

Appendix Test Data for BLE (Conducted Measurement)

Product Name: Wireless Mechanical Keyboard

Trade Mark: Keychron

Test Model: Q2 MAX

FCC ID: 2ASF4-Q2MAX

Environmental Conditions

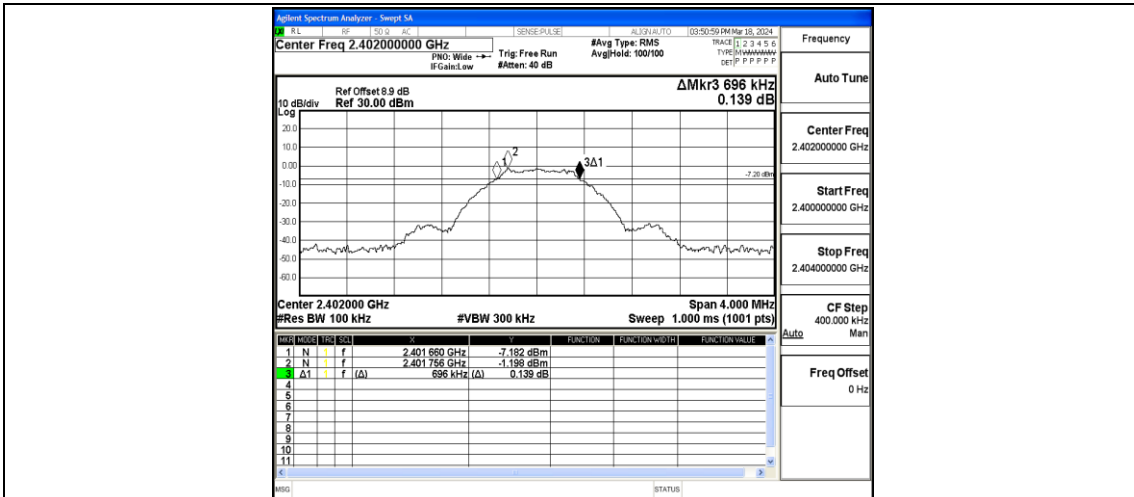
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

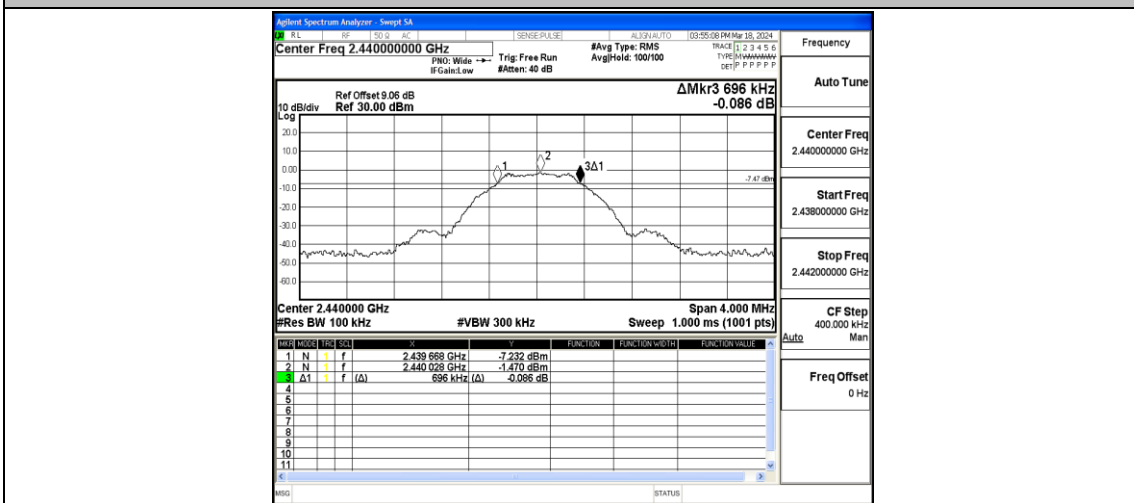
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.696	2401.660	2402.356	0.5	PASS
BLE_1M	Ant1	2440	0.696	2439.668	2440.364	0.5	PASS
BLE_1M	Ant1	2480	0.676	2479.676	2480.352	0.5	PASS

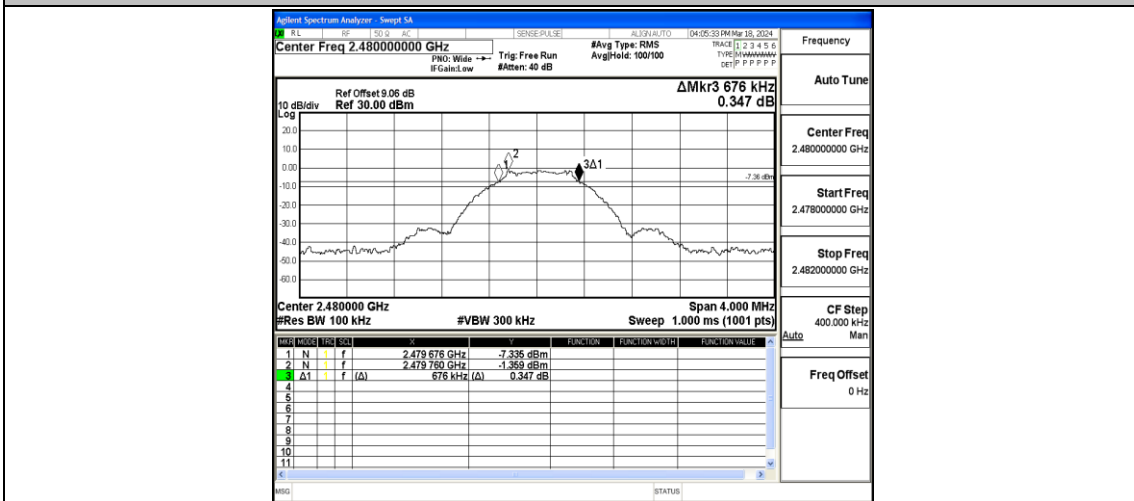
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



