

FCC Appendix RF Test Data for BLE

FCC ID : 2BVV4-M85

Company : SHENZHEN WISDIGI ROBOT CO.,LTD

EUT : Glass Cleaning Robot

Model Number : M85

Report No. : CTA26041300101

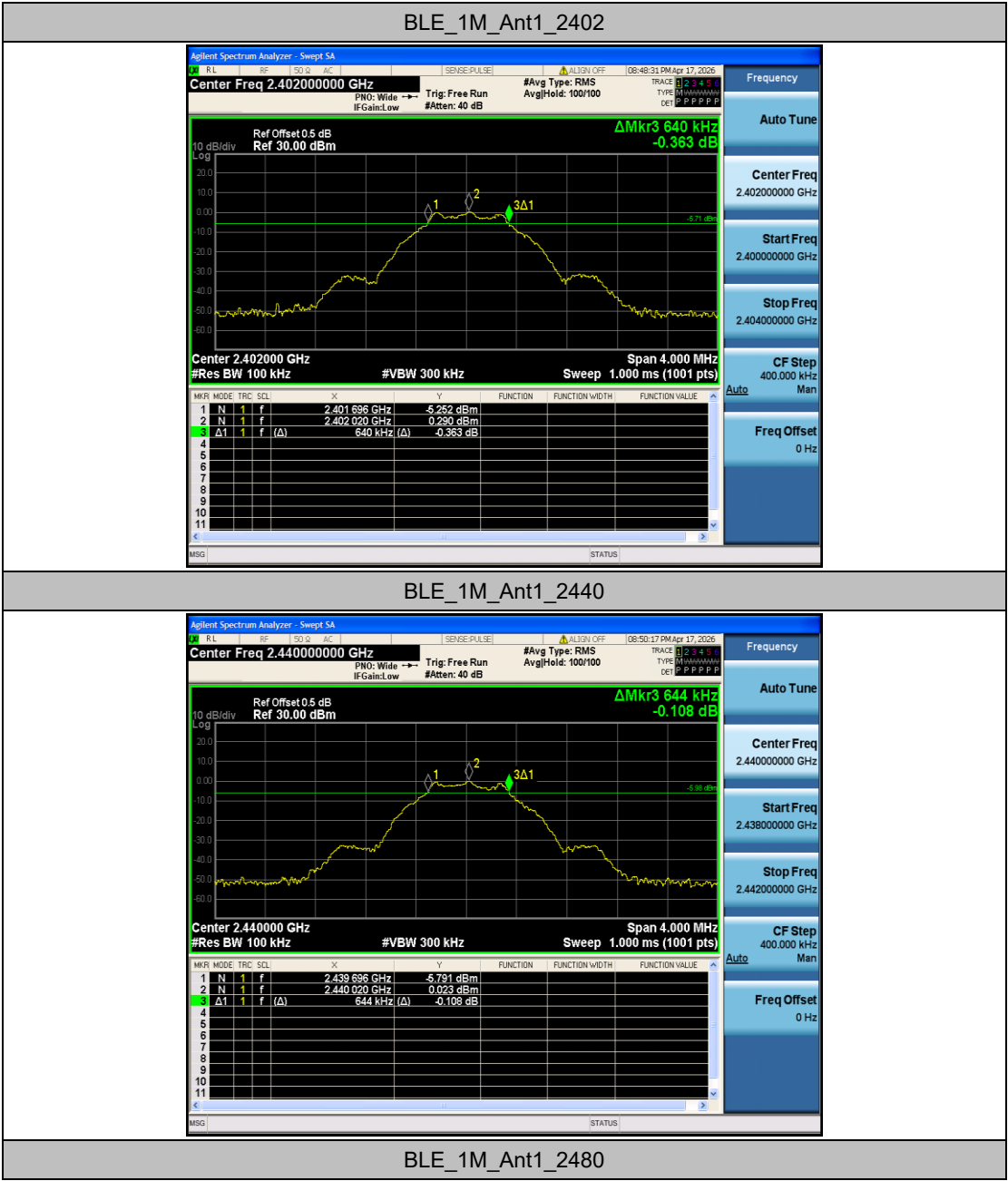
Reviewed By : Eric Wang

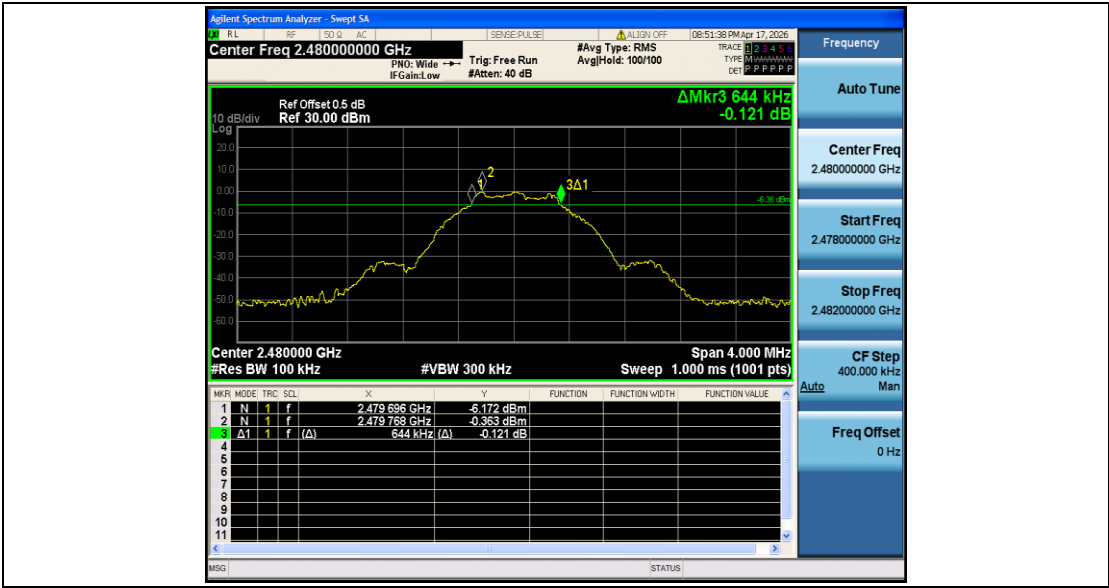
Appendix A: DTS Bandwidth

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	0.644	2439.696	2440.340	0.5	PASS
		2480	0.644	2479.696	2480.340	0.5	PASS

Test Graphs





