



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

Product Name: Car Dashcam

Trade Mark: BlackVue

Test Model: SAFY8

FCC ID: YCK-SAFY8

Environmental Conditions

Temperature:	23.5℃
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	2407.520	2416.560	0.5	PASS
11B	Ant1	2437	9.080	2432.480	2441.560	0.5	PASS
11B	Ant1	2462	9.080	2457.480	2466.560	0.5	PASS
11G	Ant1	2412	16.440	2403.800	2420.240	0.5	PASS
11G	Ant1	2437	16.360	2428.840	2445.200	0.5	PASS
11G	Ant1	2462	16.360	2453.840	2470.200	0.5	PASS
11N20SISO	Ant1	2412	17.720	2403.160	2420.880	0.5	PASS
11N20SISO	Ant1	2437	17.640	2428.200	2445.840	0.5	PASS
11N20SISO	Ant1	2462	17.760	2453.200	2470.960	0.5	PASS
11N40SISO	Ant1	2422	36.160	2404.080	2440.240	0.5	PASS
11N40SISO	Ant1	2437	35.760	2419.160	2454.920	0.5	PASS
11N40SISO	Ant1	2452	36.080	2434.000	2470.080	0.5	PASS

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



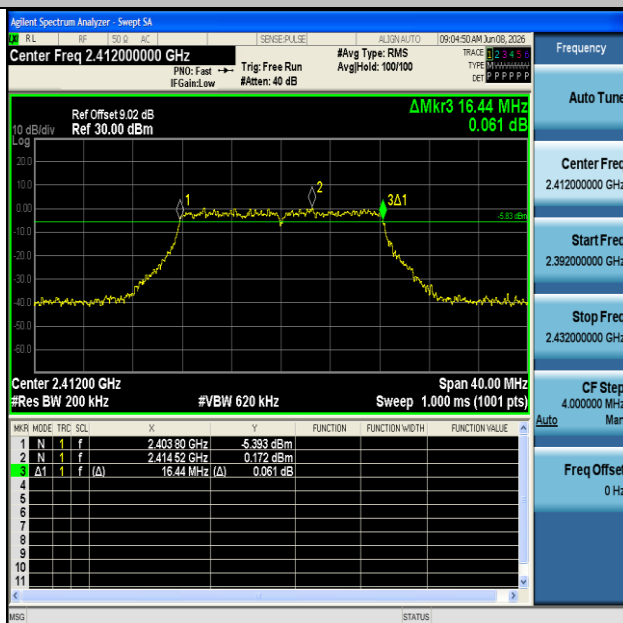


Test Graphs



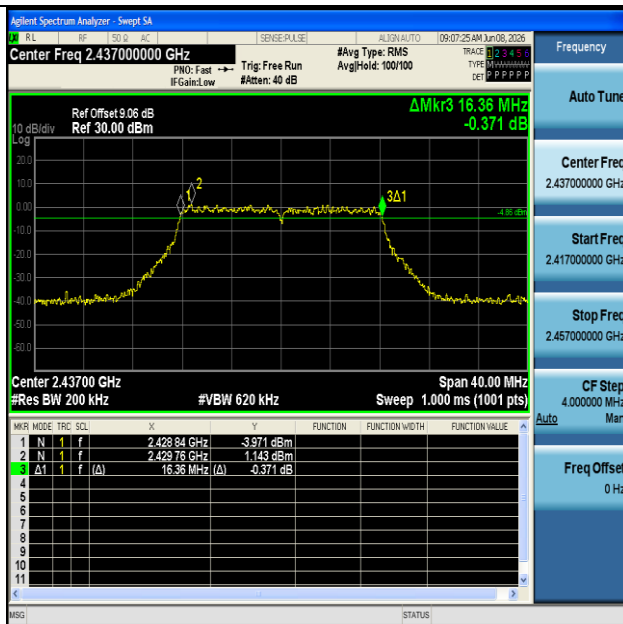


11B-Ant1-2462-PASS

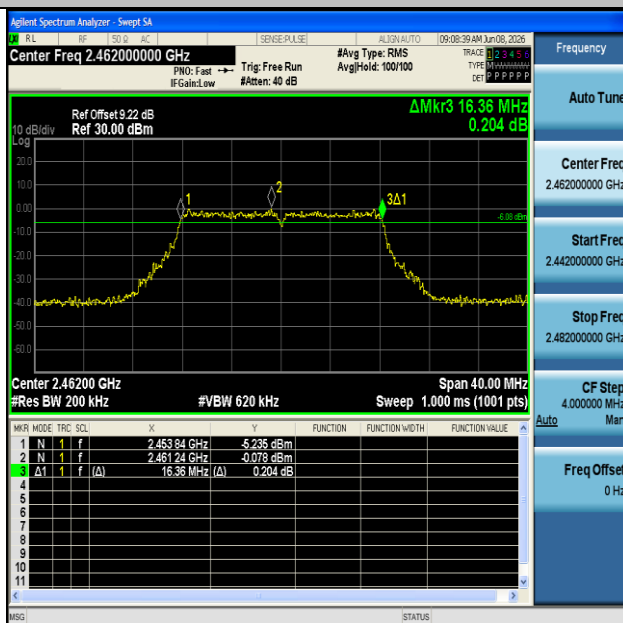


11G-Ant1-2412-PASS



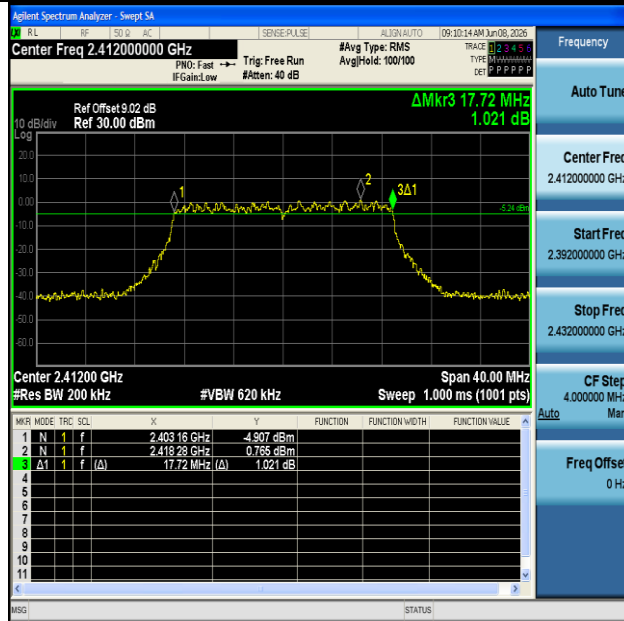


11G-Ant1-2437-PASS



11G-Ant1-2462-PASS



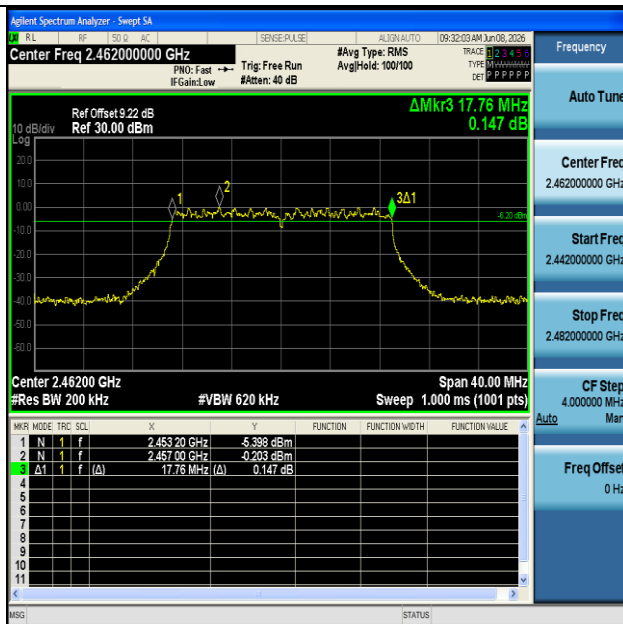


11N20SISO-Ant1-2412-PASS

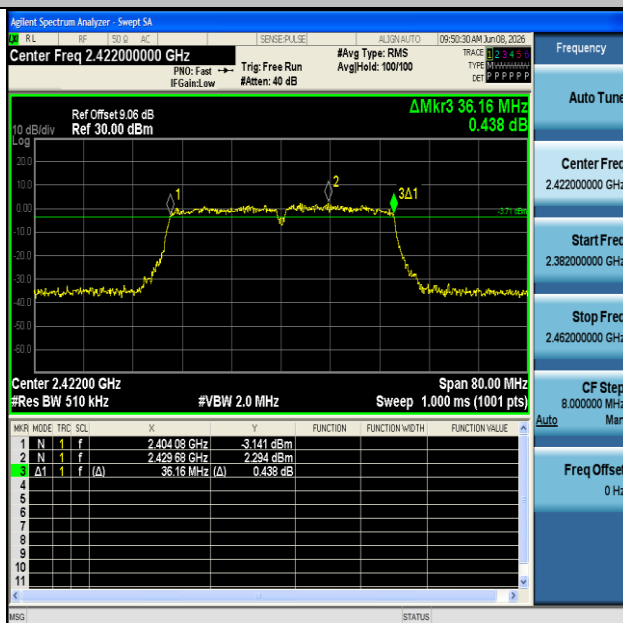


11N20SISO-Ant1-2437-PASS



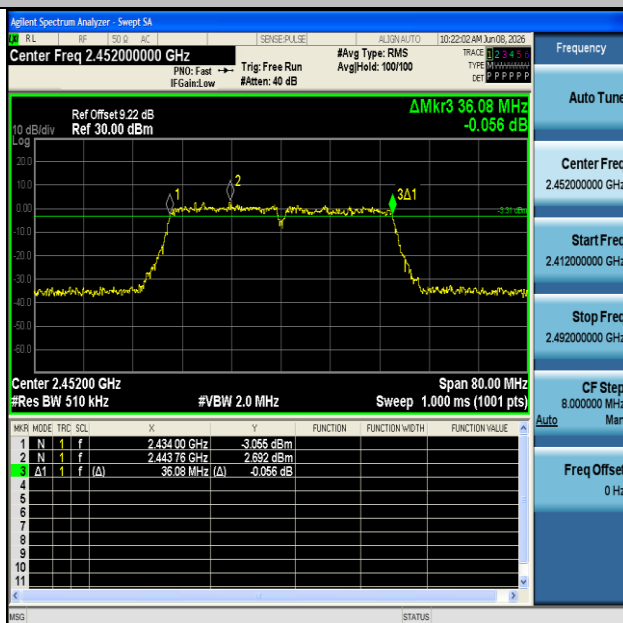
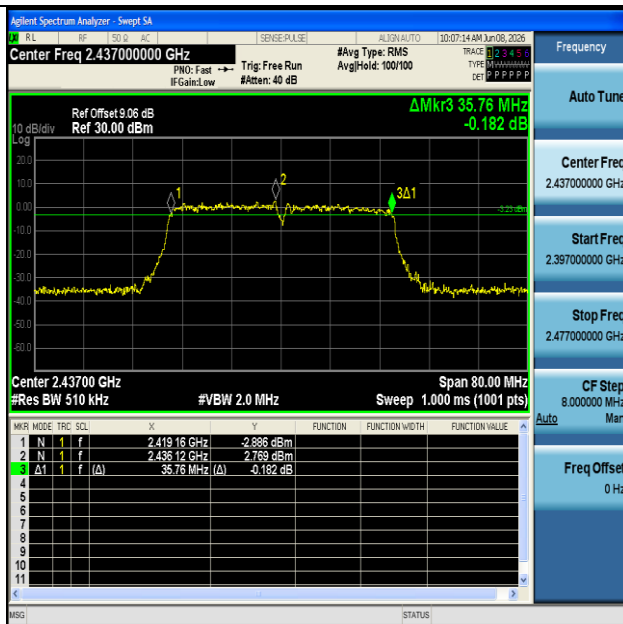


11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS







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	13.590	2405.3268	2418.9168	---	---
11B	Ant1	2437	13.388	2430.3116	2443.6996	---	---
11B	Ant1	2462	13.564	2455.2084	2468.7724	---	---
11G	Ant1	2412	17.103	2403.4852	2420.5882	---	---
11G	Ant1	2437	16.885	2428.5893	2445.4743	---	---
11G	Ant1	2462	17.094	2453.4570	2470.5510	---	---
11N20SISO	Ant1	2412	17.914	2403.1139	2421.0279	---	---
11N20SISO	Ant1	2437	17.881	2428.0465	2445.9275	---	---
11N20SISO	Ant1	2462	18.066	2452.9940	2471.0600	---	---
11N40SISO	Ant1	2422	36.242	2403.9958	2440.2378	---	---
11N40SISO	Ant1	2437	36.143	2418.9638	2455.1068	---	---
11N40SISO	Ant1	2452	36.399	2433.8657	2470.2647	---	---

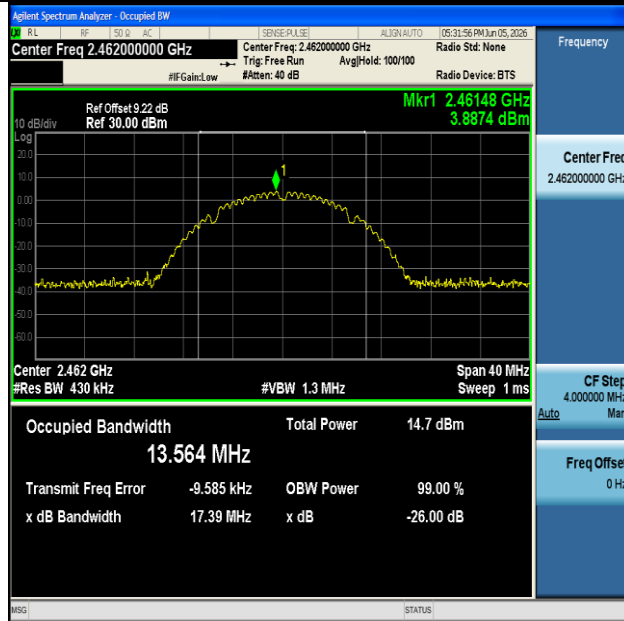
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs





11B-Ant1-2462



11G-Ant1-2412



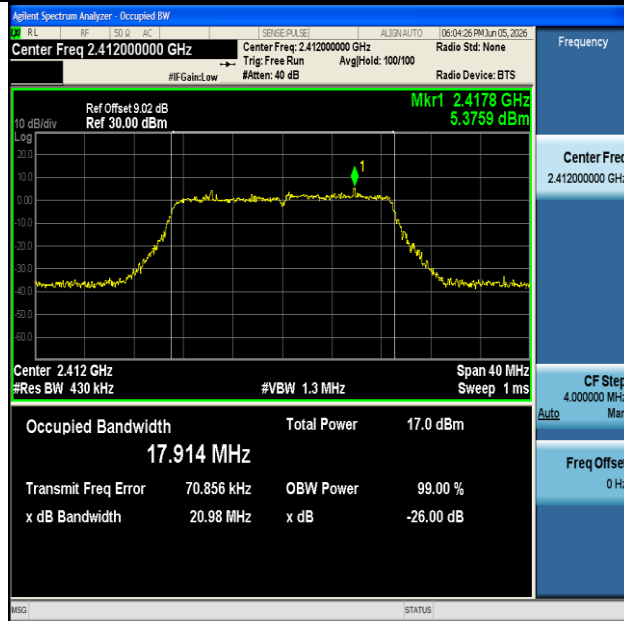


11G-Ant1-2437

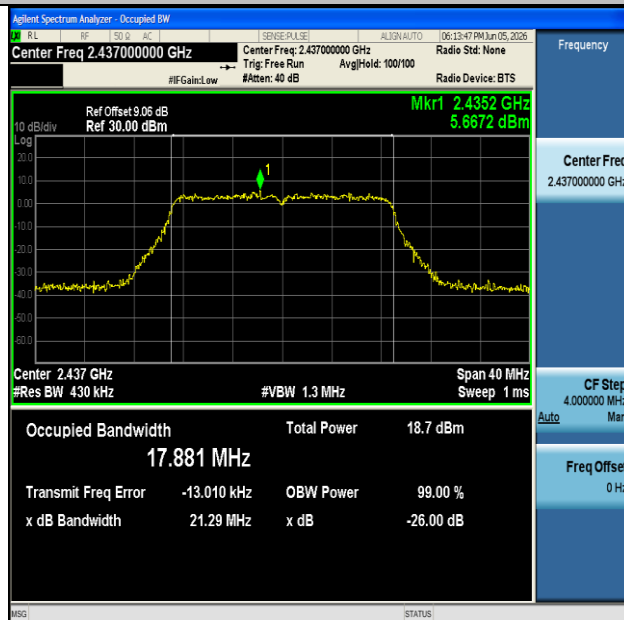


11G-Ant1-2462



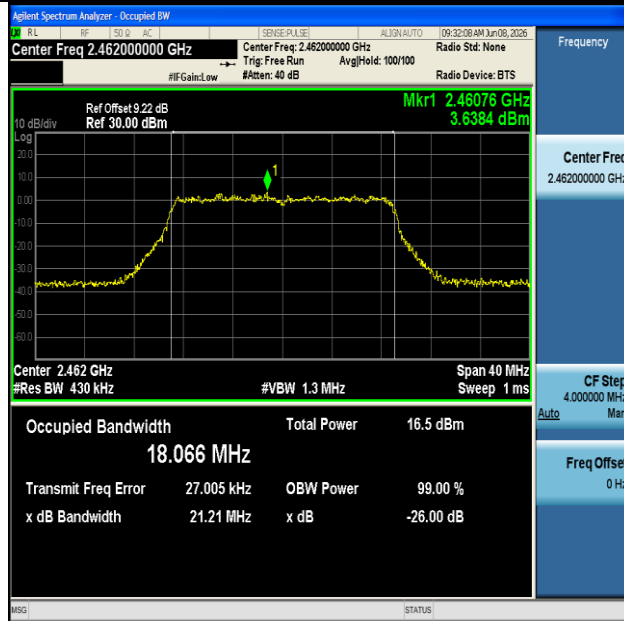


11N20SISO-Ant1-2412



11N20SISO-Ant1-2437



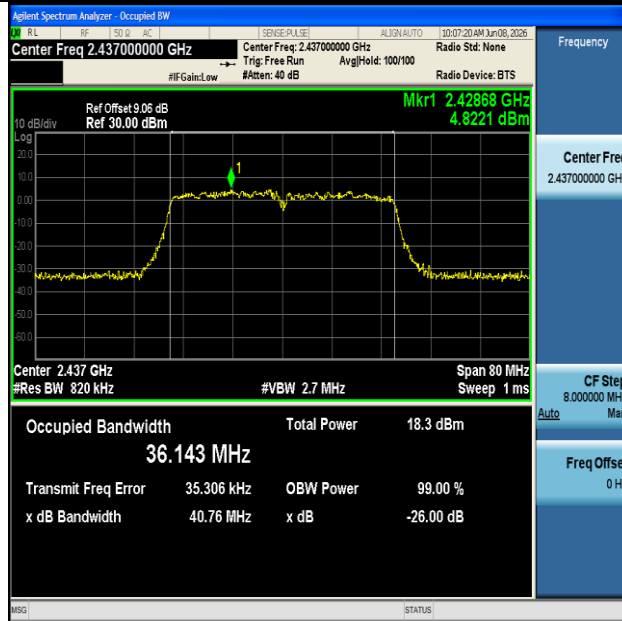


11N20SISO-Ant1-2462

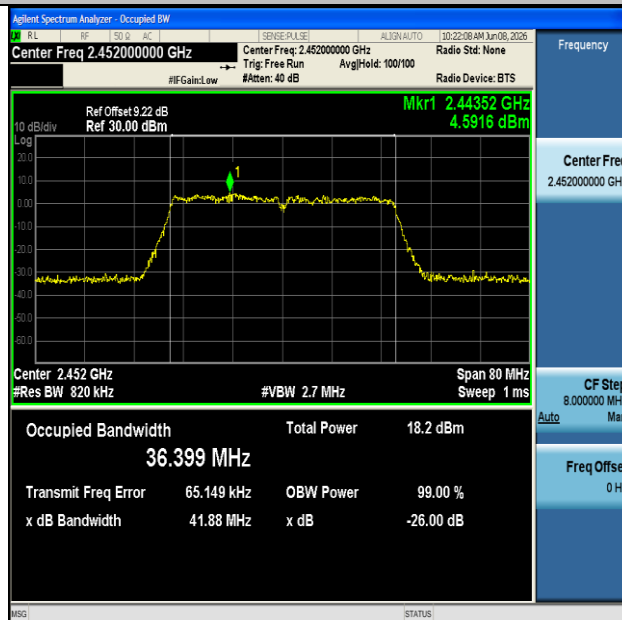


11N40SISO-Ant1-2422





11N40SISO-Ant1-2437



11N40SISO-Ant1-2452





Appendix C: Maximum Average conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11B	Ant1	2412	11.20	≤30.00	PASS
11B	Ant1	2437	12.72	≤30.00	PASS
11B	Ant1	2462	11.61	≤30.00	PASS
11G	Ant1	2412	10.55	≤30.00	PASS
11G	Ant1	2437	12.15	≤30.00	PASS
11G	Ant1	2462	11.12	≤30.00	PASS
11N20SISO	Ant1	2412	12.11	≤30.00	PASS
11N20SISO	Ant1	2437	13.09	≤30.00	PASS
11N20SISO	Ant1	2462	8.13	≤30.00	PASS
11N40SISO	Ant1	2422	11.98	≤30.00	PASS
11N40SISO	Ant1	2437	13.18	≤30.00	PASS
11N40SISO	Ant1	2452	12.01	≤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

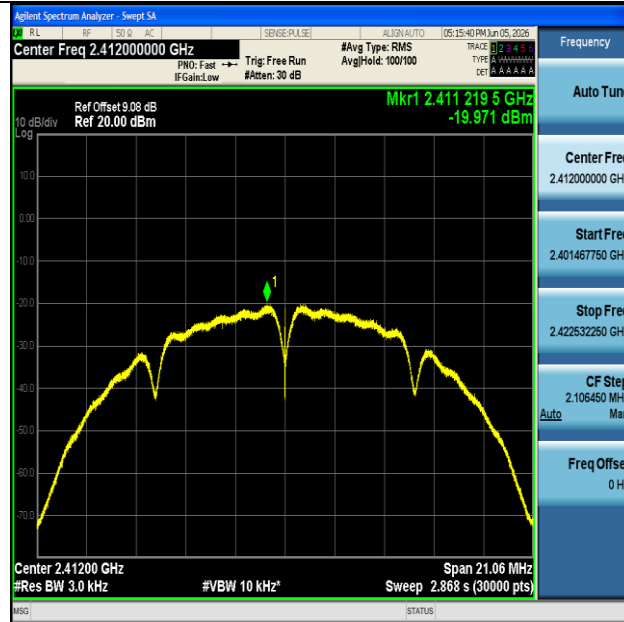
Test Mode	Antenna	Frequency [MHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-19.97	≤8.00	PASS
11B	Ant1	2437	-18.57	≤8.00	PASS
11B	Ant1	2462	-19.65	≤8.00	PASS
11G	Ant1	2412	-20.61	≤8.00	PASS
11G	Ant1	2437	-19.30	≤8.00	PASS
11G	Ant1	2462	-20.28	≤8.00	PASS
11N20SISO	Ant1	2412	-16.17	≤8.00	PASS
11N20SISO	Ant1	2437	-13.39	≤8.00	PASS
11N20SISO	Ant1	2462	-18.79	≤8.00	PASS
11N40SISO	Ant1	2422	-17.34	≤8.00	PASS
11N40SISO	Ant1	2437	-15.95	≤8.00	PASS
11N40SISO	Ant1	2452	-18.70	≤8.00	PASS

