



Appendix B

RF Test Data for 2.4GWIFI(Conducted Measurement)

Product Name: Sensorfact EnOcean Gateway 902MHz

Test Model: GW-ENOC-902

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	54.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Can Kun





B.1 DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.080	2408.480	2415.560	0.5	PASS
		2437	6.640	2433.480	2440.120	0.5	PASS
		2462	7.080	2458.480	2465.560	0.5	PASS
11G	Ant1	2412	16.000	2404.000	2420.000	0.5	PASS
		2437	15.960	2428.960	2444.920	0.5	PASS
		2462	15.800	2454.000	2469.800	0.5	PASS
11N20SISO	Ant1	2412	16.840	2403.600	2420.440	0.5	PASS
		2437	16.520	2428.440	2444.960	0.5	PASS
		2462	15.720	2453.920	2469.640	0.5	PASS

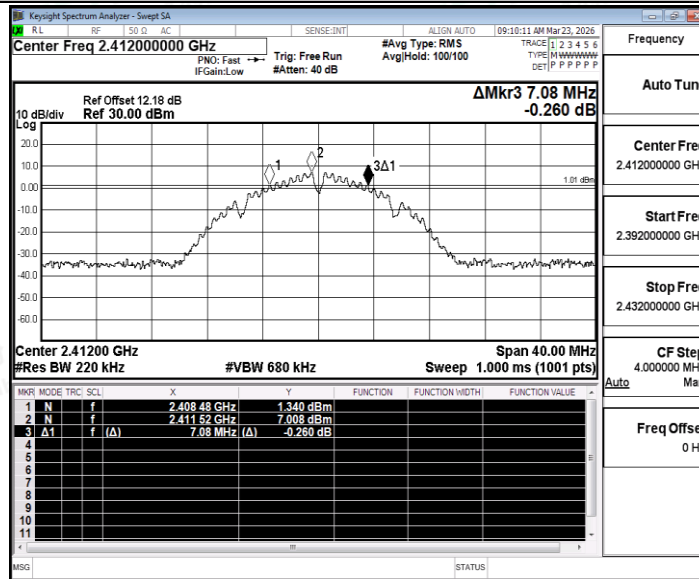
Note :offset=System attenuation +cabal loss



