

Appendix Test Data for BLE (Conducted Measurement)

Product Name: Wireless Mechanical Keyboard

Trade Mark: Keychron

Test Model: K7 Max

FCC ID: 2ASF4-K7MAX

Environmental Conditions

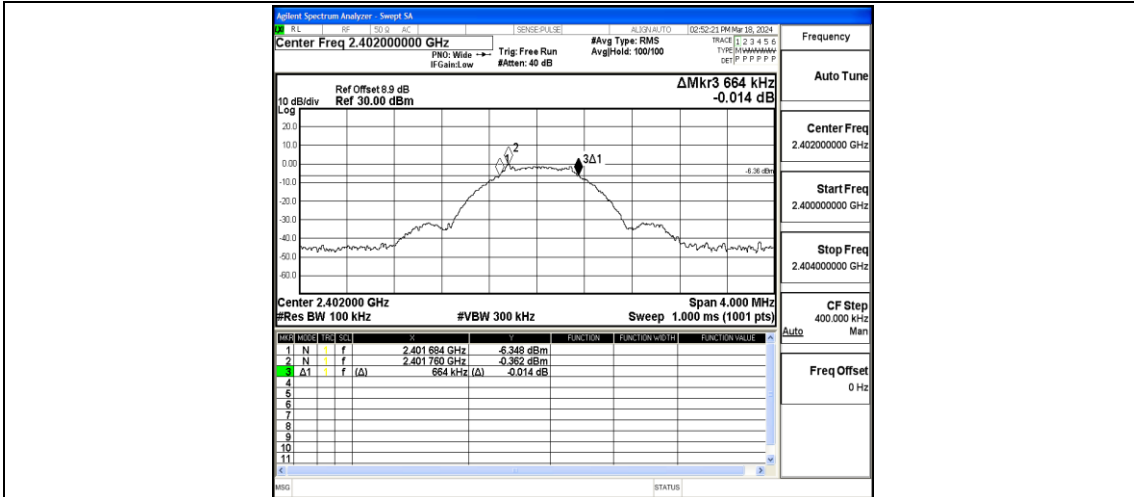
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

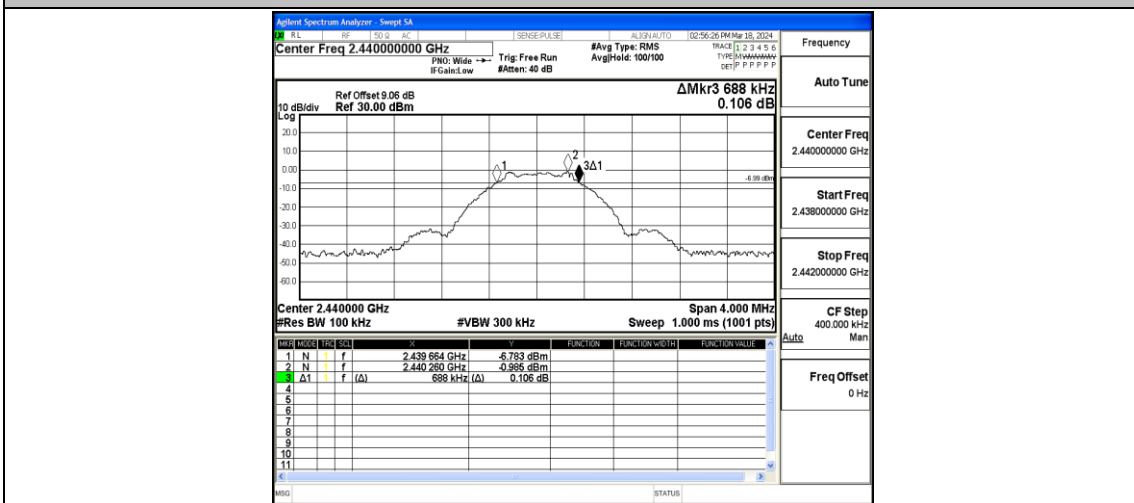
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.684	2402.348	0.5	PASS
BLE_1M	Ant1	2440	0.688	2439.664	2440.352	0.5	PASS
BLE_1M	Ant1	2480	0.708	2479.648	2480.356	0.5	PASS

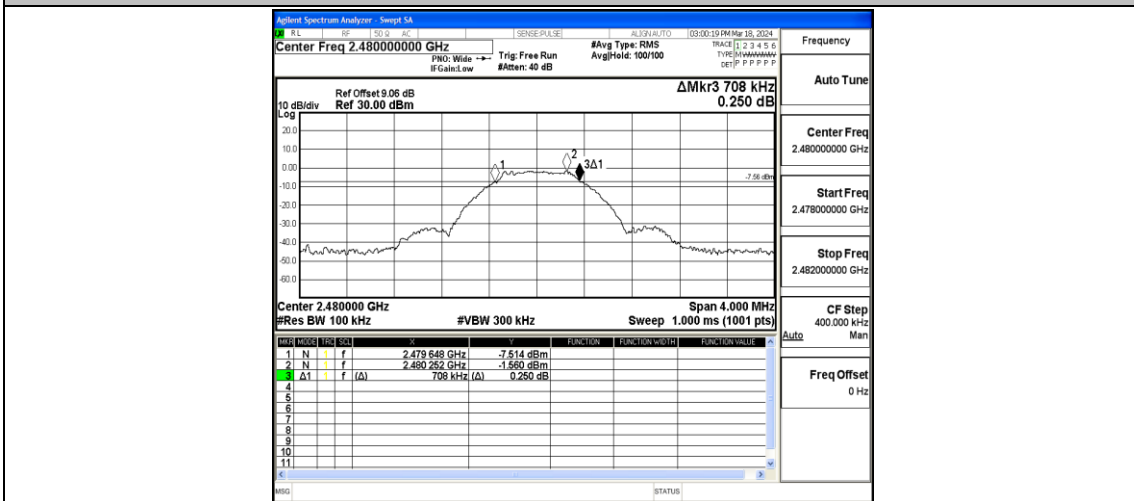
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



