

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

Product Name: Bluetooth adaptor

Trade Mark: Audiopipe

Test Model: AP-BTM-1200

FCC ID: ZNGAP-BTM-1200

Environmental Conditions

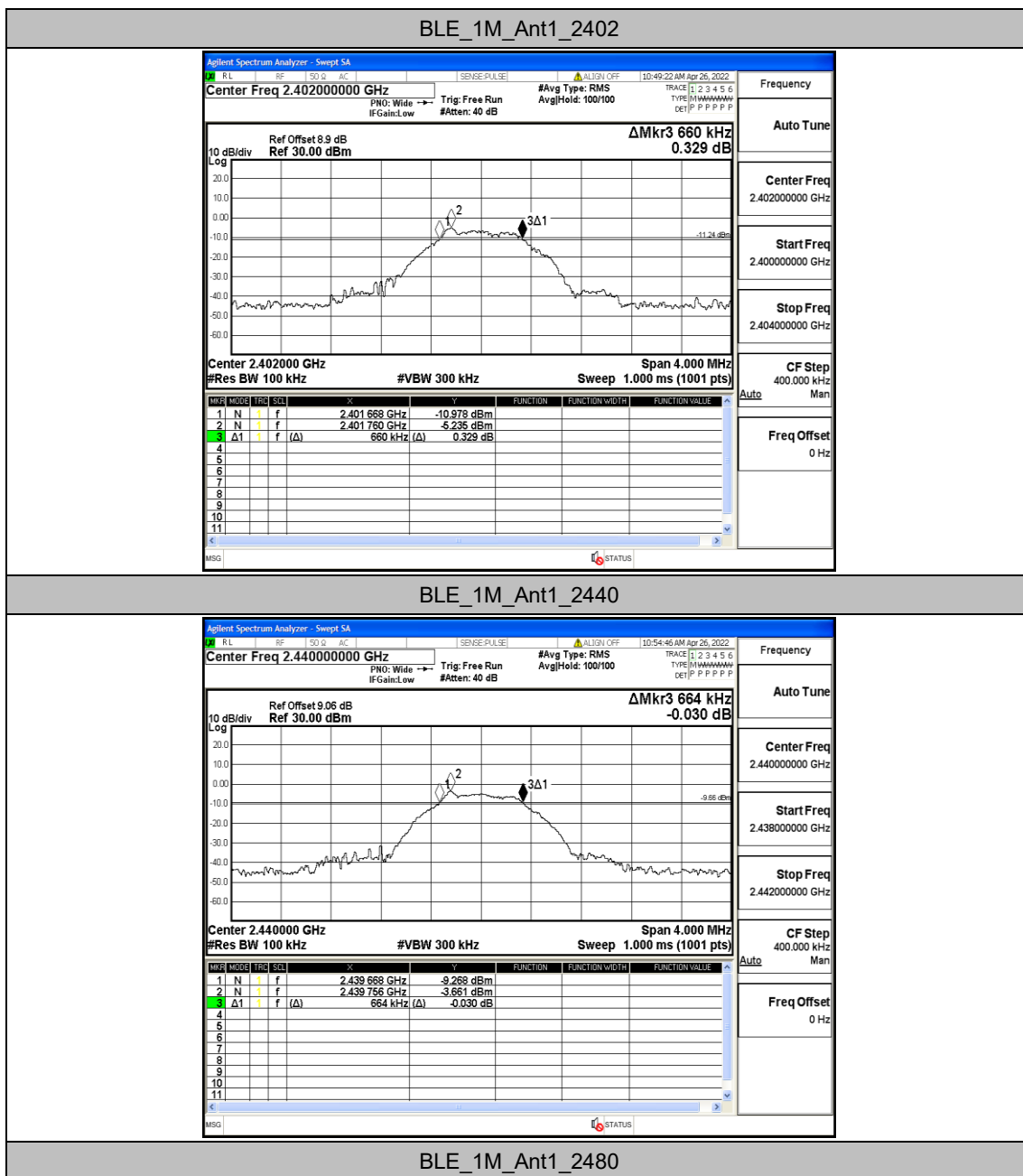
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

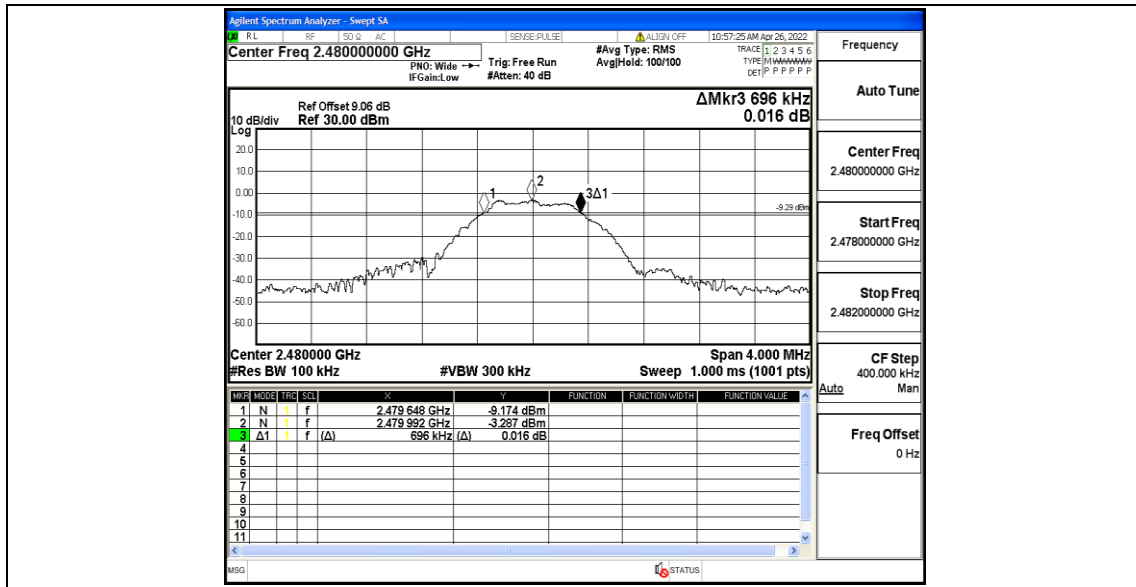
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.668	2402.328	0.5	PASS
		2440	0.664	2439.668	2440.332	0.5	PASS
		2480	0.696	2479.648	2480.344	0.5	PASS

