

Appendix Test Data for BLE (Conducted Measurement)

Product Name: Wireless Mechanical Keyboard

Trade Mark: Keychron

Test Model: K5 Max

FCC ID: 2ASF4-K5MAX

Environmental Conditions

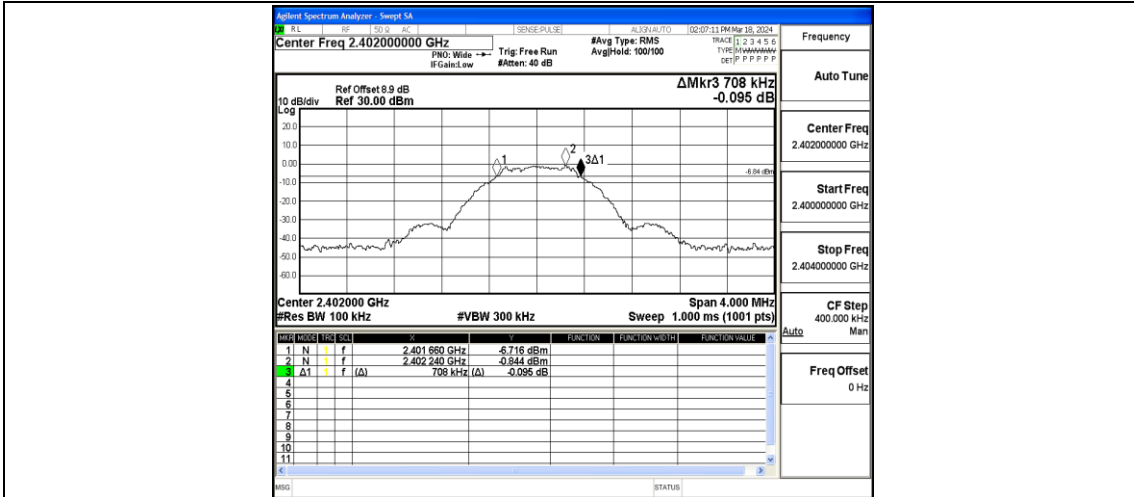
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

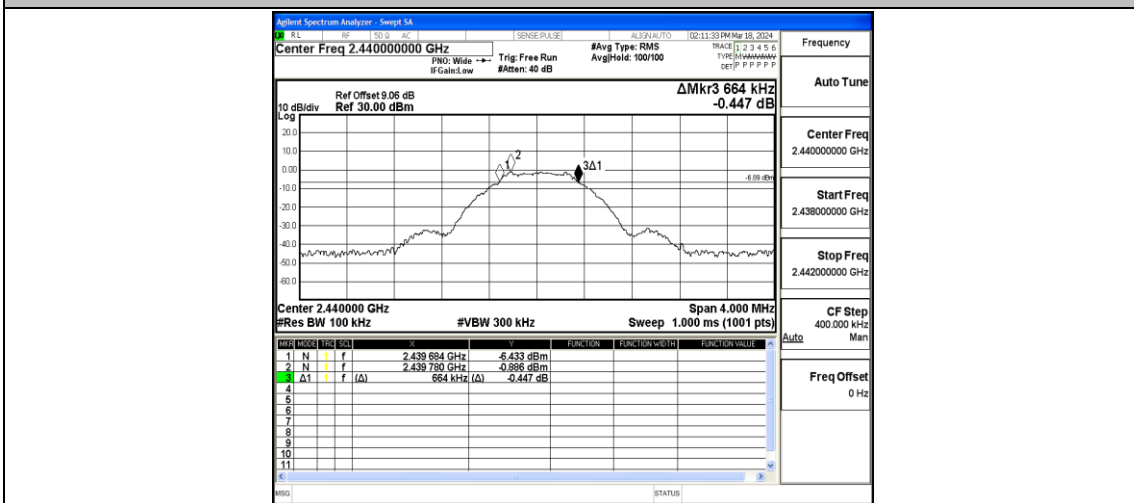
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.708	2401.660	2402.368	0.5	PASS
BLE_1M	Ant1	2440	0.664	2439.684	2440.348	0.5	PASS
BLE_1M	Ant1	2480	0.680	2479.672	2480.352	0.5	PASS

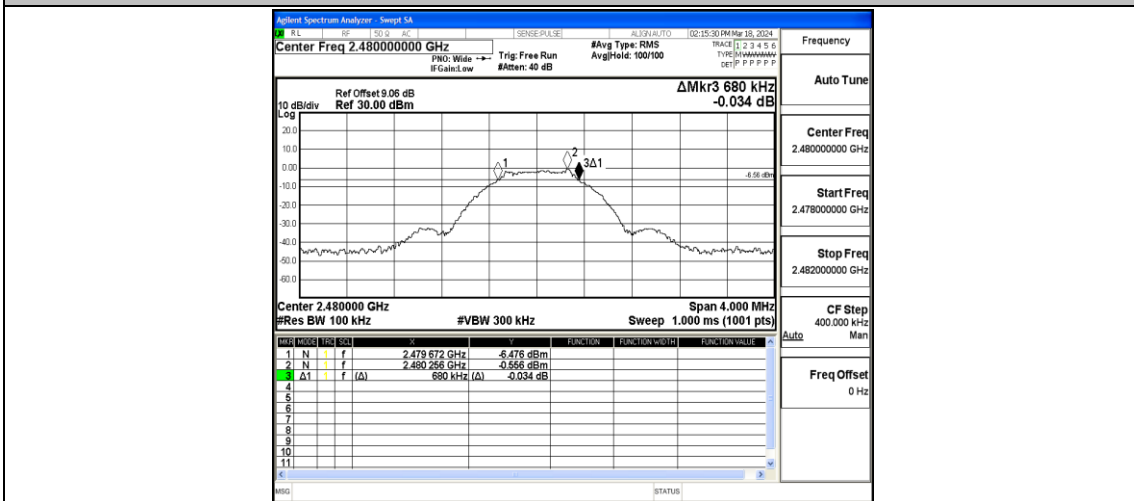
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



