

Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: VIEFONG SOS Power Bank
Test Model: VF12Z

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

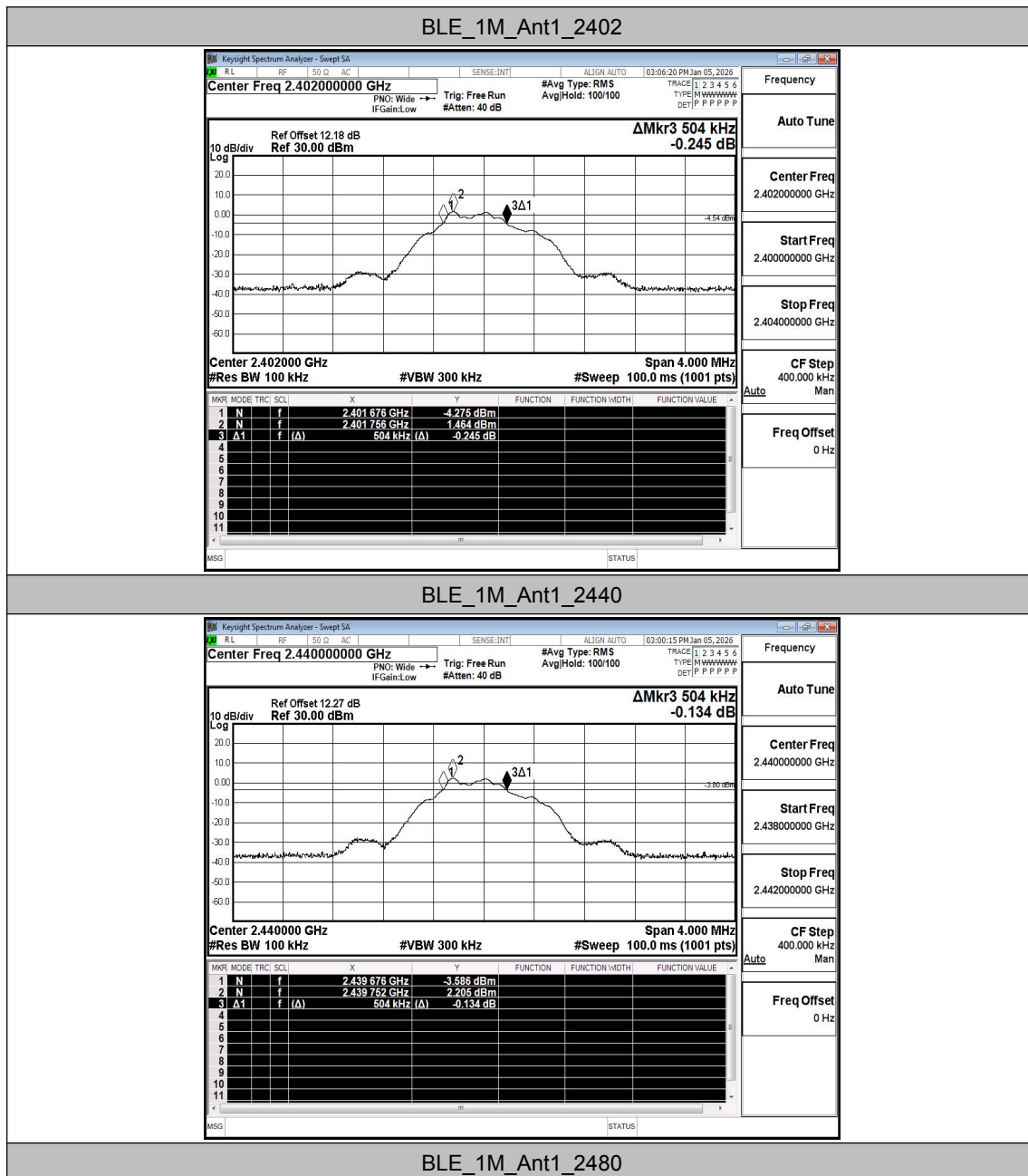
A.1 DTS Bandwidth

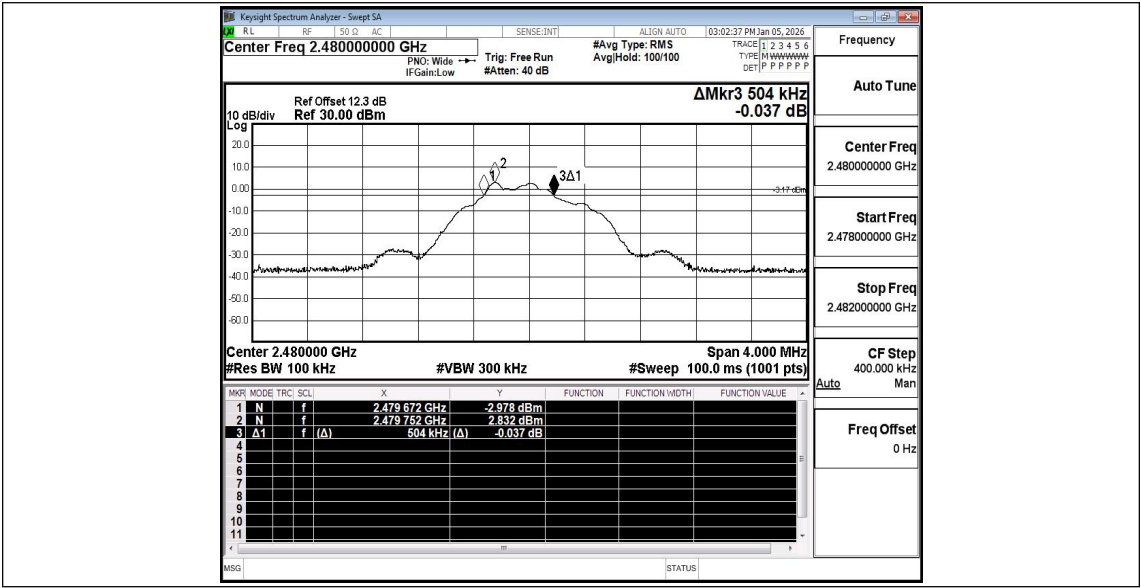
Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.504	2401.676	2402.180	0.5	PASS
		2440	0.504	2439.676	2440.180	0.5	PASS
		2480	0.504	2479.672	2480.176	0.5	PASS