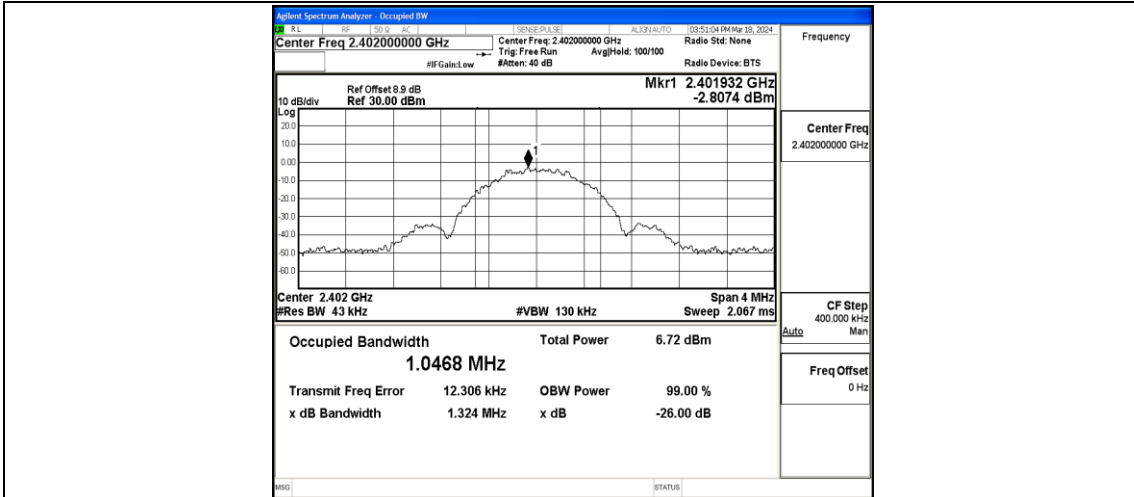
BLE_1M-Ant1-2480-PASS

Appendix B: Occupied Channel Bandwidth

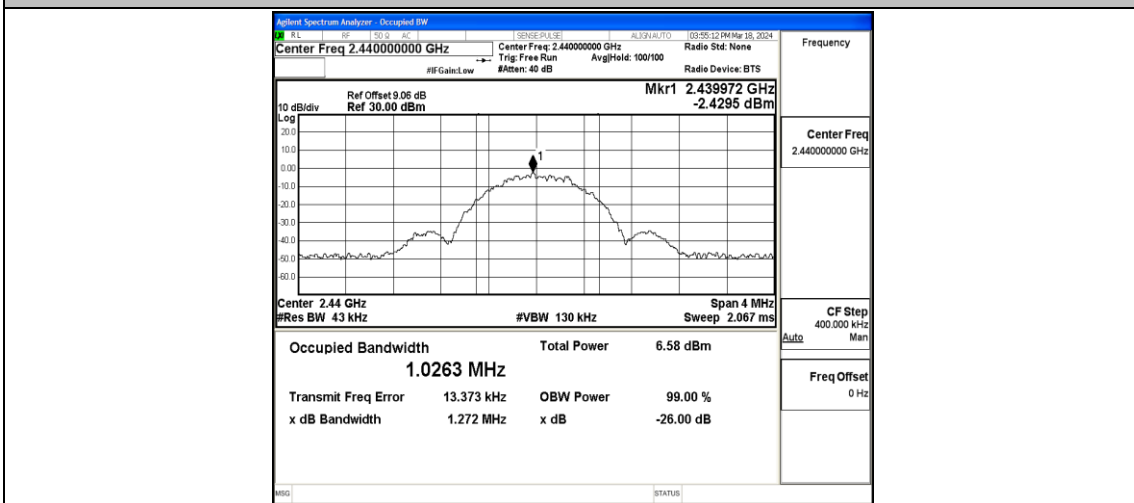
Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0468	2401.4889	2402.5357	---	---
BLE_1M	Ant1	2440	1.0263	2439.5002	2440.5265	---	---
BLE_1M	Ant1	2480	1.0220	2479.4992	2480.5212	---	---

