

Appendix Test Data for BLE (Conducted Measurement)

Product Name: Mini Microphone with Lightning /USB-C Connector

Trade Mark: /

Test Model: FB-MWMC-MC1

FCC ID: 2AANZMWMC

Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
NOTE	N/A

Appendix A: DTS Bandwidth

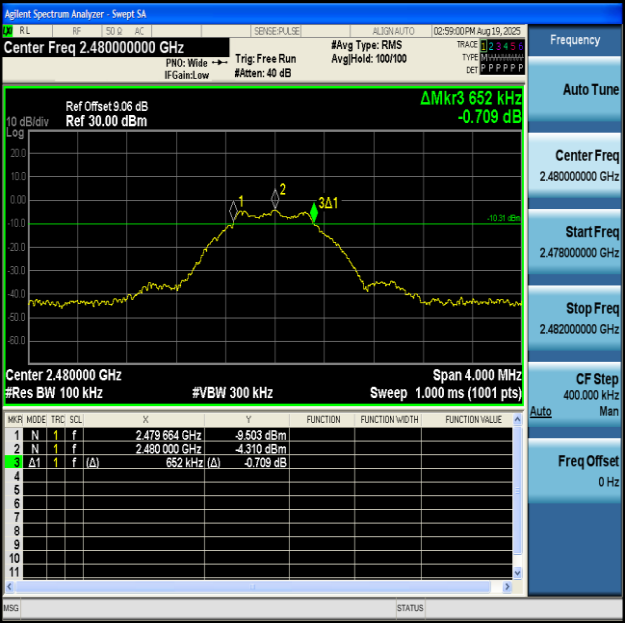
Test Result

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.652	2402.308	0.5	PASS
BLE_1M	Ant1	2440	0.648	2439.664	2440.312	0.5	PASS
BLE_1M	Ant1	2480	0.652	2479.664	2480.316	0.5	PASS
BLE_2M	Ant1	2402	1.108	2401.444	2402.552	0.5	PASS
BLE_2M	Ant1	2440	1.144	2439.408	2440.552	0.5	PASS
BLE_2M	Ant1	2480	1.096	2479.448	2480.544	0.5	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



