Appendix Test Data

Report No.:	18220WC40054501	Test Sample No.:	1-2-2
Start Test Date:	2024.2.20	Finish Test Date:	2024.2.21
Test Engineer:	Joker Wang	Auditor:	Justin Feng
Temperature:	25.3℃	Relative Humidity:	47%
Pressure:	101kPa		

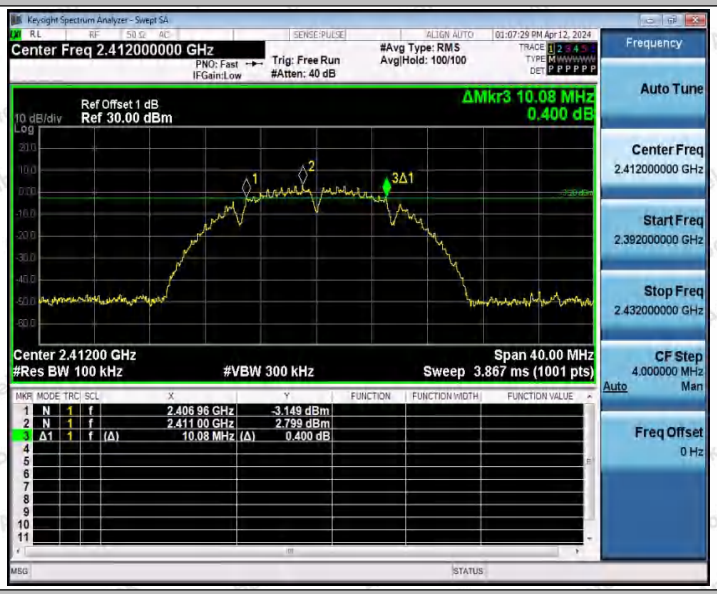
Appendix A: 6dB Bandwidth

Test Result

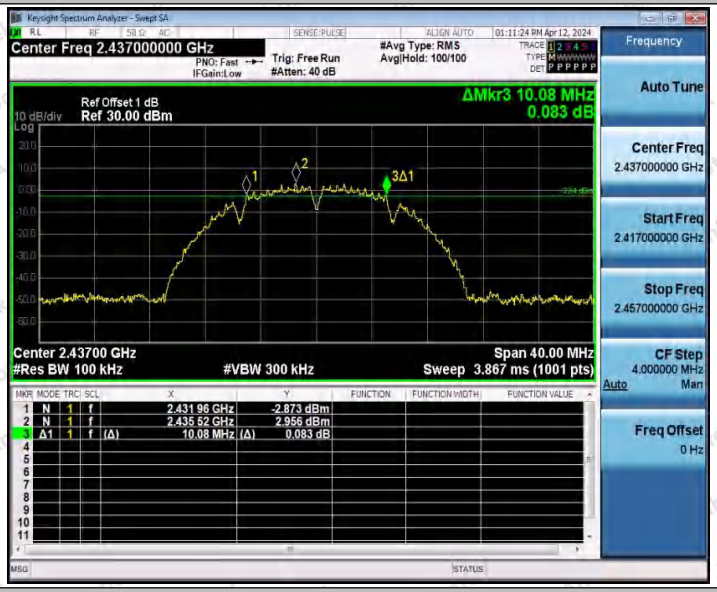
Test Mode	Antenna	Frequency[MHz]	6dB BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
		2437	10.080	2431.960	2442.040	0.5	PASS
		2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.400	2428.800	2445.200	0.5	PASS
		2462	16.320	2453.840	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.600	2403.200	2420.800	0.5	PASS
		2437	17.640	2428.200	2445.840	0.5	PASS
		2462	17.600	2453.200	2470.800	0.5	PASS
11N40SISO	Ant1	2422	35.920	2403.840	2439.760	0.5	PASS
		2437	35.840	2418.920	2454.760	0.5	PASS
		2452	36.000	2433.920	2469.920	0.5	PASS

