

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

Product Name: Bluetooth adapter

Trade Mark: N/A

Test Model: BTS-AA

FCC ID: 2A49K-BTS-AA

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

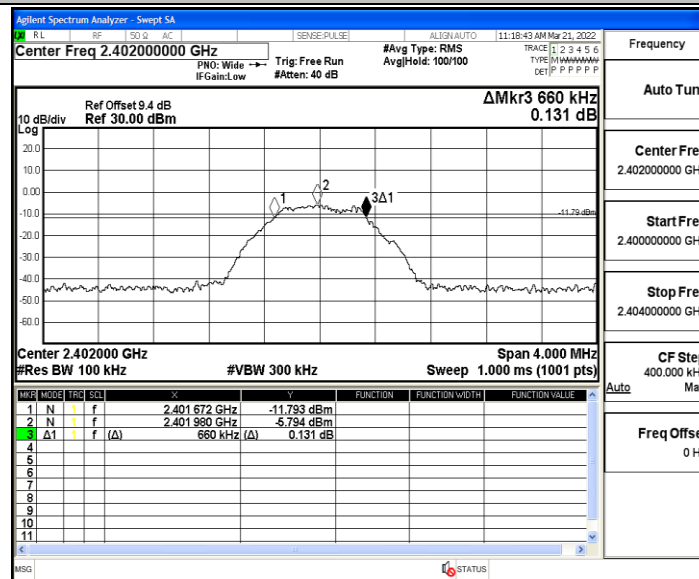
Appendix A: DTS Bandwidth

Test Result

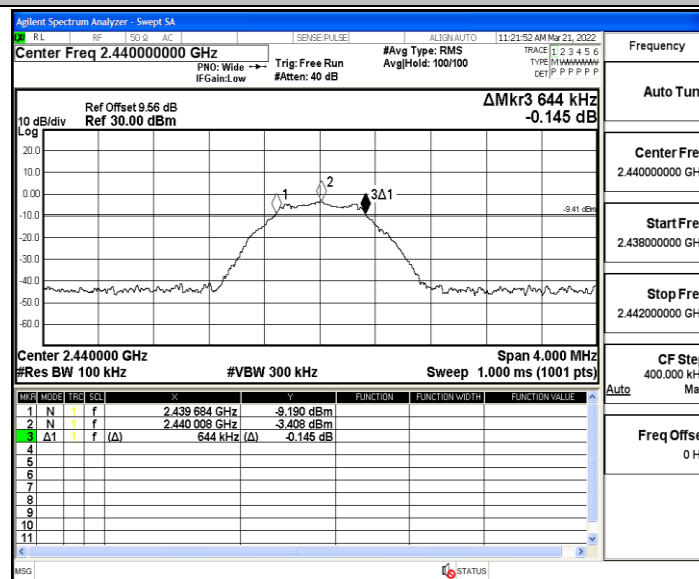
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.672	2402.332	0.5	PASS
		2440	0.644	2439.684	2440.328	0.5	PASS
		2480	0.664	2479.672	2480.336	0.5	PASS

Test Graphs

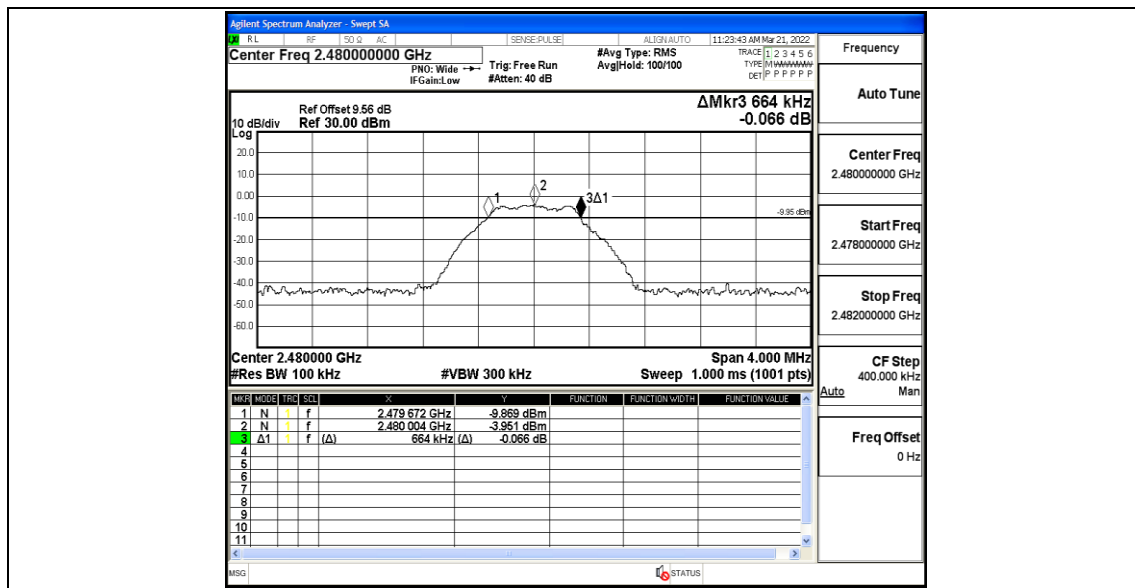
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



