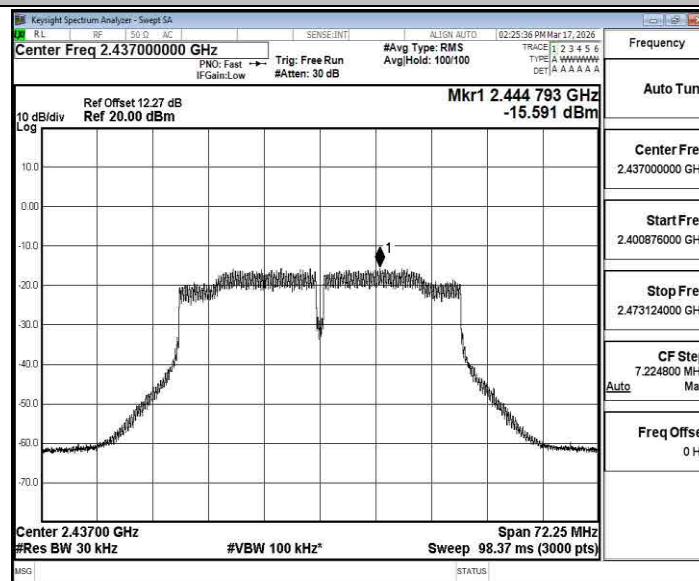
11N20SISO_Ant1_2412



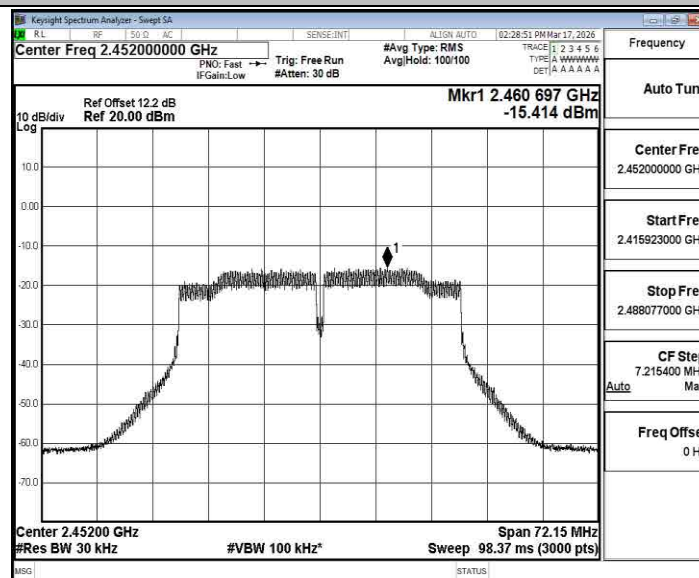
11N20SISO_Ant1_2437



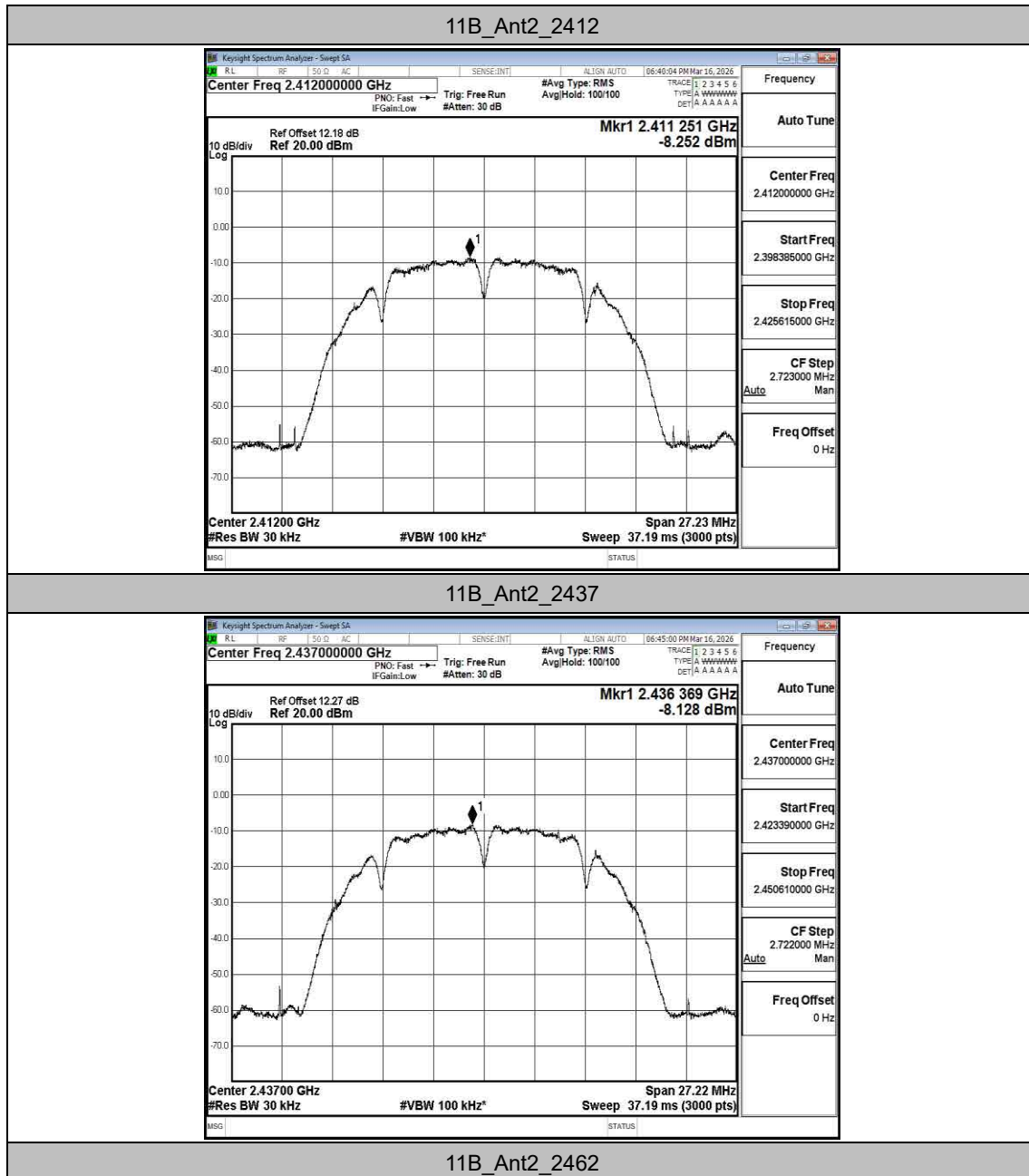
11N40SISO_Ant1_2437

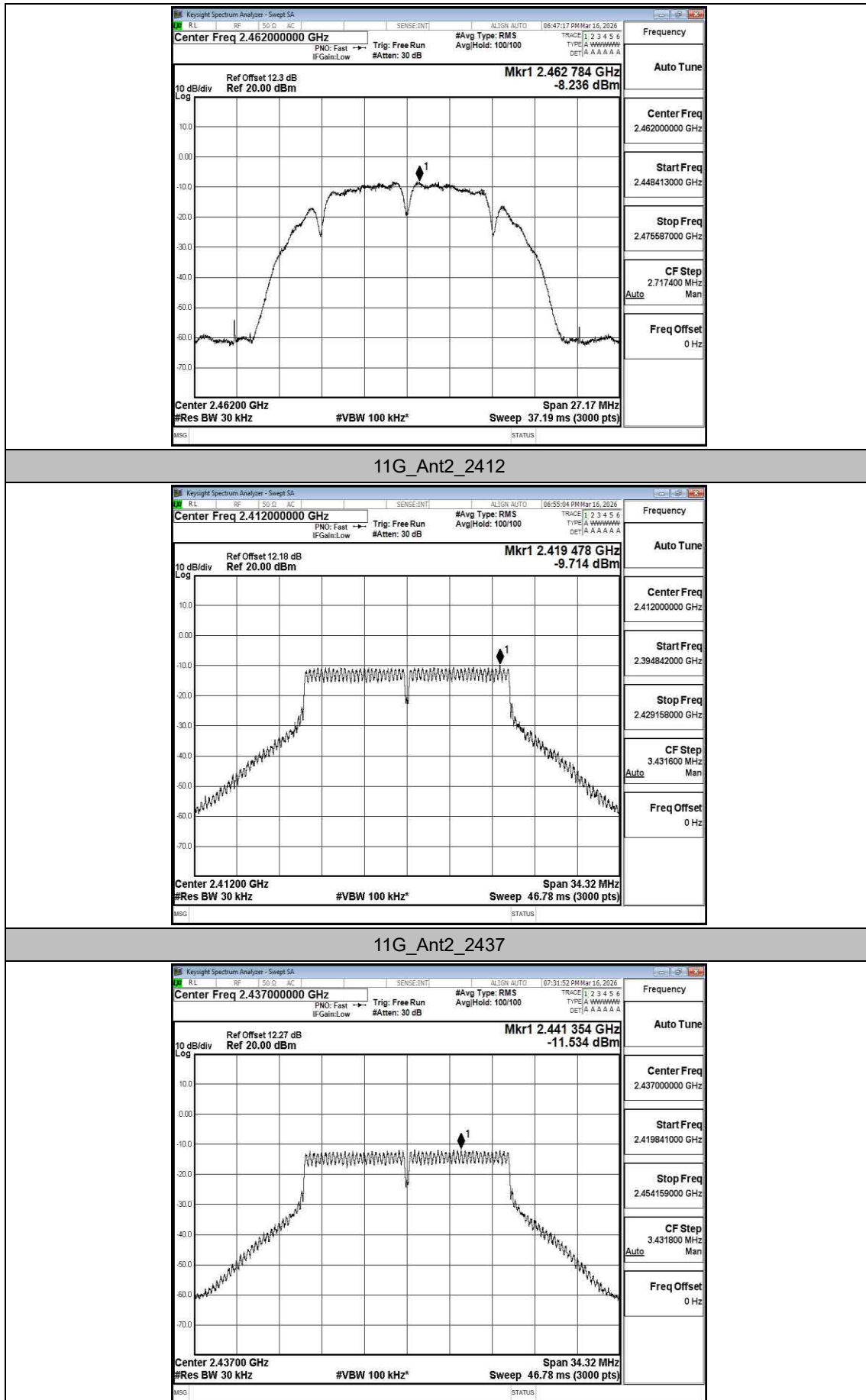


11N40SISO_Ant1_2452

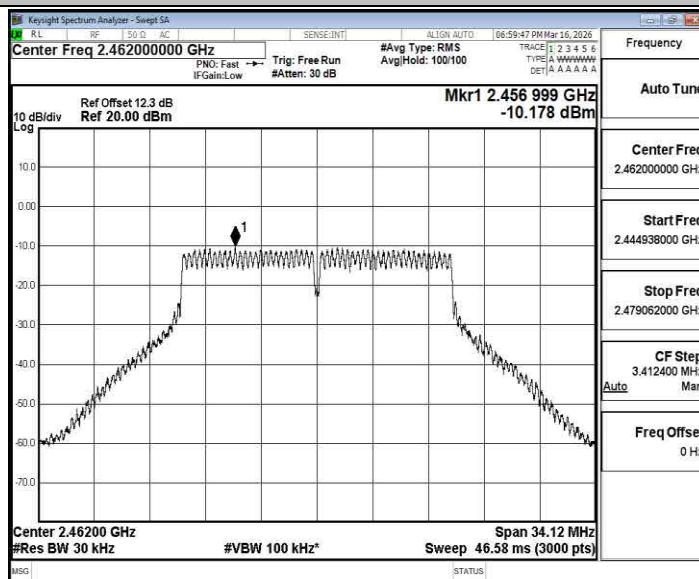


Test Graphs

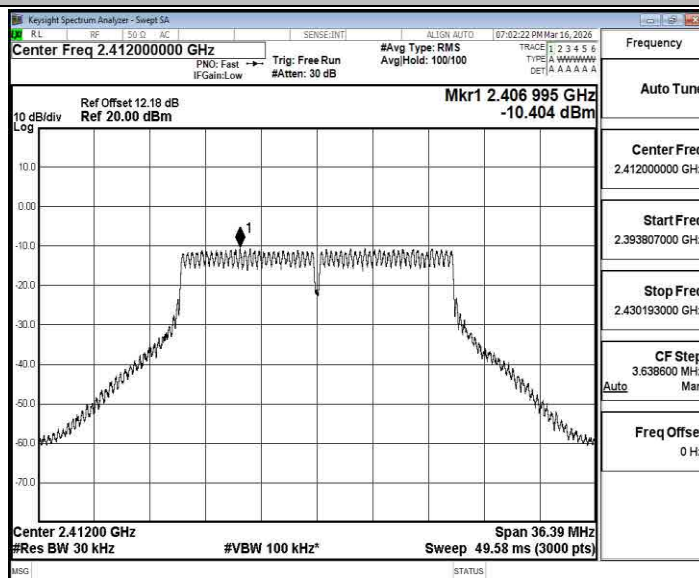




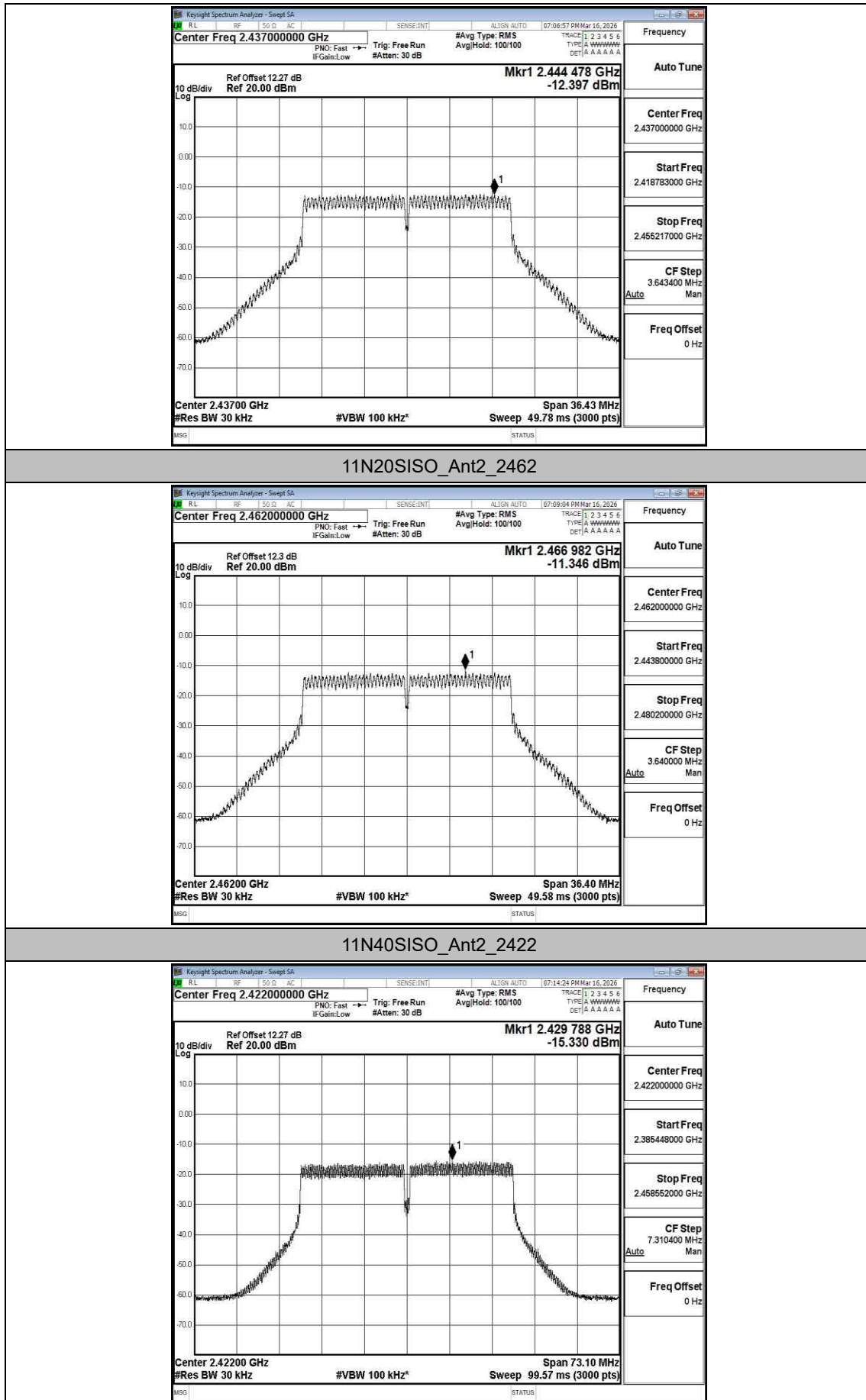
11G_Ant2_2462



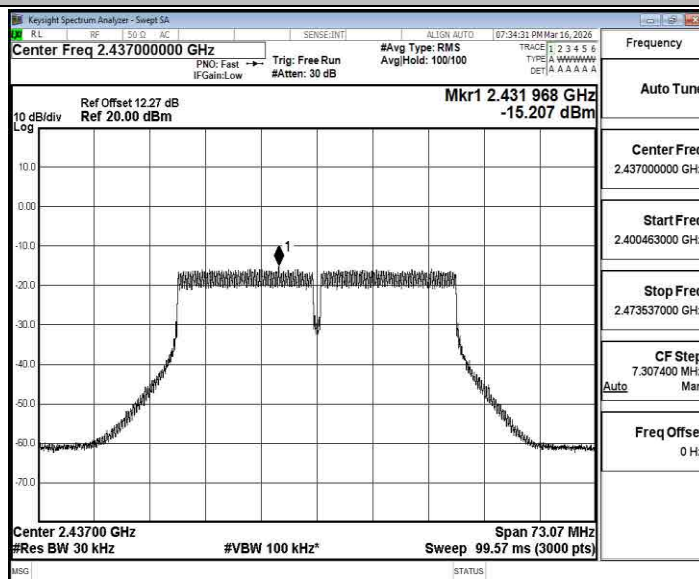
11N20SISO_Ant2_2412



