



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

Product Name: Walkie-talkie

Trade Mark: /

Test Model: V01

FCC ID: 2BBLM-V01

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	11.120	2406.960	2418.080	0.5	PASS
11B	Ant1	2437	12.040	2431.000	2443.040	0.5	PASS
11B	Ant1	2462	11.200	2456.920	2468.120	0.5	PASS
11G	Ant1	2412	16.400	2403.840	2420.240	0.5	PASS
11G	Ant1	2437	16.320	2428.840	2445.160	0.5	PASS
11G	Ant1	2462	16.360	2453.880	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.600	2403.240	2420.840	0.5	PASS
11N20SISO	Ant1	2437	17.560	2428.200	2445.760	0.5	PASS
11N20SISO	Ant1	2462	17.400	2453.400	2470.800	0.5	PASS

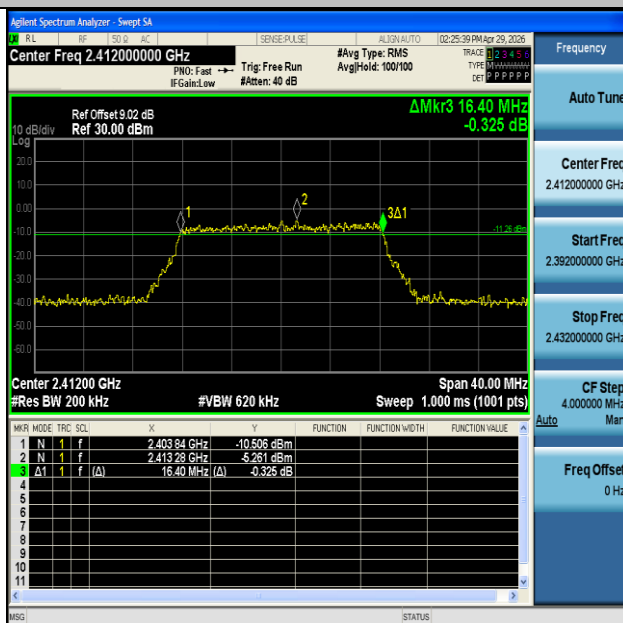
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

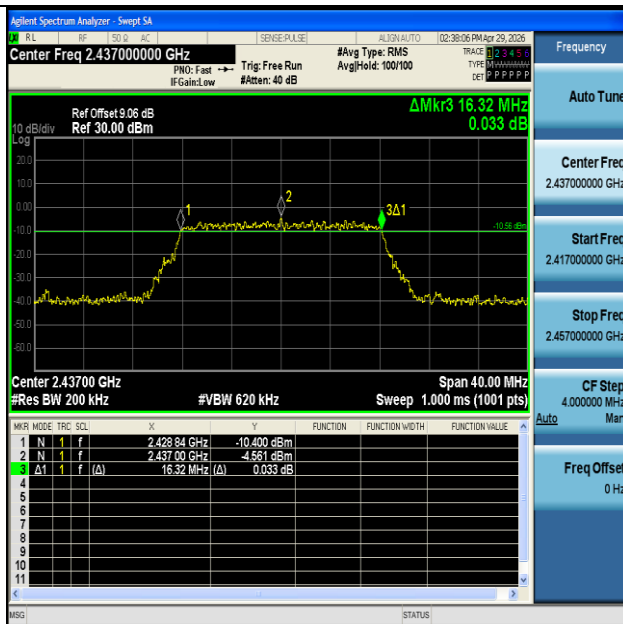




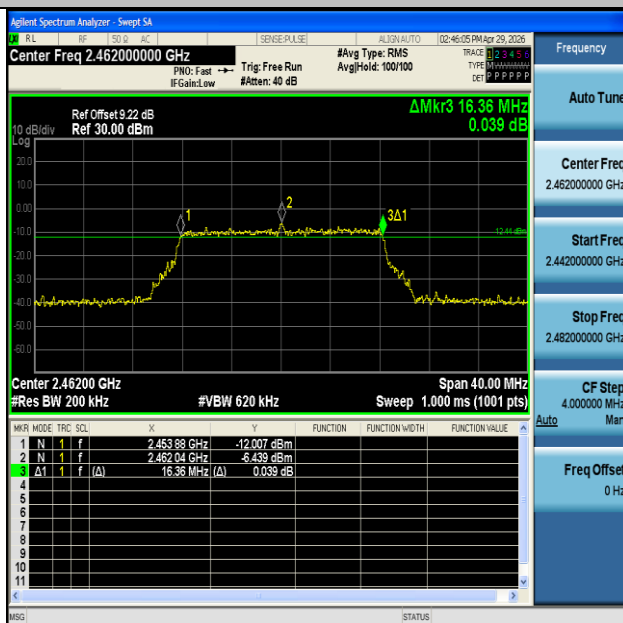
Test Graphs





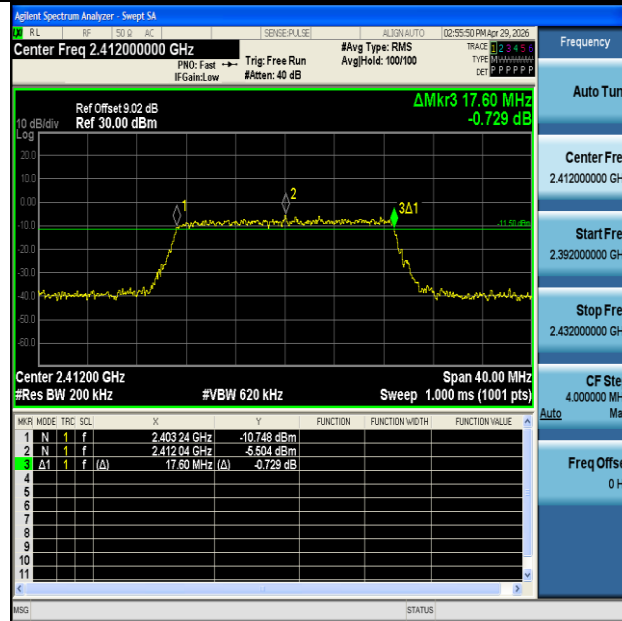


11G-Ant1-2437-PASS

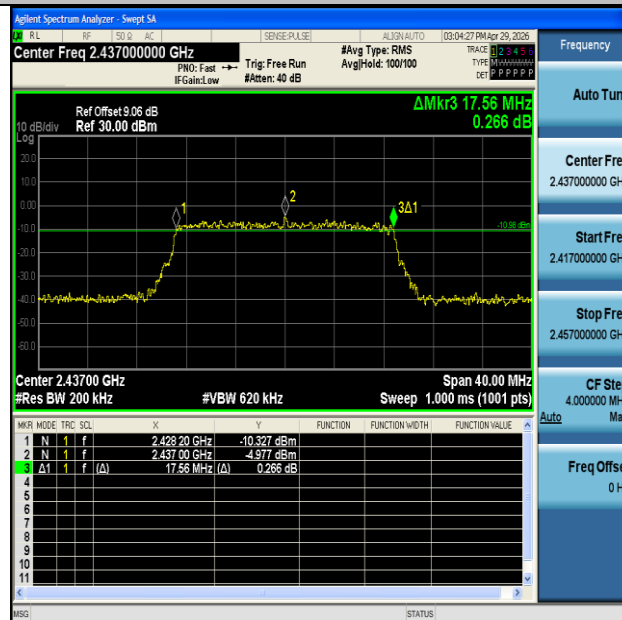


11G-Ant1-2462-PASS



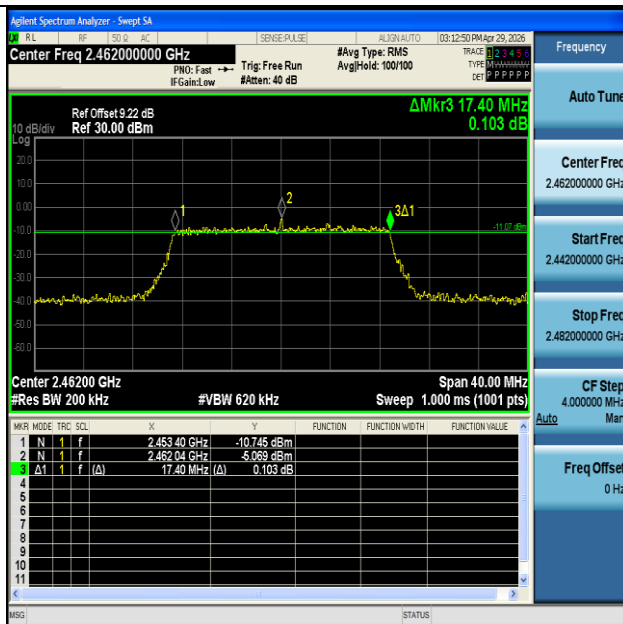


11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS





11N20SISO-Ant1-2462-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	16.067	2404.0243	2420.0913	---	---
11B	Ant1	2437	15.887	2429.0430	2444.9300	---	---
11B	Ant1	2462	16.135	2454.0198	2470.1548	---	---
11G	Ant1	2412	17.200	2403.5016	2420.7016	---	---
11G	Ant1	2437	17.145	2428.4391	2445.5841	---	---
11G	Ant1	2462	17.226	2453.4122	2470.6382	---	---
11N20SISO	Ant1	2412	18.161	2403.0040	2421.1650	---	---
11N20SISO	Ant1	2437	18.055	2427.9911	2446.0461	---	---
11N20SISO	Ant1	2462	18.181	2452.9913	2471.1723	---	---

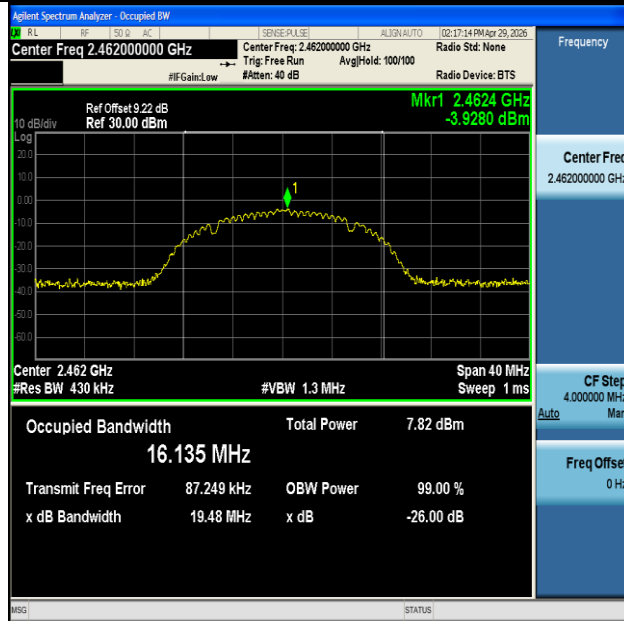
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



