

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

Product Name: OTT BOX+GPON

Trade Mark: N/A

Test Model: SD5BGD

FCC ID: 2AQLF-SD5BGX

Environmental Conditions

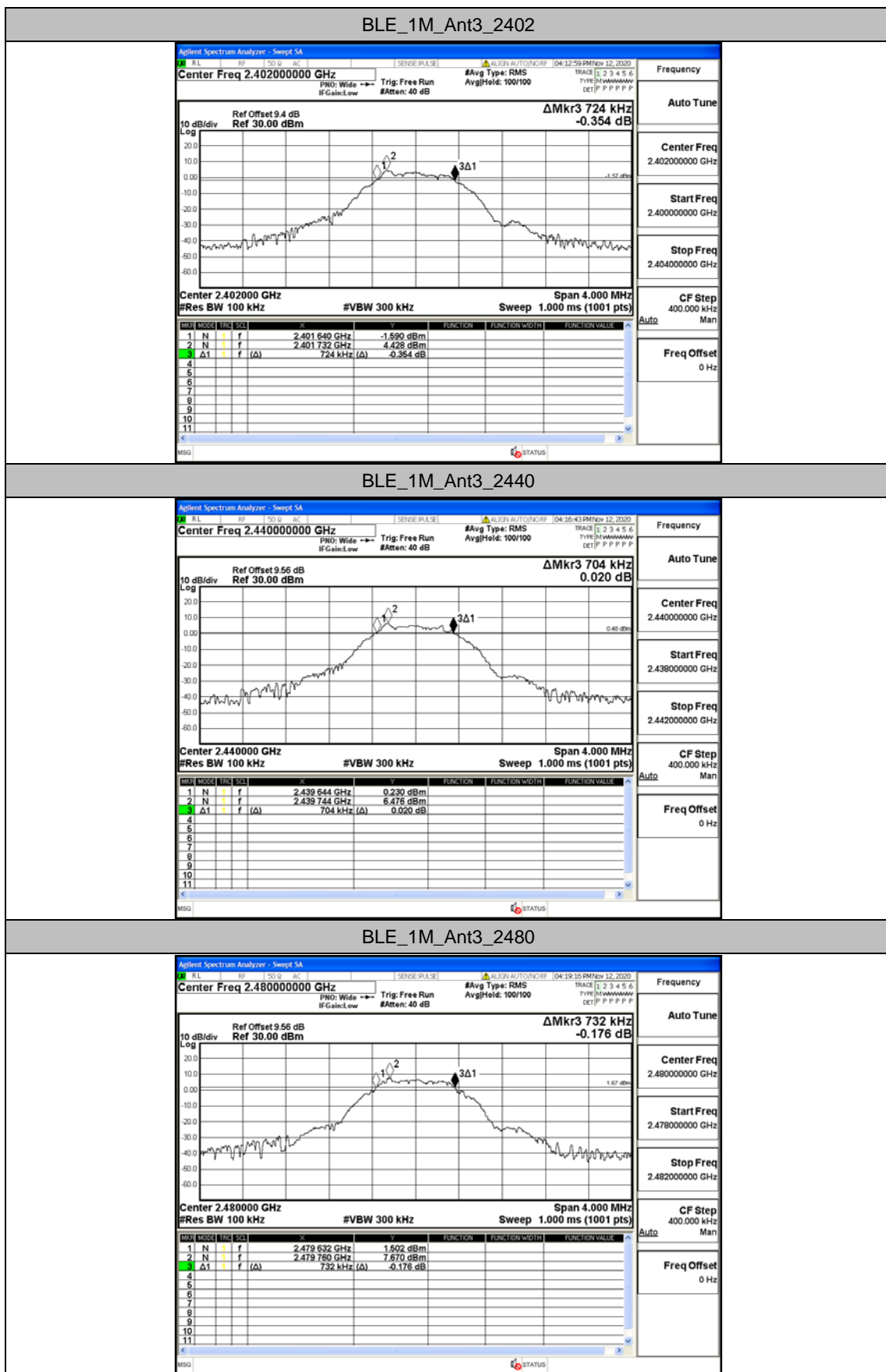
Temperature:	25.5°C
Relative Humidity:	55.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT4.0	Ant3	2402	0.724	2401.640	2402.364	0.5	PASS
		2440	0.704	2439.644	2440.348	0.5	PASS
		2480	0.732	2479.632	2480.364	0.5	PASS