Test Graphs

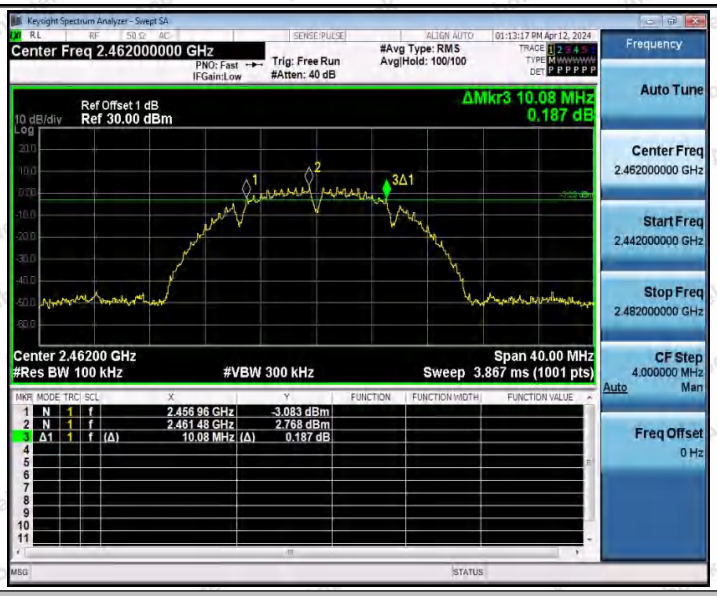
11B_Ant1_2412



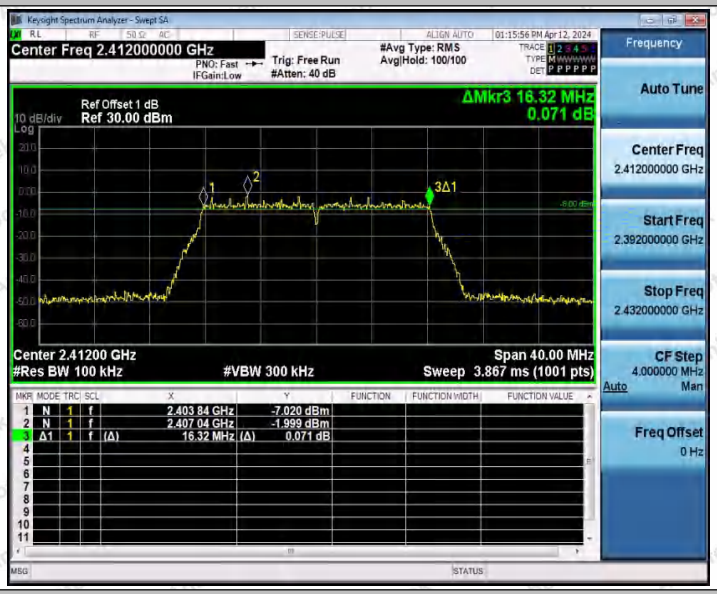
11B_Ant1_2437



11B_Ant1_2462



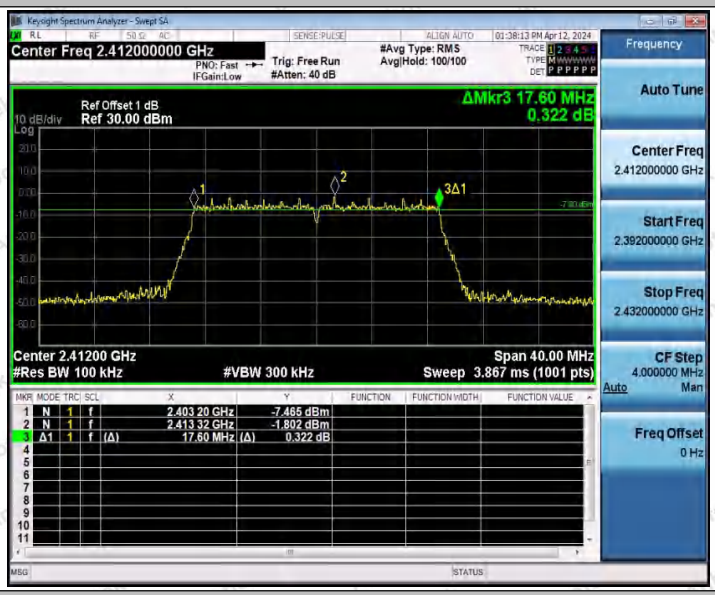
11G_Ant1_2412



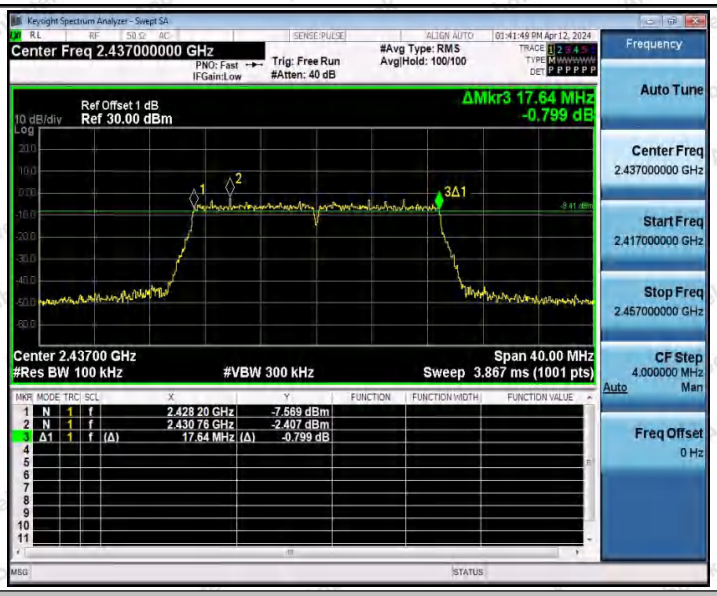
11G_Ant1_2437

11G_Ant1_2462

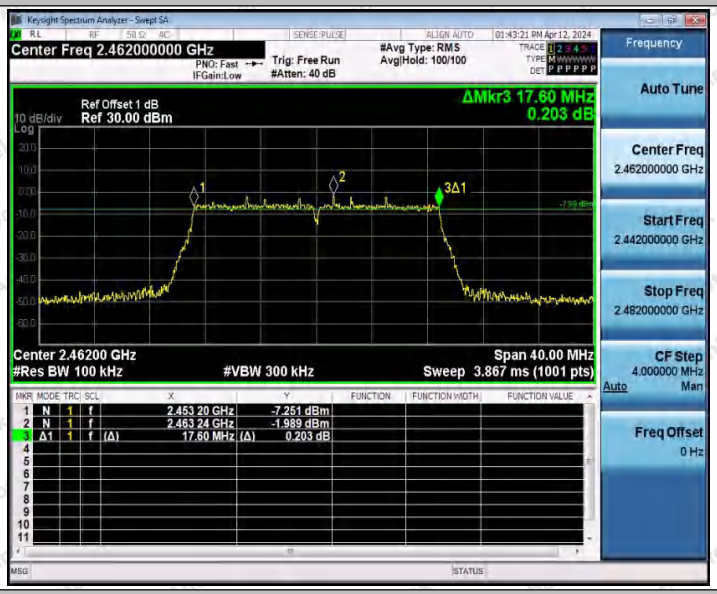
11N20SISO_Ant1_2412



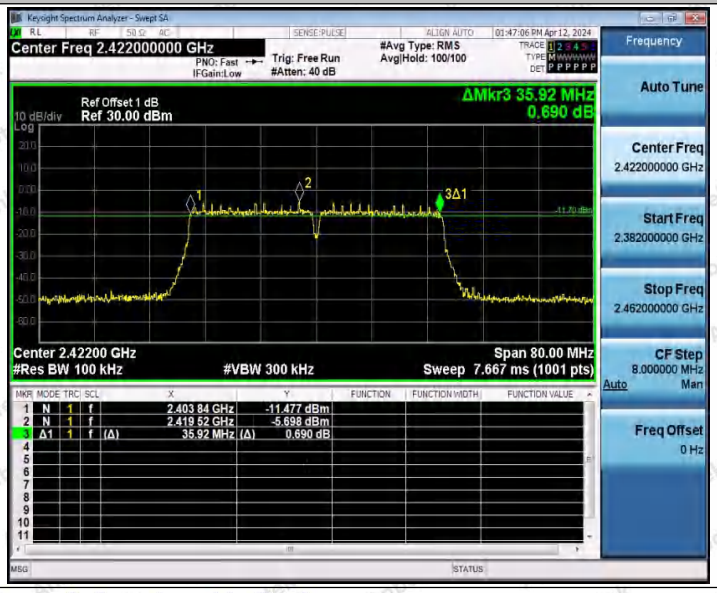
11N20SISO_Ant1_2437



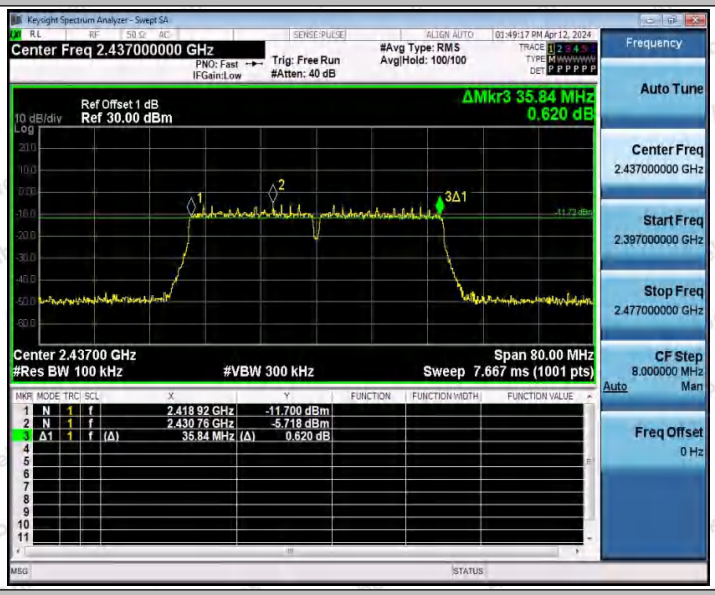
11N20SISO_Ant1_2462



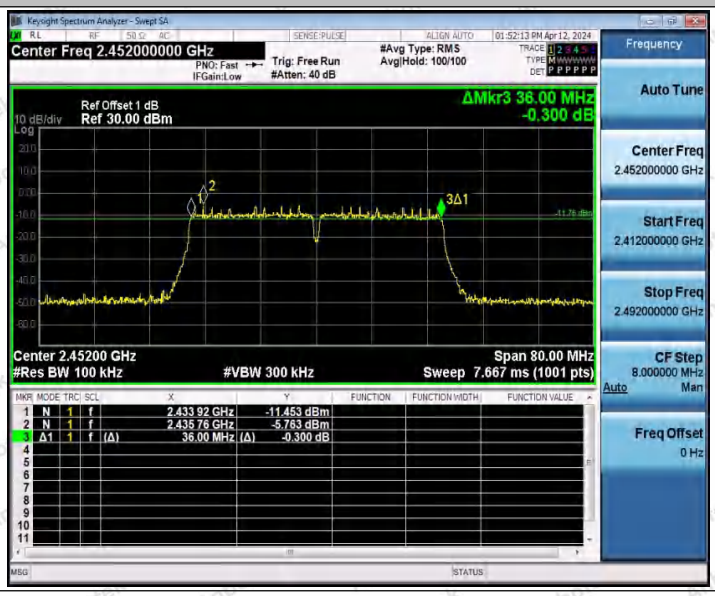
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



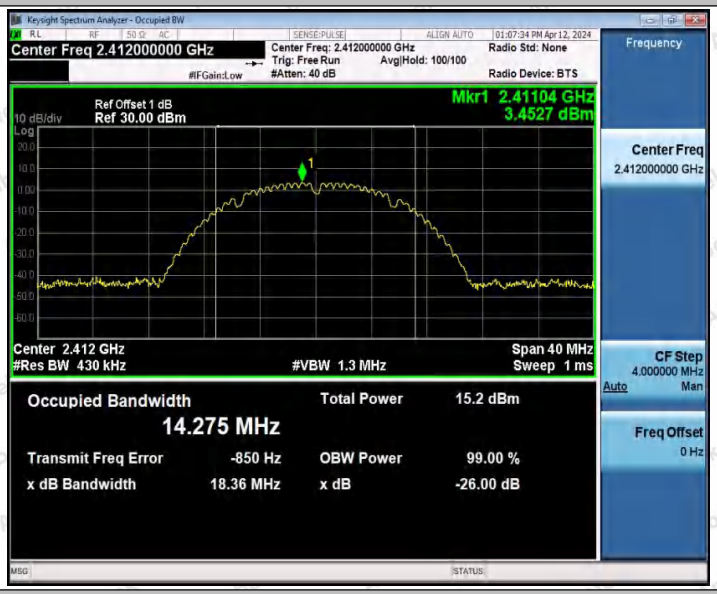
Appendix B: 99% Occupied Bandwidth

Test Result

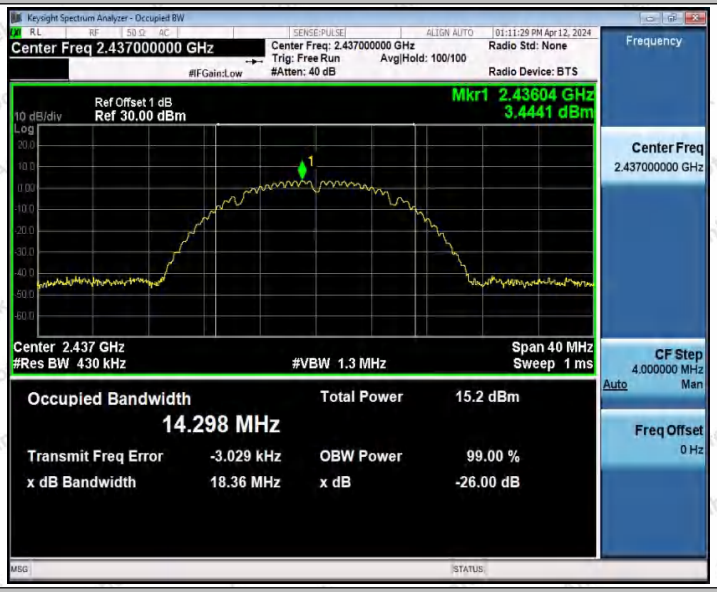
Test Mode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.275	2404.8617	2419.1367	---	---
		2437	14.298	2429.8480	2444.1460	---	---
		2462	14.288	2454.8512	2469.1392	---	---
11G	Ant1	2412	17.036	2403.5120	2420.5480	---	---
		2437	17.160	2428.4137	2445.5737	---	---
		2462	17.136	2453.4557	2470.5917	---	---
11N20SISO	Ant1	2412	17.961	2403.0336	2420.9946	---	---
		2437	17.970	2428.0430	2446.0130	---	---
		2462	17.968	2453.0332	2471.0012	---	---
11N40SISO	Ant1	2422	36.366	2403.8146	2440.1806	---	---
		2437	36.368	2418.8458	2455.2138	---	---
		2452	36.311	2433.8527	2470.1637	---	---

Test Graphs

11B_Ant1_2412

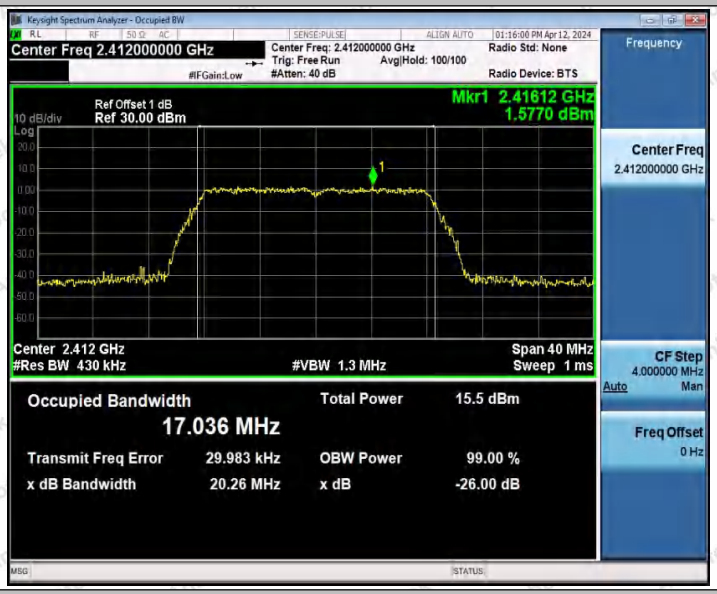


11B_Ant1_2437



11B_Ant1_2462

11G_Ant1_2412



11G_Ant1_2437