Test Graphs



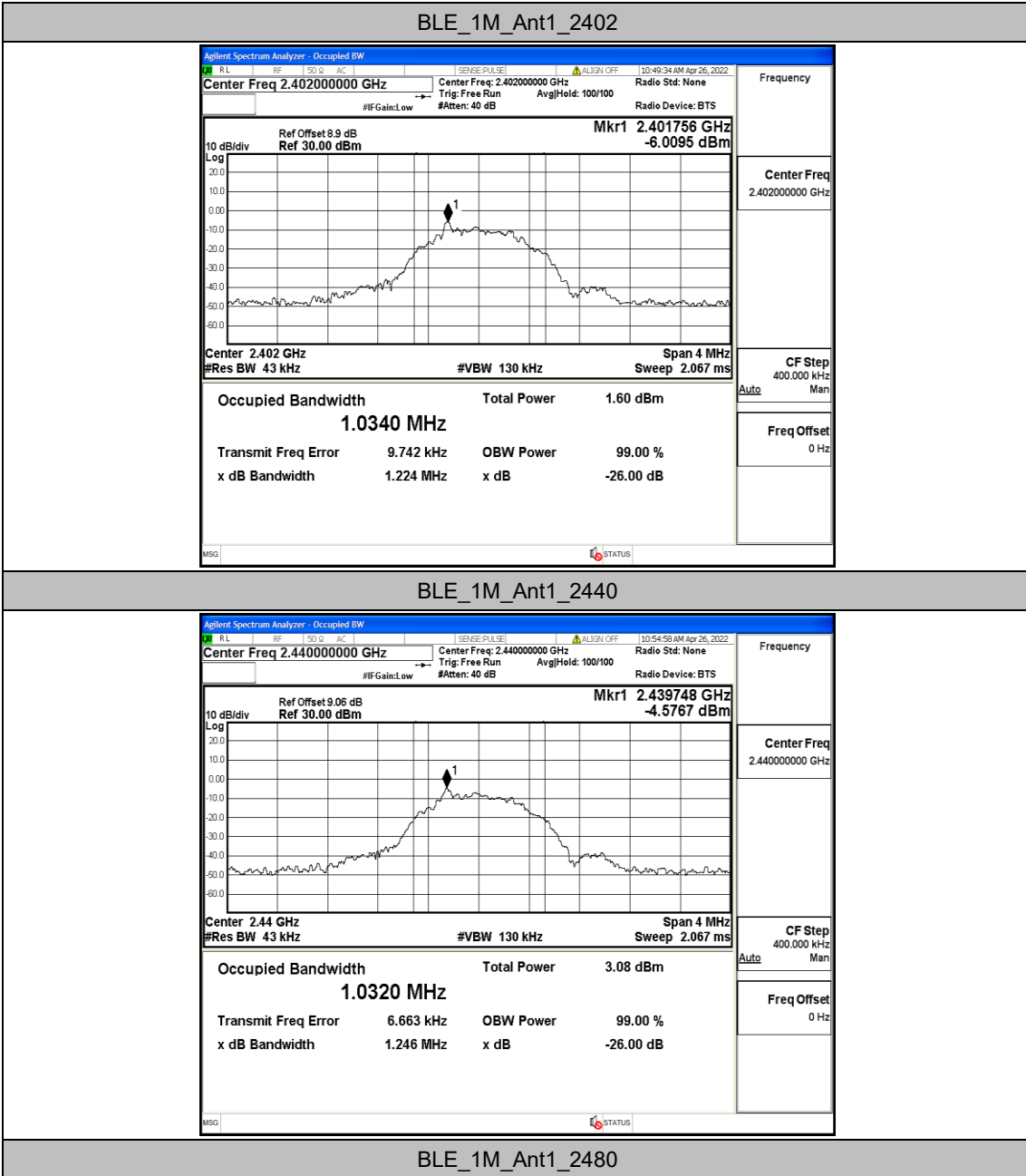


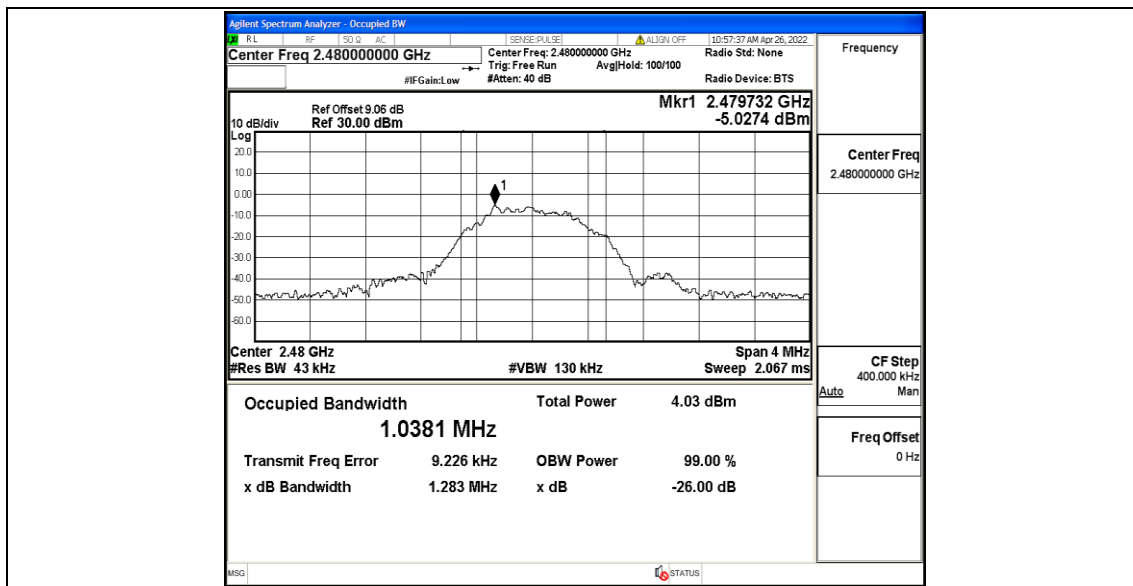
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0340	2401.493	2402.527	---	---
		2440	1.0320	2439.491	2440.523	---	---
		2480	1.0381	2479.490	2480.528	---	---

