

## Appendix Test Data for WLAN(2.4G) (Conducted Measurement)

Product Name: Motorcycle DVR Dash Camera

Trade Mark: HFK

Test Model: HM502

FCC ID: 2BFHY-HM502

### Environmental Conditions

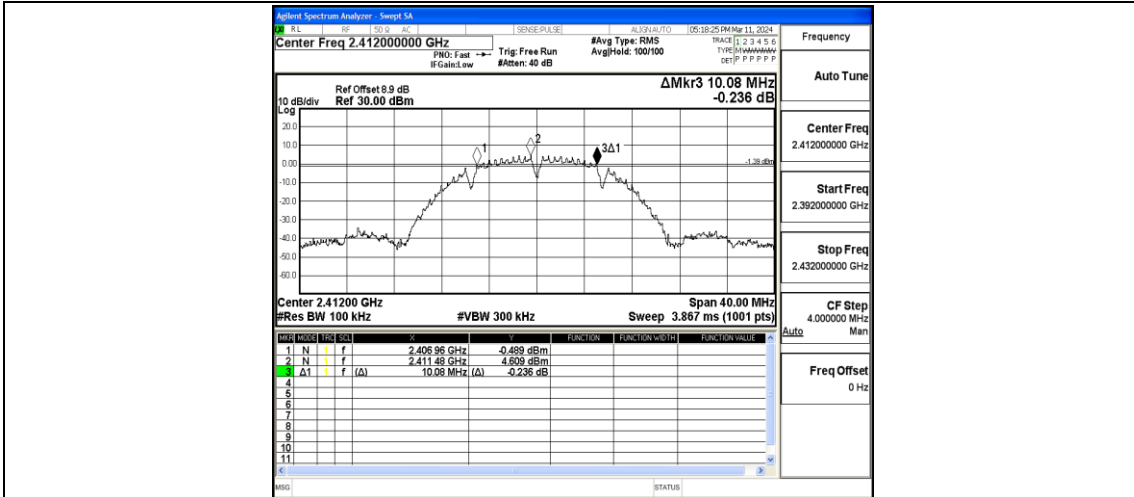
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

## Appendix A: DTS Bandwidth

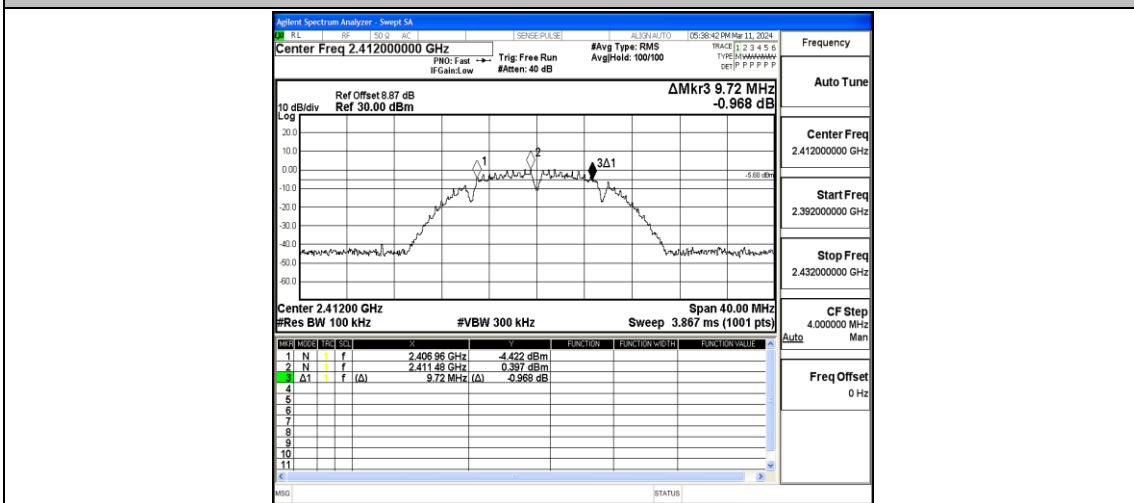
### Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
11B	Ant2	2412	9.720	2406.960	2416.680	0.5	PASS
11B	Ant1	2437	10.080	2431.960	2442.040	0.5	PASS
11B	Ant2	2437	10.080	2431.960	2442.040	0.5	PASS
11B	Ant1	2462	10.080	2456.960	2467.040	0.5	PASS
11B	Ant2	2462	10.040	2456.960	2467.000	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
11G	Ant2	2412	15.080	2404.440	2419.520	0.5	PASS
11G	Ant1	2437	15.880	2428.880	2444.760	0.5	PASS
11G	Ant2	2437	16.320	2428.840	2445.160	0.5	PASS
11G	Ant1	2462	14.840	2454.720	2469.560	0.5	PASS
11G	Ant2	2462	16.040	2453.880	2469.920	0.5	PASS
11N20MIMO	Ant1	2412	16.000	2404.120	2420.120	0.5	PASS
11N20MIMO	Ant2	2412	16.640	2403.520	2420.160	0.5	PASS
11N20MIMO	Ant1	2437	15.600	2429.160	2444.760	0.5	PASS
11N20MIMO	Ant2	2437	15.400	2429.120	2444.520	0.5	PASS
11N20MIMO	Ant1	2462	17.320	2453.440	2470.760	0.5	PASS
11N20MIMO	Ant2	2462	16.480	2453.640	2470.120	0.5	PASS
11N40MIMO	Ant1	2422	34.400	2405.120	2439.520	0.5	PASS
11N40MIMO	Ant2	2422	35.120	2404.400	2439.520	0.5	PASS
11N40MIMO	Ant1	2437	35.120	2419.400	2454.520	0.5	PASS
11N40MIMO	Ant2	2437	34.080	2419.400	2453.480	0.5	PASS
11N40MIMO	Ant1	2452	35.040	2434.480	2469.520	0.5	PASS
11N40MIMO	Ant2	2452	35.120	2434.400	2469.520	0.5	PASS

