

Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Ohsnap Key Cast
Test Model: MCA-KDK-BLK-001

Environmental Conditions

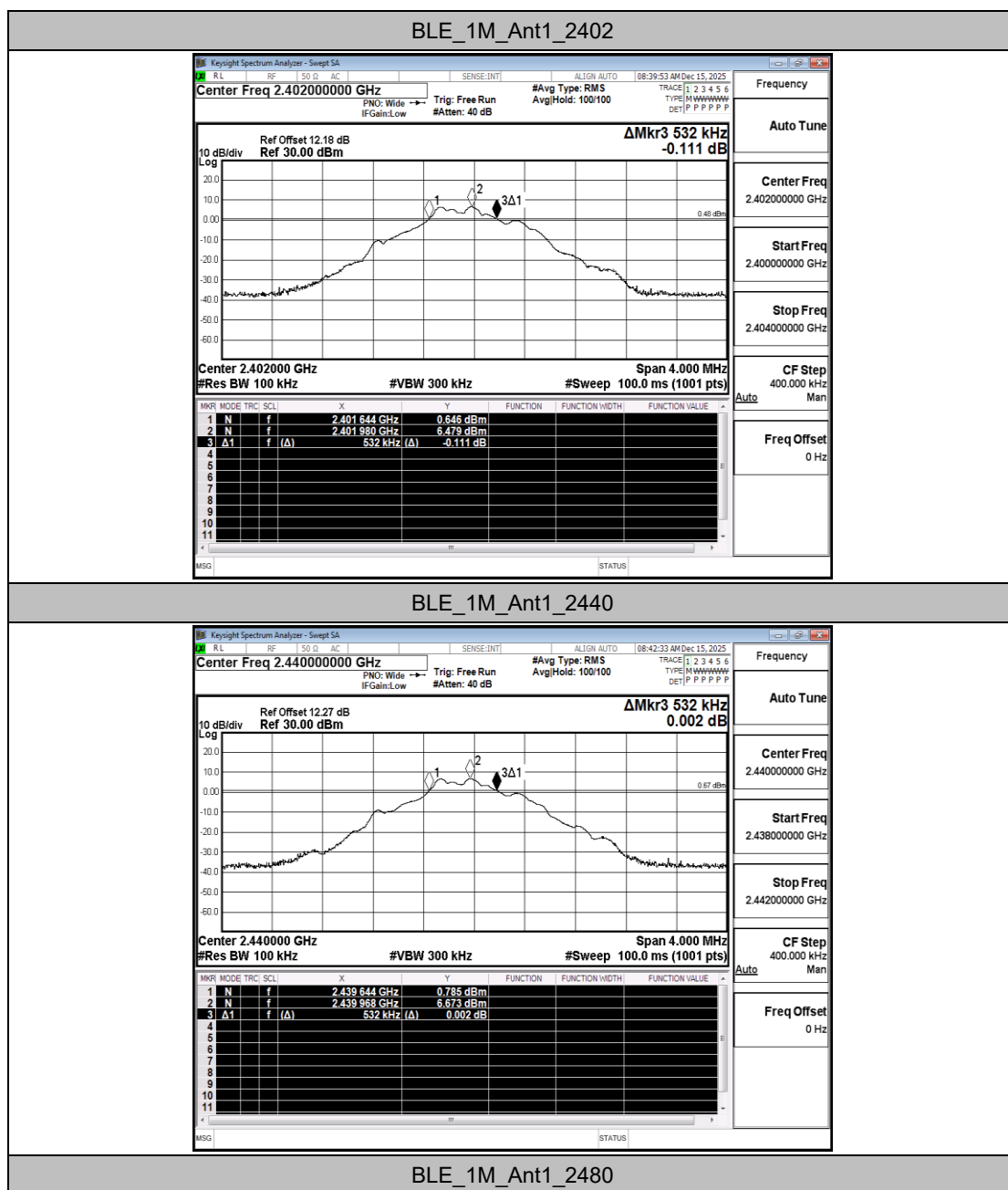
Temperature:	23.8°C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Fengliu Tang

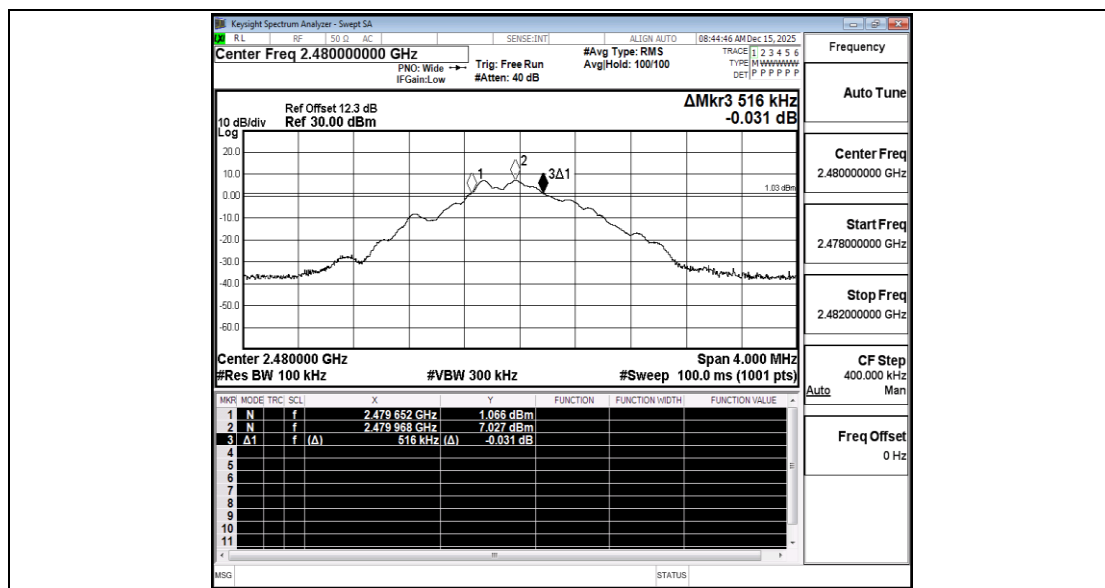
A.1 DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.532	2401.644	2402.176	0.5	PASS
		2440	0.532	2439.644	2440.176	0.5	PASS
		2480	0.516	2479.652	2480.168	0.5	PASS

Test Graphs



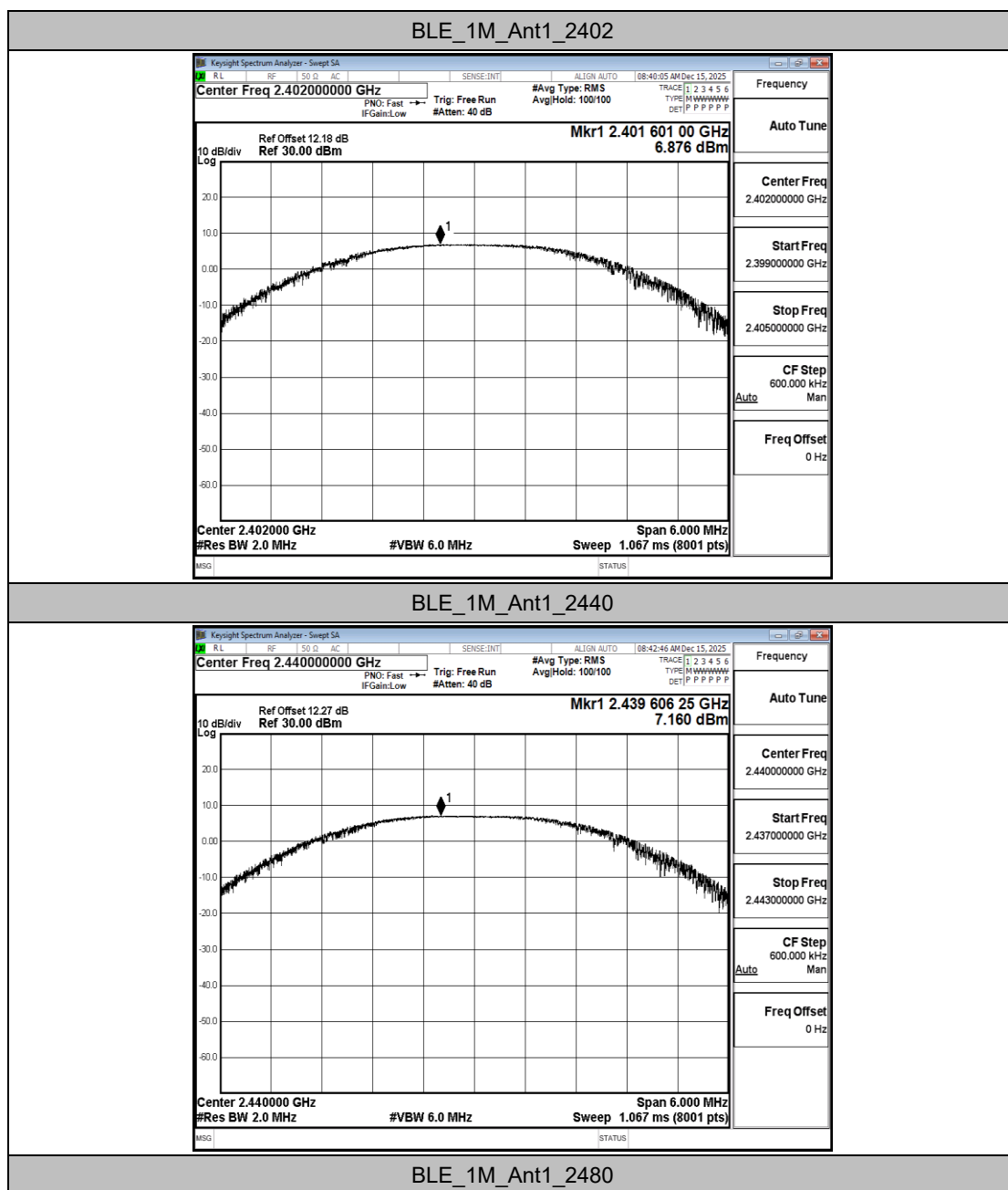


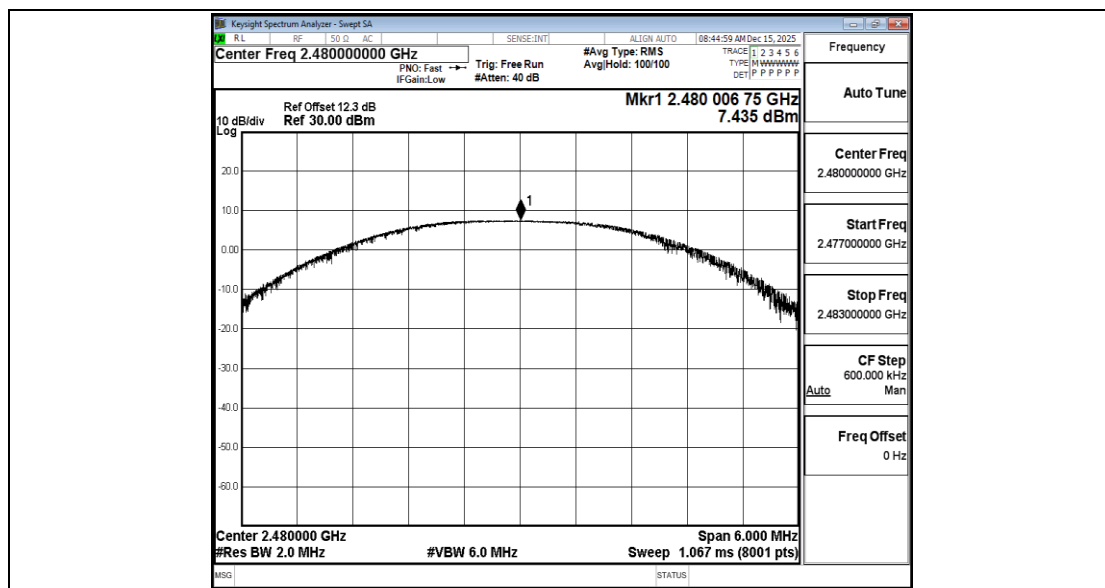
A.2 Maximum Peak Conducted Output Power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.88	≤30	PASS
		2440	7.16	≤30	PASS
		2480	7.44	≤30	PASS

Test Graphs Peak



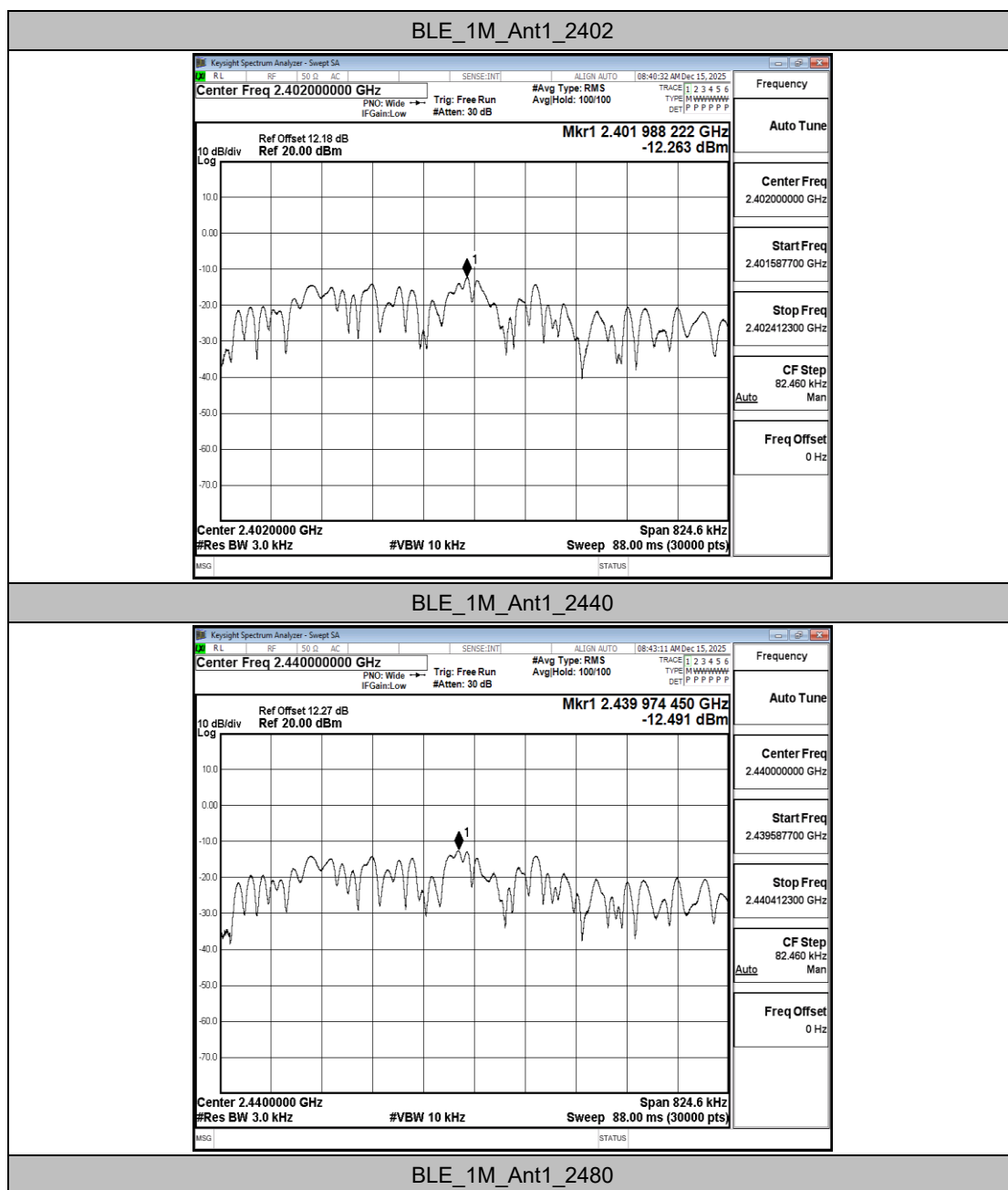


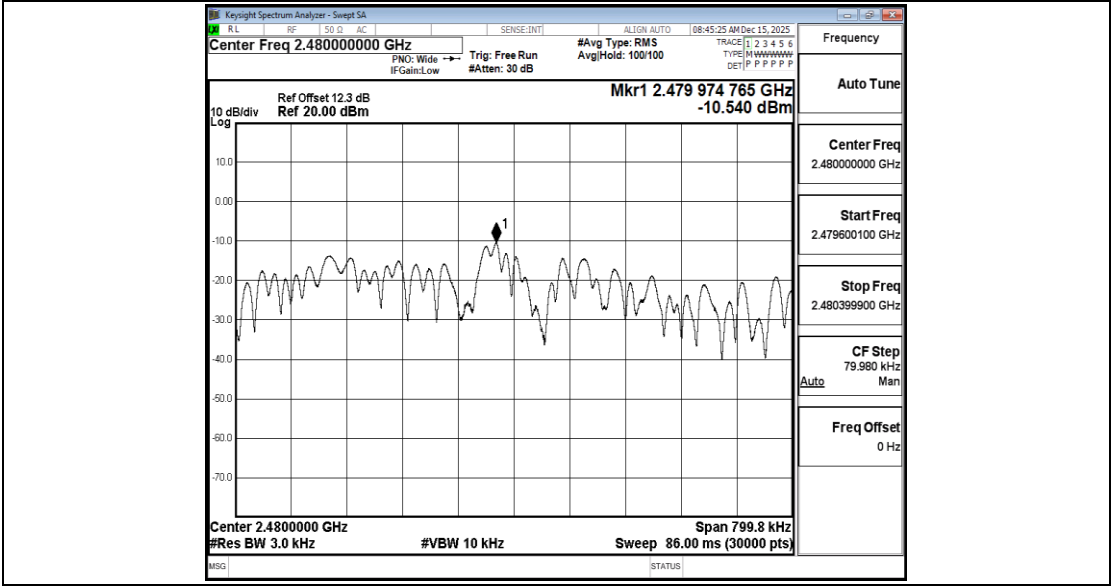
A.3 Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-12.26	≤8.00	PASS
		2440	-12.49	≤8.00	PASS
		2480	-10.54	≤8.00	PASS

Test Graphs



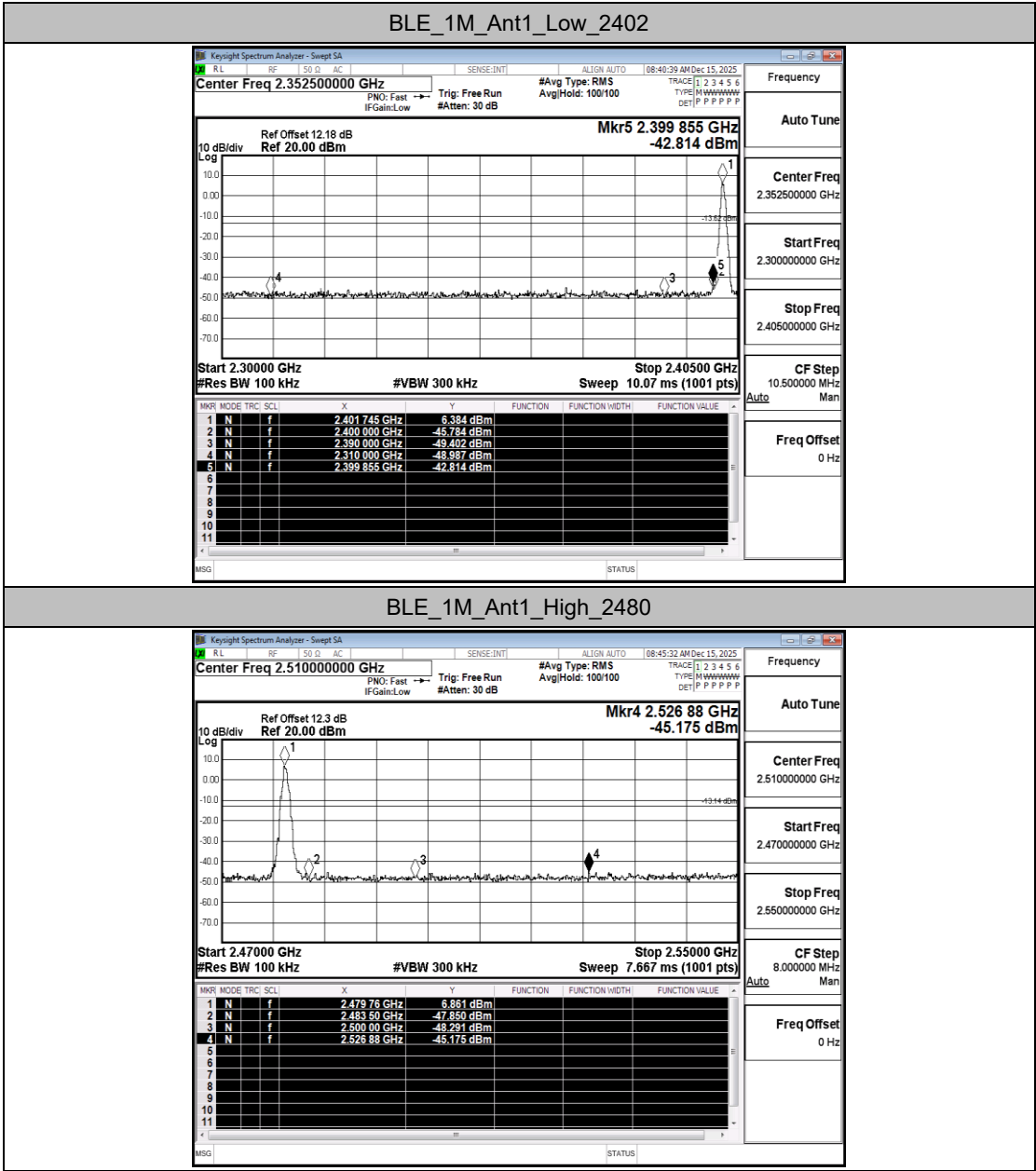


A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.38	-42.81	≤-13.62	PASS
		High	2480	6.86	-45.18	≤-13.14	PASS

Test Graphs

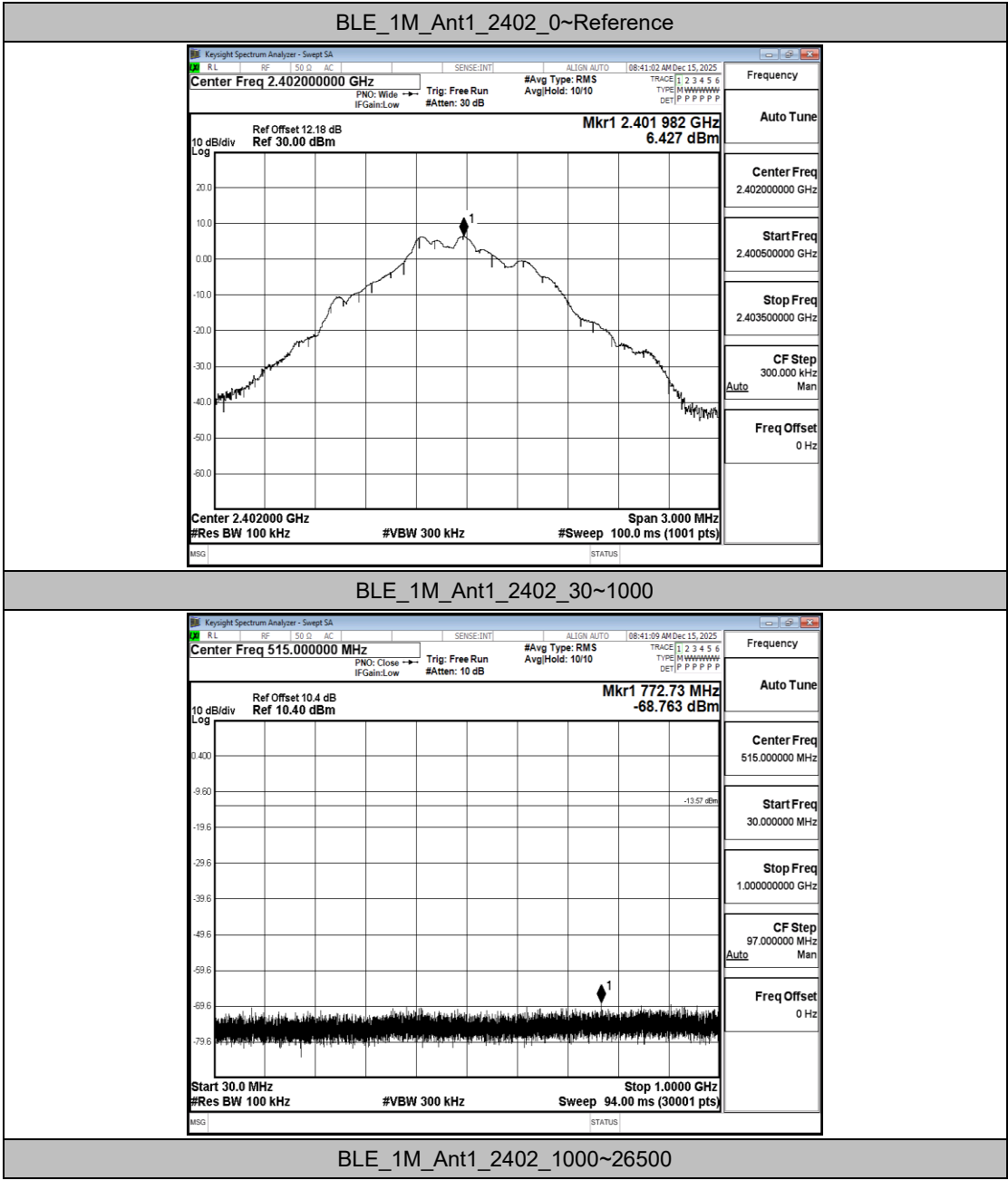


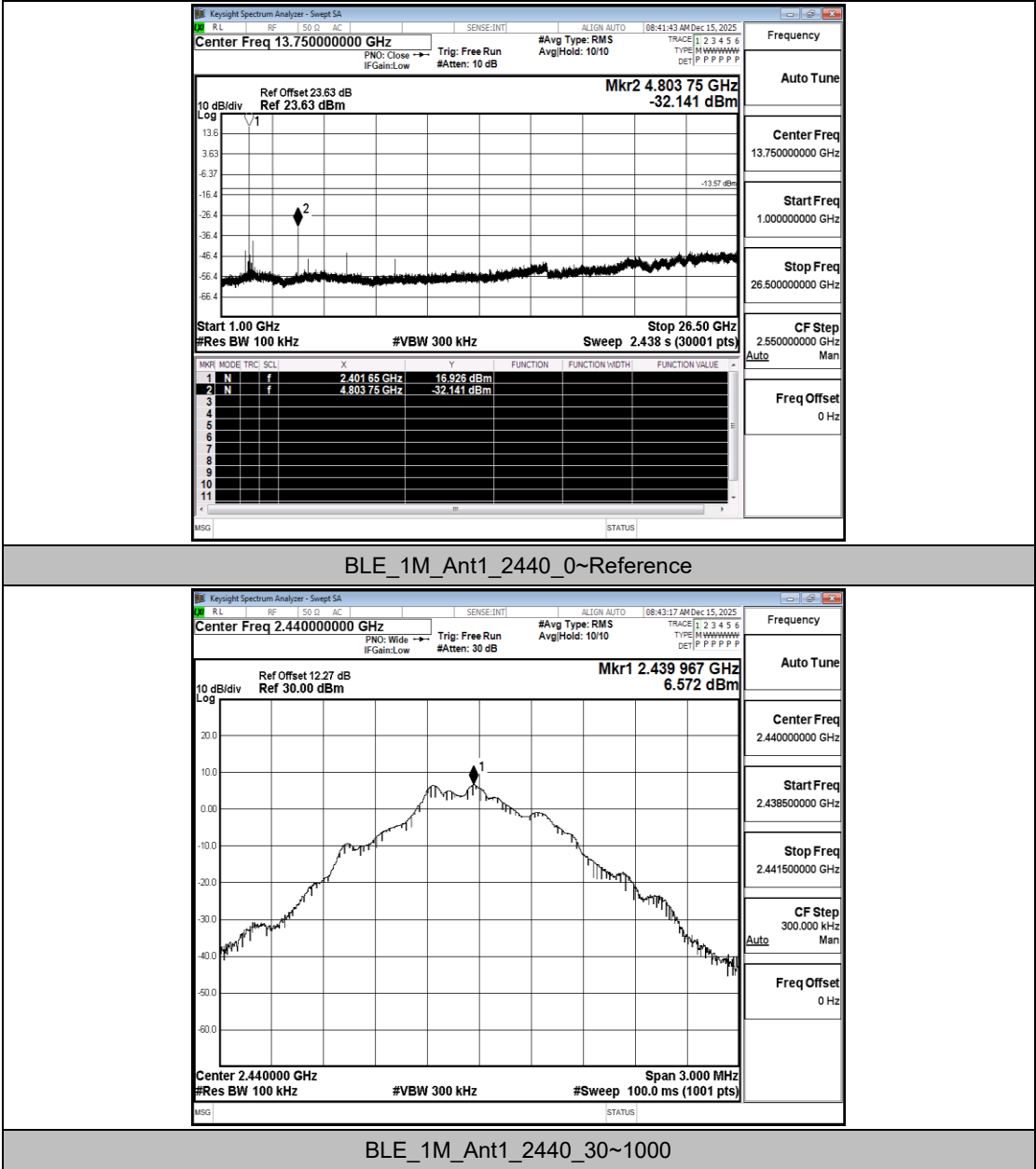
A.5 Conducted Spurious Emission

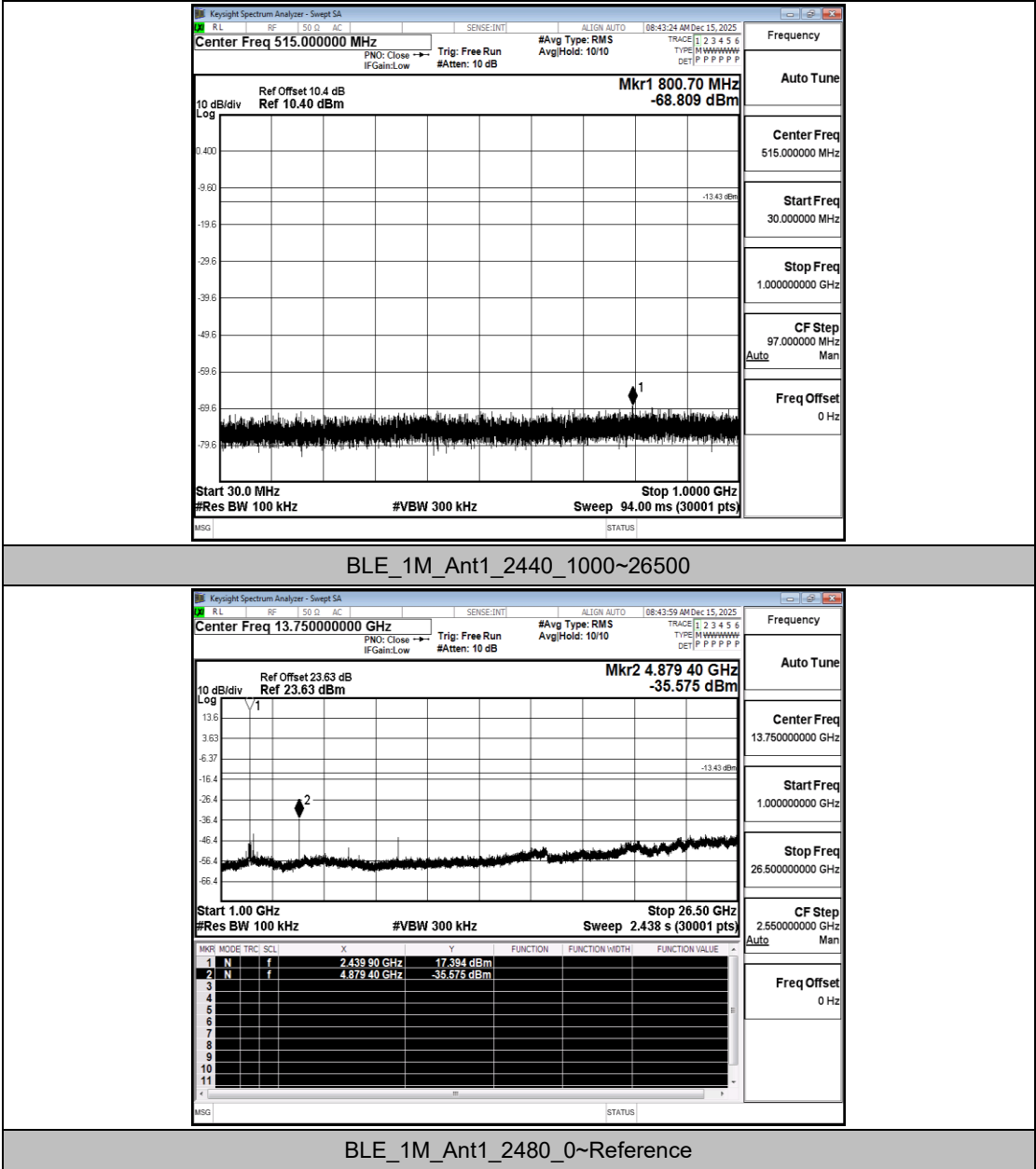
Test Result

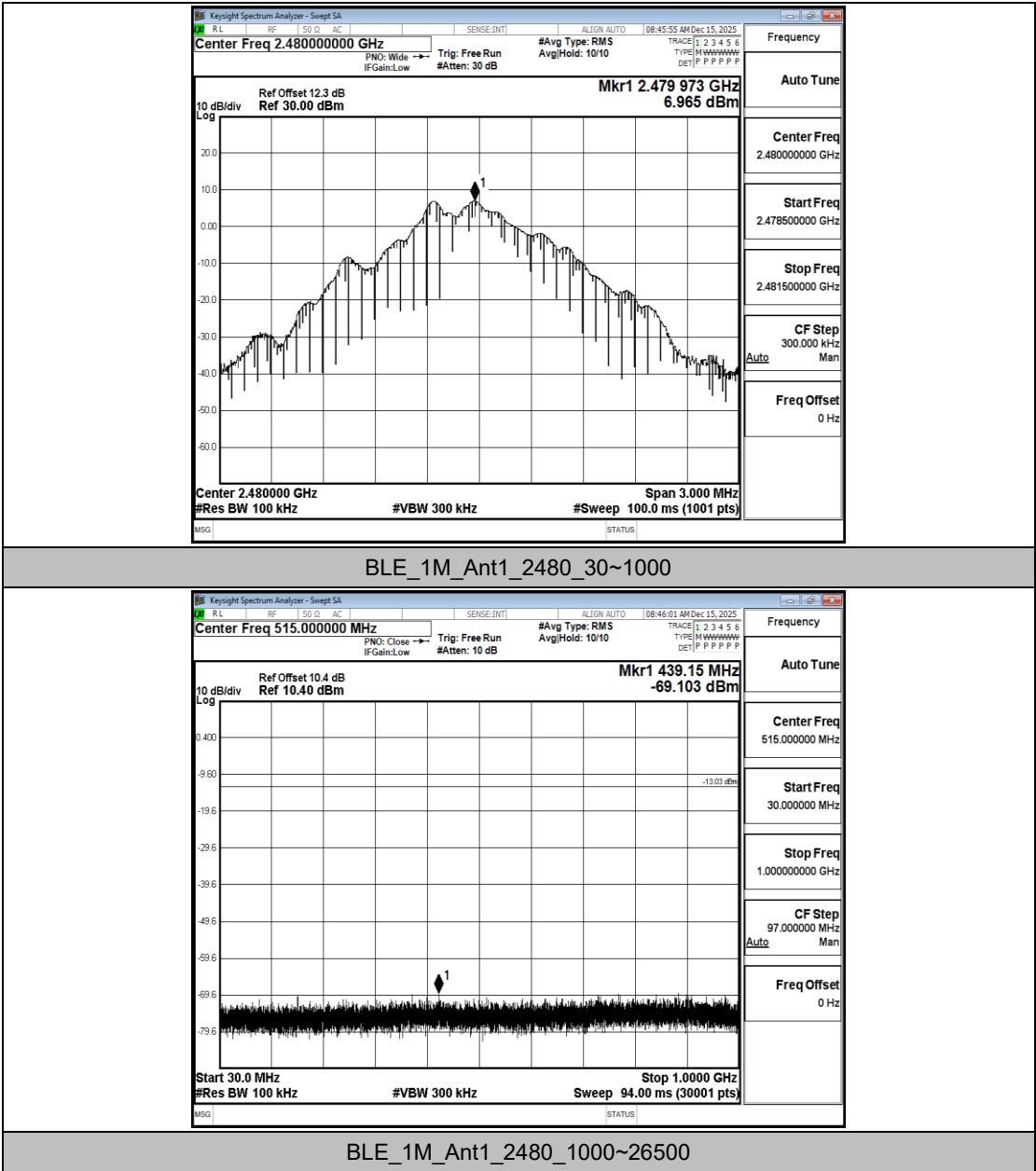
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	6.43	6.43	---	PASS
			30~1000	6.43	-68.76	≤-13.57	PASS
			1000~26500	6.43	-32.14	≤-13.57	PASS
		2440	Reference	6.57	6.57	---	PASS
			30~1000	6.57	-68.81	≤-13.43	PASS
			1000~26500	6.57	-35.58	≤-13.43	PASS
		2480	Reference	6.97	6.97	---	PASS
			30~1000	6.97	-69.1	≤-13.03	PASS
			1000~26500	6.97	-31.24	≤-13.03	PASS

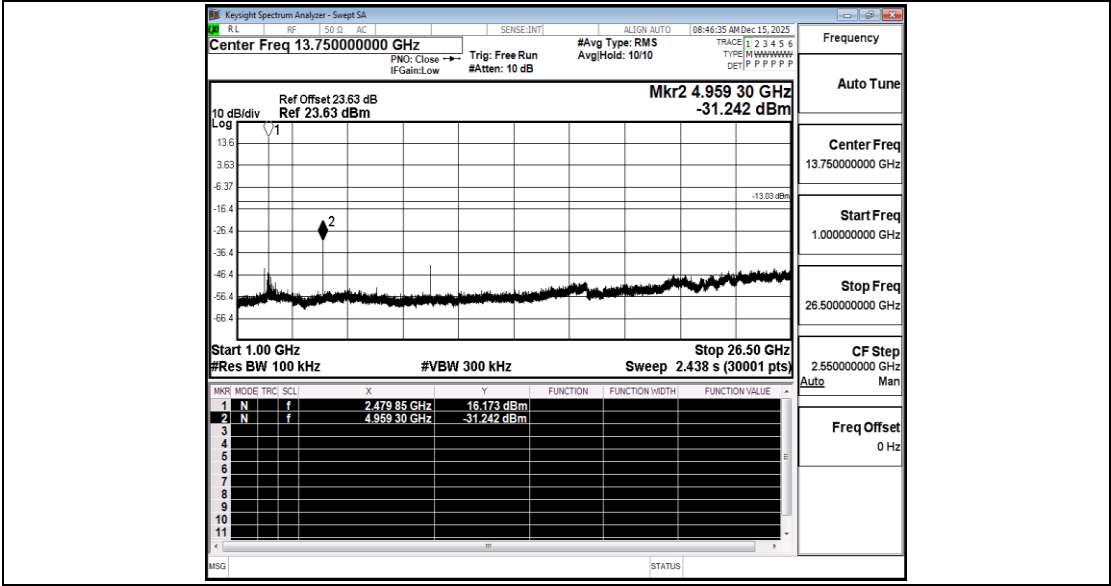
Test Graphs









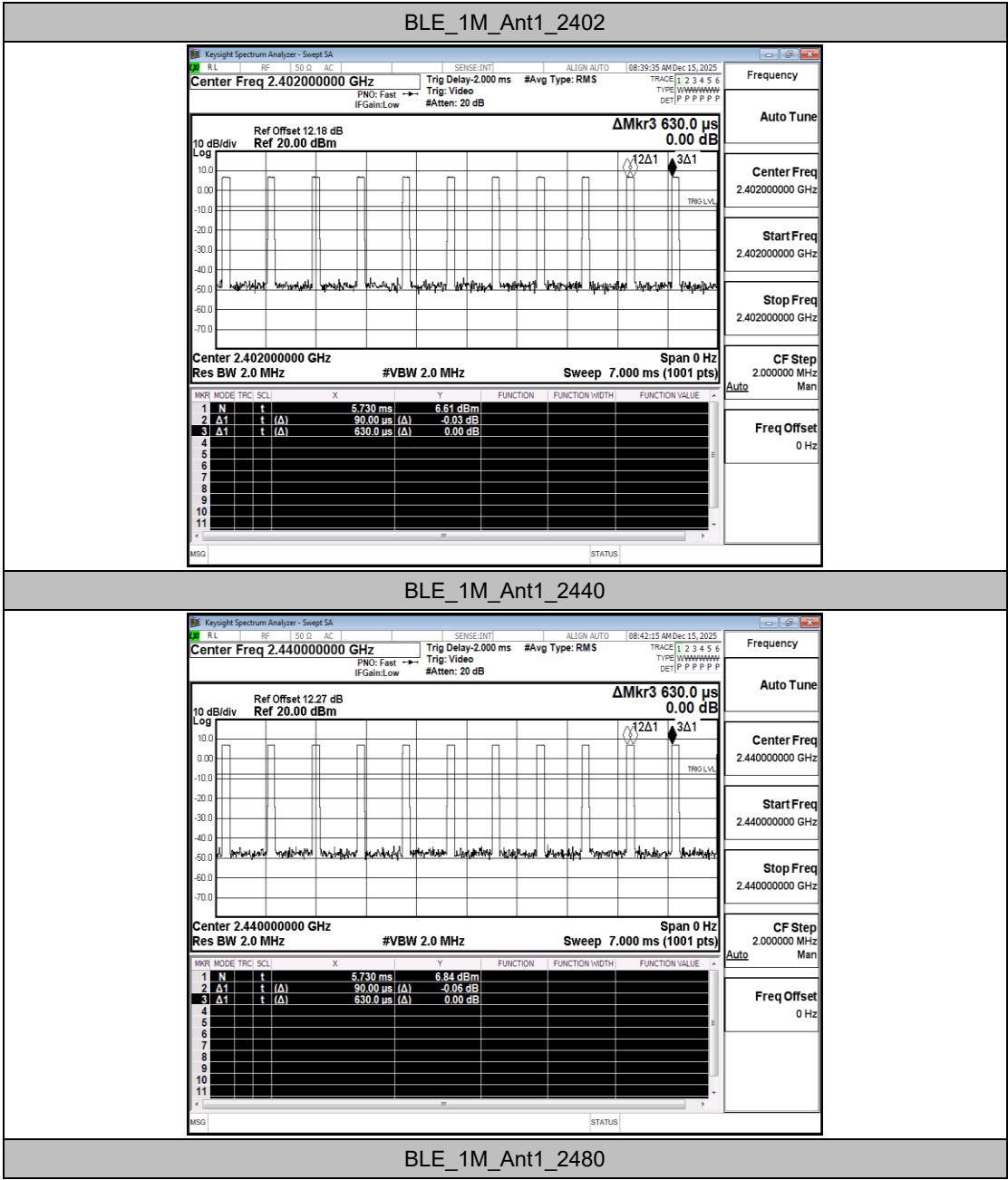


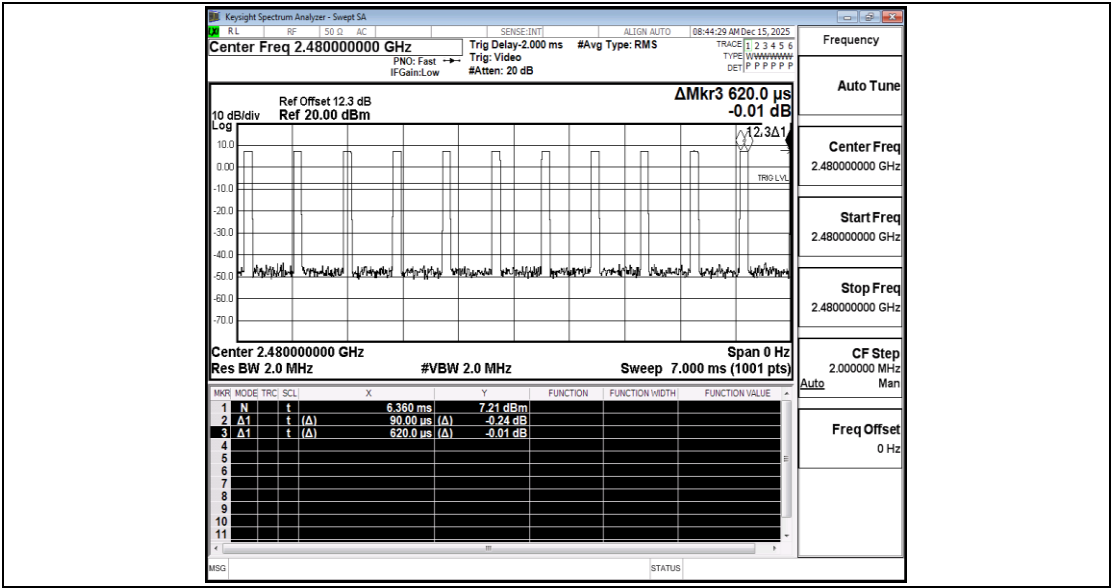
A.6 Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.09	0.63	0.1429	14.29	8.45	---	---
		2440	0.09	0.63	0.1429	14.29	8.45	---	---
		2480	0.09	0.62	0.1452	14.52	8.38	---	---

Test Graphs





A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.26	≤-51.65	2.00	8.45	48.39	≤54	PASS
				AV	2353.865	-56.39	≤-51.65	2.00	8.45	49.26	≤54	PASS
				AV	2390.000	-56.77	≤-51.65	2.00	8.45	48.88	≤54	PASS
				Peak	2310.000	-48.85	≤-23.20	2.00	0.00	48.35	≤74	PASS
				Peak	2383.055	-45.64	≤-23.20	2.00	0.00	51.56	≤74	PASS
				Peak	2390.000	-47.9	≤-23.20	2.00	0.00	49.30	≤74	PASS
		High	2480	AV	2483.500	-54.9	≤-51.58	2.00	8.38	50.68	≤54	PASS
				AV	2483.520	-54.9	≤-51.58	2.00	8.38	50.68	≤54	PASS
				AV	2500.000	-56.49	≤-51.58	2.00	8.38	49.09	≤54	PASS
				Peak	2483.500	-40.69	≤-23.20	2.00	0.00	56.51	≤74	PASS
				Peak	2483.600	-37.76	≤-23.20	2.00	0.00	59.44	≤74	PASS
				Peak	2500.000	-47.25	≤-23.20	2.00	0.00	49.95	≤74	PASS

Note:

1. The Antenna Gain is compensated in the graph.
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

