

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

Product Name: Smart watches

Trade Mark: W&O

Test Model: X7 PLUS

FCC ID: 2A7G4-X7PLUS

Environmental Conditions

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

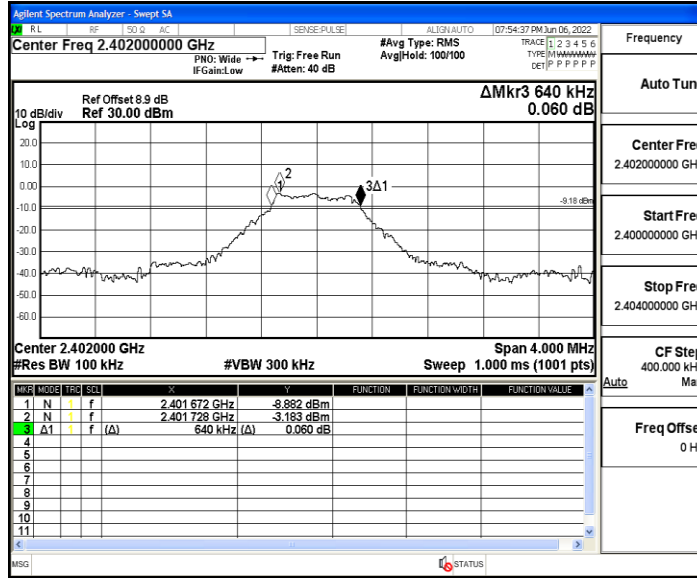
Appendix A: DTS Bandwidth

Test Result

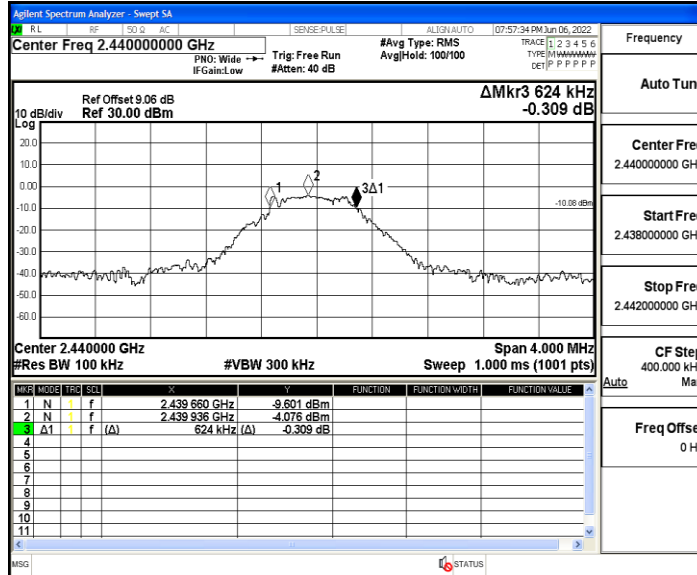
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.640	2401.672	2402.312	0.5	PASS
		2440	0.624	2439.660	2440.284	0.5	PASS
		2480	0.632	2479.676	2480.308	0.5	PASS

Test Graphs

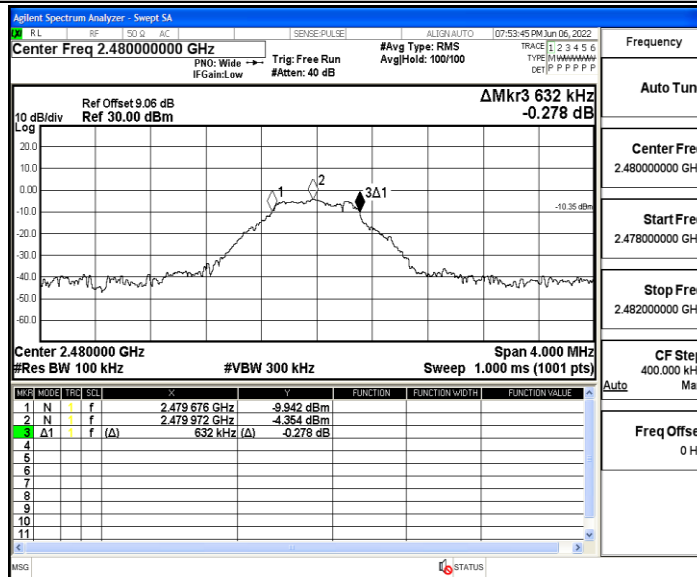
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

