



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: Massage chair

Test Model: N-0003H

Environmental Conditions

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

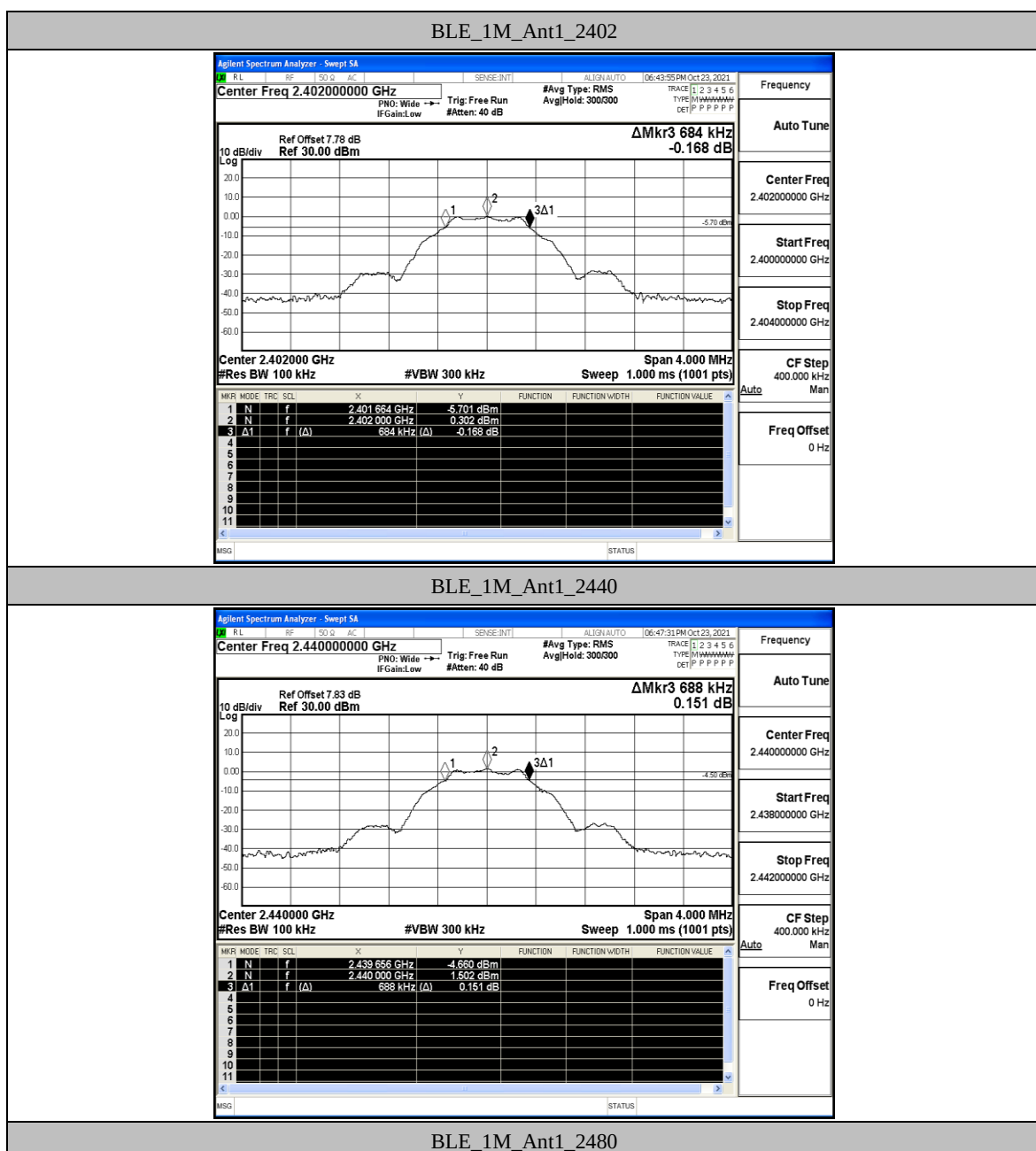


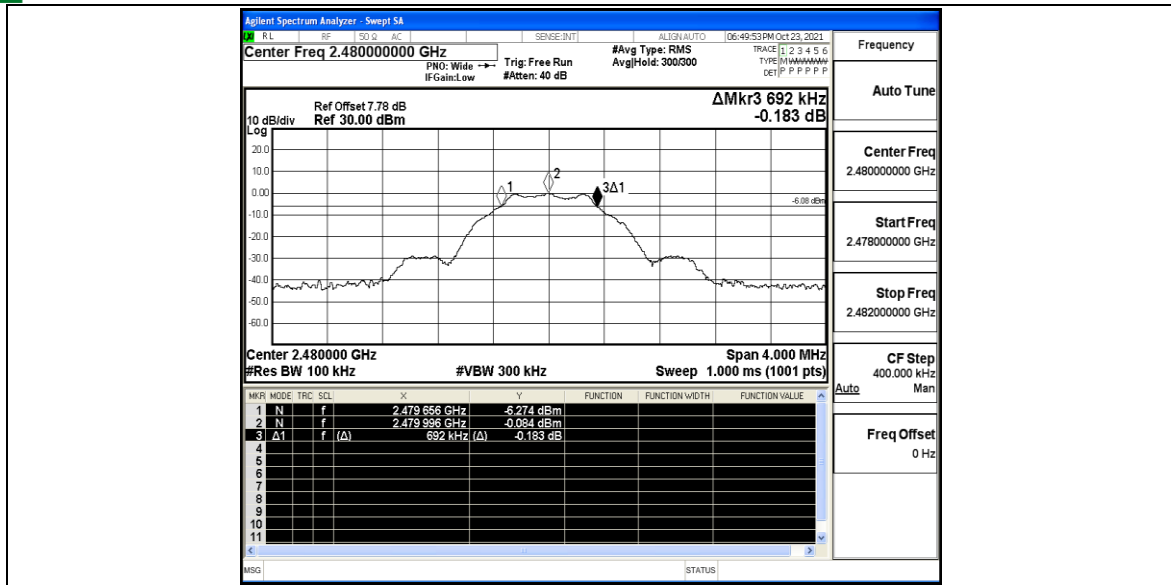
B.1 6dB Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.684	2401.664	2402.348	≥ 0.5	PASS
		2440	0.688	2439.656	2440.344	≥ 0.5	PASS
		2480	0.692	2479.656	2480.348	≥ 0.5	PASS

