

Appendix Test Data for BLE (Conducted Measurement)

Product Name: Projector

Trade Mark: N/A

Test Model: S100

FCC ID: 2BF78-S100

Environmental Conditions

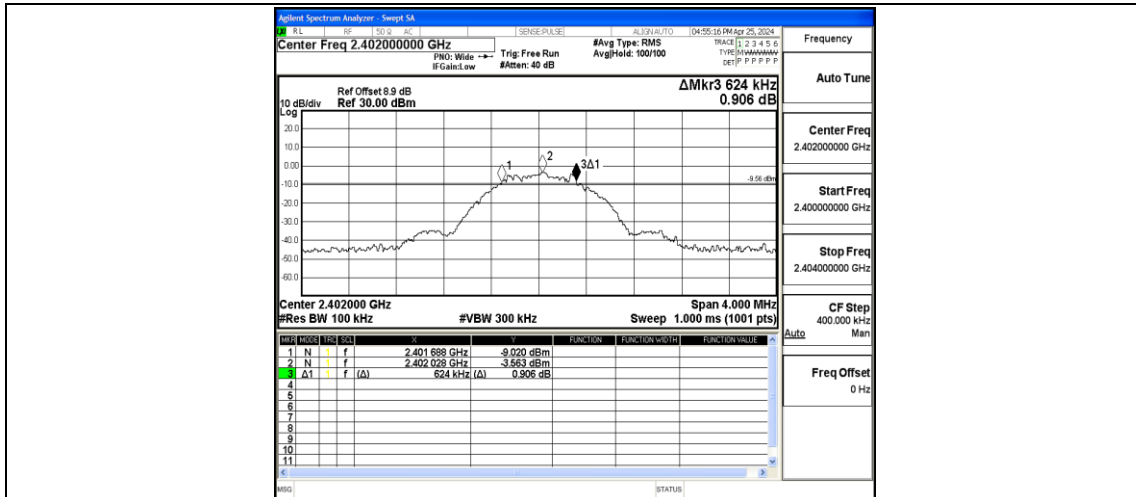
Temperature:	23.8°C
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

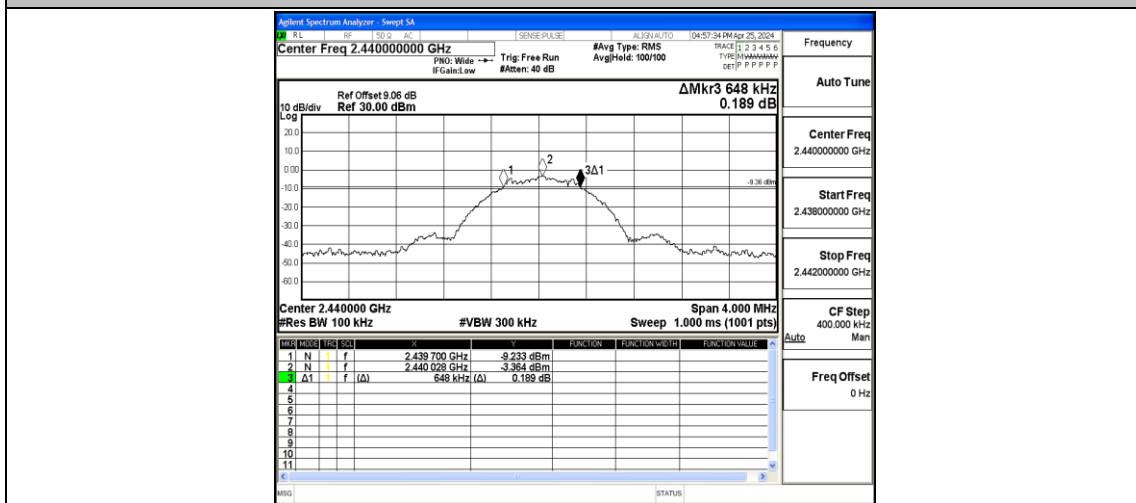
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.624	2401.688	2402.312	0.5	PASS
BLE_1M	Ant1	2440	0.648	2439.700	2440.348	0.5	PASS
BLE_1M	Ant1	2480	0.696	2479.668	2480.364	0.5	PASS

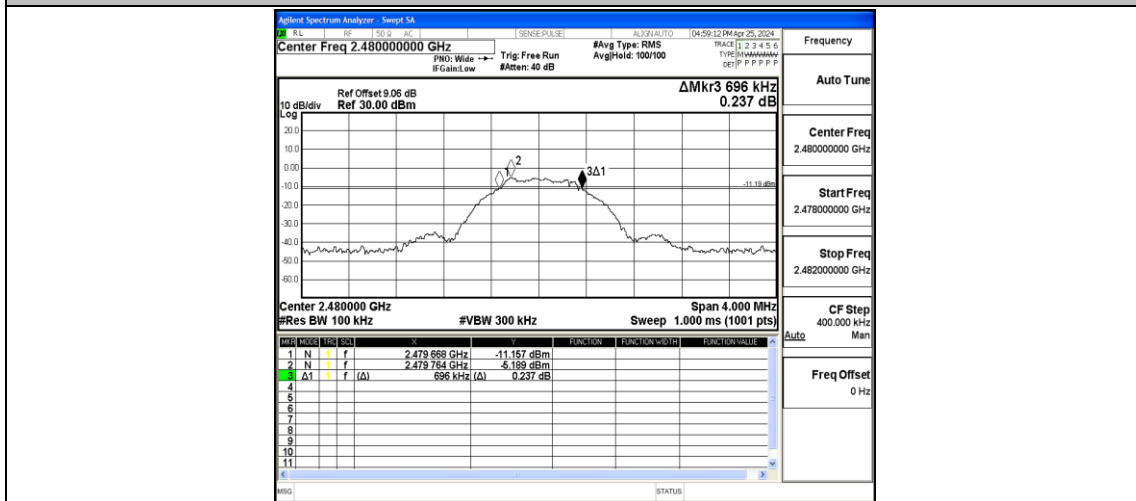
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



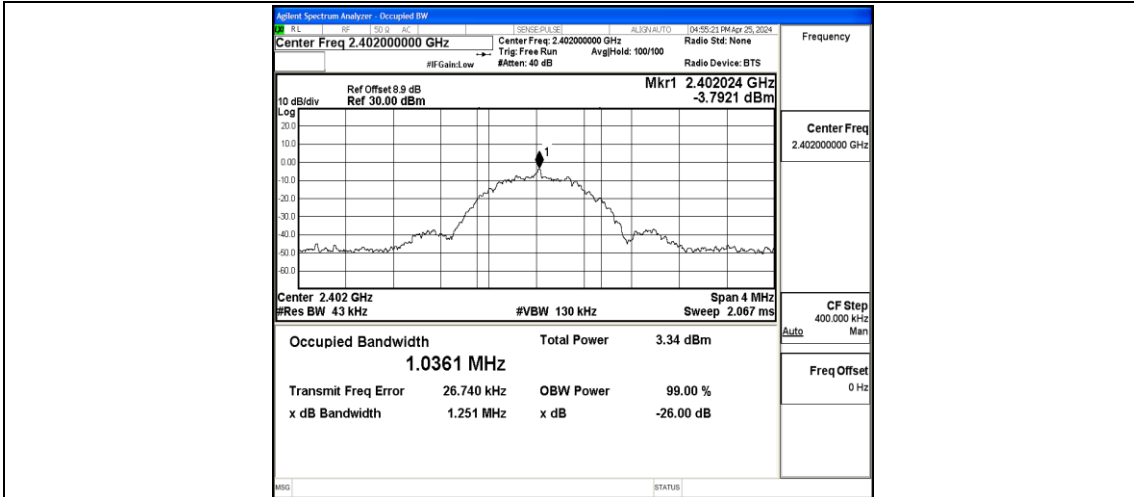
BLE_1M-Ant1-2480-PASS

Appendix B: Occupied Channel Bandwidth

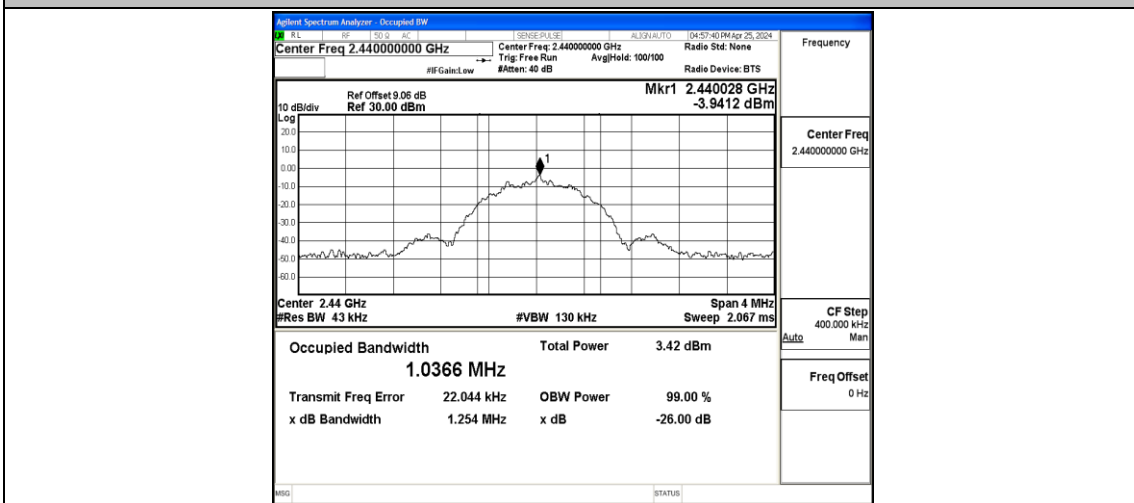
Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0361	2401.5087	2402.5448	---	---
BLE_1M	Ant1	2440	1.0366	2439.5037	2440.5403	---	---
BLE_1M	Ant1	2480	1.0318	2479.5111	2480.5429	---	---

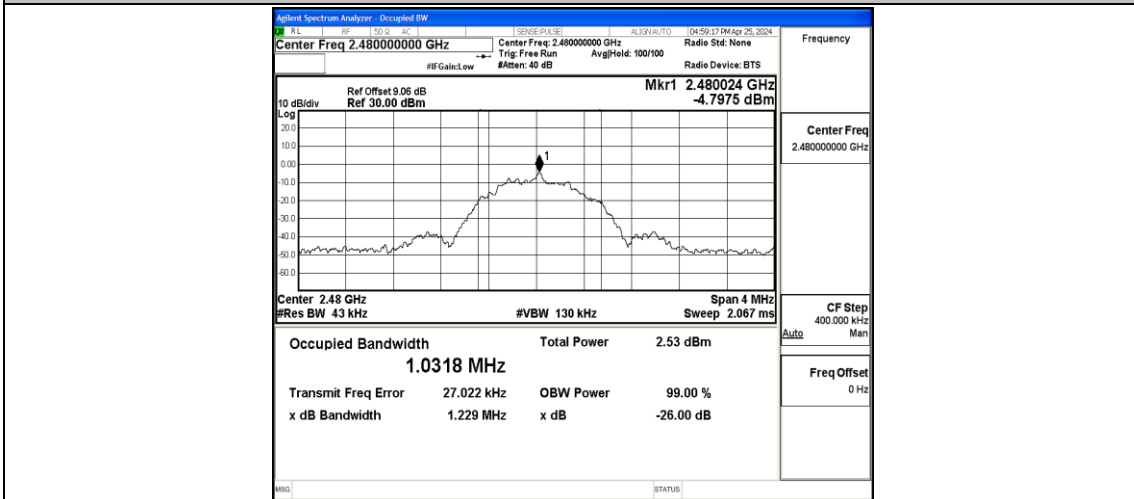
Test Graphs



BLE_1M-Ant1-2402



BLE_1M-Ant1-2440



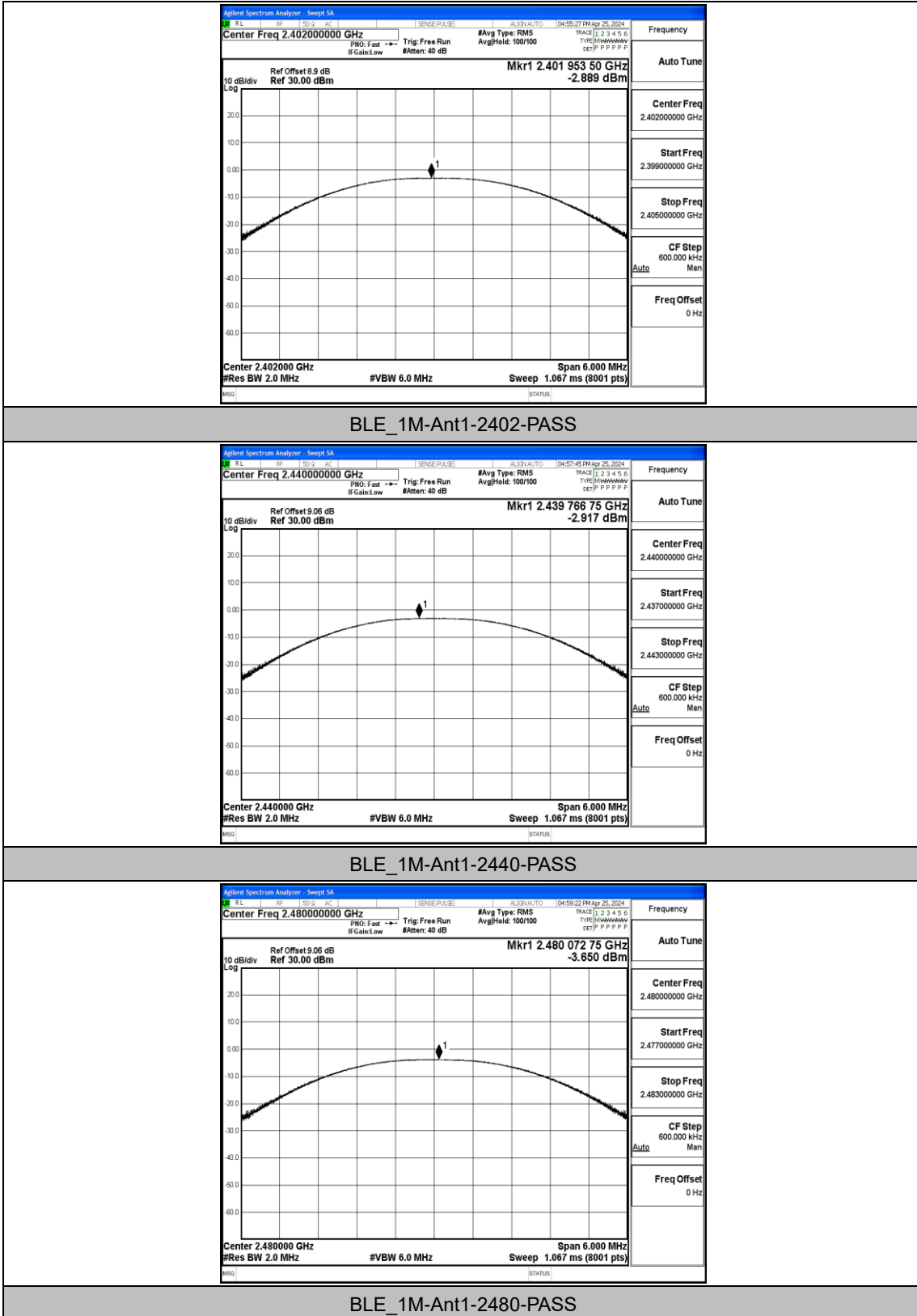
BLE_1M-Ant1-2480

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	-2.89	≤30	PASS
BLE_1M	Ant1	2440	-2.92	≤30	PASS
BLE_1M	Ant1	2480	-3.65	≤30	PASS

Test Graphs Peak

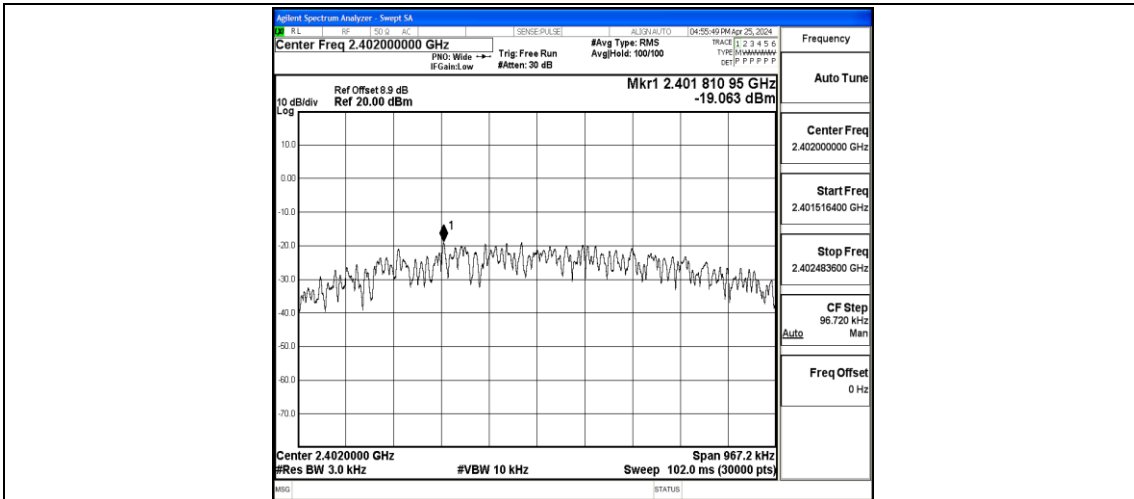


Appendix D: Maximum peak power spectral density

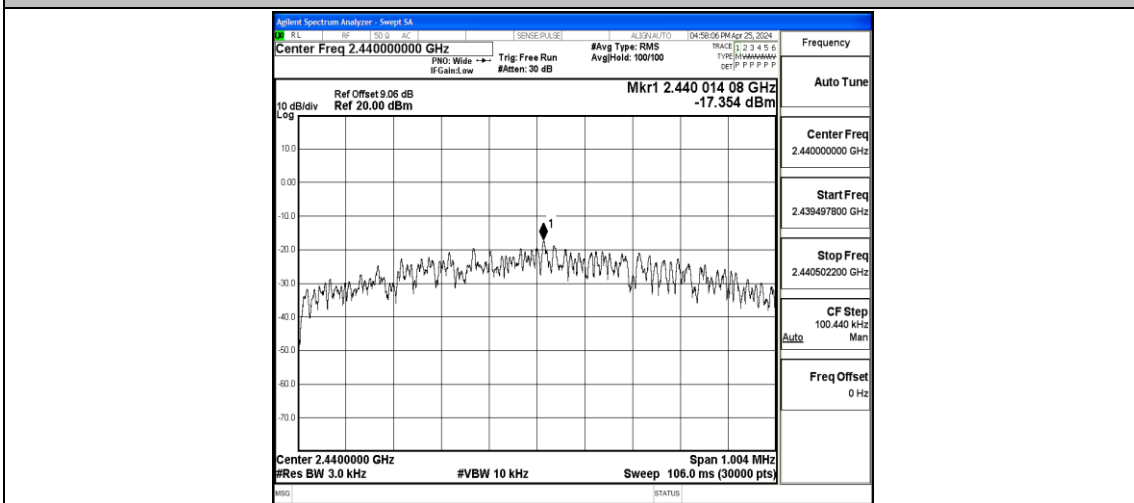
Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.06	≤8.00	PASS
BLE_1M	Ant1	2440	-17.35	≤8.00	PASS
BLE_1M	Ant1	2480	-18.79	≤8.00	PASS

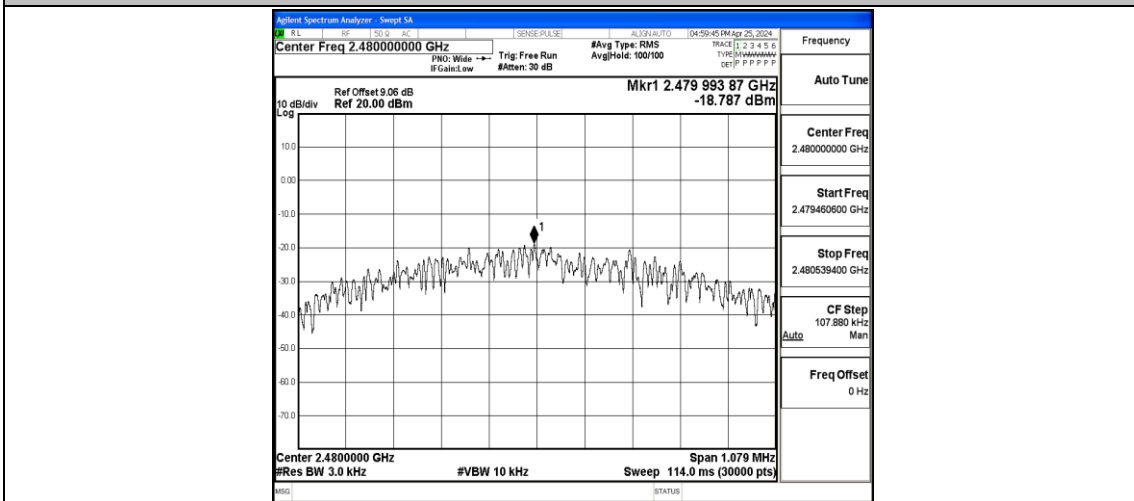
Test Graphs



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-244-PASS



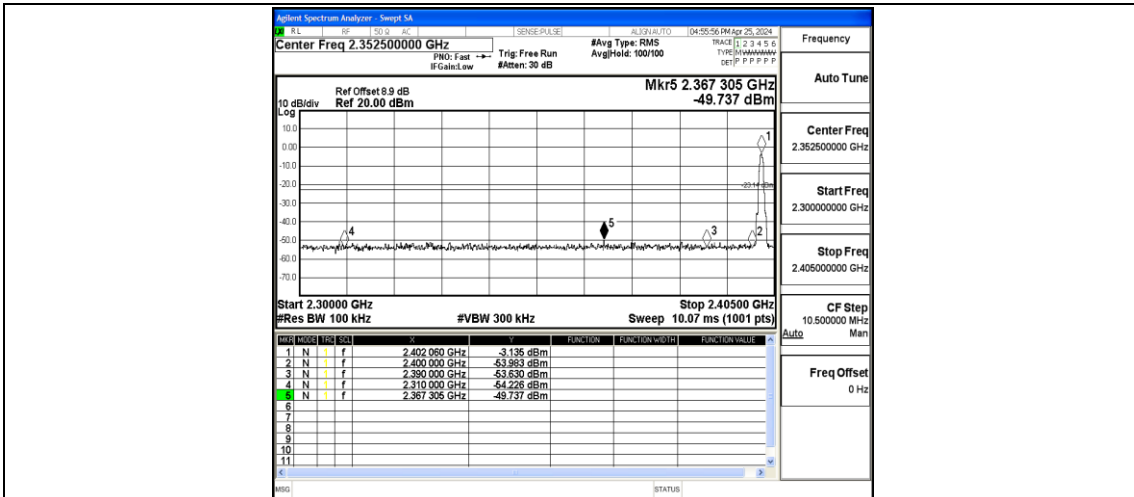
BLE_1M-Ant1-248-PASS

Appendix E: Band edge measurements

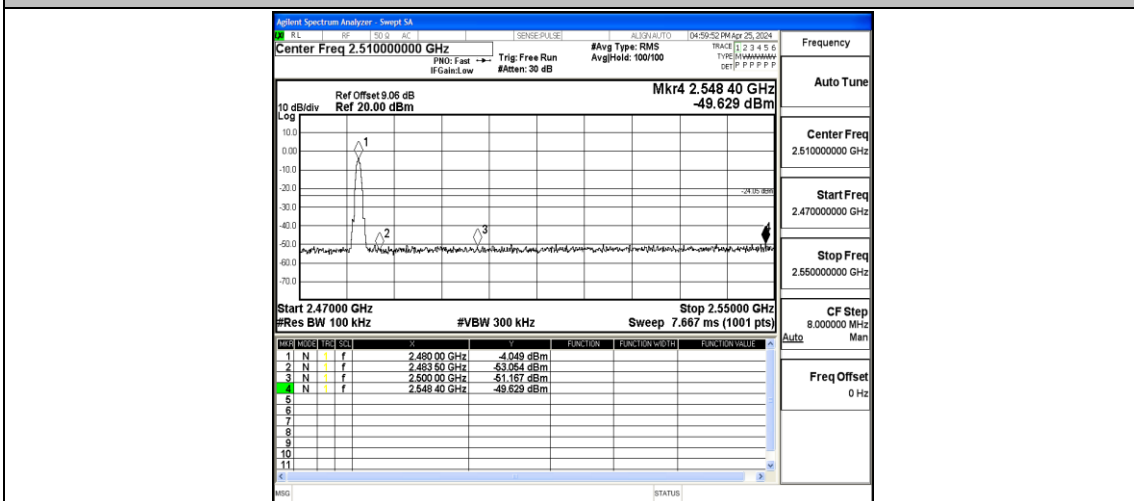
Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.14	-49.74	≤-23.14	PASS
BLE_1M	Ant1	High	2480	-4.05	-49.63	≤-24.05	PASS

Test Graphs



BLE_1M-Ant1-240-PASS



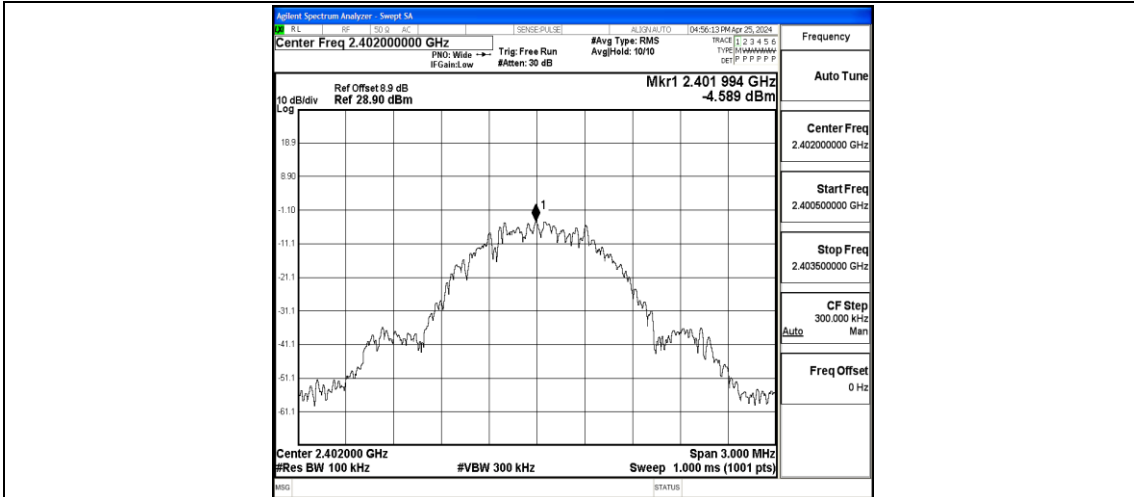
BLE_1M-Ant1-2480-PASS

Appendix F: Conducted Spurious Emission

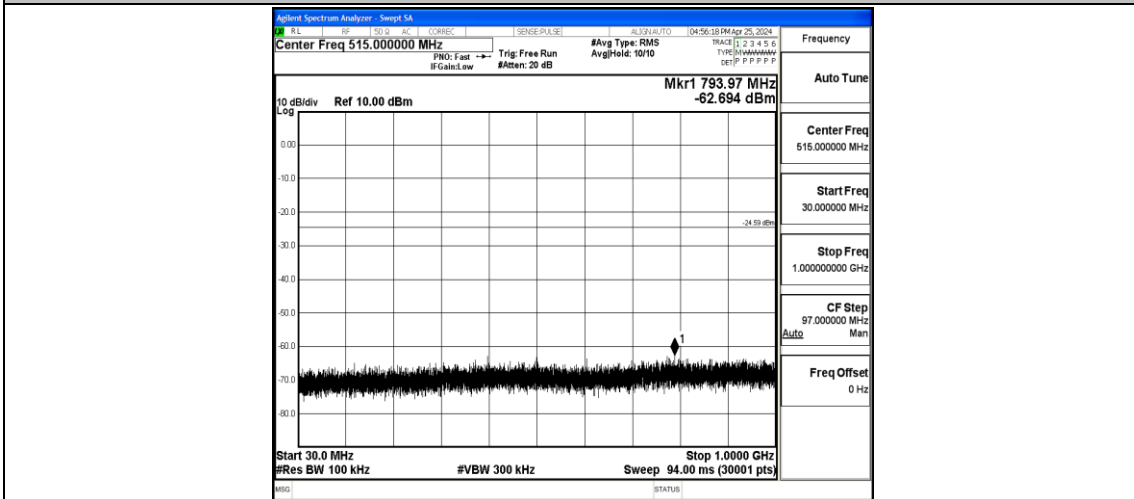
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-4.59	-4.59	---	PASS
BLE_1M	Ant1	2402	30~1000	-4.59	-62.69	≤-24.59	PASS
BLE_1M	Ant1	2402	1000~26500	-4.59	-50.61	≤-24.59	PASS
BLE_1M	Ant1	2440	0~Reference	-4.47	-4.47	---	PASS
BLE_1M	Ant1	2440	30~1000	-4.47	-61.49	≤-24.47	PASS
BLE_1M	Ant1	2440	1000~26500	-4.47	-50.77	≤-24.47	PASS
BLE_1M	Ant1	2480	0~Reference	-4.70	-4.70	---	PASS
BLE_1M	Ant1	2480	30~1000	-4.70	-62.48	≤-24.7	PASS
BLE_1M	Ant1	2480	1000~26500	-4.70	-50.26	≤-24.7	PASS

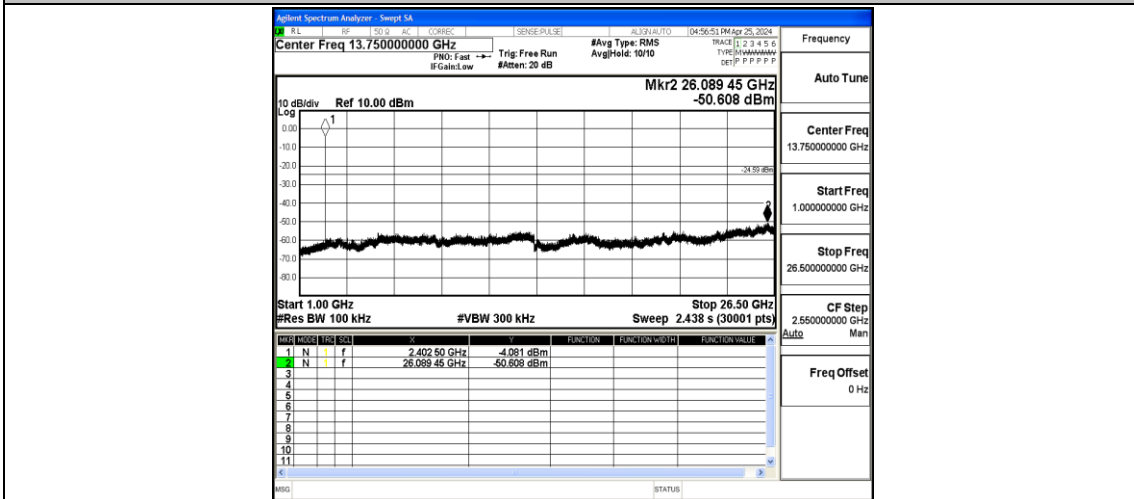
Test Graphs



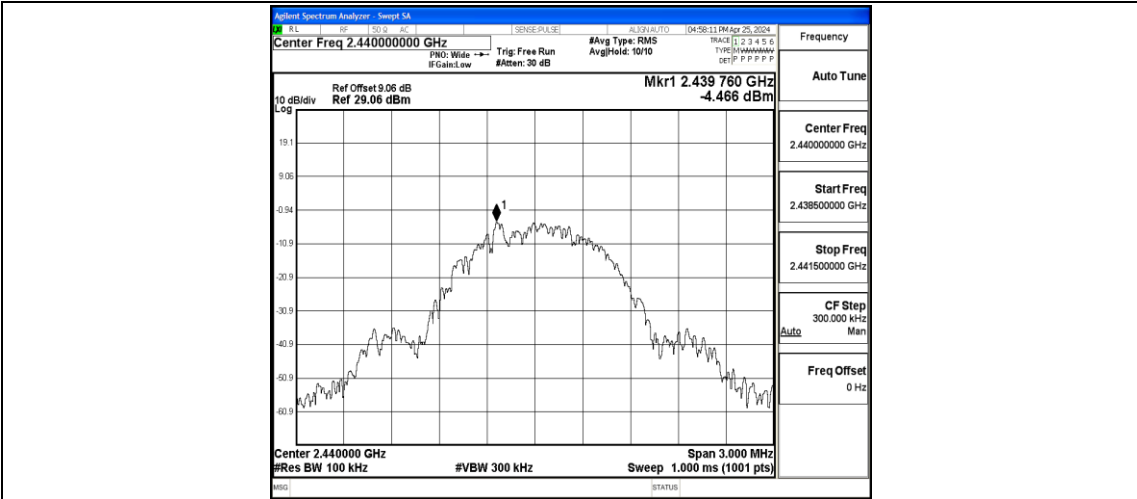
BLE_1M-Ant1-2402-0~Reference-PASS



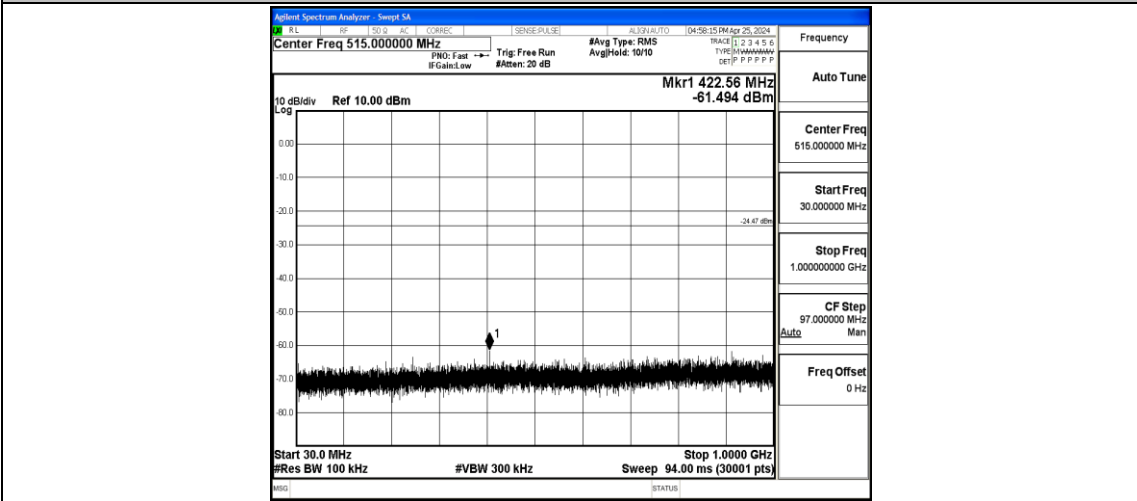
BLE_1M-Ant1-2402-30~1000-PASS



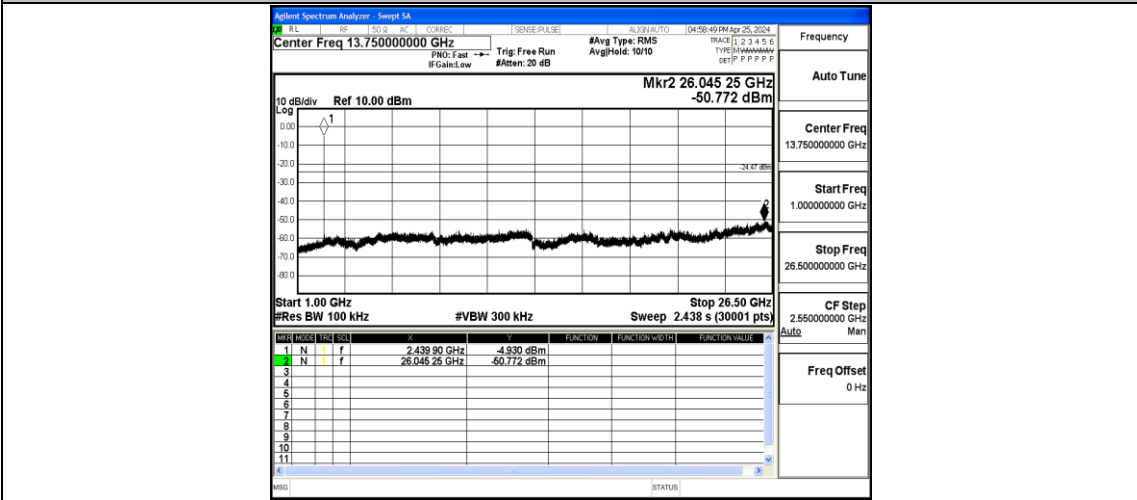
BLE_1M-Ant1-2402-1000~26500-PASS



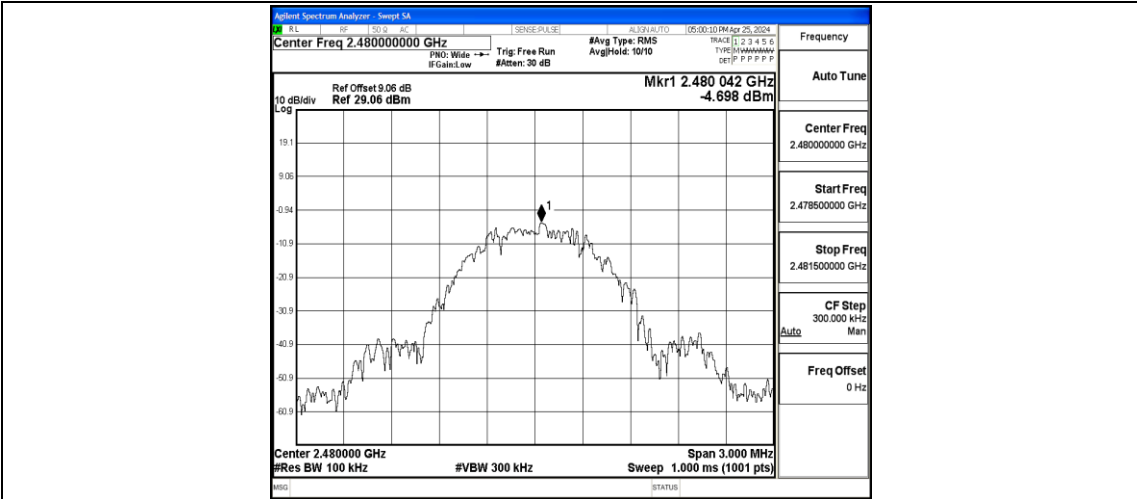
BLE_1M-Ant1-2440-0~Reference-PASS



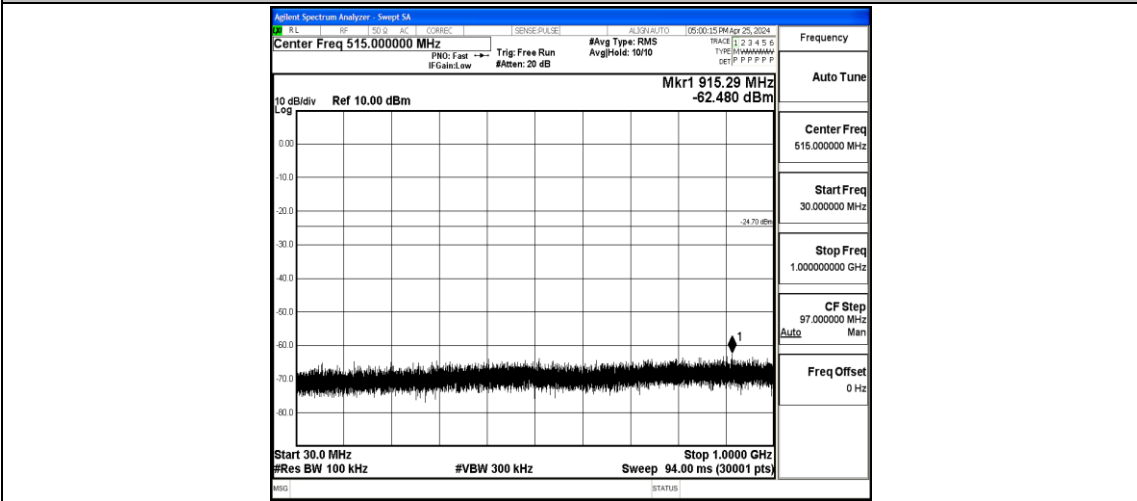
BLE_1M-Ant1-2440-30~1000-PASS



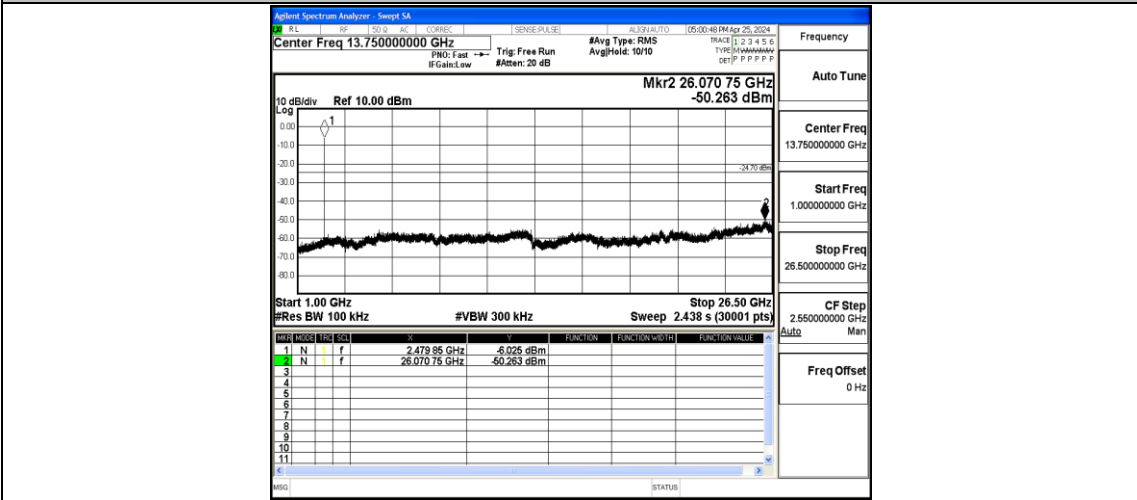
BLE_1M-Ant1-2440-1000~26500-PASS



BLE_1M-Ant1-2480-0~Reference-PASS



BLE_1M-Ant1-2480-30~1000-PASS



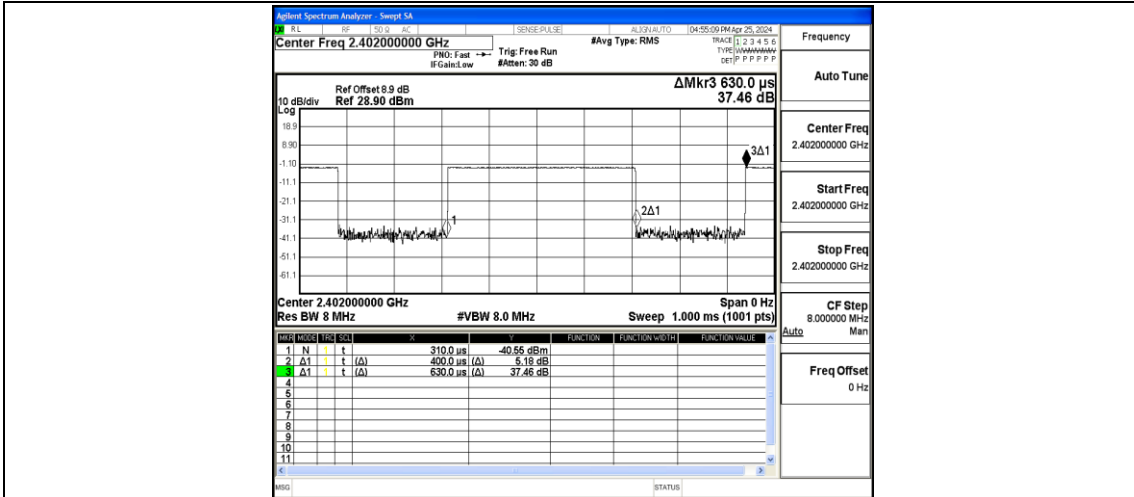
BLE_1M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

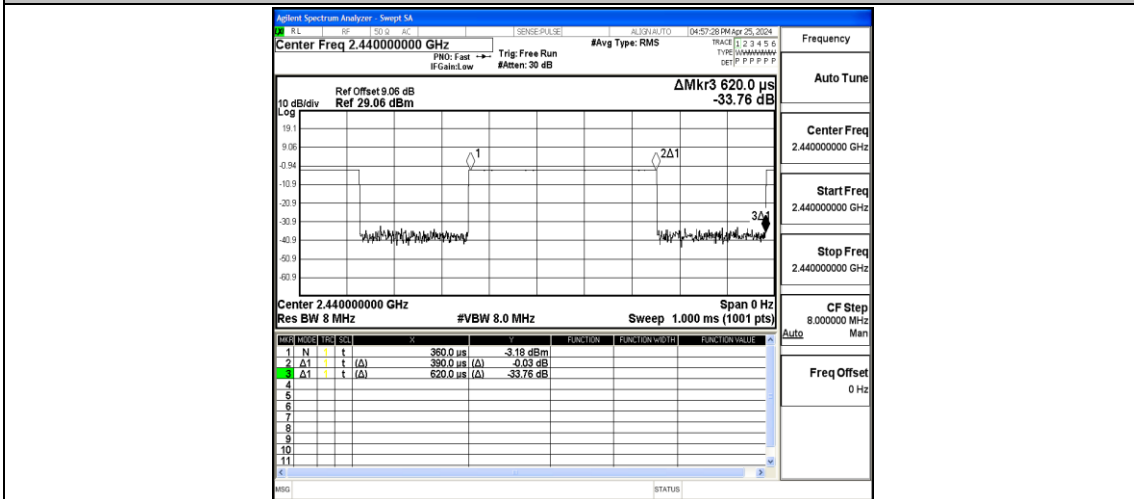
Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.40	0.63	63.49	1.97
BLE_1M	Ant1	2440	0.39	0.62	62.90	2.01
BLE_1M	Ant1	2480	0.40	0.63	63.49	1.97

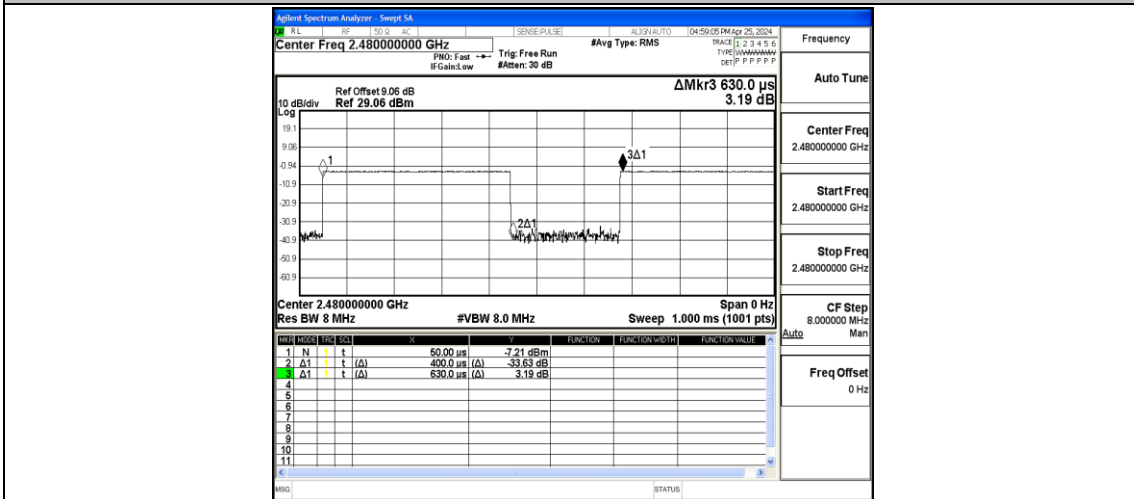
Test Graphs



NTNV-BLE_1M-Ant1-2402



NTNV-BLE_1M-Ant1-2440



NTNV-BLE_1M-Ant1-2480

Appendix H: Emissions in Restricted Bands

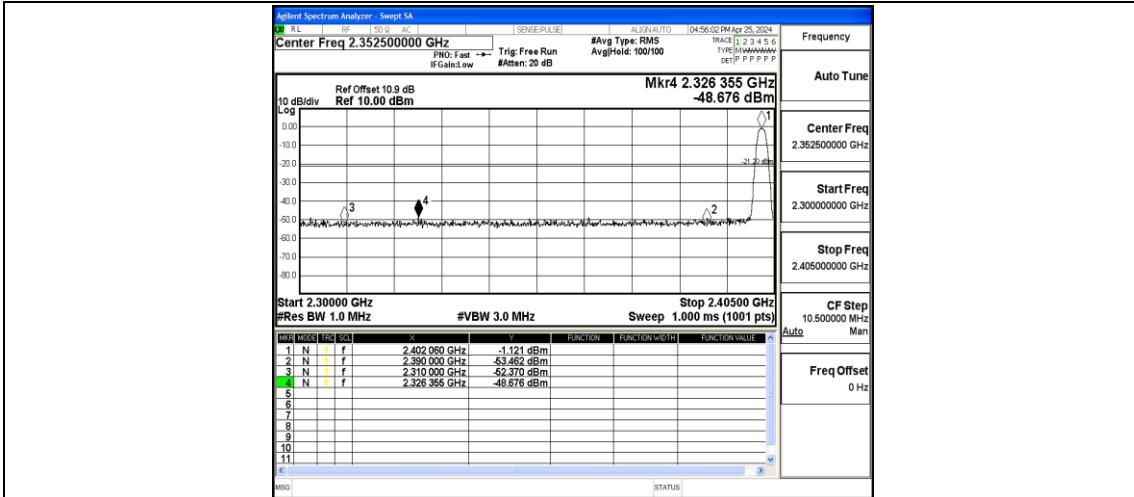
Test Result

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	-53.46	≤-21.20	41.74	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-52.37	≤-21.20	42.83	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2326.355	-48.68	≤-21.20	46.52	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-57.89	≤-41.20	37.31	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-58.68	≤-41.20	36.52	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2386.415	-57.29	≤-41.20	37.91	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-50.86	≤-21.20	44.34	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-50.83	≤-21.20	44.37	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2484.800	-48.69	≤-21.20	46.51	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-57.24	≤-41.20	37.96	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-57.7	≤-41.20	37.50	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2499.600	-56.28	≤-41.20	38.92	≤54	PASS

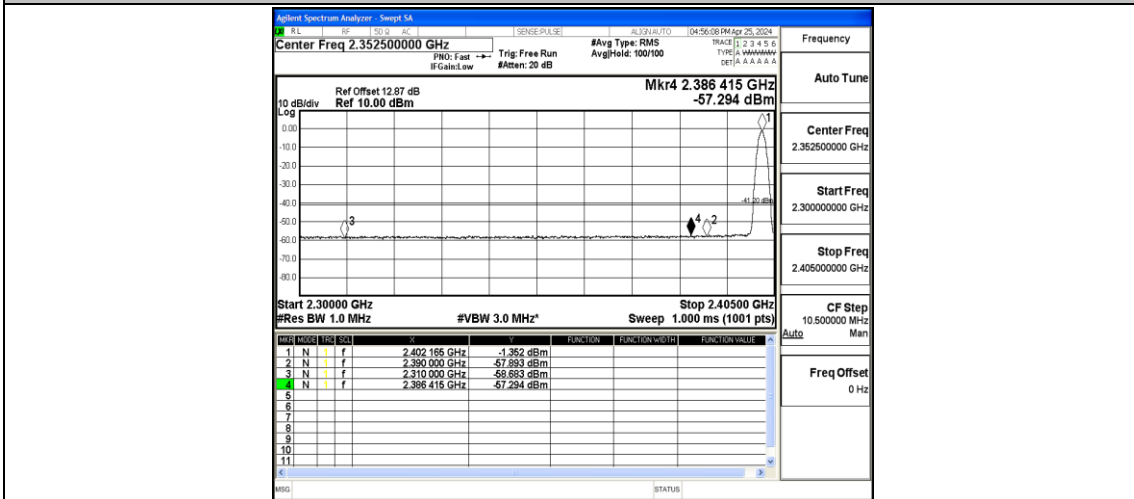
Note:

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.

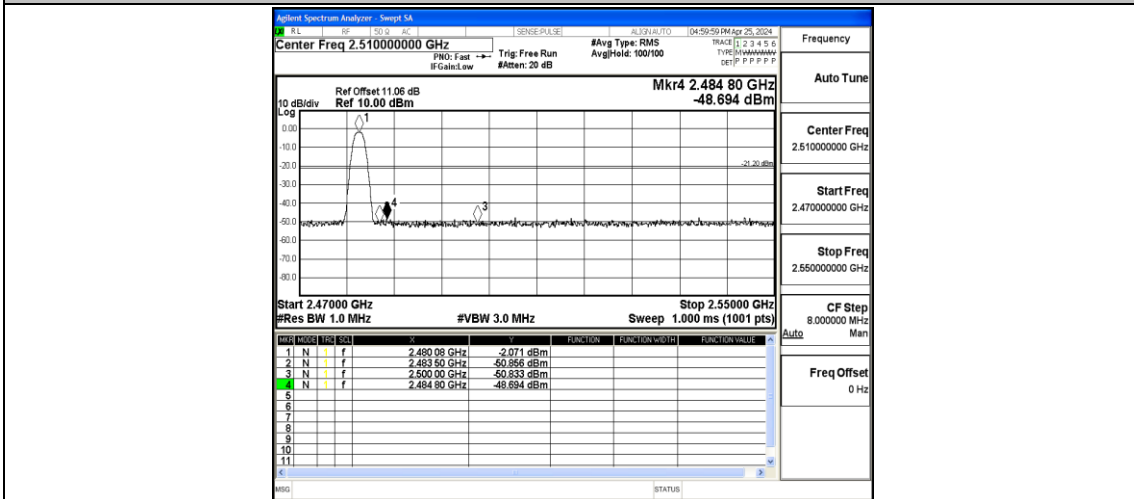
Test Graphs



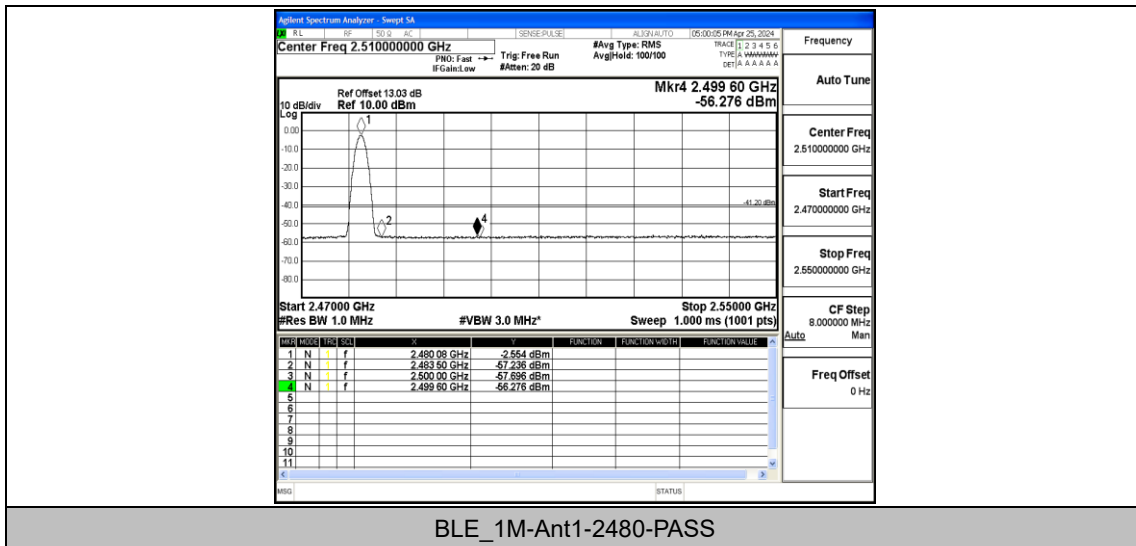
BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-240-PASS



BLE_1M-Ant1-2480-PASS



BLE_1M-Ant1-2480-PASS