

Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Car Radio

Test Model: A5

Environmental Conditions

Temperature:	26.2°C
Relative Humidity:	57.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

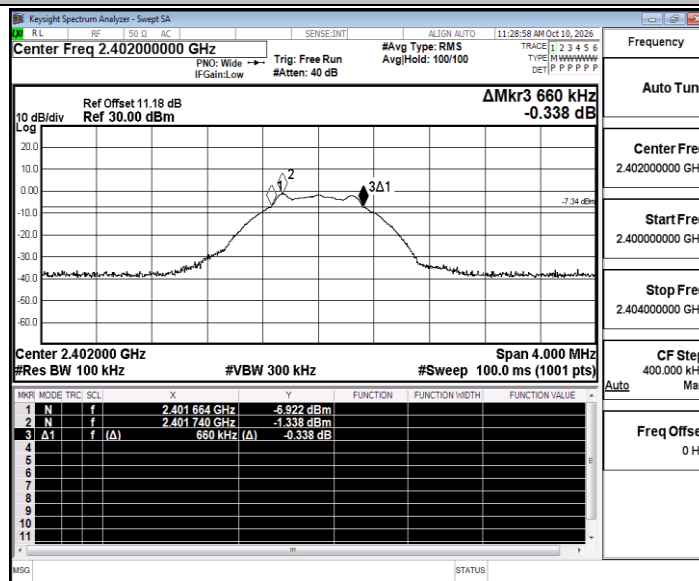
B.1 DTS Bandwidth

Test Result

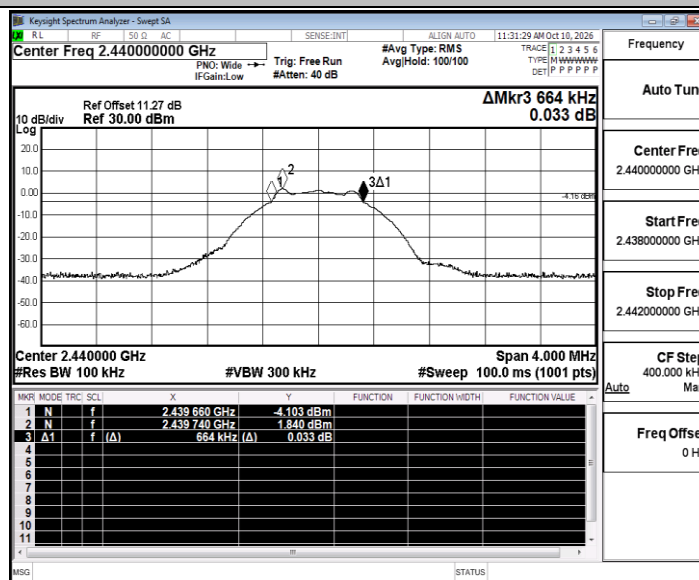
TestMode	Antenna	Freq (MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.664	2402.324	0.5	PASS
		2440	0.664	2439.660	2440.324	0.5	PASS
		2480	0.664	2479.660	2480.324	0.5	PASS

Test Graphs

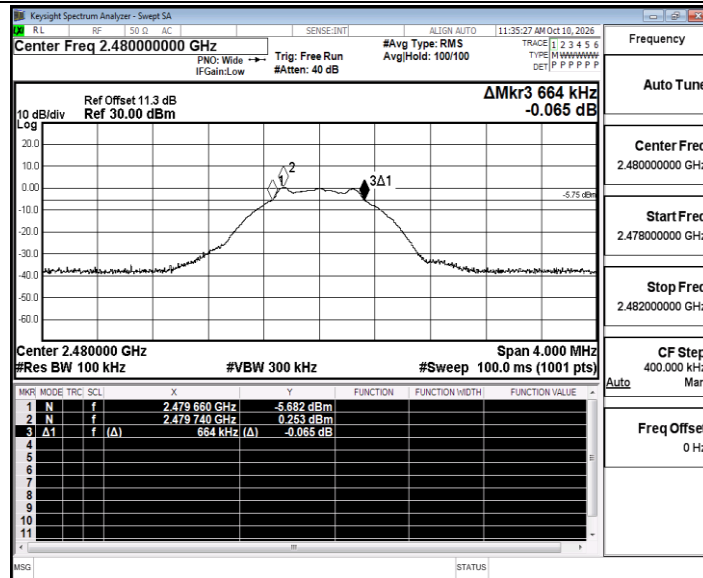
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



