

Case No. : <u>GTS20241117013-1-01</u>	
Ambient Condition: <u>23</u> °C, <u>52</u> %RH, According Standard: ■Part15C	
Test Date: <u>2024.11.20</u>	Test Engineer: <u>Evan ouyang</u>

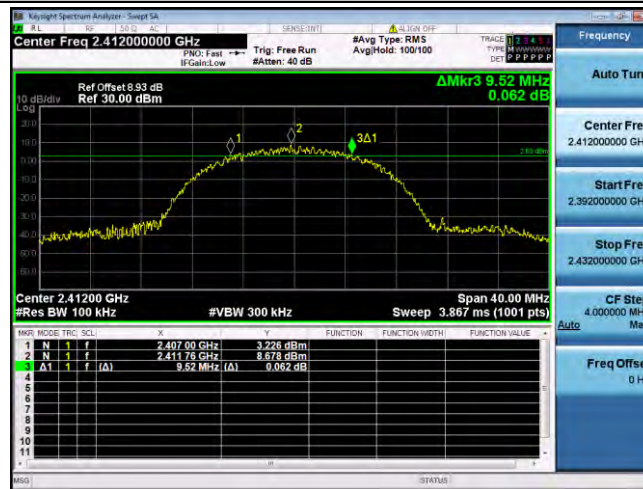
Appendix A.1: DTS Bandwidth

Test Result

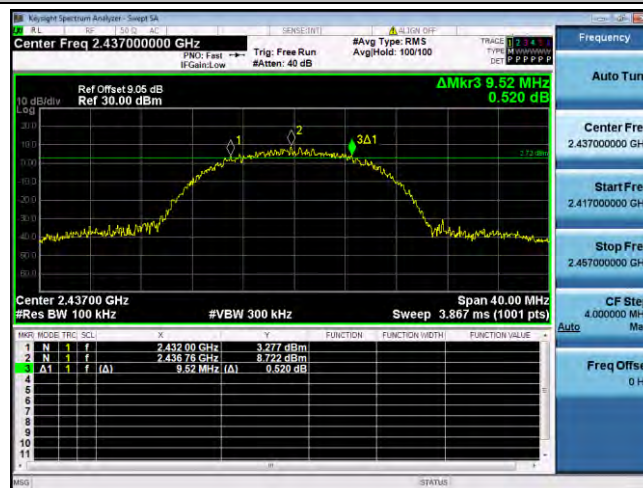
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.520	2407.000	2416.520	0.5	PASS
		2437	9.520	2432.000	2441.520	0.5	PASS
		2462	9.480	2457.000	2466.480	0.5	PASS
11G	Ant1	2412	16.360	2403.840	2420.200	0.5	PASS
		2437	16.360	2428.840	2445.200	0.5	PASS
		2462	16.360	2453.840	2470.200	0.5	PASS
11N20SISO	Ant1	2412	17.720	2403.120	2420.840	0.5	PASS
		2437	19.000	2427.480	2446.480	0.5	PASS
		2462	18.960	2452.480	2471.440	0.5	PASS
11N40SISO	Ant1	2422	19.000	2402.480	2421.480	0.5	PASS
		2437	19.000	2427.480	2446.480	0.5	PASS
		2452	18.920	2452.480	2471.400	0.5	PASS

Test Graphs

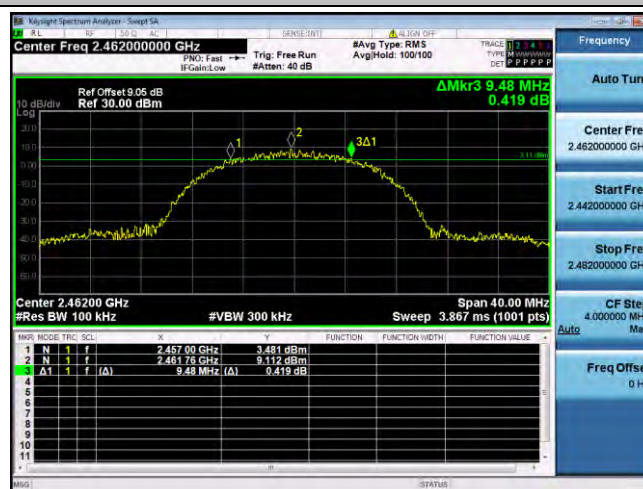
11B_Ant1_2412



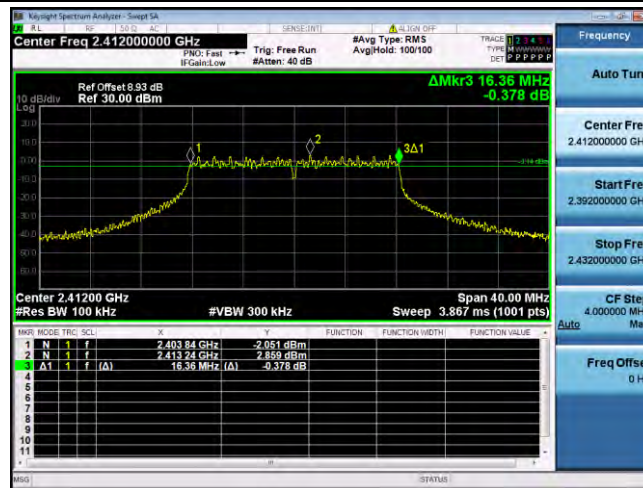
11B_Ant1_2437



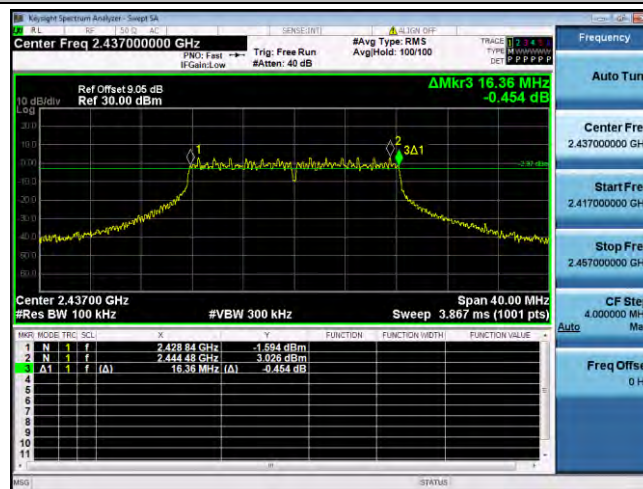
11B_Ant1_2462



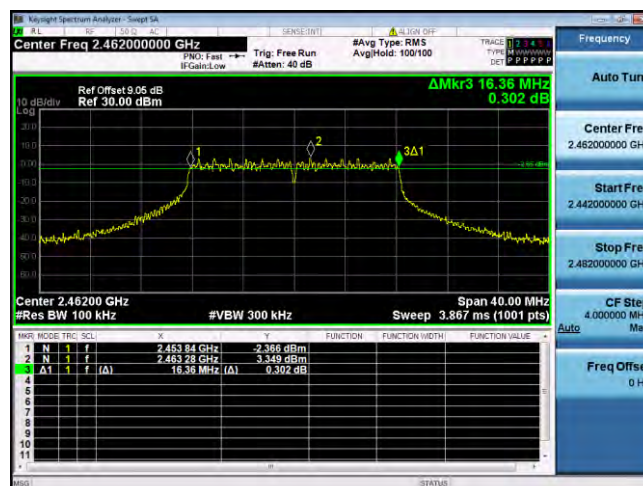
11G_Ant1_2412



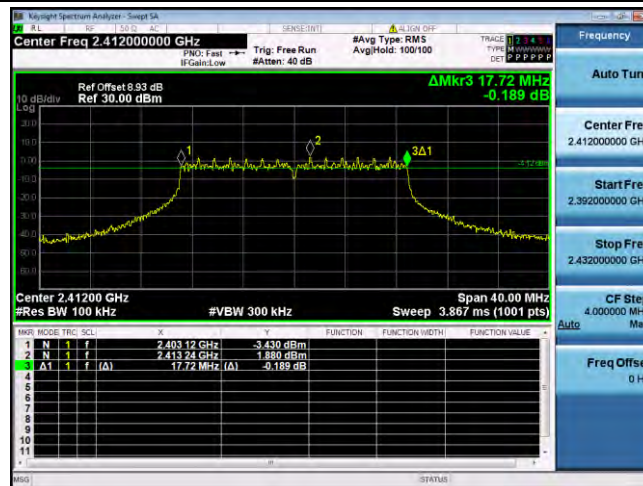
11G_Ant1_2437



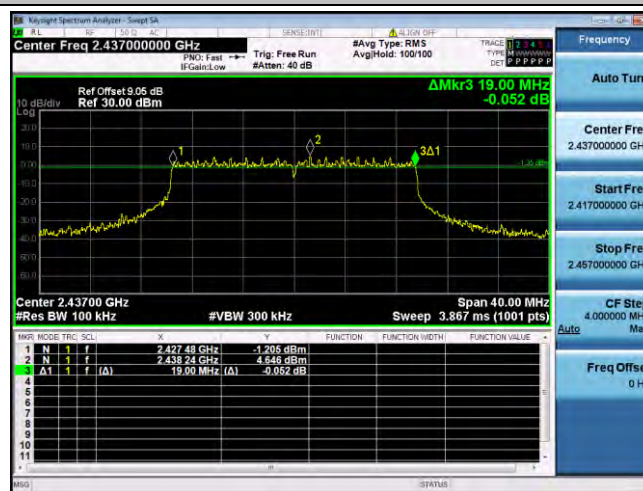
11G_Ant1_2462



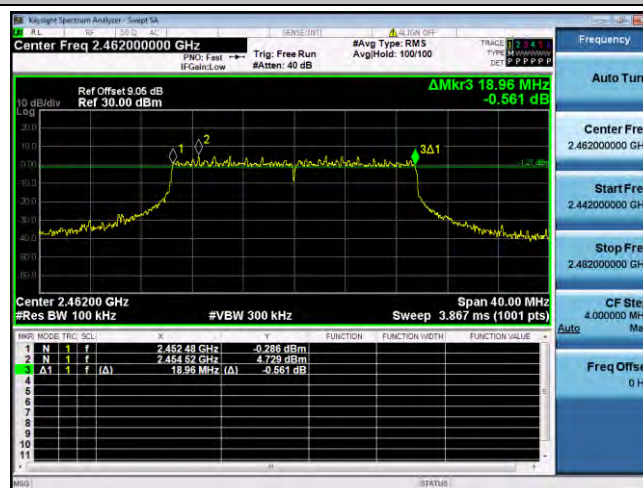
11N20SISO_Ant1_2412



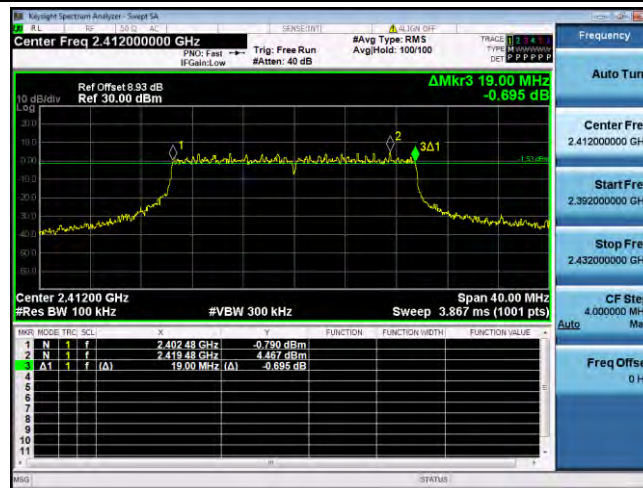
11N20SISO_Ant1_2437



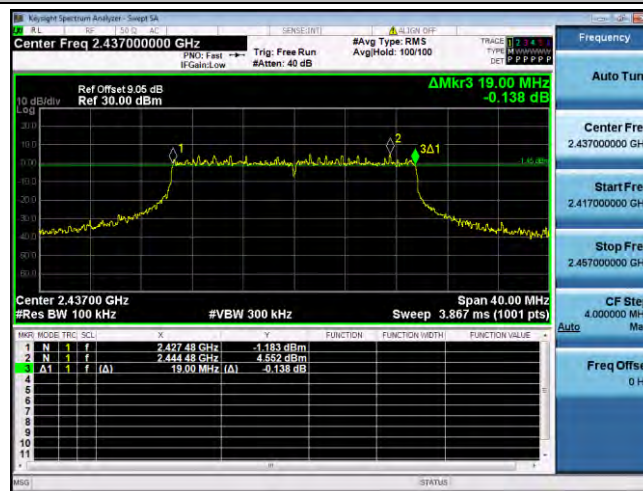
11N20SISO_Ant1_2462



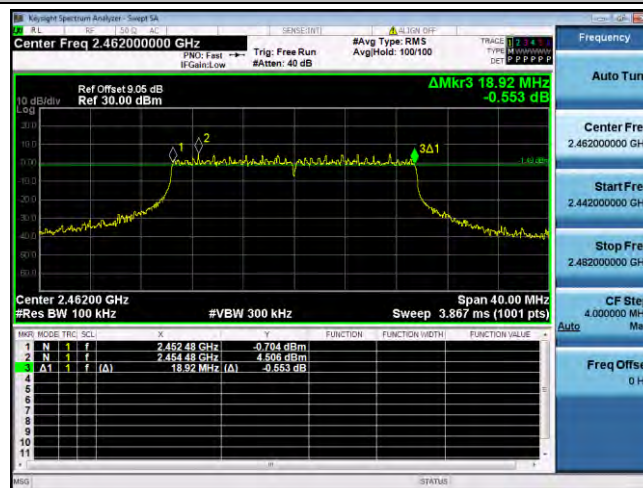
11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



