

Appendix A

RF Test Data for BT LE(Conducted Measurement)

Product Name: Quartz tube heater

Test Model: GD9315BCW-3JW

Environmental Conditions

Temperature:	23.6°C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

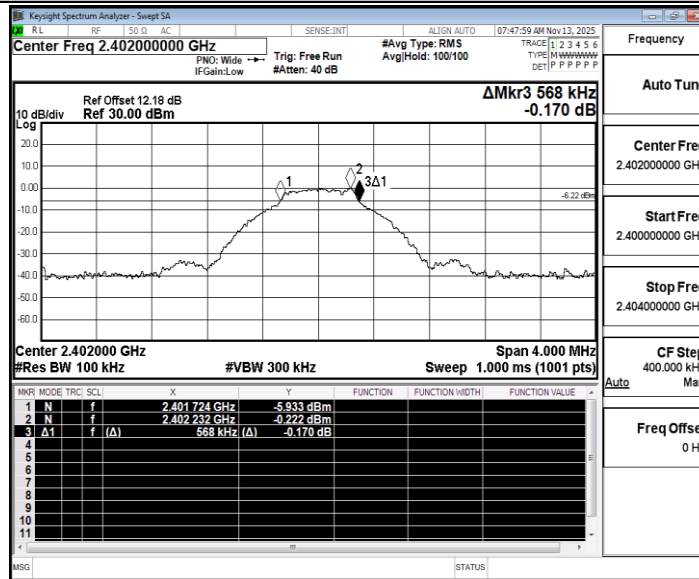
A.1 -6dB Bandwidth

Test Result

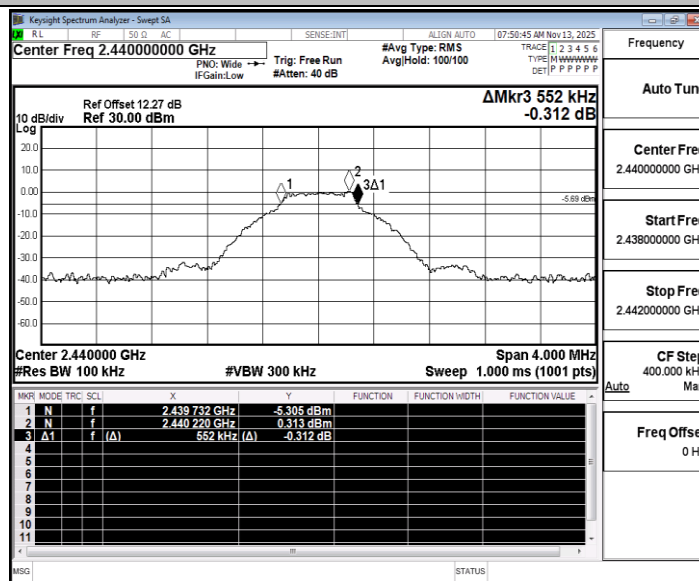
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.568	2401.724	2402.292	0.5	PASS
		2440	0.552	2439.732	2440.284	0.5	PASS
		2480	0.572	2479.720	2480.292	0.5	PASS

Test Graphs

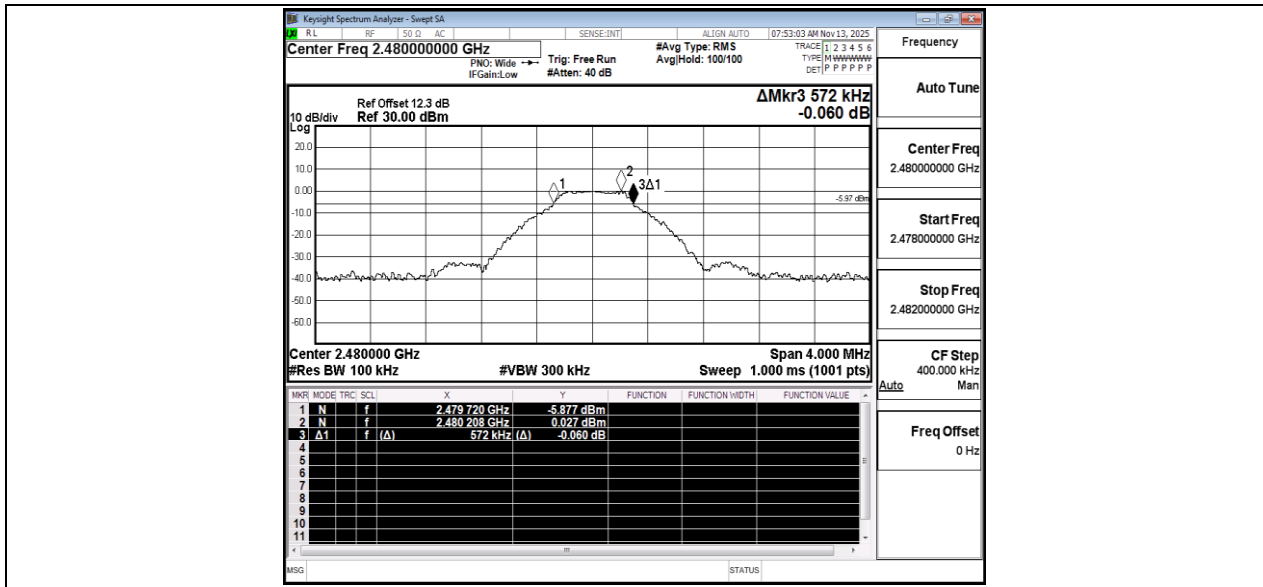
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

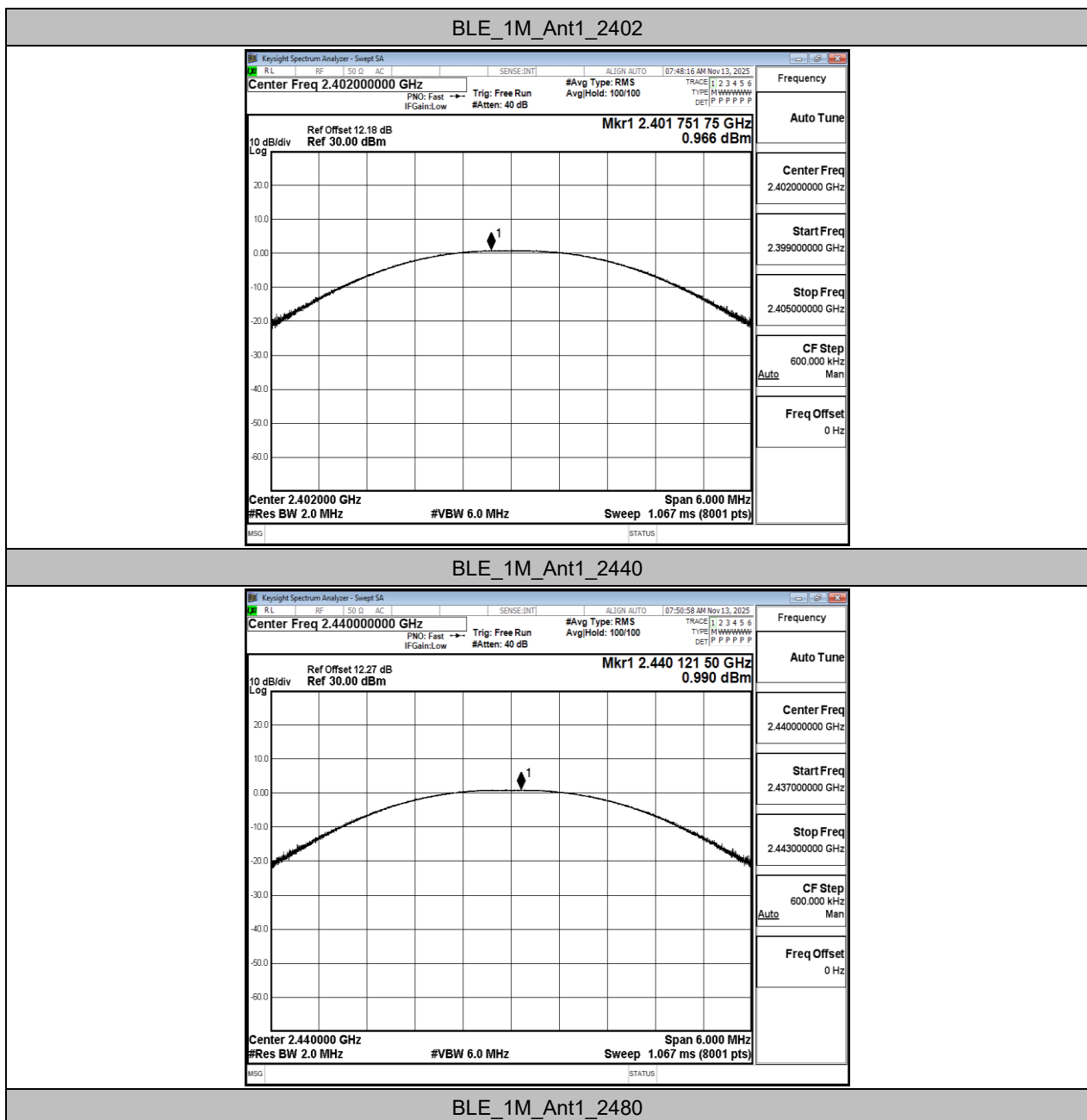


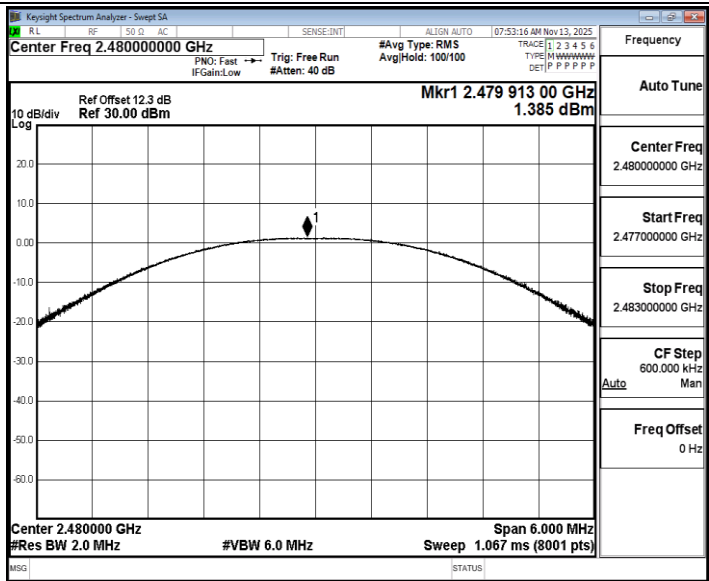
A.2 Maximum Peak Conducted Output Power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.97	≤30	PASS
		2440	0.99	≤30	PASS
		2480	1.39	≤30	PASS

Test Graphs Peak





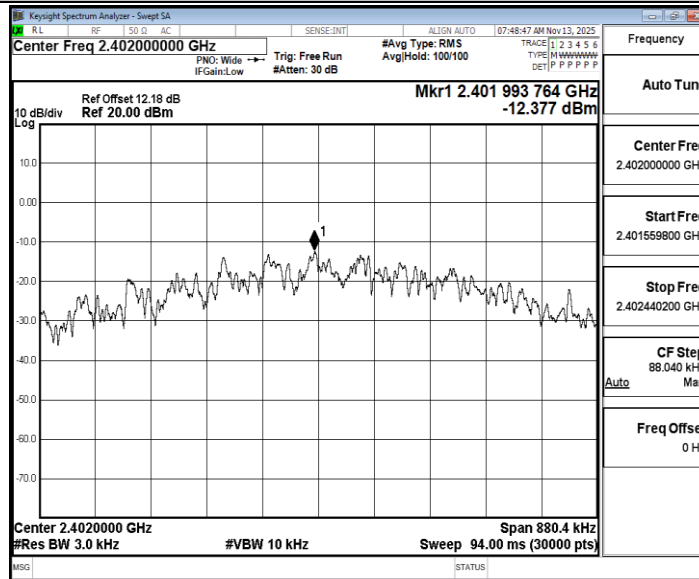
A.3 Maximum Power Spectral Density Level

Test Result

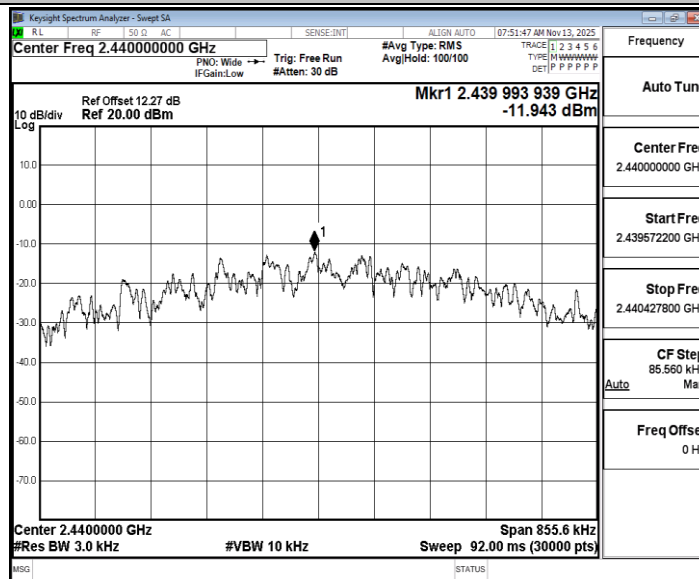
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-12.38	≤8.00	PASS
		2440	-11.94	≤8.00	PASS
		2480	-11.98	≤8.00	PASS

Test Graphs

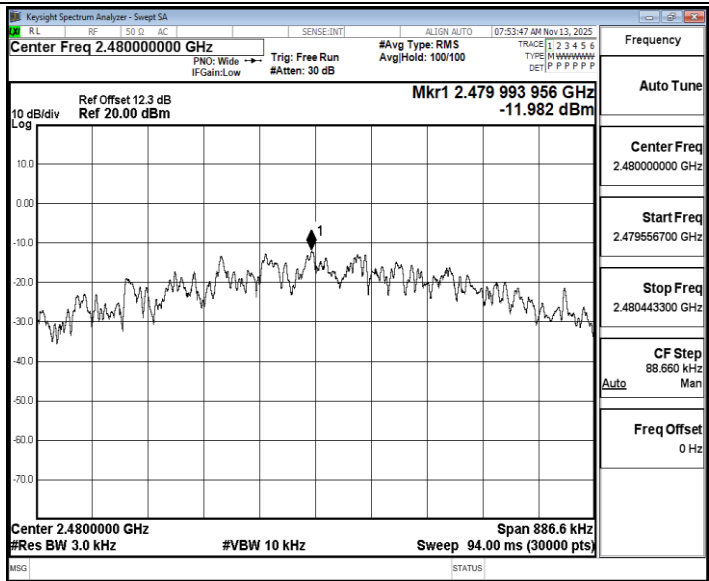
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

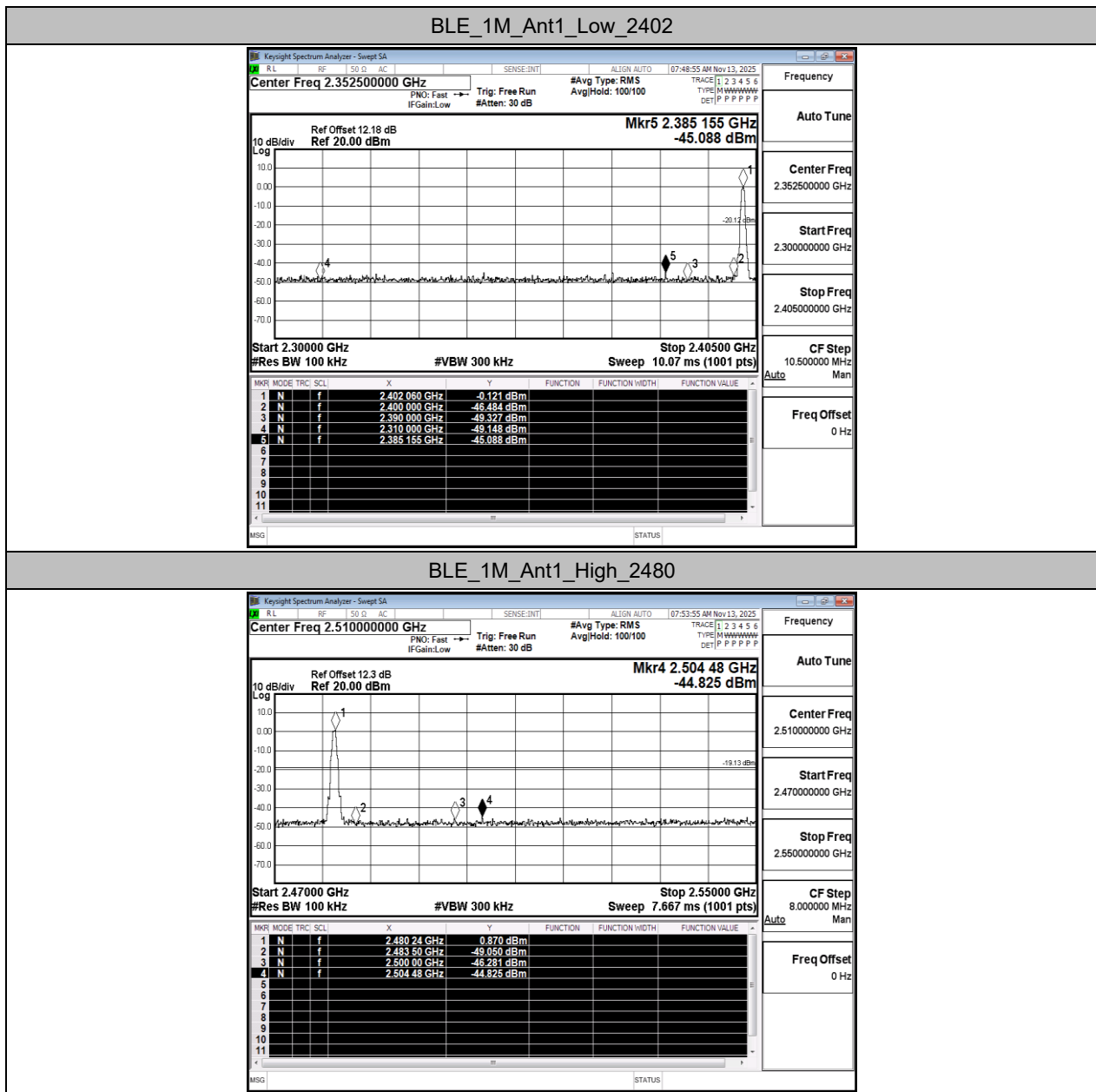


A.4 Band Edge

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.12	-45.09	≤-20.12	PASS
		High	2480	0.87	-44.83	≤-19.13	PASS

Test Graphs



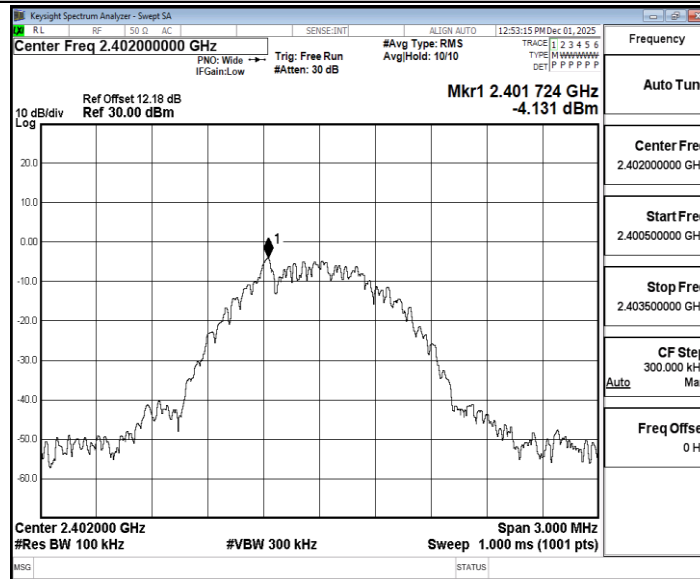
A.5 Conducted RF Spurious Emission

Test Result

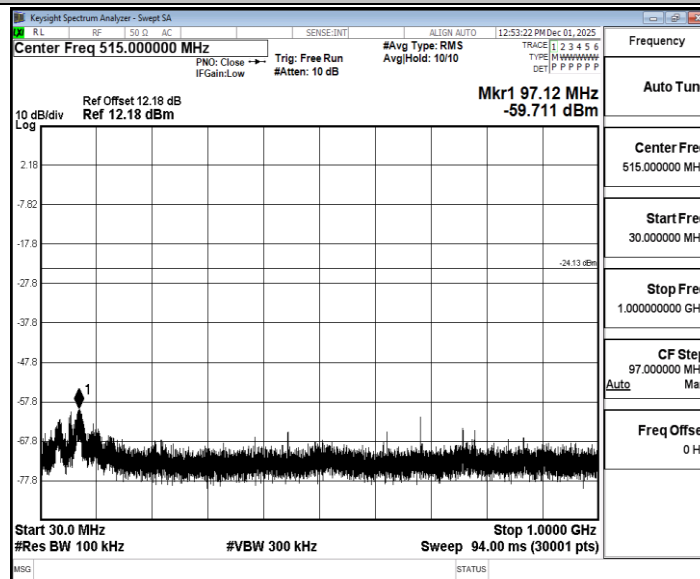
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.13	-4.13	---	PASS
			30~1000	-4.13	-59.71	≤-24.13	PASS
			1000~26500	-4.13	-54.49	≤-24.13	PASS
		2440	Reference	-1.79	-1.79	---	PASS
			30~1000	-1.79	-57.96	≤-21.79	PASS
			1000~26500	-1.79	-54.6	≤-21.79	PASS
		2480	Reference	-0.99	-0.99	---	PASS
			30~1000	-0.99	-57.81	≤-20.99	PASS
			1000~26500	-0.99	-54.18	≤-20.99	PASS

