FCC Appendix RF Test Data

FCC ID	**:**	**2BOTE-HWMDC001**
Company:	**:**	**ShenZhen Testdisplay Technology Co., Ltd**
EUT	**:**	**Motorcycle dash cam**
Model Number	**:**	**HWMDC001**
Reviewed By	**:**	**Eric Wang**

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.080	2407.440	2416.520	0.5	PASS
		2437	9.520	2432.480	2442.000	0.5	PASS
		2462	9.600	2456.960	2466.560	0.5	PASS
11G	Ant1	2412	15.880	2404.280	2420.160	0.5	PASS
		2437	15.720	2429.440	2445.160	0.5	PASS
		2462	16.040	2454.120	2470.160	0.5	PASS
11N20SISO	Ant1	2412	16.320	2404.440	2420.760	0.5	PASS
		2437	15.880	2429.360	2445.240	0.5	PASS
		2462	16.680	2453.800	2470.480	0.5	PASS
11N40SISO	Ant1	2422	35.680	2404.480	2440.160	0.5	PASS
		2437	35.120	2419.480	2454.600	0.5	PASS
		2452	35.200	2434.400	2469.600	0.5	PASS

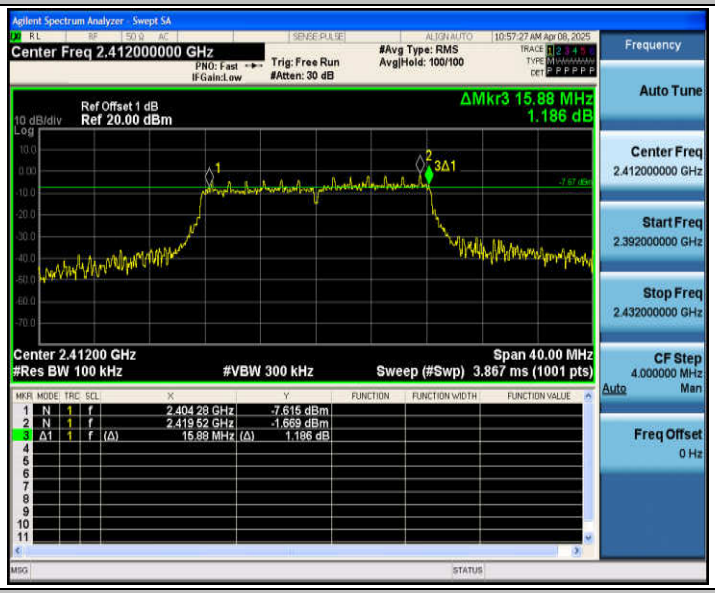
Test Graphs

11B_Ant1_2412

11B_Ant1_2437

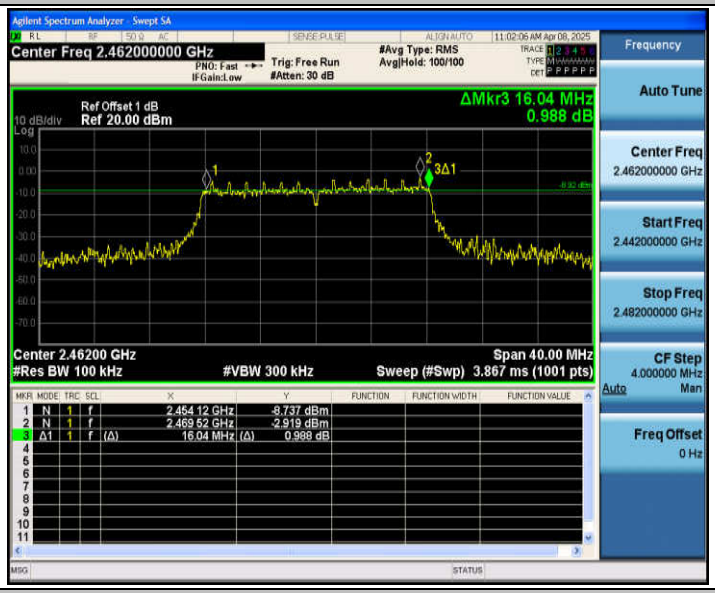
11B_Ant1_2462

11G_Ant1_2412



11G_Ant1_2437

11G_Ant1_2462

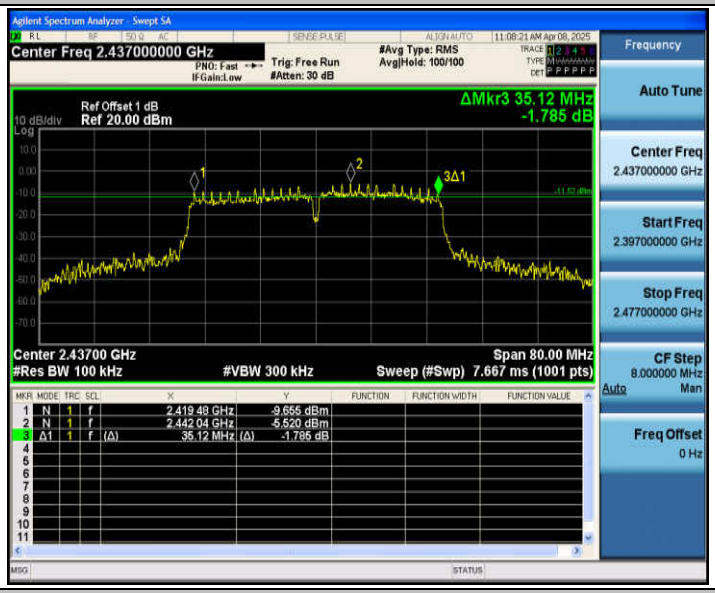


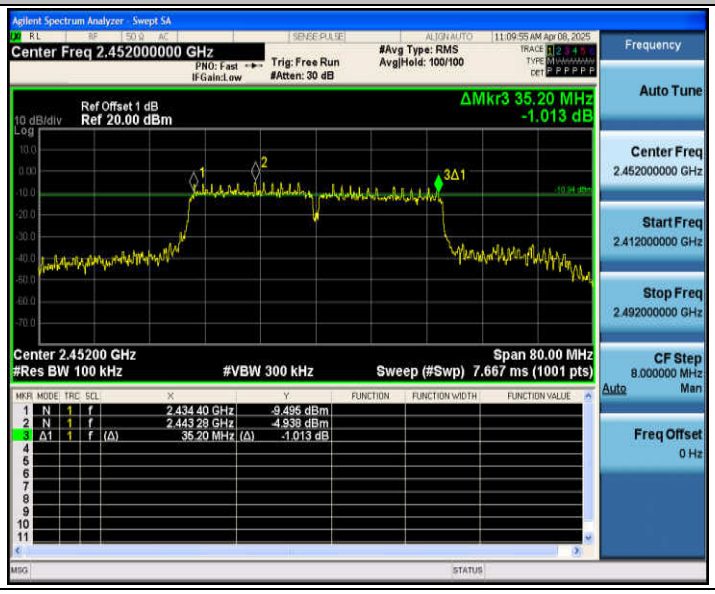
11N20SISO_Ant1_2412

11N20SISO_Ant1_2437

11N20SISO_Ant1_2462

11N40SISO_Ant1_2422

11N40SISO_Ant1_2437


11N40SISO_Ant1_2452


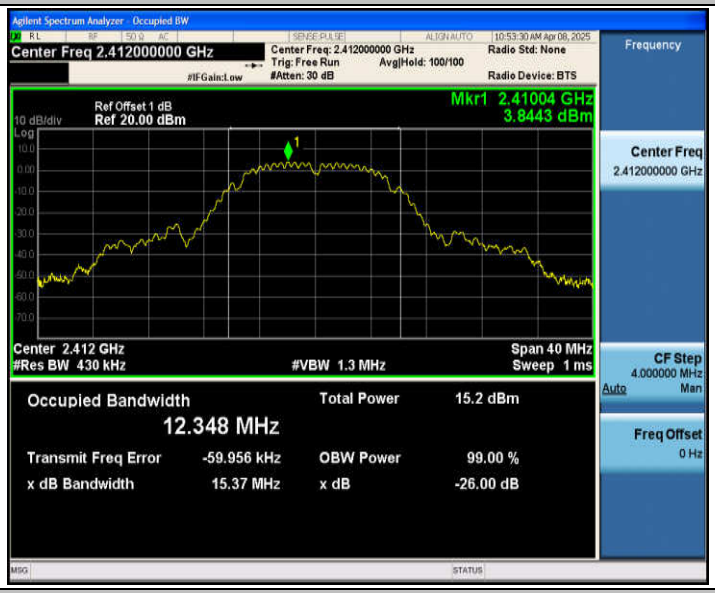
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.348	2405.7660	2418.1140	---	---
		2437	12.259	2431.1231	2443.3821	---	---
		2462	12.698	2455.4607	2468.1587	---	---
11G	Ant1	2412	16.825	2403.7916	2420.6166	---	---
		2437	16.626	2428.8745	2445.5005	---	---
		2462	16.941	2453.6248	2470.5658	---	---
11N20SISO	Ant1	2412	17.904	2403.2504	2421.1544	---	---
		2437	17.624	2428.2867	2445.9107	---	---
		2462	18.063	2453.0910	2471.1540	---	---
11N40SISO	Ant1	2422	36.261	2404.2116	2440.4726	---	---
		2437	36.104	2418.9999	2455.1039	---	---
		2452	36.414	2433.8235	2470.2375	---	---