Note :offset=System attenuation +cabal loss

Test Graphs





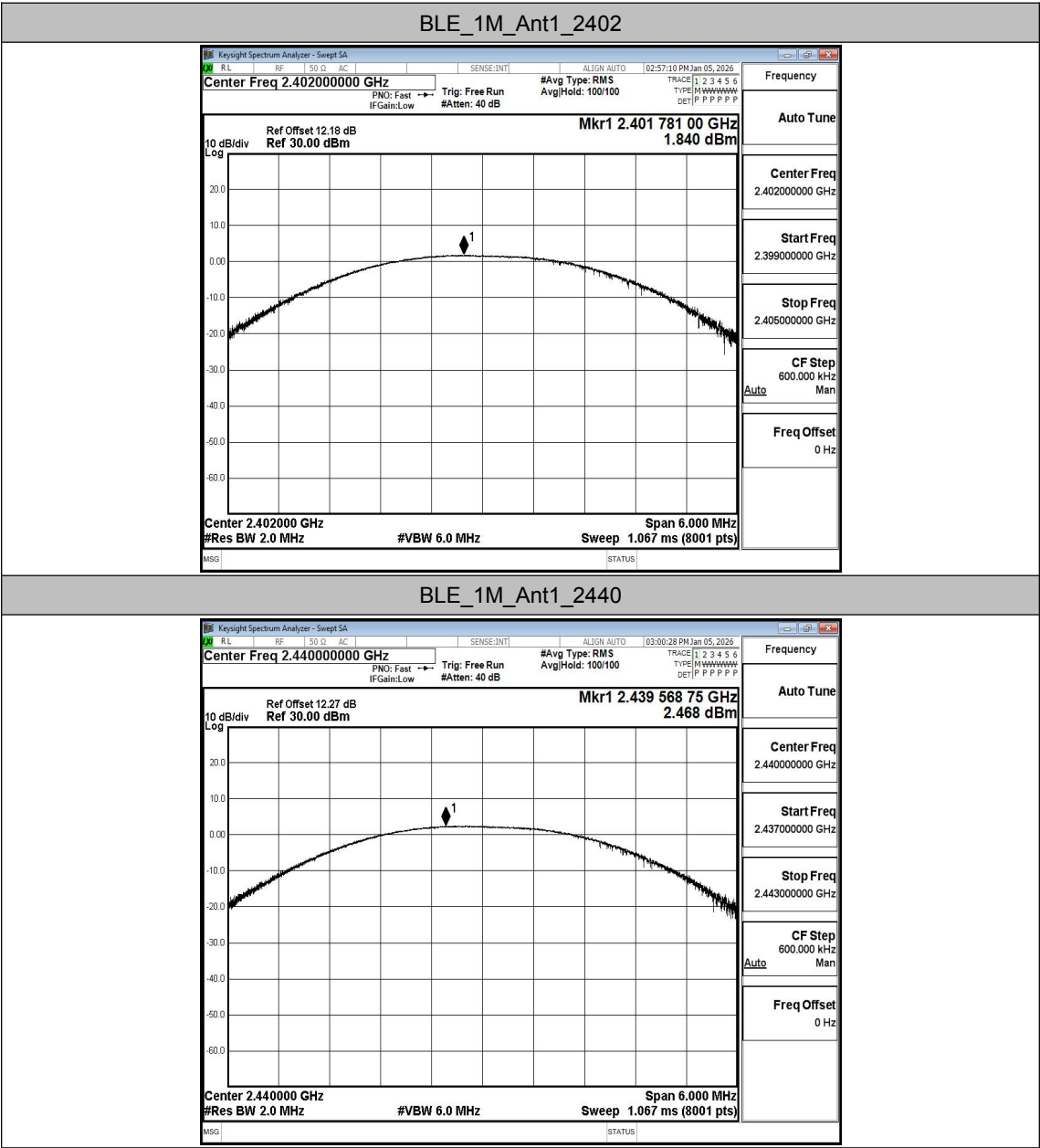
A.2 Maximum Peak conducted output power

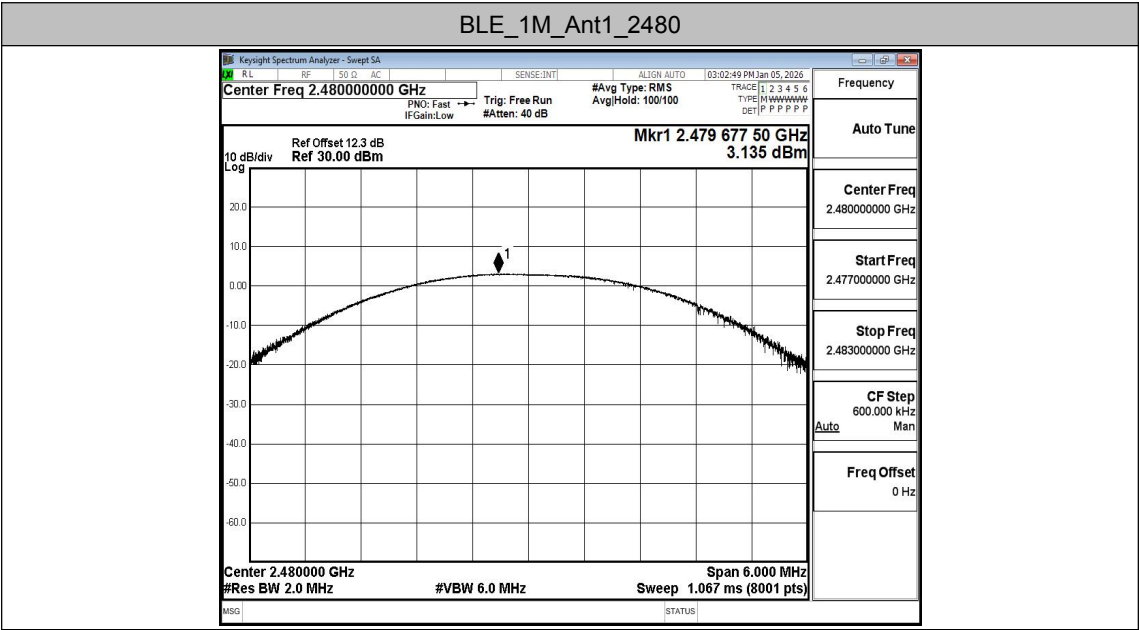
Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.84	≤30	PASS
		2440	2.47	≤30	PASS
		2480	3.14	≤30	PASS

