

RF Test Data for WLAN(2.4G) (Conducted Measurement)

Product Name: OTT+speaker

Trade Mark: N/A

Test Model: SK410A

FCC ID: 2AOVU-SK410AX

Environmental Conditions

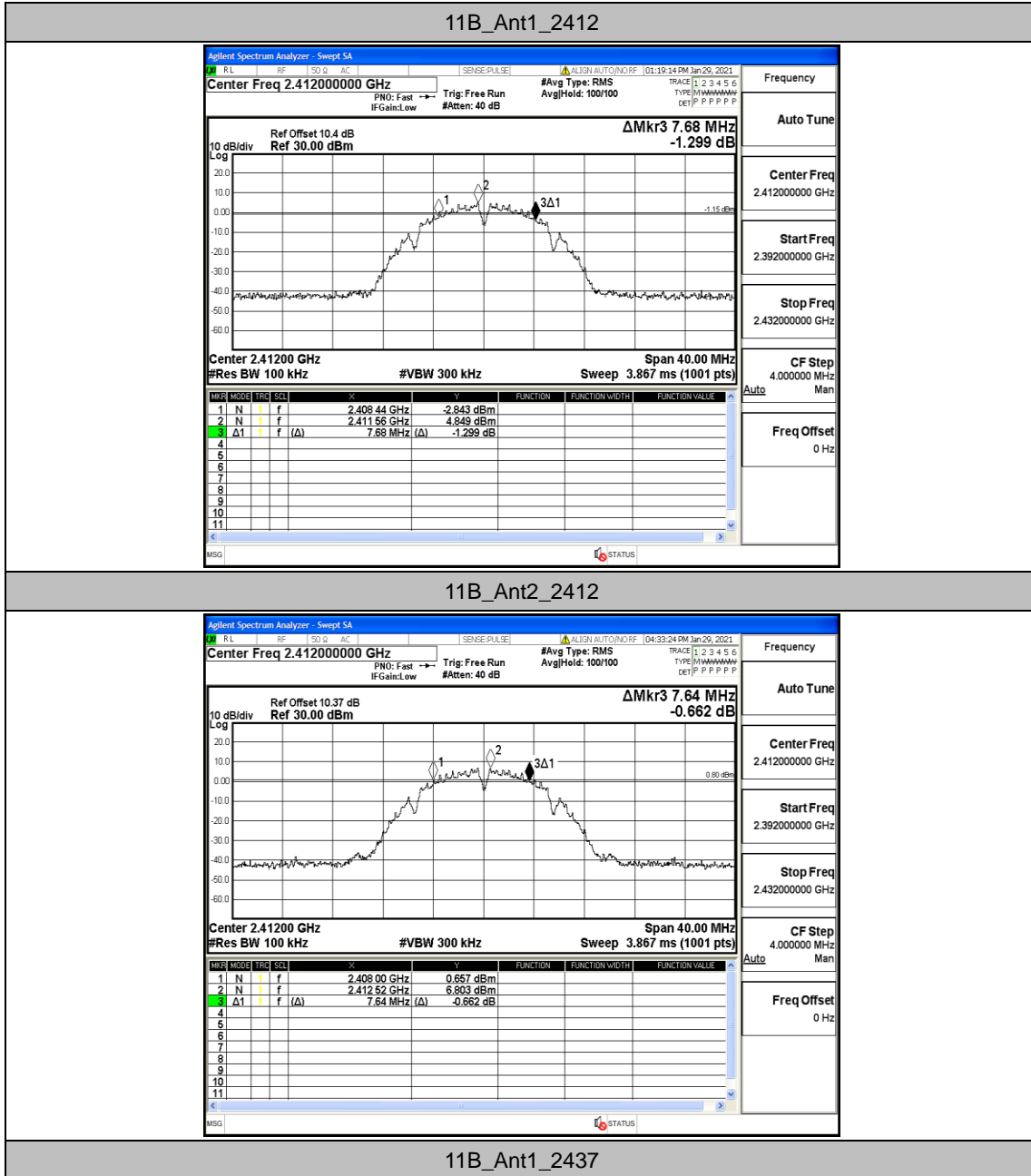
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

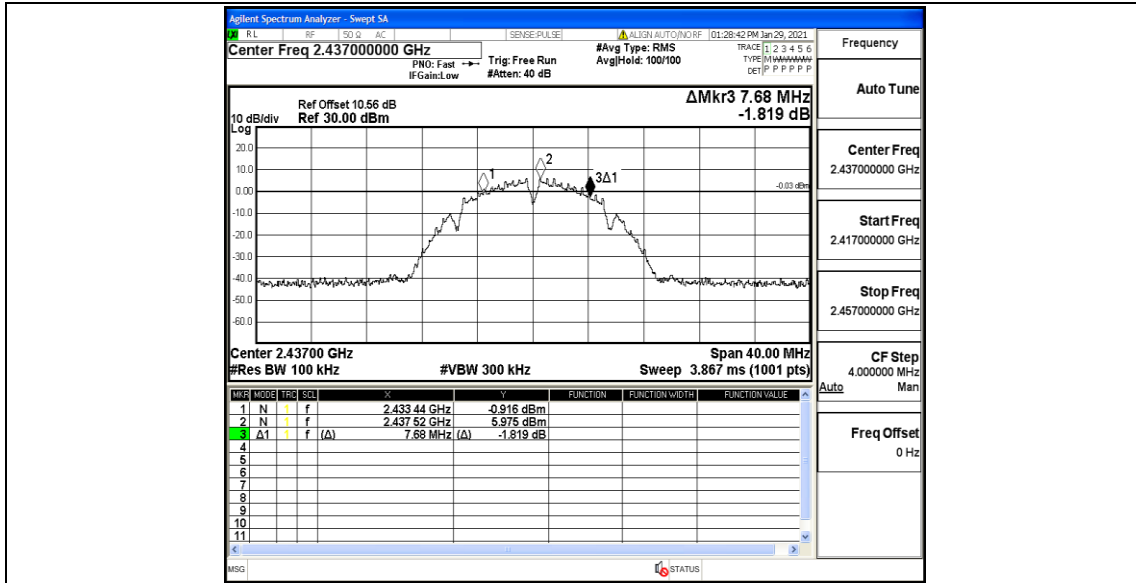
Appendix A: DTS Bandwidth

Test Result

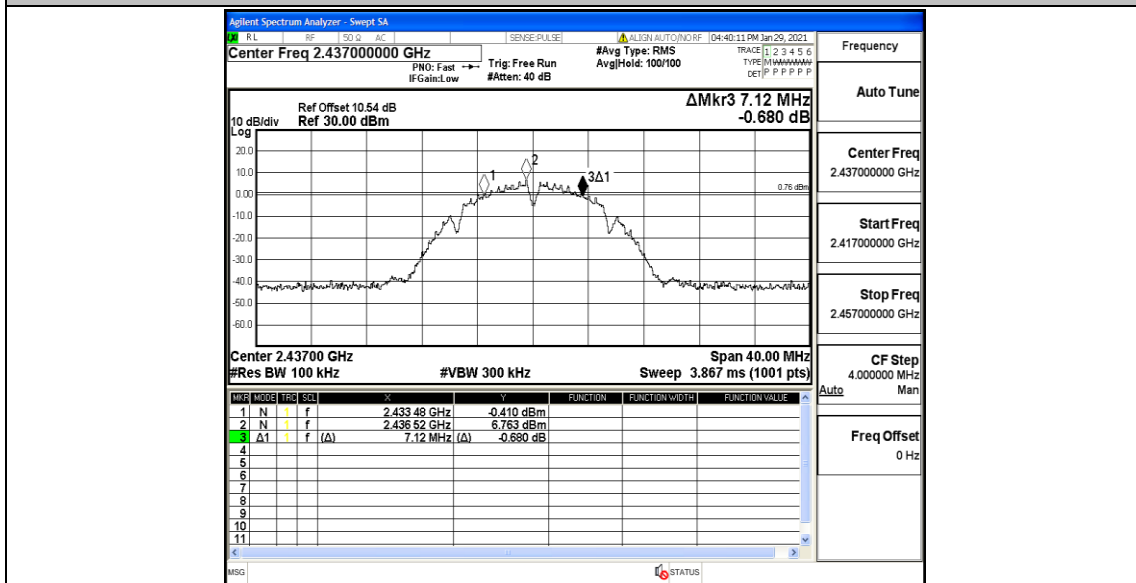
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.680	2408.440	2416.120	0.5	PASS
	Ant2	2412	7.640	2408.000	2415.640	0.5	PASS
	Ant1	2437	7.680	2433.440	2441.120	0.5	PASS
	Ant2	2437	7.120	2433.480	2440.600	0.5	PASS
	Ant1	2462	7.120	2458.480	2465.600	0.5	PASS
	Ant2	2462	7.160	2458.480	2465.640	0.5	PASS
11G	Ant1	2412	16.400	2403.840	2420.240	0.5	PASS
	Ant2	2412	16.080	2403.880	2419.960	0.5	PASS
	Ant1	2437	16.400	2428.840	2445.240	0.5	PASS
	Ant2	2437	16.400	2428.840	2445.240	0.5	PASS
	Ant1	2462	16.400	2453.840	2470.240	0.5	PASS
	Ant2	2462	16.440	2453.840	2470.280	0.5	PASS
11N20MIMO	Ant1	2412	17.720	2403.200	2420.920	0.5	PASS
	Ant2	2412	17.760	2403.160	2420.920	0.5	PASS
	Ant1	2437	17.720	2428.200	2445.920	0.5	PASS
	Ant2	2437	17.720	2428.160	2445.880	0.5	PASS
	Ant1	2462	17.760	2453.160	2470.920	0.5	PASS
	Ant2	2462	17.720	2453.200	2470.920	0.5	PASS
11AX20MIMO	Ant1	2412	19.040	2402.480	2421.520	0.5	PASS
	Ant2	2412	19.040	2402.520	2421.560	0.5	PASS
	Ant1	2437	19.040	2427.480	2446.520	0.5	PASS
	Ant2	2437	19.080	2427.480	2446.560	0.5	PASS
	Ant1	2462	19.040	2452.520	2471.560	0.5	PASS
	Ant2	2462	19.120	2452.520	2471.640	0.5	PASS

Test Graphs

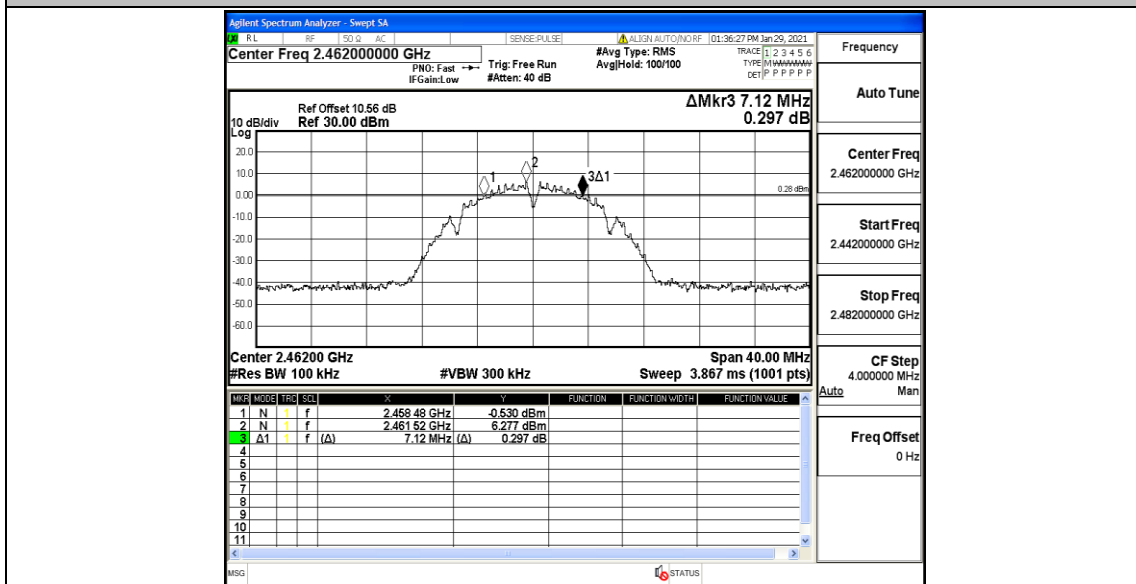




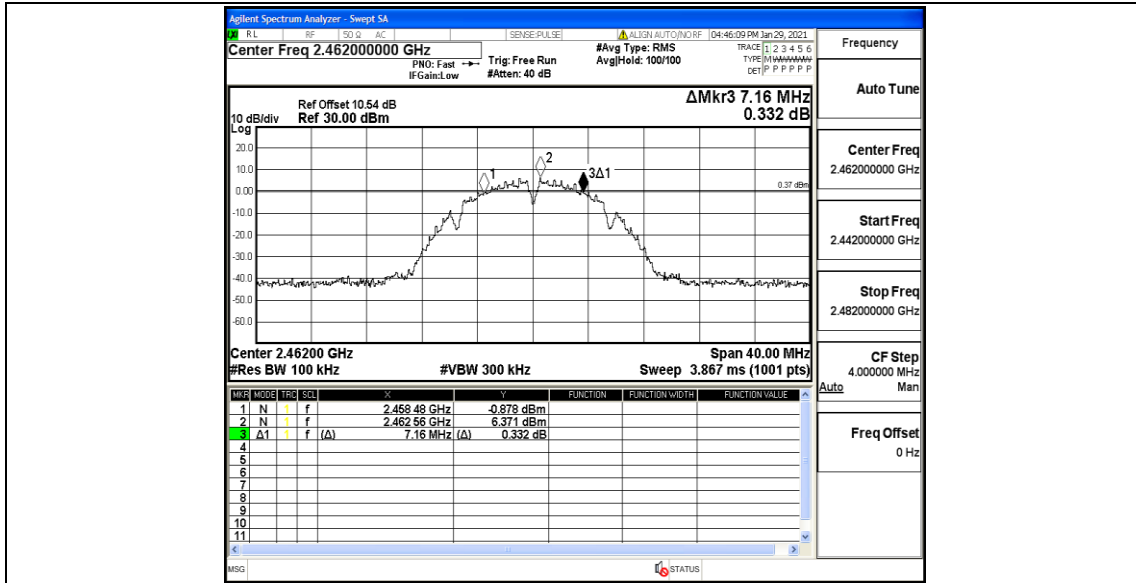
11B_Ant2_2437



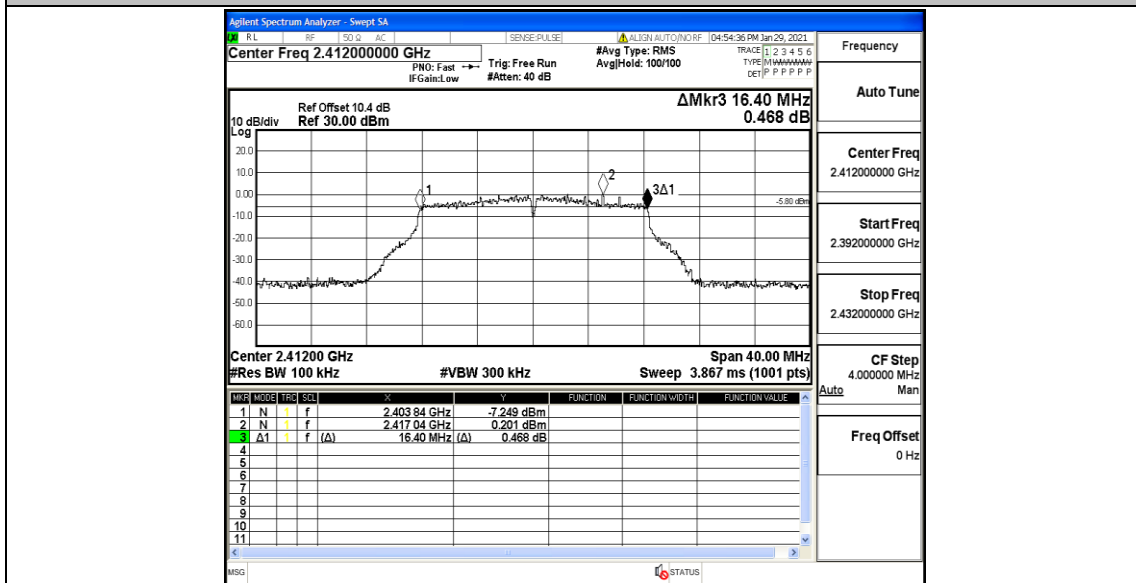
11B_Ant1_2462



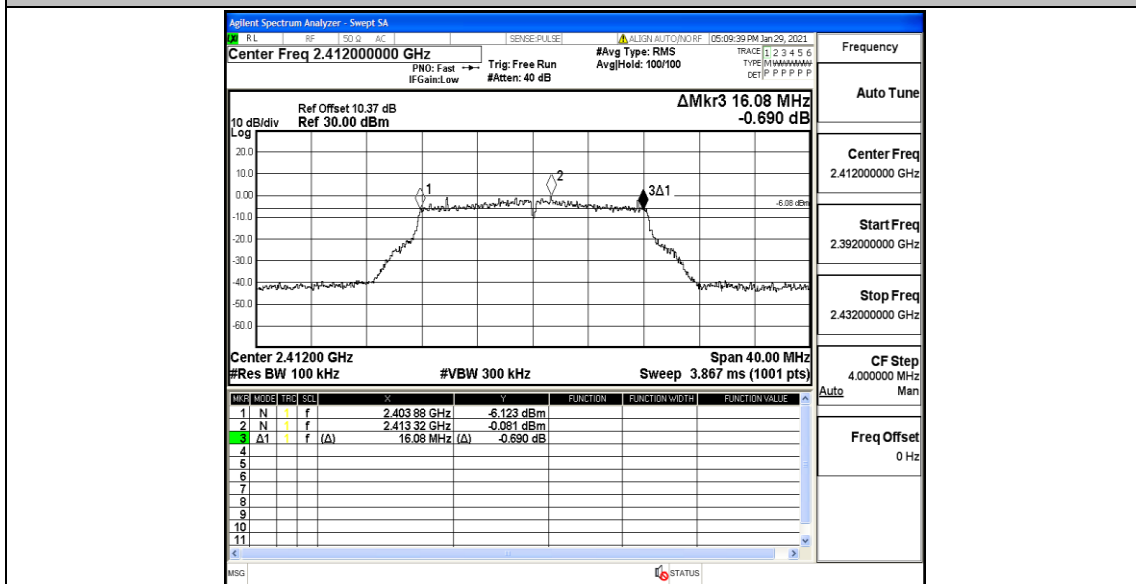
11B_Ant2_2462



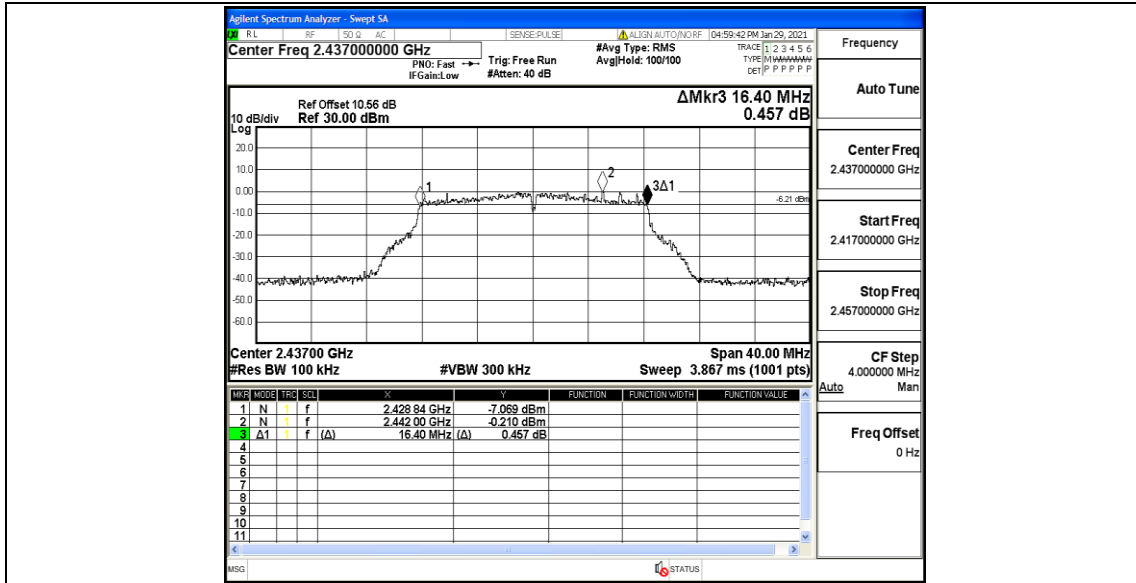
11G_Ant1_2412



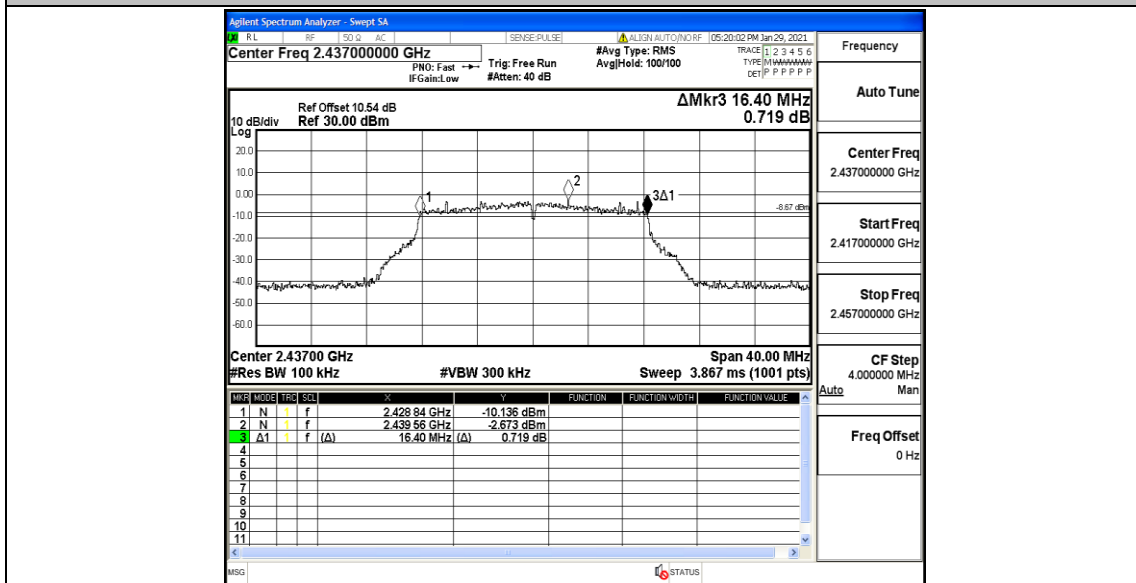
11G_Ant2_2412



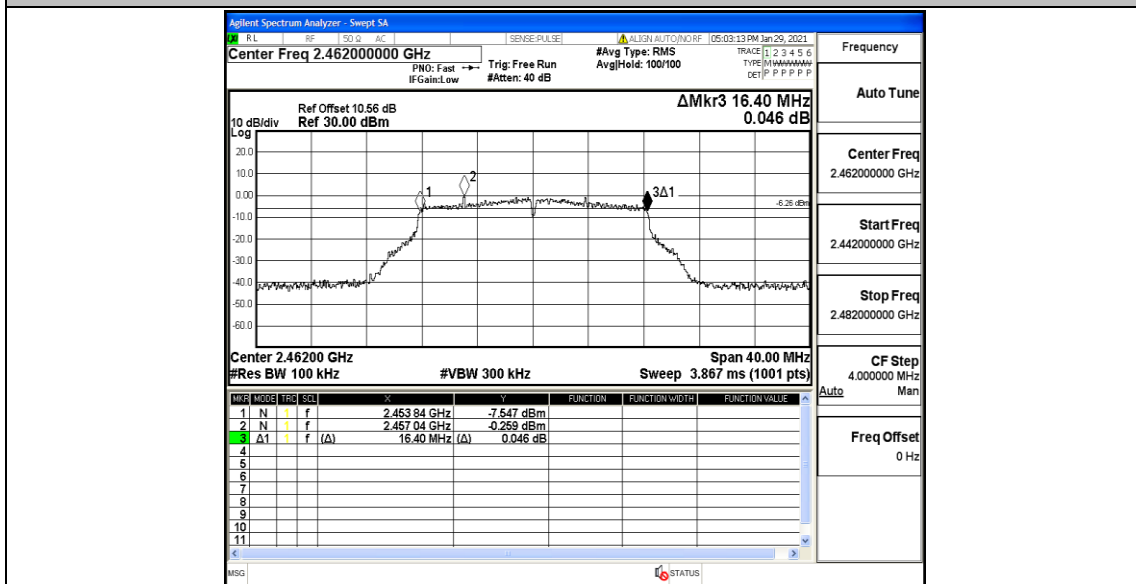
11G_Ant1_2437



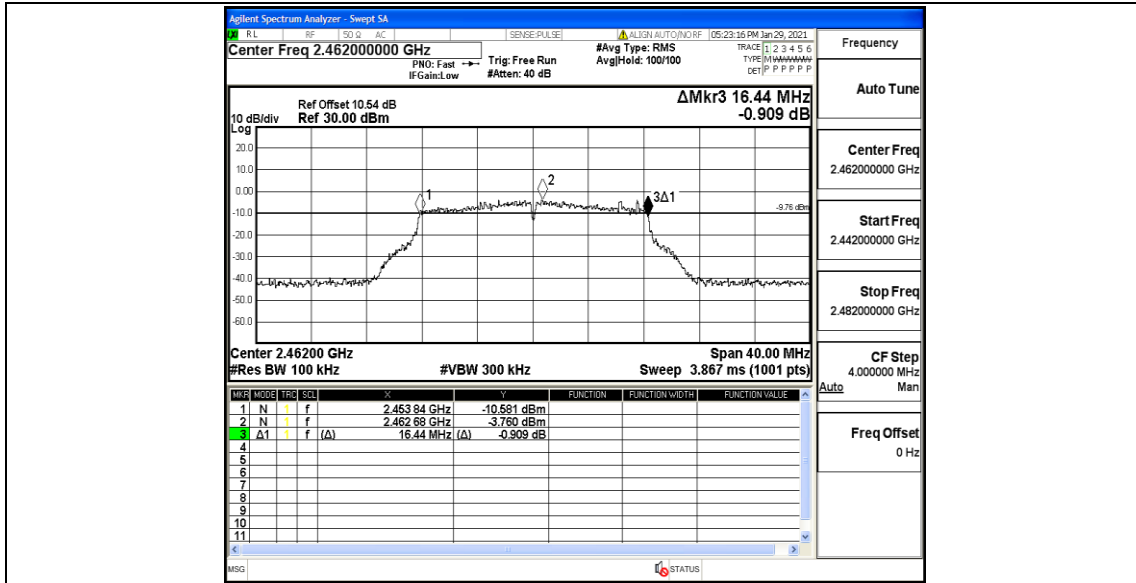
11G_Ant2_2437



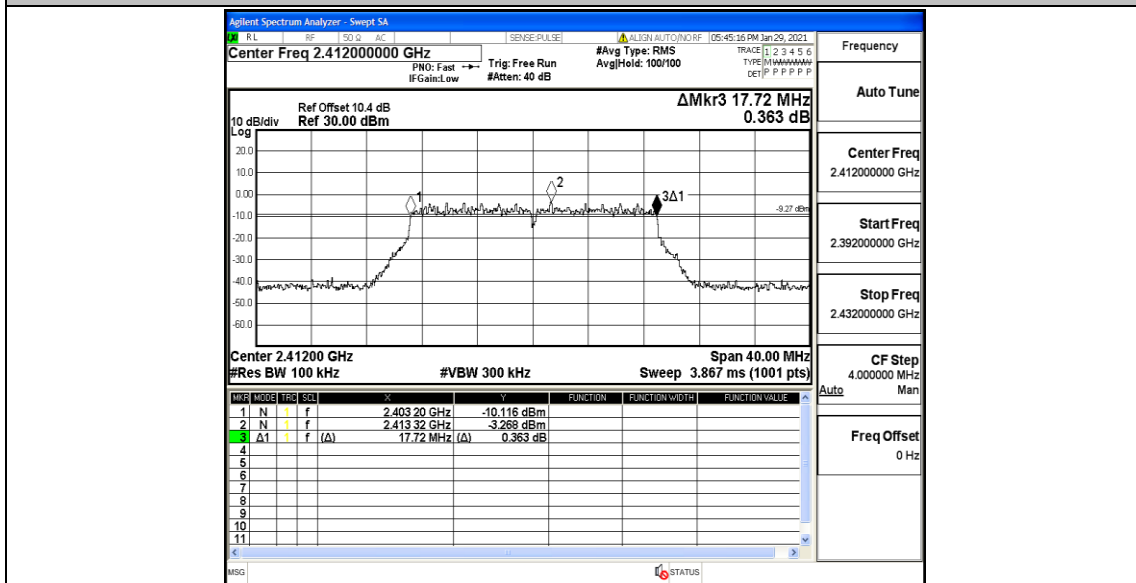
11G_Ant1_2462



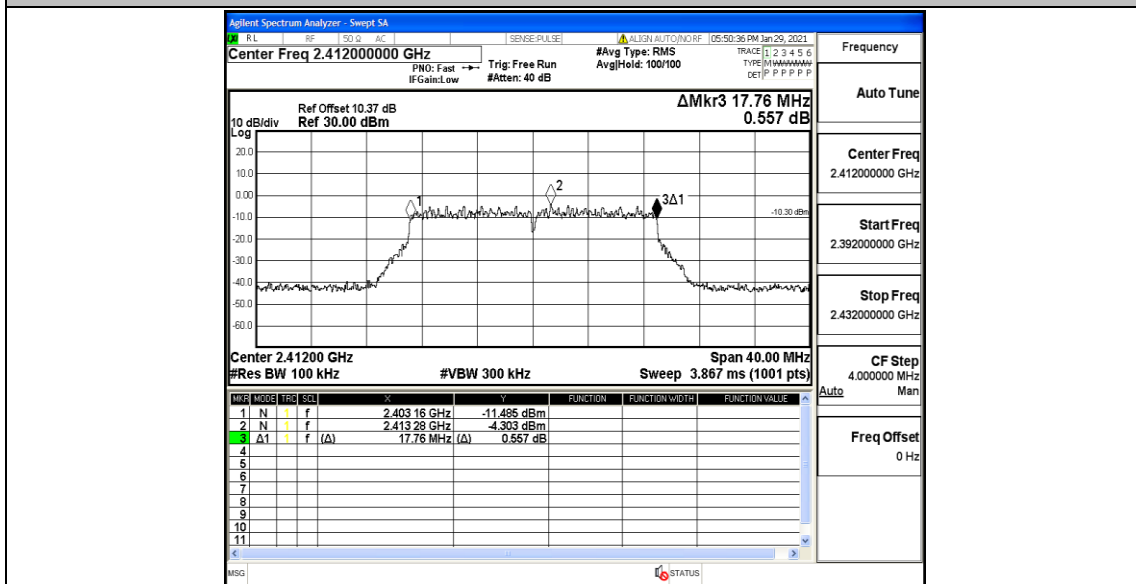
11G_Ant2_2462



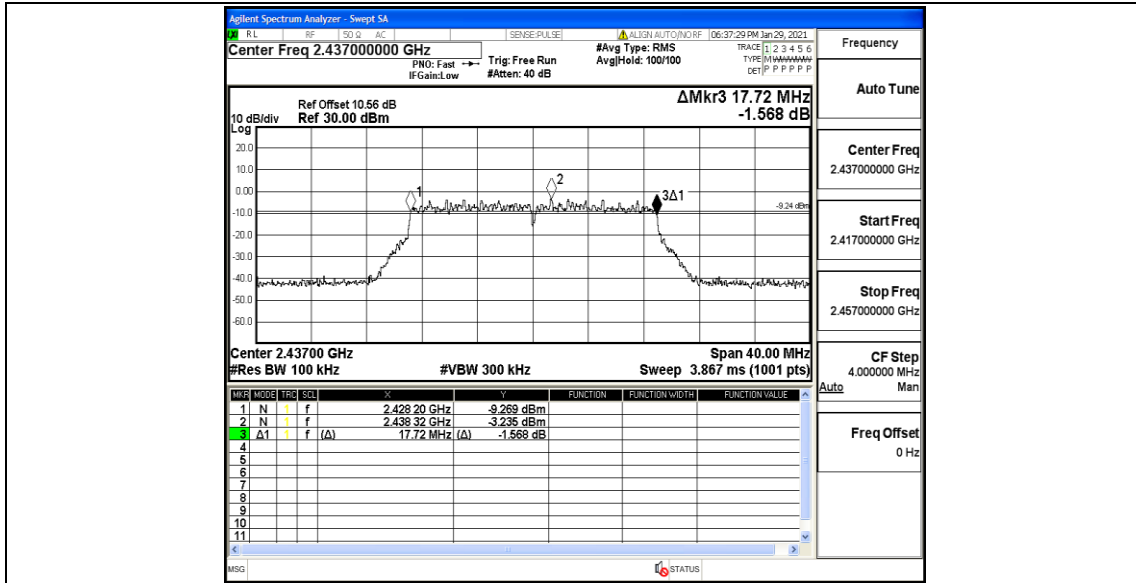
11N20MIMO_Ant1_2412



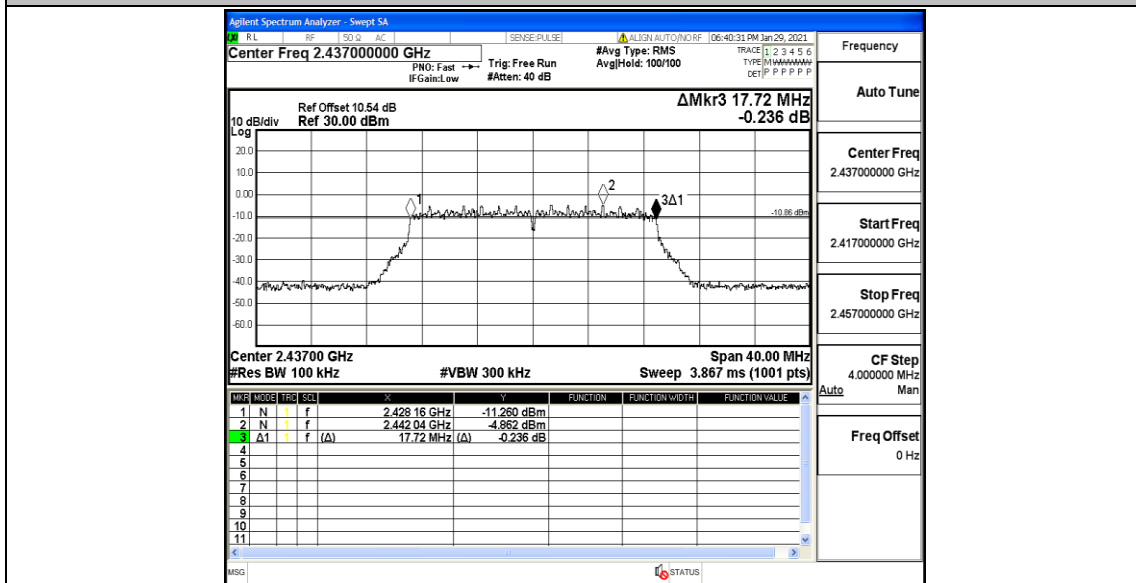
11N20MIMO_Ant2_2412



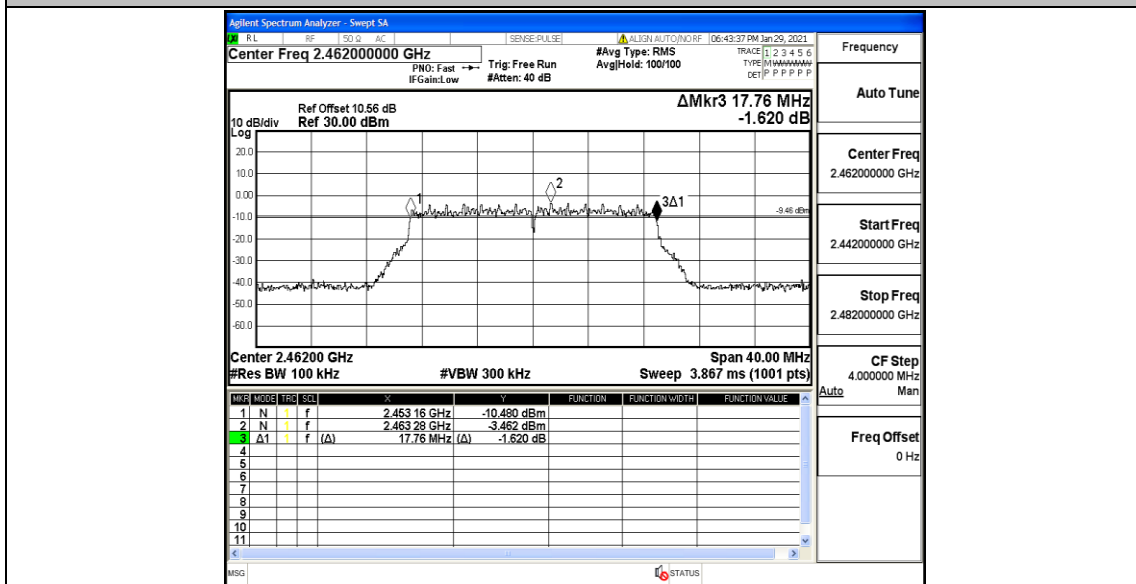
11N20MIMO_Ant1_2437



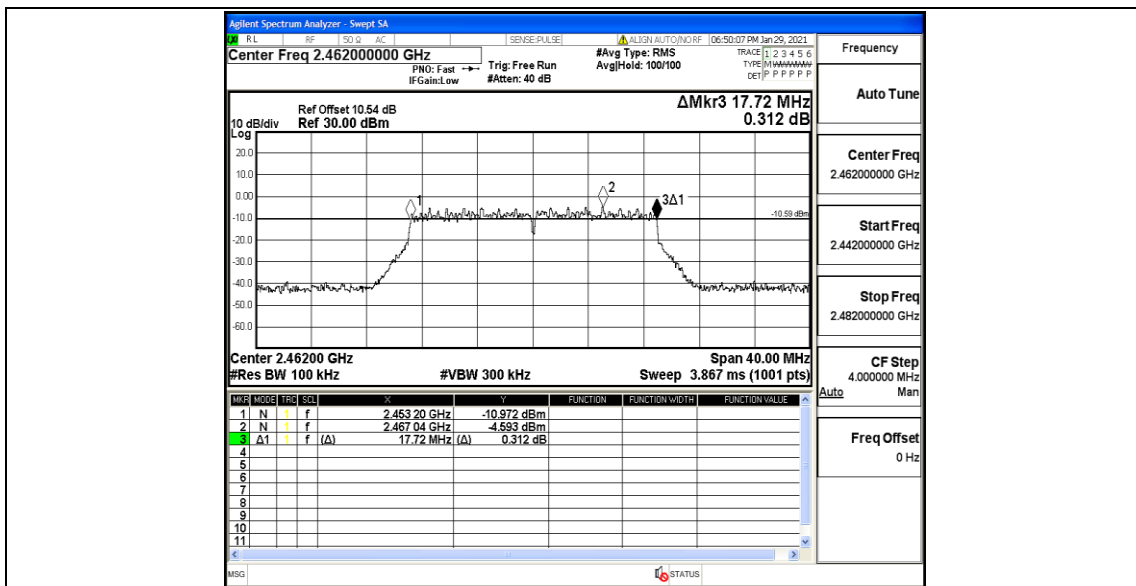
11N20MIMO_Ant2_2437



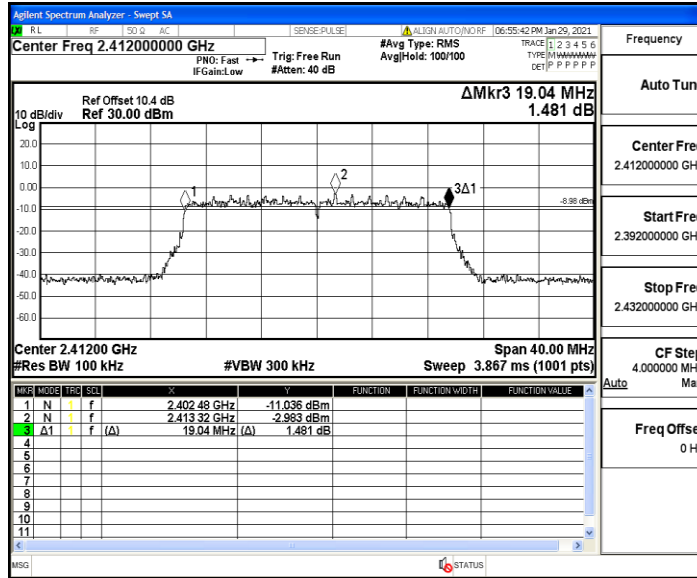
11N20MIMO_Ant1_2462



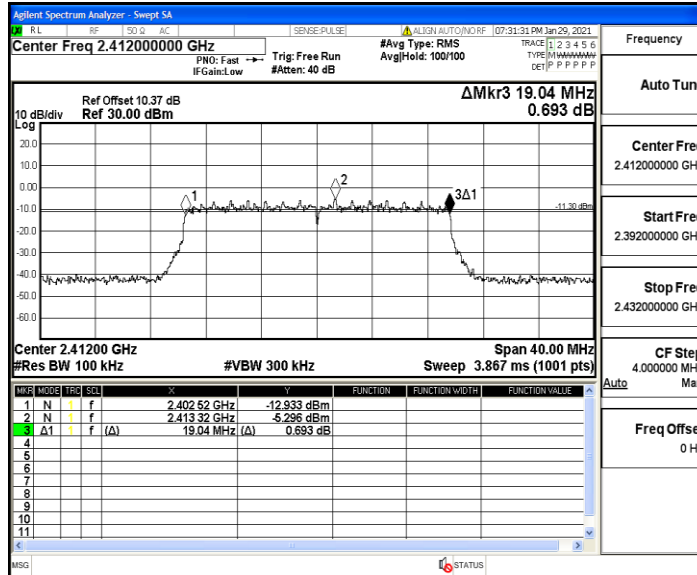
11N20MIMO_Ant2_2462



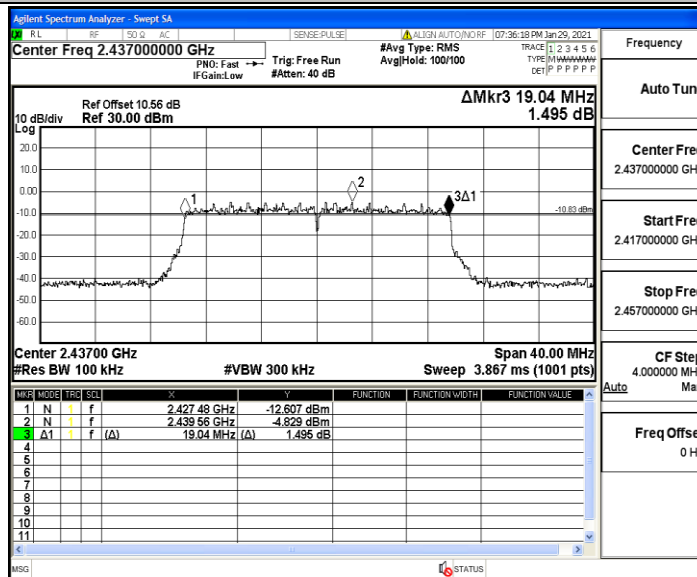
11AX20MIMO_Ant1_2412



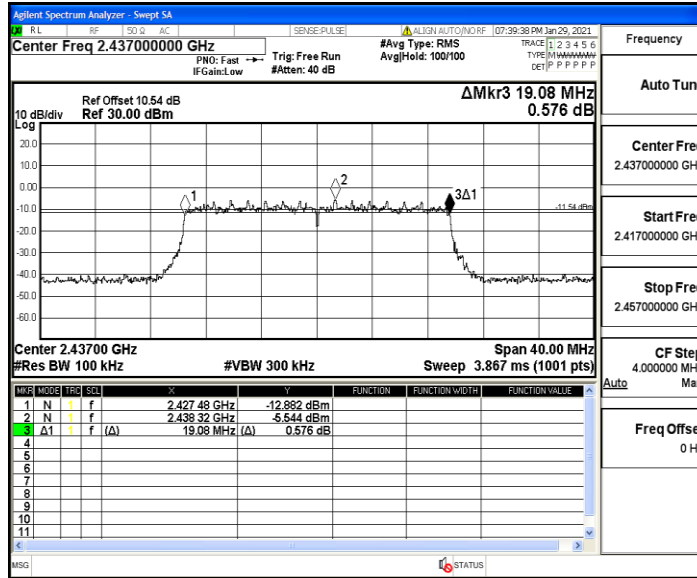
11AX20MIMO_Ant2_2412



11AX20MIMO_Ant1_2437

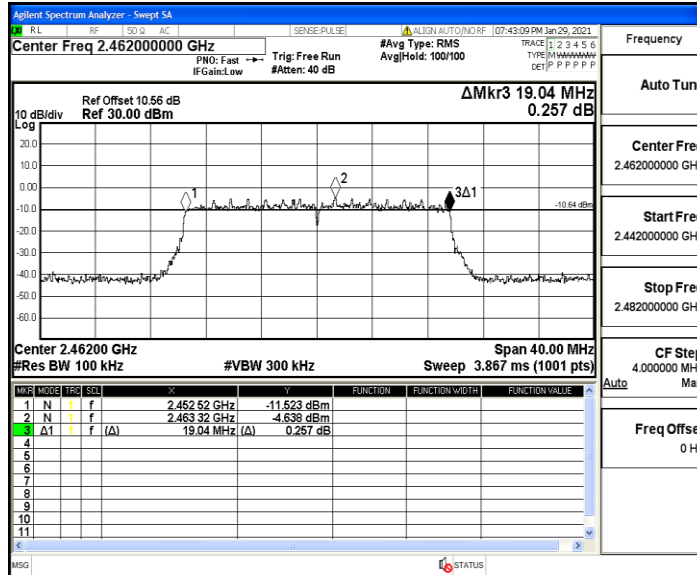


11AX20MIMO_Ant2_2437



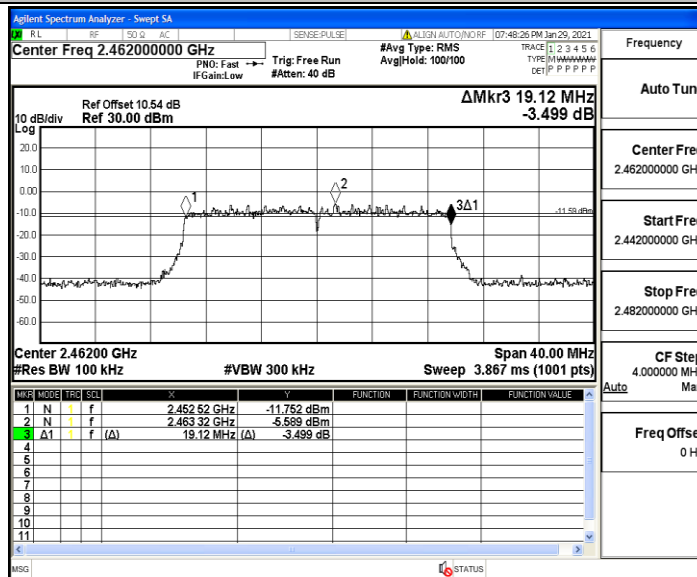
Frequency	Auto Tune
Center Freq	2.43700000 GHz
Start Freq	2.41700000 GHz
Stop Freq	2.45700000 GHz
CF Step	4.000000 MHz
CF Step	Auto Man
Freq Offset	0 Hz

