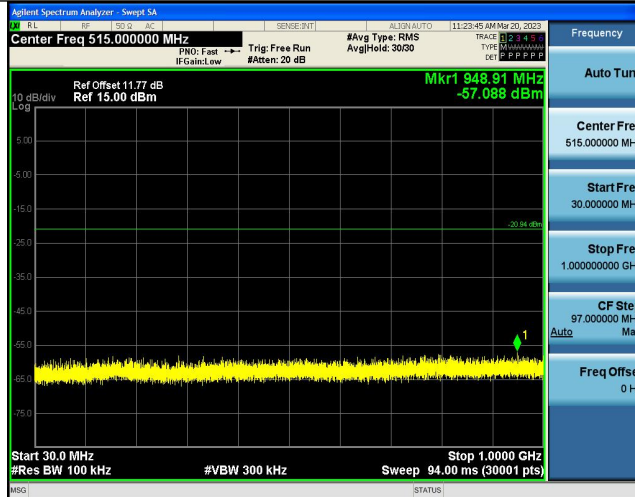
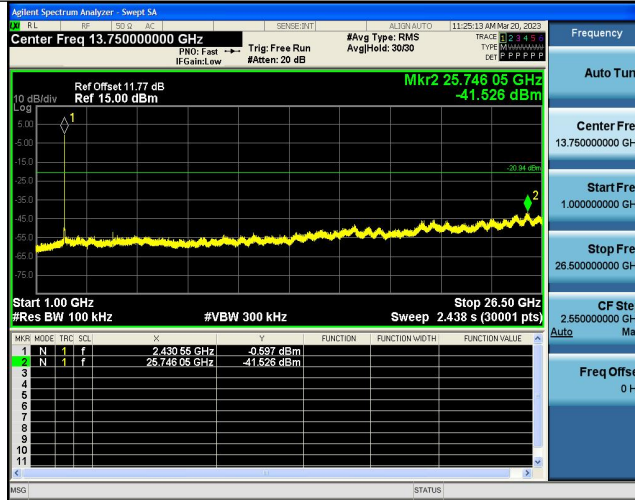