11G_Ant1_2462

11N20SISO_Ant1_2412

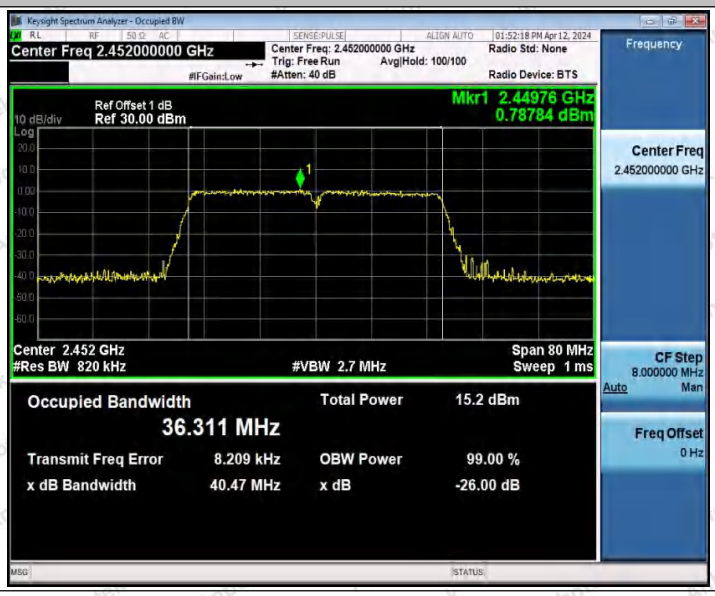
11N20SISO_Ant1_2437

11N20SISO_Ant1_2462

11N40SISO_Ant1_2422

11N40SISO_Ant1_2437

11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result Average

TestMode	Antenna	Frequency[MHz]	Average Output Power[dBm]	Conducted Limit[dBm]
11B	Ant1	2412	13.63	≤30.00
		2437	13.63	≤30.00
		2462	13.61	≤30.00
11G	Ant1	2412	13.93	≤30.00
		2437	13.83	≤30.00
		2462	13.89	≤30.00
11N20SISO	Ant1	2412	**14.04**	≤30.00
		2437	14.04	≤30.00
		2462	13.88	≤30.00
11N40SISO	Ant1	2422	12.98	≤30.00
		2437	12.90	≤30.00
		2452	12.99	≤30.00

Note：The Duty Cycle Factor(10*log(1/D)) and cable loss are compensated in the graph.

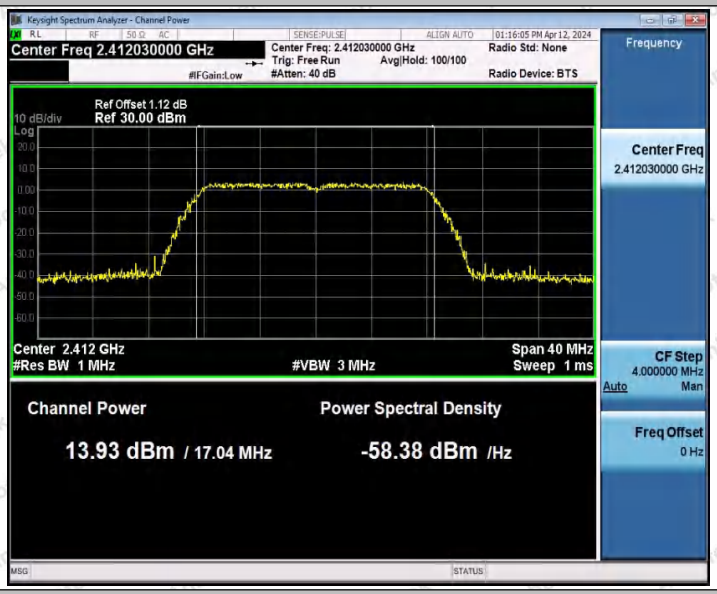
Test Graphs

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

11N40SISO_Ant1_2437

11N40SISO_Ant1_2452

Maximum conducted output power

Appendix D: Maximum power spectral density

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/30kHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-9.99	-19.99	≤8.00	PASS
		2437	-10.04	-20.04	≤8.00	PASS
		2462	-10.03	-20.03	≤8.00	PASS
11G	Ant1	2412	-14.51	-24.51	≤8.00	PASS
		2437	-15.10	-25.10	≤8.00	PASS
		2462	-14.95	-24.95	≤8.00	PASS
11N20SISO	Ant1	2412	-15.17	-25.17	≤8.00	PASS
		2437	-15.17	-25.17	≤8.00	PASS
		2462	-14.73	-24.73	≤8.00	PASS
11N40SISO	Ant1	2422	-18.48	-28.48	≤8.00	PASS
		2437	-18.90	-28.90	≤8.00	PASS
		2452	-18.44	-28.44	≤8.00	PASS