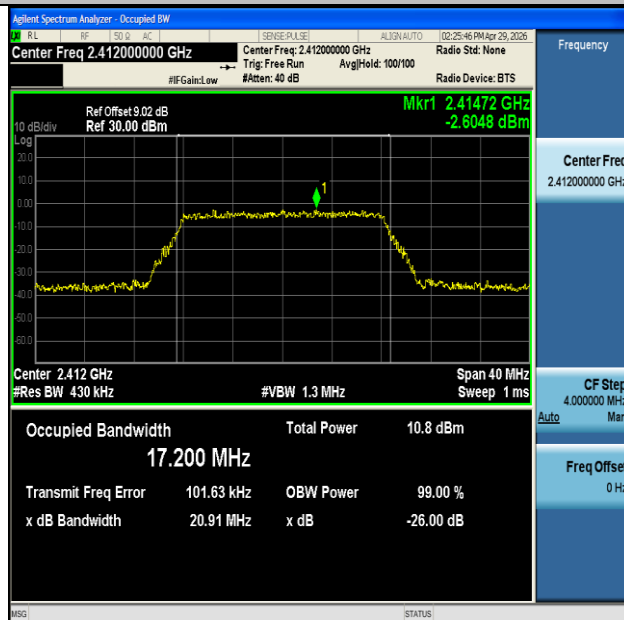


Test Graphs



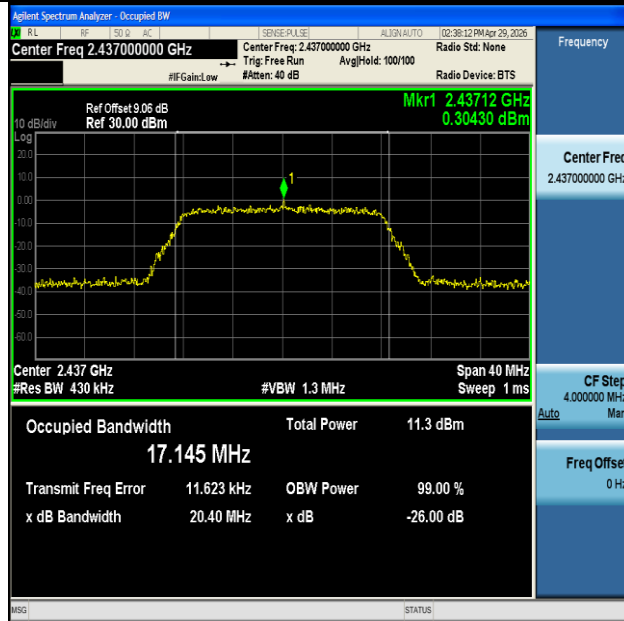


11B-Ant1-2462



11G-Ant1-2412



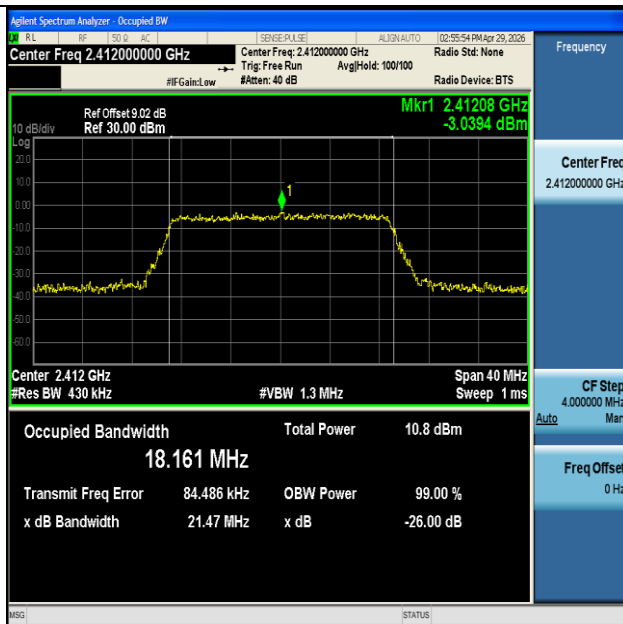


11G-Ant1-2437

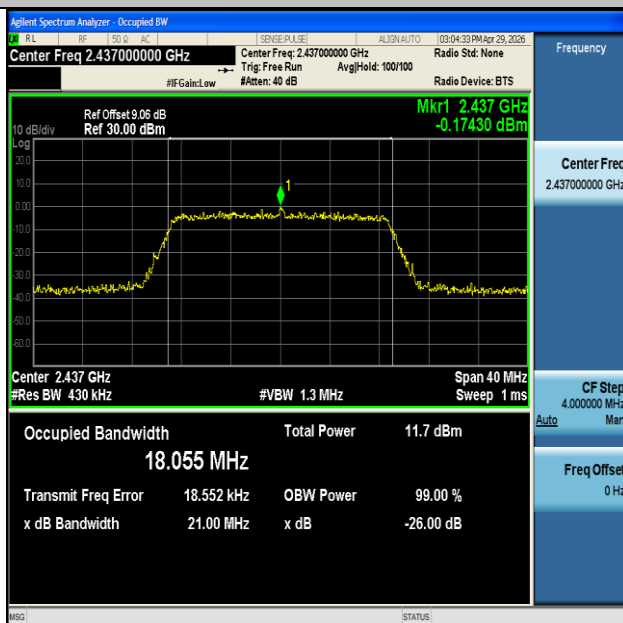


11G-Ant1-2462



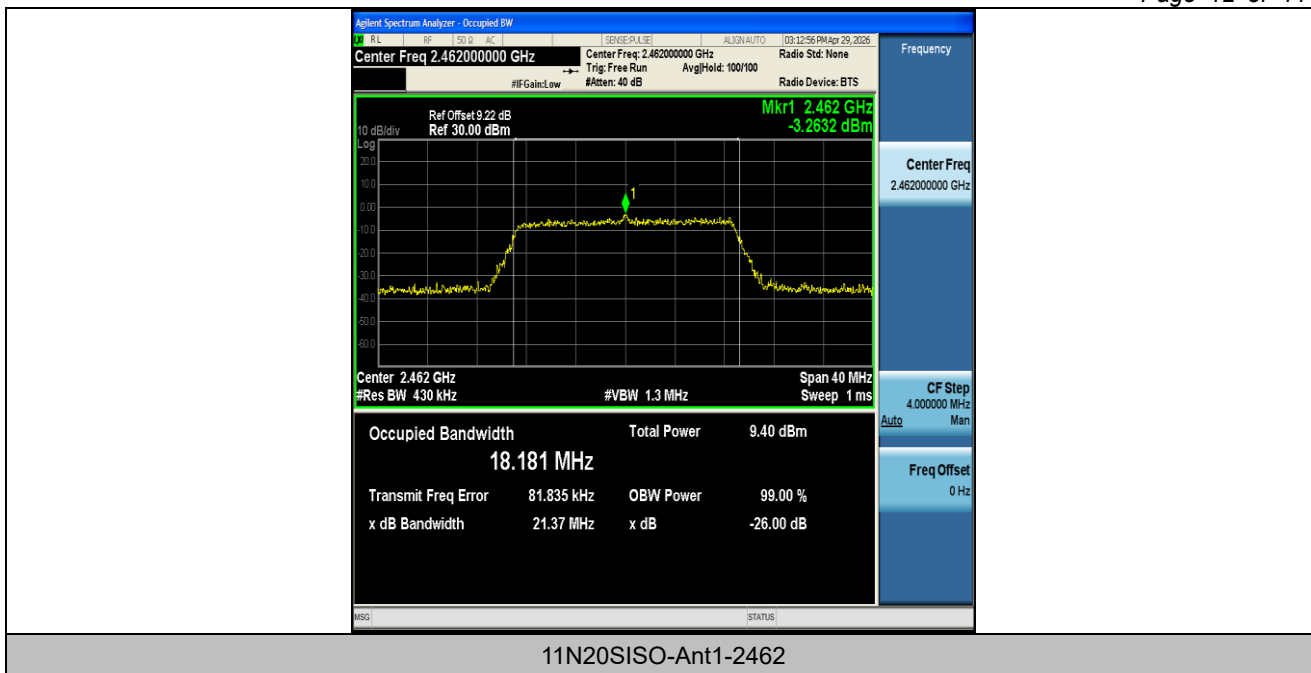


11N20SISO-Ant1-2412



11N20SISO-Ant1-2437







Appendix C: Maximum Average conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11B	Ant1	2412	6.70	≤30.00	PASS
11B	Ant1	2437	6.87	≤30.00	PASS
11B	Ant1	2462	4.62	≤30.00	PASS
11G	Ant1	2412	5.30	≤30.00	PASS
11G	Ant1	2437	5.86	≤30.00	PASS
11G	Ant1	2462	3.76	≤30.00	PASS
11N20SISO	Ant1	2412	5.08	≤30.00	PASS
11N20SISO	Ant1	2437	5.76	≤30.00	PASS
11N20SISO	Ant1	2462	3.33	≤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

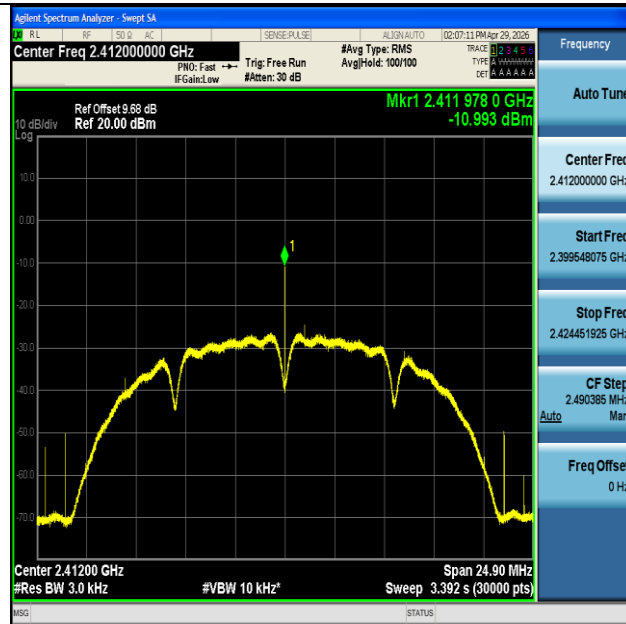
Test Mode	Antenna	Frequency [MHz]	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-10.99	≤8.00	PASS
11B	Ant1	2437	-9.60	≤8.00	PASS
11B	Ant1	2462	-12.00	≤8.00	PASS
11G	Ant1	2412	-11.64	≤8.00	PASS
11G	Ant1	2437	-10.29	≤8.00	PASS
11G	Ant1	2462	-11.66	≤8.00	PASS
11N20SISO	Ant1	2412	-13.19	≤8.00	PASS
11N20SISO	Ant1	2437	-10.11	≤8.00	PASS
11N20SISO	Ant1	2462	-8.53	≤8.00	PASS

