Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: Smart Watch

Test Model: TS21

Environmental Conditions

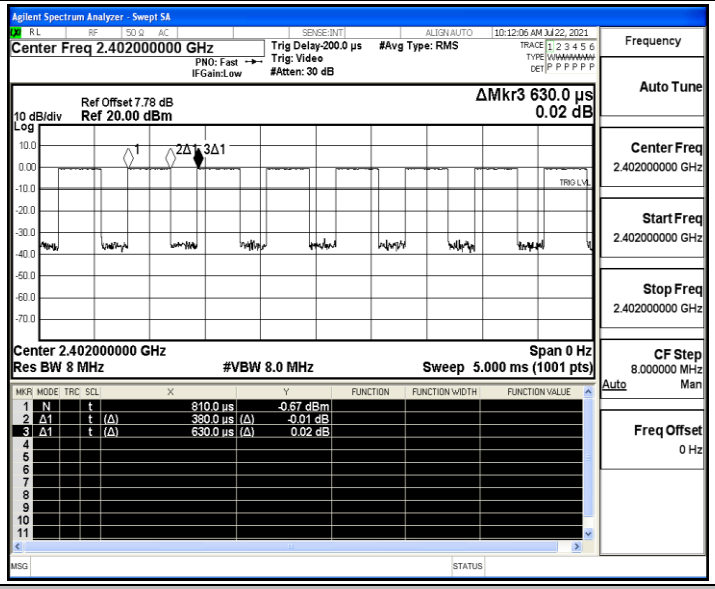
Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ken He
Supervised by:	Li Huan

B.1 Duty Cycle

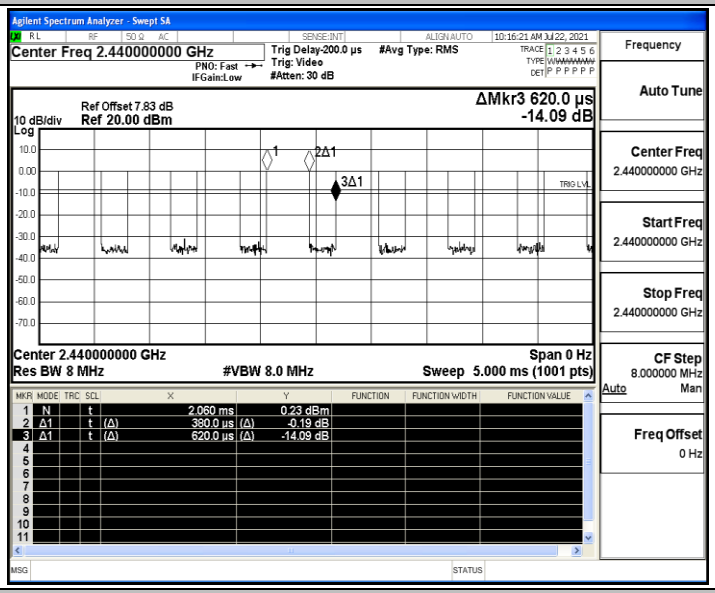
Test Result

TestMode	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	2402	0.38	0.63	0.6032	60.32	2.20	---	PASS
	2440	0.38	0.62	0.6129	61.29	2.13	---	PASS
	2480	0.38	0.63	0.6032	60.32	2.20	---	PASS

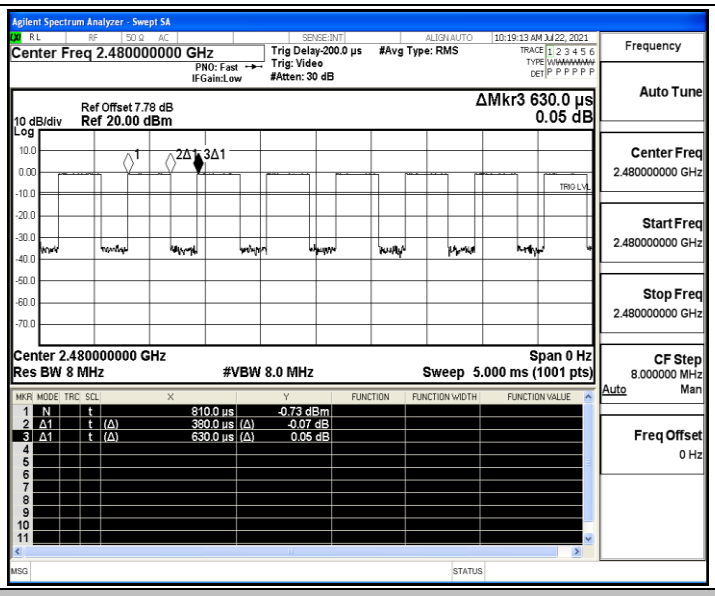
Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