Test Graphs



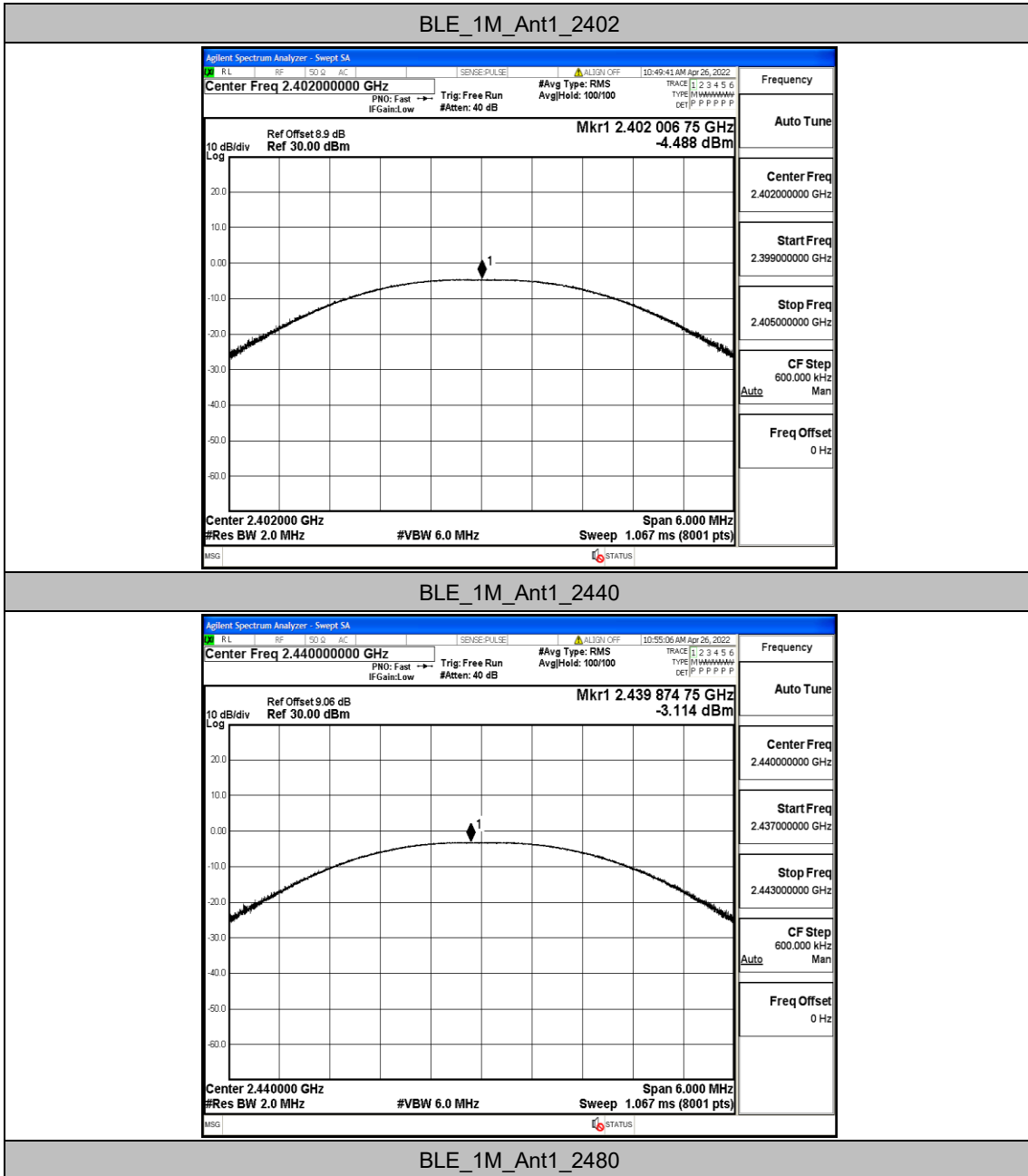


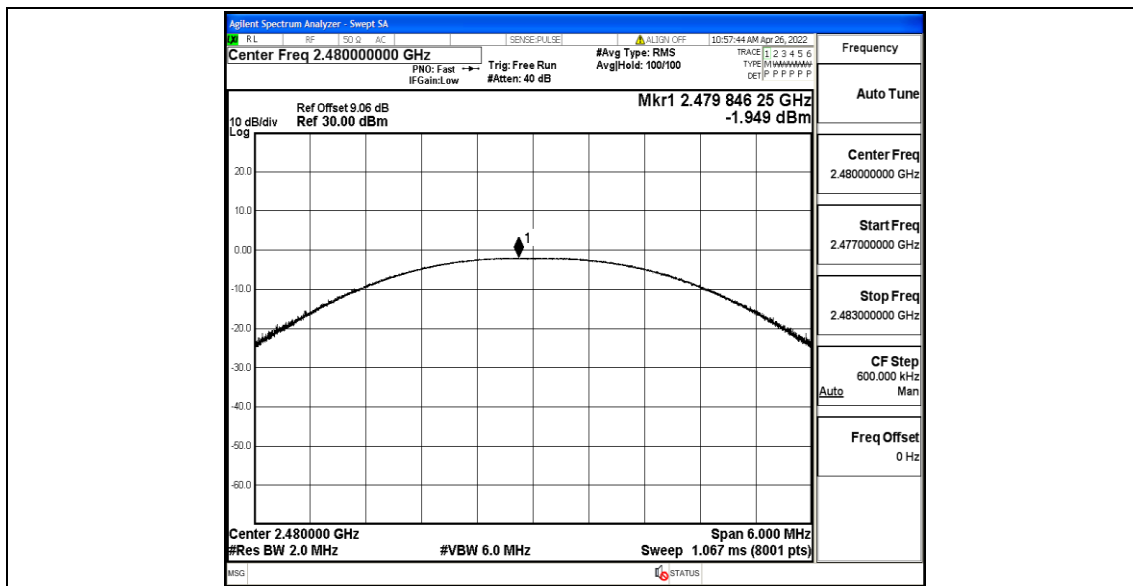
Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-4.49	≤30	PASS
		2440	-3.11	≤30	PASS
		2480	-1.95	≤30	PASS

Test Graphs



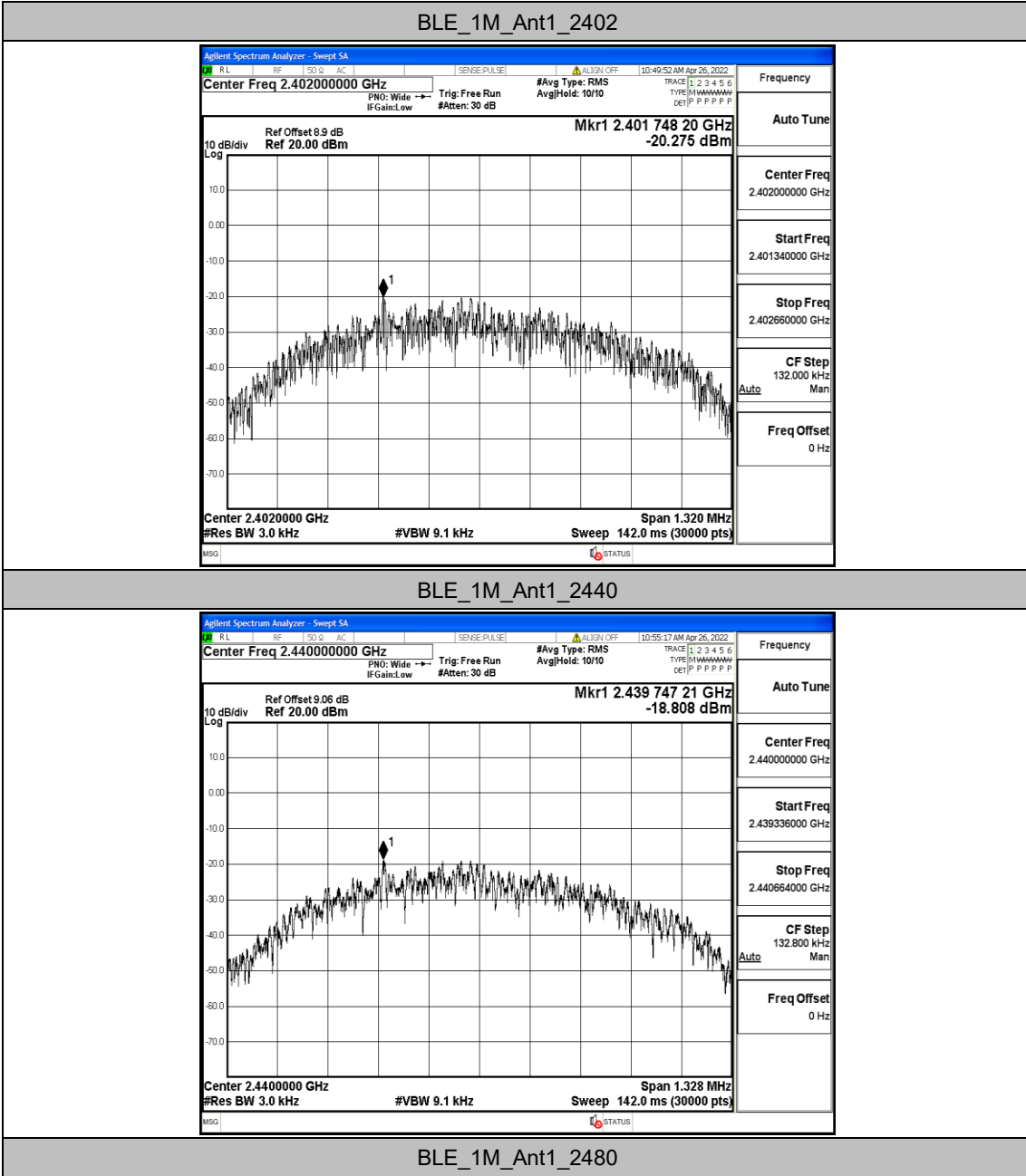


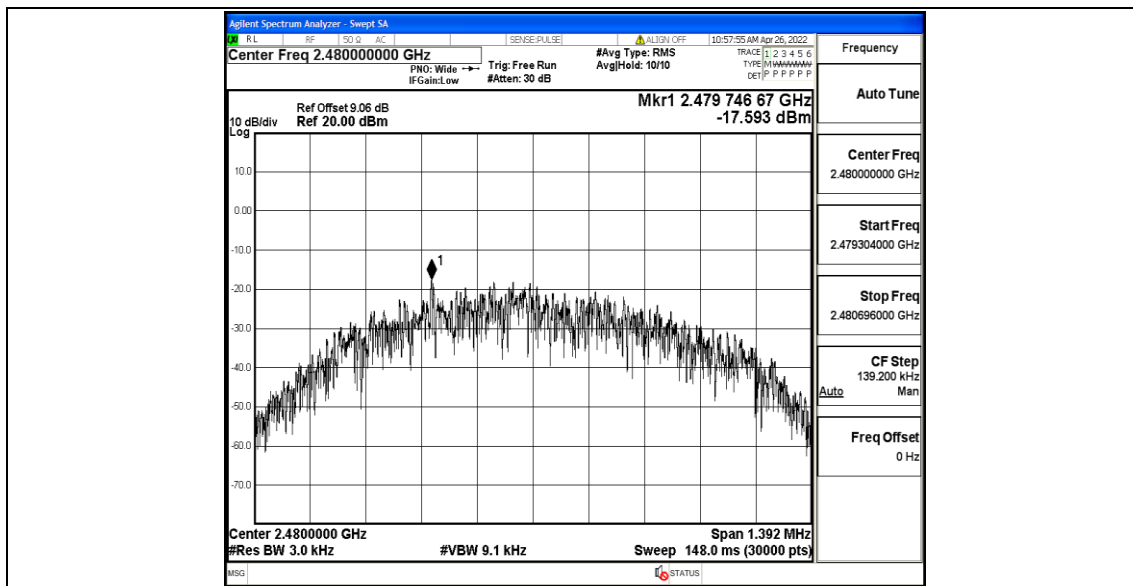
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-20.28	≤8.00	PASS
		2440	-18.81	≤8.00	PASS
		2480	-17.59	≤8.00	PASS

Test Graphs



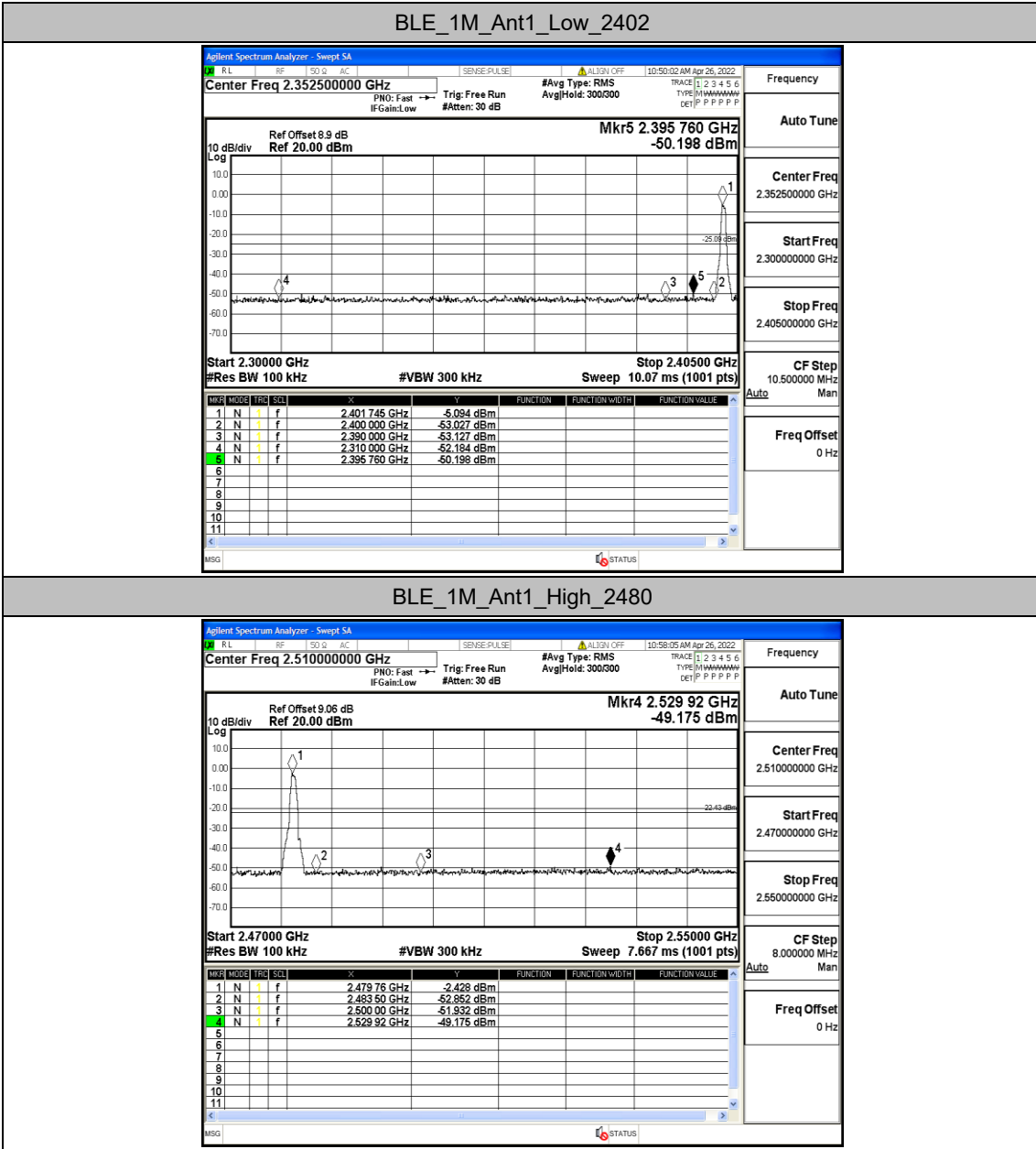


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-5.09	-50.2	≤-25.09	PASS
		High	2480	-2.43	-49.18	≤-22.43	PASS