Test Graphs

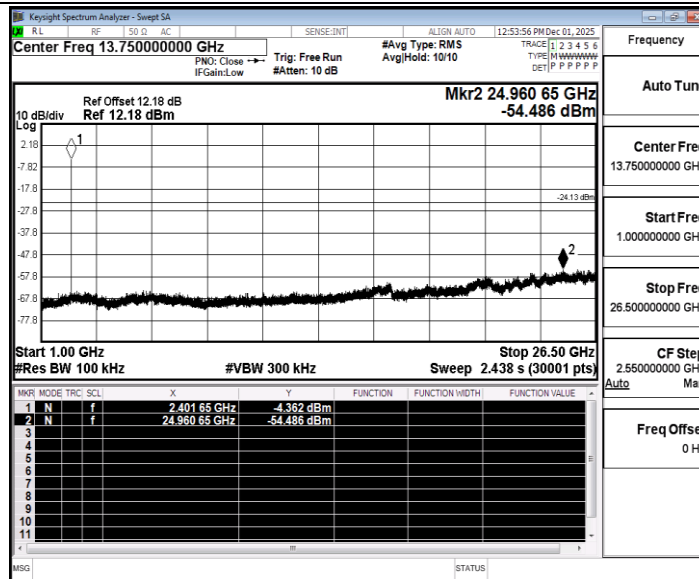
BLE_1M_Ant1_2402_0~Reference



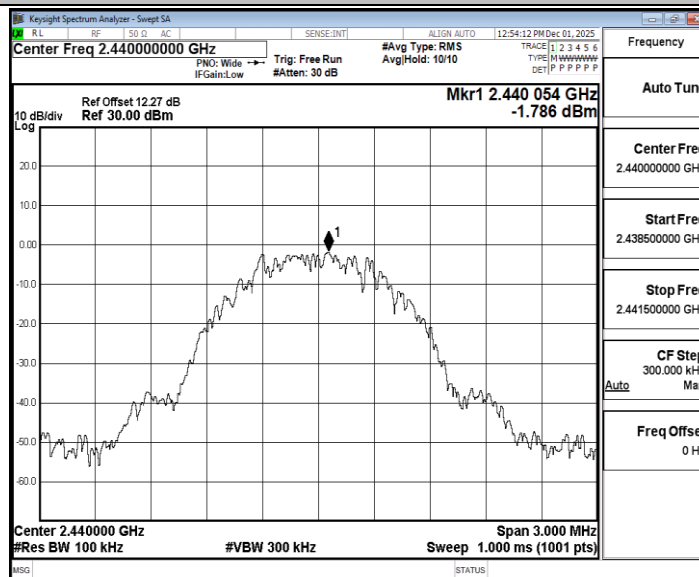
BLE_1M_Ant1_2402_30~1000



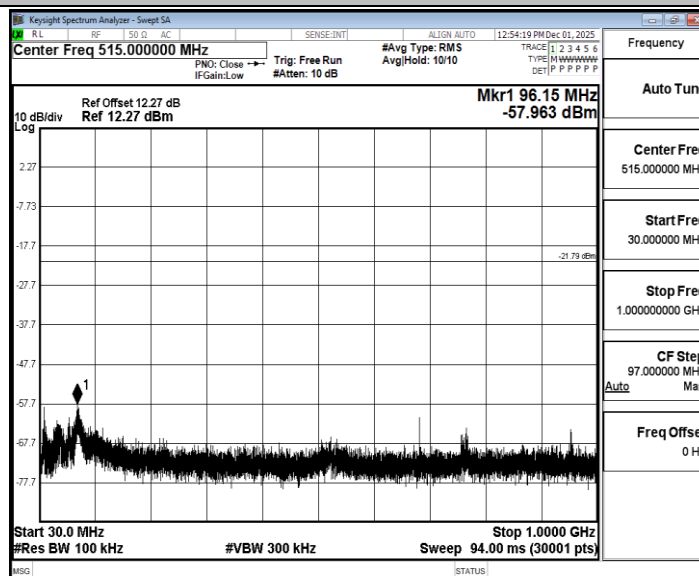
BLE_1M_Ant1_2402_1000~26500



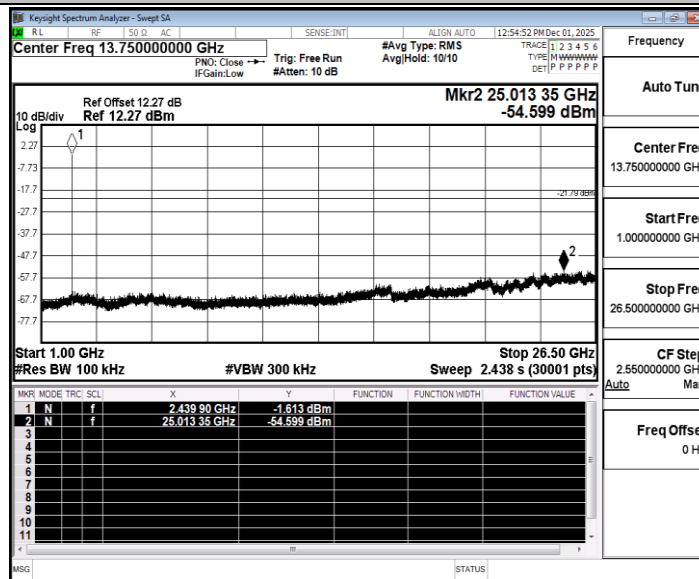
BLE_1M_Ant1_2440_0~Reference



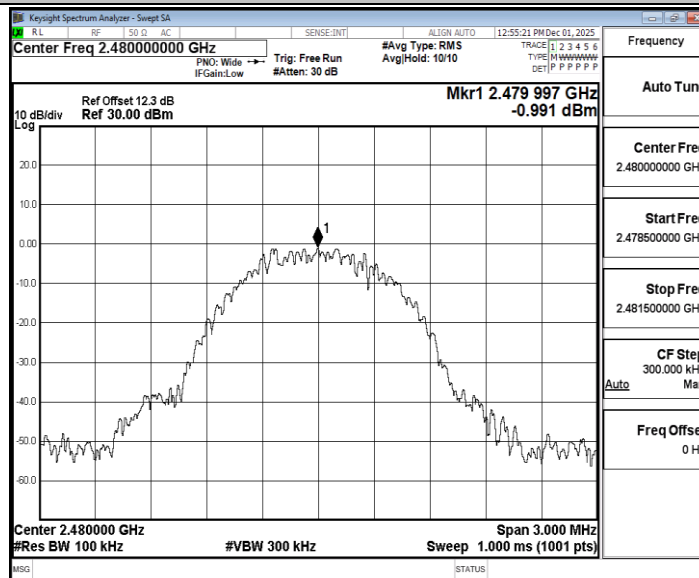
BLE_1M_Ant1_2440_30~1000



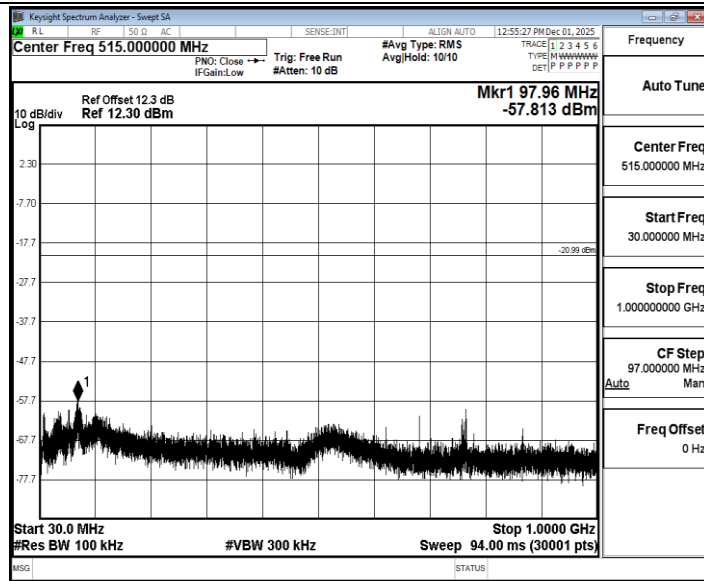
BLE_1M_Ant1_2440_1000~26500



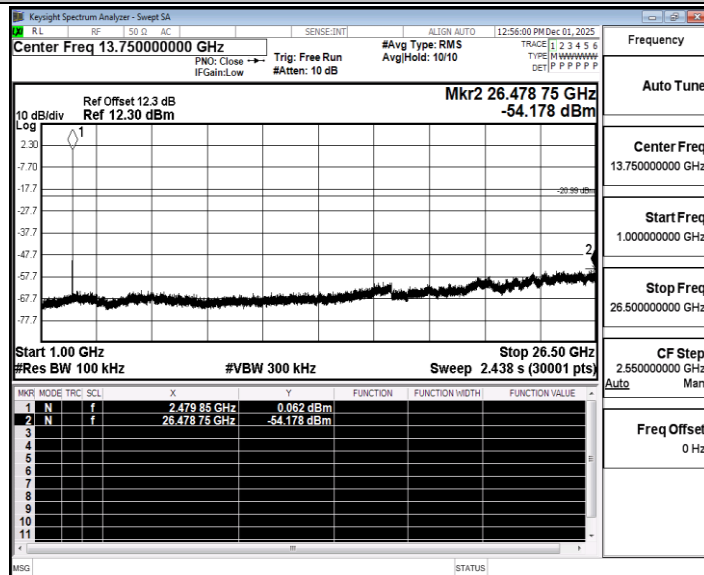
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



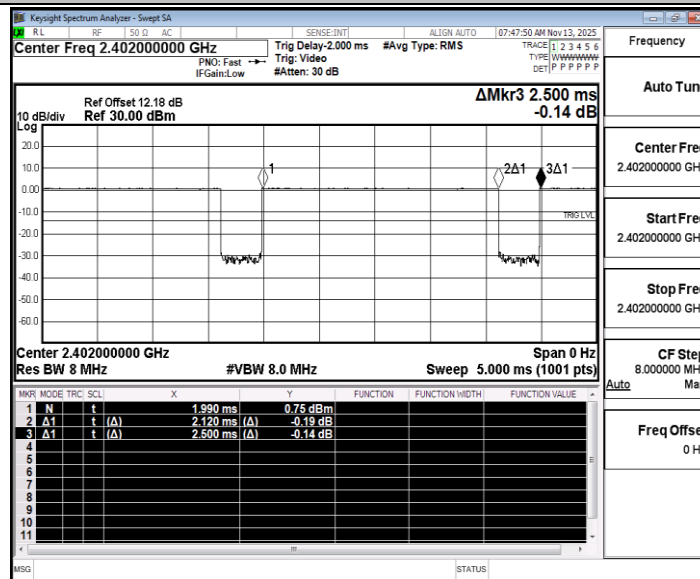
A.6 Duty Cycle

Test Result

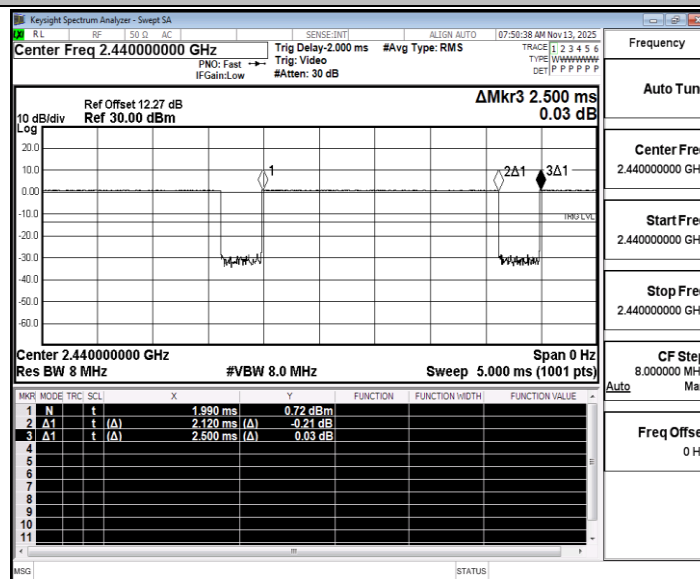
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.12	2.50	0.8480	84.80	0.72	---	---
		2440	2.12	2.50	0.8480	84.80	0.72	---	---
		2480	2.12	2.50	0.8480	84.80	0.72	---	---

Test Graphs

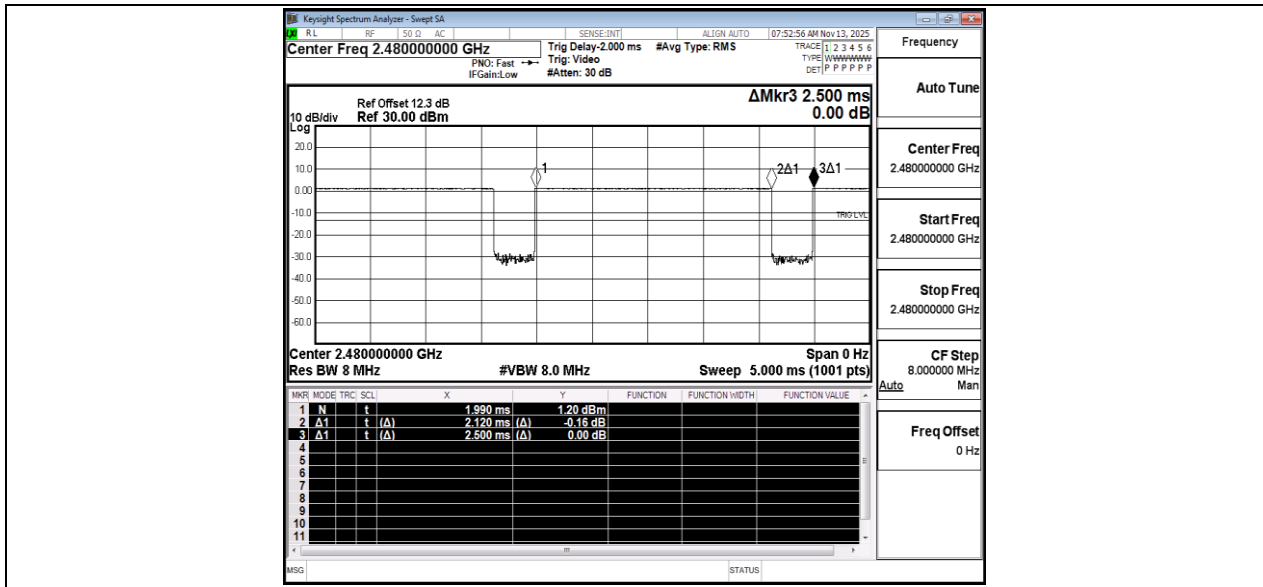
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



A.7 Restrict Band

Test Result

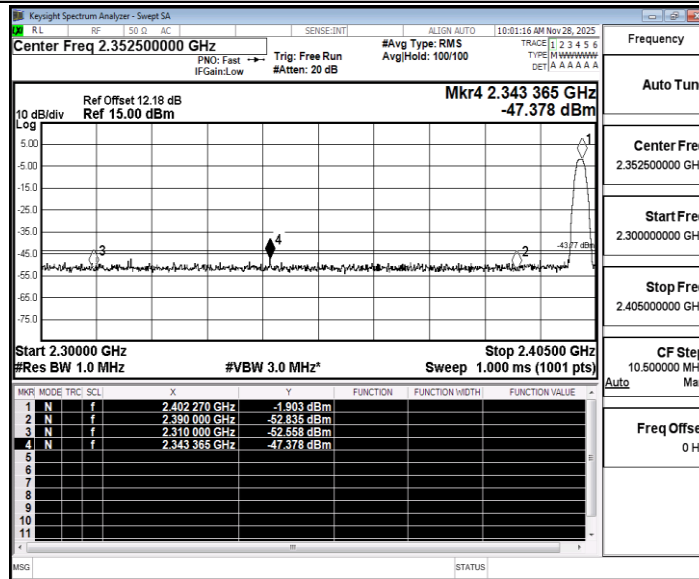
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-52.56	≤-43.77	0.72	43.36	≤54	PASS
				AV	2343.365	-47.38	≤-43.77	0.72	48.54	≤54	PASS
				AV	2390.000	-52.84	≤-43.77	0.72	43.08	≤54	PASS
				Peak	2310.000	-48.3	≤-23.20	0.00	46.9	≤74	PASS
				Peak	2325.305	-46.09	≤-23.20	0.00	49.11	≤74	PASS
				Peak	2390.000	-49.14	≤-23.20	0.00	46.06	≤74	PASS
		High	2480	AV	2483.500	-49.77	≤-43.77	0.72	46.15	≤54	PASS
				AV	2486.400	-48.03	≤-43.77	0.72	47.89	≤54	PASS
				AV	2500.000	-50.49	≤-43.77	0.72	45.43	≤54	PASS
				Peak	2483.500	-47.89	≤-23.20	0.00	47.31	≤74	PASS
				Peak	2485.120	-43.47	≤-23.20	0.00	51.73	≤74	PASS
				Peak	2500.000	-49.63	≤-23.20	0.00	45.57	≤74	PASS

Note:

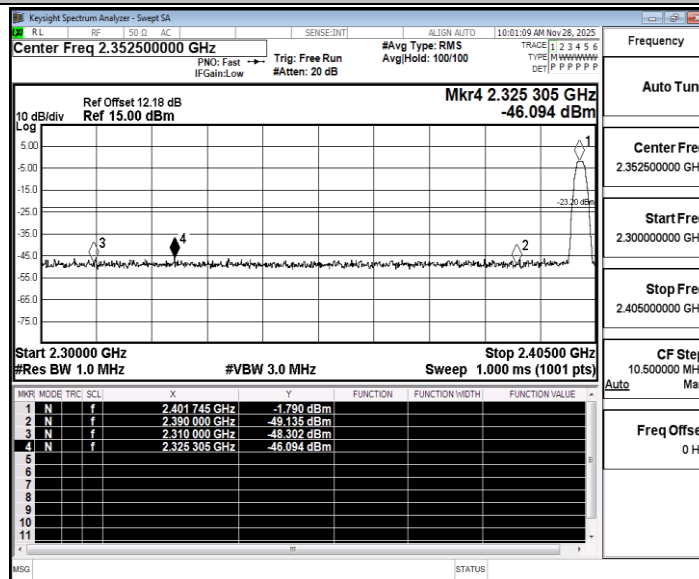
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

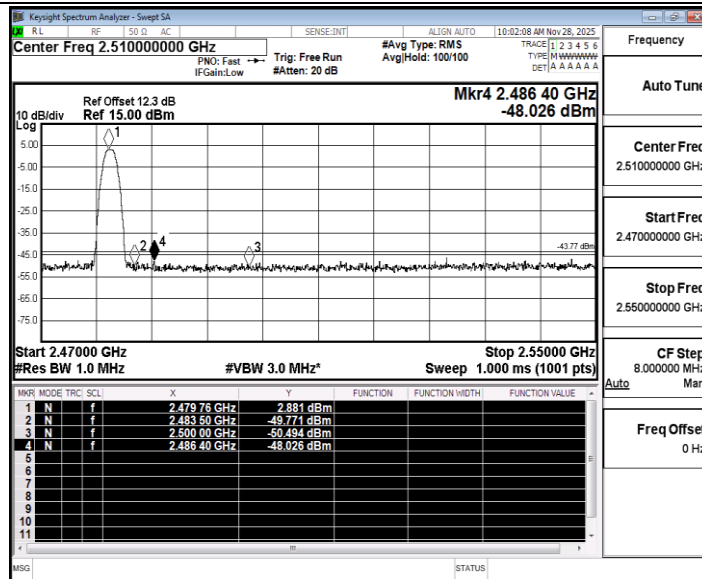
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