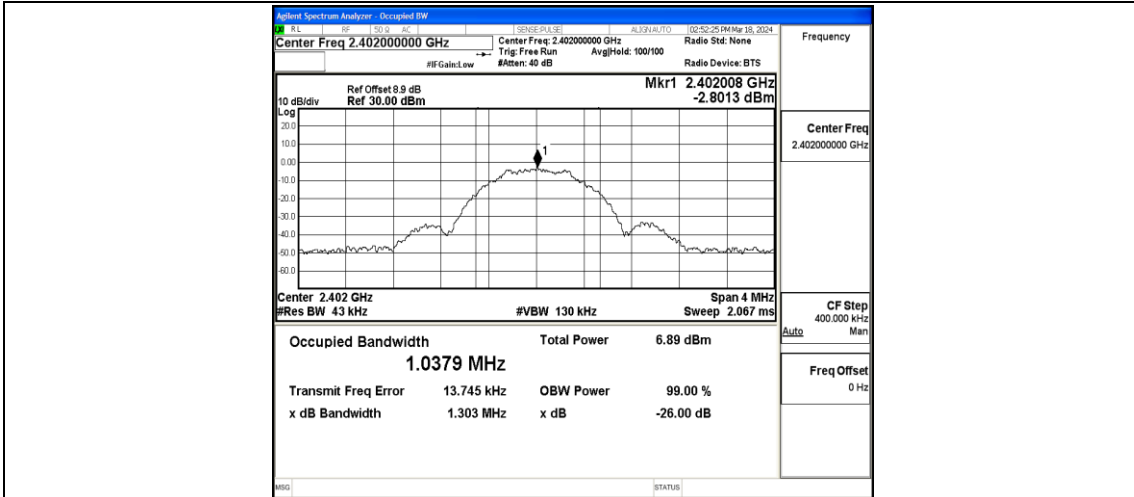
BLE_1M-Ant1-2480-PASS

Appendix B: Occupied Channel Bandwidth

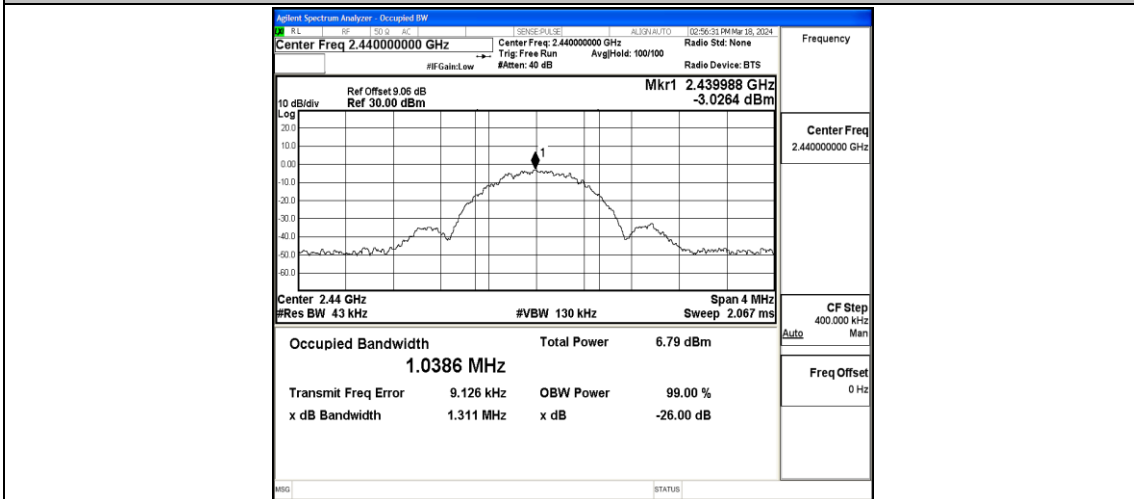
Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0379	2401.4948	2402.5327	---	---
BLE_1M	Ant1	2440	1.0386	2439.4898	2440.5284	---	---
BLE_1M	Ant1	2480	1.0404	2479.4882	2480.5286	---	---

