

Appendix Test Data for BLE (Conducted Measurement)

Product Name: IU Official Light Stick I-KE

Trade Mark: N/A

Test Model: I-KE-V3

FCC ID: 2AS3Z-I-KE-V3

Environmental Conditions

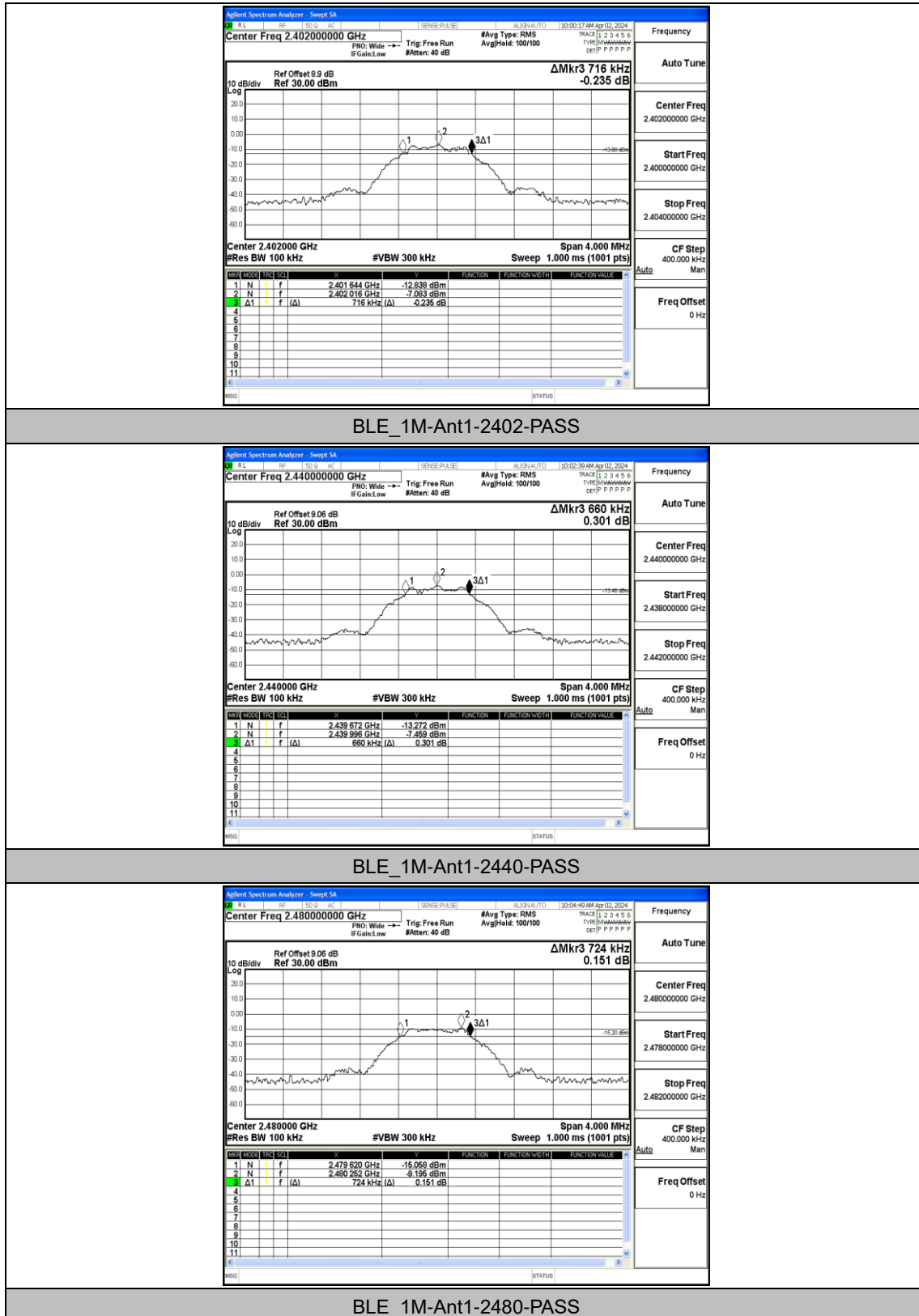
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.716	2401.644	2402.360	0.5	PASS
BLE_1M	Ant1	2440	0.660	2439.672	2440.332	0.5	PASS
BLE_1M	Ant1	2480	0.724	2479.620	2480.344	0.5	PASS