Test Graphs





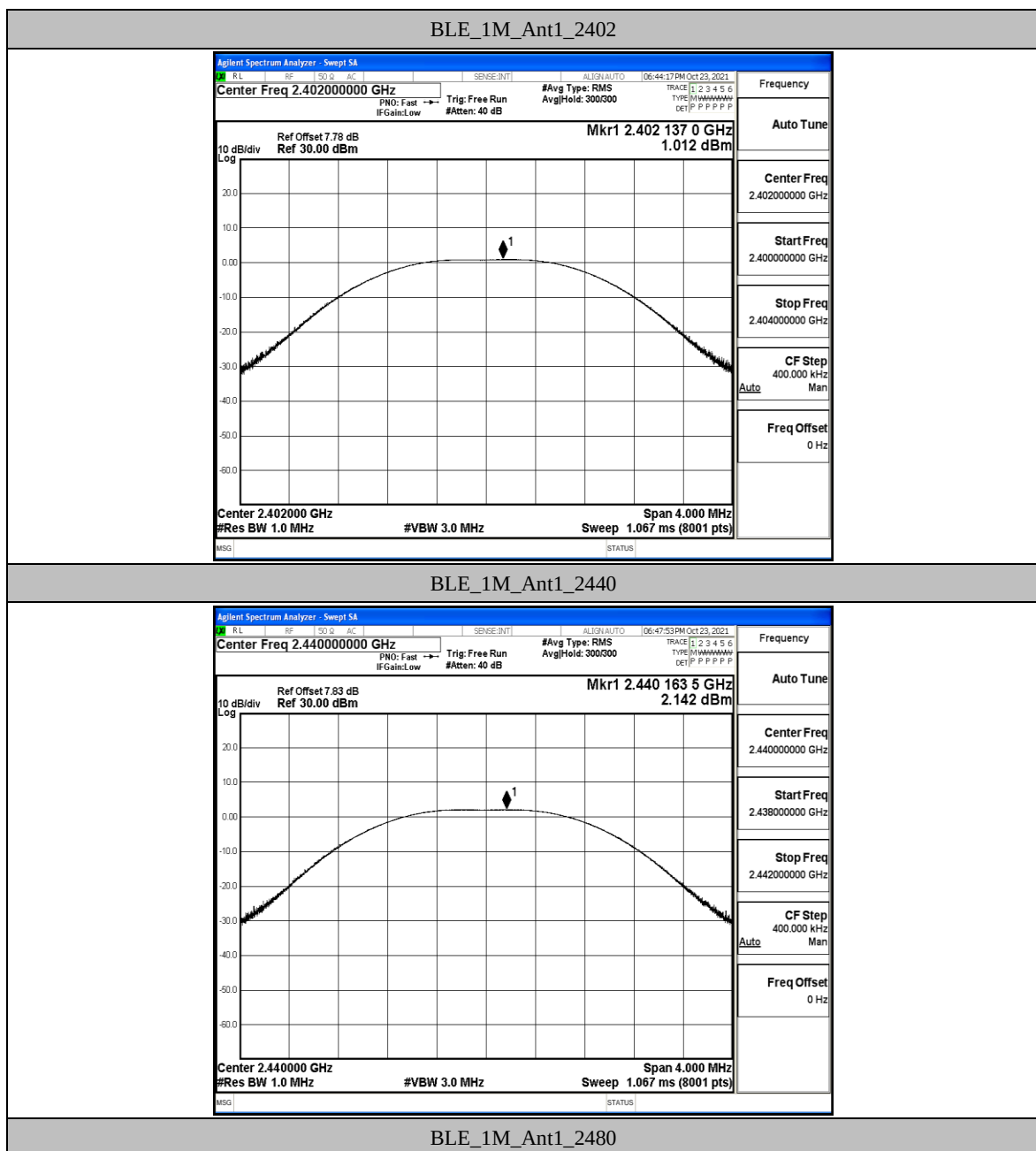


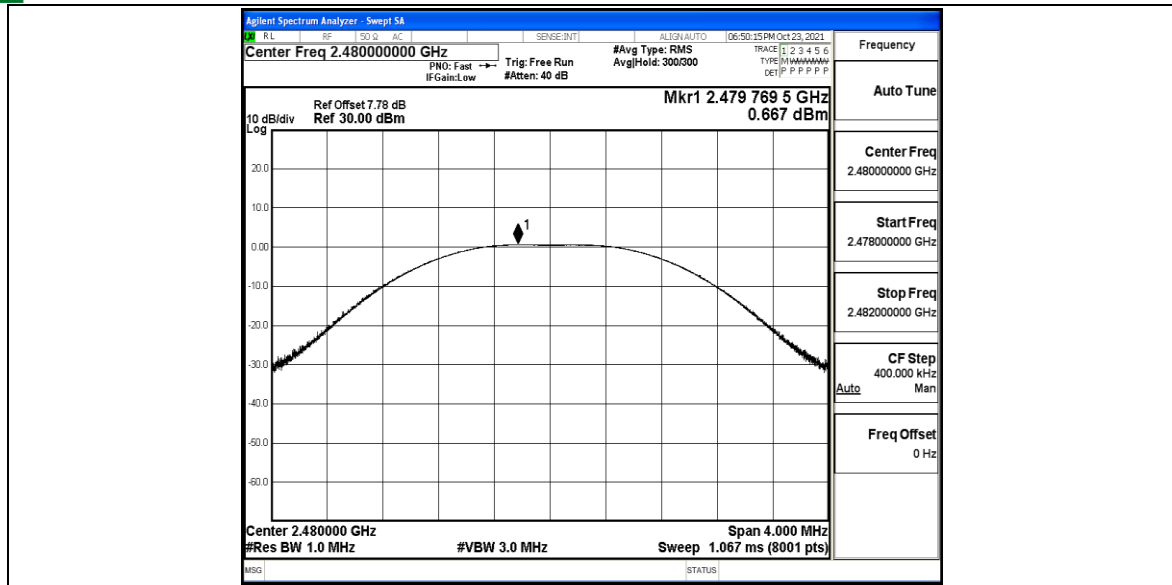
B.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.01	≤30	PASS
		2440	2.14	≤30	PASS
		2480	0.67	≤30	PASS