Note：

1. The Duty Cycle Factor(10*log(1/D)) and cable loss are compensated in the graph.
2. PSD(dBm/3kHz)= PSD(dBm/30kHz)- (10*log(30/3))

Test Graphs

11B_Ant1_2412

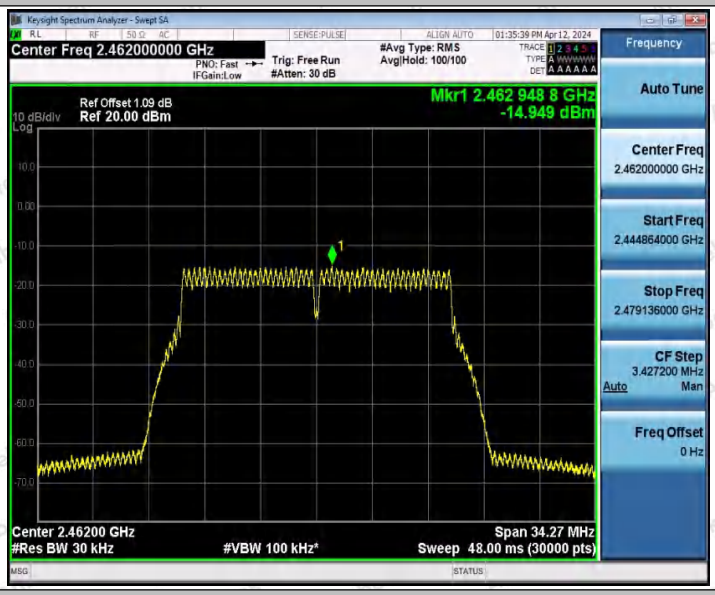
11B_Ant1_2437

11B_Ant1_2462

11G_Ant1_2412

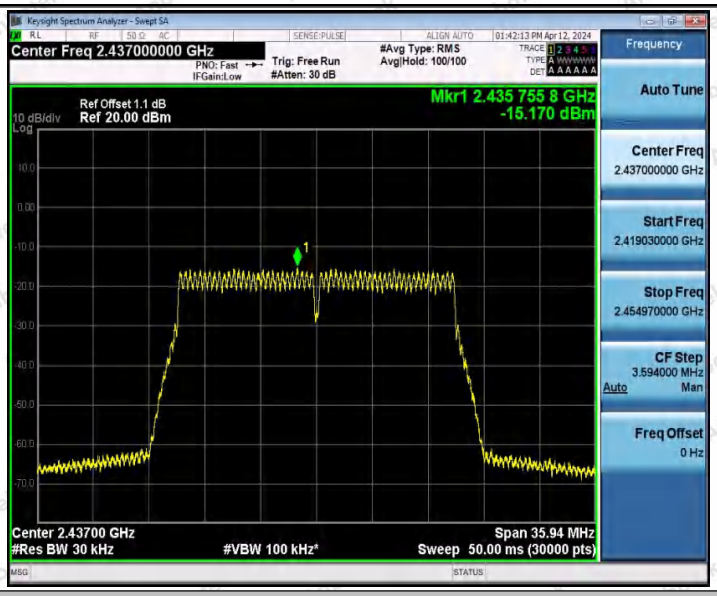
11G_Ant1_2437

11G_Ant1_2462



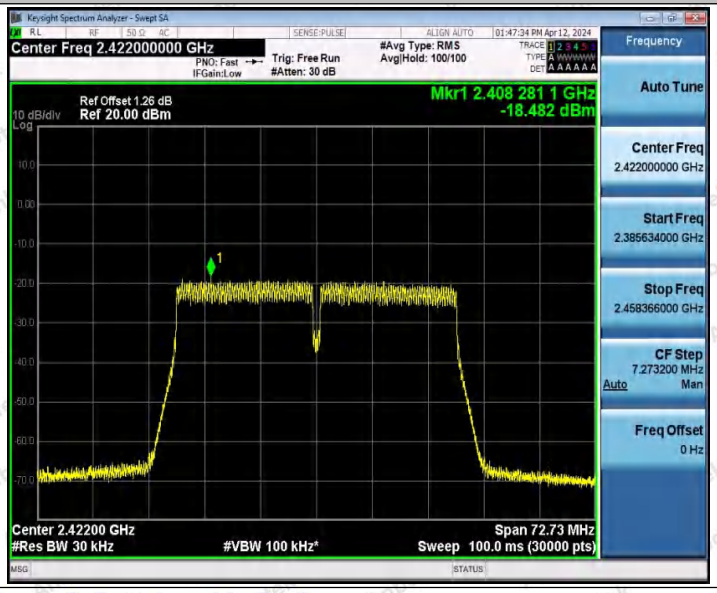
11N20SISO_Ant1_2412

11N20SISO_Ant1_2437

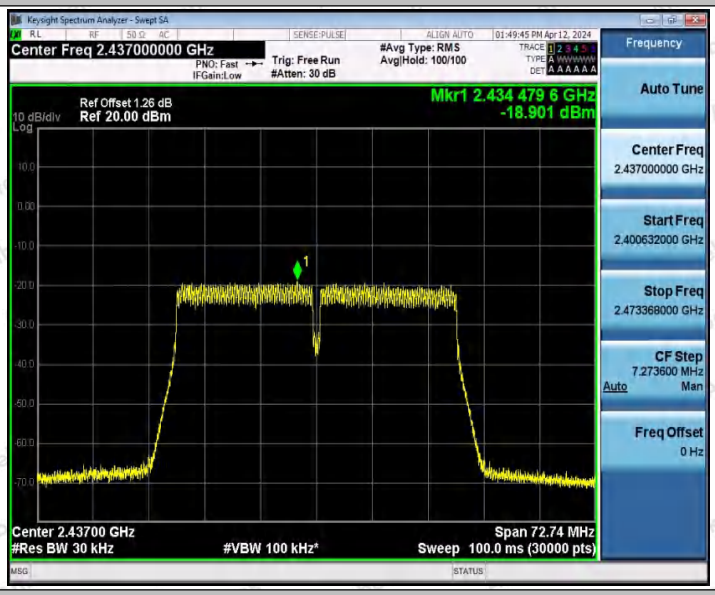


11N20SISO_Ant1_2462

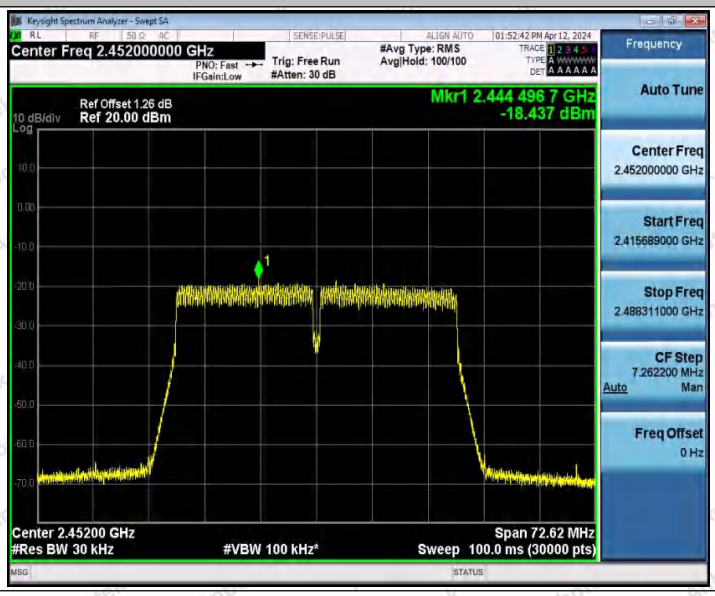
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



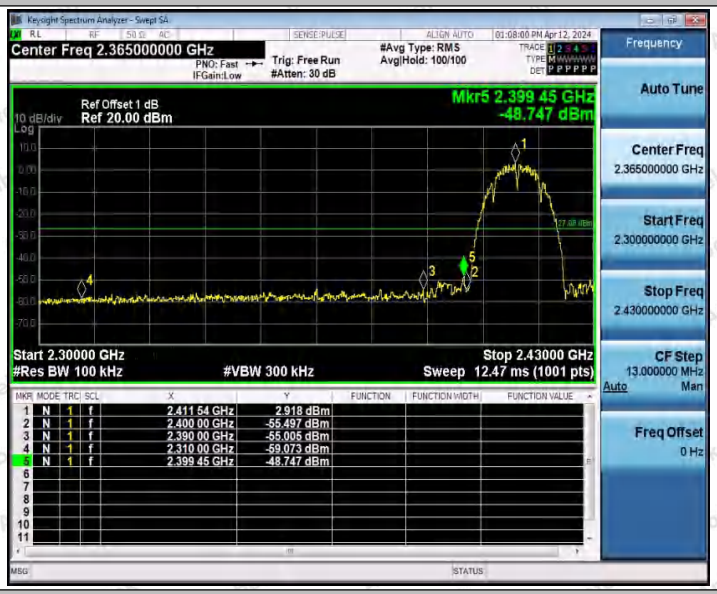
Appendix E: Conducted Band edge

Test Result

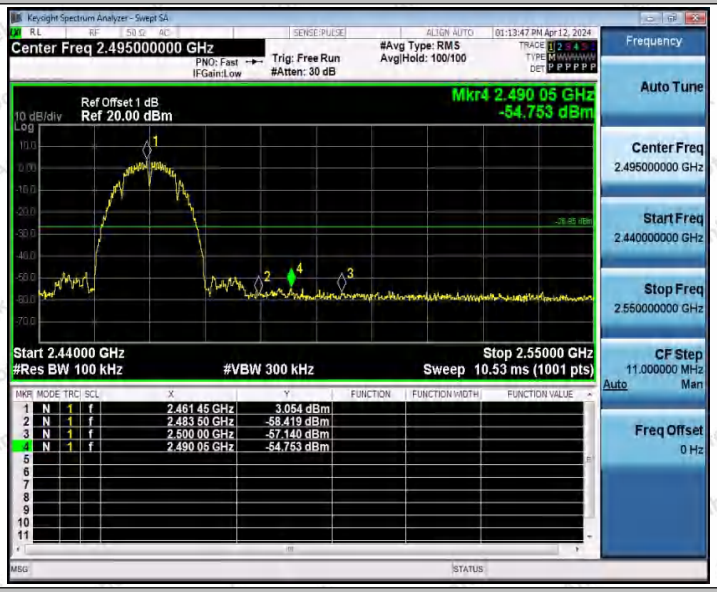
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.92	-48.75	≤-27.08	PASS
		High	2462	3.05	-54.75	≤-26.95	PASS
11G	Ant1	Low	2412	-1.77	-46.39	≤-31.77	PASS
		High	2462	-2.01	-53.7	≤-32.01	PASS
11N20SISO	Ant1	Low	2412	-1.56	-42.26	≤-31.56	PASS
		High	2462	-1.93	-53.42	≤-31.93	PASS
11N40SISO	Ant1	Low	2422	-5.76	-48.04	≤-35.76	PASS
		High	2452	-5.71	-49.45	≤-35.71	PASS