11AX20MIMO_Ant1_2462



Frequency	Auto Tune
Center Freq	2.46200000 GHz
Start Freq	2.44200000 GHz
Stop Freq	2.48200000 GHz
CF Step	4.000000 MHz
CF Step	Auto Man
Freq Offset	0 Hz

11AX20MIMO_Ant2_2462



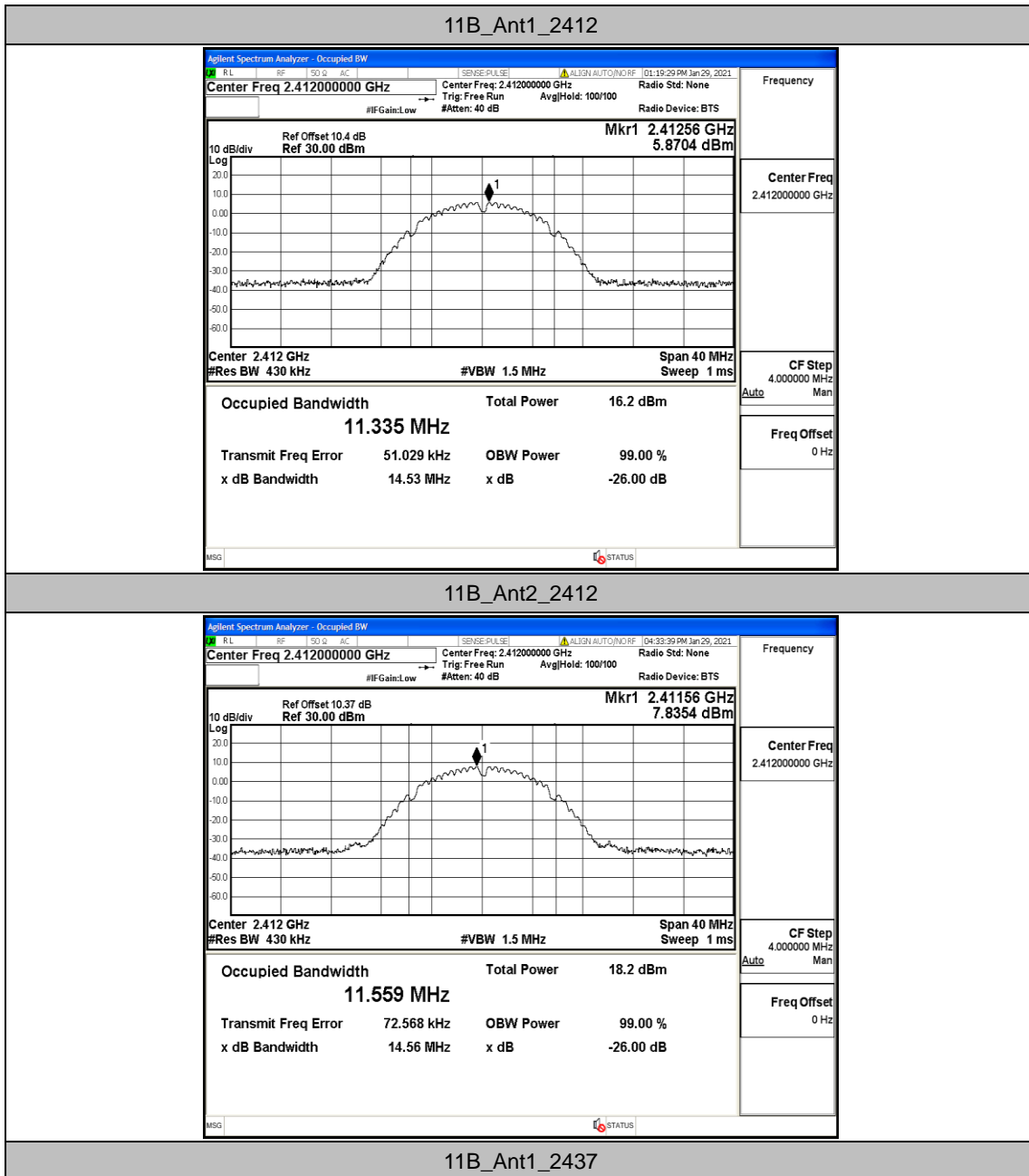
Frequency	Auto Tune
Center Freq	2.46200000 GHz
Start Freq	2.44200000 GHz
Stop Freq	2.48200000 GHz
CF Step	4.000000 MHz
CF Step	Auto Man
Freq Offset	0 Hz

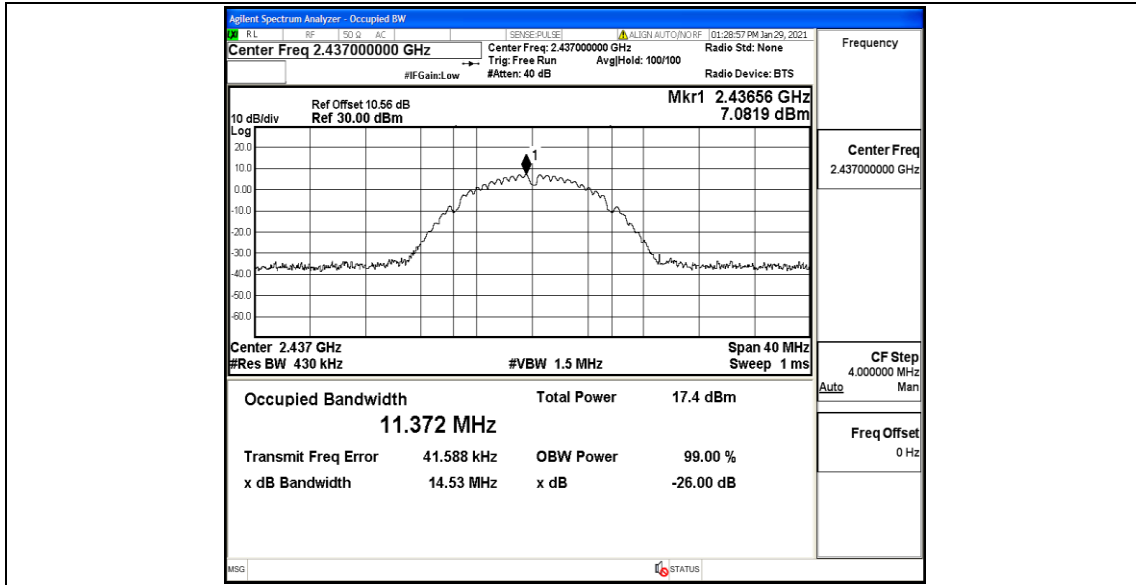
Appendix B: Occupied Channel Bandwidth

Test Result

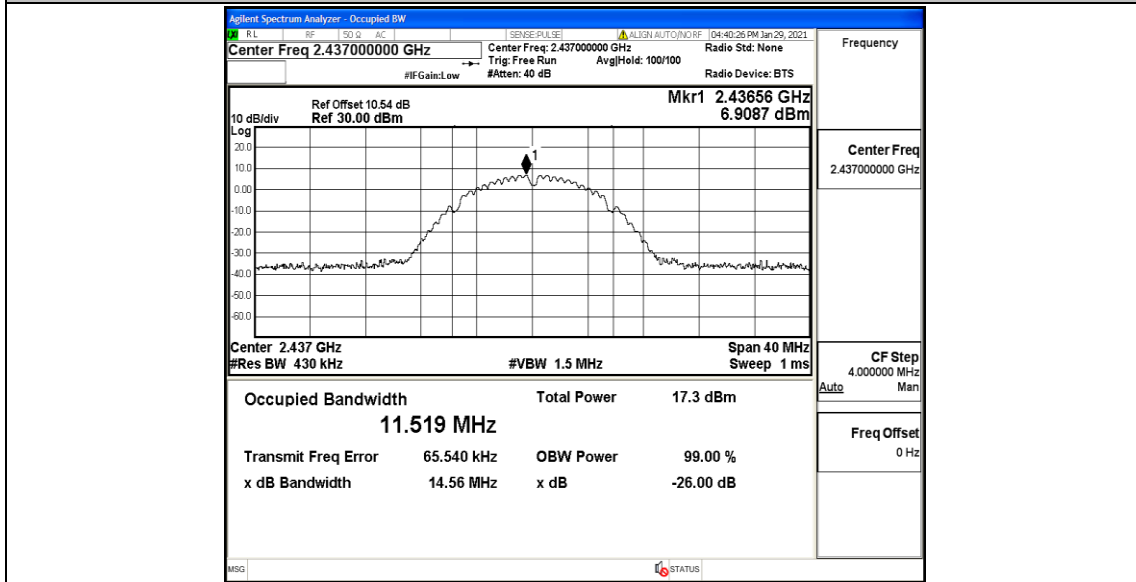
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	11.335	2406.384	2417.719	---	PASS
	Ant2	2412	11.559	2406.293	2417.852	---	PASS
	Ant1	2437	11.372	2431.356	2442.728	---	PASS
	Ant2	2437	11.519	2431.306	2442.825	---	PASS
	Ant1	2462	11.340	2456.425	2467.765	---	PASS
	Ant2	2462	11.498	2456.360	2467.858	---	PASS
11G	Ant1	2412	16.962	2403.599	2420.561	---	PASS
	Ant2	2412	17.083	2403.529	2420.612	---	PASS
	Ant1	2437	17.054	2428.531	2445.585	---	PASS
	Ant2	2437	17.074	2428.514	2445.588	---	PASS
	Ant1	2462	16.987	2453.628	2470.615	---	PASS
	Ant2	2462	16.995	2453.598	2470.593	---	PASS
11N20MIMO	Ant1	2412	18.083	2403.030	2421.113	---	PASS
	Ant2	2412	18.008	2403.044	2421.052	---	PASS
	Ant1	2437	18.043	2428.030	2446.073	---	PASS
	Ant2	2437	18.018	2428.032	2446.050	---	PASS
	Ant1	2462	18.022	2453.058	2471.080	---	PASS
	Ant2	2462	18.073	2453.066	2471.139	---	PASS
11AX20MIMO	Ant1	2412	19.050	2402.540	2421.590	---	PASS
	Ant2	2412	19.099	2402.504	2421.603	---	PASS
	Ant1	2437	19.026	2427.512	2446.538	---	PASS
	Ant2	2437	19.092	2427.529	2446.621	---	PASS
	Ant1	2462	19.126	2452.516	2471.642	---	PASS
	Ant2	2462	19.077	2452.541	2471.618	---	PASS

Test Graphs

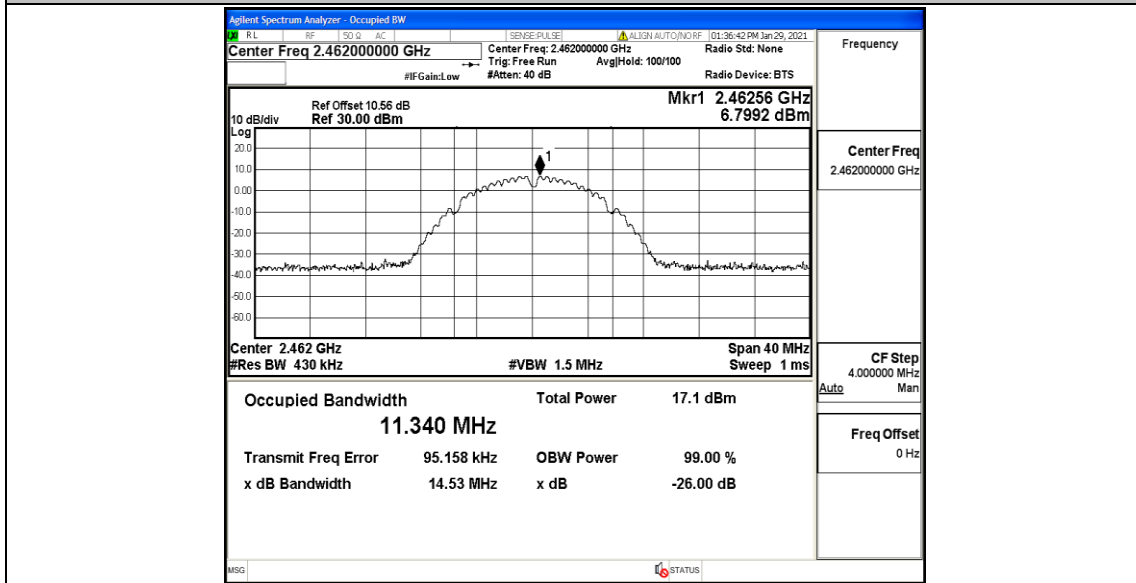




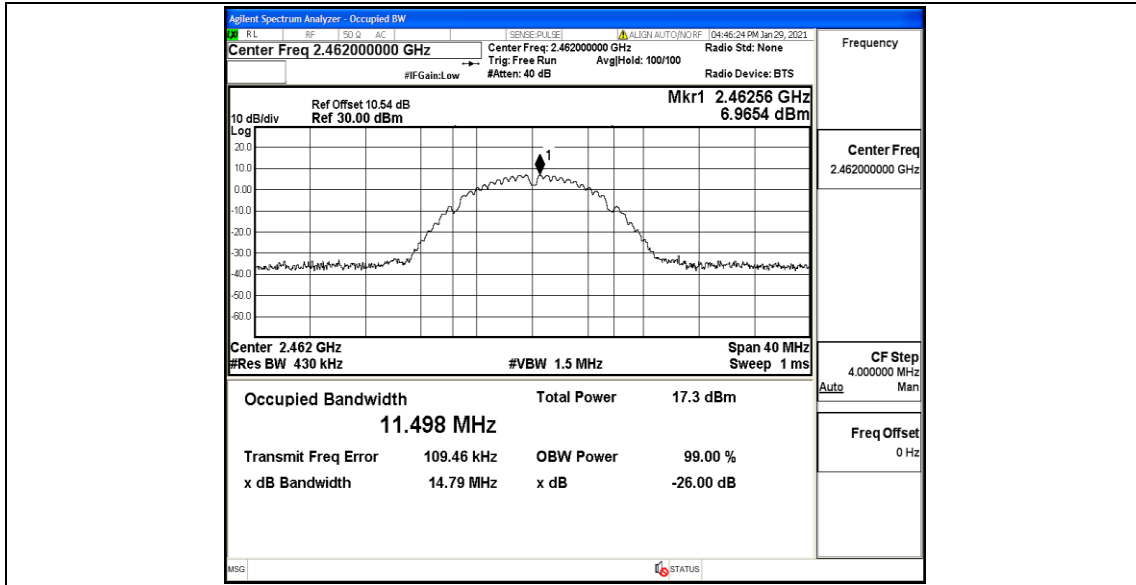
11B_Ant2_2437



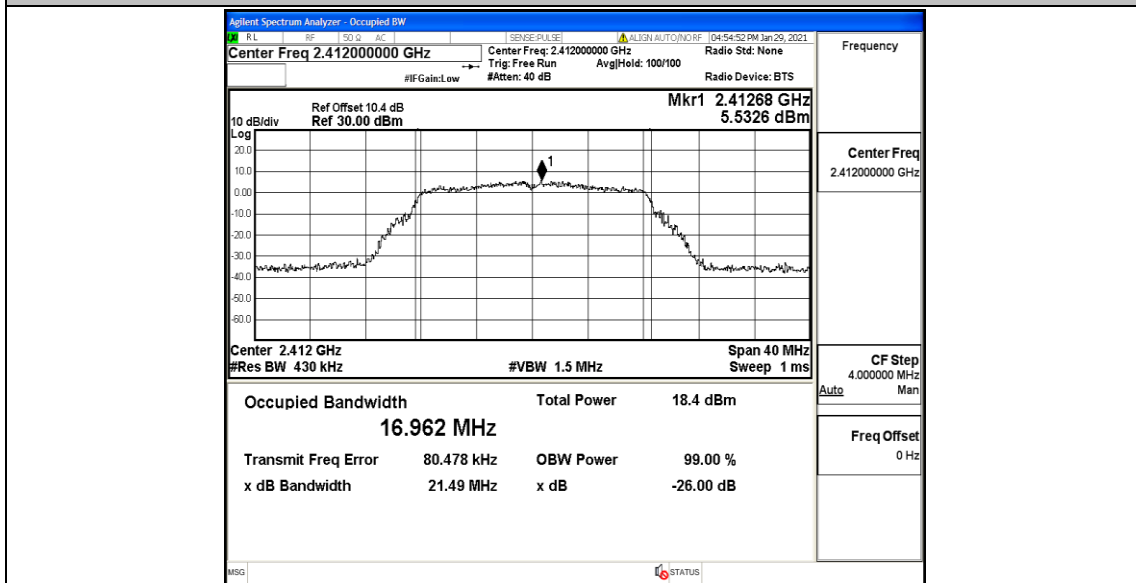
11B_Ant1_2462



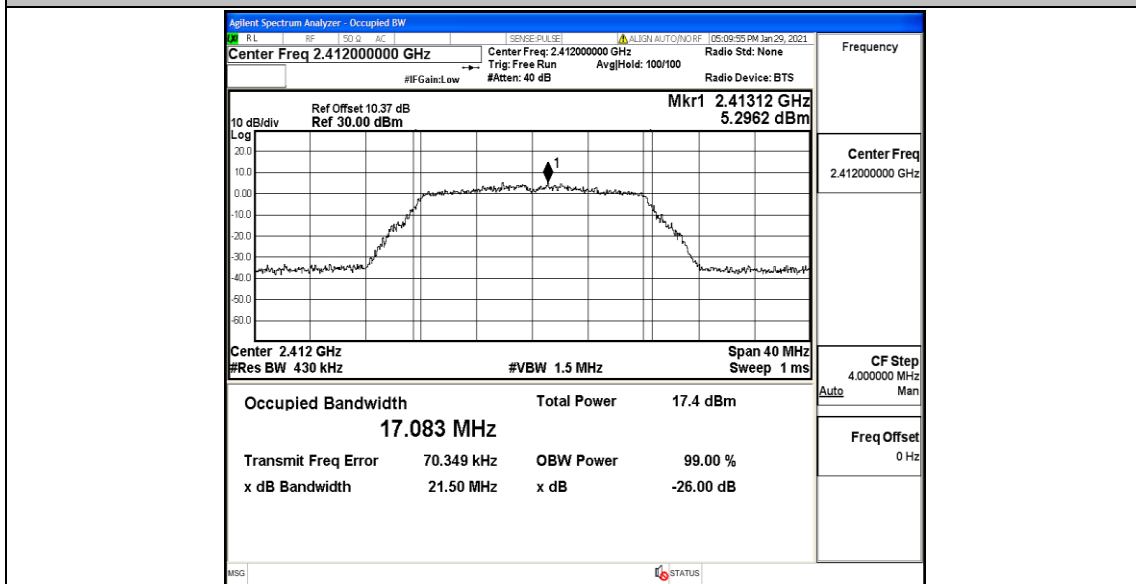
11B_Ant2_2462



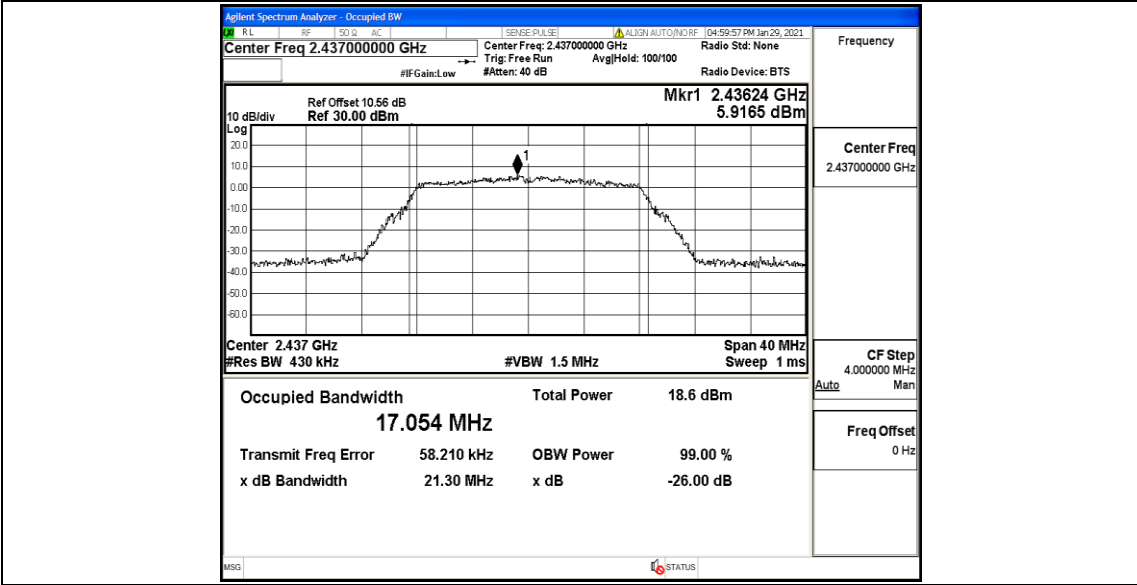
11G_Ant1_2412



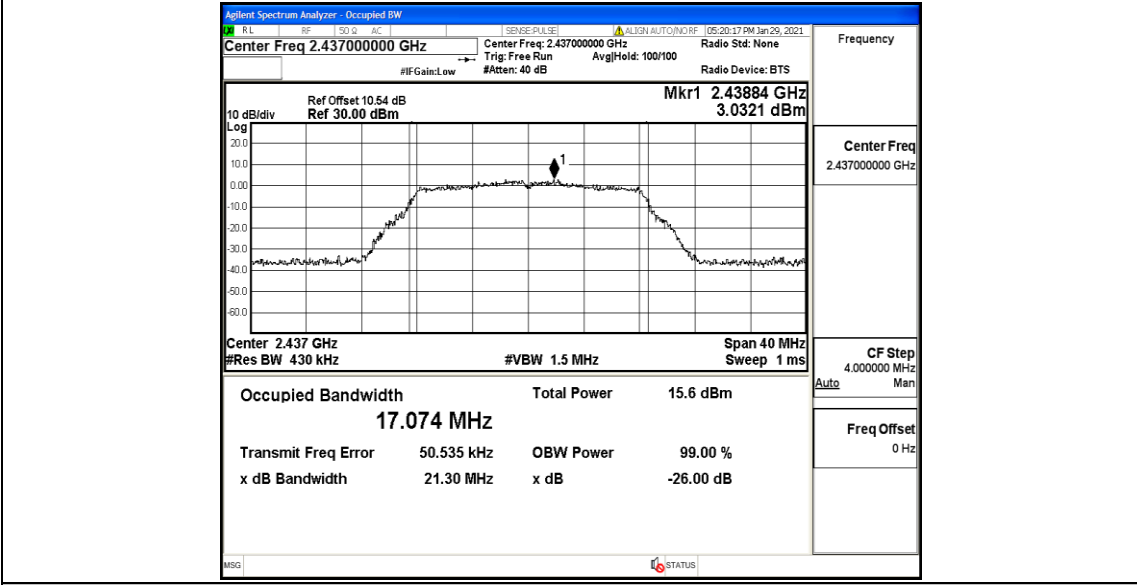
11G_Ant2_2412



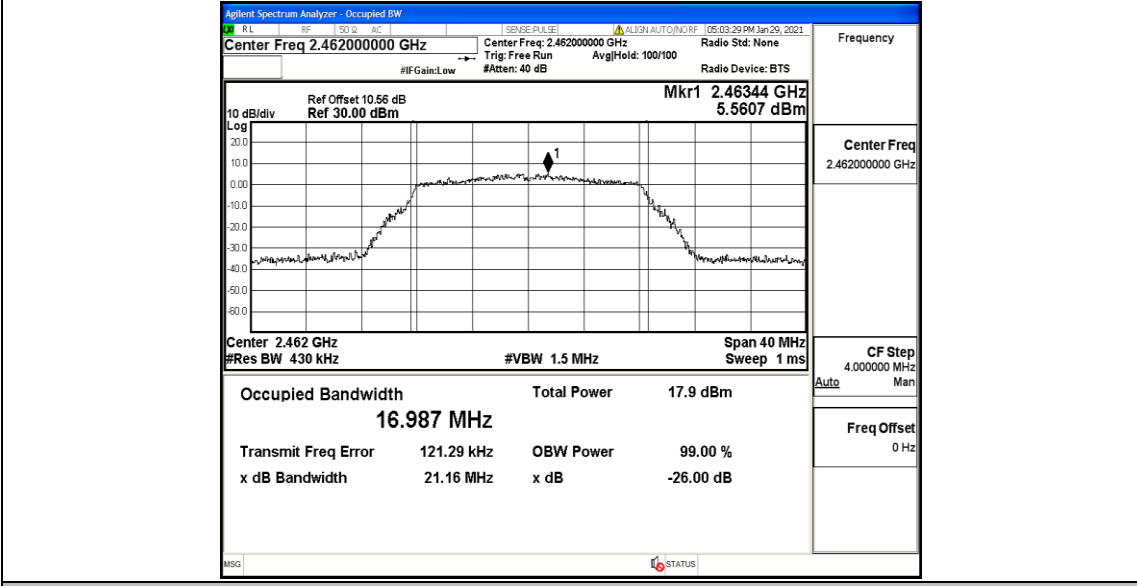
11G_Ant1_2437



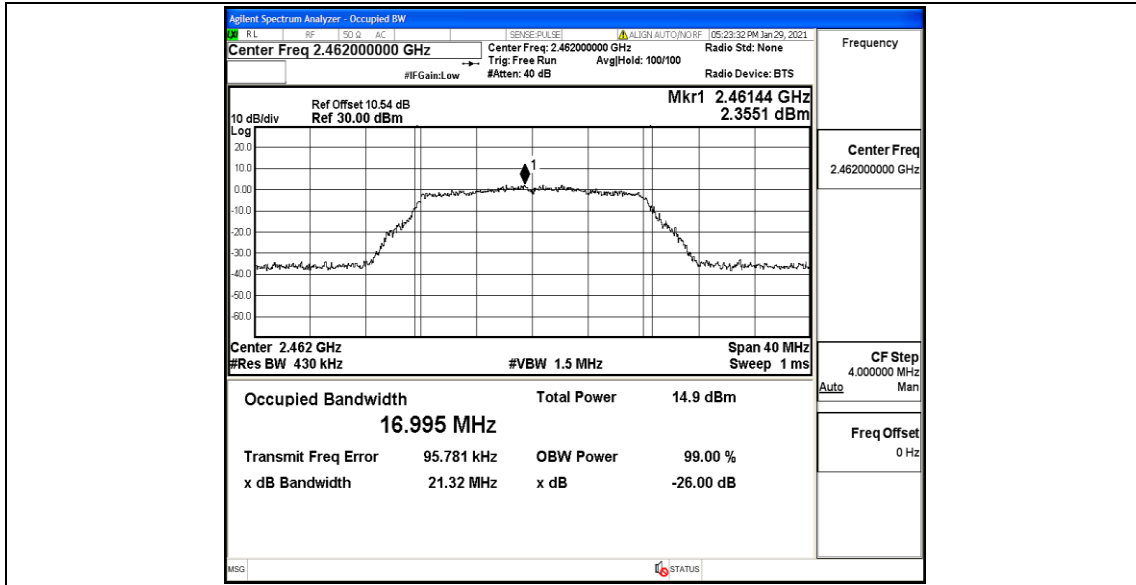
11G_Ant2_2437



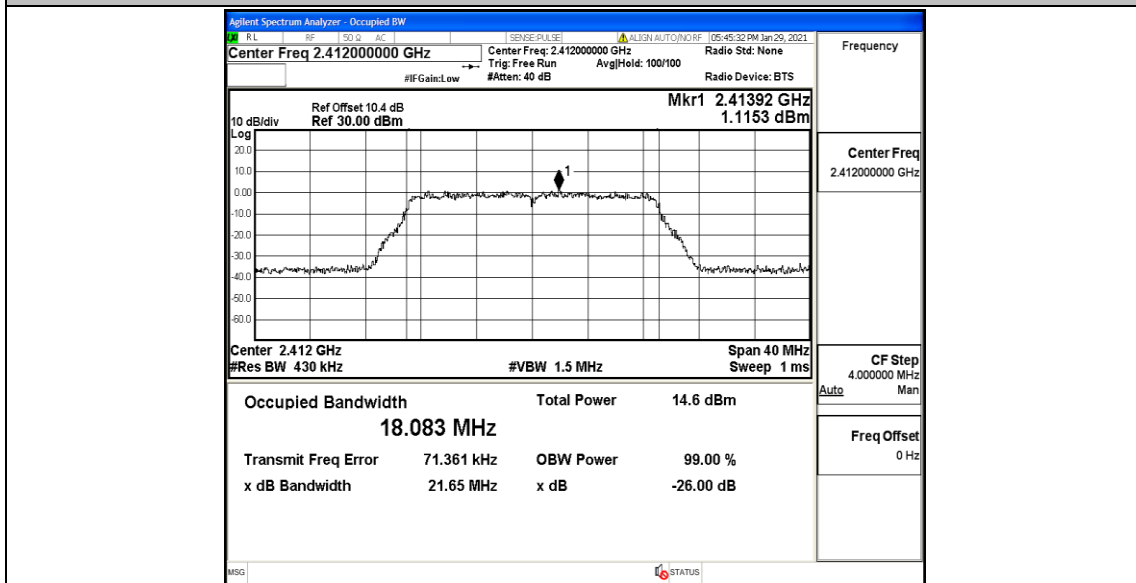
11G_Ant1_2462



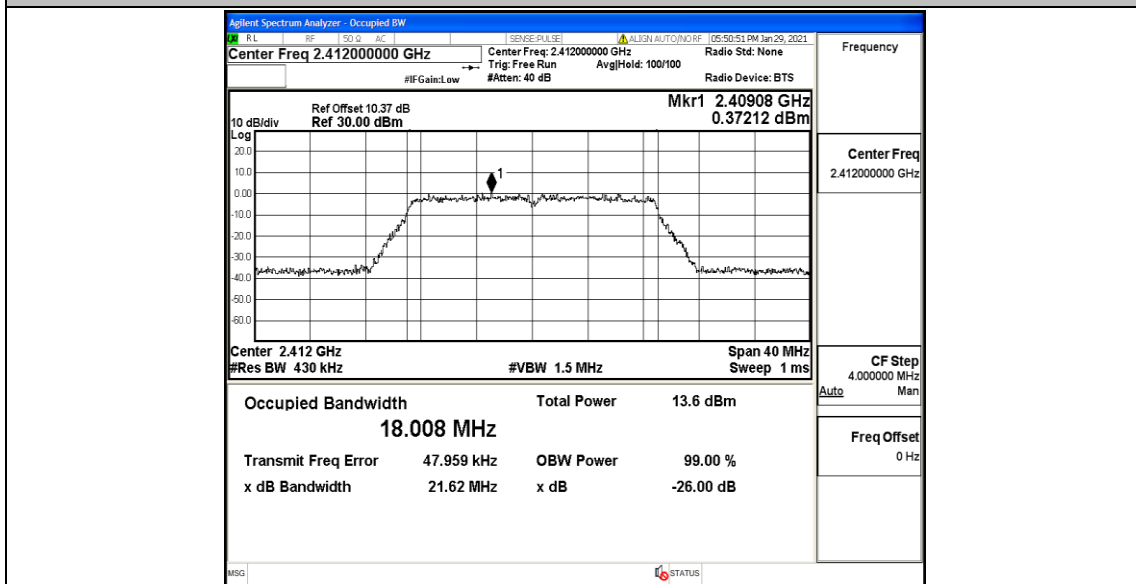
11G_Ant2_2462



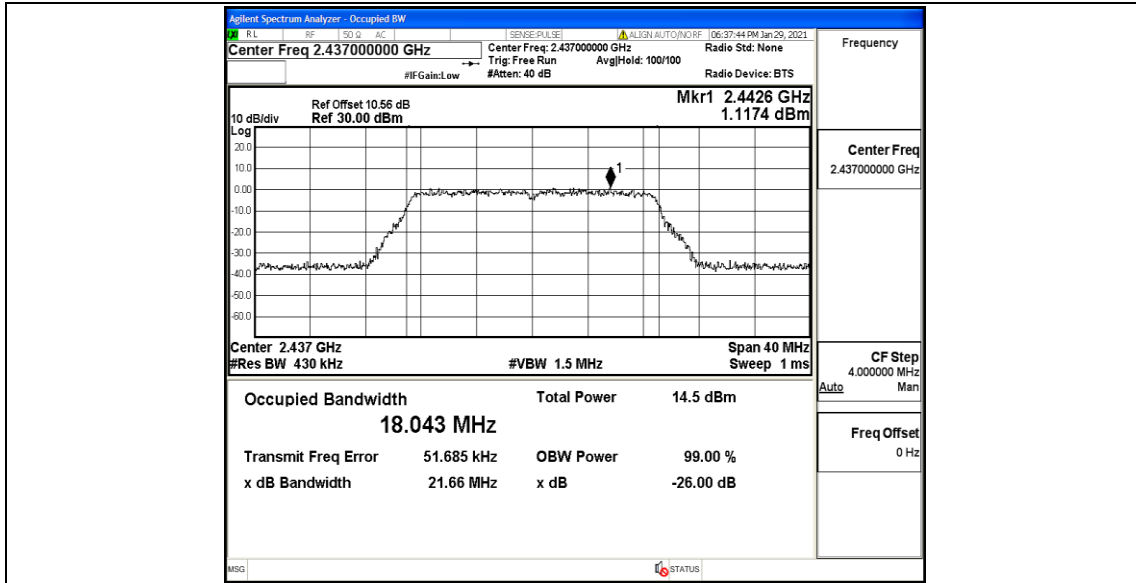
11N20MIMO_Ant1_2412



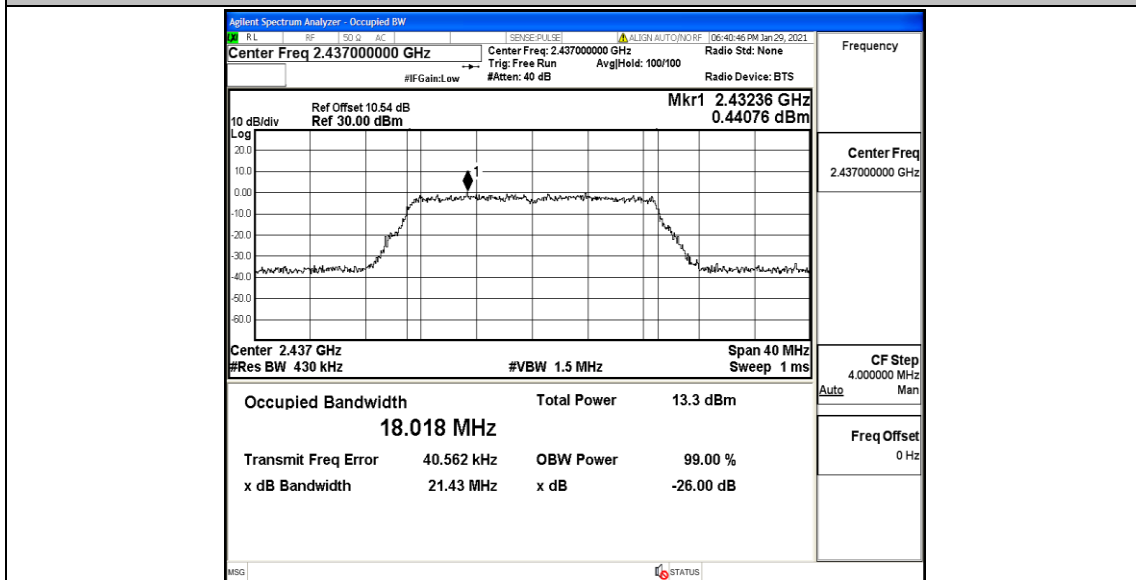
11N20MIMO_Ant2_2412



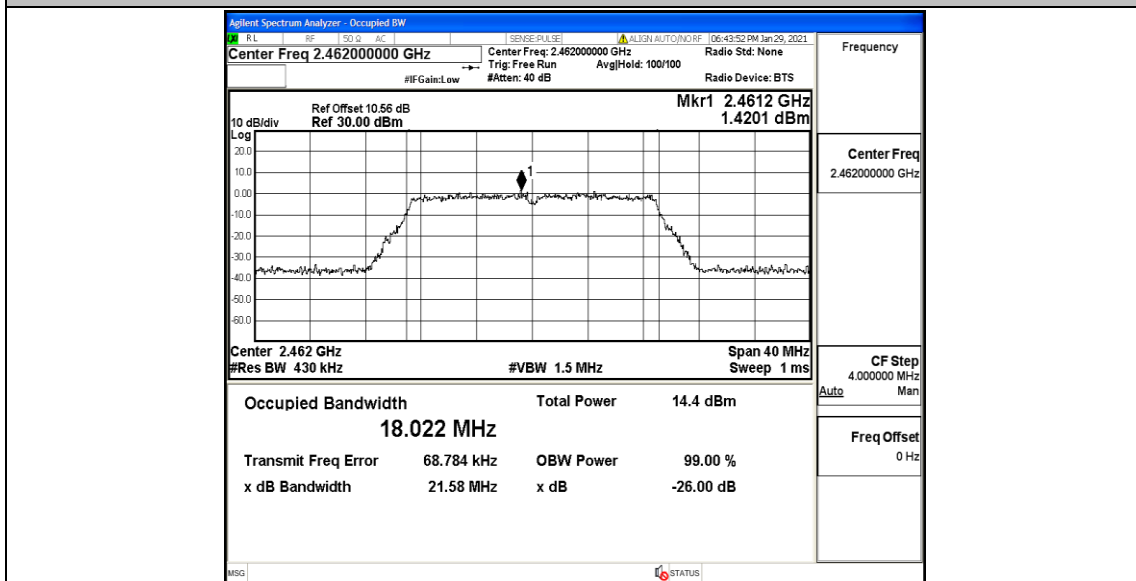
11N20MIMO_Ant1_2437



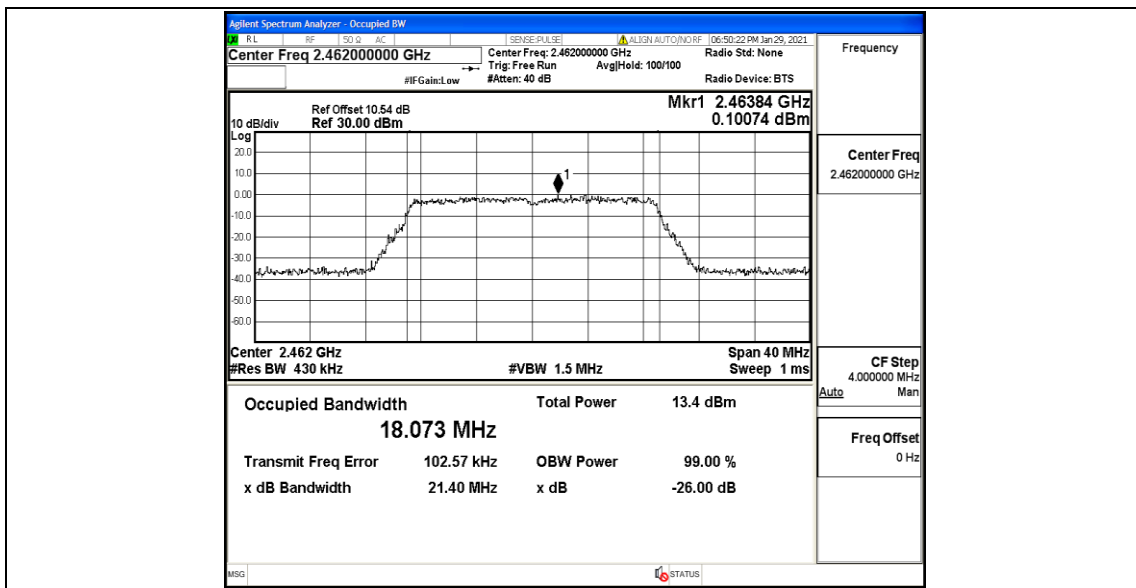
11N20MIMO_Ant2_2437

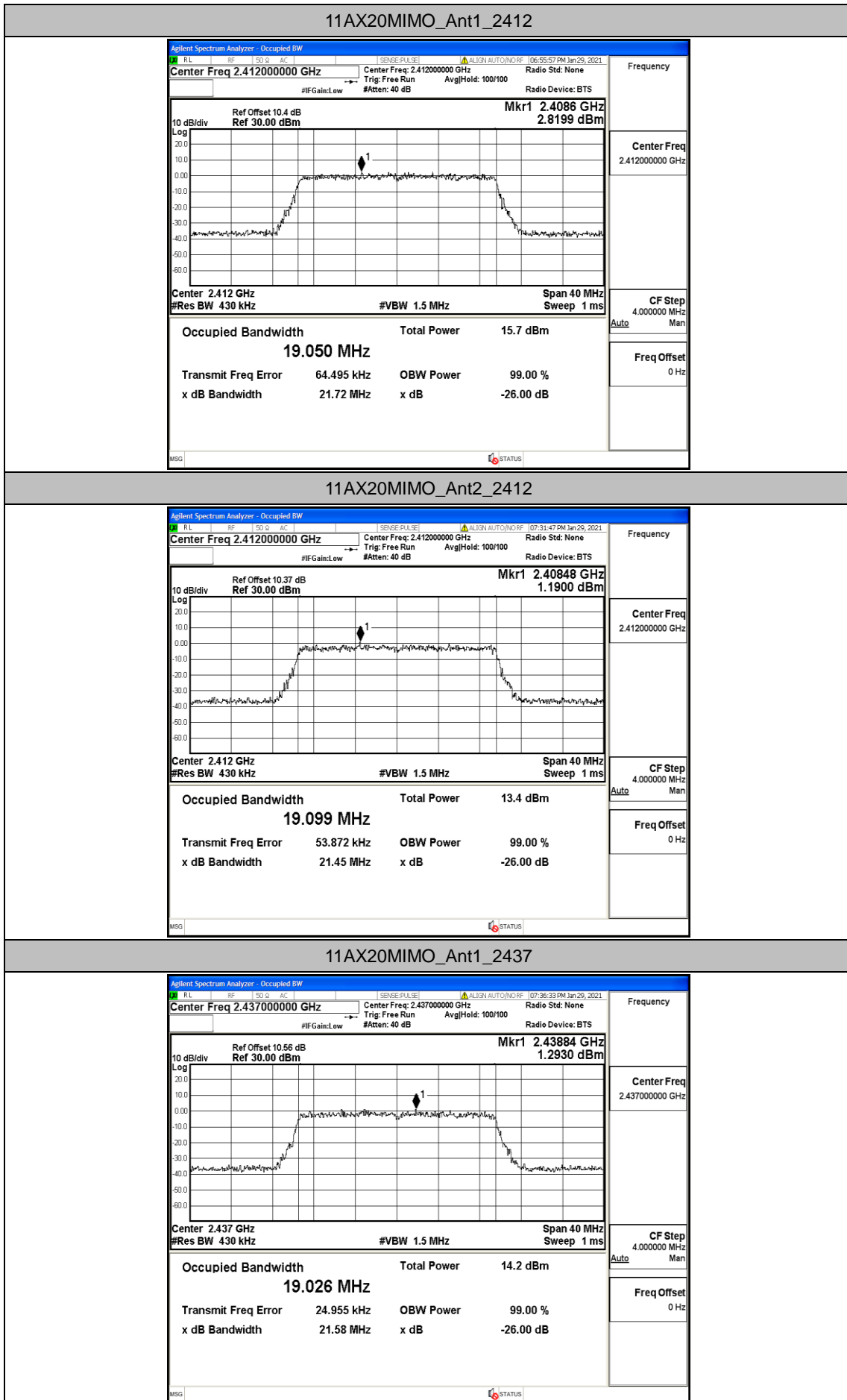


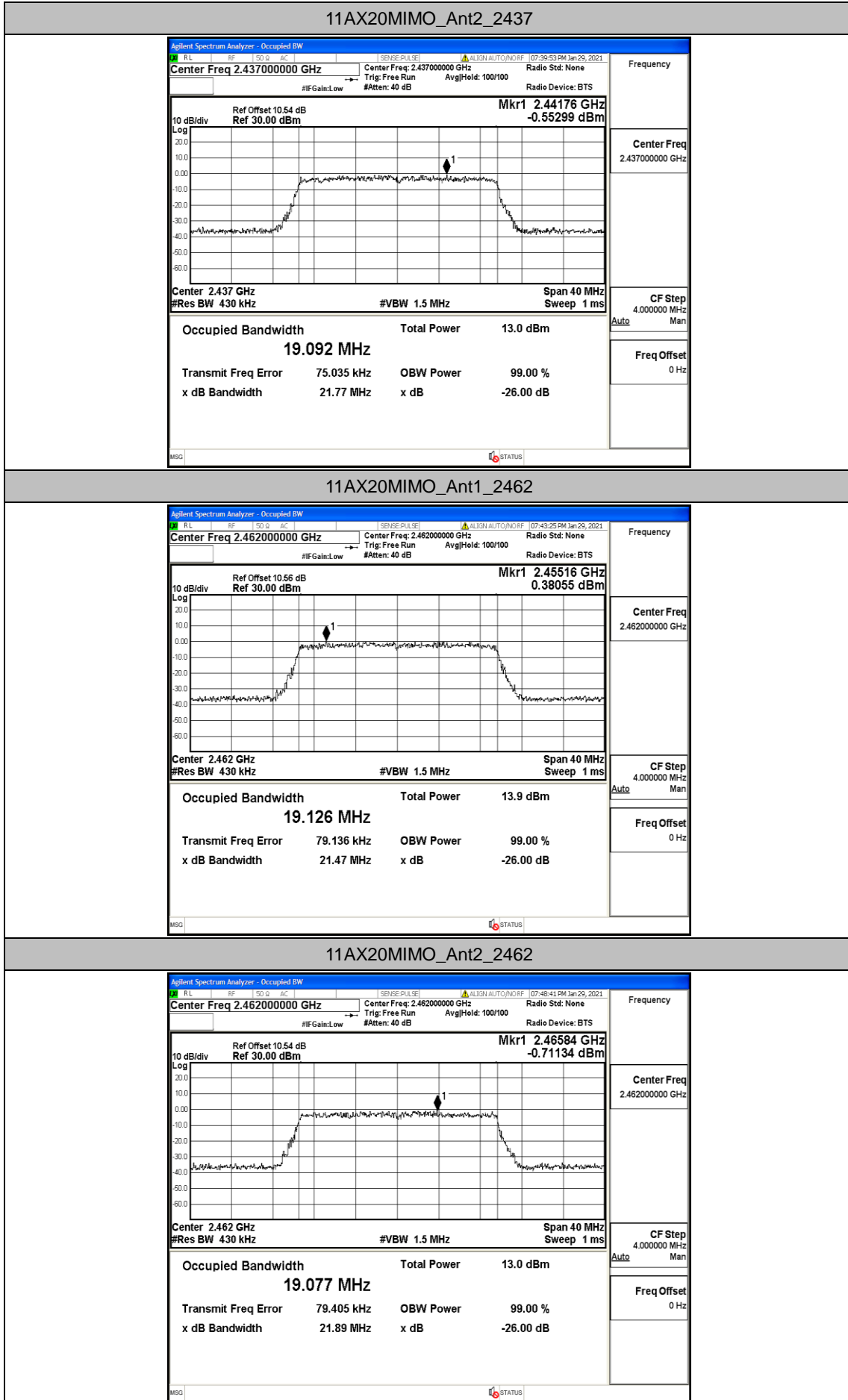
11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462







Appendix C: Maximum conducted output power

Test Result

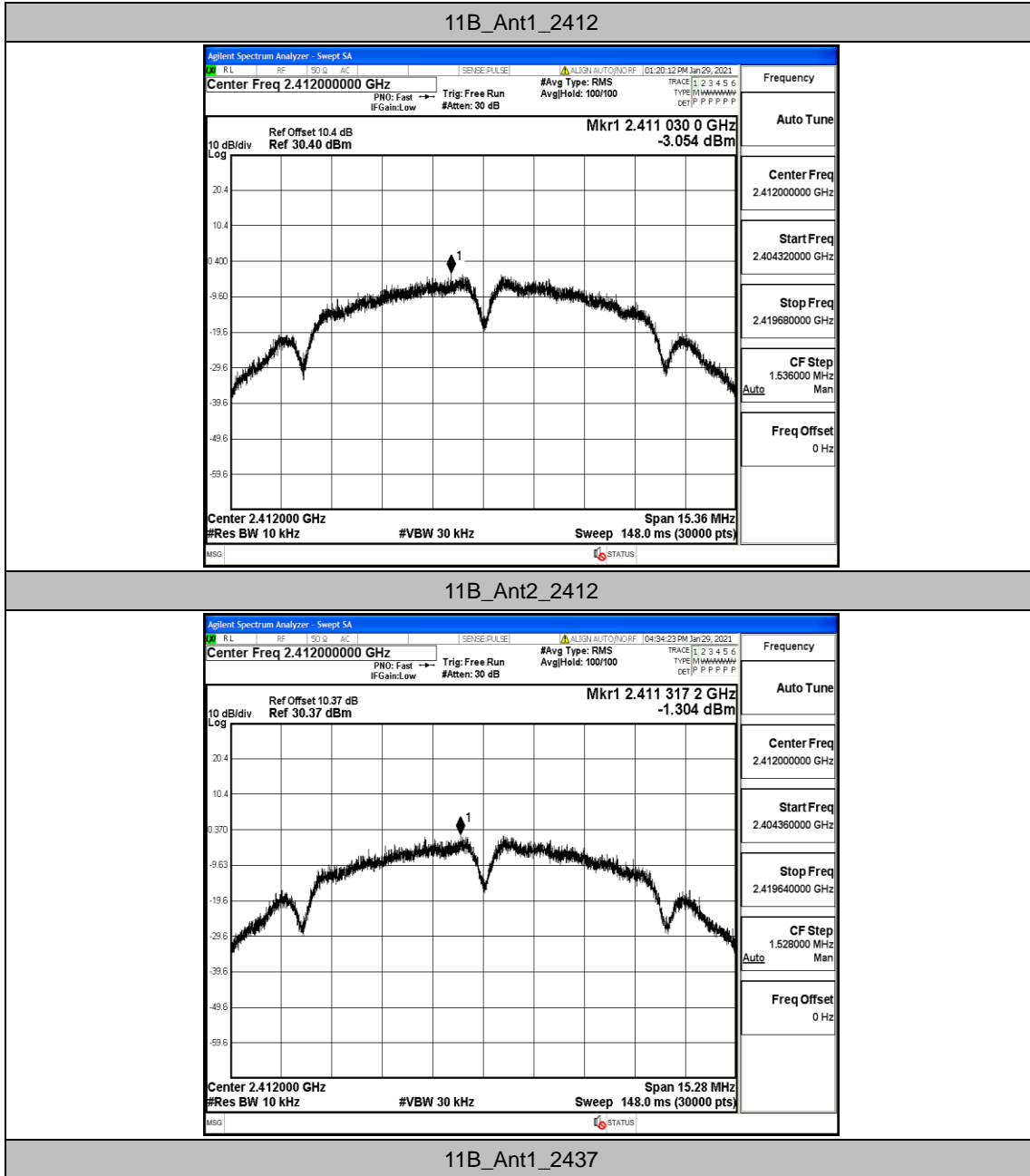
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	15.69	<=30.00	PASS
	Ant2	2412	17.69	<=30.00	PASS
	Ant1	2437	16.90	<=30.00	PASS
	Ant2	2437	16.63	<=30.00	PASS
	Ant1	2462	16.46	<=30.00	PASS
	Ant2	2462	16.62	<=30.00	PASS
11G	Ant1	2412	17.33	<=30.00	PASS
	Ant2	2412	16.44	<=30.00	PASS
	Ant1	2437	17.51	<=30.00	PASS
	Ant2	2437	16.71	<=30.00	PASS
	Ant1	2462	17.12	<=30.00	PASS
	Ant2	2462	15.96	<=30.00	PASS
11N20MIMO	Ant1	2412	15.15	<=30.00	PASS
	Ant2	2412	14.31	<=30.00	PASS
	total	2412	17.8	<=28.73	PASS
	Ant1	2437	15.18	<=30.00	PASS
	Ant2	2437	13.89	<=30.00	PASS
	total	2437	17.6	<=28.73	PASS
	Ant1	2462	15.16	<=30.00	PASS
	Ant2	2462	13.98	<=30.00	PASS
	total	2462	17.6	<=28.73	PASS
11AX20MIMO	Ant1	2412	14.79	<=30.00	PASS
	Ant2	2412	13.76	<=30.00	PASS
	total	2437	17.3	<=28.73	PASS
	Ant1	2437	14.53	<=30.00	PASS
	Ant2	2462	13.58	<=30.00	PASS
	total	2462	17.1	<=28.73	PASS
	Ant1	2412	14.44	<=30.00	PASS
	Ant2	2412	13.54	<=30.00	PASS
	total	2437	17.0	<=28.73	PASS

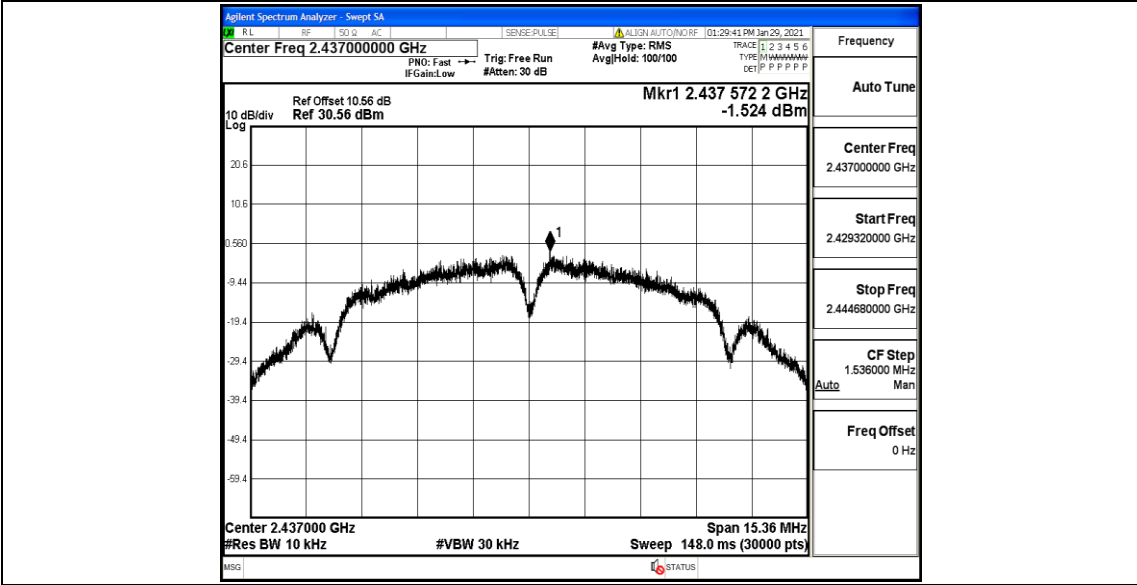
Appendix D: Maximum power spectral density

Test Result

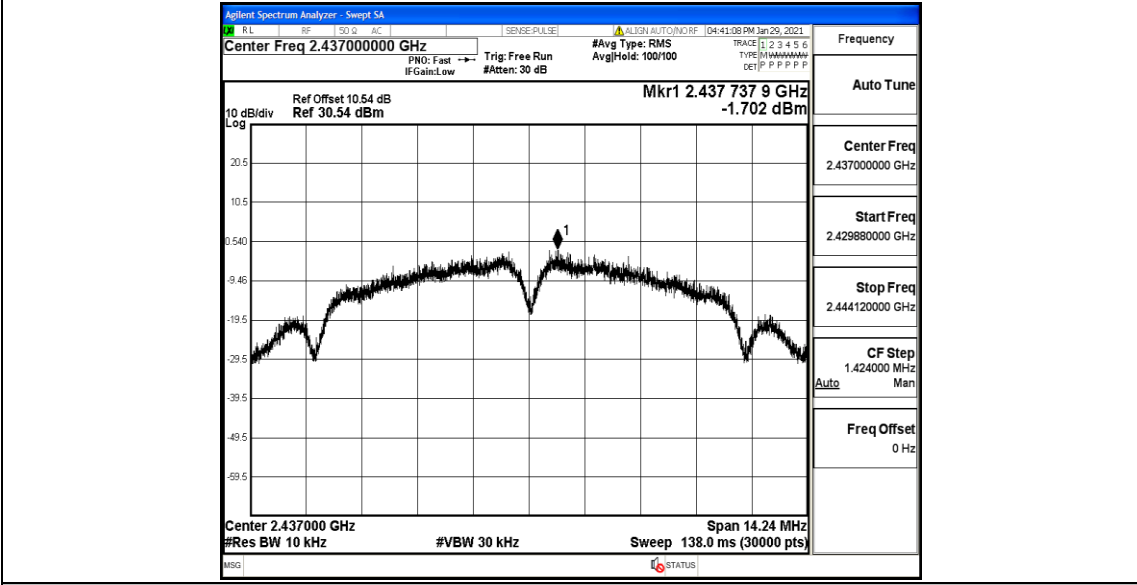
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-3.05	<=8	PASS
	Ant2	2412	-1.3	<=8	PASS
	Ant1	2437	-1.52	<=8	PASS
	Ant2	2437	-1.7	<=8	PASS
	Ant1	2462	-1.83	<=8	PASS
	Ant2	2462	-1.91	<=8	PASS
11G	Ant1	2412	-8.28	<=8	PASS
	Ant2	2412	-7.15	<=8	PASS
	Ant1	2437	-8.52	<=8	PASS
	Ant2	2437	-9.3	<=8	PASS
	Ant1	2462	-8.97	<=8	PASS
	Ant2	2462	-9.65	<=8	PASS
11N20MIMO	Ant1	2412	-11.67	<=8	PASS
	Ant2	2412	-12.66	<=8	PASS
	total	2412	-9.13	<=6.73	PASS
	Ant1	2437	-11.97	<=8	PASS
	Ant2	2437	-12.08	<=8	PASS
	total	2437	-9.01	<=6.73	PASS
	Ant1	2462	-11.21	<=8	PASS
	Ant2	2462	-11.67	<=8	PASS
total	2462	-8.42	<=6.73	PASS	
11AX20MIMO	Ant1	2412	-11.73	<=8	PASS
	Ant2	2412	-13.84	<=8	PASS
	total	2437	-9.65	<=6.73	PASS
	Ant1	2437	-13.12	<=8	PASS
	Ant2	2462	-14.37	<=8	PASS
	total	2462	-10.69	<=6.73	PASS
	Ant1	2412	-13.5	<=8	PASS
	Ant2	2412	-14.41	<=8	PASS
total	2437	-10.92	<=6.73	PASS	

Test Graphs

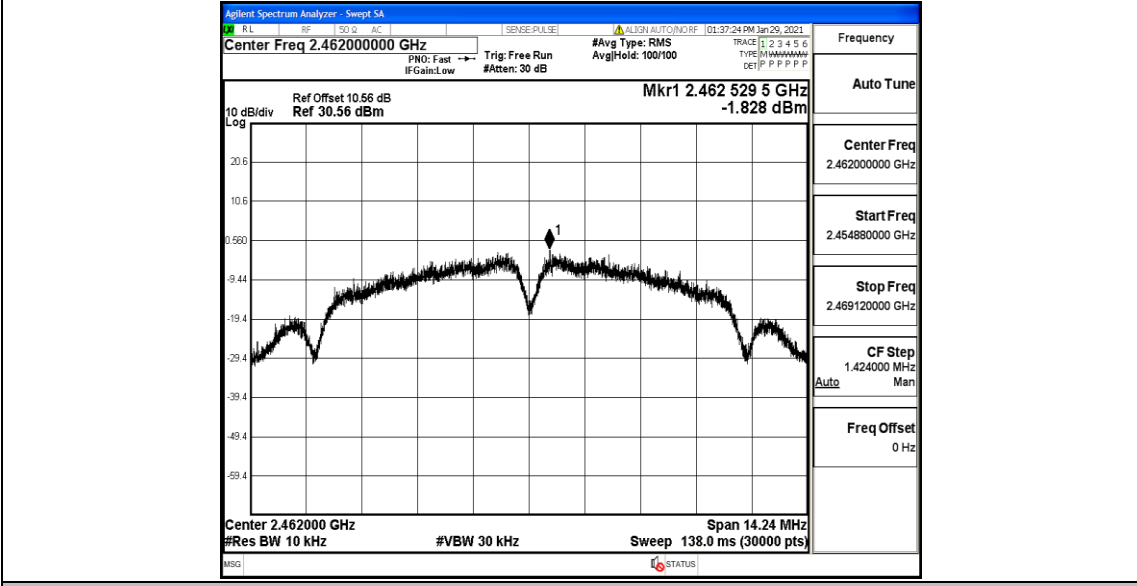




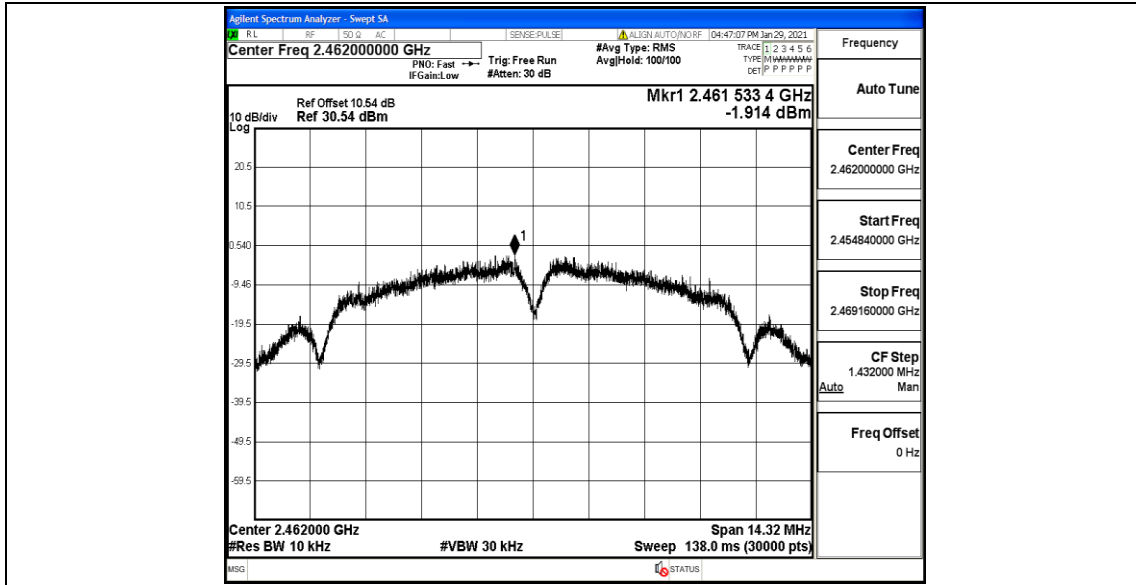
11B_Ant2_2437



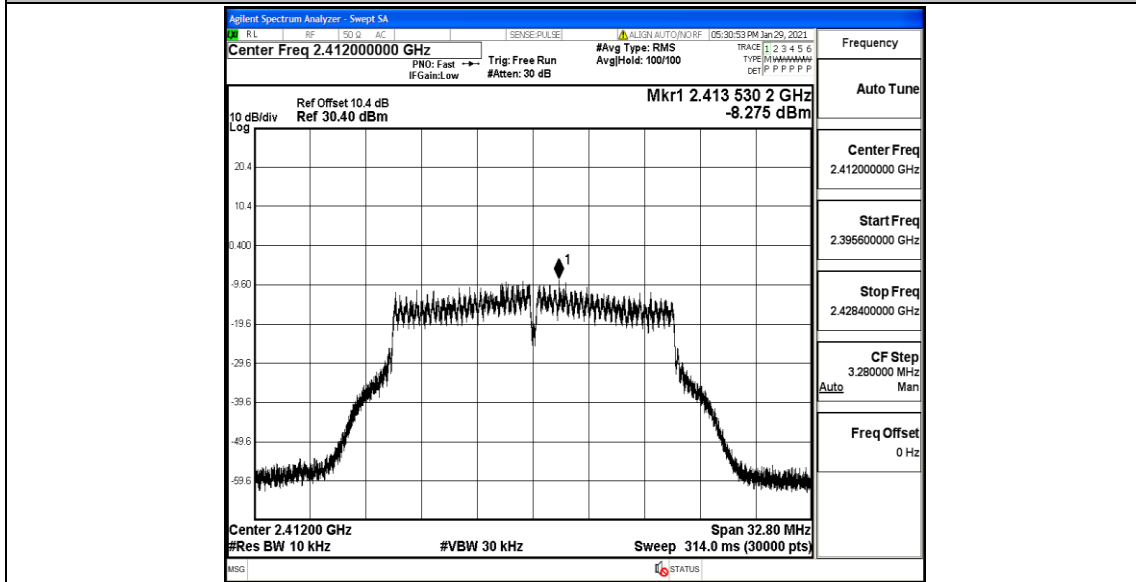
11B_Ant1_2462



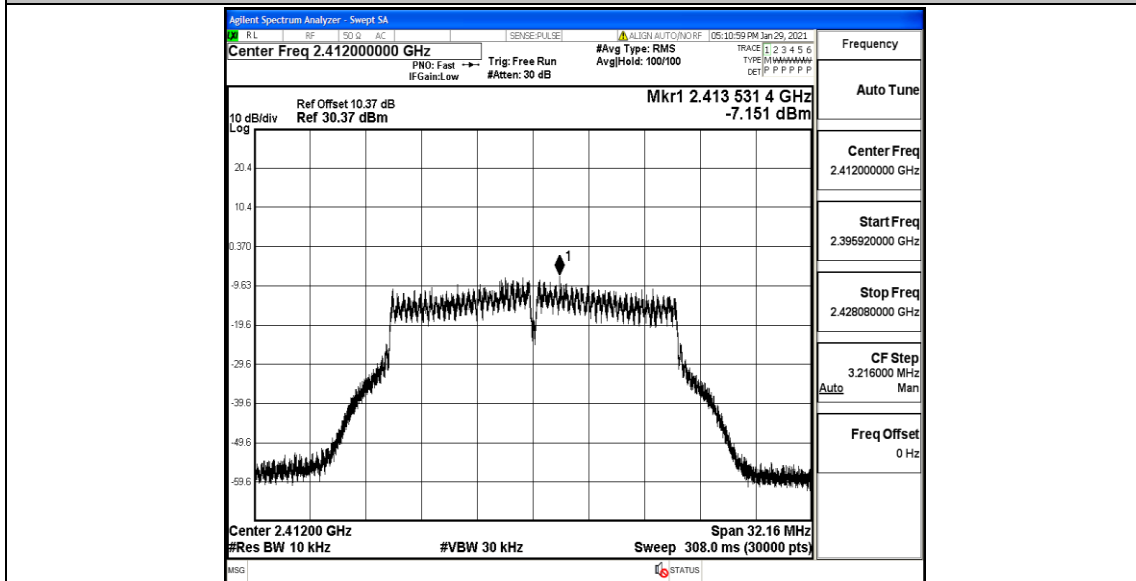
11B_Ant2_2462



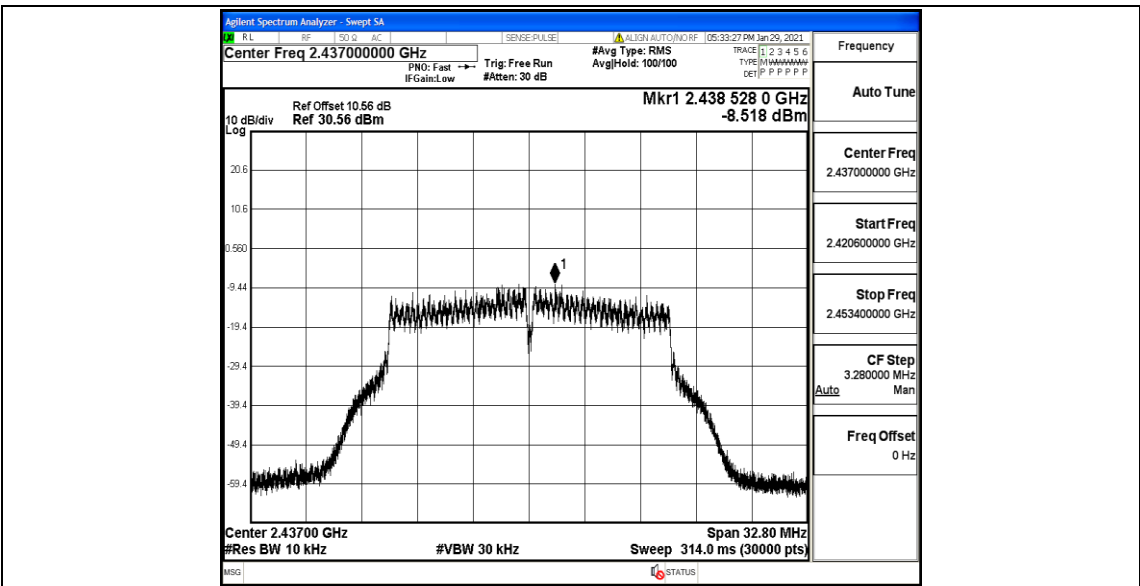
11G_Ant1_2412



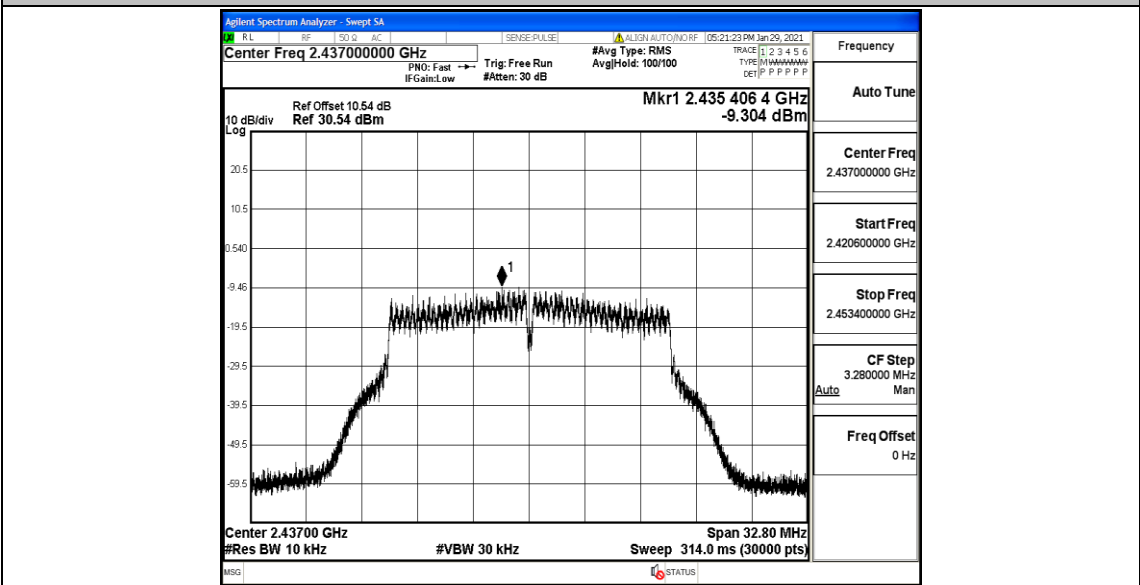
11G_Ant2_2412



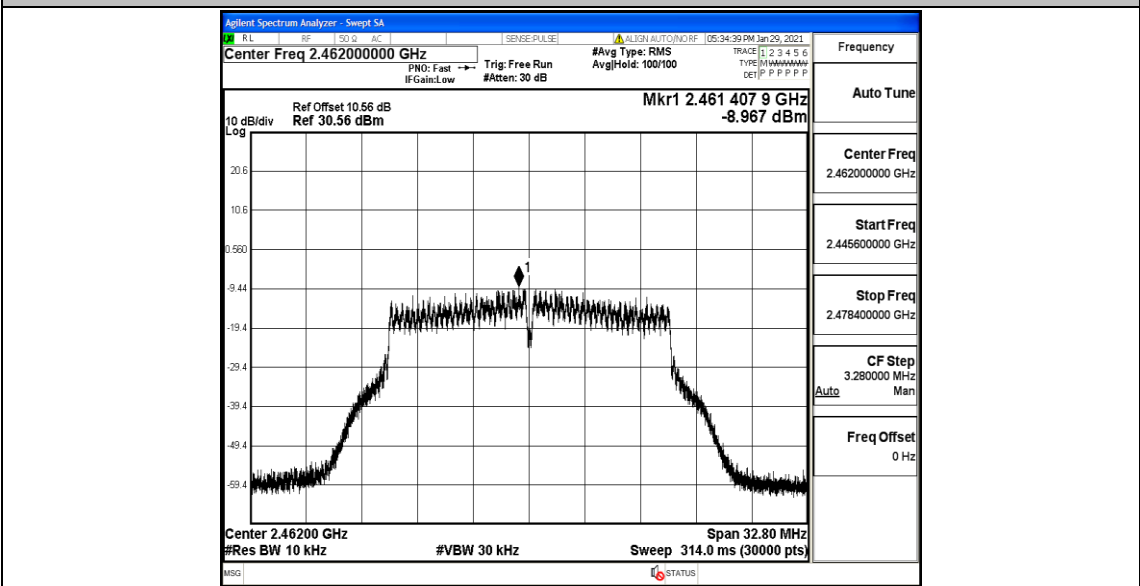
11G_Ant1_2437



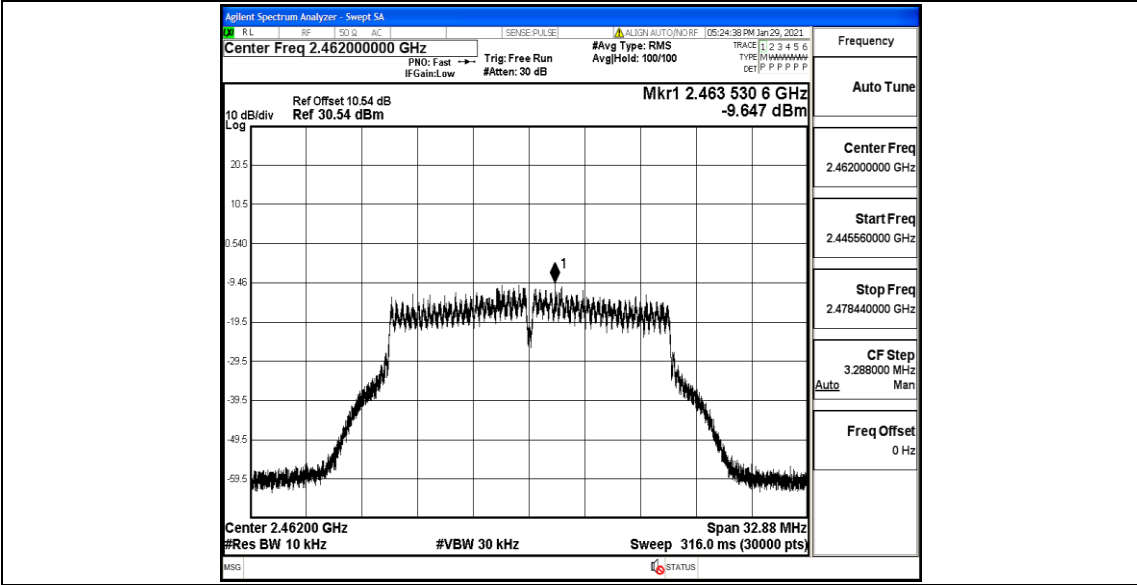
11G_Ant2_2437



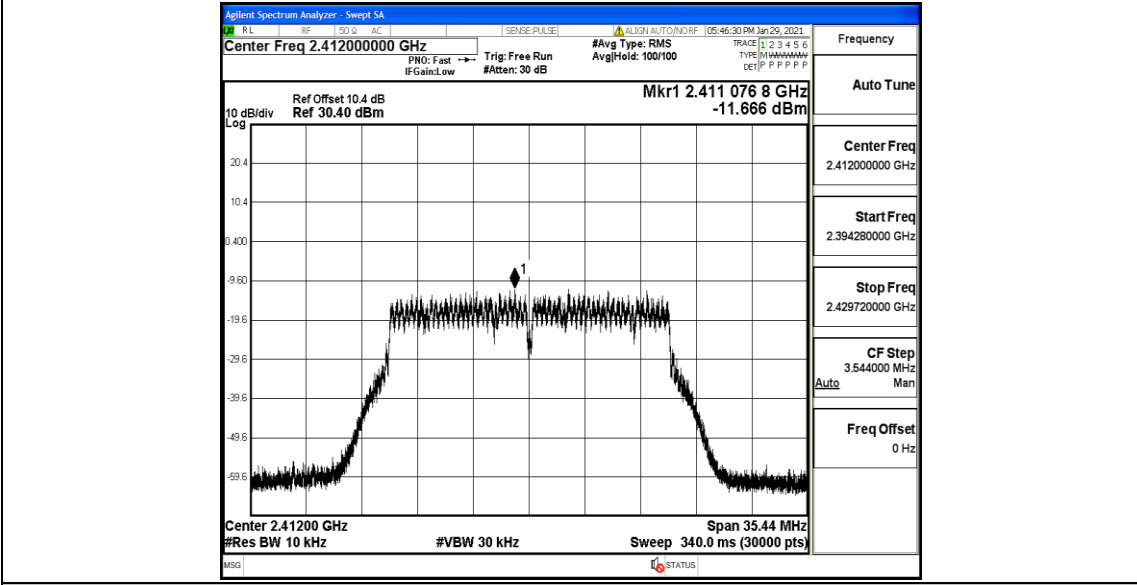
11G_Ant1_2462



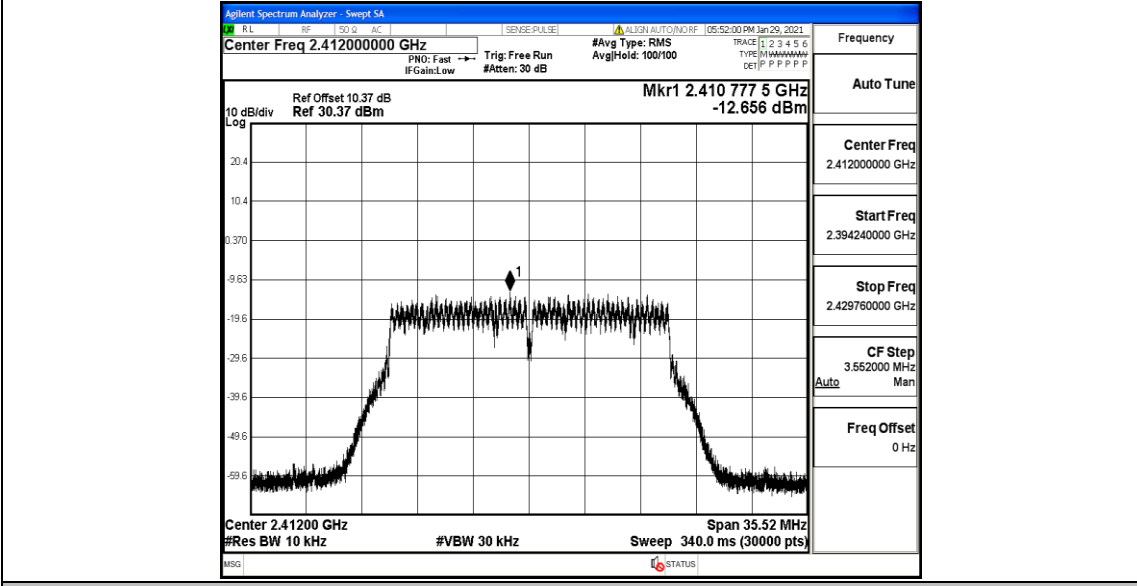
11G_Ant2_2462



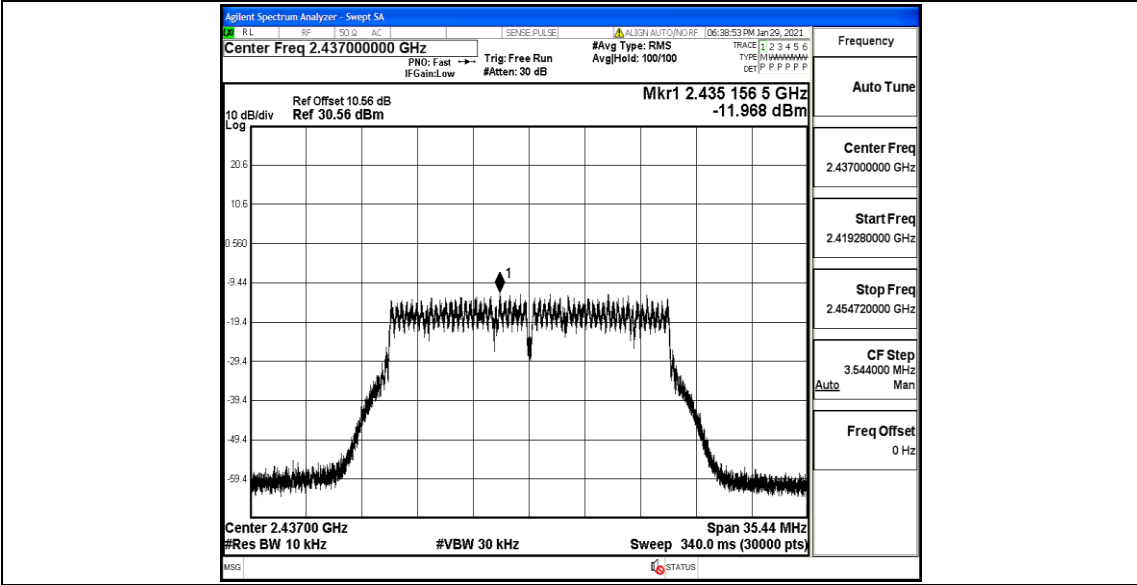
11N20MIMO_Ant1_2412



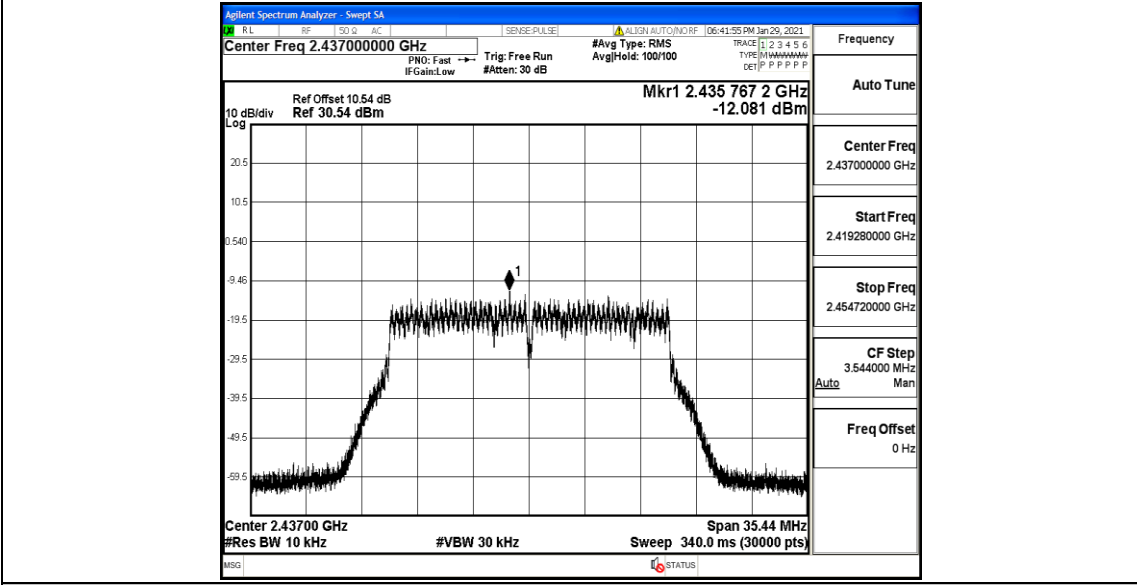
11N20MIMO_Ant2_2412



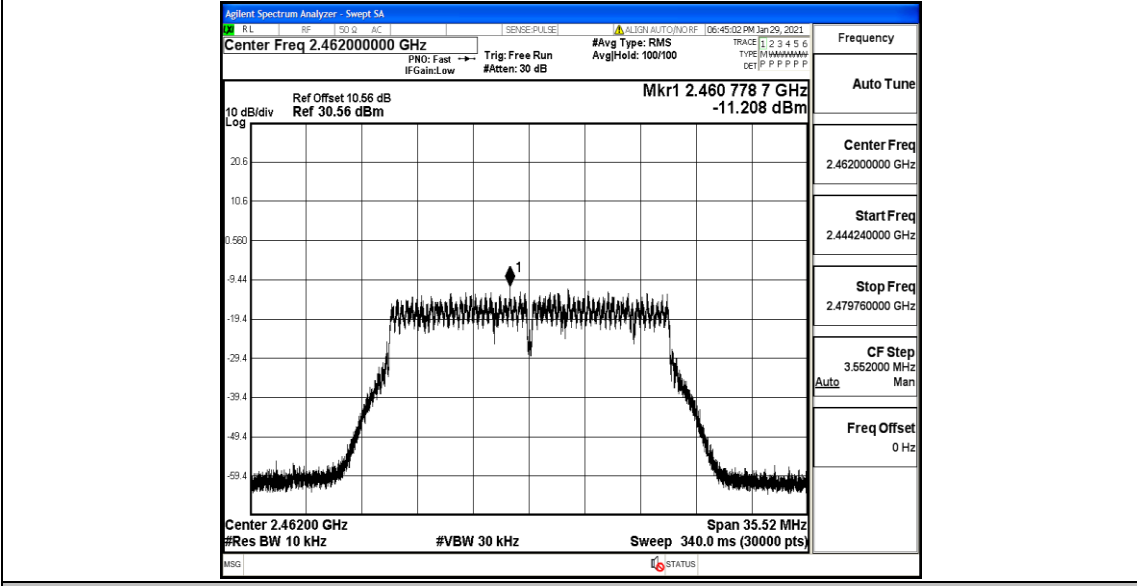
11N20MIMO_Ant1_2437



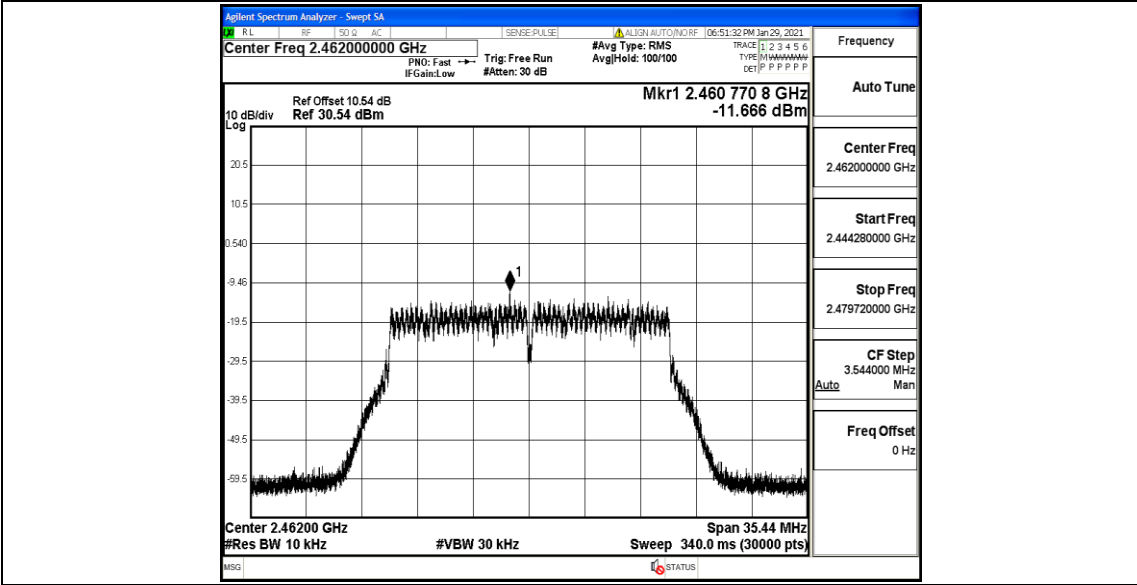
11N20MIMO_Ant2_2437



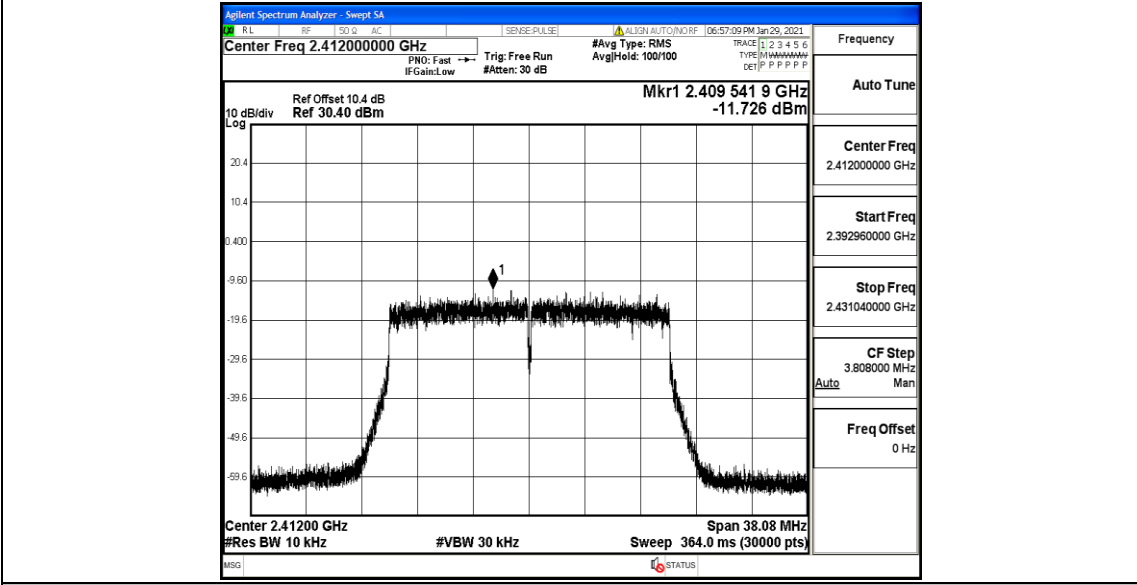
11N20MIMO_Ant1_2462



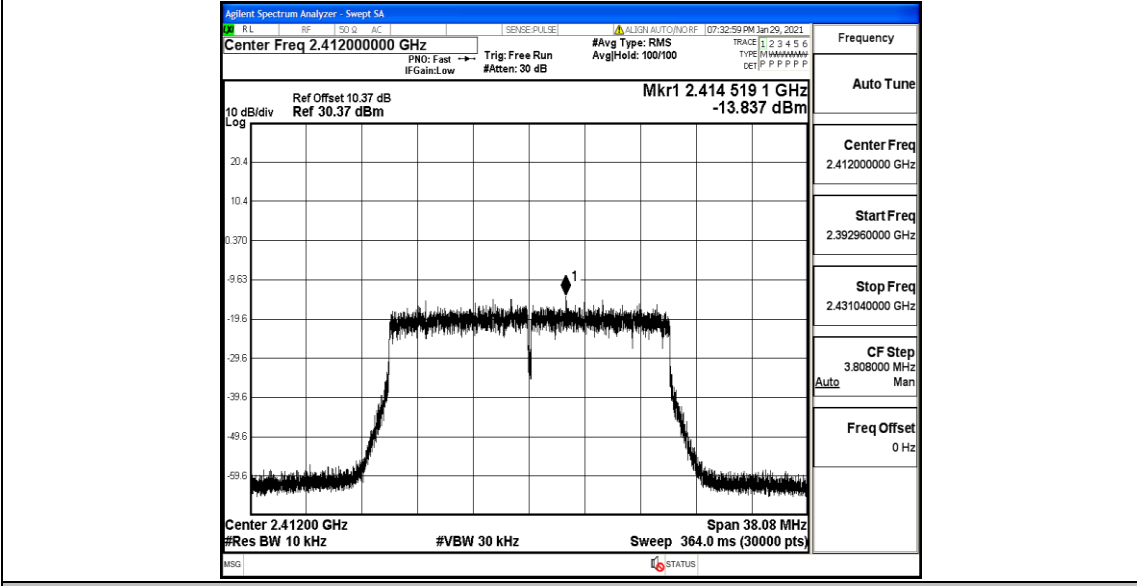
11N20MIMO_Ant2_2462



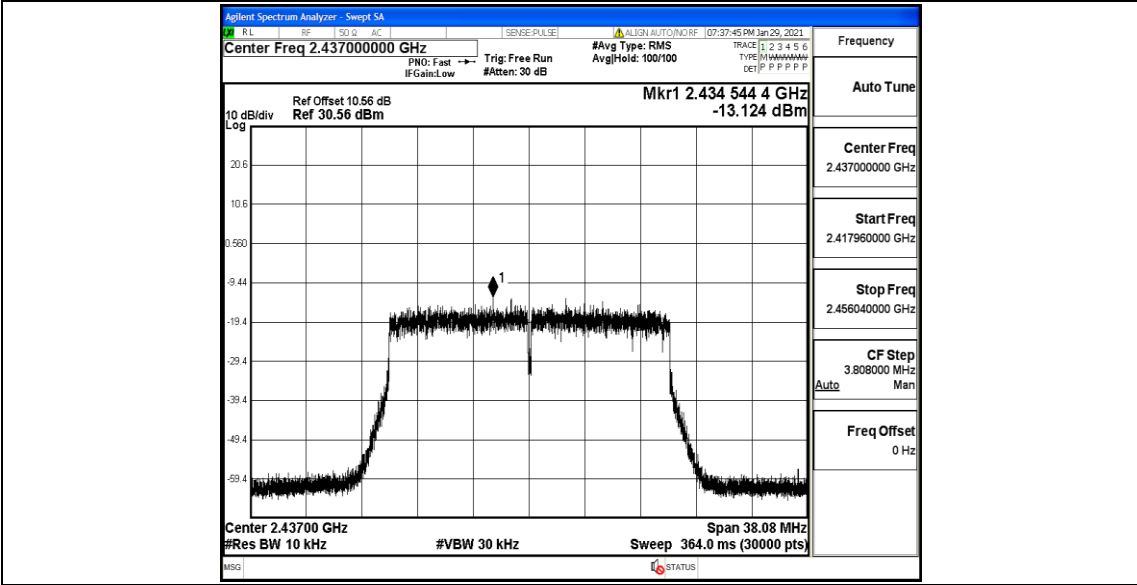
11AX20MIMO_Ant1_2412



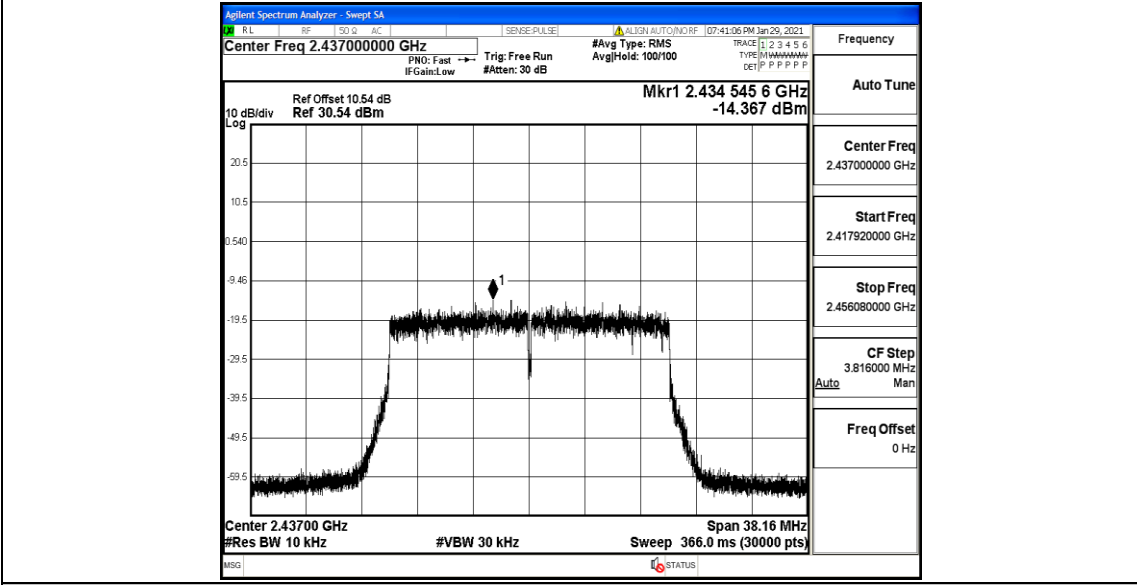
11AX20MIMO_Ant2_2412