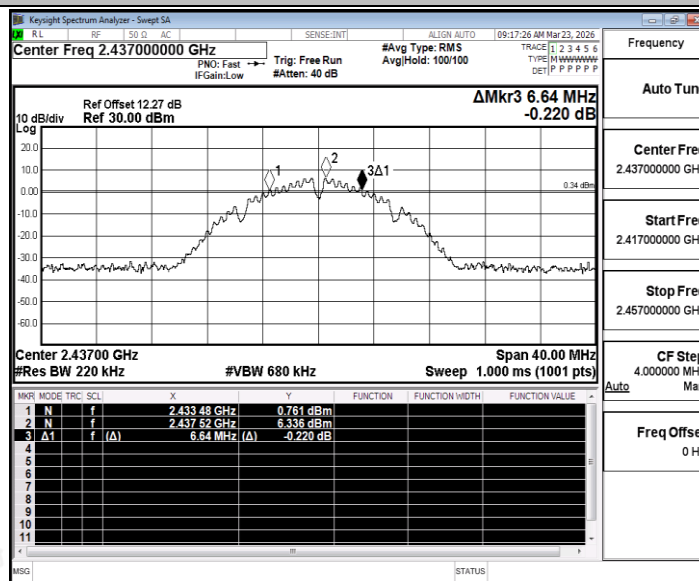


Test Graphs

11B_Ant1_2412

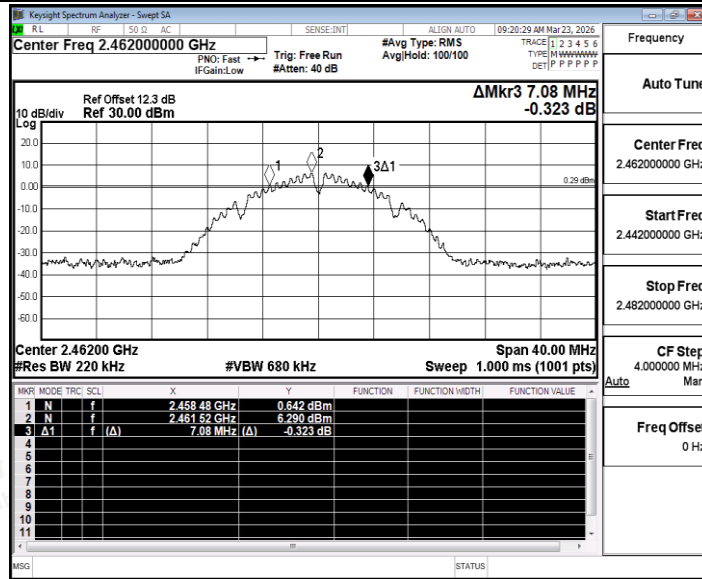


11B_Ant1_2437

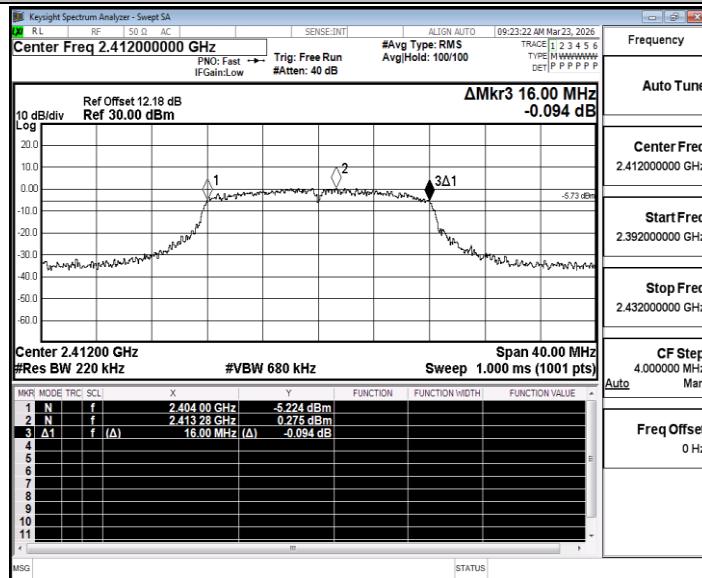


11B_Ant1_2462

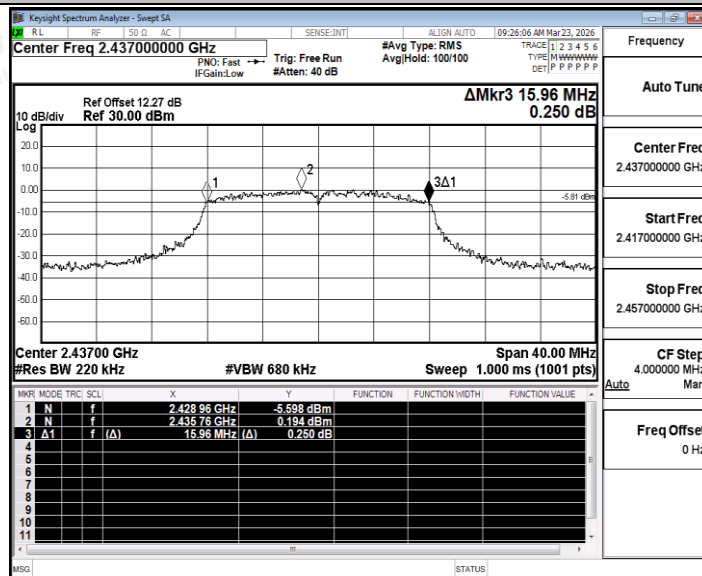




11G_Ant1_2412

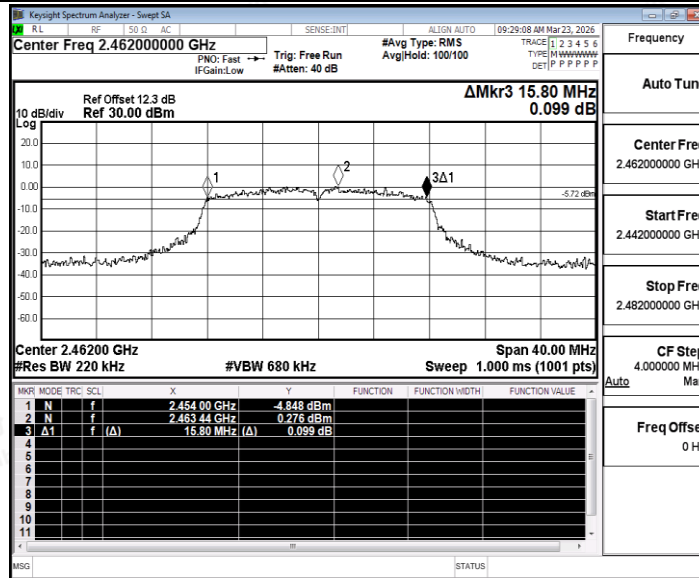


11G_Ant1_2437

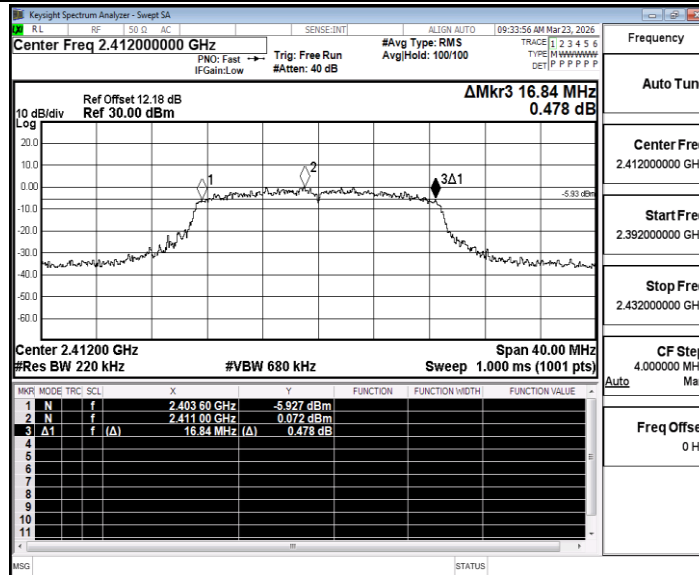




11G_Ant1_2462

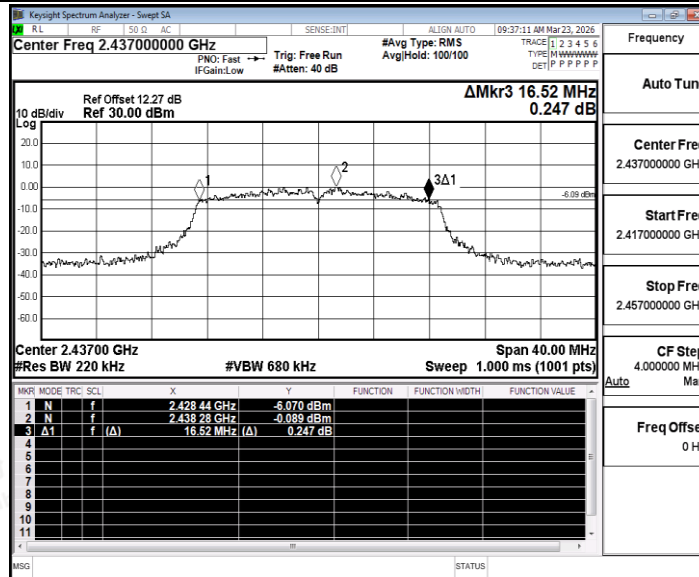


11N20SISO_Ant1_2412

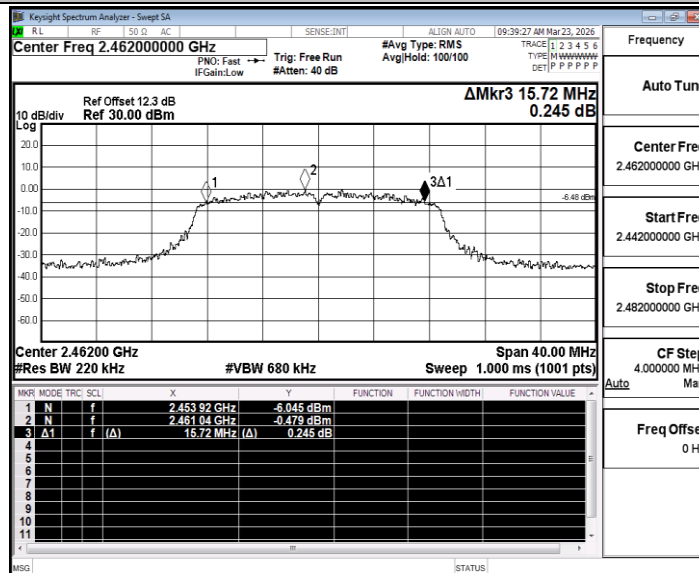


11N20SISO_Ant1_2437





11N20SISO_Ant1_2462





B.2 Maximum Average Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Conducted Power (dBm)	Limit Conducted(dBm)	Verdict
NVNT	b	2412	Ant1	6.15	0.02	6.17	27.6	Pass
NVNT	b	2437	Ant1	6.87	0.02	6.89	27.6	Pass
NVNT	b	2462	Ant1	6.02	0.02	6.04	27.6	Pass
NVNT	g	2412	Ant1	5.38	0.09	5.47	27.6	Pass
NVNT	g	2437	Ant1	5.89	0.09	5.98	27.6	Pass
NVNT	g	2462	Ant1	5.64	0.09	5.73	27.6	Pass
NVNT	n20	2412	Ant1	4.35	0.1	4.45	27.6	Pass
NVNT	n20	2437	Ant1	4.68	0.1	4.78	27.6	Pass
NVNT	n20	2462	Ant1	4.28	0.1	4.38	27.6	Pass

Note :offset=System attenuation +cabal loss





B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/30kHz)	Duty Factor (dB)	Total PSD (dBm/30kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-7.03	0.02	-7.01	5.6	Pass
NVNT	b	2437	Ant1	-7.63	0.02	-7.61	5.6	Pass
NVNT	b	2462	Ant1	-7.49	0.02	-7.47	5.6	Pass
NVNT	g	2412	Ant1	-13.79	0.09	-13.7	5.6	Pass
NVNT	g	2437	Ant1	-13.88	0.09	-13.79	5.6	Pass
NVNT	g	2462	Ant1	-13.84	0.09	-13.75	5.6	Pass
NVNT	n20	2412	Ant1	-14.51	0.1	-14.41	5.6	Pass
NVNT	n20	2437	Ant1	-14.92	0.1	-14.82	5.6	Pass
NVNT	n20	2462	Ant1	-15.21	0.1	-15.11	5.6	Pass

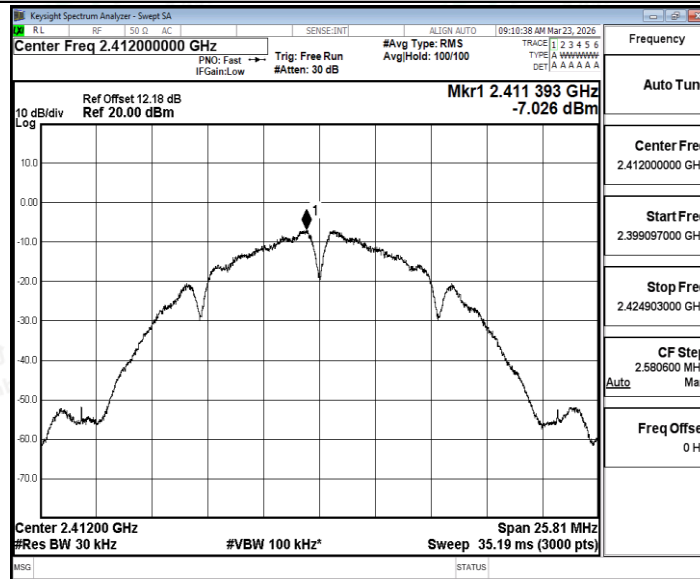
Note :offset=System attenuation +cabal loss



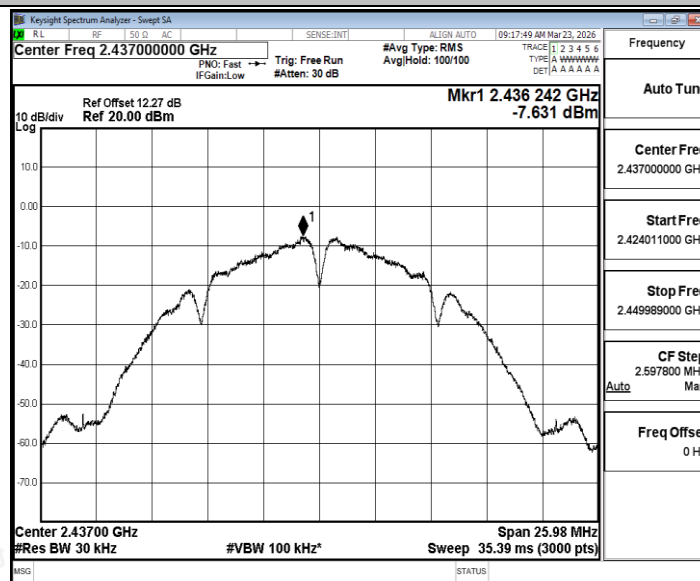


Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462

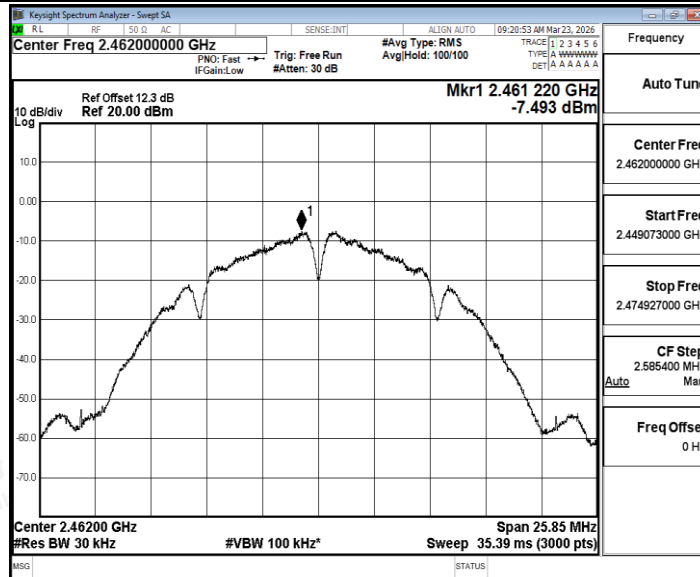


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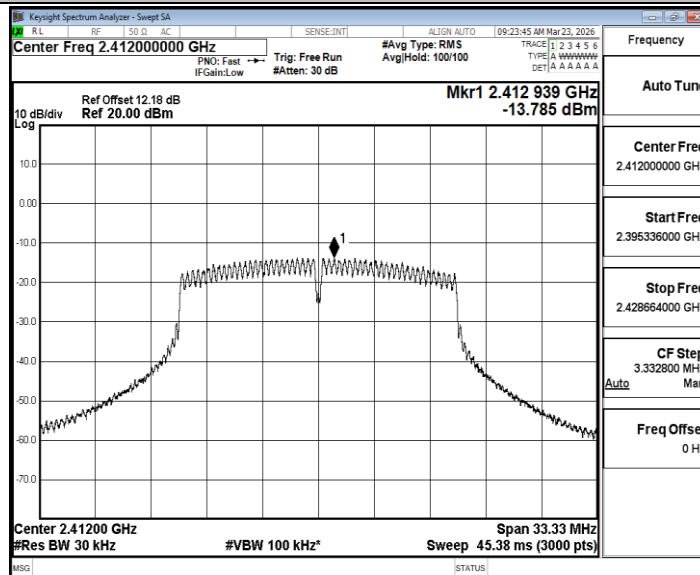
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

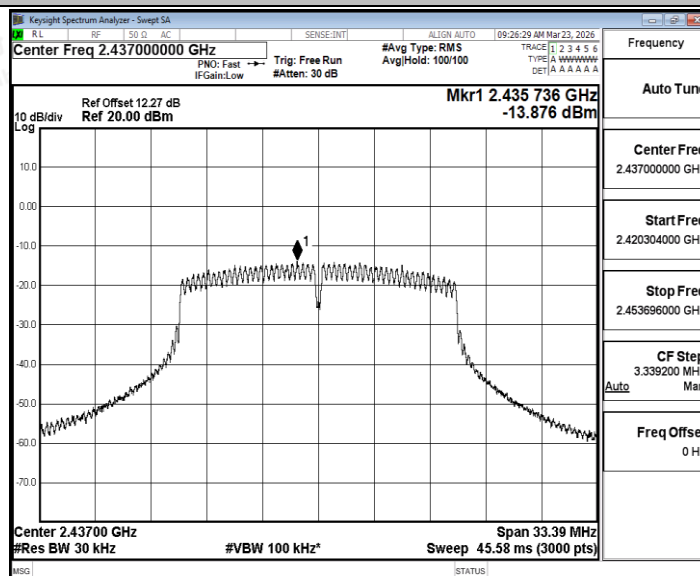
Scan code to check authenticity



11G_Ant1_2412

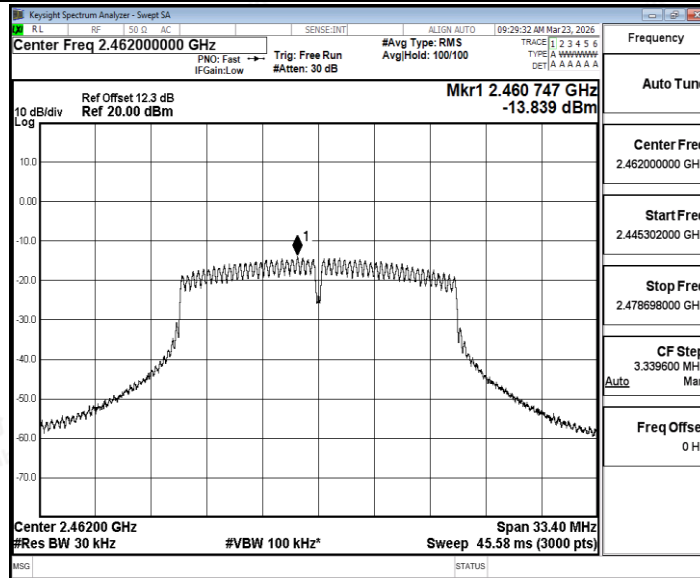


11G_Ant1_2437

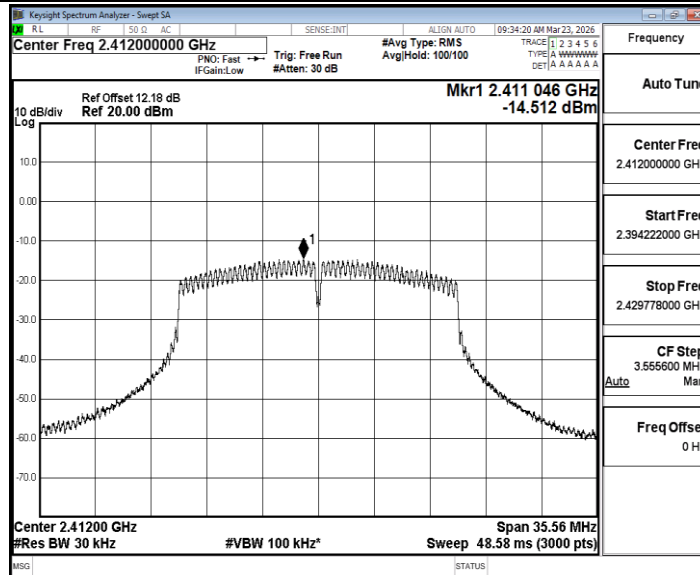




11G_Ant1_2462

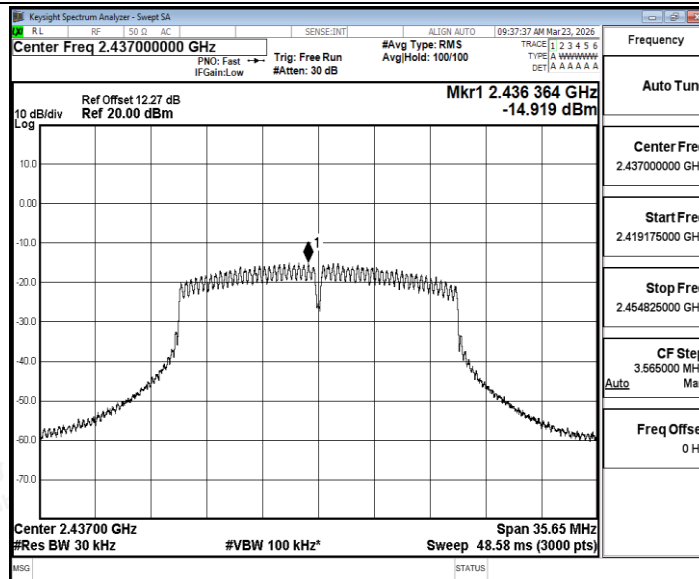


11N20SISO_Ant1_2412

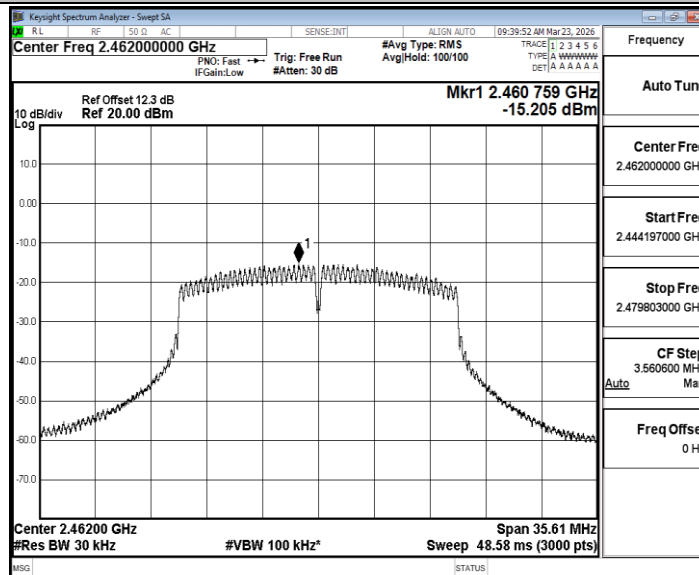


11N20SISO_Ant1_2437





11N20SISO_Ant1_2462



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Scan code to check authenticity



B.4 Band Edge

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.89	-38.47	≤-23.11	PASS
		High	2462	5.78	-43.3	≤-24.22	PASS
11G	Ant1	Low	2412	0.53	-35.21	≤-29.47	PASS
		High	2462	-1.34	-44.71	≤-31.34	PASS
11N20SISO	Ant1	Low	2412	-1.66	-35.52	≤-31.66	PASS
		High	2462	-3.15	-43.59	≤-33.15	PASS

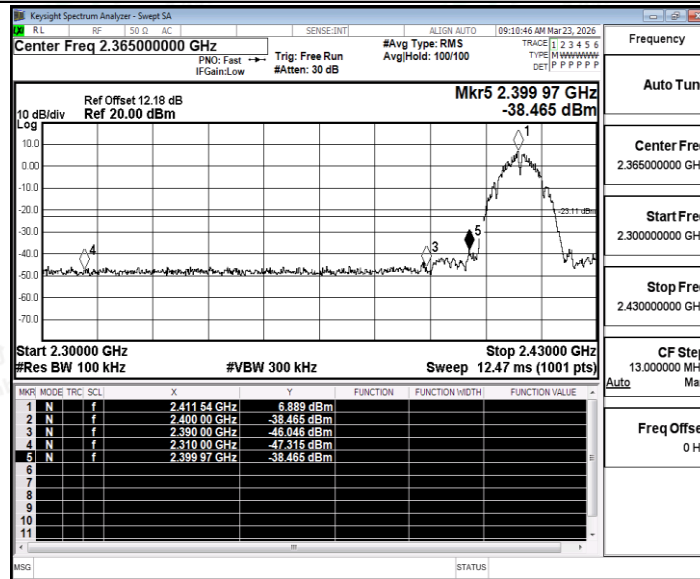
Note :offset=System attenuation +cabal loss



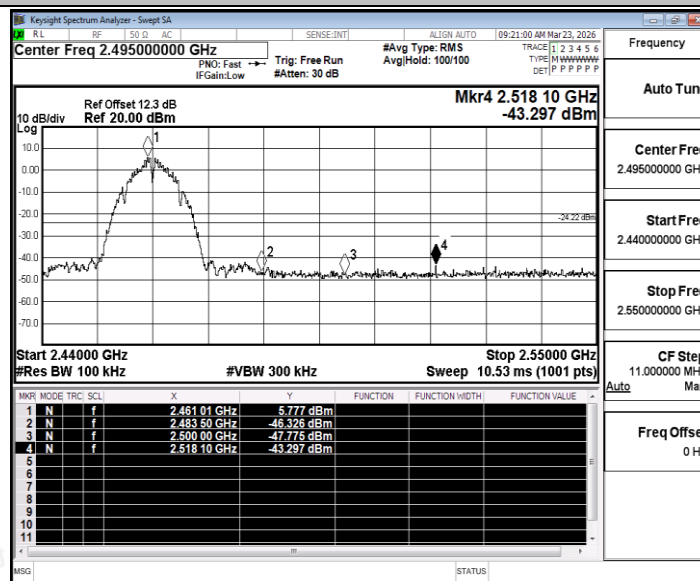


Test Graphs

11B_Ant1_Low_2412



11B_Ant1_High_2462



11G_Ant1_Low_2412

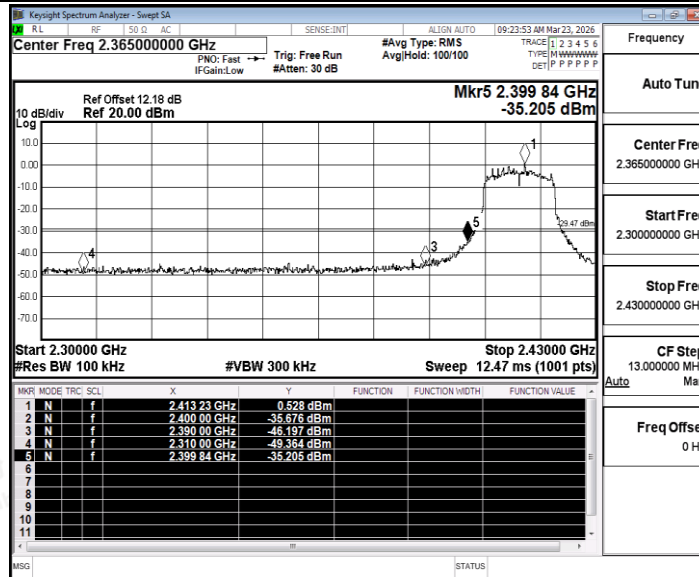


Shenzhen LCS Compliance Testing Laboratory Ltd.

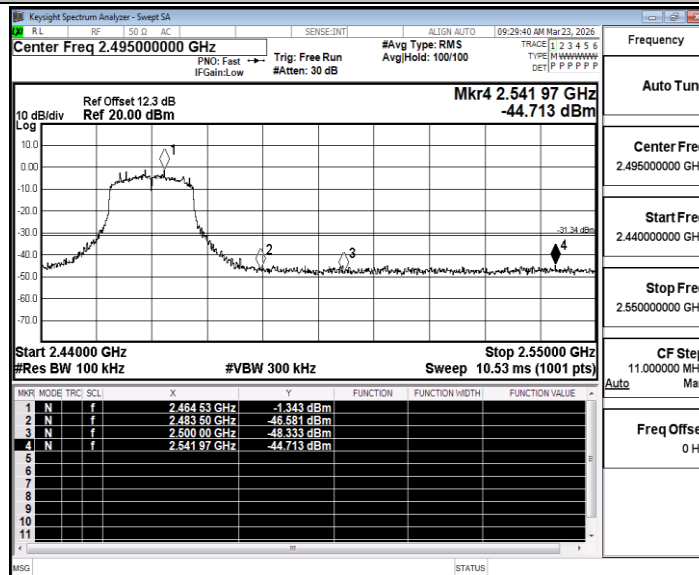
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