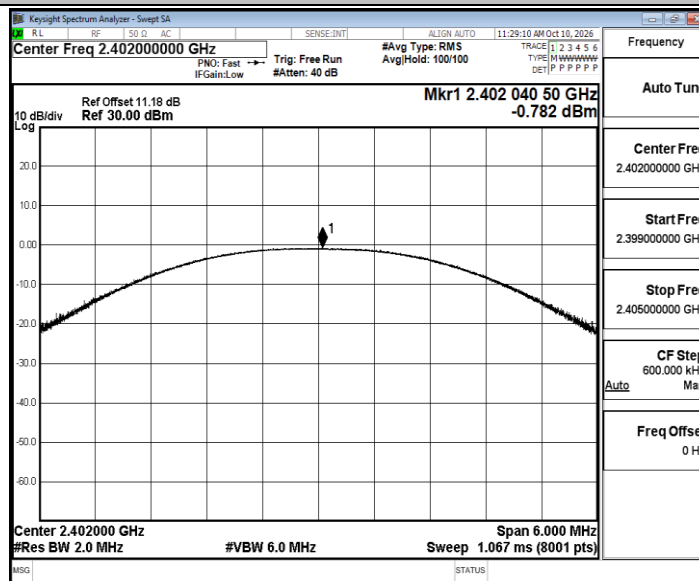
B.2 Maximum Peak conducted output power

Test Result Peak

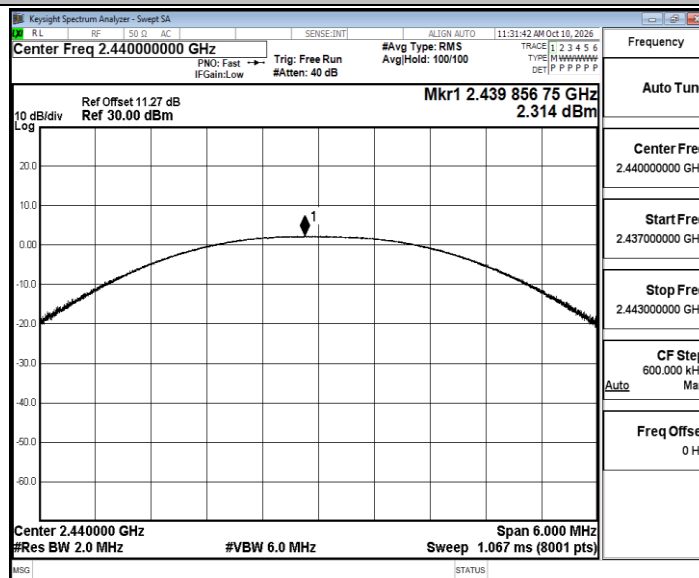
TestMode	Antenna	Freq (MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.78	≤30	PASS
		2440	2.31	≤30	PASS
		2480	0.89	≤30	PASS

Test Graphs Peak

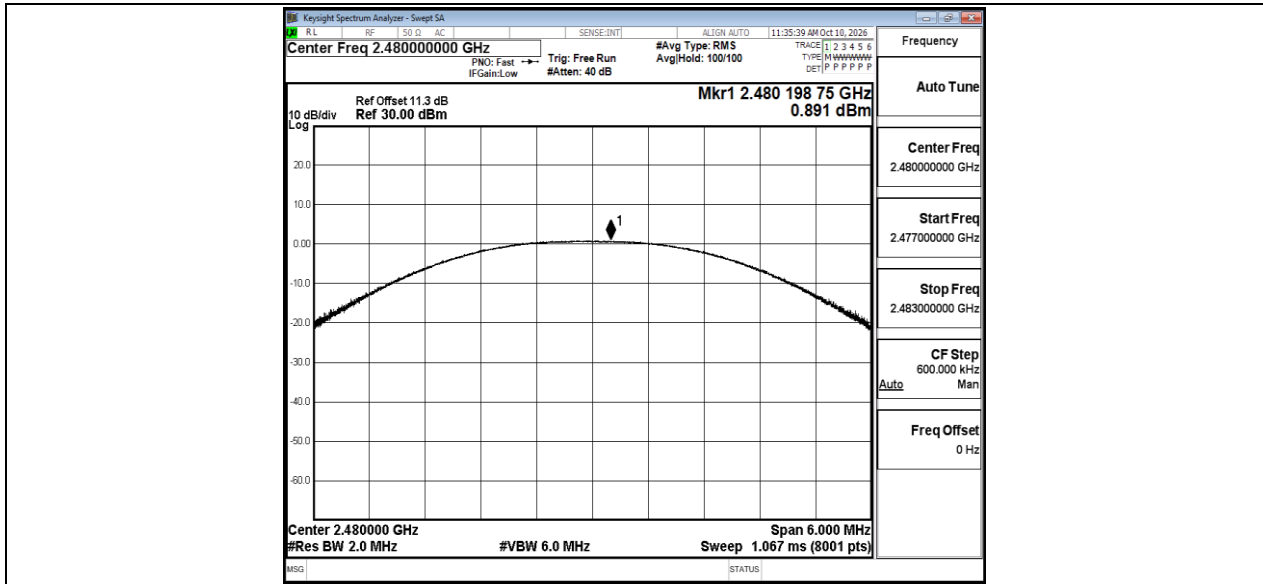
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



