



## Appendix A

### RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: IT Camera

Test Model: T30

#### Environmental Conditions

Temperature:	21.6° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

#### A.1 Duty Cycle

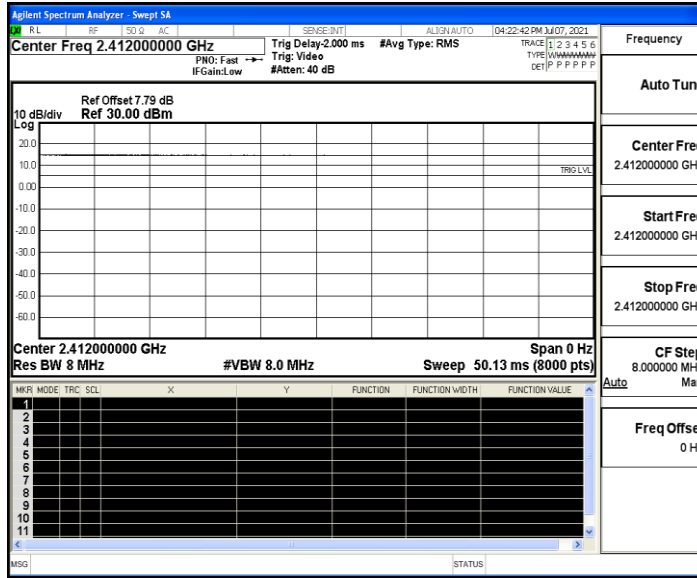
##### Test Result

TestMode	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	2412	50.00	50.00	100.00	---	PASS
	2437	50.00	50.00	100.00	---	PASS
	2462	50.00	50.00	100.00	---	PASS
11G	2412	50.00	50.00	100.00	---	PASS
	2437	50.00	50.00	100.00	---	PASS
	2462	50.00	50.00	100.00	---	PASS
11N20SISO	2412	50.00	50.00	100.00	---	PASS
	2437	50.00	50.00	100.00	---	PASS
	2462	50.00	50.00	100.00	---	PASS
11N40SISO	2422	50.00	50.00	100.00	---	PASS
	2437	50.00	50.00	100.00	---	PASS
	2452	50.00	50.00	100.00	---	PASS

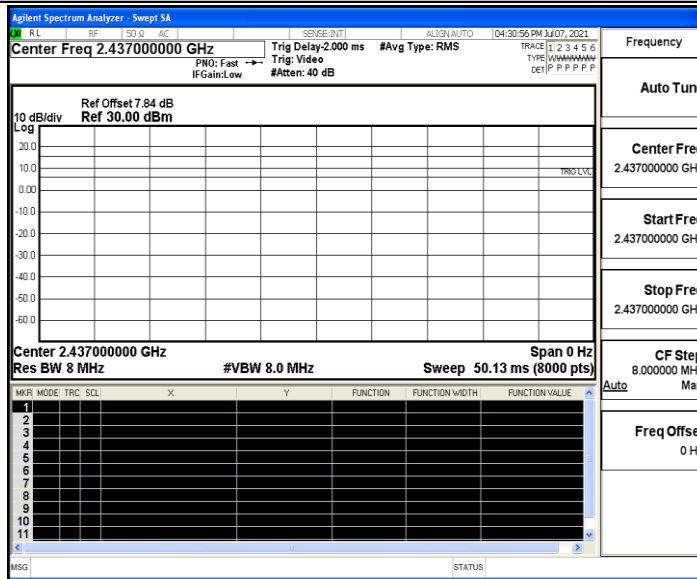


### Test Graphs

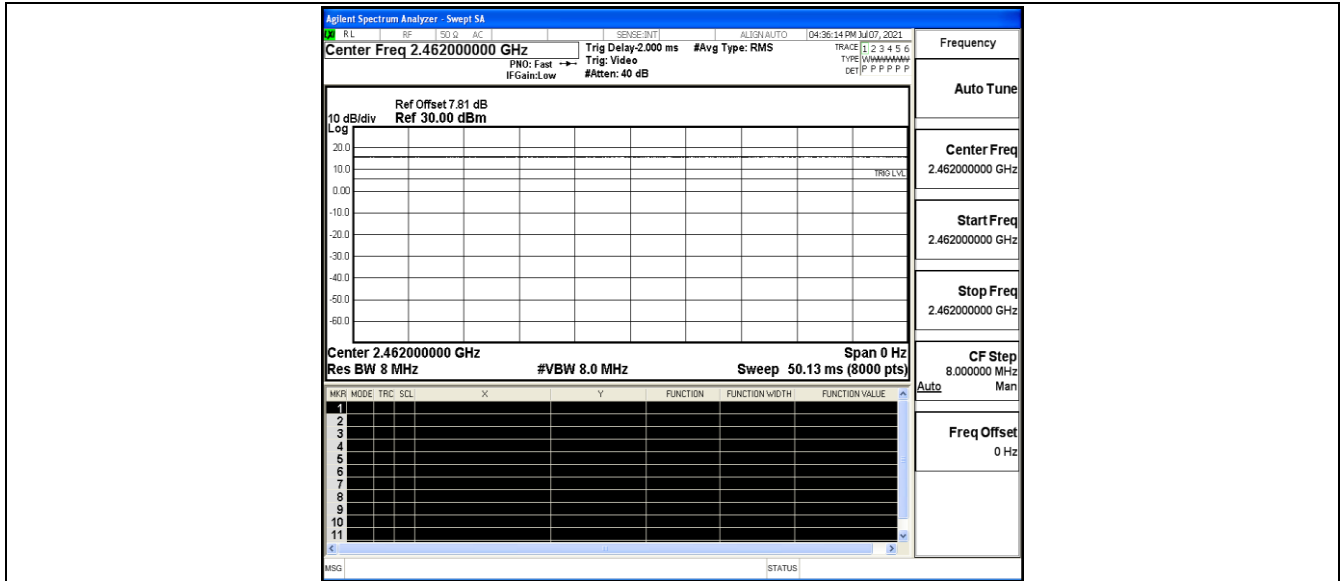
11B\_Ant1\_2412



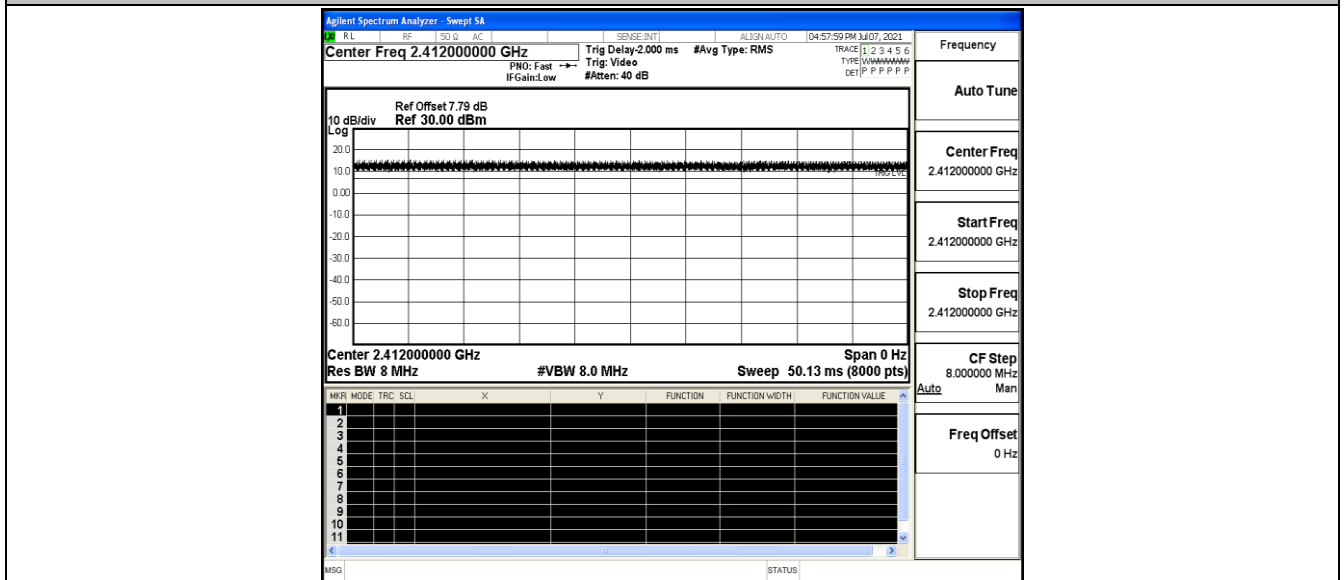
11B\_Ant1\_2437



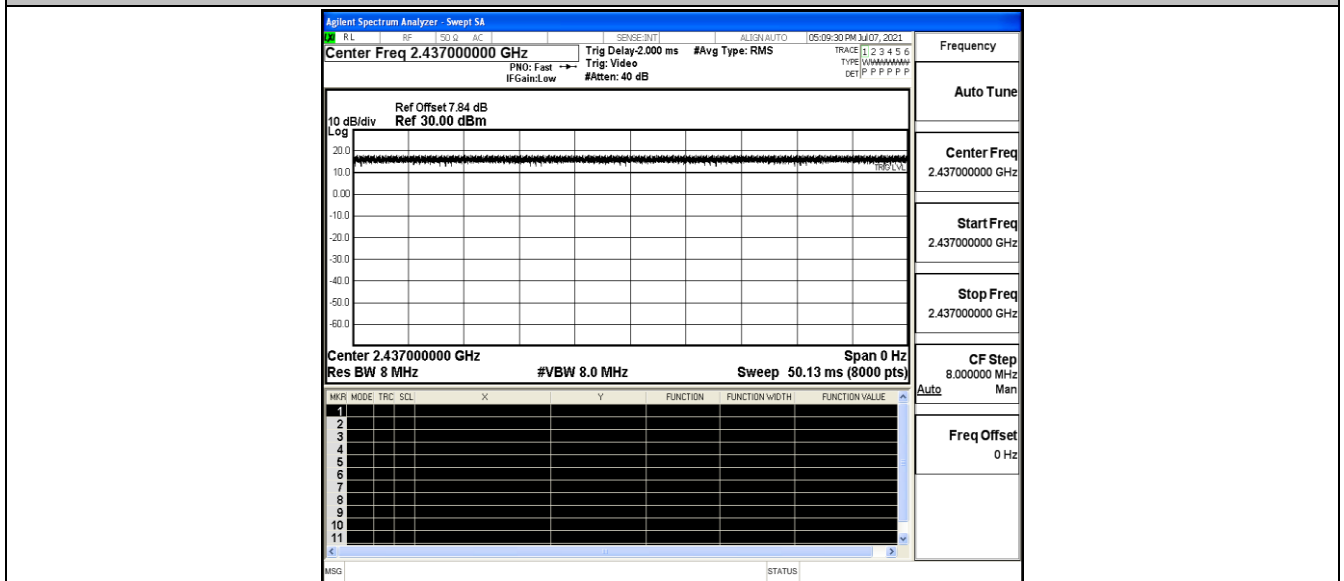
11B\_Ant1\_2462



11G\_Ant1\_2412

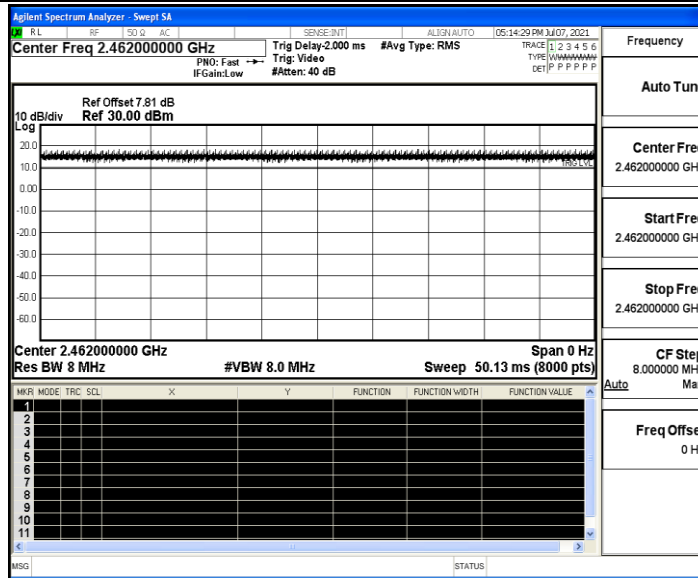


11G\_Ant1\_2437

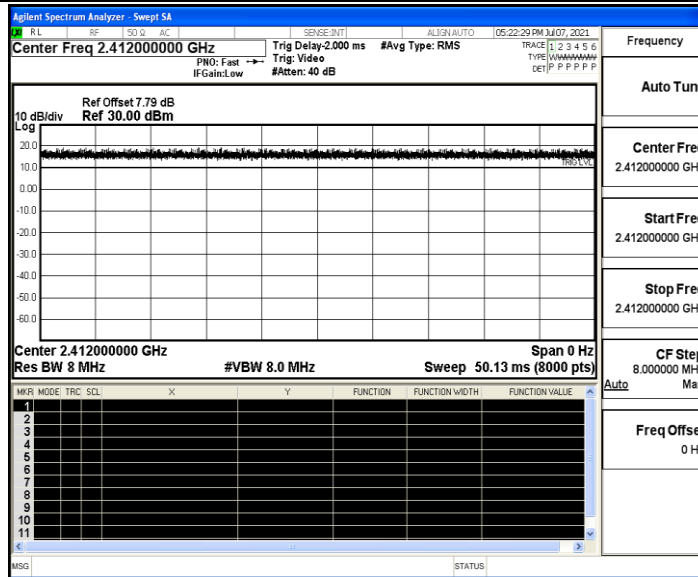




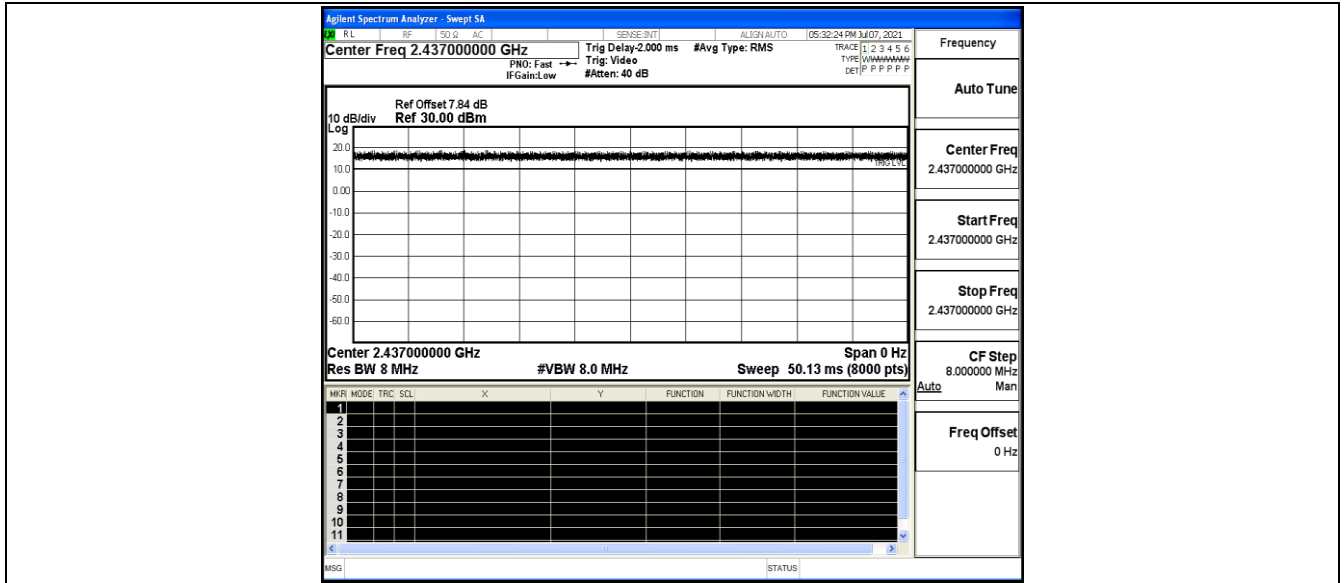
11G\_Ant1\_2462



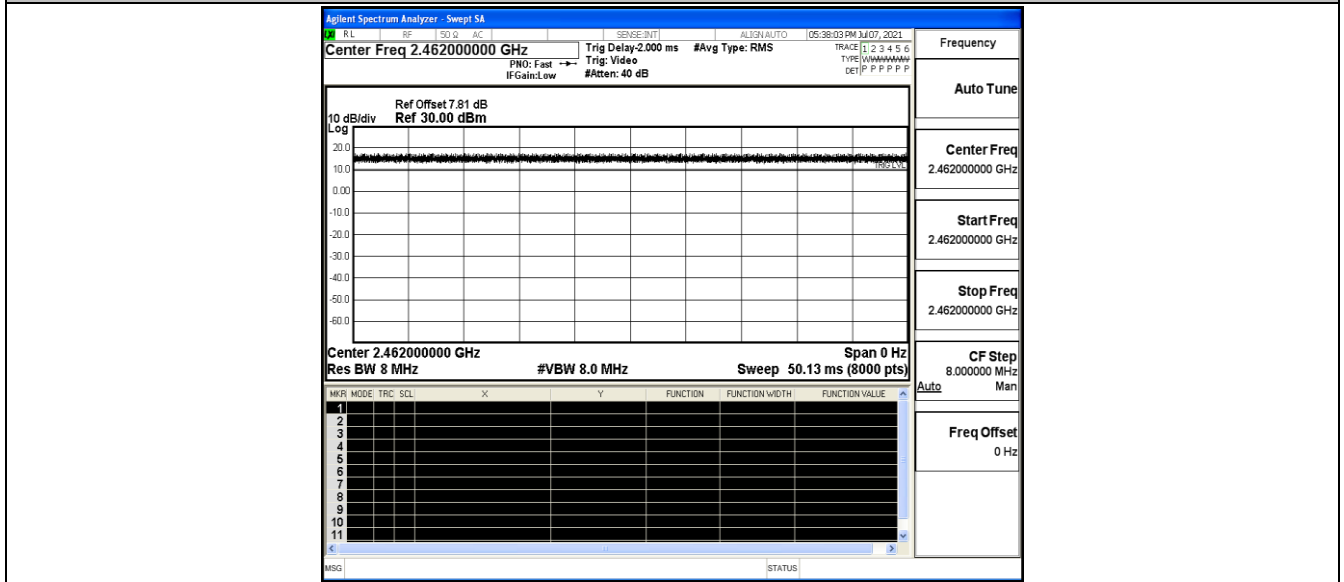
11N20SISO\_Ant1\_2412



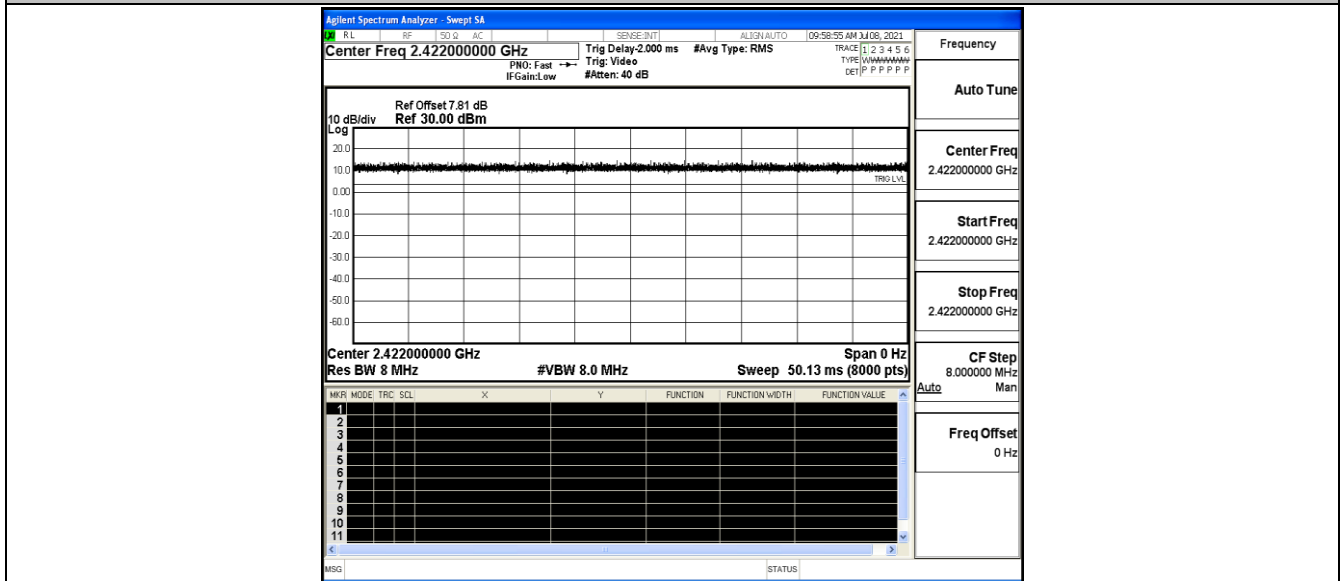
11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462

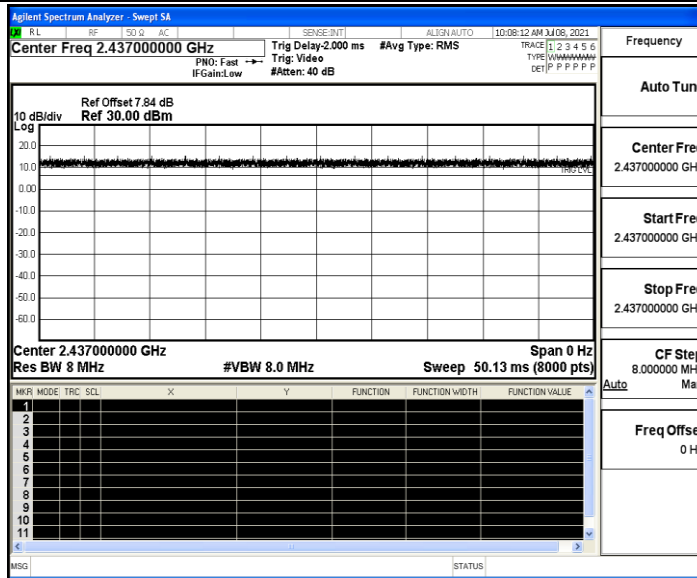


11N40SISO\_Ant1\_2422

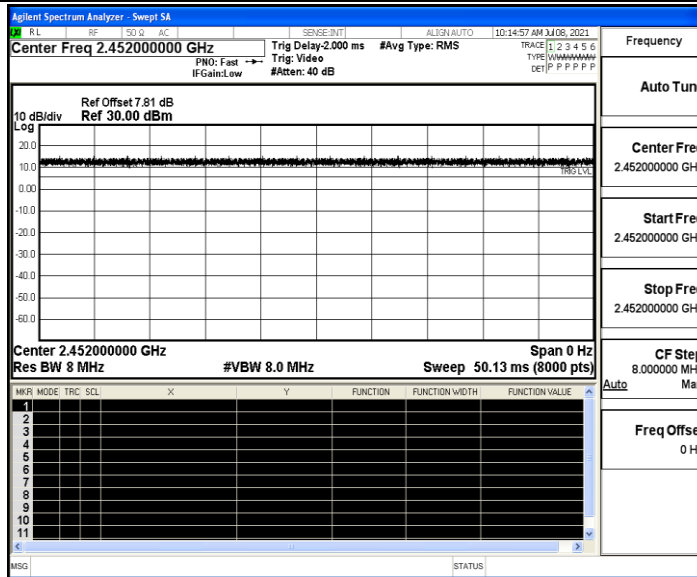




11N40SISO\_Ant1\_2437



11N40SISO\_Ant1\_2452





## A.2 Maximum conducted output power

### Test Result

TestMode	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	2412	11.50	≤30	PASS
	2437	12.41	≤30	PASS
	2462	12.76	≤30	PASS
11G	2412	11.90	≤30	PASS
	2437	12.32	≤30	PASS
	2462	11.40	≤30	PASS
11N20SISO	2412	11.86	≤30	PASS
	2437	12.20	≤30	PASS
	2462	11.31	≤30	PASS
11N40SISO	2422	11.43	≤30	PASS
	2437	11.64	≤30	PASS
	2452	11.60	≤30	PASS



### A.3 Maximum power spectral density

#### Test Result

TestMode	Channel	Meas.Level [dBm/10kHz]	Convert Factor	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	2412	-15.51	-5.23	-20.74	≤8	PASS
	2437	-14.59	-5.23	-19.82	≤8	PASS
	2462	-14.32	-5.23	-19.55	≤8	PASS
11G	2412	-16.05	-5.23	-21.28	≤8	PASS
	2437	-15.35	-5.23	-20.58	≤8	PASS
	2462	-16.00	-5.23	-21.23	≤8	PASS
11N20SISO	2412	-15.62	-5.23	-20.85	≤8	PASS
	2437	-15.54	-5.23	-20.77	≤8	PASS
	2462	-16.37	-5.23	-21.6	≤8	PASS
11N40SISO	2422	-20.20	-5.23	-25.43	≤8	PASS
	2437	-18.30	-5.23	-23.53	≤8	PASS
	2452	-18.71	-5.23	-23.94	≤8	PASS

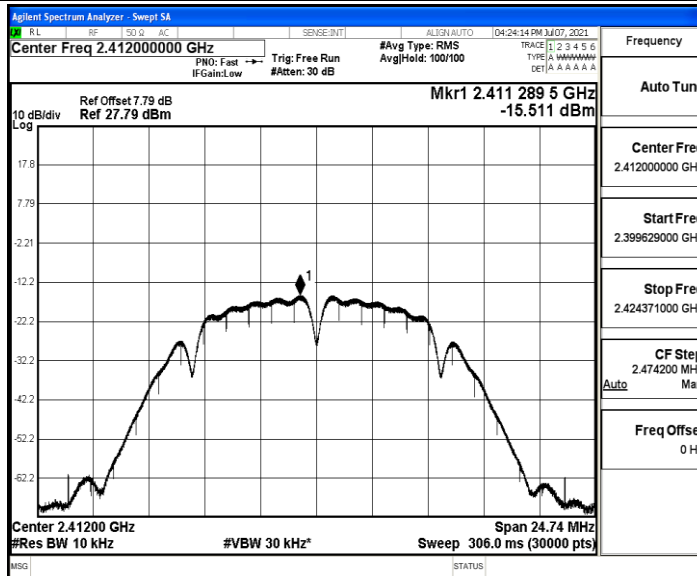
\*\*\*Note: The Convert Factor =  $10 \cdot \log(3\text{kHz}/10\text{kHz}) = -5.23$



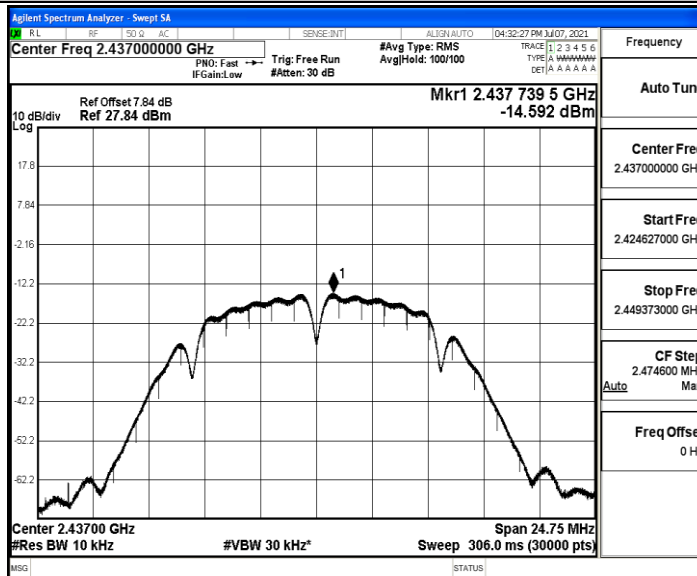


### Test Graphs

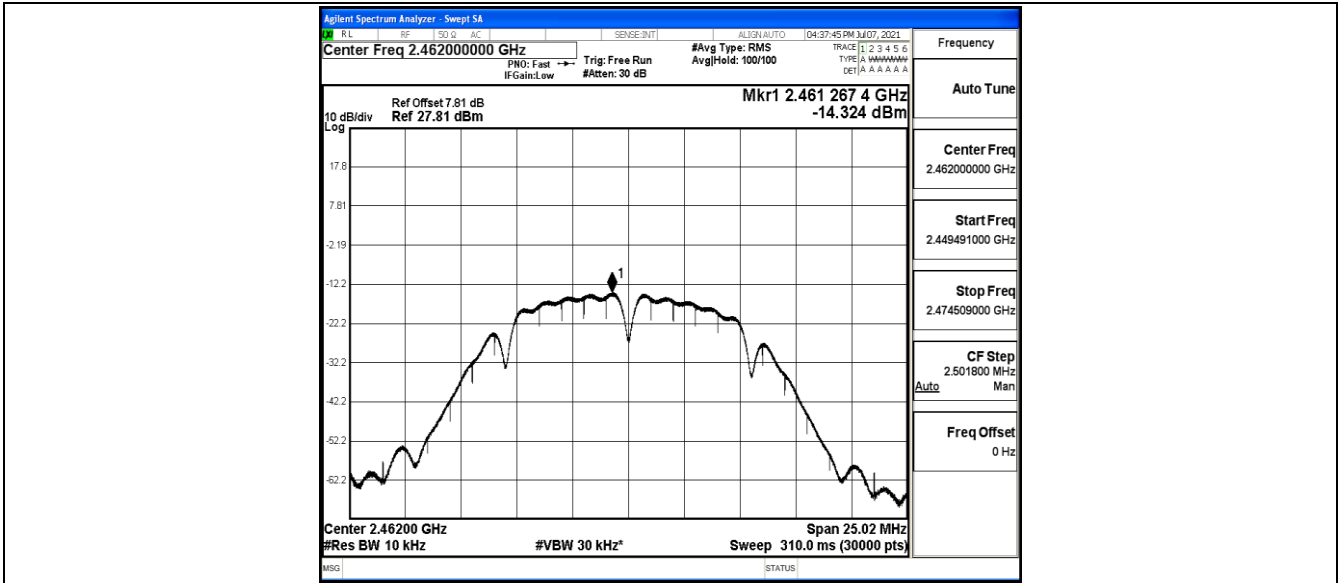
11B\_Ant1\_2412



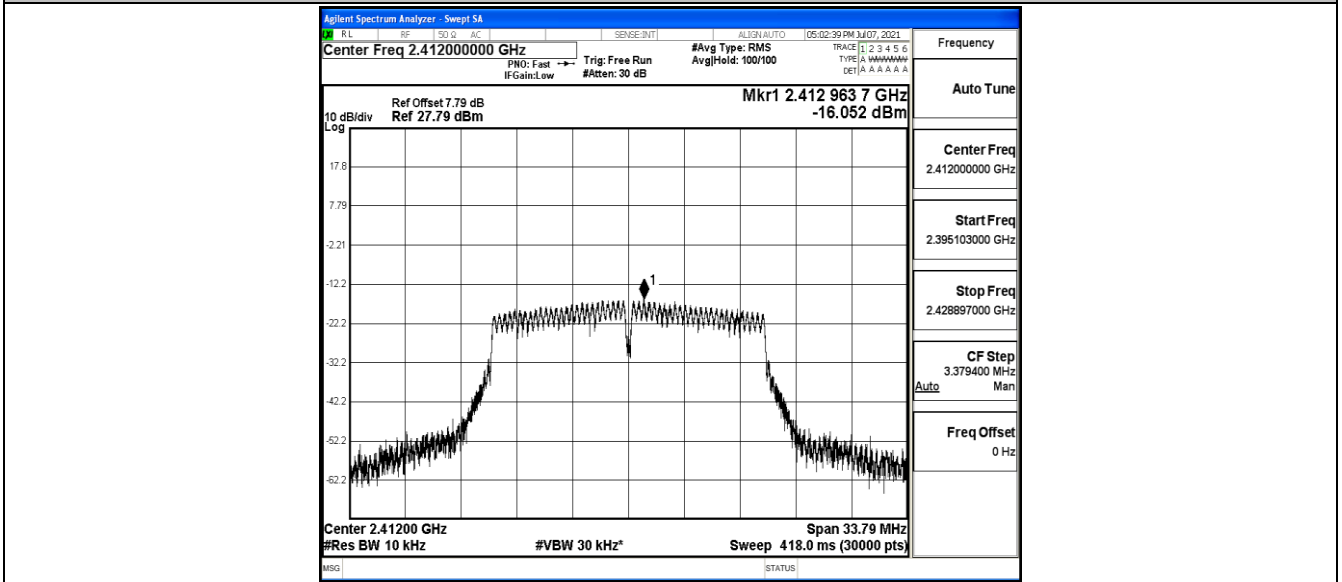
11B\_Ant1\_2437



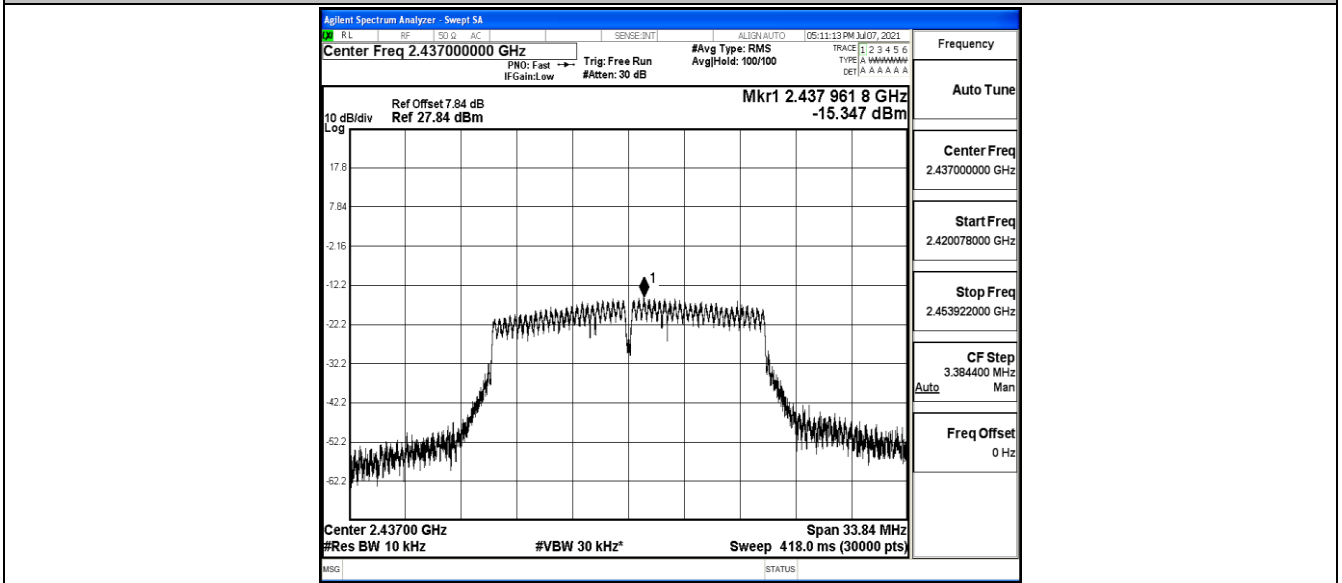
11B\_Ant1\_2462



11G\_Ant1\_2412

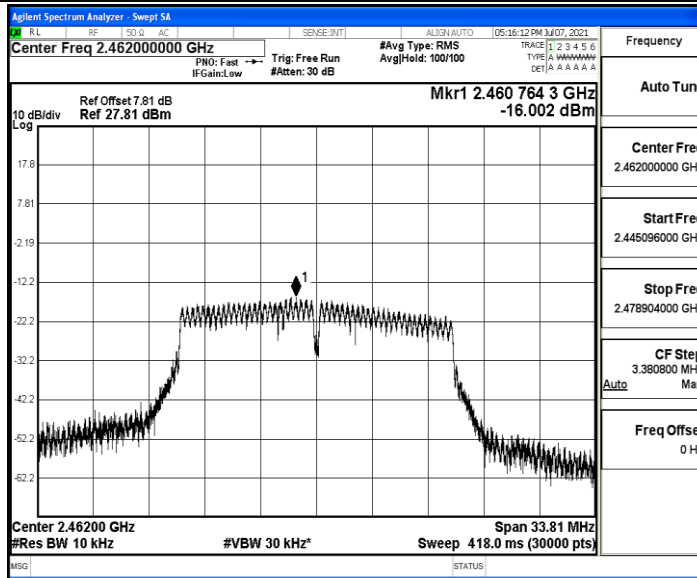


11G\_Ant1\_2437

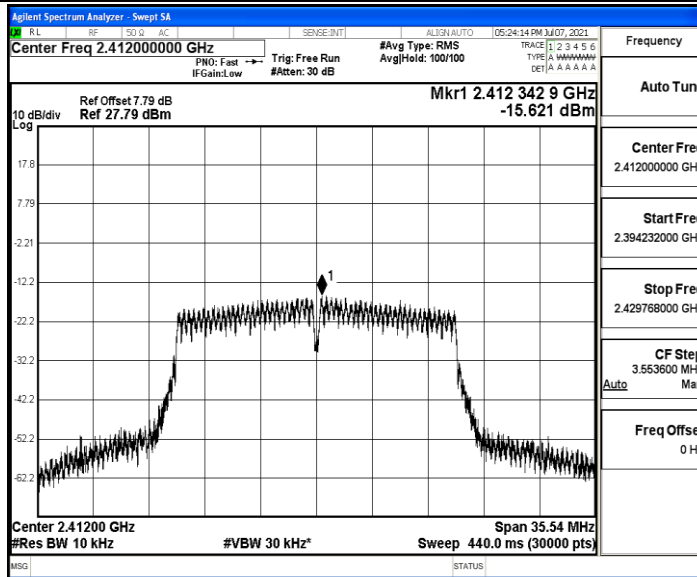




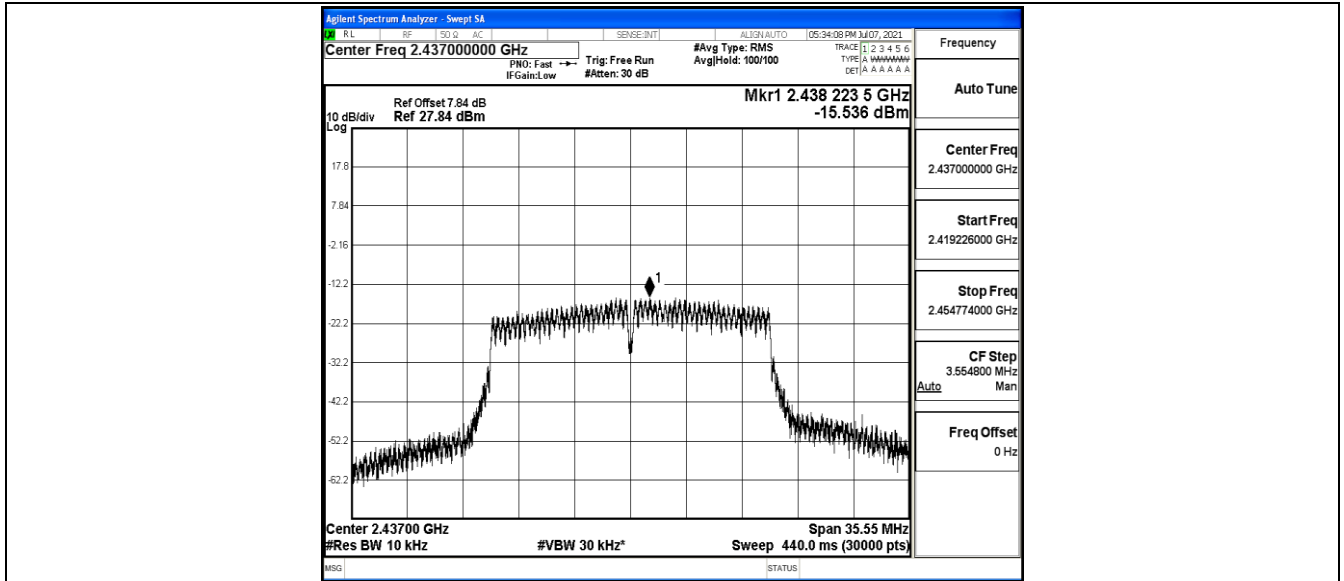
11G\_Ant1\_2462



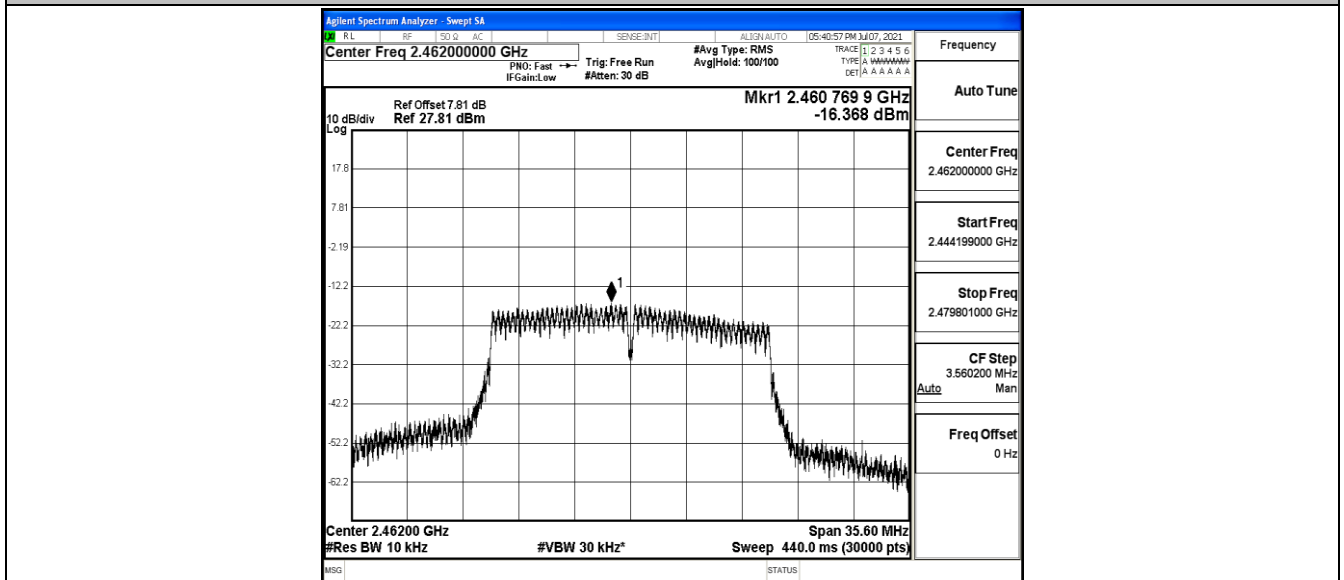
11N20SISO\_Ant1\_2412



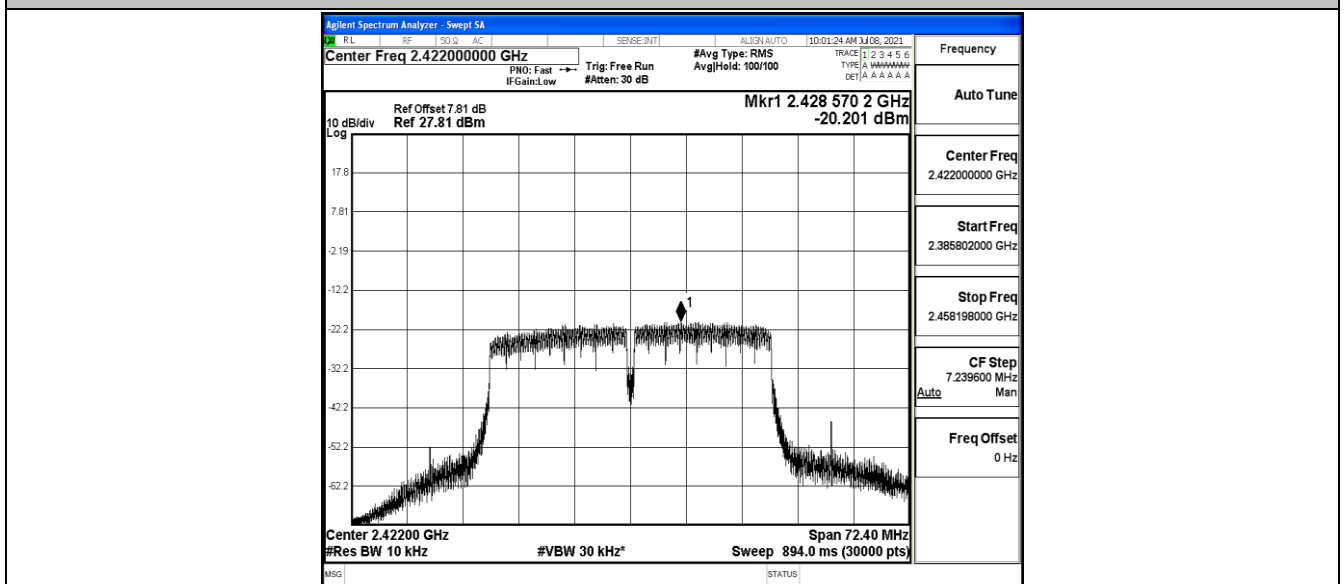
11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462

