Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart TV Box

Test Model: T95MINI

Environmental Conditions

Temperature:	22.8 ° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Bill Zhu
Supervised by:	Li Huan

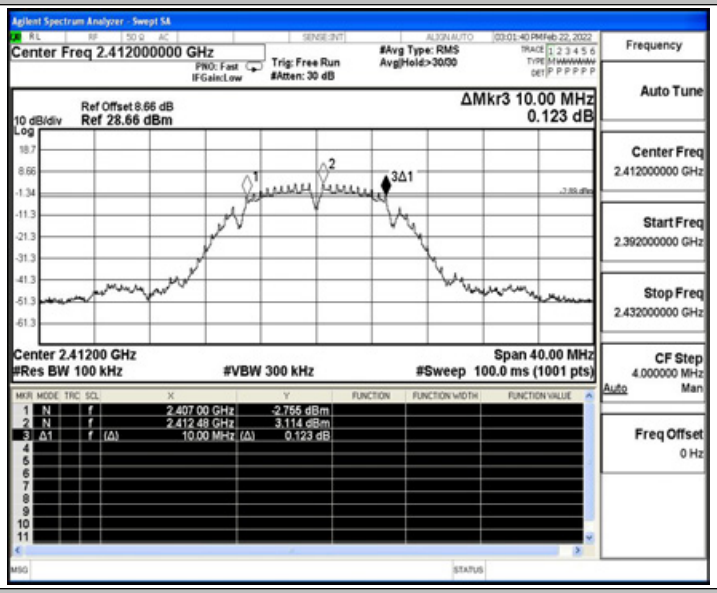
A.1 DTS Bandwidth

Test Result

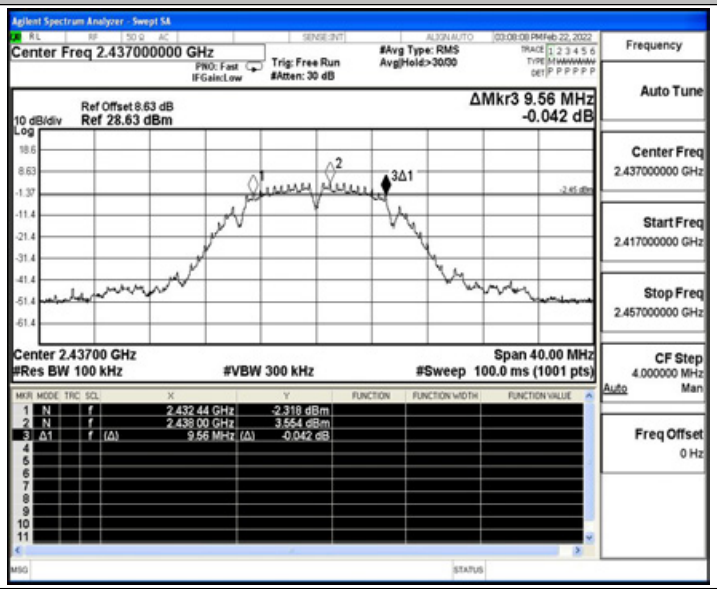
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.000	2407.000	2417.000	0.5	PASS
		2437	9.560	2432.440	2442.000	0.5	PASS
		2462	9.080	2457.440	2466.520	0.5	PASS
11G	Ant1	2412	16.400	2403.840	2420.240	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.360	2453.800	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.600	2403.200	2420.800	0.5	PASS
		2437	17.600	2428.200	2445.800	0.5	PASS
		2462	17.560	2453.200	2470.760	0.5	PASS

Test Graphs

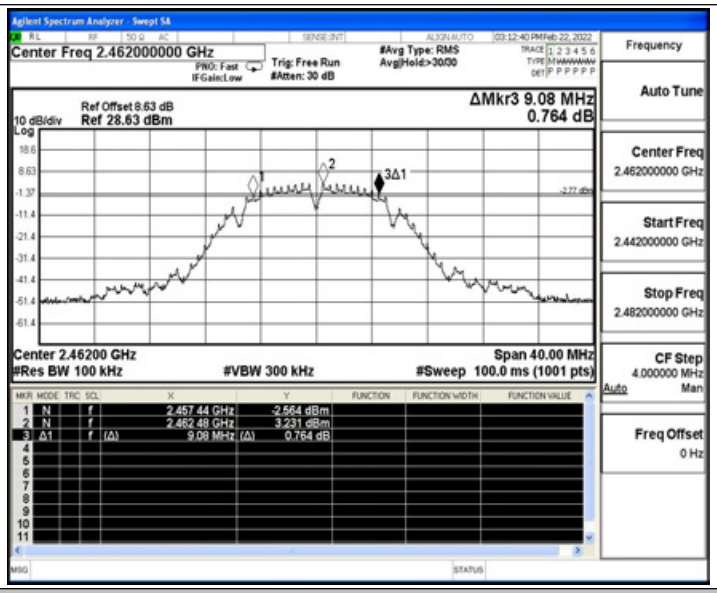
11B_Ant1_2412



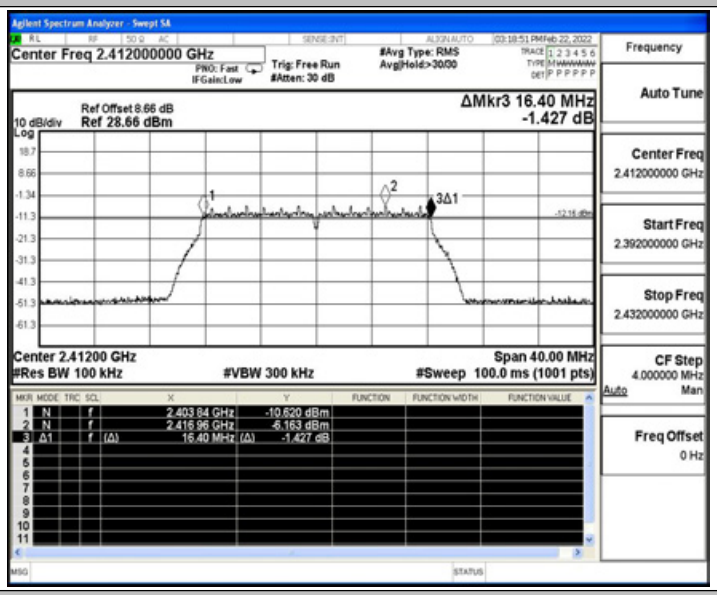
11B_Ant1_2437



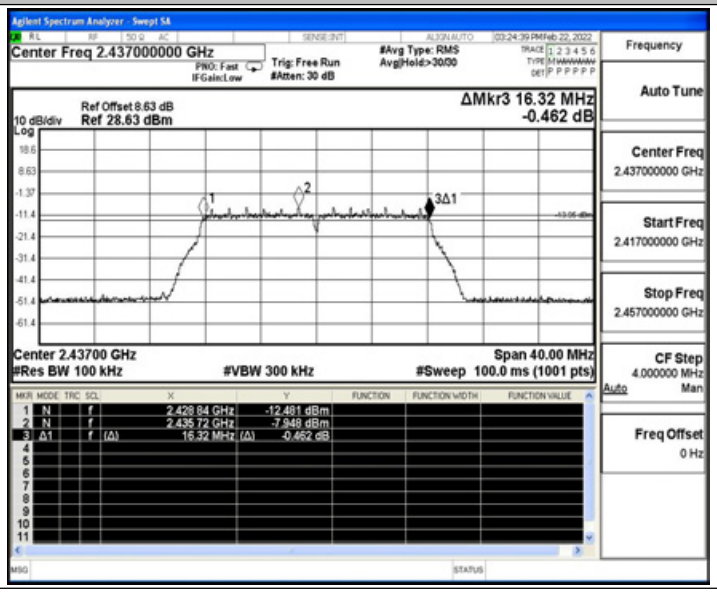
11B_Ant1_2462



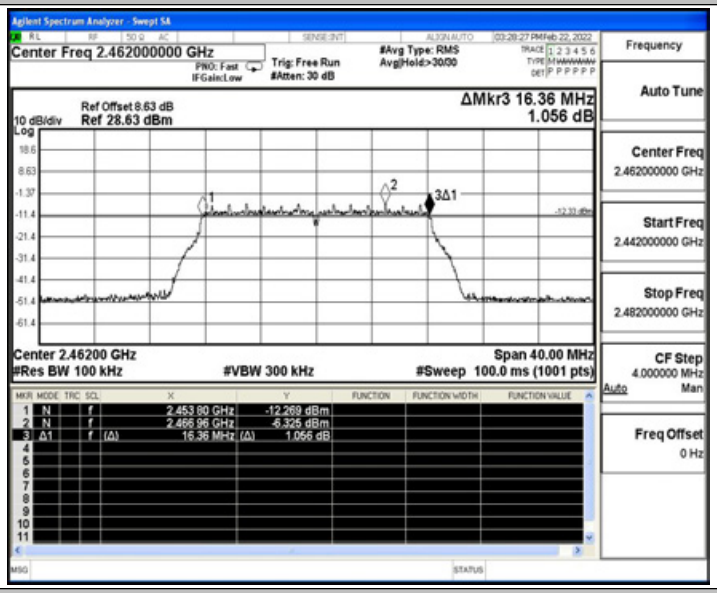
11G_Ant1_2412



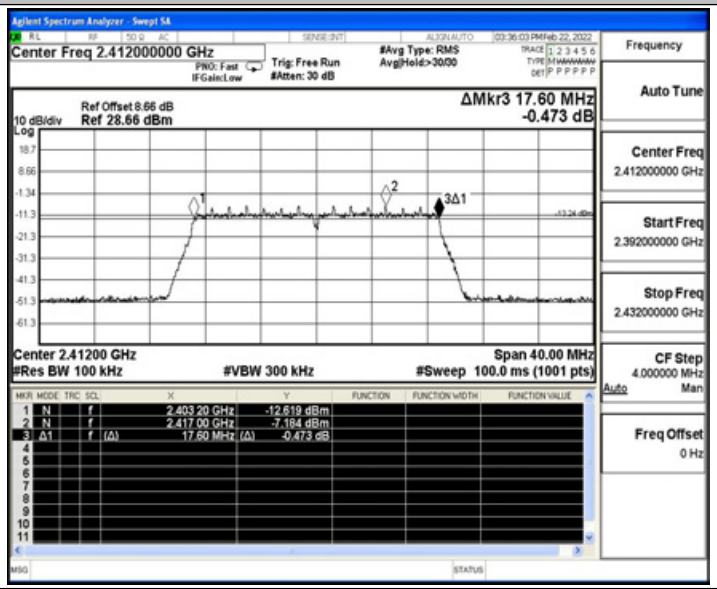
11G_Ant1_2437



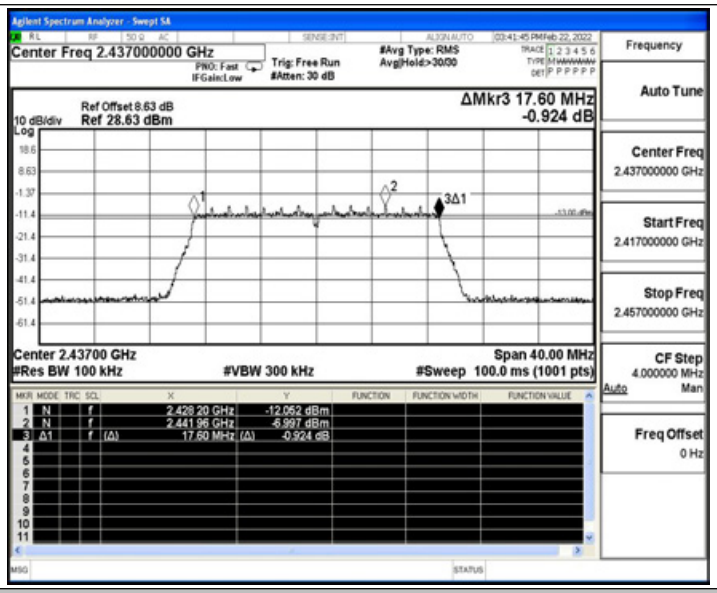
11G_Ant1_2462



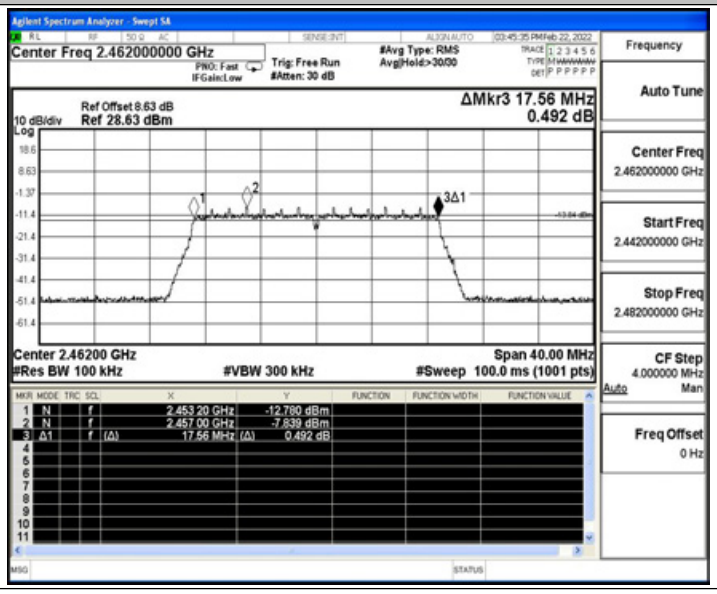
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



A.2 Maximum peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	14.83	≤30.00	PASS
		2437	15.23	≤30.00	PASS
		2462	14.87	≤30.00	PASS
11G	Ant1	2412	13.42	≤30.00	PASS
		2437	11.75	≤30.00	PASS
		2462	13.21	≤30.00	PASS
11N20SISO	Ant1	2412	12.38	≤30.00	PASS
		2437	12.50	≤30.00	PASS
		2462	11.71	≤30.00	PASS

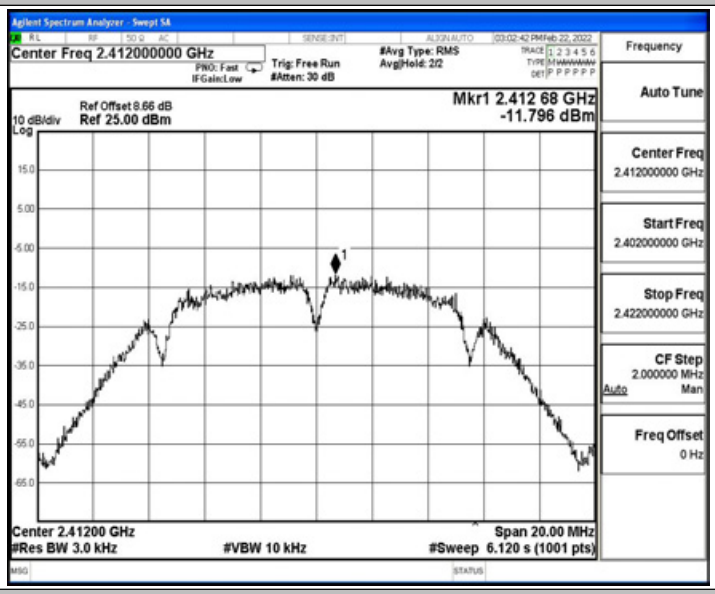
A.3 Maximum power spectral density

Test Result

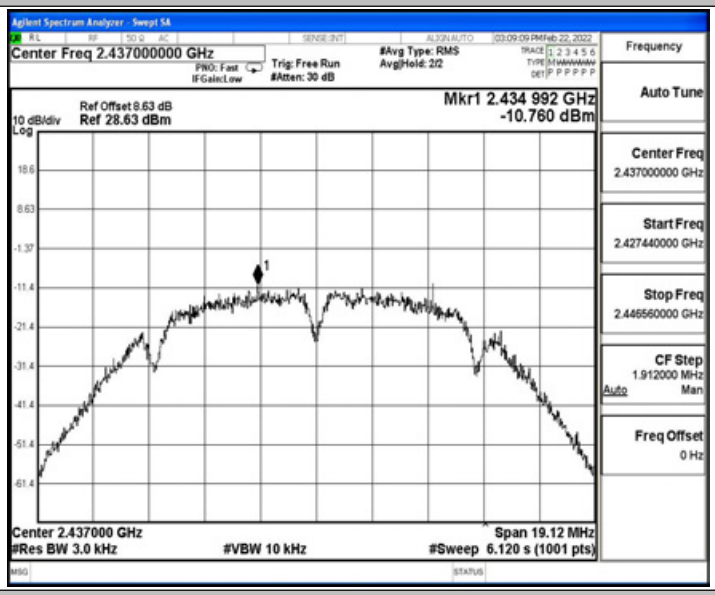
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-11.8	≤8.00	PASS
		2437	-10.76	≤8.00	PASS
		2462	-10.93	≤8.00	PASS
11G	Ant1	2412	-20.6	≤8.00	PASS
		2437	-21.34	≤8.00	PASS
		2462	-20.72	≤8.00	PASS
11N20SISO	Ant1	2412	-21.86	≤8.00	PASS
		2437	-21.8	≤8.00	PASS
		2462	-22.06	≤8.00	PASS

Test Graphs

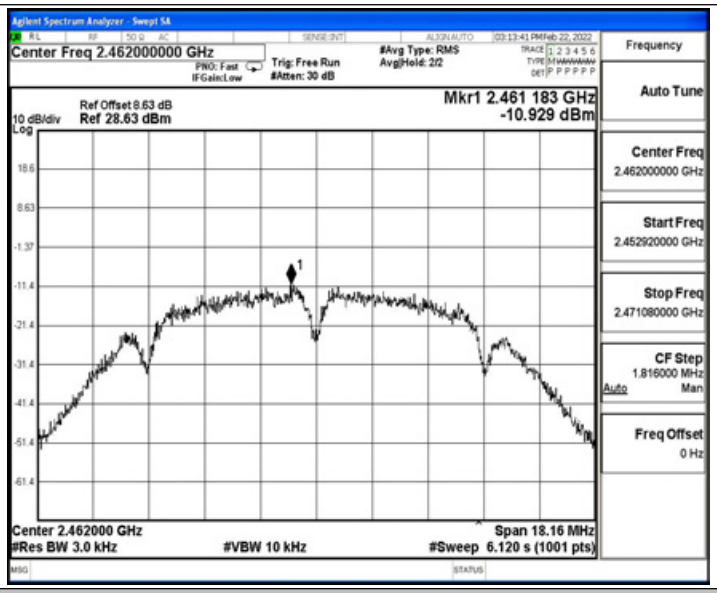
11B_Ant1_2412



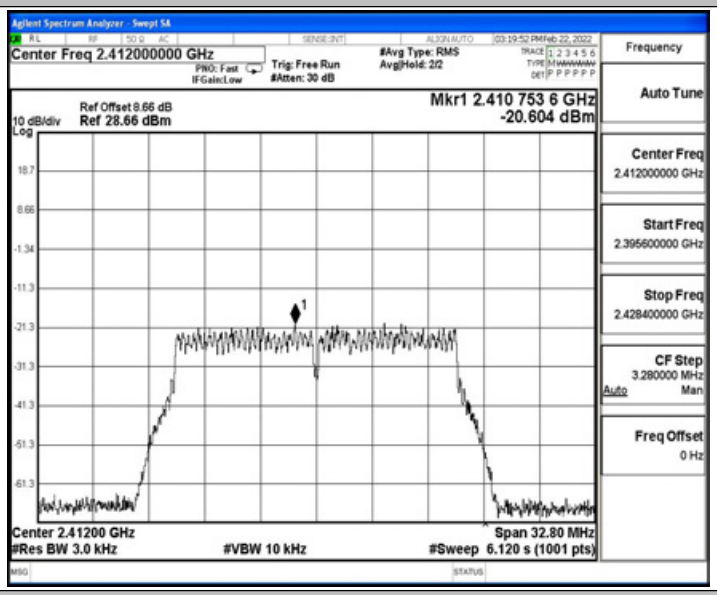
11B_Ant1_2437



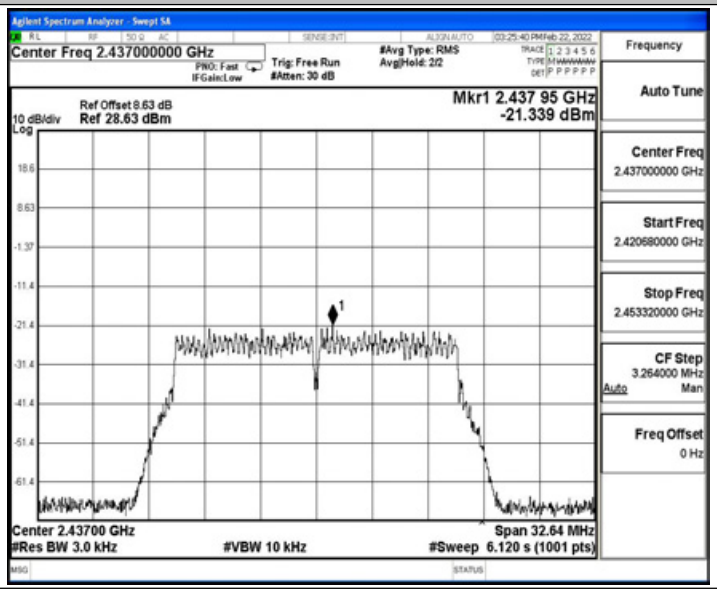
11B_Ant1_2462



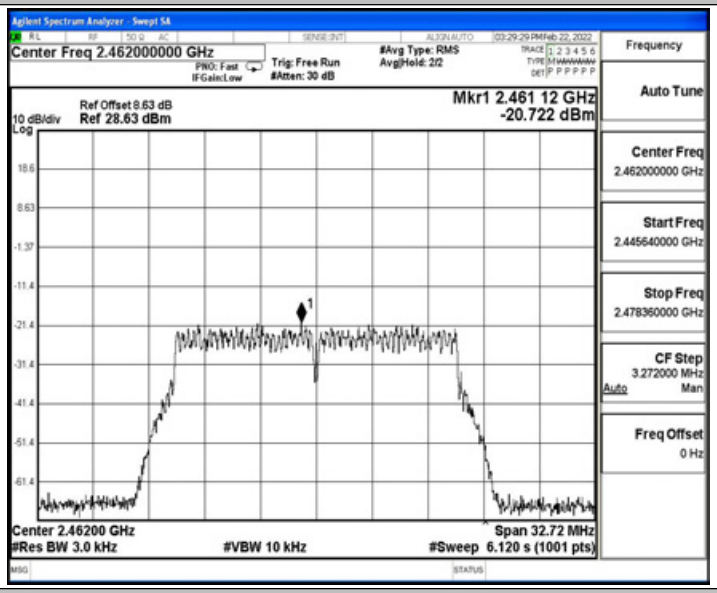
11G_Ant1_2412



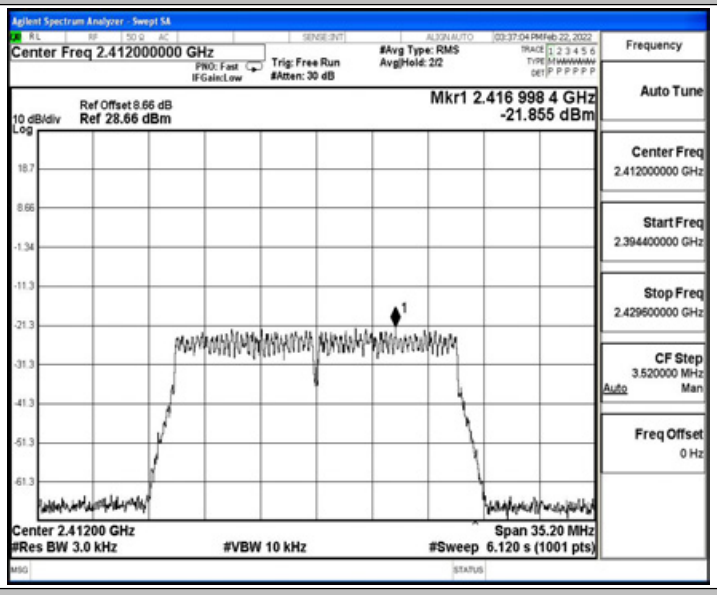
11G_Ant1_2437



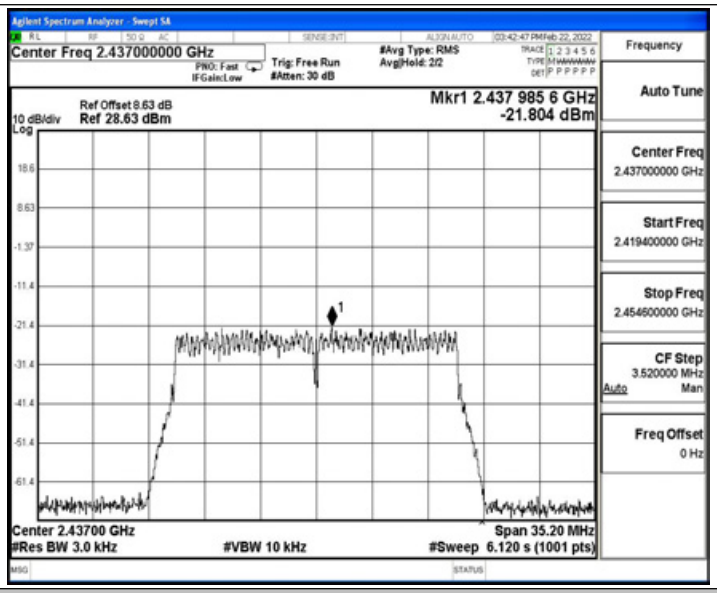
11G_Ant1_2462



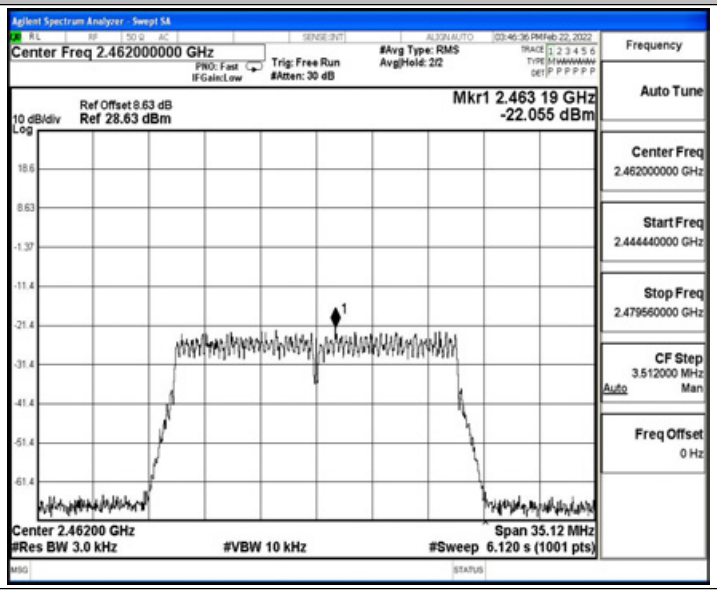
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