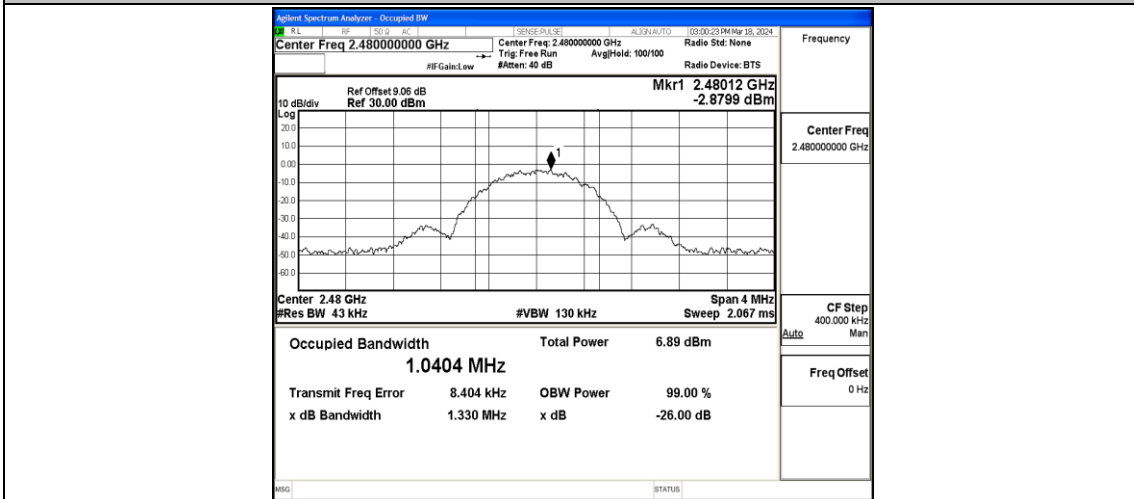
Test Graphs



BLE_1M-Ant1-2402



BLE_1M-Ant1-2440



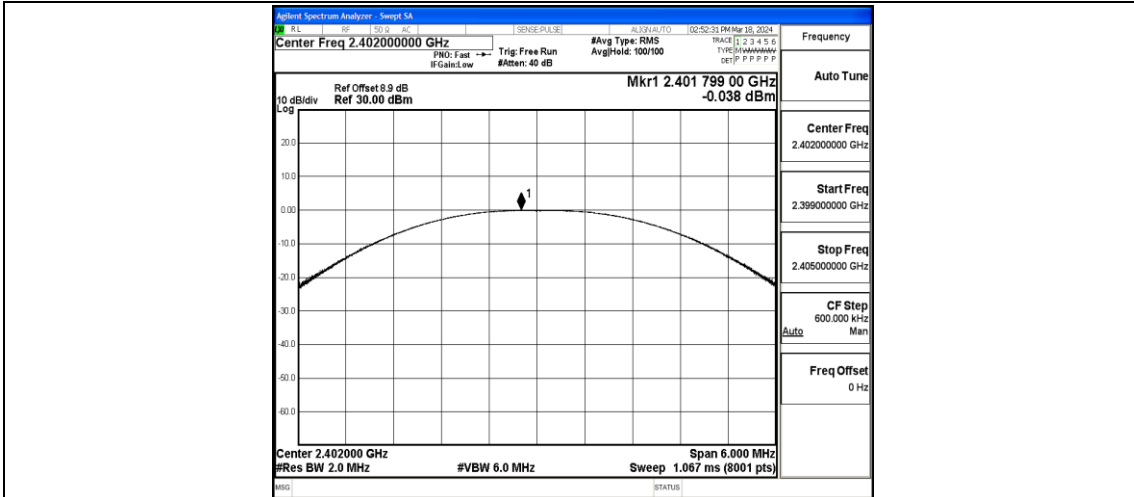
BLE_1M-Ant1-2480

Appendix C: Maximum peak conducted output power

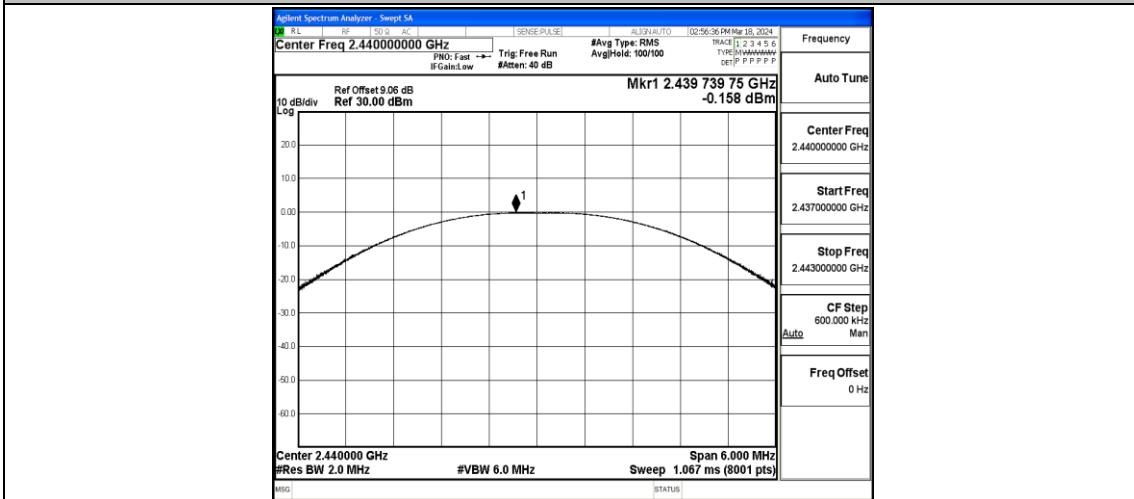
Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.04	≤30	PASS
BLE_1M	Ant1	2440	-0.16	≤30	PASS
BLE_1M	Ant1	2480	-0.13	≤30	PASS

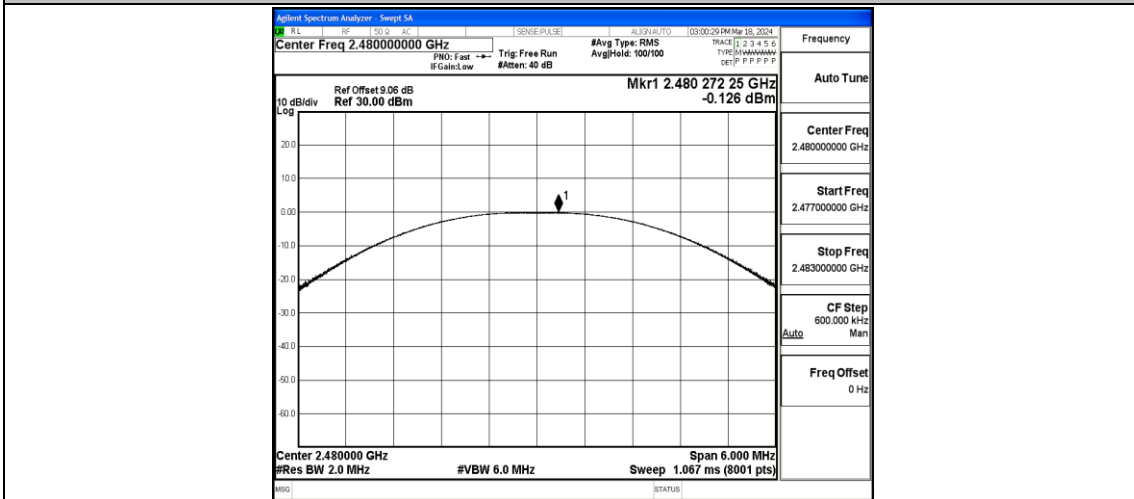
Test Graphs Peak



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



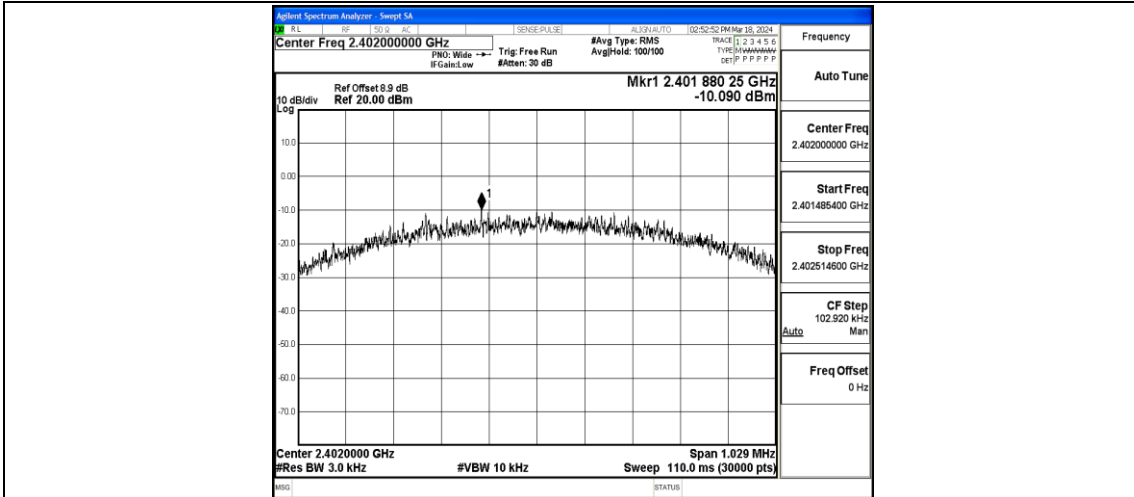
BLE_1M-Ant1-248-PASS

Appendix D: Maximum peak power spectral density

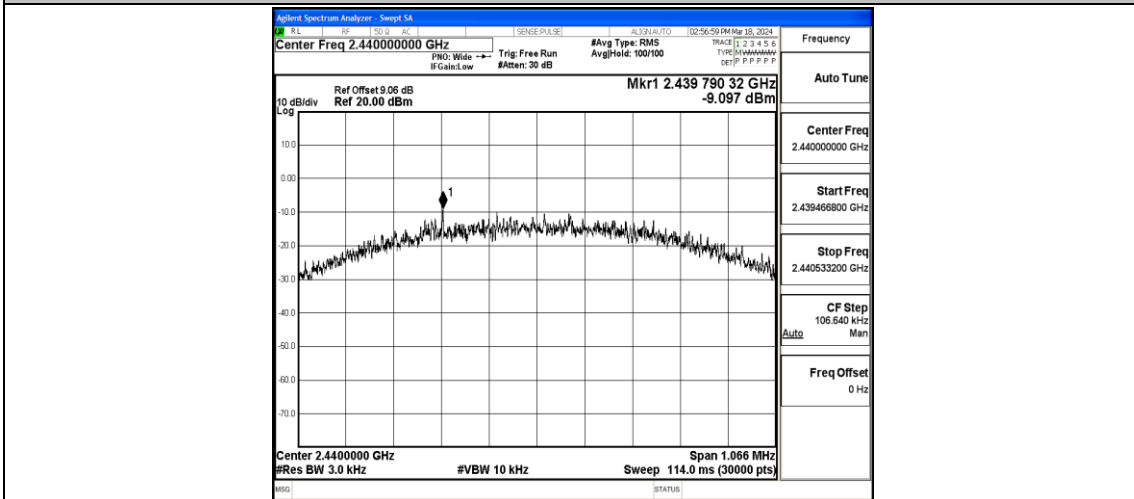
Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.09	≤8.00	PASS
BLE_1M	Ant1	2440	-9.10	≤8.00	PASS
BLE_1M	Ant1	2480	-9.08	≤8.00	PASS