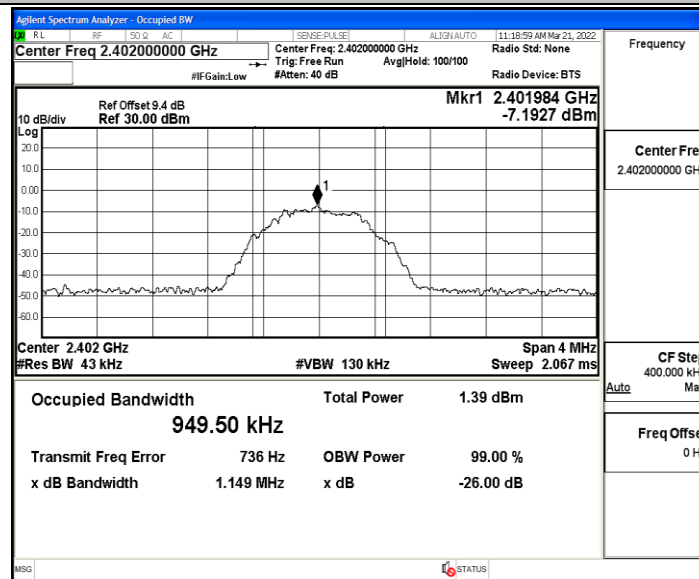
Appendix B: Occupied Channel Bandwidth

Test Result

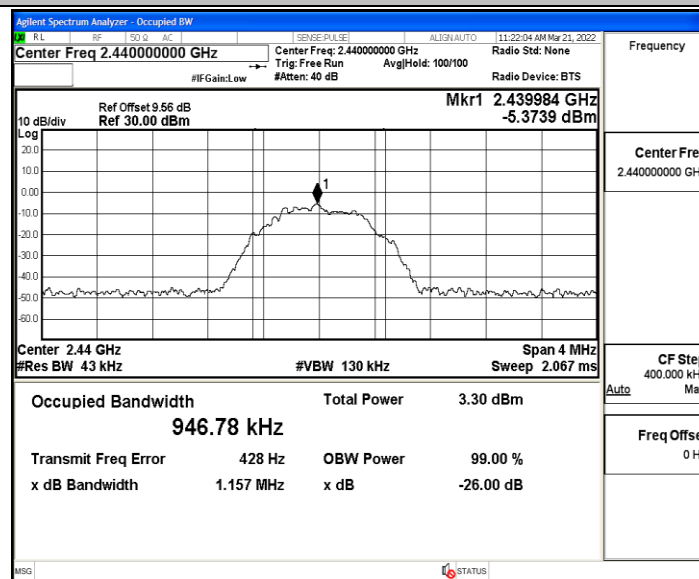
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.94950	2401.526	2402.475	---	---
		2440	0.94678	2439.527	2440.474	---	---
		2480	0.94895	2479.526	2480.475	---	---

Test Graphs

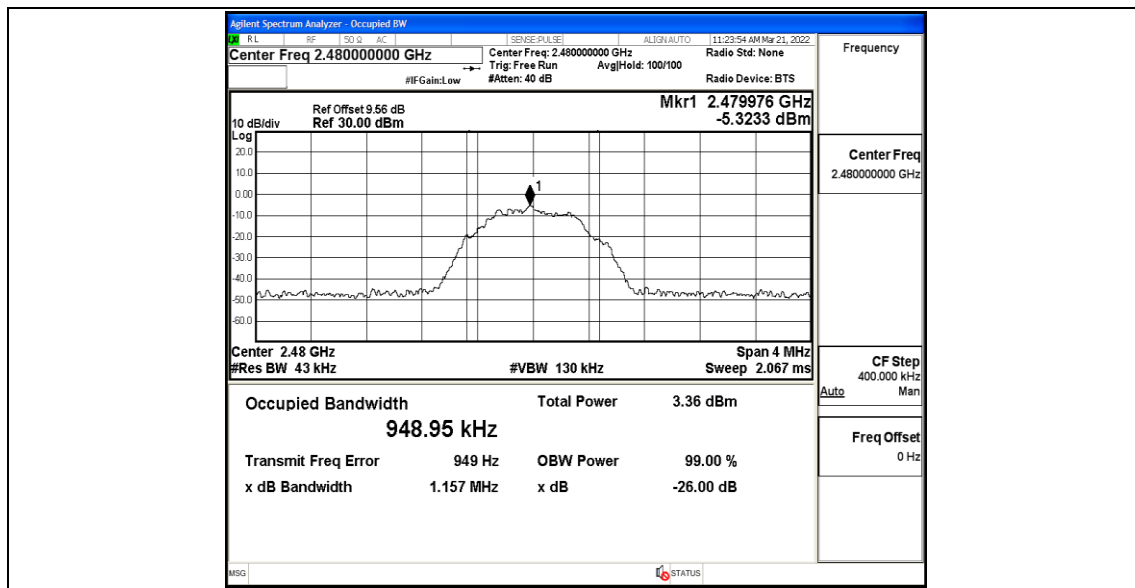
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

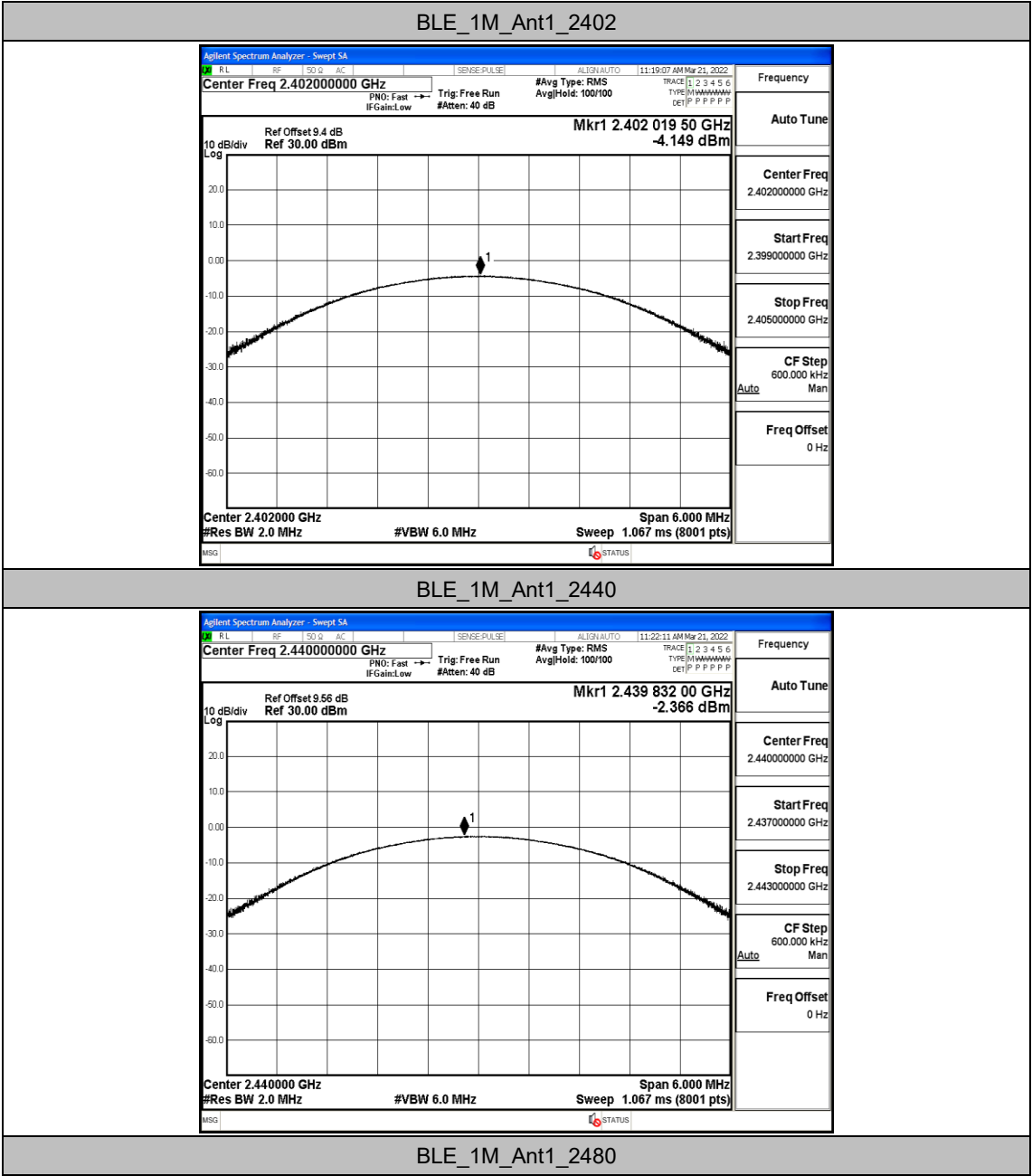


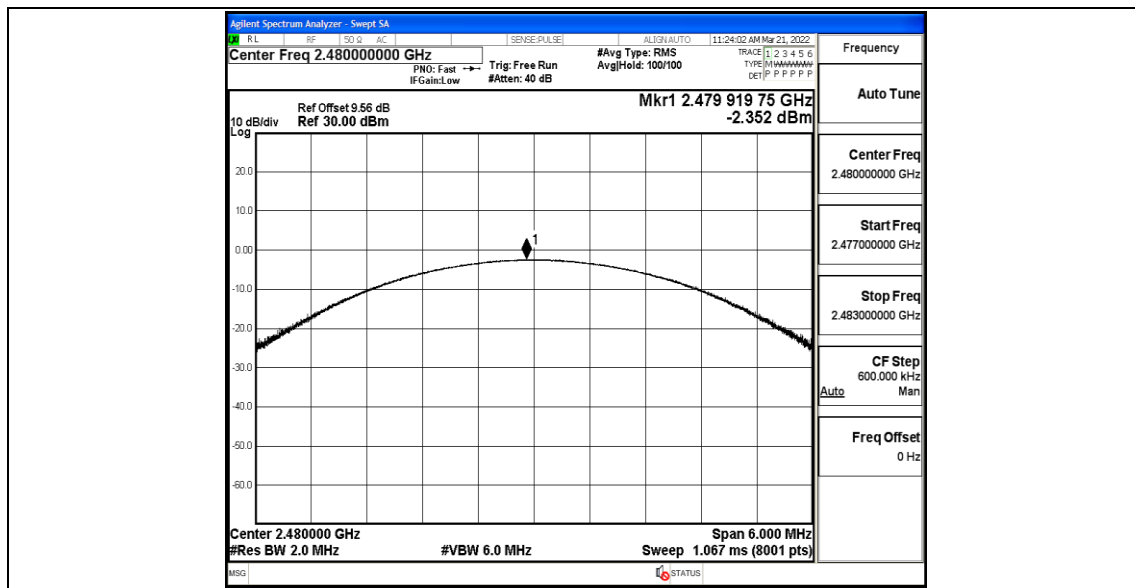
Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-4.15	≤30	PASS
		2440	-2.37	≤30	PASS
		2480	-2.35	≤30	PASS

Test Graphs



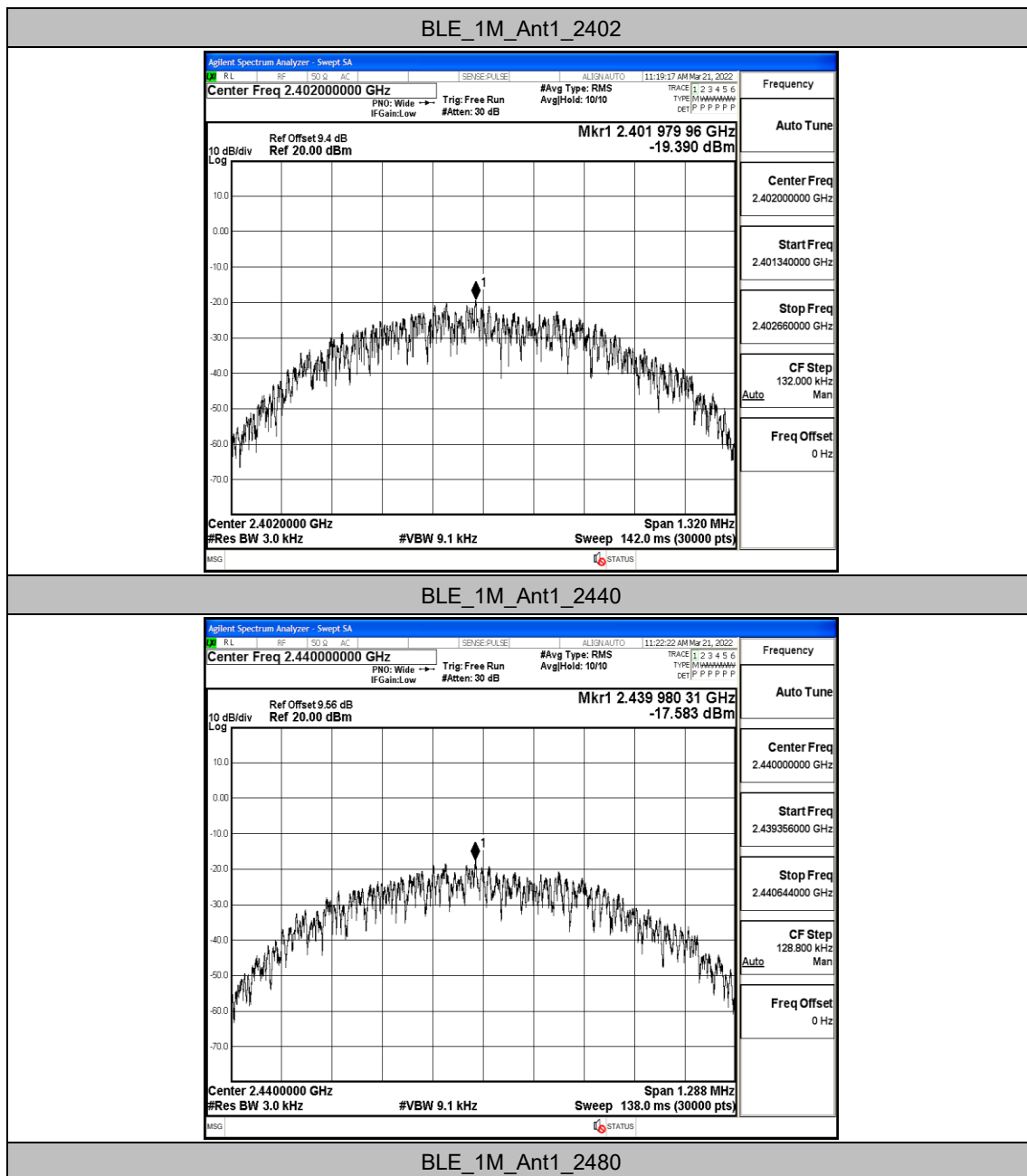


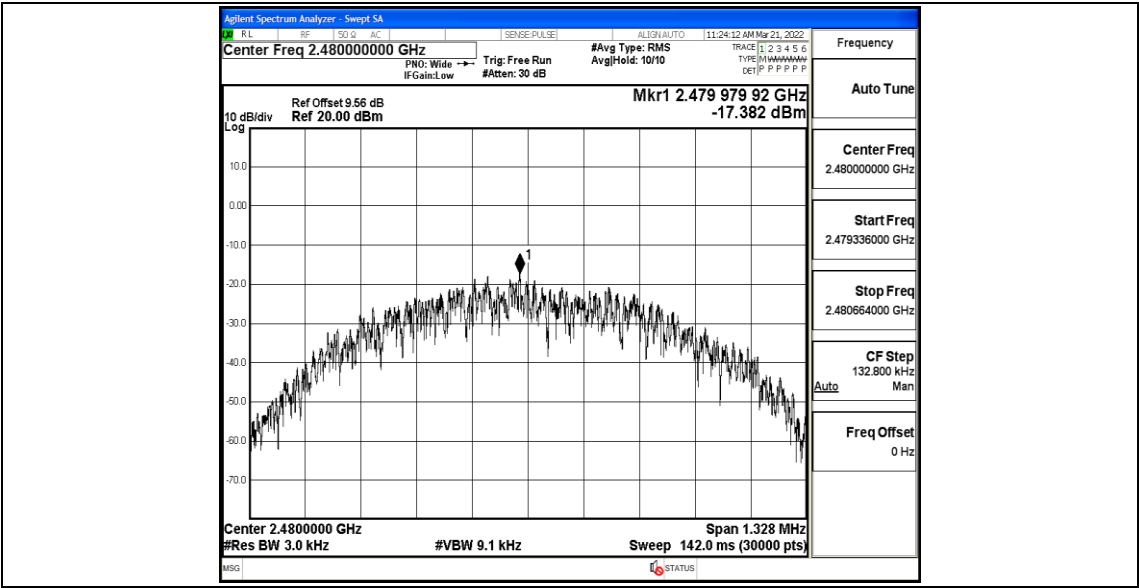
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.39	≤8.00	PASS
		2440	-17.58	≤8.00	PASS
		2480	-17.38	≤8.00	PASS

Test Graphs



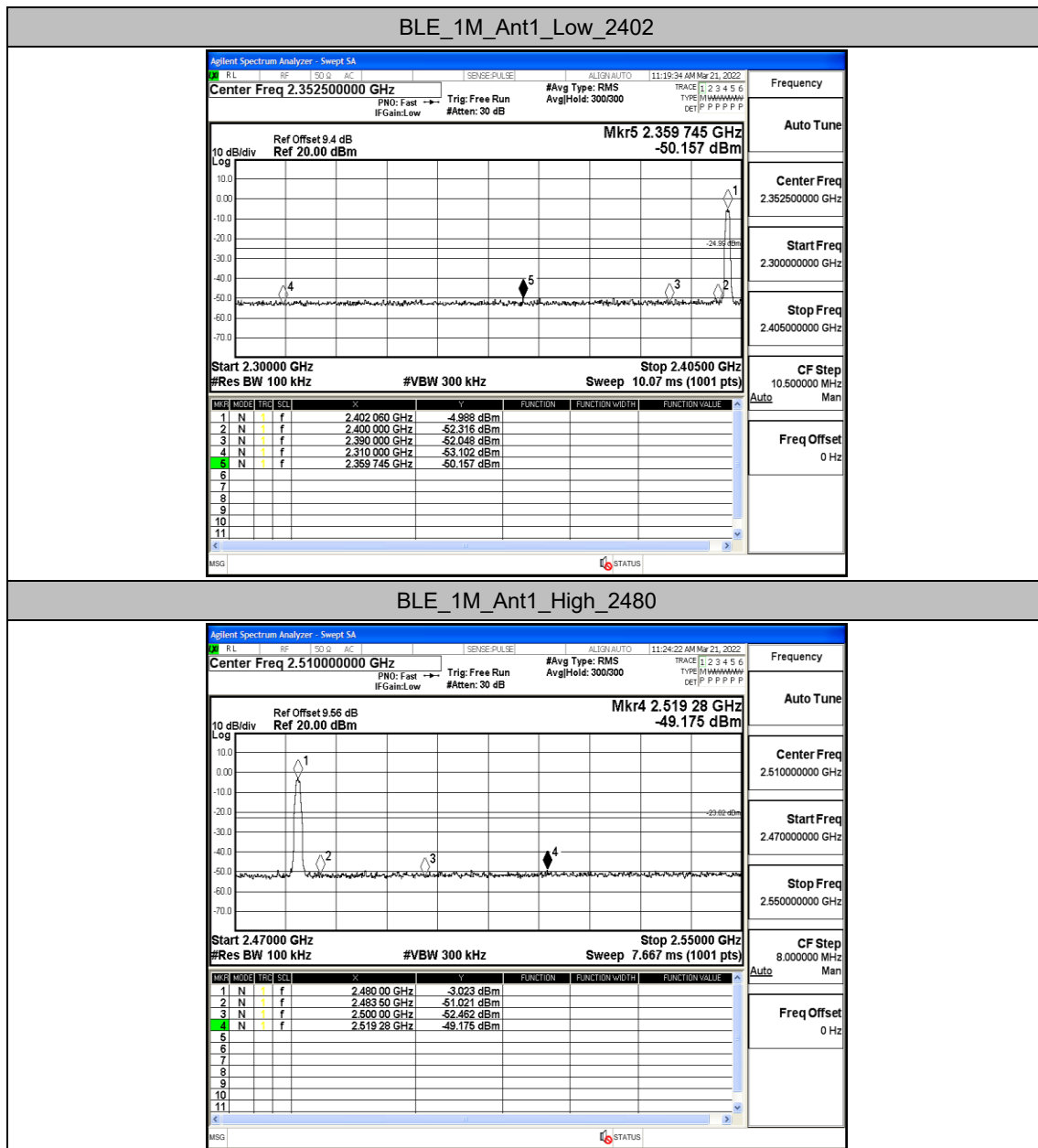


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.99	-50.16	≤-24.99	PASS
		High	2480	-3.02	-49.18	≤-23.02	PASS

Test Graphs



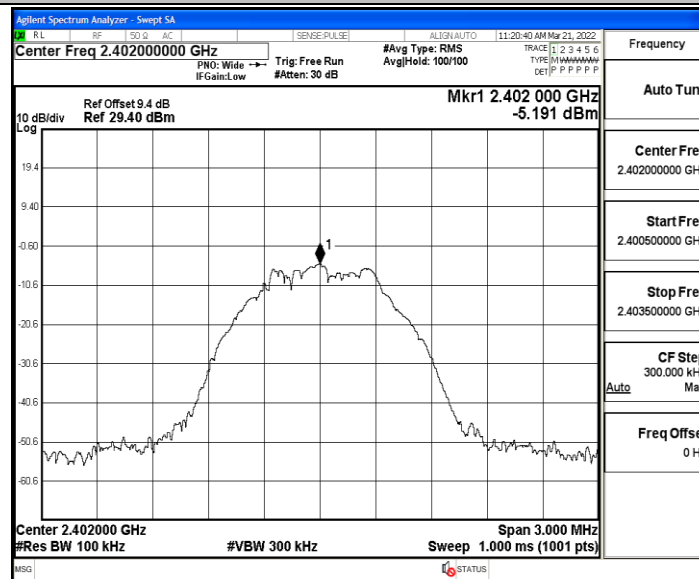
Appendix F: Conducted Spurious Emission

Test Result

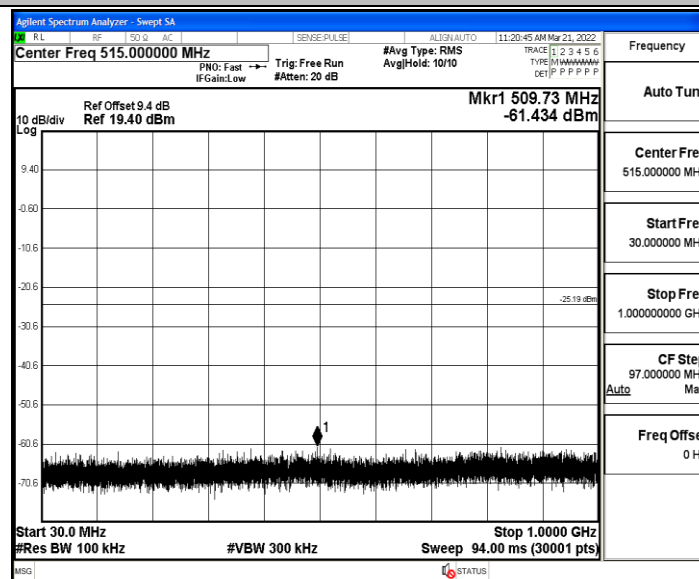
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-5.19	-5.19	---	PASS
			30~1000	-5.19	-61.43	≤-25.19	PASS
			1000~26500	-5.19	-50.28	≤-25.19	PASS
		2440	Reference	-3.36	-3.36	---	PASS
			30~1000	-3.36	-61.45	≤-23.36	PASS
			1000~26500	-3.36	-50.07	≤-23.36	PASS
		2480	Reference	-3.27	-3.27	---	PASS
			30~1000	-3.27	-60.61	≤-23.27	PASS
			1000~26500	-3.27	-50.79	≤-23.27	PASS

Test Graphs

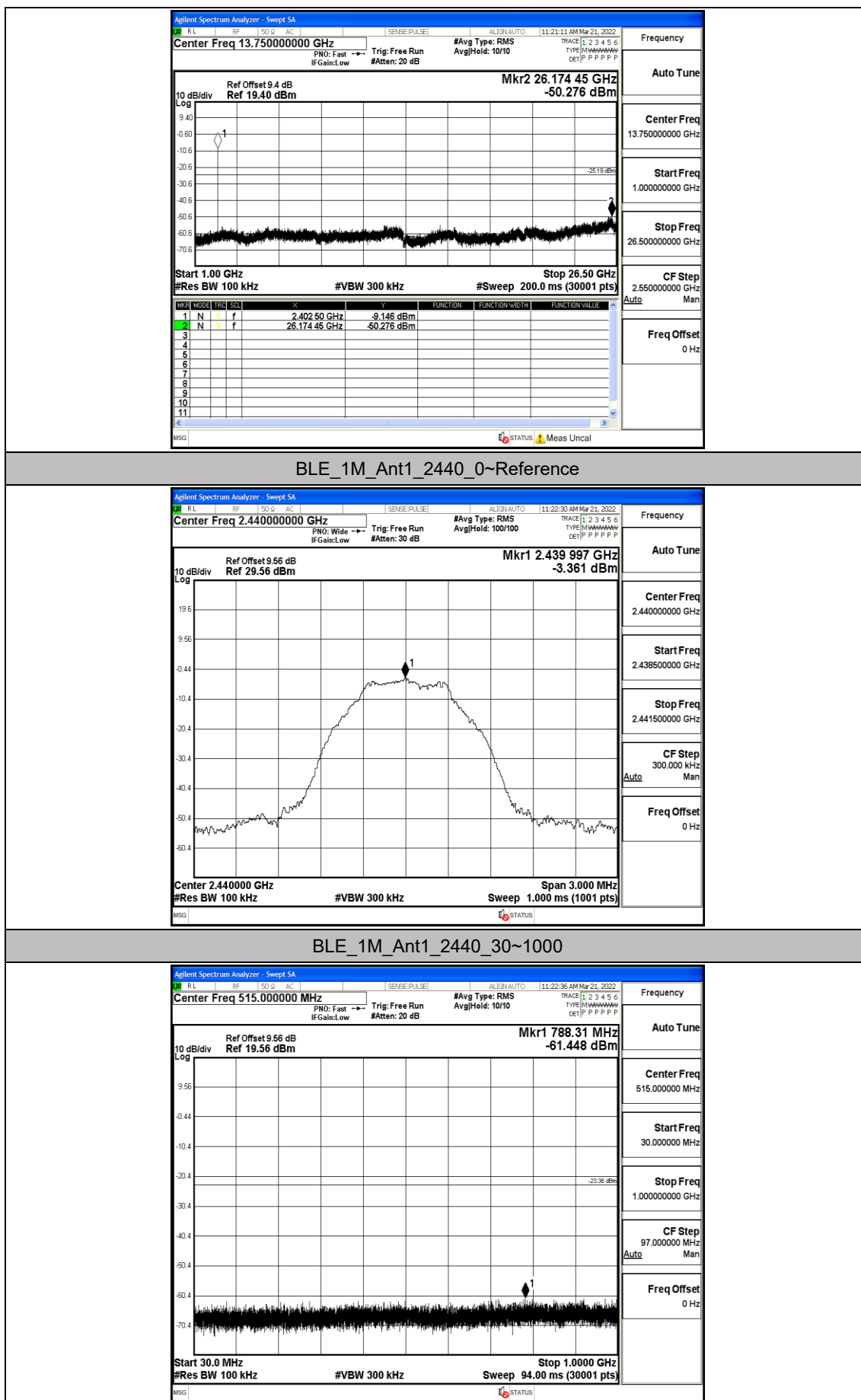
BLE_1M_Ant1_2402_0~Reference



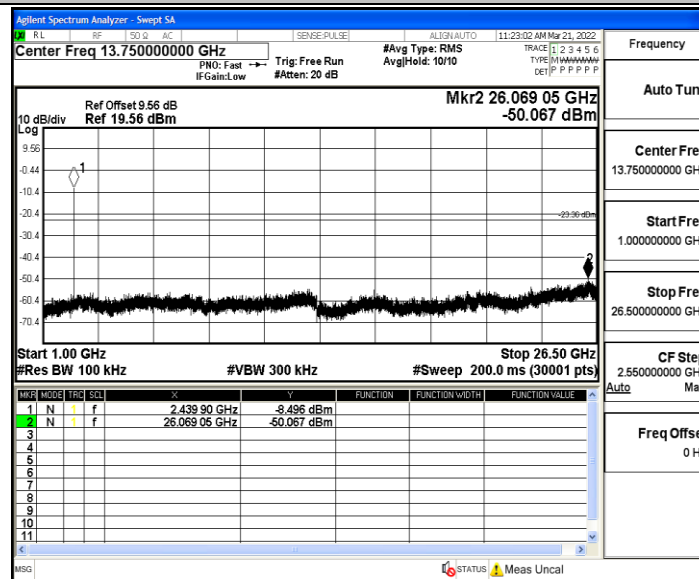
BLE_1M_Ant1_2402_30~1000



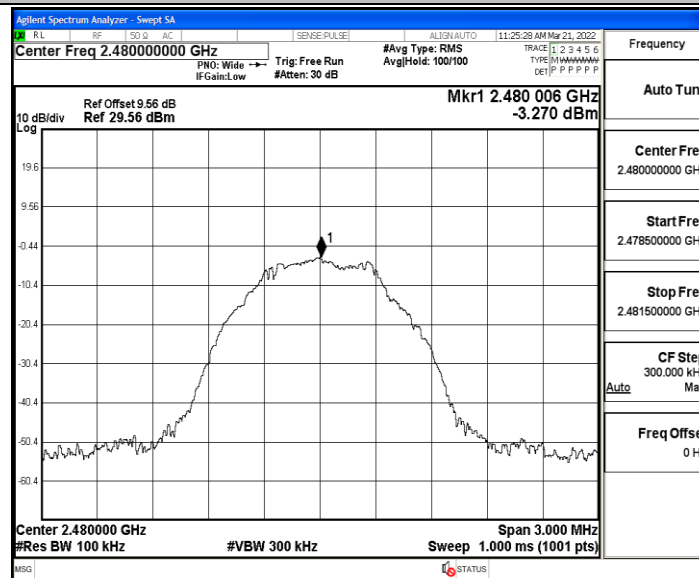
BLE_1M_Ant1_2402_1000~26500



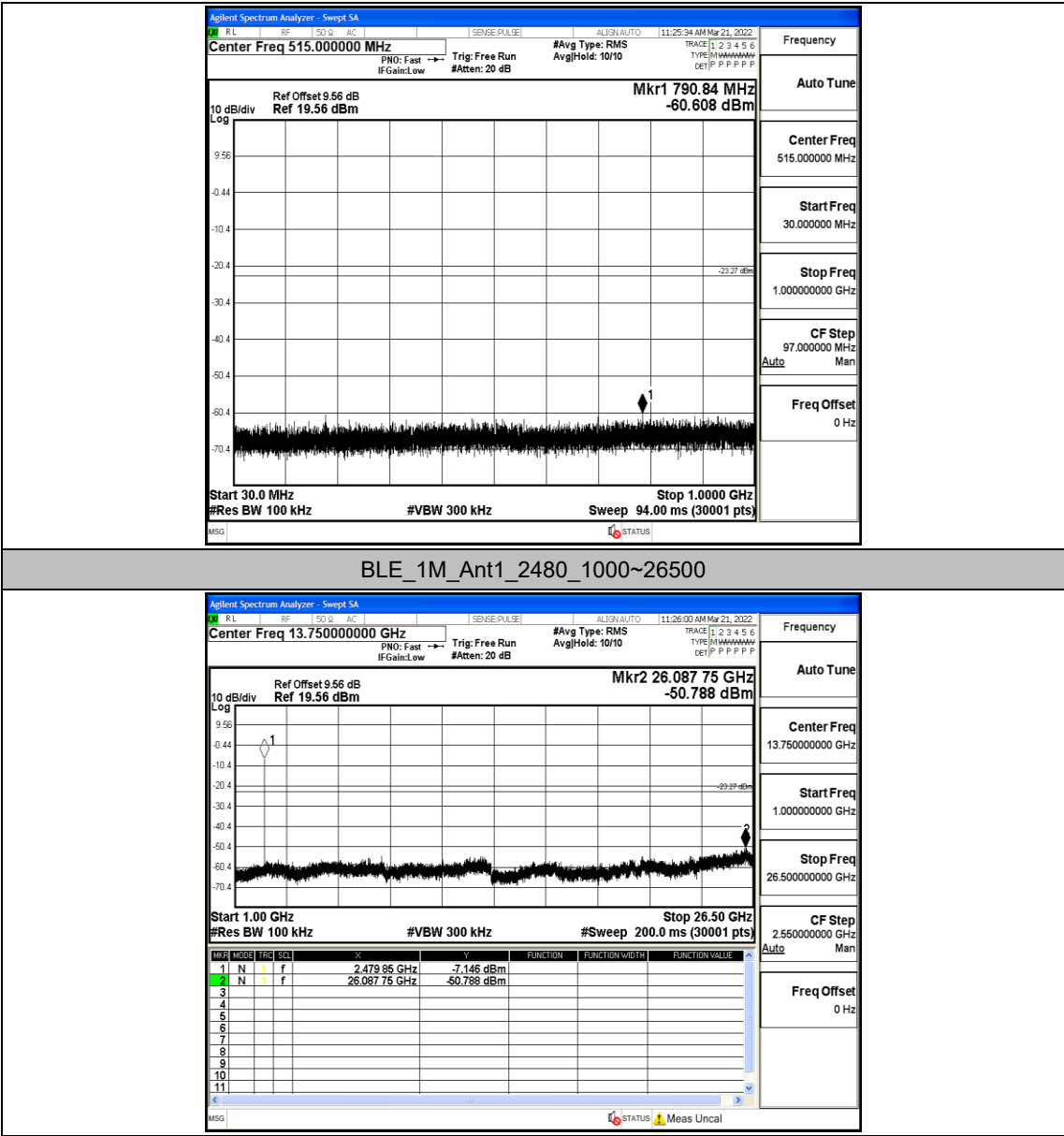
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