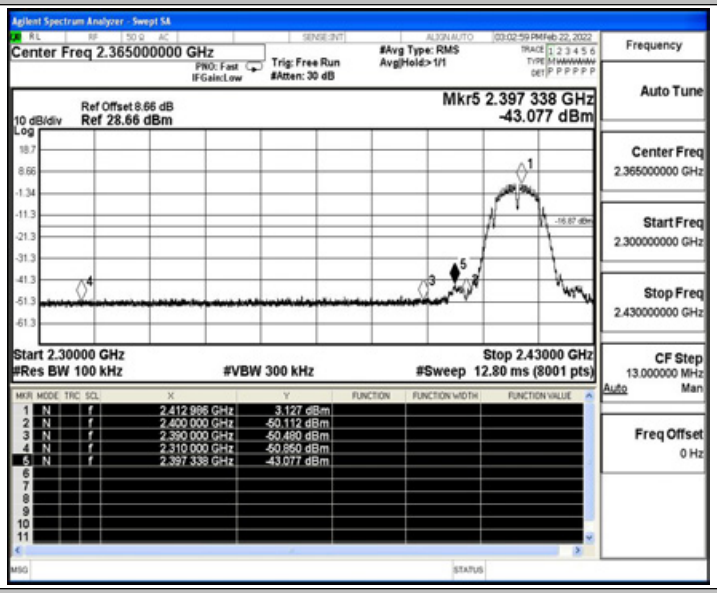
A.4 Band edge measurements

Test Result

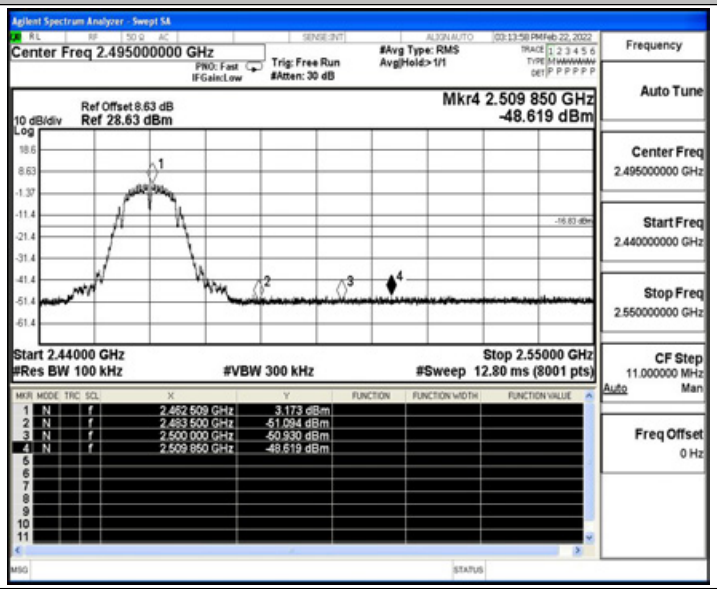
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	3.13	-43.08	≤-16.87	PASS
		High	2462	3.17	-48.62	≤-16.83	PASS
11G	Ant1	Low	2412	-6.12	-47.34	≤-26.12	PASS
		High	2462	-6.00	-48.14	≤-26	PASS
11N20SISO	Ant1	Low	2412	-6.82	-47.04	≤-26.82	PASS
		High	2462	-7.82	-47.73	≤-27.82	PASS

Test Graphs

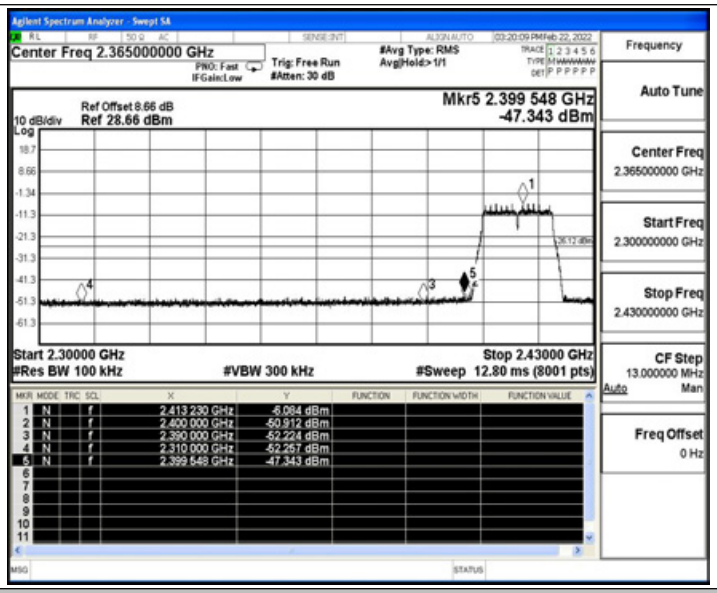
11B_Ant1_Low_2412



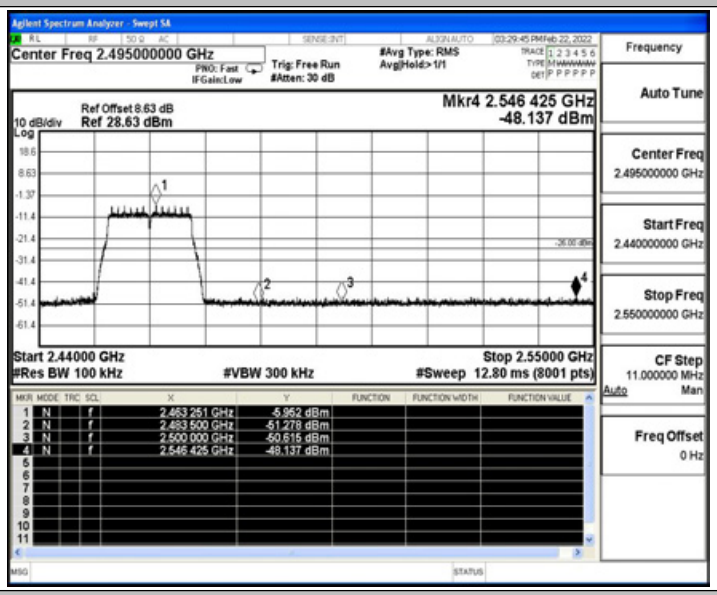
11B_Ant1_High_2462



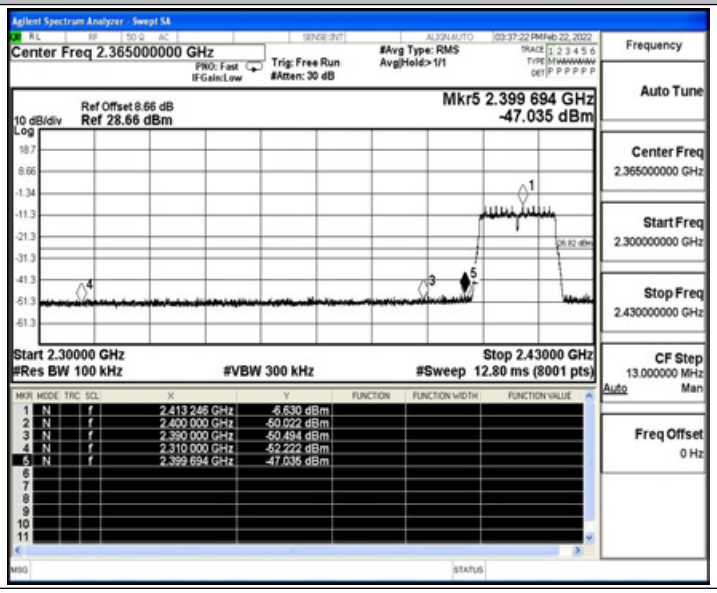
11G_Ant1_Low_2412

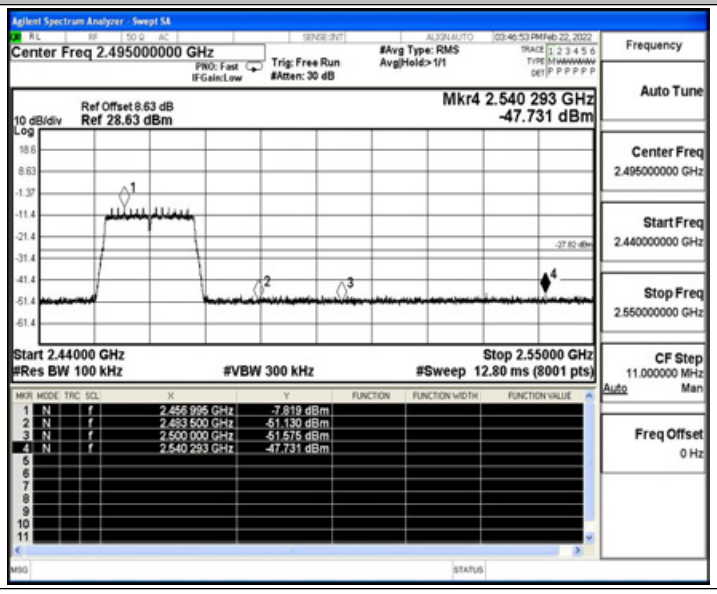


11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462


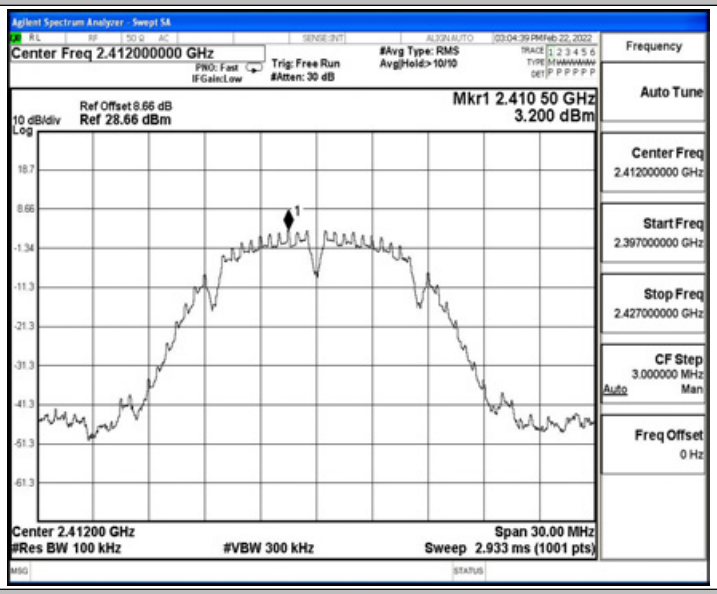
A.5 Conducted Spurious Emission

Test Result

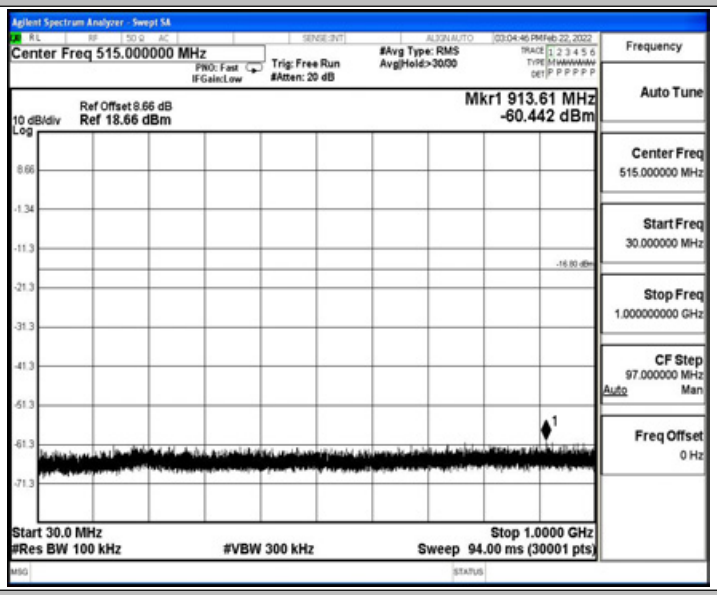
TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.20	3.20	---	PASS
			30~1000	3.20	-60.44	≤-16.8	PASS
			1000~26500	3.20	-46.41	≤-16.8	PASS
		2437	Reference	3.76	3.76	---	PASS
			30~1000	3.76	-60.79	≤-16.24	PASS
			1000~26500	3.76	-46.36	≤-16.24	PASS
		2462	Reference	3.03	3.03	---	PASS
			30~1000	3.03	-60.68	≤-16.97	PASS
			1000~26500	3.03	-45.4	≤-16.97	PASS
11G	Ant1	2412	Reference	-6.08	-6.08	---	PASS
			30~1000	-6.08	-60.81	≤-26.08	PASS
			1000~26500	-6.08	-45.72	≤-26.08	PASS
		2437	Reference	-7.38	-7.38	---	PASS
			30~1000	-7.38	-60.49	≤-27.38	PASS
			1000~26500	-7.38	-46.45	≤-27.38	PASS
		2462	Reference	-5.82	-5.82	---	PASS
			30~1000	-5.82	-48.35	≤-25.82	PASS
			1000~26500	-5.82	-45.54	≤-25.82	PASS
11N20SISO	Ant1	2412	Reference	-7.18	-7.18	---	PASS
			30~1000	-7.18	-47.69	≤-27.18	PASS
			1000~26500	-7.18	-45.7	≤-27.18	PASS
		2437	Reference	-6.51	-6.51	---	PASS
			30~1000	-6.51	-60.56	≤-26.51	PASS
			1000~26500	-6.51	-46.31	≤-26.51	PASS
		2462	Reference	-7.71	-7.71	---	PASS
			30~1000	-7.71	-60.29	≤-27.71	PASS
			1000~26500	-7.71	-46.36	≤-27.71	PASS

Test Graphs

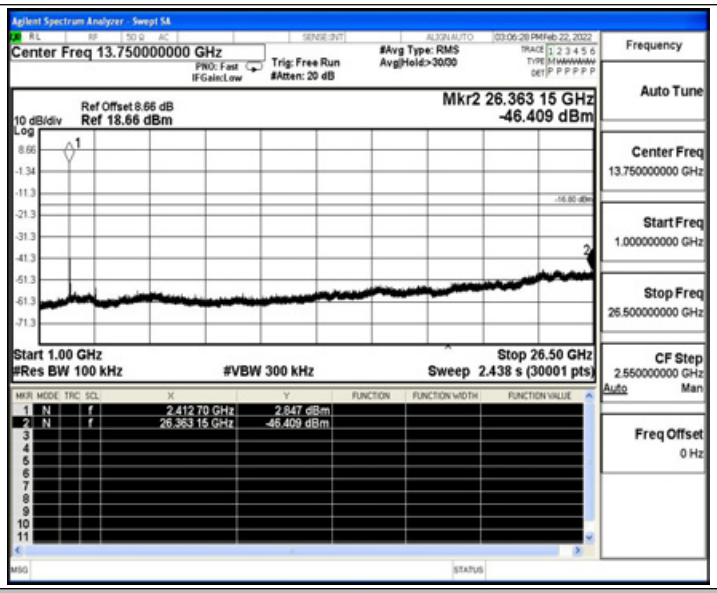
11B_Ant1_2412_0~Reference



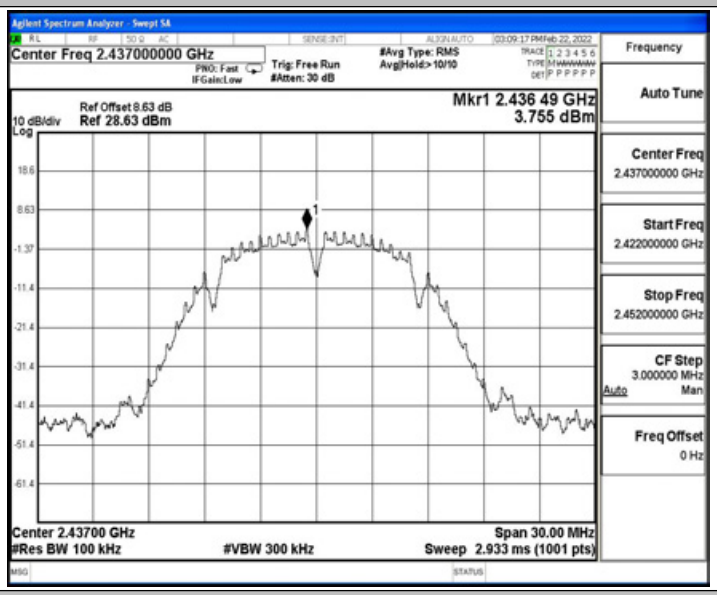
11B_Ant1_2412_30~1000



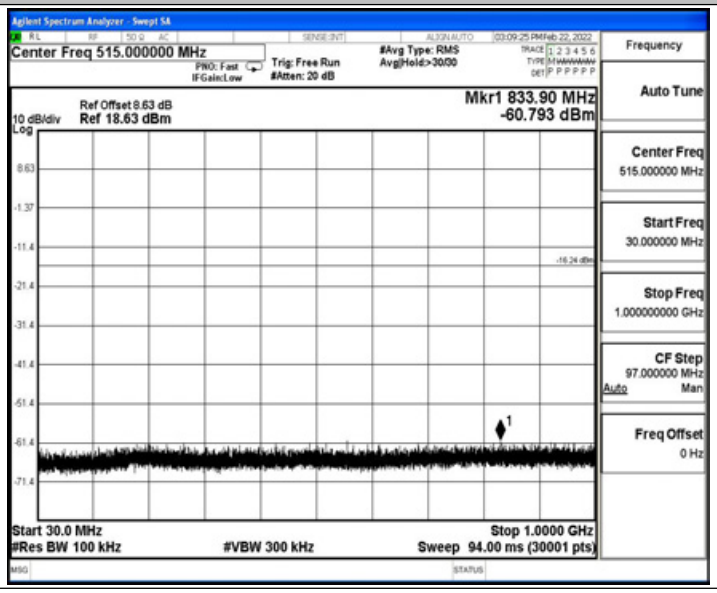
11B_Ant1_2412_1000~26500



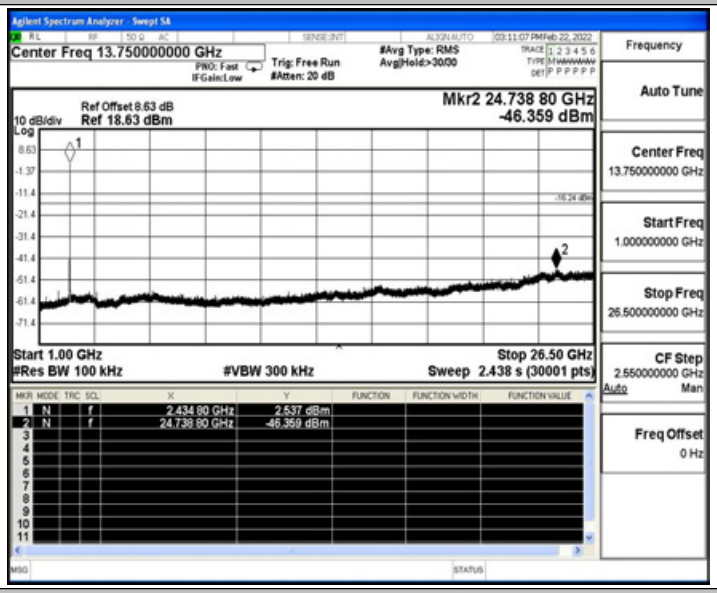
11B_Ant1_2437_0~Reference



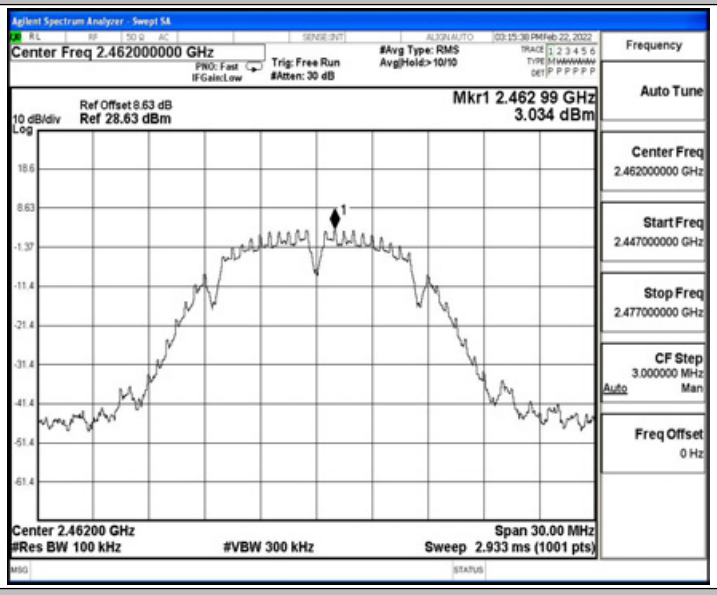
11B_Ant1_2437_30~1000



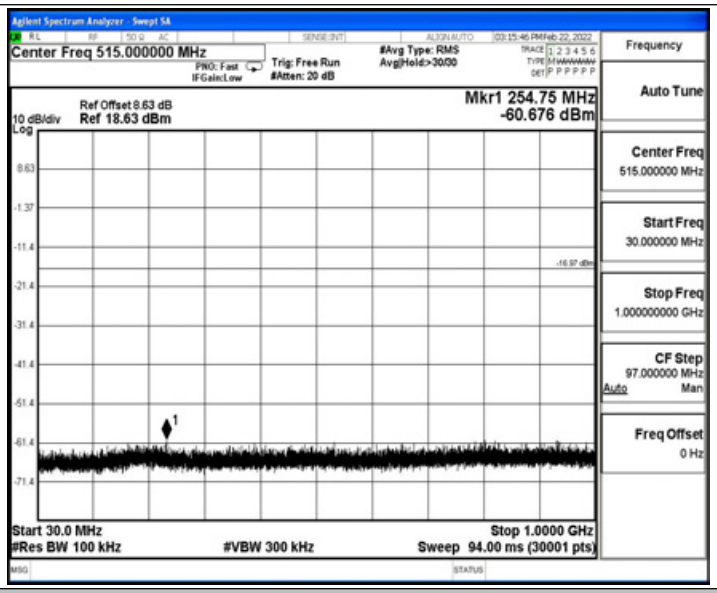
11B_Ant1_2437_1000~26500



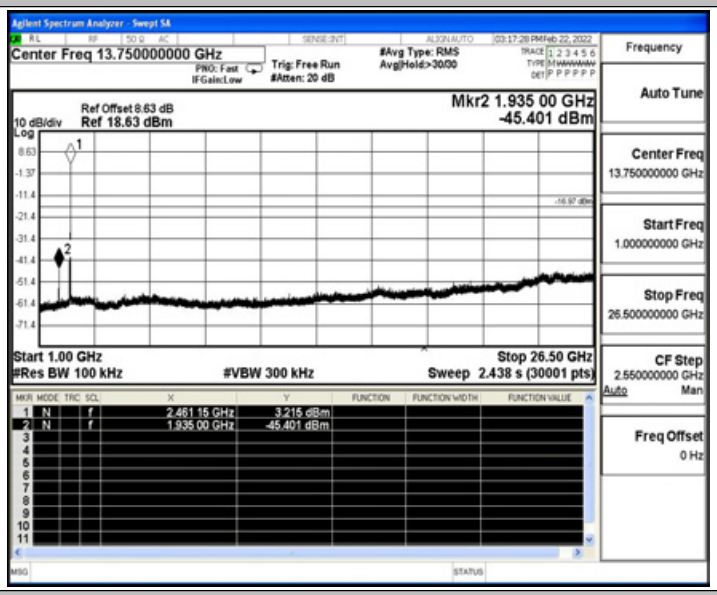
11B_Ant1_2462_0~Reference



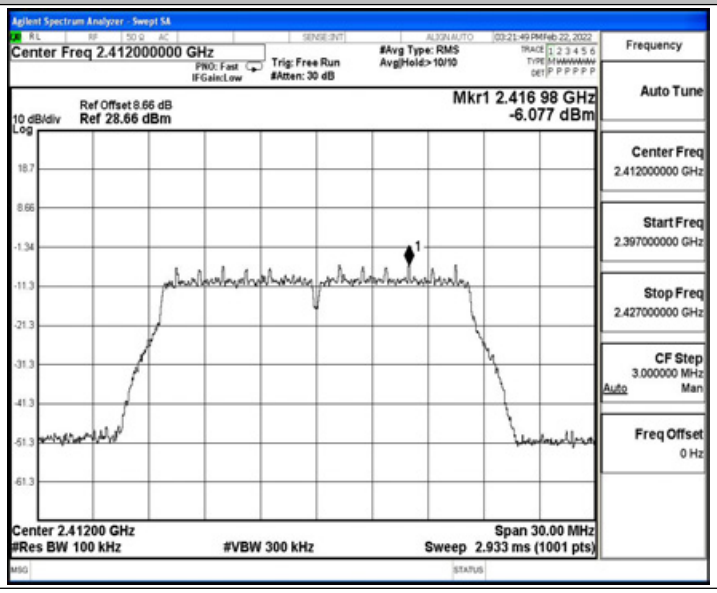
11B_Ant1_2462_30~1000



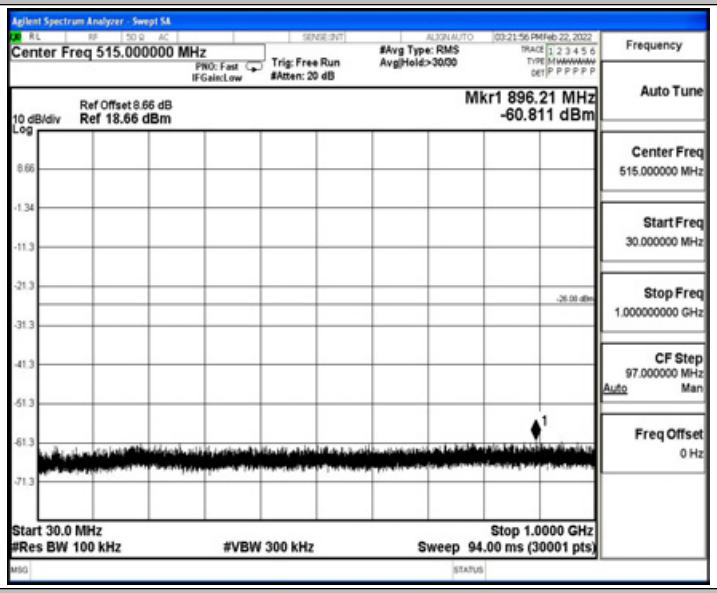
11B_Ant1_2462_1000~26500



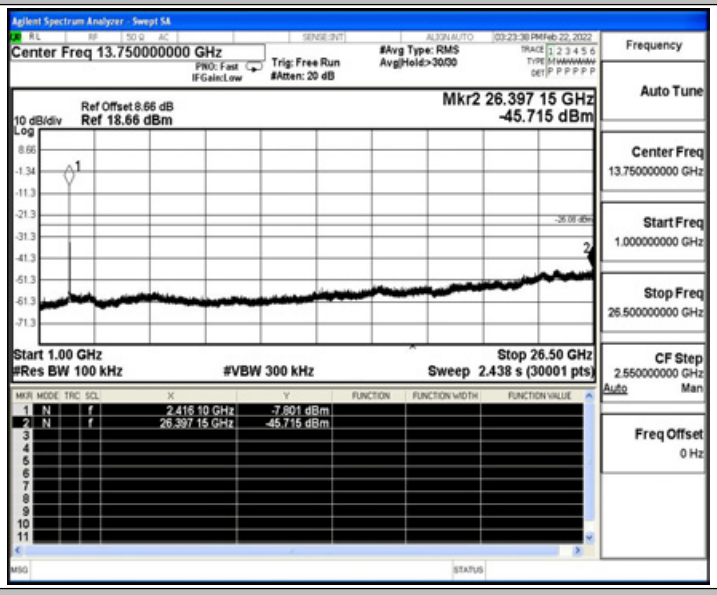
11G_Ant1_2412_0~Reference