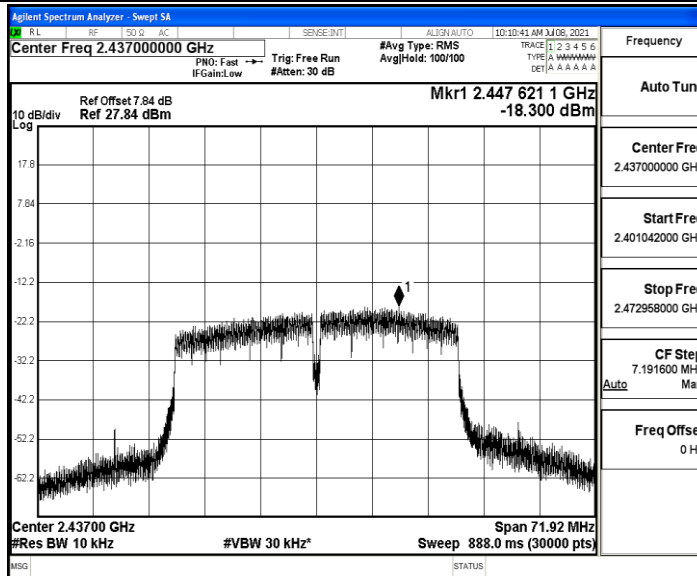


11N40SISO\_Ant1\_2422

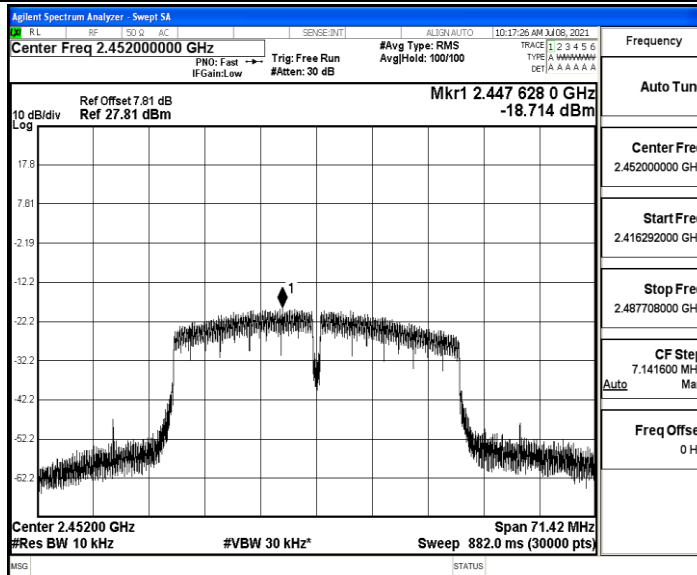




11N40SISO\_Ant1\_2437



11N40SISO\_Ant1\_2452





## A.4: 6dB Bandwidth

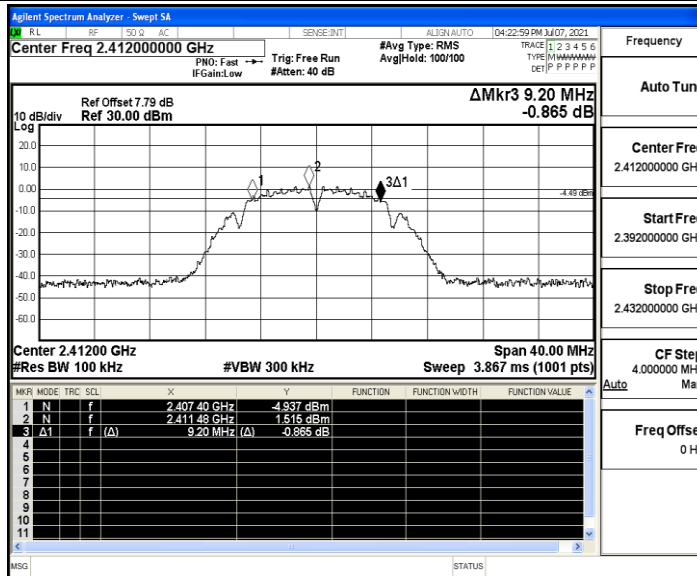
### Test Result

TestMode	Antenna	Channel	6dB Bandwidth [MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.200	0.5	PASS
		2437	9.320	0.5	PASS
		2462	9.560	0.5	PASS
11G	Ant1	2412	16.640	0.5	PASS
		2437	16.440	0.5	PASS
		2462	16.240	0.5	PASS
11N20SISO	Ant1	2412	17.680	0.5	PASS
		2437	17.680	0.5	PASS
		2462	17.360	0.5	PASS
11N40SISO	Ant1	2422	36.400	0.5	PASS
		2437	35.840	0.5	PASS
		2452	35.360	0.5	PASS

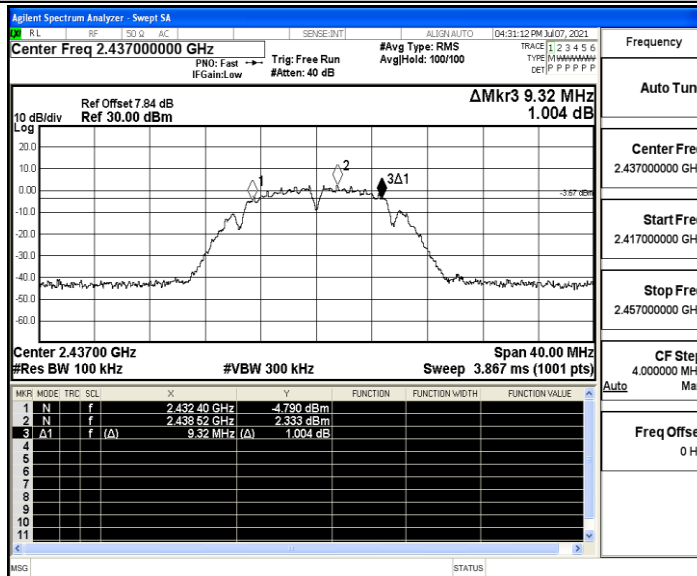


### Test Graphs

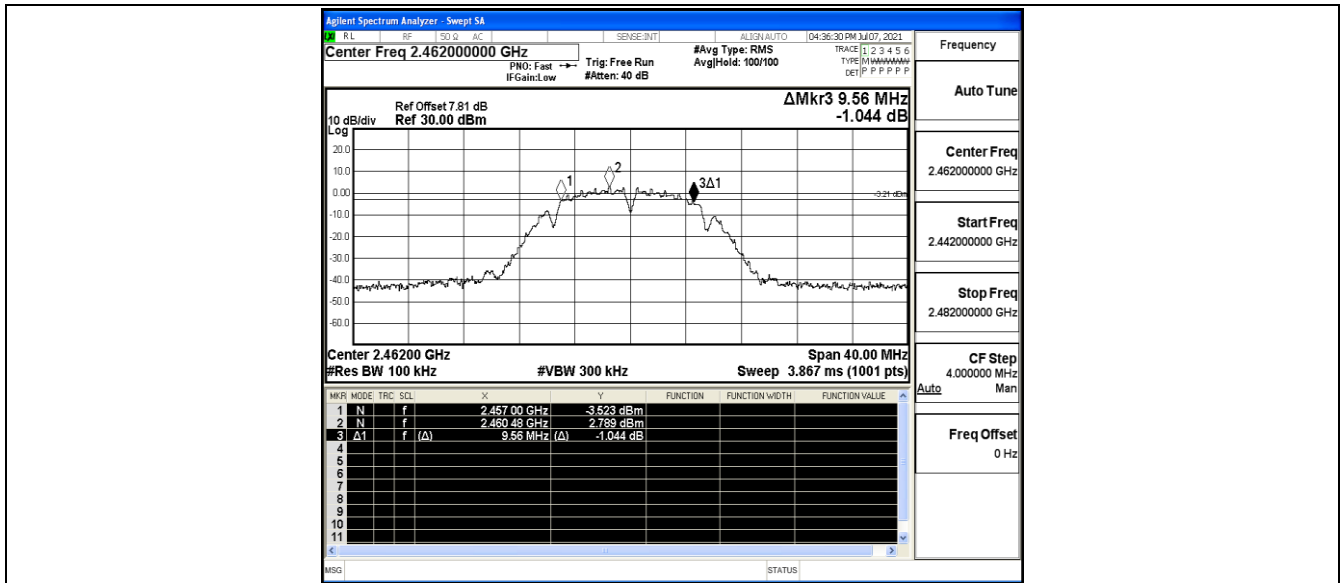
11B\_Ant1\_2412



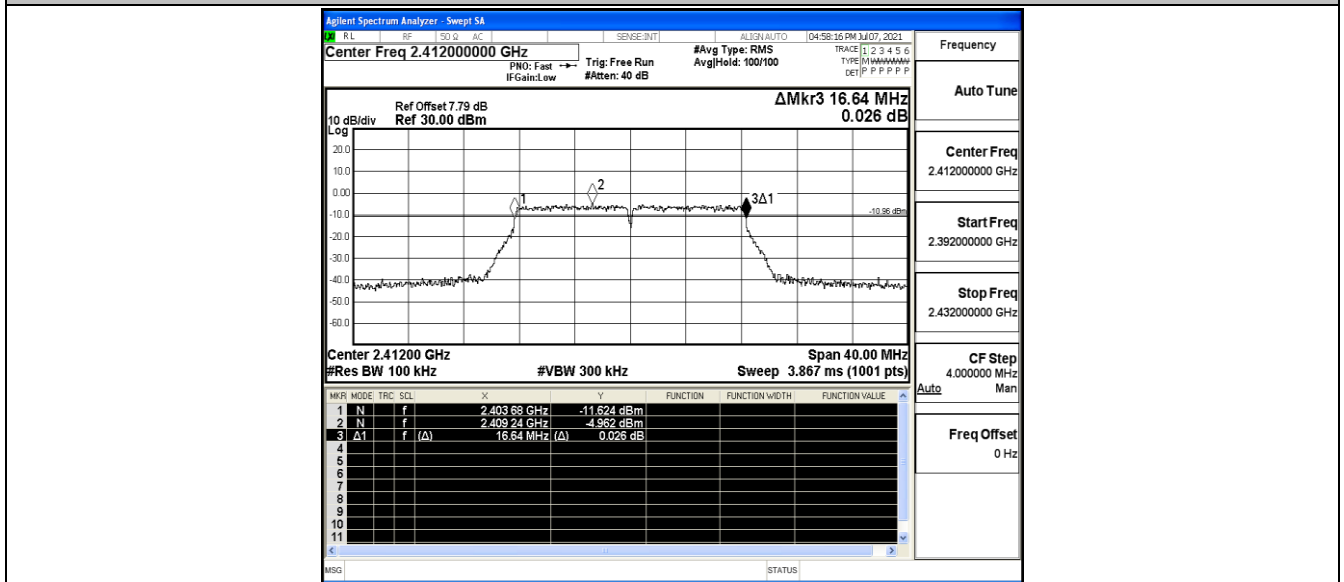
11B\_Ant1\_2437



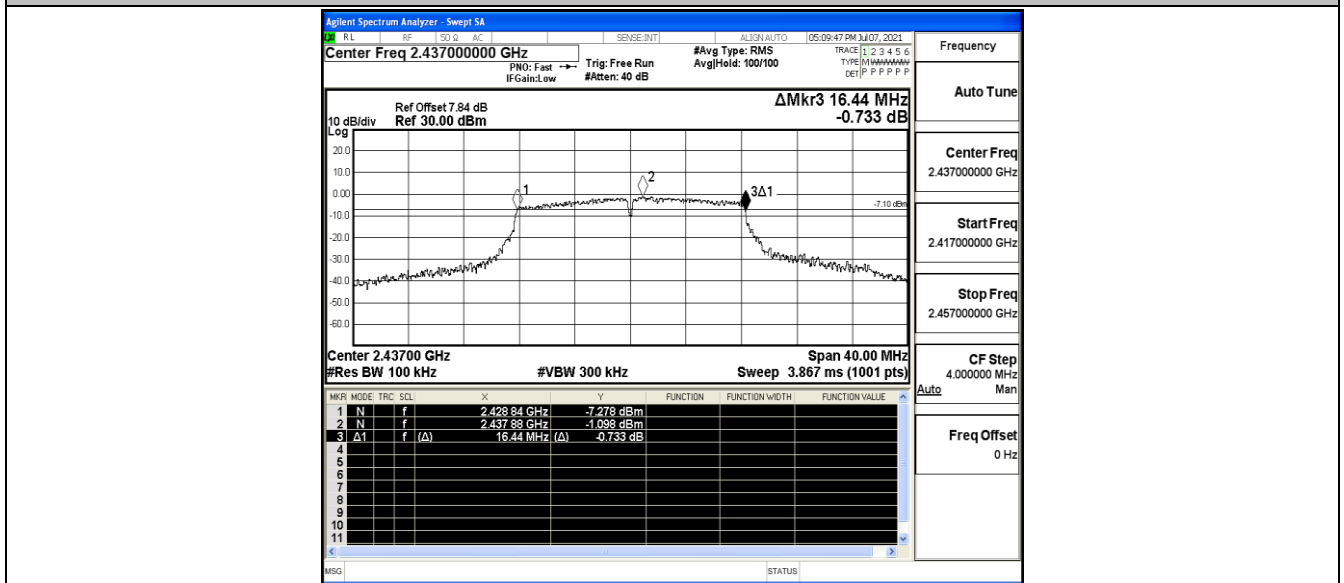
11B\_Ant1\_2462



11G\_Ant1\_2412



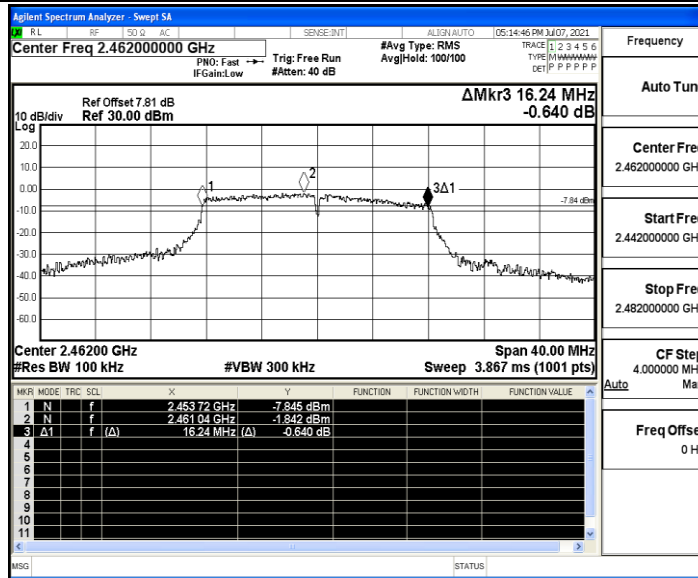
11G\_Ant1\_2437



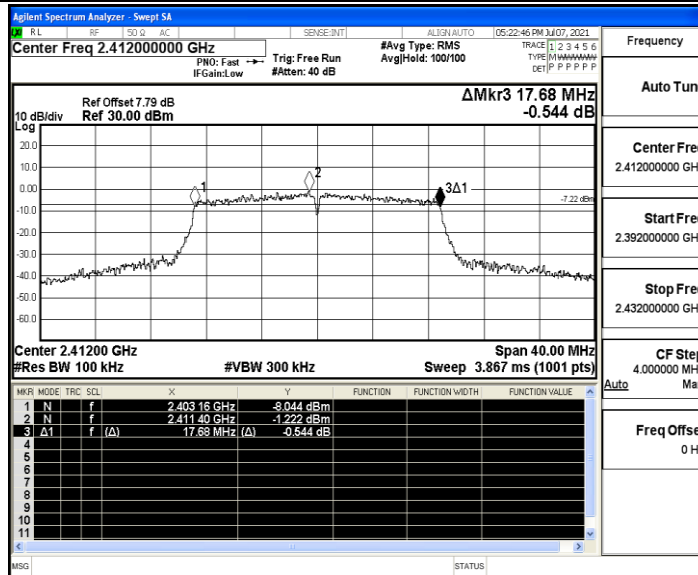




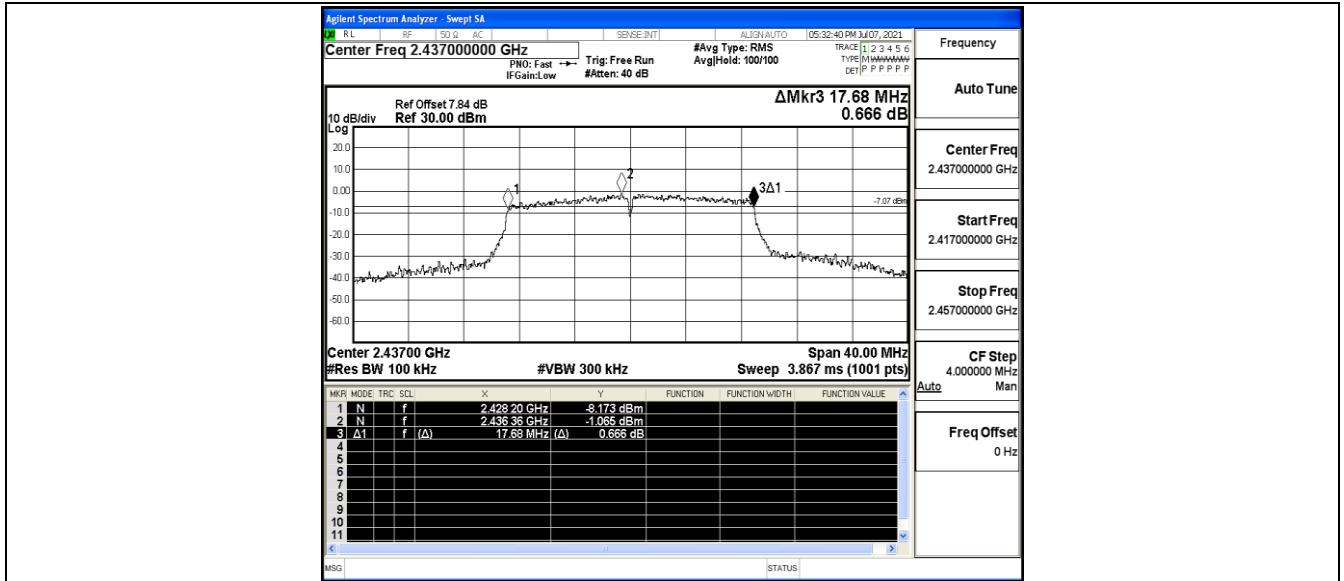
### 11G\_Ant1\_2462



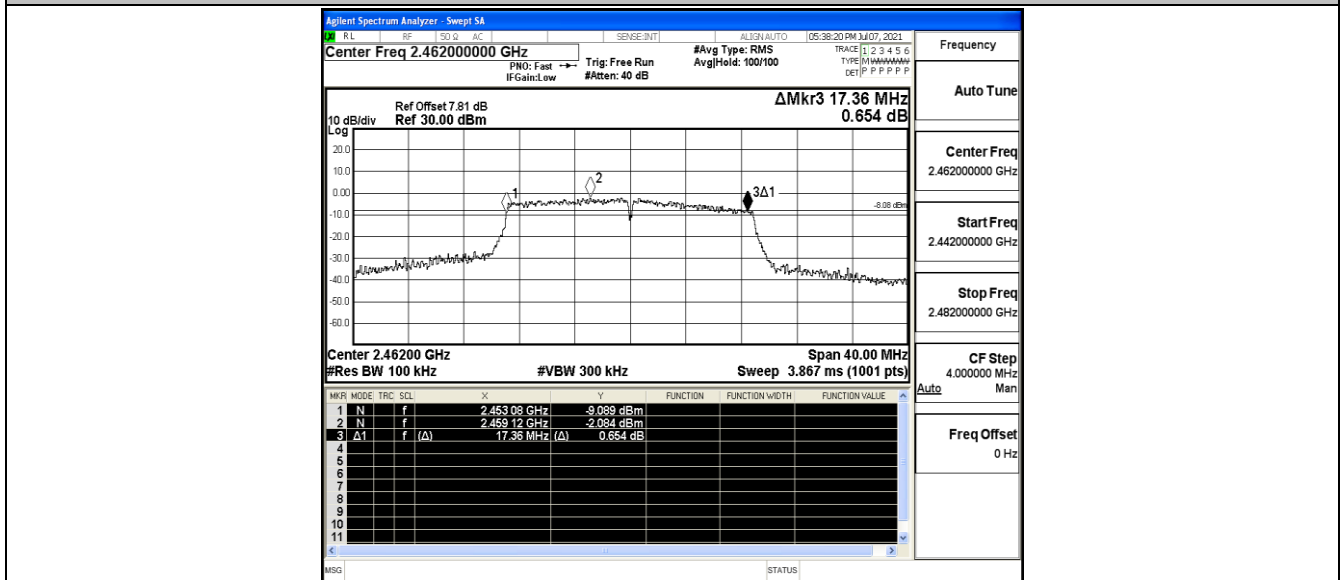
### 11N20SISO\_Ant1\_2412



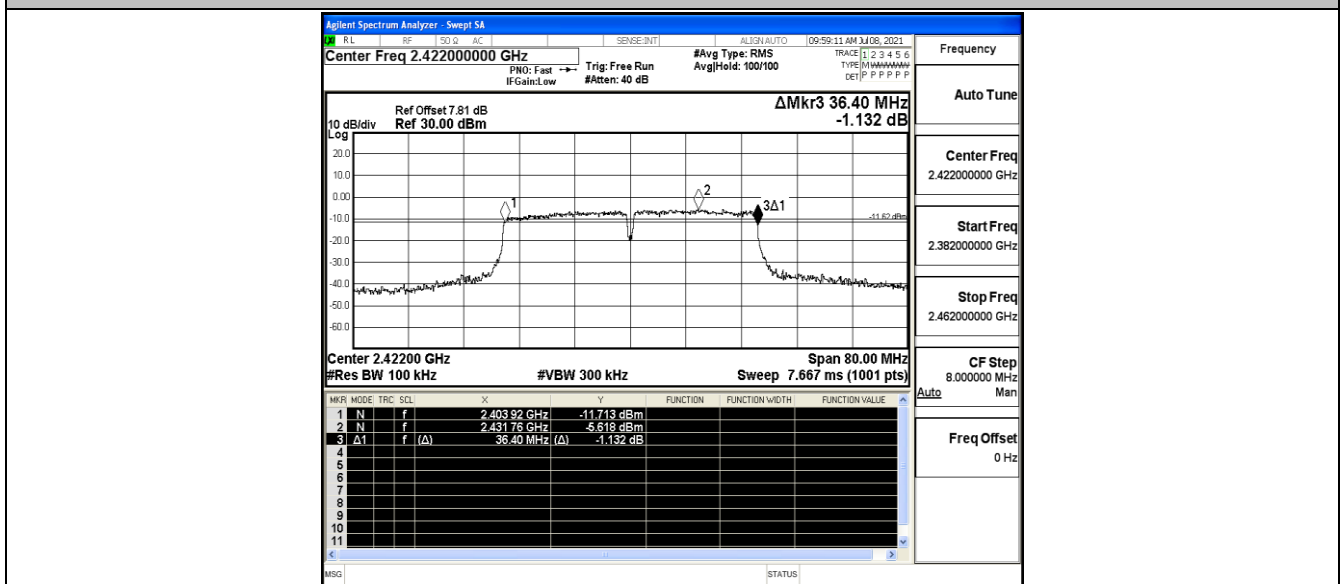
### 11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462