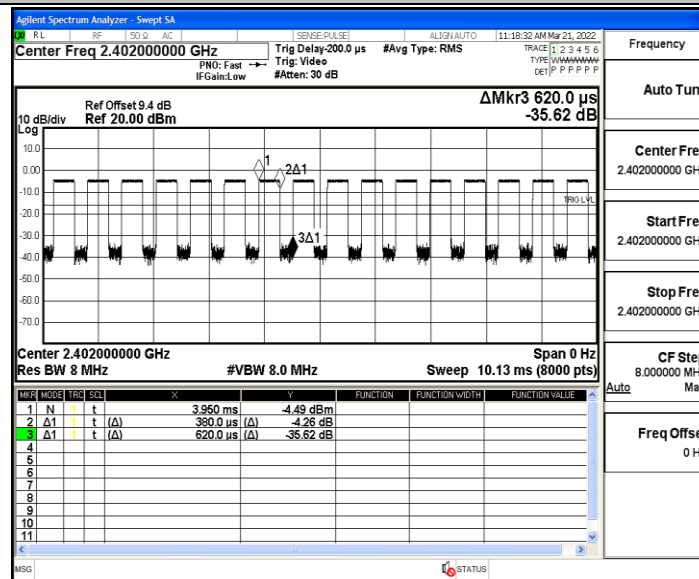
Appendix G: Duty Cycle

Test Result

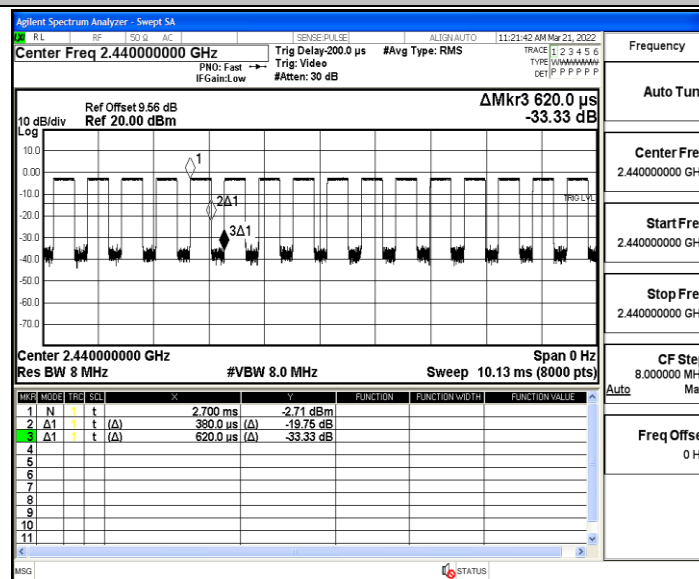
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T
BLE_1M	Ant1	2402	0.38	0.62	61.29	2.63
		2440	0.38	0.62	61.29	2.63
		2480	0.38	0.62	61.29	2.63

