



Appendix Test Data for WLAN(2. 4G) (Conducted Measurement)

Product Name: Wireless Car Adapter

Trade Mark: **acer**

Test Model: TC03A

FCC ID: 2A2P5-TC03A

Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
NOTE	N/A

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
11B	Ant1	2437	8.080	2432.960	2441.040	0.5	PASS
11B	Ant1	2462	9.000	2457.480	2466.480	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
11G	Ant1	2437	16.320	2428.840	2445.160	0.5	PASS
11G	Ant1	2462	16.320	2453.840	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.640	2403.160	2420.800	0.5	PASS
11N20SISO	Ant1	2437	17.560	2428.200	2445.760	0.5	PASS
11N20SISO	Ant1	2462	17.640	2453.160	2470.800	0.5	PASS
11N40SISO	Ant1	2422	36.320	2403.840	2440.160	0.5	PASS
11N40SISO	Ant1	2437	35.360	2419.160	2454.520	0.5	PASS
11N40SISO	Ant1	2452	36.400	2433.760	2470.160	0.5	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs





11B-Ant1-2462-PASS



11G-Ant1-2412-PASS





11G-Ant1-2437-PASS



11G-Ant1-2462-PASS





11N20SISO-Ant1-2412-PASS

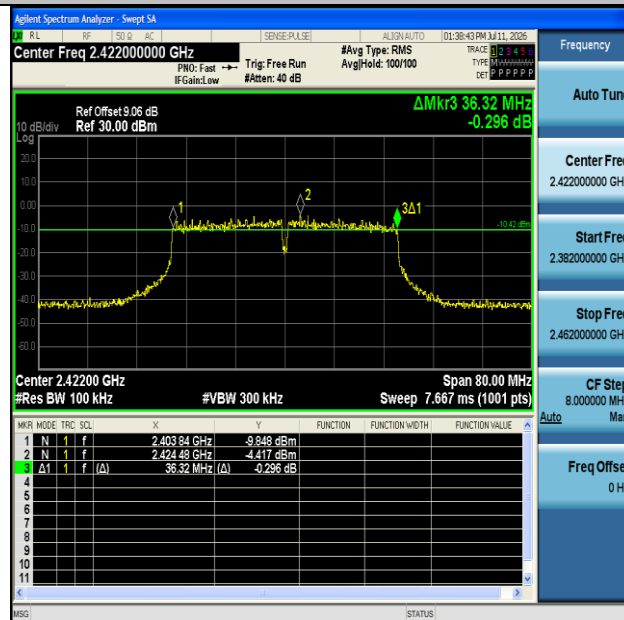


11N20SISO-Ant1-2437-PASS



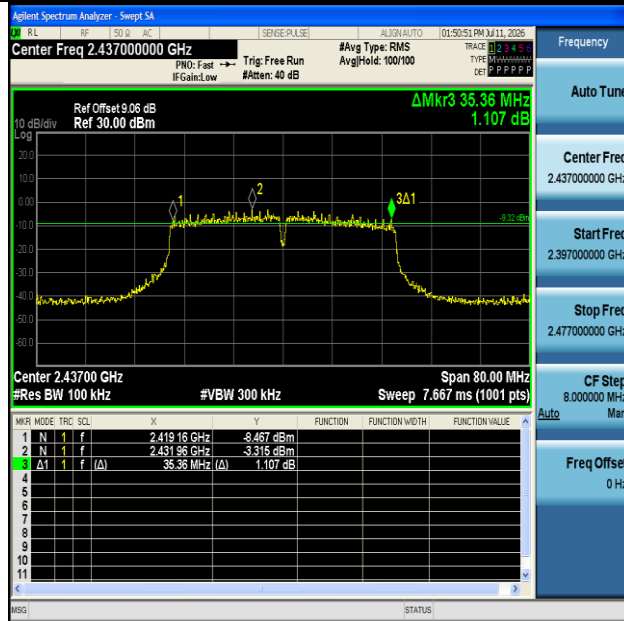


11N20SISO-Ant1-2462-PASS

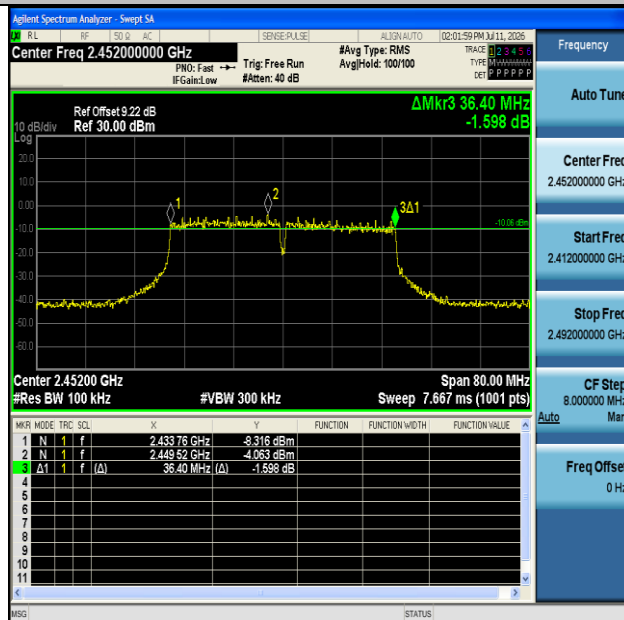


11N40SISO-Ant1-2422-PASS





11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS





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	13.221	2405.4420	2418.6630	---	---
11B	Ant1	2437	13.113	2430.4711	2443.5841	---	---
11B	Ant1	2462	13.365	2455.4285	2468.7935	---	---
11G	Ant1	2412	17.350	2403.2745	2420.6245	---	---
11G	Ant1	2437	17.179	2428.3611	2445.5401	---	---
11G	Ant1	2462	17.398	2453.3876	2470.7856	---	---
11N20SISO	Ant1	2412	18.223	2402.8935	2421.1165	---	---
11N20SISO	Ant1	2437	18.180	2427.8530	2446.0330	---	---
11N20SISO	Ant1	2462	18.373	2452.8225	2471.1955	---	---
11N40SISO	Ant1	2422	36.648	2403.6899	2440.3379	---	---
11N40SISO	Ant1	2437	36.383	2418.7724	2455.1554	---	---
11N40SISO	Ant1	2452	36.783	2433.5762	2470.3592	---	---

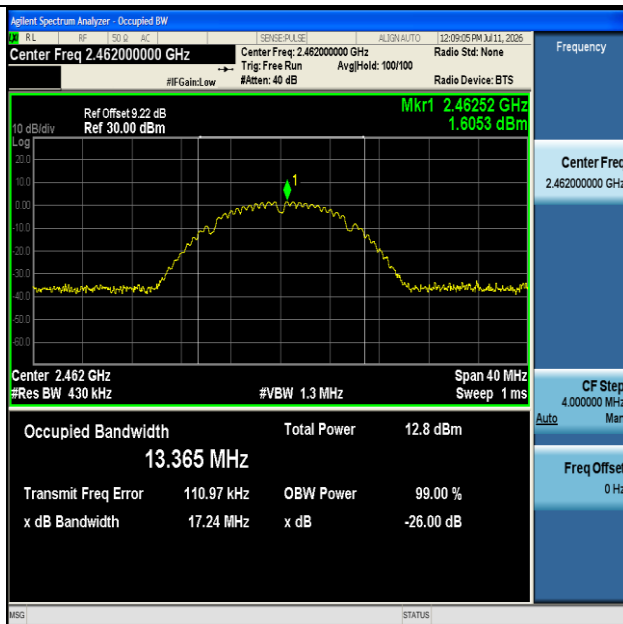
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