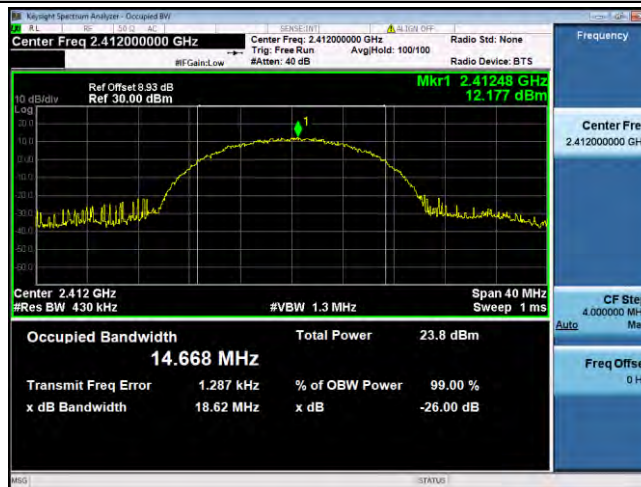
Appendix A.2: Occupied Channel Bandwidth

Test Result

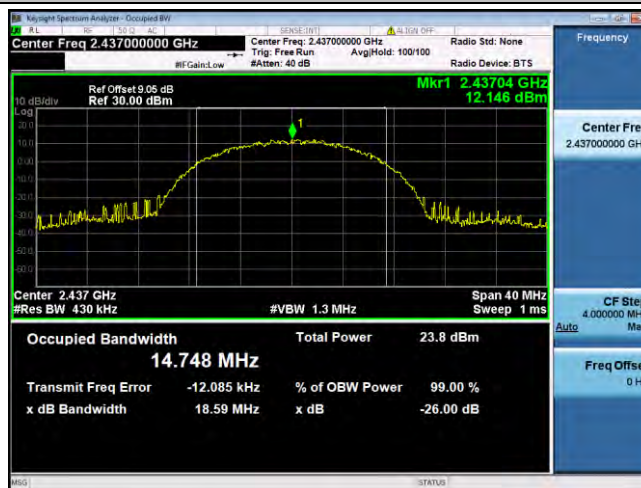
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.668	2404.6673	2419.3353	---	---
		2437	14.748	2429.6139	2444.3619	---	---
		2462	14.711	2454.5977	2469.3087	---	---
11G	Ant1	2412	16.984	2403.4324	2420.4164	---	---
		2437	16.958	2428.4723	2445.4303	---	---
		2462	16.941	2453.4517	2470.3927	---	---
11N20SISO	Ant1	2412	18.159	2402.8636	2421.0226	---	---
		2437	19.200	2427.3725	2446.5725	---	---
		2462	19.183	2452.3675	2471.5505	---	---
11N40SISO	Ant1	2422	19.189	2402.3902	2421.5792	---	---
		2437	19.197	2427.3726	2446.5696	---	---
		2452	19.197	2452.3647	2471.5617	---	---

Test Graphs

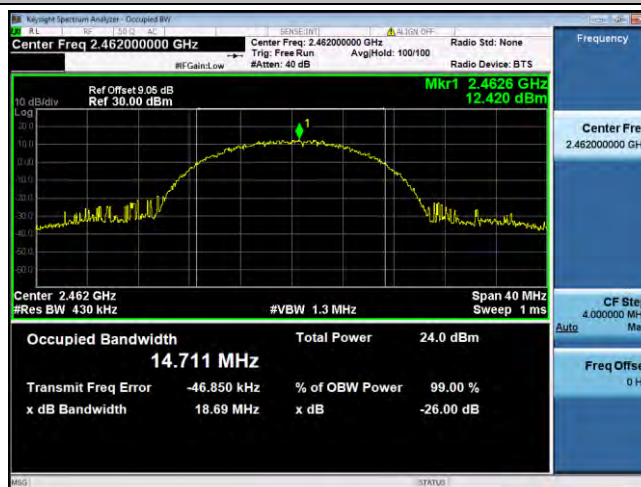
11B_Ant1_2412



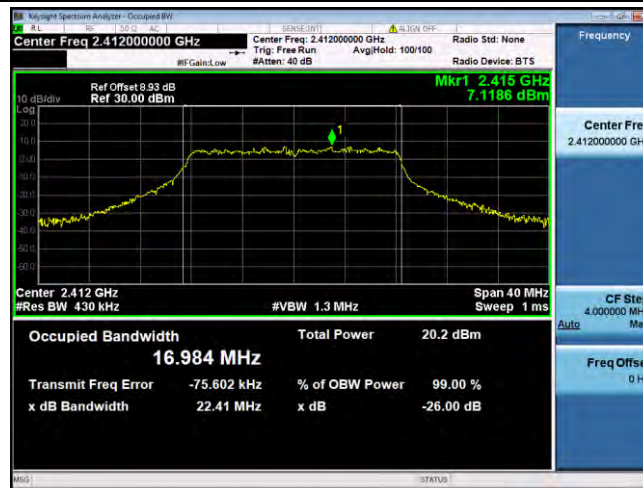
11B_Ant1_2437



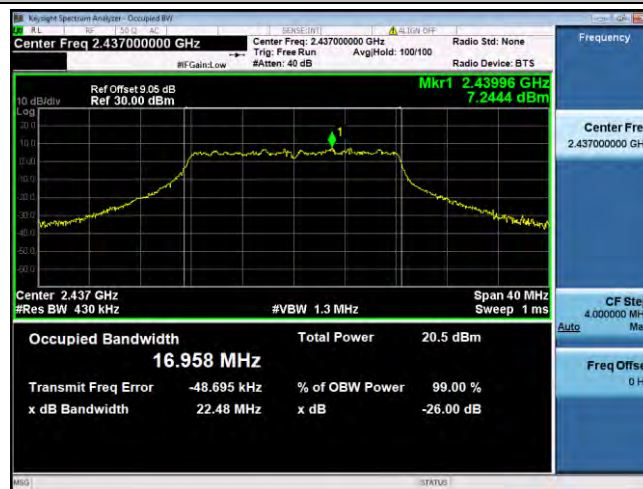
11B_Ant1_2462



11G_Ant1_2412



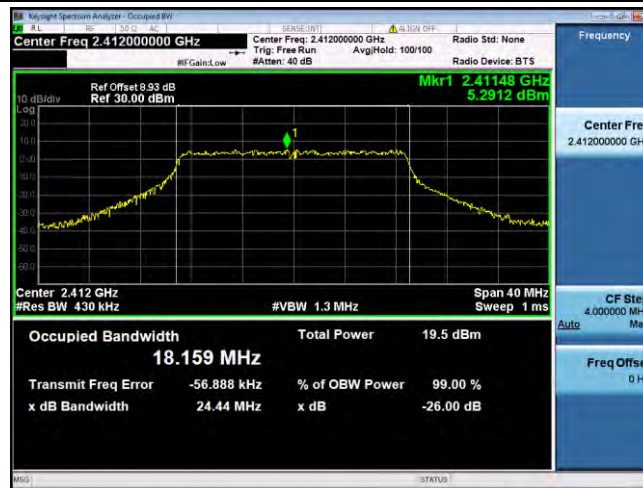
11G_Ant1_2437



11G_Ant1_2462



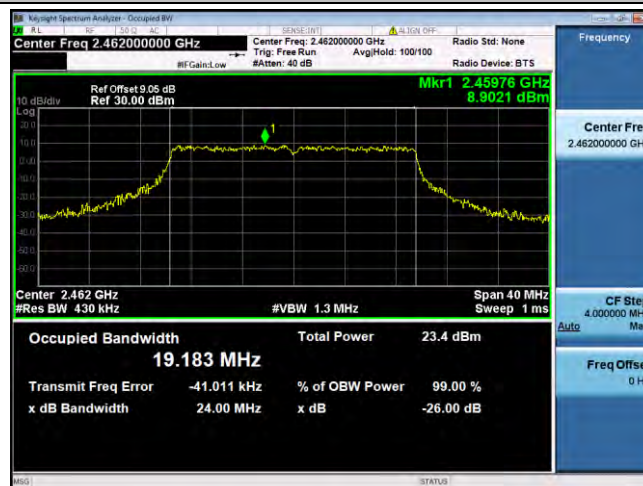
11N20SISO_Ant1_2412



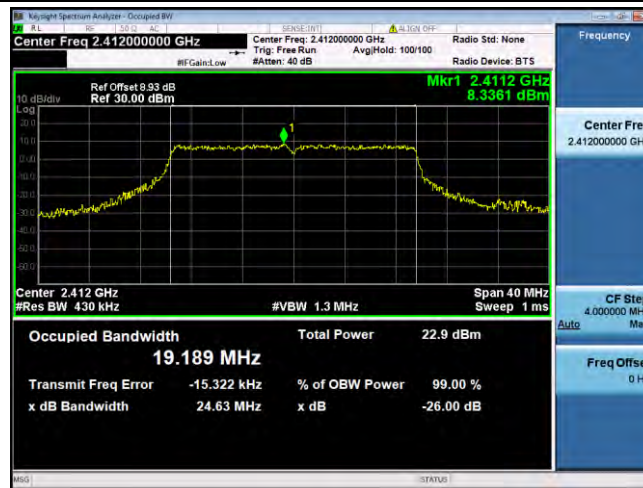
11N20SISO_Ant1_2437



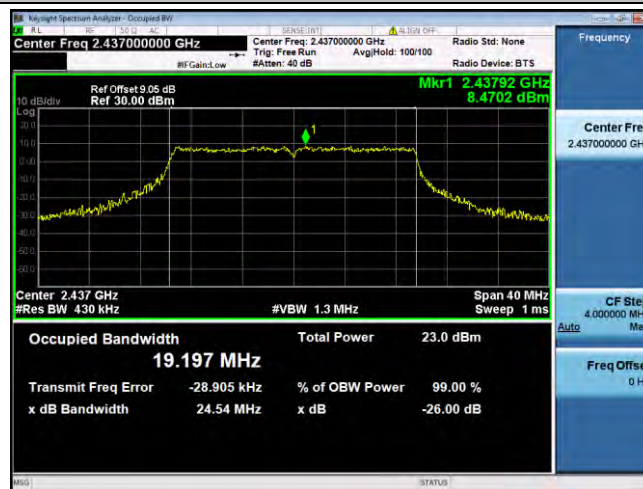
11N20SISO_Ant1_2462



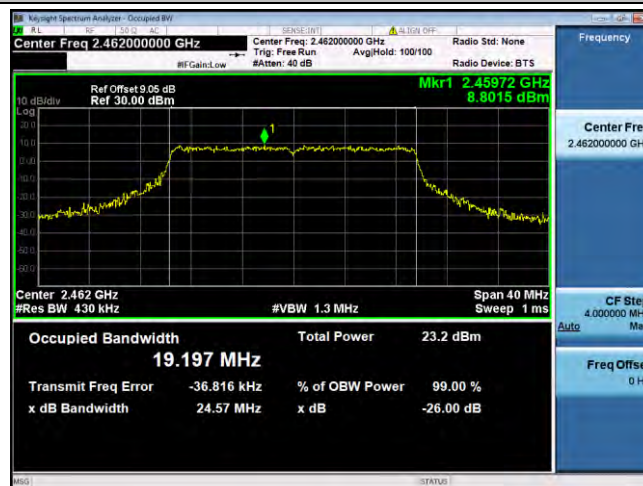
11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



Appendix A.3: Maximum conducted output power

Test Result -CHP

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	8.53	≤30.00	PASS
		2437	8.42	≤30.00	PASS
		2462	7.79	≤30.00	PASS
11G	Ant1	2412	8.13	≤30.00	PASS
		2437	7.58	≤30.00	PASS
		2462	7.94	≤30.00	PASS
11N20SISO	Ant1	2412	8.36	≤30.00	PASS
		2437	7.27	≤30.00	PASS
		2462	8.48	≤30.00	PASS
11N40SISO	Ant1	2422	8.76	≤30.00	PASS
		2437	8.35	≤30.00	PASS
		2452	7.68	≤30.00	PASS

Note:

1.The Duty Cycle Factor and RBW Factor is compensated in the data.

