



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: Treadmill

Test Model: TT-300

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan



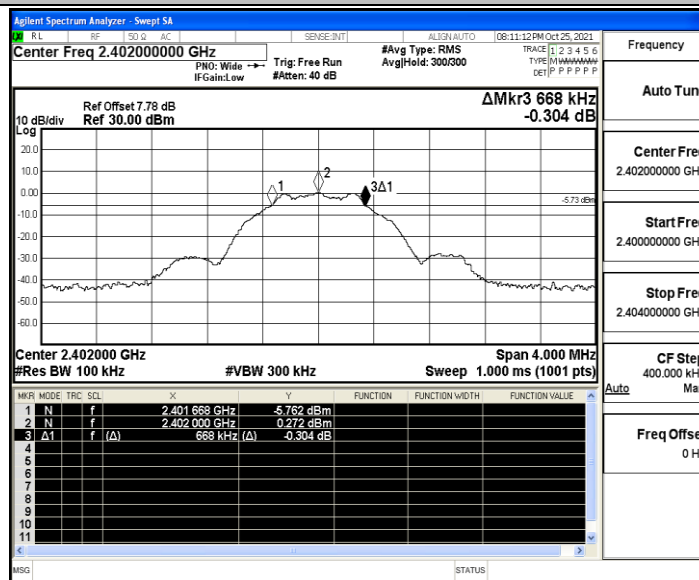
B.1 6dB Bandwidth

Test Result

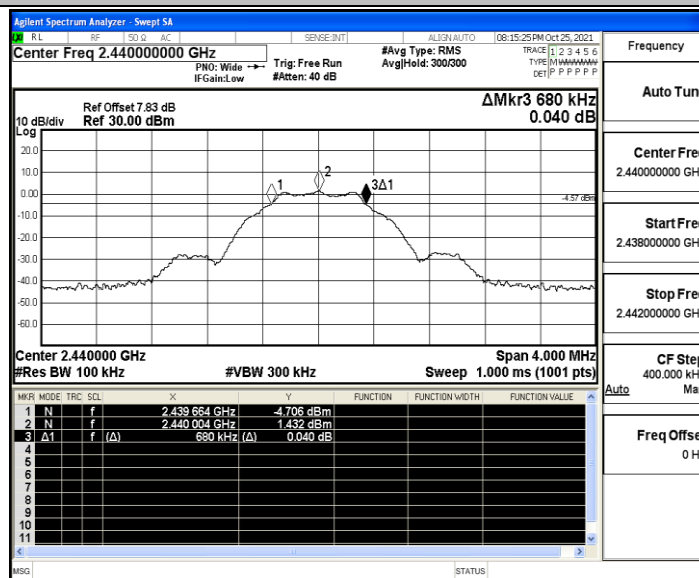
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.668	2401.668	2402.336	≥0.5	PASS
		2440	0.680	2439.664	2440.344	≥0.5	PASS
		2480	0.720	2479.636	2480.356	≥0.5	PASS

Test Graphs

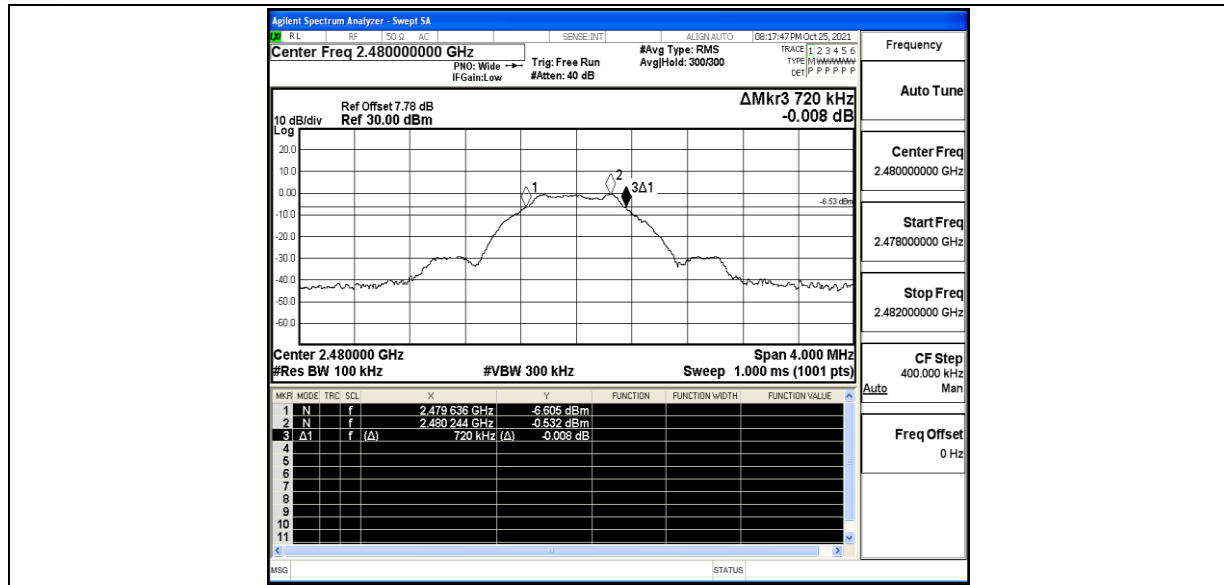
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