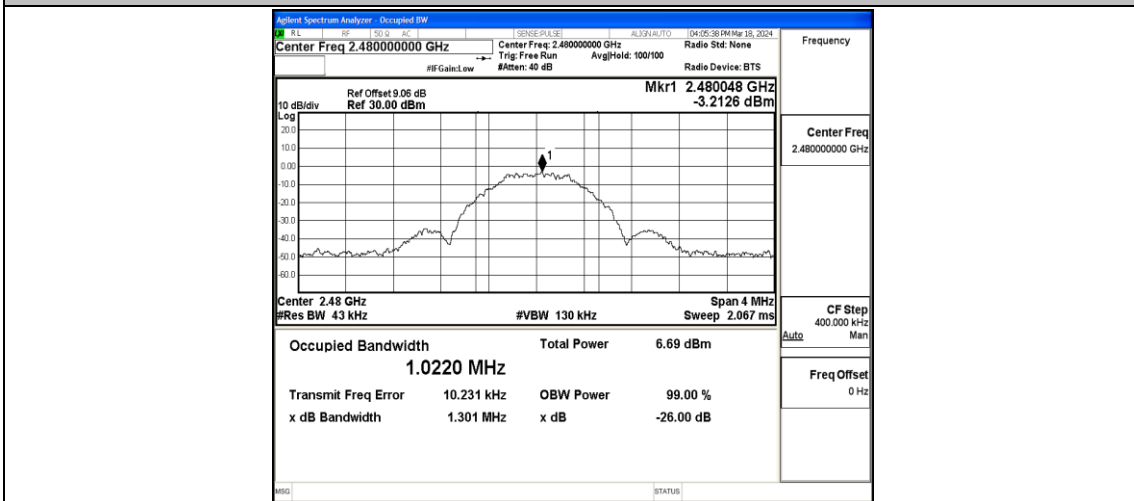
Test Graphs



BLE_1M-Ant1-2402



BLE_1M-Ant1-2440



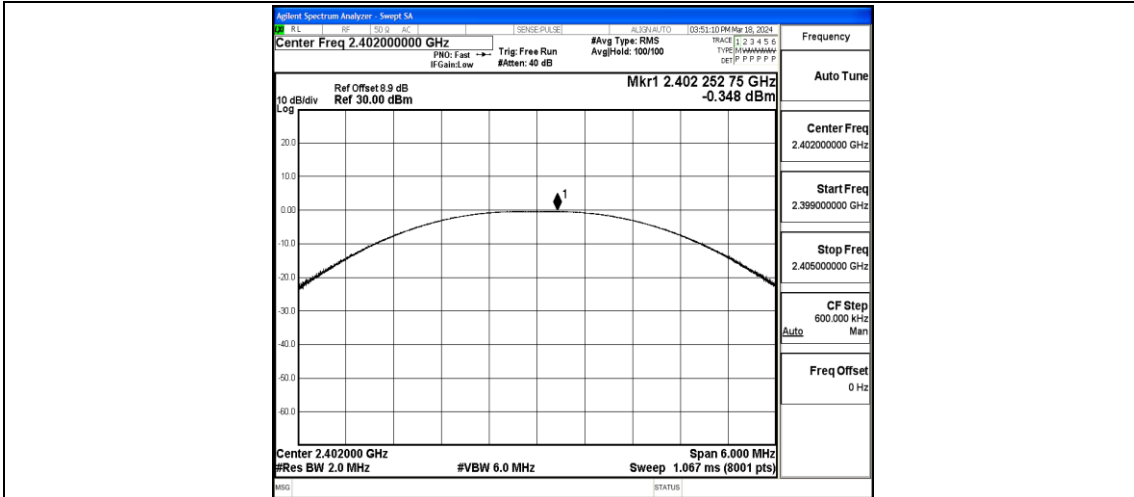
BLE_1M-Ant1-2480

Appendix C: Maximum peak conducted output power

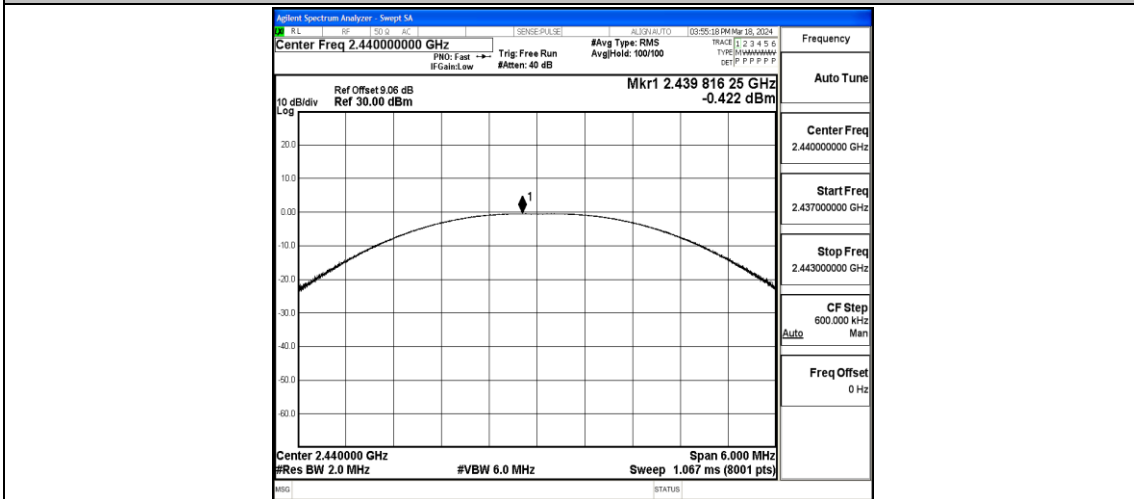
Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.35	≤30	PASS
BLE_1M	Ant1	2440	-0.42	≤30	PASS
BLE_1M	Ant1	2480	-0.42	≤30	PASS