Appendix A.4: Maximum power spectral density

Test Result

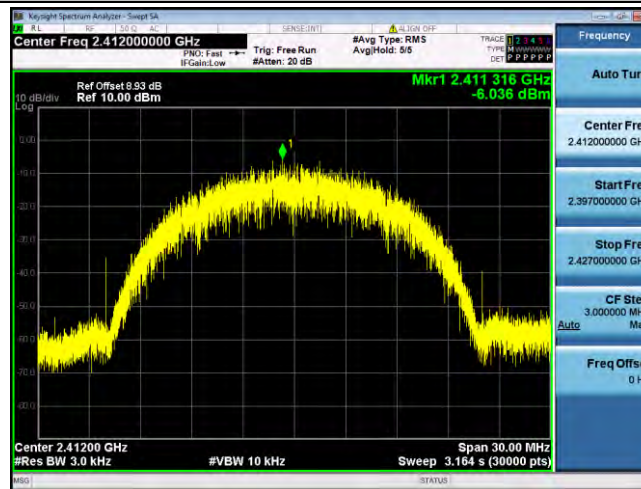
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-6.04	≤8.00	PASS
		2437	-5.88	≤8.00	PASS
		2462	-5.59	≤8.00	PASS
11G	Ant1	2412	-11.35	≤8.00	PASS
		2437	-10.35	≤8.00	PASS
		2462	-10.71	≤8.00	PASS
11N20SISO	Ant1	2412	-12.28	≤8.00	PASS
		2437	-9.70	≤8.00	PASS
		2462	-10.22	≤8.00	PASS
11N40SISO	Ant1	2422	-9.84	≤8.00	PASS
		2437	-10.71	≤8.00	PASS
		2452	-10.38	≤8.00	PASS

Note:

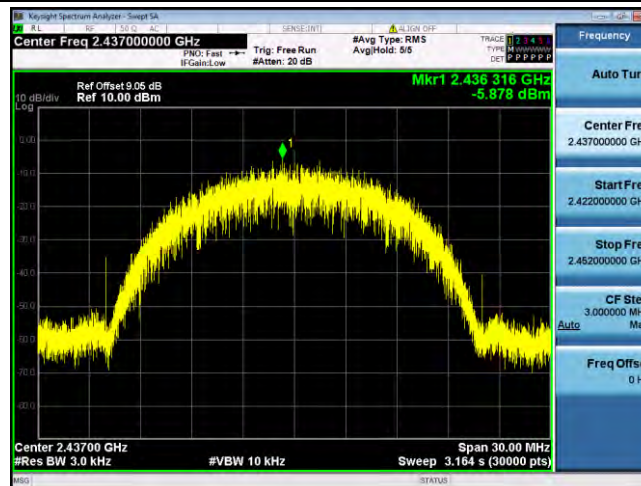
1. The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

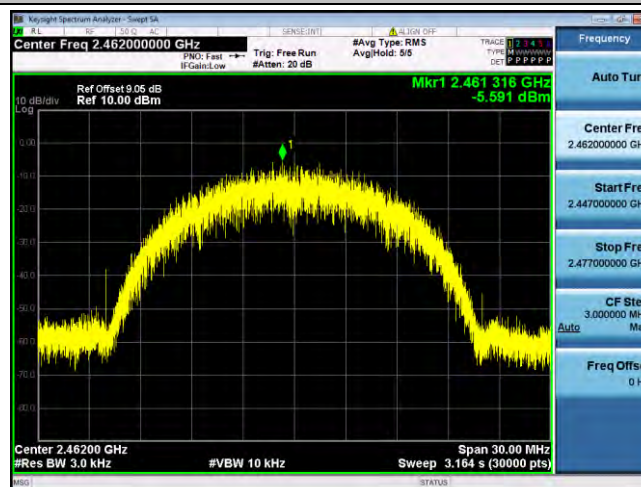
11B_Ant1_2412



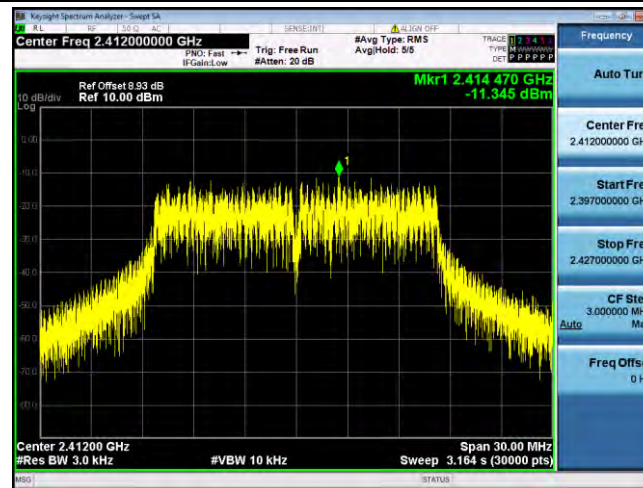
11B_Ant1_2437



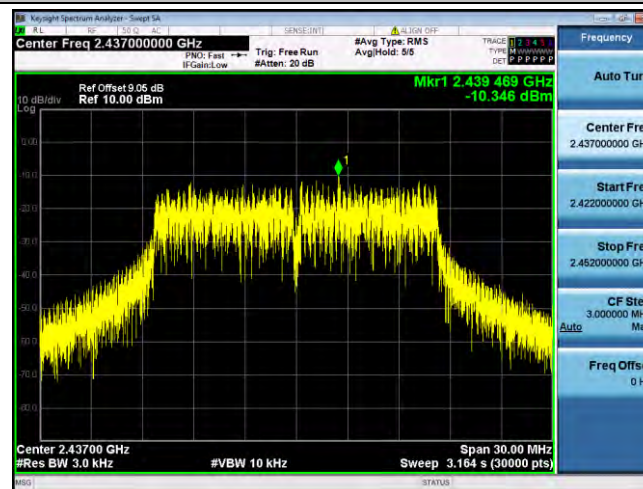
11B_Ant1_2462



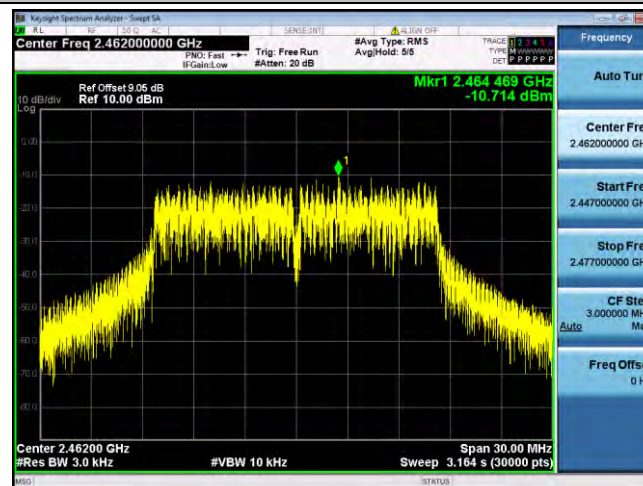
11G_Ant1_2412



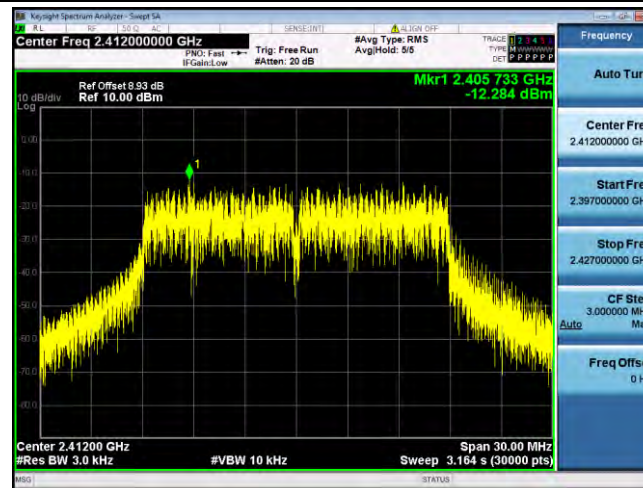
11G_Ant1_2437



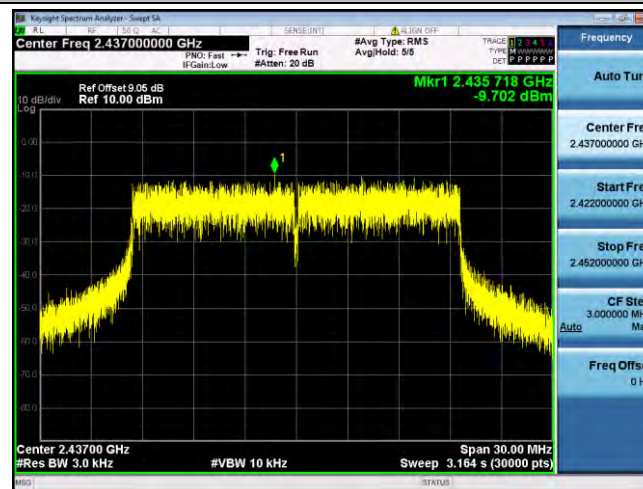
11G_Ant1_2462



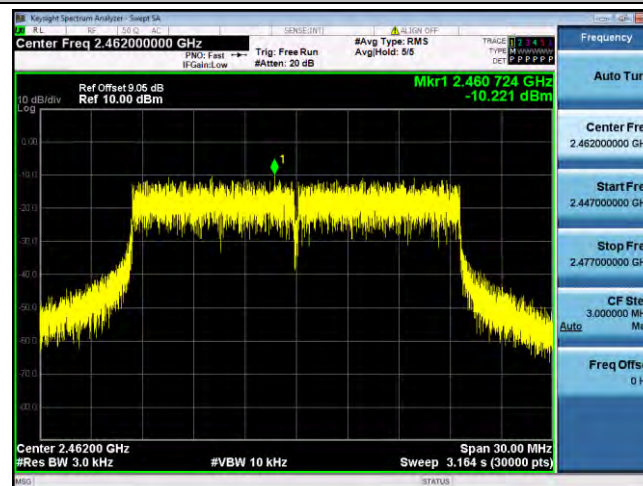
11N20SISO_Ant1_2412



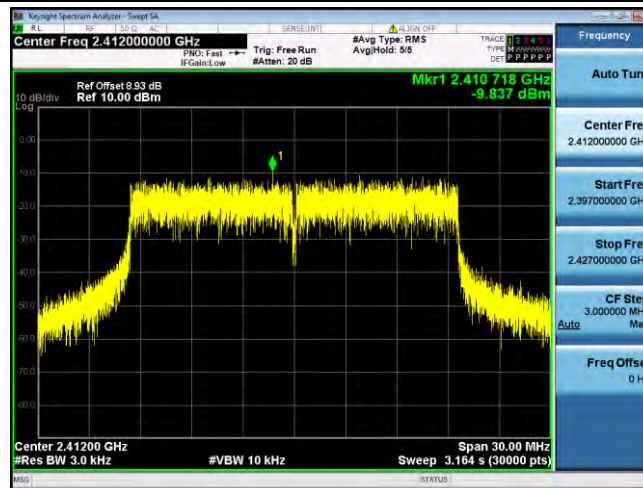
11N20SISO_Ant1_2437



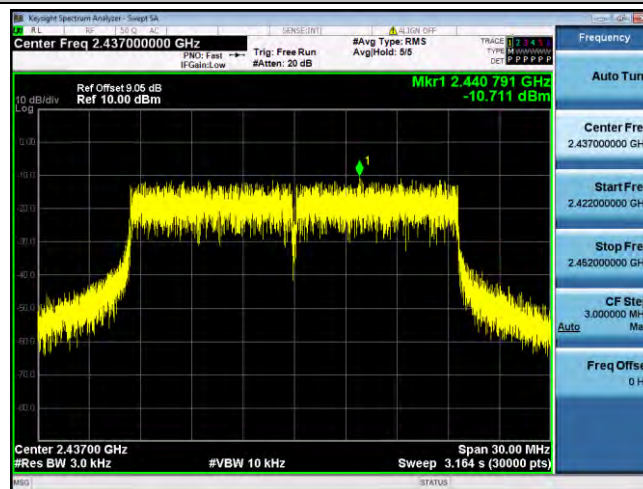
11N20SISO_Ant1_2462



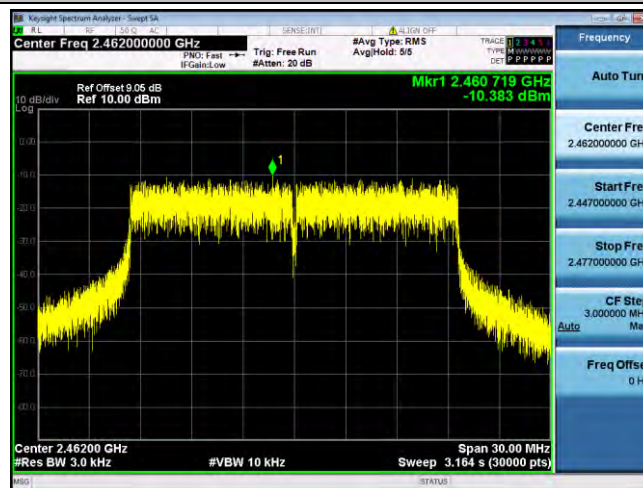
11AX20SISO_Ant1_2412



11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



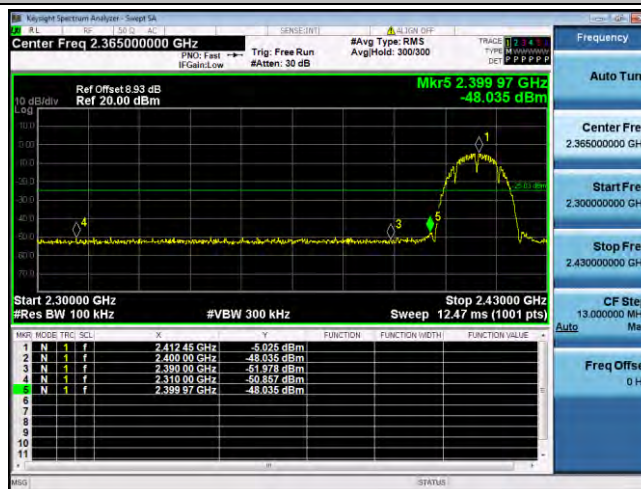
Appendix A.5: Band edge measurements

Test Result

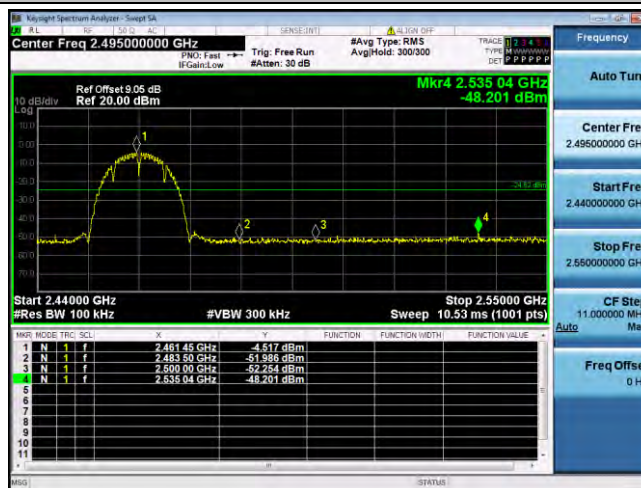
TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-5.03	-48.04	≤-25.03	PASS
		High	2462	-4.52	-48.2	≤-24.52	PASS
11G	Ant1	Low	2412	-12.18	-47.92	≤-32.18	PASS
		High	2462	-11.77	-48.86	≤-31.77	PASS
11N20SISO	Ant1	Low	2412	-12.38	-47.68	≤-32.38	PASS
		High	2462	-13.01	-48.17	≤-33.01	PASS
11N40SISO	Ant1	Low	2422	-16.43	-46.14	≤-36.43	PASS
		High	2452	-15.47	-49.19	≤-35.47	PASS

