Appendix Test Data

Report No.:	CTA23101700201	Test Sample No.:	1-2-2
Start Test Date:	2023.07.18	Finish Test Date:	2023.07.19
Temperature:	26.1℃	Relative Humidity:	53%
Pressure:	1012 hPa		

Appendix A: DTS Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.040	2407.480	2416.520	≥0.5	PASS
		2437	7.720	2433.320	2441.040	≥0.5	PASS
		2462	9.000	2457.480	2466.480	≥0.5	PASS
11G	Ant1	2412	11.280	2405.720	2417.000	≥0.5	PASS
		2437	11.240	2432.000	2443.240	≥0.5	PASS
		2462	15.040	2454.480	2469.520	≥0.5	PASS
11N20SISO	Ant1	2412	7.680	2408.280	2415.960	≥0.5	PASS
		2437	13.800	2430.720	2444.520	≥0.5	PASS
		2462	12.480	2454.560	2467.040	≥0.5	PASS
11N40SISO	Ant1	2422	27.600	2408.200	2435.800	≥0.5	PASS
		2437	28.800	2421.940	2450.740	≥0.5	PASS
		2452	25.080	2434.480	2459.560	≥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: Occupied Channel Bandwidth

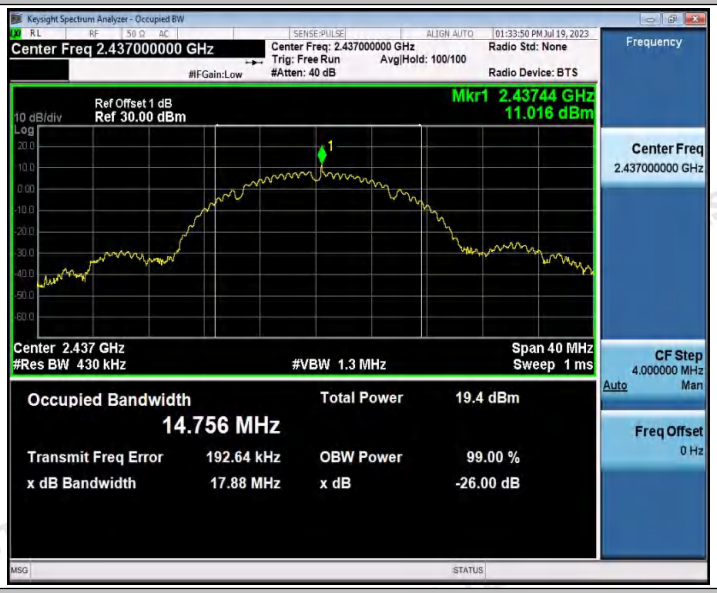
Test Result

Test Mode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.623	2404.8686	2419.4916	---	---
		2437	14.756	2429.8146	2444.5706	---	---
		2462	14.819	2454.6867	2469.5057	---	---
11G	Ant1	2412	16.173	2403.9708	2420.1438	---	---
		2437	16.144	2428.9851	2445.1291	---	---
		2462	16.110	2453.9339	2470.0439	---	---
11N20SISO	Ant1	2412	16.781	2403.6964	2420.4774	---	---
		2437	17.118	2428.4235	2445.5415	---	---
		2462	16.999	2453.4423	2470.4413	---	---
11N40SISO	Ant1	2422	36.317	2404.2693	2440.5863	---	---
		2437	36.186	2418.9962	2455.1822	---	---
		2452	35.885	2433.9067	2469.7917	---	---

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 Peak

Test Mode	Antenna	Frequency[MHz]	Peak Power[dBm]	Conducted Limit[dBm]
11B	Ant1	2412	19.01	≤30.00
		2437	19.43	≤30.00
		2462	19.04	≤30.00
11G	Ant1	2412	19.23	≤30.00
		2437	**19.99**	≤30.00
		2462	18.84	≤30.00
11N20SISO	Ant1	2412	18.94	≤30.00
		2437	19.30	≤30.00
		2462	18.62	≤30.00
11N40SISO	Ant1	2422	19.98	≤30.00
		2437	19.76	≤30.00
		2452	19.16	≤30.00

Appendix D: Maximum power spectral density

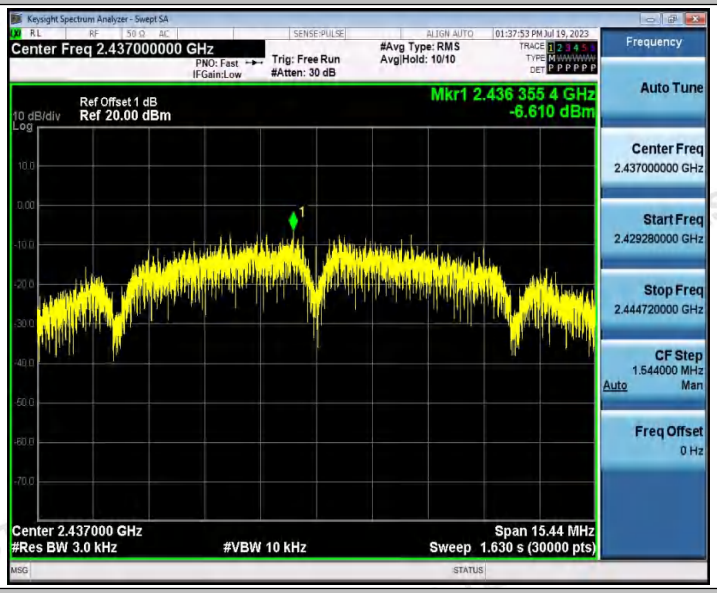
Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-6.86	≤8.00	PASS
		2437	-6.61	≤8.00	PASS
		2462	-6.05	≤8.00	PASS
11G	Ant1	2412	-12.17	≤8.00	PASS
		2437	-11.65	≤8.00	PASS
		2462	-12.47	≤8.00	PASS
11N20SISO	Ant1	2412	-12.97	≤8.00	PASS
		2437	-12.41	≤8.00	PASS
		2462	-13.39	≤8.00	PASS
11N40SISO	Ant1	2422	-12.73	≤8.00	PASS
		2437	-12.55	≤8.00	PASS
		2452	-13.43	≤8.00	PASS

