

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

Product Name: Smart Ring

Trade Mark: N/A

Test Model: R01

FCC ID: 2A047-R01

Environmental Conditions

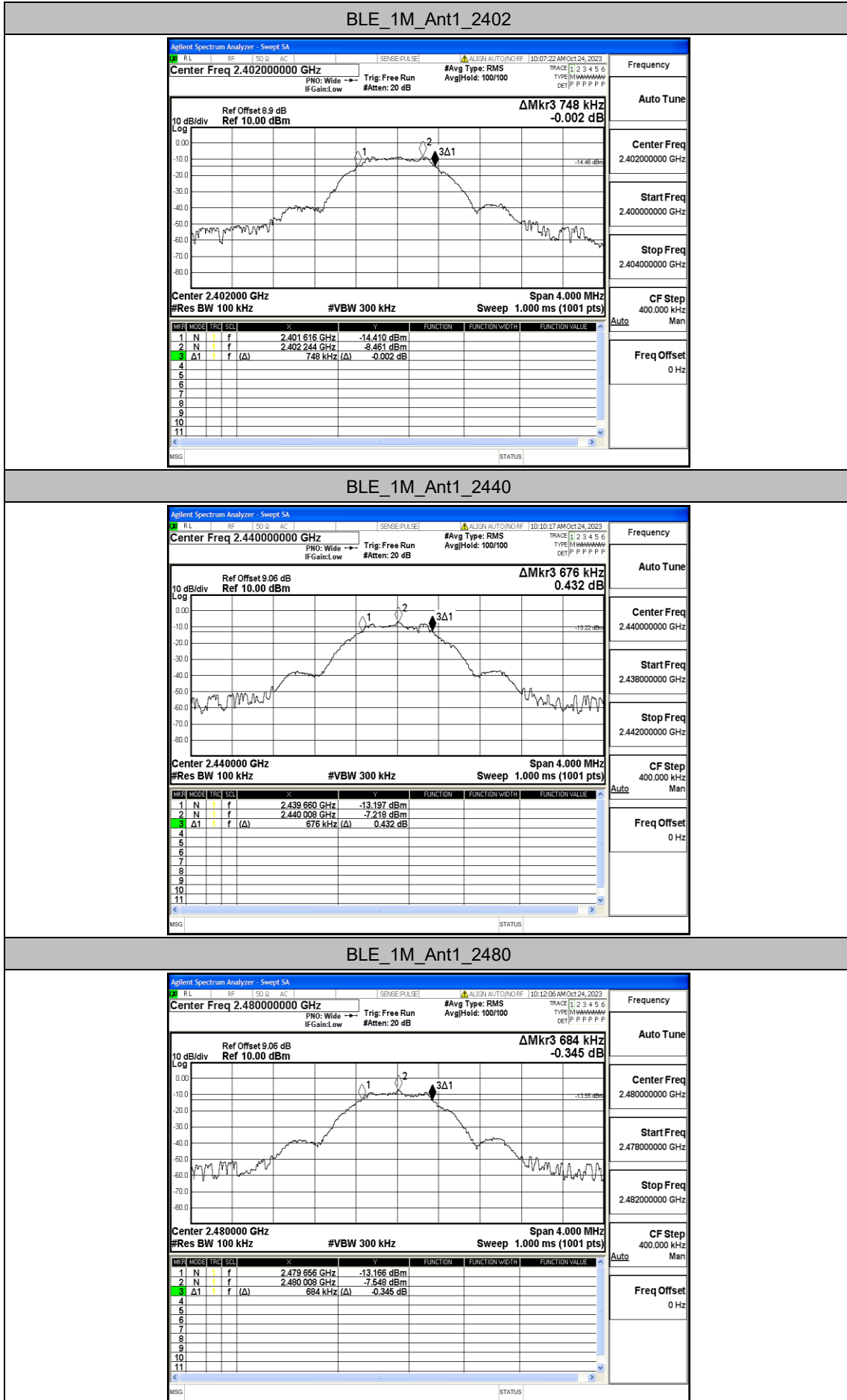
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.748	2401.616	2402.364	0.5	PASS
		2440	0.676	2439.660	2440.336	0.5	PASS
		2480	0.684	2479.656	2480.340	0.5	PASS

Test Graphs

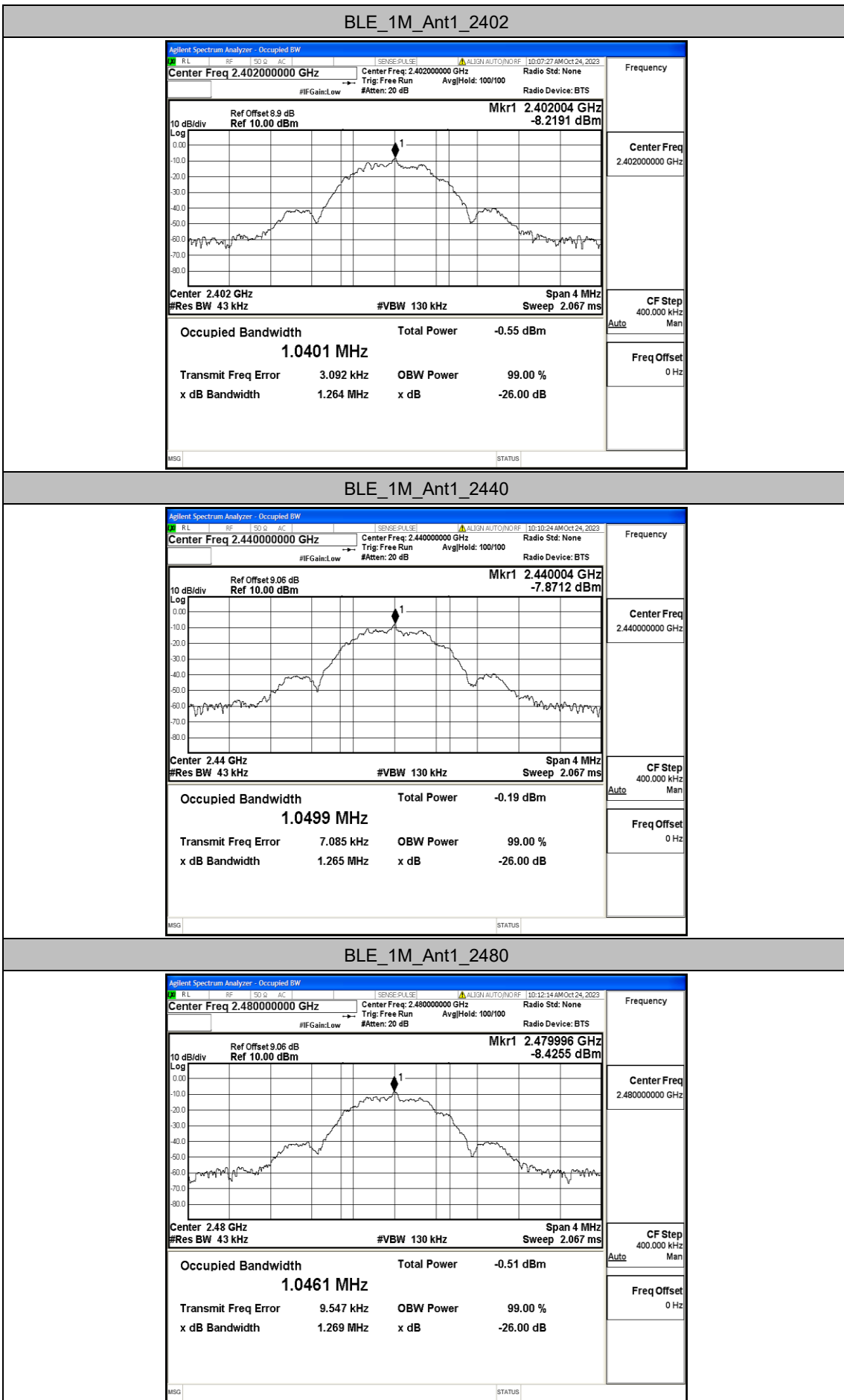


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0401	2401.4830	2402.5231	---	---
		2440	1.0499	2439.4821	2440.5320	---	---
		2480	1.0461	2479.4865	2480.5326	---	---

Test Graphs

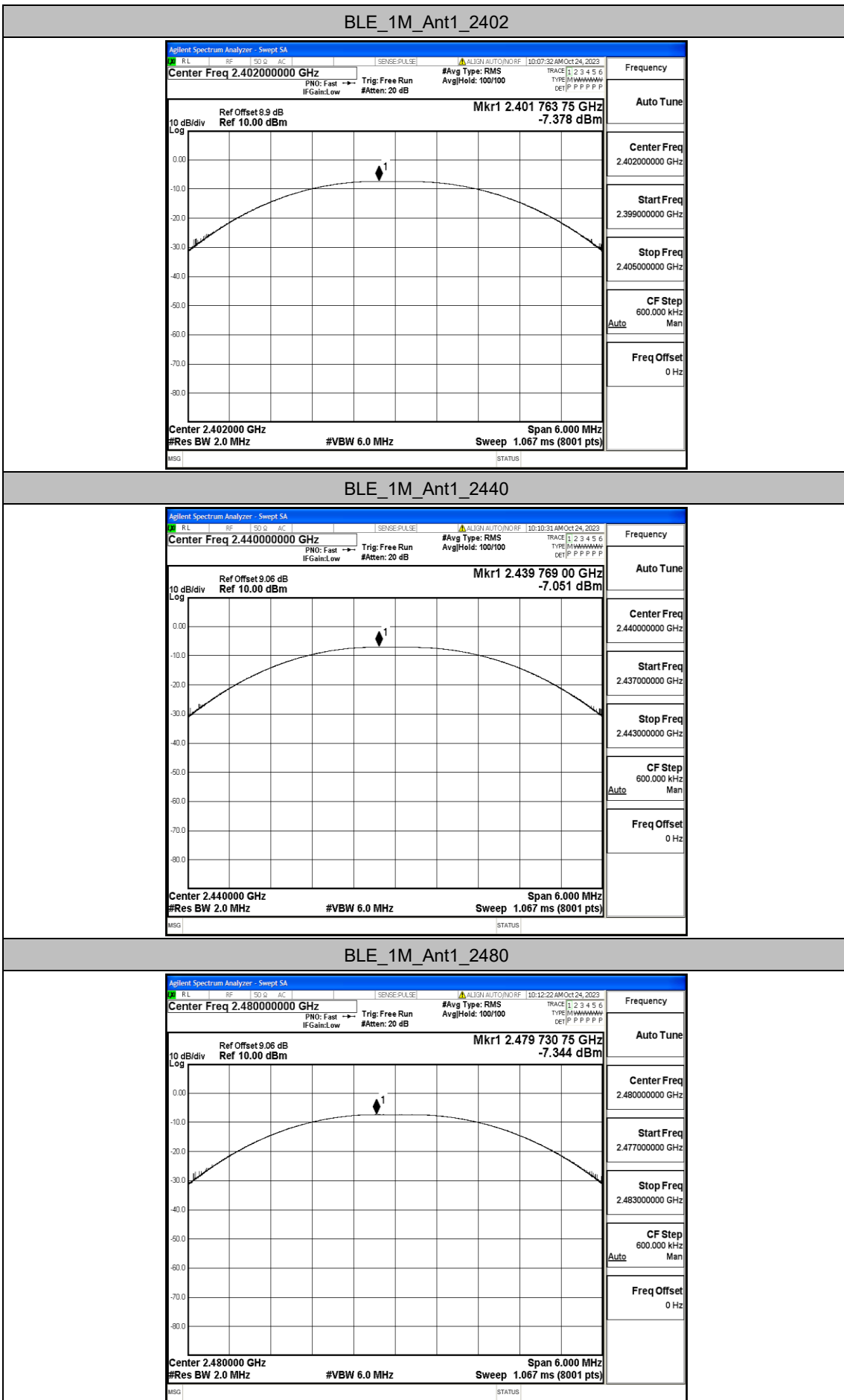


Appendix C: Maximum Peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-7.38	≤30	PASS
		2440	-7.05	≤30	PASS
		2480	-7.34	≤30	PASS

Test Graphs

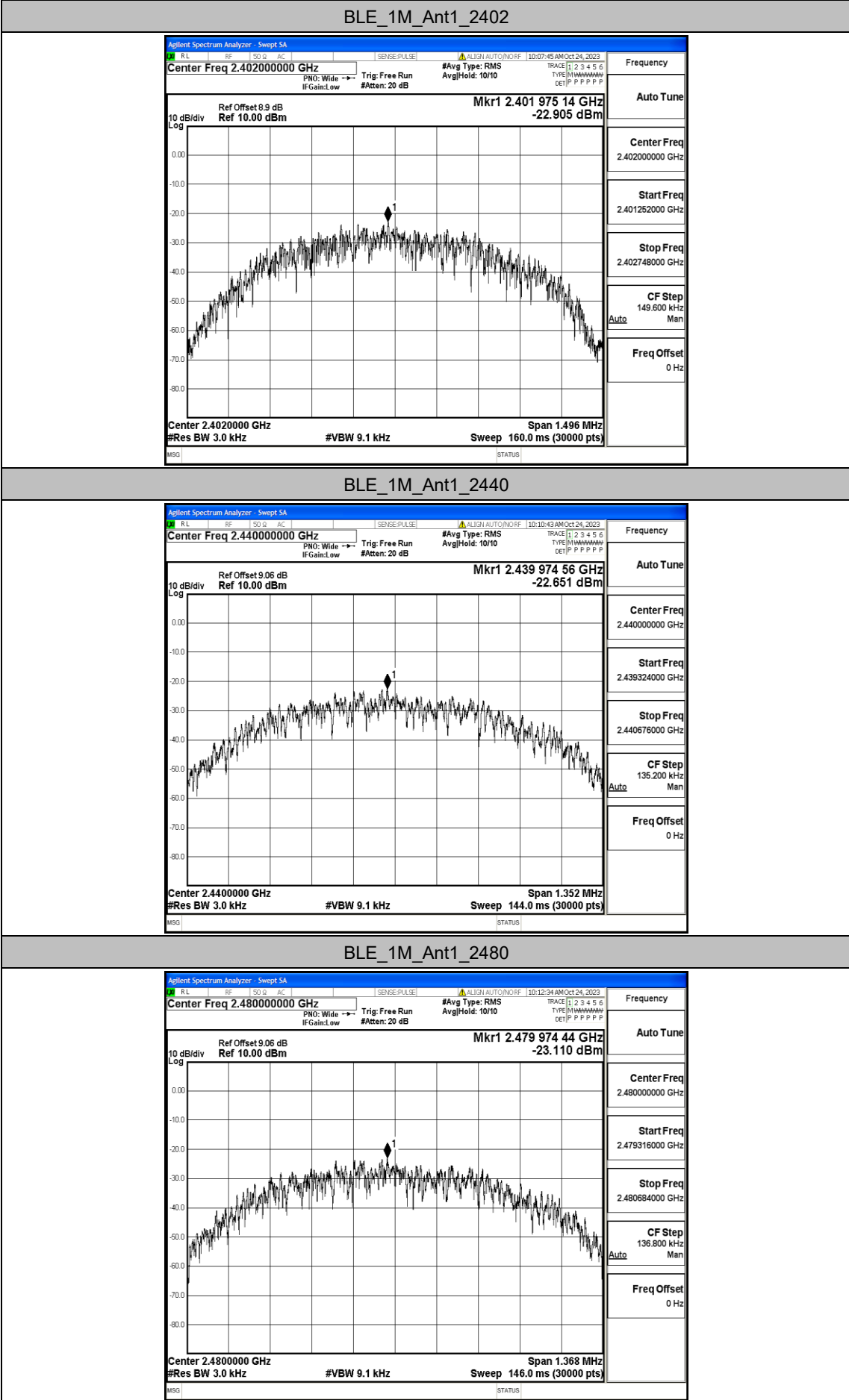


Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-22.91	≤8.00	PASS
		2440	-22.65	≤8.00	PASS
		2480	-23.11	≤8.00	PASS

Test Graphs

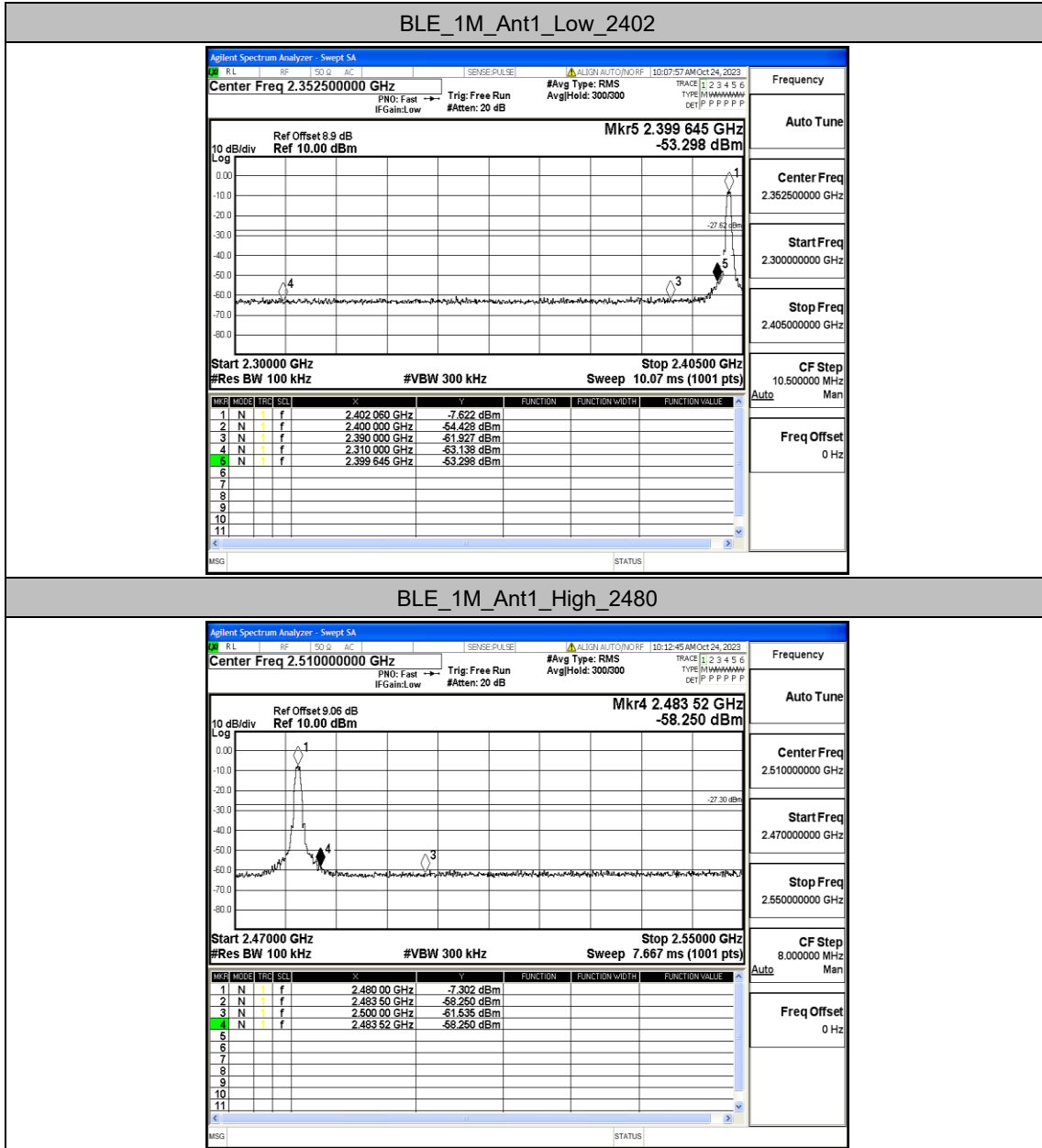


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-7.62	-53.3	≤-27.62	PASS
		High	2480	-7.30	-58.25	≤-27.3	PASS

Test Graphs

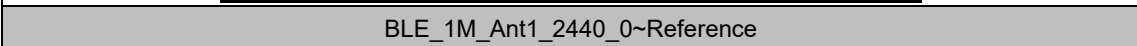
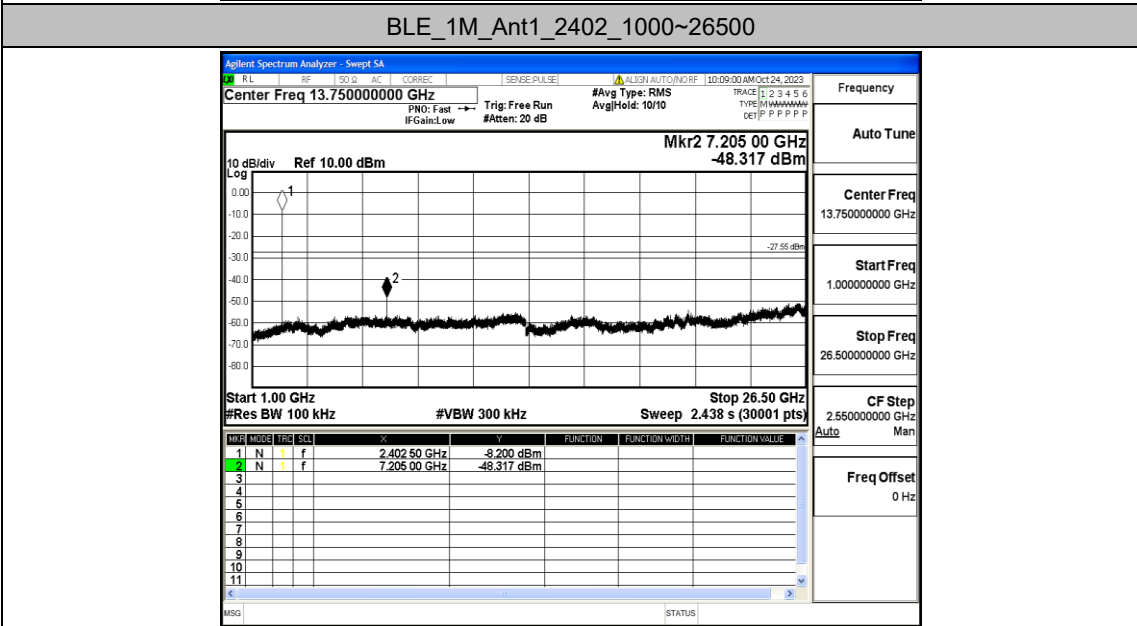
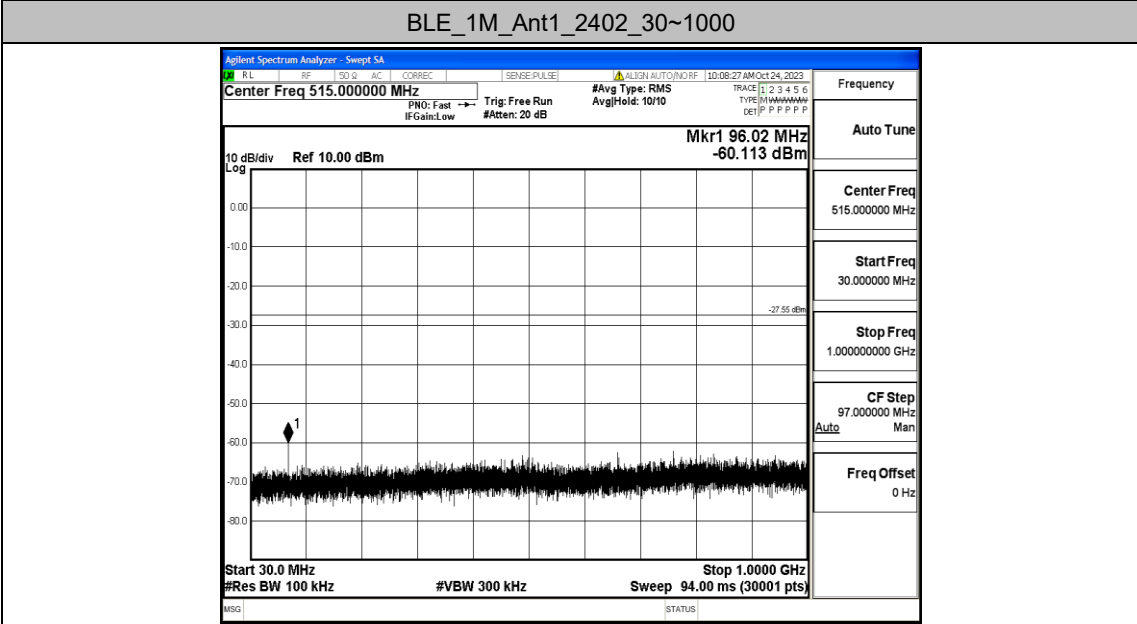
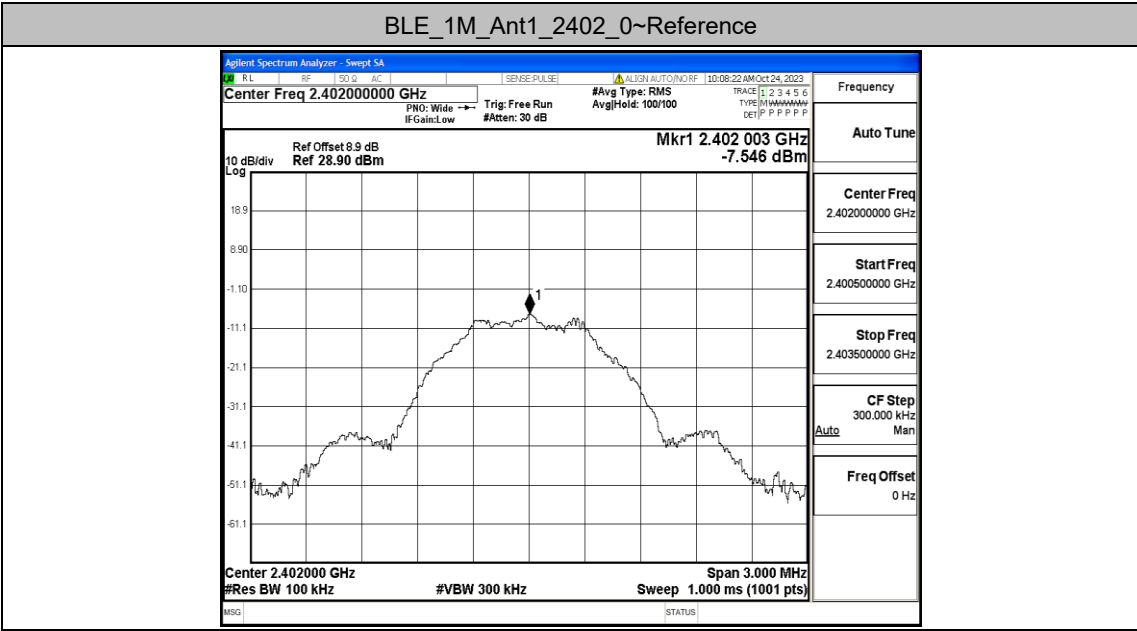


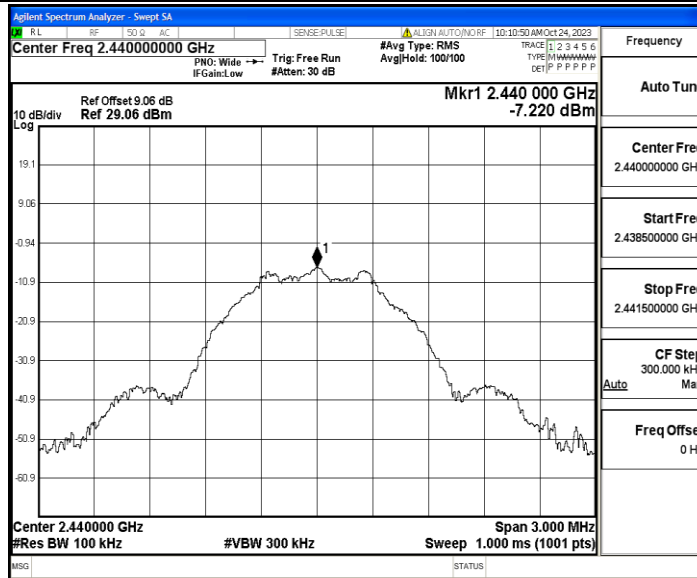
Appendix F: Conducted Spurious Emission

Test Result

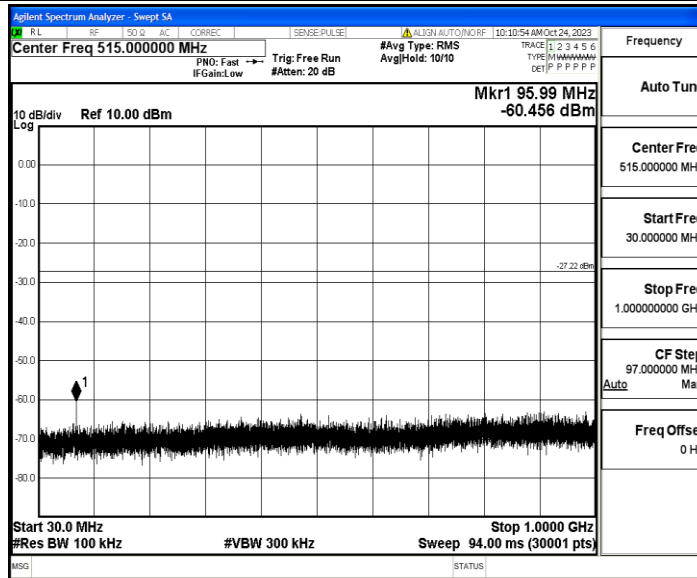
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-7.55	-7.55	---	PASS
			30~1000	-7.55	-60.11	≤-27.55	PASS
			1000~26500	-7.55	-48.32	≤-27.55	PASS
		2440	Reference	-7.22	-7.22	---	PASS
			30~1000	-7.22	-60.46	≤-27.22	PASS
			1000~26500	-7.22	-50.22	≤-27.22	PASS
		2480	Reference	-7.47	-7.47	---	PASS
			30~1000	-7.47	-59.76	≤-27.47	PASS
			1000~26500	-7.47	-49.36	≤-27.47	PASS

Test Graphs

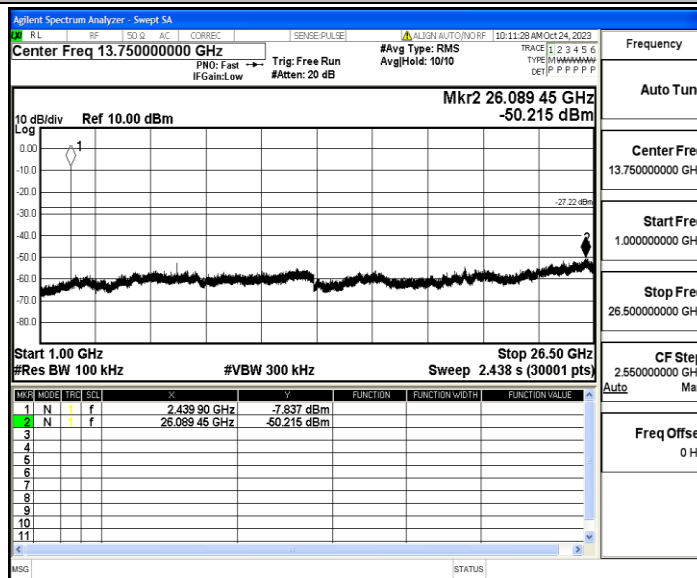




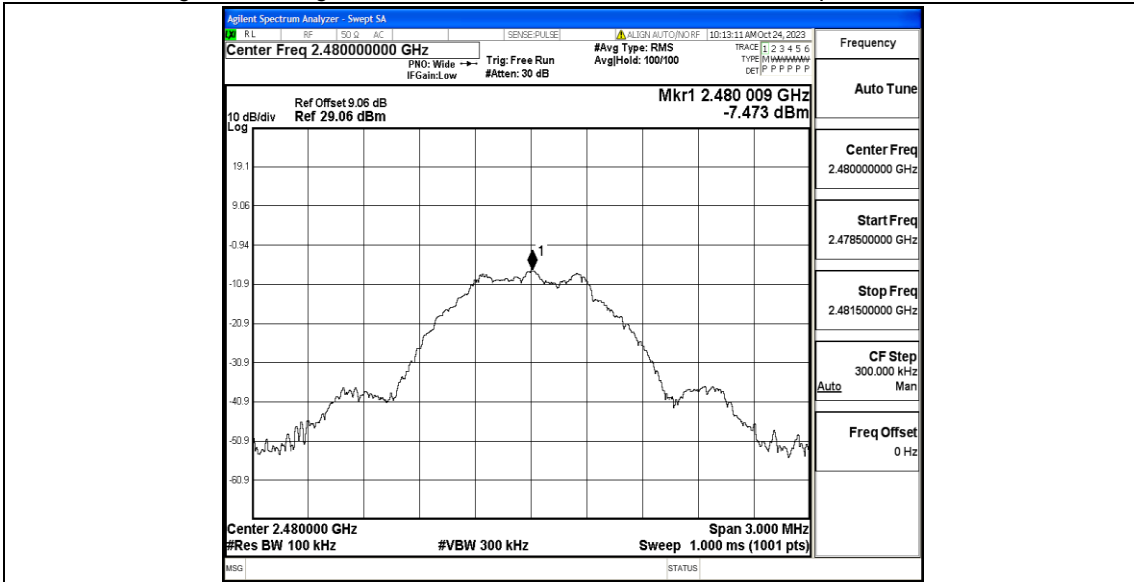
BLE_1M_Ant1_2440_30~1000



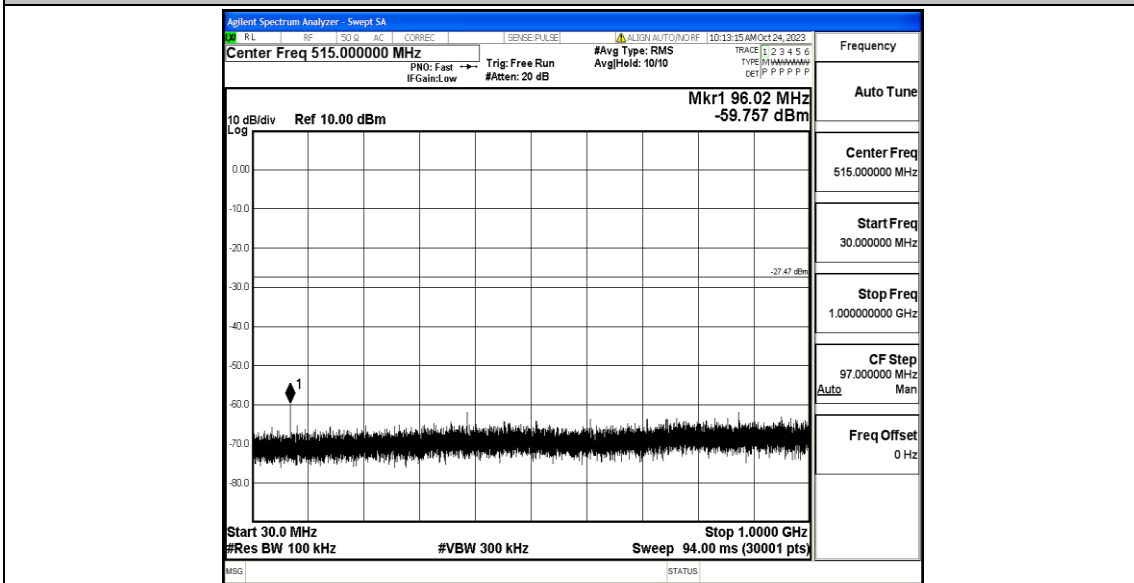
BLE_1M_Ant1_2440_1000~26500



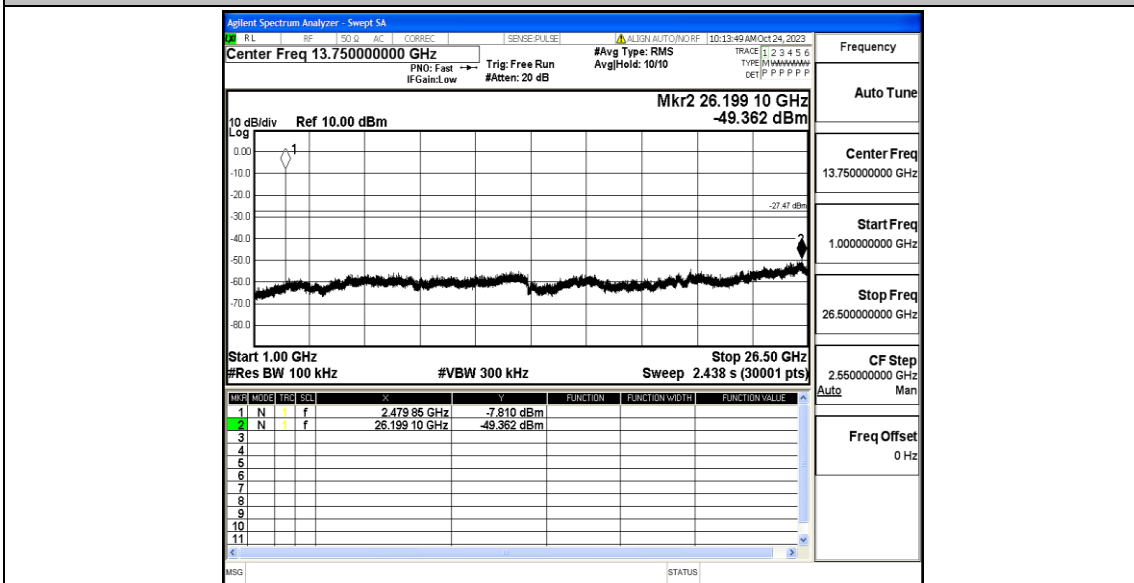
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

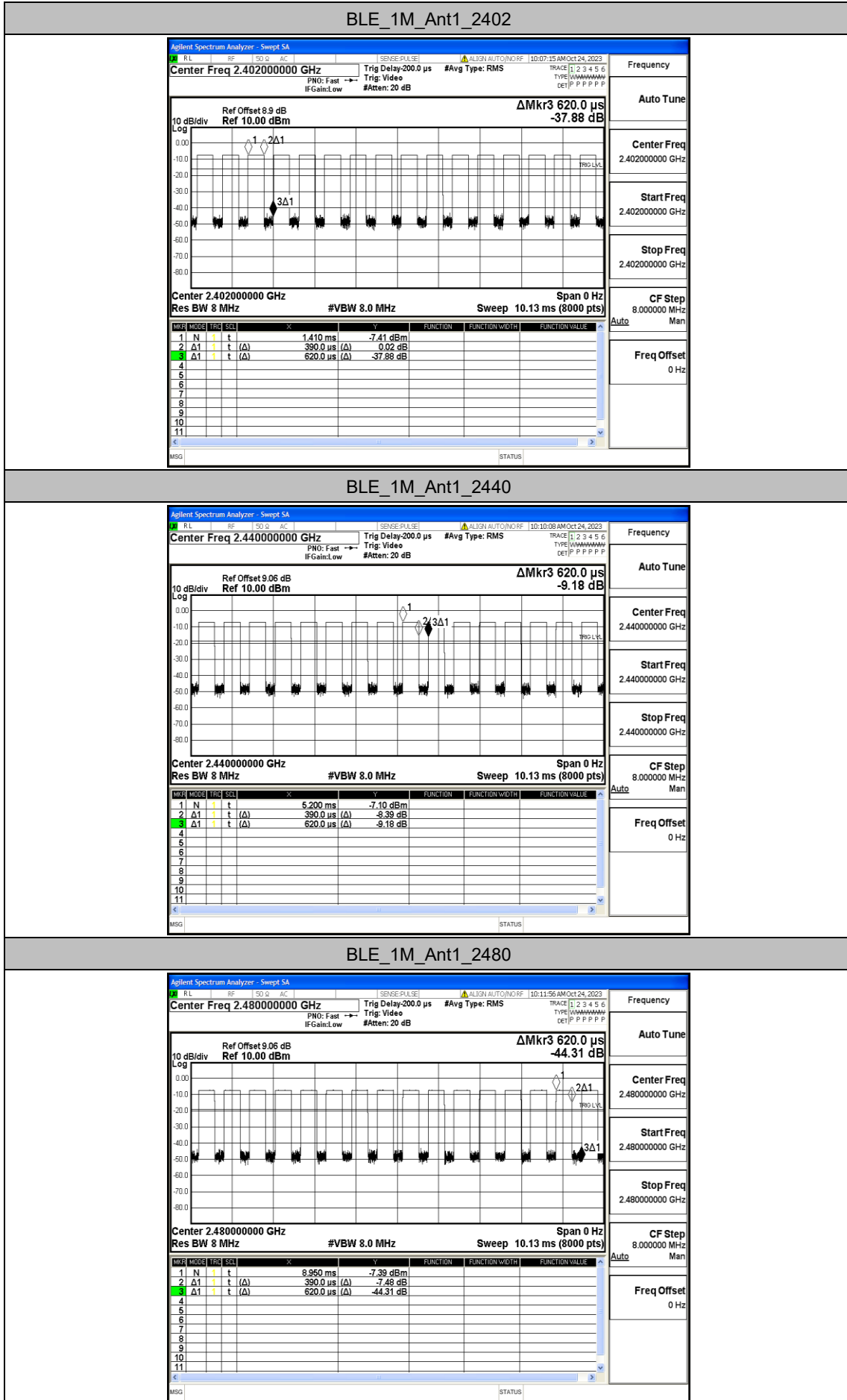


Appendix G: Duty Cycle

Test Result

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

Test Graphs



Appendix H: Emissions in Restricted Bands

Test Result

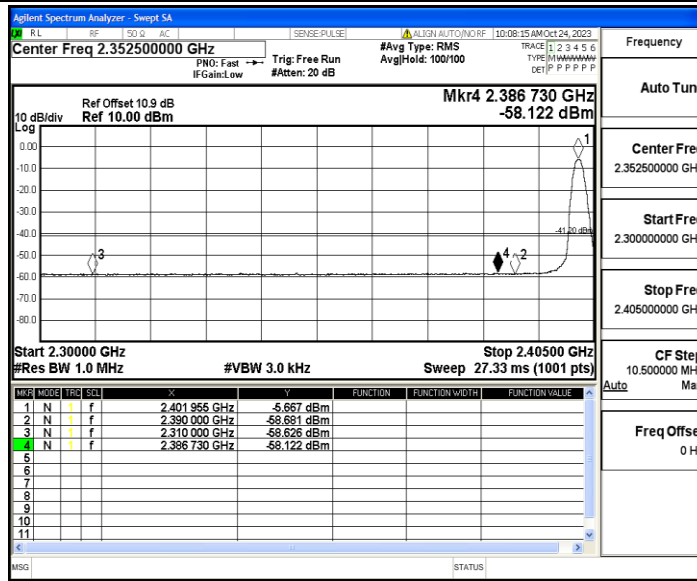
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-58.63	≤-41.20	PASS
				AV	2386.730	-58.12	≤-41.20	PASS
				AV	2390.000	-58.68	≤-41.20	PASS
				Peak	2310.000	-52.43	≤-21.20	PASS
				Peak	2383.265	-49.48	≤-21.20	PASS
				Peak	2390.000	-51.13	≤-21.20	PASS
		High	2480	AV	2483.500	-54.67	≤-41.20	PASS
				AV	2483.520	-54.67	≤-41.20	PASS
				AV	2500.000	-58.05	≤-41.20	PASS
				Peak	2483.500	-48.71	≤-21.20	PASS
				Peak	2484.560	-43.05	≤-21.20	PASS
				Peak	2500.000	-51.34	≤-21.20	PASS

Note:

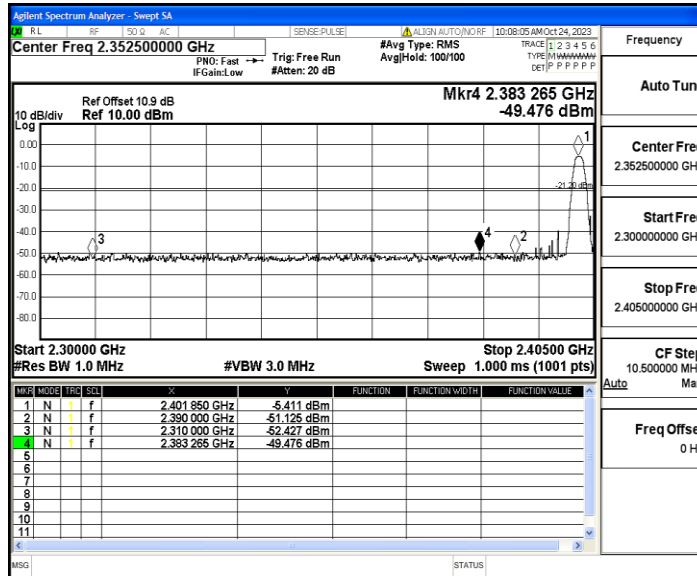
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

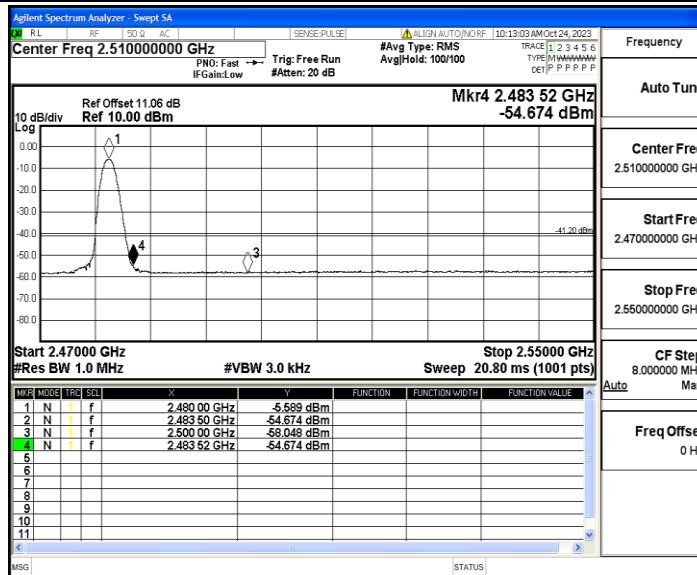
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