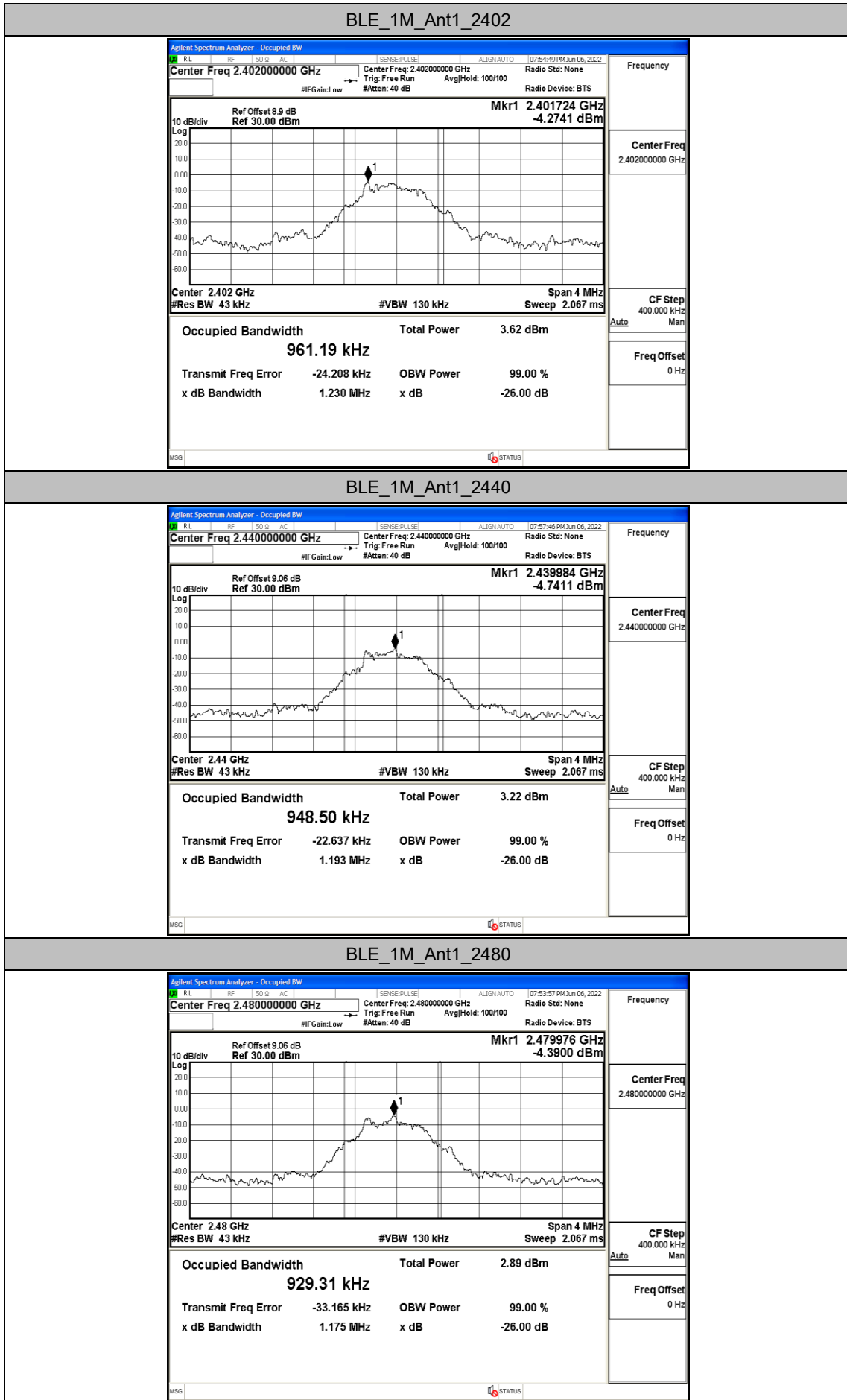


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.96119	2401.495	2402.456	---	---
		2440	0.94850	2439.503	2440.452	---	---
		2480	0.92931	2479.502	2480.431	---	---

Test Graphs

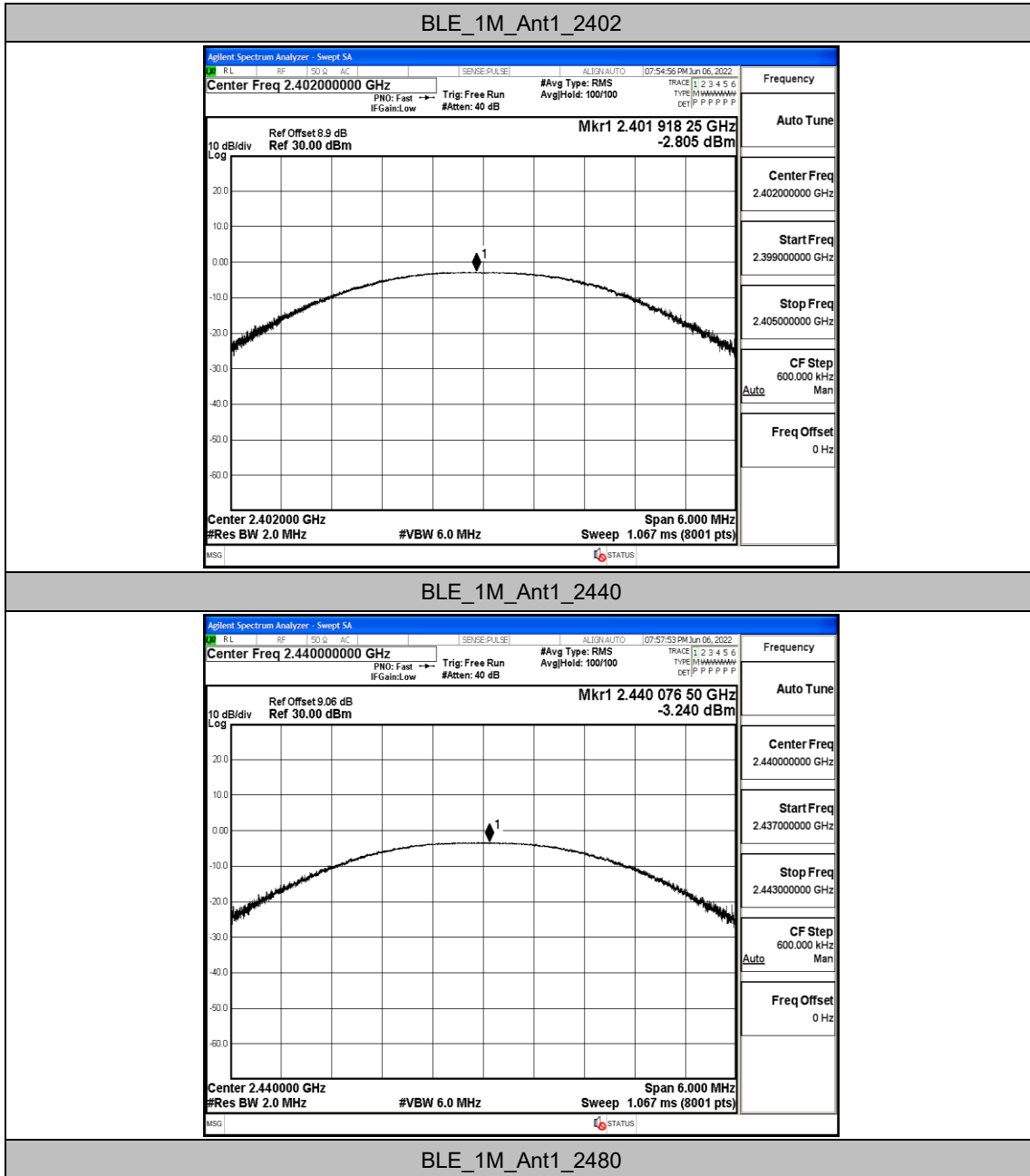


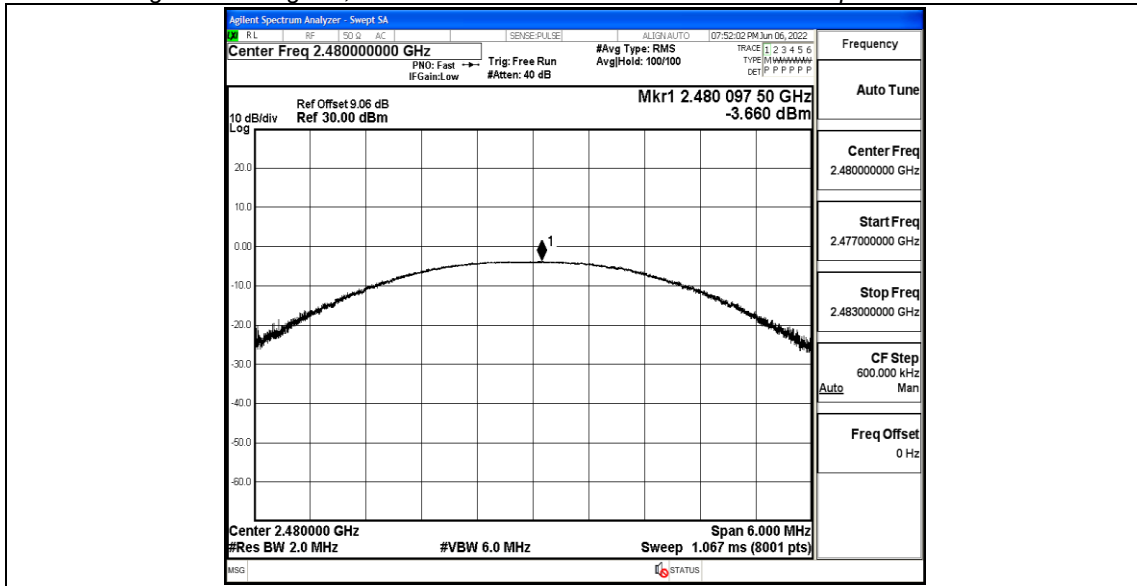
Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.81	≤30	PASS
		2440	-3.24	≤30	PASS
		2480	-3.66	≤30	PASS

Test Graphs



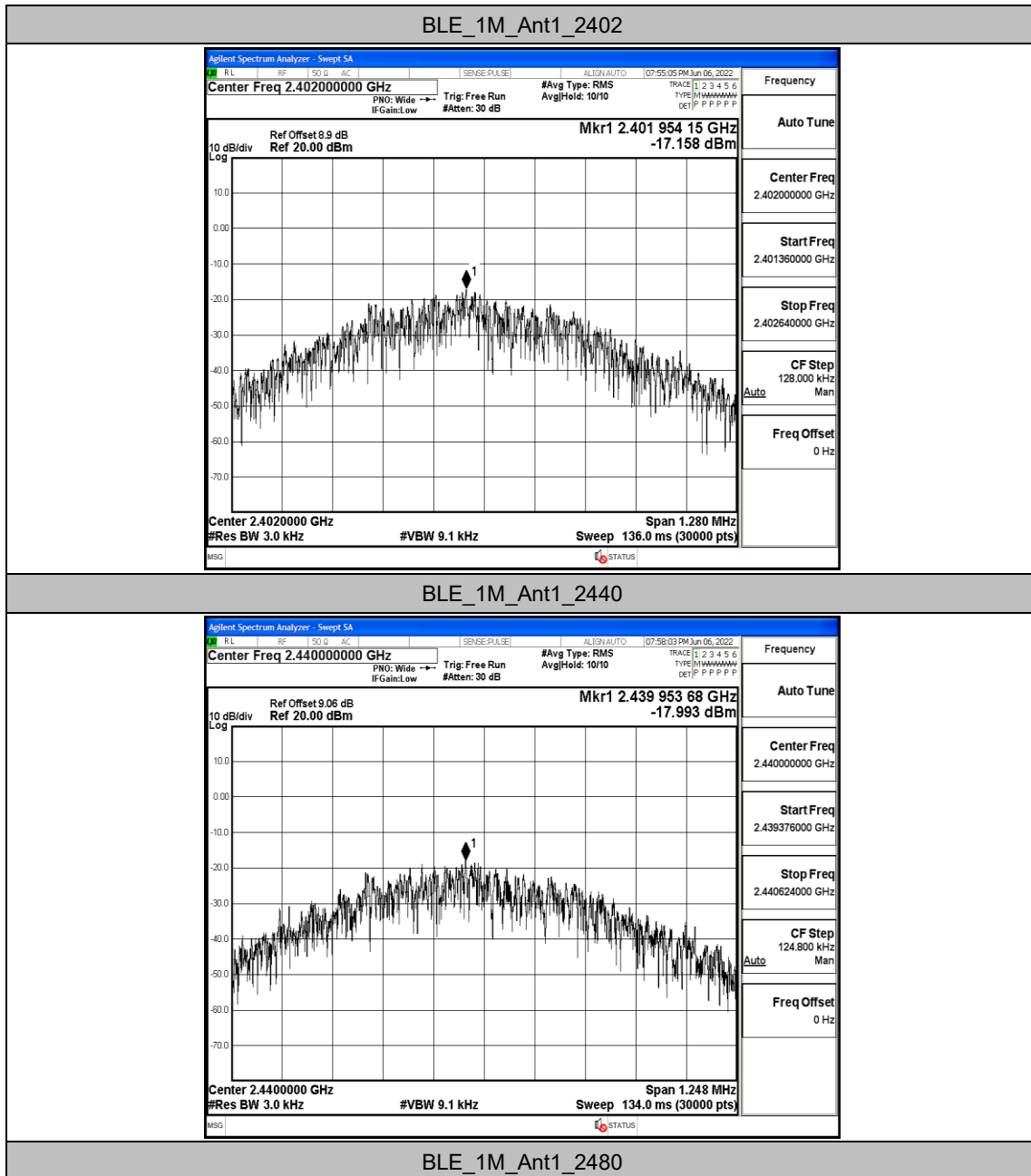


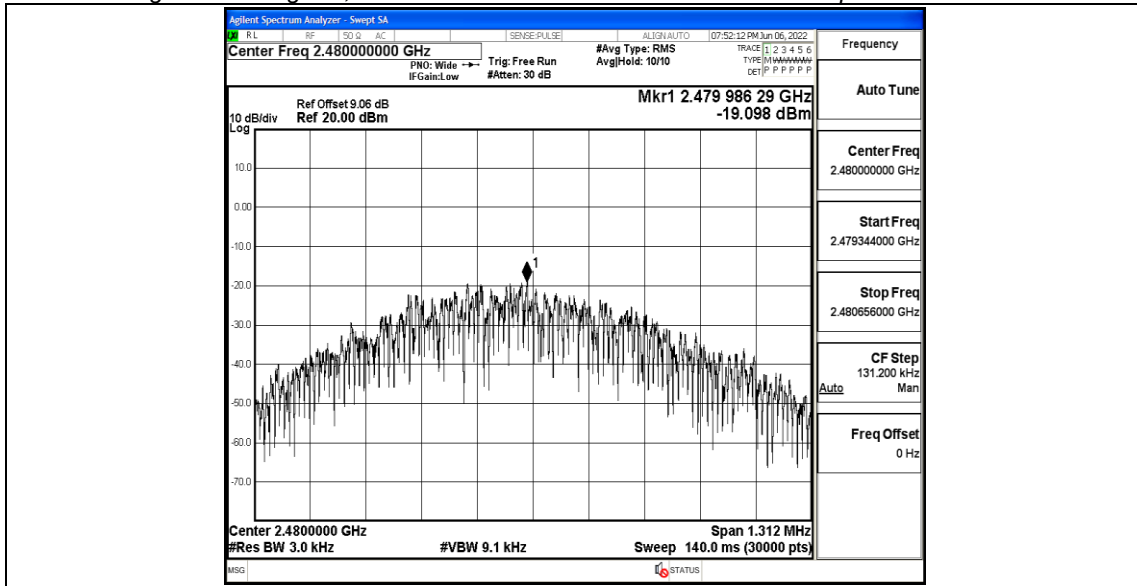
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-17.16	≤8.00	PASS
		2440	-17.99	≤8.00	PASS
		2480	-19.1	≤8.00	PASS

