

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

Product Name: RAB Bluetooth Remote Control

Trade Mark: N/A

Test Model: LCBLUEREMOTE/W

FCC ID: 2AXD8-LCBLUEREMOTE

Environmental Conditions

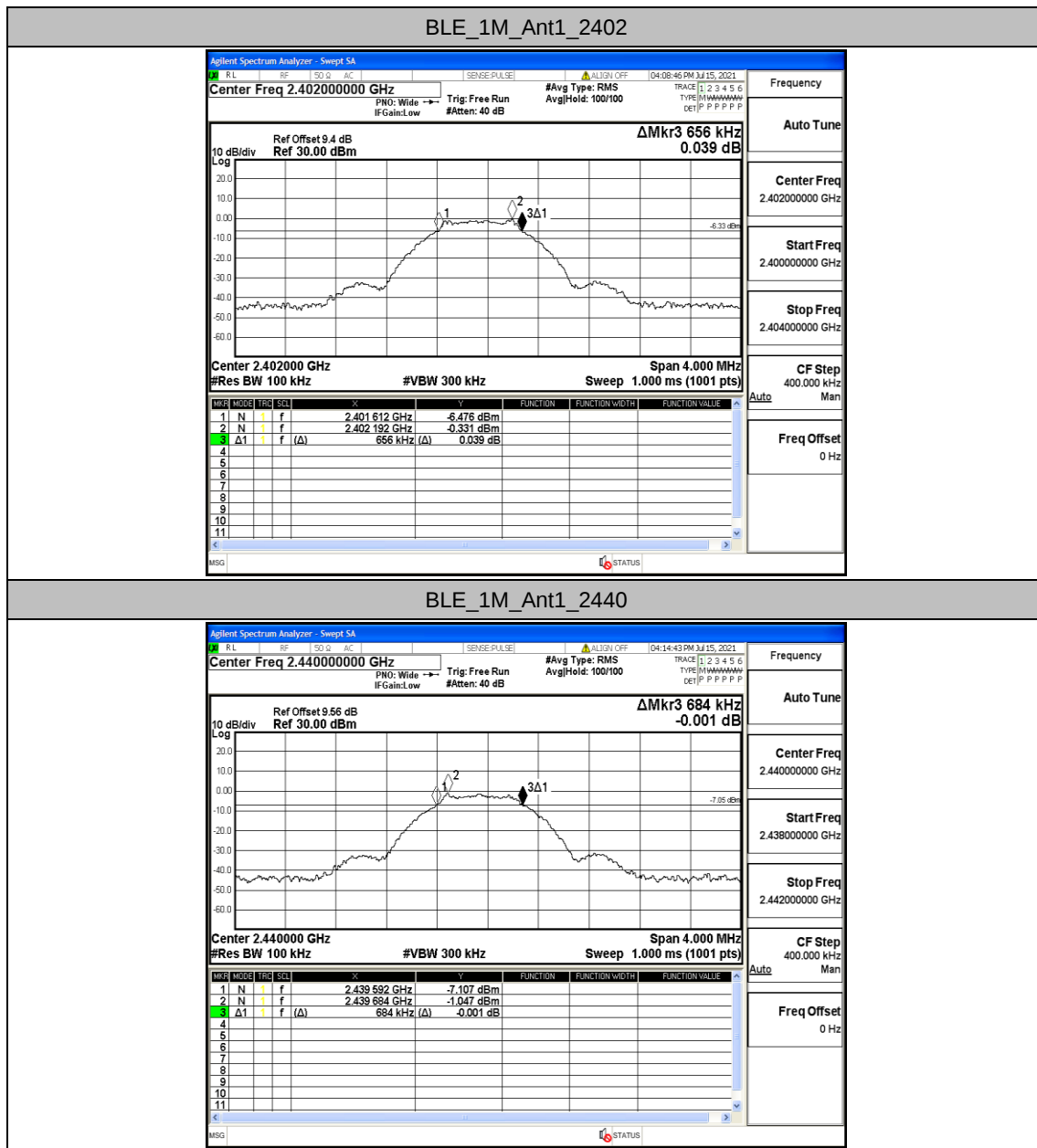
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

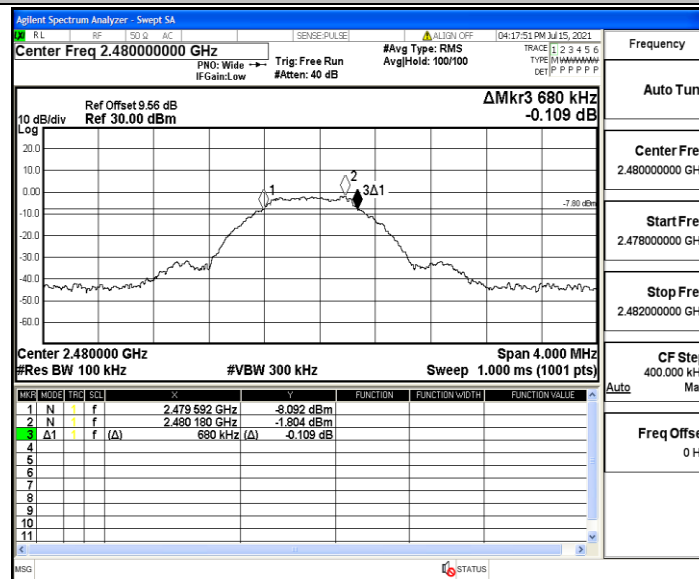
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.612	2402.268	0.5	PASS
		2440	0.684	2439.592	2440.276	0.5	PASS
		2480	0.680	2479.592	2480.272	0.5	PASS
BLE_2M	Ant1	2402	1.228	2401.340	2402.568	0.5	PASS
		2440	1.336	2439.288	2440.624	0.5	PASS
		2480	1.260	2479.288	2480.548	0.5	PASS

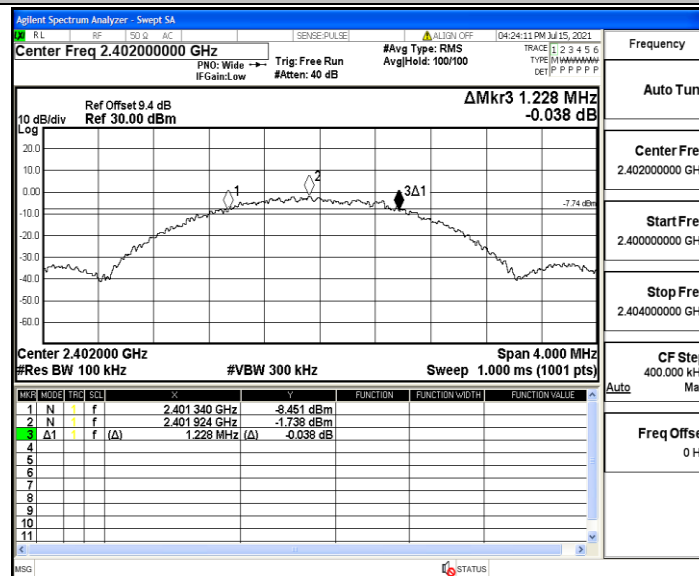
Test Graphs



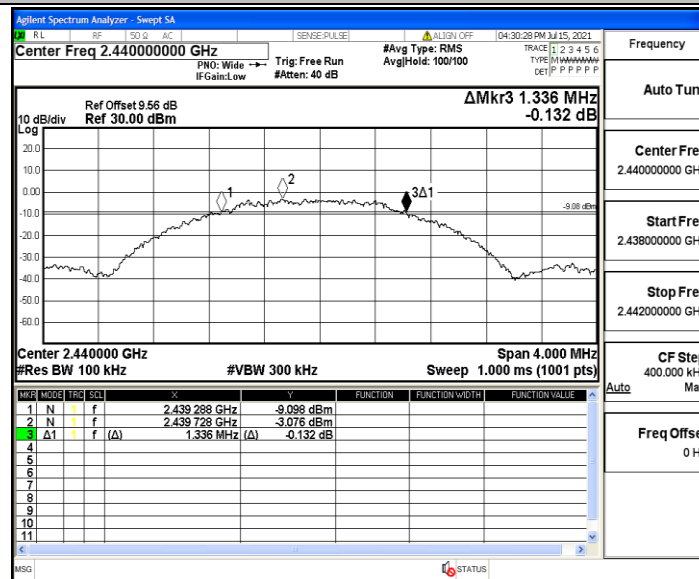
BLE_1M_Ant1_2480



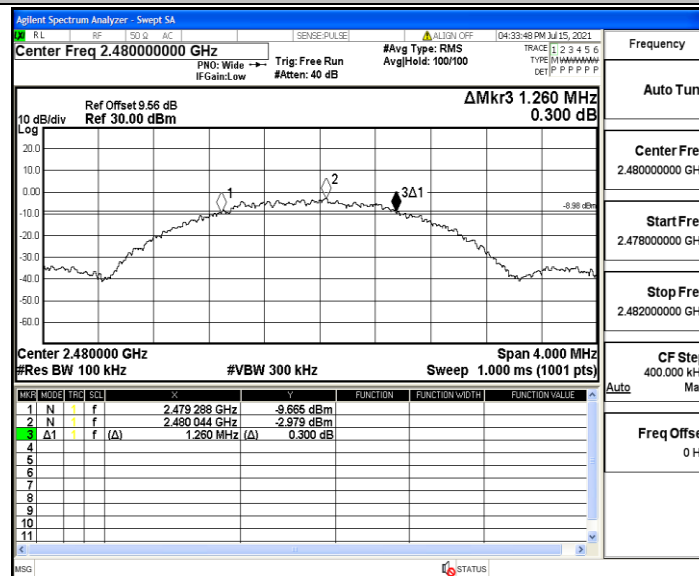
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

