

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

Product Name: Set Top Box

Trade Mark: N/A

Test Model: Claro STB SEI800CCOA-M

FCC ID: 2AOVU-SN6BHXX

Environmental Conditions

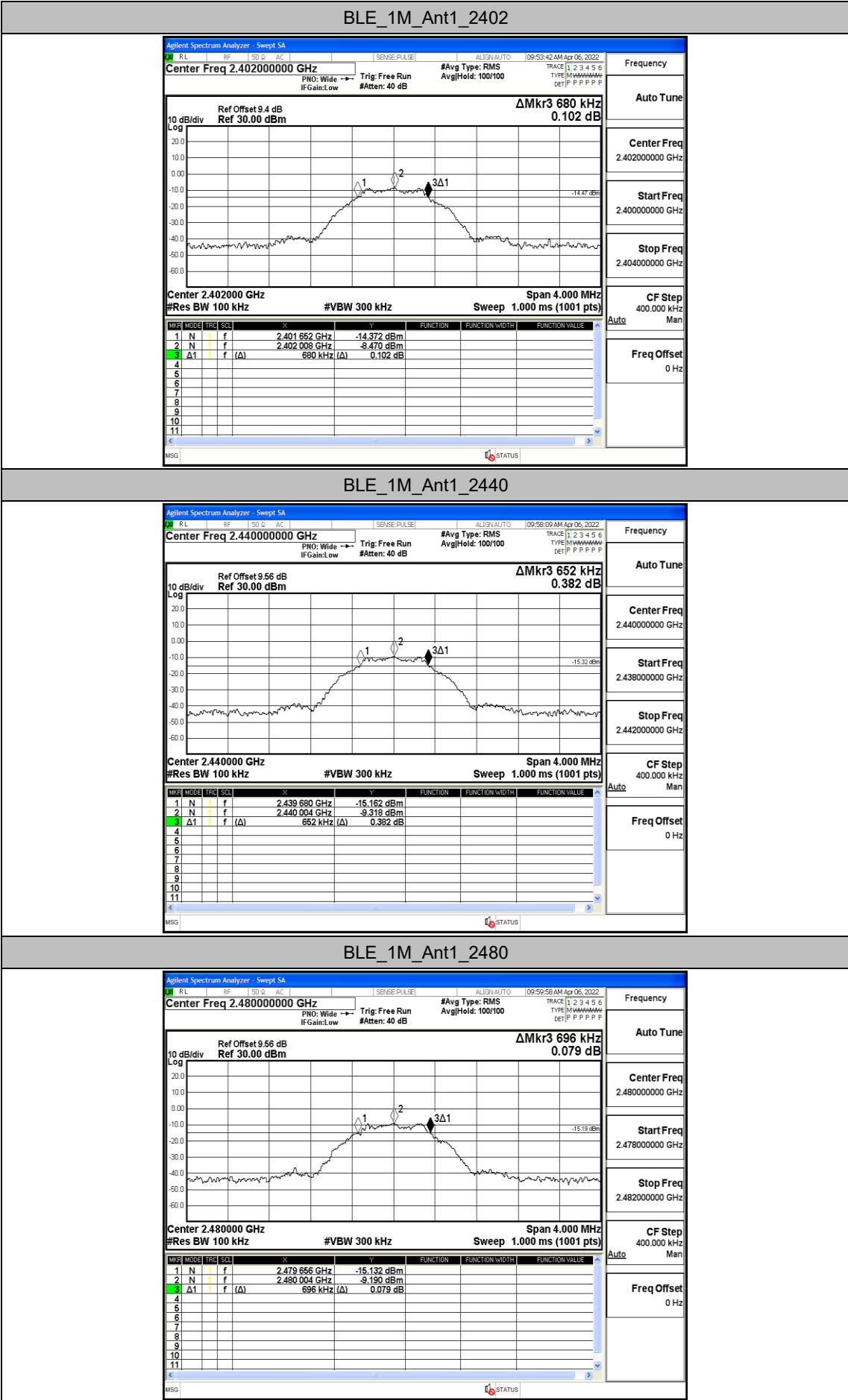
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

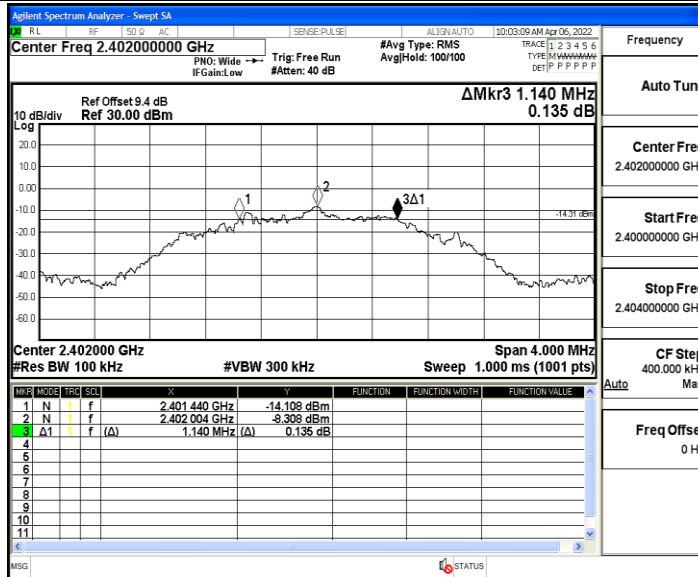
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.680	2401.652	2402.332	0.5	PASS
		2440	0.652	2439.680	2440.332	0.5	PASS
		2480	0.696	2479.656	2480.352	0.5	PASS
BLE_2M	Ant1	2402	1.140	2401.440	2402.580	0.5	PASS
		2440	1.152	2439.412	2440.564	0.5	PASS
		2480	1.288	2479.380	2480.668	0.5	PASS

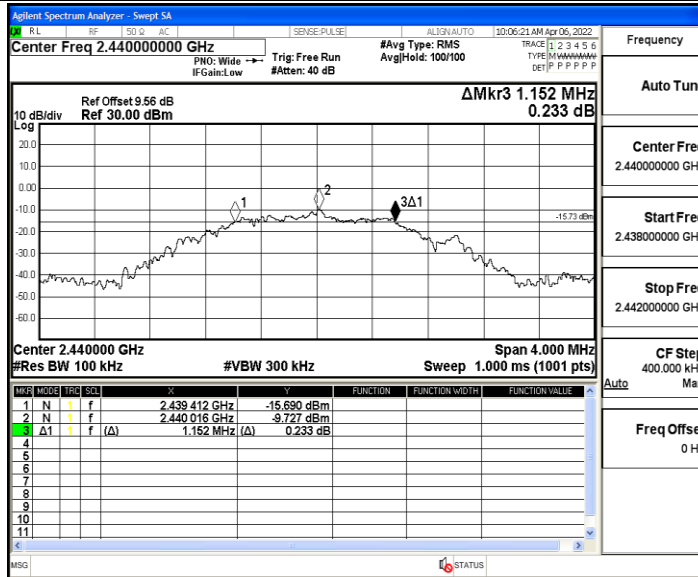
Test Graphs



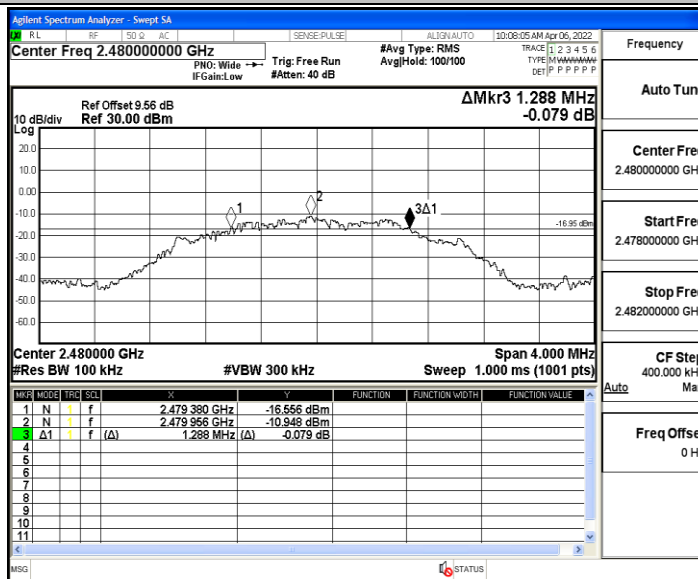
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

