

FCC Appendix RF Test Data for BLE

FCC ID : 2BYL5-LADU001

Company : Pingxiang Ladu Trading Co., Ltd. Tiankongli Branch

EUT : Dual Eye AI Companion Robot

Model Number : Ladu001

Report No. : CTA26081100201

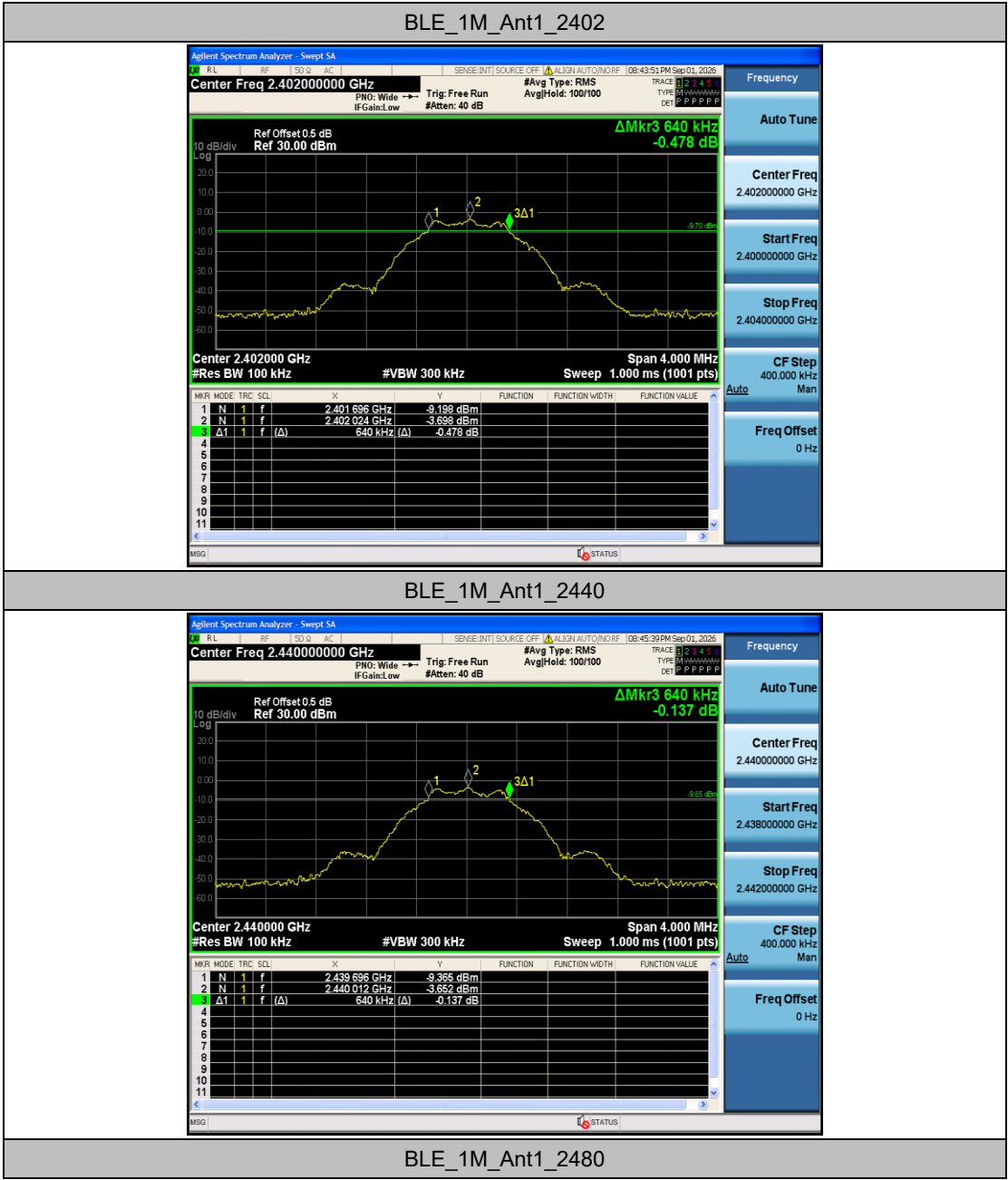
Reviewed By : Eric Wang

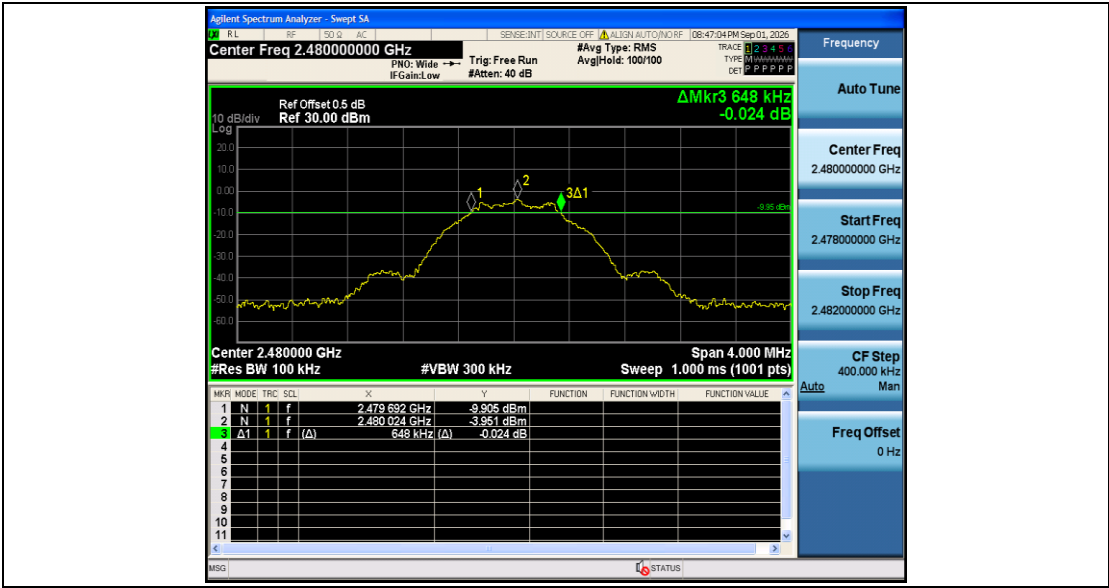
Appendix A: DTS Bandwidth

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	0.640	2439.696	2440.336	0.5	PASS
		2480	0.648	2479.692	2480.340	0.5	PASS

