

Appendix Test Data for BLE (Conducted Measurement)

Product Name: Wireless Mechanical Keyboard

Trade Mark: Keychron

Test Model: K1 Max

FCC ID: 2ASF4-K1MAX

Environmental Conditions

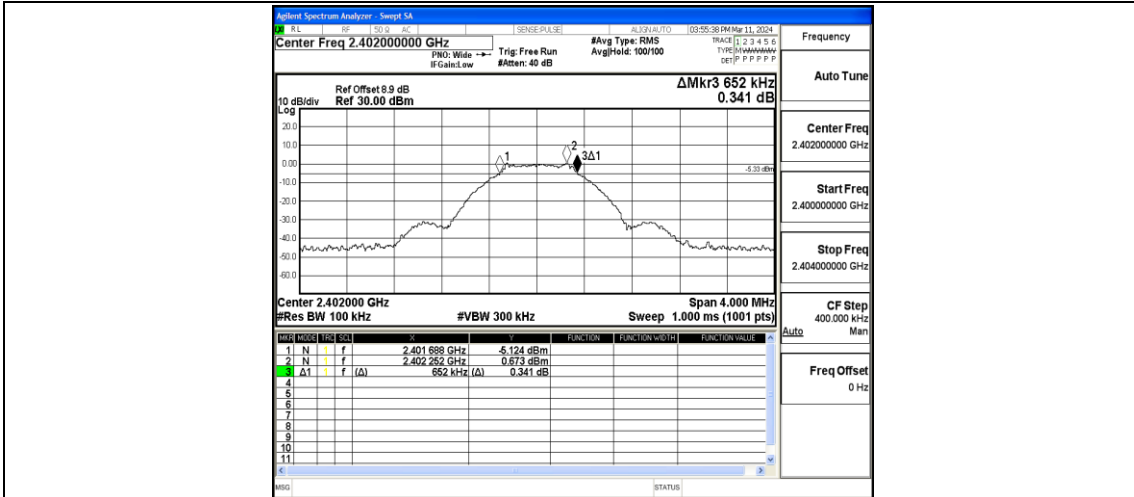
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

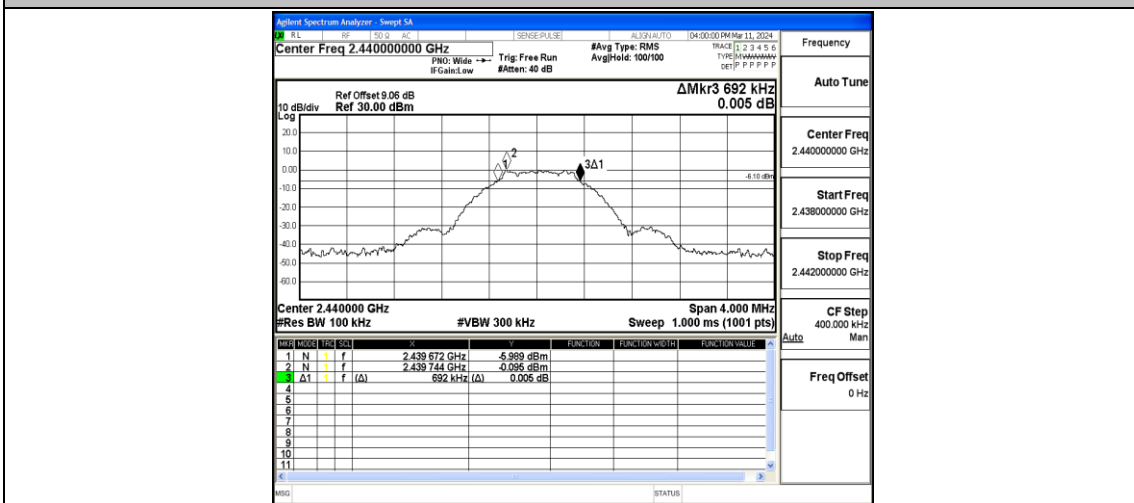
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.652	2401.688	2402.340	0.5	PASS
BLE_1M	Ant1	2440	0.692	2439.672	2440.364	0.5	PASS
BLE_1M	Ant1	2480	0.696	2479.660	2480.356	0.5	PASS

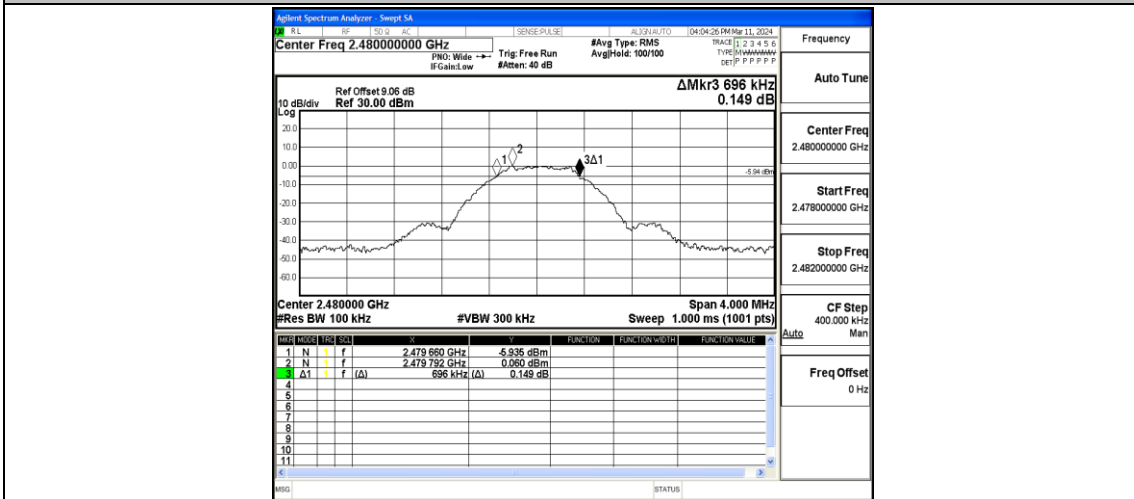
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