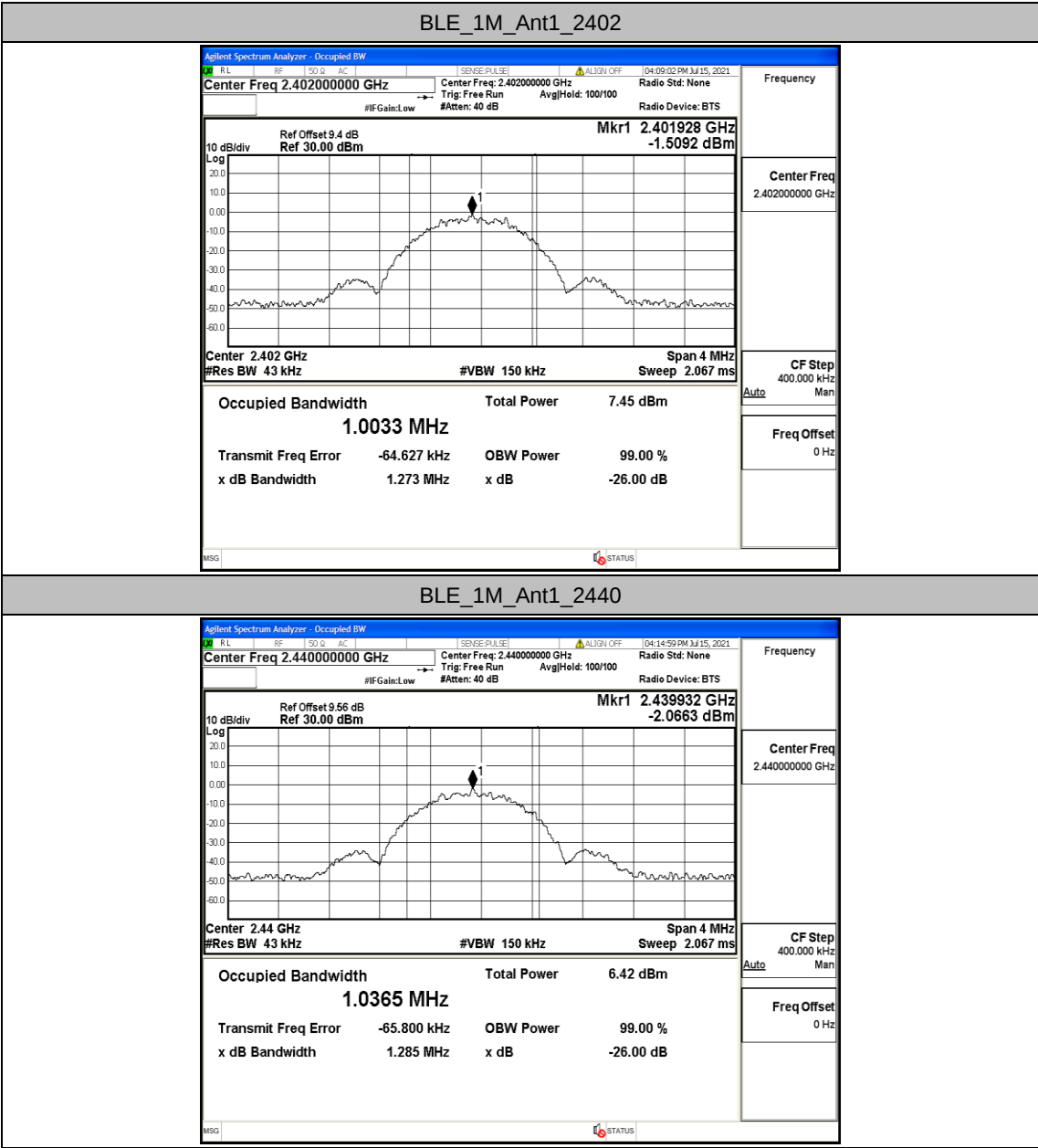


Appendix B: Occupied Channel Bandwidth

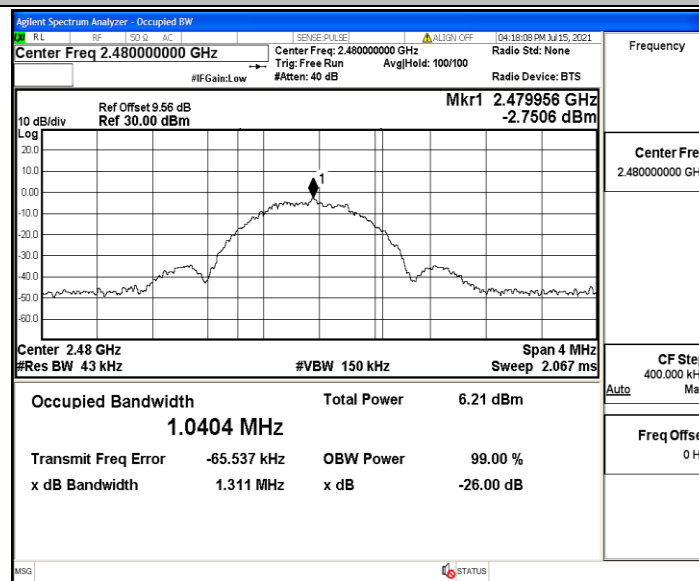
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0033	2401.434	2402.437	---	PASS
		2440	1.0365	2439.416	2440.452	---	PASS
		2480	1.0404	2479.414	2480.455	---	PASS
BLE_2M	Ant1	2402	2.0396	2400.918	2402.958	---	PASS
		2440	2.0369	2438.904	2440.941	---	PASS
		2480	2.0252	2478.920	2480.945	---	PASS

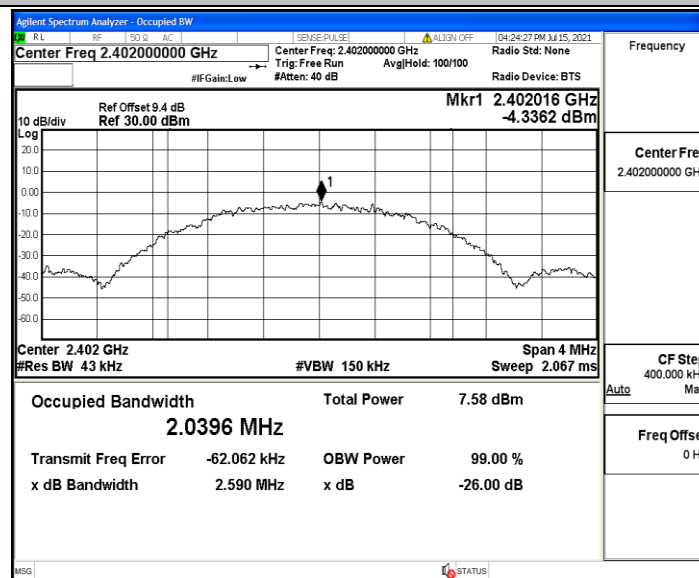
Test Graphs



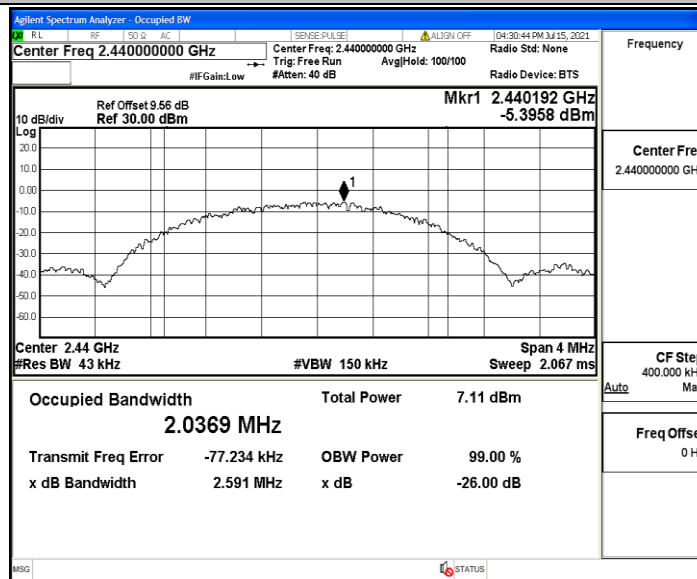
BLE_1M_Ant1_2480



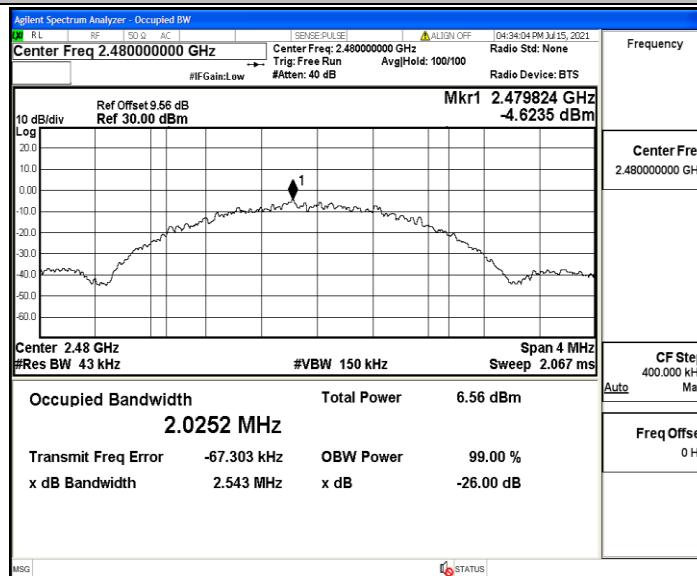
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

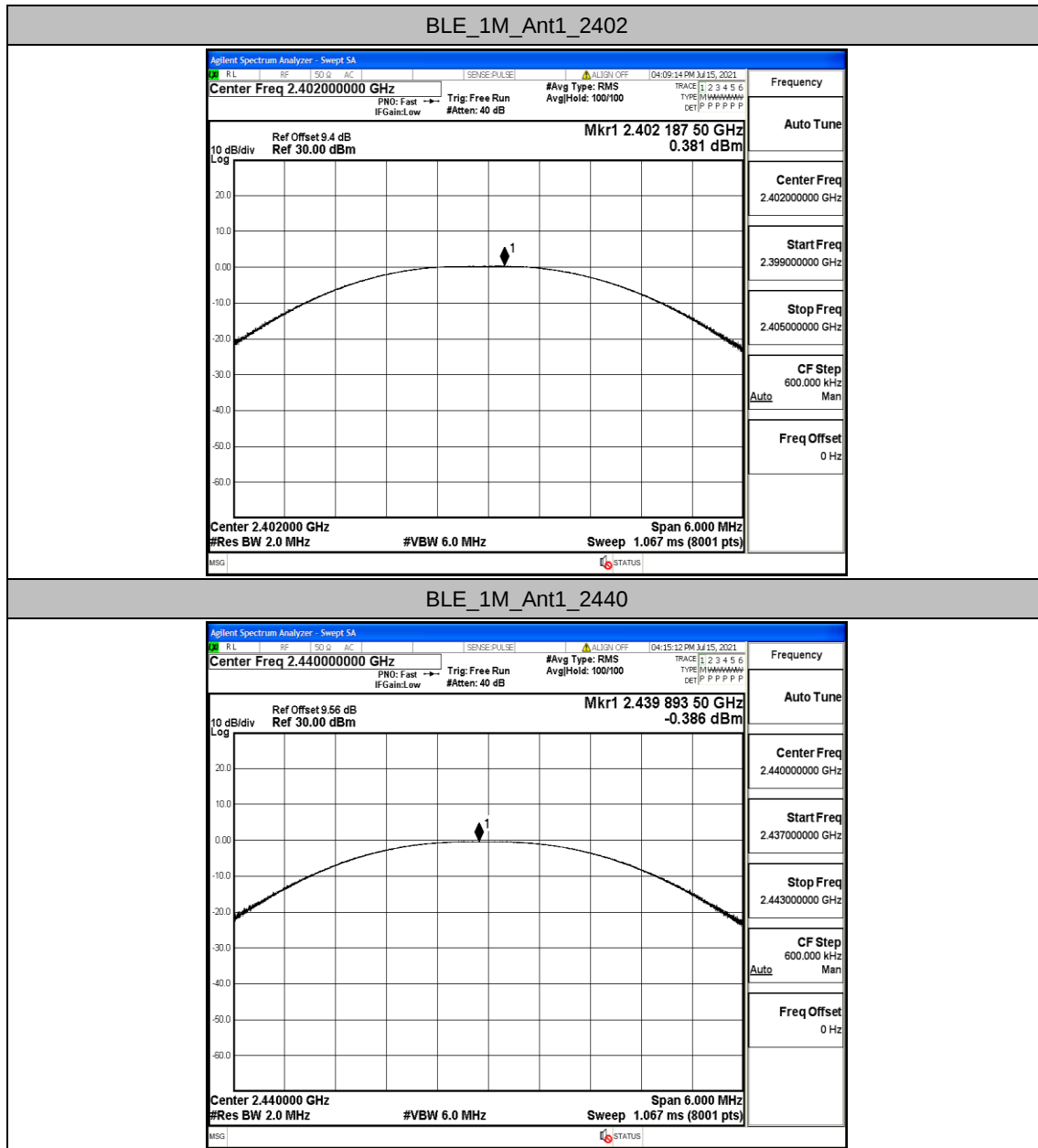


Appendix C: Maximum conducted output power

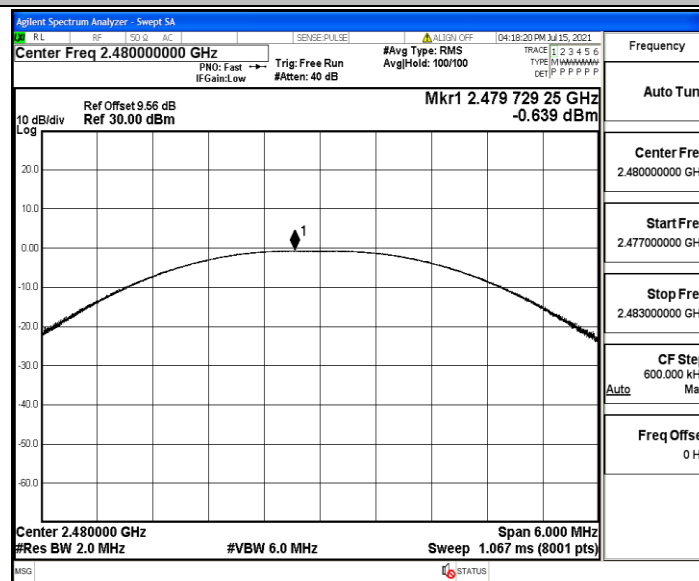
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.38	<=30	PASS
		2440	-0.39	<=30	PASS
		2480	-0.64	<=30	PASS
BLE_2M	Ant1	2402	0.27	<=30	PASS
		2440	-0.34	<=30	PASS
		2480	-0.85	<=30	PASS