Test Graphs



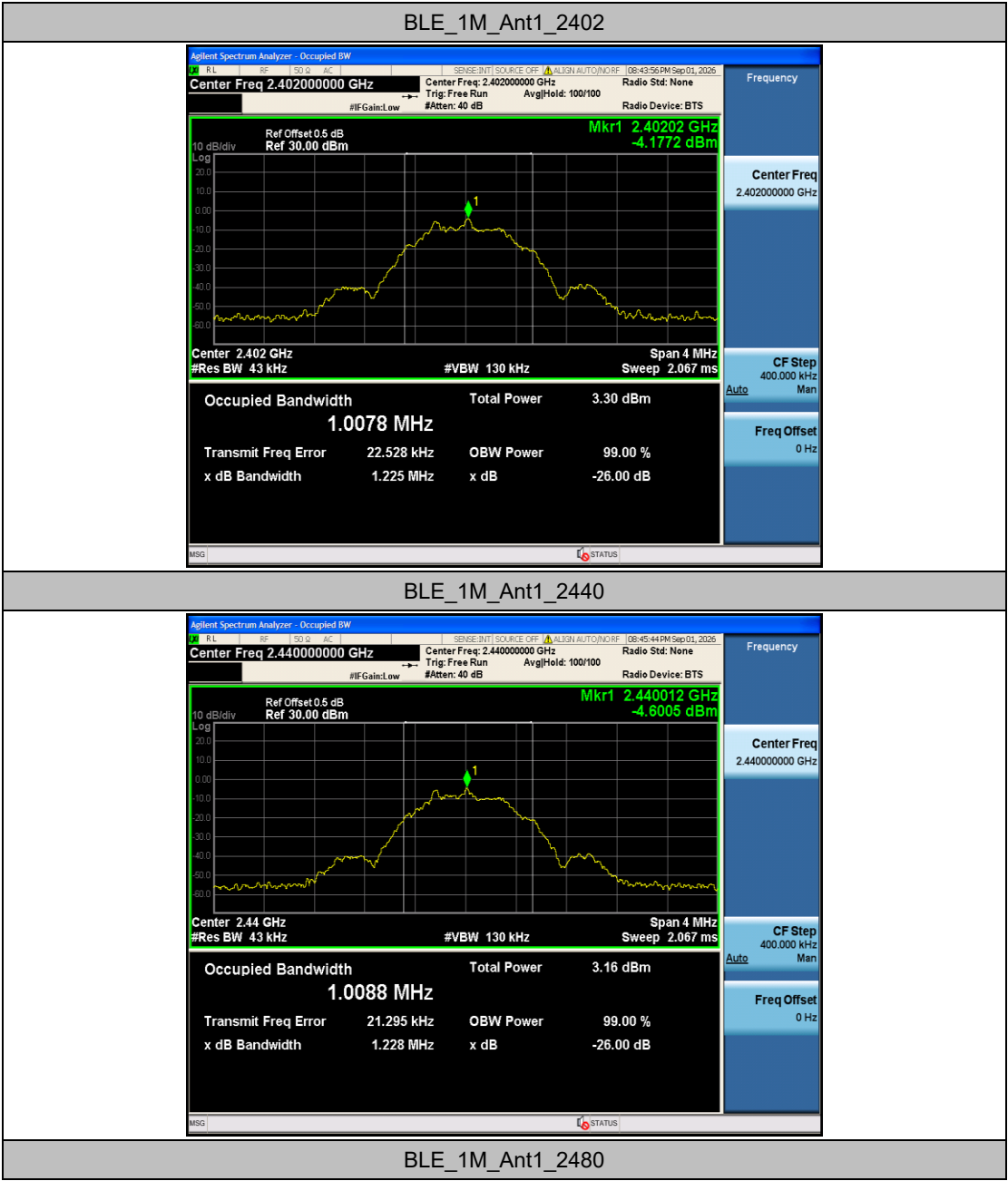


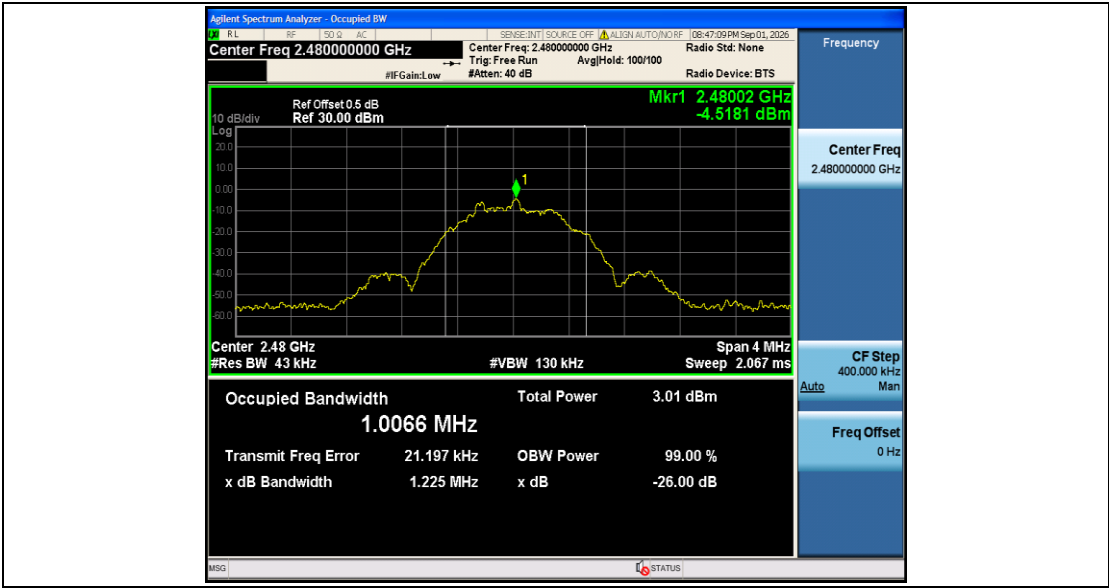
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0078	2401.5186	2402.5264	---	---
		2440	1.0088	2439.5169	2440.5257	---	---
		2480	1.0066	2479.5179	2480.5245	---	---

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	-3.37	≤30	PASS
		2440	-3.42	≤30	PASS
		2480	-3.70	≤30	PASS

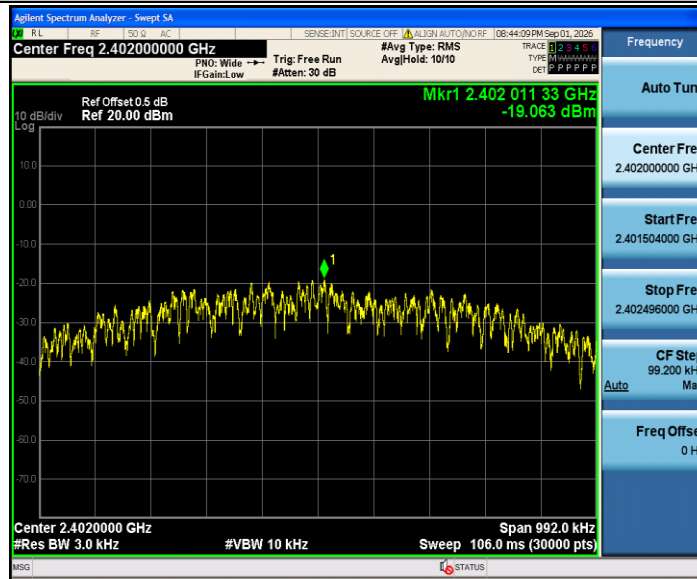
Appendix D: Maximum power spectral density

Test Result

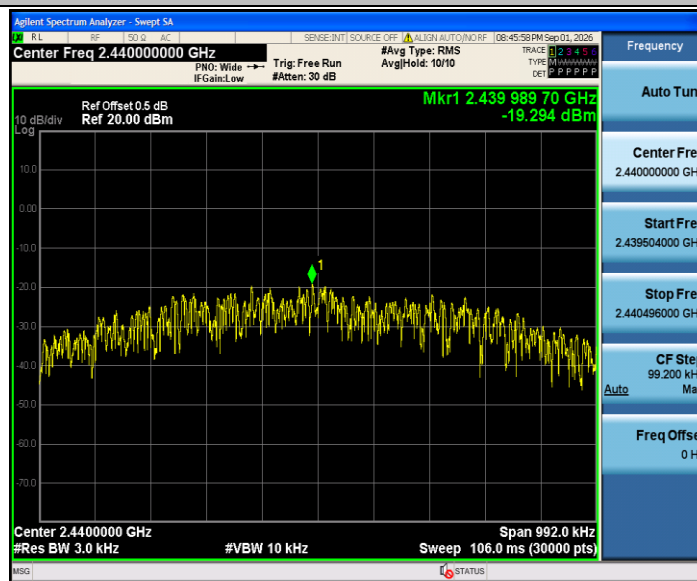
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.06	≤8.00	PASS
		2440	-19.29	≤8.00	PASS
		2480	-19.71	≤8.00	PASS

Test Graphs

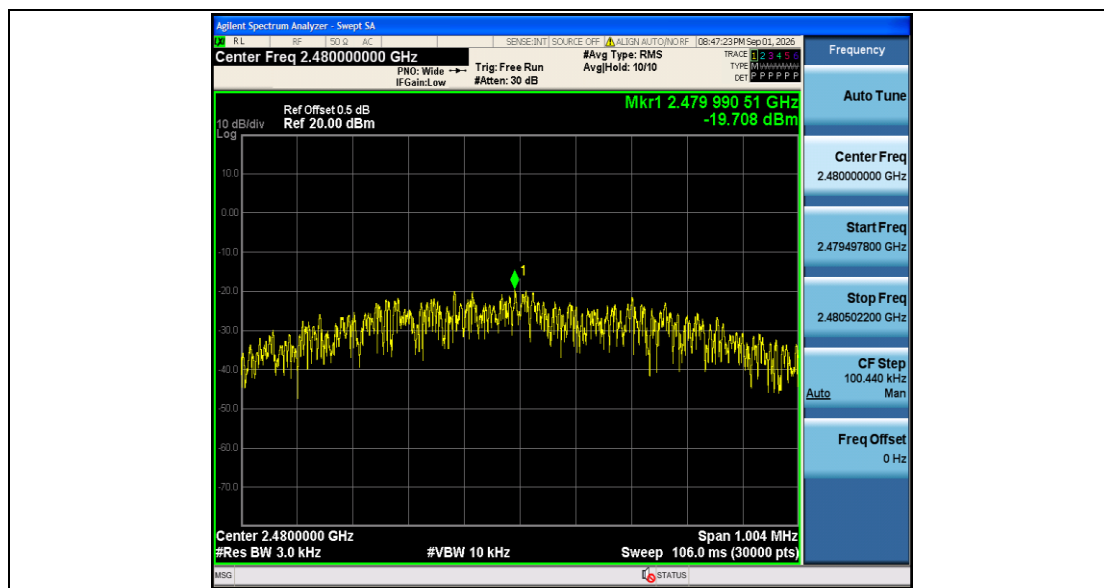
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

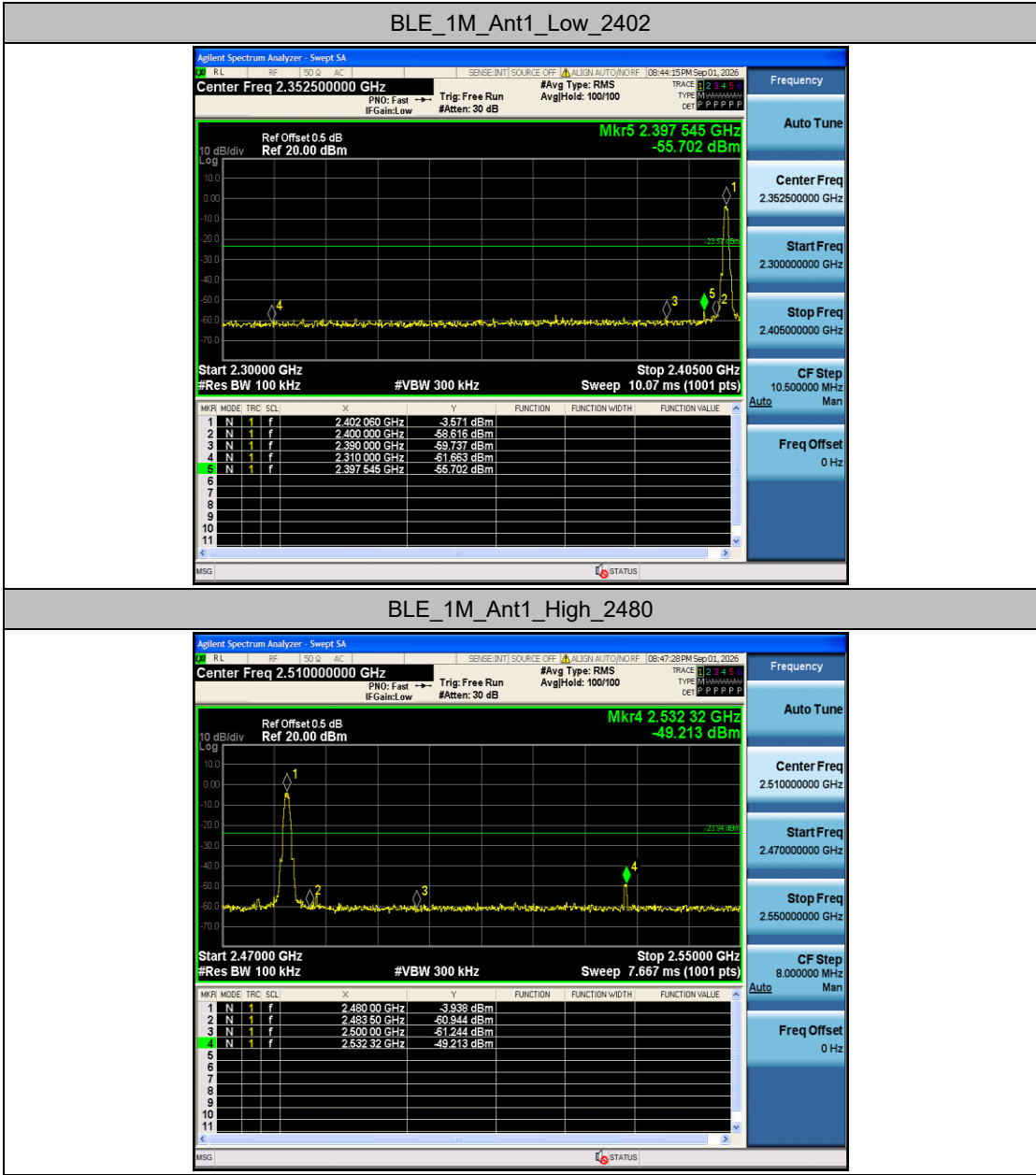


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.57	-55.7	≤-23.57	PASS
		High	2480	-3.94	-49.21	≤-23.94	PASS

Test Graphs

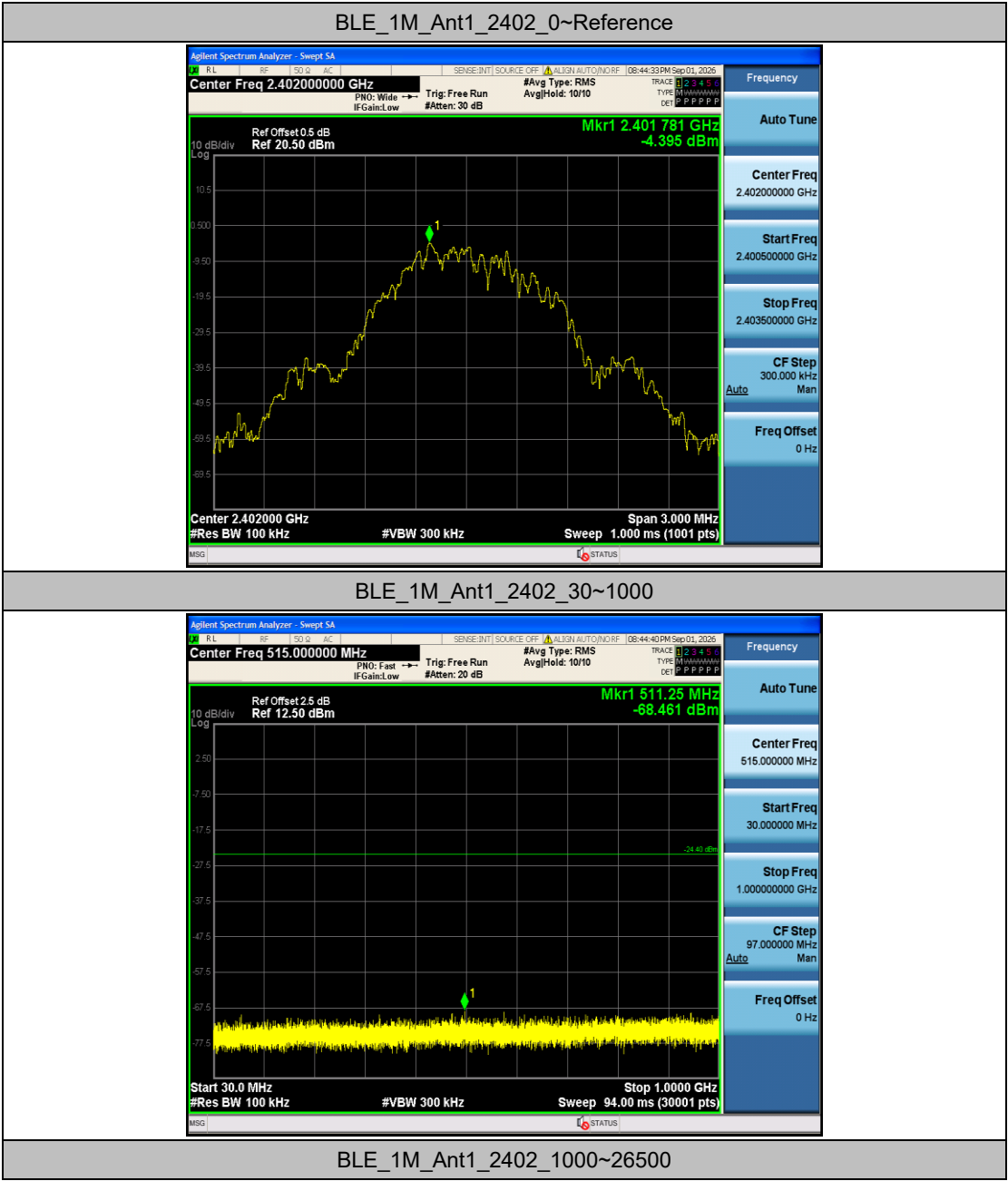


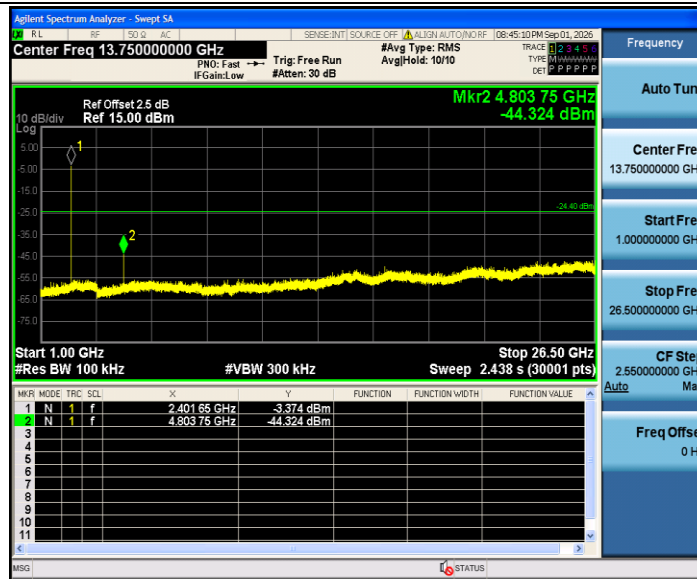
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.40	-4.40	---	PASS
			30~1000	-4.40	-68.46	≤-24.4	PASS
			1000~26500	-4.40	-44.32	≤-24.4	PASS
		2440	Reference	-3.78	-3.78	---	PASS
			30~1000	-3.78	-68.27	≤-23.78	PASS
			1000~26500	-3.78	-45.69	≤-23.78	PASS
		2480	Reference	-4.57	-4.57	---	PASS
			30~1000	-4.57	-67.07	≤-24.57	PASS
			1000~26500	-4.57	-46.35	≤-24.57	PASS

Test Graphs

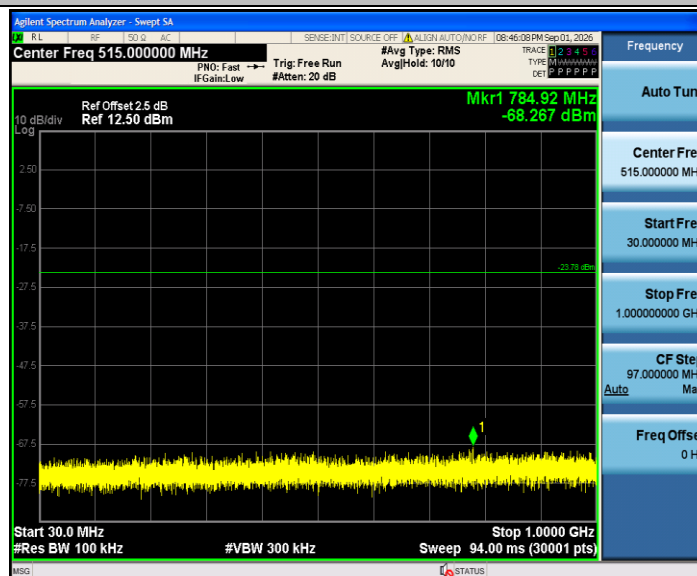




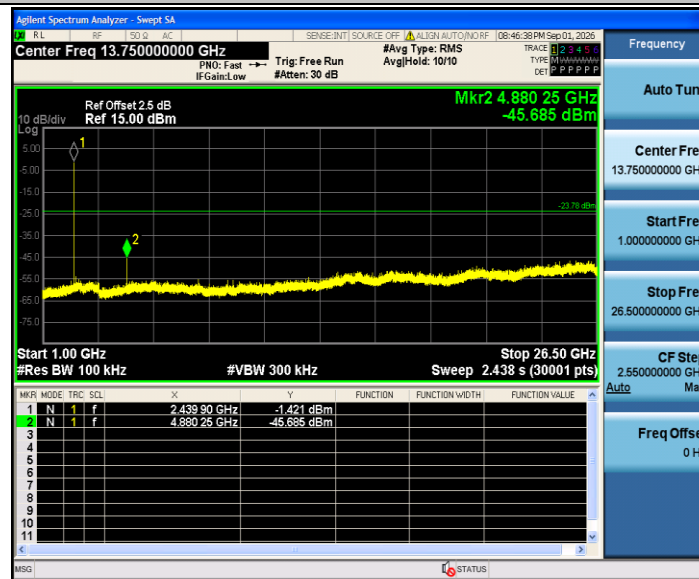
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



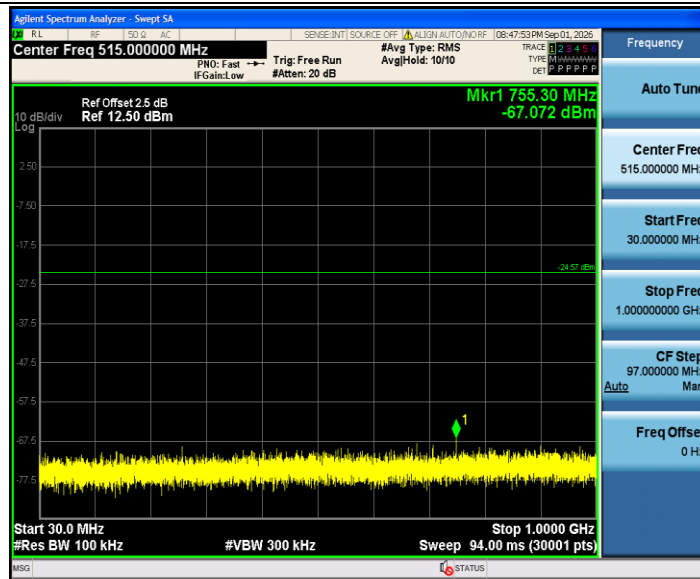
BLE_1M_Ant1_2440_1000~26500



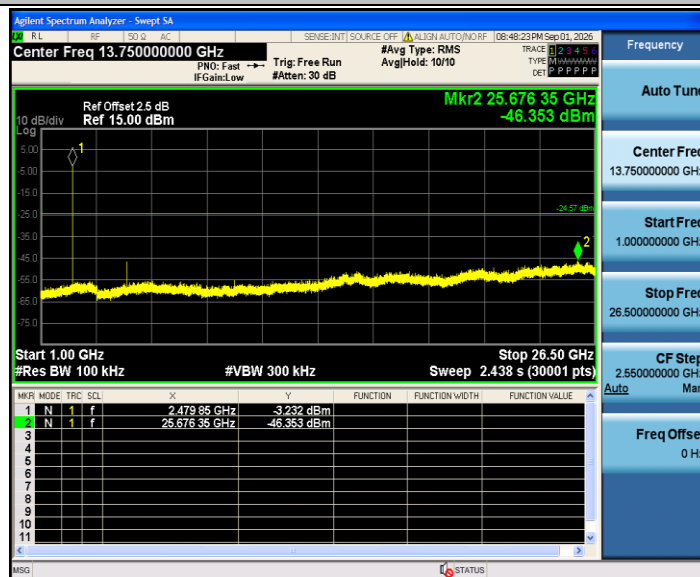
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

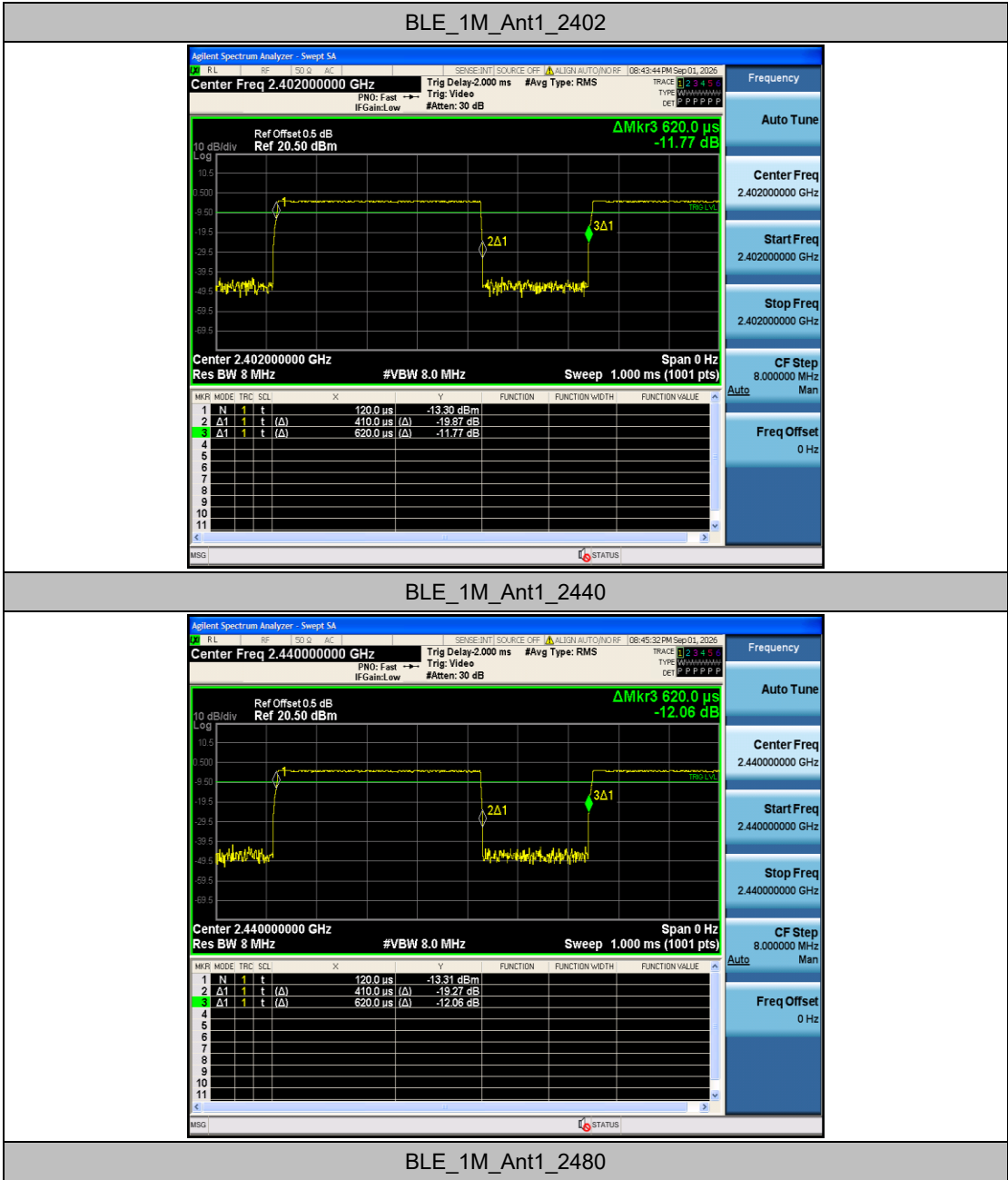


Appendix G: Duty Cycle

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

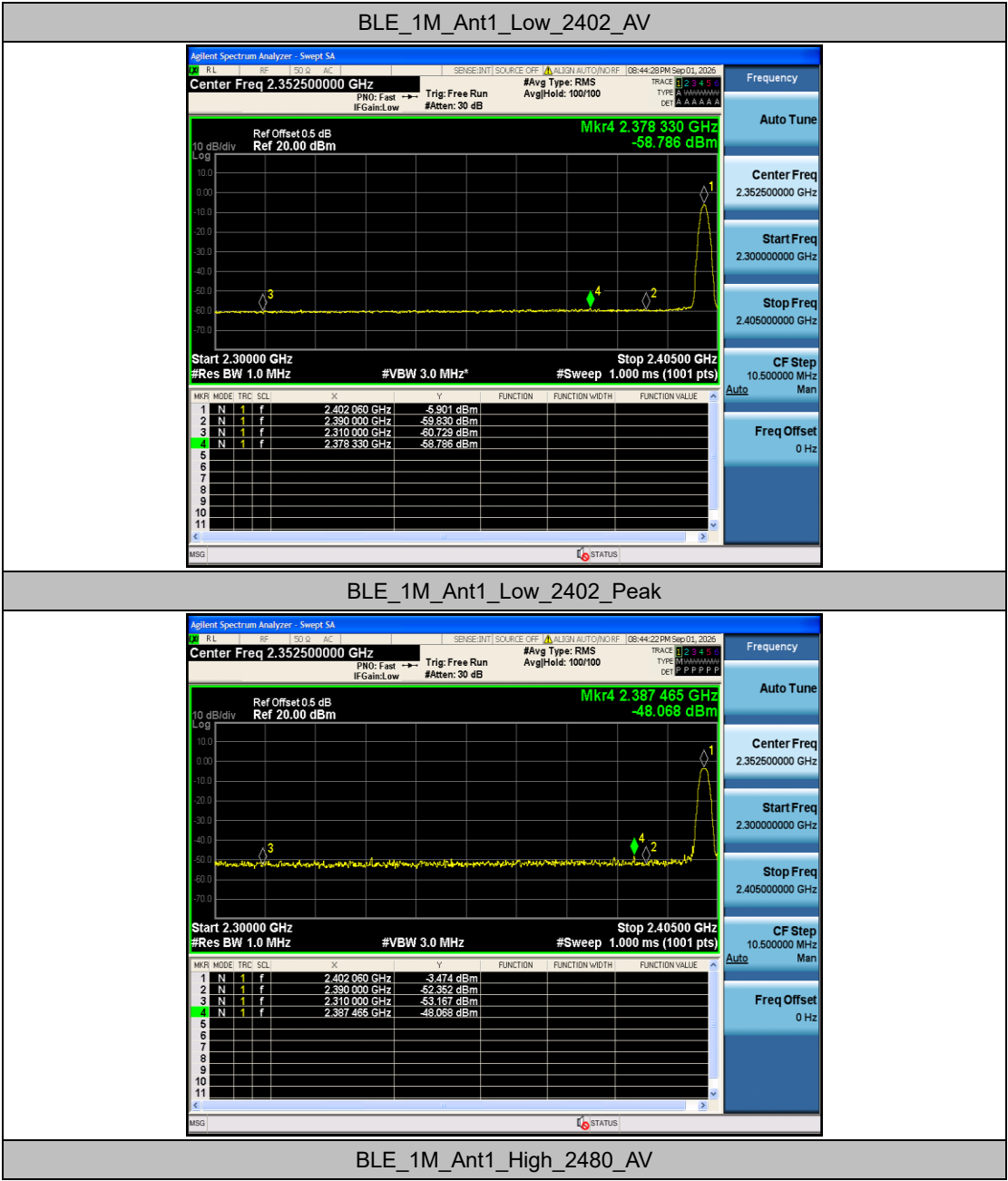
Test Result

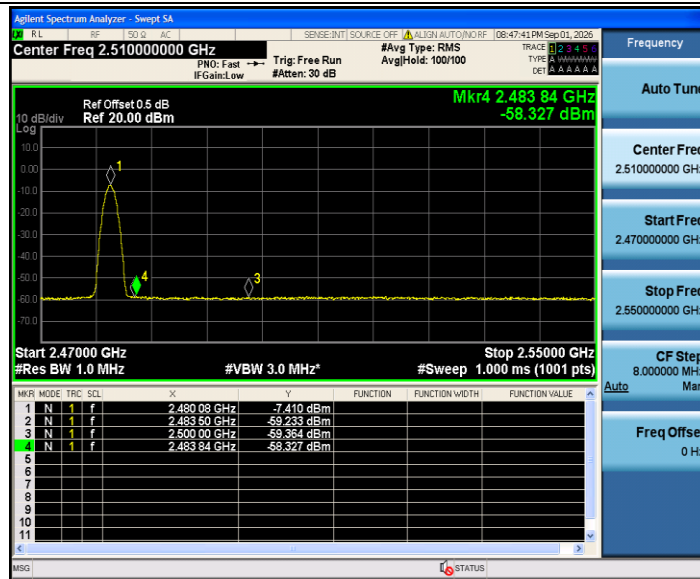
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.73	2.41	1.80	38.68	≤54	PASS
				AV	2378.330	-58.79	2.41	1.80	40.62	≤54	PASS
				AV	2390.000	-59.83	2.41	1.80	39.58	≤54	PASS
				Peak	2310.000	-53.17	2.41	0.00	44.44	≤74	PASS
				Peak	2387.465	-48.07	2.41	0.00	49.54	≤74	PASS
				Peak	2390.000	-52.35	2.41	0.00	45.26	≤74	PASS
		High	2480	AV	2483.500	-59.23	2.41	1.80	40.18	≤54	PASS
				AV	2483.840	-58.33	2.41	1.80	41.08	≤54	PASS
				AV	2500.000	-59.36	2.41	1.80	40.05	≤54	PASS
				Peak	2483.500	-49.87	2.41	0.00	47.74	≤74	PASS
				Peak	2496.640	-48.58	2.41	0.00	49.03	≤74	PASS
				Peak	2500.000	-52.49	2.41	0.00	45.12	≤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_High_2480_Peak