Note :offset=System attenuation +cabal loss

Test Graphs Peak





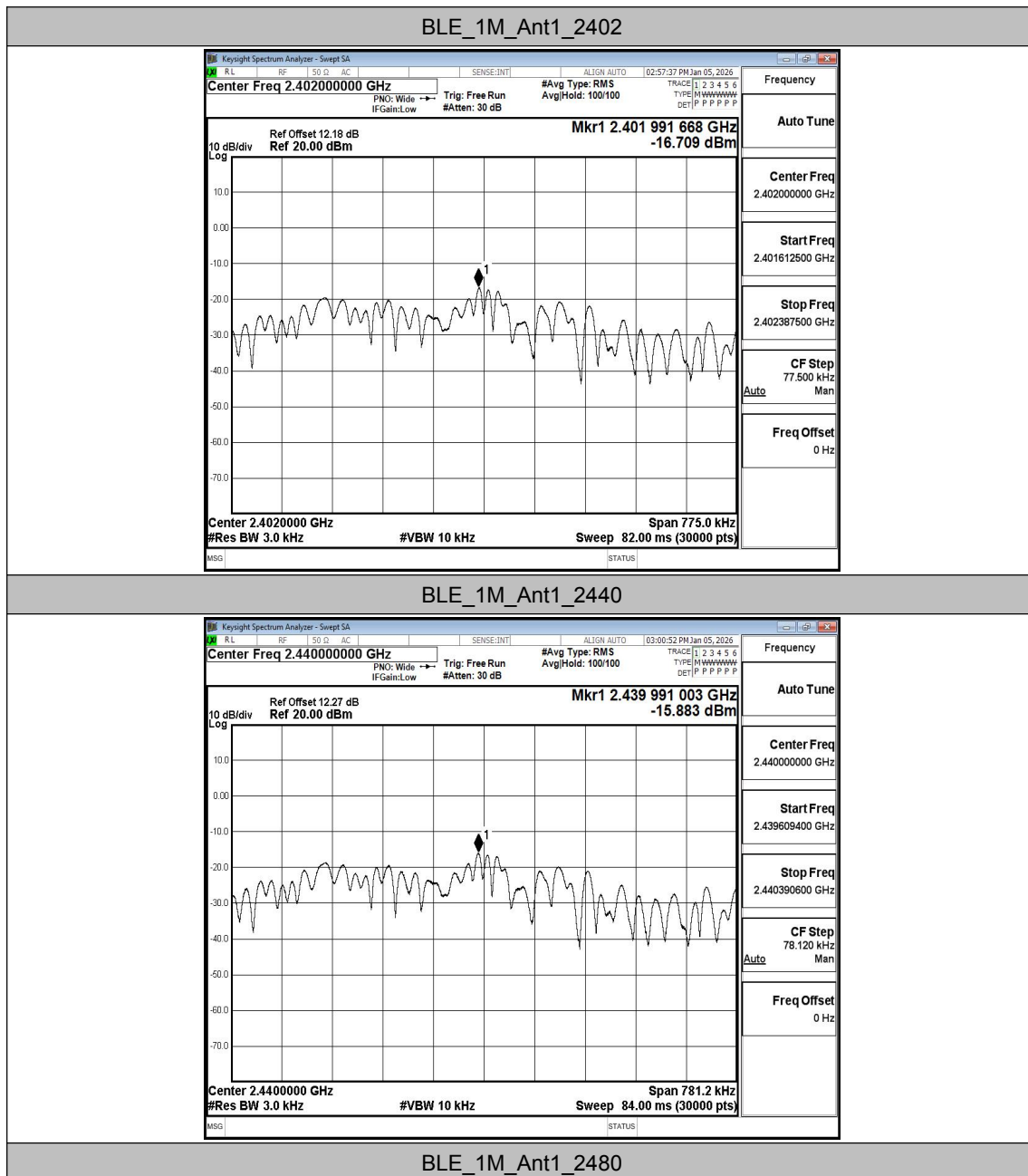
A.3 Maximum power spectral density

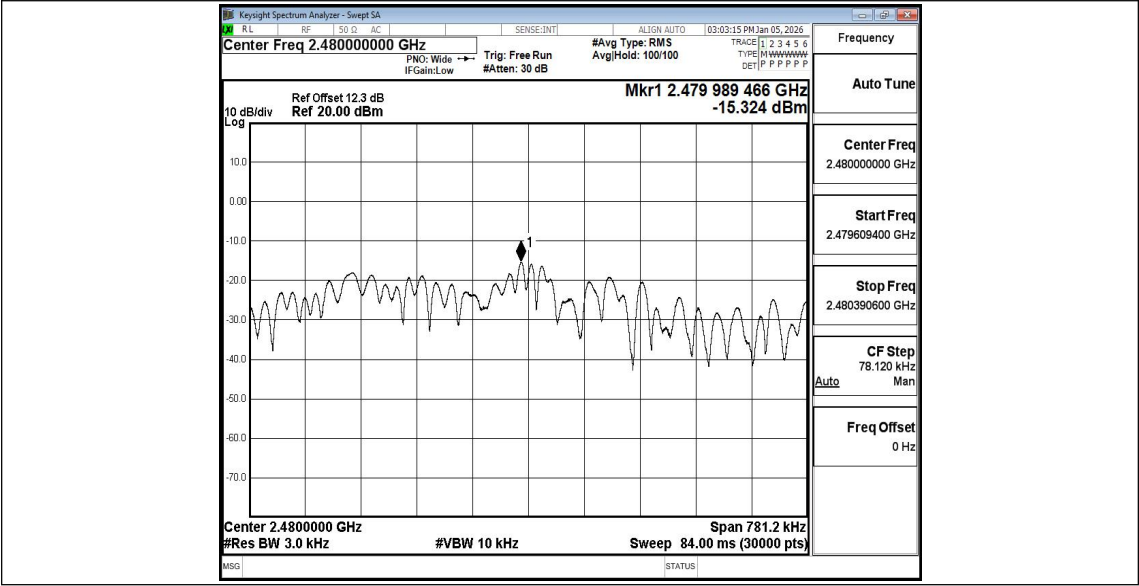
Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.71	≤8.00	PASS
		2440	-15.88	≤8.00	PASS
		2480	-15.32	≤8.00	PASS

Note :offset=System attenuation +caval loss

Test Graphs





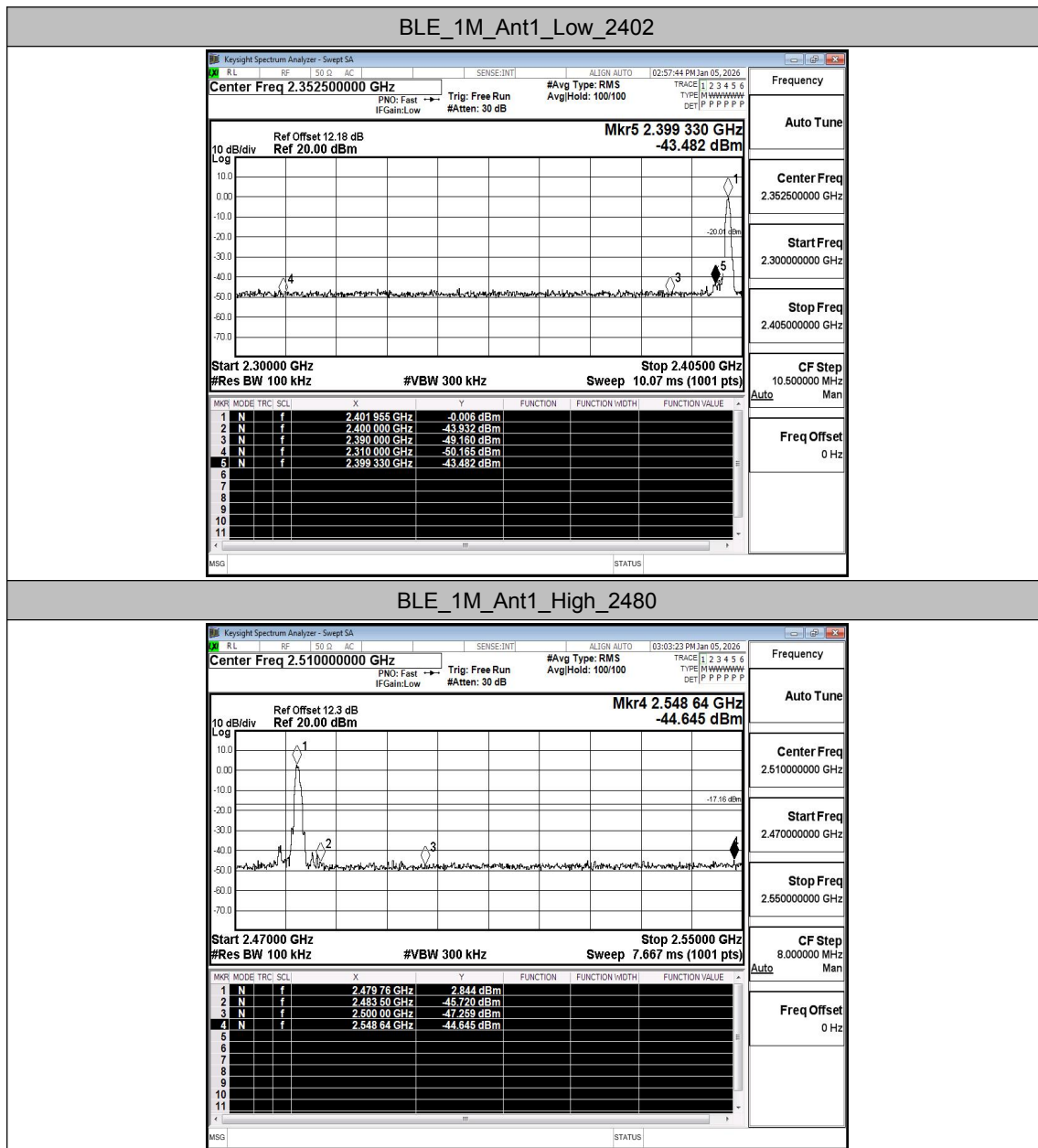
A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.01	-43.48	≤ -20.01	PASS
		High	2480	2.84	-44.65	≤ -17.16	PASS

