

FCC Appendix RF Test Data for BLE

FCC ID : 2BLBK-OWL03

Company : Shenzhen Midou Technology Co., Ltd.

EUT : Smart RGB Outdoor Wall Light

Model Number : OWL03

Report No. : CTA26041001001

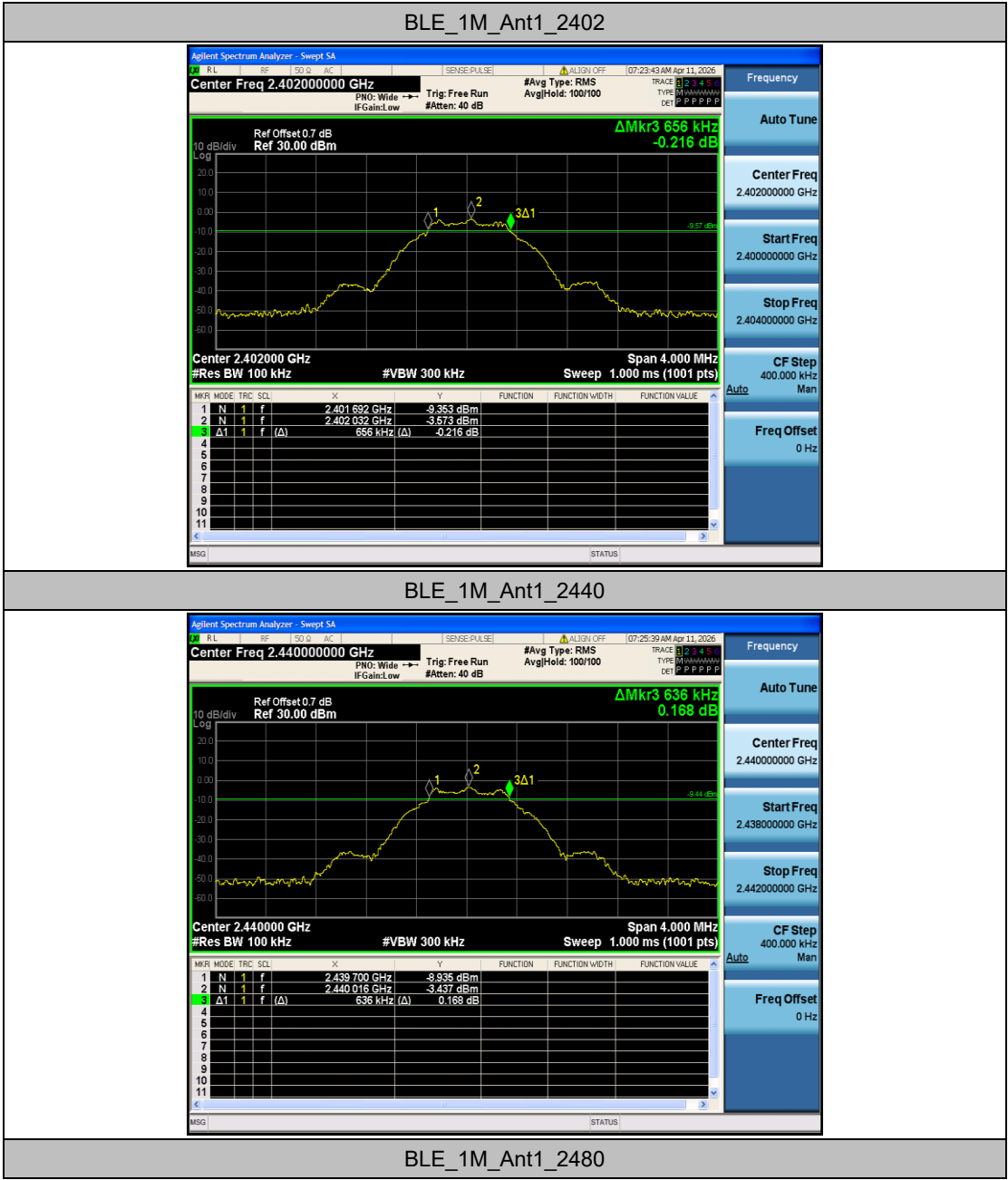
Reviewed By : Eric Wang

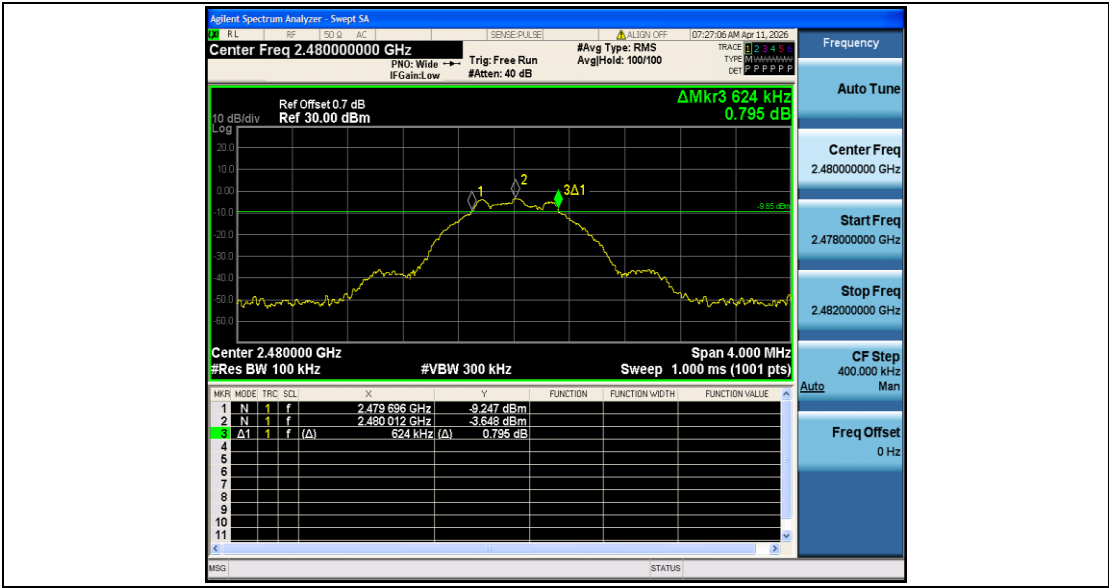
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.692	2402.348	0.5	PASS
		2440	0.636	2439.700	2440.336	0.5	PASS
		2480	0.624	2479.696	2480.320	0.5	PASS

Test Graphs





Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0097	2401.5169	2402.5266	---	---
		2440	0.99998	2439.5202	2440.5202	---	---
		2480	1.0002	2479.5210	2480.5212	---	---

Test Graphs

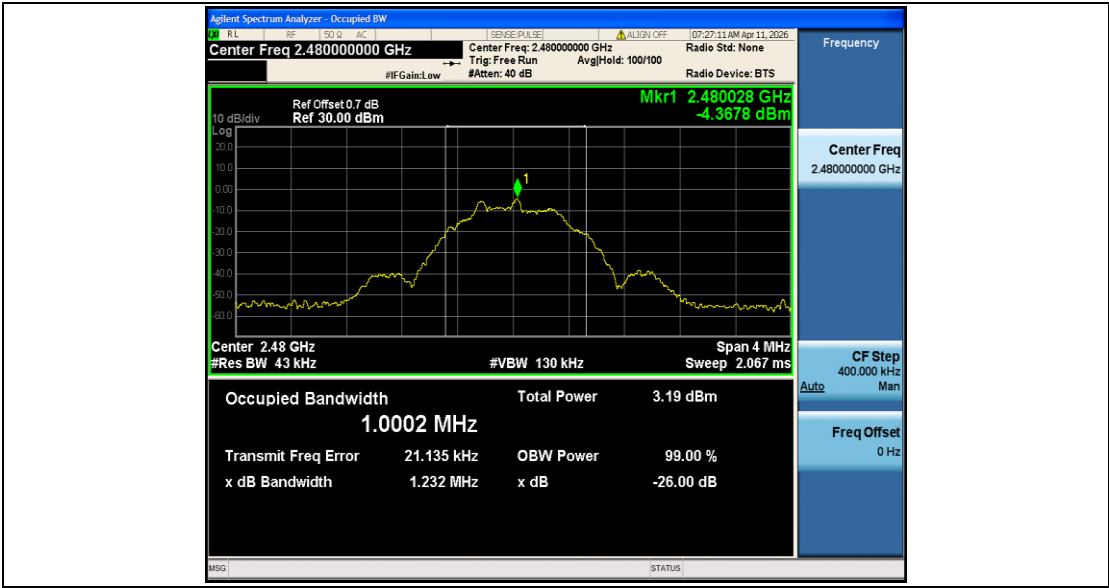
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.11	≤30	PASS
		2440	-3.30	≤30	PASS
		2480	-3.30	≤30	PASS

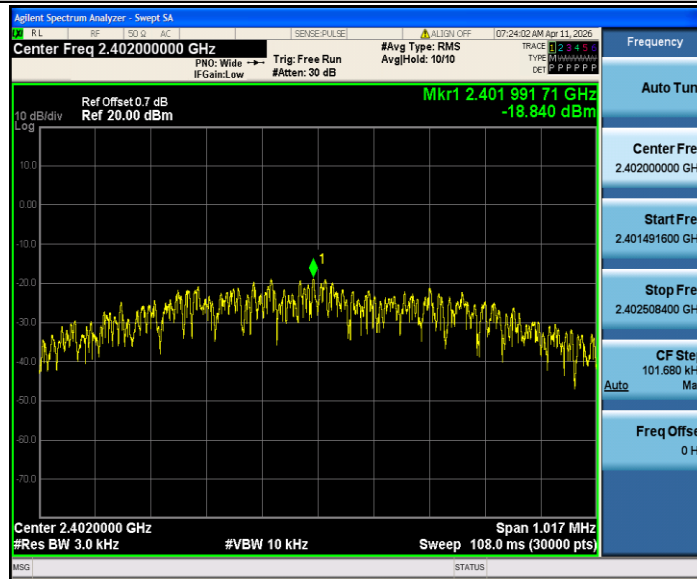
Appendix D: Maximum power spectral density

Test Result

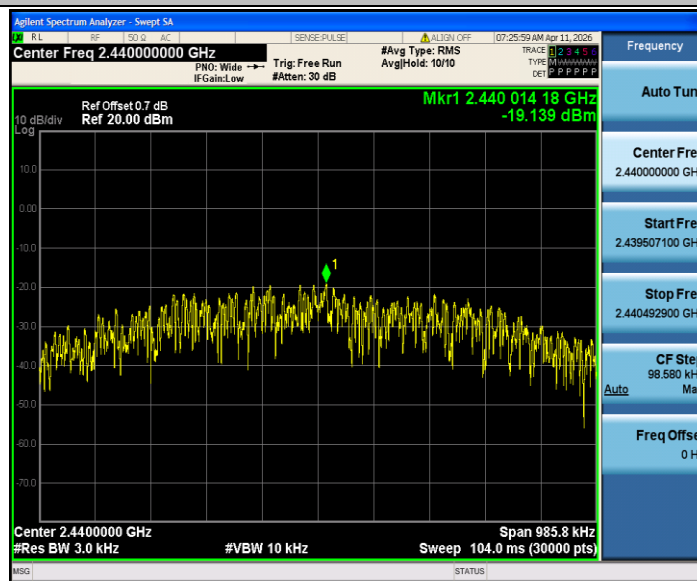
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.84	≤8.00	PASS
		2440	-19.14	≤8.00	PASS
		2480	-18.86	≤8.00	PASS

Test Graphs

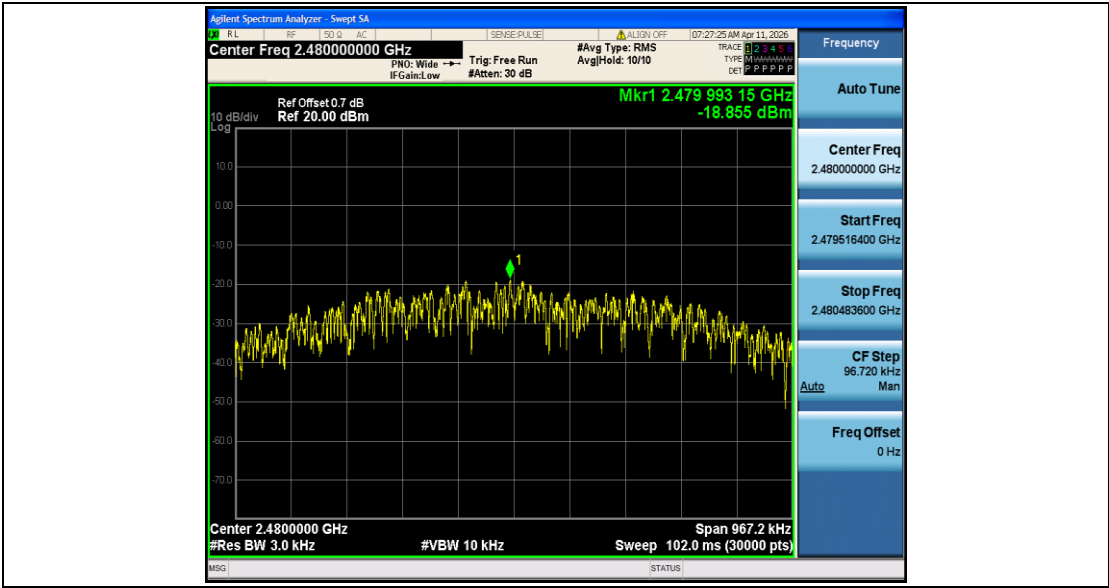
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

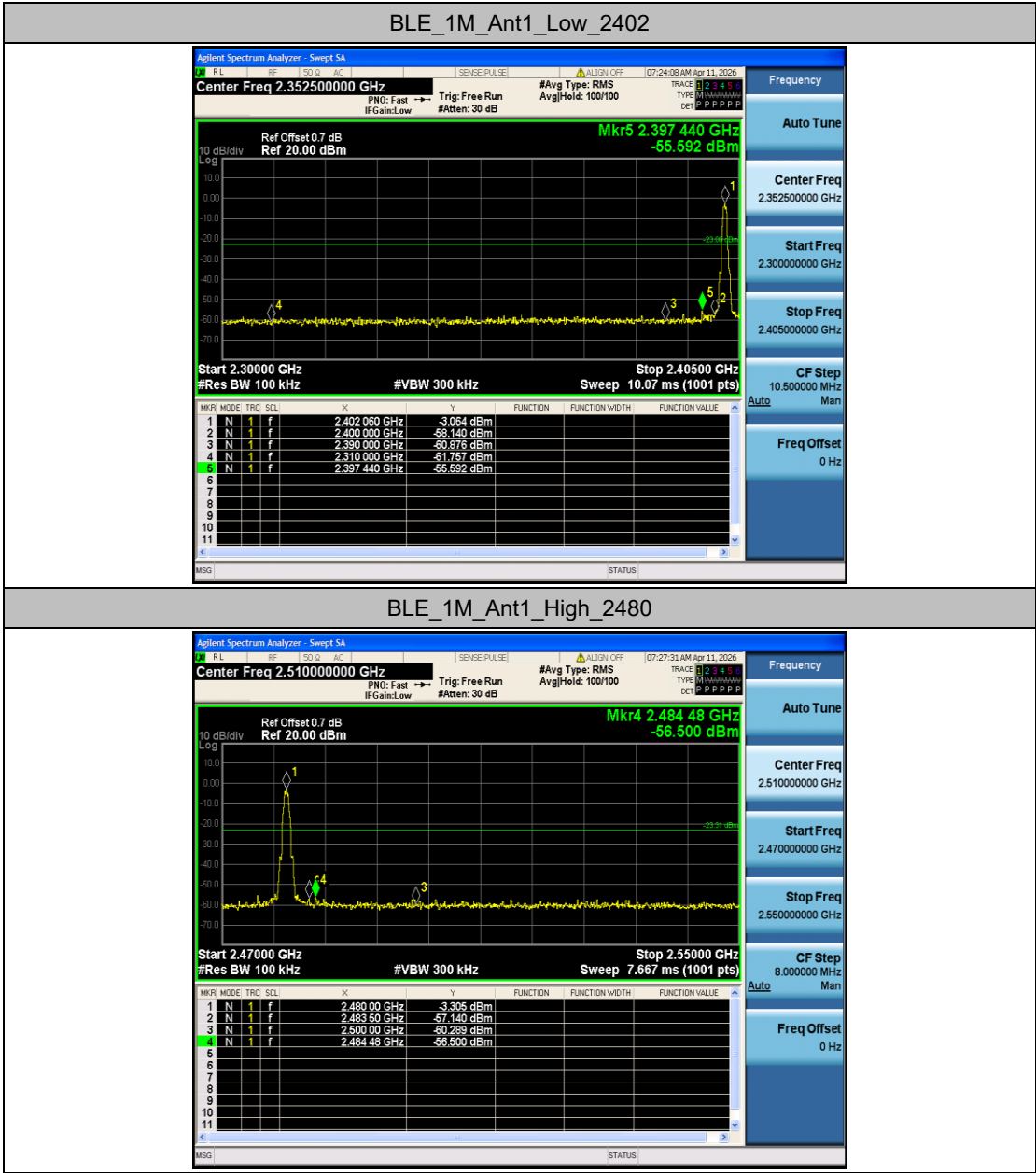


Appendix E: Band edge measurements

Test Result

TestMod e	Antenn a	ChNam e	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-3.06	-55.59	≤-23.06	PASS
		High	2480	-3.31	-56.5	≤-23.31	PASS

Test Graphs

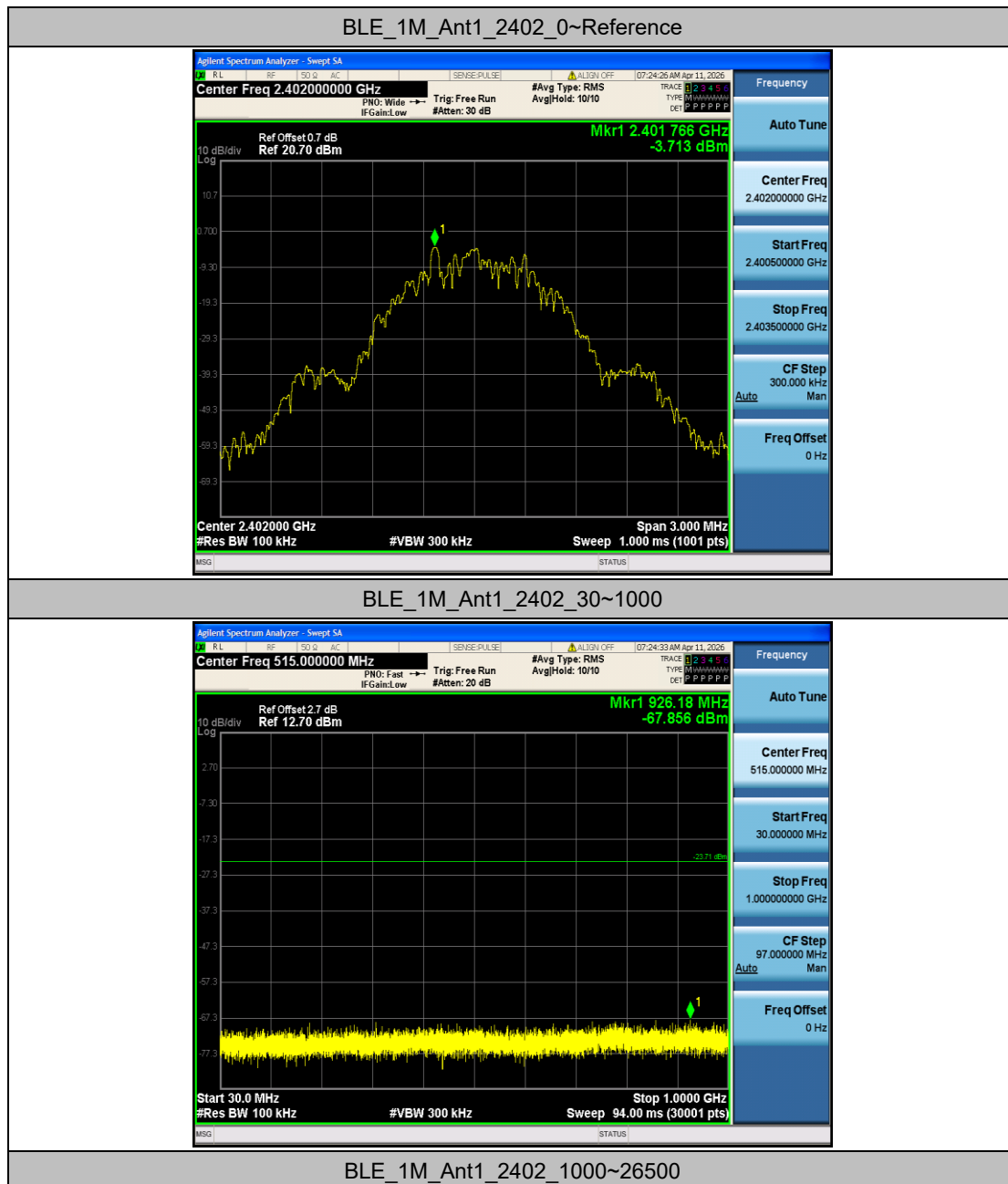


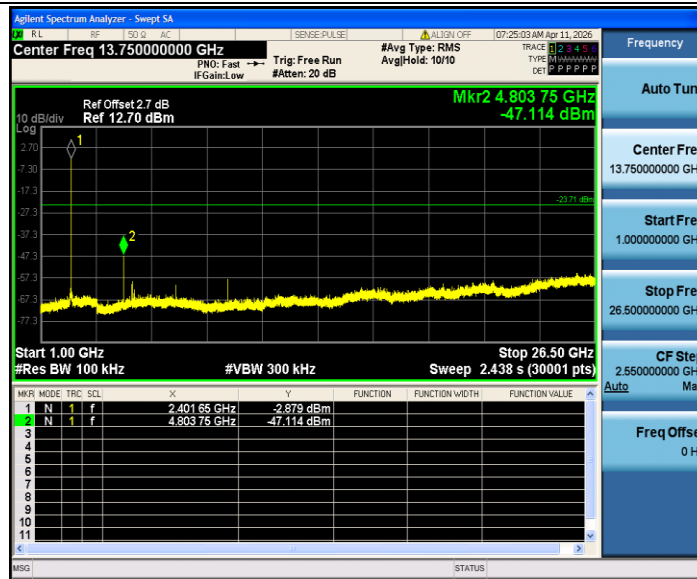
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.71	-3.71	---	PASS
			30~1000	-3.71	-67.86	≤-23.71	PASS
			1000~26500	-3.71	-47.11	≤-23.71	PASS
		2440	Reference	-6.36	-6.36	---	PASS
			30~1000	-6.36	-67.91	≤-26.36	PASS
			1000~26500	-6.36	-47.27	≤-26.36	PASS
		2480	Reference	-4.00	-4.00	---	PASS
			30~1000	-4.00	-67.8	≤-24	PASS
			1000~26500	-4.00	-49.18	≤-24	PASS

Test Graphs

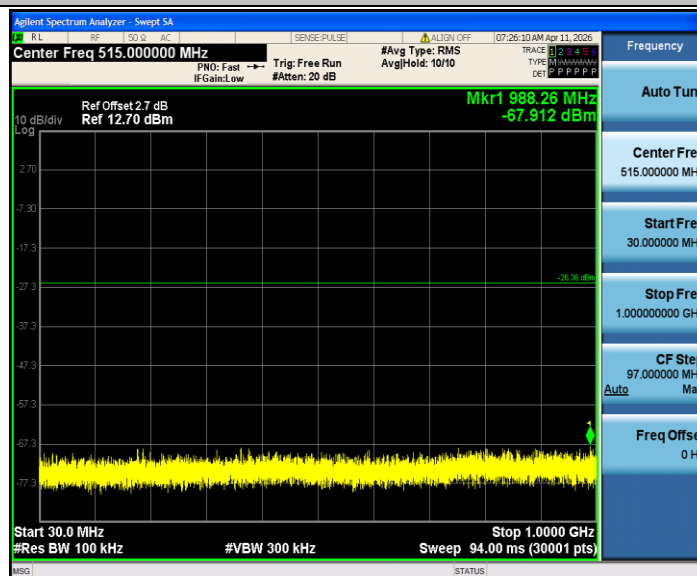




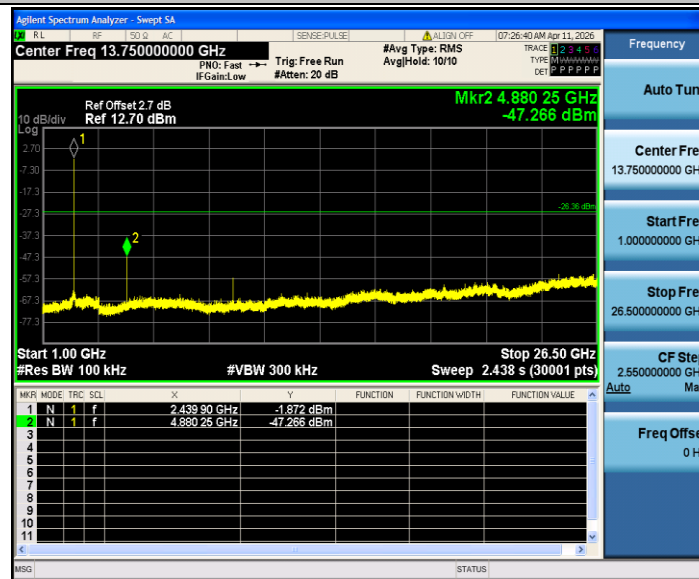
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



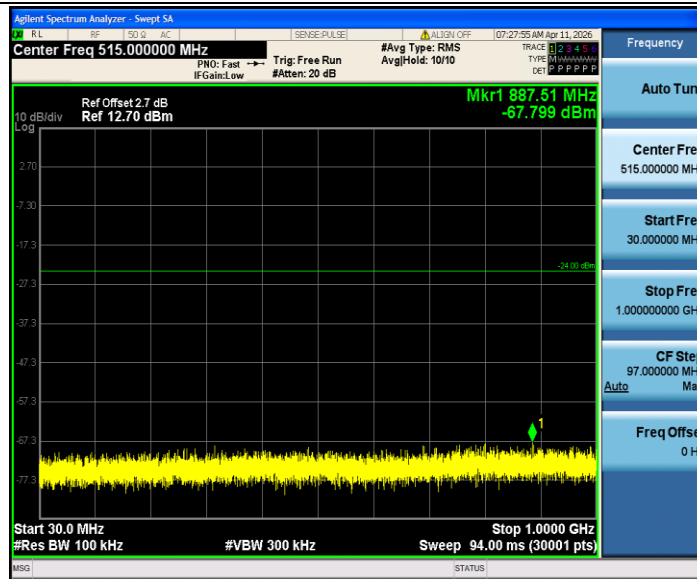
BLE_1M_Ant1_2440_1000~26500



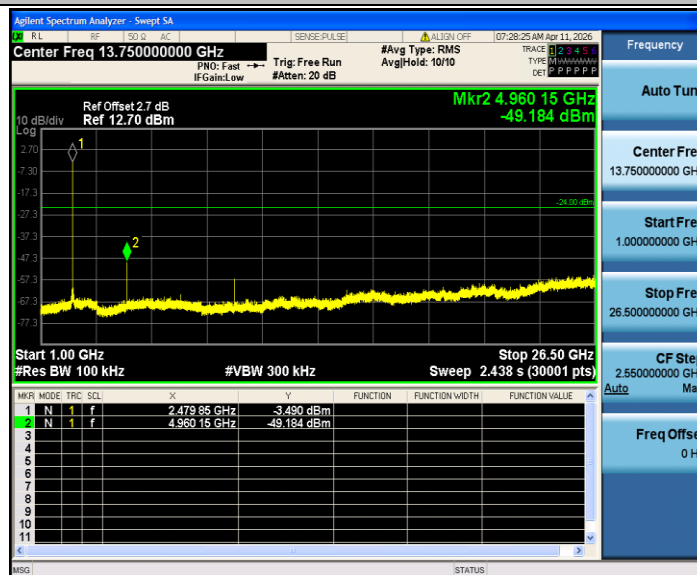
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

