Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Lunaglow Nano Wet Dry Vacuum Cleaner

Trade Mark: Lunaglow

Test Model: Lunaglow Nano

Environmental Conditions

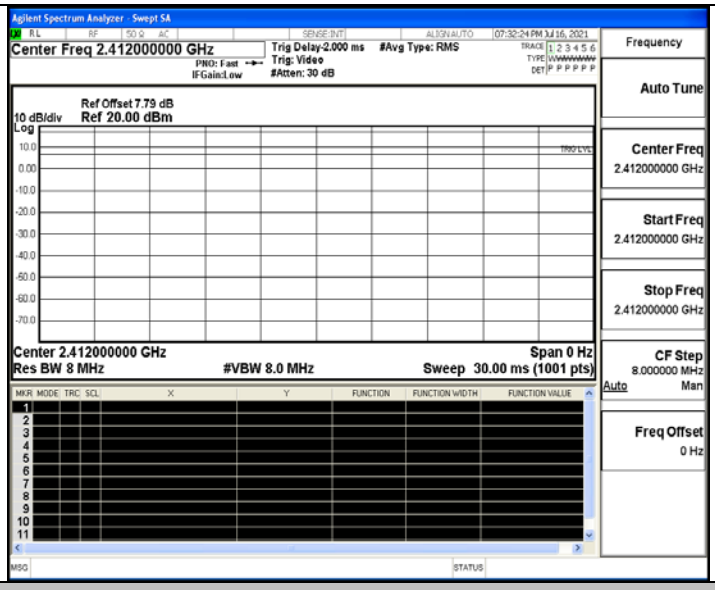
Temperature:	21.5 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Duty Cycle

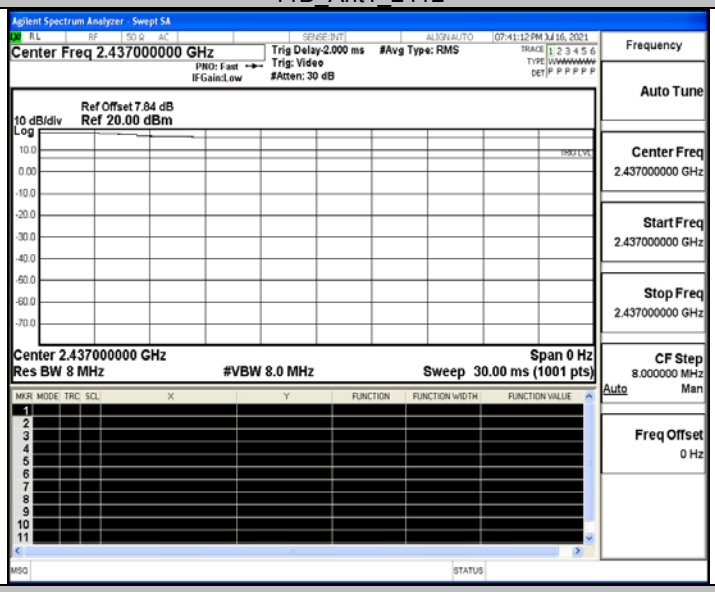
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	30.00	30.00	100.00	---	PASS
		2437	30.00	30.00	100.00	---	PASS
		2462	30.00	30.00	100.00	---	PASS
11G	Ant1	2412	1.39	1.43	97.20	---	PASS
		2437	1.39	1.43	97.20	---	PASS
		2462	1.39	1.43	97.20	---	PASS
11N20SISO	Ant1	2412	1.30	1.34	97.01	---	PASS
		2437	1.30	1.34	97.01	---	PASS
		2462	1.30	1.34	97.01	---	PASS

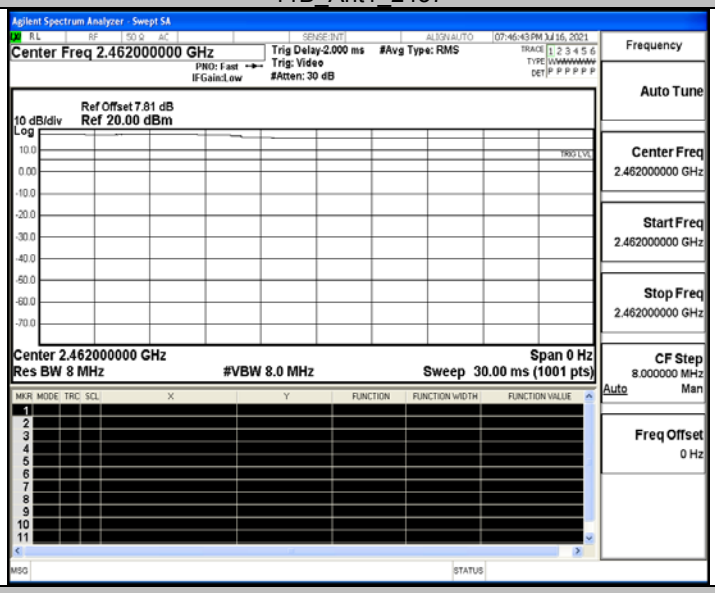
Test Graphs



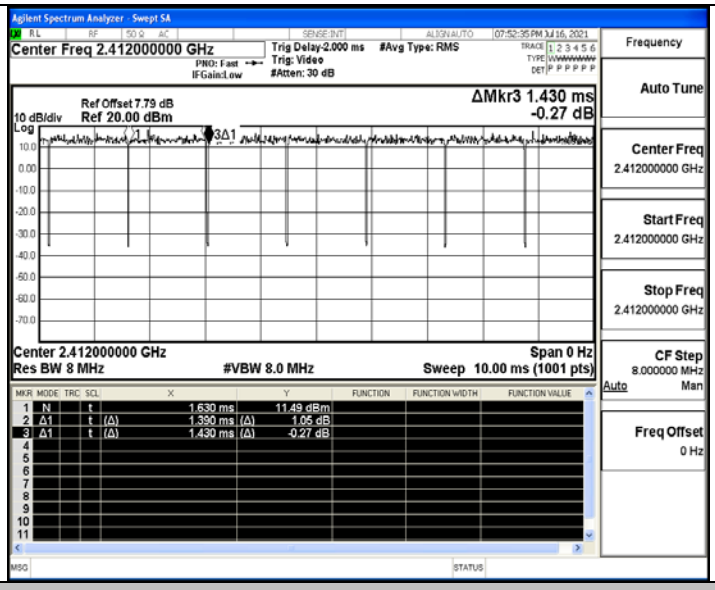
11B_Ant1_2412



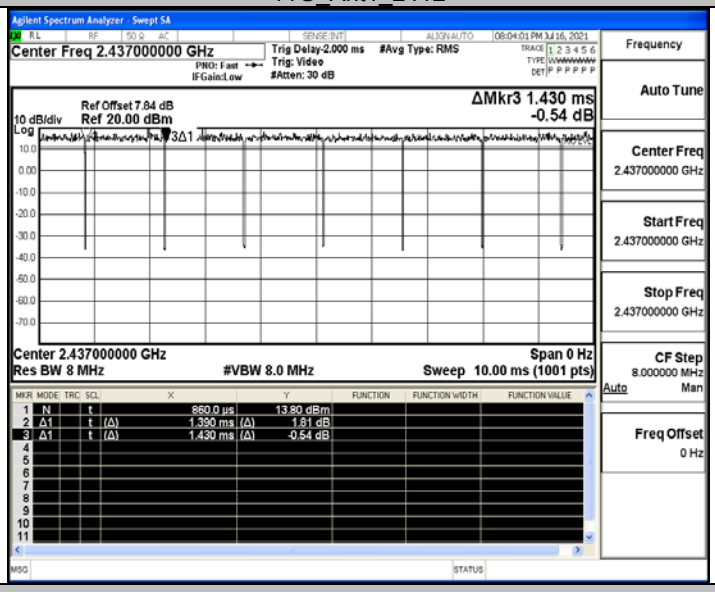
11B_Ant1_2437



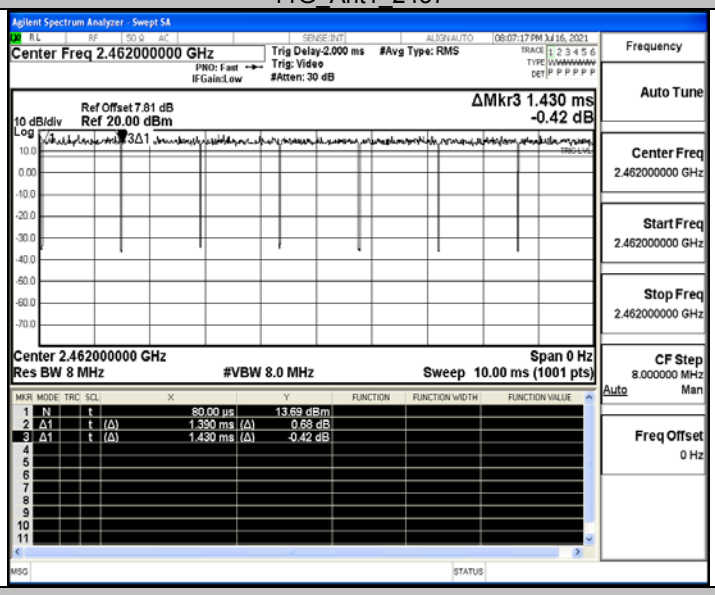
11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



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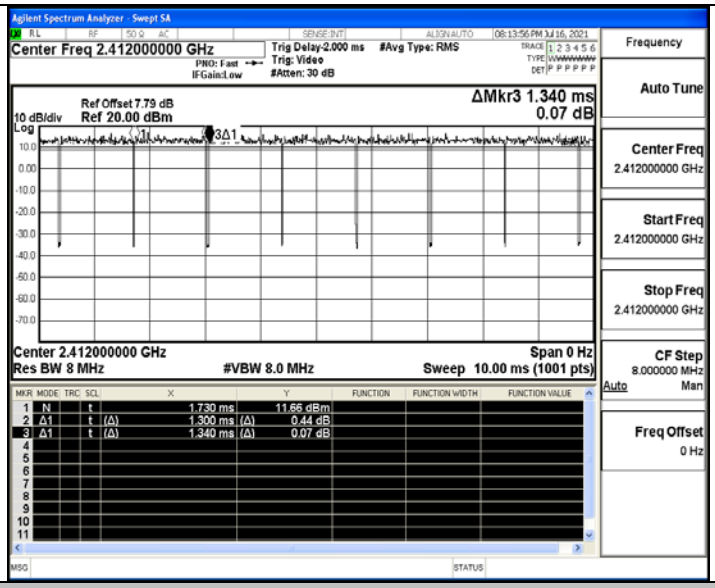
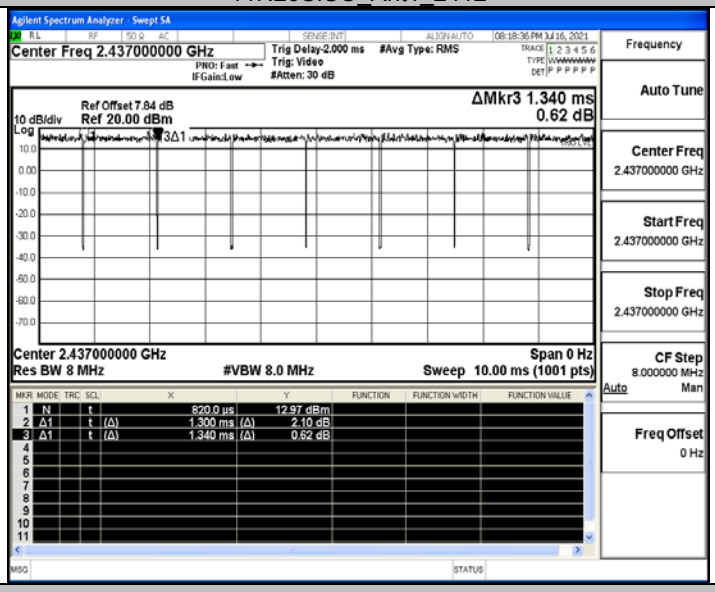


11N20SISO_Ant1_2412



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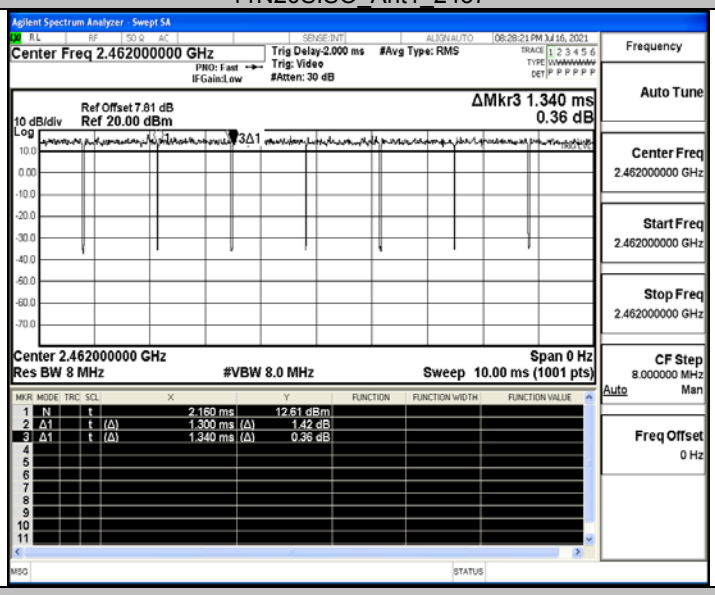