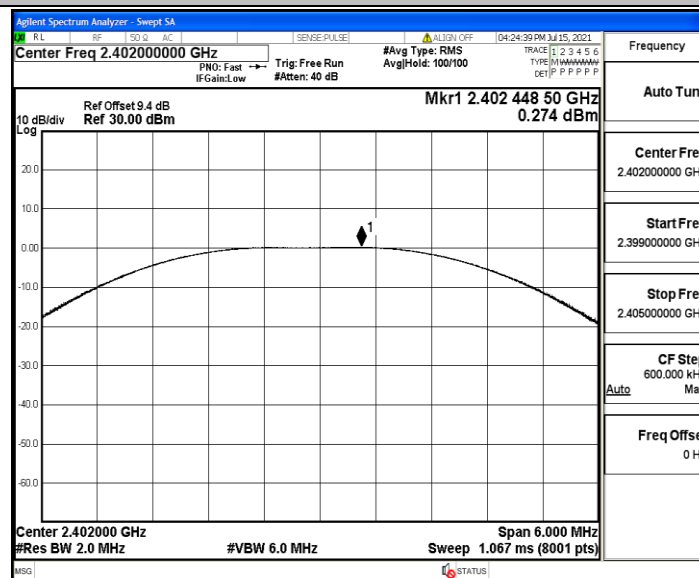
Test Graphs

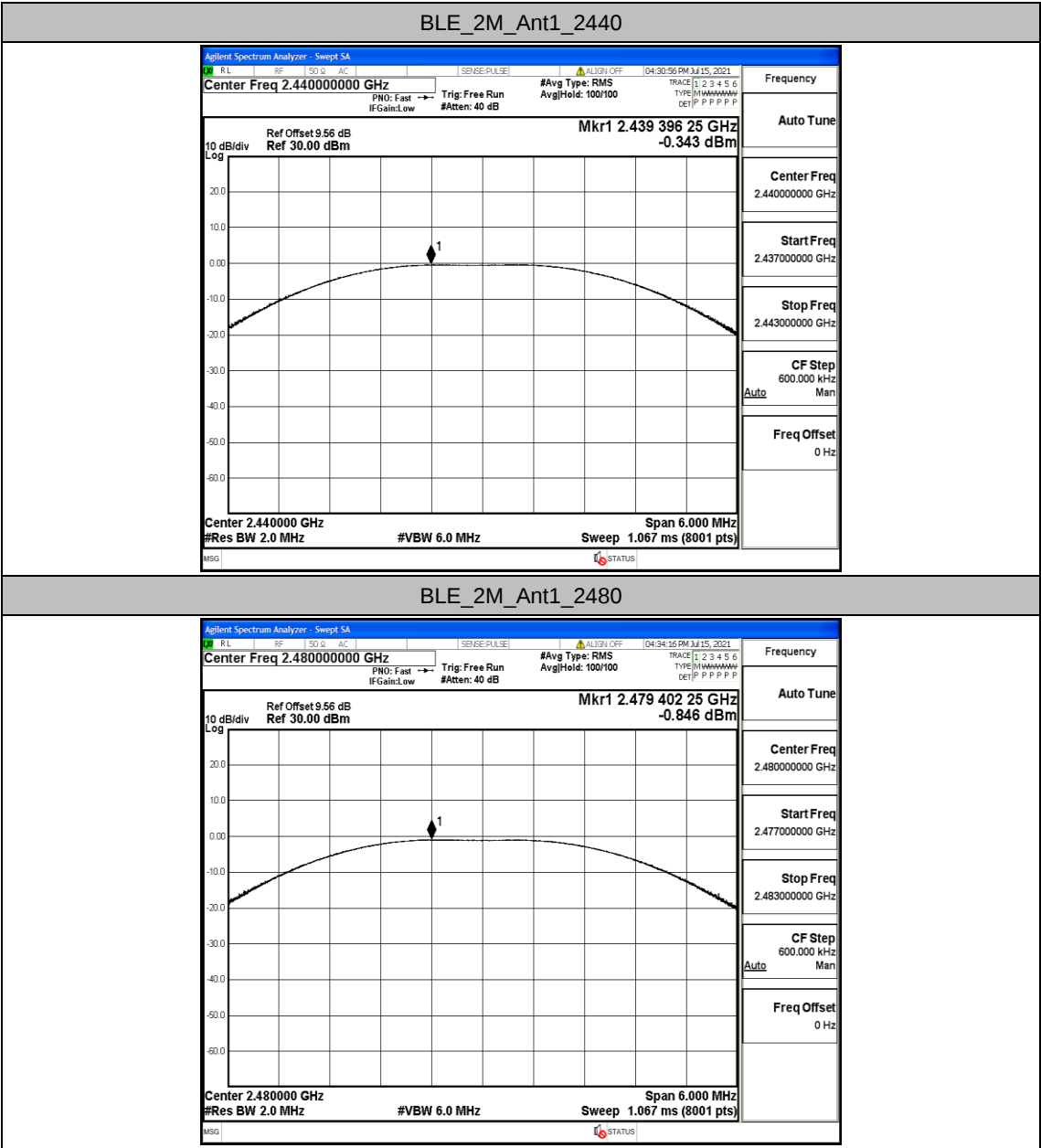


BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



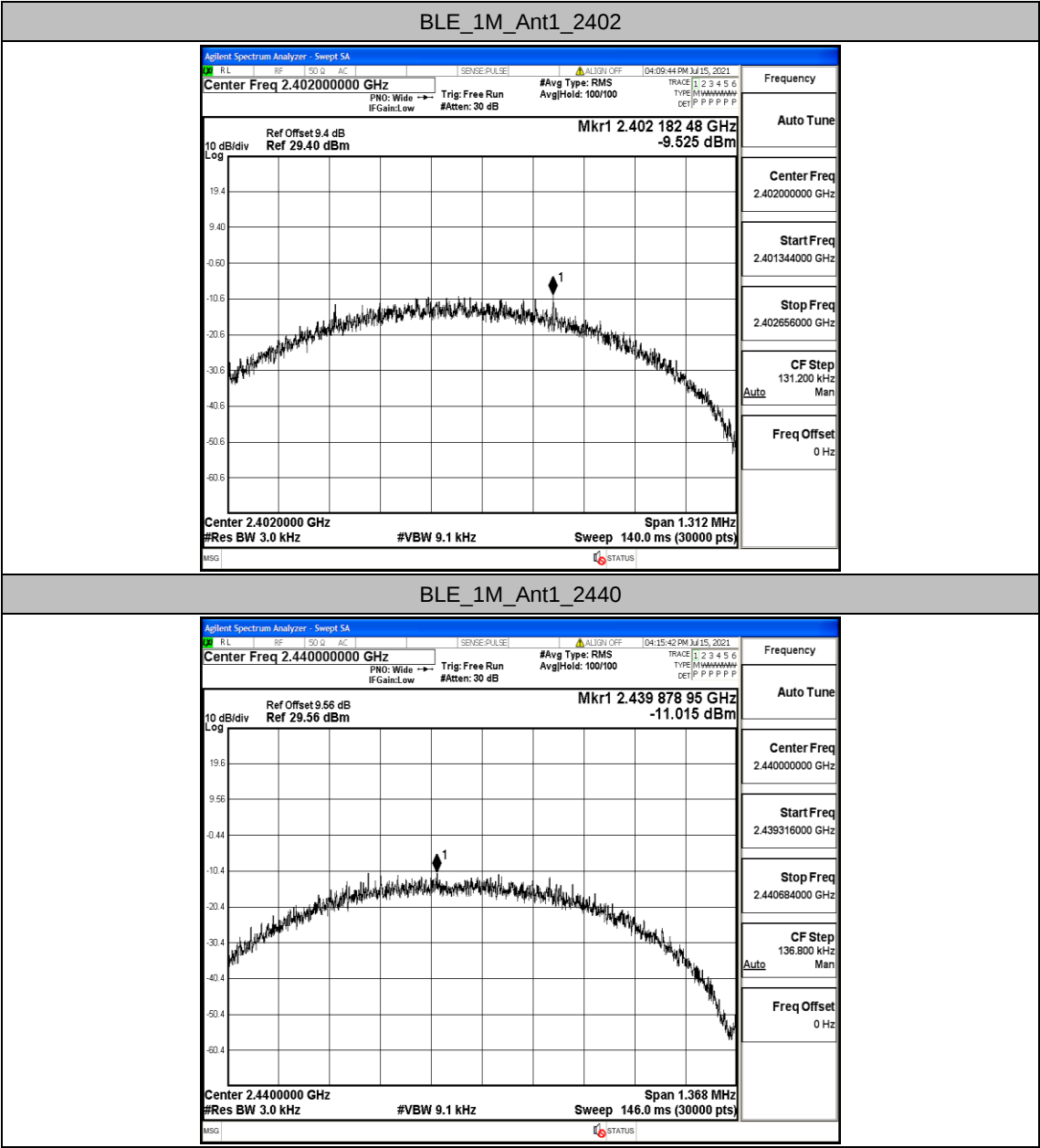


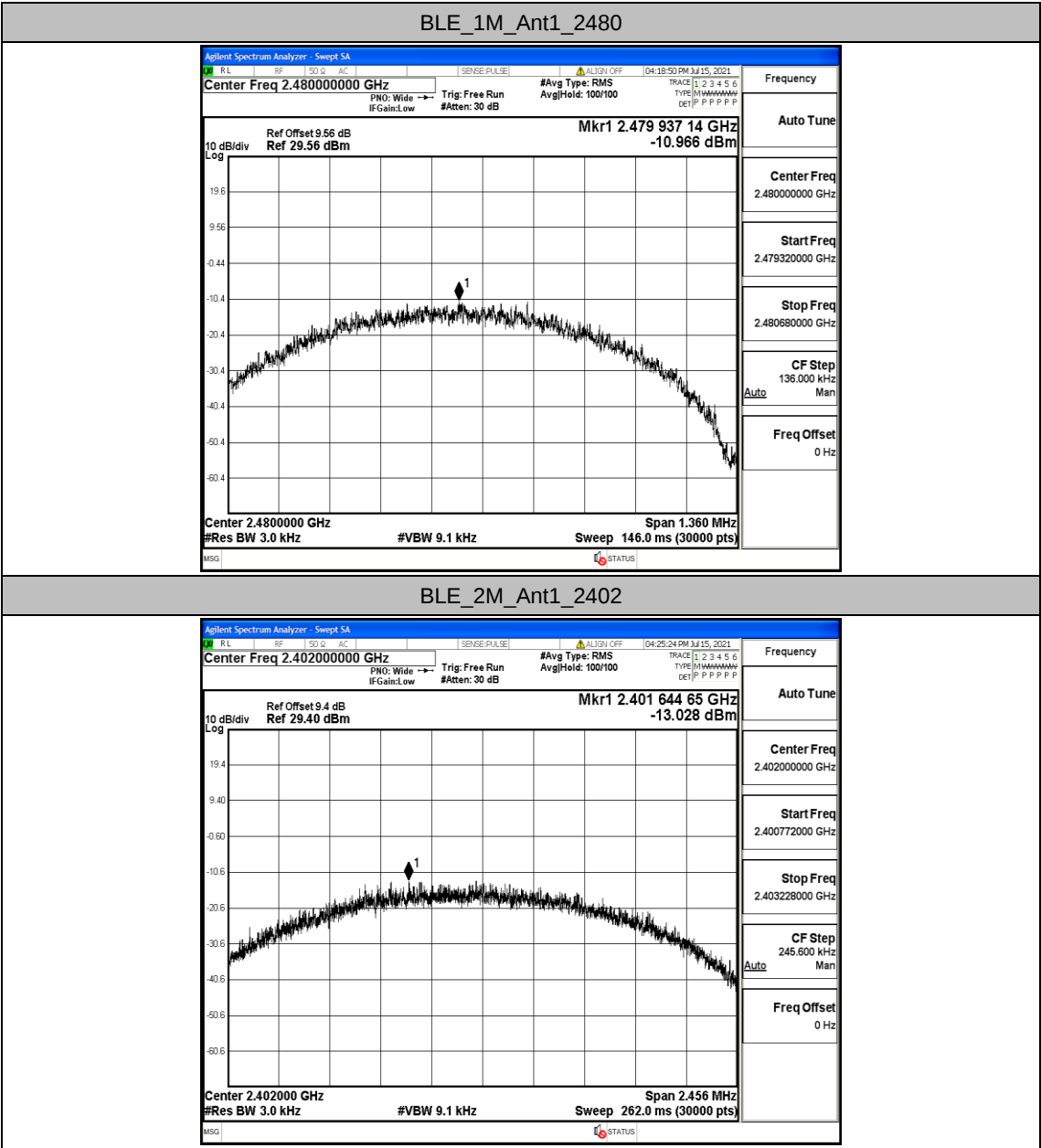
Appendix D: Maximum power spectral density

