



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

Product Name: bird feeder camera

Trade Mark: /

Test Model: V9-WNQ-03

FCC ID: 2AY58-V9-WNQ-03

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

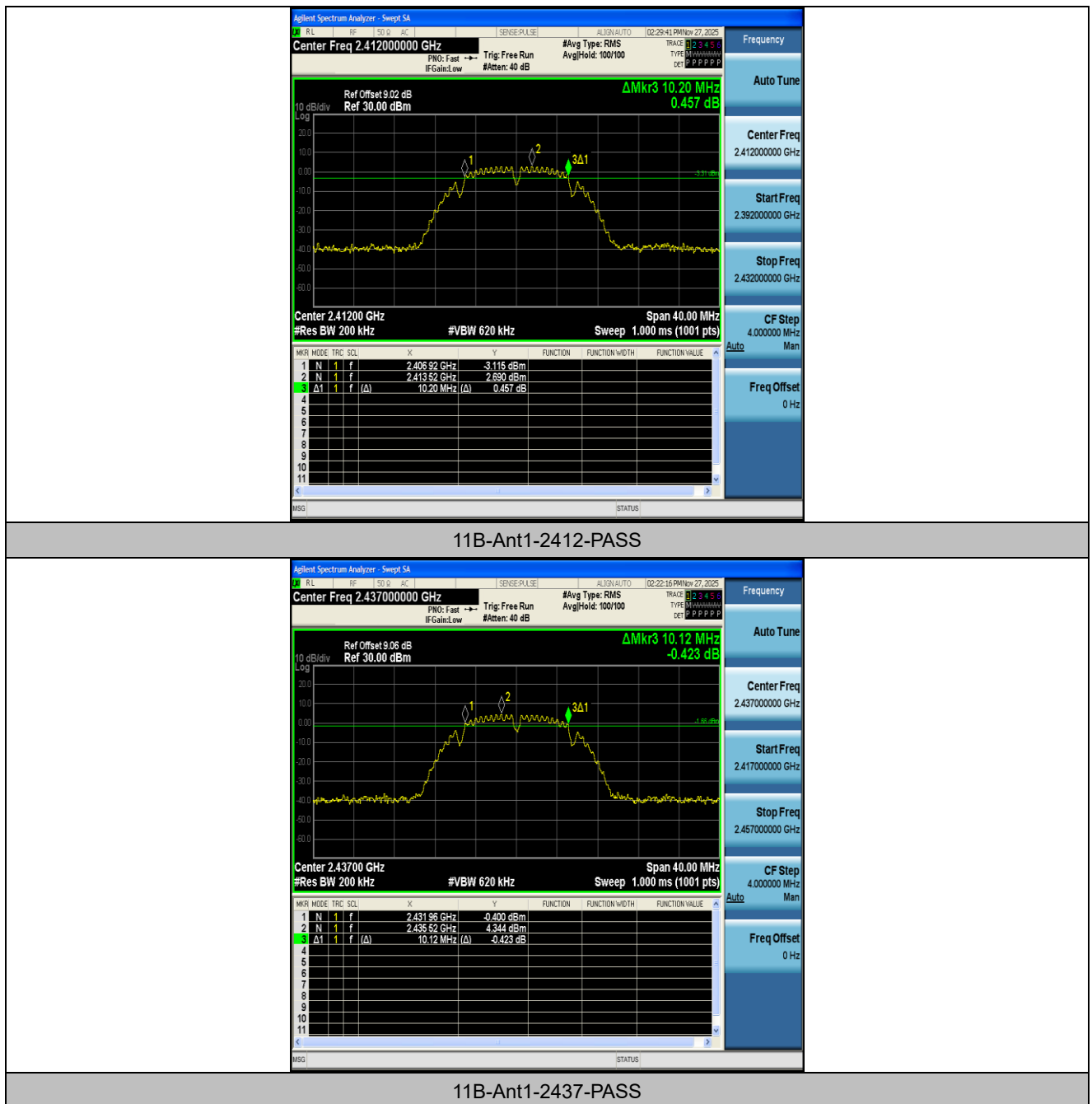
Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	10.200	2406.920	2417.120	0.5	PASS
11B	Ant1	2437	10.120	2431.960	2442.080	0.5	PASS
11B	Ant1	2462	10.160	2456.960	2467.120	0.5	PASS
11G	Ant1	2412	16.440	2403.800	2420.240	0.5	PASS
11G	Ant1	2437	16.520	2428.680	2445.200	0.5	PASS
11G	Ant1	2462	16.400	2453.840	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.680	2403.200	2420.880	0.5	PASS
11N20SISO	Ant1	2437	17.600	2428.200	2445.800	0.5	PASS
11N20SISO	Ant1	2462	17.640	2453.200	2470.840	0.5	PASS

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



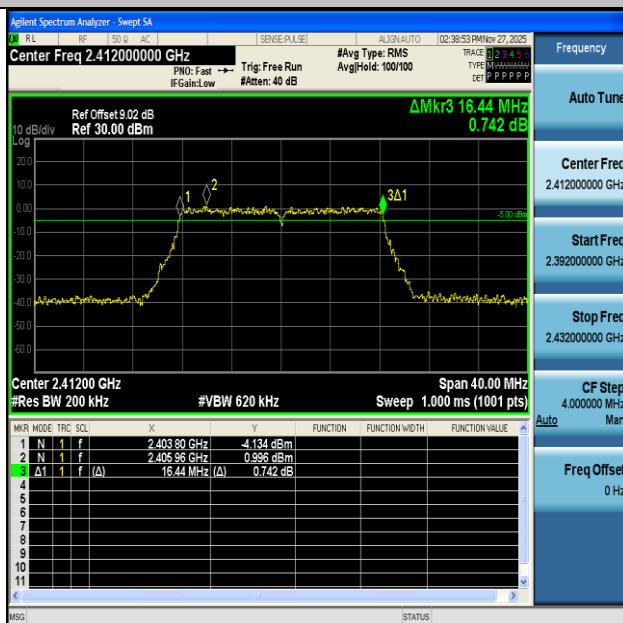


Test Graphs



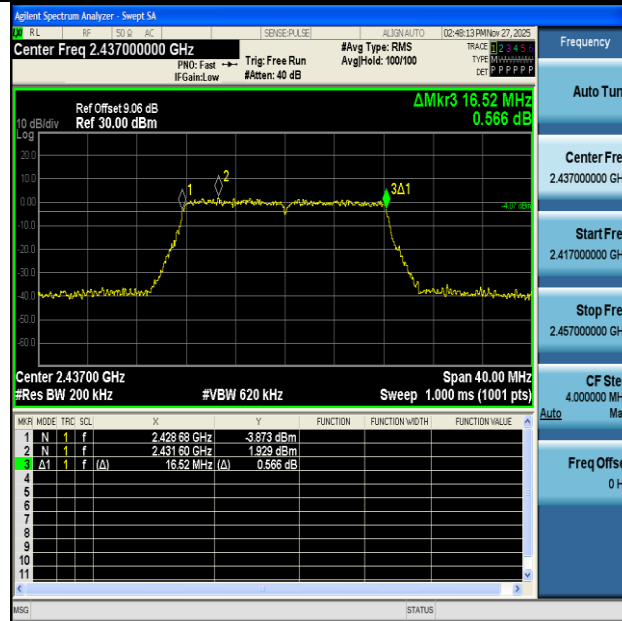


11B-Ant1-2462-PASS

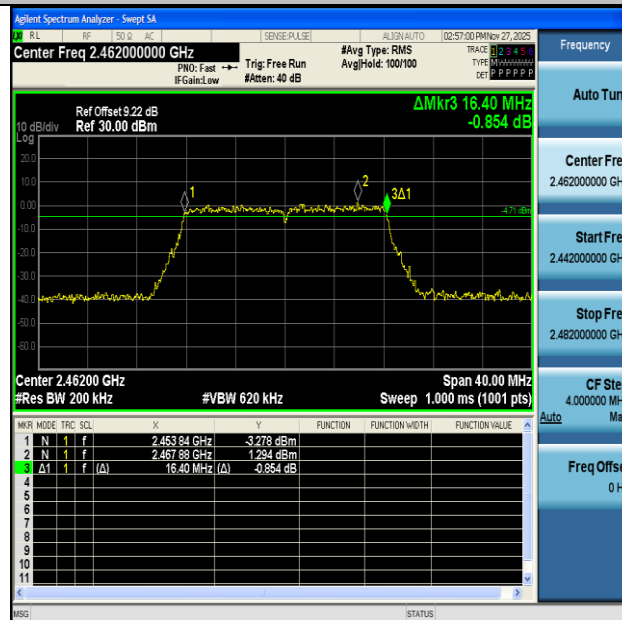


11G-Ant1-2412-PASS



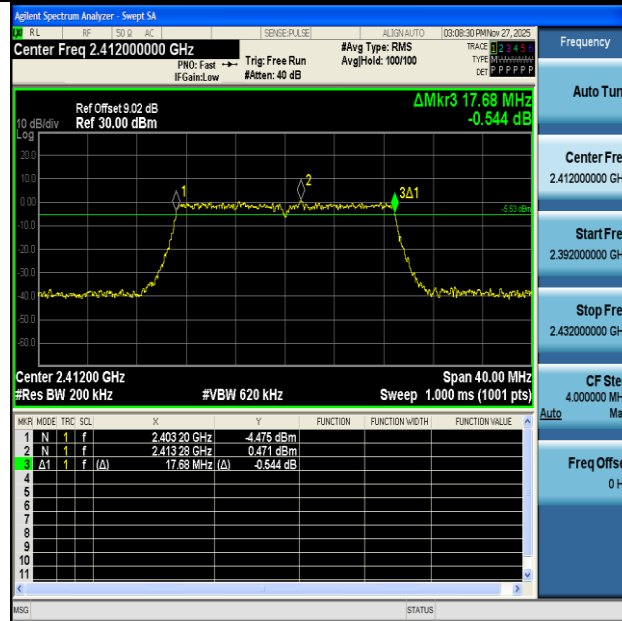


11G-Ant1-2437-PASS

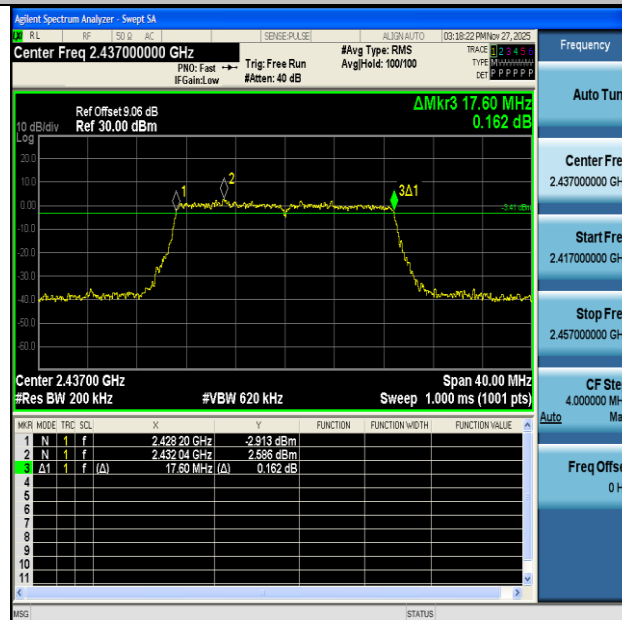


11G-Ant1-2462-PASS



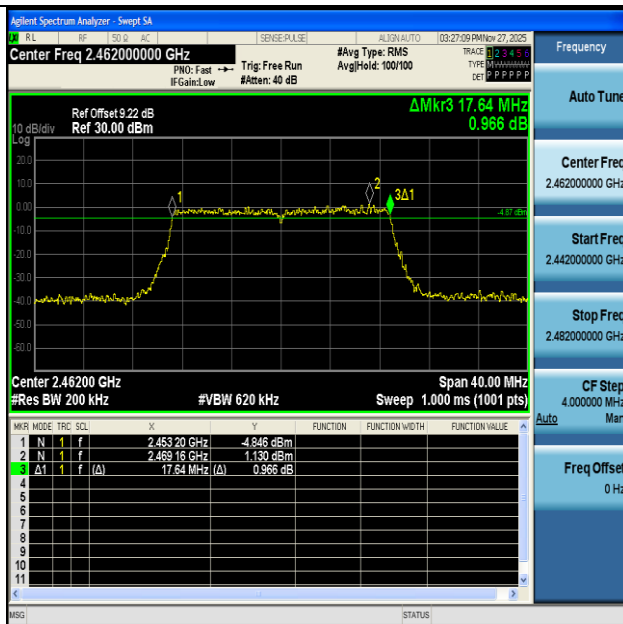


11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS





11N20SISO-Ant1-2462-PASS





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	13.311	2405.3779	2418.6889	---	---
11B	Ant1	2437	13.201	2430.3683	2443.5693	---	---
11B	Ant1	2462	13.308	2455.4092	2468.7172	---	---
11G	Ant1	2412	16.845	2403.5760	2420.4210	---	---
11G	Ant1	2437	16.756	2428.6006	2445.3566	---	---
11G	Ant1	2462	16.876	2453.6014	2470.4774	---	---
11N20SISO	Ant1	2412	17.824	2403.1055	2420.9295	---	---
11N20SISO	Ant1	2437	17.765	2428.1192	2445.8842	---	---
11N20SISO	Ant1	2462	17.820	2453.1293	2470.9493	---	---