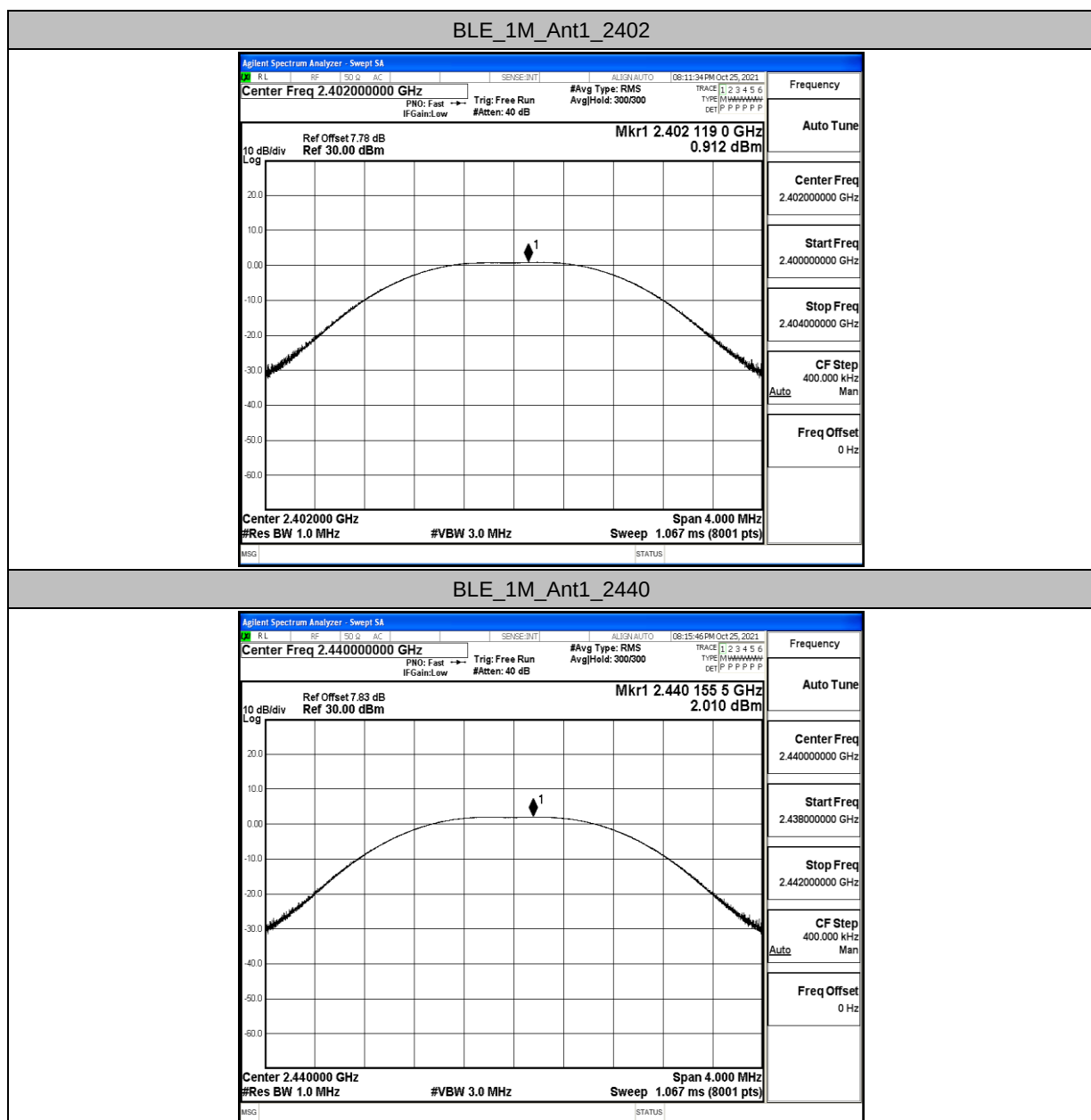


B.2 Maximum conducted output power

Test Result

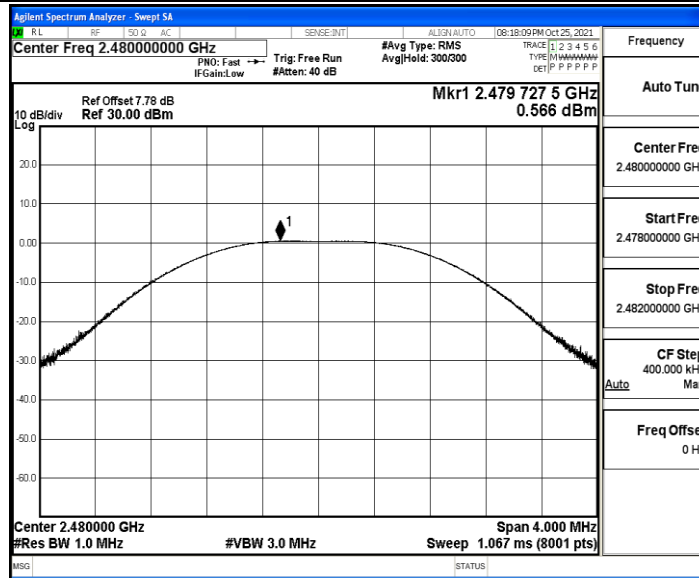
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.91	≤30	PASS
		2440	2.01	≤30	PASS
		2480	0.57	≤30	PASS