Test Graphs

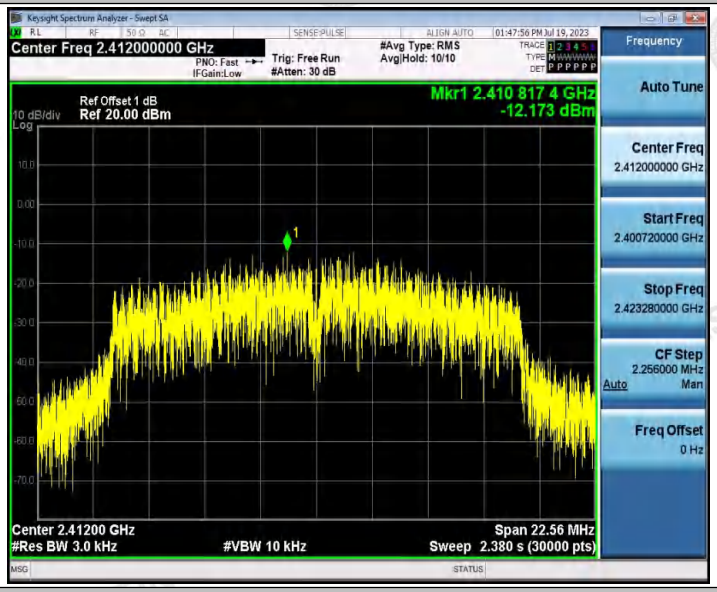
11B_Ant1_2412

11B_Ant1_2437

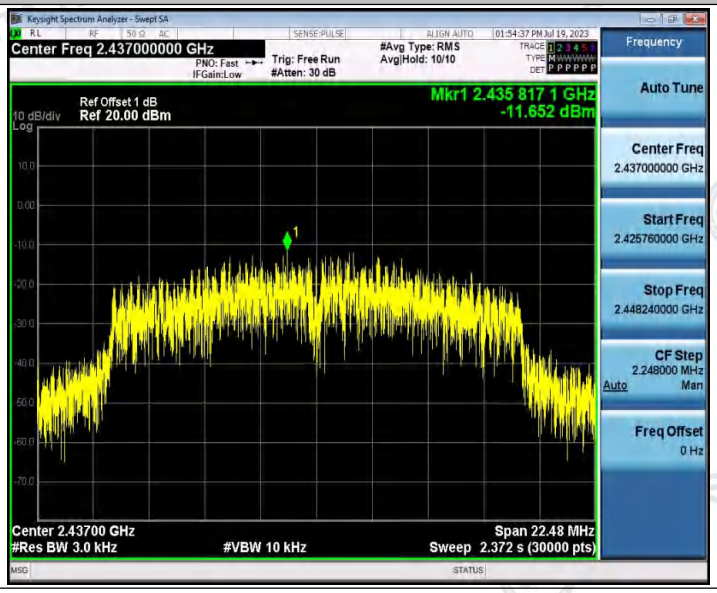


11B_Ant1_2462

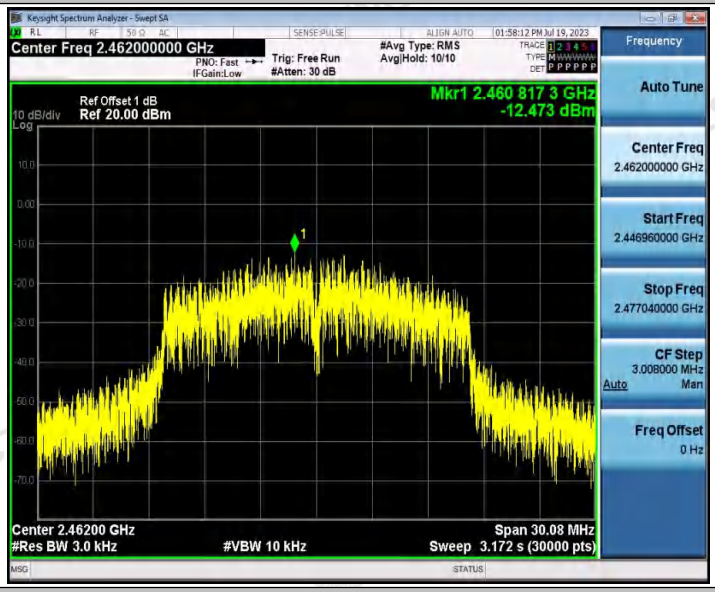
11G_Ant1_2412



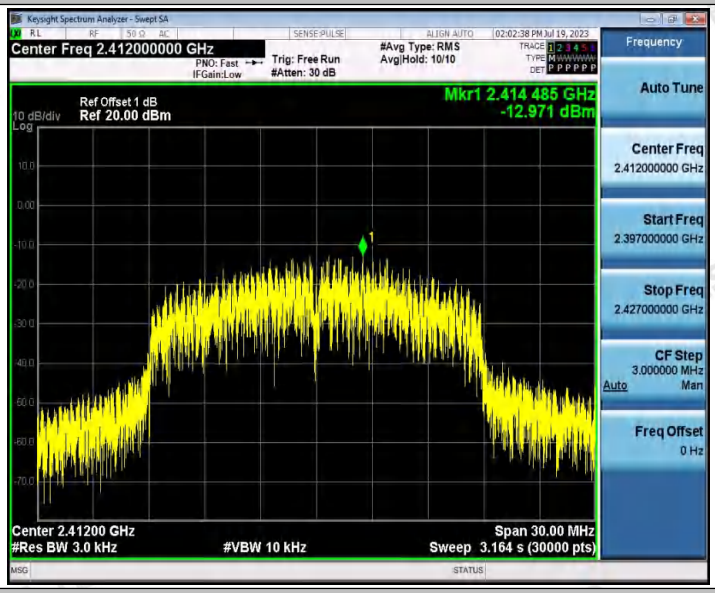
11G_Ant1_2437



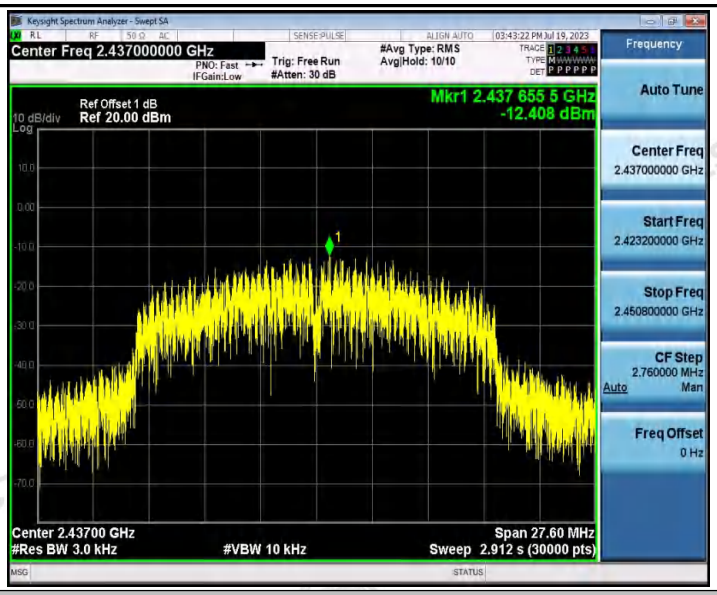
11G_Ant1_2462



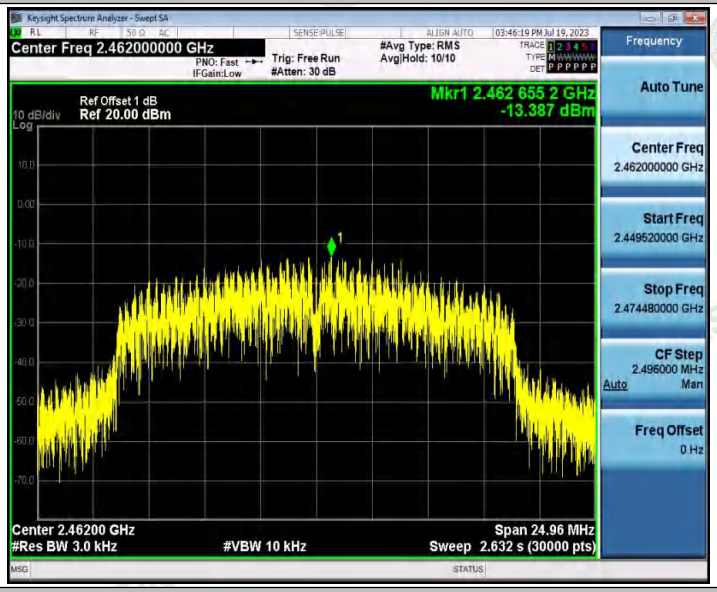
11N20SISO_Ant1_2412



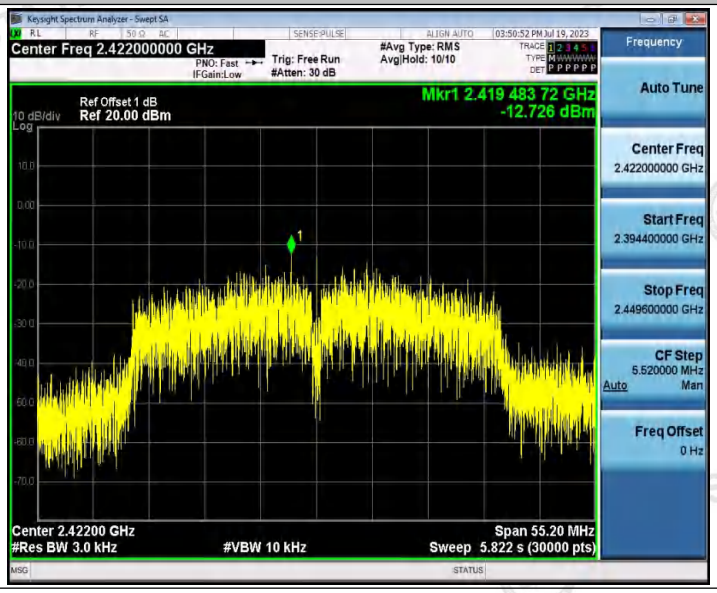
11N20SISO_Ant1_2437



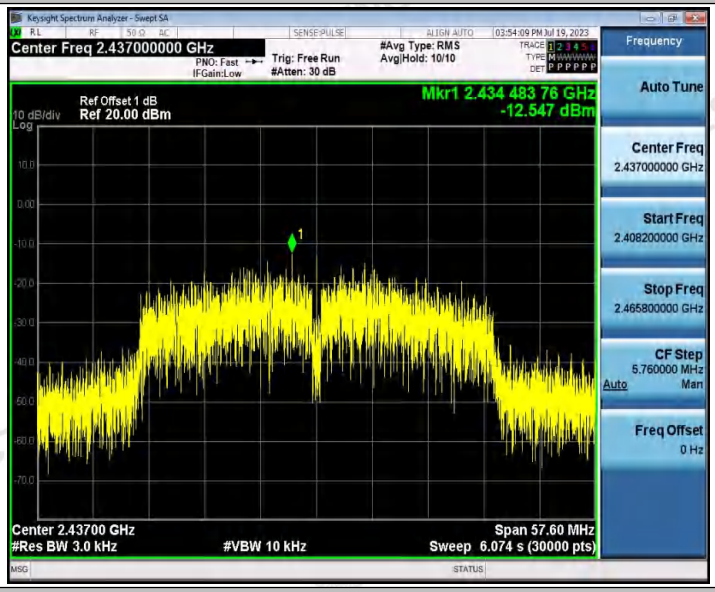
11N20SISO_Ant1_2462



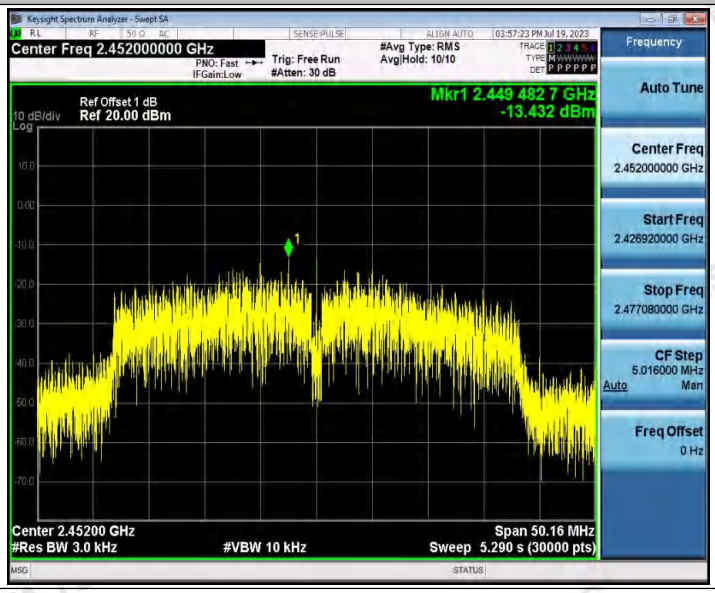
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



