

FCC Appendix RF Test Data for BLE

FCC ID : 2BX8Z-GE005

Company : KIE ELECTRONICS LIMITED

EUT : Smart Digital Calendar

Model Number : GE005

Report No. : CTA26070201801

Reviewed By : Eric Wang

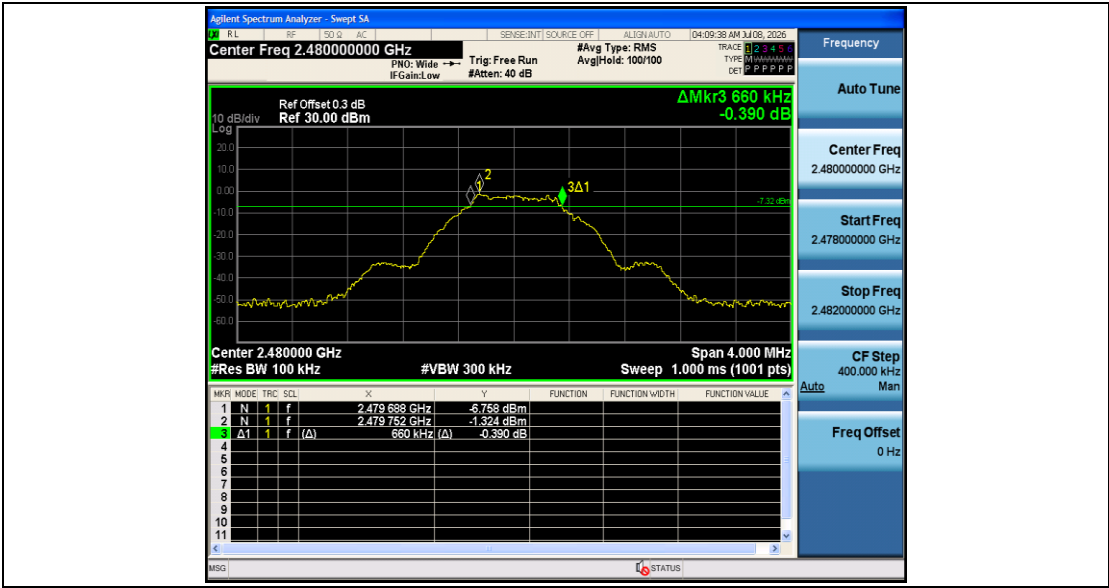
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.652	2401.688	2402.340	0.5	PASS
		2440	0.640	2439.688	2440.328	0.5	PASS
		2480	0.660	2479.688	2480.348	0.5	PASS

Test Graphs



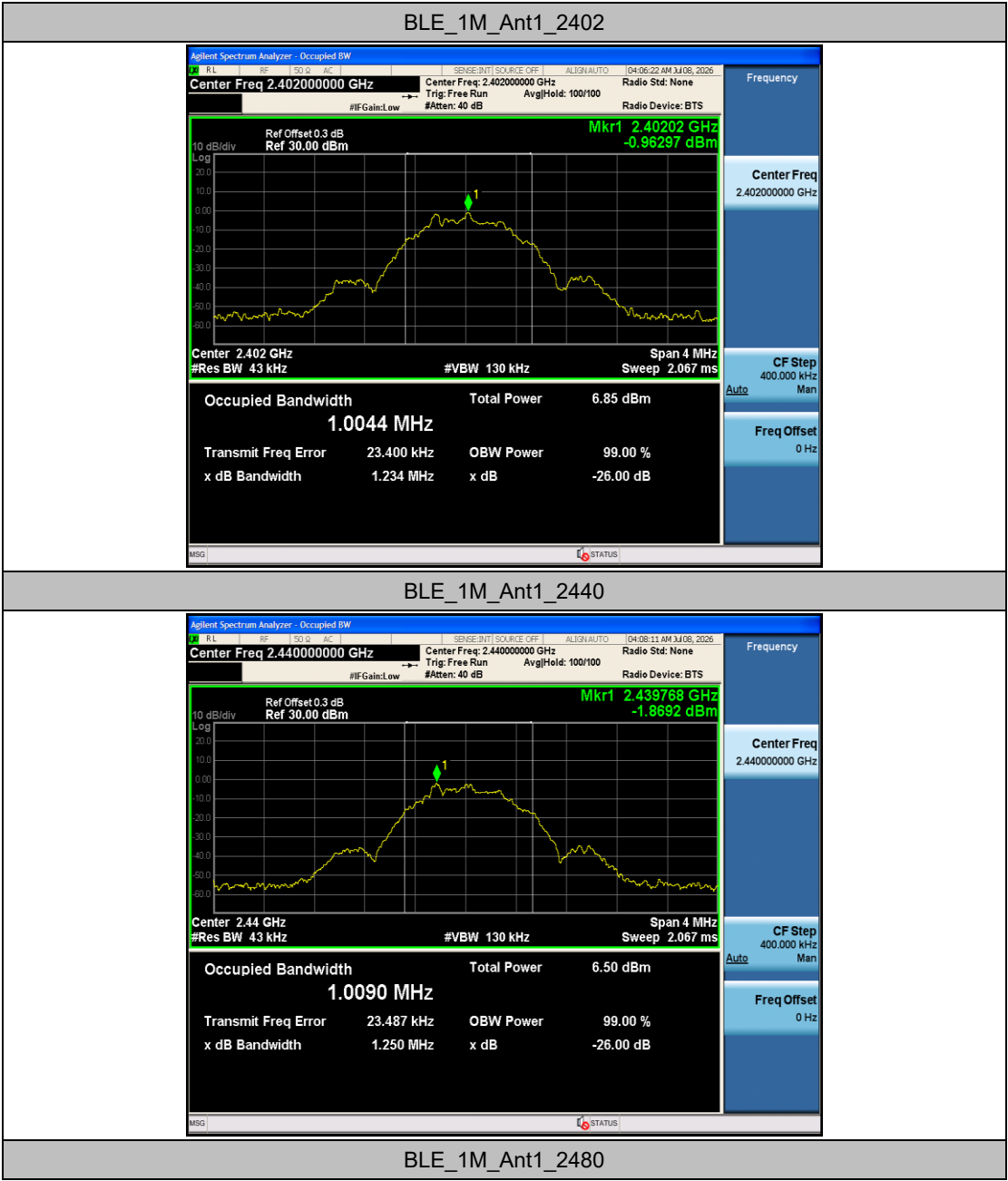


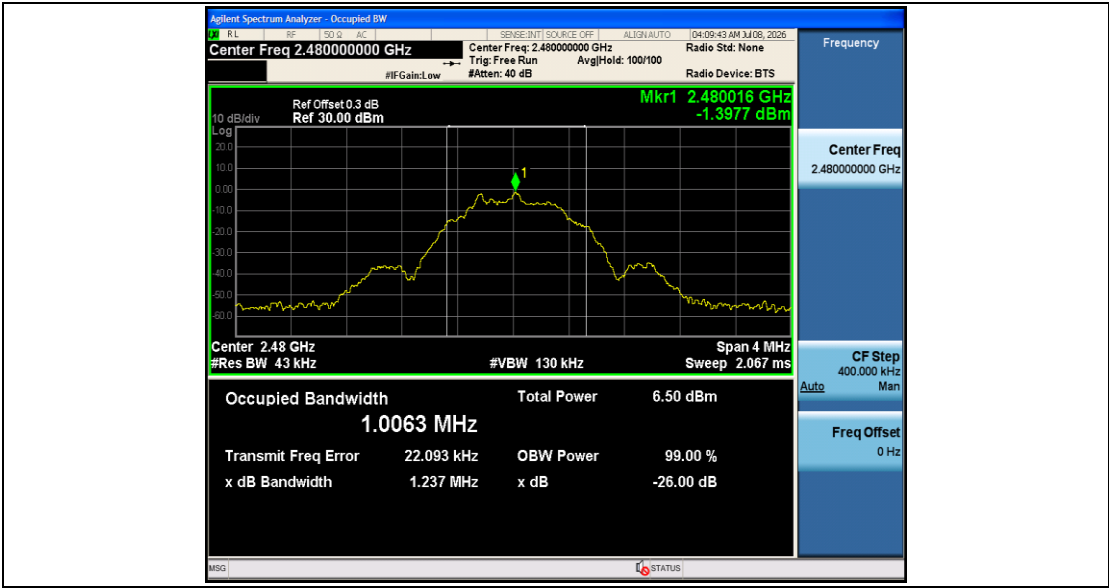
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0044	2401.5212	2402.5256	---	---
		2440	1.0090	2439.5190	2440.5280	---	---
		2480	1.0063	2479.5189	2480.5252	---	---

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	0.07	≤30	PASS
		2440	-0.05	≤30	PASS
		2480	-0.29	≤30	PASS

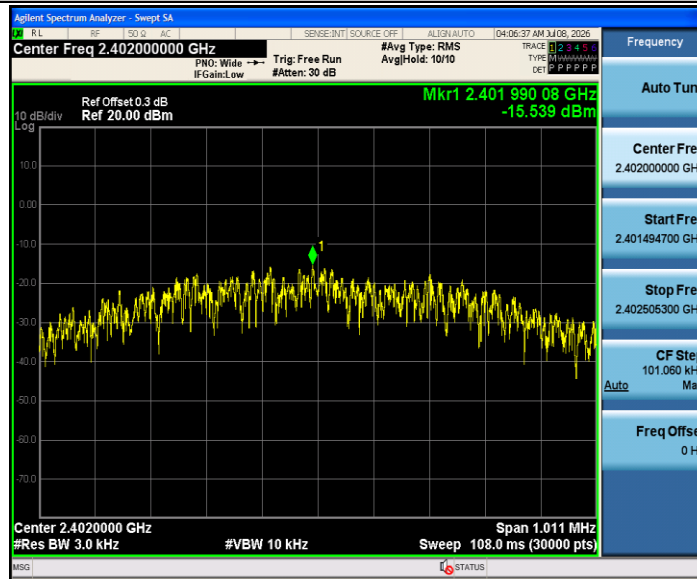
Appendix D: Maximum power spectral density

Test Result

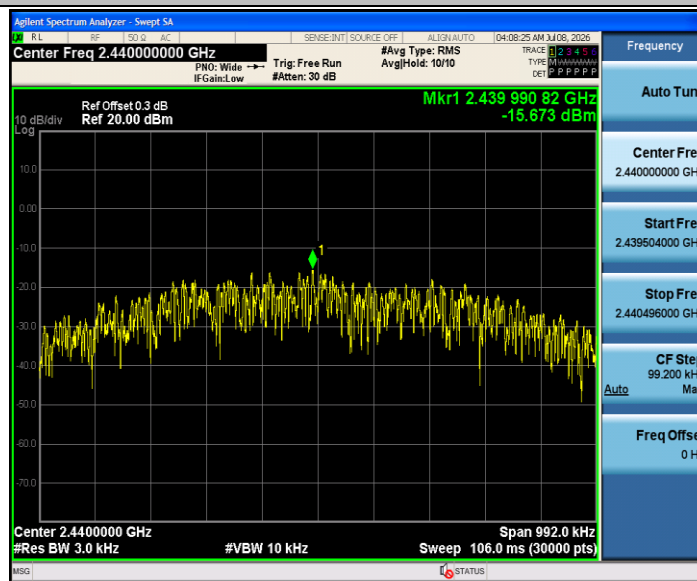
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.54	≤8.00	PASS
		2440	-15.67	≤8.00	PASS
		2480	-15.86	≤8.00	PASS

Test Graphs

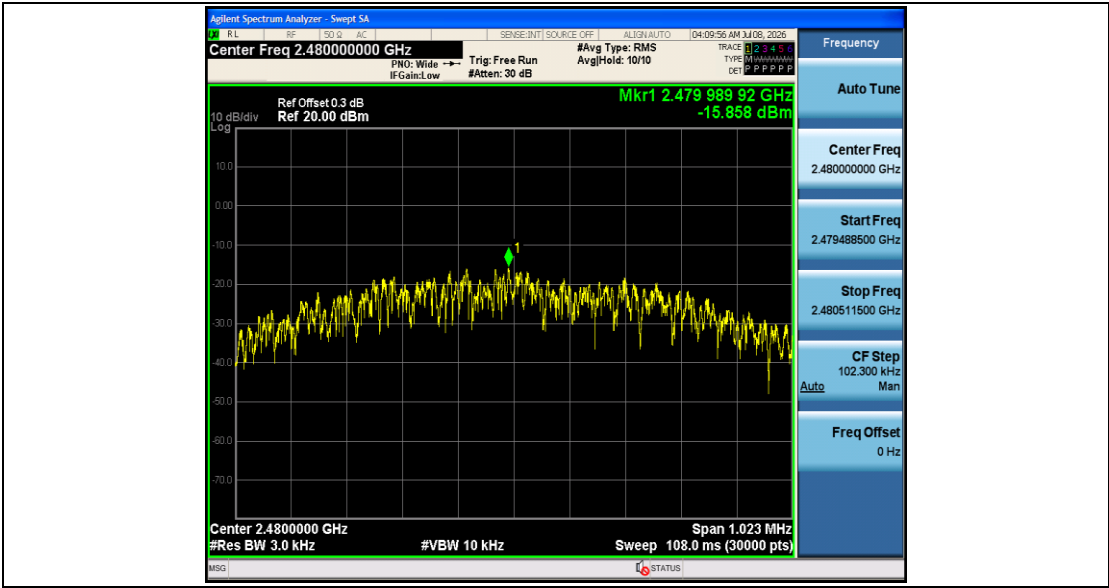
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

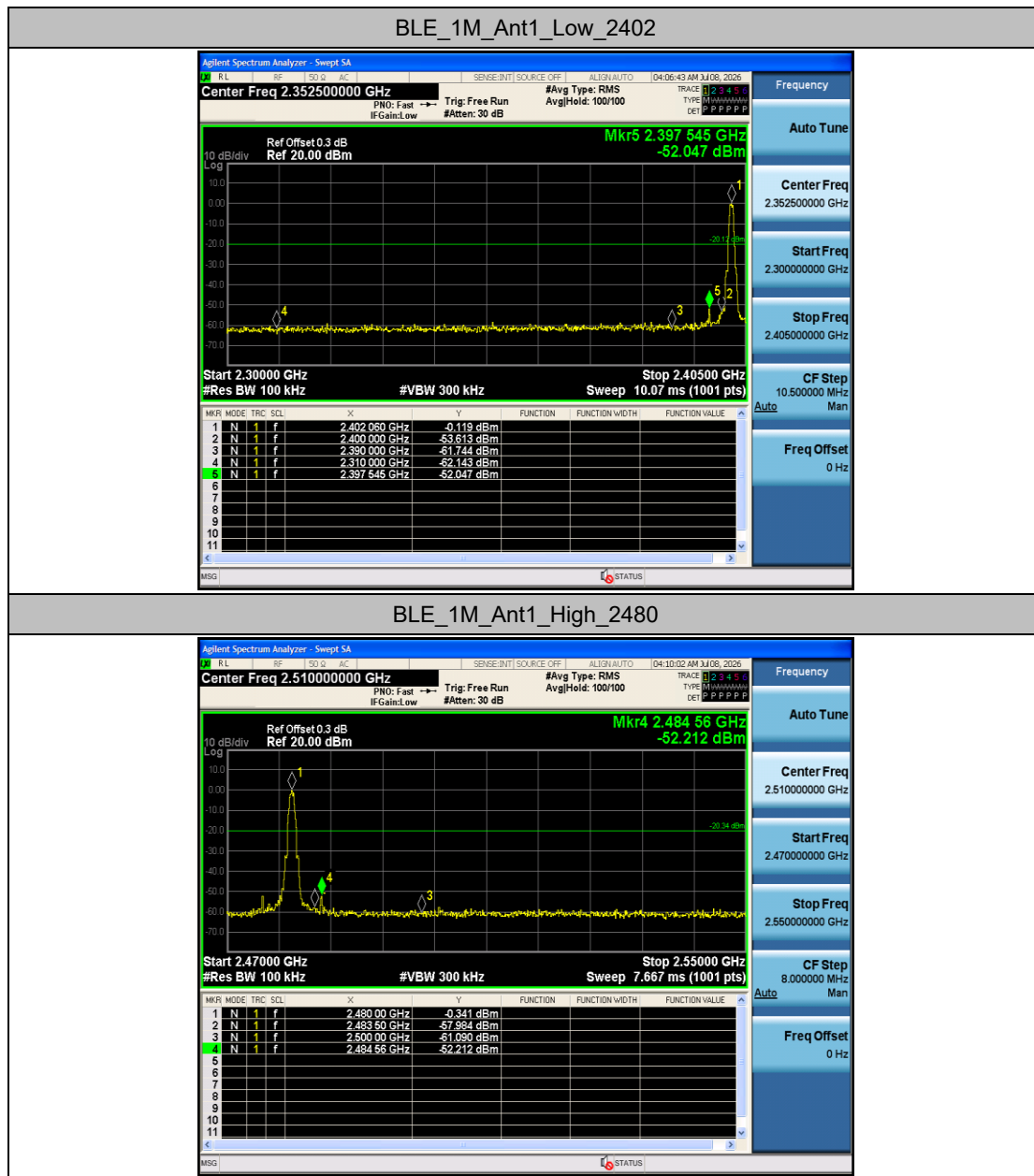


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.12	-52.05	≤-20.12	PASS
		High	2480	-0.34	-52.21	≤-20.34	PASS

Test Graphs

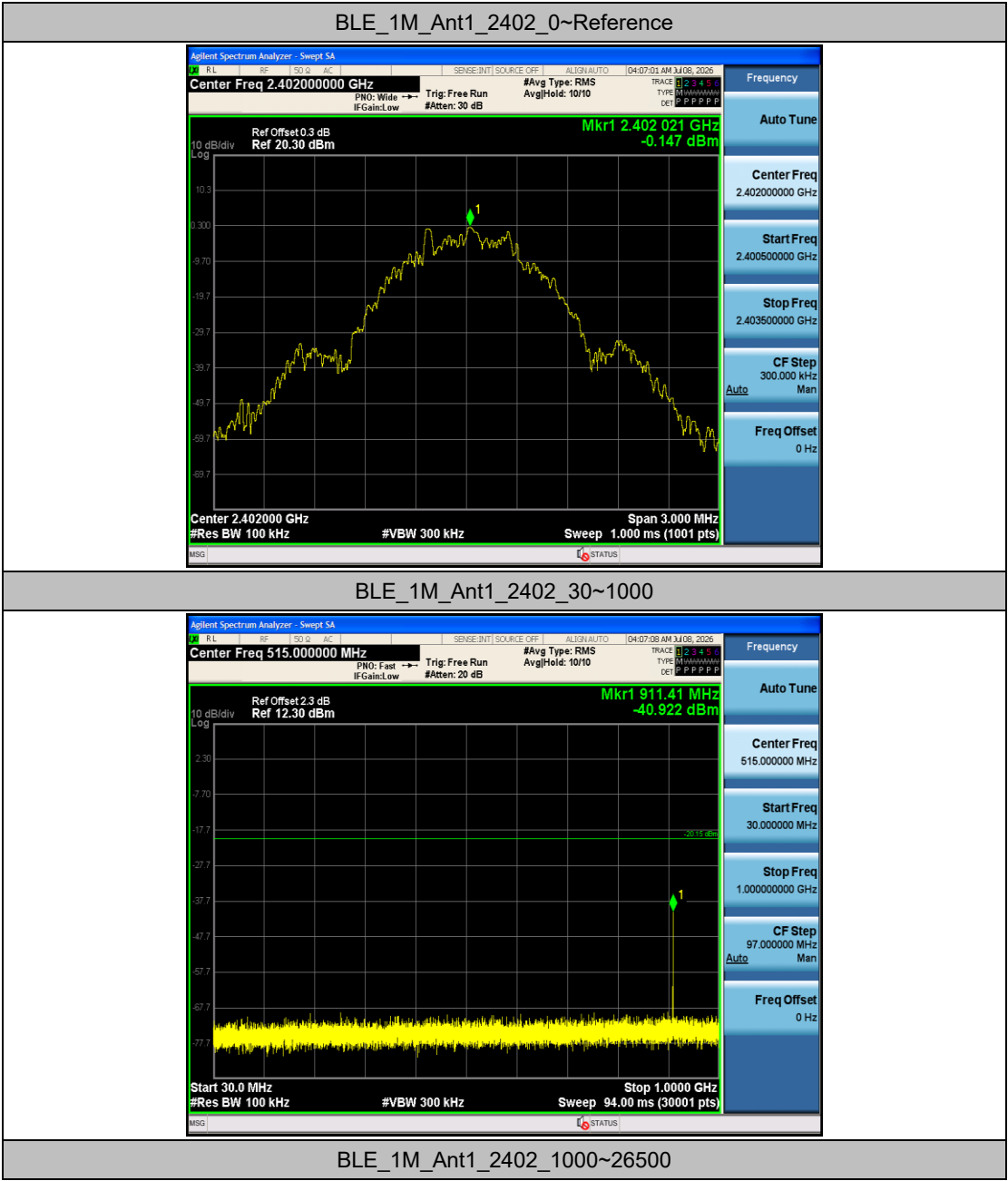


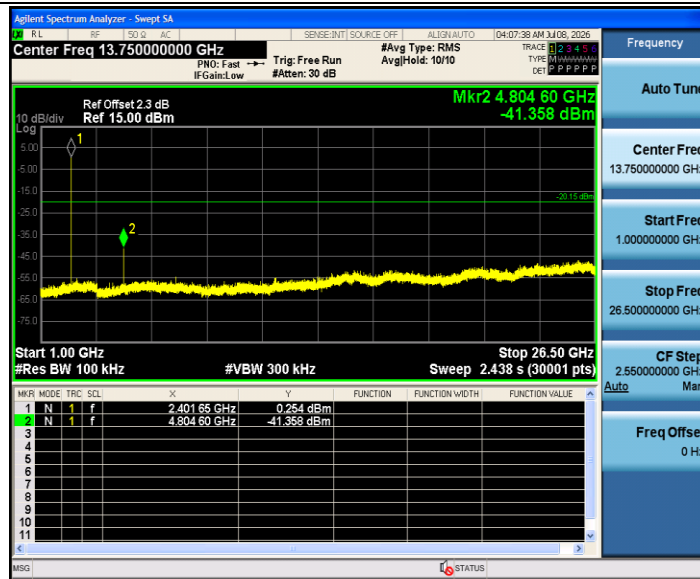
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.15	-0.15	---	PASS
			30~1000	-0.15	-40.92	≤-20.15	PASS
			1000~26500	-0.15	-41.36	≤-20.15	PASS
		2440	Reference	-1.41	-1.41	---	PASS
			30~1000	-1.41	-68.34	≤-21.41	PASS
			1000~26500	-1.41	-40.84	≤-21.41	PASS
		2480	Reference	-1.76	-1.76	---	PASS
			30~1000	-1.76	-68.34	≤-21.76	PASS
			1000~26500	-1.76	-40.88	≤-21.76	PASS

Test Graphs

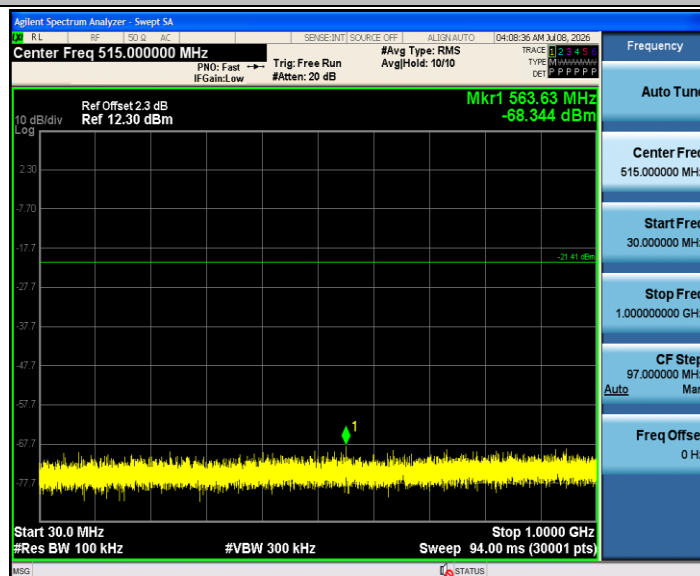




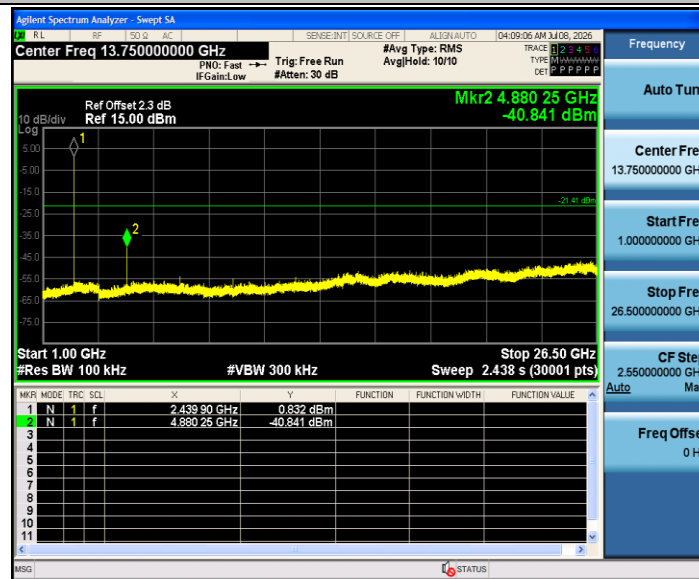
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



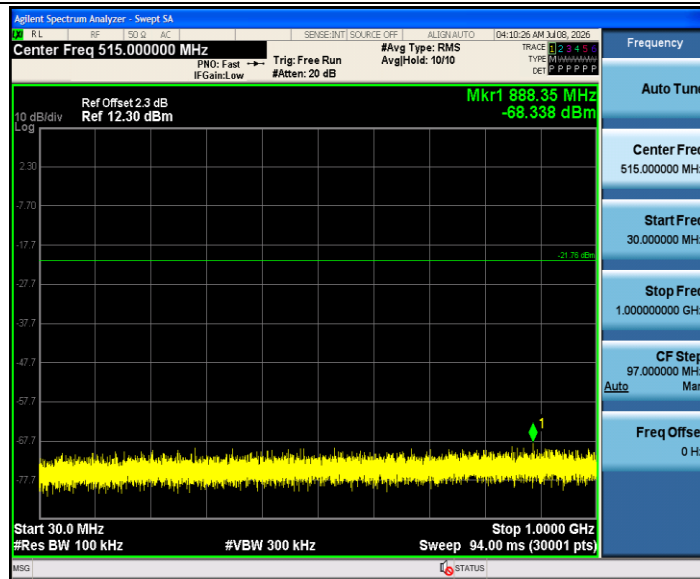
BLE_1M_Ant1_2440_1000~26500



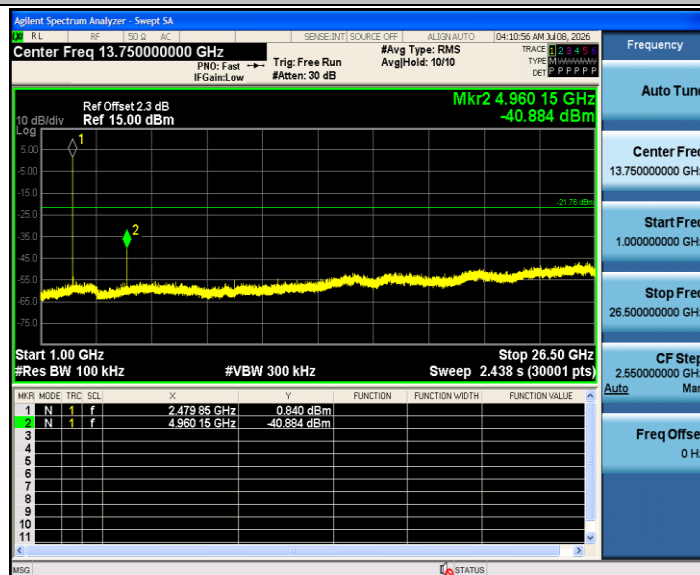
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



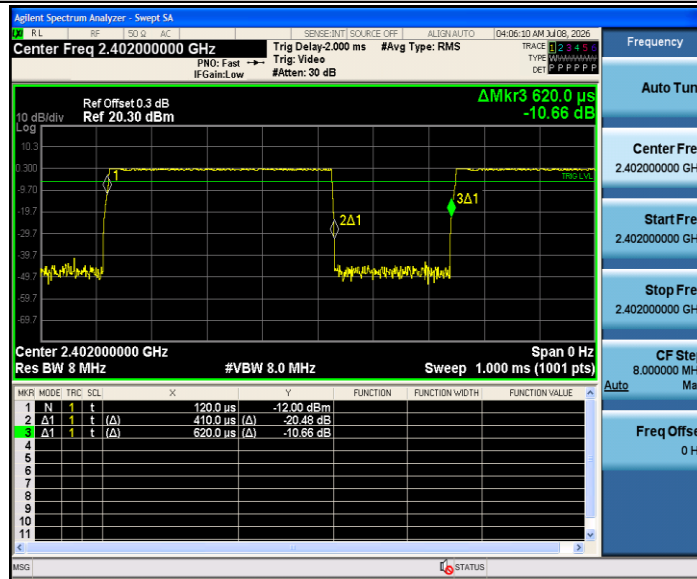
Appendix G: Duty Cycle

Test Result

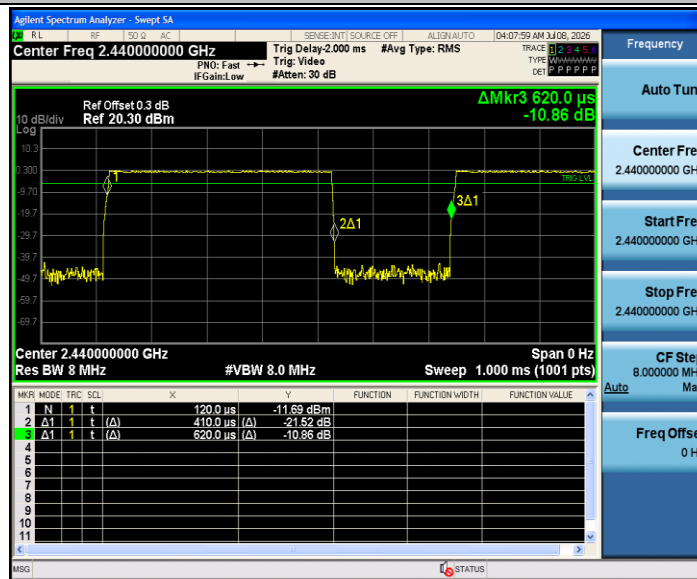
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.62	0.6613	66.13	1.80	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.42	0.63	0.6667	66.67	1.76	---	---

Test Graphs

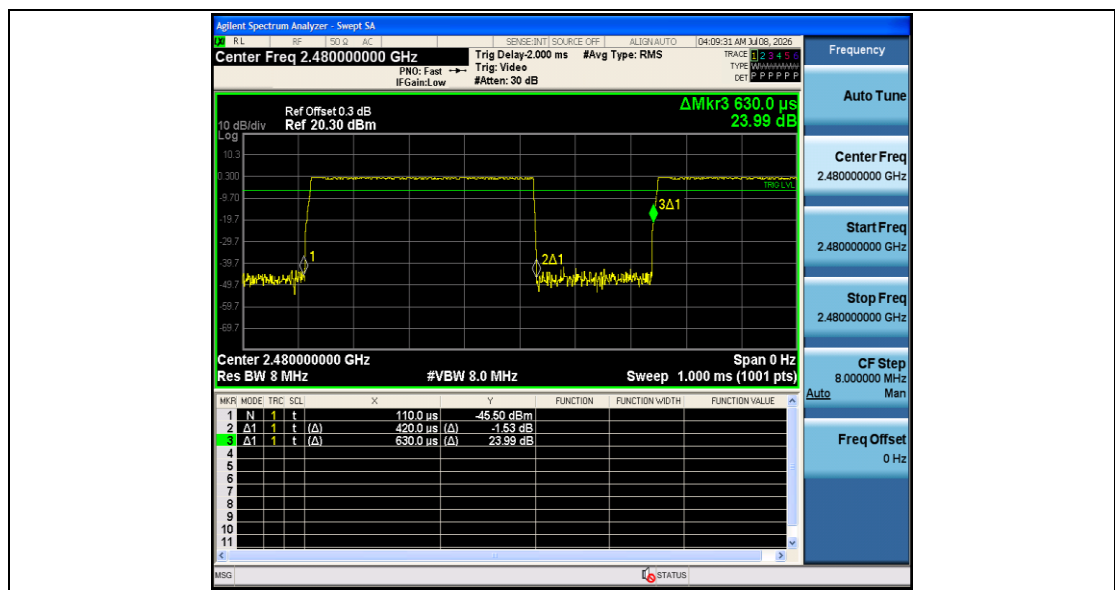
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

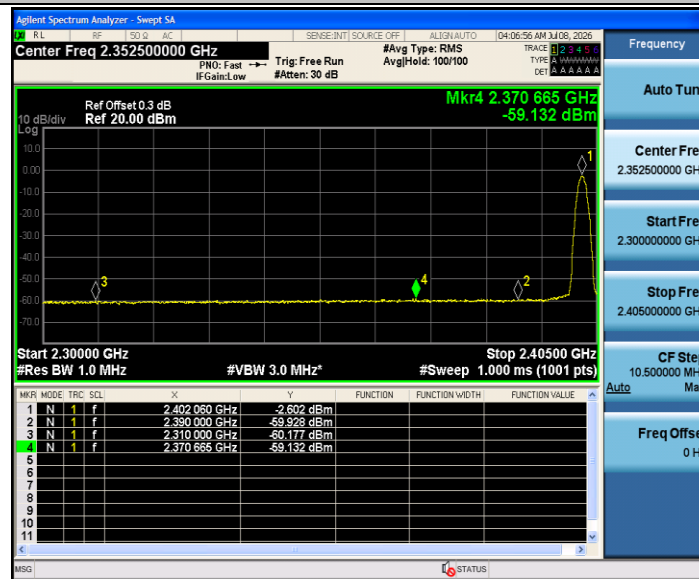
TestMode	Antenna	Channel	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.18	3.81	1.80	40.63	≤54	PASS
				AV	2370.665	-59.13	3.81	1.80	41.68	≤54	PASS
				AV	2390.000	-59.93	3.81	1.80	40.88	≤54	PASS
				Peak	2310.000	-53.33	3.81	0.00	45.68	≤74	PASS
				Peak	2363.945	-48.81	3.81	0.00	50.2	≤74	PASS
				Peak	2390.000	-50.05	3.81	0.00	48.96	≤74	PASS
		High	2480	AV	2483.500	-58.59	3.81	1.76	42.18	≤54	PASS
				AV	2484.400	-57.21	3.81	1.76	43.56	≤54	PASS
				AV	2500.000	-59.37	3.81	1.76	41.4	≤54	PASS
				Peak	2483.500	-48.44	3.81	0.00	50.57	≤74	PASS
				Peak	2484.640	-44.15	3.81	0.00	54.86	≤74	PASS
				Peak	2500.000	-52.15	3.81	0.00	46.86	≤74	PASS

Note:

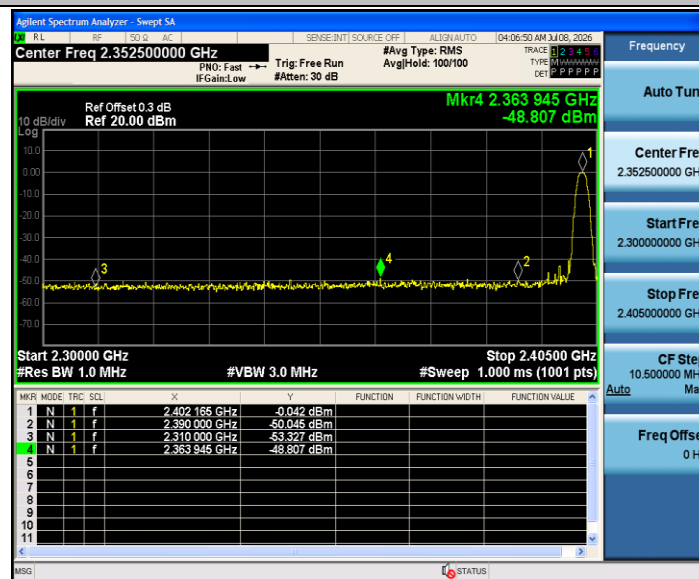
1. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

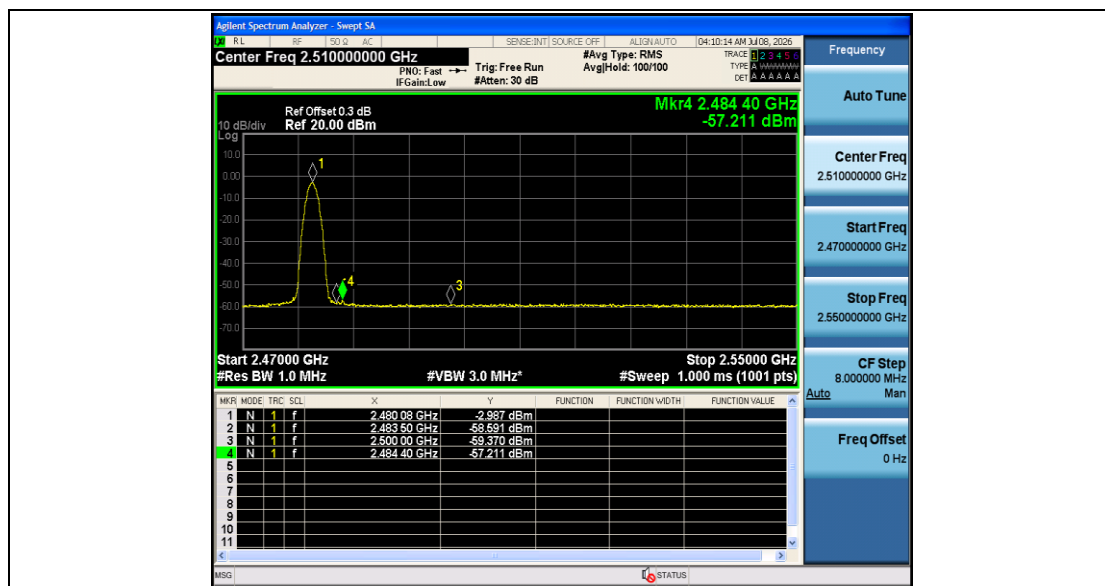
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