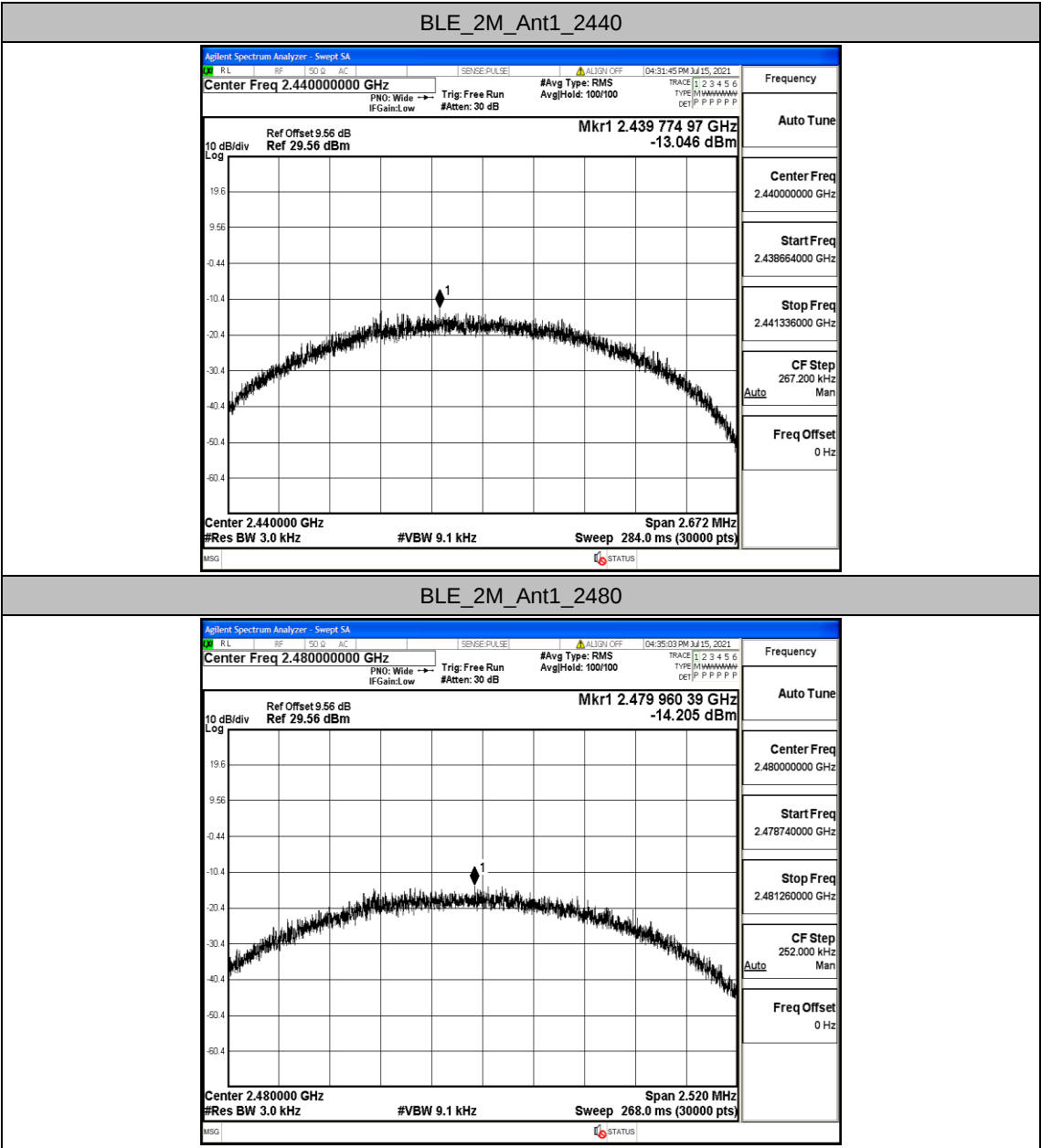
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-9.53	<=8	PASS
		2440	-11.02	<=8	PASS
		2480	-10.97	<=8	PASS
BLE_2M	Ant1	2402	-13.03	<=8	PASS
		2440	-13.05	<=8	PASS
		2480	-14.21	<=8	PASS

Test Graphs





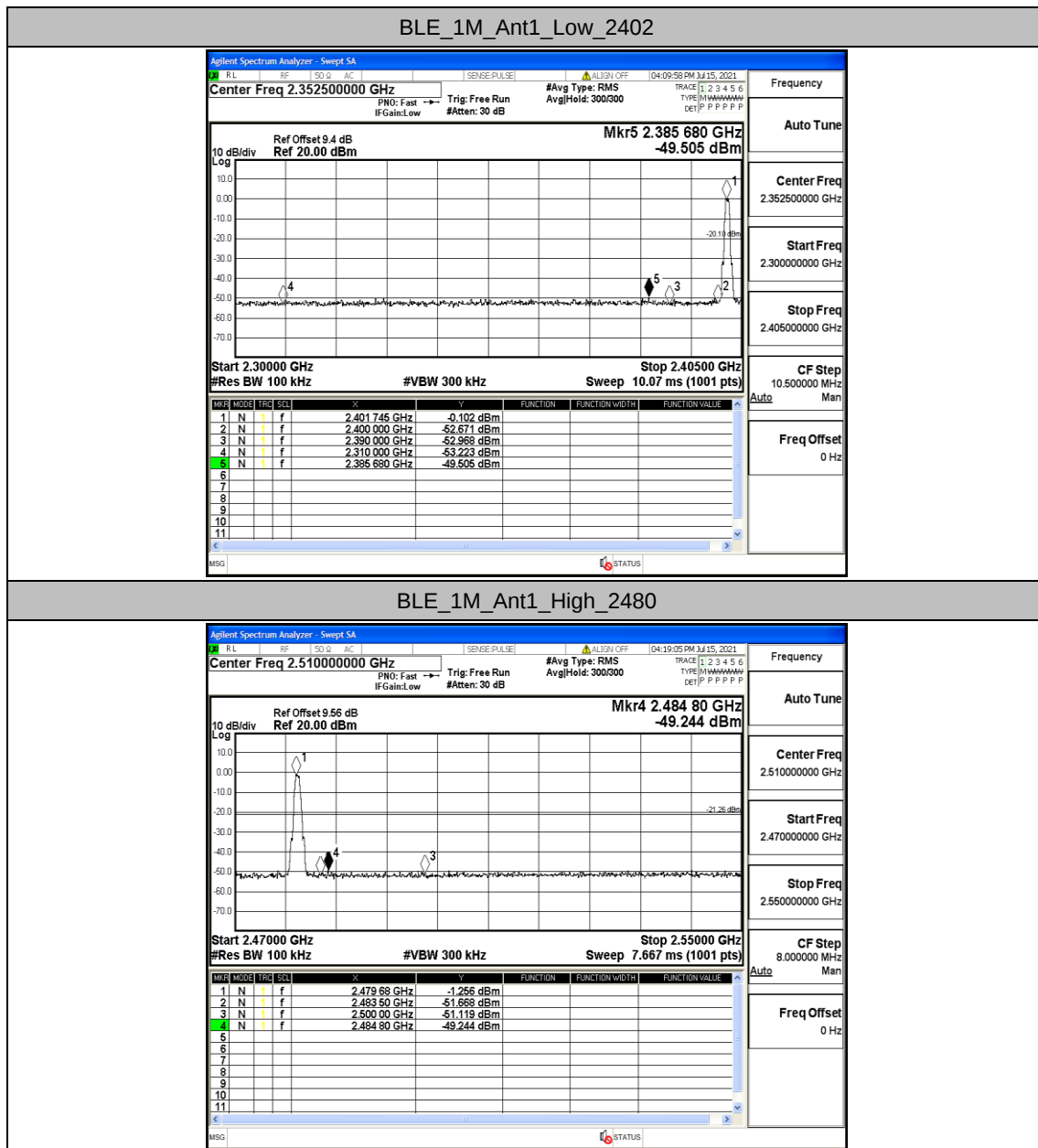


Appendix E: Band edge measurements

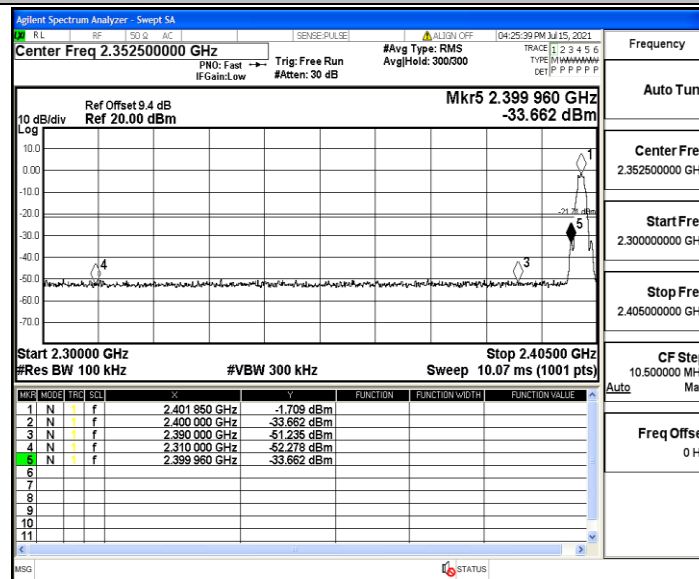
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.10	-49.51	<=-20.1	PASS
		High	2480	-1.26	-49.24	<=-21.26	PASS
BLE_2M	Ant1	Low	2402	-1.71	-33.66	<=-21.71	PASS
		High	2480	-2.65	-48.91	<=-22.65	PASS

