

Appendix B

RF Test Data for BT LE(Conducted Measurement)

Product Name: XMARI Guitar

Test Model: XMARI

Environmental Conditions

Temperature:	24.1°C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Yan Chen
Supervised by:	Fengliu Tang

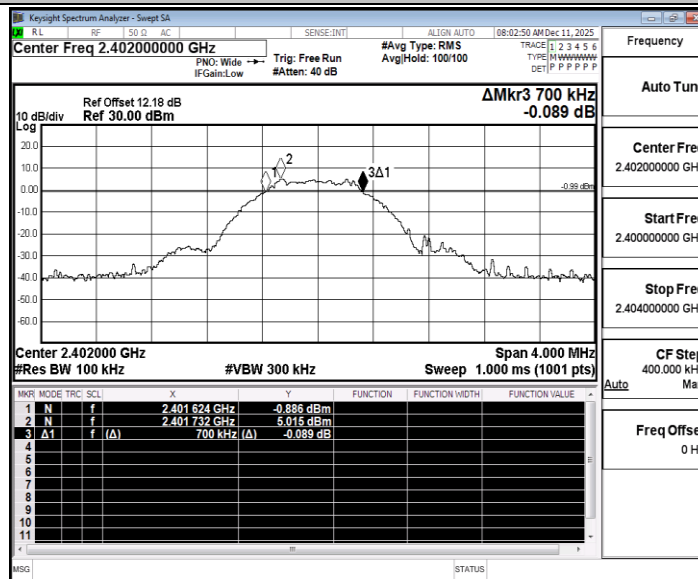
B.1 DTS Bandwidth

Test Result

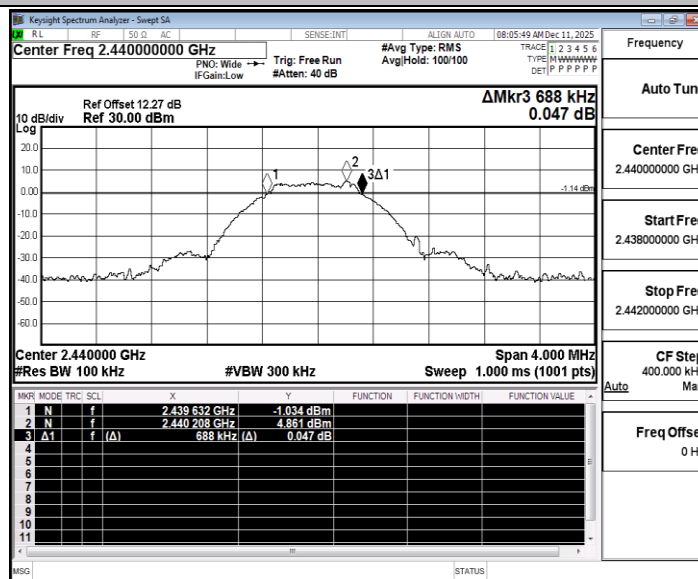
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.700	2401.624	2402.324	0.5	PASS
		2440	0.688	2439.632	2440.320	0.5	PASS
		2480	0.640	2479.648	2480.288	0.5	PASS

Test Graphs

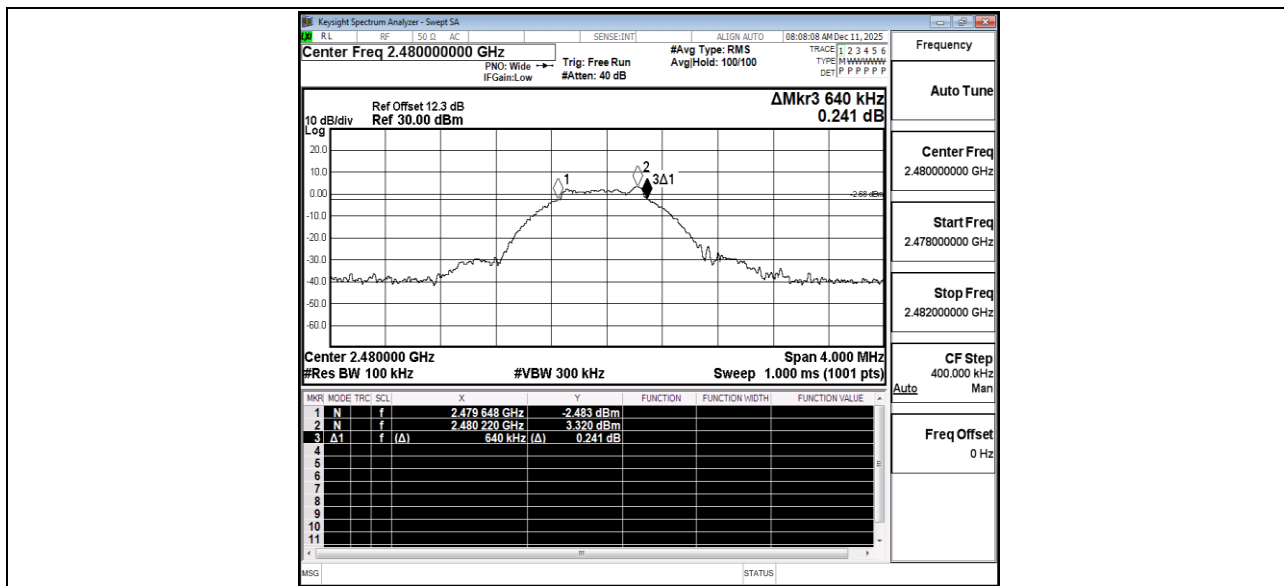
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