11N20SISO_Ant1_2462

A.2 Maximum Peak Conducted Output Power

Test Result

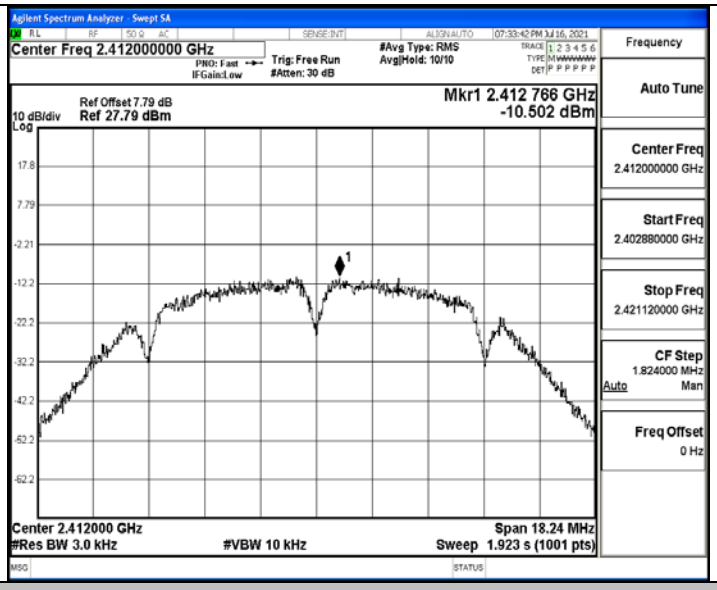
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	15.51	≤30	PASS
		2437	15.31	≤30	PASS
		2462	15.15	≤30	PASS
11G	Ant1	2412	16.06	≤30	PASS
		2437	17.69	≤30	PASS
		2462	17.41	≤30	PASS
11N20SISO	Ant1	2412	16.15	≤30	PASS
		2437	17.65	≤30	PASS
		2462	17.45	≤30	PASS

A.3 Maximum Power Spectral Density

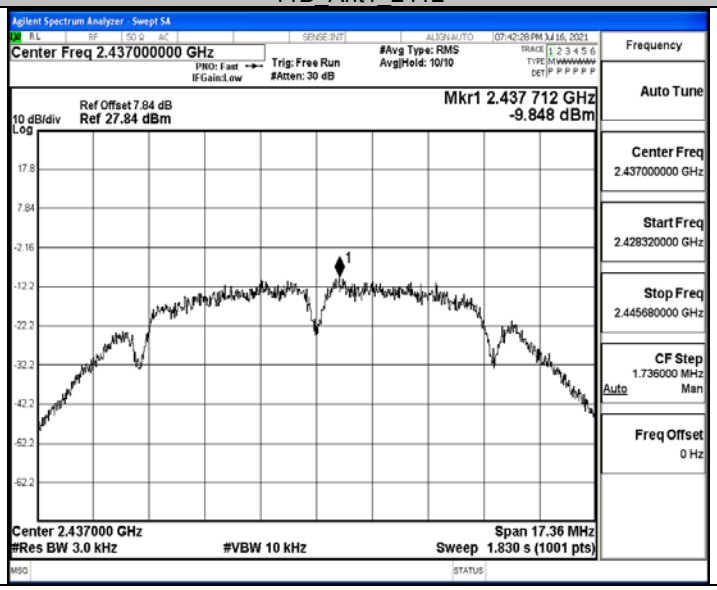
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.5	≤8	PASS
		2437	-9.85	≤8	PASS
		2462	-10.91	≤8	PASS
11G	Ant1	2412	-14.72	≤8	PASS
		2437	-13.26	≤8	PASS
		2462	-14.24	≤8	PASS
11N20SISO	Ant1	2412	-15.36	≤8	PASS
		2437	-12.6	≤8	PASS
		2462	-12.94	≤8	PASS

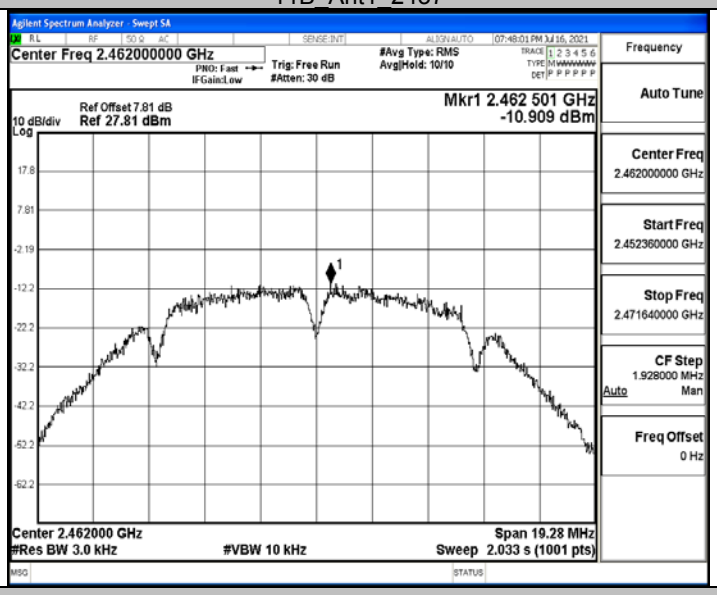
Test Graphs



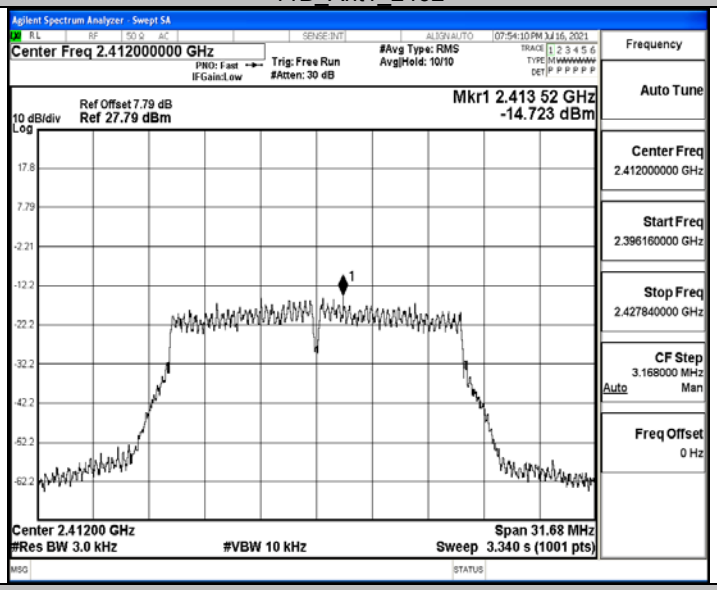
11B_Ant1_2412



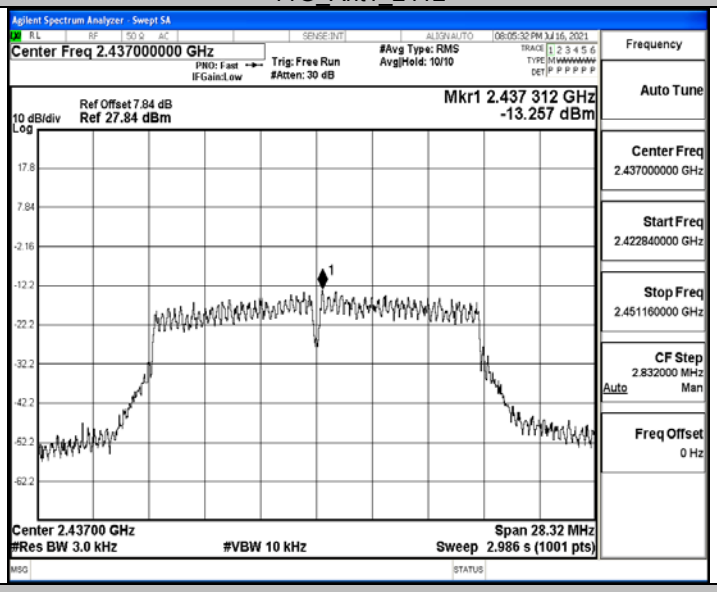
11B_Ant1_2437



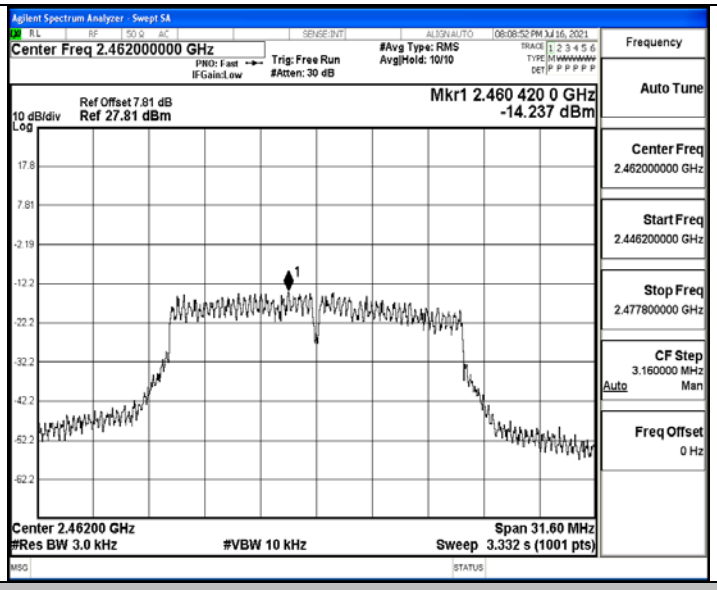
11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



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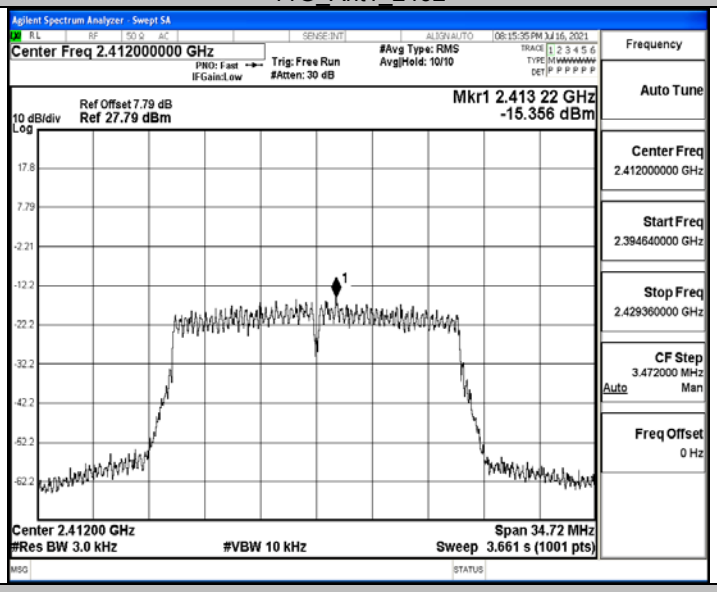

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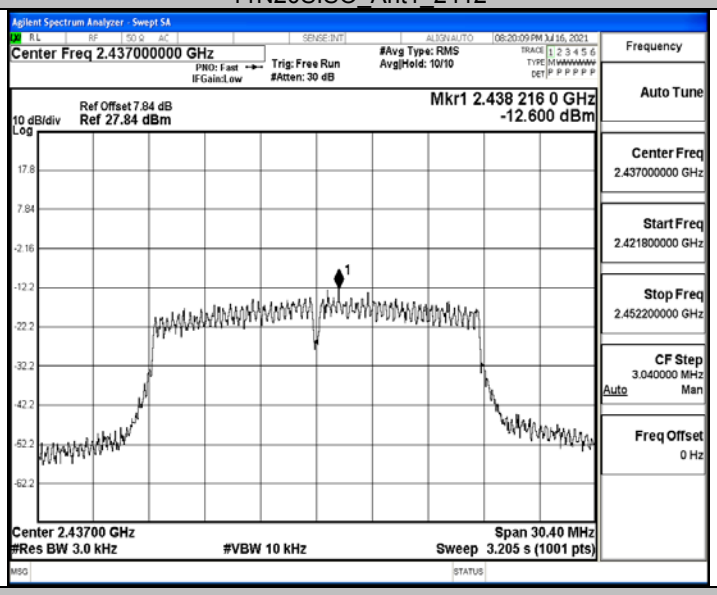

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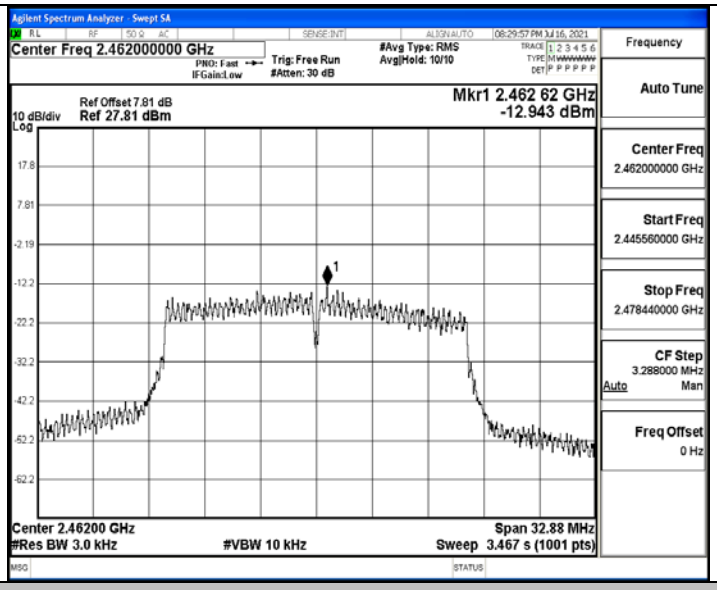