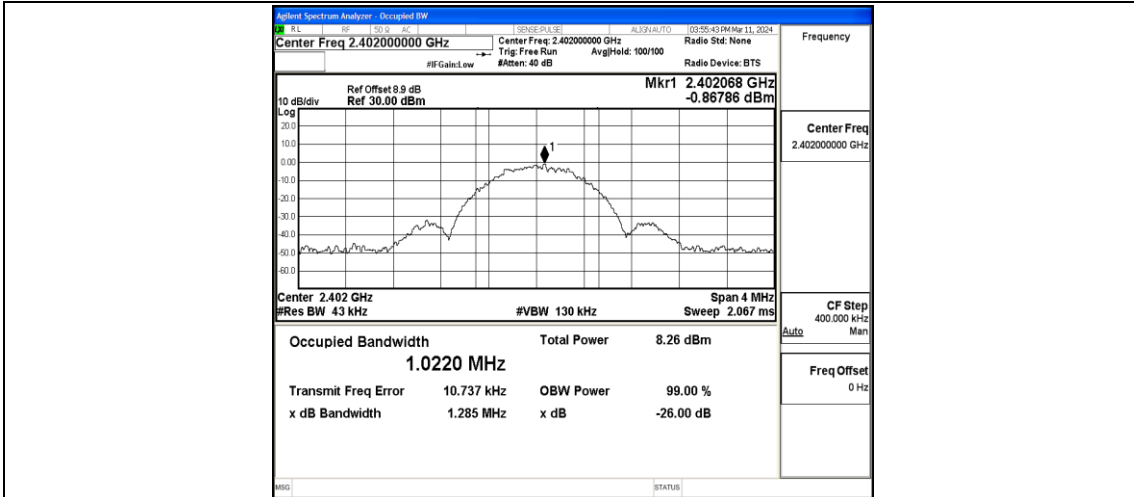
BLE_1M-Ant1-2480-PASS

Appendix B: Occupied Channel Bandwidth

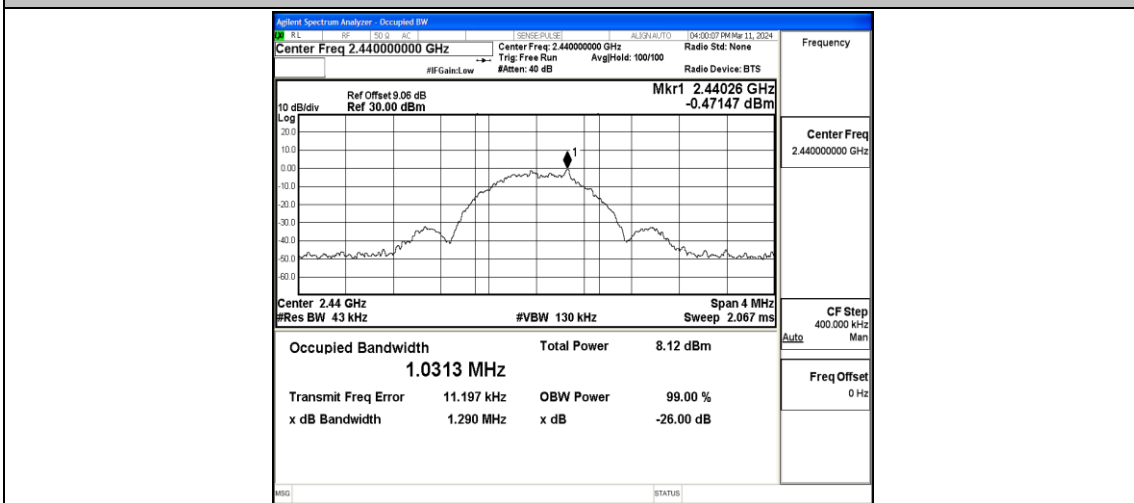
Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0220	2401.4997	2402.5217	---	---
BLE_1M	Ant1	2440	1.0313	2439.4956	2440.5269	---	---
BLE_1M	Ant1	2480	1.0269	2479.4978	2480.5247	---	---