Test Graphs

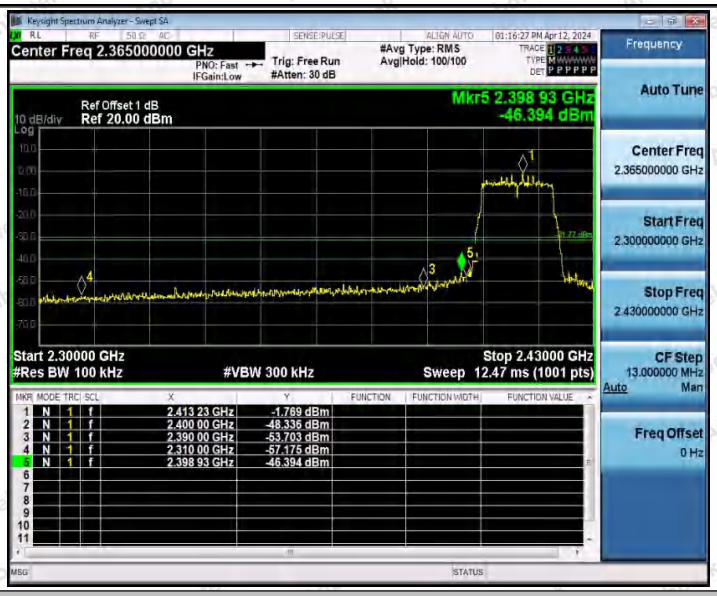
11B_Ant1_Low_2412



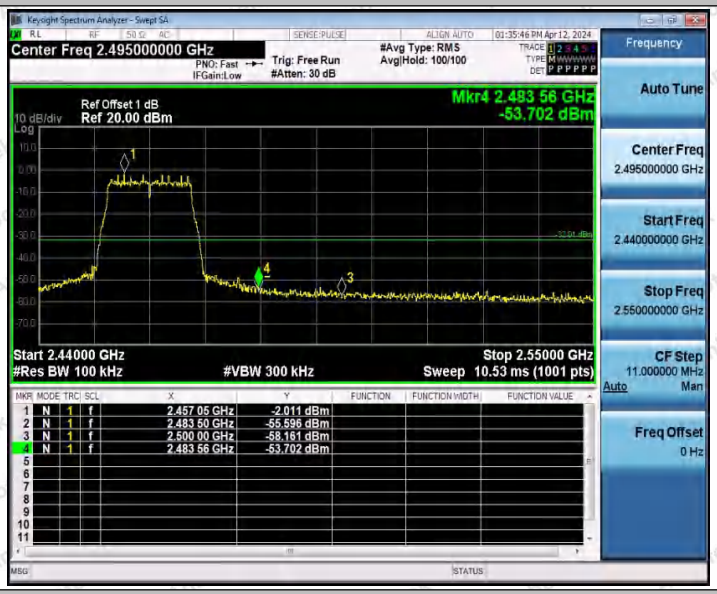
11B_Ant1_High_2462



11G_Ant1_Low_2412

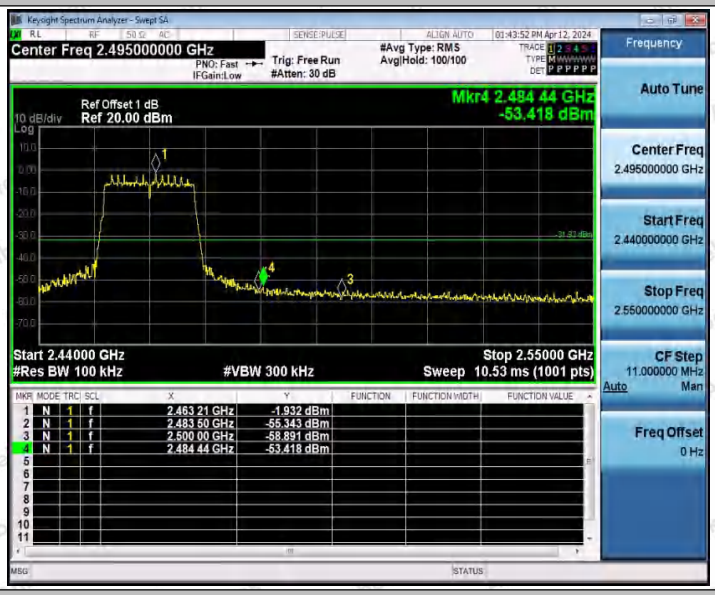


11G_Ant1_High_2462



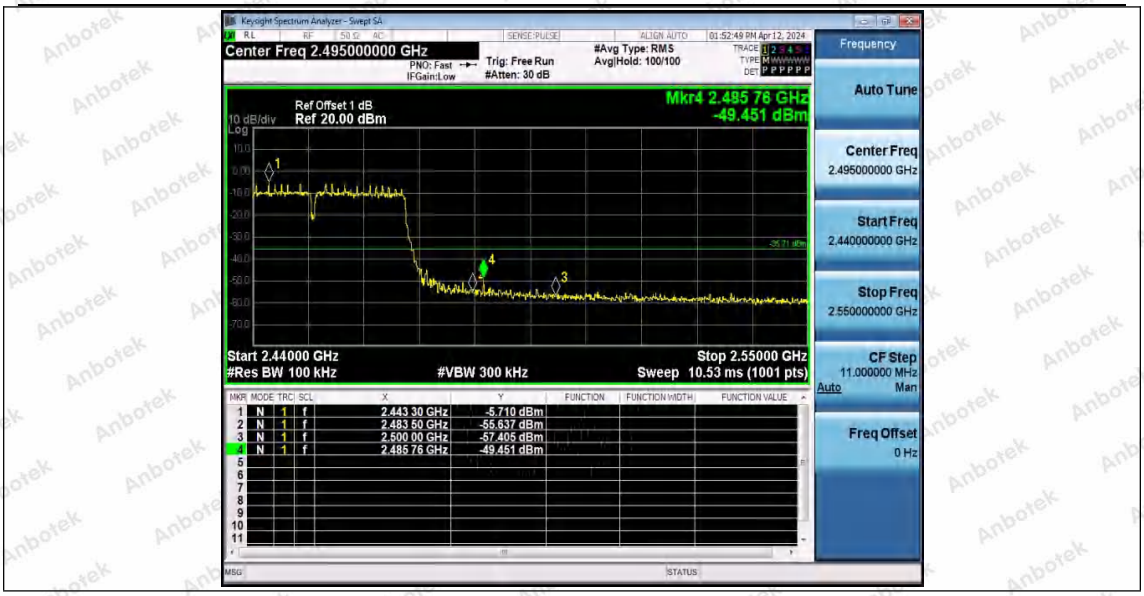
11N20SISO_Ant1_Low_2412

11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422

11N40SISO_Ant1_High_2452


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.495000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.485 76 GHz
-49.451 dBm
Start 2.44000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
Sweep 10.53 ms (1001 pts)
1 N 1 f 2.443 30 GHz -5.710 dBm
2 N 1 f 2.483 50 GHz -55.637 dBm
3 N 1 f 2.500 00 GHz -57.405 dBm
4 N 1 f 2.485 76 GHz -49.451 dBm
Frequency
Auto Tune
Center Freq
2.495000000 GHz
Start Freq
2.440000000 GHz
Stop Freq
2.550000000 GHz
CF Step
11.000000 MHz
Auto Man
Freq Offset
0 Hz

Appendix F: Conducted Spurious Emission

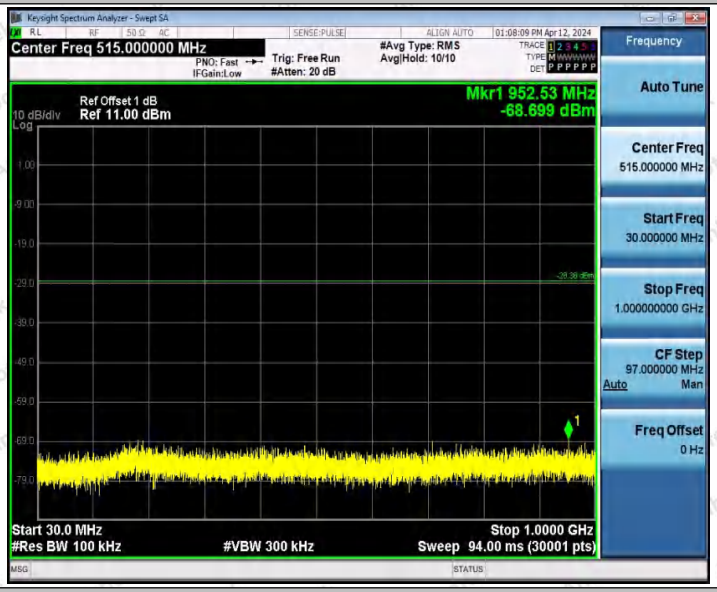
Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.62	1.62	---	PASS
			30~1000	1.62	-68.7	≤-28.38	PASS
			1000~26500	1.62	-53.29	≤-28.38	PASS
		2437	Reference	1.99	1.99	---	PASS
			30~1000	1.99	-68.33	≤-28.01	PASS
			1000~26500	1.99	-53.66	≤-28.01	PASS
		2462	Reference	1.83	1.83	---	PASS
			30~1000	1.83	-68.65	≤-28.17	PASS
			1000~26500	1.83	-54	≤-28.17	PASS
11G	Ant1	2412	Reference	-2.84	-2.84	---	PASS
			30~1000	-2.84	-68.11	≤-32.84	PASS
			1000~26500	-2.84	-53.88	≤-32.84	PASS
		2437	Reference	-4.41	-4.41	---	PASS
			30~1000	-4.41	-68.63	≤-34.41	PASS
			1000~26500	-4.41	-54.17	≤-34.41	PASS
		2462	Reference	-5.25	-5.25	---	PASS
			30~1000	-5.25	-69.37	≤-35.25	PASS
			1000~26500	-5.25	-53.6	≤-35.25	PASS
11N20SISO	Ant1	2412	Reference	-4.73	-4.73	---	PASS
			30~1000	-4.73	-69.18	≤-34.73	PASS
			1000~26500	-4.73	-53.62	≤-34.73	PASS
		2437	Reference	-3.95	-3.95	---	PASS
			30~1000	-3.95	-68.55	≤-33.95	PASS
			1000~26500	-3.95	-53.69	≤-33.95	PASS
		2462	Reference	-4.24	-4.24	---	PASS
			30~1000	-4.24	-68.3	≤-34.24	PASS
			1000~26500	-4.24	-53.31	≤-34.24	PASS
11N40SISO	Ant1	2422	Reference	-6.23	-6.23	---	PASS
			30~1000	-6.23	-68.98	≤-36.23	PASS
			1000~26500	-6.23	-53.91	≤-36.23	PASS
		2437	Reference	-7.12	-7.12	---	PASS
			30~1000	-7.12	-68.96	≤-37.12	PASS
			1000~26500	-7.12	-53.35	≤-37.12	PASS
		2452	Reference	-5.92	-5.92	---	PASS
			30~1000	-5.92	-69.01	≤-35.92	PASS
			1000~26500	-5.92	-53.83	≤-35.92	PASS