Test Graphs

11B_Ant1_2412

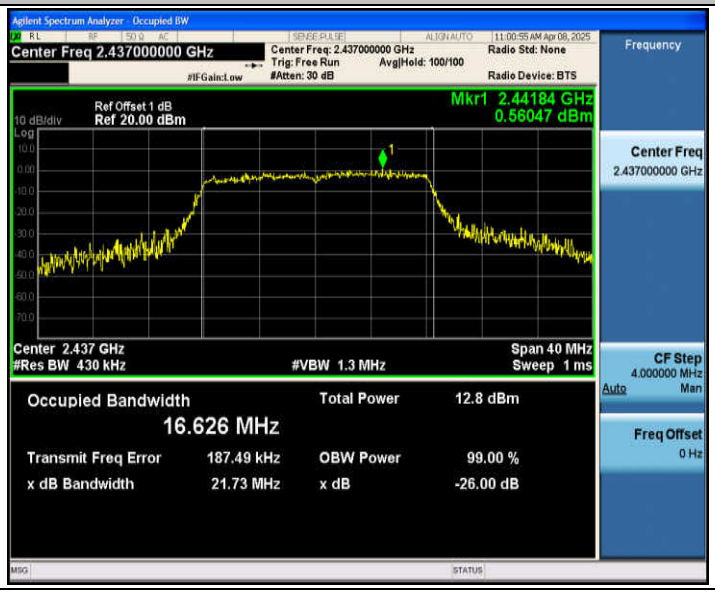


11B_Ant1_2437

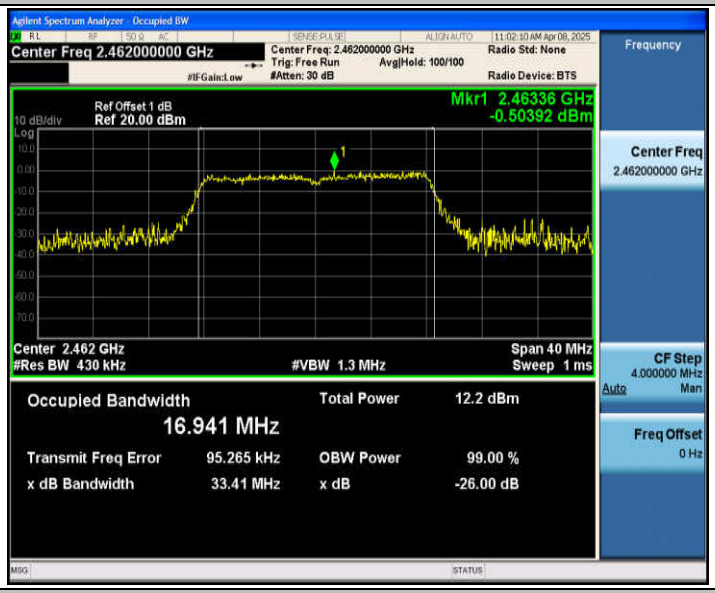
11B_Ant1_2462

11G_Ant1_2412

11G_Ant1_2437

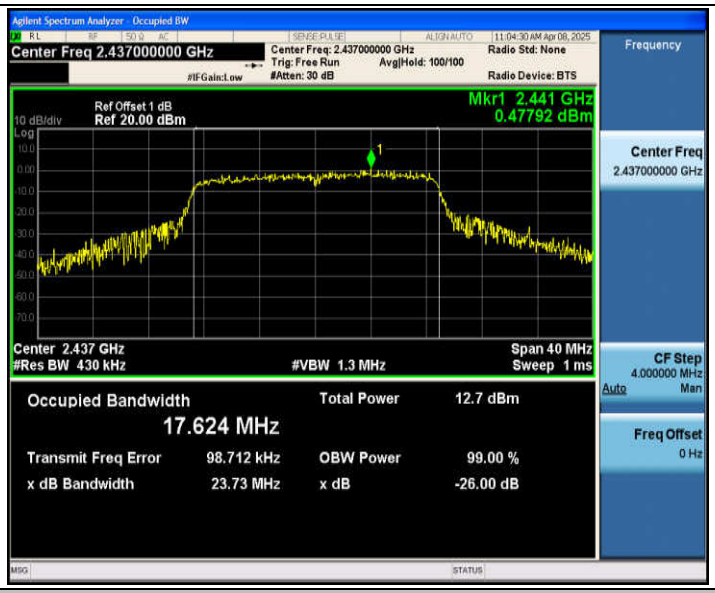


11G_Ant1_2462

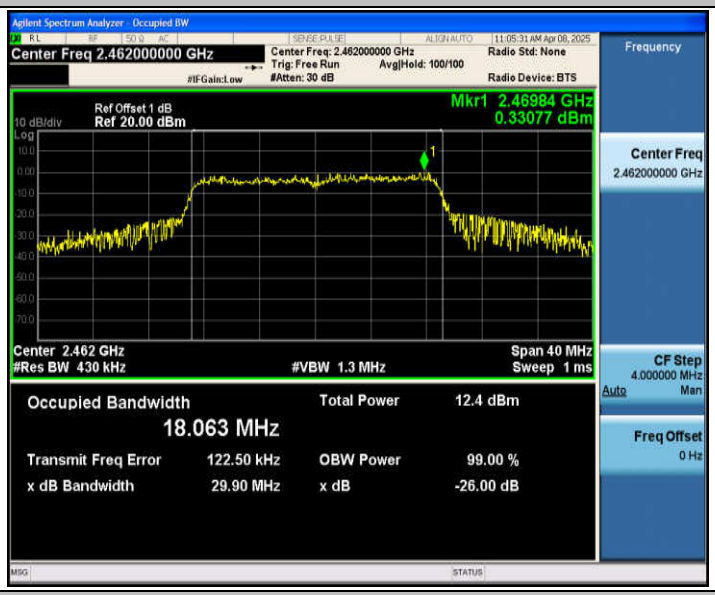


11N20SISO_Ant1_2412

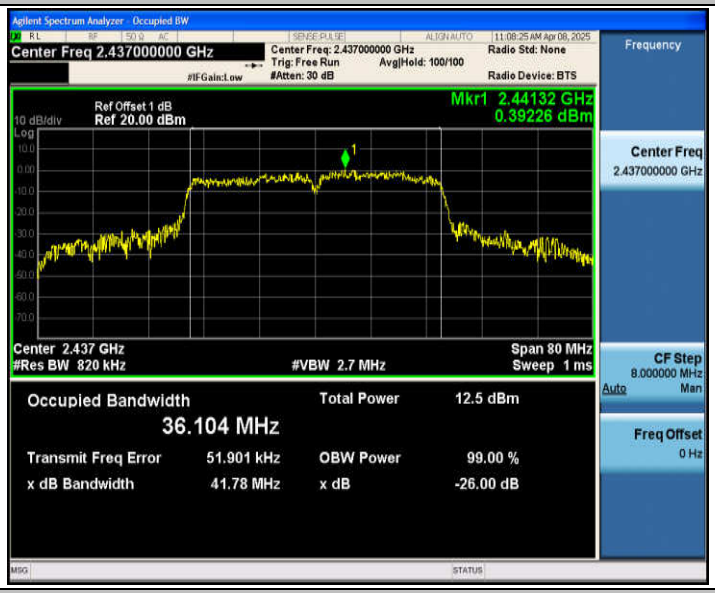
11N20SISO_Ant1_2437

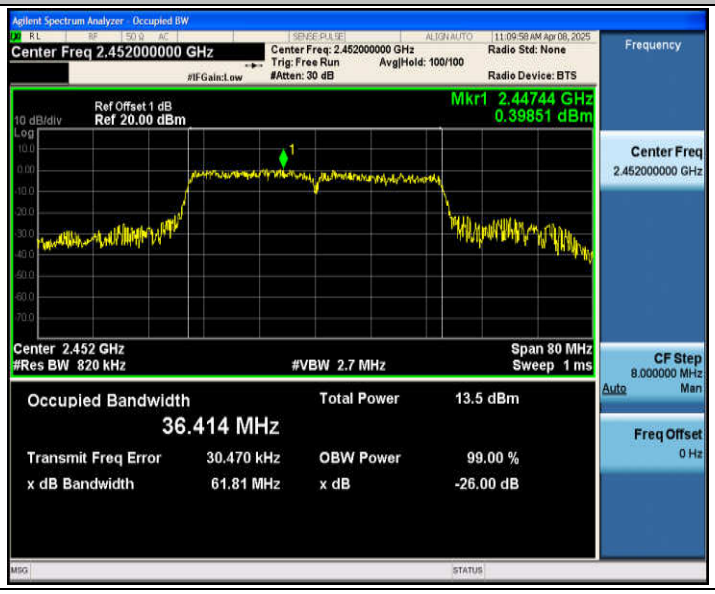


11N20SISO_Ant1_2462



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]	Limit [dBm]	Verdict
11B	Ant1	2412	15.02	≤30.00	PASS
		2437	15.27	≤30.00	PASS
		2462	14.20	≤30.00	PASS
11G	Ant1	2412	13.94	≤30.00	PASS
		2437	13.40	≤30.00	PASS
		2462	12.94	≤30.00	PASS
11N20SISO	Ant1	2412	14.08	≤30.00	PASS
		2437	13.22	≤30.00	PASS
		2462	12.73	≤30.00	PASS
11N40SISO	Ant1	2422	13.14	≤30.00	PASS
		2437	12.68	≤30.00	PASS
		2452	13.57	≤30.00	PASS

Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.59	≤8.00	PASS
		2437	-9.71	≤8.00	PASS
		2462	-12.04	≤8.00	PASS
11G	Ant1	2412	-18.36	≤8.00	PASS
		2437	-18.24	≤8.00	PASS
		2462	-18.82	≤8.00	PASS
11N20SISO	Ant1	2412	-16.91	≤8.00	PASS
		2437	-18.86	≤8.00	PASS
		2462	-18.89	≤8.00	PASS
11N40SISO	Ant1	2422	-21.44	≤8.00	PASS
		2437	-21.35	≤8.00	PASS
		2452	-21.39	≤8.00	PASS