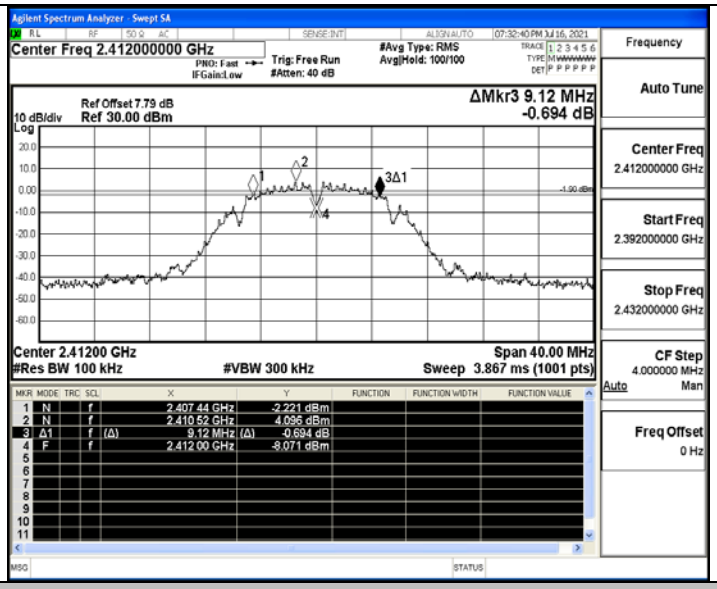
11N20SISO_Ant1_2462

A.4 6dB Bandwidth

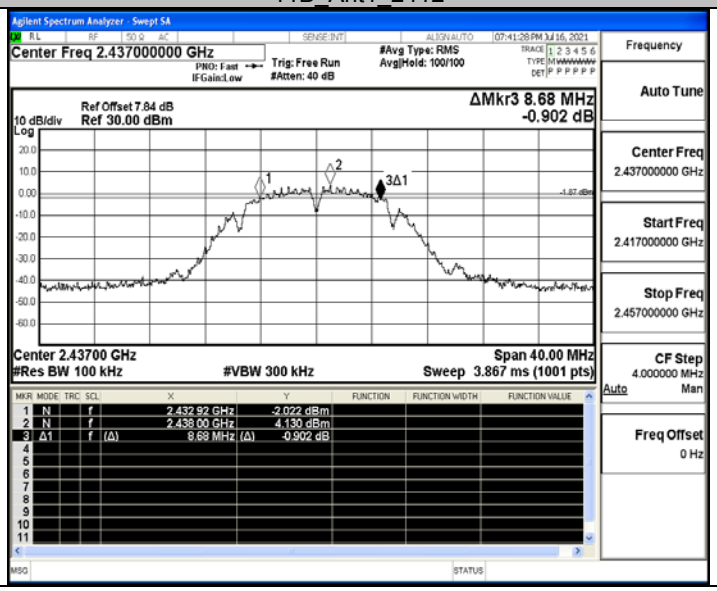
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.120	2407.440	2416.560	0.5	PASS
		2437	8.680	2432.920	2441.600	0.5	PASS
		2462	9.640	2456.920	2466.560	0.5	PASS
11G	Ant1	2412	15.840	2404.080	2419.920	0.5	PASS
		2437	14.160	2430.640	2444.800	0.5	PASS
		2462	15.800	2453.800	2469.600	0.5	PASS
11N20SISO	Ant1	2412	17.360	2403.200	2420.560	0.5	PASS
		2437	15.200	2429.400	2444.600	0.5	PASS
		2462	16.440	2453.160	2469.600	0.5	PASS

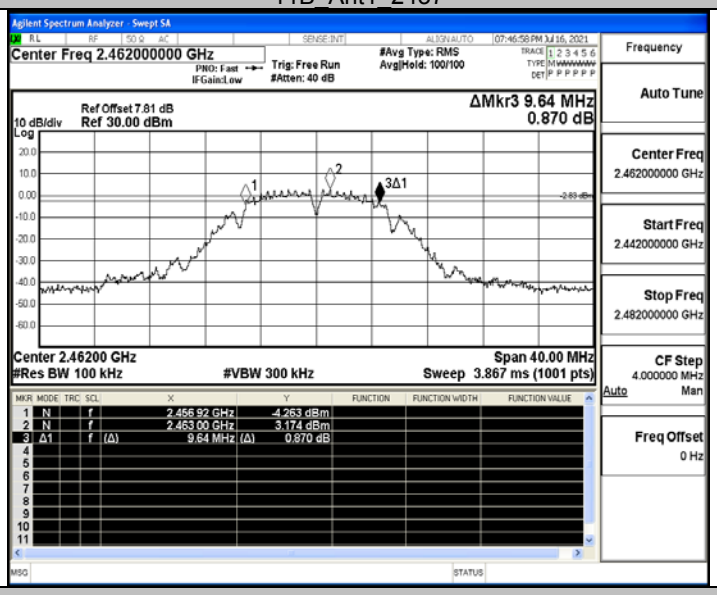
Test Graphs



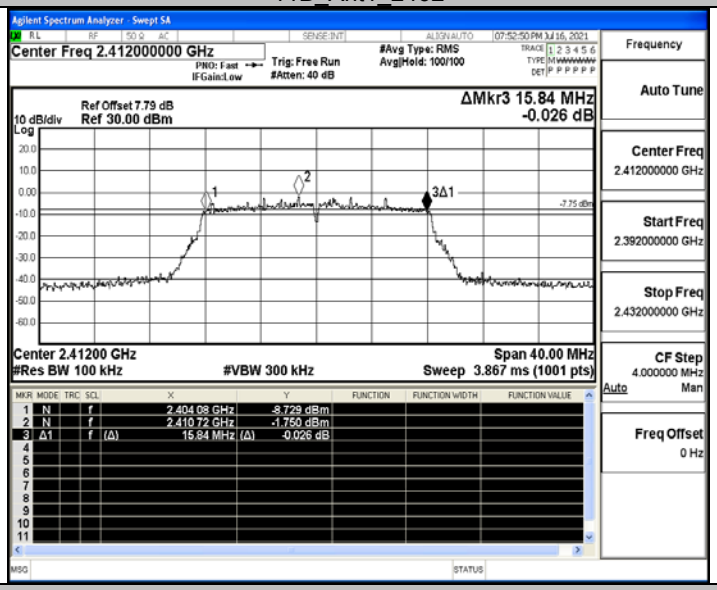
11B_Ant1_2412



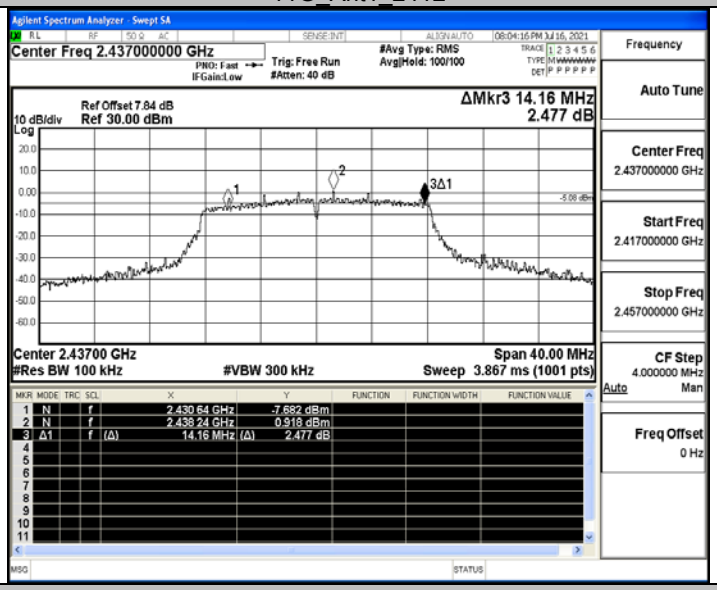
11B_Ant1_2437



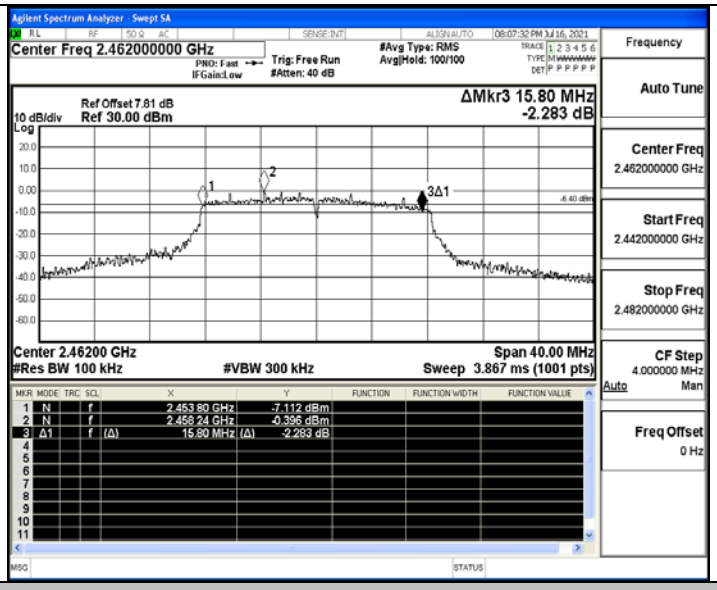
11B_Ant1_2462



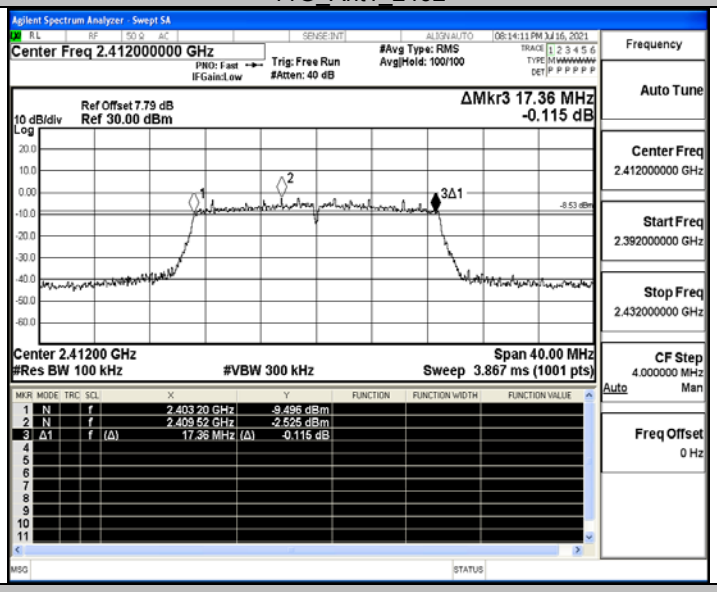
11G_Ant1_2412



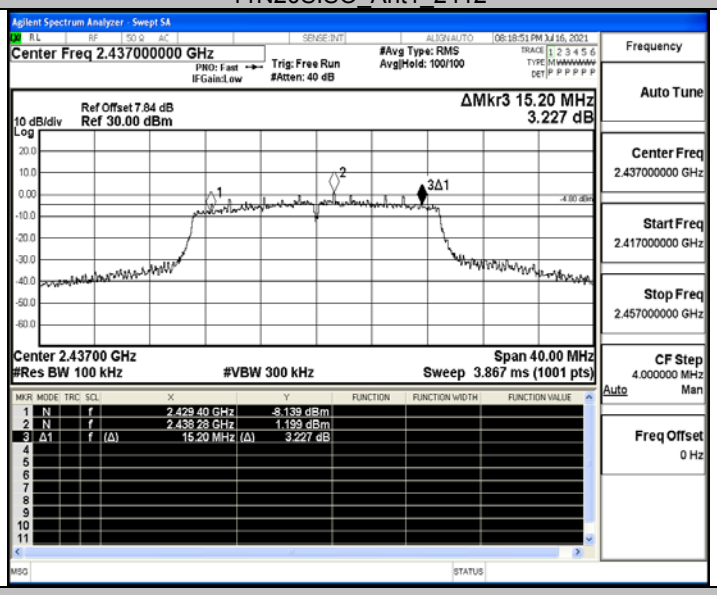
11G_Ant1_2437



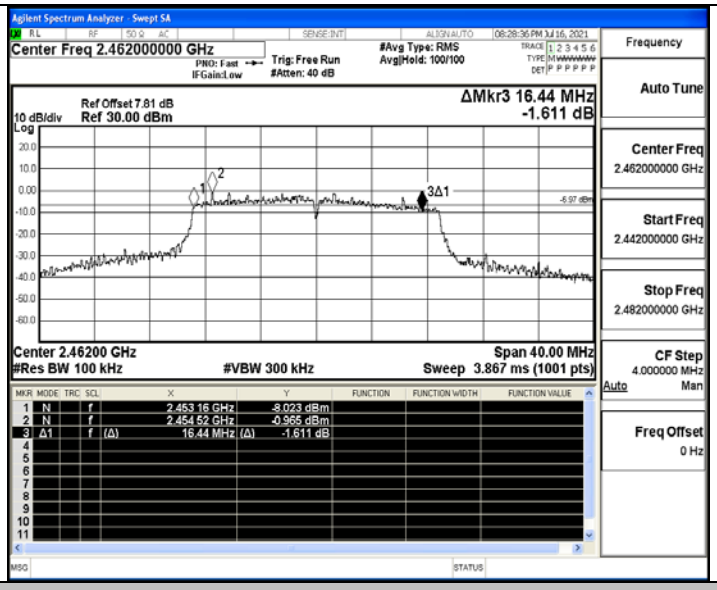
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