BLE_2M-Ant1-2480-PASS

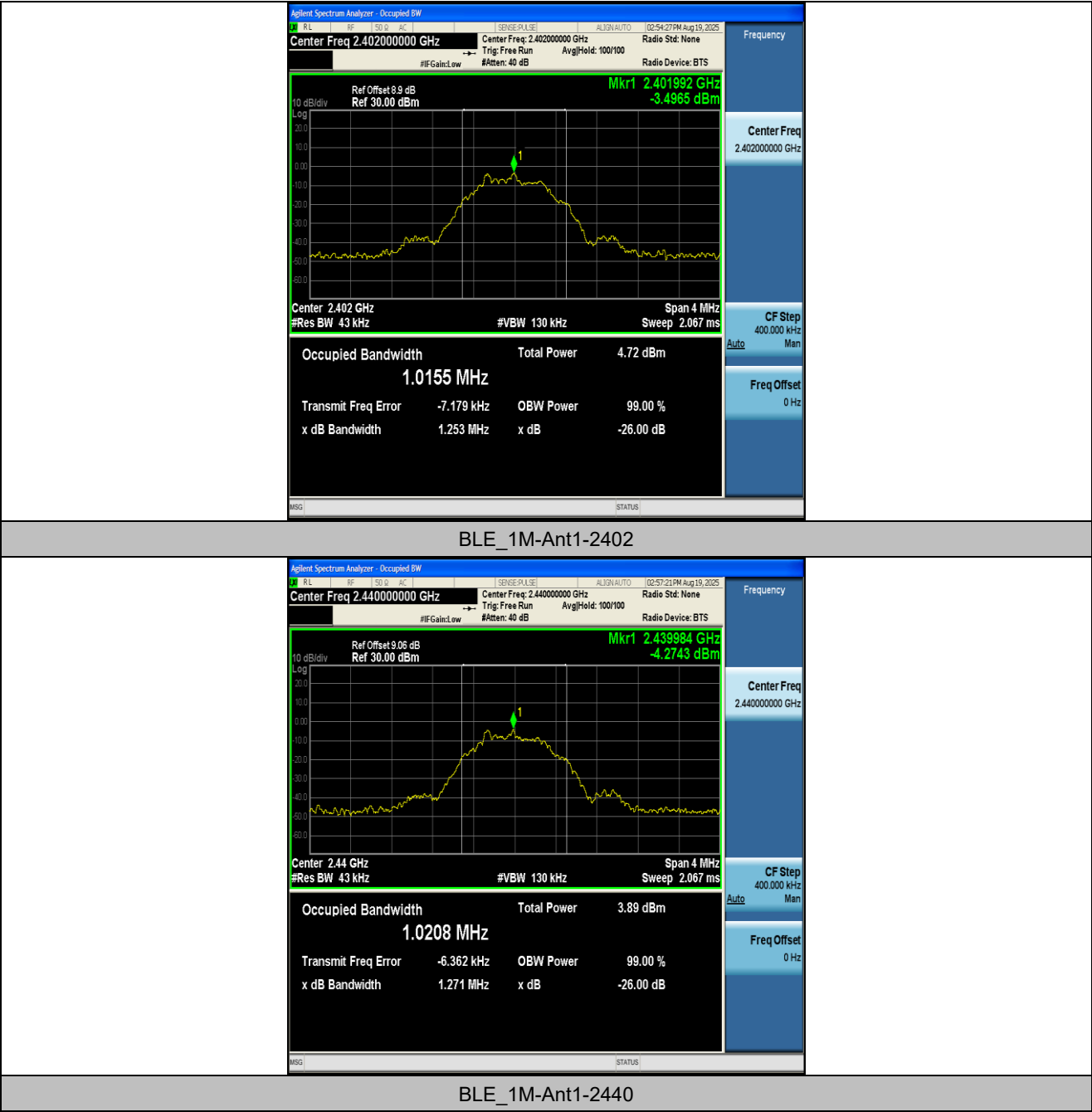
Appendix B: Occupied Channel Bandwidth

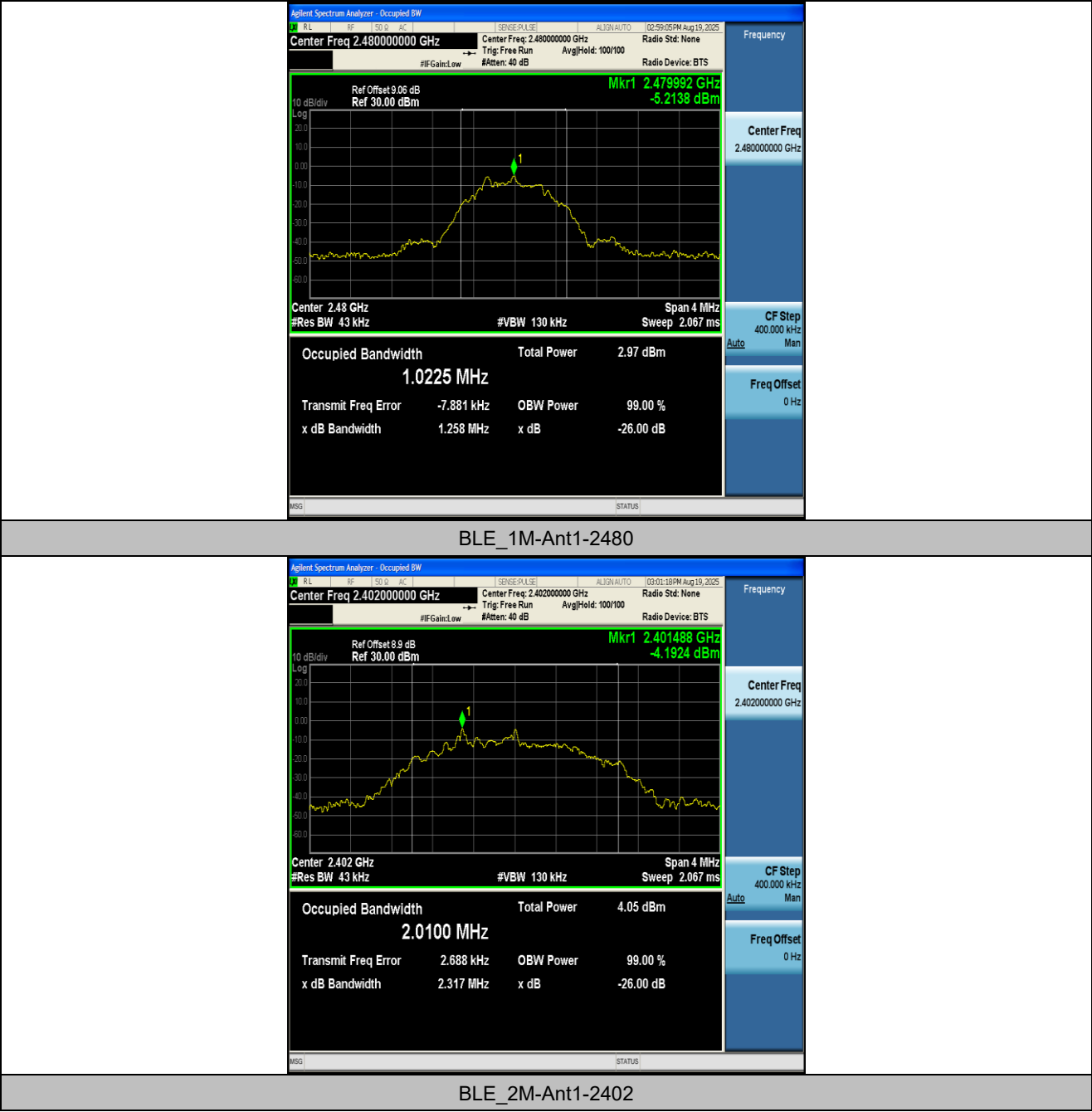
Test Result

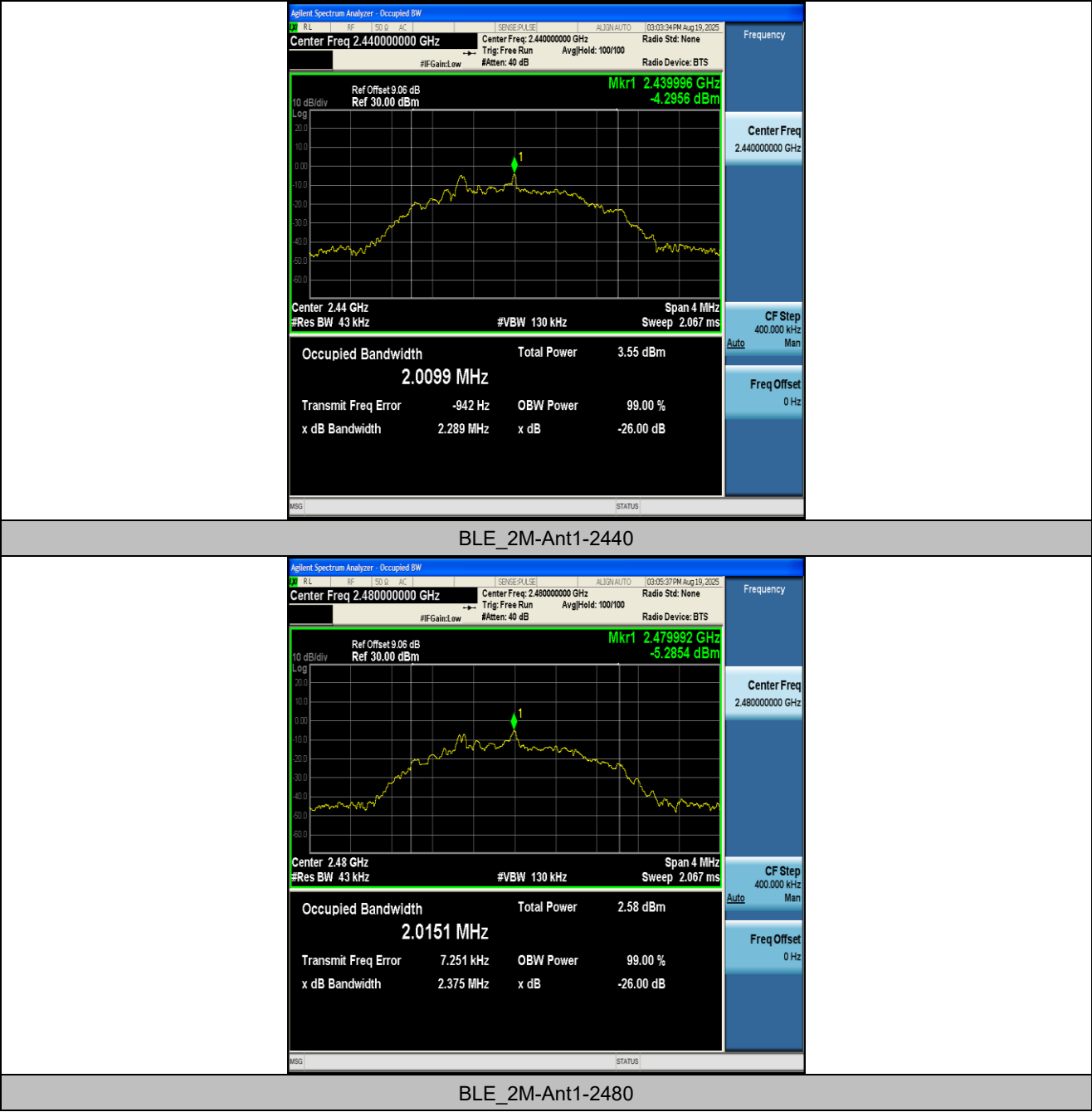
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	1.0155	2401.4851	2402.5006	---	---
BLE_1M	Ant1	2440	1.0208	2439.4832	2440.5040	---	---
BLE_1M	Ant1	2480	1.0225	2479.4809	2480.5034	---	---
BLE_2M	Ant1	2402	2.0100	2400.9977	2403.0077	---	---
BLE_2M	Ant1	2440	2.0099	2438.9941	2441.0040	---	---
BLE_2M	Ant1	2480	2.0151	2478.9997	2481.0148	---	---

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs







Appendix C: Maximum peak conducted output power

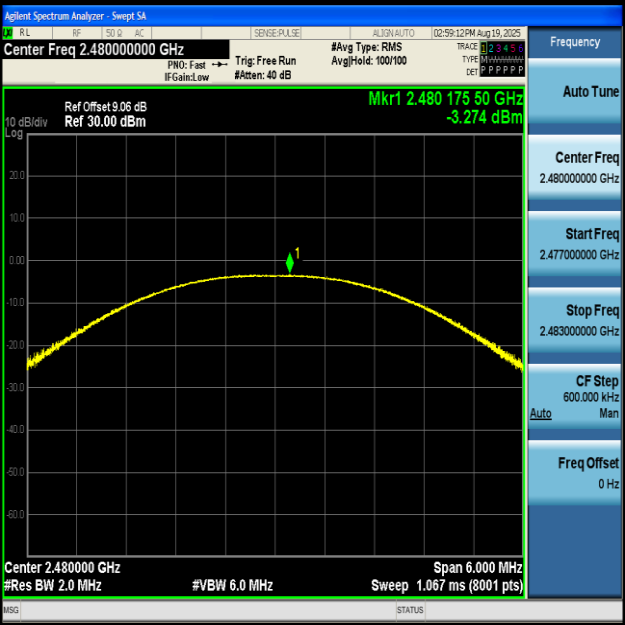
Test Result Peak

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
BLE_1M	Ant1	2402	-1.72	≤30	PASS
BLE_1M	Ant1	2440	-2.28	≤30	PASS
BLE_1M	Ant1	2480	-3.27	≤30	PASS
BLE_2M	Ant1	2402	-1.70	≤30	PASS
BLE_2M	Ant1	2440	-2.36	≤30	PASS
BLE_2M	Ant1	2480	-3.30	≤30	PASS