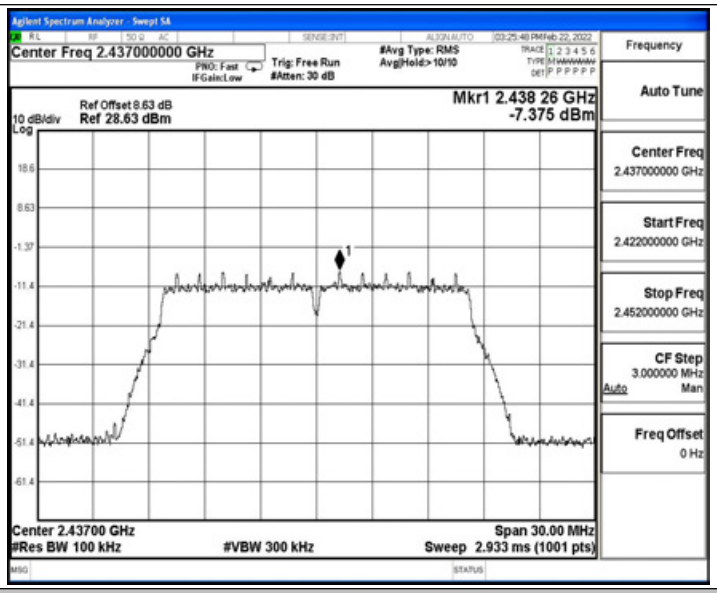
11G_Ant1_2412_30~1000



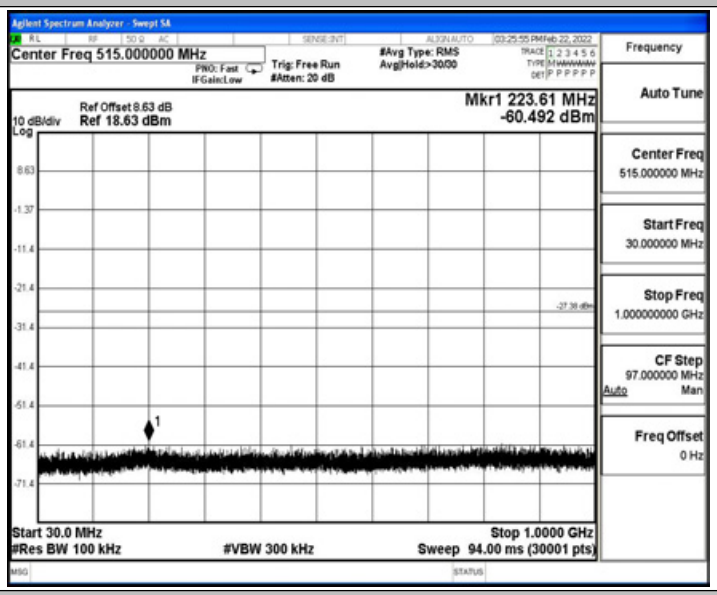
11G_Ant1_2412_1000~26500



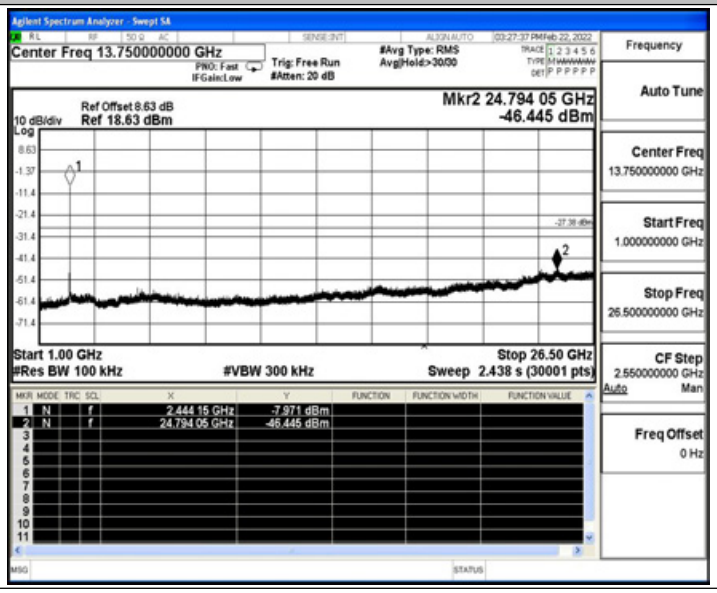
11G_Ant1_2437_0~Reference



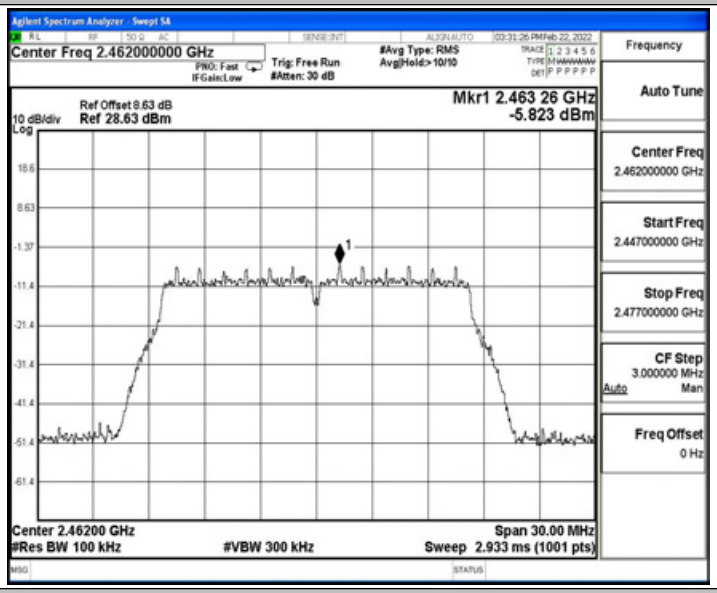
11G_Ant1_2437_30~1000



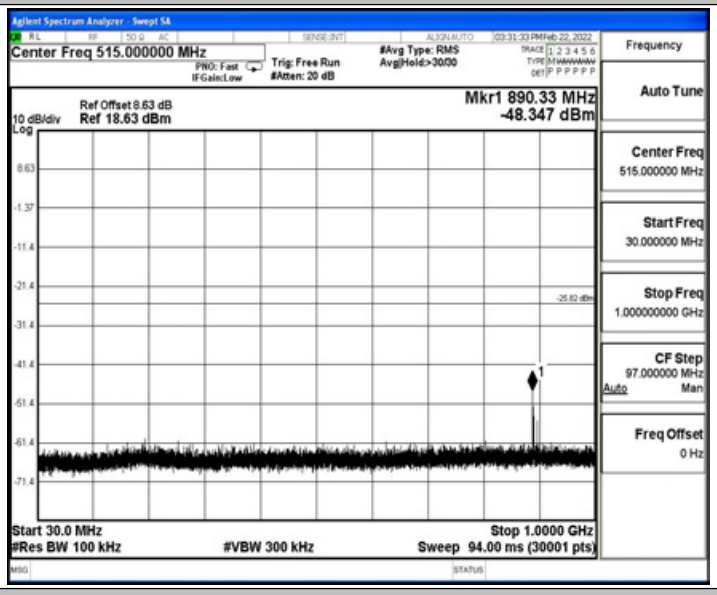
11G_Ant1_2437_1000~26500



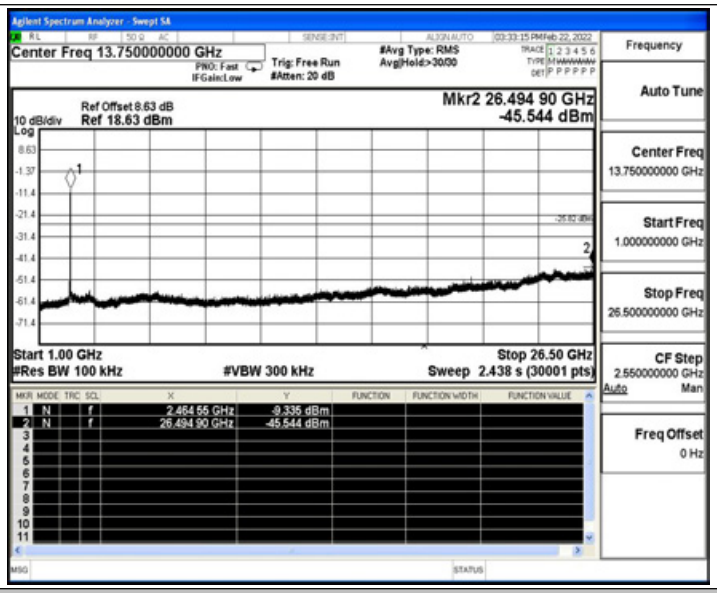
11G_Ant1_2462_0~Reference



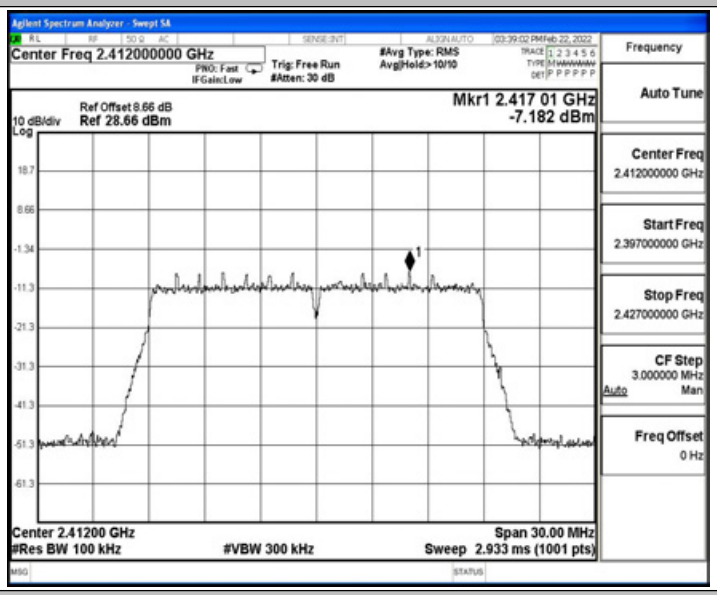
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference



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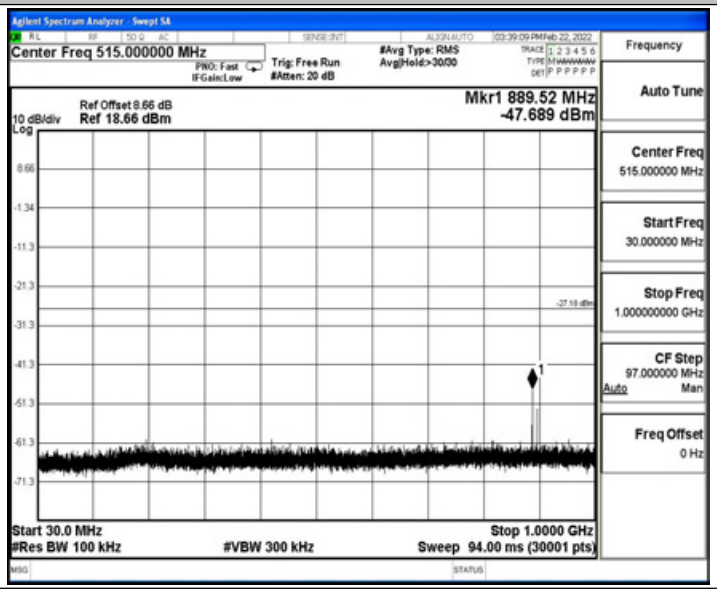

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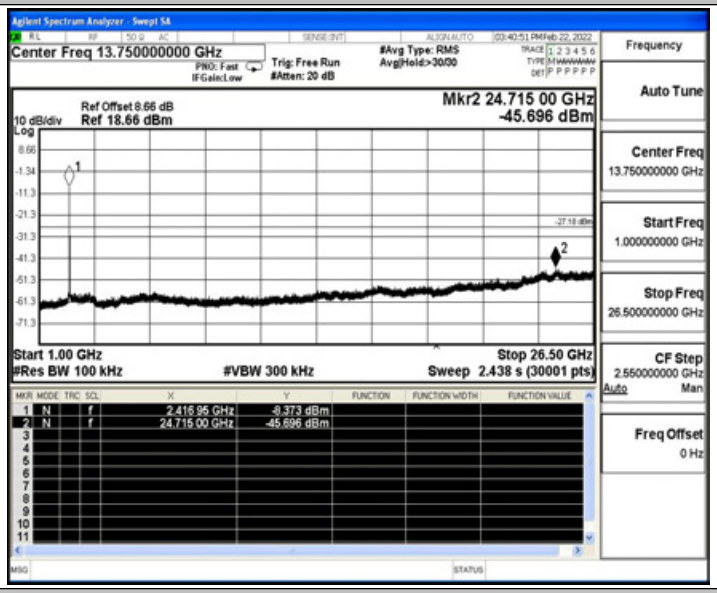