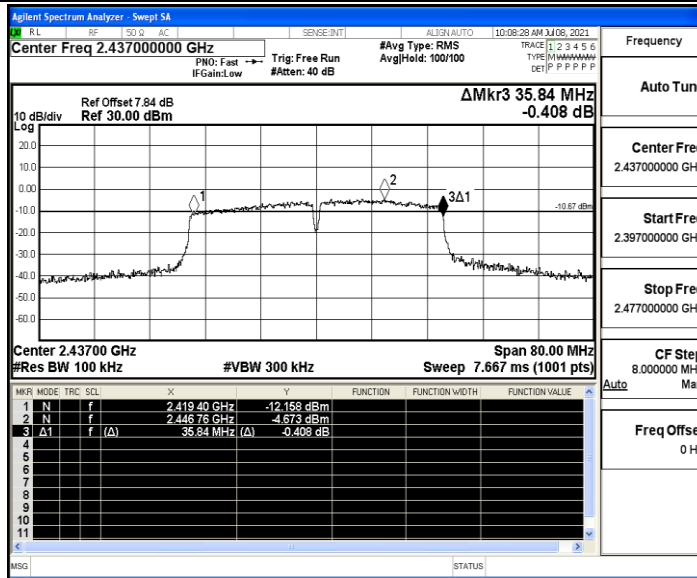


11N40SISO\_Ant1\_2422

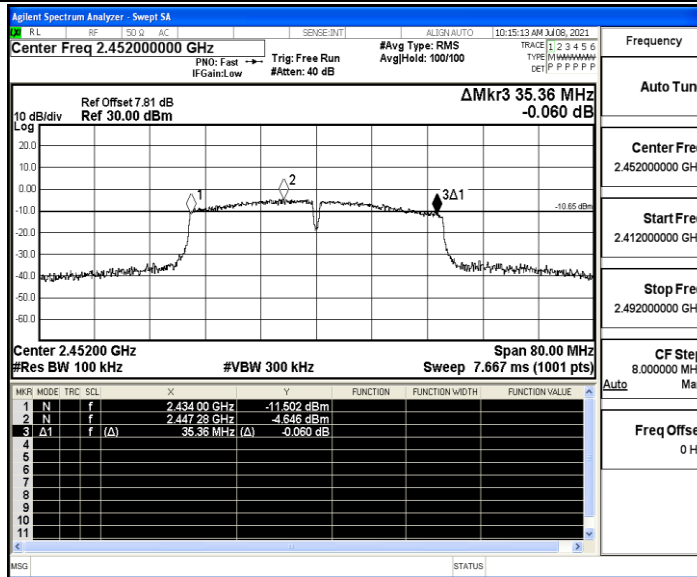




### 11N40SISO\_Ant1\_2437



### 11N40SISO\_Ant1\_2452





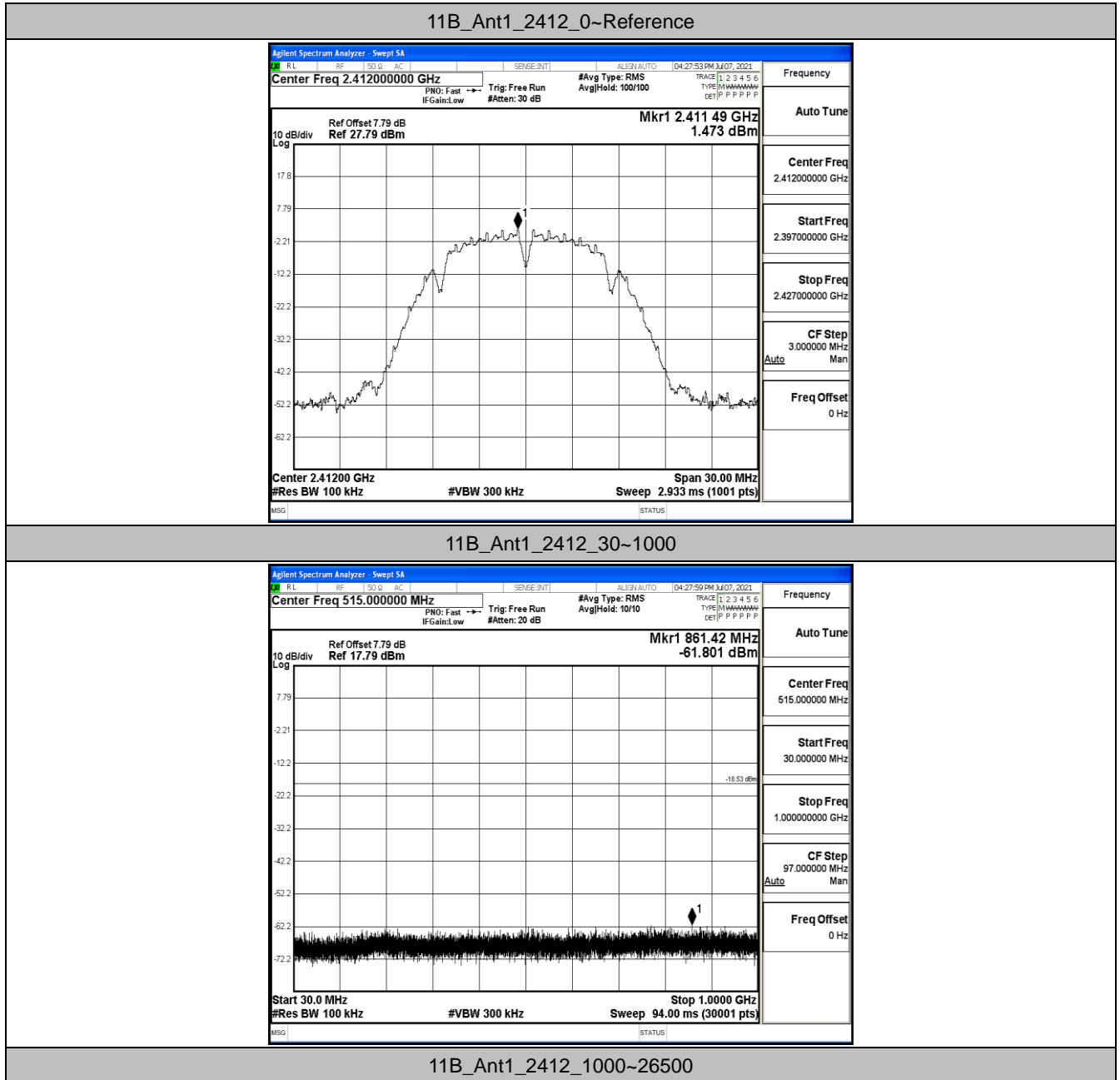
## A.5 Conducted Spurious Emission

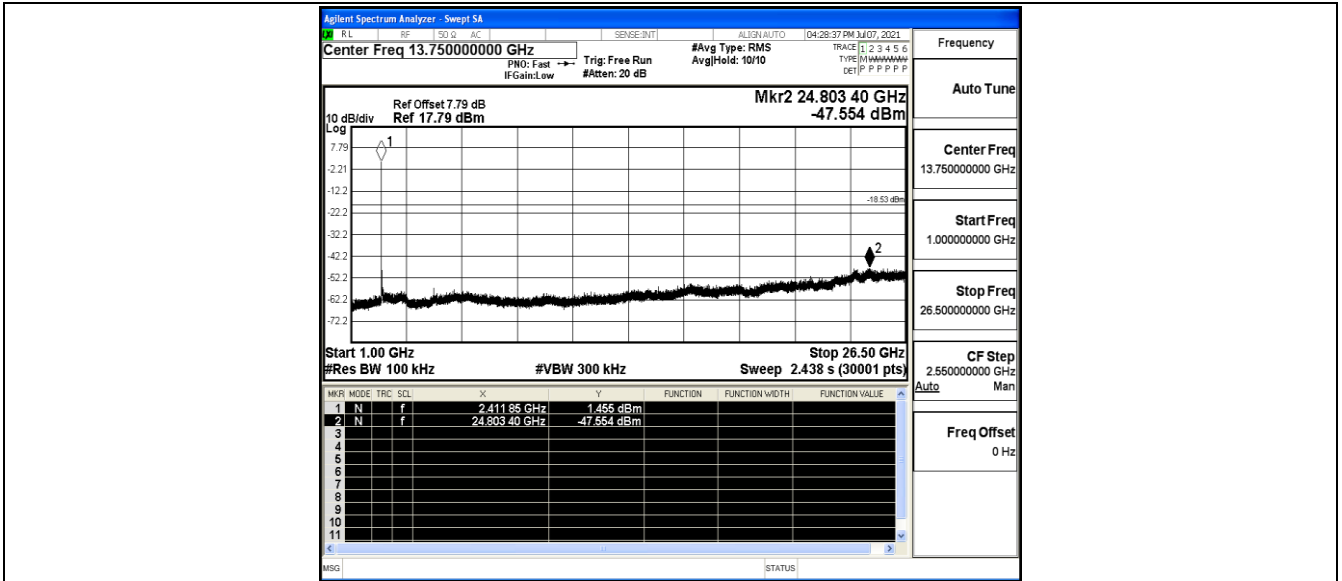
### Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.47	1.47	---	PASS
			30~1000	1.47	-61.8	≤-18.53	PASS
			1000~26500	1.47	-47.55	≤-18.53	PASS
		2437	Reference	2.39	2.39	---	PASS
			30~1000	2.39	-61.73	≤-17.61	PASS
			1000~26500	2.39	-46.95	≤-17.61	PASS
		2462	Reference	2.77	2.77	---	PASS
			30~1000	2.77	-62.23	≤-17.24	PASS
			1000~26500	2.77	-46.46	≤-17.24	PASS
11G	Ant1	2412	Reference	-1.73	-1.73	---	PASS
			30~1000	-1.73	-61.54	≤-21.73	PASS
			1000~26500	-1.73	-46.86	≤-21.73	PASS
		2437	Reference	-1.20	-1.20	---	PASS
			30~1000	-1.20	-60.11	≤-21.2	PASS
			1000~26500	-1.20	-47.63	≤-21.2	PASS
		2462	Reference	-1.89	-1.89	---	PASS
			30~1000	-1.89	-60.64	≤-21.89	PASS
			1000~26500	-1.89	-47.02	≤-21.89	PASS
11N20SISO	Ant1	2412	Reference	-1.18	-1.18	---	PASS
			30~1000	-1.18	-60.56	≤-21.18	PASS
			1000~26500	-1.18	-47.81	≤-21.18	PASS
		2437	Reference	-1.23	-1.23	---	PASS
			30~1000	-1.23	-61.27	≤-21.23	PASS
			1000~26500	-1.23	-47.29	≤-21.23	PASS
		2462	Reference	-1.41	-1.41	---	PASS
			30~1000	-1.41	-61.69	≤-21.41	PASS
			1000~26500	-1.41	-47.67	≤-21.41	PASS
11N40SISO	Ant1	2422	Reference	-5.69	-5.69	---	PASS
			30~1000	-5.69	-56.91	≤-25.69	PASS
			1000~26500	-5.69	-48	≤-25.69	PASS
		2437	Reference	-4.76	-4.76	---	PASS
			30~1000	-4.76	-56.8	≤-24.76	PASS
			1000~26500	-4.76	-47.47	≤-24.76	PASS
		2452	Reference	-4.50	-4.50	---	PASS
			30~1000	-4.50	-57.12	≤-24.5	PASS
			1000~26500	-4.50	-47.63	≤-24.5	PASS