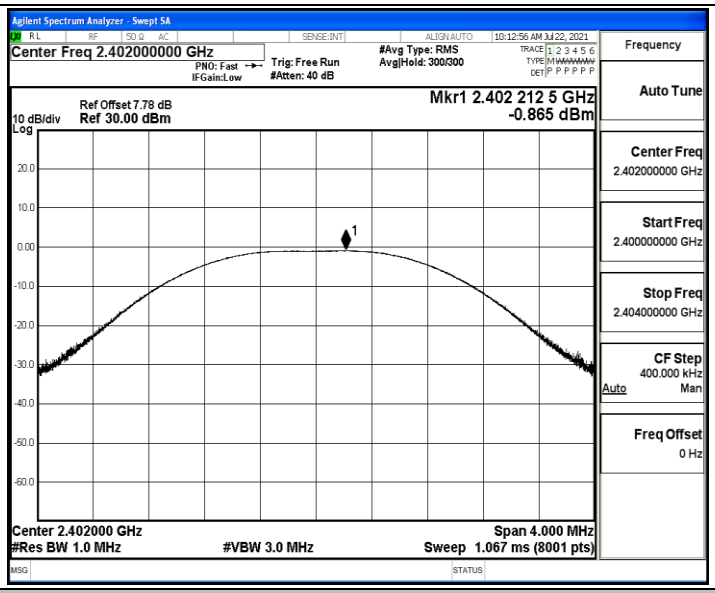
BLE_1M_Ant1_2480

B.2 Maximum conducted output power

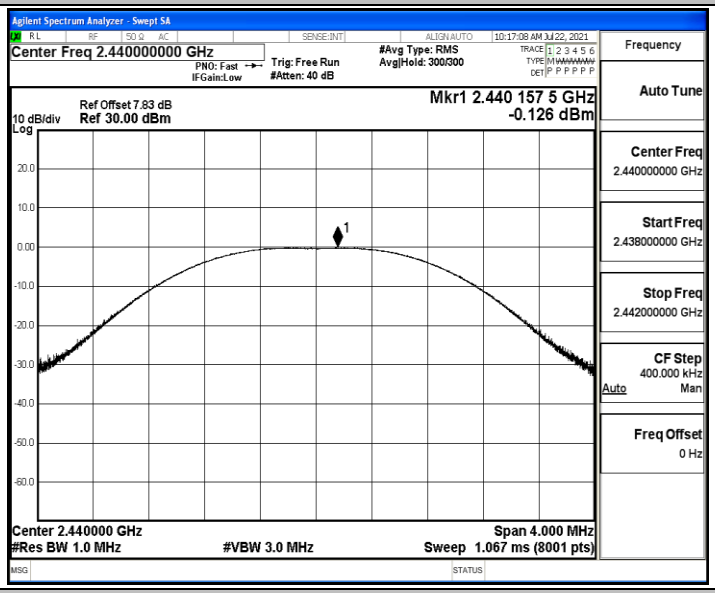
Test Result

TestMode	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	2402	-0.87	≤30	PASS
	2440	-0.13	≤30	PASS
	2480	-0.64	≤30	PASS

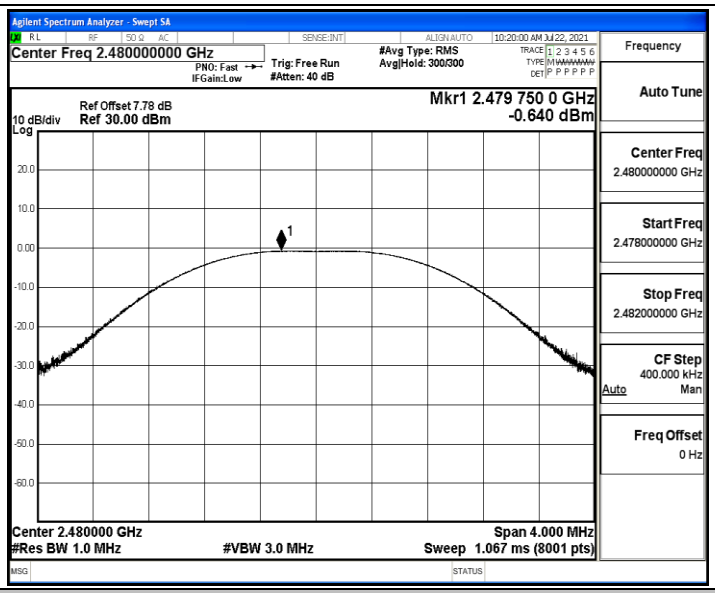
Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