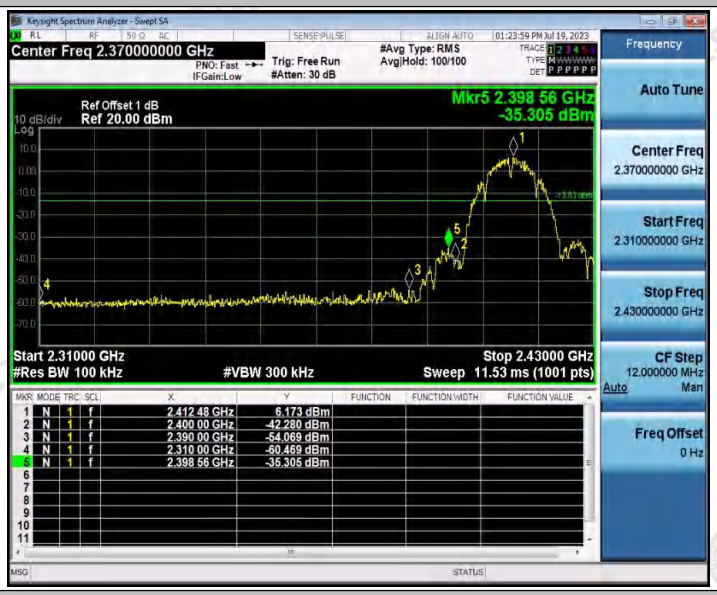
Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.17	-35.31	≤-13.83	PASS
		High	2462	6.17	-47.3	≤-13.83	PASS
11G	Ant1	Low	2412	4.20	-28.7	≤-15.8	PASS
		High	2462	3.73	-46.78	≤-16.27	PASS
11N20SISO	Ant1	Low	2412	3.20	-29.18	≤-16.8	PASS
		High	2462	4.34	-47.34	≤-15.66	PASS
11N40SISO	Ant1	Low	2422	3.93	-22.3	≤-16.07	PASS
		High	2452	2.76	-26.43	≤-17.25	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 2.465000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
03:57:29 PM Jul 19, 2023
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.484 46 GHz
-26.433 dBm
Start 2.43000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.50000 GHz
Sweep 6.733 ms (1001 pts)
1 N 1 f 2.448 27 GHz 2.755 dBm
2 N 1 f 2.483 50 GHz -31.982 dBm
3 N 1 f 2.500 00 GHz -50.800 dBm
4 N 1 f 2.484 46 GHz -26.433 dBm
Frequency
Auto Tune
Center Freq
2.465000000 GHz
Start Freq
2.430000000 GHz
Stop Freq
2.500000000 GHz
CF Step
7.000000 MHz
Auto
Man
Freq Offset
0 Hz

Appendix F: Conducted Spurious Emission

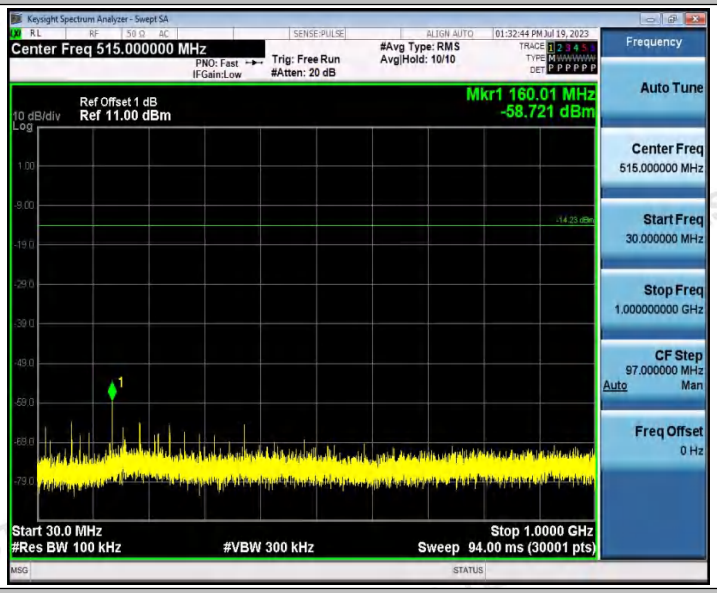
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	5.77	5.77	---	PASS
			30~1000	5.77	-58.72	≤-14.23	PASS
			1000~26500	5.77	-35.05	≤-14.23	PASS
		2437	Reference	6.50	6.50	---	PASS
			30~1000	6.50	-58.15	≤-13.5	PASS
			1000~26500	6.50	-22.06	≤-13.5	PASS
		2462	Reference	6.26	6.26	---	PASS
			30~1000	6.26	-58.99	≤-13.74	PASS
			1000~26500	6.26	-40.8	≤-13.74	PASS
11G	Ant1	2412	Reference	4.06	4.06	---	PASS
			30~1000	4.06	-51.94	≤-15.94	PASS
			1000~26500	4.06	-36.15	≤-15.94	PASS
		2437	Reference	5.38	5.38	---	PASS
			30~1000	5.38	-51.92	≤-14.62	PASS
			1000~26500	5.38	-34.87	≤-14.62	PASS
		2462	Reference	4.01	4.01	---	PASS
			30~1000	4.01	-54.17	≤-15.99	PASS
			1000~26500	4.01	-38.53	≤-15.99	PASS
11N20SISO	Ant1	2412	Reference	4.79	4.79	---	PASS
			30~1000	4.79	-56.22	≤-15.21	PASS
			1000~26500	4.79	-37.08	≤-15.21	PASS
		2437	Reference	5.13	5.13	---	PASS
			30~1000	5.13	-56.66	≤-14.87	PASS
			1000~26500	5.13	-33.27	≤-14.87	PASS
		2462	Reference	3.87	3.87	---	PASS
			30~1000	3.87	-55.86	≤-16.13	PASS
			1000~26500	3.87	-35.65	≤-16.13	PASS
11N40SISO	Ant1	2422	Reference	3.65	3.65	---	PASS
			30~1000	3.65	-51.89	≤-16.35	PASS
			1000~26500	3.65	-32.56	≤-16.35	PASS
		2437	Reference	3.75	3.75	---	PASS
			30~1000	3.75	-56.43	≤-16.25	PASS
			1000~26500	3.75	-34.66	≤-16.25	PASS
		2452	Reference	2.78	2.78	---	PASS
			30~1000	2.78	-49.68	≤-17.22	PASS
			1000~26500	2.78	-36.95	≤-17.22	PASS