Test Graphs





BLE_1M_Ant1_2480





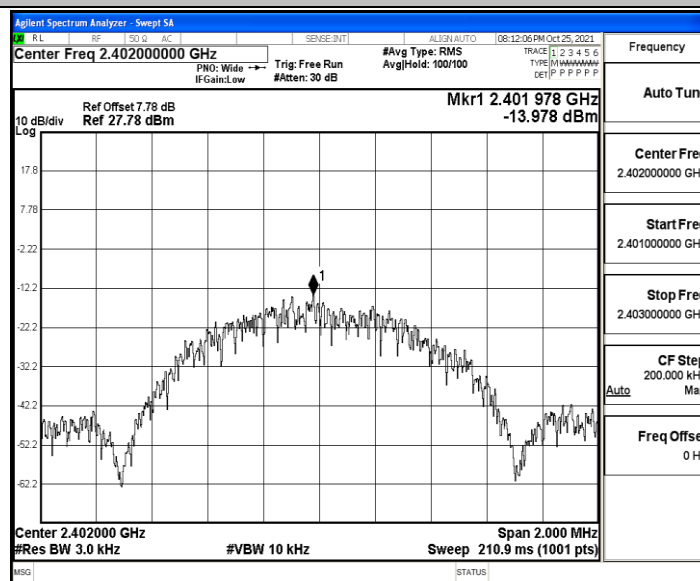
B.3 Maximum power spectral density

Test Result

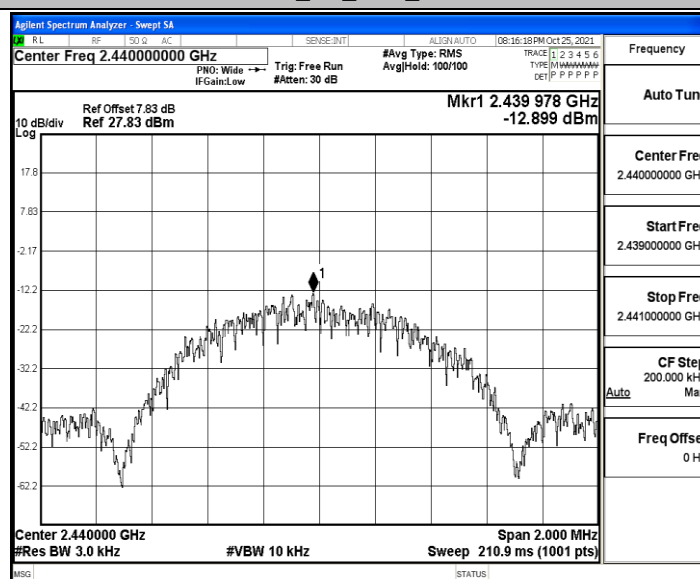
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.98	≤8	PASS
		2440	-12.9	≤8	PASS
		2480	-14.22	≤8	PASS

Test Graphs

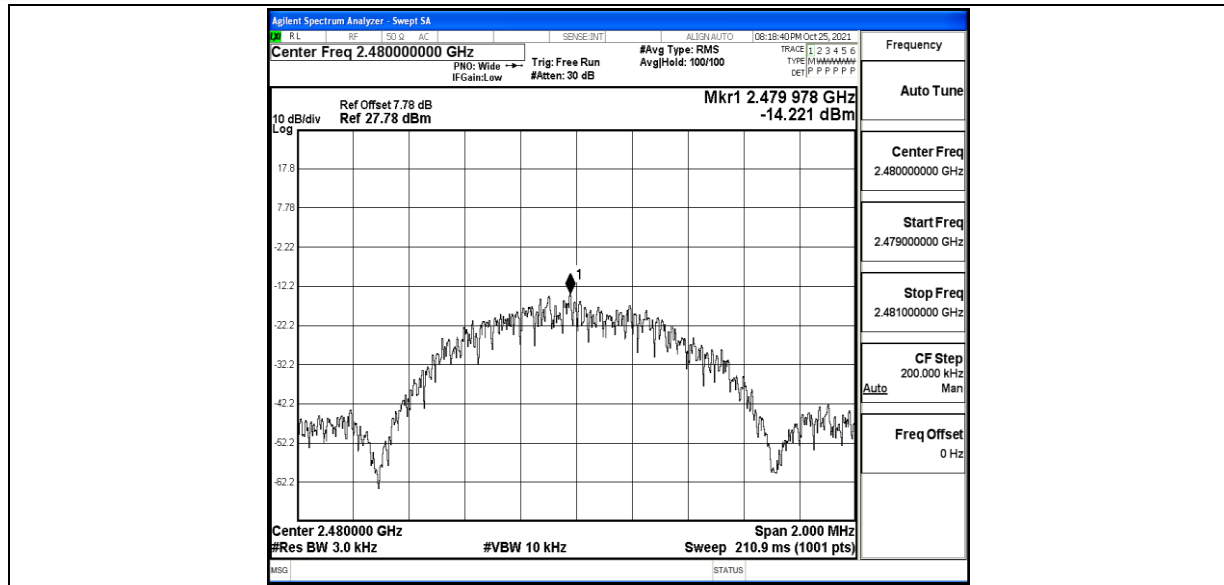
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



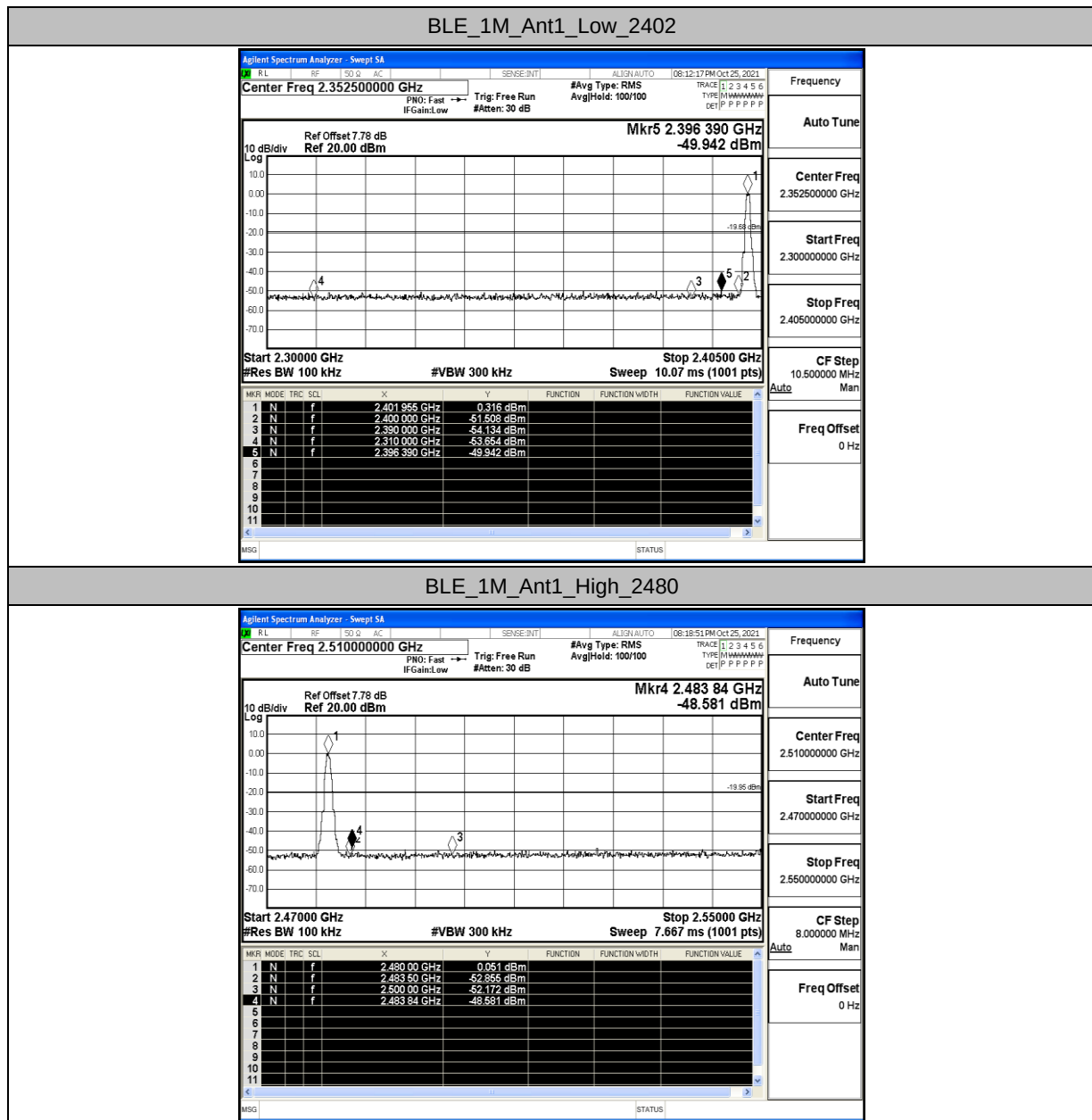


B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.32	-49.94	≤-19.68	PASS
		High	2480	0.05	-48.58	≤-19.95	PASS

Test Graphs





B.5 Conducted Spurious Emission

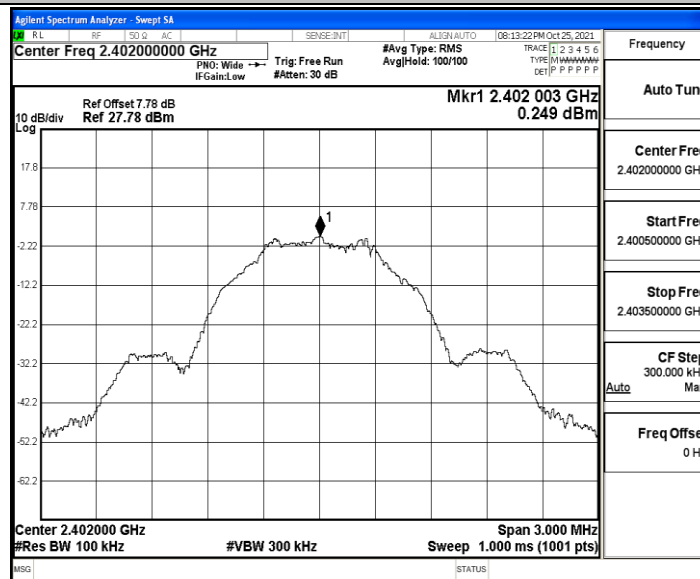
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.25	0.25	---	PASS
			30~1000	0.25	-61.73	≤-19.75	PASS
			1000~26500	0.25	-46.99	≤-19.75	PASS
		2440	Reference	1.38	1.38	---	PASS
			30~1000	1.38	-61.72	≤-18.62	PASS
			1000~26500	1.38	-47.56	≤-18.62	PASS
		2480	Reference	-0.49	-0.49	---	PASS
			30~1000	-0.49	-62.17	≤-20.49	PASS
			1000~26500	-0.49	-46.7	≤-20.49	PASS