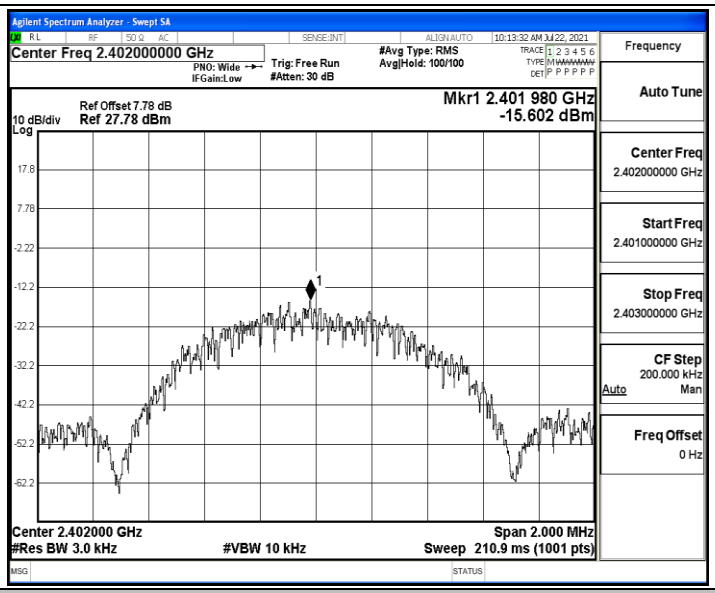
BLE_1M_Ant1_2480

B.3 Maximum power spectral density

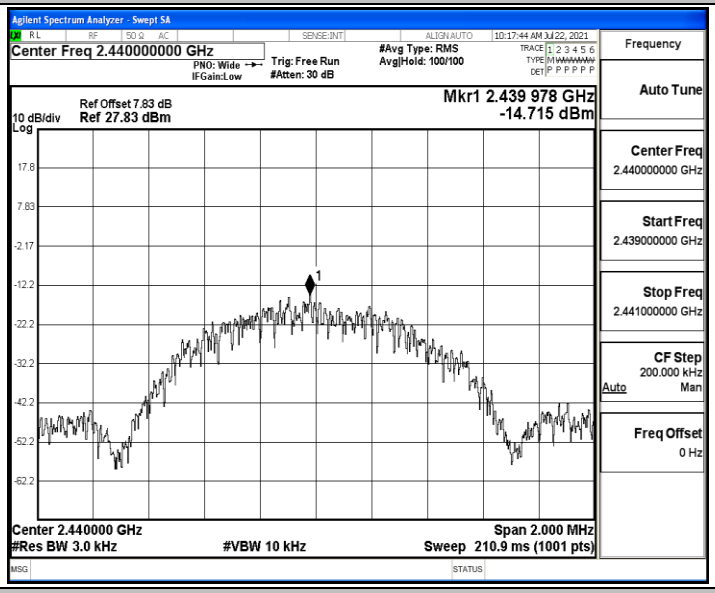
Test Result

TestMode	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	2402	-15.6	≤8	PASS
	2440	-14.72	≤8	PASS
	2480	-15.25	≤8	PASS

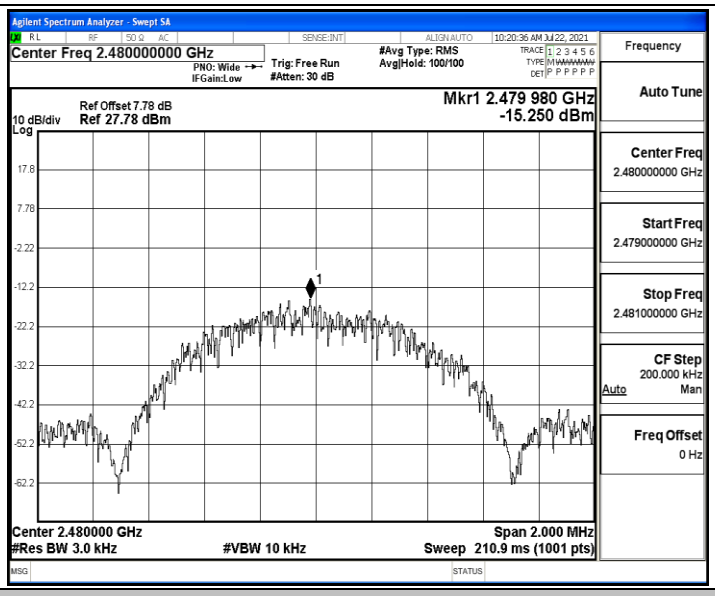
Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



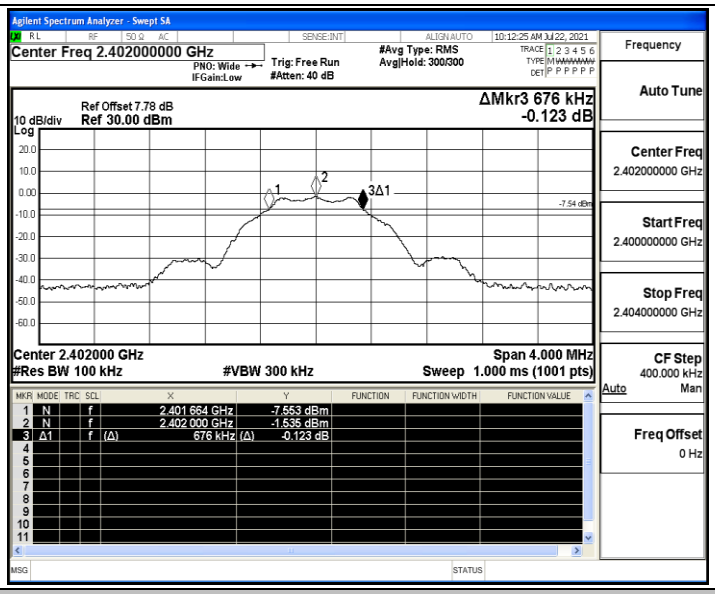
BLE_1M_Ant1_2480

B.4 DTS Bandwidth

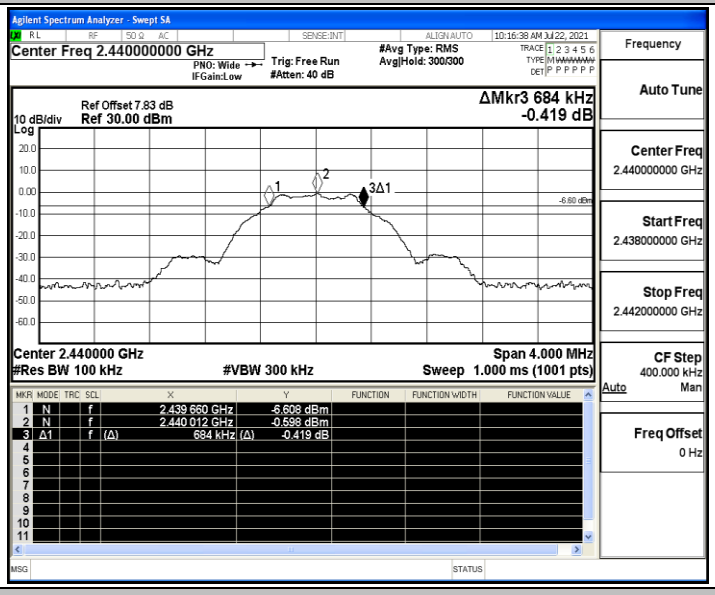
Test Result

TestMode	Channel	DTS BW [MHz]	Limit[MHz]	Verdict
BLE_1M	2402	0.676	≥0.5	PASS
	2440	0.684	≥0.5	PASS
	2480	0.672	≥0.5	PASS

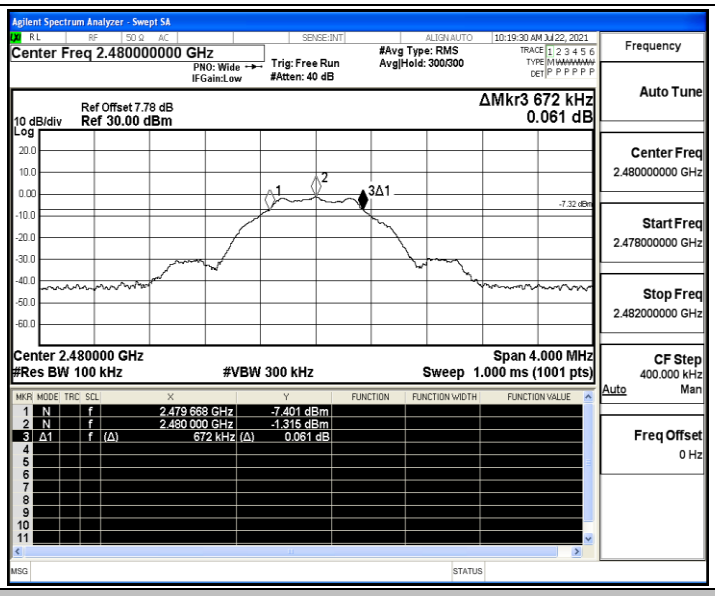
Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



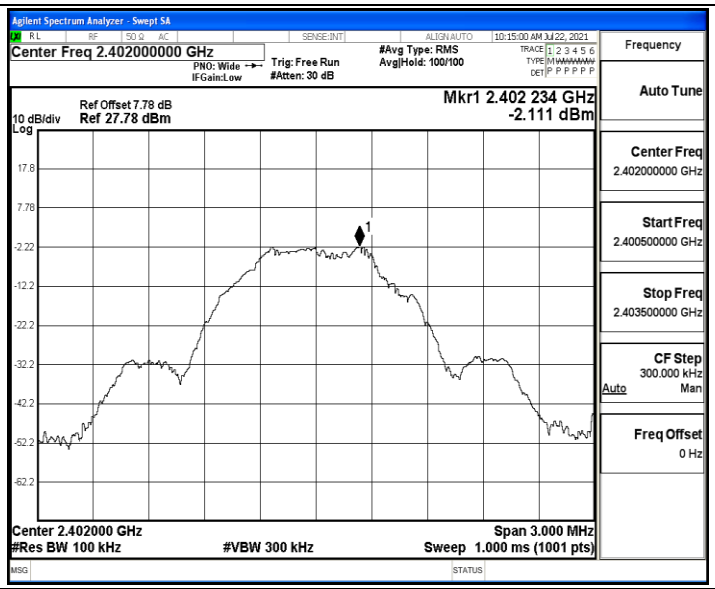
BLE_1M_Ant1_2480

B.5 Conducted Spurious Emission

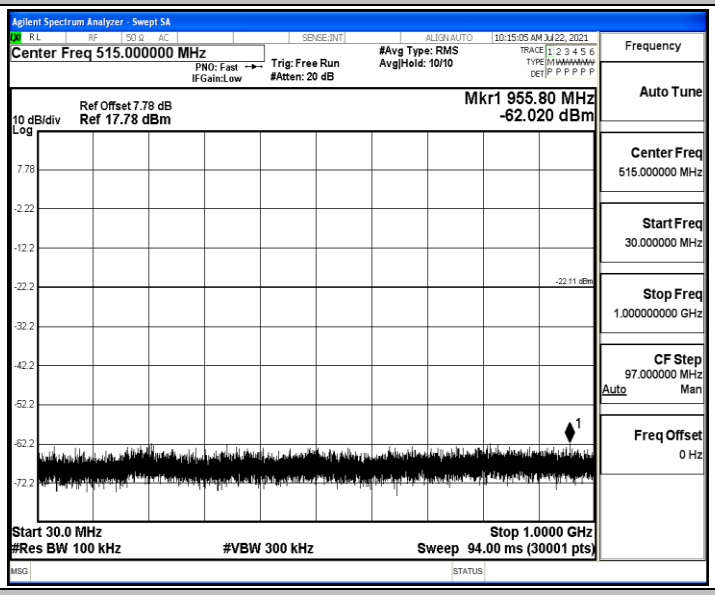
Test Result

TestMode	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	2402	Reference	-2.11	-2.11	---	PASS
		30~1000	-2.11	-62.02	≤-22.11	PASS
		1000~26500	-2.11	-46.98	≤-22.11	PASS
	2440	Reference	-0.36	-0.36	---	PASS
		30~1000	-0.36	-61.98	≤-20.36	PASS
		1000~26500	-0.36	-47.26	≤-20.36	PASS
	2480	Reference	-1.83	-1.83	---	PASS
		30~1000	-1.83	-62.22	≤-21.83	PASS
		1000~26500	-1.83	-47.5	≤-21.83	PASS

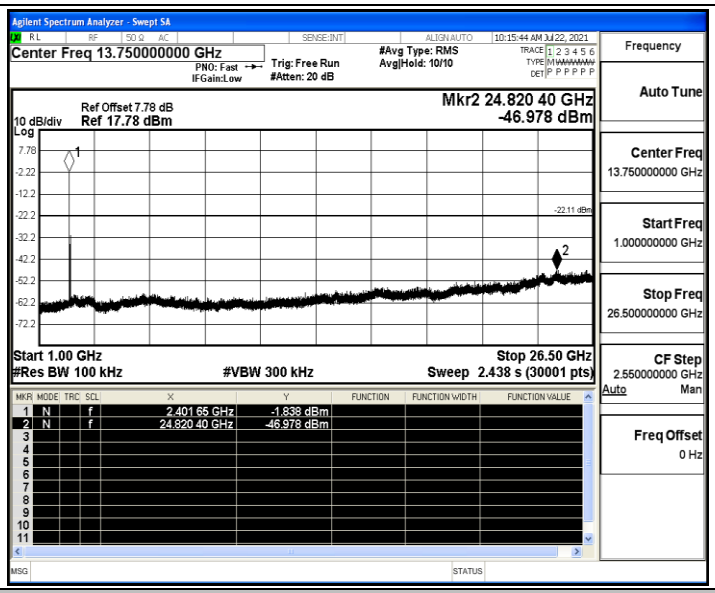
Test Graphs



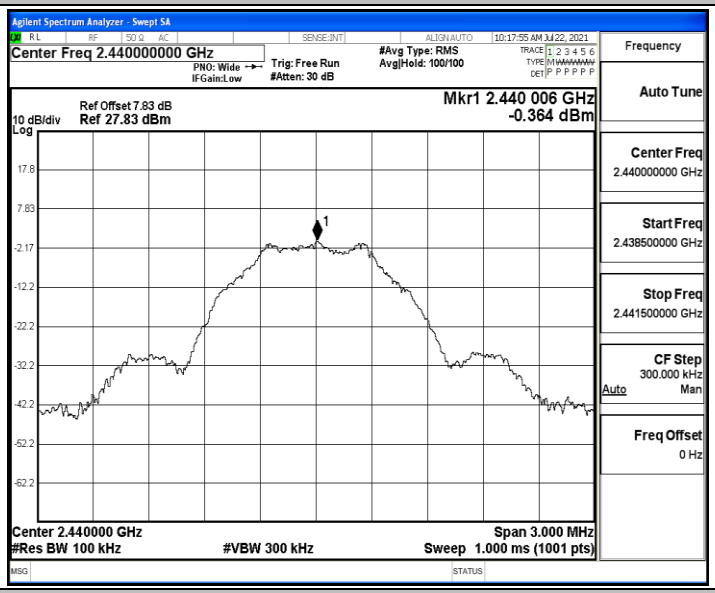
BLE_1M_Ant1_2402_0~Reference



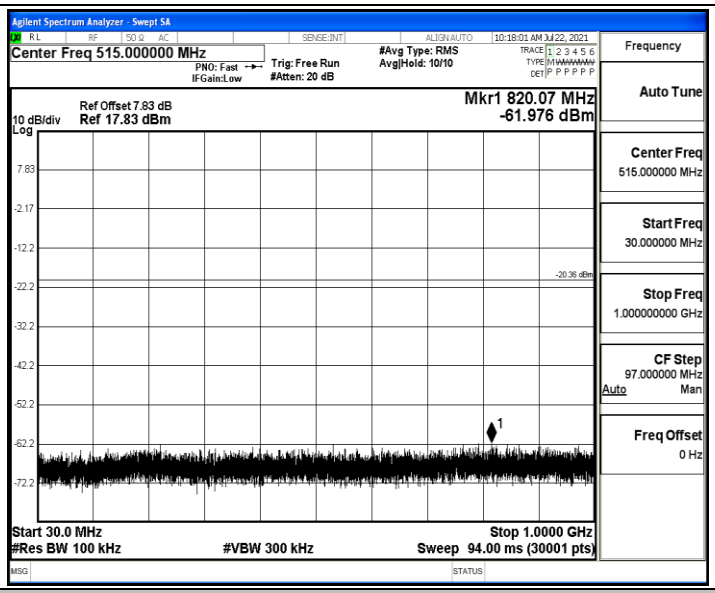
BLE_1M_Ant1_2402_30~1000



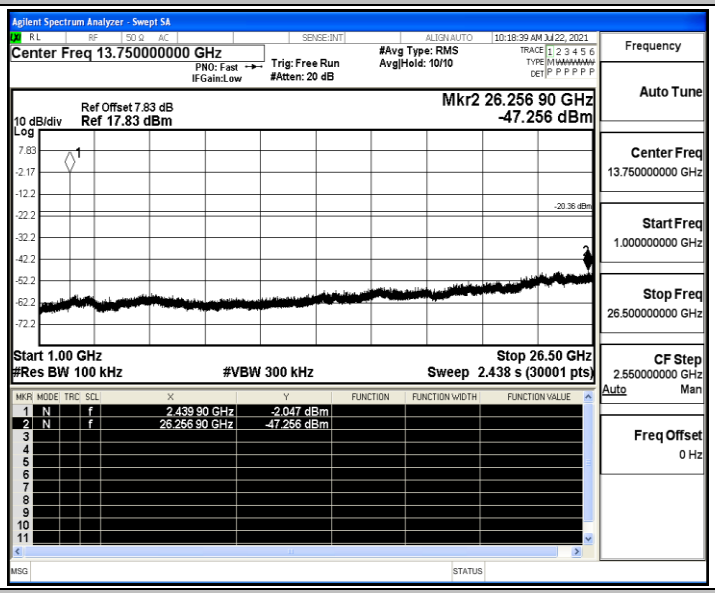
BLE_1M_Ant1_2402_1000~26500



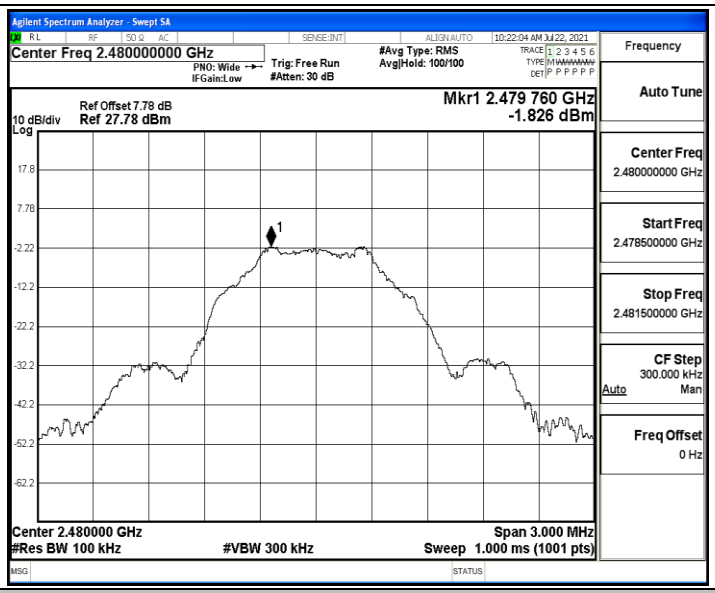
BLE_1M_Ant1_2440_0~Reference



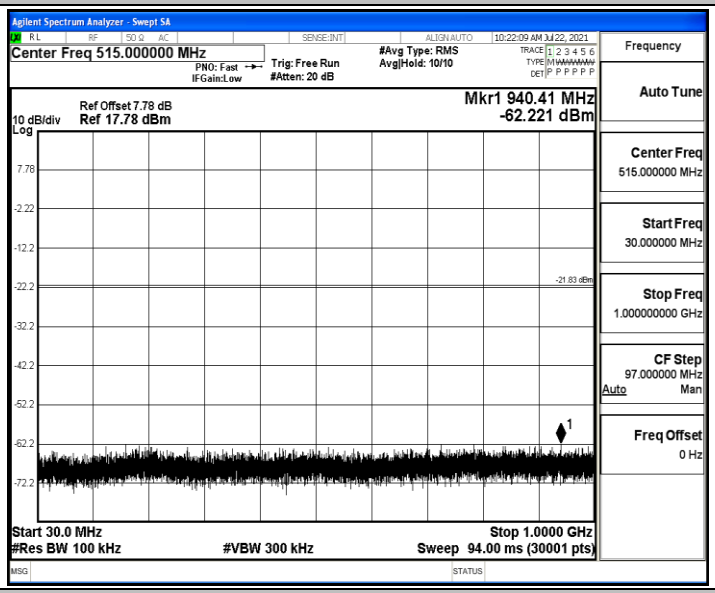
BLE_1M_Ant1_2440_30~1000



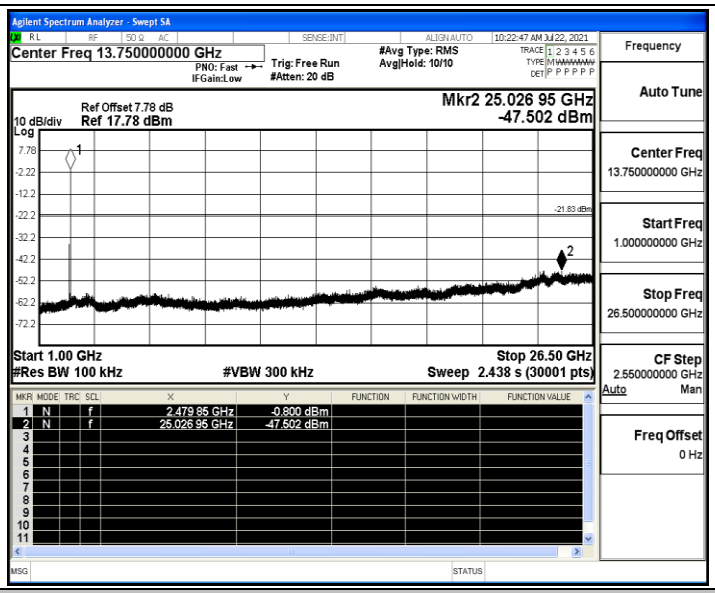
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



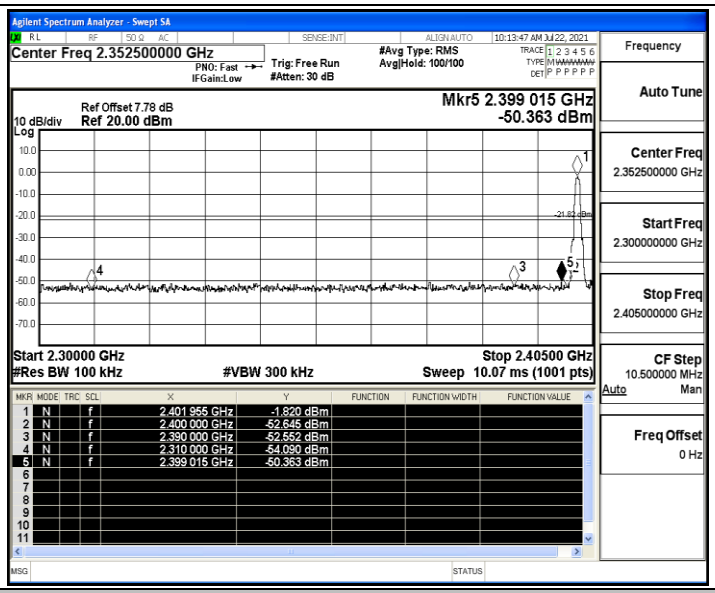
BLE_1M_Ant1_2480_1000~26500

B.6 Band edge measurements

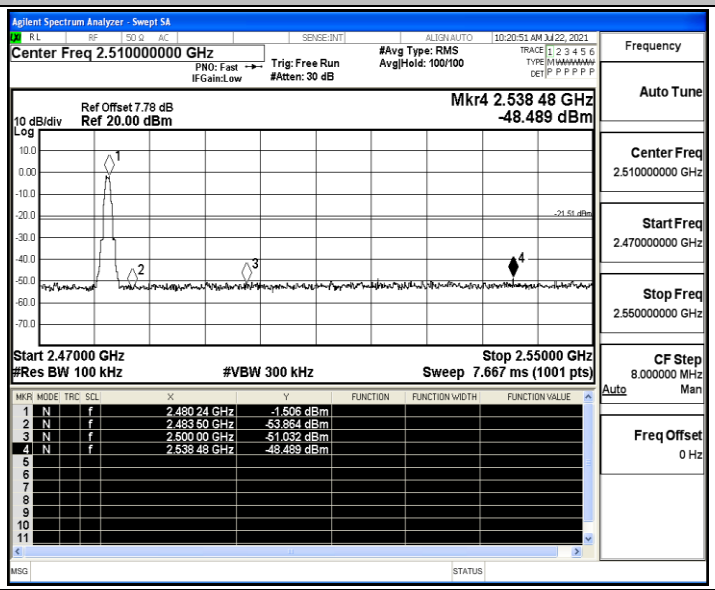
Test Result

TestMode	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Low	2402	-1.82	-50.36	≤-21.82	PASS
	High	2480	-1.51	-48.49	≤-21.51	PASS