Test Graphs

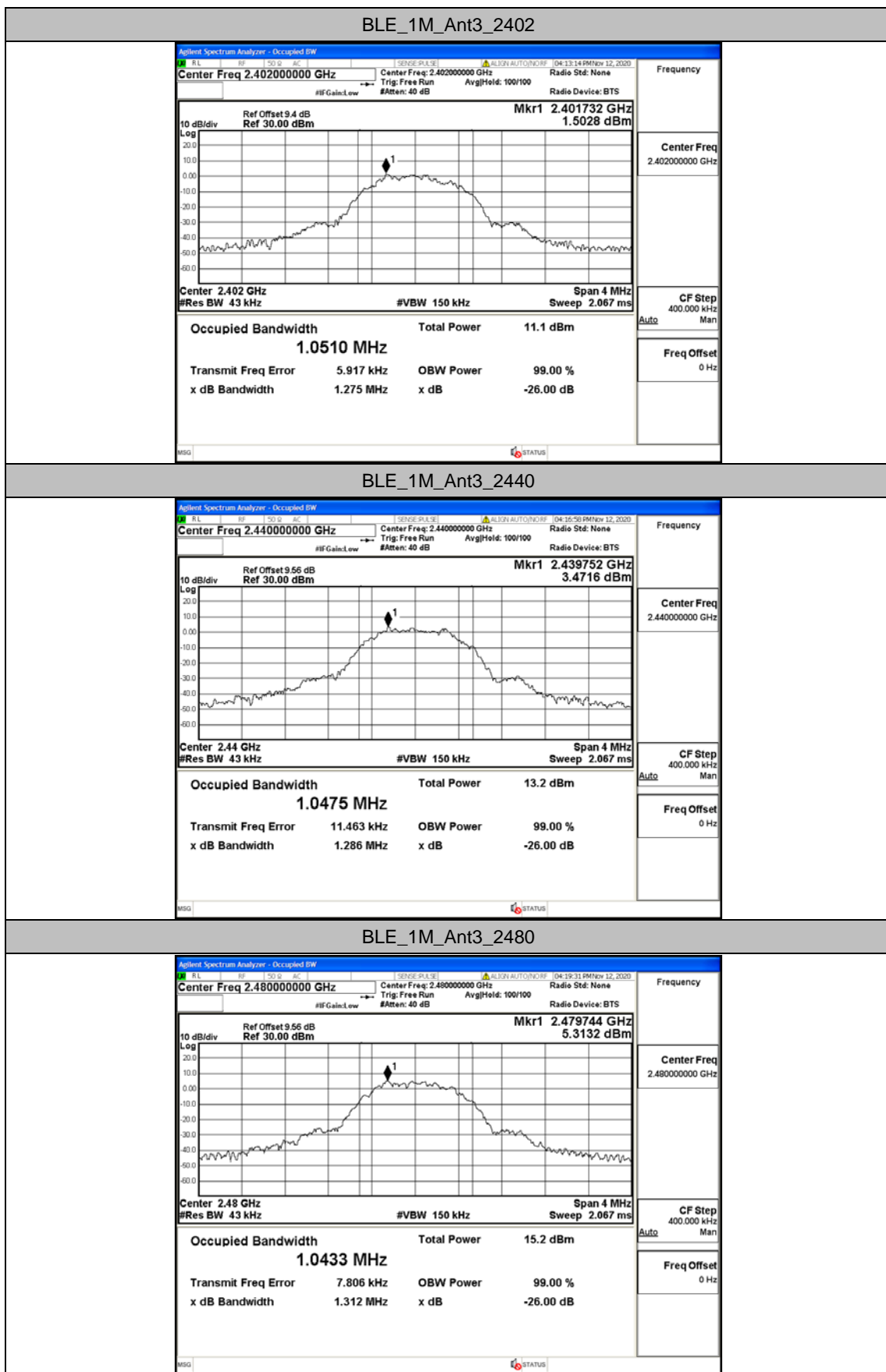


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT4.0	Ant3	2402	1.0510	2401.480	2402.531	---	PASS
		2440	1.0475	2439.488	2440.535	---	PASS
		2480	1.0433	2479.486	2480.529	---	PASS