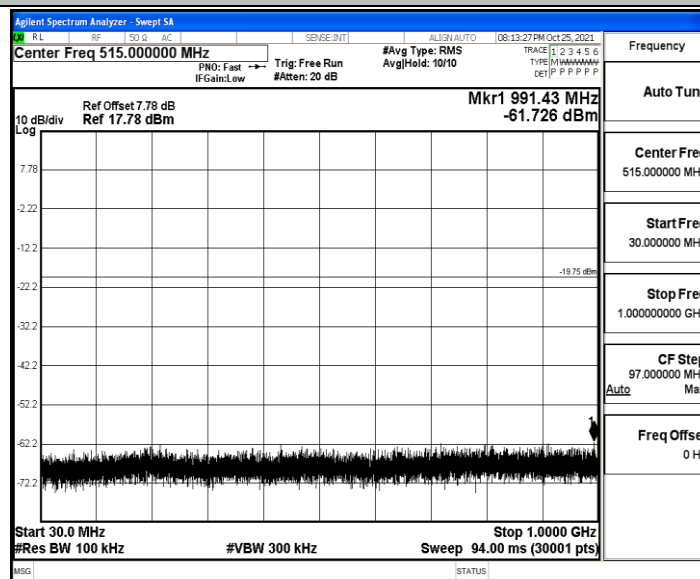


Test Graphs

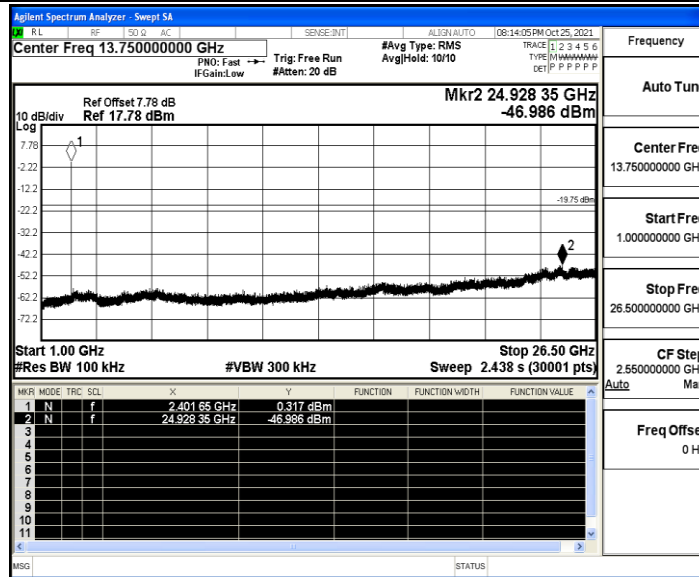
BLE_1M_Ant1_2402_0~Reference



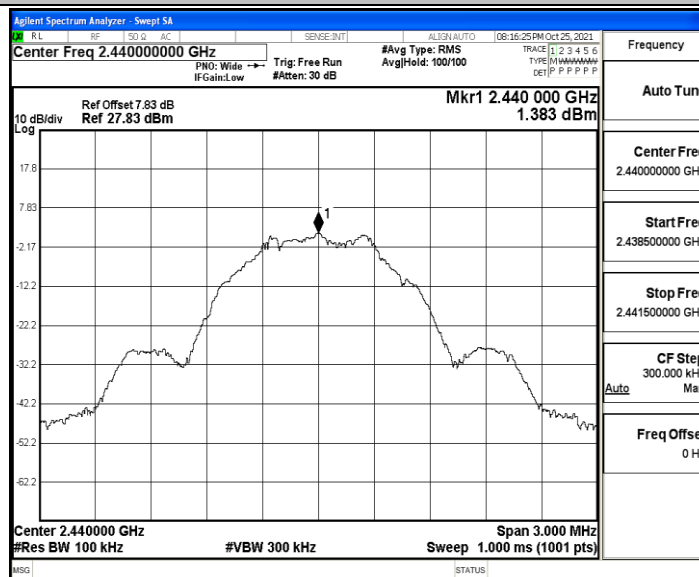
BLE_1M_Ant1_2402_30~1000



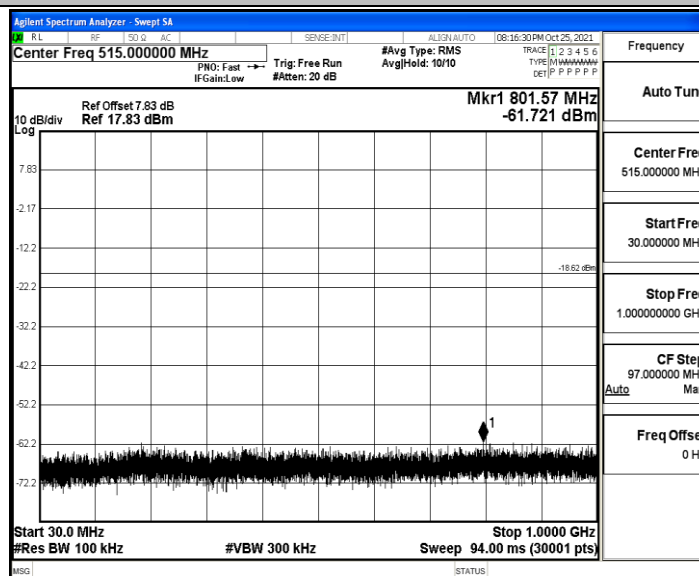
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