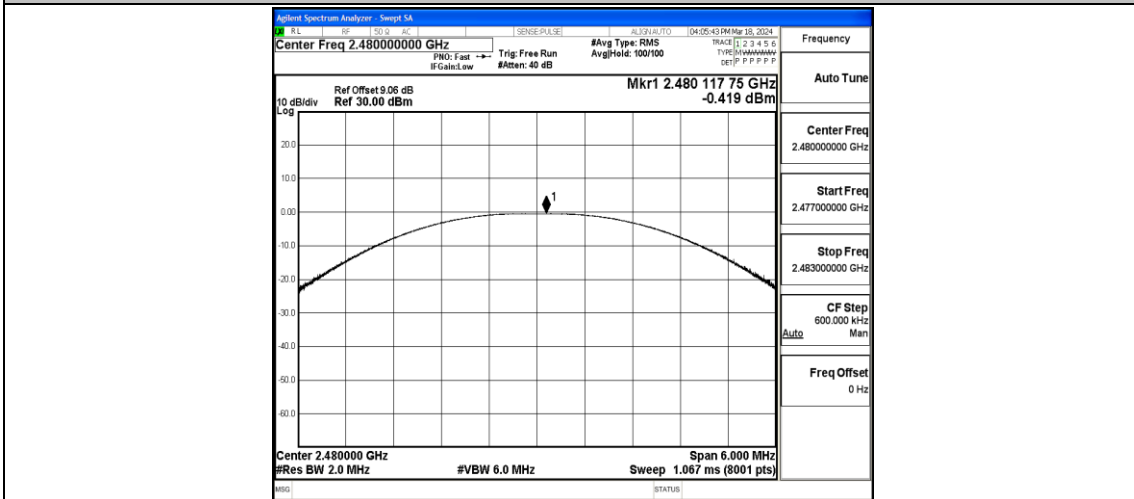
Test Graphs Peak



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



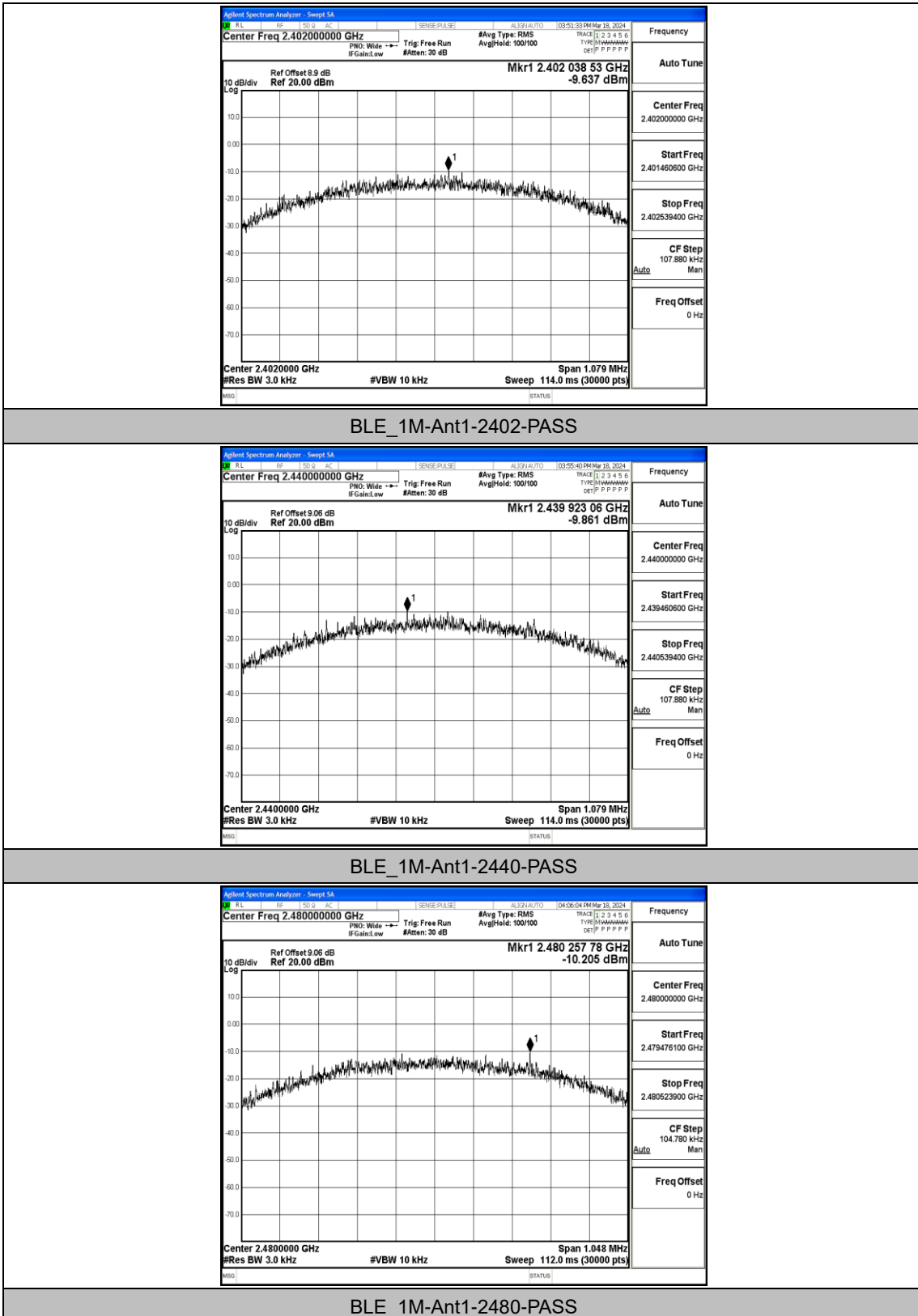
BLE_1M-Ant1-2480-PASS

Appendix D: Maximum peak power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-9.64	≤8.00	PASS
BLE_1M	Ant1	2440	-9.86	≤8.00	PASS
BLE_1M	Ant1	2480	-10.21	≤8.00	PASS

Test Graphs

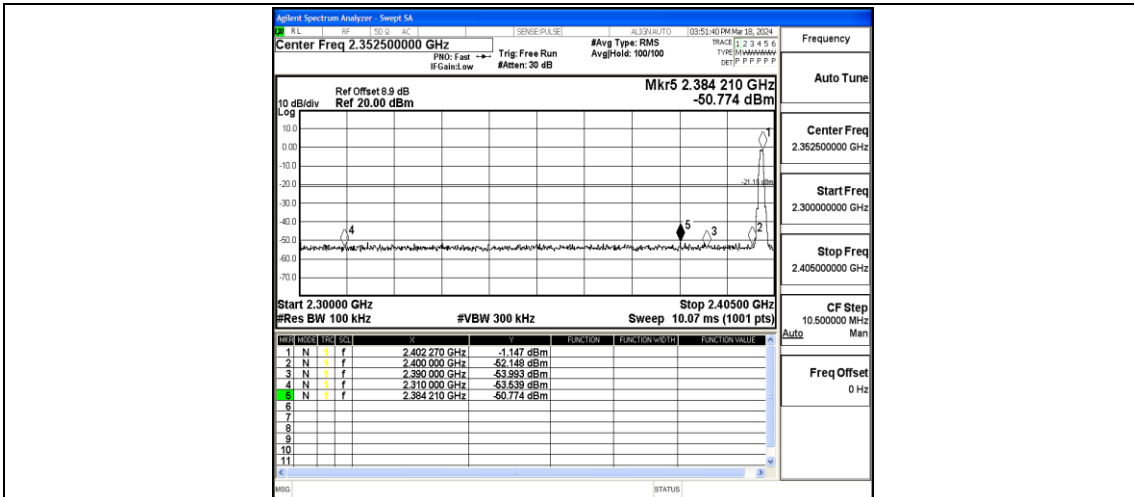


Appendix E: Band edge measurements

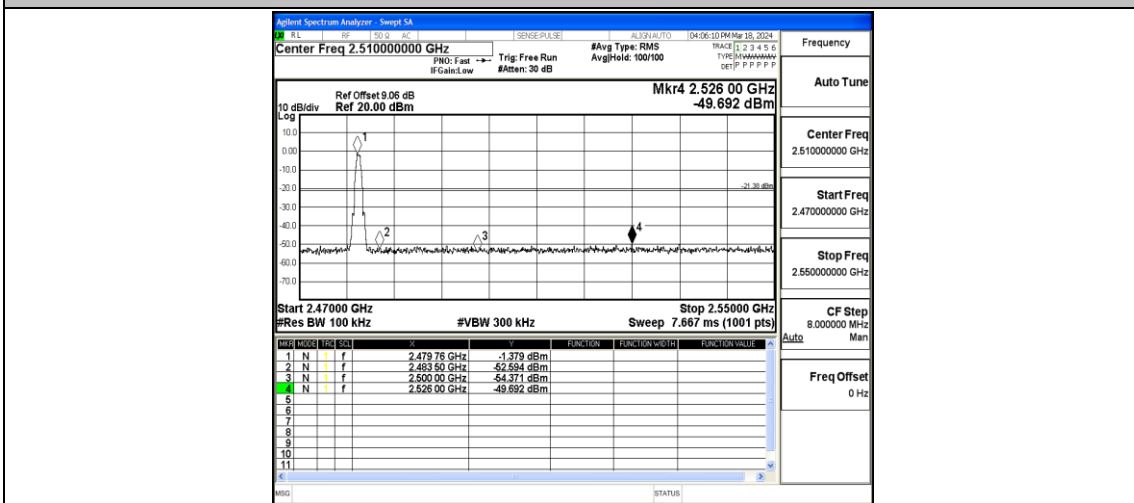
Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.15	-50.77	≤-21.15	PASS
BLE_1M	Ant1	High	2480	-1.38	-49.69	≤-21.38	PASS

Test Graphs



BLE_1M-Ant1-240-PASS



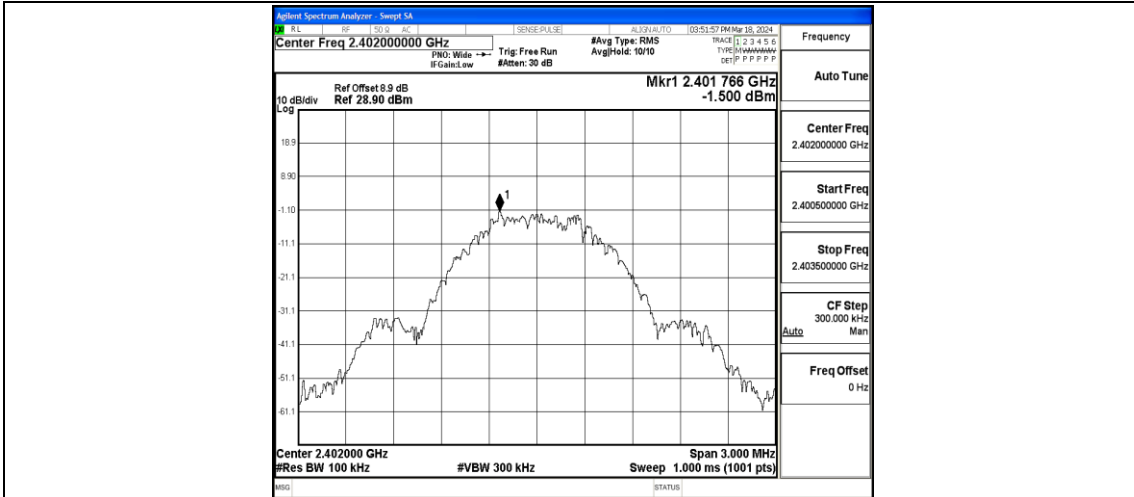
BLE_1M-Ant1-2480-PASS

Appendix F: Conducted Spurious Emission

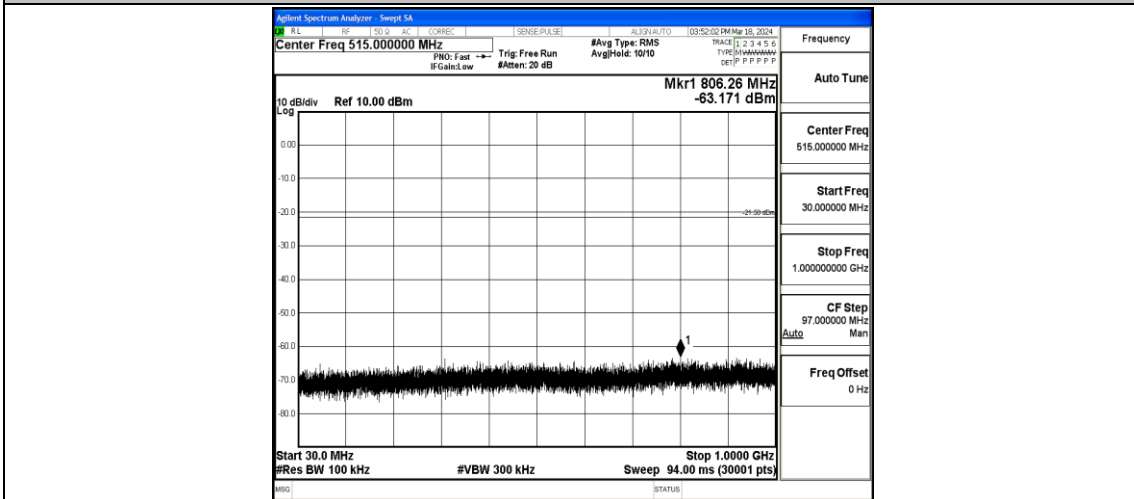
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-1.50	-1.50	---	PASS
BLE_1M	Ant1	2402	30~1000	-1.50	-63.17	≤-21.5	PASS
BLE_1M	Ant1	2402	1000~26500	-1.50	-48.11	≤-21.5	PASS
BLE_1M	Ant1	2440	0~Reference	-1.79	-1.79	---	PASS
BLE_1M	Ant1	2440	30~1000	-1.79	-63.23	≤-21.79	PASS
BLE_1M	Ant1	2440	1000~26500	-1.79	-49.57	≤-21.79	PASS
BLE_1M	Ant1	2480	0~Reference	-1.73	-1.73	---	PASS
BLE_1M	Ant1	2480	30~1000	-1.73	-62.25	≤-21.73	PASS
BLE_1M	Ant1	2480	1000~26500	-1.73	-50.11	≤-21.73	PASS

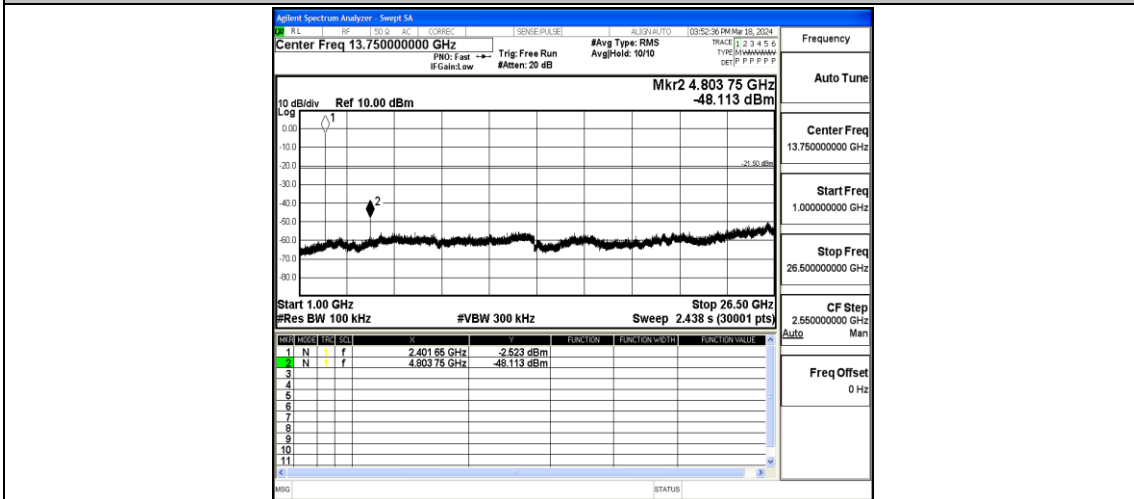
Test Graphs



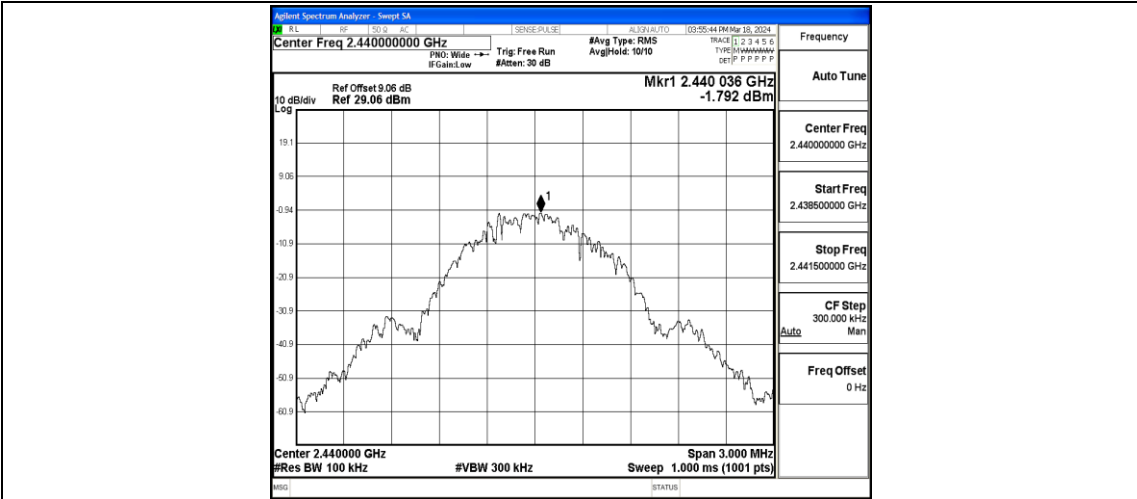
BLE_1M-Ant1-2402-0~Reference-PASS



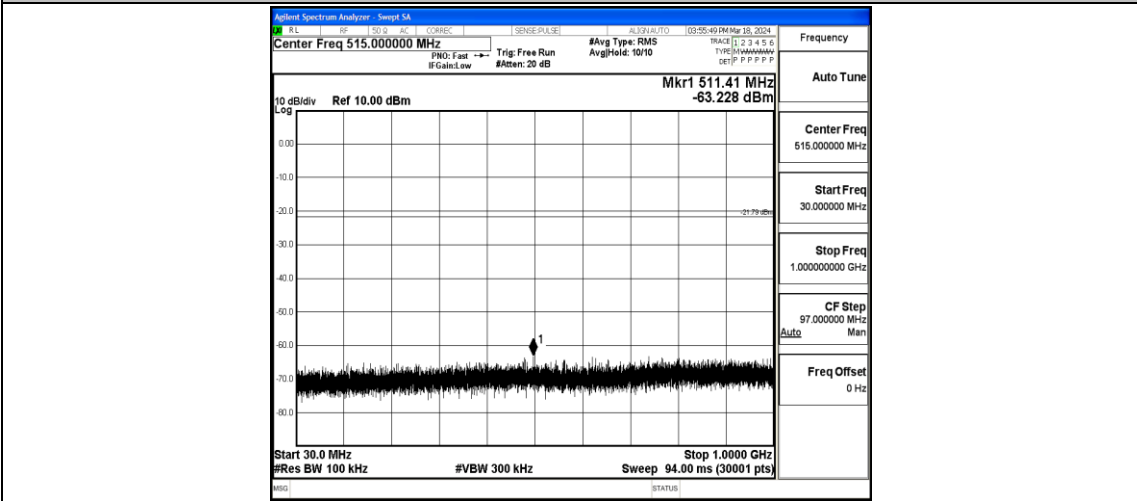
BLE_1M-Ant1-2402-30~1000-PASS



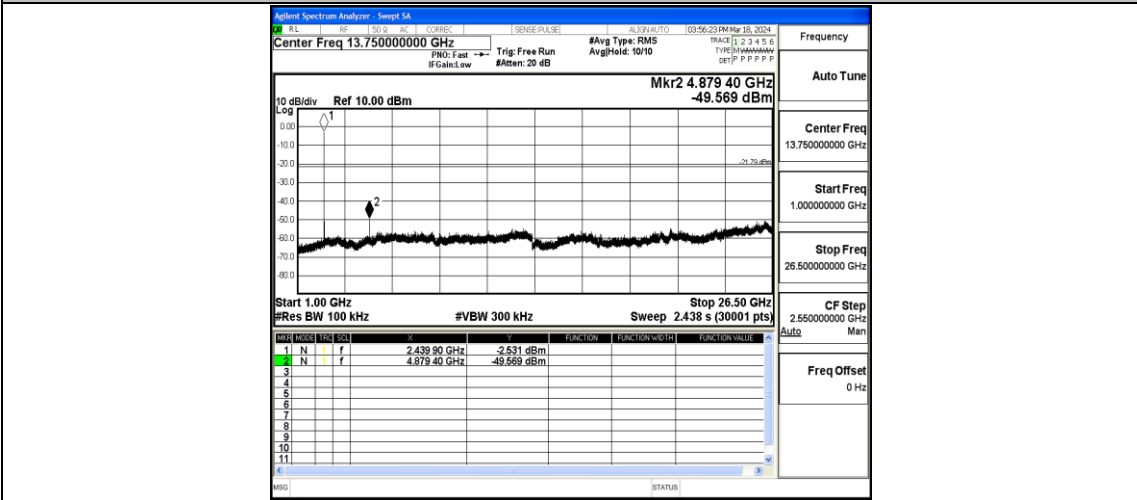
BLE_1M-Ant1-2402-1000~26500-PASS



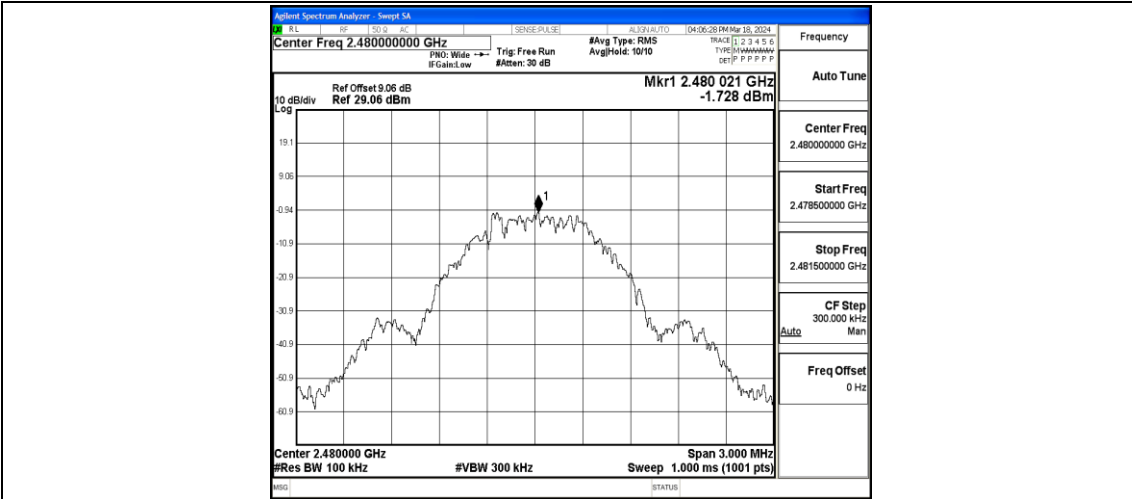
BLE_1M-Ant1-2440-0~Reference-PASS



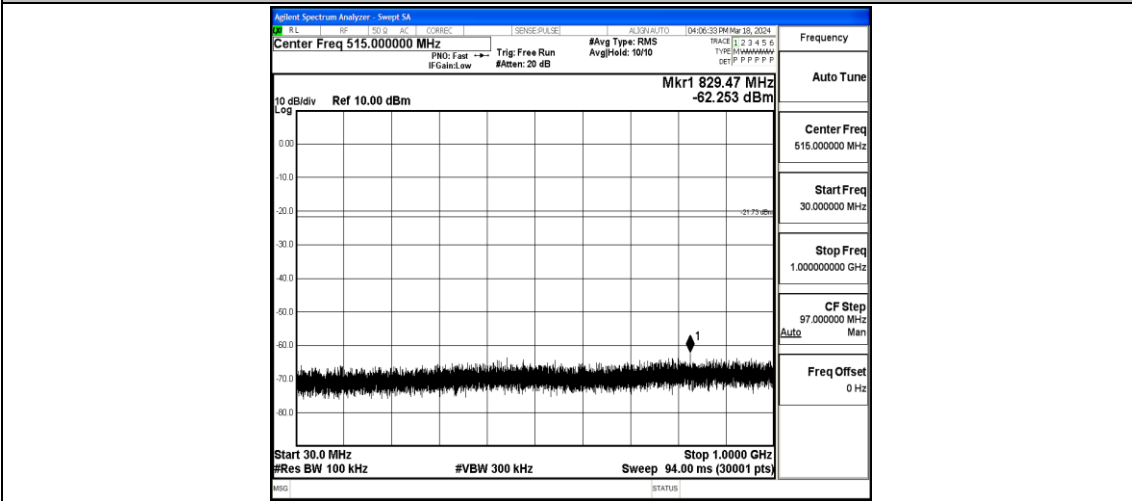
BLE_1M-Ant1-2440-30~1000-PASS



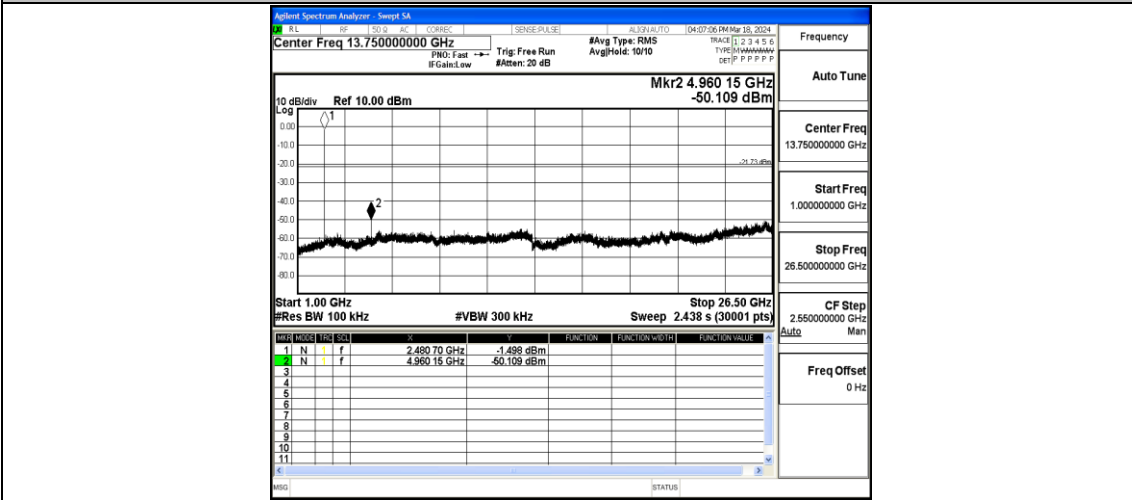
BLE_1M-Ant1-2440-1000~26500-PASS



BLE_1M-Ant1-2480-0~Reference-PASS



BLE_1M-Ant1-2480-30~1000-PASS



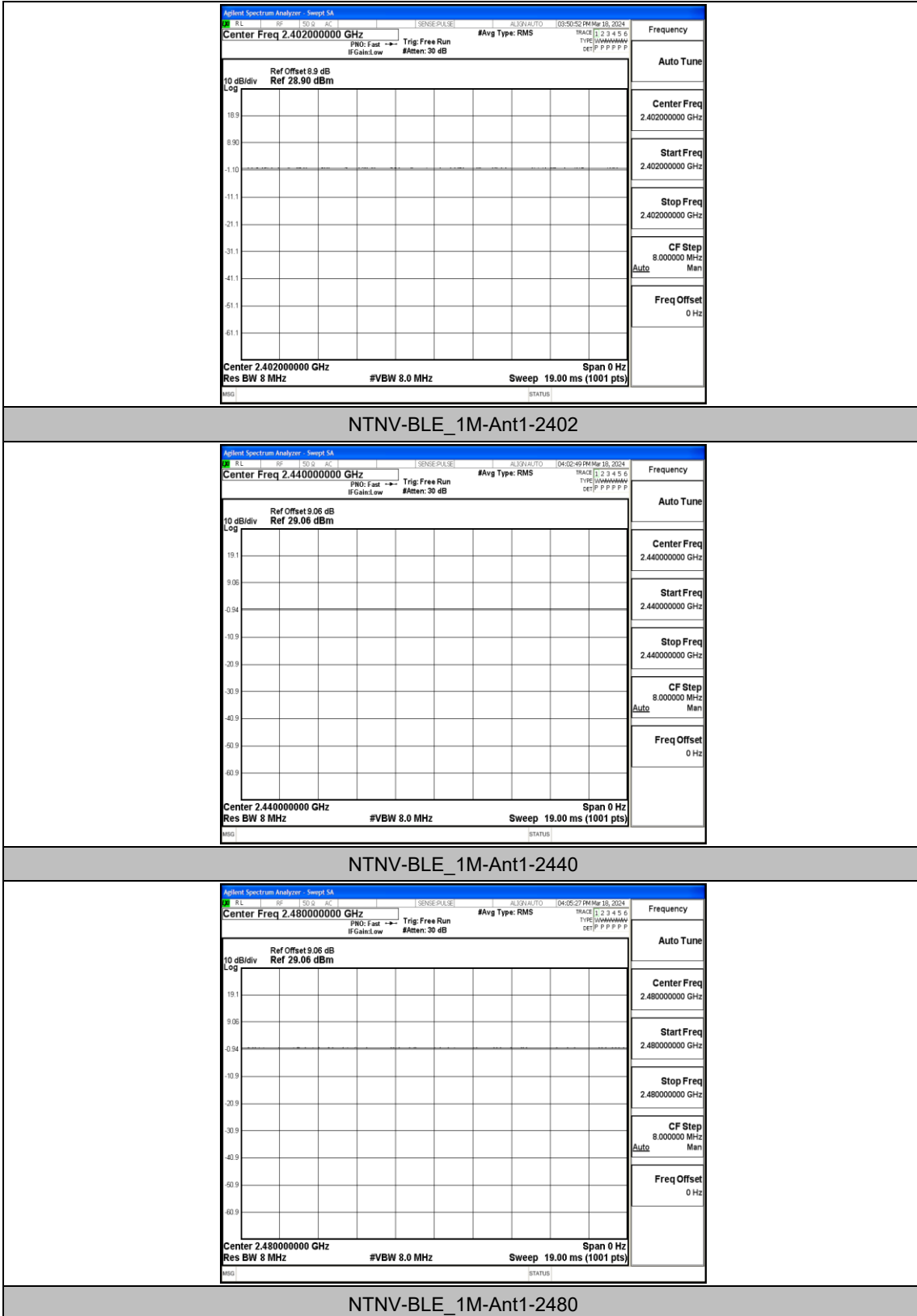
BLE_1M-Ant1-2480-1000~26500-PASS

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	100.00	0
BLE_1M	Ant1	2440	19.00	19.00	100.00	0
BLE_1M	Ant1	2480	19.00	19.00	100.00	0

Test Graphs



Appendix H: Emissions in Restricted Bands

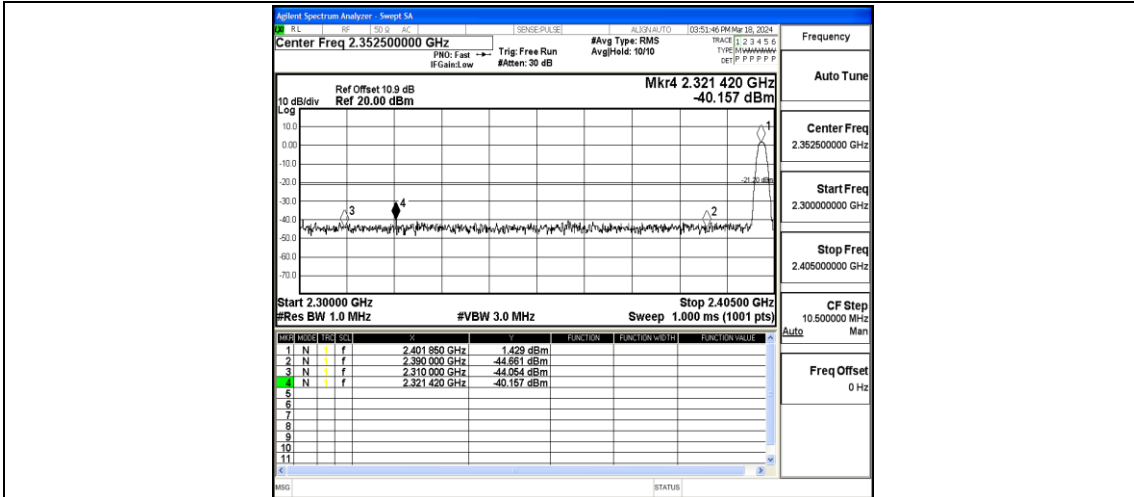
Test Result

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	-44.66	≤-21.20	50.54	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-44.05	≤-21.20	51.15	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2321.420	-40.16	≤-21.20	55.04	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-50.24	≤-41.20	44.96	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-50.69	≤-41.20	44.51	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2383.685	-49.58	≤-41.20	45.62	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-42.7	≤-21.20	52.50	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-39.96	≤-21.20	55.24	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2494.320	-38.68	≤-21.20	56.52	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-49.02	≤-41.20	46.18	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-49.8	≤-41.20	45.40	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2483.520	-49.02	≤-41.20	46.18	≤54	PASS

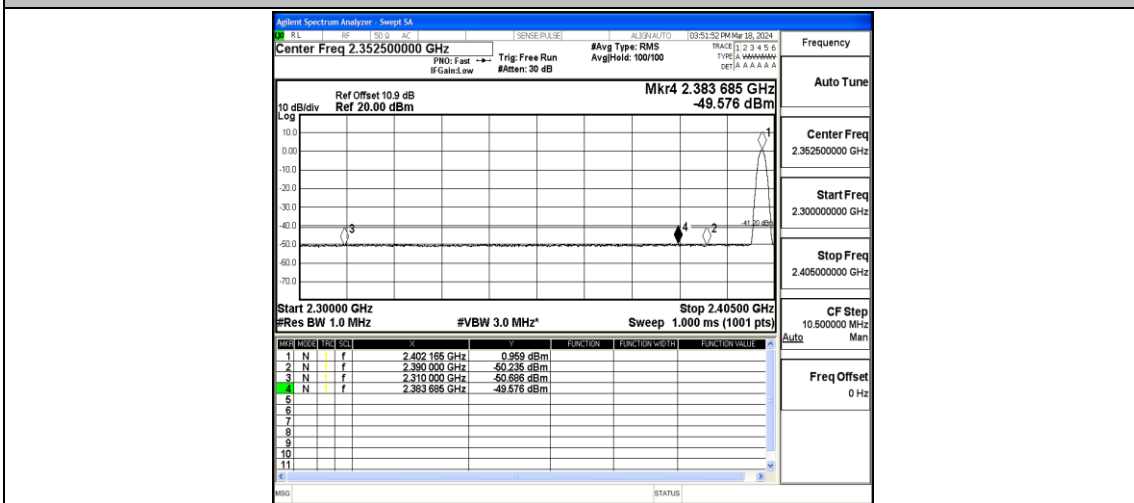
Note:

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.

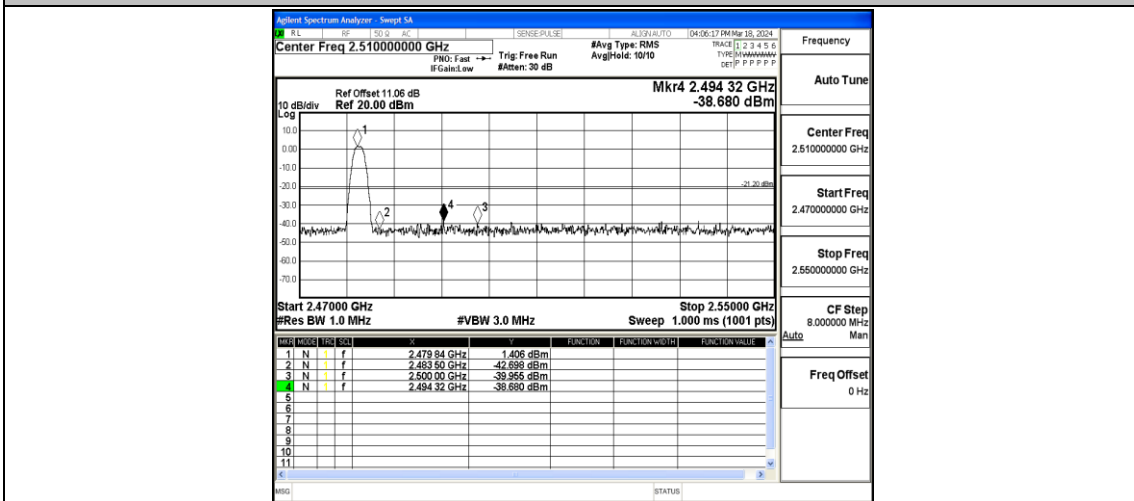
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-2480-PASS