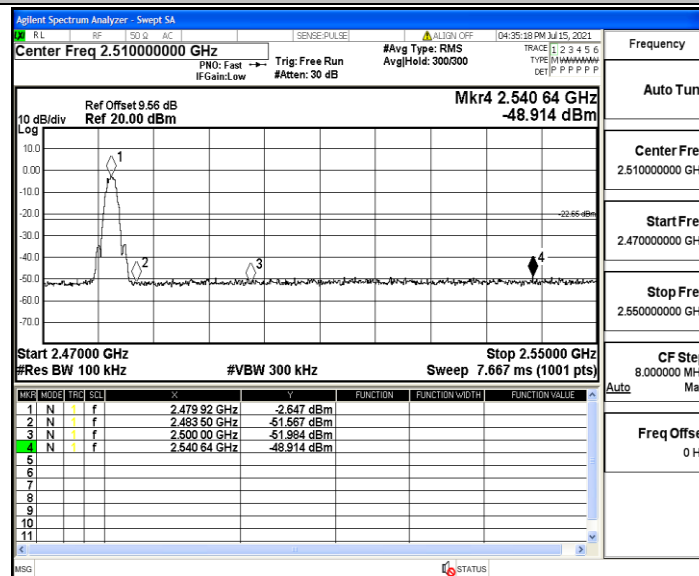
Test Graphs



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480

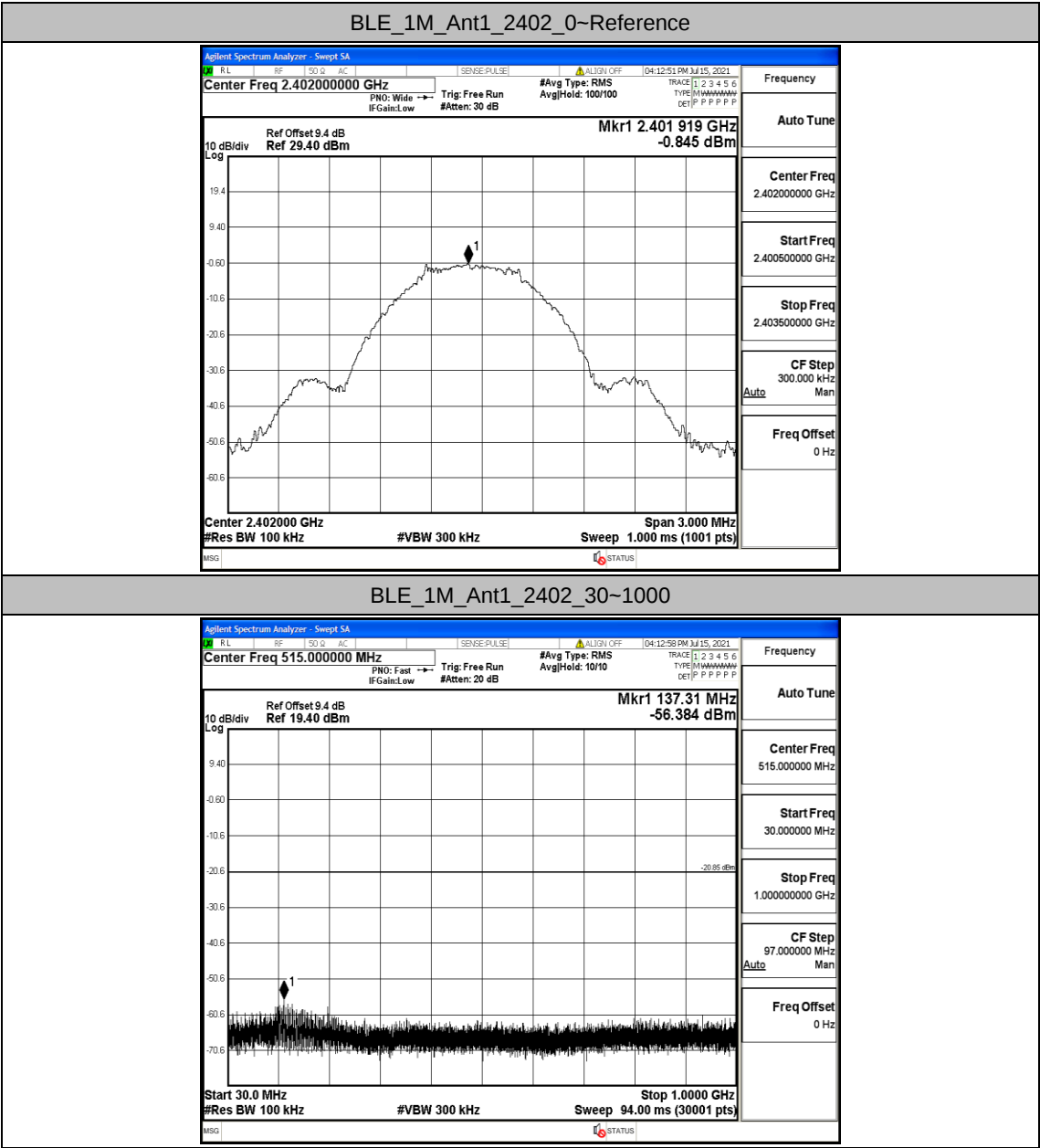


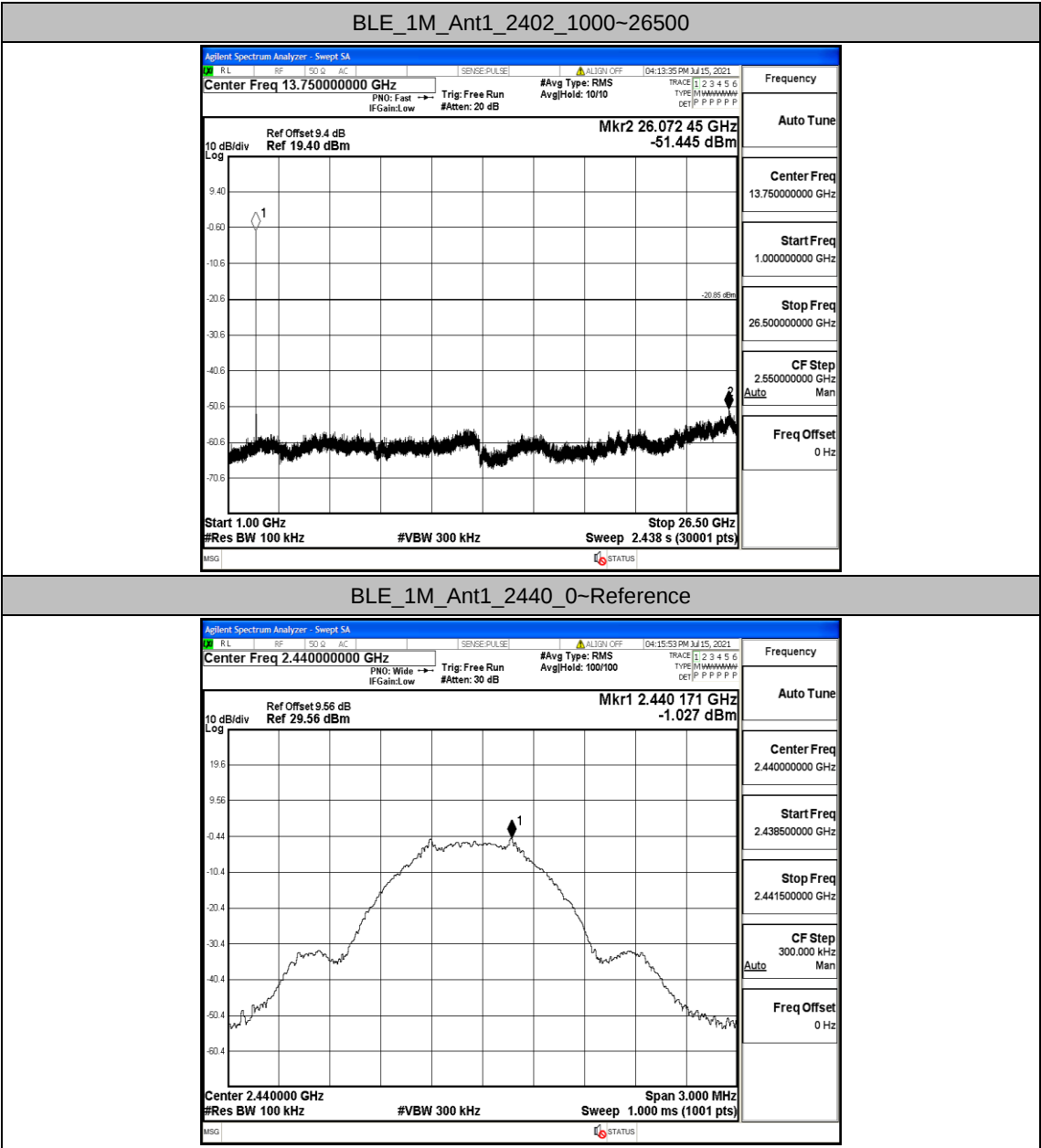
Appendix F: Conducted Spurious Emission

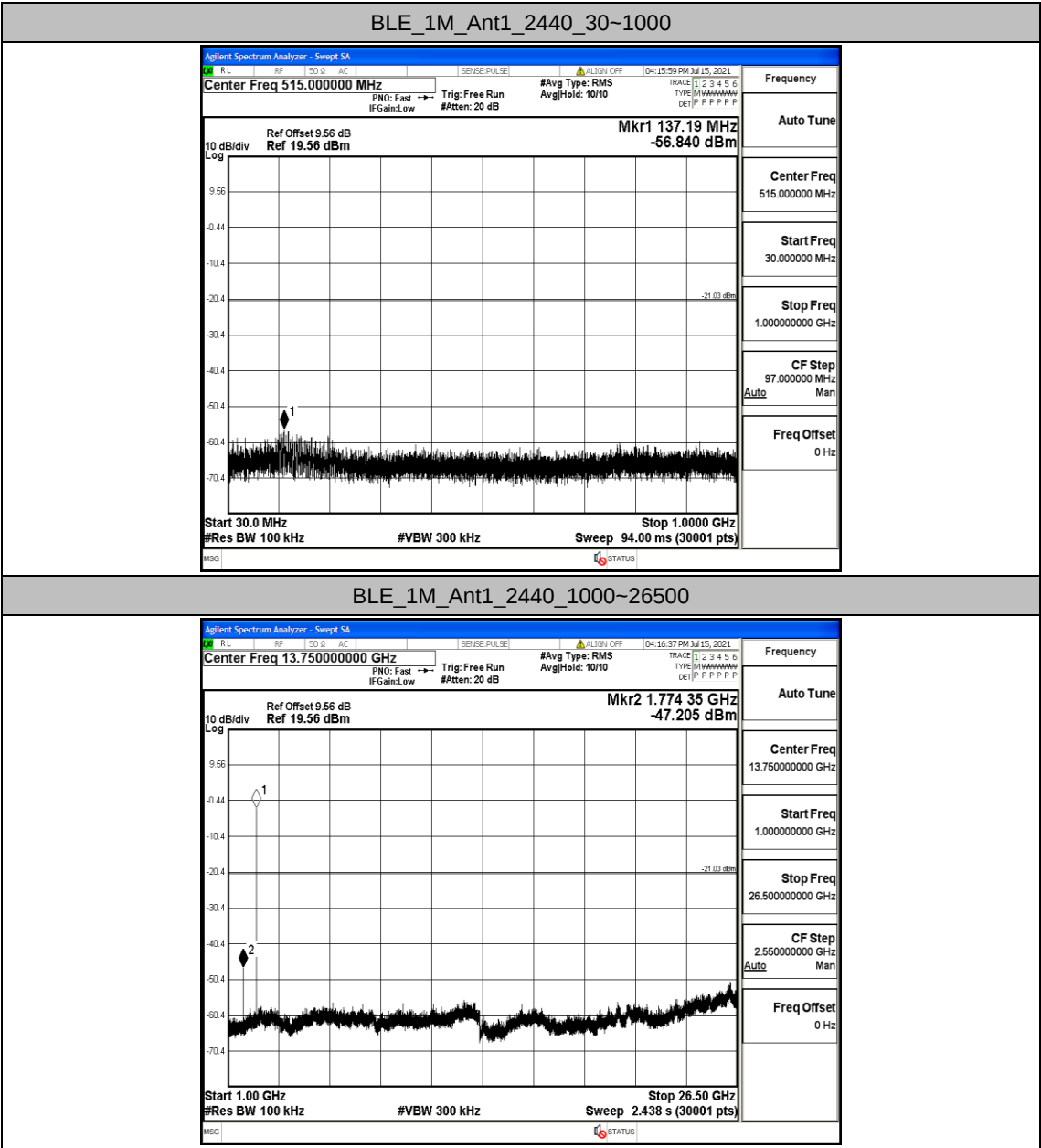
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.85	-0.85	---	PASS
			30~1000	-0.85	-56.38	<=-20.85	PASS
			1000~26500	-0.85	-51.45	<=-20.85	PASS
		2440	Reference	-1.03	-1.03	---	PASS
			30~1000	-1.03	-56.84	<=-21.03	PASS
			1000~26500	-1.03	-47.21	<=-21.03	PASS
		2480	Reference	-1.51	-1.51	---	PASS
			30~1000	-1.51	-56.48	<=-21.51	PASS
			1000~26500	-1.51	-51.95	<=-21.51	PASS
BLE_2M	Ant1	2402	Reference	-1.47	-1.47	---	PASS
			30~1000	-1.47	-57.24	<=-21.47	PASS
			1000~26500	-1.47	-51.58	<=-21.47	PASS
		2440	Reference	-3.00	-3.00	---	PASS
			30~1000	-3.00	-56.94	<=-23	PASS
			1000~26500	-3.00	-51.91	<=-23	PASS
		2480	Reference	-3.10	-3.10	---	PASS
			30~1000	-3.10	-56.56	<=-23.1	PASS
			1000~26500	-3.10	-51.55	<=-23.1	PASS