Test Graphs

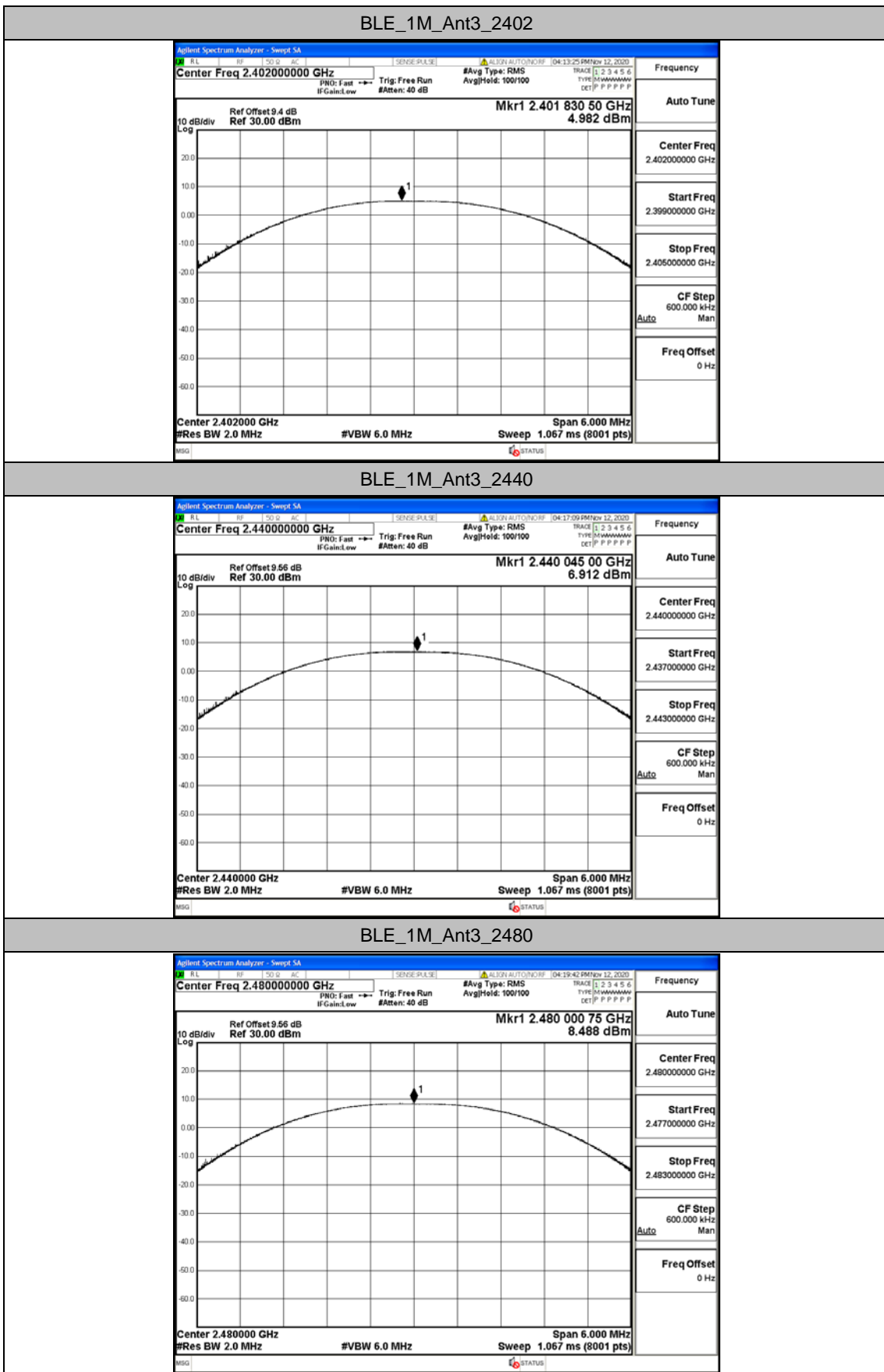


Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_BT4.0	Ant3	2402	4.98	<=30	PASS
		2440	6.91	<=30	PASS
		2480	8.49	<=30	PASS

Test Graphs



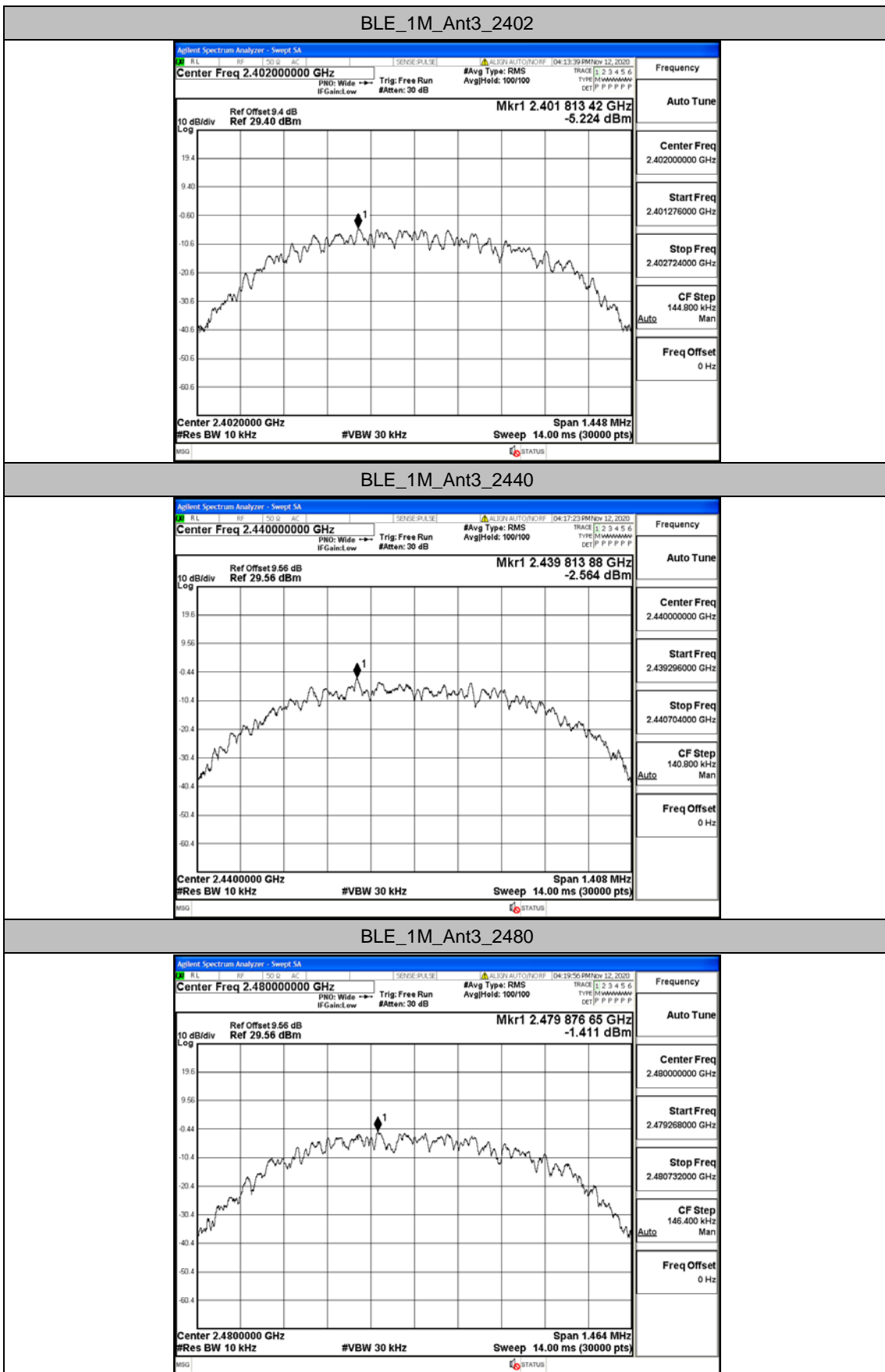
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm /3-100kHz]	Conveter factor(dB)	Result 3kHz (dBm)	Limit[dBm/ 3kHz]	Verdict
BLE_BT4.0	Ant3	2402	-5.22	5.23	-10.45	<=8	PASS
		2440	-2.56	5.23	-7.79	<=8	PASS
		2480	-1.41	5.23	-6.64	<=8	PASS