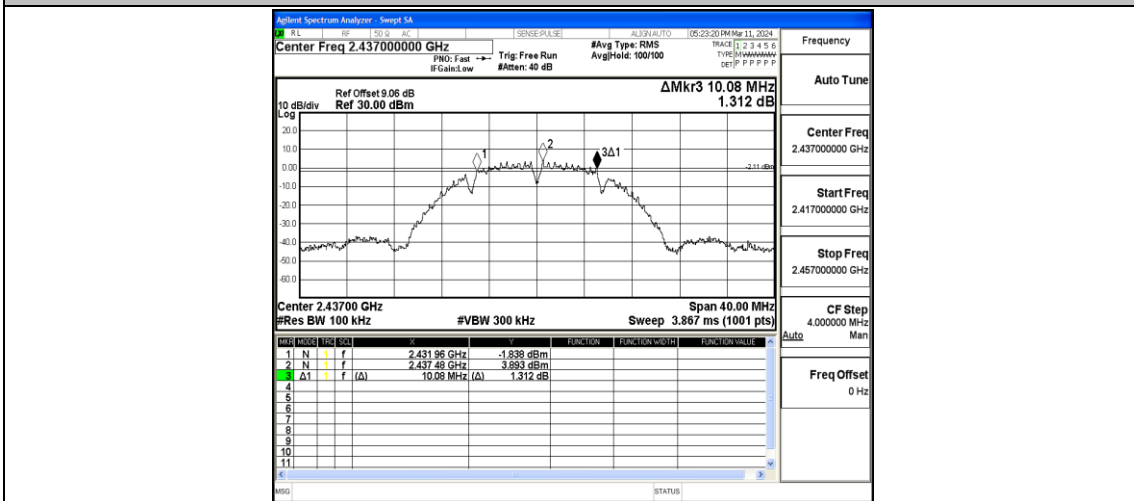
### Test Graphs



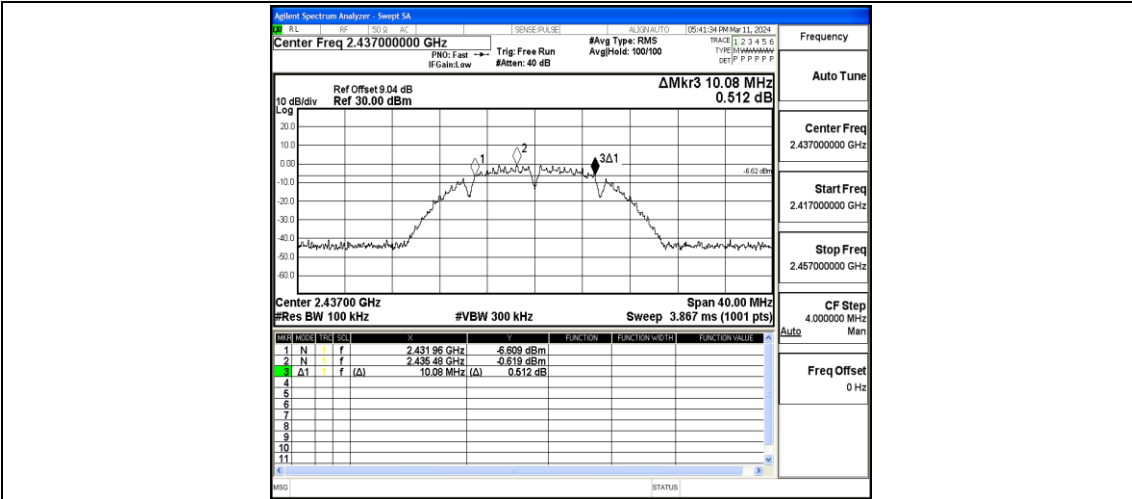
11B-Ant1-2412-PASS



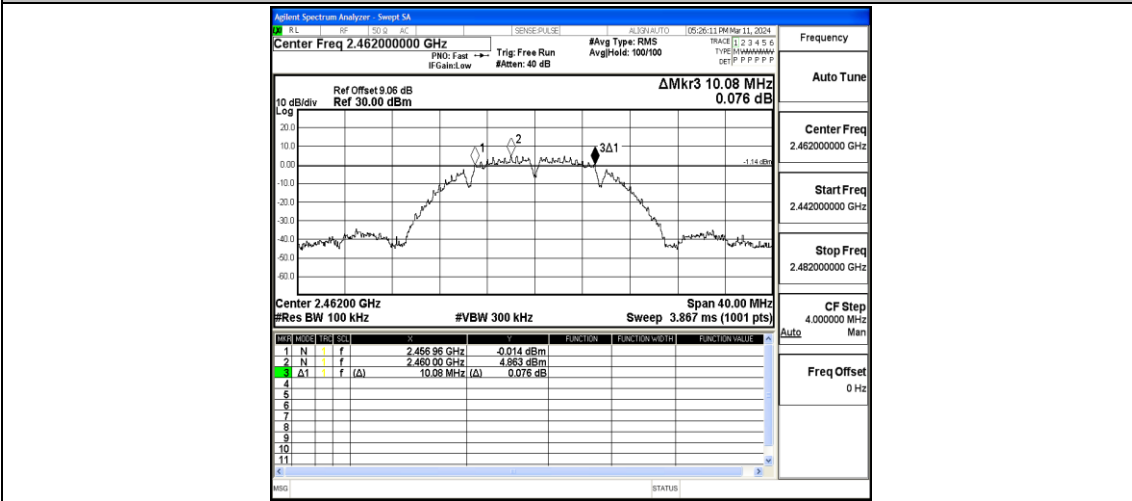
11B-Ant2-2412-PASS



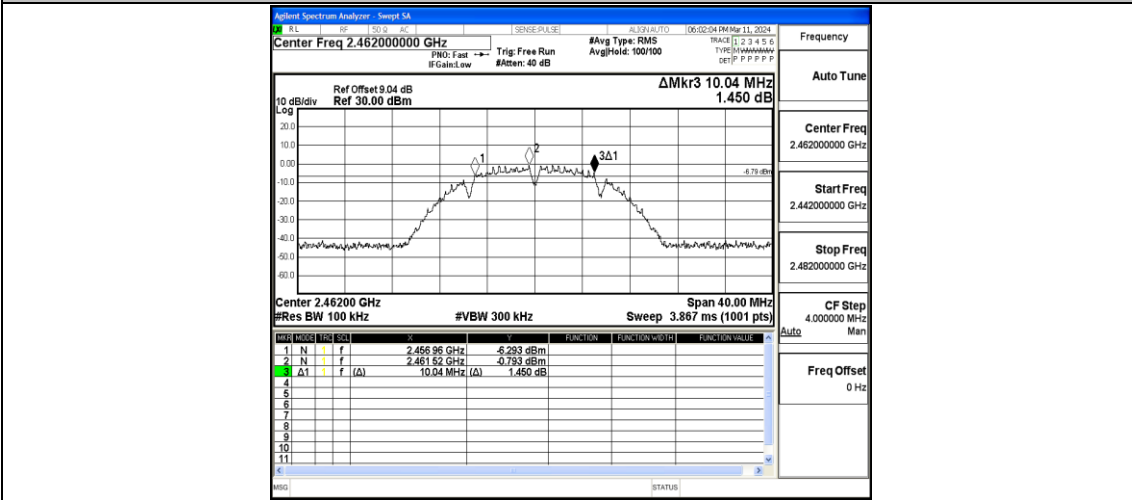
11B-Ant1-2437-PASS



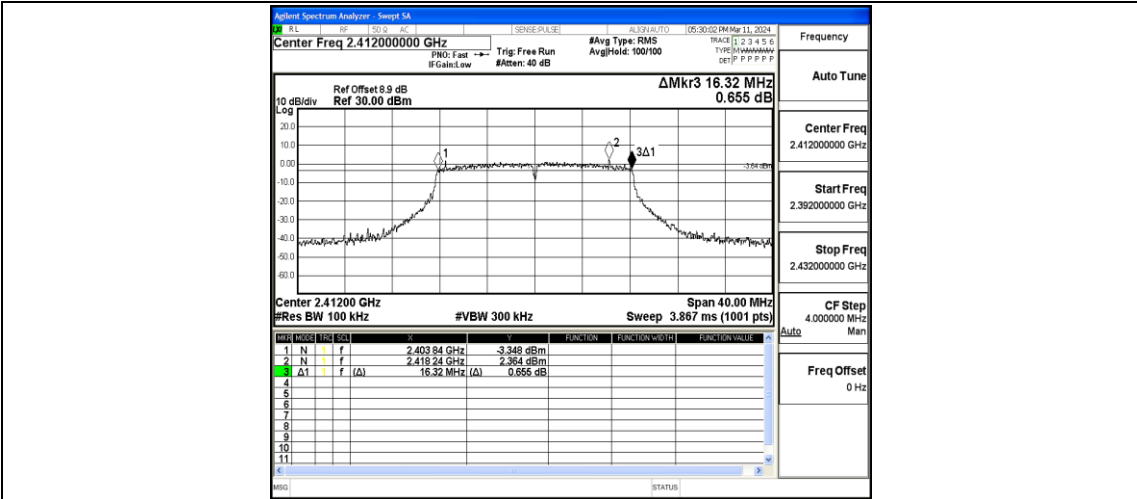
11B-Ant2-2437-PASS



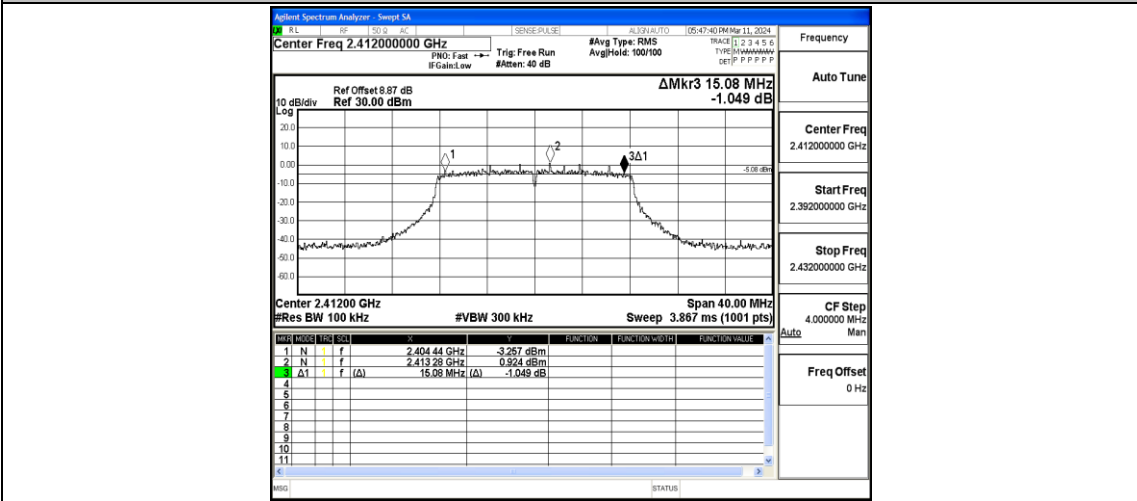
11B-Ant1-2462-PASS



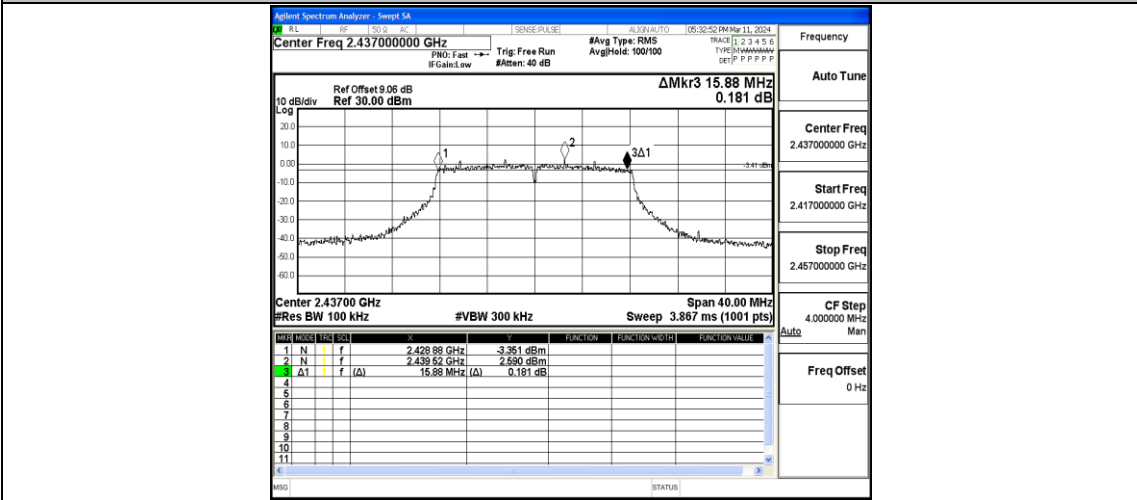
11B-Ant2-2462-PASS



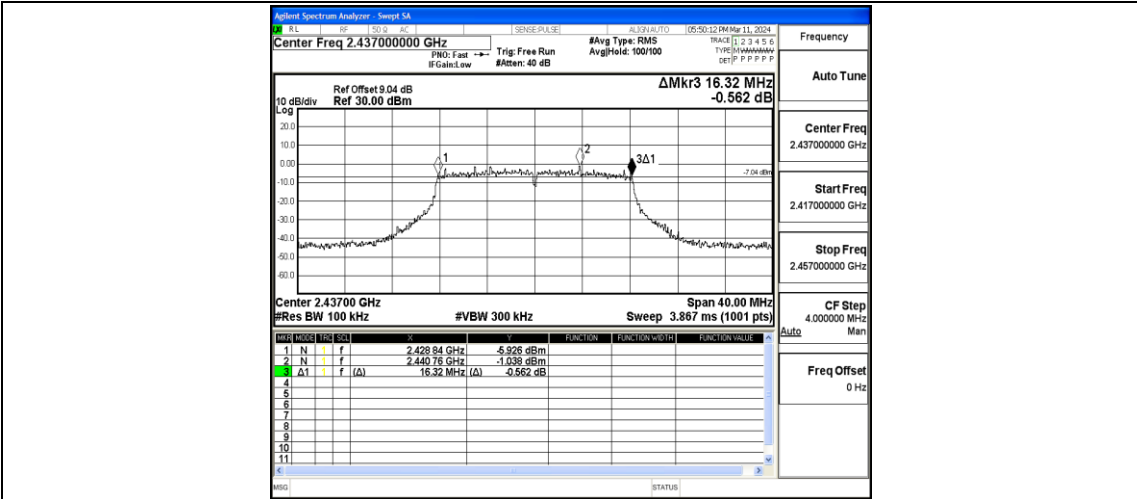
11G-Ant1-2412-PASS



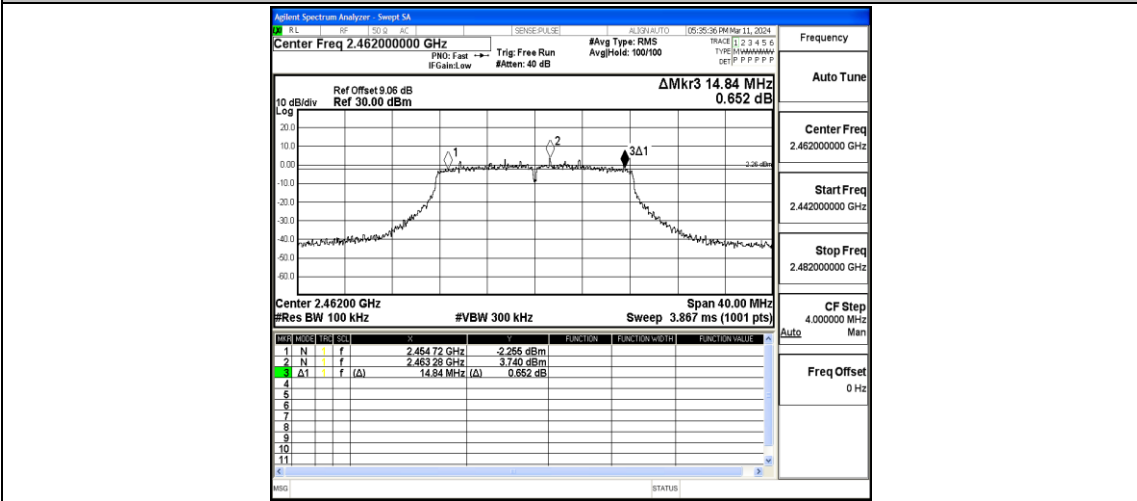
11G-Ant2-2412-PASS



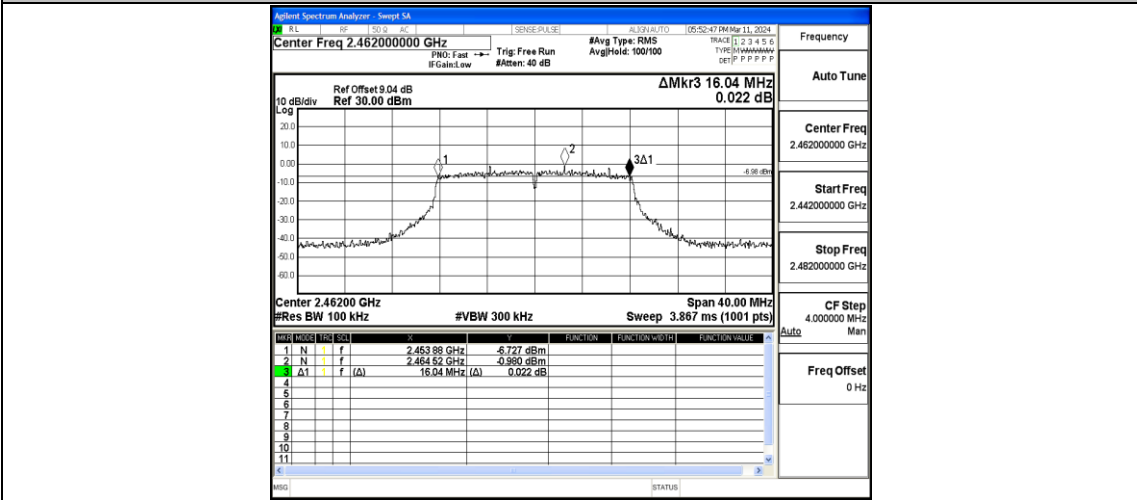
11G-Ant1-2437-PASS



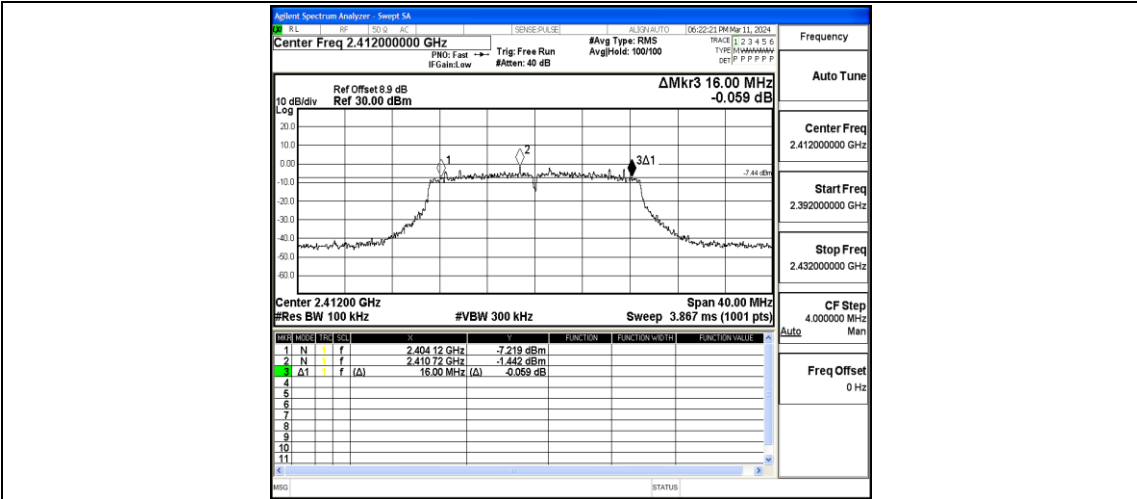
11G-Ant2-2437-PASS



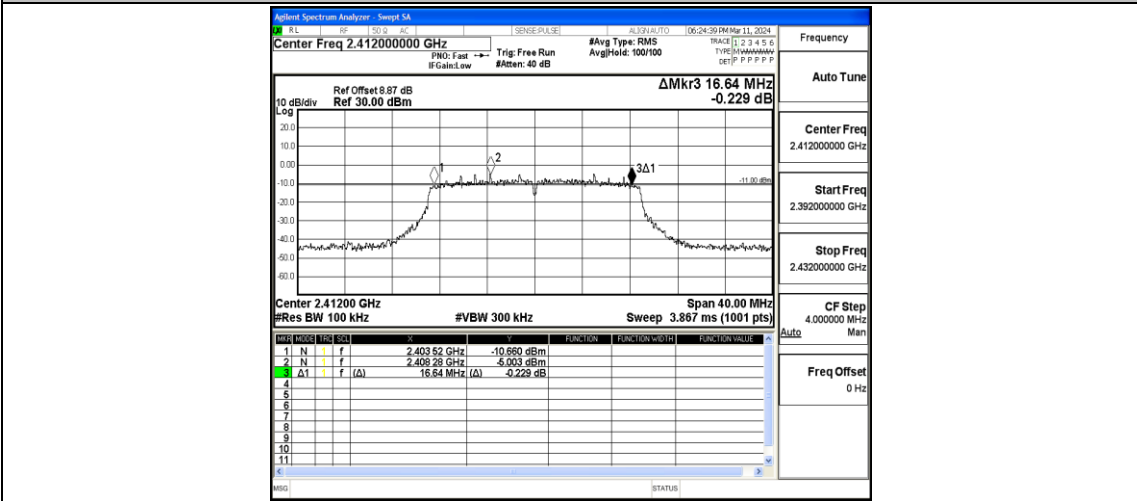
11G-Ant1-2462-PASS



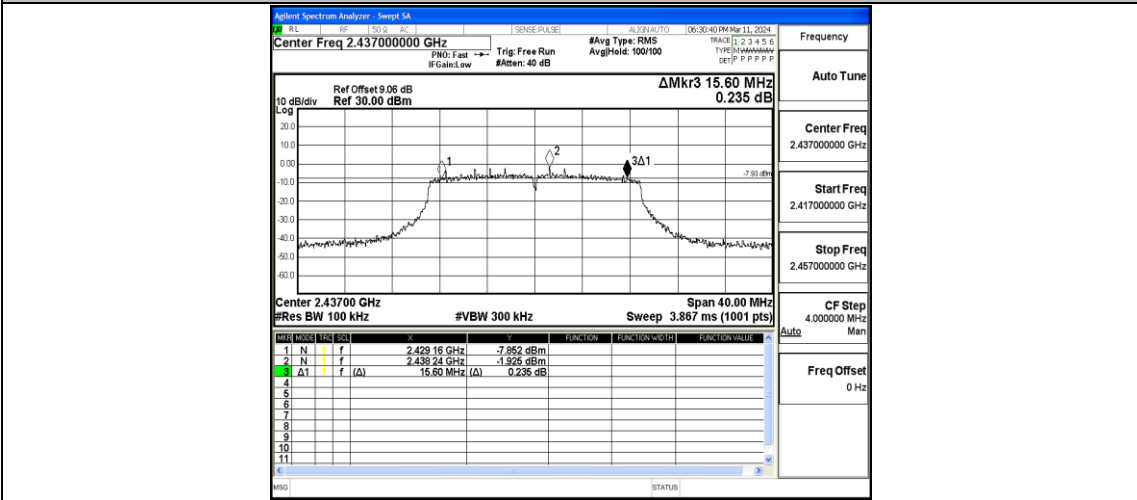
11G-Ant2-2462-PASS