Test Graphs

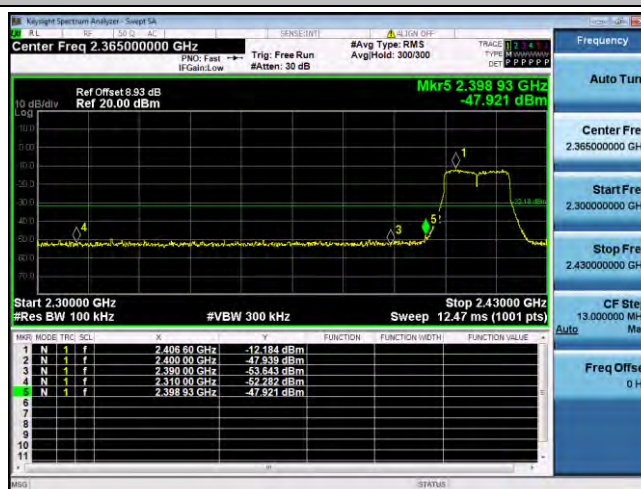
11B_Ant1_Low_2412



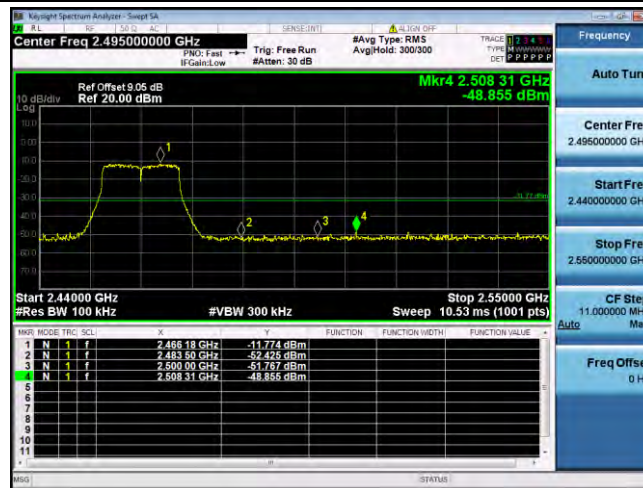
11B_Ant1_High_2462



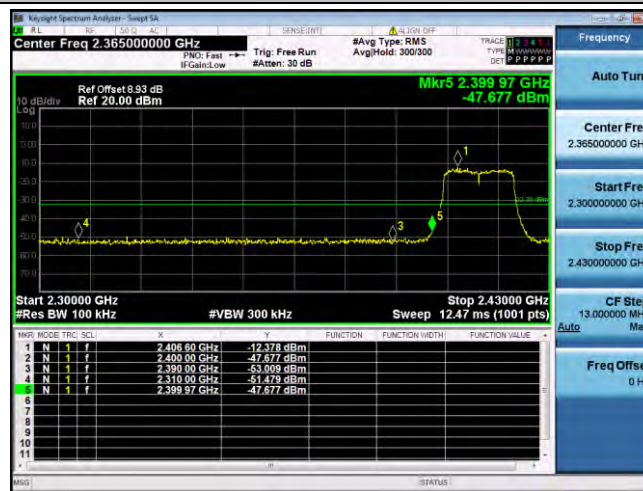
11G_Ant1_Low_2412



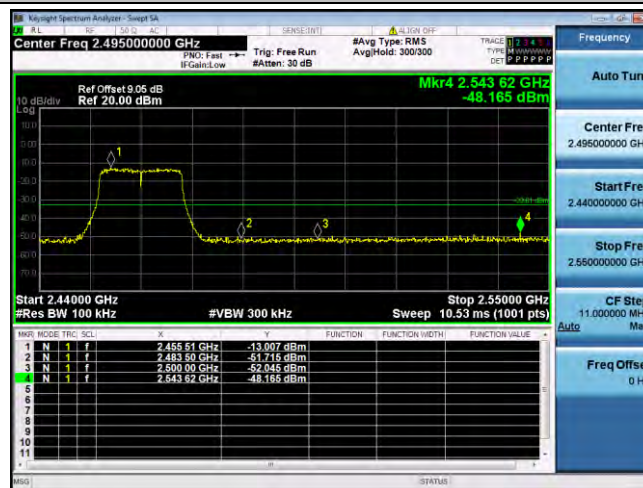
11G_Ant1_High_2462



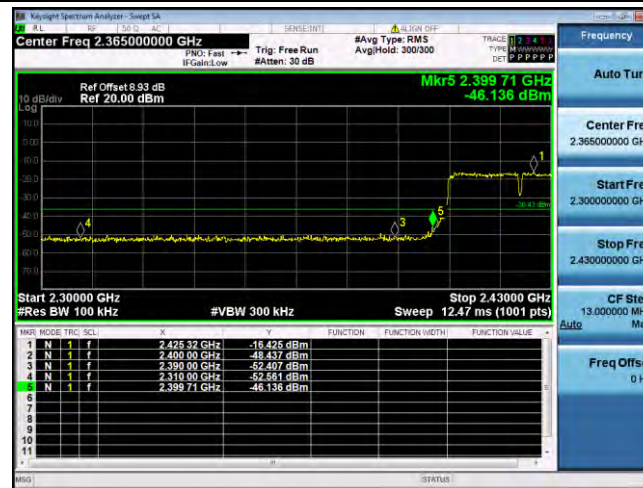
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



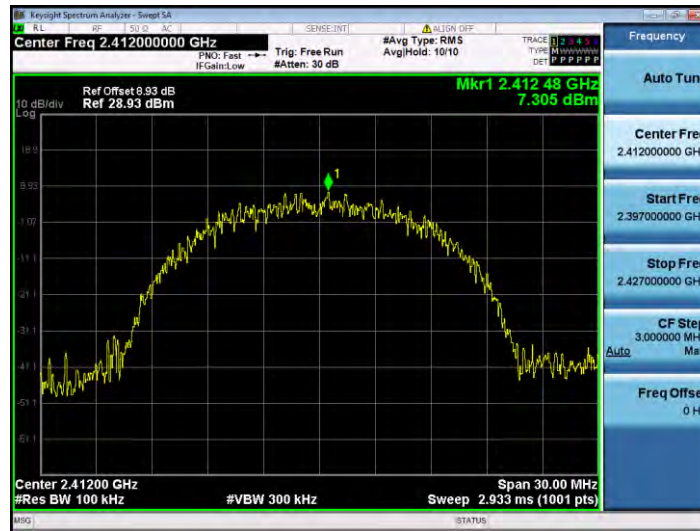
Appendix A.6: Conducted Spurious Emission

Test Result

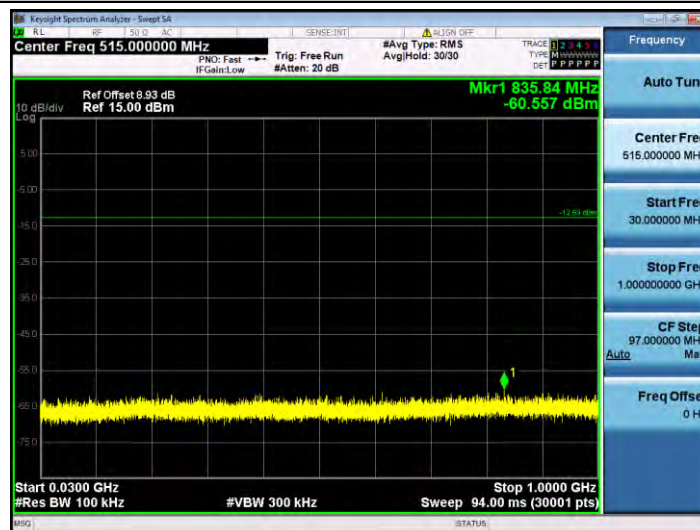
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	7.31	7.31	---	PASS
			30~1000	7.31	-60.56	≤-12.69	PASS
			1000~26500	7.31	-41.08	≤-12.69	PASS
		2437	Reference	-5.11	-5.11	---	PASS
			30~1000	-5.11	-60.52	≤-25.11	PASS
			1000~26500	-5.11	-48.05	≤-25.11	PASS
		2462	Reference	-4.79	-4.79	---	PASS
			30~1000	-4.79	-53.89	≤-24.79	PASS
			1000~26500	-4.79	-47.81	≤-24.79	PASS
11G	Ant1	2412	Reference	-13.11	-13.11	---	PASS
			30~1000	-13.11	-60.55	≤-33.11	PASS
			1000~26500	-13.11	-45.88	≤-33.11	PASS
		2437	Reference	-12.50	-12.50	---	PASS
			30~1000	-12.50	-53.71	≤-32.5	PASS
			1000~26500	-12.50	-47.63	≤-32.5	PASS
		2462	Reference	-11.95	-11.95	---	PASS
			30~1000	-11.95	-60.88	≤-31.95	PASS
			1000~26500	-11.95	-48.03	≤-31.95	PASS
11N20SISO	Ant1	2412	Reference	-13.55	-13.55	---	PASS
			30~1000	-13.55	-60.7	≤-33.55	PASS
			1000~26500	-13.55	-47.87	≤-33.55	PASS
		2437	Reference	-13.71	-13.71	---	PASS
			30~1000	-13.71	-58.89	≤-33.71	PASS
			1000~26500	-13.71	-47.78	≤-33.71	PASS
		2462	Reference	-13.81	-13.81	---	PASS
			30~1000	-13.81	-57.09	≤-33.81	PASS
			1000~26500	-13.81	-47.69	≤-33.81	PASS
11N40SISO	Ant1	2422	Reference	-16.32	-16.32	---	PASS
			30~1000	-16.32	-60.65	≤-36.32	PASS
			1000~26500	-16.32	-47.37	≤-36.32	PASS
		2437	Reference	-16.44	-16.44	---	PASS
			30~1000	-16.44	-46.45	≤-36.44	PASS
			1000~26500	-16.44	-47.37	≤-36.44	PASS
		2452	Reference	-16.00	-16.00	---	PASS
			30~1000	-16.00	-59.28	≤-36	PASS
			1000~26500	-16.00	-48.18	≤-36	PASS

Test Graphs

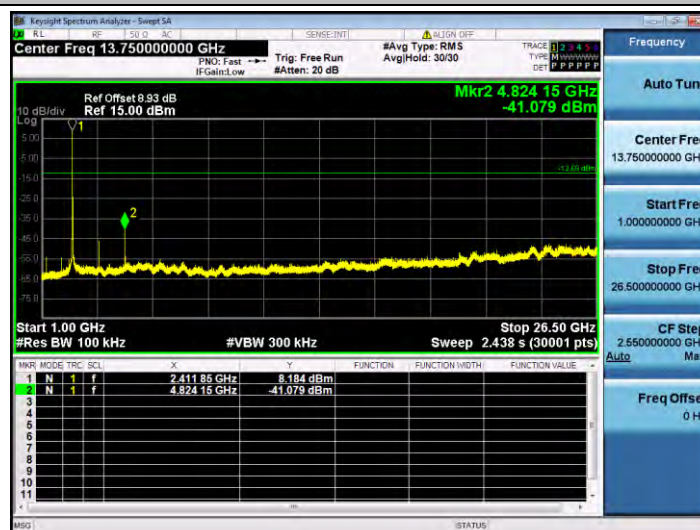
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



11B_Ant1_2412_1000~26500



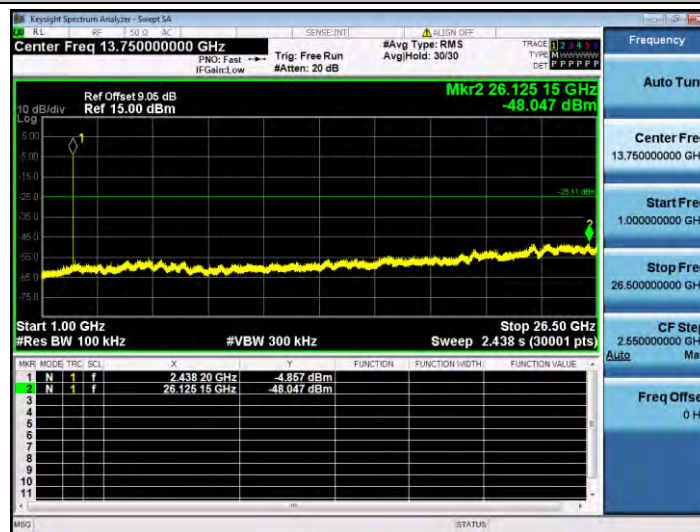
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



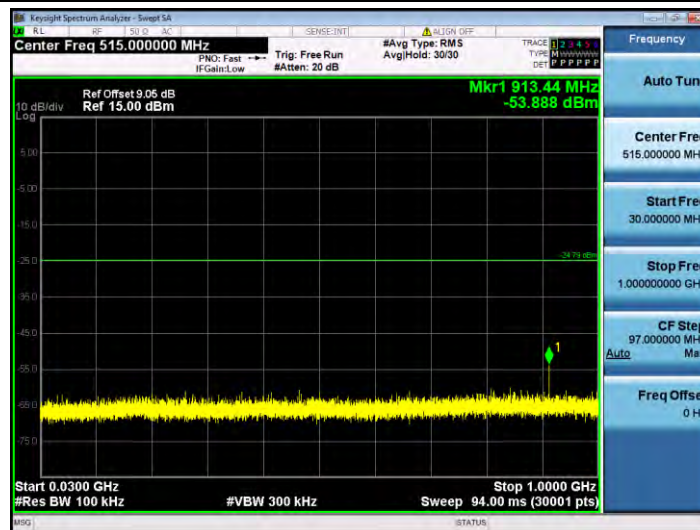
11B_Ant1_2437_1000~26500



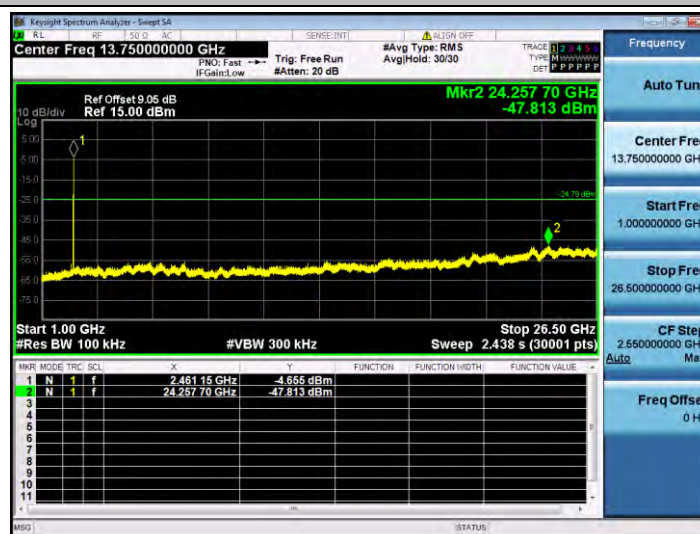
11B_Ant1_2462_0~Reference



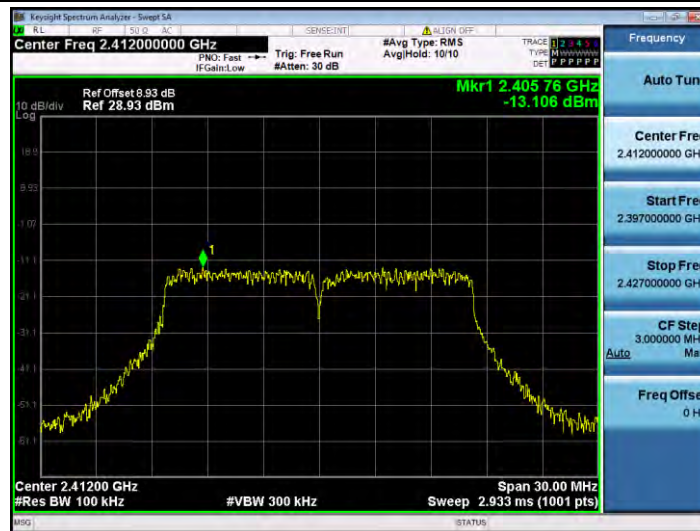
11B_Ant1_2462_30~1000



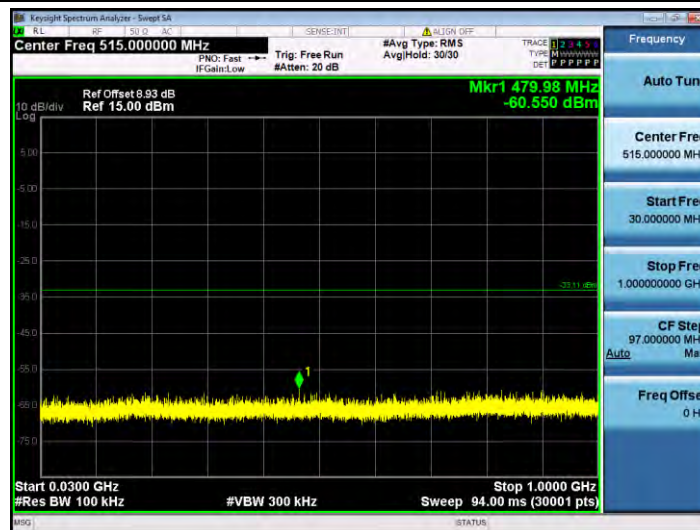
11B_Ant1_2462_1000~26500



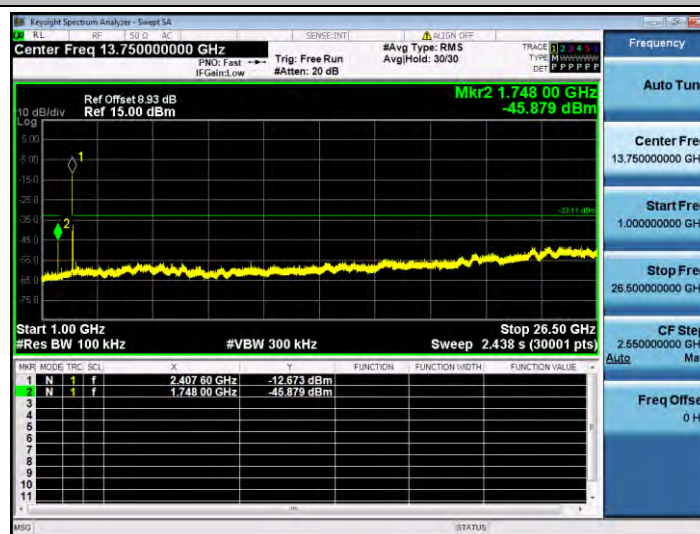
11G_Ant1_2412_0~Reference



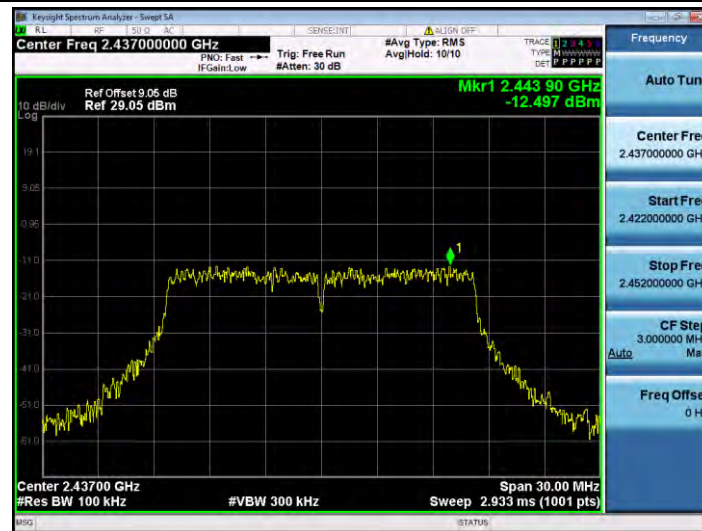
11G_Ant1_2412_30~1000



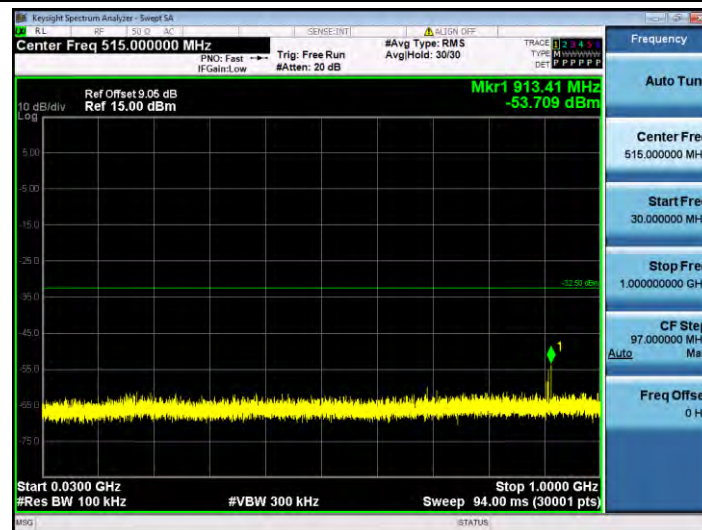
11G_Ant1_2412_1000~26500



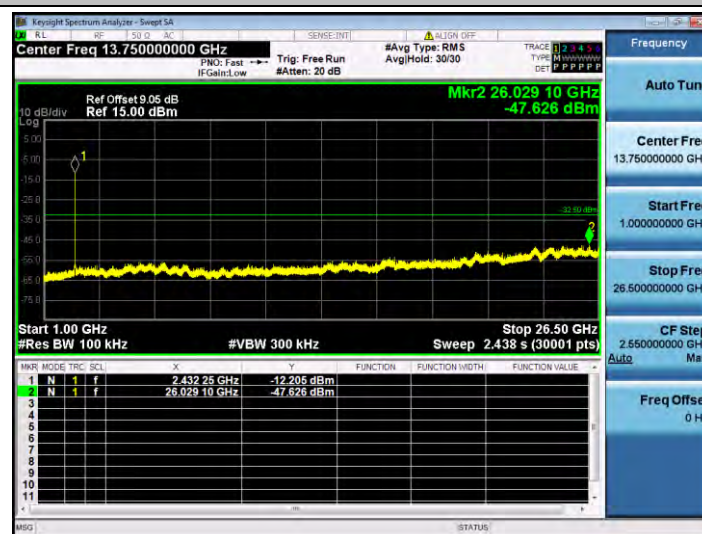
11G_Ant1_2437_0~Reference



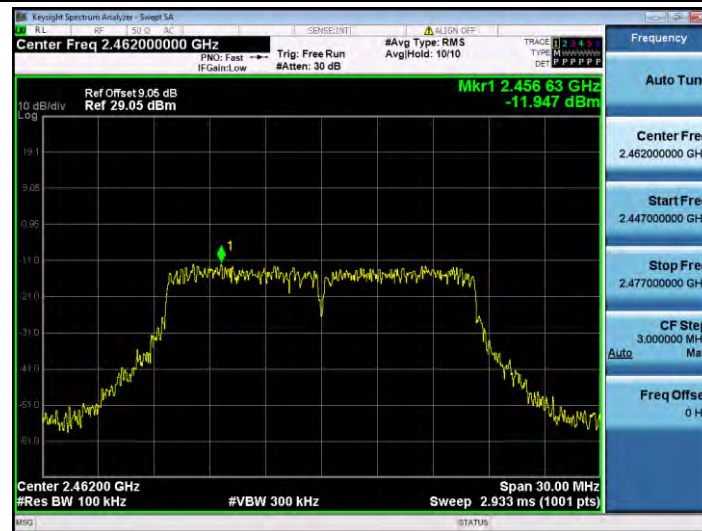
11G_Ant1_2437_30~1000



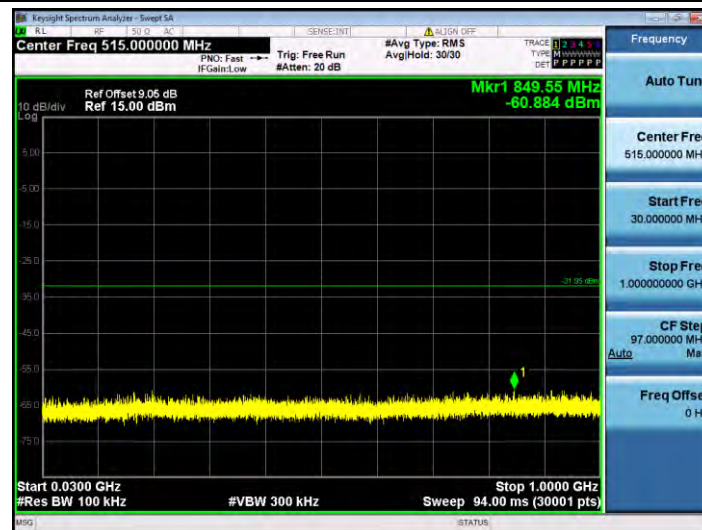
11G_Ant1_2437_1000~26500



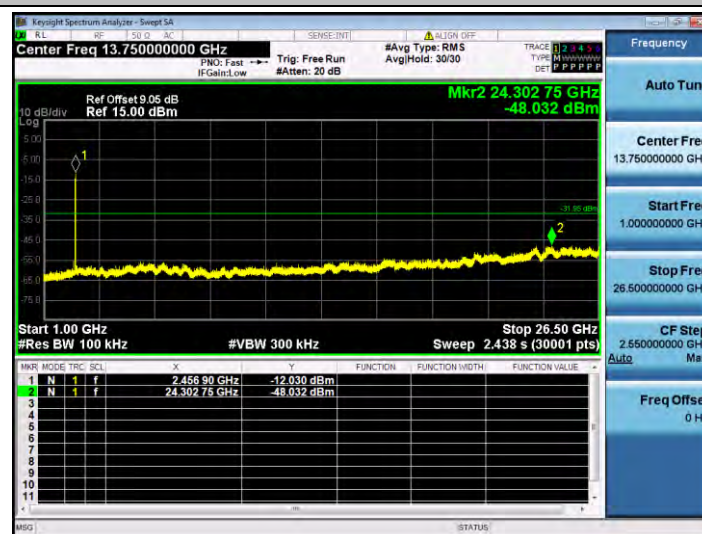
11G_Ant1_2462_0~Reference



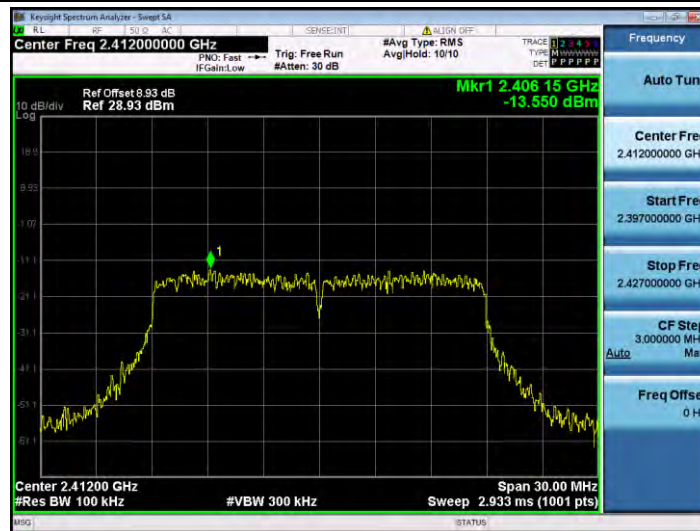
11G_Ant1_2462_30~1000



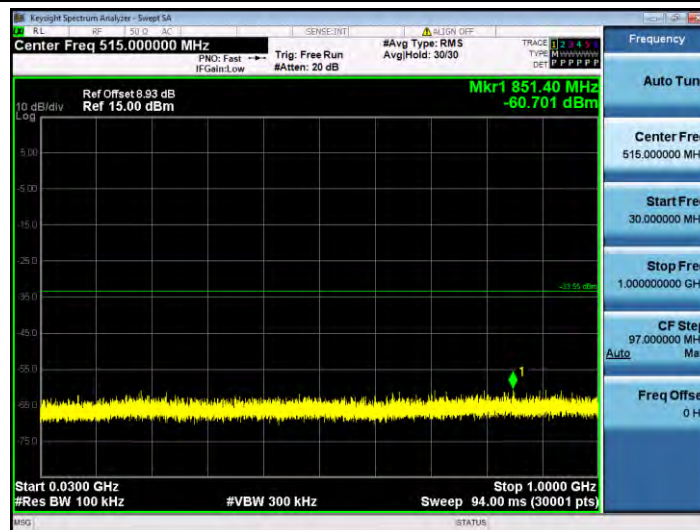
11G_Ant1_2462_1000~26500



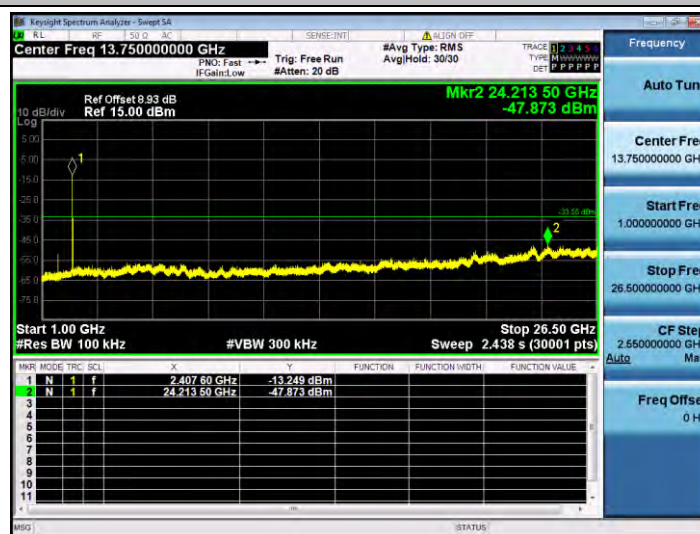
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