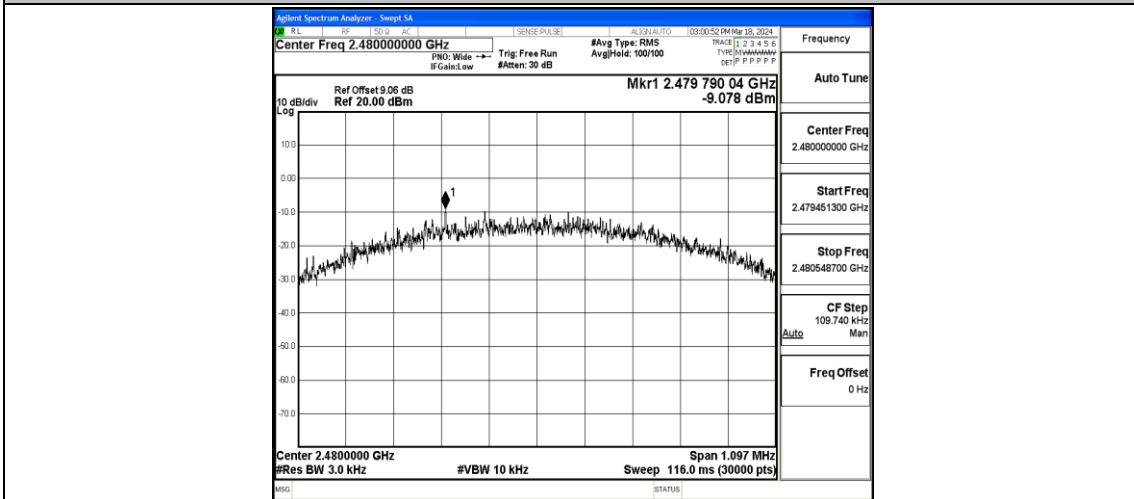
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



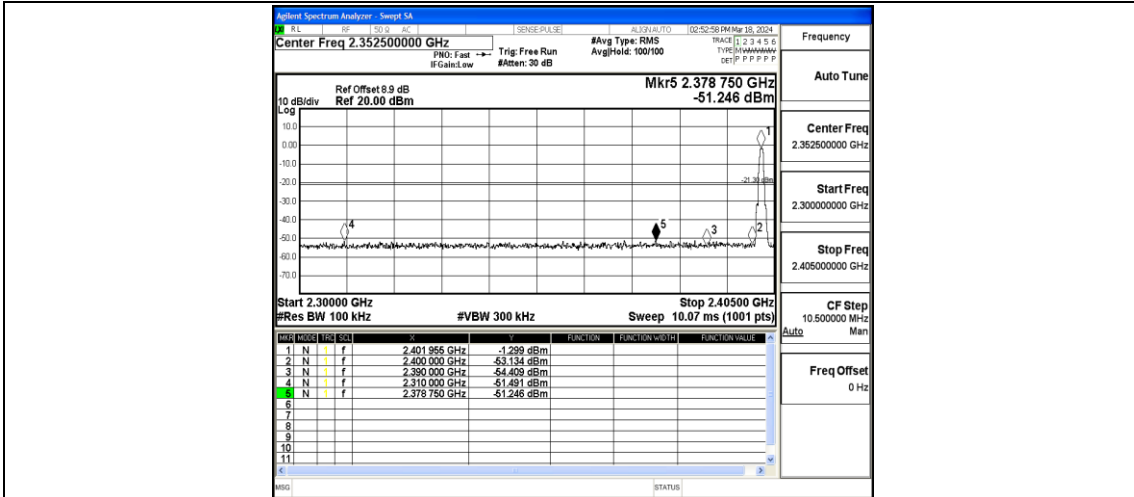
BLE_1M-Ant1-2480-PASS

Appendix E: Band edge measurements

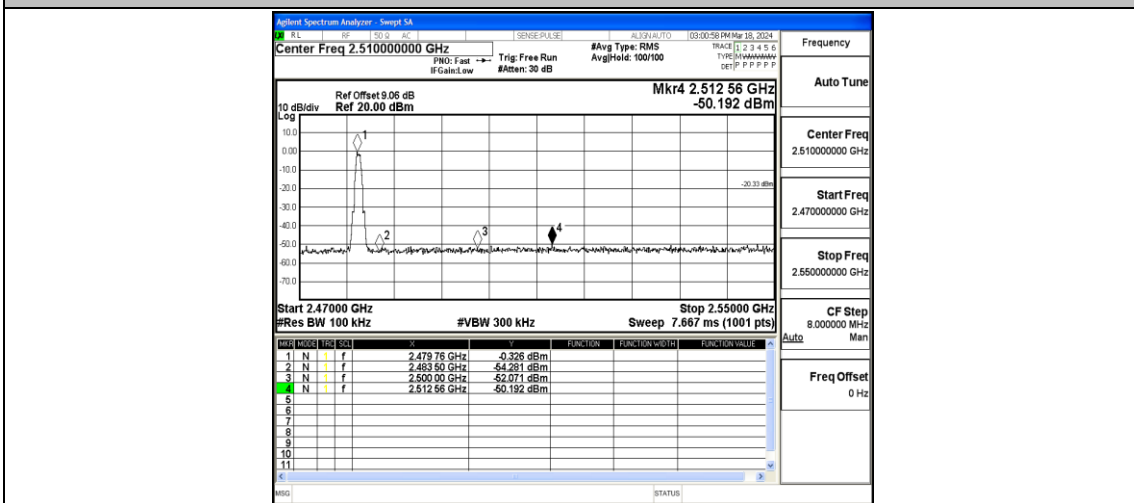
Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.30	-51.25	≤-21.3	PASS
BLE_1M	Ant1	High	2480	-0.33	-50.19	≤-20.33	PASS

