

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

Product Name: DSP

Trade Mark: DS18

Test Model: DSP8.8BT

FCC ID: 2AYOQ-DSP88BT

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	0.700	2401.664	2402.364	0.5	PASS
		2440	0.652	2439.696	2440.348	0.5	PASS
		2480	0.676	2479.680	2480.356	0.5	PASS

Test Graphs



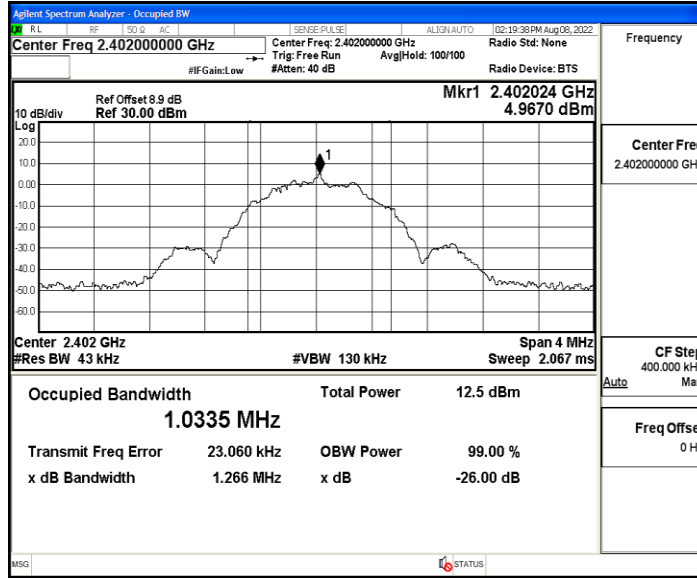
Appendix B: Occupied Channel Bandwidth

Test Result

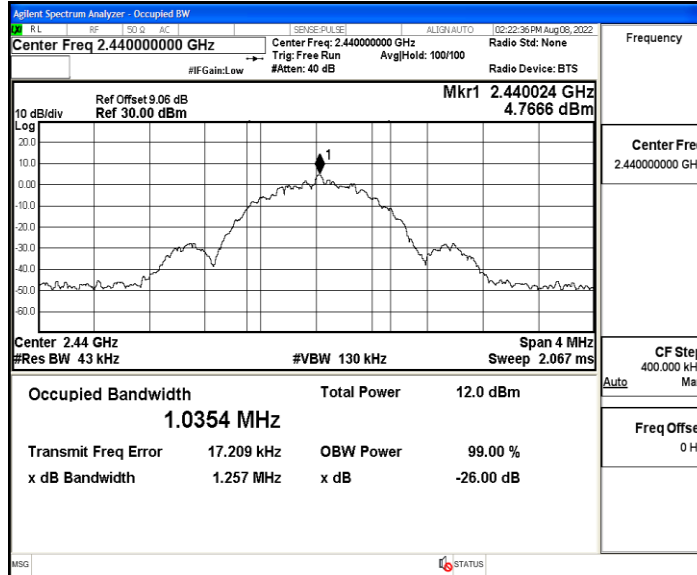
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0335	2401.506	2402.540	---	---
		2440	1.0354	2439.500	2440.535	---	---
		2480	1.0364	2479.505	2480.541	---	---

Test Graphs

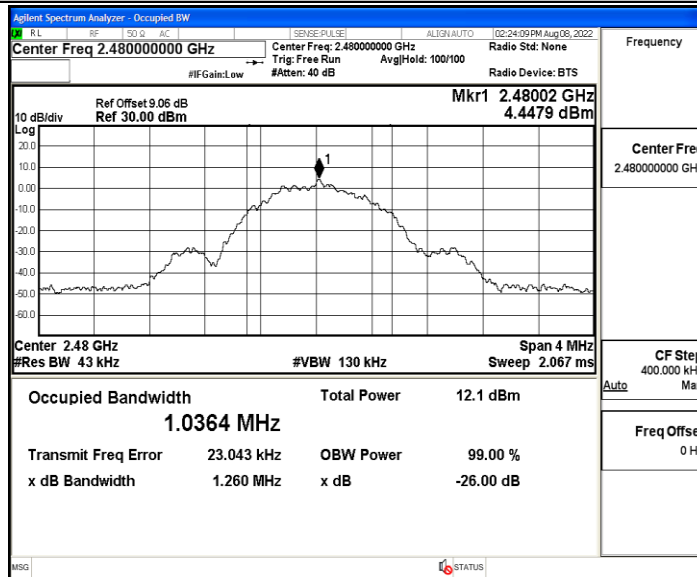
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