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

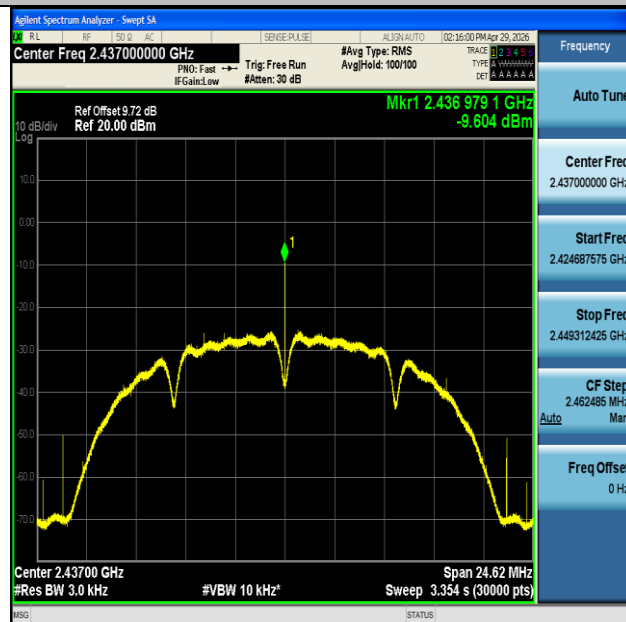




Test Graphs

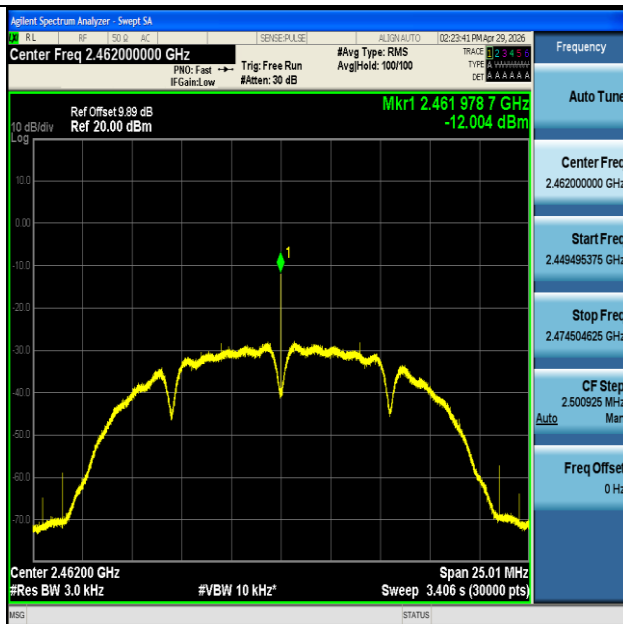


11B-Ant1-2412-PASS

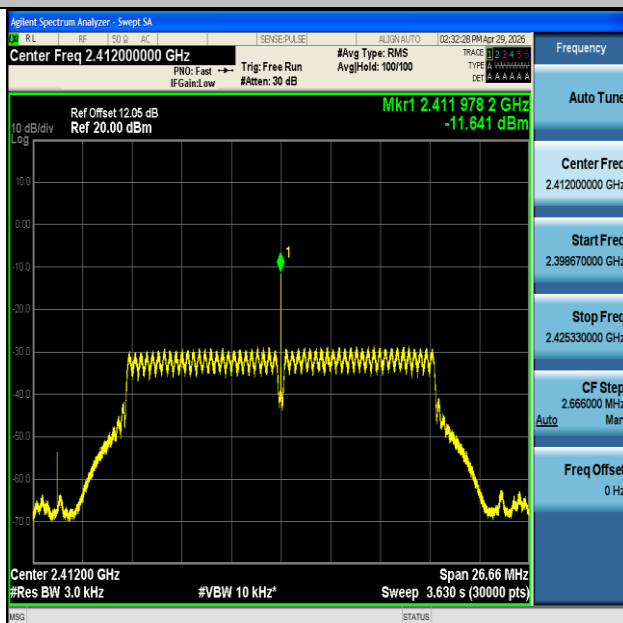


11B-Ant1-2437-PASS



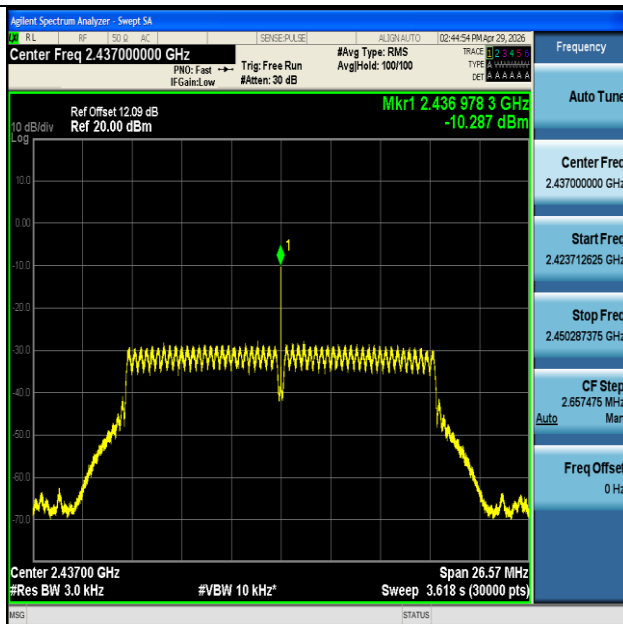


11B-Ant1-2462-PASS

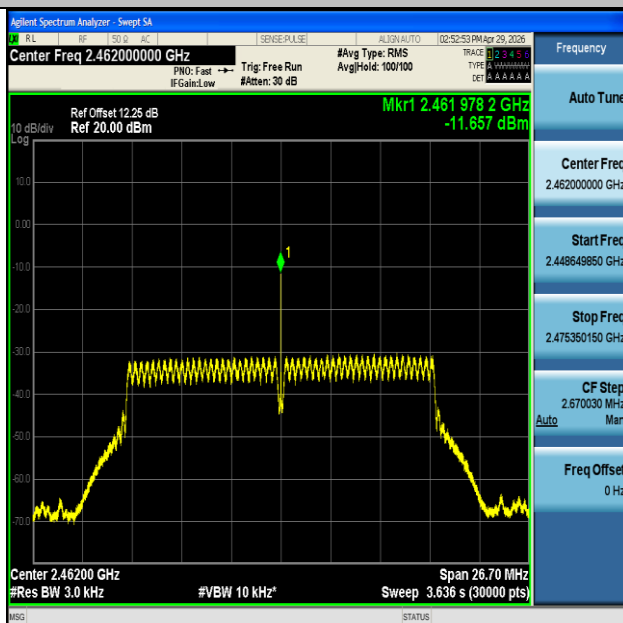


11G-Ant1-2412-PASS



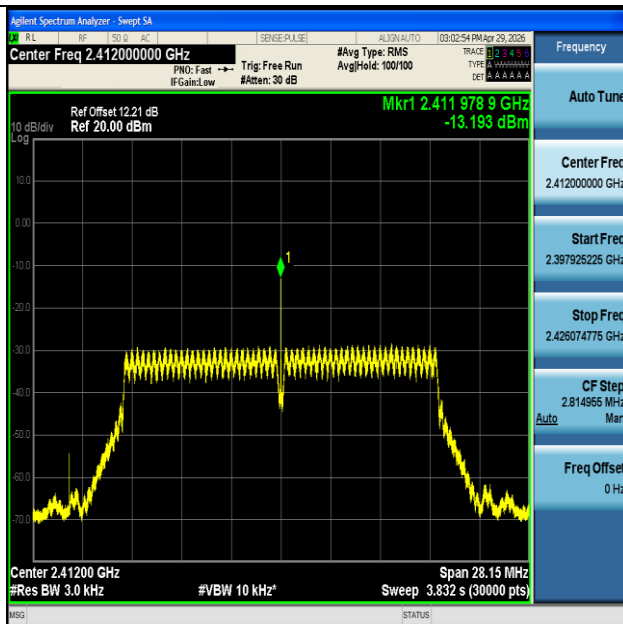


11G-Ant1-2437-PASS

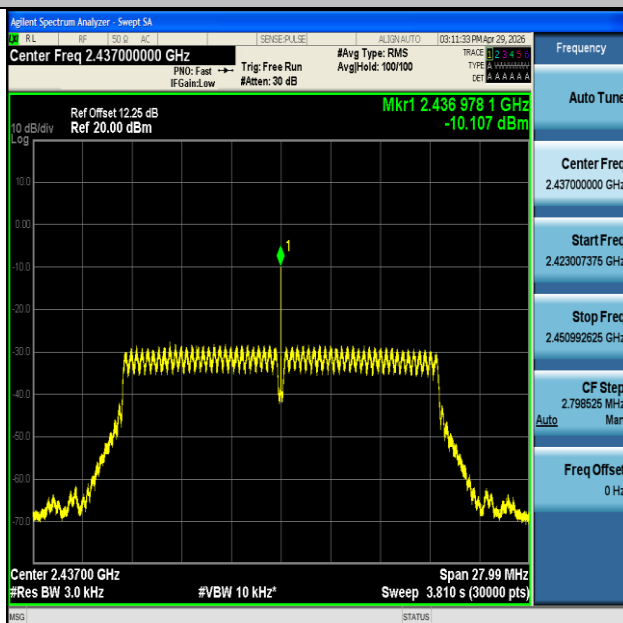


11G-Ant1-2462-PASS



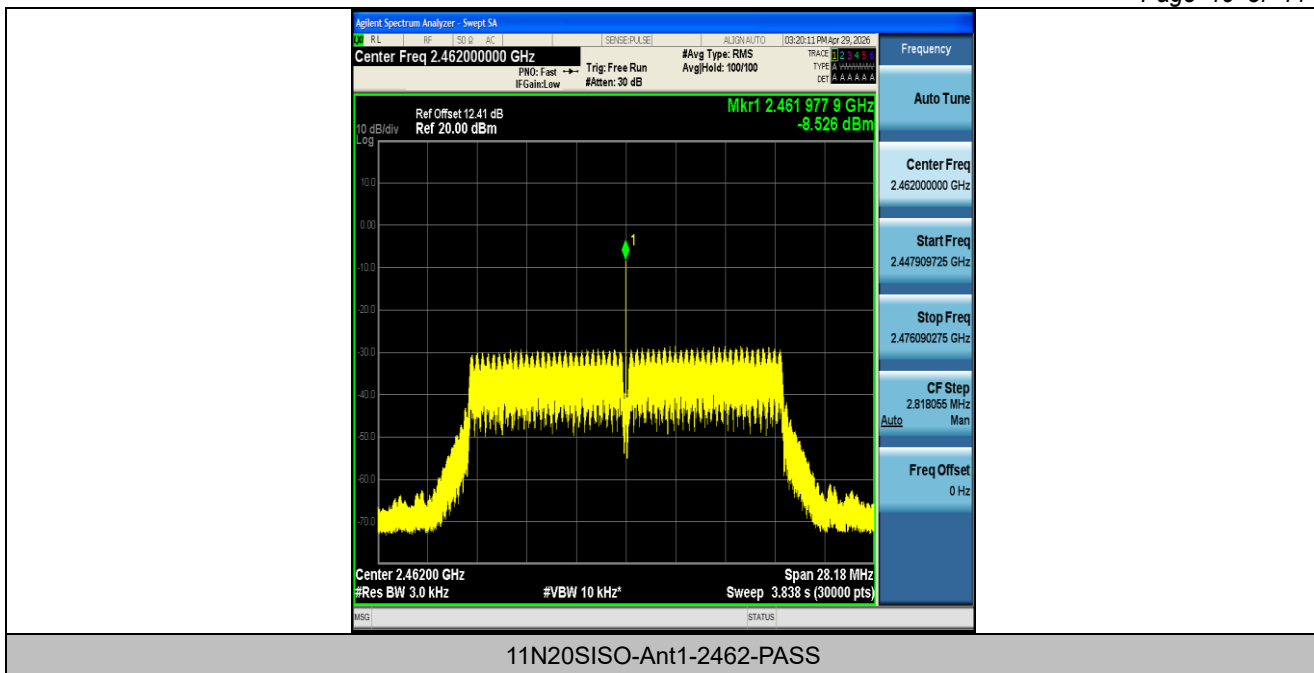


11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS







Appendix E: Band edge measurements

Test Result

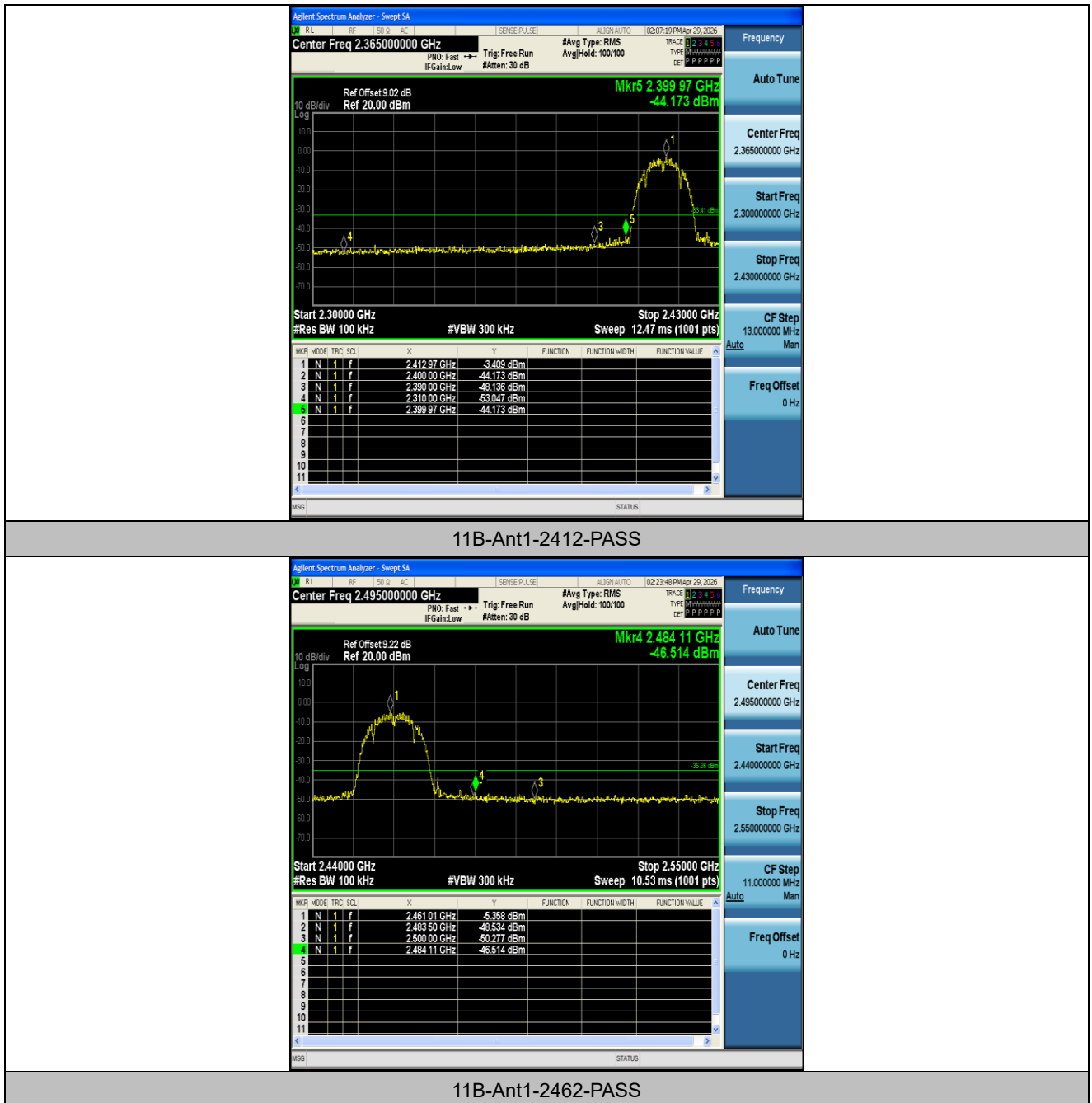
Test Mode	Antenna	Ch. Name	Frequency.[MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	-3.41	-44.17	≤ -33.41	PASS
11B	Ant1	High	2462	-5.36	-46.51	≤ -35.36	PASS
11G	Ant1	Low	2412	-5.94	-42.12	≤ -35.94	PASS
11G	Ant1	High	2462	-7.16	-47.68	≤ -37.16	PASS
11N20SISO	Ant1	Low	2412	-6.89	-41.31	≤ -36.89	PASS
11N20SISO	Ant1	High	2462	-6.53	-46.06	≤ -36.53	PASS