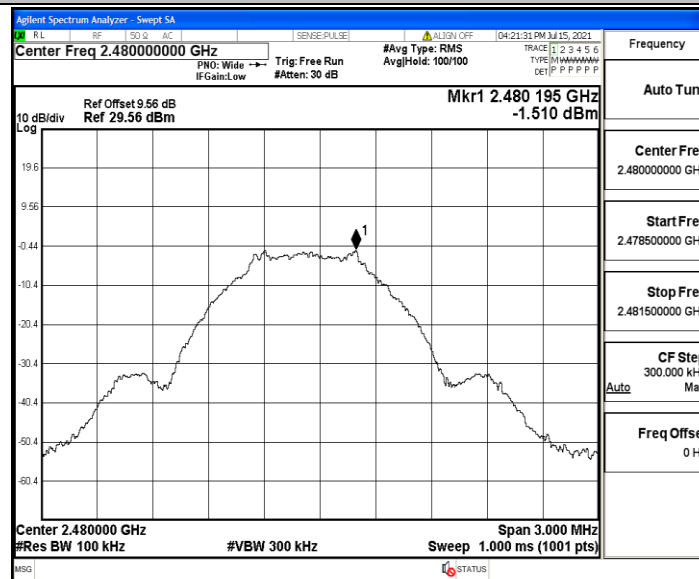
Test Graphs



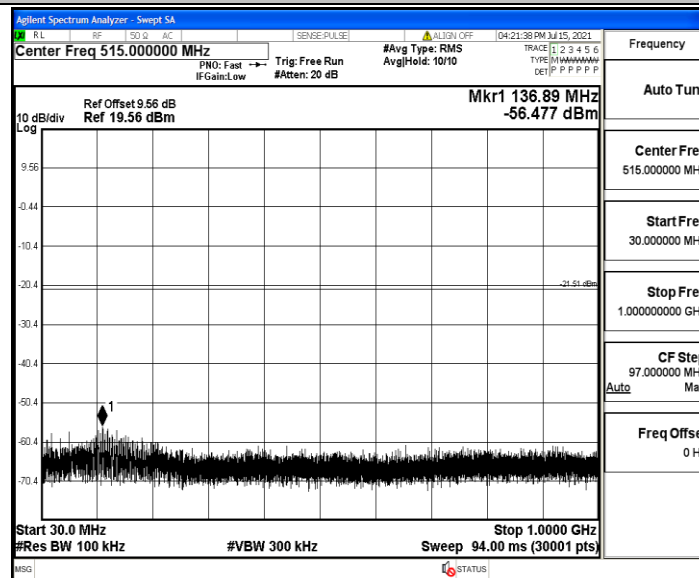


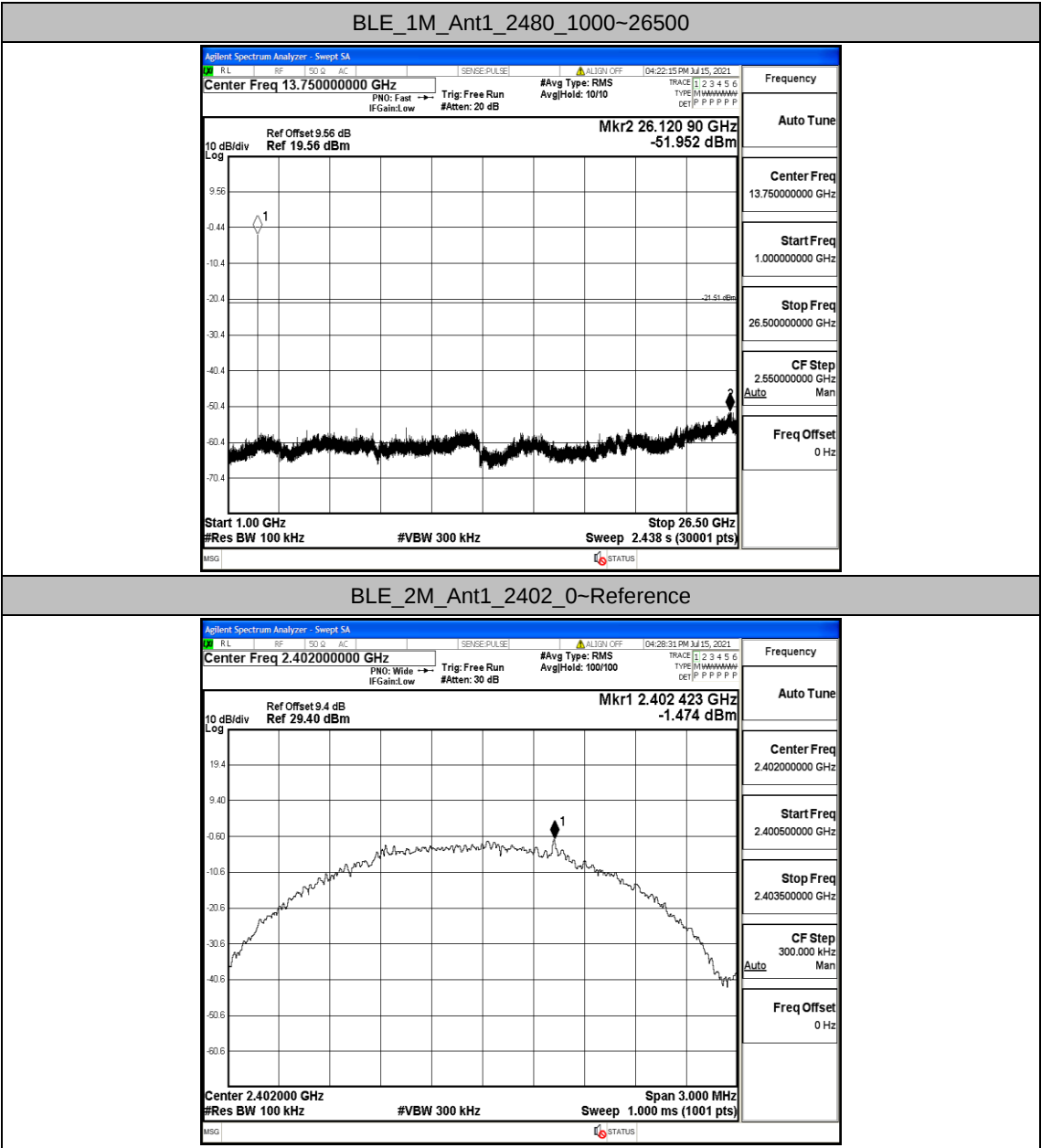


BLE_1M_Ant1_2480_0~Reference

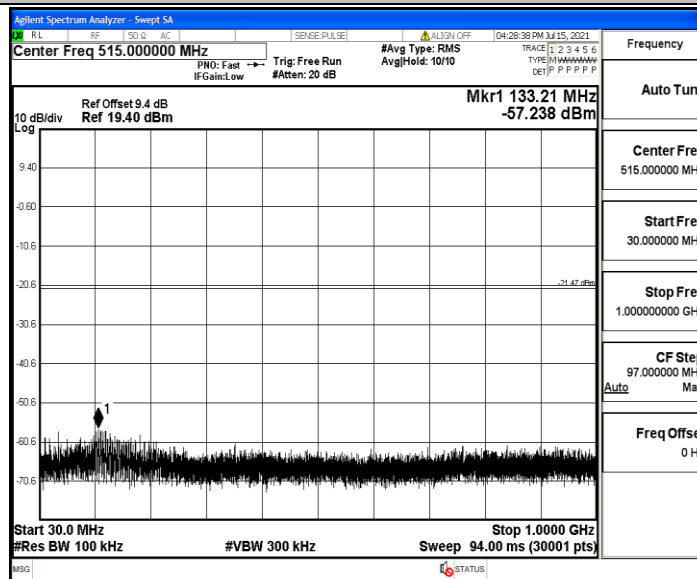


BLE_1M_Ant1_2480_30~1000

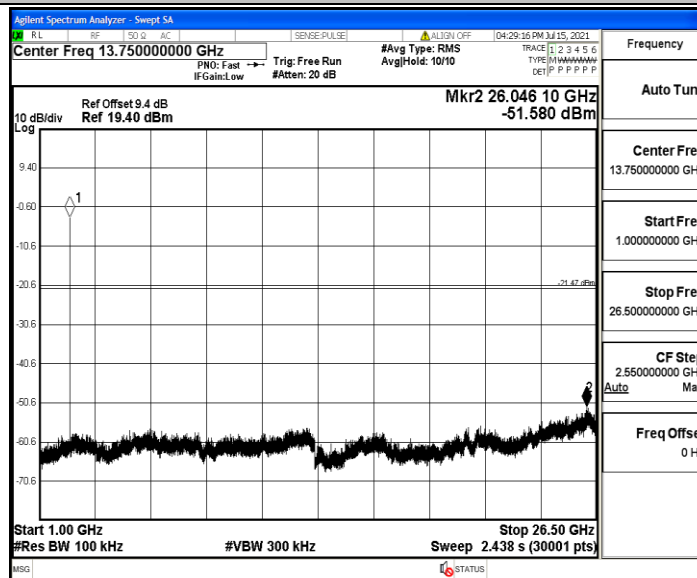




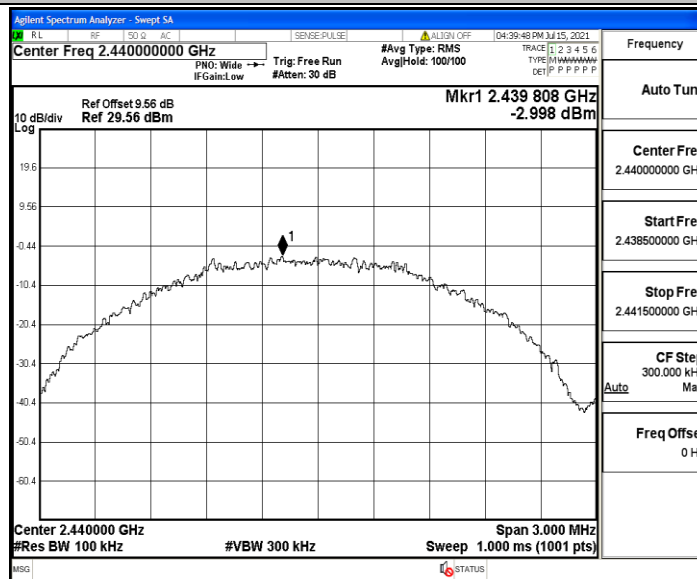
BLE_2M_Ant1_2402_30~1000



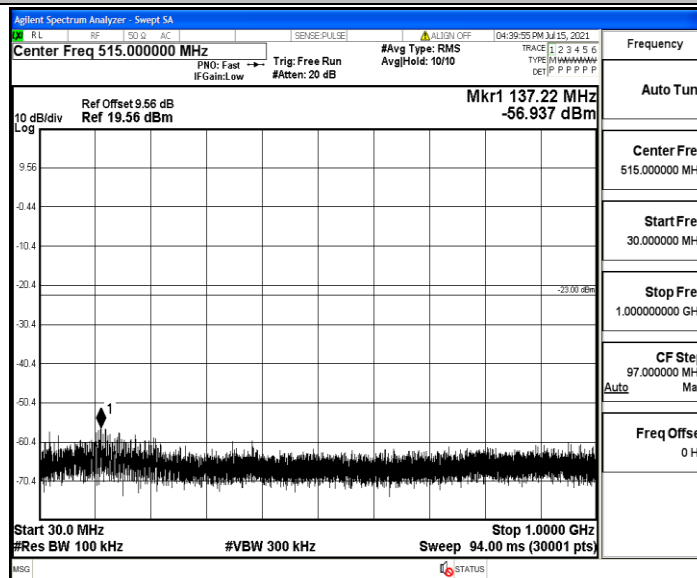
BLE_2M_Ant1_2402_1000~26500

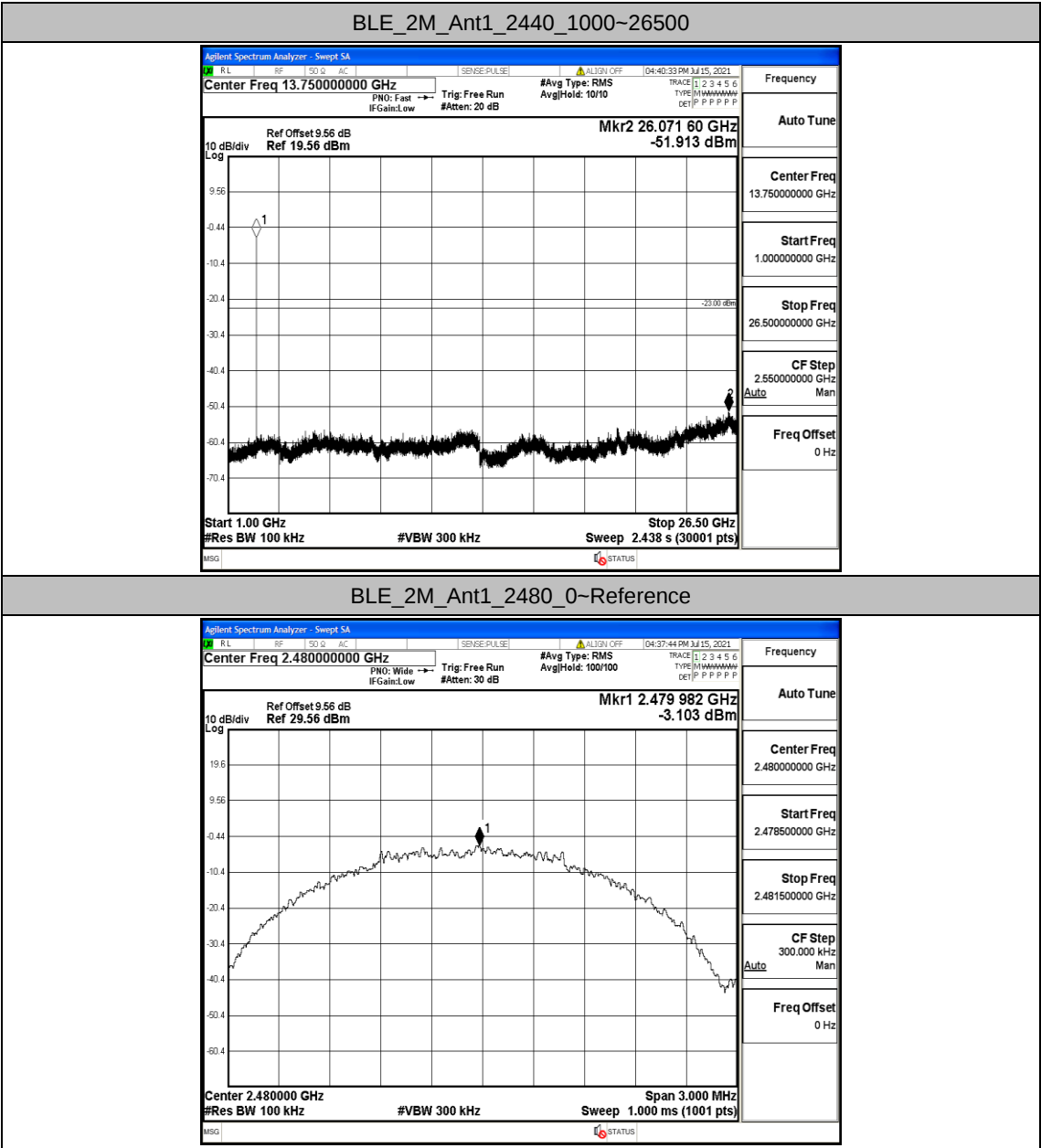


BLE_2M_Ant1_2440_0~Reference

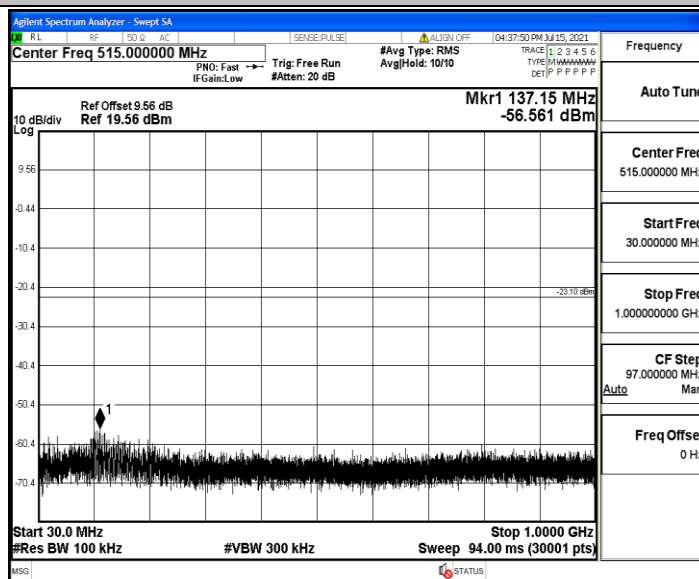


BLE_2M_Ant1_2440_30~1000

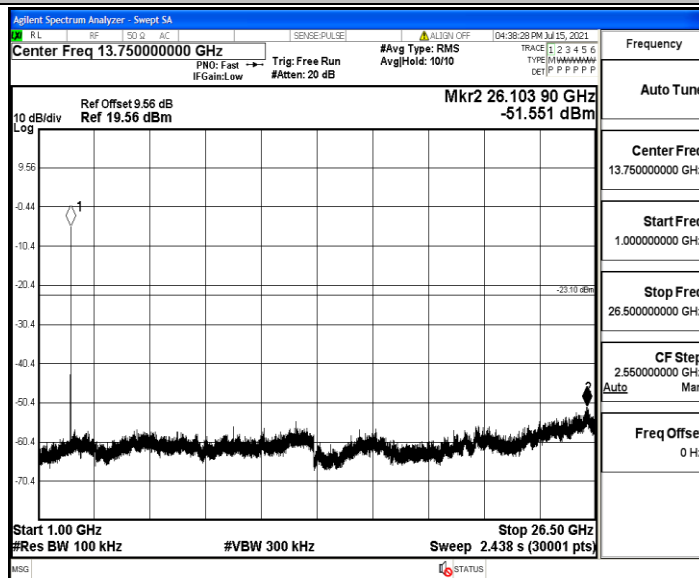




BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

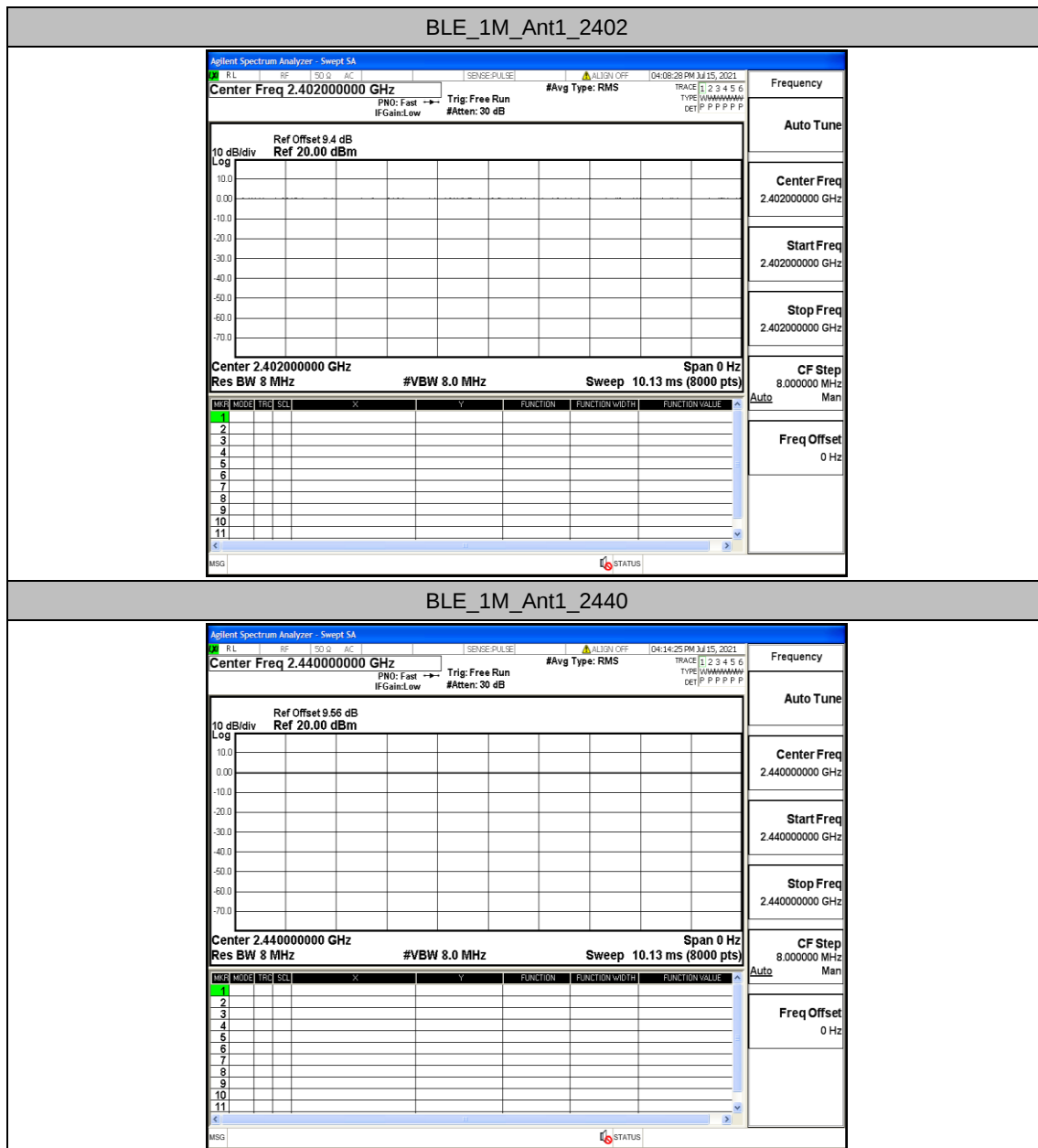


Appendix G: Duty Cycle

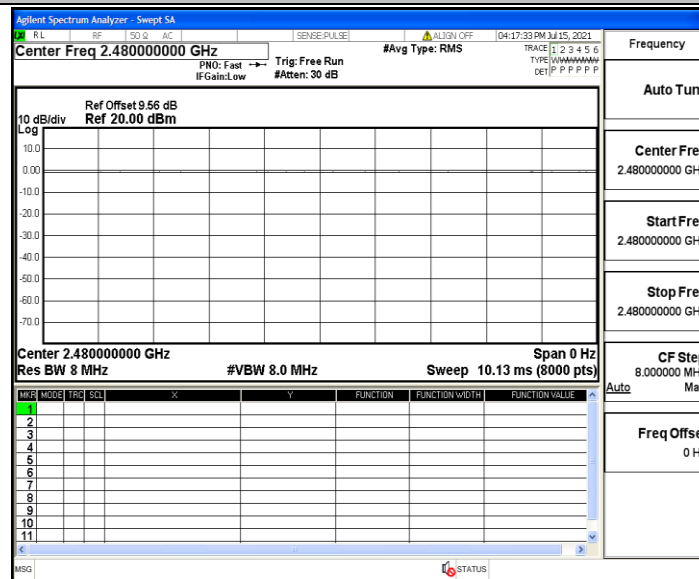
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
BLE_1M	Ant1	2402	10.00	10.00	100.00
		2440	10.00	10.00	100.00
		2480	10.00	10.00	100.00
BLE_2M	Ant1	2402	10.00	10.00	100.00
		2440	10.00	10.00	100.00
		2480	10.00	10.00	100.00

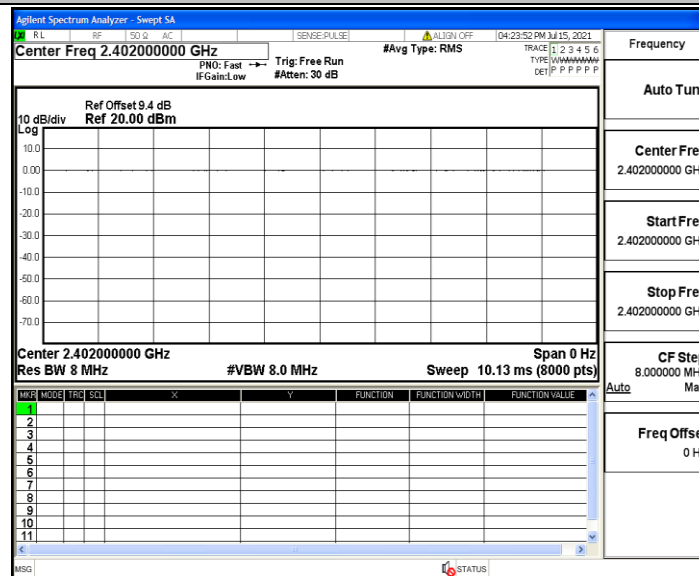
Test Graphs



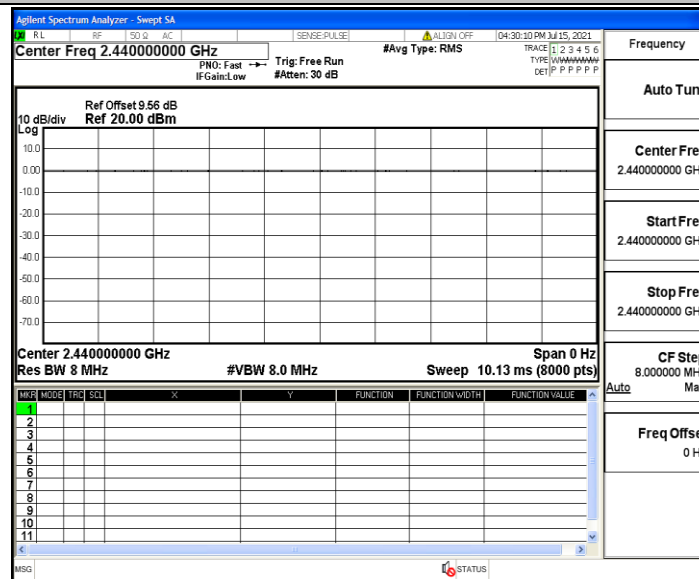
BLE_1M_Ant1_2480



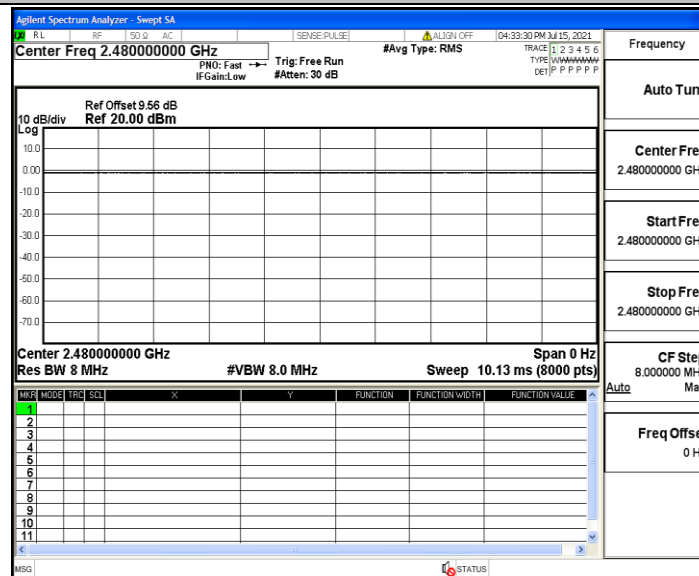
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix H: Emissions in Restricted Bands