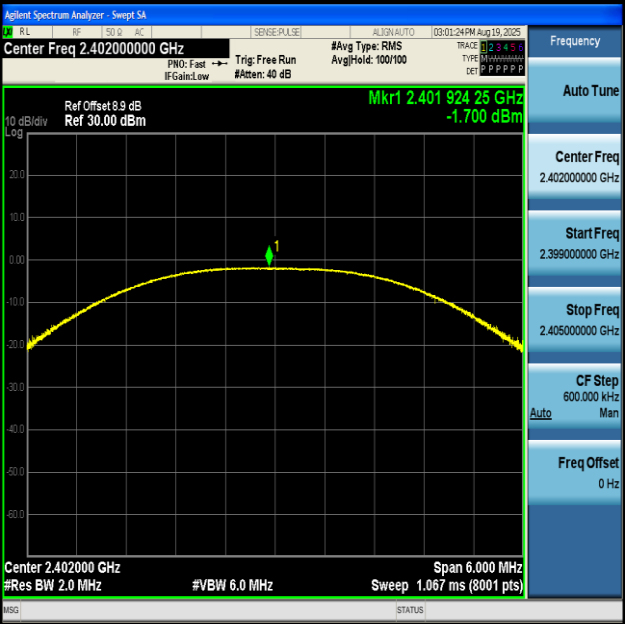
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs Peak

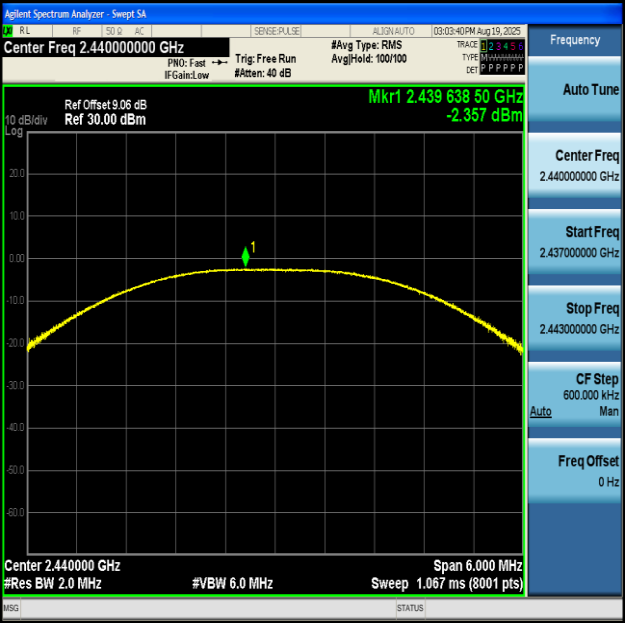




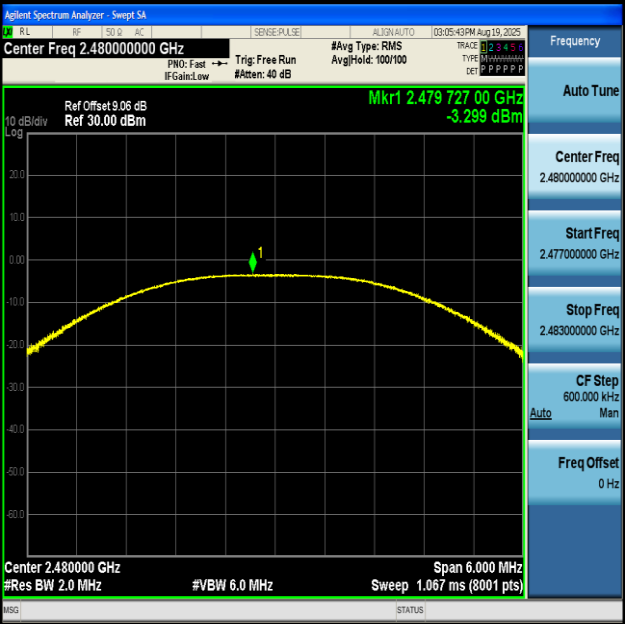
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



BLE_2M-Ant1-2480-PASS

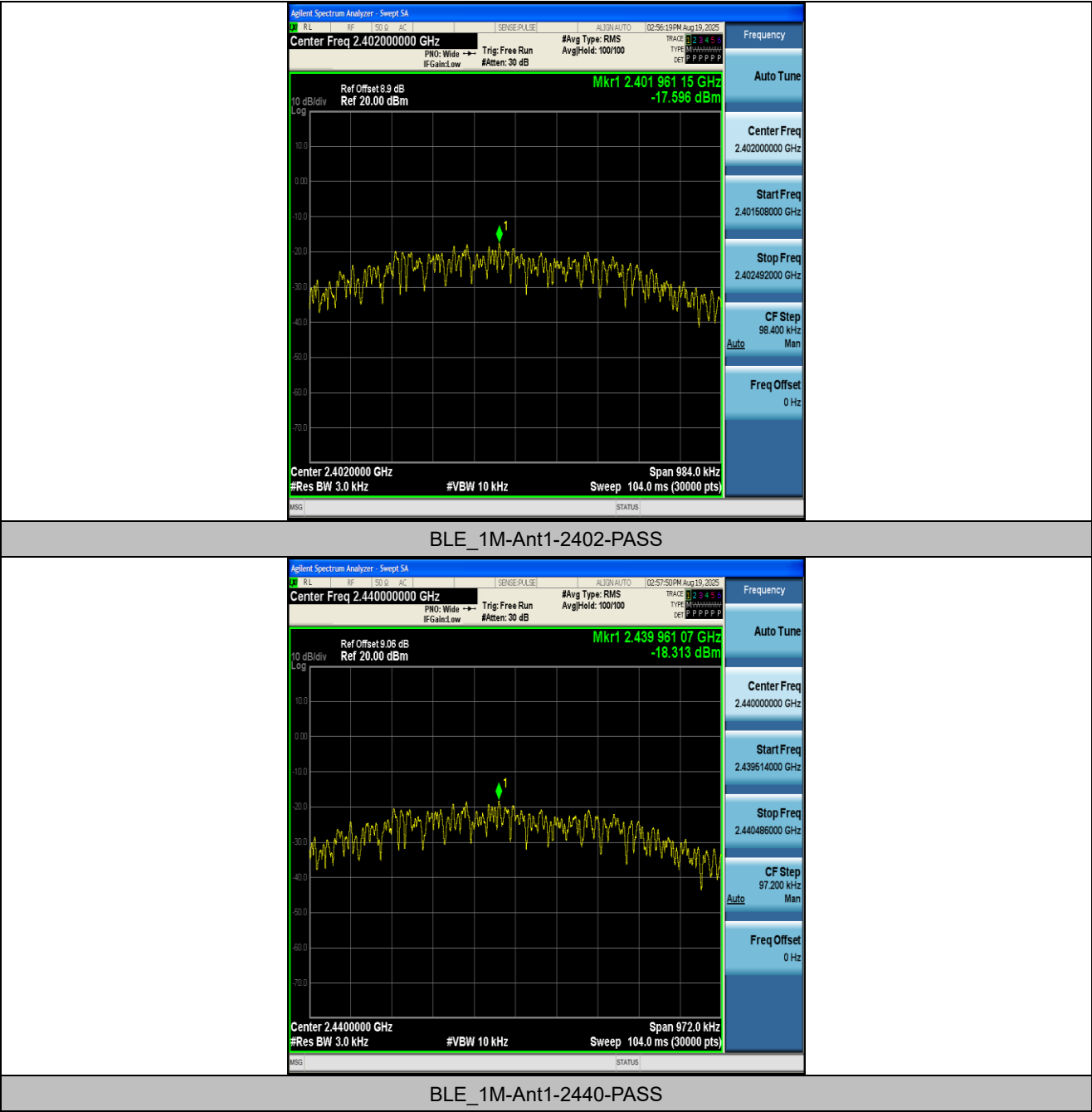
Appendix D: Maximum peak power spectral density

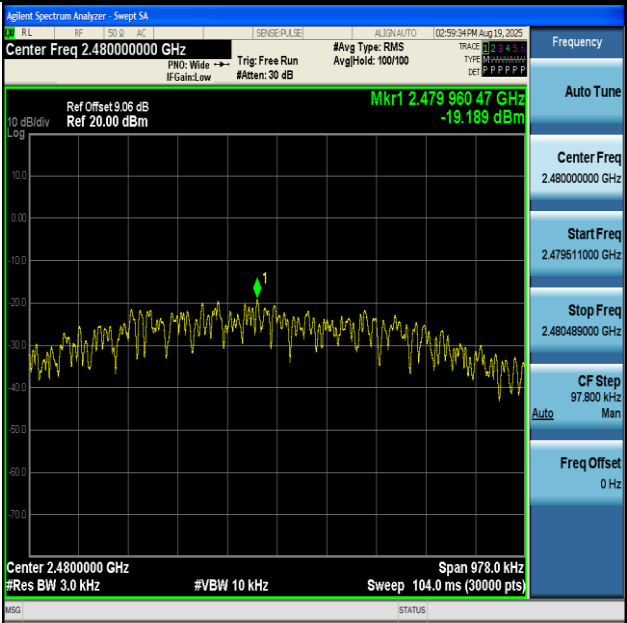
Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-17.60	≤8.00	PASS
BLE_1M	Ant1	2440	-18.31	≤8.00	PASS
BLE_1M	Ant1	2480	-19.19	≤8.00	PASS
BLE_2M	Ant1	2402	-20.71	≤8.00	PASS
BLE_2M	Ant1	2440	-21.37	≤8.00	PASS
BLE_2M	Ant1	2480	-22.33	≤8.00	PASS