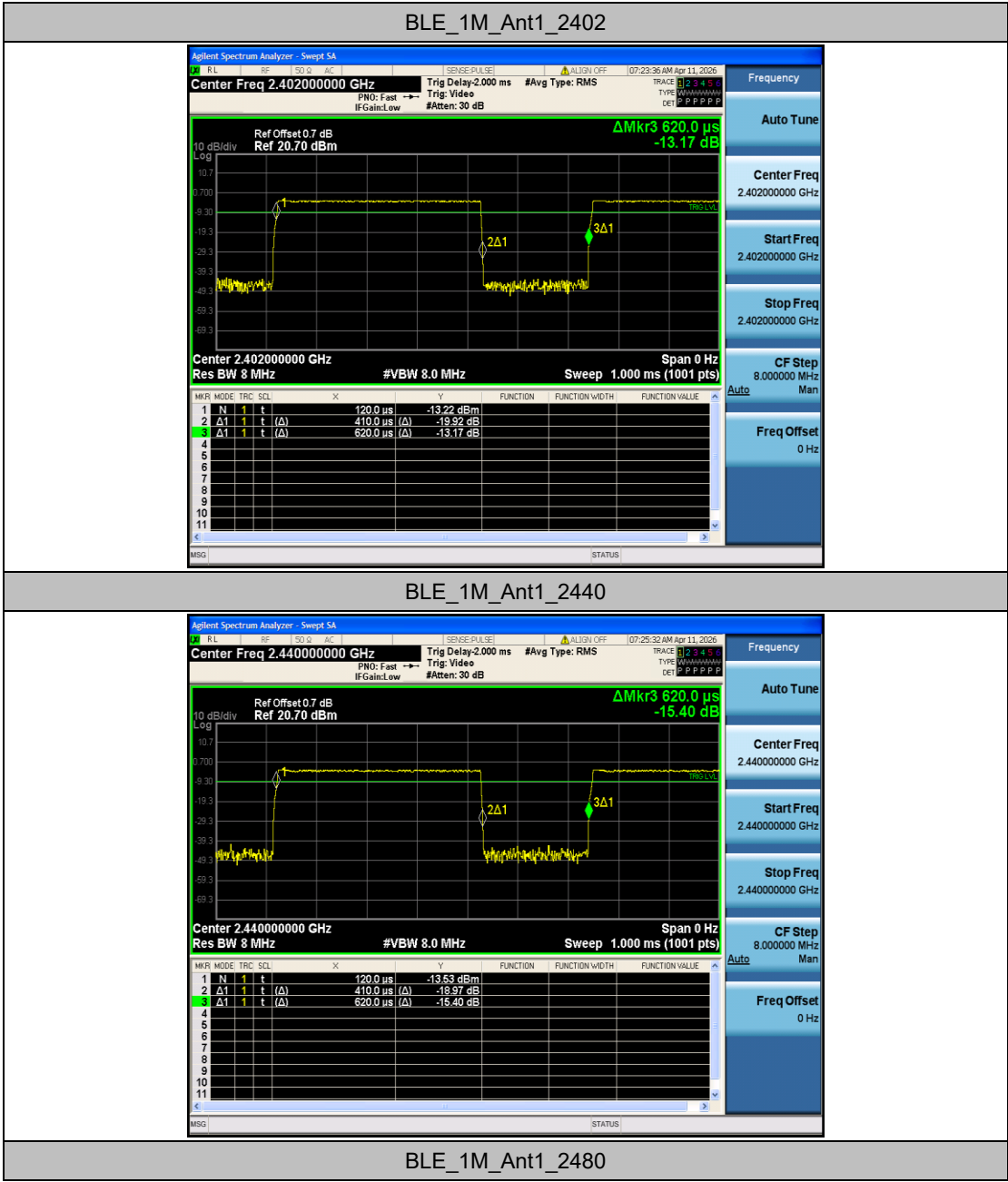


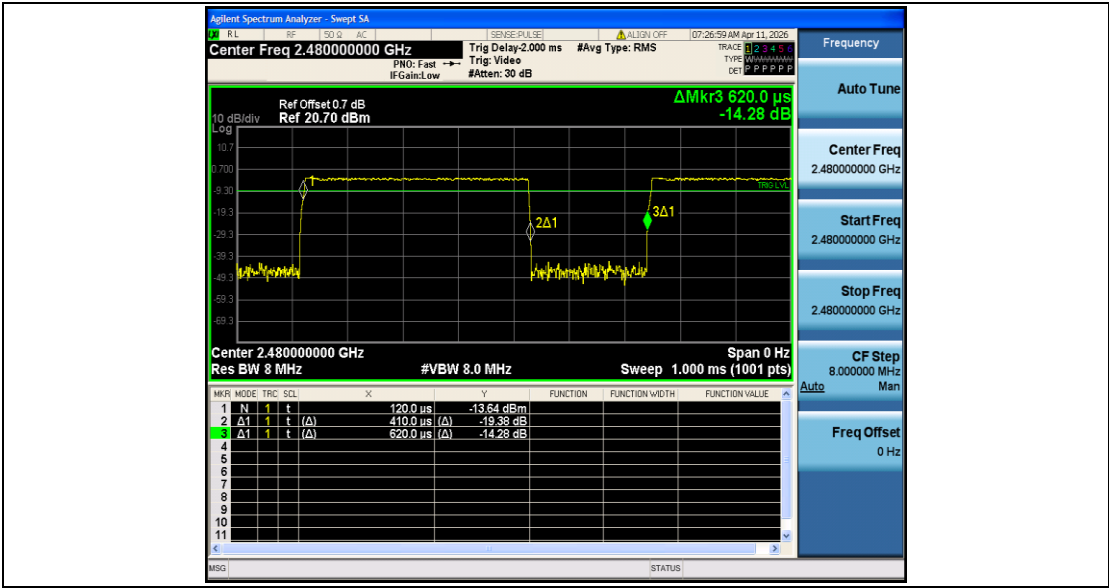
Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.62	0.6613	66.13	1.80	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.41	0.62	0.6613	66.13	1.80	---	---

Test Graphs





Appendix H: Emissions in Restricted Bands

Test Result

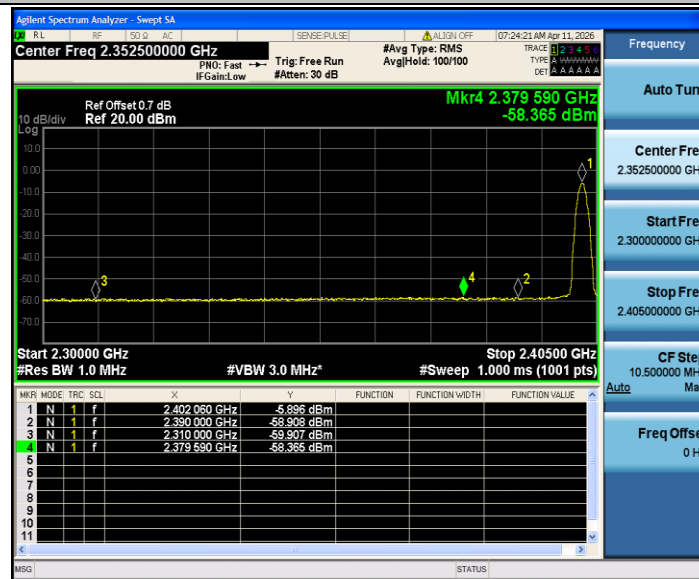
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-59.91	2.00	1.80	39.09	≤54	PASS
				AV	2379.590	-58.37	2.00	1.80	40.63	≤54	PASS
				AV	2390.000	-58.91	2.00	1.80	40.09	≤54	PASS
				Peak	2310.000	-51.39	2.00	0.00	45.81	≤74	PASS
				Peak	2356.700	-47.47	2.00	0.00	49.73	≤74	PASS
				Peak	2390.000	-50.69	2.00	0.00	46.51	≤74	PASS
		High	2480	AV	2483.500	-57.31	2.00	1.80	41.69	≤54	PASS
				AV	2483.520	-57.31	2.00	1.80	41.69	≤54	PASS
				AV	2500.000	-58.71	2.00	1.80	40.29	≤54	PASS
				Peak	2483.500	-49.78	2.00	0.00	47.42	≤74	PASS
				Peak	2485.280	-47.26	2.00	0.00	49.94	≤74	PASS
				Peak	2500.000	-51.62	2.00	0.00	45.58	≤74	PASS

Note:

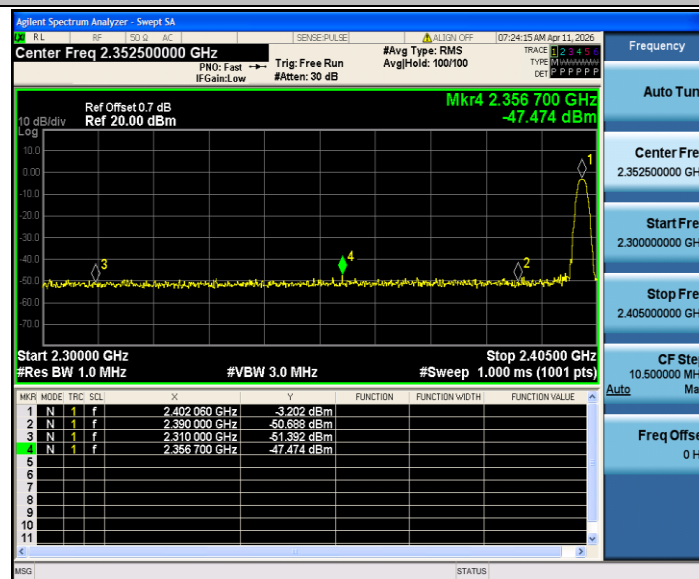
The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

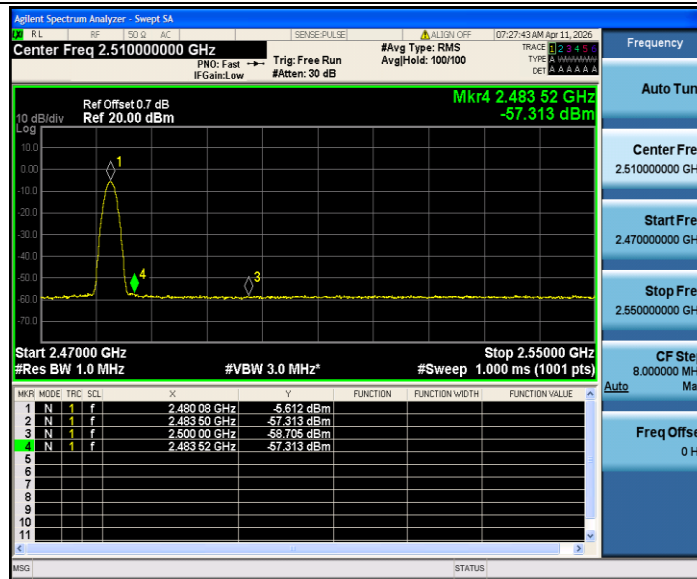
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