Test Graphs



BLE_1M-Ant1-240-PASS



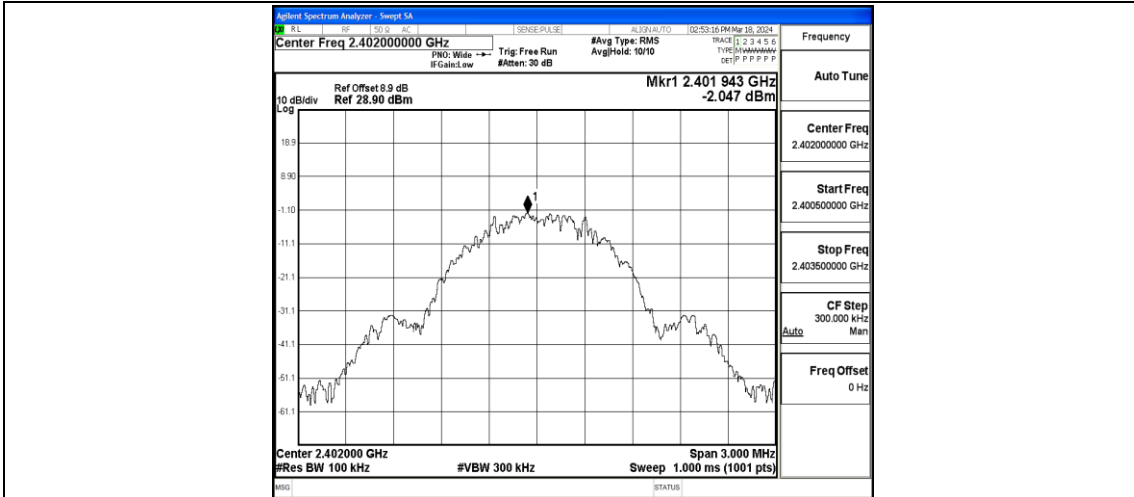
BLE_1M-Ant1-2480-PASS

Appendix F: Conducted Spurious Emission

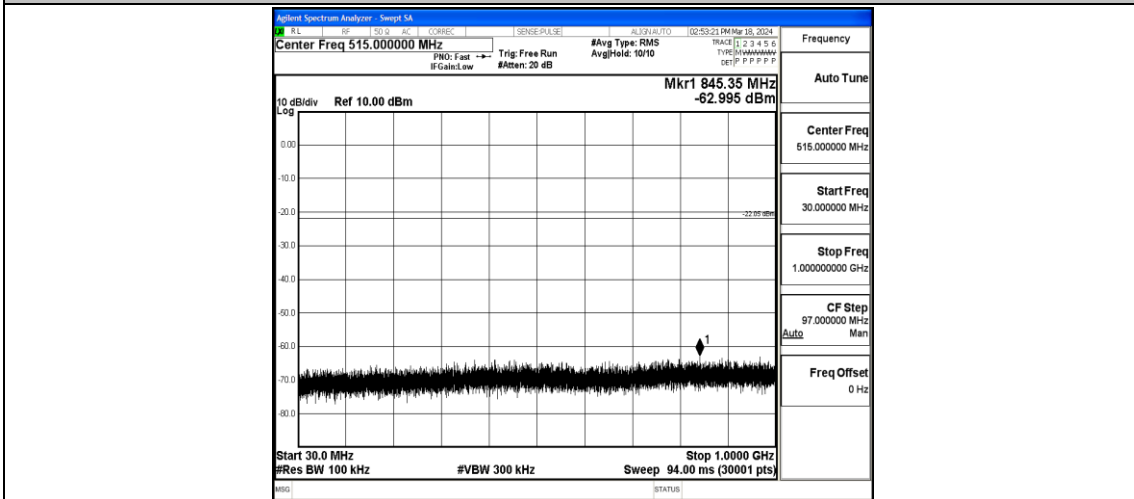
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-2.05	-2.05	---	PASS
BLE_1M	Ant1	2402	30~1000	-2.05	-63	≤-22.05	PASS
BLE_1M	Ant1	2402	1000~26500	-2.05	-46.53	≤-22.05	PASS
BLE_1M	Ant1	2440	0~Reference	-1.93	-1.93	---	PASS
BLE_1M	Ant1	2440	30~1000	-1.93	-63.22	≤-21.93	PASS
BLE_1M	Ant1	2440	1000~26500	-1.93	-48.18	≤-21.93	PASS
BLE_1M	Ant1	2480	0~Reference	-1.44	-1.44	---	PASS
BLE_1M	Ant1	2480	30~1000	-1.44	-63.24	≤-21.44	PASS
BLE_1M	Ant1	2480	1000~26500	-1.44	-48.63	≤-21.44	PASS