Note :offset=System attenuation +cabal loss

Test Graphs



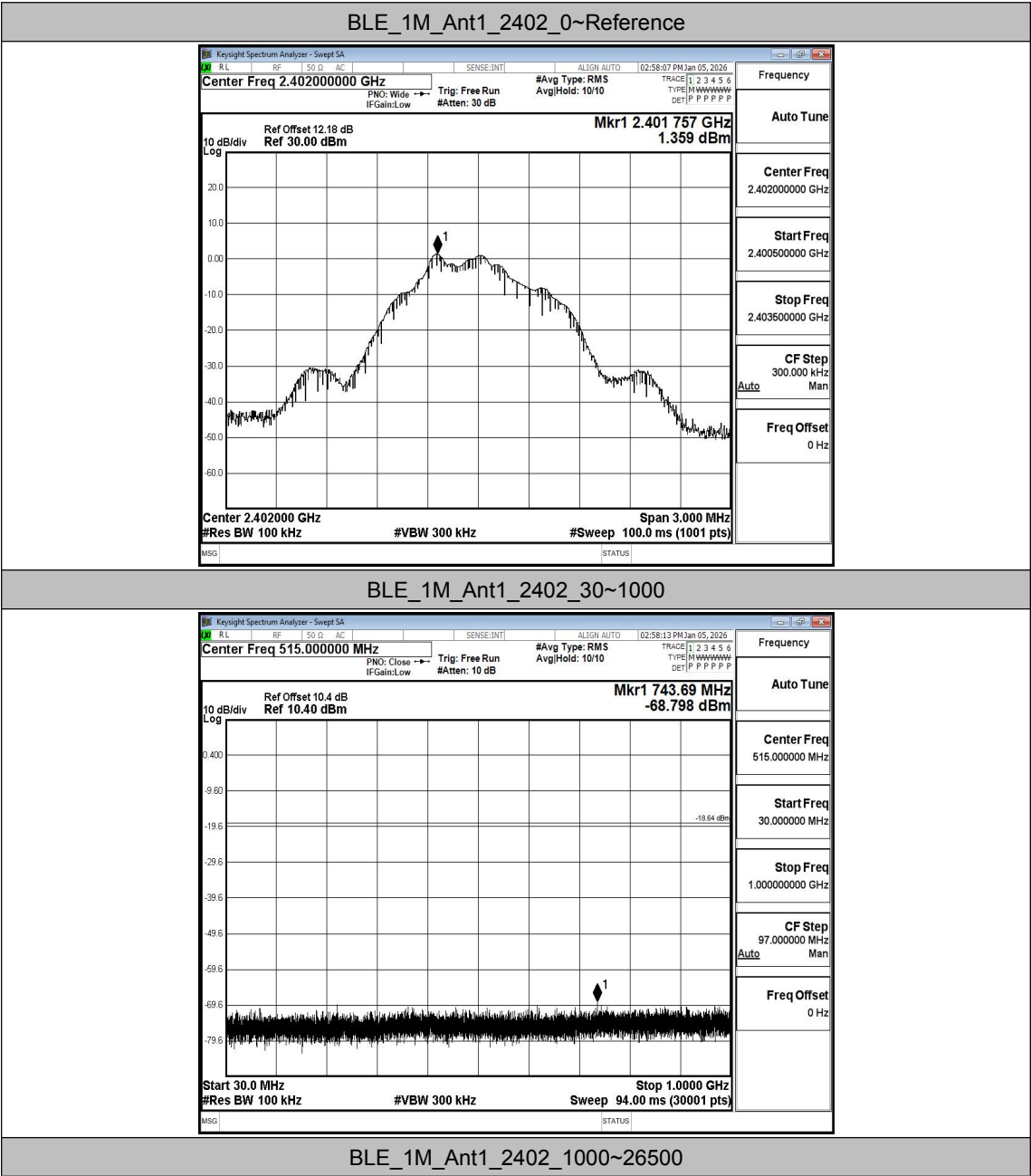
A.5 Conducted Spurious Emission

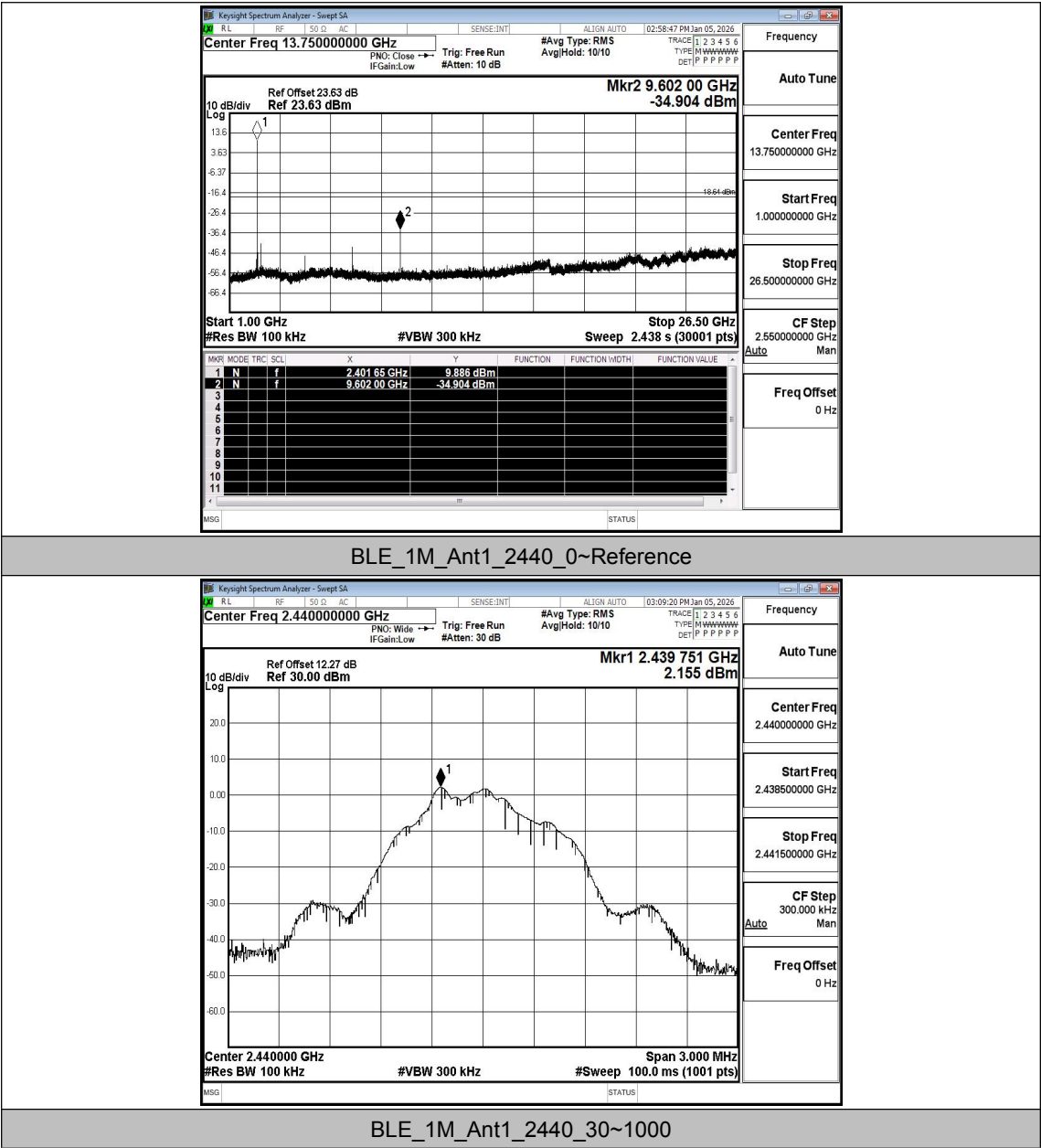
Test Result

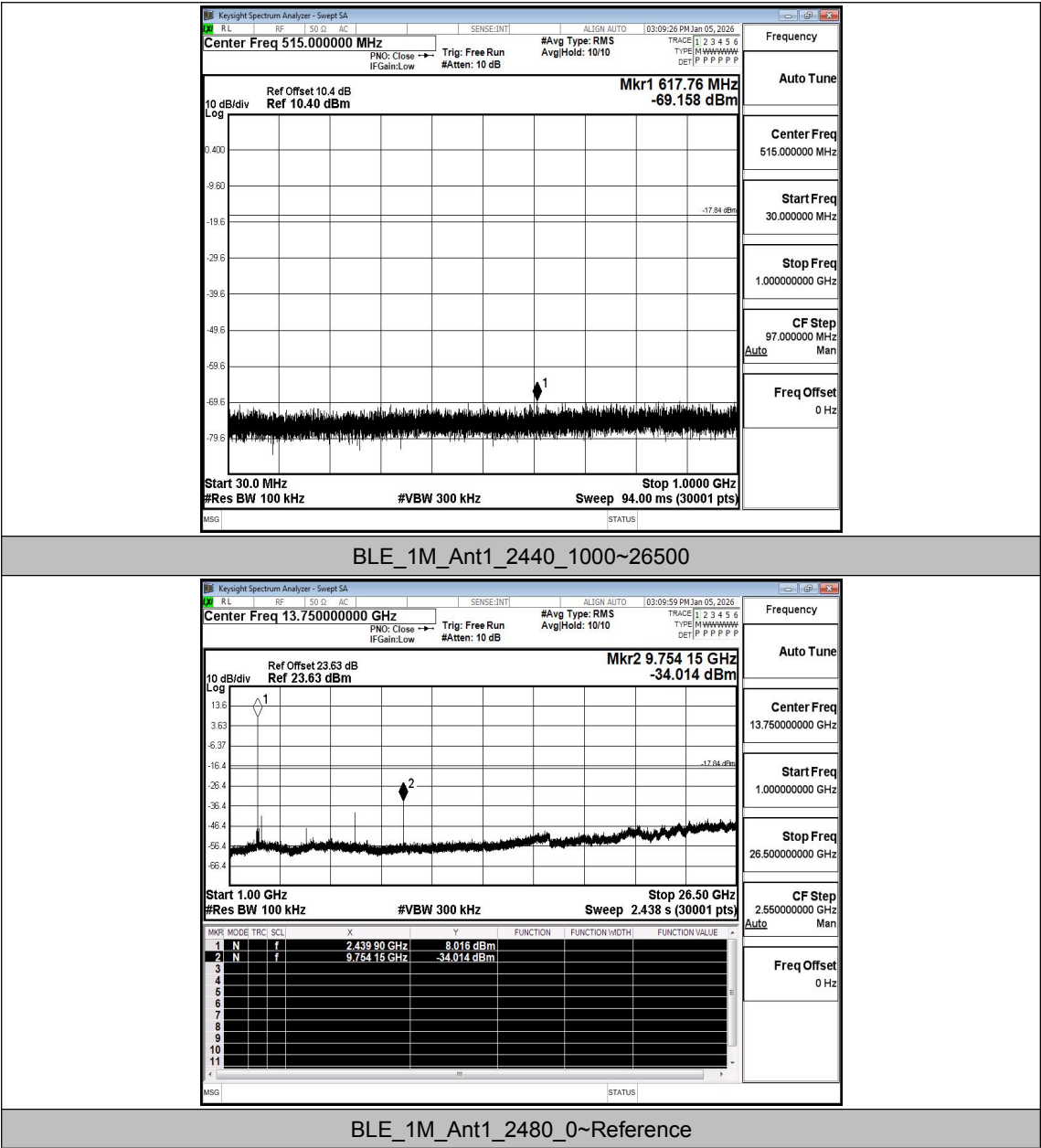
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	1.36	1.36	---	PASS
			30~1000	1.36	-68.8	≤ -18.64	PASS
			1000~26500	1.36	-34.9	≤ -18.64	PASS
		2440	Reference	2.16	2.16	---	PASS
			30~1000	2.16	-69.16	≤ -17.84	PASS
			1000~26500	2.16	-34.01	≤ -17.84	PASS
		2480	Reference	2.80	2.80	---	PASS
			30~1000	2.80	-69.04	≤ -17.2	PASS
			1000~26500	2.80	-34.92	≤ -17.2	PASS