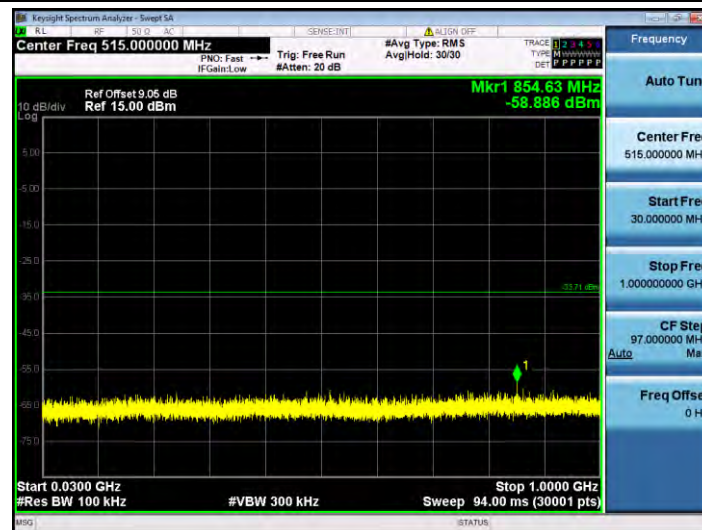
11N20SISO_Ant1_2412_1000~26500



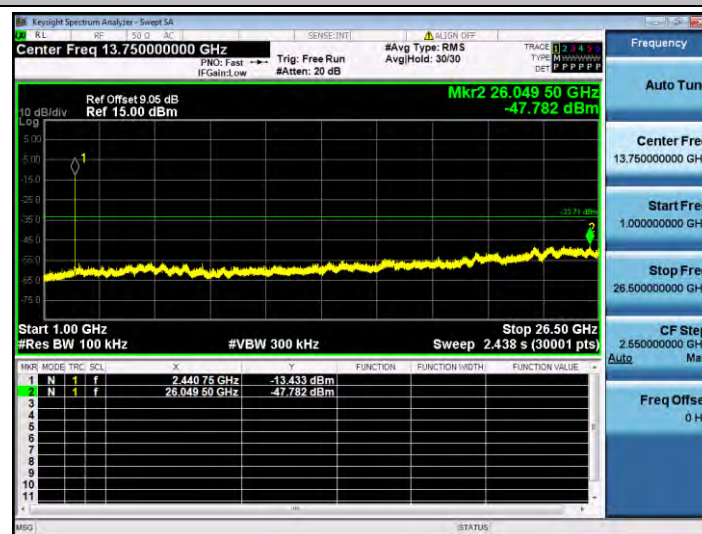
11N20SISO_Ant1_2437_0~Reference



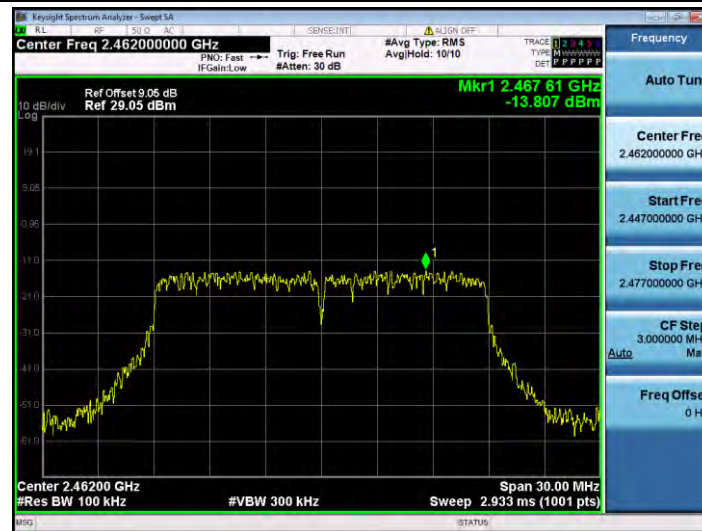
11N20SISO_Ant1_2437_30~1000



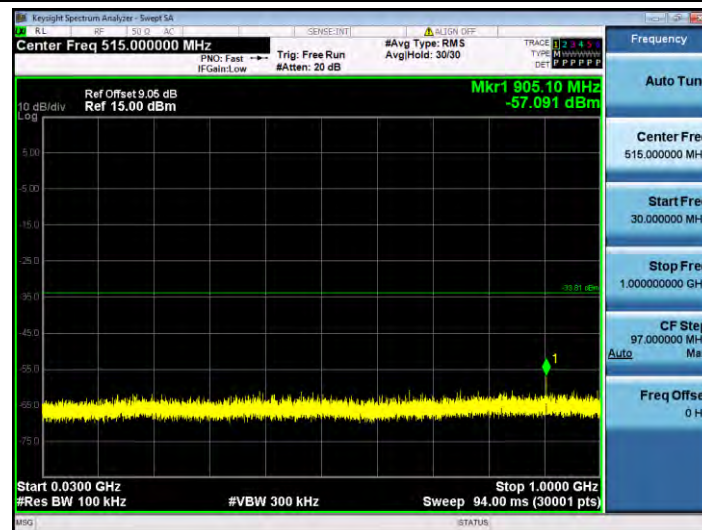
11N20SISO_Ant1_2437_1000~26500



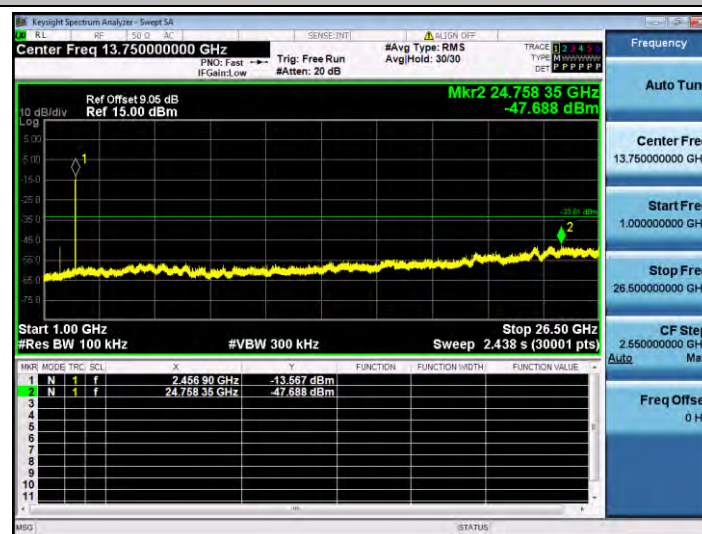
11N20SISO_Ant1_2462_0~Reference



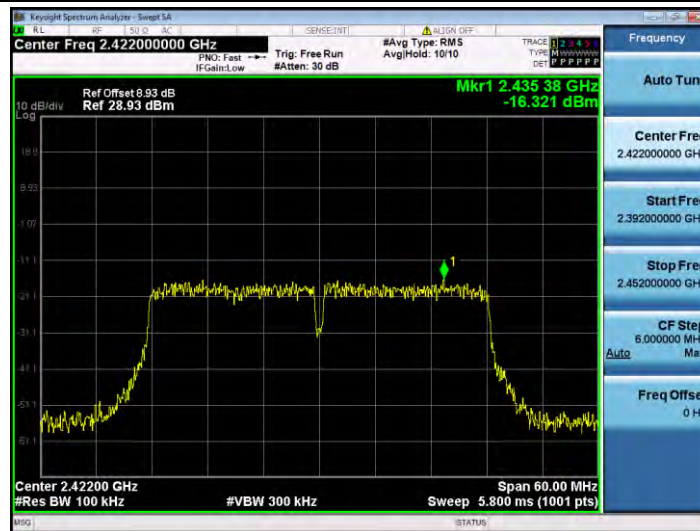
11N20SISO_Ant1_2462_30~1000



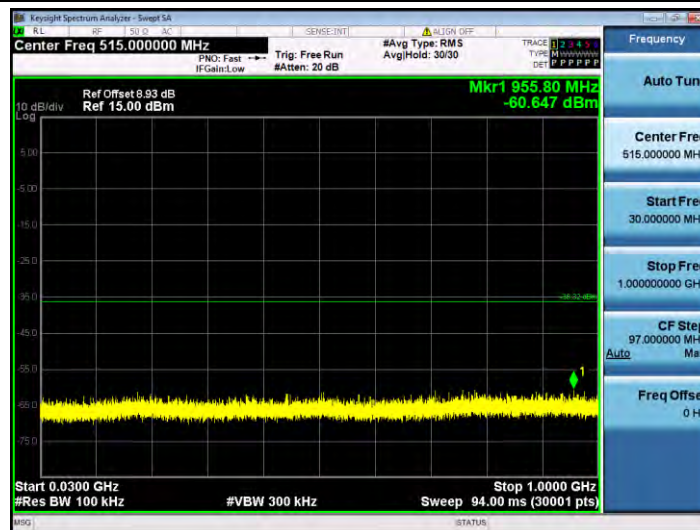
11N20SISO_Ant1_2462_1000~26500



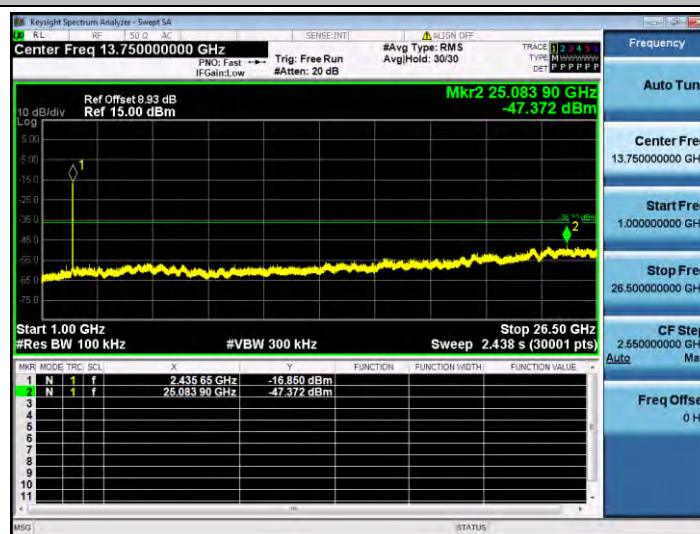
11N40SISO_Ant1_2422_0~Reference



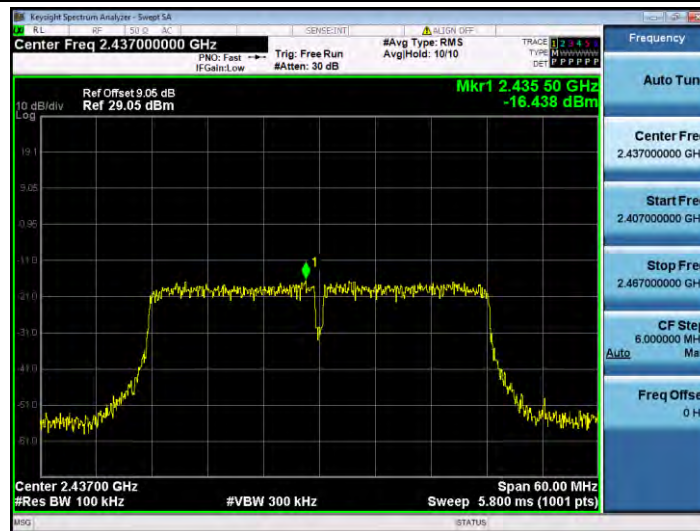
11N40SISO_Ant1_2422_30~1000



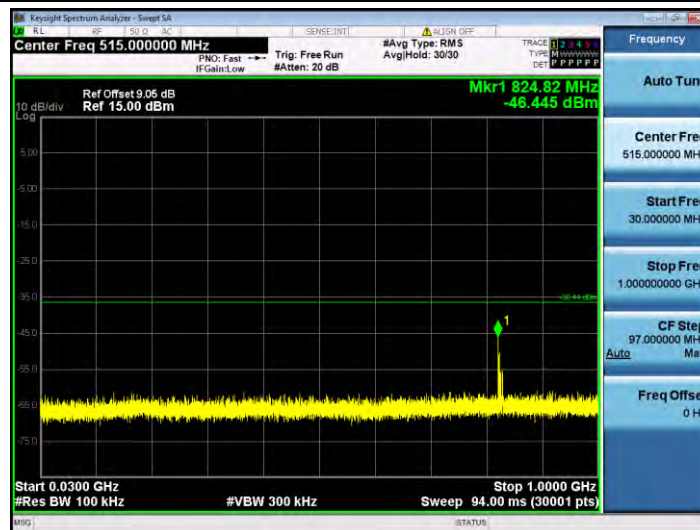
11N40SISO_Ant1_2422_1000~26500



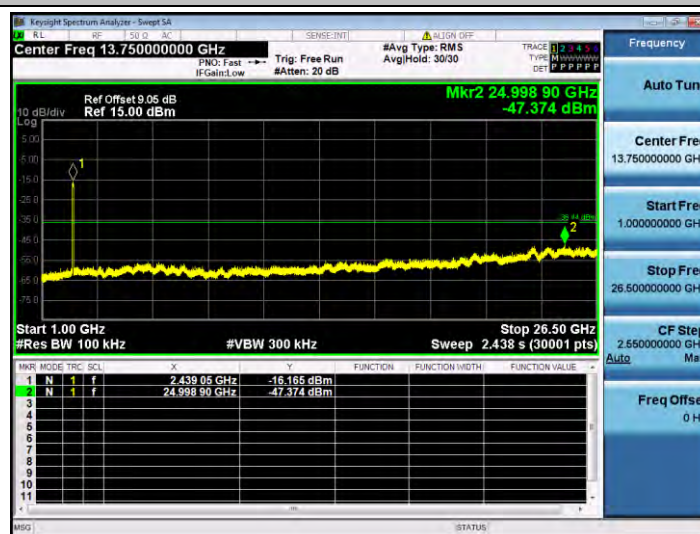
11N40SISO_Ant1_2437_0~Reference



11N40SISO_Ant1_2437_30~1000



11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference

The screenshot shows a Keysight Spectrum Analyzer interface. The main display area shows a noise floor at -59.277 dBm. The frequency range is from 0.0300 GHz to 1.0000 GHz. The resolution bandwidth (Res BW) is 100 kHz. The video bandwidth (VBW) is 300 kHz. The sweep time is 94.00 ms (30001 pts). The center frequency is 515.000000 MHz. The reference level is 15.00 dBm. The reference offset is 9.05 dB. The measurement type is RMS. The average hold time is 30/30. The trace is labeled 'Mkr1 480.02 MHz -59.277 dBm'. The display is in Log mode. The vertical scale is 10 dB/div. The horizontal scale is 1.00 MHz. The interface includes various control panels for frequency, resolution, and measurement settings.

The screenshot displays a Keysight Spectrum Analyzer interface. The main plot shows a frequency spectrum with a prominent peak at 24.236 GHz, labeled 'Mkr2 24.236 45 GHz -48.176 dBm'. The plot is set to a center frequency of 13.750 GHz and a resolution bandwidth of 100 kHz. The y-axis represents power in dBm, ranging from -75 dB to 10 dB. The x-axis represents frequency in GHz, ranging from 13.7 GHz to 13.8 GHz. A table at the bottom of the plot area lists measurement data for two markers.

MARK	MODE	TRIG	EQ	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.447 55 GHz	-15.971 dBm			
2	N	1	f	24.236 45 GHz	-48.176 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

Appendix A.7: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49	≤-41.20	46.20	≤54	PASS
				AV	2389.960	-44.68	≤-41.20	50.52	≤54	PASS