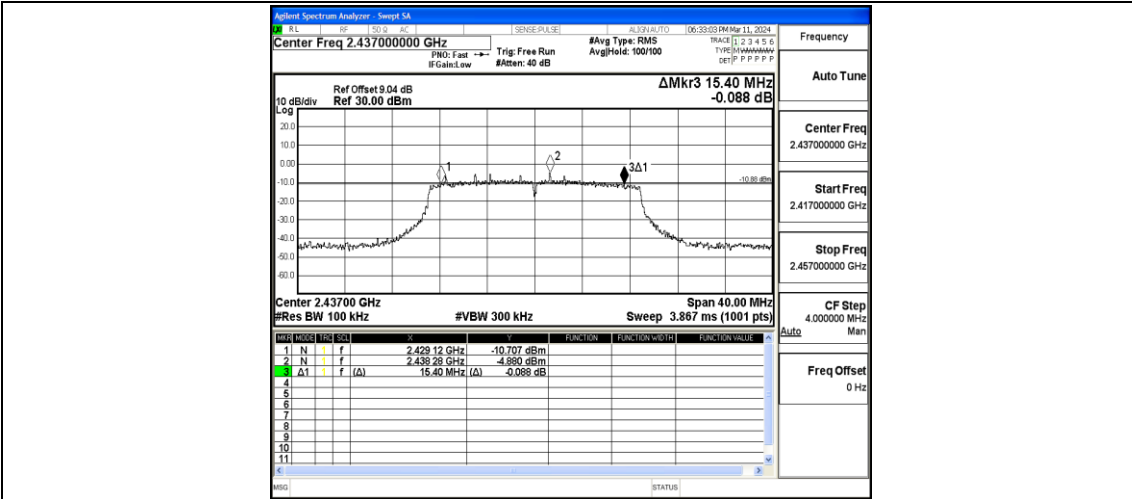
11N20MIMO-Ant1-2412-PASS



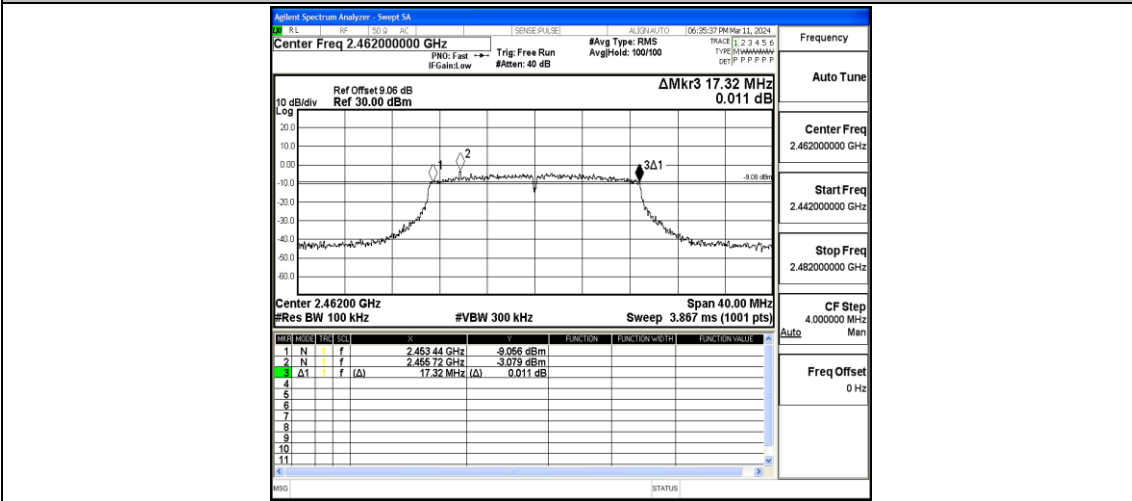
11N20MIMO-Ant2-2412-PASS



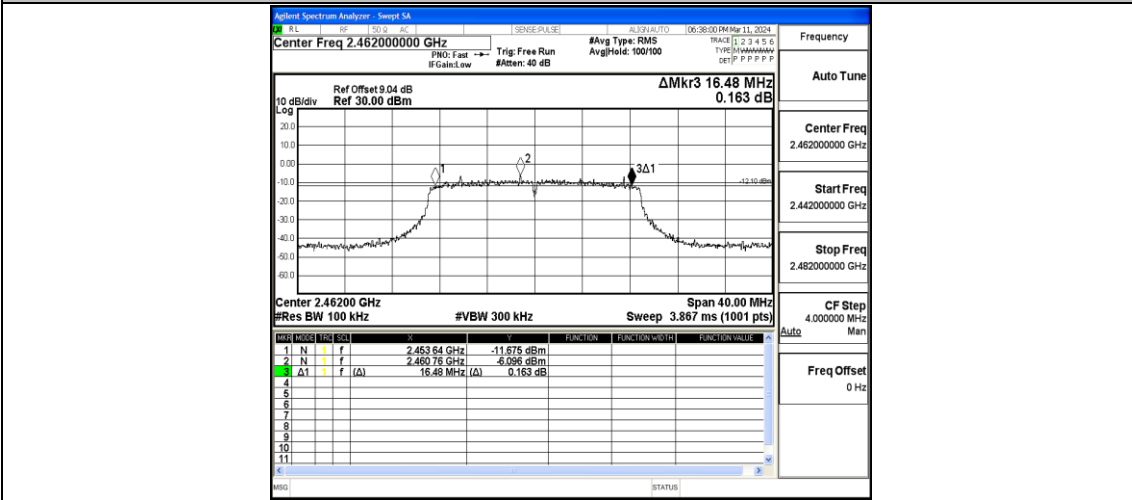
11N20MIMO-Ant1-2437-PASS



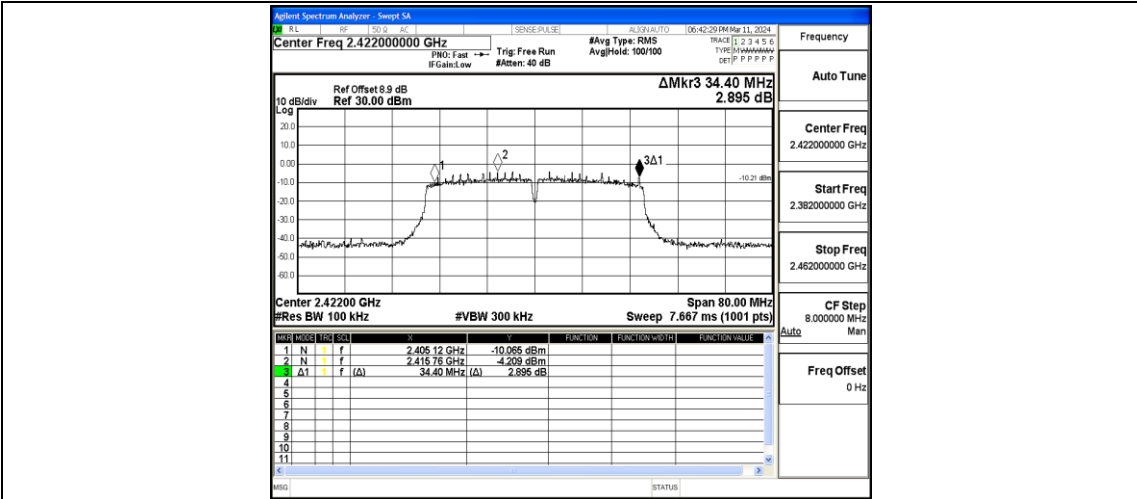
11N20MIMO-Ant2-2437-PASS



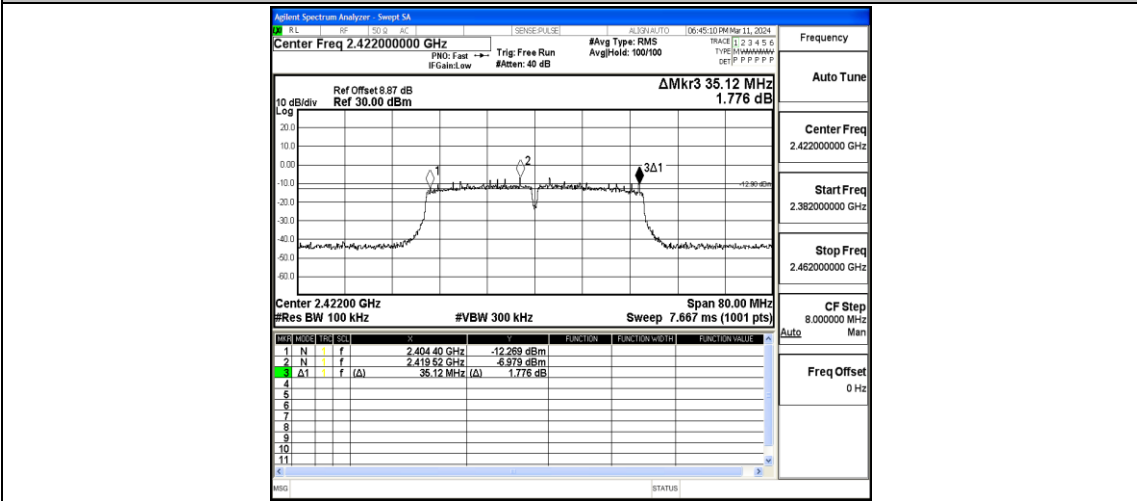
11N20MIMO-Ant1-2462-PASS



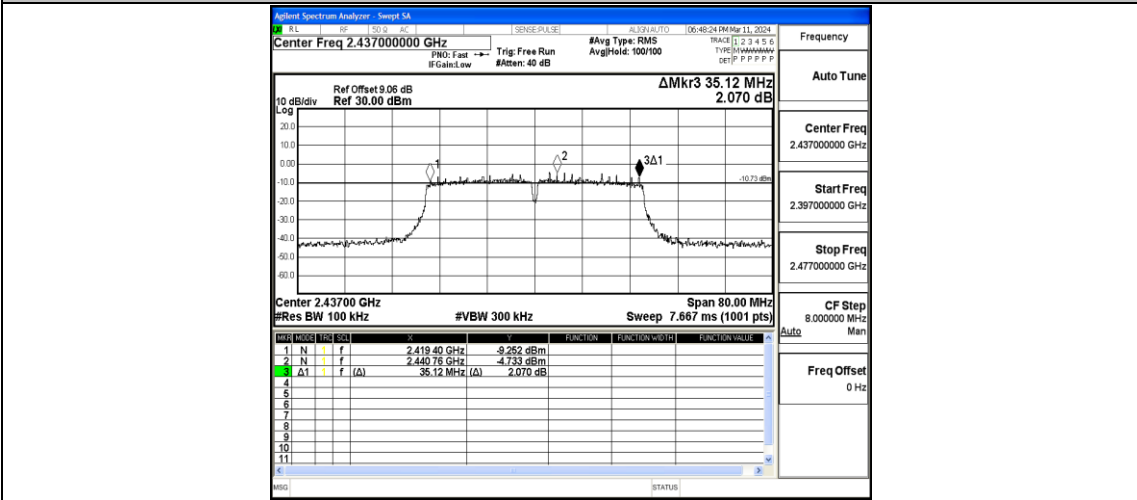
11N20MIMO-Ant2-2462-PASS



11N40MIMO-Ant1-2422-PASS

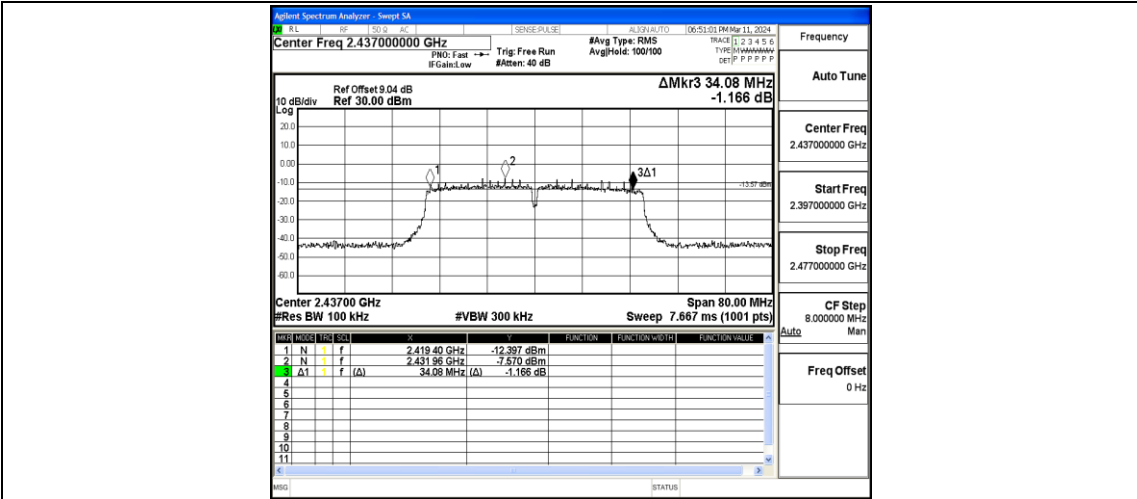


11N40MIMO-Ant2-2422-PASS

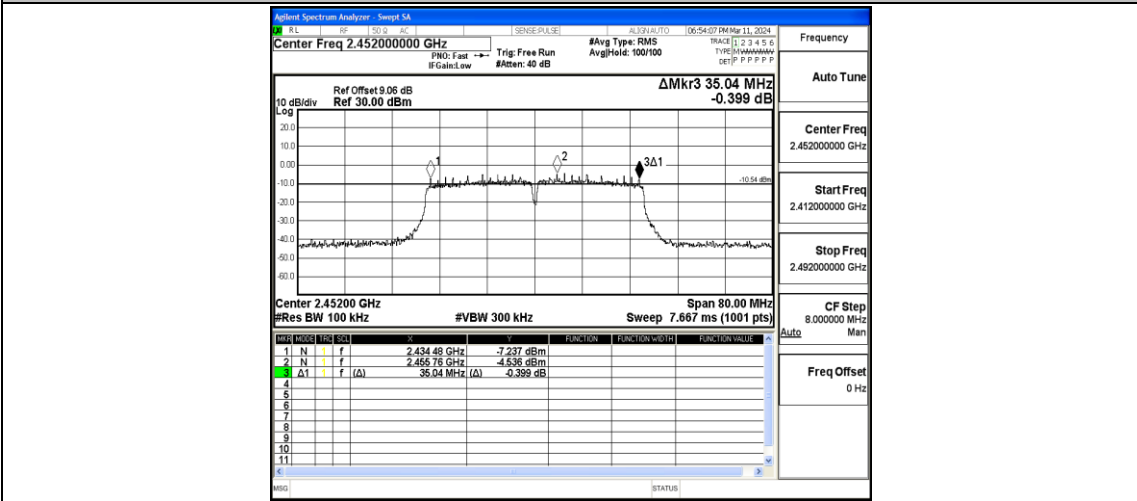


11N40MIMO-Ant1-2437-PASS

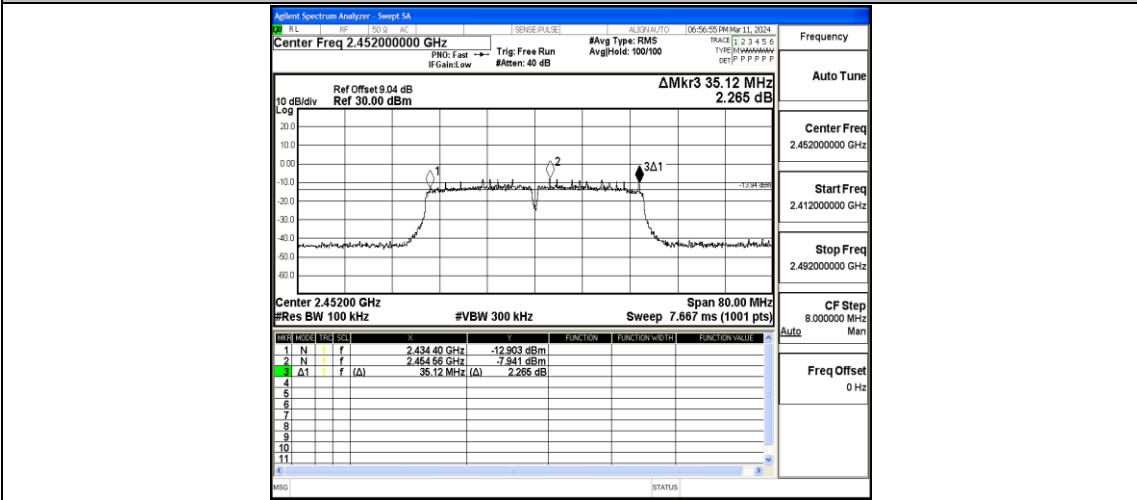




11N40MIMO-Ant2-2437-PASS



11N40MIMO-Ant1-2452-PASS



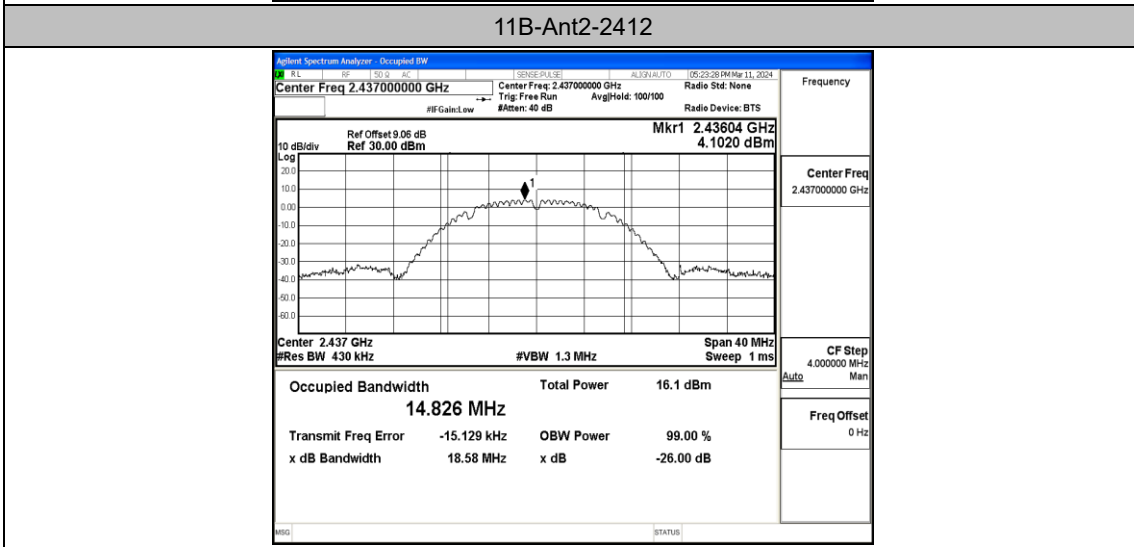
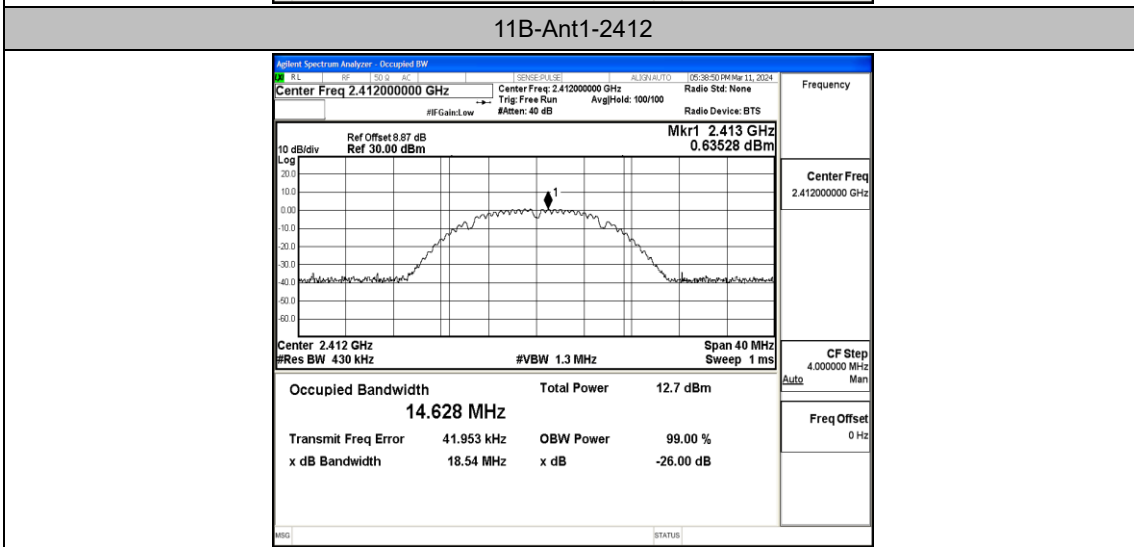
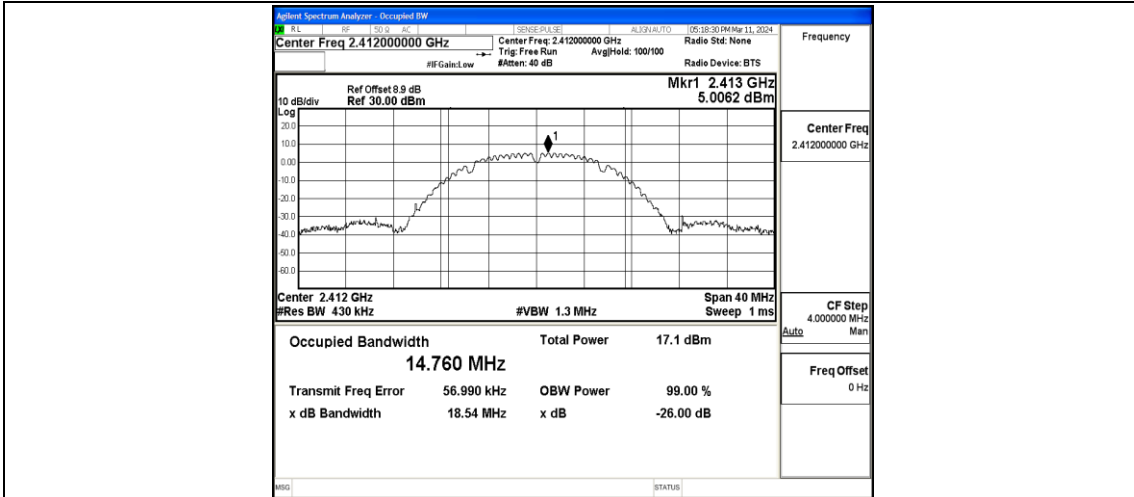
11N40MIMO-Ant2-2452-PASS