Test Graphs

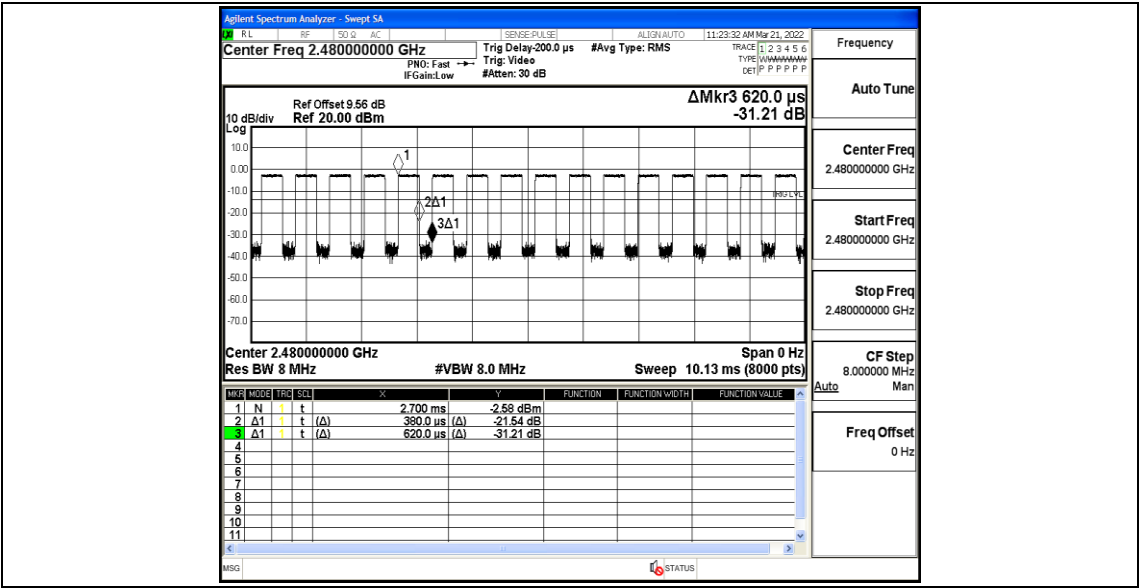
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

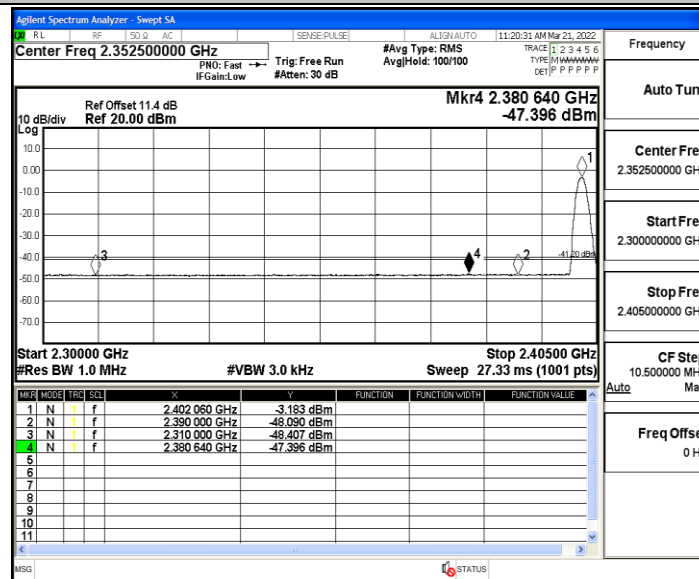
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.41	≤-41.20	PASS
				AV	2380.640	-47.4	≤-41.20	PASS
				AV	2390.000	-48.09	≤-41.20	PASS
				Peak	2310.000	-41.97	≤-21.20	PASS
				Peak	2319.425	-39.23	≤-21.20	PASS
				Peak	2390.000	-42.4	≤-21.20	PASS
		High	2480	AV	2483.500	-47.21	≤-41.20	PASS
				AV	2499.840	-47.07	≤-41.20	PASS
				AV	2500.000	-47.12	≤-41.20	PASS
				Peak	2483.500	-41	≤-21.20	PASS
				Peak	2486.960	-38.45	≤-21.20	PASS
				Peak	2500.000	-40.85	≤-21.20	PASS

Note:

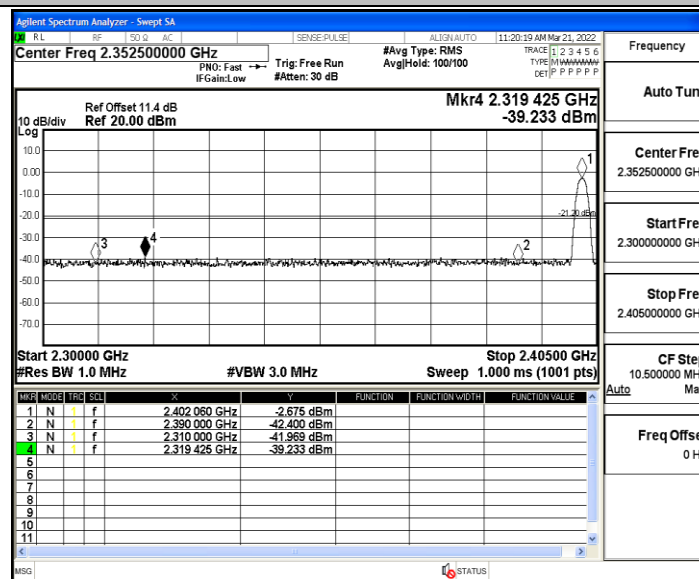
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