1. Conveter factor = $10 * \lg(\text{RBW}/3 \text{ kHz})$
2. Result 3kHz = Result - Conveter factor

Test Graphs

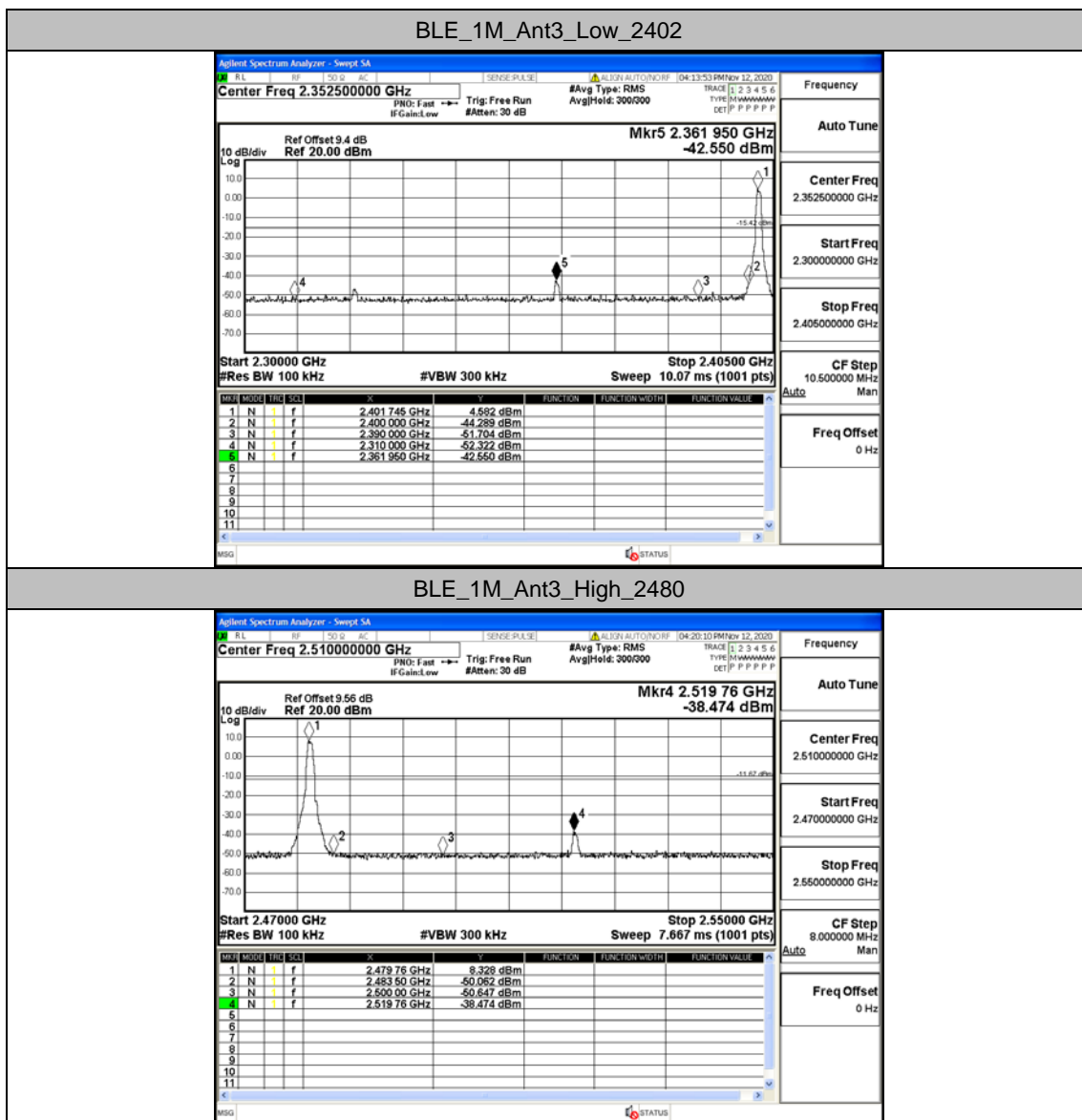


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_BT4.0	Ant3	Low	2402	4.58	-42.55	<=-15.42	PASS
		High	2480	8.33	-38.47	<=-11.67	PASS

Test Graphs

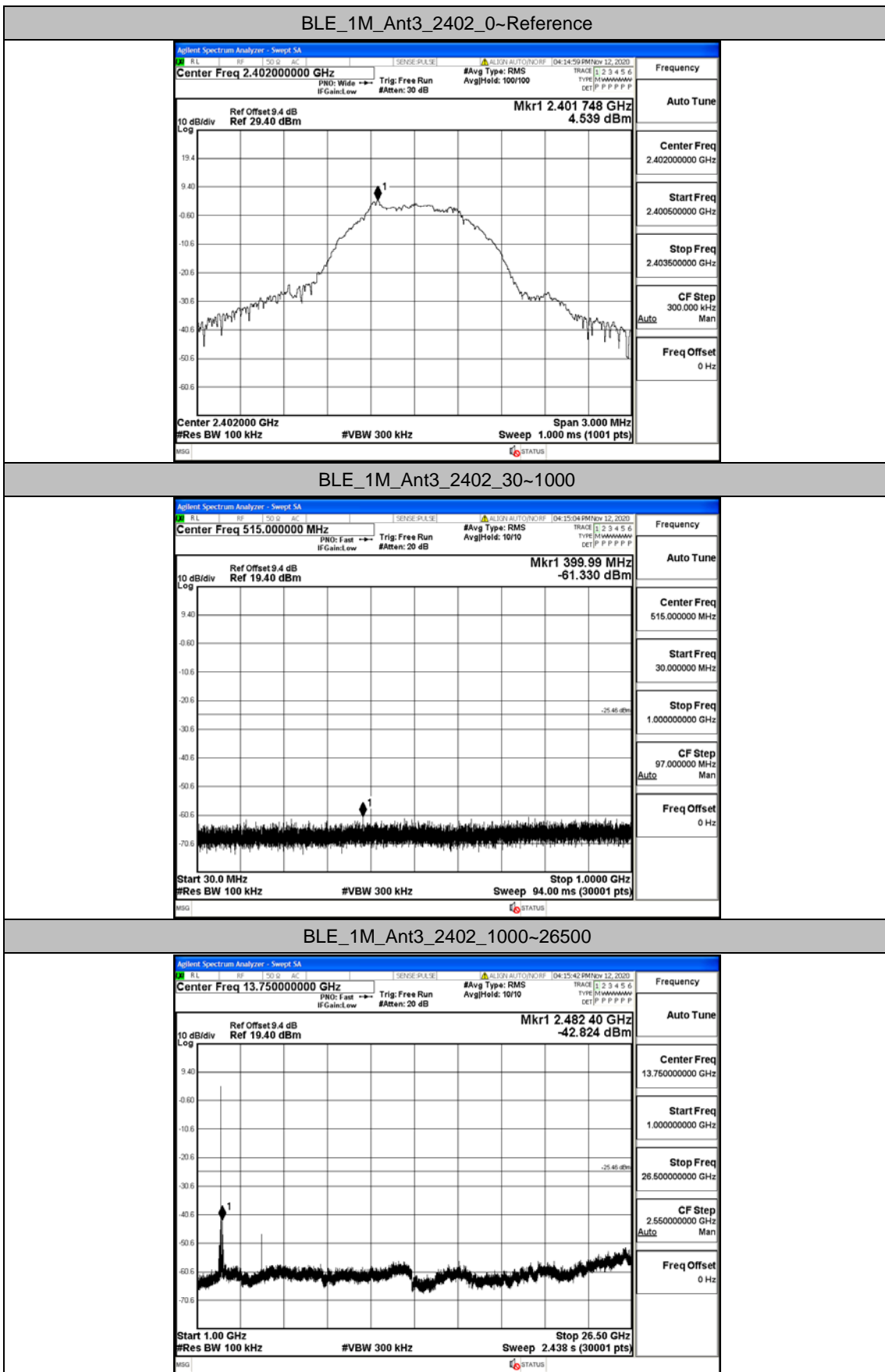


Appendix F: Conducted Spurious Emission

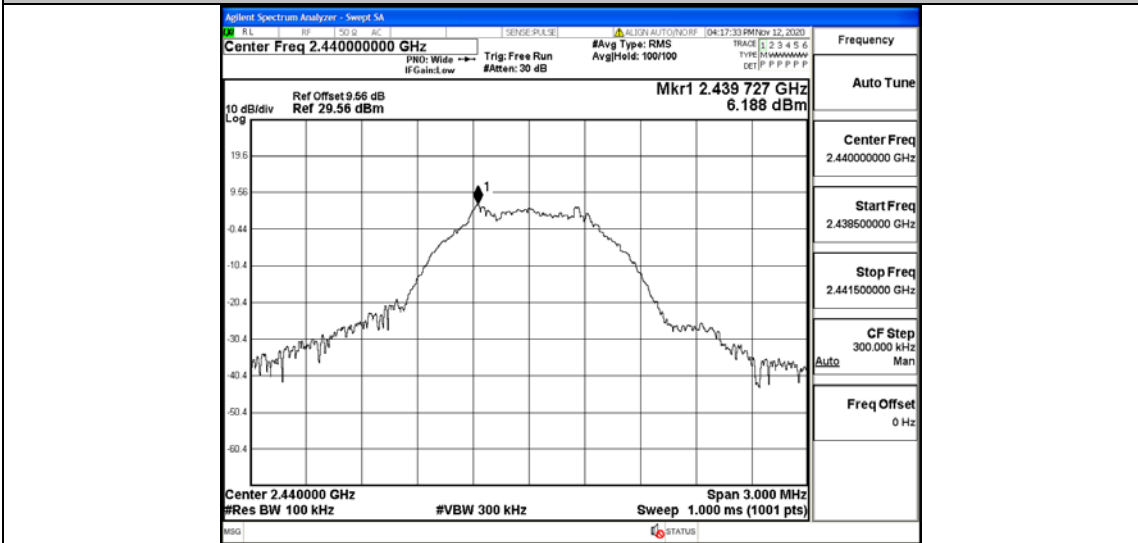
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant3	2402	Reference	4.54	4.54	---	PASS
			30~1000	4.54	-61.33	<=-25.461	PASS
			1000~26500	4.54	-42.824	<=-25.461	PASS
		2440	Reference	6.19	6.19	---	PASS
			30~1000	6.19	-61.005	<=-23.812	PASS
			1000~26500	6.19	-42.306	<=-23.812	PASS
		2480	Reference	7.67	7.67	---	PASS
			30~1000	7.67	-61.087	<=-22.328	PASS
			1000~26500	7.67	-39.304	<=-22.328	PASS

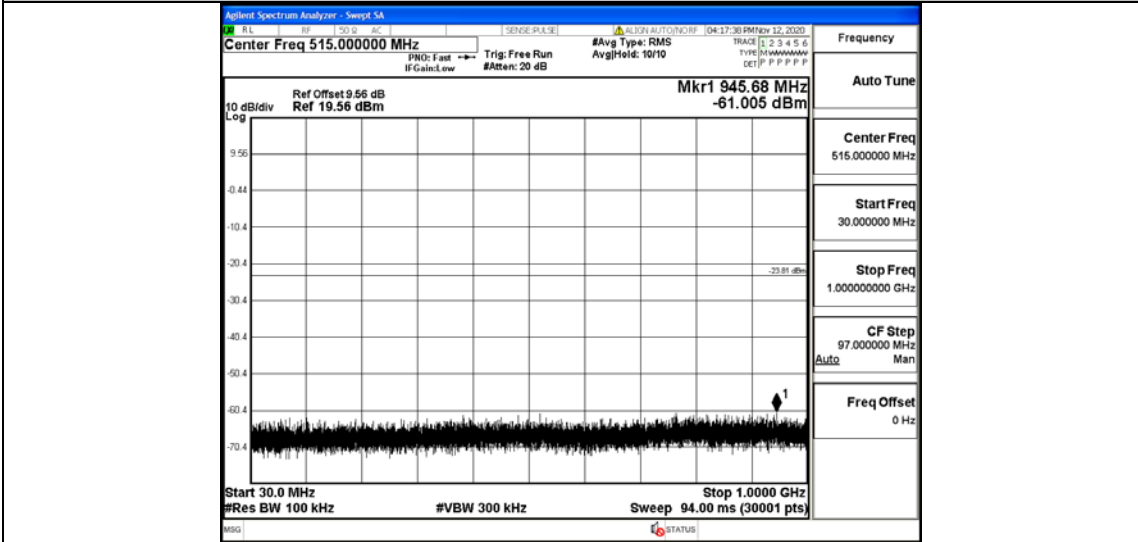
Test Graphs



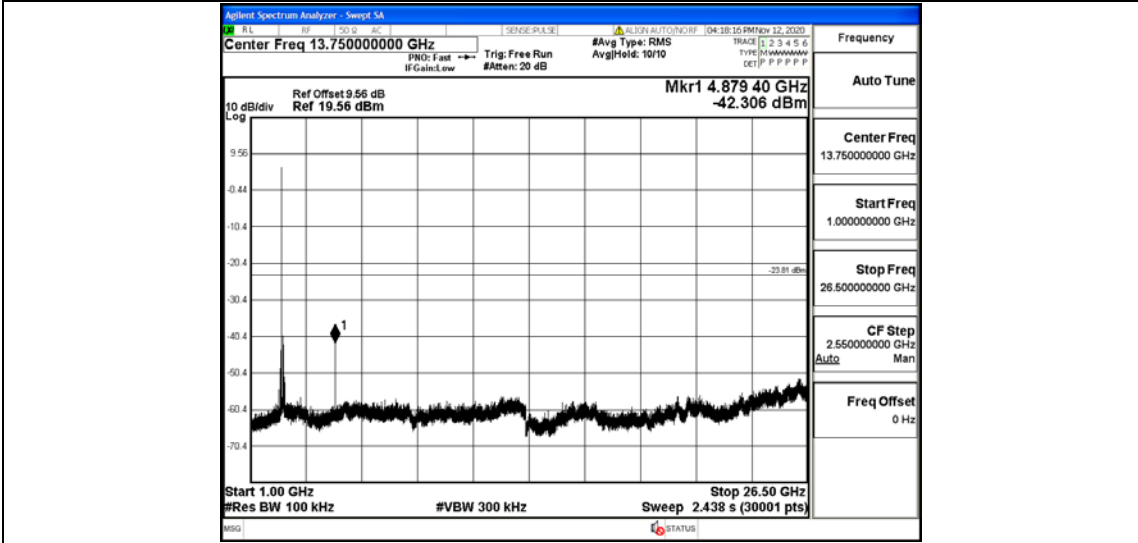
BLE_1M_Ant3_2440_0~Reference



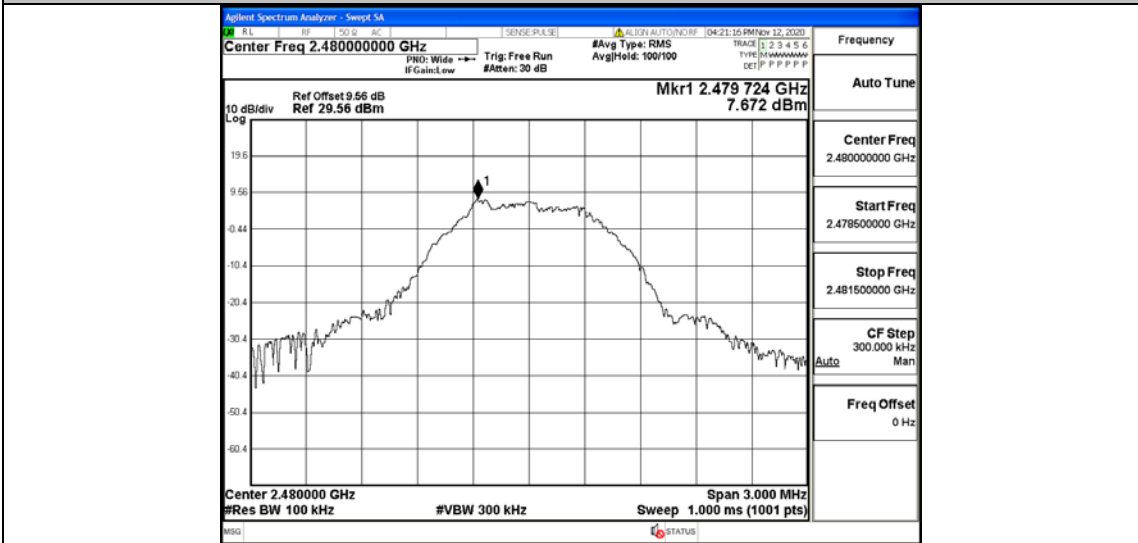
BLE_1M_Ant3_2440_30~1000



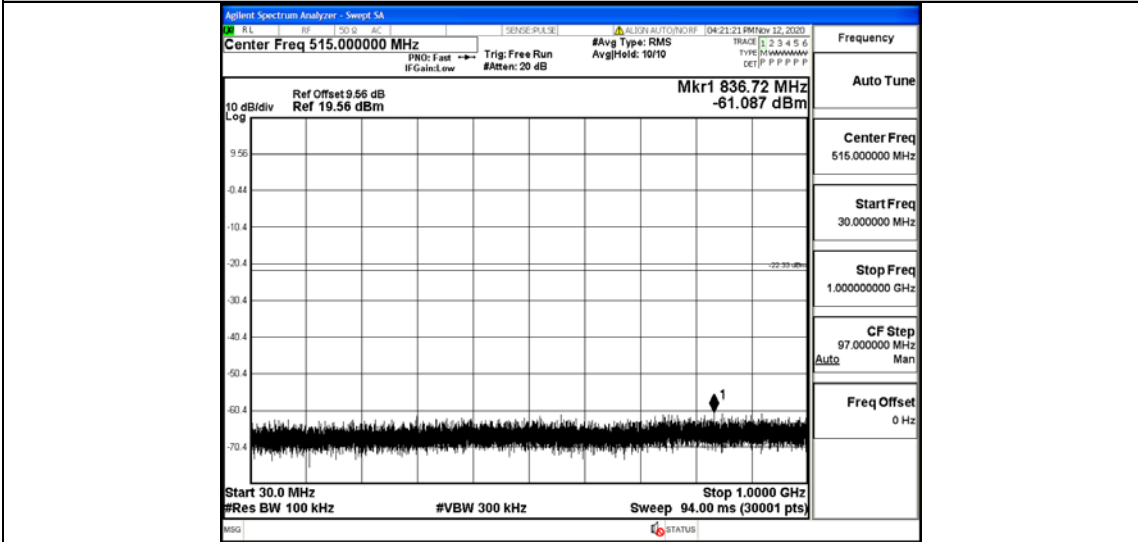
BLE_1M_Ant3_2440_1000~26500



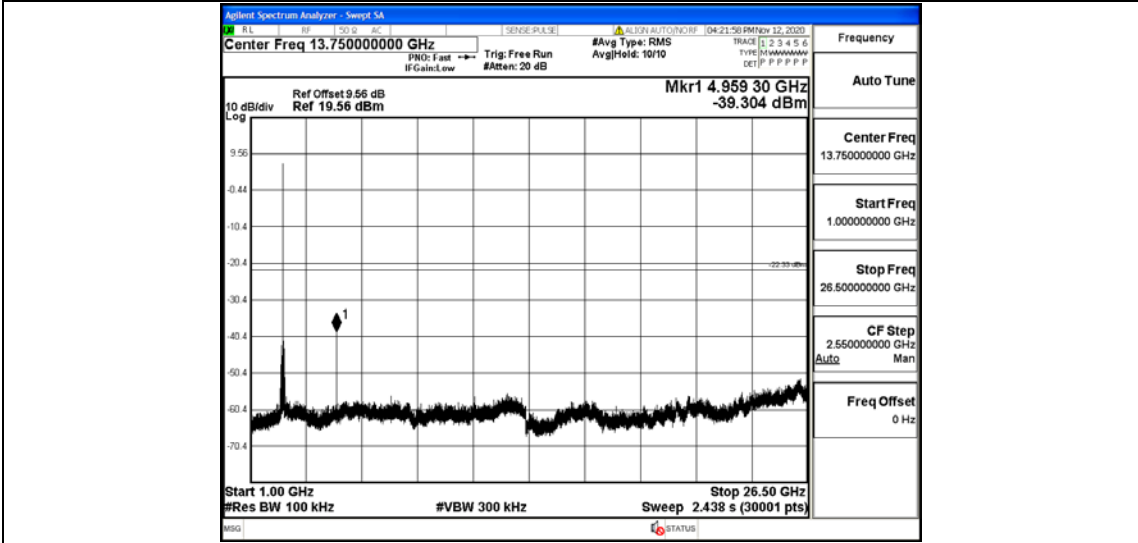
BLE_1M_Ant3_2480_0~Reference



BLE_1M_Ant3_2480_30~1000



BLE_1M_Ant3_2480_1000~26500

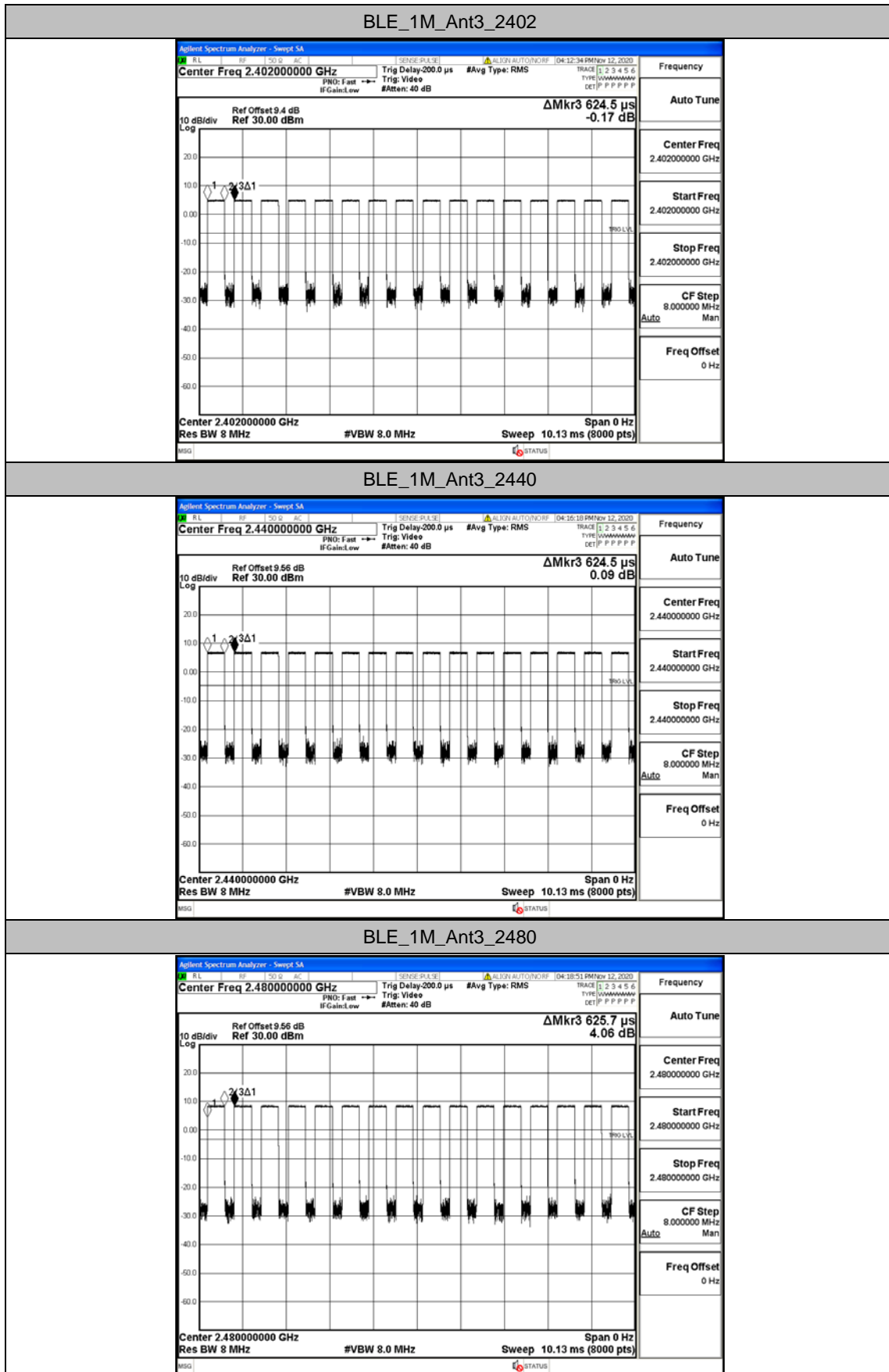


Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/B[KHz]
BLE_BT4.0	Ant3	2402	0.40	0.62	64.00	2.5
		2440	0.40	0.62	64.00	2.5
		2480	0.40	0.63	64.00	2.5

Test Graphs



Appendix H: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_BT4 .0	Ant3	Low	2402	AV	2310.000	-48.49	<=-41.20	PASS
				AV	2390.000	-47.59	<=-41.20	PASS
				Peak	2310.000	-41.37	<=-21.20	PASS
				Peak	2390.000	-39.96	<=-21.20	PASS
		High	2480	AV	2483.500	-43.59	<=-41.20	PASS
				AV	2500.000	-46.8	<=-41.20	PASS
				Peak	2483.500	-33.79	<=-21.20	PASS
				Peak	2500.000	-40.34	<=-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