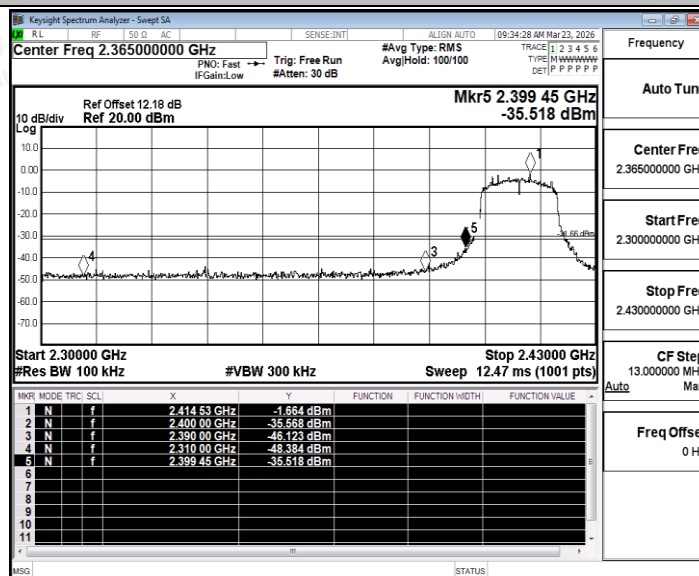
Scan code to check authenticity



11G_Ant1_High_2462

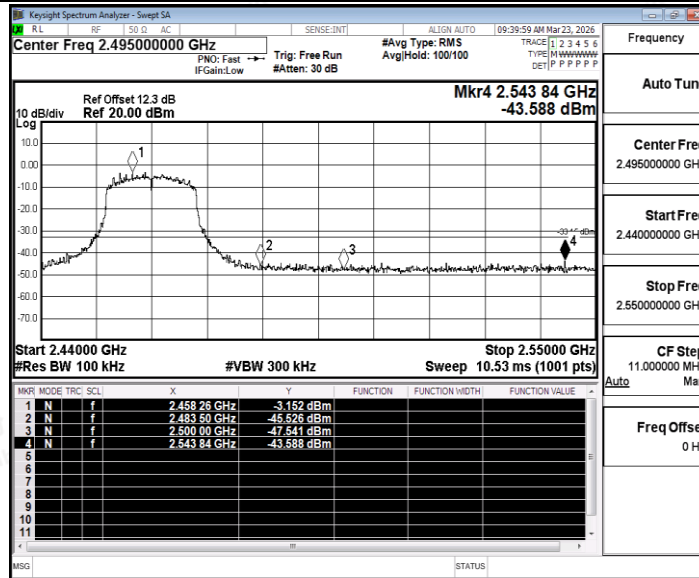


11N20SISO_Ant1_Low_2412





11N20SISO_Ant1_High_2462





B.5 Conducted RF Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	4.72	4.72	---	PASS
			30~1000	4.72	-69.16	≤ -25.28	PASS
			1000~26500	4.72	-43.29	≤ -25.28	PASS
		2437	Reference	5.07	5.07	---	PASS
			30~1000	5.07	-69.45	≤ -24.93	PASS
			1000~26500	5.07	-43.56	≤ -24.93	PASS
		2462	Reference	2.89	2.89	---	PASS
			30~1000	2.89	-68.9	≤ -27.11	PASS
			1000~26500	2.89	-42.98	≤ -27.11	PASS
11G	Ant1	2412	Reference	-2.55	-2.55	---	PASS
			30~1000	-2.55	-69.63	≤ -32.55	PASS
			1000~26500	-2.55	-43.1	≤ -32.55	PASS
		2437	Reference	-2.14	-2.14	---	PASS
			30~1000	-2.14	-68.59	≤ -32.14	PASS
			1000~26500	-2.14	-43.14	≤ -32.14	PASS
		2462	Reference	-3.55	-3.55	---	PASS
			30~1000	-3.55	-69.54	≤ -33.55	PASS
			1000~26500	-3.55	-43.15	≤ -33.55	PASS
11N20SISO	Ant1	2412	Reference	-4.16	-4.16	---	PASS
			30~1000	-4.16	-69.08	≤ -34.16	PASS
			1000~26500	-4.16	-42.76	≤ -34.16	PASS
		2437	Reference	-5.09	-5.09	---	PASS
			30~1000	-5.09	-68.46	≤ -35.09	PASS
			1000~26500	-5.09	-42.73	≤ -35.09	PASS
		2462	Reference	-4.67	-4.67	---	PASS
			30~1000	-4.67	-69.22	≤ -34.67	PASS
			1000~26500	-4.67	-43.23	≤ -34.67	PASS

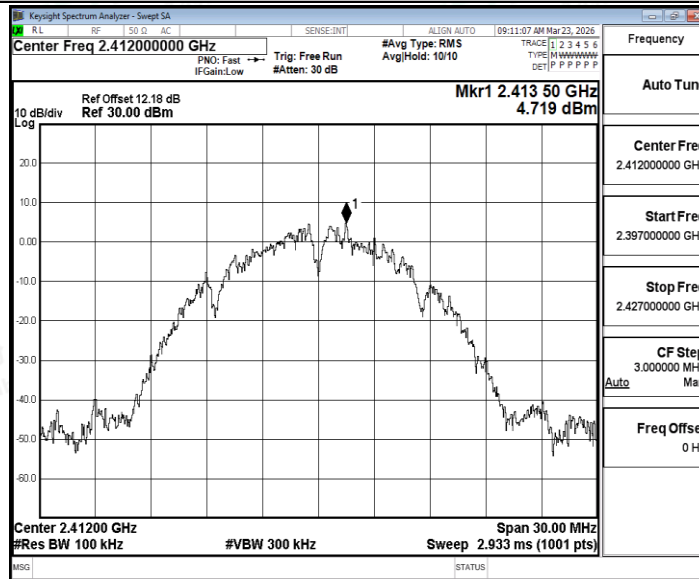
Note :Regarding the spurious emissions from 30MHz to 26.5GHz, the cable lose have been set in the CORREC' of the Spectrum Analyzer during the test.