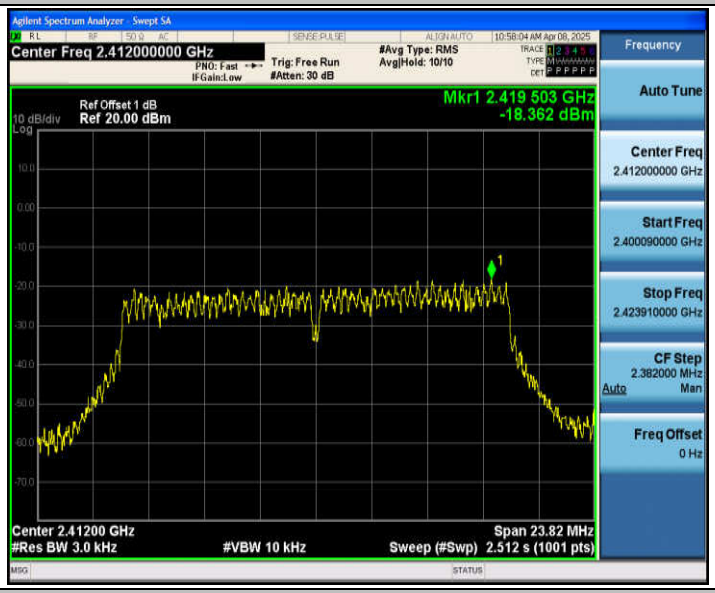
Test Graphs

11B_Ant1_2412

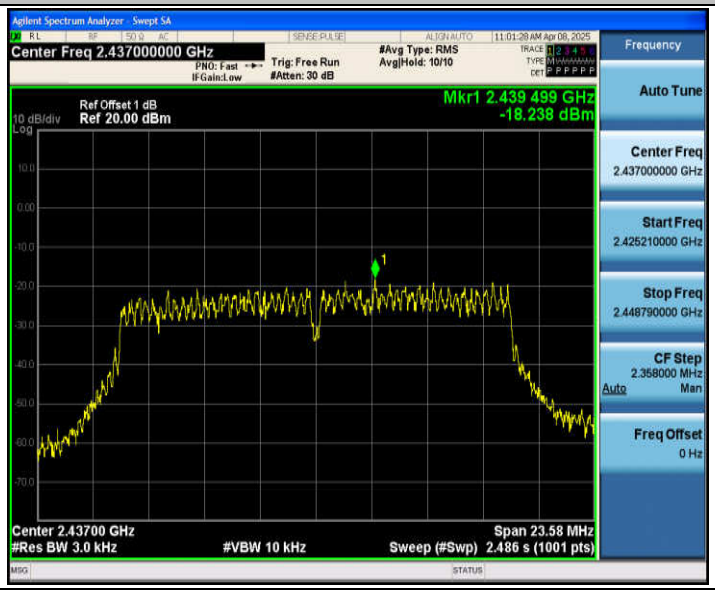
11B_Ant1_2437

11B_Ant1_2462

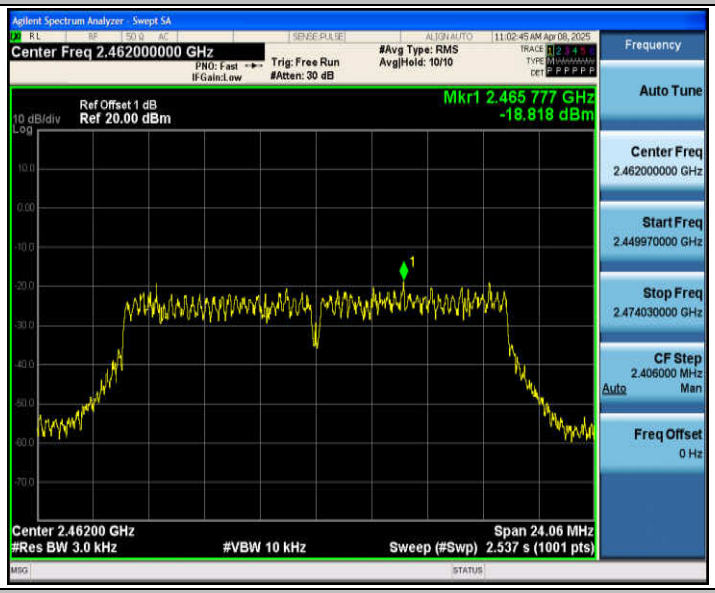
11G_Ant1_2412



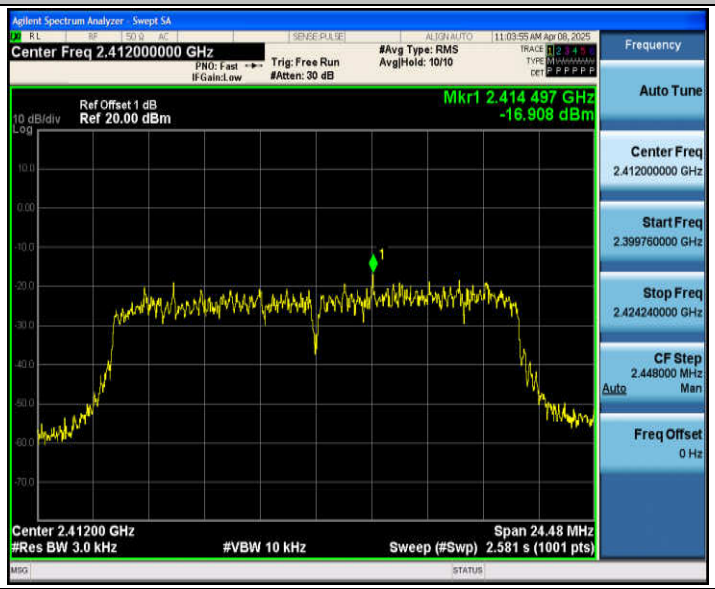
11G_Ant1_2437



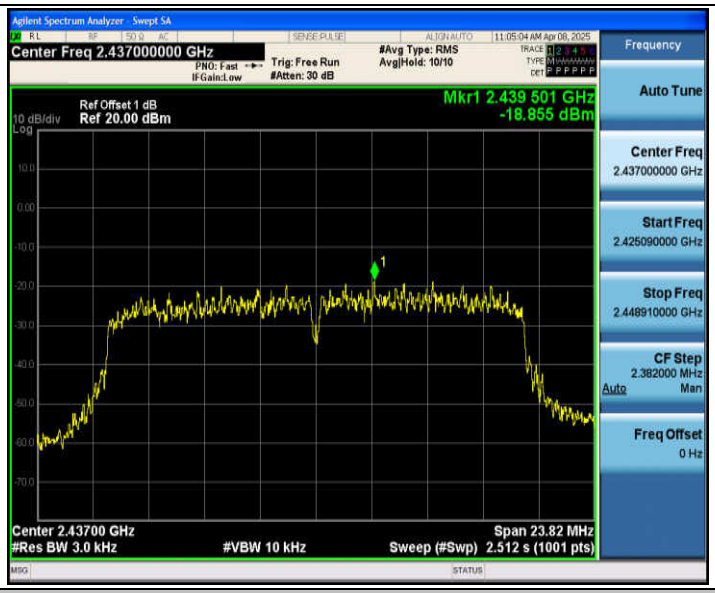
11G_Ant1_2462



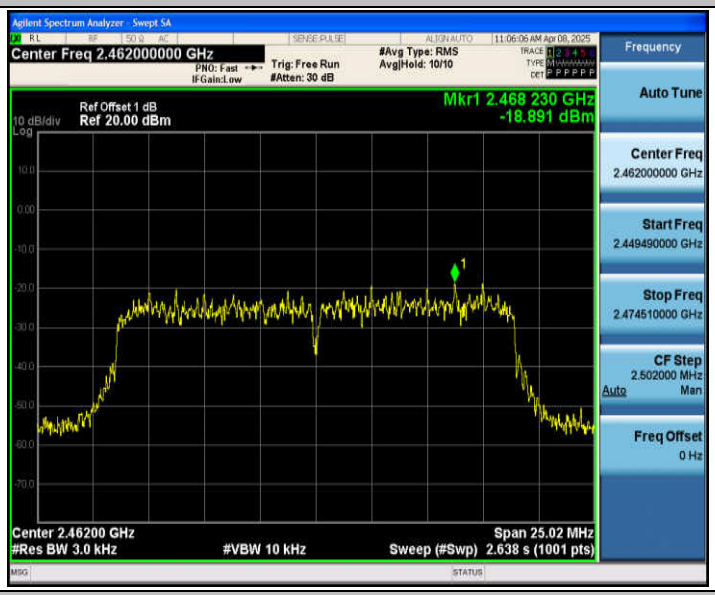
11N20SISO_Ant1_2412



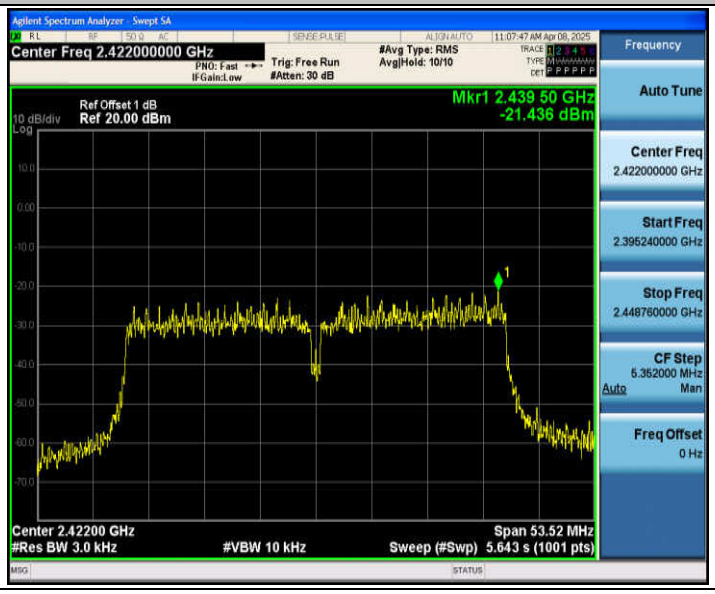
11N20SISO_Ant1_2437

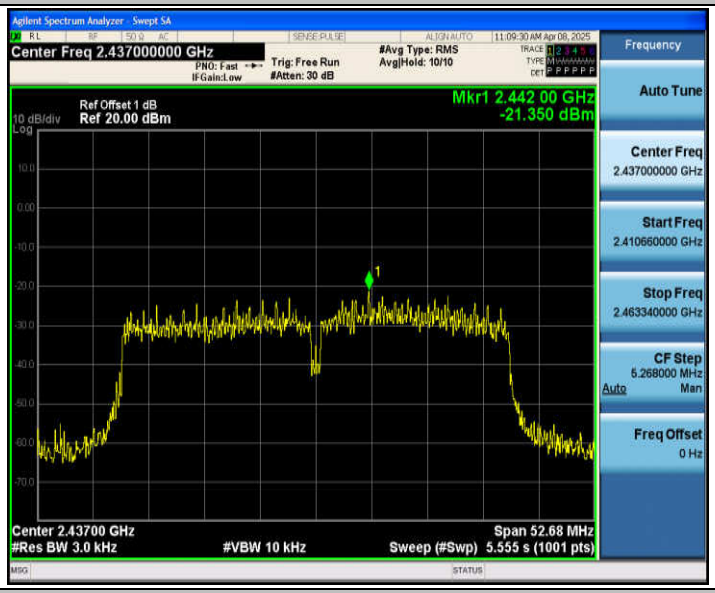


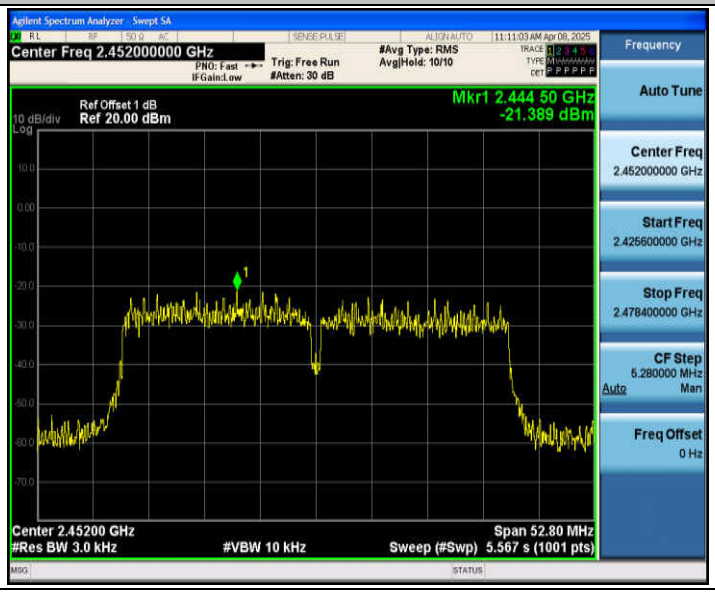
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437


11N40SISO_Ant1_2452


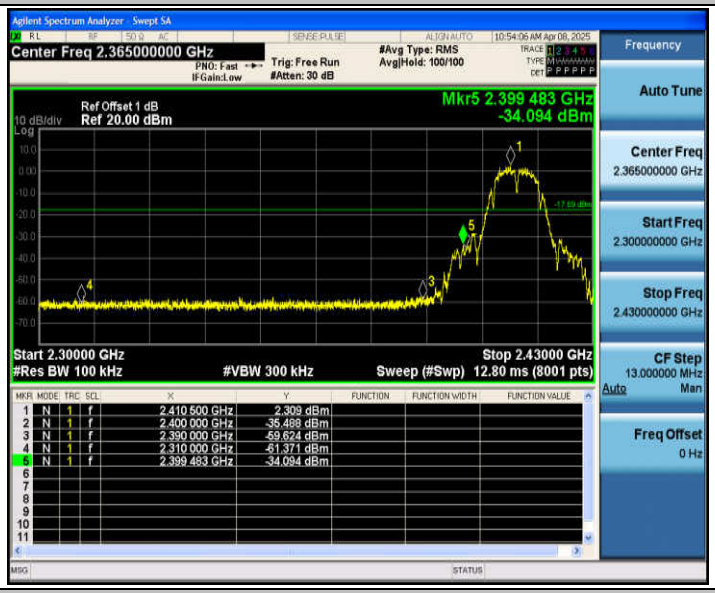
Appendix E: Band edge measurements

Test Result

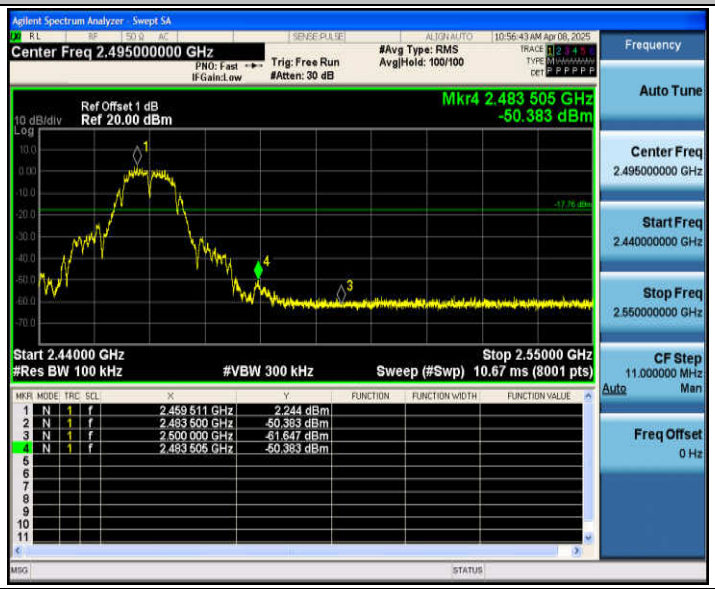
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.31	-34.09	≤-17.69	PASS
		High	2462	2.24	-50.38	≤-17.76	PASS
11G	Ant1	Low	2412	-1.65	-35.29	≤-21.65	PASS
		High	2462	-3.67	-38.36	≤-23.67	PASS
11N20SISO	Ant1	Low	2412	-1.77	-35.11	≤-21.77	PASS
		High	2462	-2.99	-38.78	≤-22.99	PASS
11N40SISO	Ant1	Low	2422	-5.07	-38.91	≤-25.07	PASS
		High	2452	-4.99	-35.49	≤-24.99	PASS