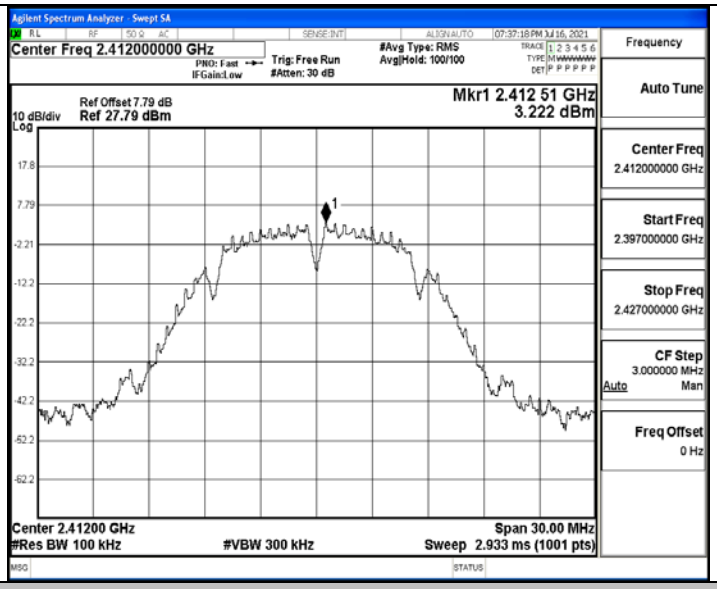
11N20SISO_Ant1_2462

A.5 RF Conducted Spurious Emissions

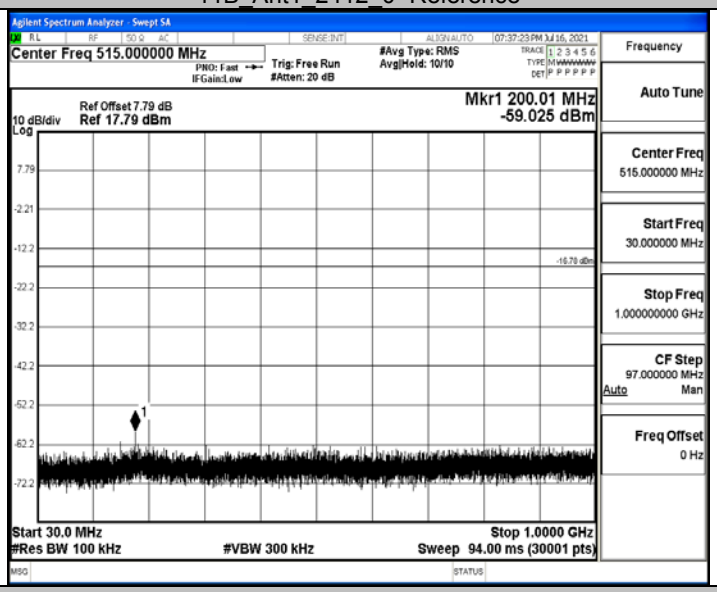
Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.22	3.22	---	PASS
			30~1000	3.22	-59.03	≤-16.78	PASS
			1000~26500	3.22	-47.58	≤-16.78	PASS
		2437	Reference	3.44	3.44	---	PASS
			30~1000	3.44	-60.73	≤-16.56	PASS
			1000~26500	3.44	-47.56	≤-16.56	PASS
		2462	Reference	3.34	3.34	---	PASS
			30~1000	3.34	-60.43	≤-16.66	PASS
			1000~26500	3.34	-47.42	≤-16.66	PASS
11G	Ant1	2412	Reference	-1.37	-1.37	---	PASS
			30~1000	-1.37	-60.84	≤-21.37	PASS
			1000~26500	-1.37	-46.75	≤-21.37	PASS
		2437	Reference	0.25	0.25	---	PASS
			30~1000	0.25	-58.61	≤-19.76	PASS
			1000~26500	0.25	-46.96	≤-19.76	PASS
		2462	Reference	0.19	0.19	---	PASS
			30~1000	0.19	-59.78	≤-19.81	PASS
			1000~26500	0.19	-47.43	≤-19.81	PASS
11N20SISO	Ant1	2412	Reference	-1.22	-1.22	---	PASS
			30~1000	-1.22	-59.35	≤-21.22	PASS
			1000~26500	-1.22	-47.09	≤-21.22	PASS
		2437	Reference	0.14	0.14	---	PASS
			30~1000	0.14	-57.38	≤-19.86	PASS
			1000~26500	0.14	-46.36	≤-19.86	PASS
		2462	Reference	0.17	0.17	---	PASS
			30~1000	0.17	-58.37	≤-19.83	PASS
			1000~26500	0.17	-47.79	≤-19.83	PASS

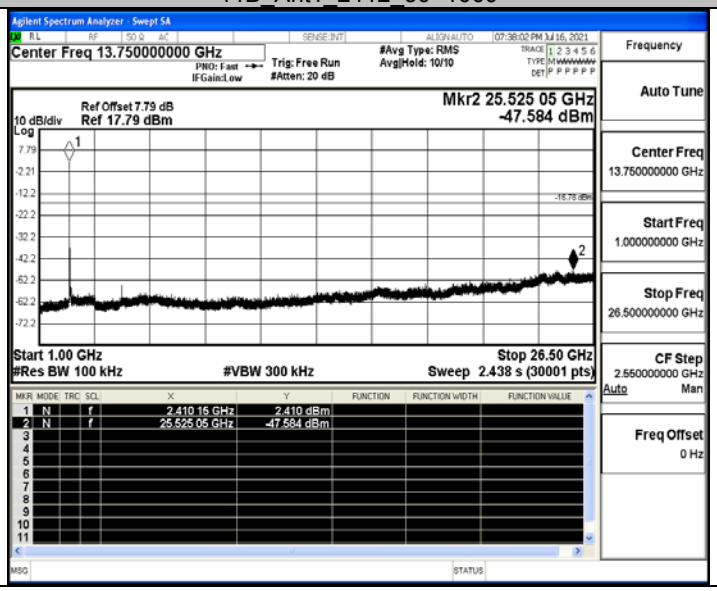
Test Graphs



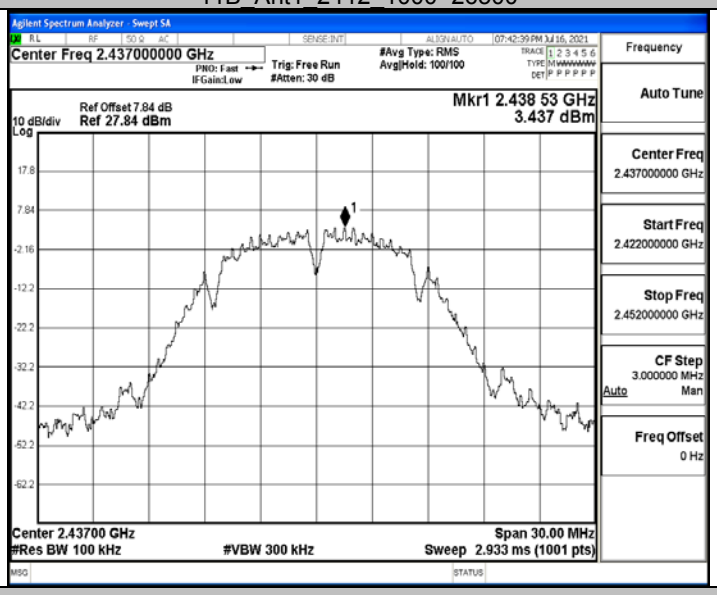
11B_Ant1_2412_0~Reference



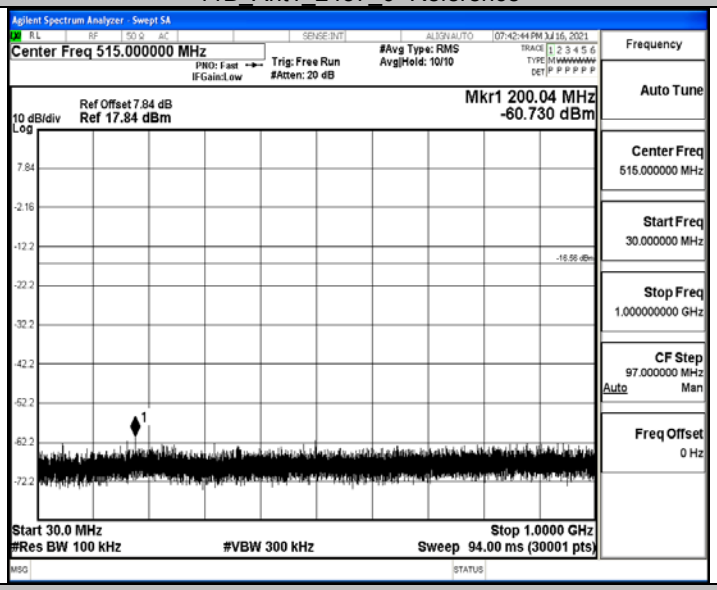
11B_Ant1_2412_30~1000



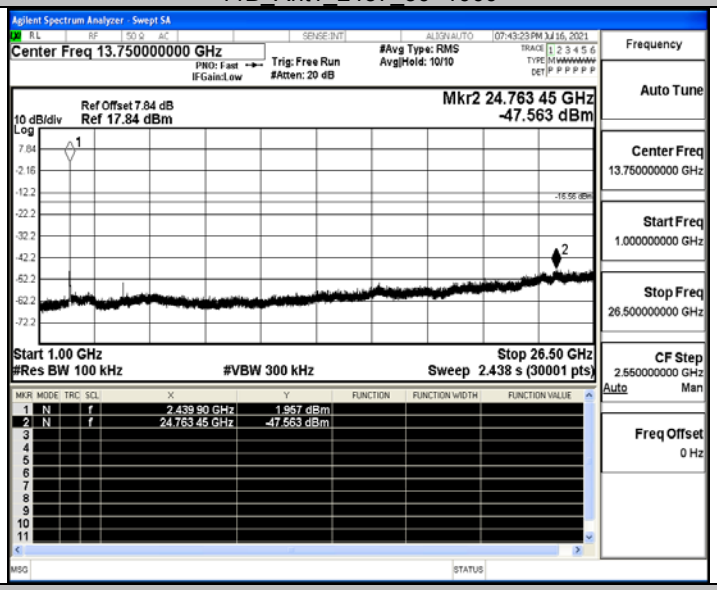
11B_Ant1_2412_1000~26500



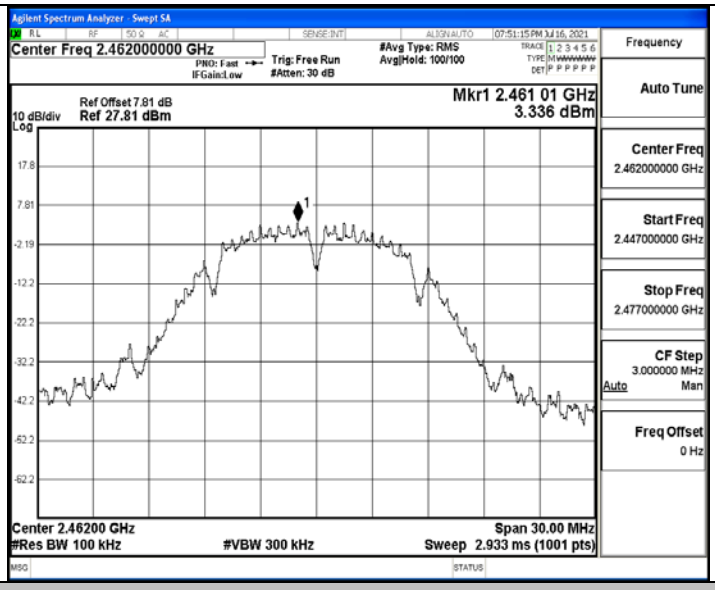
11B_Ant1_2437_0~Reference



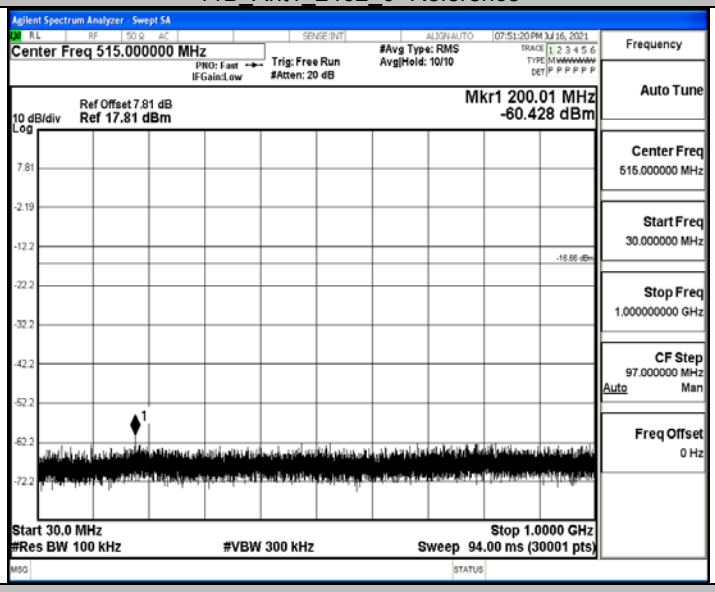
11B_Ant1_2437_30~1000



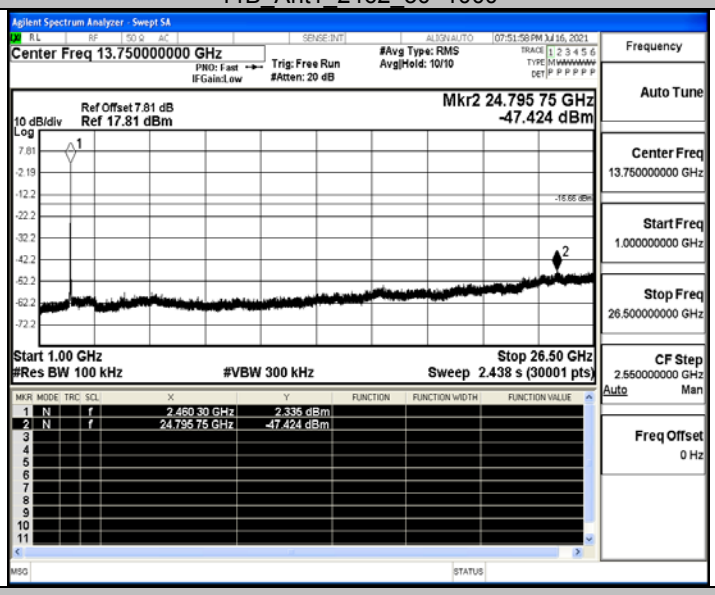
11B_Ant1_2437_1000~26500



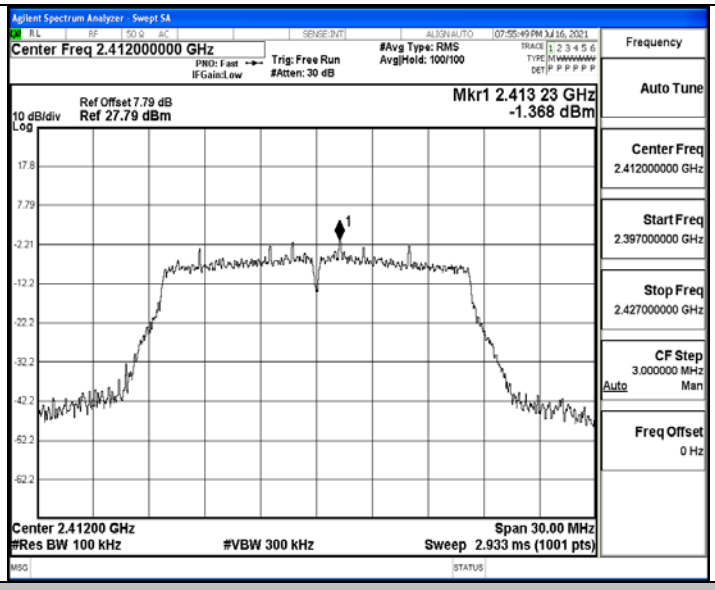
11B_Ant1_2462_0~Reference



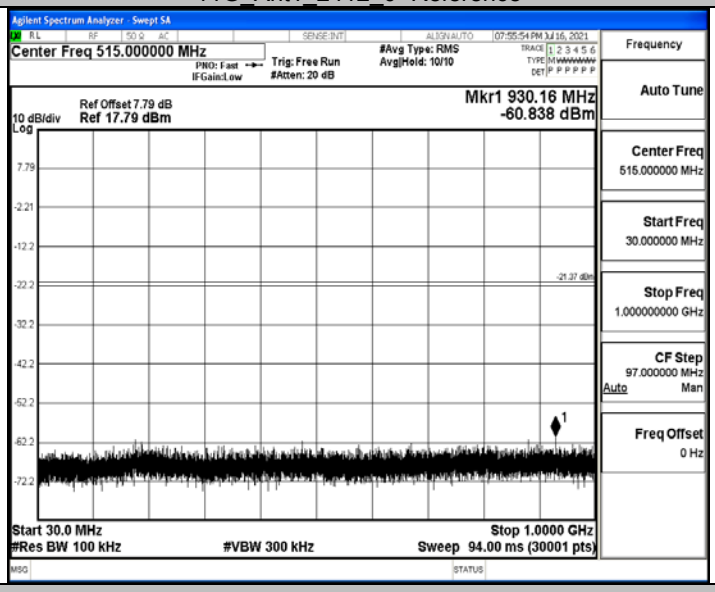
11B_Ant1_2462_30~1000



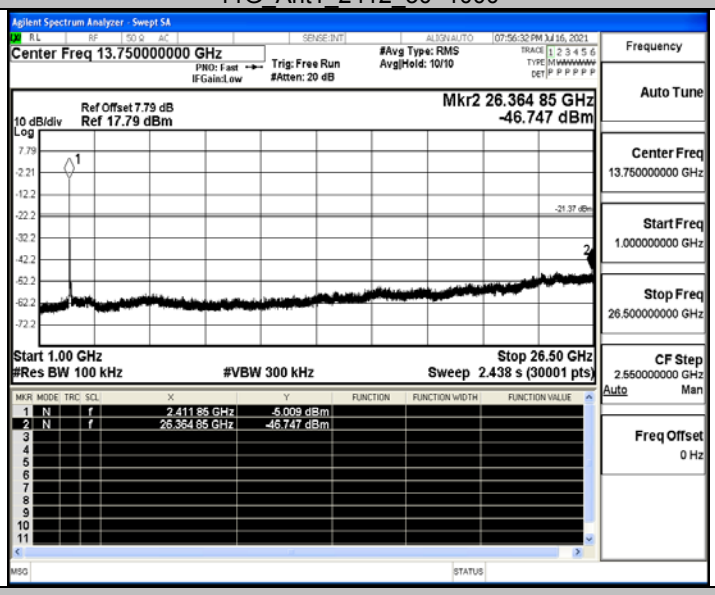
11B_Ant1_2462_1000~26500



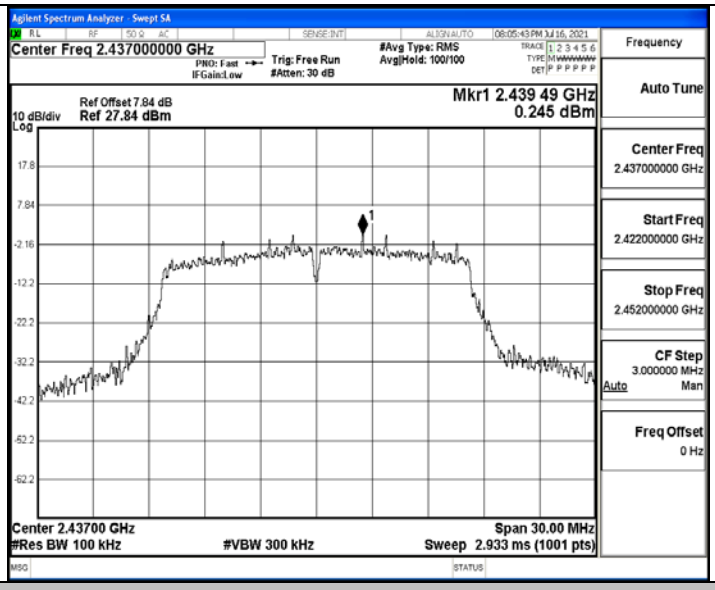
11G_Ant1_2412_0~Reference



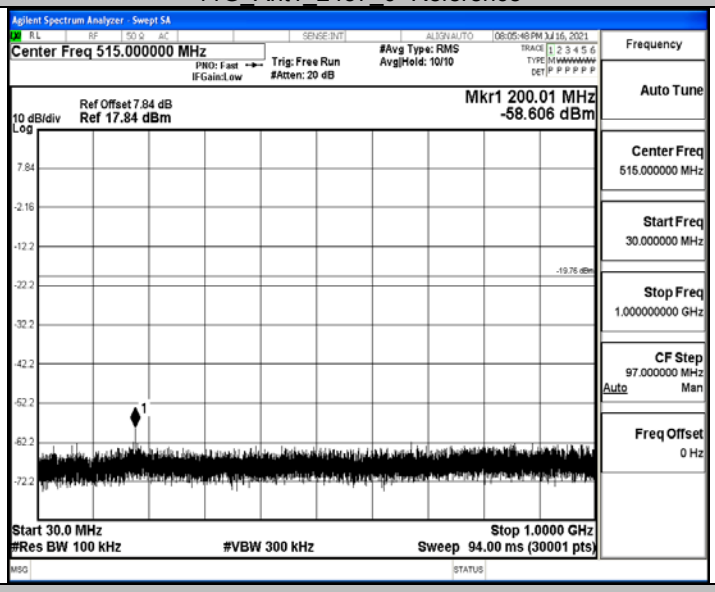
11G_Ant1_2412_30~1000



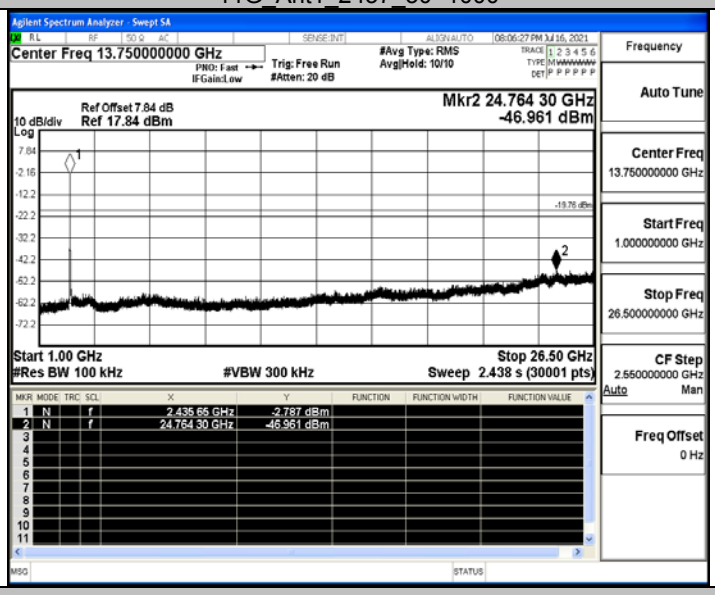
11G_Ant1_2412_1000~26500



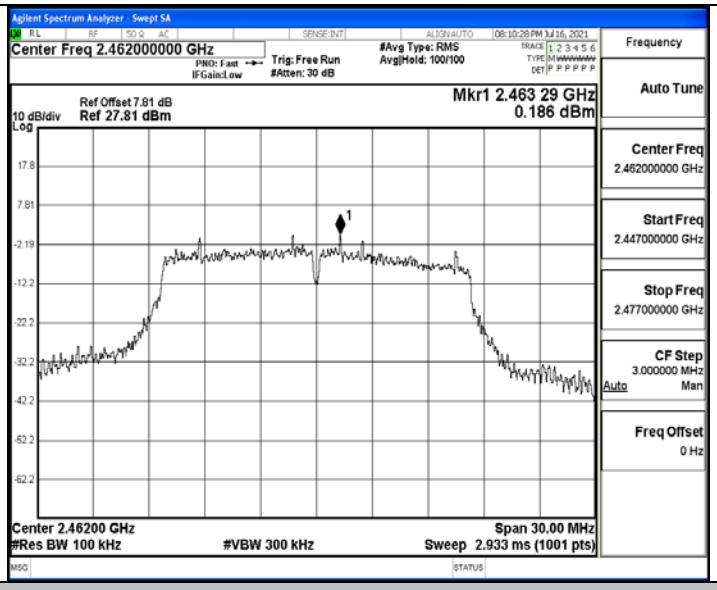
11G_Ant1_2437_0~Reference



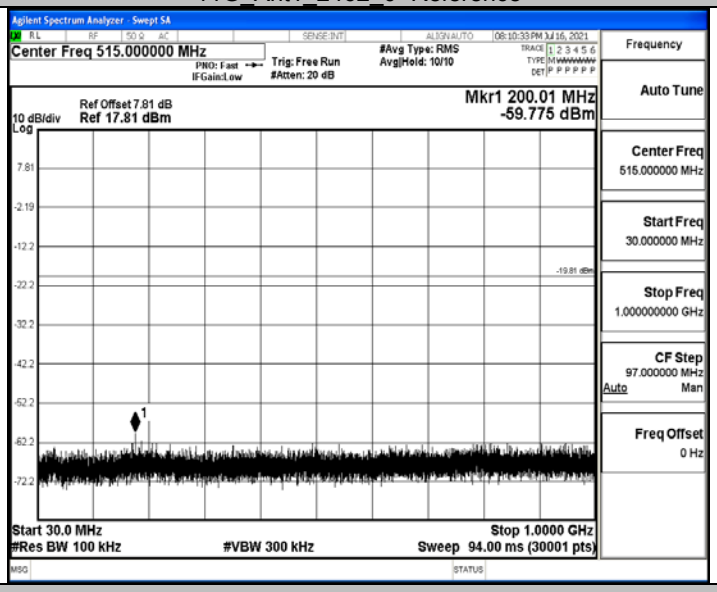
11G_Ant1_2437_30~1000



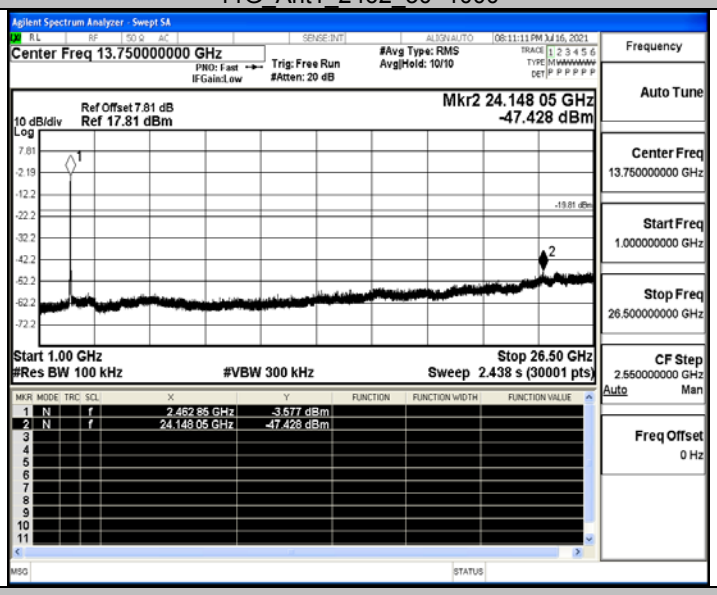
11G_Ant1_2437_1000~26500



11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



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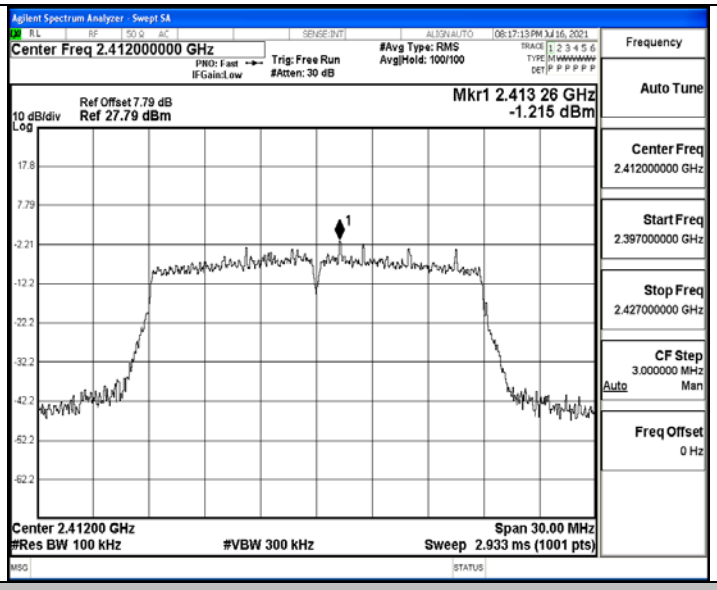
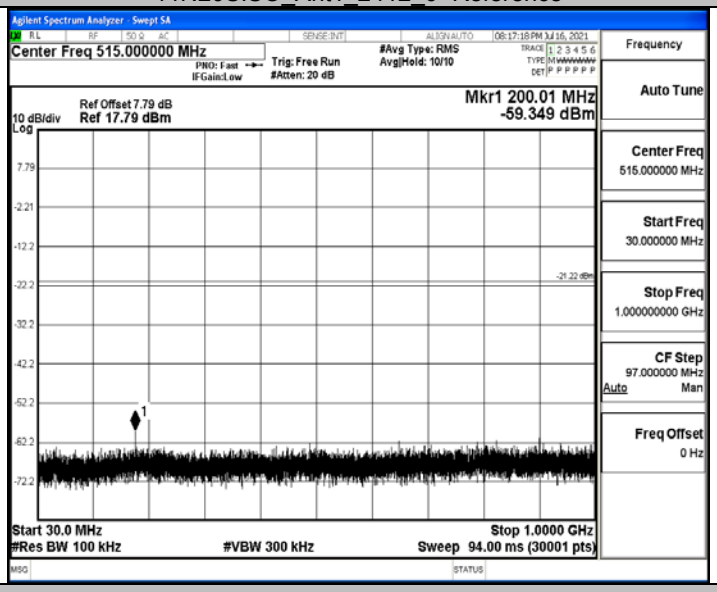


11N20SISO_Ant1_2412_0~Reference



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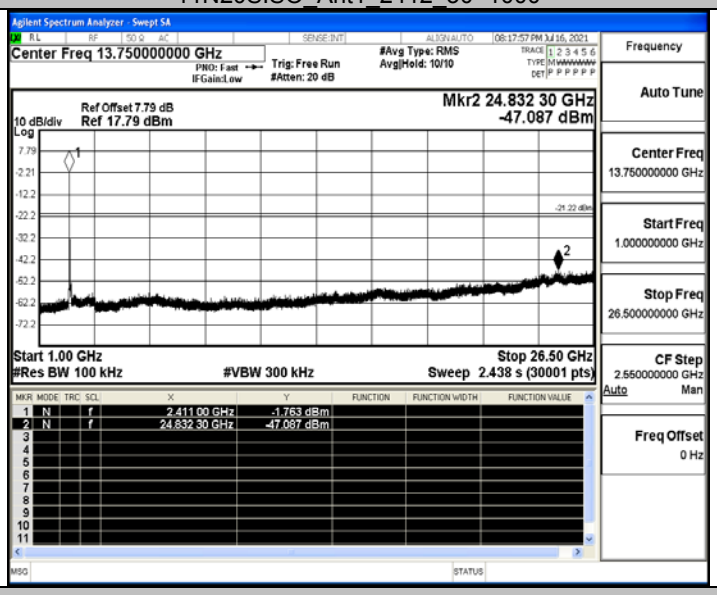

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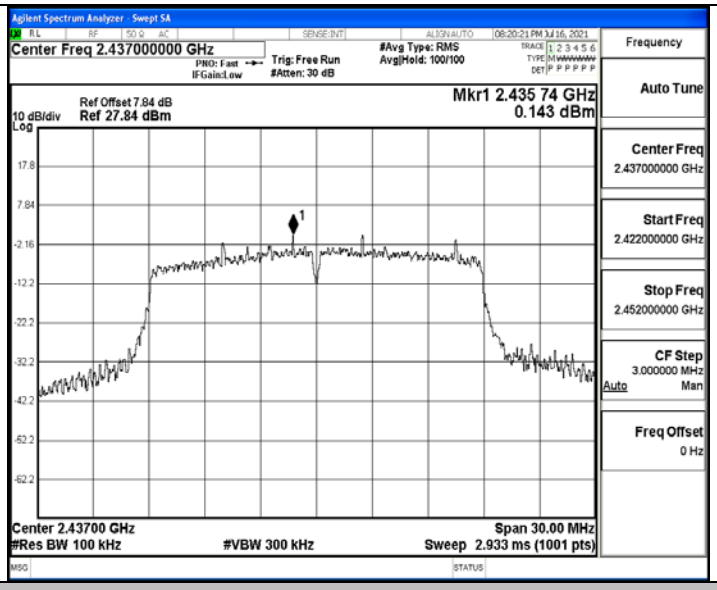

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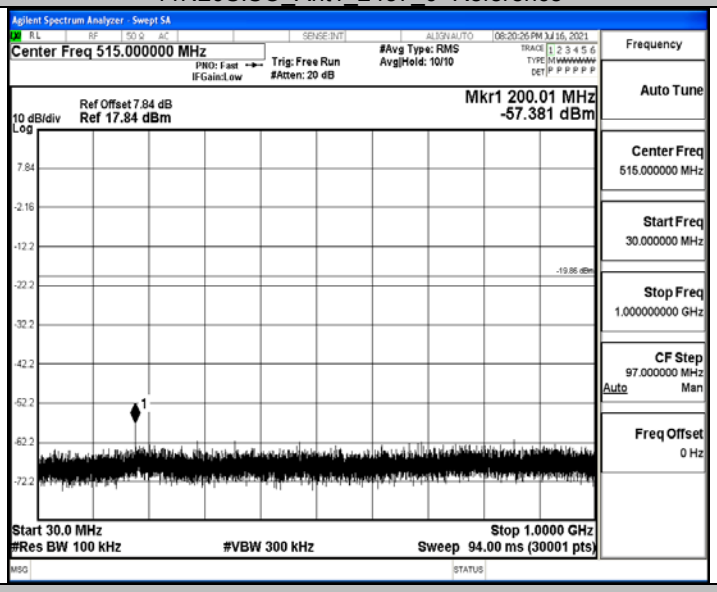

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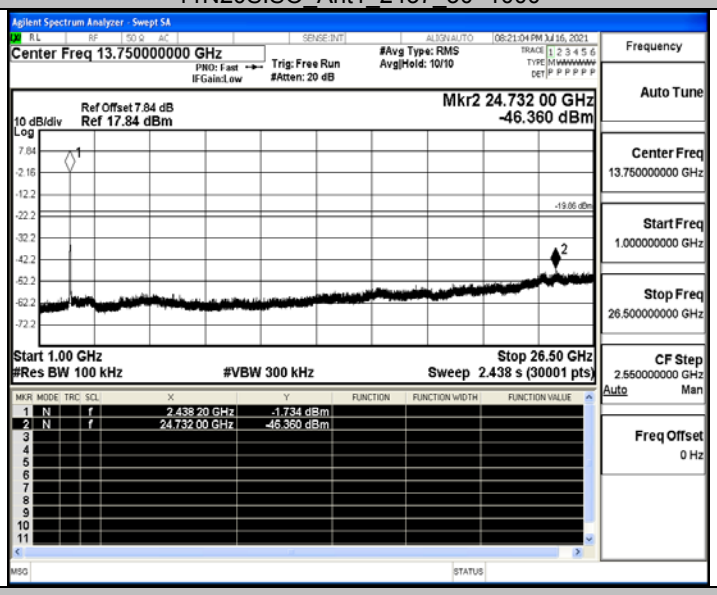

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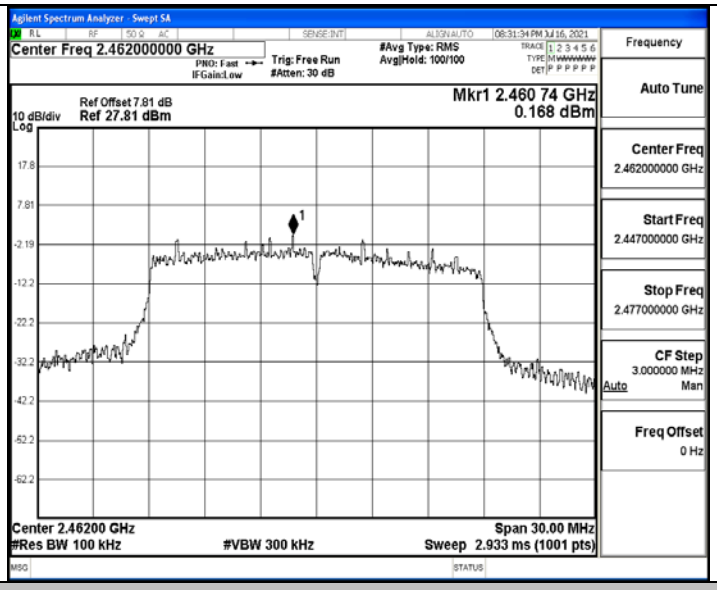

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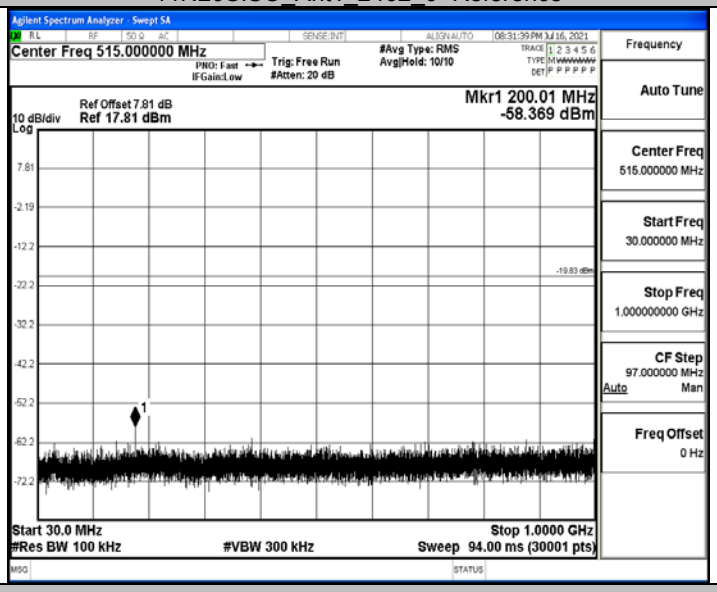
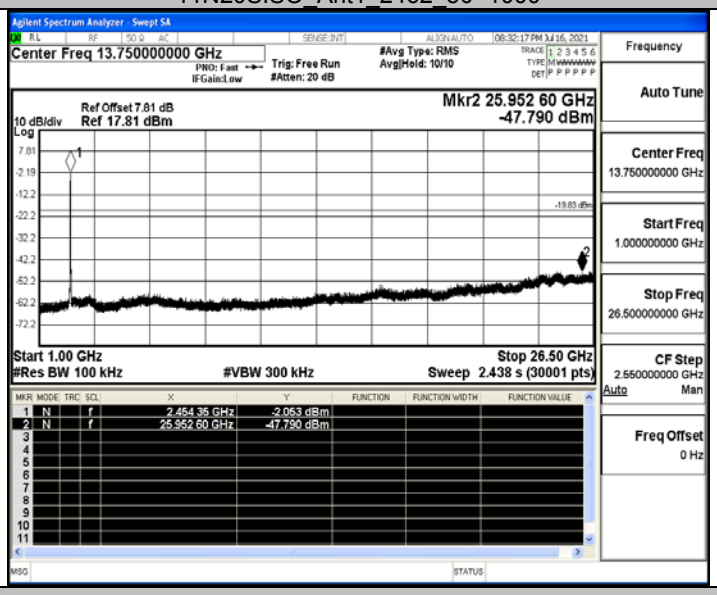


11N20SISO_Ant1_2462_30~1000



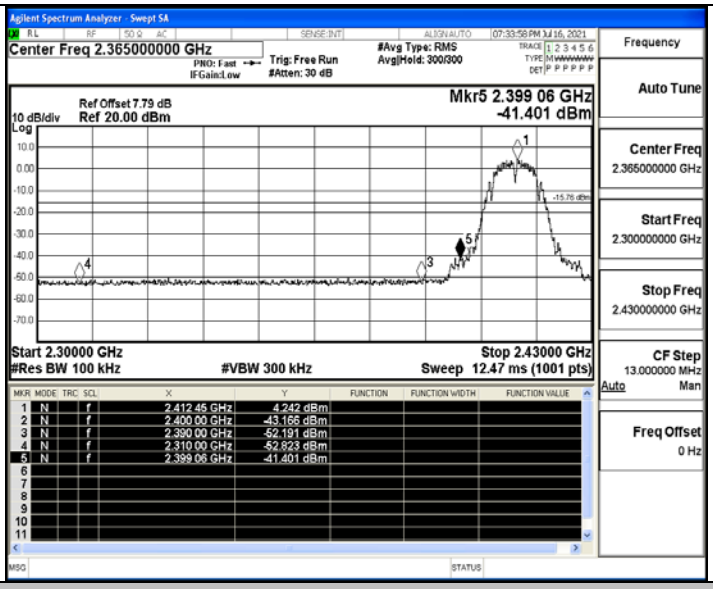
11N20SISO_Ant1_2462_1000~26500

A.6 Band-edge for RF Conducted Emissions

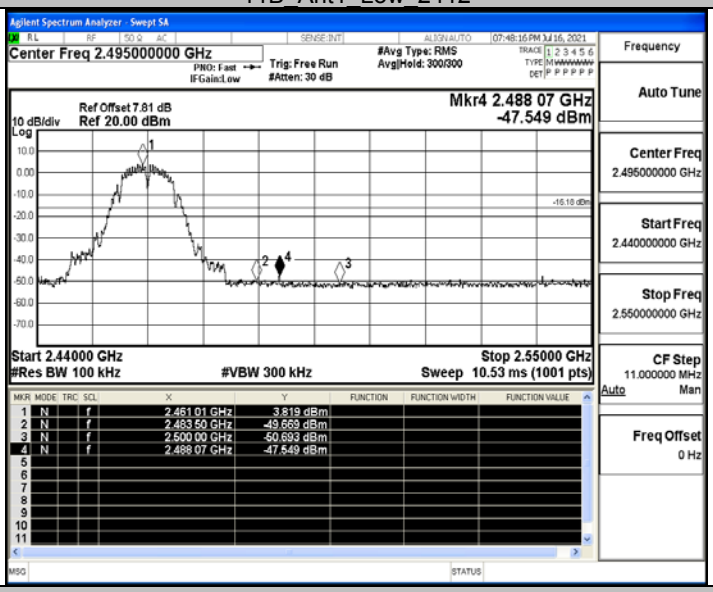
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.24	-41.4	≤-15.76	PASS
		High	2462	3.82	-47.55	≤-16.18	PASS
11G	Ant1	Low	2412	-1.45	-37.81	≤-21.45	PASS
		High	2462	0.31	-44.34	≤-19.69	PASS
11N20SISO	Ant1	Low	2412	-1.37	-36.69	≤-21.37	PASS
		High	2462	0.16	-42.2	≤-19.84	PASS

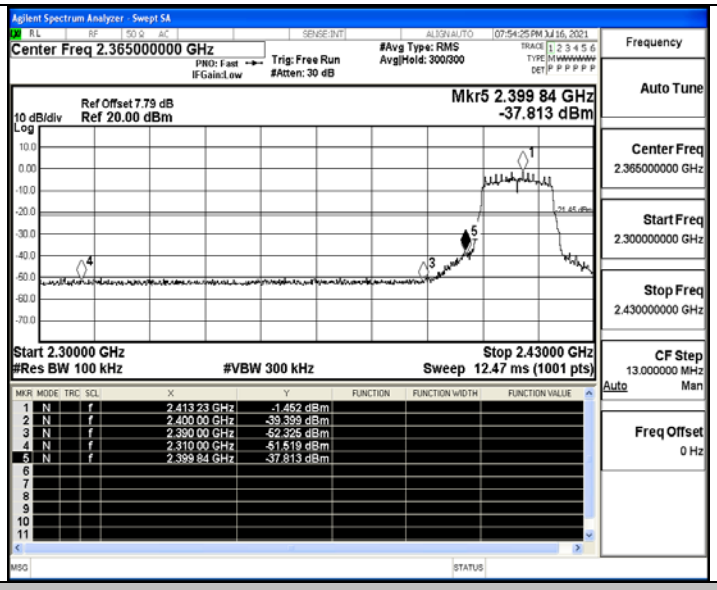
Test Graphs



11B_Ant1_Low_2412



11B_Ant1_High_2462



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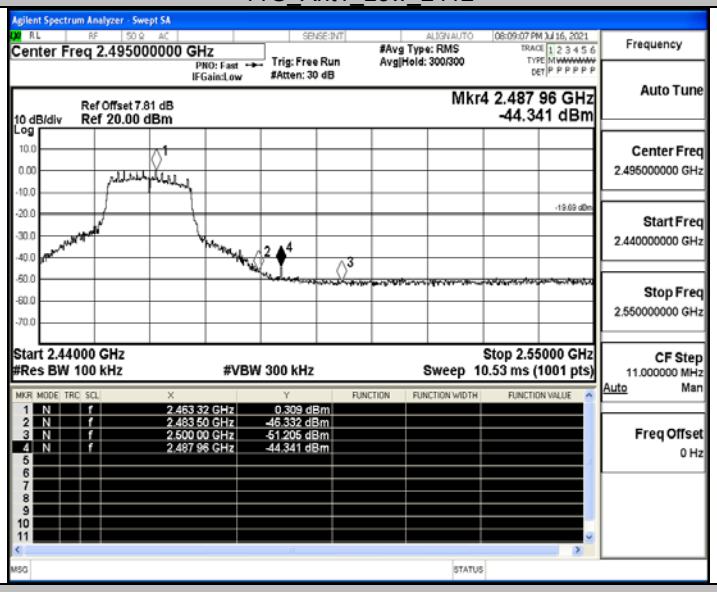

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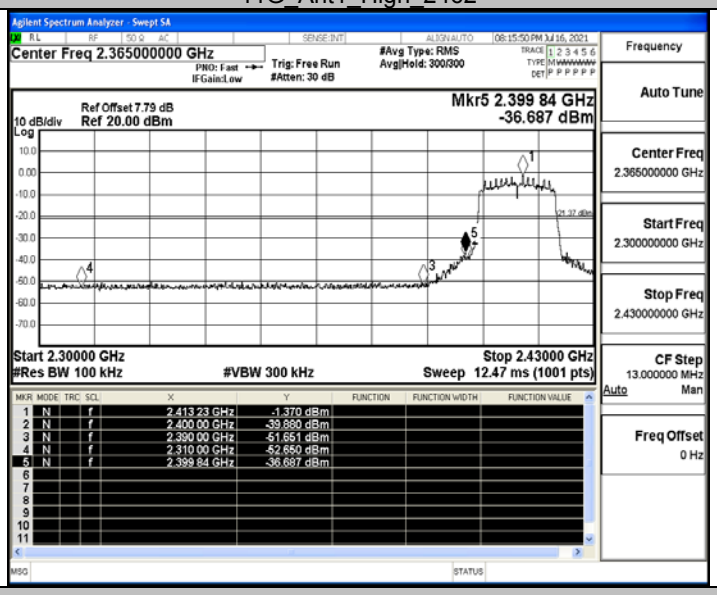
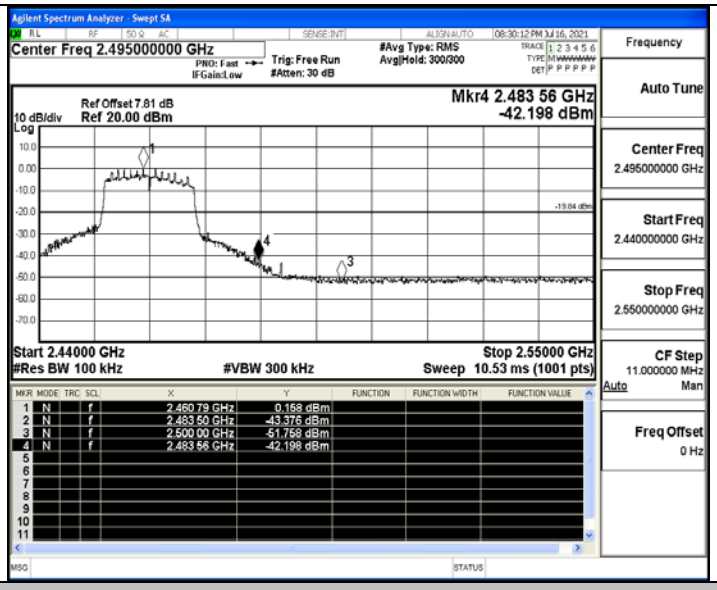


11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462

A.7 Restrict-band band-edge measurements

Test Result

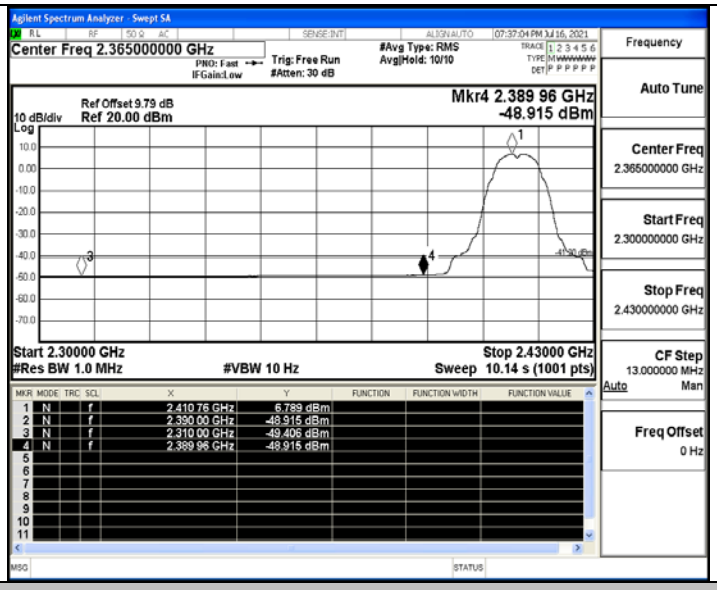
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.41	≤-41.20	45.79	≤54	PASS
				AV	2389.960	-48.92	≤-41.20	46.28	≤54	PASS
				AV	2390.000	-48.92	≤-41.20	46.28	≤54	PASS
				Peak	2310.000	-45.14	≤-21.20	50.06	≤74	PASS
				Peak	2343.550	-40.34	≤-21.20	54.86	≤74	PASS
				Peak	2390.000	-42.66	≤-21.20	52.54	≤74	PASS
		High	2462	AV	2483.500	-47.03	≤-41.20	48.17	≤54	PASS
				AV	2488.070	-46.41	≤-41.20	48.79	≤54	PASS
				AV	2500.000	-48.41	≤-41.20	46.79	≤54	PASS
				Peak	2483.500	-43.11	≤-21.20	52.09	≤74	PASS
				Peak	2491.260	-39.74	≤-21.20	55.46	≤74	PASS
				Peak	2500.000	-42.69	≤-21.20	52.51	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-48.75	≤-41.20	46.45	≤54	PASS
				AV	2389.960	-48.1	≤-41.20	47.10	≤54	PASS
				AV	2390.000	-48.1	≤-41.20	47.10	≤54	PASS
				Peak	2310.000	-42	≤-21.20	53.20	≤74	PASS
				Peak	2367.210	-38.55	≤-21.20	56.65	≤74	PASS
				Peak	2390.000	-41.17	≤-21.20	54.03	≤74	PASS
		High	2462	AV	2483.500	-42.46	≤-41.20	52.74	≤54	PASS
				AV	2483.560	-42.69	≤-41.20	52.51	≤54	PASS
				AV	2500.000	-47.79	≤-41.20	47.41	≤54	PASS
				Peak	2483.500	-35.35	≤-21.20	59.85	≤74	PASS
				Peak	2484.550	-31.5	≤-21.20	63.70	≤74	PASS
				Peak	2500.000	-41.33	≤-21.20	53.87	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-48.9	≤-41.20	46.30	≤54	PASS
				AV	2389.830	-48.03	≤-41.20	47.17	≤54	PASS
				AV	2390.000	-48.06	≤-41.20	47.14	≤54	PASS
				Peak	2310.000	-43.18	≤-21.20	52.02	≤74	PASS
				Peak	2350.180	-38.68	≤-21.20	56.52	≤74	PASS
				Peak	2390.000	-40.19	≤-21.20	55.01	≤74	PASS
		High	2462	AV	2483.500	-42.95	≤-41.20	52.25	≤54	PASS
				AV	2483.780	-43.22	≤-41.20	51.98	≤54	PASS
				AV	2500.000	-47.77	≤-41.20	47.43	≤54	PASS

				Peak	2483.500	-33.79	≤-21.20	61.41	≤74	PASS
				Peak	2485.430	-31.97	≤-21.20	63.23	≤74	PASS
				Peak	2500.000	-41.19	≤-21.20	54.01	≤74	PASS

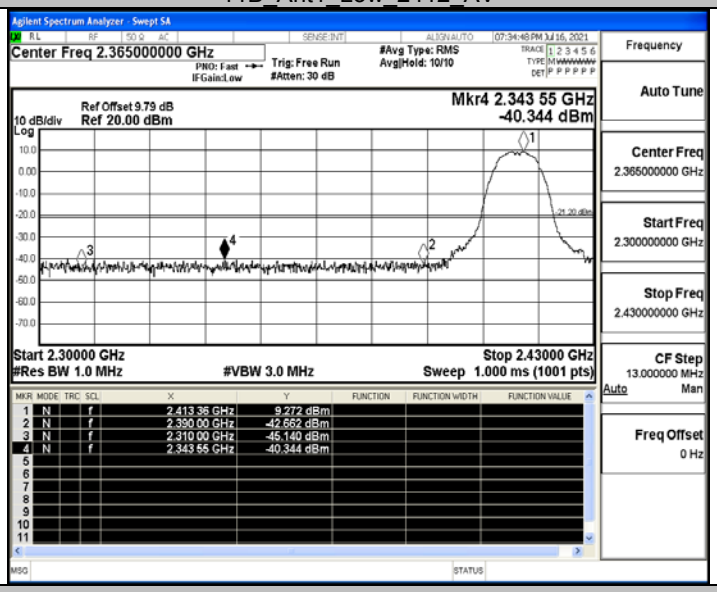
Note：

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.

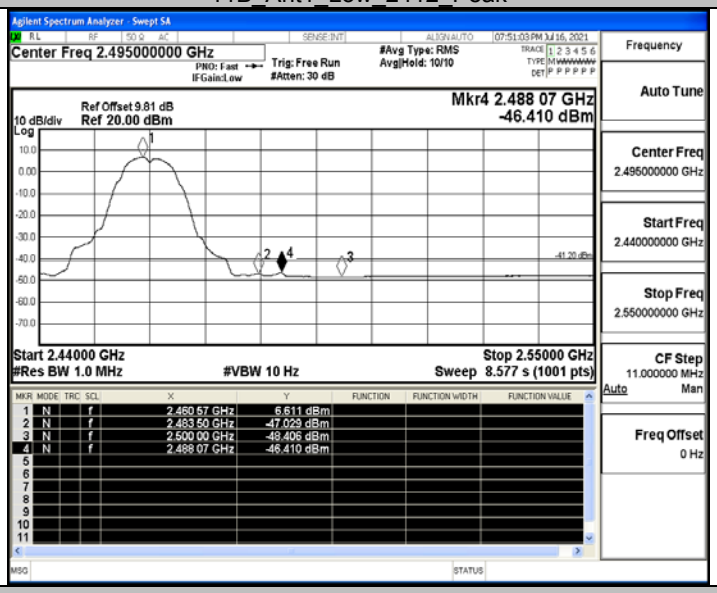
Test Graphs



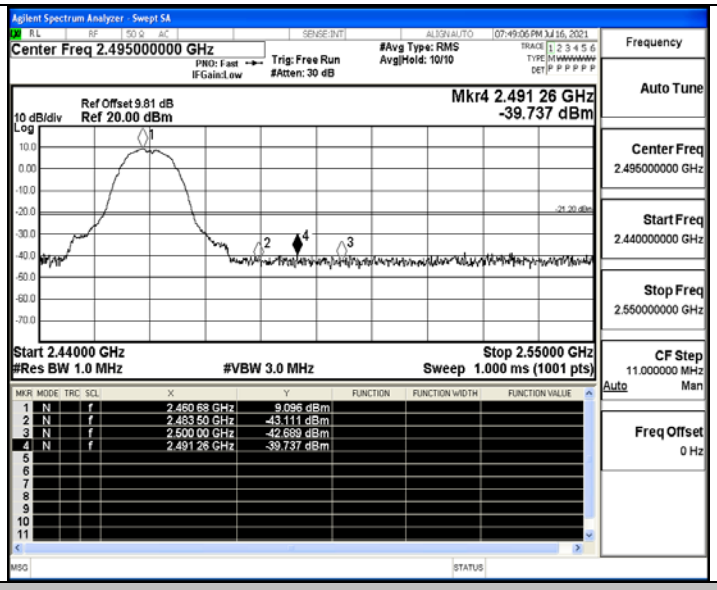
11B_Ant1_Low_2412_AV



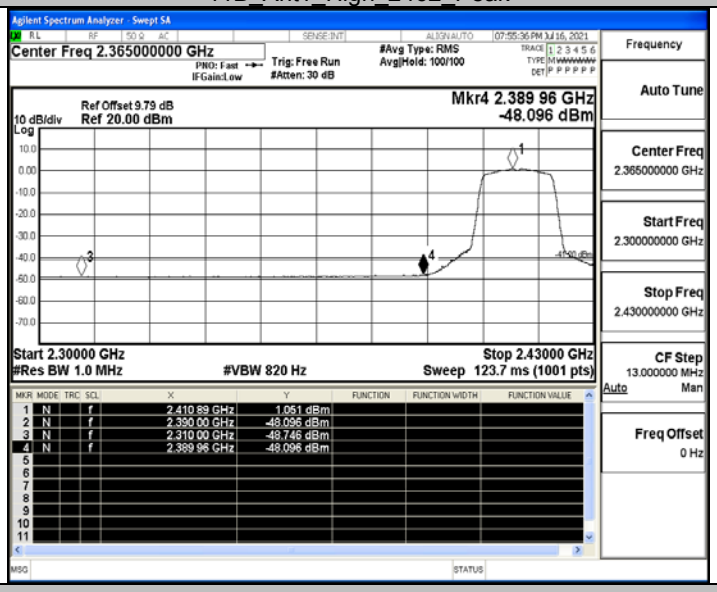
11B_Ant1_Low_2412_Peak



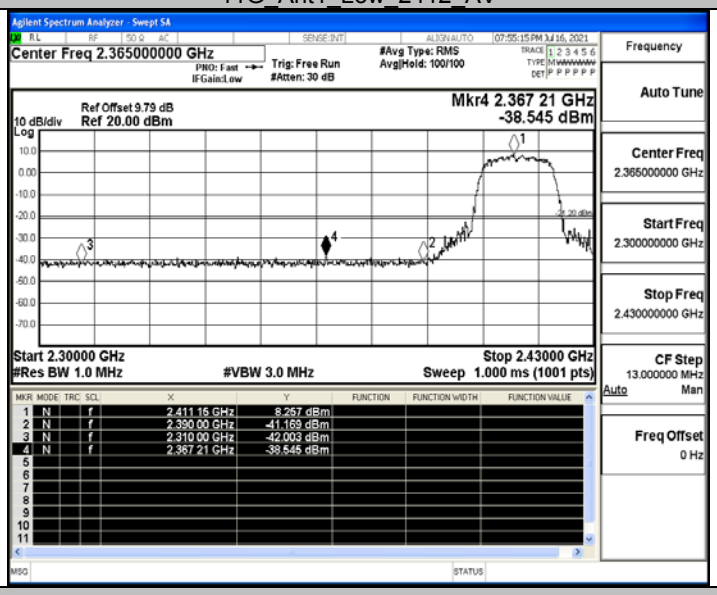
11B_Ant1_High_2462_AV



11B_Ant1_High_2462_Peak



11G_Ant1_Low_2412_AV



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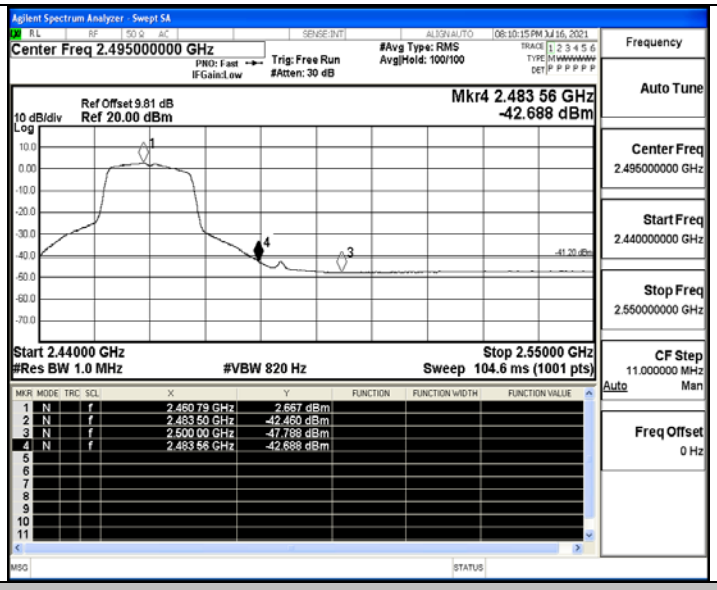
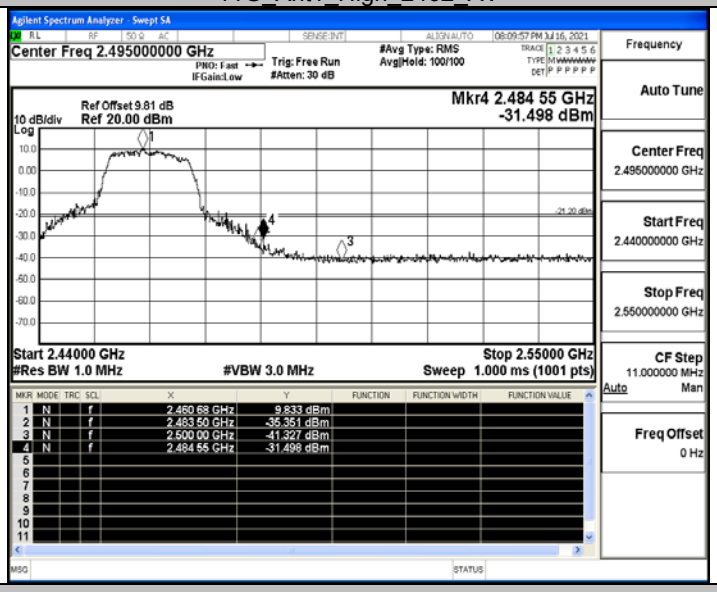


11G_Ant1_High_2462_AV



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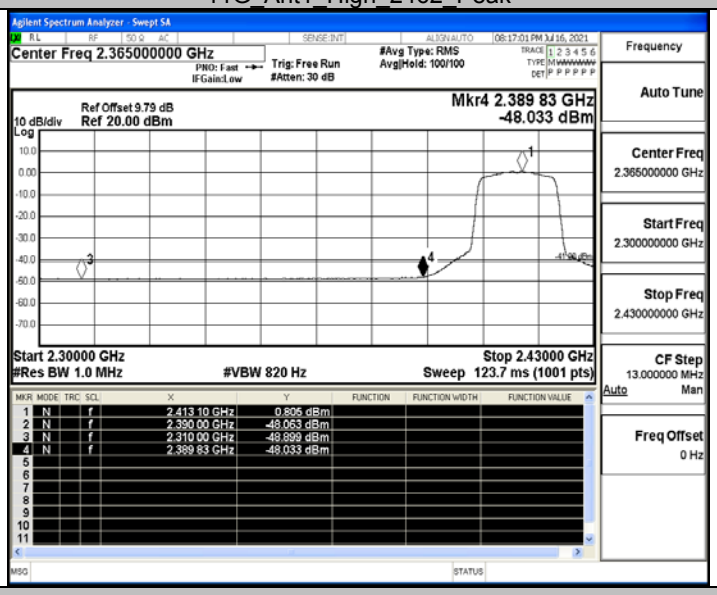
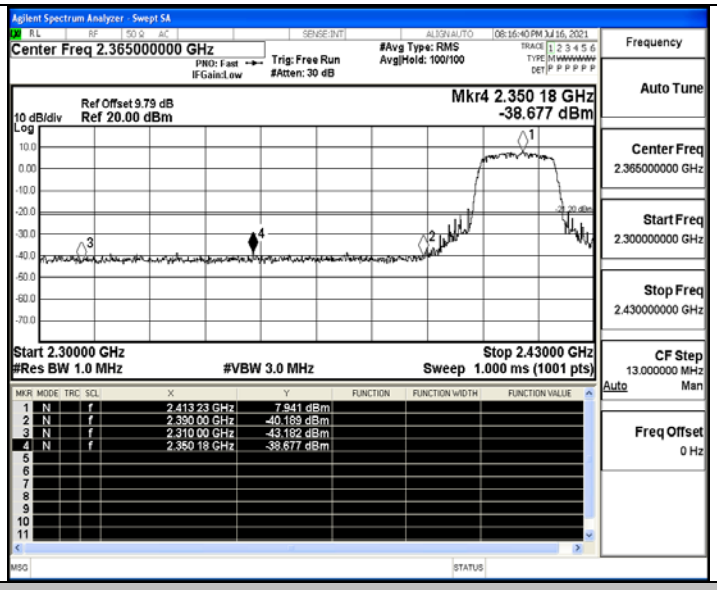
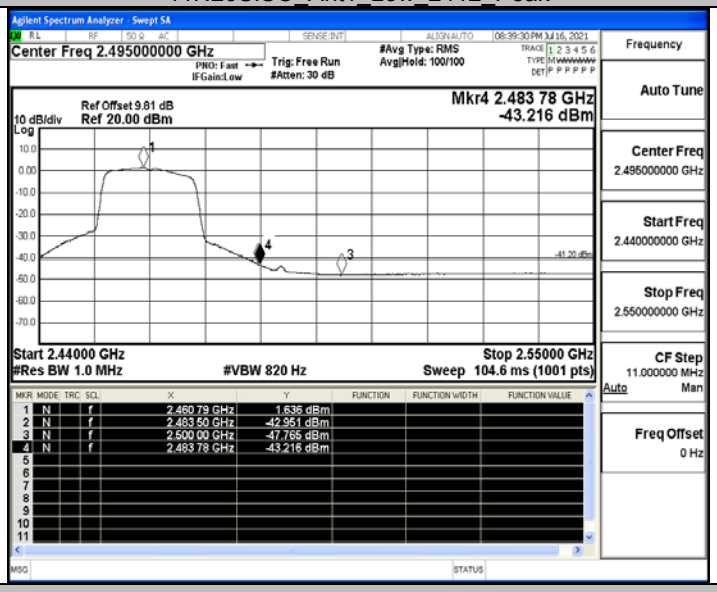


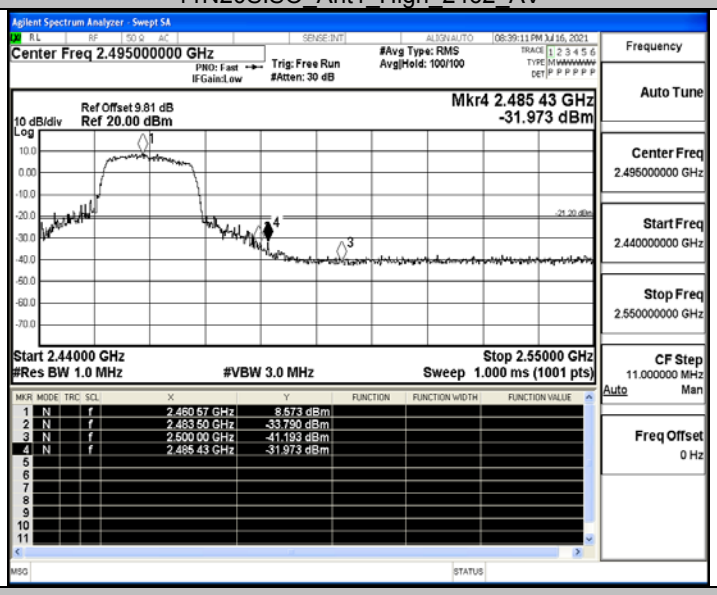
11N20SISO_Ant1_Low_2412_AV



11N20SISO_Ant1_Low_2412_Peak



11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak