

Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Aroma Diffuser

Test Model: ECOSCENT V.2 ULTRA

Environmental Conditions

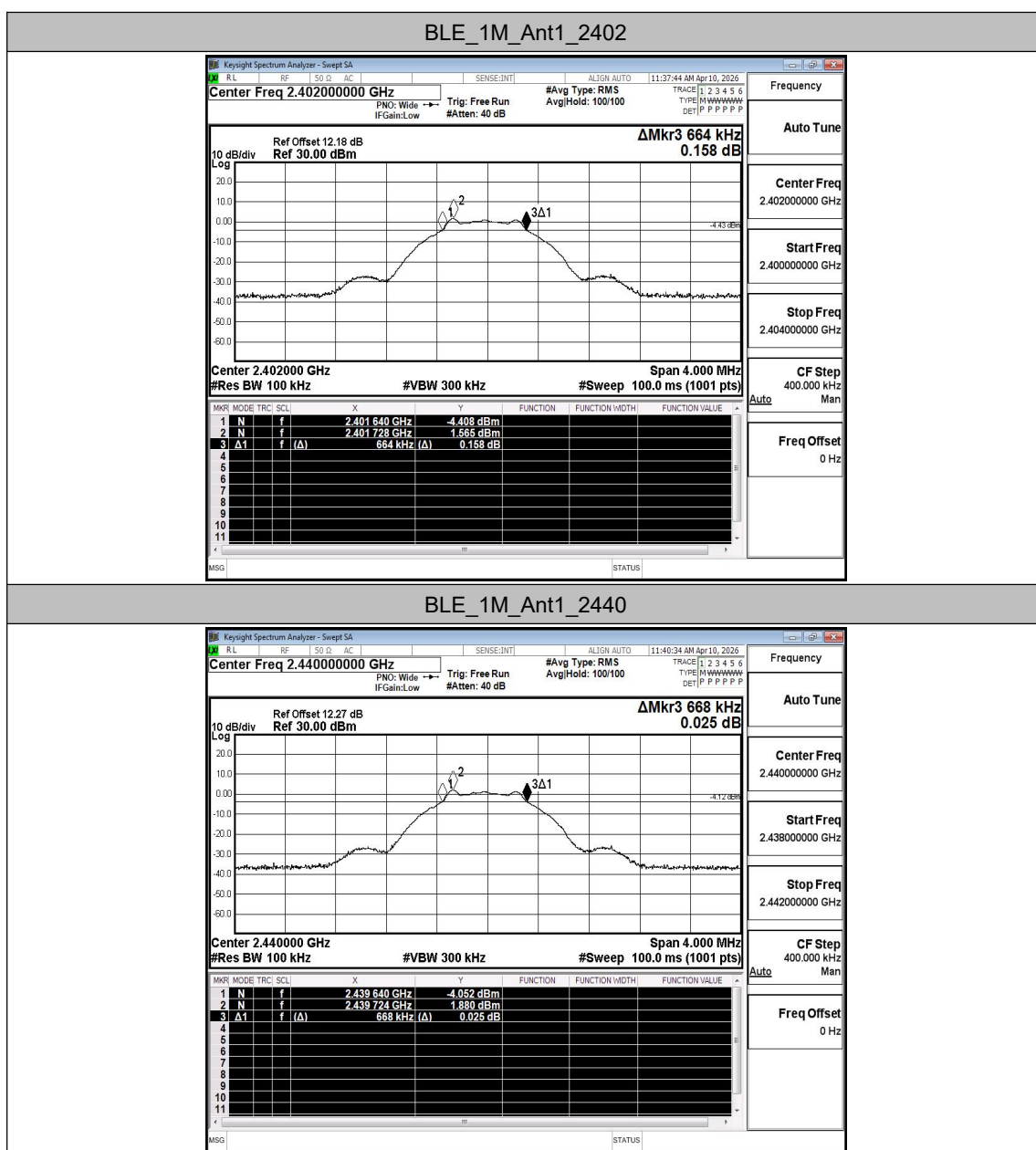
Temperature:	24.6°C
Relative Humidity:	54.5%
ATM Pressure:	100.0 kPa
Test Engineer:	zhao xing hai
Supervised by:	Fengliu Tang

A.1 DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.640	2402.304	0.5	PASS
		2440	0.668	2439.640	2440.308	0.5	PASS
		2480	0.668	2479.636	2480.304	0.5	PASS