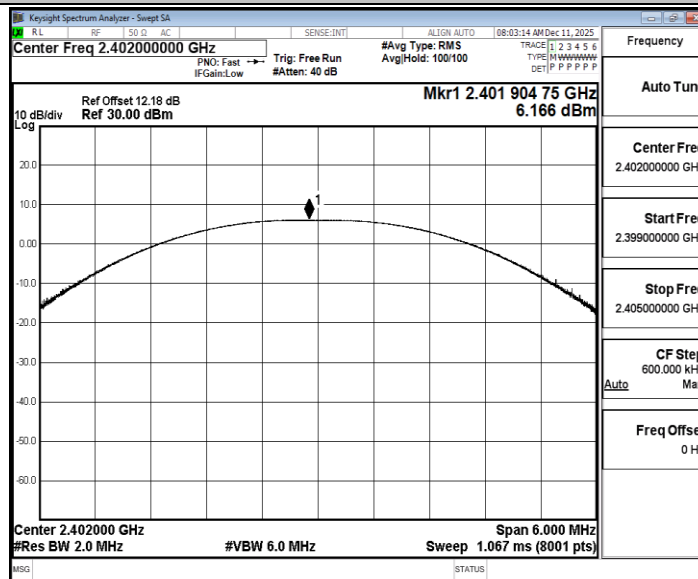
B.2 Maximum Peak Conducted Output Power

Test Result Peak

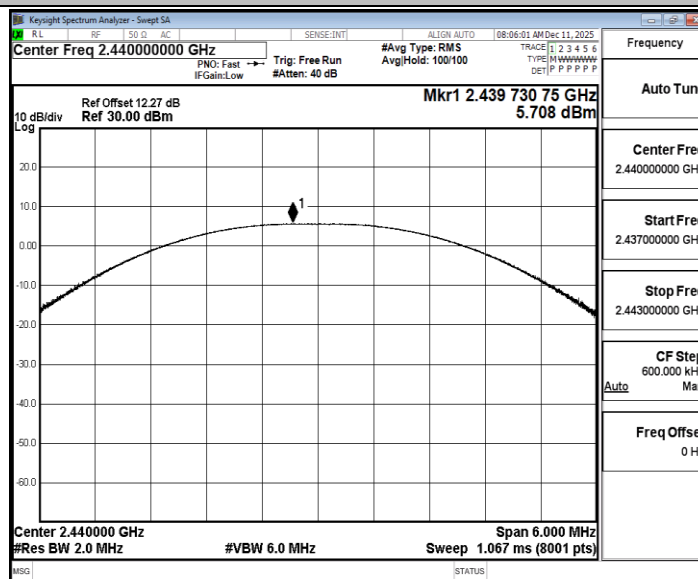
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.17	≤30	PASS
		2440	5.71	≤30	PASS
		2480	3.82	≤30	PASS

Test Graphs Peak

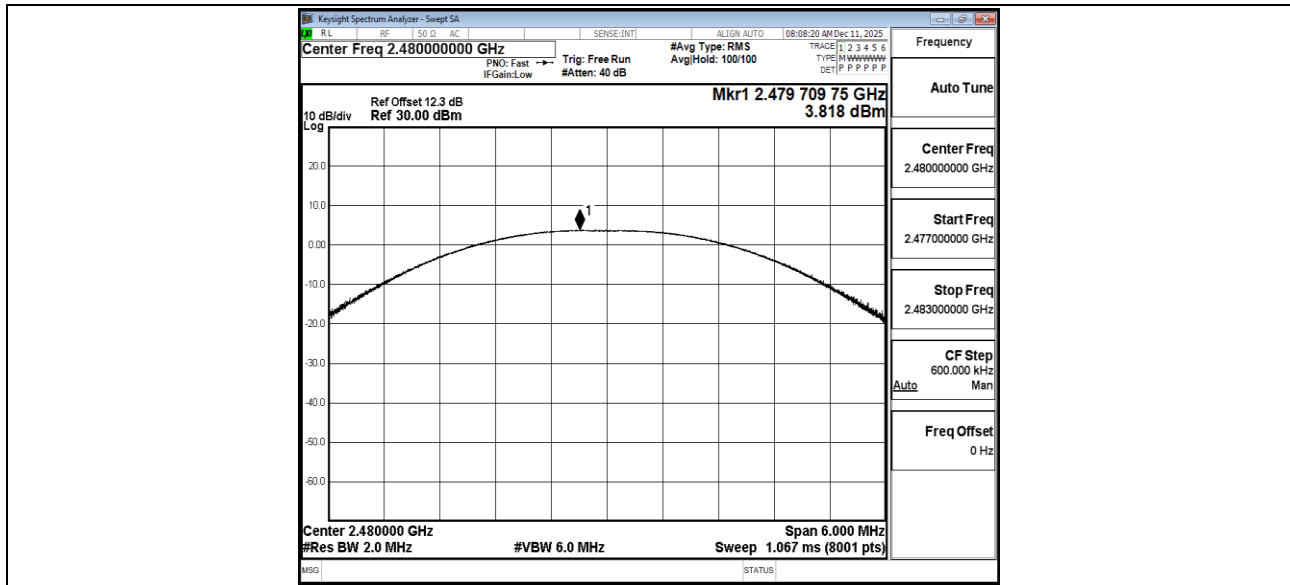
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