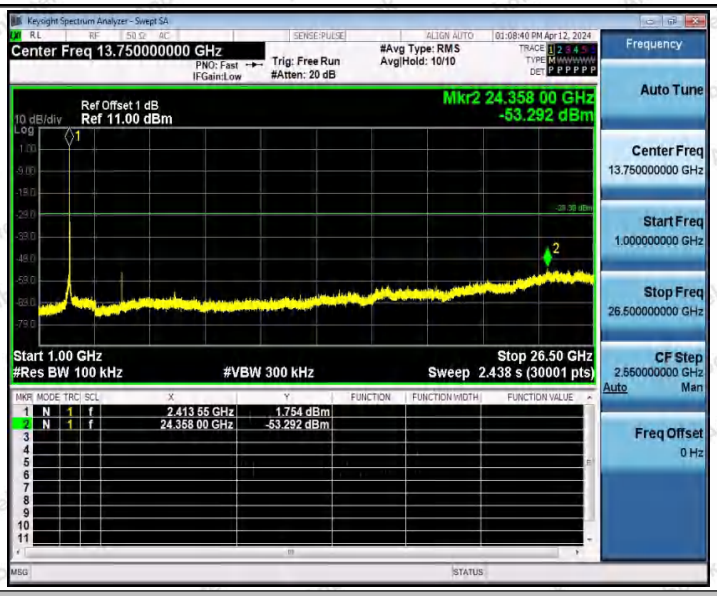
Test Graphs

11B_Ant1_2412_0~Reference

11B_Ant1_2412_30~1000

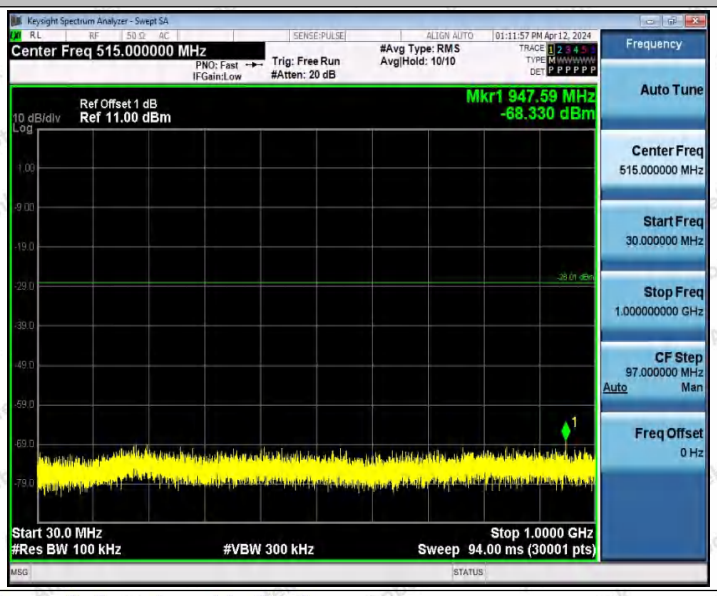


11B_Ant1_2412_1000~26500

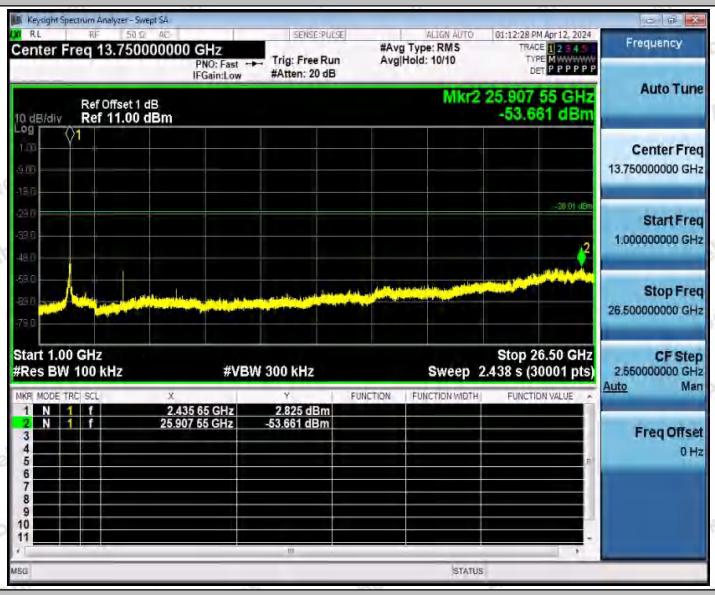


11B_Ant1_2437_0~Reference

11B_Ant1_2437_30~1000

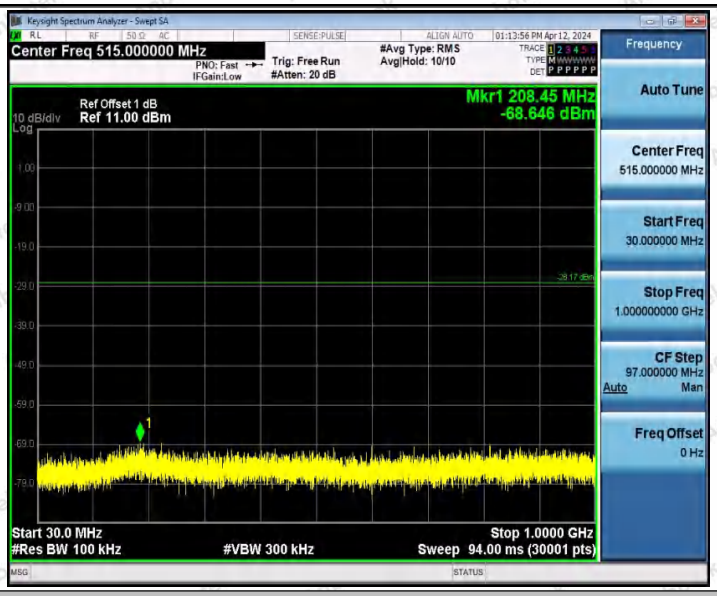


11B_Ant1_2437_1000~26500

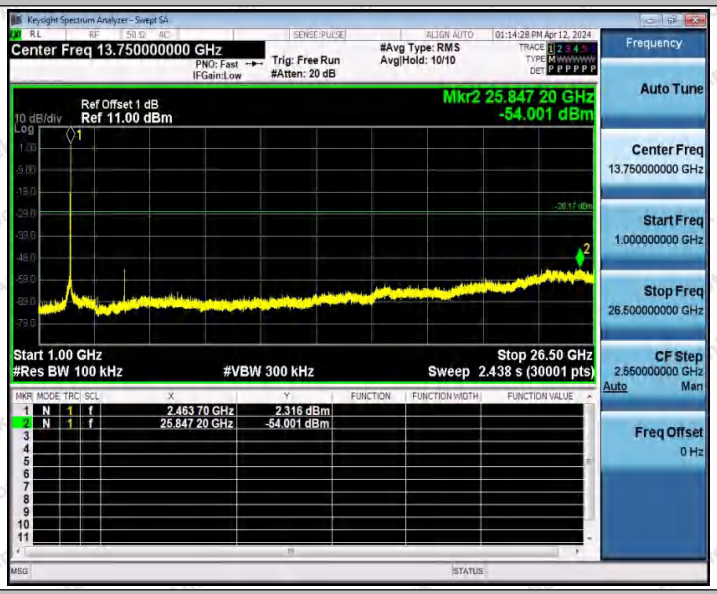


11B_Ant1_2462_0~Reference

11B_Ant1_2462_30~1000

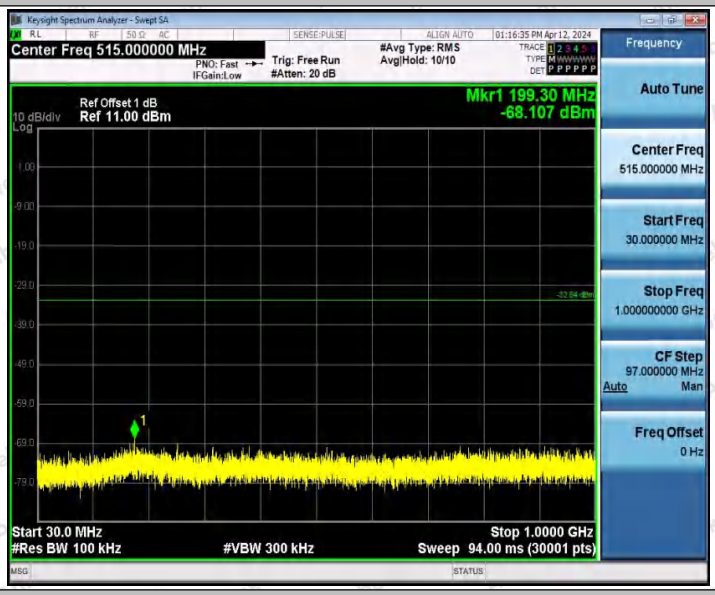


11B_Ant1_2462_1000~26500

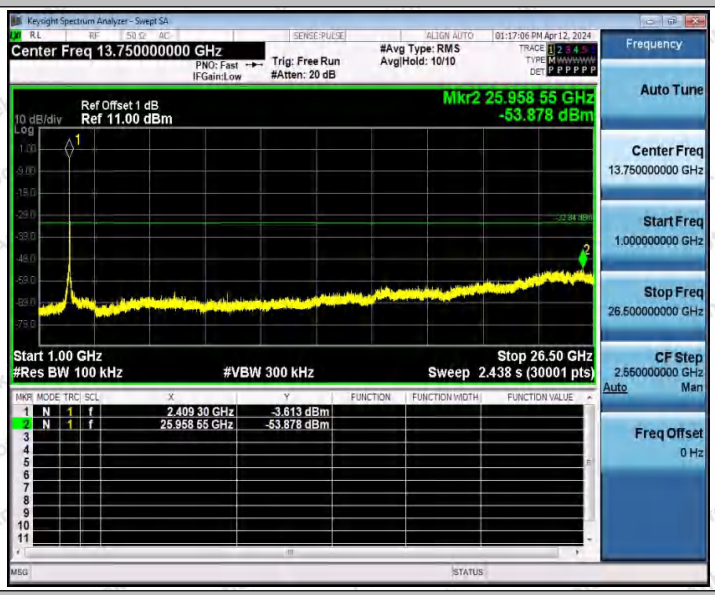


11G_Ant1_2412_0~Reference

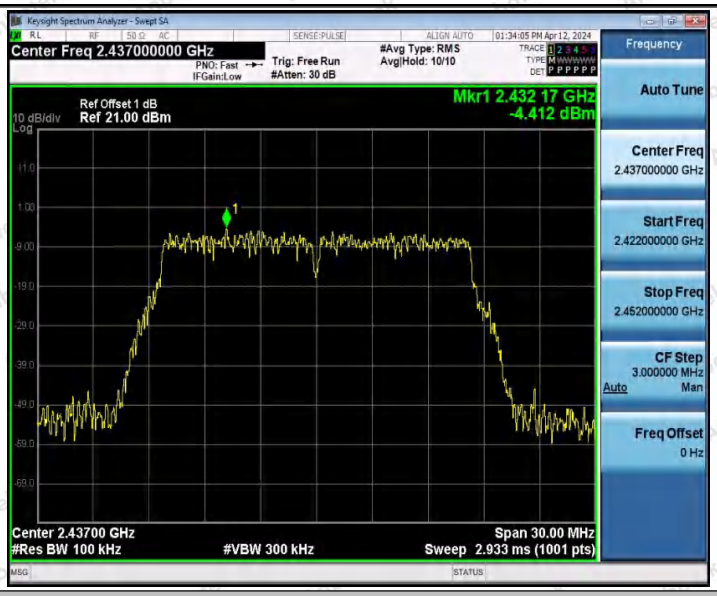
11G_Ant1_2412_30~1000



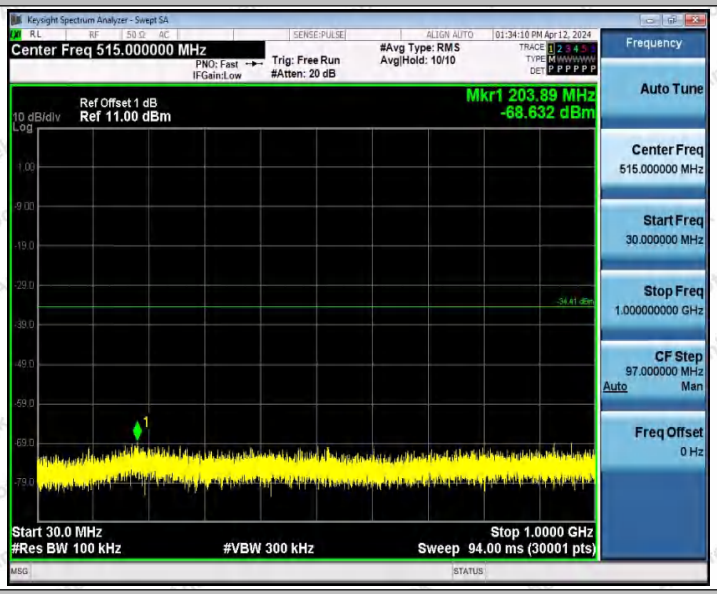
11G_Ant1_2412_1000~26500



11G_Ant1_2437_0~Reference



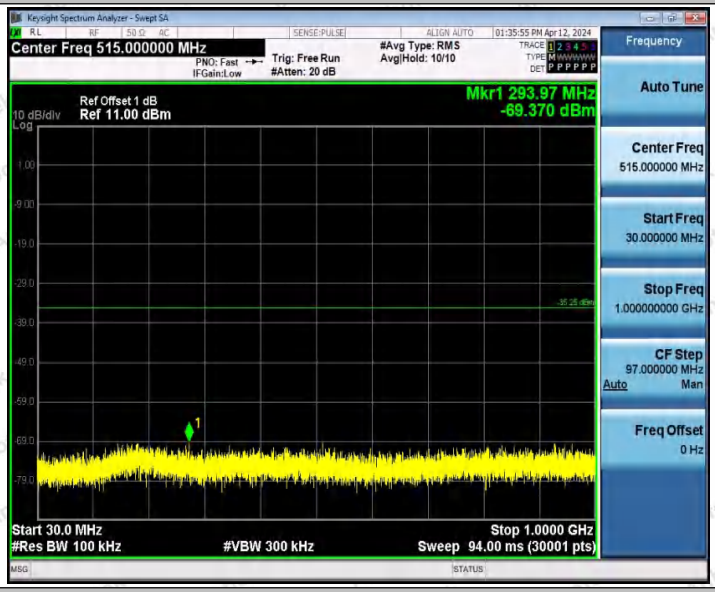
11G_Ant1_2437_30~1000



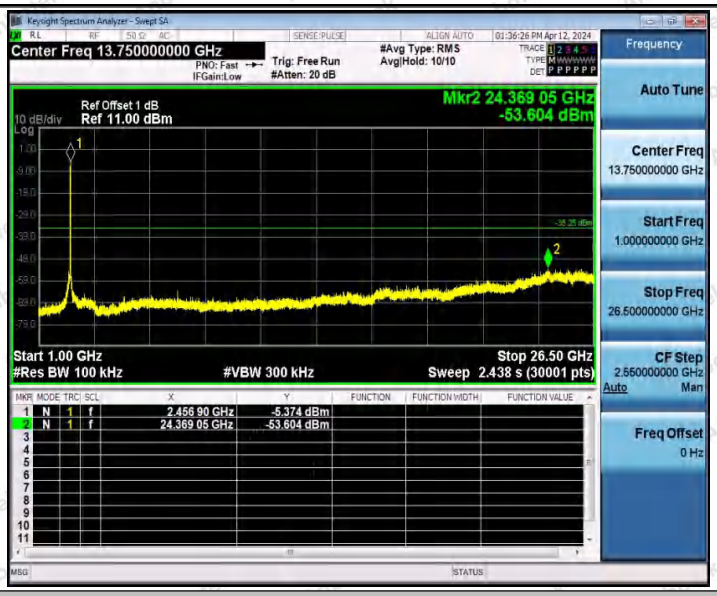
11G_Ant1_2437_1000~26500

11G_Ant1_2462_0~Reference

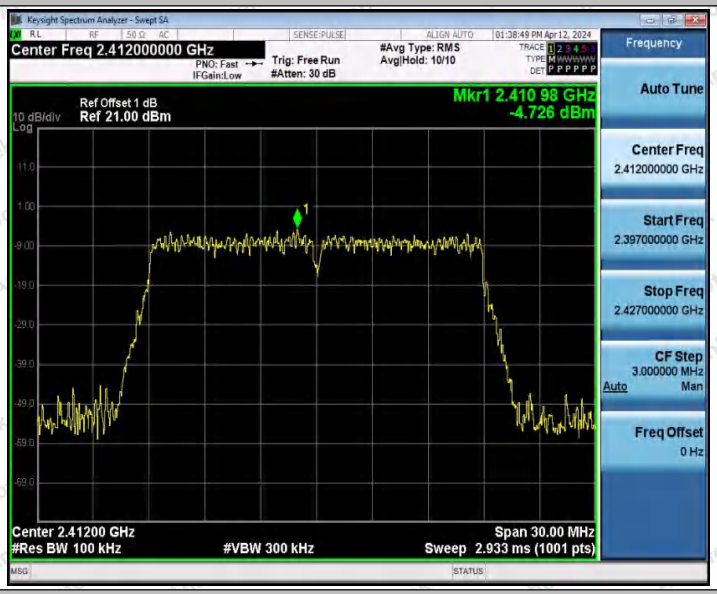
11G_Ant1_2462_30~1000



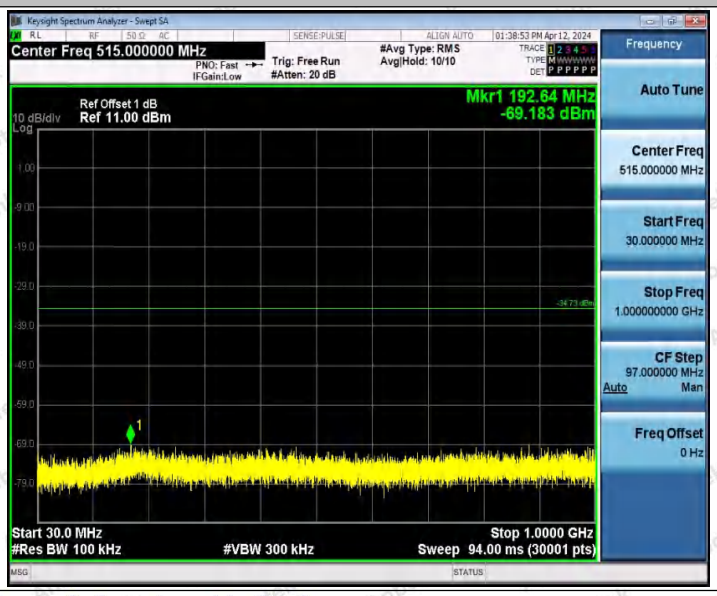
11G_Ant1_2462_1000~26500



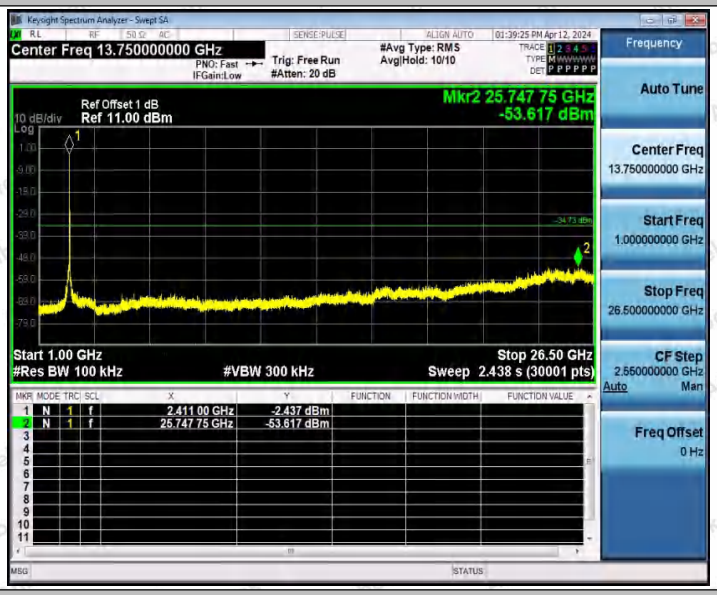
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000