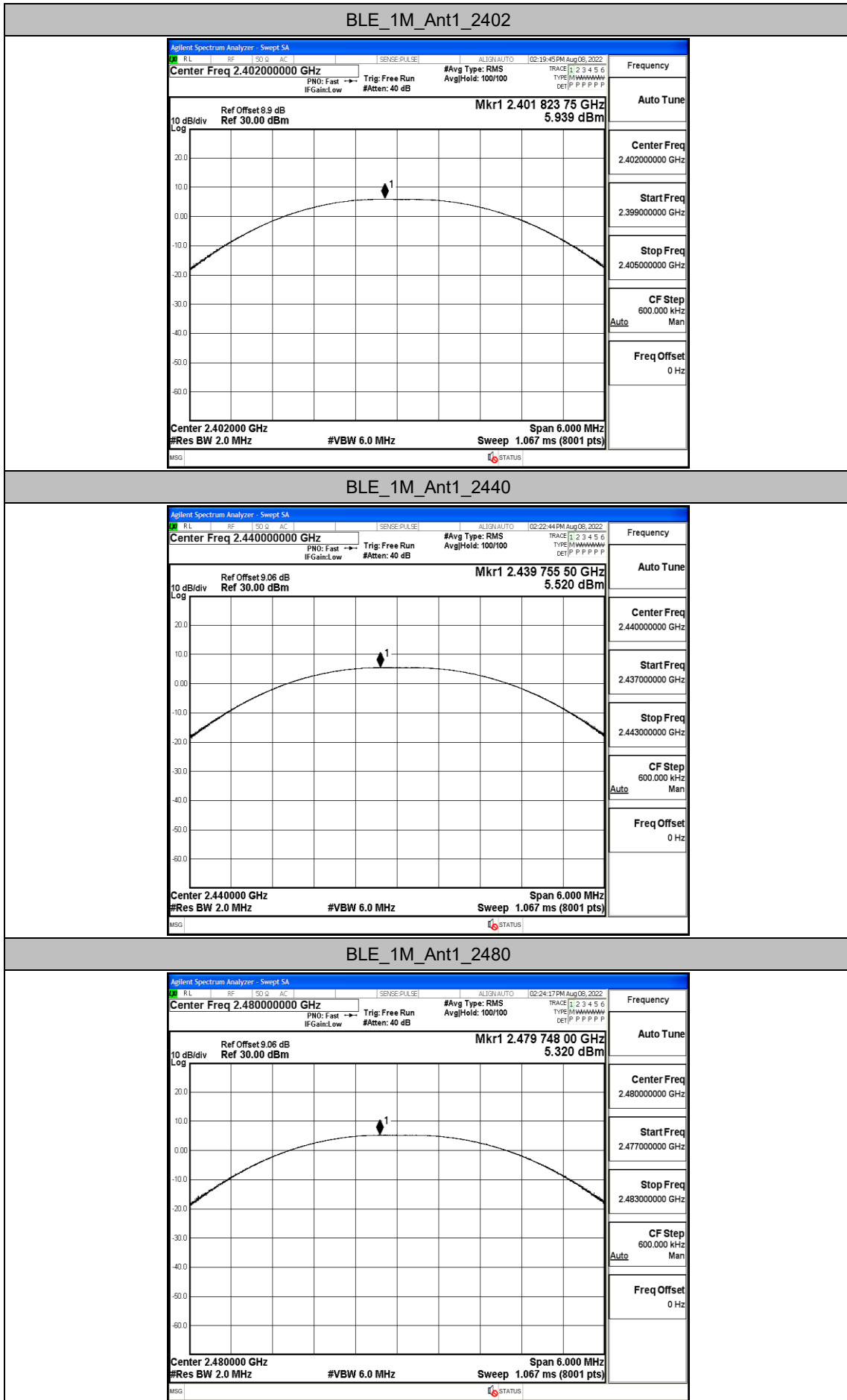


Appendix C: Maximum Peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	5.94	≤30	PASS
		2440	5.52	≤30	PASS
		2480	5.32	≤30	PASS