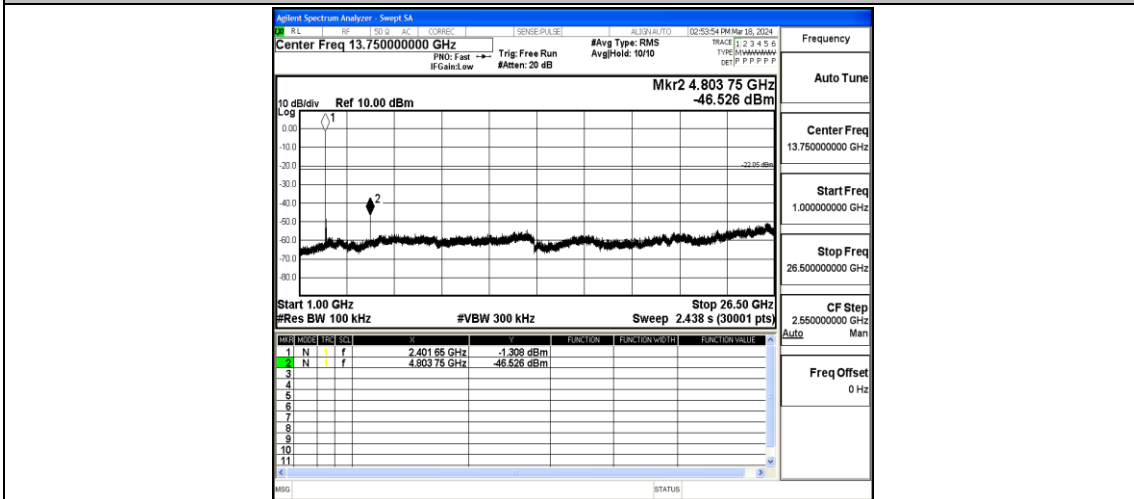
Test Graphs



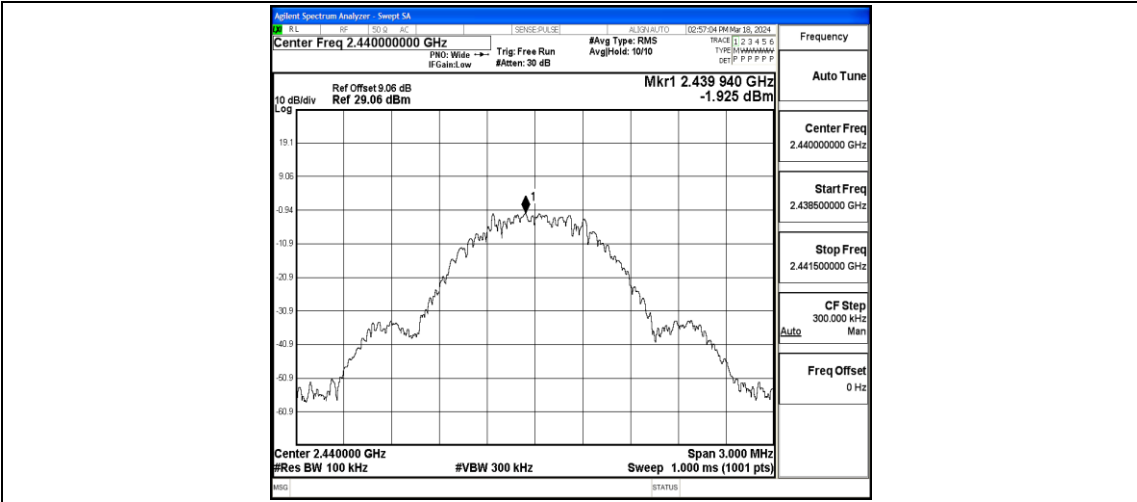
BLE_1M-Ant1-2402-0~Reference-PASS



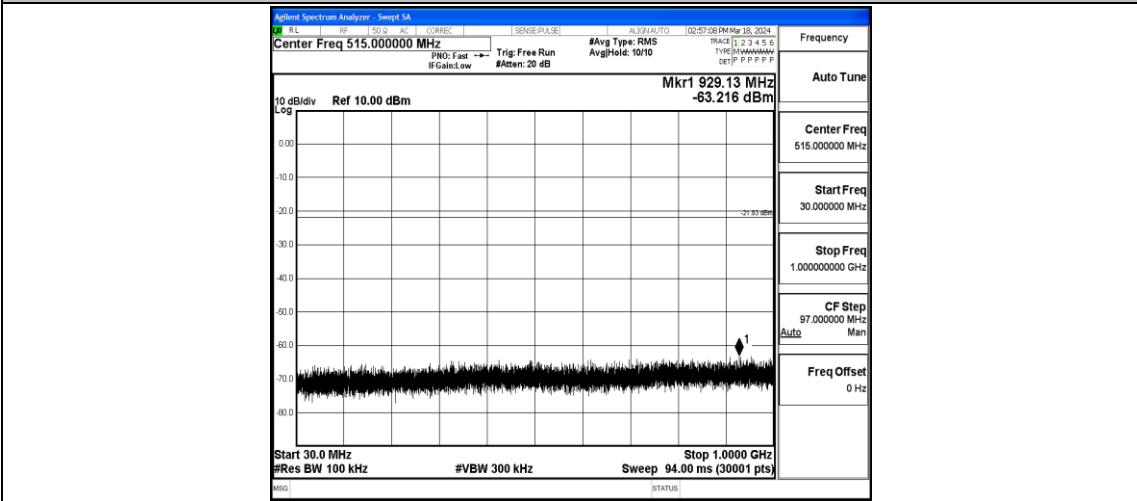
BLE_1M-Ant1-2402-30~1000-PASS



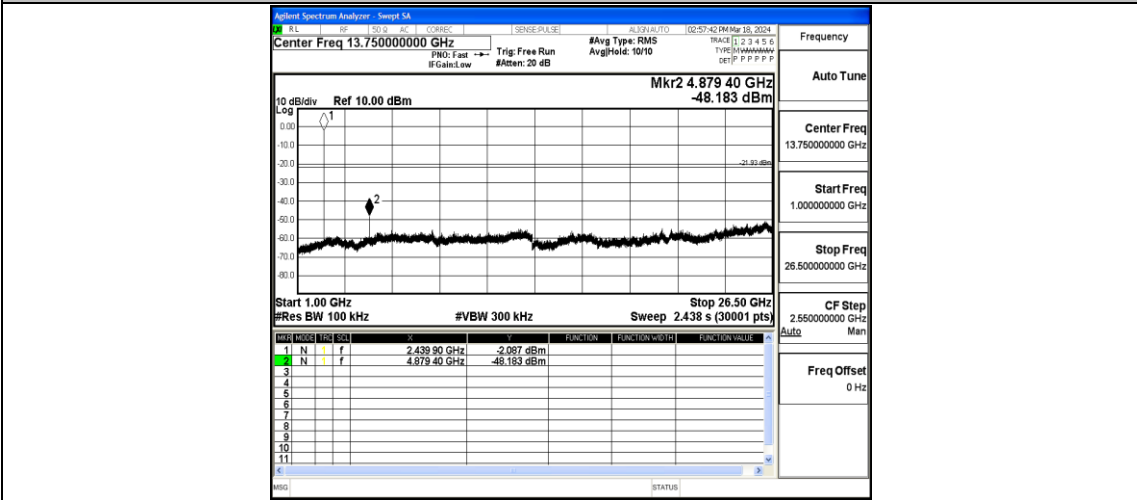
BLE_1M-Ant1-2402-1000~26500-PASS



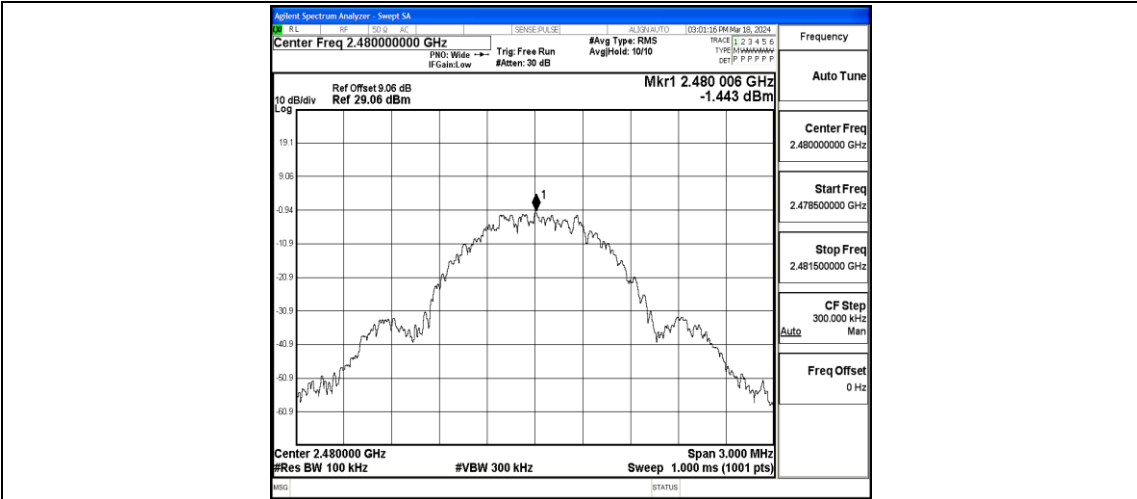
