

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

Product Name: Smart Watch

Trade Mark: Tranya

Test Model: TranyaGo

FCC ID: 2A4AX-QY01

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

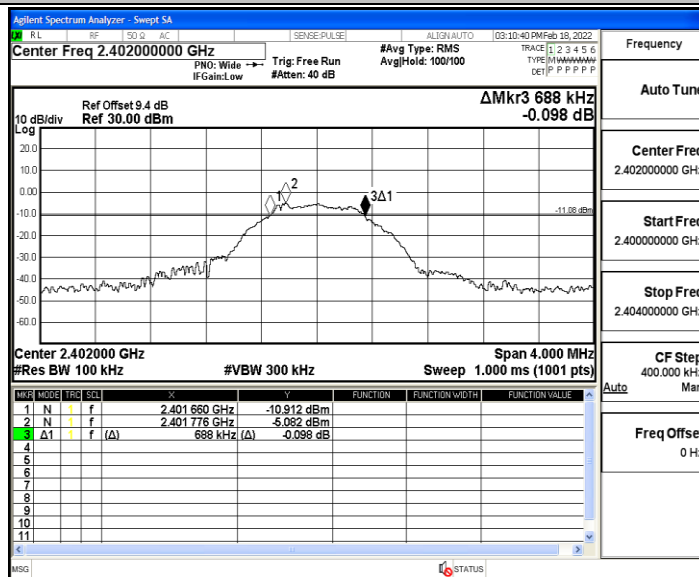
Appendix A: DTS Bandwidth

Test Result

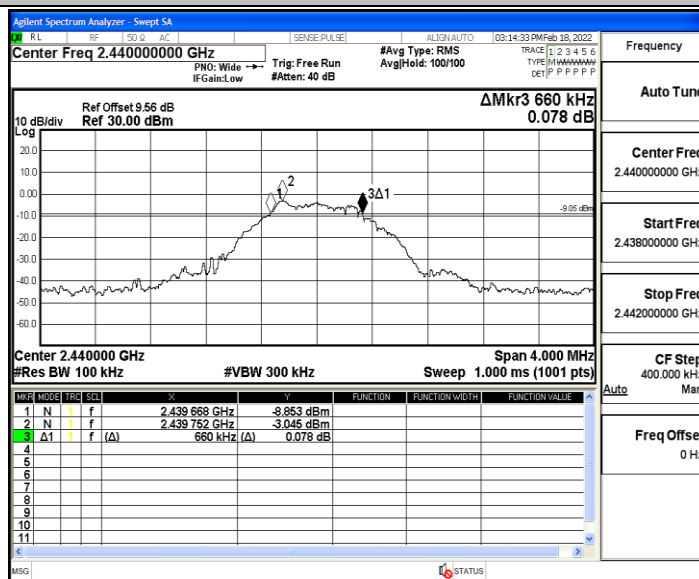
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.688	2401.660	2402.348	0.5	PASS
		2440	0.660	2439.668	2440.328	0.5	PASS
		2480	0.660	2479.664	2480.324	0.5	PASS

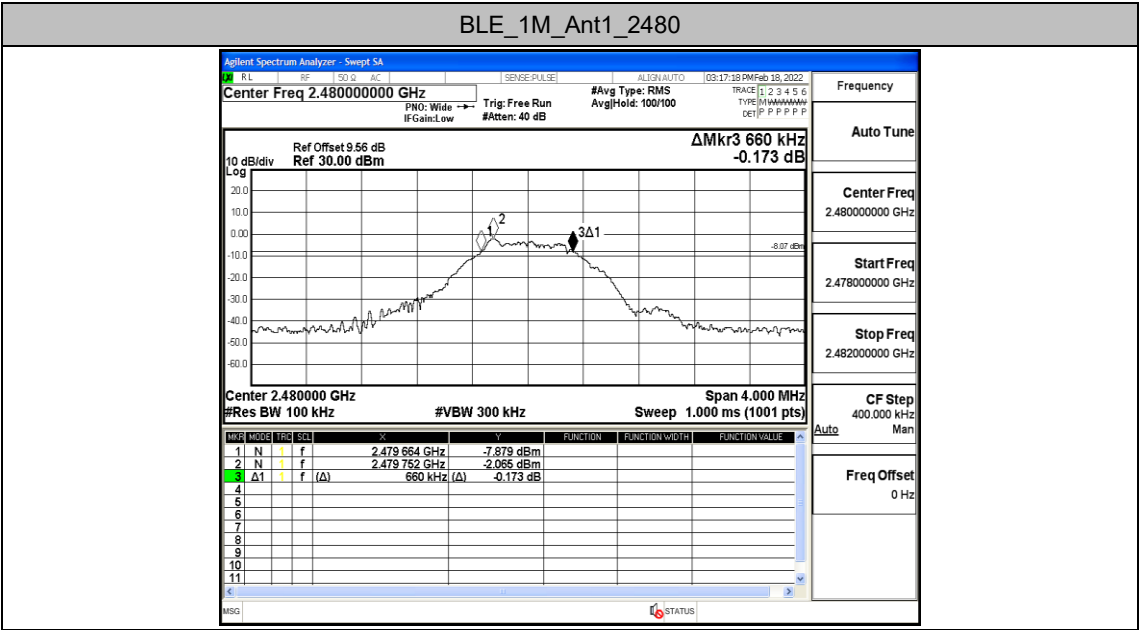
Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440