Test Graphs





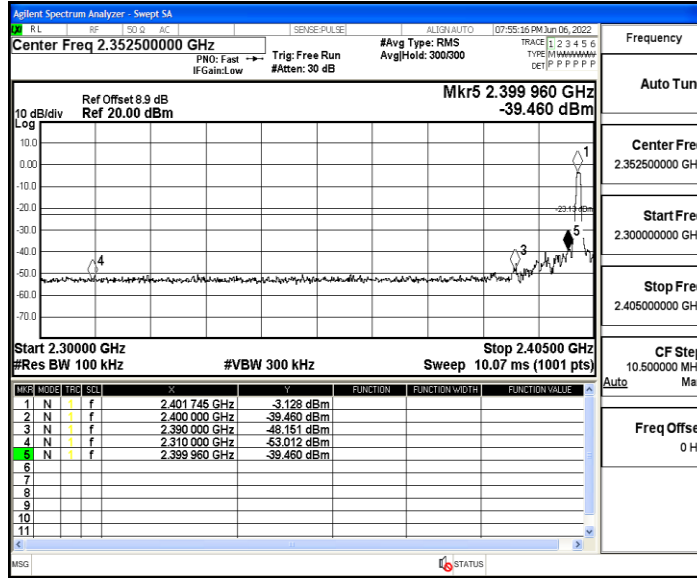
Appendix E: Band edge measurements

Test Result

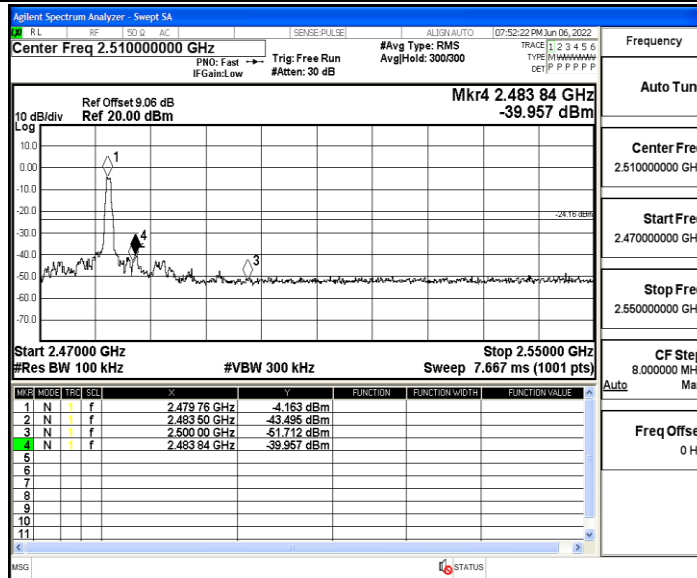
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.13	-39.46	≤-23.13	PASS
		High	2480	-4.16	-39.96	≤-24.16	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

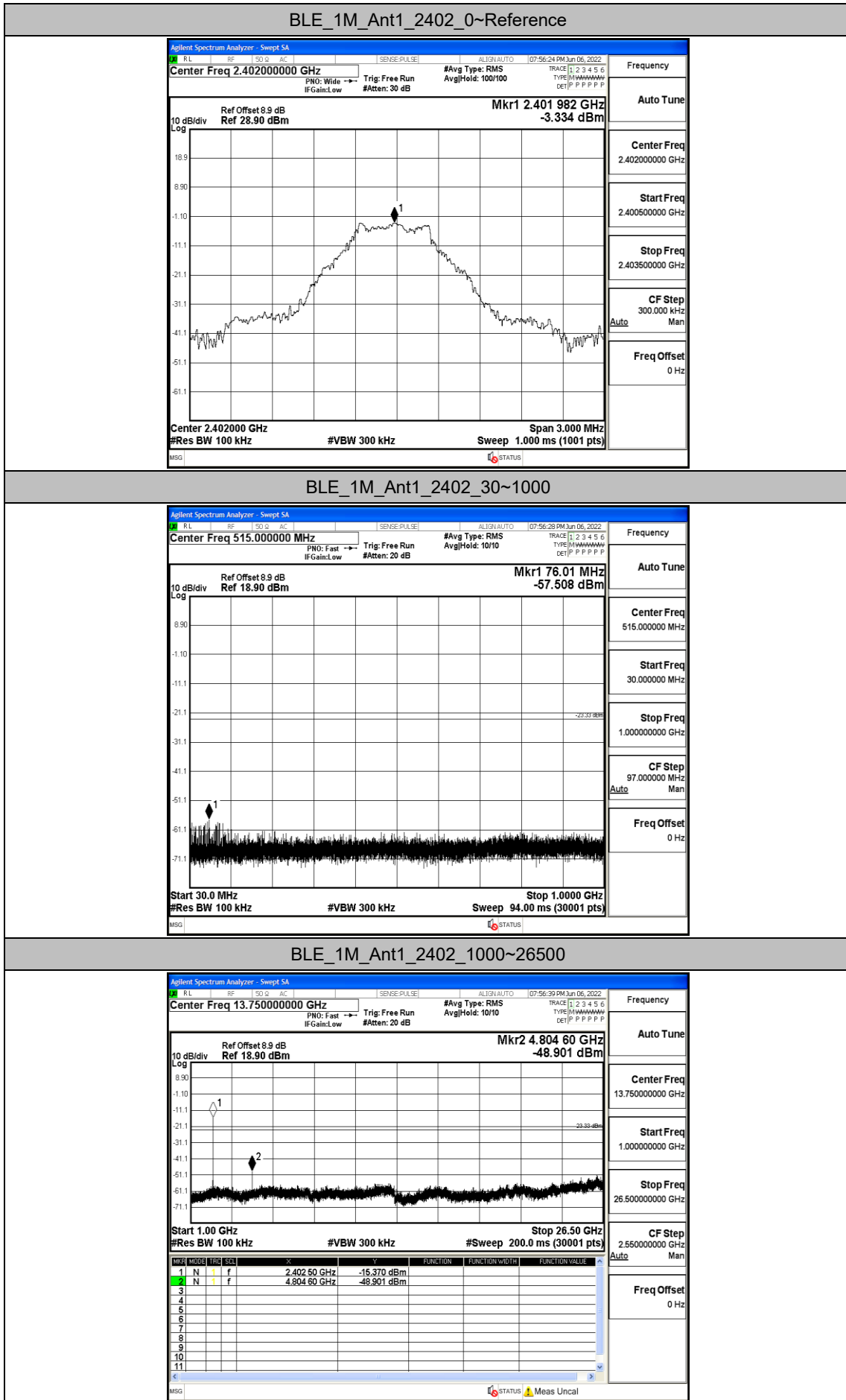


Appendix F: Conducted Spurious Emission

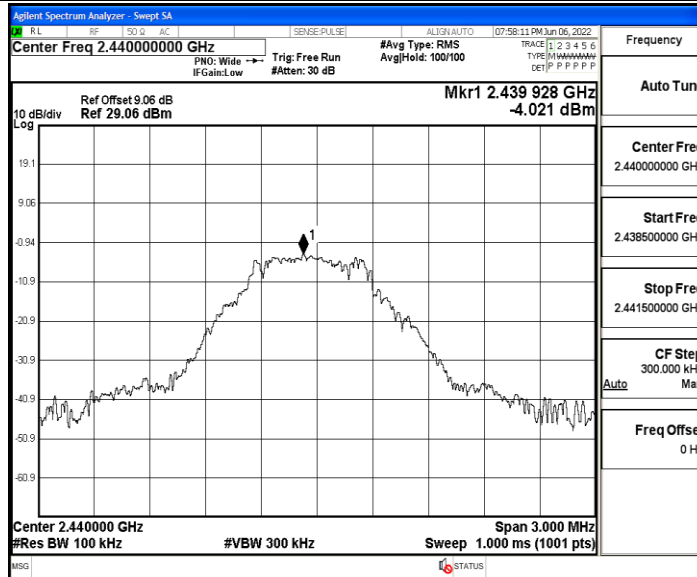
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.33	-3.33	---	PASS
			30~1000	-3.33	-57.51	≤-23.33	PASS
			1000~26500	-3.33	-48.9	≤-23.33	PASS
		2440	Reference	-4.02	-4.02	---	PASS
			30~1000	-4.02	-56.89	≤-24.02	PASS
			1000~26500	-4.02	-51.47	≤-24.02	PASS
		2480	Reference	-4.60	-4.60	---	PASS
			30~1000	-4.60	-57.38	≤-24.6	PASS
			1000~26500	-4.60	-51.28	≤-24.6	PASS

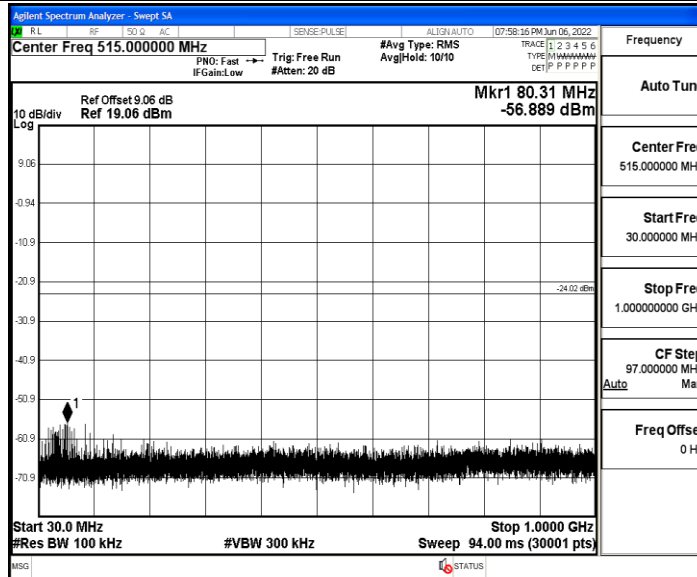
Test Graphs



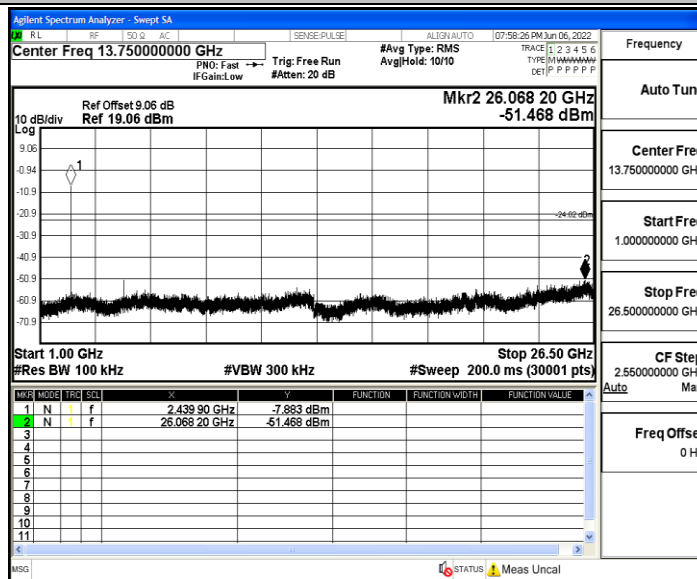
BLE_1M_Ant1_2440_0~Reference



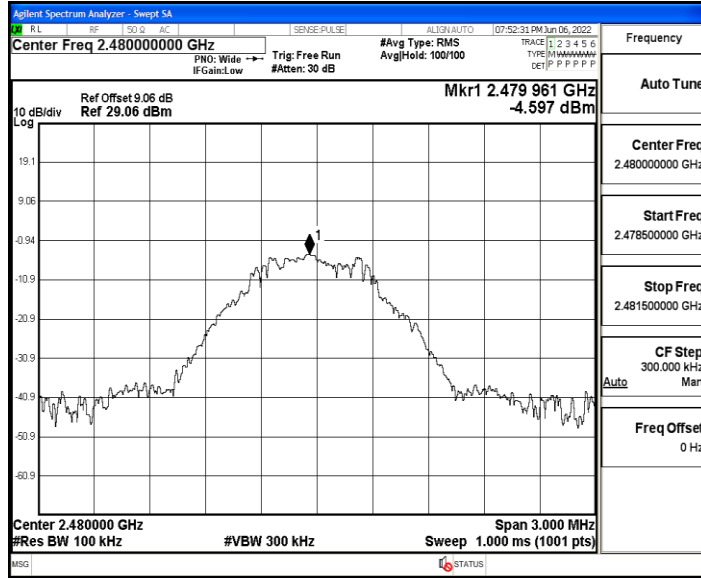
BLE_1M_Ant1_2440_30~1000



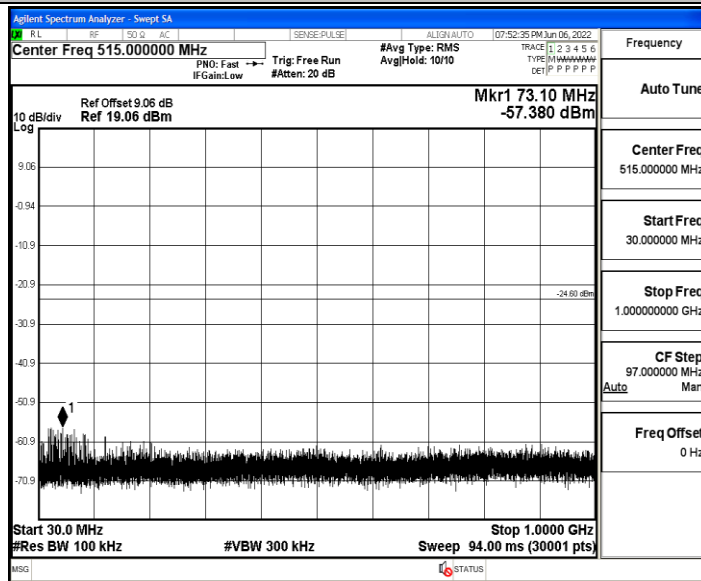
BLE_1M_Ant1_2440_1000~26500



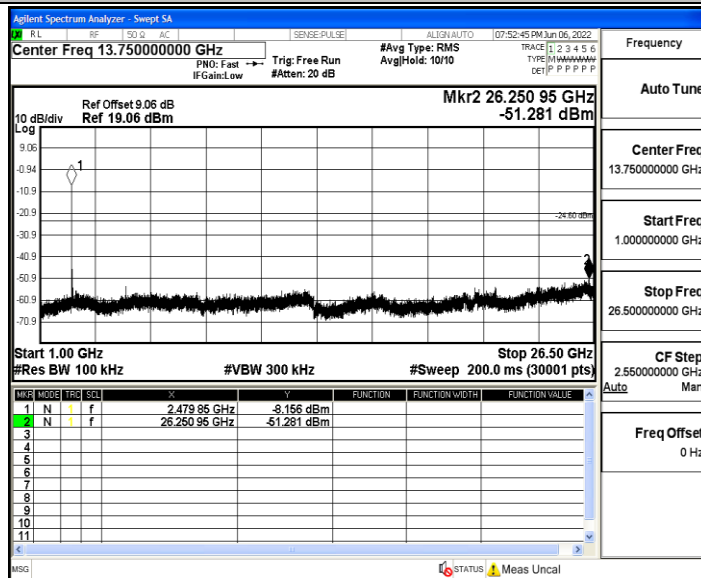
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



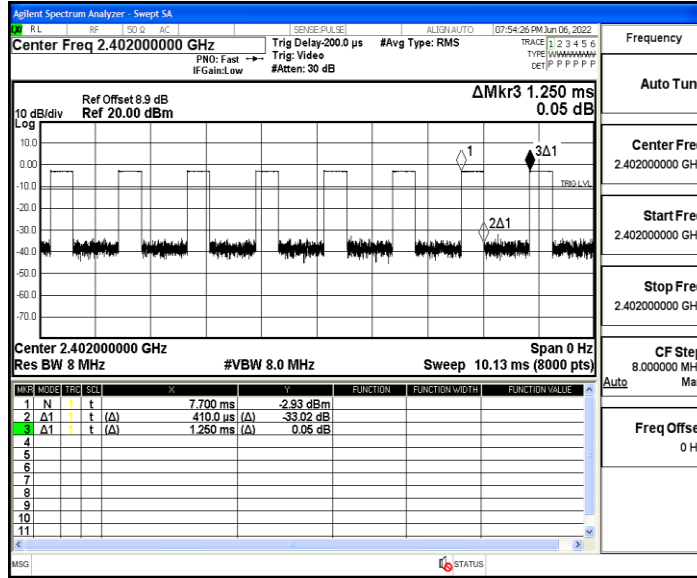
Appendix G: Duty Cycle

Test Result

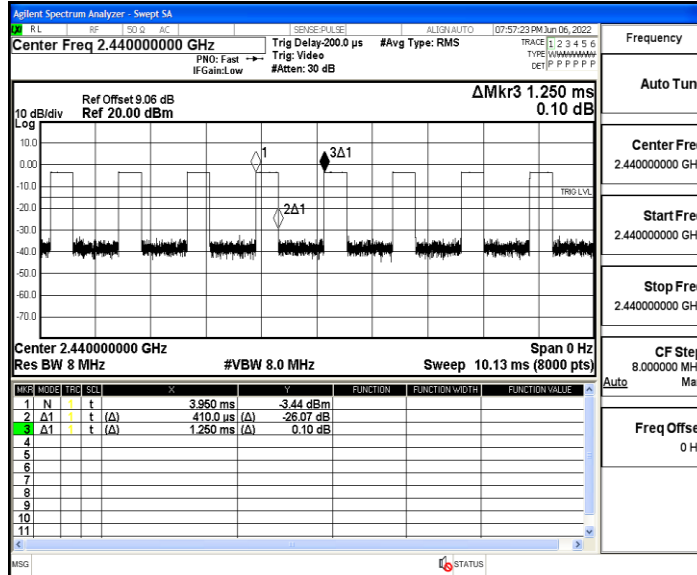
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	0.41	1.25	32.80	2.44
		2440	0.41	1.25	32.80	2.44
		2480	0.41	1.25	32.80	2.44