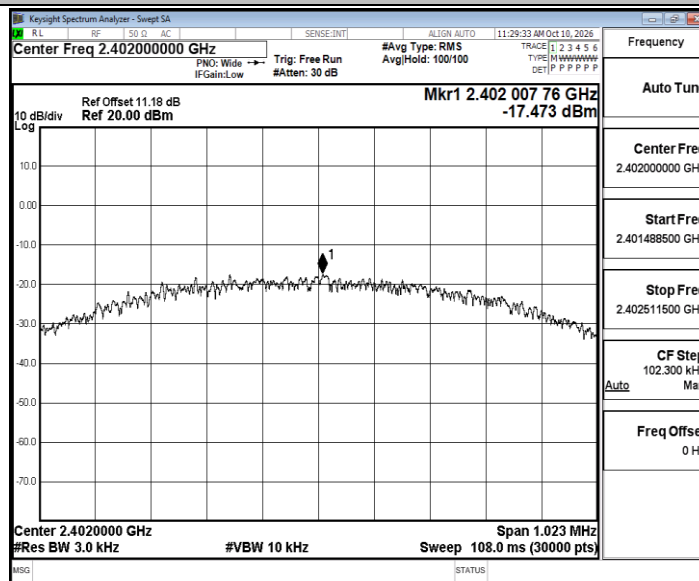
B.3 Maximum power spectral density

Test Result

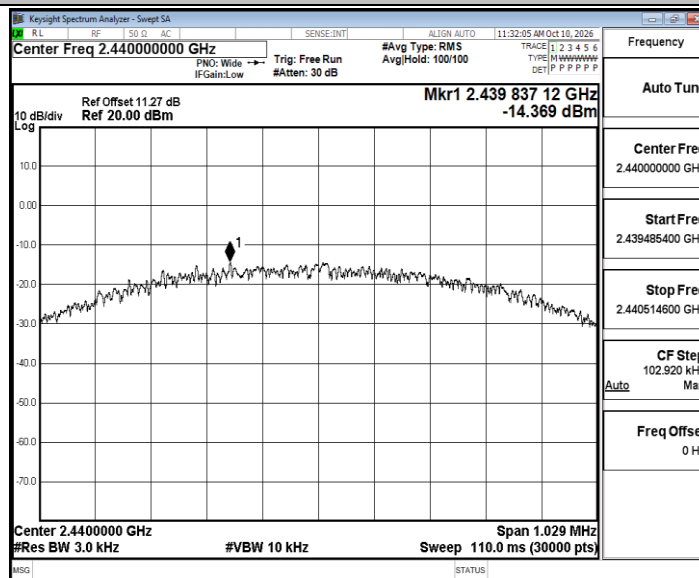
TestMode	Antenna	Freq (MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-17.47	≤8.00	PASS
		2440	-14.37	≤8.00	PASS
		2480	-15.91	≤8.00	PASS

Test Graphs

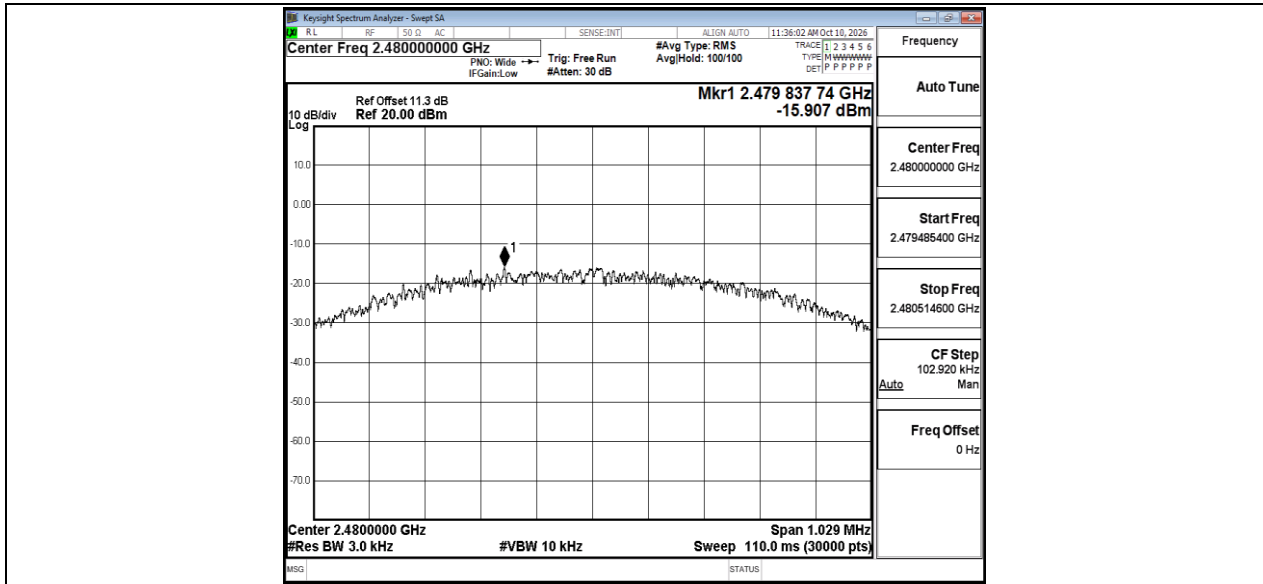
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

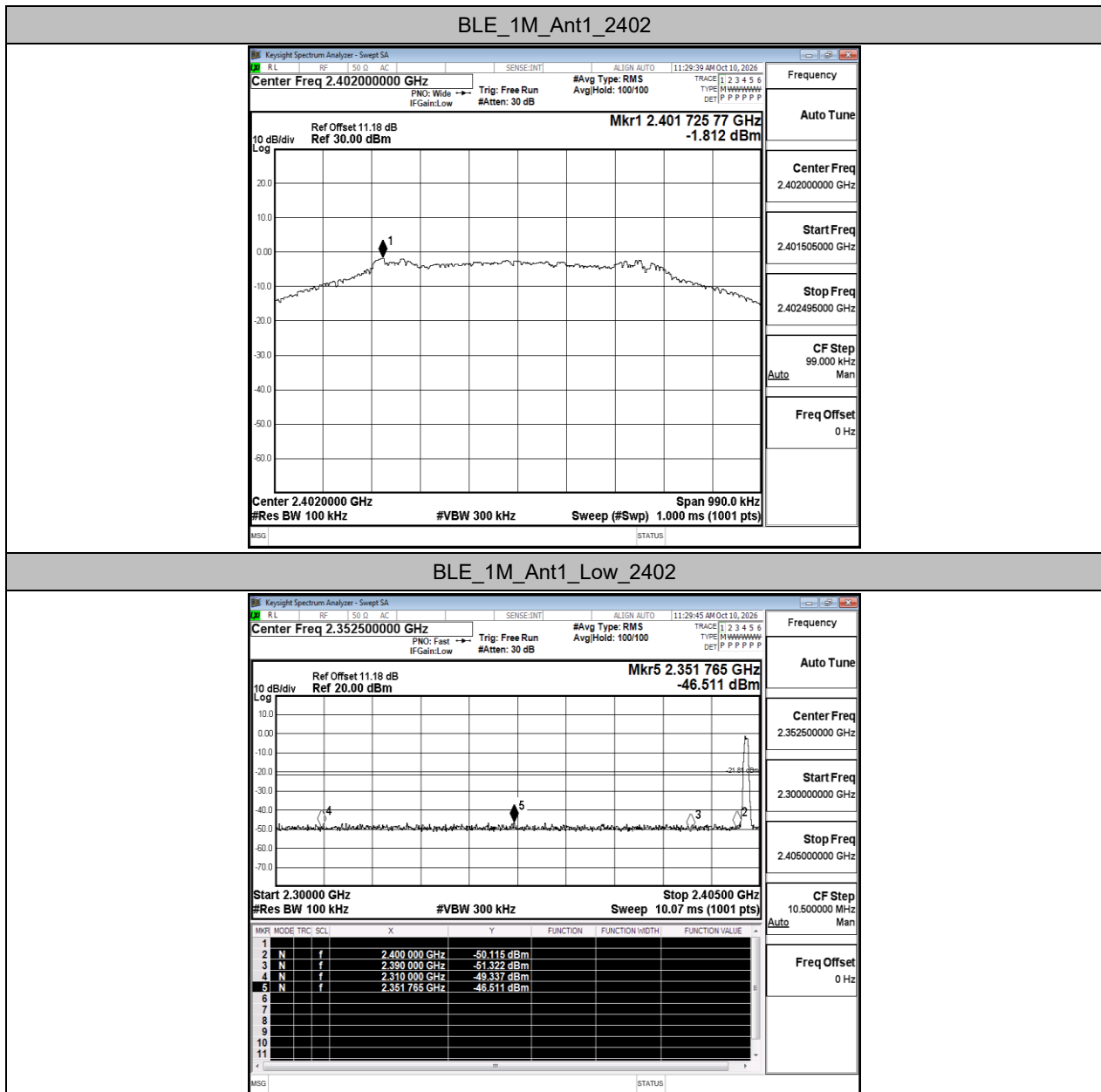


B.4 Band edge measurements

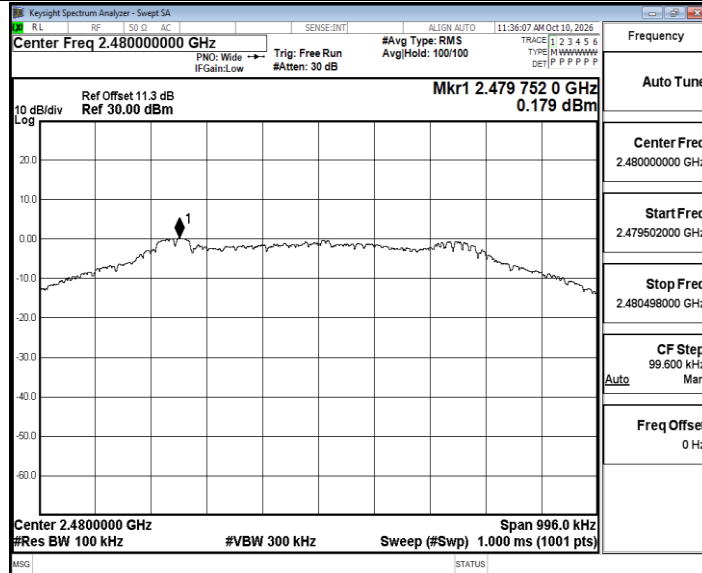
Test Result

TestMode	Antenna	ChName	Freq (MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.81	-46.51	≤-21.81	PASS
		High	2480	0.18	-45.12	≤-19.82	PASS

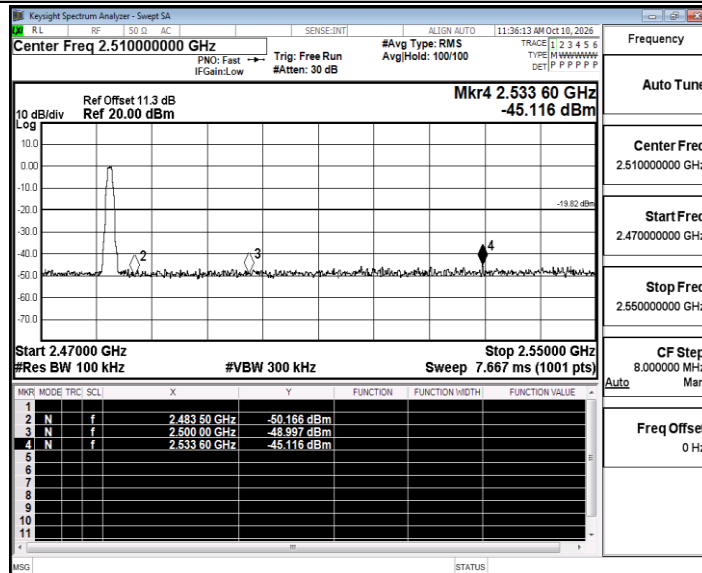
Test Graphs



BLE_1M_Ant1_2480



BLE_1M_Ant1_High_2480



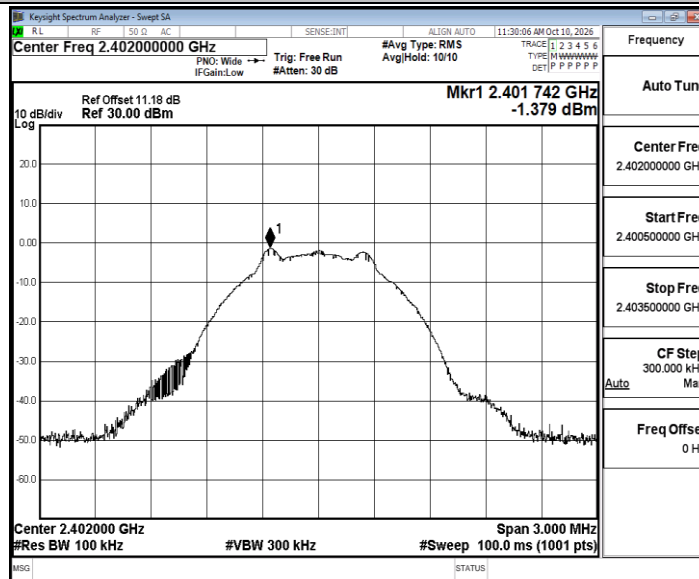
B.5 Conducted Spurious Emission

Test Result

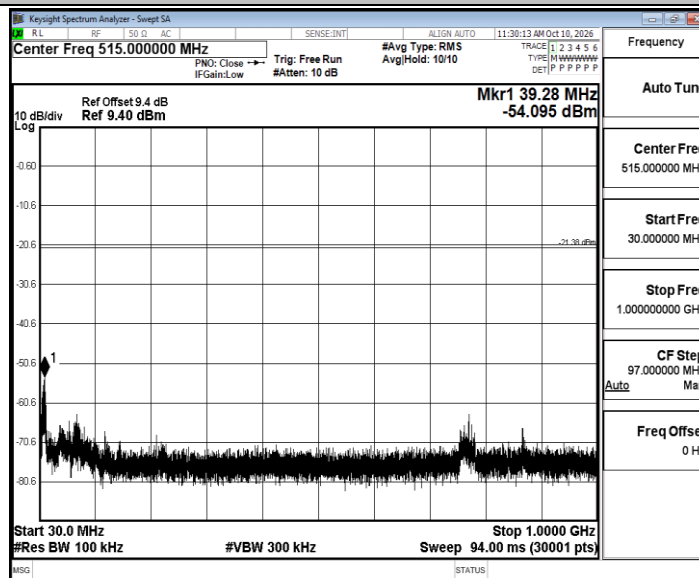
TestMode	Antenna	Freq (MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.38	-1.38	---	PASS
			30~1000	-1.38	-54.1	≤-21.38	PASS
			1000~26500	-1.38	-42.42	≤-21.38	PASS
		2440	Reference	1.74	1.74	---	PASS
			30~1000	1.74	-55.12	≤-18.26	PASS
			1000~26500	1.74	-44.26	≤-18.26	PASS
		2480	Reference	0.25	0.25	---	PASS
			30~1000	0.25	-59.15	≤-19.75	PASS
			1000~26500	0.25	-44.29	≤-19.75	PASS

Test Graphs

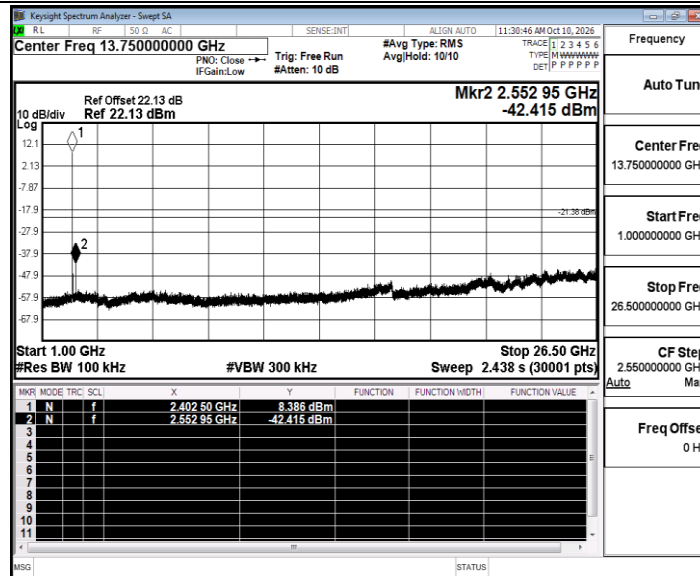
BLE_1M_Ant1_2402_0~Reference



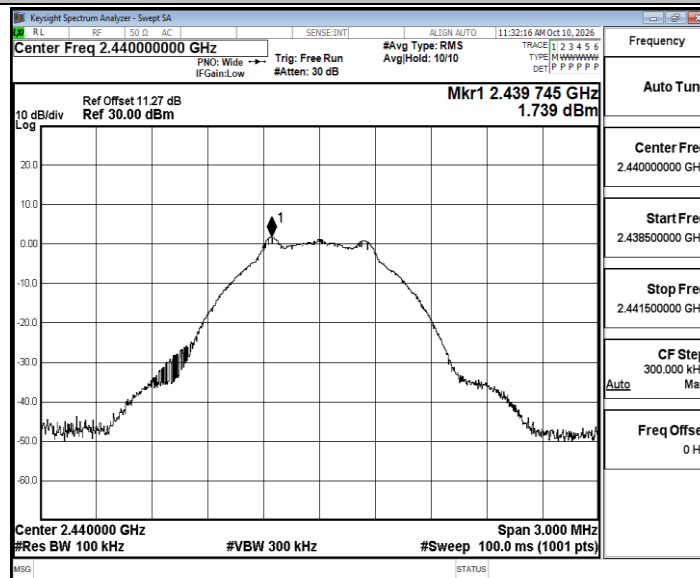
BLE_1M_Ant1_2402_30~1000



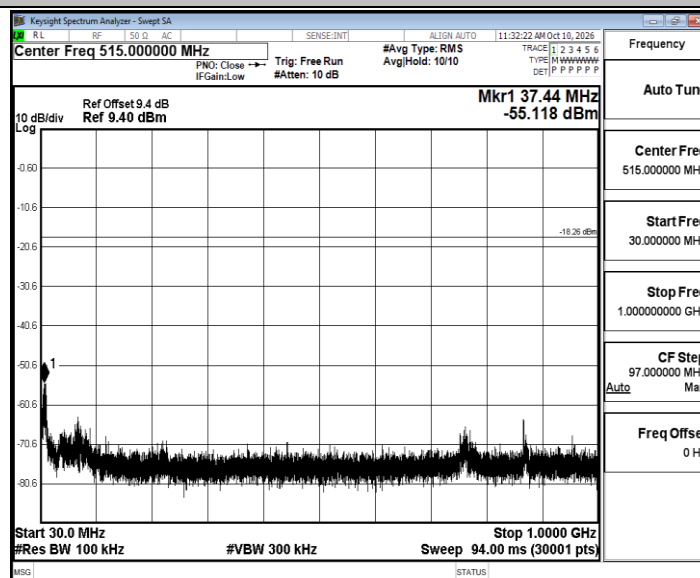
BLE_1M_Ant1_2402_1000~26500



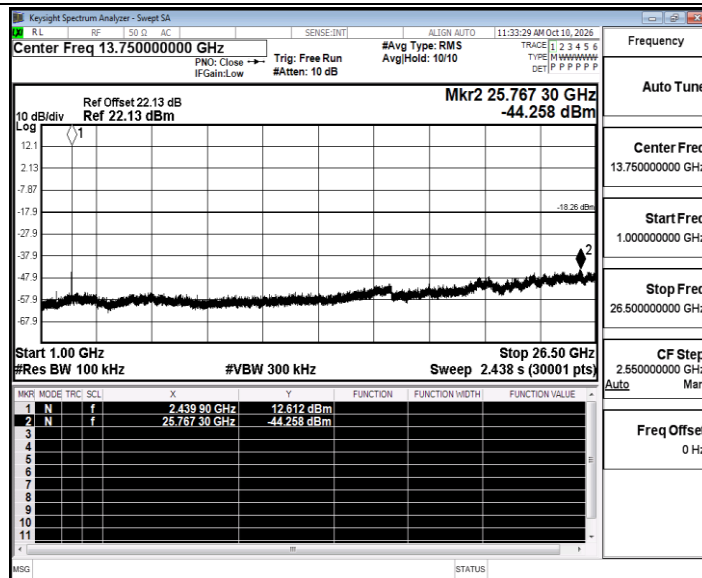
BLE_1M_Ant1_2440_0~Reference



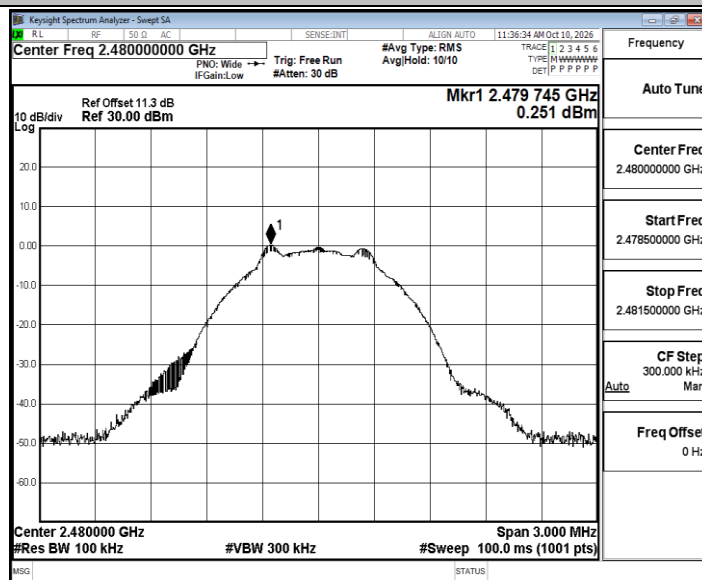
BLE_1M_Ant1_2440_30~1000



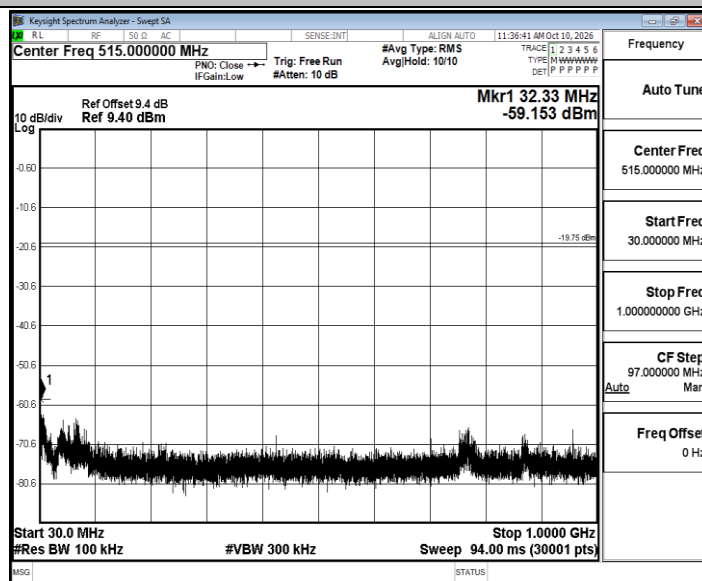
BLE_1M_Ant1_2440_1000~26500



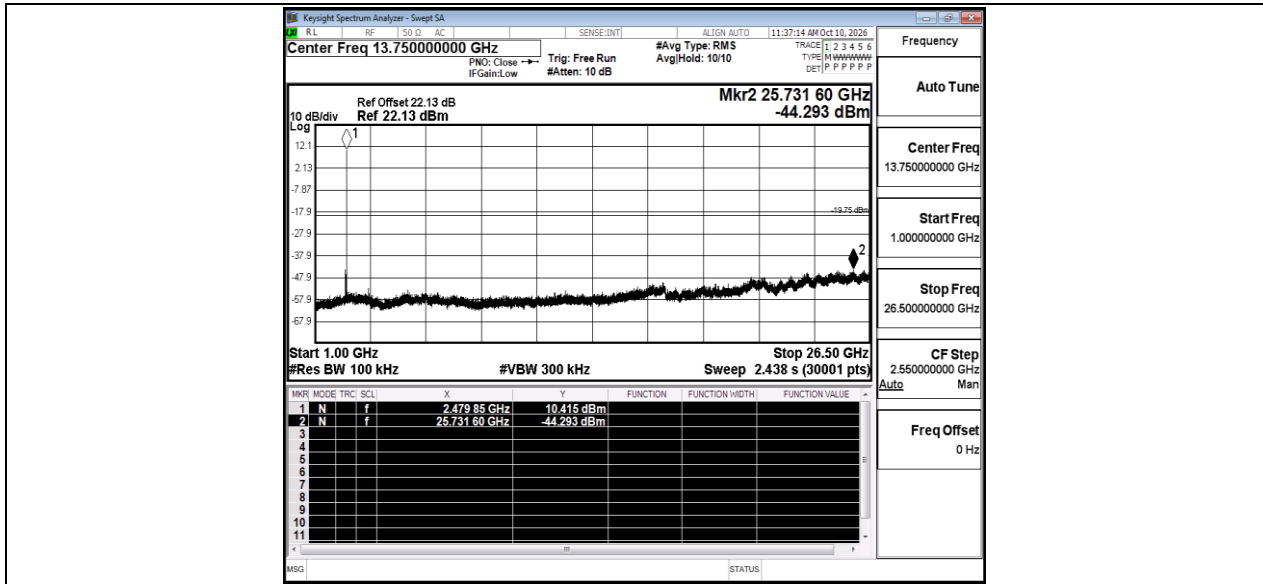
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