Test Graphs

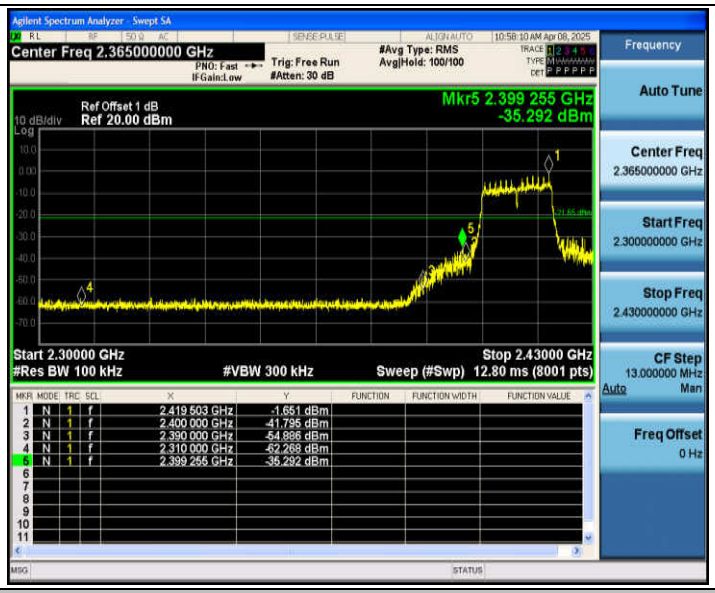
11B_Ant1_Low_2412



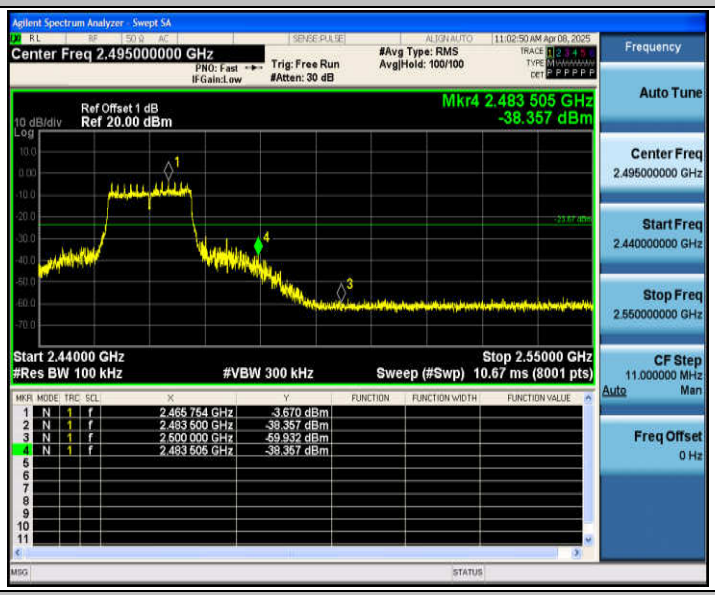
11B_Ant1_High_2462



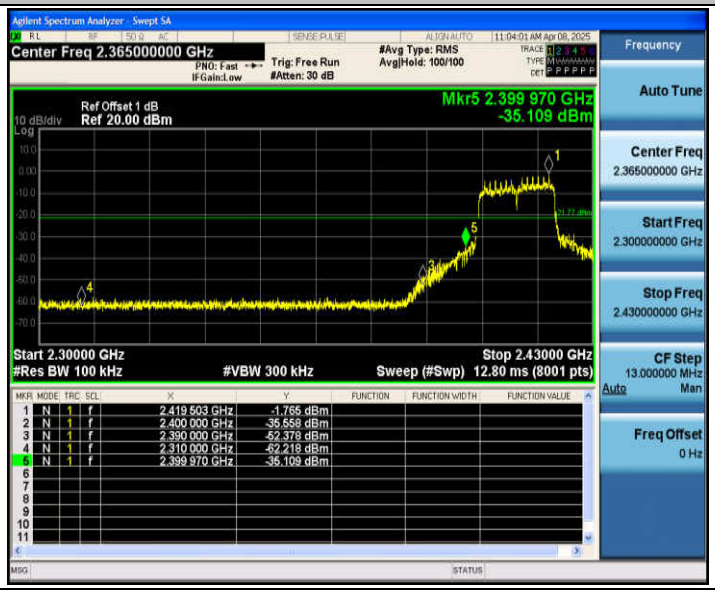
11G_Ant1_Low_2412



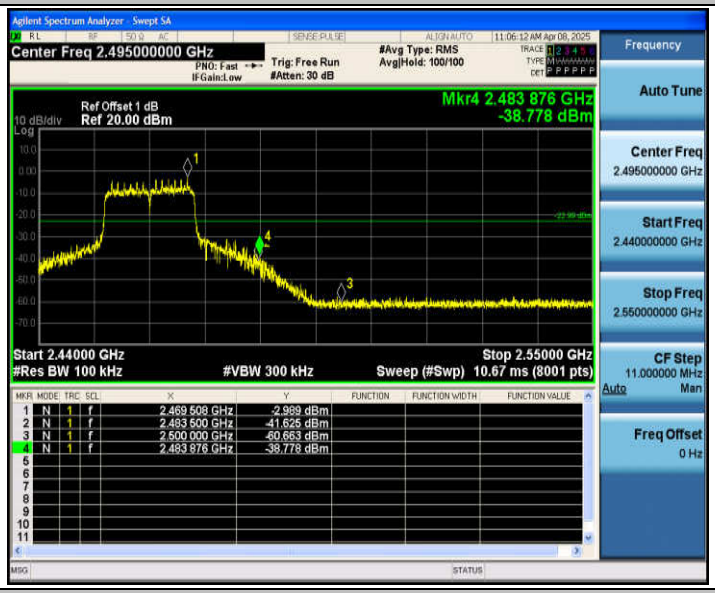
11G_Ant1_High_2462



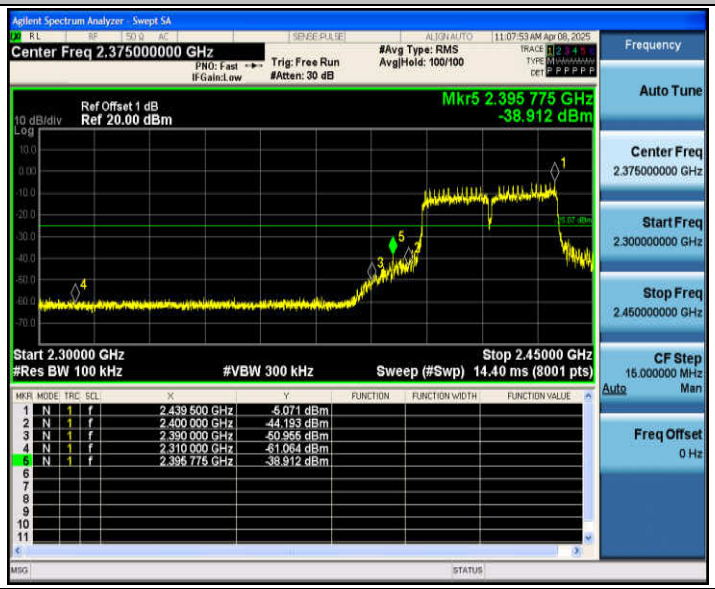
11N20SISO_Ant1_Low_2412



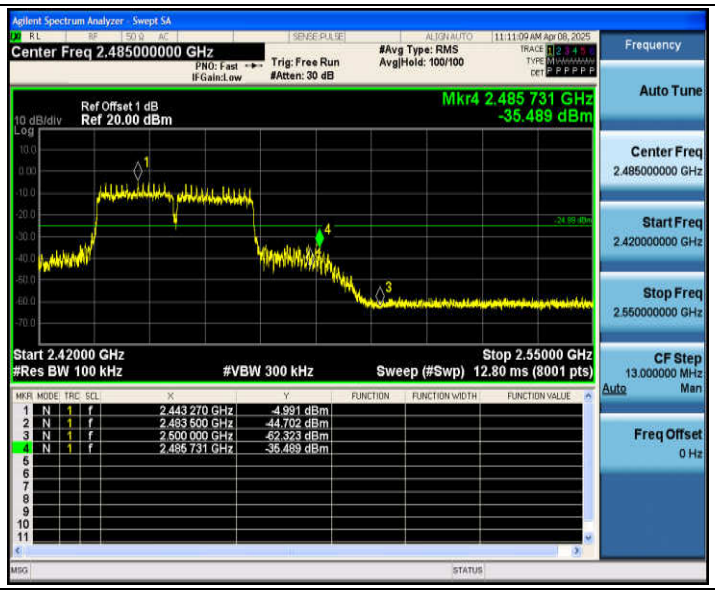
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.485000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
11:11:09 AM Apr 08, 2025
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.485 731 GHz
-35.489 dBm
Start 2.42000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
Sweep (#Swp) 12.80 ms (8001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.443 270 GHz -4.991 dBm
2 N 1 f 2.483 500 GHz -44.702 dBm
3 N 1 f 2.500 000 GHz -62.323 dBm
4 N 1 f 2.485 731 GHz -35.489 dBm
Frequency
Auto Tune
Center Freq
2.485000000 GHz
Start Freq
2.420000000 GHz
Stop Freq
2.550000000 GHz
CF Step
13.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Appendix F: Conducted Spurious Emission

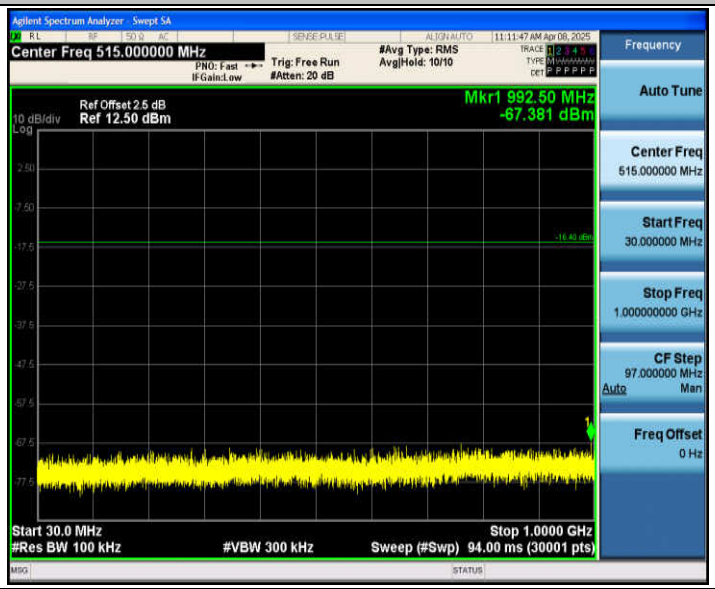
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.60	3.60	---	PASS
			30~1000	3.60	-67.38	≤-16.4	PASS
			1000~26500	3.60	-42.01	≤-16.4	PASS
		2437	Reference	2.28	2.28	---	PASS
			30~1000	2.28	-67.98	≤-17.72	PASS
			1000~26500	2.28	-41.24	≤-17.72	PASS
		2462	Reference	1.98	1.98	---	PASS
			30~1000	1.98	-67.5	≤-18.02	PASS
			1000~26500	1.98	-35.46	≤-18.02	PASS
11G	Ant1	2412	Reference	-0.55	-0.55	---	PASS
			30~1000	-0.55	-67.97	≤-20.55	PASS
			1000~26500	-0.55	-47.89	≤-20.55	PASS
		2437	Reference	-1.09	-1.09	---	PASS
			30~1000	-1.09	-67.4	≤-21.09	PASS
			1000~26500	-1.09	-54.1	≤-21.09	PASS
		2462	Reference	-3.00	-3.00	---	PASS
			30~1000	-3.00	-67.61	≤-23	PASS
			1000~26500	-3.00	-49.28	≤-23	PASS
11N20SISO	Ant1	2412	Reference	-1.26	-1.26	---	PASS
			30~1000	-1.26	-67.13	≤-21.26	PASS
			1000~26500	-1.26	-51.98	≤-21.26	PASS
		2437	Reference	-1.05	-1.05	---	PASS
			30~1000	-1.05	-67.97	≤-21.05	PASS
			1000~26500	-1.05	-54.2	≤-21.05	PASS
		2462	Reference	-3.53	-3.53	---	PASS
			30~1000	-3.53	-66.94	≤-23.53	PASS
			1000~26500	-3.53	-50.34	≤-23.53	PASS
11N40SISO	Ant1	2422	Reference	-3.65	-3.65	---	PASS
			30~1000	-3.65	-66.77	≤-23.65	PASS
			1000~26500	-3.65	-52.04	≤-23.65	PASS
		2437	Reference	-4.20	-4.20	---	PASS
			30~1000	-4.20	-67.42	≤-24.2	PASS
			1000~26500	-4.20	-51.62	≤-24.2	PASS
		2452	Reference	-3.36	-3.36	---	PASS
			30~1000	-3.36	-67.04	≤-23.36	PASS
			1000~26500	-3.36	-55.04	≤-23.36	PASS

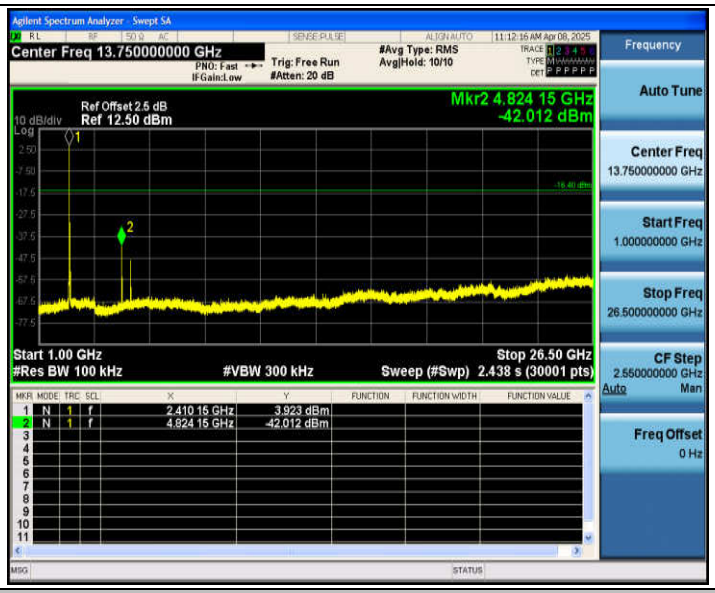
Test Graphs

11B_Ant1_2412_0~Reference

11B_Ant1_2412_30~1000

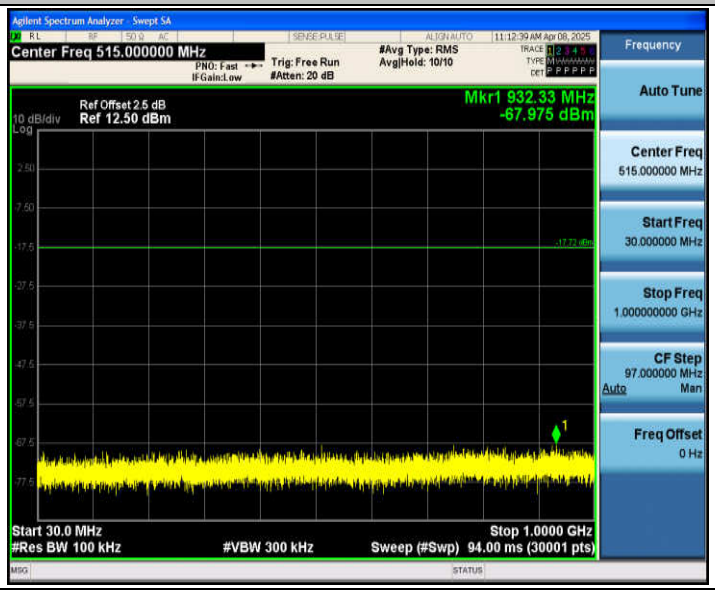


11B_Ant1_2412_1000~26500

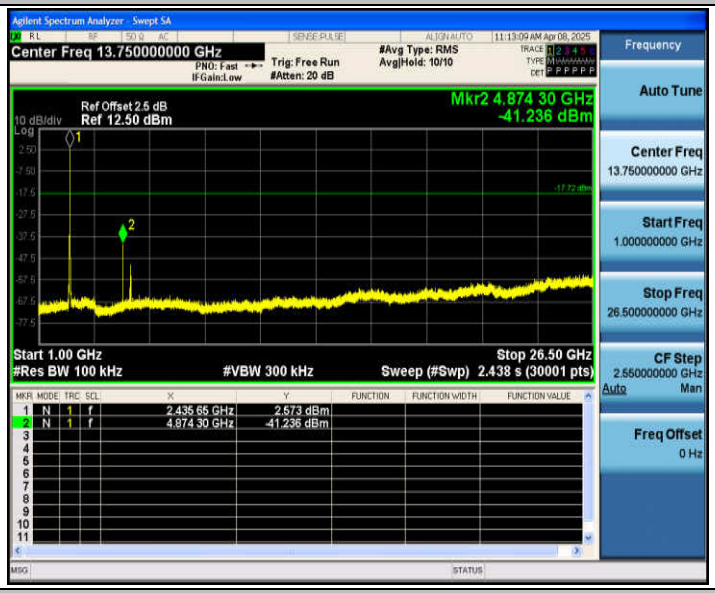


11B_Ant1_2437_0~Reference

11B_Ant1_2437_30~1000

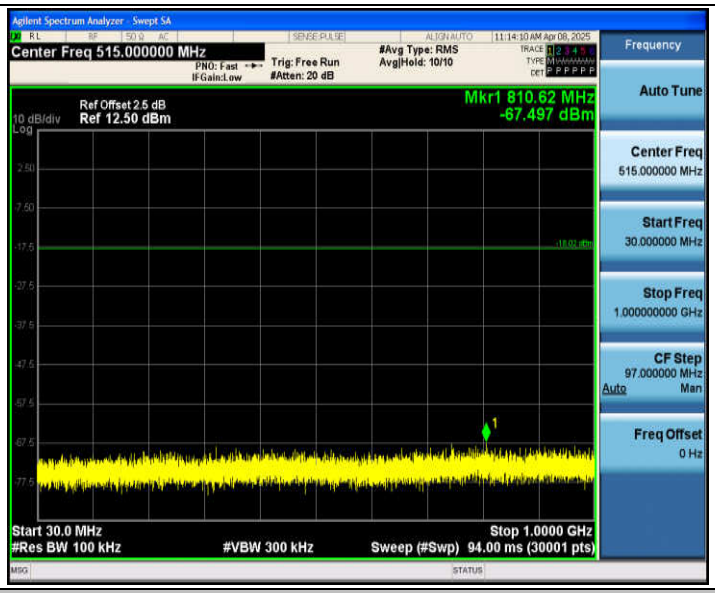


11B_Ant1_2437_1000~26500

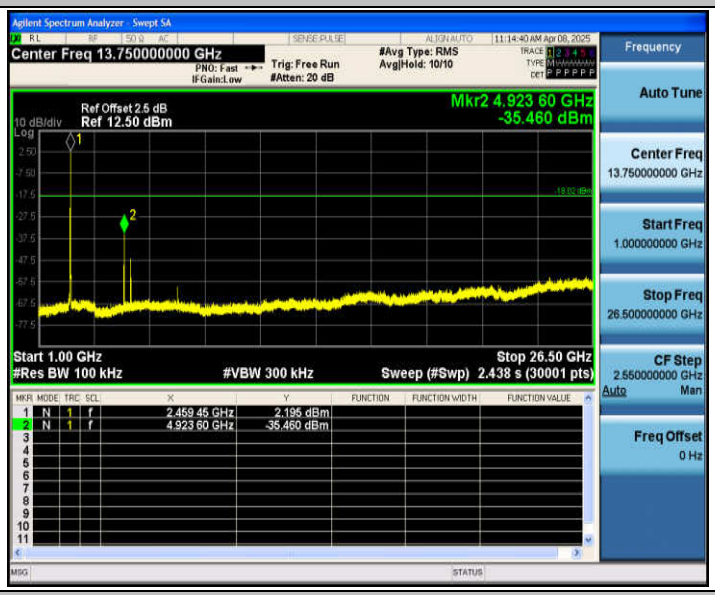


11B_Ant1_2462_0~Reference

11B_Ant1_2462_30~1000

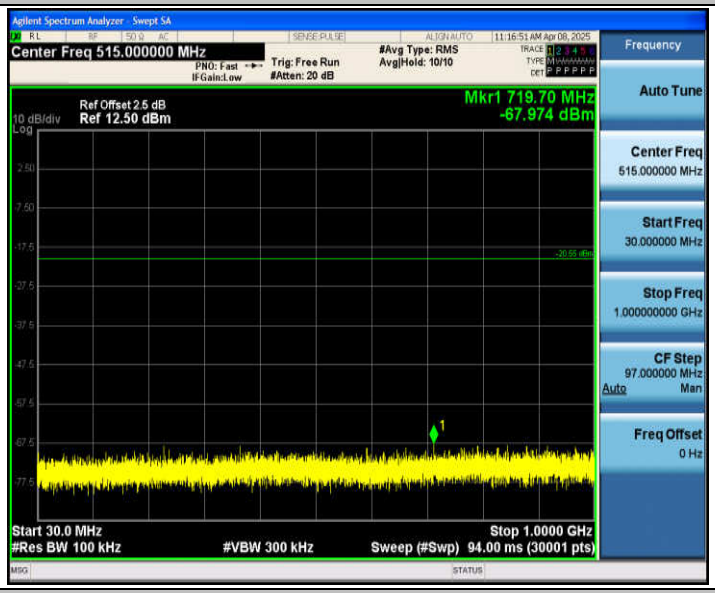


11B_Ant1_2462_1000~26500



11G_Ant1_2412_0~Reference

11G_Ant1_2412_30~1000



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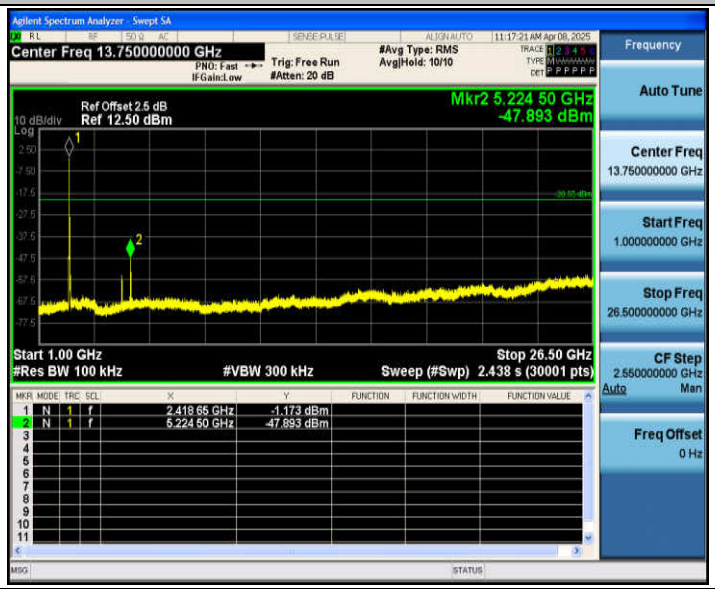
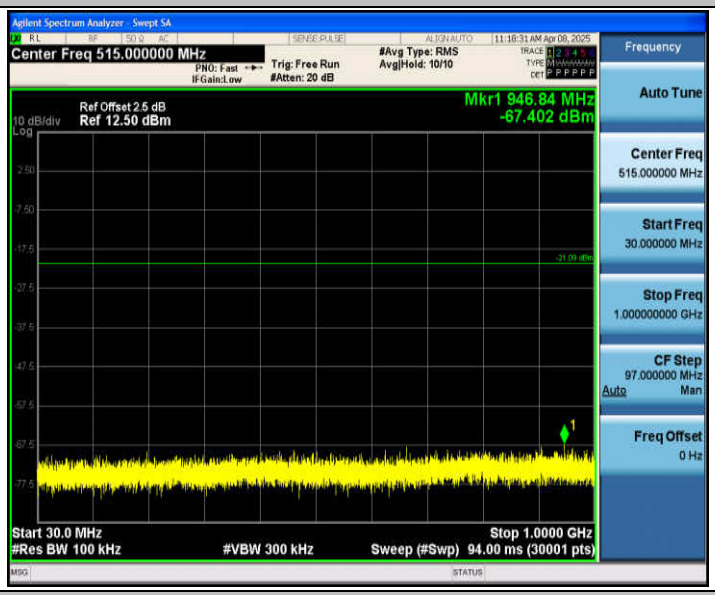


11G_Ant1_2437_0~Reference

11G_Ant1_2437_30~1000



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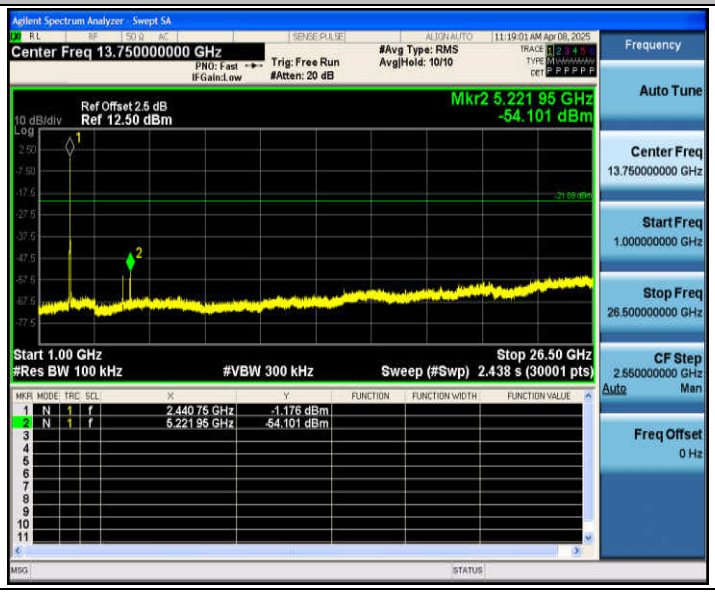

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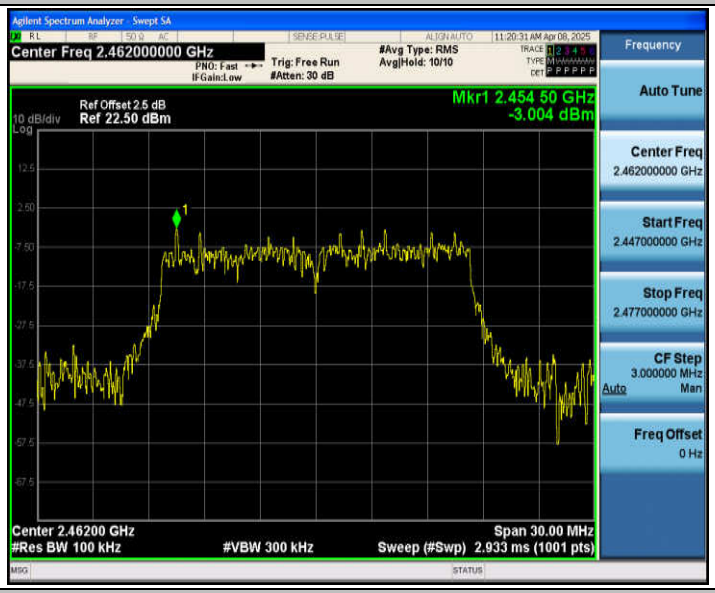

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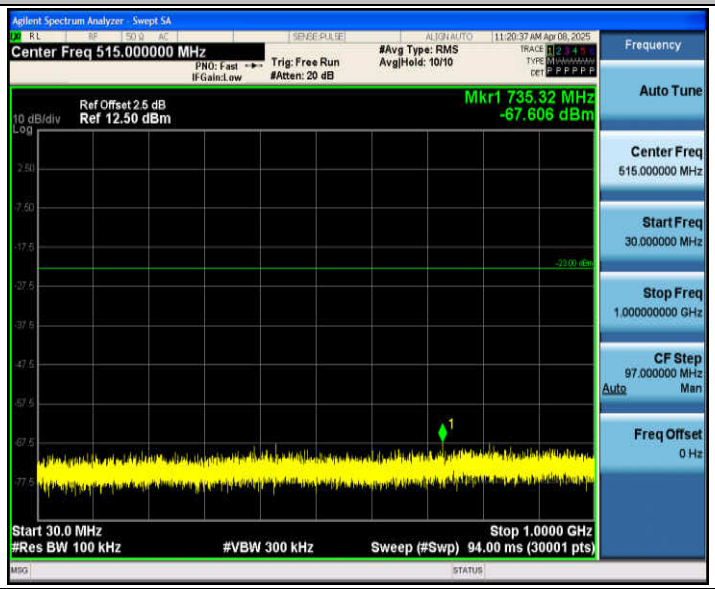

11G_Ant1_2462_1000~26500

11N20SISO_Ant1_2412_0~Reference

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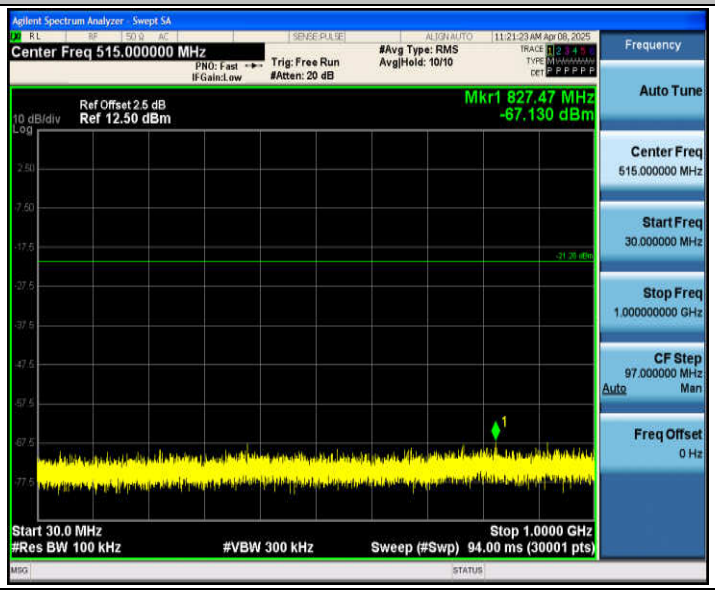