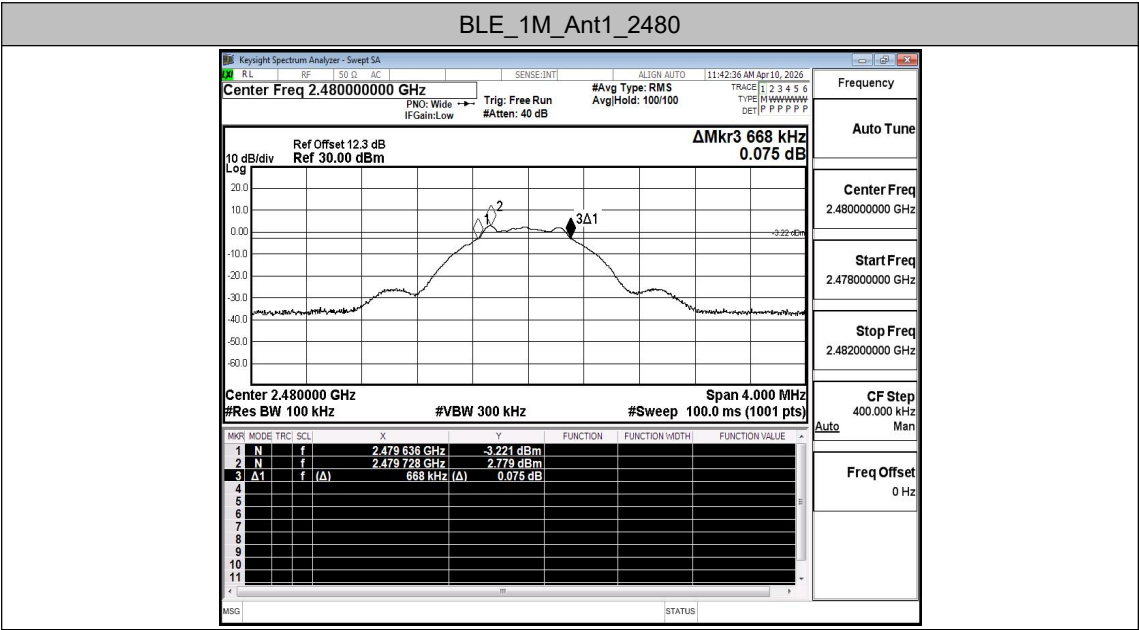
Test Graphs



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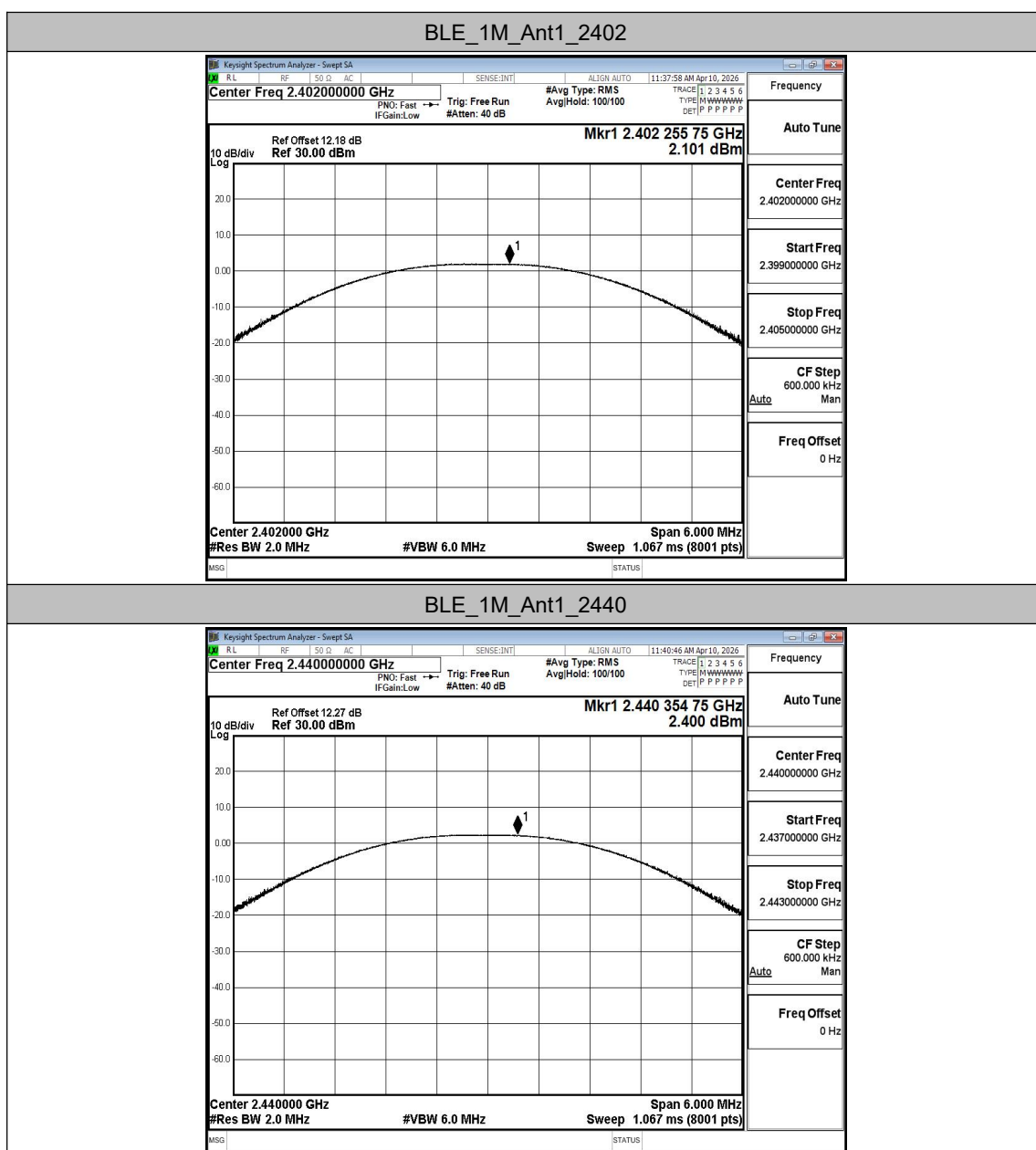


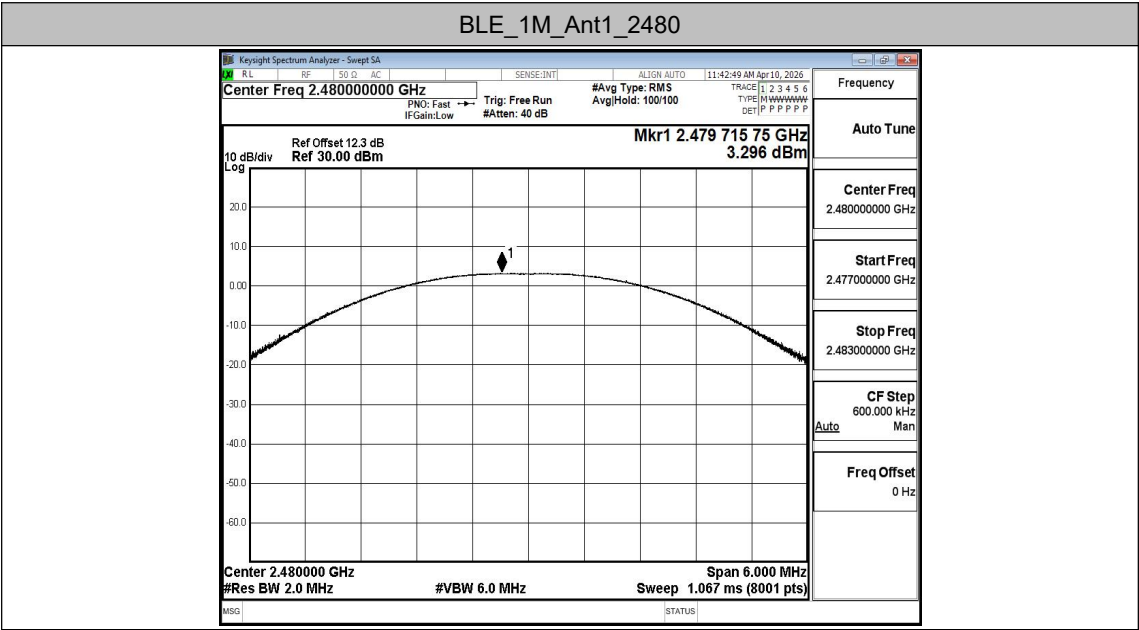
A.2 Maximum Peak conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.10	≤30	PASS
		2440	2.40	≤30	PASS
		2480	3.30	≤30	PASS

Test Graphs Peak



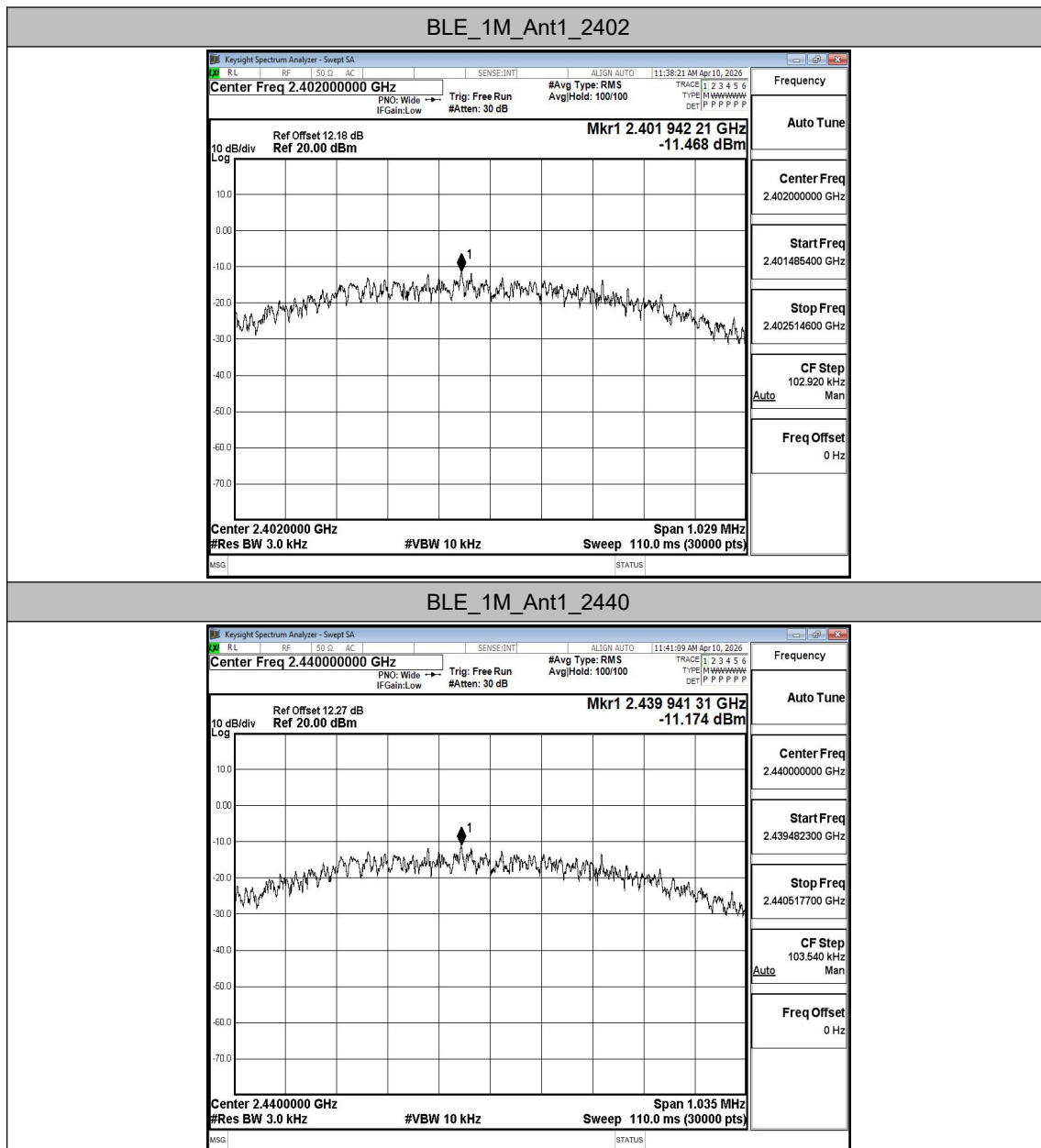


A.3 Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.47	≤8.00	PASS
		2440	-11.17	≤8.00	PASS
		2480	-10.33	≤8.00	PASS

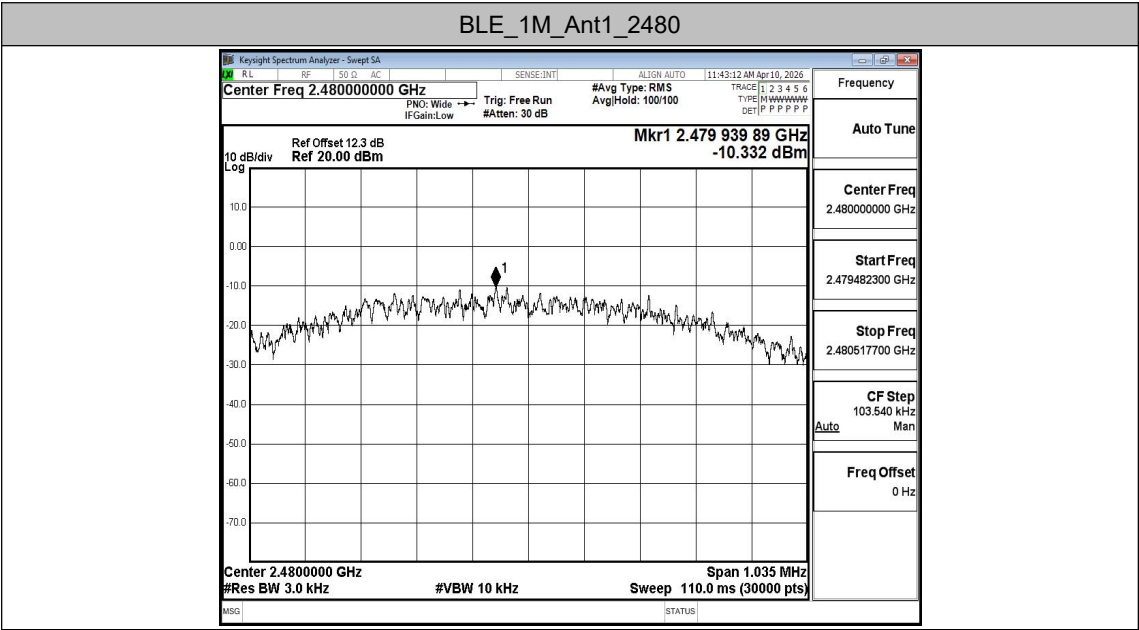
Test Graphs



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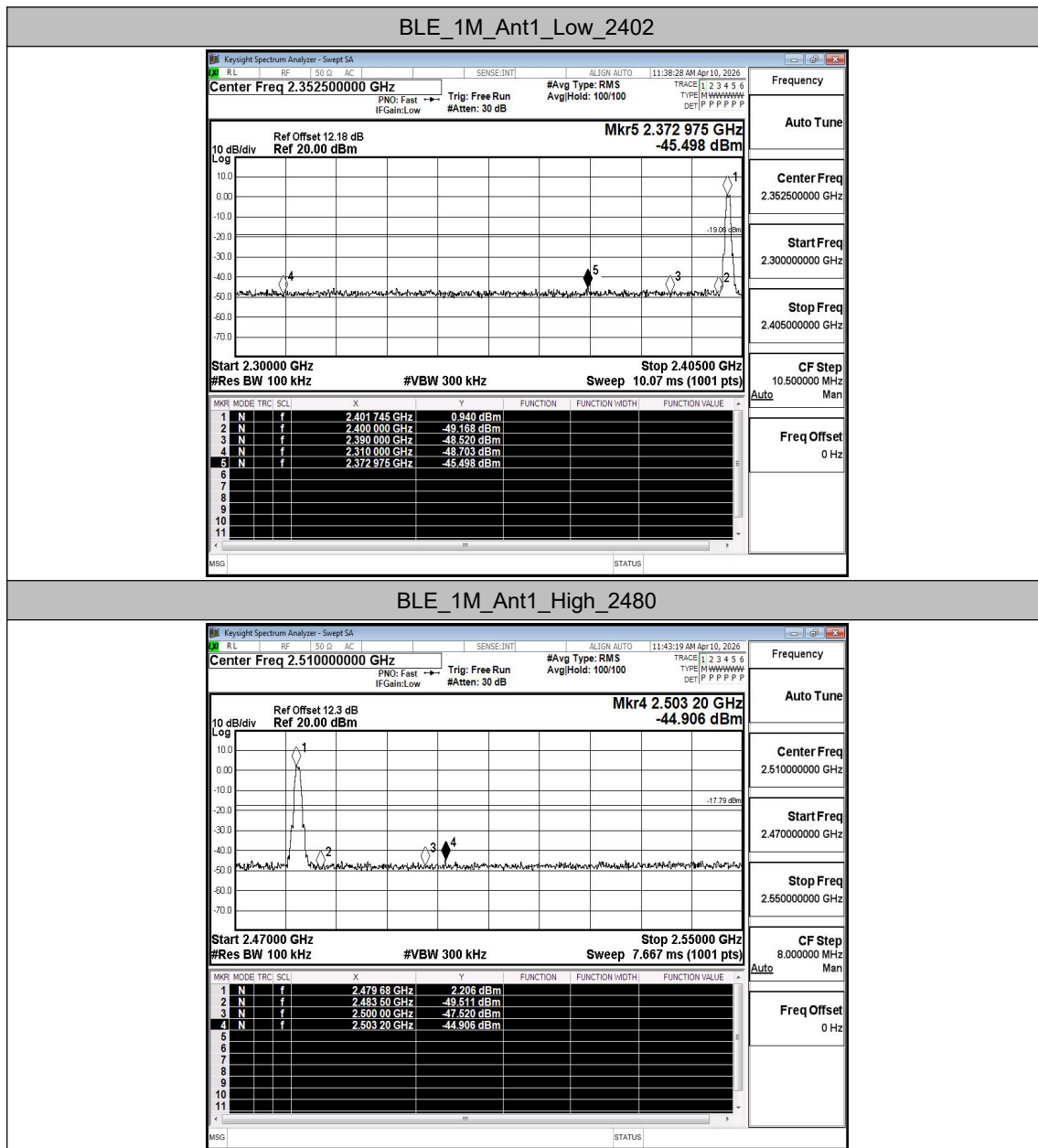