Test Graphs





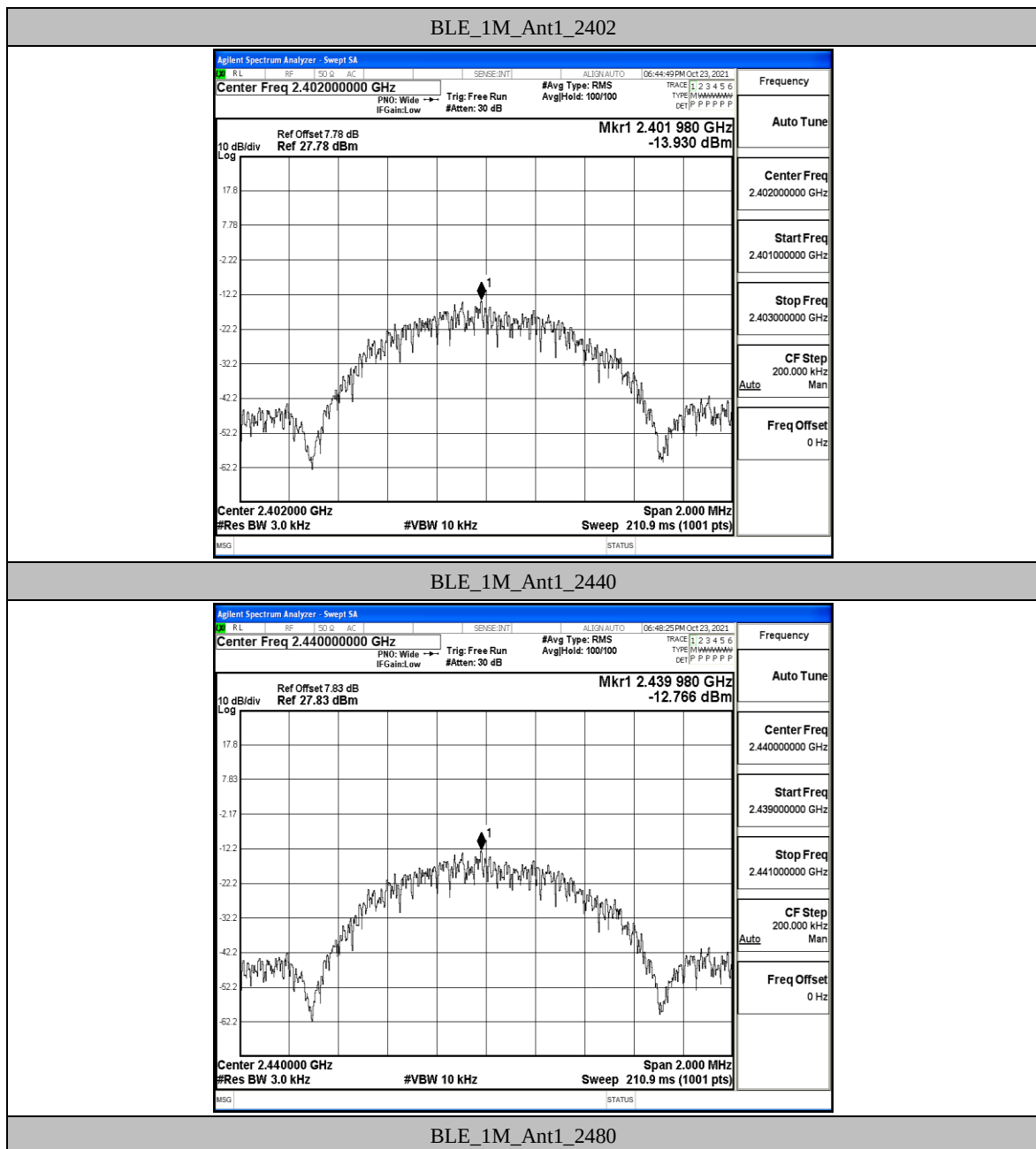


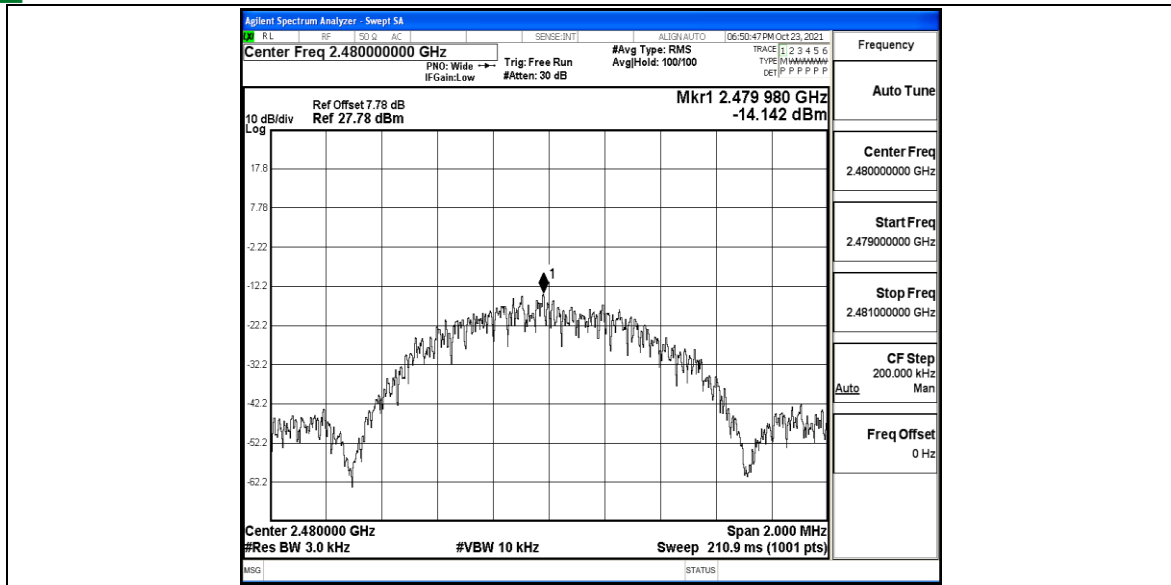
B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.93	≤8	PASS
		2440	-12.77	≤8	PASS
		2480	-14.14	≤8	PASS

Test Graphs





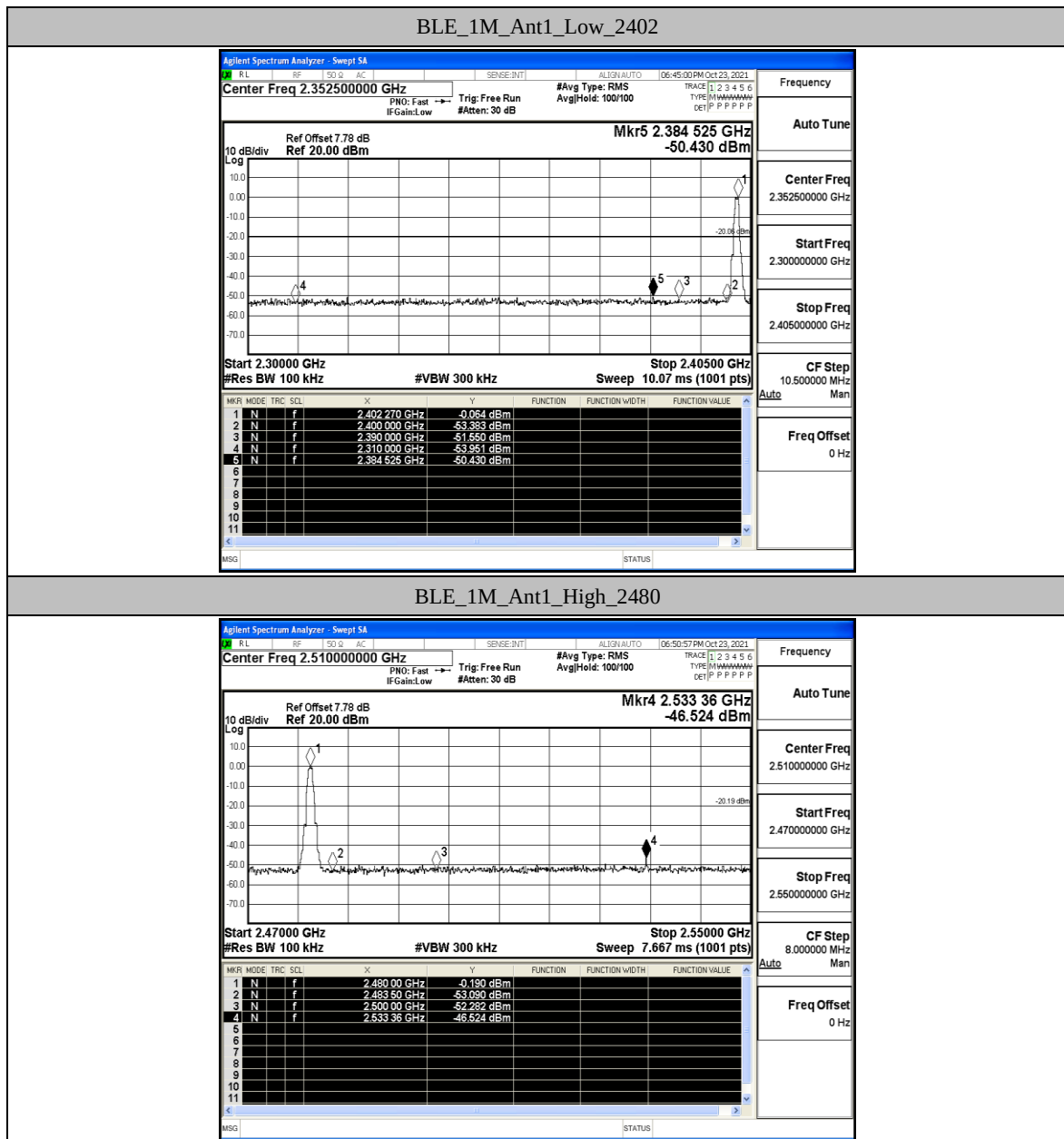


B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.06	-50.43	≤-20.06	PASS
		High	2480	-0.19	-46.52	≤-20.19	PASS

Test Graphs

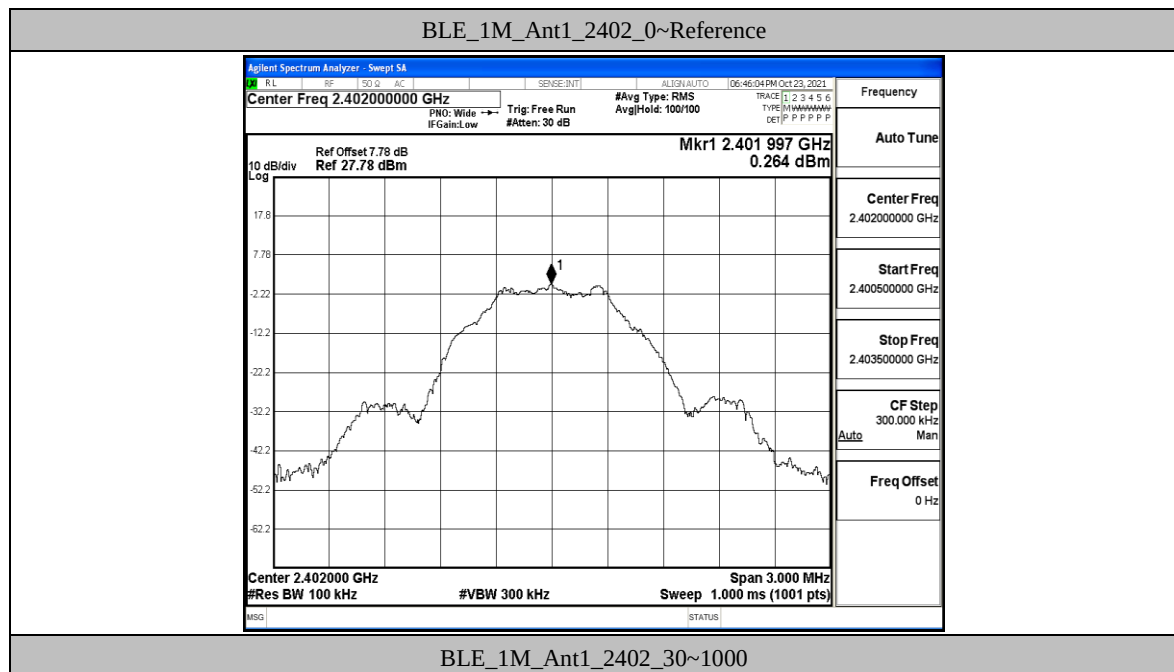


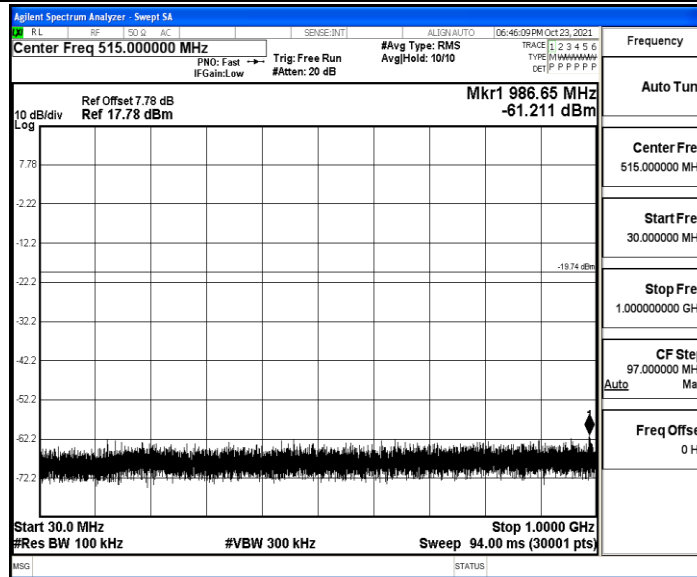
B.5 Conducted Spurious Emission

Test Result

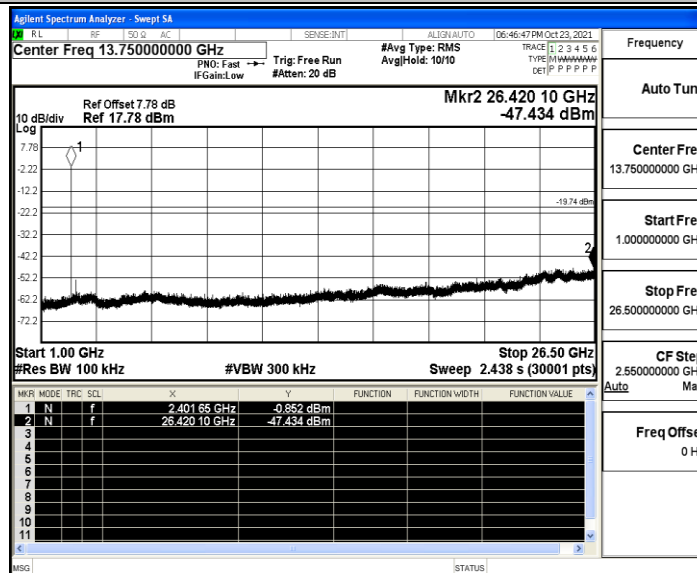
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.26	0.26	---	PASS
			30~1000	0.26	-61.21	≤-19.74	PASS
			1000~26500	0.26	-47.43	≤-19.74	PASS
		2440	Reference	1.08	1.08	---	PASS
			30~1000	1.08	-62.17	≤-18.92	PASS
			1000~26500	1.08	-47.53	≤-18.92	PASS
		2480	Reference	-0.10	-0.10	---	PASS
			30~1000	-0.10	-61.41	≤-20.1	PASS
			1000~26500	-0.10	-47.78	≤-20.1	PASS

