

Appendix Test Data for BT(BLE) (Conducted Measurement)

Product Name: projector

Trade Mark: umiio

Test Model: A007

FCC ID: 2BAHIA007

Environmental Conditions

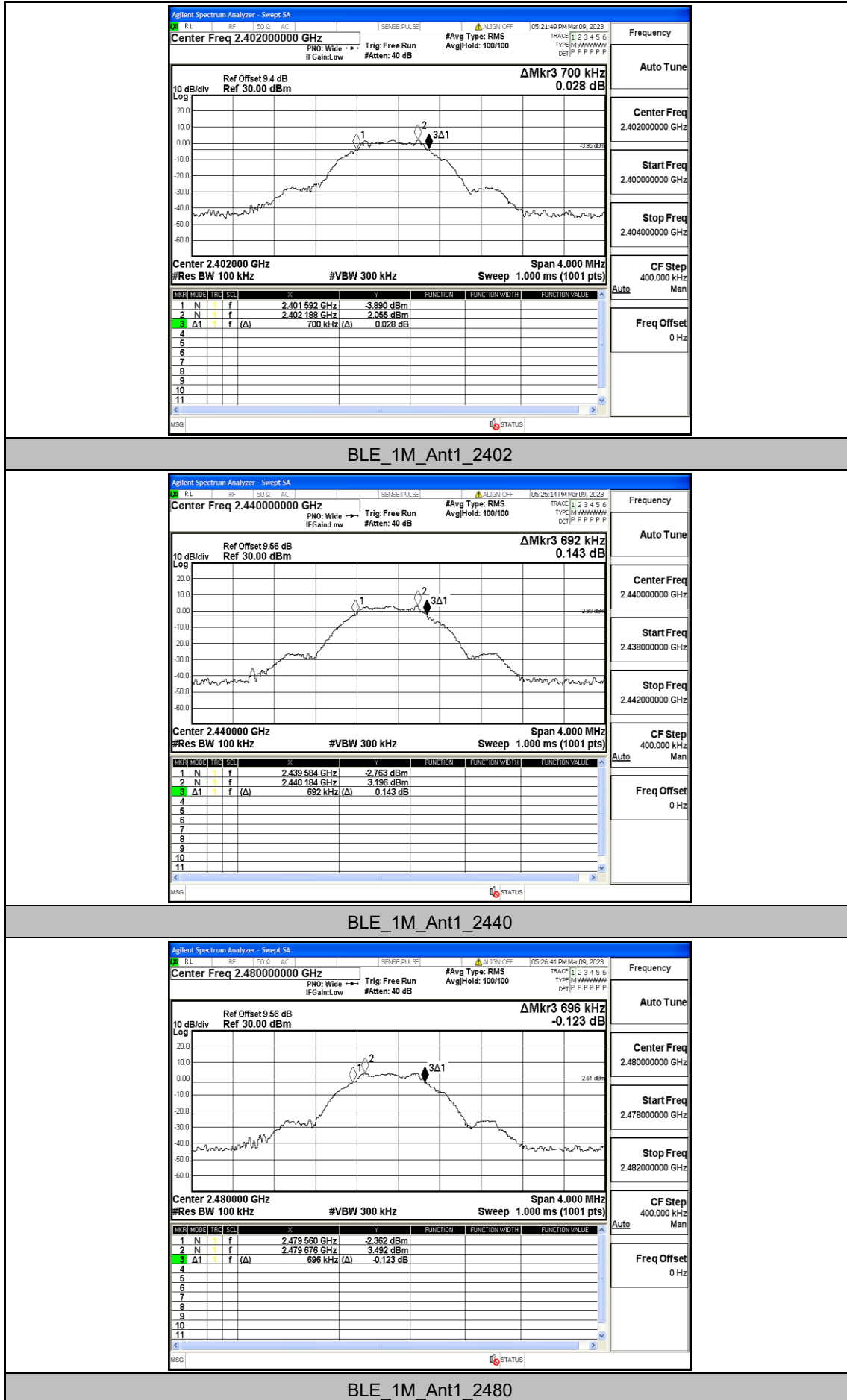
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.700	2401.592	2402.292	0.5	PASS
		2440	0.692	2439.584	2440.276	0.5	PASS
		2480	0.696	2479.560	2480.256	0.5	PASS