				AV	2390.000	-44.68	≤-41.20	50.52	≤54	PASS
				Peak	2310.000	-43.78	≤-21.20	51.42	≤74	PASS
				Peak	2387.750	-38.68	≤-21.20	56.52	≤74	PASS
				Peak	2390.000	-46.32	≤-21.20	48.88	≤74	PASS
		High	2462	AV	2483.500	-49.15	≤-41.20	46.05	≤54	PASS
				AV	2498.080	-48.9	≤-41.20	46.30	≤54	PASS
				AV	2500.000	-48.93	≤-41.20	46.27	≤54	PASS
				Peak	2483.500	-49.08	≤-21.20	46.12	≤74	PASS
				Peak	2486.860	-41.75	≤-21.20	53.45	≤74	PASS
				Peak	2500.000	-47.92	≤-21.20	47.28	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.61	≤-41.20	45.59	≤54	PASS
				AV	2389.960	-49.17	≤-41.20	46.03	≤54	PASS
				AV	2390.000	-49.17	≤-41.20	46.03	≤54	PASS
				Peak	2310.000	-44.59	≤-21.20	50.61	≤74	PASS
				Peak	2330.680	-40	≤-21.20	55.20	≤74	PASS
				Peak	2390.000	-48.04	≤-21.20	47.16	≤74	PASS
		High	2462	AV	2483.500	-49.13	≤-41.20	46.07	≤54	PASS
				AV	2499.620	-48.92	≤-41.20	46.28	≤54	PASS
				AV	2500.000	-48.94	≤-41.20	46.26	≤54	PASS
				Peak	2483.500	-49.48	≤-21.20	45.72	≤74	PASS
				Peak	2499.620	-41.72	≤-21.20	53.48	≤74	PASS
				Peak	2500.000	-42.74	≤-21.20	52.46	≤74	PASS
11N20SIS O	Ant1	Low	2412	AV	2310.000	-49.61	≤-41.20	45.59	≤54	PASS
				AV	2389.960	-49.2	≤-41.20	46.00	≤54	PASS
				AV	2390.000	-49.2	≤-41.20	46.00	≤54	PASS
				Peak	2310.000	-48.71	≤-21.20	46.49	≤74	PASS
				Peak	2361.100	-40.29	≤-21.20	54.91	≤74	PASS
				Peak	2390.000	-46.6	≤-21.20	48.60	≤74	PASS
		High	2462	AV	2483.500	-49.11	≤-41.20	46.09	≤54	PASS
				AV	2499.950	-48.91	≤-41.20	46.29	≤54	PASS
				AV	2500.000	-48.91	≤-41.20	46.29	≤54	PASS
				Peak	2483.500	-42.46	≤-21.20	52.74	≤74	PASS
				Peak	2488.400	-41.53	≤-21.20	53.67	≤74	PASS
				Peak	2500.000	-46.52	≤-21.20	48.68	≤74	PASS
11N40SIS	Ant1	Low	2422	AV	2310.000	-49.6	≤-41.20	45.60	≤54	PASS

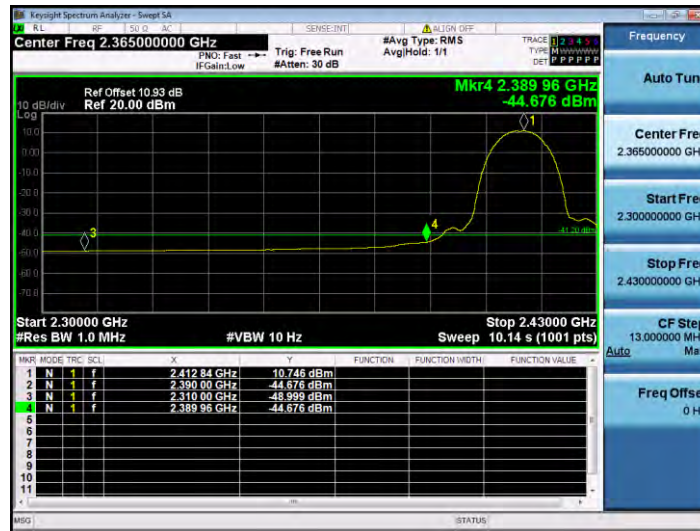
O				AV	2389.960	-49.08	≤ -41.20	46.12	≤ 54	PASS
				AV	2390.000	-49.08	≤ -41.20	46.12	≤ 54	PASS
				Peak	2310.000	-45.47	≤ -21.20	49.73	≤ 74	PASS
				Peak	2370.720	-40.46	≤ -21.20	54.74	≤ 74	PASS
				Peak	2390.000	-47.61	≤ -21.20	47.59	≤ 74	PASS
		High	2452	AV	2483.500	-49.08	≤ -41.20	46.12	≤ 54	PASS
				AV	2499.070	-48.91	≤ -41.20	46.29	≤ 54	PASS
				AV	2500.000	-48.94	≤ -41.20	46.26	≤ 54	PASS
				Peak	2483.500	-49.59	≤ -21.20	45.61	≤ 74	PASS
				Peak	2499.180	-40.37	≤ -21.20	54.83	≤ 74	PASS
				Peak	2500.000	-47.13	≤ -21.20	48.07	≤ 74	PASS

Note:

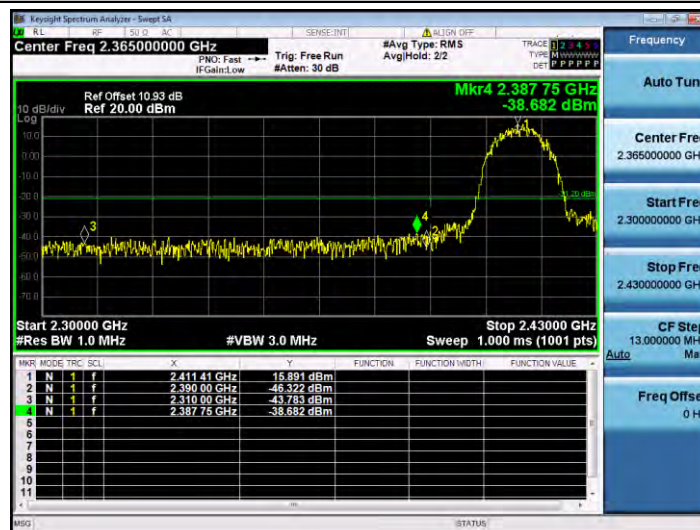
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

