

FCC Appendix RF Test Data for BLE

FCC ID : **HCQ-IDTOUCH1**

Company : **Inovonics Wireless Corporation**

EUT : **Inovonics Wired Touchscreen Keypad**

Model Number : **IDTOUCH1**

Report No. : **CTA26020600501**

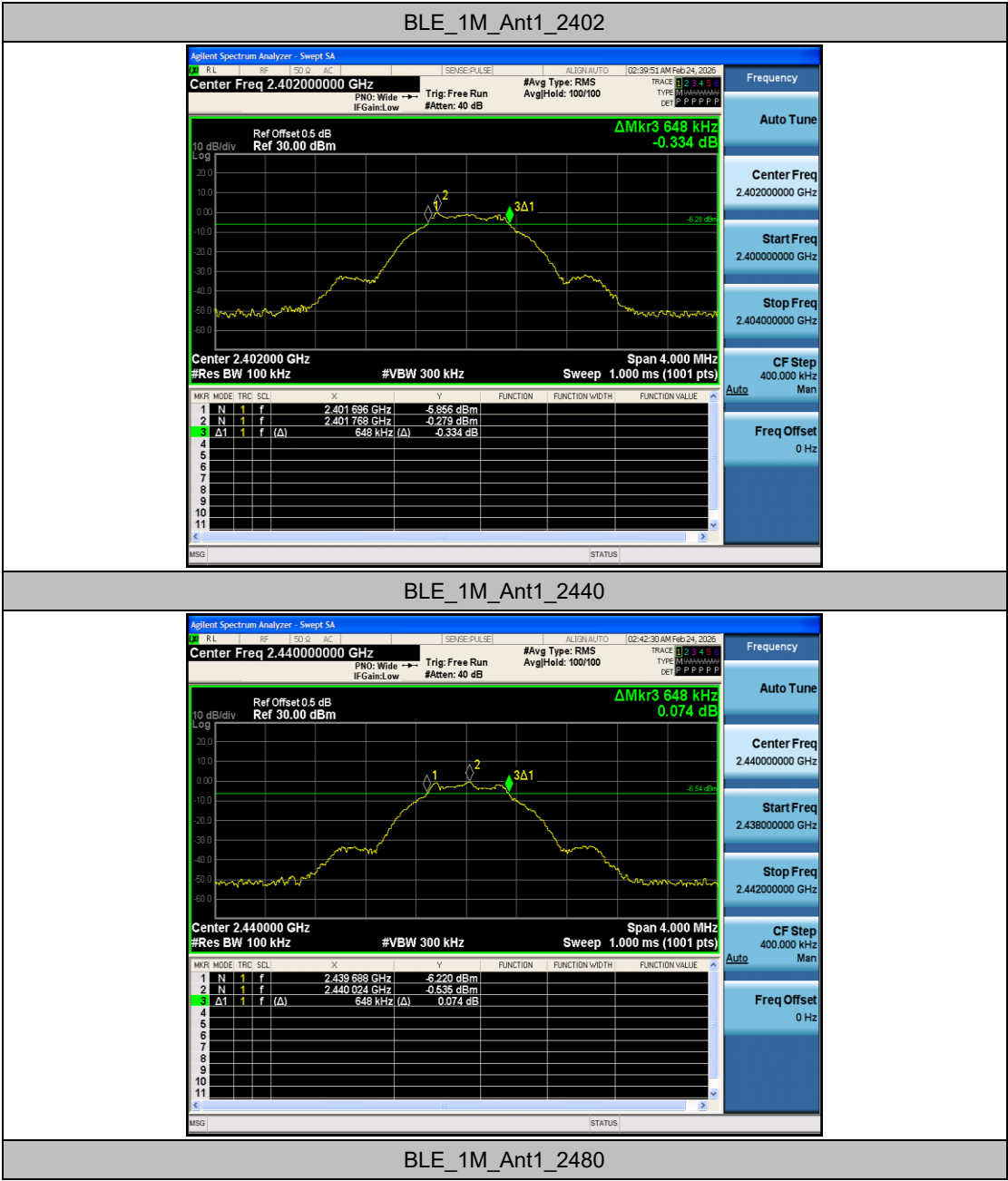
Reviewed By : **Eric Wang**

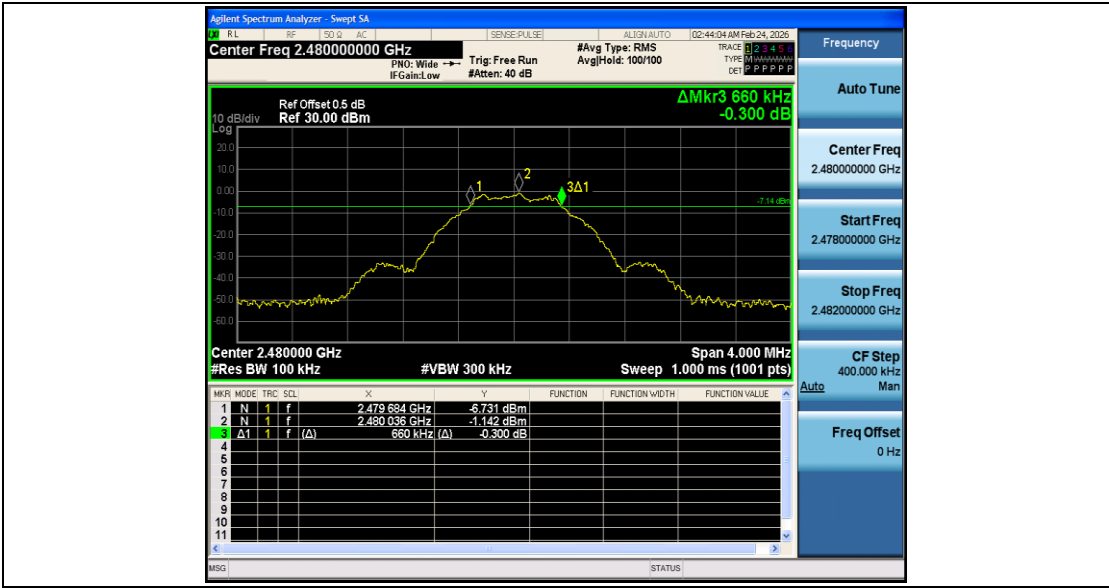
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.648	2401.696	2402.344	0.5	PASS
		2440	0.648	2439.688	2440.336	0.5	PASS
		2480	0.660	2479.684	2480.344	0.5	PASS