Test Graphs

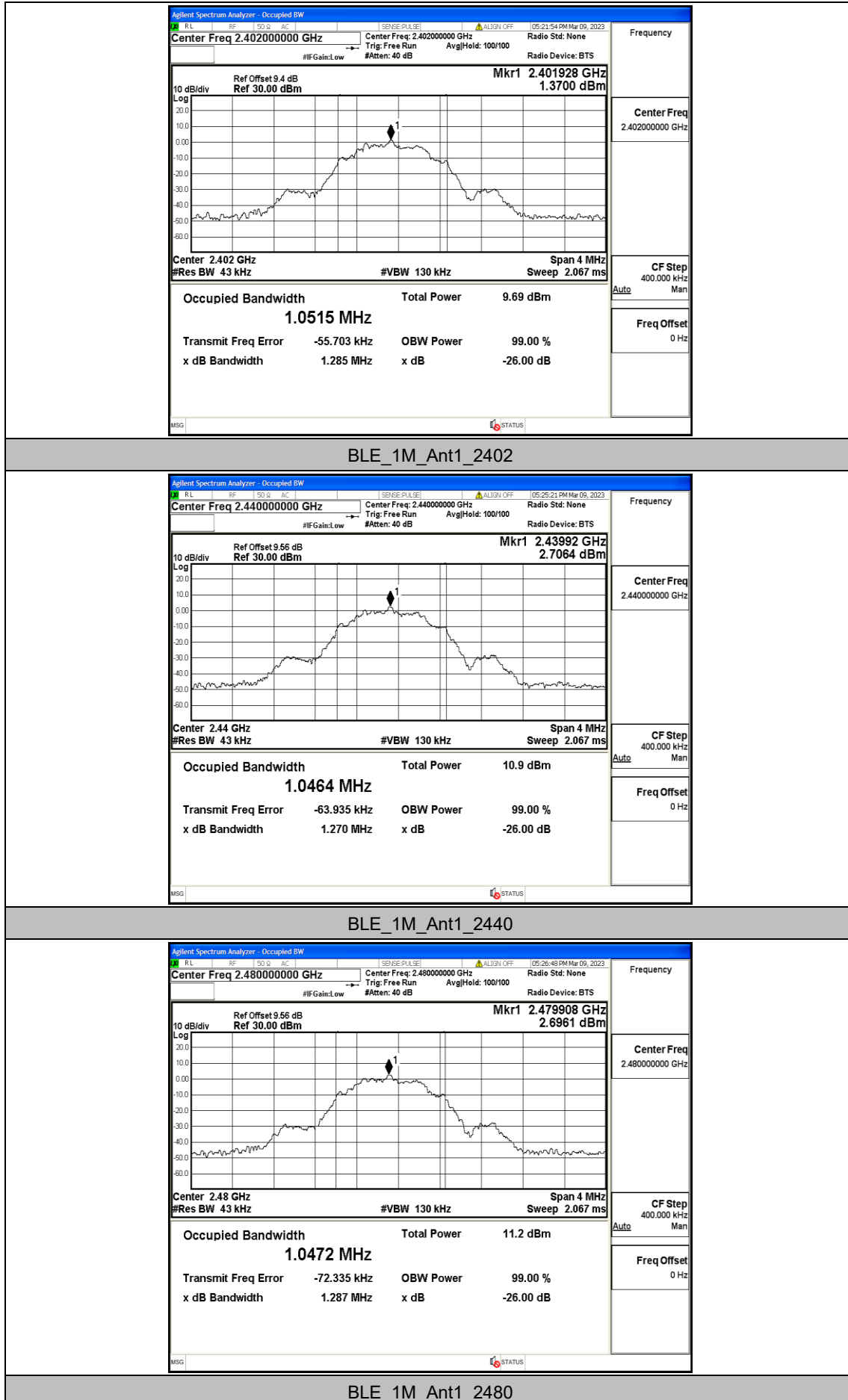


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0515	2401.4186	2402.4701	---	---
		2440	1.0464	2439.4129	2440.4593	---	---
		2480	1.0472	2479.4041	2480.4513	---	---

Test Graphs

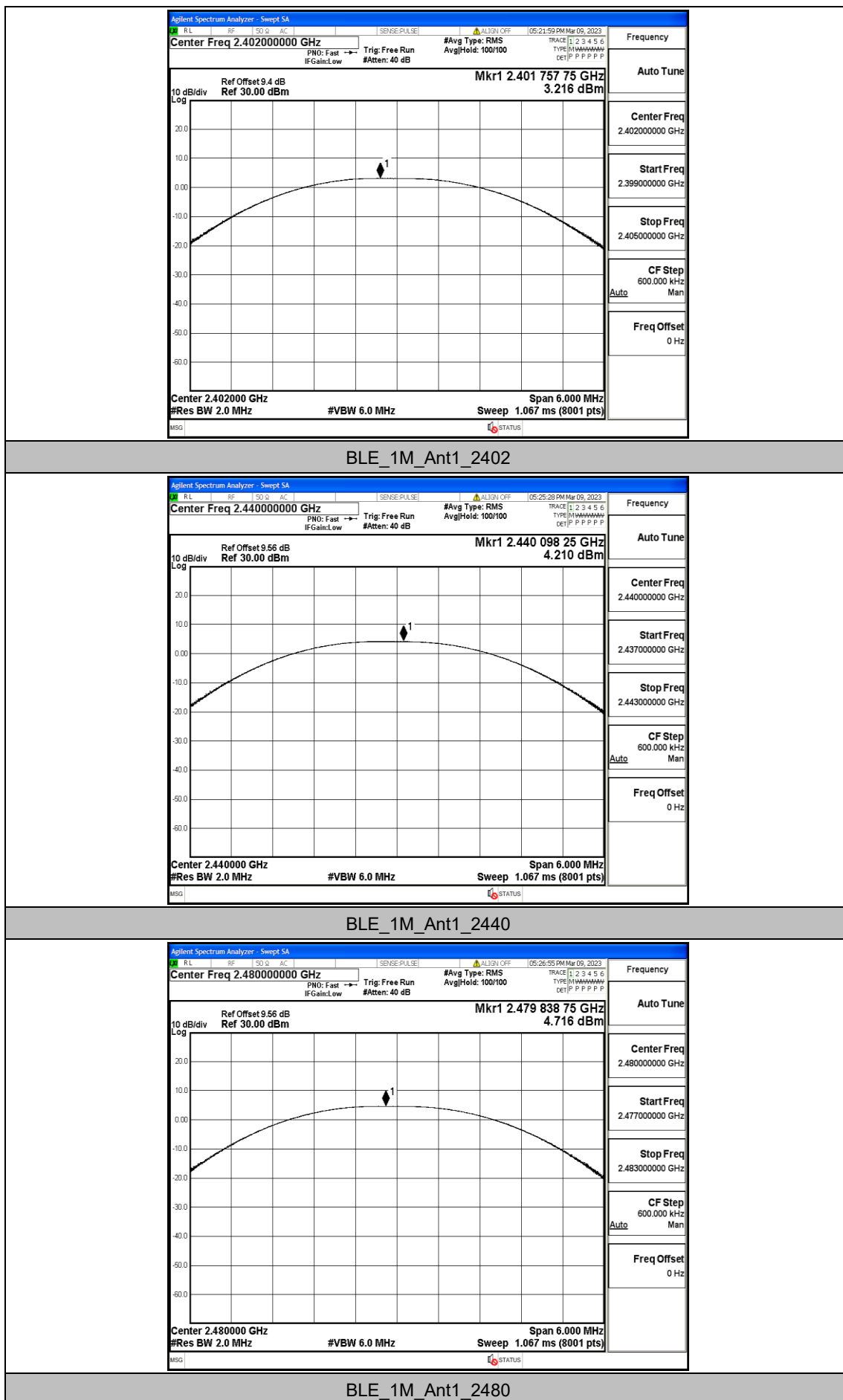


Appendix C: Maximum Peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.22	≤30	PASS
		2440	4.21	≤30	PASS
		2480	4.72	≤30	PASS

Test Graphs

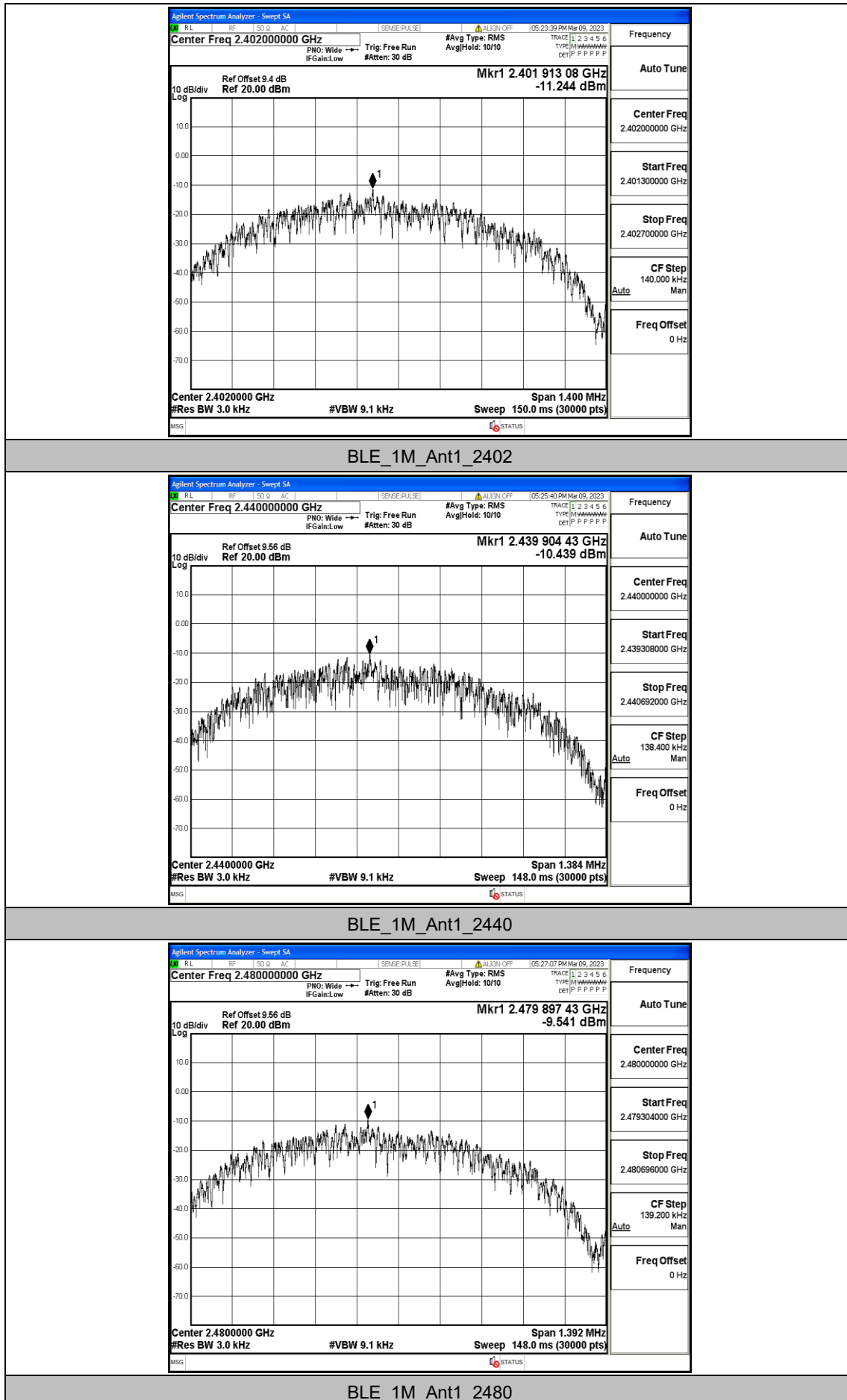


Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.24	≤8.00	PASS
		2440	-10.44	≤8.00	PASS
		2480	-9.54	≤8.00	PASS