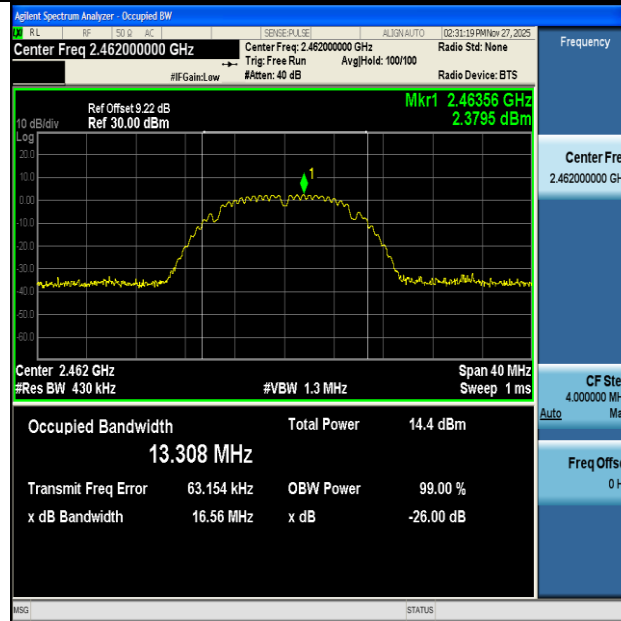
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



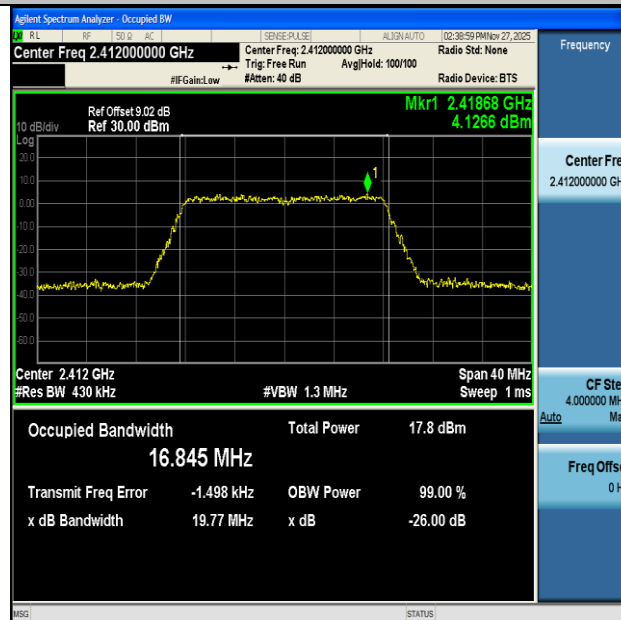


Test Graphs



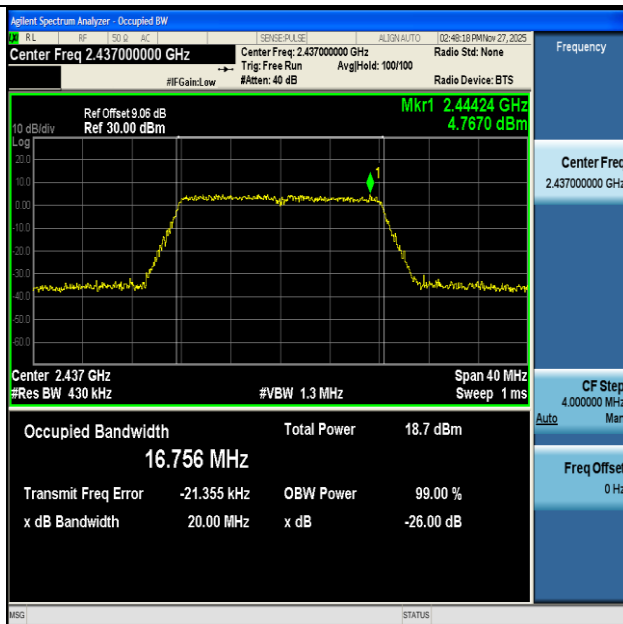


11B-Ant1-2462

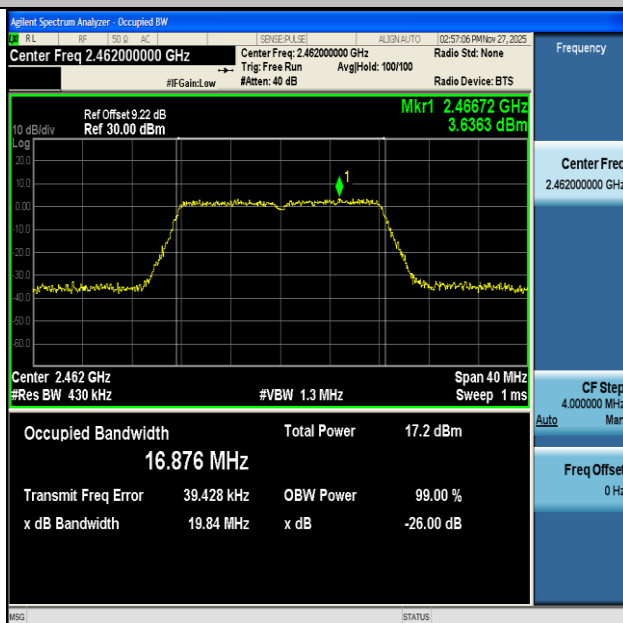


11G-Ant1-2412



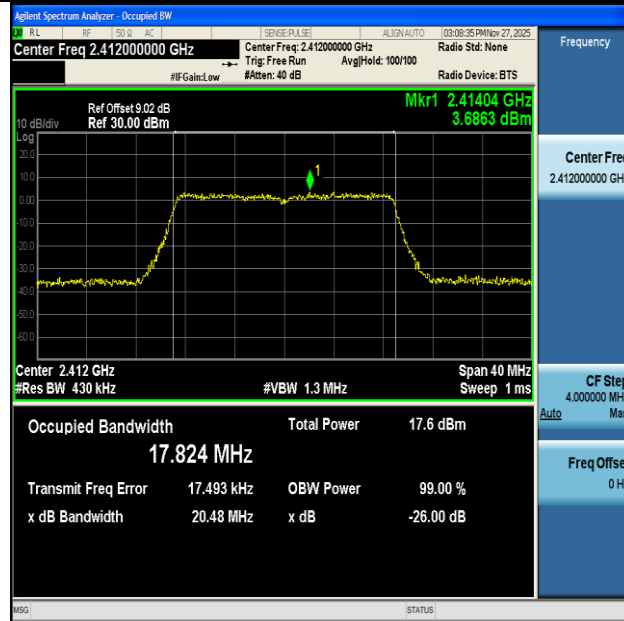


11G-Ant1-2437

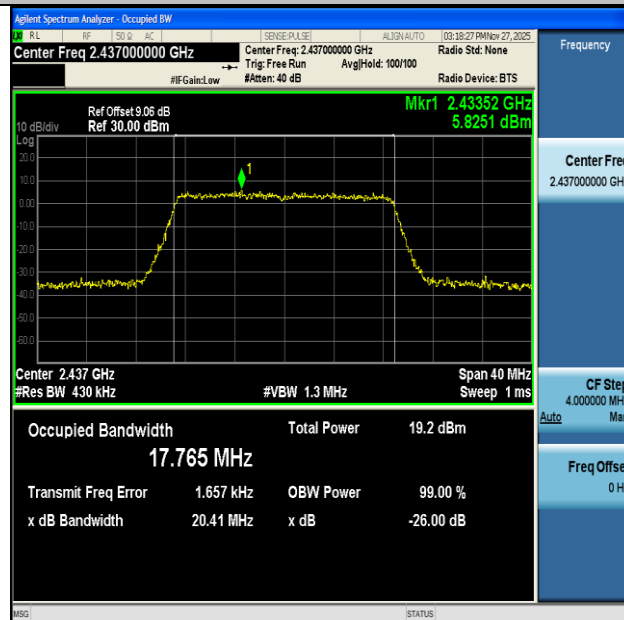


11G-Ant1-2462



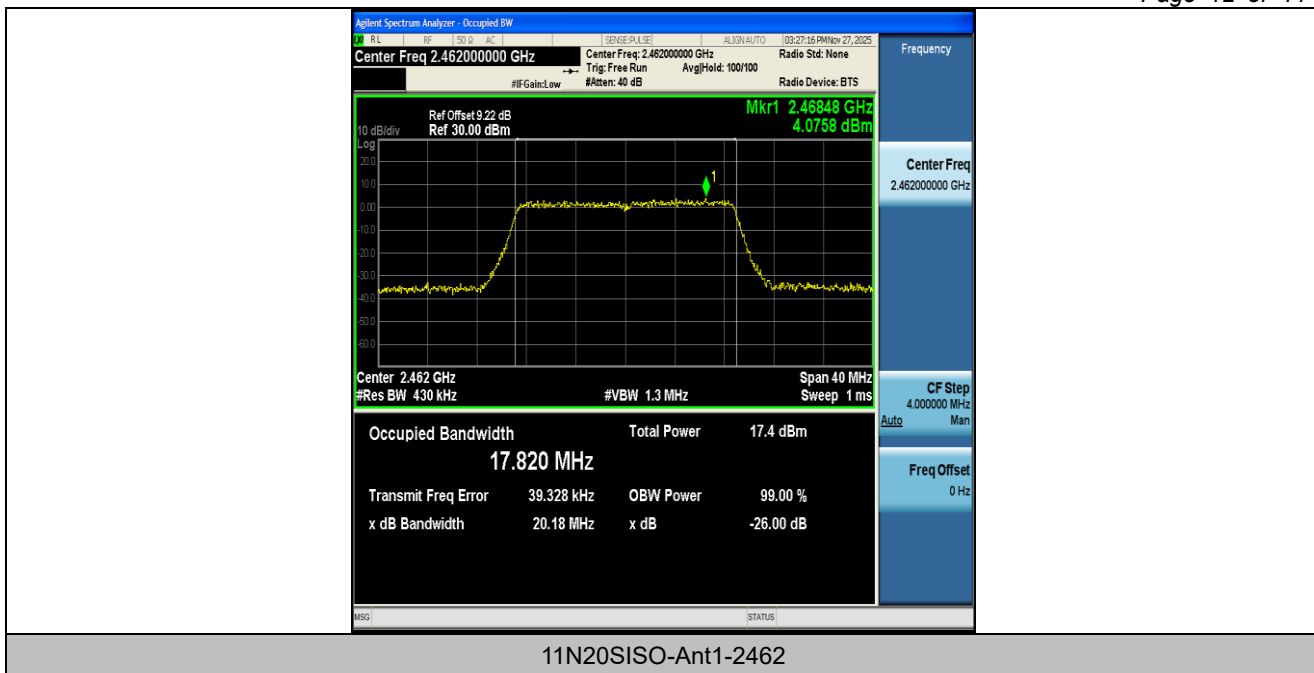


11N20SISO-Ant1-2412



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	12.28	≤30.00	PASS
11B	Ant1	2437	13.42	≤30.00	PASS
11B	Ant1	2462	11.51	≤30.00	PASS
11G	Ant1	2412	11.68	≤30.00	PASS
11G	Ant1	2437	12.57	≤30.00	PASS
11G	Ant1	2462	11.30	≤30.00	PASS
11N20SISO	Ant1	2412	11.61	≤30.00	PASS
11N20SISO	Ant1	2437	13.08	≤30.00	PASS
11N20SISO	Ant1	2462	11.27	≤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