Test Graphs

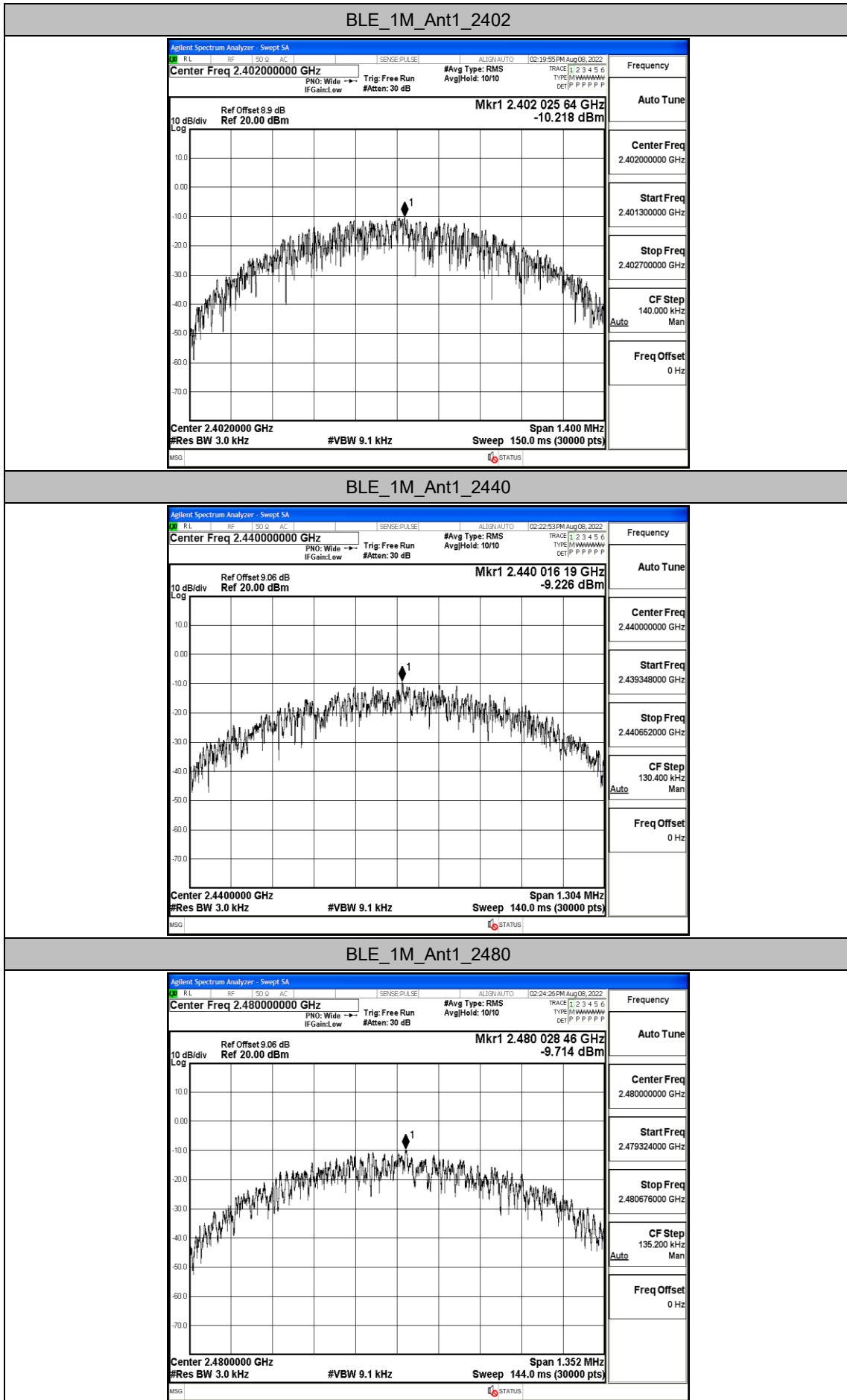


Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.22	≤8.00	PASS
		2440	-9.23	≤8.00	PASS
		2480	-9.71	≤8.00	PASS