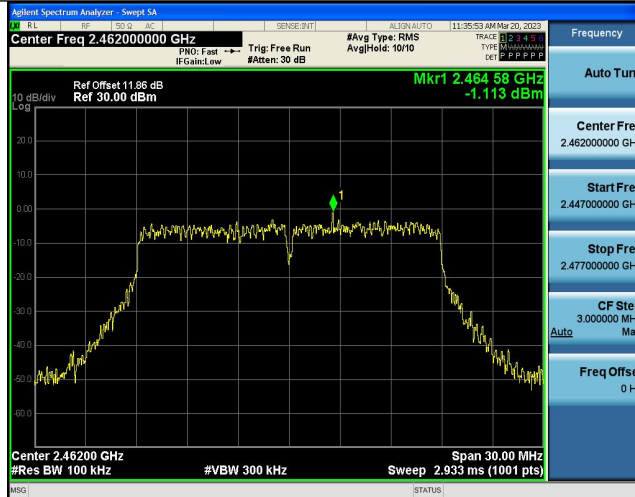
11N20SISO-Ant1-2437-30~1000--0.94



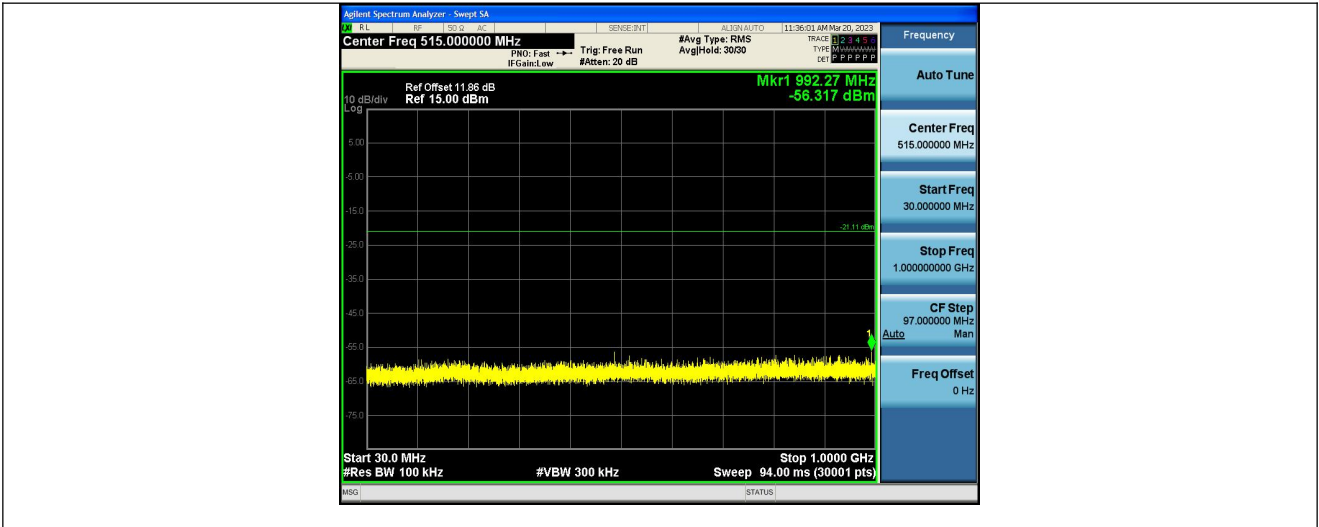
11N20SISO-Ant1-2437-1000~26500--0.94



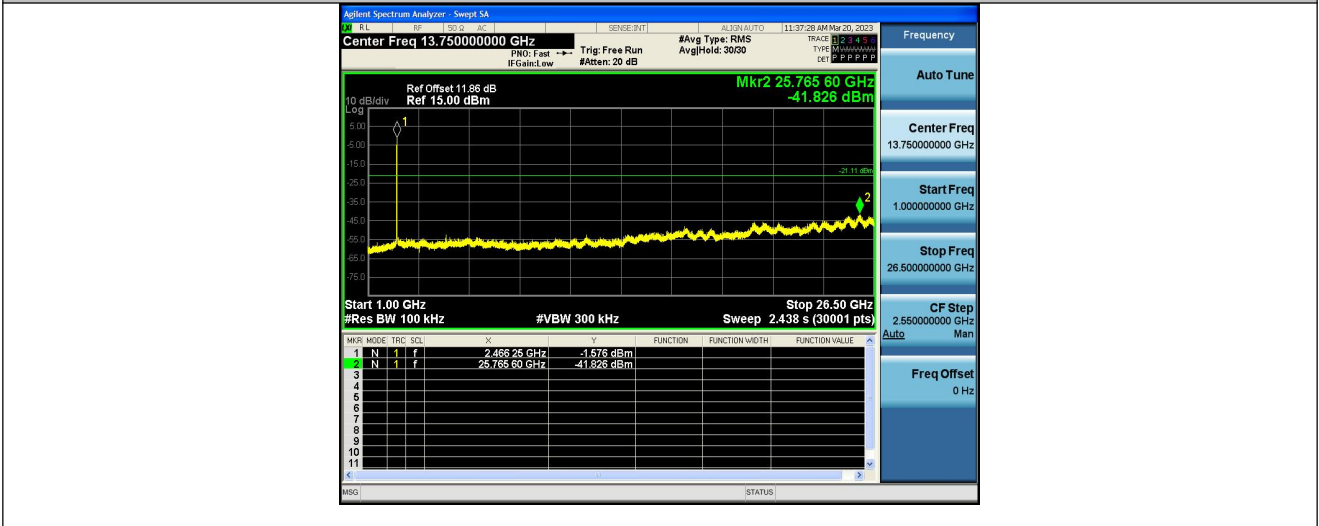
11N20SISO-Ant1-2462-0~Reference--1.11



11N20SISO-Ant1-2462-30~1000--1.11



11N20SISO-Ant1-2462-1000~26500--1.11



Emissions in Restricted Bands

TestMode	Antenna	ChName	Frequency[M Hz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	Peak	2390.000	-39.73	≤-21.20	55.47	≤74	PASS



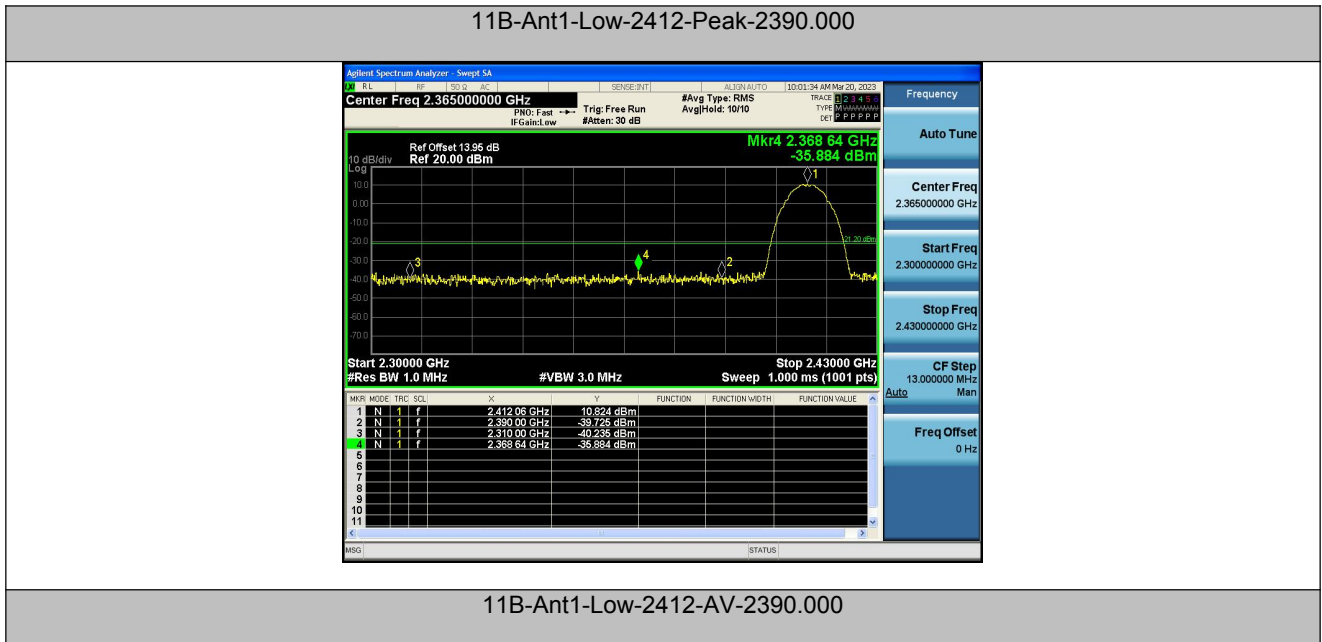
11B	Ant1	Low	2412	Peak	2310.000	-40.24	≤-21.20	54.96	≤74	PASS
11B	Ant1	Low	2412	Peak	2368.640	-35.88	≤-21.20	59.32	≤74	PASS
11B	Ant1	Low	2412	AV	2390.000	-45.38	≤-41.20	49.82	≤54	PASS
11B	Ant1	Low	2412	AV	2310.000	-45.84	≤-41.20	49.36	≤54	PASS
11B	Ant1	Low	2412	AV	2387.490	-45.33	≤-41.20	49.87	≤54	PASS
11B	Ant1	High	2462	Peak	2483.500	-40.95	≤-21.20	54.25	≤74	PASS
11B	Ant1	High	2462	Peak	2500.000	-39.51	≤-21.20	55.69	≤74	PASS
11B	Ant1	High	2462	Peak	2495.550	-36.24	≤-21.20	58.96	≤74	PASS
11B	Ant1	High	2462	AV	2483.500	-45.21	≤-41.20	49.99	≤54	PASS
11B	Ant1	High	2462	AV	2500.000	-45.26	≤-41.20	49.94	≤54	PASS
11B	Ant1	High	2462	AV	2489.170	-45.12	≤-41.20	50.08	≤54	PASS
11G	Ant1	Low	2412	Peak	2390.000	-40.06	≤-21.20	55.14	≤74	PASS
11G	Ant1	Low	2412	Peak	2310.000	-40.8	≤-21.20	54.40	≤74	PASS
11G	Ant1	Low	2412	Peak	2360.190	-35.8	≤-21.20	59.40	≤74	PASS
11G	Ant1	Low	2412	AV	2390.000	-43.88	≤-41.20	51.32	≤54	PASS
11G	Ant1	Low	2412	AV	2310.000	-44.85	≤-41.20	50.35	≤54	PASS
11G	Ant1	Low	2412	AV	2378.910	-43.79	≤-41.20	51.41	≤54	PASS
11G	Ant1	High	2462	Peak	2483.500	-39.03	≤-21.20	56.17	≤74	PASS
11G	Ant1	High	2462	Peak	2500.000	-41.7	≤-21.20	53.50	≤74	PASS
11G	Ant1	High	2462	Peak	2485.760	-36.19	≤-21.20	59.01	≤74	PASS
11G	Ant1	High	2462	AV	2483.500	-43.53	≤-41.20	51.67	≤54	PASS
11G	Ant1	High	2462	AV	2500.000	-43.92	≤-41.20	51.28	≤54	PASS
11G	Ant1	High	2462	AV	2483.560	-43.4	≤-41.20	51.80	≤54	PASS
11N20SI SO	Ant1	Low	2412	Peak	2390.000	-39.78	≤-21.20	55.42	≤74	PASS
11N20SI SO	Ant1	Low	2412	Peak	2310.000	-42	≤-21.20	53.20	≤74	PASS
11N20SI SO	Ant1	Low	2412	Peak	2317.160	-35.81	≤-21.20	59.39	≤74	PASS
11N20SI SO	Ant1	Low	2412	AV	2390.000	-44.66	≤-41.20	50.54	≤54	PASS
11N20SI SO	Ant1	Low	2412	AV	2310.000	-45.2	≤-41.20	50.00	≤54	PASS
11N20SI SO	Ant1	Low	2412	AV	2389.570	-44.62	≤-41.20	50.58	≤54	PASS

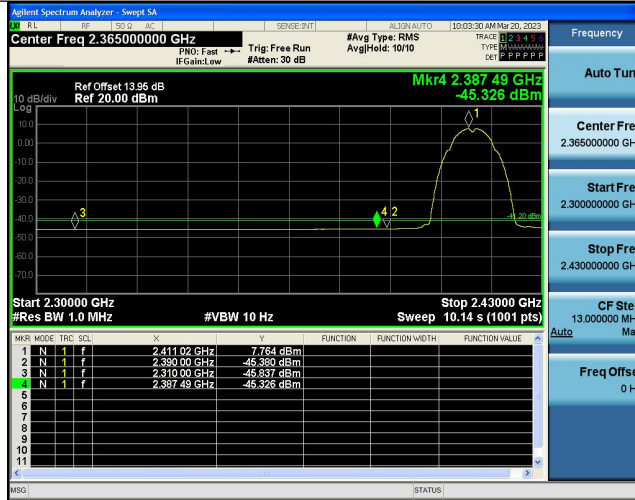


11N20SI SO	Ant1	High	2462	Peak	2483.500	-38.66	≤-21.20	56.54	≤74	PASS
11N20SI SO	Ant1	High	2462	Peak	2500.000	-38.88	≤-21.20	56.32	≤74	PASS
11N20SI SO	Ant1	High	2462	Peak	2486.750	-34.6	≤-21.20	60.60	≤74	PASS
11N20SI SO	Ant1	High	2462	AV	2483.500	-43.98	≤-41.20	51.22	≤54	PASS
11N20SI SO	Ant1	High	2462	AV	2500.000	-44.73	≤-41.20	50.47	≤54	PASS
11N20SI SO	Ant1	High	2462	AV	2483.780	-43.94	≤-41.20	51.26	≤54	PASS

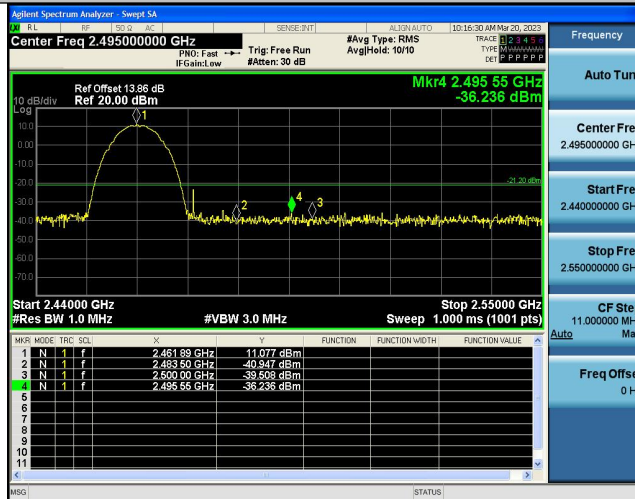
Note:

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.

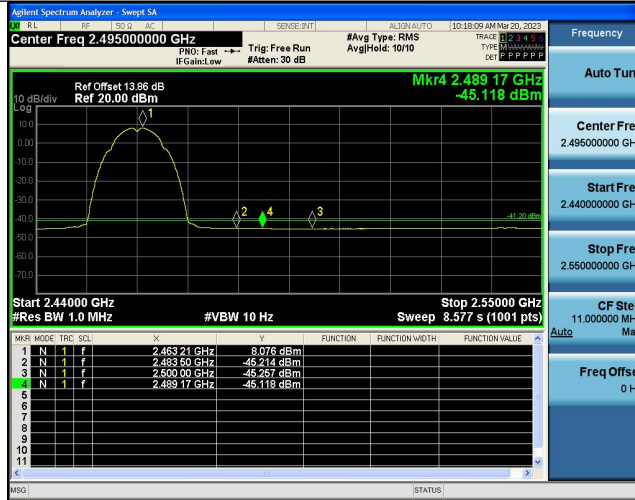




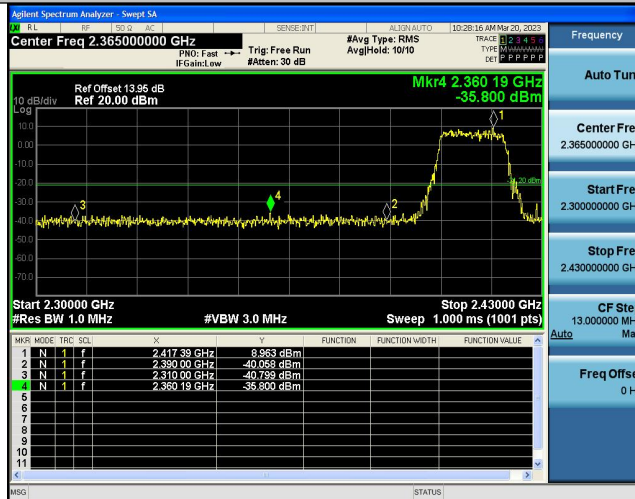
11B-Ant1-High-2462-Peak-2483.500



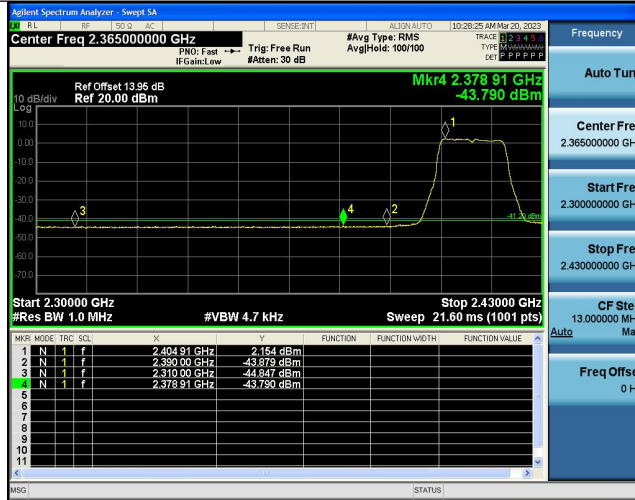
11B-Ant1-High-2462-AV-2483.500



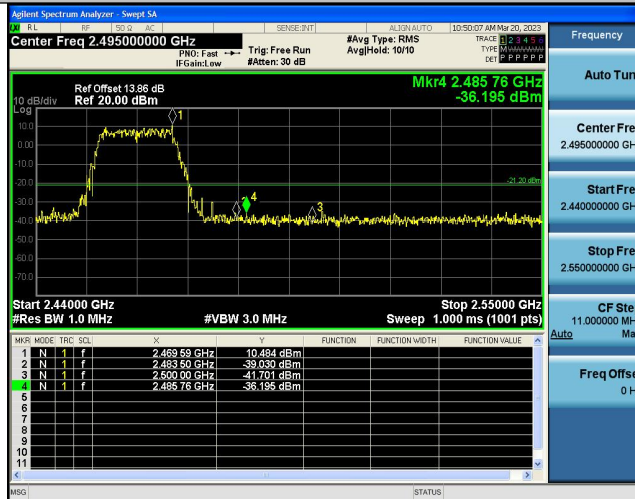
11G-Ant1-Low-2412-Peak-2390.000



11G-Ant1-Low-2412-AV-2390.000



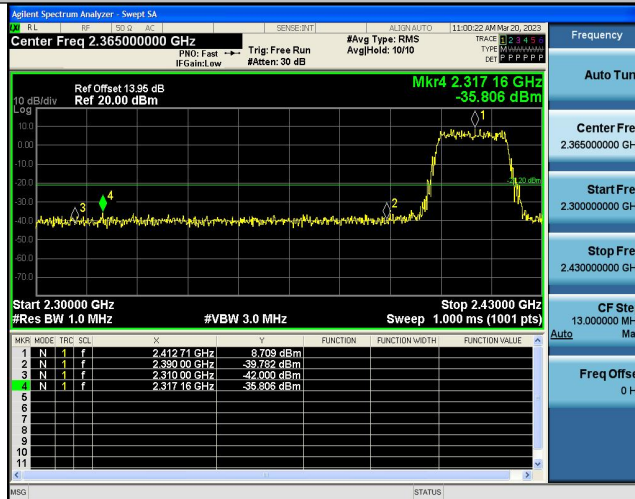
11G-Ant1-High-2462-Peak-2483.500



11G-Ant1-High-2462-AV-2483.500



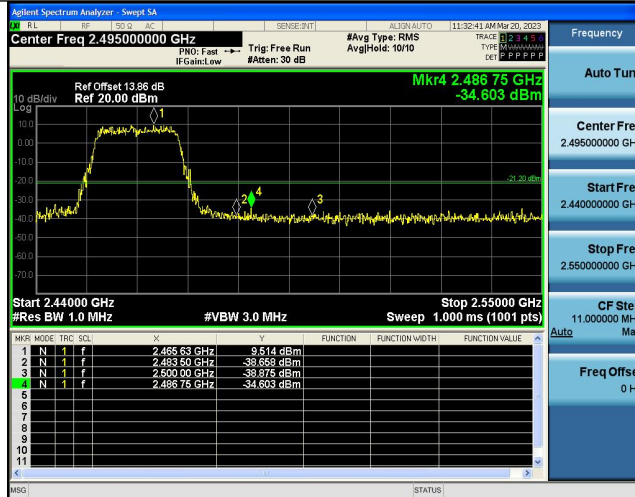
11N20SISO-Ant1-Low-2412-Peak-2390.000



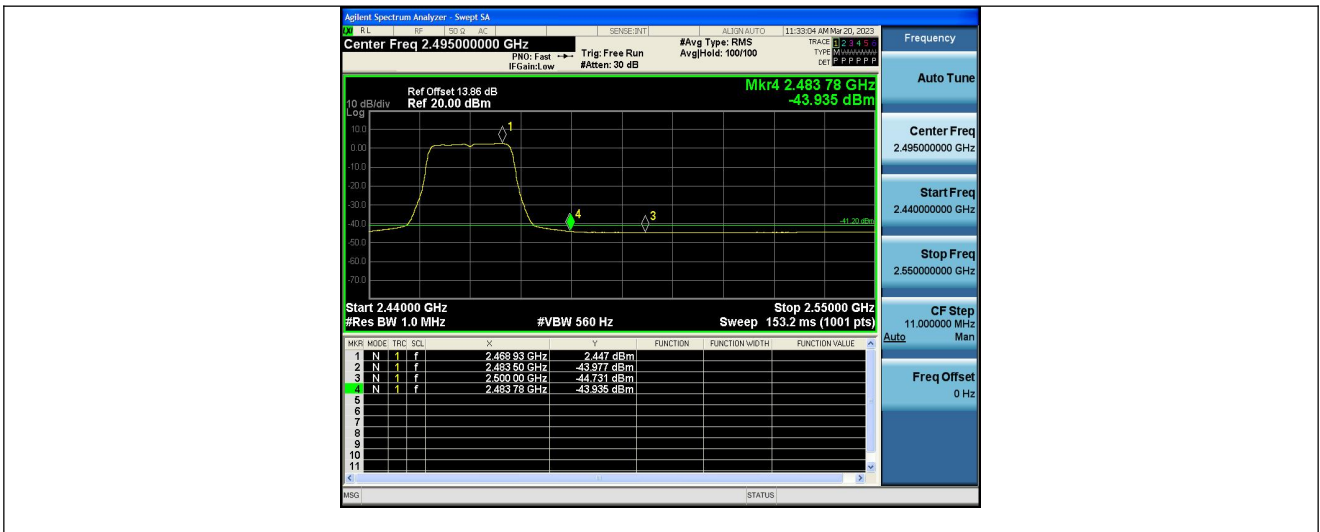
11N20SISO-Ant1-Low-2412-AV-2390.000



11N20SISO-Ant1-High-2462-Peak-2483.500



11N20SISO-Ant1-High-2462-AV-2483.500



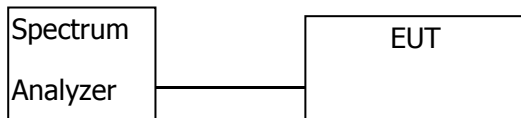


8 Band Edge Measurement

- Test Requirement : Section 15.247(d) In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).
- Test Method : ANSI C63.10:2013
- Test Limit : Regulation 15.247 (d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

8.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold
3. Set up:



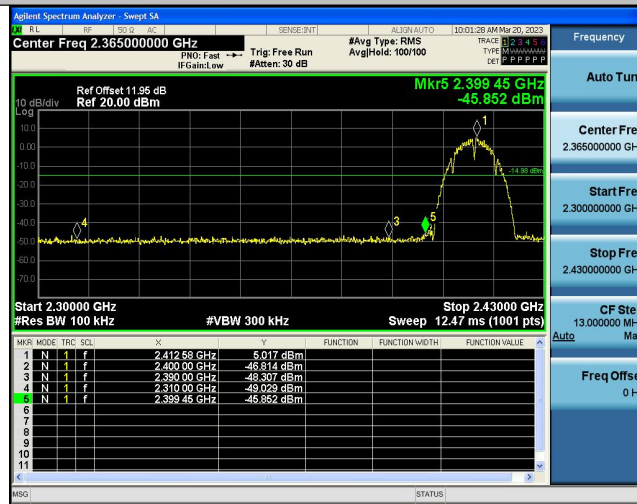


8.2 Test Result

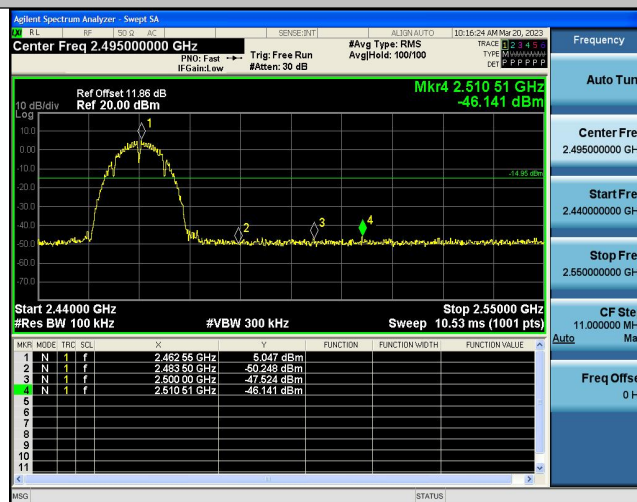
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.02	-45.85	≤-14.98	PASS
11B	Ant1	High	2462	5.05	-46.14	≤-14.95	PASS
11G	Ant1	Low	2412	-0.51	-42.62	≤-20.51	PASS
11G	Ant1	High	2462	0.07	-46.41	≤-19.93	PASS
11N20SISO	Ant1	Low	2412	-0.75	-39.11	≤-20.75	PASS
11N20SISO	Ant1	High	2462	-0.60	-46.02	≤-20.6	PASS

Test Graphs

11B-Ant1-Low-2412-5.02

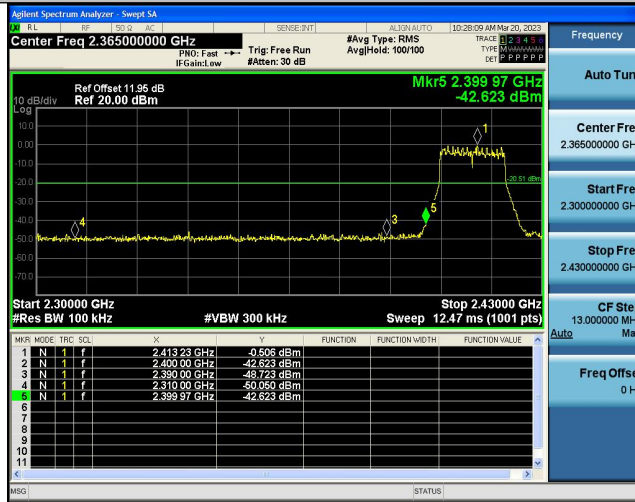


11B-Ant1-High-2462-5.05

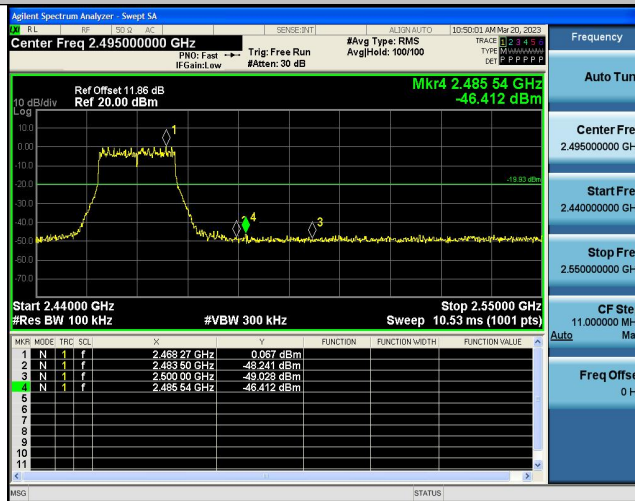




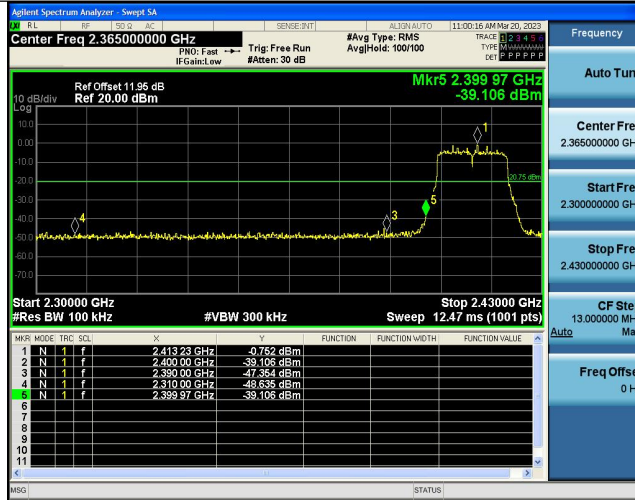
11G-Ant1-Low-2412--0.51



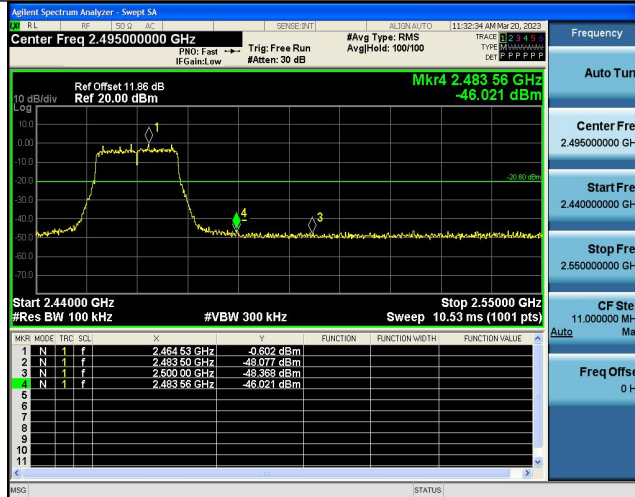
11G-Ant1-High-2462-0.07



11N20SISO-Ant1-Low-2412--0.75



11N20SISO-Ant1-High-2462--0.60





9 6dB Bandwidth Measurement

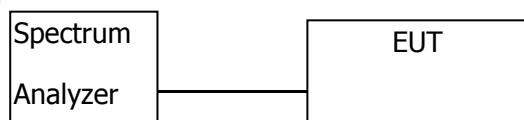
Test Requirement : FCC CFR47 Part 15 Section 15.247

Test Method : ANSI C63.10:2013

Test Limit : Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

9.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz
3. Set up:



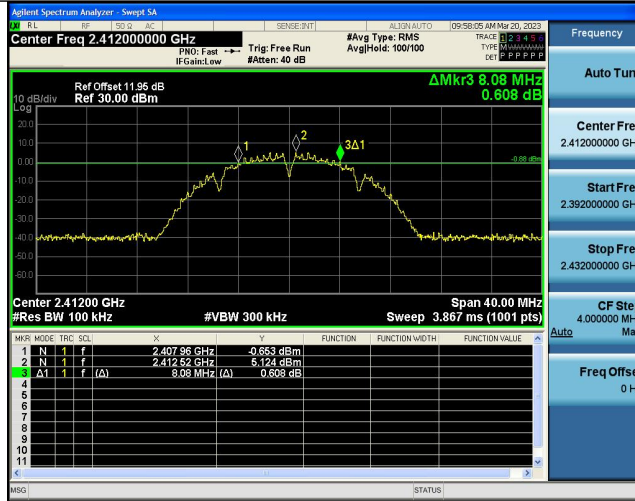
9.2 Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.080	2407.960	2416.040	0.5	PASS
11B	Ant1	2437	8.560	2432.960	2441.520	0.5	PASS
11B	Ant1	2462	8.040	2458.000	2466.040	0.5	PASS
11G	Ant1	2412	16.400	2403.840	2420.240	0.5	PASS
11G	Ant1	2437	16.400	2428.840	2445.240	0.5	PASS
11G	Ant1	2462	16.480	2453.800	2470.280	0.5	PASS
11N20SISO	Ant1	2412	17.560	2403.240	2420.800	0.5	PASS
11N20SISO	Ant1	2437	16.680	2428.880	2445.560	0.5	PASS
11N20SISO	Ant1	2462	17.320	2453.480	2470.800	0.5	PASS



Test Graphs

11B-Ant1-2412



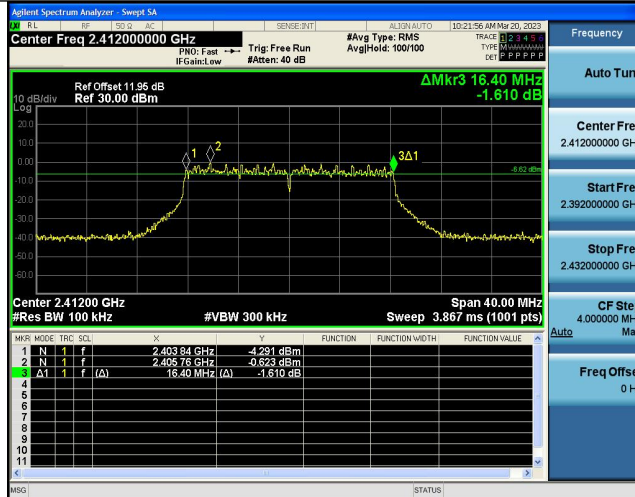
11B-Ant1-2437



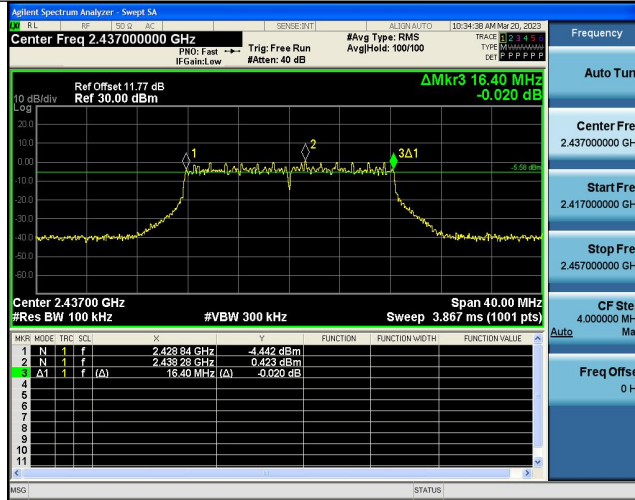
11B-Ant1-2462



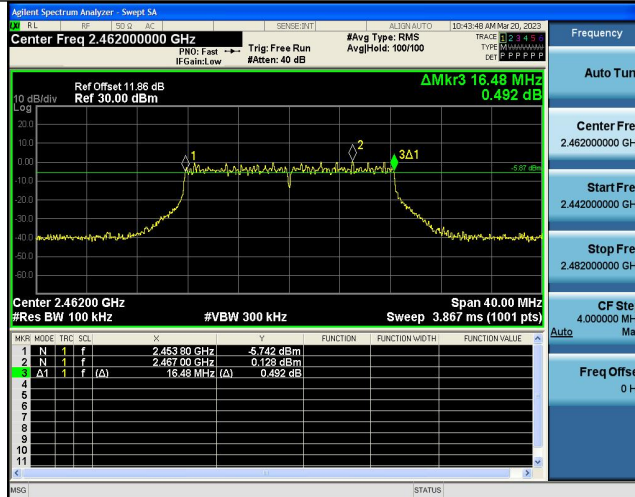
11G-Ant1-2412



11G-Ant1-2437



11G-Ant1-2462



11N20SISO-Ant1-2412