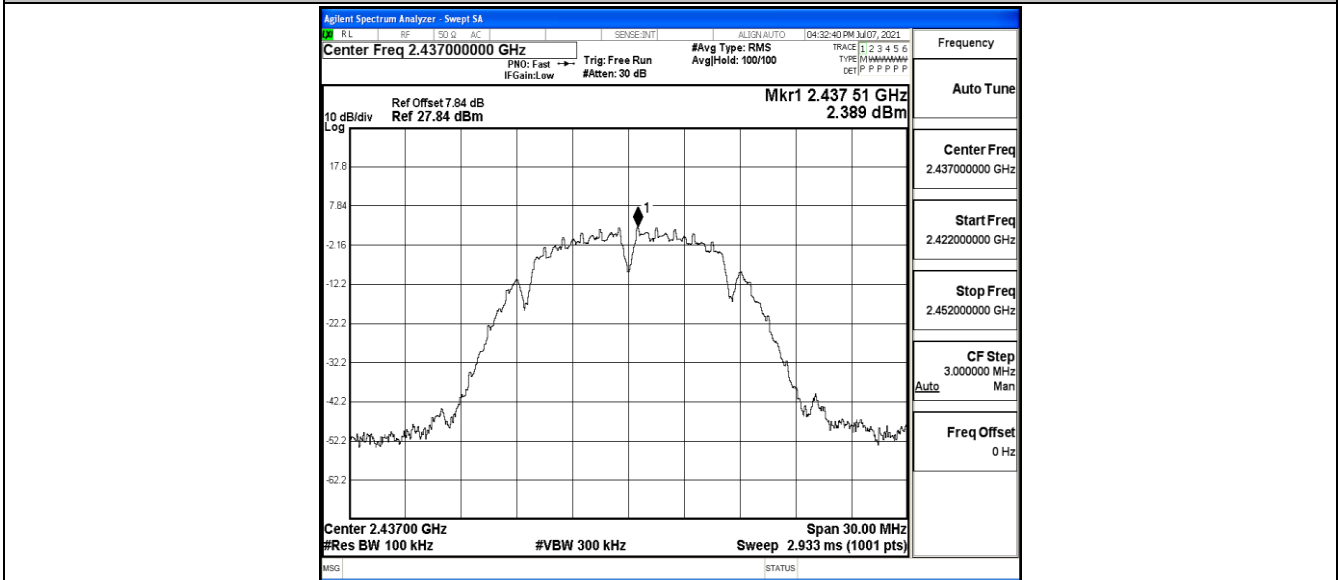


### Test Graphs

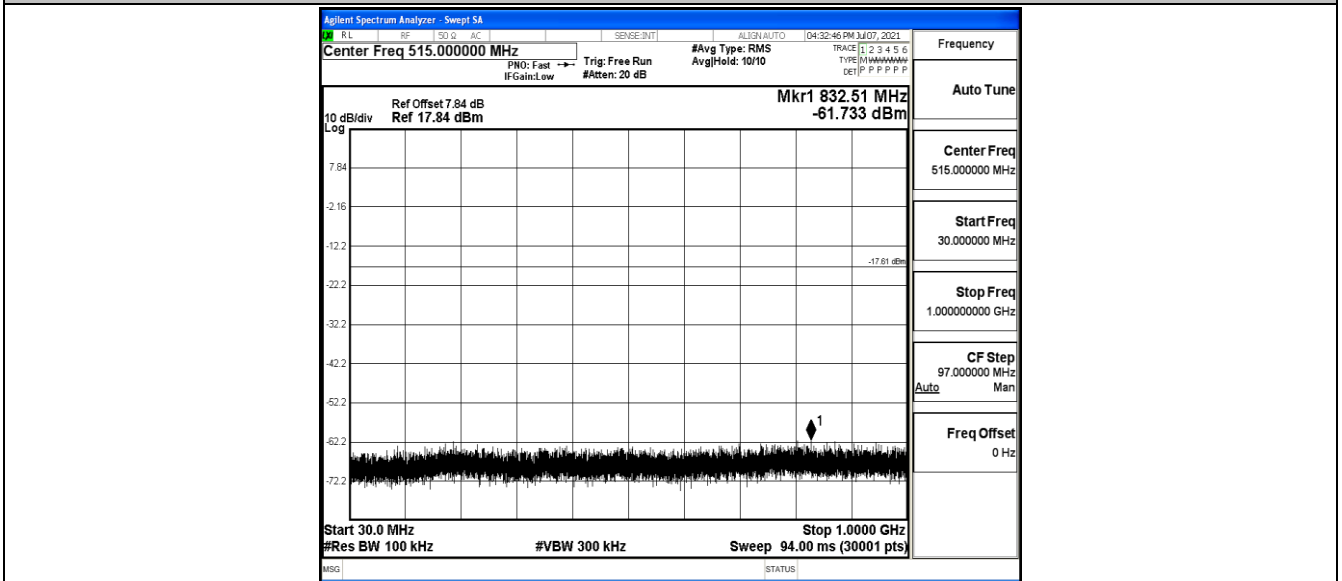




11B\_Ant1\_2437\_0-Reference

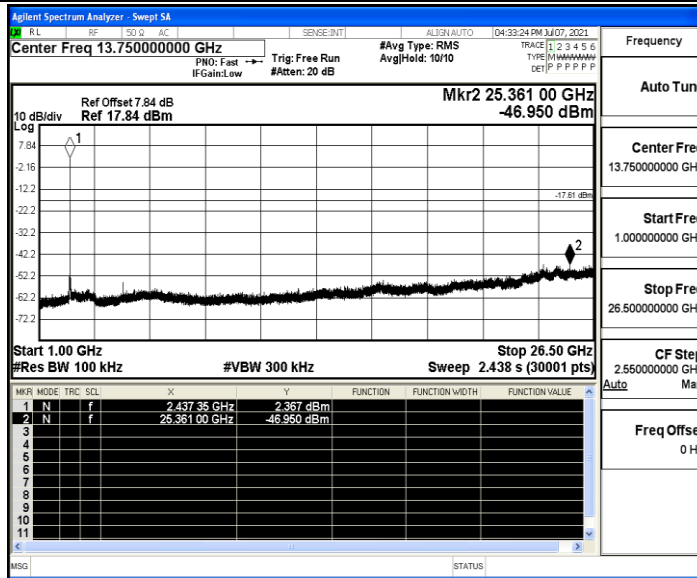


11B\_Ant1\_2437\_30-1000

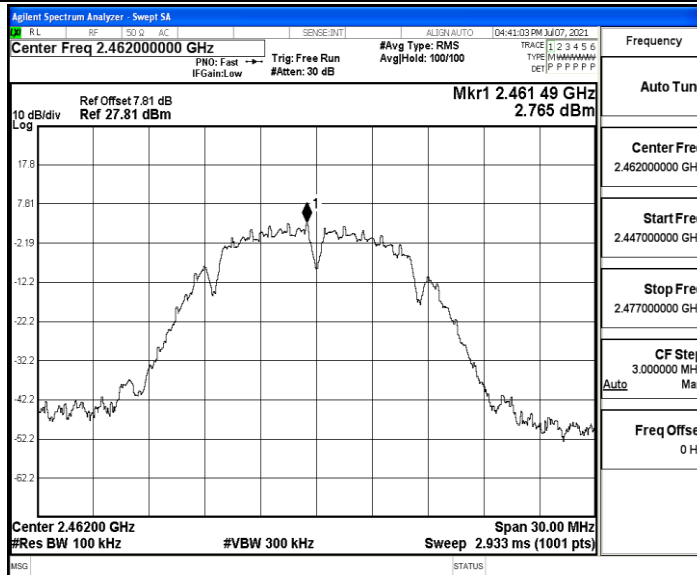




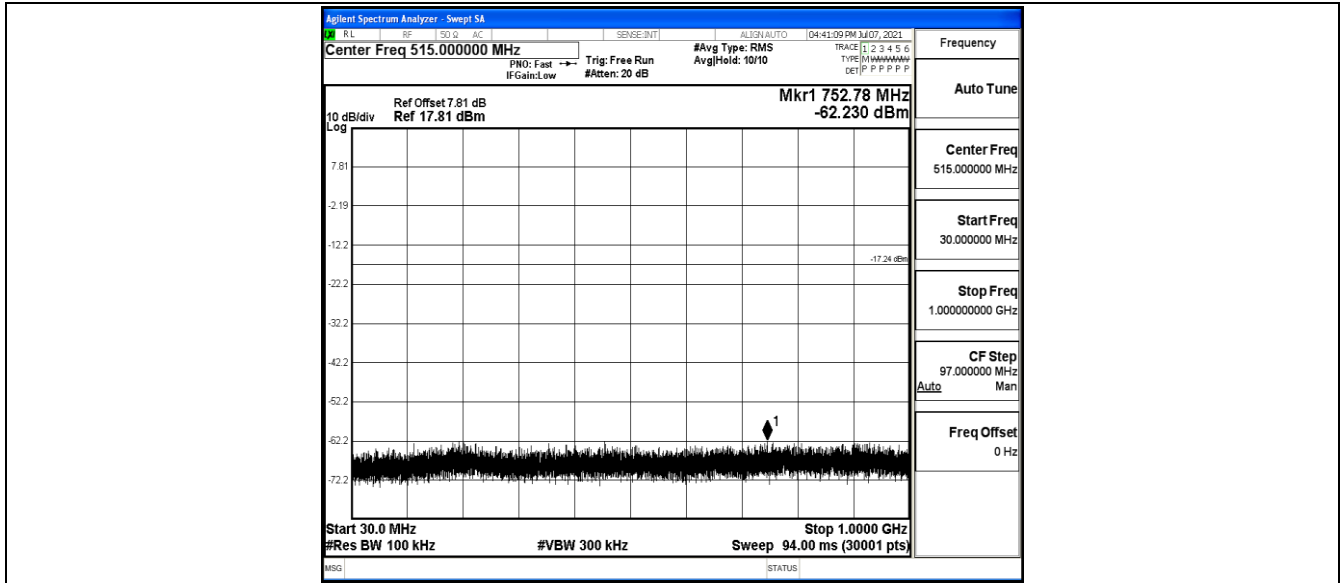
11B\_Ant1\_2437\_1000~26500



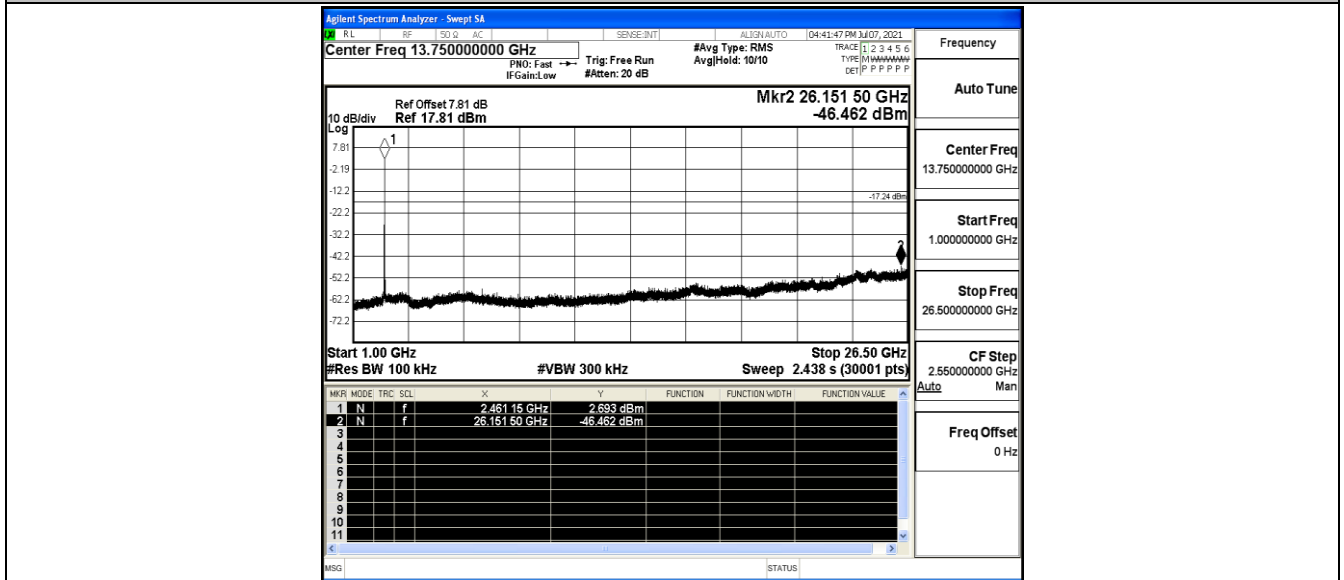
11B\_Ant1\_2462\_0~Reference



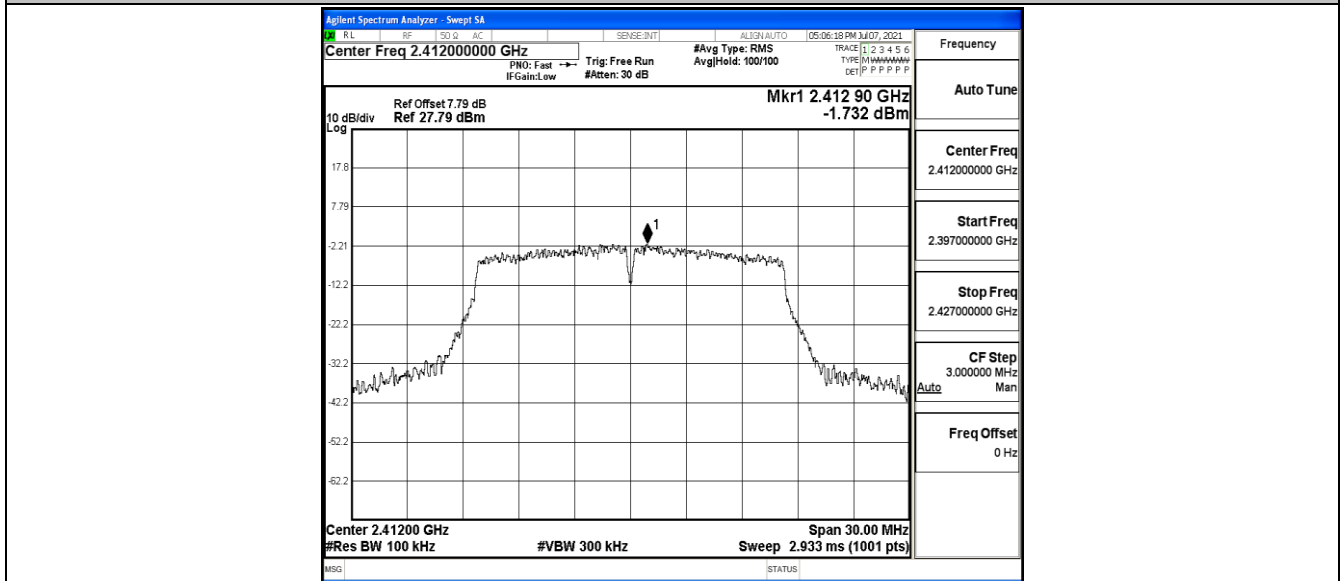
11B\_Ant1\_2462\_30~1000



11B\_Ant1\_2462\_1000~26500



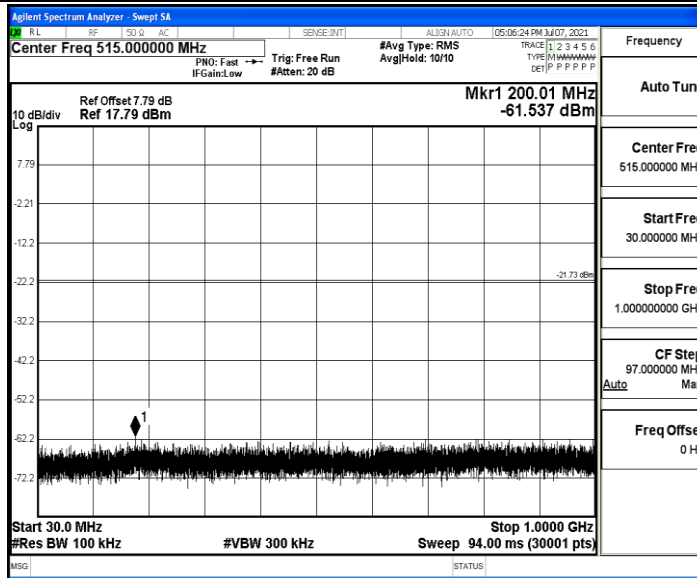
11G\_Ant1\_2412\_0~Reference



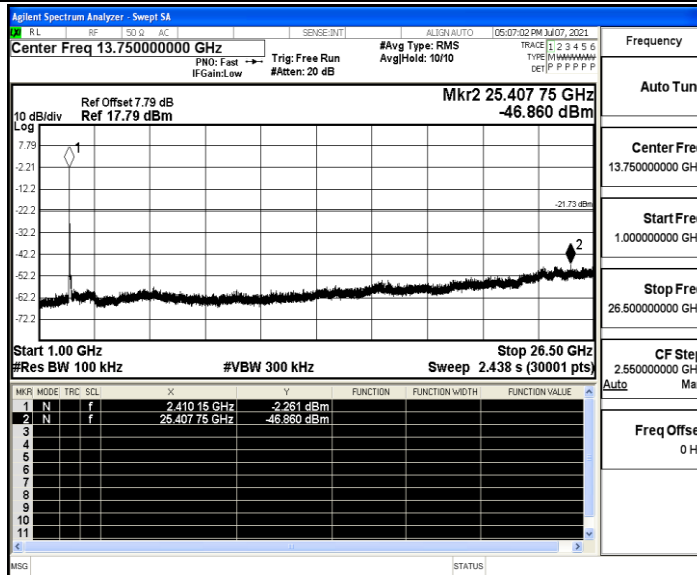




11G\_Ant1\_2412\_30~1000



11G\_Ant1\_2412\_1000~26500

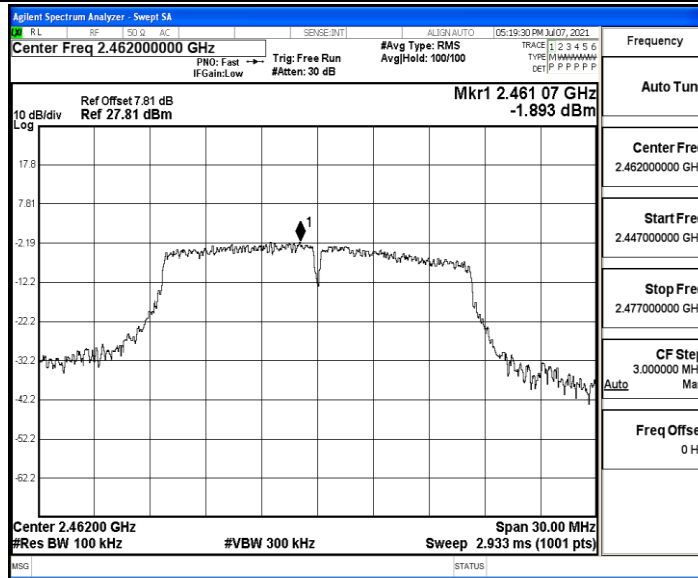


11G\_Ant1\_2437\_0~Reference

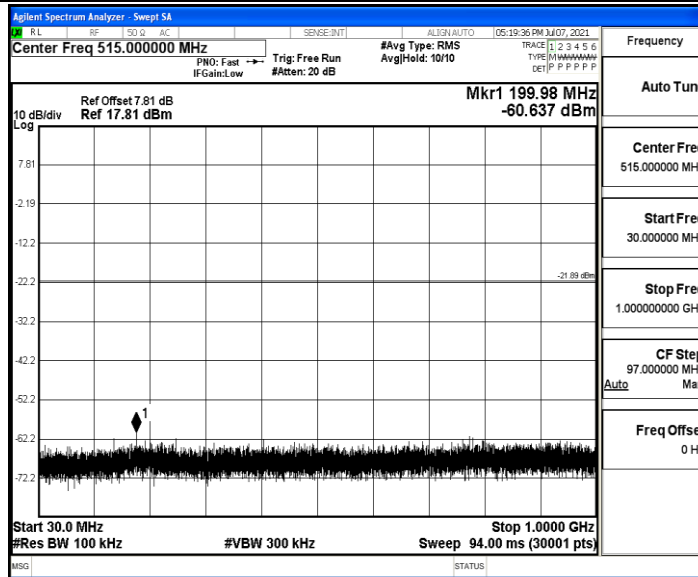




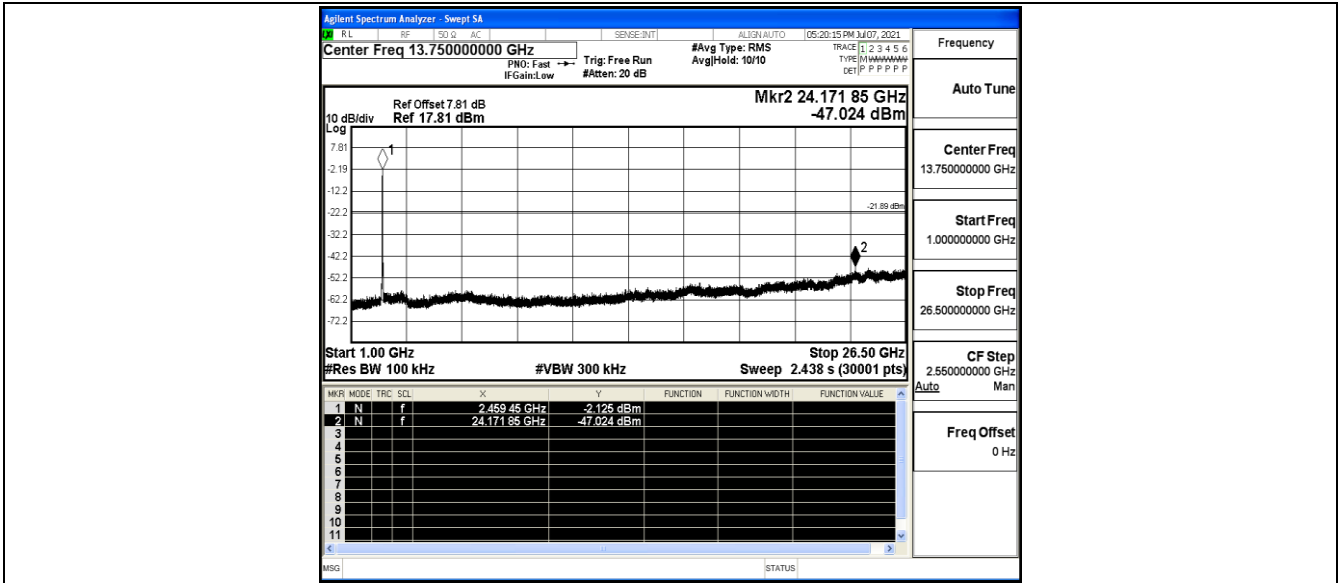
11G\_Ant1\_2462\_0~Reference



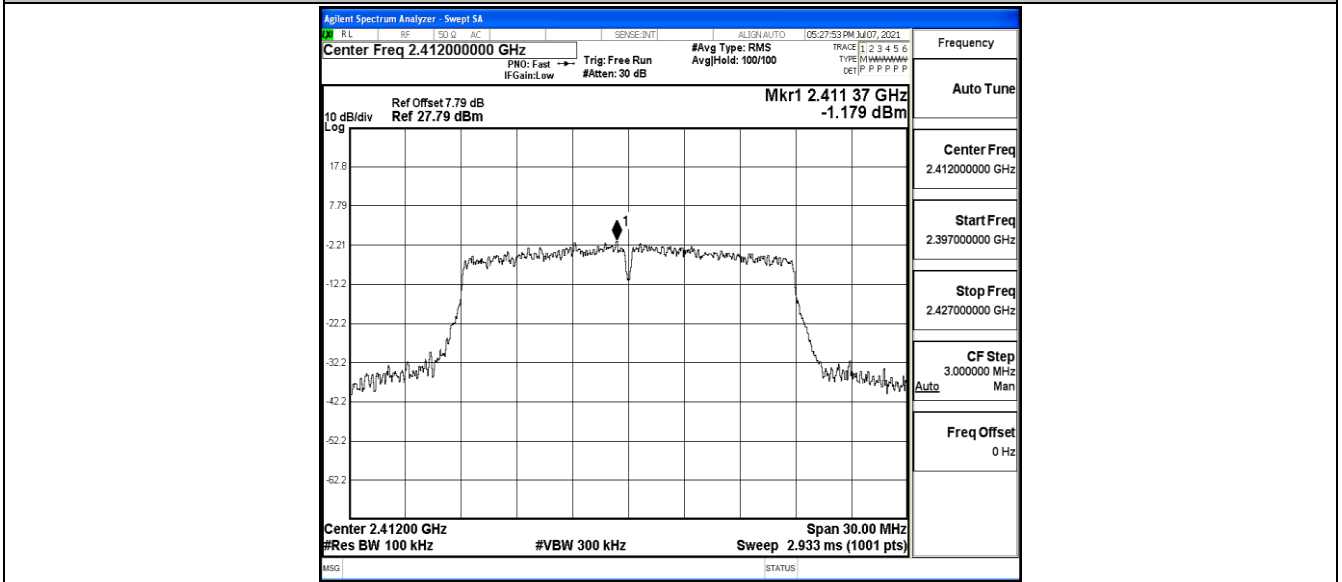
11G\_Ant1\_2462\_30~1000



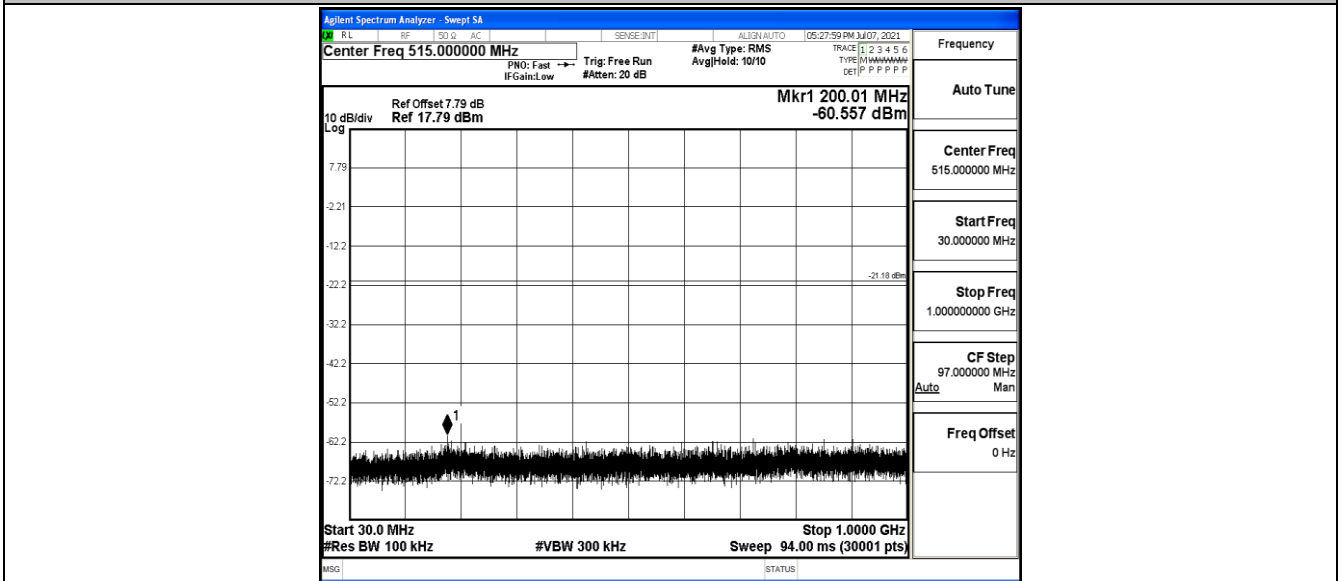
11G\_Ant1\_2462\_1000~26500



11N20SISO\_Ant1\_2412\_0~Reference

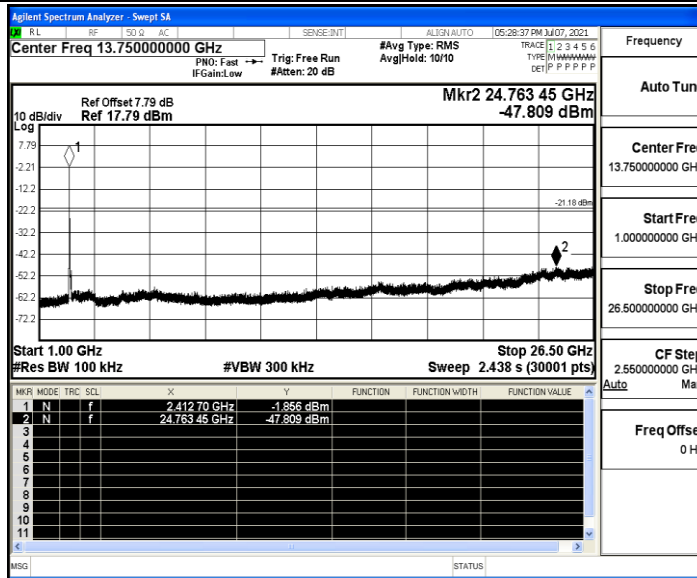


11N20SISO\_Ant1\_2412\_30~1000

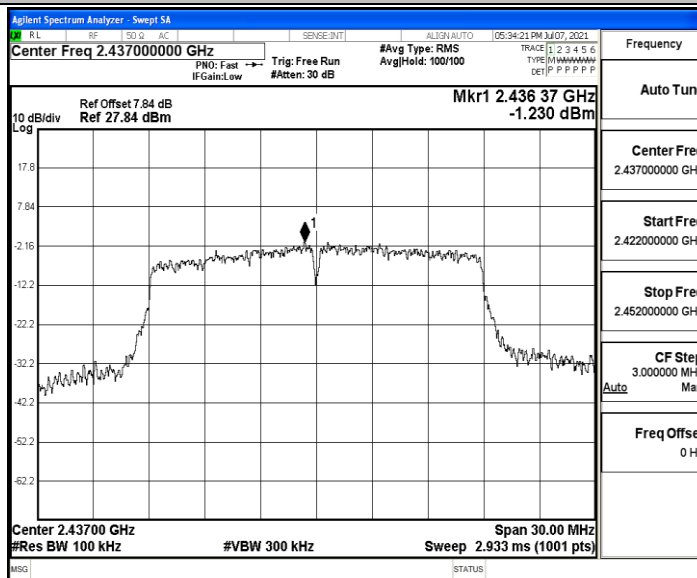




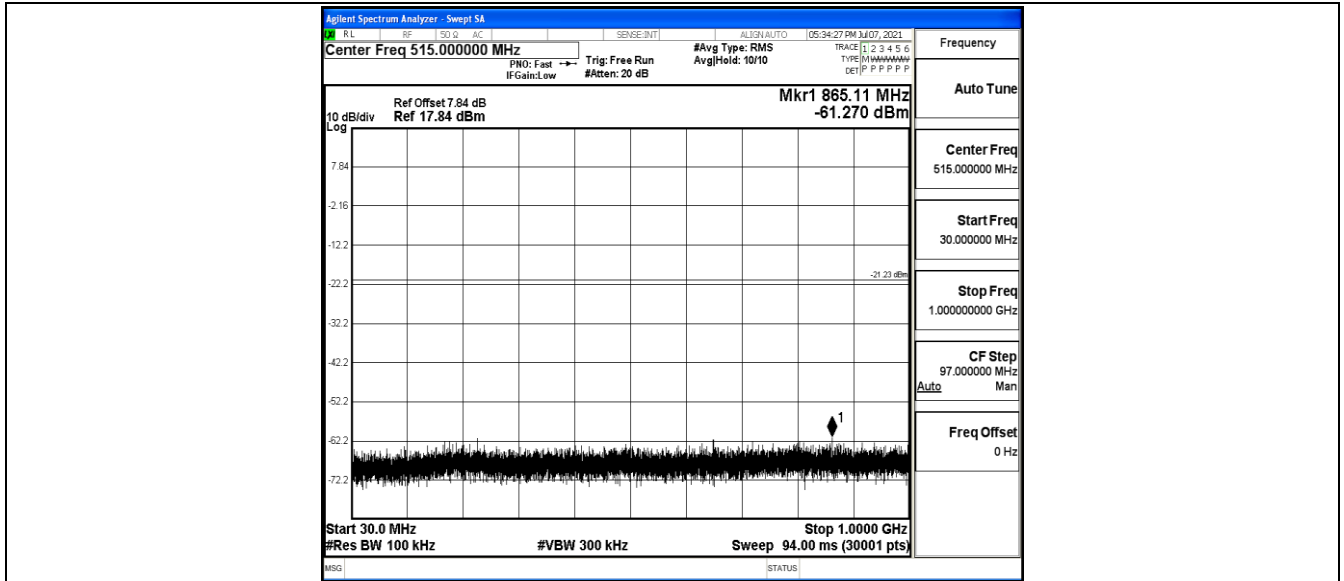
11N20SISO\_Ant1\_2412\_1000~26500



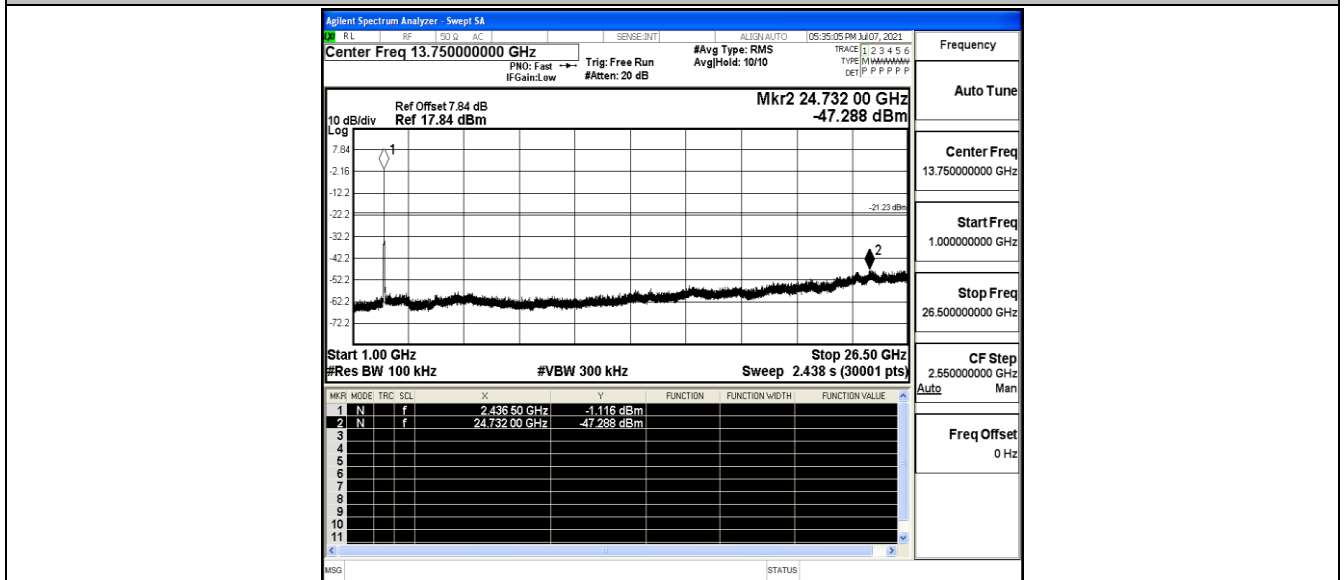
11N20SISO\_Ant1\_2437\_0~Reference



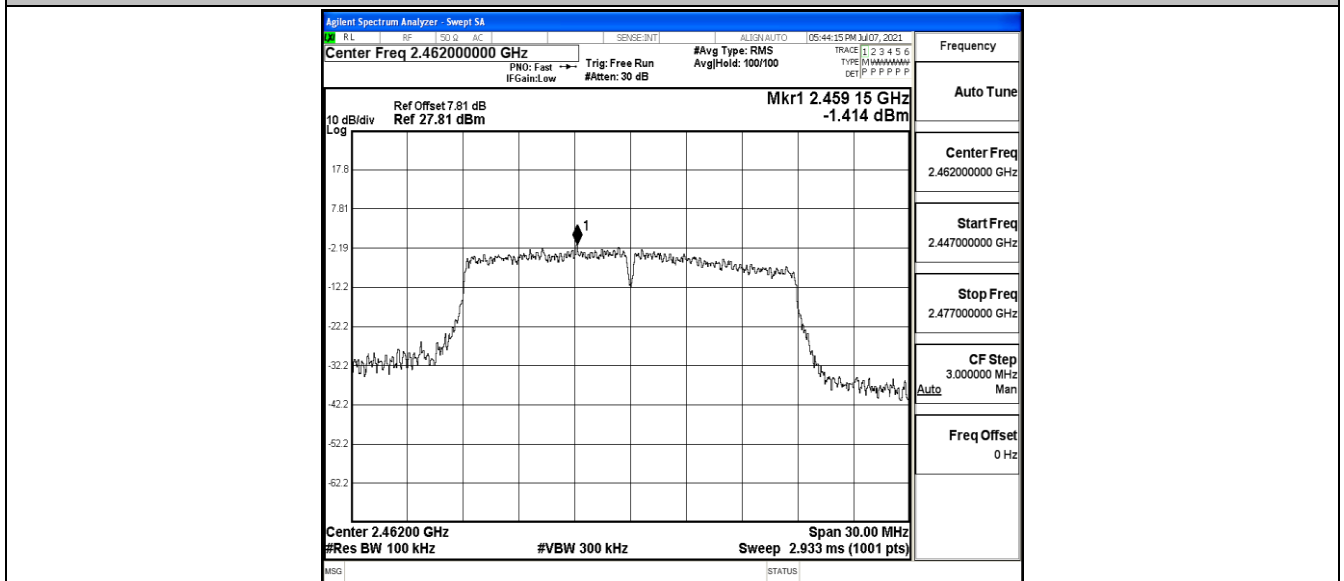
11N20SISO\_Ant1\_2437\_30~1000



11N20SISO\_Ant1\_2437\_1000~26500