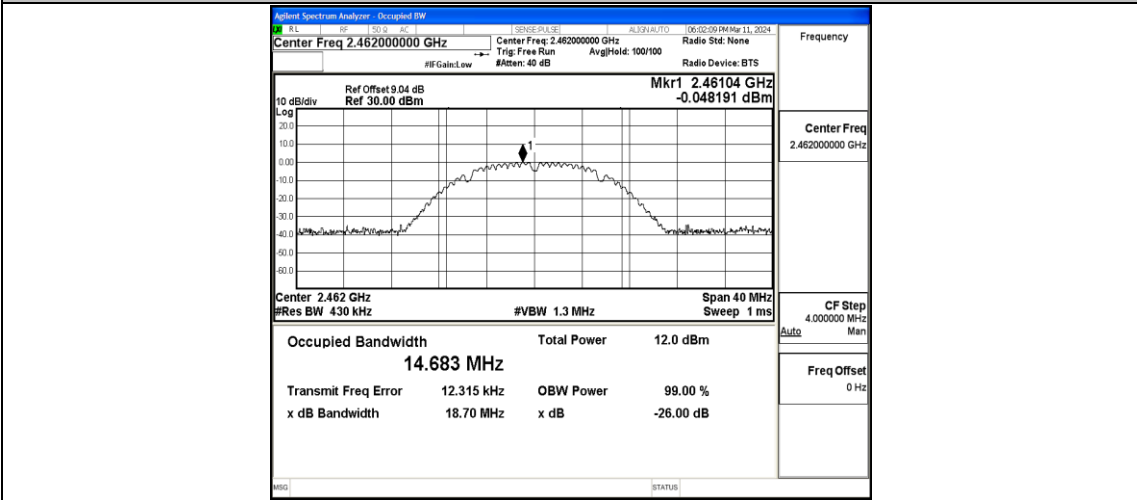
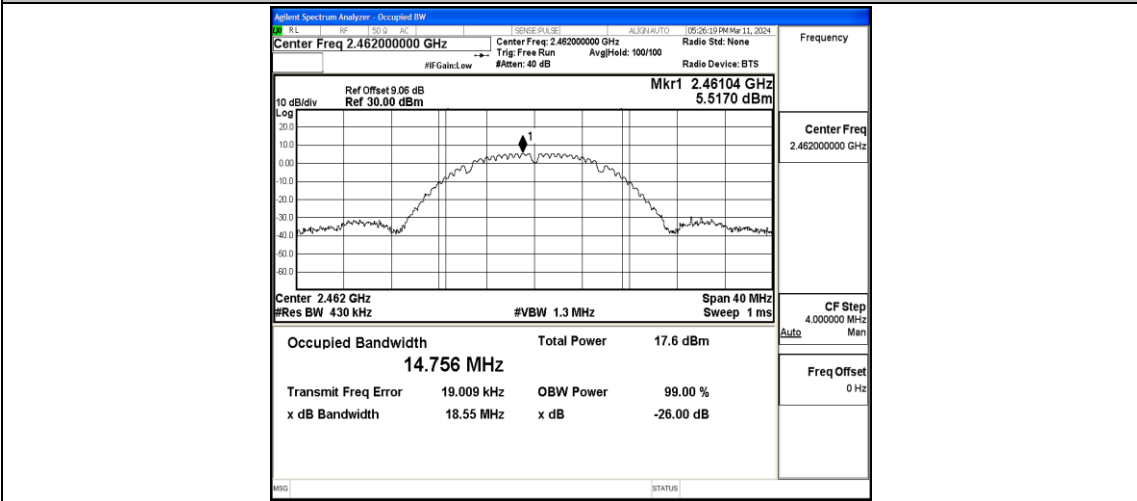
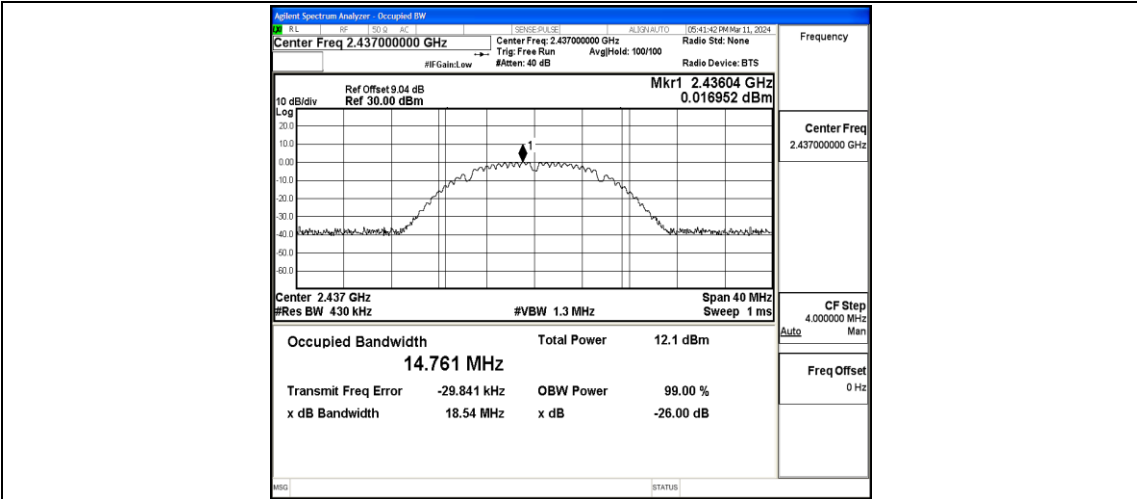
## Appendix B: Occupied Channel Bandwidth

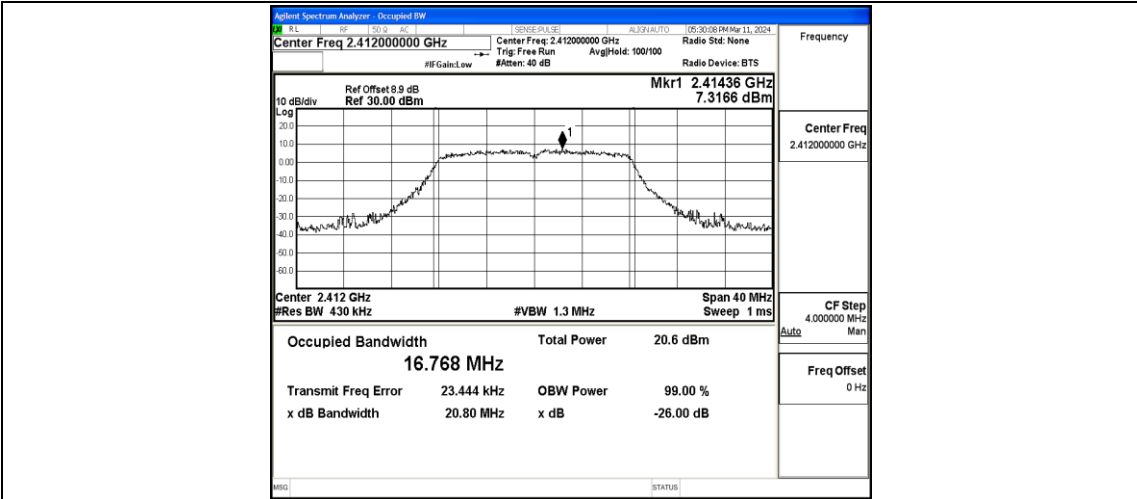
### Test Result

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.760	2404.6770	2419.4370	---	---
11B	Ant2	2412	14.628	2404.7280	2419.3560	---	---
11B	Ant1	2437	14.826	2429.5719	2444.3979	---	---
11B	Ant2	2437	14.761	2429.5897	2444.3507	---	---
11B	Ant1	2462	14.756	2454.6410	2469.3970	---	---
11B	Ant2	2462	14.683	2454.6708	2469.3538	---	---
11G	Ant1	2412	16.768	2403.6394	2420.4074	---	---
11G	Ant2	2412	16.590	2403.7646	2420.3546	---	---
11G	Ant1	2437	16.849	2428.5459	2445.3949	---	---
11G	Ant2	2437	16.672	2428.6671	2445.3391	---	---
11G	Ant1	2462	16.753	2453.6355	2470.3885	---	---
11G	Ant2	2462	16.654	2453.7008	2470.3548	---	---
11N20MIMO	Ant1	2412	17.908	2403.1395	2421.0475	---	---
11N20MIMO	Ant2	2412	17.821	2403.1455	2420.9665	---	---
11N20MIMO	Ant1	2437	17.871	2428.1234	2445.9944	---	---
11N20MIMO	Ant2	2437	17.824	2428.1104	2445.9344	---	---
11N20MIMO	Ant1	2462	17.823	2453.1410	2470.9640	---	---
11N20MIMO	Ant2	2462	17.834	2453.1301	2470.9641	---	---
11N40MIMO	Ant1	2422	36.119	2403.9836	2440.1026	---	---
11N40MIMO	Ant2	2422	36.202	2403.9045	2440.1065	---	---
11N40MIMO	Ant1	2437	36.427	2418.8213	2455.2483	---	---
11N40MIMO	Ant2	2437	36.435	2418.7891	2455.2241	---	---
11N40MIMO	Ant1	2452	36.193	2433.9835	2470.1765	---	---
11N40MIMO	Ant2	2452	36.322	2433.9484	2470.2704	---	---