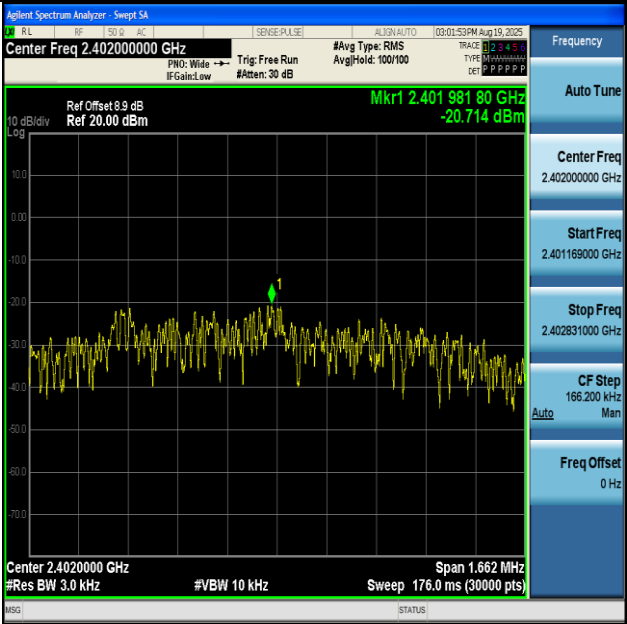
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs

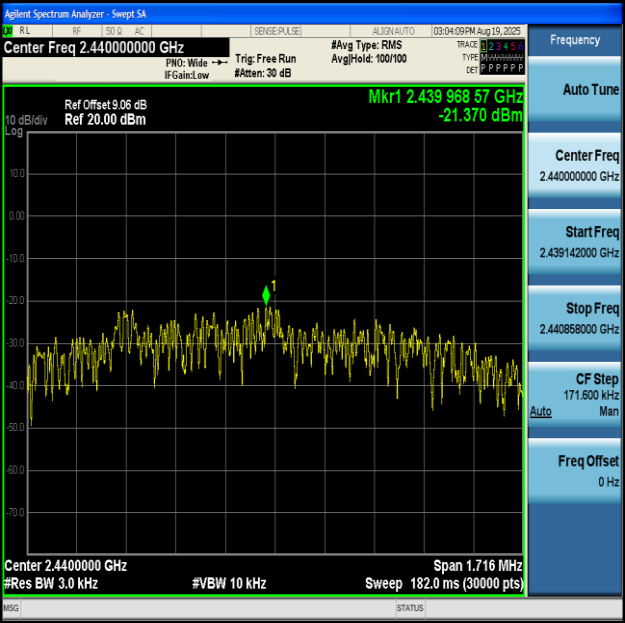




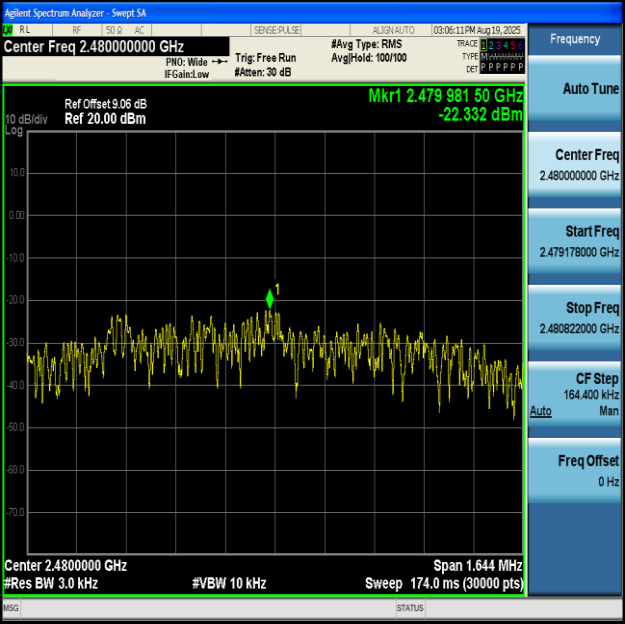
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



