

Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Remote Control

Test Model: e7 Remote

Environmental Conditions

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

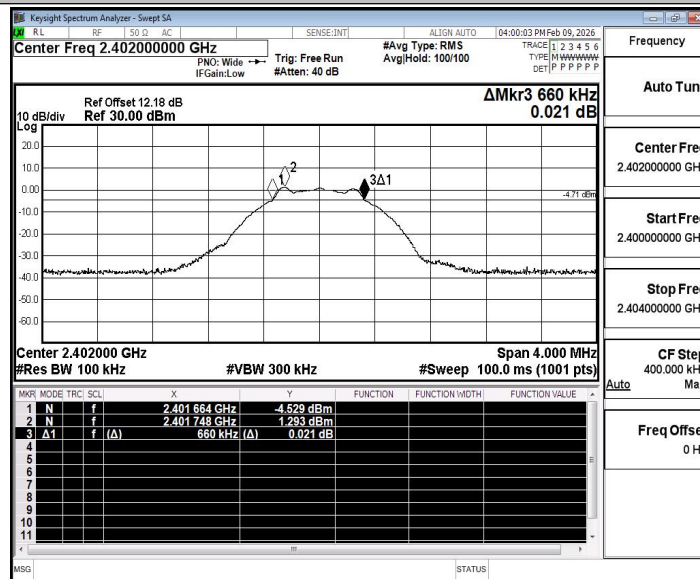
A.1 DTS Bandwidth

Test Result

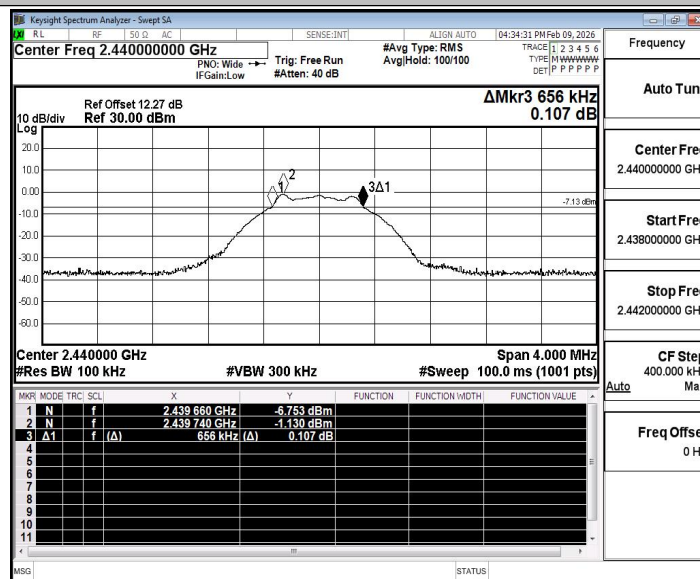
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.664	2402.324	0.5	PASS
		2440	0.656	2439.660	2440.316	0.5	PASS
		2480	0.660	2479.664	2480.324	0.5	PASS

Test Graphs

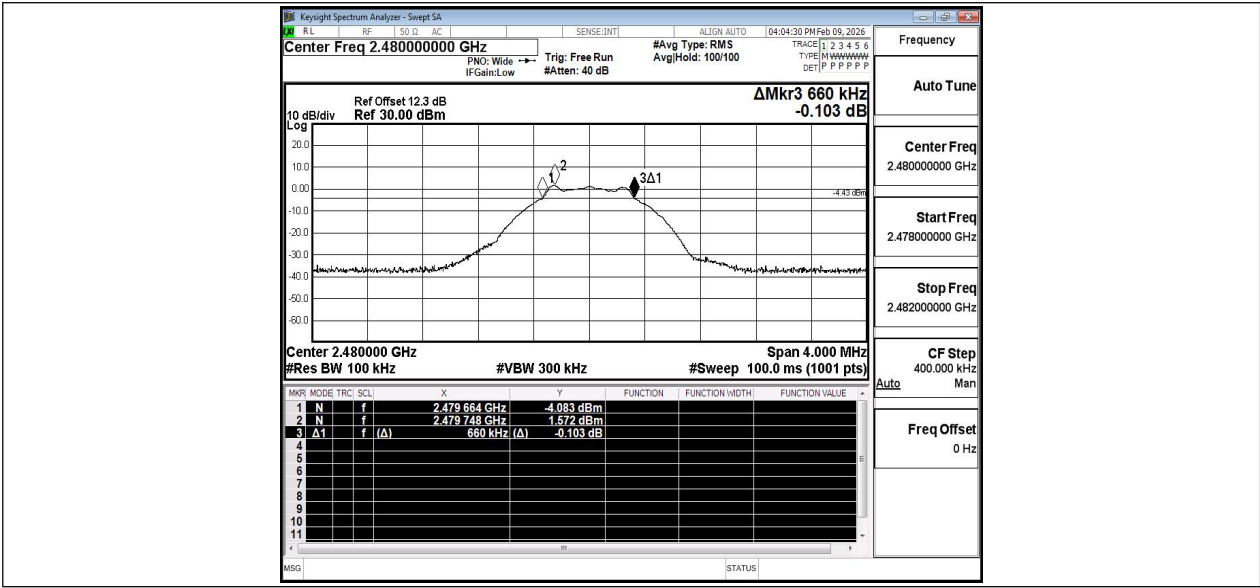
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



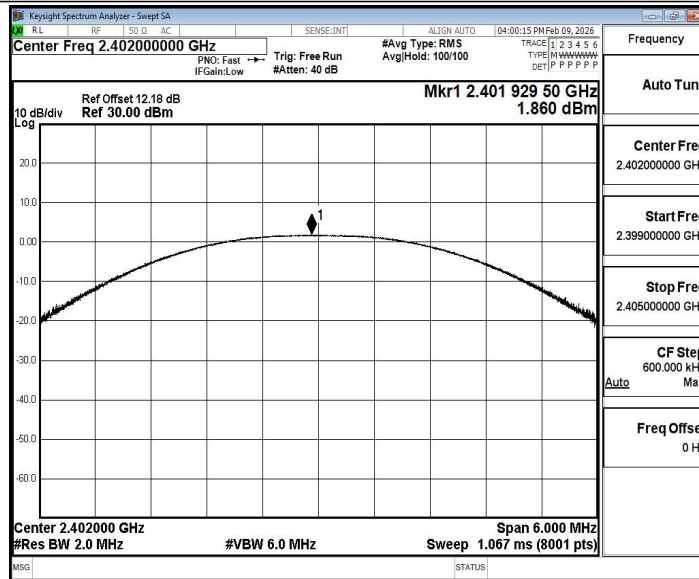
A.2 Maximum Peak Conducted Output Power

Test Result Peak

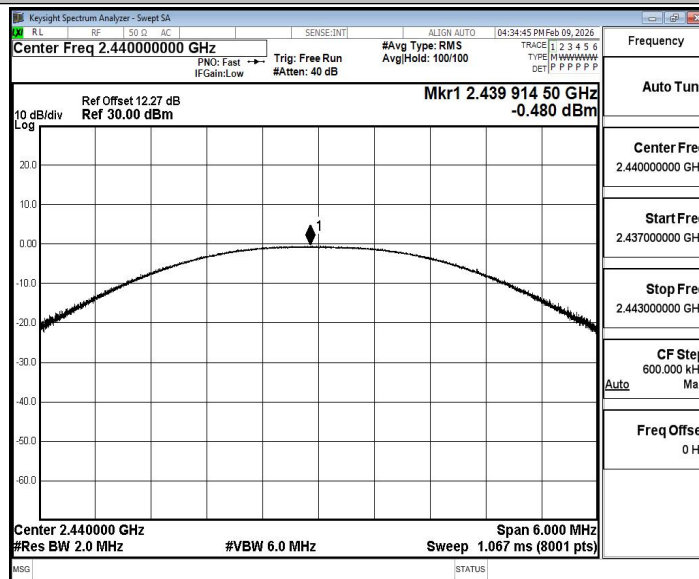
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.86	≤30	PASS
		2440	-0.48	≤30	PASS
		2480	2.28	≤30	PASS

Test Graphs Peak

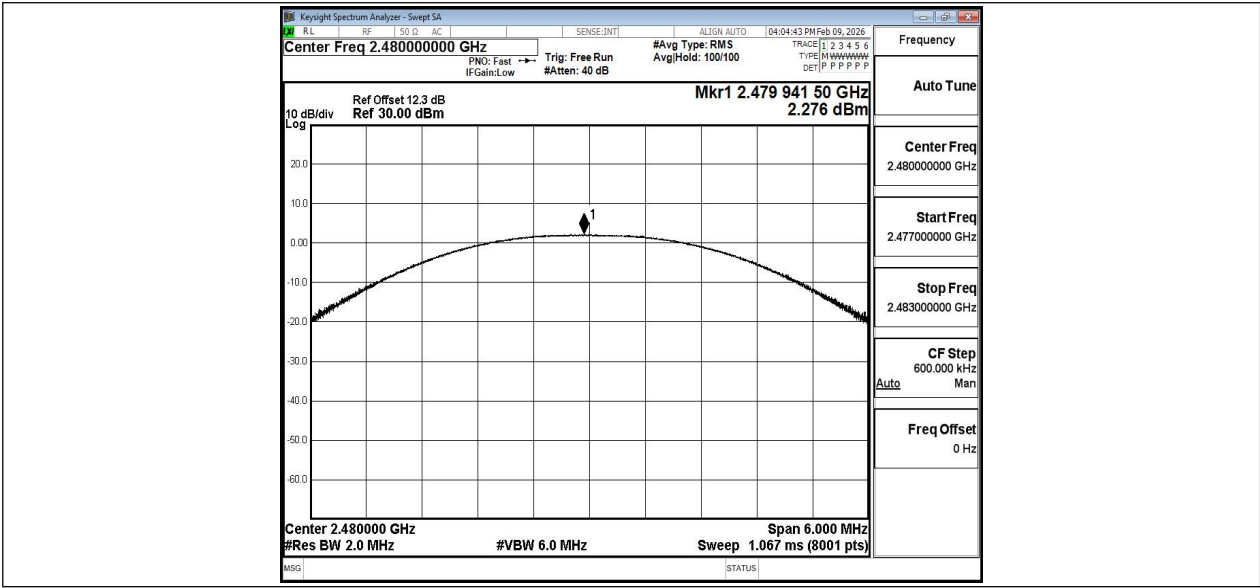
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



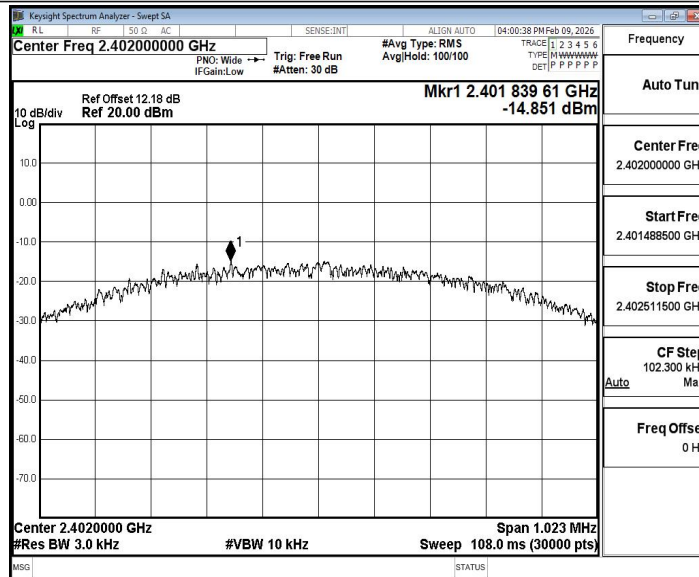
A.3 Maximum power spectral density

Test Result

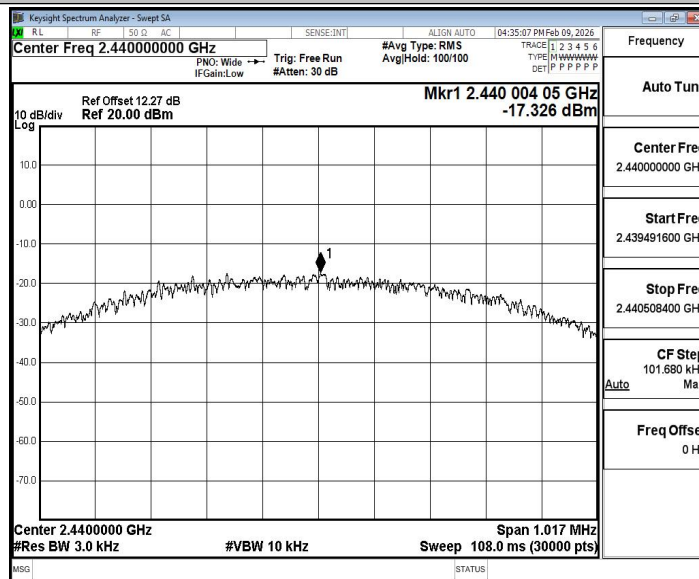
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.85	≤8.00	PASS
		2440	-17.33	≤8.00	PASS
		2480	-14.48	≤8.00	PASS

Test Graphs

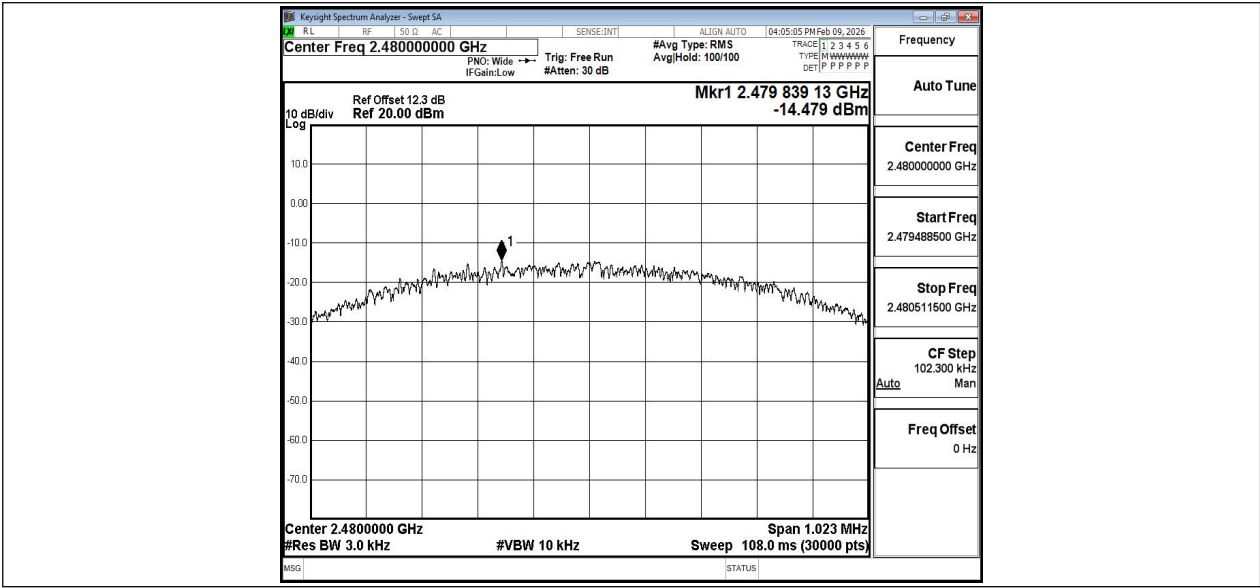
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

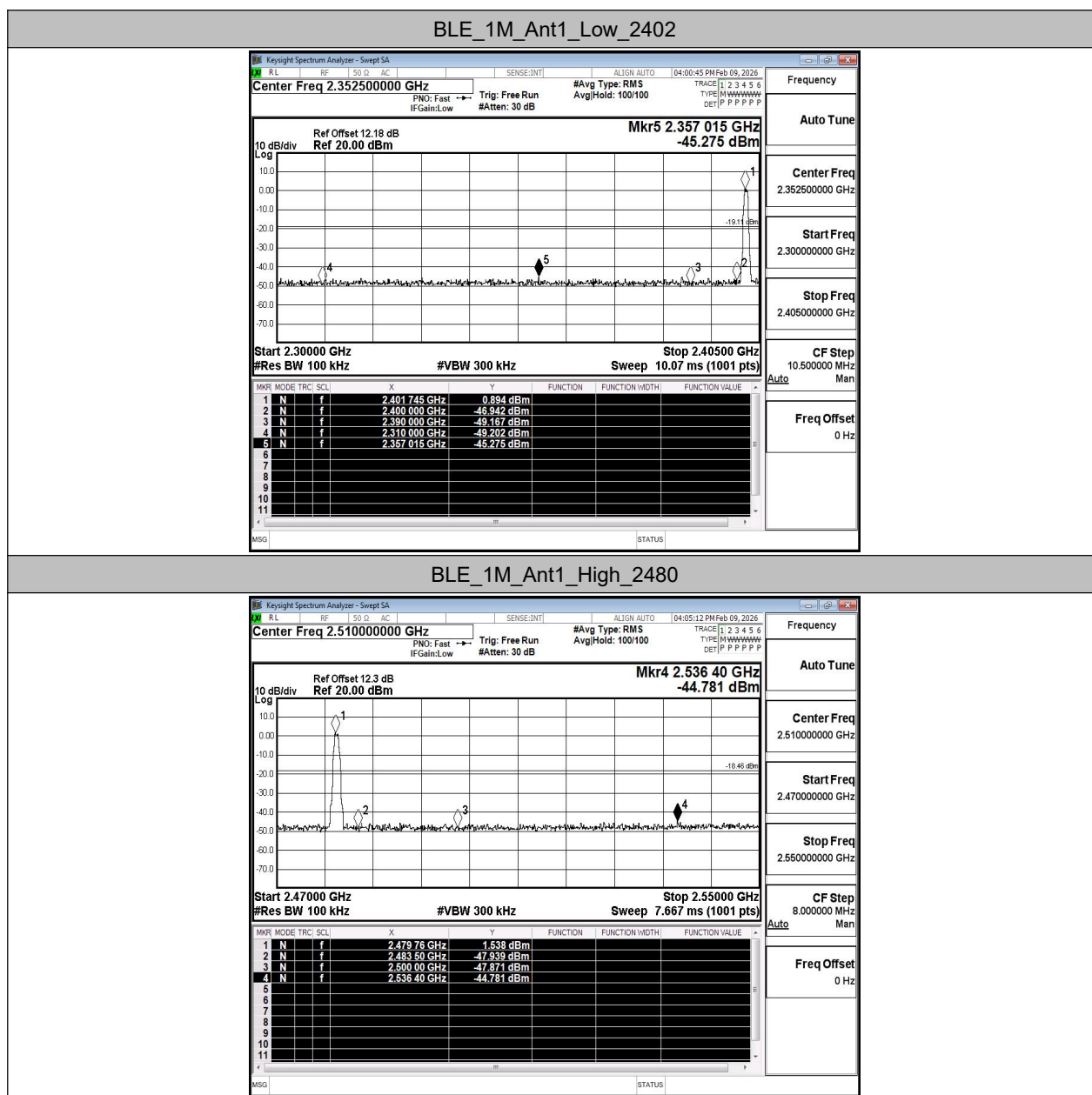


A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.89	-45.28	≤-19.11	PASS
		High	2480	1.54	-44.78	≤-18.46	PASS

Test Graphs



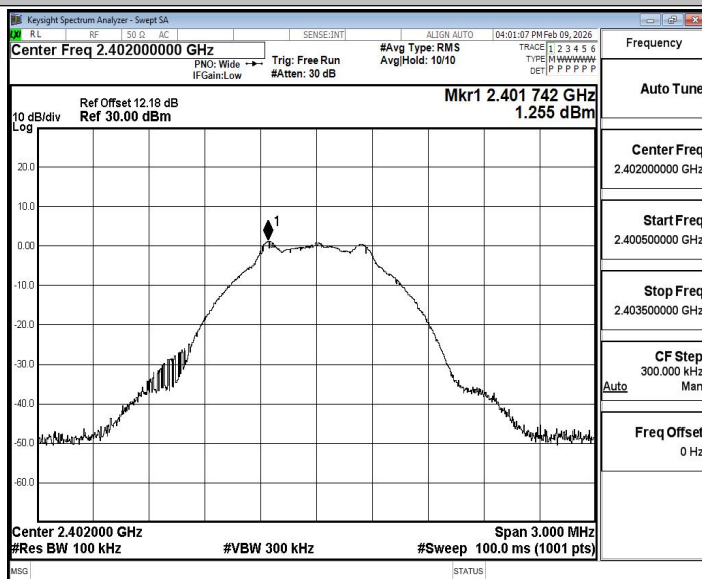
A.5 Conducted Spurious Emission

Test Result

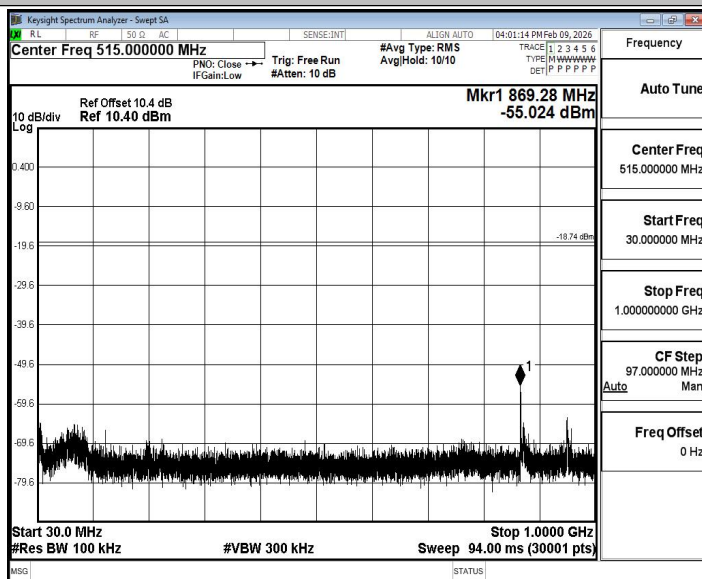
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	1.26	1.26	---	PASS
			30~1000	1.26	-55.02	≤-18.74	PASS
			1000~26500	1.26	-43.26	≤-18.74	PASS
		2440	Reference	-1.23	-1.23	---	PASS
			30~1000	-1.23	-58.57	≤-21.23	PASS
			1000~26500	-1.23	-43.83	≤-21.23	PASS
		2480	Reference	1.50	1.50	---	PASS
			30~1000	1.50	-53.85	≤-18.5	PASS
			1000~26500	1.50	-43.16	≤-18.5	PASS

Test Graphs

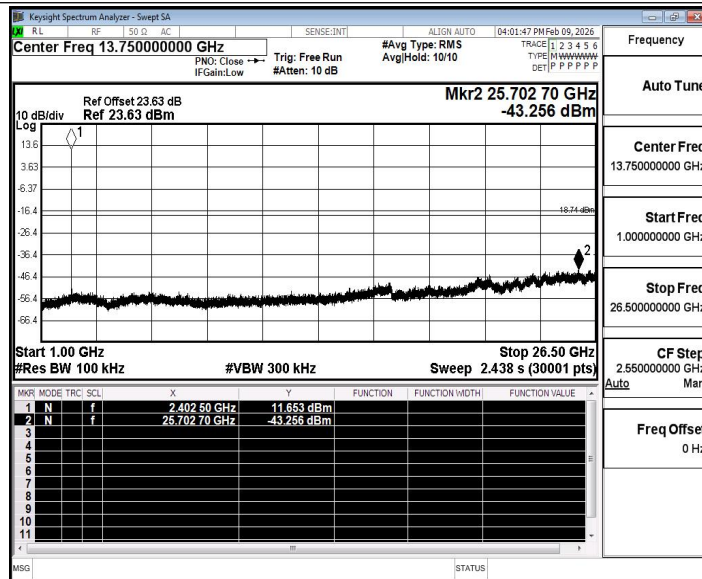
BLE_1M_Ant1_2402_0~Reference



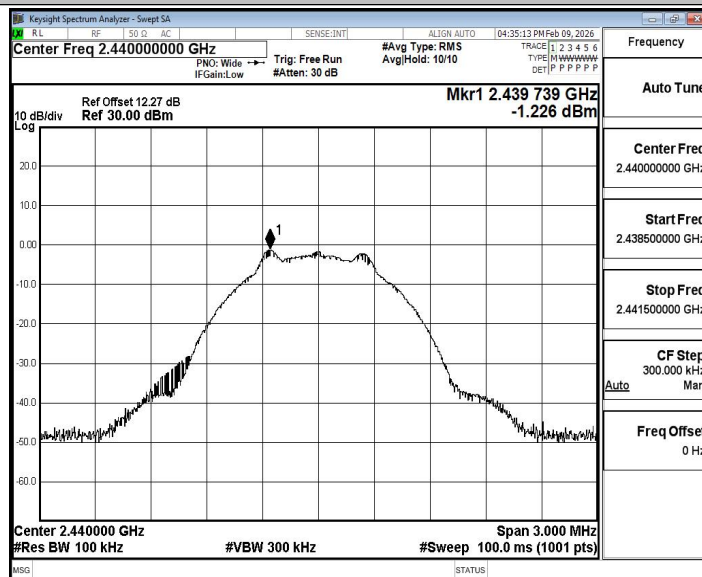
BLE_1M_Ant1_2402_30~1000



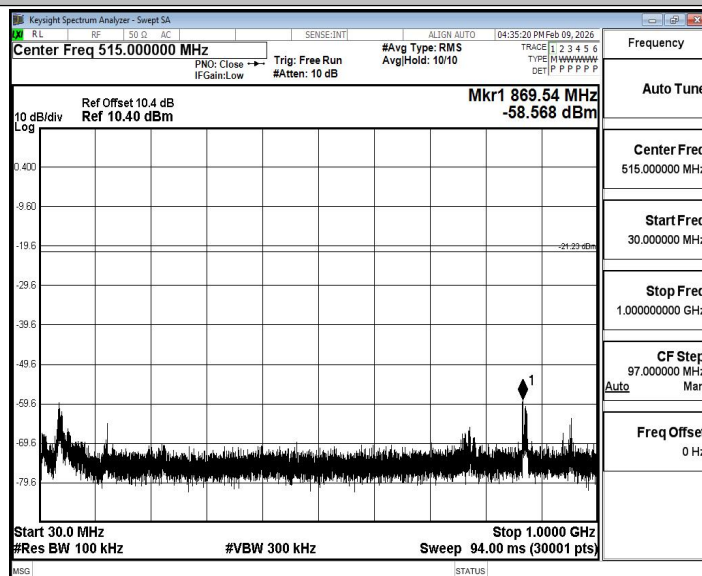
BLE_1M_Ant1_2402_1000~26500



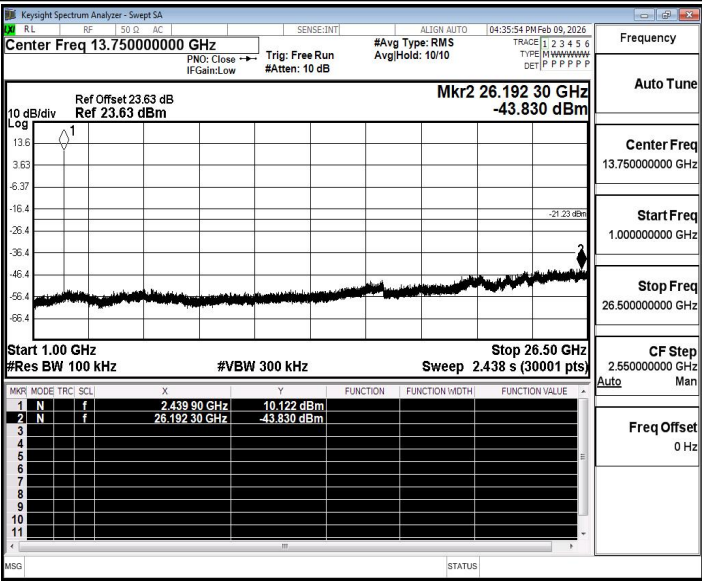
BLE_1M_Ant1_2440_0~Reference



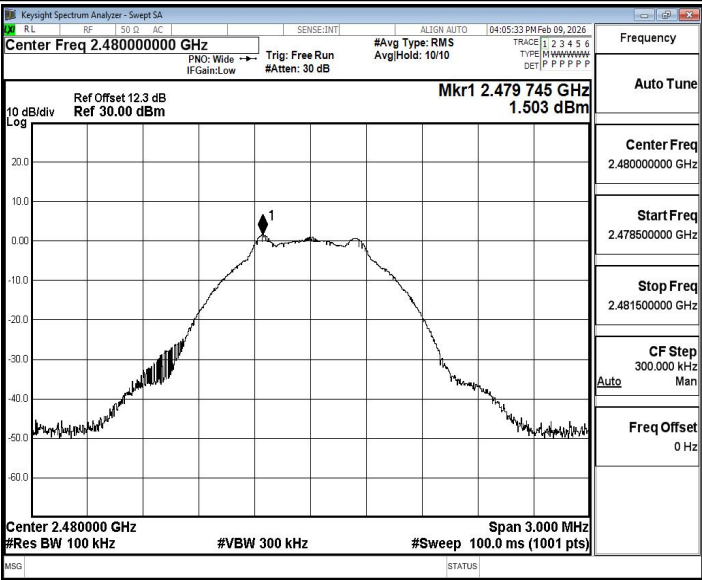
BLE_1M_Ant1_2440_30~1000



BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000