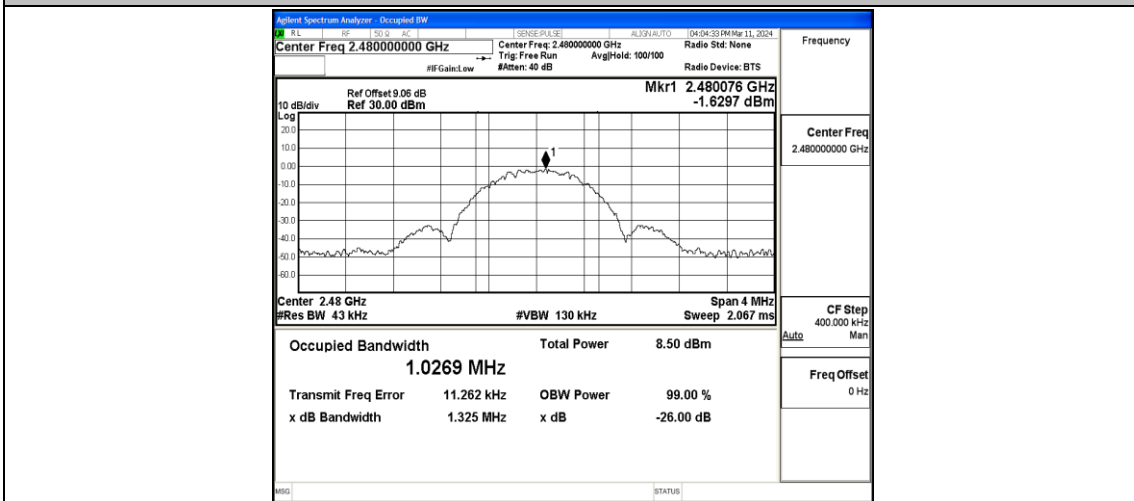
Test Graphs



BLE_1M-Ant1-2402



BLE_1M-Ant1-2440



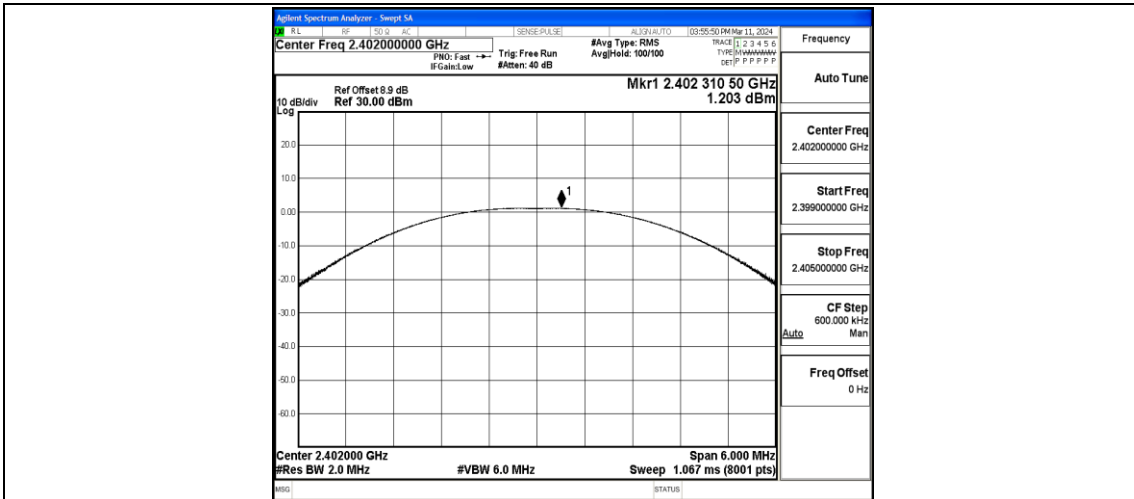
BLE_1M-Ant1-2480

Appendix C: Maximum peak conducted output power

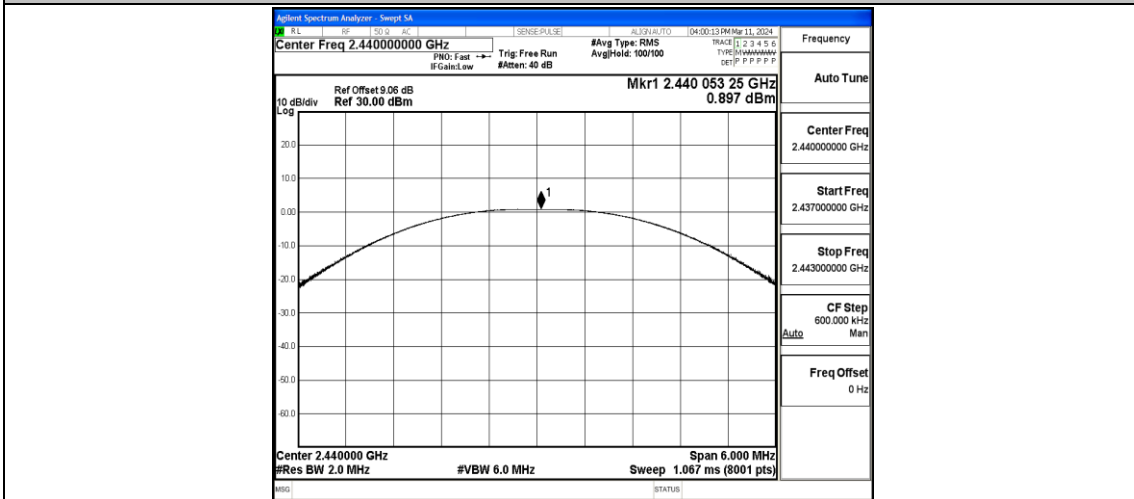
Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.20	≤30	PASS
BLE_1M	Ant1	2440	0.90	≤30	PASS
BLE_1M	Ant1	2480	1.23	≤30	PASS

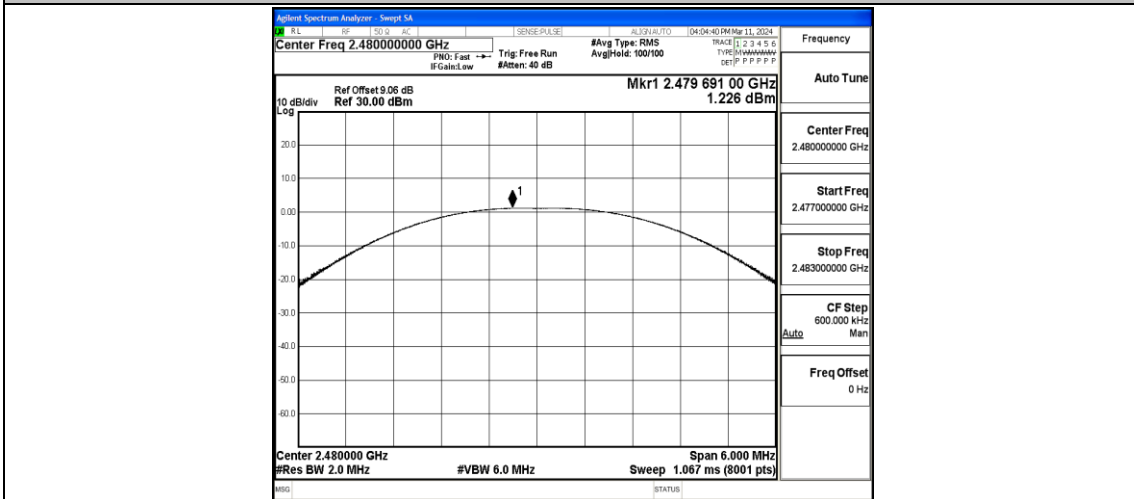
Test Graphs Peak



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



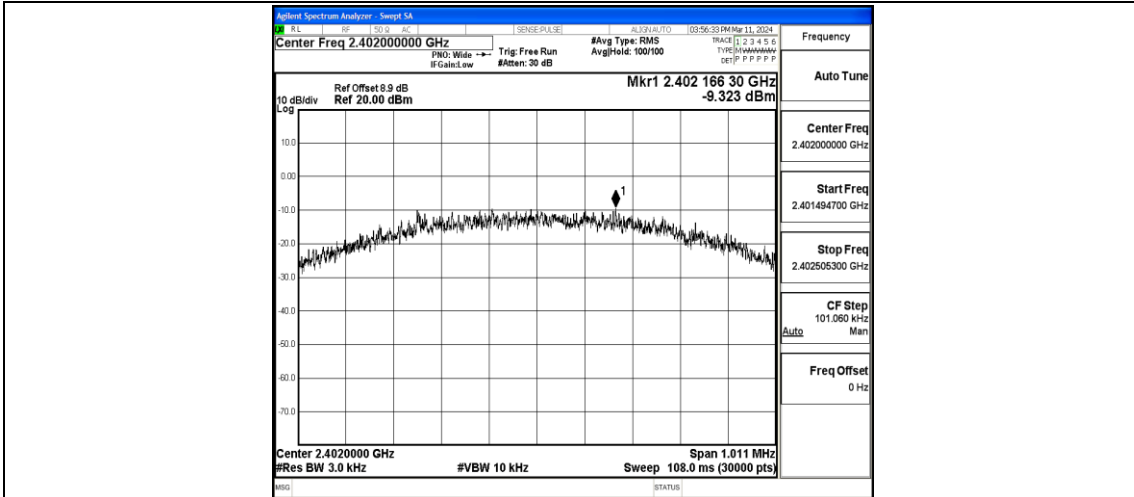
BLE_1M-Ant1-248-PASS

Appendix D: Maximum peak power spectral density

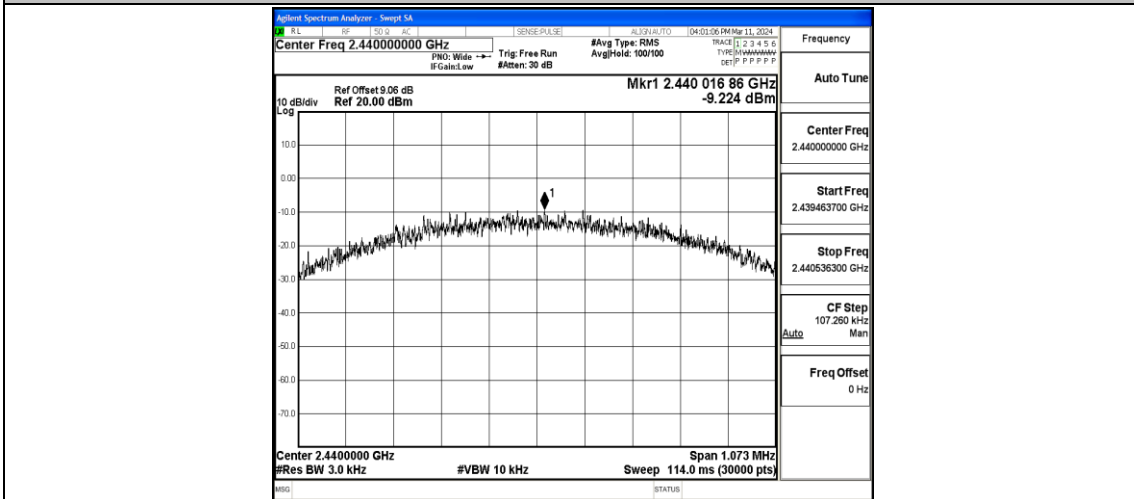
Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-9.32	≤8.00	PASS
BLE_1M	Ant1	2440	-9.22	≤8.00	PASS
BLE_1M	Ant1	2480	-8.90	≤8.00	PASS