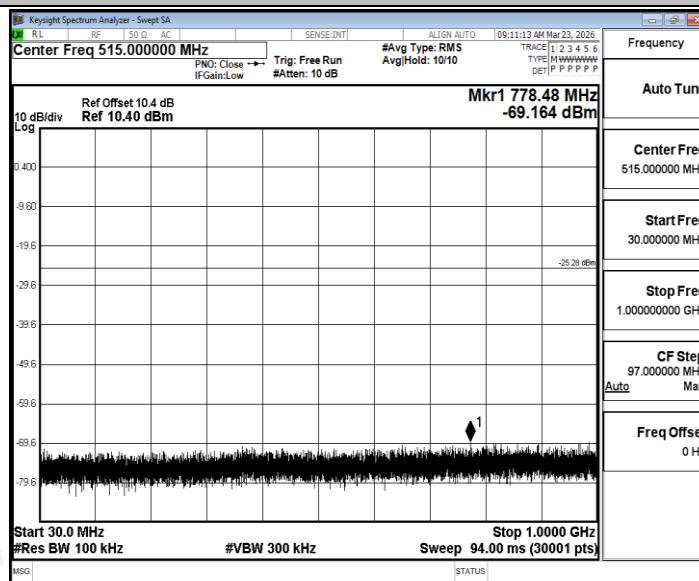


Test Graphs

11B_Ant1_2412_0~Reference

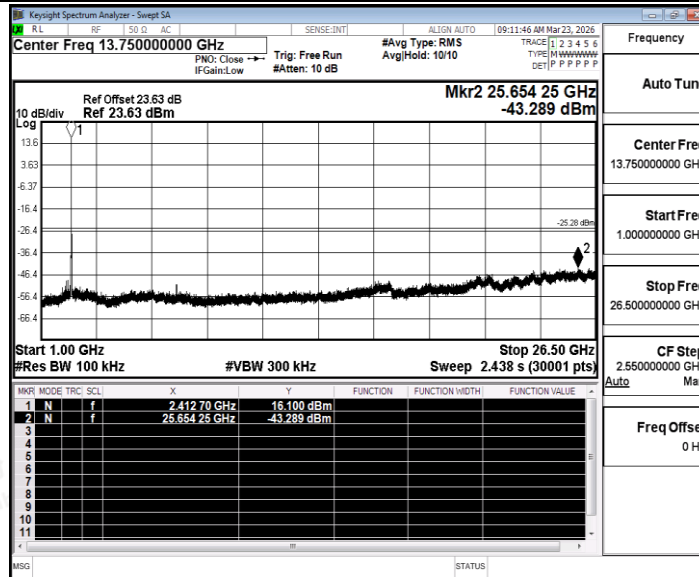


11B_Ant1_2412_30~1000

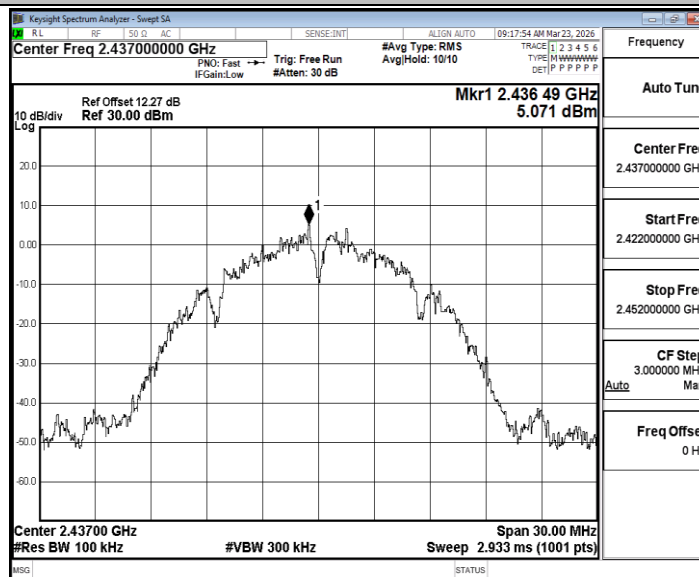


11B_Ant1_2412_1000~26500

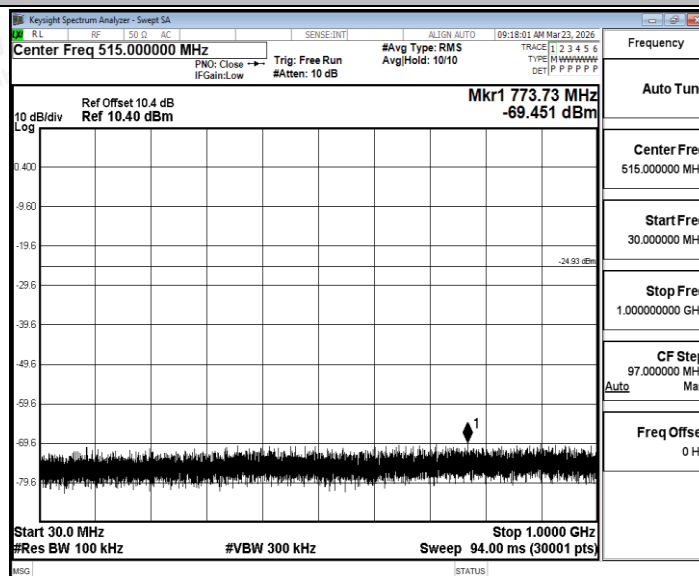




11B_Ant1_2437_0~Reference

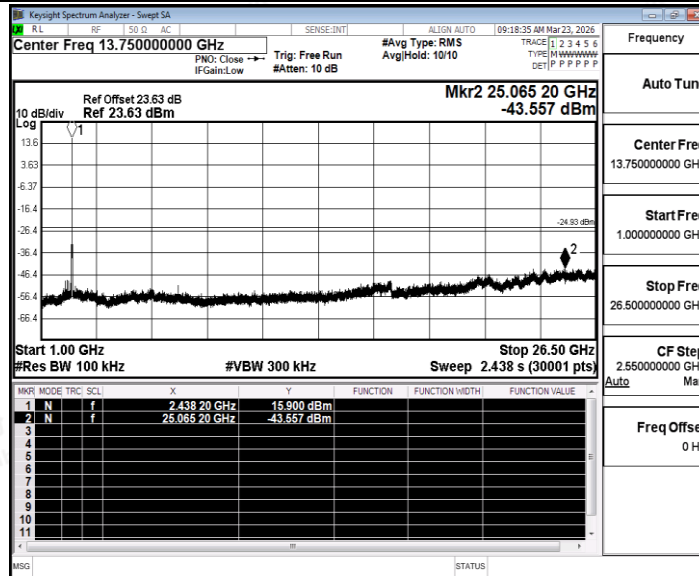


11B_Ant1_2437_30~1000

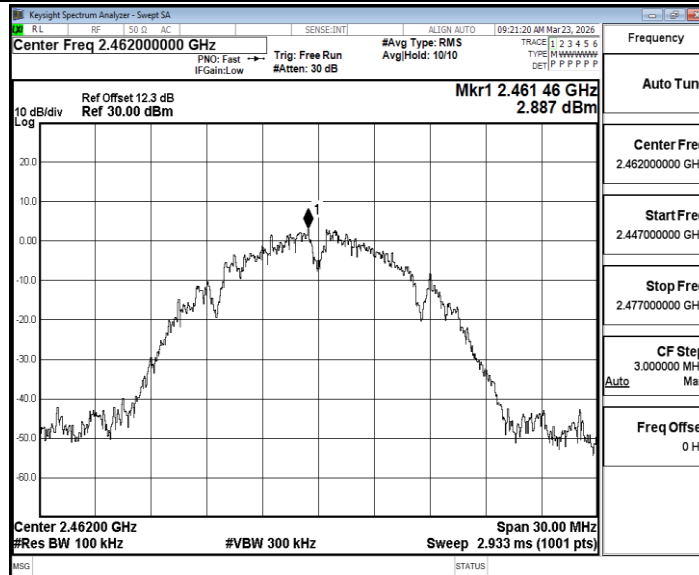




11B_Ant1_2437_1000~26500

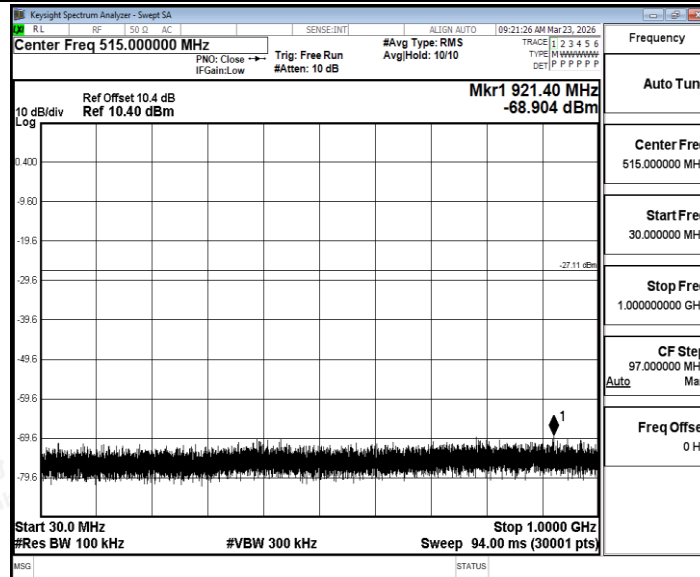


11B_Ant1_2462_0~Reference

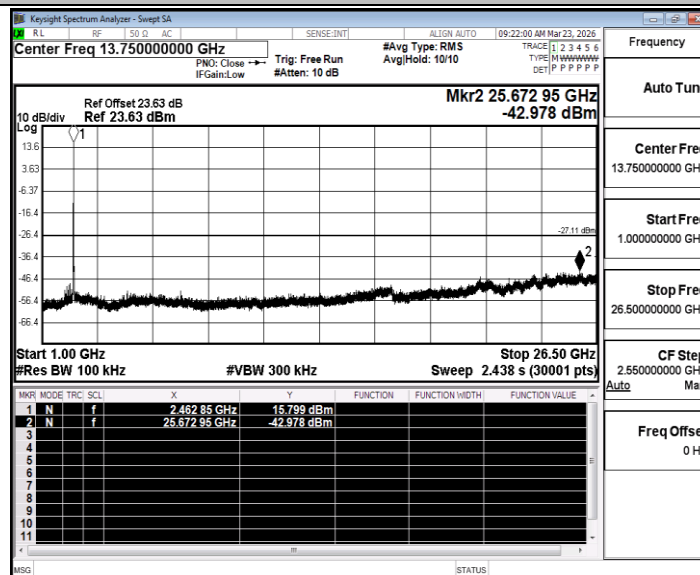


11B_Ant1_2462_30~1000

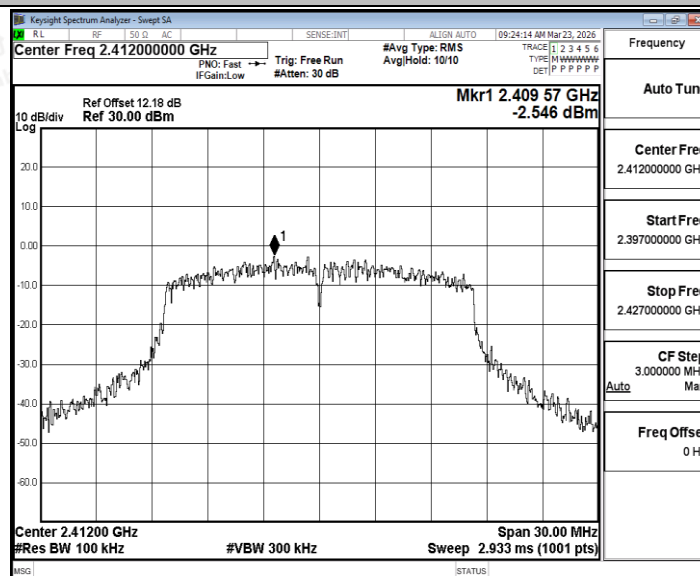




11B_Ant1_2462_1000~26500

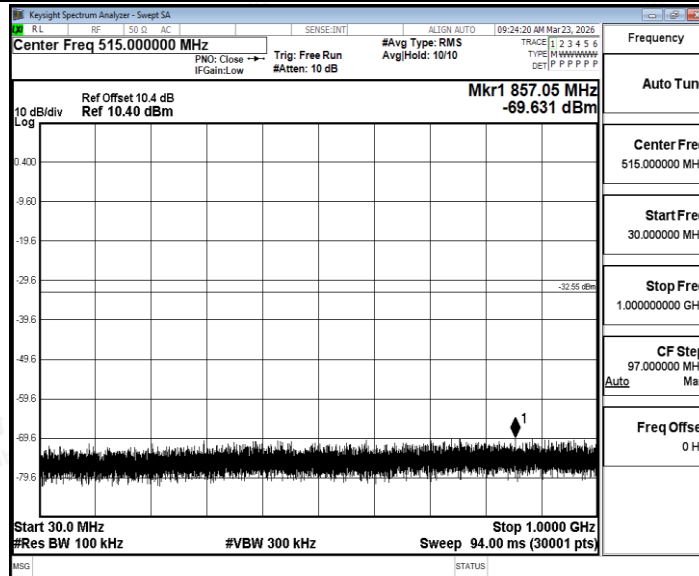


11G_Ant1_2412_0~Reference

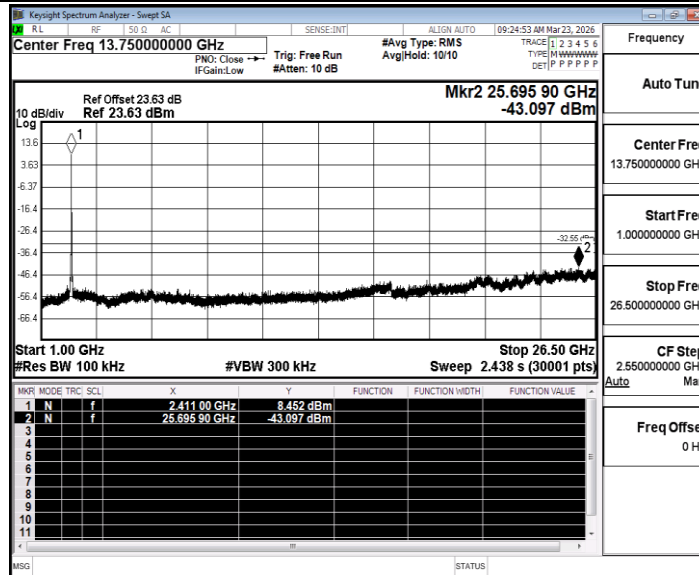