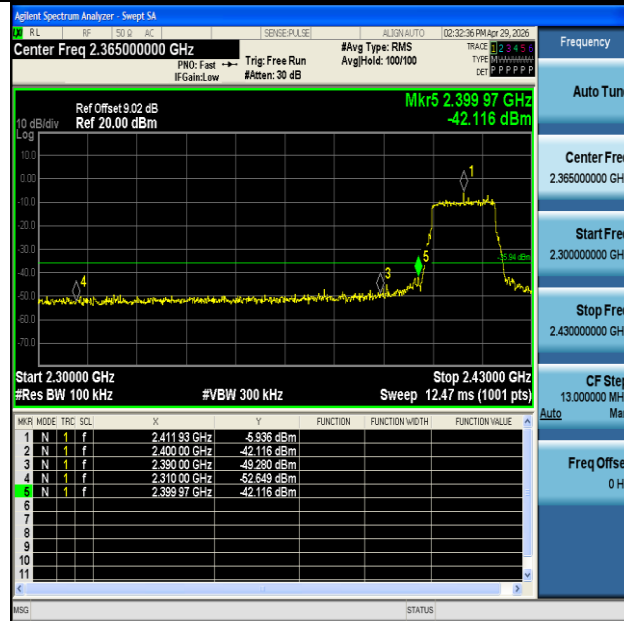
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



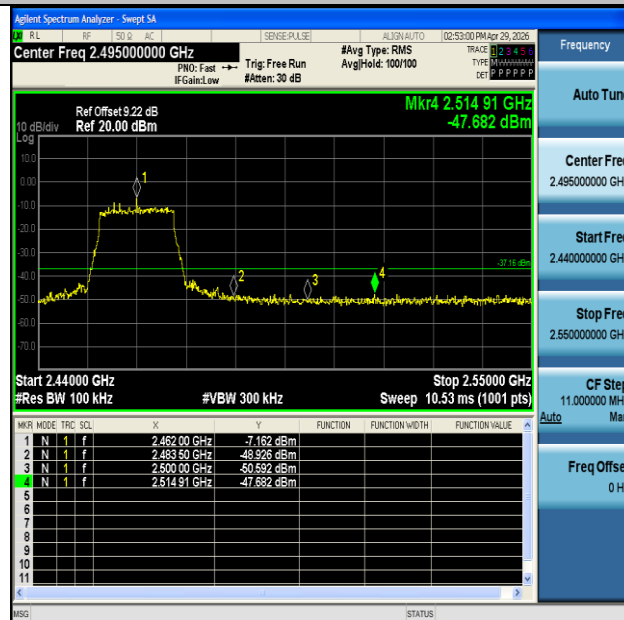


Test Graphs



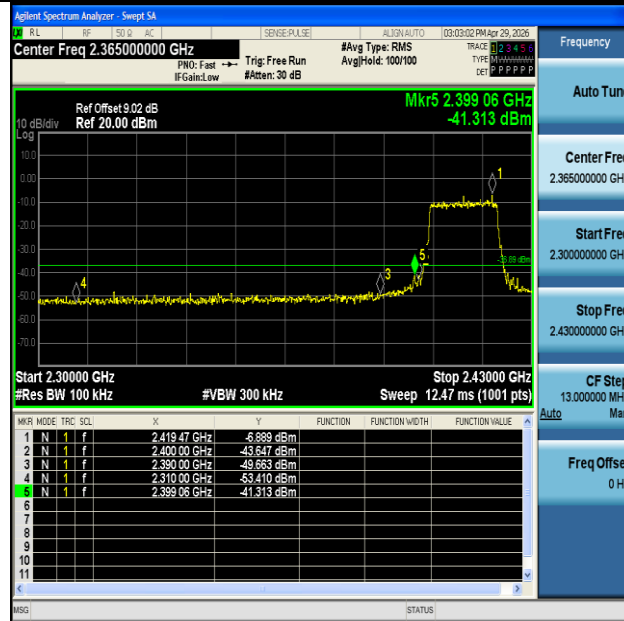


11G-Ant1-2412-PASS

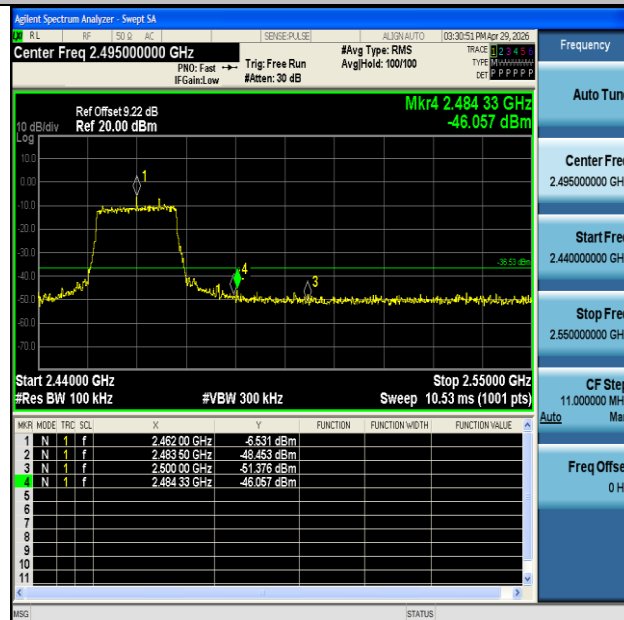


11G-Ant1-2462-PASS





11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2462-PASS





Appendix F: Conducted Spurious Emission

Test Result

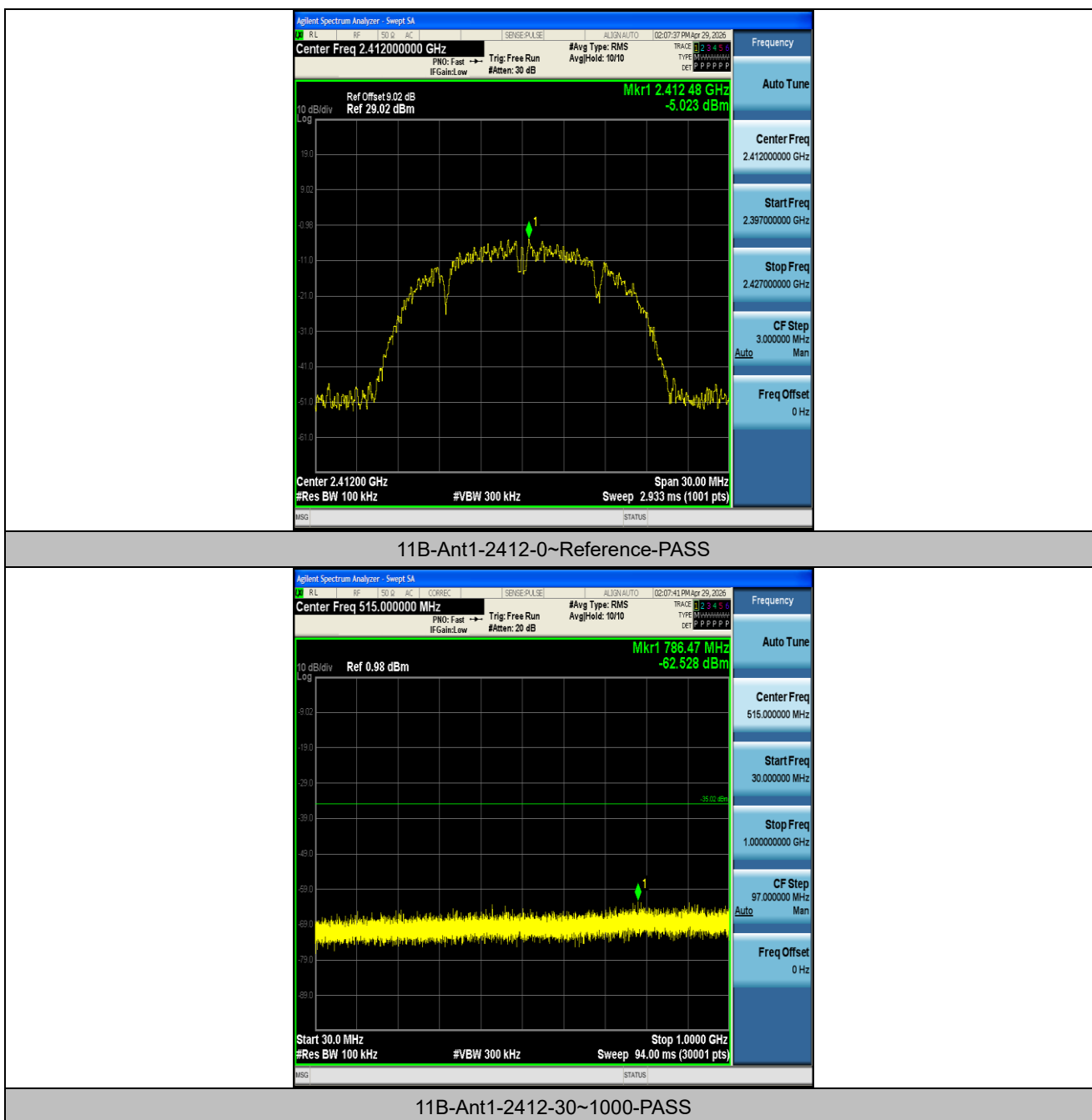
Test Mode	Antenna	Frequency [MHz]	Freq. Range [Mhz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	0~Reference	-5.02	-5.02	---	PASS
11B	Ant1	2412	30~1000	-5.02	-62.53	≤ -35.02	PASS
11B	Ant1	2412	1000~26500	-5.02	-37.46	≤ -35.02	PASS
11B	Ant1	2437	0~Reference	-3.87	-3.87	---	PASS
11B	Ant1	2437	30~1000	-3.87	-62.9	≤ -33.87	PASS
11B	Ant1	2437	1000~26500	-3.87	-37.52	≤ -33.87	PASS
11B	Ant1	2462	0~Reference	-6.66	-6.66	---	PASS
11B	Ant1	2462	30~1000	-6.66	-62.54	≤ -36.66	PASS
11B	Ant1	2462	1000~26500	-6.66	-37.96	≤ -36.66	PASS
11G	Ant1	2412	0~Reference	-7.89	-7.89	---	PASS
11G	Ant1	2412	30~1000	-7.89	-72.46	≤ -37.89	PASS
11G	Ant1	2412	1000~26500	-7.89	-47.54	≤ -37.89	PASS
11G	Ant1	2437	0~Reference	-7.20	-7.20	---	PASS
11G	Ant1	2437	30~1000	-7.20	-72.66	≤ -37.2	PASS
11G	Ant1	2437	1000~26500	-7.20	-47.6	≤ -37.2	PASS
11G	Ant1	2462	0~Reference	-7.18	-7.18	---	PASS
11G	Ant1	2462	30~1000	-7.18	-72.99	≤ -37.18	PASS
11G	Ant1	2462	1000~26500	-7.18	-46.9	≤ -37.18	PASS
11N20SISO	Ant1	2412	0~Reference	-9.50	-9.50	---	PASS
11N20SISO	Ant1	2412	30~1000	-9.50	-72.38	≤ -39.5	PASS
11N20SISO	Ant1	2412	1000~26500	-9.50	-47.6	≤ -39.5	PASS
11N20SISO	Ant1	2437	0~Reference	-6.01	-6.01	---	PASS
11N20SISO	Ant1	2437	30~1000	-6.01	-72.74	≤ -36.01	PASS
11N20SISO	Ant1	2437	1000~26500	-6.01	-47.64	≤ -36.01	PASS
11N20SISO	Ant1	2462	0~Reference	-10.17	-10.17	---	PASS
11N20SISO	Ant1	2462	30~1000	-10.17	-73.24	≤ -40.17	PASS
11N20SISO	Ant1	2462	1000~26500	-10.17	-47.5	≤ -40.17	PASS