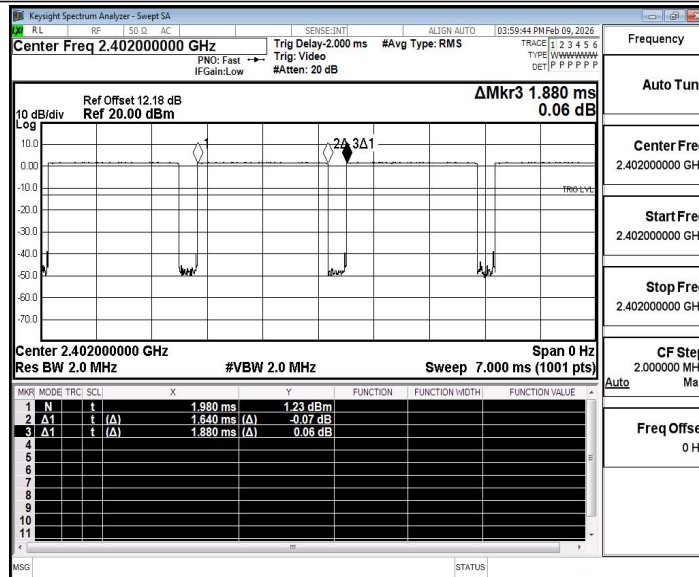
A.6 Duty Cycle

Test Result

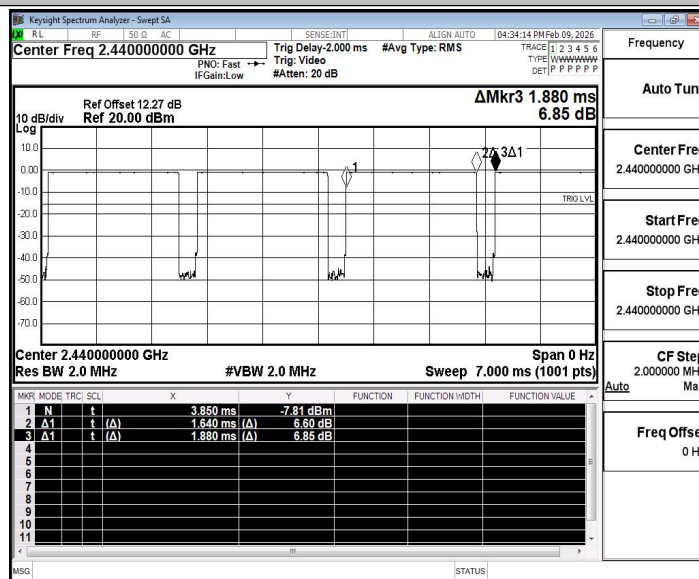
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	1.64	1.88	0.8723	87.23	0.59	---	---
		2440	1.64	1.88	0.8723	87.23	0.59	---	---
		2480	1.63	1.87	0.8717	87.17	0.60	---	---

Test Graphs

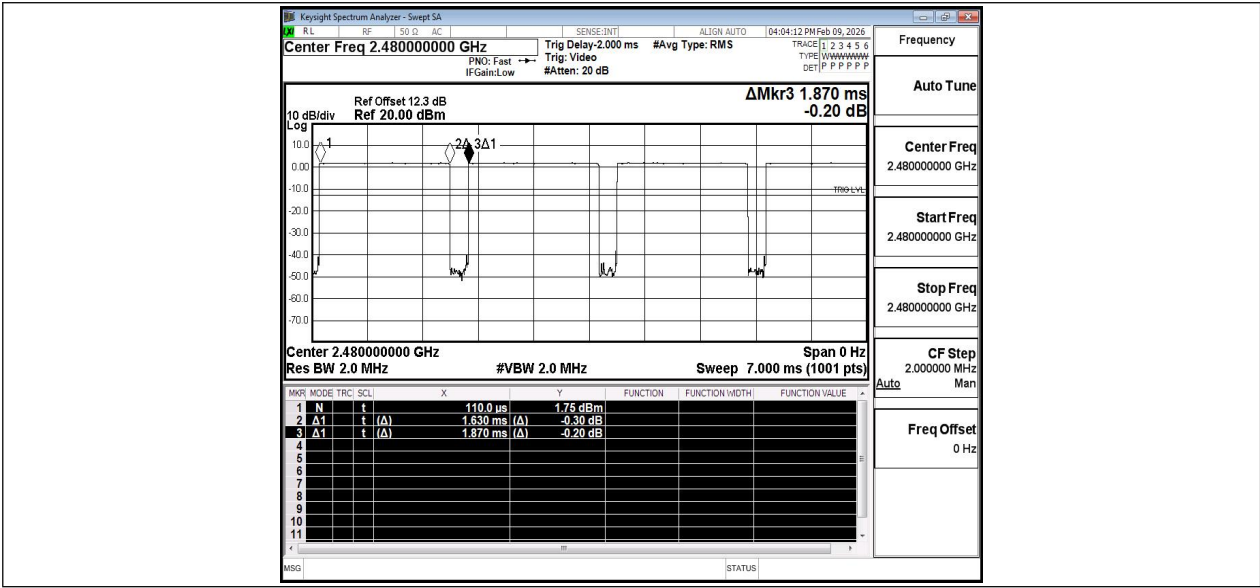
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



A.7 Emissions in Restricted Bands

Test Result

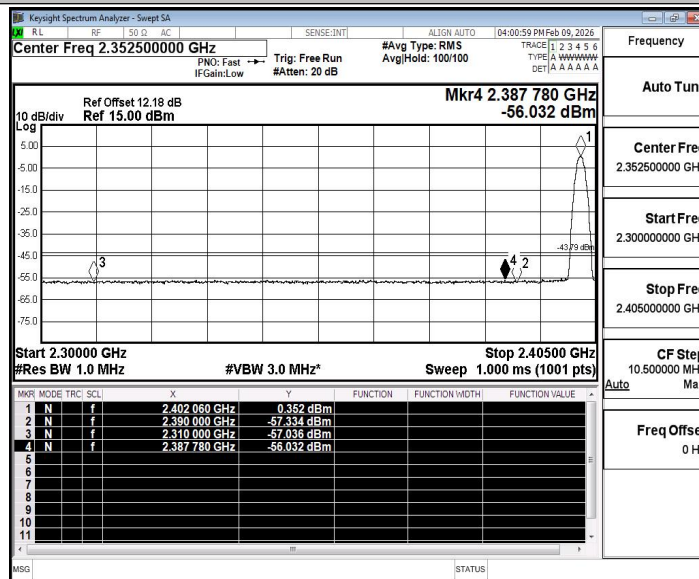
Test Mode	Antenna	Channel Name	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.04	≤-43.79	2.00	0.59	40.75	≤54	PASS
				AV	2387.780	-56.03	≤-43.79	2.00	0.59	41.76	≤54	PASS
				AV	2390.000	-57.33	≤-43.79	2.00	0.59	40.46	≤54	PASS
				Peak	2310.000	-49.52	≤-23.20	2.00	0.00	47.68	≤74	PASS
				Peak	2371.295	-46.17	≤-23.20	2.00	0.00	51.03	≤74	PASS
				Peak	2390.000	-48.23	≤-23.20	2.00	0.00	48.97	≤74	PASS
		High	2480	AV	2483.500	-55.92	≤-43.80	2.00	0.60	41.88	≤54	PASS
				AV	2483.600	-55.72	≤-43.80	2.00	0.60	42.08	≤54	PASS
				AV	2500.000	-56.82	≤-43.80	2.00	0.60	40.98	≤54	PASS
				Peak	2483.500	-47.78	≤-23.20	2.00	0.00	49.42	≤74	PASS
				Peak	2484.480	-45.06	≤-23.20	2.00	0.00	52.14	≤74	PASS
				Peak	2500.000	-49.79	≤-23.20	2.00	0.00	47.41	≤74	PASS

Note:

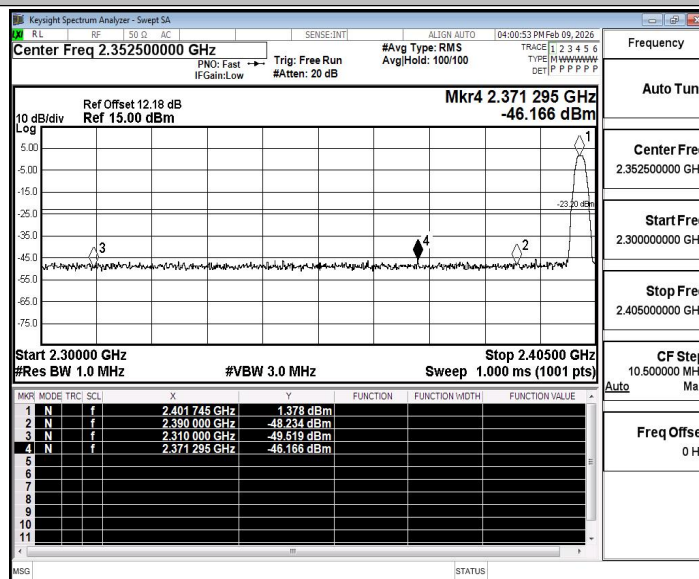
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

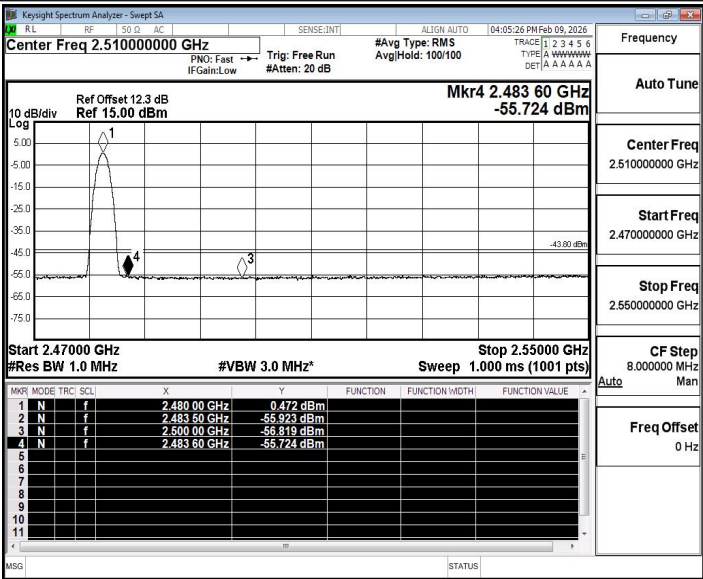
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