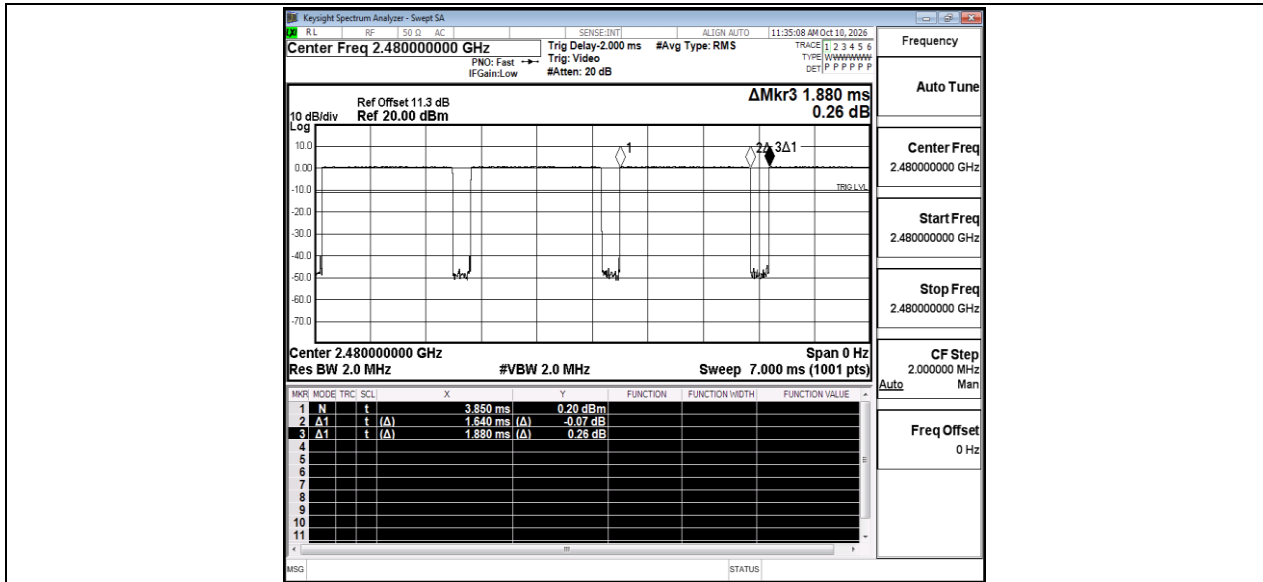
B.6 Duty Cycle

Test Result

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

Test Graphs





B.7 Emissions in Restricted Bands

Test Result

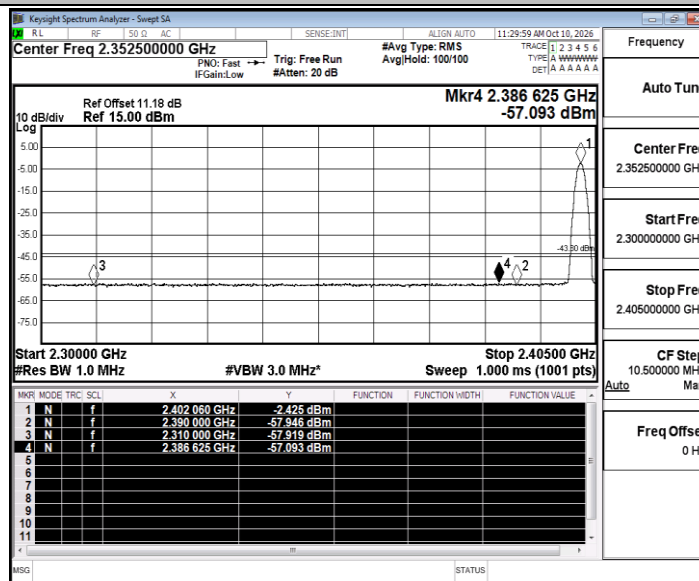
TestMode	Antenna	ChName	Freq (MHz)	Detect or	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.92	≤-43.80	2.0	0.6	39.94	≤54	PASS
				AV	2386.625	-57.09	≤-43.80	2.0	0.6	40.77	≤54	PASS
				AV	2390.000	-57.95	≤-43.80	2.0	0.6	39.91	≤54	PASS
				Peak	2310.000	-48.96	≤-23.20	2.0	0	48.3	≤74	PASS
				Peak	2343.260	-46.13	≤-23.20	2.0	0	51.13	≤74	PASS
				Peak	2390.000	-48.65	≤-23.20	2.0	0	48.61	≤74	PASS
		High	2480	AV	2483.500	-57.45	≤-43.79	2.0	0.59	40.4	≤54	PASS
				AV	2483.840	-56.35	≤-43.79	2.0	0.59	41.5	≤54	PASS
				AV	2500.000	-57.69	≤-43.79	2.0	0.59	40.16	≤54	PASS
				Peak	2483.500	-49.31	≤-23.20	2.0	0	47.95	≤74	PASS
				Peak	2499.600	-47.54	≤-23.20	2.0	0	49.72	≤74	PASS
				Peak	2500.000	-49.5	≤-23.20	2.0	0	47.76	≤74	PASS

Note:

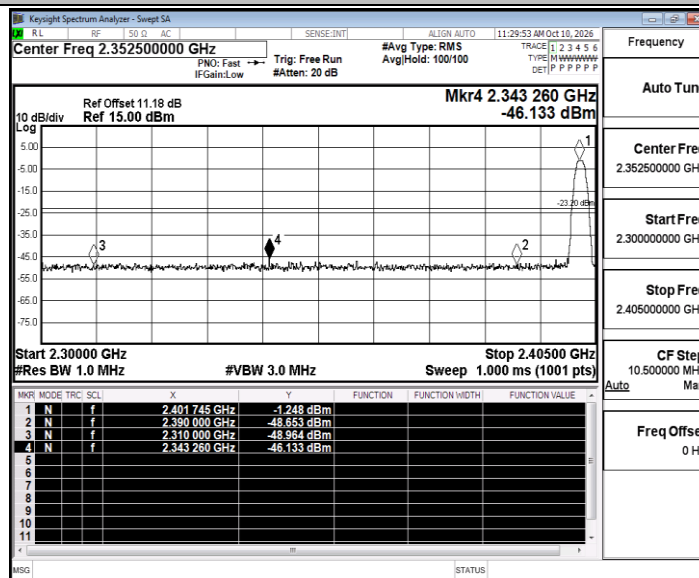
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

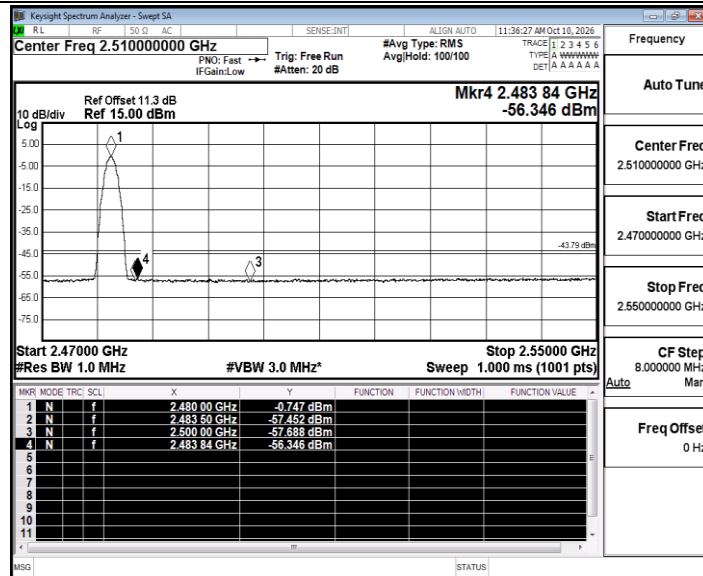
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