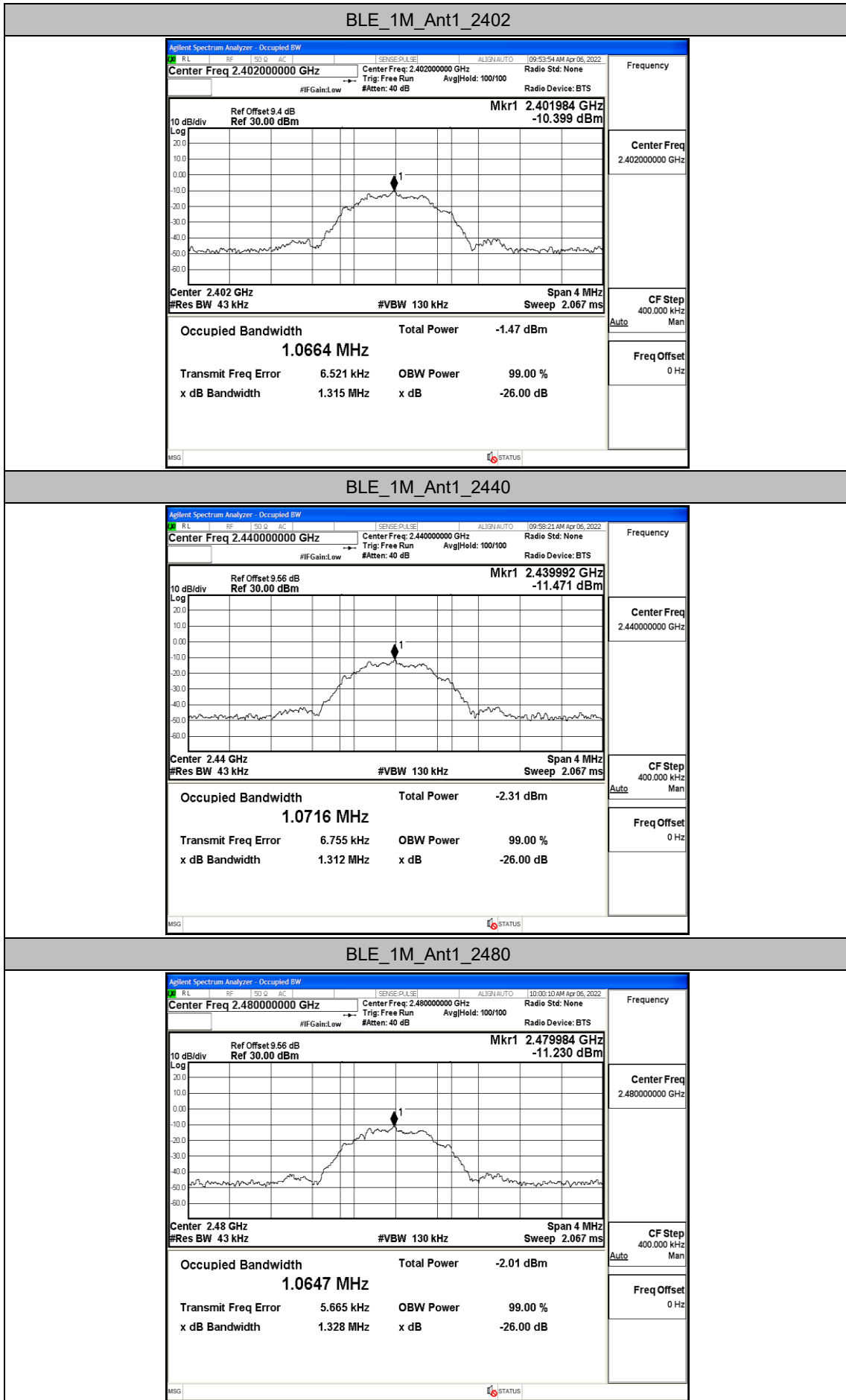


Appendix B: Occupied Channel Bandwidth

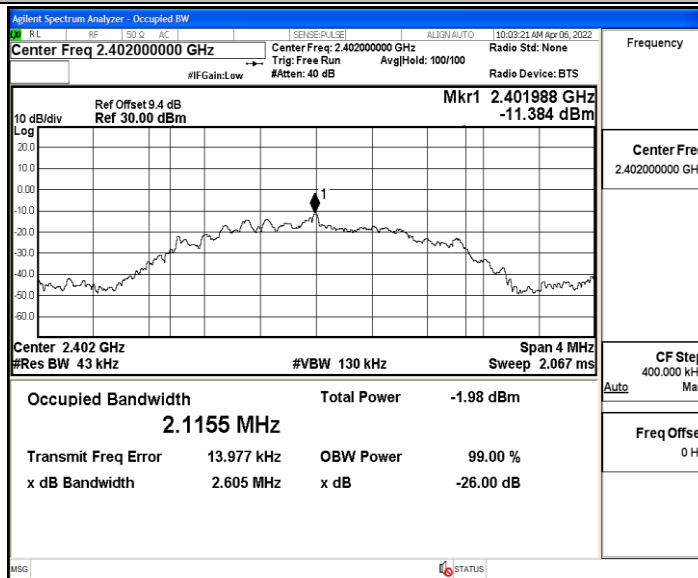
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0664	2401.473	2402.540	---	PASS
		2440	1.0716	2439.471	2440.543	---	PASS
		2480	1.0647	2479.473	2480.538	---	PASS
BLE_2M	Ant1	2402	2.1155	2400.956	2403.072	---	PASS
		2440	2.0972	2438.973	2441.070	---	PASS
		2480	2.1047	2478.961	2481.066	---	PASS

Test Graphs



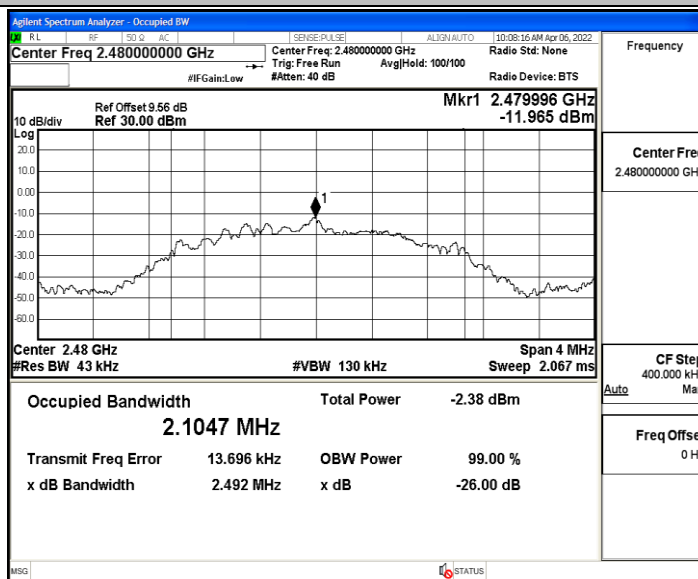
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

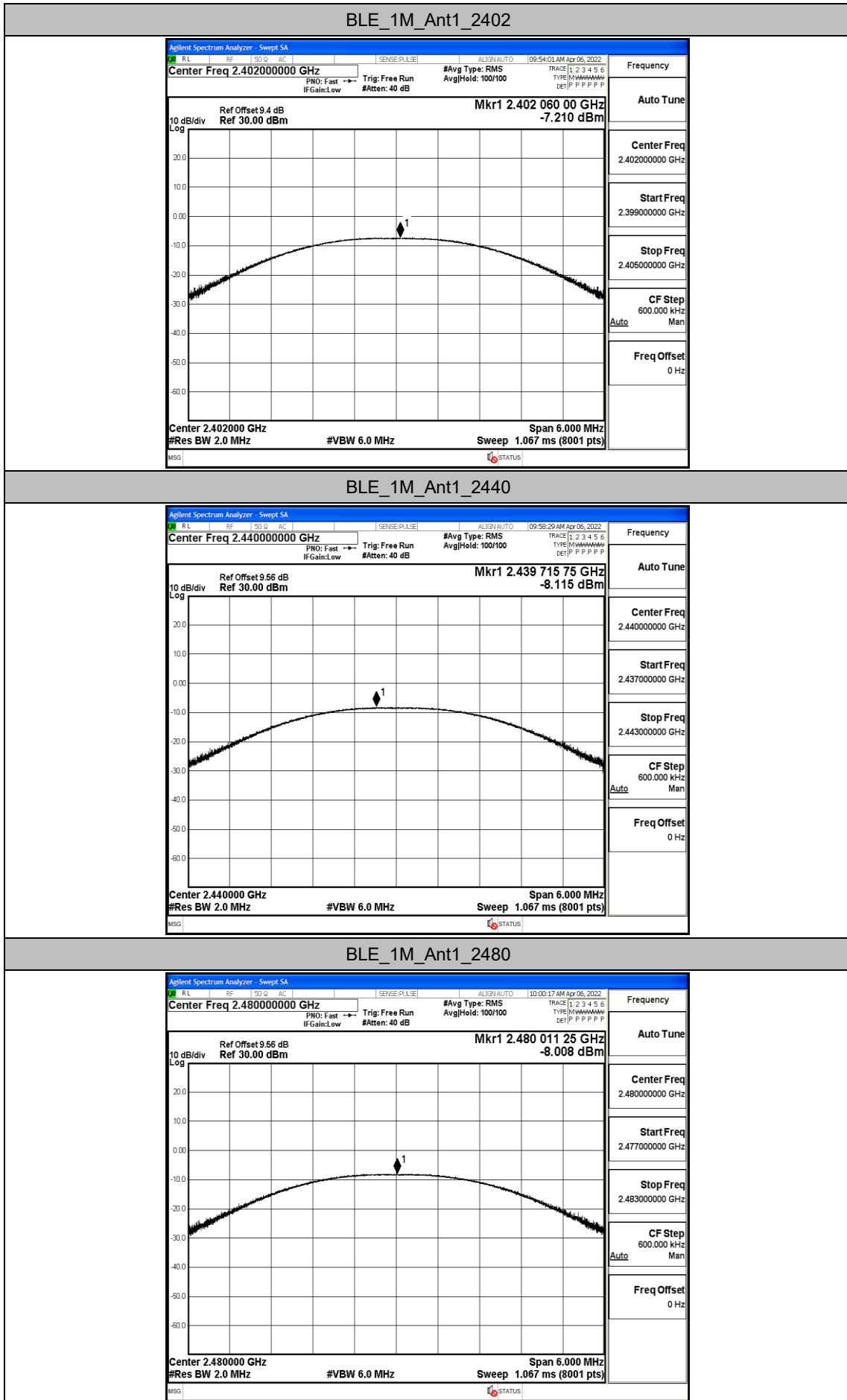


Appendix C: Maximum conducted output power

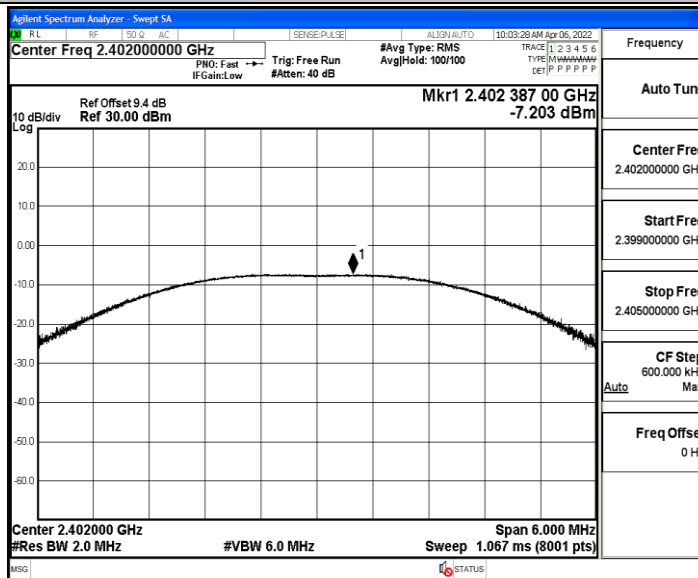
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-7.21	≤30	PASS
		2440	-8.12	≤30	PASS
		2480	-8.01	≤30	PASS
BLE_2M	Ant1	2402	-7.2	≤30	PASS
		2440	-8.16	≤30	PASS
		2480	-7.78	≤30	PASS