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

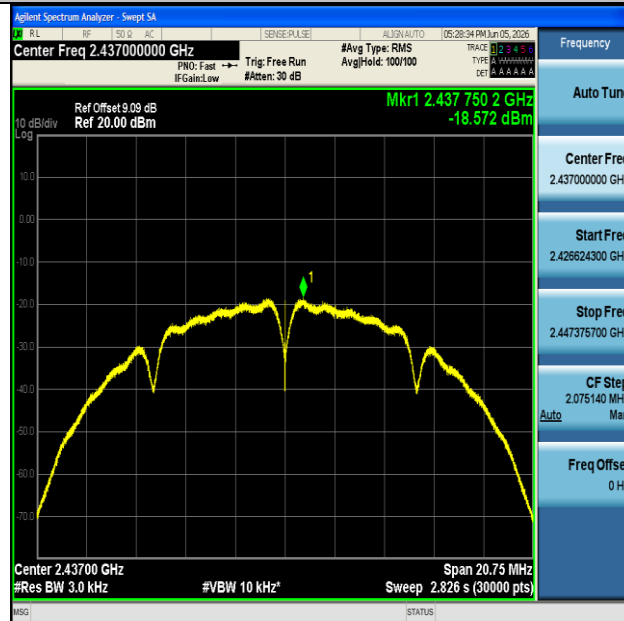




Test Graphs

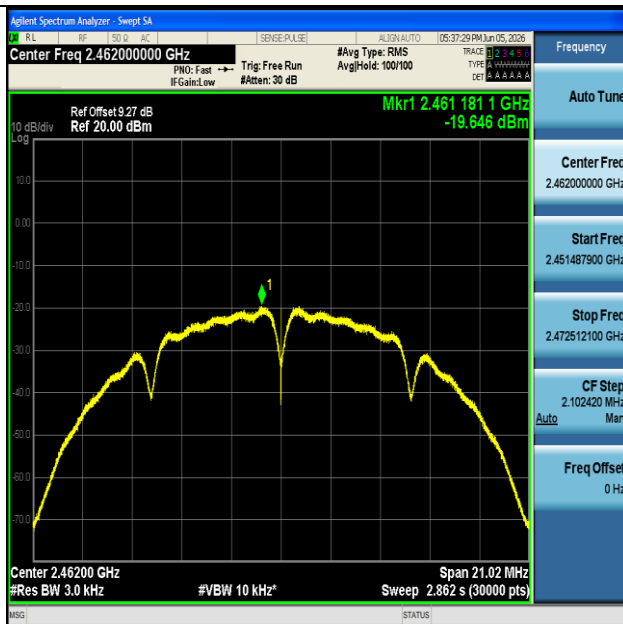


11B-Ant1-2412-PASS

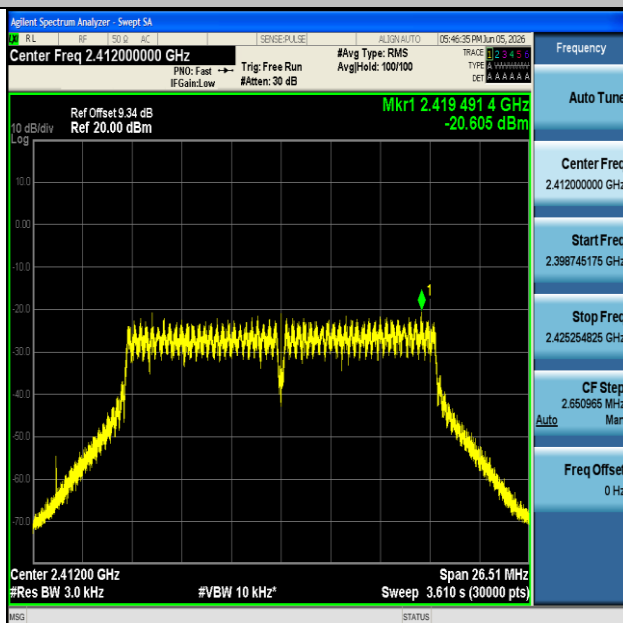


11B-Ant1-2437-PASS



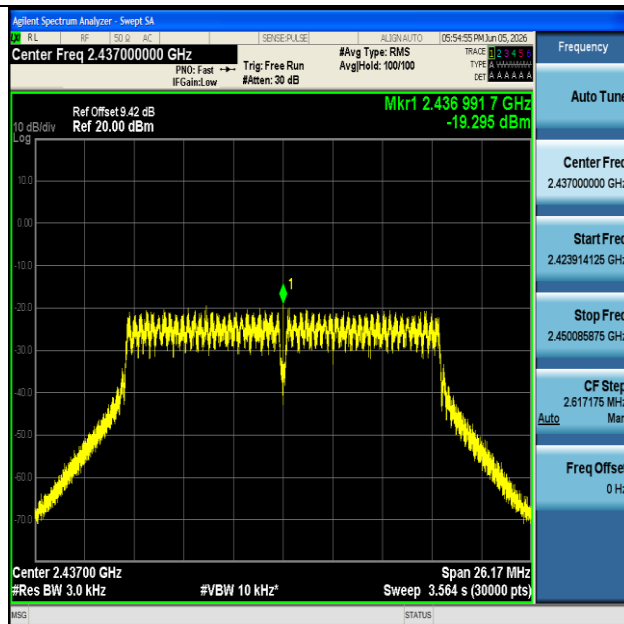


11B-Ant1-2462-PASS

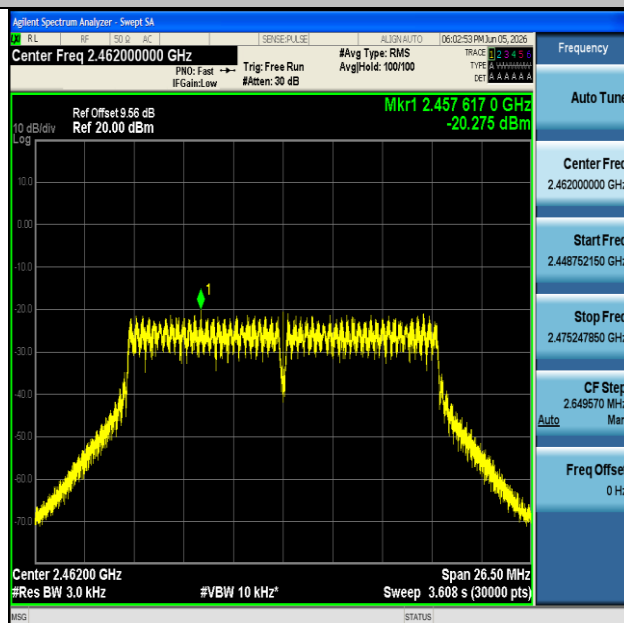


11G-Ant1-2412-PASS



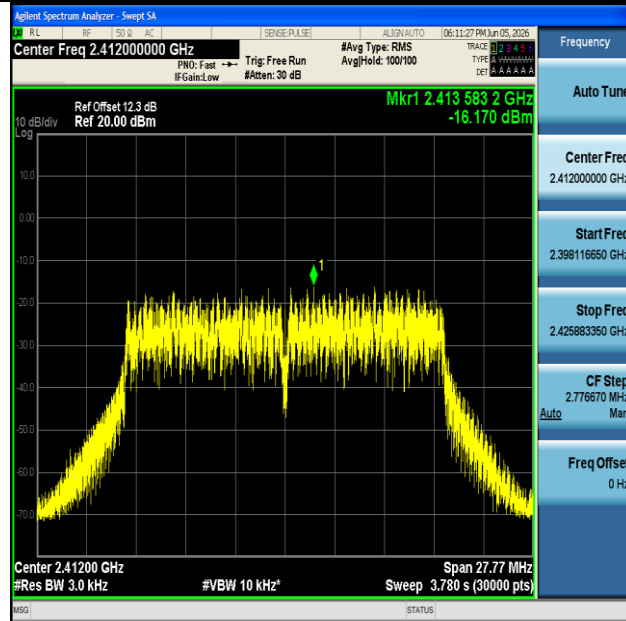


11G-Ant1-2437-PASS

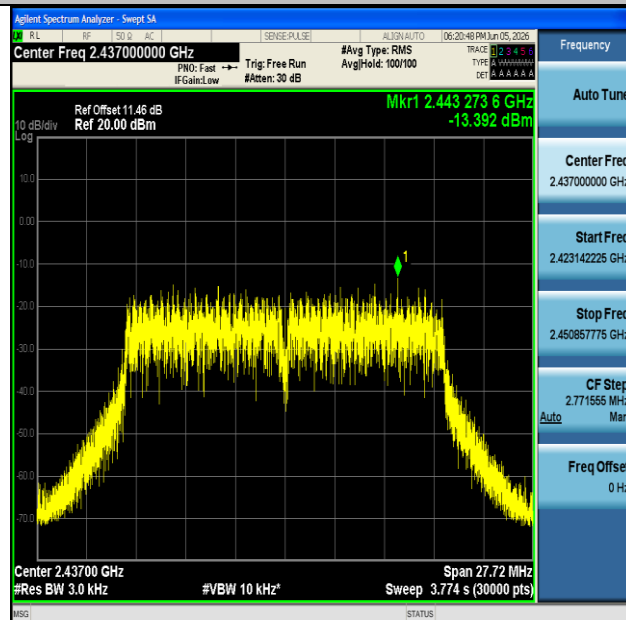


11G-Ant1-2462-PASS



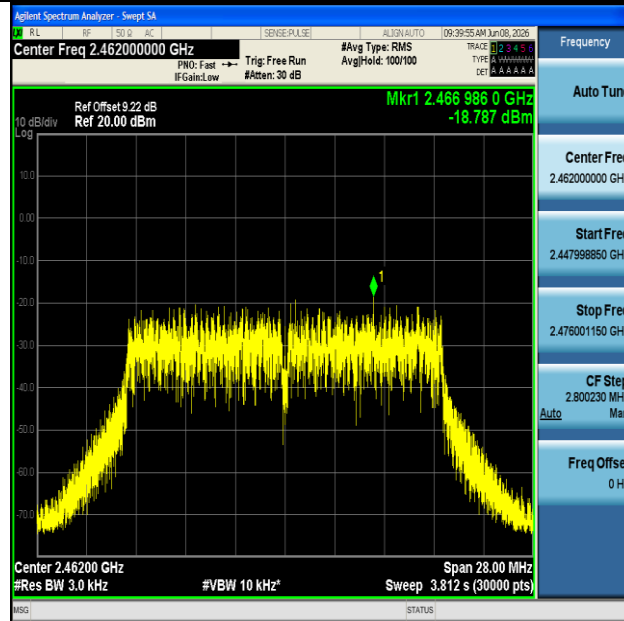


11N20SISO-Ant1-2412-PASS

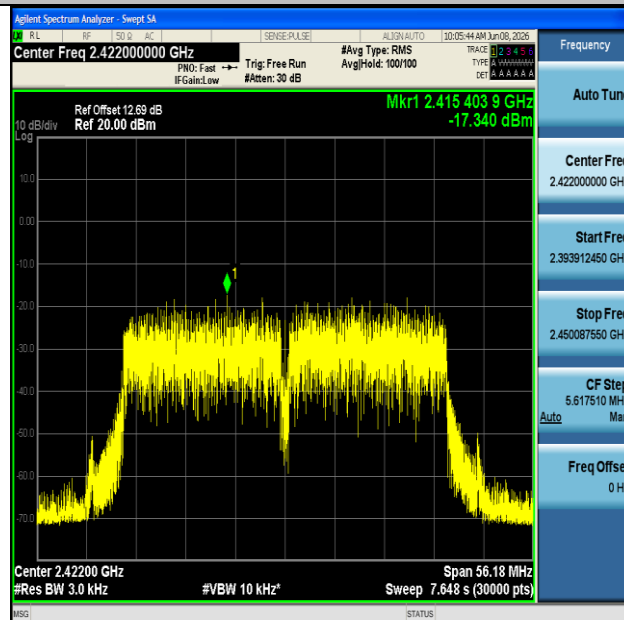


11N20SISO-Ant1-2437-PASS



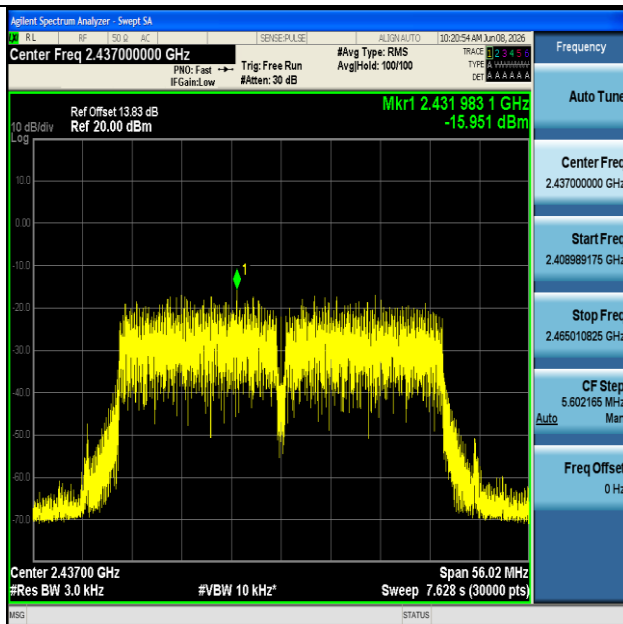


11N20SISO-Ant1-2462-PASS

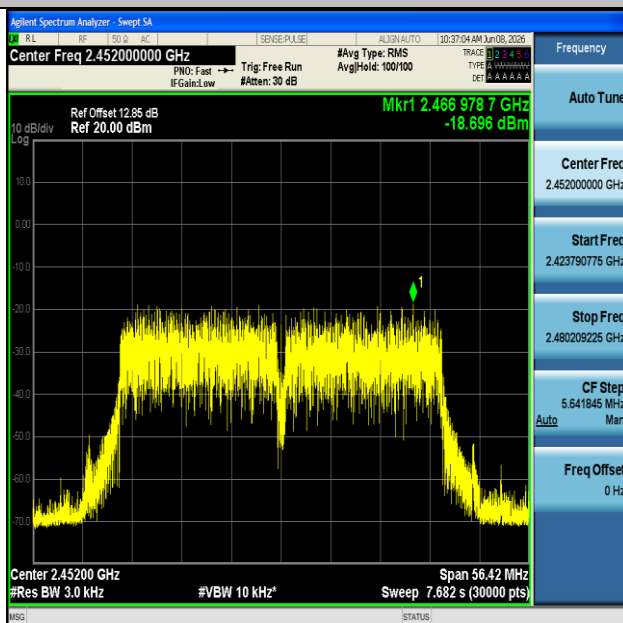


11N40SISO-Ant1-2422-PASS





11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS





Appendix E: Band edge measurements

Test Result

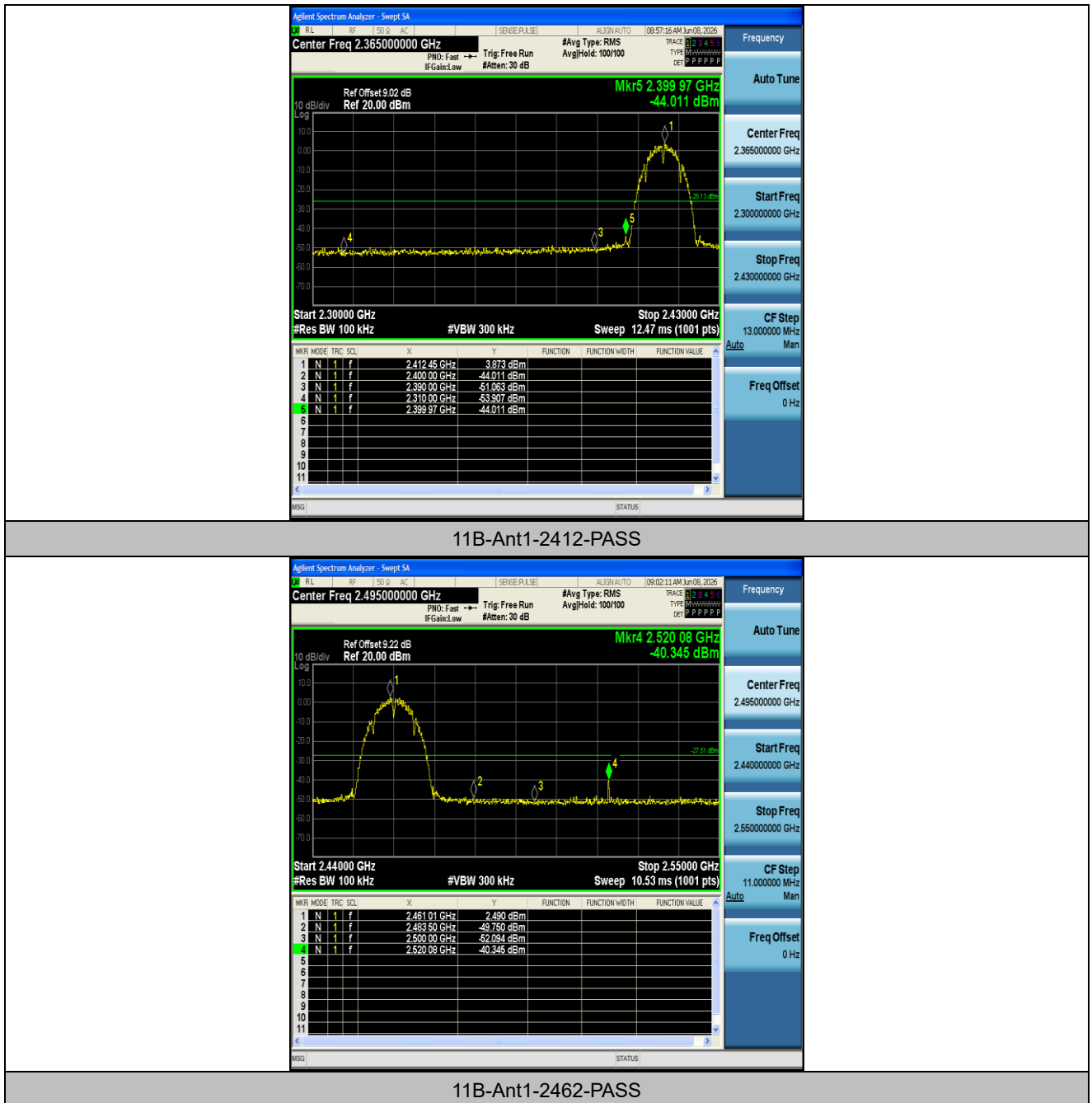
Test Mode	Antenna	Ch. Name	Frequency.[MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	3.87	-44.01	≤-26.13	PASS
11B	Ant1	High	2462	2.49	-40.35	≤-27.51	PASS
11G	Ant1	Low	2412	-0.68	-39.55	≤-30.68	PASS
11G	Ant1	High	2462	-0.95	-47.97	≤-30.95	PASS
11N20SISO	Ant1	Low	2412	-0.09	-40	≤-30.09	PASS
11N20SISO	Ant1	High	2462	-0.94	-48.26	≤-30.94	PASS
11N40SISO	Ant1	Low	2422	-2.30	-35.93	≤-32.3	PASS
11N40SISO	Ant1	High	2452	-2.20	-45.1	≤-32.2	PASS