Test Graphs

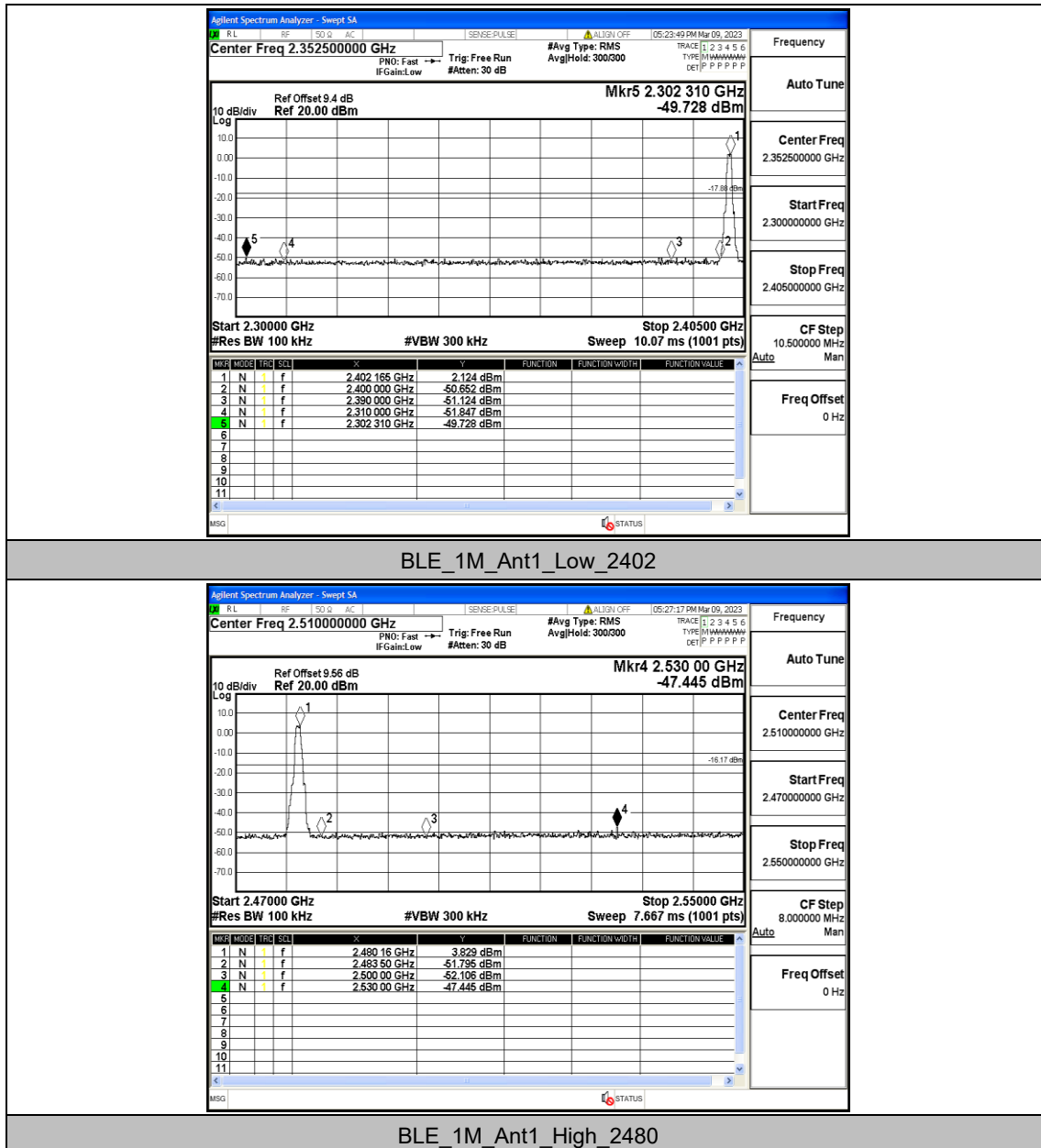


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	2.12	-49.73	≤-17.88	PASS
		High	2480	3.83	-47.45	≤-16.17	PASS

Test Graphs

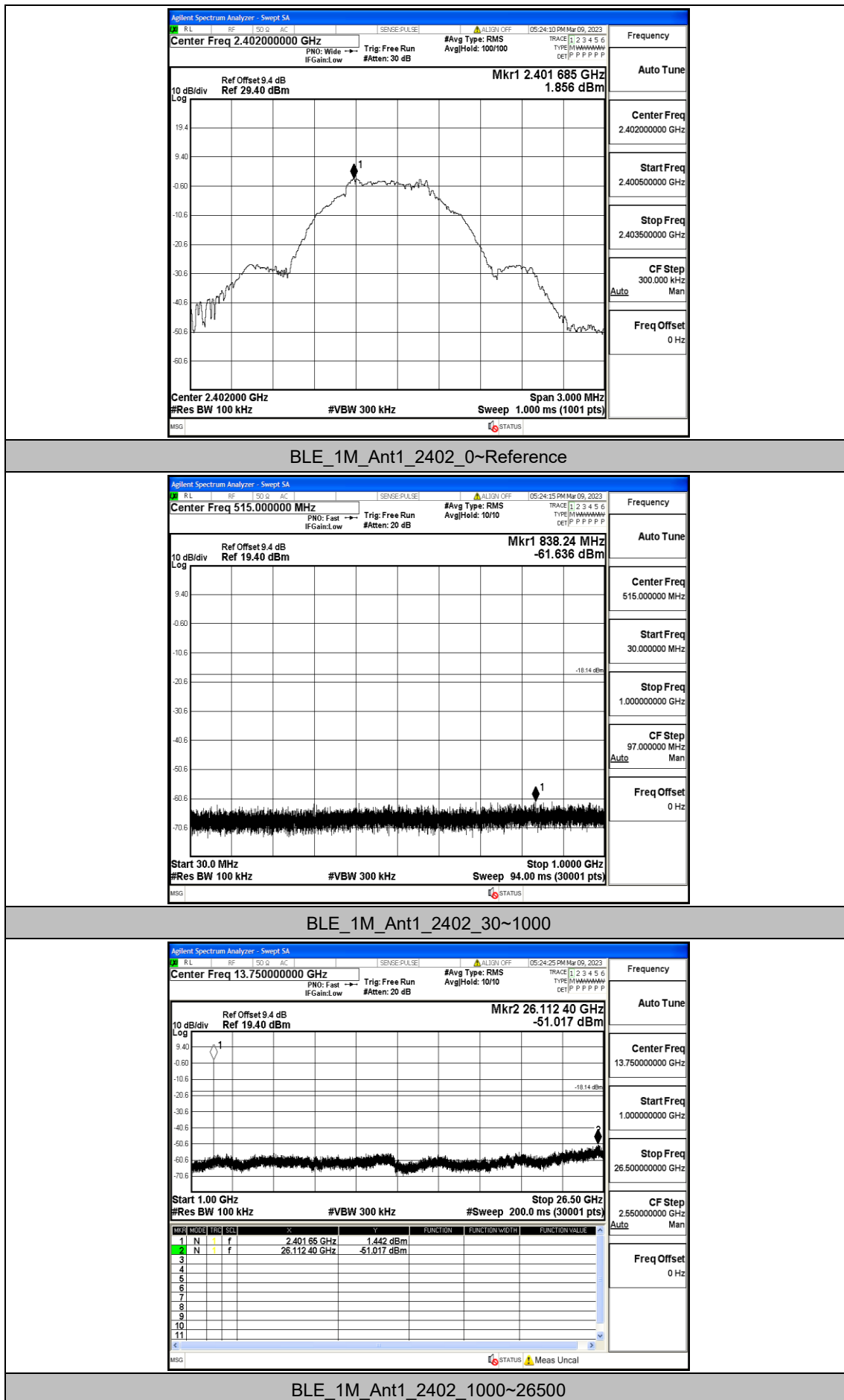


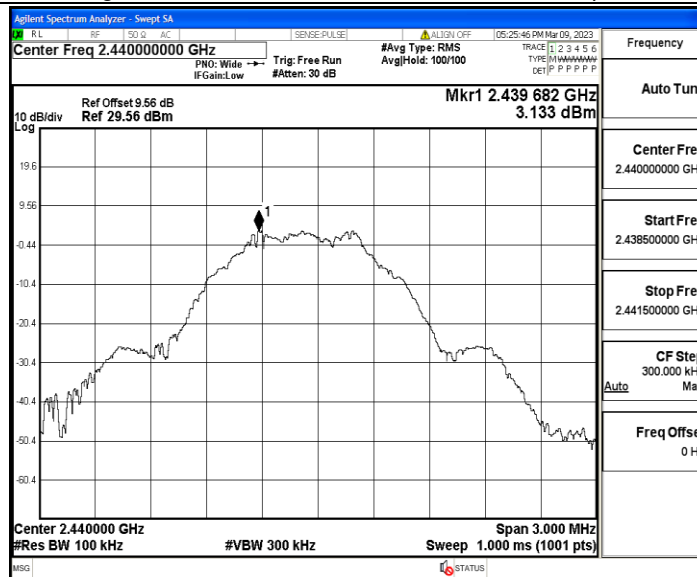
Appendix F: Conducted Spurious Emission

Test Result

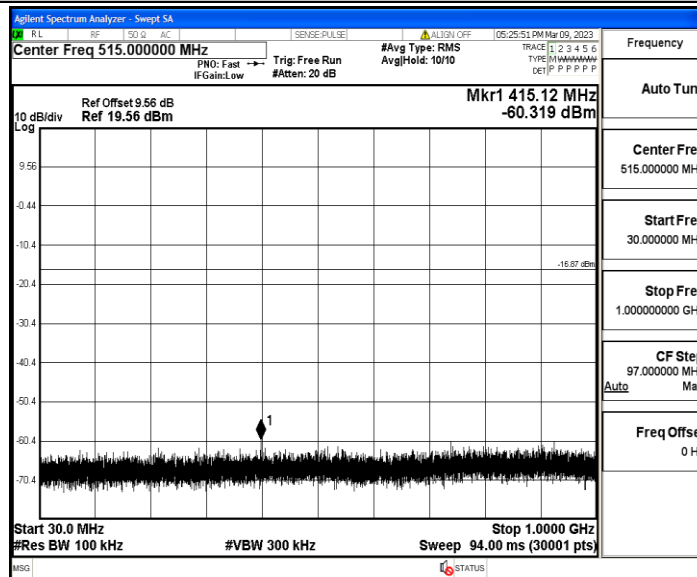
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	1.86	1.86	---	PASS
			30~1000	1.86	-61.64	≤-18.14	PASS
			1000~26500	1.86	-51.02	≤-18.14	PASS
		2440	Reference	3.13	3.13	---	PASS
			30~1000	3.13	-60.32	≤-16.87	PASS
			1000~26500	3.13	-50.44	≤-16.87	PASS
		2480	Reference	2.42	2.42	---	PASS
			30~1000	2.42	-61.4	≤-17.58	PASS
			1000~26500	2.42	-50.59	≤-17.58	PASS

Test Graphs

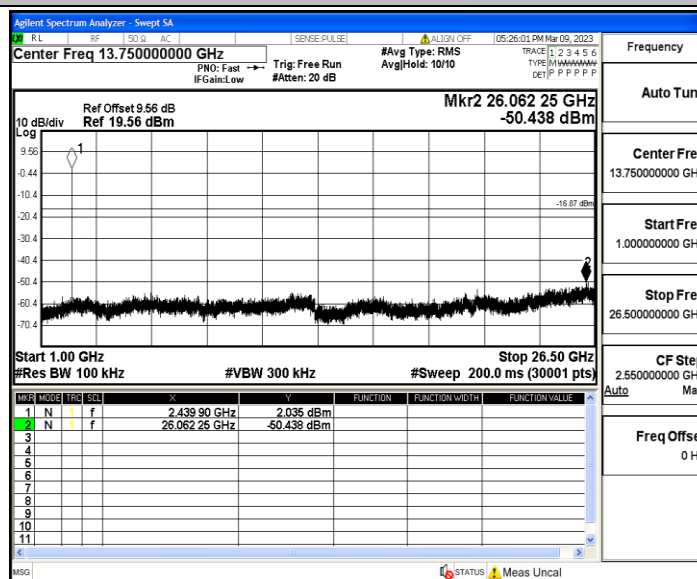




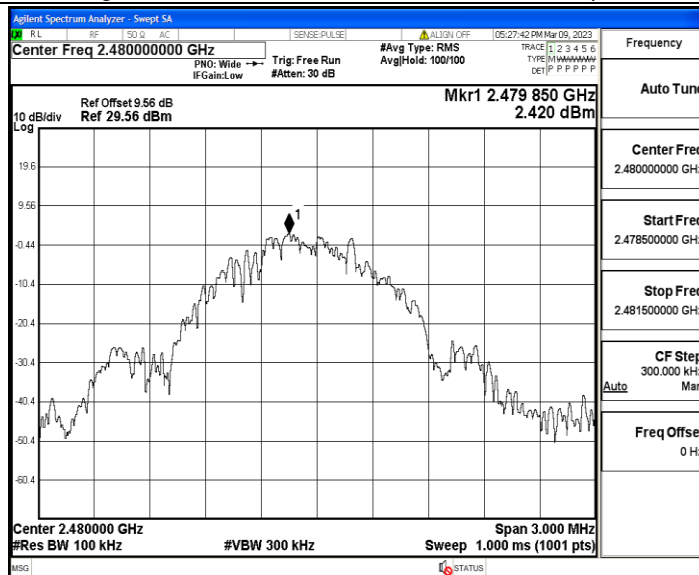
BLE_1M_Ant1_2440_0~Reference



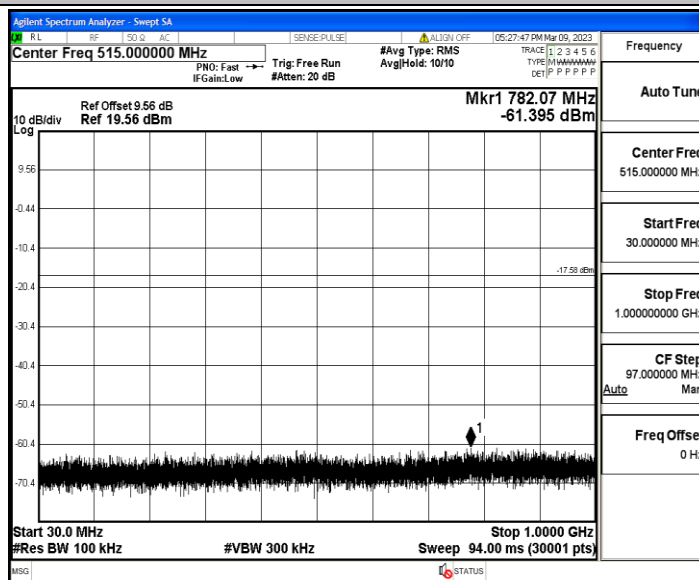
BLE_1M_Ant1_2440_30~1000



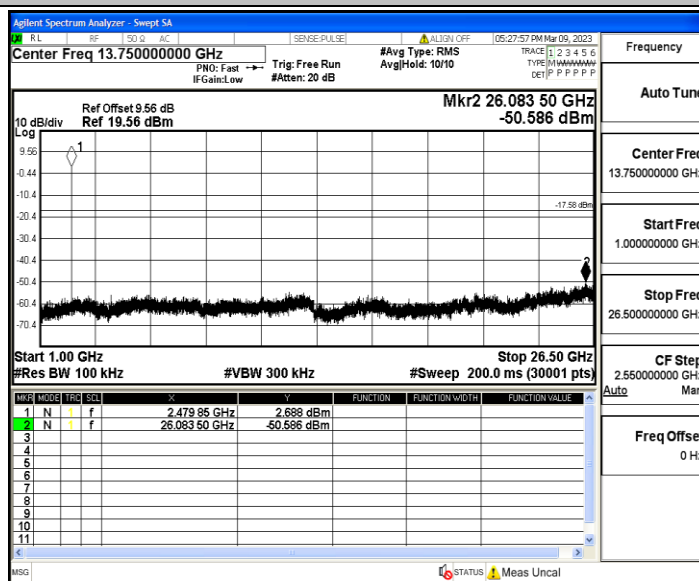
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



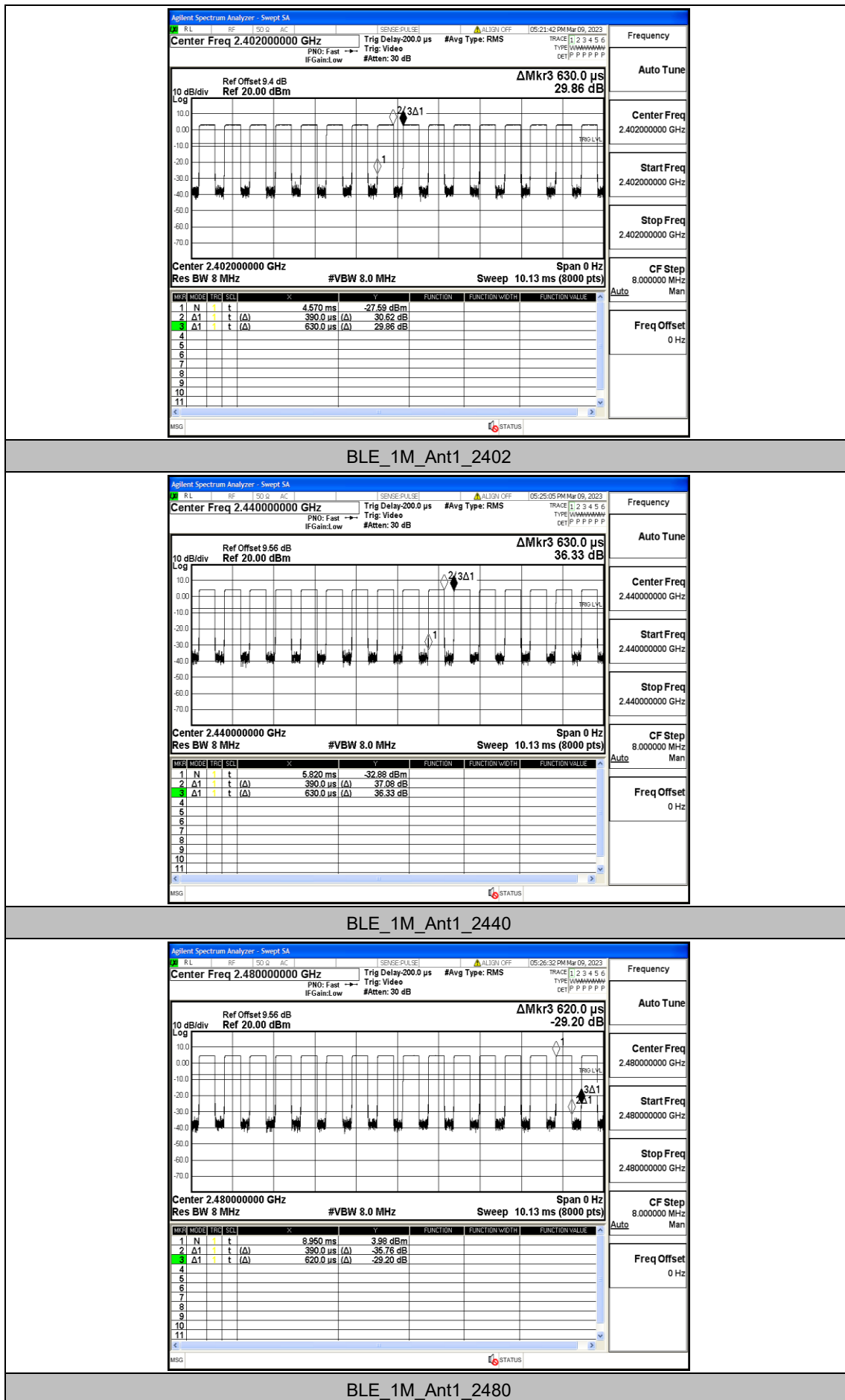
BLE_1M_Ant1_2480_1000~26500

Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	0.39	0.63	61.90	2.56
		2440	0.39	0.63	61.90	2.56
		2480	0.39	0.62	62.90	2.56

Test Graphs



Appendix H: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.31	≤-41.20	PASS
				AV	2388.410	-47.64	≤-41.20	PASS
				AV	2390.000	-48.16	≤-41.20	PASS
				Peak	2310.000	-41.56	≤-21.20	PASS
				Peak	2350.295	-38.43	≤-21.20	PASS
				Peak	2390.000	-40.85	≤-21.20	PASS
		High	2480	AV	2483.500	-46.77	≤-41.20	PASS
				AV	2483.520	-46.77	≤-41.20	PASS
				AV	2500.000	-47.23	≤-41.20	PASS
				Peak	2483.500	-40.21	≤-21.20	PASS
				Peak	2498.480	-38.59	≤-21.20	PASS
				Peak	2500.000	-42.33	≤-21.20	PASS

Note:

1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
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