BLE_1M-Ant1-2440-0~Reference-PASS



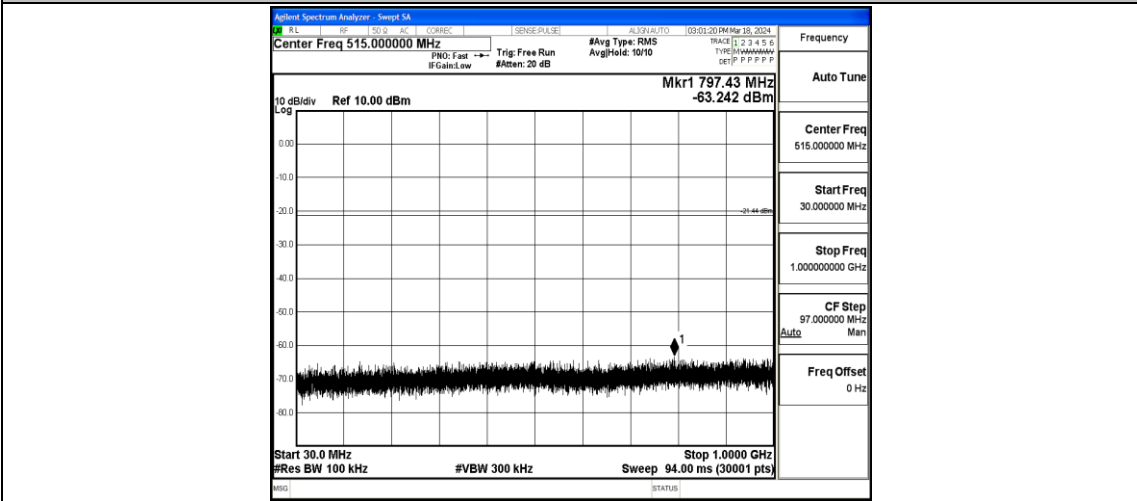
BLE_1M-Ant1-2440-30~1000-PASS



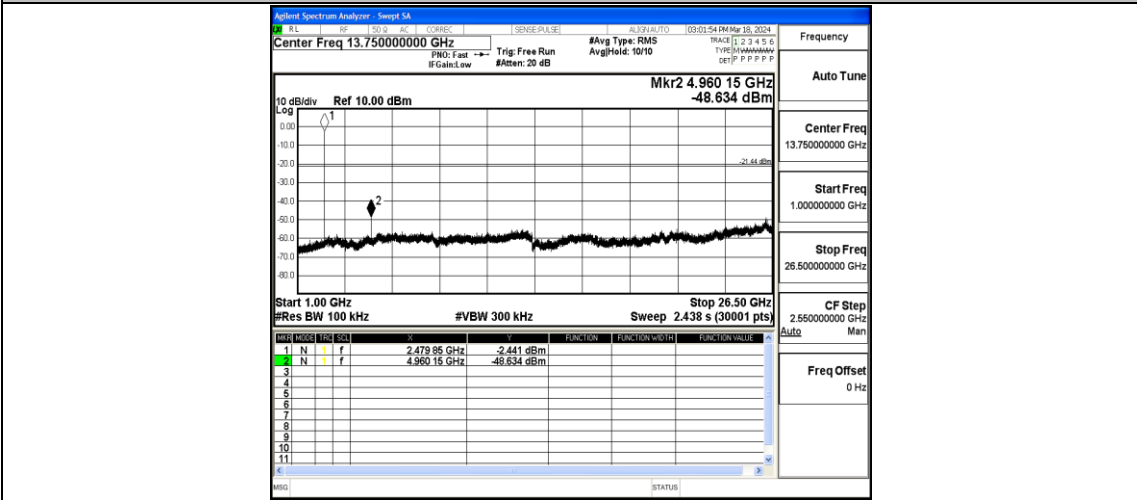
BLE_1M-Ant1-2440-1000~26500-PASS



BLE_1M-Ant1-2480-0~Reference-PASS



BLE_1M-Ant1-2480-30~1000-PASS



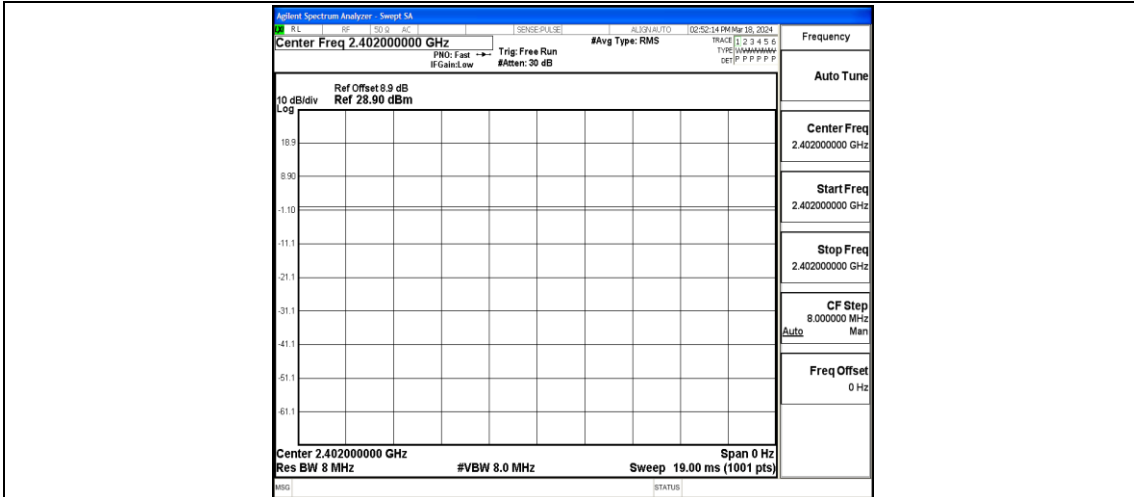
BLE_1M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