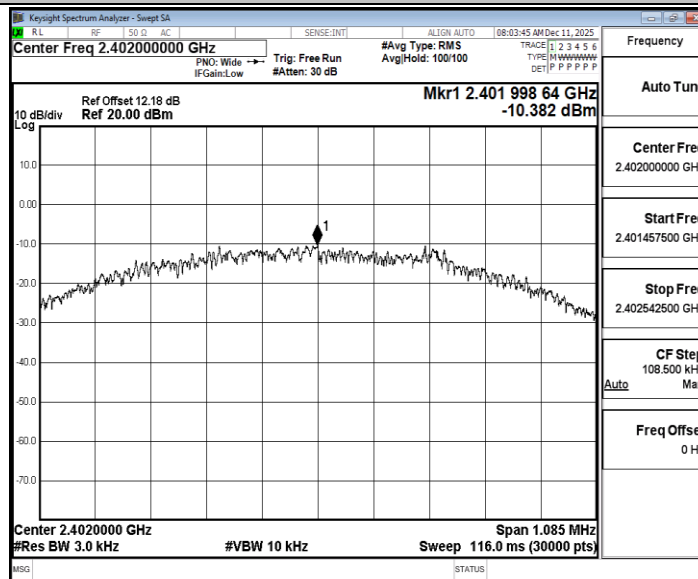
B.3 Maximum power spectral density

Test Result

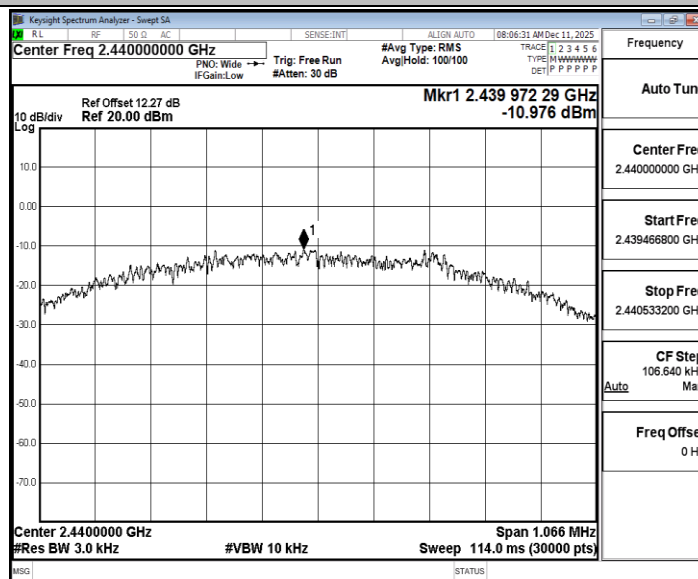
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.38	≤8.00	PASS
		2440	-10.98	≤8.00	PASS
		2480	-12.83	≤8.00	PASS

Test Graphs

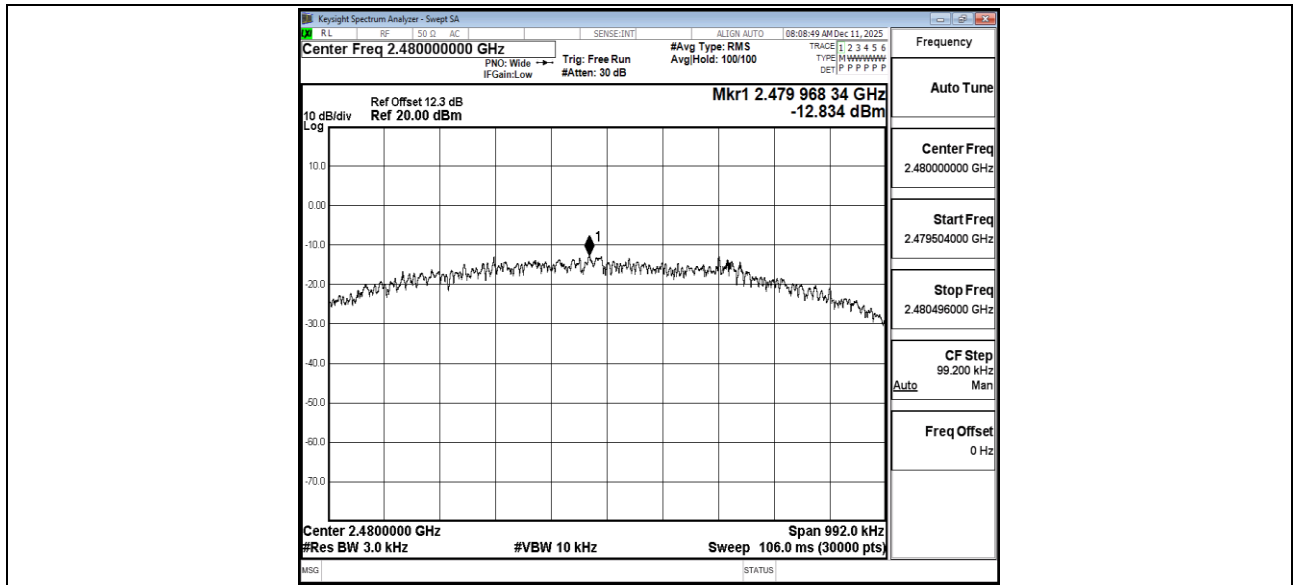
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



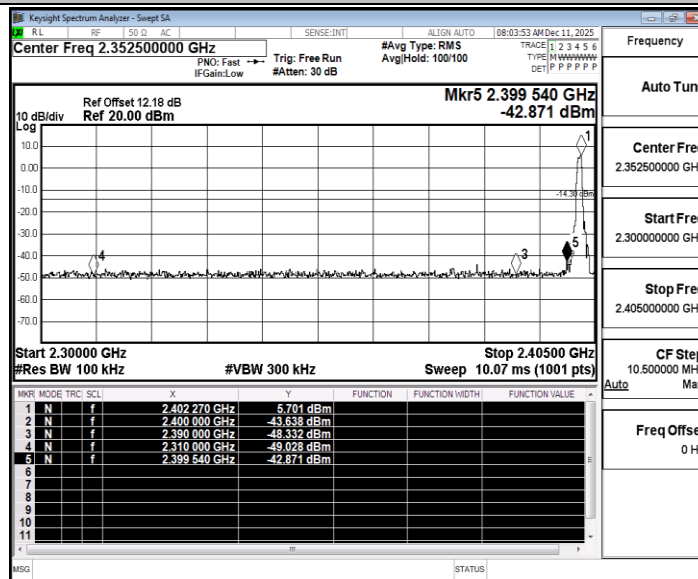
B.4 Band edge measurements

Test Result

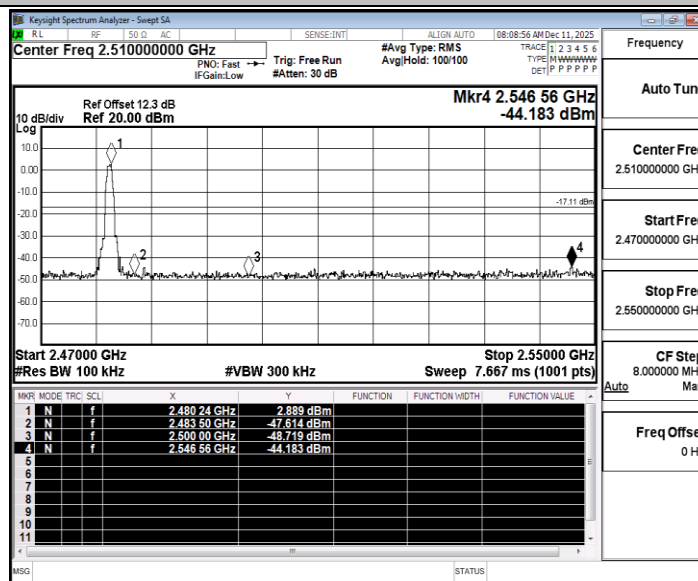
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	5.70	-42.87	≤-14.3	PASS
		High	2480	2.89	-44.18	≤-17.11	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



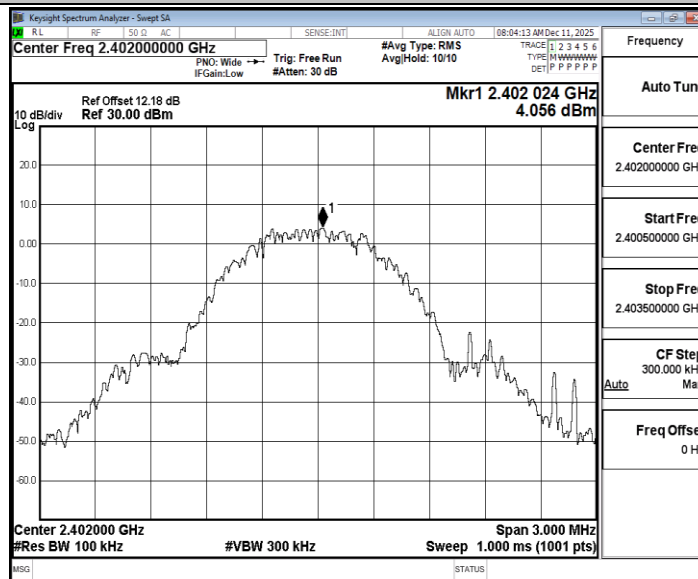
B.5 Conducted Spurious Emission

Test Result

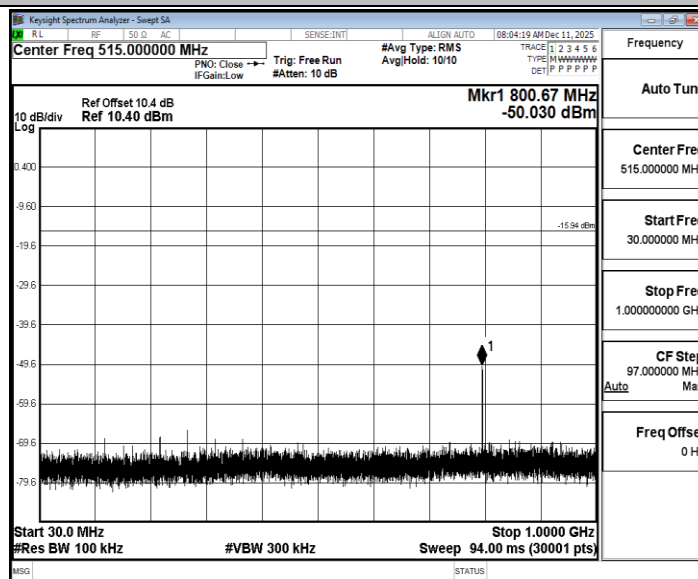
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	4.06	4.06	---	PASS
			30~1000	4.06	-50.03	≤-15.94	PASS
			1000~26500	4.06	-23.45	≤-15.94	PASS
		2440	Reference	3.82	3.82	---	PASS
			30~1000	3.82	-50.47	≤-16.18	PASS
			1000~26500	3.82	-22.42	≤-16.18	PASS
		2480	Reference	3.04	3.04	---	PASS
			30~1000	3.04	-51.76	≤-16.96	PASS
			1000~26500	3.04	-24.25	≤-16.96	PASS

Test Graphs

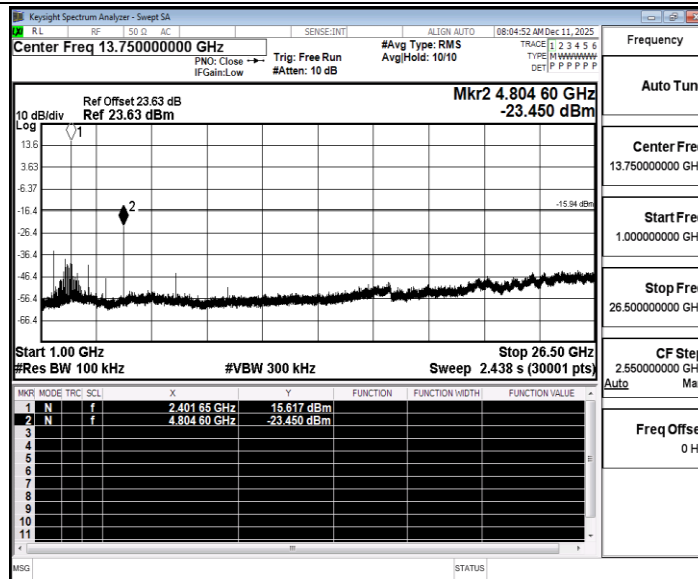
BLE_1M_Ant1_2402_0~Reference



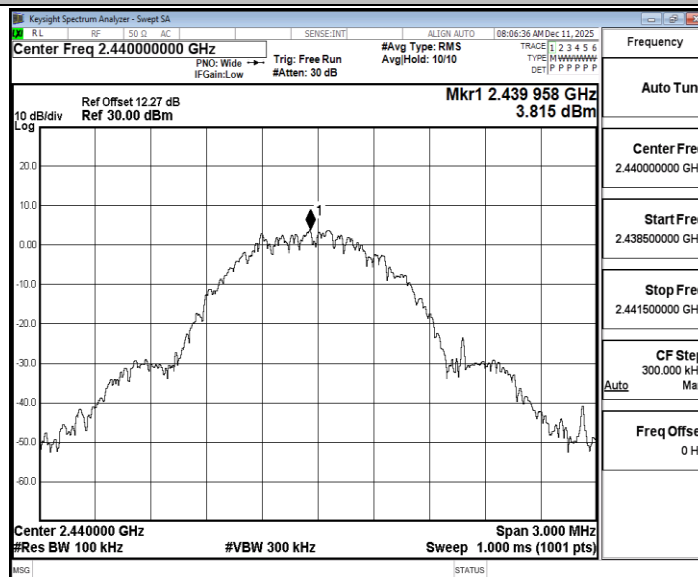
BLE_1M_Ant1_2402_30~1000



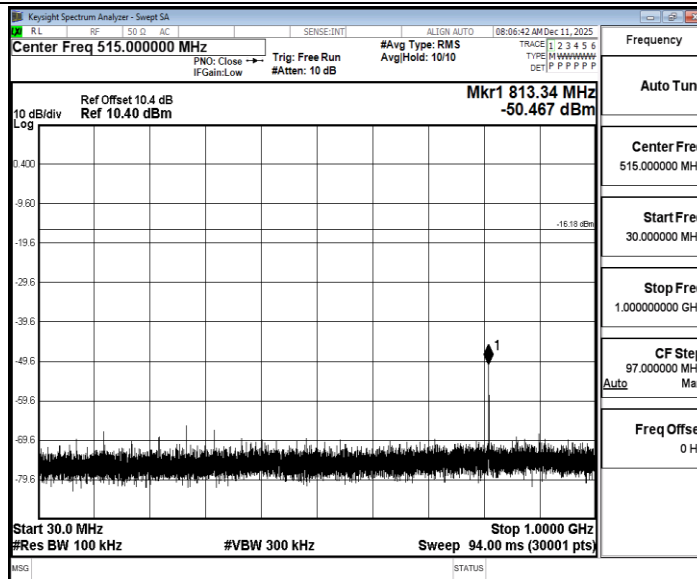
BLE_1M_Ant1_2402_1000~26500



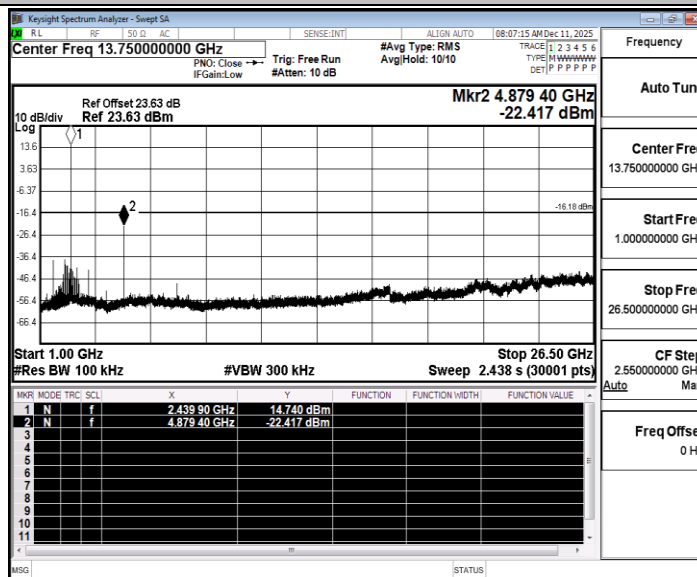