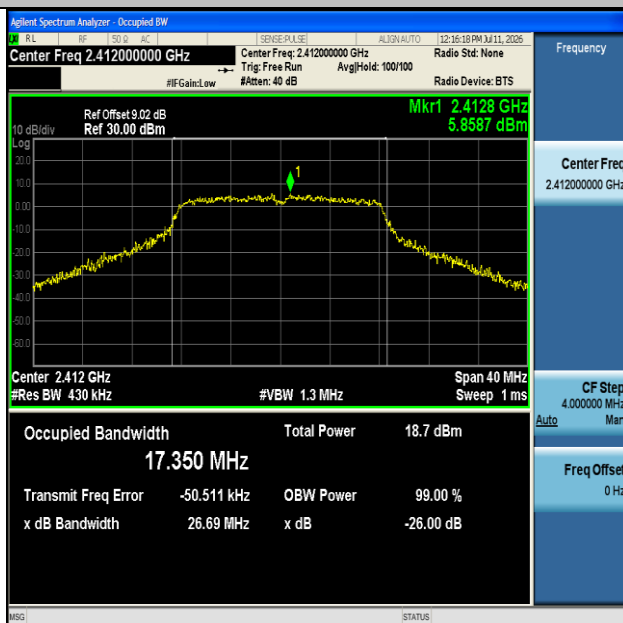


Test Graphs



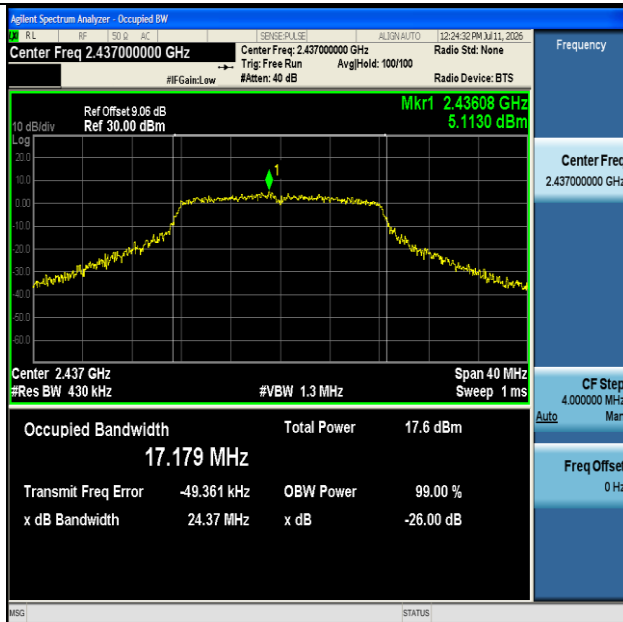


11B-Ant1-2462

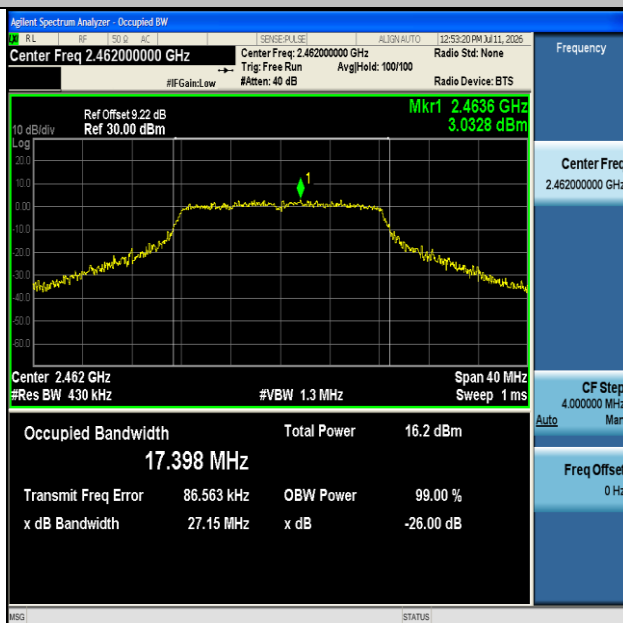


11G-Ant1-2412



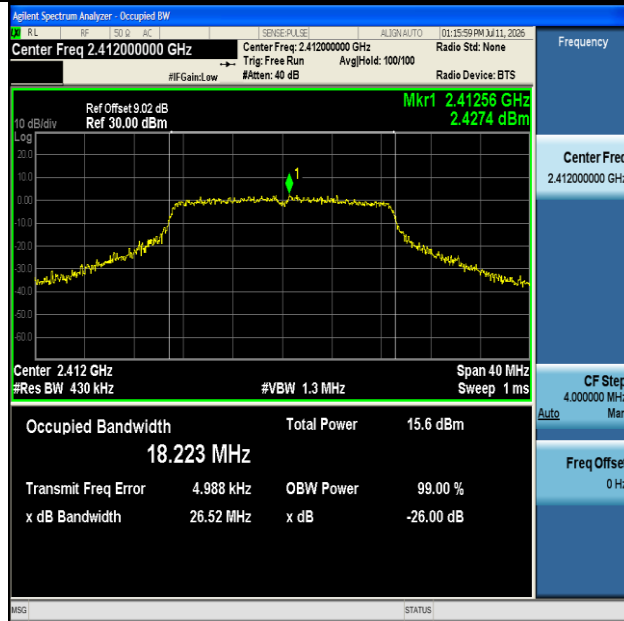


11G-Ant1-2437

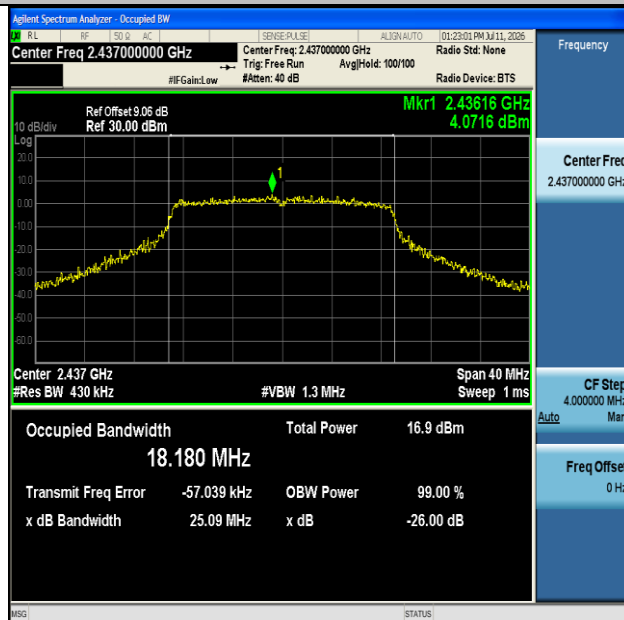


11G-Ant1-2462





11N20SISO-Ant1-2412

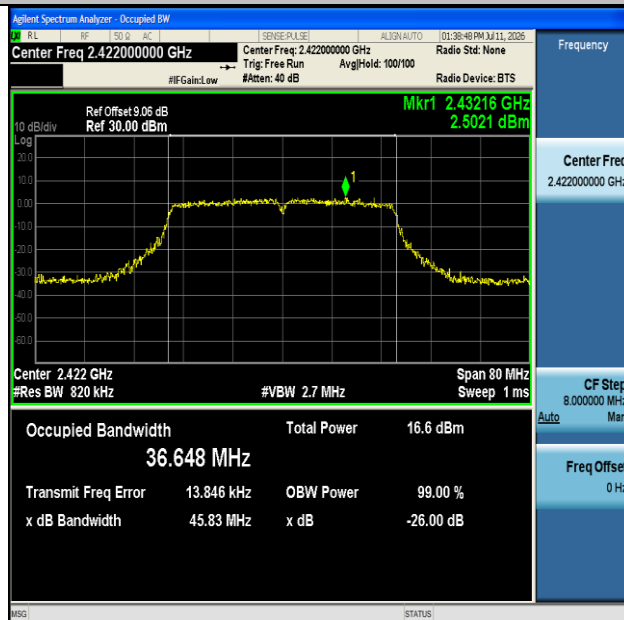


11N20SISO-Ant1-2437



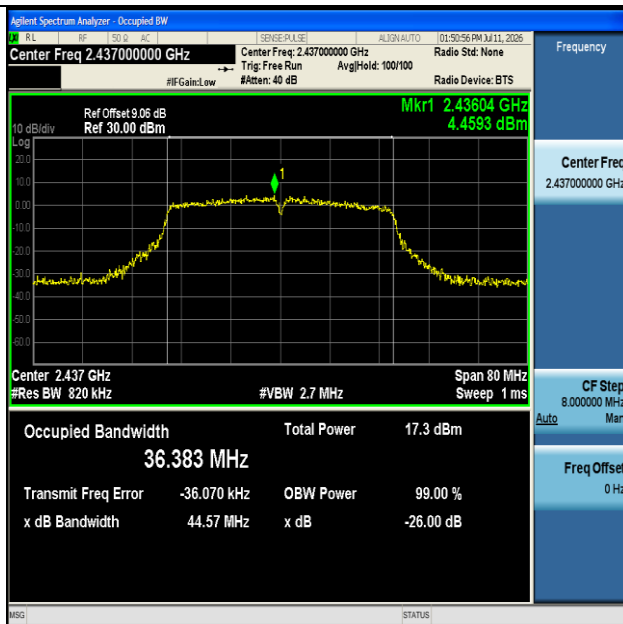


11N20SISO-Ant1-2462

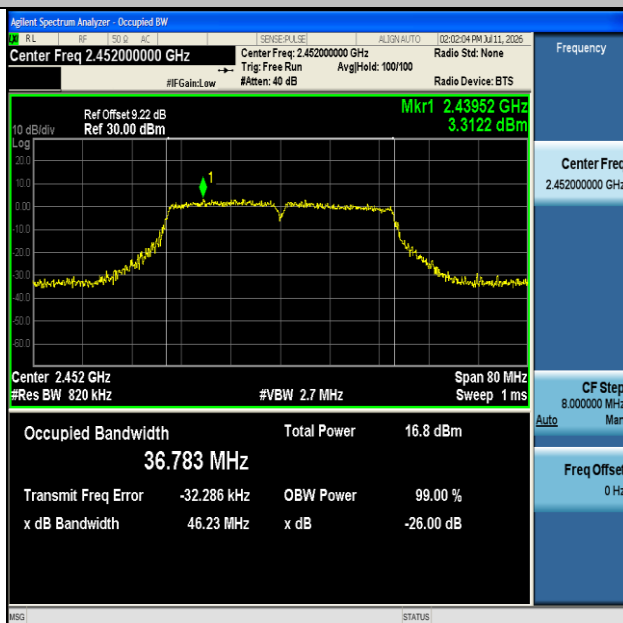


11N40SISO-Ant1-2422





11N40SISO-Ant1-2437



11N40SISO-Ant1-2452





Appendix C: Maximum Peak conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11B	Ant1	2412	14.24	≤30.00	PASS
11B	Ant1	2437	14.08	≤30.00	PASS
11B	Ant1	2462	12.36	≤30.00	PASS
11G	Ant1	2412	17.69	≤30.00	PASS
11G	Ant1	2437	18.61	≤30.00	PASS
11G	Ant1	2462	17.21	≤30.00	PASS
11N20SISO	Ant1	2412	16.42	≤30.00	PASS
11N20SISO	Ant1	2437	17.62	≤30.00	PASS
11N20SISO	Ant1	2462	16.41	≤30.00	PASS
11N40SISO	Ant1	2422	16.70	≤30.00	PASS
11N40SISO	Ant1	2437	17.35	≤30.00	PASS
11N40SISO	Ant1	2452	16.90	≤30.00	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB) + Duty Cycle Factor(dB)





Appendix C: Maximum Average conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11B	Ant1	2412	11.81	≤30.00	PASS
11B	Ant1	2437	11.72	≤30.00	PASS
11B	Ant1	2462	9.81	≤30.00	PASS
11G	Ant1	2412	10.62	≤30.00	PASS
11G	Ant1	2437	11.56	≤30.00	PASS
11G	Ant1	2462	10.16	≤30.00	PASS
11N20SISO	Ant1	2412	8.66	≤30.00	PASS
11N20SISO	Ant1	2437	10.92	≤30.00	PASS
11N20SISO	Ant1	2462	8.94	≤30.00	PASS
11N40SISO	Ant1	2422	9.41	≤30.00	PASS
11N40SISO	Ant1	2437	10.53	≤30.00	PASS
11N40SISO	Ant1	2452	9.10	≤30.00	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB) + Duty Cycle Factor(dB)





Appendix D: Maximum Average power spectral density

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-9.61	≤8.00	PASS
11B	Ant1	2437	-8.99	≤8.00	PASS
11B	Ant1	2462	-11.72	≤8.00	PASS
11G	Ant1	2412	-11.80	≤8.00	PASS
11G	Ant1	2437	-12.61	≤8.00	PASS
11G	Ant1	2462	-14.16	≤8.00	PASS
11N20SISO	Ant1	2412	-15.53	≤8.00	PASS
11N20SISO	Ant1	2437	-13.10	≤8.00	PASS
11N20SISO	Ant1	2462	-14.73	≤8.00	PASS
11N40SISO	Ant1	2422	-17.45	≤8.00	PASS
11N40SISO	Ant1	2437	-16.80	≤8.00	PASS
11N40SISO	Ant1	2452	-17.33	≤8.00	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB) + Duty Cycle Factor(dB)