Test Graphs

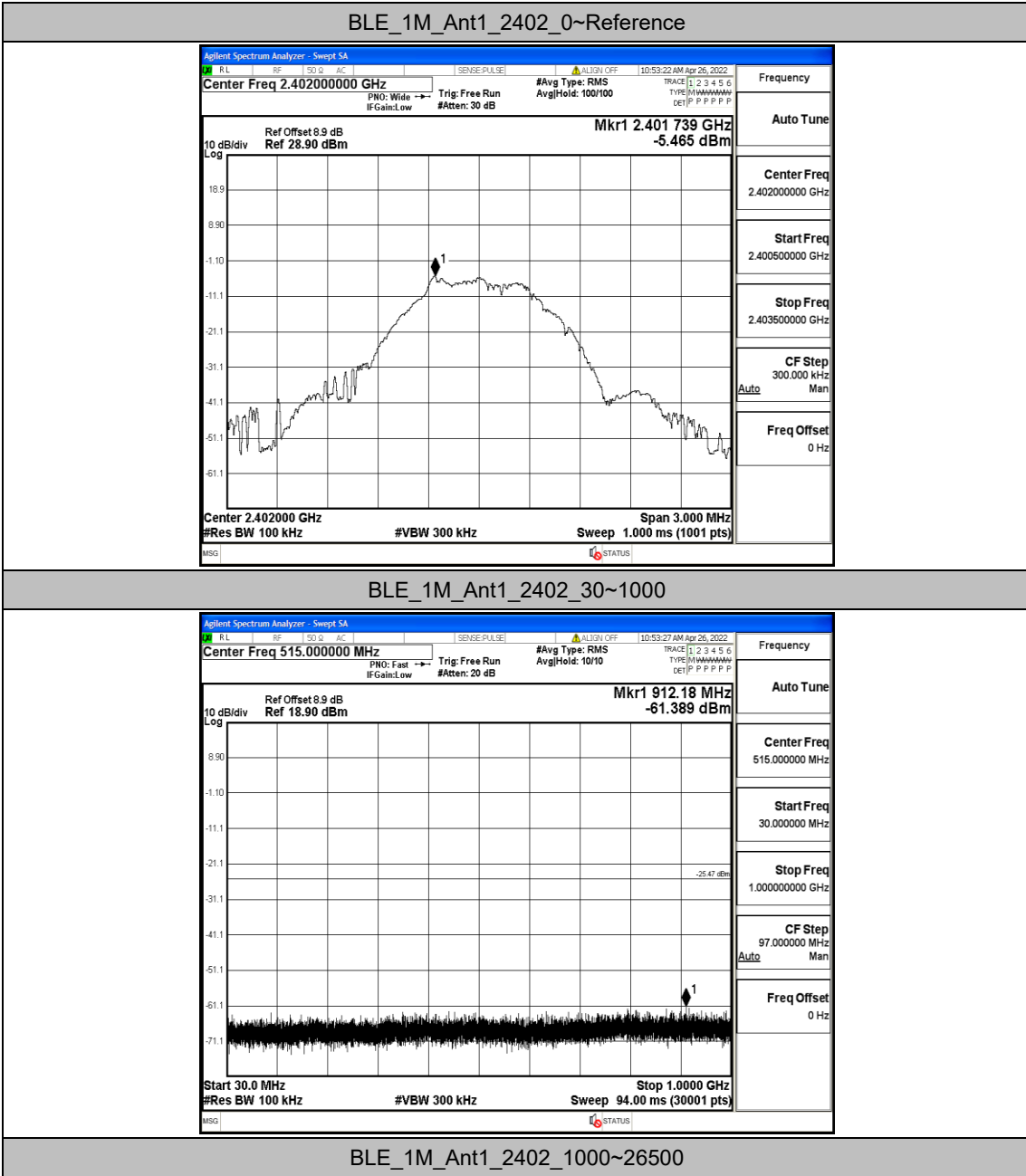


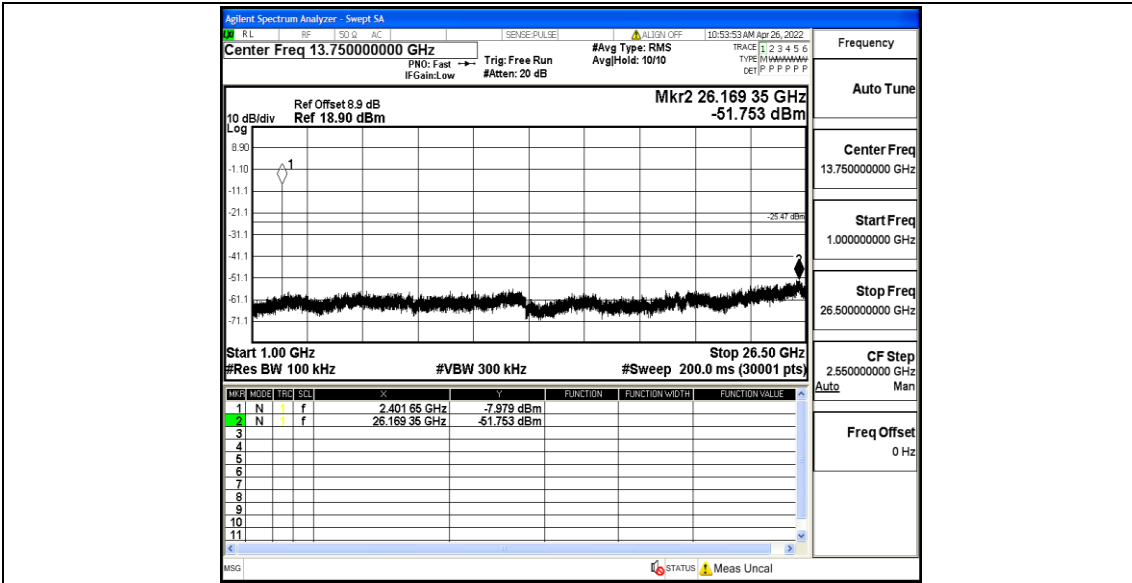
Appendix F: Conducted Spurious Emission

Test Result

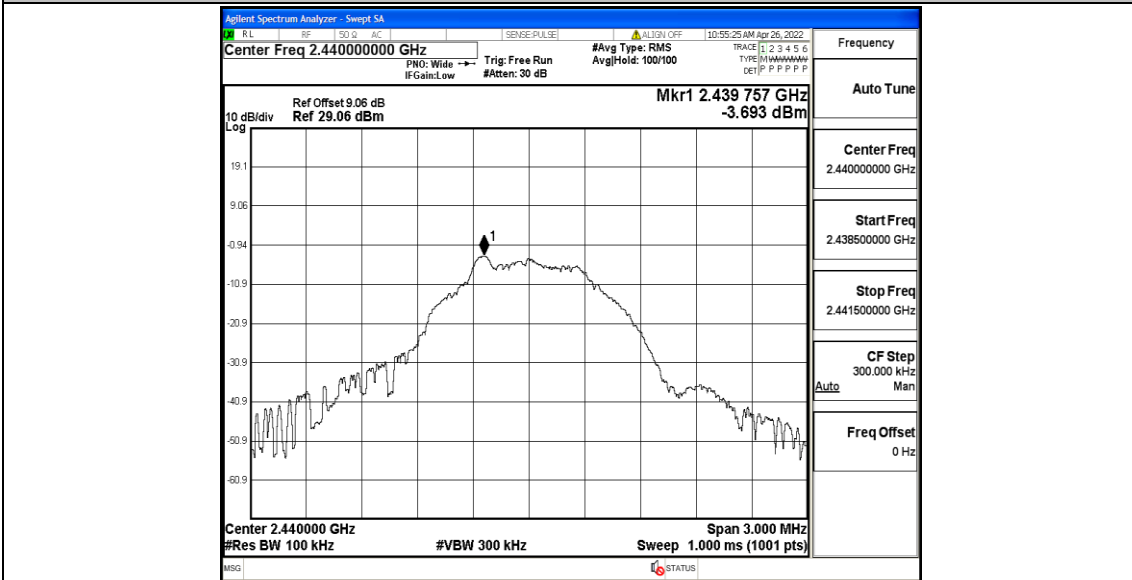
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-5.47	-5.47	---	PASS
			30~1000	-5.47	-61.39	≤-25.47	PASS
			1000~26500	-5.47	-51.75	≤-25.47	PASS
		2440	Reference	-3.69	-3.69	---	PASS
			30~1000	-3.69	-60.02	≤-23.69	PASS
			1000~26500	-3.69	-45.06	≤-23.69	PASS
		2480	Reference	-2.66	-2.66	---	PASS
			30~1000	-2.66	-61.16	≤-22.66	PASS
			1000~26500	-2.66	-49.79	≤-22.66	PASS