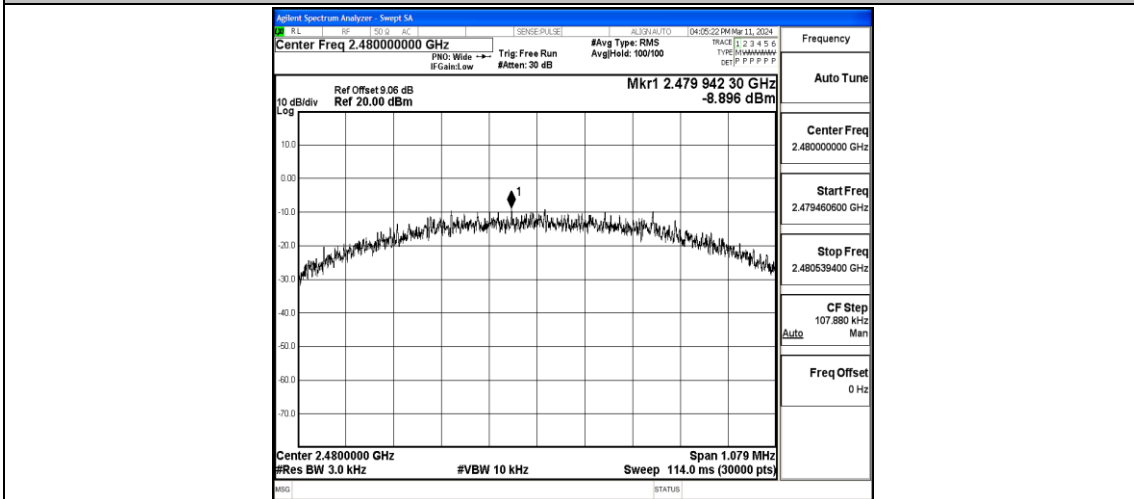
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



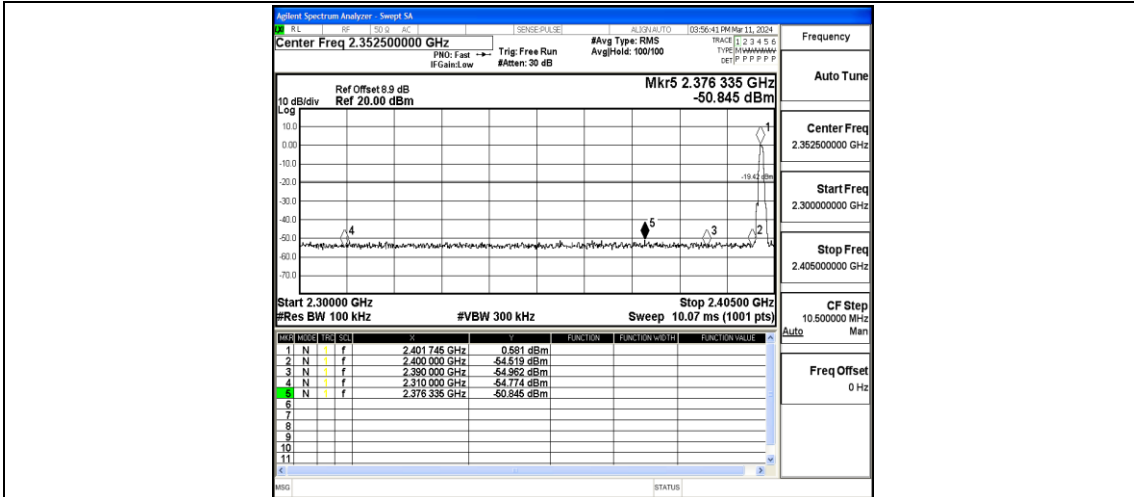
BLE_1M-Ant1-2480-PASS

Appendix E: Band edge measurements

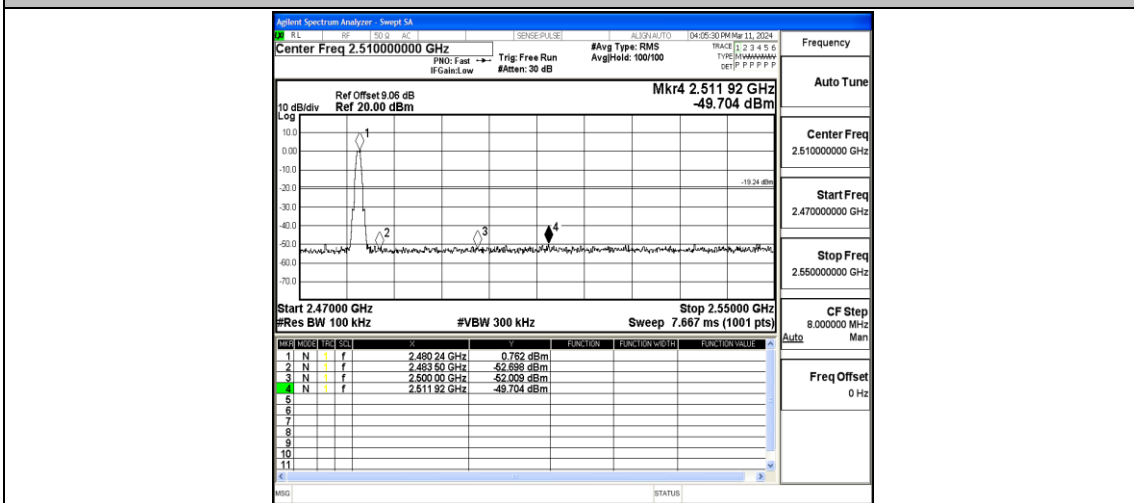
Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.58	-50.85	≤-19.42	PASS
BLE_1M	Ant1	High	2480	0.76	-49.7	≤-19.24	PASS