BLE_1M_Ant1_2440_0~Reference



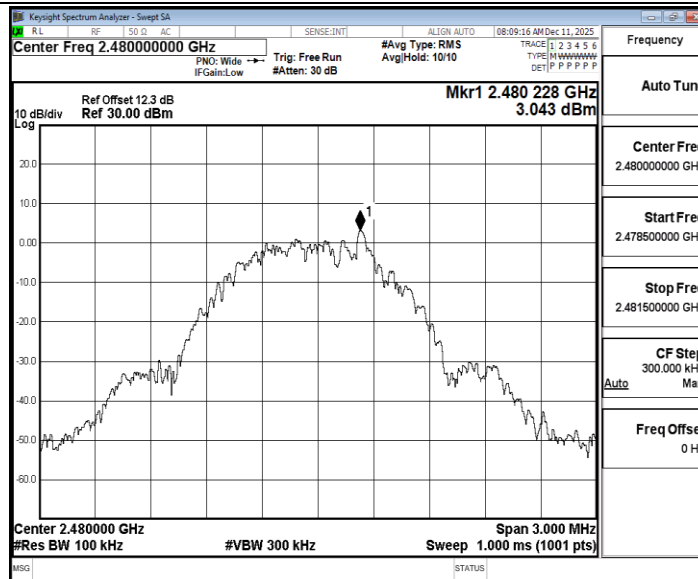
BLE_1M_Ant1_2440_30~1000



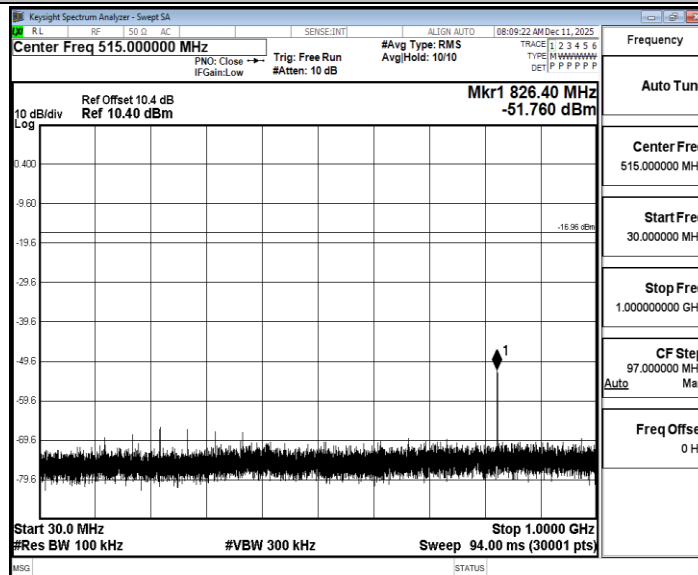
BLE_1M_Ant1_2440_1000~26500



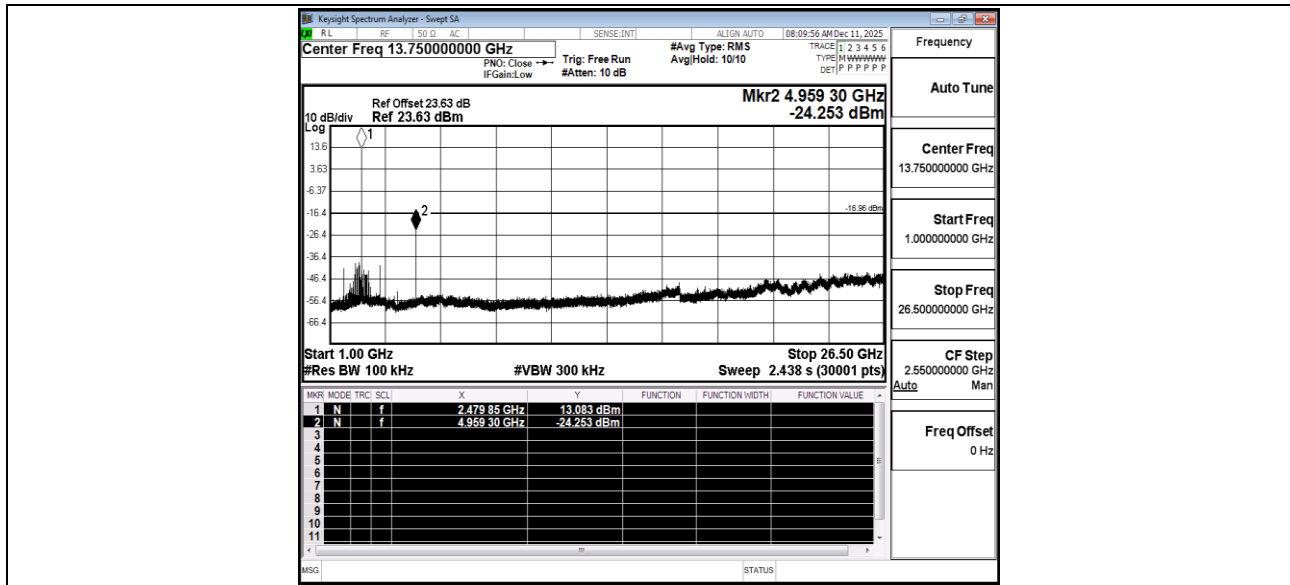
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



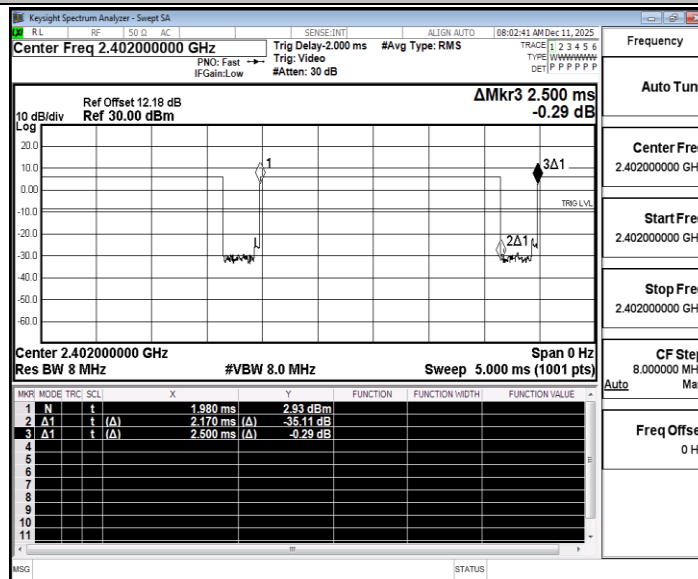
B.6 Duty Cycle

Test Result

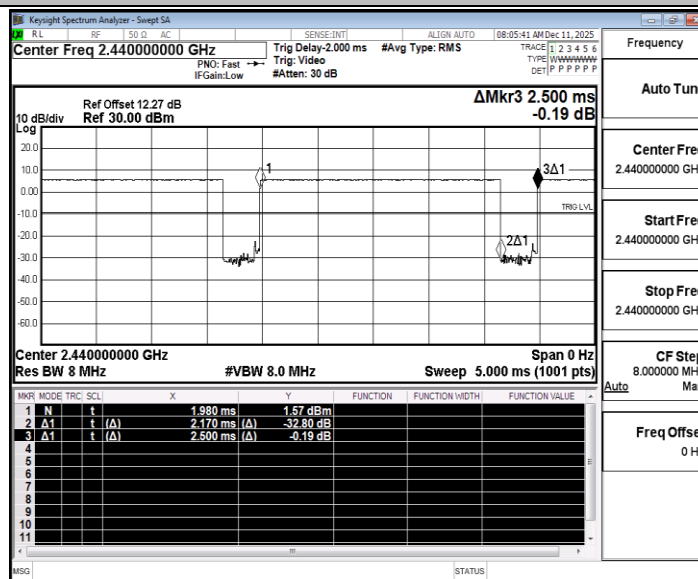
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.17	2.50	0.8680	86.80	0.61	---	---
		2440	2.17	2.50	0.8680	86.80	0.61	---	---
		2480	2.16	2.50	0.8640	86.40	0.63	---	---

Test Graphs

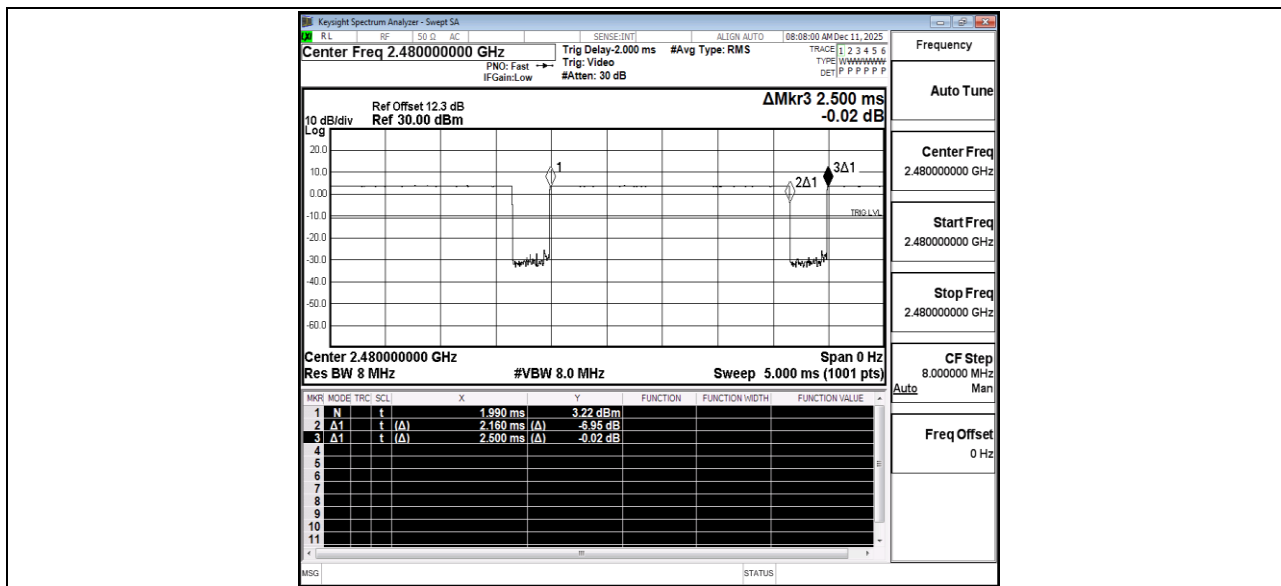
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



B.7 Emissions in Restricted Bands

Test Result

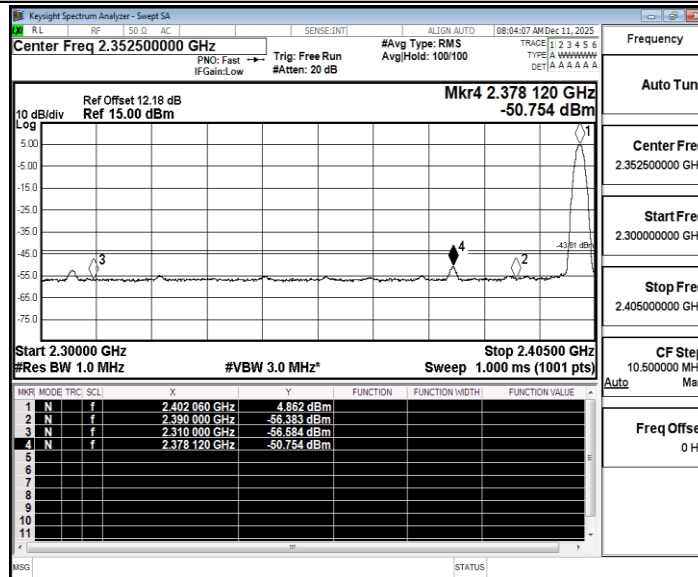
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-56.58	≤-43.81	2.00	0.61	41.23	≤54	PASS
				AV	2378.120	-50.75	≤-43.81	2.00	0.61	47.06	≤54	PASS
				AV	2390.000	-56.38	≤-43.81	2.00	0.61	41.43	≤54	PASS
				Peak	2310.000	-49.81	≤-23.20	2.00	0.00	47.39	≤74	PASS
				Peak	2378.120	-44.39	≤-23.20	2.00	0.00	52.81	≤74	PASS
				Peak	2390.000	-47.23	≤-23.20	2.00	0.00	49.97	≤74	PASS
		High	2480	AV	2483.500	-55.93	≤-43.83	2.00	0.63	41.90	≤54	PASS
				AV	2485.360	-52.7	≤-43.83	2.00	0.63	45.13	≤54	PASS
				AV	2500.000	-56.3	≤-43.83	2.00	0.63	41.53	≤54	PASS
				Peak	2483.500	-47.85	≤-23.20	2.00	0.00	49.35	≤74	PASS
				Peak	2485.920	-44.8	≤-23.20	2.00	0.00	52.40	≤74	PASS
				Peak	2500.000	-49.34	≤-23.20	2.00	0.00	47.86	≤74	PASS

Note:

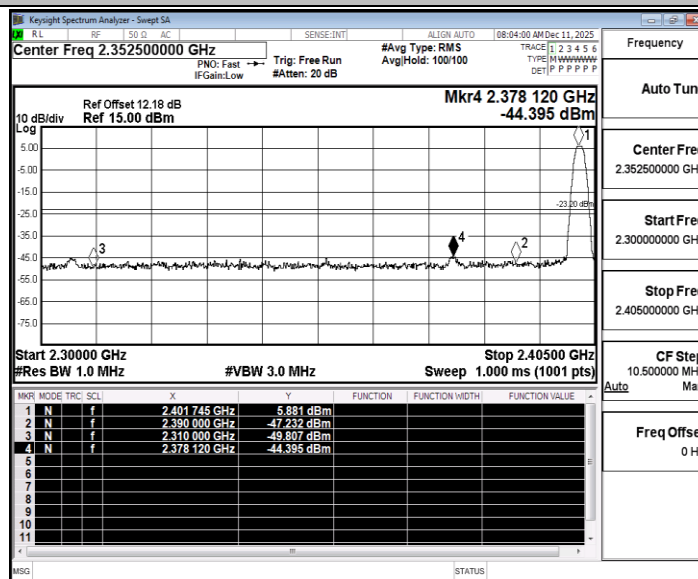
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

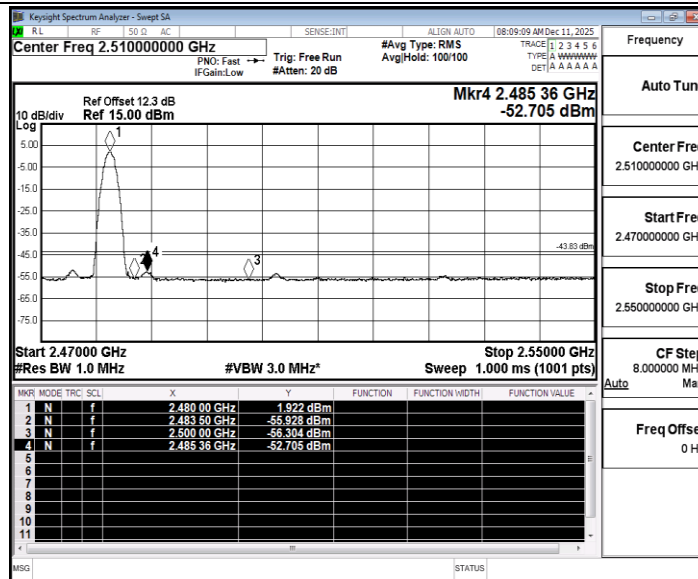
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