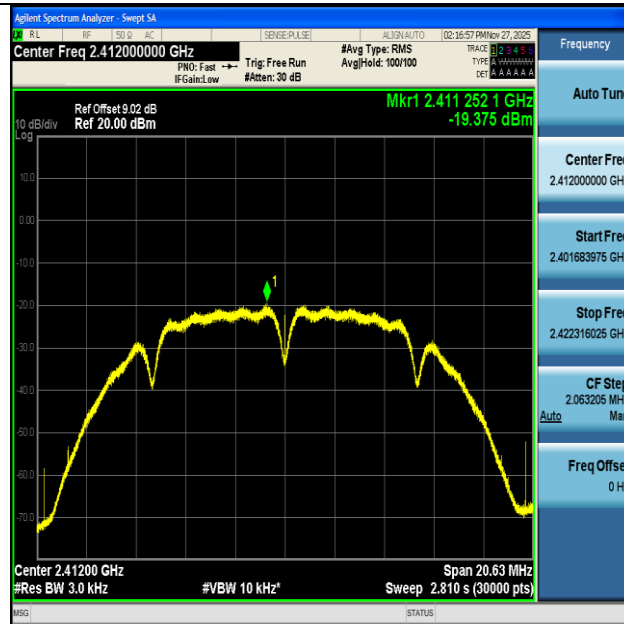
Test Mode	Antenna	Frequency [MHz]	Raw. Data [dBm/3-100kHz]	Dc. Factor	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-19.38	0.00	-19.38	≤8.00	PASS
11B	Ant1	2437	-16.83	0.01	-16.82	≤8.00	PASS
11B	Ant1	2462	-19.77	0.01	-19.76	≤8.00	PASS
11G	Ant1	2412	-21.31	0.06	-21.25	≤8.00	PASS
11G	Ant1	2437	-20.75	0.06	-20.69	≤8.00	PASS
11G	Ant1	2462	-22.15	0.06	-22.09	≤8.00	PASS
11N20SISO	Ant1	2412	-22.79	0.07	-22.72	≤8.00	PASS
11N20SISO	Ant1	2437	-18.70	0.07	-18.63	≤8.00	PASS
11N20SISO	Ant1	2462	-19.37	0.07	-19.30	≤8.00	PASS