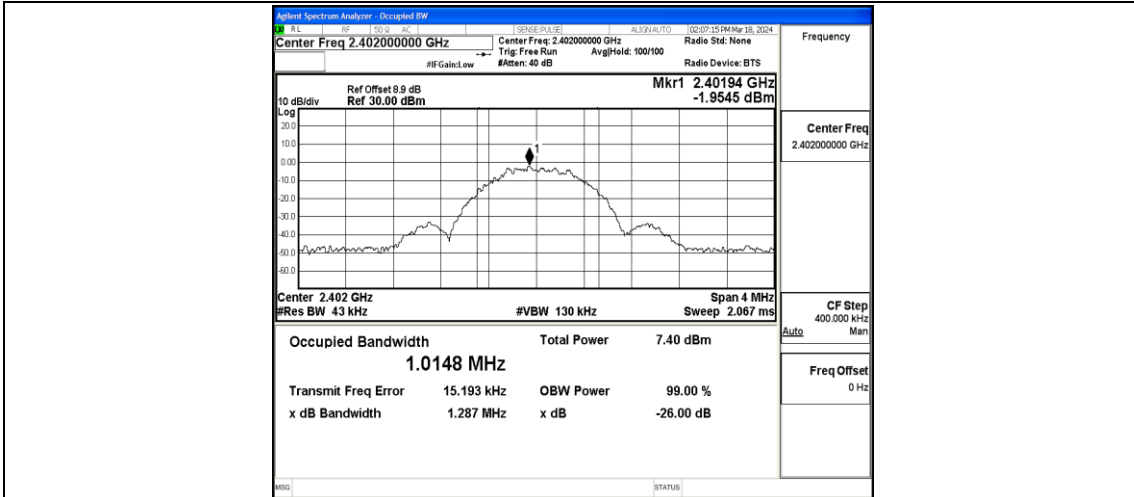
BLE_1M-Ant1-2480-PASS

Appendix B: Occupied Channel Bandwidth

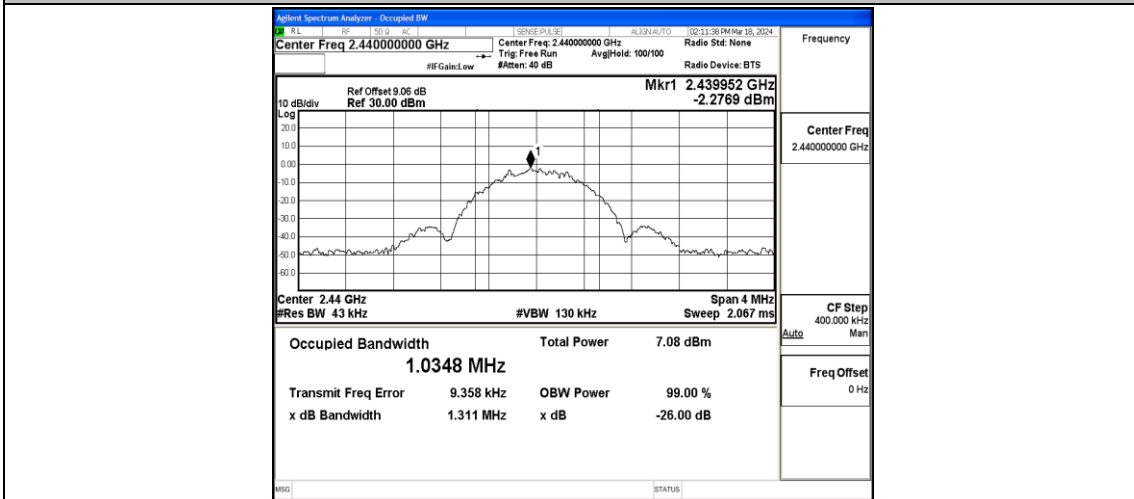
Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0148	2401.5078	2402.5226	---	---
BLE_1M	Ant1	2440	1.0348	2439.4920	2440.5268	---	---
BLE_1M	Ant1	2480	1.0259	2479.4954	2480.5213	---	---