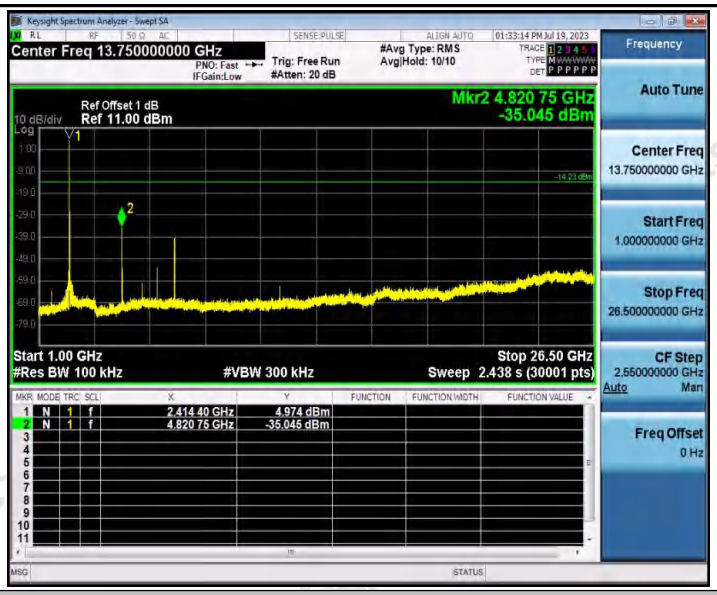
Test Graphs

11B_Ant1_2412_0~Reference

11B_Ant1_2412_30~1000

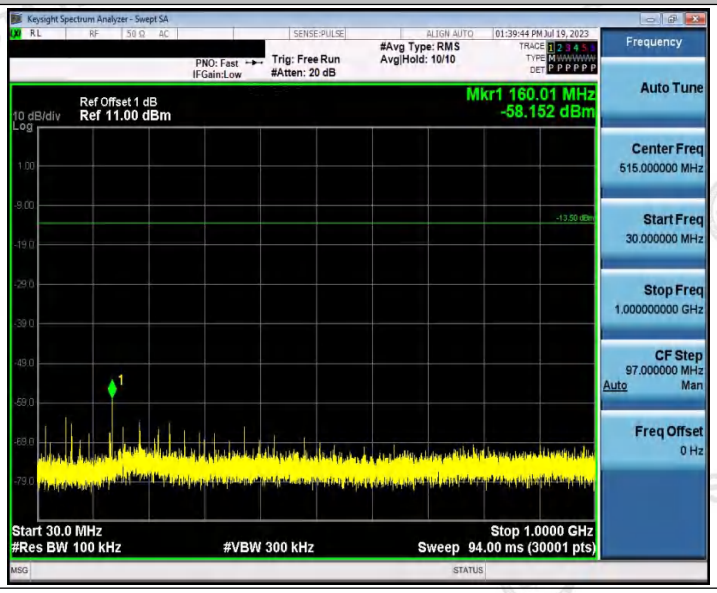


11B_Ant1_2412_1000~26500

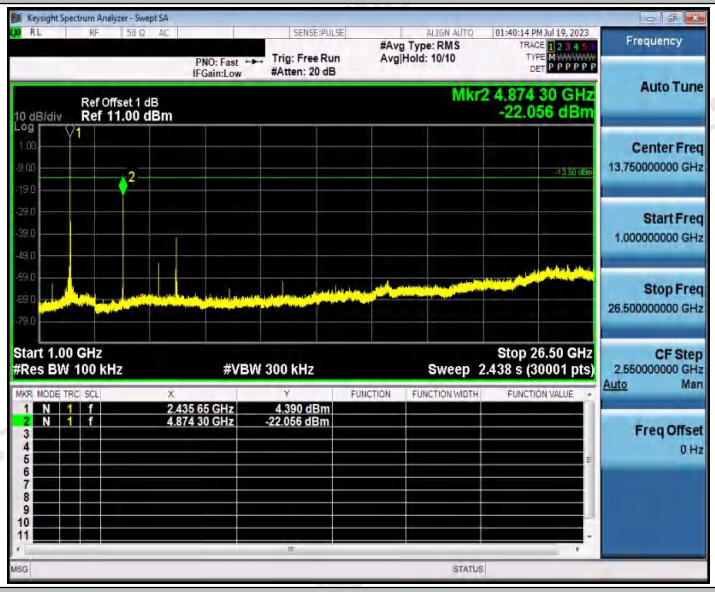


11B_Ant1_2437_0~Reference

11B_Ant1_2437_30~1000

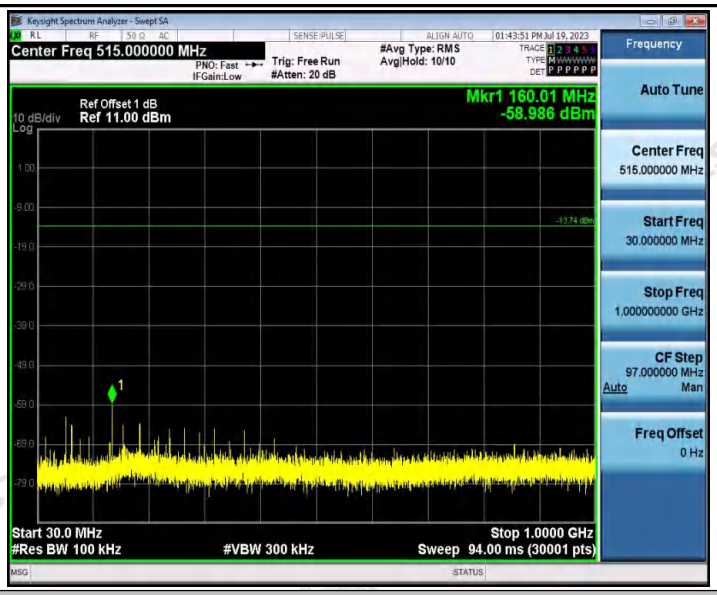


11B_Ant1_2437_1000~26500

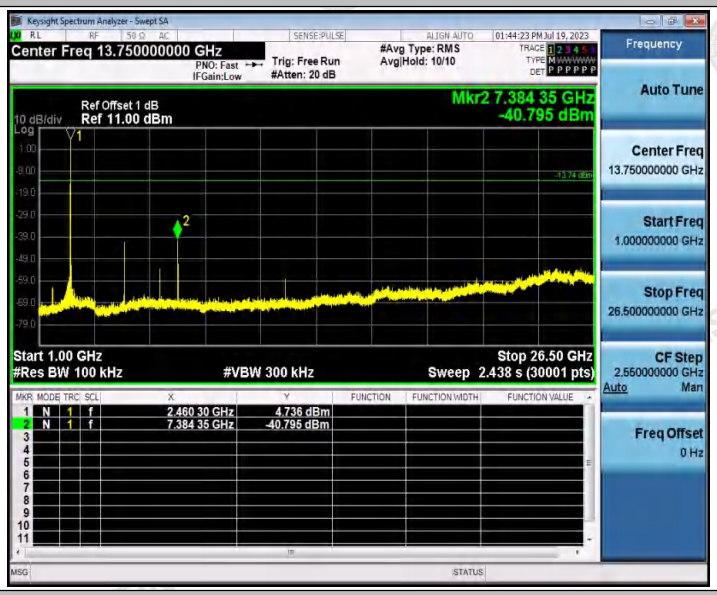


11B_Ant1_2462_0~Reference

11B_Ant1_2462_30~1000

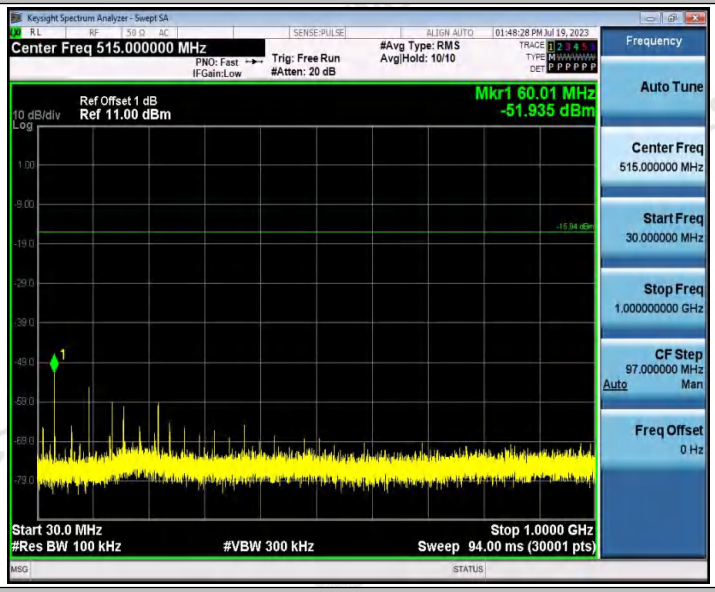


11B_Ant1_2462_1000~26500

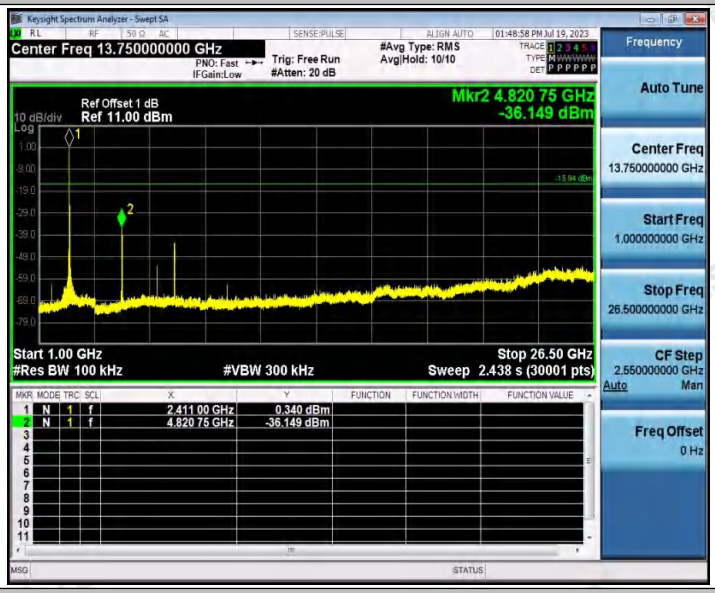


11G_Ant1_2412_0~Reference

11G_Ant1_2412_30~1000

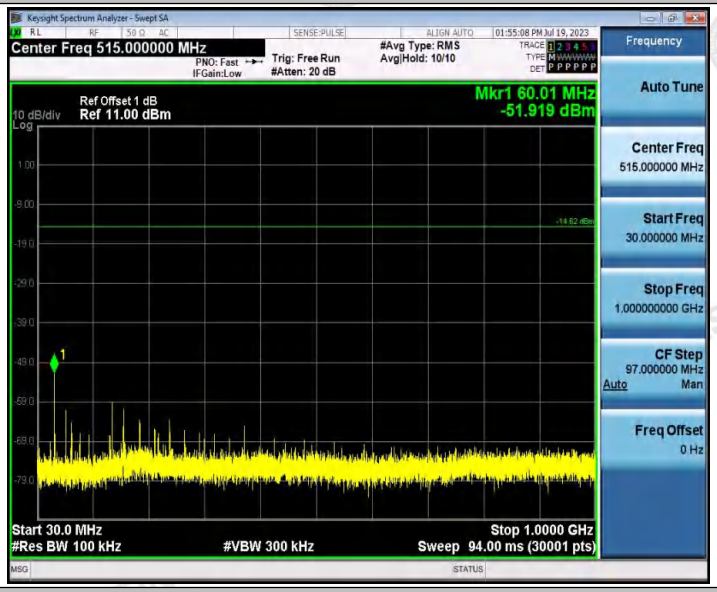


11G_Ant1_2412_1000~26500

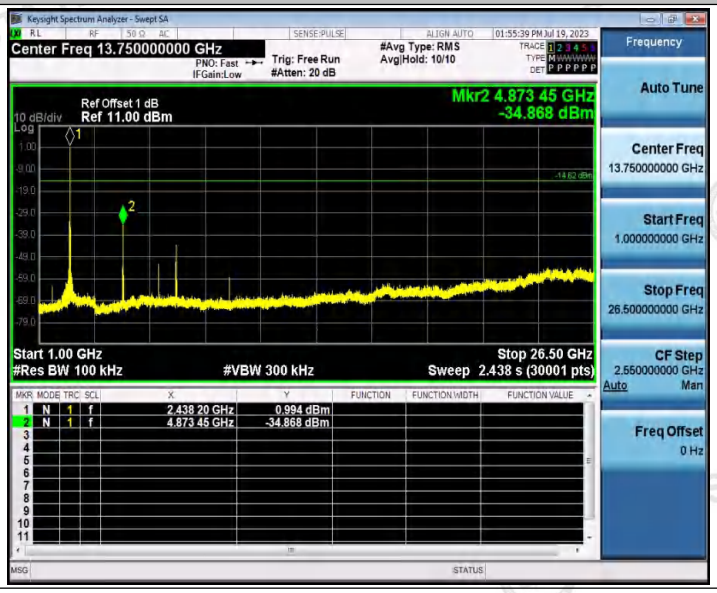


11G_Ant1_2437_0~Reference

11G_Ant1_2437_30~1000

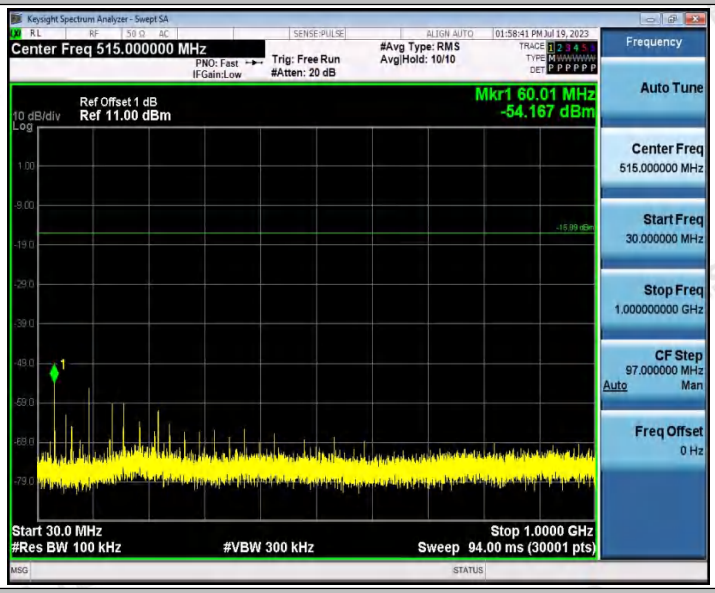


11G_Ant1_2437_1000~26500

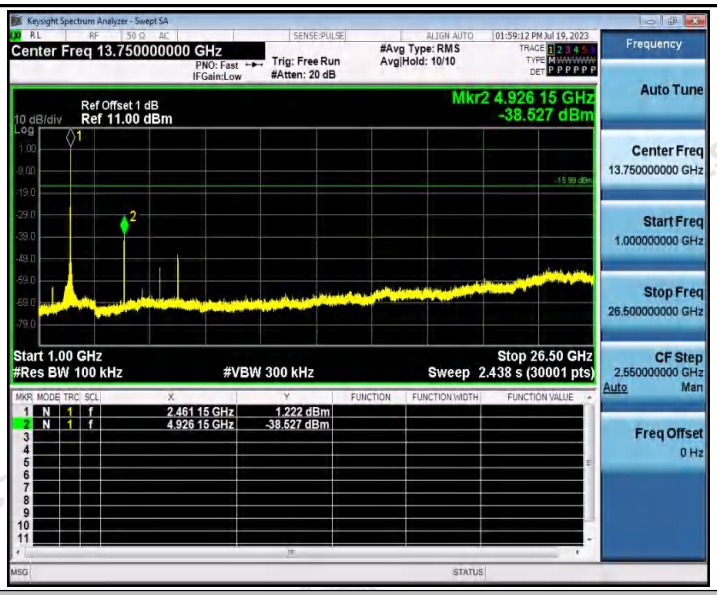


11G_Ant1_2462_0~Reference

11G_Ant1_2462_30~1000

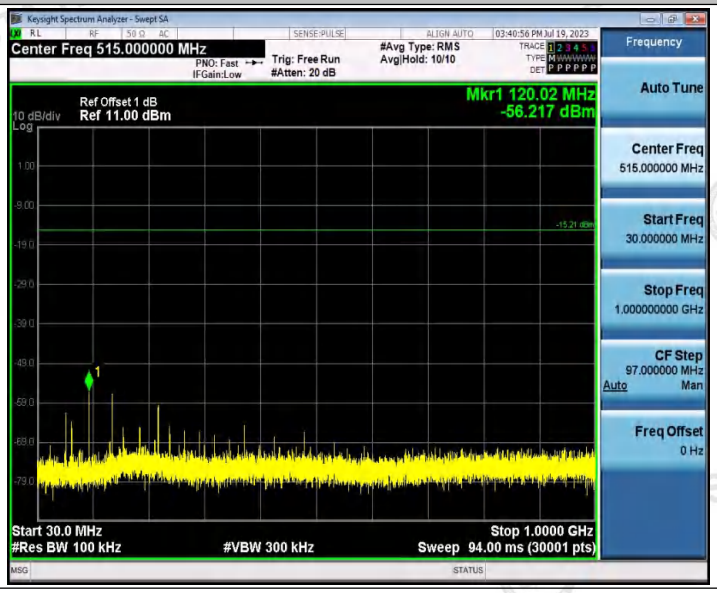


11G_Ant1_2462_1000~26500

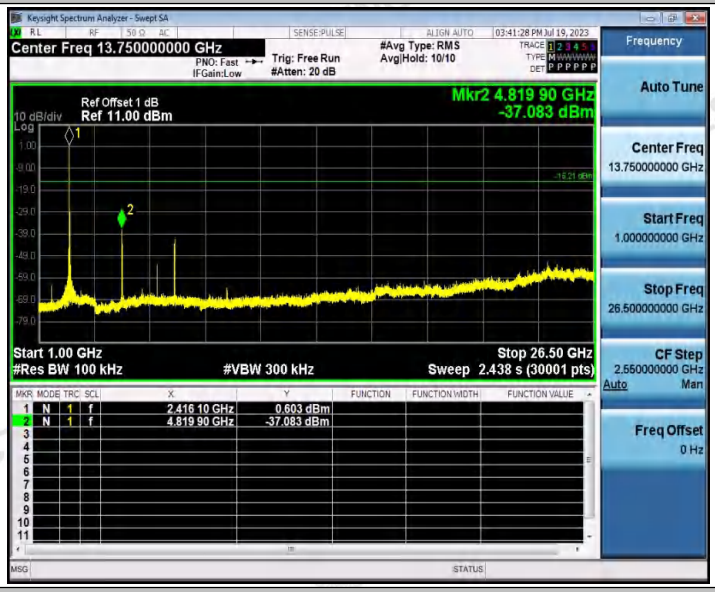


11N20SISO_Ant1_2412_0~Reference

11N20SISO_Ant1_2412_30~1000

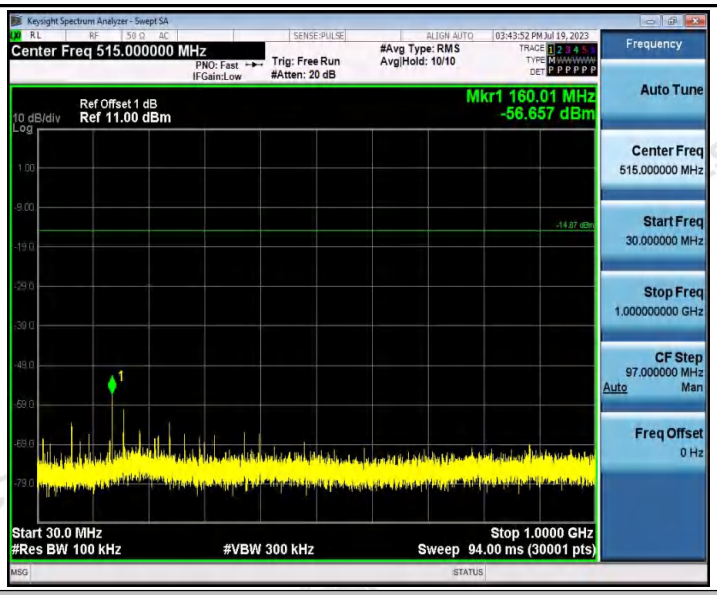


11N20SISO_Ant1_2412_1000~26500

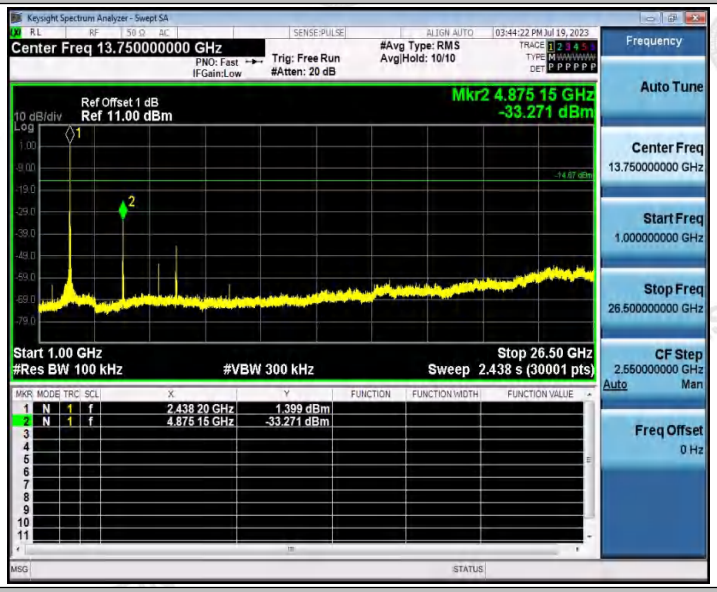


11N20SISO_Ant1_2437_0~Reference

11N20SISO_Ant1_2437_30~1000

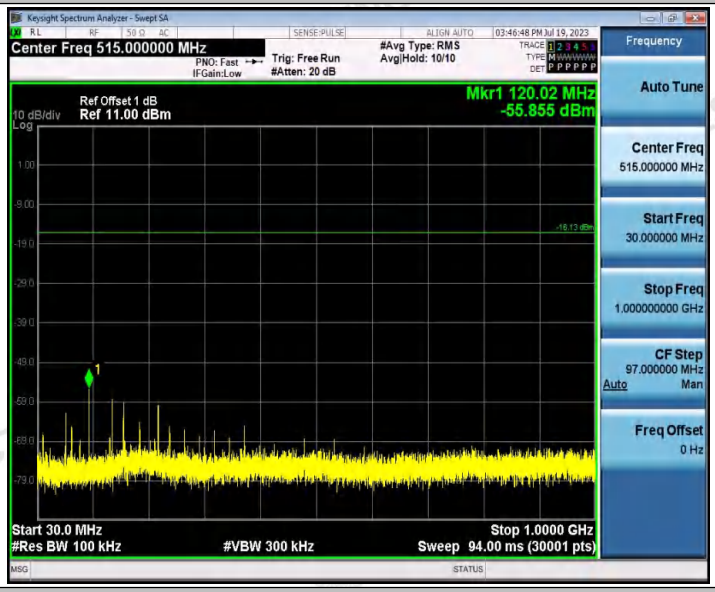


11N20SISO_Ant1_2437_1000~26500

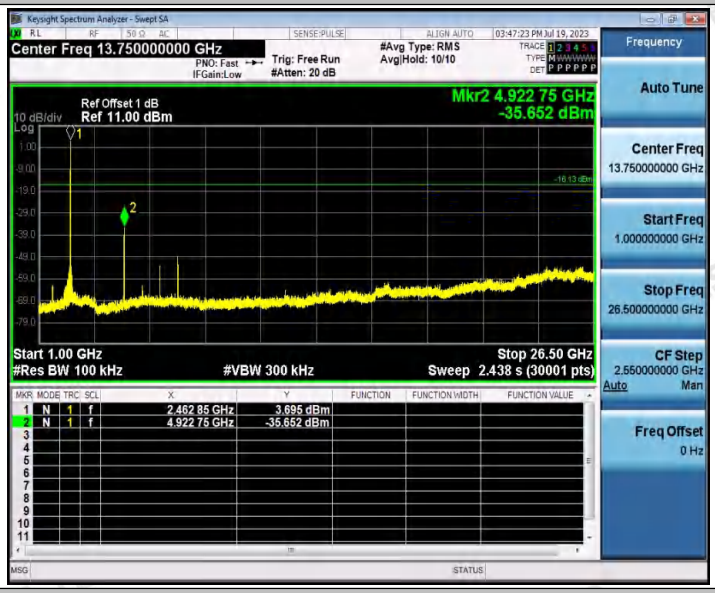


11N20SISO_Ant1_2462_0~Reference

11N20SISO_Ant1_2462_30~1000

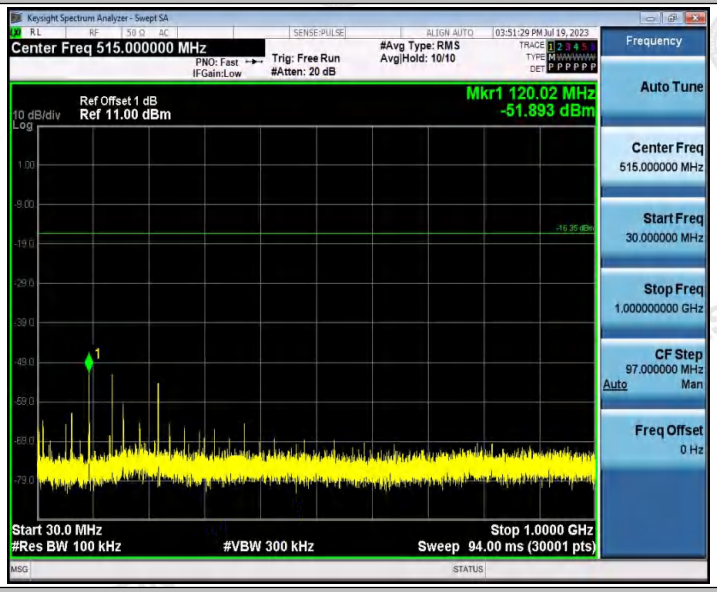


11N20SISO_Ant1_2462_1000~26500



11N40SISO_Ant1_2422_0~Reference

11N40SISO_Ant1_2422_30~1000



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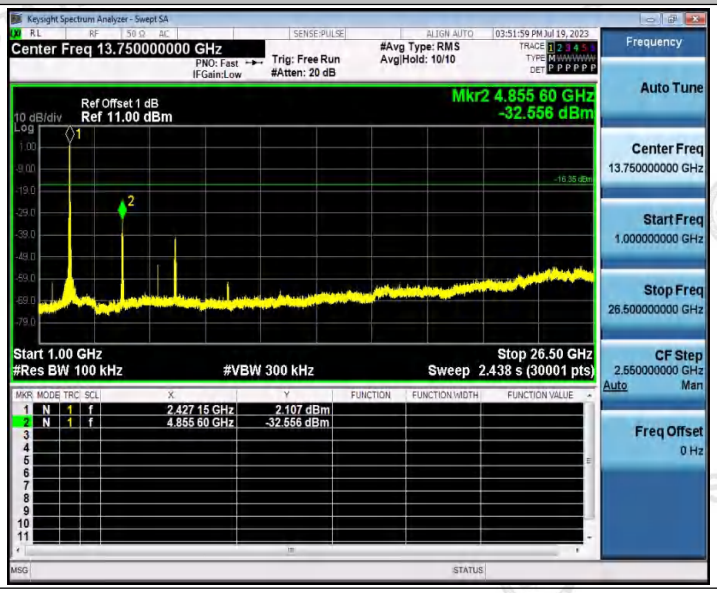
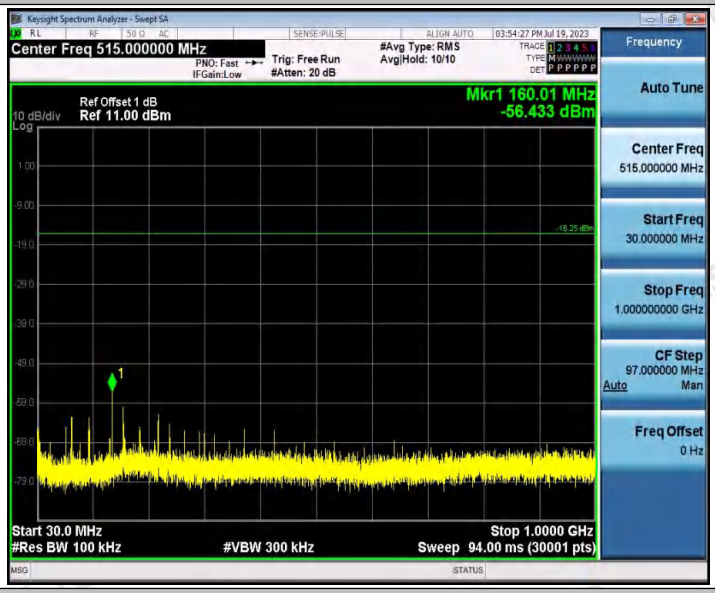


11N40SISO_Ant1_2437_0~Reference

11N40SISO_Ant1_2437_30~1000



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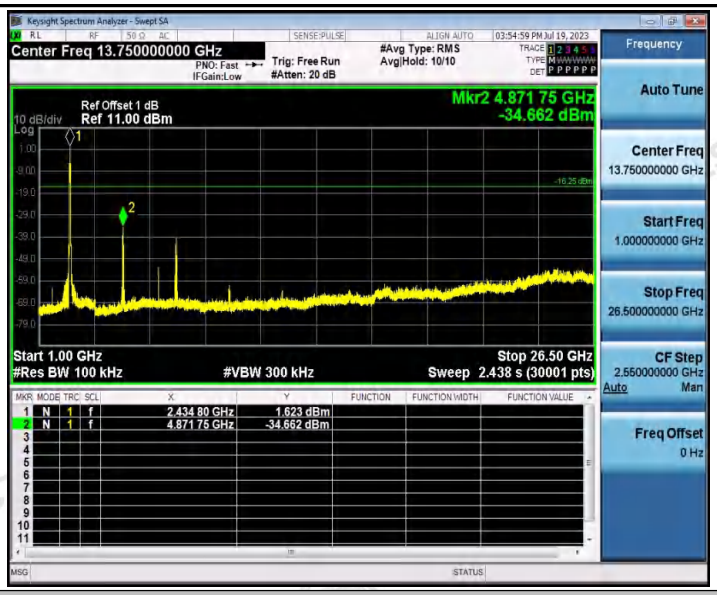
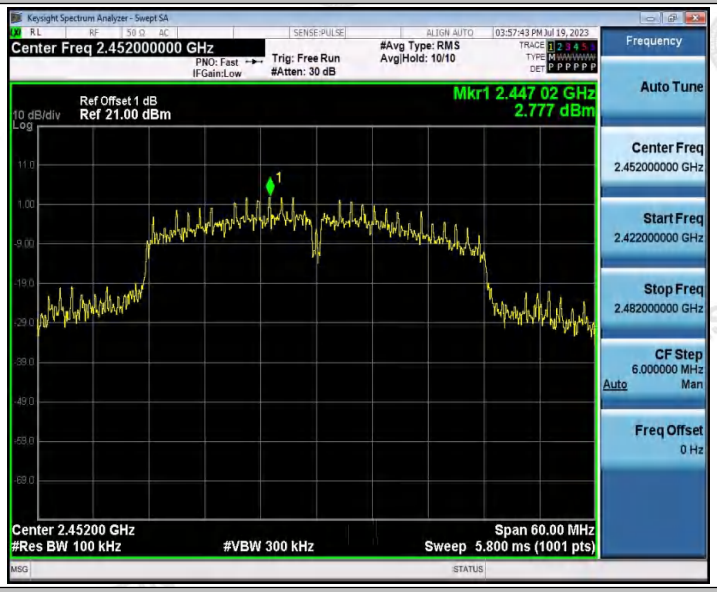


11N40SISO_Ant1_2452_0~Reference



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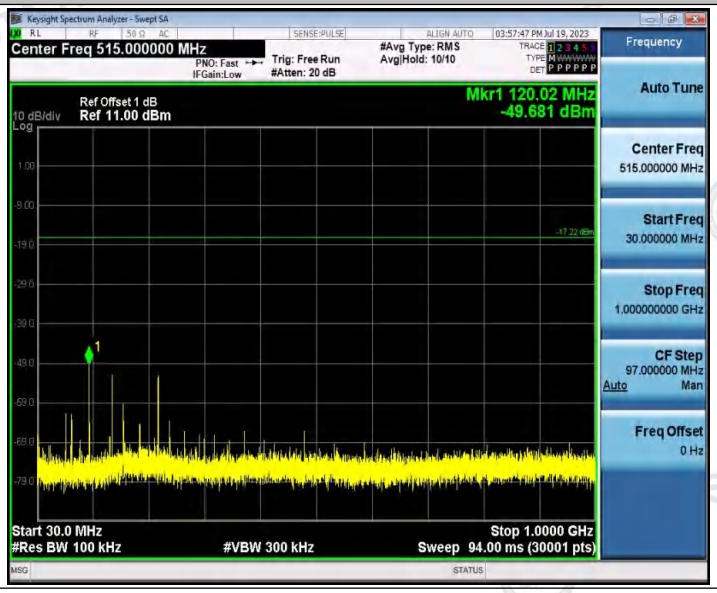

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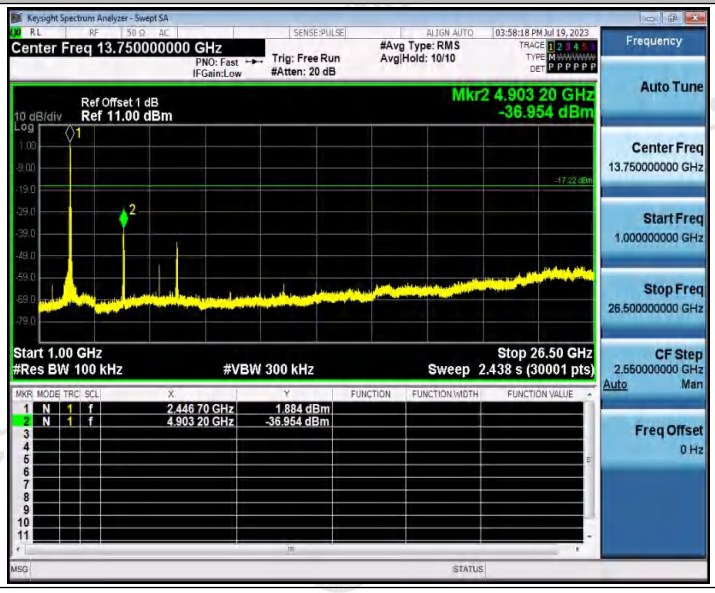


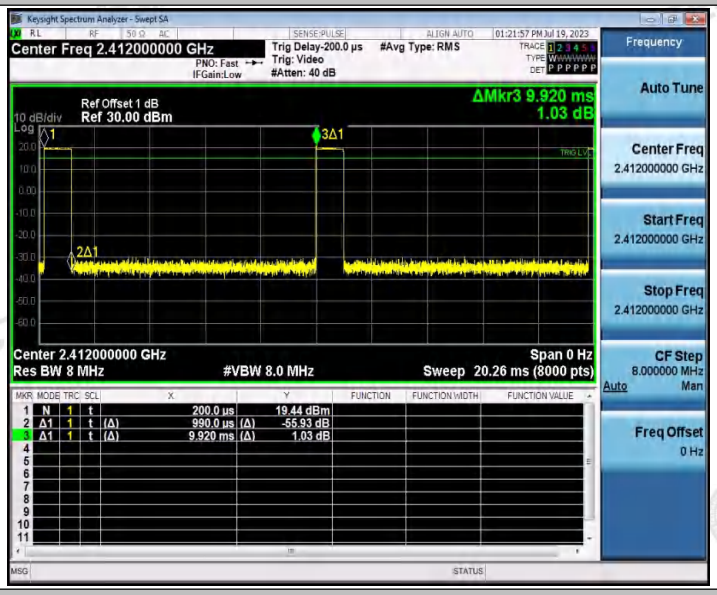
Appendix G: Duty Cycle

Test Result

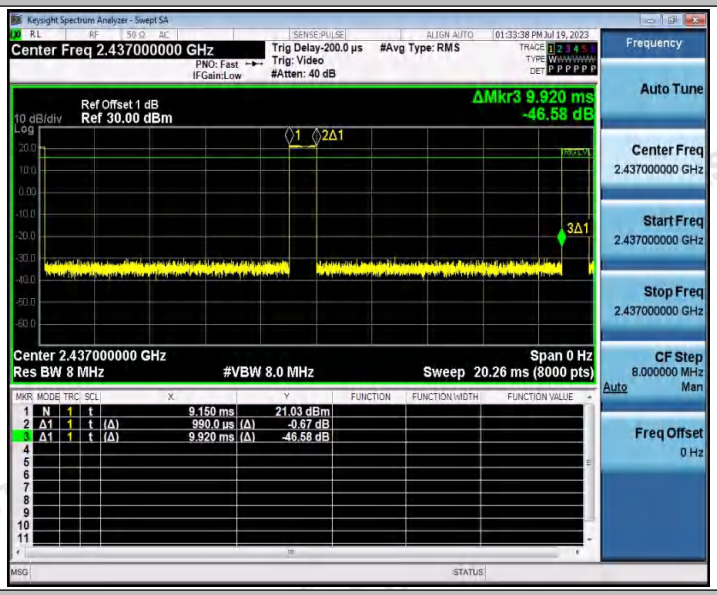
Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	0.99	9.92	9.98	10.01
		2437	0.99	9.92	9.98	10.01
		2462	0.99	9.92	9.98	10.01
11G	Ant1	2412	0.16	1.66	9.64	10.16
		2437	0.16	1.65	9.70	10.13
		2462	0.16	1.66	9.64	10.16
11N20SISO	Ant1	2412	0.16	1.69	9.47	10.24
		2437	0.16	1.69	9.47	10.24
		2462	0.16	1.70	9.41	10.26
11N40SISO	Ant1	2422	0.10	1.06	9.43	10.25
		2437	0.10	1.06	9.43	10.25
		2452	0.10	1.06	9.43	10.25

Test Graphs

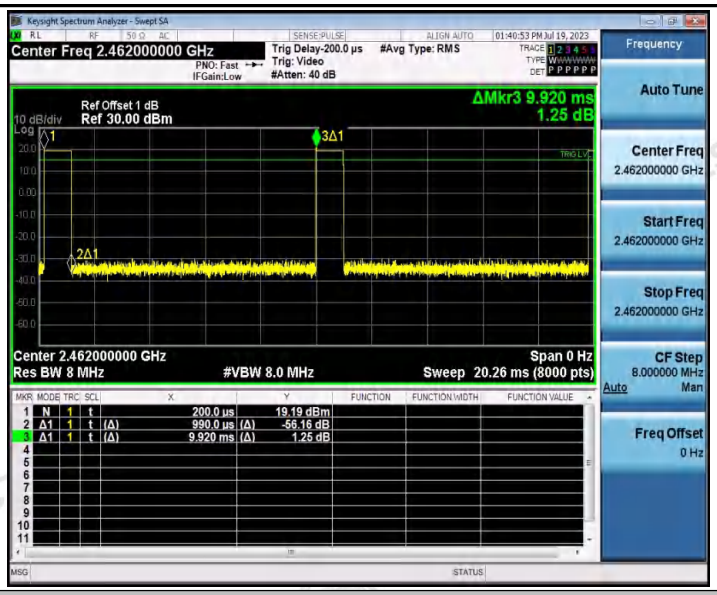
11B_Ant1_2412



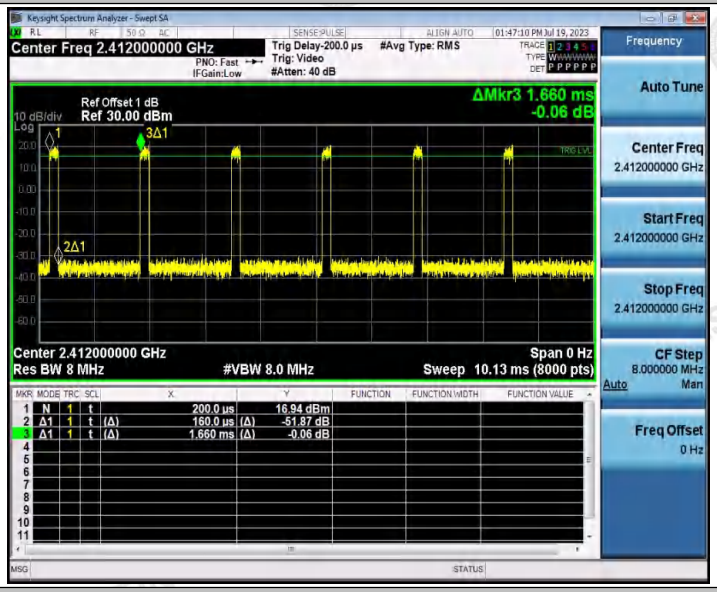
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



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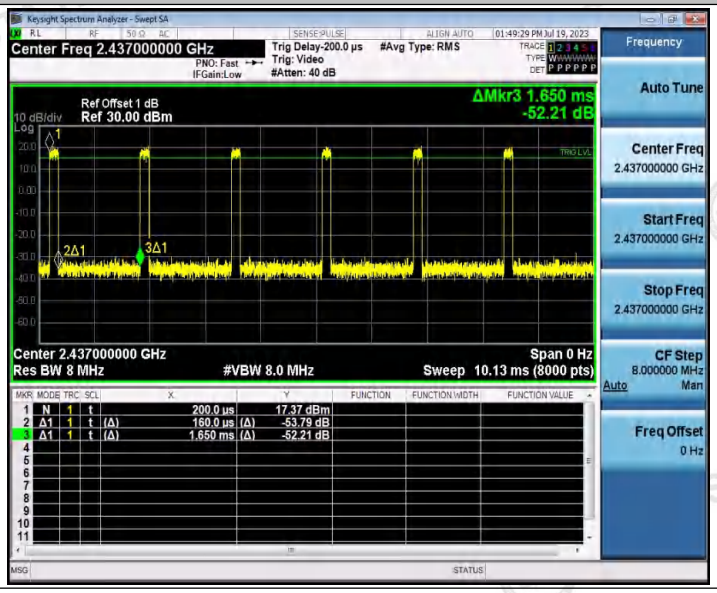
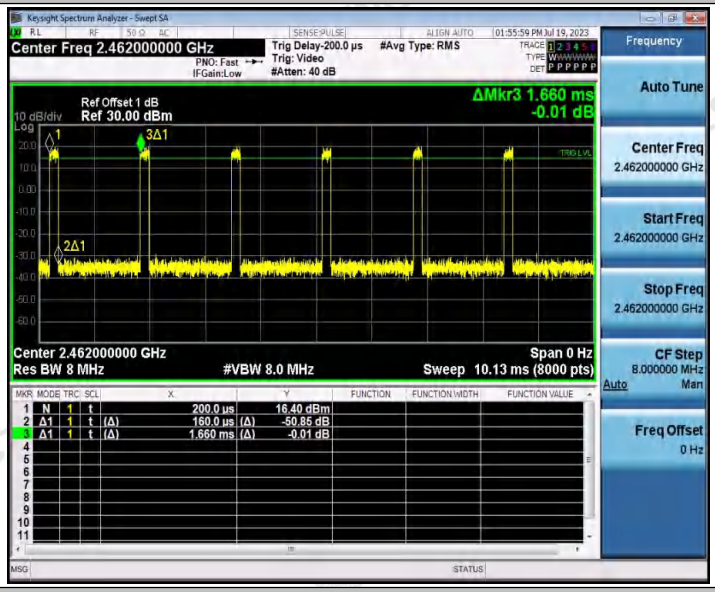
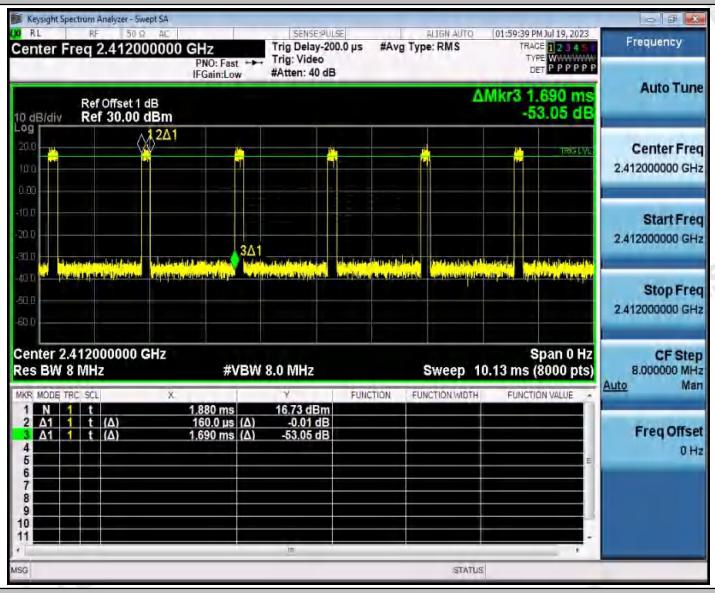


11G_Ant1_2462



11N20SISO_Ant1_2412



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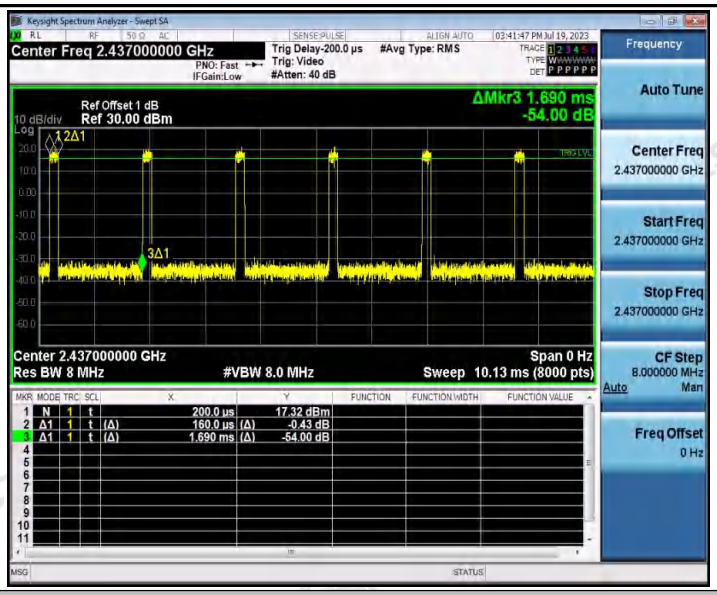

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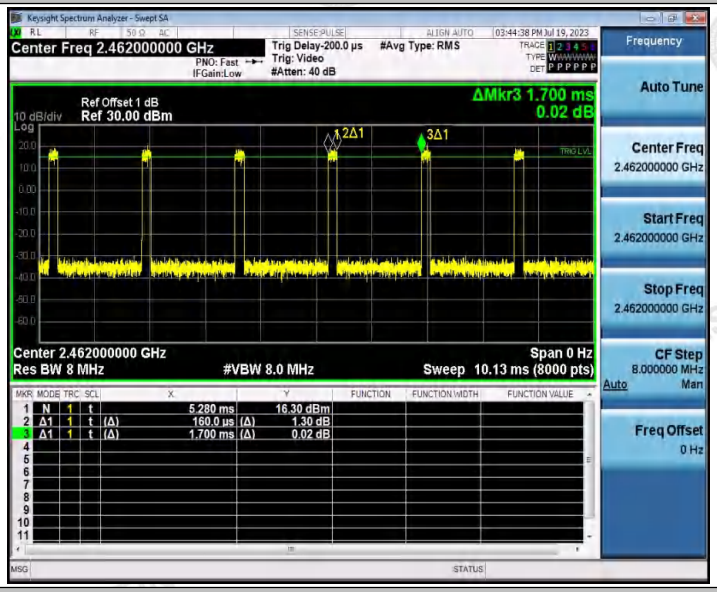

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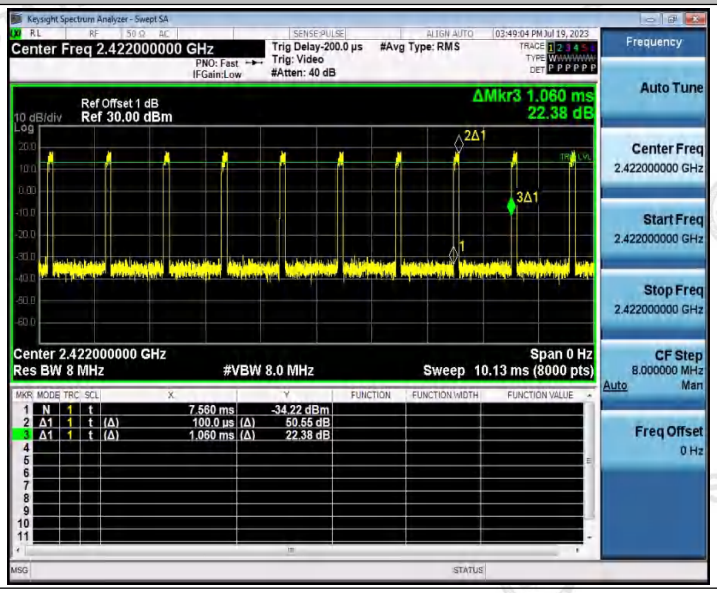

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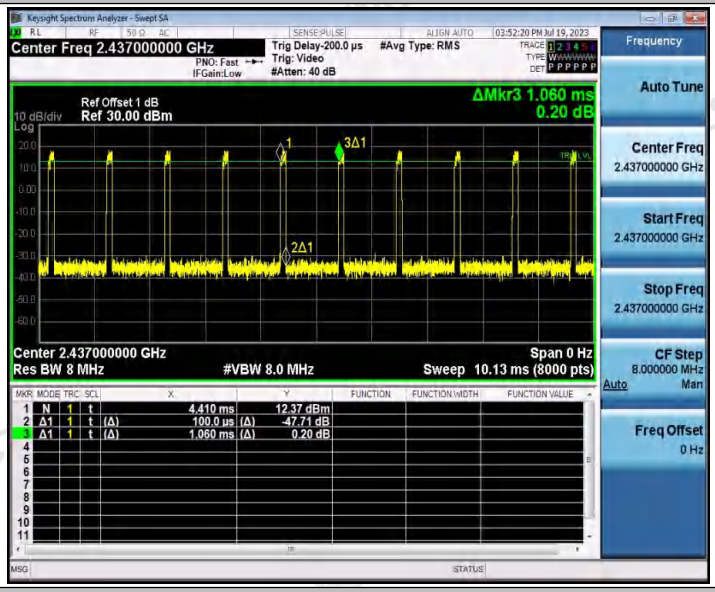

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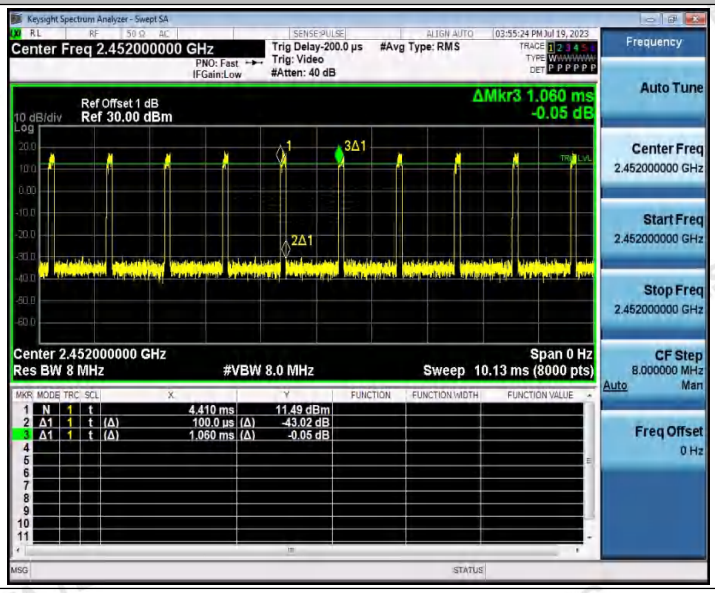

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