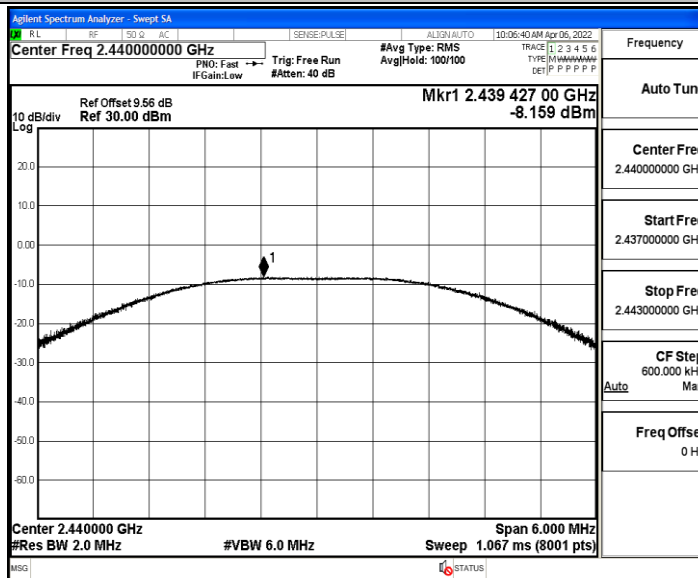
Test Graphs



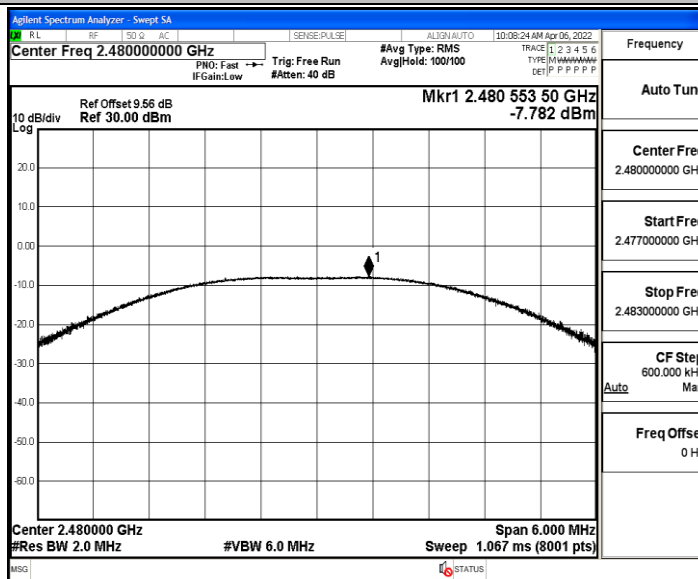
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

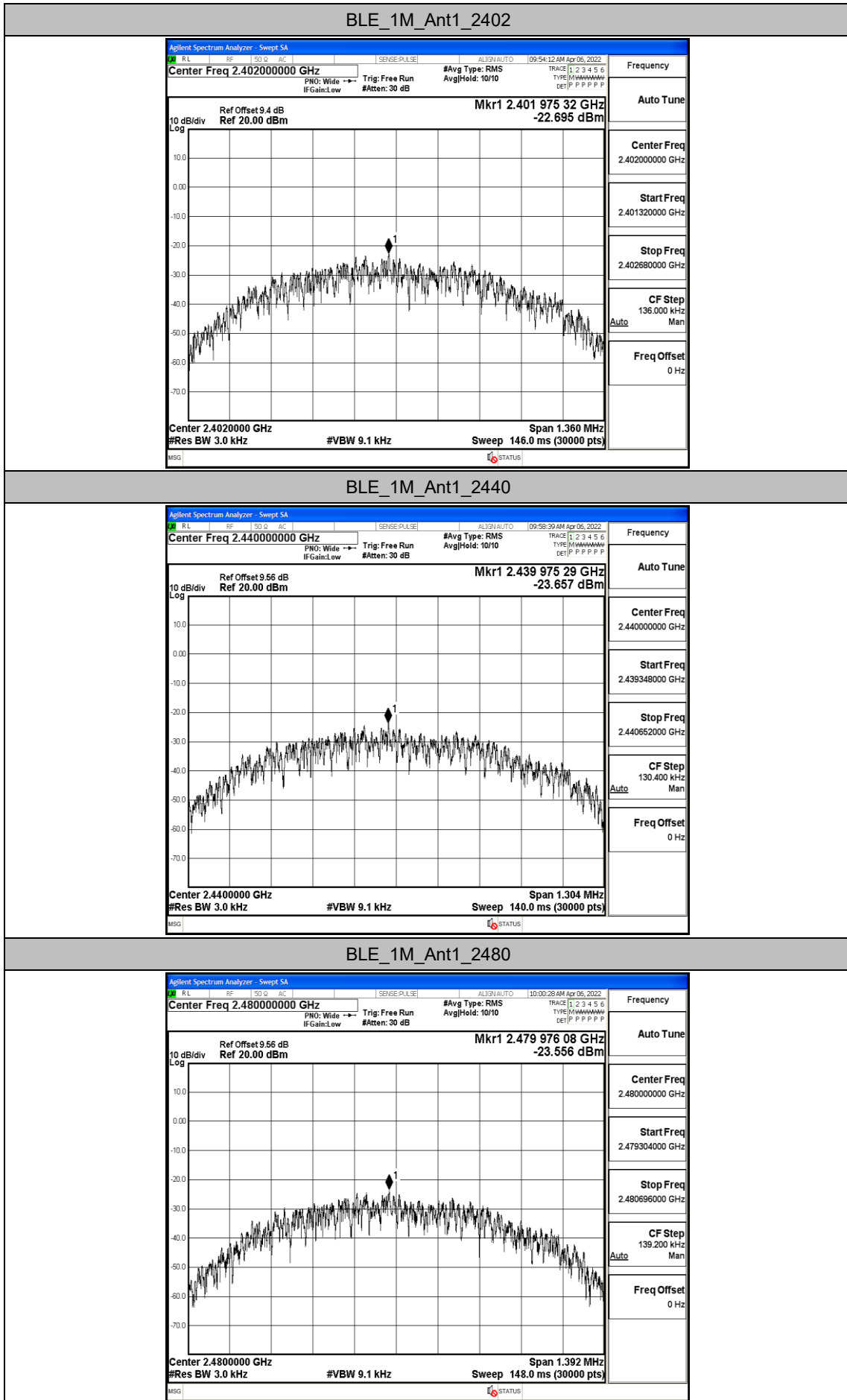


Appendix D: Maximum power spectral density

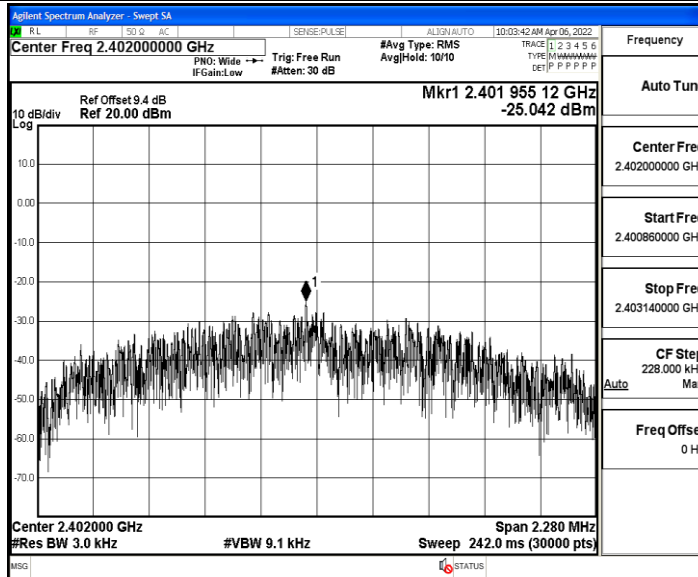
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-22.7	≤8.00	PASS
		2440	-23.66	≤8.00	PASS
		2480	-23.56	≤8.00	PASS
BLE_2M	Ant1	2402	-25.04	≤8.00	PASS
		2440	-26.13	≤8.00	PASS
		2480	-25.67	≤8.00	PASS

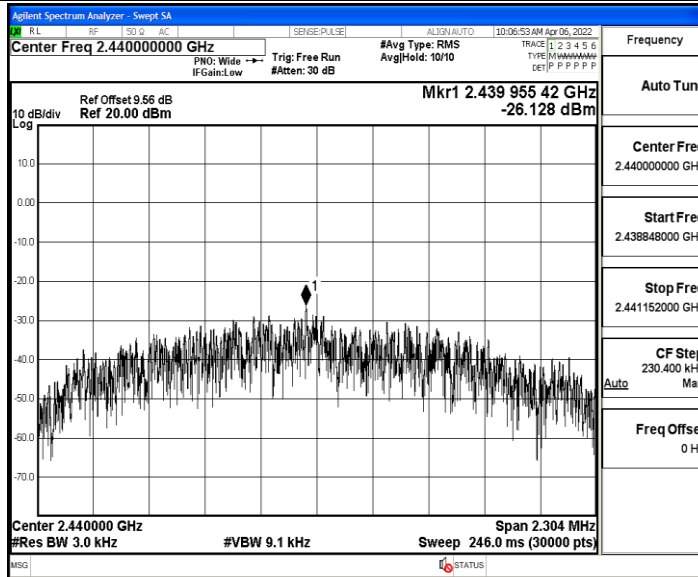
Test Graphs



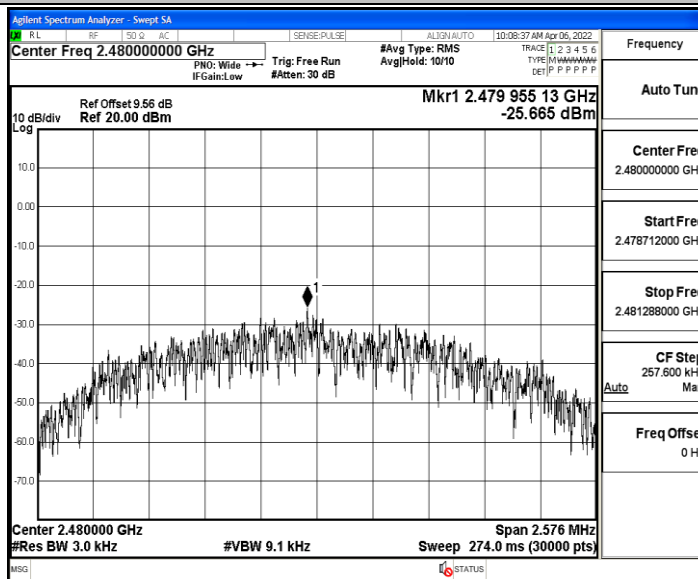
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