Test Graphs

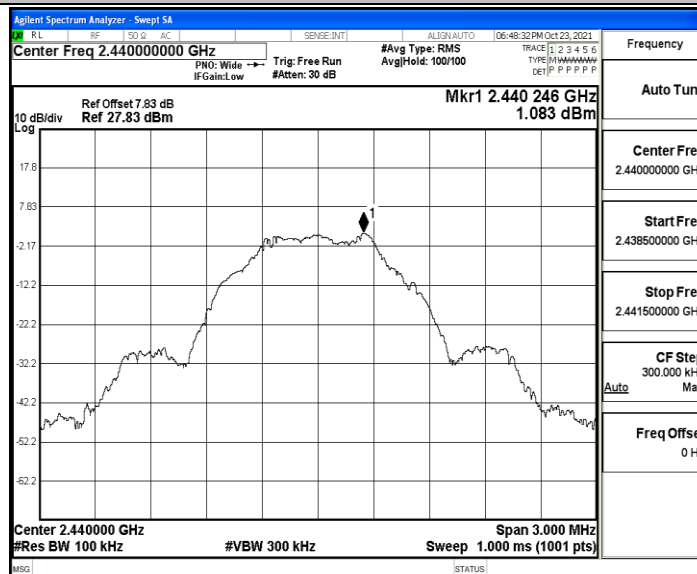




BLE_1M_Ant1_2402_1000~26500

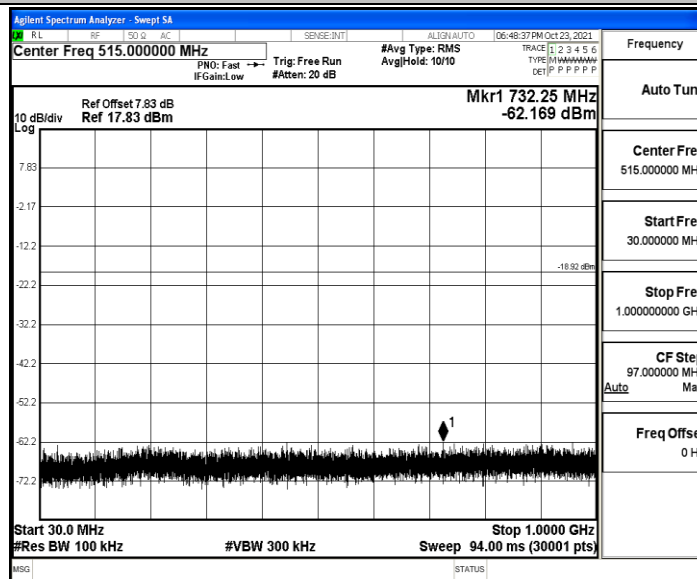


BLE_1M_Ant1_2440_0~Reference

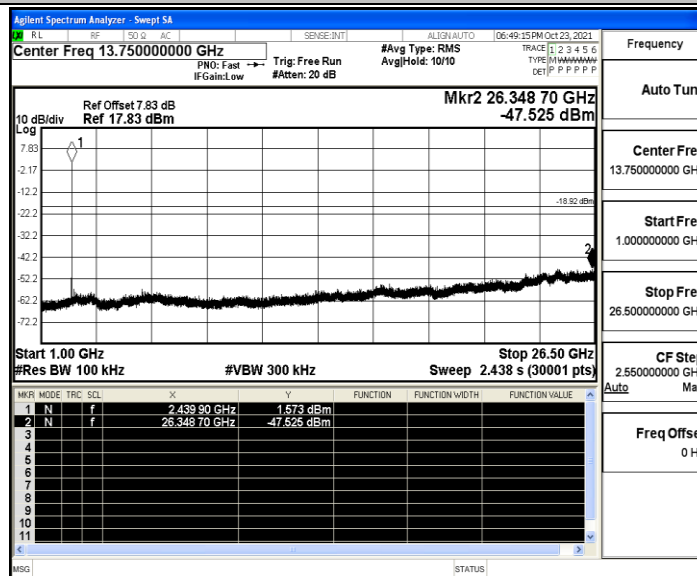




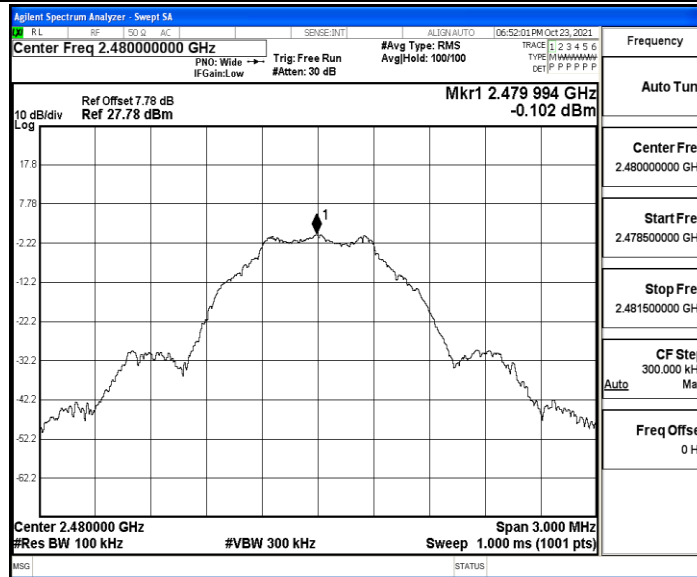
BLE_1M_Ant1_2440_30~1000



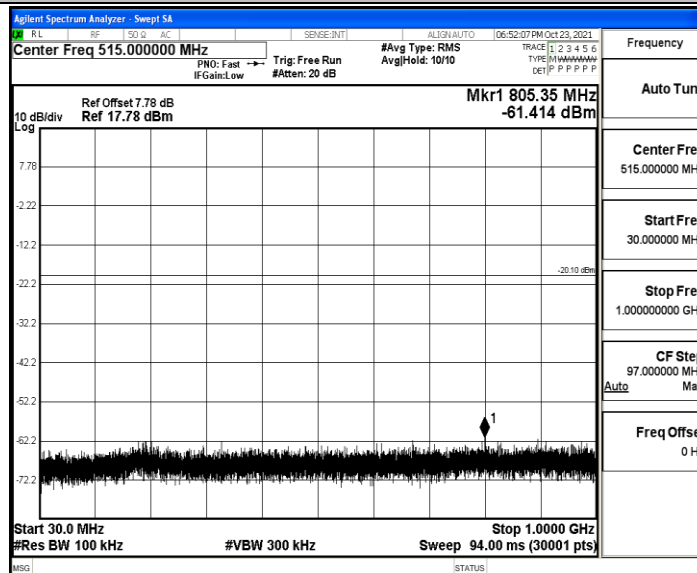
BLE_1M_Ant1_2440_1000~26500



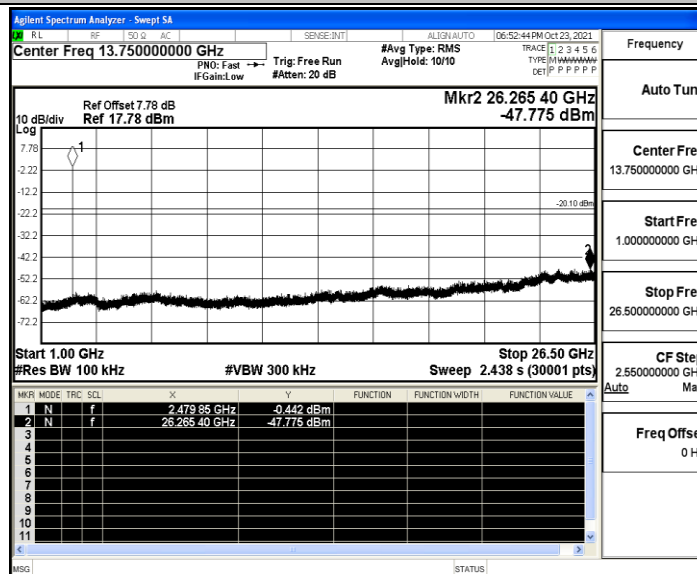
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