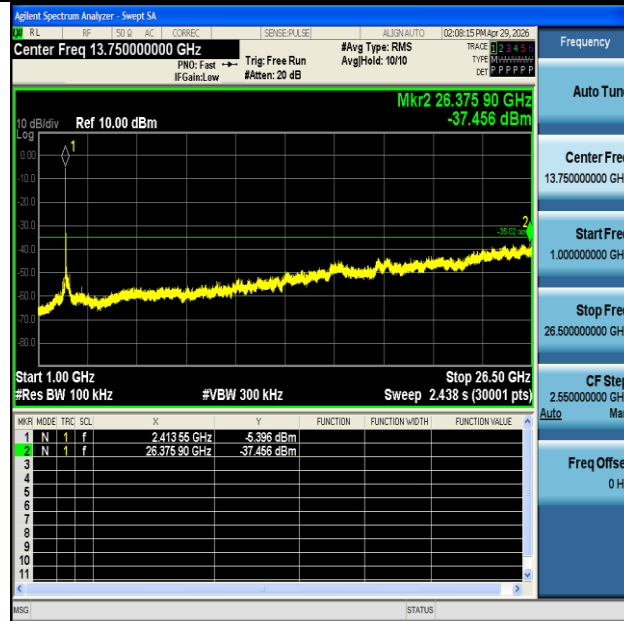
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.