Test Graphs





Appendix B: Occupied Channel Bandwidth

Test Result

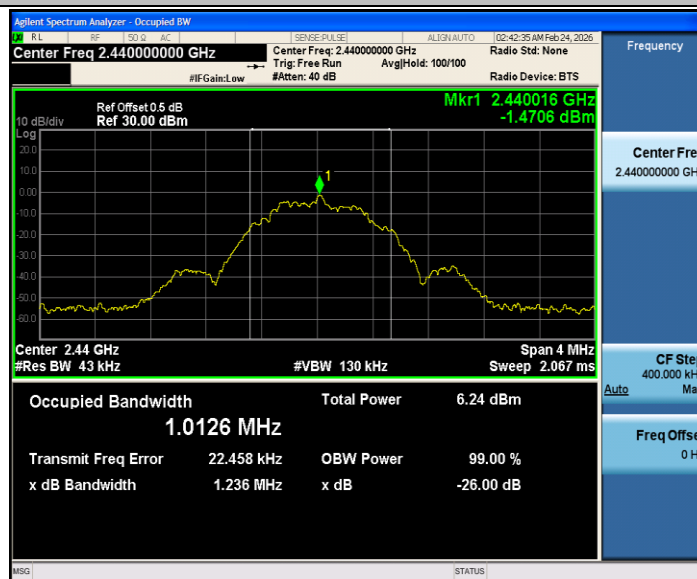
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0042	2401.5158	2402.5200	---	---
		2440	1.0126	2439.5162	2440.5288	---	---
		2480	1.0128	2479.5151	2480.5279	---	---

Test Graphs

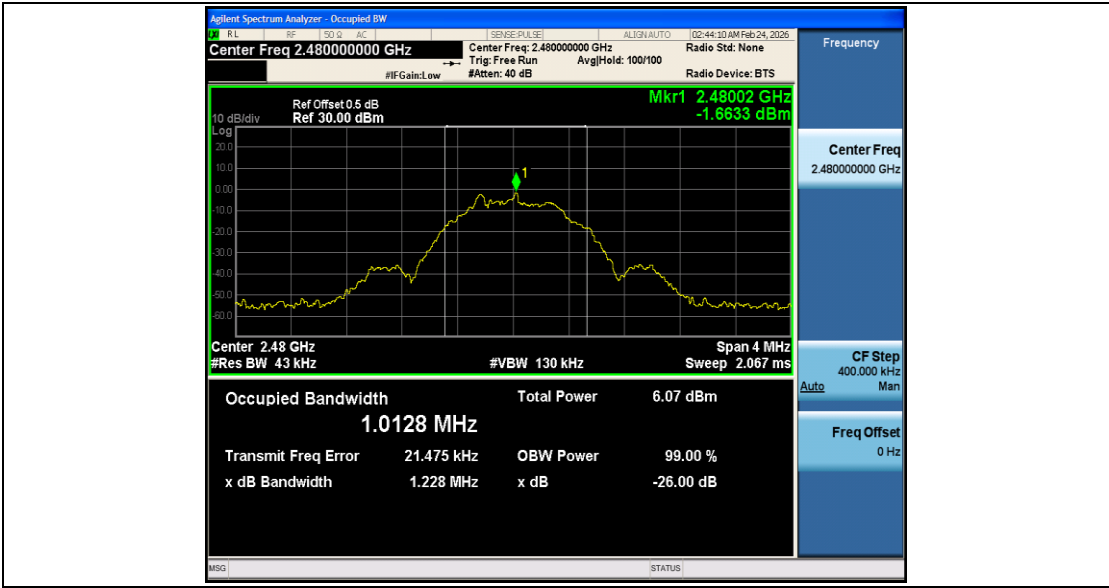
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.23	≤30	PASS
		2440	-0.39	≤30	PASS
		2480	-0.63	≤30	PASS