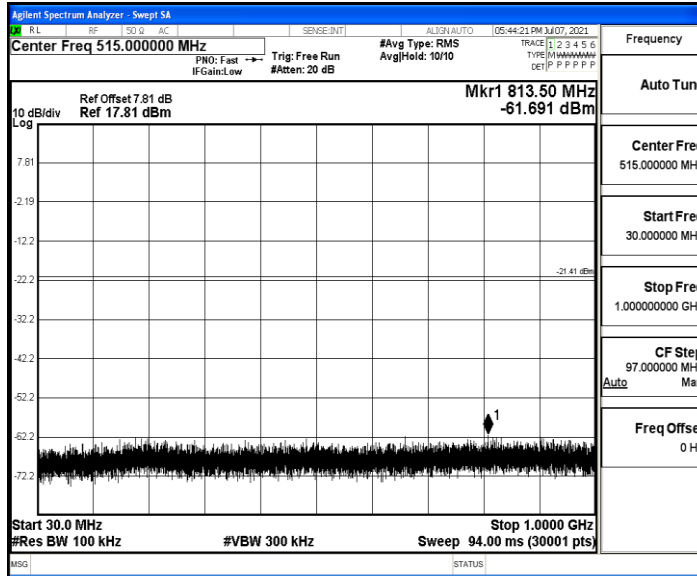


11N20SISO\_Ant1\_2462\_0~Reference

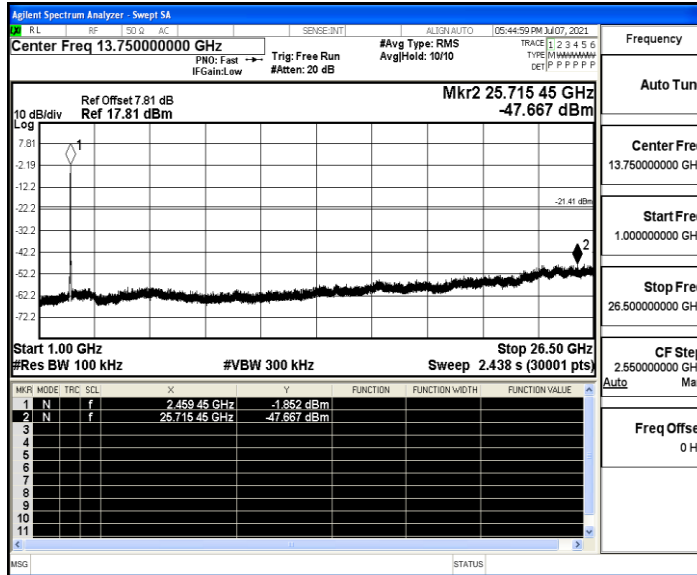




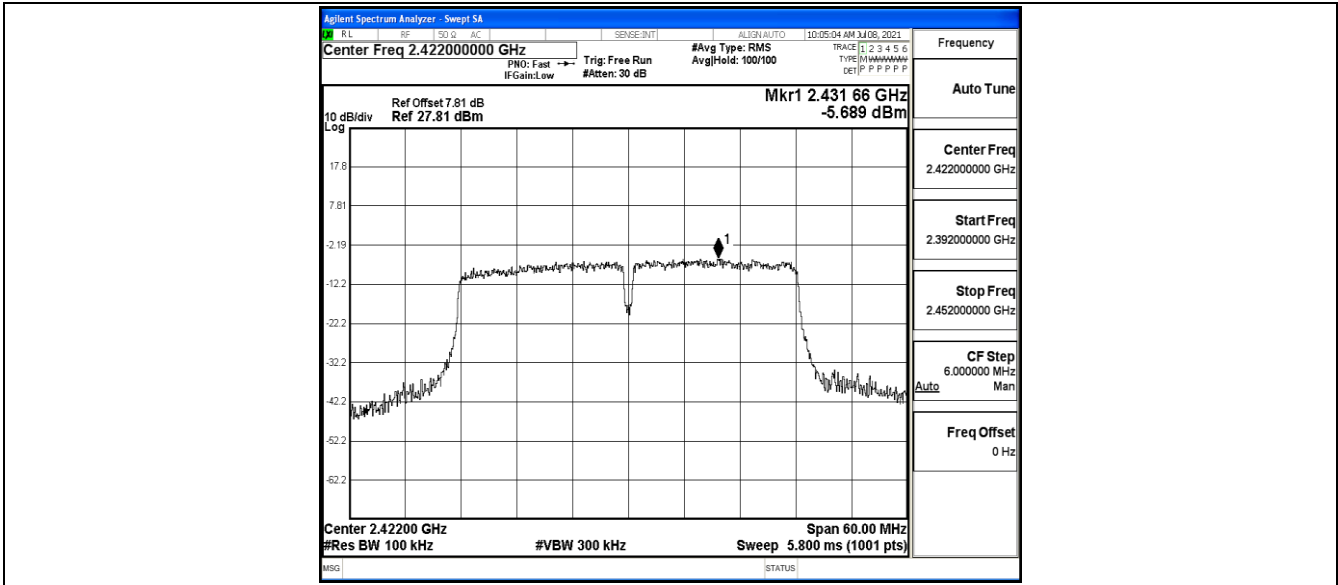
11N20SISO\_Ant1\_2462\_30~1000



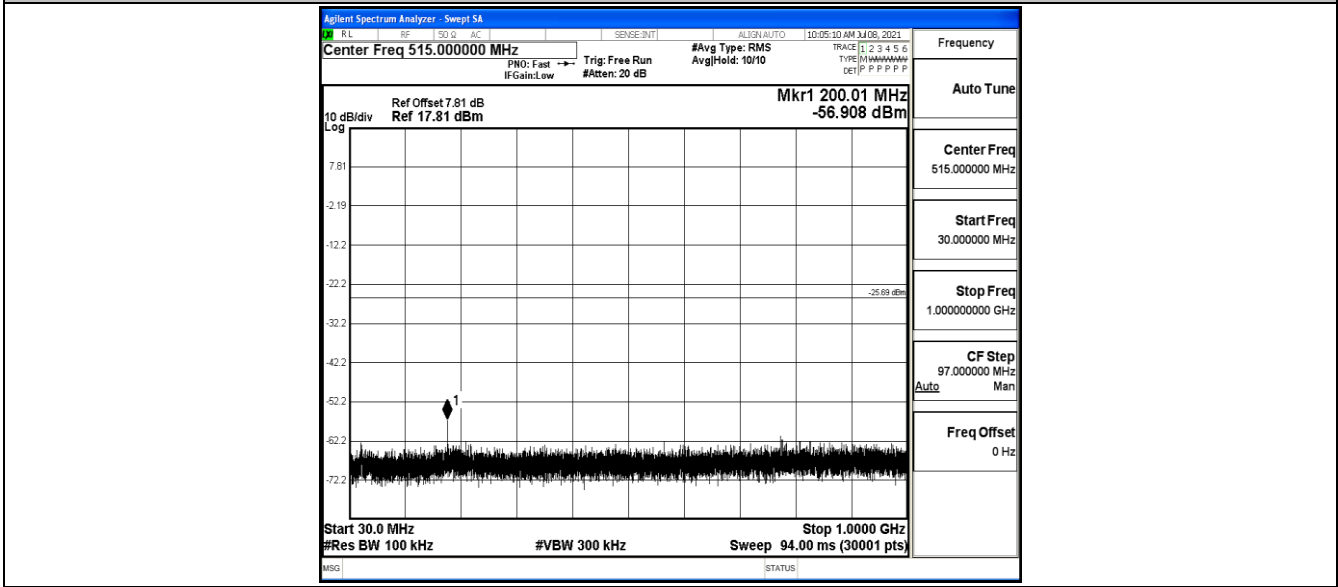
11N20SISO\_Ant1\_2462\_1000~26500



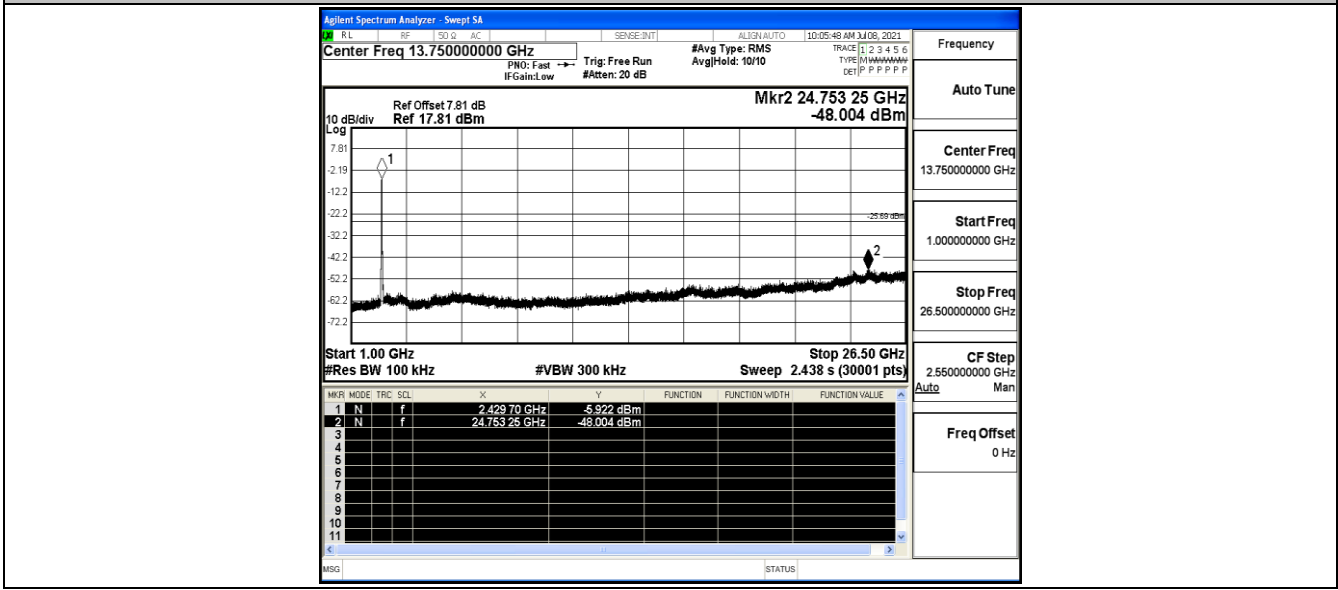
11N40SISO\_Ant1\_2422\_0~Reference



11N40SISO\_Ant1\_2422\_30~1000



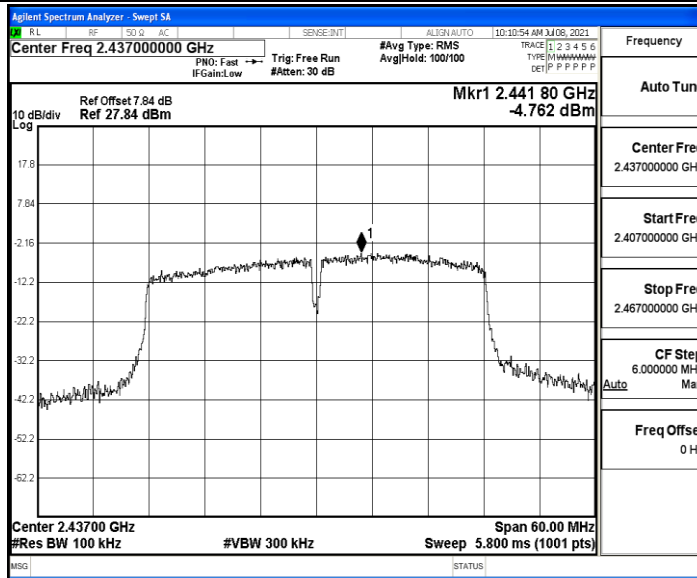
11N40SISO\_Ant1\_2422\_1000~26500



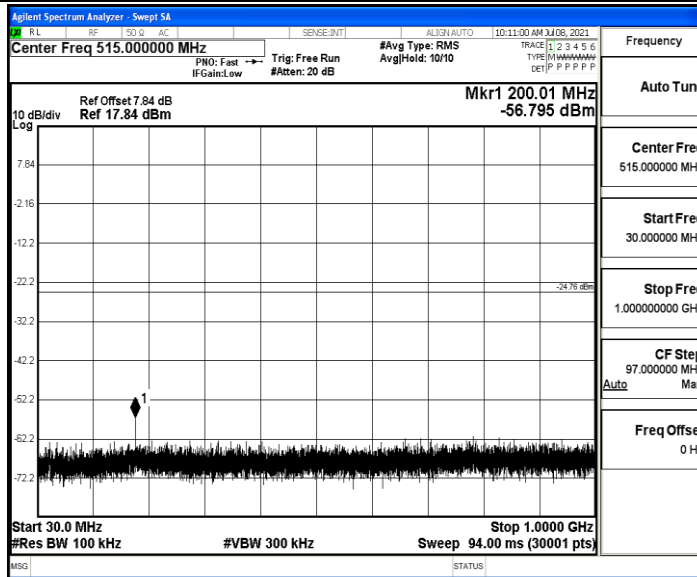




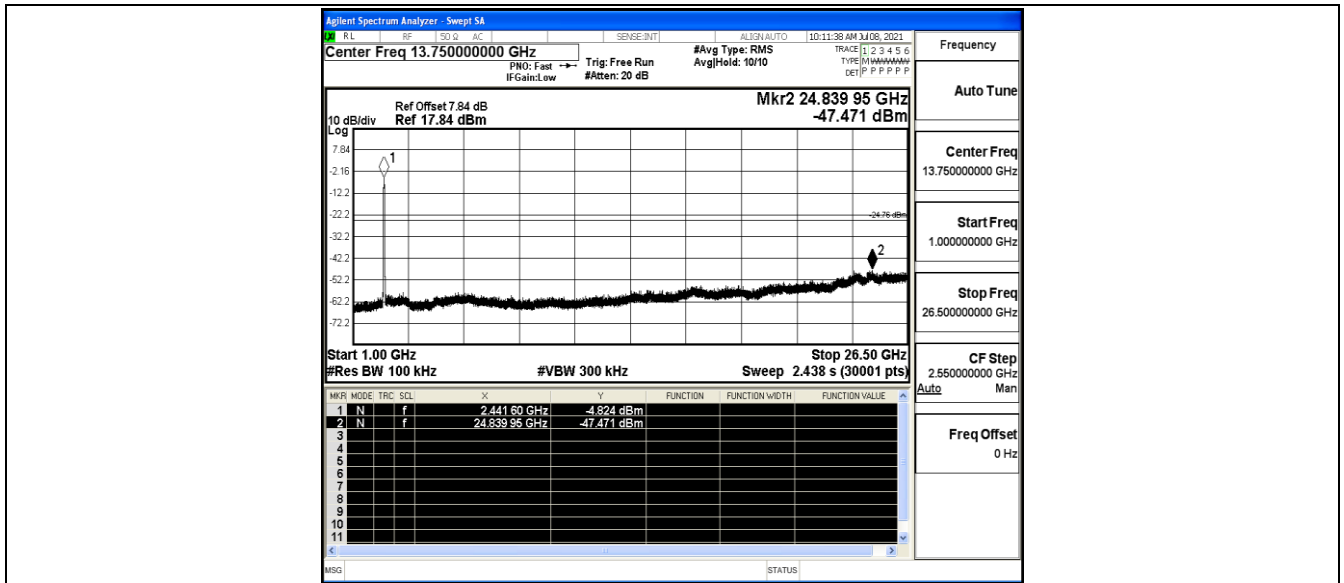
11N40SISO\_Ant1\_2437\_0~Reference



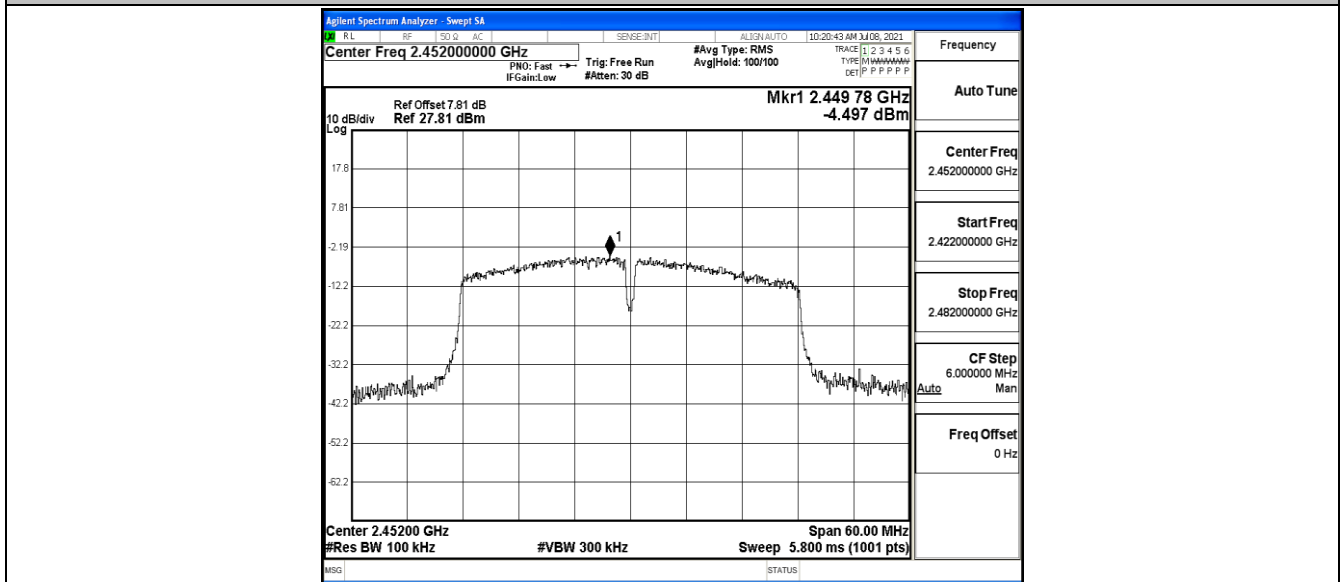
11N40SISO\_Ant1\_2437\_30~1000



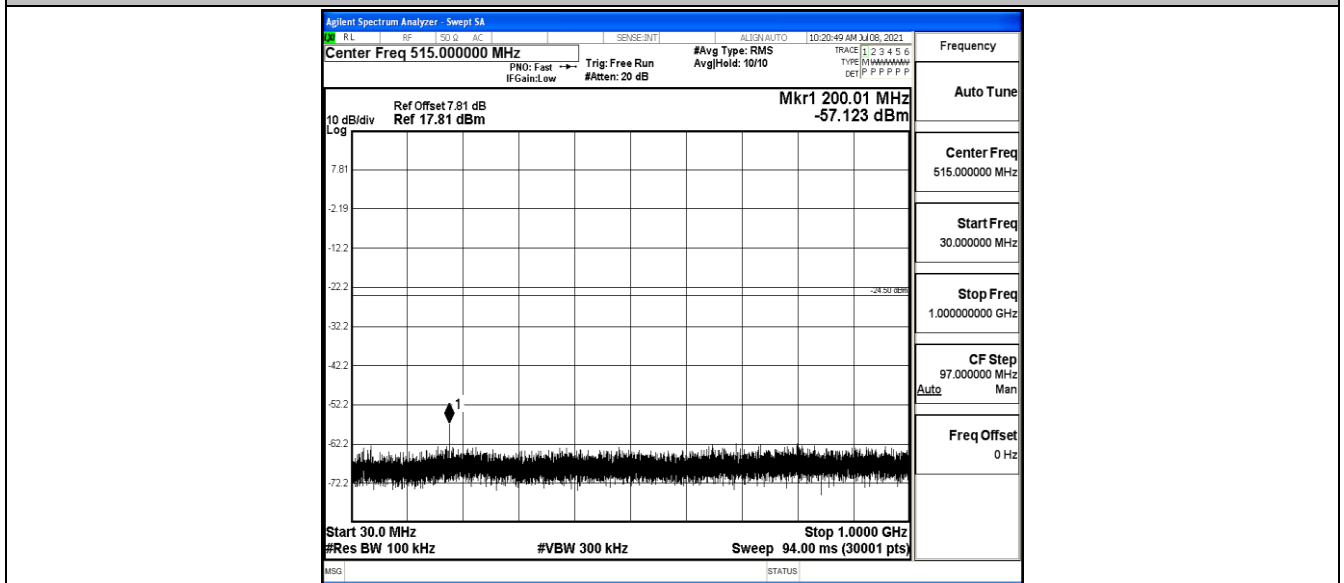
11N40SISO\_Ant1\_2437\_1000~26500



11N40SISO\_Ant1\_2452\_0~Reference

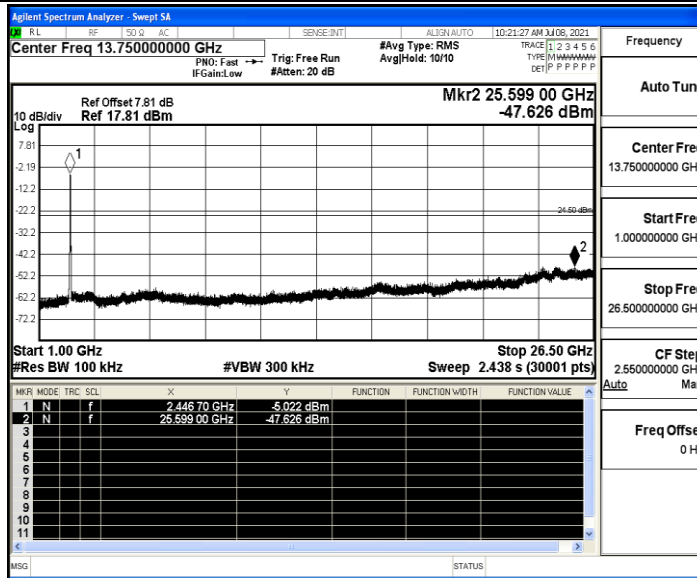


11N40SISO\_Ant1\_2452\_30~1000





11N40SISO\_Ant1\_2452\_1000~26500





## A.6 Band-edge for RF Conducted Emissions

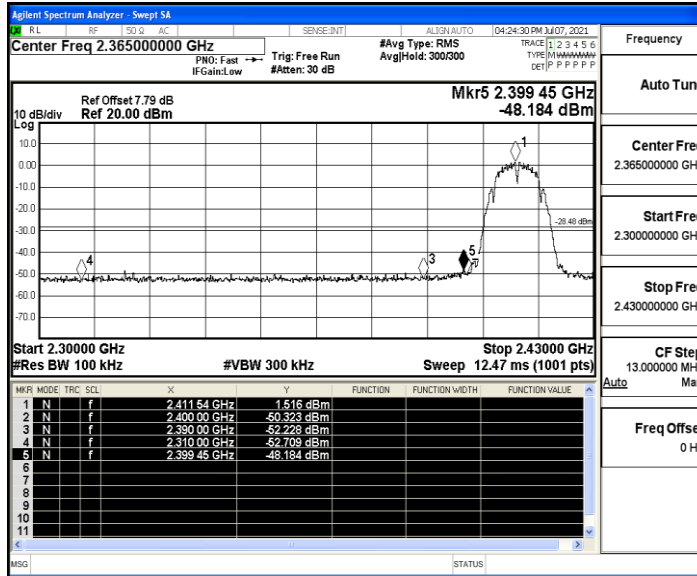
### Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	1.52	-48.18	$\leq -28.48$	PASS
		High	2462	2.81	-47.78	$\leq -27.19$	PASS
11G	Ant1	Low	2412	-1.60	-33.37	$\leq -31.6$	PASS
		High	2462	-1.82	-43.6	$\leq -31.82$	PASS
11N20SISO	Ant1	Low	2412	-1.31	-32.63	$\leq -31.31$	PASS
		High	2462	-1.76	-43.43	$\leq -31.76$	PASS
11N40SISO	Ant1	Low	2422	-5.69	-36.68	$\leq -35.69$	PASS
		High	2452	-4.42	-36.57	$\leq -34.42$	PASS

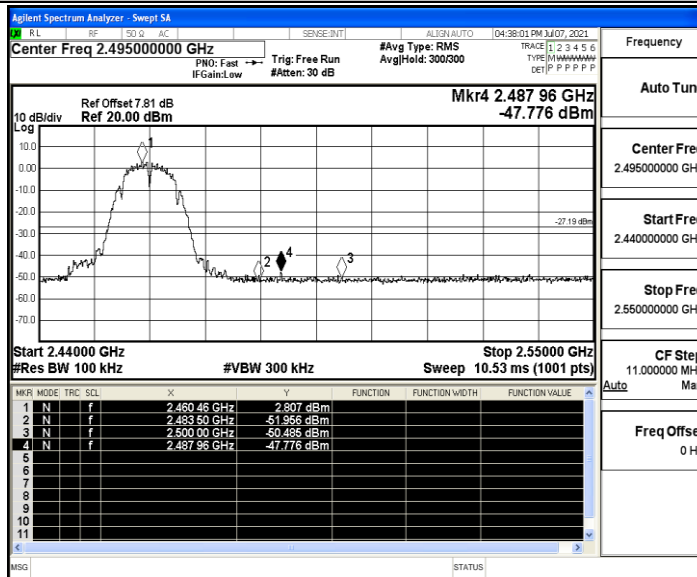


### Test Graphs

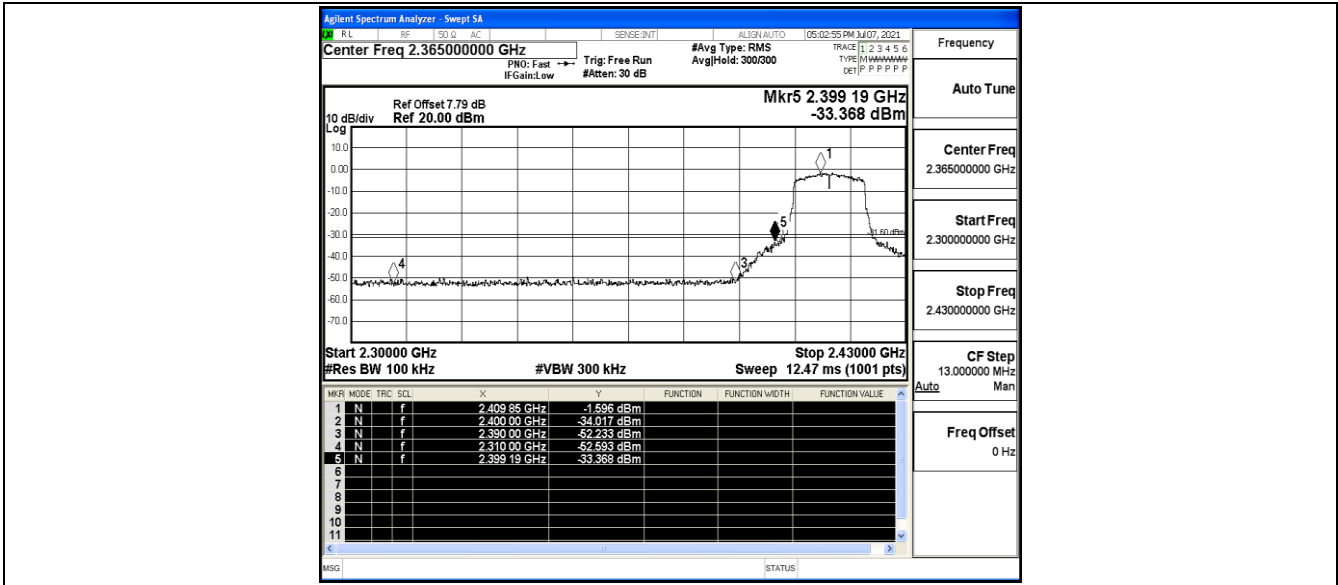
11B\_Ant1\_Low\_2412



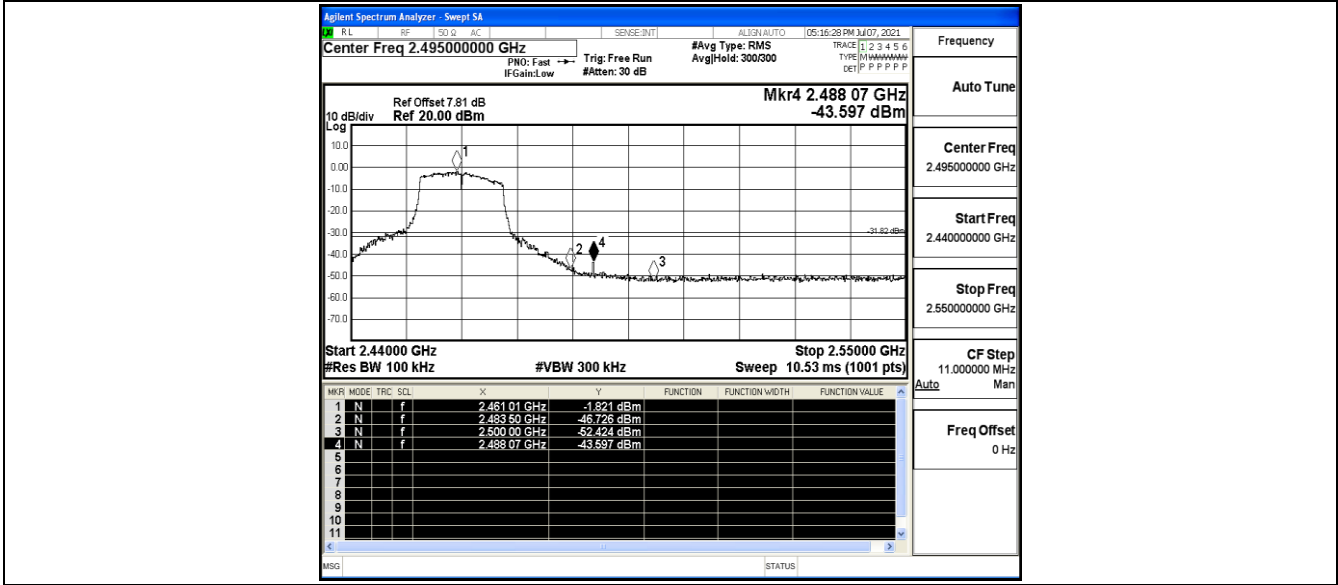
11B\_Ant1\_High\_2462



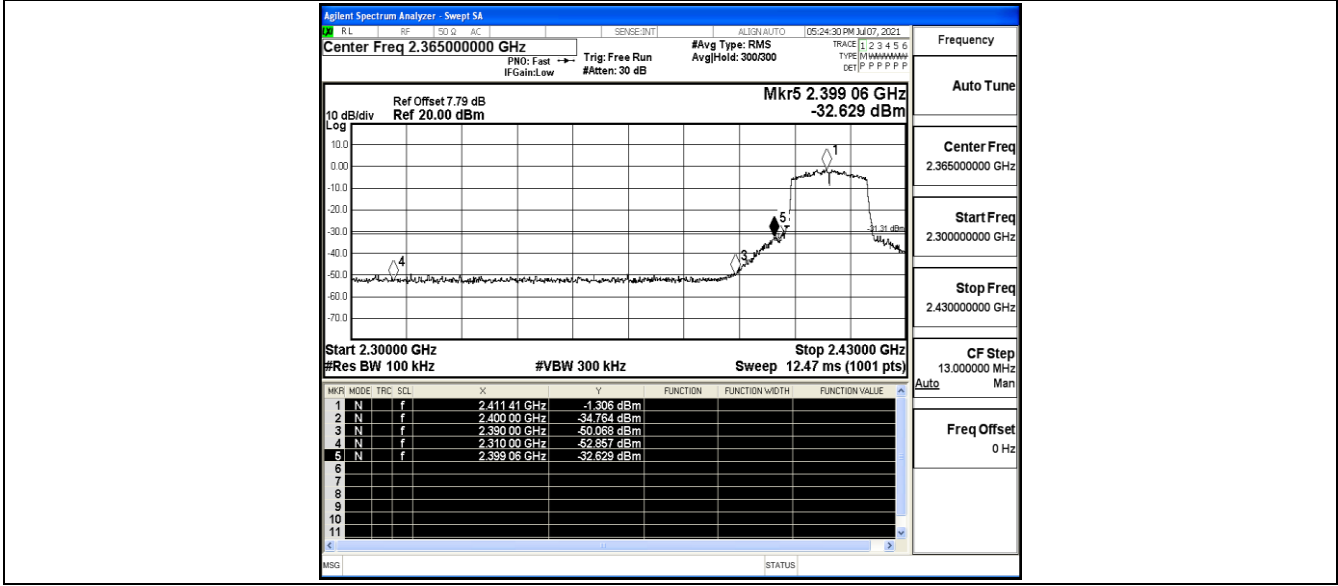
11G\_Ant1\_Low\_2412



11G\_Ant1\_High\_2462

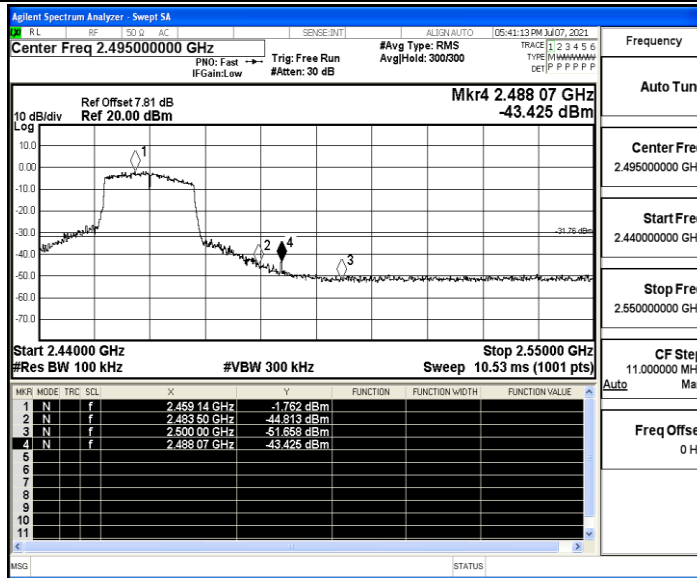


11N20SIS0\_Ant1\_Low\_2412

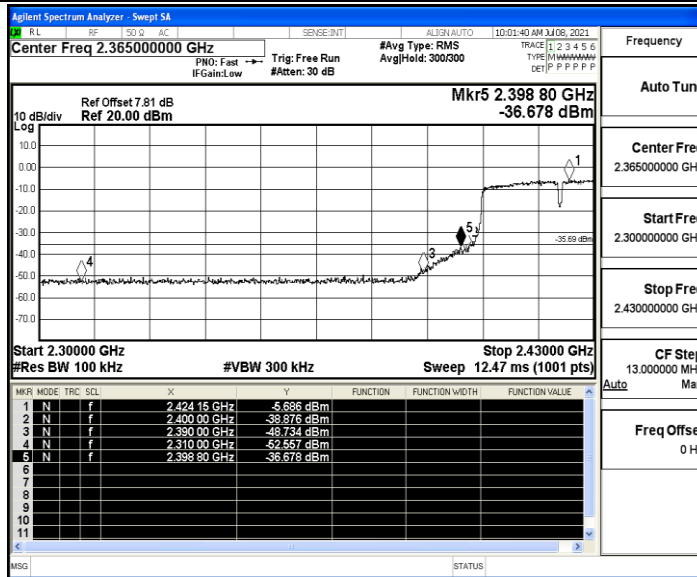




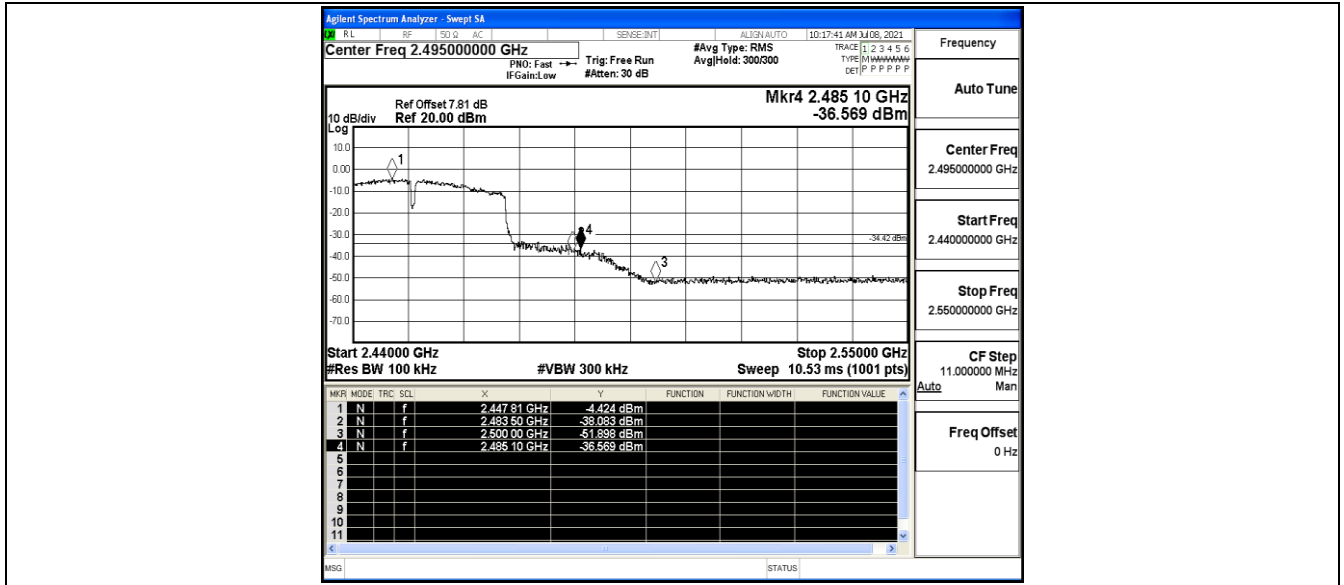
11N20SISO\_Ant1\_High\_2462



11N40SISO\_Ant1\_Low\_2422



11N40SISO\_Ant1\_High\_2452







## A.7 Emissions in Restricted Bands

### Test Result

TestMode	ChName	Channel	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Low	2412	AV	2310.000	-49.35	≤-41.20	PASS
			AV	2389.310	-48.88	≤-41.20	PASS
			AV	2390.000	-48.91	≤-41.20	PASS
			Peak	2310.000	-45.07	≤-21.20	PASS
			Peak	2363.960	-39.32	≤-21.20	PASS
			Peak	2390.000	-41.3	≤-21.20	PASS
	High	2462	AV	2483.500	-48.03	≤-41.20	PASS
			AV	2487.960	-47.03	≤-41.20	PASS
			AV	2500.000	-48.34	≤-41.20	PASS
			Peak	2483.500	-44.07	≤-21.20	PASS
			Peak	2492.690	-38.66	≤-21.20	PASS
			Peak	2500.000	-43.77	≤-21.20	PASS
11G	Low	2412	AV	2310.000	-49.33	≤-41.20	PASS
			AV	2389.960	-47.75	≤-41.20	PASS
			AV	2390.000	-47.75	≤-41.20	PASS
			Peak	2310.000	-44.94	≤-21.20	PASS
			Peak	2389.700	-38.57	≤-21.20	PASS
			Peak	2390.000	-41.7	≤-21.20	PASS
	High	2462	AV	2483.500	-43.42	≤-41.20	PASS
			AV	2487.960	-43	≤-41.20	PASS
			AV	2500.000	-48.34	≤-41.20	PASS
			Peak	2483.500	-36.2	≤-21.20	PASS
			Peak	2485.100	-34.59	≤-21.20	PASS
			Peak	2500.000	-40.21	≤-21.20	PASS
11N20SISO	Low	2412	AV	2310.000	-49.34	≤-41.20	PASS
			AV	2389.960	-46.86	≤-41.20	PASS
			AV	2390.000	-46.86	≤-41.20	PASS
			Peak	2310.000	-43.27	≤-21.20	PASS
			Peak	2389.180	-37.1	≤-21.20	PASS
			Peak	2390.000	-40.02	≤-21.20	PASS
	High	2462	AV	2483.500	-41.5	≤-41.20	PASS
			AV	2483.560	-41.6	≤-41.20	PASS
			AV	2500.000	-48.37	≤-41.20	PASS
			Peak	2483.500	-33.97	≤-21.20	PASS
			Peak	2484.770	-30.33	≤-21.20	PASS
			Peak	2500.000	-42.37	≤-21.20	PASS
11N40SISO	Low	2422	AV	2310.000	-49.37	≤-41.20	PASS



			AV	2389.960	-45.56	$\leq -41.20$	PASS
			AV	2390.000	-45.56	$\leq -41.20$	PASS
			Peak	2310.000	-41.91	$\leq -21.20$	PASS
			Peak	2389.830	-39.23	$\leq -21.20$	PASS
			Peak	2390.000	-43.02	$\leq -21.20$	PASS
	High	2452	AV	2483.500	-44.84	$\leq -41.20$	PASS
			AV	2483.560	-44.87	$\leq -41.20$	PASS
			AV	2500.000	-48.39	$\leq -41.20$	PASS
			Peak	2483.500	-39.82	$\leq -21.20$	PASS
			Peak	2483.560	-35.75	$\leq -21.20$	PASS
			Peak	2500.000	-43.32	$\leq -21.20$	PASS

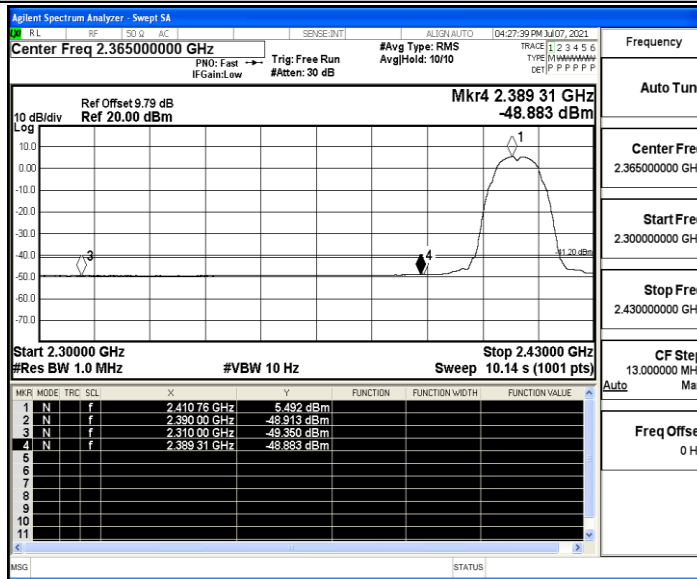
## Note:

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.

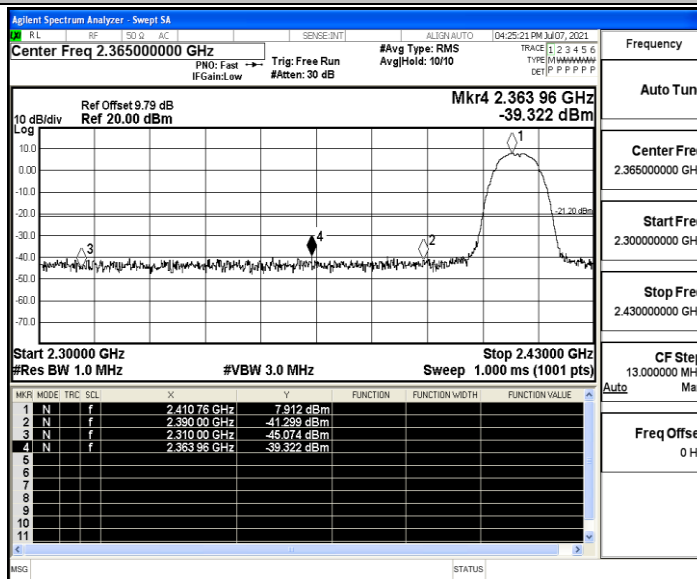


### Test Graphs

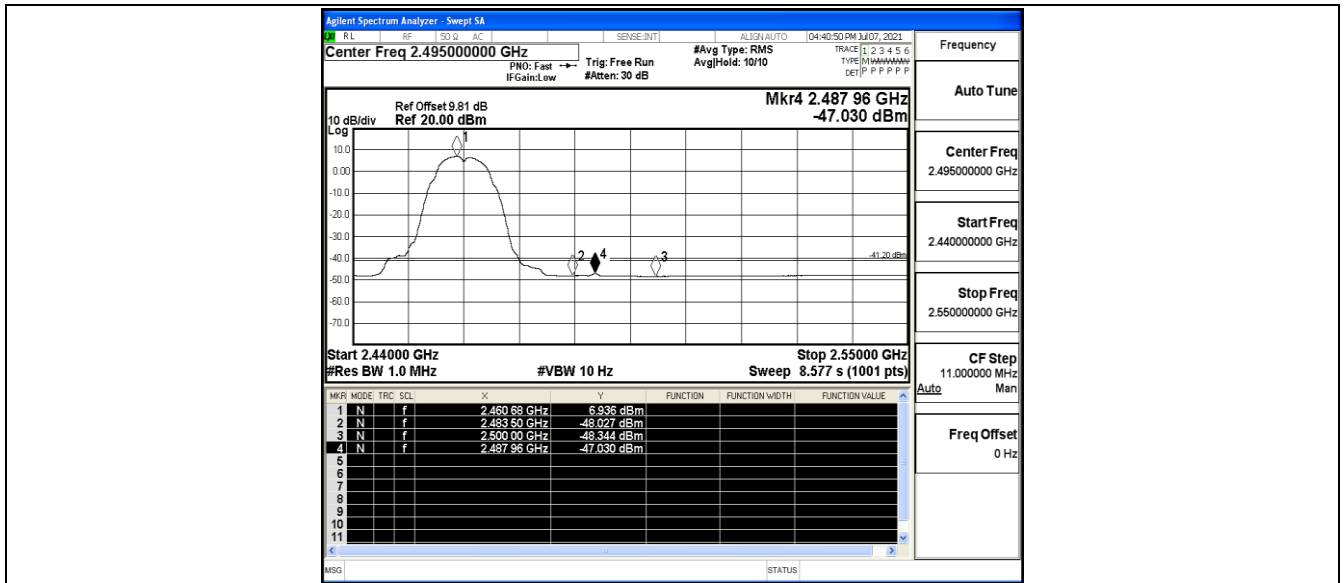
11B\_Ant1\_Low\_2412\_AV



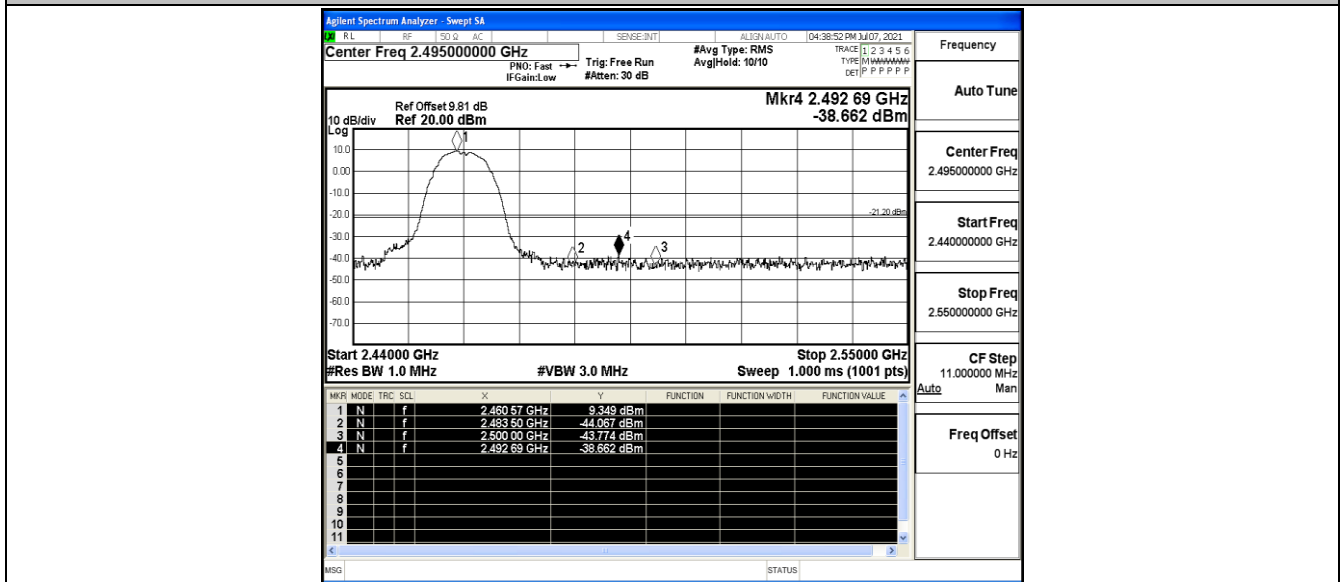
11B\_Ant1\_Low\_2412\_Peak



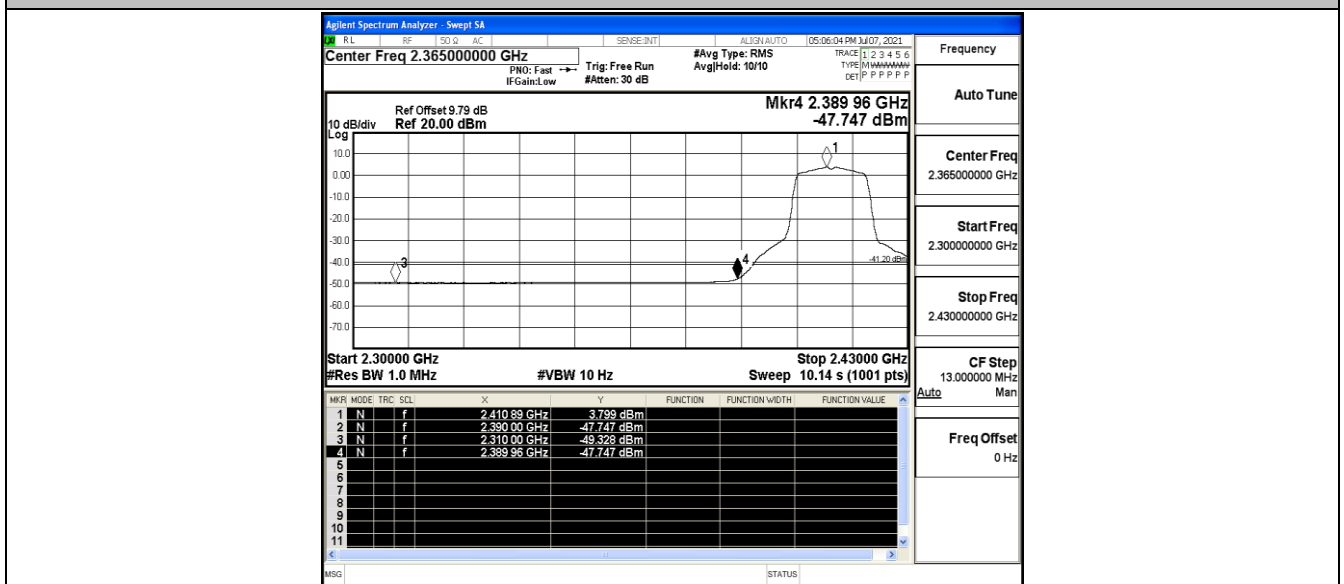
11B\_Ant1\_High\_2462\_AV



11B\_Ant1\_High\_2462\_Peak

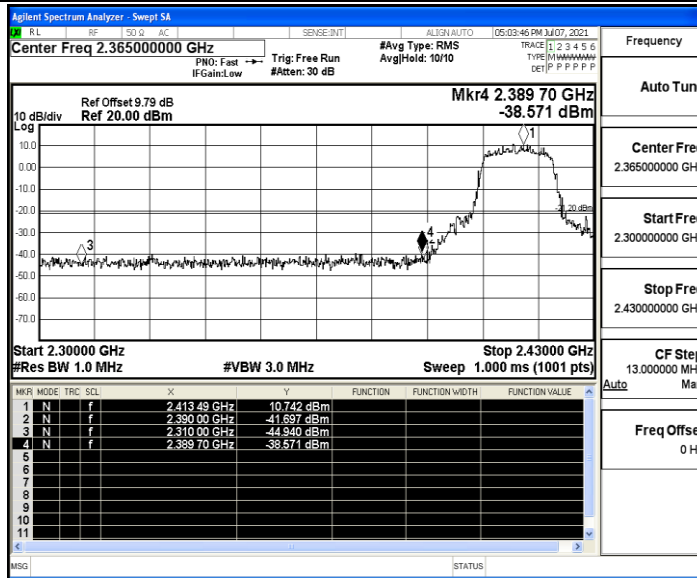


11G\_Ant1\_Low\_2412\_AV

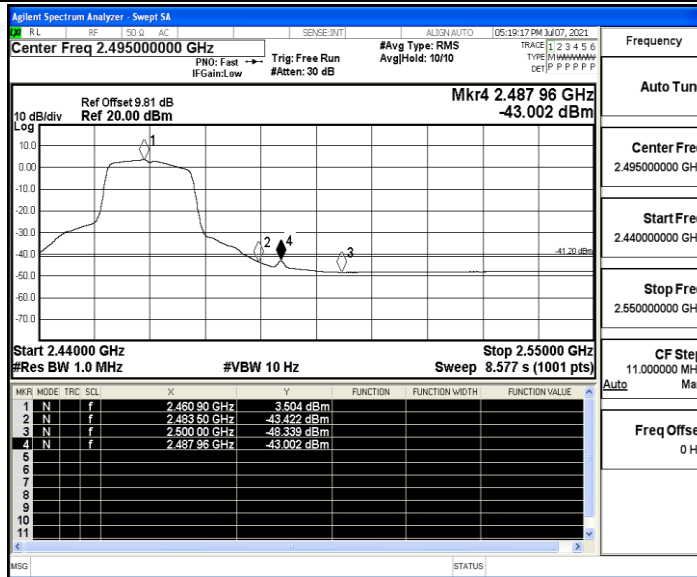




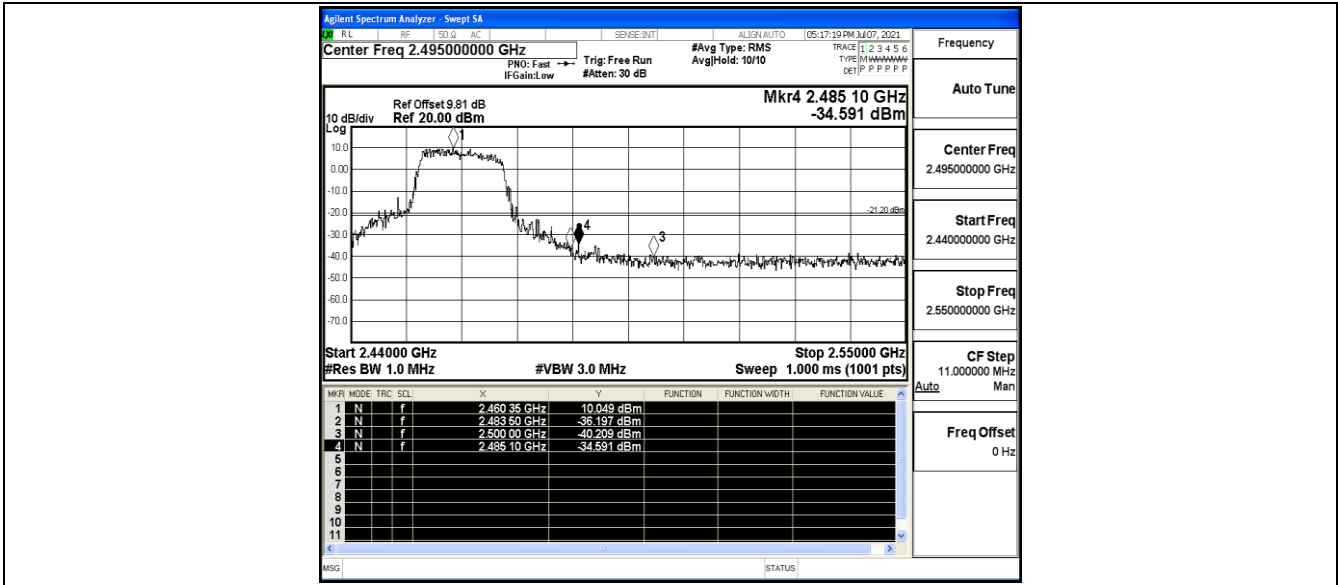
### 11G\_Ant1\_Low\_2412\_Peak



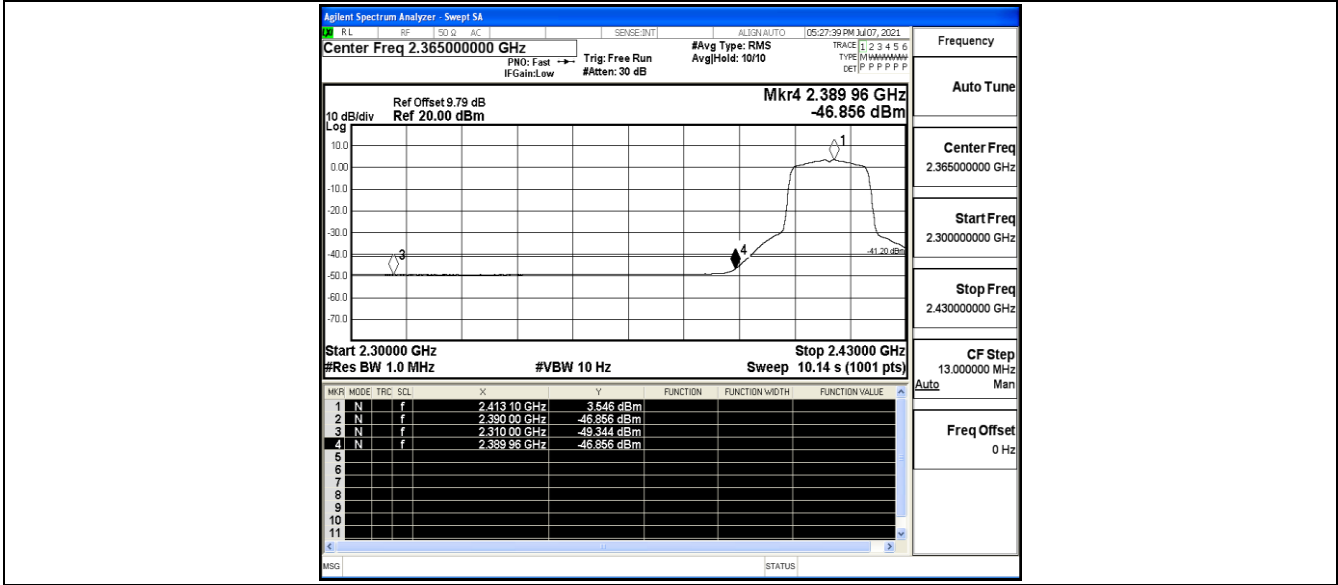
### 11G\_Ant1\_High\_2462\_AV



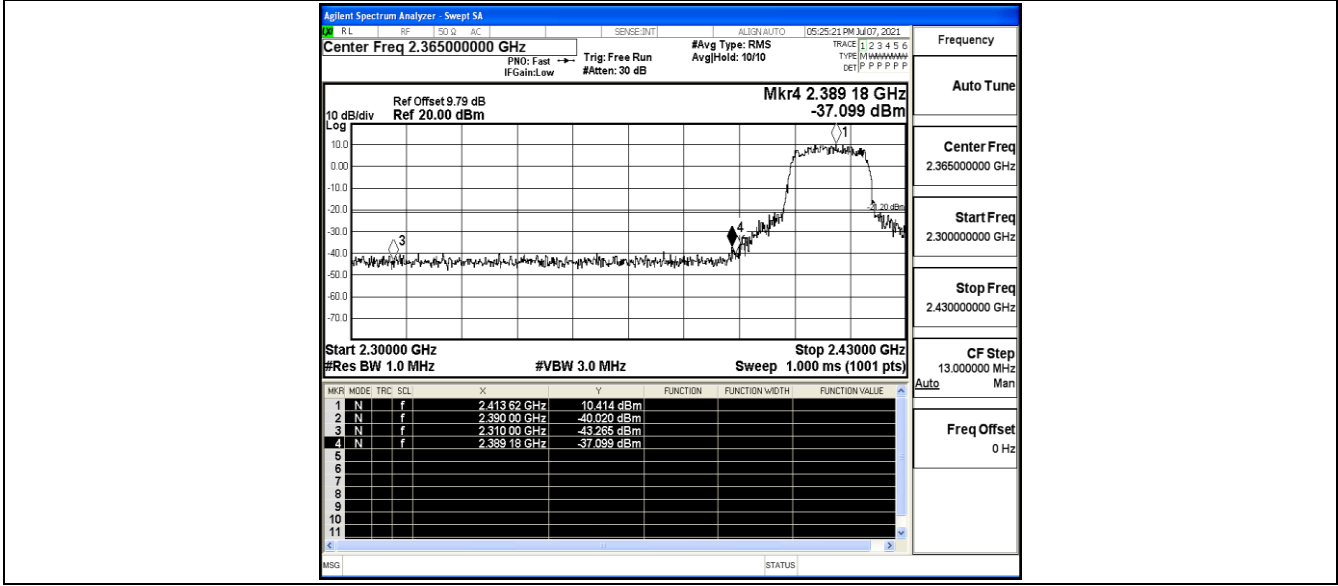
### 11G\_Ant1\_High\_2462\_Peak



11N20SISO\_Ant1\_Low\_2412\_AV

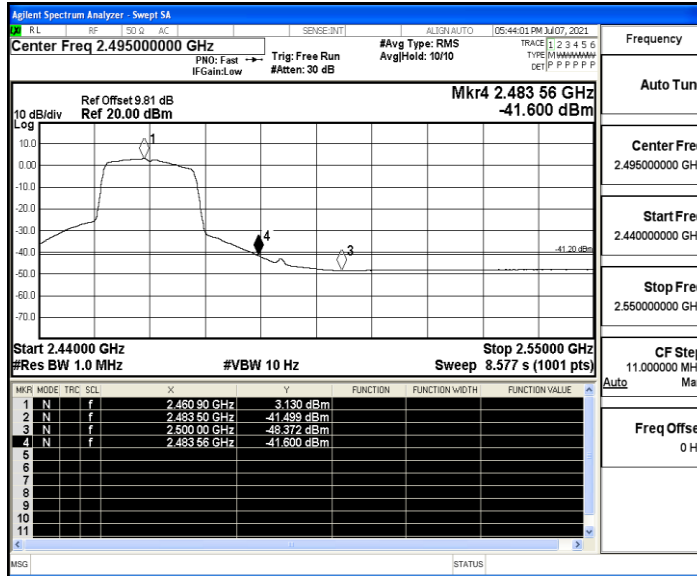


11N20SISO\_Ant1\_Low\_2412\_Peak

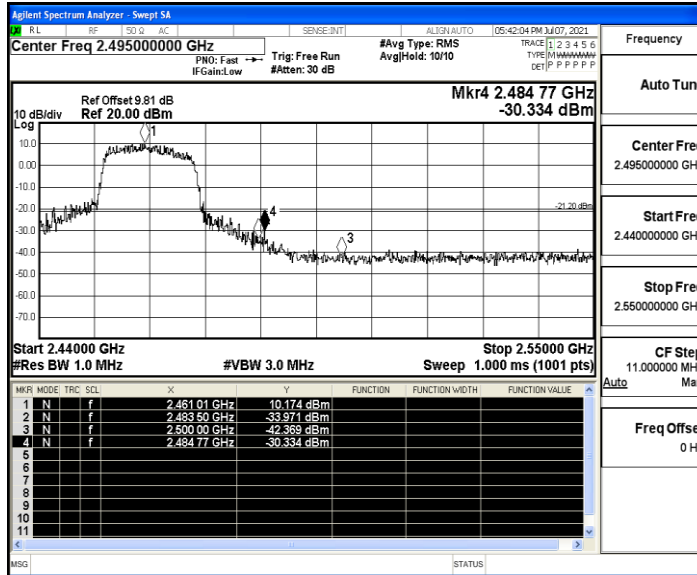




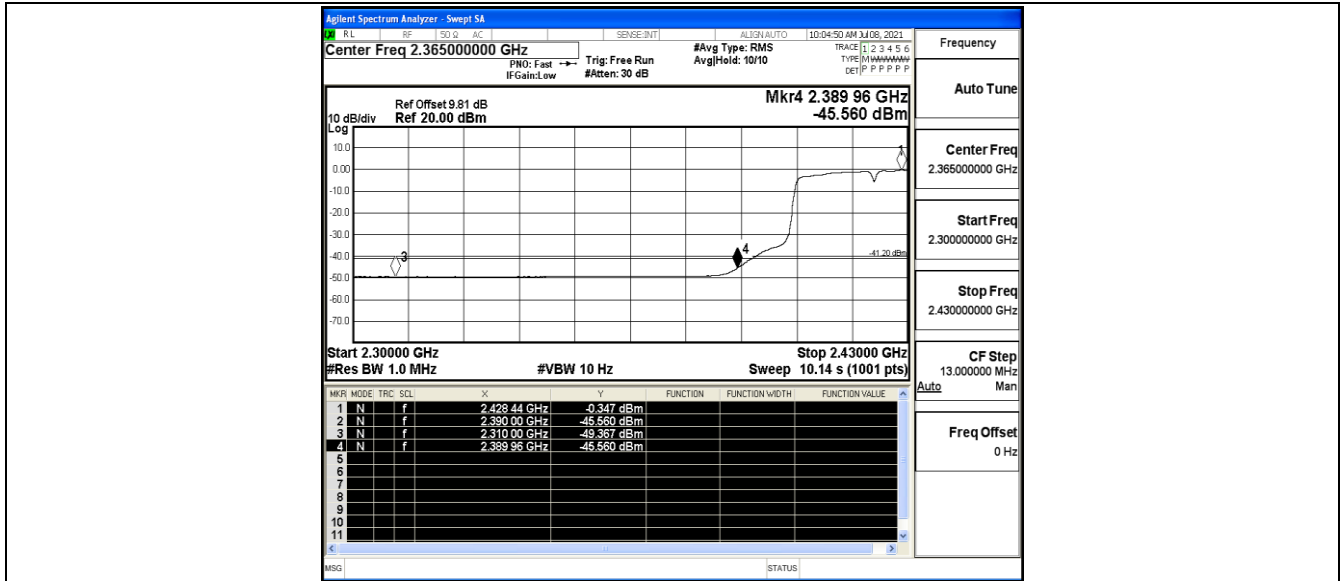
### 11N20SISO\_Ant1\_High\_2462\_AV



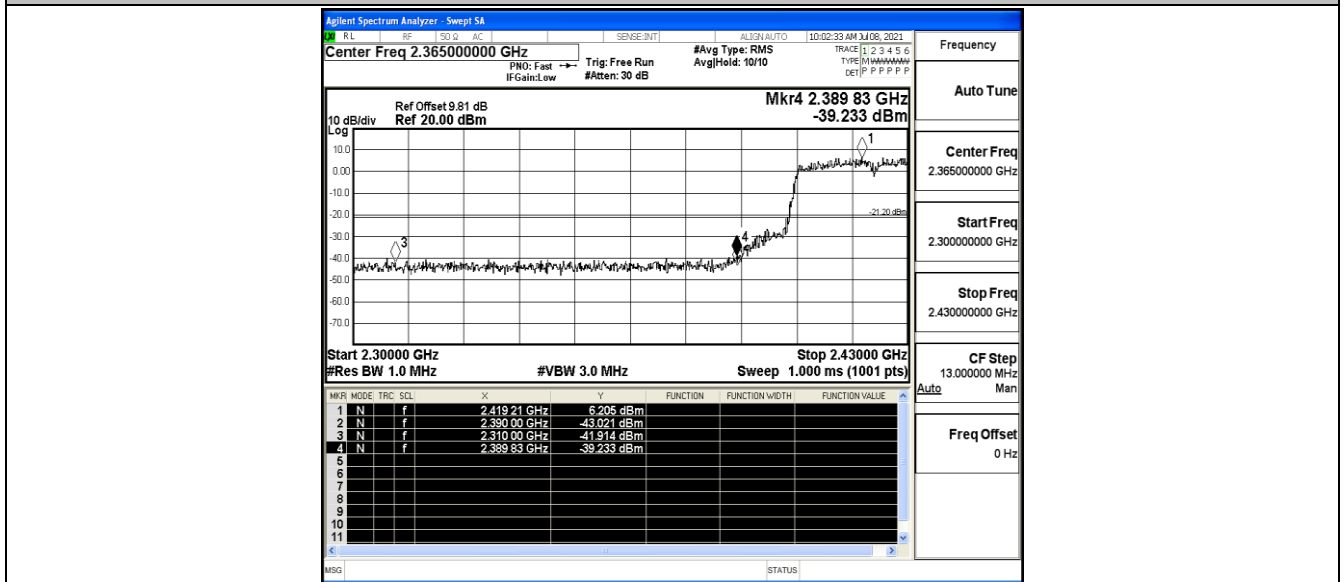
### 11N20SISO\_Ant1\_High\_2462\_Peak



### 11N40SISO\_Ant1\_Low\_2422\_AV



11N40SISO\_Ant1\_Low\_2422\_Peak



11N40SISO\_Ant1\_High\_2452\_AV