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

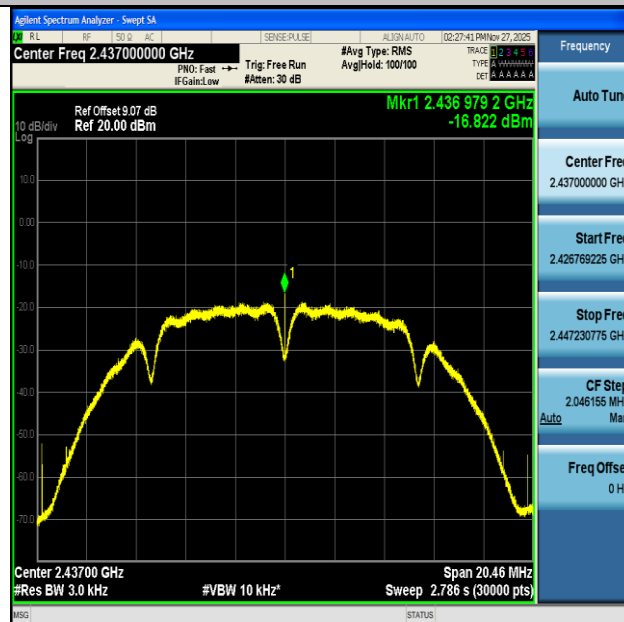




Test Graphs

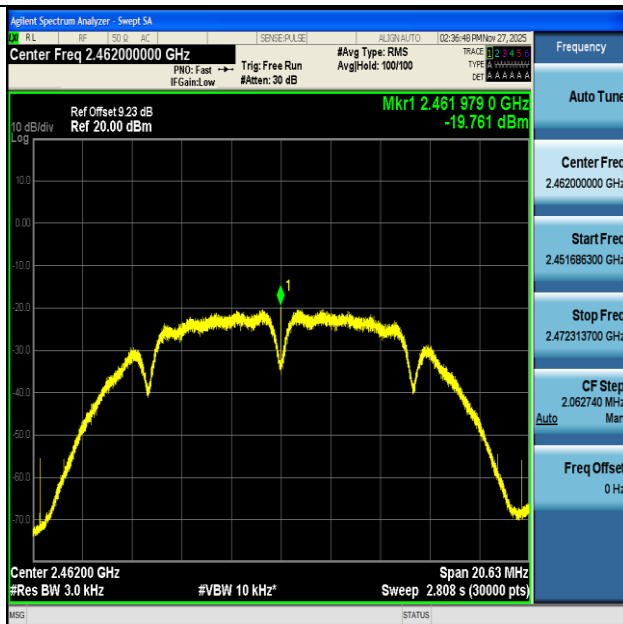


11B-Ant1-2412-PASS

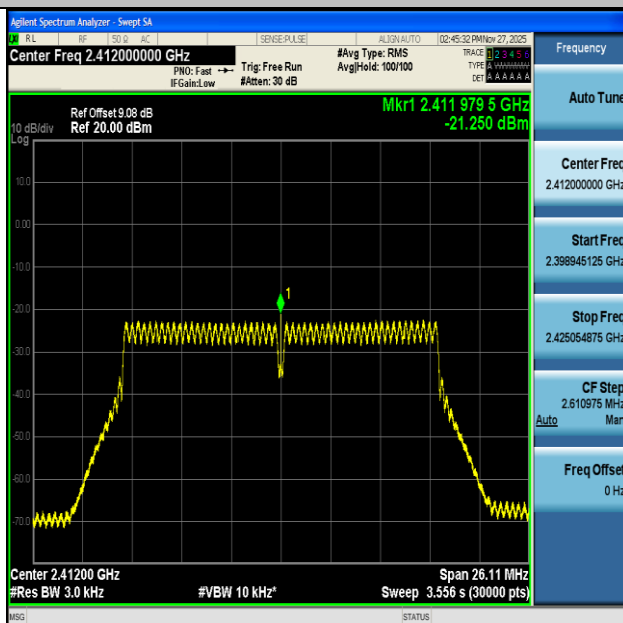


11B-Ant1-2437-PASS



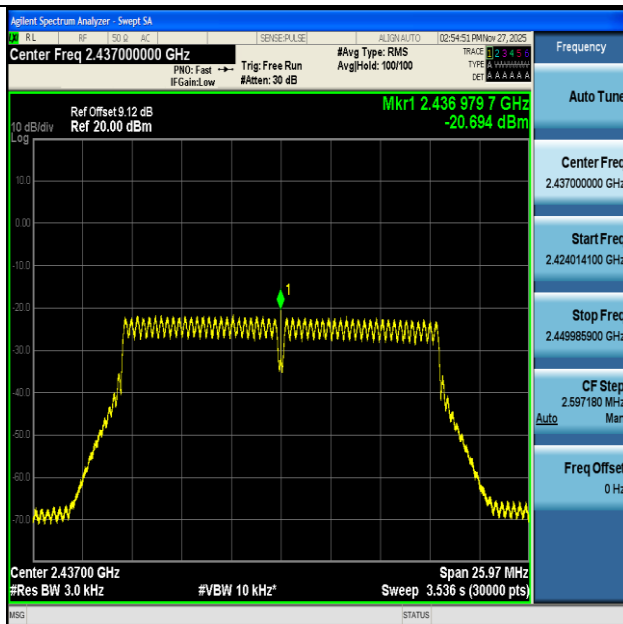


11B-Ant1-2462-PASS

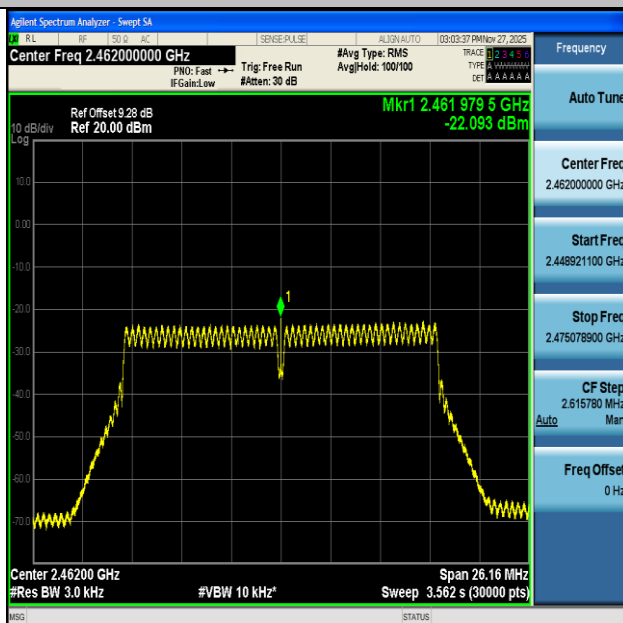


11G-Ant1-2412-PASS



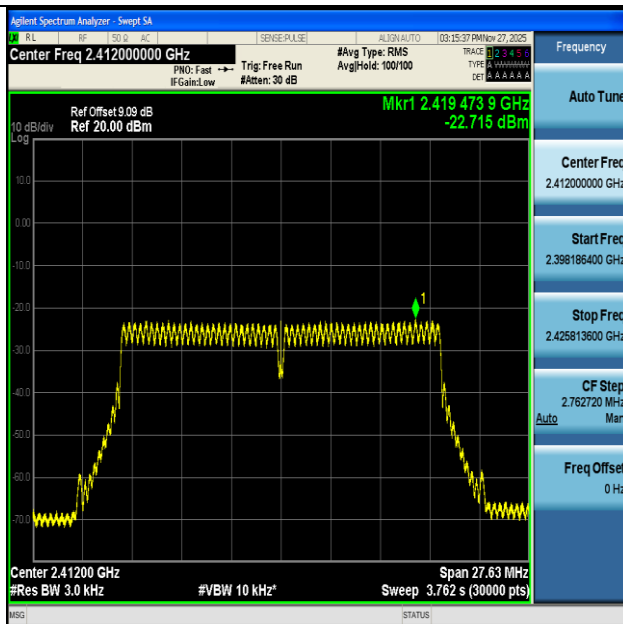


11G-Ant1-2437-PASS

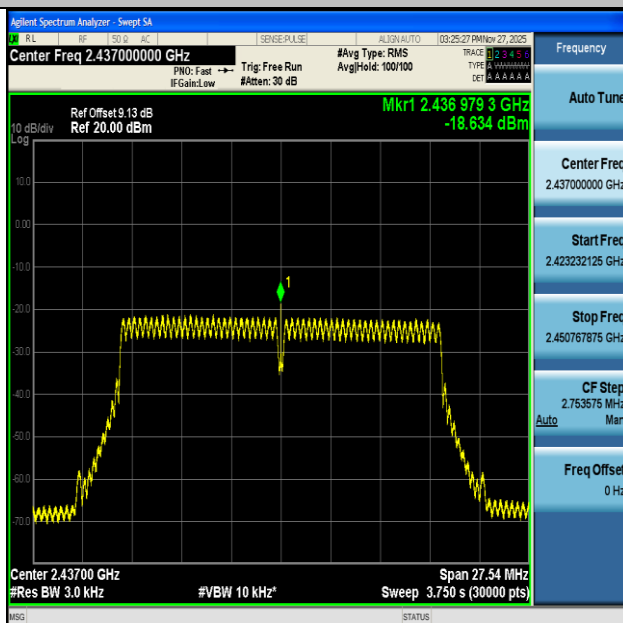


11G-Ant1-2462-PASS



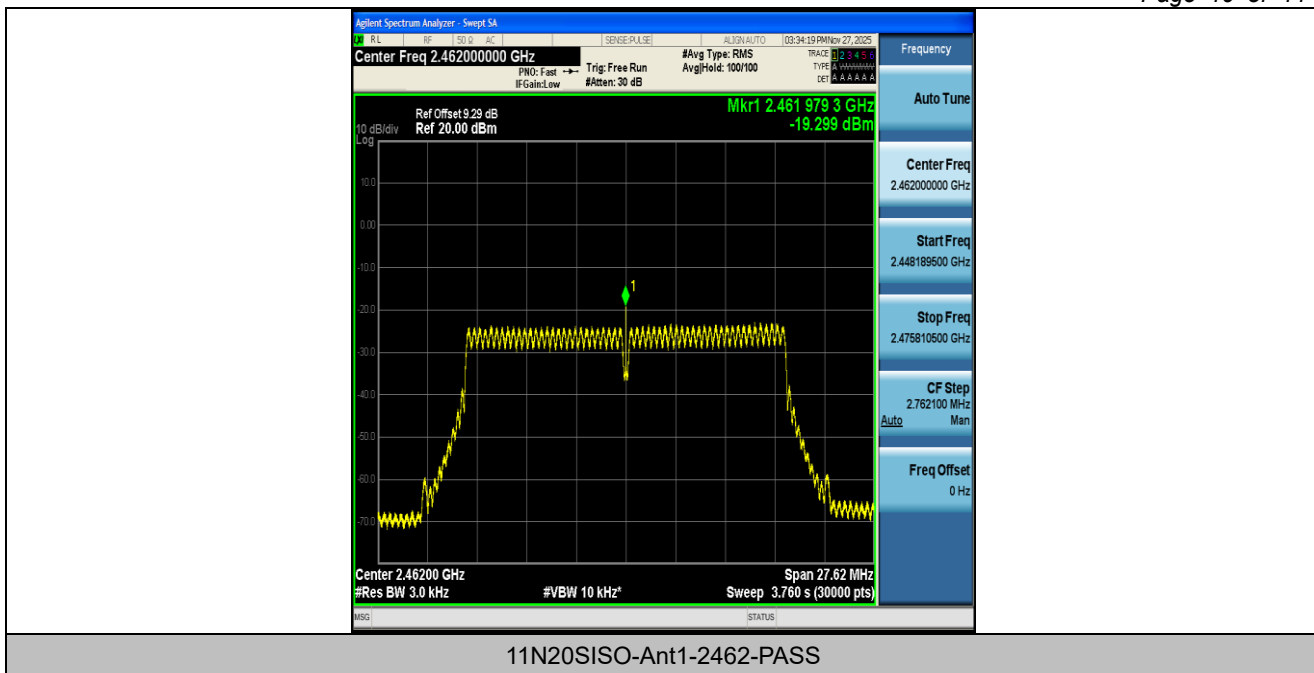


11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS







Appendix E: Band edge measurements

Test Result

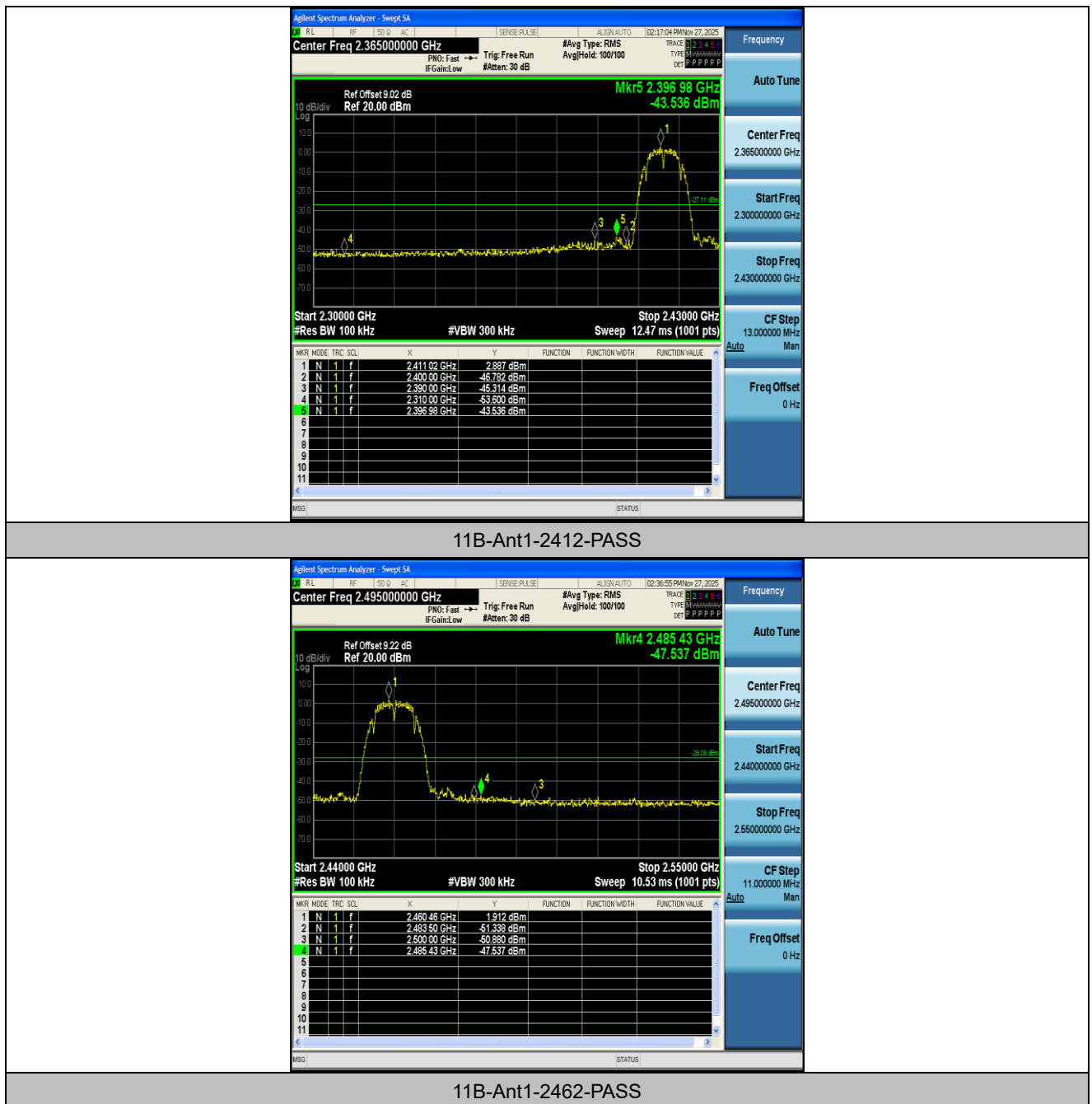
Test Mode	Antenna	Ch. Name	Frequency.[MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	2.89	-43.54	≤-27.11	PASS
11B	Ant1	High	2462	1.91	-47.54	≤-28.09	PASS
11G	Ant1	Low	2412	0.57	-44.02	≤-29.43	PASS
11G	Ant1	High	2462	-1.37	-47.07	≤-31.37	PASS
11N20SISO	Ant1	Low	2412	0.08	-43.64	≤-29.92	PASS
11N20SISO	Ant1	High	2462	-0.17	-46.2	≤-30.17	PASS

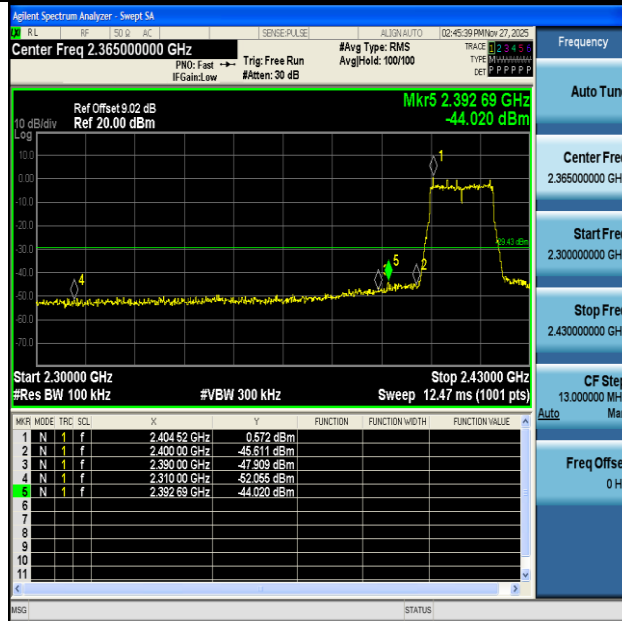
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



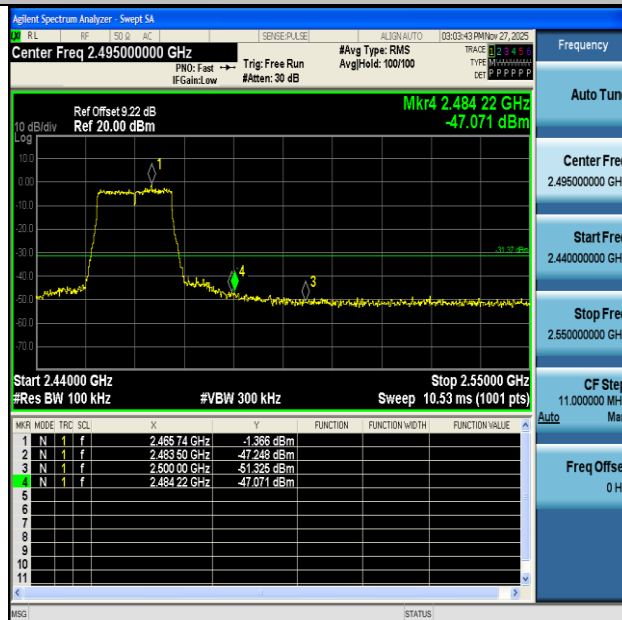


Test Graphs





11G-Ant1-2412-PASS

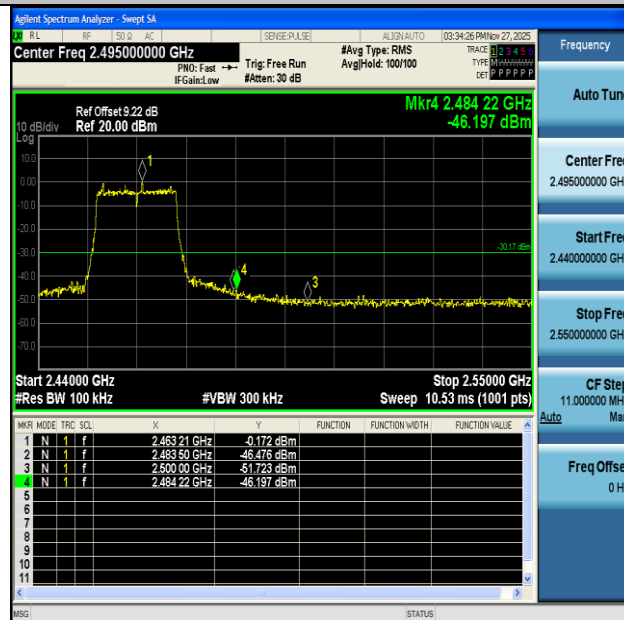


11G-Ant1-2462-PASS





11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2462-PASS





Appendix F: Conducted Spurious Emission

Test Result

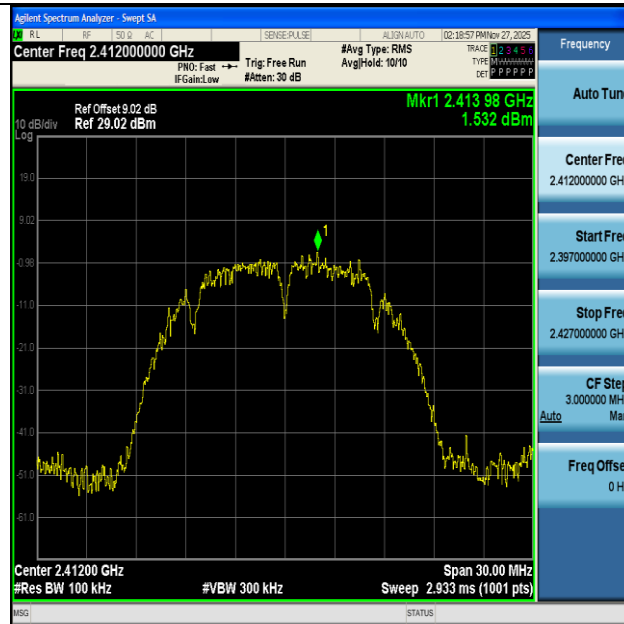
Test Mode	Antenna	Frequency [MHz]	Freq. Range [Mhz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	0~Reference	1.53	1.53	---	PASS
11B	Ant1	2412	30~1000	1.53	-62.74	≤-28.47	PASS
11B	Ant1	2412	1000~26500	1.53	-37.81	≤-28.47	PASS
11B	Ant1	2437	0~Reference	2.67	2.67	---	PASS
11B	Ant1	2437	30~1000	2.67	-62.42	≤-27.33	PASS
11B	Ant1	2437	1000~26500	2.67	-37.05	≤-27.33	PASS
11B	Ant1	2462	0~Reference	0.74	0.74	---	PASS
11B	Ant1	2462	30~1000	0.74	-62.59	≤-29.26	PASS
11B	Ant1	2462	1000~26500	0.74	-37	≤-29.26	PASS
11G	Ant1	2412	0~Reference	-2.85	-2.85	---	PASS
11G	Ant1	2412	30~1000	-2.85	-62.87	≤-32.85	PASS
11G	Ant1	2412	1000~26500	-2.85	-36.9	≤-32.85	PASS
11G	Ant1	2437	0~Reference	-2.00	-2.00	---	PASS
11G	Ant1	2437	30~1000	-2.00	-62.81	≤-32	PASS
11G	Ant1	2437	1000~26500	-2.00	-36.25	≤-32	PASS
11G	Ant1	2462	0~Reference	-1.94	-1.94	---	PASS
11G	Ant1	2462	30~1000	-1.94	-62.59	≤-31.94	PASS
11G	Ant1	2462	1000~26500	-1.94	-37.01	≤-31.94	PASS
11N20SISO	Ant1	2412	0~Reference	-0.25	-0.25	---	PASS
11N20SISO	Ant1	2412	30~1000	-0.25	-62.45	≤-30.25	PASS
11N20SISO	Ant1	2412	1000~26500	-0.25	-37.66	≤-30.25	PASS
11N20SISO	Ant1	2437	0~Reference	0.54	0.54	---	PASS
11N20SISO	Ant1	2437	30~1000	0.54	-62.23	≤-29.46	PASS
11N20SISO	Ant1	2437	1000~26500	0.54	-37.88	≤-29.46	PASS
11N20SISO	Ant1	2462	0~Reference	-2.92	-2.92	---	PASS
11N20SISO	Ant1	2462	30~1000	-2.92	-62.95	≤-32.92	PASS
11N20SISO	Ant1	2462	1000~26500	-2.92	-37.82	≤-32.92	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.

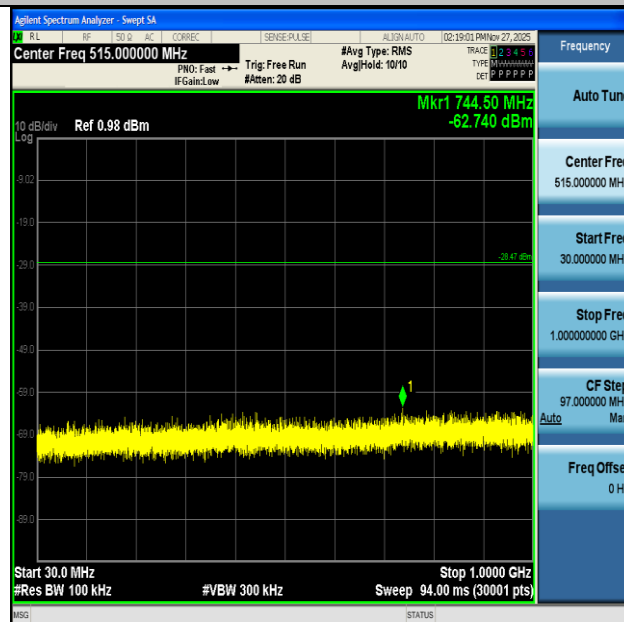




Test Graphs

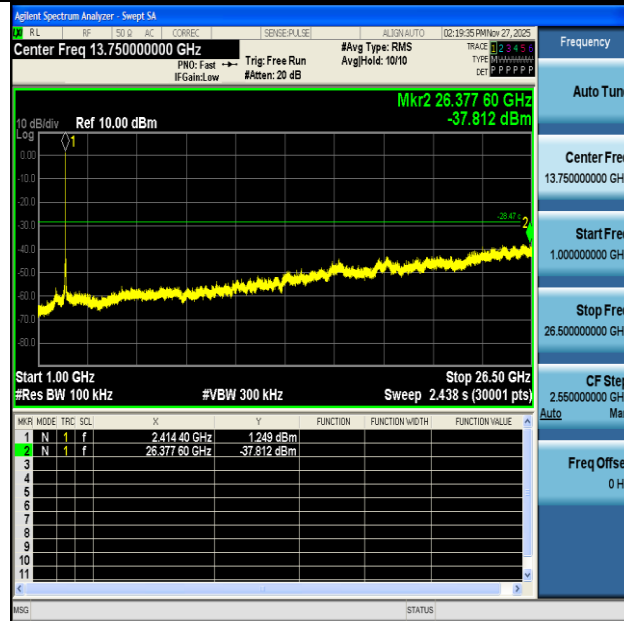


11B-Ant1-2412-0~Reference-PASS

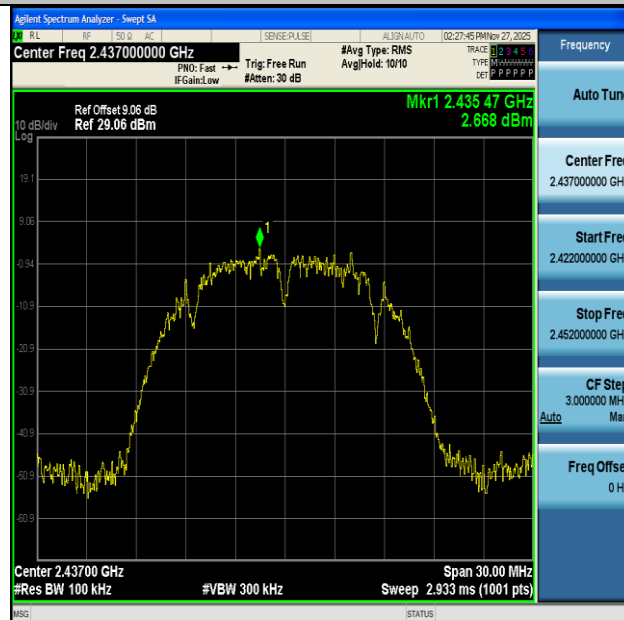


11B-Ant1-2412-30~1000-PASS



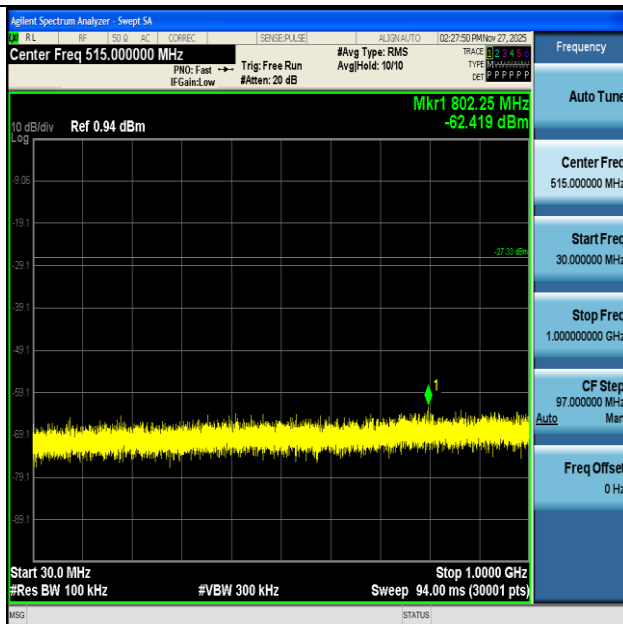


11B-Ant1-2412-1000~26500-PASS

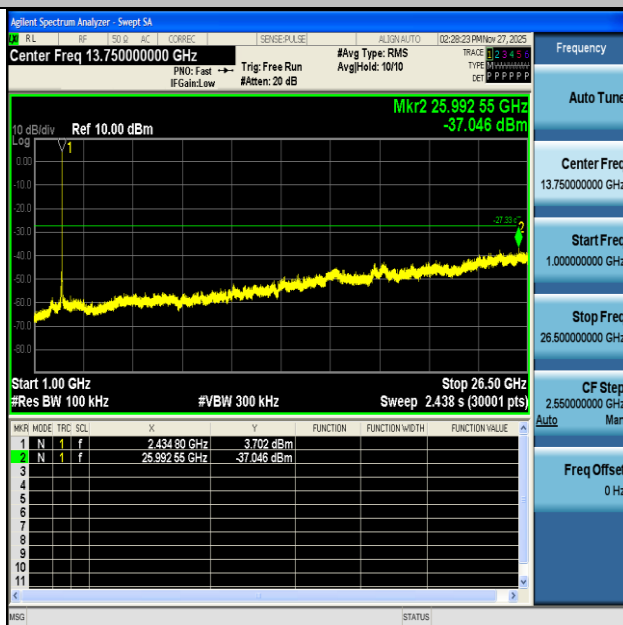


11B-Ant1-2437-0~Reference-PASS



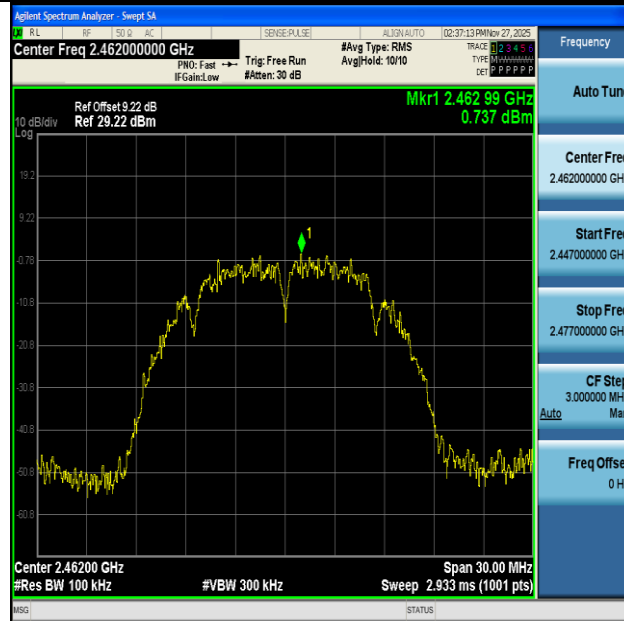


11B-Ant1-2437-30~1000-PASS

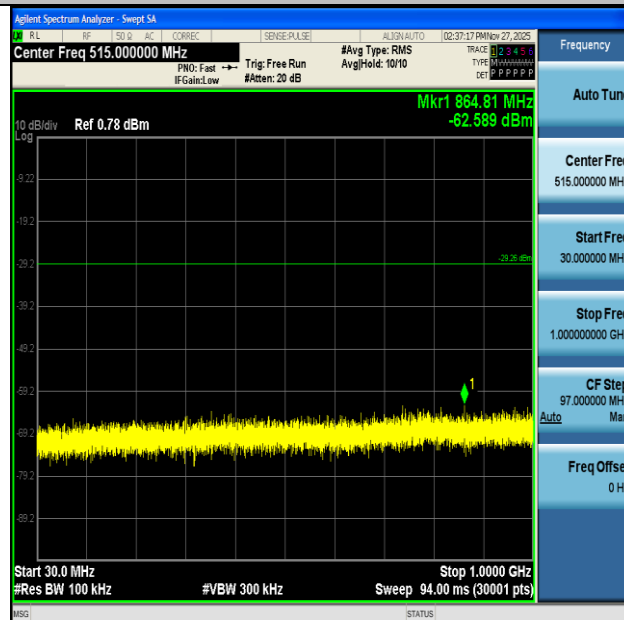


11B-Ant1-2437-1000~26500-PASS



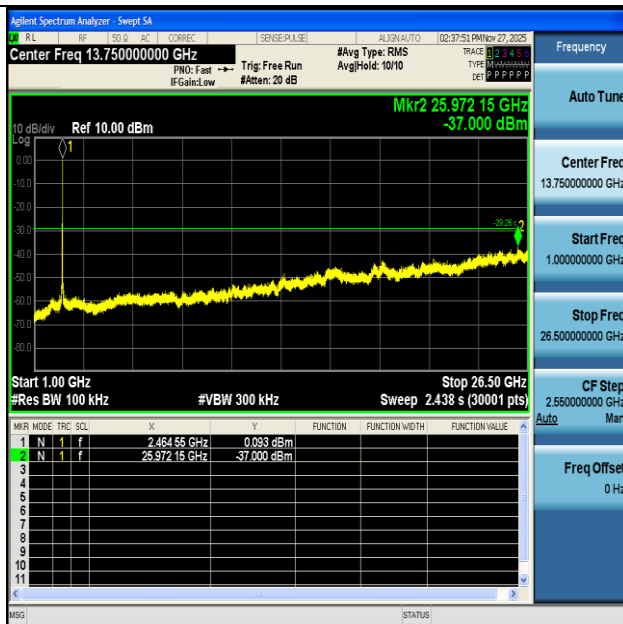


11B-Ant1-2462-0~Reference-PASS

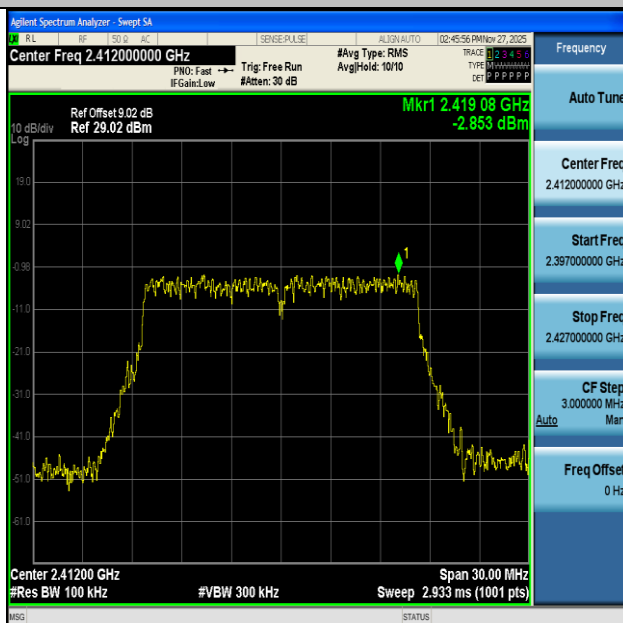


11B-Ant1-2462-30~1000-PASS



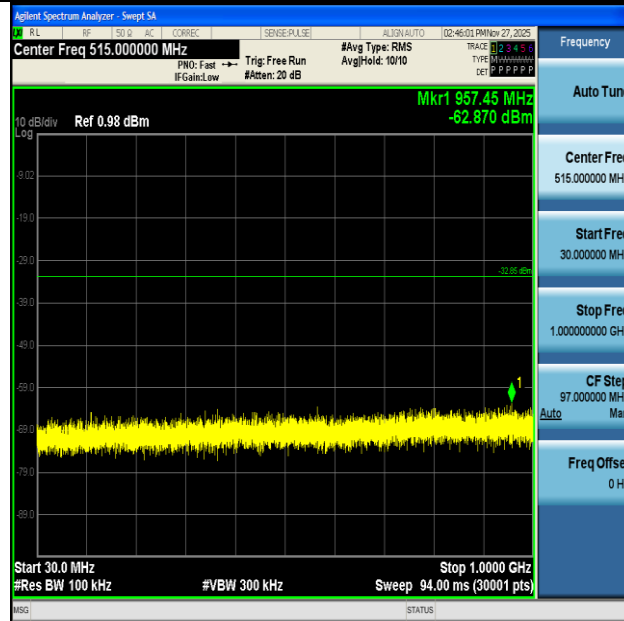


11B-Ant1-2462-1000~26500-PASS

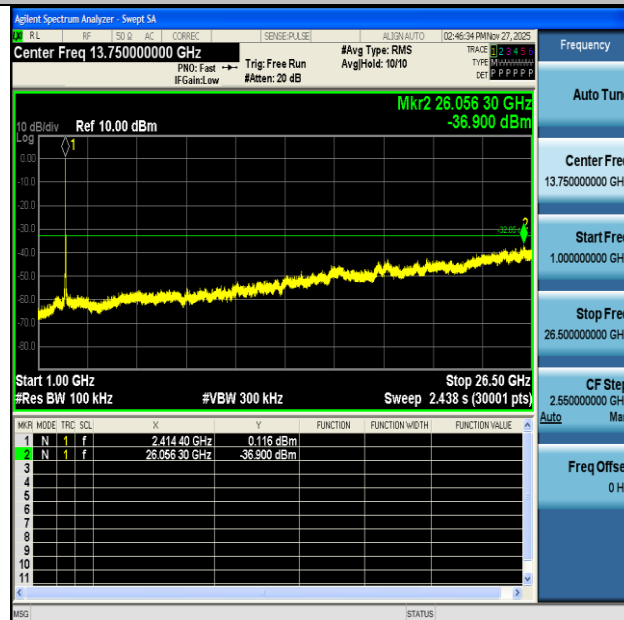


11G-Ant1-2412-0~Reference-PASS



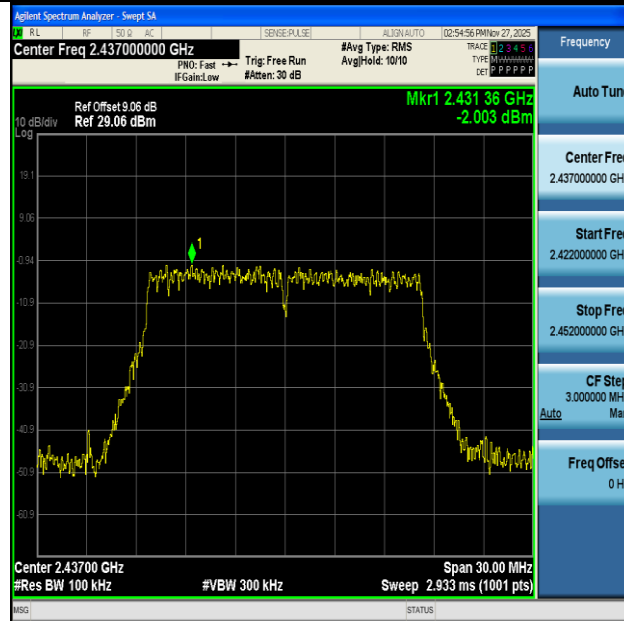


11G-Ant1-2412-30~1000-PASS

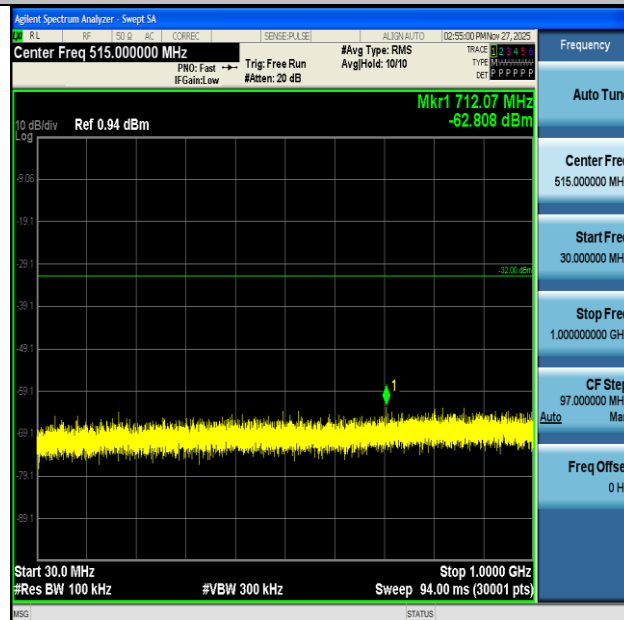


11G-Ant1-2412-1000~26500-PASS



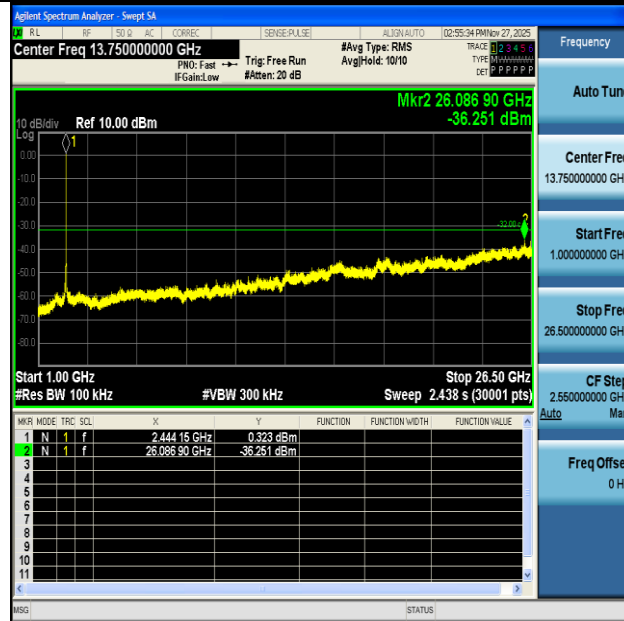


11G-Ant1-2437-0~Reference-PASS

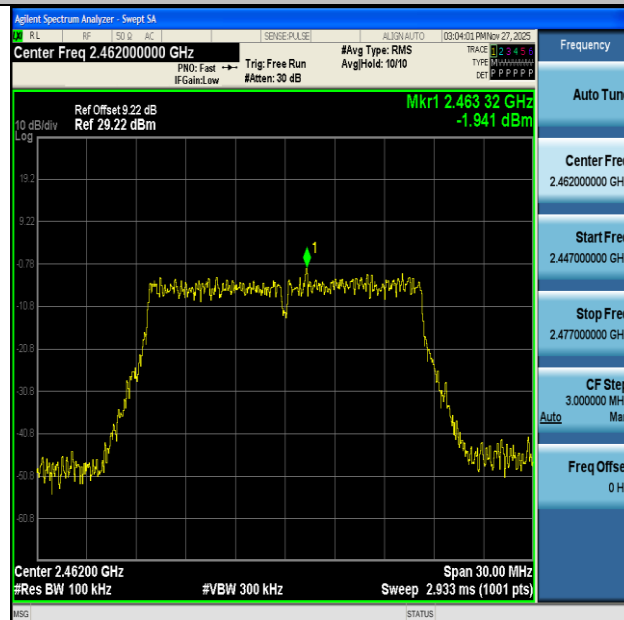


11G-Ant1-2437-30~1000-PASS



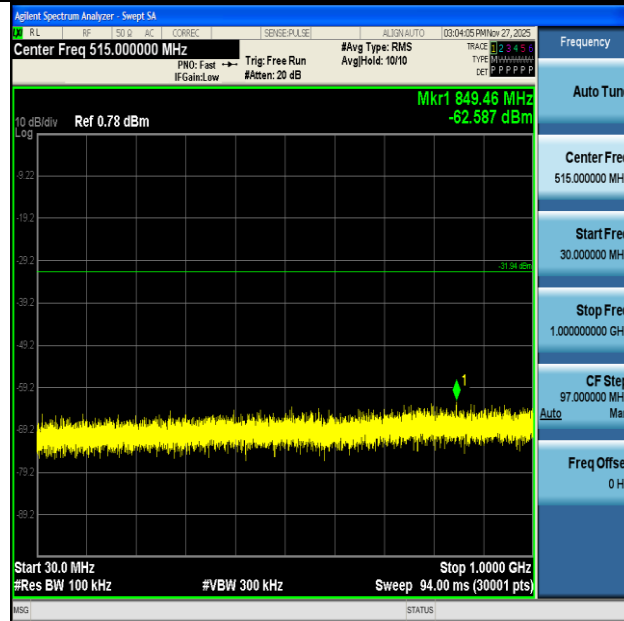


11G-Ant1-2437-1000~26500-PASS

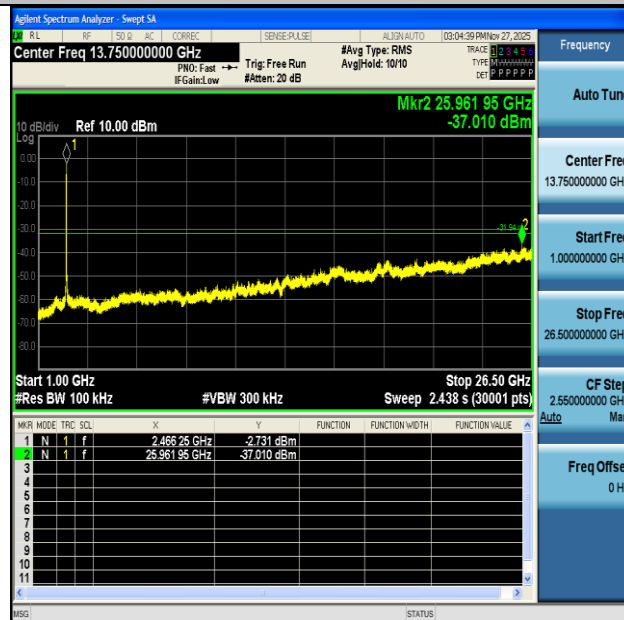


11G-Ant1-2462-0~Reference-PASS



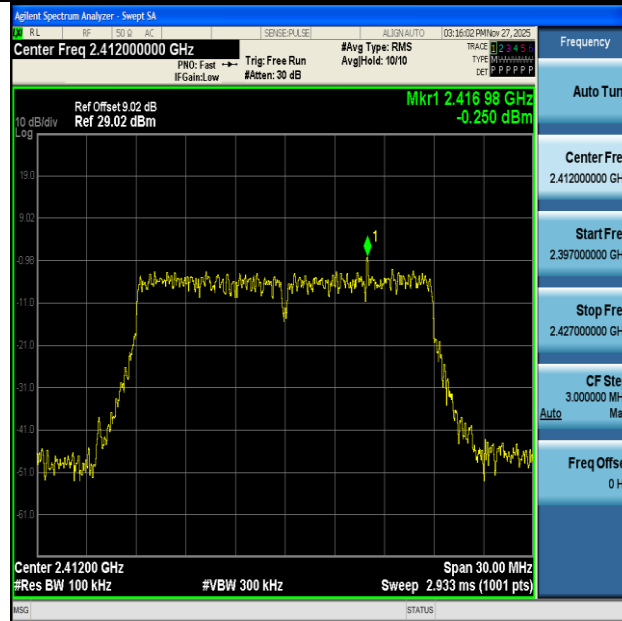


11G-Ant1-2462-30~1000-PASS

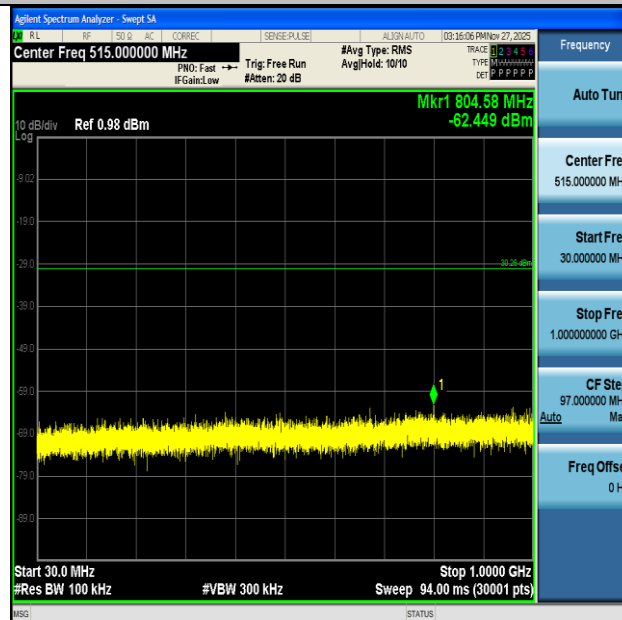


11G-Ant1-2462-1000~26500-PASS



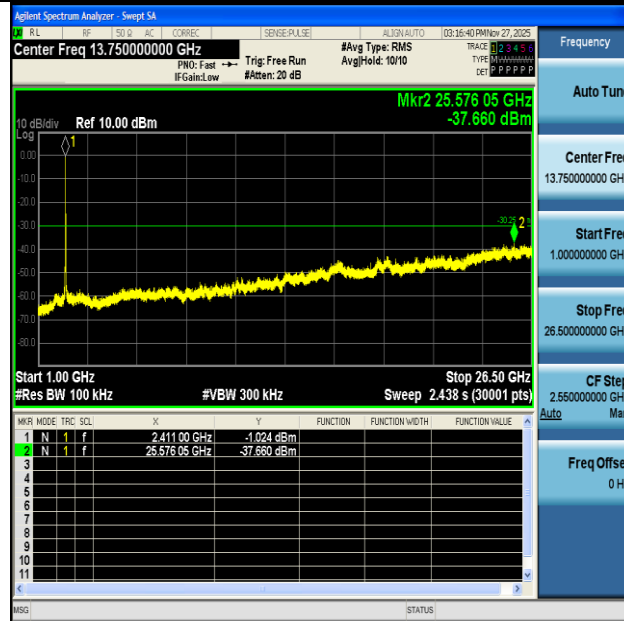


11N20SISO-Ant1-2412-0~Reference-PASS

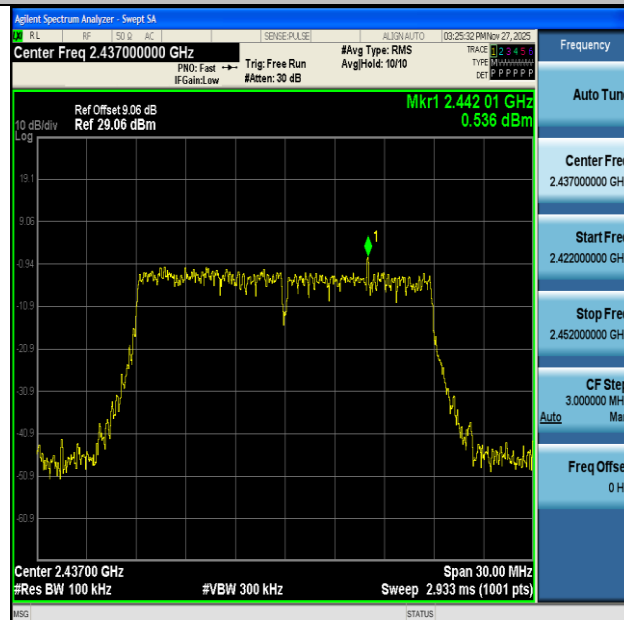


11N20SISO-Ant1-2412-30~1000-PASS



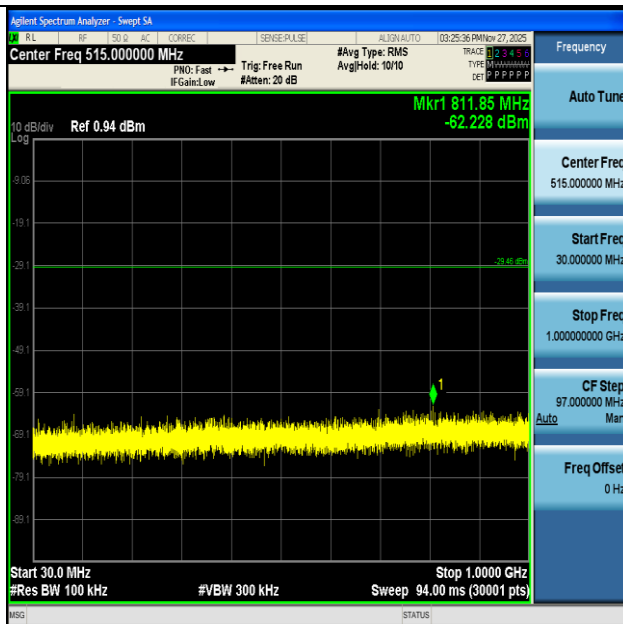


11N20SISO-Ant1-2412-1000~26500-PASS

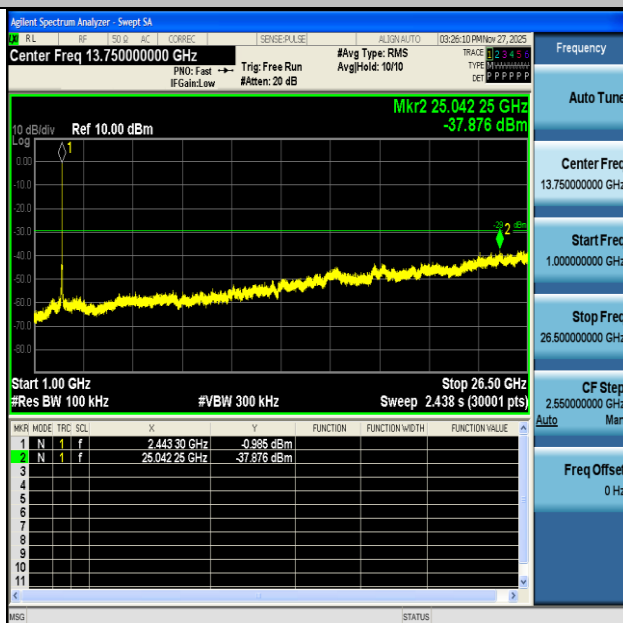


11N20SISO-Ant1-2437-0~Reference-PASS





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

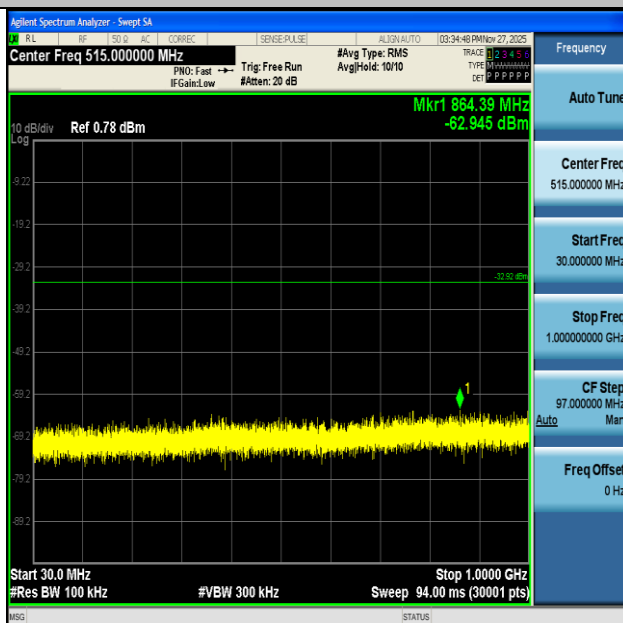


11N20SISO-Ant1-2437-1000~26500-PASS



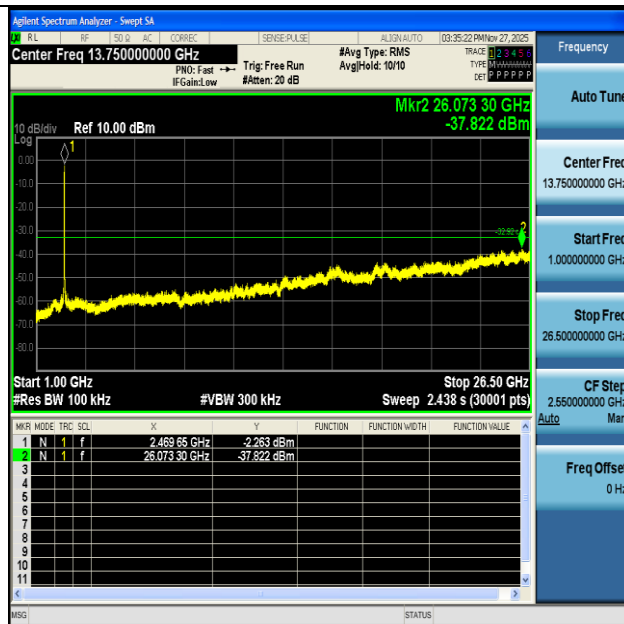


11N20SISO-Ant1-2462-0~Reference-PASS



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





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





Appendix G: Duty Cycle

Test Result

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	16.42	16.45	99.82	0.01
11B	Ant1	2437	16.41	16.45	99.76	0.01
11B	Ant1	2462	16.42	16.45	99.82	0.01
11G	Ant1	2412	2.72	2.76	98.55	0.06
11G	Ant1	2437	2.72	2.76	98.55	0.06
11G	Ant1	2462	2.72	2.76	98.55	0.06
11N20SISO	Ant1	2412	2.53	2.57	98.44	0.07
11N20SISO	Ant1	2437	2.53	2.57	98.44	0.07
11N20SISO	Ant1	2462	2.53	2.57	98.44	0.07

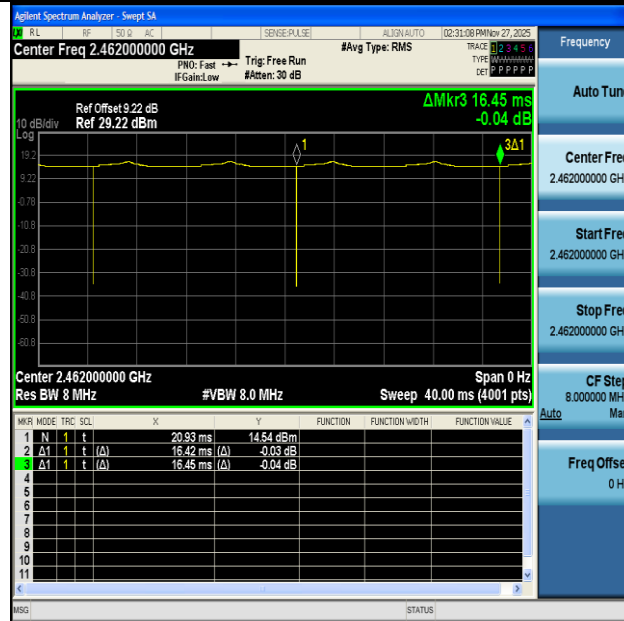
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



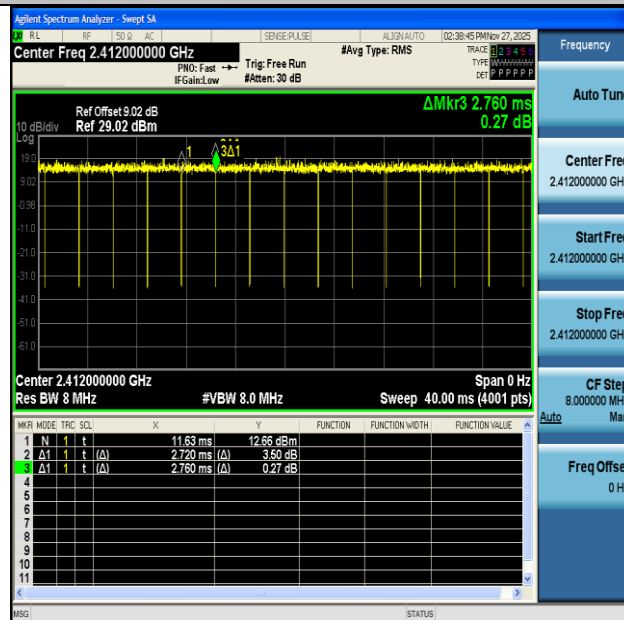


Test Graphs



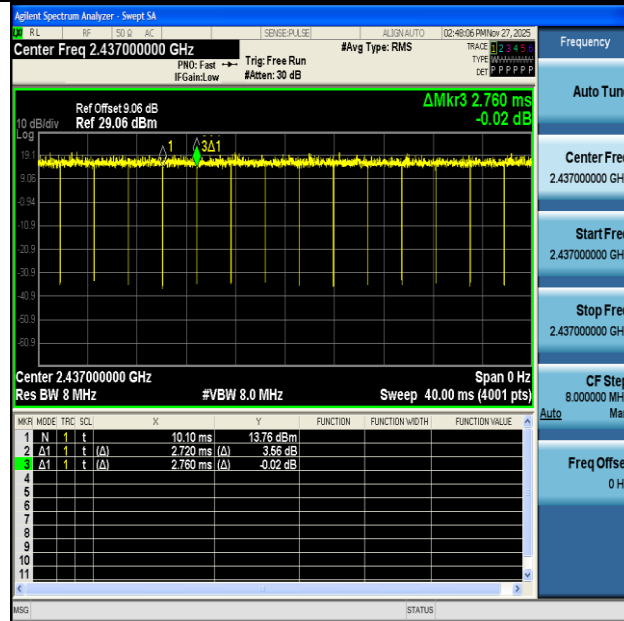


NTNV-11B-Ant1-2462

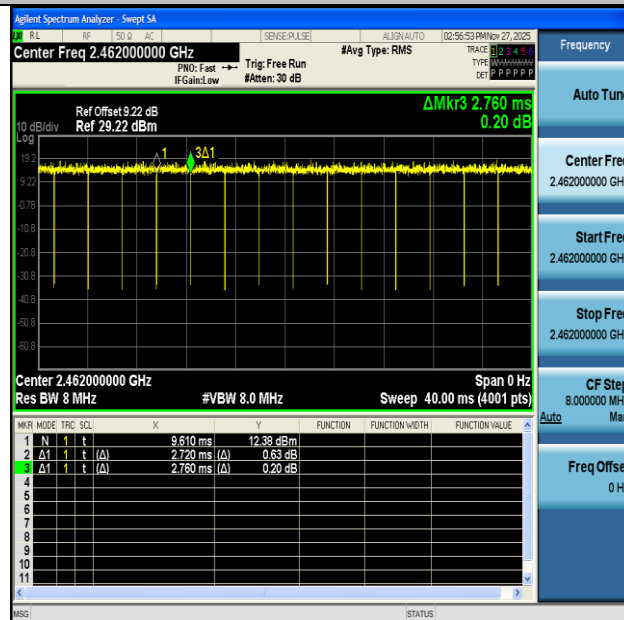


NTNV-11G-Ant1-2412



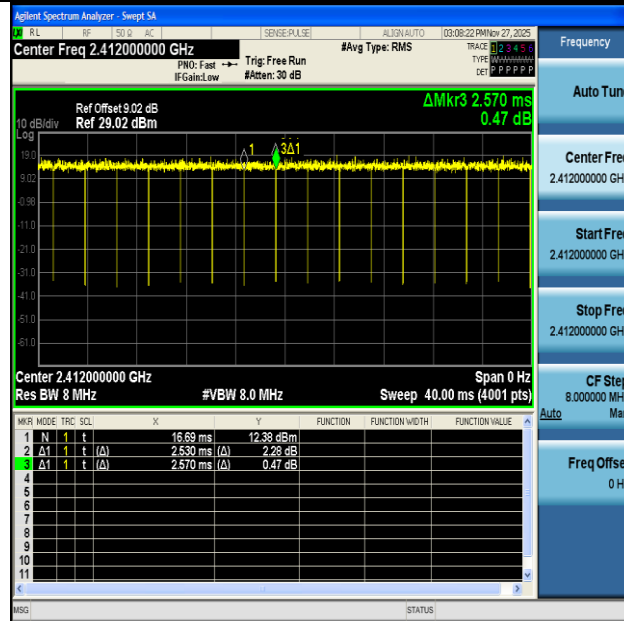


NTNV-11G-Ant1-2437

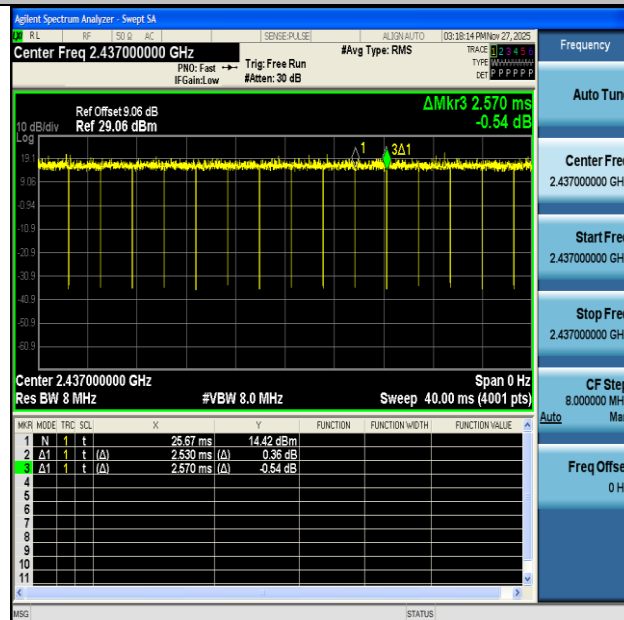


NTNV-11G-Ant1-2462



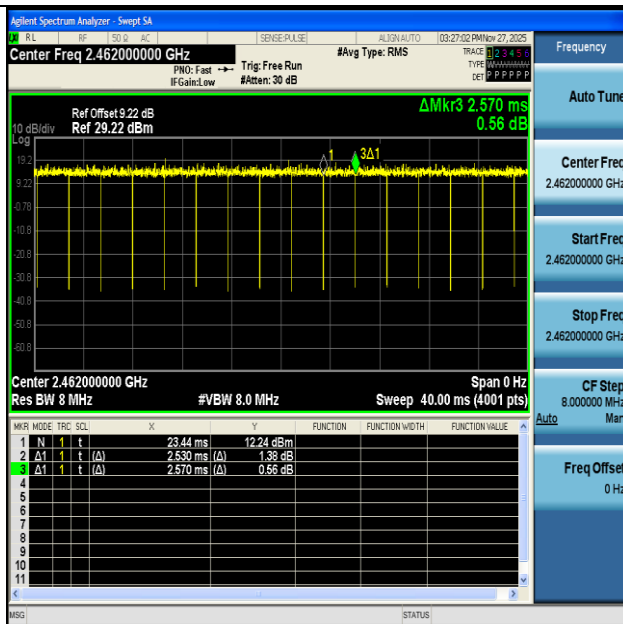


NTNV-11N20SISO-Ant1-2412



NTNV-11N20SISO-Ant1-2437





NTNV-11N20SISO-Ant1-2462