Test Graphs



BLE_1M-Ant1-240-PASS



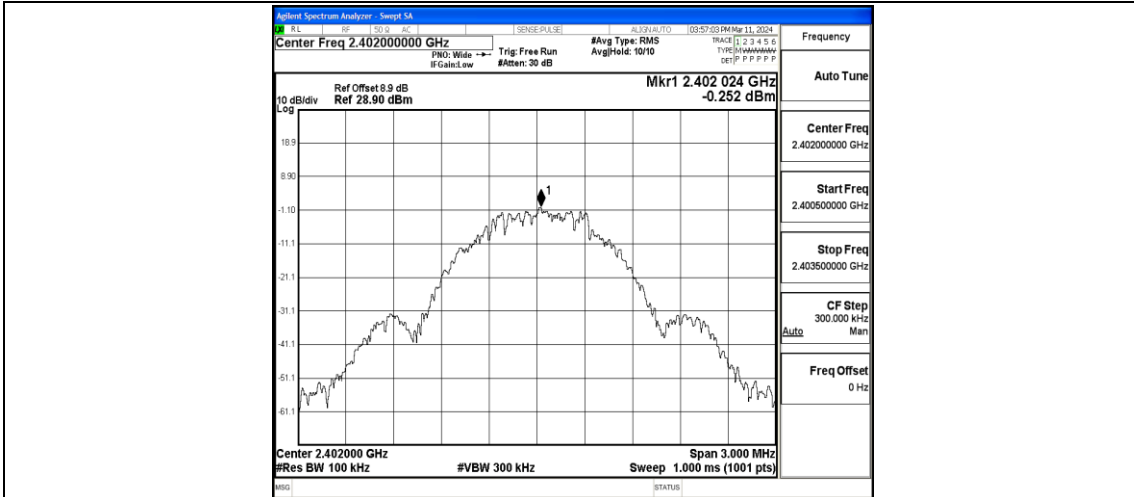
BLE_1M-Ant1-2480-PASS

Appendix F: Conducted Spurious Emission

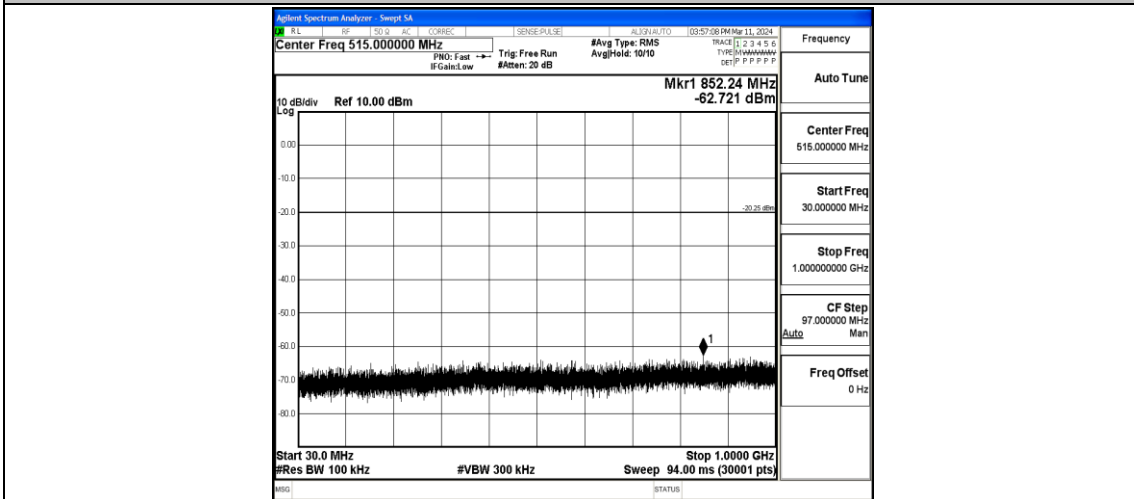
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-0.25	-0.25	---	PASS
BLE_1M	Ant1	2402	30~1000	-0.25	-62.72	≤-20.25	PASS
BLE_1M	Ant1	2402	1000~26500	-0.25	-42.93	≤-20.25	PASS
BLE_1M	Ant1	2440	0~Reference	-0.41	-0.41	---	PASS
BLE_1M	Ant1	2440	30~1000	-0.41	-63.14	≤-20.41	PASS
BLE_1M	Ant1	2440	1000~26500	-0.41	-41.79	≤-20.41	PASS
BLE_1M	Ant1	2480	0~Reference	-0.05	-0.05	---	PASS
BLE_1M	Ant1	2480	30~1000	-0.05	-62.26	≤-20.05	PASS
BLE_1M	Ant1	2480	1000~26500	-0.05	-43.48	≤-20.05	PASS