Test Graphs



BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

B.7 Emissions in Restricted Bands

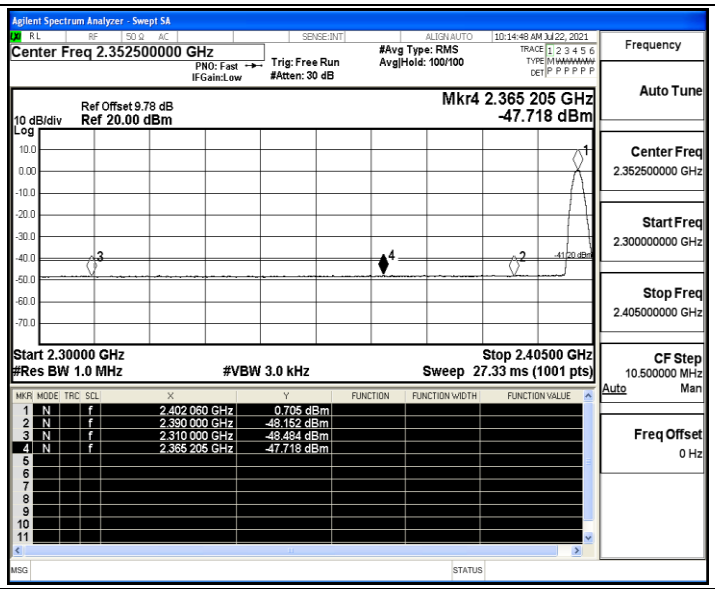
Test Result

TestMode	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	2402	AV	2310.000	-48.48	≤-41.20	46.72	≤54	PASS
		AV	2365.205	-47.72	≤-41.20	47.48	≤54	PASS
		AV	2390.000	-48.15	≤-41.20	47.05	≤54	PASS
		Peak	2310.000	-42.75	≤-21.20	52.45	≤74	PASS
		Peak	2374.445	-39.03	≤-21.20	56.17	≤74	PASS
		Peak	2390.000	-41.72	≤-21.20	53.48	≤74	PASS
	2480	AV	2483.500	-47.39	≤-41.20	47.81	≤54	PASS
		AV	2496.000	-47.1	≤-41.20	48.10	≤54	PASS
		AV	2500.000	-47.56	≤-41.20	47.64	≤54	PASS
		Peak	2483.500	-41.38	≤-21.20	53.82	≤74	PASS
		Peak	2486.560	-37.62	≤-21.20	57.58	≤74	PASS
		Peak	2500.000	-40.58	≤-21.20	54.62	≤74	PASS

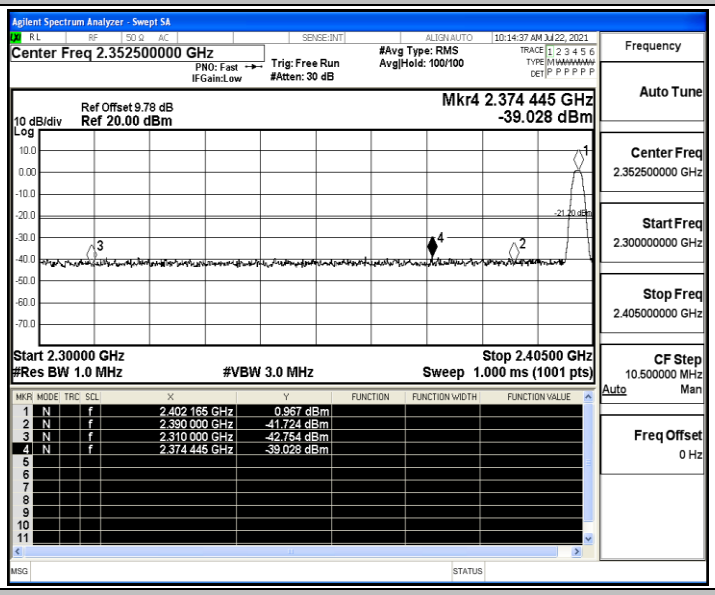
Note：

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.

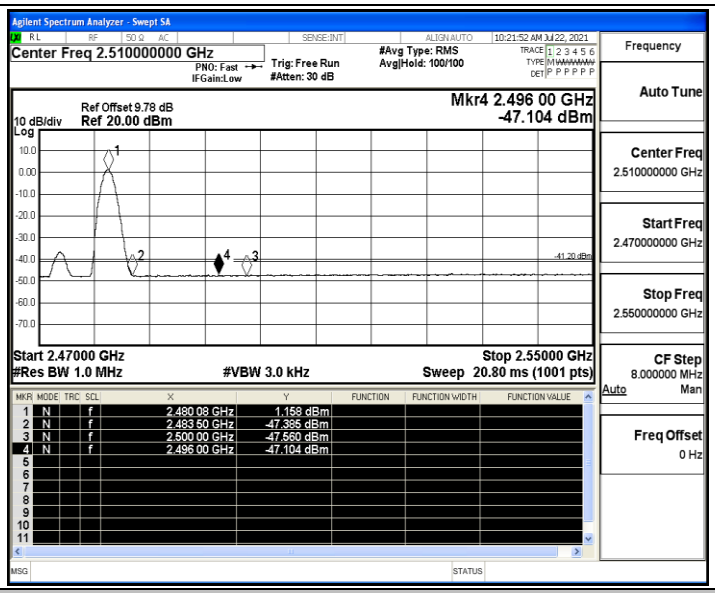
Test Graphs



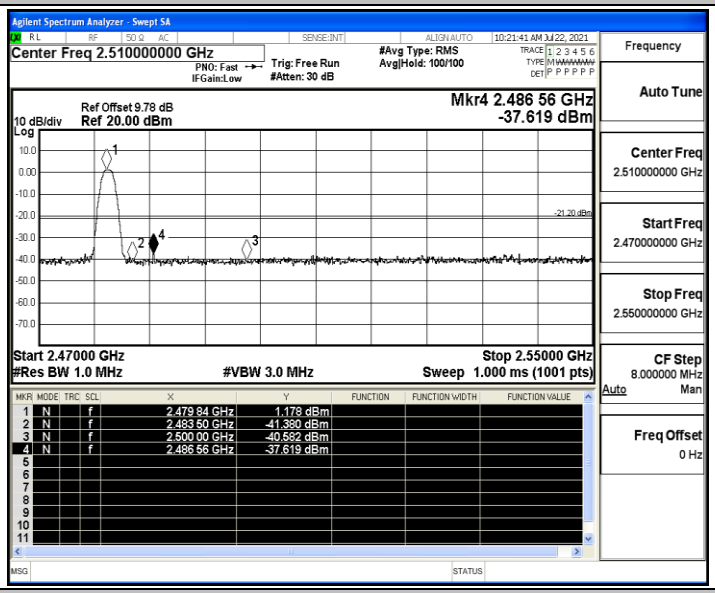
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak