



Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: AIR PURIFIER

Test Model: Y1000

Environmental Conditions

Temperature:	22.4° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li huan

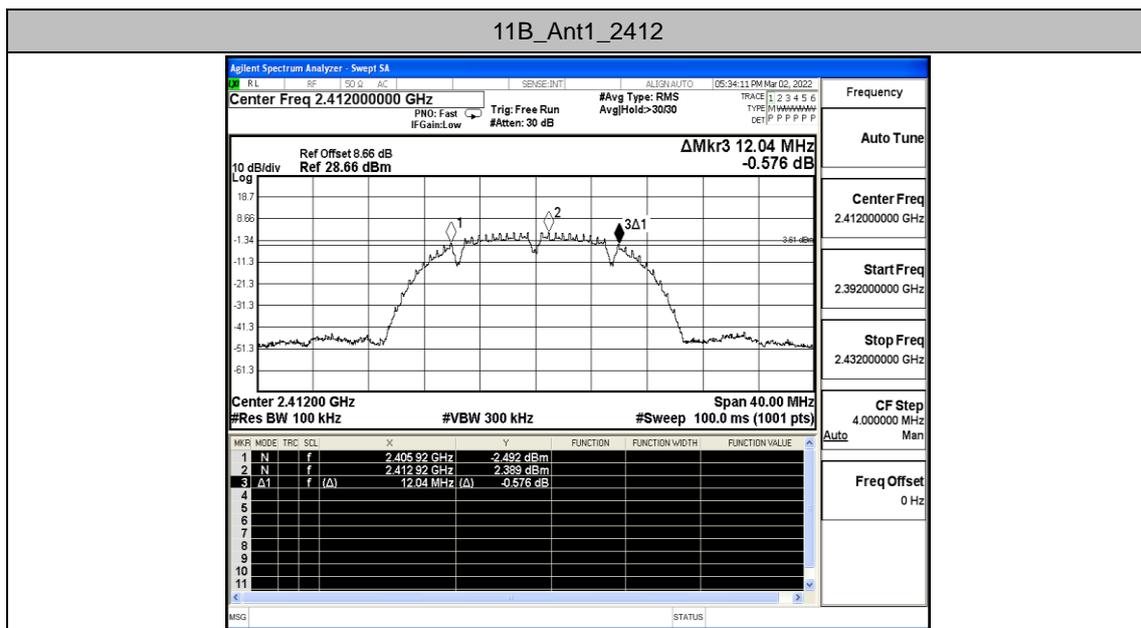


B.1 6dB Bandwidth

Test Result

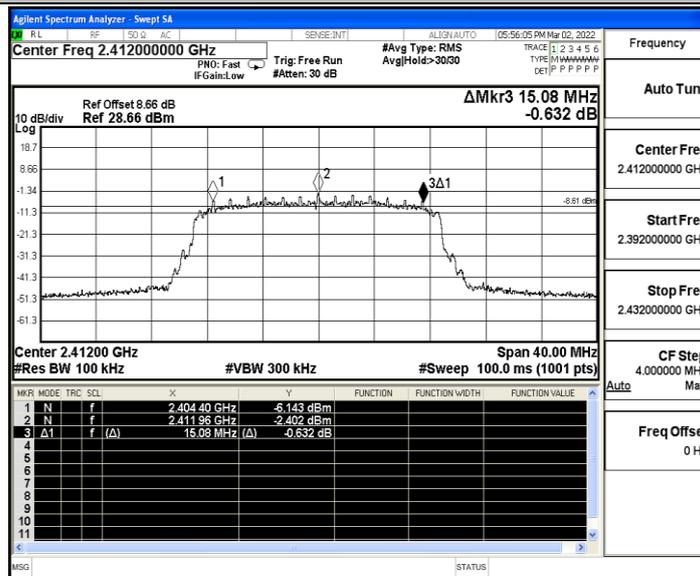
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.040	2405.920	2417.960	0.5	PASS
		2437	12.040	2430.920	2442.960	0.5	PASS
		2462	12.040	2455.920	2467.960	0.5	PASS
11G	Ant1	2412	15.080	2404.400	2419.480	0.5	PASS
		2437	15.080	2429.400	2444.480	0.5	PASS
		2462	15.120	2454.360	2469.480	0.5	PASS
11N20SISO	Ant1	2412	15.080	2404.400	2419.480	0.5	PASS
		2437	15.080	2429.400	2444.480	0.5	PASS
		2462	15.080	2454.400	2469.480	0.5	PASS

Test Graphs

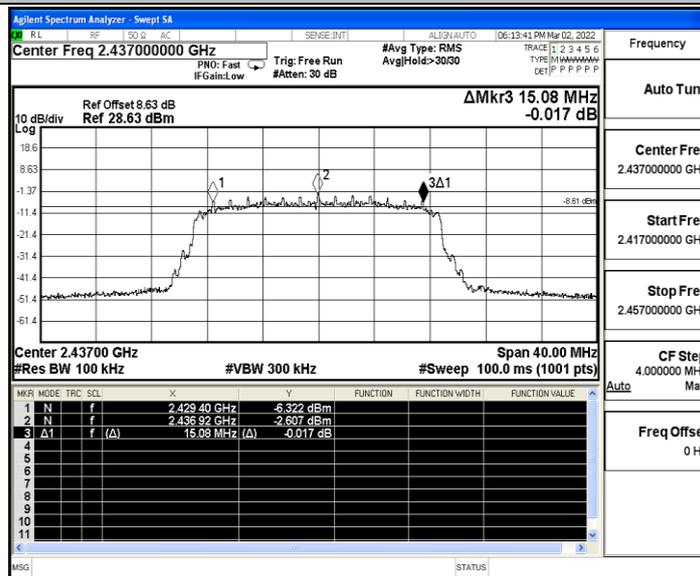




11G_Ant1_2412

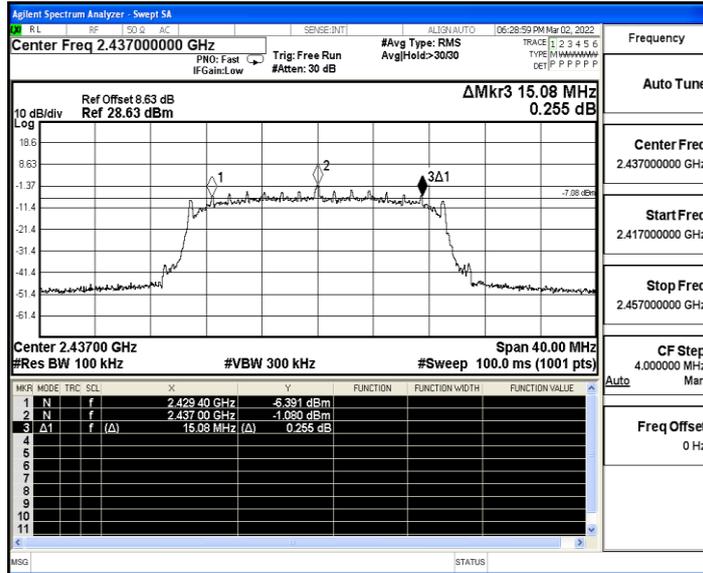


11G_Ant1_2437

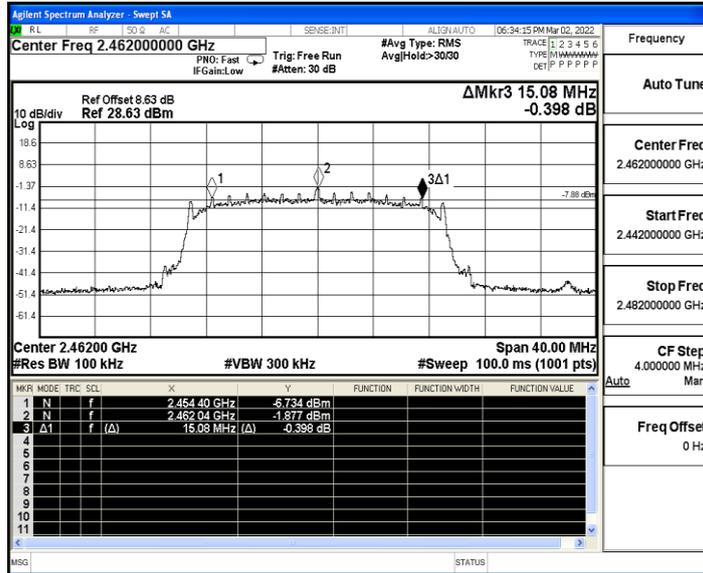




11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



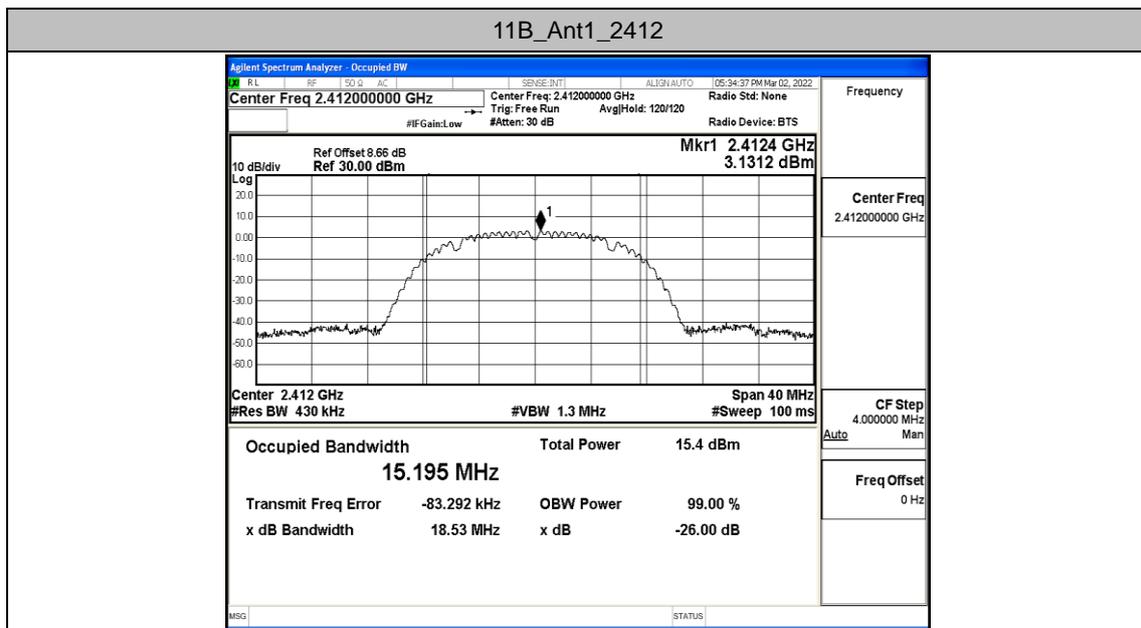


B.2 Occupied Channel Bandwidth

Test Result

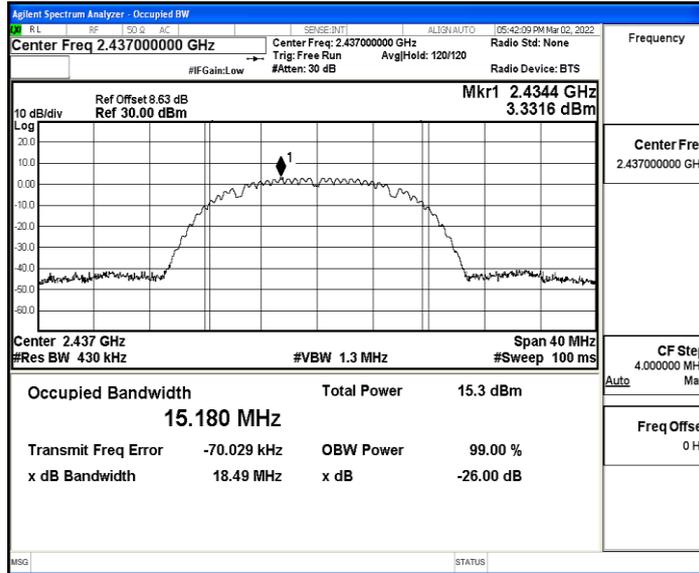
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	15.195	2404.319	2419.514	---	---
		2437	15.180	2429.340	2444.520	---	---
		2462	15.199	2454.301	2469.500	---	---
11G	Ant1	2412	17.167	2403.308	2420.475	---	---
		2437	17.223	2428.366	2445.589	---	---
		2462	17.208	2453.316	2470.524	---	---
11N20SISO	Ant1	2412	18.192	2402.871	2421.063	---	---
		2437	18.221	2427.836	2446.057	---	---
		2462	18.184	2452.862	2471.046	---	---

Test Graphs

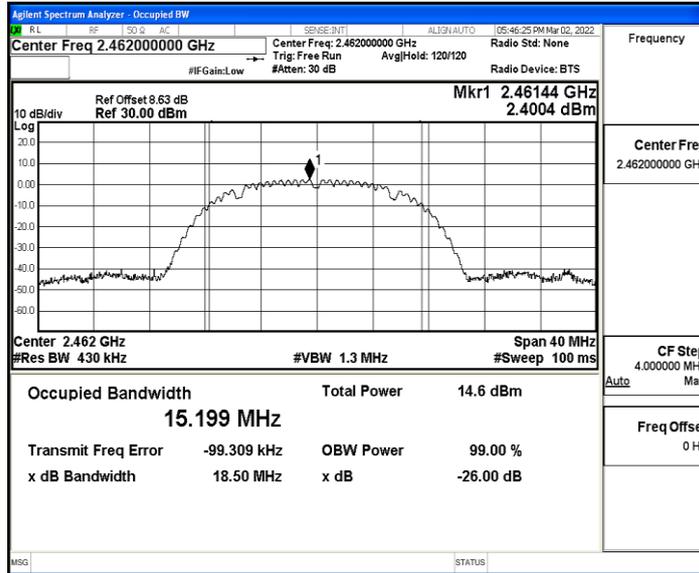




11B_Ant1_2437

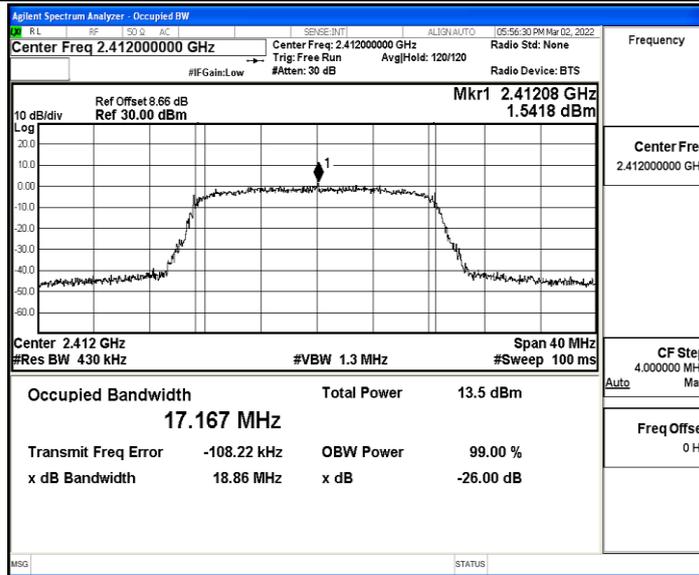


11B_Ant1_2462

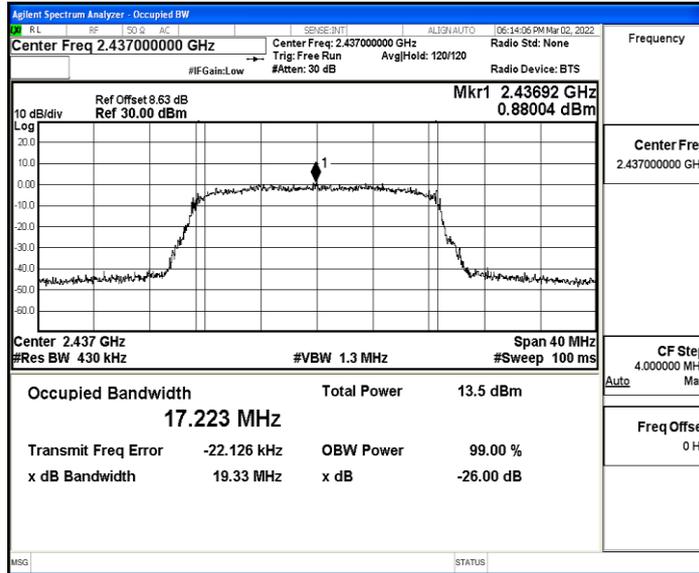




11G_Ant1_2412

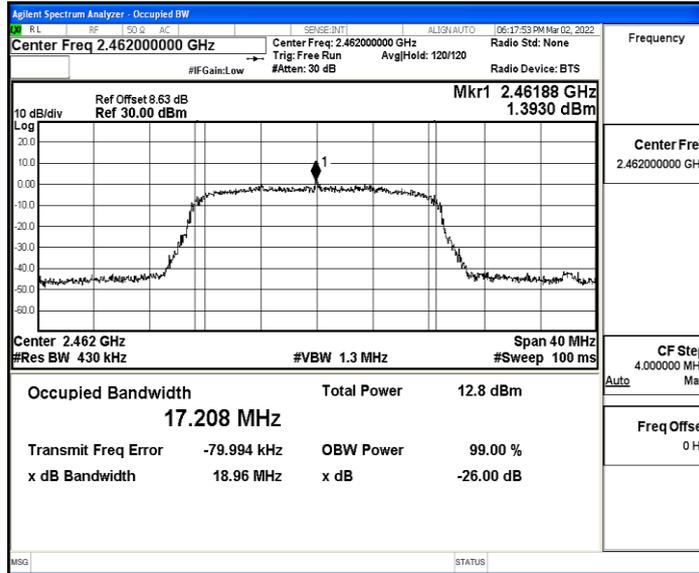


11G_Ant1_2437

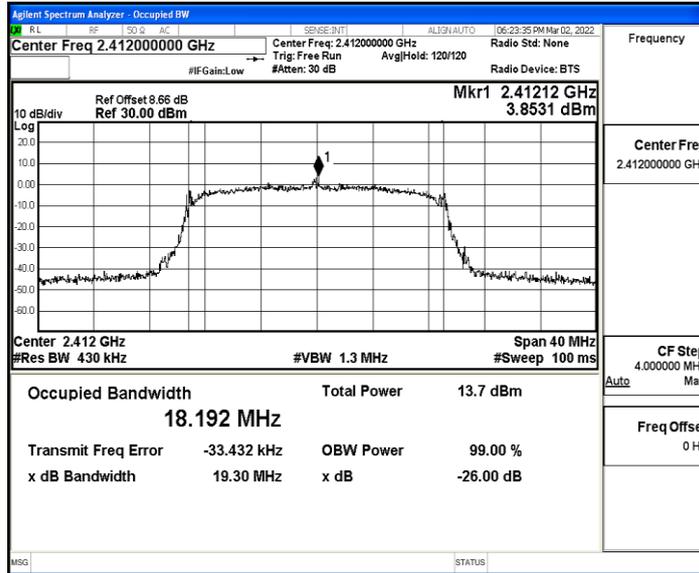




11G_Ant1_2462

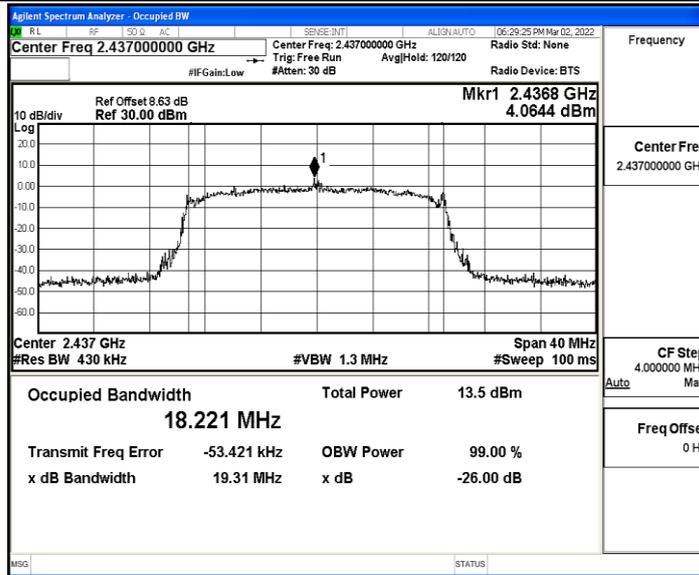


11N20SISO_Ant1_2412

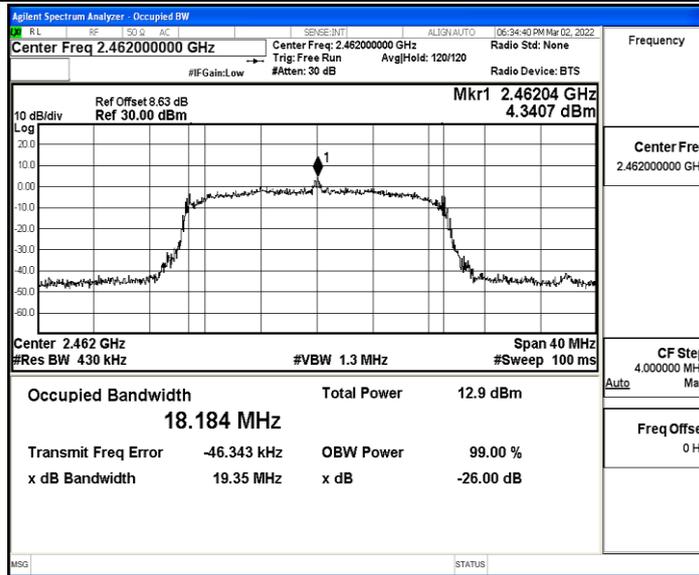




11N20SISO_Ant1_2437



11N20SISO_Ant1_2462





B.3 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	16.09	≤30.00	PASS
		2437	16.01	≤30.00	PASS
		2462	15.32	≤30.00	PASS
11G	Ant1	2412	16.02	≤30.00	PASS
		2437	15.93	≤30.00	PASS
		2462	15.30	≤30.00	PASS
11N20SISO	Ant1	2412	16.23	≤30.00	PASS
		2437	16.06	≤30.00	PASS
		2462	15.34	≤30.00	PASS

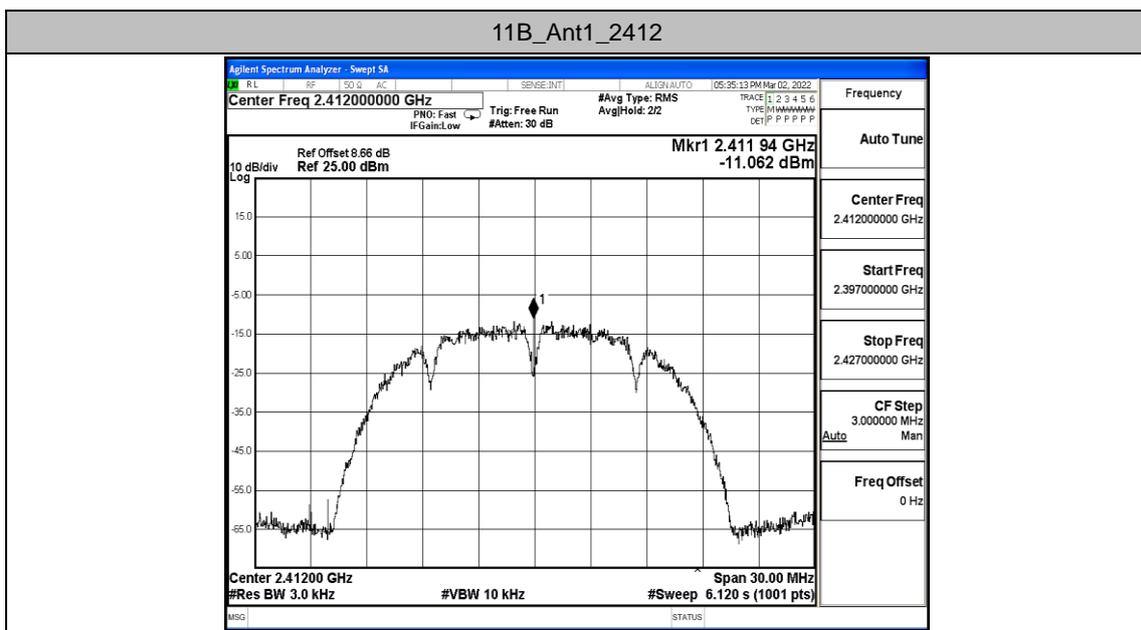


B.4 Maximum power spectral density

Test Result

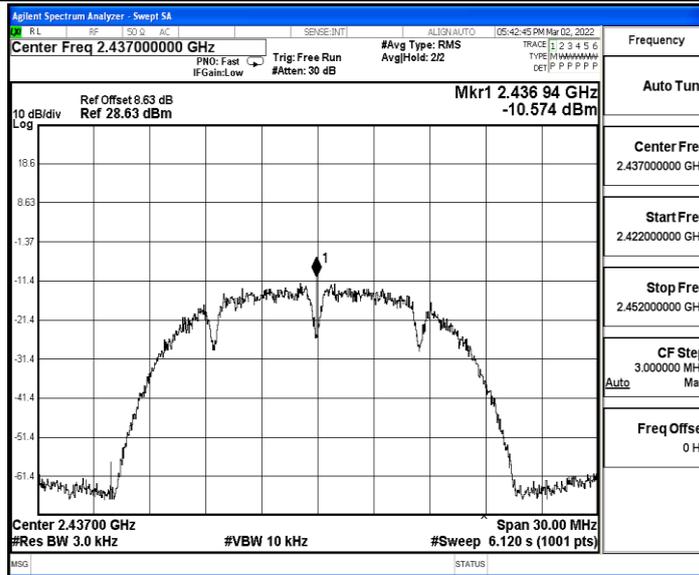
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-11.06	≤8.00	PASS
		2437	-10.57	≤8.00	PASS
		2462	-12.01	≤8.00	PASS
11G	Ant1	2412	-11.22	≤8.00	PASS
		2437	-11.5	≤8.00	PASS
		2462	-12.54	≤8.00	PASS
11N20SISO	Ant1	2412	-11.49	≤8.00	PASS
		2437	-10.96	≤8.00	PASS
		2462	-11.91	≤8.00	PASS

Test Graphs

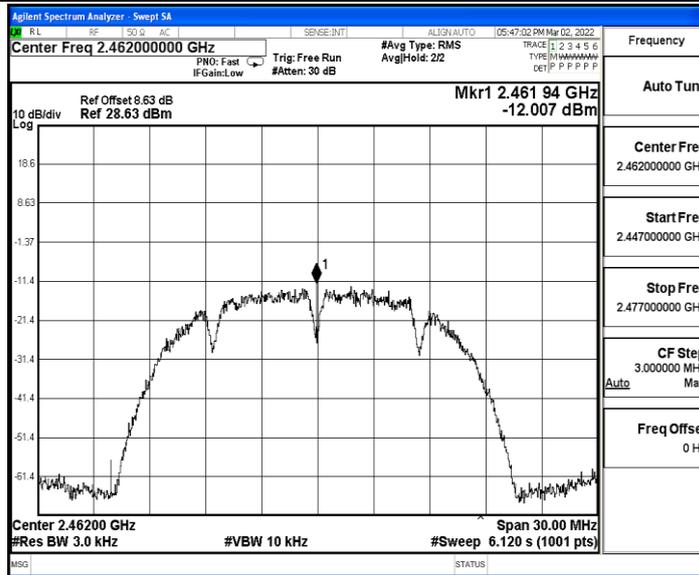




11B_Ant1_2437

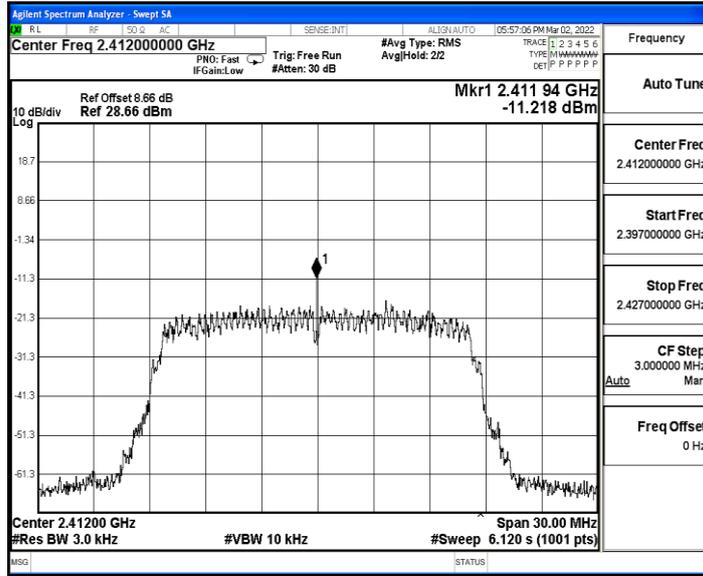


11B_Ant1_2462

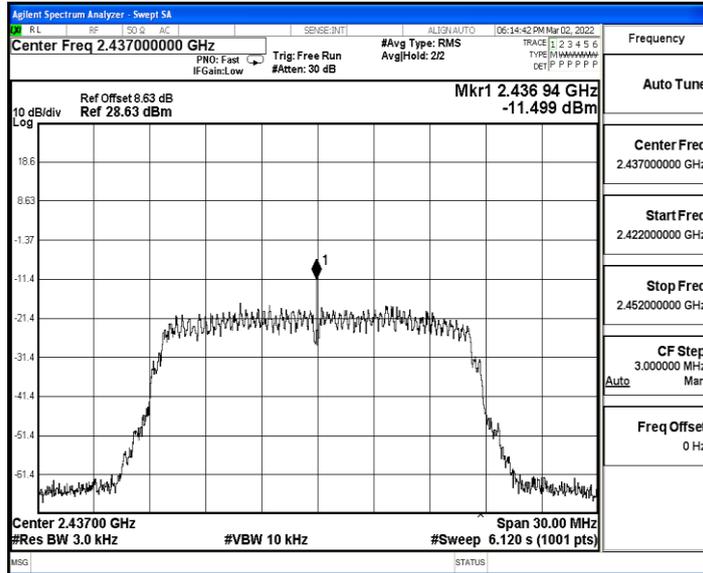




11G_Ant1_2412

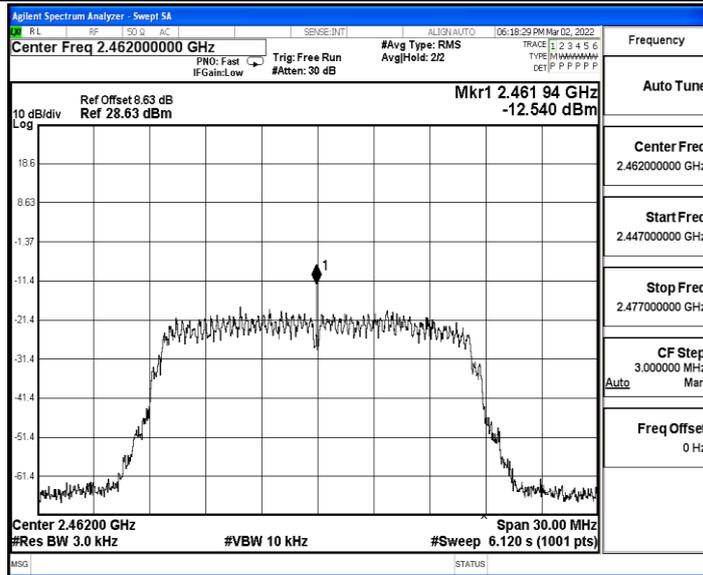


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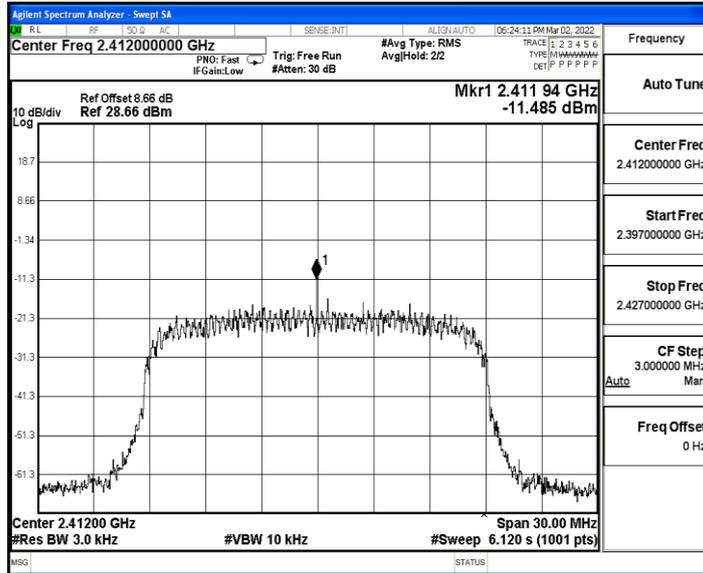




11G_Ant1_2462

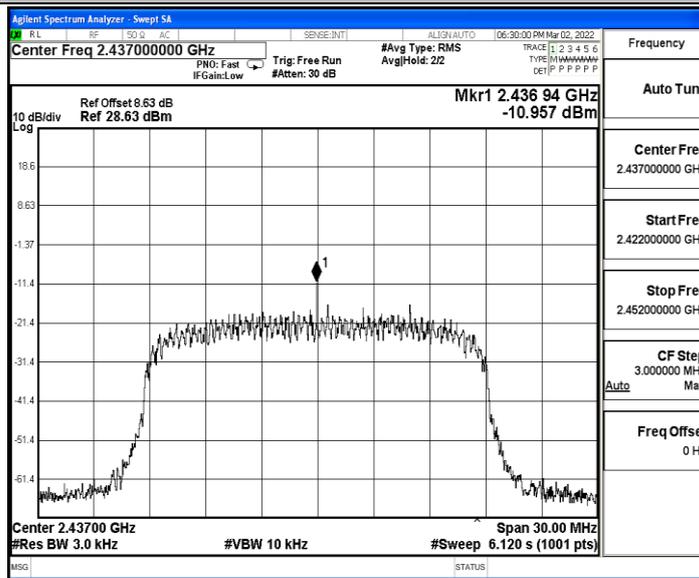


11N20SISO_Ant1_2412

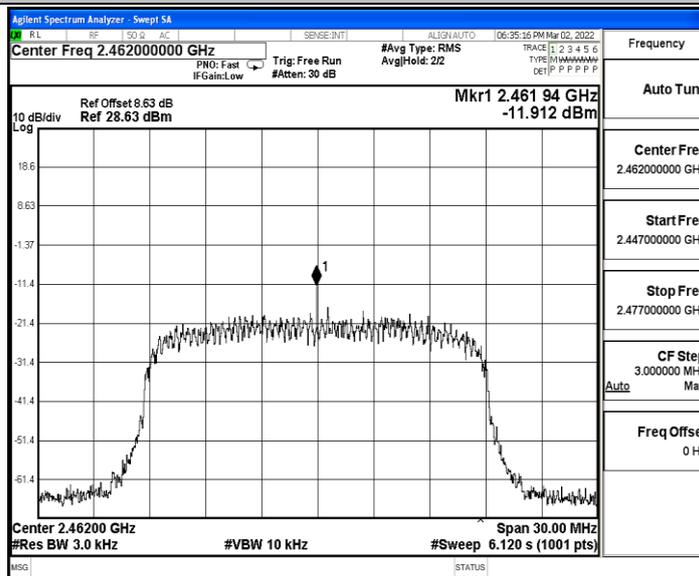




11N20SISO_Ant1_2437



11N20SISO_Ant1_2462





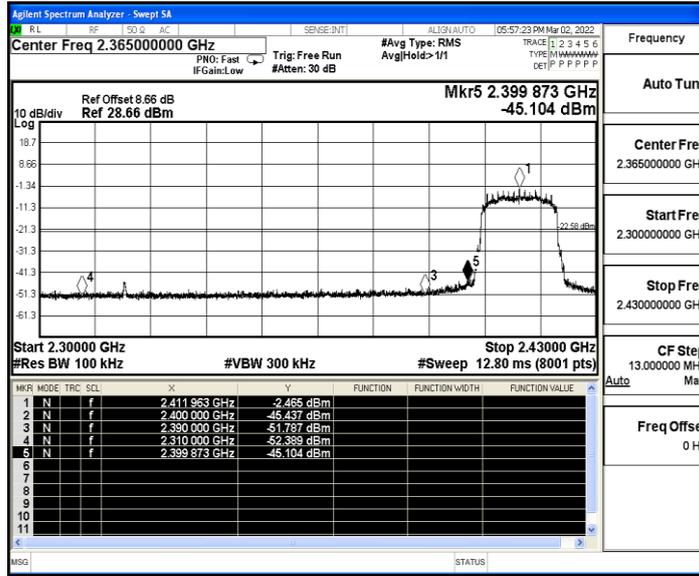
B.5 Band edge measurements

Test Result

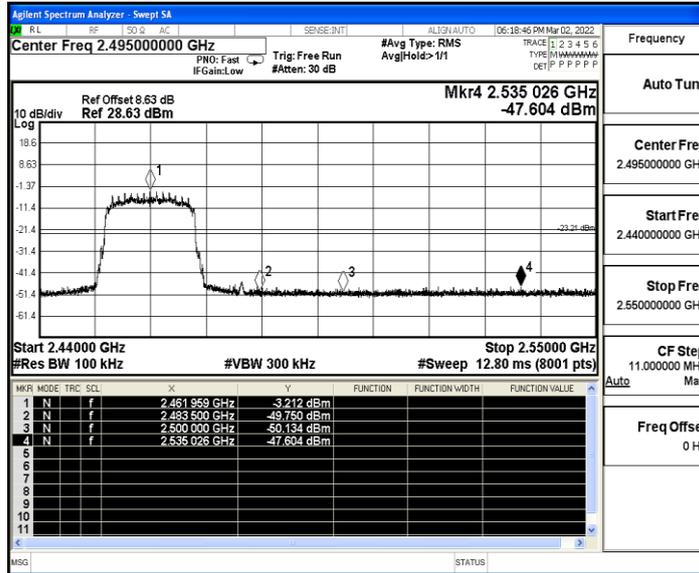
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.57	-44.91	≤-17.43	PASS
		High	2462	1.73	-47.61	≤-18.27	PASS
11G	Ant1	Low	2412	-2.58	-45.1	≤-22.58	PASS
		High	2462	-3.21	-47.6	≤-23.21	PASS
11N20SISO	Ant1	Low	2412	-0.67	-45.5	≤-20.67	PASS
		High	2462	-1.77	-47.94	≤-21.77	PASS



11G_Ant1_Low_2412

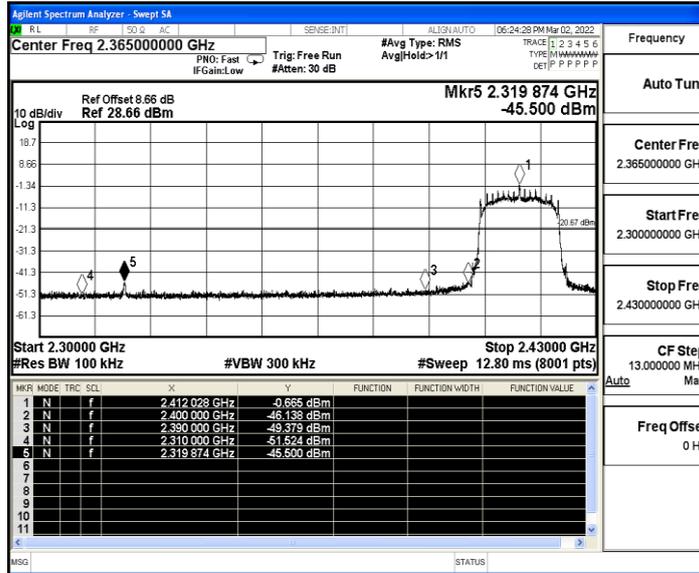


11G_Ant1_High_2462

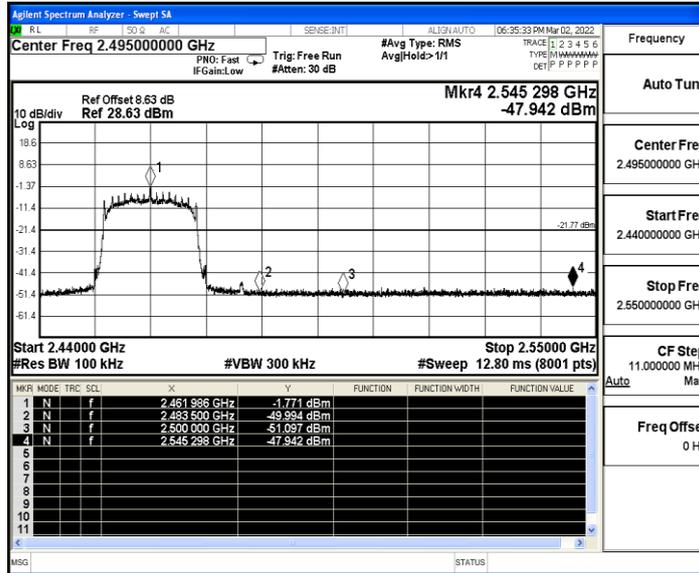




11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462





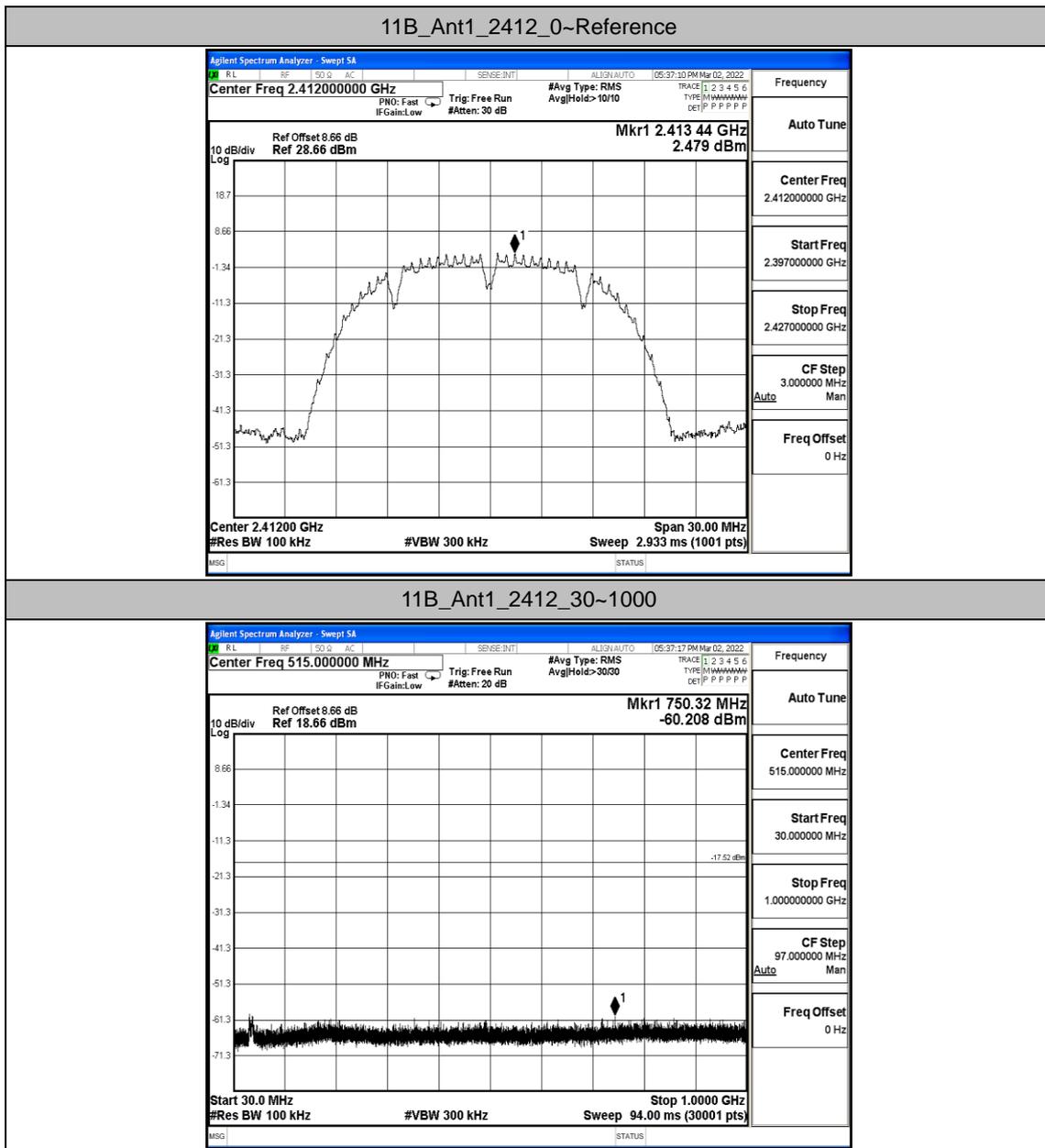
B.6 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.48	2.48	---	PASS
			30~1000	2.48	-60.21	≤-17.52	PASS
			1000~26500	2.48	-46.45	≤-17.52	PASS
		2437	Reference	2.52	2.52	---	PASS
			30~1000	2.52	-58.95	≤-17.48	PASS
			1000~26500	2.52	-46.02	≤-17.48	PASS
		2462	Reference	1.82	1.82	---	PASS
			30~1000	1.82	-59.32	≤-18.18	PASS
			1000~26500	1.82	-46.36	≤-18.18	PASS
11G	Ant1	2412	Reference	-2.24	-2.24	---	PASS
			30~1000	-2.24	-59.88	≤-22.24	PASS
			1000~26500	-2.24	-46.11	≤-22.24	PASS
		2437	Reference	-2.56	-2.56	---	PASS
			30~1000	-2.56	-59.89	≤-22.56	PASS
			1000~26500	-2.56	-45.46	≤-22.56	PASS
		2462	Reference	-2.89	-2.89	---	PASS
			30~1000	-2.89	-60.36	≤-22.89	PASS
			1000~26500	-2.89	-46	≤-22.89	PASS
11N20SISO	Ant1	2412	Reference	-1.10	-1.10	---	PASS
			30~1000	-1.10	-60.49	≤-21.1	PASS
			1000~26500	-1.10	-45.23	≤-21.1	PASS
		2437	Reference	-0.88	-0.88	---	PASS
			30~1000	-0.88	-60.28	≤-20.88	PASS
			1000~26500	-0.88	-46.4	≤-20.88	PASS
		2462	Reference	-1.58	-1.58	---	PASS
			30~1000	-1.58	-59.74	≤-21.58	PASS
			1000~26500	-1.58	-46.44	≤-21.58	PASS

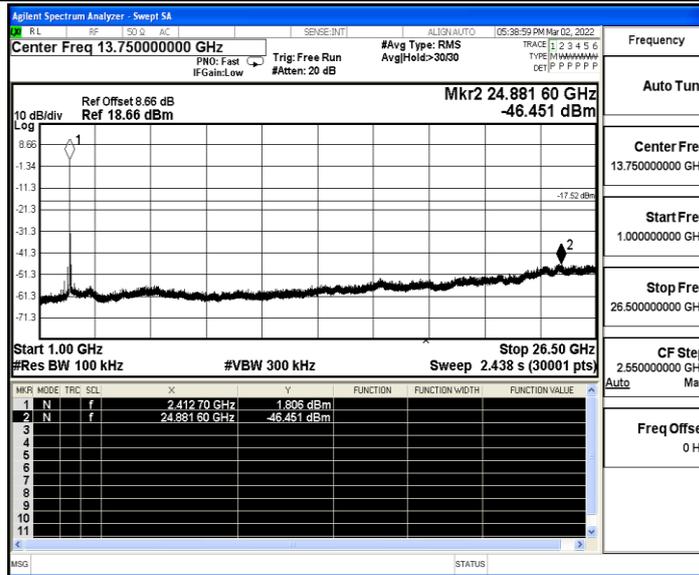


Test Graphs

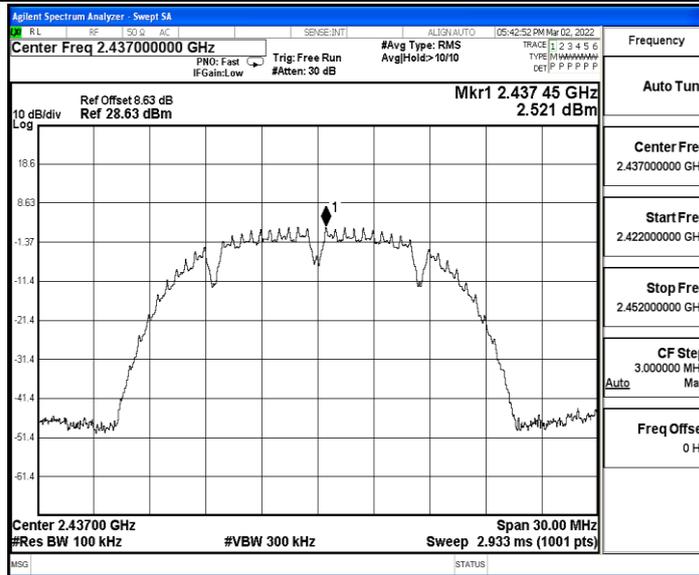




11B_Ant1_2412_1000~26500

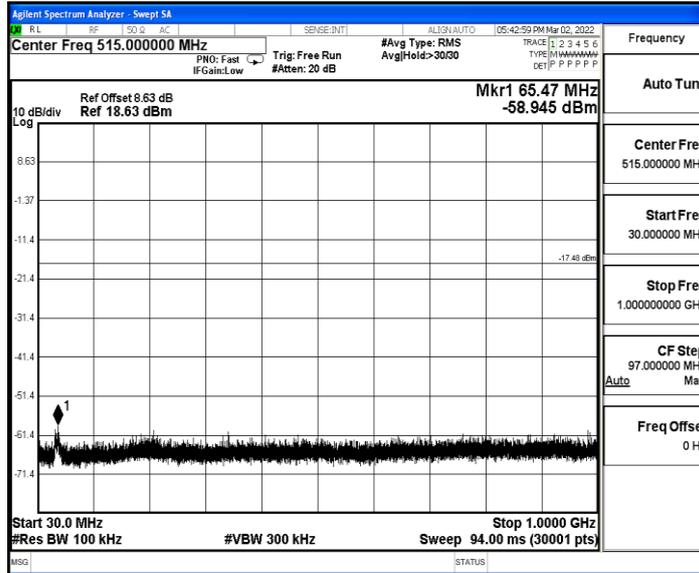


11B_Ant1_2437_0~Reference

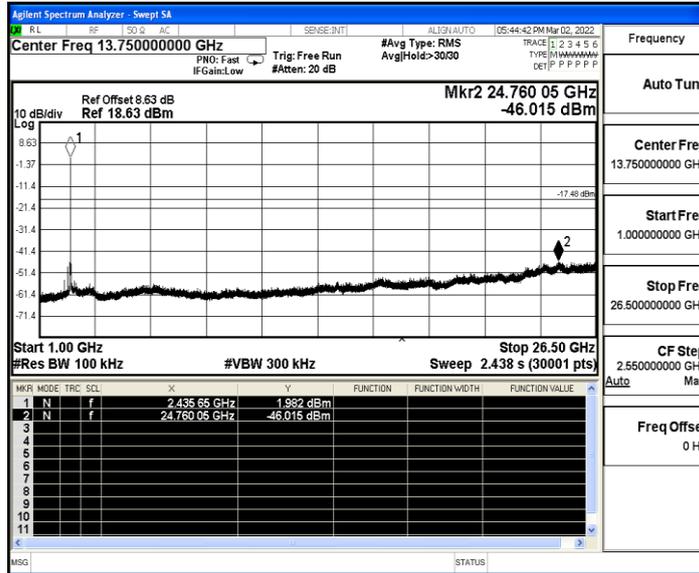




11B_Ant1_2437_30~1000

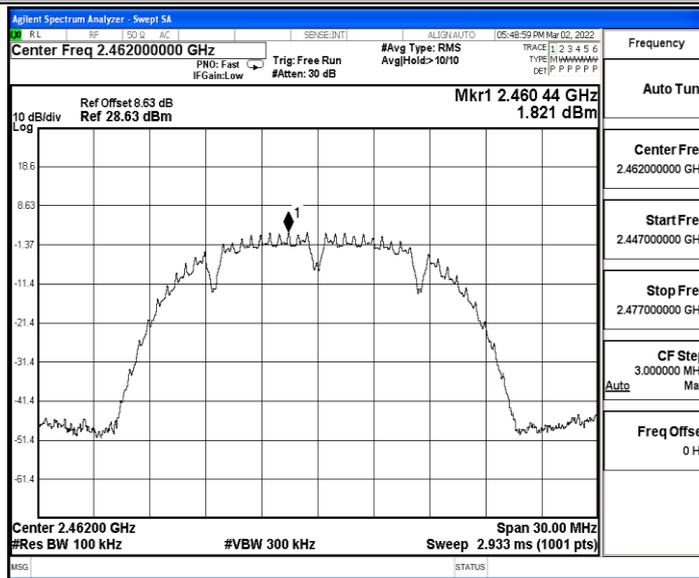


11B_Ant1_2437_1000~26500

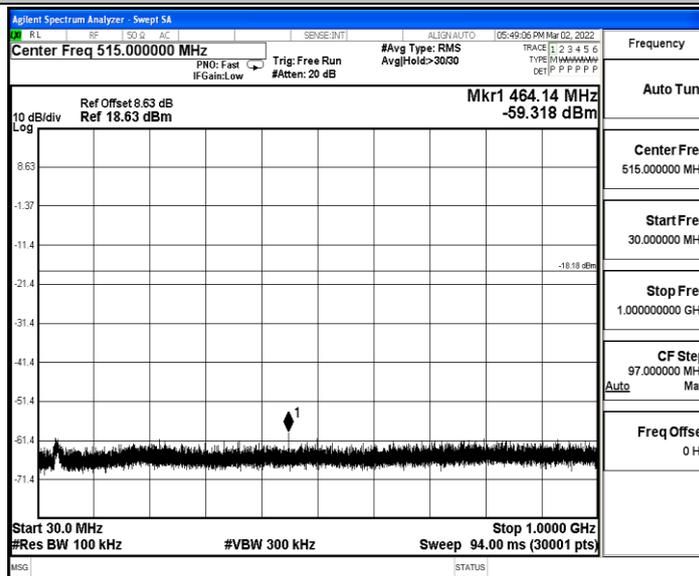




11B_Ant1_2462_0~Reference

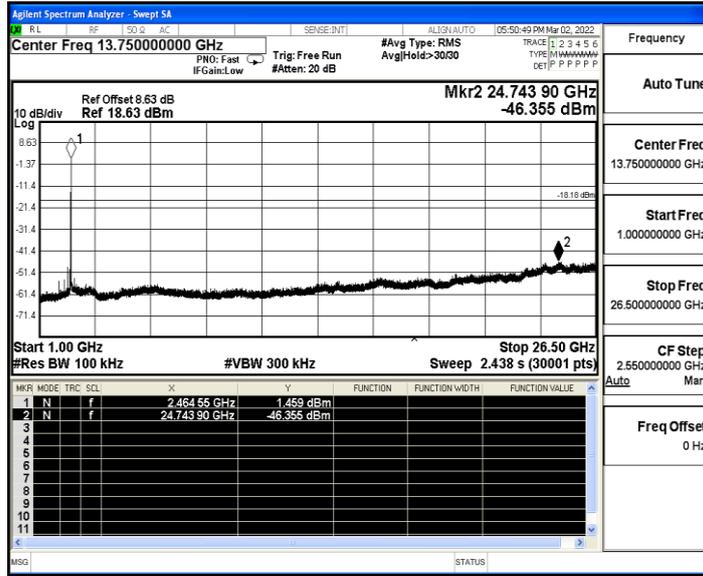


11B_Ant1_2462_30~1000

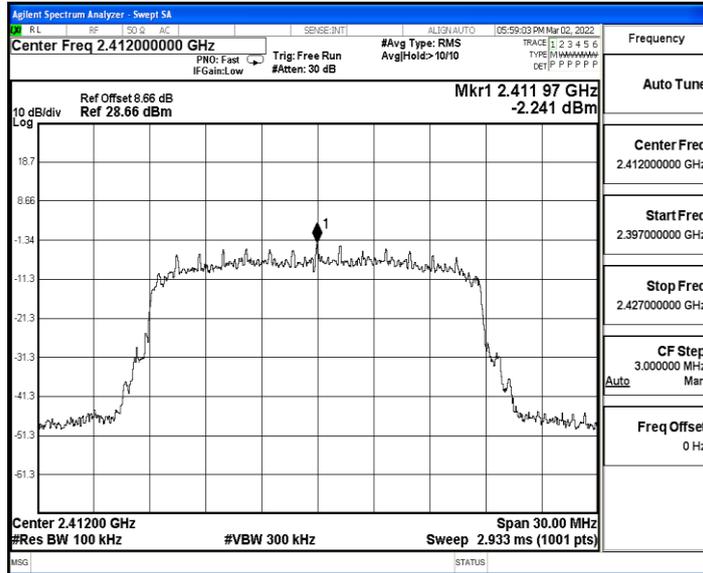




11B_Ant1_2462_1000~26500

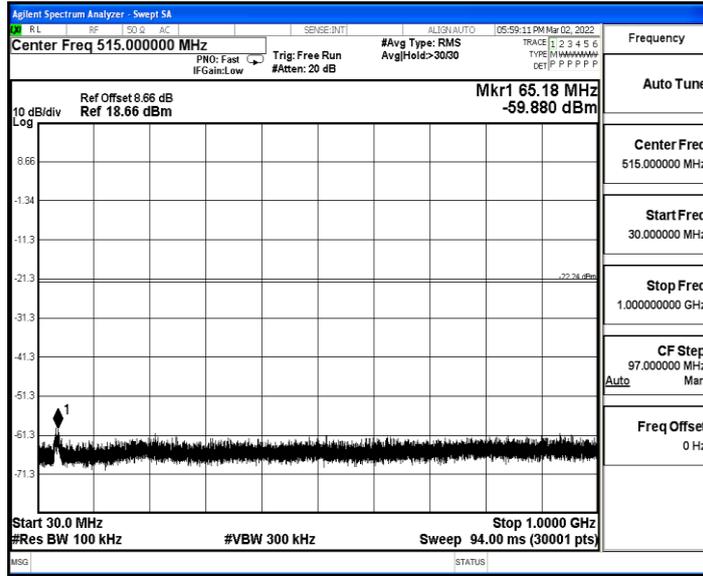


11G_Ant1_2412_0~Reference

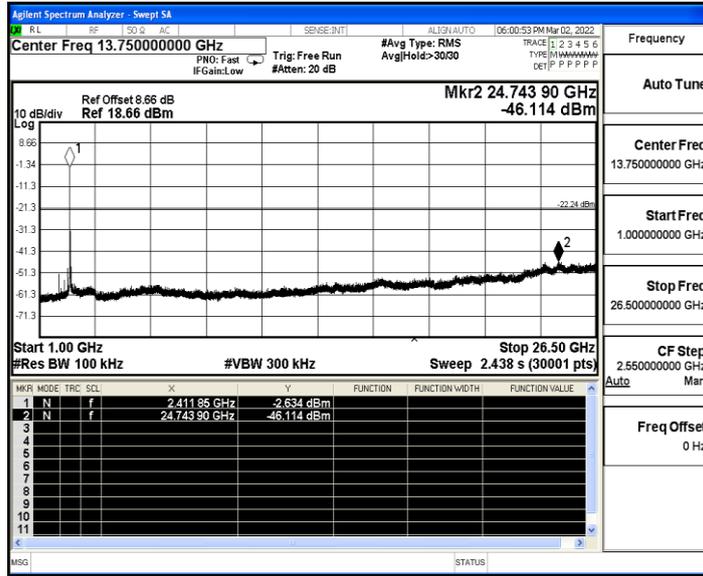




11G_Ant1_2412_30~1000

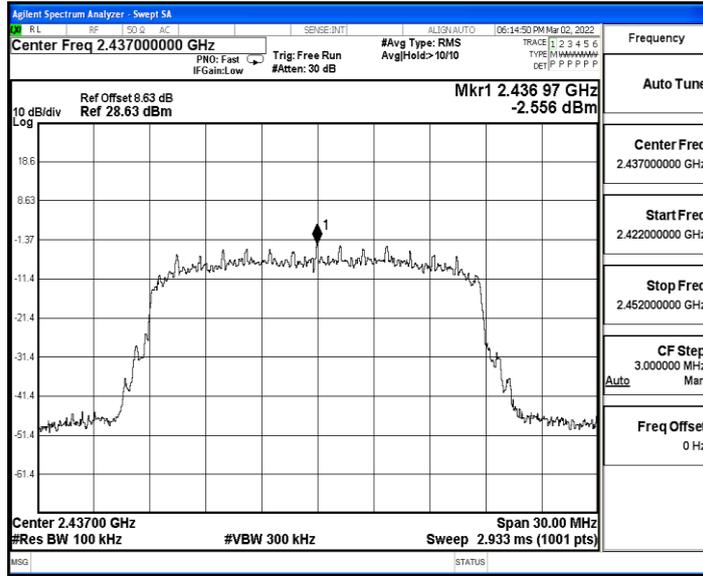


11G_Ant1_2412_1000~26500

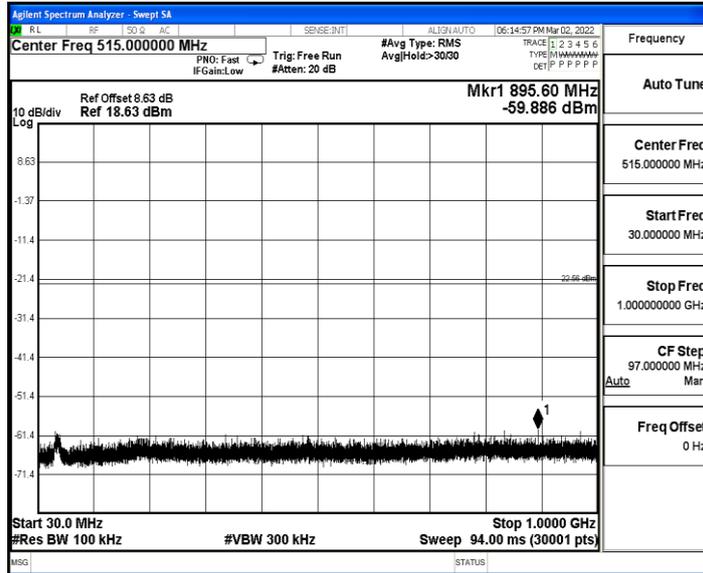




11G_Ant1_2437_0~Reference

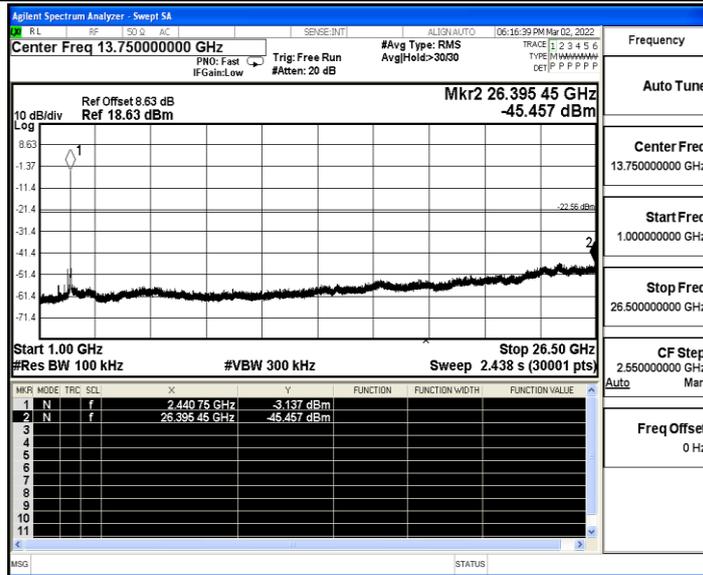


11G_Ant1_2437_30~1000

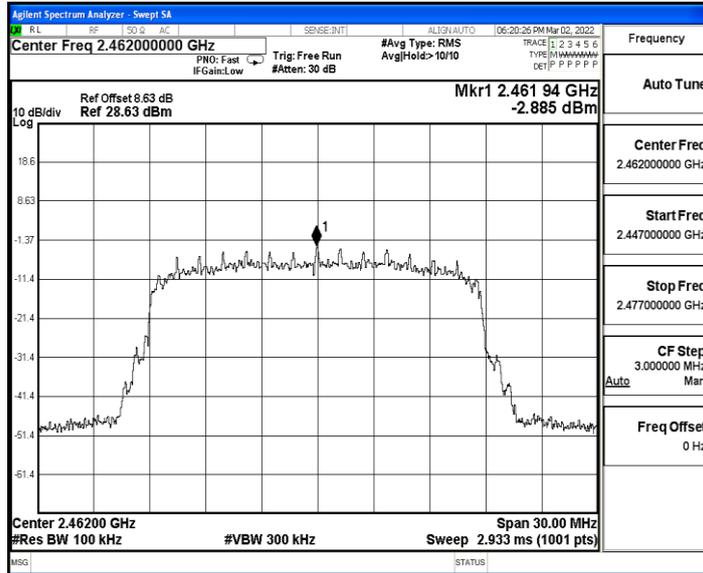




11G_Ant1_2437_1000~26500

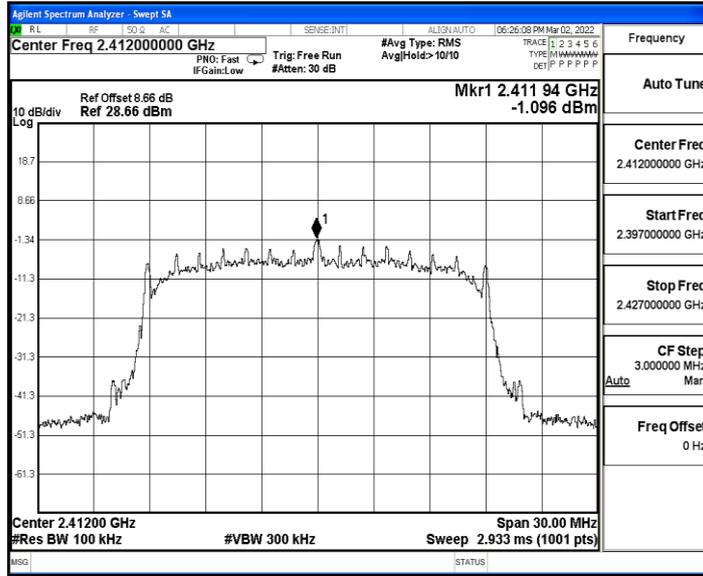


11G_Ant1_2462_0~Reference

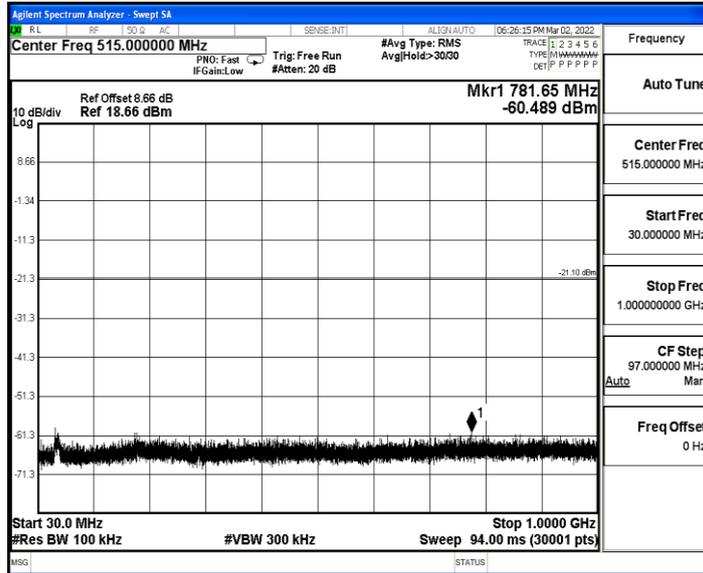




11N20SISO_Ant1_2412_0~Reference

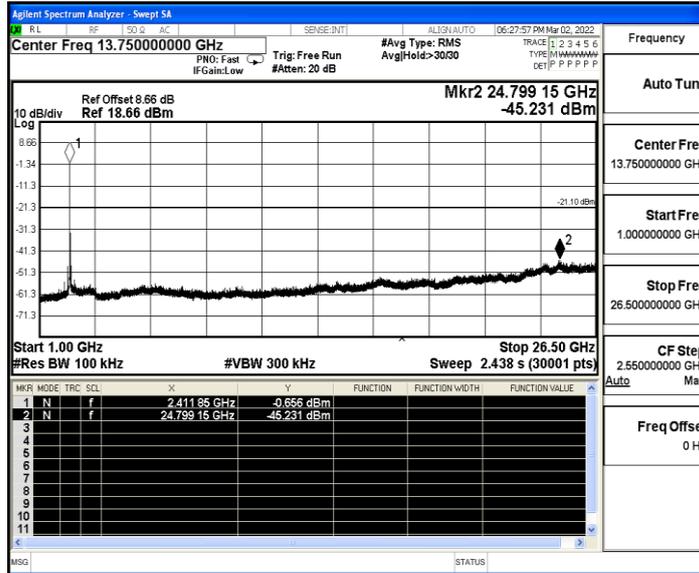


11N20SISO_Ant1_2412_30~1000

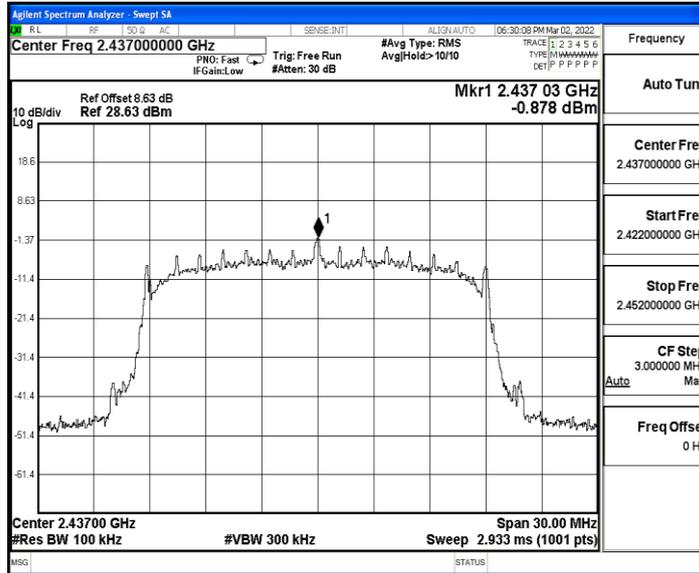




11N20SISO_Ant1_2412_1000~26500

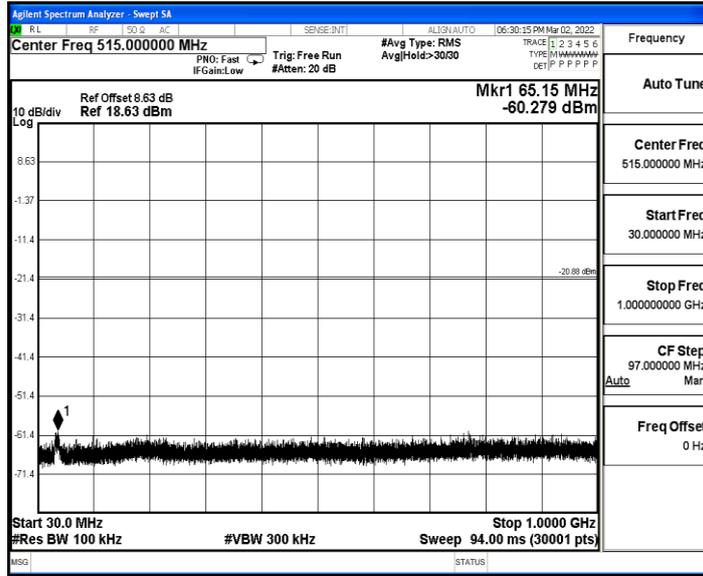


11N20SISO_Ant1_2437_0~Reference

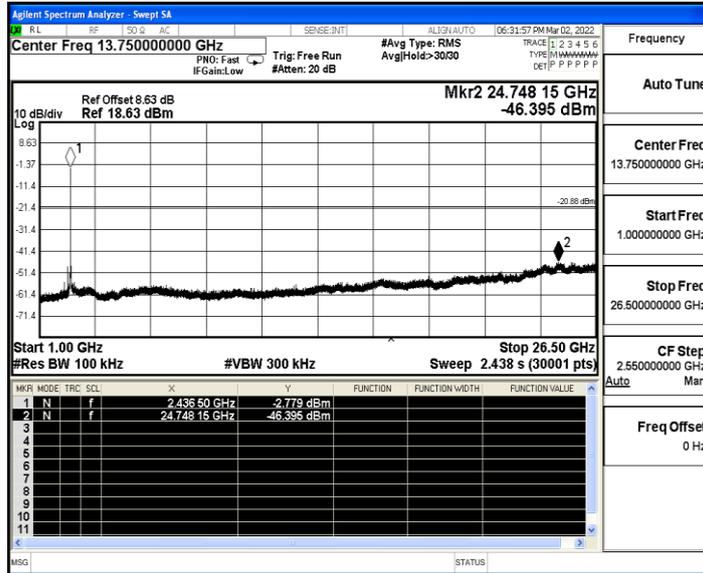




11N20SISO_Ant1_2437_30~1000

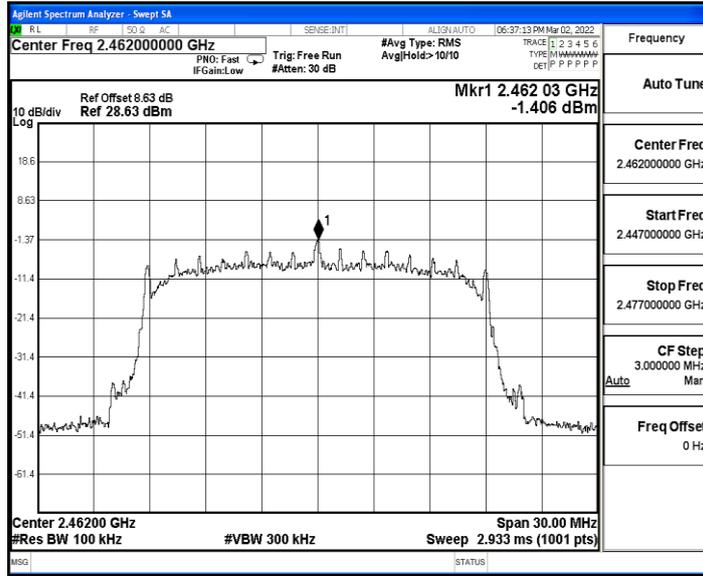


11N20SISO_Ant1_2437_1000~26500

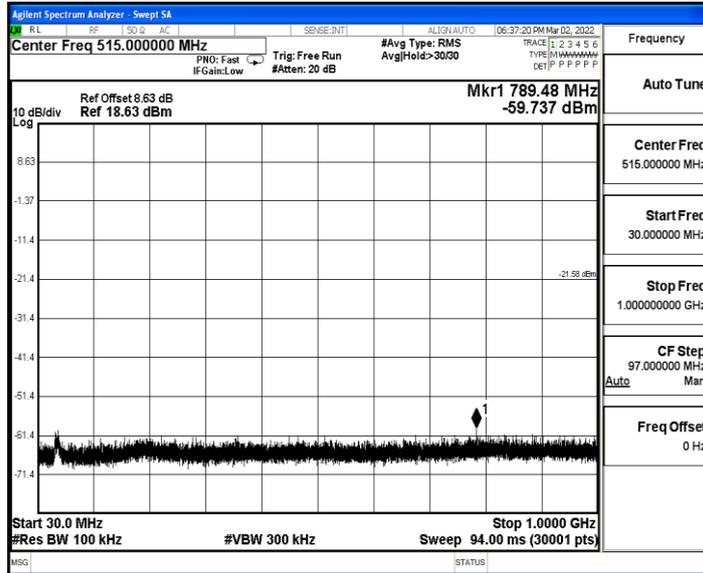




11N20SISO_Ant1_2462_0~Reference

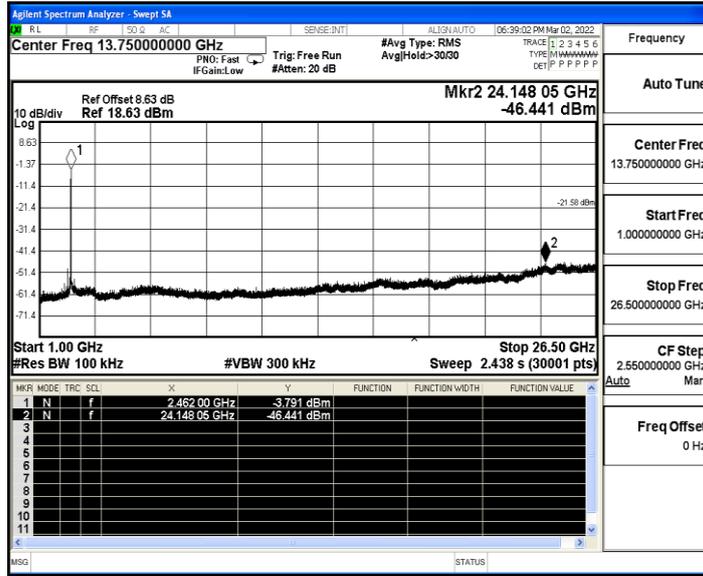


11N20SISO_Ant1_2462_30~1000





11N20SISO_Ant1_2462_1000~26500





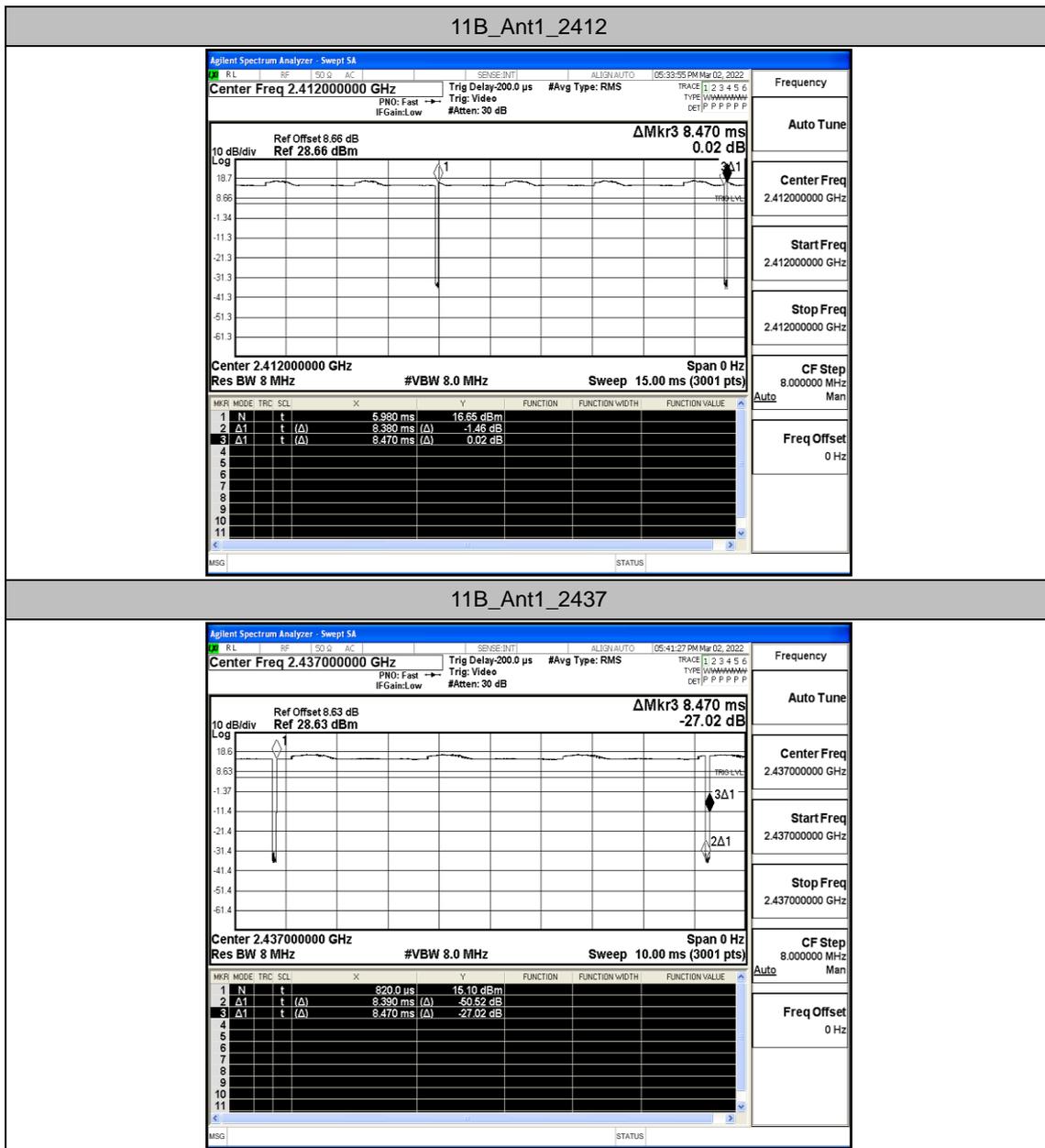
B.7 Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	8.38	8.47	98.94	---	---
		2437	8.39	8.47	99.06	---	---
		2462	8.38	8.47	98.94	---	---
11G	Ant1	2412	1.39	1.41	98.58	---	---
		2437	1.39	1.41	98.58	---	---
		2462	1.40	1.41	99.29	---	---
11N20SISO	Ant1	2412	1.30	1.31	99.24	---	---
		2437	1.30	1.32	98.48	---	---
		2462	1.30	1.32	98.48	---	---



Test Graphs





B.8 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBUV/m]	Limit [dBUV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-58.01	≤-41.20	37.19	≤54	PASS
				AV	2319.890	-46.43	≤-41.20	48.77	≤54	PASS
				AV	2390.000	-53.6	≤-41.20	41.60	≤54	PASS
				Peak	2310.000	-46.93	≤-21.20	48.27	≤74	PASS
				Peak	2319.500	-41.07	≤-21.20	54.13	≤74	PASS
				Peak	2390.000	-41.94	≤-21.20	53.26	≤74	PASS
		High	2462	AV	2483.500	-53.26	≤-41.20	41.94	≤54	PASS
				AV	2483.560	-53.35	≤-41.20	41.85	≤54	PASS
				AV	2500.000	-54.98	≤-41.20	40.22	≤54	PASS
				Peak	2483.500	-42.56	≤-21.20	52.64	≤74	PASS
				Peak	2483.670	-40.97	≤-21.20	54.23	≤74	PASS
				Peak	2500.000	-44.18	≤-21.20	51.02	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-57.6	≤-41.20	37.60	≤54	PASS
				AV	2319.890	-46.88	≤-41.20	48.32	≤54	PASS
				AV	2390.000	-52.15	≤-41.20	43.05	≤54	PASS
				Peak	2310.000	-46.49	≤-21.20	48.71	≤74	PASS
				Peak	2389.700	-40.41	≤-21.20	54.79	≤74	PASS
				Peak	2390.000	-41.46	≤-21.20	53.74	≤74	PASS
		High	2462	AV	2483.500	-52.35	≤-41.20	42.85	≤54	PASS
				AV	2483.560	-52.33	≤-41.20	42.87	≤54	PASS
				AV	2500.000	-53.67	≤-41.20	41.53	≤54	PASS
				Peak	2483.500	-41.98	≤-21.20	53.22	≤74	PASS
				Peak	2484.110	-41.14	≤-21.20	54.06	≤74	PASS
				Peak	2500.000	-42.89	≤-21.20	52.31	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-57.55	≤-41.20	37.65	≤54	PASS
				AV	2319.890	-46.73	≤-41.20	48.47	≤54	PASS
				AV	2390.000	-51.94	≤-41.20	43.26	≤54	PASS
				Peak	2310.000	-47.51	≤-21.20	47.69	≤74	PASS
				Peak	2389.310	-39.74	≤-21.20	55.46	≤74	PASS
				Peak	2390.000	-39.9	≤-21.20	55.30	≤74	PASS
		High	2462	AV	2483.500	-52.13	≤-41.20	43.07	≤54	PASS
				AV	2483.780	-52.32	≤-41.20	42.88	≤54	PASS
				AV	2500.000	-53.75	≤-41.20	41.45	≤54	PASS
				Peak	2483.500	-41.99	≤-21.20	53.21	≤74	PASS
				Peak	2484.220	-41.14	≤-21.20	54.06	≤74	PASS
				Peak	2500.000	-43.96	≤-21.20	51.24	≤74	PASS

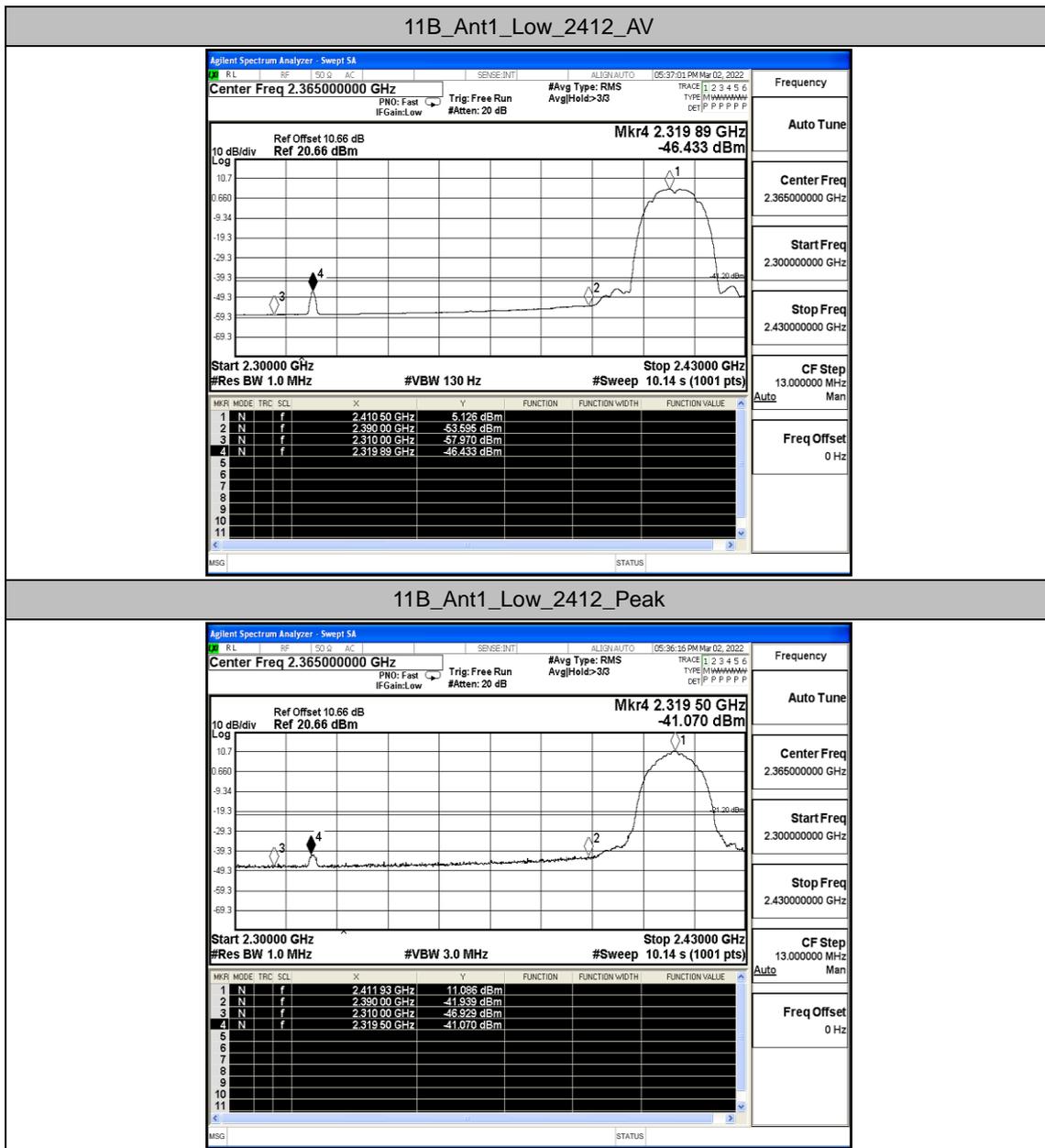


Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

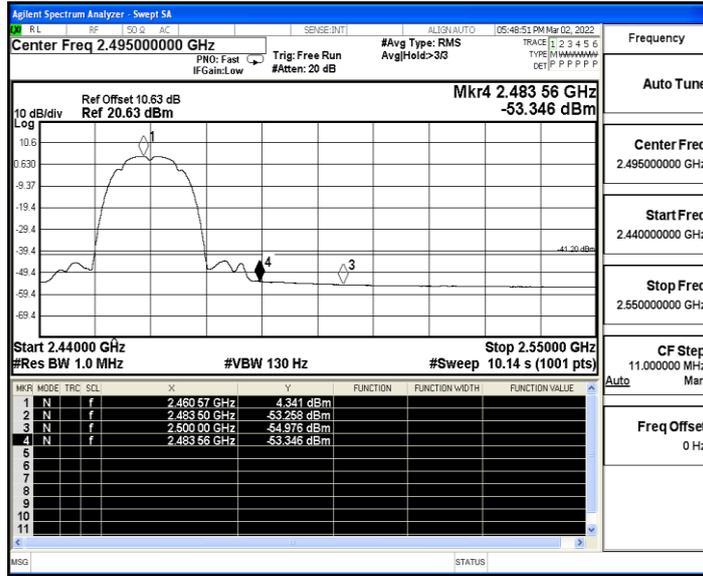


Test Graphs

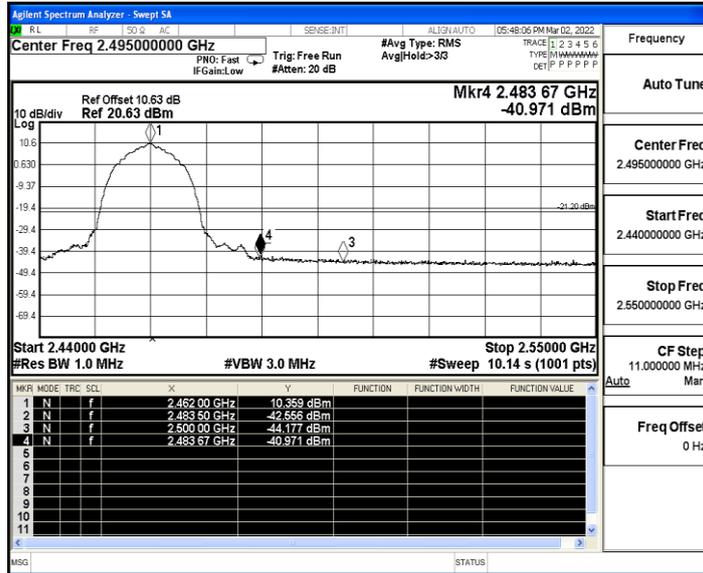




11B_Ant1_High_2462_AV

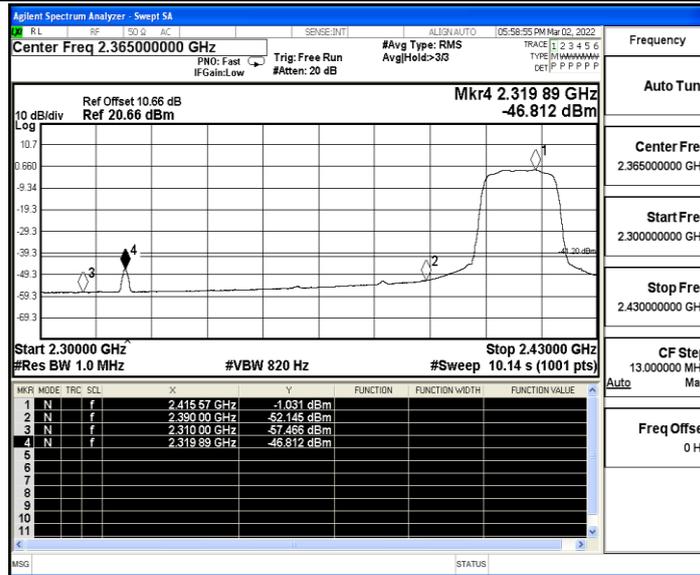


11B_Ant1_High_2462_Peak

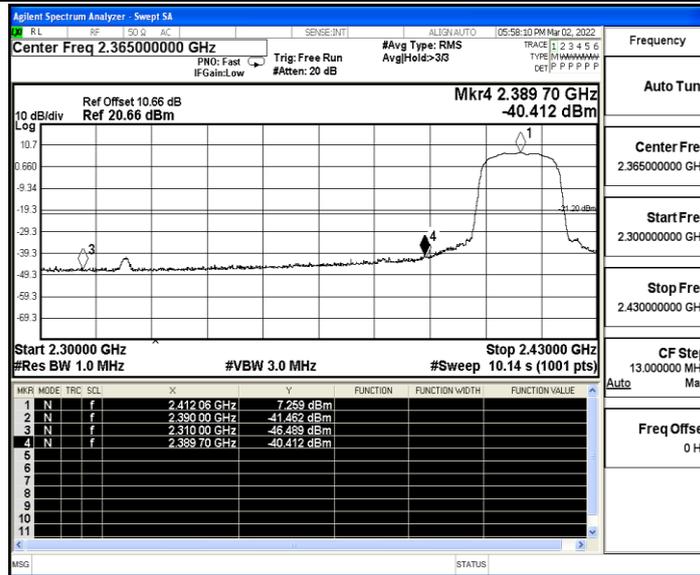




11G_Ant1_Low_2412_AV

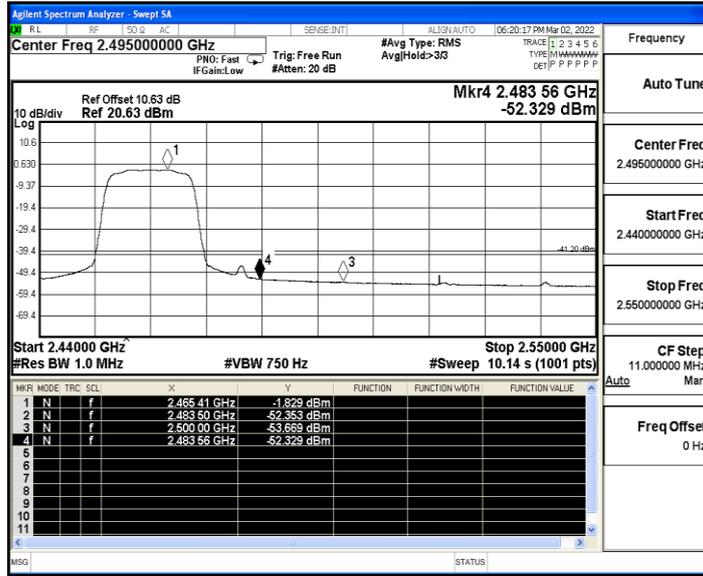


11G_Ant1_Low_2412_Peak



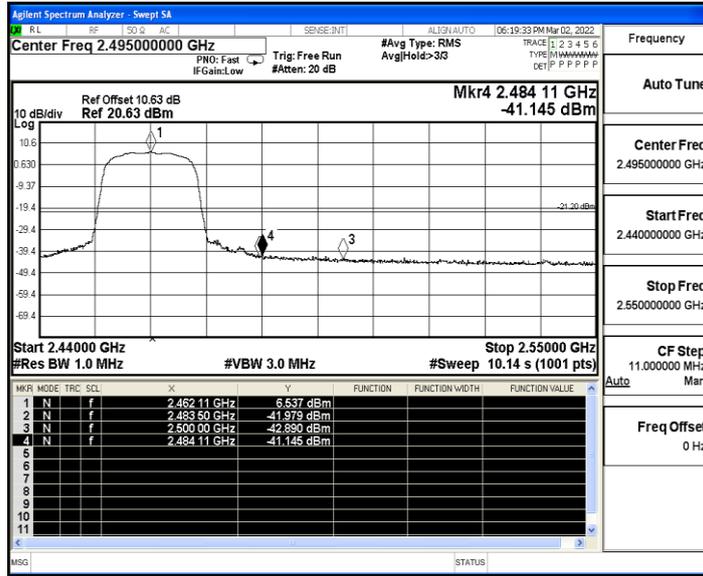


11G_Ant1_High_2462_AV



Frequency	Auto Tune
Center Freq	2.495000000 GHz
Start Freq	2.440000000 GHz
Stop Freq	2.550000000 GHz
CF Step	11.000000 MHz
Auto	Man
Freq Offset	0 Hz

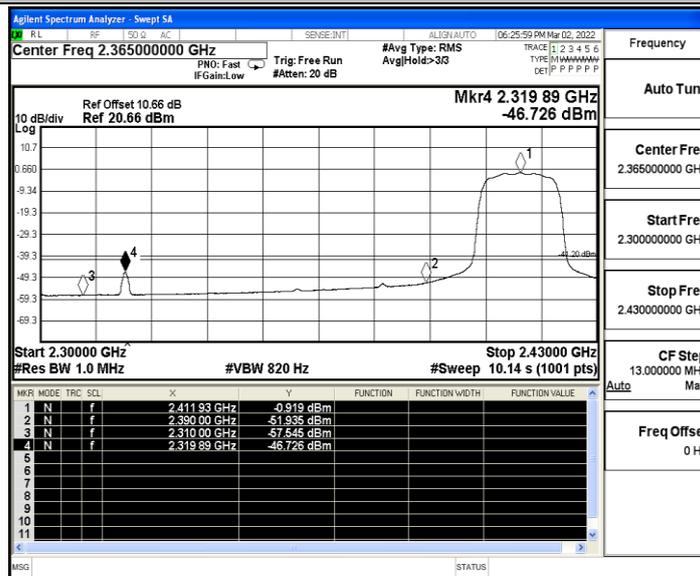
11G_Ant1_High_2462_Peak



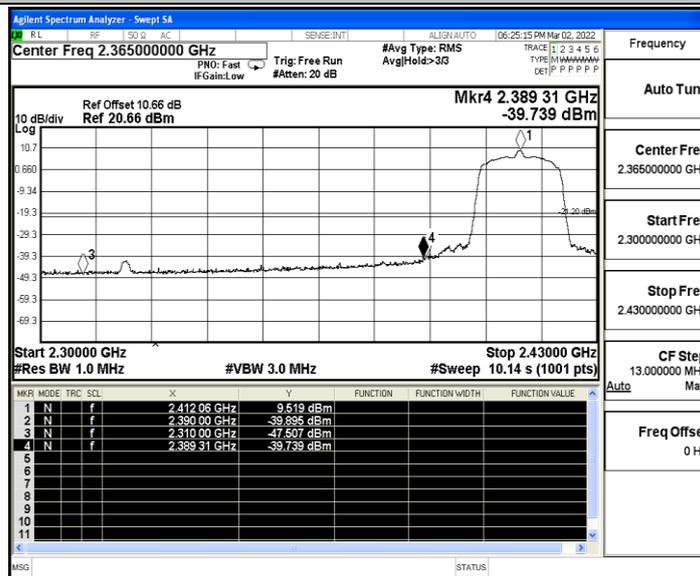
Frequency	Auto Tune
Center Freq	2.495000000 GHz
Start Freq	2.440000000 GHz
Stop Freq	2.550000000 GHz
CF Step	11.000000 MHz
Auto	Man
Freq Offset	0 Hz



11N20SISO_Ant1_Low_2412_AV

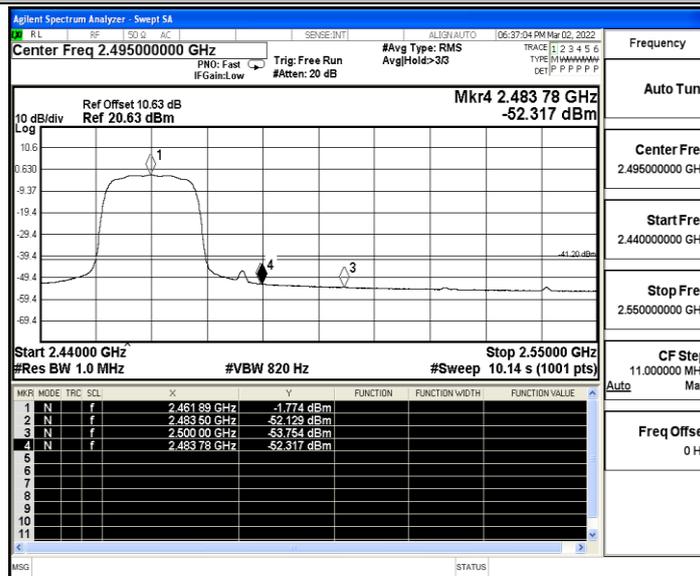


11N20SISO_Ant1_Low_2412_Peak





11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak