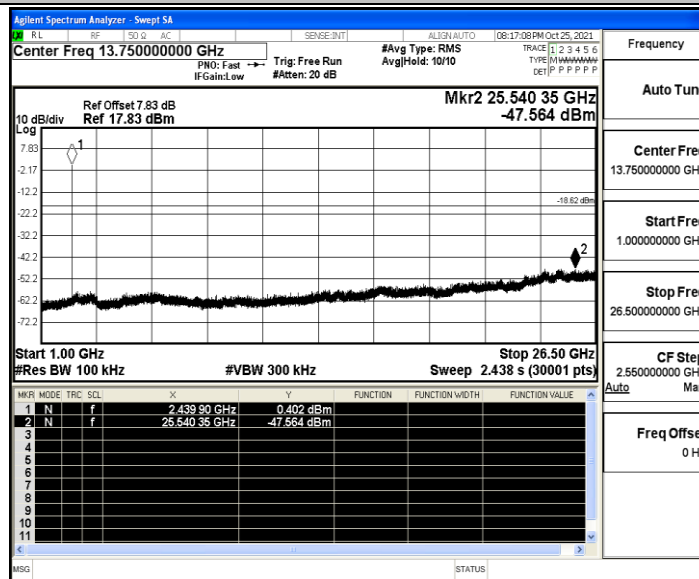


BLE_1M_Ant1_2440_30~1000

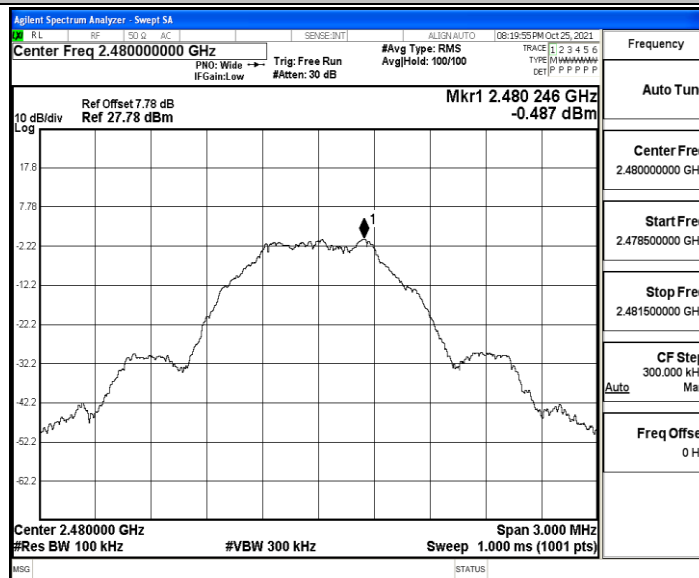




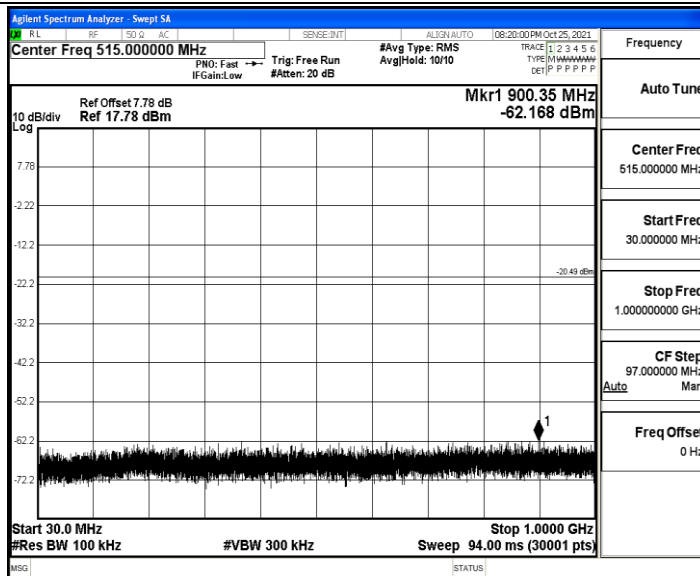
BLE_1M_Ant1_2440_1000~26500



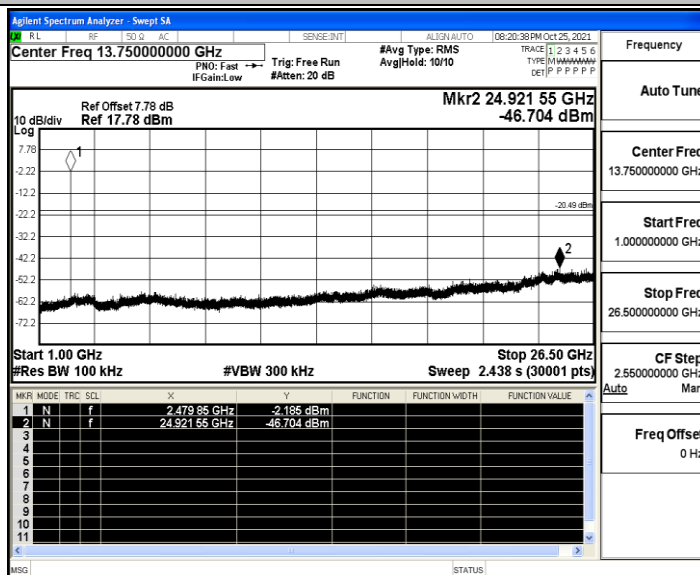
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