BLE_2M-Ant1-2480-PASS

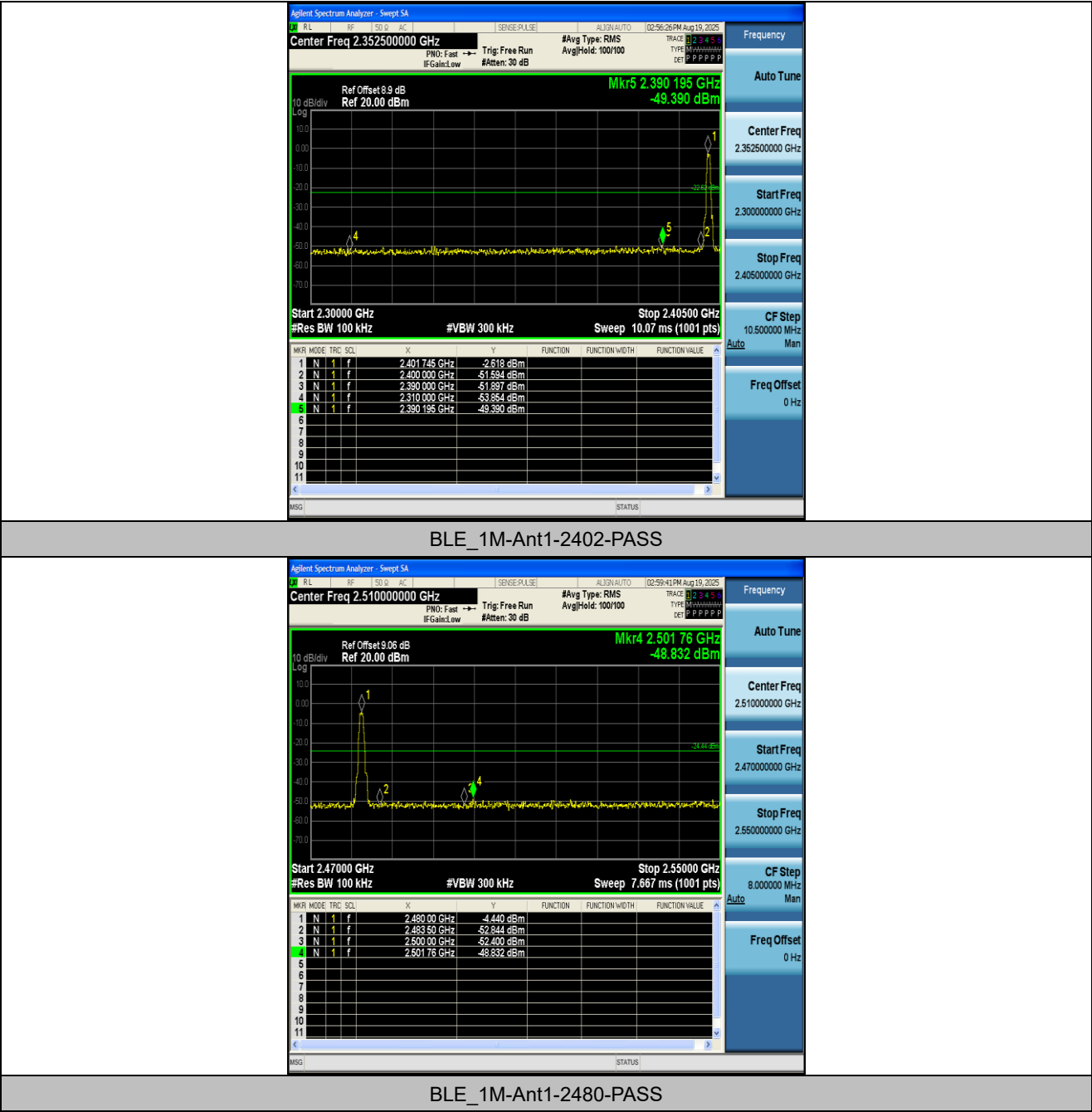
Appendix E: Band edge measurements

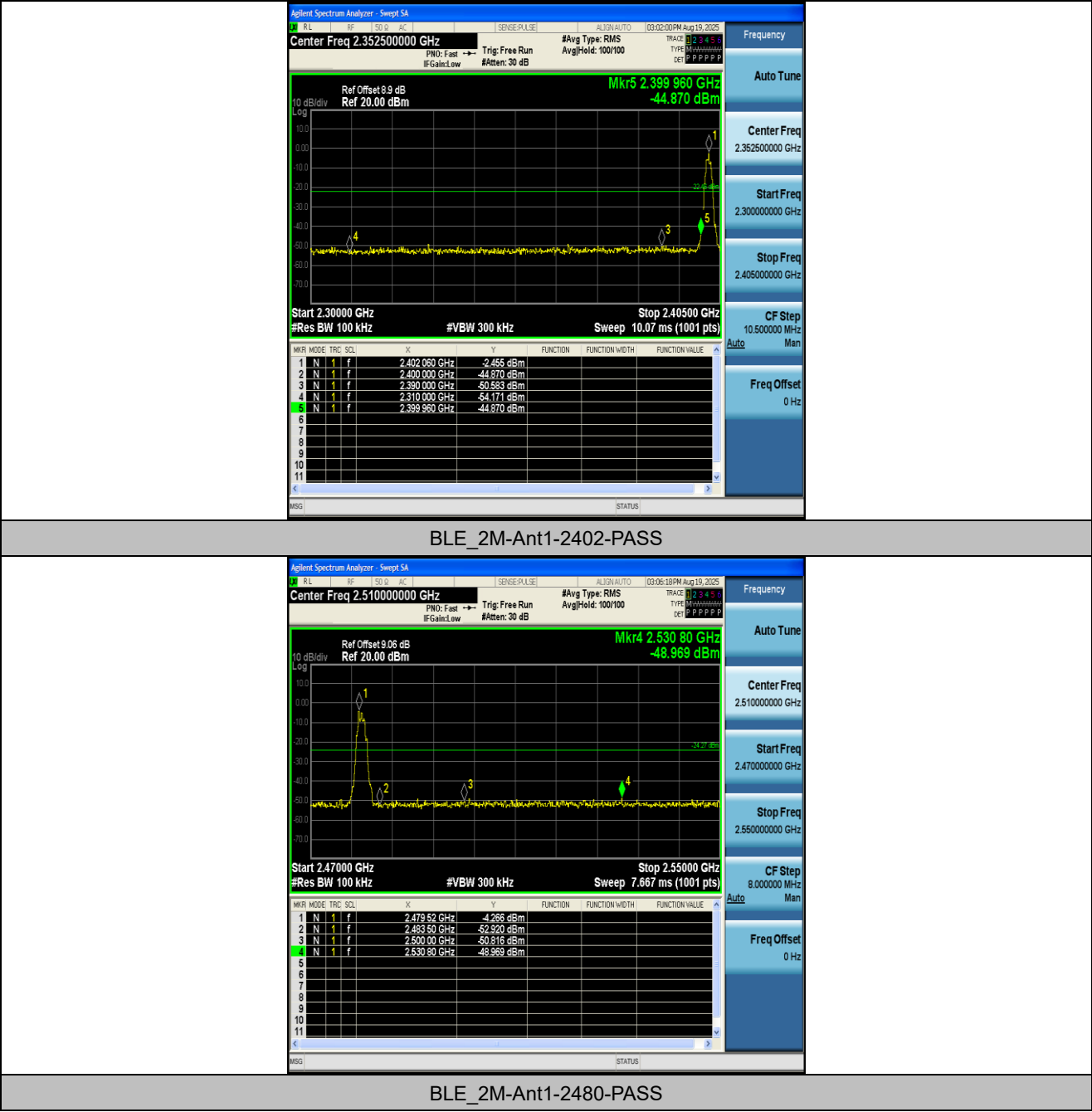
Test Result

Test Mode	Antenna	Ch. Name	Frequency [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.62	-49.39	≤-22.62	PASS
BLE_1M	Ant1	High	2480	-4.44	-48.83	≤-24.44	PASS
BLE_2M	Ant1	Low	2402	-2.46	-44.87	≤-22.46	PASS
BLE_2M	Ant1	High	2480	-4.27	-48.97	≤-24.27	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