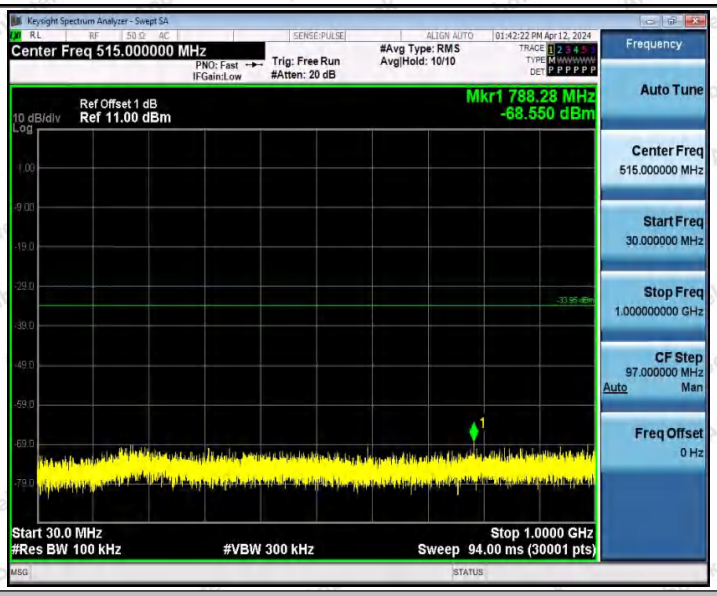


11N20SISO_Ant1_2412_1000~26500



11N20SISO_Ant1_2437_0~Reference

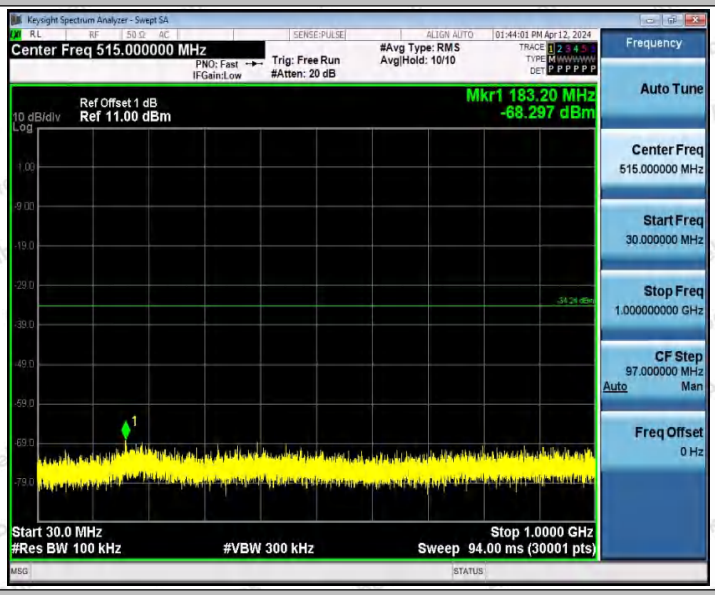
11N20SISO_Ant1_2437_30~1000



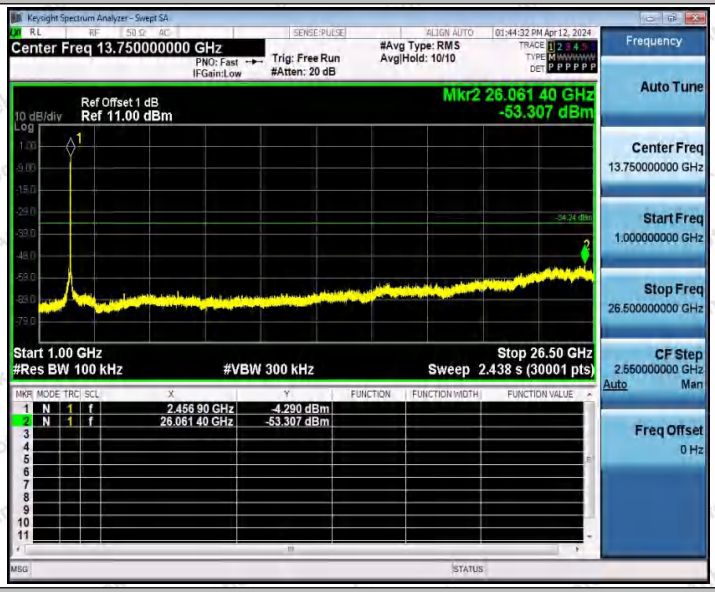
11N20SISO_Ant1_2437_1000~26500

11N20SISO_Ant1_2462_0~Reference

11N20SISO_Ant1_2462_30~1000

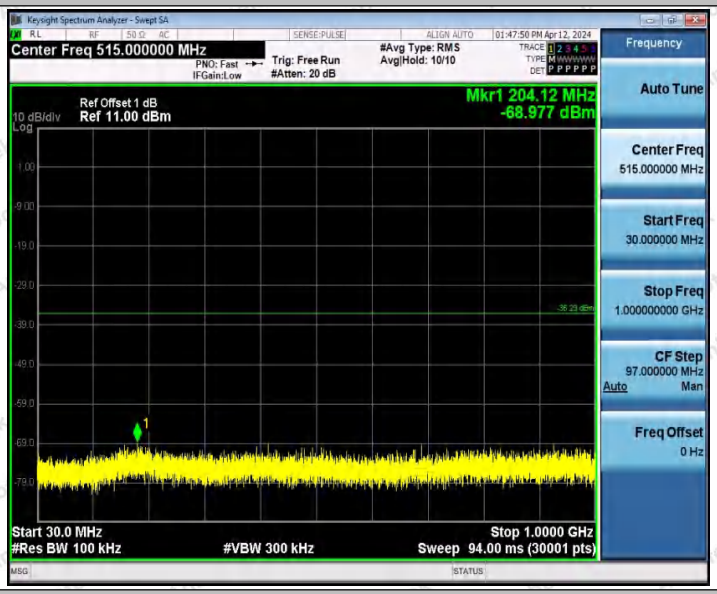


11N20SISO_Ant1_2462_1000~26500

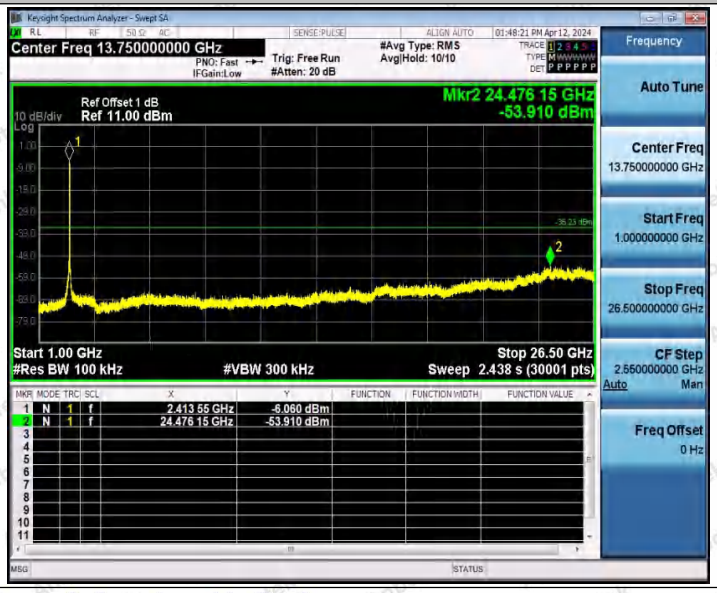


11N40SISO_Ant1_2422_0~Reference

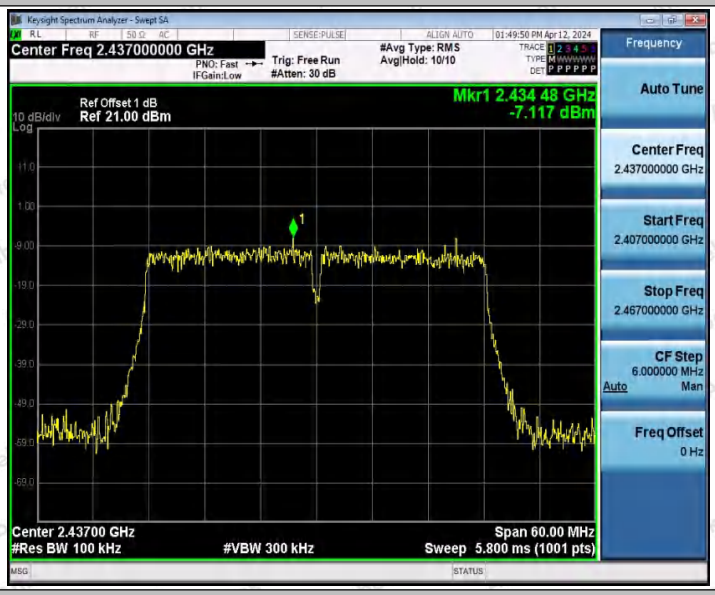
11N40SISO_Ant1_2422_30~1000



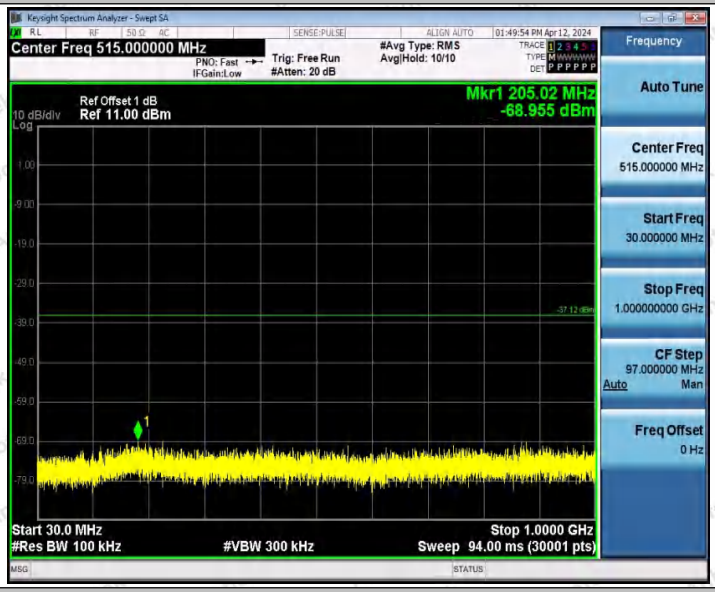
11N40SISO_Ant1_2422_1000~26500



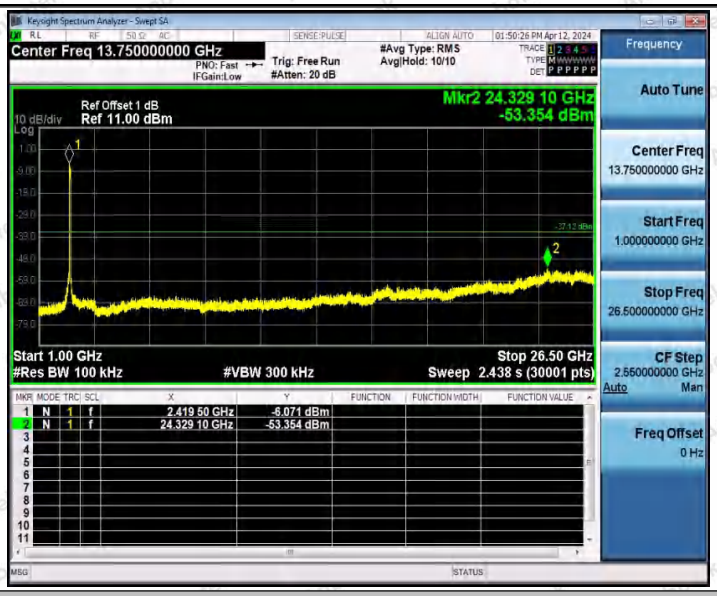
11N40SISO_Ant1_2437_0~Reference



11N40SISO_Ant1_2437_30~1000

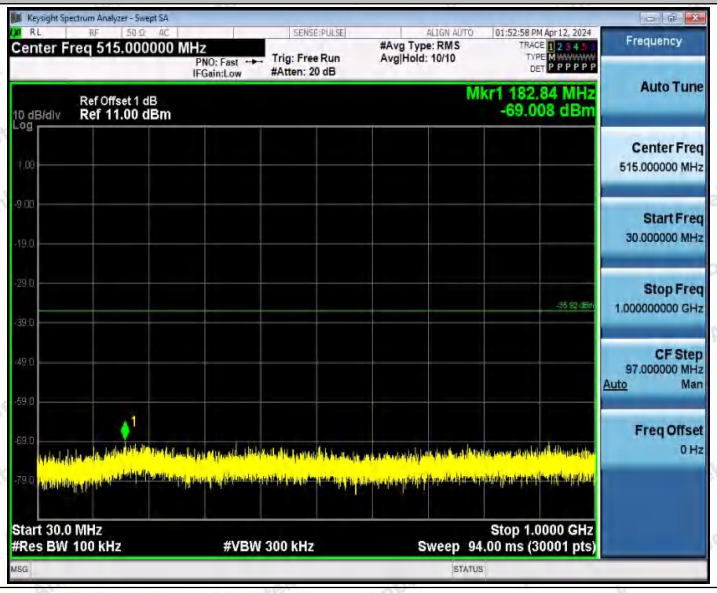


11N40SISO_Ant1_2437_1000~26500

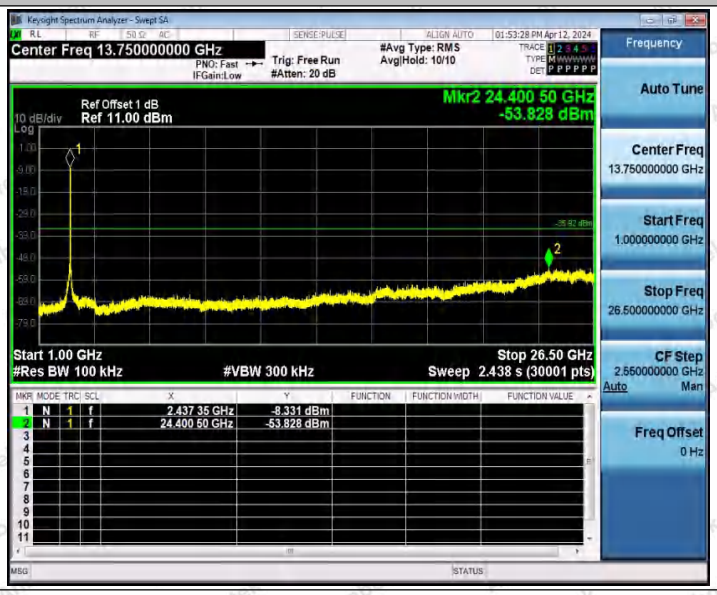


11N40SISO_Ant1_2452_0~Reference

11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500



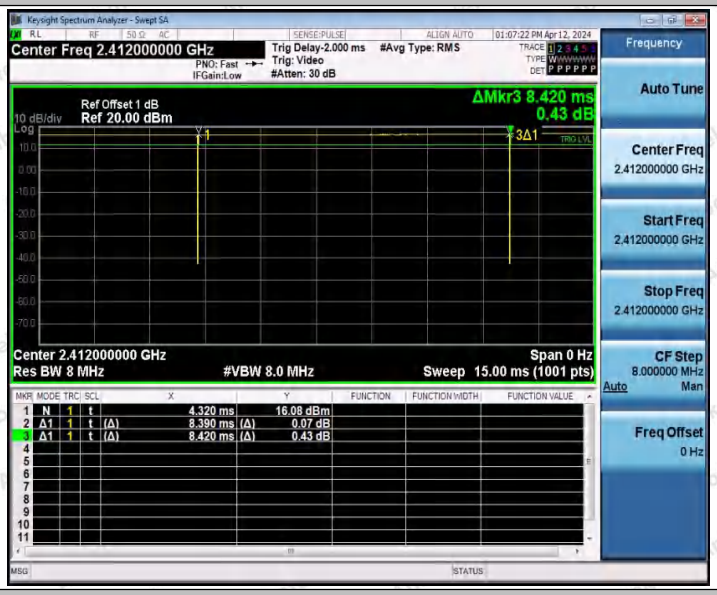
Appendix G: Duty Cycle

Test Result

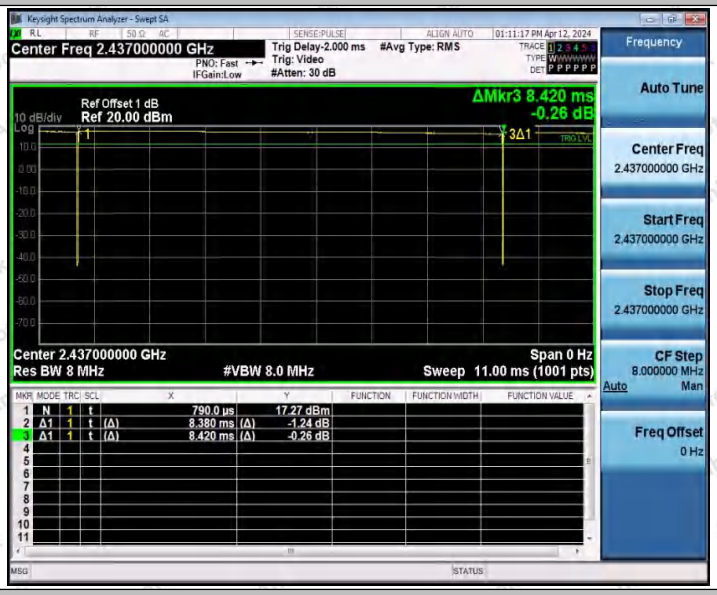
Test Mode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	8.39	8.42	99.64	0.02
		2437	8.38	8.42	99.52	0.02
		2462	8.39	8.42	99.64	0.02
11G	Ant1	2412	1.39	1.43	97.20	0.12
		2437	1.39	1.43	97.20	0.12
		2462	1.39	1.42	97.89	0.09
11N20SISO	Ant1	2412	1.29	1.33	96.99	0.13
		2437	1.30	1.33	97.74	0.10
		2462	1.30	1.33	97.74	0.10
11N40SISO	Ant1	2422	0.64	0.68	94.12	0.26
		2437	0.65	0.69	94.20	0.26
		2452	0.65	0.69	94.20	0.26

Test Graphs

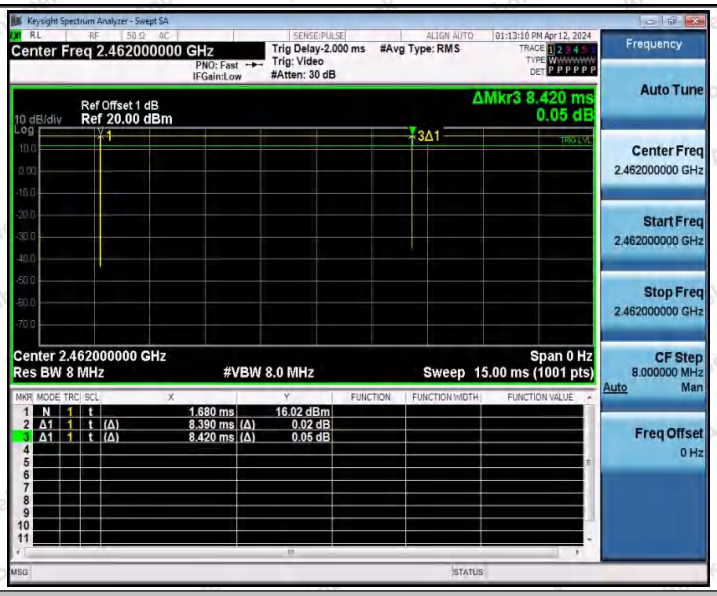
11B_Ant1_2412



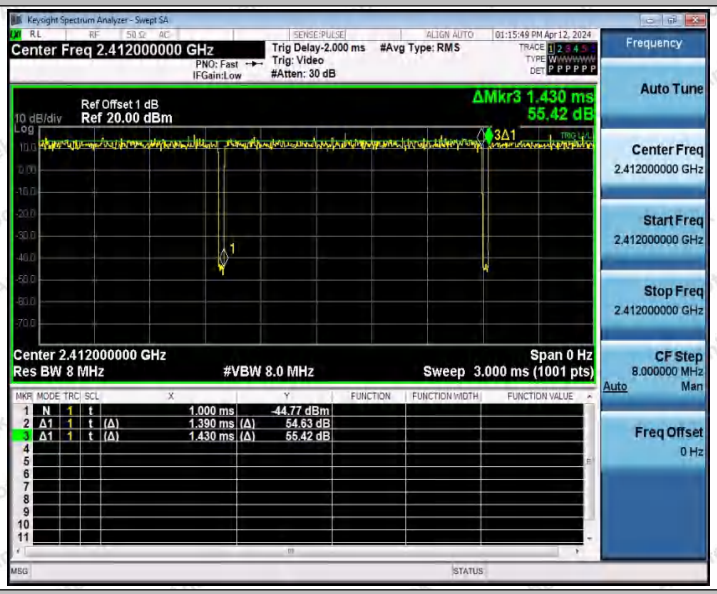
11B_Ant1_2437



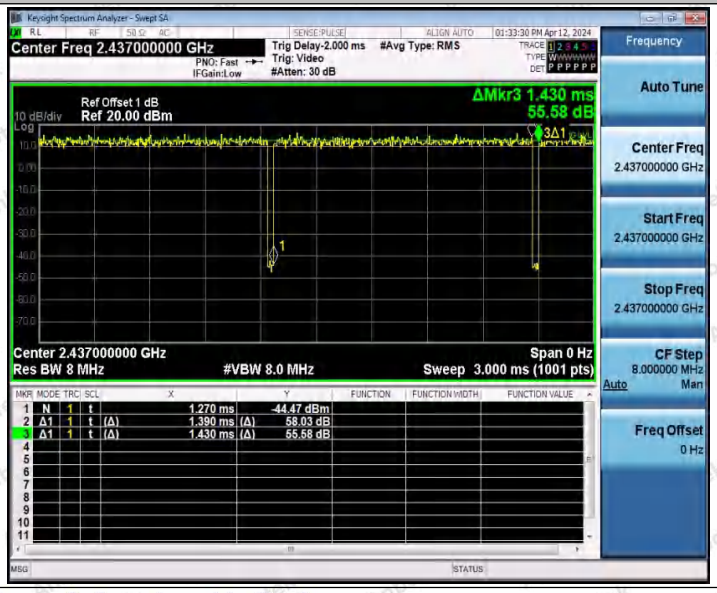
11B_Ant1_2462



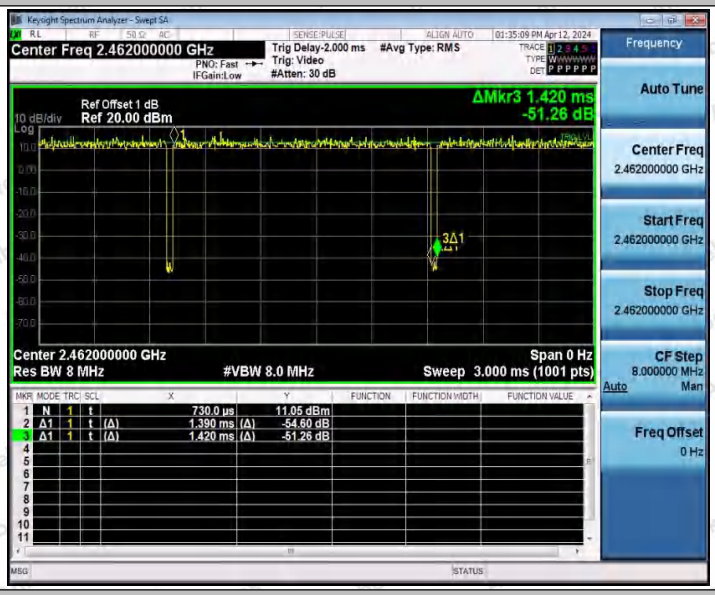
11G_Ant1_2412



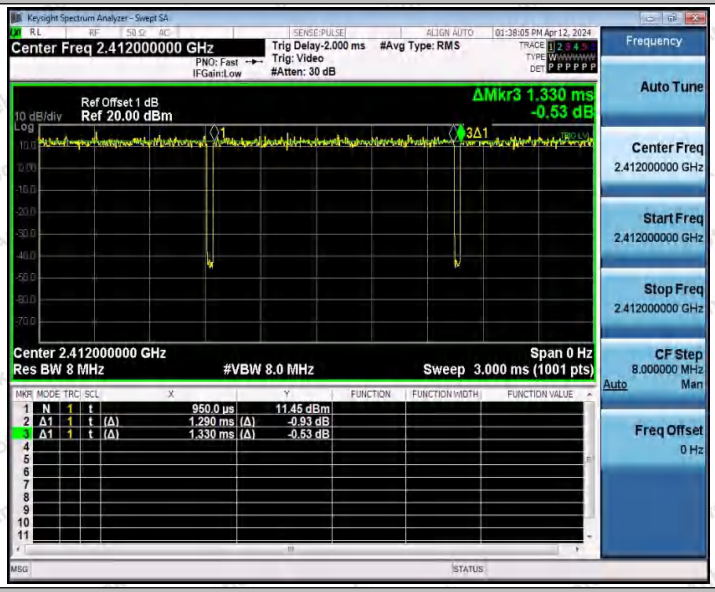
11G_Ant1_2437



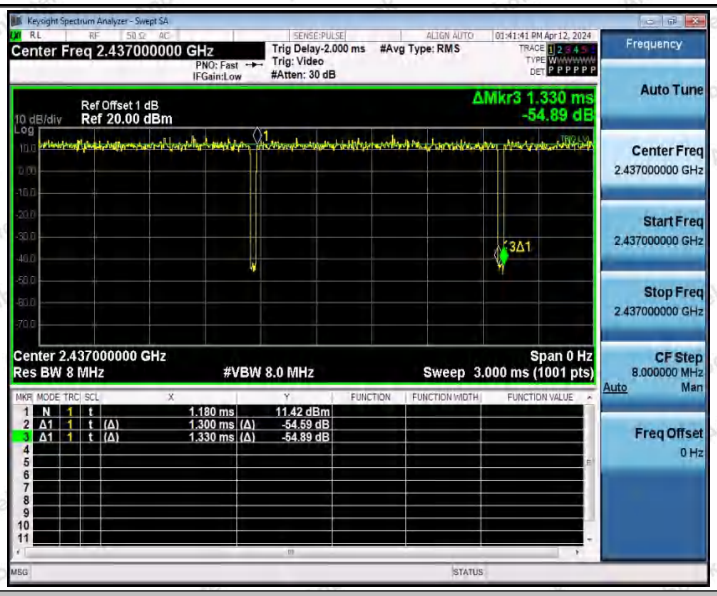
11G_Ant1_2462



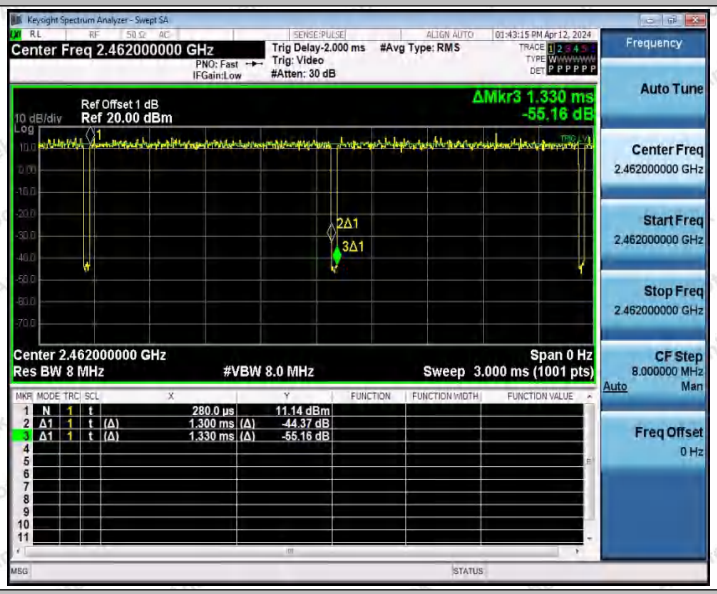
11N20SISO_Ant1_2412



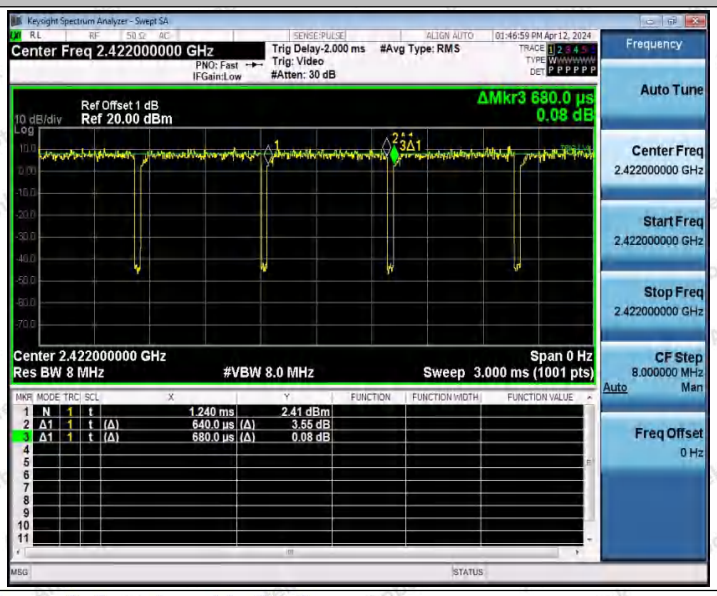
11N20SISO_Ant1_2437



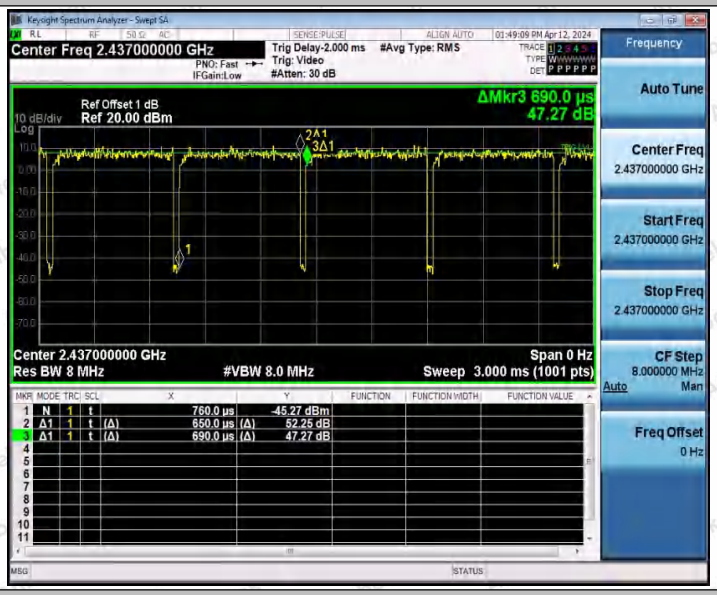
11N20SISO_Ant1_2462



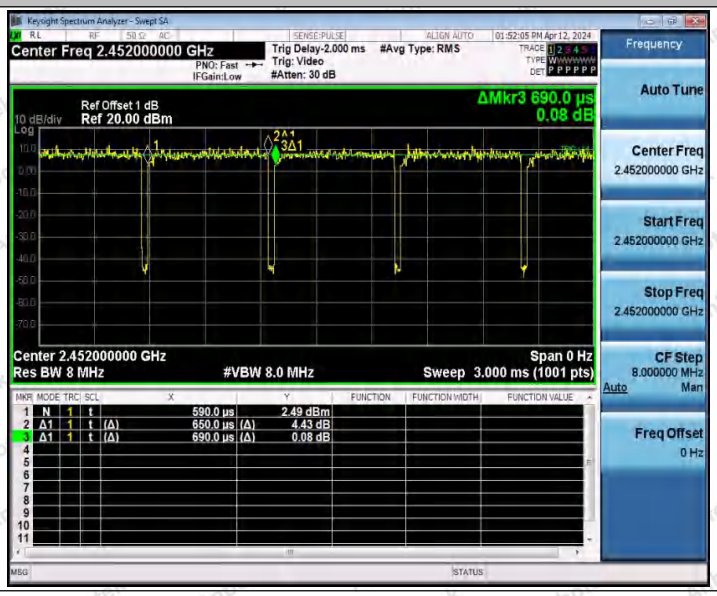
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



---END---