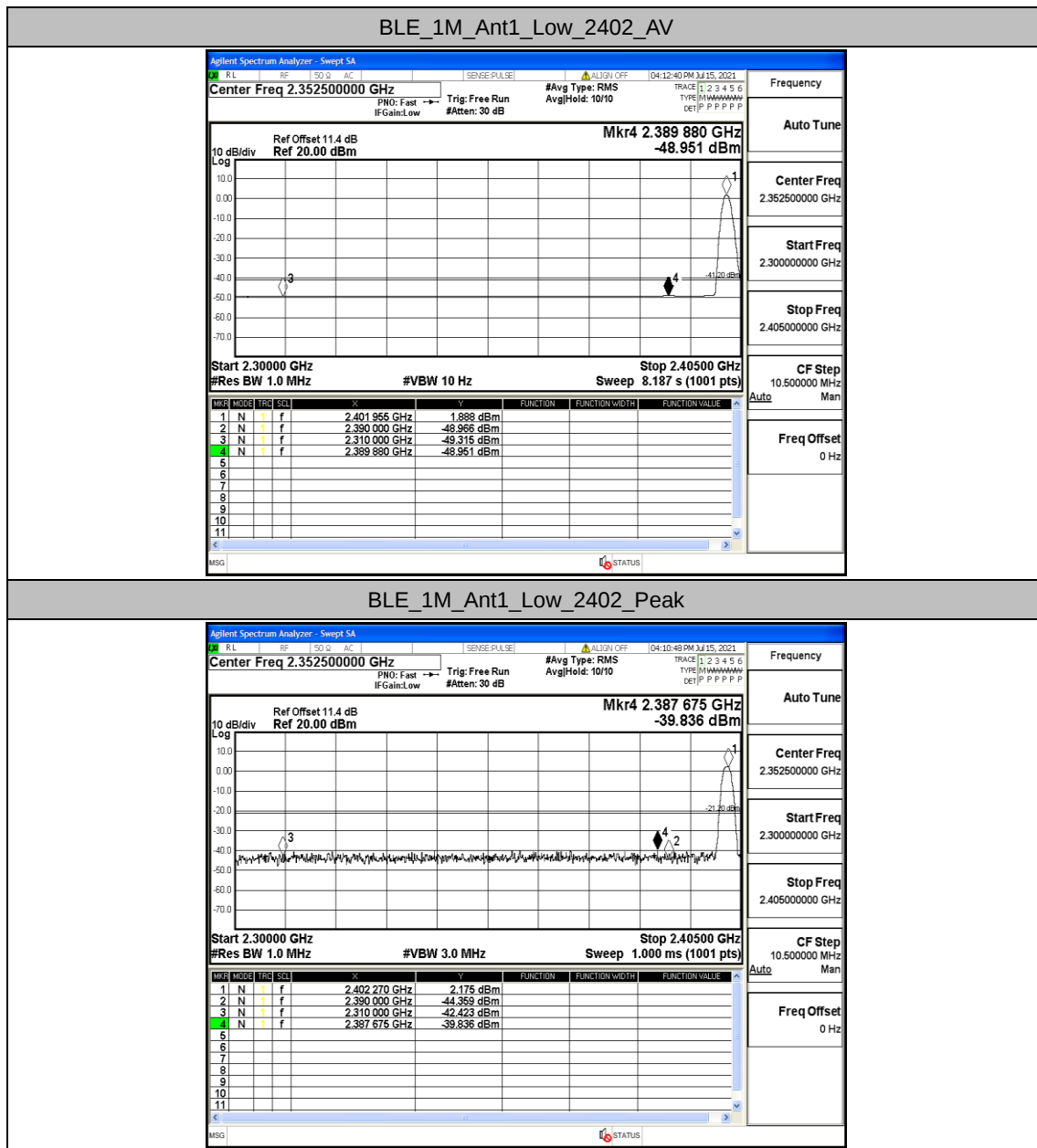
Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-49.32	<=-41.20	PASS
				AV	2389.880	-48.95	<=-41.20	PASS
				AV	2390.000	-48.97	<=-41.20	PASS
				Peak	2310.000	-42.42	<=-21.20	PASS
				Peak	2387.675	-39.84	<=-21.20	PASS
				Peak	2390.000	-44.36	<=-21.20	PASS
		High	2480	AV	2483.500	-48.24	<=-41.20	PASS
				AV	2500.000	-48.31	<=-41.20	PASS
				Peak	2483.500	-45.17	<=-21.20	PASS
				Peak	2491.120	-38.28	<=-21.20	PASS
				Peak	2500.000	-43.15	<=-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-49.3	<=-41.20	PASS
				AV	2389.670	-48.94	<=-41.20	PASS
				AV	2390.000	-48.96	<=-41.20	PASS
				Peak	2310.000	-45.38	<=-21.20	PASS
				Peak	2327.720	-39.78	<=-21.20	PASS
				Peak	2390.000	-44.14	<=-21.20	PASS
		High	2480	AV	2483.500	-46.8	<=-41.20	PASS
				AV	2500.000	-48.32	<=-41.20	PASS
				Peak	2483.500	-43.6	<=-21.20	PASS
				Peak	2493.600	-38.26	<=-21.20	PASS
				Peak	2500.000	-43.83	<=-21.20	PASS

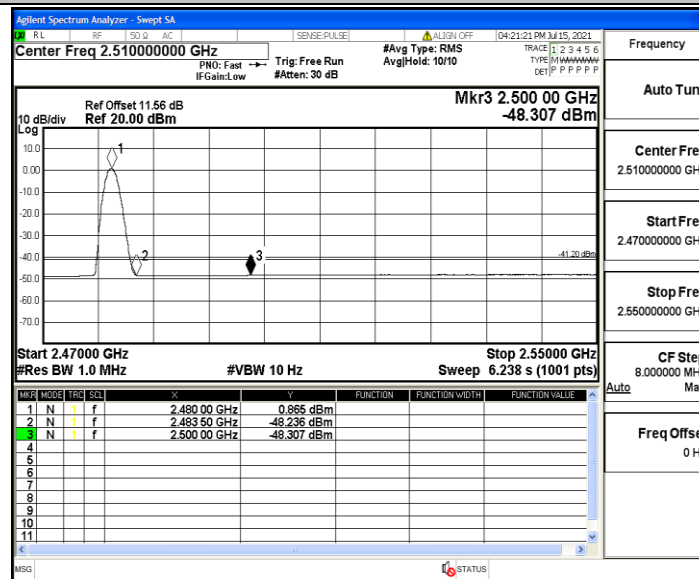
Note:

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.

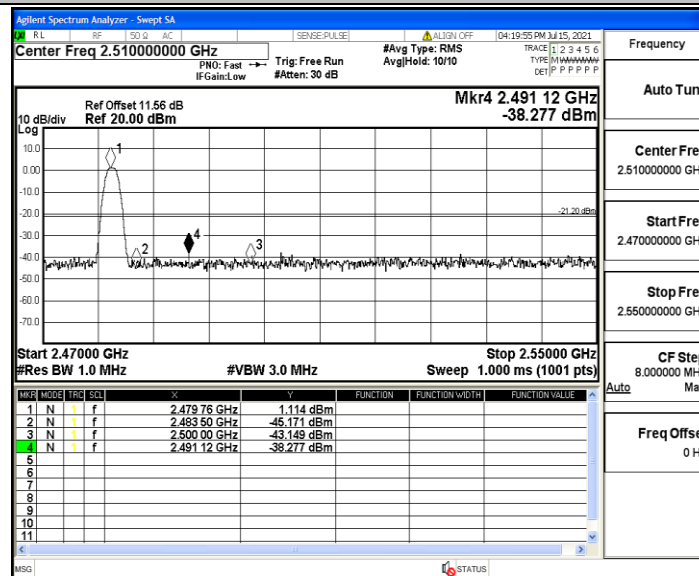
Test Graphs



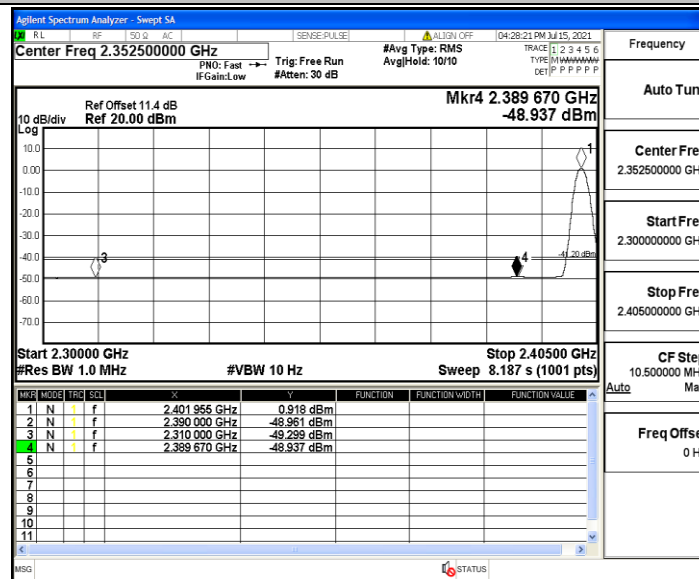
BLE_1M_Ant1_High_2480_AV



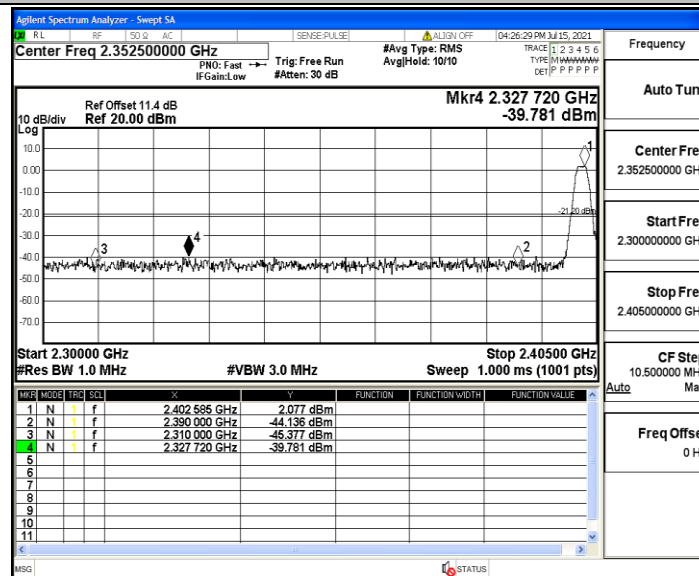
BLE_1M_Ant1_High_2480_Peak



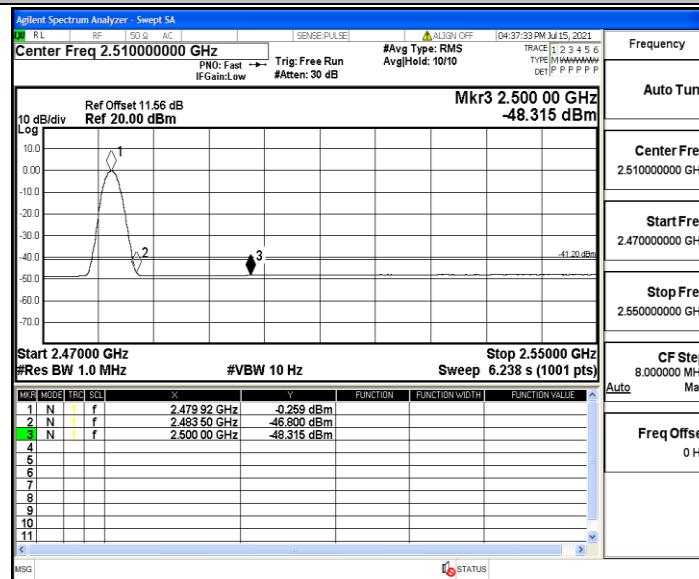
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