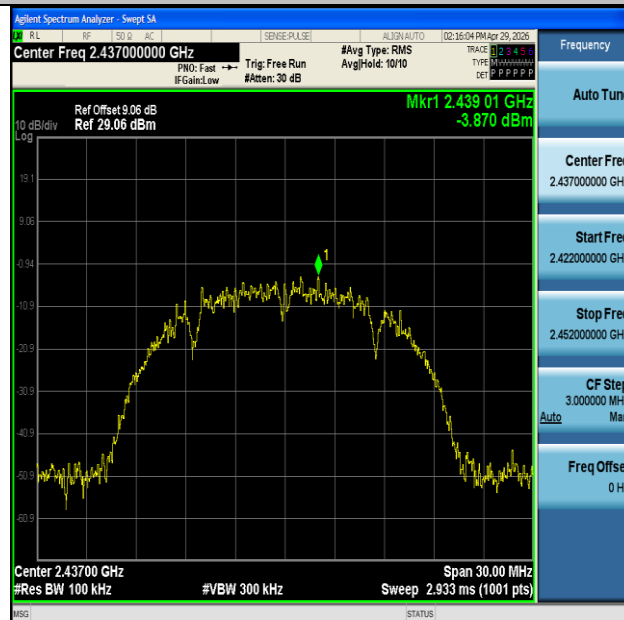


Test Graphs



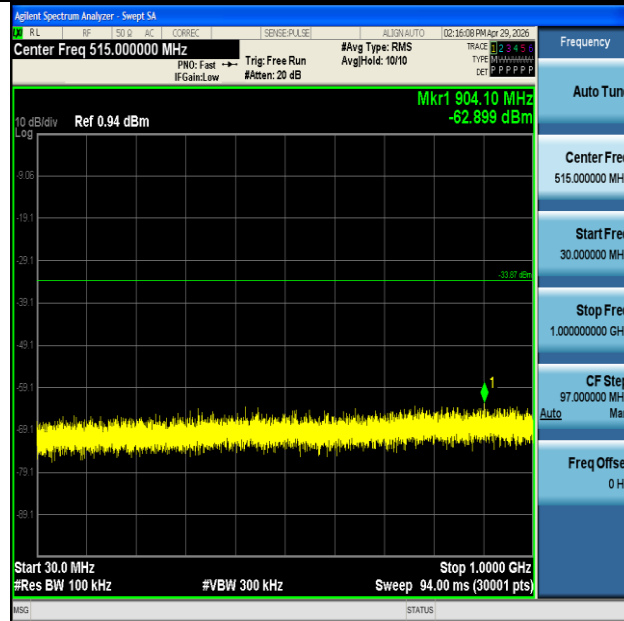


11B-Ant1-2412-1000~26500-PASS

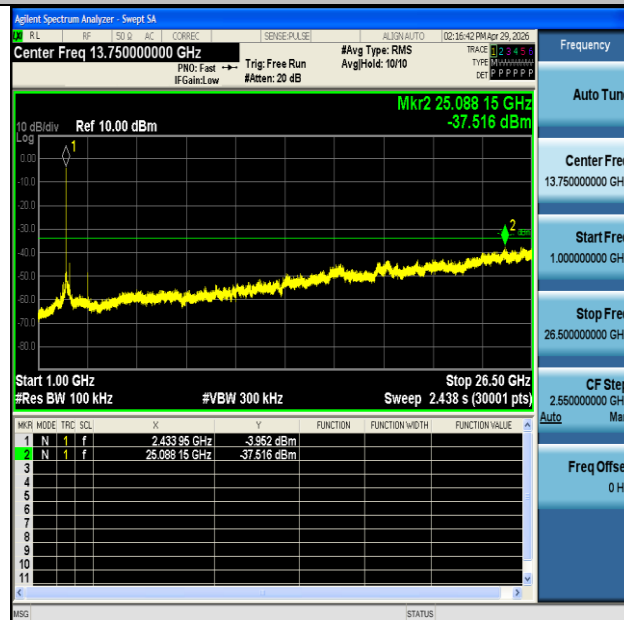


11B-Ant1-2437-0~Reference-PASS



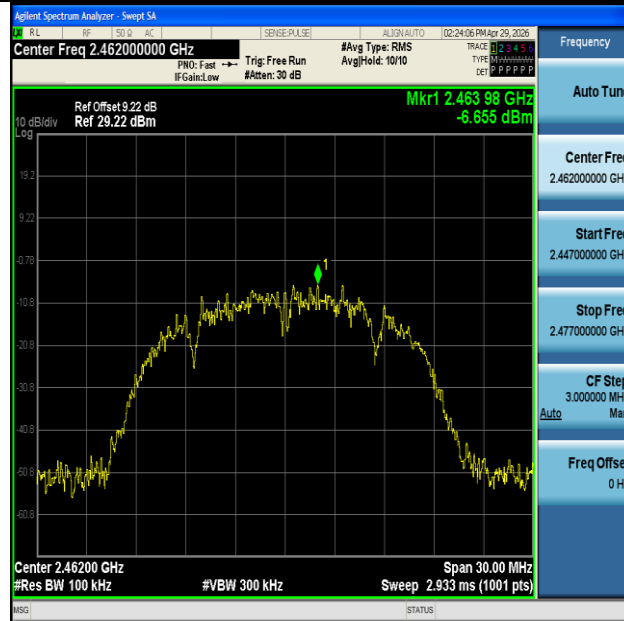


11B-Ant1-2437-30~1000-PASS

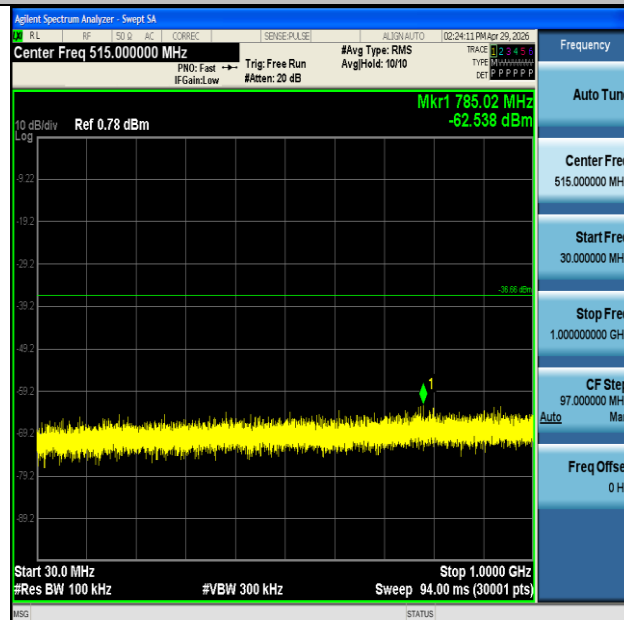


11B-Ant1-2437-1000~26500-PASS



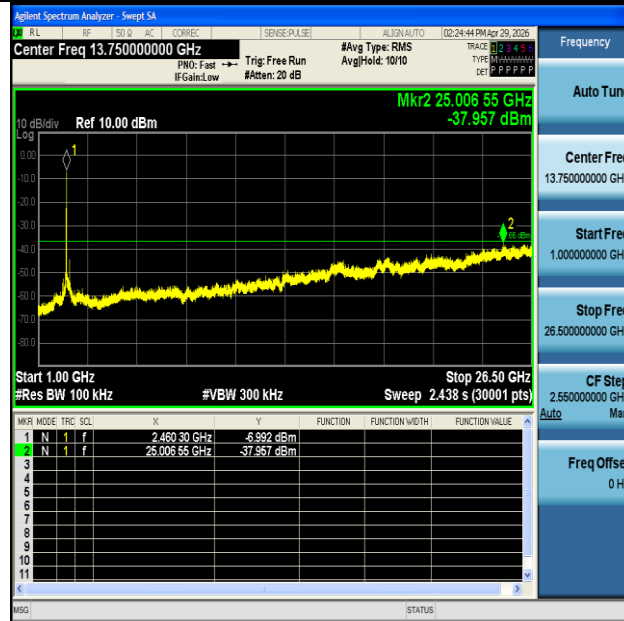


11B-Ant1-2462-0~Reference-PASS

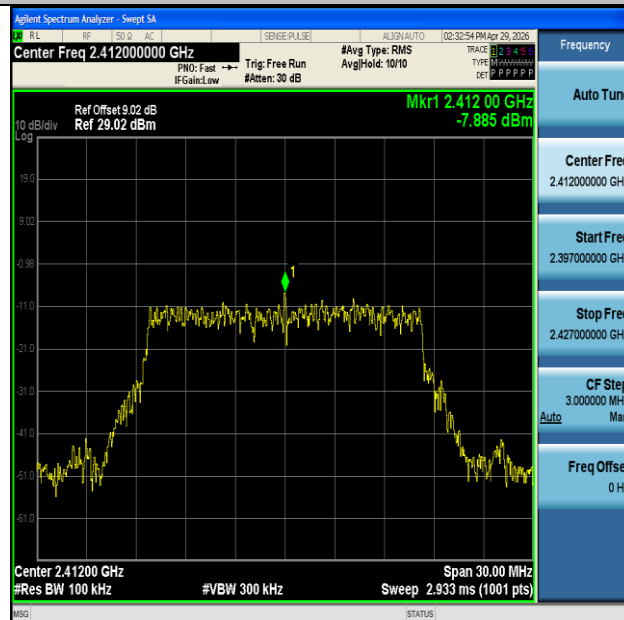


11B-Ant1-2462-30~1000-PASS



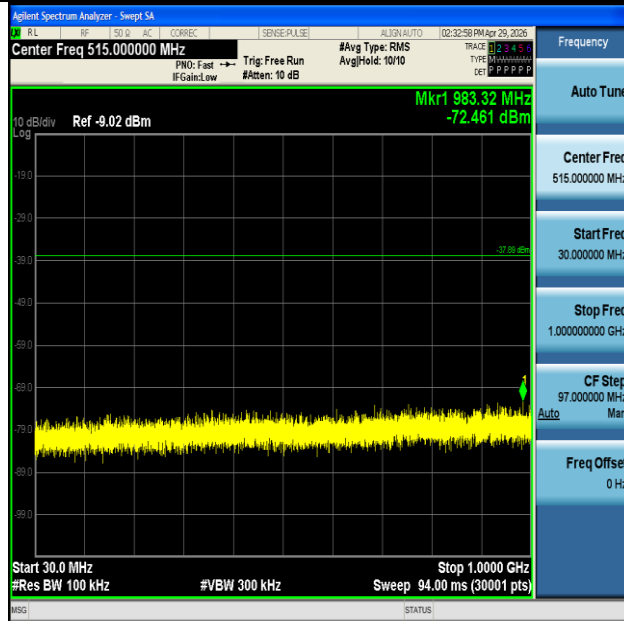


11B-Ant1-2462-1000~26500-PASS

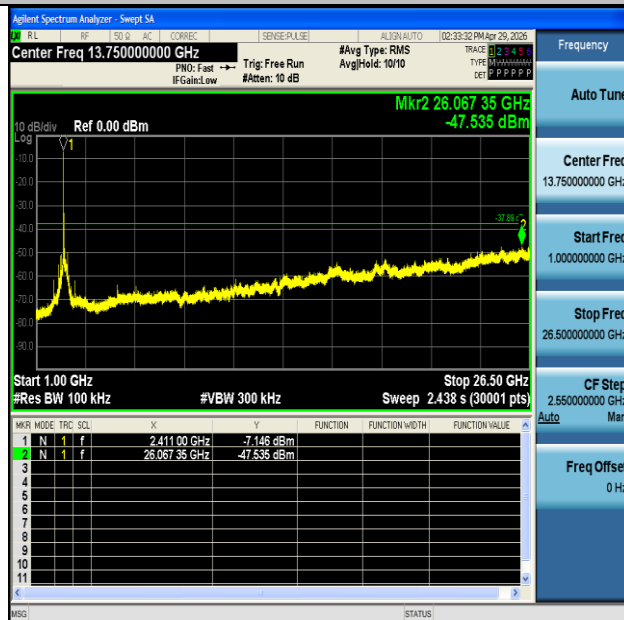


11G-Ant1-2412-0~Reference-PASS



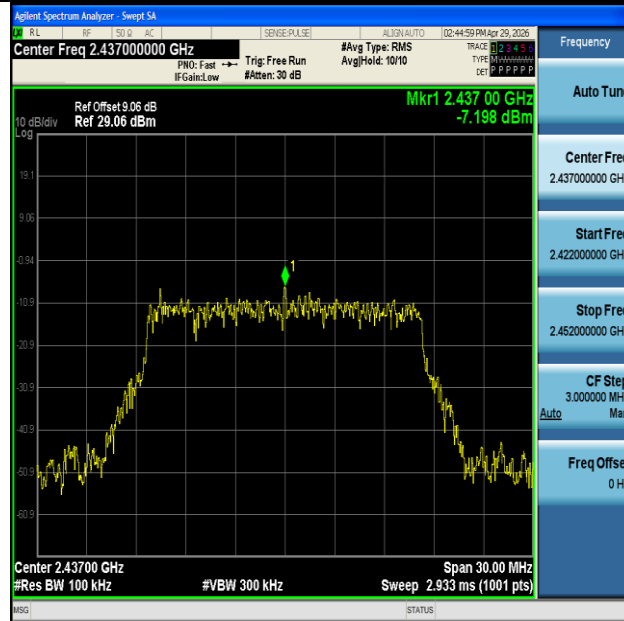


11G-Ant1-2412-30~1000-PASS

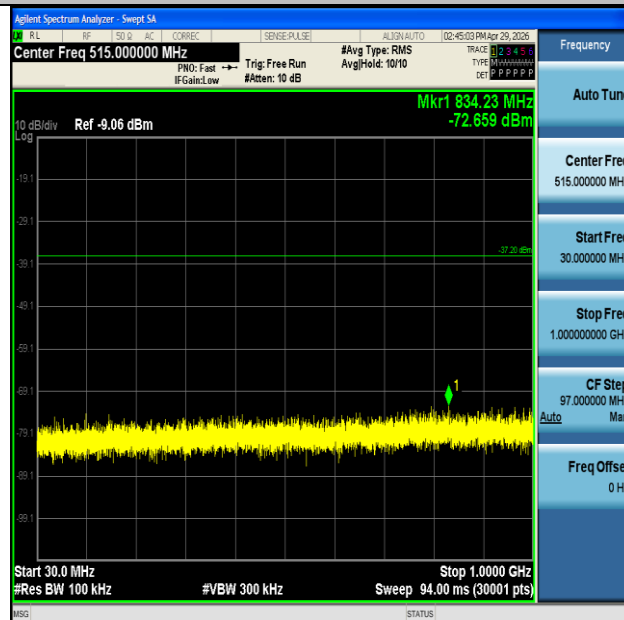


11G-Ant1-2412-1000~26500-PASS



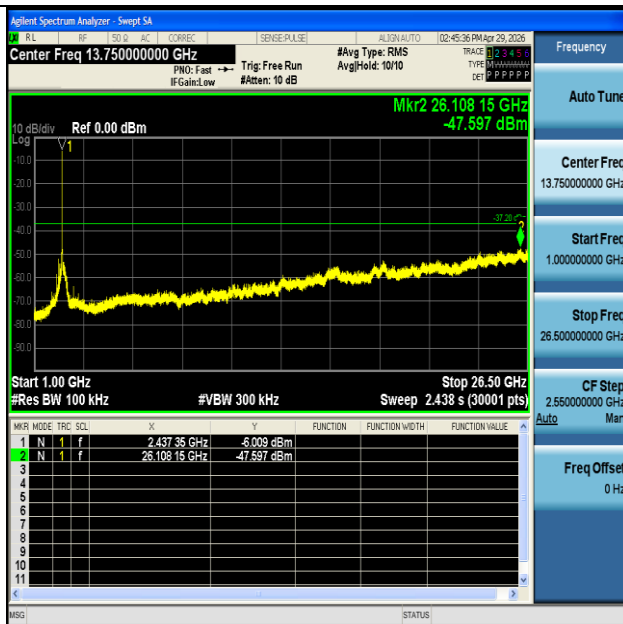


11G-Ant1-2437-0~Reference-PASS

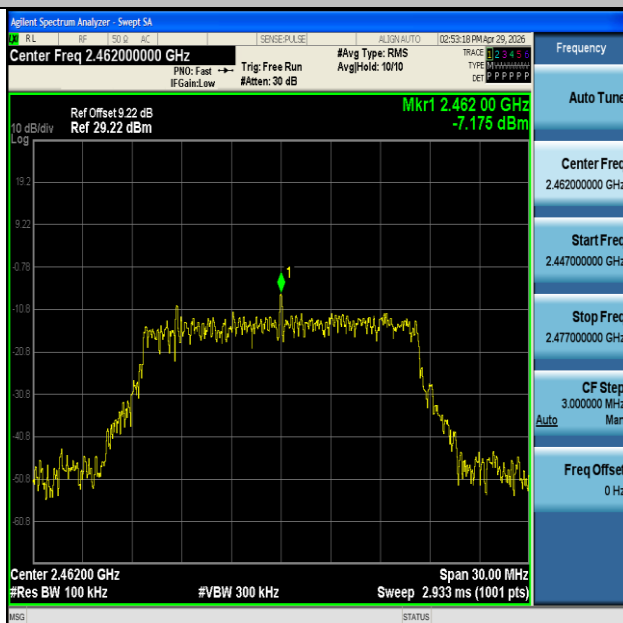


11G-Ant1-2437-30~1000-PASS



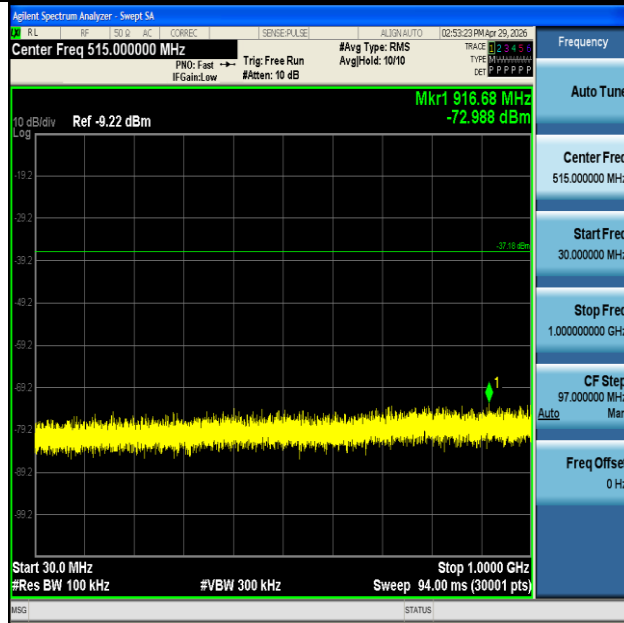


11G-Ant1-2437-1000~26500-PASS

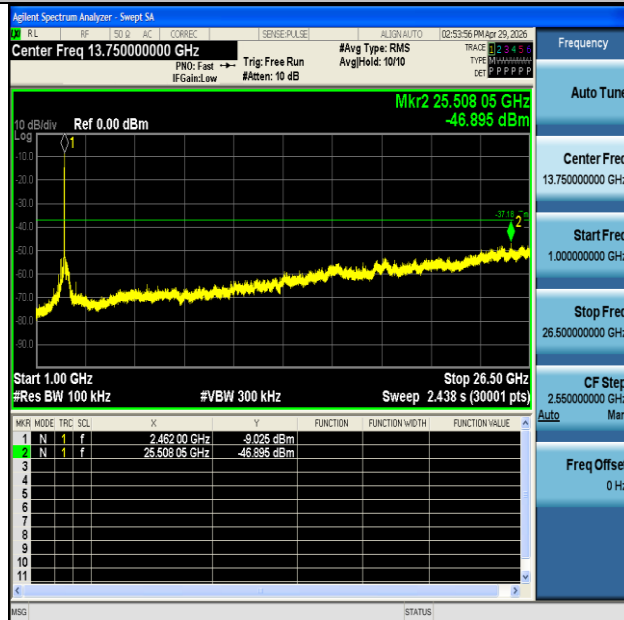


11G-Ant1-2462-0~Reference-PASS



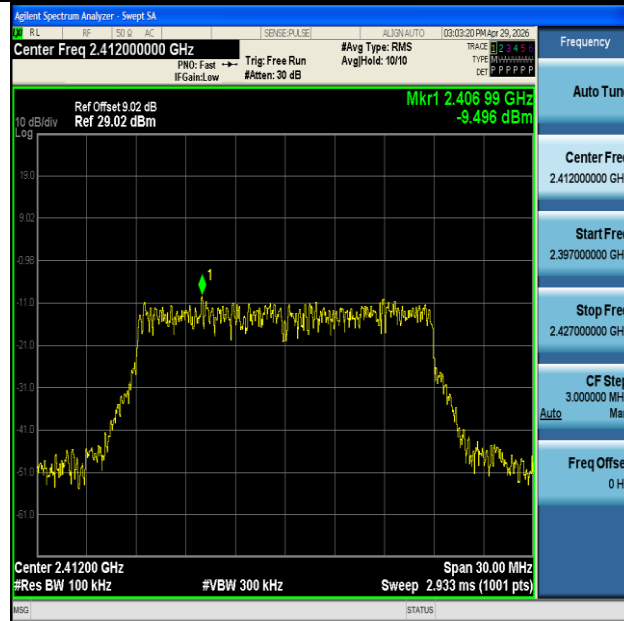


11G-Ant1-2462-30~1000-PASS

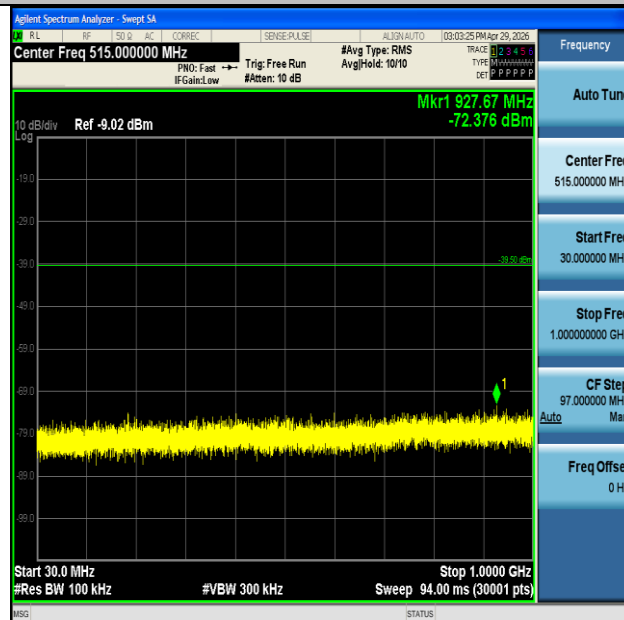


11G-Ant1-2462-1000~26500-PASS



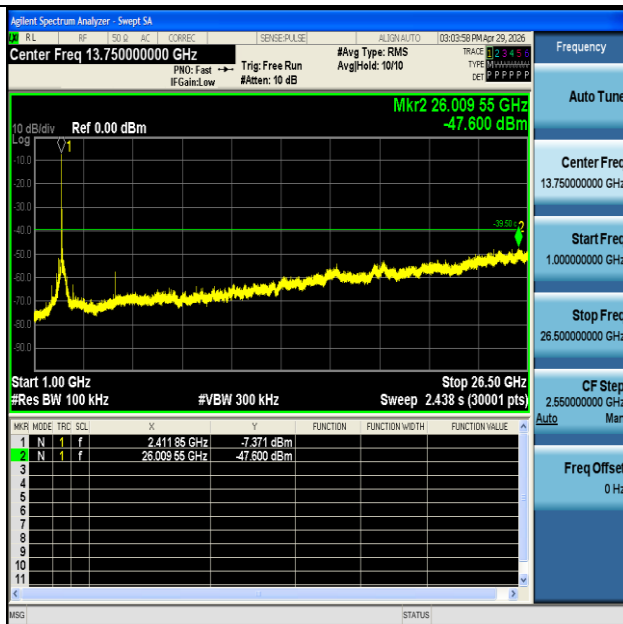


11N20SISO-Ant1-2412-0~Reference-PASS

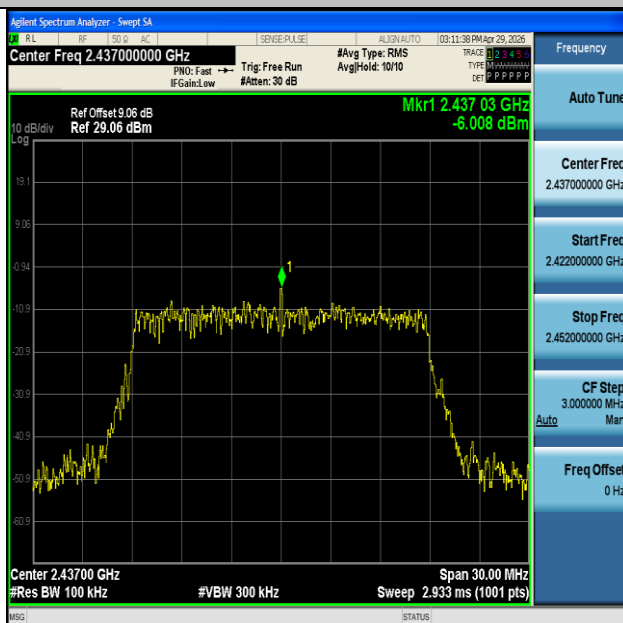


11N20SISO-Ant1-2412-30~1000-PASS



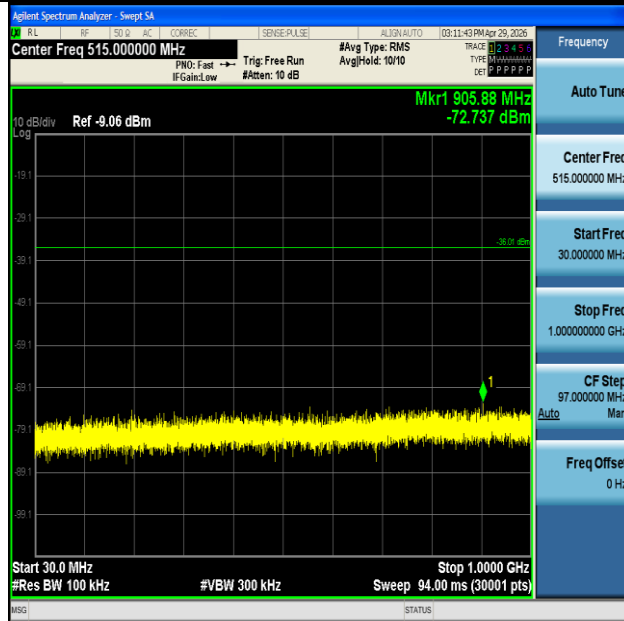


11N20SISO-Ant1-2412-1000~26500-PASS

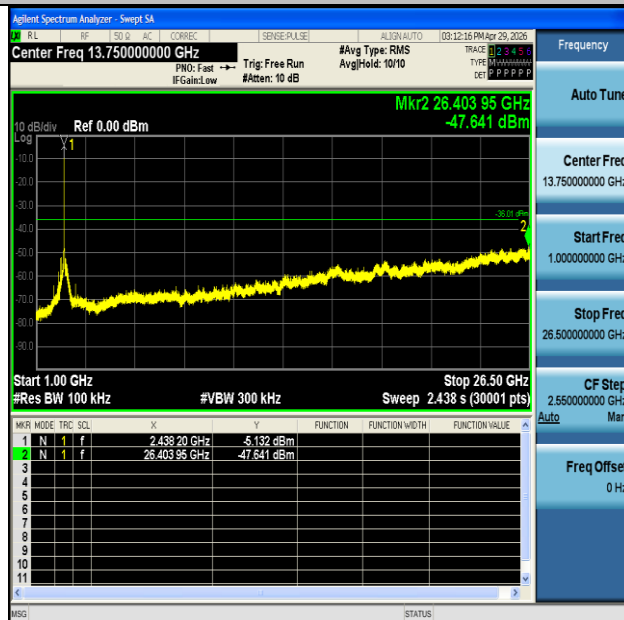


11N20SISO-Ant1-2437-0~Reference-PASS



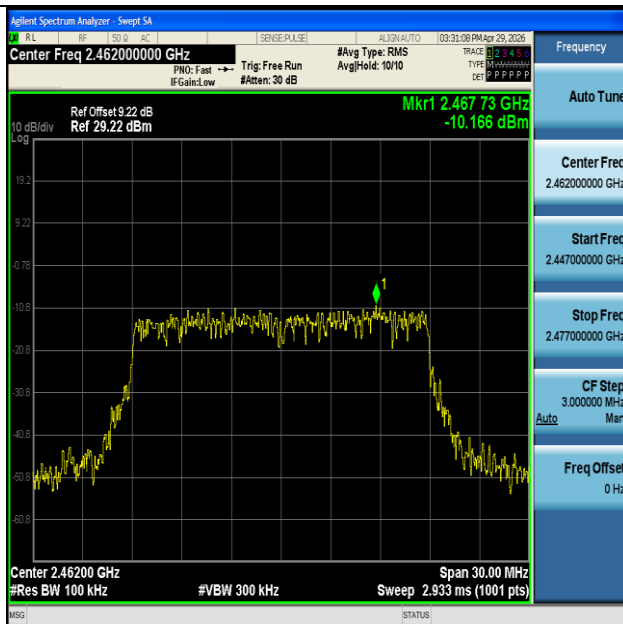


11N20SISO-Ant1-2437-30~1000-PASS

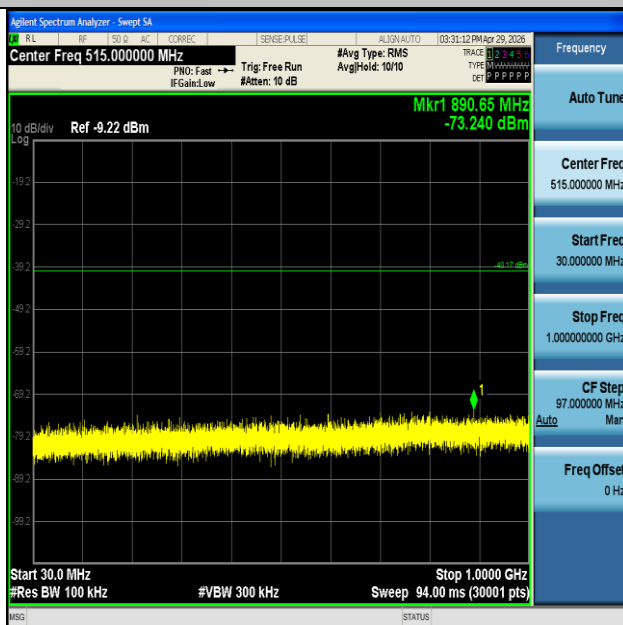


11N20SISO-Ant1-2437-1000~26500-PASS



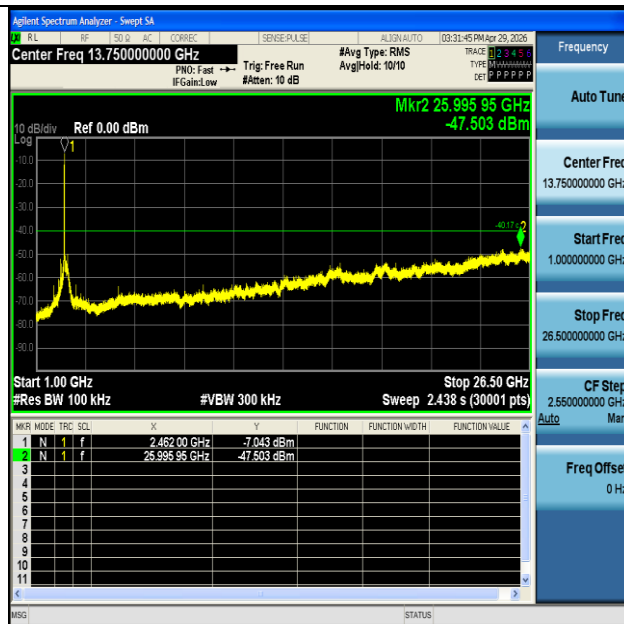


11N20SISO-Ant1-2462-0~Reference-PASS



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





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





Appendix G: Duty Cycle