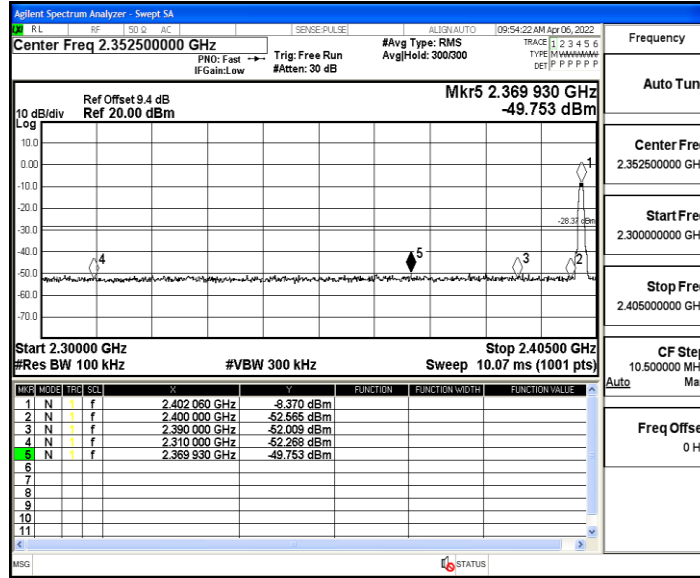
Appendix E: Band edge measurements

Test Result

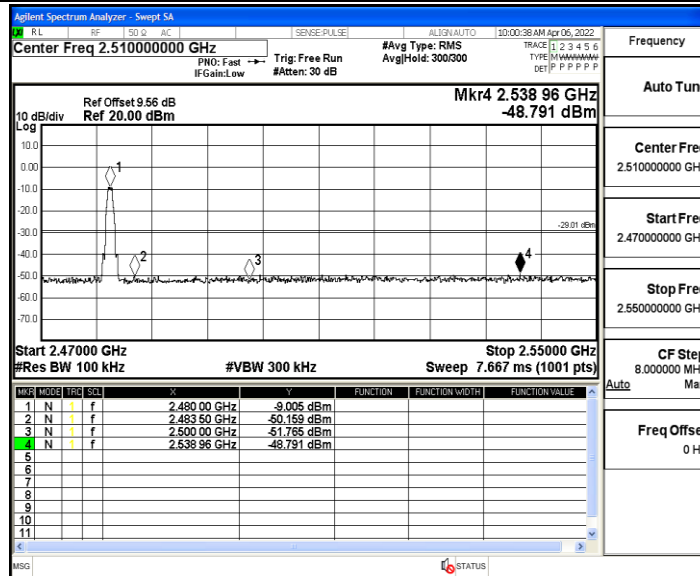
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-8.37	-49.75	≤-28.37	PASS
		High	2480	-9.01	-48.79	≤-29.01	PASS
BLE_2M	Ant1	Low	2402	-8.46	-40.13	≤-28.46	PASS
		High	2480	-9.12	-49.32	≤-29.12	PASS

Test Graphs

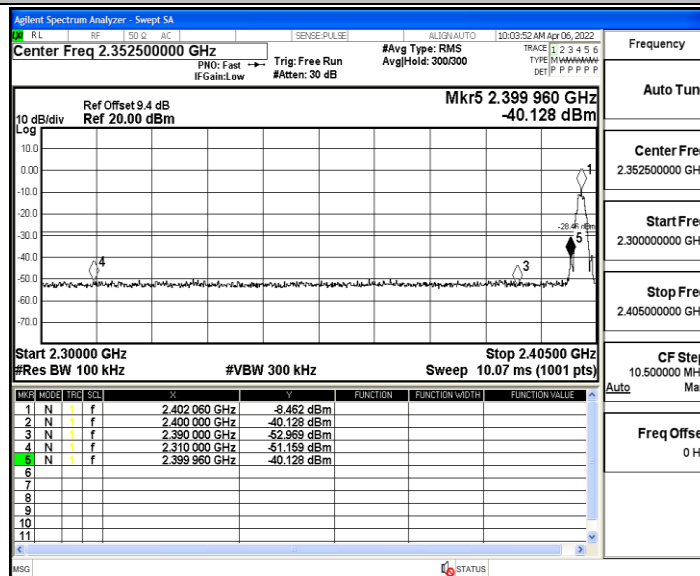
BLE_1M_Ant1_Low_2402



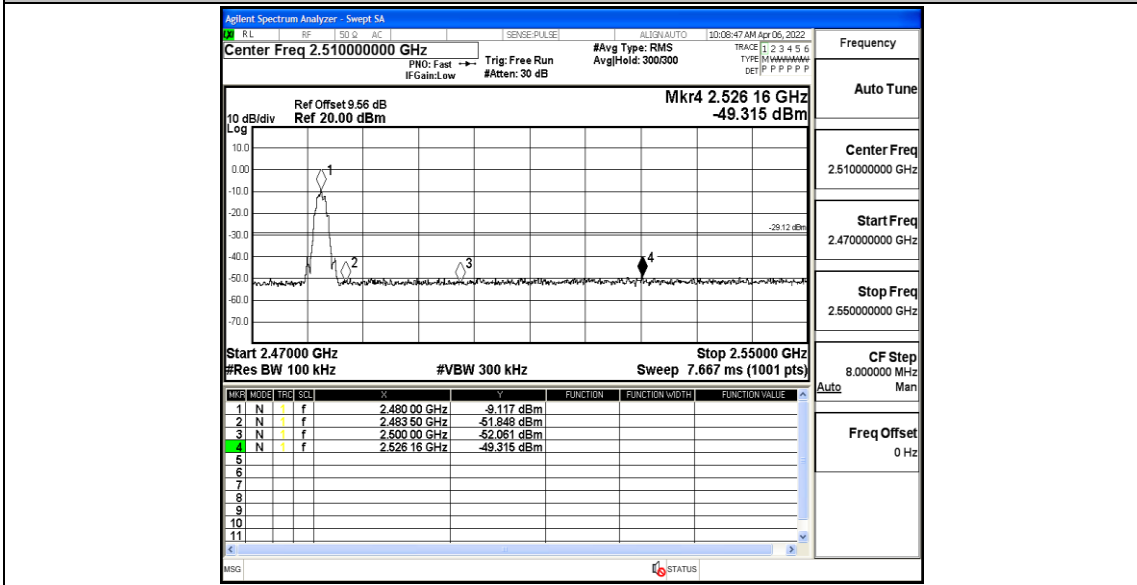
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480

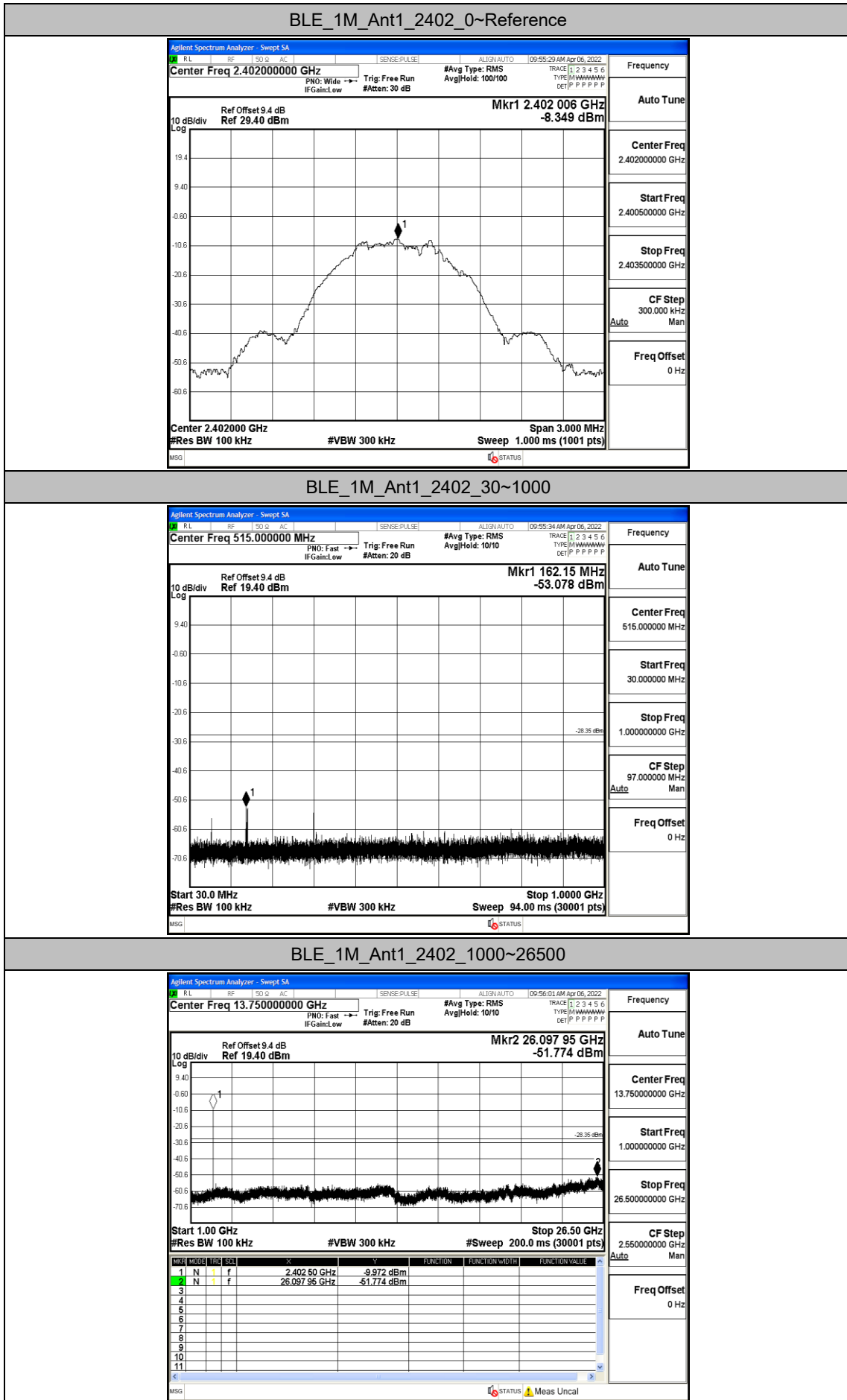


Appendix F: Conducted Spurious Emission

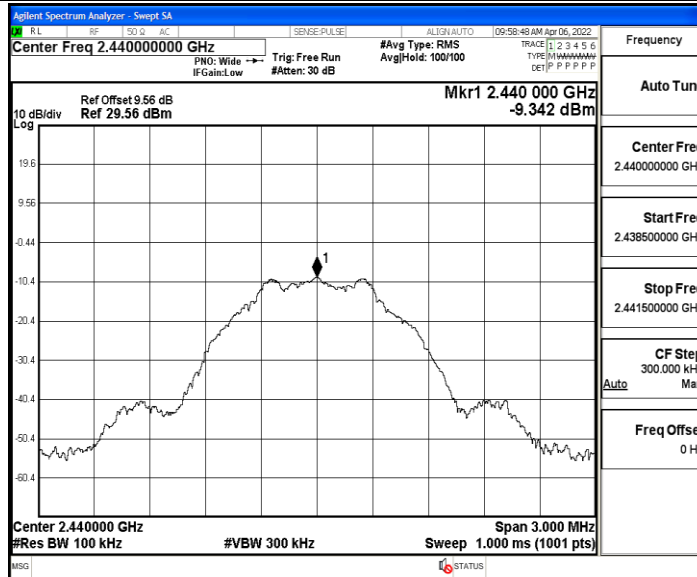
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-8.35	-8.35	---	PASS
			30~1000	-8.35	-53.08	≤-28.35	PASS
			1000~26500	-8.35	-51.77	≤-28.35	PASS
		2440	Reference	-9.34	-9.34	---	PASS
			30~1000	-9.34	-45.88	≤-29.34	PASS
			1000~26500	-9.34	-50.56	≤-29.34	PASS
		2480	Reference	-8.96	-8.96	---	PASS
			30~1000	-8.96	-51.99	≤-28.96	PASS
			1000~26500	-8.96	-51.32	≤-28.96	PASS
BLE_2M	Ant1	2402	Reference	-8.34	-8.34	---	PASS
			30~1000	-8.34	-49.64	≤-28.34	PASS
			1000~26500	-8.34	-50.52	≤-28.34	PASS
		2440	Reference	-9.39	-9.39	---	PASS
			30~1000	-9.39	-48.11	≤-29.39	PASS
			1000~26500	-9.39	-51.37	≤-29.39	PASS
		2480	Reference	-9.11	-9.11	---	PASS
			30~1000	-9.11	-53.16	≤-29.11	PASS
			1000~26500	-9.11	-50.59	≤-29.11	PASS