Appendix B: Occupied Channel Bandwidth

Test Result

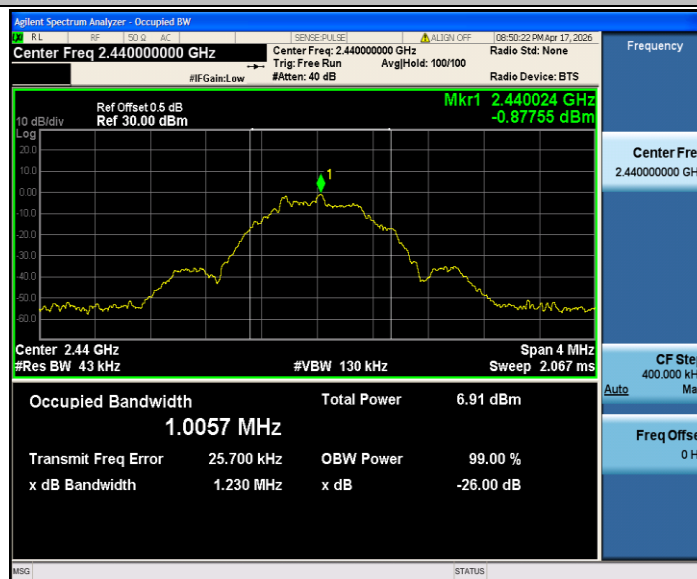
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0093	2401.5153	2402.5246	---	---
		2440	1.0057	2439.5229	2440.5286	---	---
		2480	1.0139	2479.5167	2480.5306	---	---

Test Graphs

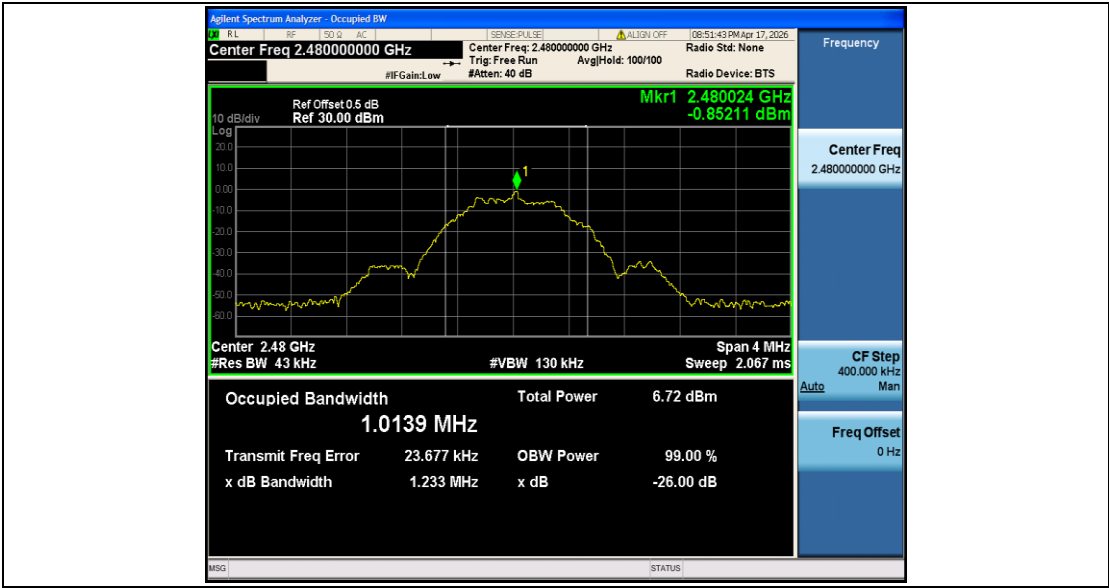
BLE_1M_Ant1_2402



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	0.45	≤30	PASS
		2440	0.18	≤30	PASS
		2480	0.14	≤30	PASS

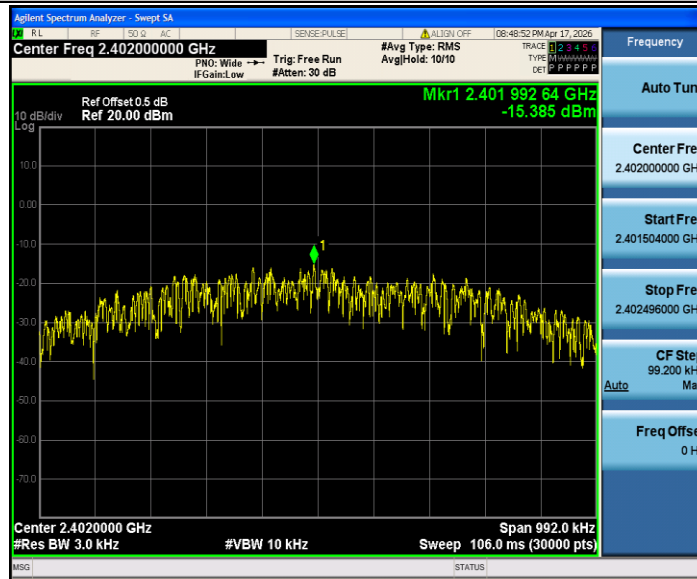
Appendix D: Maximum power spectral density

Test Result

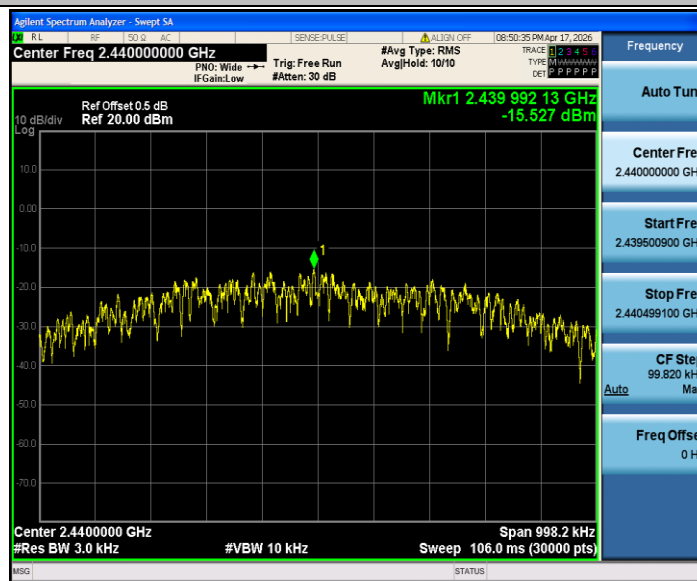
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.39	≤8.00	PASS
		2440	-15.53	≤8.00	PASS
		2480	-15.79	≤8.00	PASS

Test Graphs

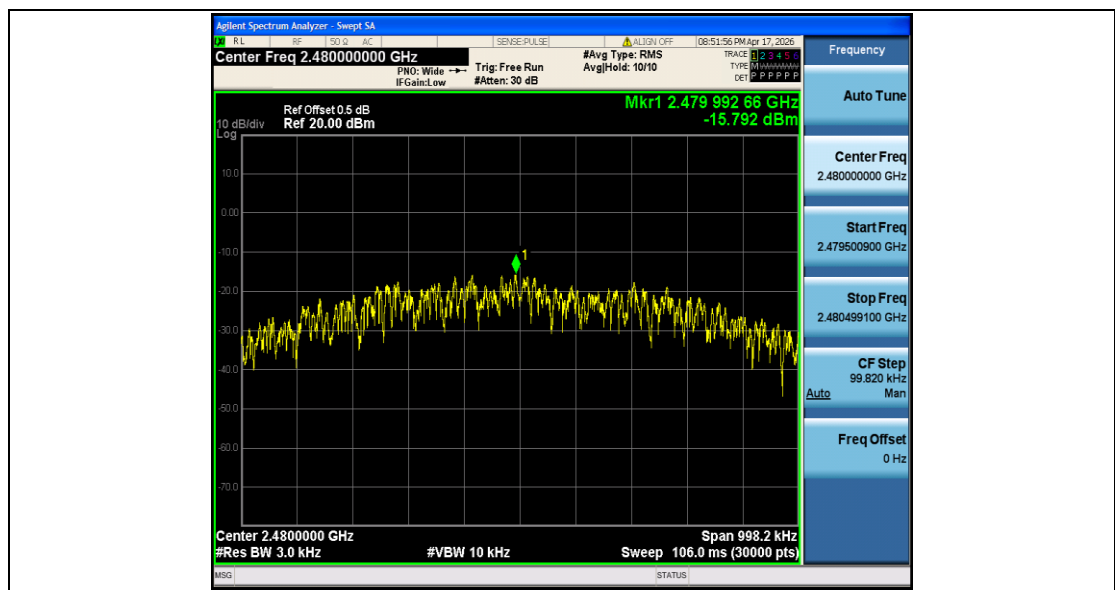
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