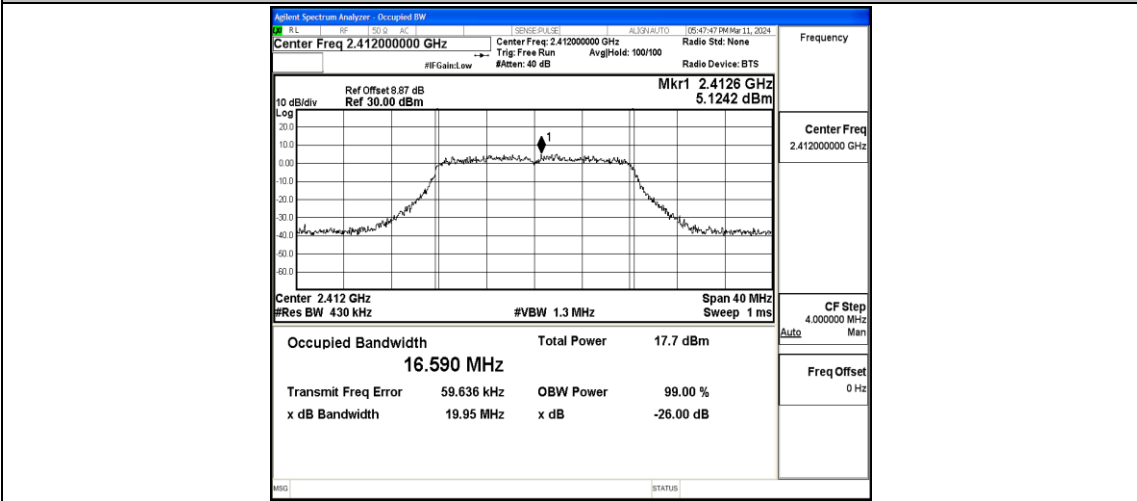
### Test Graphs



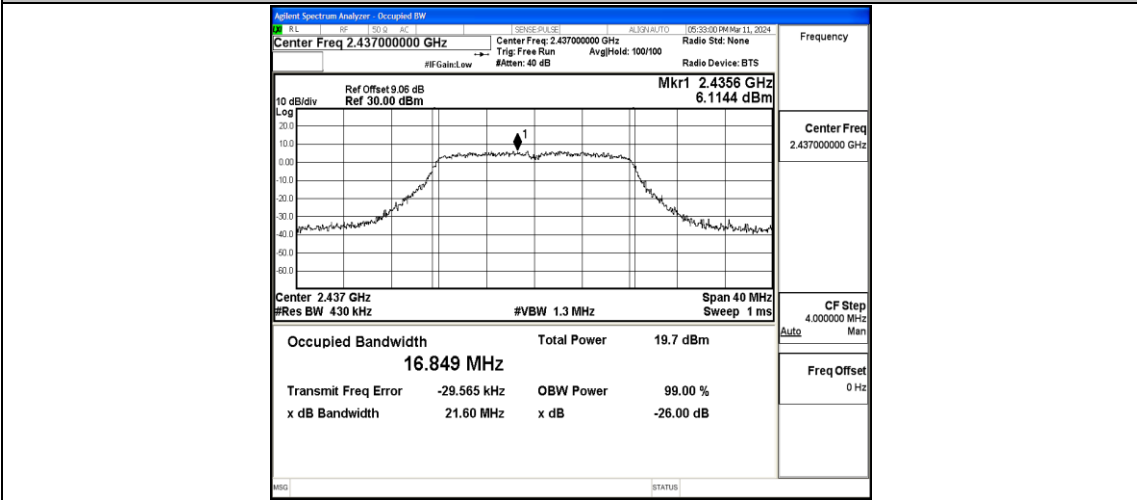




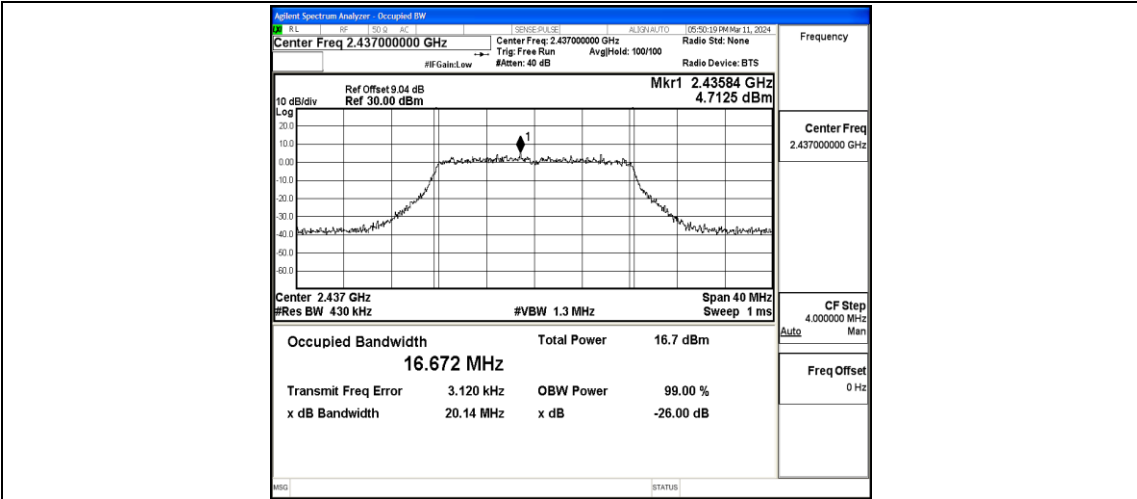
11G-Ant1-2412



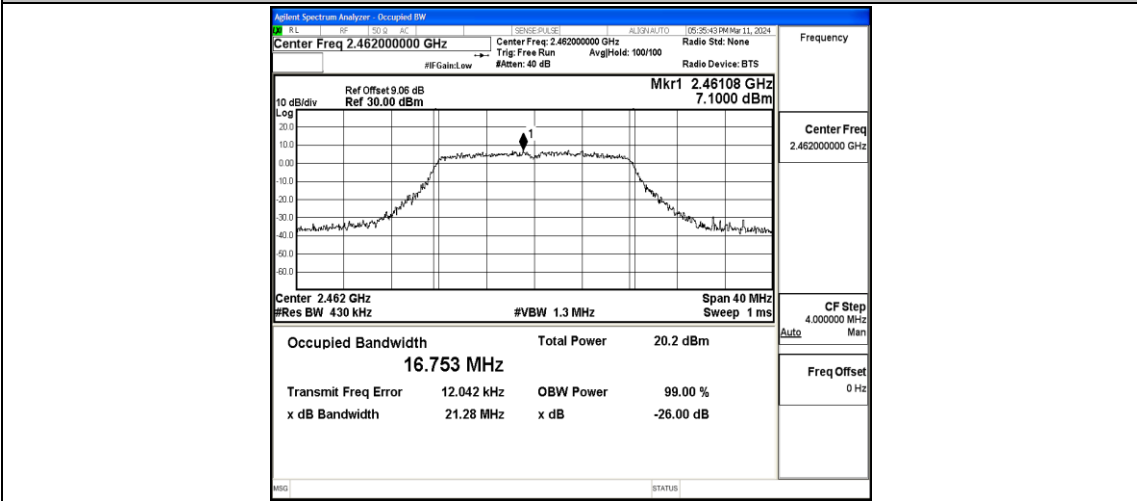
11G-Ant2-2412



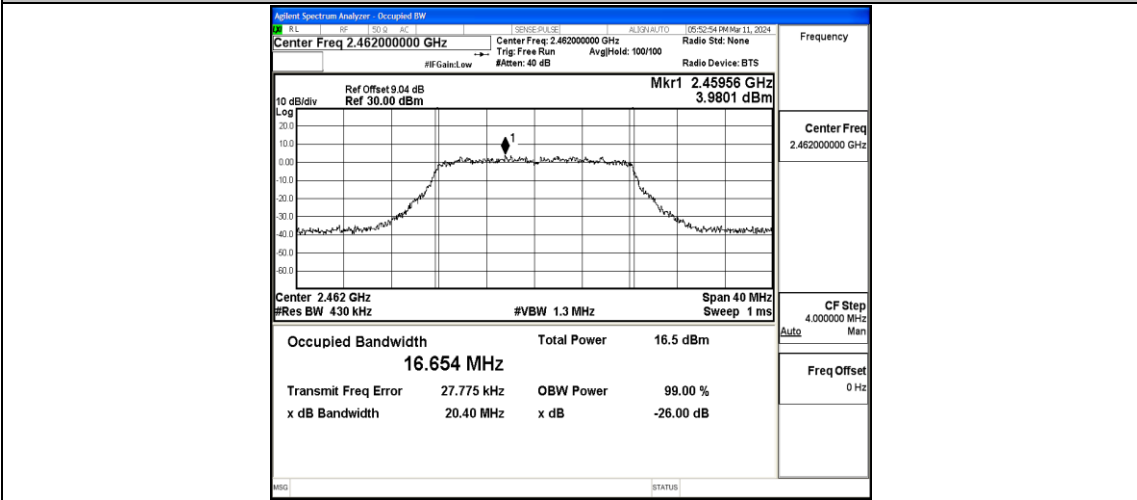
11G-Ant1-2437



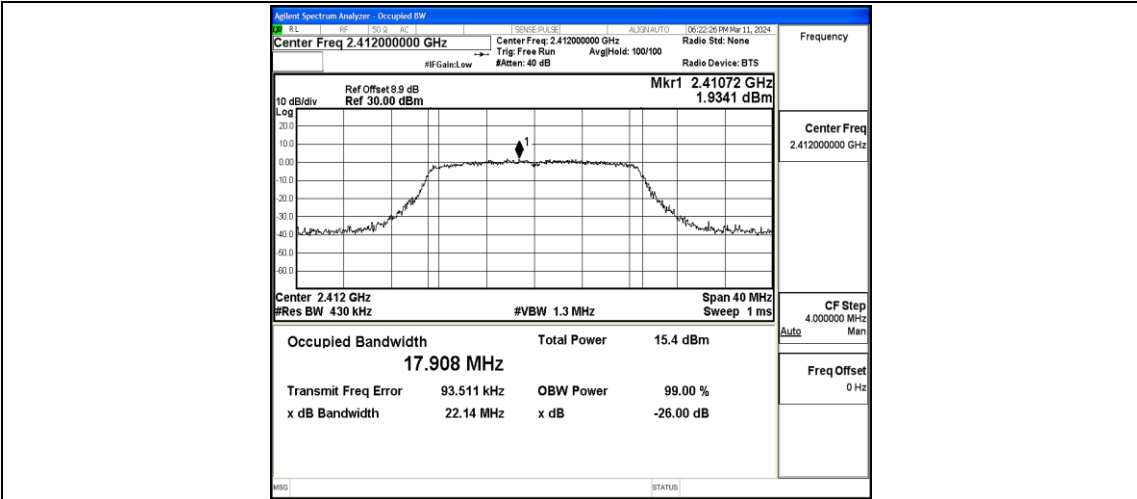
11G-Ant2-2437



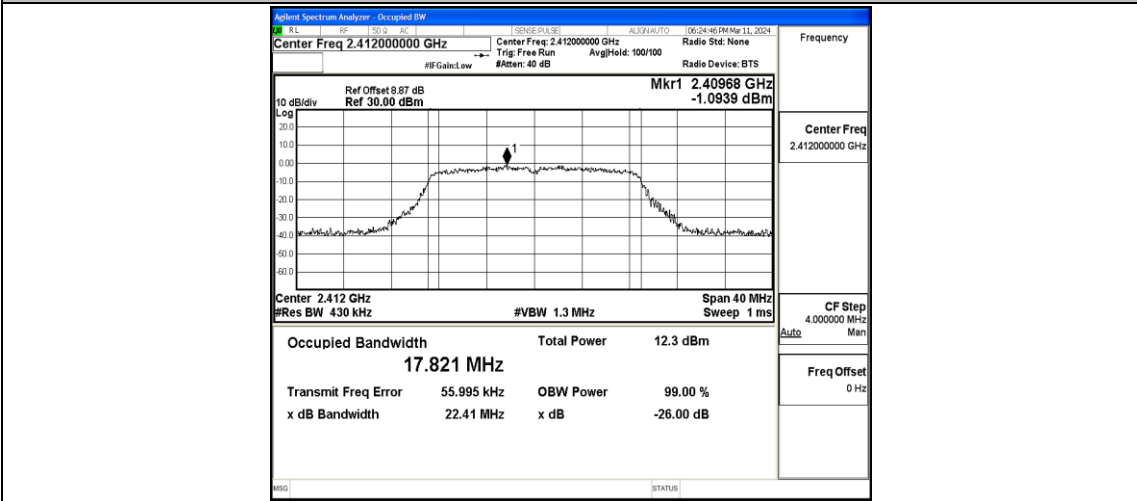
11G-Ant1-2462



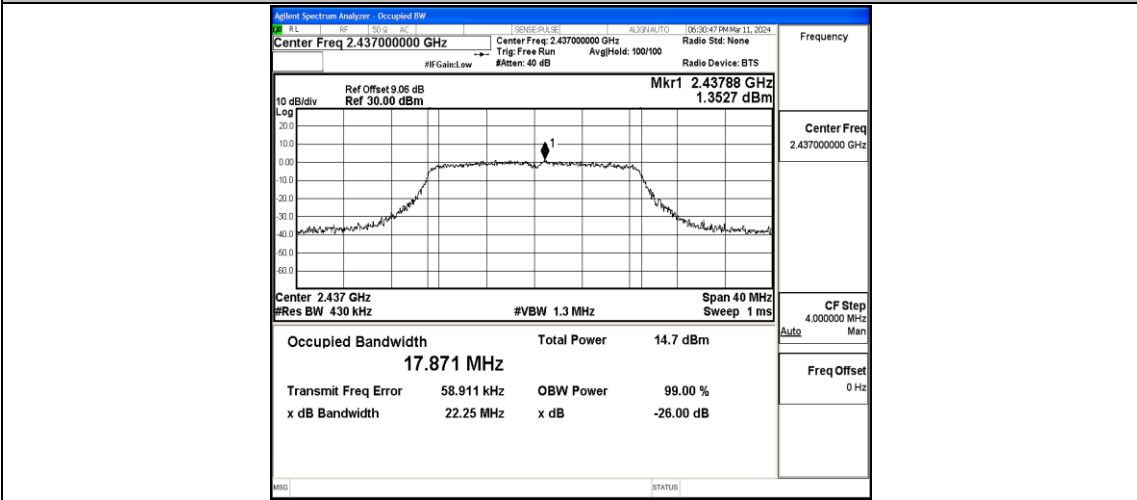
11G-Ant2-2462



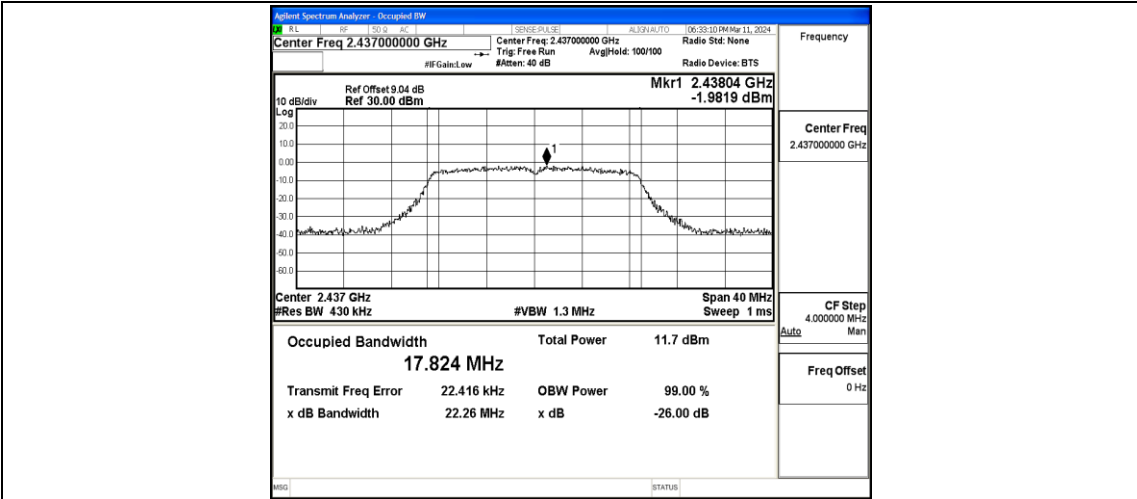
11N20MIMO-Ant1-2412



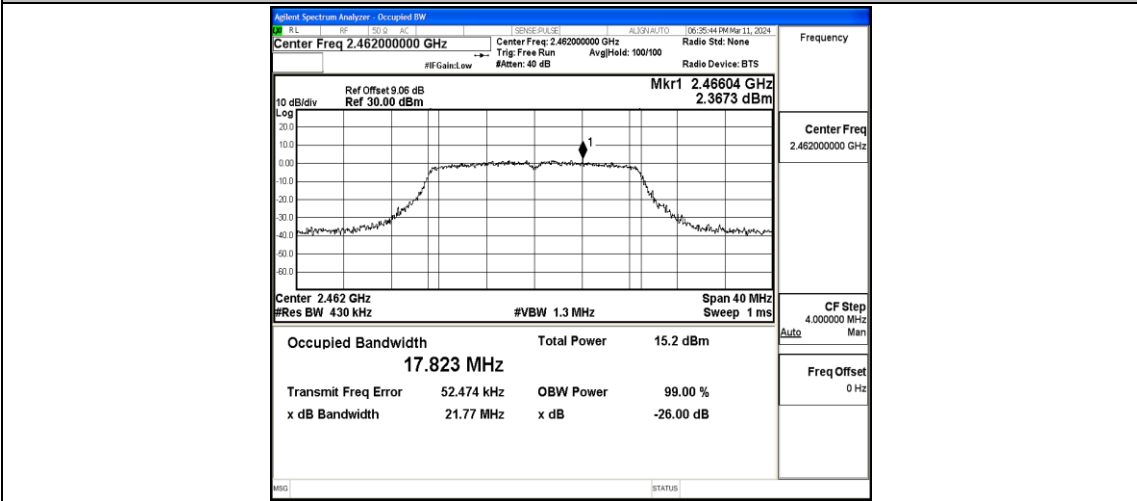
11N20MIMO-Ant2-2412



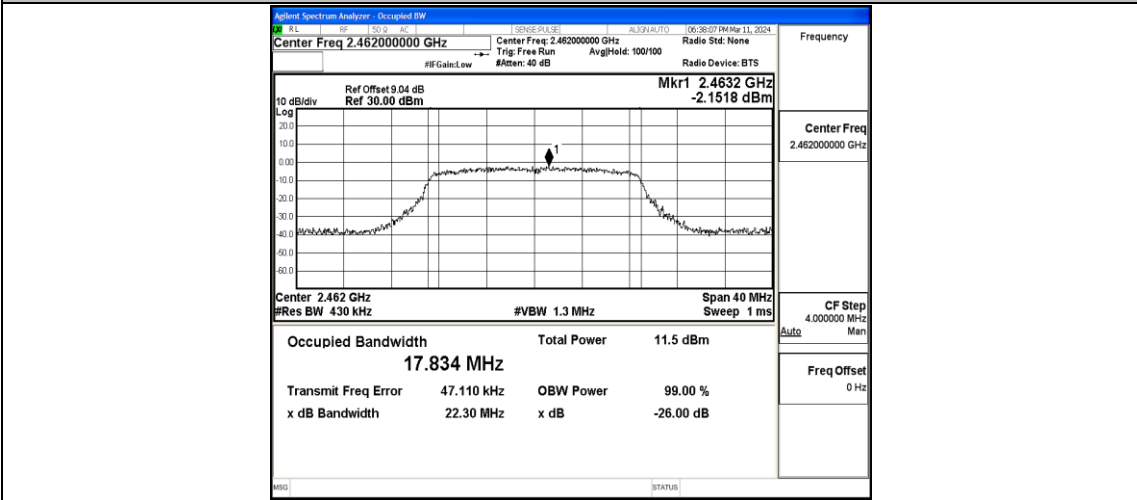
11N20MIMO-Ant1-2437



11N20MIMO-Ant2-2437

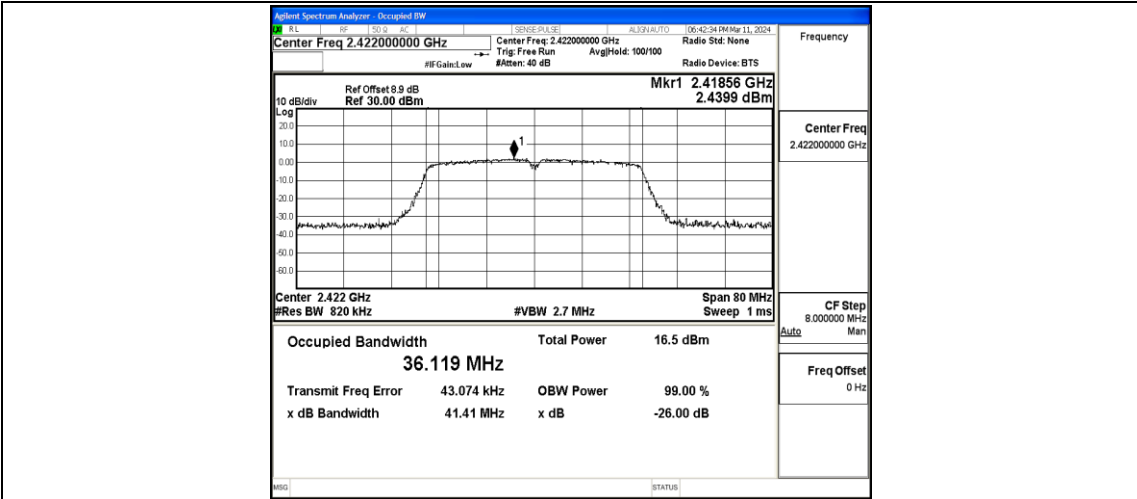


11N20MIMO-Ant1-2462

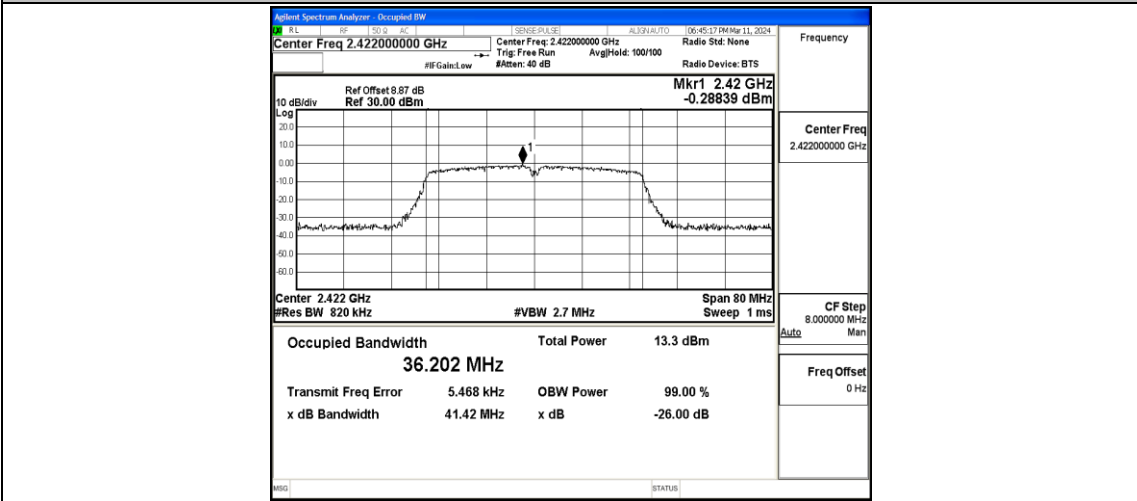


11N20MIMO-Ant2-2462

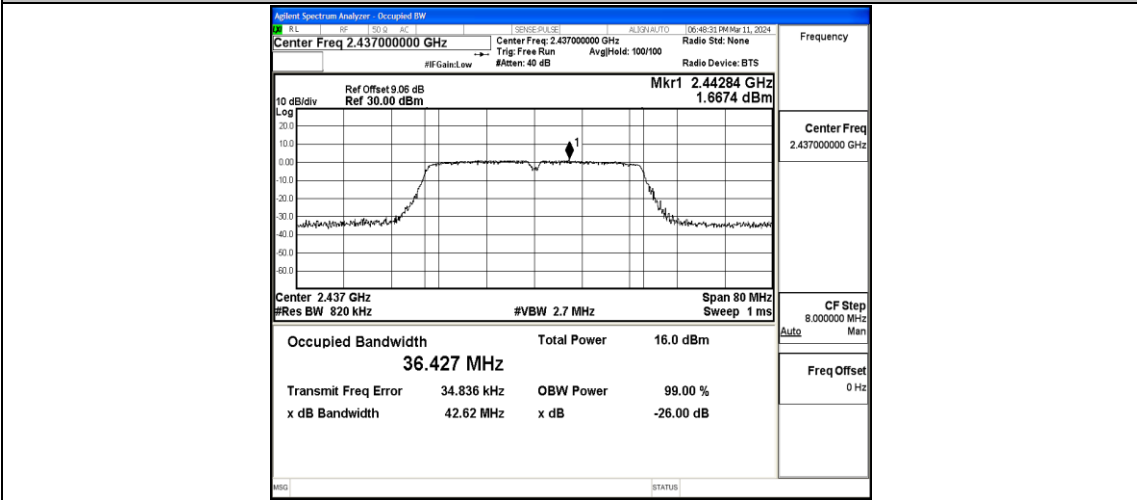




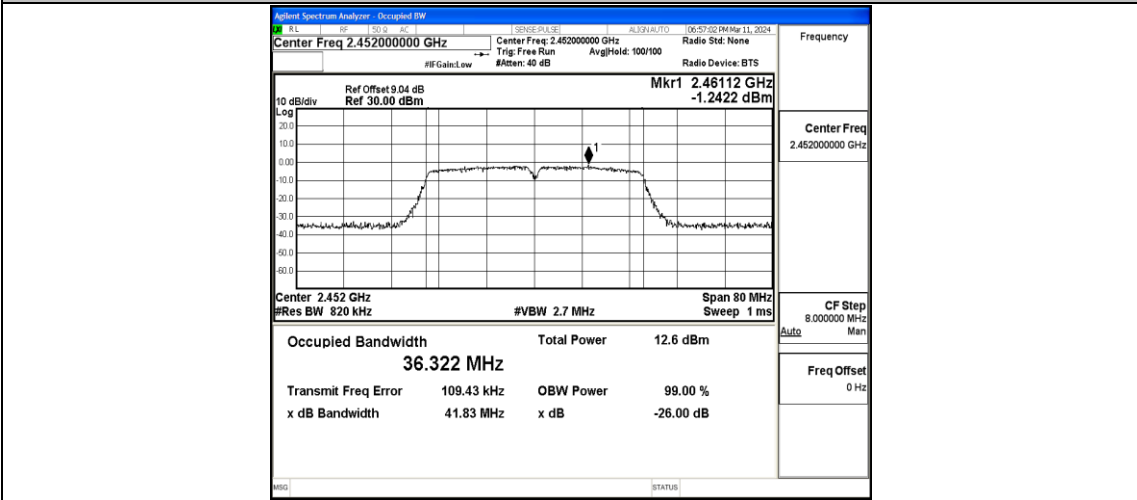
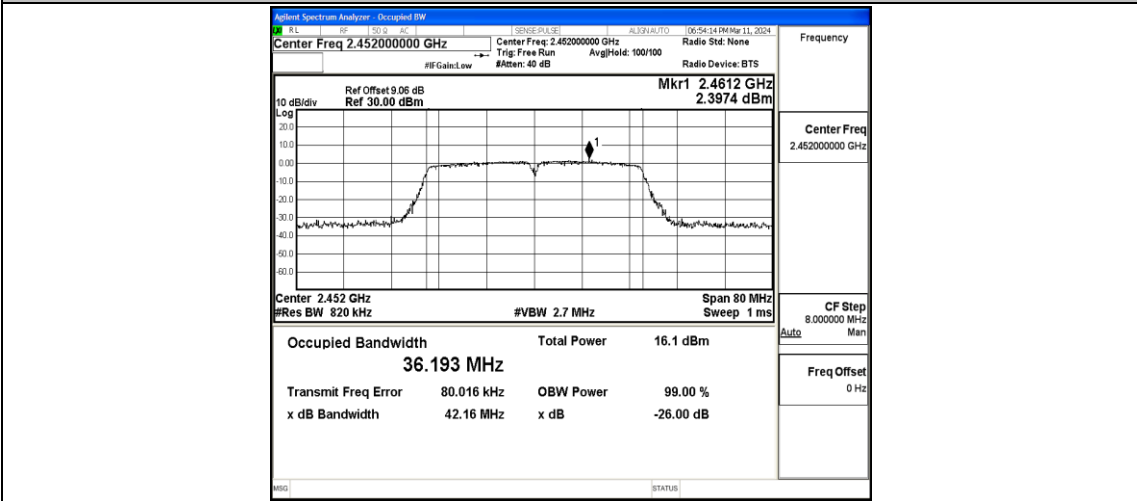
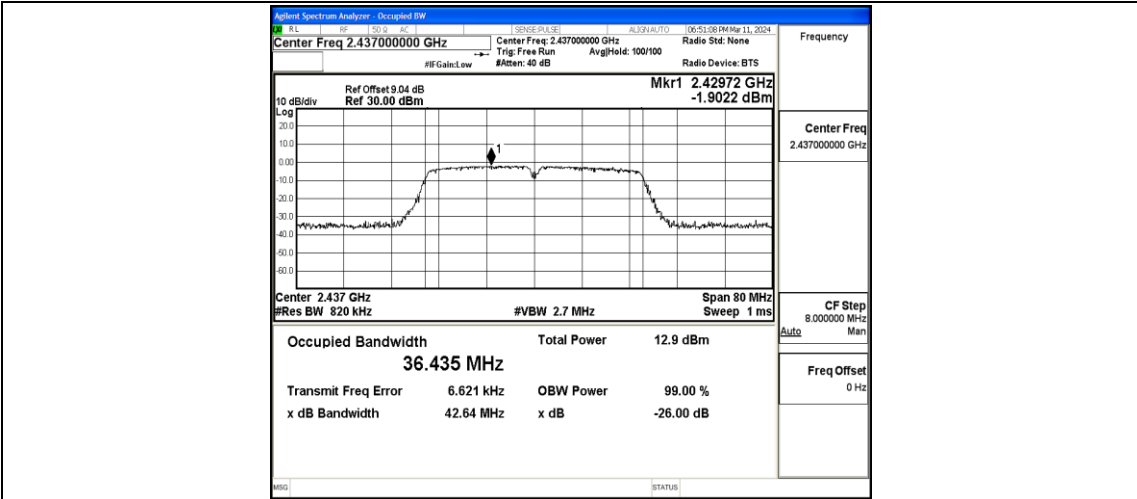
11N40MIMO-Ant1-2422



11N40MIMO-Ant2-2422



11N40MIMO-Ant1-2437



## Appendix C: Maximum Average conducted output power

### Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	16.63	≤30.00	PASS
11B	Ant2	2412	12.22	≤30.00	PASS
11B	Ant1	2437	15.72	≤30.00	PASS
11B	Ant2	2437	11.68	≤30.00	PASS
11B	Ant1	2462	17.18	≤30.00	PASS
11B	Ant2	2462	11.58	≤30.00	PASS
11G	Ant1	2412	18.52	≤30.00	PASS
11G	Ant2	2412	16.71	≤30.00	PASS
11G	Ant1	2437	15.92	≤30.00	PASS
11G	Ant2	2437	17.78	≤30.00	PASS
11G	Ant1	2462	16.21	≤30.00	PASS
11G	Ant2	2462	17.62	≤30.00	PASS
11N20MIMO	Ant1	2412	16.43	≤30.00	PASS
11N20MIMO	Ant2	2412	13.46	≤30.00	PASS
11N20MIMO	total	2412	18.20	≤30.00	PASS
11N20MIMO	Ant1	2437	15.71	≤30.00	PASS
11N20MIMO	Ant2	2437	12.51	≤30.00	PASS
11N20MIMO	total	2437	17.41	≤30.00	PASS
11N20MIMO	Ant1	2462	16.31	≤30.00	PASS
11N20MIMO	Ant2	2462	12.52	≤30.00	PASS
11N20MIMO	total	2462	17.83	≤30.00	PASS
11N40MIMO	Ant1	2422	16.64	≤30.00	PASS
11N40MIMO	Ant2	2422	13.61	≤30.00	PASS
11N40MIMO	total	2422	18.39	≤30.00	PASS
11N40MIMO	Ant1	2437	16.35	≤30.00	PASS
11N40MIMO	Ant2	2437	13.03	≤30.00	PASS
11N40MIMO	total	2437	18.01	≤30.00	PASS
11N40MIMO	Ant1	2452	16.27	≤30.00	PASS
11N40MIMO	Ant2	2452	12.86	≤30.00	PASS
11N40MIMO	total	2452	17.90	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

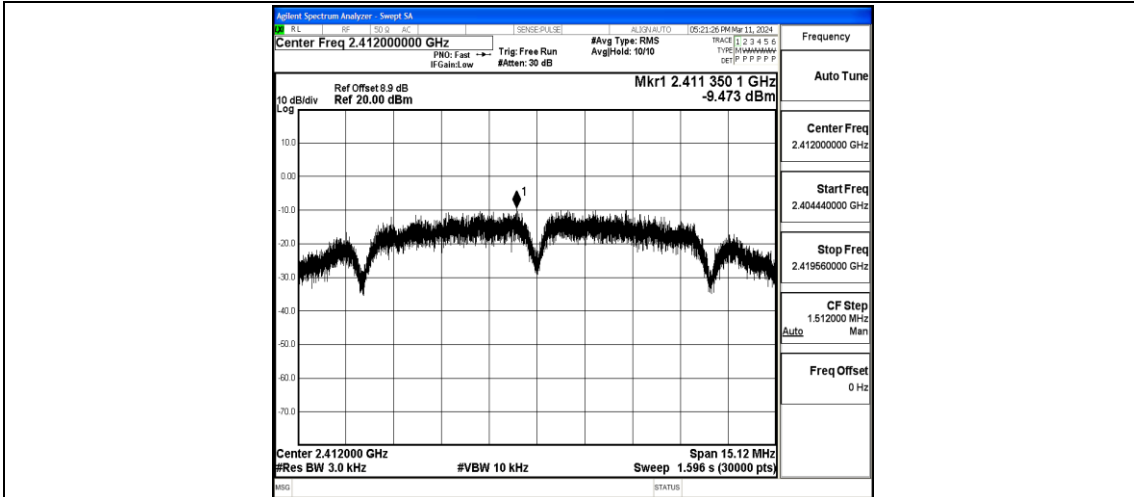
## Appendix D: Maximum Average power spectral density

### Test Result

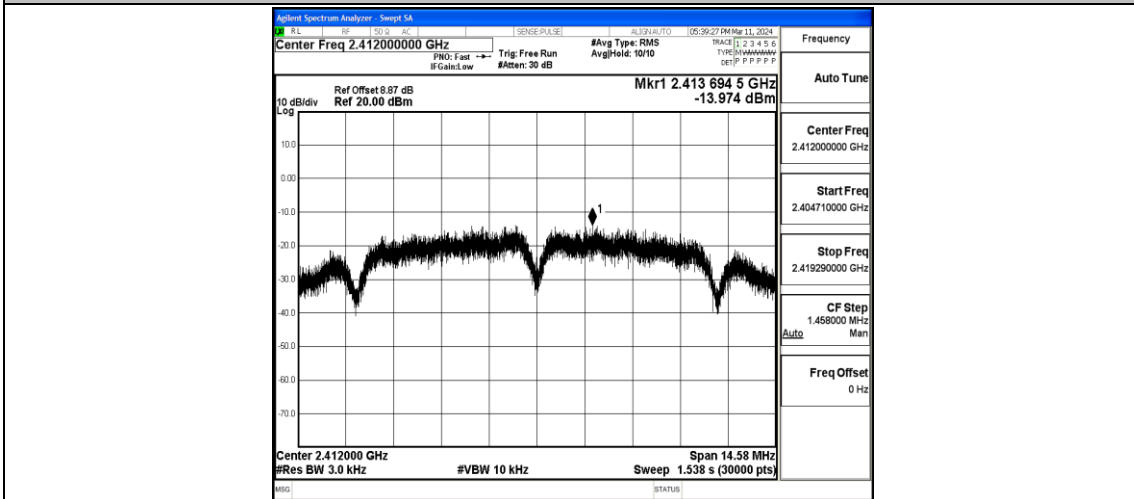
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-9.47	≤8.00	PASS
11B	Ant2	2412	-13.97	≤8.00	PASS
11B	Ant1	2437	-10.05	≤8.00	PASS
11B	Ant2	2437	-13.67	≤8.00	PASS
11B	Ant1	2462	-8.13	≤8.00	PASS
11B	Ant2	2462	-14.22	≤8.00	PASS
11G	Ant2	2412	-13.40	≤8.00	PASS
11G	Ant1	2412	-14.09	≤8.00	PASS
11G	Ant1	2437	-14.95	≤8.00	PASS
11G	Ant2	2437	-13.37	≤8.00	PASS
11G	Ant1	2462	-15.16	≤8.00	PASS
11G	Ant2	2462	-14.11	≤8.00	PASS
11N20MIMO	Ant1	2412	-14.31	≤8.00	PASS
11N20MIMO	Ant2	2412	-17.29	≤8.00	PASS
11N20MIMO	total	2412	-12.54	≤8.00	PASS
11N20MIMO	Ant1	2437	-16.55	≤8.00	PASS
11N20MIMO	Ant2	2437	-18.59	≤8.00	PASS
11N20MIMO	total	2437	-14.44	≤8.00	PASS
11N20MIMO	Ant1	2462	-15.96	≤8.00	PASS
11N20MIMO	Ant2	2462	-19.41	≤8.00	PASS
11N20MIMO	total	2462	-14.34	≤8.00	PASS
11N40MIMO	Ant1	2422	-18.16	≤8.00	PASS
11N40MIMO	Ant2	2422	-21.36	≤8.00	PASS
11N40MIMO	total	2422	-16.46	≤8.00	PASS
11N40MIMO	Ant1	2437	-18.09	≤8.00	PASS
11N40MIMO	Ant2	2437	-20.99	≤8.00	PASS
11N40MIMO	total	2437	-16.29	≤8.00	PASS
11N40MIMO	Ant1	2452	-19.29	≤8.00	PASS
11N40MIMO	Ant2	2452	-22.88	≤8.00	PASS
11N40MIMO	total	2452	-17.71	≤8.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