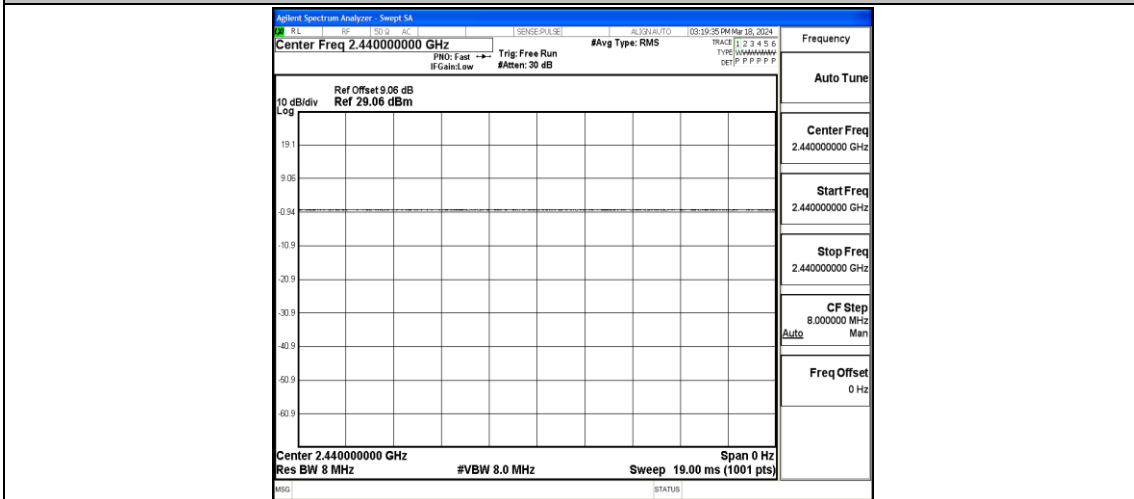
Test Result

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

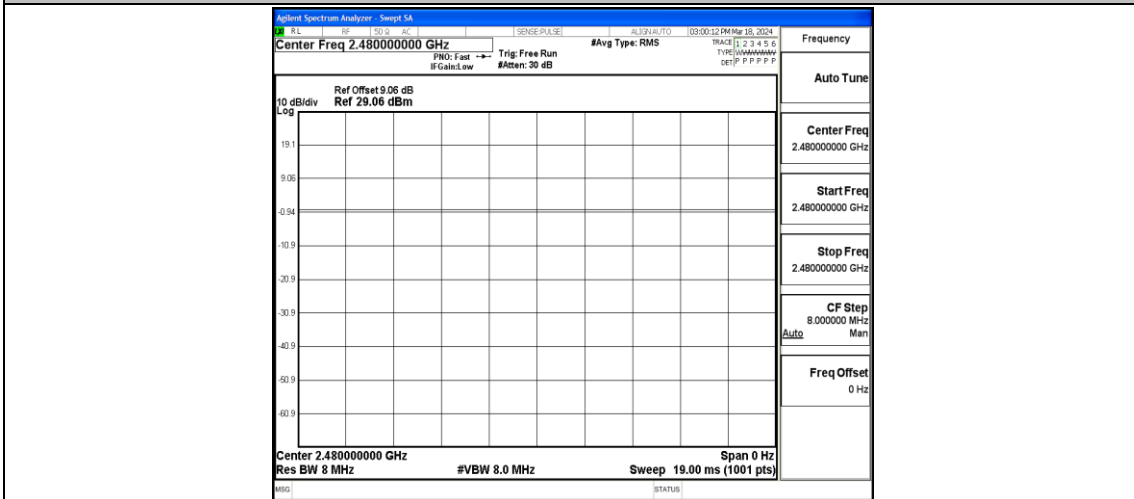
Test Graphs



NTNV-BLE_1M-Ant1-2402



NTNV-BLE_1M-Ant1-2440



NTNV-BLE_1M-Ant1-2480

Appendix H: Emissions in Restricted Bands

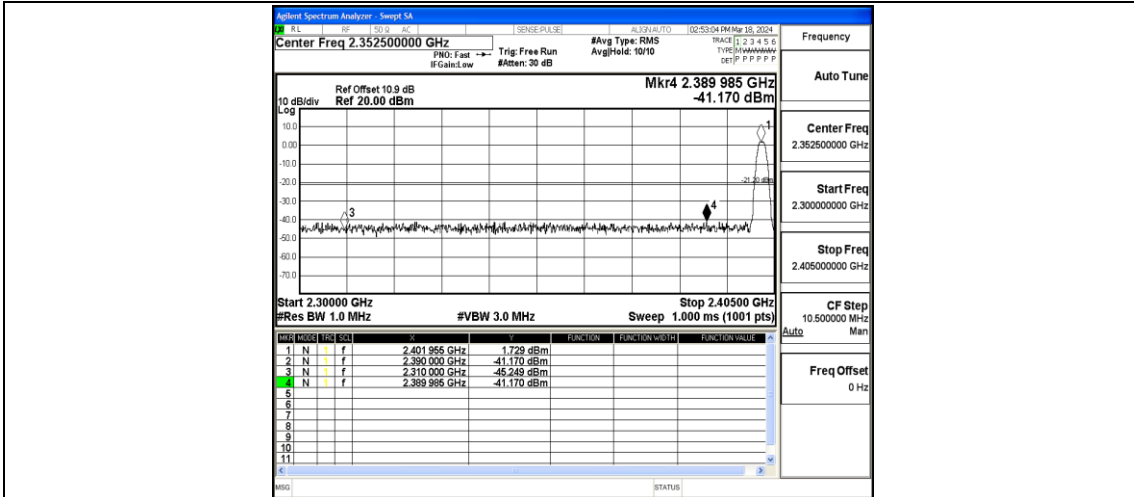
Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	Peak	2390.000	-41.17	≤-21.20	54.03	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-45.25	≤-21.20	49.95	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2389.985	-41.17	≤-21.20	54.03	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-50.42	≤-41.20	44.78	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-50.59	≤-41.20	44.61	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2378.540	-49.55	≤-41.20	45.65	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-44.55	≤-21.20	50.65	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-42.27	≤-21.20	52.93	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2497.200	-40.49	≤-21.20	54.71	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-49.9	≤-41.20	45.30	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-49.53	≤-41.20	45.67	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2497.680	-49.13	≤-41.20	46.07	≤54	PASS

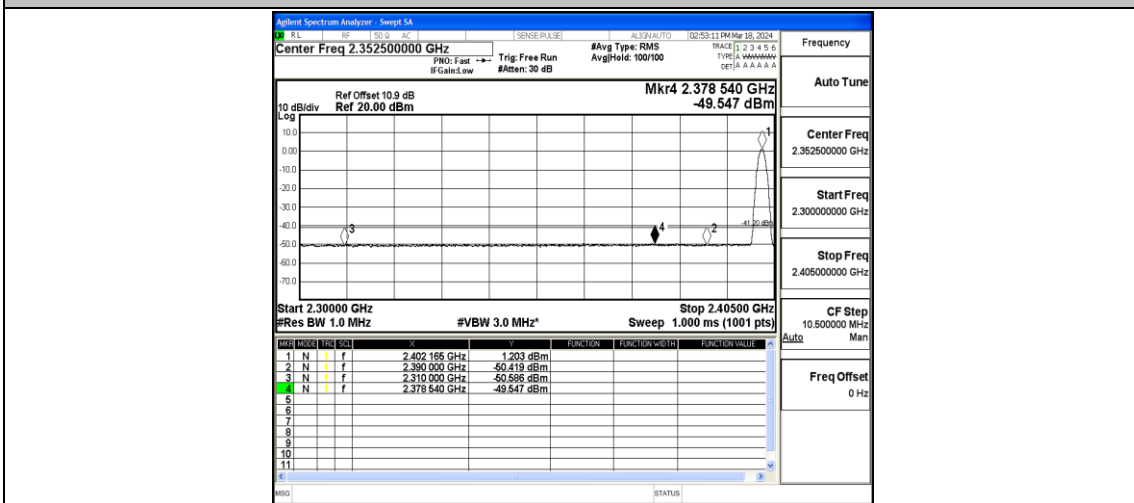
Note:

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.

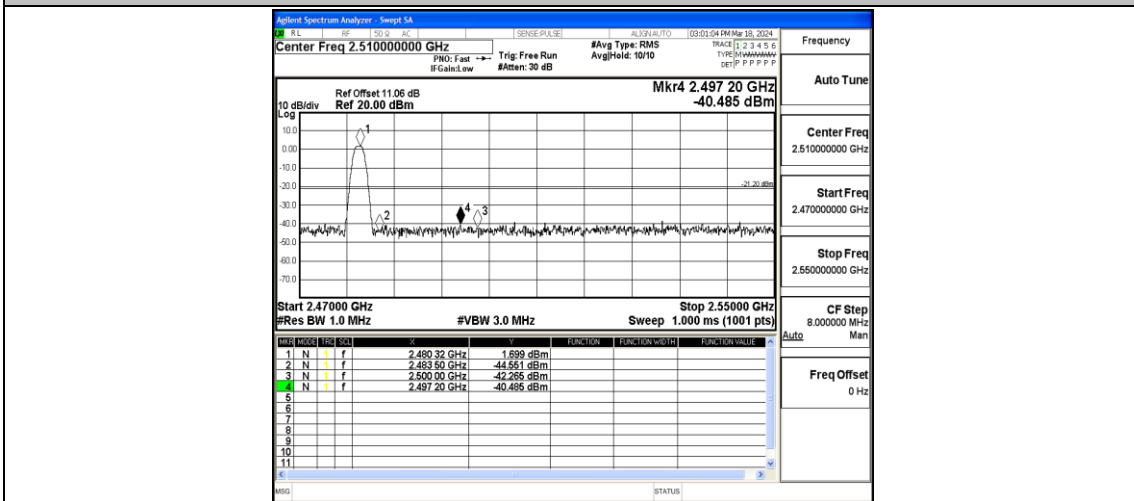
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-2480-PASS