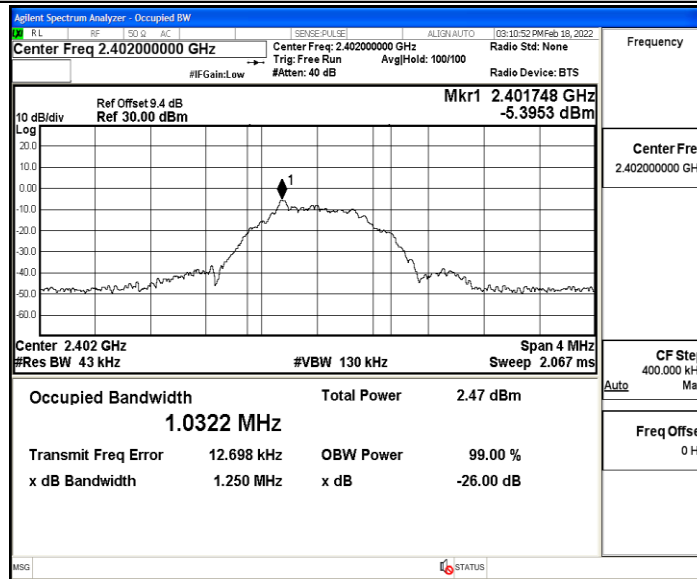
Appendix B: Occupied Channel Bandwidth

Test Result

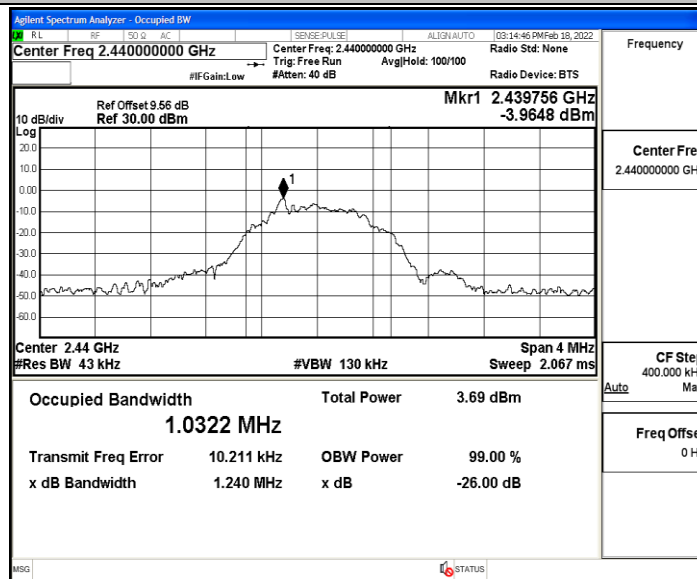
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0322	2401.497	2402.529	---	---
		2440	1.0322	2439.494	2440.526	---	---
		2480	1.0315	2479.495	2480.526	---	---

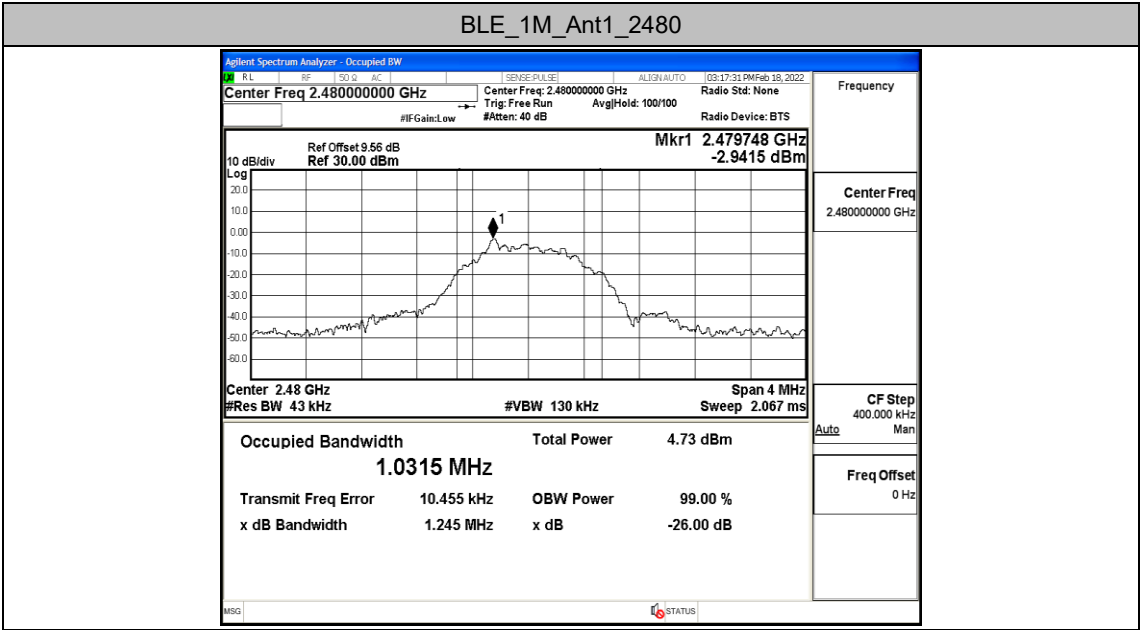
Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