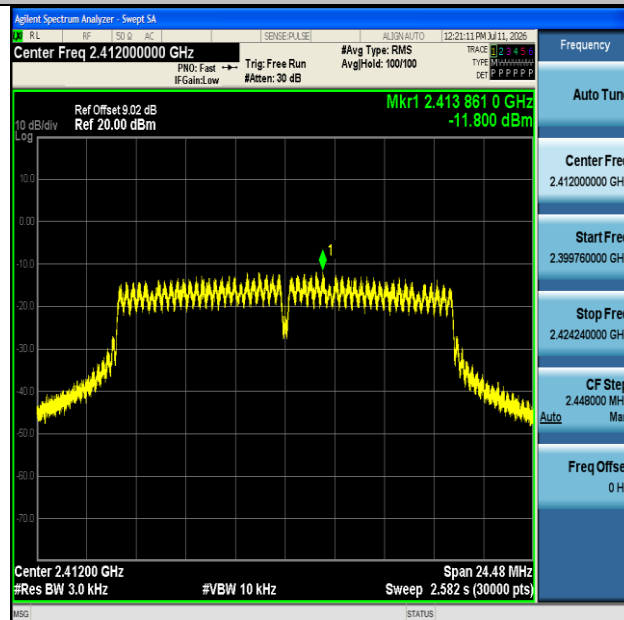


Test Graphs



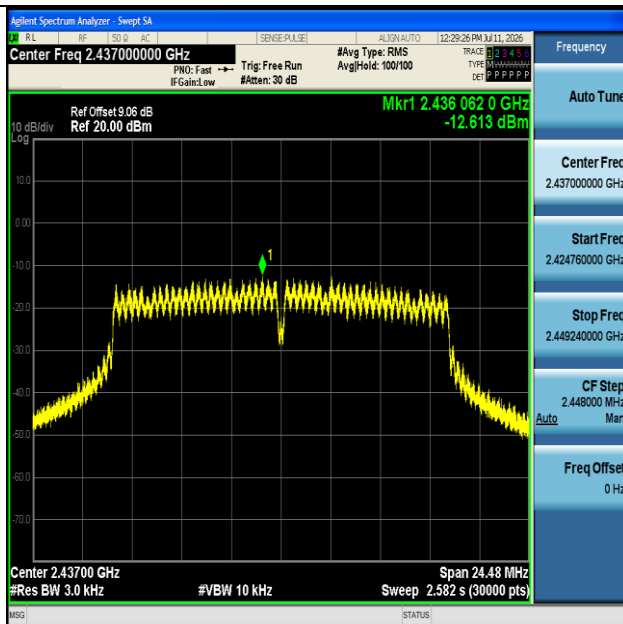


11B-Ant1-2462-PASS

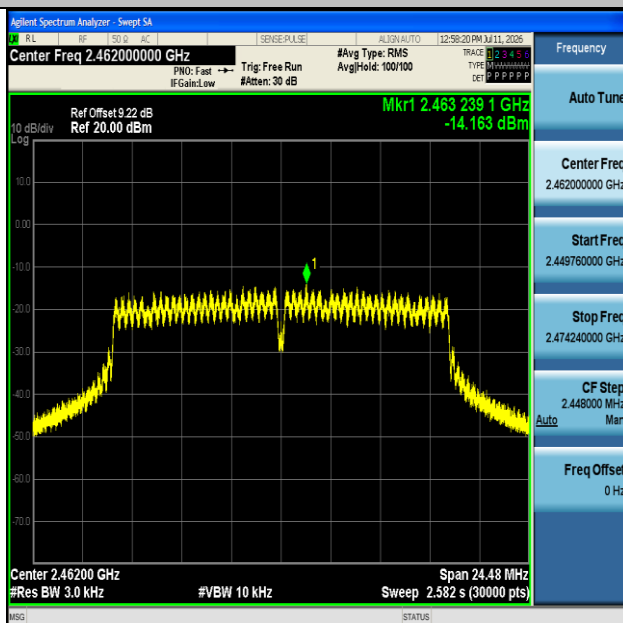


11G-Ant1-2412-PASS



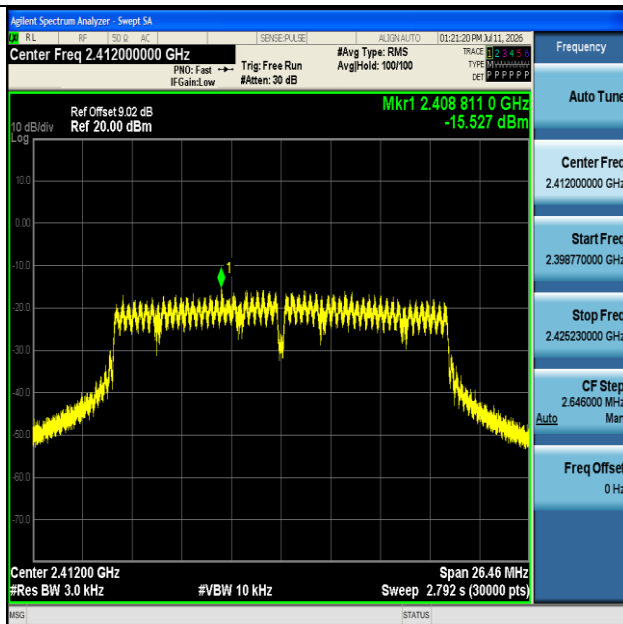


11G-Ant1-2437-PASS

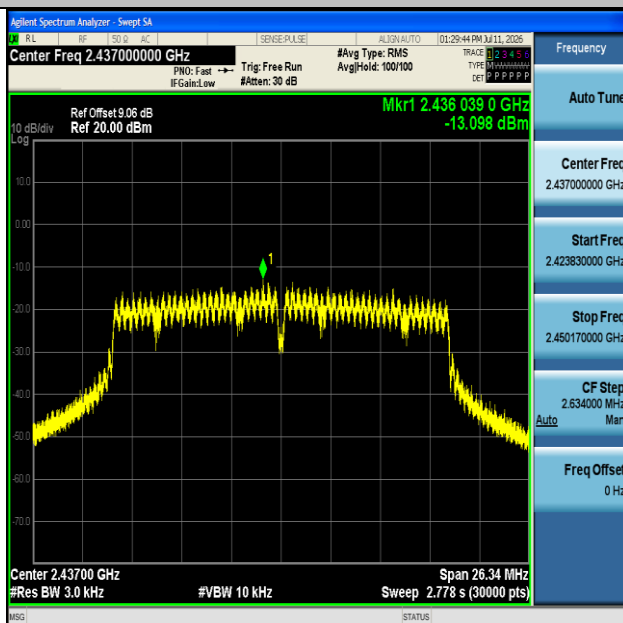


11G-Ant1-2462-PASS



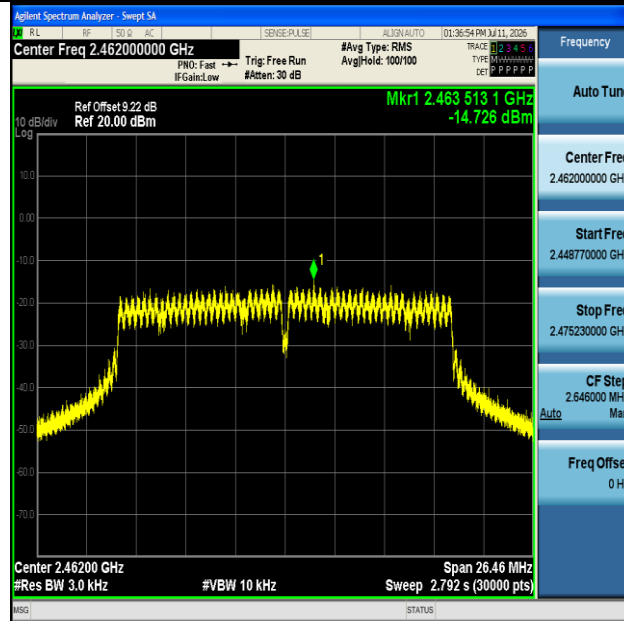


11N20SISO-Ant1-2412-PASS

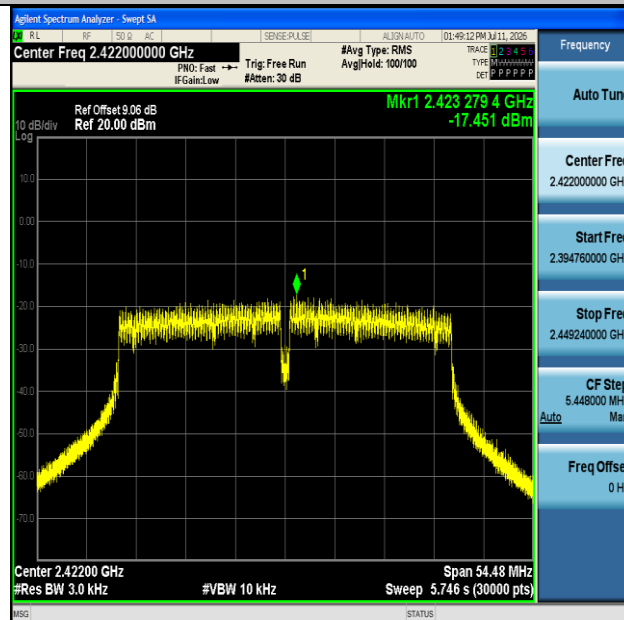


11N20SISO-Ant1-2437-PASS



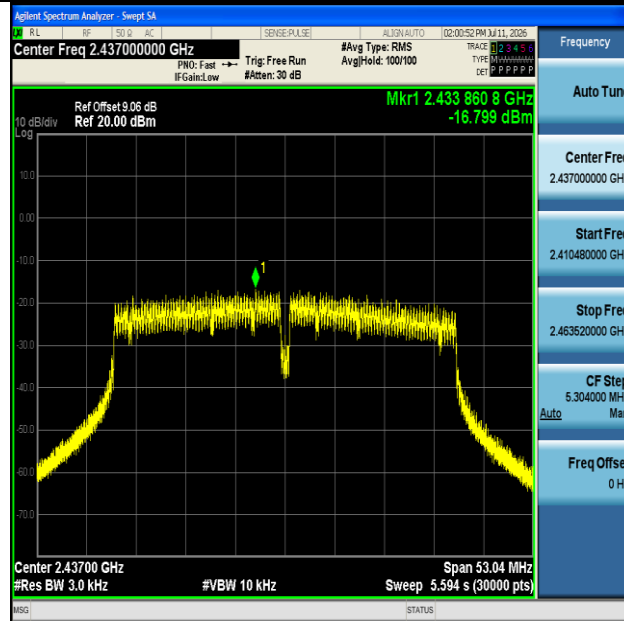


11N20SISO-Ant1-2462-PASS

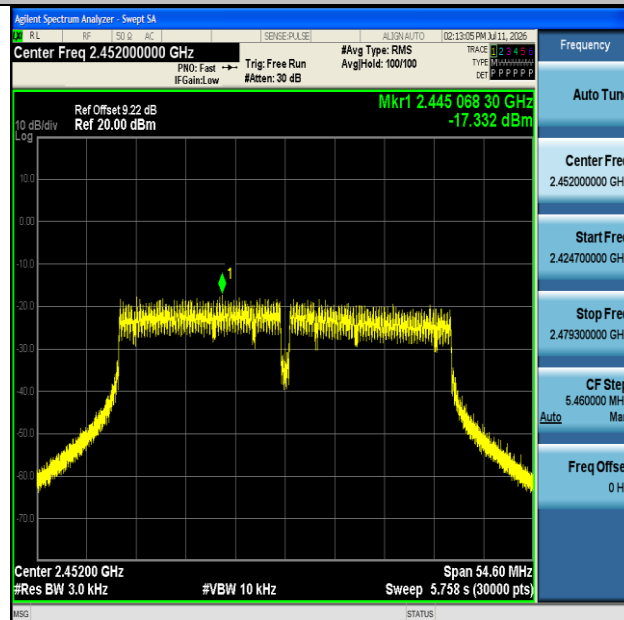


11N40SISO-Ant1-2422-PASS





11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS





Appendix E: Band edge measurements

Test Result

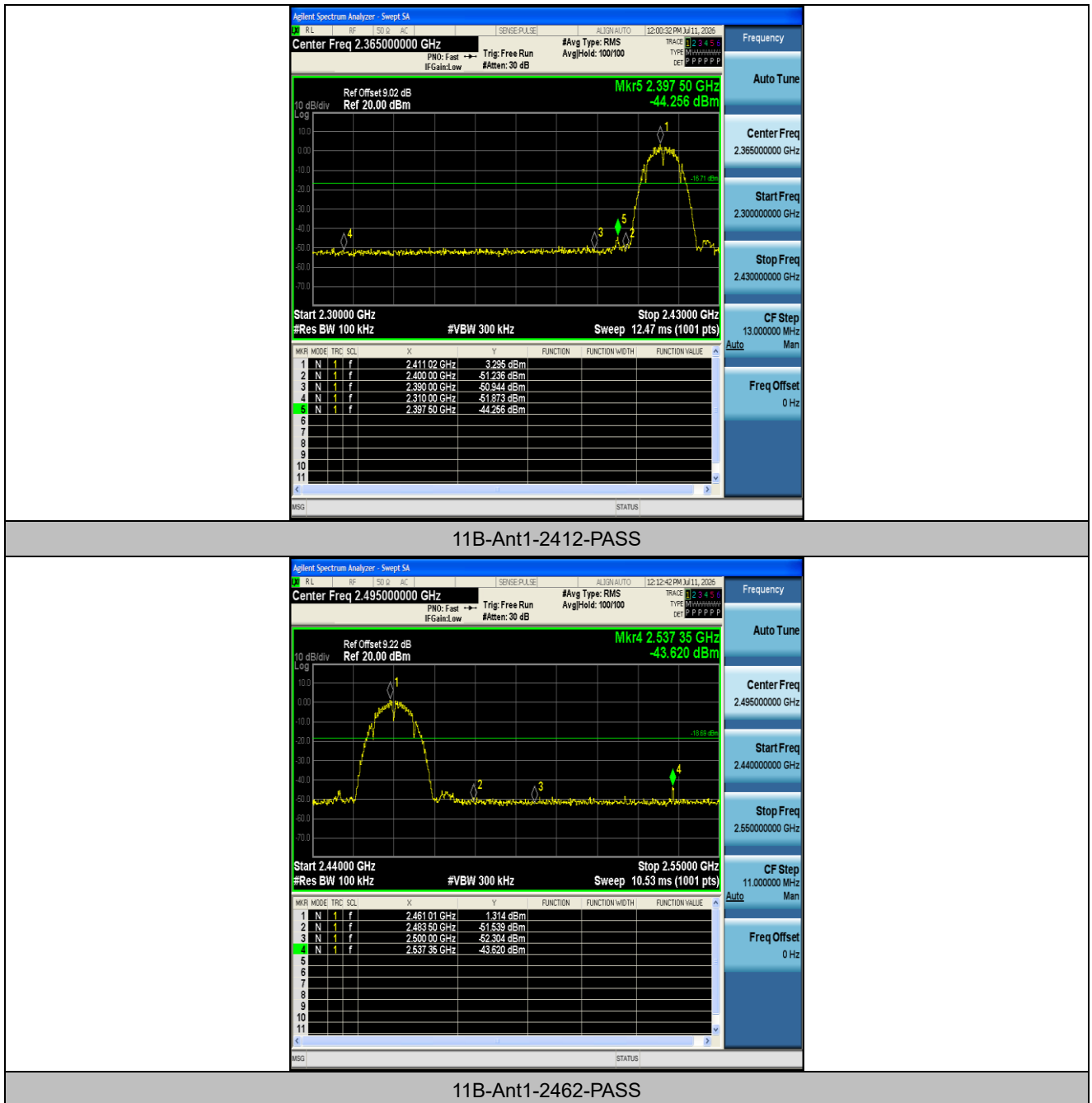
Test Mode	Antenna	Ch. Name	Frequency.[MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	3.30	-44.26	≤ -16.71	PASS
11B	Ant1	High	2462	1.31	-43.62	≤ -18.69	PASS
11G	Ant1	Low	2412	2.17	-27.97	≤ -17.83	PASS
11G	Ant1	High	2462	-2.00	-47.11	≤ -22	PASS
11N20SISO	Ant1	Low	2412	-2.00	-30.88	≤ -22	PASS
11N20SISO	Ant1	High	2462	-2.34	-34.54	≤ -22.34	PASS
11N40SISO	Ant1	Low	2422	-4.36	-35.34	≤ -24.36	PASS
11N40SISO	Ant1	High	2452	-4.03	-47.53	≤ -24.03	PASS