Test Result

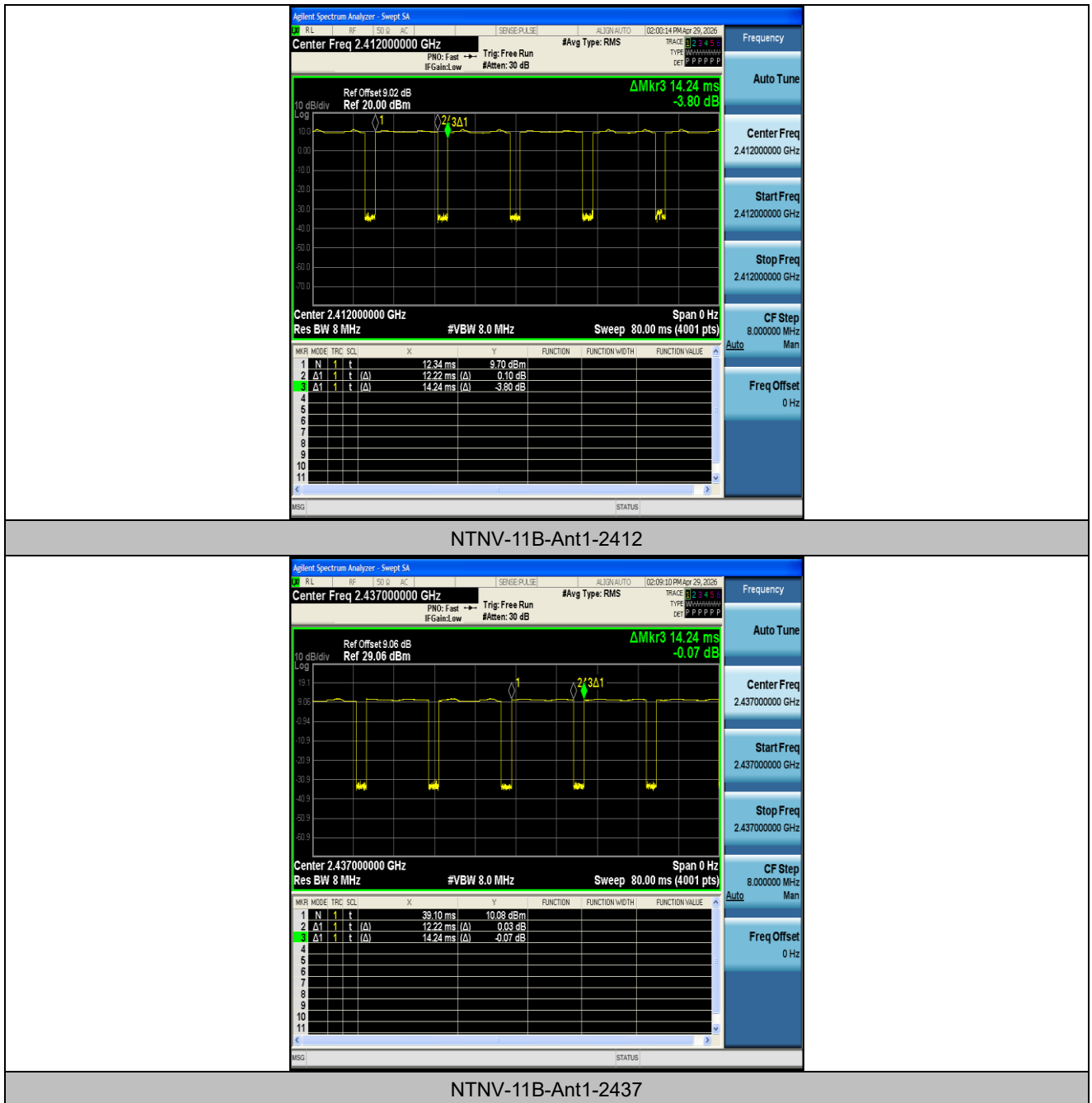
Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	12.22	14.24	85.81	0.66
11B	Ant1	2437	12.22	14.24	85.81	0.66
11B	Ant1	2462	12.22	14.26	85.69	0.67
11G	Ant1	2412	2.02	4.06	49.75	3.03
11G	Ant1	2437	2.02	4.06	49.75	3.03
11G	Ant1	2462	2.02	4.06	49.75	3.03
11N20SISO	Ant1	2412	1.88	3.92	47.96	3.19
11N20SISO	Ant1	2437	1.88	3.92	47.96	3.19
11N20SISO	Ant1	2462	1.88	3.92	47.96	3.19

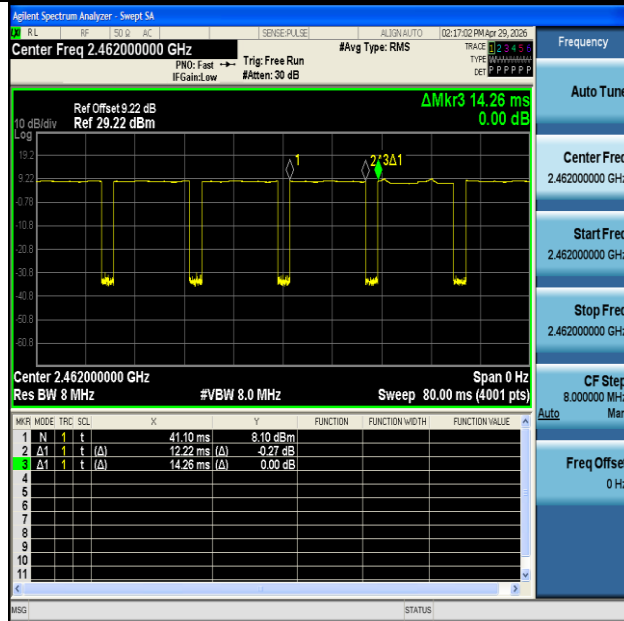
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



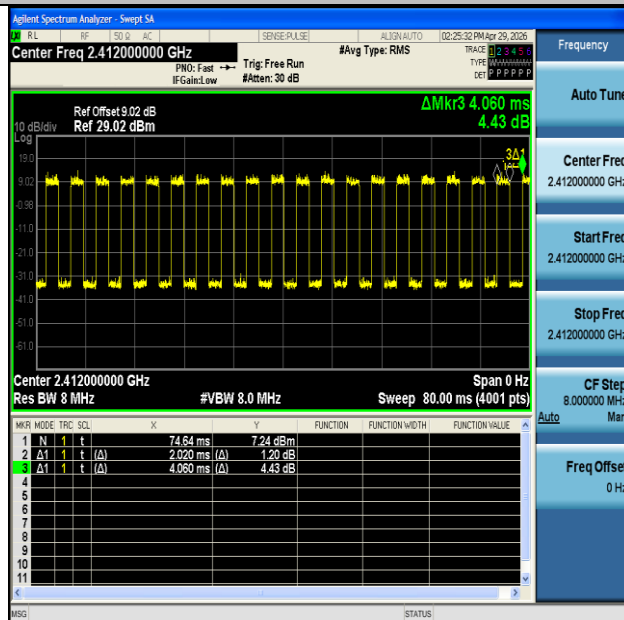


Test Graphs



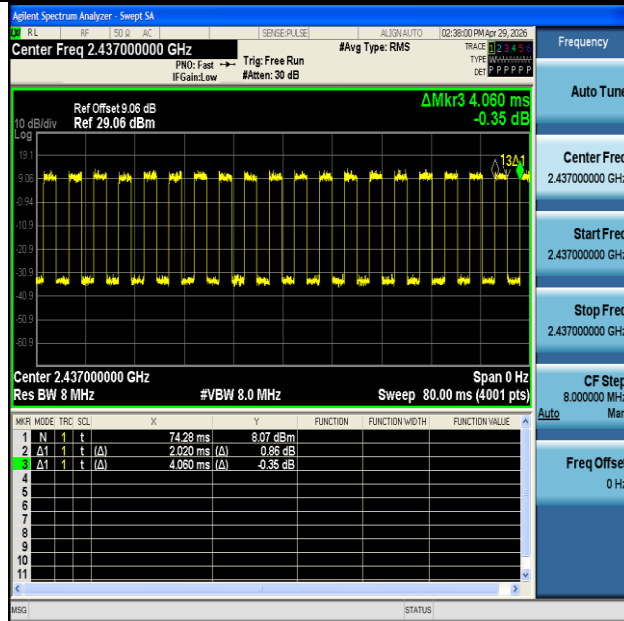


NTNV-11B-Ant1-2462

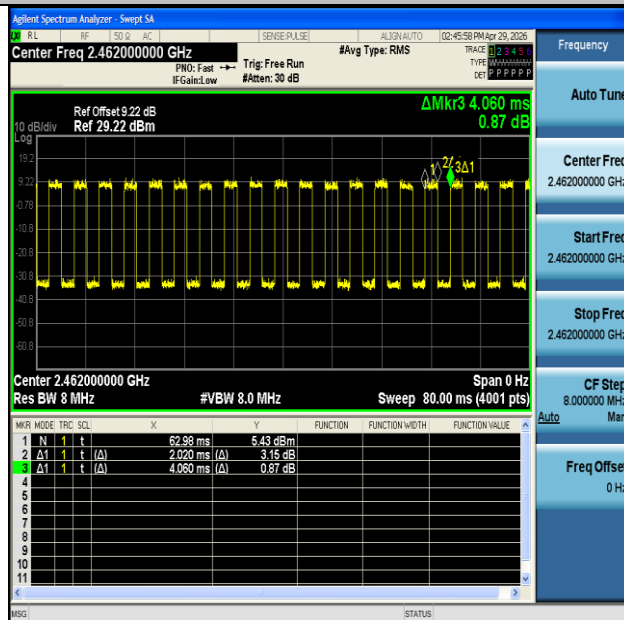


NTNV-11G-Ant1-2412



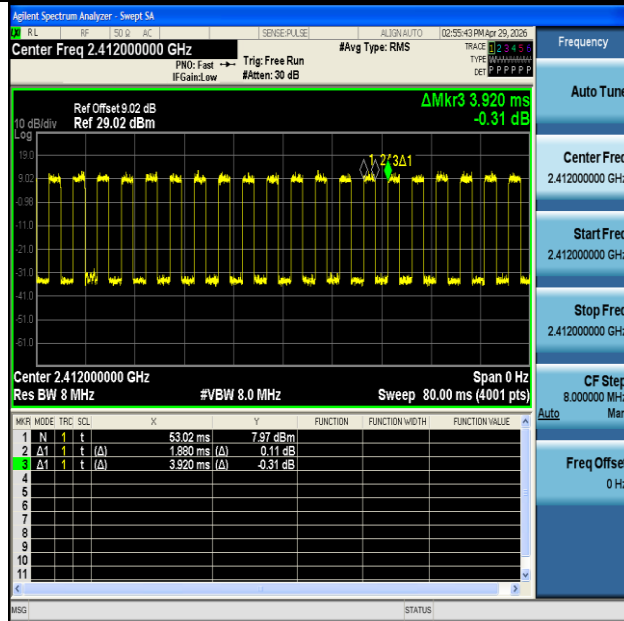


NTNV-11G-Ant1-2437

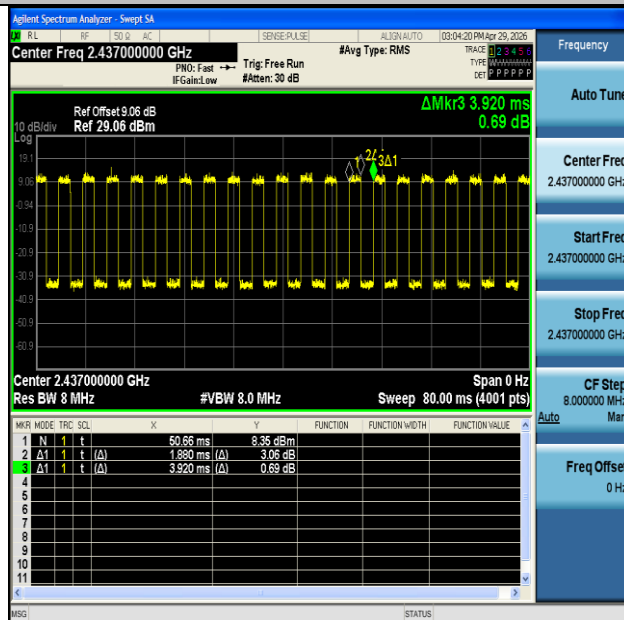


NTNV-11G-Ant1-2462



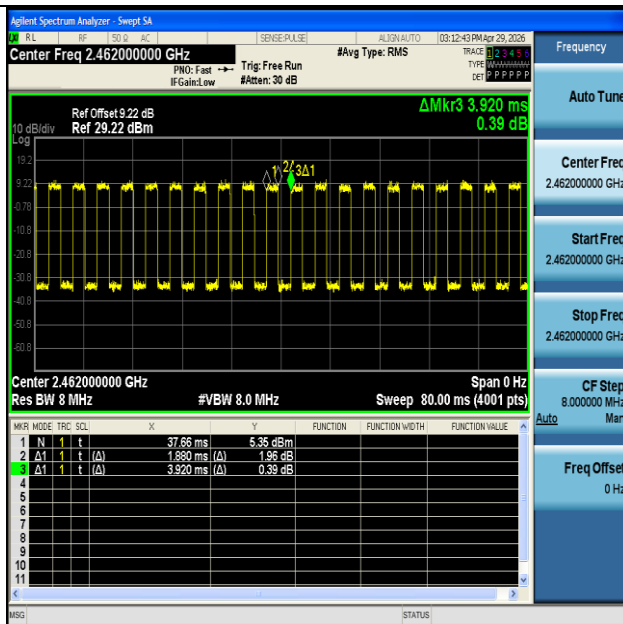


NTNV-11N20SISO-Ant1-2412



NTNV-11N20SISO-Ant1-2437





NTNV-11N20SISO-Ant1-2462