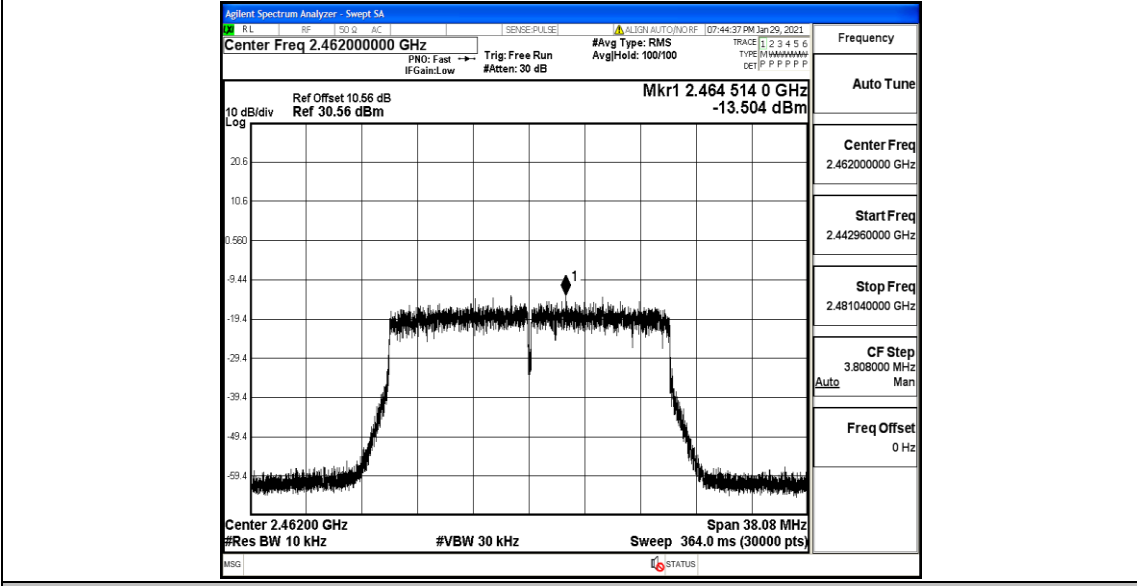
11AX20MIMO_Ant1_2437



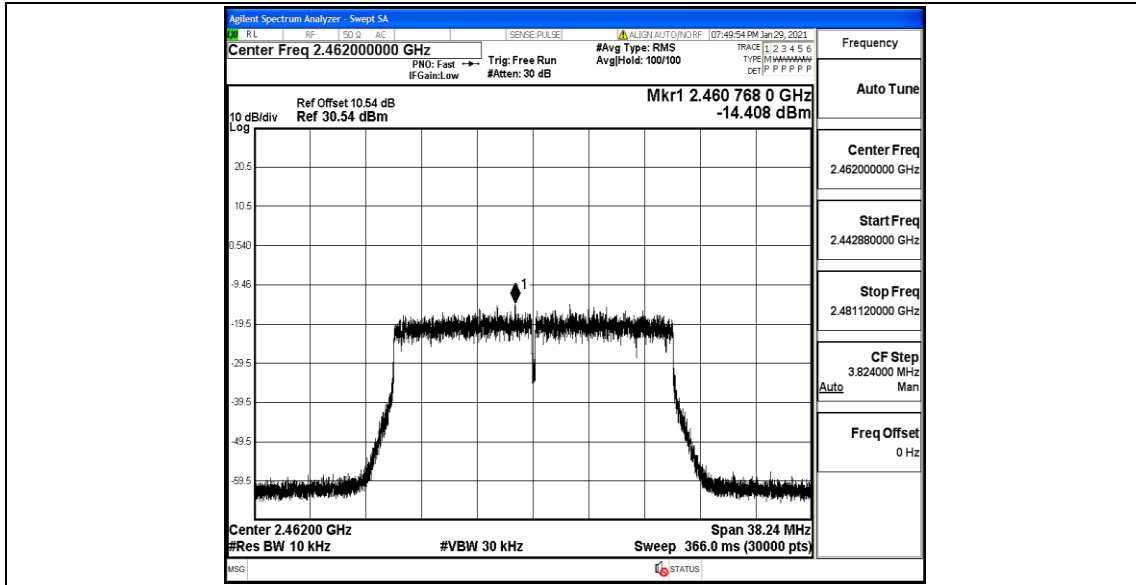
11AX20MIMO_Ant2_2437



11AX20MIMO_Ant1_2462



11AX20MIMO_Ant2_2462

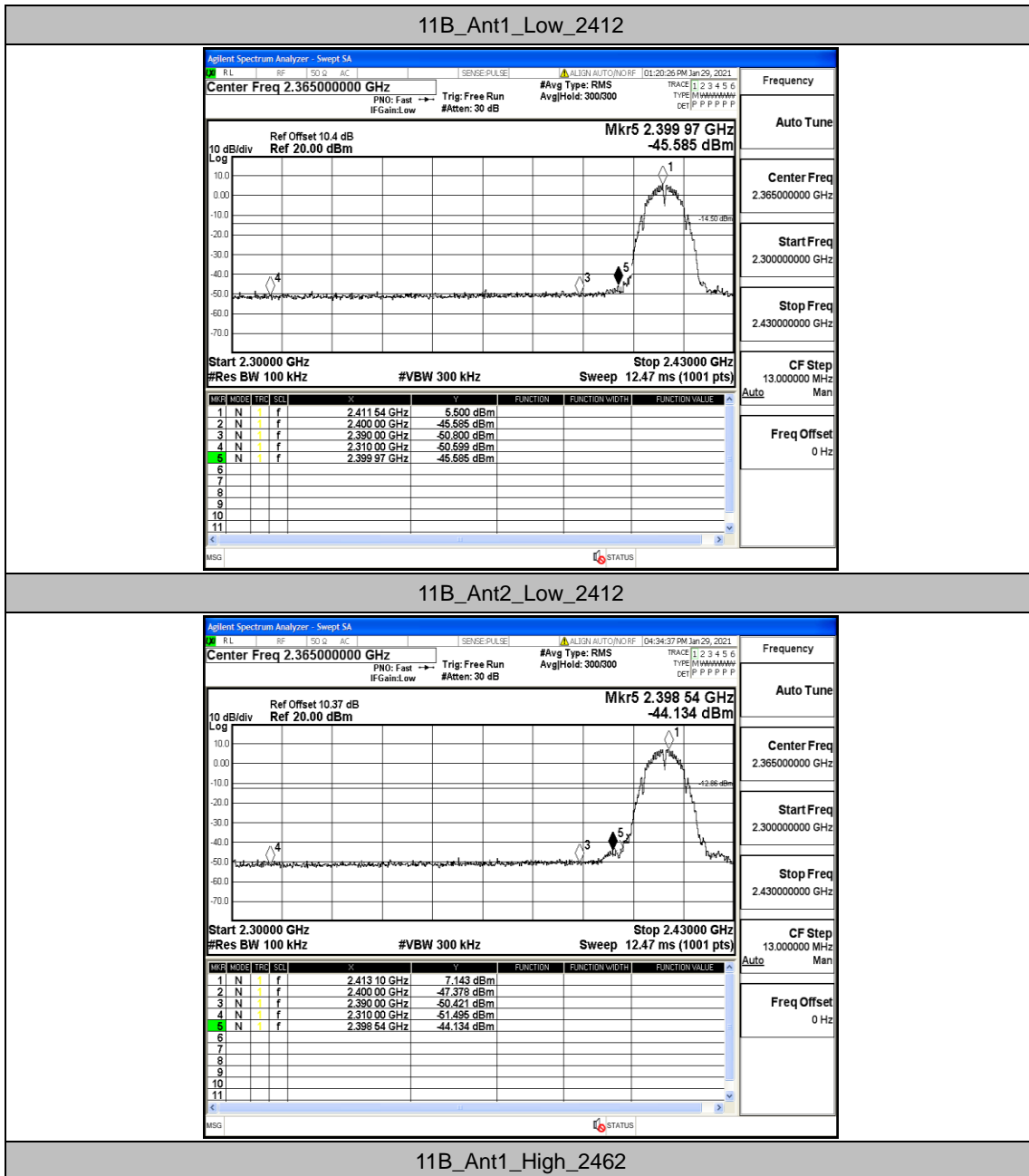


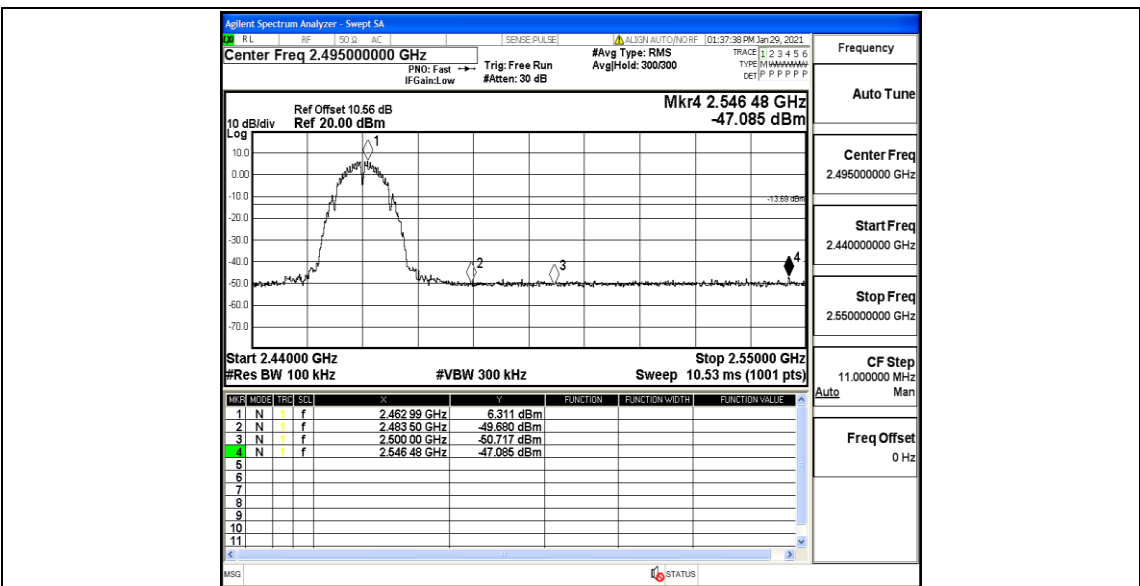
Appendix E: Band edge measurements

Test Result

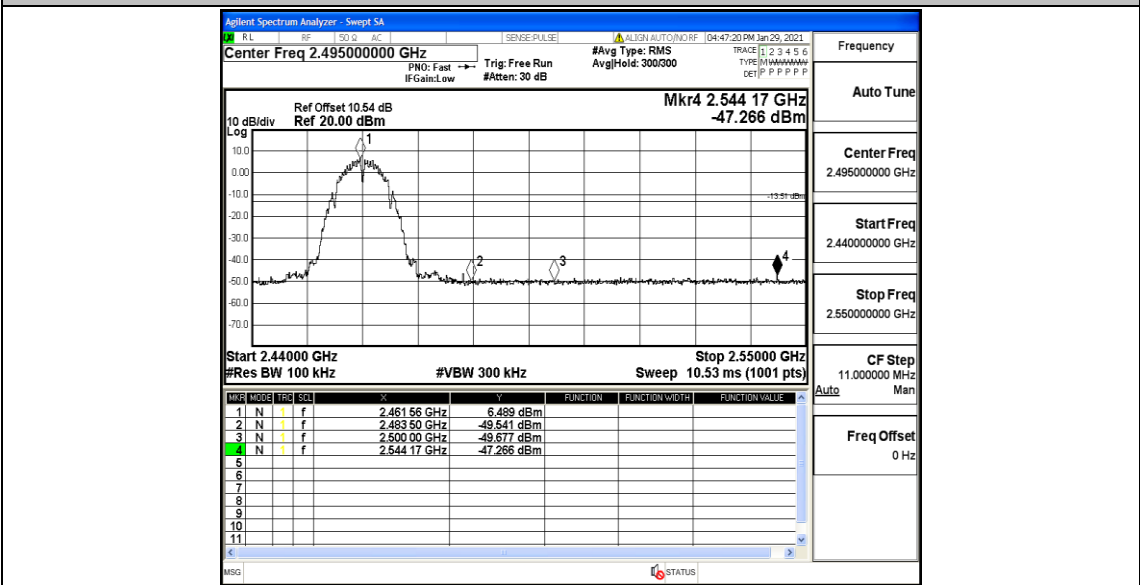
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.50	-45.59	<=-13.72	PASS
	Ant2	Low	2412	7.14	-44.13	<=-13.6	PASS
	Ant1	High	2462	6.31	-47.09	<=-13.21	PASS
	Ant2	High	2462	6.49	-47.27	<=-13.6	PASS
11G	Ant1	Low	2412	1.06	-38.98	<=-18.83	PASS
	Ant2	Low	2412	-0.03	-41.71	<=-17.48	PASS
	Ant1	High	2462	0.66	-46.53	<=-17.62	PASS
	Ant2	High	2462	-2.67	-47.72	<=-18.51	PASS
11N20MIMO	Ant1	Low	2412	-3.31	-43.67	<=-17.76	PASS
	Ant2	Low	2412	-4.11	-44.87	<=-17.7	PASS
	Ant1	High	2462	-3.16	-47.69	<=-18.2	PASS
	Ant2	High	2462	-4.46	-47.52	<=-18.51	PASS
11AX20MIMO	Ant1	Low	2412	-2.83	-44.99	<=-22.83	PASS
	Ant2	Low	2412	-5.26	-46.77	<=-25.26	PASS
	Ant1	High	2462	-4.52	-47.51	<=-24.52	PASS
	Ant2	High	2462	-5.42	-47.69	<=-25.42	PASS

Test Graphs

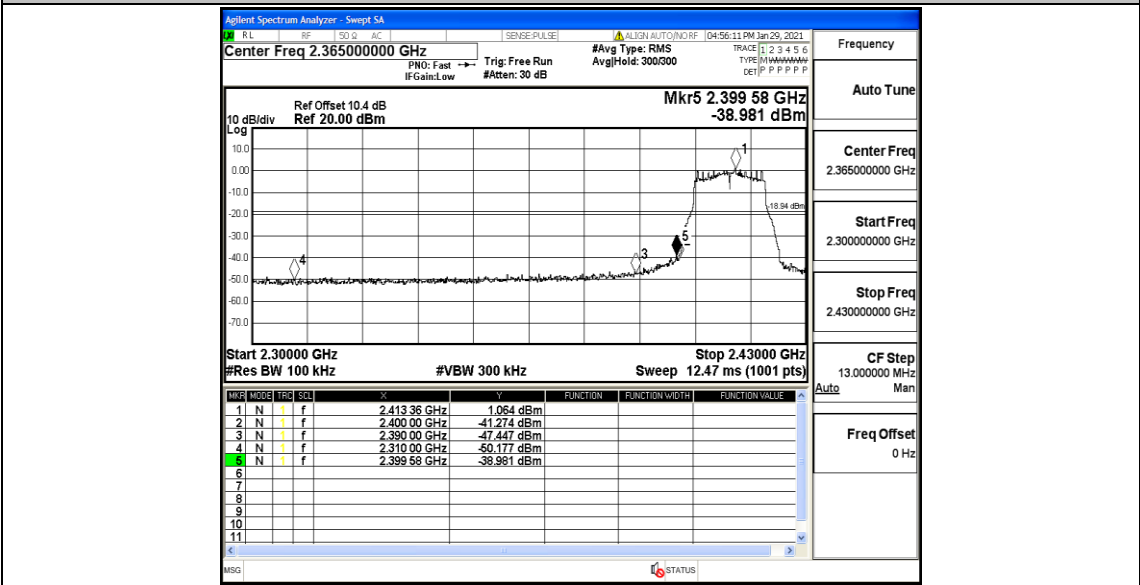




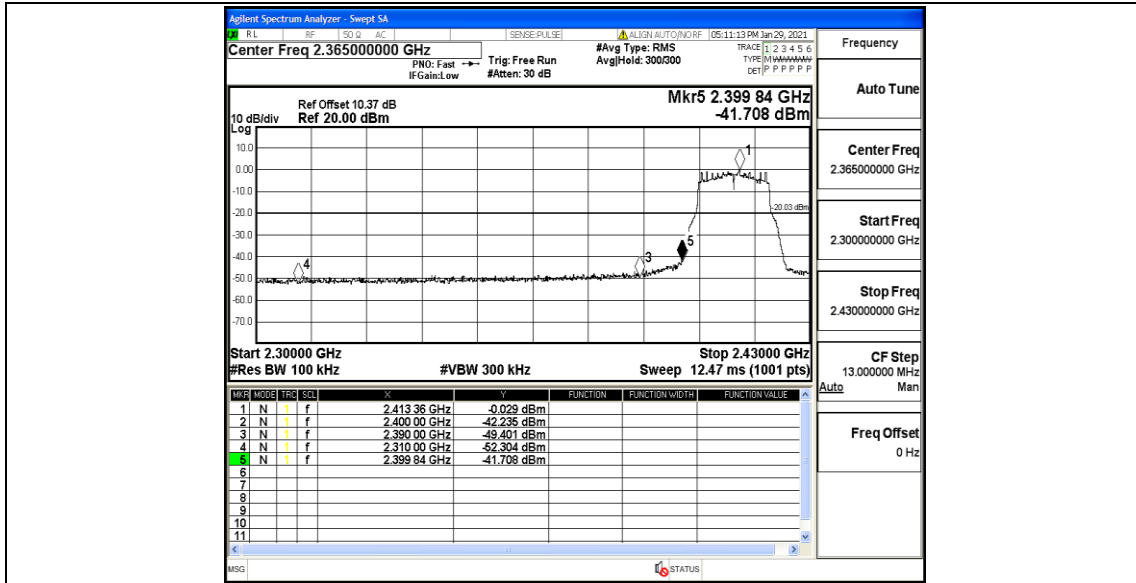
11B_Ant2_High_2462



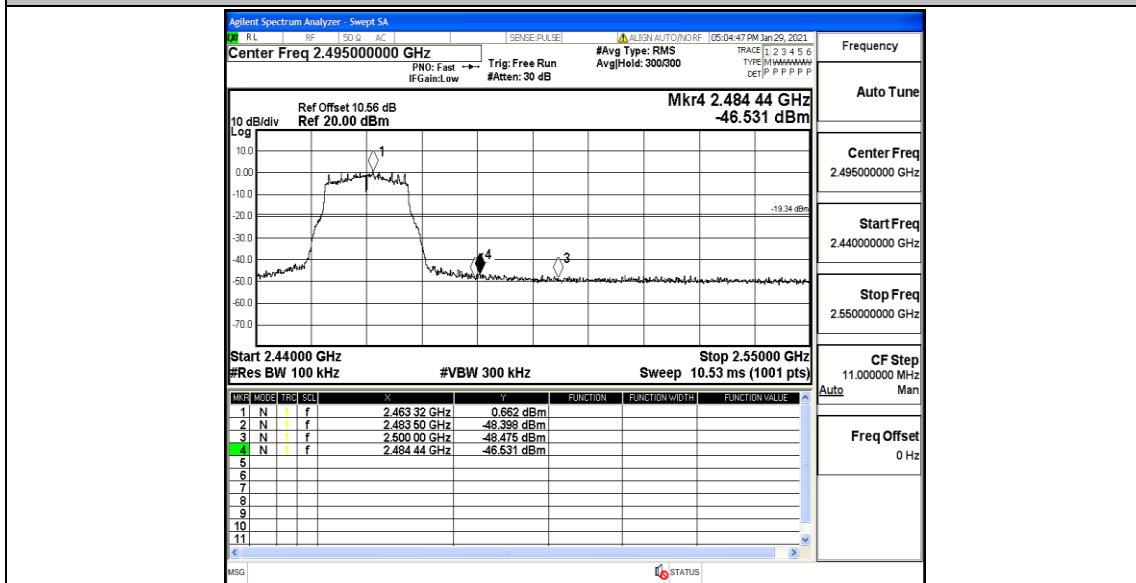
11G_Ant1_Low_2412



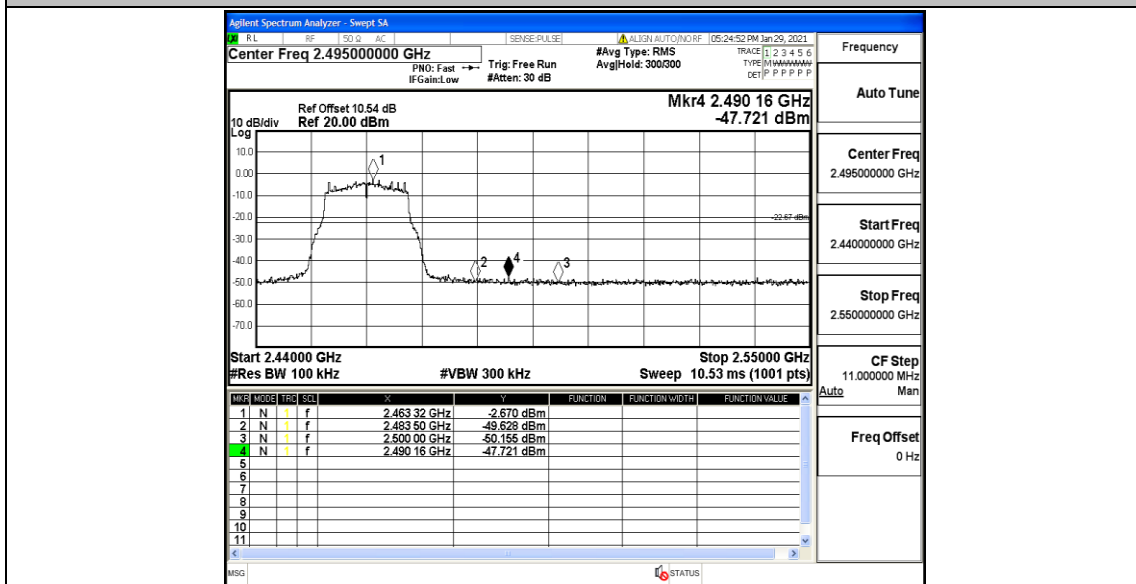
11G_Ant2_Low_2412



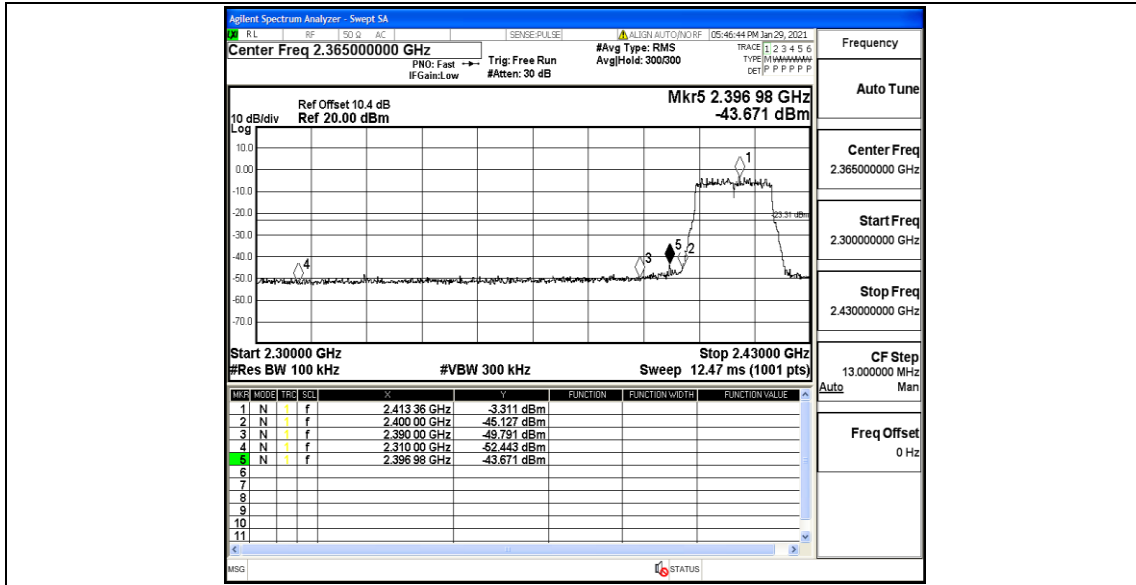
11G_Ant1_High_2462



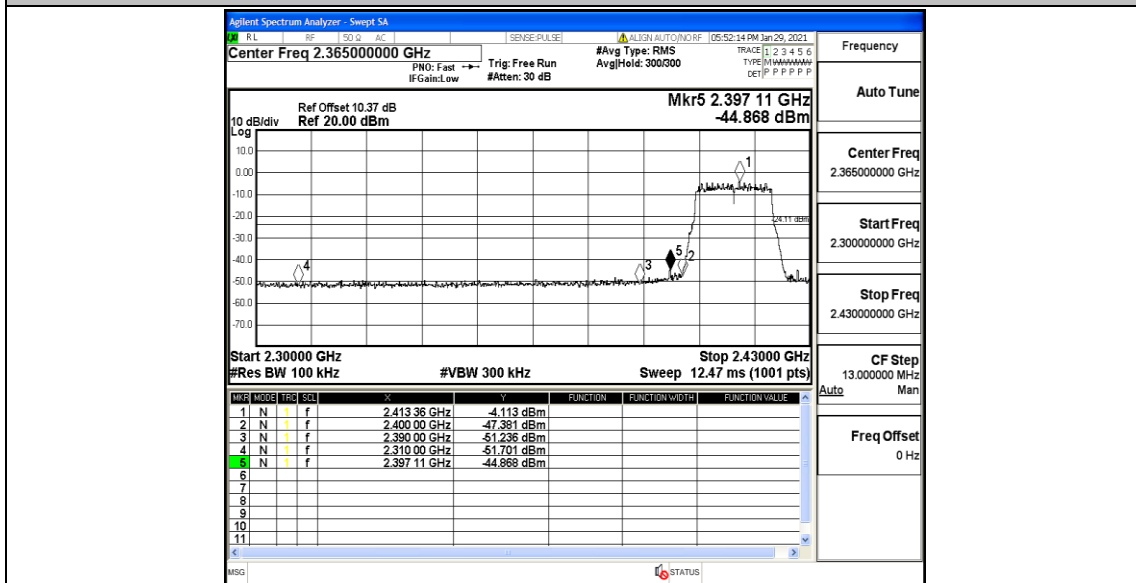
11G_Ant2_High_2462



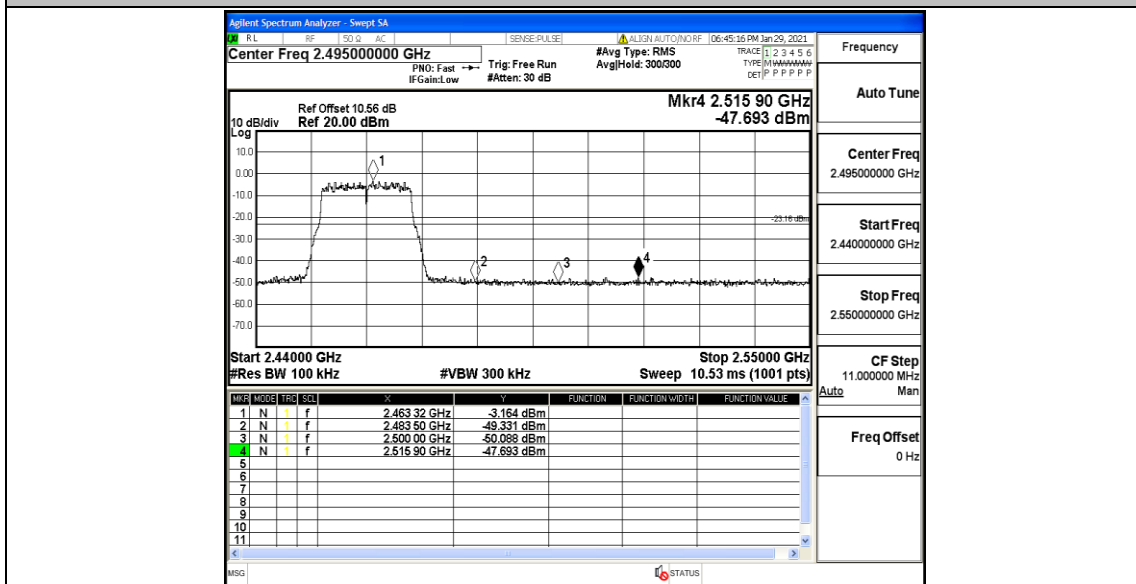
11N20MIMO_Ant1_Low_2412



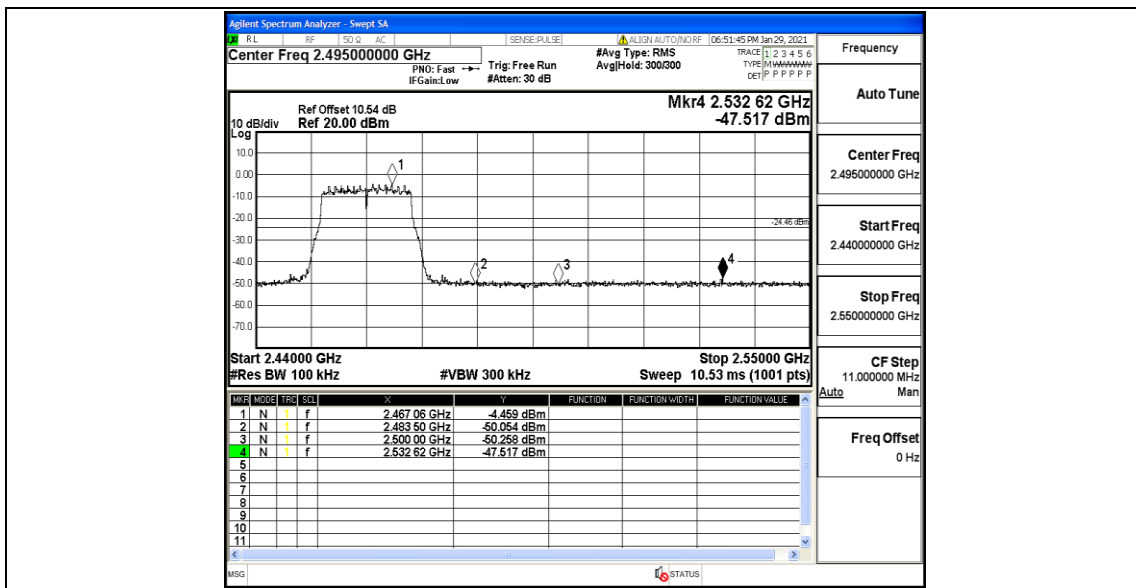
11N20MIMO_Ant2_Low_2412



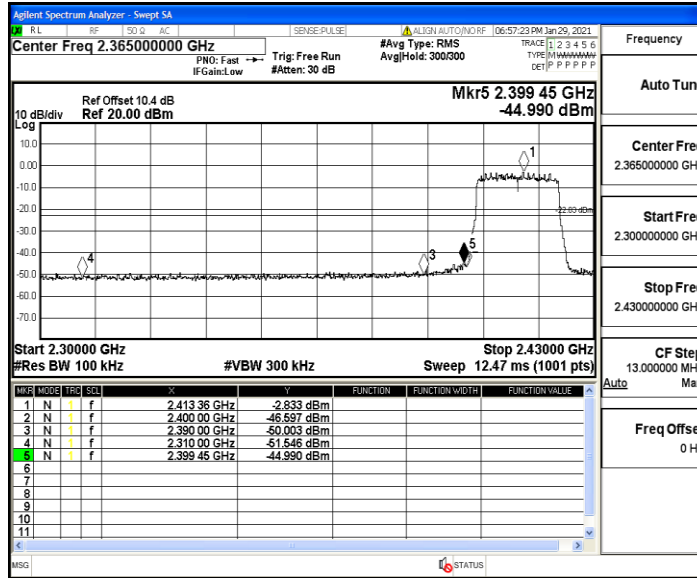
11N20MIMO_Ant1_High_2462



11N20MIMO_Ant2_High_2462

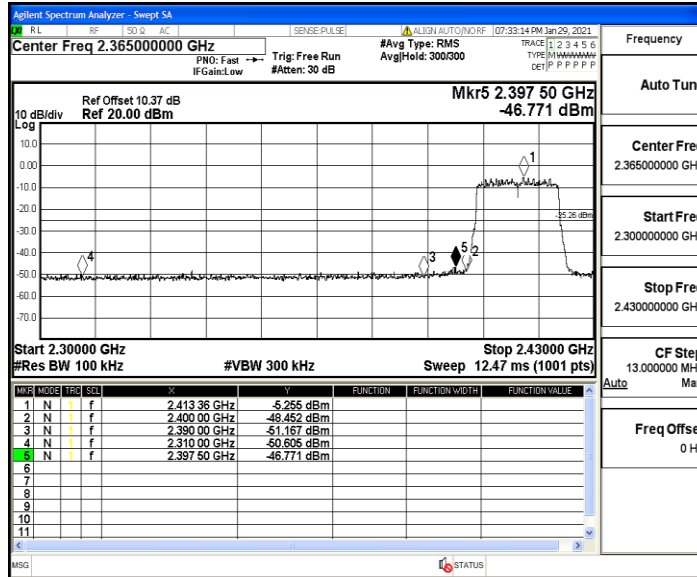


11AX20MIMO_Ant1_Low_2412



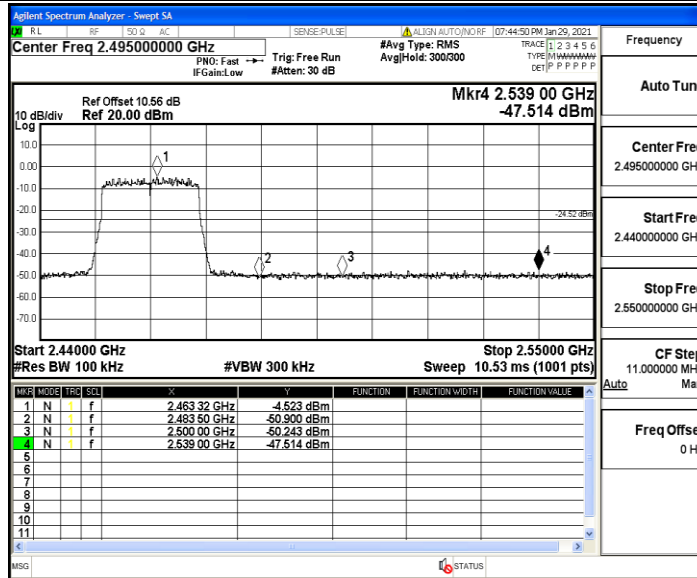
Frequency	Auto Tune
Center Freq	2.36500000 GHz
Start Freq	2.30000000 GHz
Stop Freq	2.43000000 GHz
CF Step	13.000000 MHz
Freq Offset	0 Hz

11AX20MIMO_Ant2_Low_2412

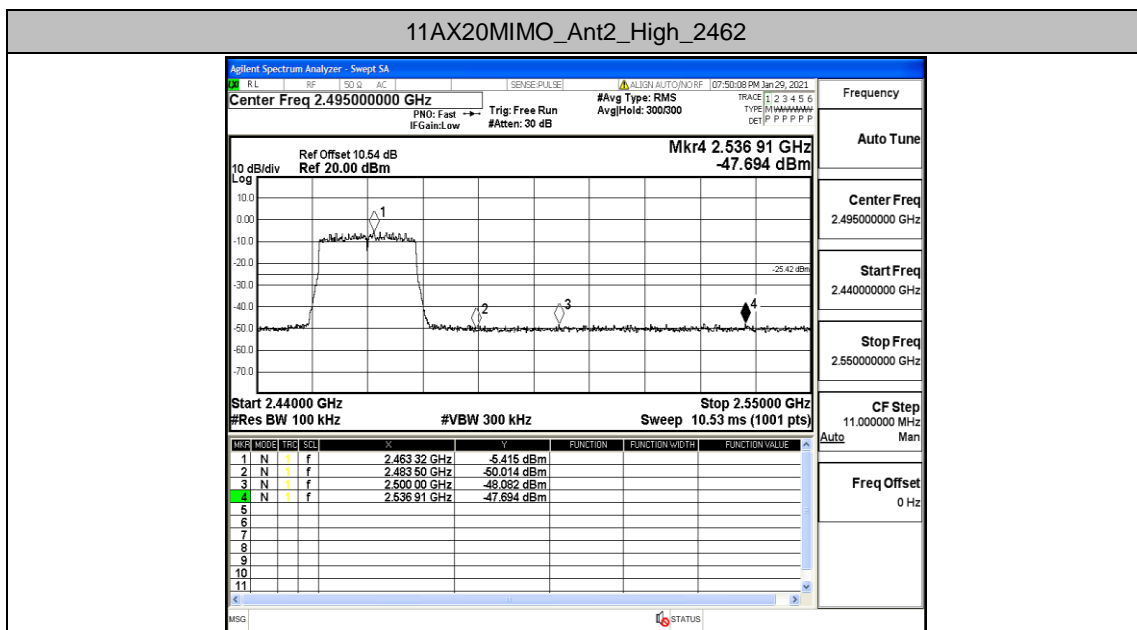


Frequency	Auto Tune
Center Freq	2.36500000 GHz
Start Freq	2.30000000 GHz
Stop Freq	2.43000000 GHz
CF Step	13.000000 MHz
Freq Offset	0 Hz

11AX20MIMO_Ant1_High_2462



Frequency	Auto Tune
Center Freq	2.49500000 GHz
Start Freq	2.44000000 GHz
Stop Freq	2.55000000 GHz
CF Step	11.000000 MHz
Freq Offset	0 Hz



Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	5.45	5.45	---	PASS
			30~1000	5.45	-60.33	<=-14.55	PASS
			1000~26500	5.45	-50.99	<=-14.55	PASS
	Ant2	2412	Reference	7.10	7.10	---	PASS
			30~1000	7.10	-60.15	<=-12.9	PASS
			1000~26500	7.10	-51.82	<=-12.9	PASS
	Ant1	2437	Reference	6.15	6.15	---	PASS
			30~1000	6.15	-60.04	<=-13.85	PASS
			1000~26500	6.15	-48.43	<=-13.85	PASS
	Ant2	2437	Reference	6.10	6.10	---	PASS
			30~1000	6.10	-60.11	<=-13.9	PASS
			1000~26500	6.10	-46.03	<=-13.9	PASS
	Ant1	2462	Reference	5.29	5.29	---	PASS
			30~1000	5.29	-59.39	<=-14.71	PASS
			1000~26500	5.29	-50.2	<=-14.71	PASS
	Ant2	2462	Reference	5.63	5.63	---	PASS
			30~1000	5.63	-59.27	<=-14.37	PASS
			1000~26500	5.63	-50.71	<=-14.37	PASS
11G	Ant1	2412	Reference	0.60	0.60	---	PASS
			30~1000	0.60	-59.5	<=-19.4	PASS
			1000~26500	0.60	-45.48	<=-19.4	PASS
	Ant2	2412	Reference	-3.26	-3.26	---	PASS
			30~1000	-3.26	-60.55	<=-23.26	PASS
			1000~26500	-3.26	-50.74	<=-23.26	PASS
	Ant1	2437	Reference	0.10	0.10	---	PASS
			30~1000	0.10	-59.49	<=-19.9	PASS
			1000~26500	0.10	-50.48	<=-19.9	PASS
	Ant2	2437	Reference	-2.60	-2.60	---	PASS
			30~1000	-2.60	-60.05	<=-22.6	PASS
			1000~26500	-2.60	-51.17	<=-22.6	PASS
	Ant1	2462	Reference	-48.94	-48.94	---	PASS
			30~1000	0.07	-59.6	<=-19.93	PASS
			1000~26500	0.07	-51.41	<=-19.93	PASS
	Ant2	2462	Reference	-3.28	-3.28	---	PASS
			30~1000	-3.28	-59.86	<=-23.28	PASS
			1000~26500	-3.28	-50.47	<=-23.28	PASS
11N20MIMO	Ant1	2412	Reference	-3.37	-3.37	---	PASS
			30~1000	-3.37	-60.59	<=-23.37	PASS

			1000~26500	-3.37	-51.34	<=-23.37	PASS
	Ant2	2412	Reference	-4.46	-4.46	---	PASS
			30~1000	-4.46	-59.53	<=-24.46	PASS
			1000~26500	-4.46	-51.18	<=-24.46	PASS
	Ant1	2437	Reference	-3.80	-3.80	---	PASS
			30~1000	-3.80	-60.19	<=-23.8	PASS
			1000~26500	-3.80	-50.49	<=-23.8	PASS
	Ant2	2437	Reference	-4.94	-4.94	---	PASS
			30~1000	-4.94	-59.76	<=-24.94	PASS
			1000~26500	-4.94	-51.07	<=-24.94	PASS
	Ant1	2462	Reference	-3.86	-3.86	---	PASS
			30~1000	-3.86	-60.07	<=-23.86	PASS
			1000~26500	-3.86	-50.06	<=-23.86	PASS
	Ant2	2462	Reference	-4.48	-4.48	---	PASS
			30~1000	-4.48	-59.78	<=-24.48	PASS
			1000~26500	-4.48	-50.41	<=-24.48	PASS

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11AX20MIMO	Ant1	2412	Reference	-4.20	-4.20	---	PASS
			30~1000	-4.20	-60.5	<=-24.2	PASS
			1000~26500	-4.20	-50.72	<=-24.2	PASS
	Ant2	2412	Reference	-5.56	-5.56	---	PASS
			30~1000	-5.56	-59.36	<=-25.56	PASS
			1000~26500	-5.56	-51.17	<=-25.56	PASS
	Ant1	2437	Reference	-4.43	-4.43	---	PASS
			30~1000	-4.43	-60	<=-24.43	PASS
			1000~26500	-4.43	-51.05	<=-24.43	PASS
	Ant2	2437	Reference	-5.65	-5.65	---	PASS
			30~1000	-5.65	-59.99	<=-25.65	PASS
			1000~26500	-5.65	-51.39	<=-25.65	PASS
	Ant1	2462	Reference	-4.51	-4.51	---	PASS
			30~1000	-4.51	-59.85	<=-24.51	PASS
			1000~26500	-4.51	-50.81	<=-24.51	PASS
	Ant2	2462	Reference	-5.43	-5.43	---	PASS
			30~1000	-5.43	-59.48	<=-25.43	PASS
			1000~26500	-5.43	-50.82	<=-25.43	PASS

Test Graphs