11G_Ant1_2412_30~1000

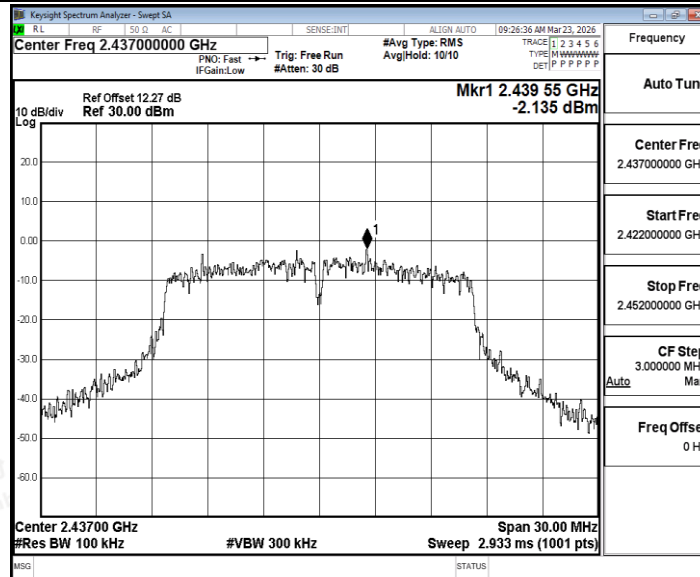


11G_Ant1_2412_1000~26500

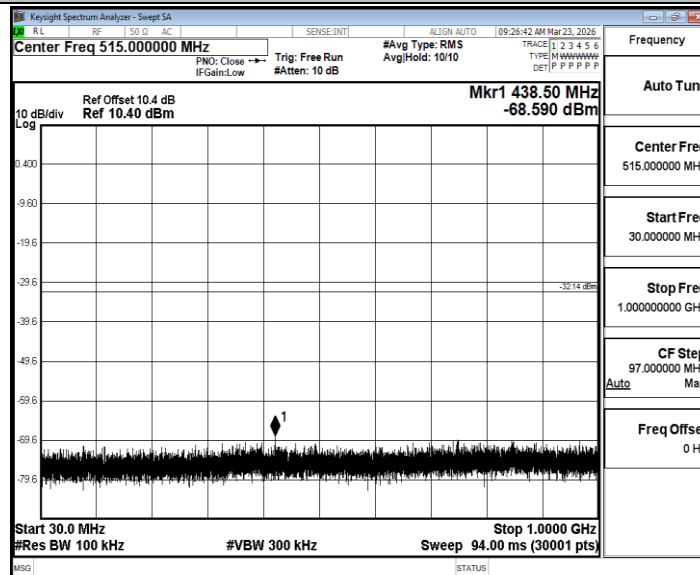


11G_Ant1_2437_0~Reference

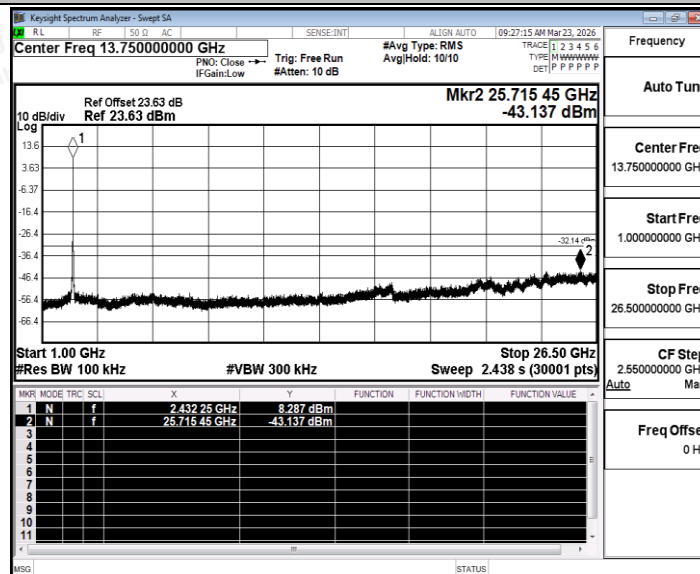




11G_Ant1_2437_30~1000

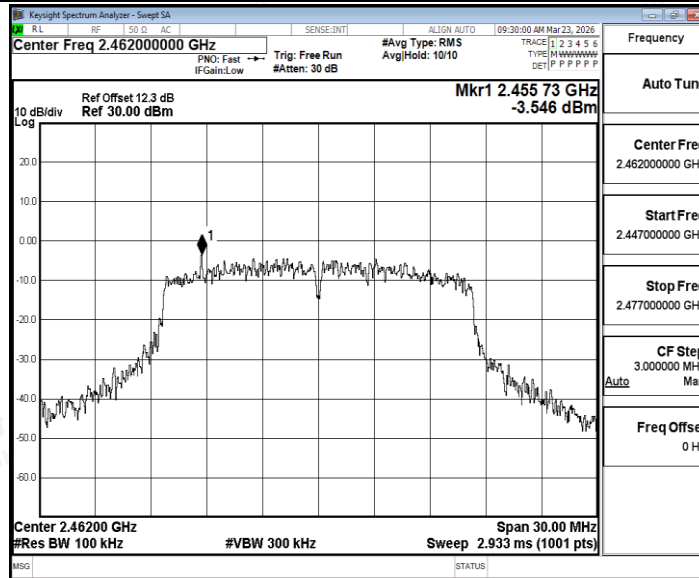


11G_Ant1_2437_1000~26500

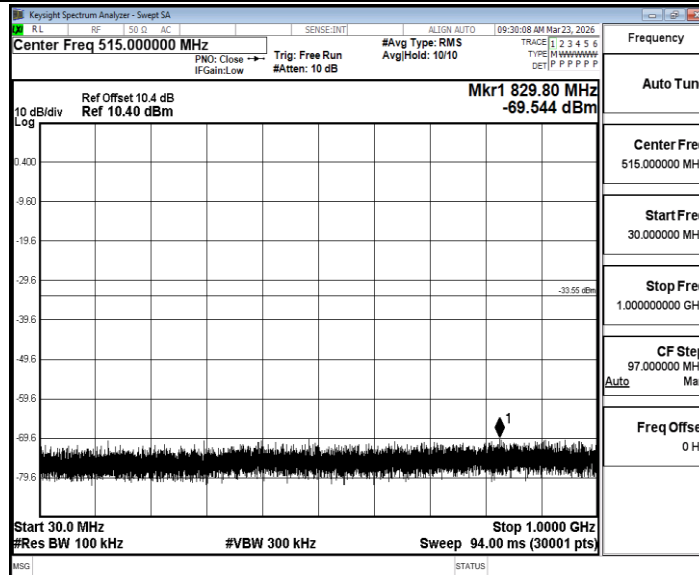




11G_Ant1_2462_0~Reference

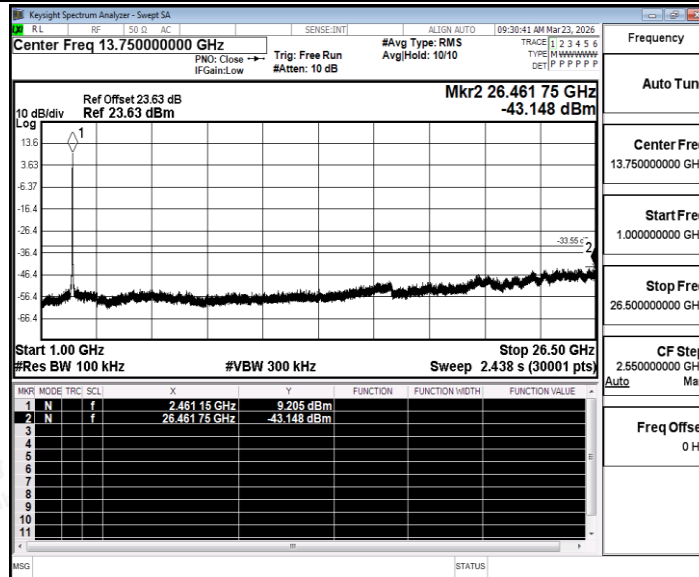


11G_Ant1_2462_30~1000

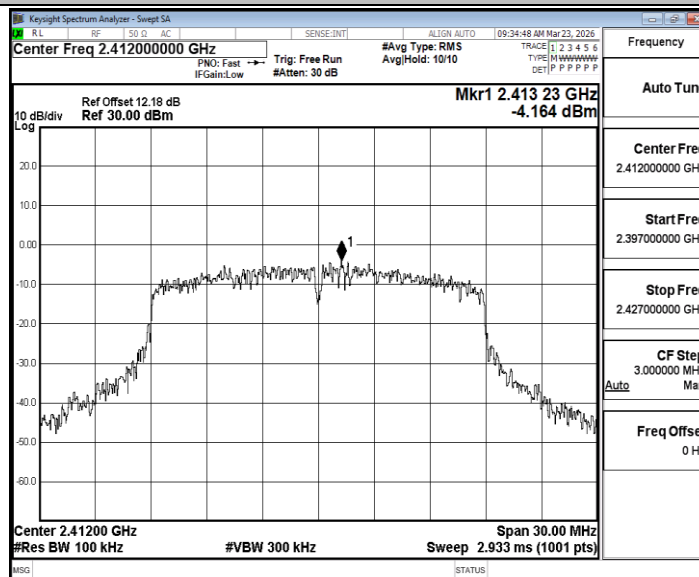


11G_Ant1_2462_1000~26500

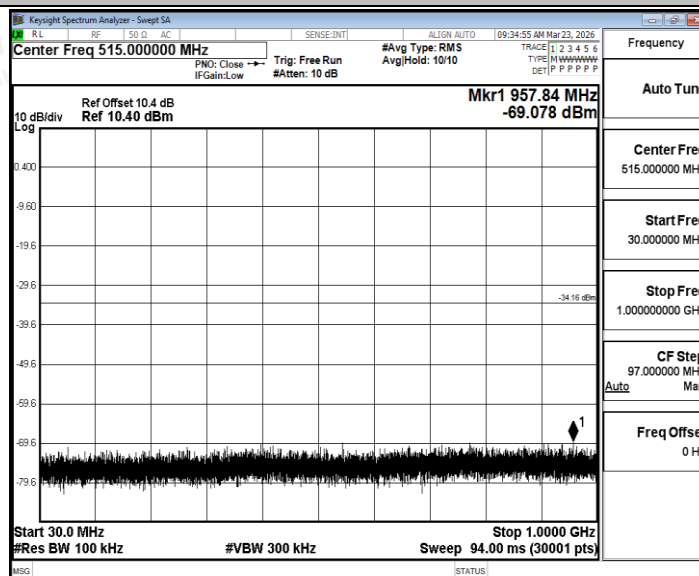




11N20SISO_Ant1_2412_0~Reference

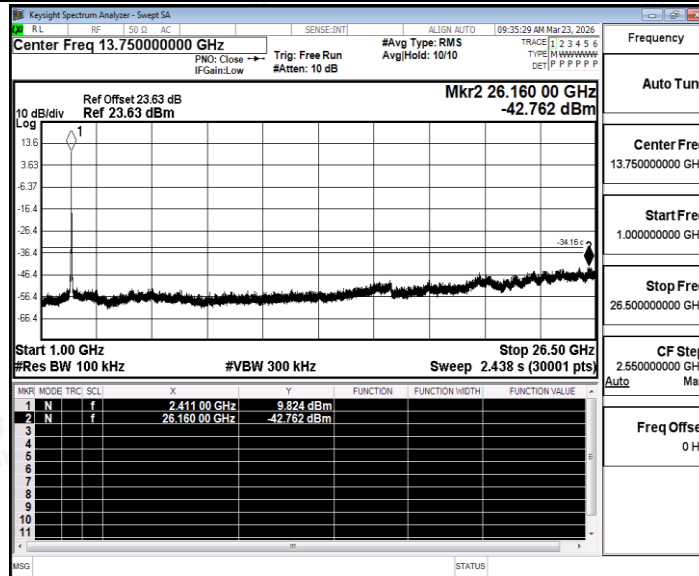


11N20SISO_Ant1_2412_30~1000

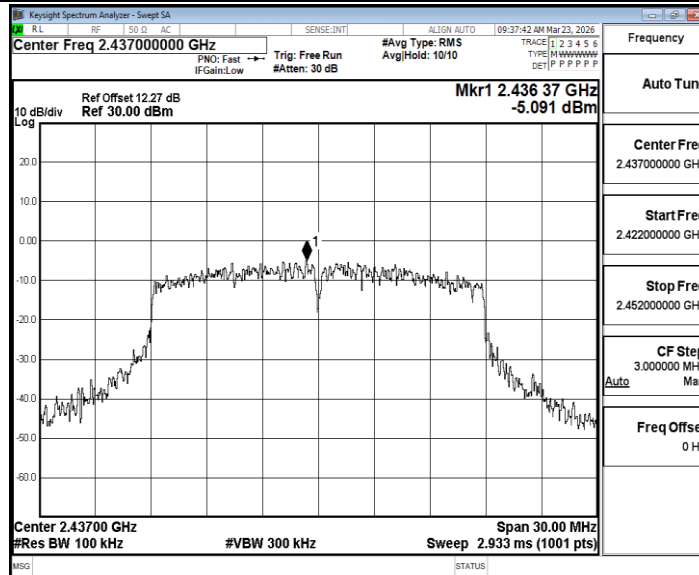




11N20SISO_Ant1_2412_1000~26500