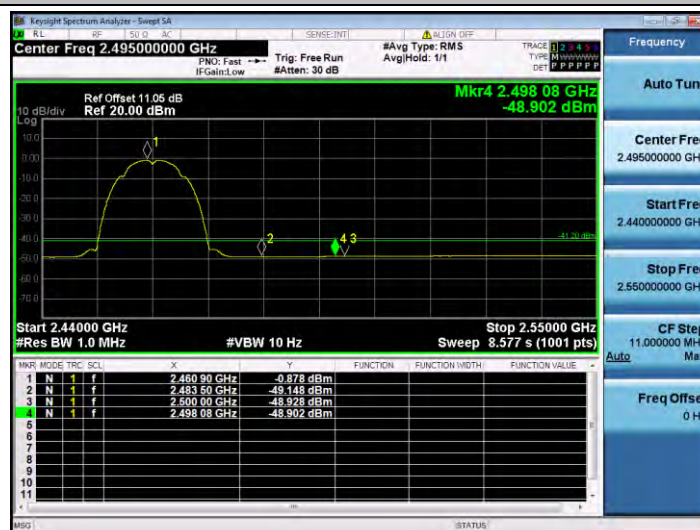
11B_Ant1_Low_2412_AV



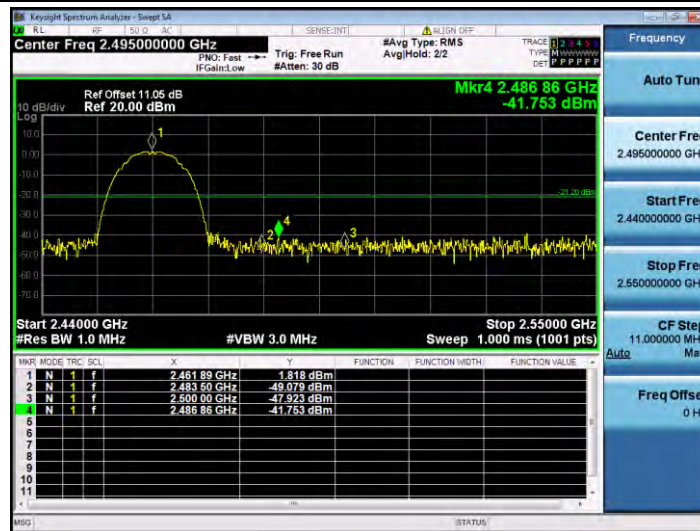
11B_Ant1_Low_2412_Peak



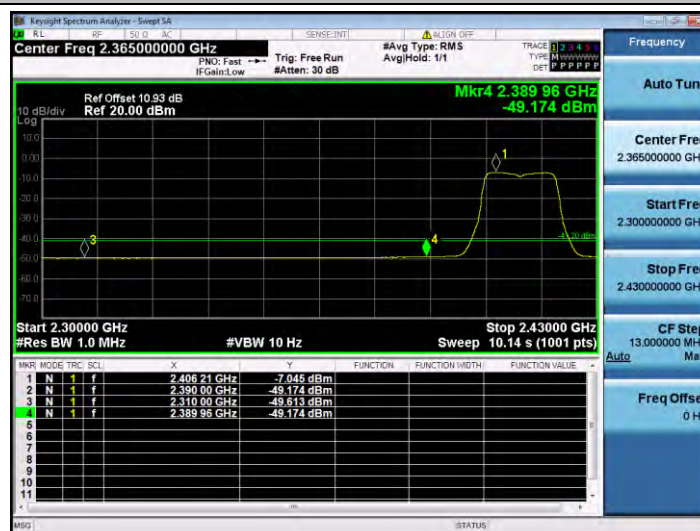
11B_Ant1_High_2462_AV



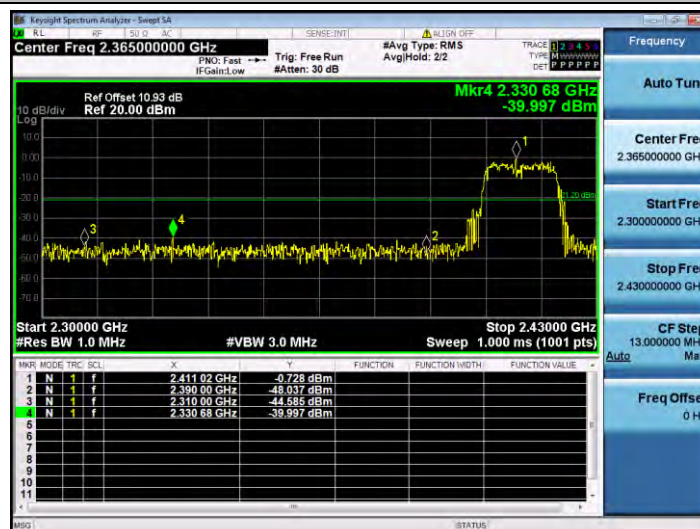
11B_Ant1_High_2462_Peak



11G_Ant1_Low_2412_AV

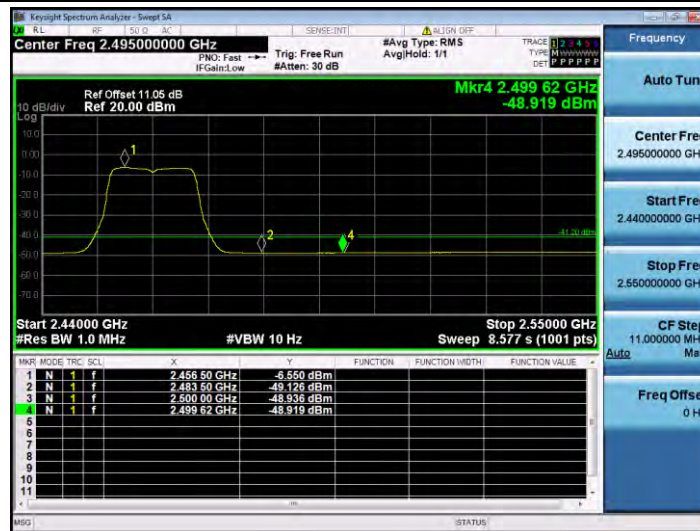


11G_Ant1_Low_2412_Peak

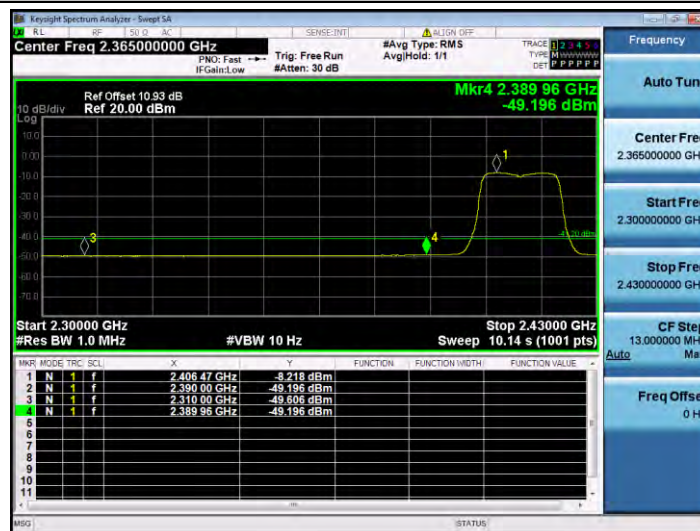


11G_Ant1_High_2462_AV

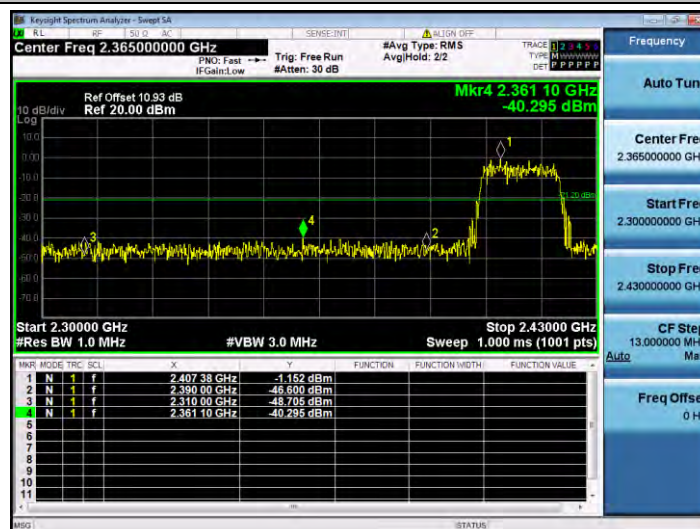
11G_Ant1_High_2462_Peak



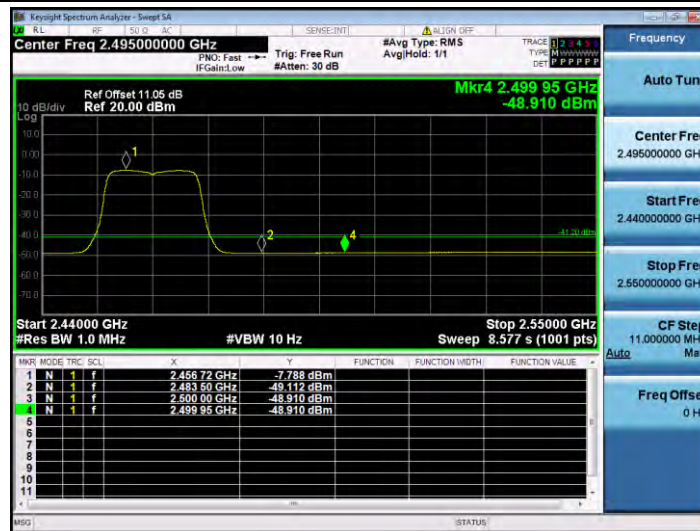
11N20SISO_Ant1_Low_2412_AV



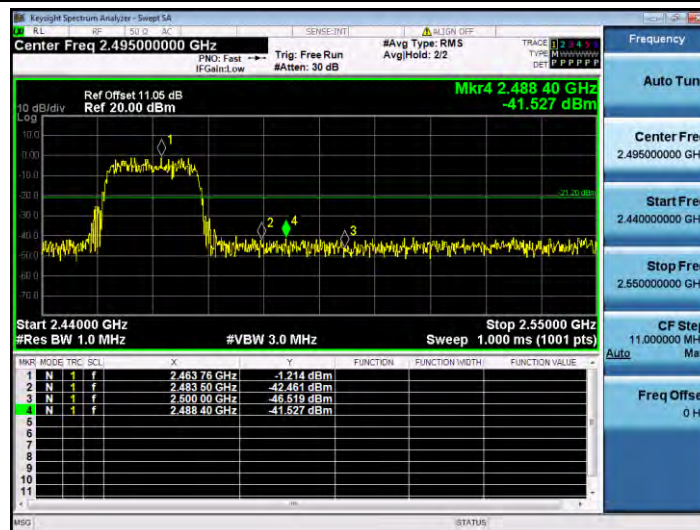
11N20SISO_Ant1_Low_2412_Peak



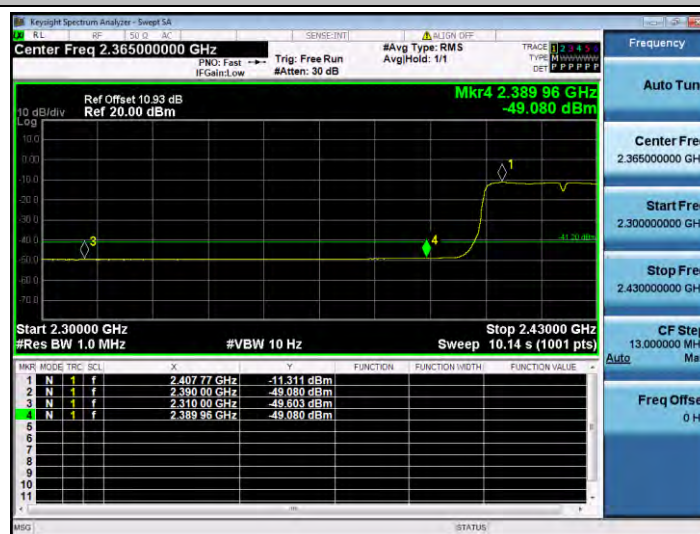
11N20SISO_Ant1_High_2462_AV



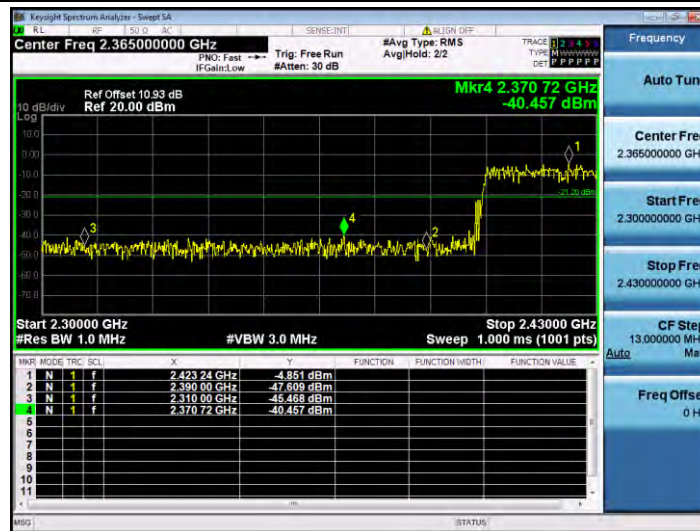
11N20SISO_Ant1_High_2462_Peak



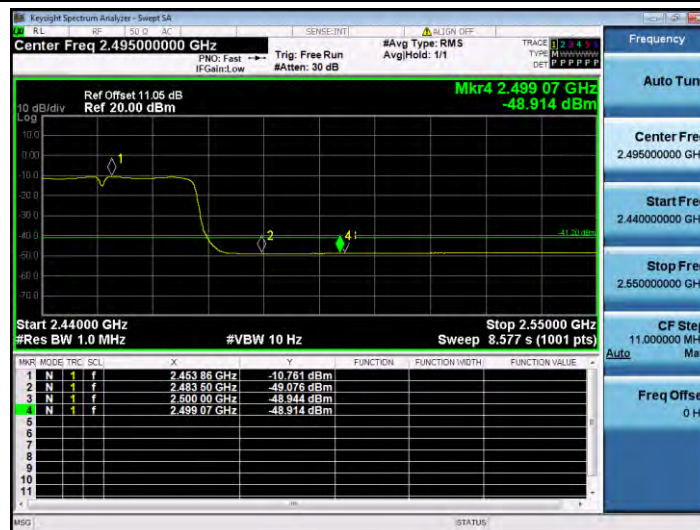
11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV



11N40SISO_Ant1_High_2452_Peak