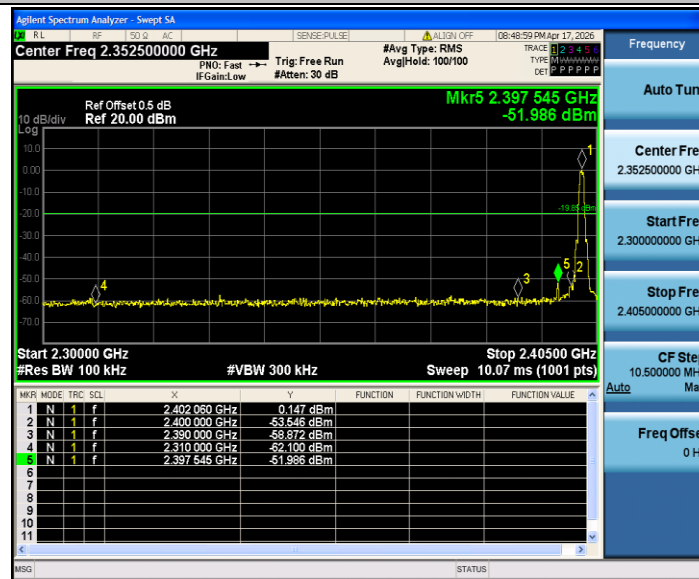
Appendix E: Band edge measurements

Test Result

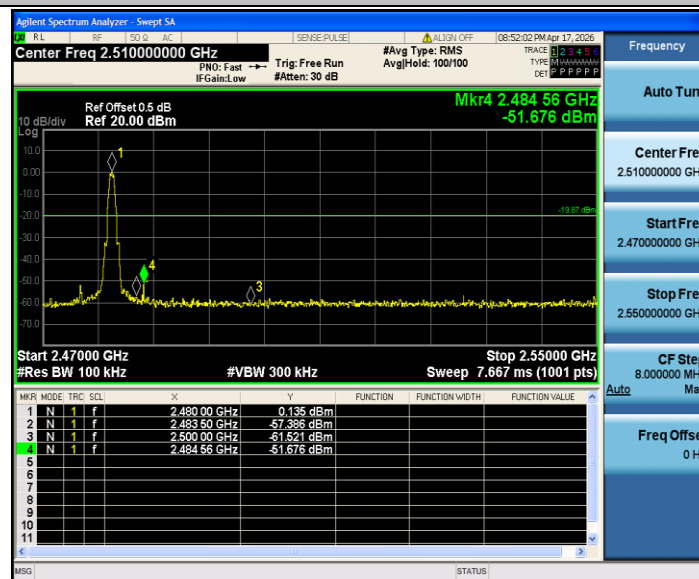
TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.15	-51.99	≤-19.85	PASS
		High	2480	0.14	-51.68	≤-19.87	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

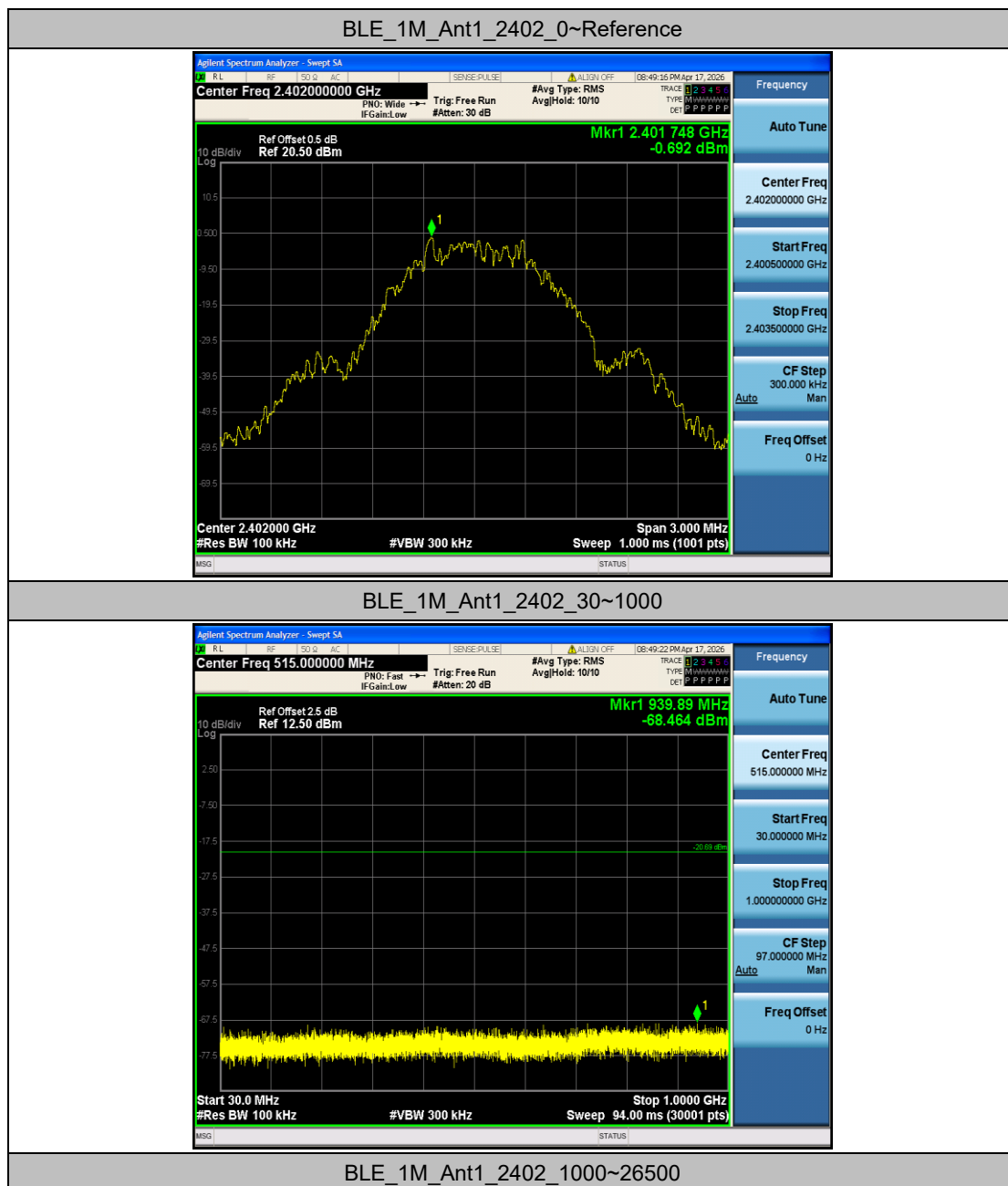


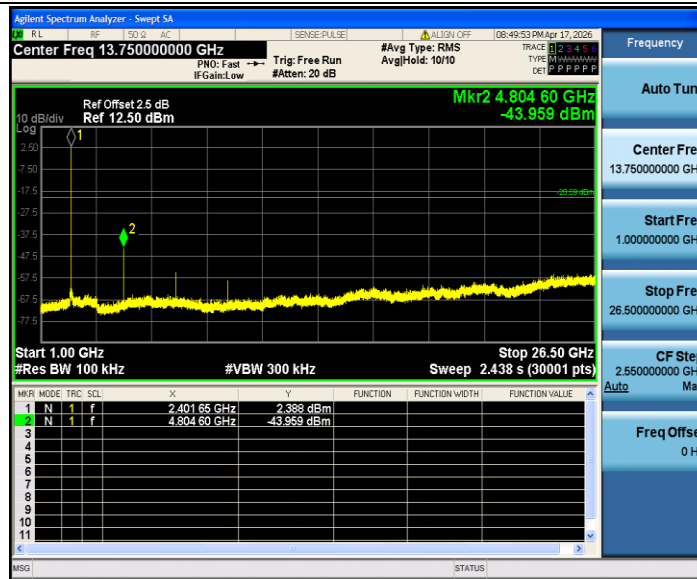
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.69	-0.69	---	PASS
			30~1000	-0.69	-68.46	≤-20.69	PASS
			1000~26500	-0.69	-43.96	≤-20.69	PASS
		2440	Reference	-2.11	-2.11	---	PASS
			30~1000	-2.11	-67.51	≤-22.11	PASS
			1000~26500	-2.11	-41.41	≤-22.11	PASS
		2480	Reference	-0.15	-0.15	---	PASS
			30~1000	-0.15	-67.32	≤-20.15	PASS
			1000~26500	-0.15	-42.93	≤-20.15	PASS

Test Graphs

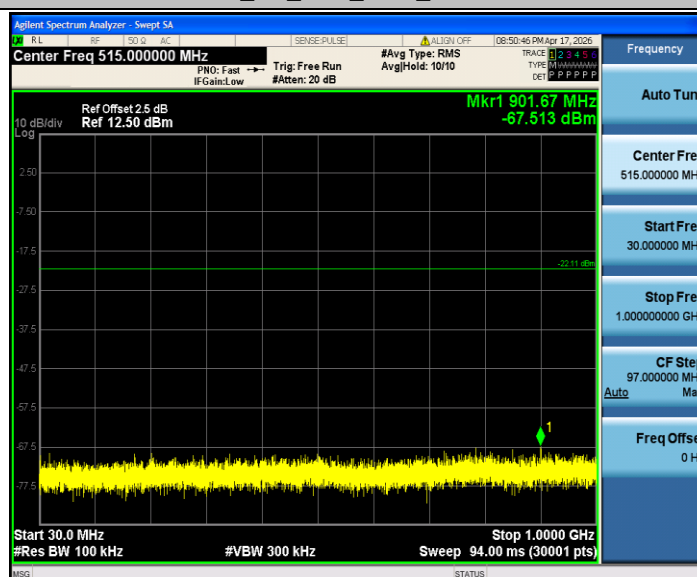




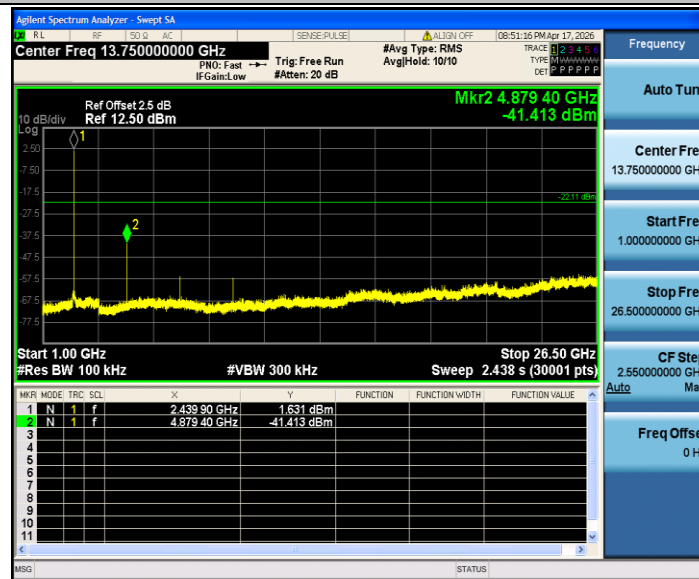
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



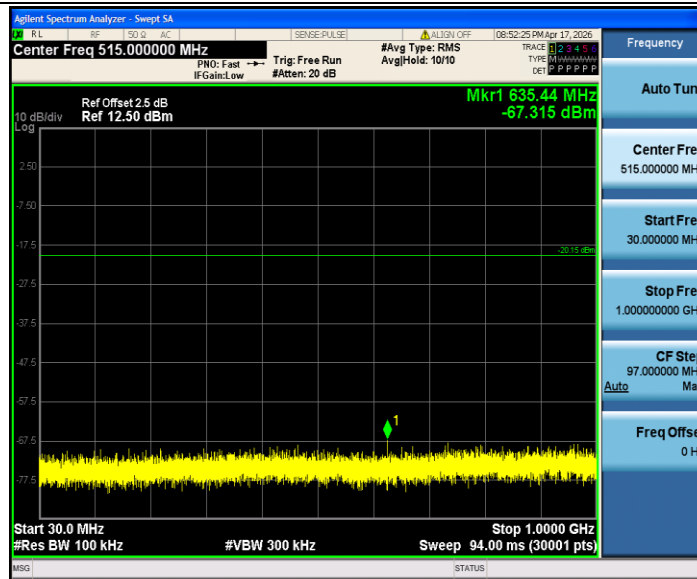
BLE_1M_Ant1_2440_1000~26500



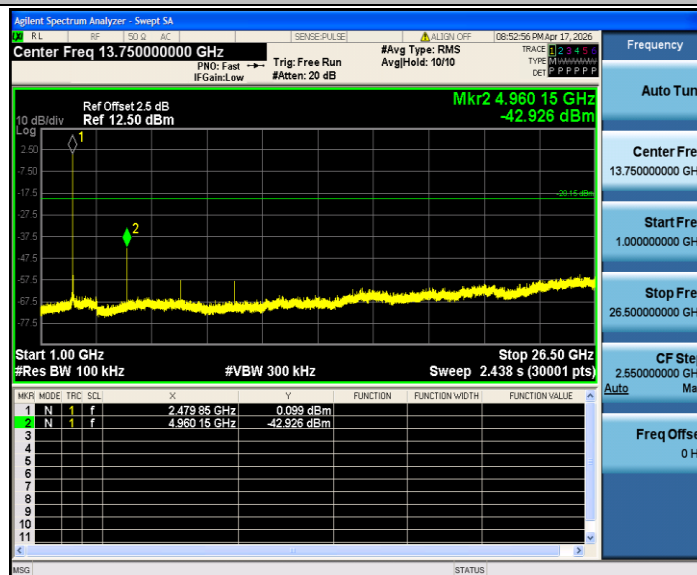
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

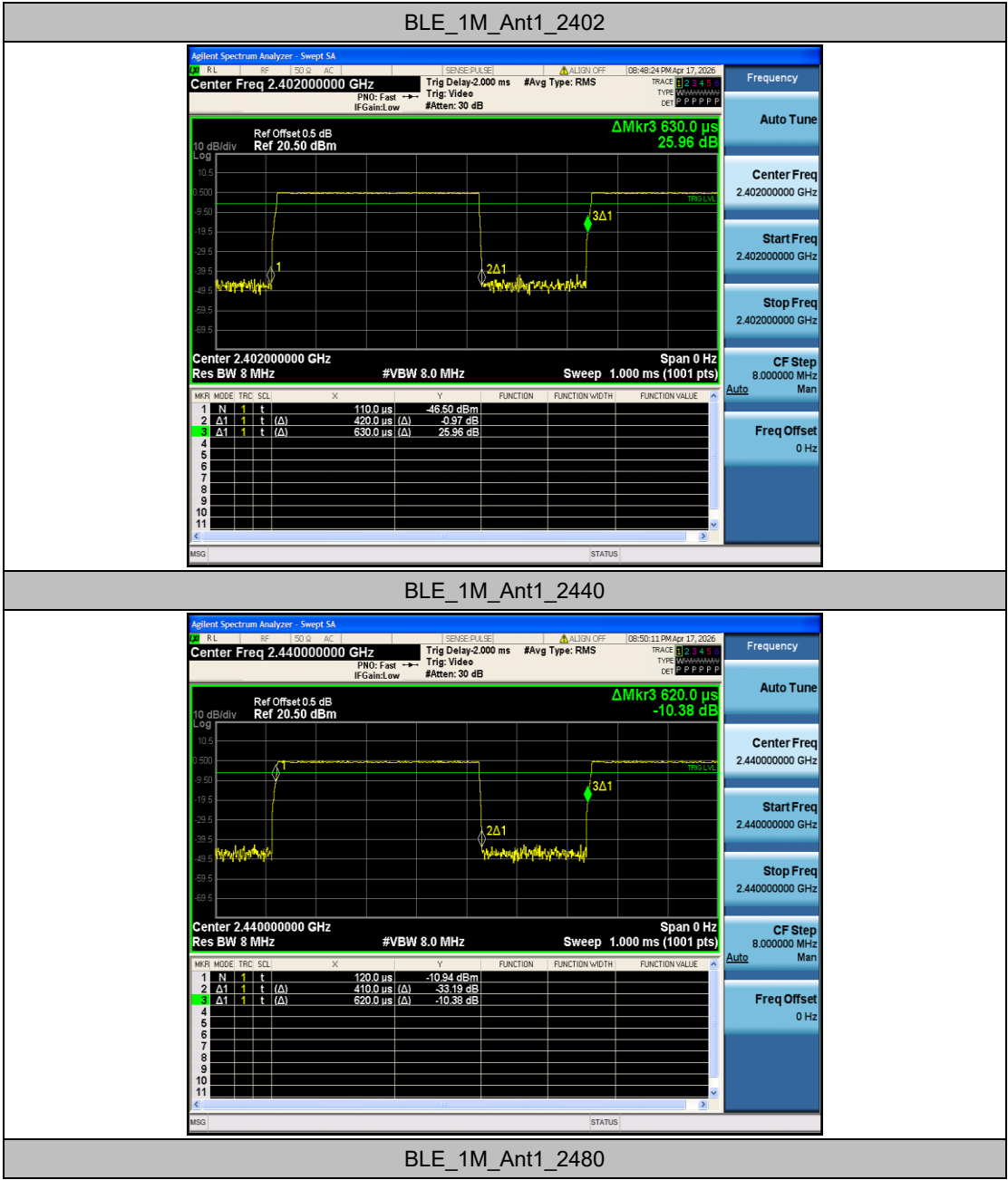


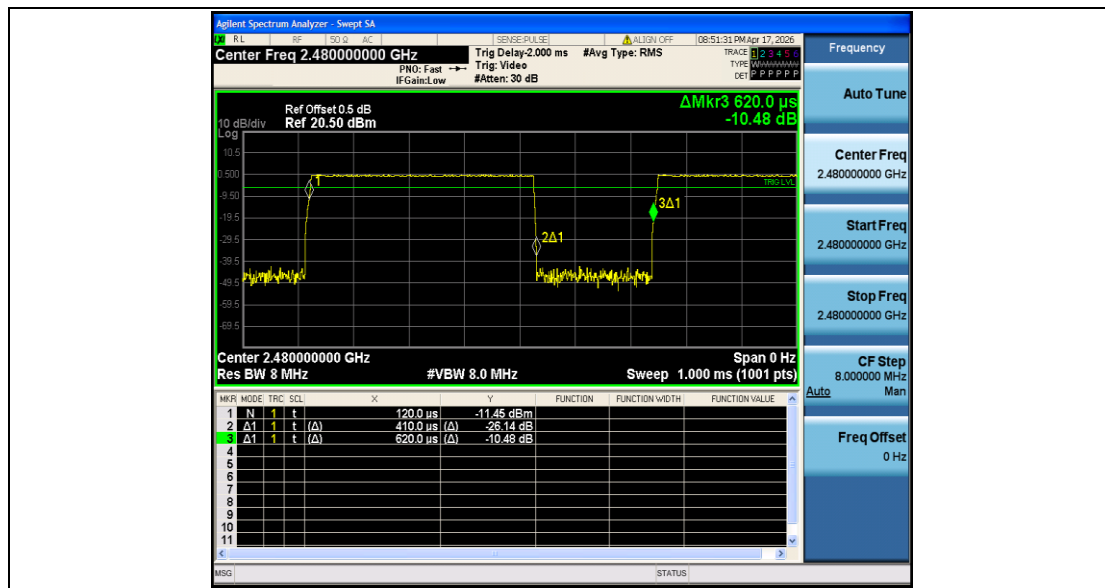
Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.42	0.63	0.6667	66.67	1.76	---	---
		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	-60.05	2.00	1.76	38.91	≤54	PASS
				AV	2377.175	-58.52	2.00	1.76	40.44	≤54	PASS
				AV	2390.000	-59.18	2.00	1.76	39.78	≤54	PASS
				Peak	2310.000	-51.86	2.00	0.00	45.34	≤74	PASS
				Peak	2364.785	-48.33	2.00	0.00	48.87	≤74	PASS
				Peak	2390.000	-50.03	2.00	0.00	47.17	≤74	PASS
		High	2480	AV	2483.500	-57.36	2.00	1.80	41.64	≤54	PASS
				AV	2484.240	-57.16	2.00	1.80	41.84	≤54	PASS
				AV	2500.000	-59.24	2.00	1.80	39.76	≤54	PASS
				Peak	2483.500	-48.46	2.00	0.00	48.74	≤74	PASS
				Peak	2484.400	-44.77	2.00	0.00	52.43	≤74	PASS
				Peak	2500.000	-50.64	2.00	0.00	46.56	≤74	PASS

Note:

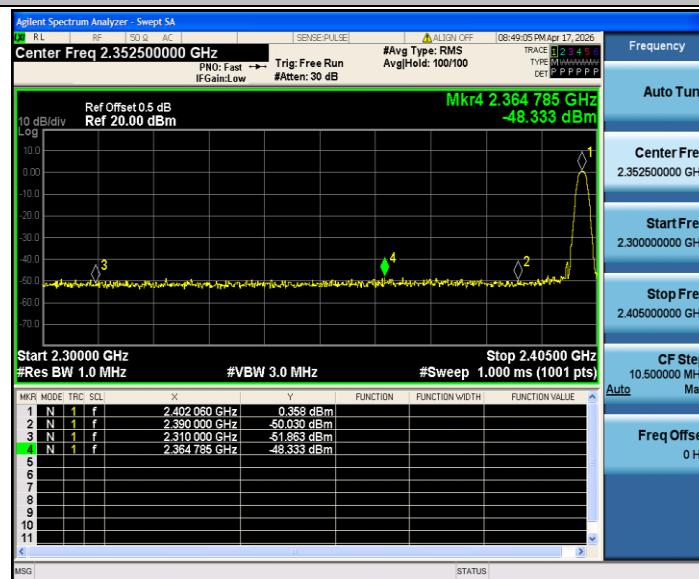
The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

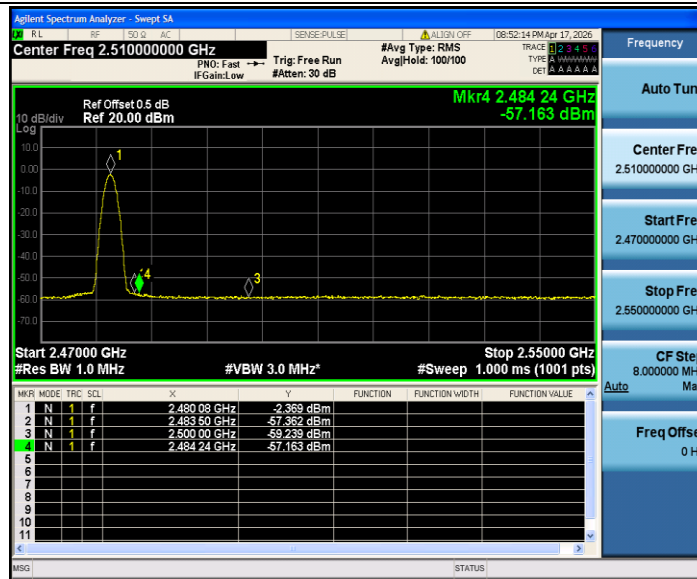
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