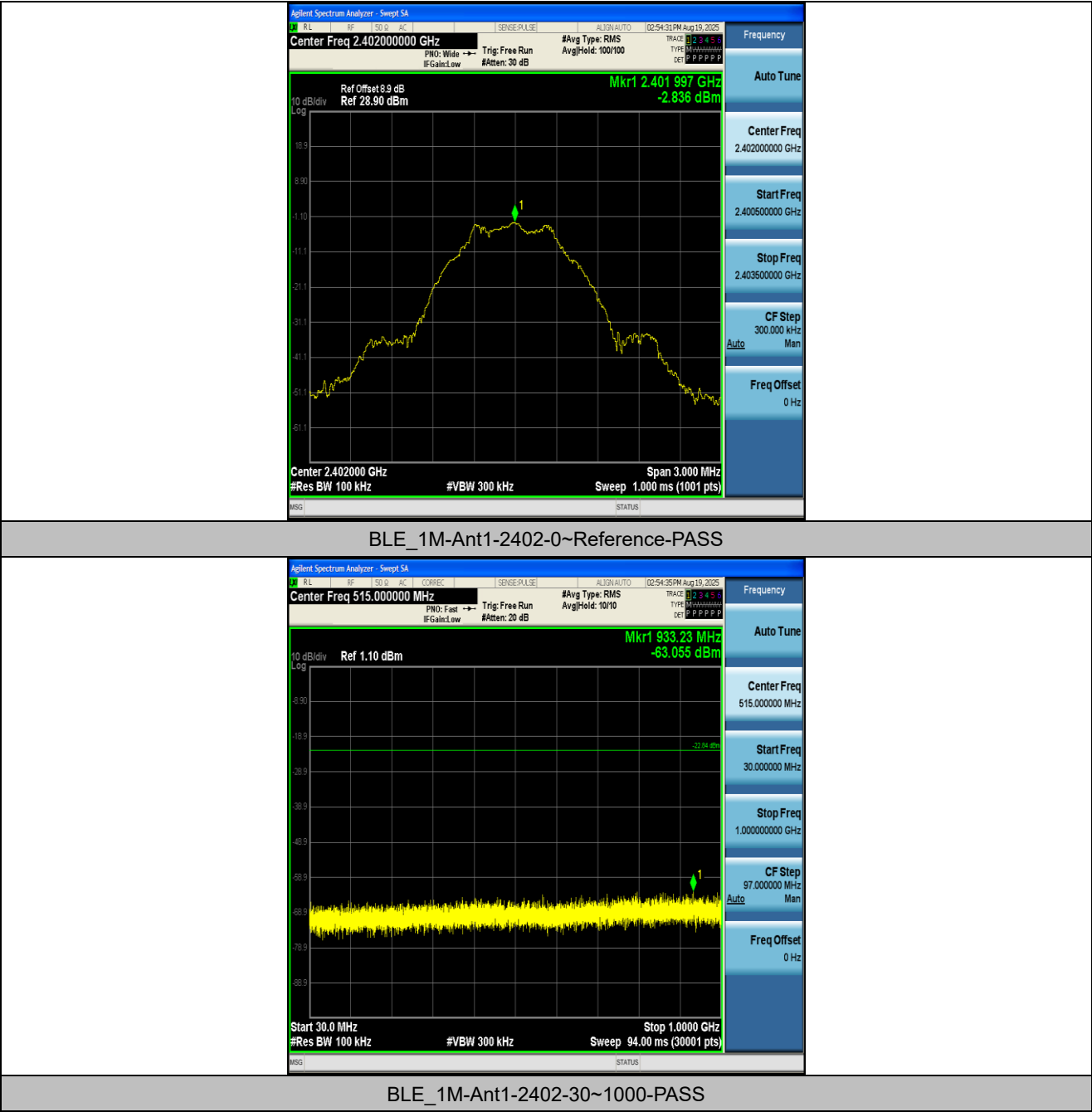
Appendix F: Conducted Spurious Emission

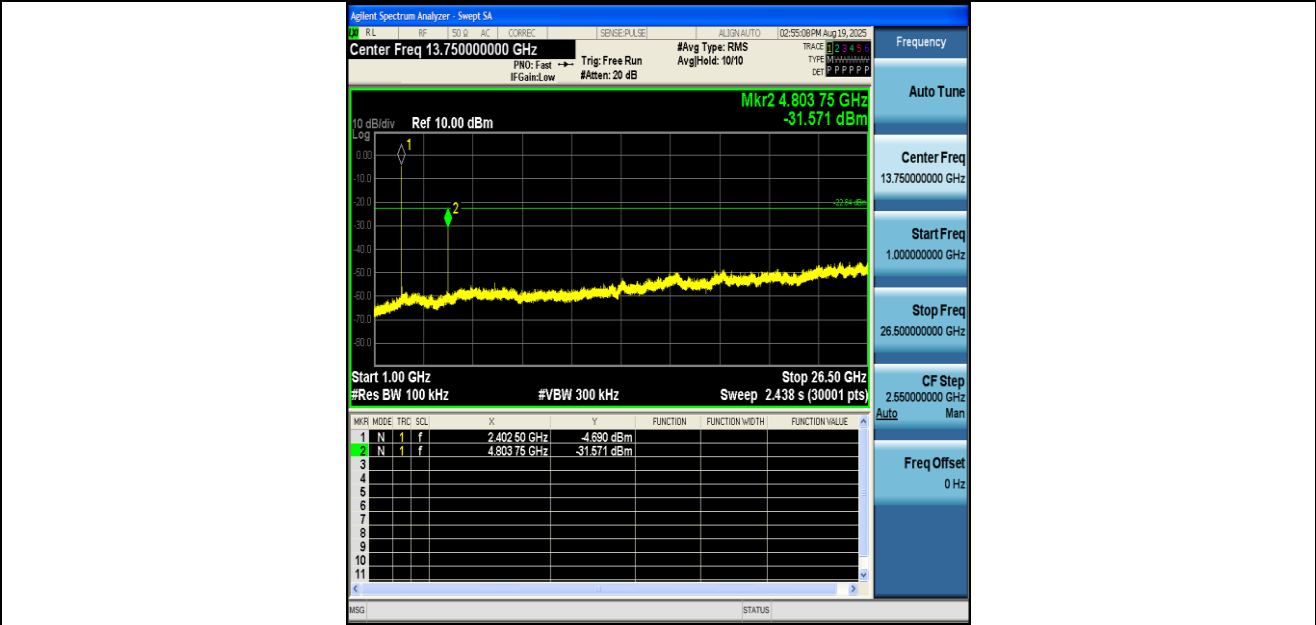
Test Result

Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-2.84	-2.84	---	PASS
BLE_1M	Ant1	2402	30~1000	-2.84	-63.06	≤-22.84	PASS
BLE_1M	Ant1	2402	1000~26500	-2.84	-31.57	≤-22.84	PASS
BLE_1M	Ant1	2440	0~Reference	-3.24	-3.24	---	PASS
BLE_1M	Ant1	2440	30~1000	-3.24	-62.87	≤-23.24	PASS
BLE_1M	Ant1	2440	1000~26500	-3.24	-33.78	≤-23.24	PASS
BLE_1M	Ant1	2480	0~Reference	-4.25	-4.25	---	PASS
BLE_1M	Ant1	2480	30~1000	-4.25	-62.9	≤-24.25	PASS
BLE_1M	Ant1	2480	1000~26500	-4.25	-34.86	≤-24.25	PASS
BLE_2M	Ant1	2402	0~Reference	-2.64	-2.64	---	PASS
BLE_2M	Ant1	2402	30~1000	-2.64	-63.36	≤-22.64	PASS
BLE_2M	Ant1	2402	1000~26500	-2.64	-30.55	≤-22.64	PASS
BLE_2M	Ant1	2440	0~Reference	-3.46	-3.46	---	PASS
BLE_2M	Ant1	2440	30~1000	-3.46	-62.65	≤-23.46	PASS
BLE_2M	Ant1	2440	1000~26500	-3.46	-36.13	≤-23.46	PASS
BLE_2M	Ant1	2480	0~Reference	-4.18	-4.18	---	PASS
BLE_2M	Ant1	2480	30~1000	-4.18	-62.21	≤-24.18	PASS
BLE_2M	Ant1	2480	1000~26500	-4.18	-33.69	≤-24.18	PASS

Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.

Test Graphs

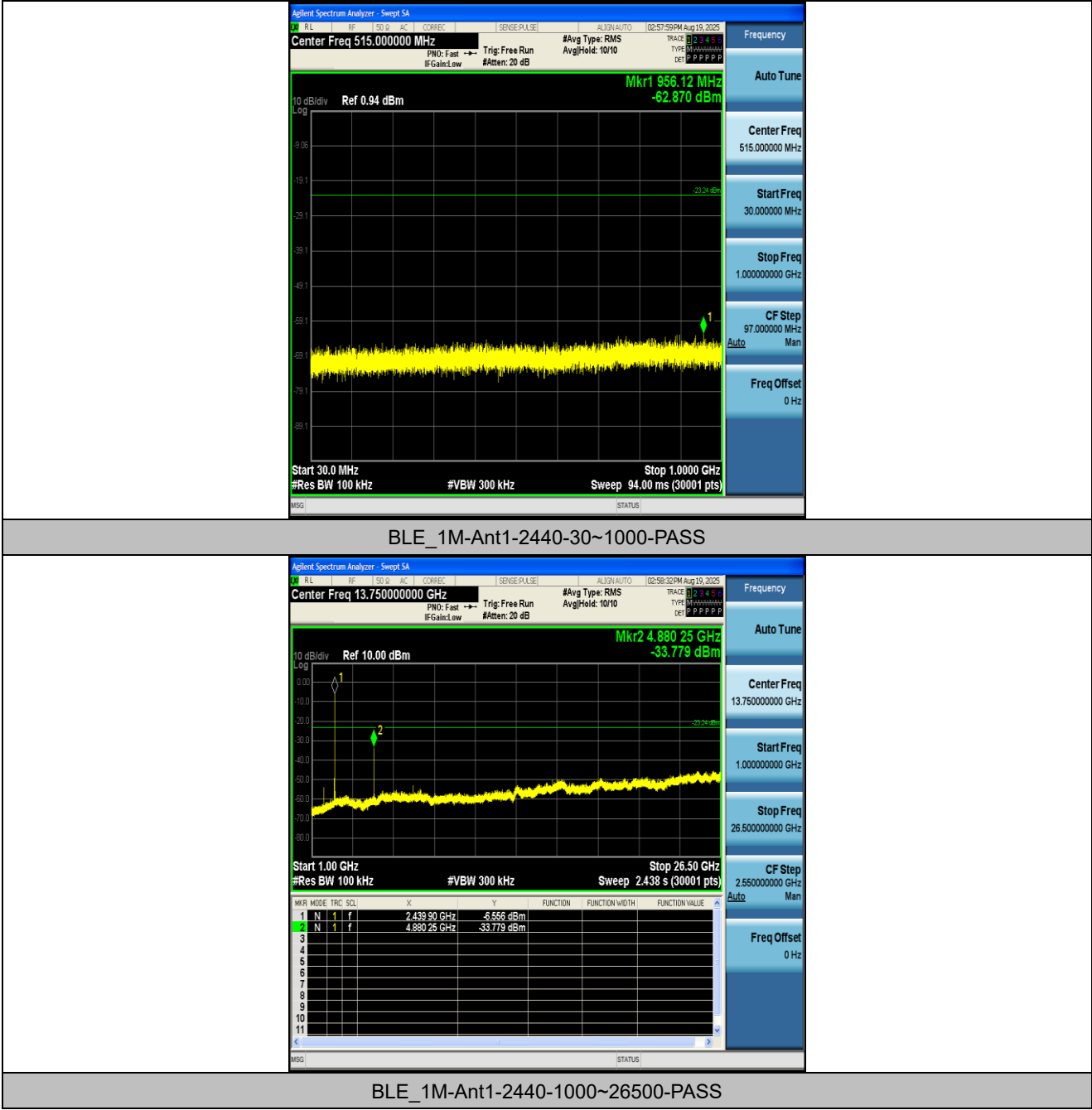




BLE_1M-Ant1-2402-1000~26500-PASS

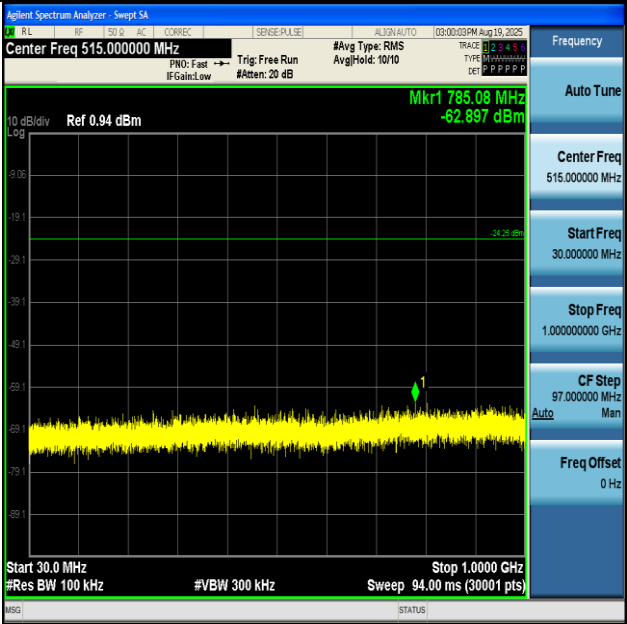


BLE_1M-Ant1-2440-0~Reference-PASS

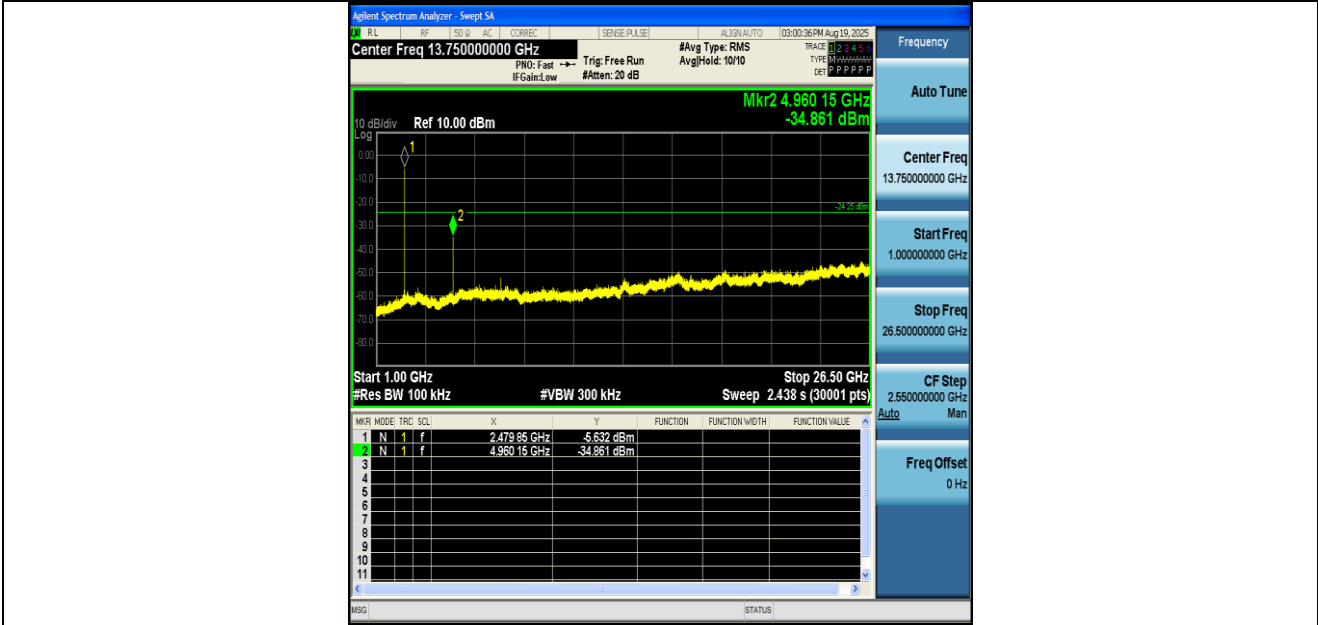




BLE_1M-Ant1-2480-0~Reference-PASS



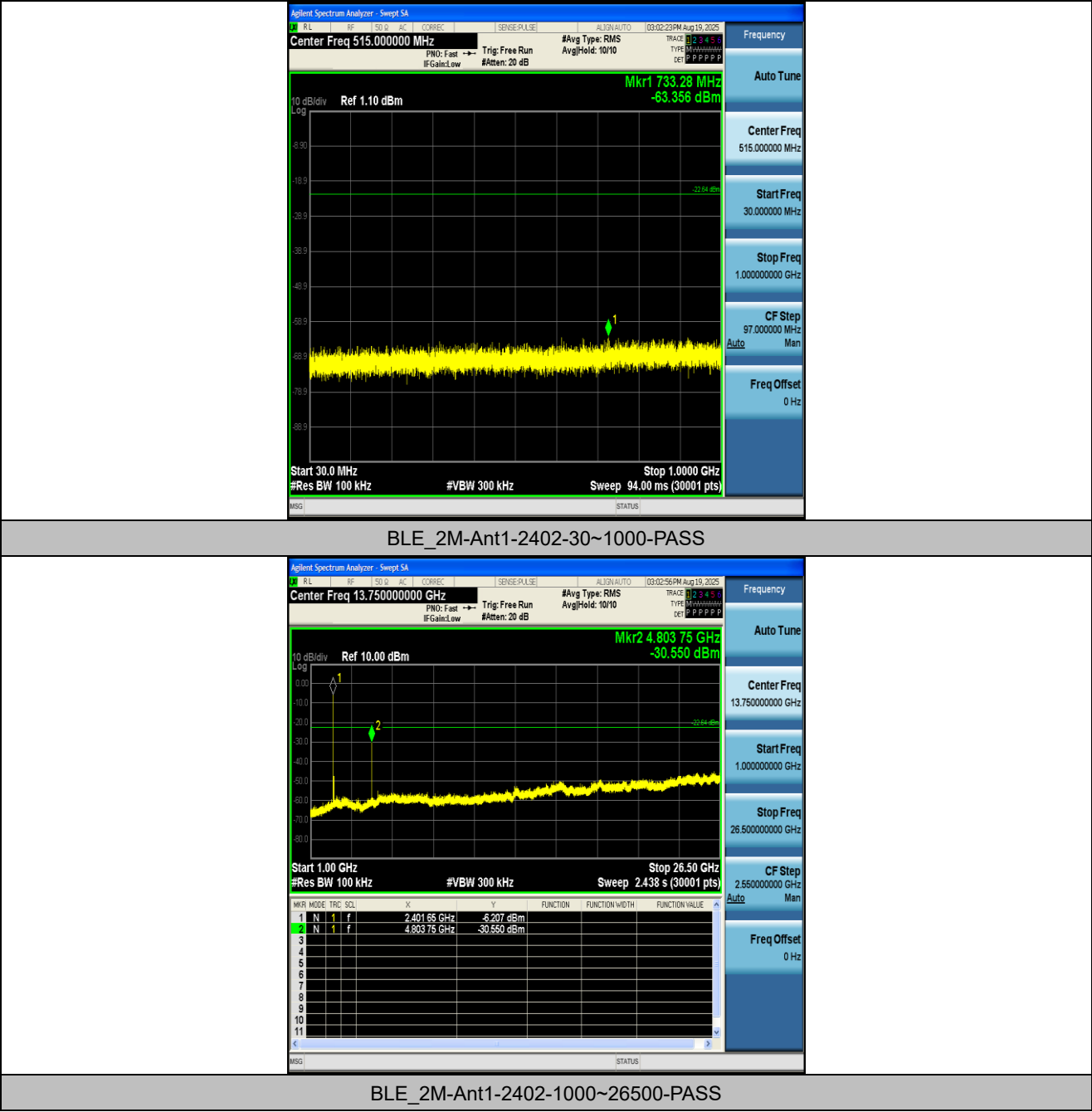
BLE_1M-Ant1-2480-30~1000-PASS



BLE_1M-Ant1-2480-1000~26500-PASS

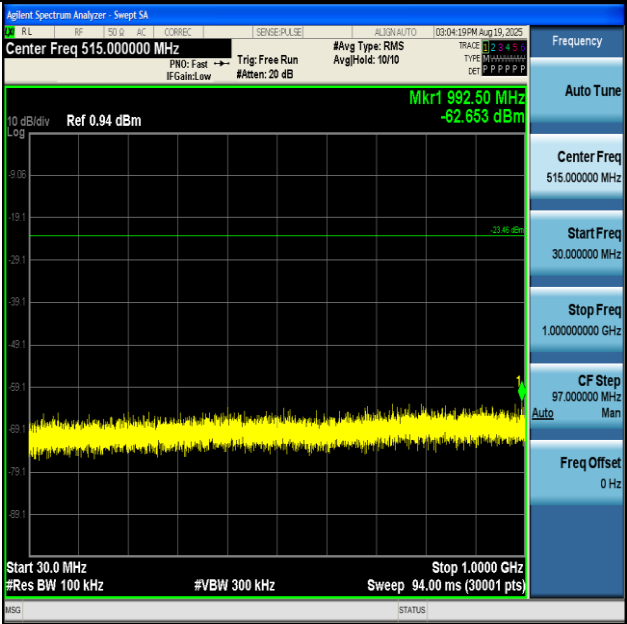


BLE_2M-Ant1-2402-0~Reference-PASS

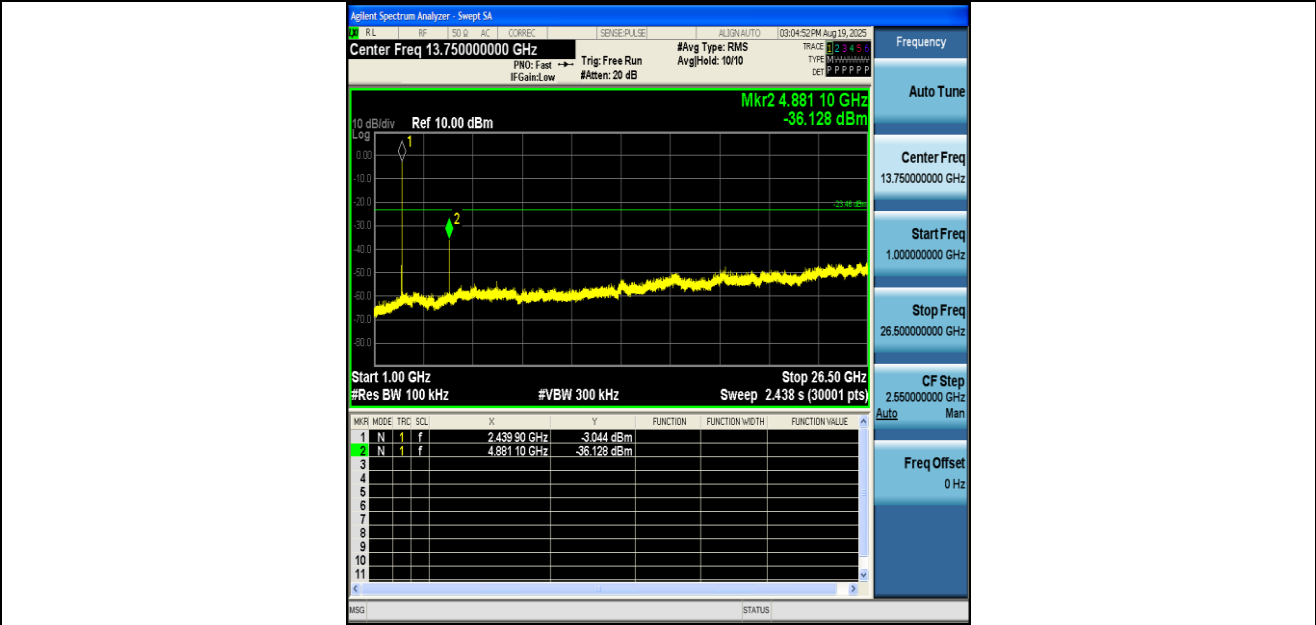




BLE_2M-Ant1-2440-0~Reference-PASS