Test Graphs



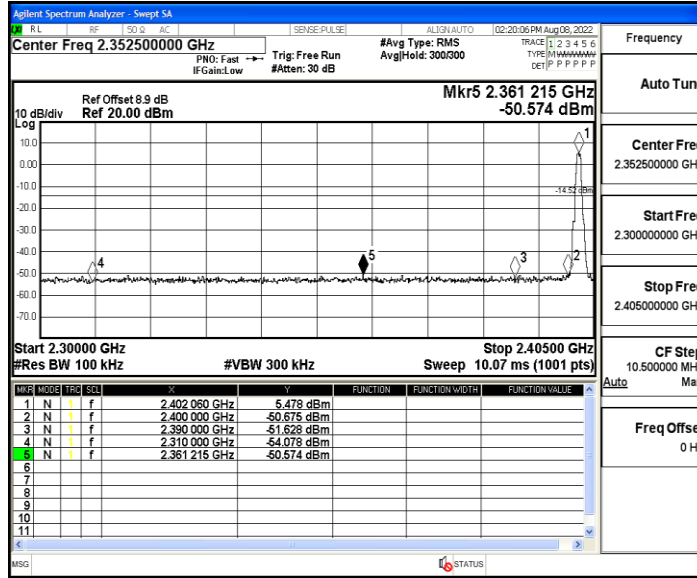
Appendix E: Band edge measurements

Test Result

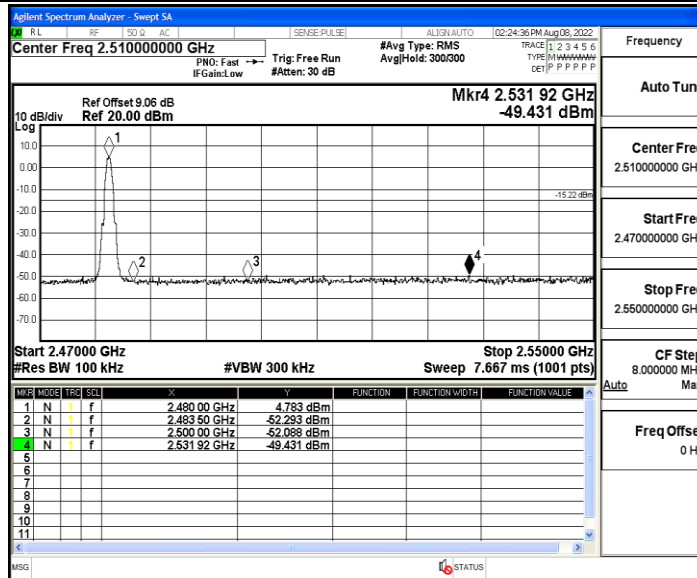
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	5.48	-50.57	≤-14.52	PASS
		High	2480	4.78	-49.43	≤-15.22	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