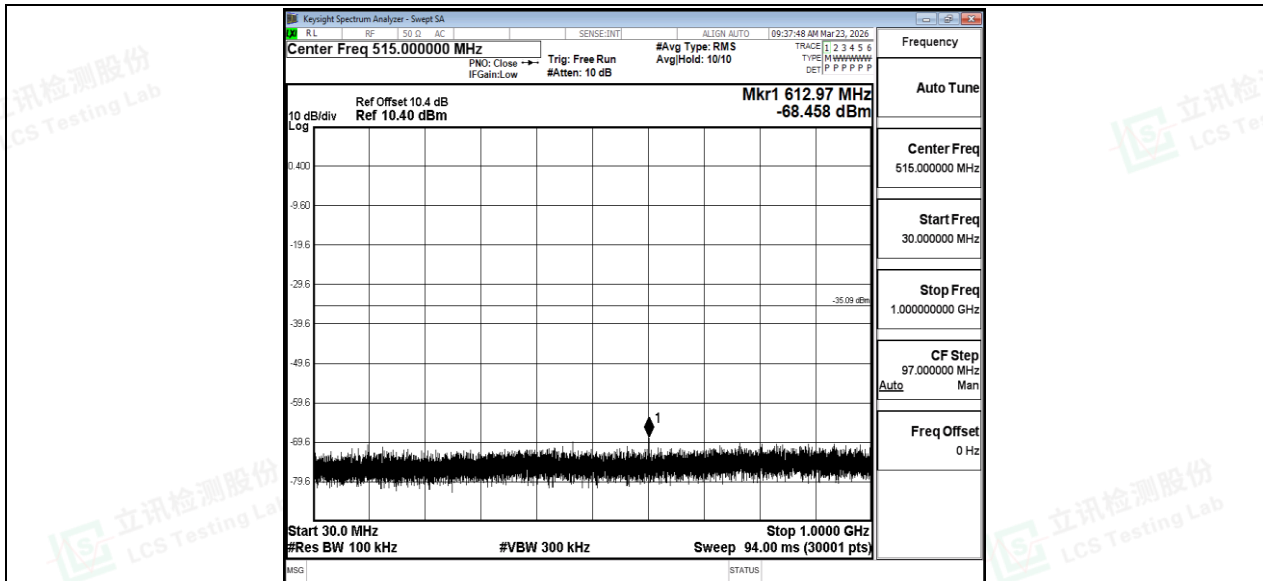


11N20SISO_Ant1_2437_0~Reference

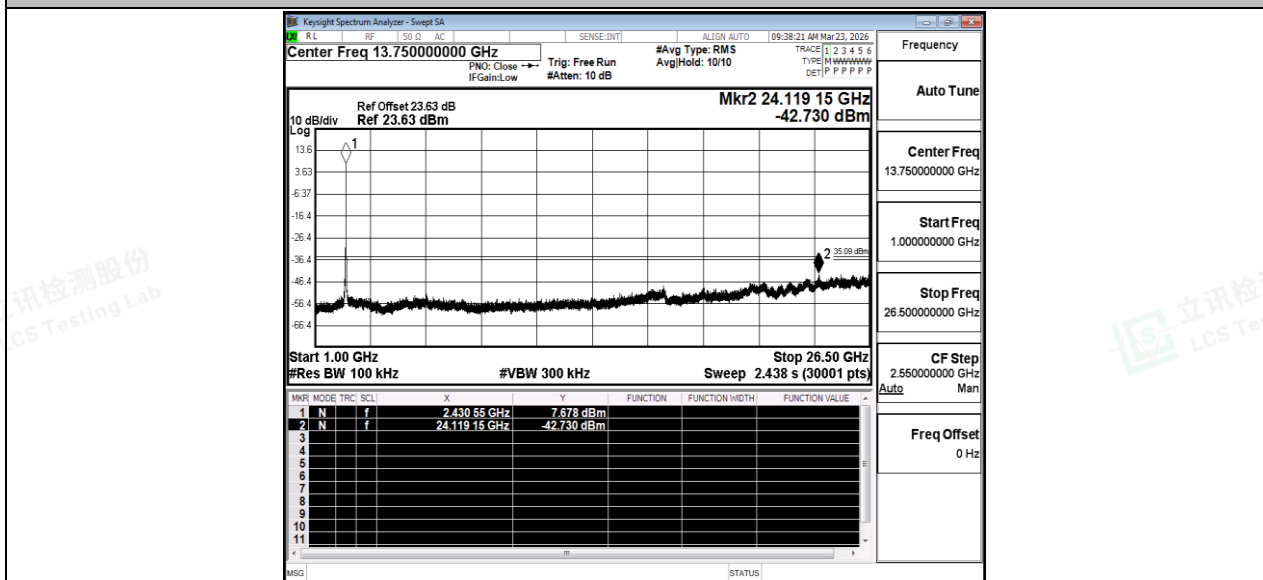


11N20SISO_Ant1_2437_30~1000

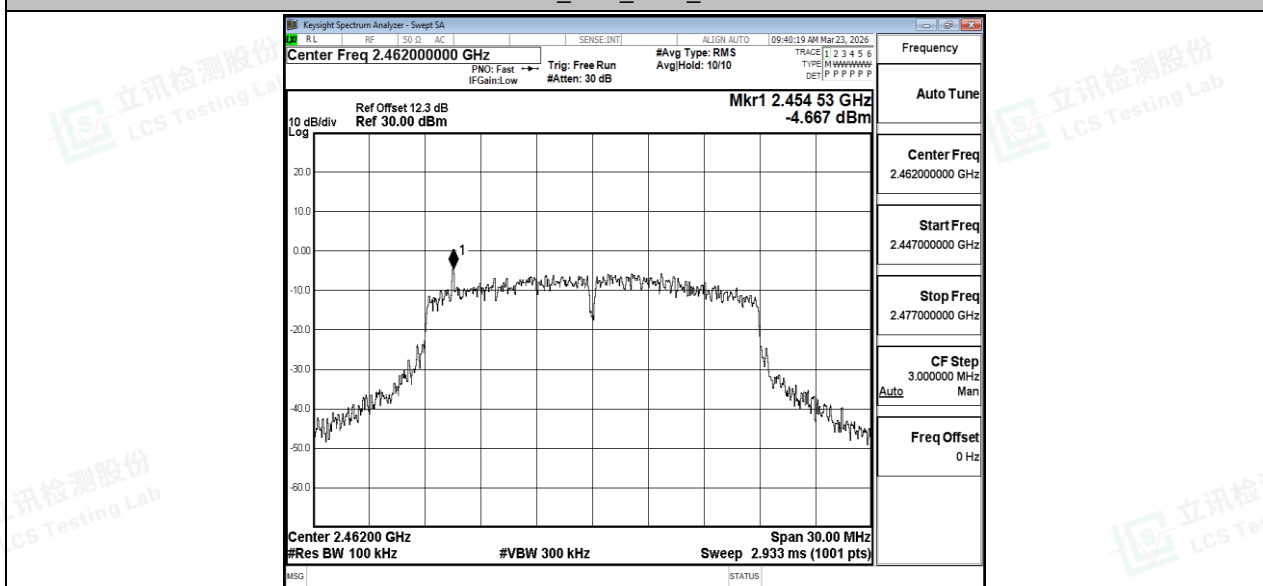




11N20SISO_Ant1_2437_1000~26500

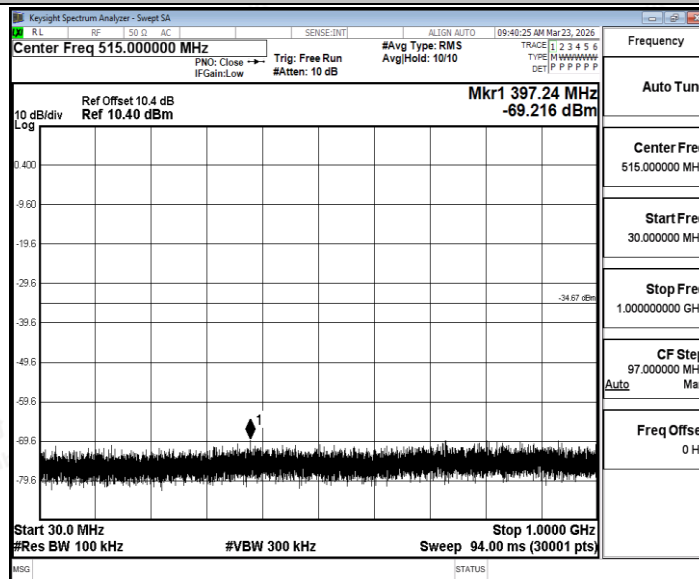


11N20SISO_Ant1_2462_0-Reference

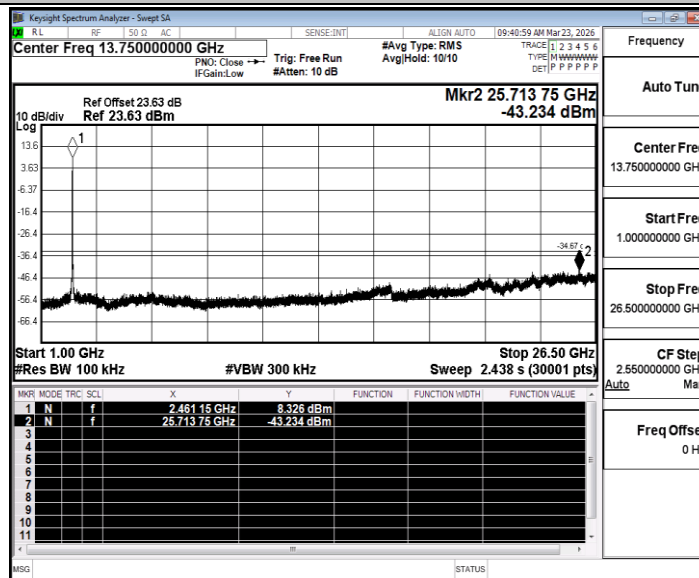




11N20SISO_Ant1_2462_30~1000



11N20SISO_Ant1_2462_1000~26500





B.6 Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	xFactor
11B	Ant1	2412	8.61	8.64	99.65	0.02
		2437	8.61	8.64	99.65	0.02
		2462	8.60	8.63	99.65	0.02
11G	Ant1	2412	1.42	1.45	97.93	0.09
		2437	1.42	1.45	97.93	0.09
		2462	1.43	1.46	97.95	0.09
11N20SISO	Ant1	2412	1.33	1.36	97.79	0.10
		2437	1.33	1.36	97.79	0.10
		2462	1.34	1.37	97.81	0.10