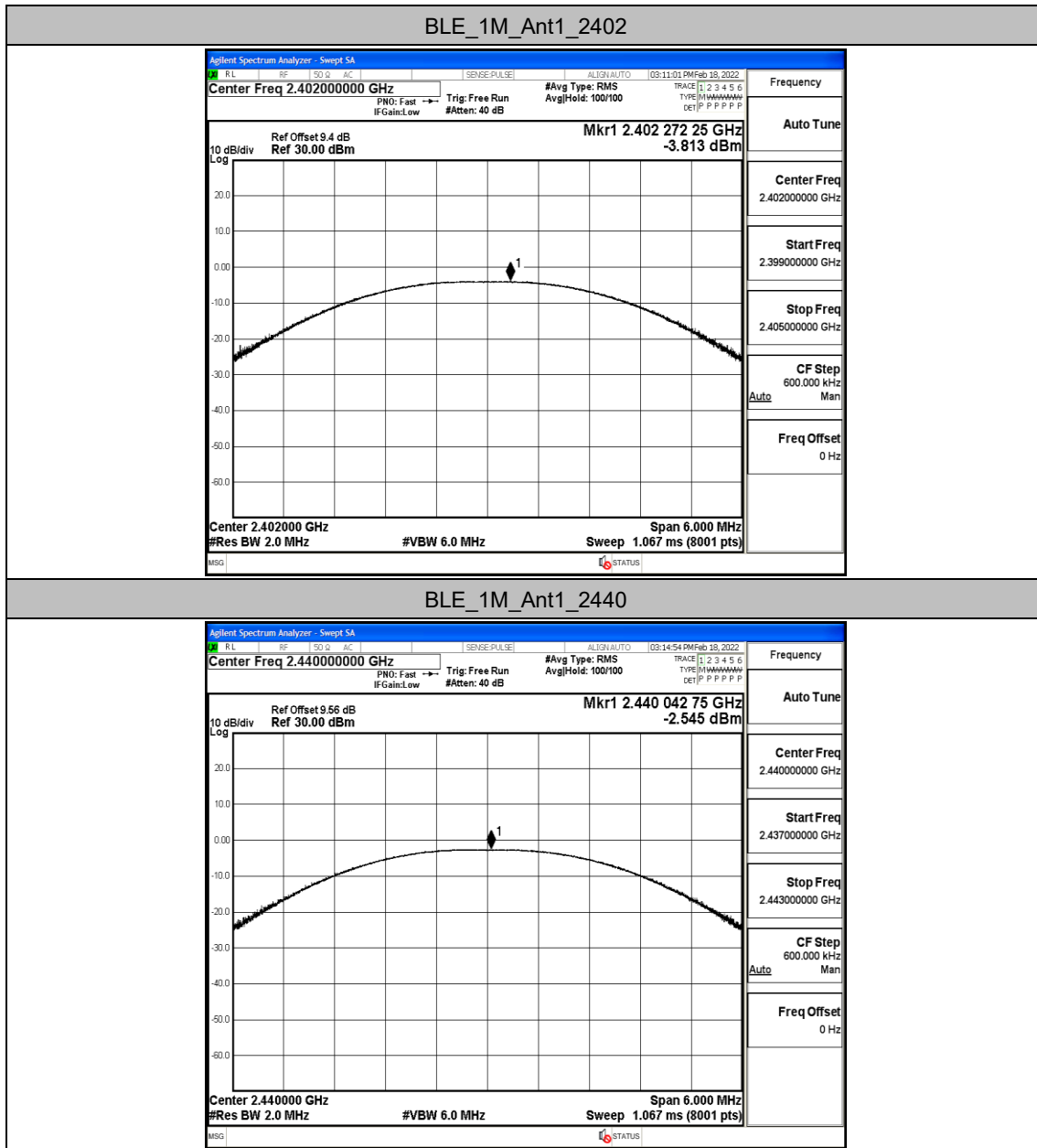


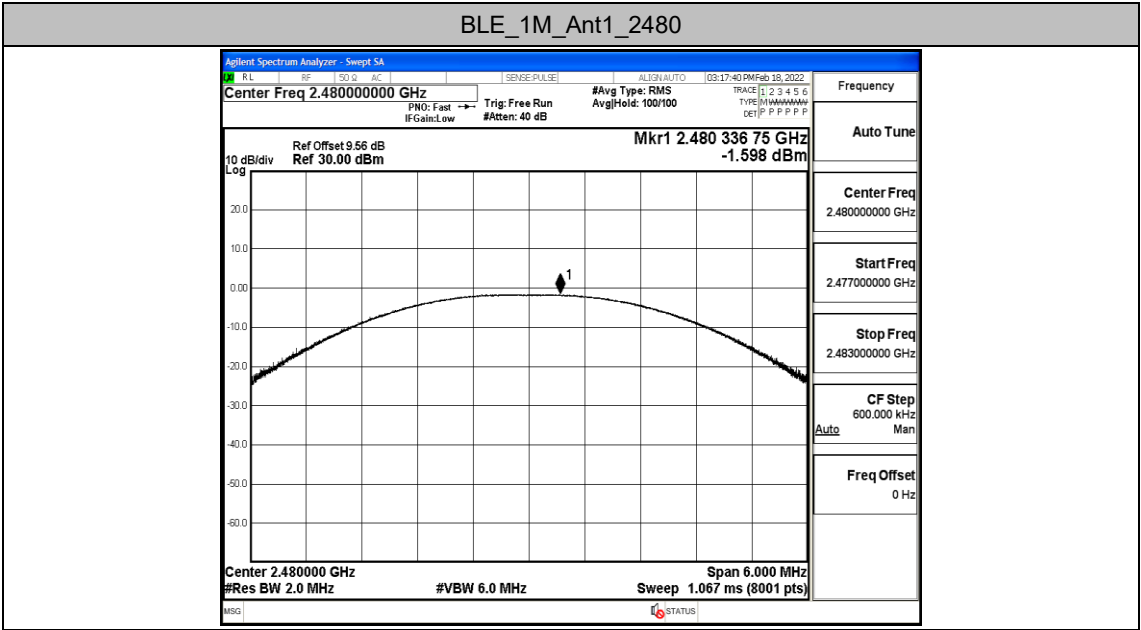
Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.81	≤30	PASS
		2440	-2.55	≤30	PASS
		2480	-1.6	≤30	PASS