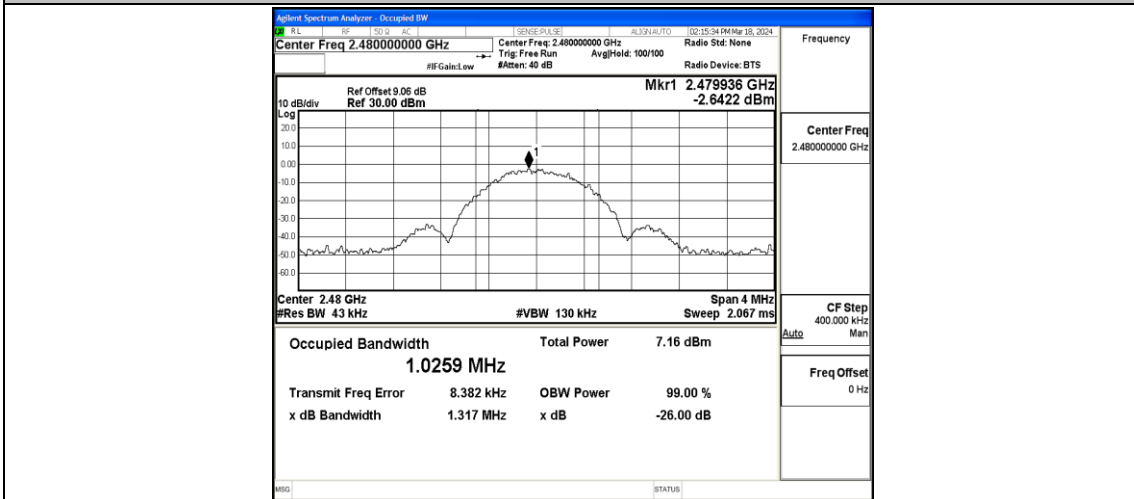
Test Graphs



BLE_1M-Ant1-2402



BLE_1M-Ant1-2440



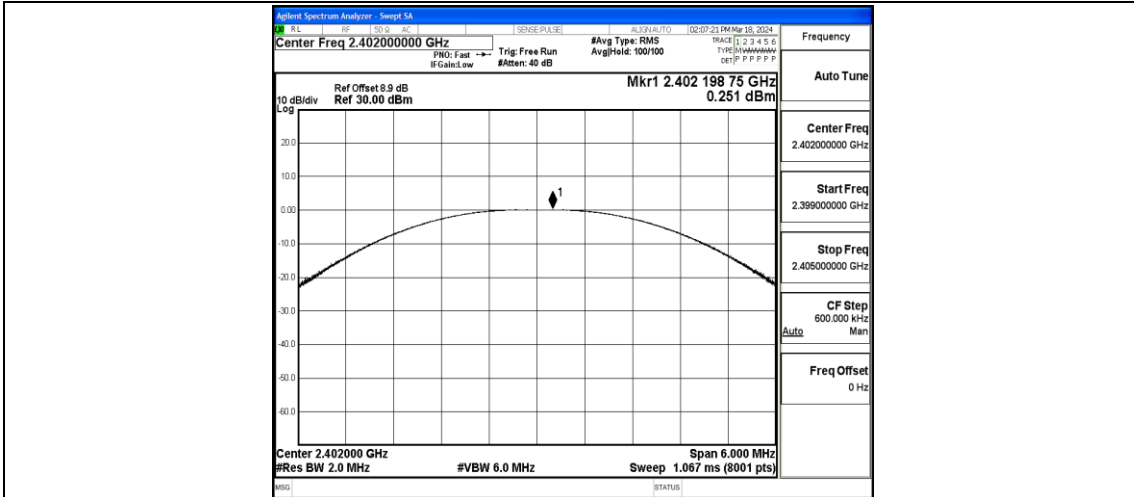
BLE_1M-Ant1-2480

Appendix C: Maximum peak conducted output power

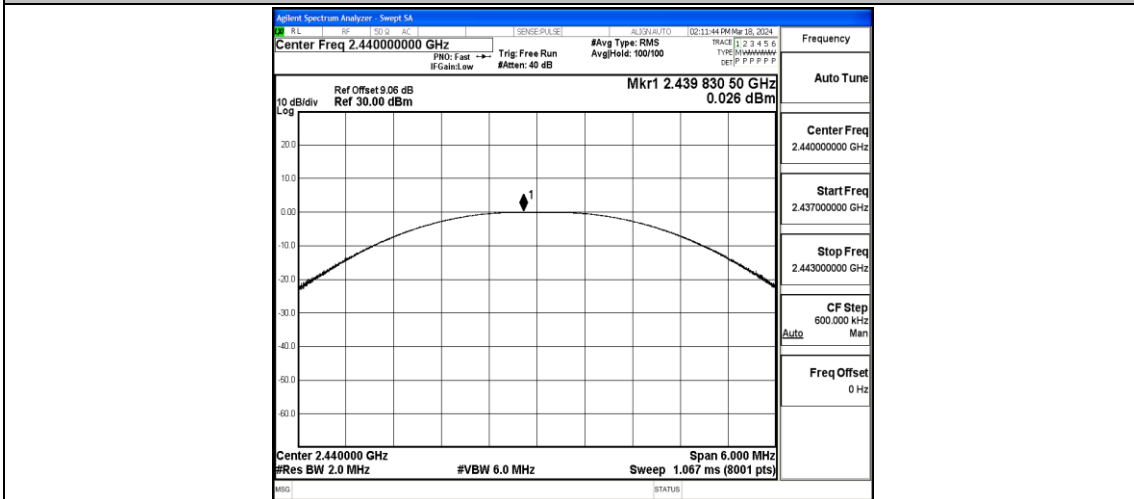
Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.25	≤30	PASS
BLE_1M	Ant1	2440	0.03	≤30	PASS
BLE_1M	Ant1	2480	0.06	≤30	PASS

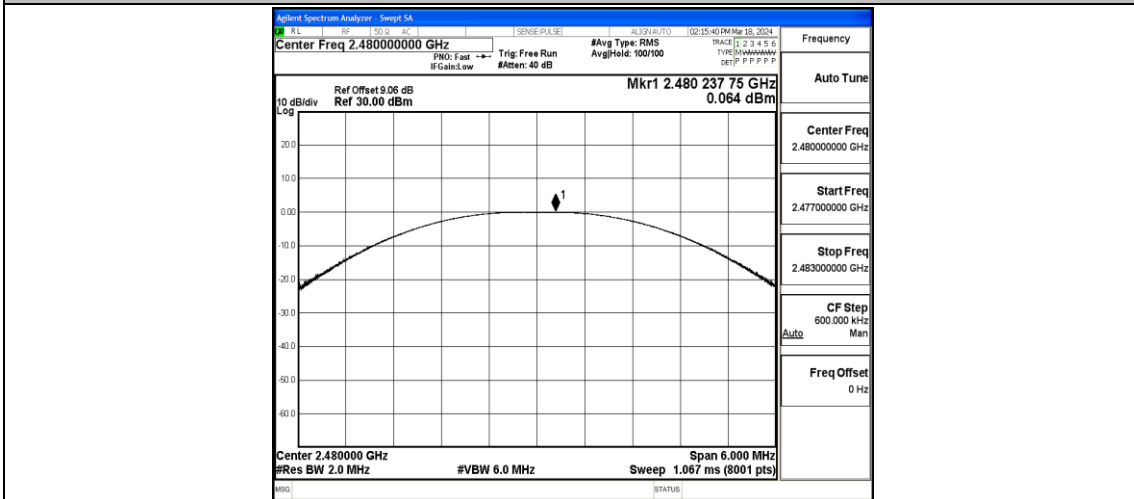
Test Graphs Peak



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



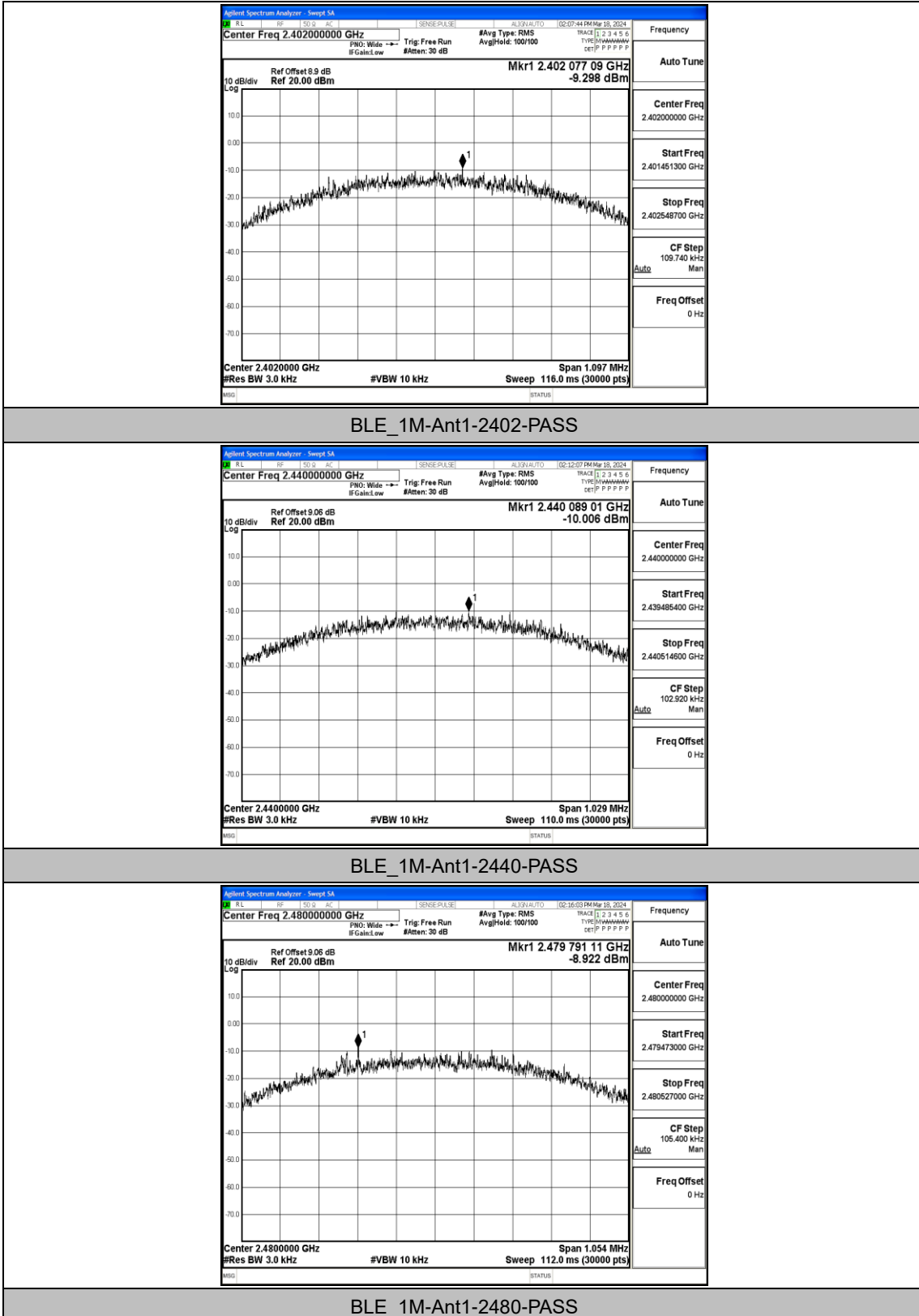
BLE_1M-Ant1-248-PASS

Appendix D: Maximum peak power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-9.30	≤8.00	PASS
BLE_1M	Ant1	2440	-10.01	≤8.00	PASS
BLE_1M	Ant1	2480	-8.92	≤8.00	PASS

Test Graphs

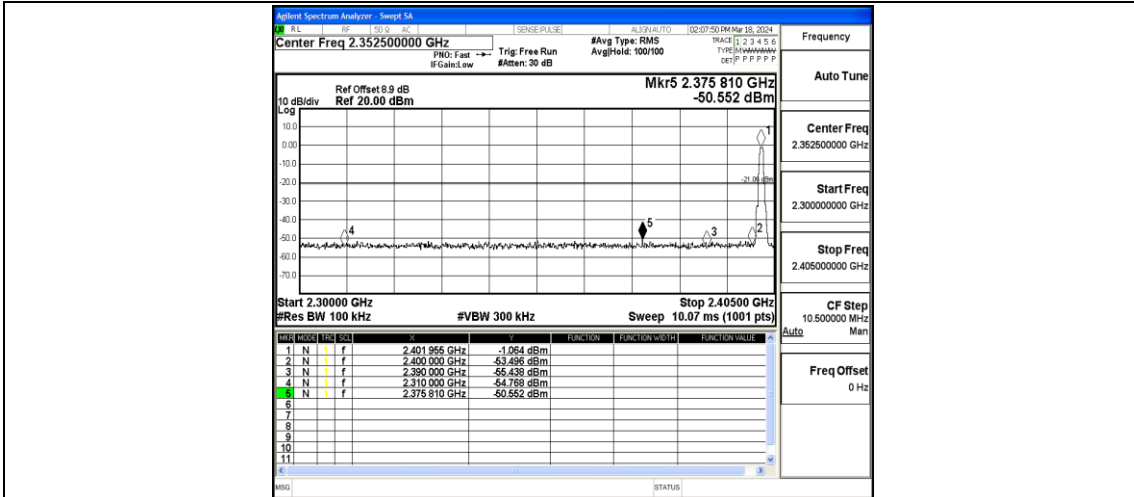


Appendix E: Band edge measurements

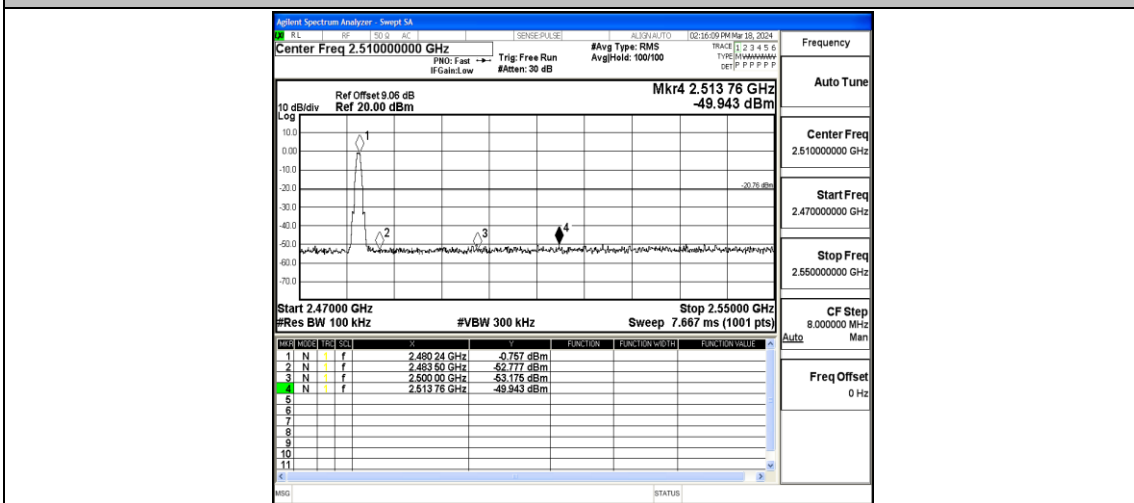
Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.06	-50.55	≤-21.06	PASS
BLE_1M	Ant1	High	2480	-0.76	-49.94	≤-20.76	PASS

Test Graphs



BLE_1M-Ant1-240-PASS



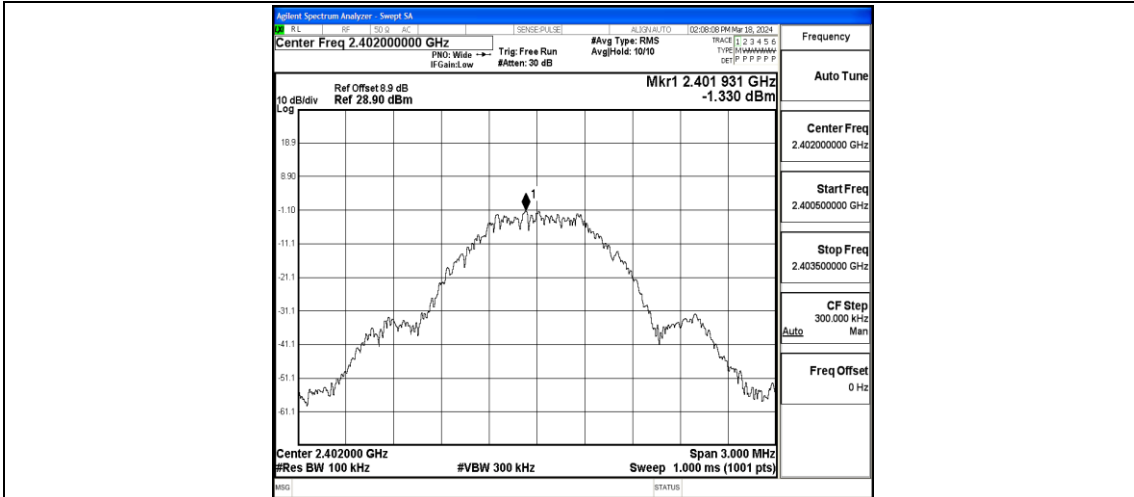
BLE_1M-Ant1-2480-PASS

Appendix F: Conducted Spurious Emission

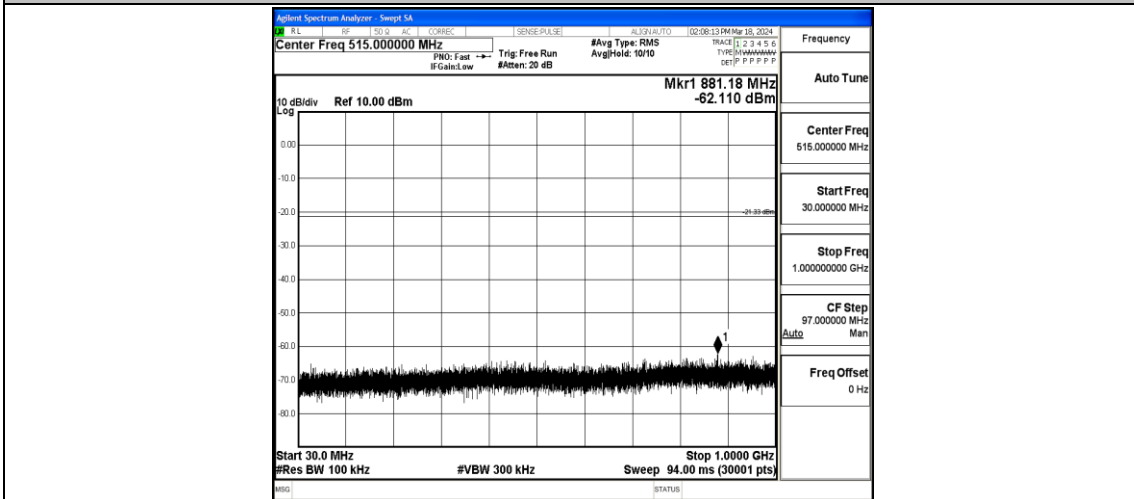
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-1.33	-1.33	---	PASS
BLE_1M	Ant1	2402	30~1000	-1.33	-62.11	≤-21.33	PASS
BLE_1M	Ant1	2402	1000~26500	-1.33	-47.23	≤-21.33	PASS
BLE_1M	Ant1	2440	0~Reference	-1.49	-1.49	---	PASS
BLE_1M	Ant1	2440	30~1000	-1.49	-62.96	≤-21.49	PASS
BLE_1M	Ant1	2440	1000~26500	-1.49	-46.45	≤-21.49	PASS
BLE_1M	Ant1	2480	0~Reference	-1.42	-1.42	---	PASS
BLE_1M	Ant1	2480	30~1000	-1.42	-62.56	≤-21.42	PASS
BLE_1M	Ant1	2480	1000~26500	-1.42	-47.61	≤-21.42	PASS

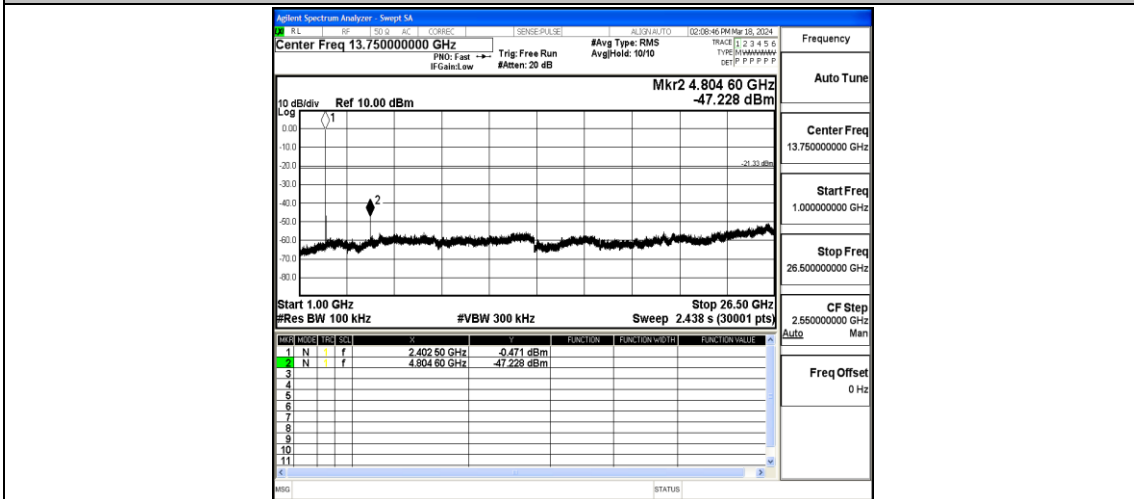
Test Graphs



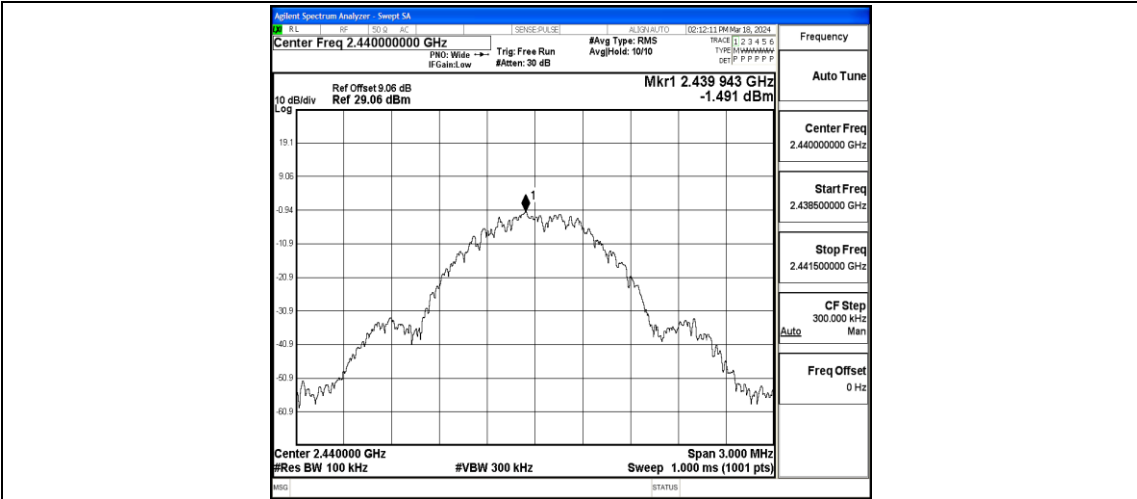
BLE_1M-Ant1-2402-0~Reference-PASS



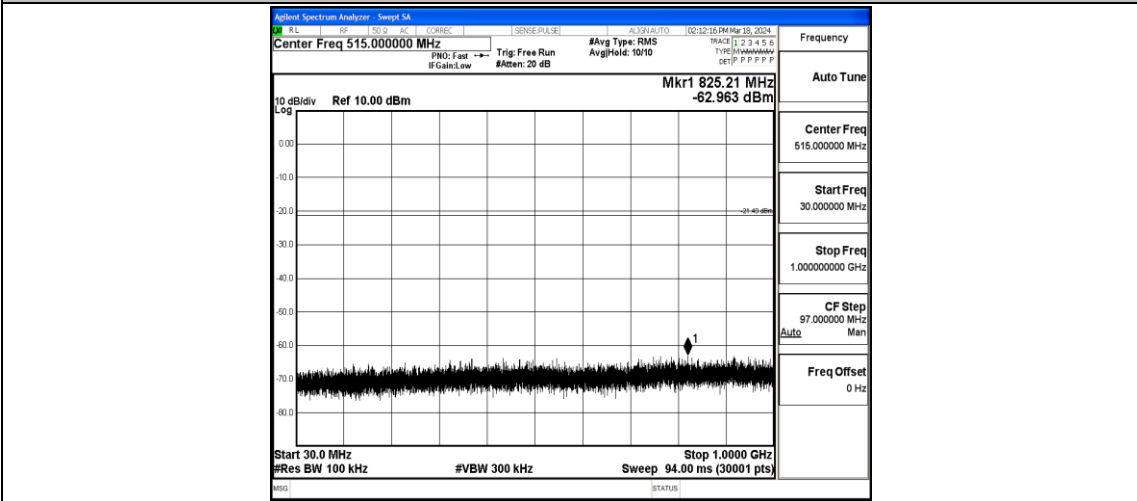
BLE_1M-Ant1-2402-30~1000-PASS



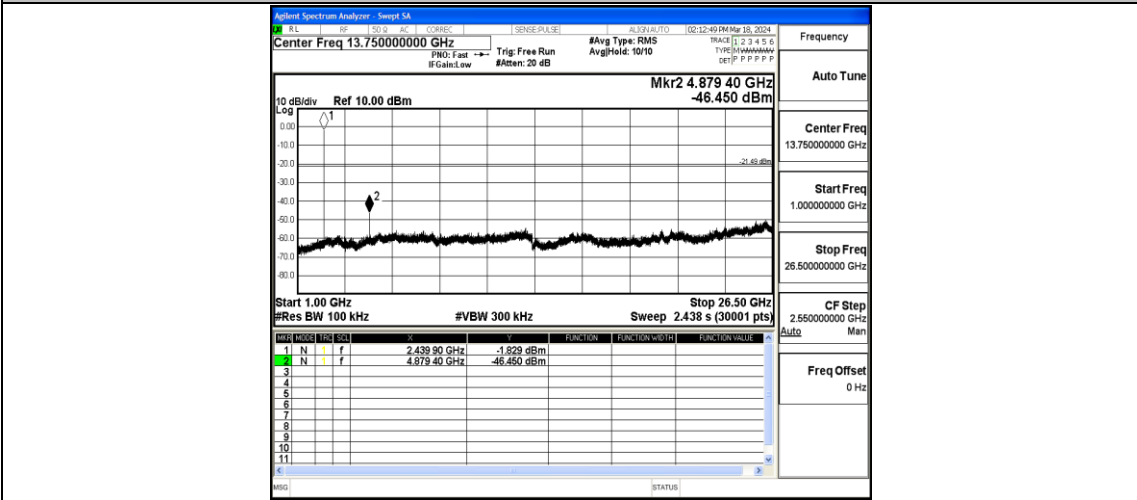
BLE_1M-Ant1-2402-1000~26500-PASS



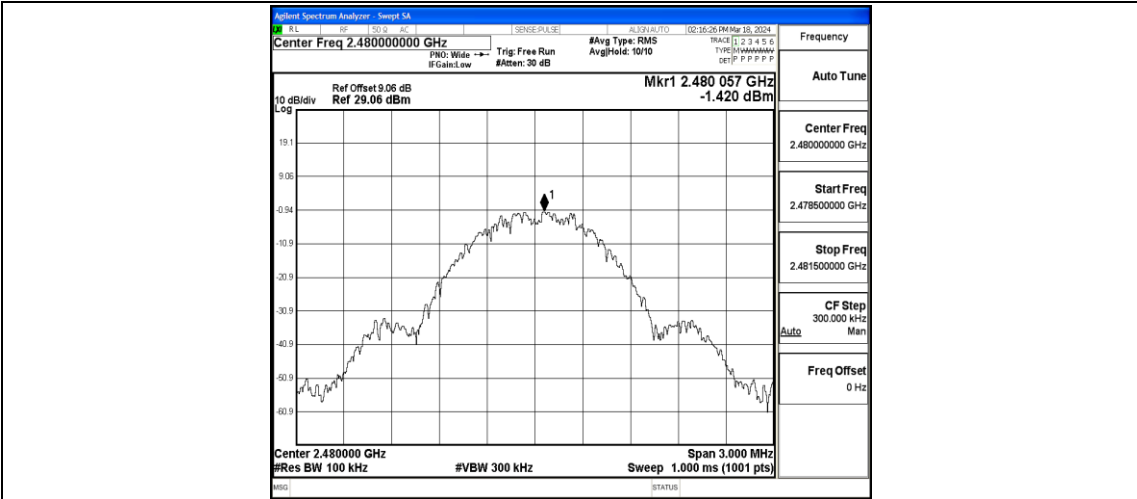
BLE_1M-Ant1-2440-0~Reference-PASS



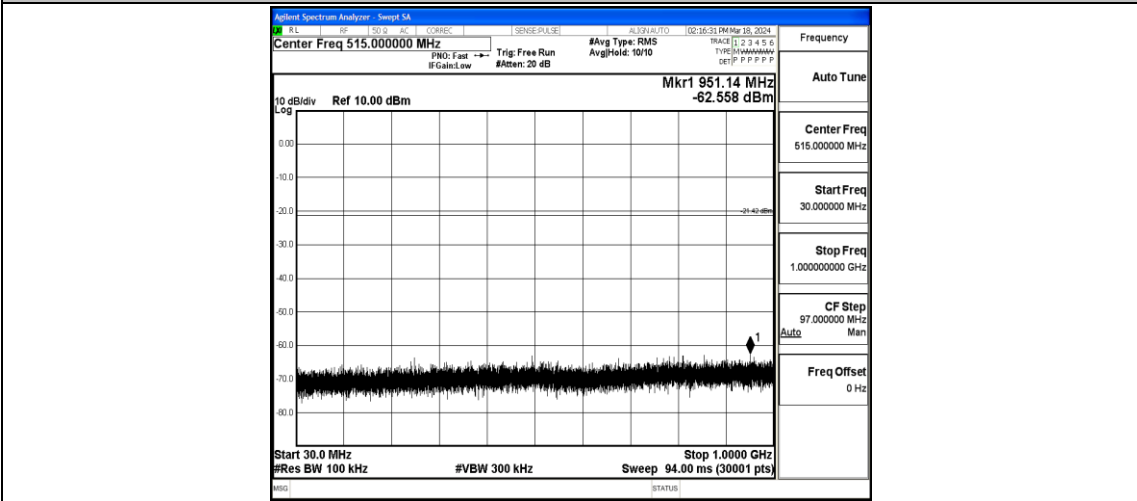
BLE_1M-Ant1-2440-30~1000-PASS



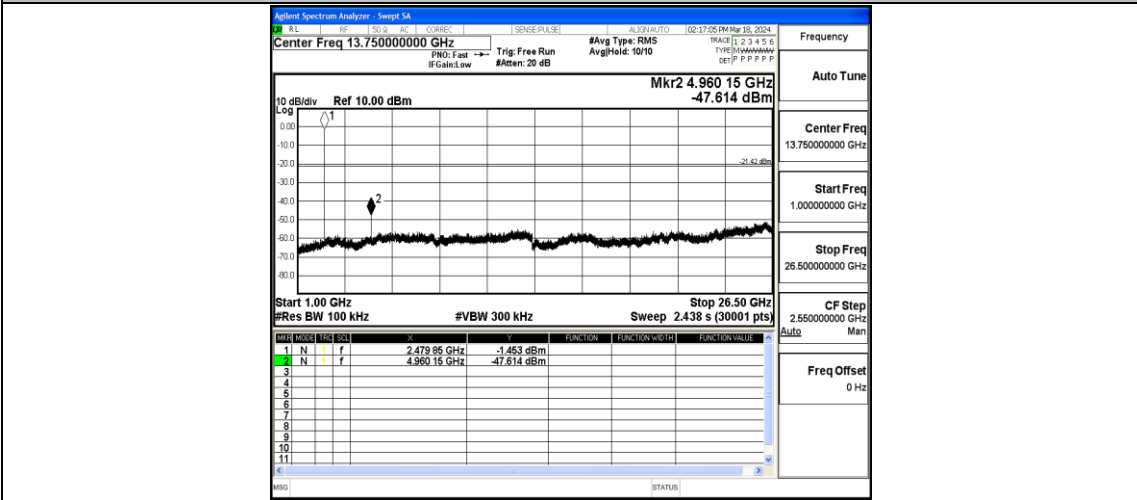
BLE_1M-Ant1-2440-1000~26500-PASS



BLE_1M-Ant1-2480-0~Reference-PASS



BLE_1M-Ant1-2480-30~1000-PASS



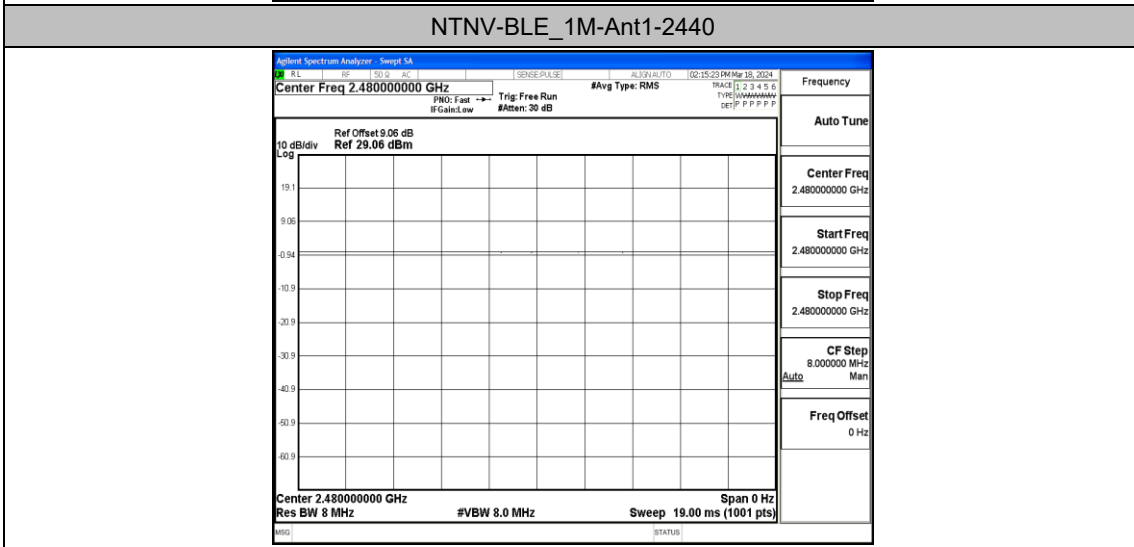
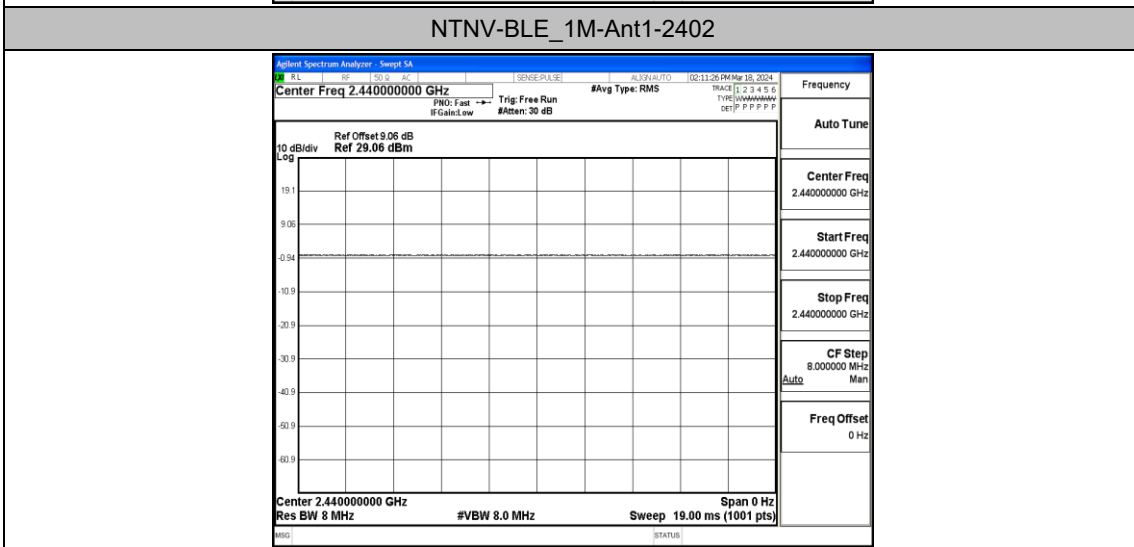
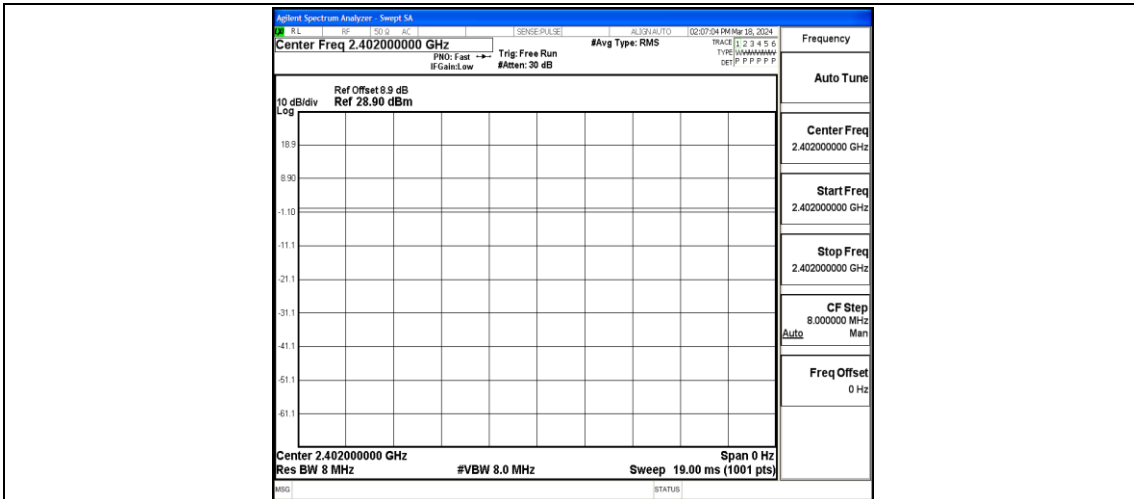
BLE_1M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	19.00	19.00	100	NaN
BLE_1M	Ant1	2440	19.00	19.00	100	NaN
BLE_1M	Ant1	2480	19.00	19.00	100	NaN

Test Graphs



Appendix H: Emissions in Restricted Bands

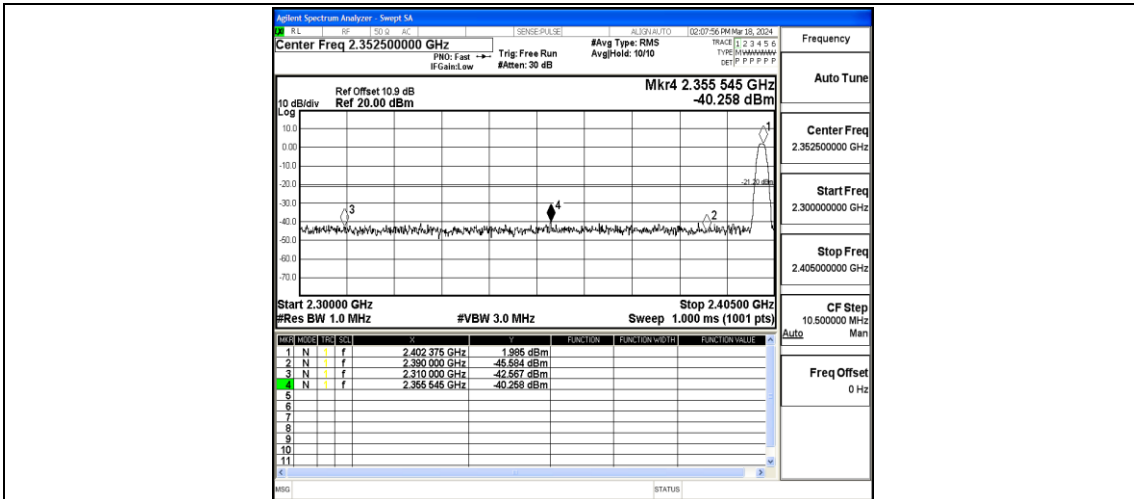
Test Result

TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	Peak	2390.000	-45.58	≤-21.20	49.62	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-42.57	≤-21.20	52.63	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2355.545	-40.26	≤-21.20	54.94	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-50.22	≤-41.20	44.98	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-51	≤-41.20	44.20	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2369.615	-49.81	≤-41.20	45.39	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-44.47	≤-21.20	50.73	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-45.19	≤-21.20	50.01	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2498.320	-40.23	≤-21.20	54.97	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-49.94	≤-41.20	45.26	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-50.28	≤-41.20	44.92	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2493.040	-48.93	≤-41.20	46.27	≤54	PASS

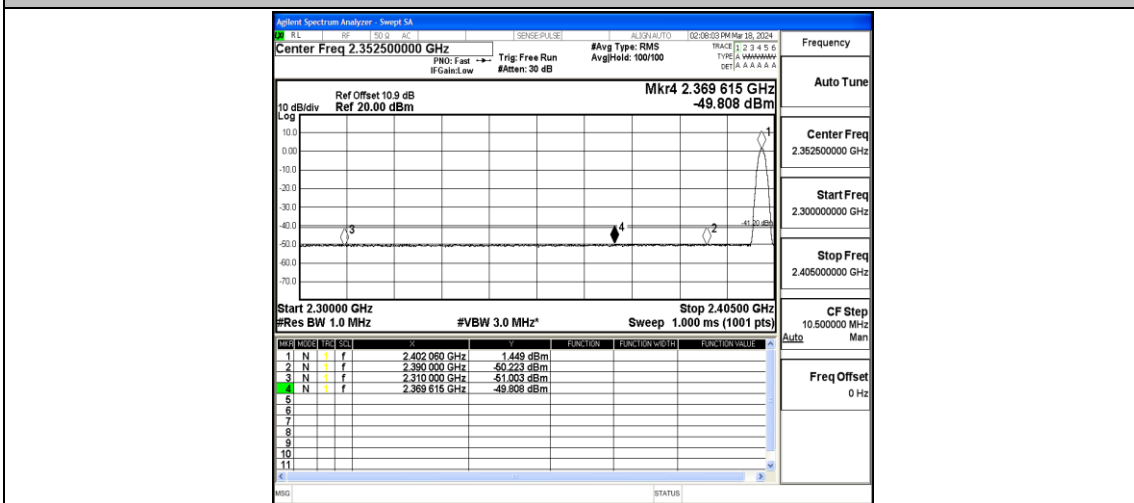
Note:

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.

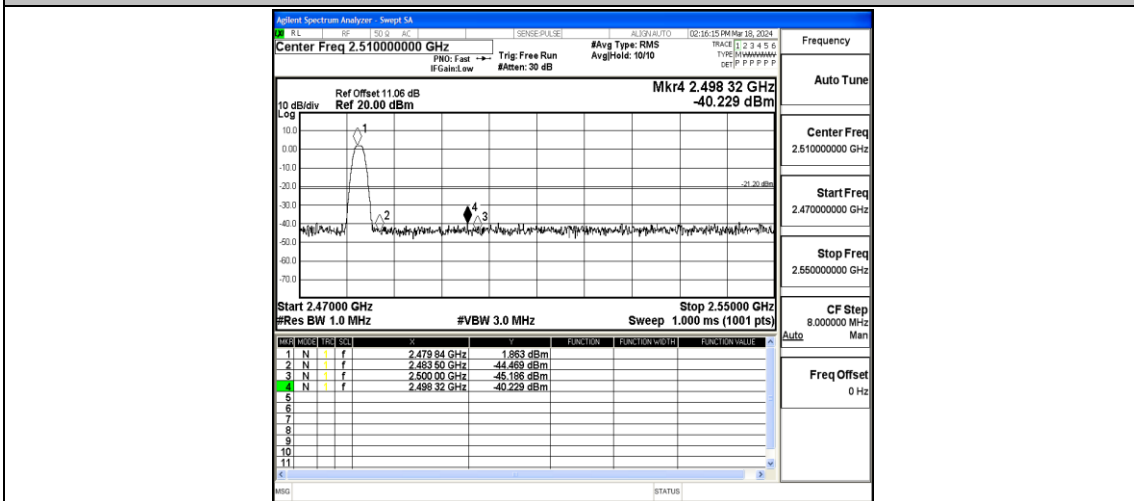
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-2480-PASS

