

Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Aroma Diffuser

Test Model: ECOSCENT V.2 ULTRA

Environmental Conditions

Temperature:	24.6°C
Relative Humidity:	54.5%
ATM Pressure:	100.0 kPa
Test Engineer:	zhao xing hai
Supervised by:	Fengliu Tang

B.1 DTS Bandwidth

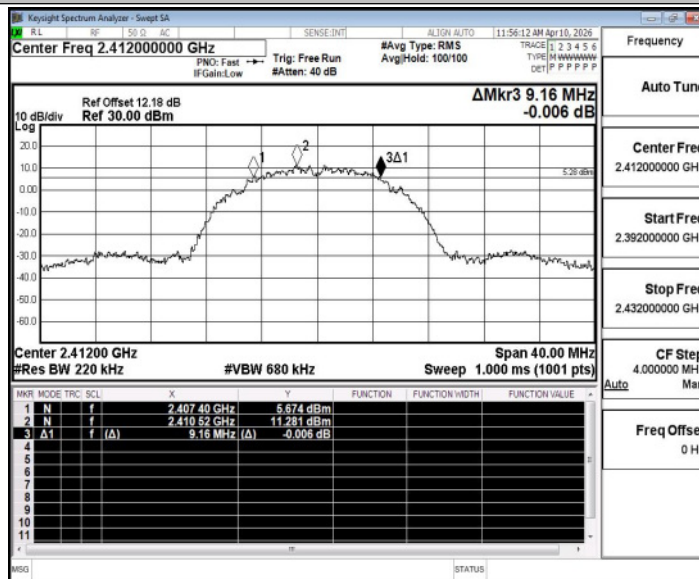
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.160	2407.400	2416.560	0.5	PASS
		2437	9.040	2432.400	2441.440	0.5	PASS
		2462	10.040	2456.960	2467.000	0.5	PASS
11G	Ant1	2412	15.920	2404.080	2420.000	0.5	PASS
		2437	16.000	2428.920	2444.920	0.5	PASS
		2462	15.880	2454.040	2469.920	0.5	PASS
11N20SISO	Ant1	2412	17.240	2403.360	2420.600	0.5	PASS
		2437	17.240	2428.440	2445.680	0.5	PASS
		2462	16.720	2453.680	2470.400	0.5	PASS
11N40SISO	Ant1	2422	34.800	2404.880	2439.680	0.5	PASS
		2437	35.280	2419.640	2454.920	0.5	PASS
		2452	35.040	2434.560	2469.600	0.5	PASS
11AX20SISO	Ant1	2412	18.720	2402.680	2421.400	0.5	PASS
		2437	18.000	2428.080	2446.080	0.5	PASS
		2462	18.600	2452.680	2471.280	0.5	PASS

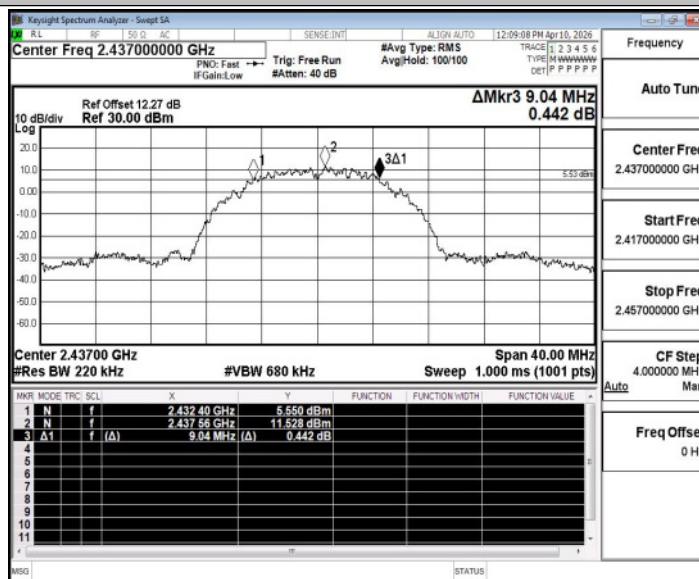
Note :offset=System attenuation +cabal loss

Test Graphs

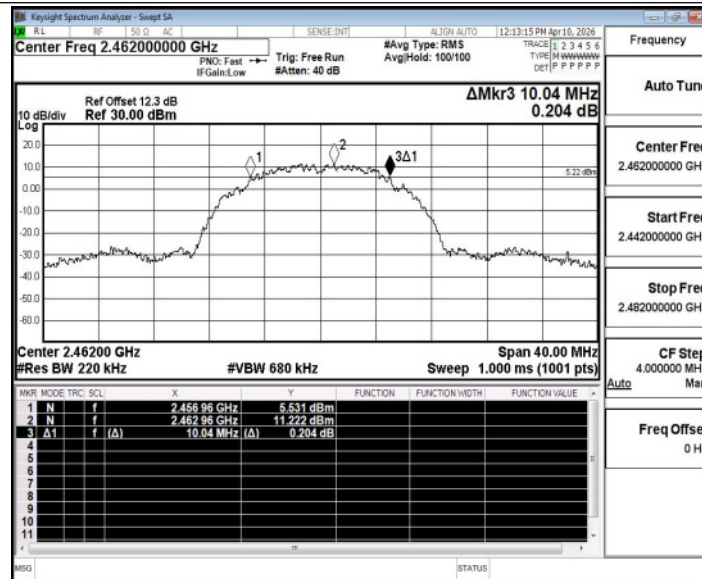
11B_Ant1_2412



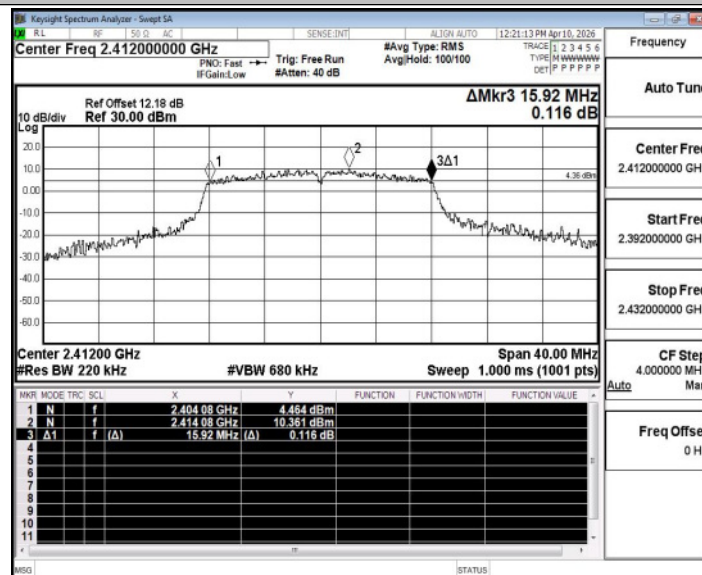
11B_Ant1_2437



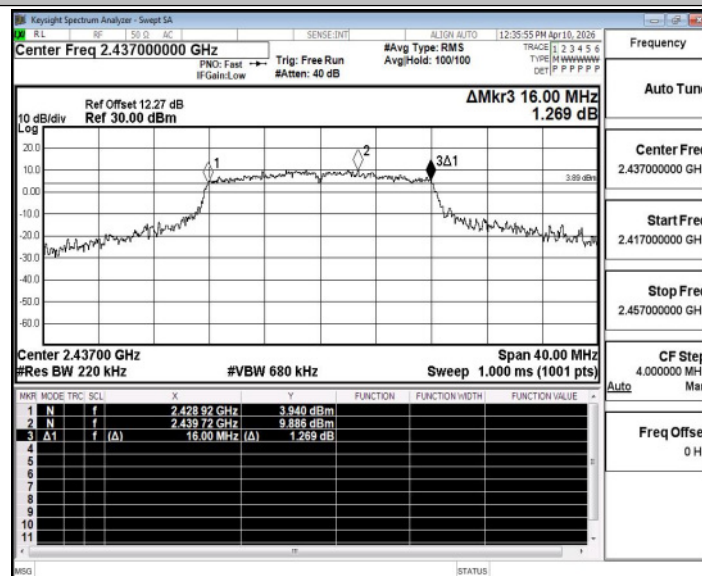
11B_Ant1_2462



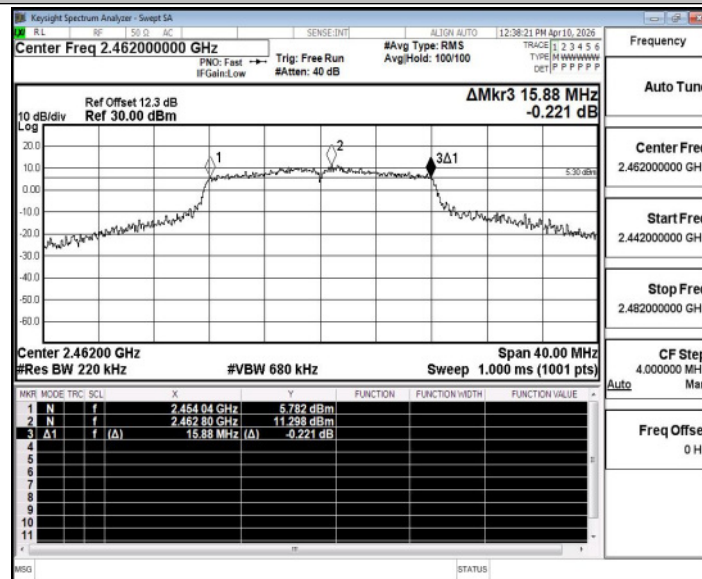
11G_Ant1_2412



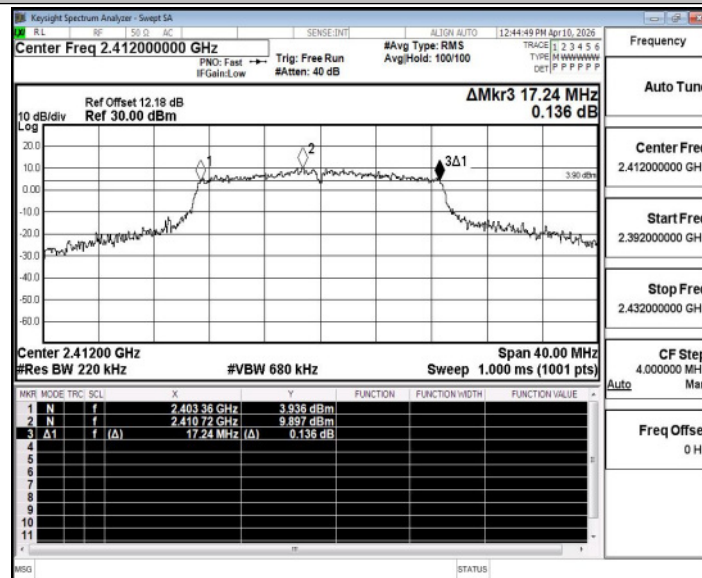
11G_Ant1_2437



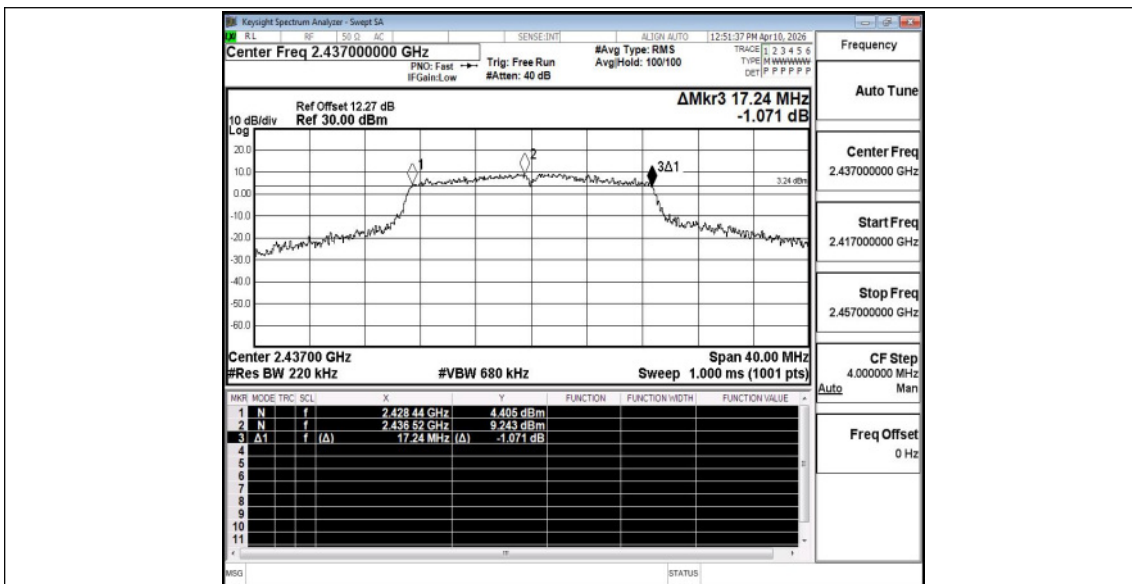
11G_Ant1_2462



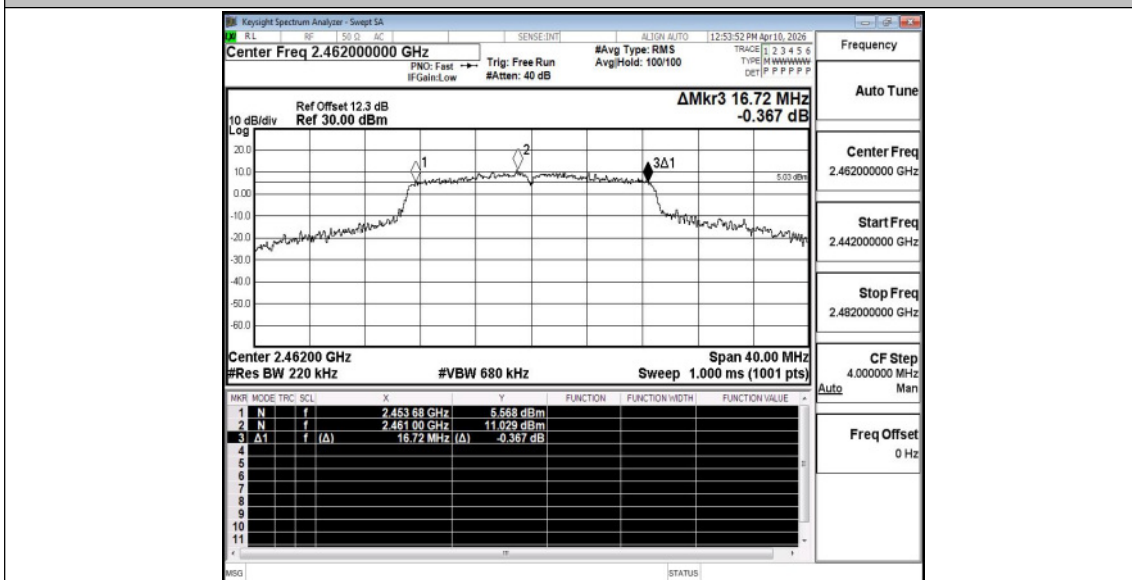
11N20SISO_Ant1_2412



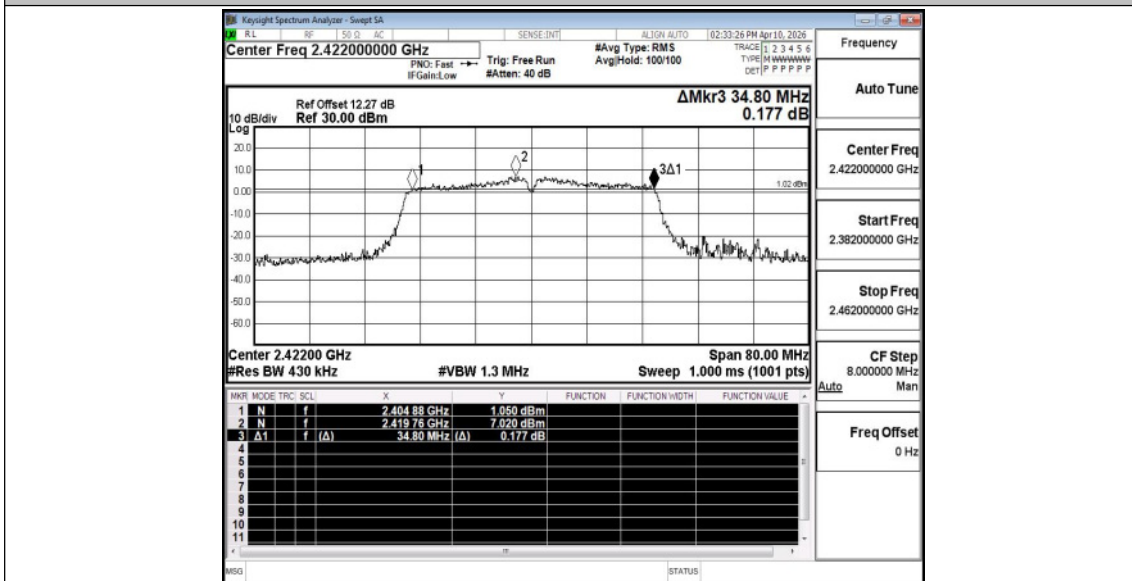
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422

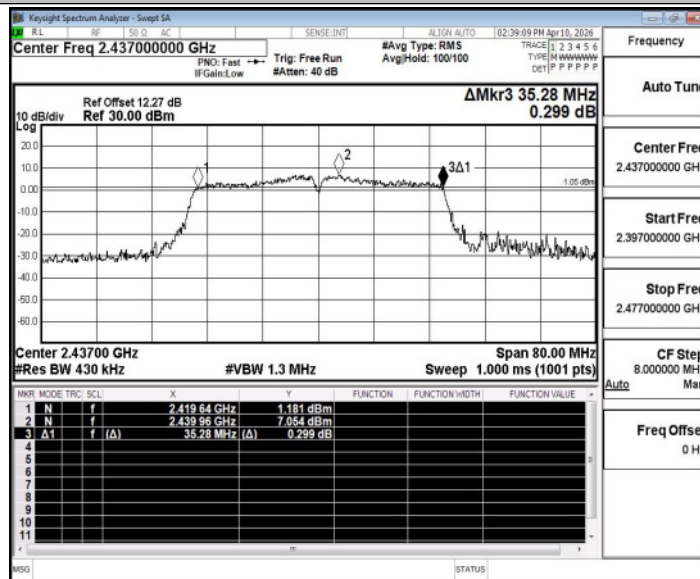


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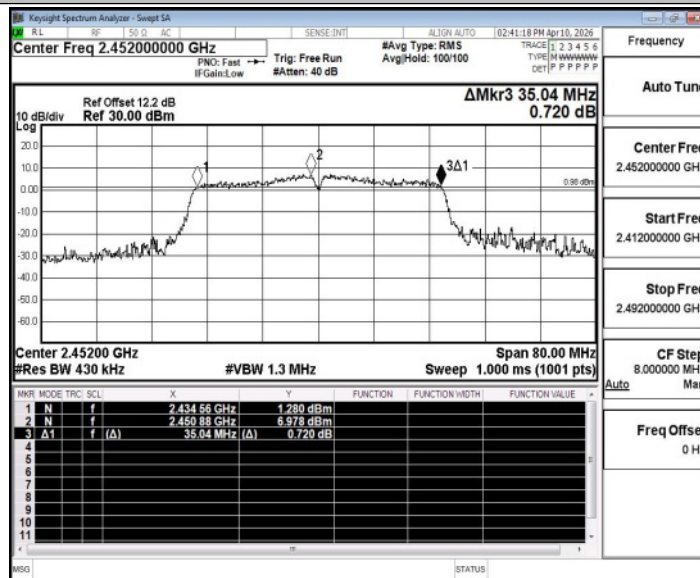
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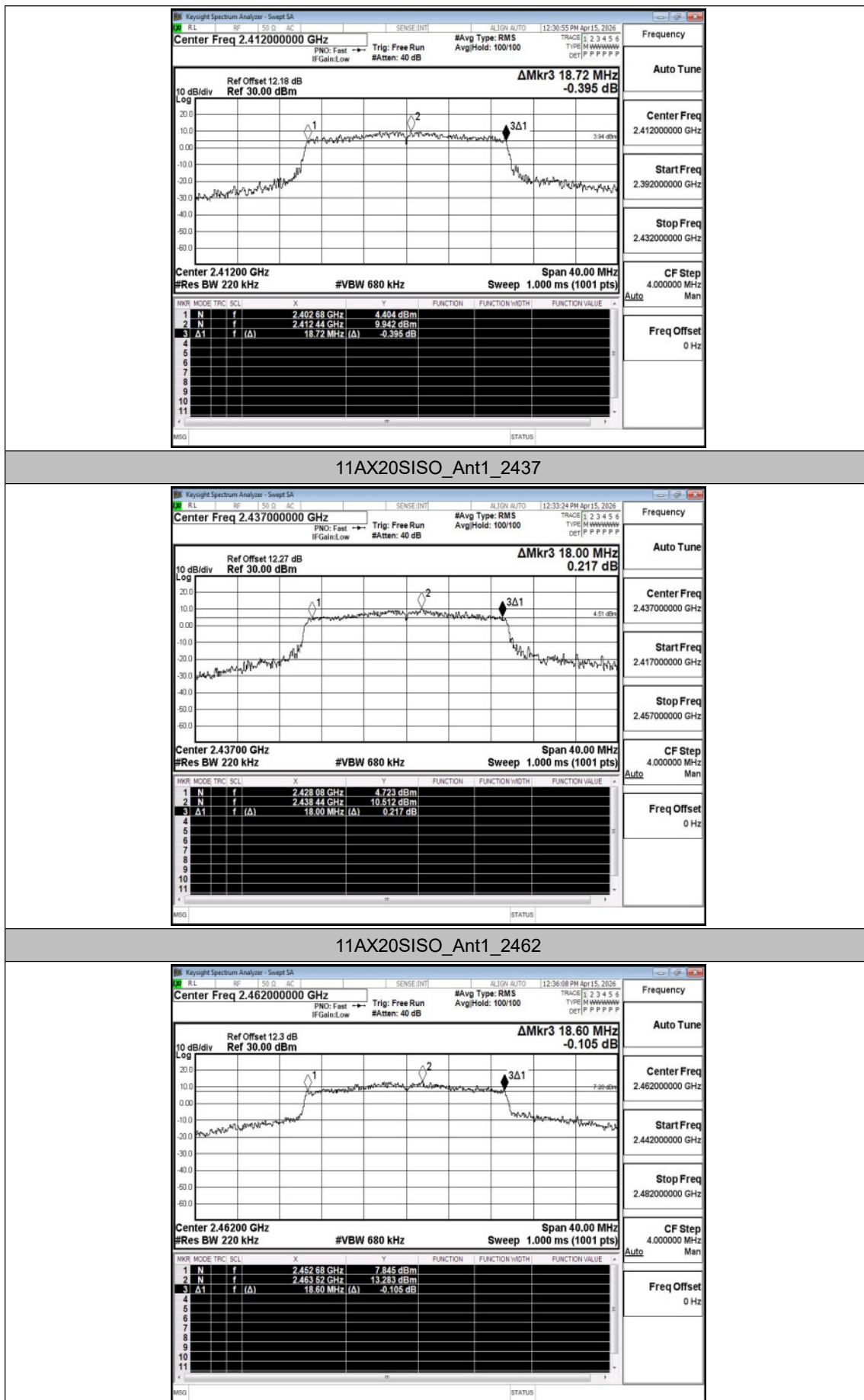
11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



11AX20SISO_Ant1_2412



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B.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	17.83	0.00	17.83	≤30.00	PASS
		2437	16.22	0.00	16.22	≤30.00	PASS
		2462	16.55	0.00	16.55	≤30.00	PASS
11G	Ant1	2412	18.83	0.02	18.85	≤30.00	PASS
		2437	19.06	0.02	19.08	≤30.00	PASS
		2462	19.40	0.02	19.42	≤30.00	PASS
11N20SISO	Ant1	2412	19.06	0.03	19.09	≤30.00	PASS
		2437	18.62	0.02	18.64	≤30.00	PASS
		2462	19.48	0.03	19.51	≤30.00	PASS
11N40SISO	Ant1	2422	16.12	0.05	16.17	≤30.00	PASS
		2437	16.26	0.05	16.31	≤30.00	PASS
		2452	16.52	0.03	16.55	≤30.00	PASS
11AX20SISO	Ant1	2412	18.66	0.02	18.68	≤30.00	PASS
		2437	18.43	0.02	18.45	≤30.00	PASS
		2462	19.74	0.03	19.77	≤30.00	PASS

Note :offset=System attenuation +cabal loss

B.3 Maximum power spectral density

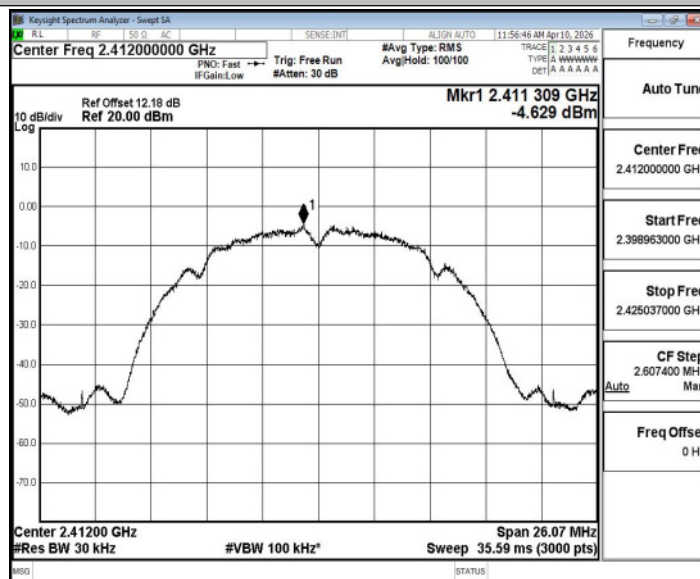
Test Result

TestMode	Antenna	Frequency [MHz]	Measured PSD [dBm/30kHz]	DC Factor [dB]	Result [dBm/30kHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-4.63	0.00	-4.63	-14.63	≤8.00	PASS
		2437	-4.73	0.00	-4.73	-14.73	≤8.00	PASS
		2462	-3.48	0.00	-3.48	-13.48	≤8.00	PASS
11G	Ant1	2412	-3.83	0.02	-3.81	-13.81	≤8.00	PASS
		2437	-3.68	0.02	-3.66	-13.66	≤8.00	PASS
		2462	-2.75	0.02	-2.73	-12.73	≤8.00	PASS
11N20SISO	Ant1	2412	-3.94	0.03	-3.91	-13.91	≤8.00	PASS
		2437	-4.07	0.02	-4.05	-14.05	≤8.00	PASS
		2462	-3.57	0.03	-3.54	-13.54	≤8.00	PASS
11N40SISO	Ant1	2422	-9.7	0.05	-9.65	-19.65	≤8.00	PASS
		2437	-9.64	0.05	-9.59	-19.59	≤8.00	PASS
		2452	-9.53	0.03	-9.50	-19.5	≤8.00	PASS
11AX20SISO	Ant1	2412	-6.33	0.02	-6.31	-16.31	≤8.00	PASS
		2437	-6.62	0.02	-6.60	-16.6	≤8.00	PASS
		2462	-3.36	0.03	-3.33	-13.33	≤8.00	PASS

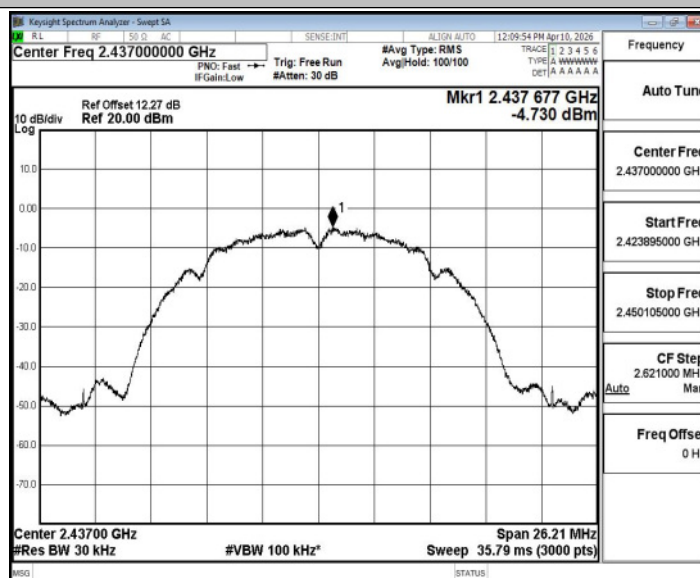
Note :offset=System attenuation +cabal loss

Test Graphs

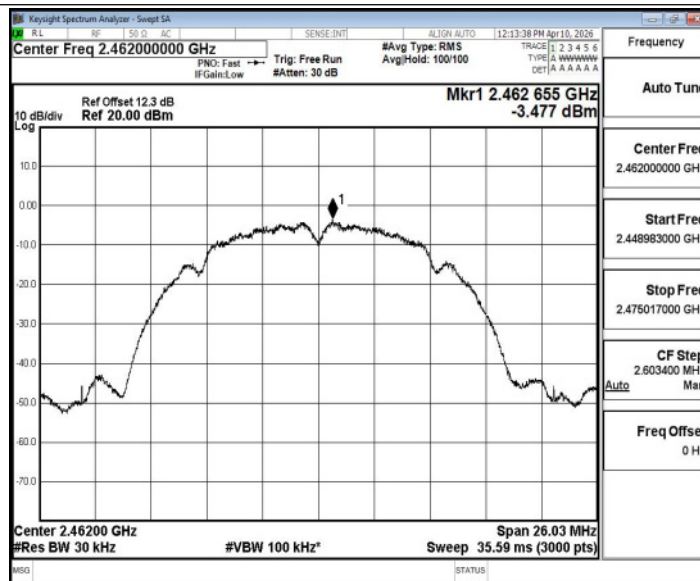
11B_Ant1_2412



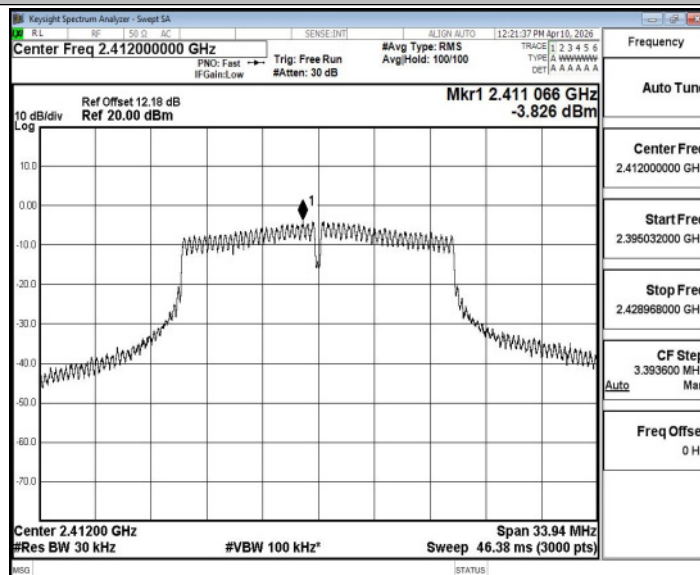
11B_Ant1_2437



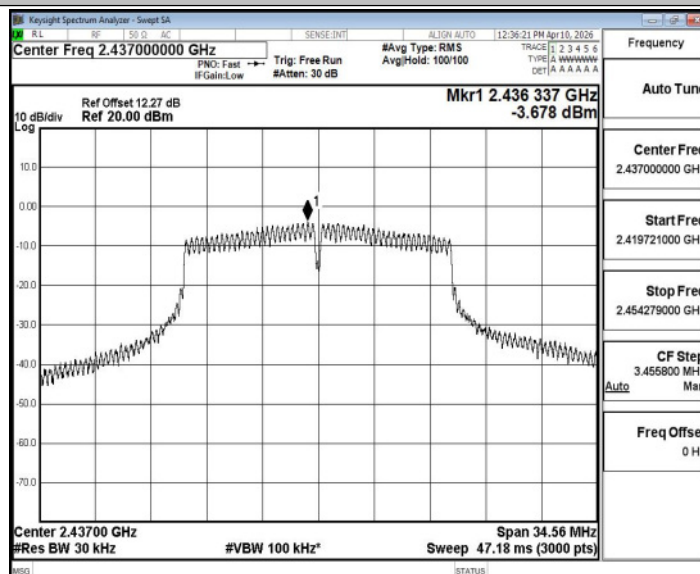
11B_Ant1_2462



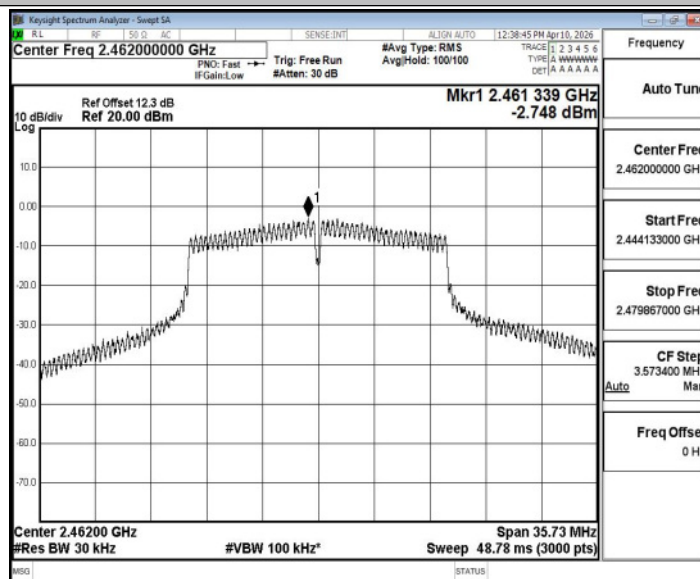
11G_Ant1_2412



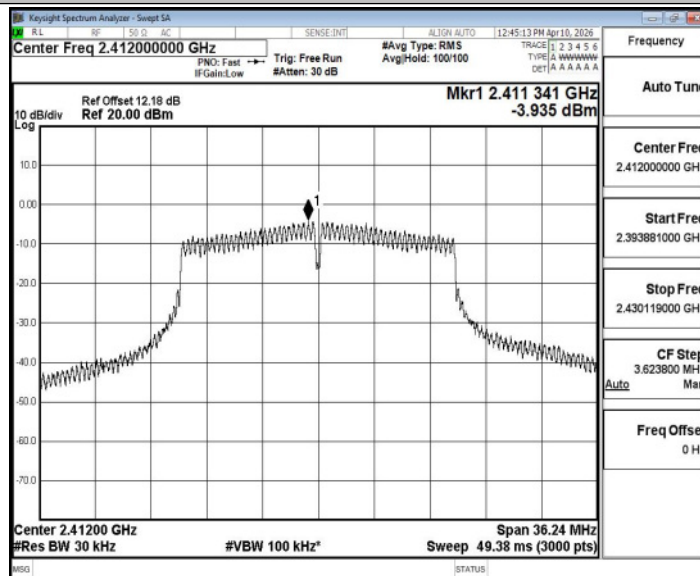
11G_Ant1_2437



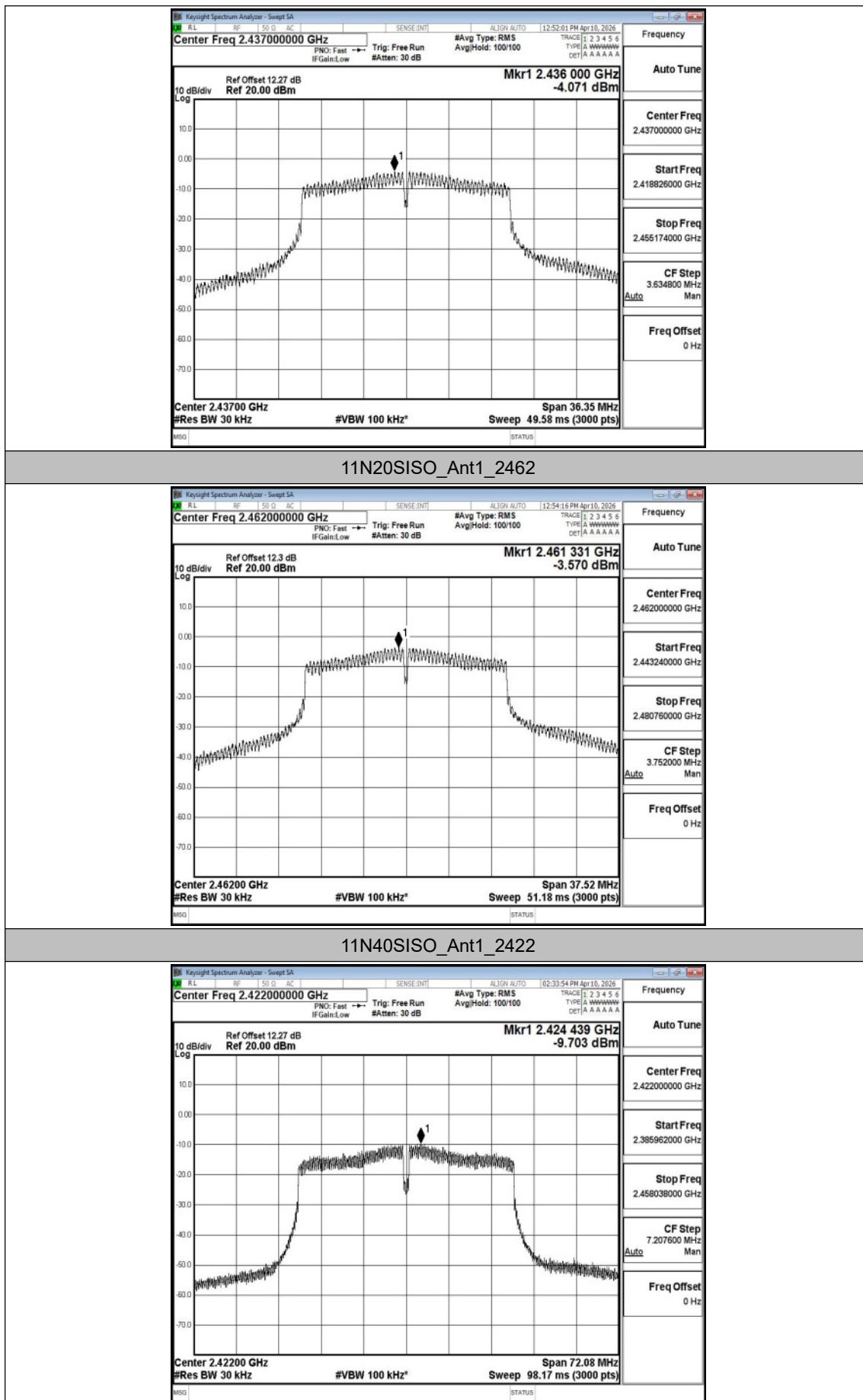
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437