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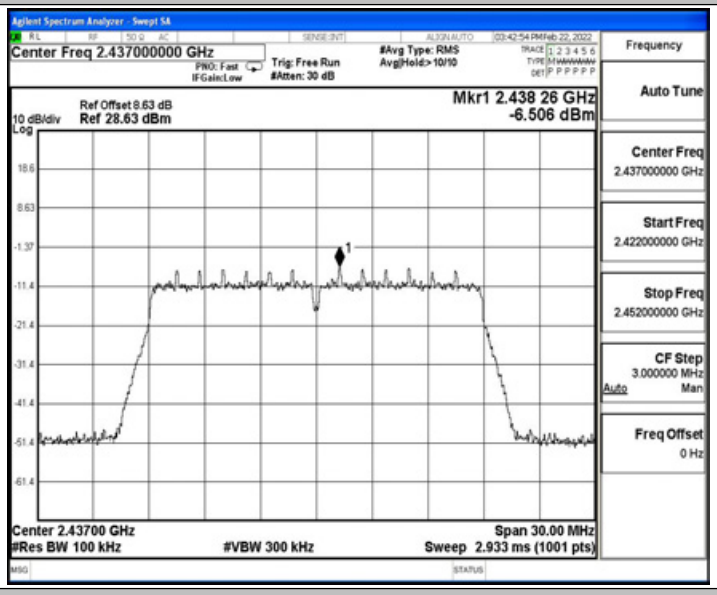

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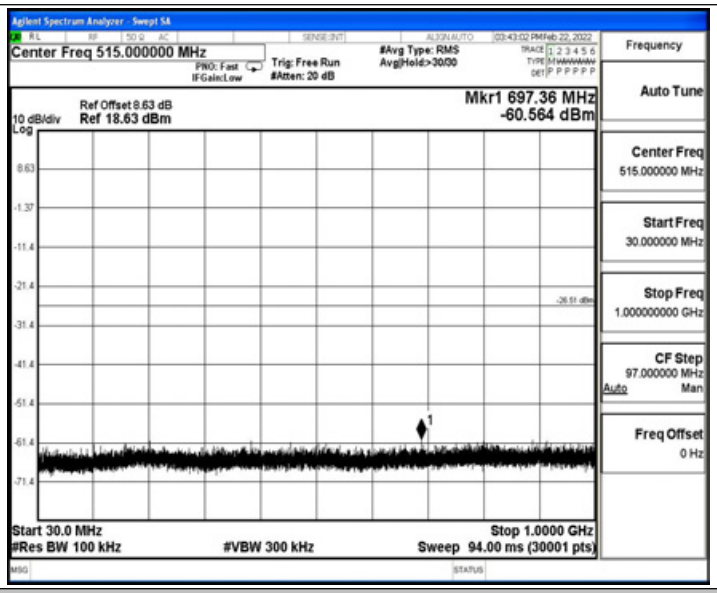

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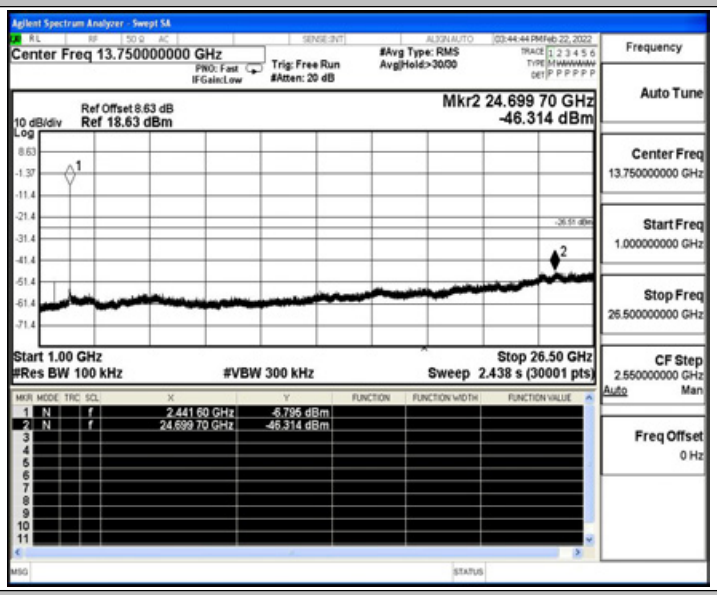

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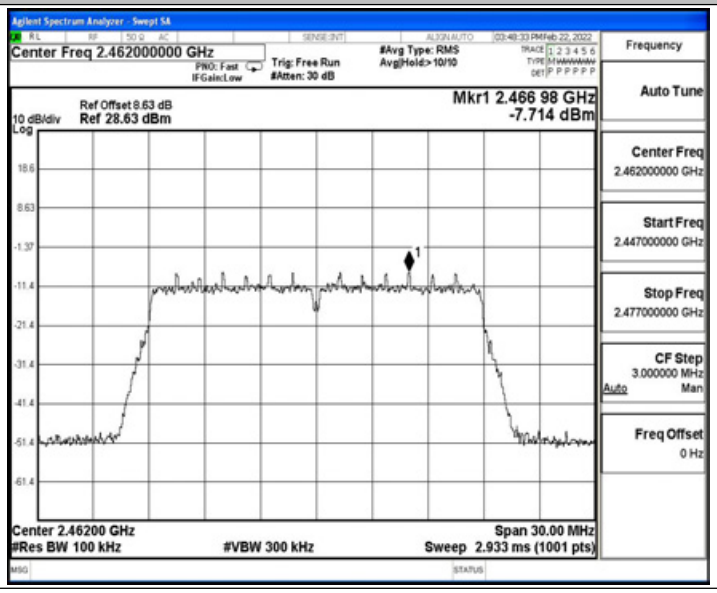

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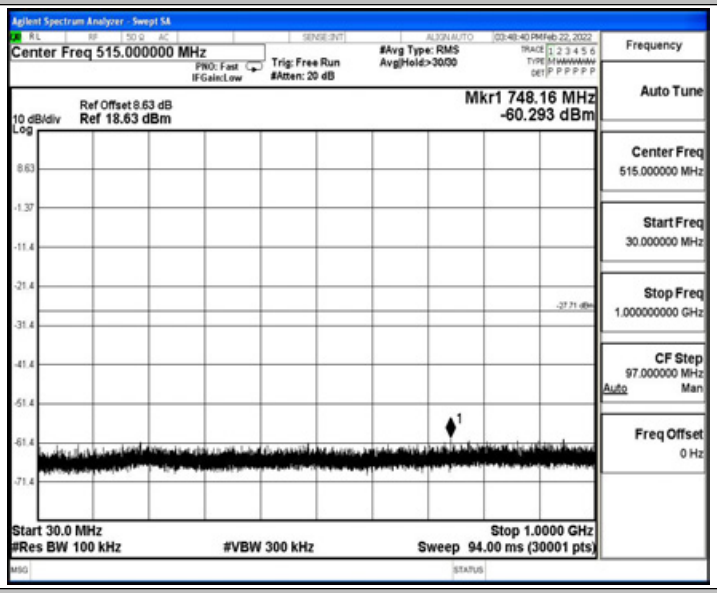
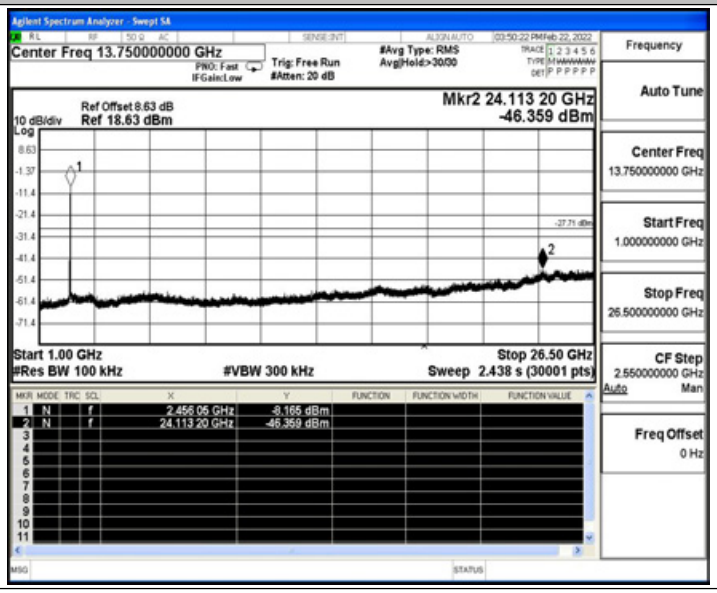


11N20SISO_Ant1_2462_1000~26500



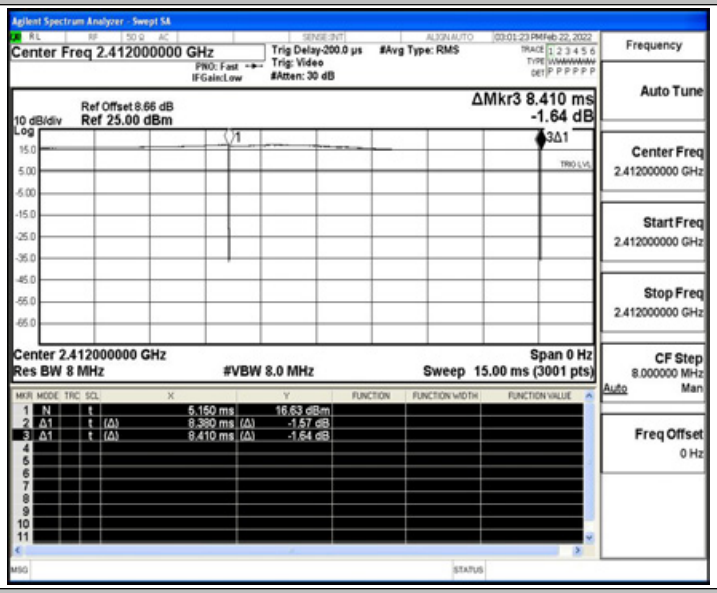
A.6 Duty Cycle

Test Result

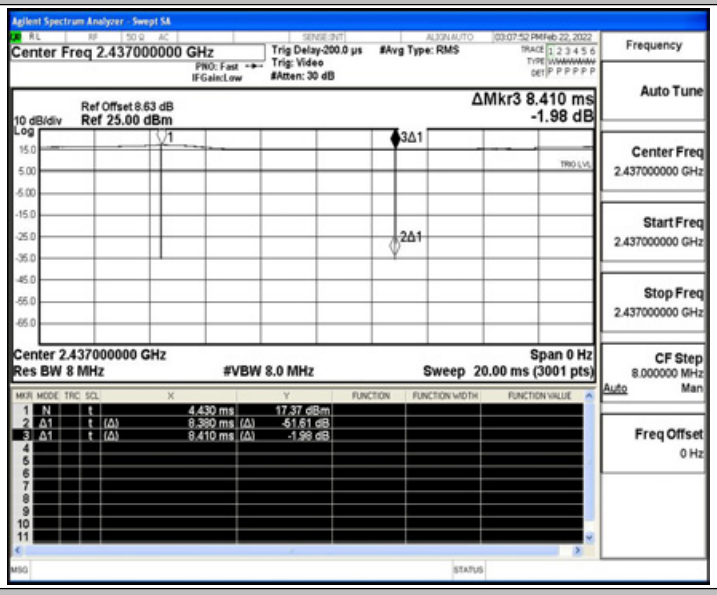
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
11B	Ant1	2412	8.38	8.41	99.64	---
		2437	8.38	8.41	99.64	---
		2462	8.39	8.41	99.76	---
11G	Ant1	2412	1.40	1.43	97.90	0.72
		2437	1.39	1.43	97.20	0.72
		2462	1.39	1.42	97.89	0.72
11N20SISO	Ant1	2412	1.30	1.33	97.74	0.77
		2437	1.30	1.33	97.74	0.77
		2462	1.30	1.34	97.01	0.77

Test Graphs

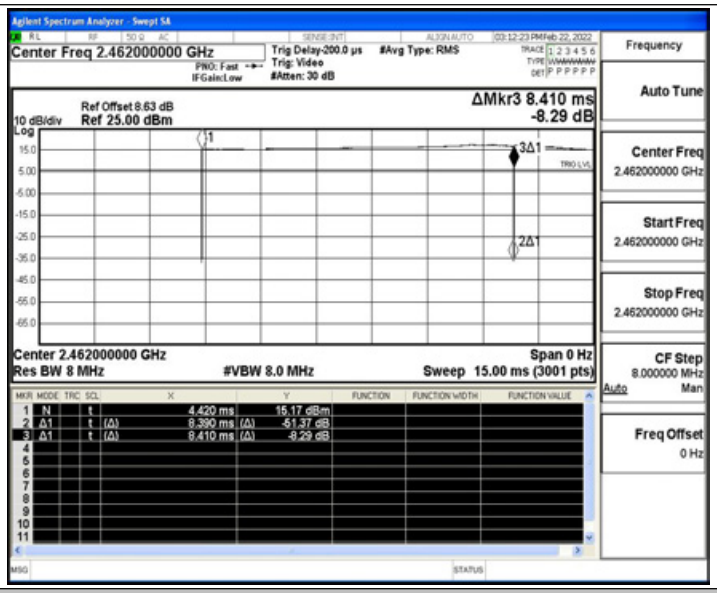
11B_Ant1_2412



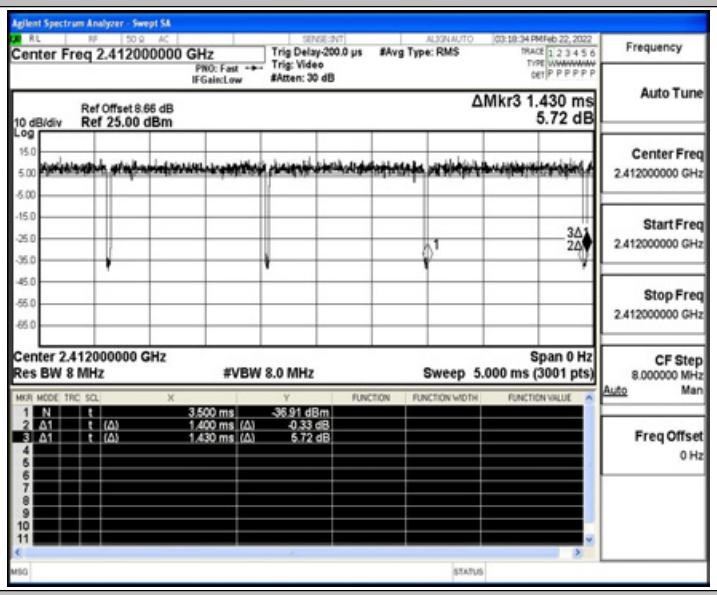
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



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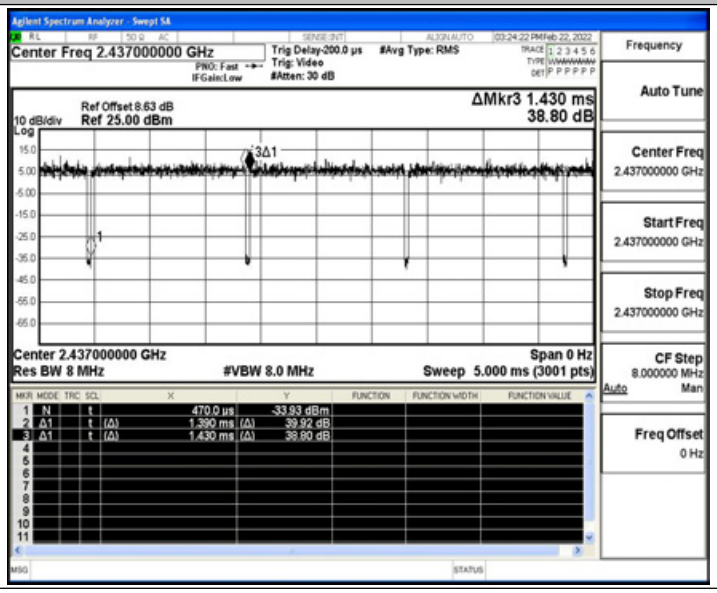
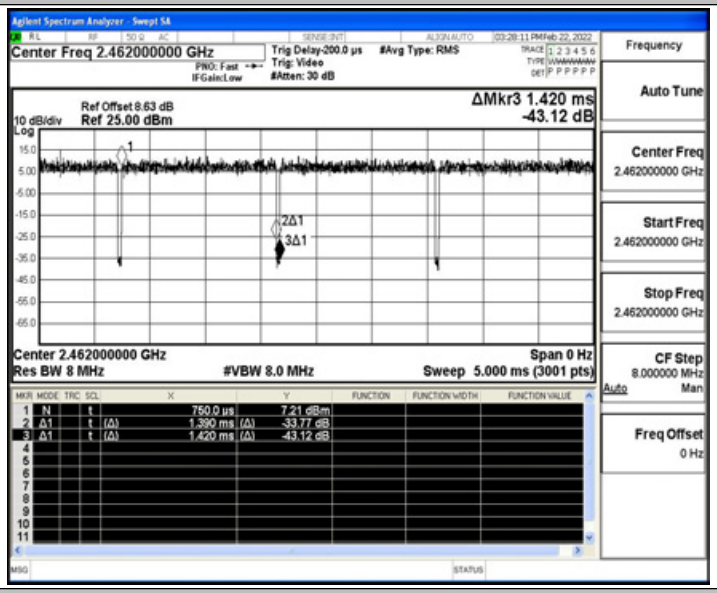
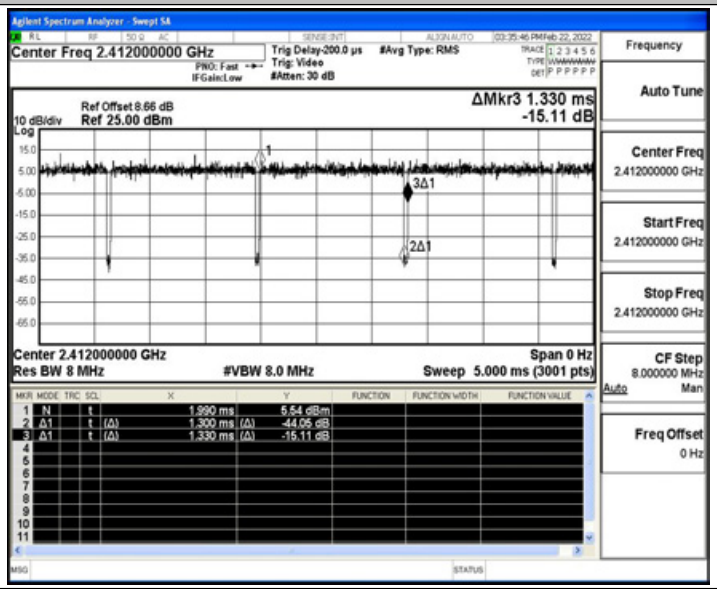


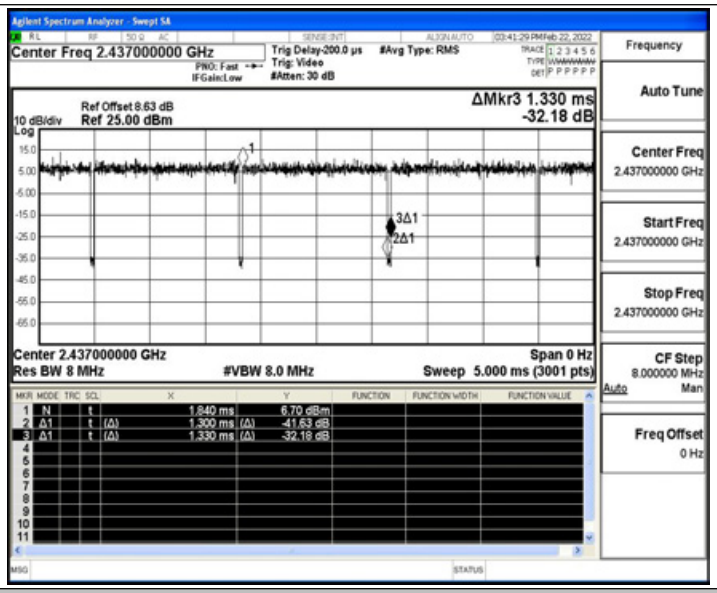
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



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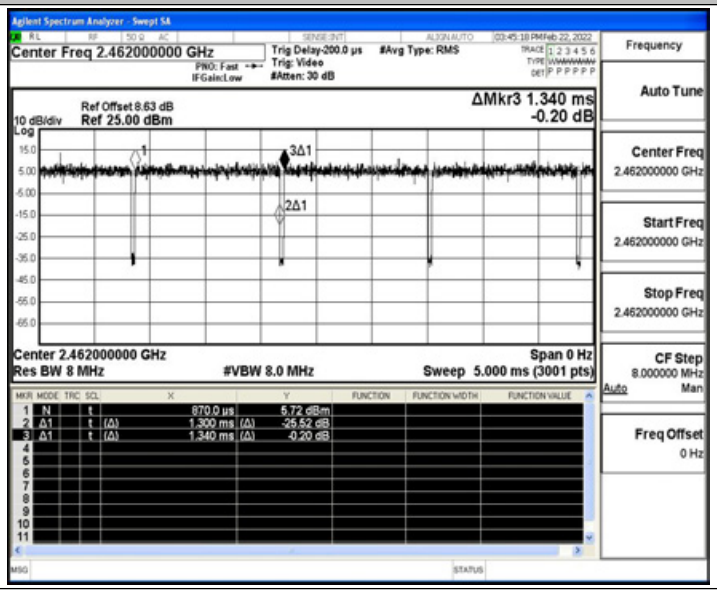


A.7 Emissions in Restricted Bands

Test Result

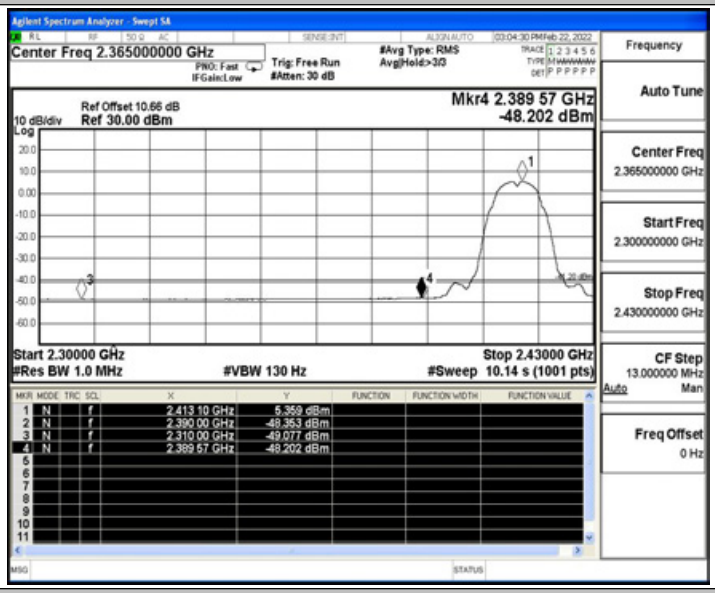
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.08	≤-41.20	46.12	≤54	PASS
				AV	2389.570	-48.2	≤-41.20	47.00	≤54	PASS
				AV	2390.000	-48.35	≤-41.20	46.85	≤54	PASS
				Peak	2310.000	-37.9	≤-21.20	57.30	≤74	PASS
				Peak	2346.670	-36.24	≤-21.20	58.96	≤74	PASS
				Peak	2390.000	-37.92	≤-21.20	57.28	≤74	PASS
		High	2462	AV	2483.500	-47.92	≤-41.20	47.28	≤54	PASS
				AV	2499.840	-47.82	≤-41.20	47.38	≤54	PASS
				AV	2500.000	-47.86	≤-41.20	47.34	≤54	PASS
				Peak	2483.500	-37.25	≤-21.20	57.95	≤74	PASS
				Peak	2488.400	-36.12	≤-21.20	59.08	≤74	PASS
				Peak	2500.000	-36.42	≤-21.20	58.78	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-48.56	≤-41.20	46.64	≤54	PASS
				AV	2386.450	-47.71	≤-41.20	47.49	≤54	PASS
				AV	2390.000	-47.83	≤-41.20	47.37	≤54	PASS
				Peak	2310.000	-38.57	≤-21.20	56.63	≤74	PASS
				Peak	2389.830	-35.76	≤-21.20	59.44	≤74	PASS
				Peak	2390.000	-37.05	≤-21.20	58.15	≤74	PASS
		High	2462	AV	2483.500	-47.36	≤-41.20	47.84	≤54	PASS
				AV	2498.850	-47.23	≤-41.20	47.97	≤54	PASS
				AV	2500.000	-47.41	≤-41.20	47.79	≤54	PASS
				Peak	2483.500	-37.04	≤-21.20	58.16	≤74	PASS
				Peak	2485.430	-35.62	≤-21.20	59.58	≤74	PASS
				Peak	2500.000	-36.42	≤-21.20	58.78	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-48.51	≤-41.20	46.69	≤54	PASS
				AV	2389.960	-47.7	≤-41.20	47.50	≤54	PASS
				AV	2390.000	-47.7	≤-41.20	47.50	≤54	PASS
				Peak	2310.000	-38.55	≤-21.20	56.65	≤74	PASS
				Peak	2378.260	-35.76	≤-21.20	59.44	≤74	PASS
				Peak	2390.000	-37.51	≤-21.20	57.69	≤74	PASS
		High	2462	AV	2483.500	-47.41	≤-41.20	47.79	≤54	PASS
				AV	2486.090	-47.21	≤-41.20	47.99	≤54	PASS
				AV	2500.000	-47.31	≤-41.20	47.89	≤54	PASS
				Peak	2483.500	-36.95	≤-21.20	58.25	≤74	PASS
				Peak	2484.550	-35.46	≤-21.20	59.74	≤74	PASS
				Peak	2500.000	-37.67	≤-21.20	57.53	≤74	PASS

Note：

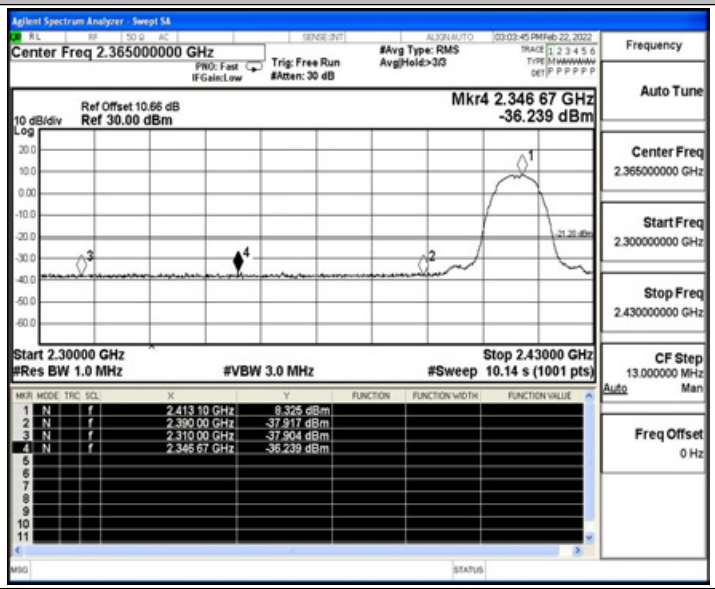
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

11B_Ant1_Low_2412_AV



11B_Ant1_Low_2412_Peak



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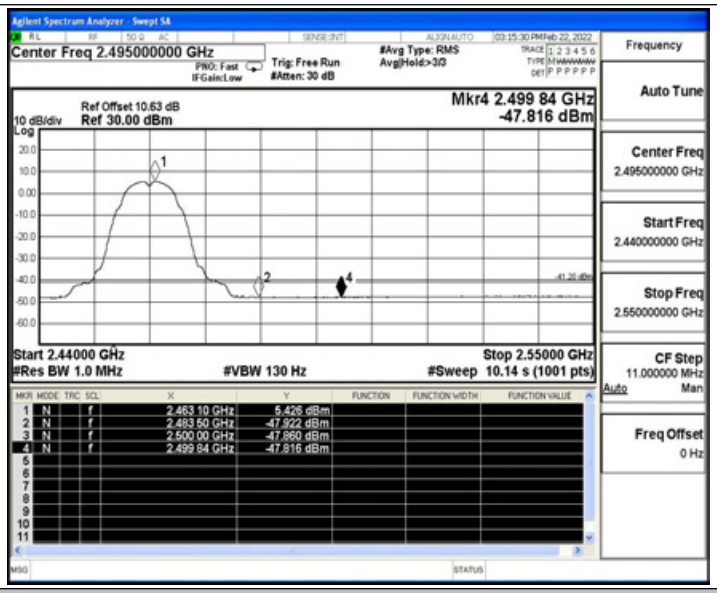

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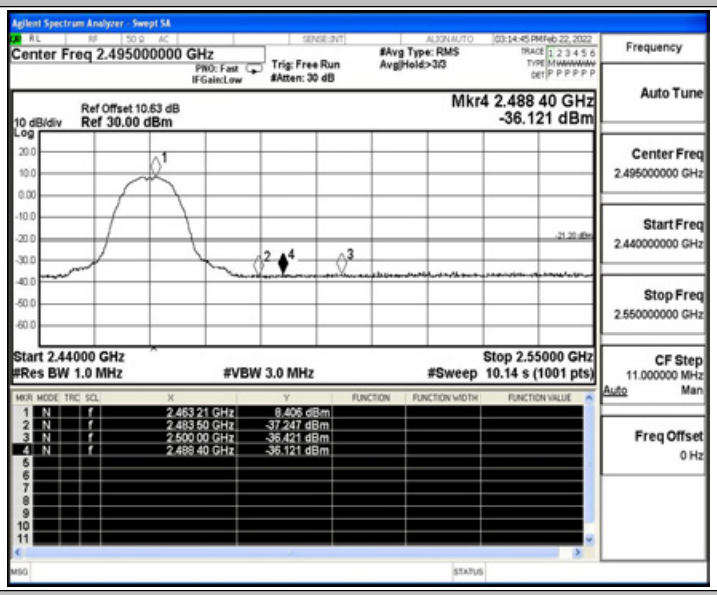

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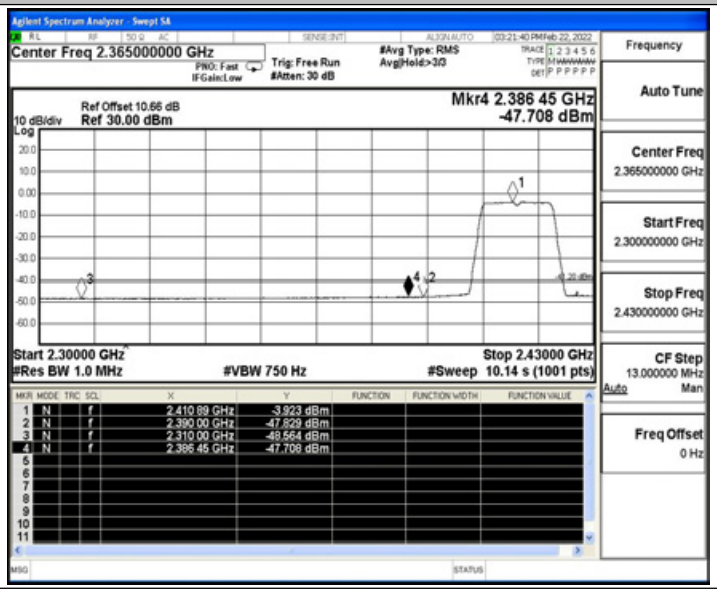

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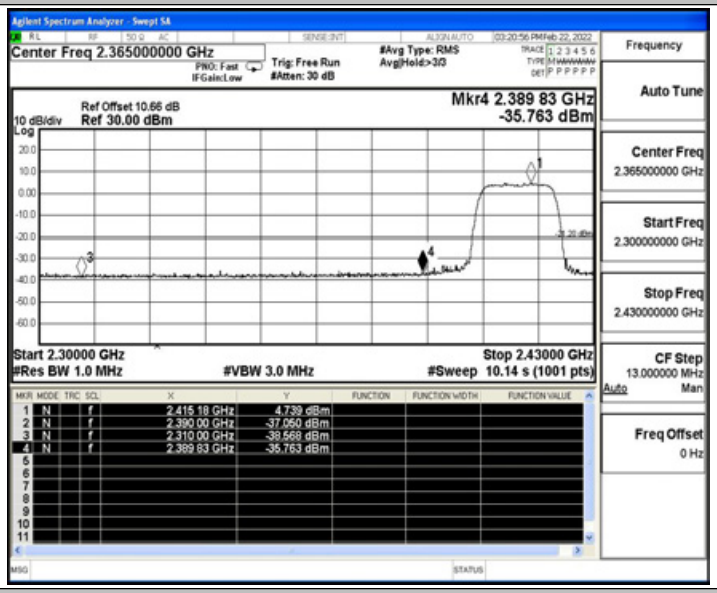
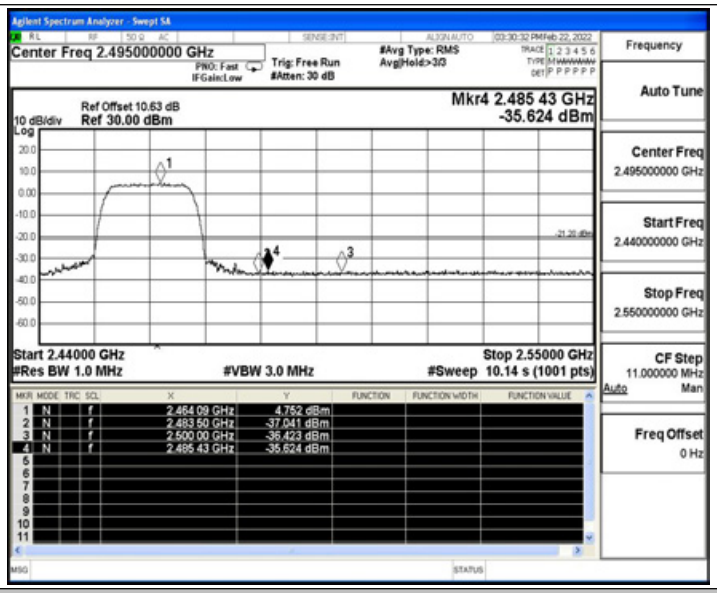


11G_Ant1_High_2462_AV

11G_Ant1_High_2462_Peak



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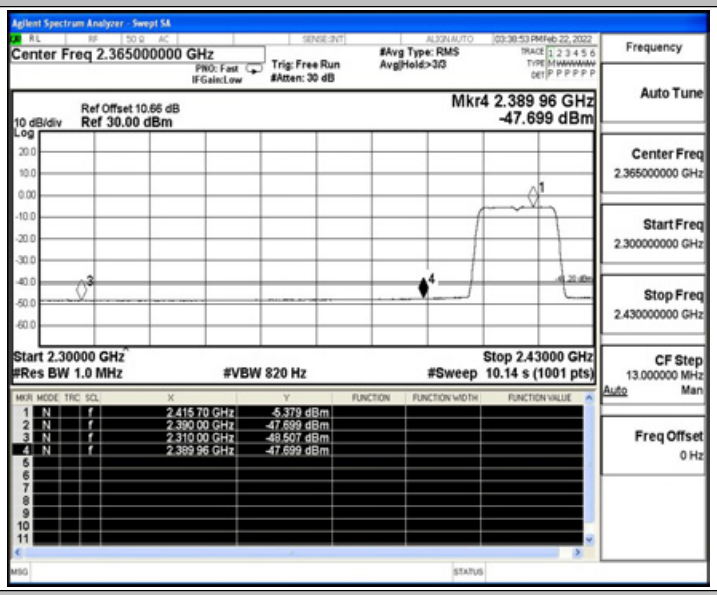

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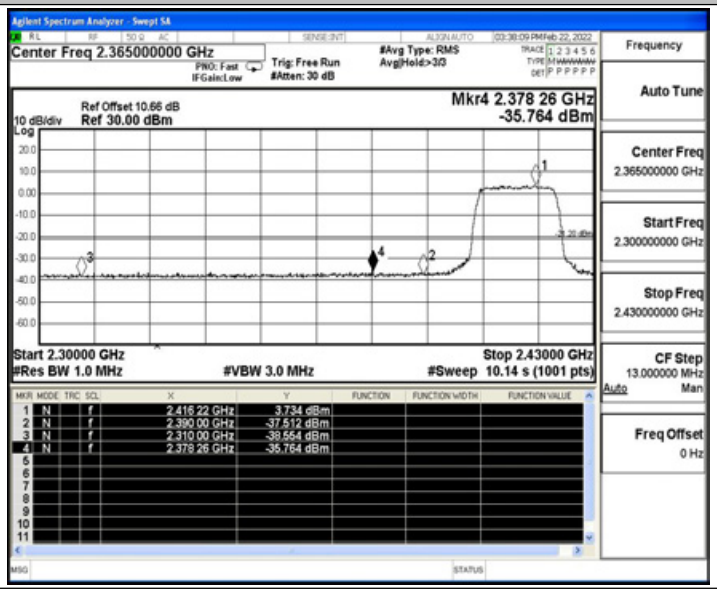

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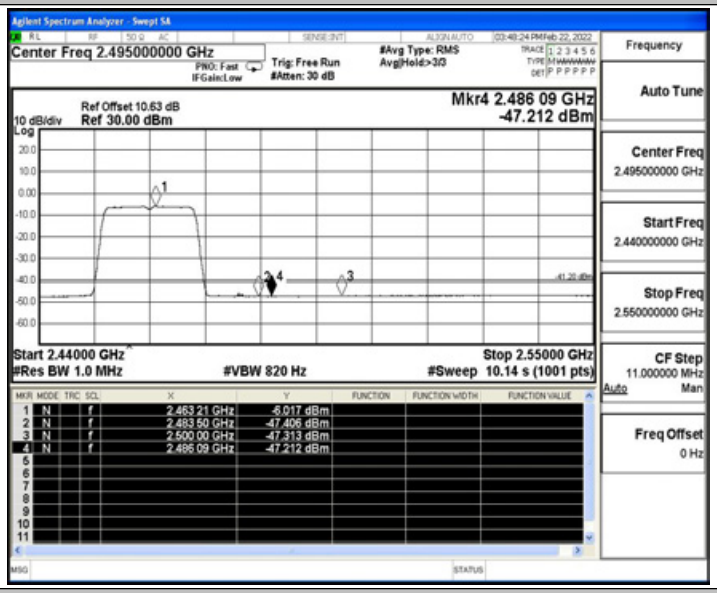
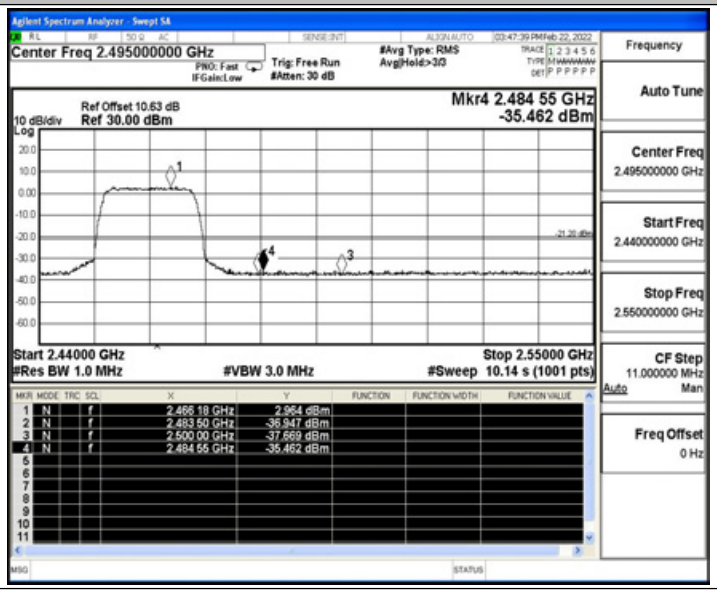
11N20SISO_Ant1_High_2462_Peak