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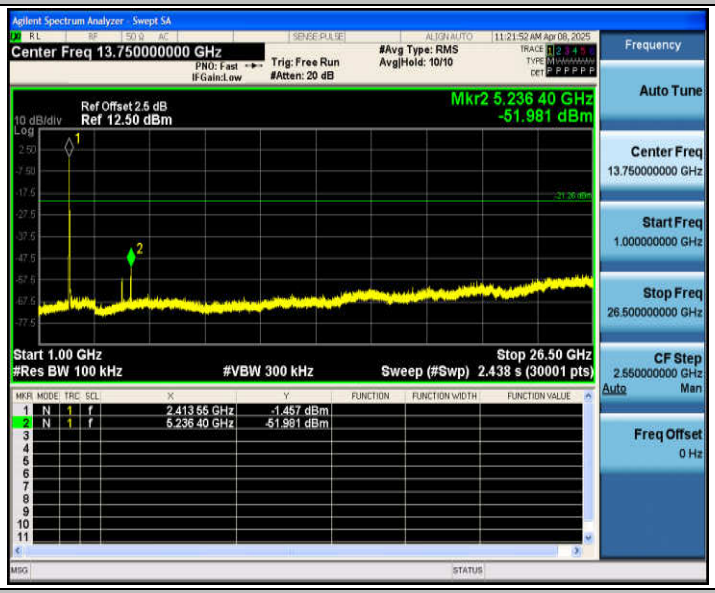

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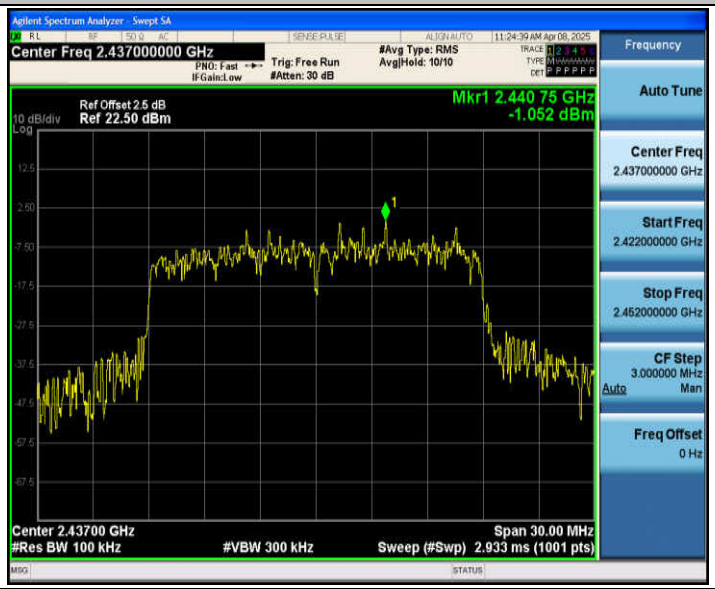

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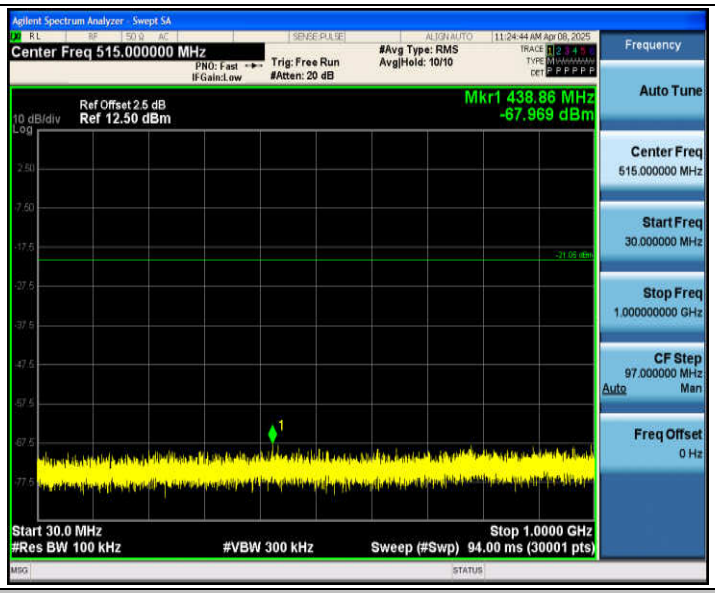

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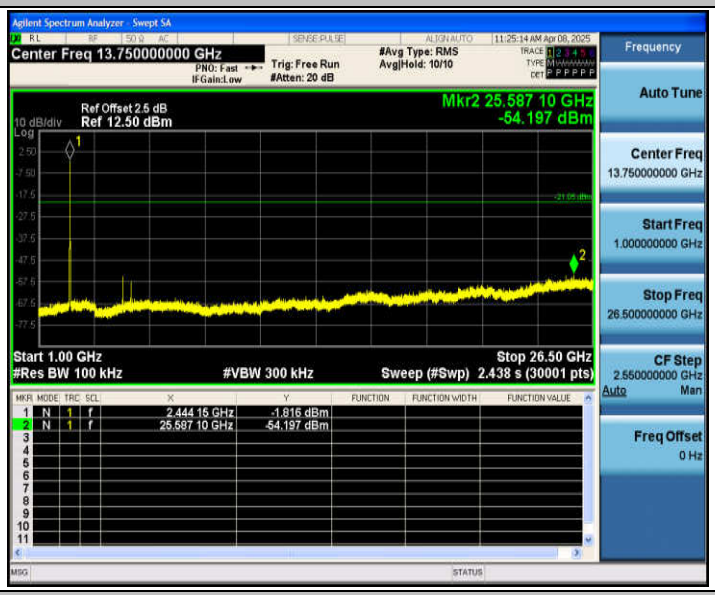

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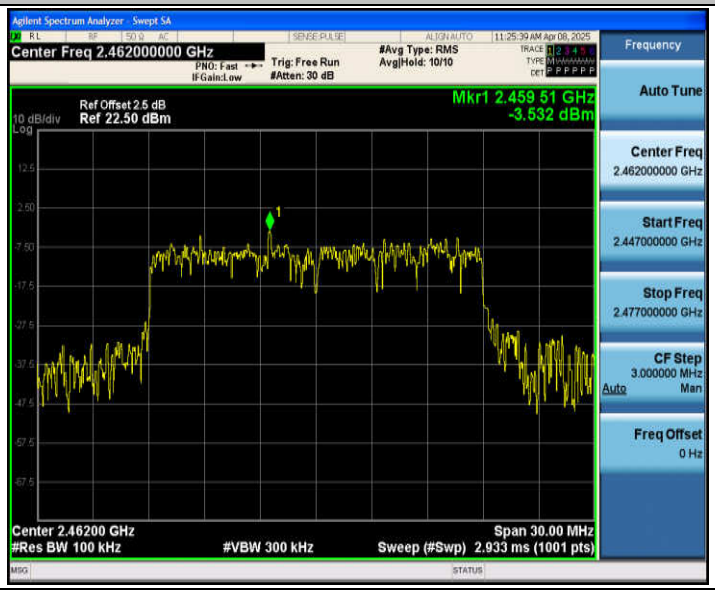

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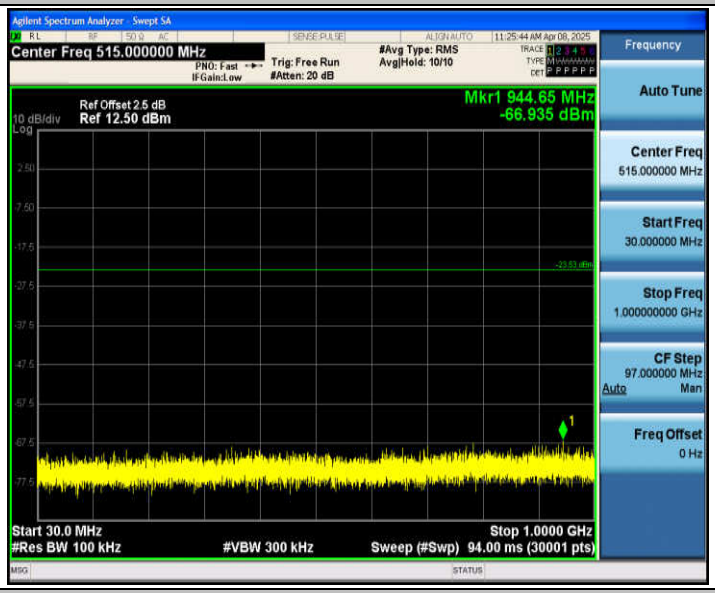

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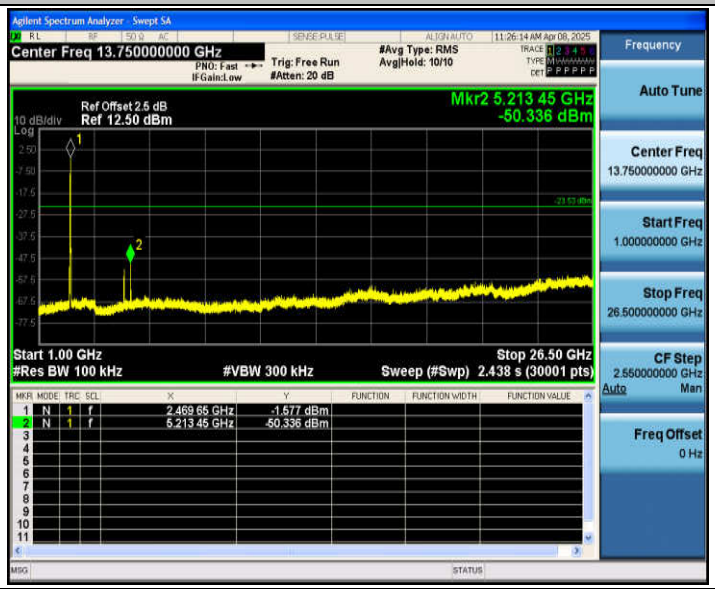
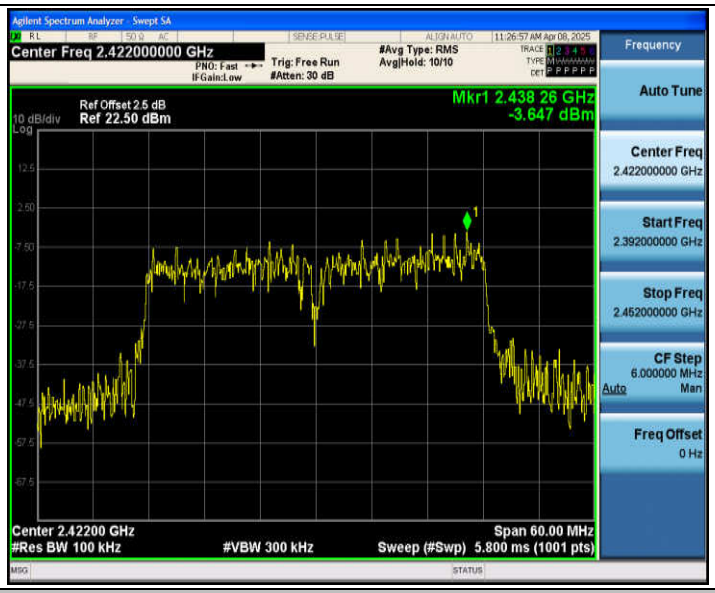


11N40SISO_Ant1_2422_0~Reference



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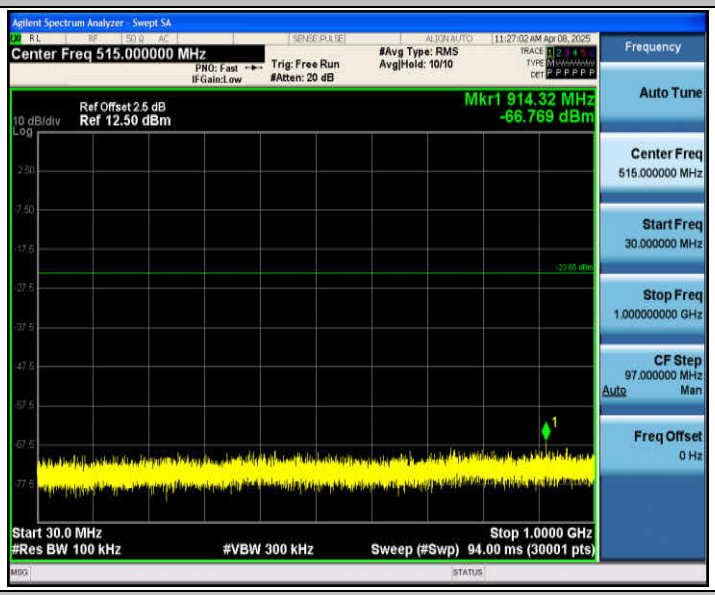

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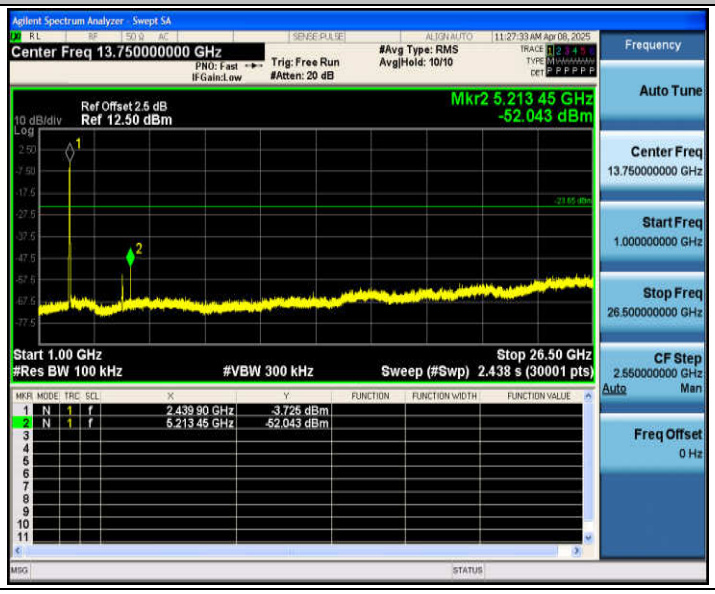

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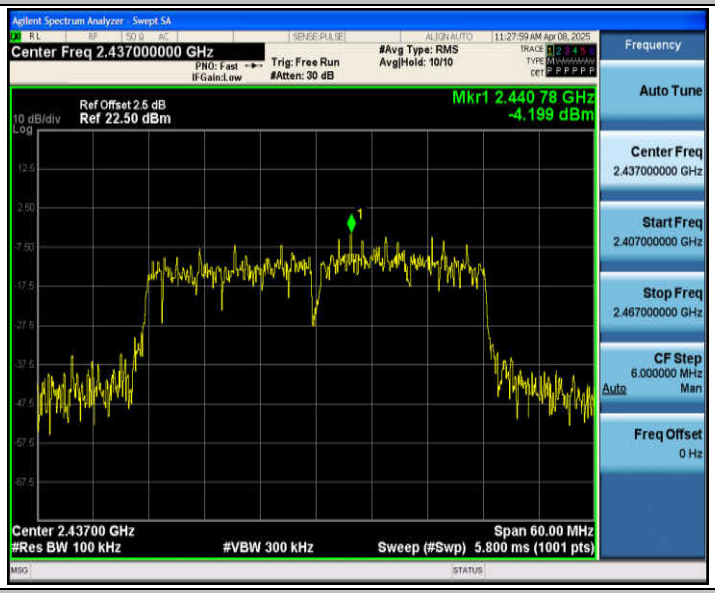

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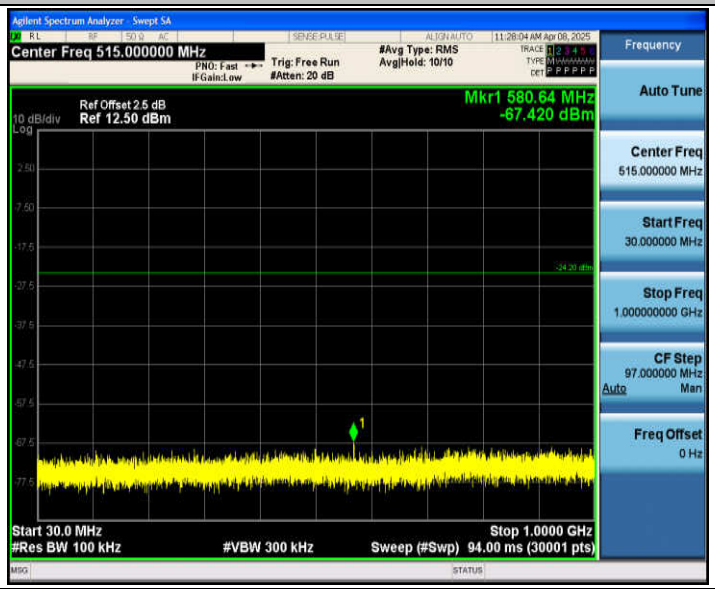

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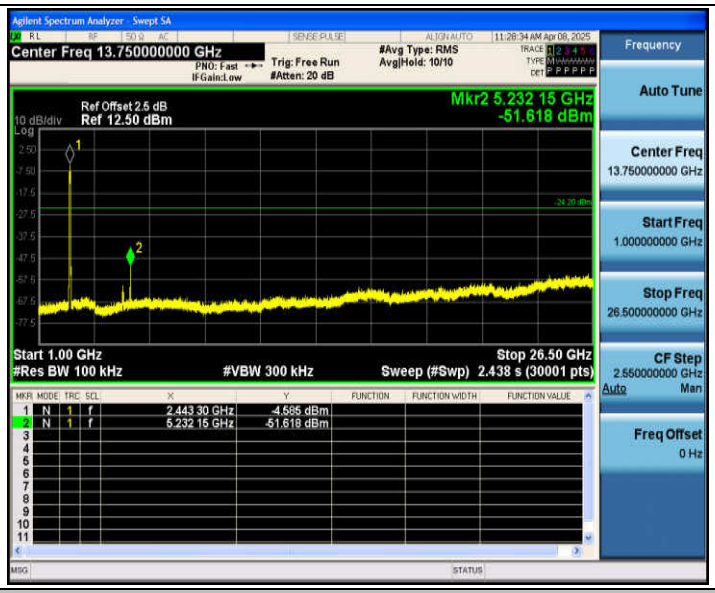
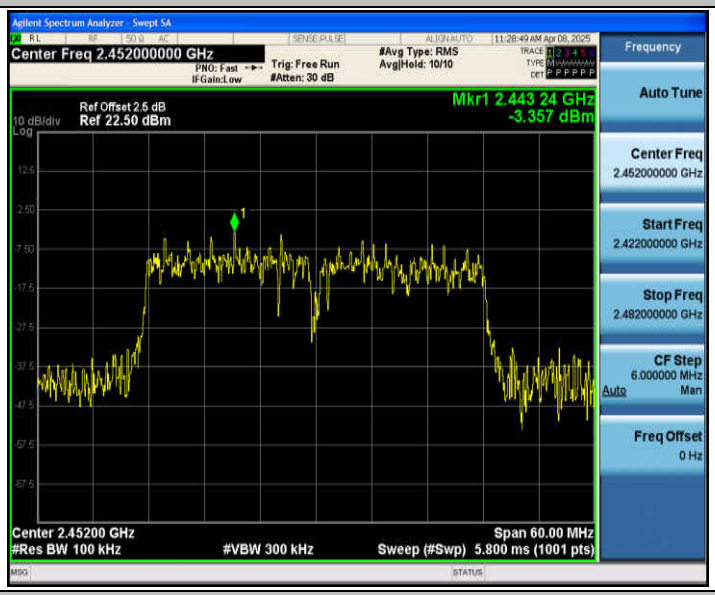
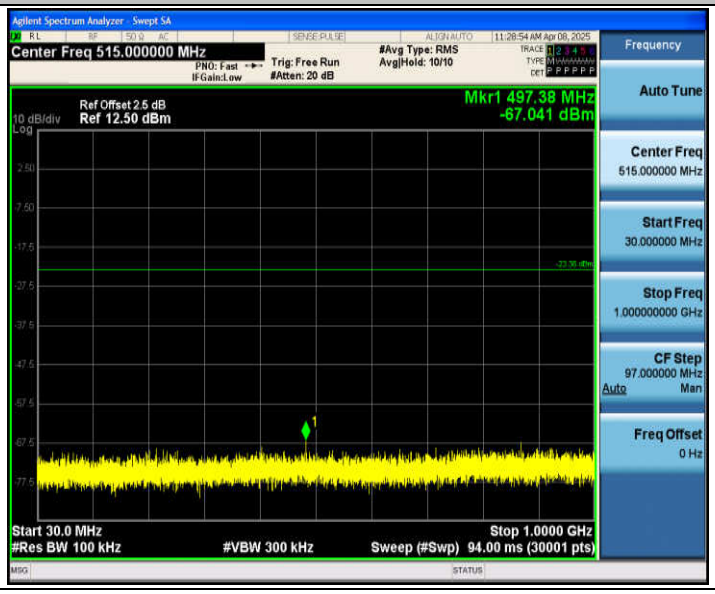


11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



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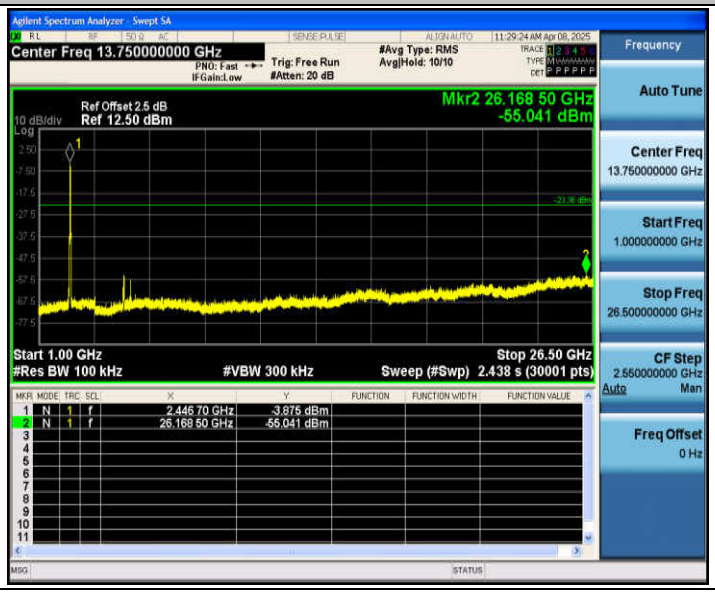


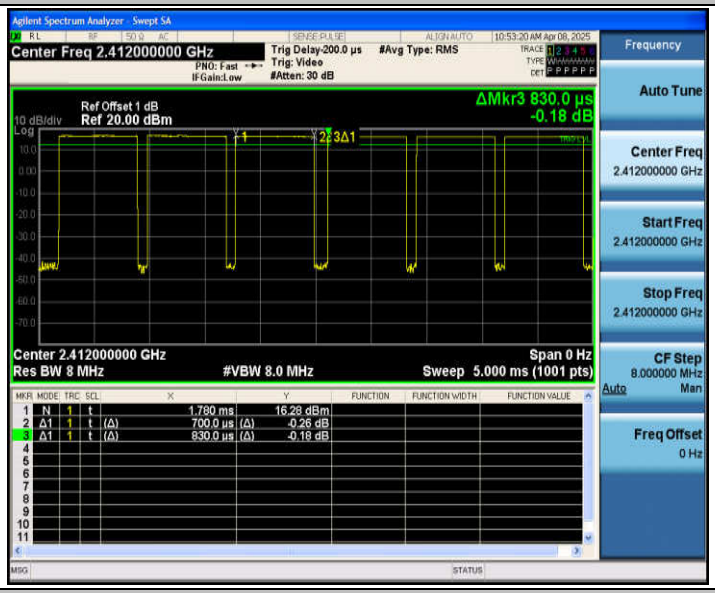
Appendix G: Duty Cycle

Test Result

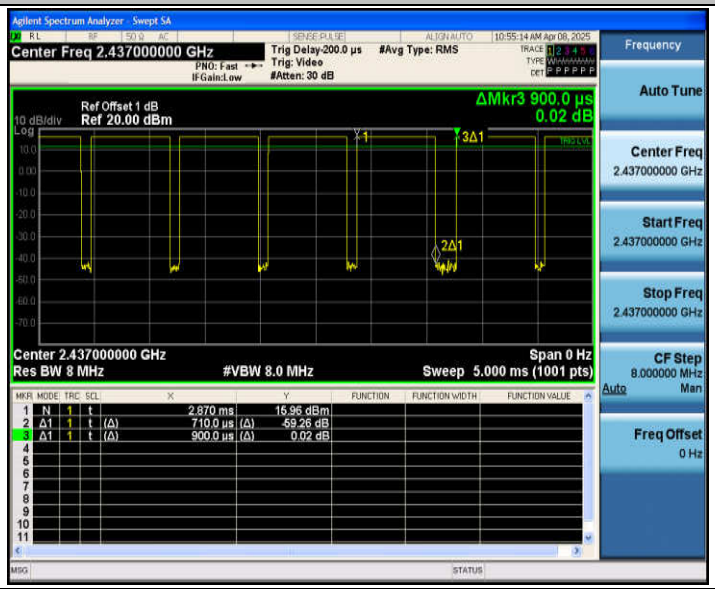
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	Ant1	2412	0.70	0.83	84.34
		2437	0.71	0.90	78.89
		2462	0.70	0.81	86.42
11G	Ant1	2412	0.11	0.33	33.33
		2437	0.11	0.31	35.48
		2462	0.12	0.27	44.44
11N20SISO	Ant1	2412	0.11	0.29	37.93
		2437	0.11	0.28	39.29
		2462	0.11	0.28	39.29
11N40SISO	Ant1	2422	0.07	0.26	26.92
		2437	0.07	0.25	28.00
		2452	0.07	0.26	26.92

Test Graphs

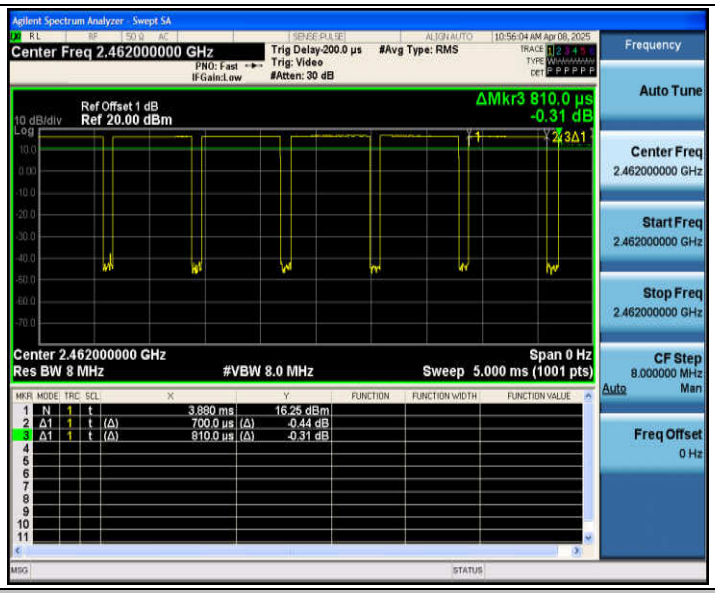
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