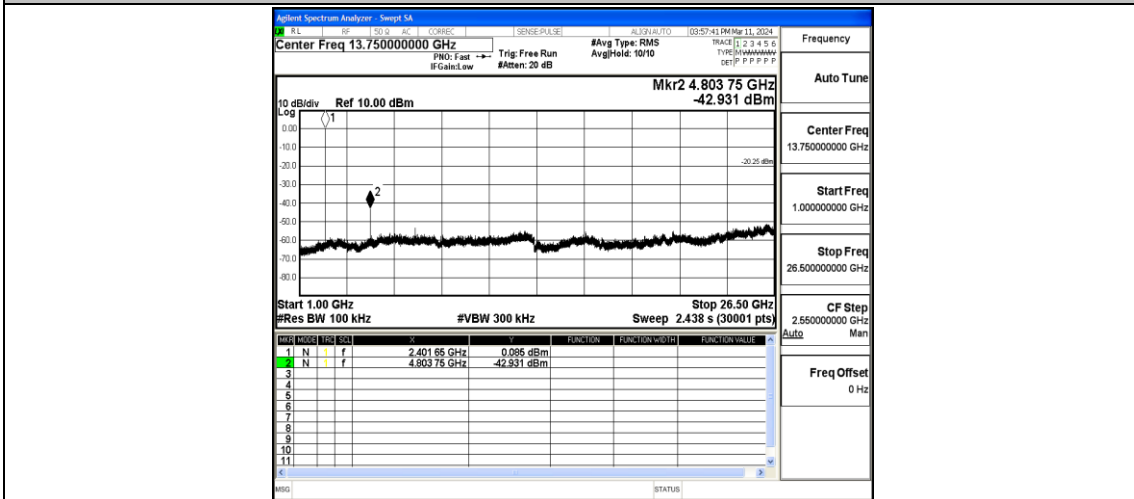
Test Graphs



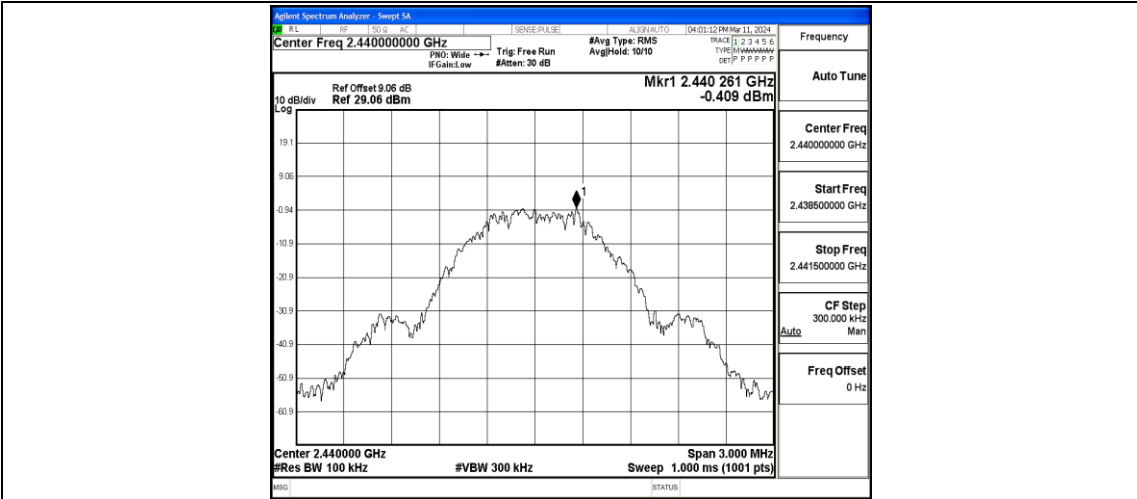
BLE_1M-Ant1-2402-0~Reference-PASS



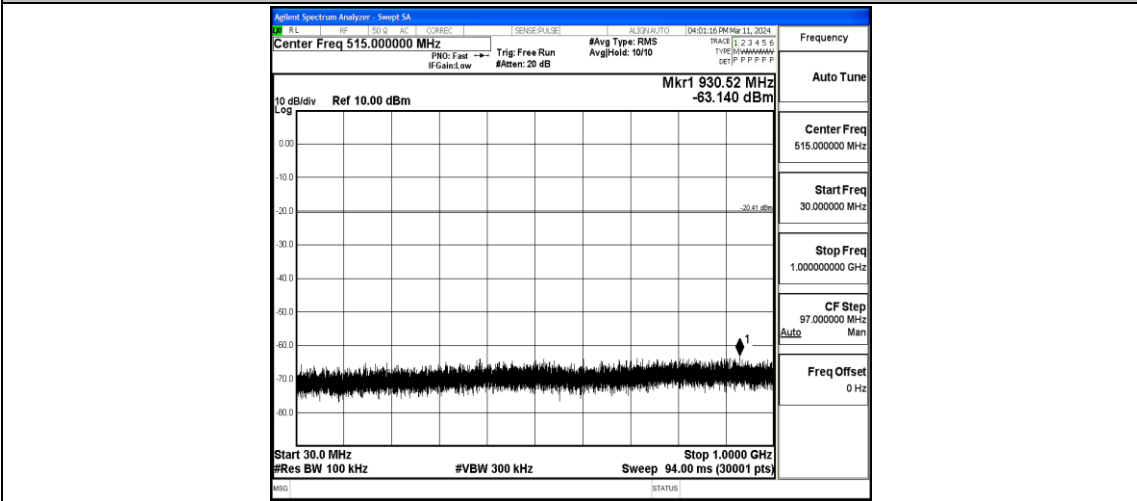
BLE_1M-Ant1-2402-30~1000-PASS



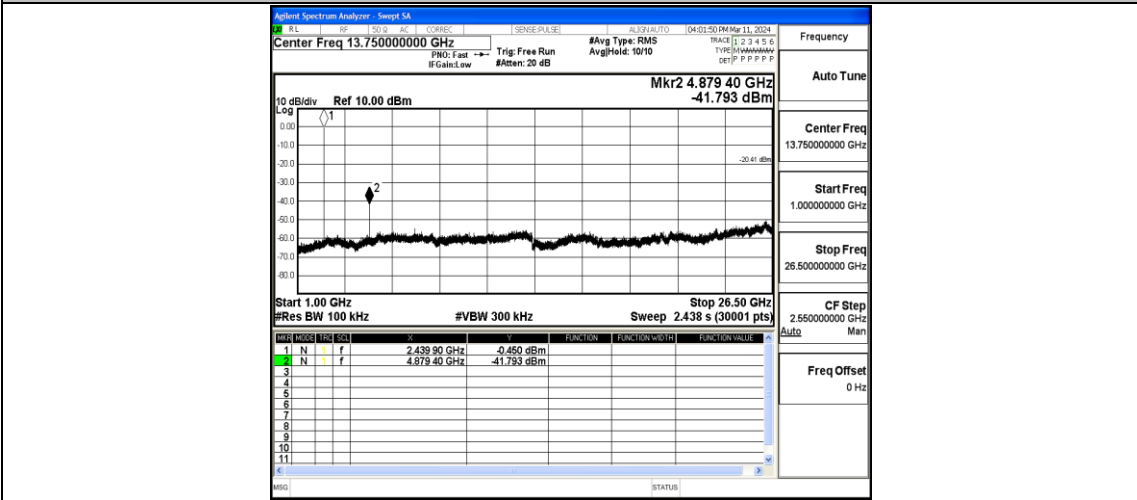
BLE_1M-Ant1-2402-1000~26500-PASS



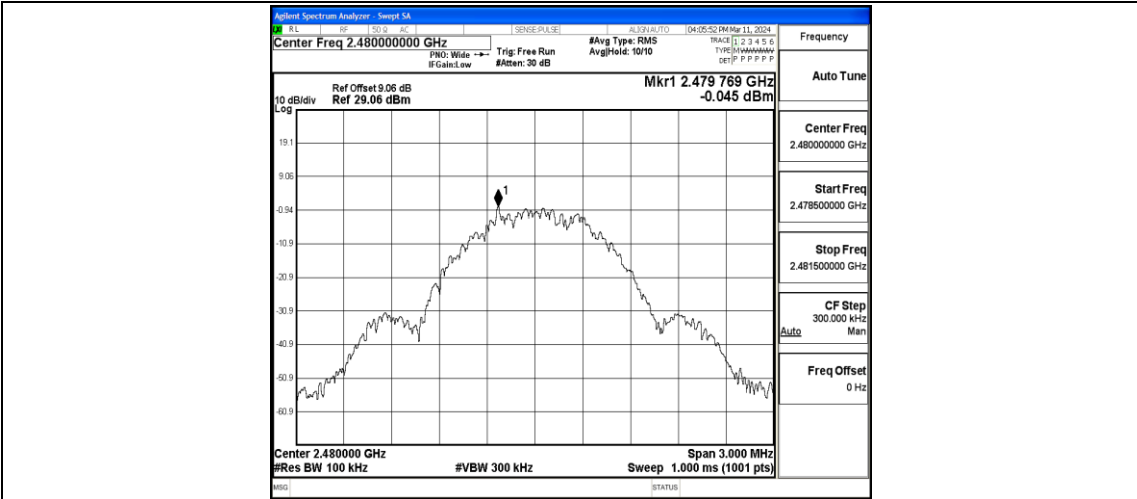
BLE_1M-Ant1-2440-0~Reference-PASS



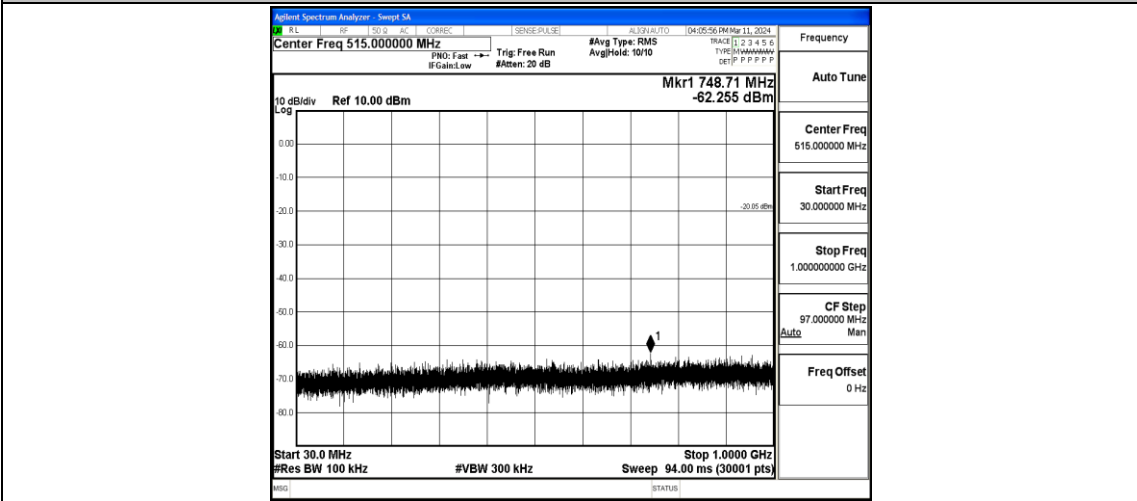
BLE_1M-Ant1-2440-30~1000-PASS



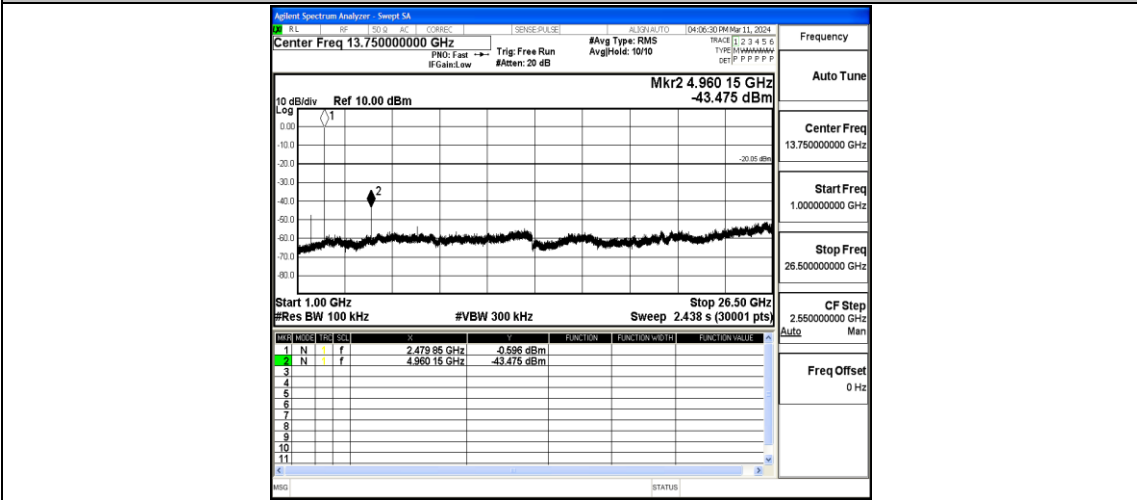
BLE_1M-Ant1-2440-1000~26500-PASS



BLE_1M-Ant1-2480-0~Reference-PASS



BLE_1M-Ant1-2480-30~1000-PASS



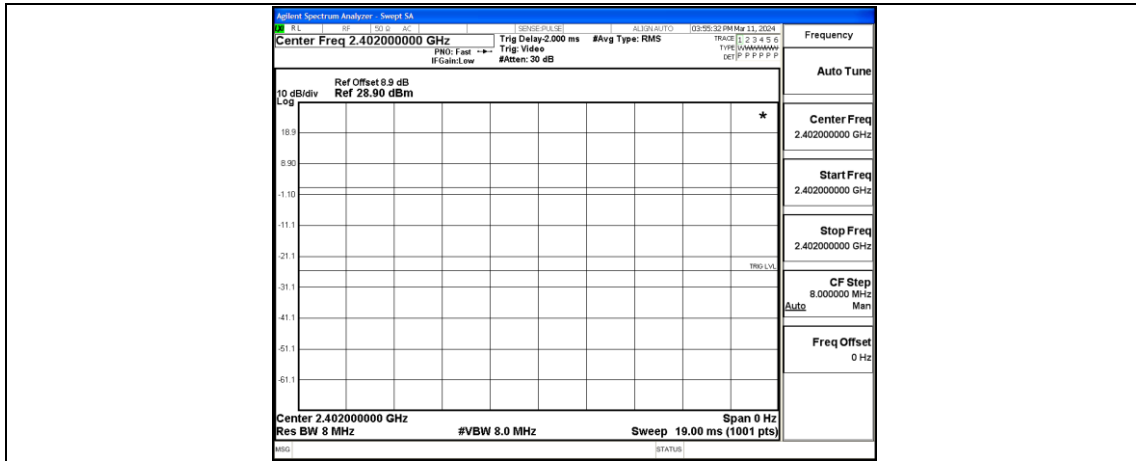
BLE_1M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

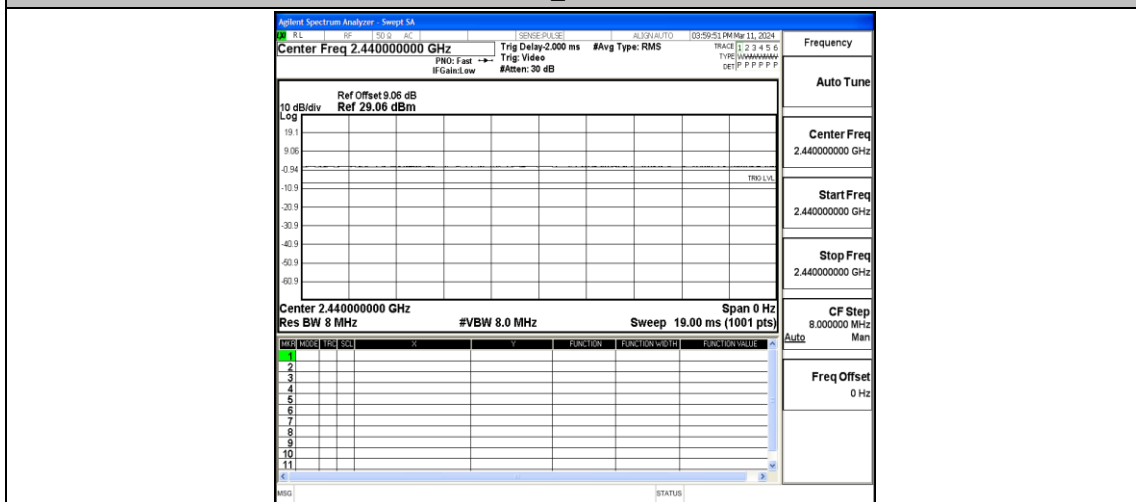
Test Result

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

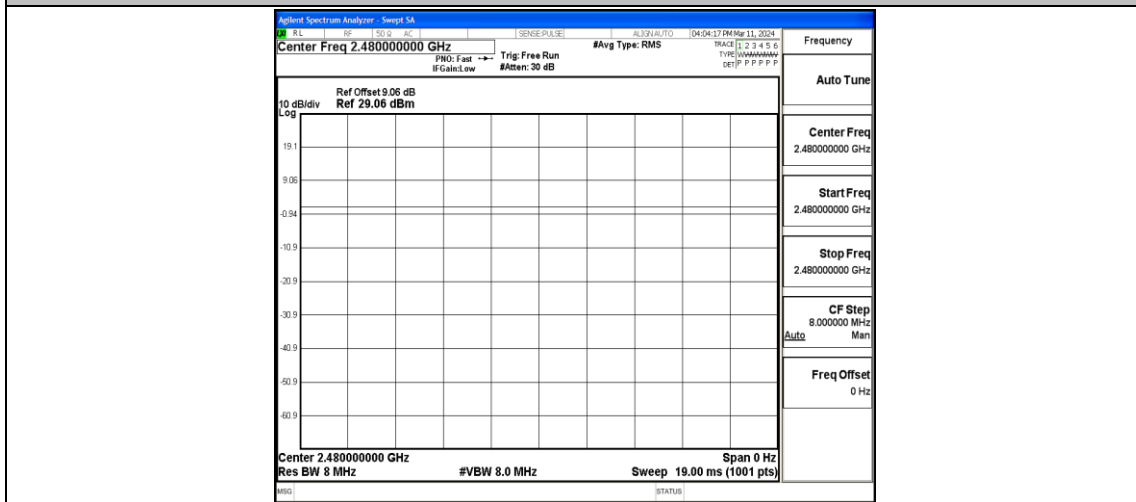
Test Graphs



NTNV-BLE_1M-Ant1-2402



NTNV-BLE_1M-Ant1-2440



NTNV-BLE_1M-Ant1-2480

Appendix H: Emissions in Restricted Bands

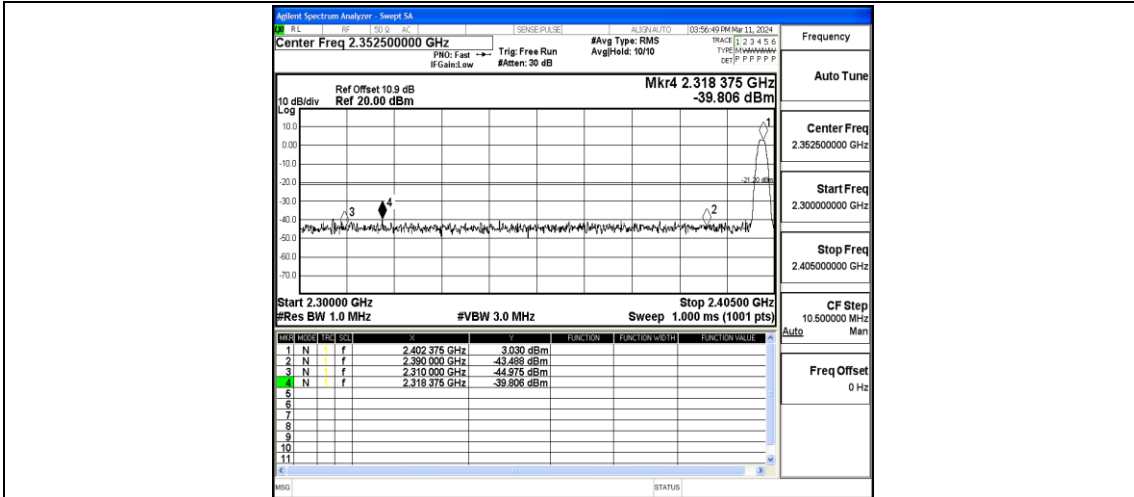
Test Result

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	-43.49	≤-21.20	51.71	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-44.98	≤-21.20	50.22	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2318.375	-39.81	≤-21.20	55.39	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-50.55	≤-41.20	44.65	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-50.82	≤-41.20	44.38	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2363.105	-49.6	≤-41.20	45.60	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-45.25	≤-21.20	49.95	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-44.42	≤-21.20	50.78	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2491.120	-40.18	≤-21.20	55.02	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-49.86	≤-41.20	45.34	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-49.5	≤-41.20	45.70	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2484.480	-49.03	≤-41.20	46.17	≤54	PASS

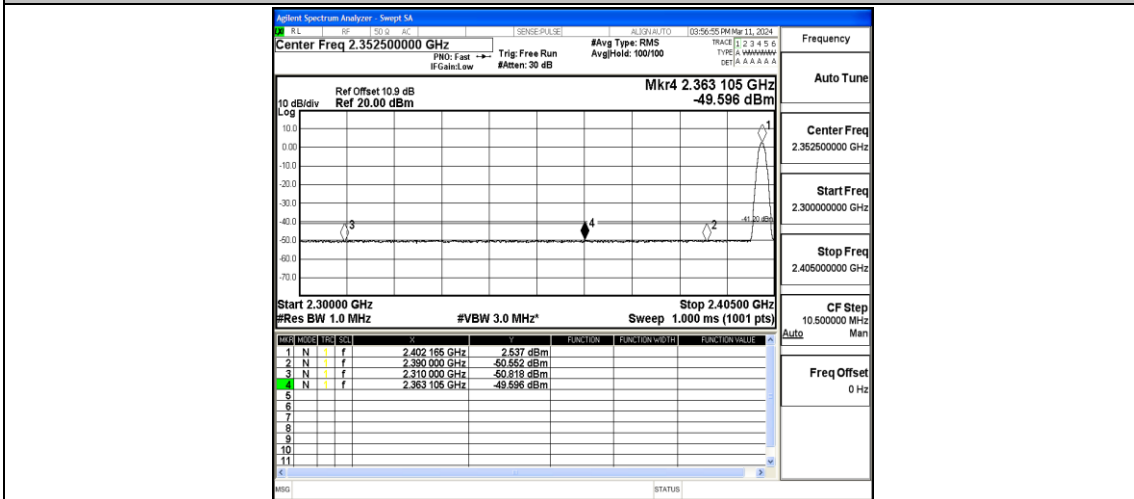
Note:

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.

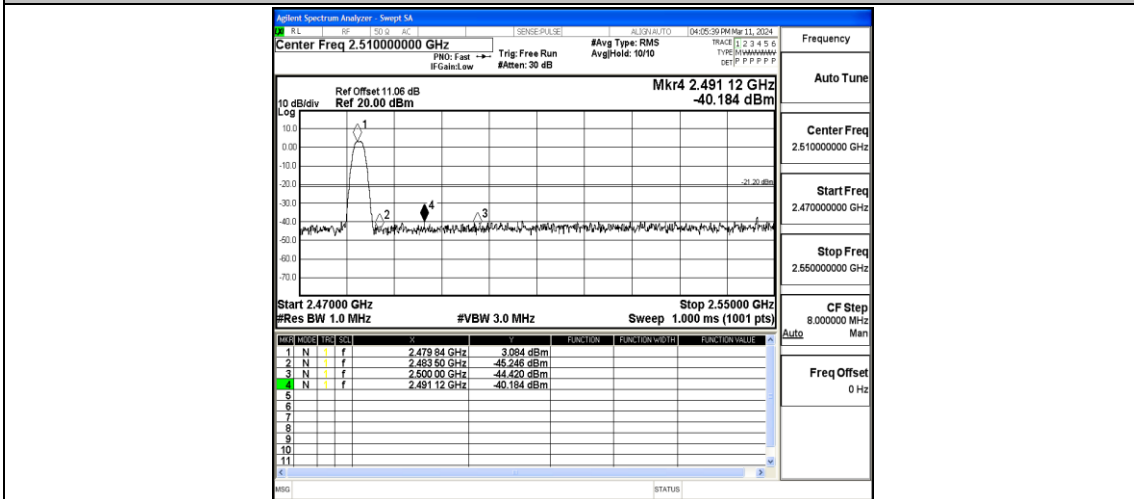
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-2480-PASS