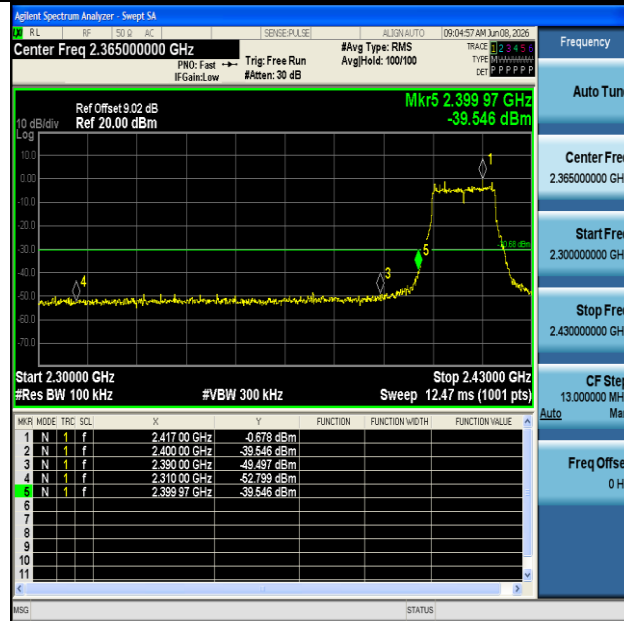
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



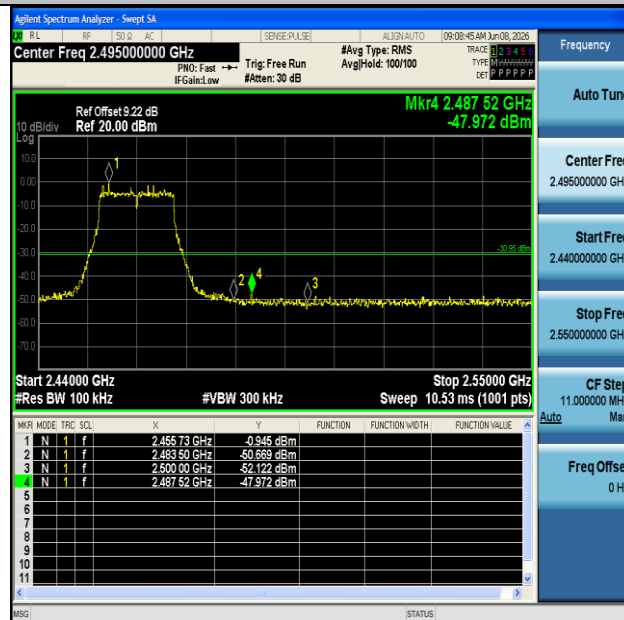


Test Graphs



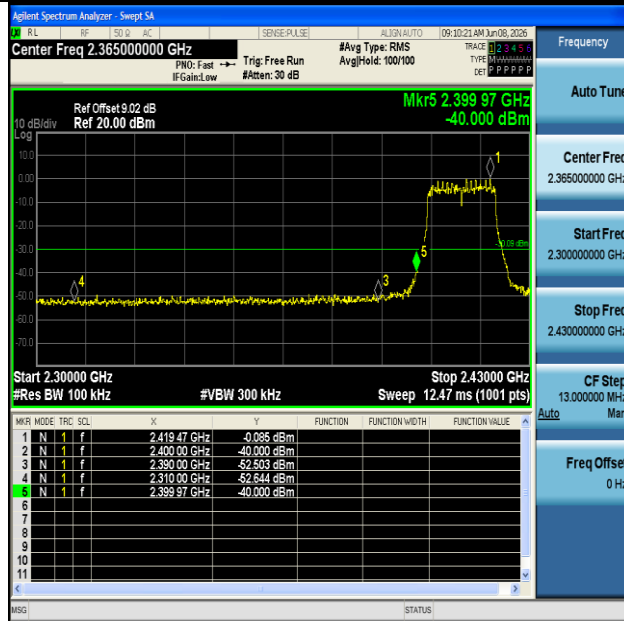


11G-Ant1-2412-PASS

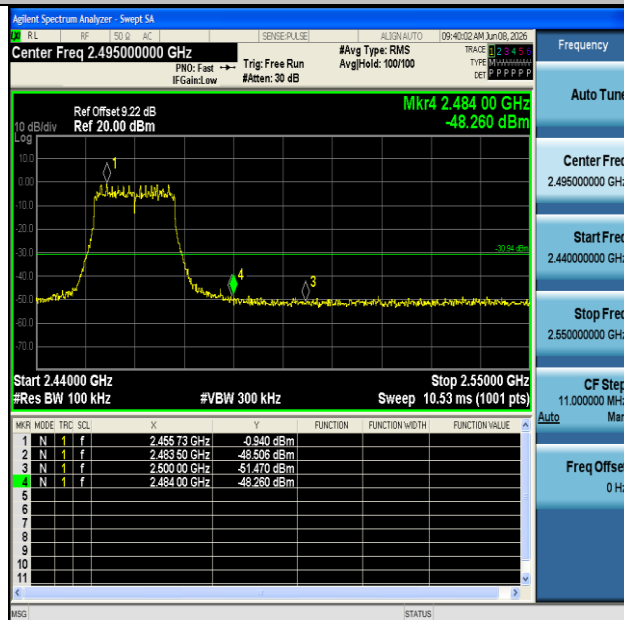


11G-Ant1-2462-PASS





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	0~Reference	3.79	3.79	---	PASS
11B	Ant1	2412	30~1000	3.79	-63.16	≤-26.21	PASS
11B	Ant1	2412	1000~26500	3.79	-36.97	≤-26.21	PASS
11B	Ant1	2437	0~Reference	2.06	2.06	---	PASS
11B	Ant1	2437	30~1000	2.06	-62.79	≤-27.94	PASS
11B	Ant1	2437	1000~26500	2.06	-38.4	≤-27.94	PASS
11B	Ant1	2462	0~Reference	1.36	1.36	---	PASS
11B	Ant1	2462	30~1000	1.36	-62.6	≤-28.64	PASS
11B	Ant1	2462	1000~26500	1.36	-37.12	≤-28.64	PASS
11G	Ant1	2412	0~Reference	-3.87	-3.87	---	PASS
11G	Ant1	2412	30~1000	-3.87	-62.4	≤-33.87	PASS
11G	Ant1	2412	1000~26500	-3.87	-37.65	≤-33.87	PASS
11G	Ant1	2437	0~Reference	-2.57	-2.57	---	PASS
11G	Ant1	2437	30~1000	-2.57	-62.36	≤-32.57	PASS
11G	Ant1	2437	1000~26500	-2.57	-37.28	≤-32.57	PASS
11G	Ant1	2462	0~Reference	-4.19	-4.19	---	PASS
11G	Ant1	2462	30~1000	-4.19	-62.32	≤-34.19	PASS
11G	Ant1	2462	1000~26500	-4.19	-35.63	≤-34.19	PASS
11N20SISO	Ant1	2412	0~Reference	-1.14	-1.14	---	PASS
11N20SISO	Ant1	2412	30~1000	-1.14	-62.76	≤-31.14	PASS
11N20SISO	Ant1	2412	1000~26500	-1.14	-37.92	≤-31.14	PASS
11N20SISO	Ant1	2437	0~Reference	-0.68	-0.68	---	PASS
11N20SISO	Ant1	2437	30~1000	-0.68	-62.21	≤-30.68	PASS
11N20SISO	Ant1	2437	1000~26500	-0.68	-37.19	≤-30.68	PASS
11N20SISO	Ant1	2462	0~Reference	-2.60	-2.60	---	PASS
11N20SISO	Ant1	2462	30~1000	-2.60	-62.69	≤-32.6	PASS
11N20SISO	Ant1	2462	1000~26500	-2.60	-38.03	≤-32.6	PASS
11N40SISO	Ant1	2422	0~Reference	-2.49	-2.49	---	PASS
11N40SISO	Ant1	2422	30~1000	-2.49	-62.35	≤-32.49	PASS
11N40SISO	Ant1	2422	1000~26500	-2.49	-37.9	≤-32.49	PASS
11N40SISO	Ant1	2437	0~Reference	-2.38	-2.38	---	PASS
11N40SISO	Ant1	2437	30~1000	-2.38	-61.87	≤-32.38	PASS
11N40SISO	Ant1	2437	1000~26500	-2.38	-38.22	≤-32.38	PASS
11N40SISO	Ant1	2452	0~Reference	-2.65	-2.65	---	PASS
11N40SISO	Ant1	2452	30~1000	-2.65	-62.59	≤-32.65	PASS
11N40SISO	Ant1	2452	1000~26500	-2.65	-37.53	≤-32.65	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



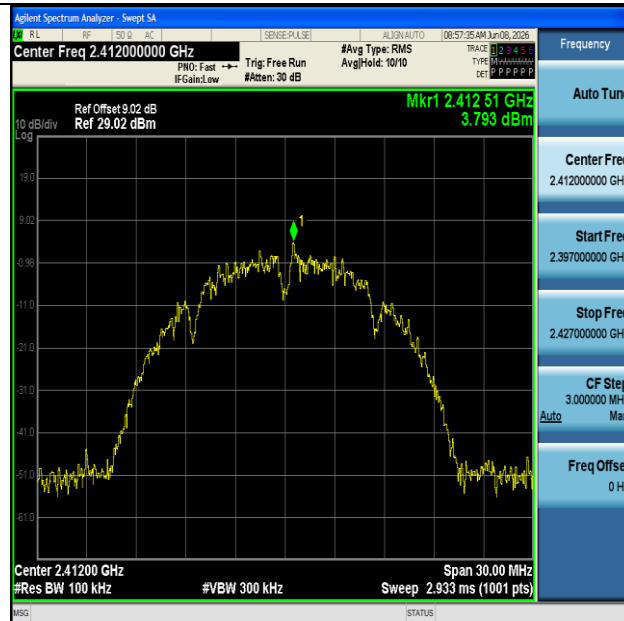


the Spectrum Analyzer during the test.