Test Graphs

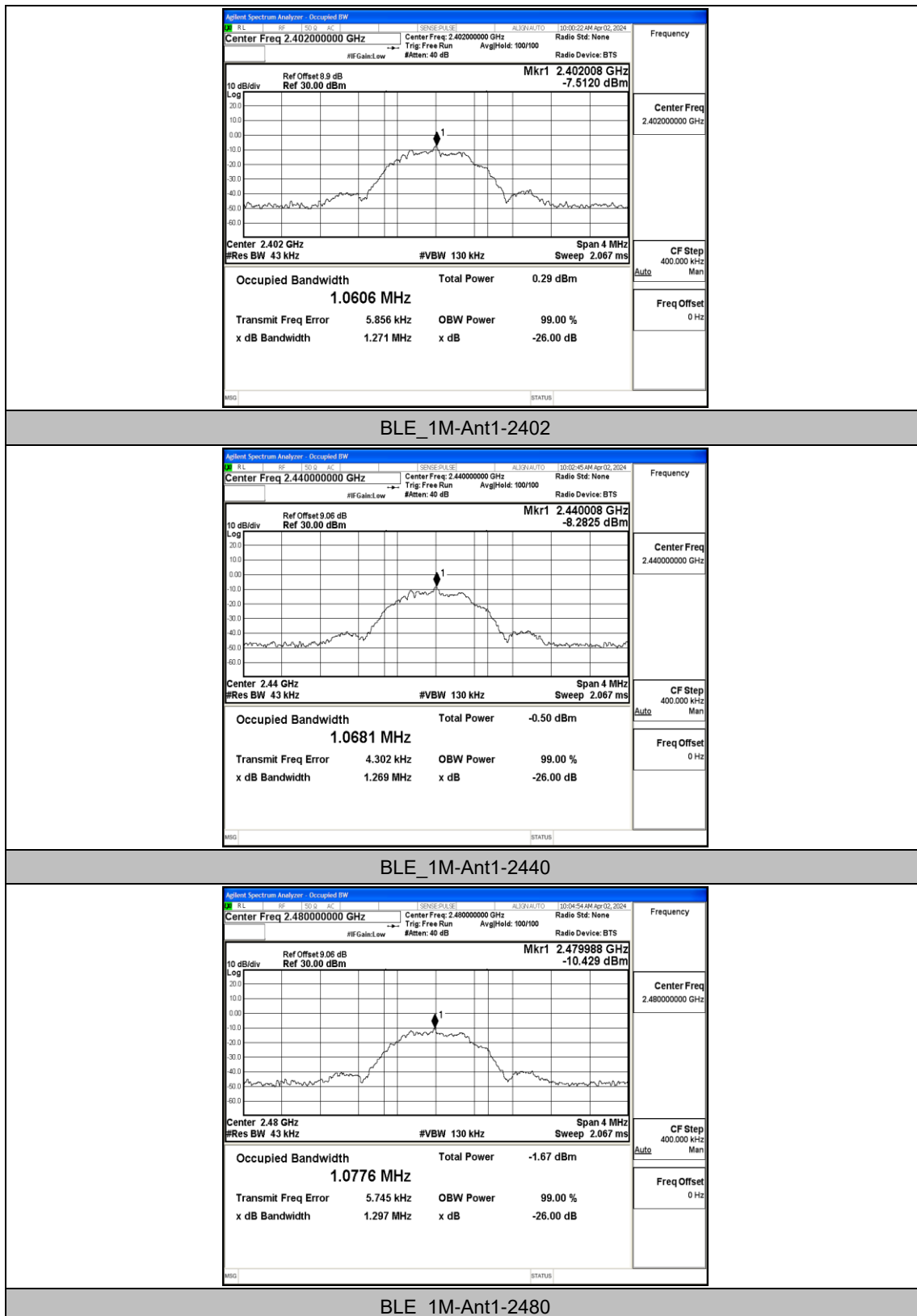


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0606	2401.4756	2402.5362	---	---
BLE_1M	Ant1	2440	1.0681	2439.4703	2440.5384	---	---
BLE_1M	Ant1	2480	1.0776	2479.4669	2480.5445	---	---