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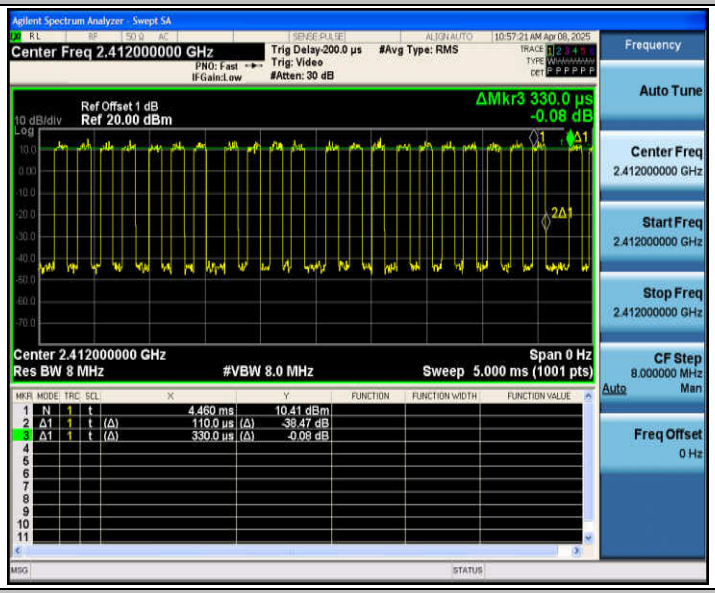

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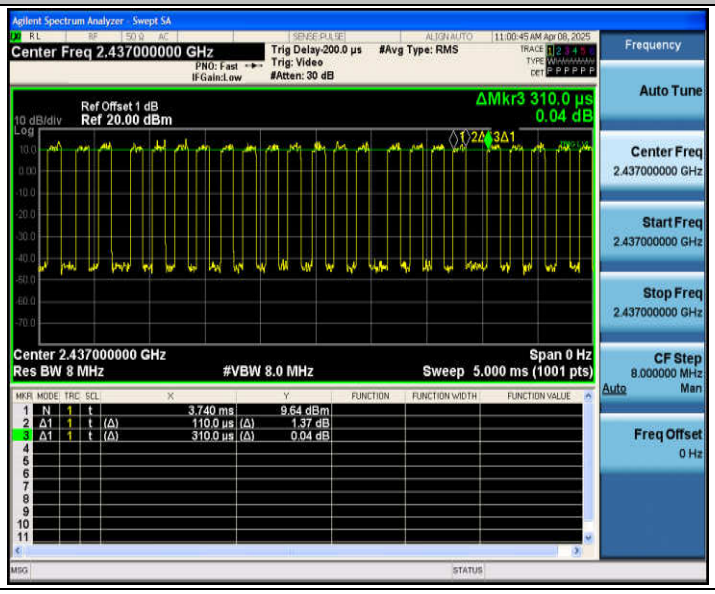

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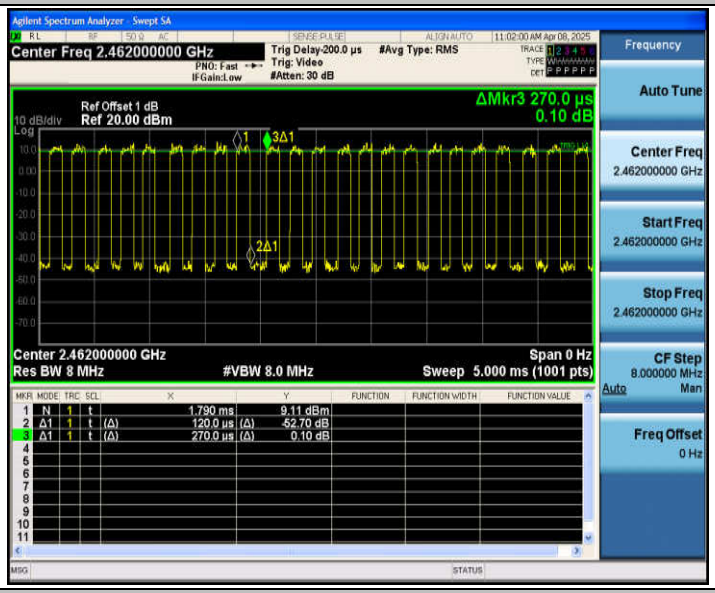

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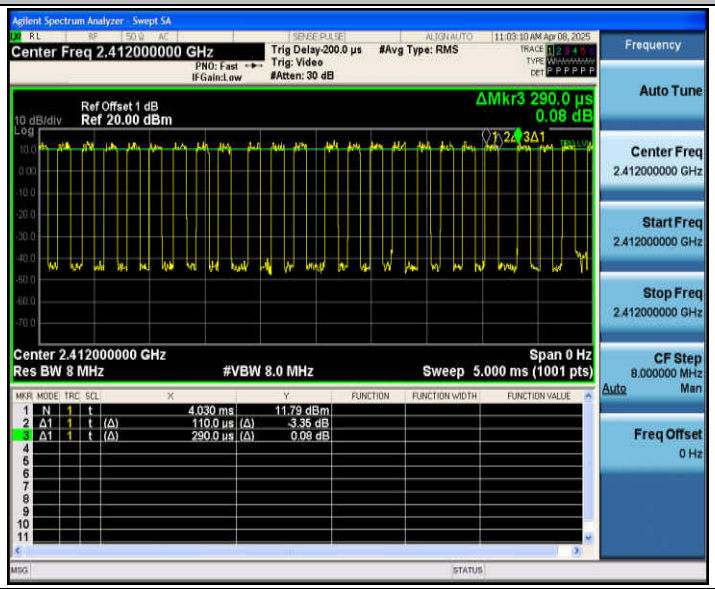

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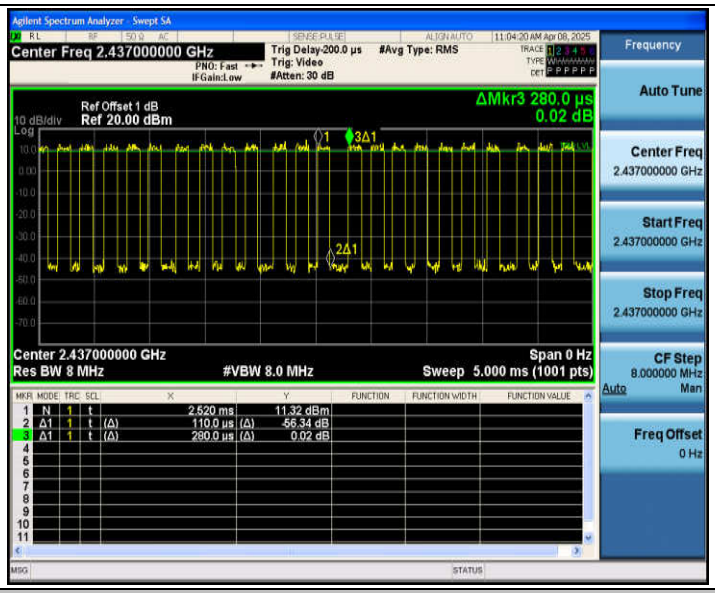

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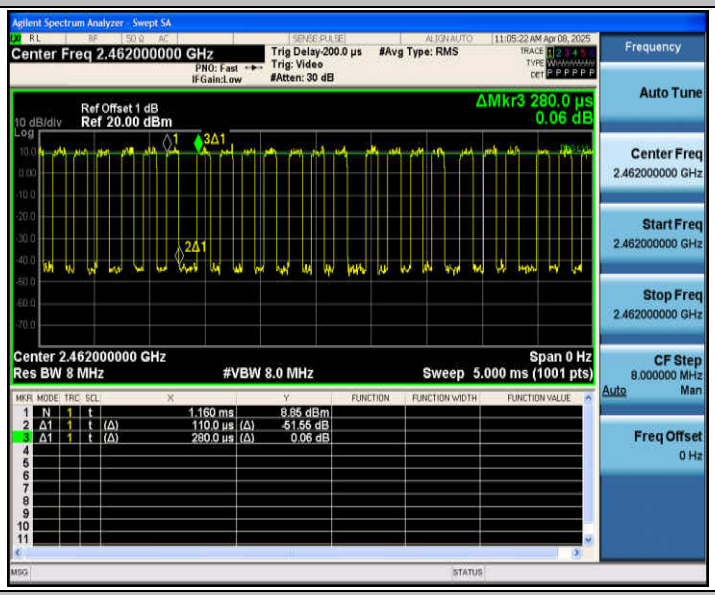

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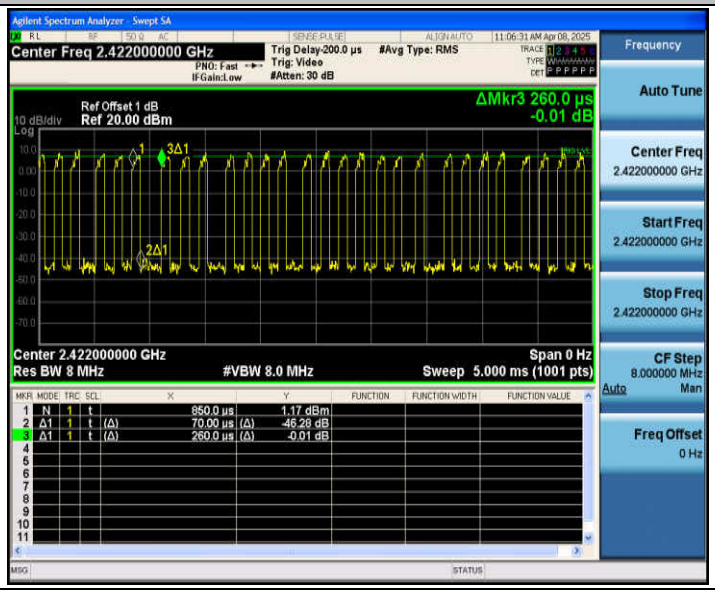

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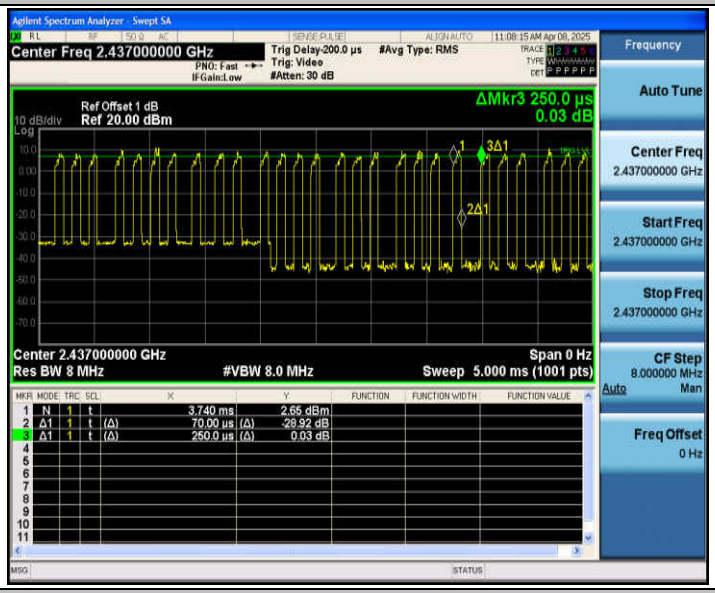
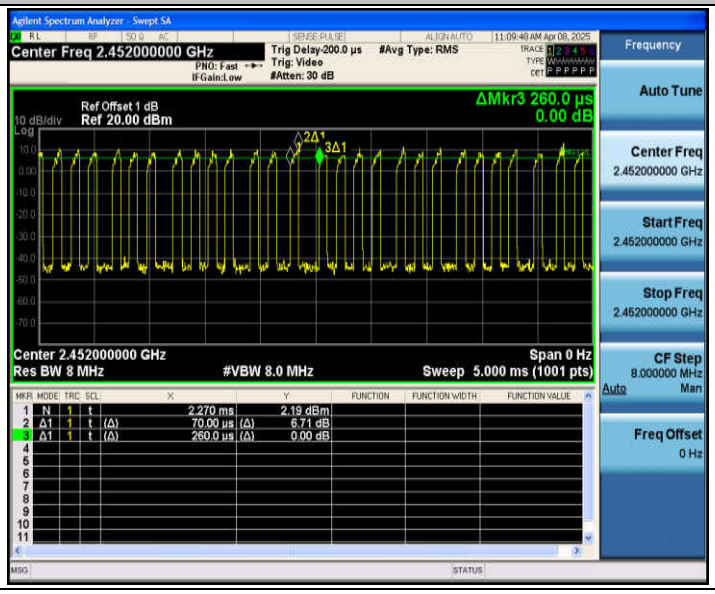
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