Test Graphs



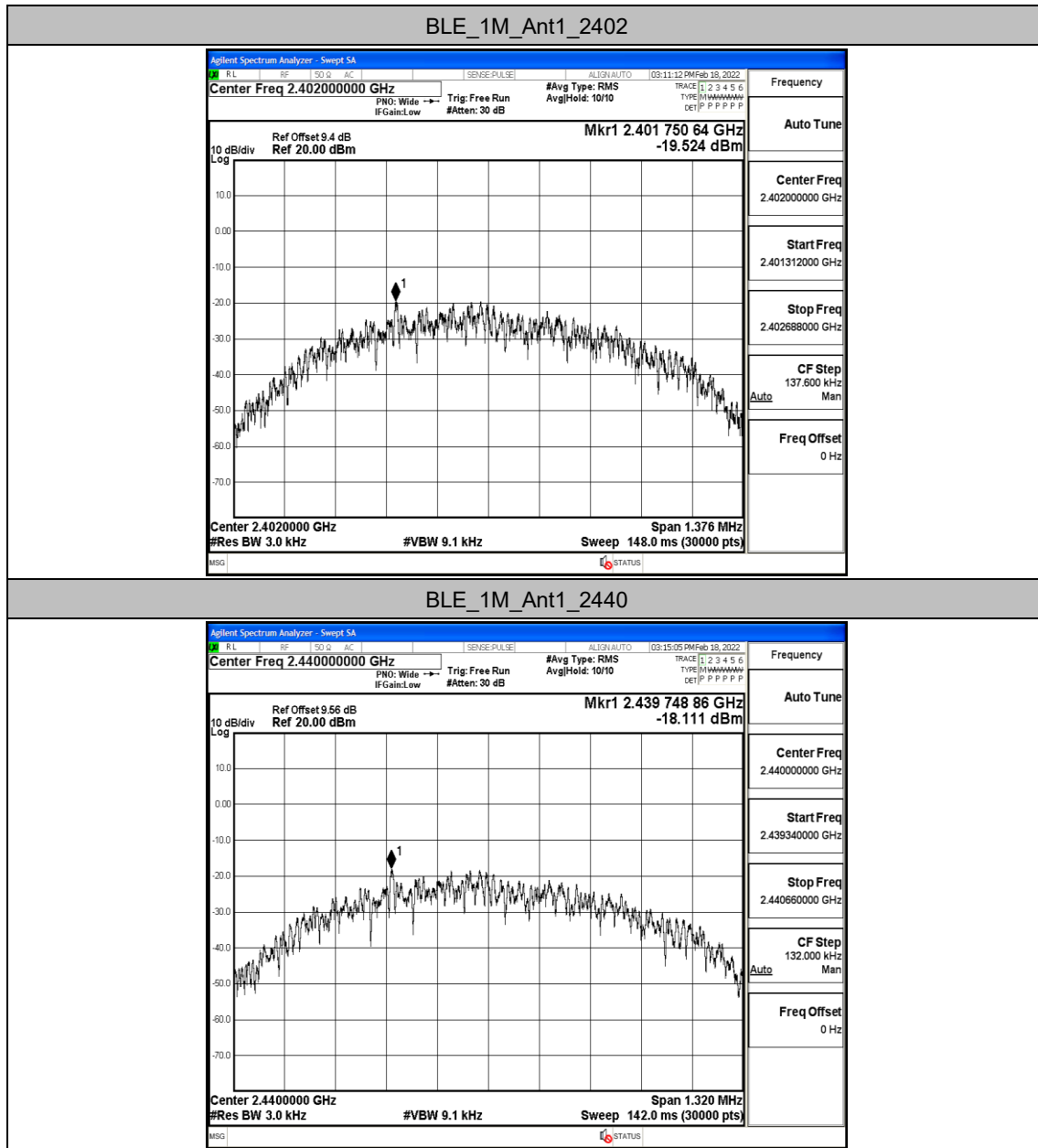


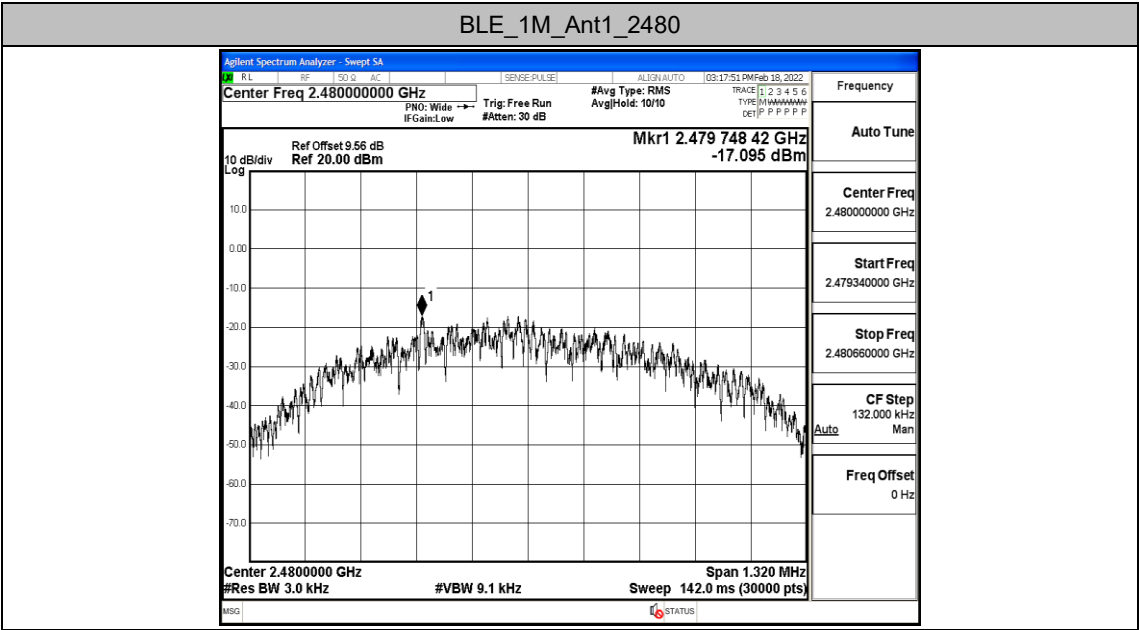
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.52	≤8.00	PASS
		2440	-18.11	≤8.00	PASS
		2480	-17.1	≤8.00	PASS