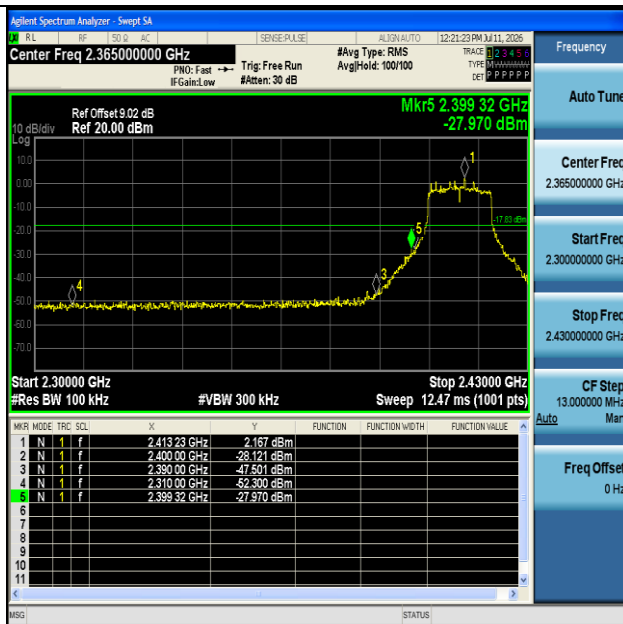
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



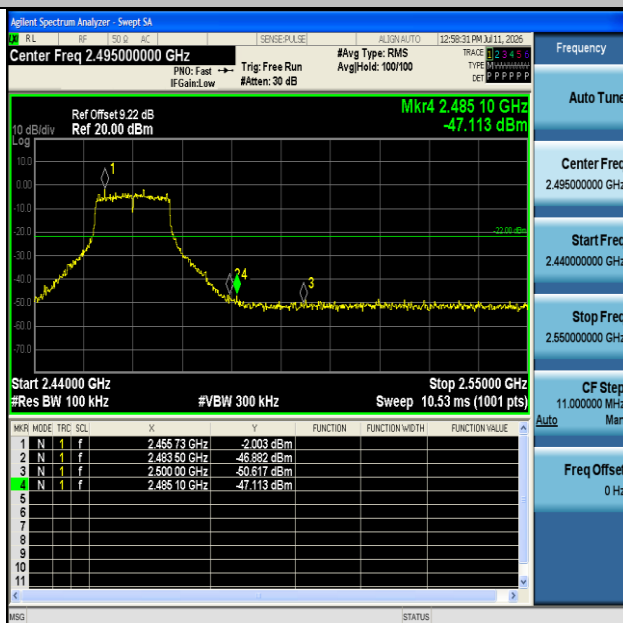


Test Graphs



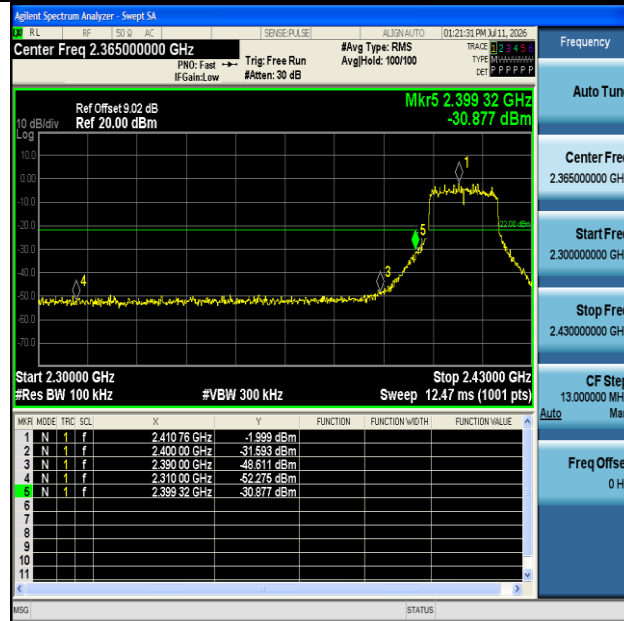


11G-Ant1-2412-PASS

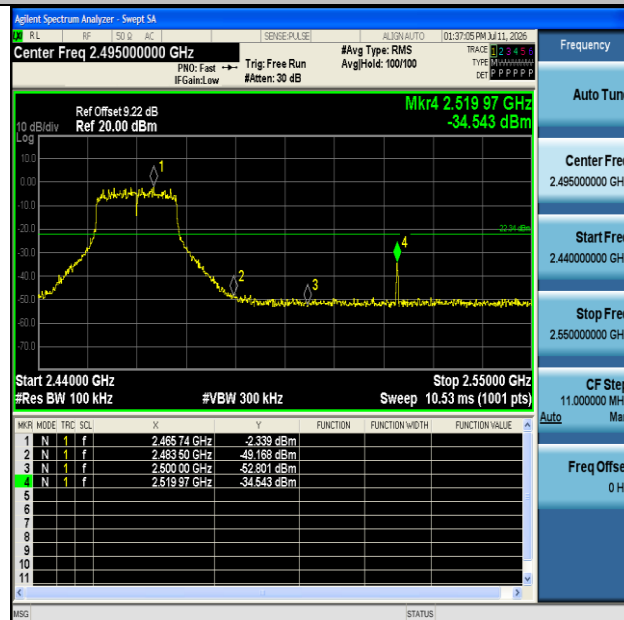


11G-Ant1-2462-PASS



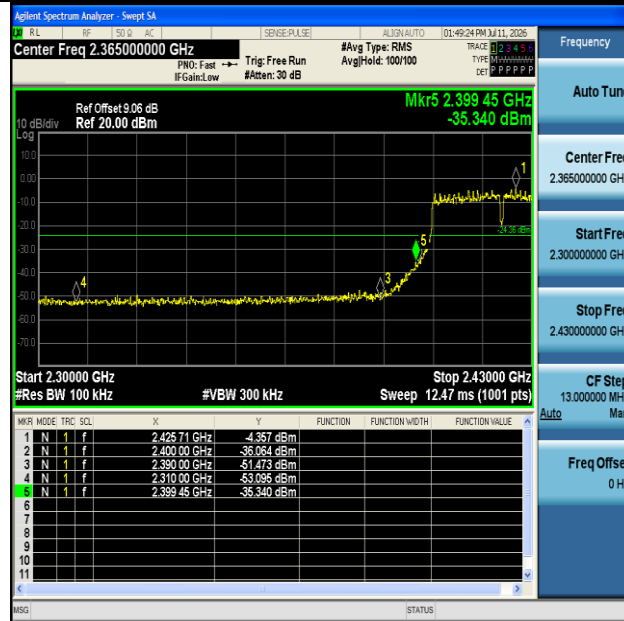


11N20SISO-Ant1-2412-PASS

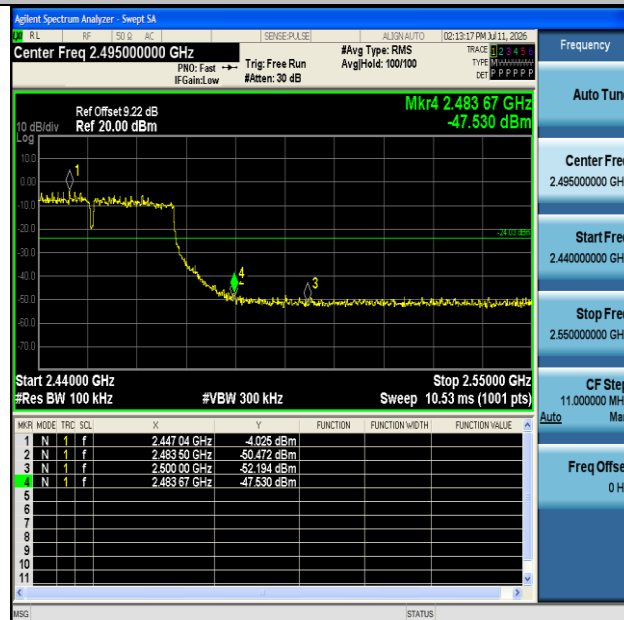


11N20SISO-Ant1-2462-PASS





11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2452-PASS





Appendix F: Conducted Spurious Emission

Test Result

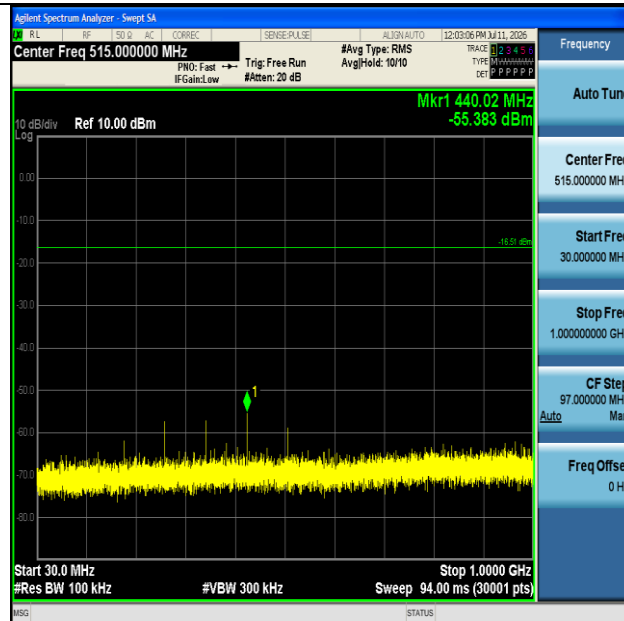
Test Mode	Antenna	Frequency [MHz]	Freq. Range [Mhz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	3.49	-55.38	≤-16.51	PASS
11B	Ant1	2412	1000~26500	3.49	-37.76	≤-16.51	PASS
11B	Ant1	2437	30~1000	3.57	-55.85	≤-16.43	PASS
11B	Ant1	2437	1000~26500	3.57	-36.69	≤-16.43	PASS
11B	Ant1	2462	30~1000	1.43	-55.06	≤-18.57	PASS
11B	Ant1	2462	1000~26500	1.43	-37.42	≤-18.57	PASS
11G	Ant1	2412	30~1000	1.35	-55.39	≤-18.65	PASS
11G	Ant1	2412	1000~26500	1.35	-36.98	≤-18.65	PASS
11G	Ant1	2437	30~1000	0.78	-55.28	≤-19.22	PASS
11G	Ant1	2437	1000~26500	0.78	-37.84	≤-19.22	PASS
11G	Ant1	2462	30~1000	-0.69	-55.6	≤-20.69	PASS
11G	Ant1	2462	1000~26500	-0.69	-37.67	≤-20.69	PASS
11N20SISO	Ant1	2412	30~1000	-1.34	-55.27	≤-21.34	PASS
11N20SISO	Ant1	2412	1000~26500	-1.34	-38.18	≤-21.34	PASS
11N20SISO	Ant1	2437	30~1000	-0.06	-55.95	≤-20.06	PASS
11N20SISO	Ant1	2437	1000~26500	-0.06	-36.9	≤-20.06	PASS
11N20SISO	Ant1	2462	30~1000	-2.00	-56.4	≤-22	PASS
11N20SISO	Ant1	2462	1000~26500	-2.00	-37.98	≤-22	PASS
11N40SISO	Ant1	2422	30~1000	-4.34	-55.03	≤-24.34	PASS
11N40SISO	Ant1	2422	1000~26500	-4.34	-37.82	≤-24.34	PASS
11N40SISO	Ant1	2437	30~1000	-3.10	-55.41	≤-23.1	PASS
11N40SISO	Ant1	2437	1000~26500	-3.10	-37.63	≤-23.1	PASS
11N40SISO	Ant1	2452	30~1000	-4.17	-54.93	≤-24.17	PASS
11N40SISO	Ant1	2452	1000~26500	-4.17	-37.47	≤-24.17	PASS

Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.

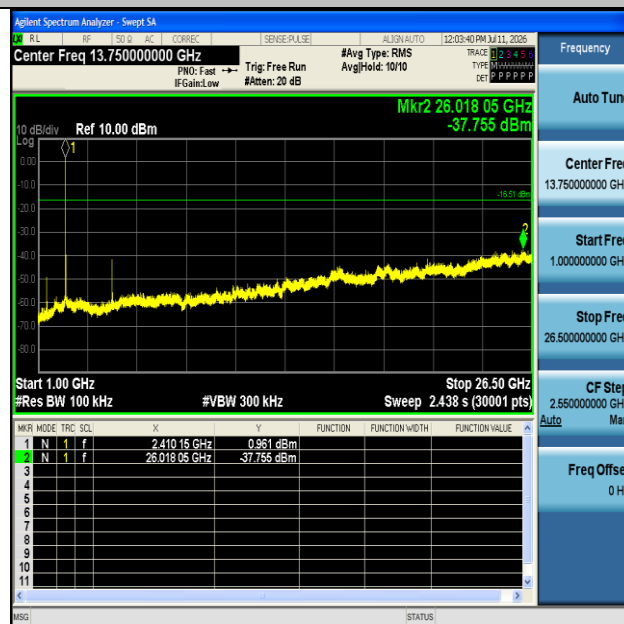




Test Graphs

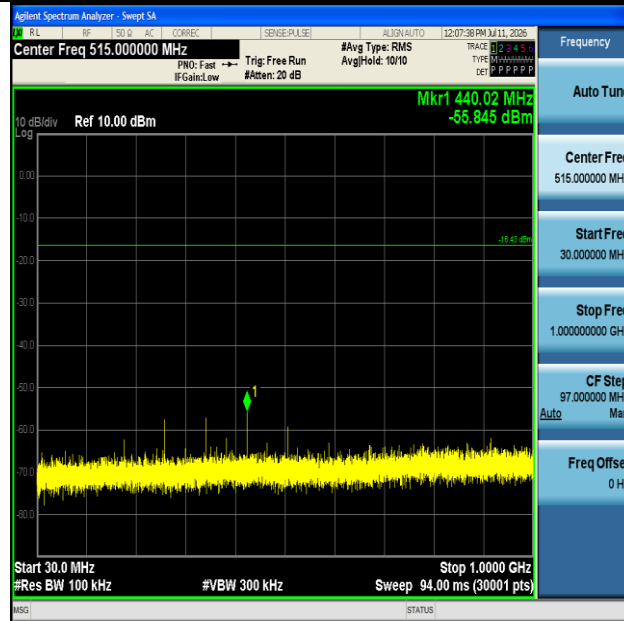


11B-Ant1-2412-30~1000-PASS

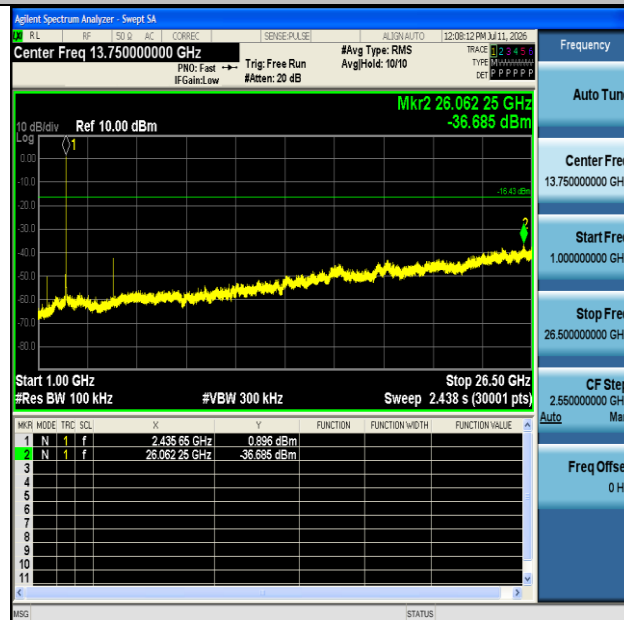


11B-Ant1-2412-1000~26500-PASS



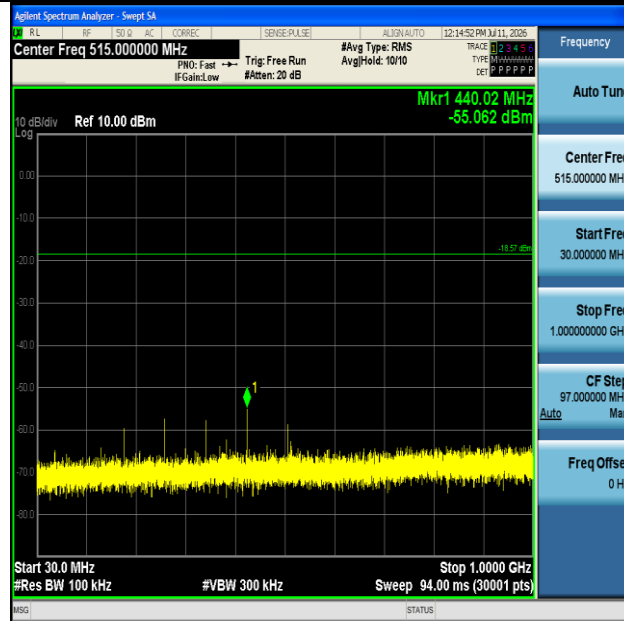


11B-Ant1-2437-30~1000-PASS

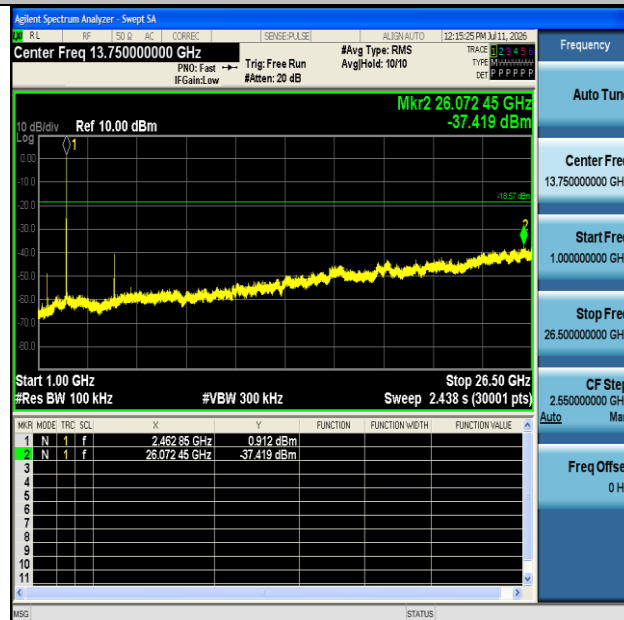


11B-Ant1-2437-1000~26500-PASS



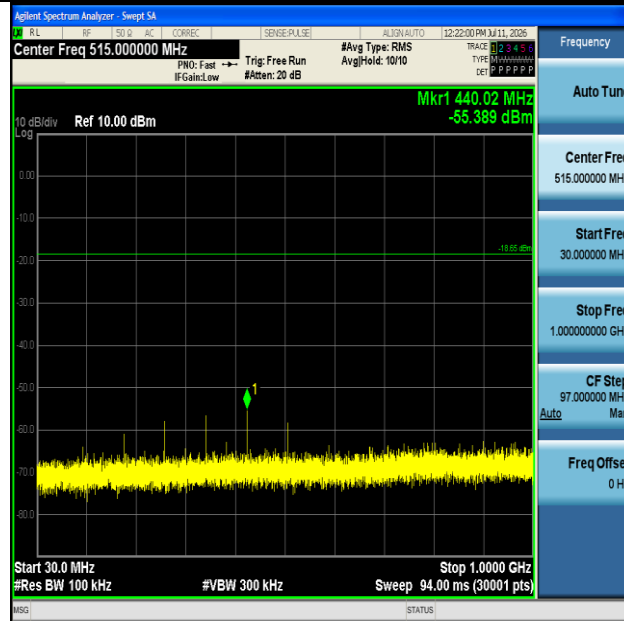


11B-Ant1-2462-30~1000-PASS

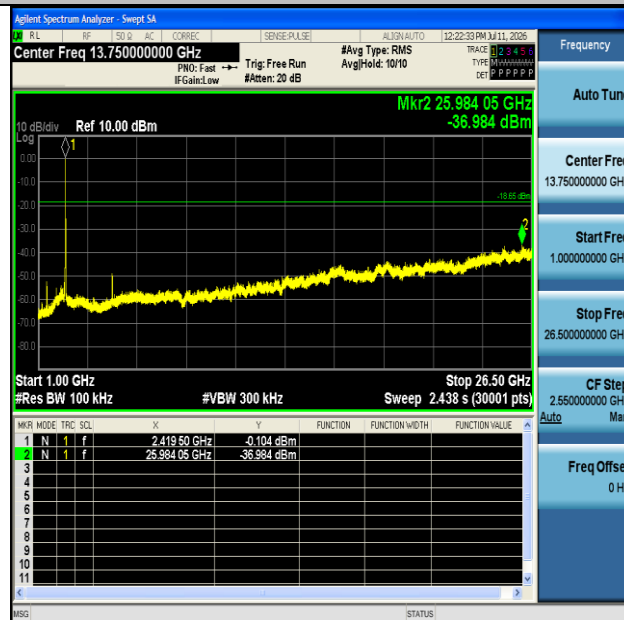


11B-Ant1-2462-1000~26500-PASS



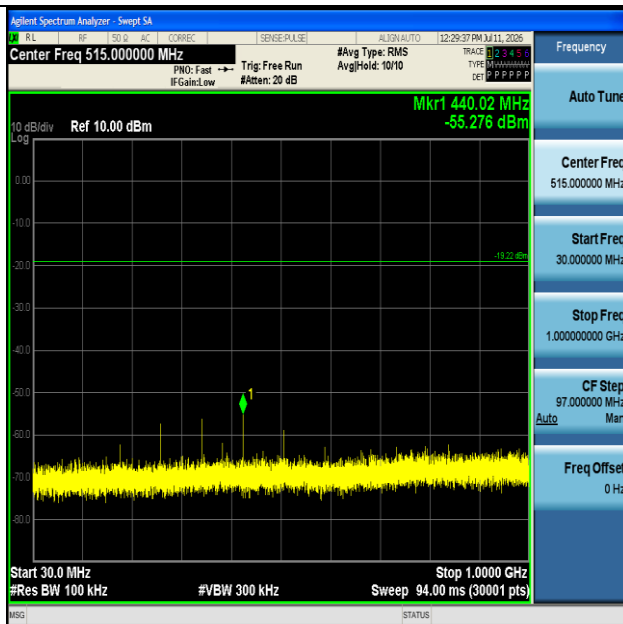


11G-Ant1-2412-30~1000-PASS

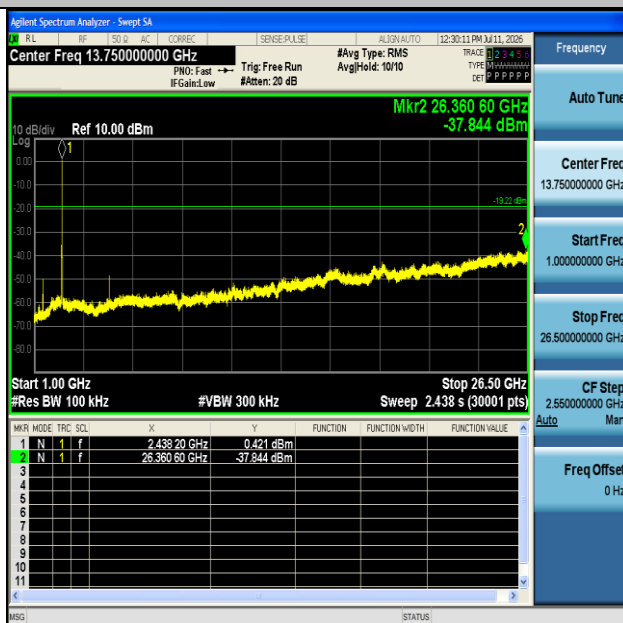


11G-Ant1-2412-1000~26500-PASS



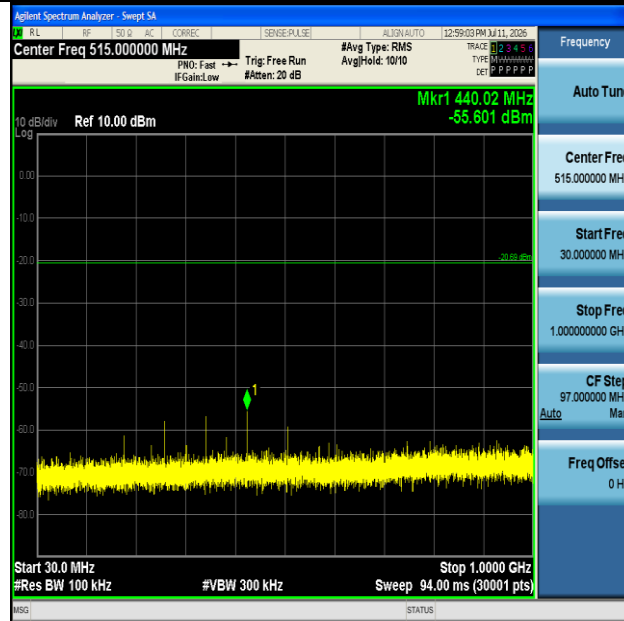


11G-Ant1-2437-30~1000-PASS

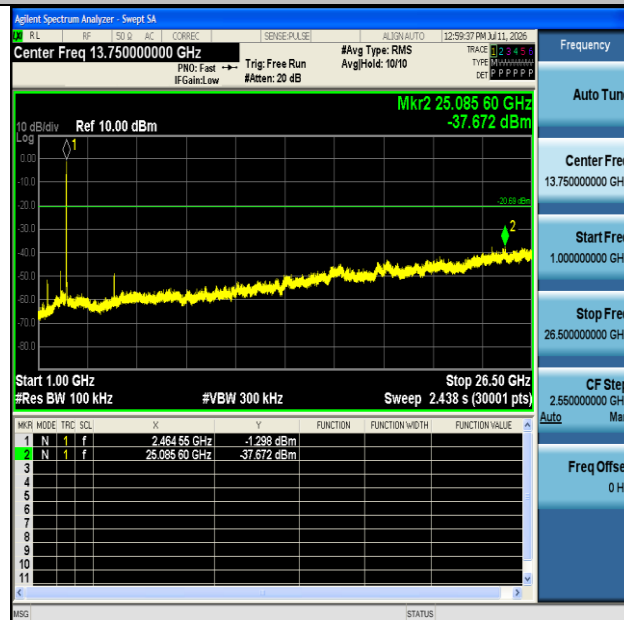


11G-Ant1-2437-1000~26500-PASS



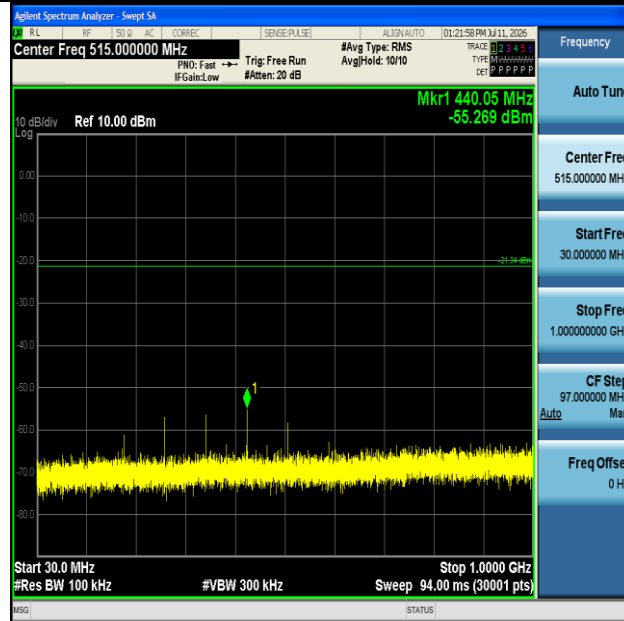


11G-Ant1-2462-30~1000-PASS

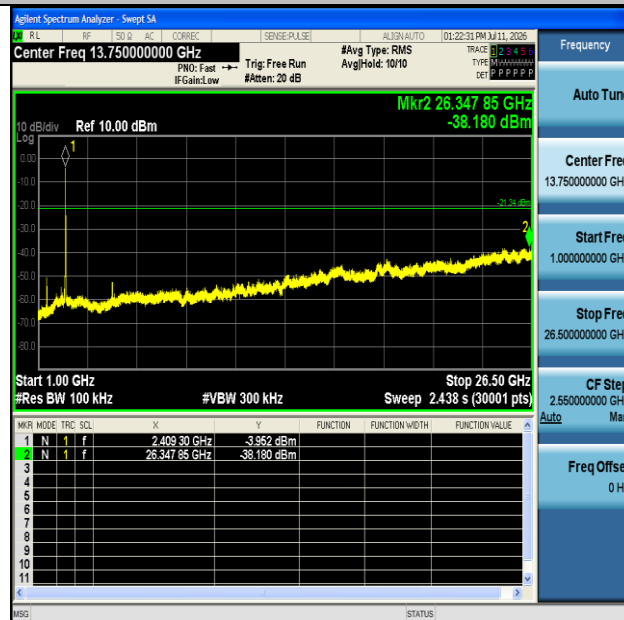


11G-Ant1-2462-1000~26500-PASS



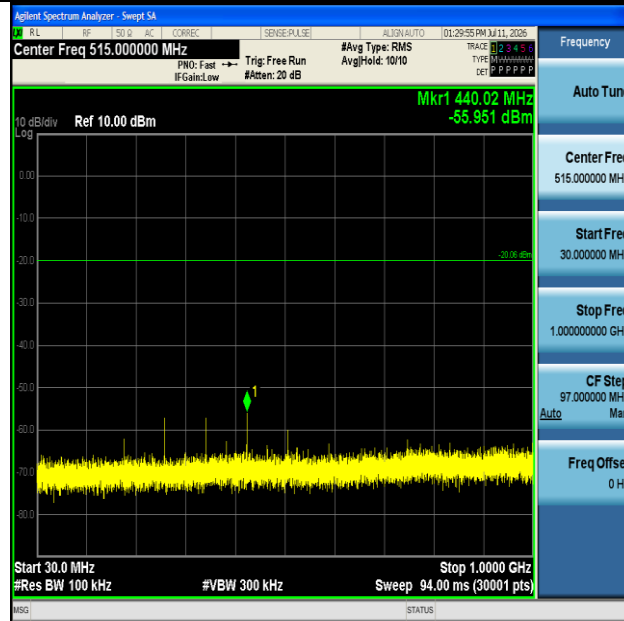


11N20SISO-Ant1-2412-30~1000-PASS

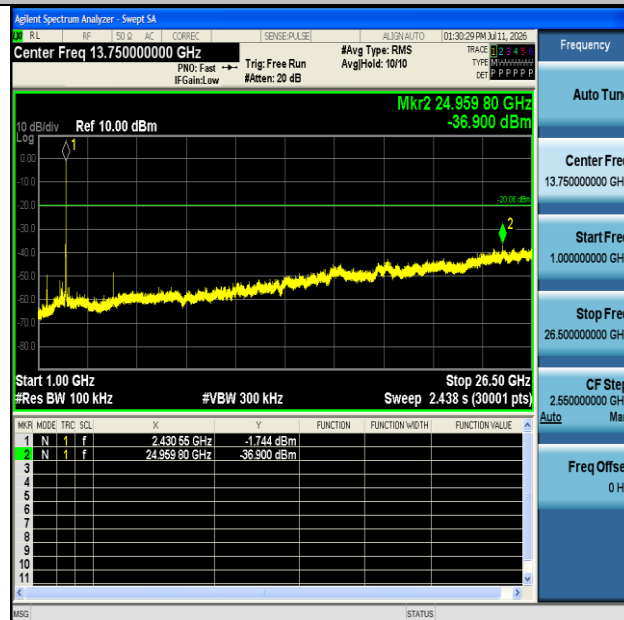


11N20SISO-Ant1-2412-1000~26500-PASS



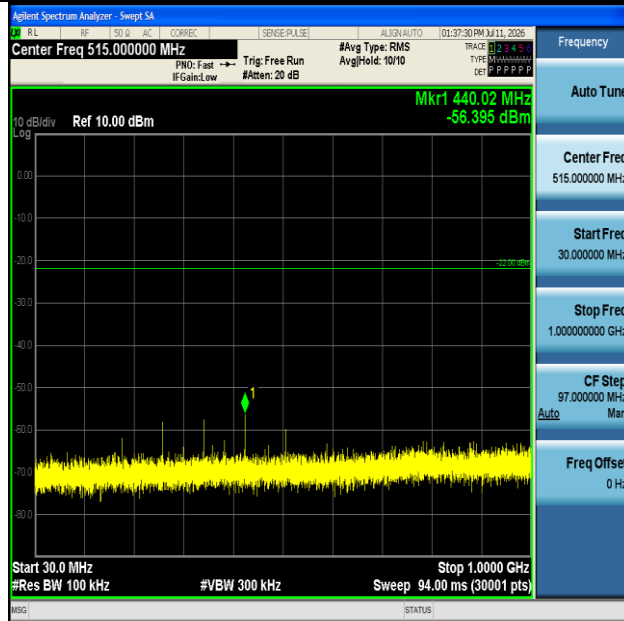


11N20SISO-Ant1-2437-30~1000-PASS

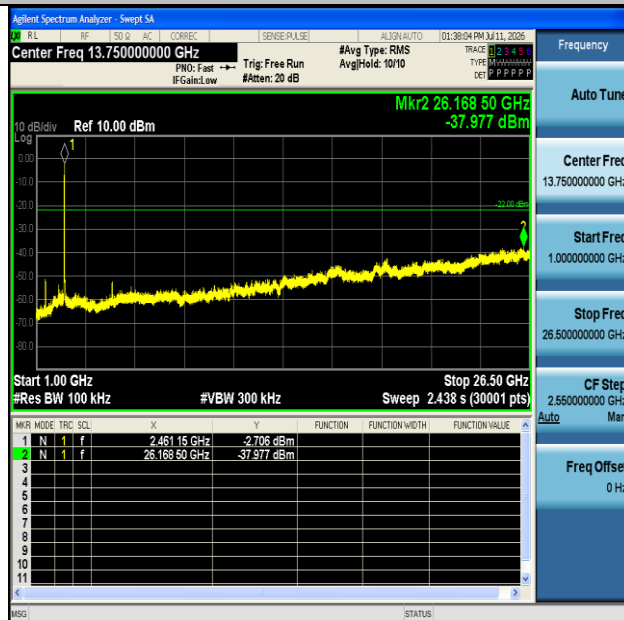


11N20SISO-Ant1-2437-1000~26500-PASS



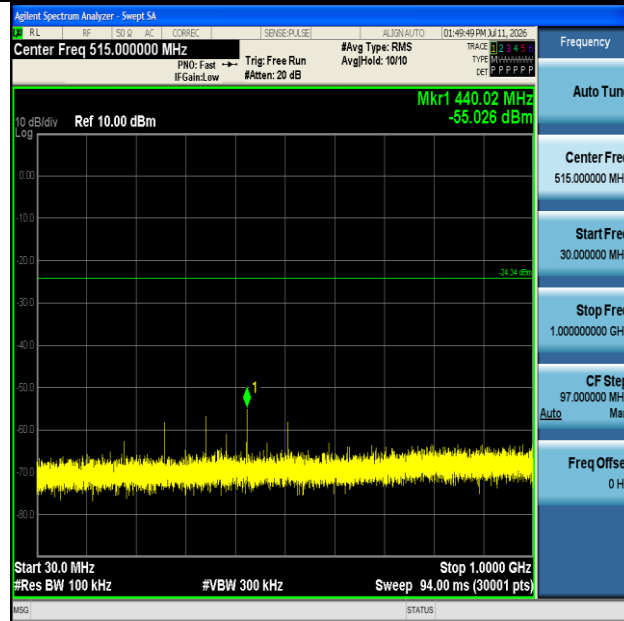


11N20SISO-Ant1-2462-30~1000-PASS



11N20SISO-Ant1-2462-1000~26500-PASS



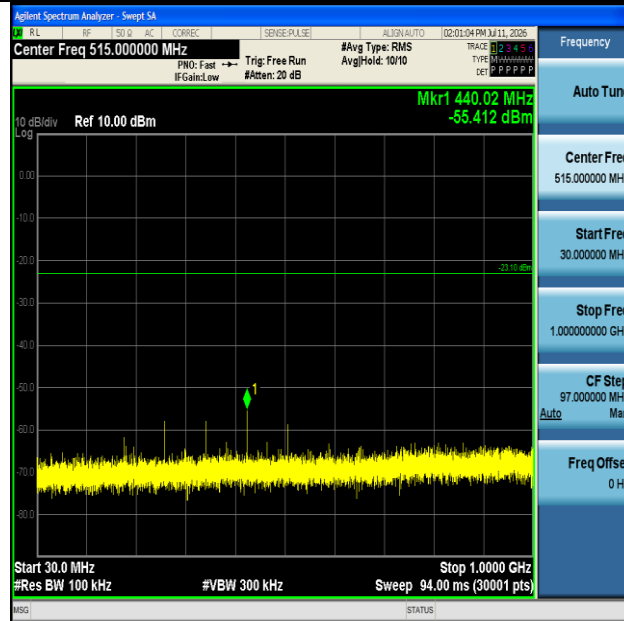


11N40SISO-Ant1-2422-30~1000-PASS

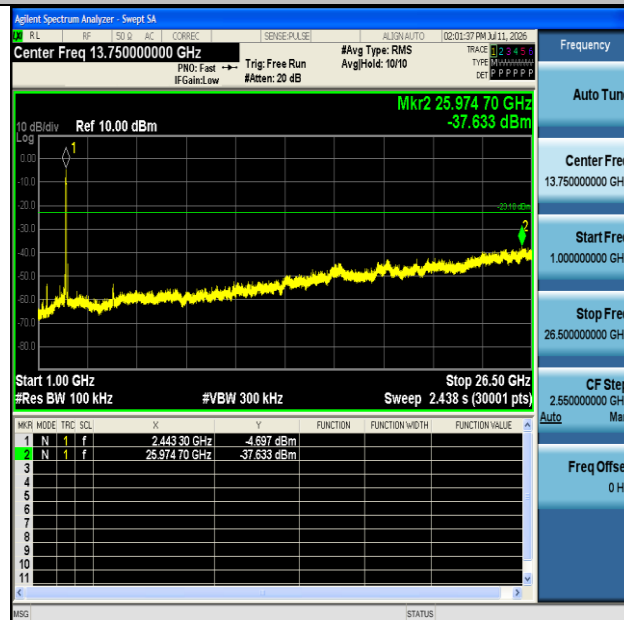


11N40SISO-Ant1-2422-1000~26500-PASS



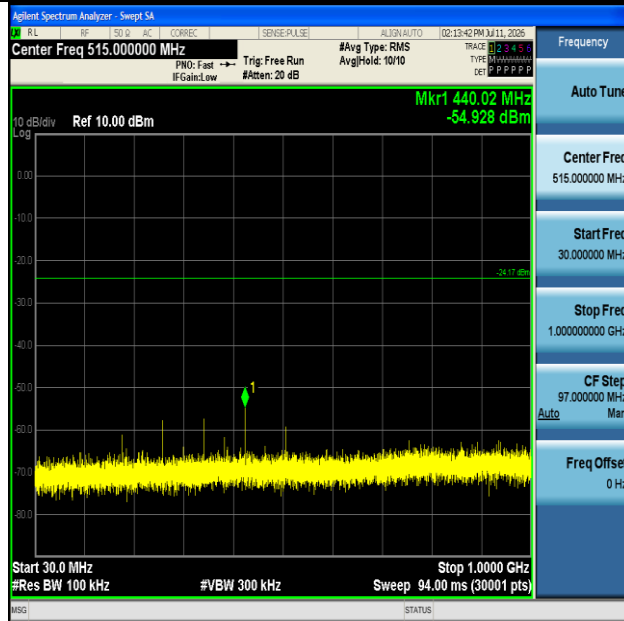


11N40SISO-Ant1-2437-30~1000-PASS

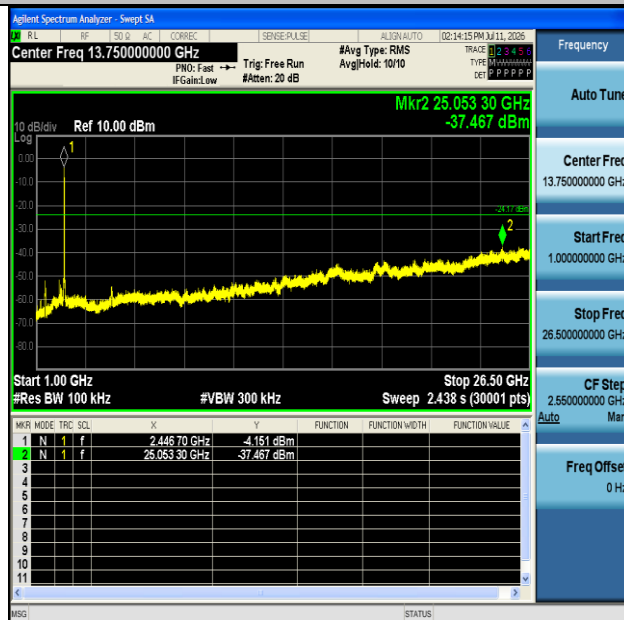


11N40SISO-Ant1-2437-1000~26500-PASS





11N40SISO-Ant1-2452-30~1000-PASS



11N40SISO-Ant1-2452-1000~26500-PASS





Appendix G: Duty Cycle

Test Result

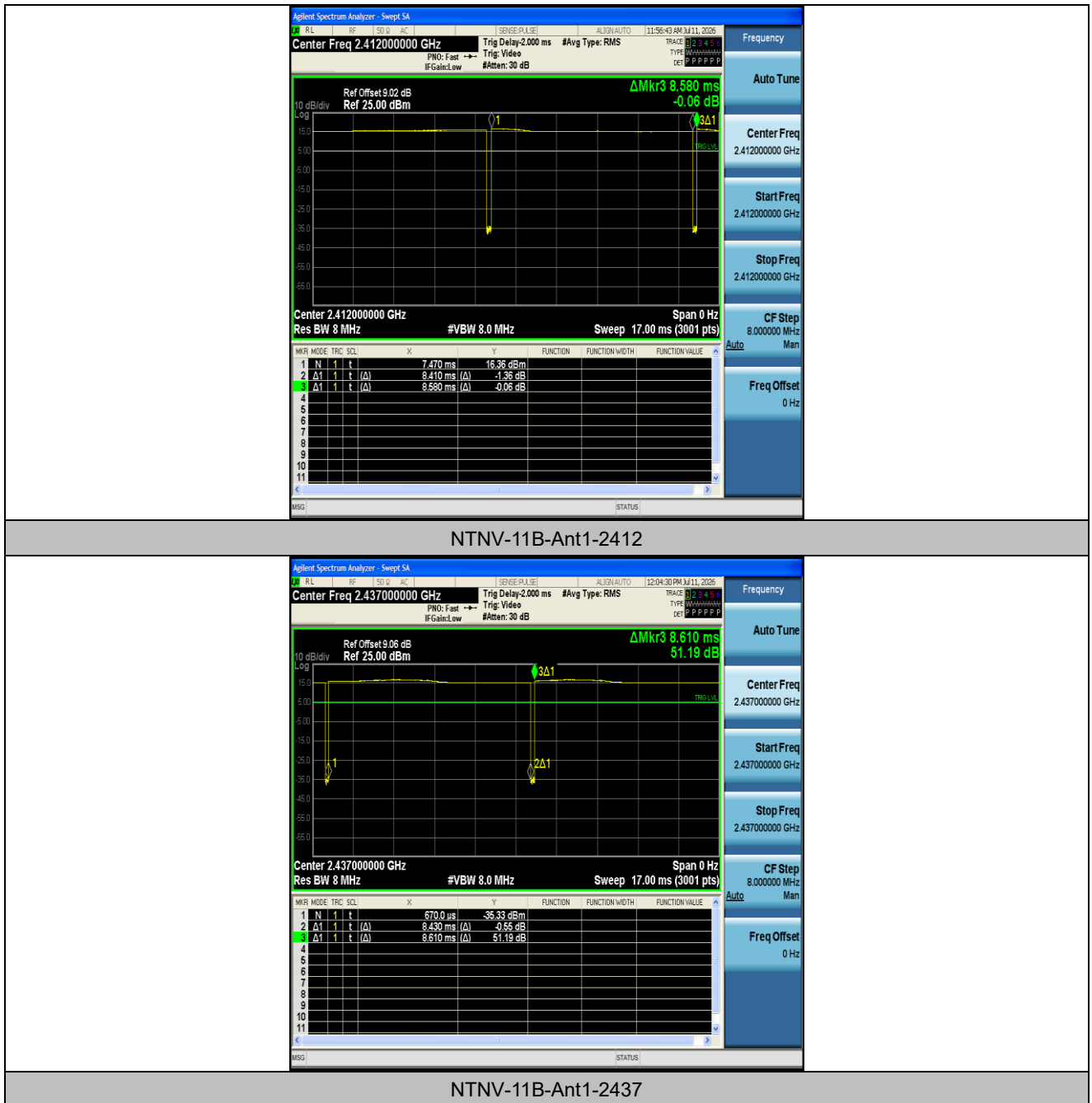
Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	8.41	8.58	98.02	0.09
11B	Ant1	2437	8.43	8.61	97.91	0.09
11B	Ant1	2462	8.41	8.56	98.25	0.08
11G	Ant1	2412	1.40	1.57	89.17	0.50
11G	Ant1	2437	1.39	1.62	85.80	0.67
11G	Ant1	2462	1.39	1.58	87.97	0.56
11N20SISO	Ant1	2412	0.54	0.72	75.00	1.25
11N20SISO	Ant1	2437	0.54	0.75	72.00	1.43
11N20SISO	Ant1	2462	0.54	0.66	81.82	0.87
11N40SISO	Ant1	2422	0.52	0.64	81.25	0.90
11N40SISO	Ant1	2437	0.52	0.75	69.33	1.59
11N40SISO	Ant1	2452	0.52	0.86	60.47	2.18

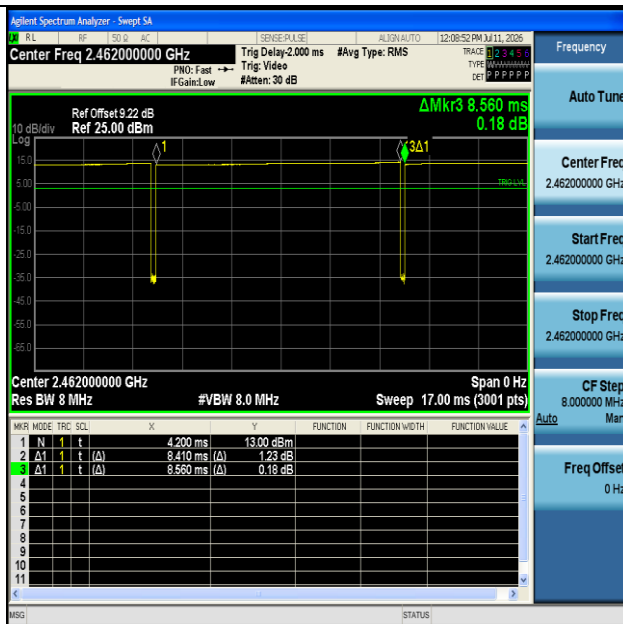
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