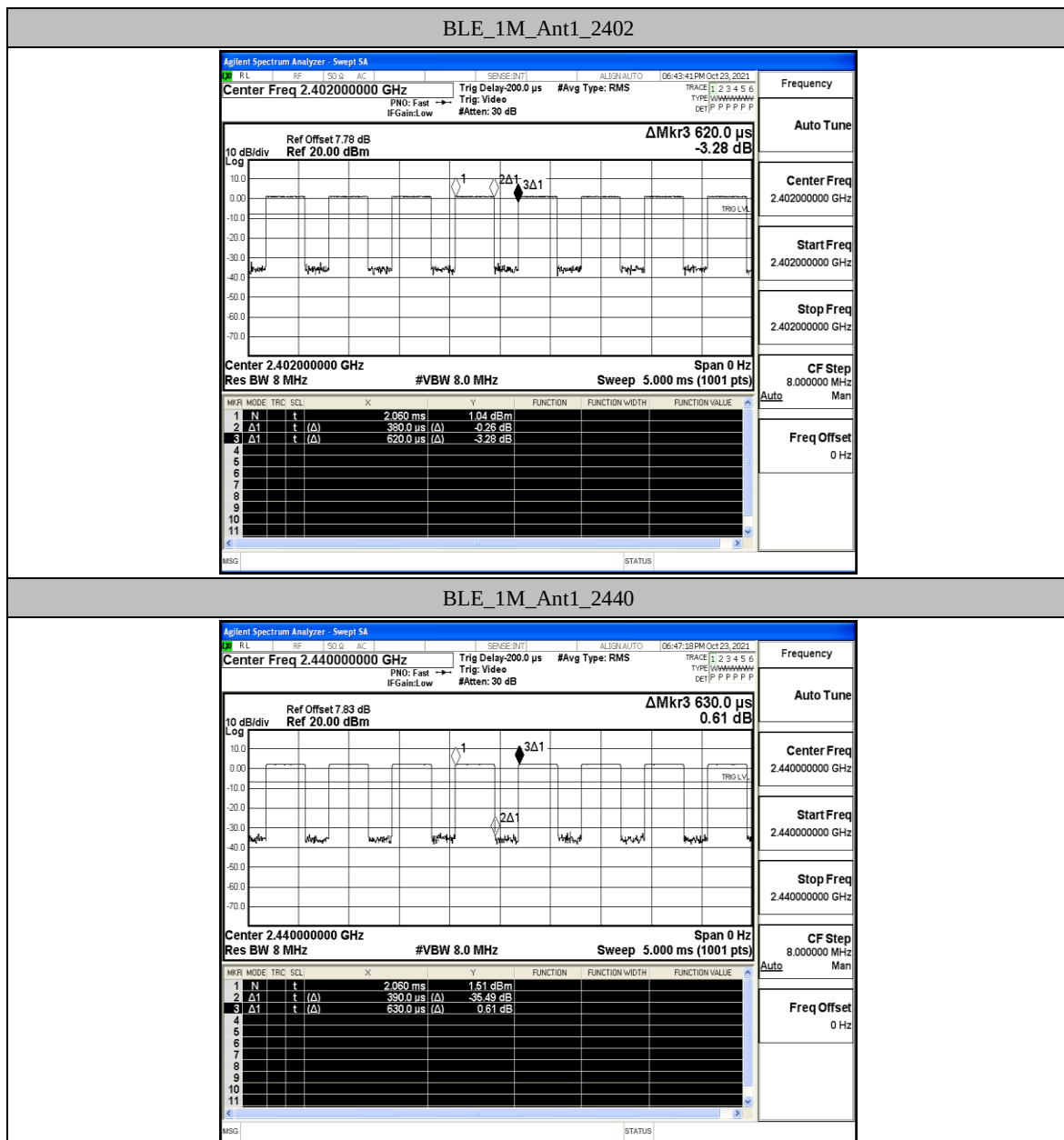


B.6 Duty Cycle

Test Result

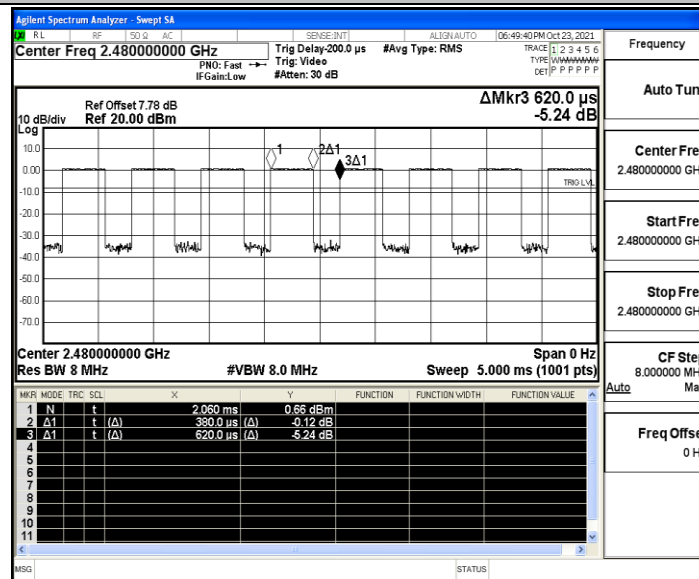
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.62	0.6129	61.29	2.13	---	PASS
		2440	0.39	0.63	0.6190	61.90	2.08	---	PASS
		2480	0.38	0.62	0.6129	61.29	2.13	---	PASS

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	-48.67	≤-41.20	46.53	≤54	PASS
				AV	2388.620	-47.73	≤-41.20	47.47	≤54	PASS
				AV	2390.000	-48.08	≤-41.20	47.12	≤54	PASS
				Peak	2310.000	-40.51	≤-21.20	54.69	≤74	PASS
				Peak	2351.555	-38.62	≤-21.20	56.58	≤74	PASS
				Peak	2390.000	-40.77	≤-21.20	54.43	≤74	PASS
		High	2480	AV	2483.500	-46.98	≤-41.20	48.22	≤54	PASS
				AV	2483.520	-46.98	≤-41.20	48.22	≤54	PASS
				AV	2500.000	-47.55	≤-41.20	47.65	≤54	PASS
				Peak	2483.500	-42.14	≤-21.20	53.06	≤74	PASS
				Peak	2487.600	-38.77	≤-21.20	56.43	≤74	PASS
				Peak	2500.000	-40.65	≤-21.20	54.55	≤74	PASS

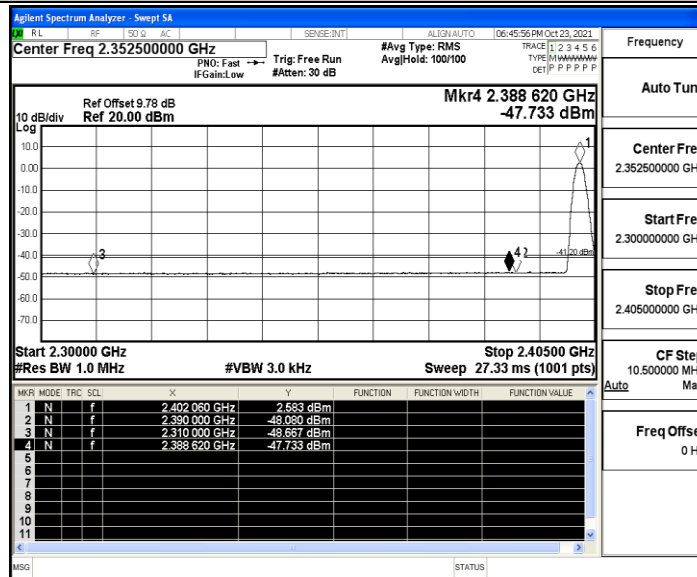
Note:

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.

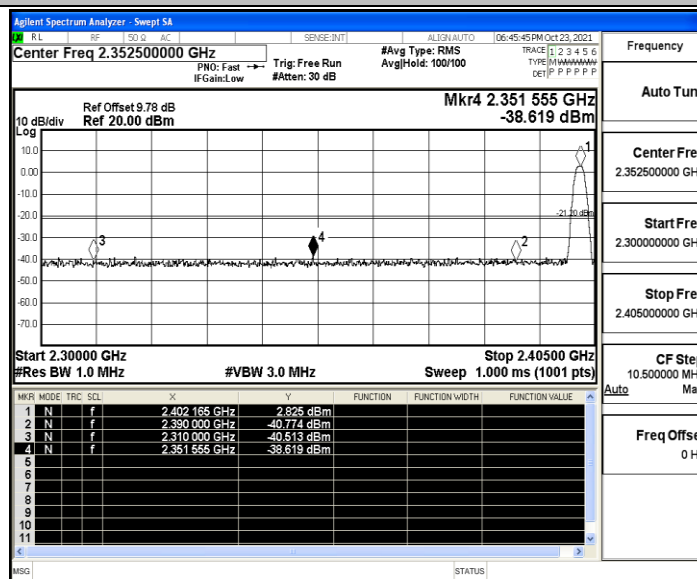


Test Graphs

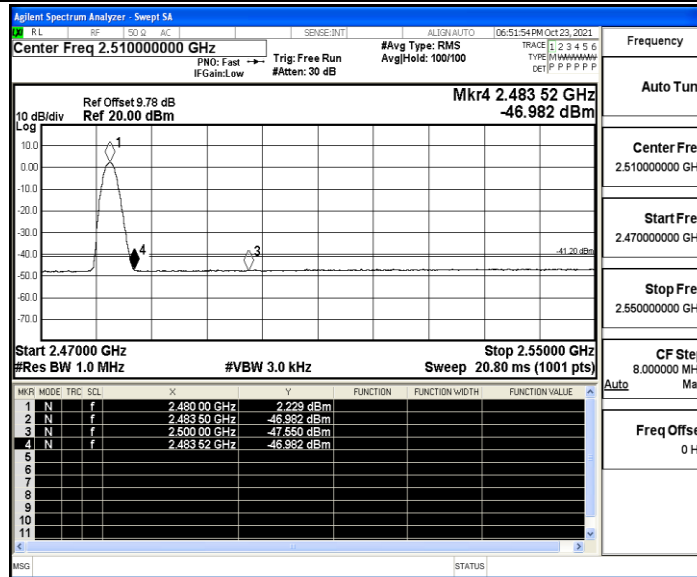
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

