

FCC Appendix RF Test Data for BLE

FCC ID : 2BBQT-IVDL2205WH

Company : MCG Innovations Inc

EUT : 360 DEGREE AMBIENT TABLE LAMP

Model Number : IVDL2205WH

Report No. : CTA26012300501

Reviewed By : Eric Wang

Appendix A: DTS Bandwidth

Test Result

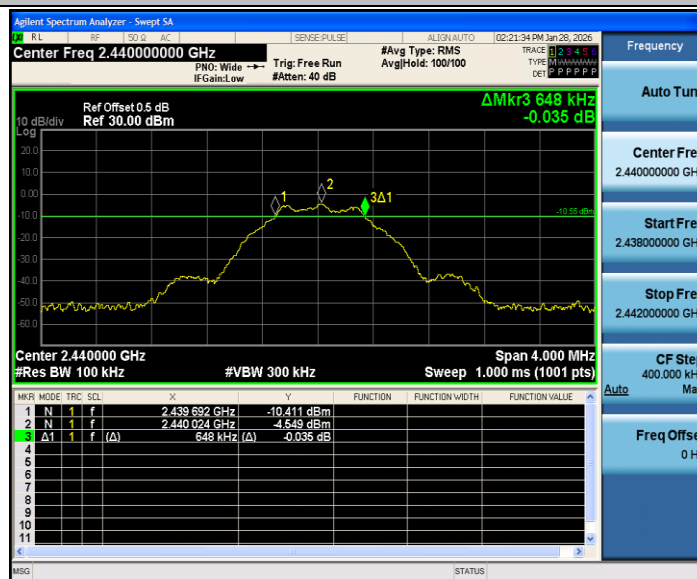
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.640	2401.696	2402.336	0.5	PASS
		2440	0.648	2439.692	2440.340	0.5	PASS
		2480	0.640	2479.696	2480.336	0.5	PASS

Test Graphs

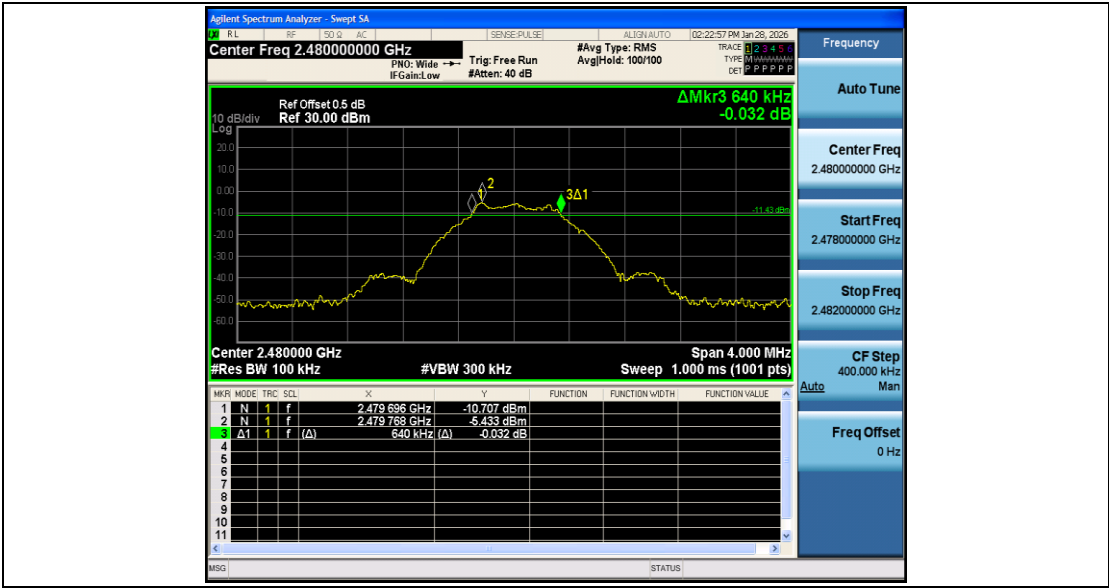
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



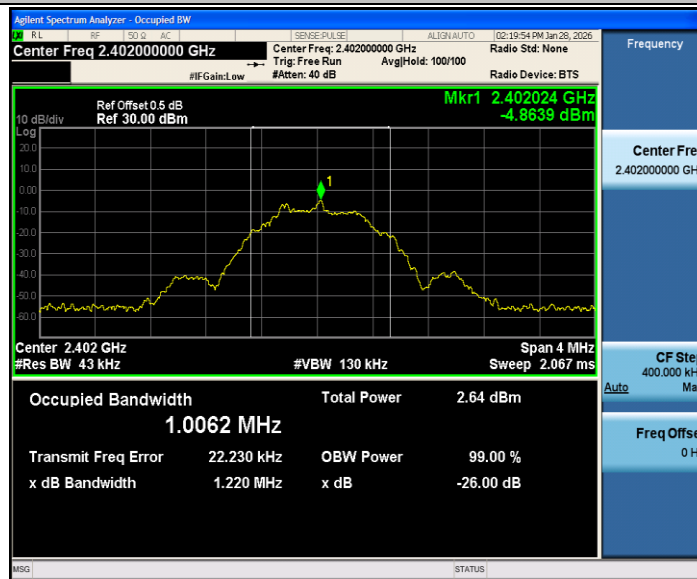
Appendix B: Occupied Channel Bandwidth

Test Result

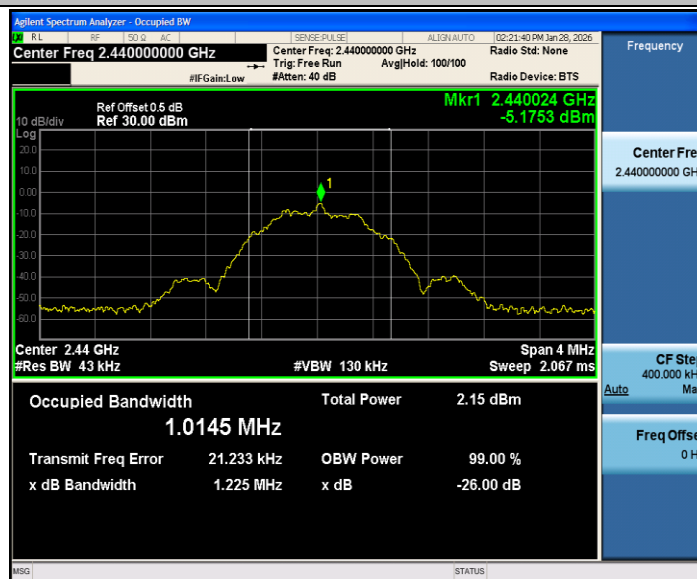
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0062	2401.5191	2402.5253	---	---
		2440	1.0145	2439.5140	2440.5285	---	---
		2480	1.0085	2479.5173	2480.5258	---	---

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	-4.01	≤30	PASS
		2440	-4.33	≤30	PASS
		2480	-4.74	≤30	PASS

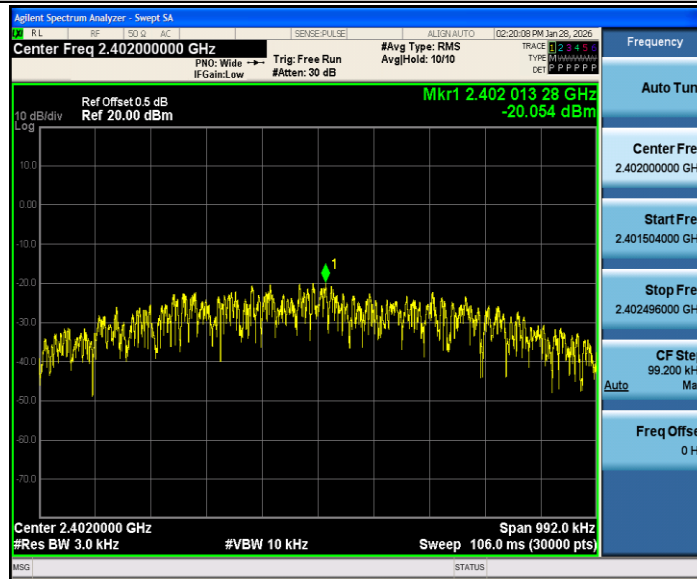
Appendix D: Maximum power spectral density

Test Result

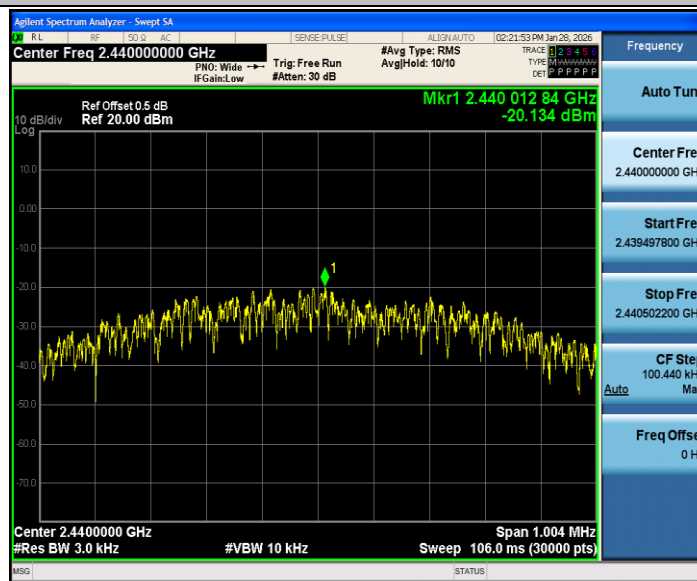
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-20.05	≤8.00	PASS
		2440	-20.13	≤8.00	PASS
		2480	-20.81	≤8.00	PASS

Test Graphs

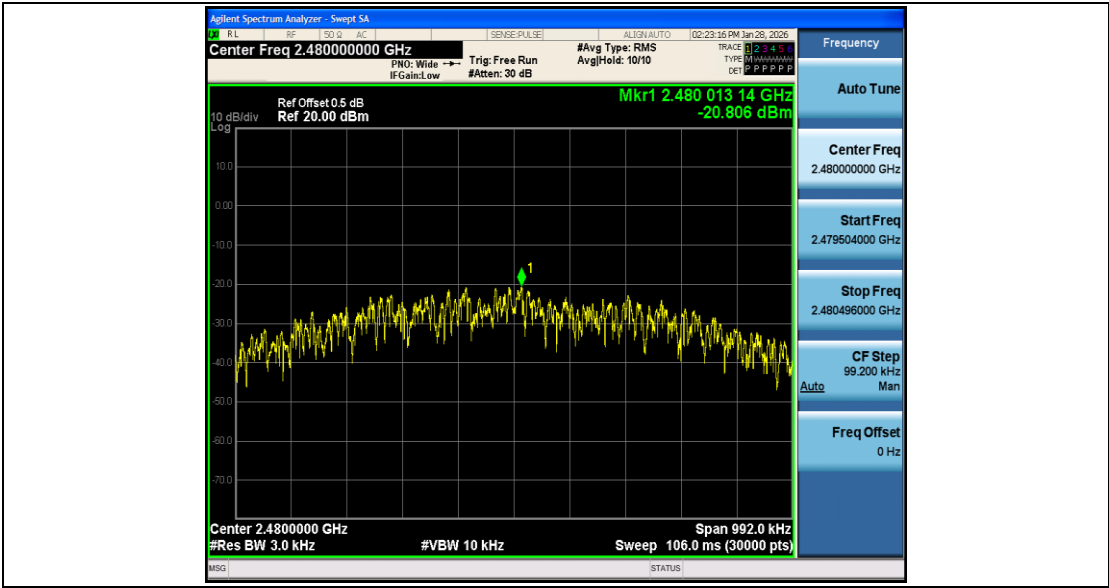
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



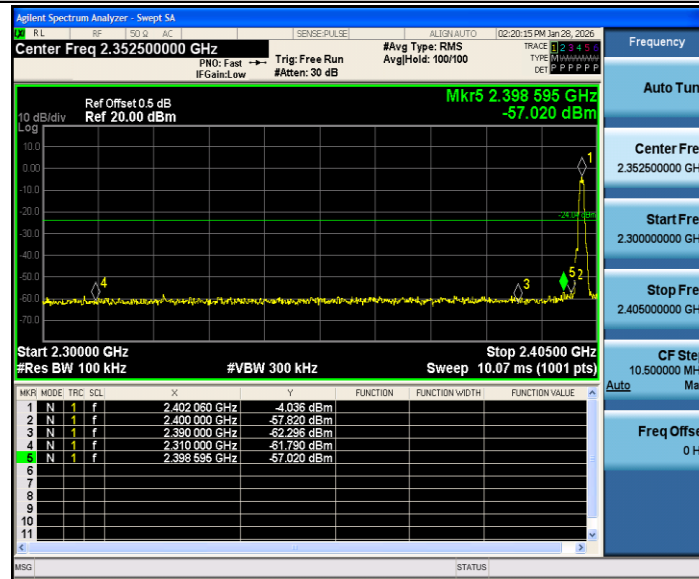
Appendix E: Band edge measurements

Test Result

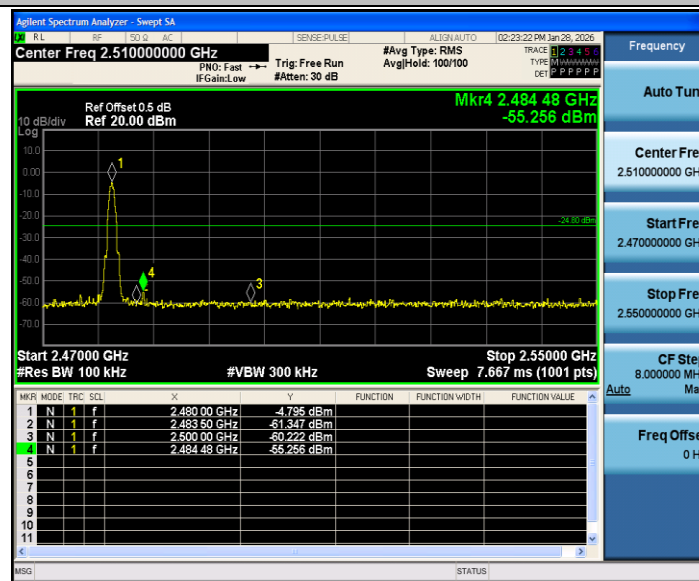
TestMod e	Antenn a	ChNam e	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-4.04	-57.02	≤-24.04	PASS
		High	2480	-4.80	-55.26	≤-24.8	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

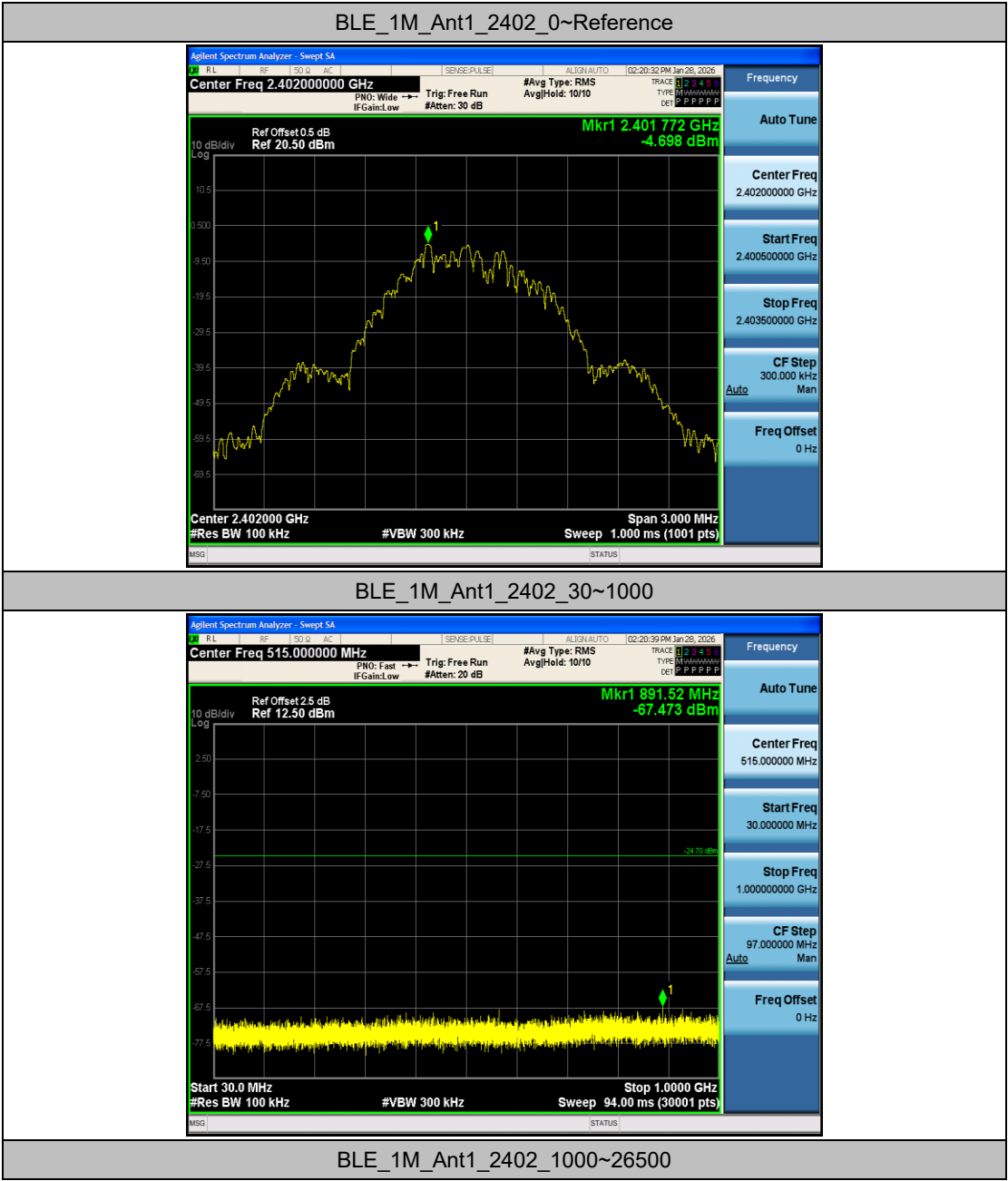


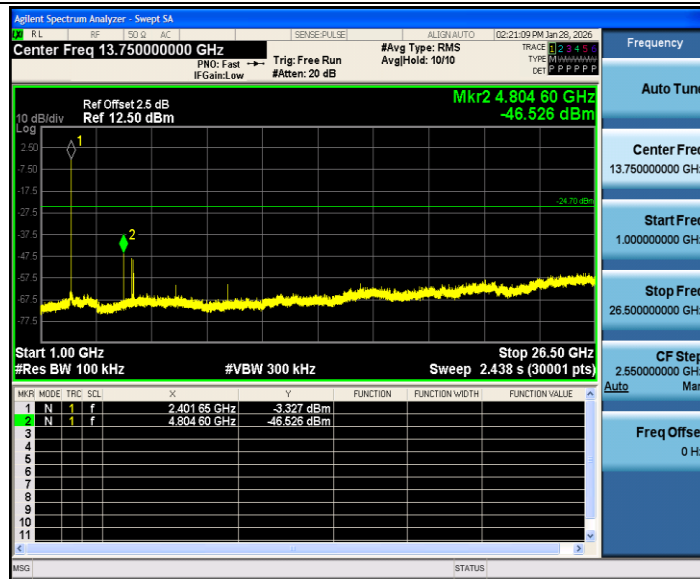
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.70	-4.70	---	PASS
			30~1000	-4.70	-67.47	≤-24.7	PASS
			1000~26500	-4.70	-46.53	≤-24.7	PASS
		2440	Reference	-5.92	-5.92	---	PASS
			30~1000	-5.92	-68.51	≤-25.92	PASS
			1000~26500	-5.92	-46.68	≤-25.92	PASS
		2480	Reference	-6.74	-6.74	---	PASS
			30~1000	-6.74	-67.66	≤-26.74	PASS
			1000~26500	-6.74	-48.91	≤-26.74	PASS

Test Graphs

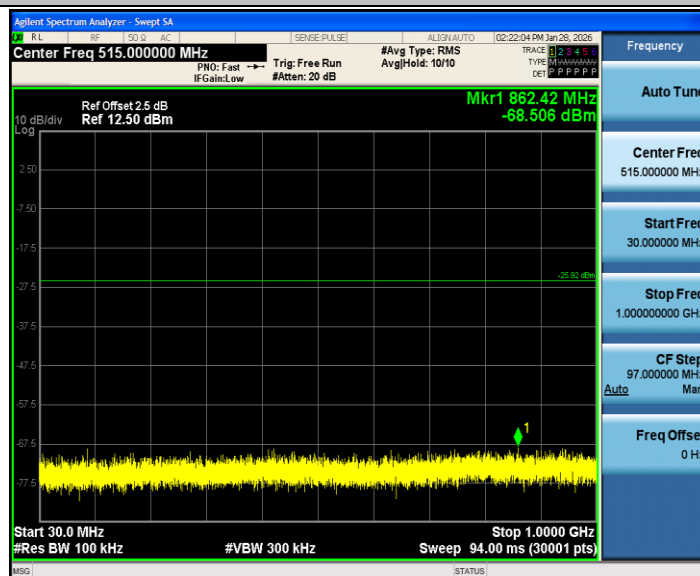




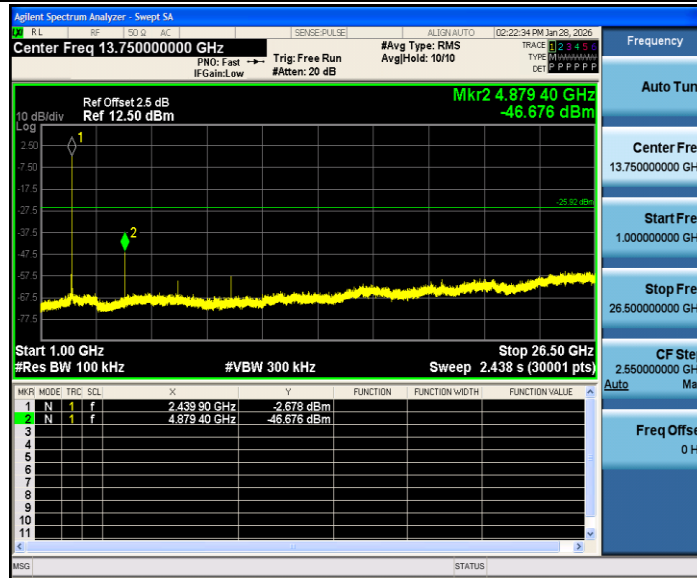
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



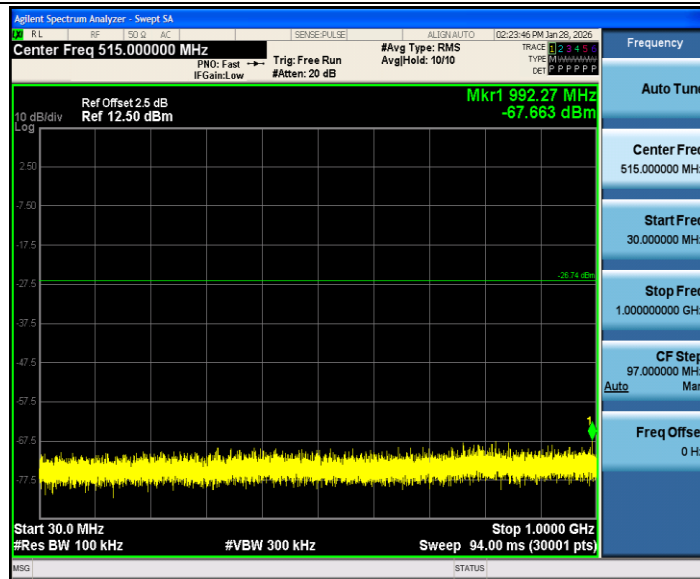
BLE_1M_Ant1_2440_1000~26500



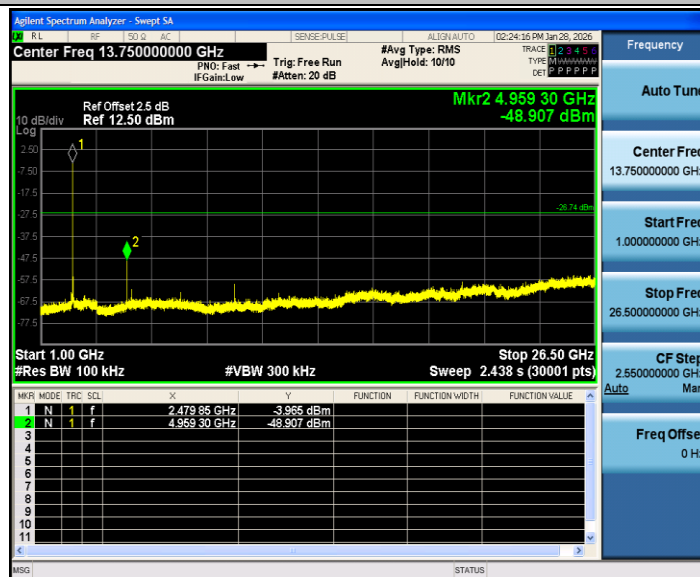
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

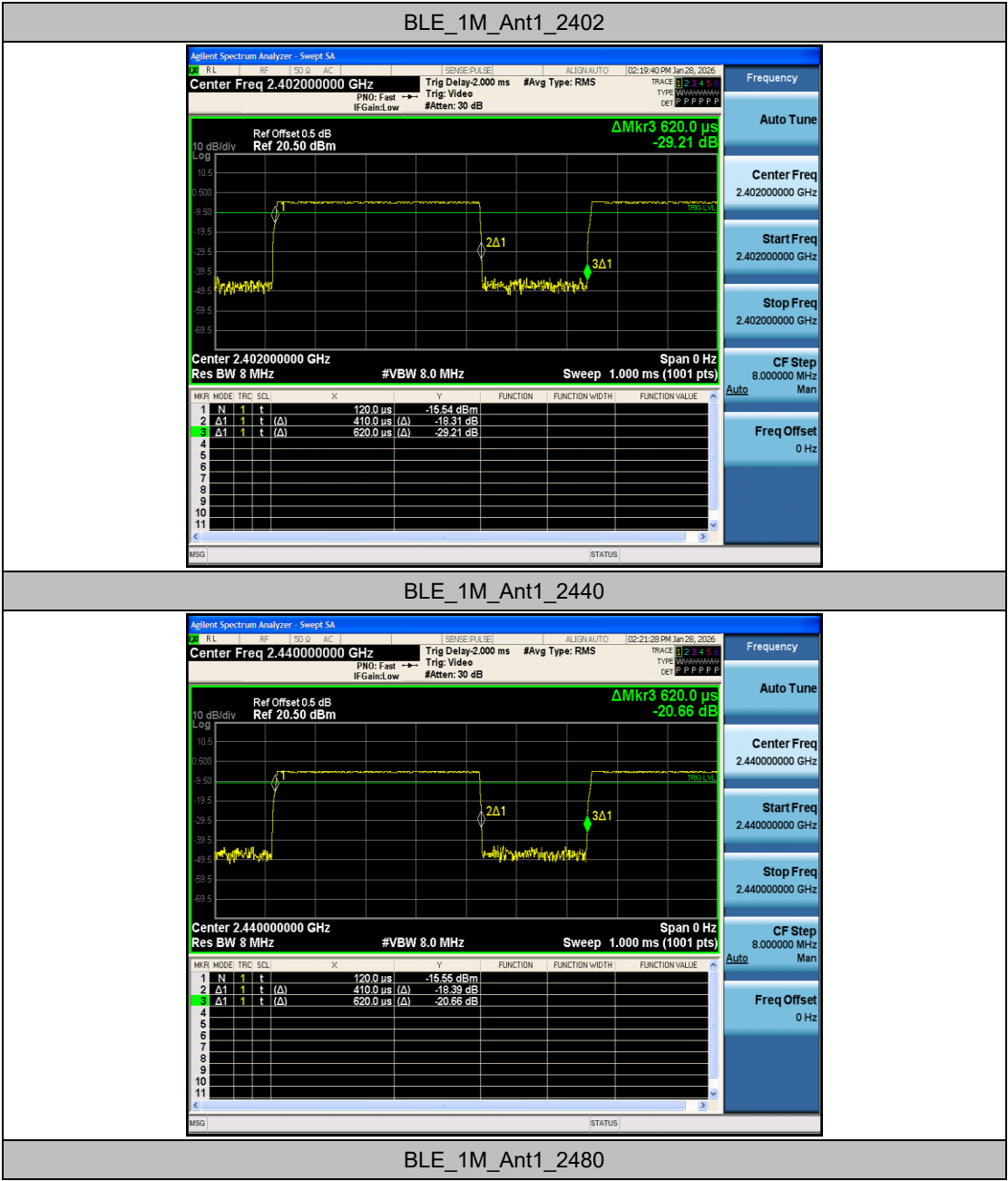


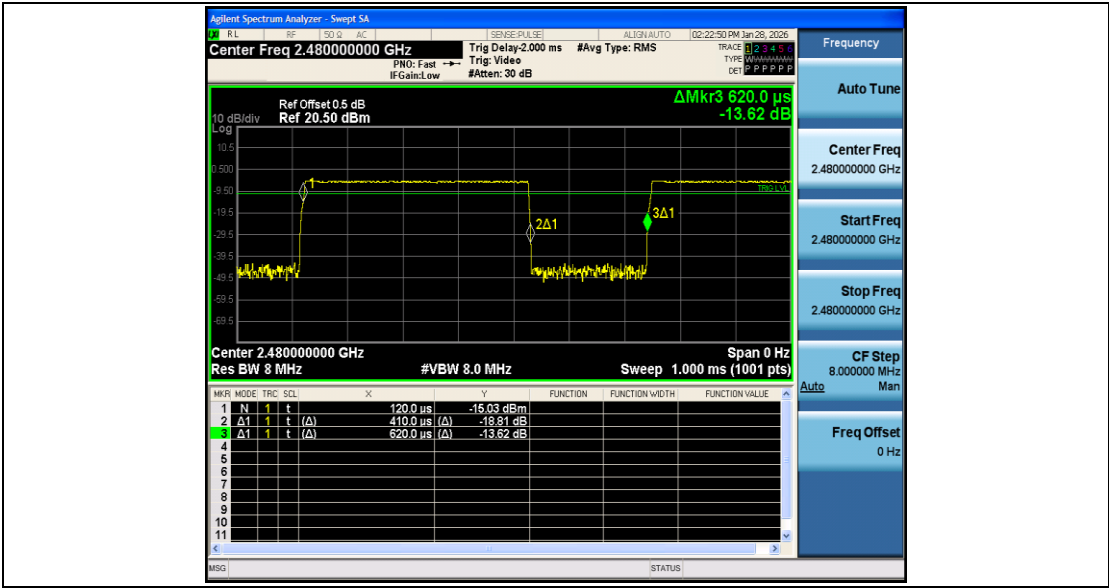
Appendix G: Duty Cycle

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	Channel	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	-59.42	2.00	1.80	39.58	≤54	PASS
				AV	2375.390	-58.56	2.00	1.80	40.44	≤54	PASS
				AV	2390.000	-59.25	2.00	1.80	39.75	≤54	PASS
				Peak	2310.000	-52.59	2.00	0.00	44.61	≤74	PASS
				Peak	2379.380	-48.05	2.00	0.00	49.15	≤74	PASS
				Peak	2390.000	-51.2	2.00	0.00	46.00	≤74	PASS
		High	2480	AV	2483.500	-58.31	2.00	1.80	40.69	≤54	PASS
				AV	2483.520	-58.31	2.00	1.80	40.69	≤54	PASS
				AV	2500.000	-59.56	2.00	1.80	39.44	≤54	PASS
				Peak	2483.500	-50.67	2.00	0.00	46.53	≤74	PASS
				Peak	2484.240	-48.17	2.00	0.00	49.03	≤74	PASS
				Peak	2500.000	-52.11	2.00	0.00	45.09	≤74	PASS

Note:

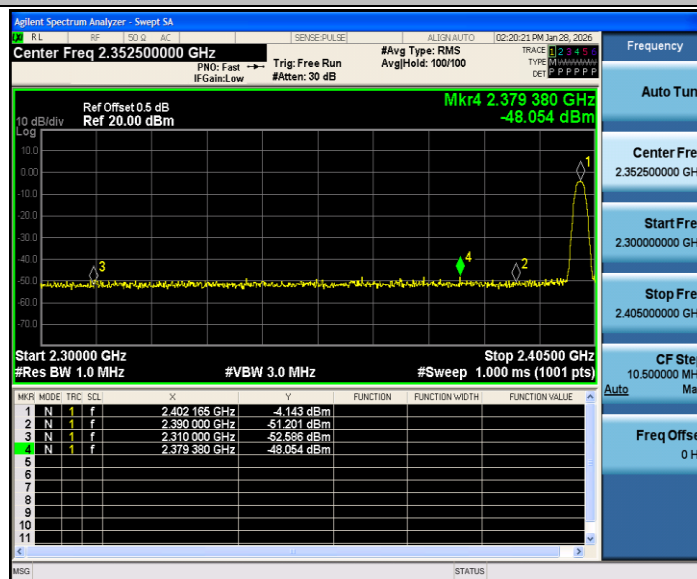
1. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

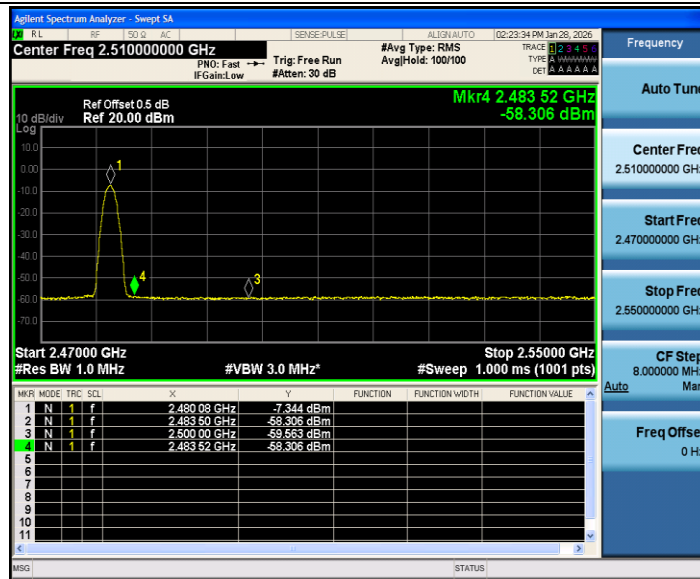
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