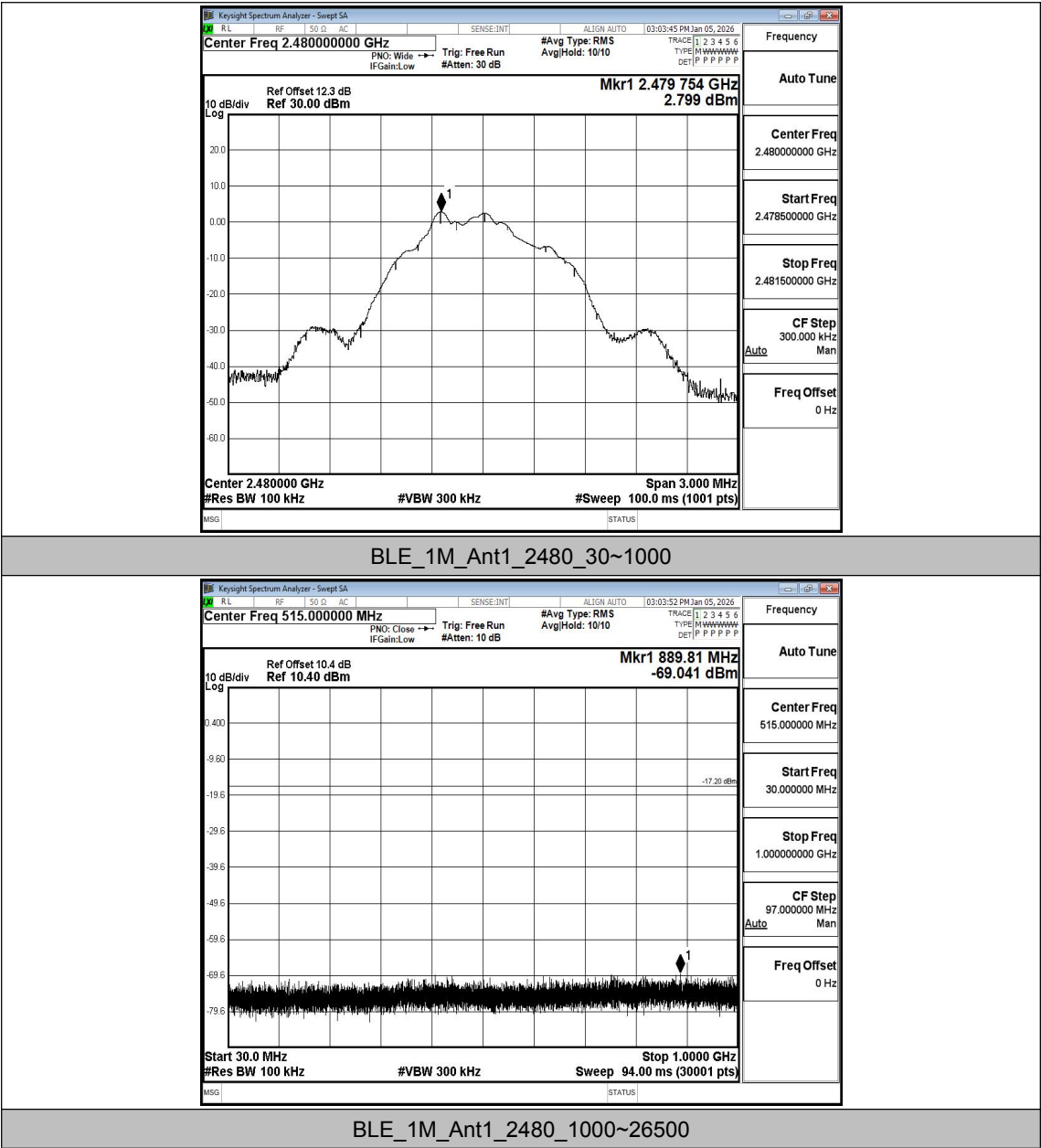
Note : Regarding the spurious emissions from 30MHz to 26.5GHz, the cable lose have been set in the CORREC' of the Spectrum Analyzer during the test.