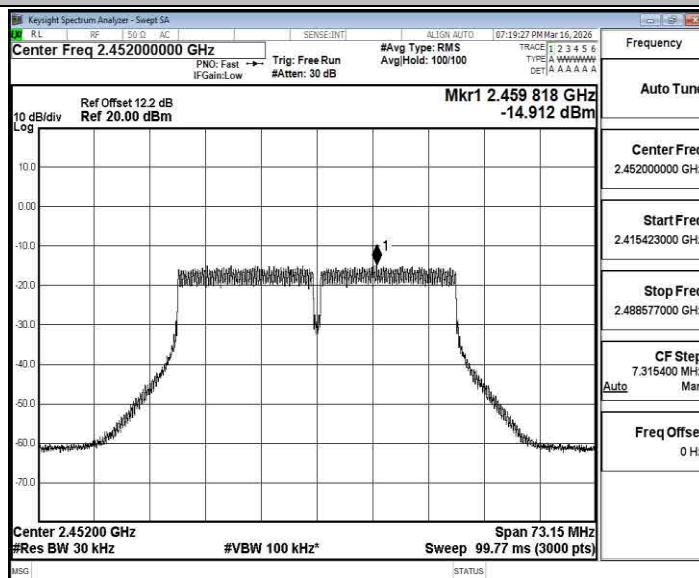
11N20SISO_Ant2_2437



11N40SISO_Ant2_2437



11N40SISO_Ant2_2452



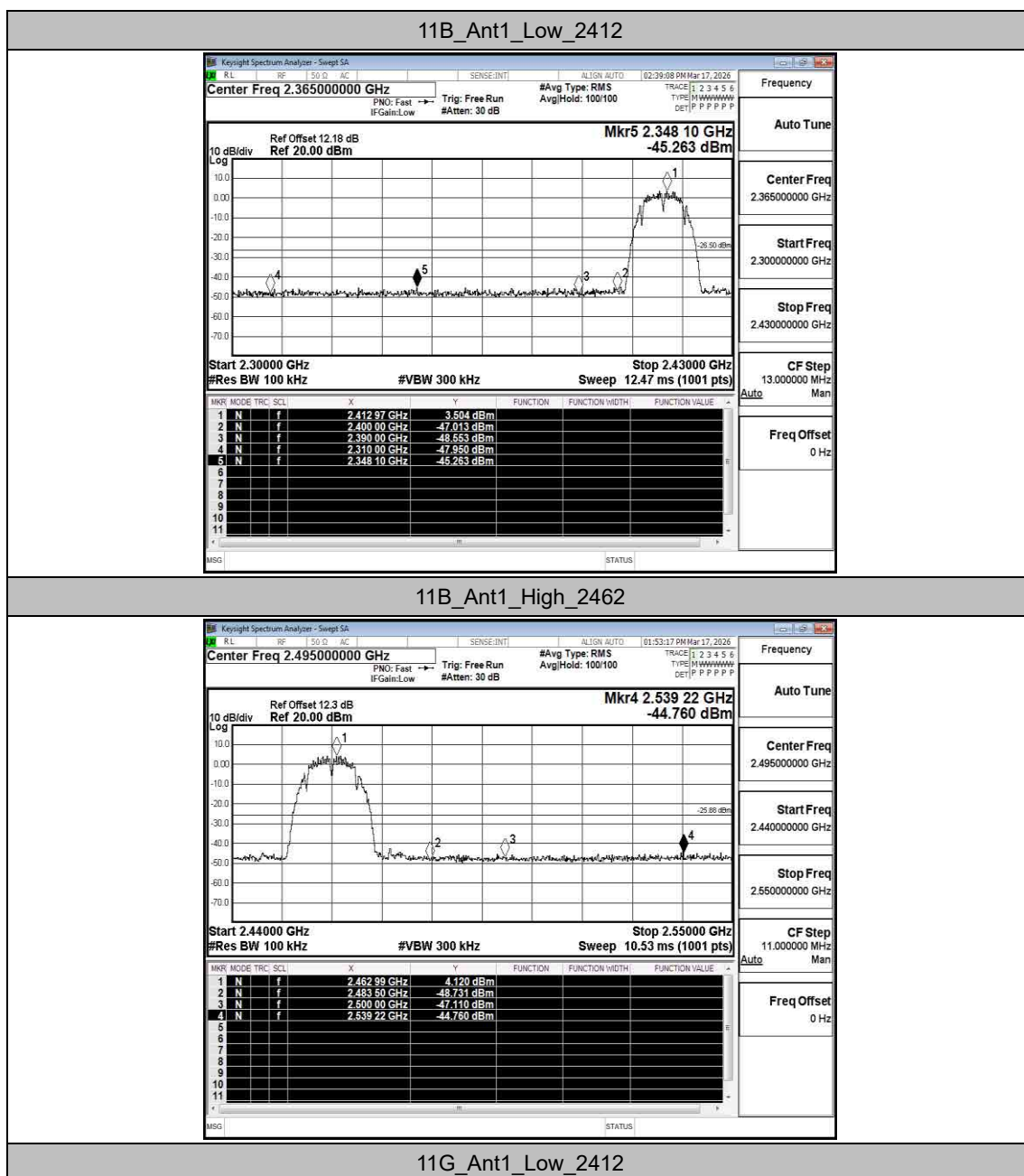
C.4 Band edge measurements

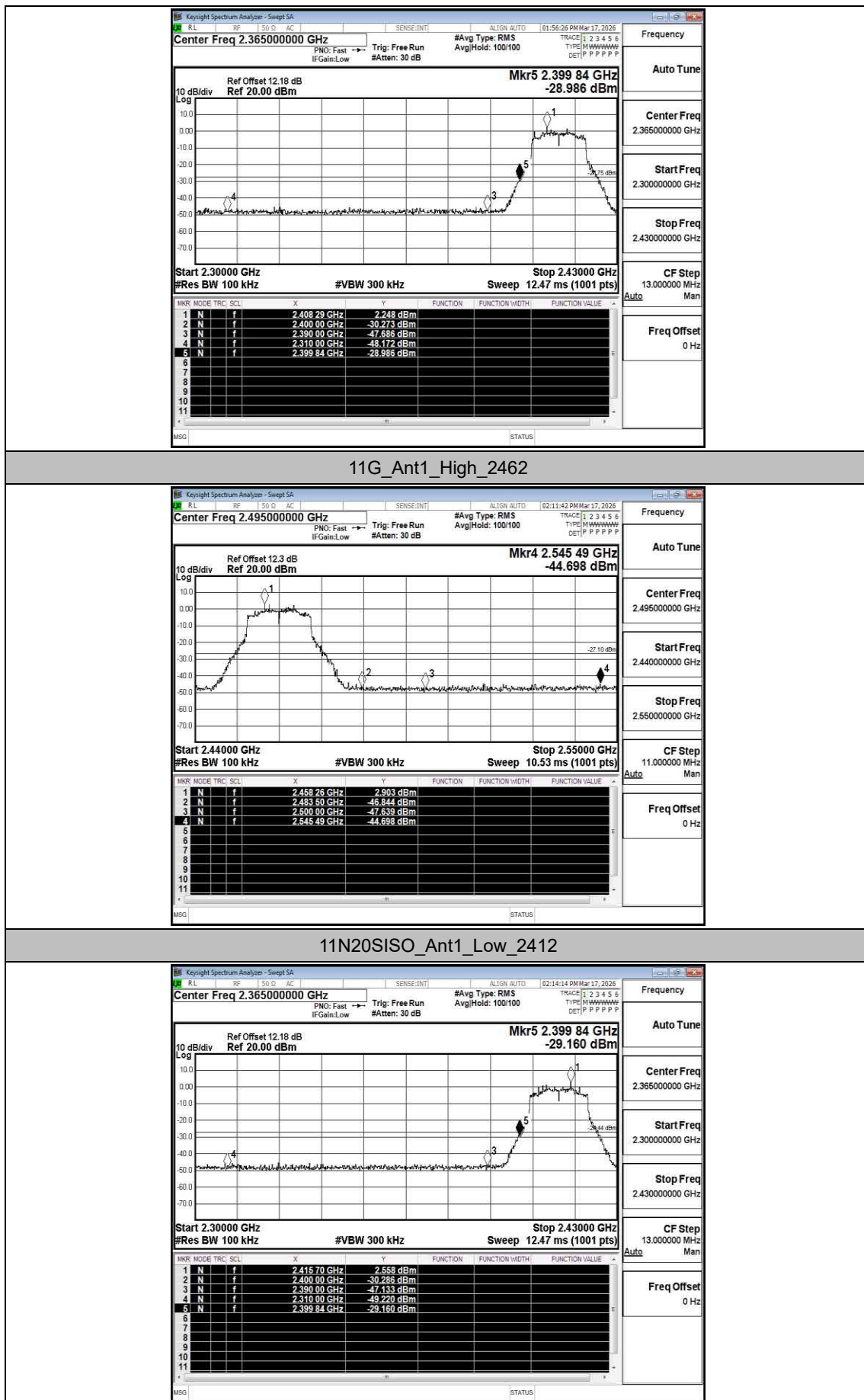
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	3.50	-45.26	≤-26.5	PASS
		High	2462	4.12	-44.76	≤-25.88	PASS
11G	Ant1	Low	2412	2.25	-28.99	≤-27.75	PASS
		High	2462	2.90	-44.7	≤-27.1	PASS
11N20SISO	Ant1	Low	2412	2.56	-29.16	≤-27.44	PASS