Test Graphs

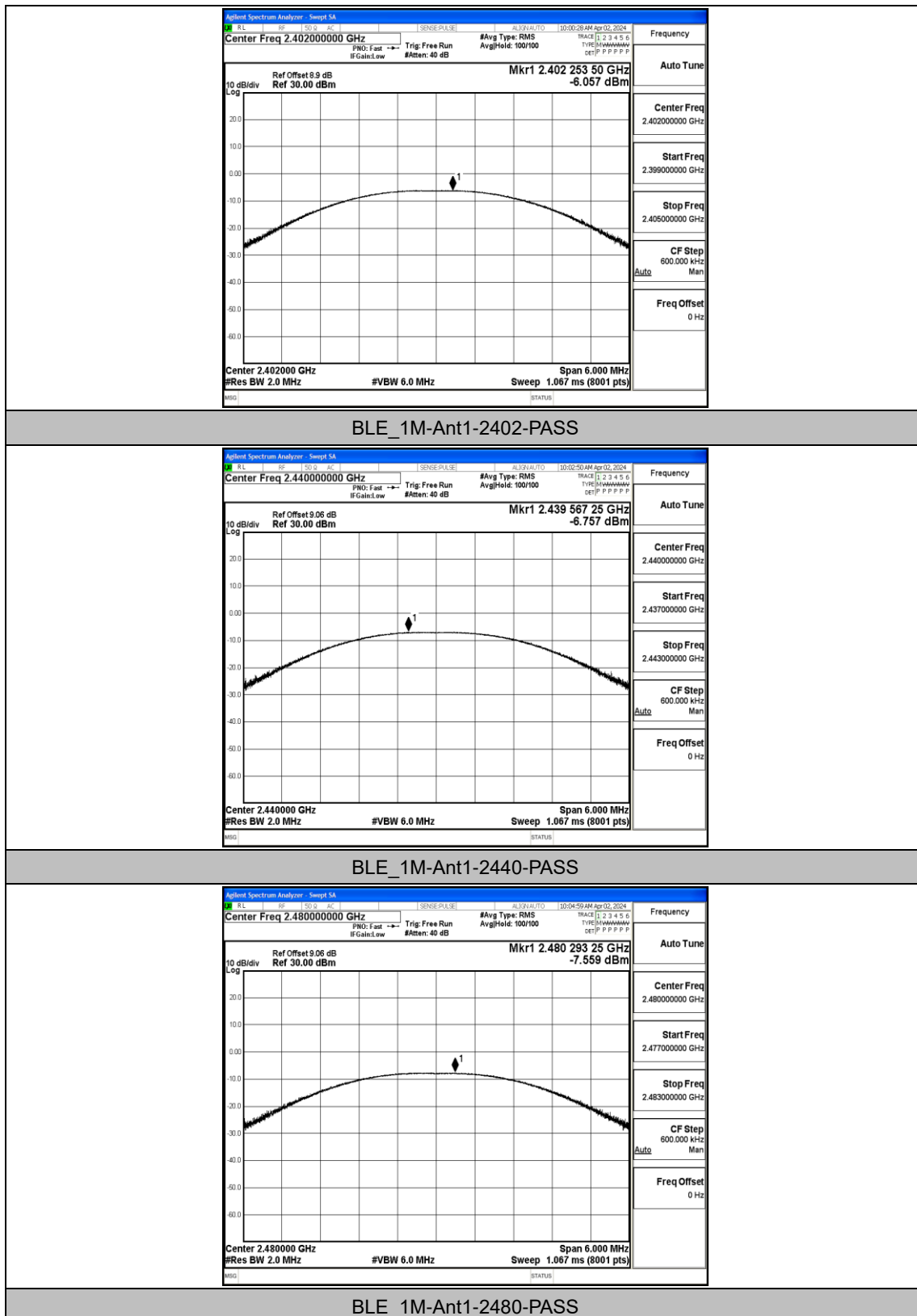


Appendix C: Maximum peak conducted output power

Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-6.06	≤30	PASS
BLE_1M	Ant1	2440	-6.76	≤30	PASS
BLE_1M	Ant1	2480	-7.56	≤30	PASS

Test Graphs Peak

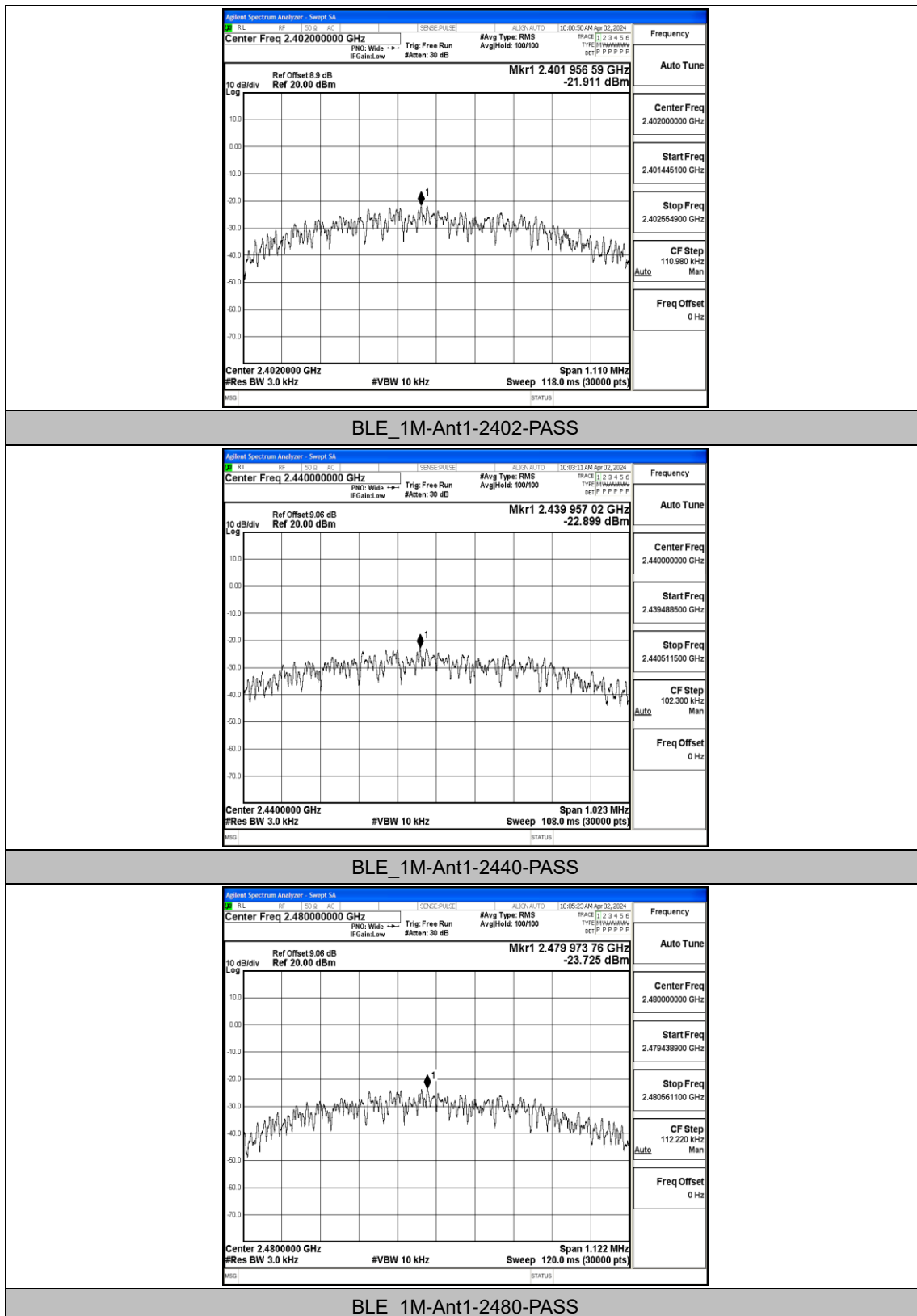


Appendix D: Maximum peak power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-21.91	≤8.00	PASS
BLE_1M	Ant1	2440	-22.90	≤8.00	PASS
BLE_1M	Ant1	2480	-23.73	≤8.00	PASS

Test Graphs

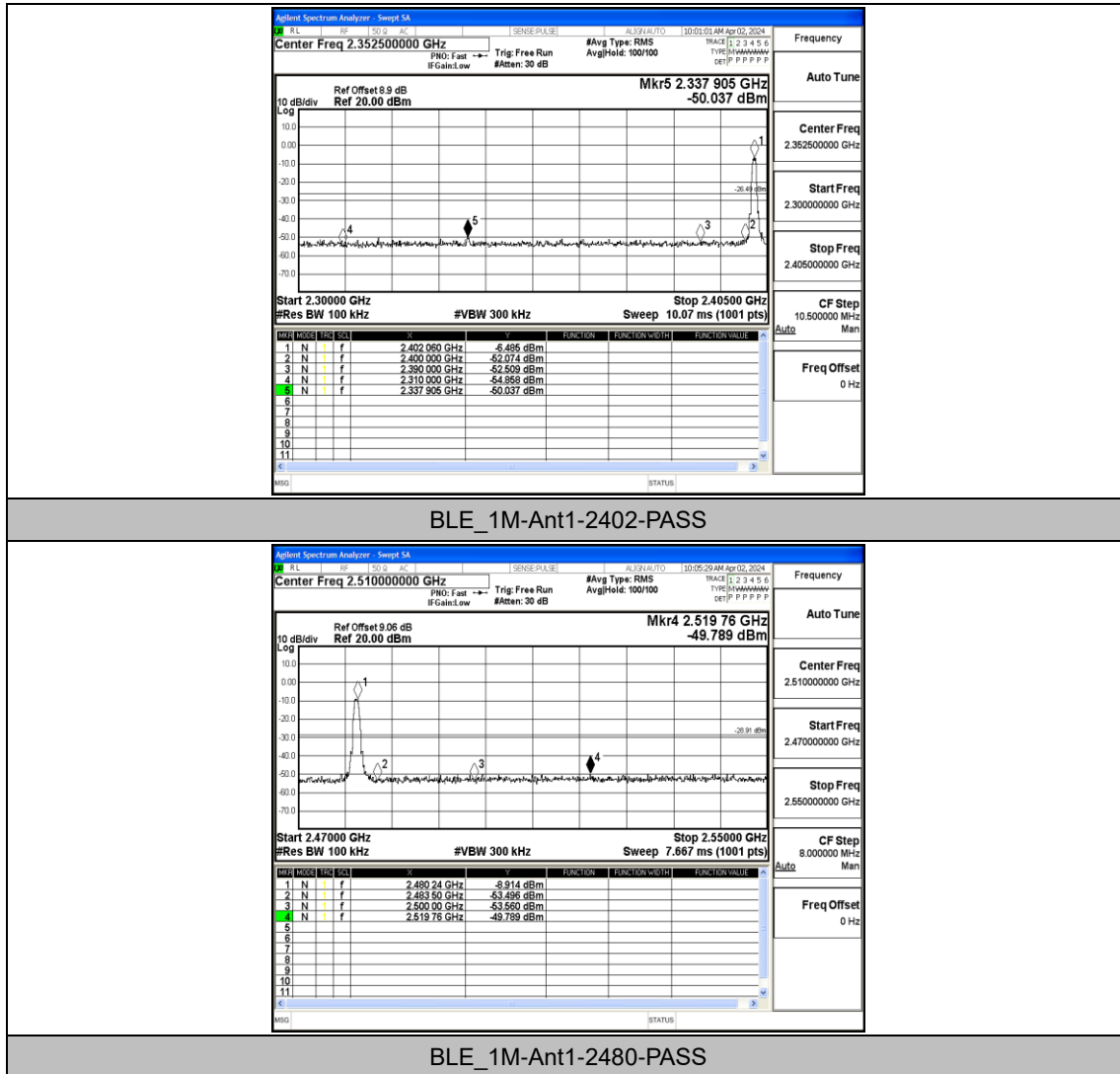


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-6.49	-50.04	≤-26.49	PASS
BLE_1M	Ant1	High	2480	-8.91	-49.79	≤-28.91	PASS

Test Graphs

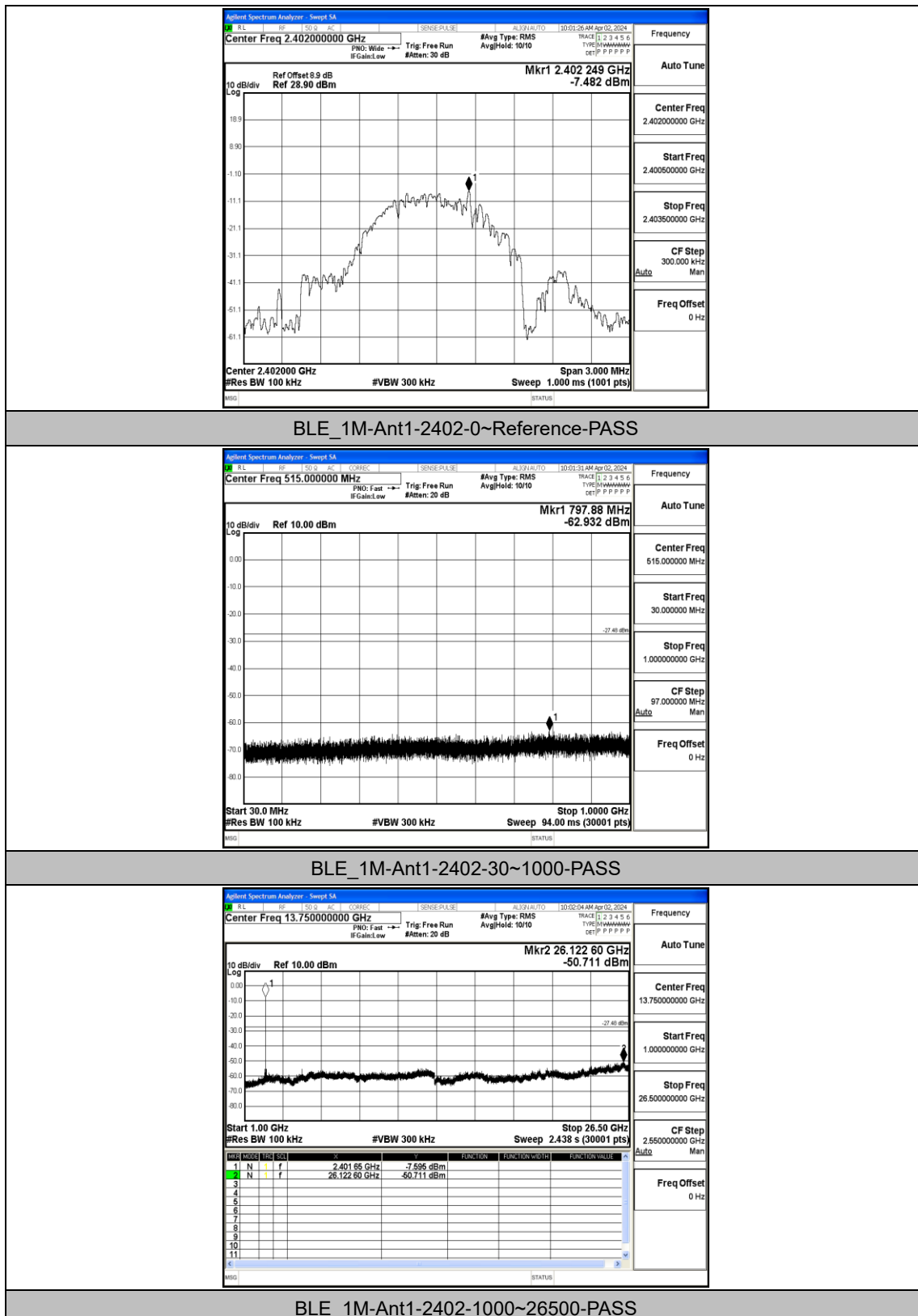


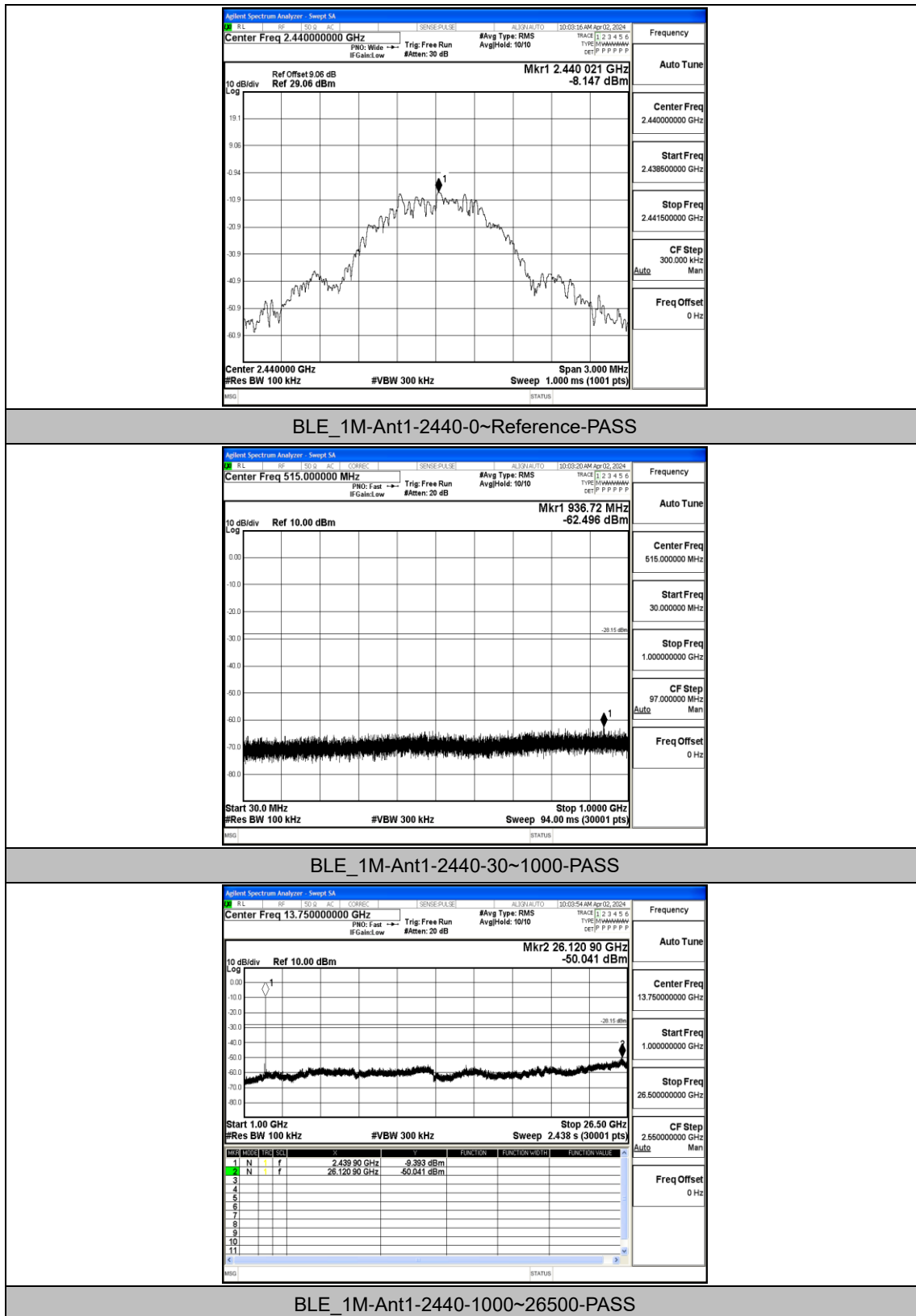
Appendix F: Conducted Spurious Emission

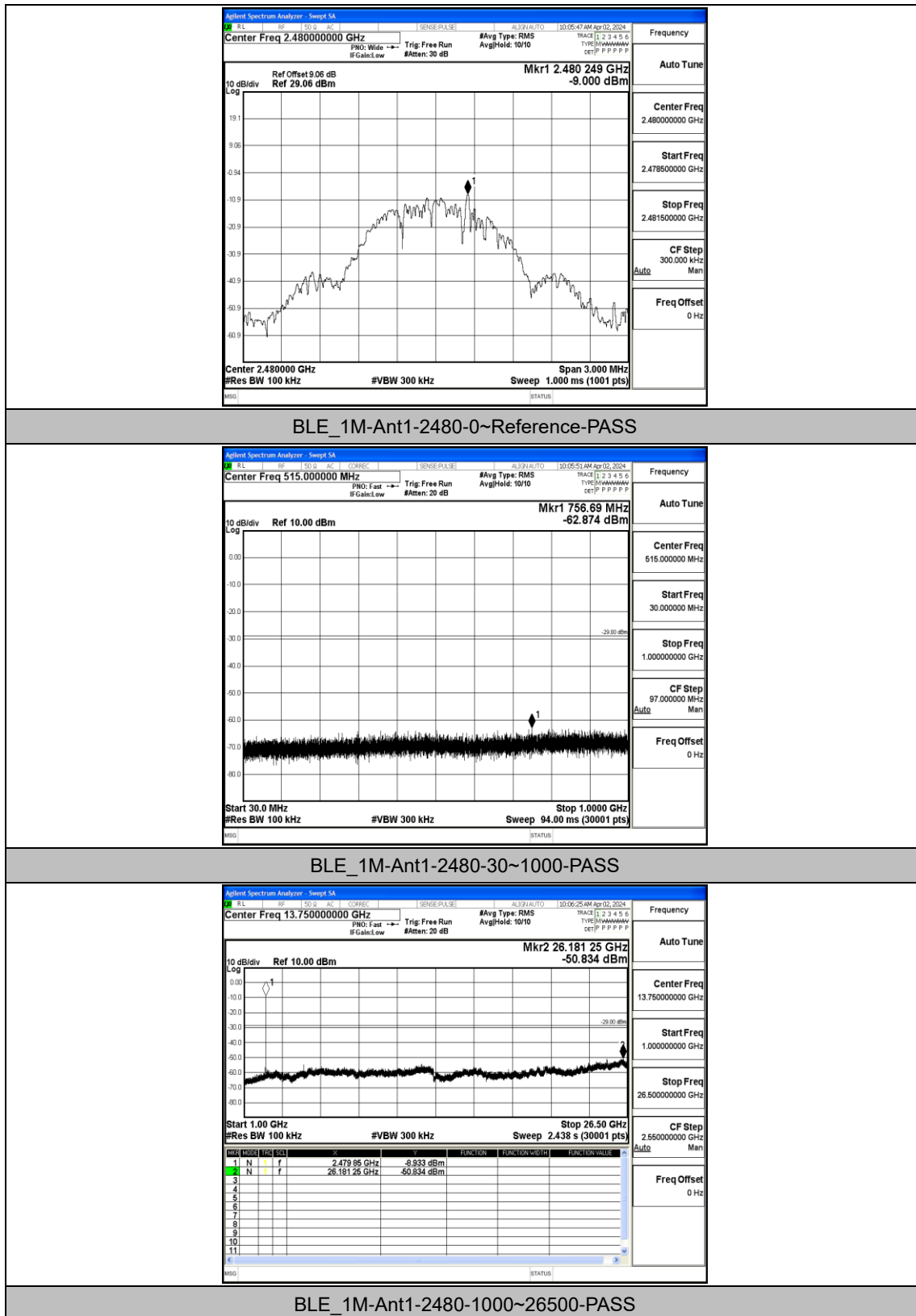
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-7.48	-7.48	---	PASS
BLE_1M	Ant1	2402	30~1000	-7.48	-62.93	≤-27.48	PASS
BLE_1M	Ant1	2402	1000~26500	-7.48	-50.71	≤-27.48	PASS
BLE_1M	Ant1	2440	0~Reference	-8.15	-8.15	---	PASS
BLE_1M	Ant1	2440	30~1000	-8.15	-62.5	≤-28.15	PASS
BLE_1M	Ant1	2440	1000~26500	-8.15	-50.04	≤-28.15	PASS
BLE_1M	Ant1	2480	0~Reference	-9.00	-9.00	---	PASS
BLE_1M	Ant1	2480	30~1000	-9.00	-62.87	≤-29	PASS
BLE_1M	Ant1	2480	1000~26500	-9.00	-50.83	≤-29	PASS

Test Graphs





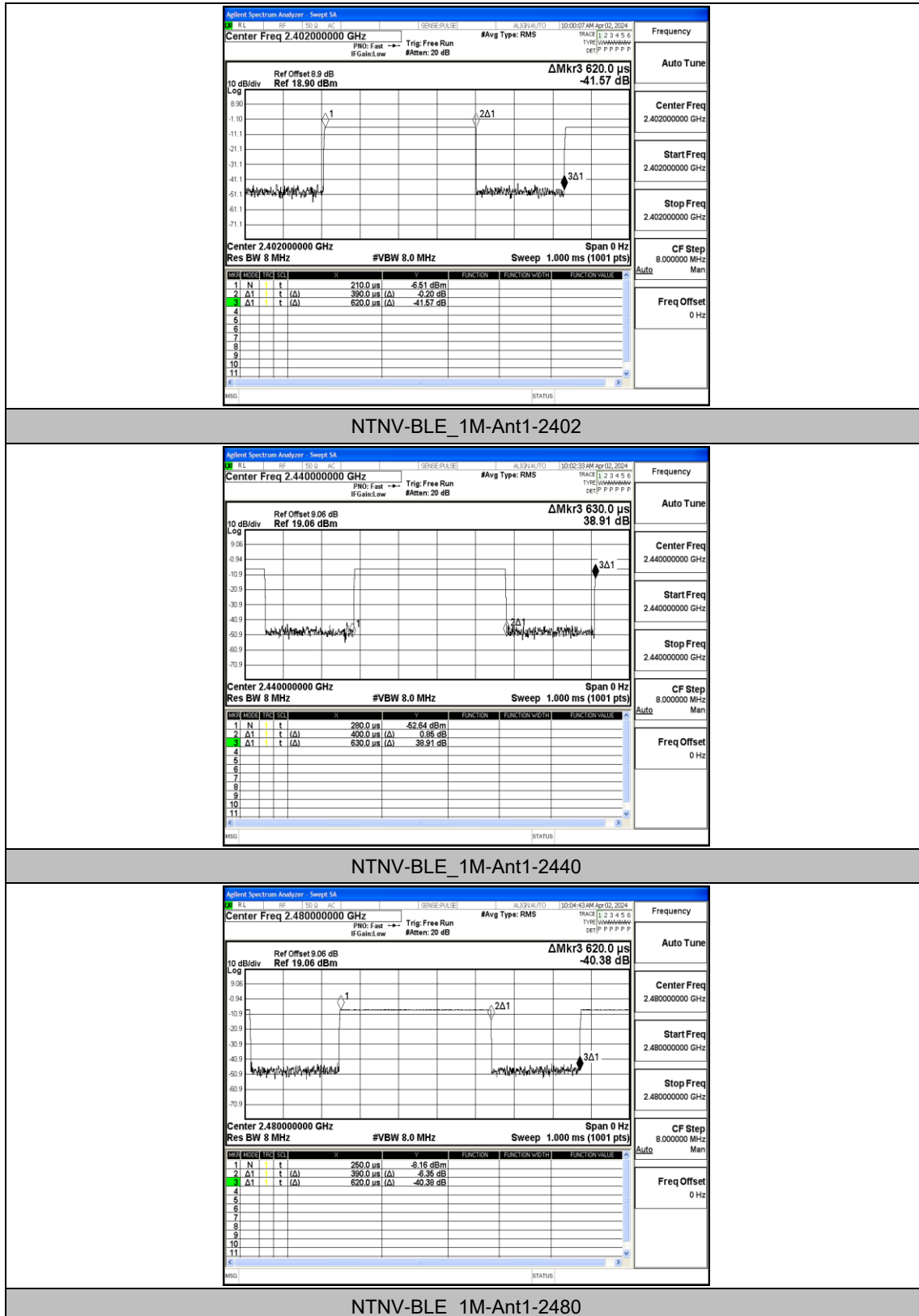


Appendix G: Duty Cycle

Test Result

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

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	-43.5	≤-21.20	51.70	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-42.46	≤-21.20	52.74	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2351.135	-39.35	≤-21.20	55.85	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-48.36	≤-41.20	46.84	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.66	≤-41.20	46.54	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2337.905	-46.9	≤-41.20	48.30	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-39.43	≤-21.20	55.77	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-39.91	≤-21.20	55.29	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2483.600	-38.26	≤-21.20	56.94	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-47.55	≤-41.20	47.65	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-46.87	≤-41.20	48.33	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2491.840	-46.73	≤-41.20	48.47	≤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