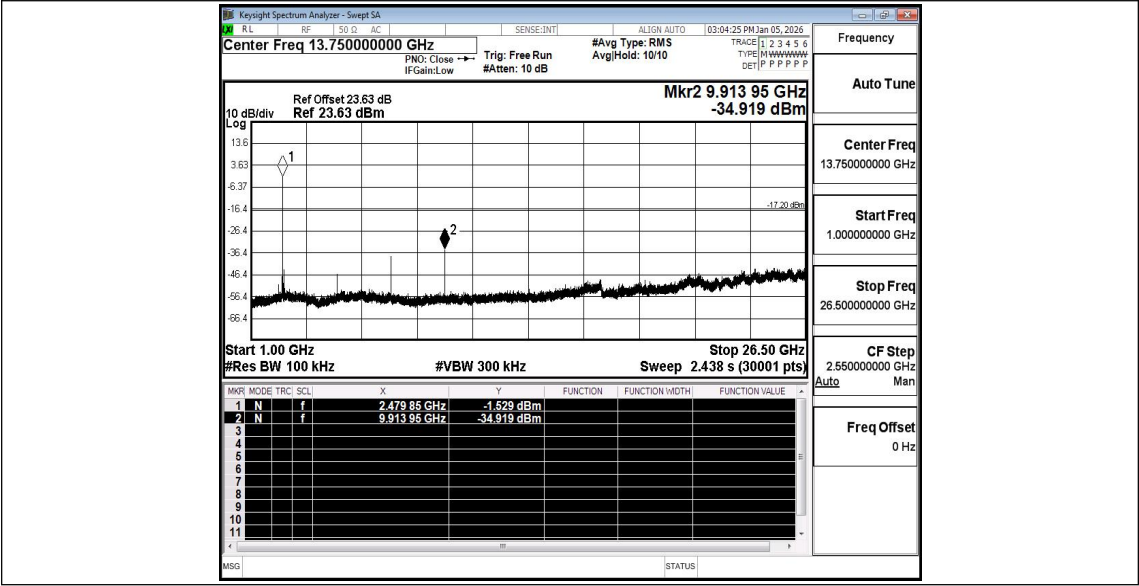
Test Graphs











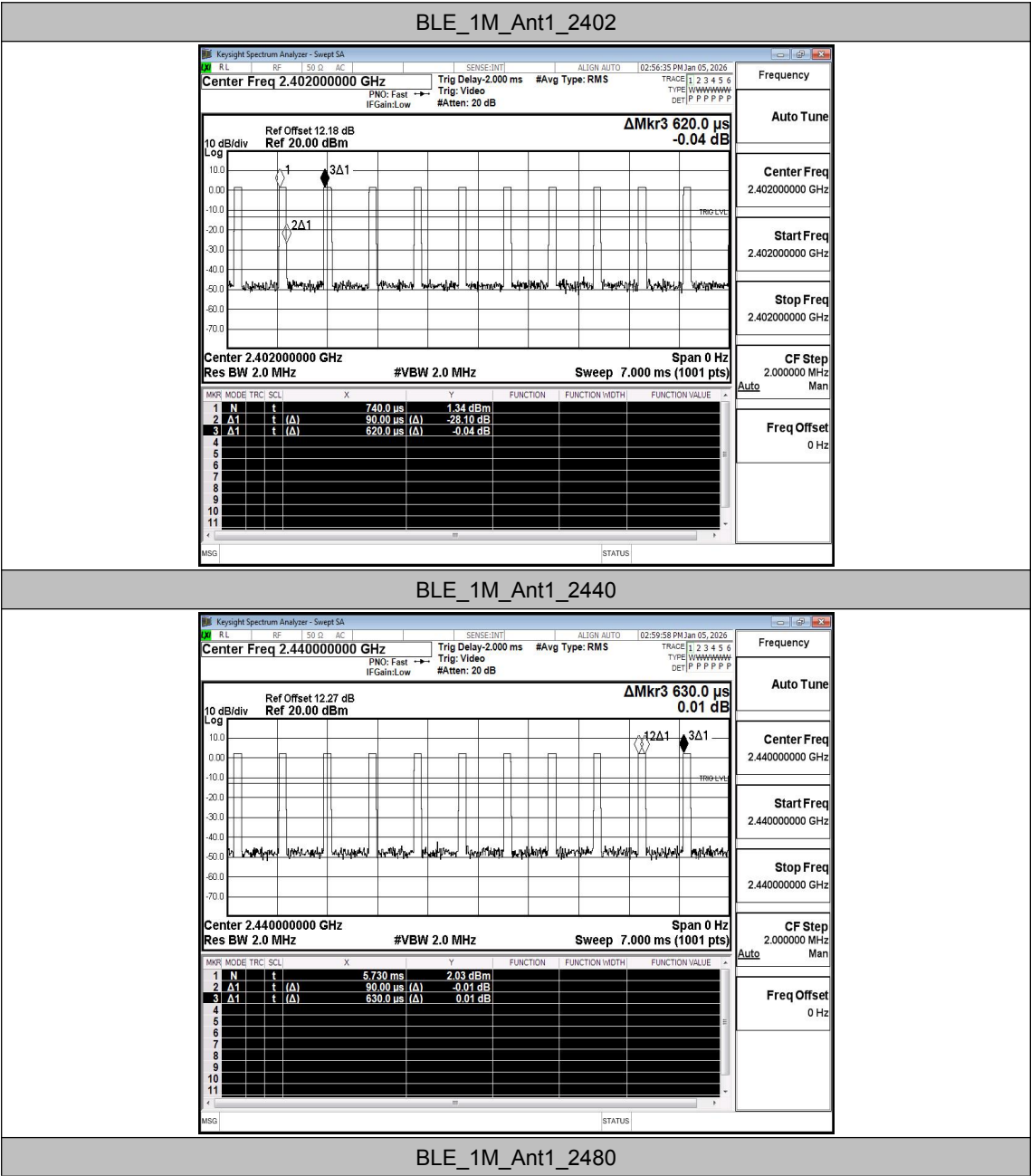
A.6 Duty Cycle

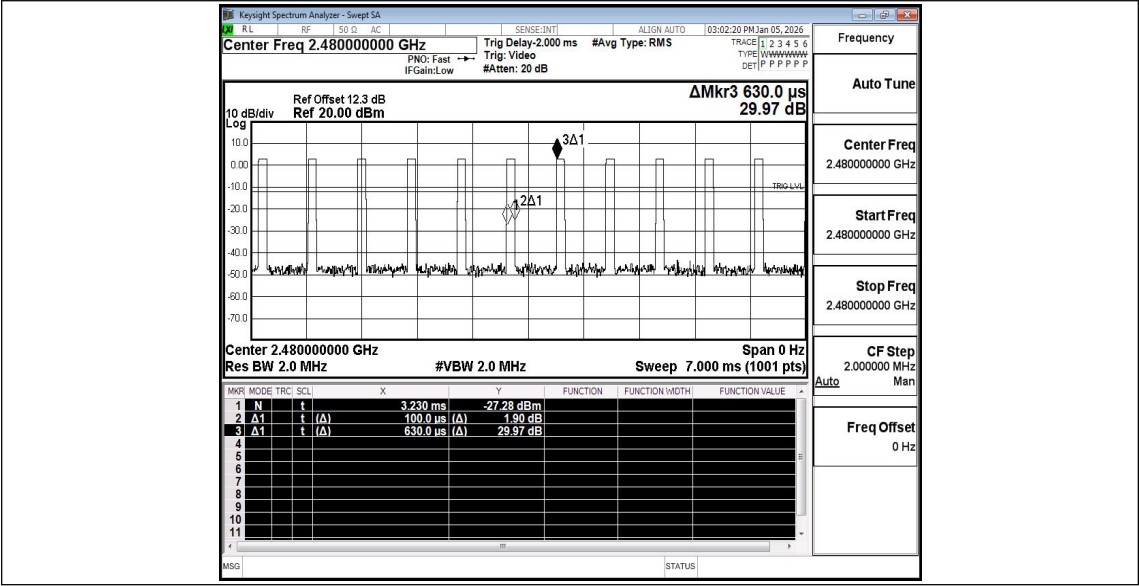
Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.09	0.62	0.1452	14.52	8.38	---	---
		2440	0.09	0.63	0.1429	14.29	8.45	---	---
		2480	0.10	0.63	0.1587	15.87	7.99	---	---

Note :offset=System attenuation +cabal loss

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	≤-51.58	2.00	8.38	48.58	≤54	PASS
				AV	2378.120	-56.43	≤-51.58	2.00	8.38	49.15	≤54	PASS
				AV	2390.000	-56.97	≤-51.58	2.00	8.38	48.61	≤54	PASS
				Peak	2310.000	-47.13	≤-23.20	2.00	0.00	50.07	≤74	PASS
				Peak	2333.390	-45.68	≤-23.20	2.00	0.00	51.52	≤74	PASS
				Peak	2390.000	-47.36	≤-23.20	2.00	0.00	49.84	≤74	PASS
		High	2480	AV	2483.500	-53.67	≤-51.19	2.00	7.99	51.52	≤54	PASS
				AV	2483.520	-53.67	≤-51.19	2.00	7.99	51.52	≤54	PASS
				AV	2500.000	-56.58	≤-51.19	2.00	7.99	48.61	≤54	PASS
				Peak	2483.500	-42.24	≤-23.20	2.00	0.00	54.96	≤74	PASS
				Peak	2483.760	-42.15	≤-23.20	2.00	0.00	55.05	≤74	PASS
				Peak	2500.000	-47.48	≤-23.20	2.00	0.00	49.72	≤74	PASS

Note :offset=System attenuation +cable loss

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