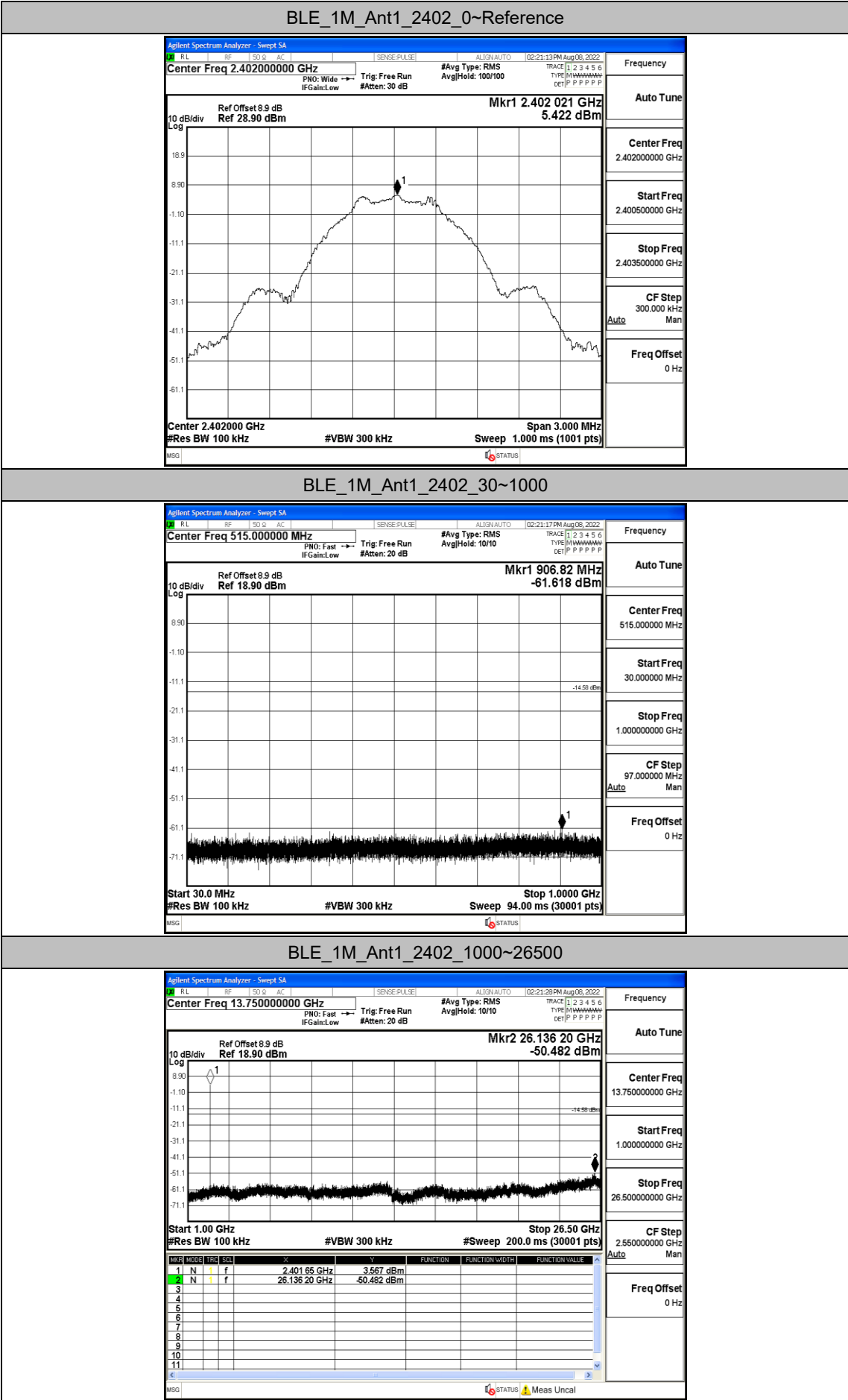


Appendix F: Conducted Spurious Emission

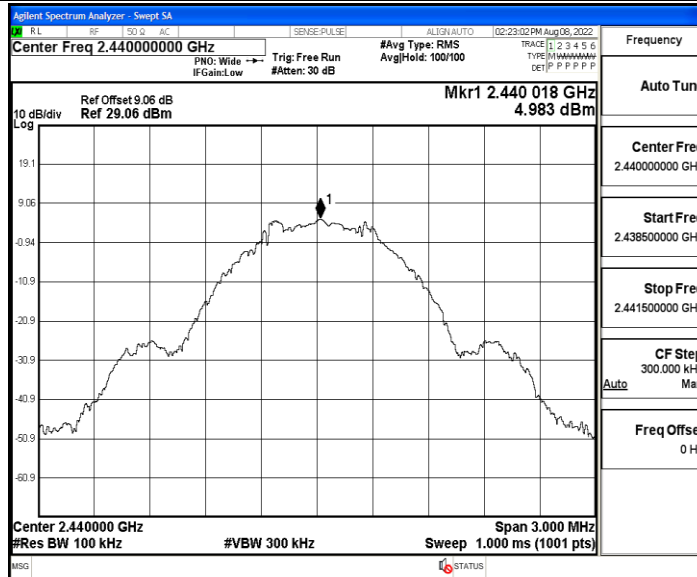
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	5.42	5.42	---	PASS
			30~1000	5.42	-61.62	≤-14.58	PASS
			1000~26500	5.42	-50.48	≤-14.58	PASS
		2440	Reference	4.98	4.98	---	PASS
			30~1000	4.98	-61.27	≤-15.02	PASS
			1000~26500	4.98	-51.33	≤-15.02	PASS
		2480	Reference	4.68	4.68	---	PASS
			30~1000	4.68	-61.03	≤-15.32	PASS
			1000~26500	4.68	-50.99	≤-15.32	PASS

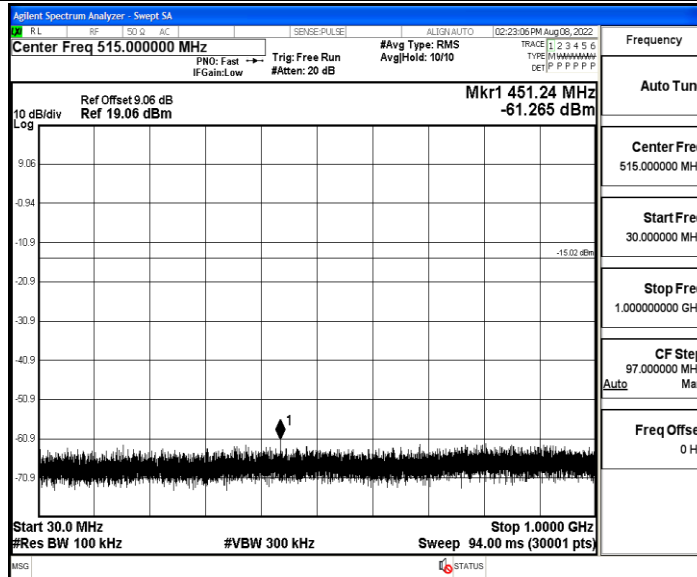
Test Graphs



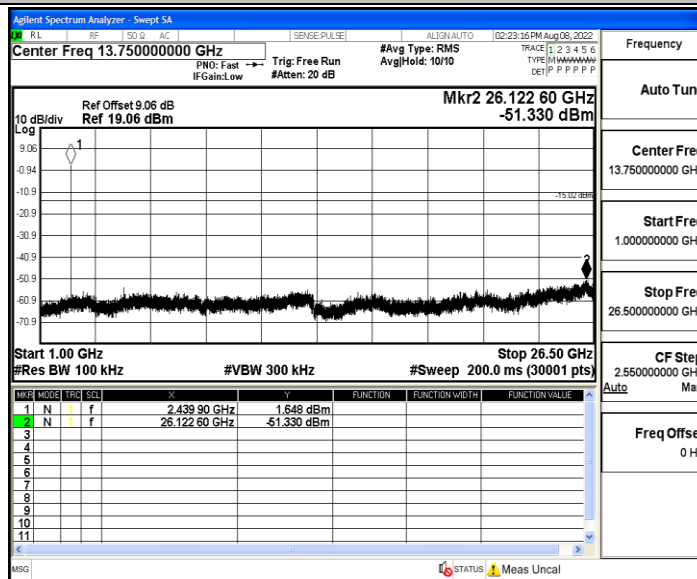
BLE_1M_Ant1_2440_0~Reference



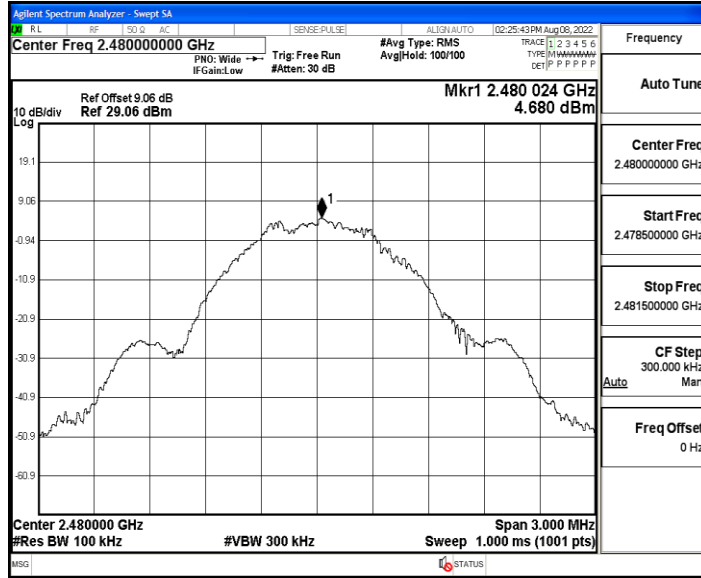
BLE_1M_Ant1_2440_30~1000



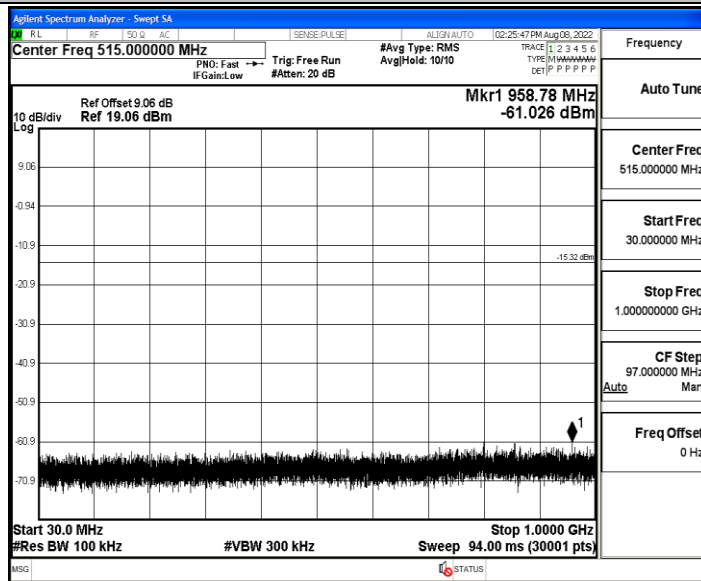
BLE_1M_Ant1_2440_1000~26500



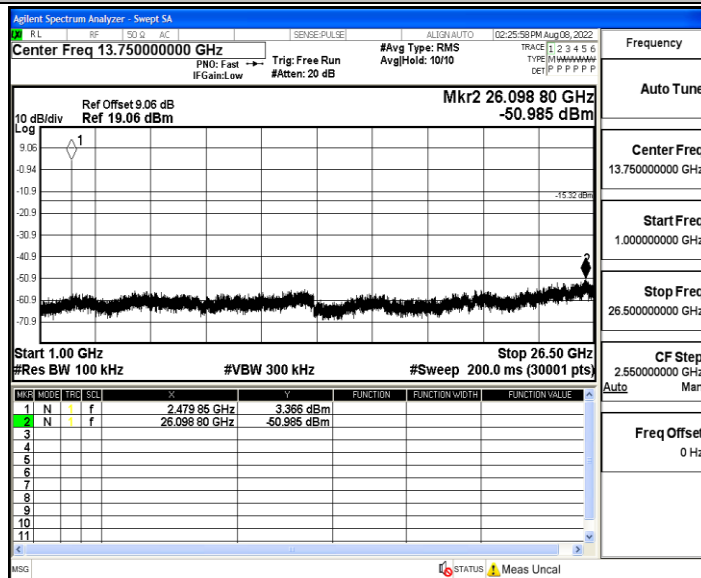
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

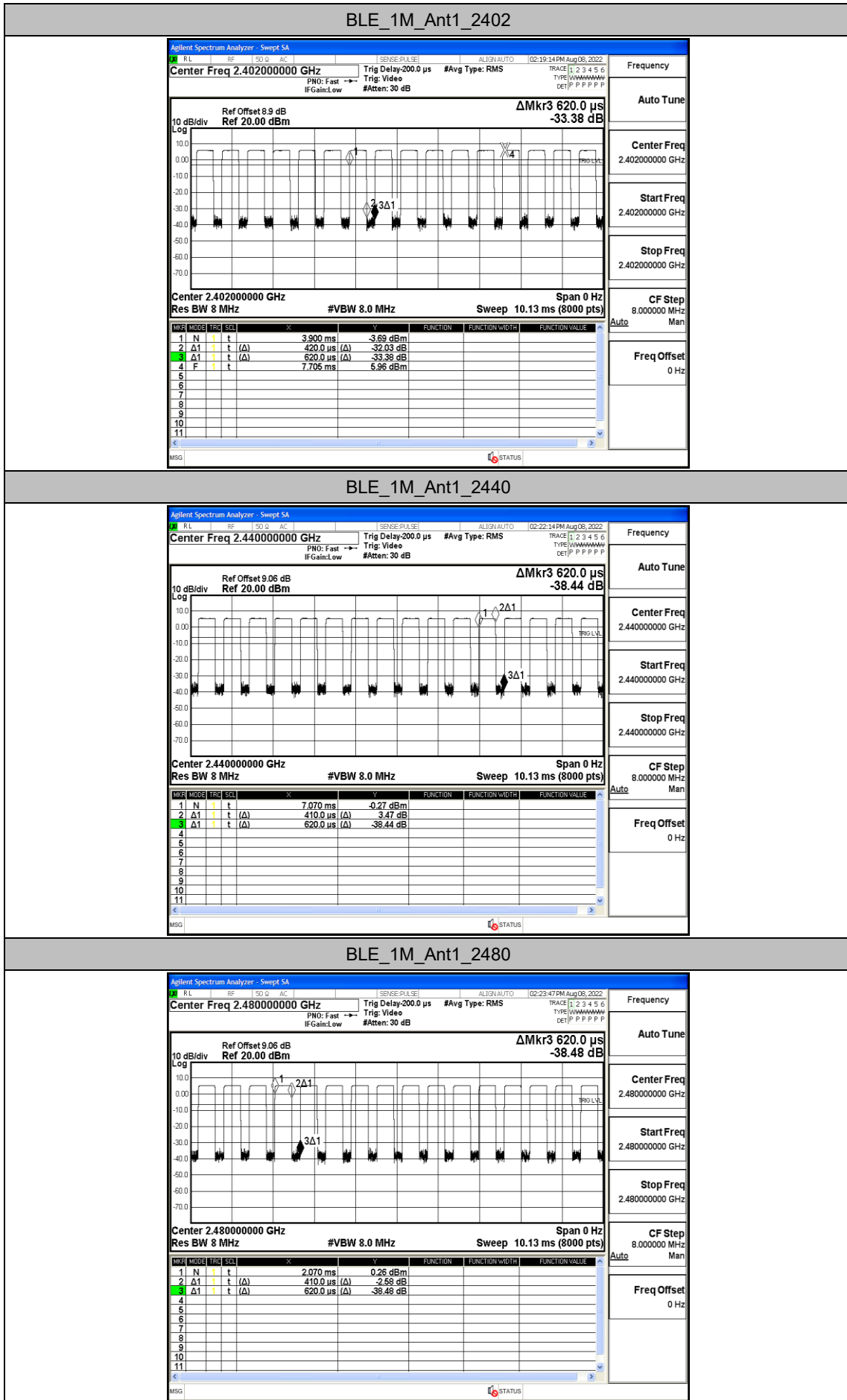


Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	0.42	0.62	67.74	2.38
		2440	0.41	0.62	66.13	2.44
		2480	0.41	0.62	66.13	2.44

Test Graphs



Appendix H: Emissions in Restricted Bands

Test Result

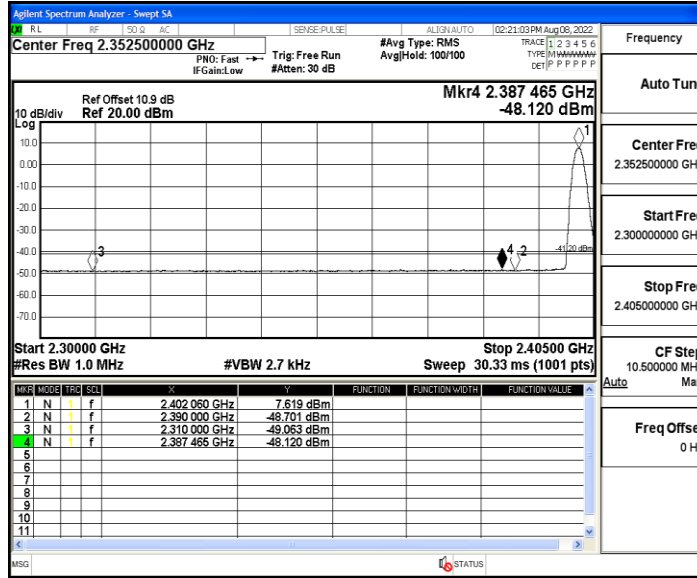
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-49.06	≤-41.20	PASS
				AV	2387.465	-48.12	≤-41.20	PASS
				AV	2390.000	-48.7	≤-41.20	PASS
				Peak	2310.000	-43.32	≤-21.20	PASS
				Peak	2385.890	-39.08	≤-21.20	PASS
				Peak	2390.000	-41.85	≤-21.20	PASS
		High	2480	AV	2483.500	-45.91	≤-41.20	PASS
				AV	2483.520	-45.91	≤-41.20	PASS
				AV	2500.000	-48.11	≤-41.20	PASS
				Peak	2483.500	-40.7	≤-21.20	PASS
				Peak	2484.080	-38.53	≤-21.20	PASS
				Peak	2500.000	-42.06	≤-21.20	PASS

Note:

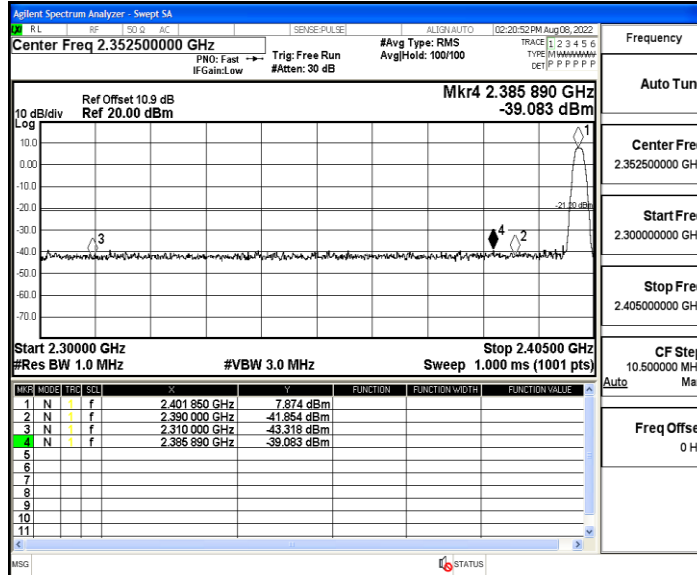
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

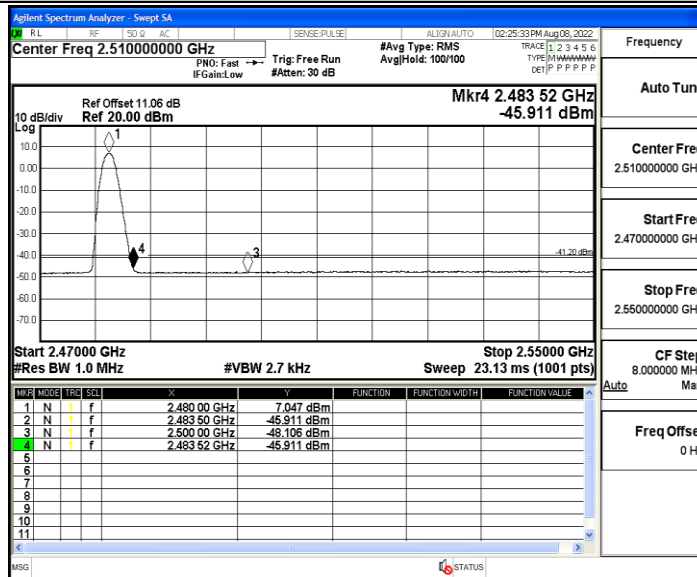
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