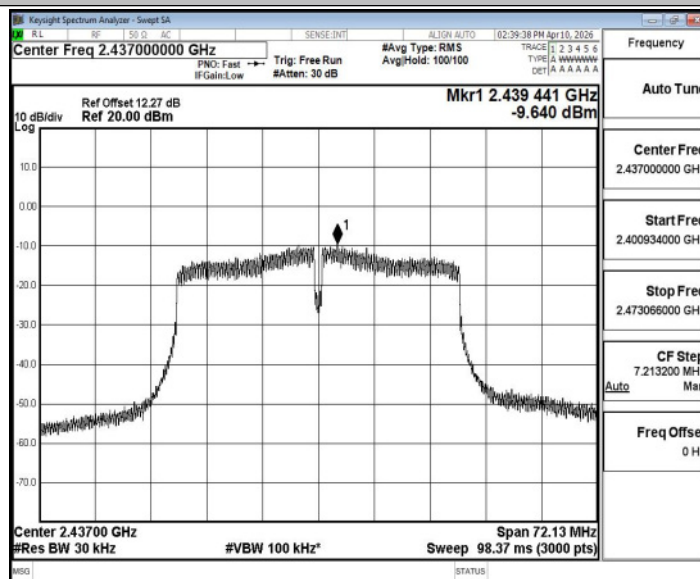


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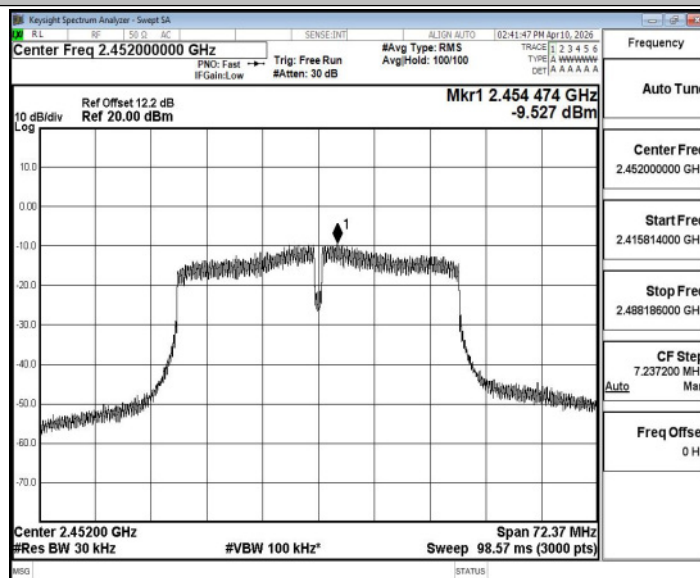
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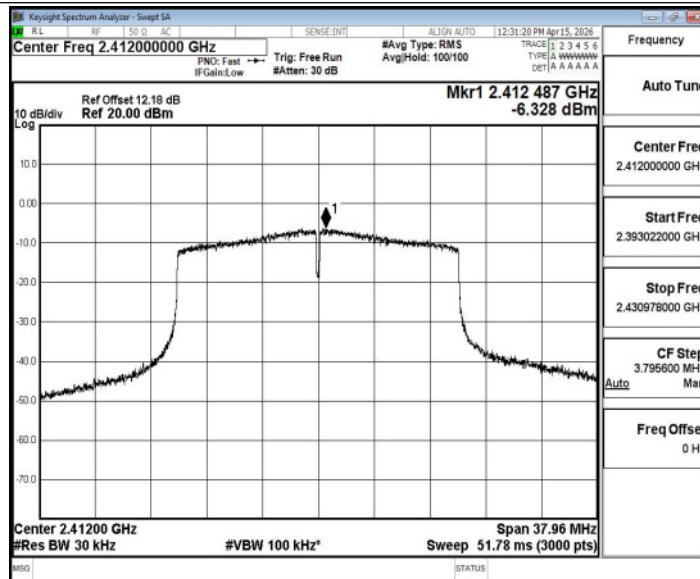
11N40SISO_Ant1_2437



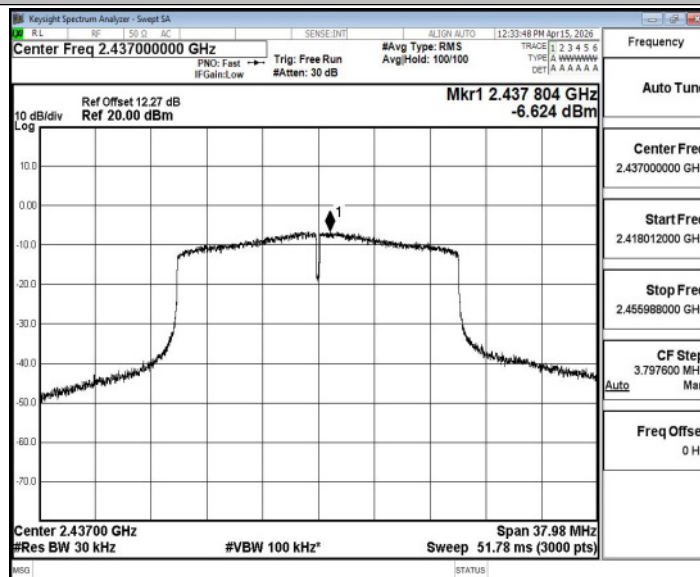
11N40SISO_Ant1_2452



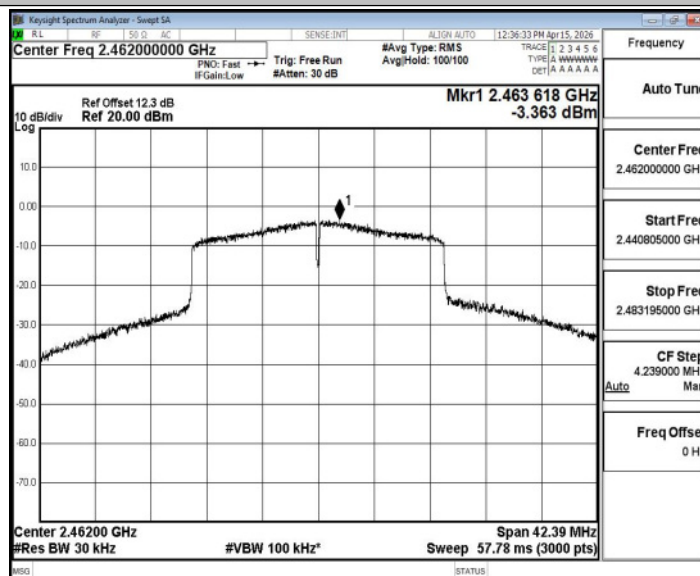
11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



B.4 Band edge measurements

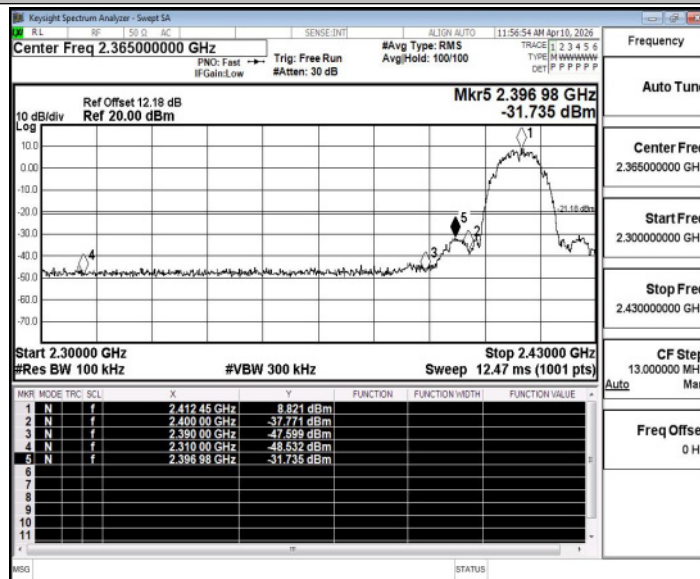
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	8.82	-31.74	≤-21.18	PASS
		High	2462	9.32	-42.25	≤-20.68	PASS
11G	Ant1	Low	2412	5.92	-27.19	≤-24.08	PASS
		High	2462	8.77	-25.95	≤-21.23	PASS
11N20SISO	Ant1	Low	2412	0.70	-29.49	≤-29.3	PASS
		High	2462	6.95	-24.4	≤-23.06	PASS
11N40SISO	Ant1	Low	2422	0.83	-31.92	≤-29.17	PASS
		High	2452	3.48	-26.75	≤-26.52	PASS
11AX20SISO	Ant1	Low	2412	6.73	-24.92	≤-23.27	PASS
		High	2462	3.30	-43.33	≤-26.7	PASS

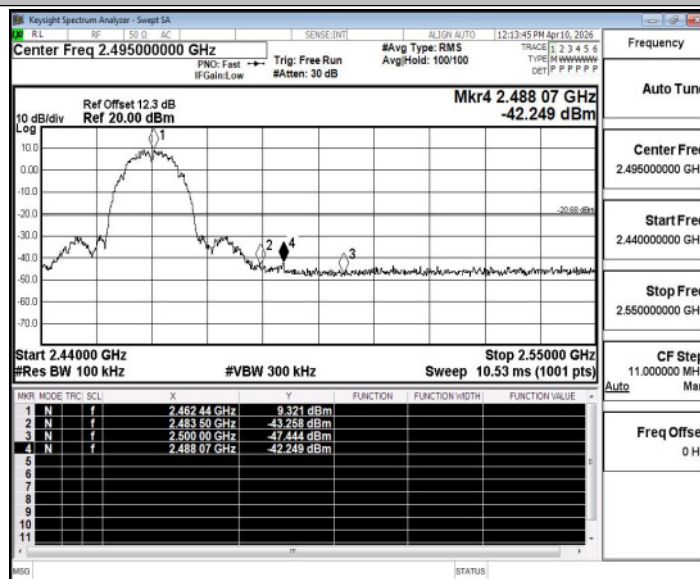
Note :offset=System attenuation +cabal loss

Test Graphs

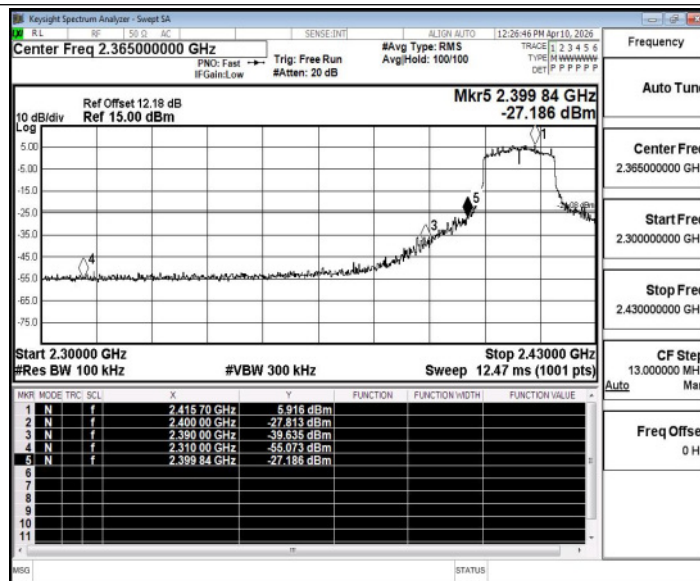
11B_Ant1_Low_2412



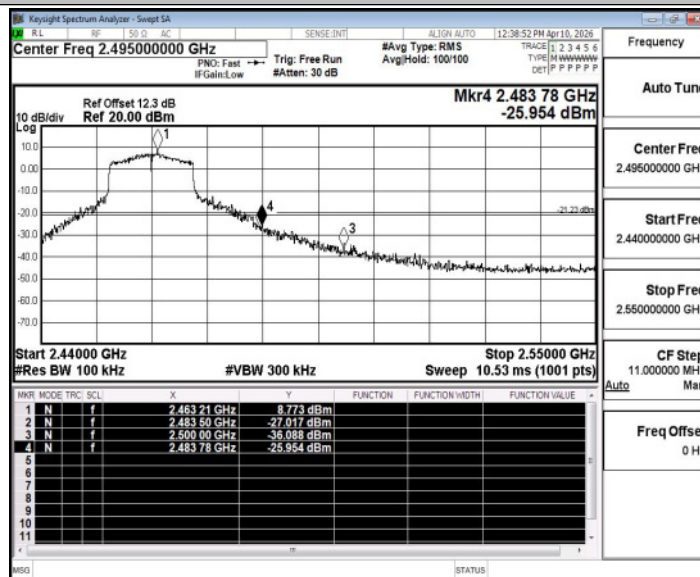
11B_Ant1_High_2462



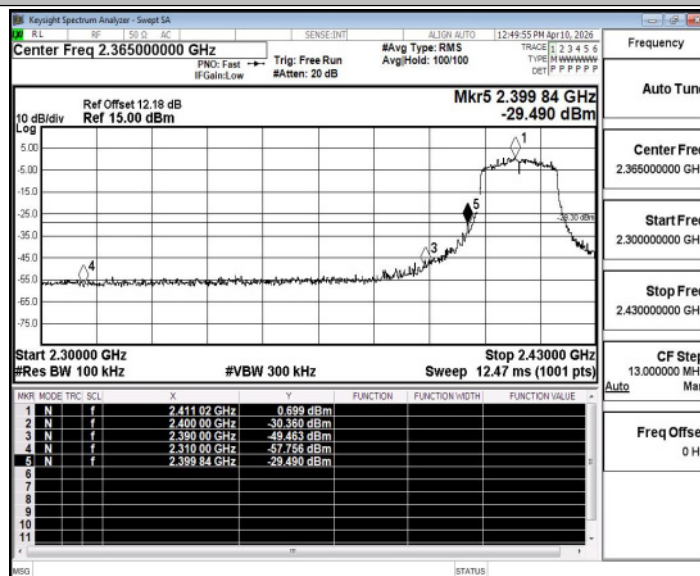
11G_Ant1_Low_2412



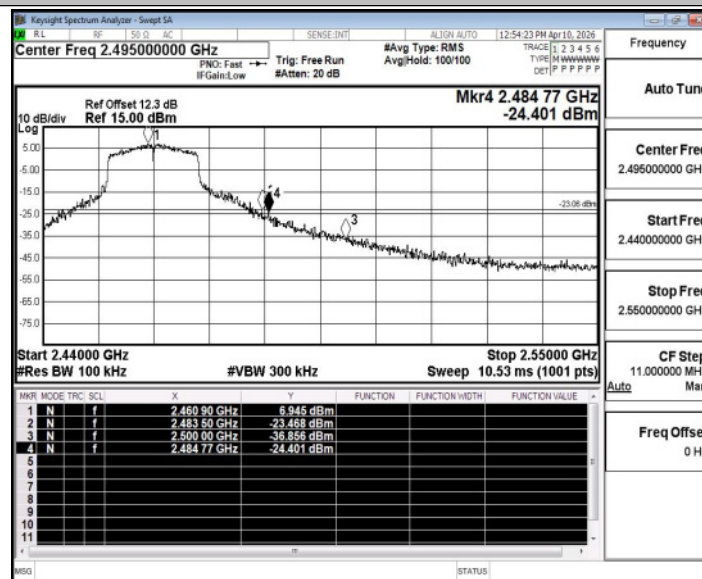
11G_Ant1_High_2462



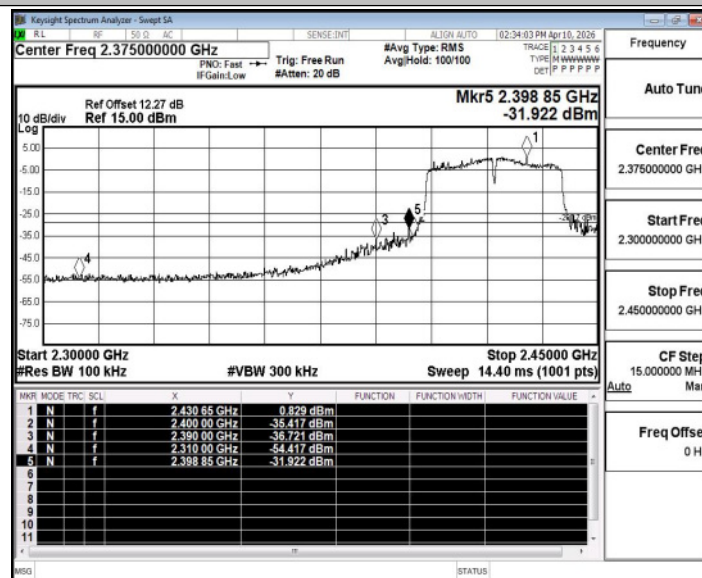
11N20SISO_Ant1_Low_2412



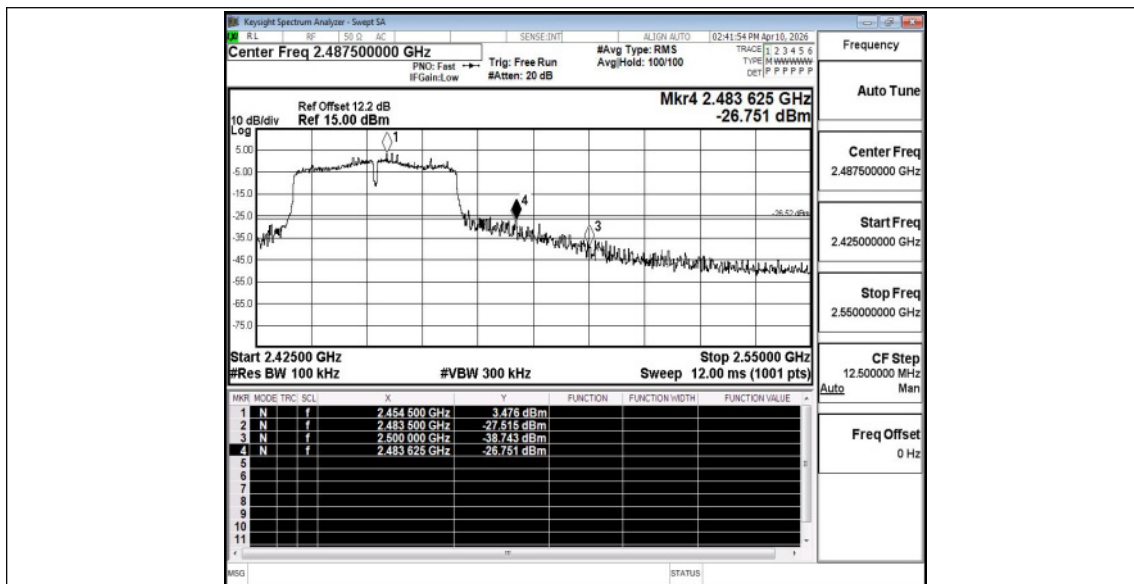
11N20SISO_Ant1_High_2462



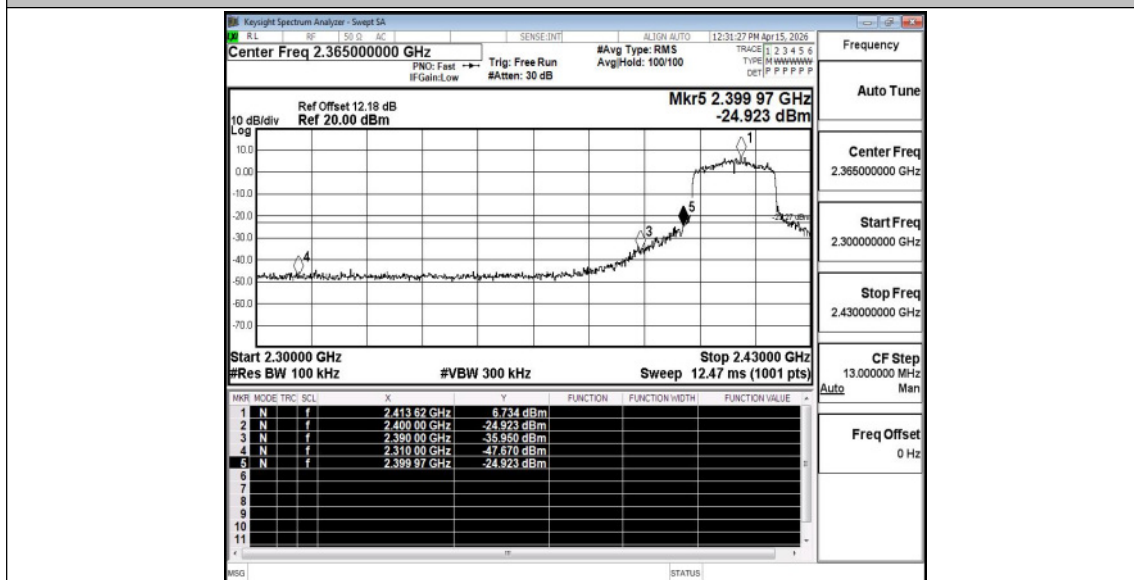
11N40SISO_Ant1_Low_2422



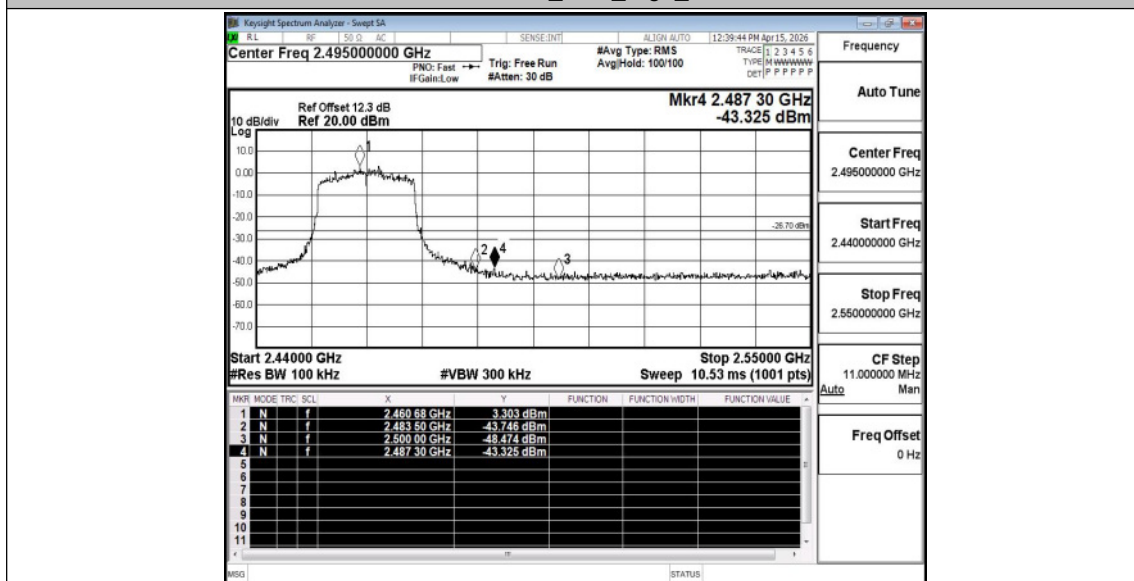
11N40SISO_Ant1_High_2452



11AX20SISO_Ant1_Low_2412



11AX20SISO_Ant1_High_2462



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B.5 Conducted Spurious Emission

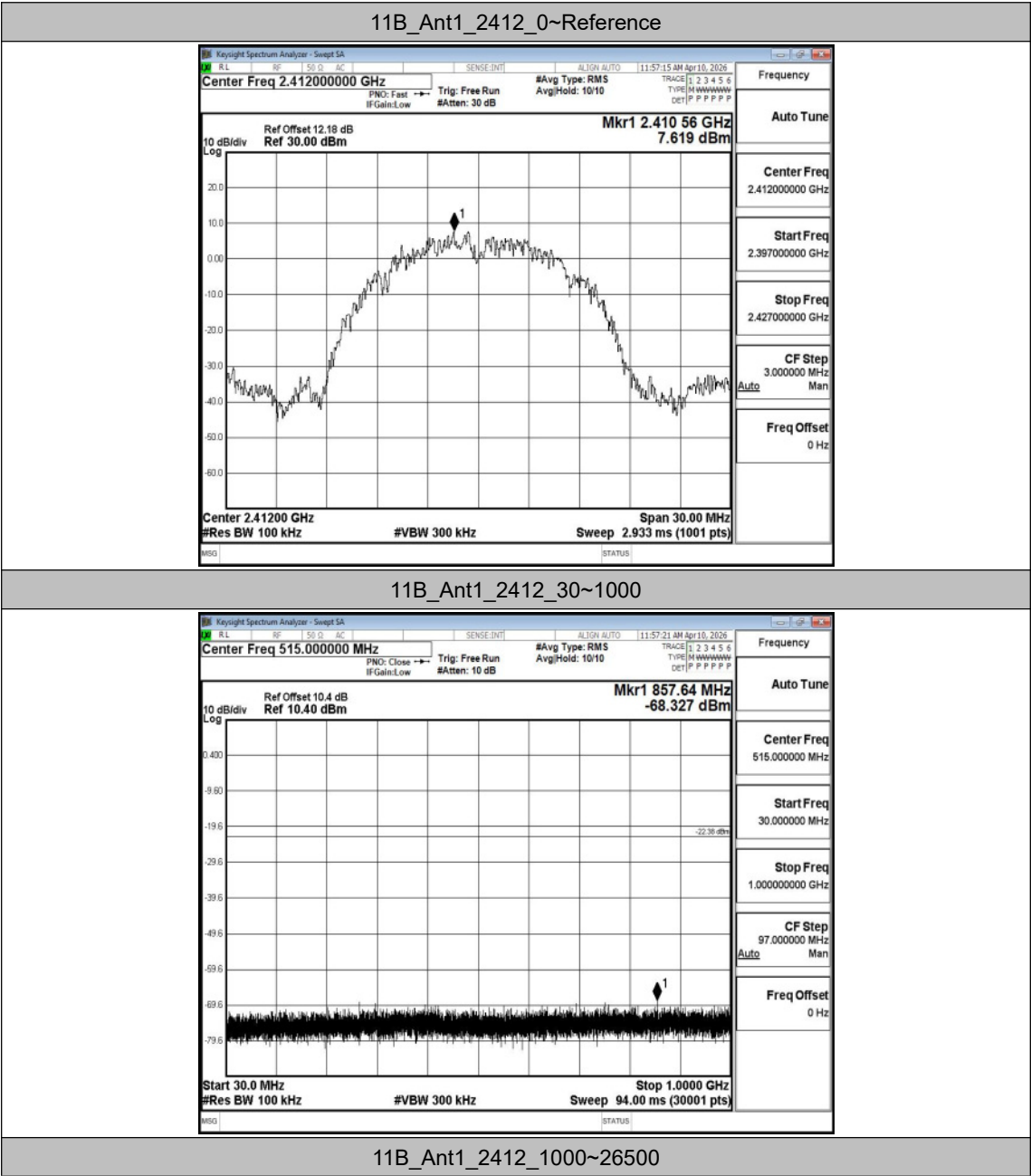
Test Result

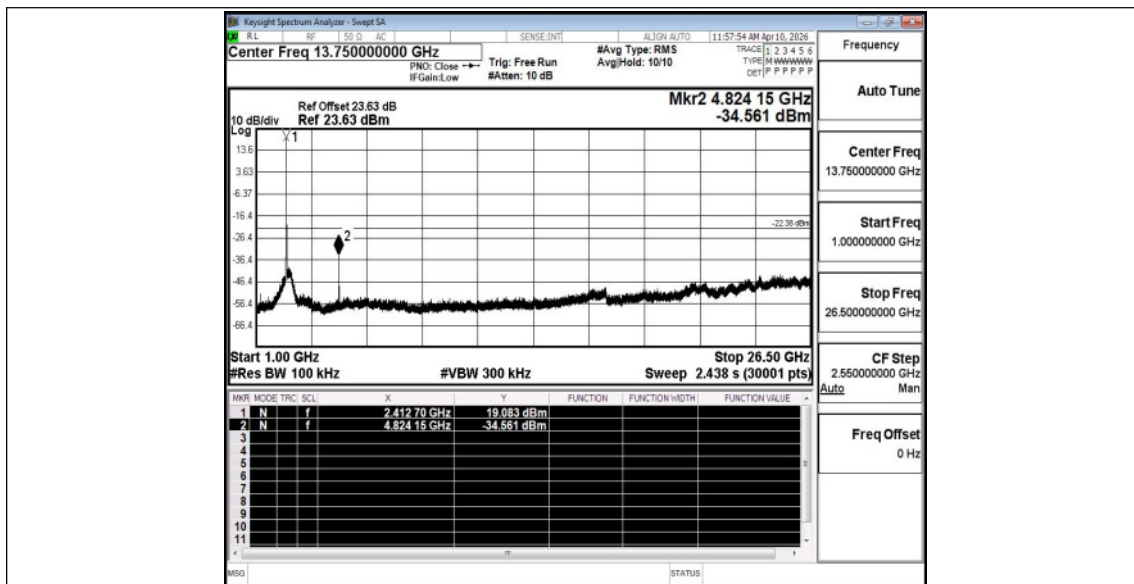
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	7.62	7.62	---	PASS
			30~1000	7.62	-68.33	≤-22.38	PASS
			1000~26500	7.62	-34.56	≤-22.38	PASS
		2437	Reference	7.32	7.32	---	PASS
			30~1000	7.32	-68.87	≤-22.68	PASS
			1000~26500	7.32	-39.04	≤-22.68	PASS
		2462	Reference	8.70	8.70	---	PASS
			30~1000	8.70	-68.2	≤-21.3	PASS
			1000~26500	8.70	-39.78	≤-21.3	PASS
11G	Ant1	2412	Reference	5.79	5.79	---	PASS
			30~1000	5.79	-68.01	≤-24.21	PASS
			1000~26500	5.79	-36.76	≤-24.21	PASS
		2437	Reference	6.19	6.19	---	PASS
			30~1000	6.19	-68.76	≤-23.81	PASS
			1000~26500	6.19	-37.98	≤-23.81	PASS
		2462	Reference	6.09	6.09	---	PASS
			30~1000	6.09	-69	≤-23.91	PASS
			1000~26500	6.09	-36.89	≤-23.91	PASS
11N20SISO	Ant1	2412	Reference	5.76	5.76	---	PASS
			30~1000	5.76	-69.08	≤-24.24	PASS
			1000~26500	5.76	-38.06	≤-24.24	PASS
		2437	Reference	8.11	8.11	---	PASS
			30~1000	8.11	-68.76	≤-21.89	PASS
			1000~26500	8.11	-37.06	≤-21.89	PASS
		2462	Reference	8.69	8.69	---	PASS
			30~1000	8.69	-68.9	≤-21.31	PASS
			1000~26500	8.69	-37.2	≤-21.31	PASS
11N40SISO	Ant1	2422	Reference	0.52	0.52	---	PASS
			30~1000	0.52	-56.18	≤-29.48	PASS
			1000~26500	0.52	-36.54	≤-29.48	PASS
		2437	Reference	-0.01	-0.01	---	PASS
			30~1000	-0.01	-55.94	≤-30.01	PASS
			1000~26500	-0.01	-36.93	≤-30.01	PASS
		2452	Reference	3.28	3.28	---	PASS
			30~1000	3.28	-51.8	≤-26.72	PASS
			1000~26500	3.28	-36.73	≤-26.72	PASS
11AX20SISO	Ant1	2412	Reference	5.89	5.89	---	PASS

			30~1000	5.89	-68.56	≤ -24.11	PASS
			1000~26500	5.89	-36.49	≤ -24.11	PASS
		2437	Reference	4.36	4.36	---	PASS
			30~1000	4.36	-68.75	≤ -25.64	PASS
			1000~26500	4.36	-36.44	≤ -25.64	PASS
		2462	Reference	8.16	8.16	---	PASS
			30~1000	8.16	-67.98	≤ -21.84	PASS
			1000~26500	8.16	-31.48	≤ -21.84	PASS

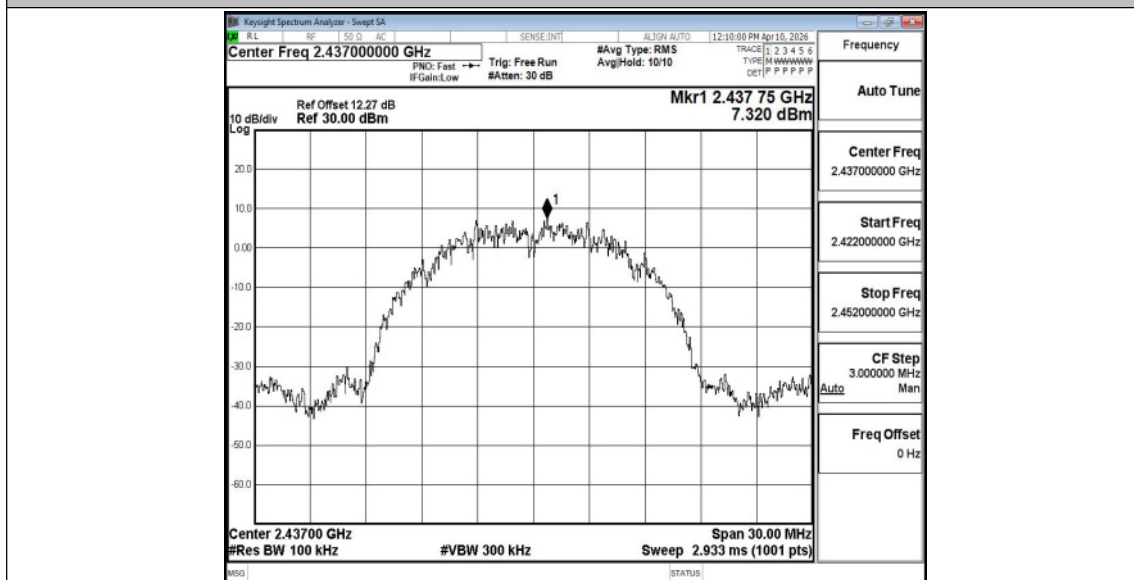
Note :Regarding the spurious emissions from 30MHz to 26.5GHz, the cable lose have been set in the CORREC' of the Spectrum Analyzer during the test.

Test Graphs

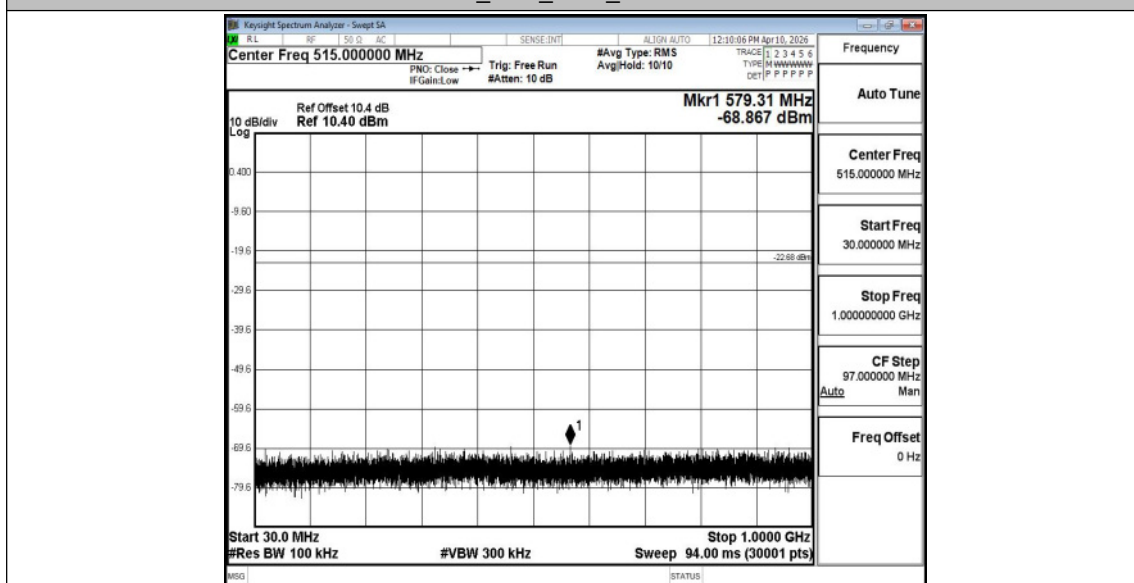


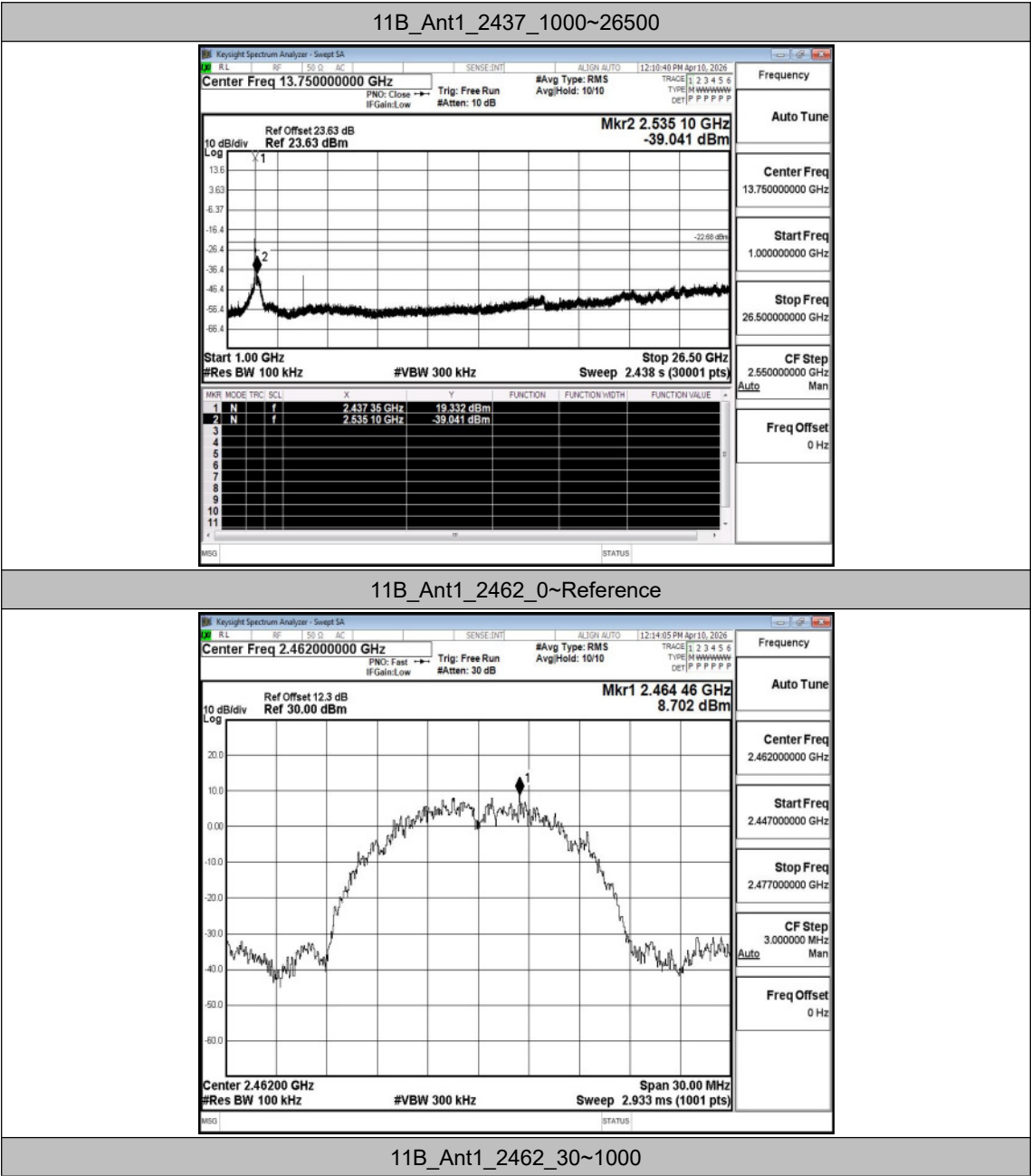


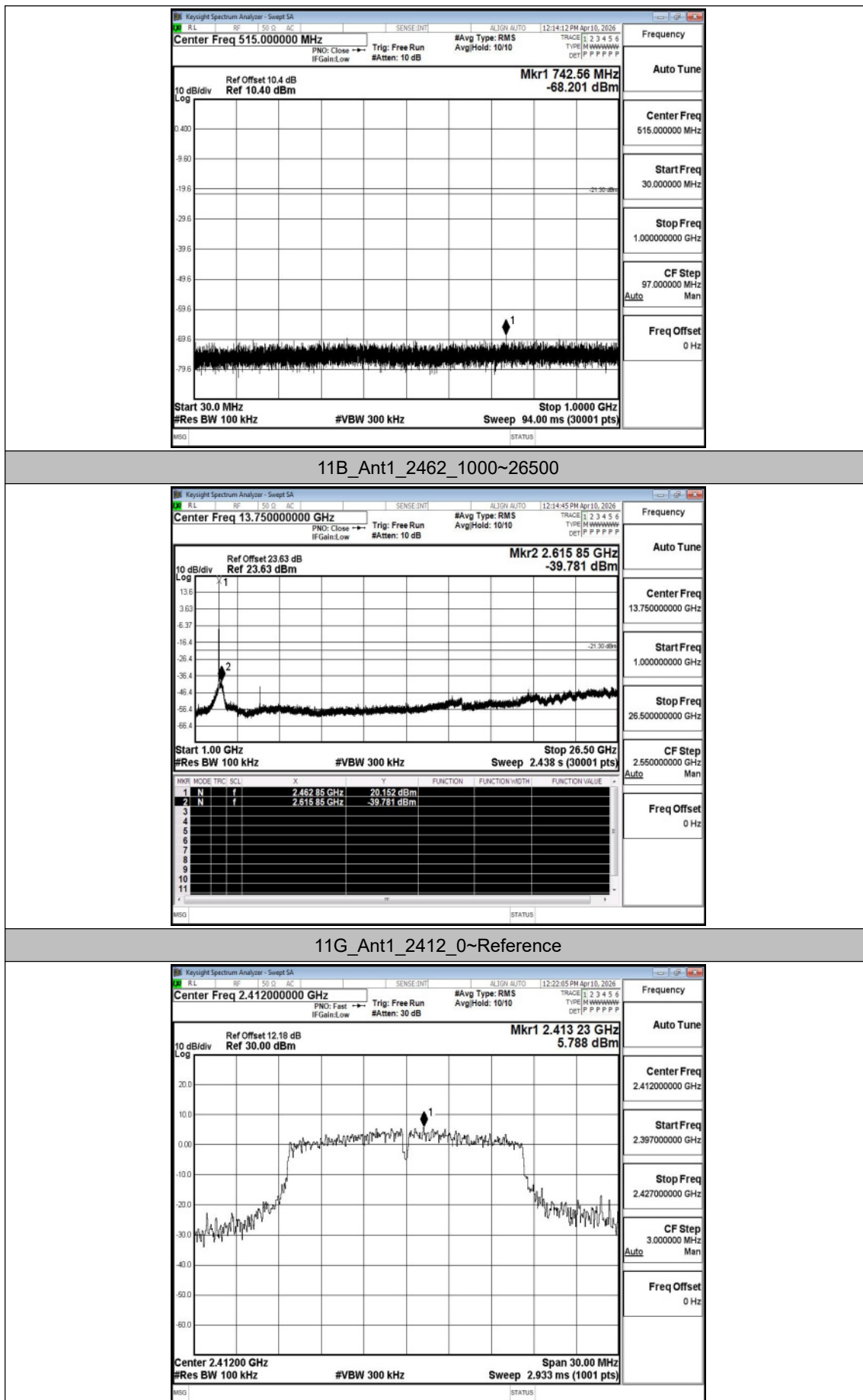
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



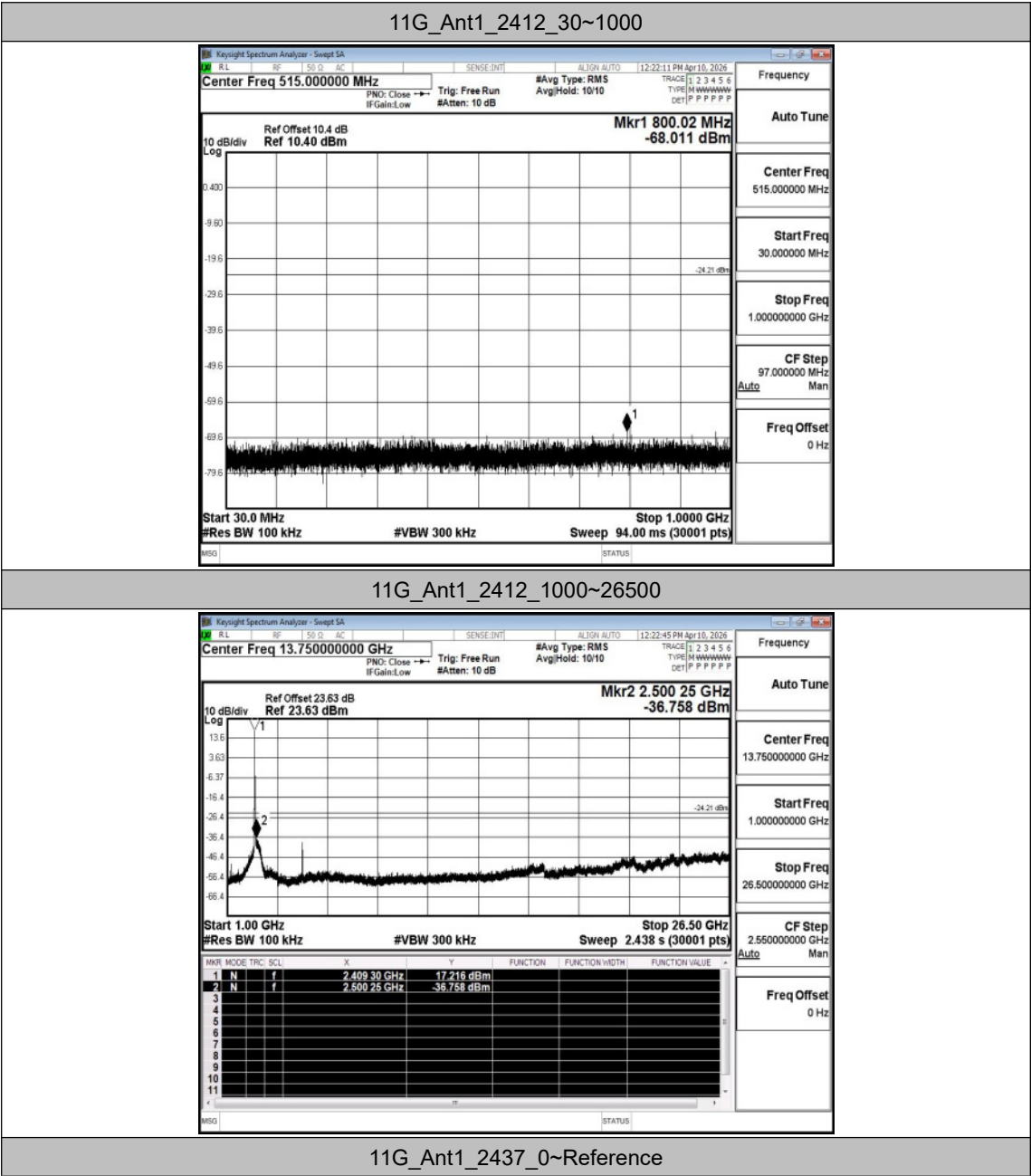


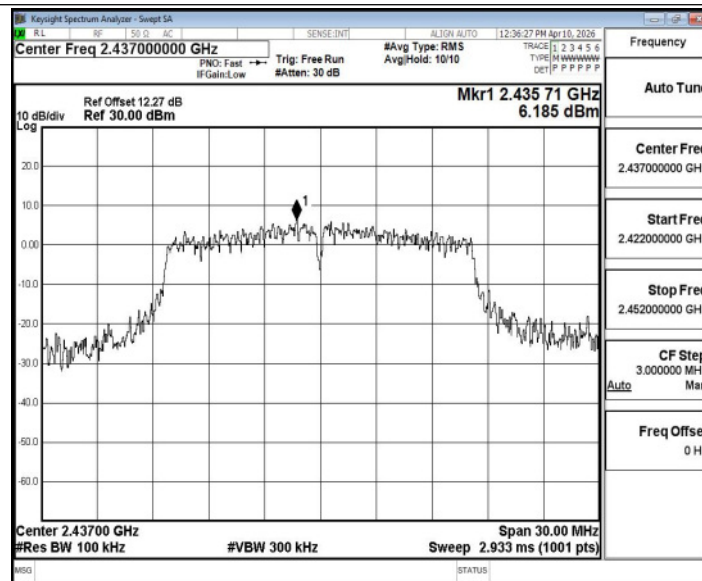


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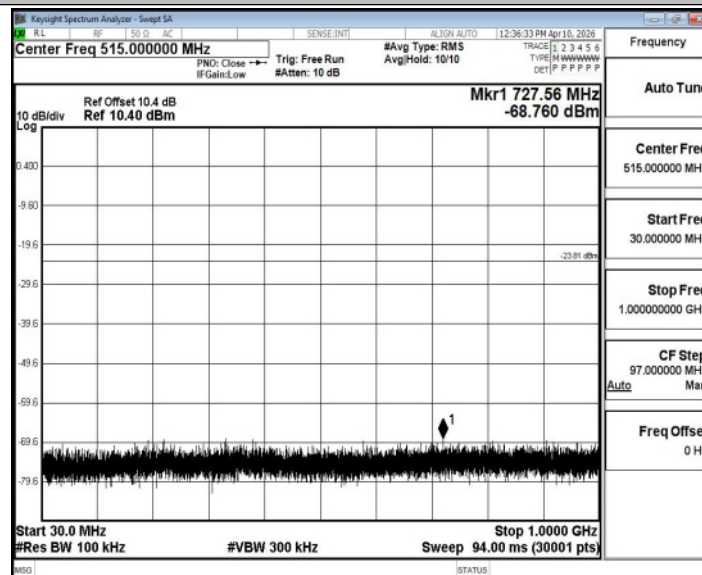
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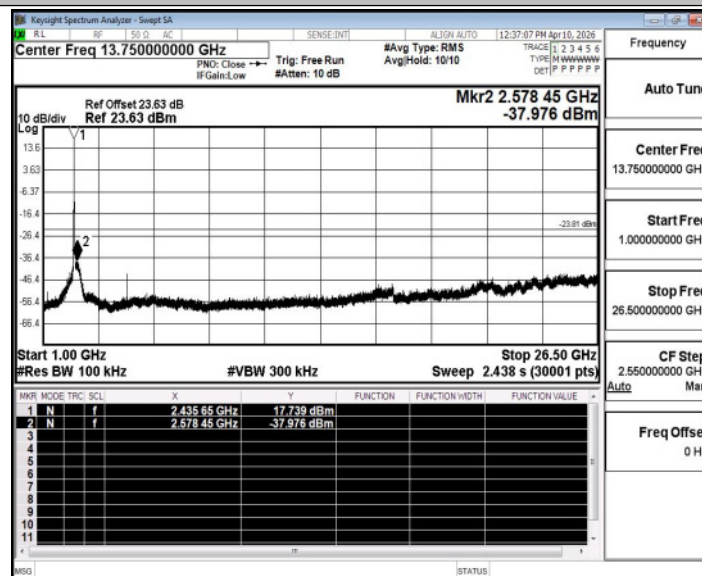




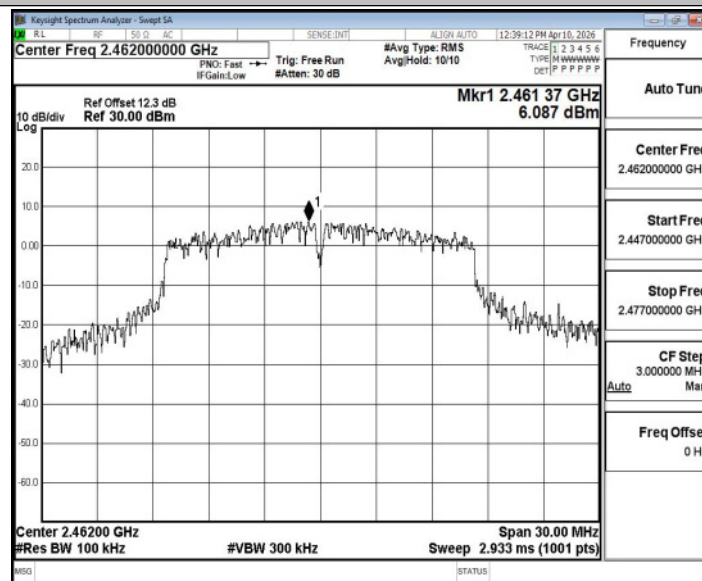
11G_Ant1_2437_30~1000



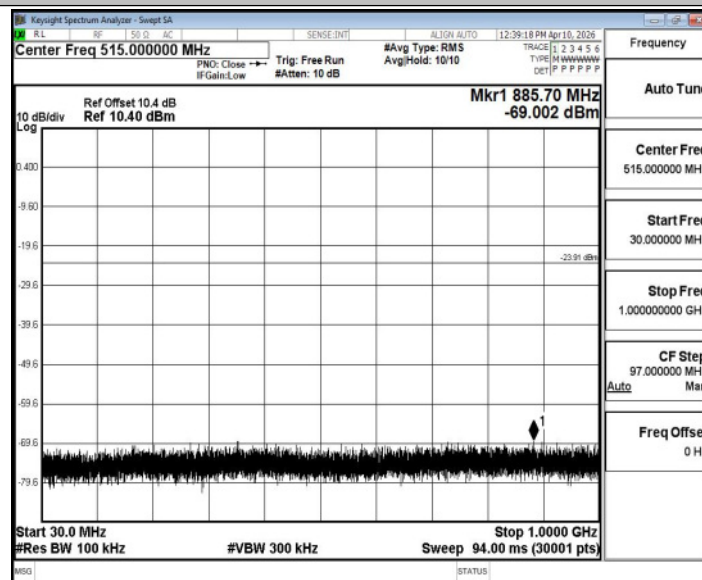
11G_Ant1_2437_1000~26500



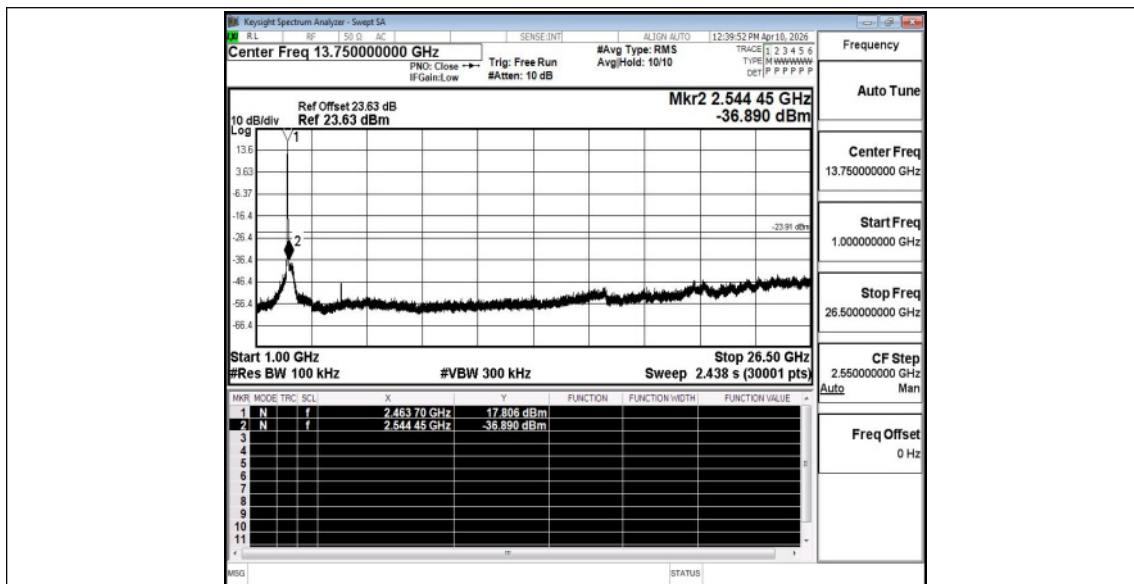
11G_Ant1_2462_0~Reference



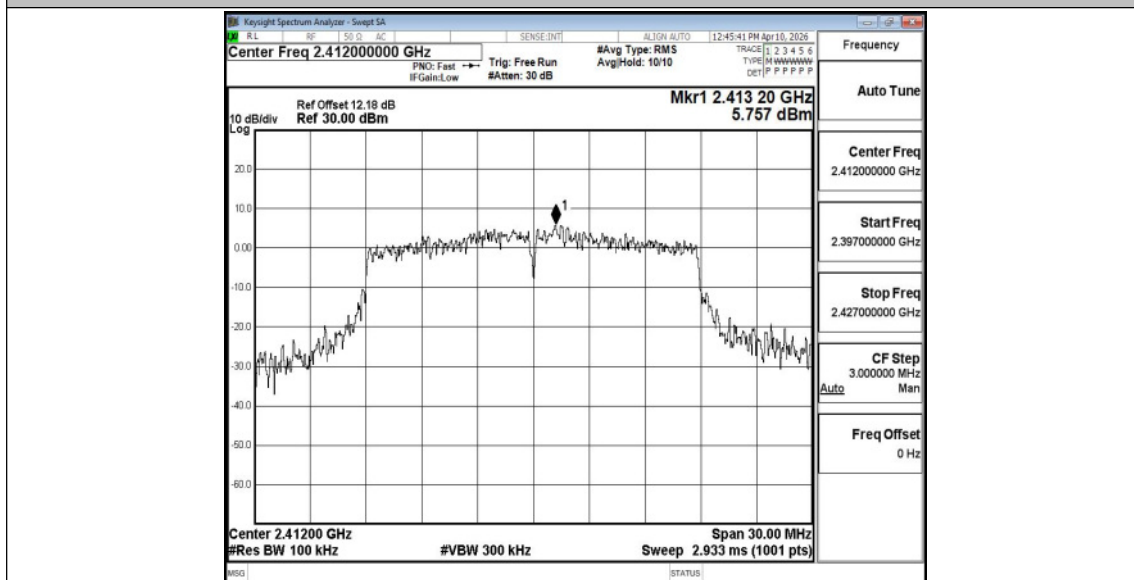
11G_Ant1_2462_30~1000



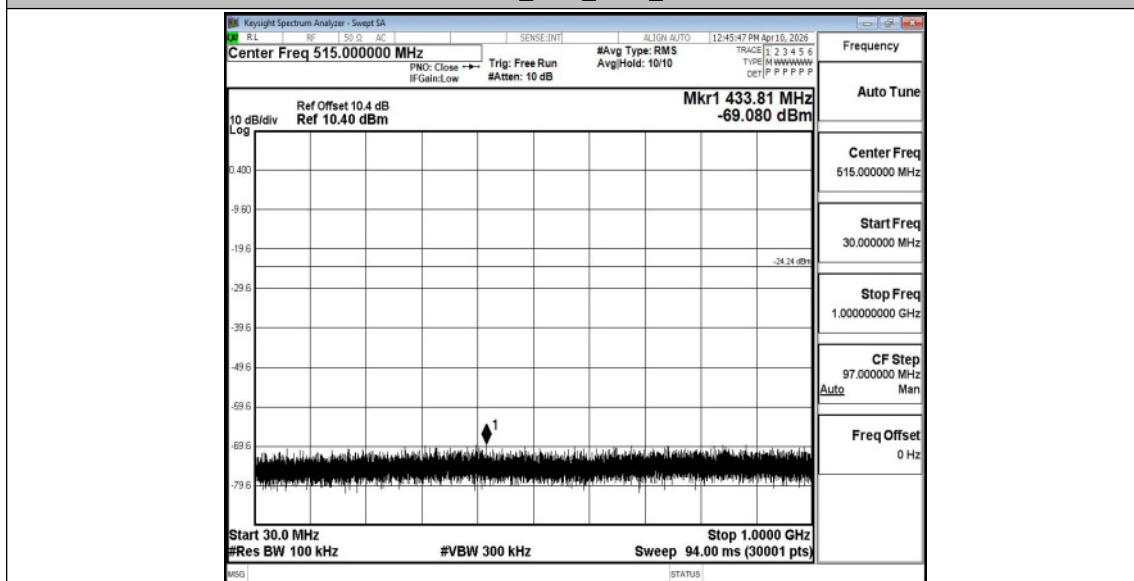
11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



Guangzhou LCS Compliance Testing Laboratory Ltd.

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