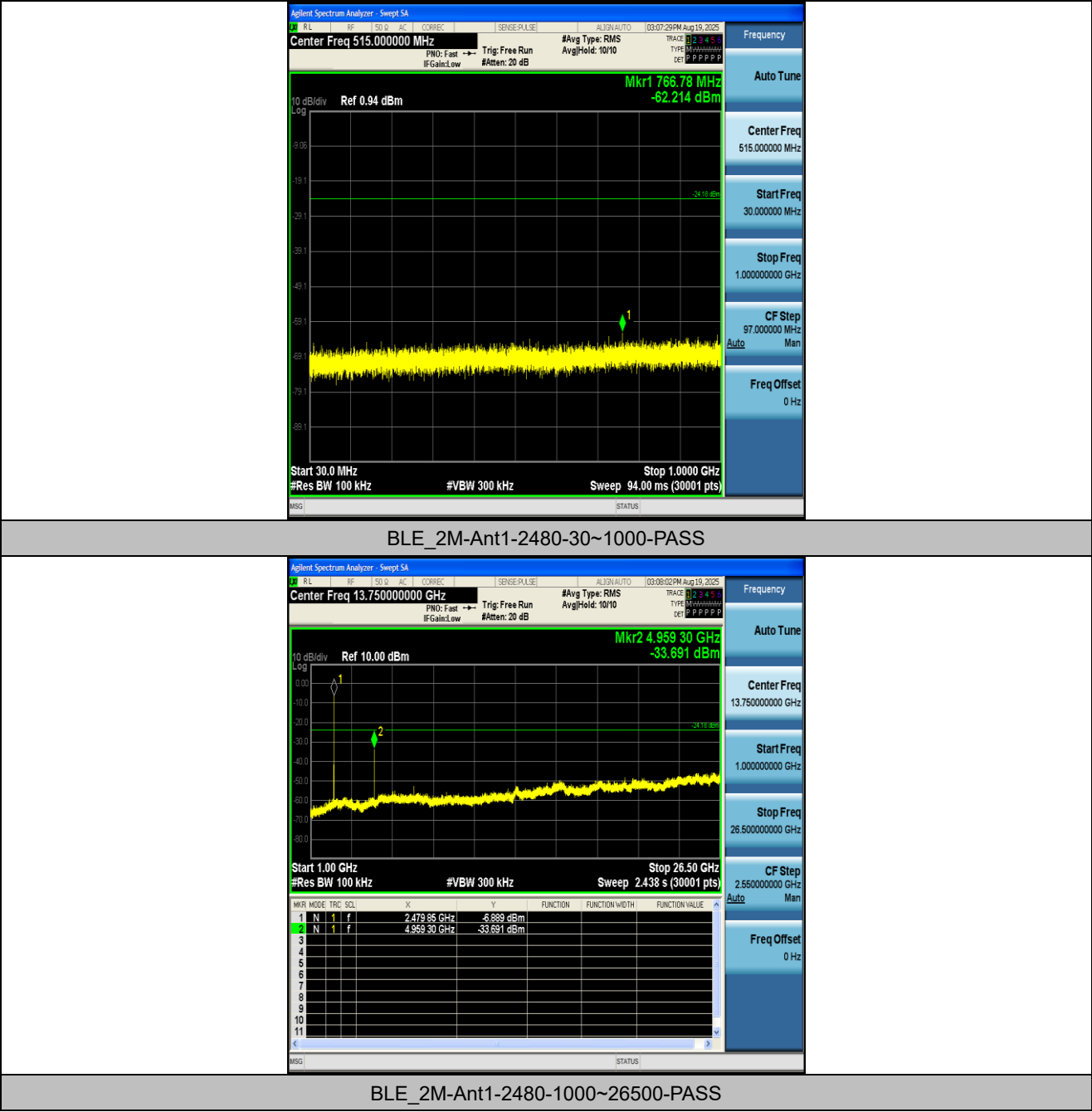
BLE_2M-Ant1-2440-30~1000-PASS



BLE_2M-Ant1-2440-1000~26500-PASS



BLE_2M-Ant1-2480-0~Reference-PASS



Appendix G: Duty Cycle

Test Result

Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
BLE_1M	Ant1	2402	0.41	0.62	66.13	1.80
BLE_1M	Ant1	2440	0.41	0.63	65.08	1.87
BLE_1M	Ant1	2480	0.41	0.62	66.13	1.80
BLE_2M	Ant1	2402	0.23	0.63	36.51	4.38
BLE_2M	Ant1	2440	0.23	0.62	37.10	4.31
BLE_2M	Ant1	2480	0.23	0.63	36.51	4.38

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs