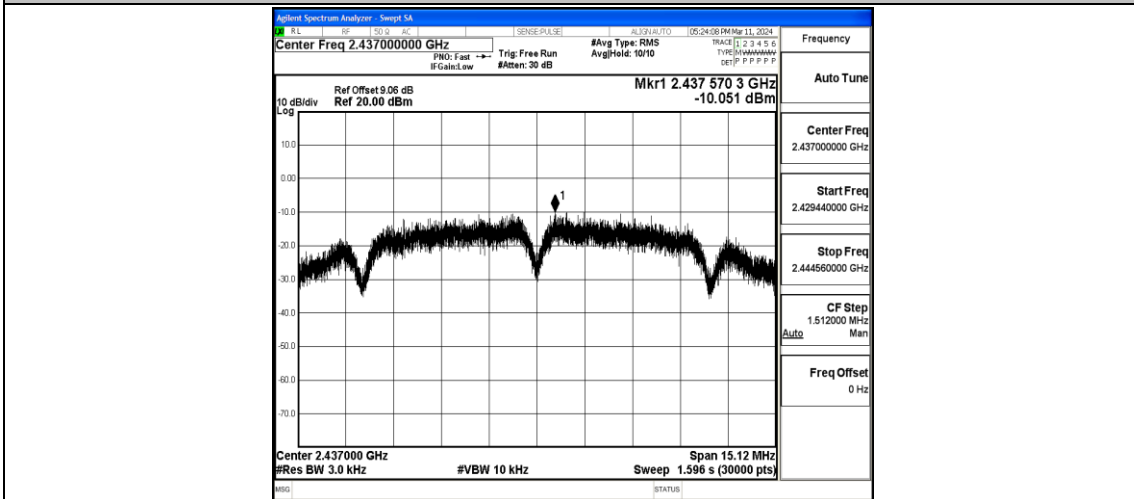
### Test Graphs



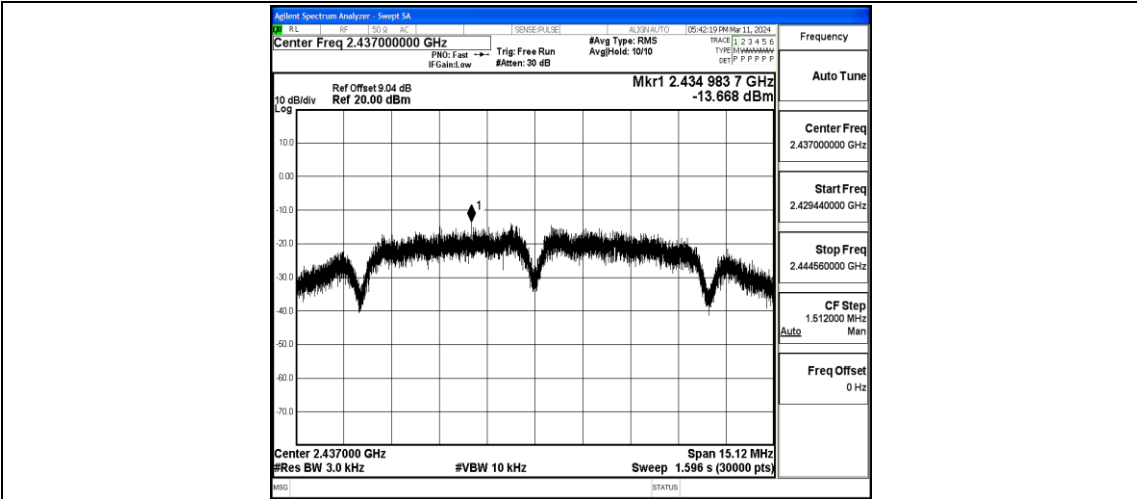
11B-Ant1-2412-PASS



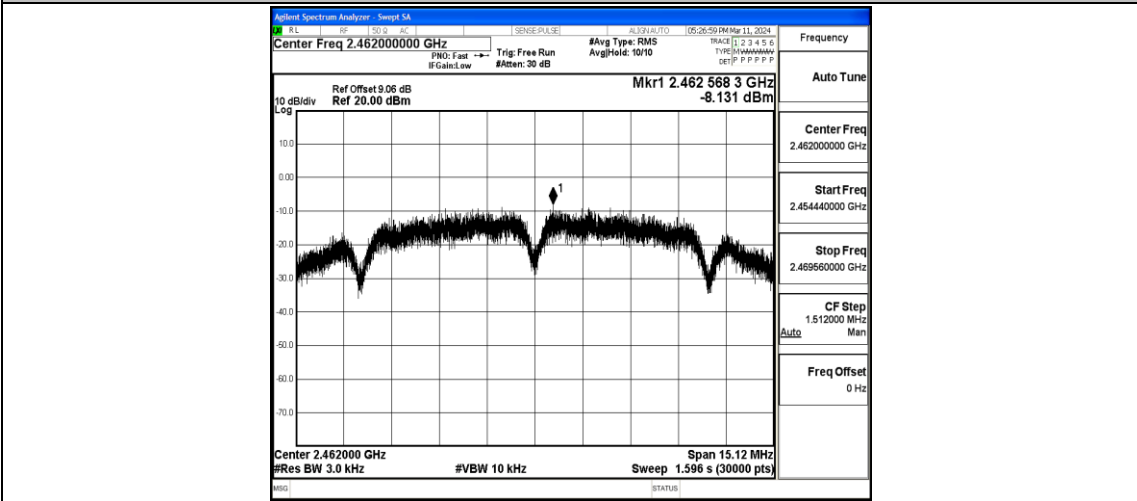
11B-Ant2-2412-PASS



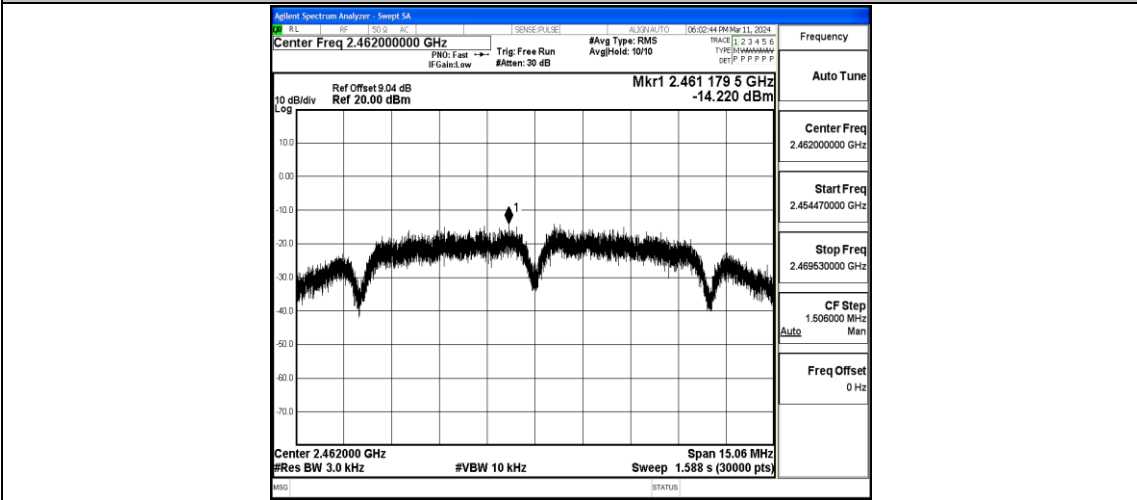
11B-Ant1-2437-PASS



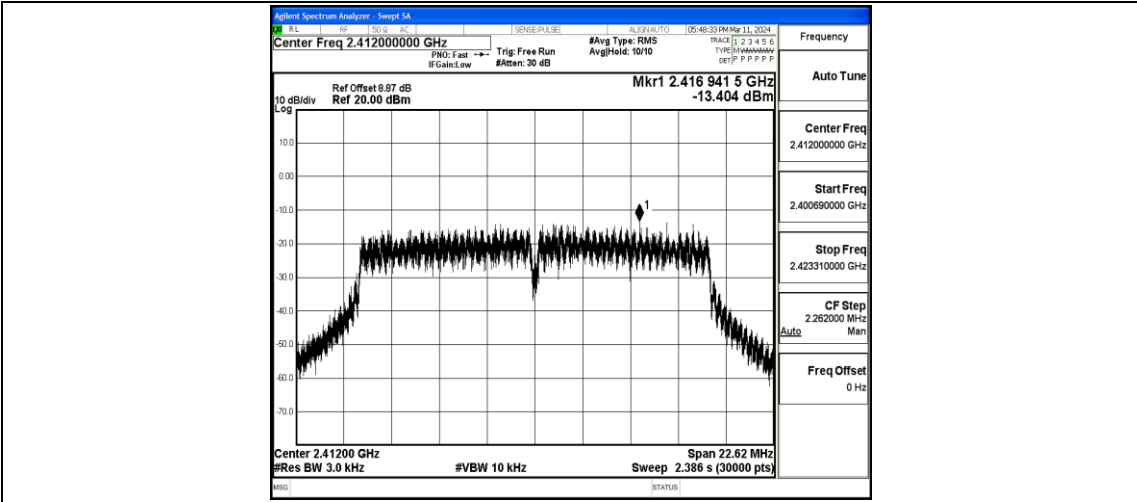
11B-Ant2-2437-PASS



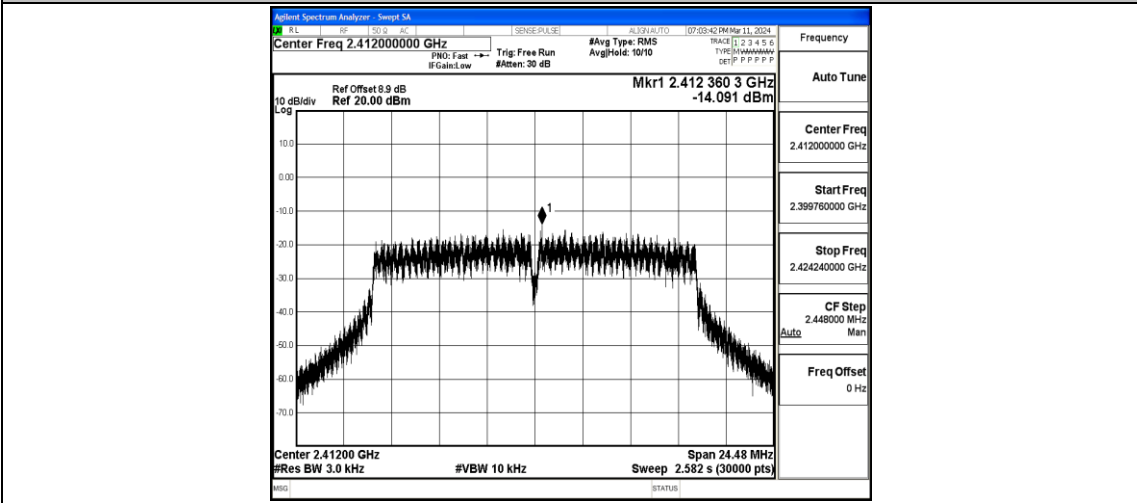
11B-Ant1-2462-PASS



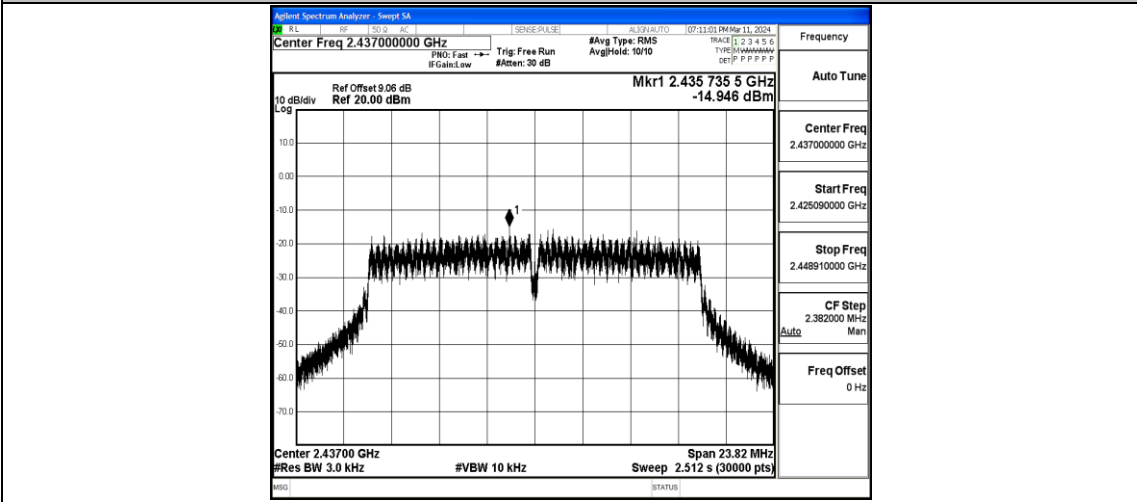
11B-Ant2-2462-PASS



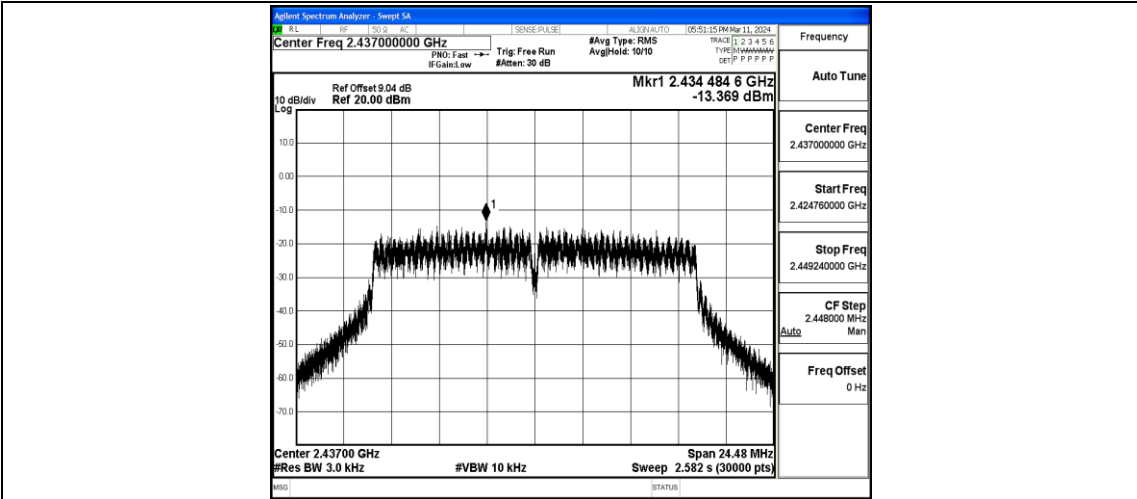
11G-Ant2-2412-PASS



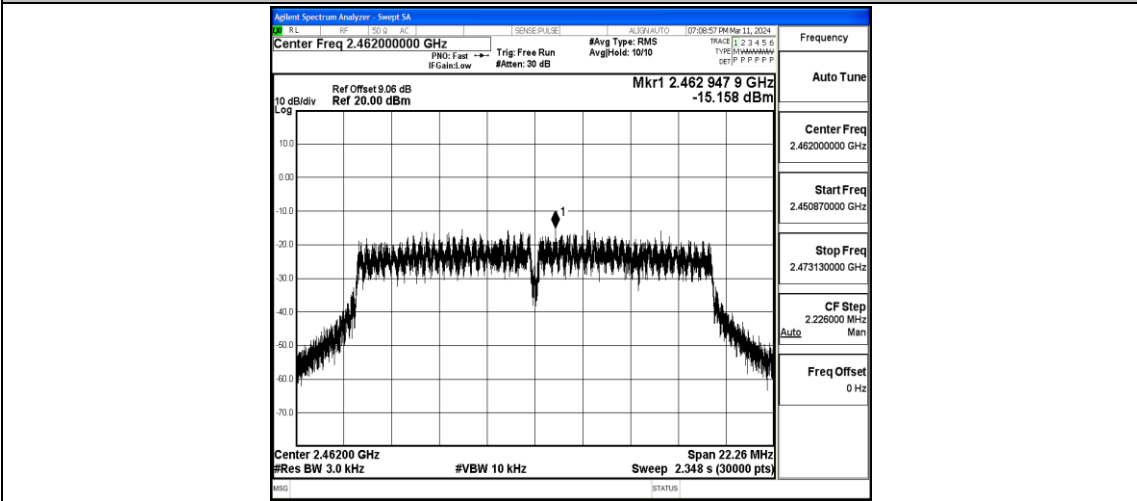
11G-Ant1-2412-PASS



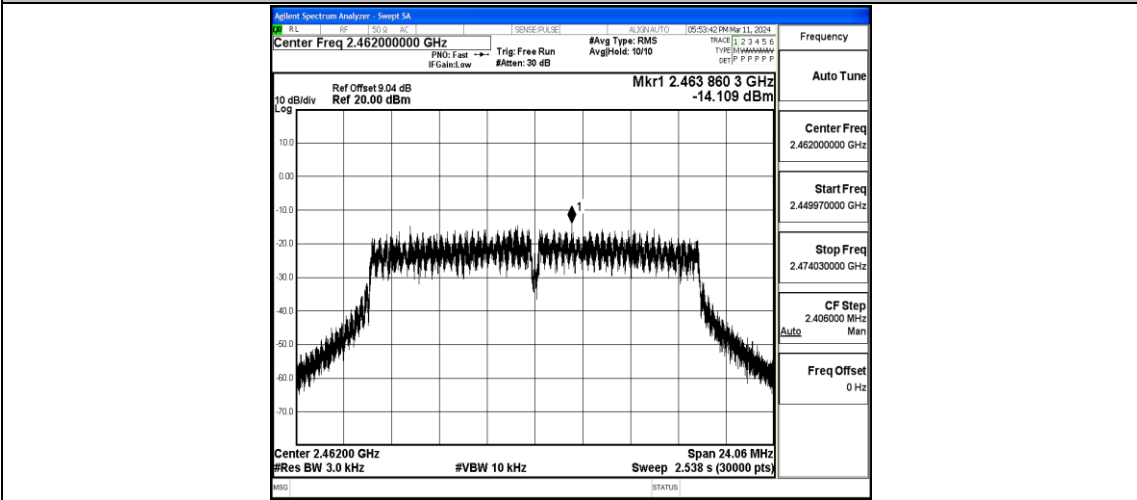
11G-Ant1-2437-PASS



11G-Ant2-2437-PASS

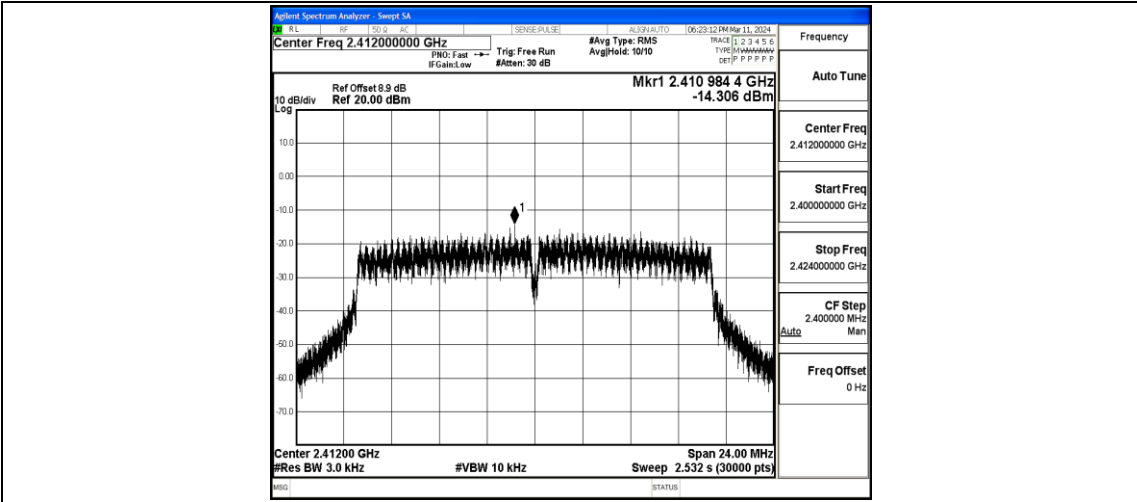


11G-Ant1-2462-PASS

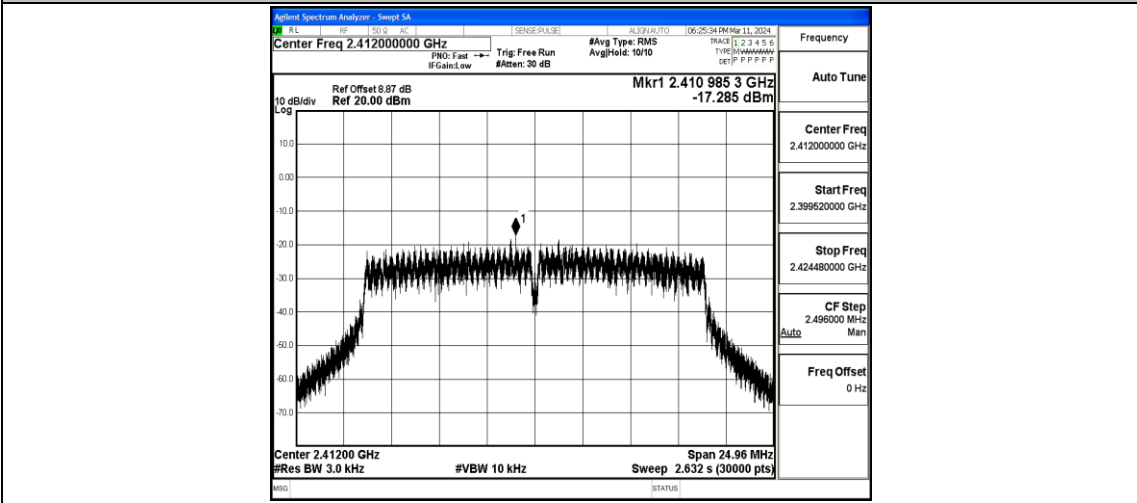


11G-Ant2-2462-PASS

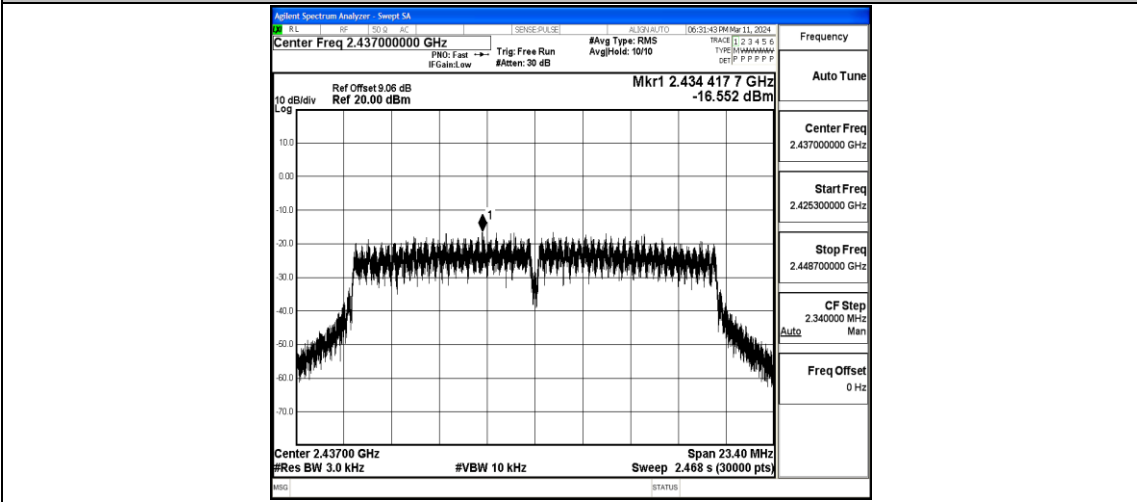




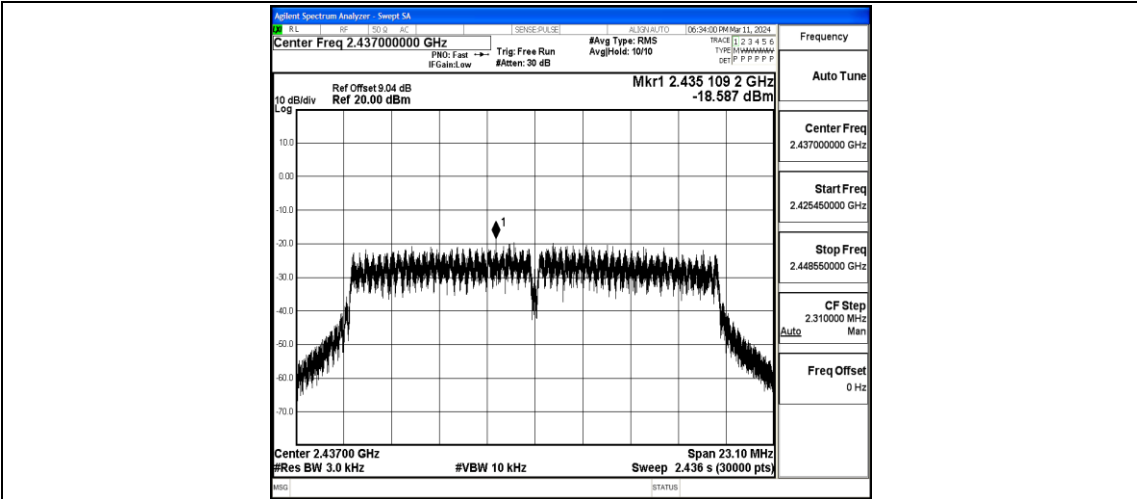
11N20MIMO-Ant1-2412-PASS



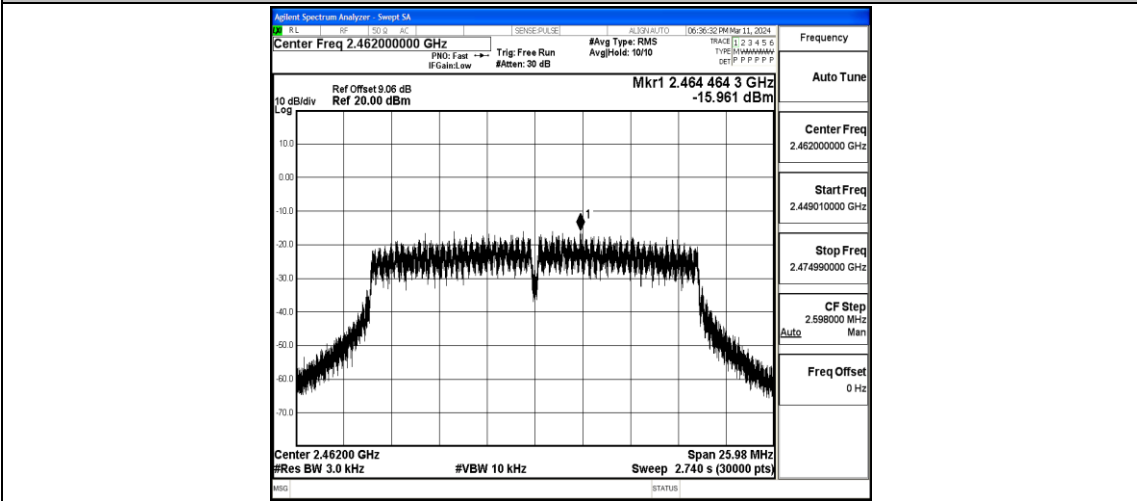
11N20MIMO-Ant2-2412-PASS



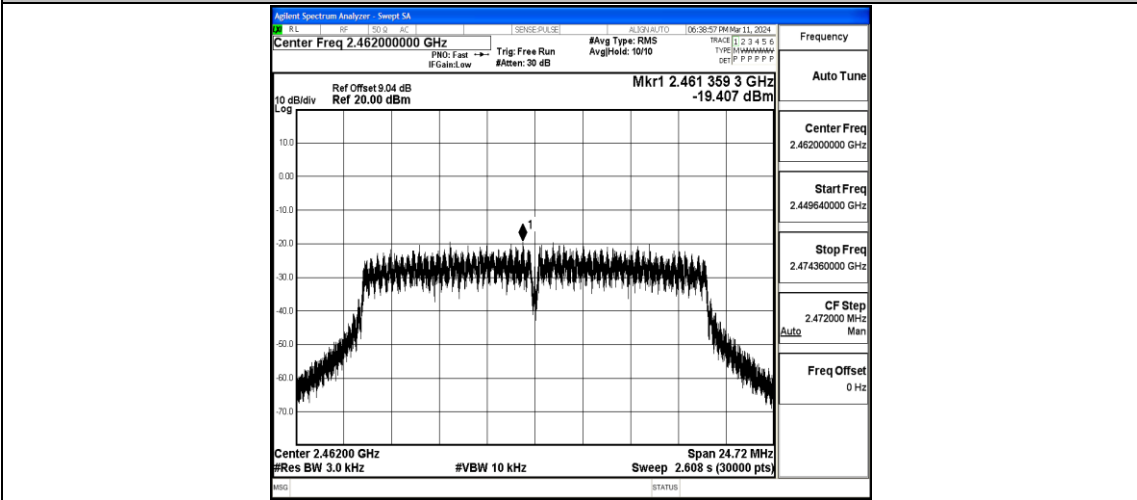
11N20MIMO-Ant1-2437-PASS



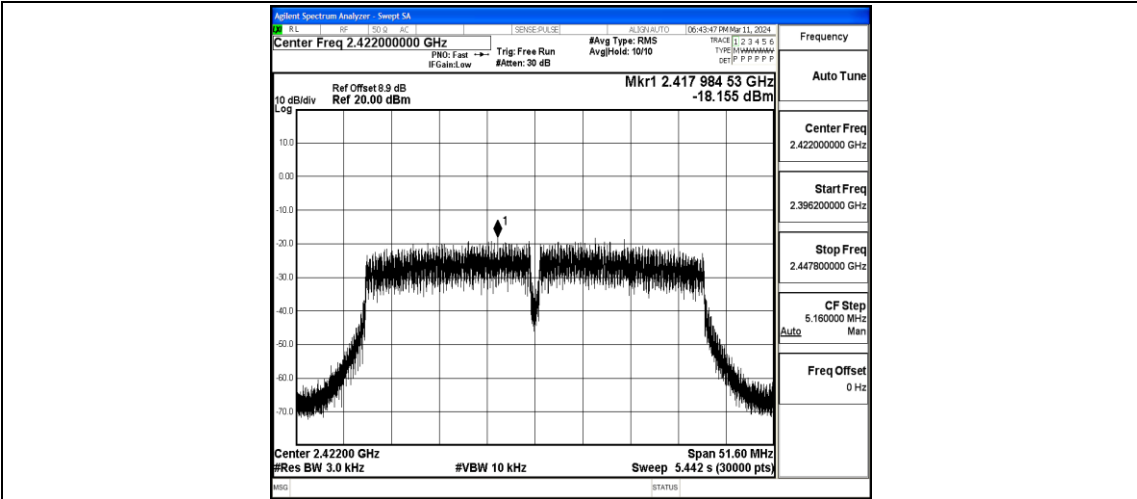
11N20MIMO-Ant2-2437-PASS



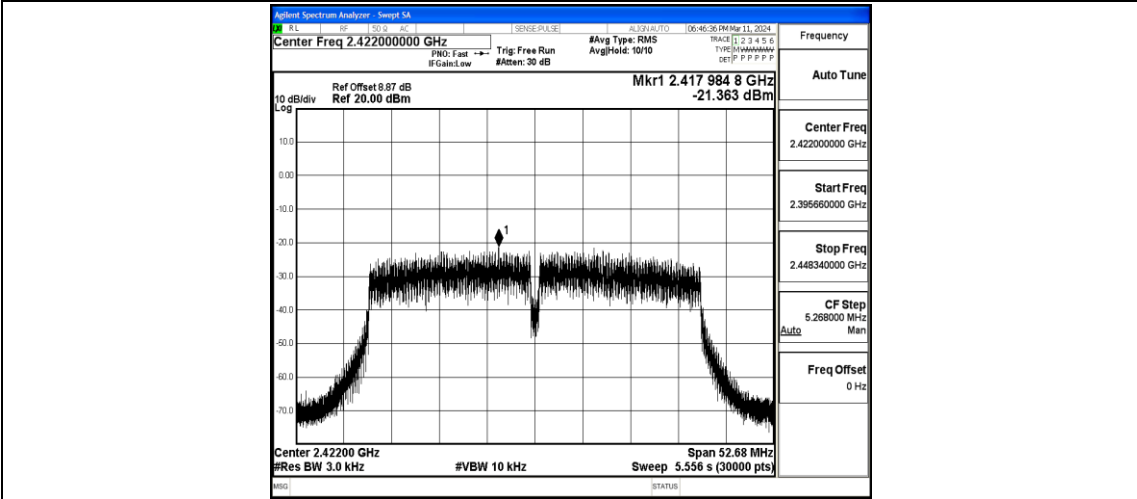
11N20MIMO-Ant1-2462-PASS



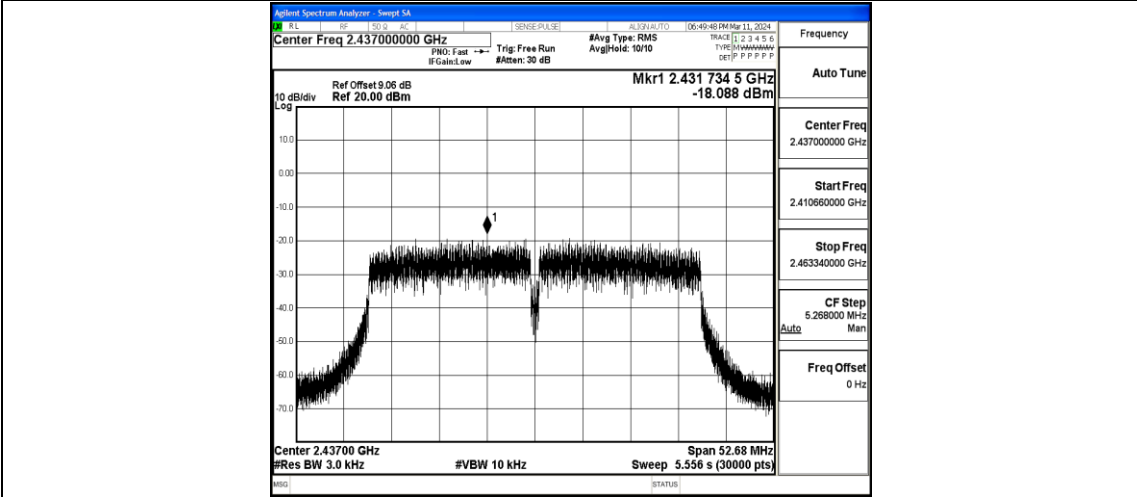
11N20MIMO-Ant2-2462-PASS



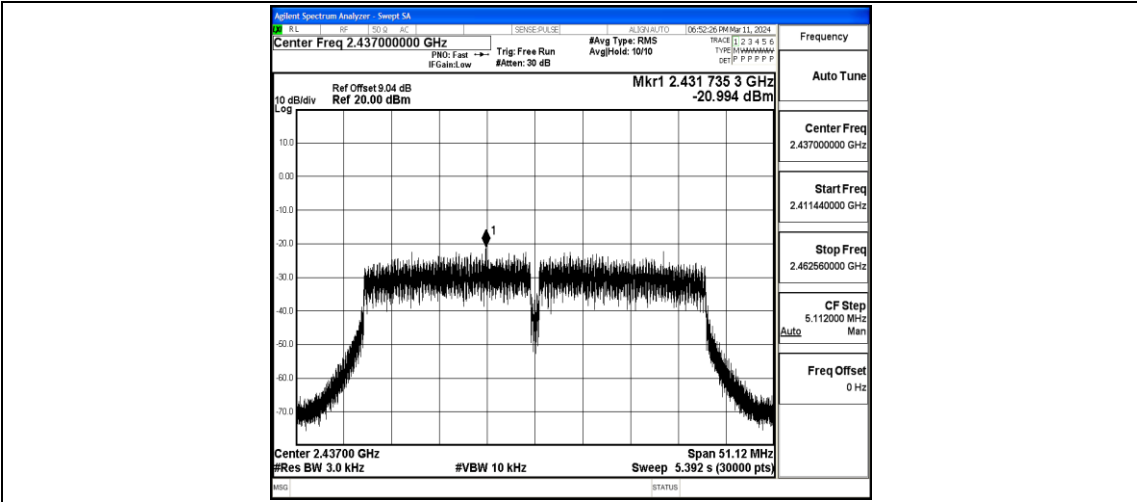
11N40MIMO-Ant1-2422-PASS



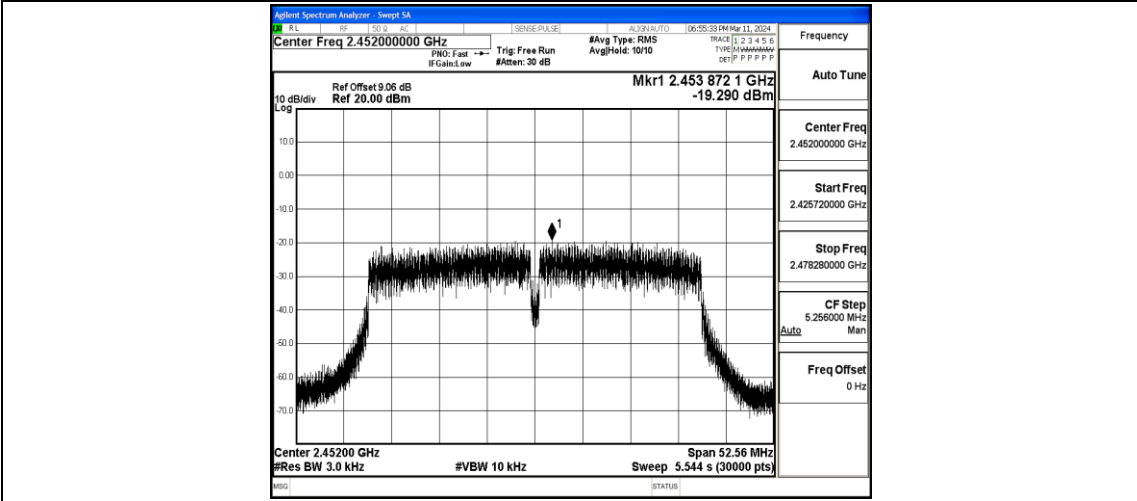
11N40MIMO-Ant2-2422-PASS



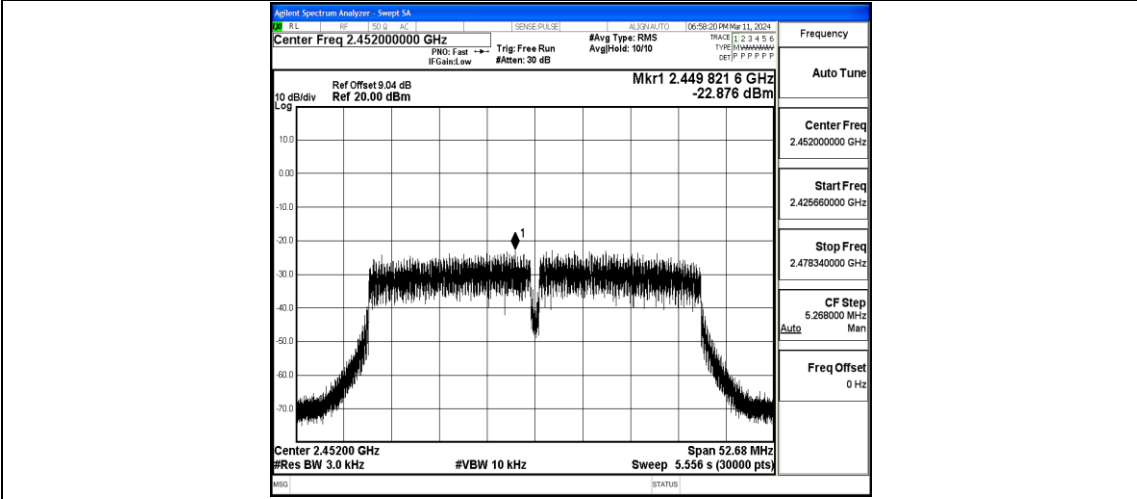
11N40MIMO-Ant1-2437-PASS



11N40MIMO-Ant2-2437-PASS



11N40MIMO-Ant1-2452-PASS



11N40MIMO-Ant2-2452-PASS

## Appendix E: Reference level measurement

### Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2413.50	4.67
11B	Ant2	2412	2410.50	0.27
11B	Ant1	2437	2437.51	3.58
11B	Ant2	2437	2436.50	0.01
11B	Ant1	2462	2460.00	5.00
11B	Ant2	2462	2463.51	-0.62
11G	Ant2	2412	2417.00	-0.06
11G	Ant1	2412	2413.30	-1.56
11G	Ant2	2437	2434.50	-0.91
11G	Ant1	2437	2439.48	-2.39
11G	Ant2	2462	2460.70	-1.56
11G	Ant1	2462	2460.73	-1.57
11N20MIMO	Ant1	2412	2413.27	-0.79
11N20MIMO	Ant2	2412	2416.99	-4.82
11N20MIMO	Ant1	2437	2438.26	-1.59
11N20MIMO	Ant2	2437	2433.21	-6.04
11N20MIMO	Ant1	2462	2463.25	-0.95
11N20MIMO	Ant2	2462	2466.97	-6.01
11N40MIMO	Ant1	2422	2416.99	-3.96
11N40MIMO	Ant2	2422	2417.00	-6.83
11N40MIMO	Ant1	2437	2428.26	-4.57
11N40MIMO	Ant2	2437	2433.22	-8.30
11N40MIMO	Ant1	2452	2455.73	-4.29
11N40MIMO	Ant2	2452	2447.00	-7.89