Test Graphs

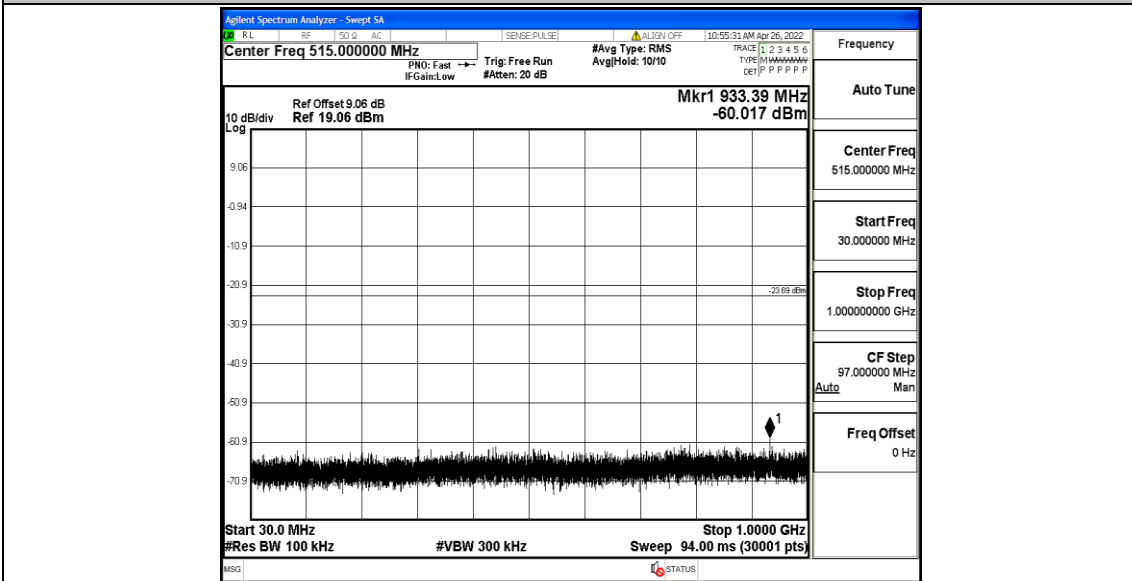




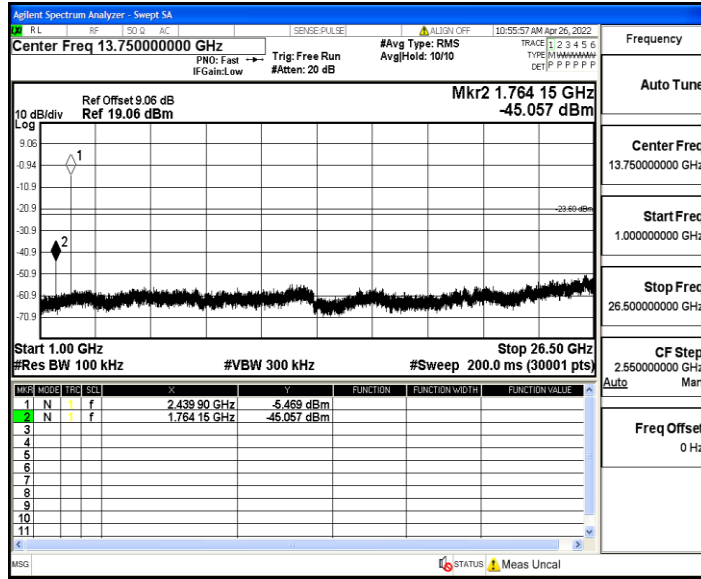
BLE_1M_Ant1_2440_0~Reference



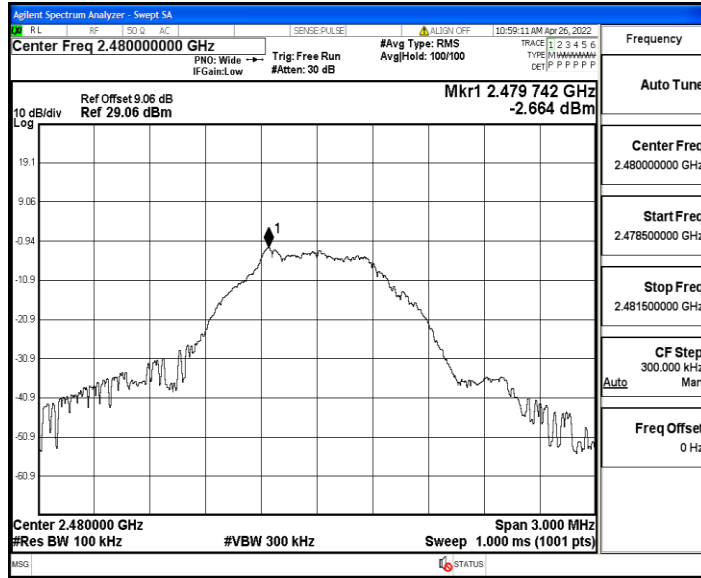
BLE_1M_Ant1_2440_30~1000



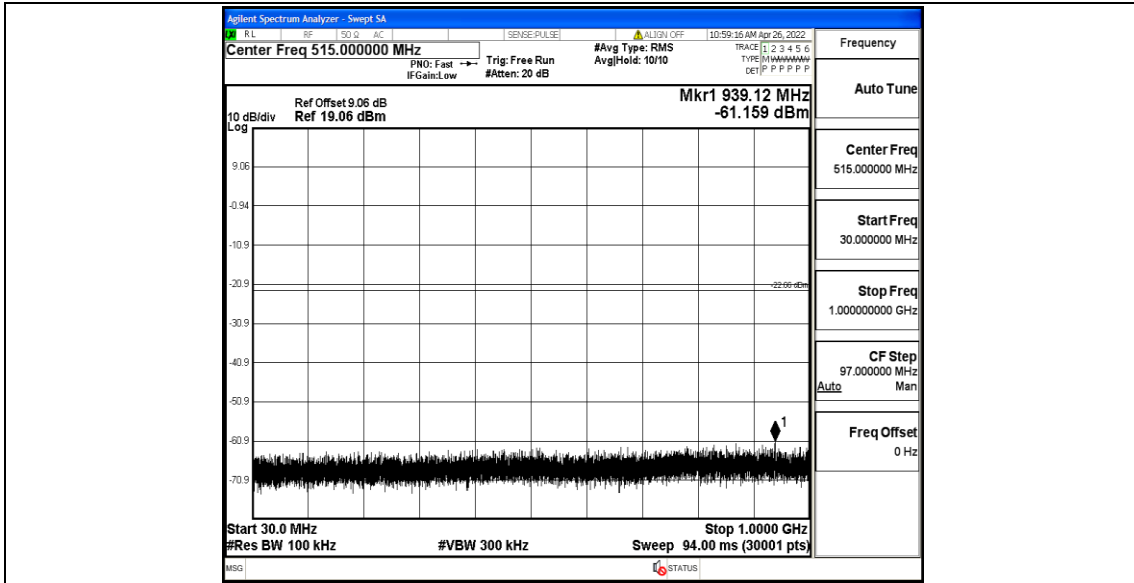
BLE_1M_Ant1_2440_1000~26500



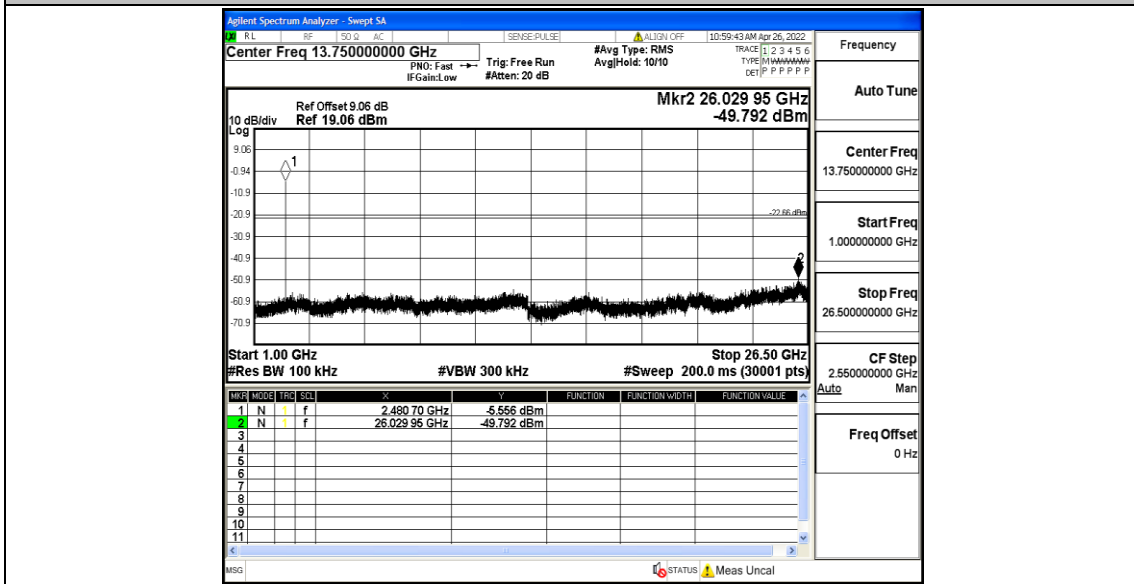
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