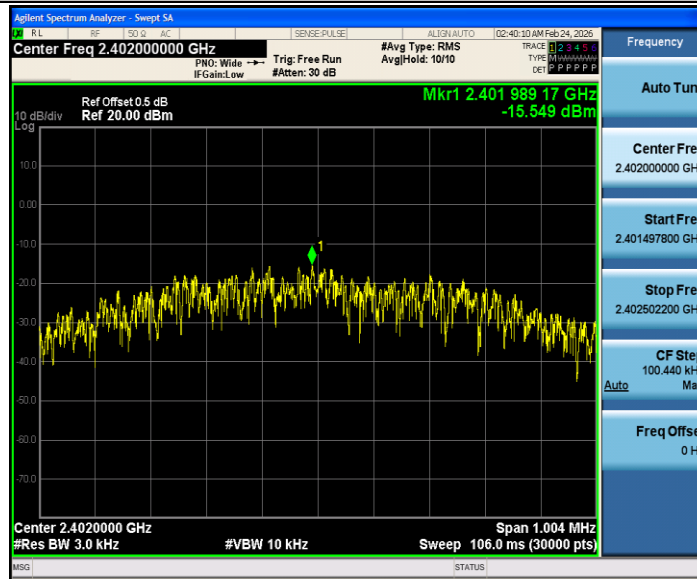
Appendix D: Maximum power spectral density

Test Result

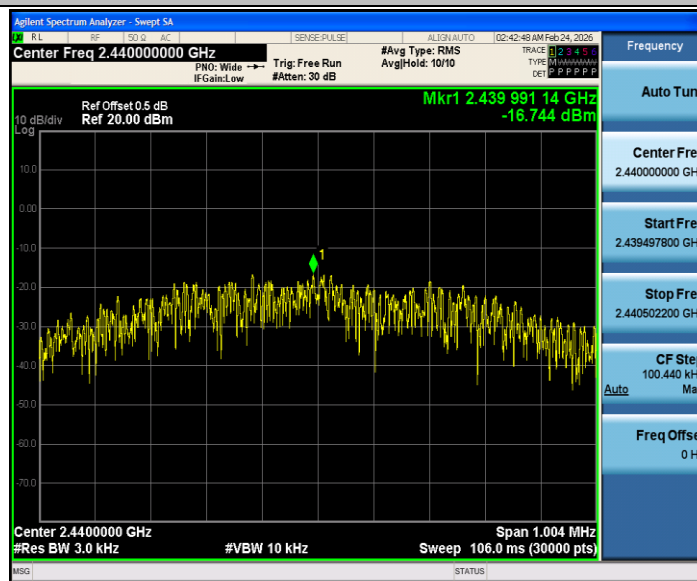
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.55	≤8.00	PASS
		2440	-16.74	≤8.00	PASS
		2480	-16.14	≤8.00	PASS

Test Graphs

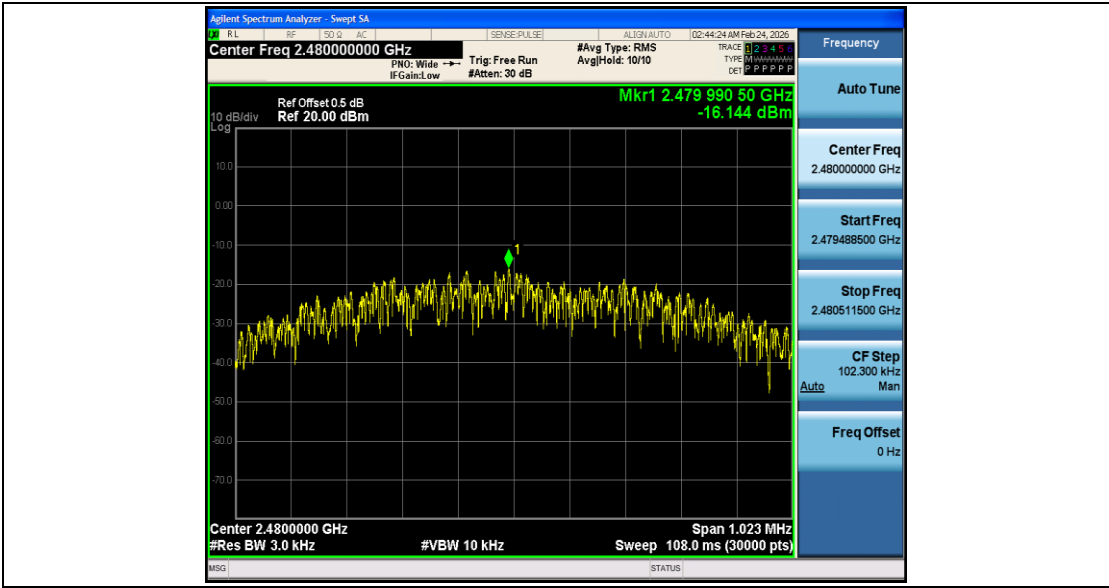
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

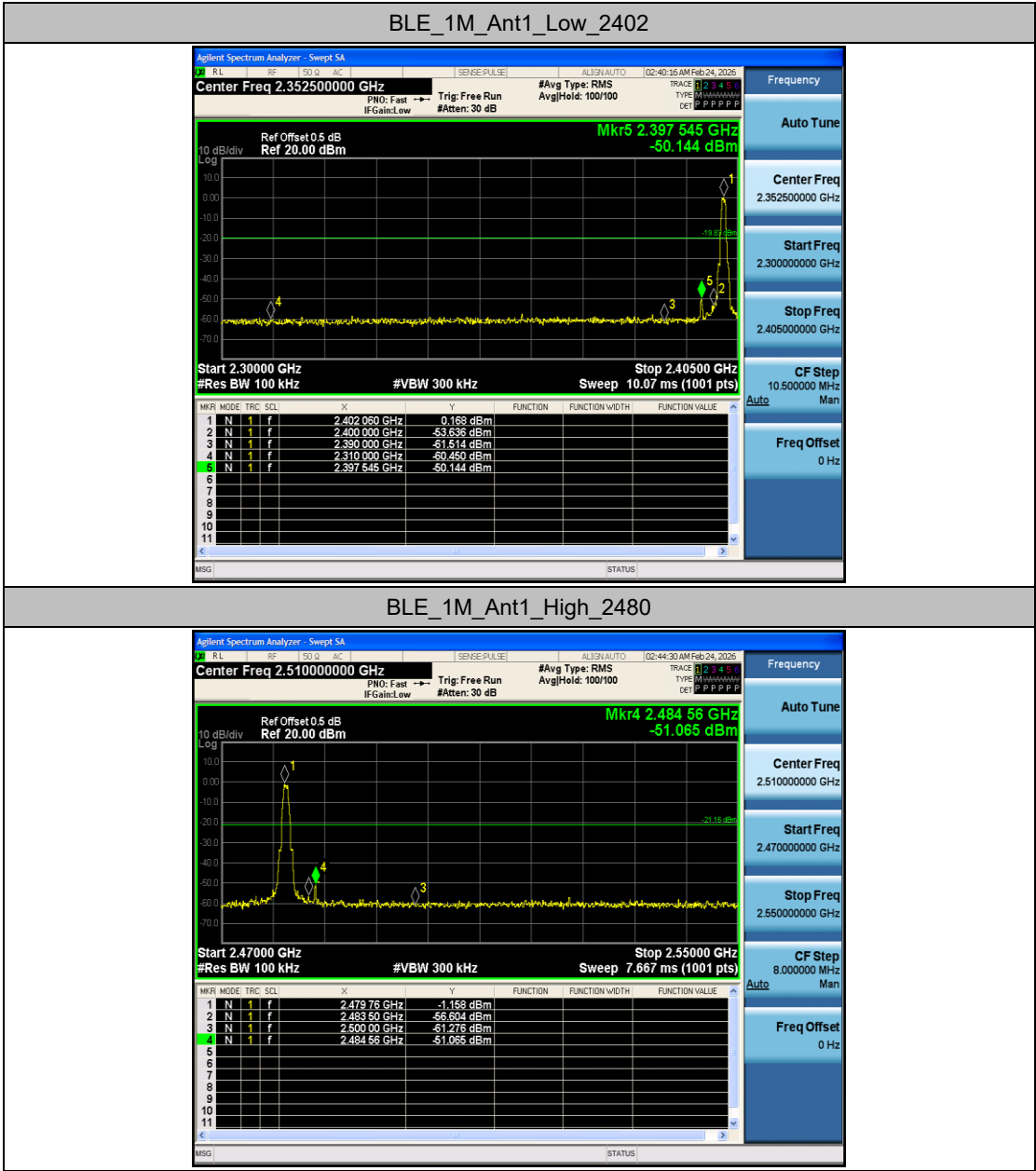


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.17	-50.14	≤-19.83	PASS
		High	2480	-1.16	-51.07	≤-21.16	PASS

Test Graphs

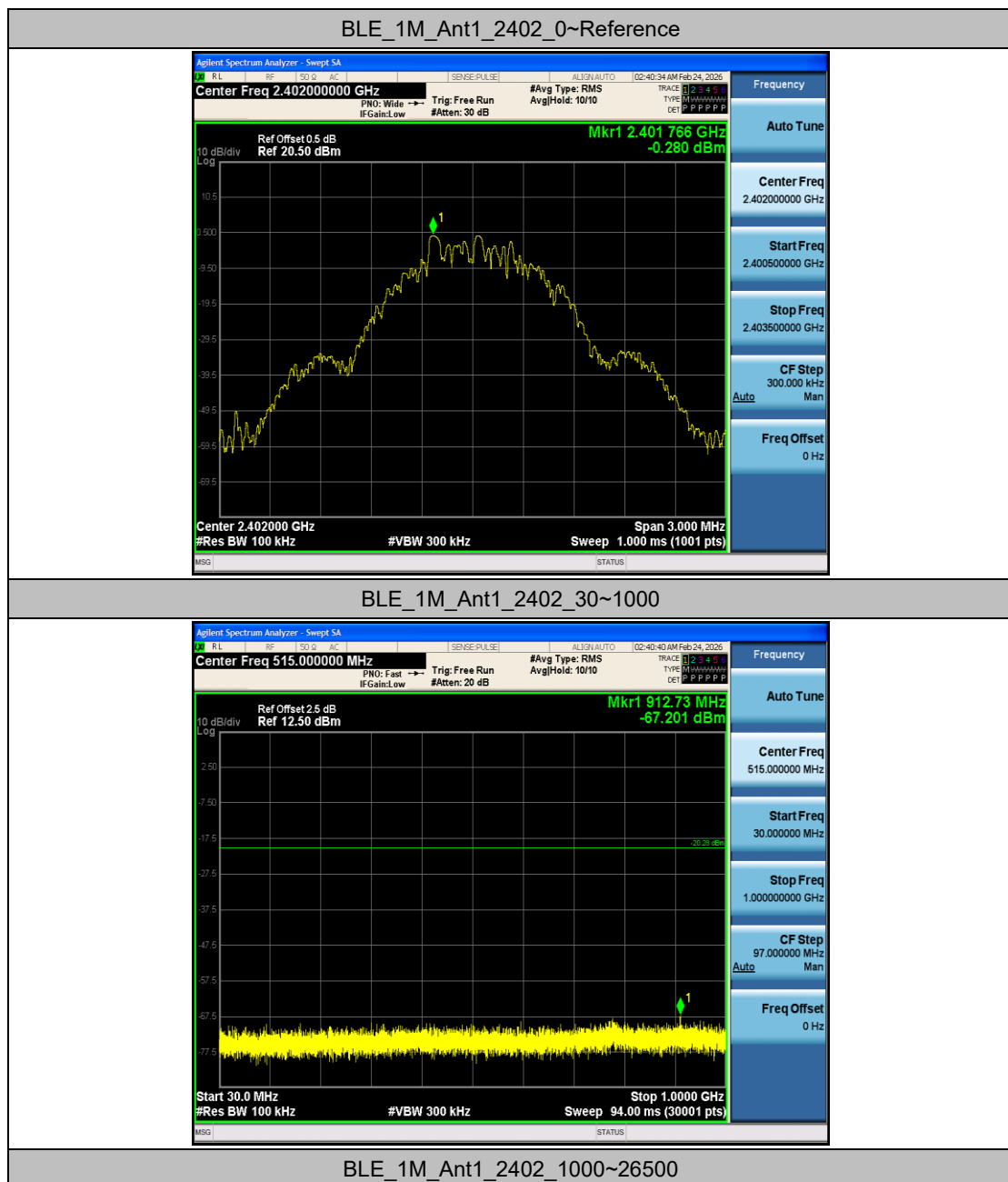


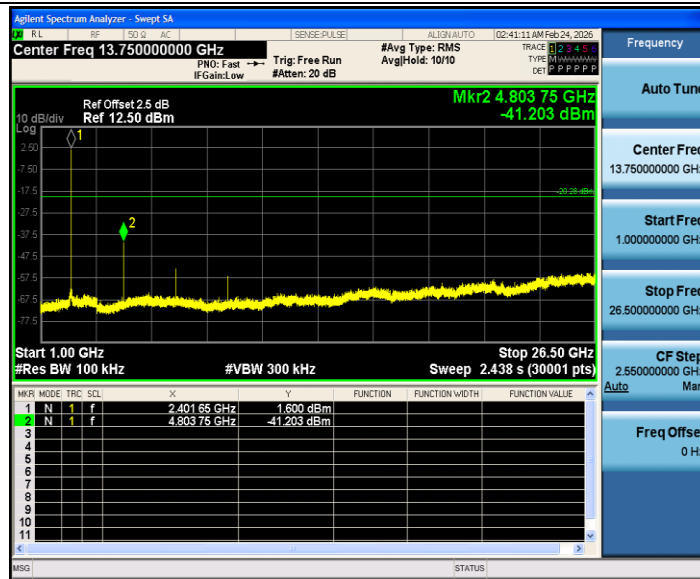
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.28	-0.28	---	PASS
			30~1000	-0.28	-67.2	≤-20.28	PASS
			1000~26500	-0.28	-41.2	≤-20.28	PASS
		2440	Reference	-1.84	-1.84	---	PASS
			30~1000	-1.84	-67.36	≤-21.84	PASS
			1000~26500	-1.84	-41.12	≤-21.84	PASS
		2480	Reference	-2.21	-2.21	---	PASS
			30~1000	-2.21	-68.21	≤-22.21	PASS
			1000~26500	-2.21	-43.53	≤-22.21	PASS

Test Graphs

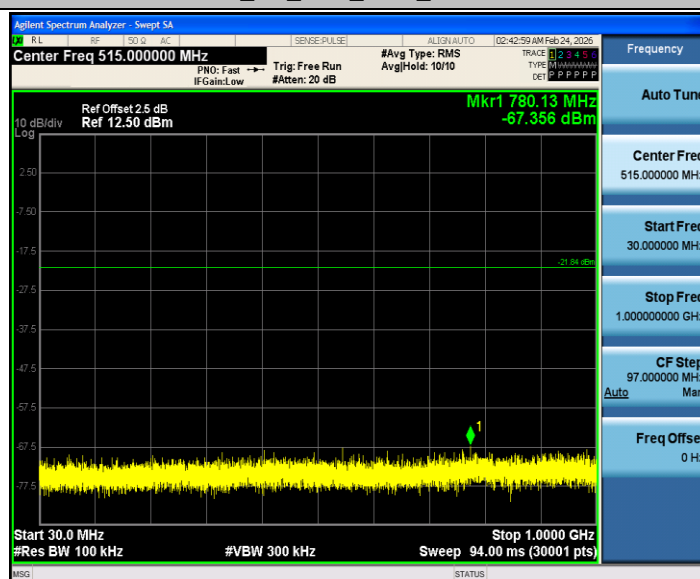




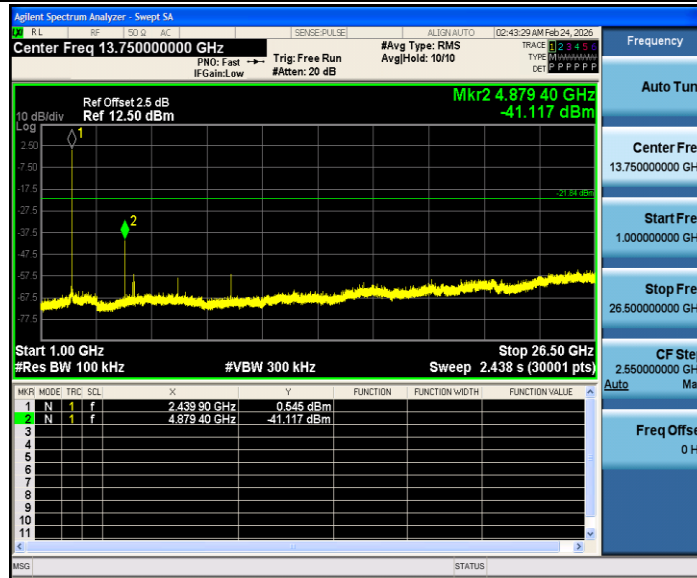
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



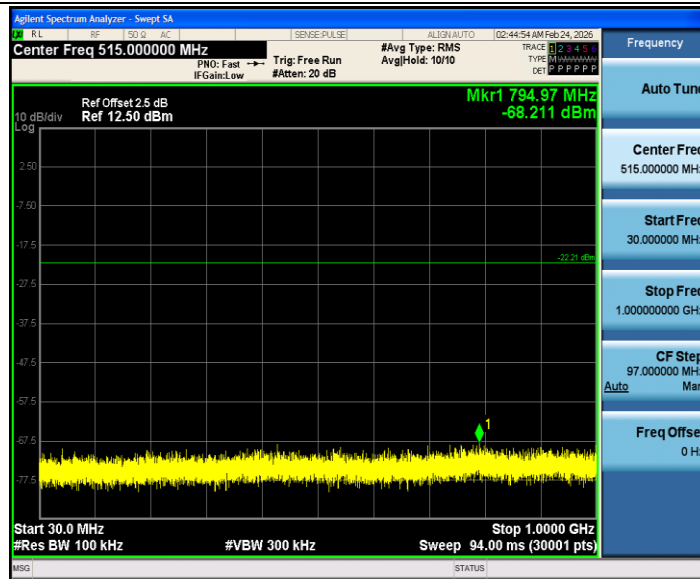
BLE_1M_Ant1_2440_1000~26500



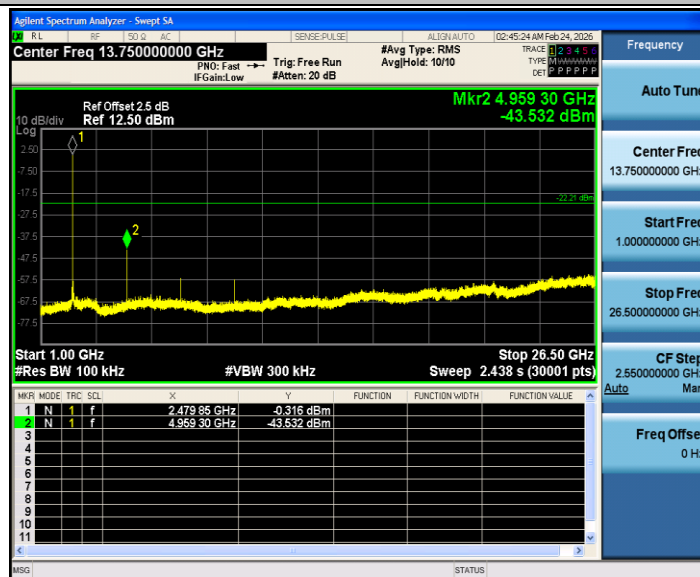
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

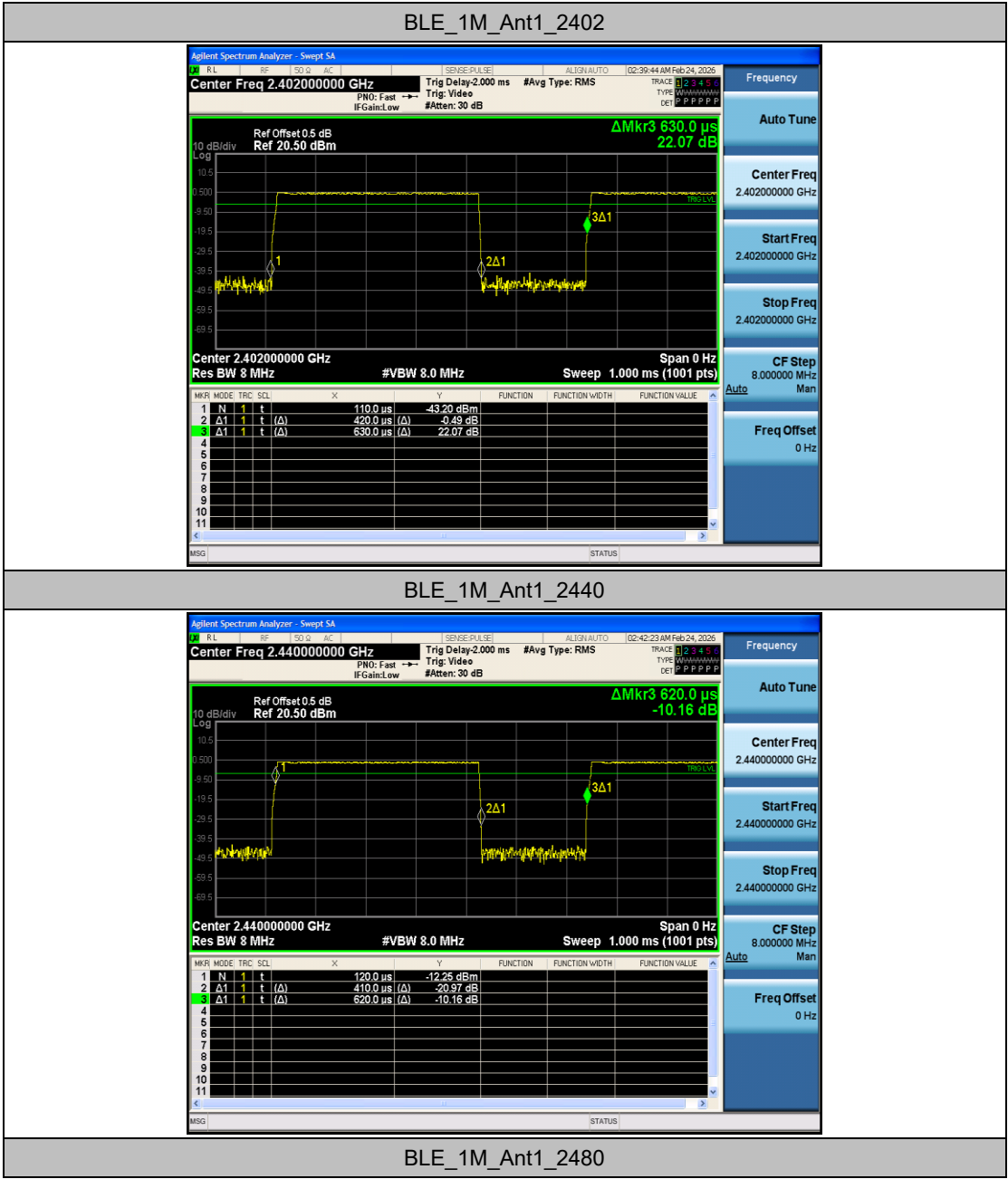


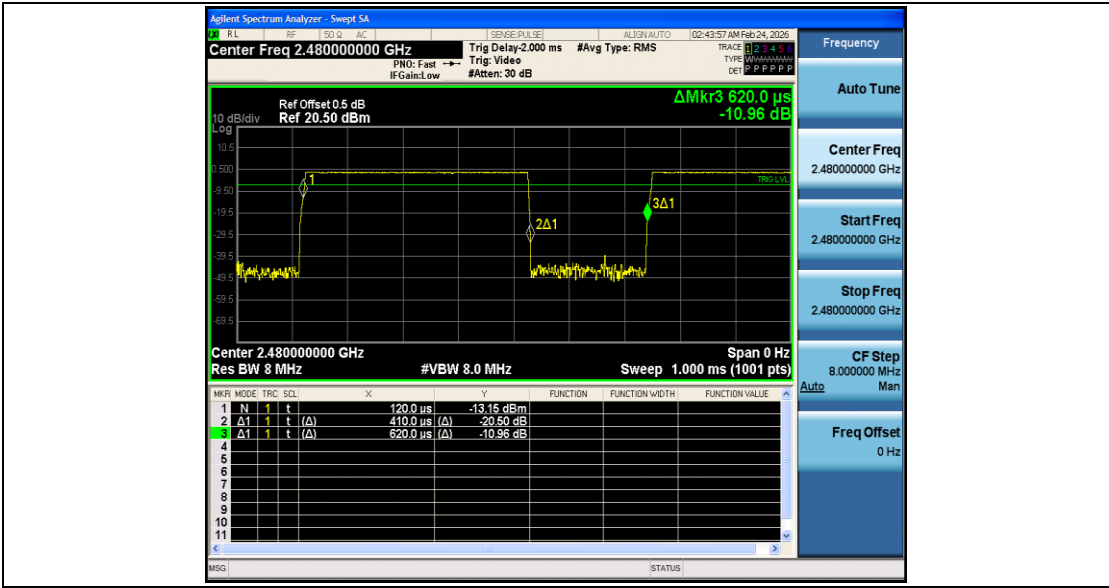
Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.42	0.63	0.6667	66.67	1.76	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.41	0.62	0.6613	66.13	1.80	---	---

Test Graphs





Appendix H: Emissions in Restricted Bands

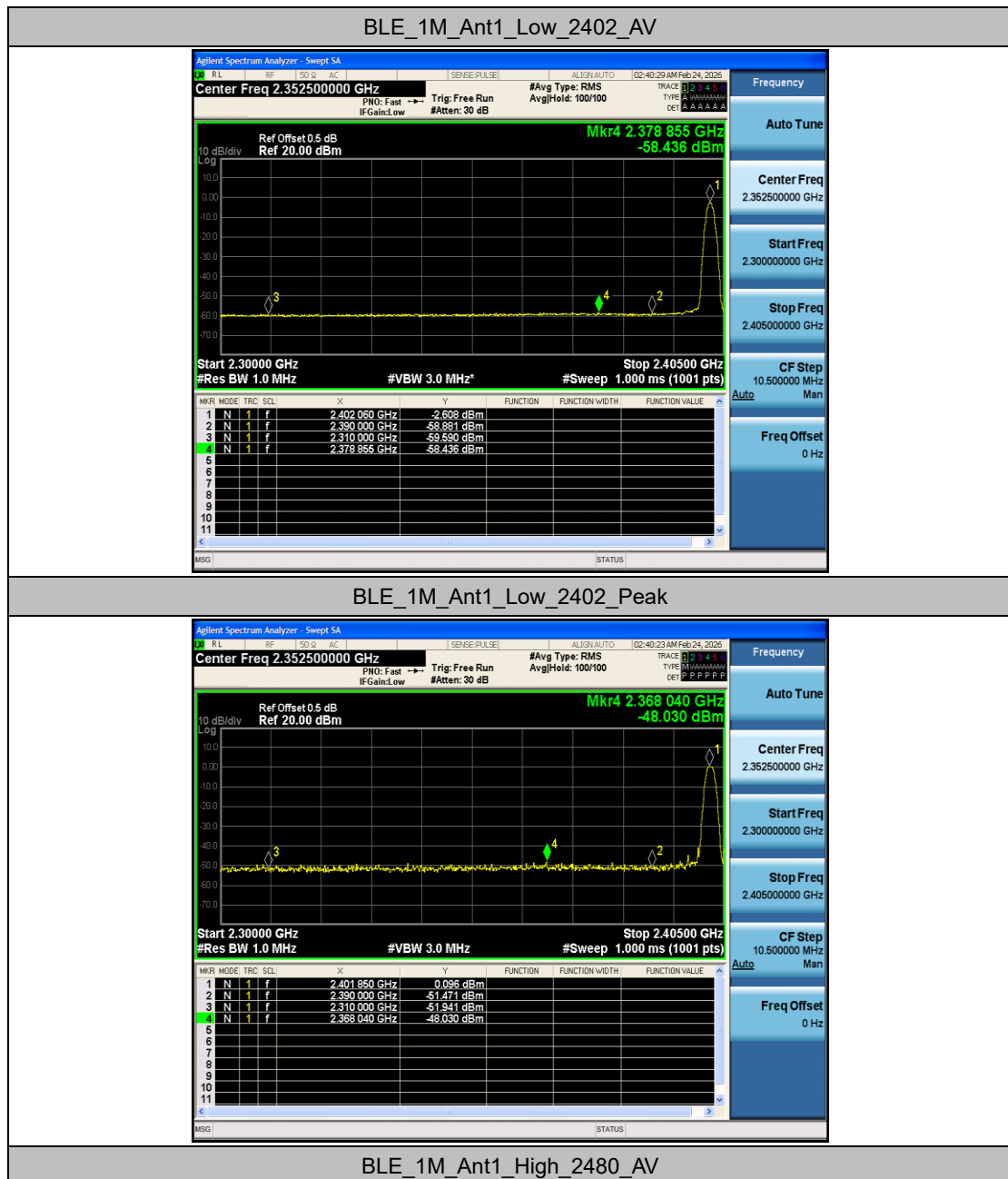
Test Result

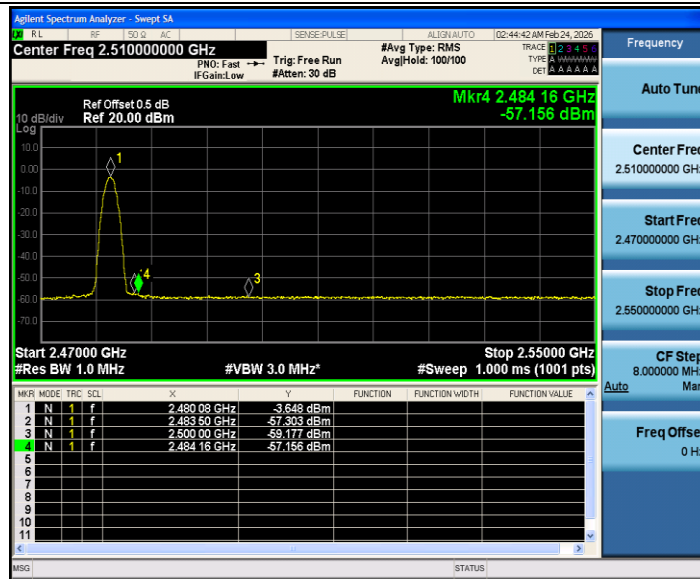
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-59.59	2.00	1.76	39.37	≤54	PASS
				AV	2378.855	-58.44	2.00	1.76	40.52	≤54	PASS
				AV	2390.000	-58.88	2.00	1.76	40.08	≤54	PASS
				Peak	2310.000	-51.94	2.00	0.00	45.26	≤74	PASS
				Peak	2368.040	-48.03	2.00	0.00	49.17	≤74	PASS
				Peak	2390.000	-51.47	2.00	0.00	45.73	≤74	PASS
		High	2480	AV	2483.500	-57.3	2.00	1.80	41.70	≤54	PASS
				AV	2484.160	-57.16	2.00	1.80	41.84	≤54	PASS
				AV	2500.000	-59.18	2.00	1.80	39.82	≤54	PASS
				Peak	2483.500	-50.88	2.00	0.00	46.32	≤74	PASS
				Peak	2484.560	-43.47	2.00	0.00	53.73	≤74	PASS
				Peak	2500.000	-50.12	2.00	0.00	47.08	≤74	PASS

Note:

1. 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