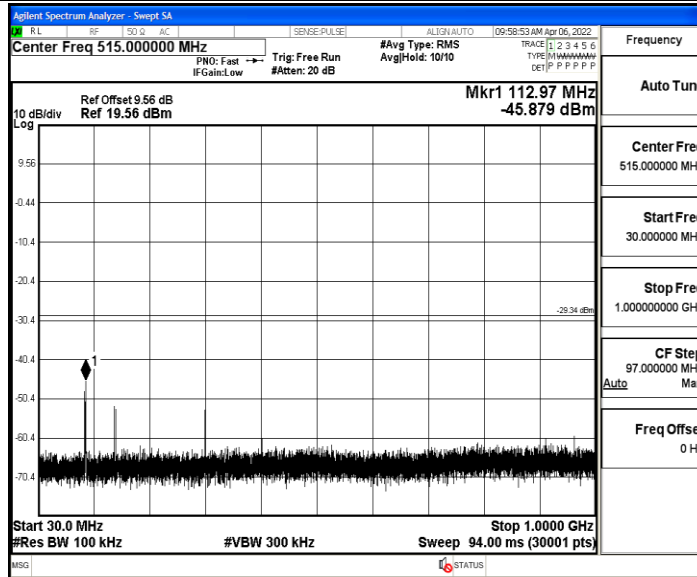
Test Graphs



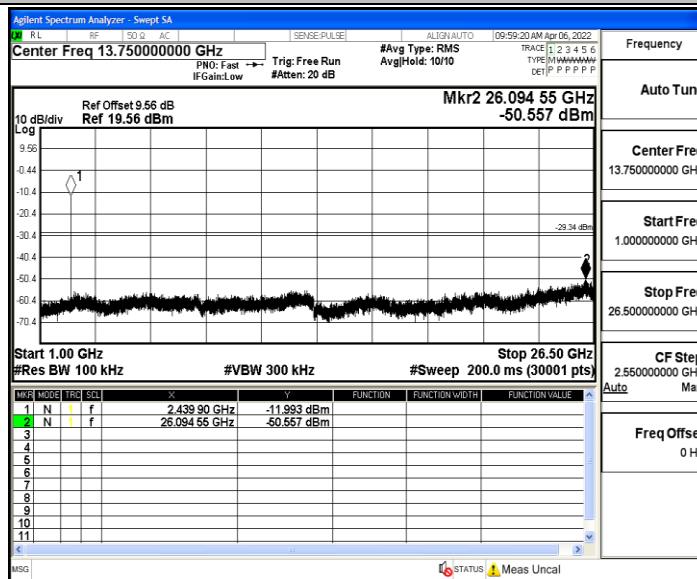
BLE_1M_Ant1_2440_0~Reference



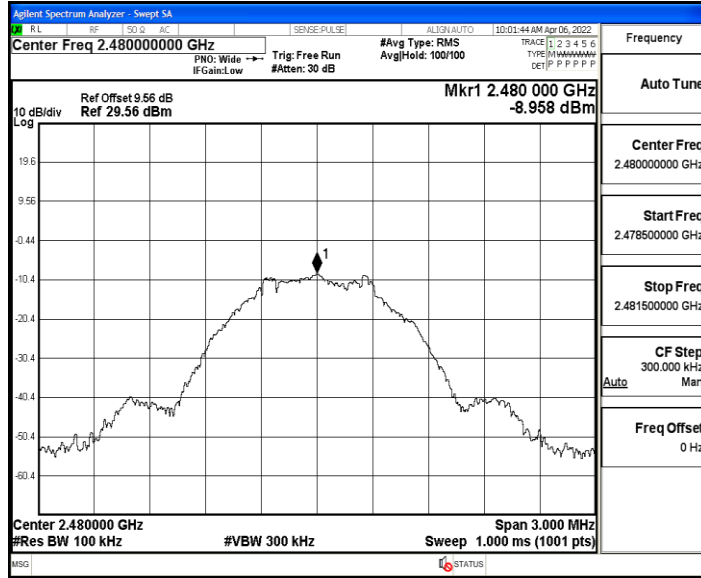
BLE_1M_Ant1_2440_30~1000



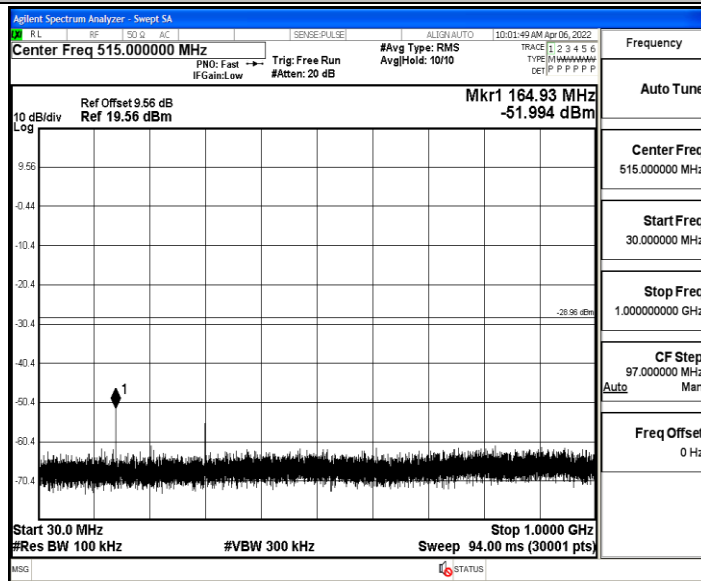
BLE_1M_Ant1_2440_1000~26500



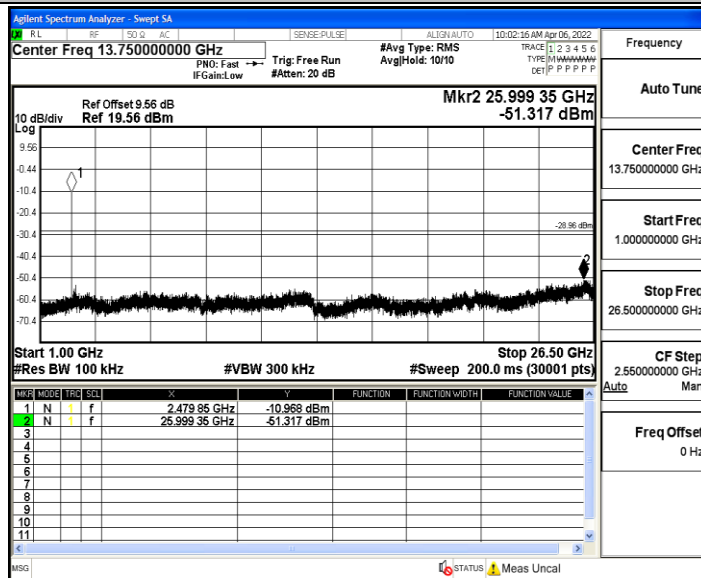
BLE_1M_Ant1_2480_0~Reference



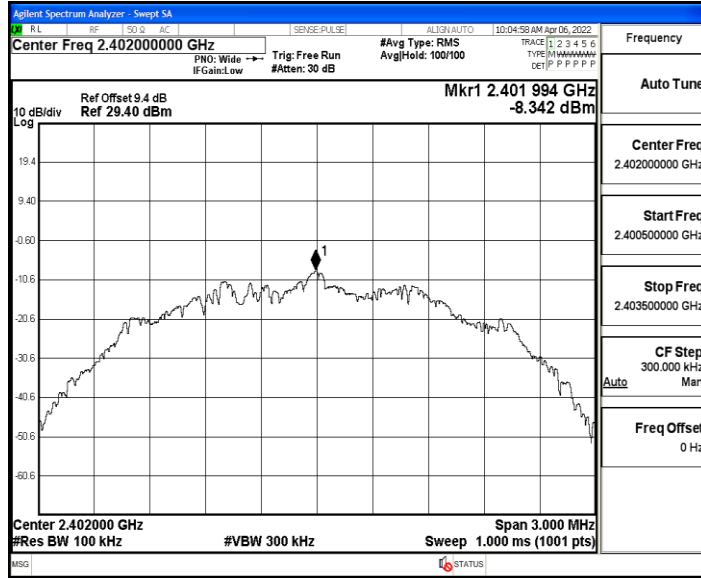
BLE_1M_Ant1_2480_30~1000



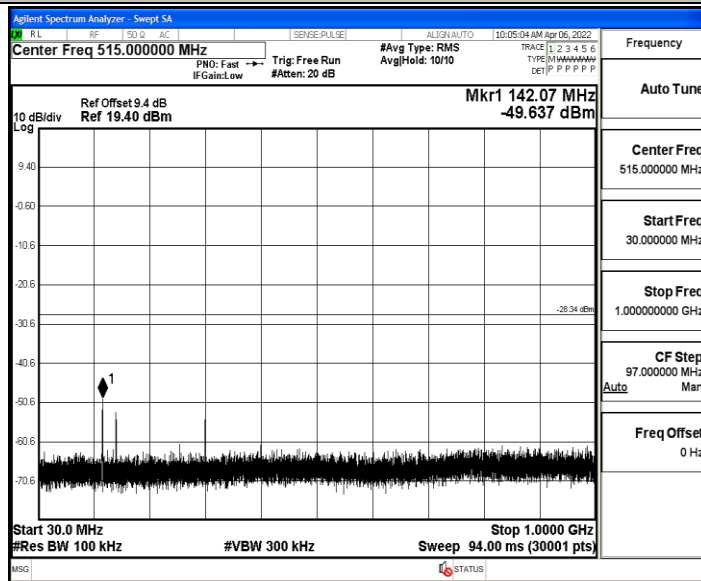
BLE_1M_Ant1_2480_1000~26500



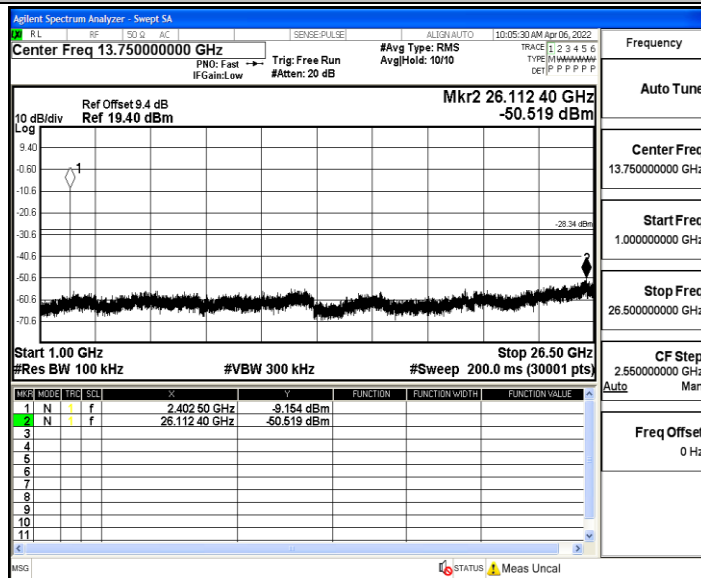
BLE_2M_Ant1_2402_0~Reference



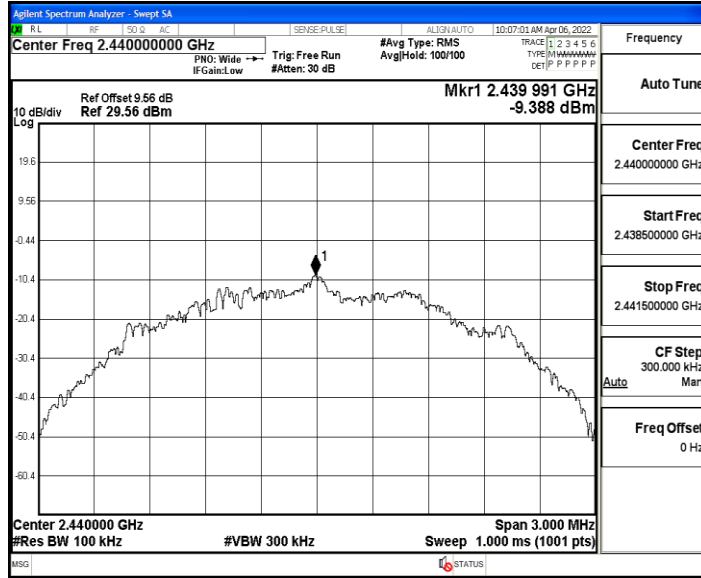
BLE_2M_Ant1_2402_30~1000



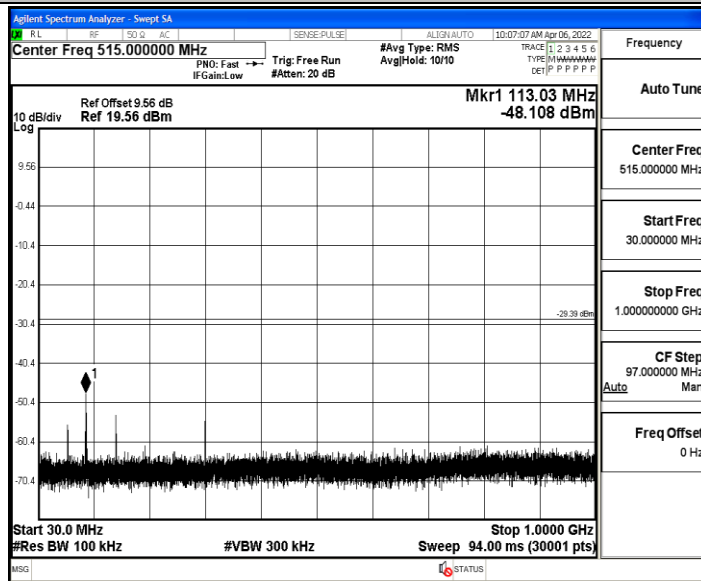
BLE_2M_Ant1_2402_1000~26500



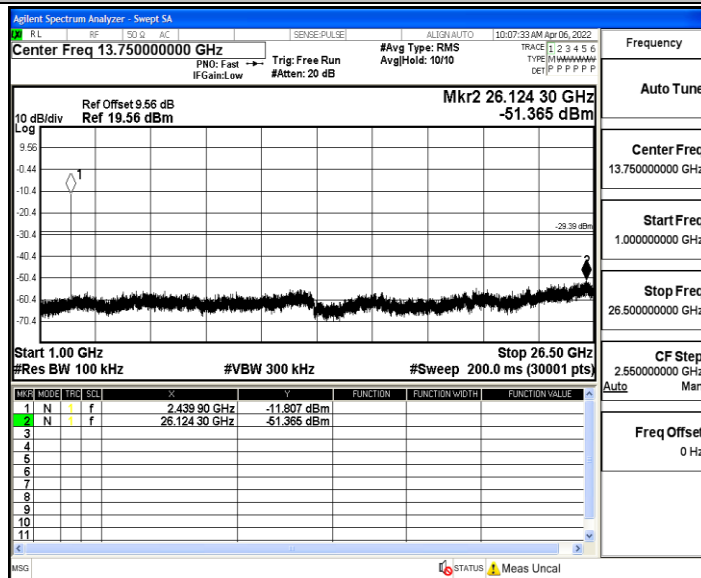
BLE_2M_Ant1_2440_0~Reference



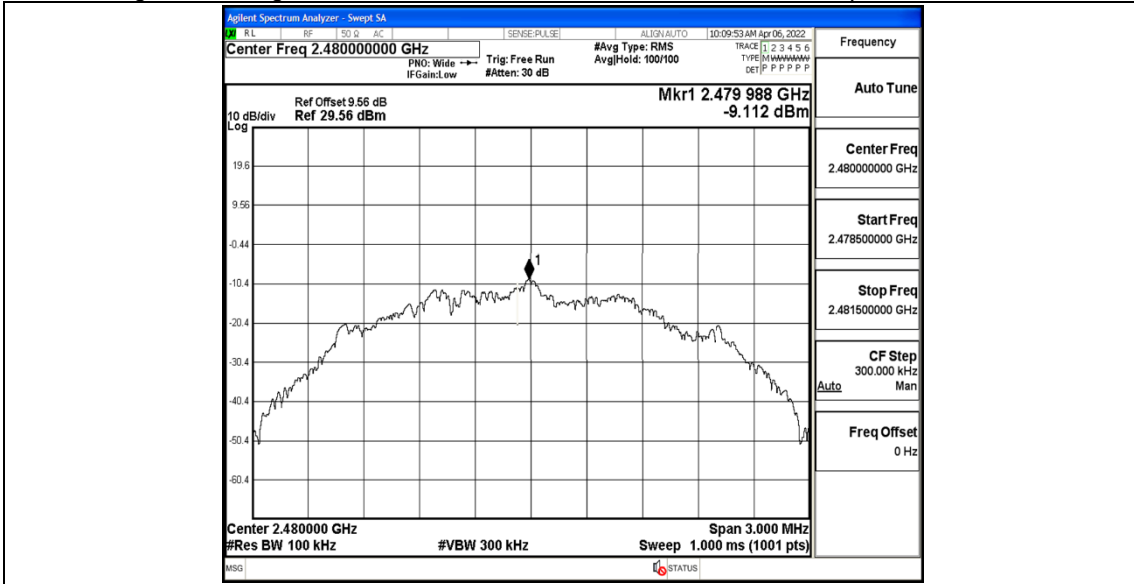
BLE_2M_Ant1_2440_30~1000



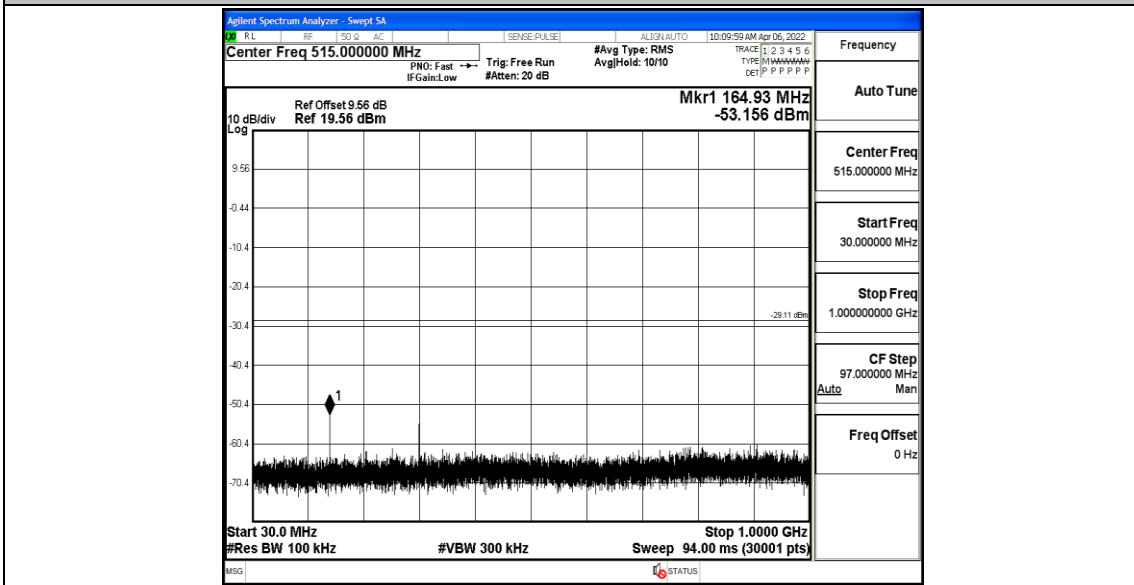
BLE_2M_Ant1_2440_1000~26500



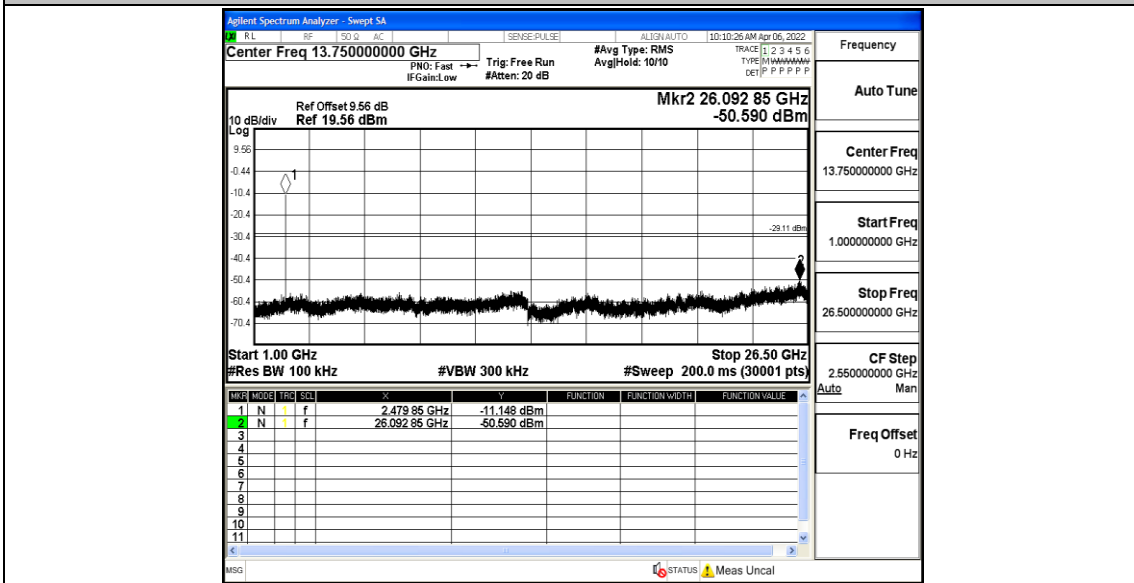
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

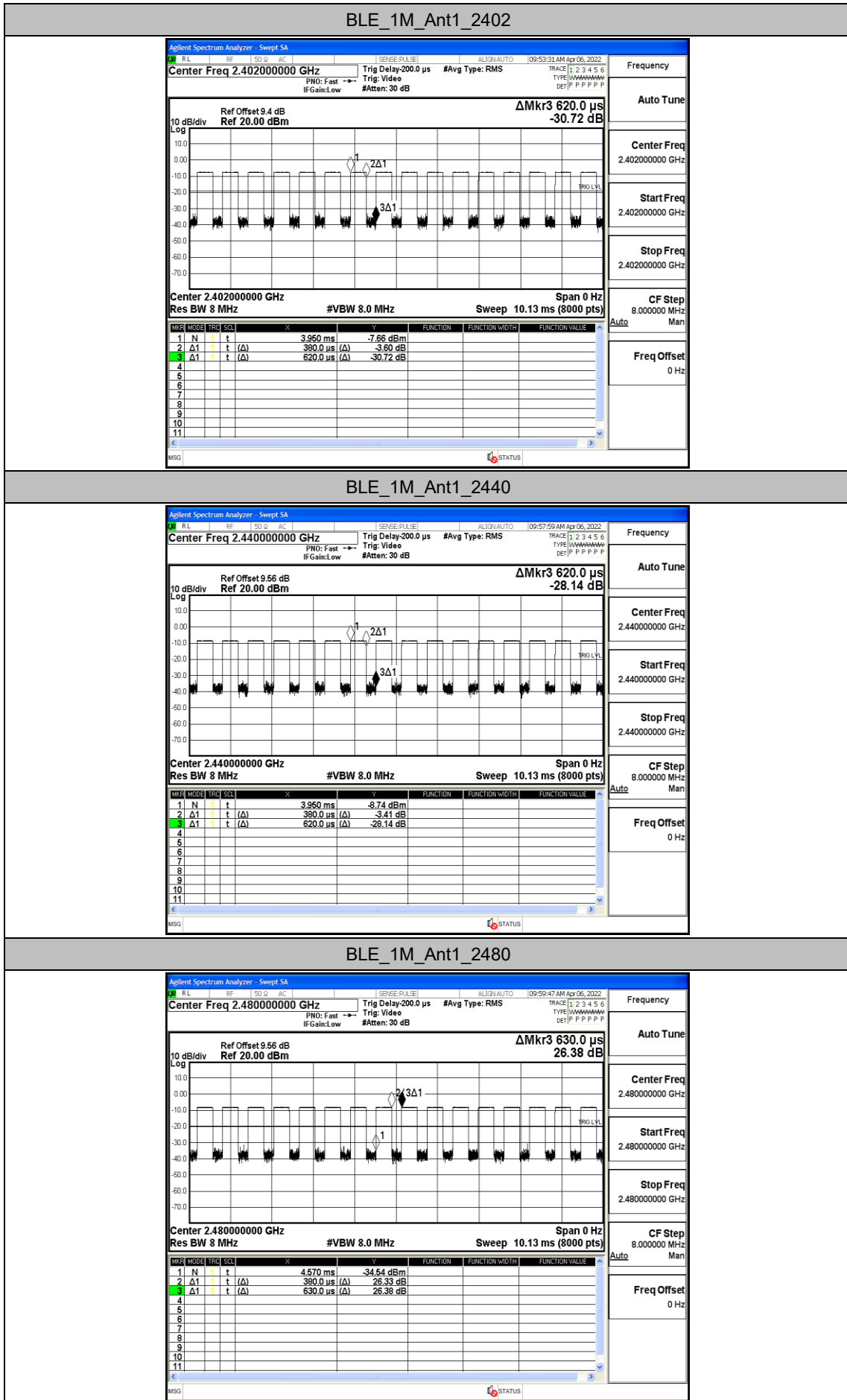


Appendix G: Duty Cycle

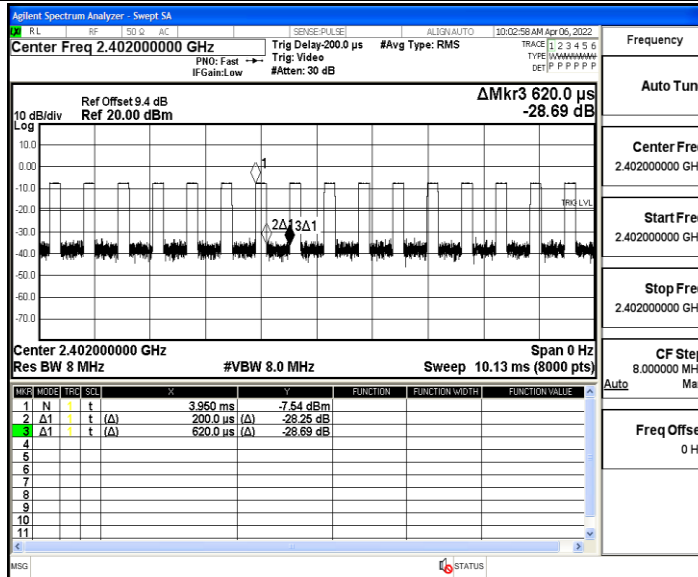
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [KHz]
BLE_1M	Ant1	2402	0.38	0.62	61.29	2.63
		2440	0.38	0.62	61.29	2.63
		2480	0.38	0.63	60.32	2.63
BLE_2M	Ant1	2402	0.20	0.62	32.26	5.00
		2440	0.20	0.62	32.26	5.00
		2480	0.20	0.62	32.26	5.00

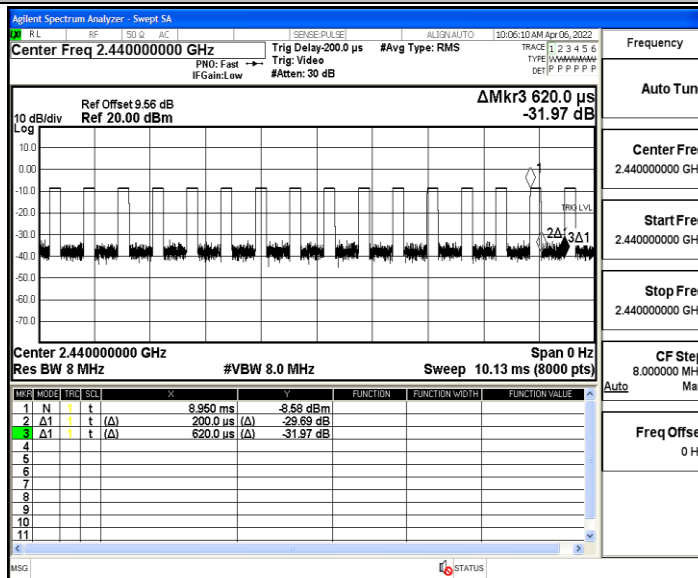
Test Graphs



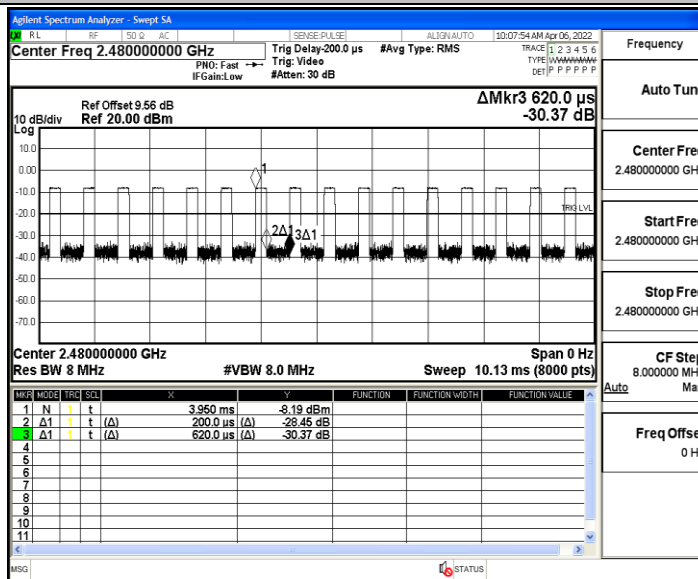
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

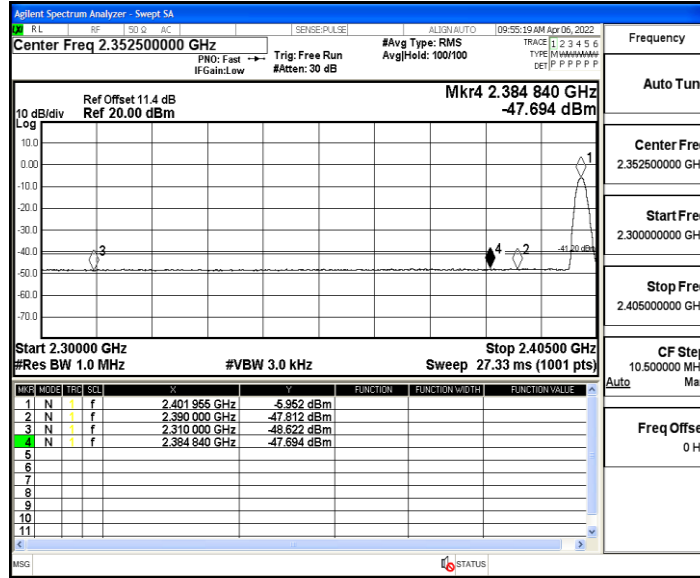
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.62	≤-41.20	PASS
				AV	2384.840	-47.69	≤-41.20	PASS
				AV	2390.000	-47.81	≤-41.20	PASS
				Peak	2310.000	-42.24	≤-21.20	PASS
				Peak	2352.500	-38.78	≤-21.20	PASS
				Peak	2390.000	-41.75	≤-21.20	PASS
		High	2480	AV	2483.500	-47.75	≤-41.20	PASS
				AV	2487.360	-47.19	≤-41.20	PASS
				AV	2500.000	-47.63	≤-41.20	PASS
				Peak	2483.500	-40.78	≤-21.20	PASS
				Peak	2486.480	-38.22	≤-21.20	PASS
				Peak	2500.000	-41.22	≤-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-47.72	≤-41.20	PASS
				AV	2388.515	-46.99	≤-41.20	PASS
				AV	2390.000	-47.6	≤-41.20	PASS
				Peak	2310.000	-40.74	≤-21.20	PASS
				Peak	2349.875	-38.73	≤-21.20	PASS
				Peak	2390.000	-41.24	≤-21.20	PASS
		High	2480	AV	2483.500	-47.05	≤-41.20	PASS
				AV	2496.240	-46.72	≤-41.20	PASS
				AV	2500.000	-47.04	≤-41.20	PASS
				Peak	2483.500	-41.13	≤-21.20	PASS
				Peak	2492.480	-37.9	≤-21.20	PASS
				Peak	2500.000	-40.81	≤-21.20	PASS

Note:

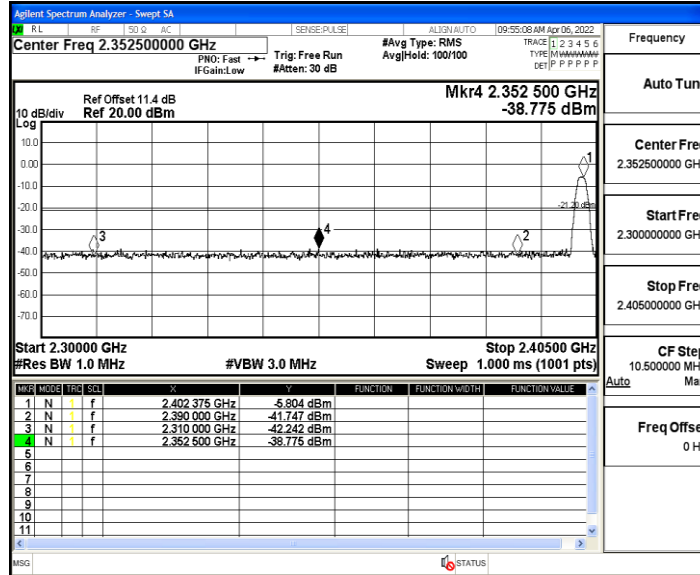
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

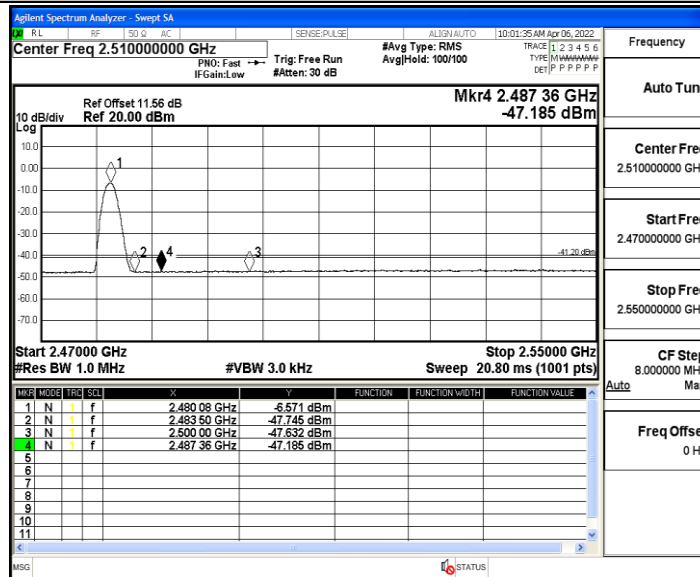
BLE_1M_Ant1_Low_2402_AV



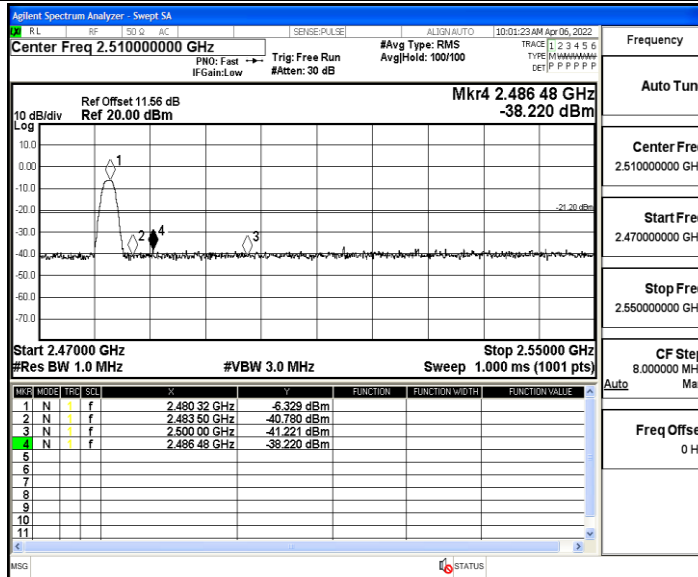
BLE_1M_Ant1_Low_2402_Peak



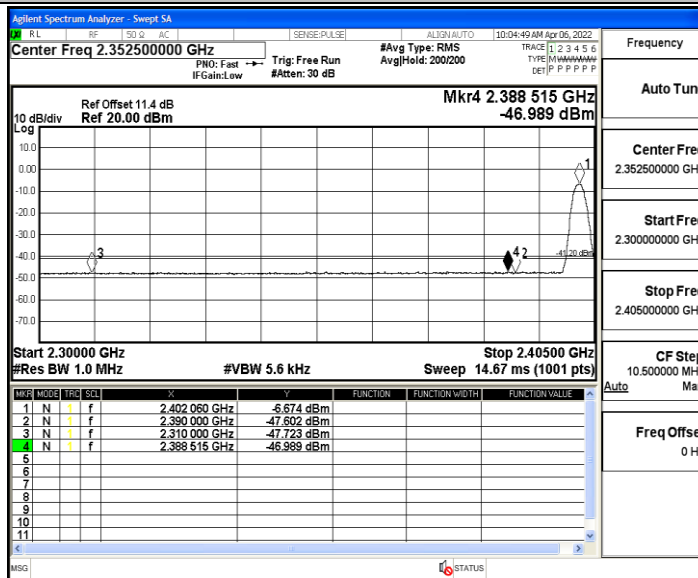
BLE_1M_Ant1_High_2480_AV



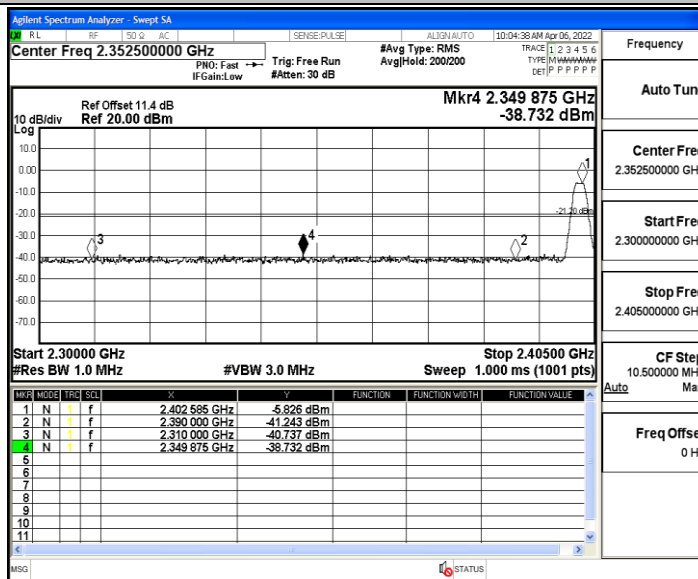
BLE_1M_Ant1_High_2480_Peak



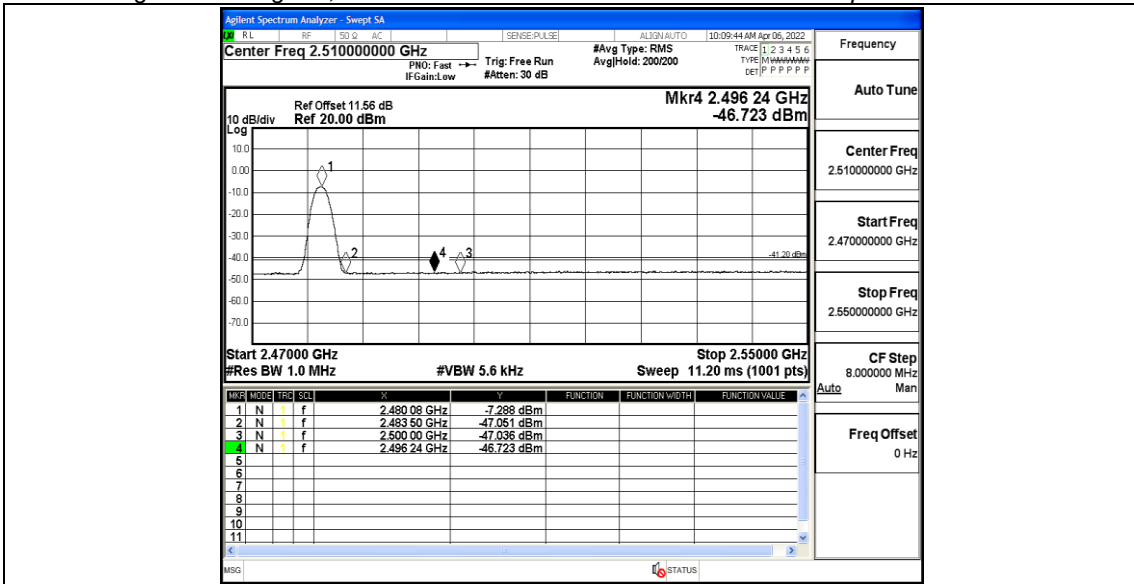
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