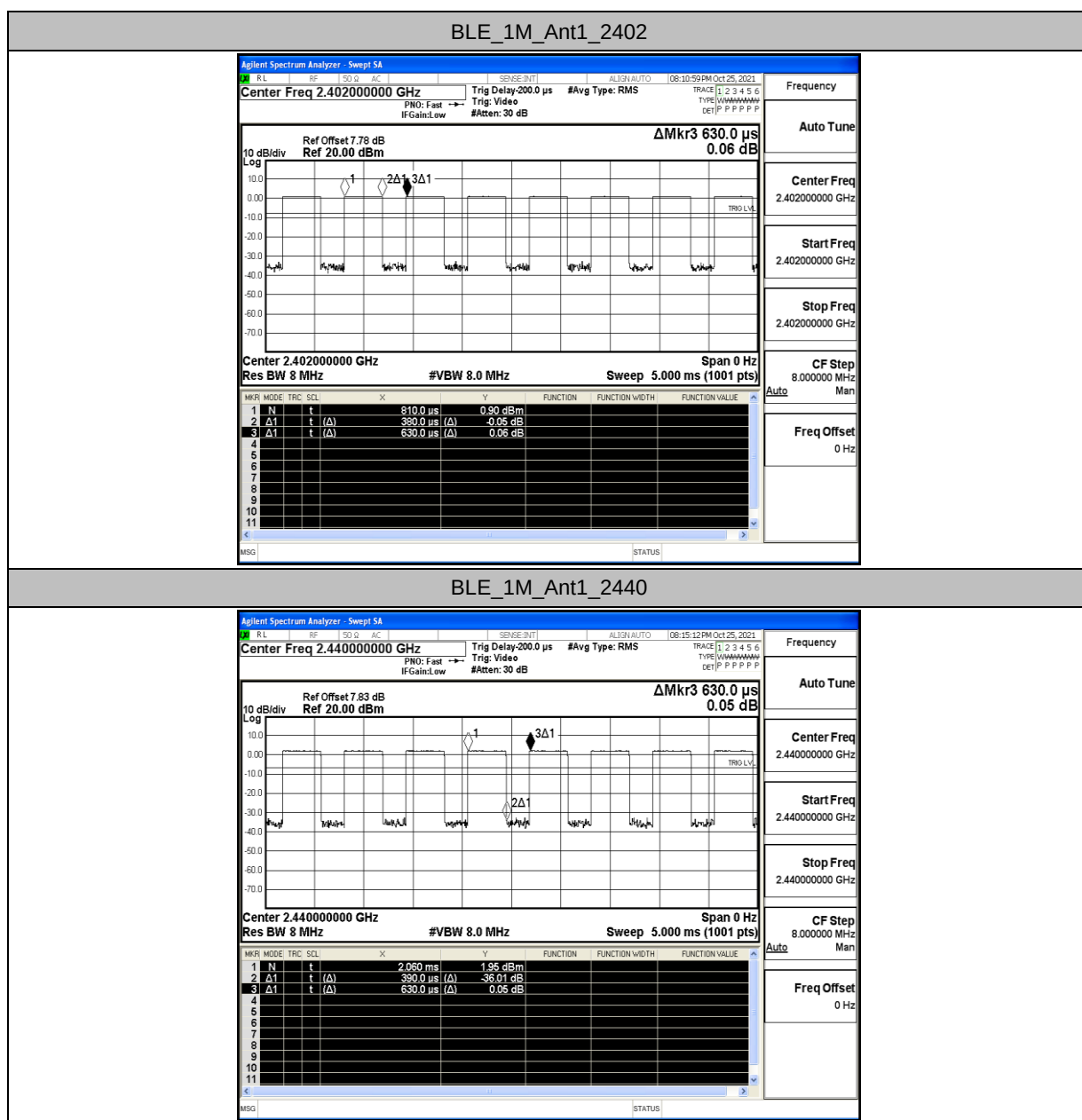


B.6 Duty Cycle

Test Result

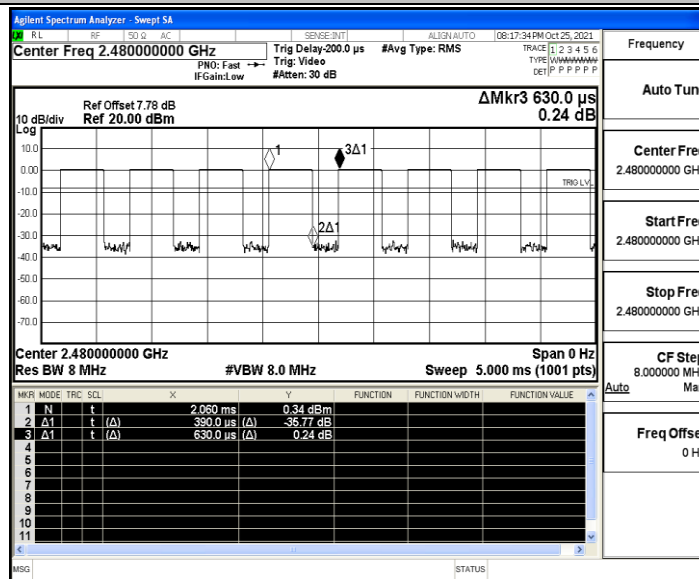
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.63	0.6032	60.32	2.20	---	PASS
		2440	0.39	0.63	0.6190	61.90	2.08	---	PASS
		2480	0.39	0.63	0.6190	61.90	2.08	---	PASS

Test Graphs





BLE_1M_Ant1_2480





B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.35	≤-41.20	46.85	≤54	PASS
				AV	2386.940	-47.48	≤-41.20	47.72	≤54	PASS
				AV	2390.000	-47.98	≤-41.20	47.22	≤54	PASS
				Peak	2310.000	-41.77	≤-21.20	53.43	≤74	PASS
				Peak	2354.600	-38.5	≤-21.20	56.70	≤74	PASS
				Peak	2390.000	-42.23	≤-21.20	52.97	≤74	PASS
		High	2480	AV	2483.500	-47.58	≤-41.20	47.62	≤54	PASS
				AV	2494.000	-47.19	≤-41.20	48.01	≤54	PASS
				AV	2500.000	-47.6	≤-41.20	47.60	≤54	PASS
				Peak	2483.500	-41.35	≤-21.20	53.85	≤74	PASS
				Peak	2494.400	-38.27	≤-21.20	56.93	≤74	PASS
				Peak	2500.000	-41.29	≤-21.20	53.91	≤74	PASS

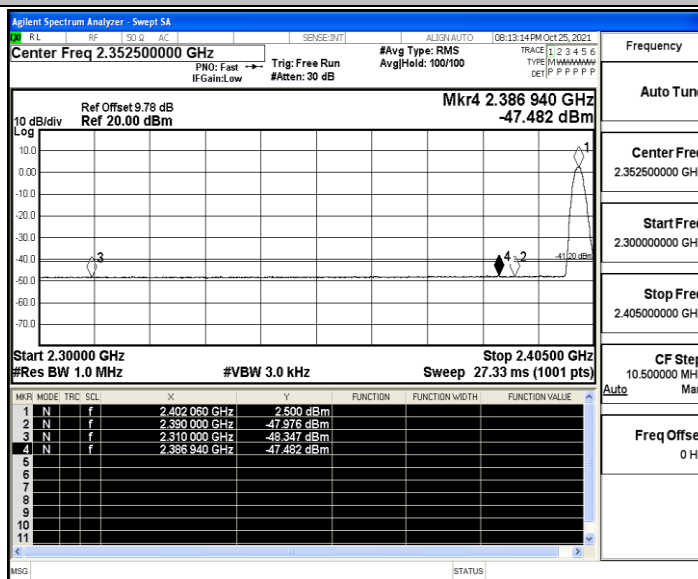
Note:

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.

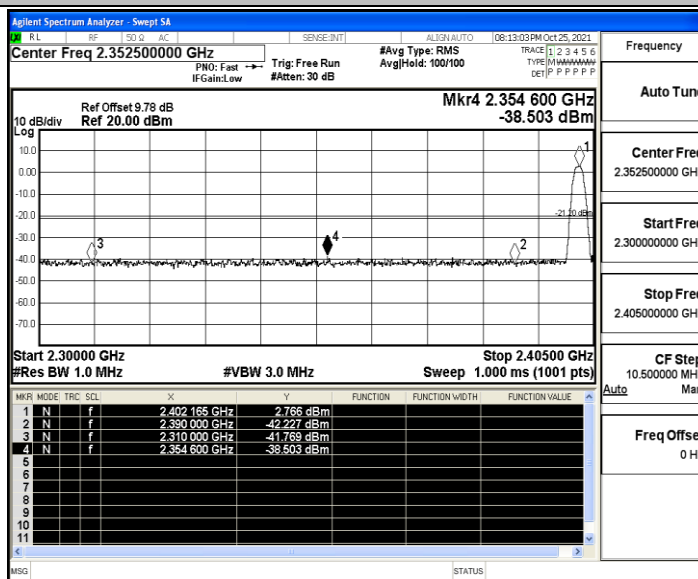


Test Graphs

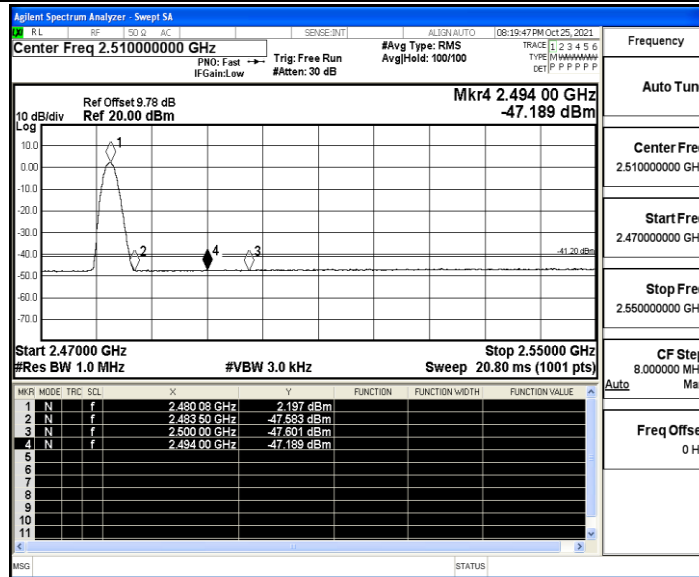
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

