

FCC Appendix RF Test Data for BLE

FCC ID : 2BWV8-RGBIC18LED

Company : Guangzhou Binchengfa Auto Accessories Factory

EUT : CAR COLORFUL ATMOSPHERE LAMP

Model Number : RGBIC 18LED

Report No. : CTA26061601401

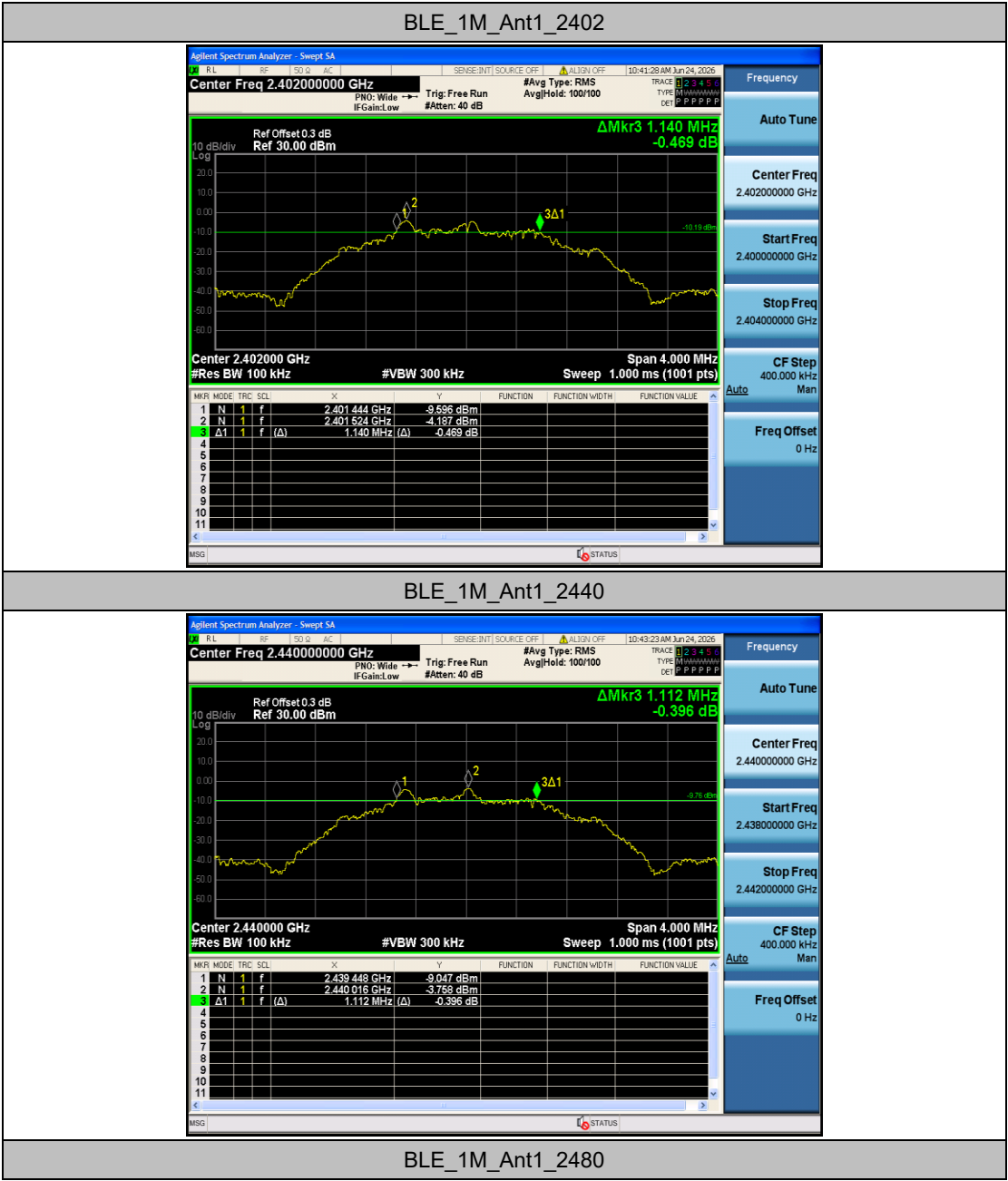
Reviewed By : Eric Wang

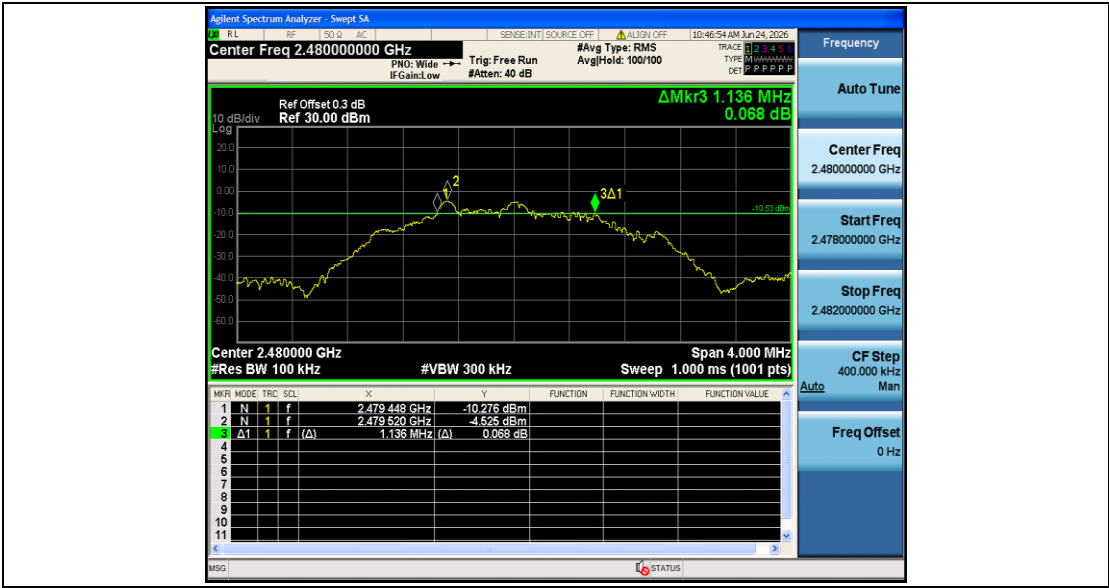
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.140	2401.444	2402.584	0.5	PASS
		2440	1.112	2439.448	2440.560	0.5	PASS
		2480	1.136	2479.448	2480.584	0.5	PASS

Test Graphs



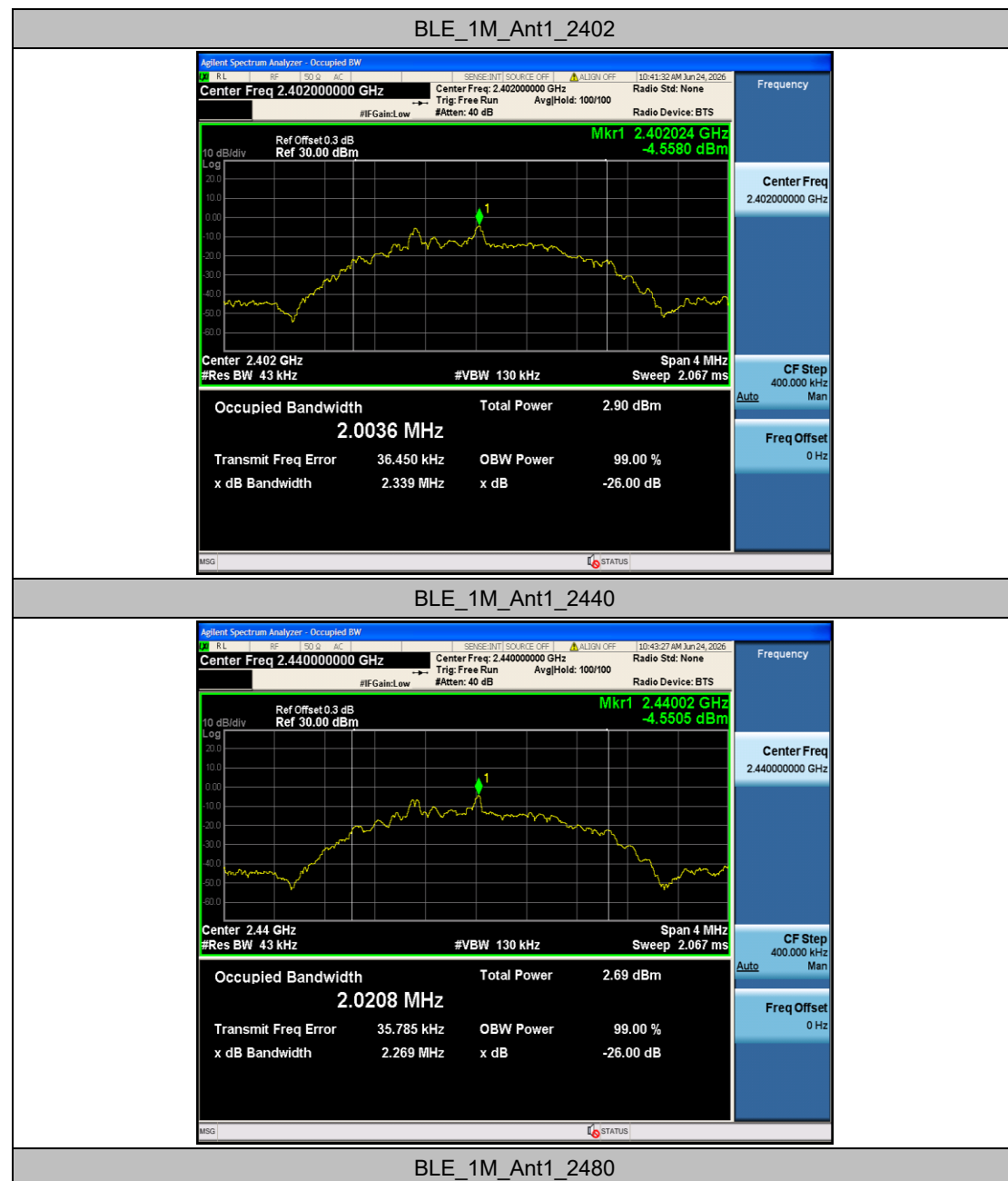


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	2.0036	2401.0347	2403.0383	---	---
		2440	2.0208	2439.0254	2441.0462	---	---
		2480	2.0025	2479.0289	2481.0314	---	---

Test Graphs





Appendix C: Maximum conducted output power

Test Result Peak

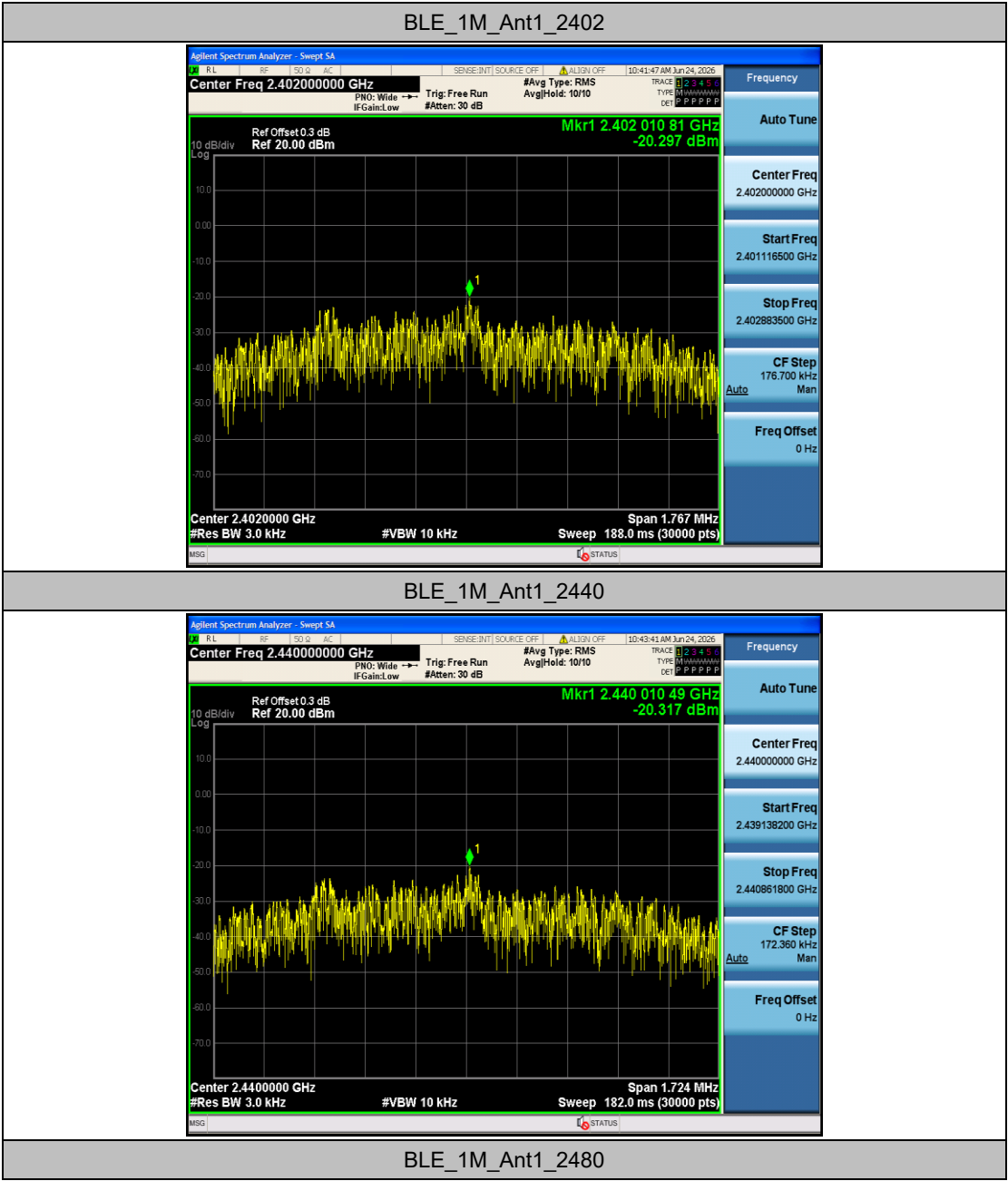
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.52	≤30	PASS
		2440	-3.60	≤30	PASS
		2480	-3.86	≤30	PASS

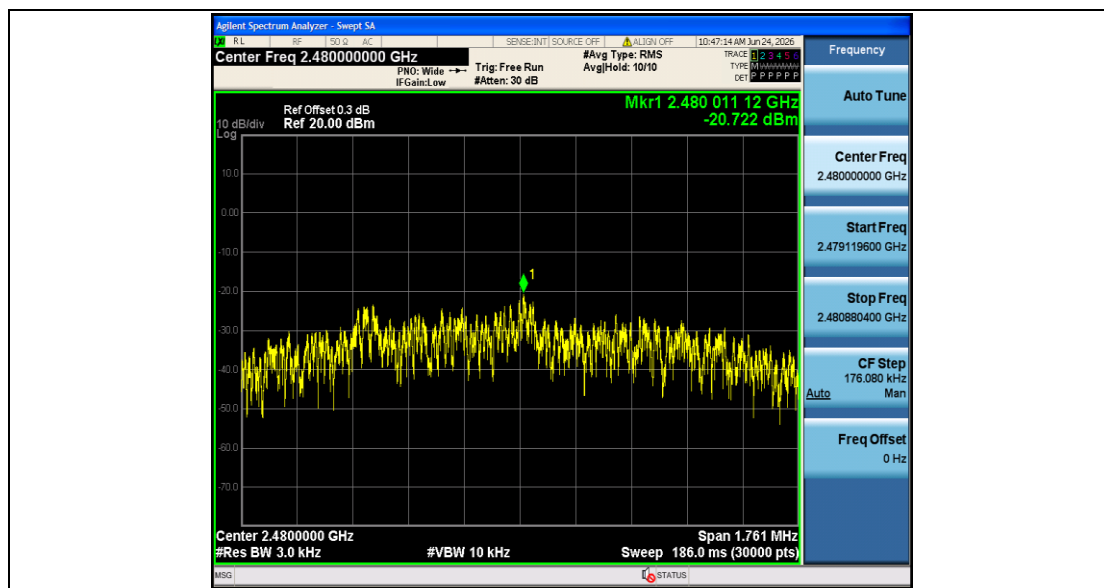
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-20.30	≤8.00	PASS
		2440	-20.32	≤8.00	PASS
		2480	-20.72	≤8.00	PASS

Test Graphs



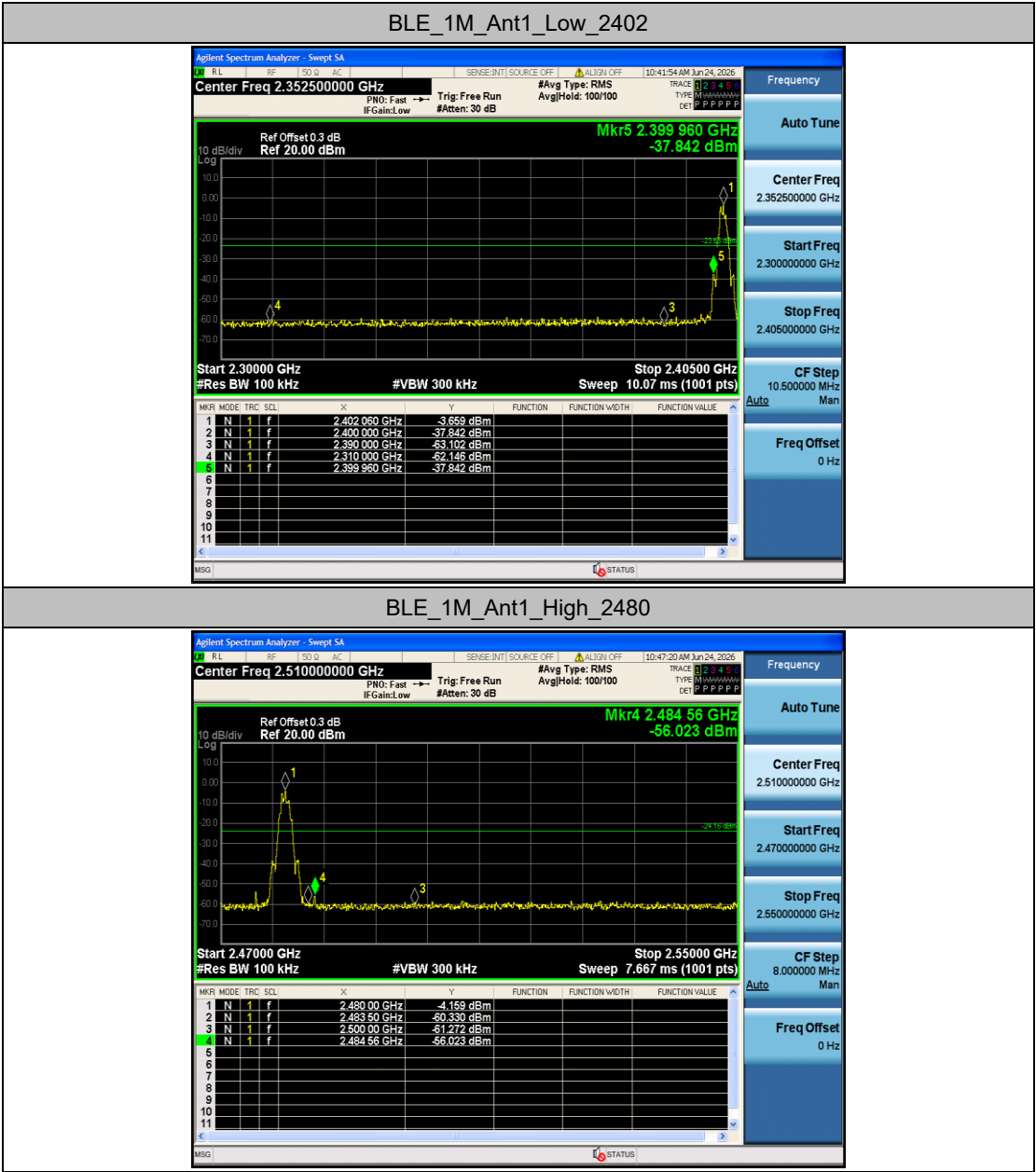


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.66	-37.84	≤-23.66	PASS
		High	2480	-4.16	-56.02	≤-24.16	PASS

Test Graphs

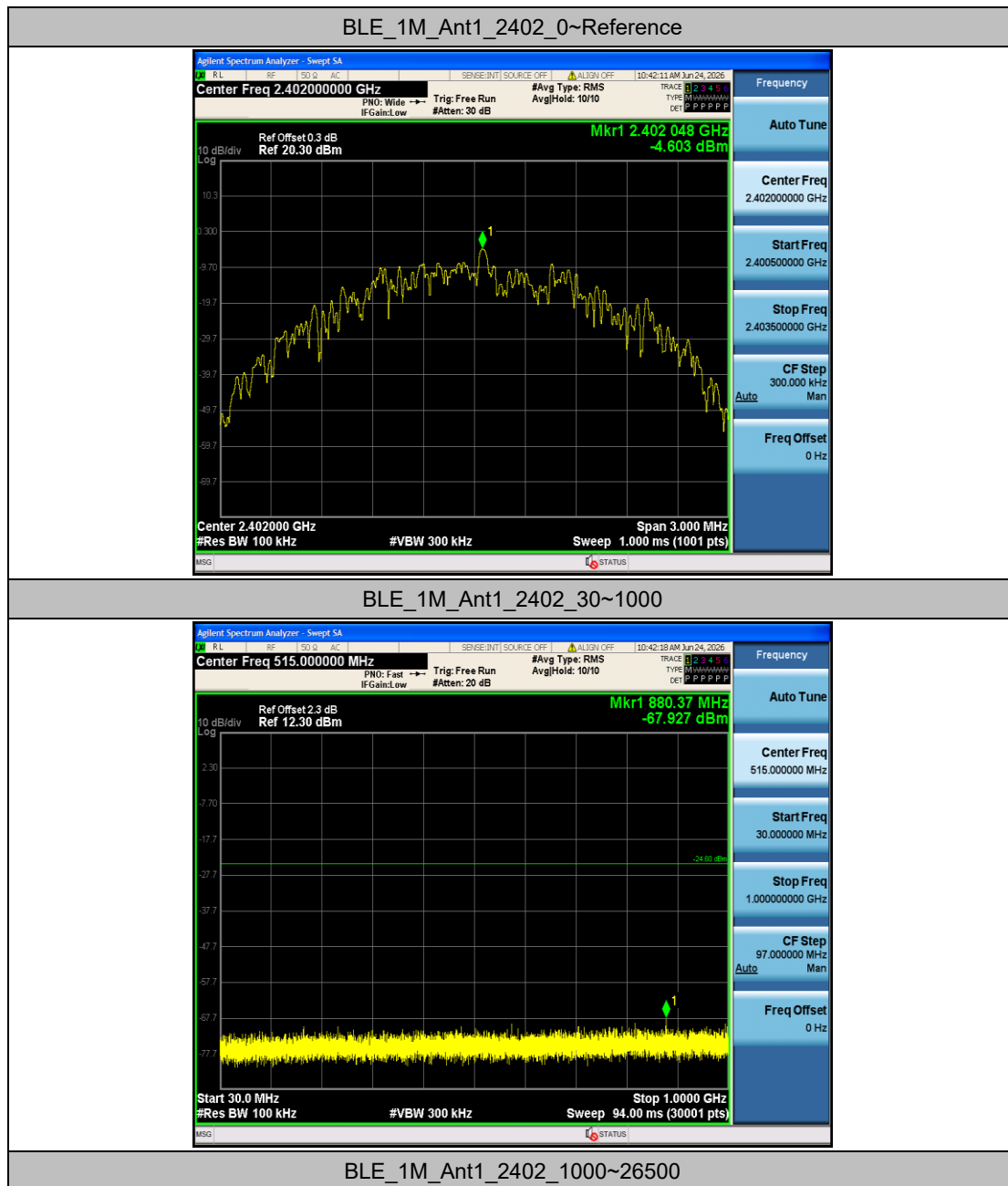


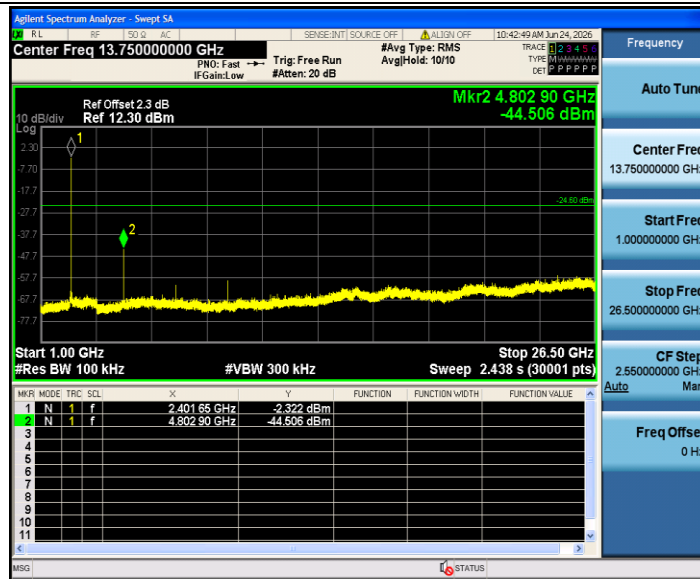
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.60	-4.60	---	PASS
			30~1000	-4.60	-67.93	≤-24.6	PASS
			1000~26500	-4.60	-44.51	≤-24.6	PASS
		2440	Reference	-5.43	-5.43	---	PASS
			30~1000	-5.43	-68.38	≤-25.43	PASS
			1000~26500	-5.43	-47.06	≤-25.43	PASS
		2480	Reference	-6.20	-6.20	---	PASS
			30~1000	-6.20	-63.34	≤-26.2	PASS
			1000~26500	-6.20	-50.88	≤-26.2	PASS

Test Graphs

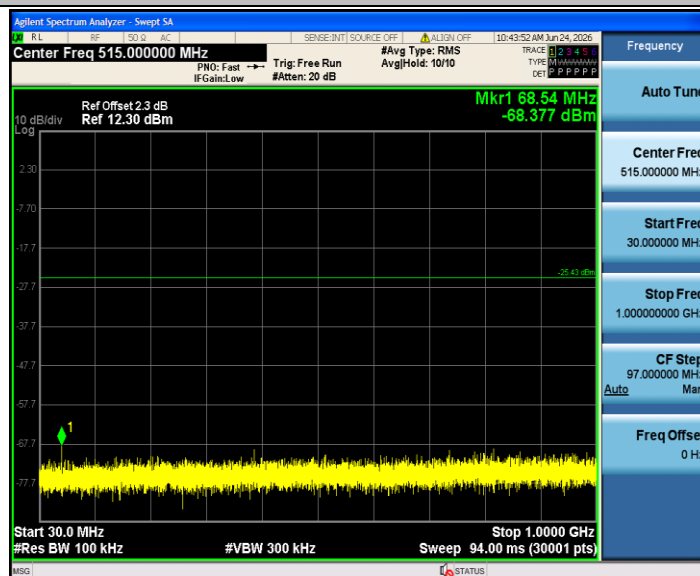




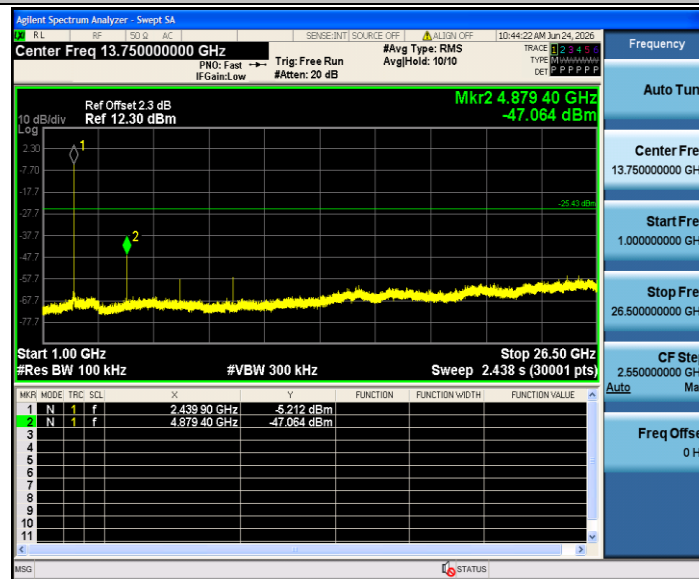
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



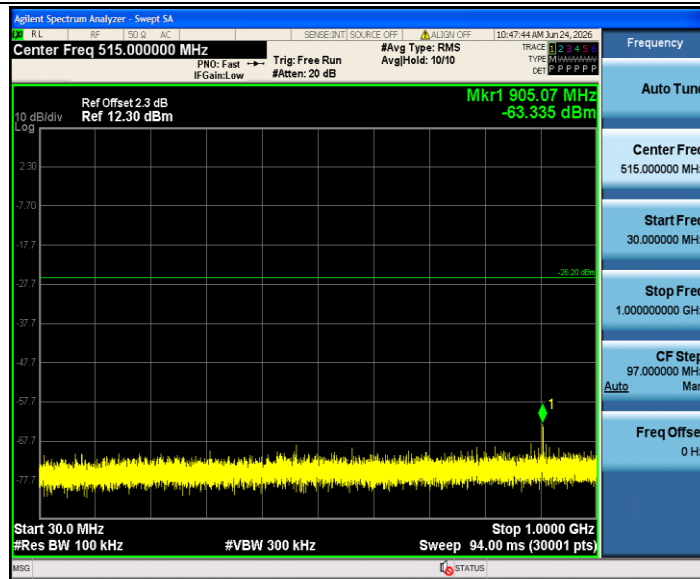
BLE_1M_Ant1_2440_1000~26500



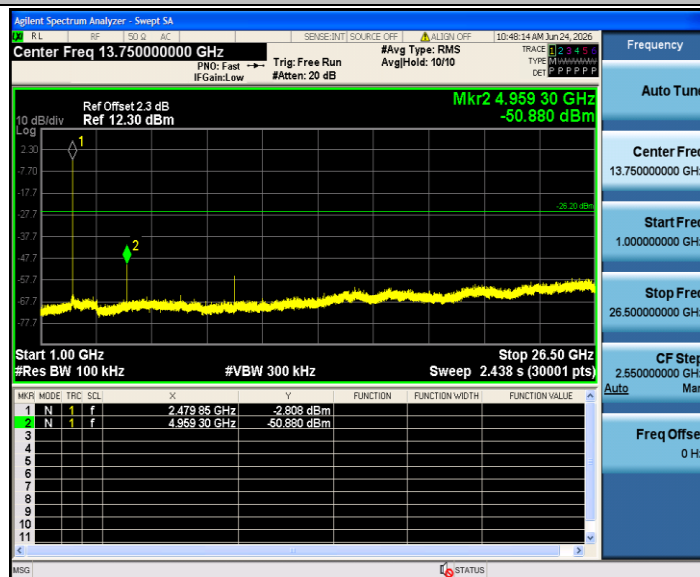
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



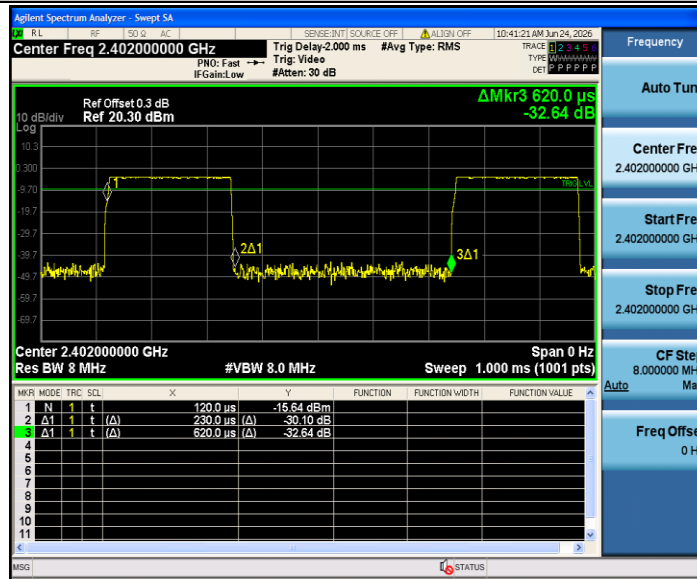
Appendix G: Duty Cycle

Test Result

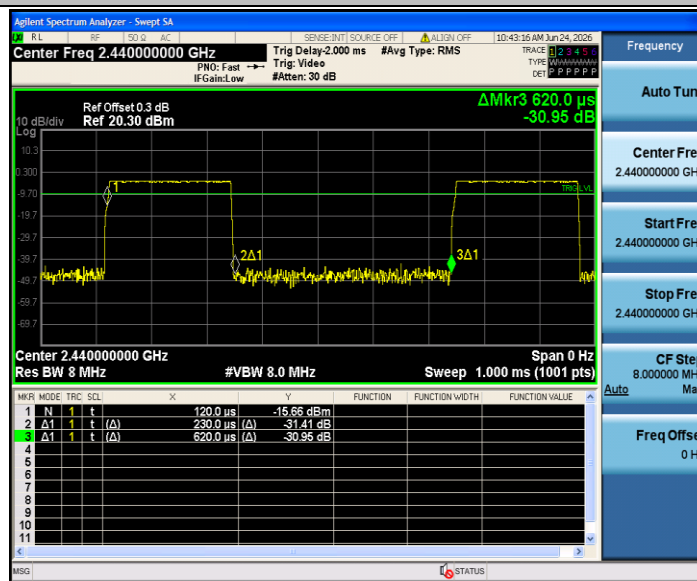
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.23	0.62	0.3710	37.10	4.31	---	---
		2440	0.23	0.62	0.3710	37.10	4.31	---	---
		2480	0.23	0.62	0.3710	37.10	4.31	---	---

Test Graphs

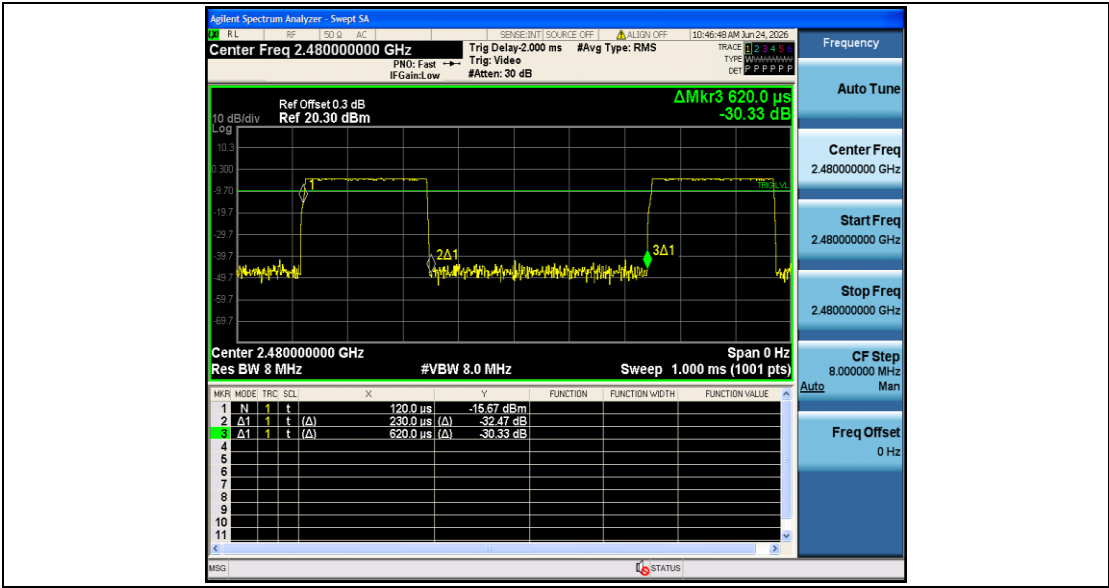
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

TestMode	Antenna	Channel Name	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	-61.2	2.00	4.31	40.31	≤54	PASS
				AV	2372.135	-59.27	2.00	4.31	42.24	≤54	PASS
				AV	2390.000	-60.14	2.00	4.31	41.37	≤54	PASS
				Peak	2310.000	-50.9	2.00	0.00	46.30	≤74	PASS
				Peak	2360.690	-49.75	2.00	0.00	47.45	≤74	PASS
				Peak	2390.000	-53.1	2.00	0.00	44.10	≤74	PASS
		High	2480	AV	2483.500	-58.69	2.00	4.31	42.82	≤54	PASS
				AV	2484.480	-58.55	2.00	4.31	42.96	≤54	PASS
				AV	2500.000	-59.99	2.00	4.31	41.52	≤54	PASS
				Peak	2483.500	-49.92	2.00	0.00	47.28	≤74	PASS
				Peak	2484.400	-46.26	2.00	0.00	50.94	≤74	PASS
				Peak	2500.000	-52.27	2.00	0.00	44.93	≤74	PASS

Note:

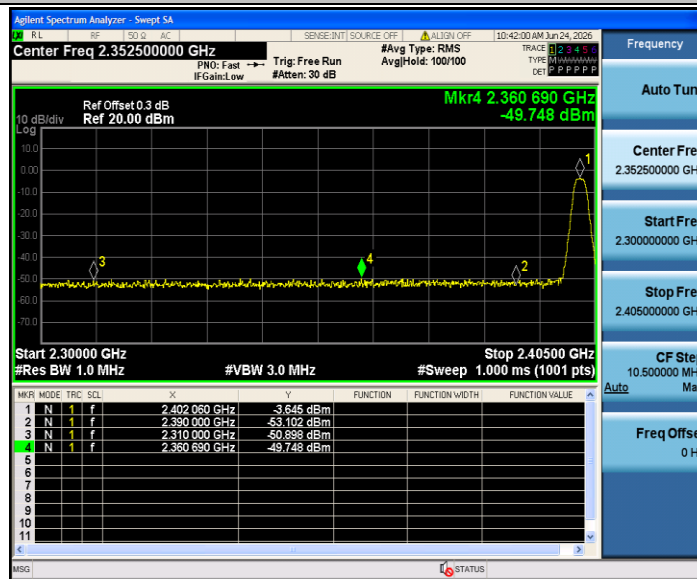
1. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

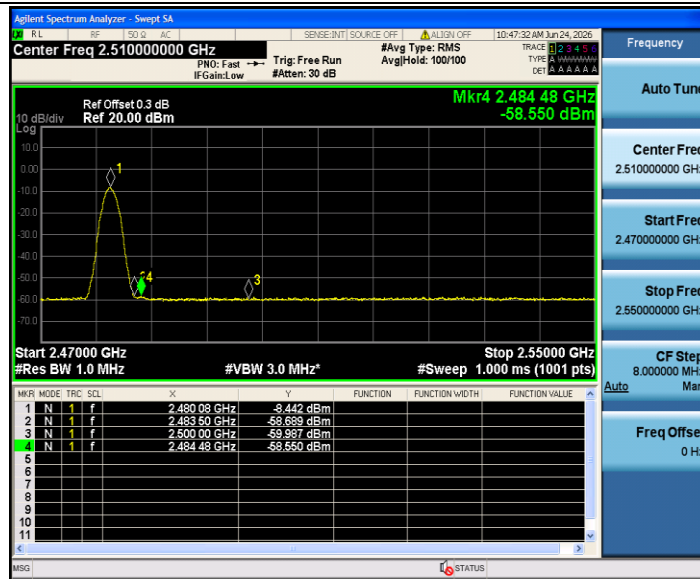
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