A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.94	-45.5	≤-19.06	PASS
		High	2480	2.21	-44.91	≤-17.79	PASS

Test Graphs

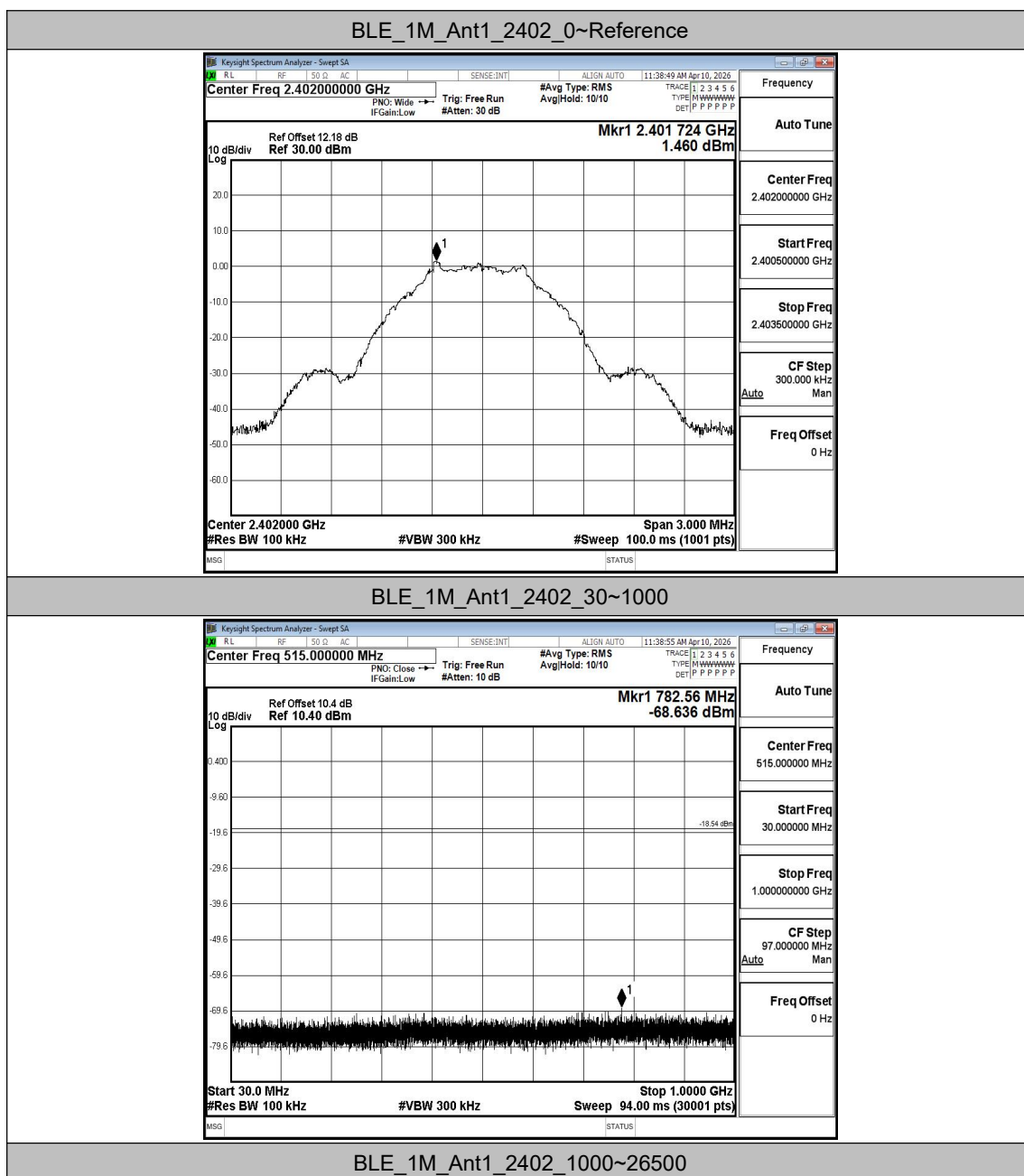


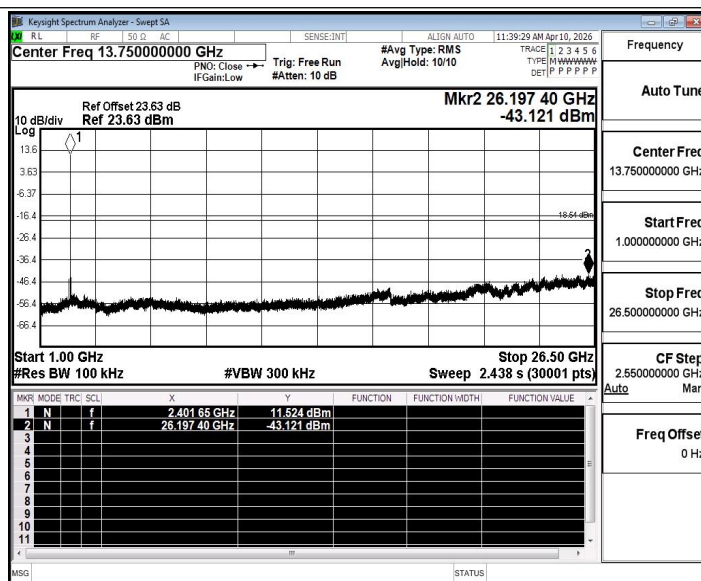
A.5 Conducted Spurious Emission

Test Result

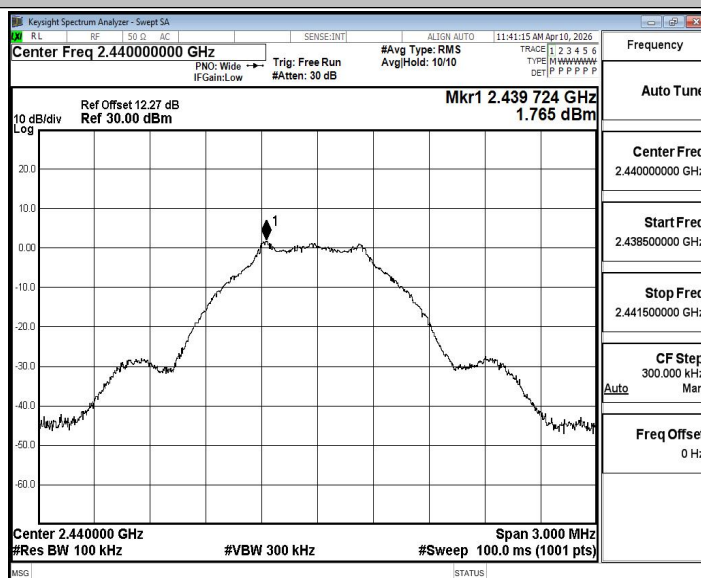
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	1.46	1.46	---	PASS
			30~1000	1.46	-68.64	≤-18.54	PASS
			1000~26500	1.46	-43.12	≤-18.54	PASS
		2440	Reference	1.77	1.77	---	PASS
			30~1000	1.77	-68.11	≤-18.23	PASS
			1000~26500	1.77	-43.16	≤-18.23	PASS
		2480	Reference	2.62	2.62	---	PASS
			30~1000	2.62	-69.13	≤-17.38	PASS
			1000~26500	2.62	-42.89	≤-17.38	PASS

Test Graphs

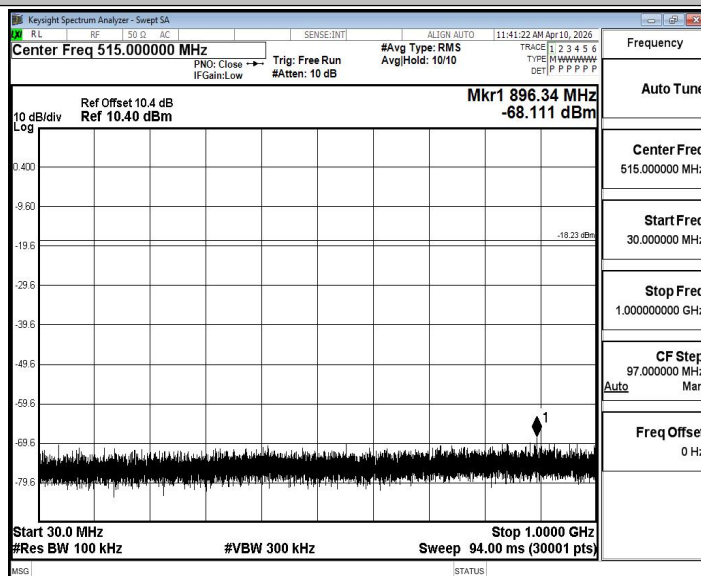




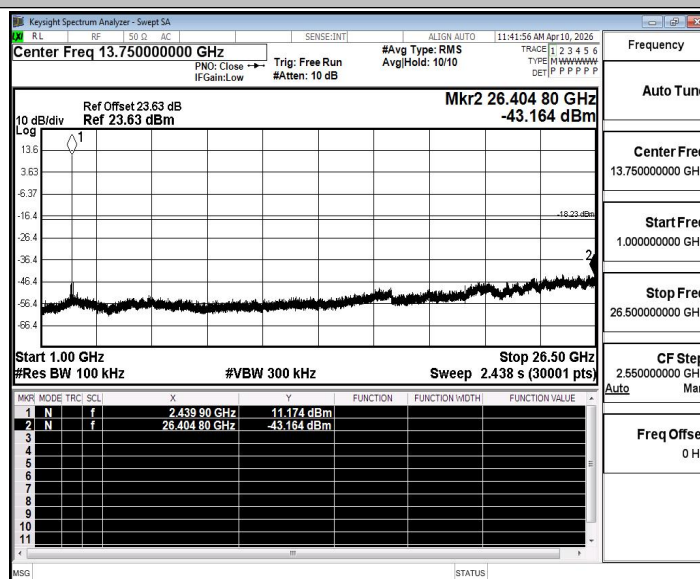
BLE_1M_Ant1_2440_0~Reference



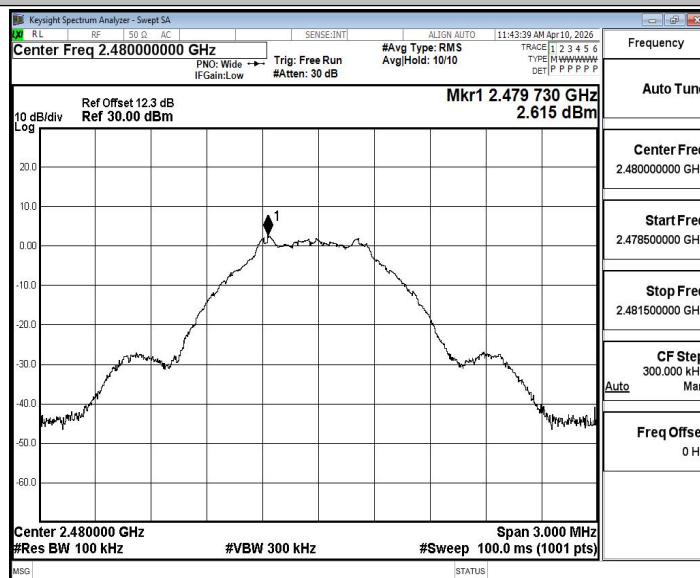
BLE_1M_Ant1_2440_30~1000



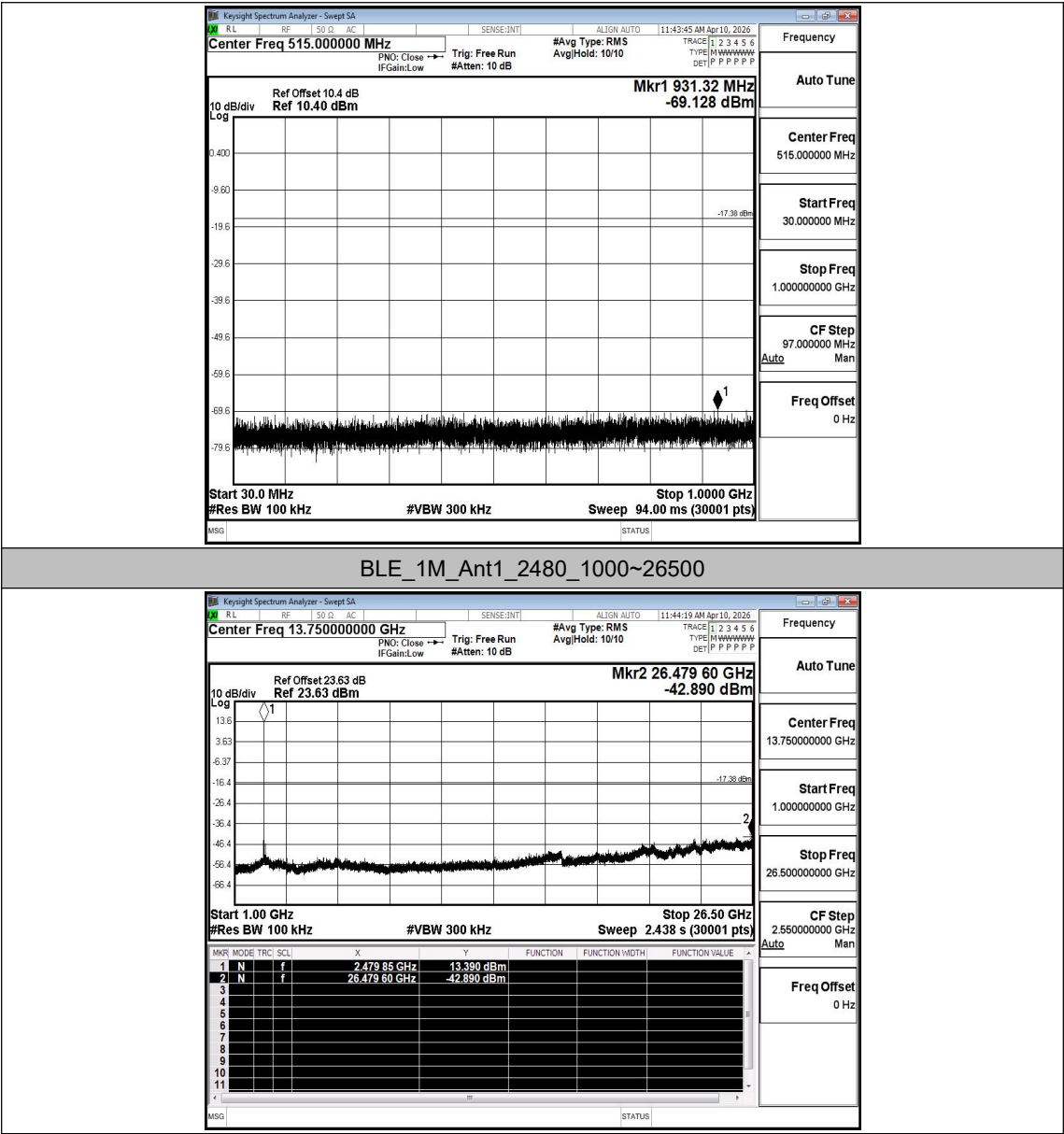
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000

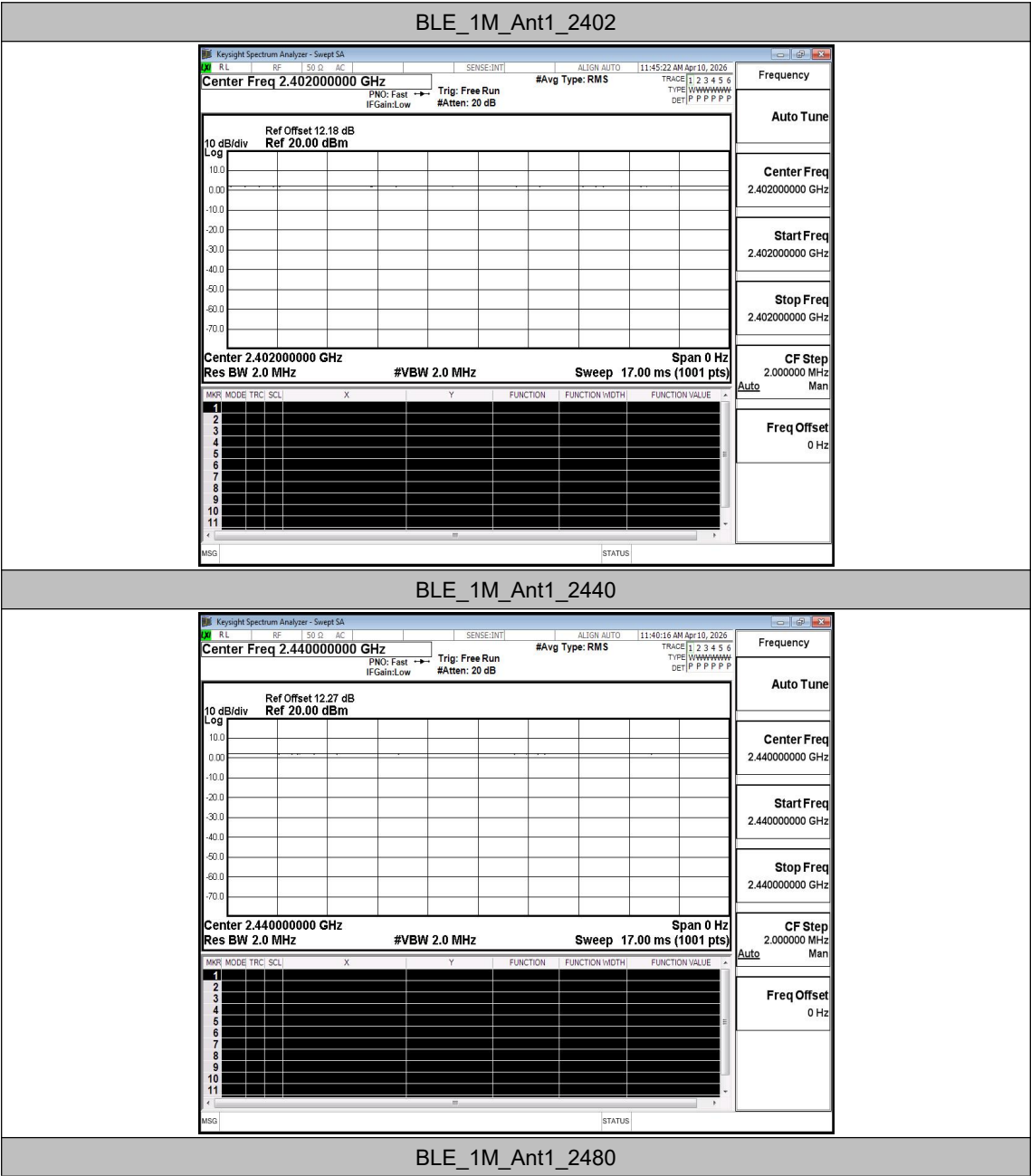


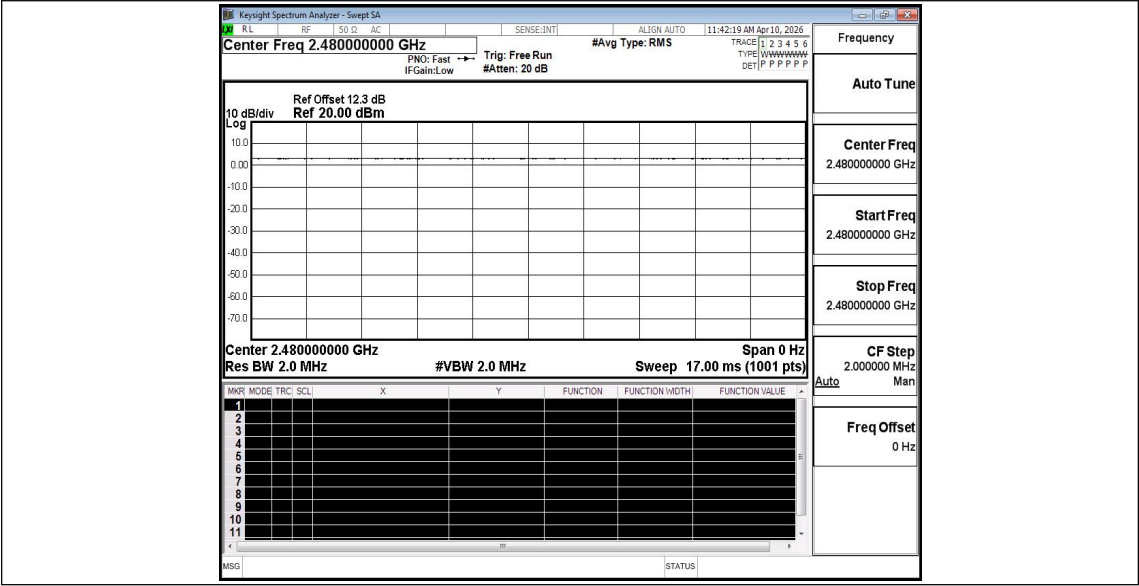
A.6 Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	17.00	17.00	1.0000	100.00	0.00	---	---
		2440	17.00	17.00	1.0000	100.00	0.00	---	---
		2480	17.00	17.00	1.0000	100.00	0.00	---	---

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	-57.74	-44.44	3.43	0.00	40.70	≤54	PASS
				AV	2353.655	-52.52	-44.44	3.43	0.00	45.92	≤54	PASS
				AV	2390.000	-57.53	-44.44	3.43	0.00	40.91	≤54	PASS
				Peak	2310.000	-52.34	-24.44	3.43	0.00	46.10	≤74	PASS
				Peak	2346.305	-46.45	-24.44	3.43	0.00	51.99	≤74	PASS
				Peak	2390.000	-49.52	-24.44	3.43	0.00	48.92	≤74	PASS
		High	2480	AV	2483.500	-56.93	-44.44	3.43	0.00	41.51	≤54	PASS
				AV	2485.440	-53.79	-44.44	3.43	0.00	44.65	≤54	PASS
				AV	2500.000	-56.95	-44.44	3.43	0.00	41.49	≤54	PASS
				Peak	2483.500	-49.09	-24.44	3.43	0.00	49.35	≤74	PASS
				Peak	2485.840	-46.04	-24.44	3.43	0.00	52.40	≤74	PASS
				Peak	2500.000	-50.9	-24.44	3.43	0.00	47.54	≤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