Test Graphs



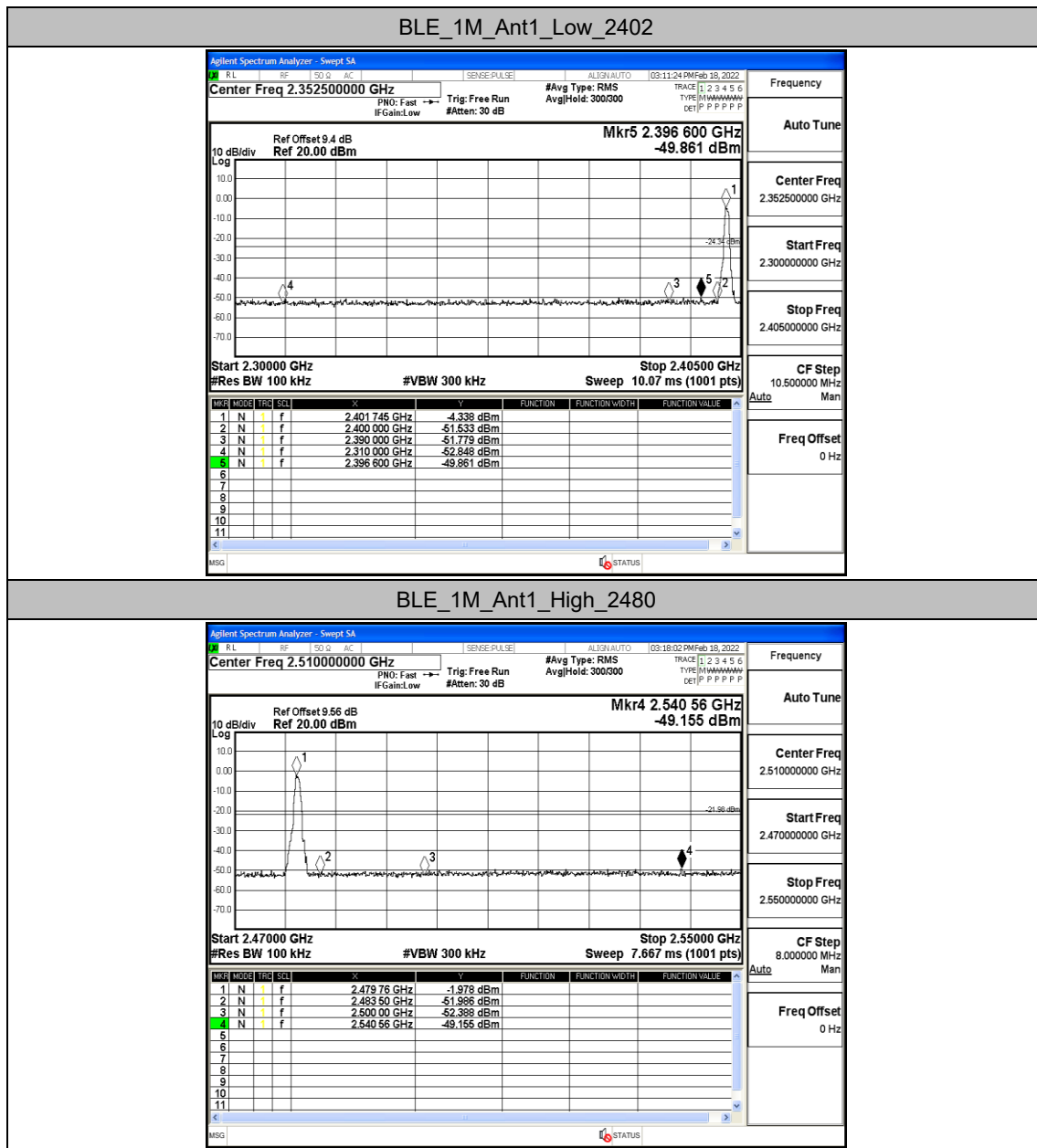


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.34	-49.86	≤-24.34	PASS
		High	2480	-1.98	-49.16	≤-21.98	PASS

Test Graphs

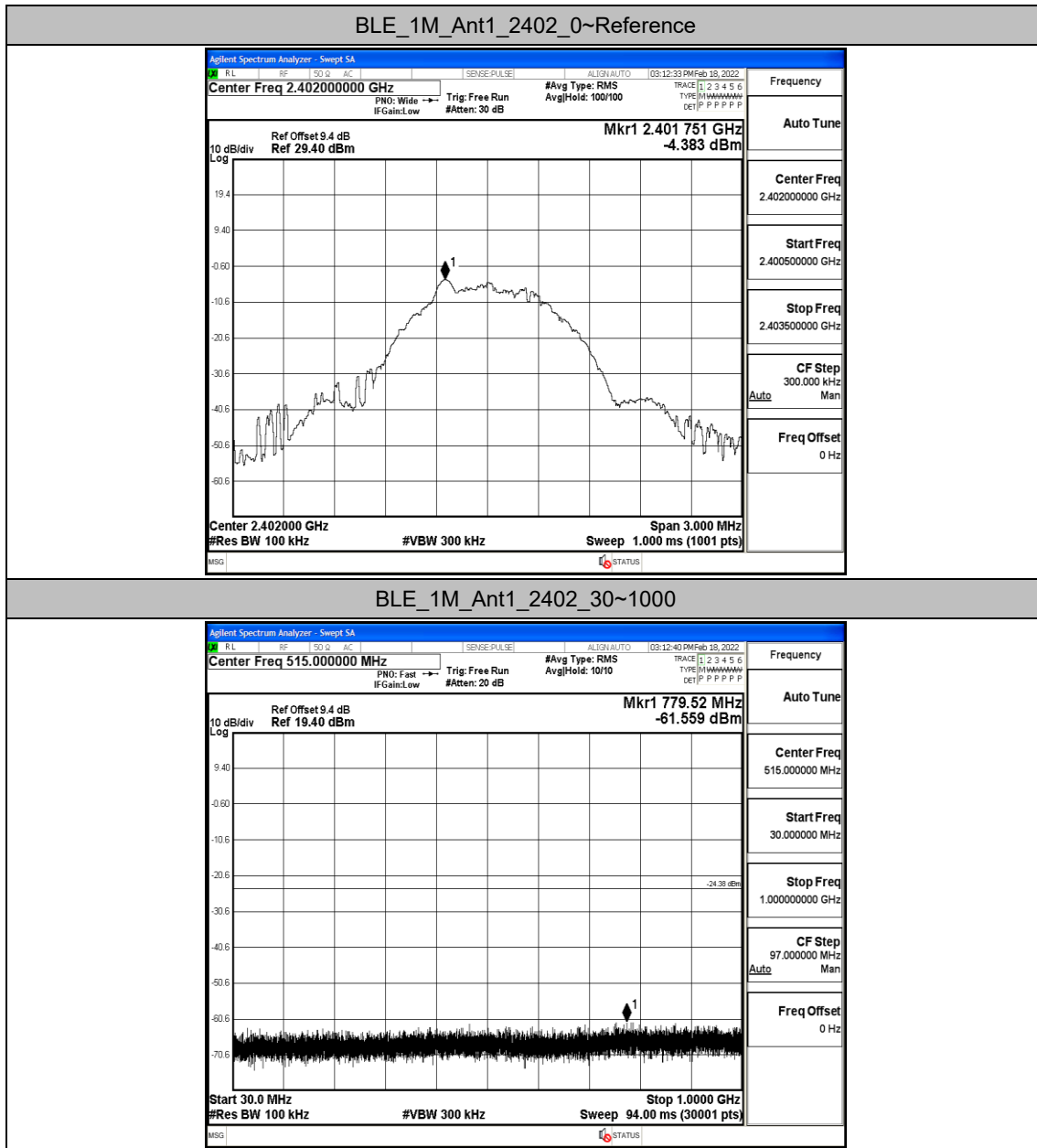


Appendix F: Conducted Spurious Emission

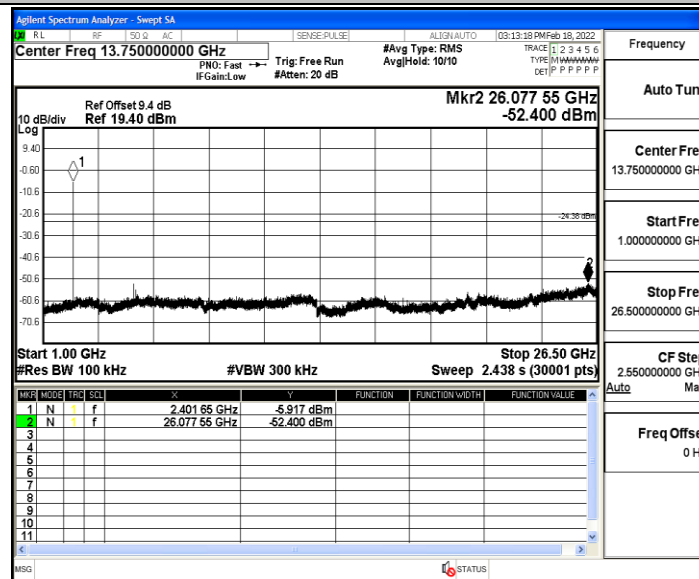
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.38	-4.38	---	PASS
			30~1000	-4.38	-61.56	≤-24.38	PASS
			1000~26500	-4.38	-52.4	≤-24.38	PASS
		2440	Reference	-3.07	-3.07	---	PASS
			30~1000	-3.07	-61.49	≤-23.07	PASS
			1000~26500	-3.07	-51.37	≤-23.07	PASS
		2480	Reference	-1.99	-1.99	---	PASS
			30~1000	-1.99	-61.2	≤-21.99	PASS
			1000~26500	-1.99	-52.61	≤-21.99	PASS

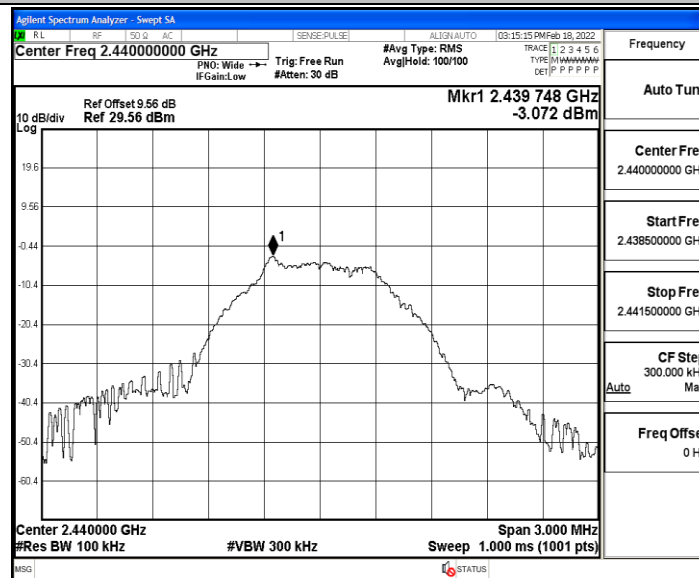
Test Graphs



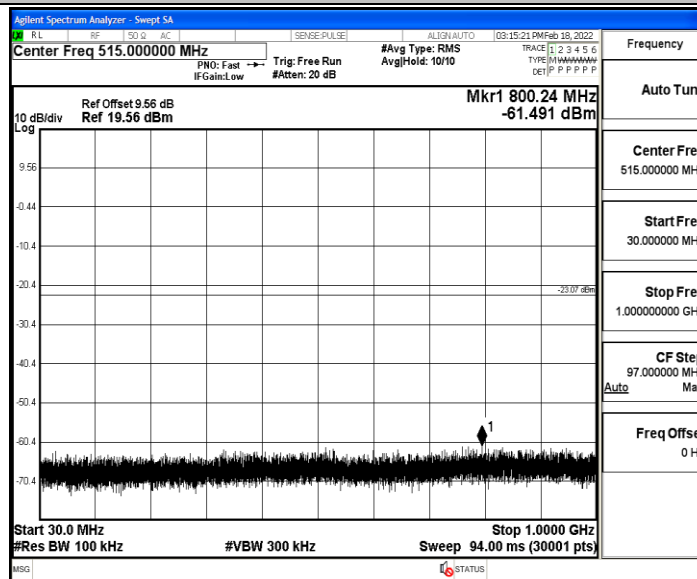
BLE_1M_Ant1_2402_1000~26500



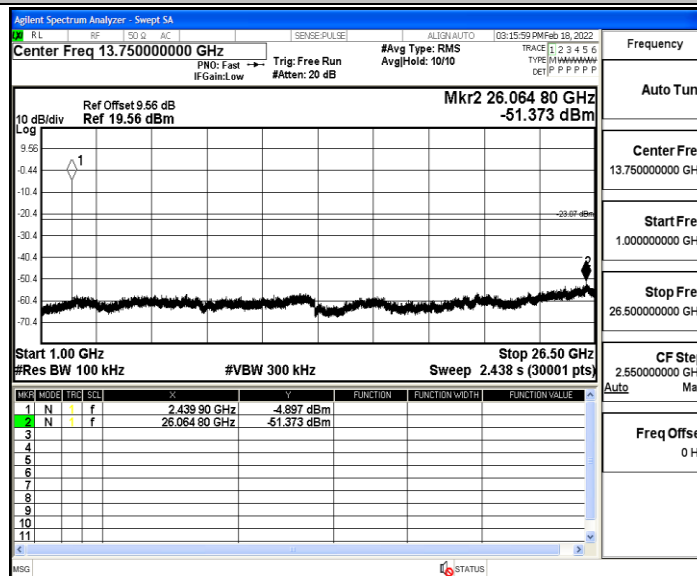
BLE_1M_Ant1_2440_0~Reference



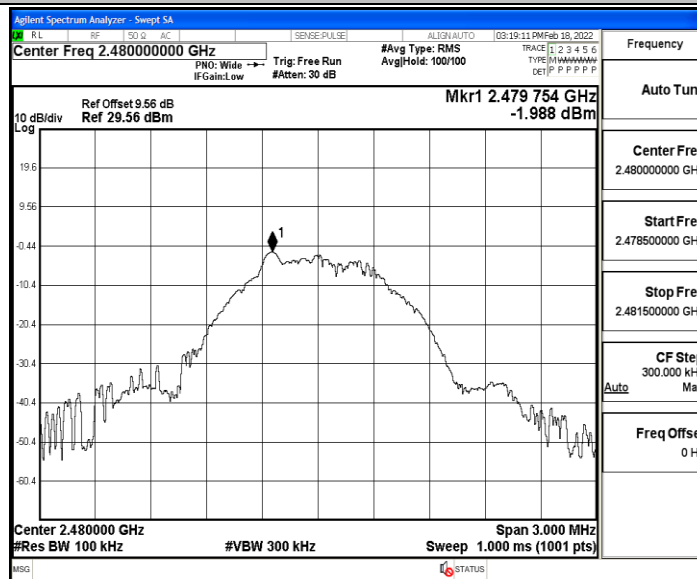
BLE_1M_Ant1_2440_30~1000



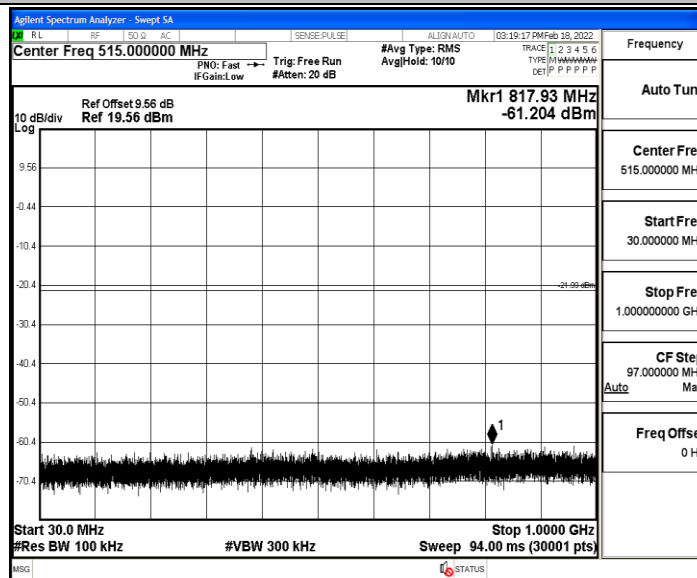
BLE_1M_Ant1_2440_1000~26500

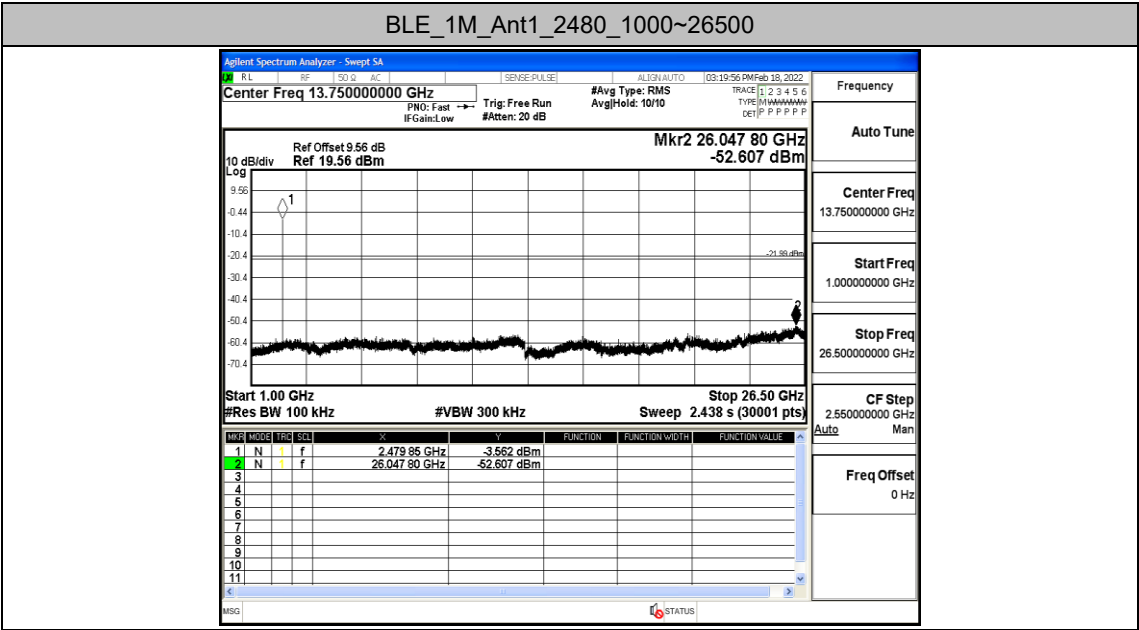


BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000





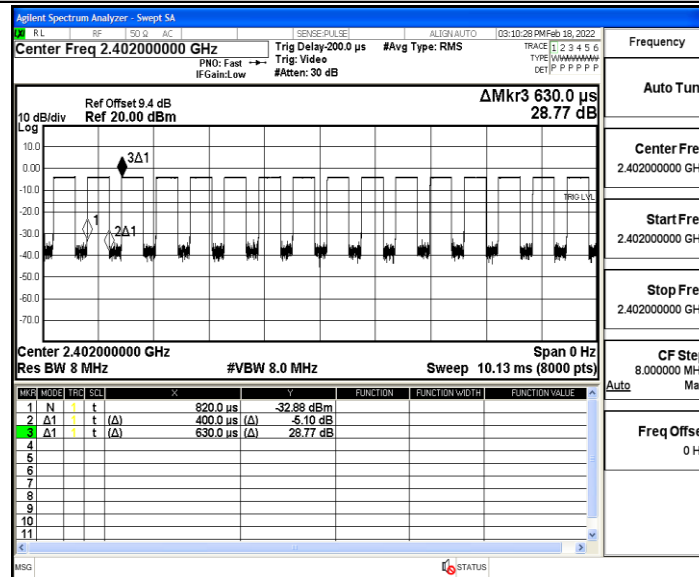
Appendix G: Duty Cycle

Test Result

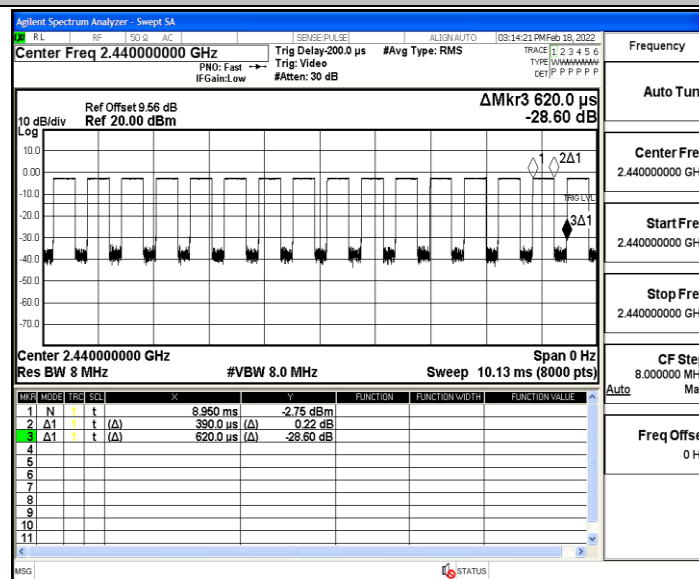
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T
BLE_1M	Ant1	2402	0.40	0.63	63.49	2.50
		2440	0.39	0.62	62.90	2.56
		2480	0.40	0.63	63.49	2.50

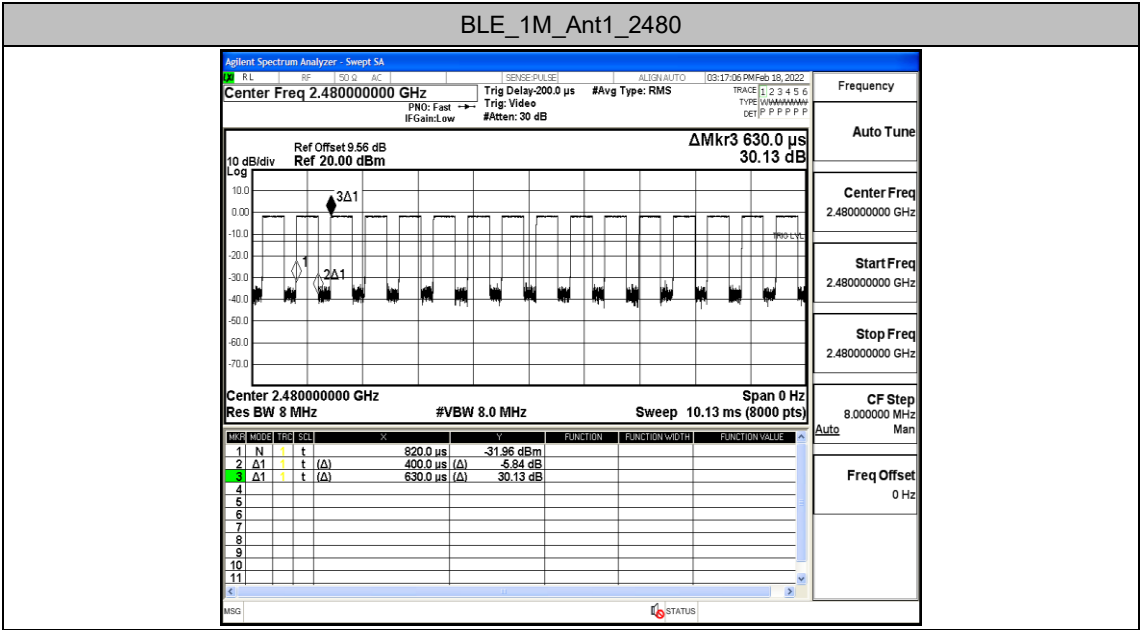
Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440





Appendix H: Emissions in Restricted Bands

Test Result

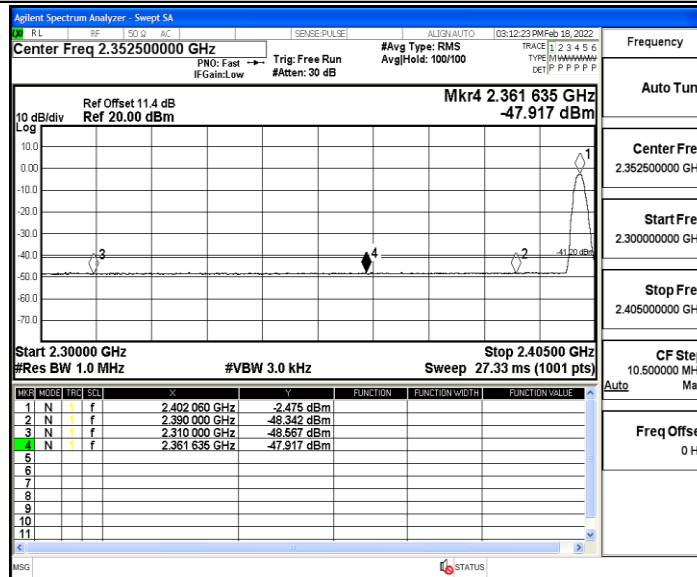
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.57	≤-41.20	PASS
				AV	2361.635	-47.92	≤-41.20	PASS
				AV	2390.000	-48.34	≤-41.20	PASS
				Peak	2310.000	-42.85	≤-21.20	PASS
				Peak	2378.435	-38.85	≤-21.20	PASS
				Peak	2390.000	-42.27	≤-21.20	PASS
		High	2480	AV	2483.500	-47.4	≤-41.20	PASS
				AV	2494.000	-47.22	≤-41.20	PASS
				AV	2500.000	-47.55	≤-41.20	PASS
				Peak	2483.500	-41.84	≤-21.20	PASS
				Peak	2499.760	-38.83	≤-21.20	PASS
				Peak	2500.000	-41.71	≤-21.20	PASS

Note:

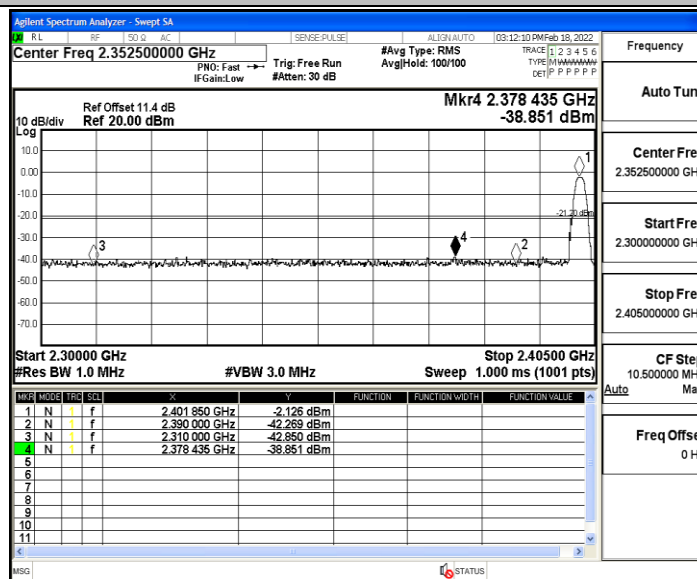
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

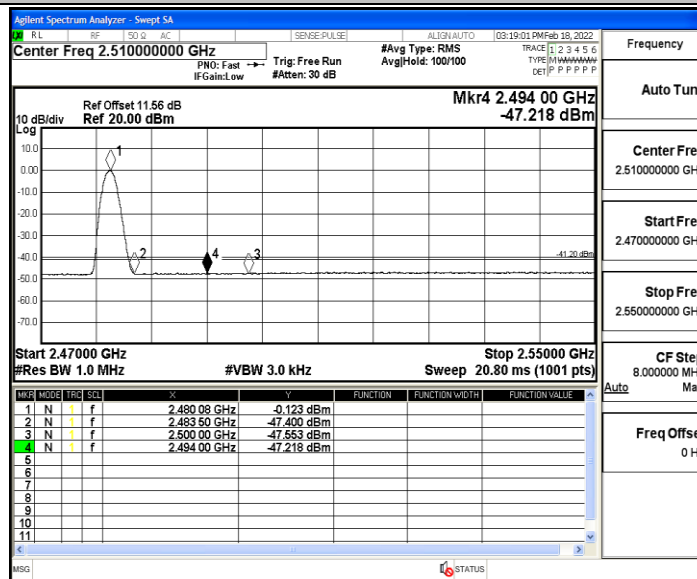
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