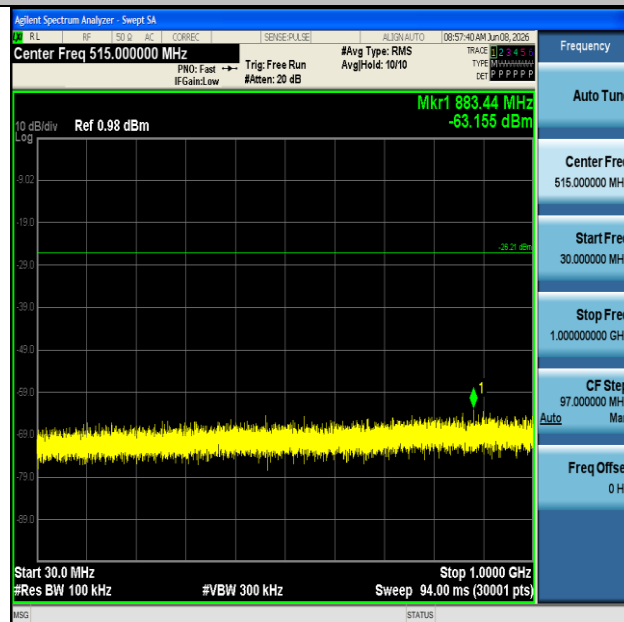




Test Graphs

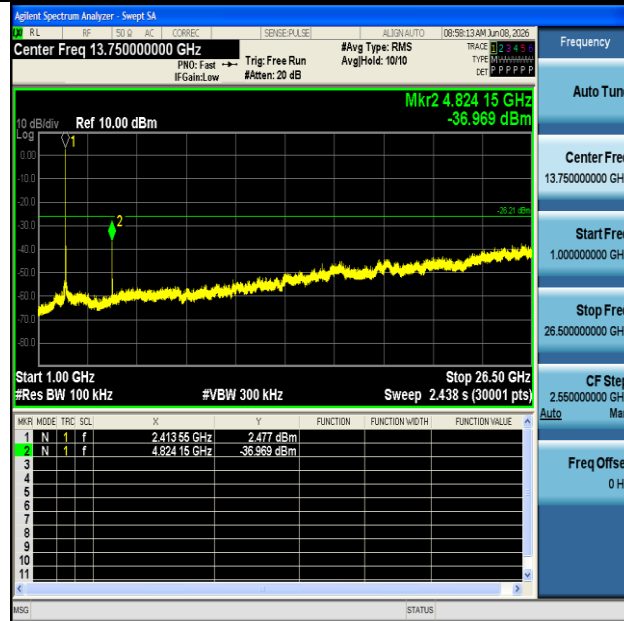


11B-Ant1-2412-0~Reference-PASS

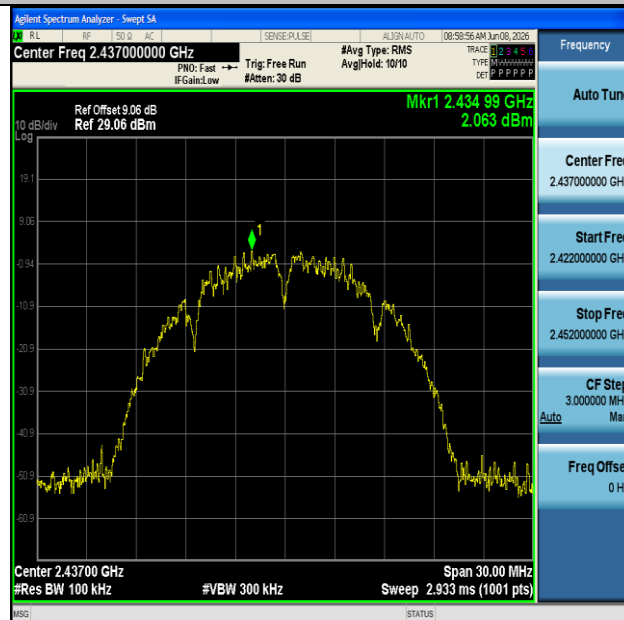


11B-Ant1-2412-30~1000-PASS



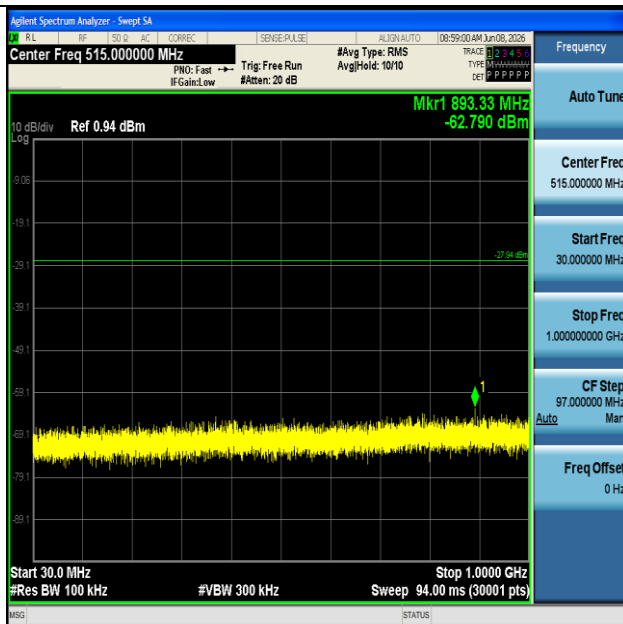


11B-Ant1-2412-1000~26500-PASS

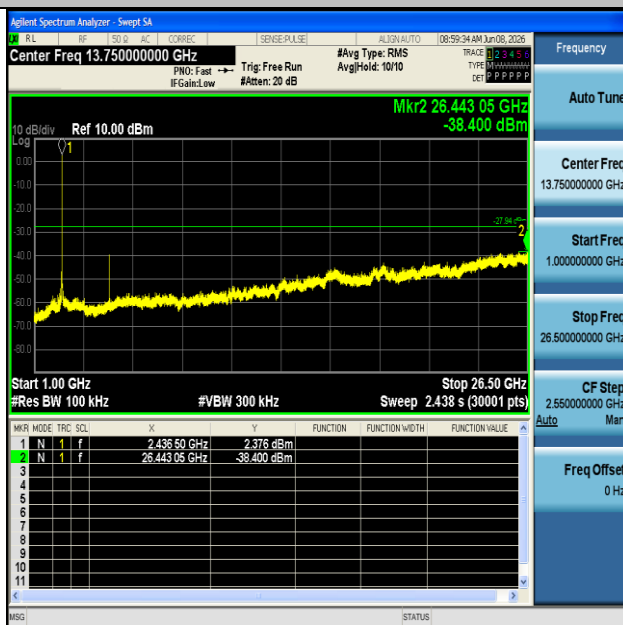


11B-Ant1-2437-0~Reference-PASS



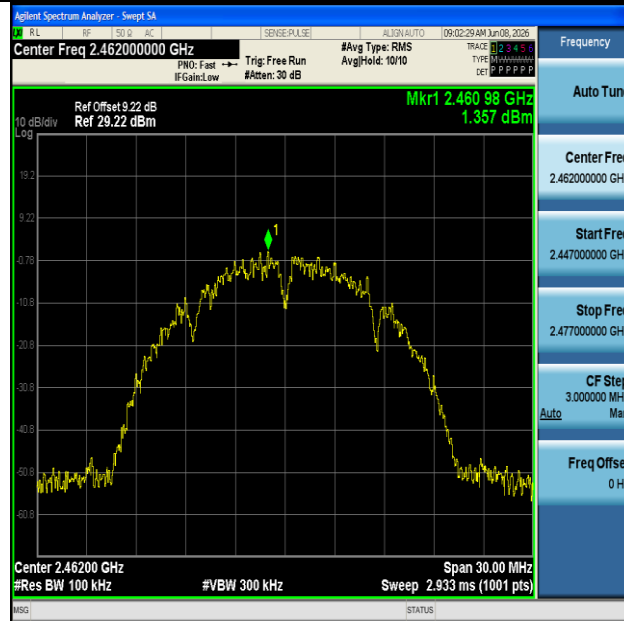


11B-Ant1-2437-30~1000-PASS

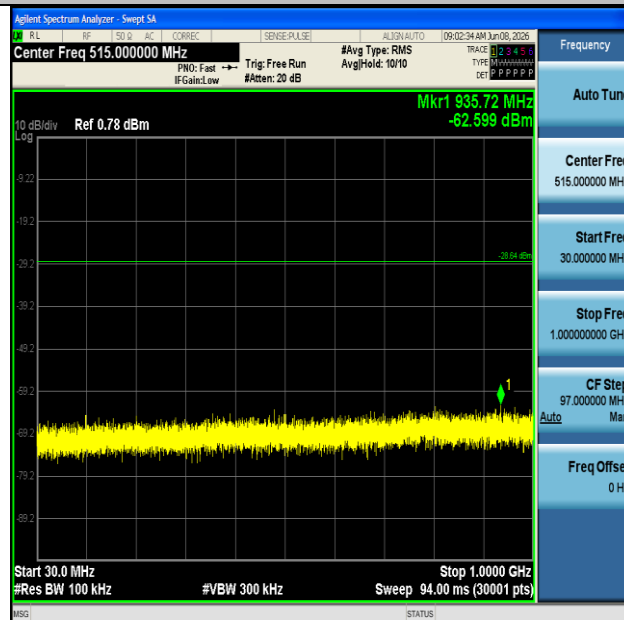


11B-Ant1-2437-1000~26500-PASS



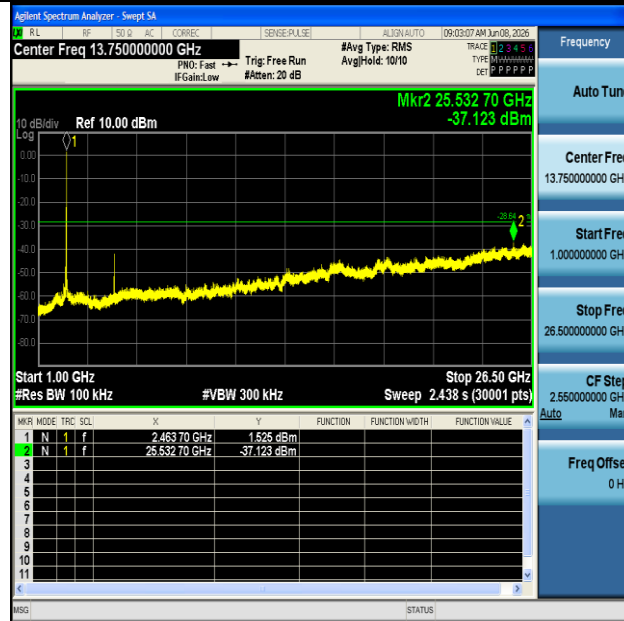


11B-Ant1-2462-0~Reference-PASS

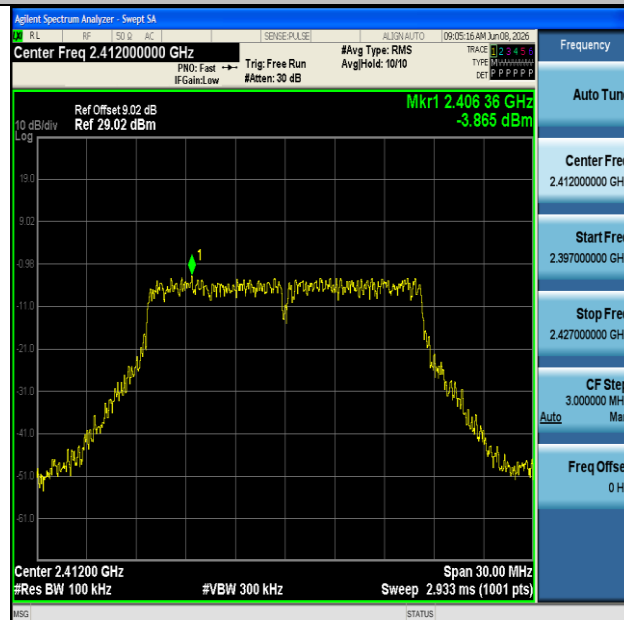


11B-Ant1-2462-30~1000-PASS



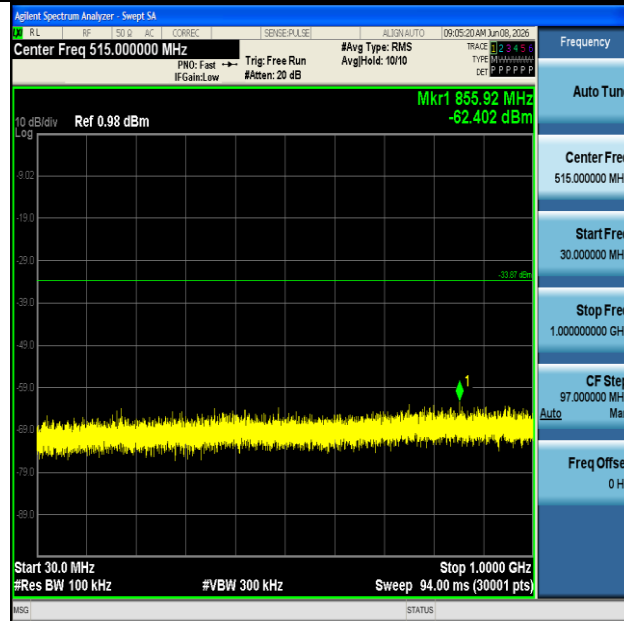


11B-Ant1-2462-1000~26500-PASS

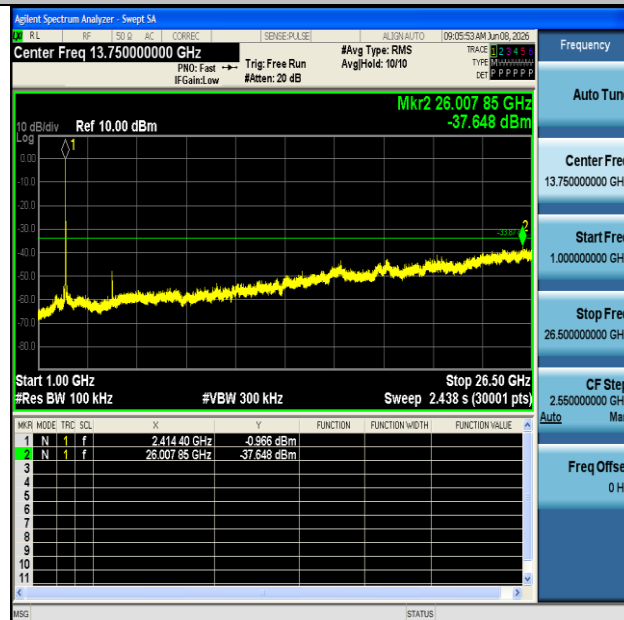


11G-Ant1-2412-0~Reference-PASS



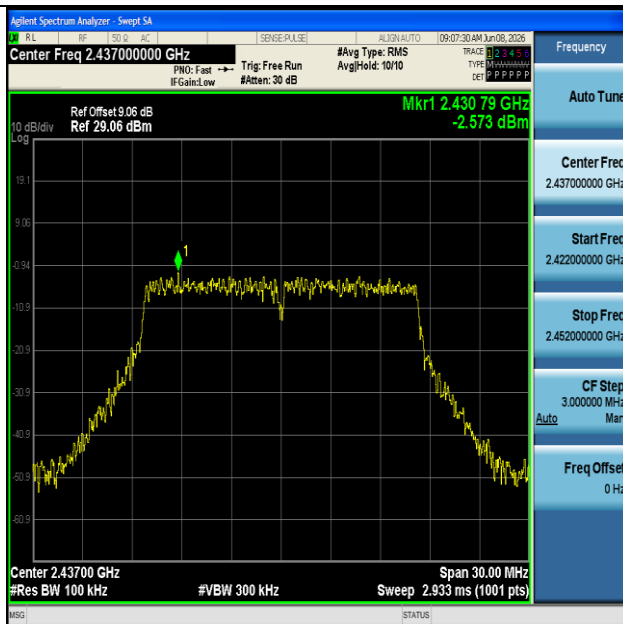


11G-Ant1-2412-30~1000-PASS

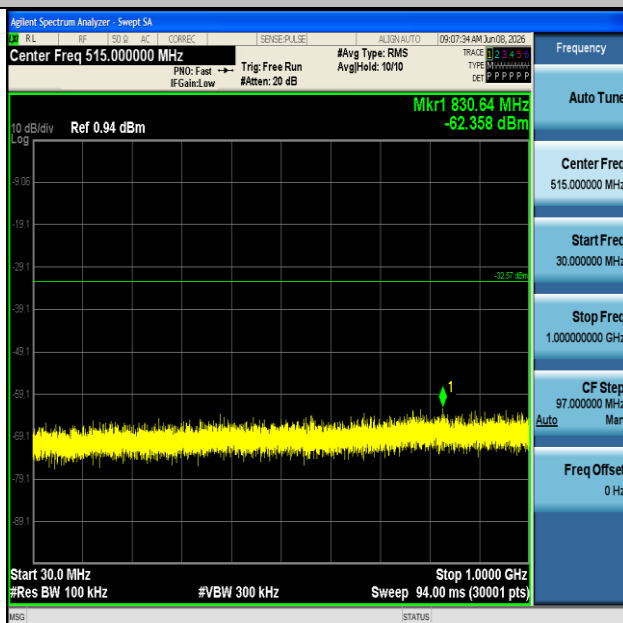


11G-Ant1-2412-1000~26500-PASS