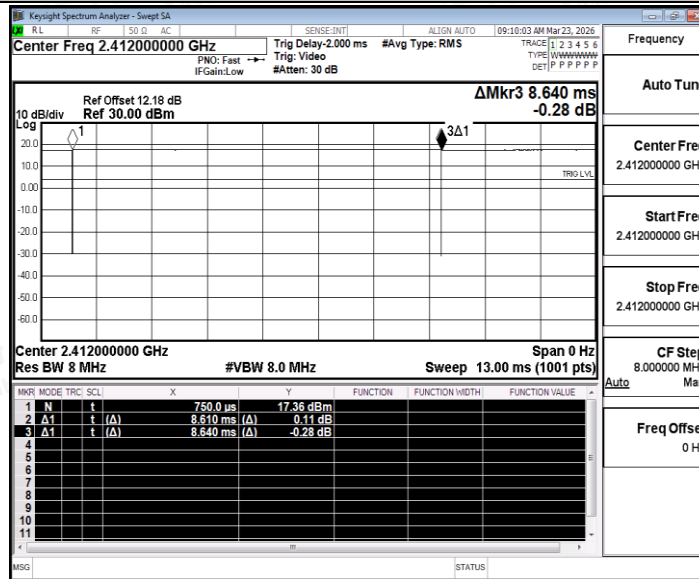
Note :offset=System attenuation +cabal loss



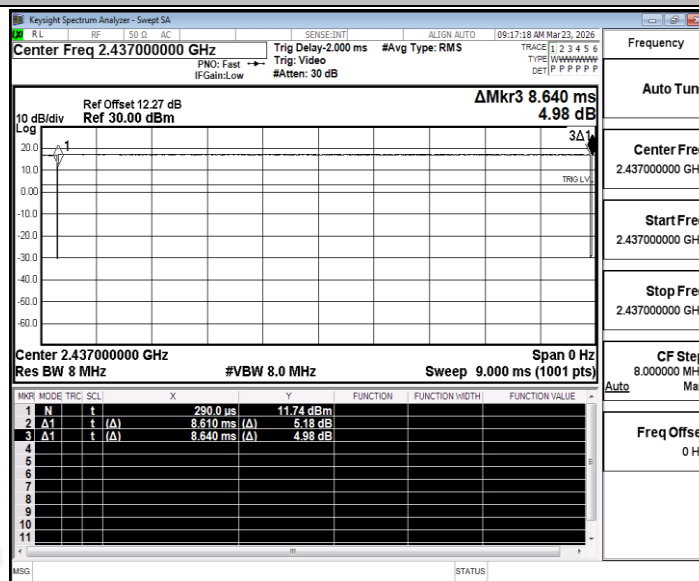


Test Graphs

11B_Ant1_2412

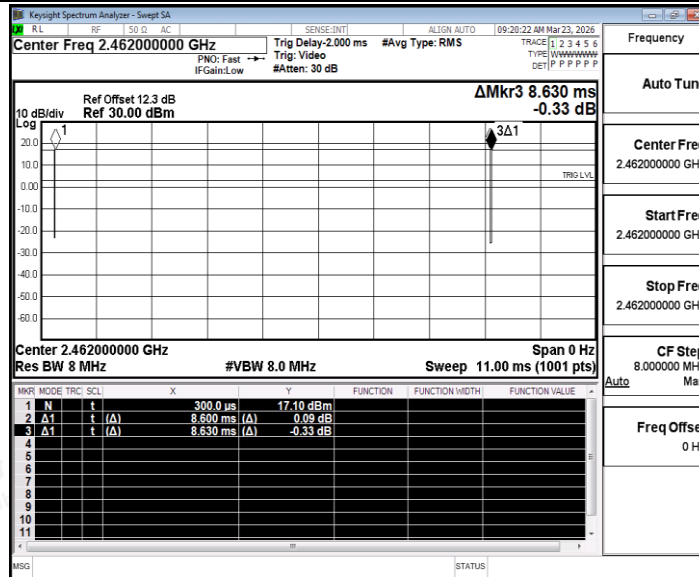


11B_Ant1_2437

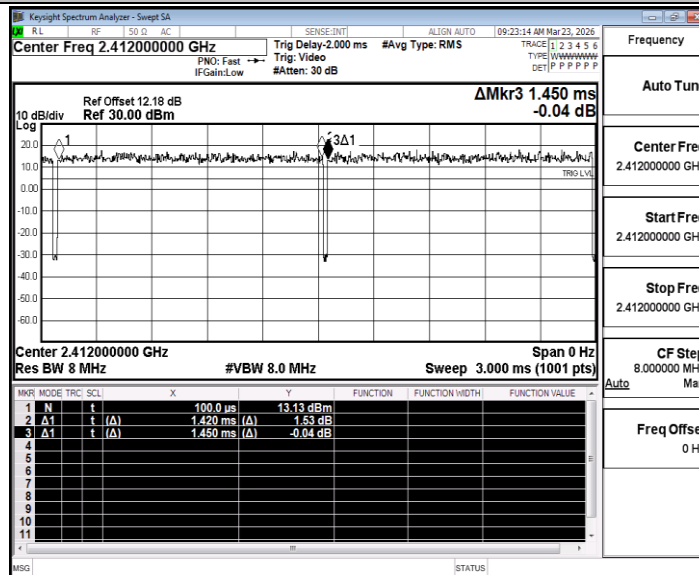


11B_Ant1_2462

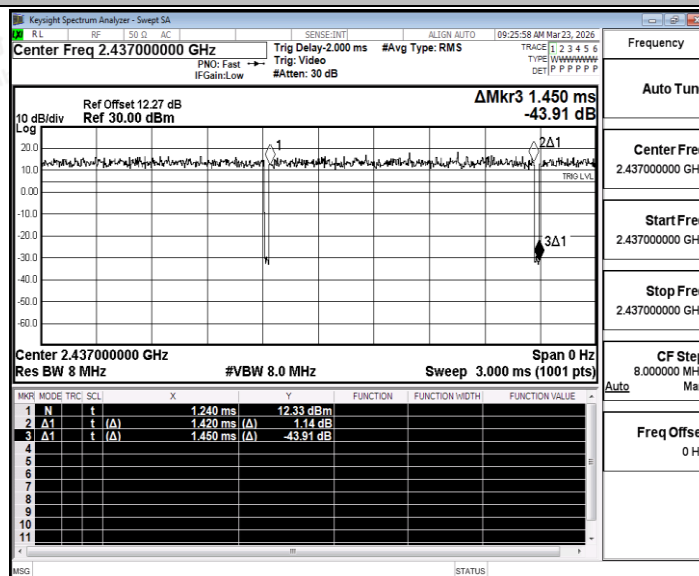




11G_Ant1_2412

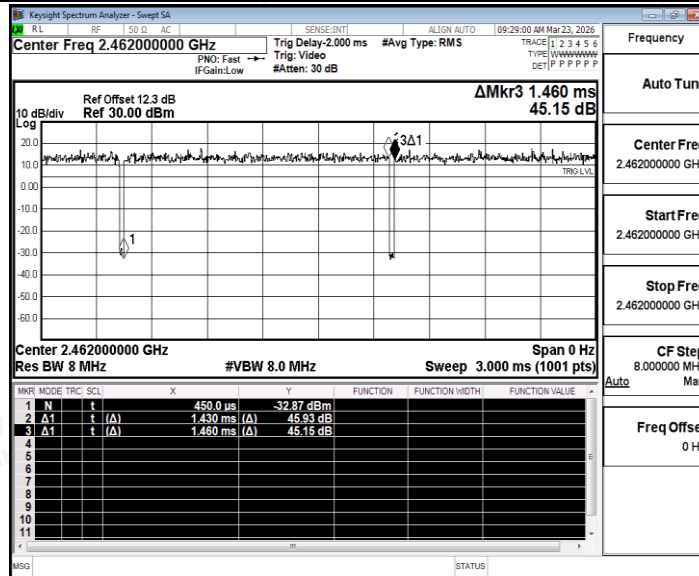


11G_Ant1_2437

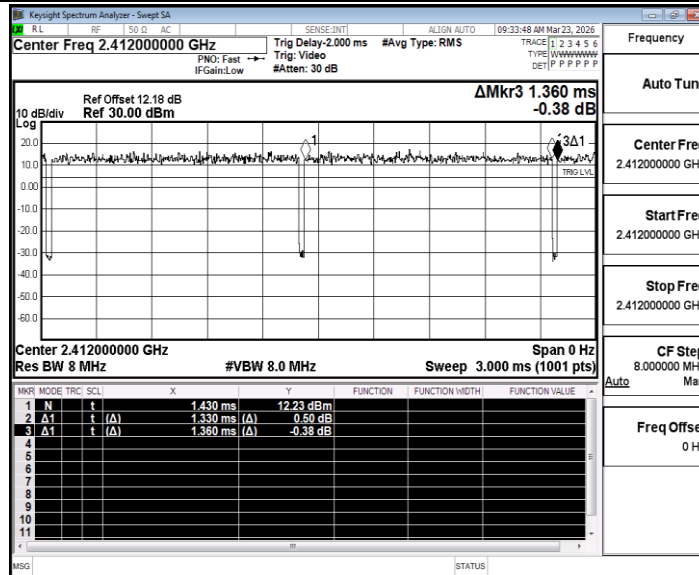




11G_Ant1_2462

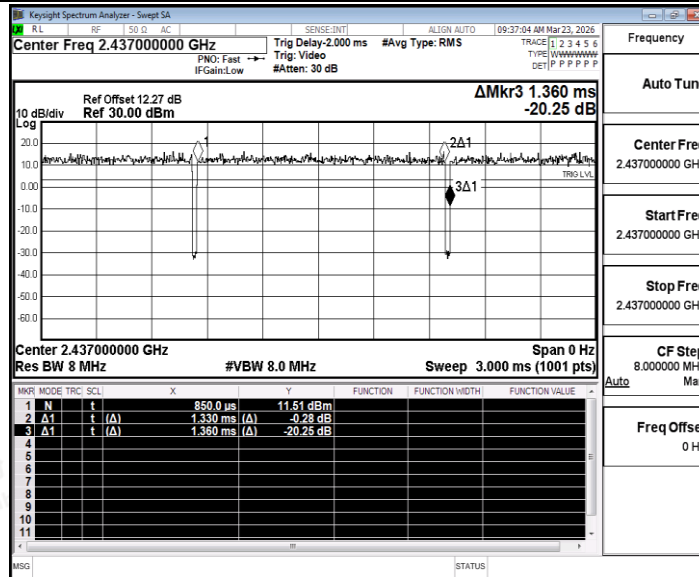


11N20SISO_Ant1_2412



11N20SISO_Ant1_2437





11N20SISO_Ant1_2462