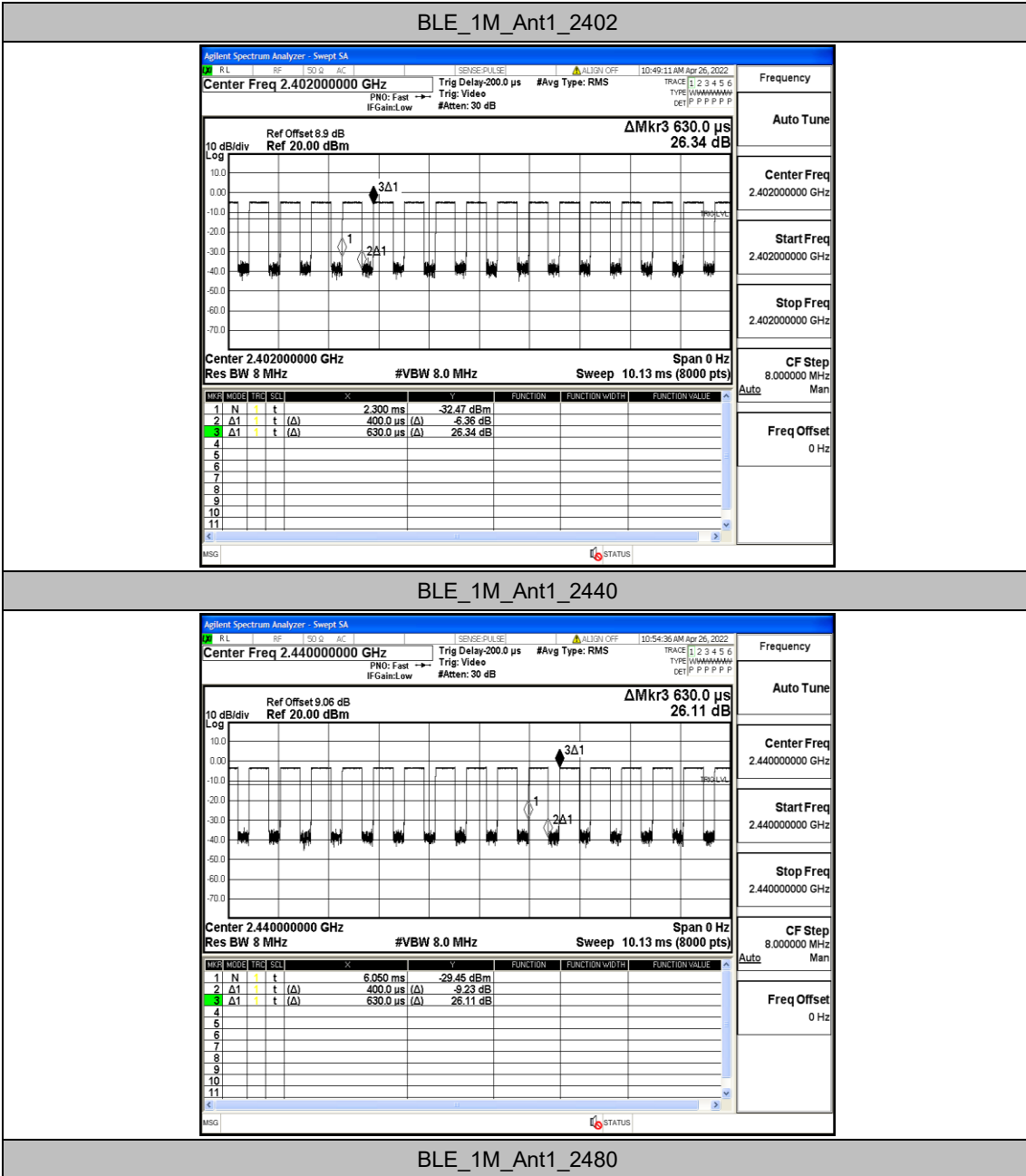


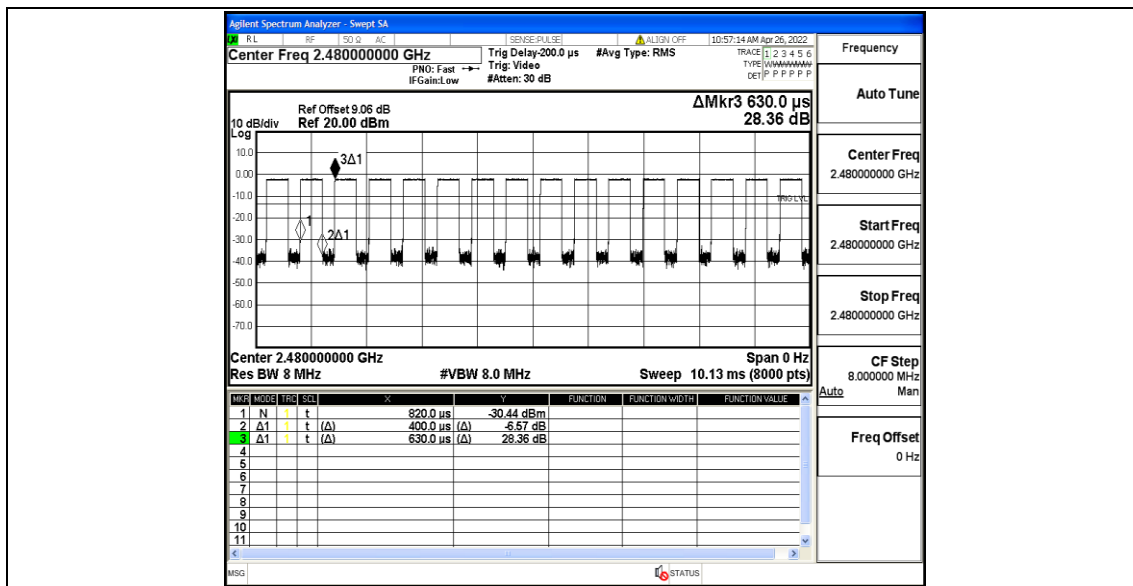
Appendix G: Duty Cycle

Test Result

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

Test Graphs





Appendix H: Emissions in Restricted Bands

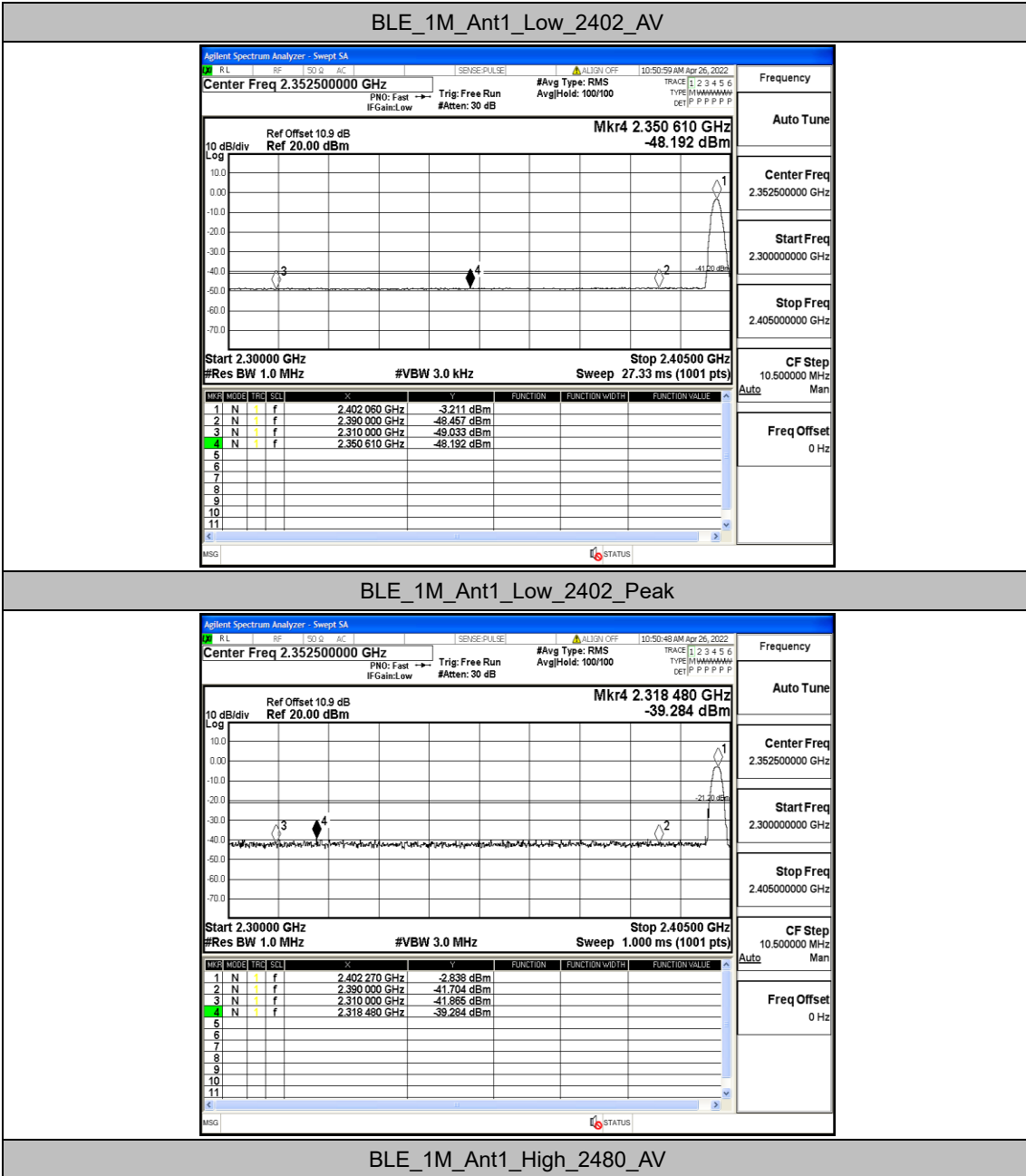
Test Result

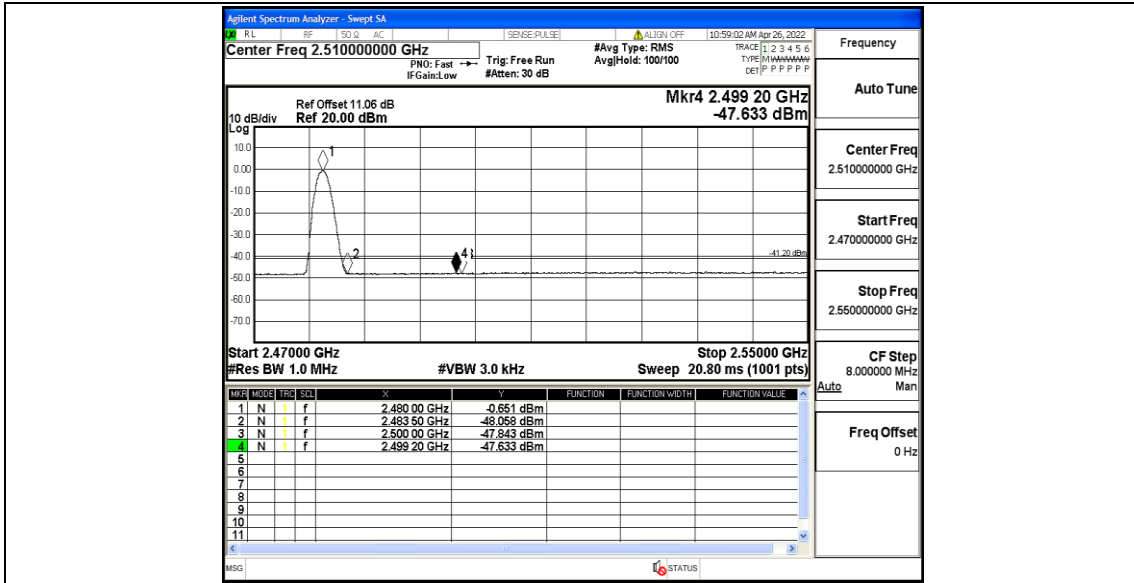
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-49.03	≤-41.20	PASS
				AV	2350.610	-48.19	≤-41.20	PASS
				AV	2390.000	-48.46	≤-41.20	PASS
				Peak	2310.000	-41.87	≤-21.20	PASS
				Peak	2318.480	-39.28	≤-21.20	PASS
				Peak	2390.000	-41.7	≤-21.20	PASS
		High	2480	AV	2483.500	-48.06	≤-41.20	PASS
				AV	2499.200	-47.63	≤-41.20	PASS
				AV	2500.000	-47.84	≤-41.20	PASS
				Peak	2483.500	-42.66	≤-21.20	PASS
				Peak	2492.960	-38.02	≤-21.20	PASS
				Peak	2500.000	-41.61	≤-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_High_2480_Peak