		High	2462	2.69	-45.49	≤-27.31	PASS
11N40SISO	Ant1	Low	2422	-0.70	-32.75	≤-30.7	PASS
		High	2452	-0.44	-45.2	≤-30.44	PASS

Note: offset=System attenuation +cabel loss

Test Graphs



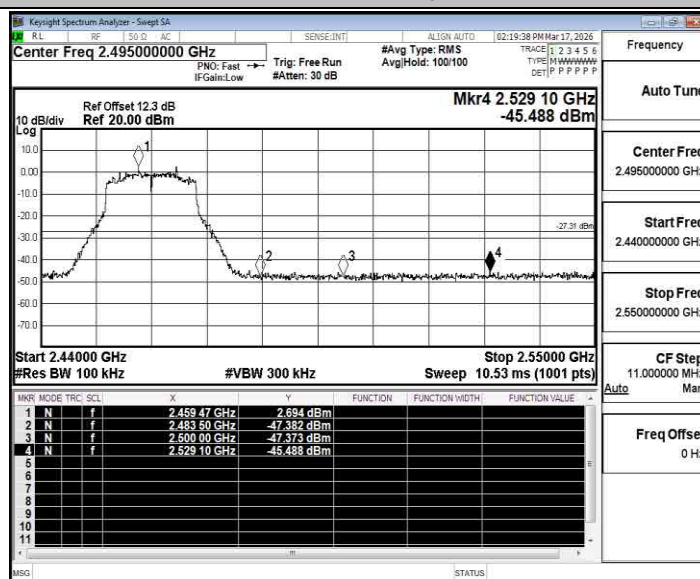


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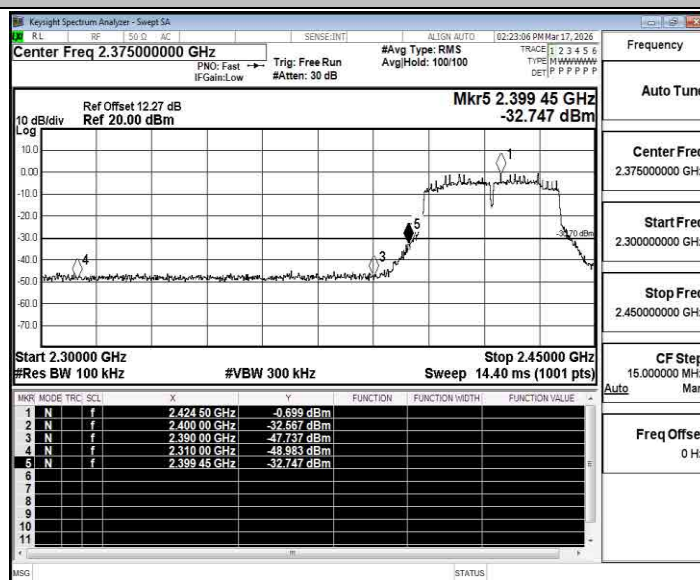
Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

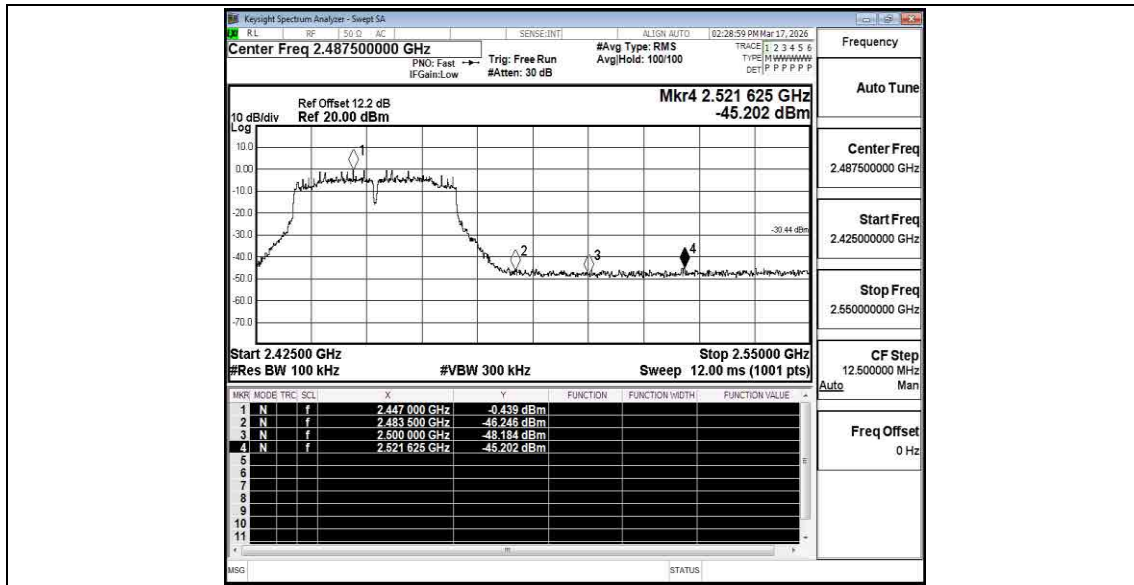
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

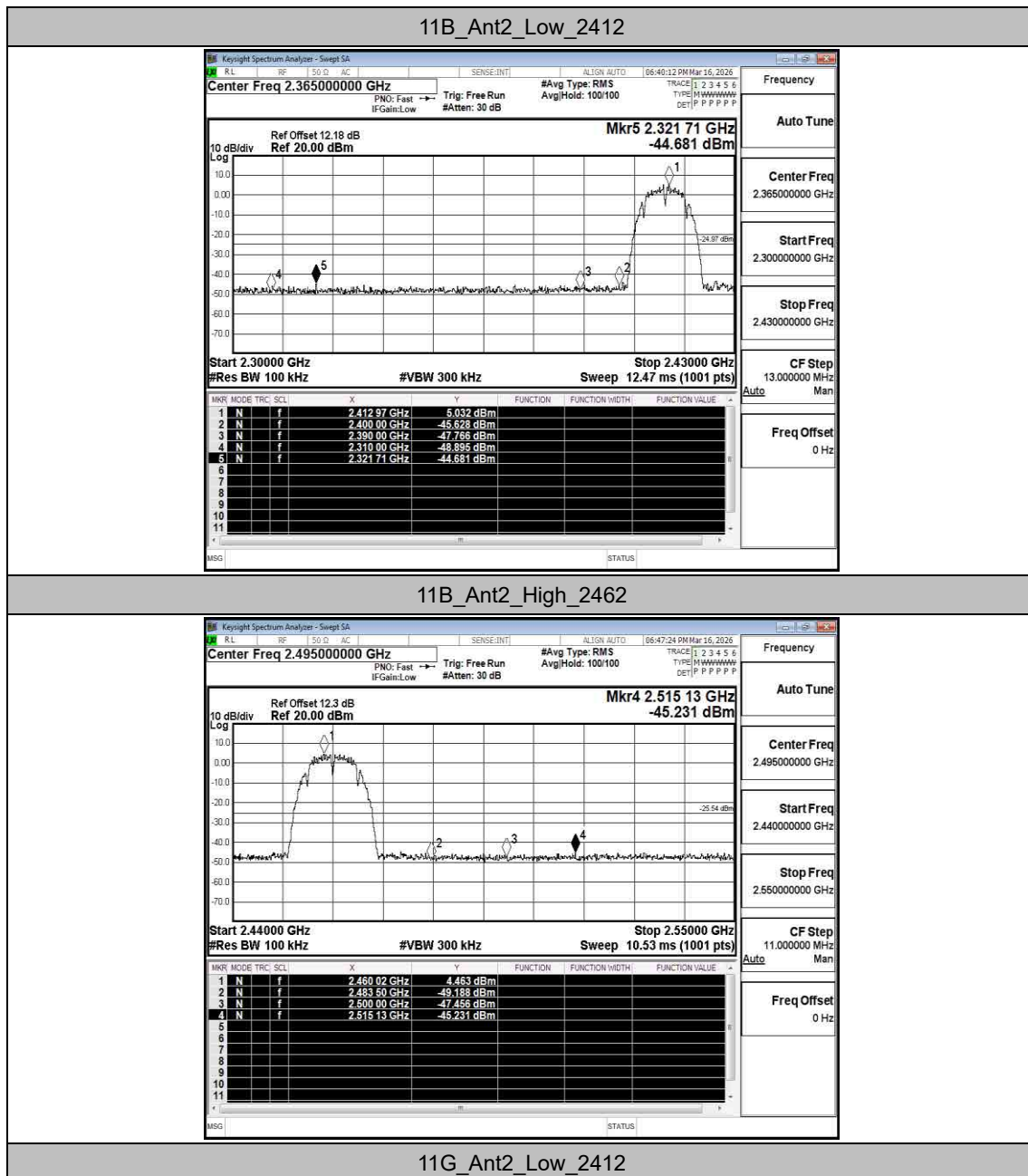


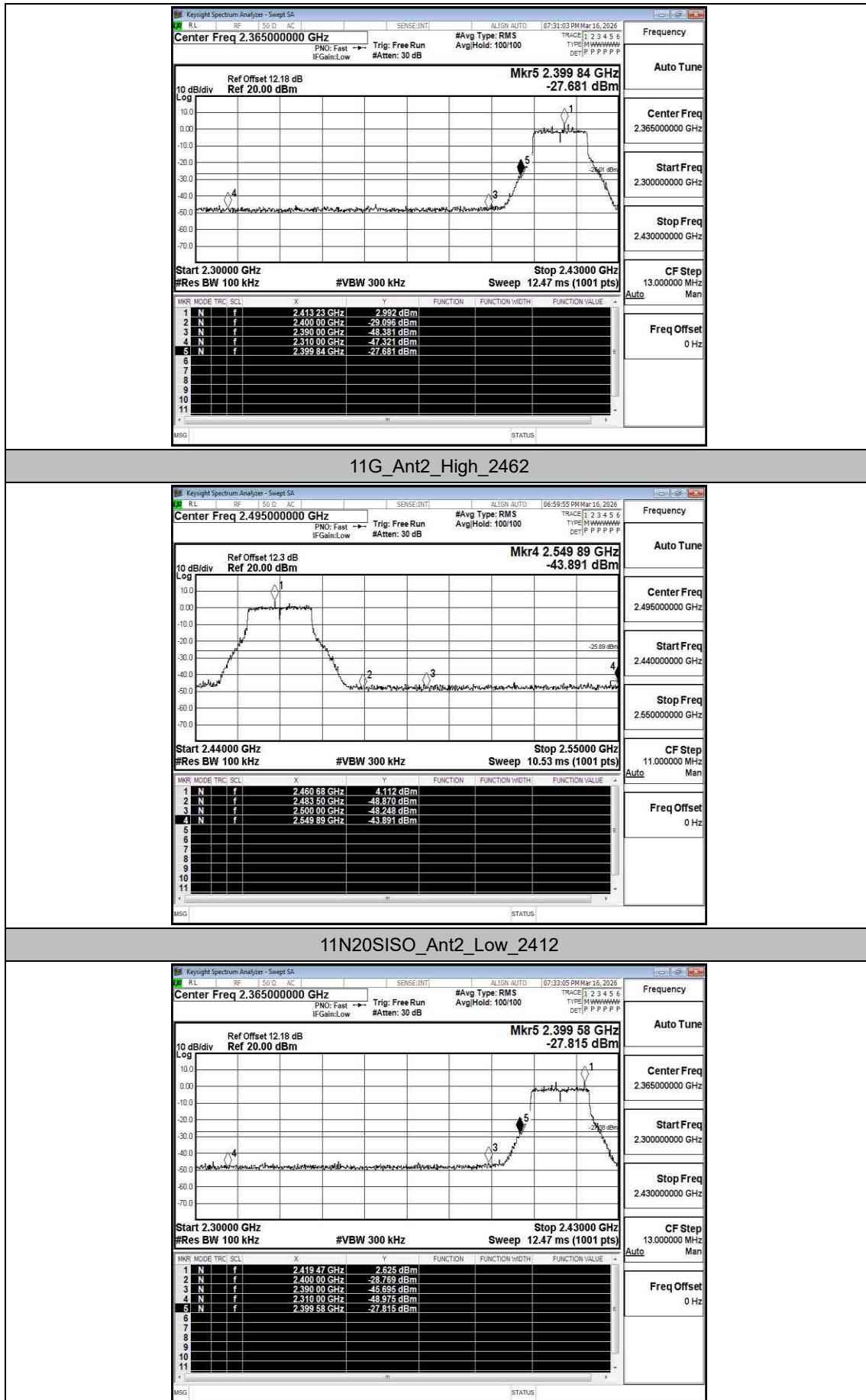
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant2	Low	2412	5.03	-44.68	≤-24.97	PASS
		High	2462	4.46	-45.23	≤-25.54	PASS
11G	Ant2	Low	2412	2.99	-27.68	≤-27.01	PASS
		High	2462	4.11	-43.89	≤-25.89	PASS
11N20SISO	Ant2	Low	2412	2.63	-27.82	≤-27.38	PASS
		High	2462	2.33	-44.54	≤-27.67	PASS
11N40SISO	Ant2	Low	2422	-14.80	-45.53	≤-44.8	PASS
		High	2452	0.69	-44.93	≤-29.31	PASS

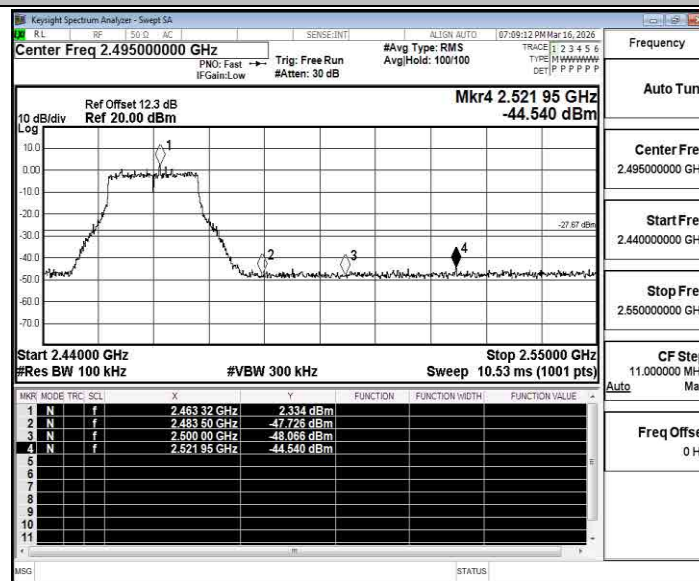
Note: offset=System attenuation +cabal loss

Test Graphs

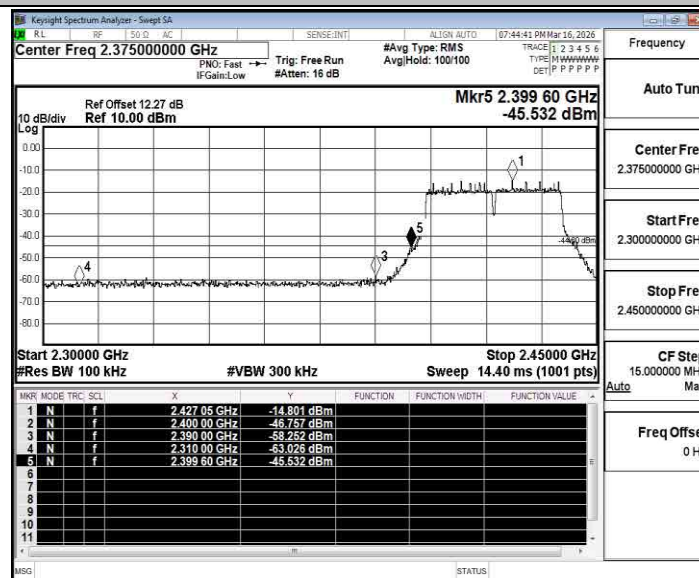




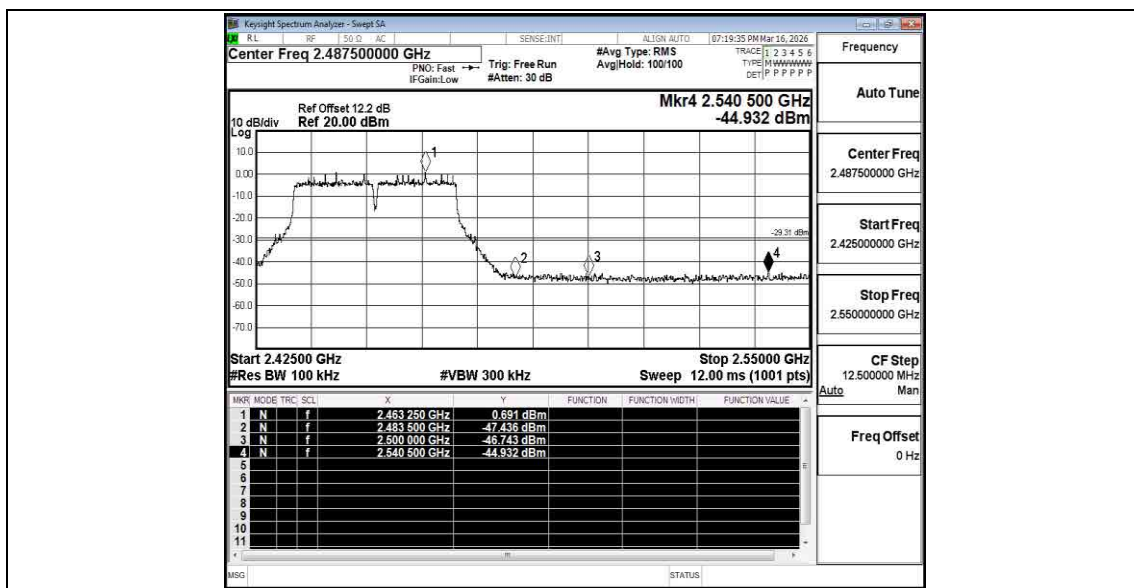
11N20SISO_Ant2_High_2462



11N40SISO_Ant2_Low_2422



11N40SISO_Ant2_High_2452



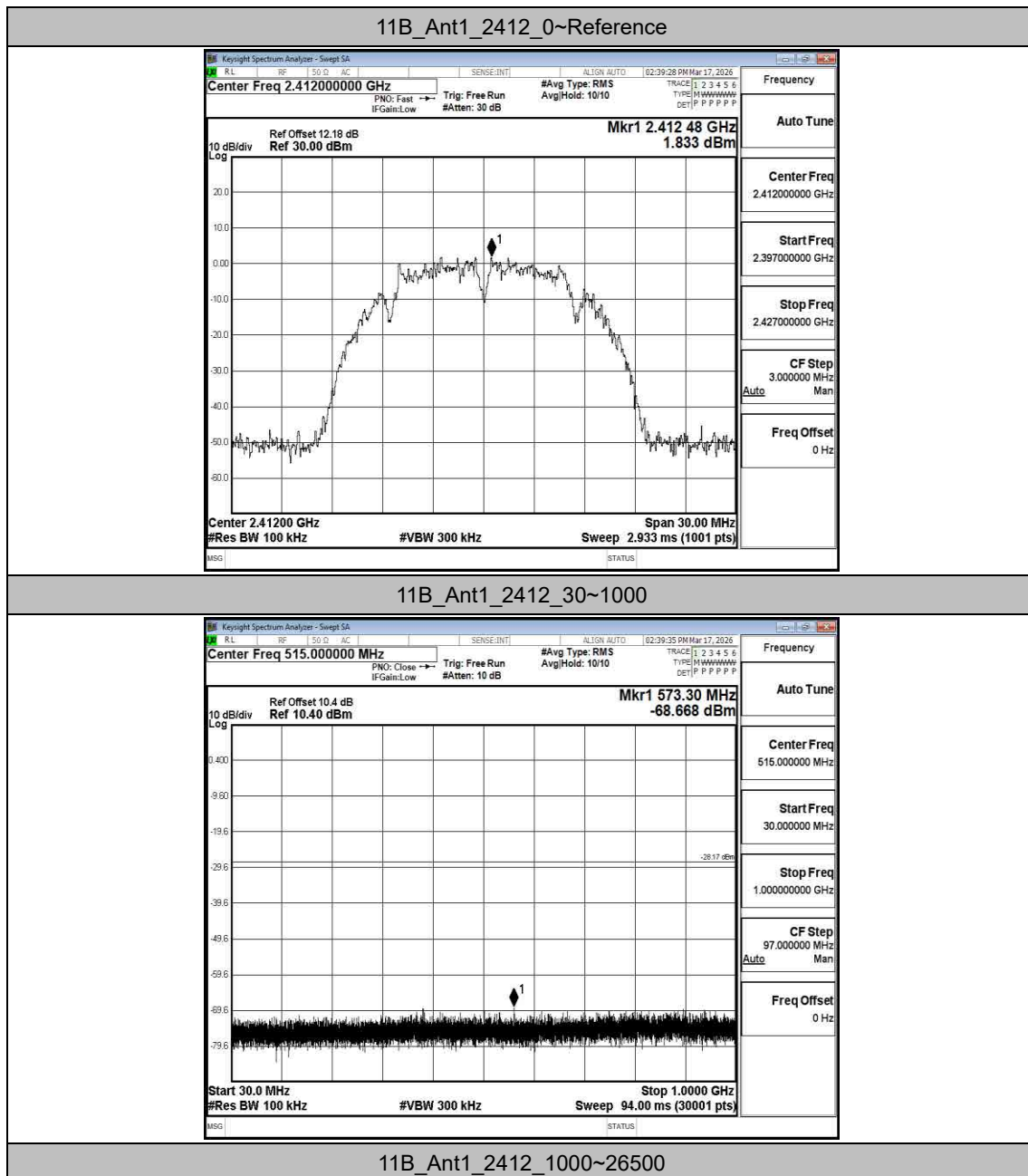
C.5 Conducted Spurious Emission

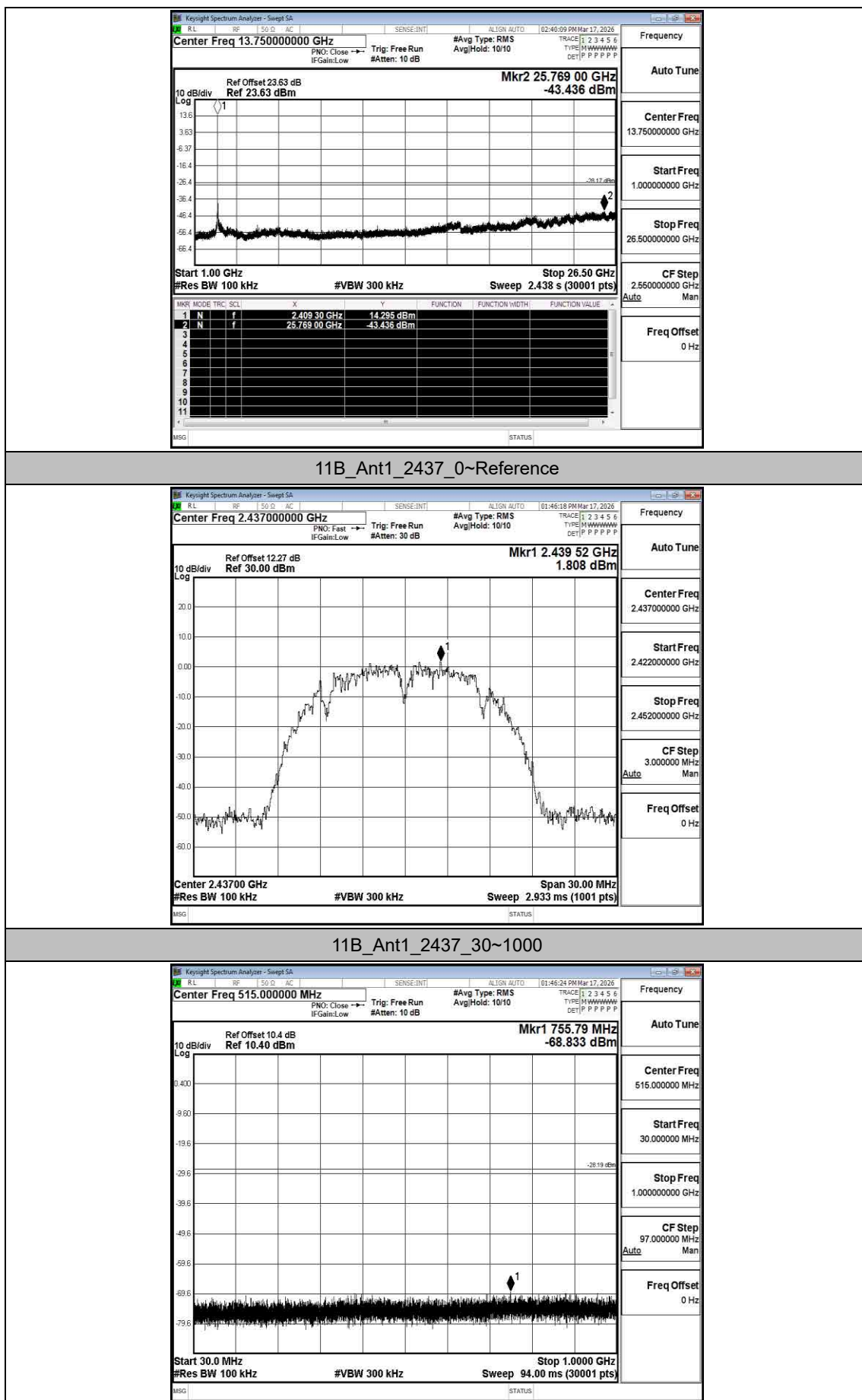
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.83	1.83	---	PASS
			30~1000	1.83	-68.67	≤-28.17	PASS
			1000~26500	1.83	-43.44	≤-28.17	PASS
		2437	Reference	1.81	1.81	---	PASS
			30~1000	1.81	-68.83	≤-28.19	PASS
			1000~26500	1.81	-43.49	≤-28.19	PASS
		2462	Reference	3.95	3.95	---	PASS
			30~1000	3.95	-68.28	≤-26.05	PASS
			1000~26500	3.95	-43.08	≤-26.05	PASS
11G	Ant1	2412	Reference	0.39	0.39	---	PASS
			30~1000	0.39	-68.88	≤-29.61	PASS
			1000~26500	0.39	-42.55	≤-29.61	PASS
		2437	Reference	-0.91	-0.91	---	PASS
			30~1000	-0.91	-68.88	≤-30.91	PASS
			1000~26500	-0.91	-43.23	≤-30.91	PASS
		2462	Reference	0.80	0.80	---	PASS
			30~1000	0.80	-68.95	≤-29.2	PASS
			1000~26500	0.80	-43.2	≤-29.2	PASS
11N20SISO	Ant1	2412	Reference	2.49	2.49	---	PASS
			30~1000	2.49	-68.67	≤-27.51	PASS
			1000~26500	2.49	-43.55	≤-27.51	PASS
		2437	Reference	0.00	0.00	---	PASS
			30~1000	0.00	-68.36	≤-30	PASS
			1000~26500	0.00	-42.99	≤-30	PASS
		2462	Reference	2.84	2.84	---	PASS
			30~1000	2.84	-69.15	≤-27.16	PASS
			1000~26500	2.84	-42.76	≤-27.16	PASS
11N40SISO	Ant1	2422	Reference	-0.71	-0.71	---	PASS
			30~1000	-0.71	-69.61	≤-30.71	PASS
			1000~26500	-0.71	-42.81	≤-30.71	PASS
		2437	Reference	-3.28	-3.28	---	PASS
			30~1000	-3.28	-68.73	≤-33.28	PASS
			1000~26500	-3.28	-42.98	≤-33.28	PASS
		2452	Reference	-3.77	-3.77	---	PASS
			30~1000	-3.77	-67.85	≤-33.77	PASS
			1000~26500	-3.77	-43.02	≤-33.77	PASS

Note: offset=System attenuation +cabal loss

Test Graphs



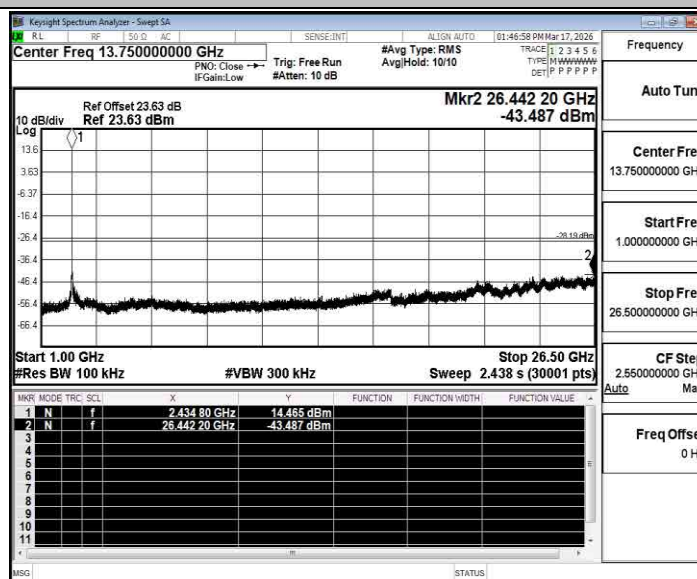


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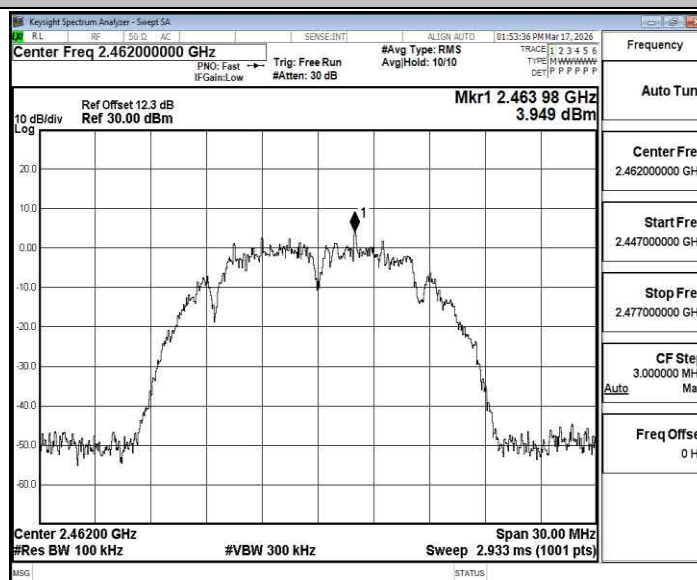
Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

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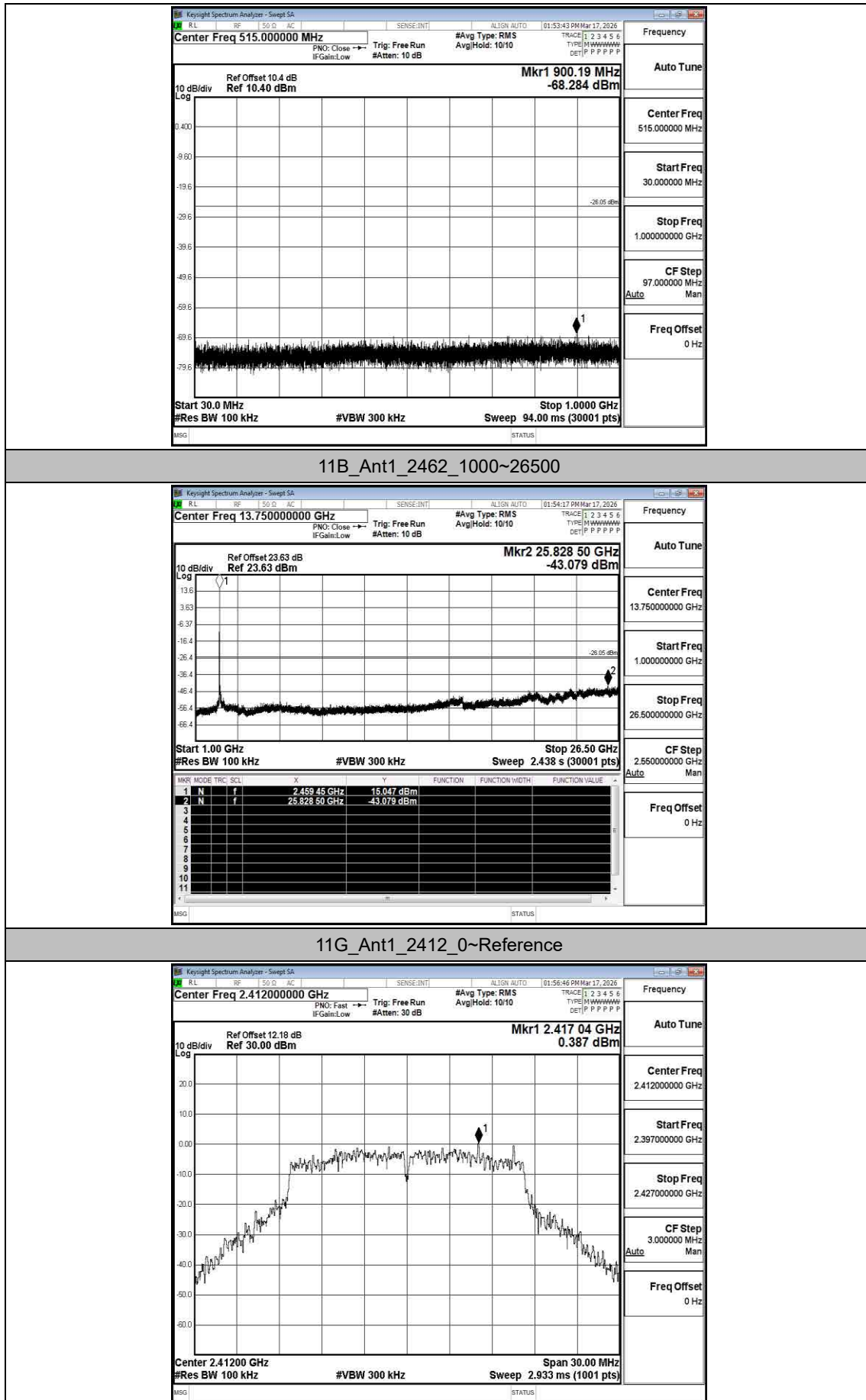
11B_Ant1_2437_1000~26500



11B_Ant1_2462_0~Reference



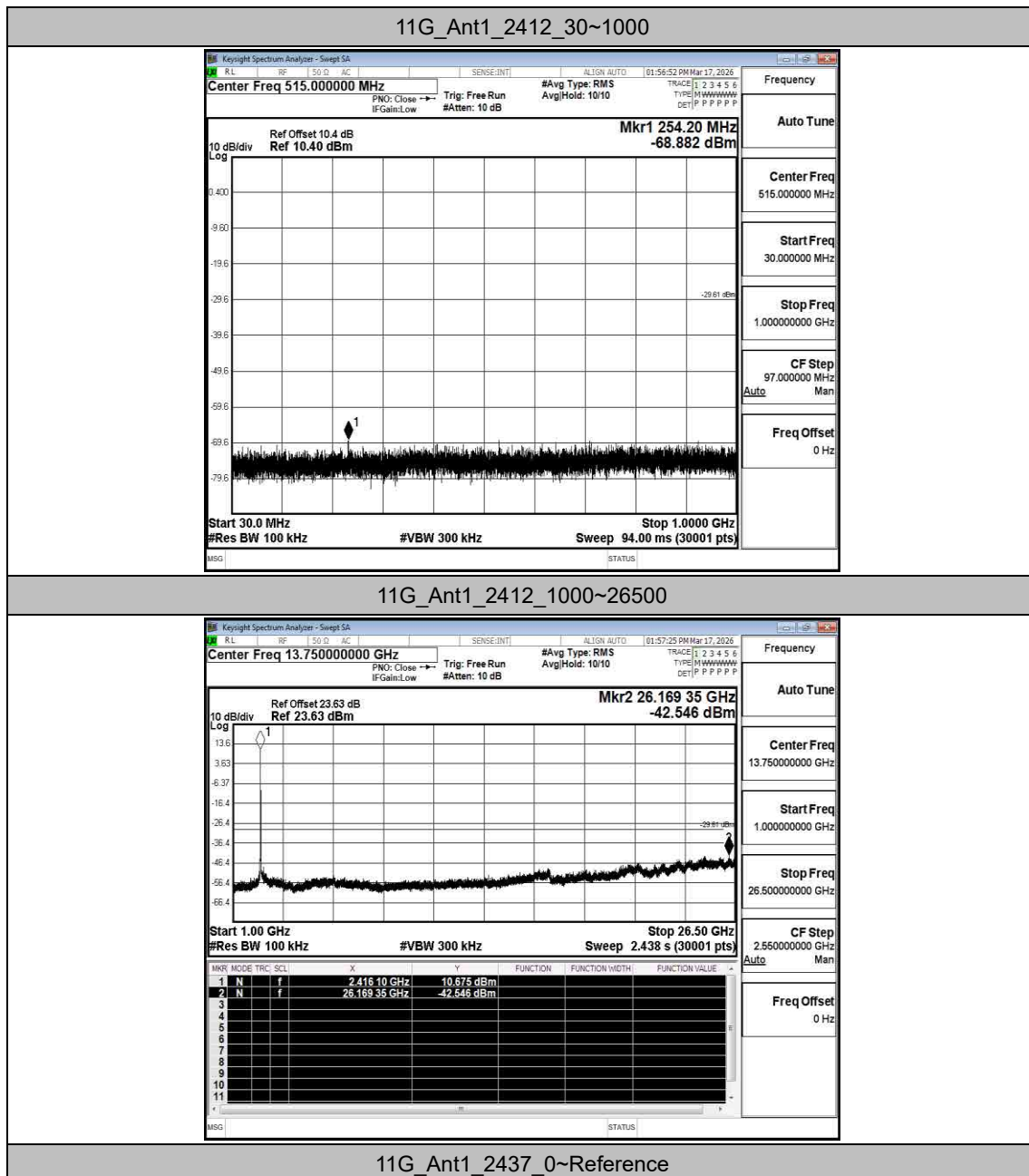
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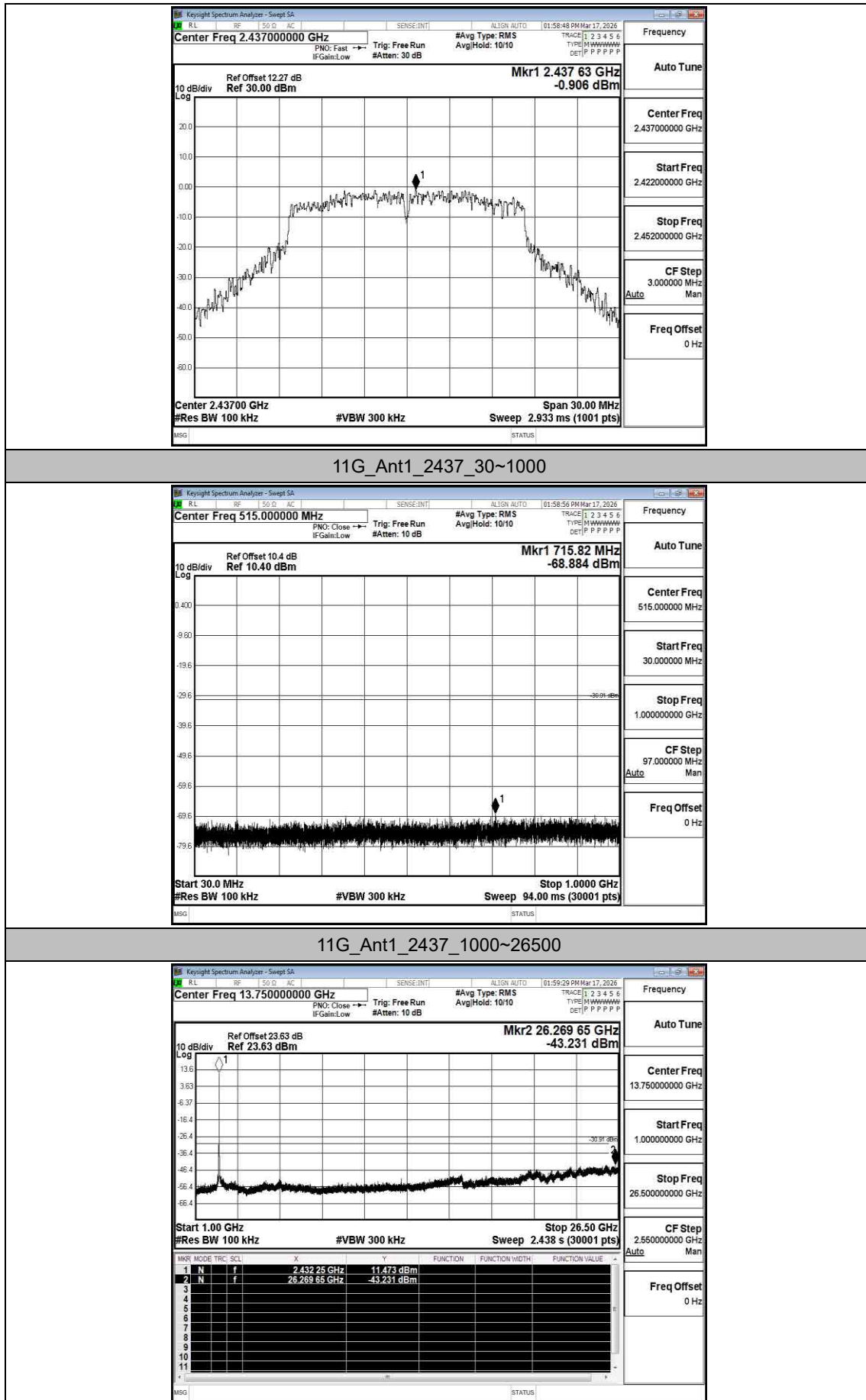


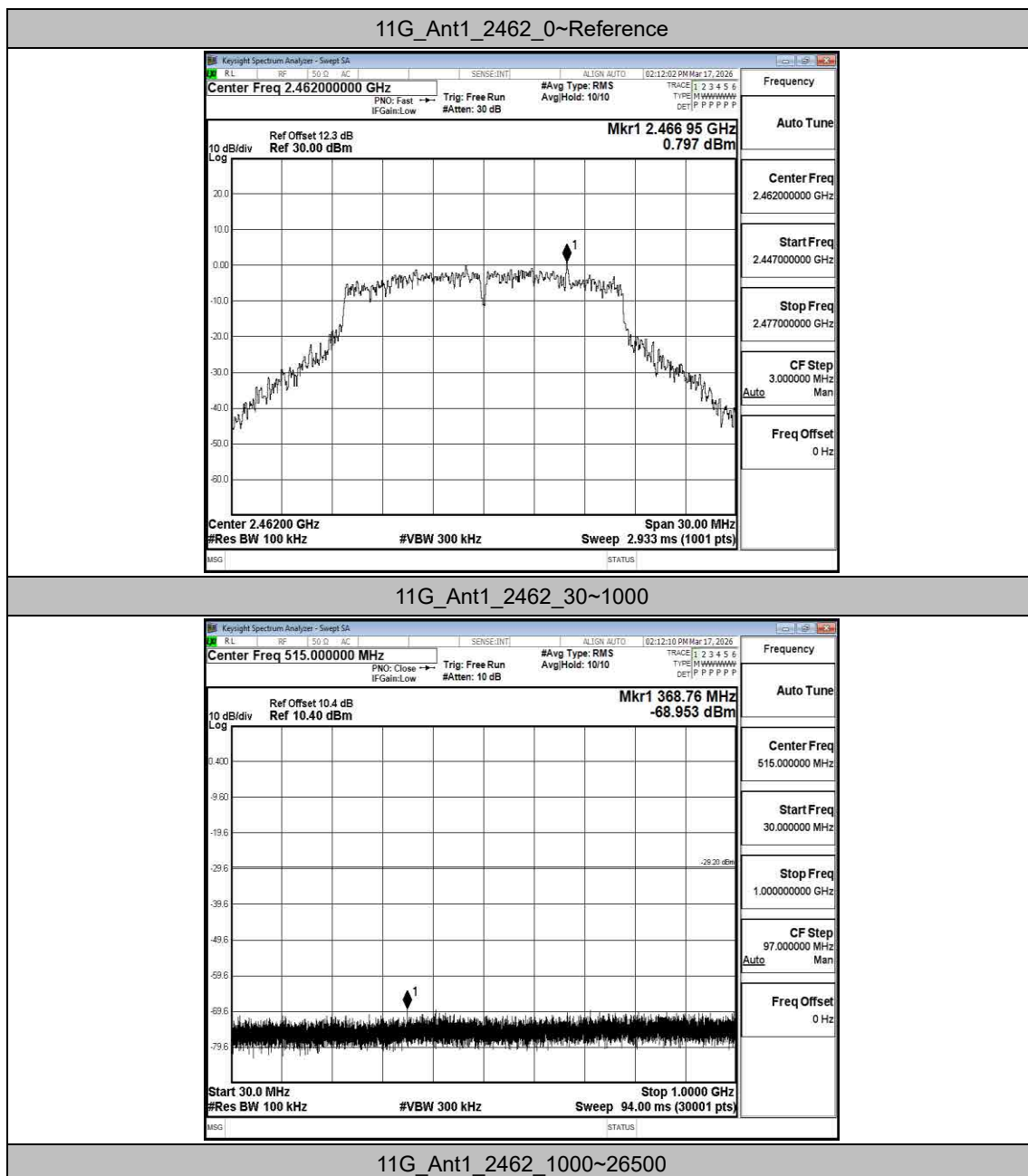
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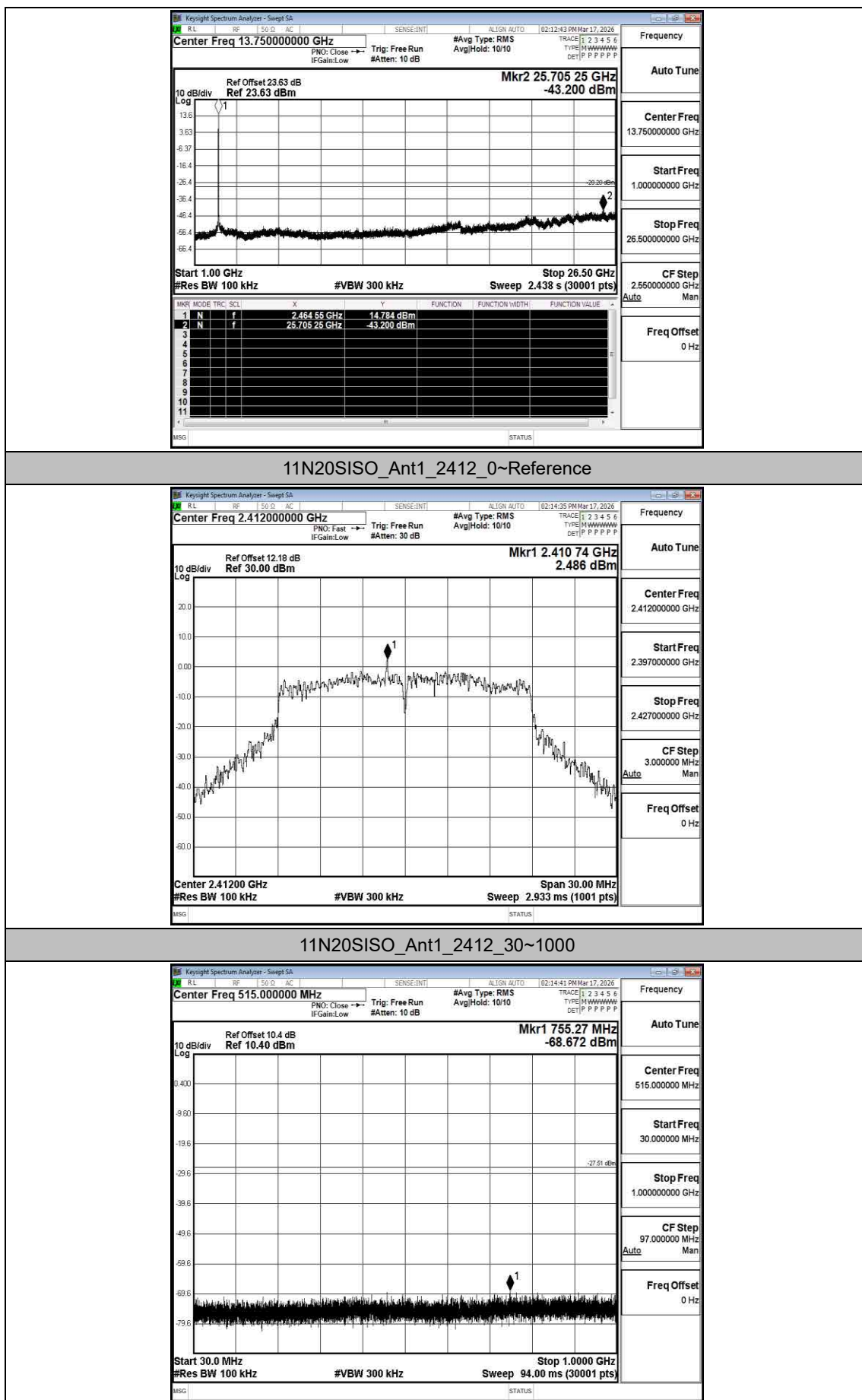
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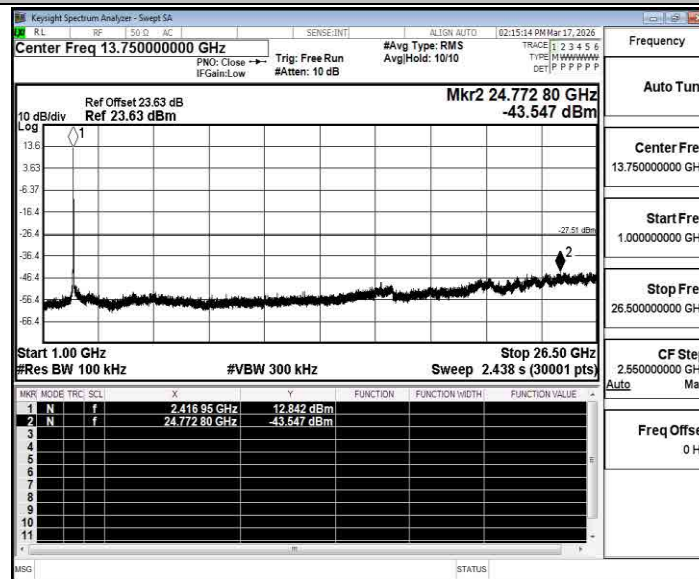


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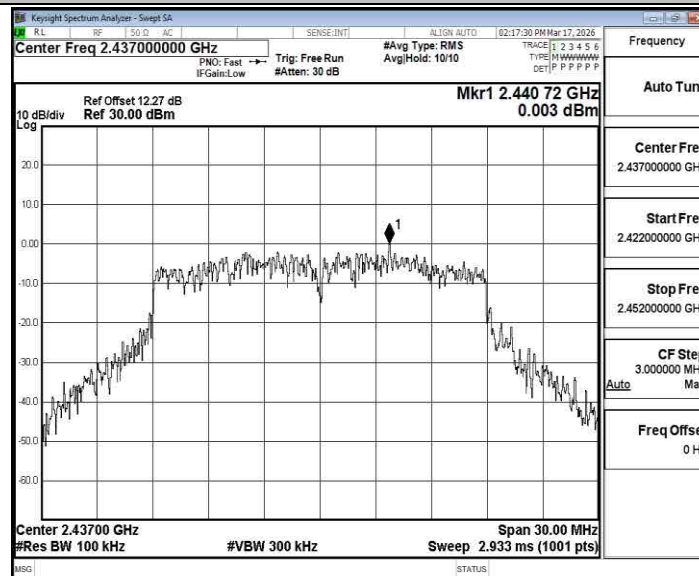
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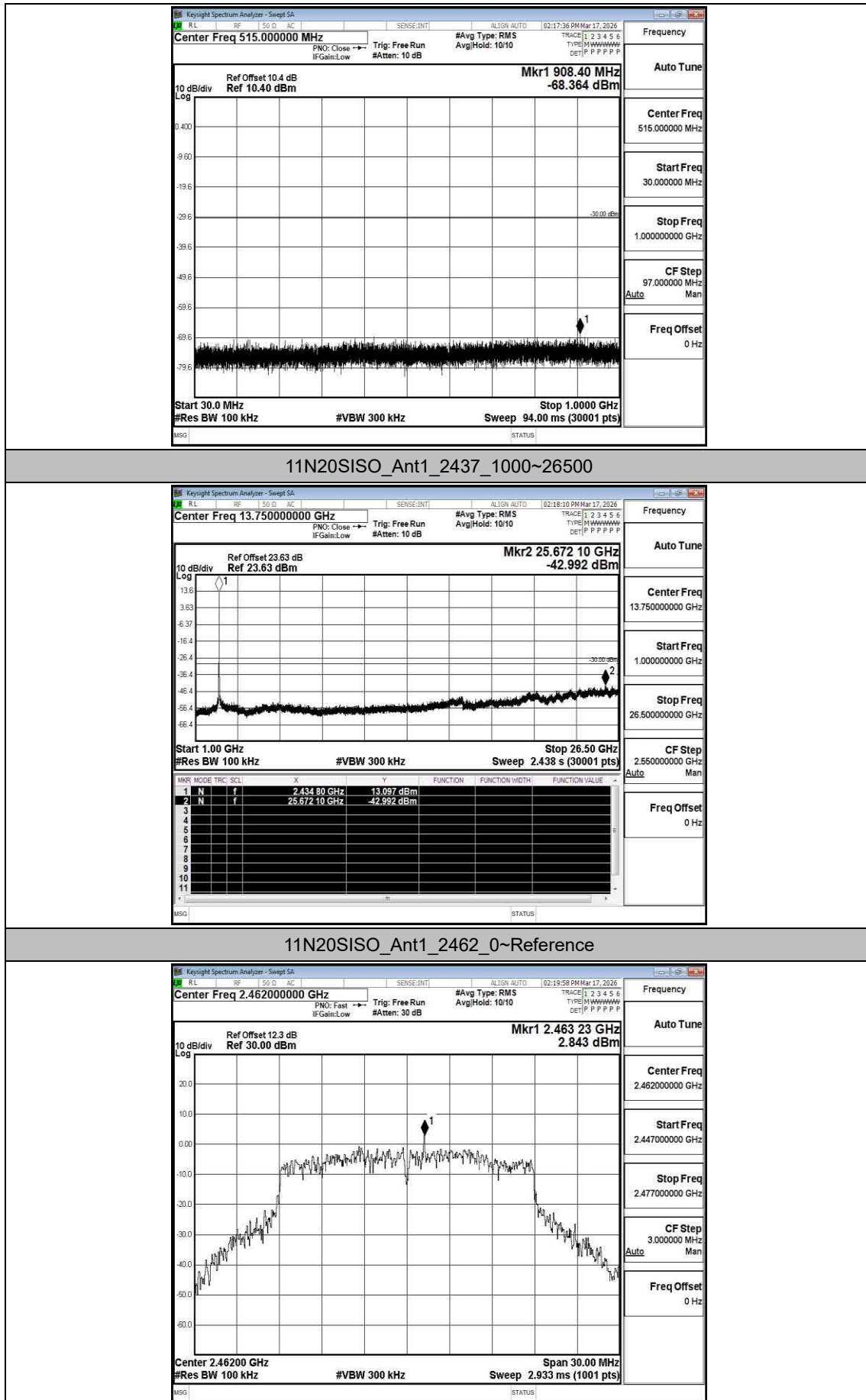
11N20SISO_Ant1_2412_1000~26500



11N20SISO_Ant1_2437_0~Reference



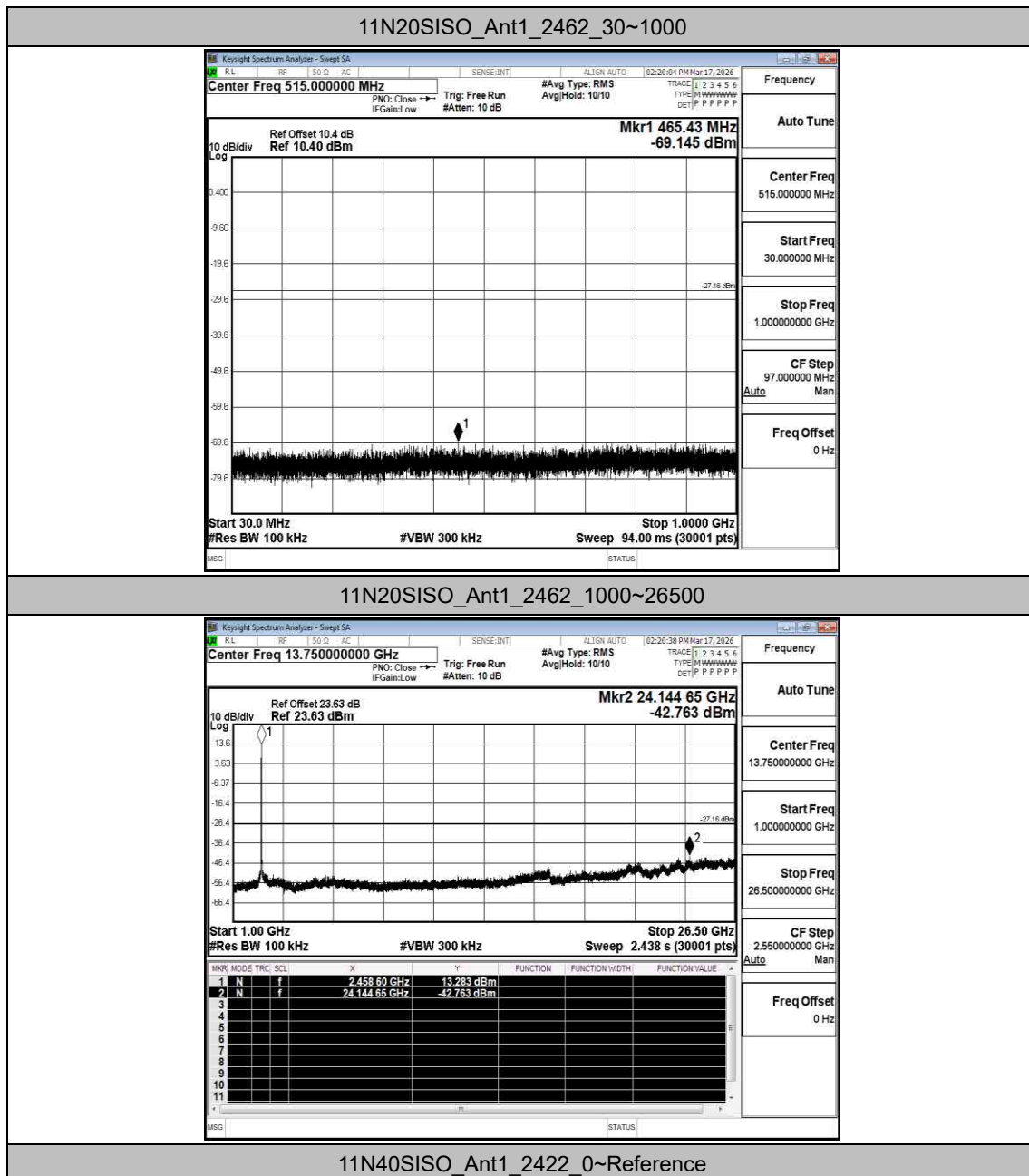
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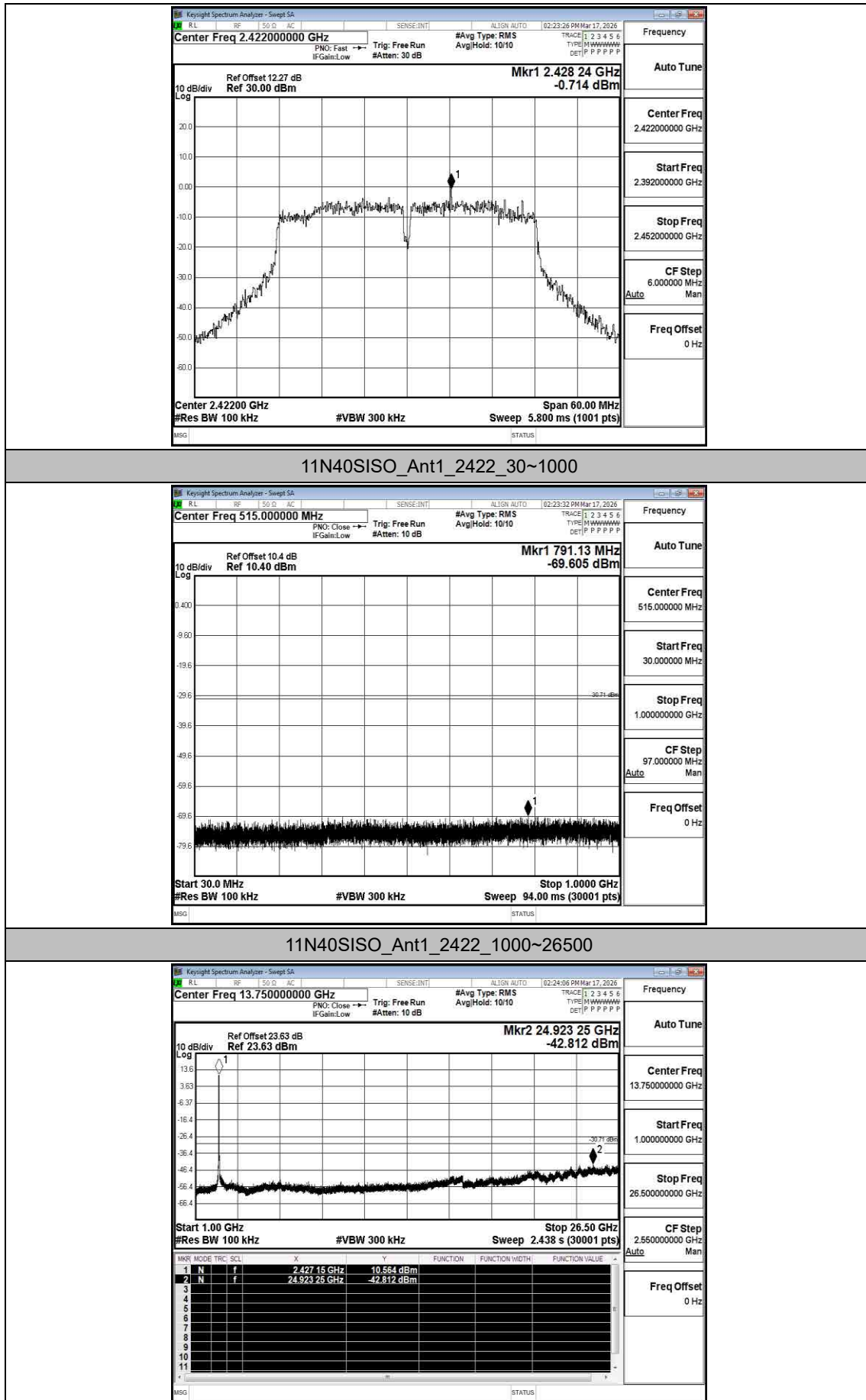


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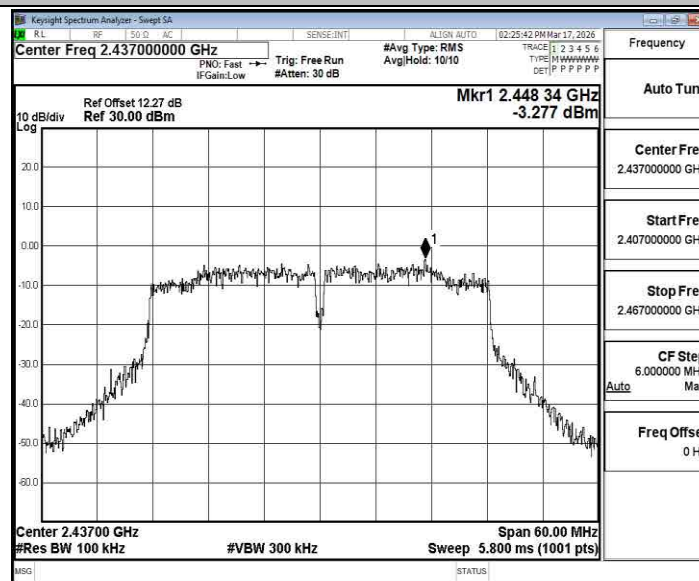


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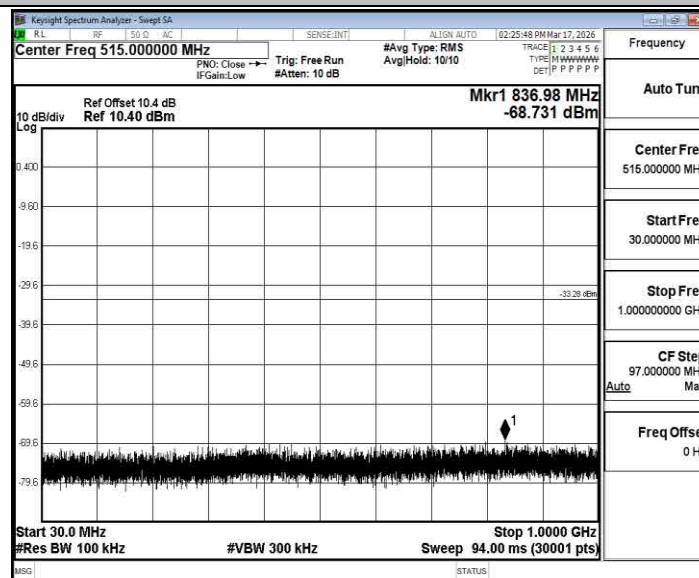
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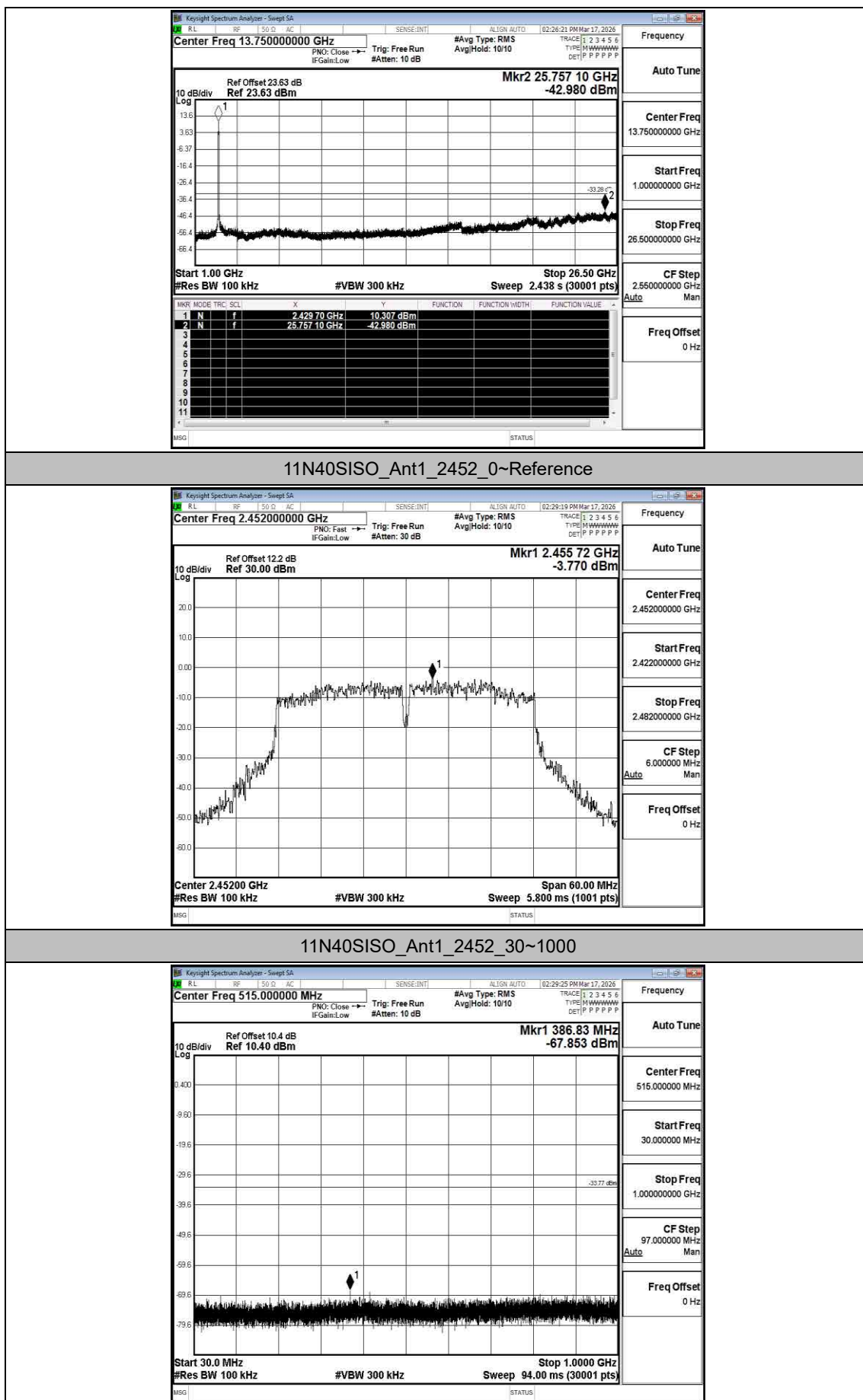
11N40SISO_Ant1_2437_0~Reference



11N40SISO_Ant1_2437_30~1000



11N40SISO_Ant1_2437_1000~26500



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