Test Graphs

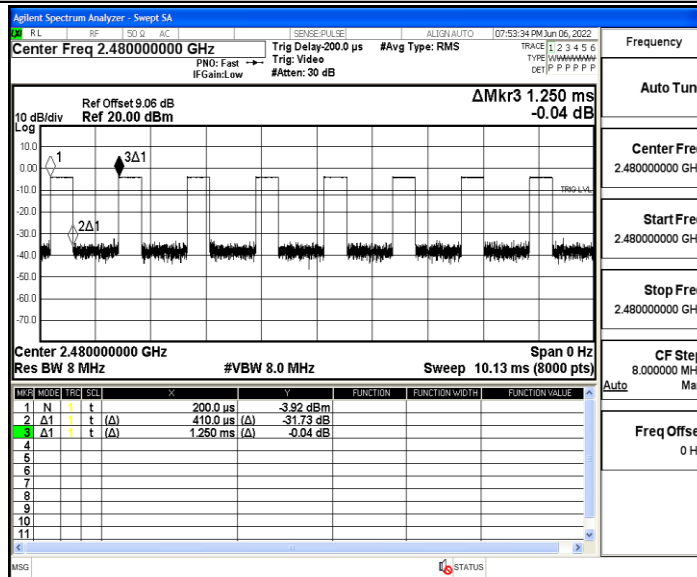
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

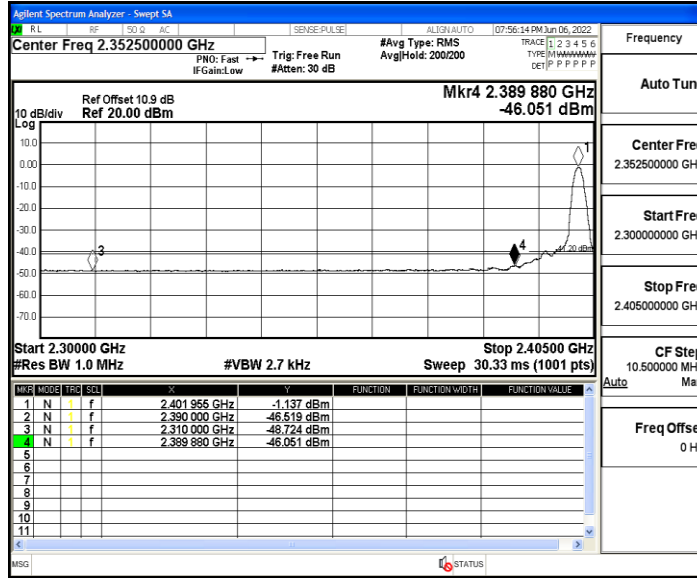
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.72	≤-41.20	PASS
				AV	2389.880	-46.05	≤-41.20	PASS
				AV	2390.000	-46.52	≤-41.20	PASS
				Peak	2310.000	-39.81	≤-21.20	PASS
				Peak	2389.775	-34.44	≤-21.20	PASS
				Peak	2390.000	-34.59	≤-21.20	PASS
		High	2480	AV	2483.500	-42.32	≤-41.20	PASS
				AV	2486.880	-41.82	≤-41.20	PASS
				AV	2500.000	-53	≤-41.20	PASS
				Peak	2483.500	-29.84	≤-21.20	PASS
				Peak	2483.600	-28.04	≤-21.20	PASS
				Peak	2500.000	-52.47	≤-21.20	PASS

Note:

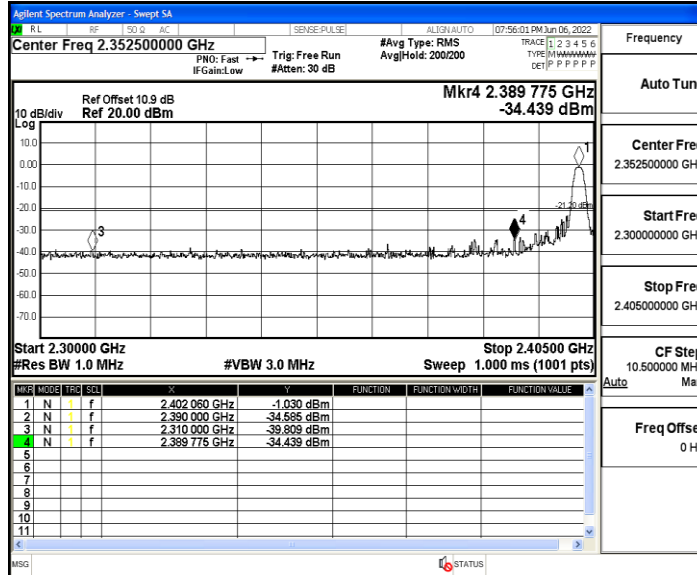
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

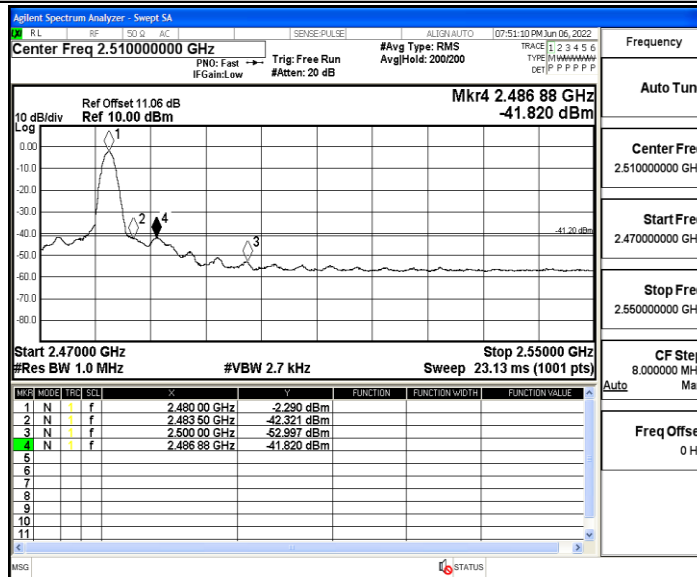
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