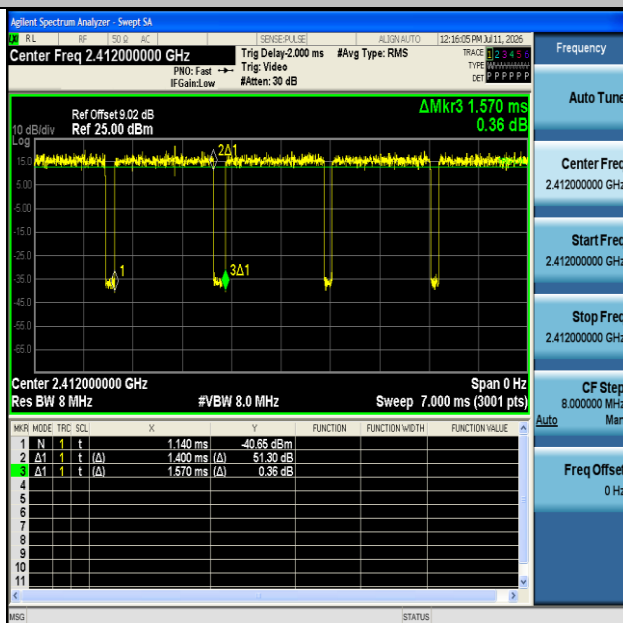


Test Graphs



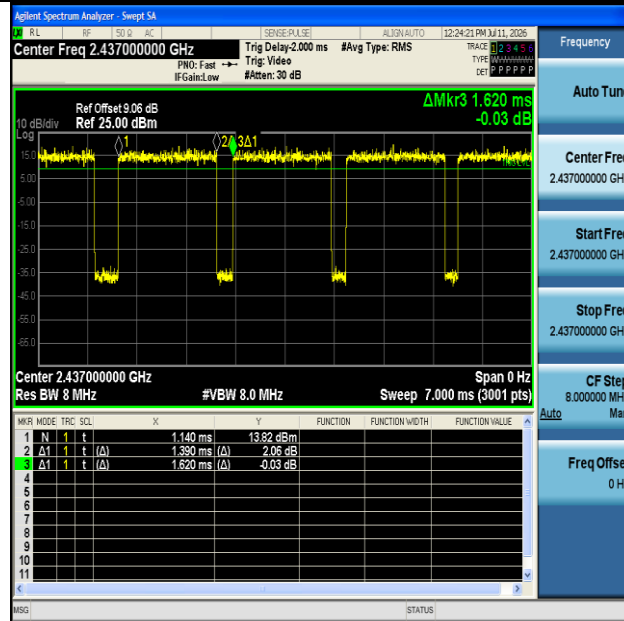


NTNV-11B-Ant1-2462

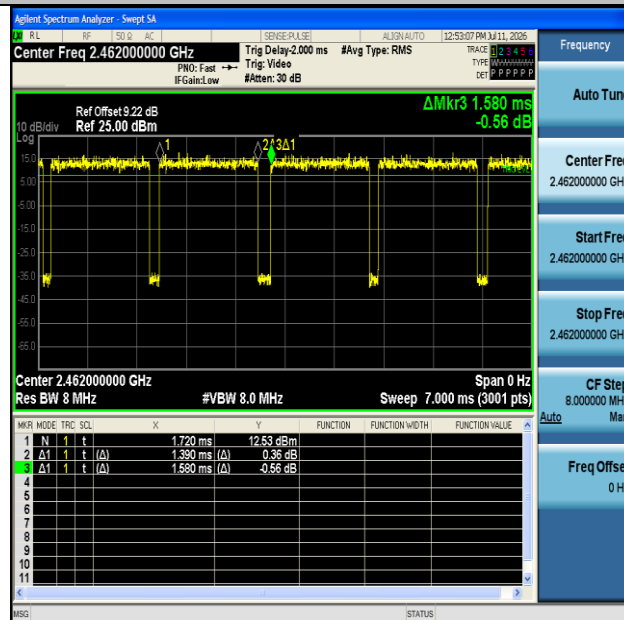


NTNV-11G-Ant1-2412



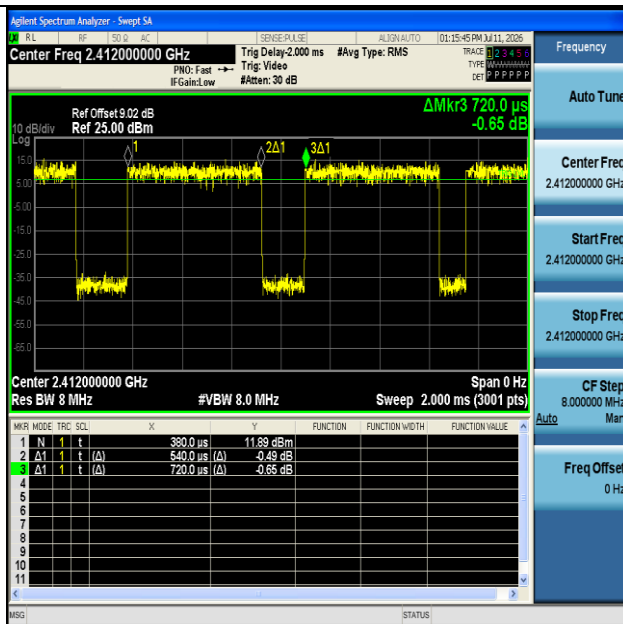


NTNV-11G-Ant1-2437

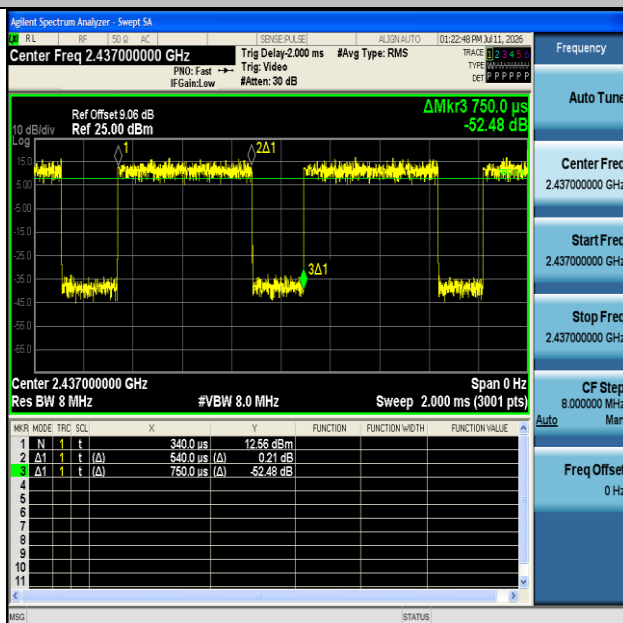


NTNV-11G-Ant1-2462



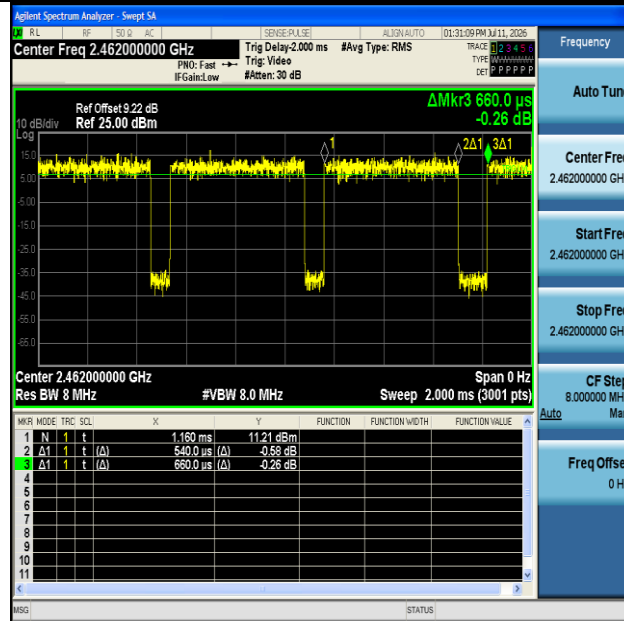


NTVN-11N20SISO-Ant1-2412

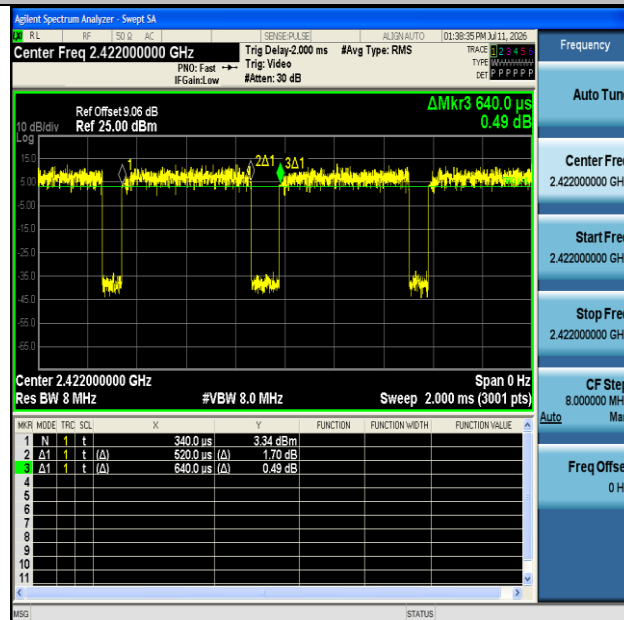


NTVN-11N20SISO-Ant1-2437



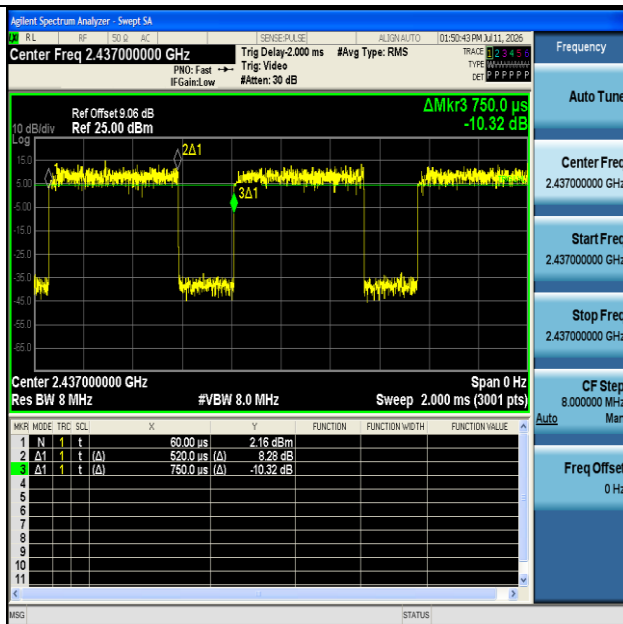


NTVN-11N20SISO-Ant1-2462

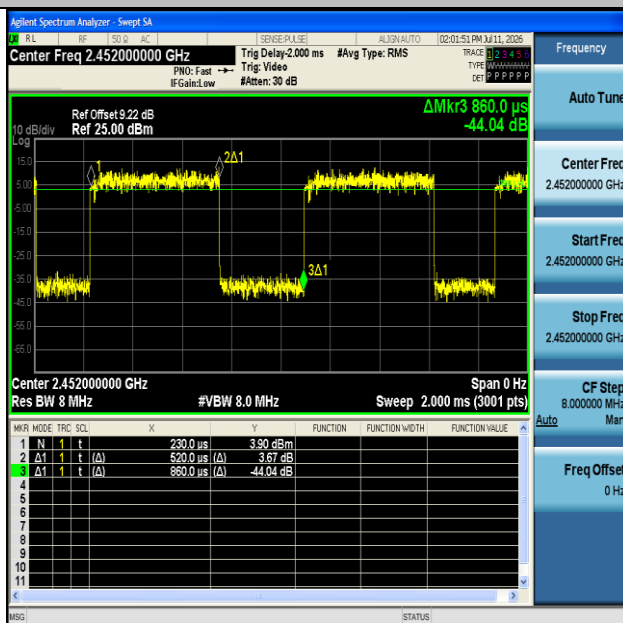


NTVN-11N40SISO-Ant1-2422





NTNV-11N40SISO-Ant1-2437



NTNV-11N40SISO-Ant1-2452