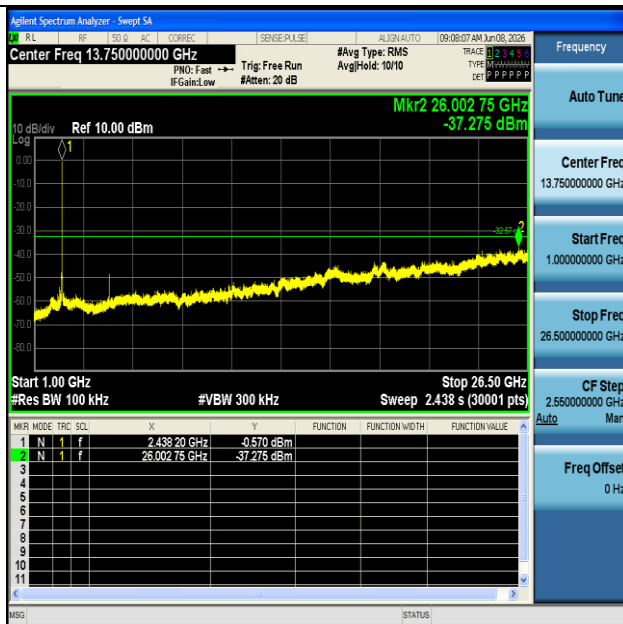


11G-Ant1-2437-0~Reference-PASS

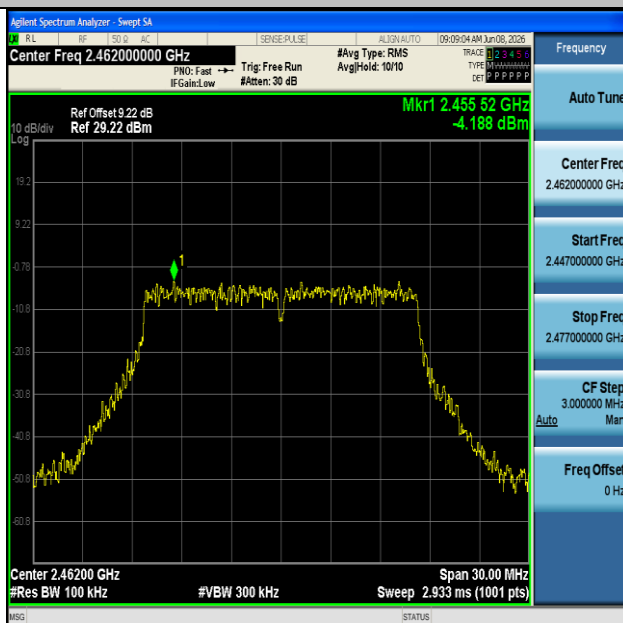


11G-Ant1-2437-30~1000-PASS



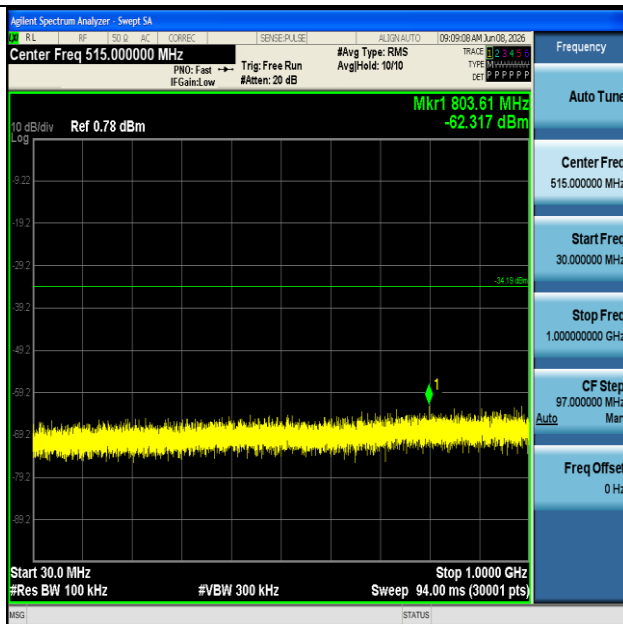


11G-Ant1-2437-1000~26500-PASS

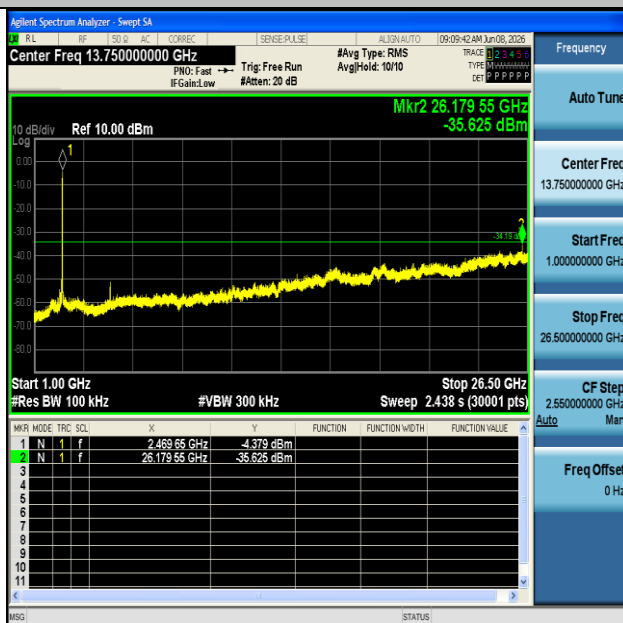


11G-Ant1-2462-0~Reference-PASS



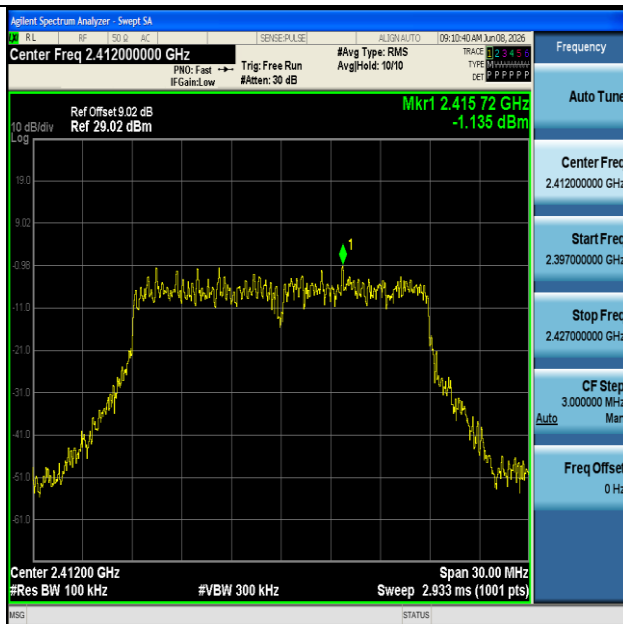


11G-Ant1-2462-30~1000-PASS

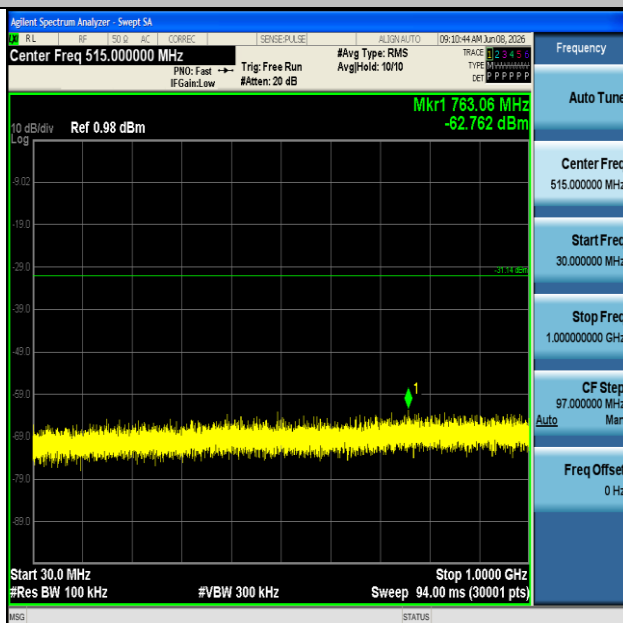


11G-Ant1-2462-1000~26500-PASS



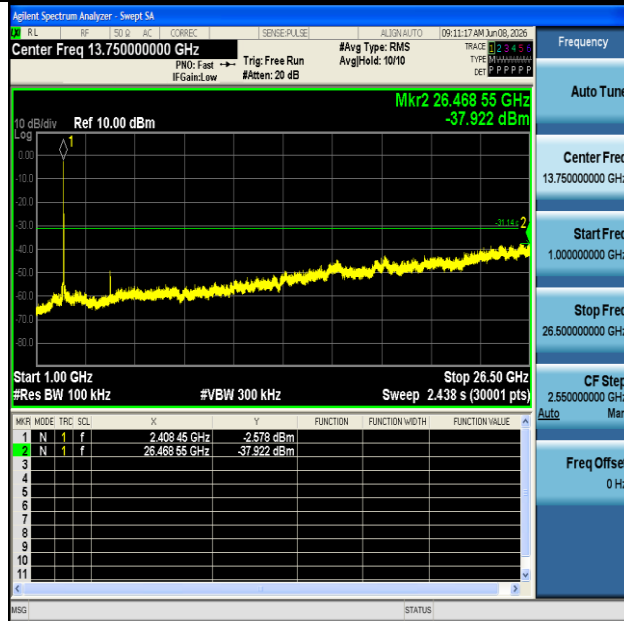


11N20SISO-Ant1-2412-0~Reference-PASS

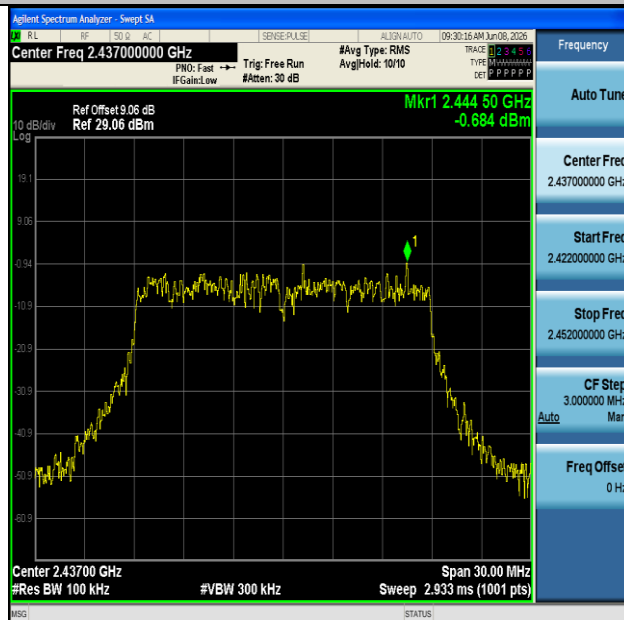


11N20SISO-Ant1-2412-30~1000-PASS



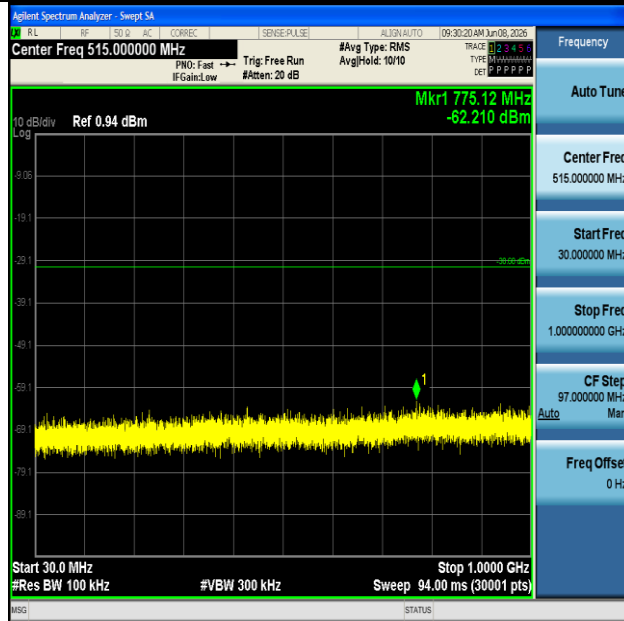


11N20SiSO-Ant1-2412-1000~26500-PASS

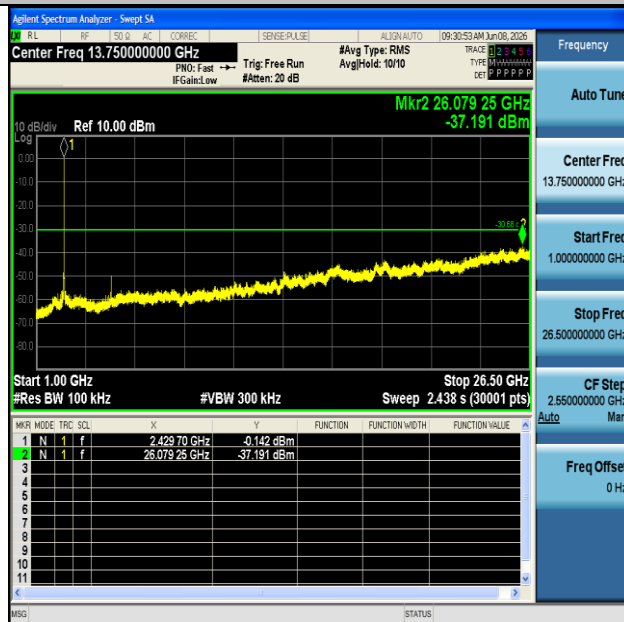


11N20SiSO-Ant1-2437-0~Reference-PASS



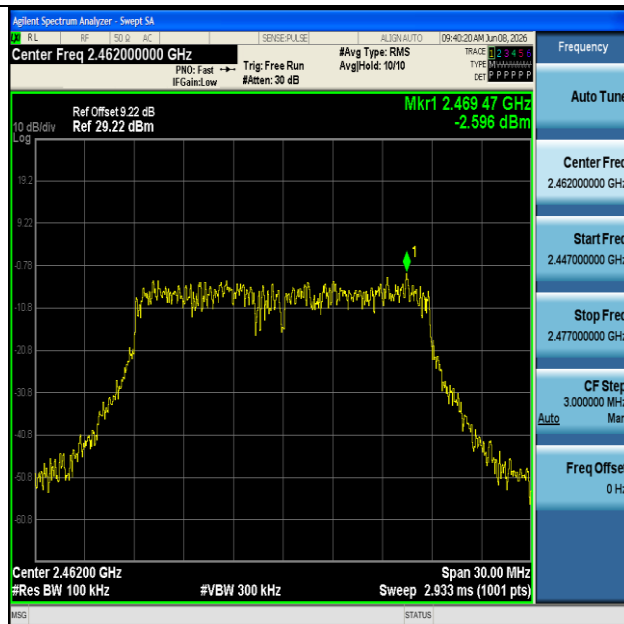


11N20SISO-Ant1-2437-30~1000-PASS

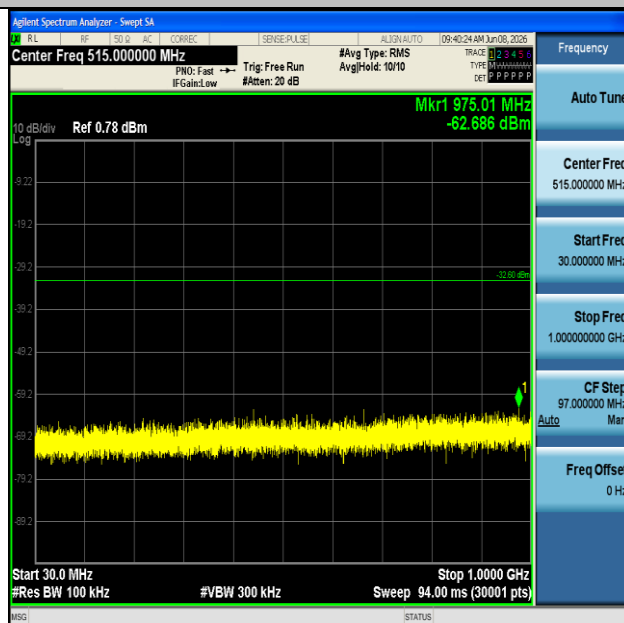


11N20SISO-Ant1-2437-1000~26500-PASS



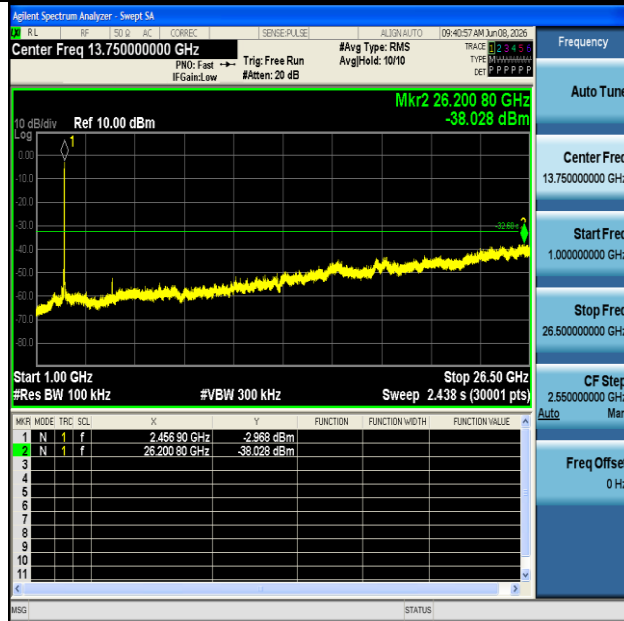


11N20SISO-Ant1-2462-0~Reference-PASS

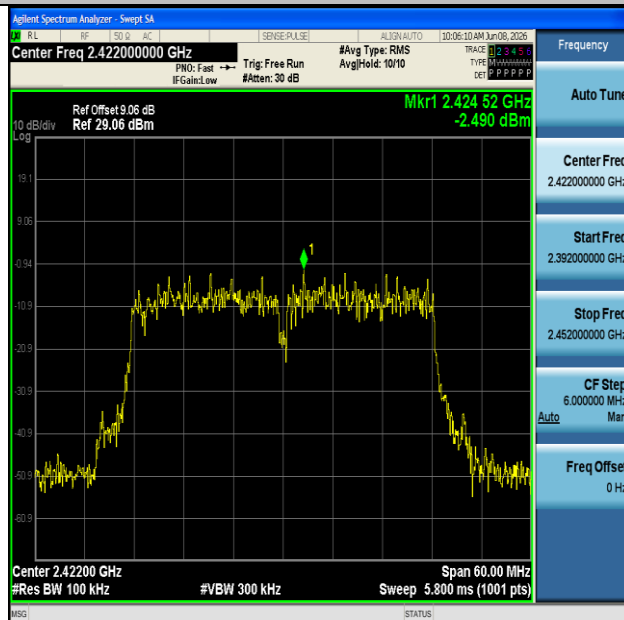


11N20SISO-Ant1-2462-30~1000-PASS





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

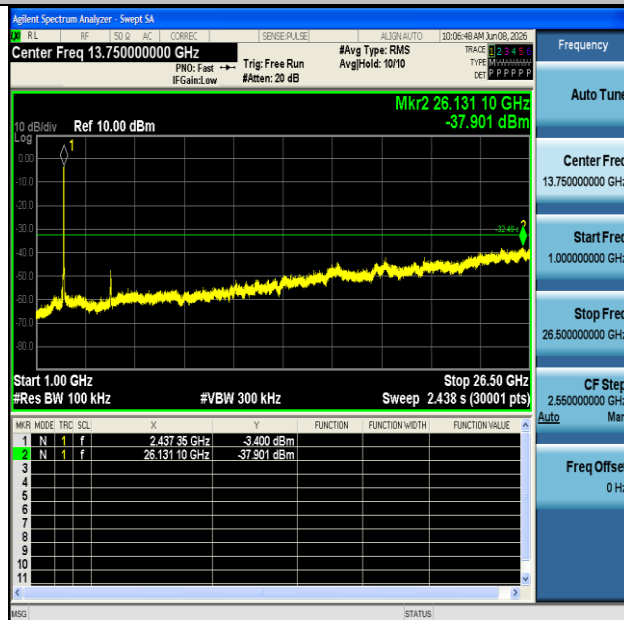


11N40SISO-Ant1-2422-0~Reference-PASS



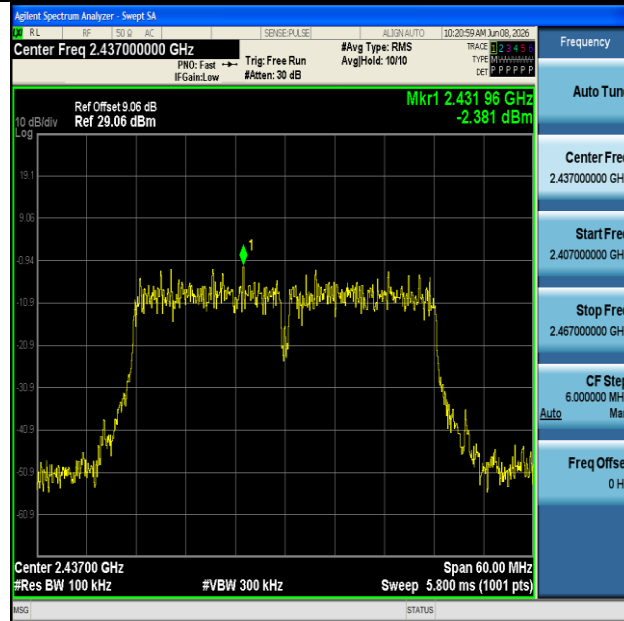


11N40SISO-Ant1-2422-30~1000-PASS

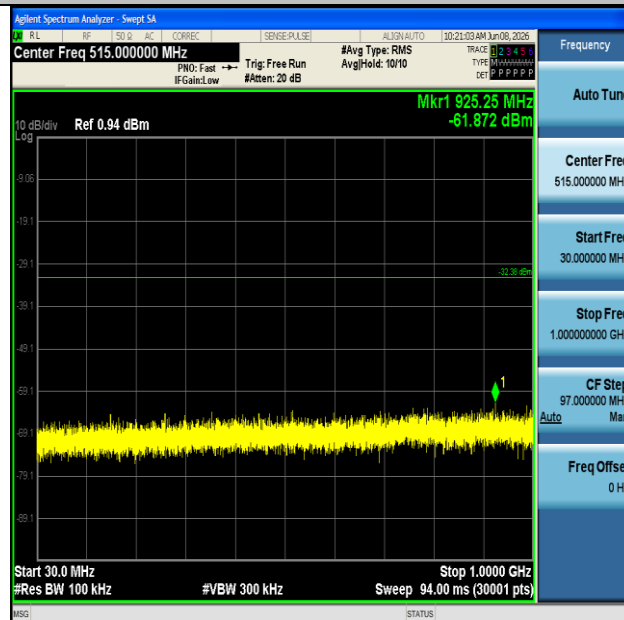


11N40SISO-Ant1-2422-1000~26500-PASS



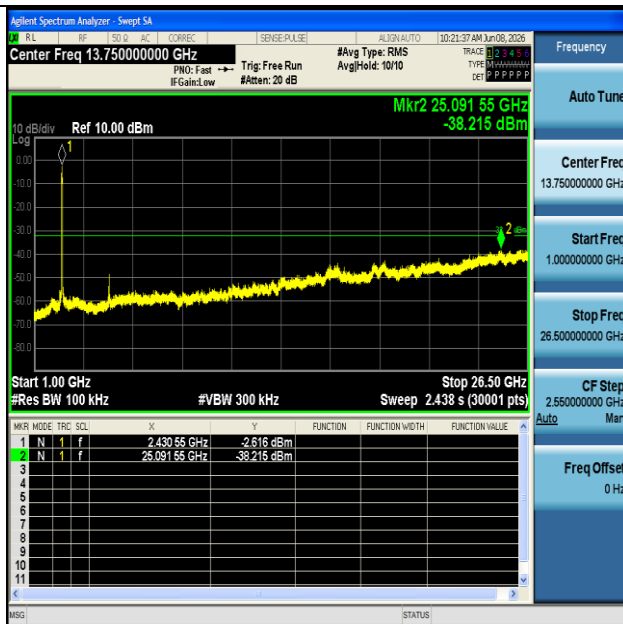


11N40SISO-Ant1-2437-0~Reference-PASS

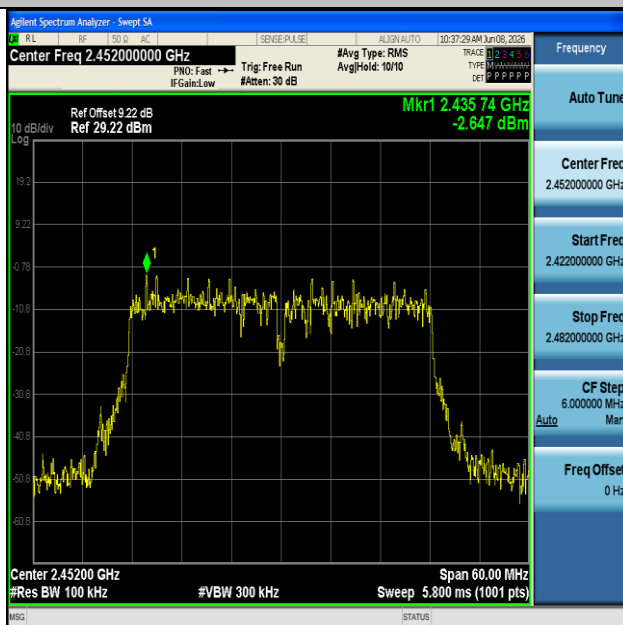


11N40SISO-Ant1-2437-30~1000-PASS



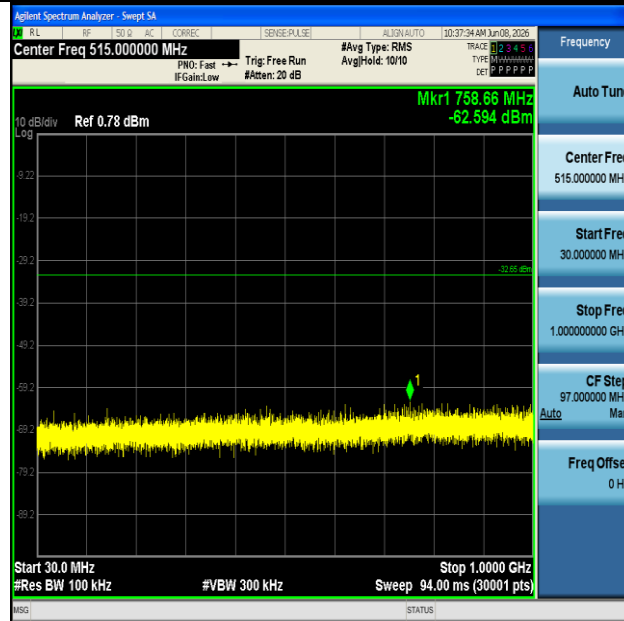


11N40SISO-Ant1-2437-1000~26500-PASS

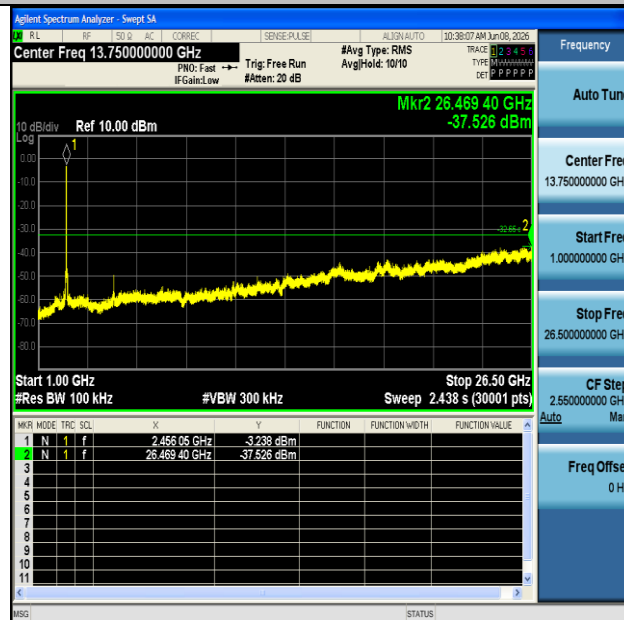


11N40SISO-Ant1-2452-0~Reference-PASS





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



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





Appendix G: Duty Cycle

Test Result

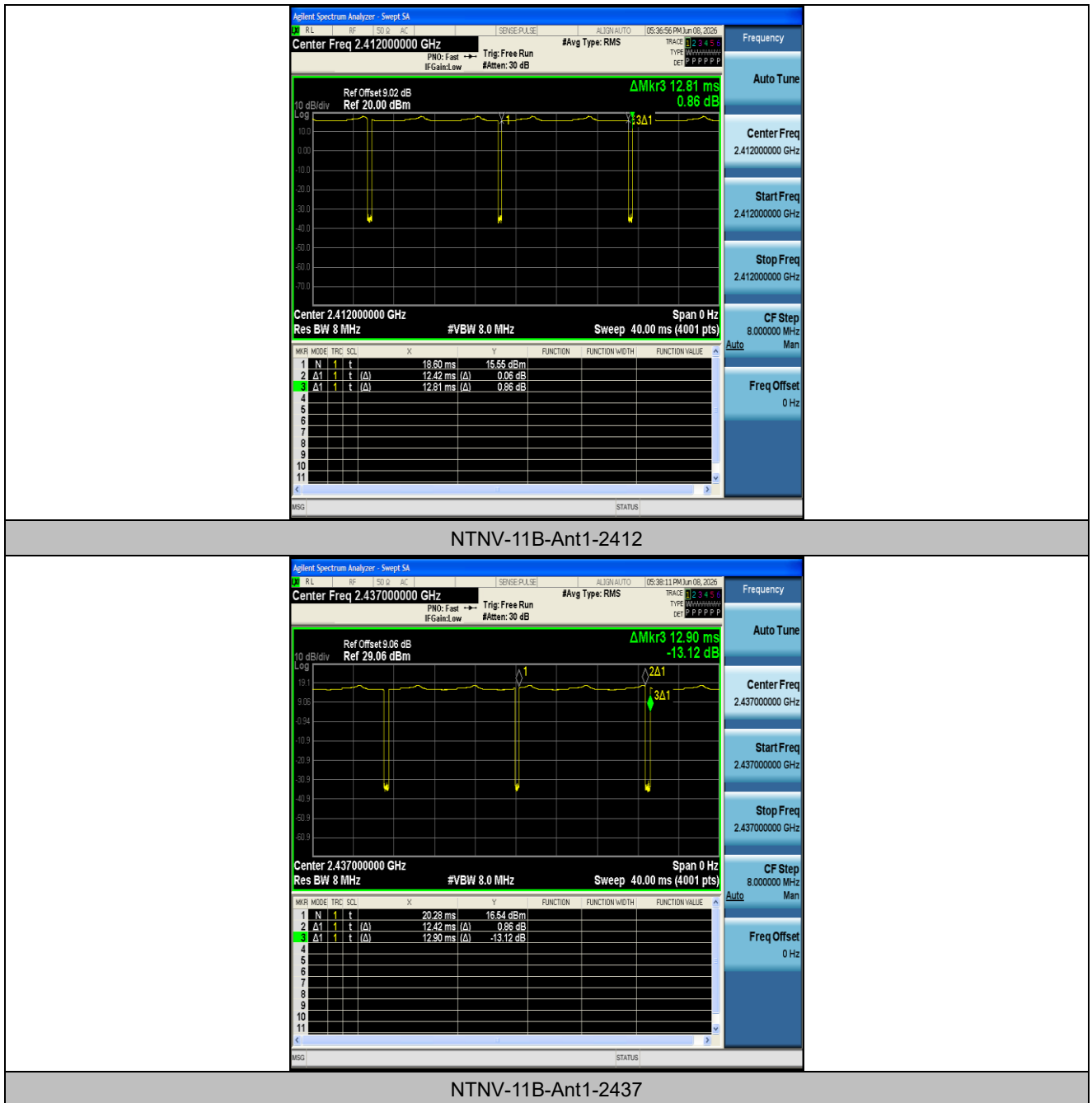
Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	12.42	12.81	96.96	0.13
11B	Ant1	2437	12.42	12.90	96.28	0.16
11B	Ant1	2462	12.42	12.84	96.73	0.14
11G	Ant1	2412	2.06	2.29	89.96	0.46
11G	Ant1	2437	2.06	2.29	89.96	0.46
11G	Ant1	2462	2.06	2.29	89.96	0.46
11N20SISO	Ant1	2412	1.92	2.11	91.00	0.41
11N20SISO	Ant1	2437	1.92	2.13	90.14	0.45
11N20SISO	Ant1	2462	1.93	2.12	91.04	0.41
11N40SISO	Ant1	2422	0.95	1.18	80.51	0.94
11N40SISO	Ant1	2437	0.94	1.17	80.34	0.95
11N40SISO	Ant1	2452	0.94	1.18	79.66	0.99

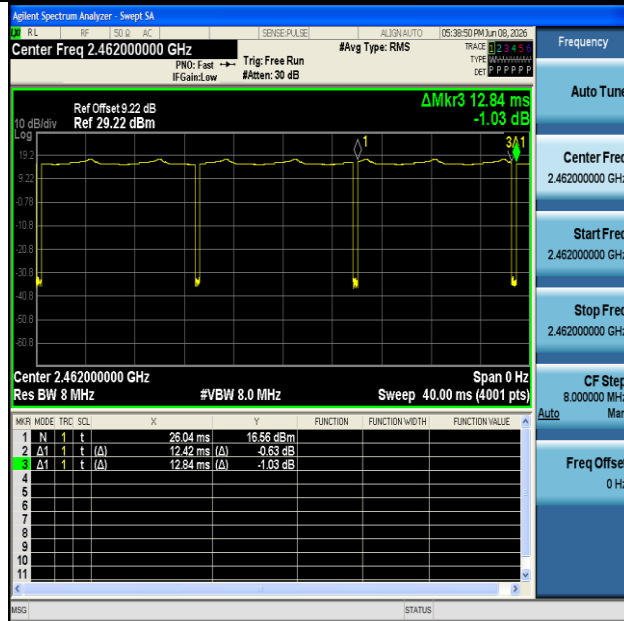
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



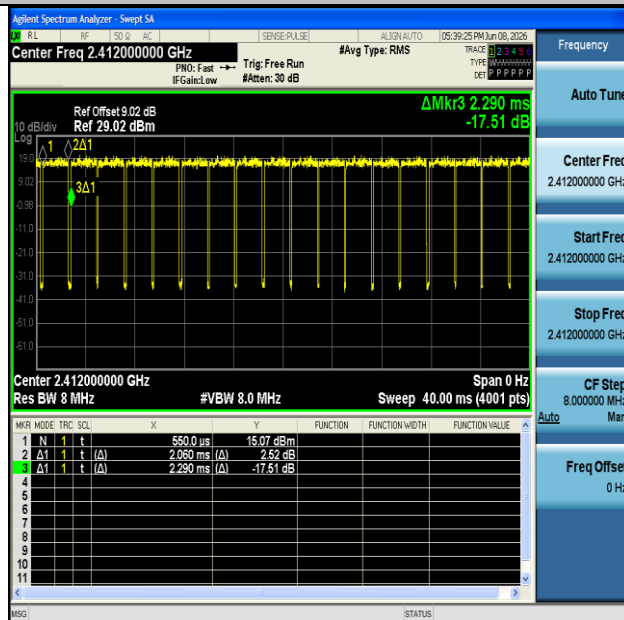


Test Graphs



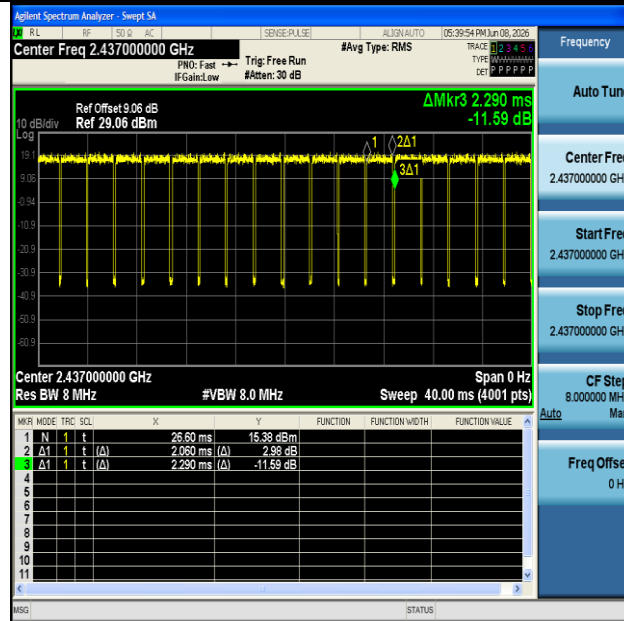


NTNV-11B-Ant1-2462

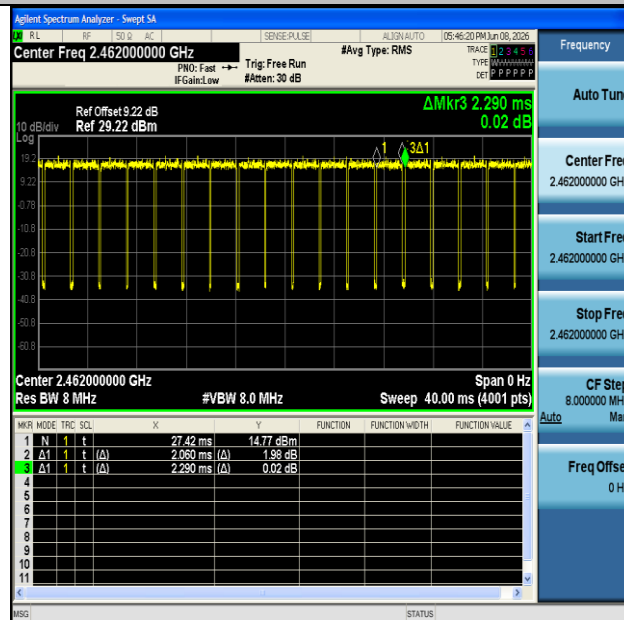


NTNV-11G-Ant1-2412



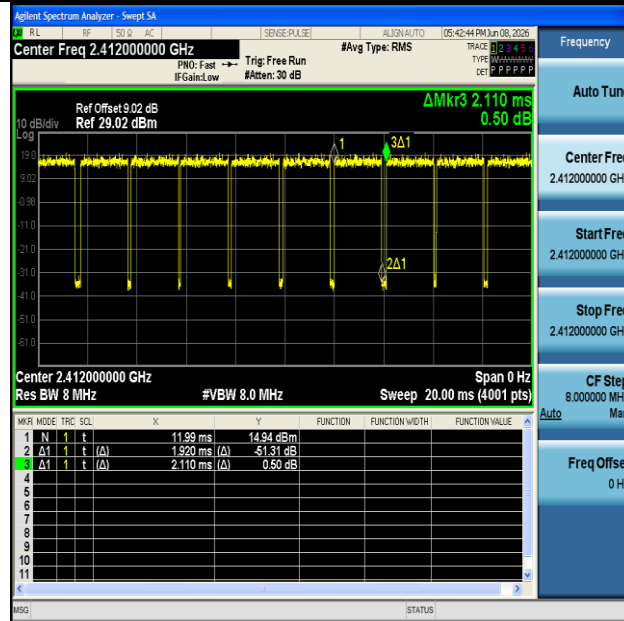


NTNV-11G-Ant1-2437

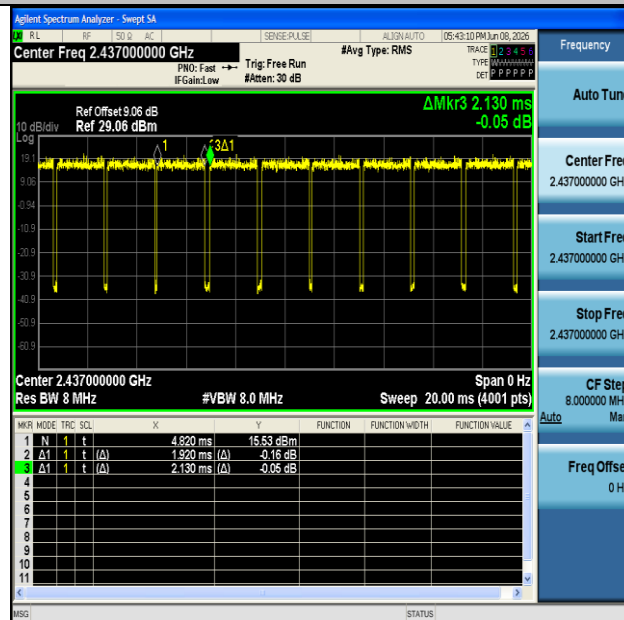


NTNV-11G-Ant1-2462





NTNV-11N20SISO-Ant1-2412



NTNV-11N20SISO-Ant1-2437

