

FCC Appendix RF Test Data for BLE

FCC ID : 2BW5S-LC-5050

Company : Jiangsu Wormhole E-commerce Technology Co., Ltd.

EUT : Led Strip Light

Model Number : LC-5050

Report No. : CTA26062301101

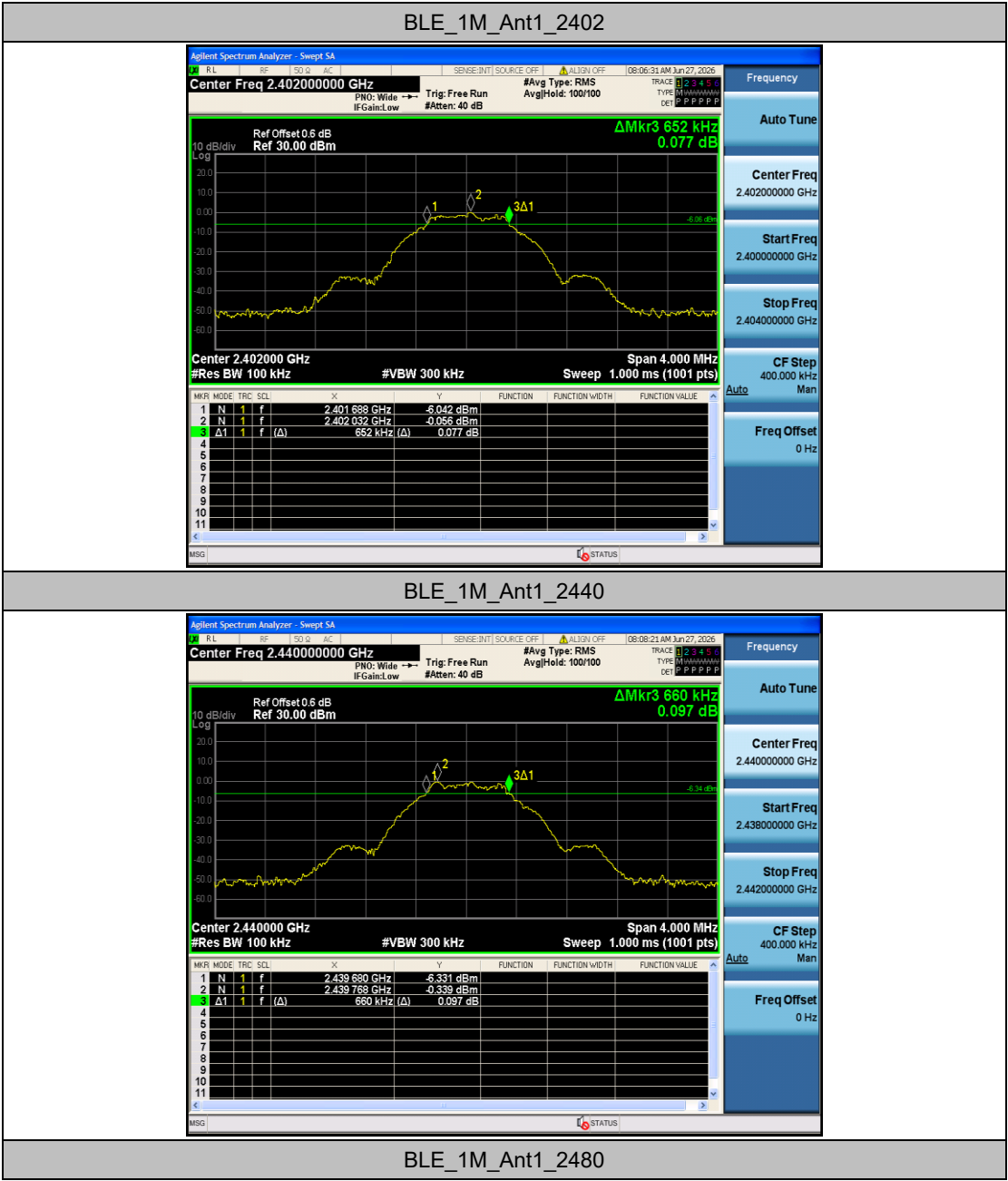
Reviewed By : Eric Wang

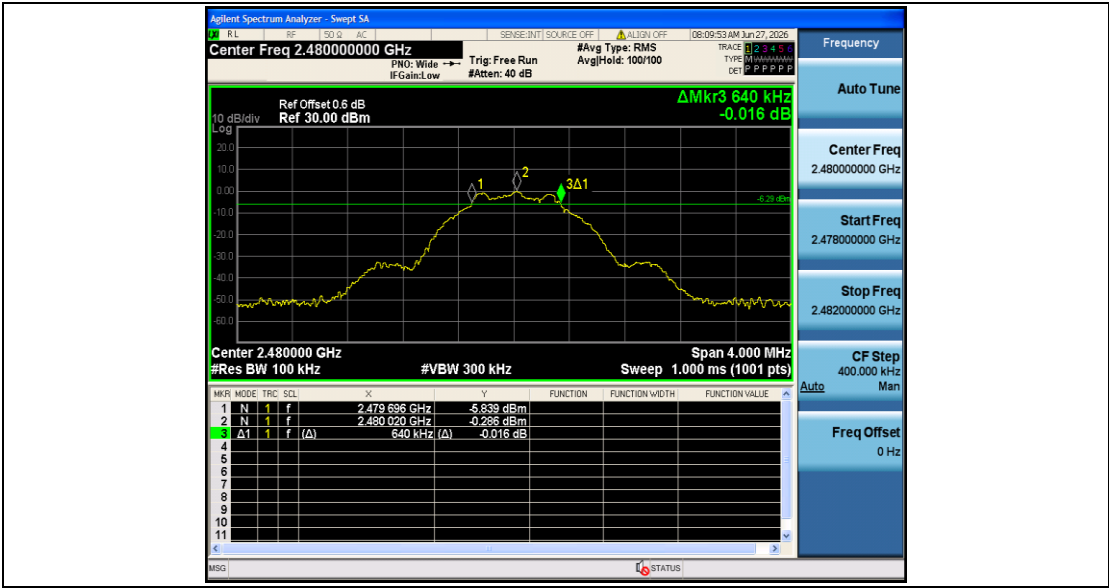
Appendix A: DTS Bandwidth

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	0.660	2439.680	2440.340	0.5	PASS
		2480	0.640	2479.696	2480.336	0.5	PASS

Test Graphs



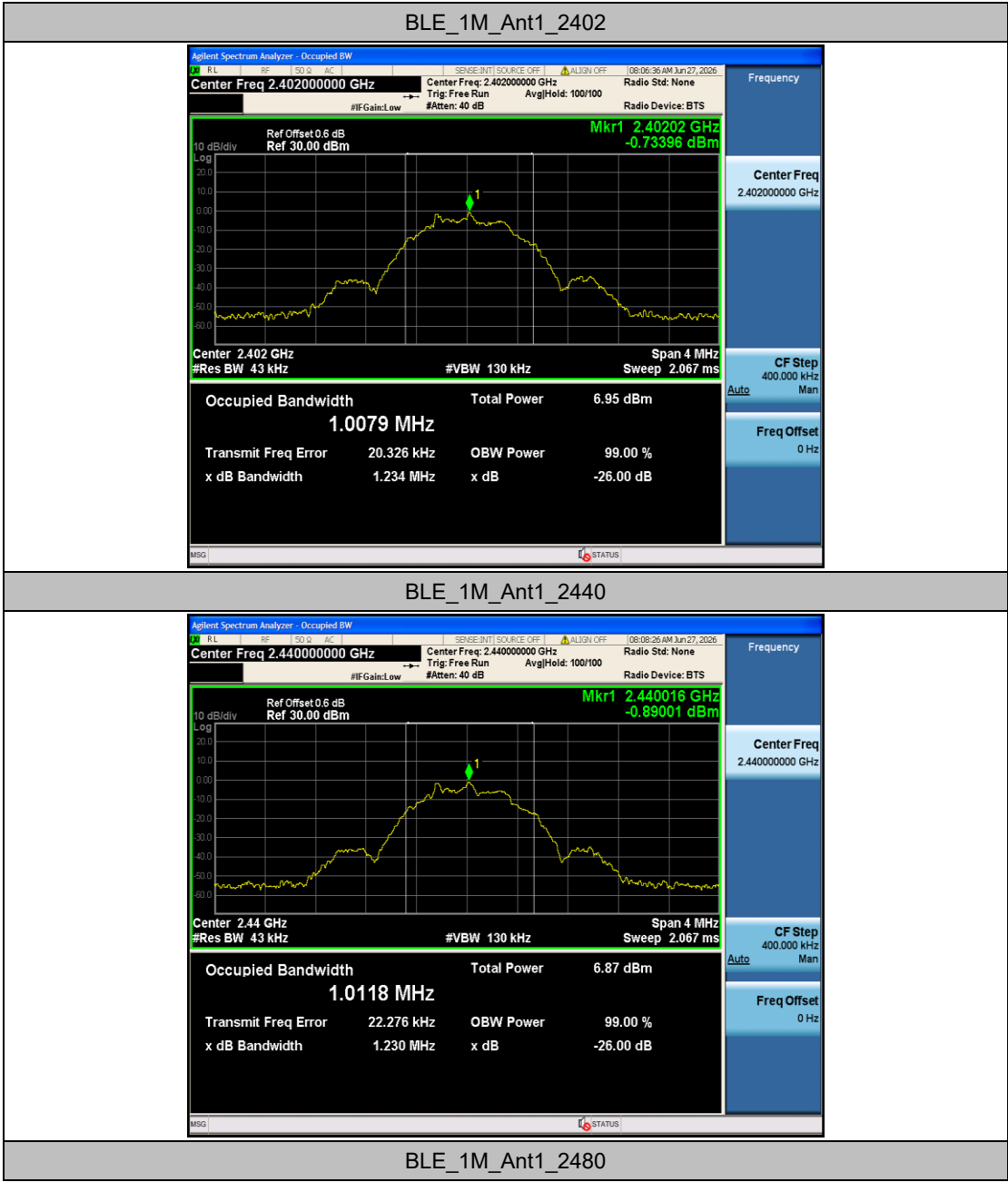


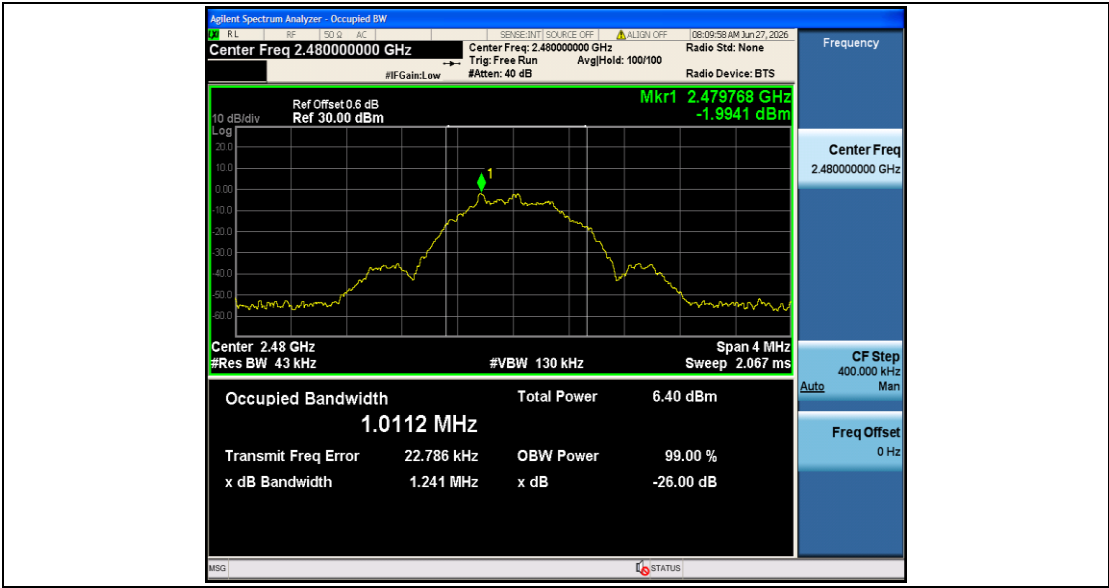
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0079	2401.5164	2402.5243	---	---
		2440	1.0118	2439.5164	2440.5282	---	---
		2480	1.0112	2479.5172	2480.5284	---	---

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	0.20	≤30	PASS
		2440	0.10	≤30	PASS
		2480	-0.21	≤30	PASS

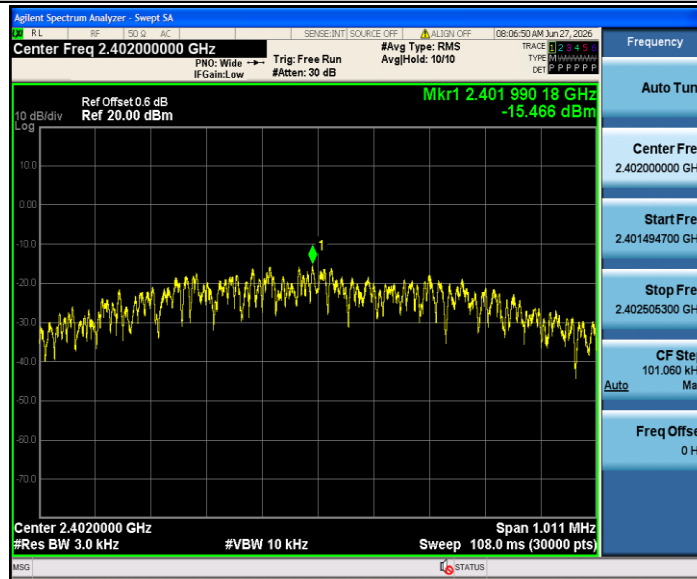
Appendix D: Maximum power spectral density

Test Result

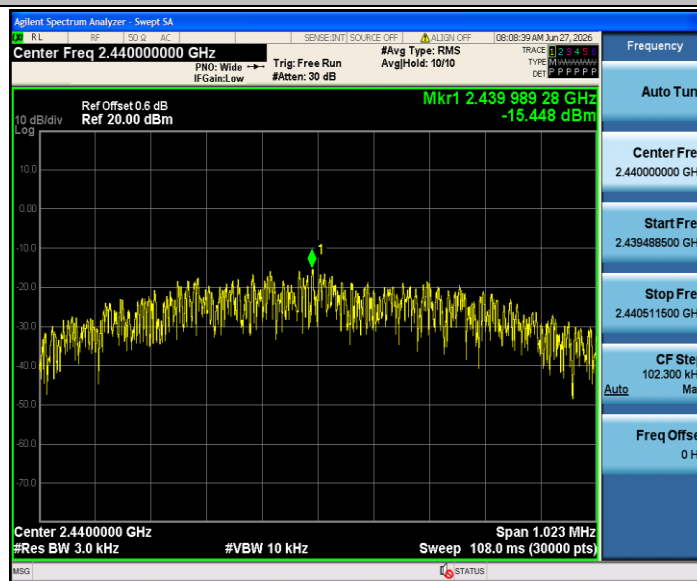
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.47	≤8.00	PASS
		2440	-15.45	≤8.00	PASS
		2480	-15.67	≤8.00	PASS

Test Graphs

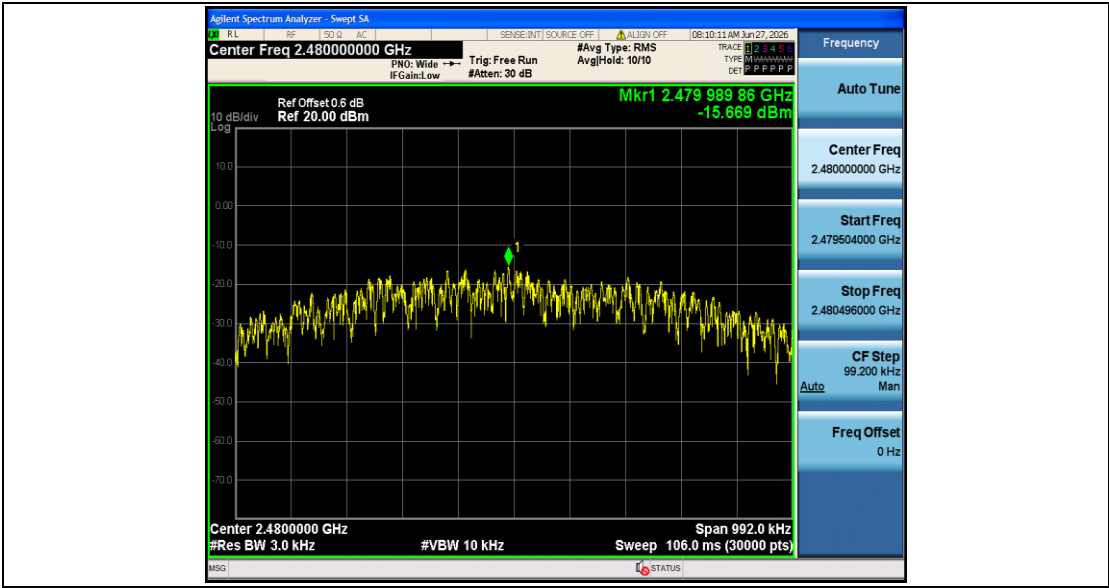
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

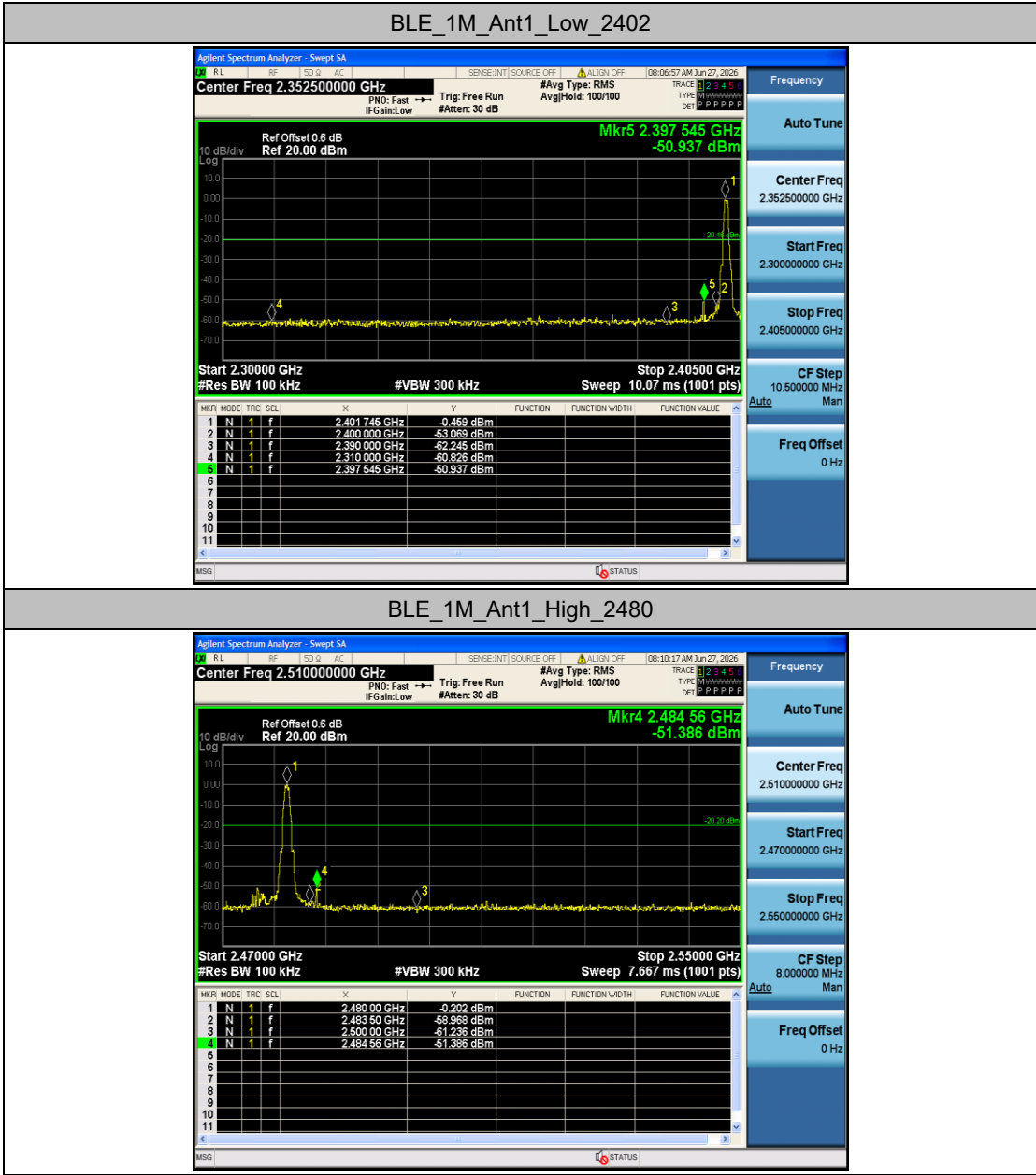


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.46	-50.94	≤-20.46	PASS
		High	2480	-0.20	-51.39	≤-20.2	PASS

Test Graphs

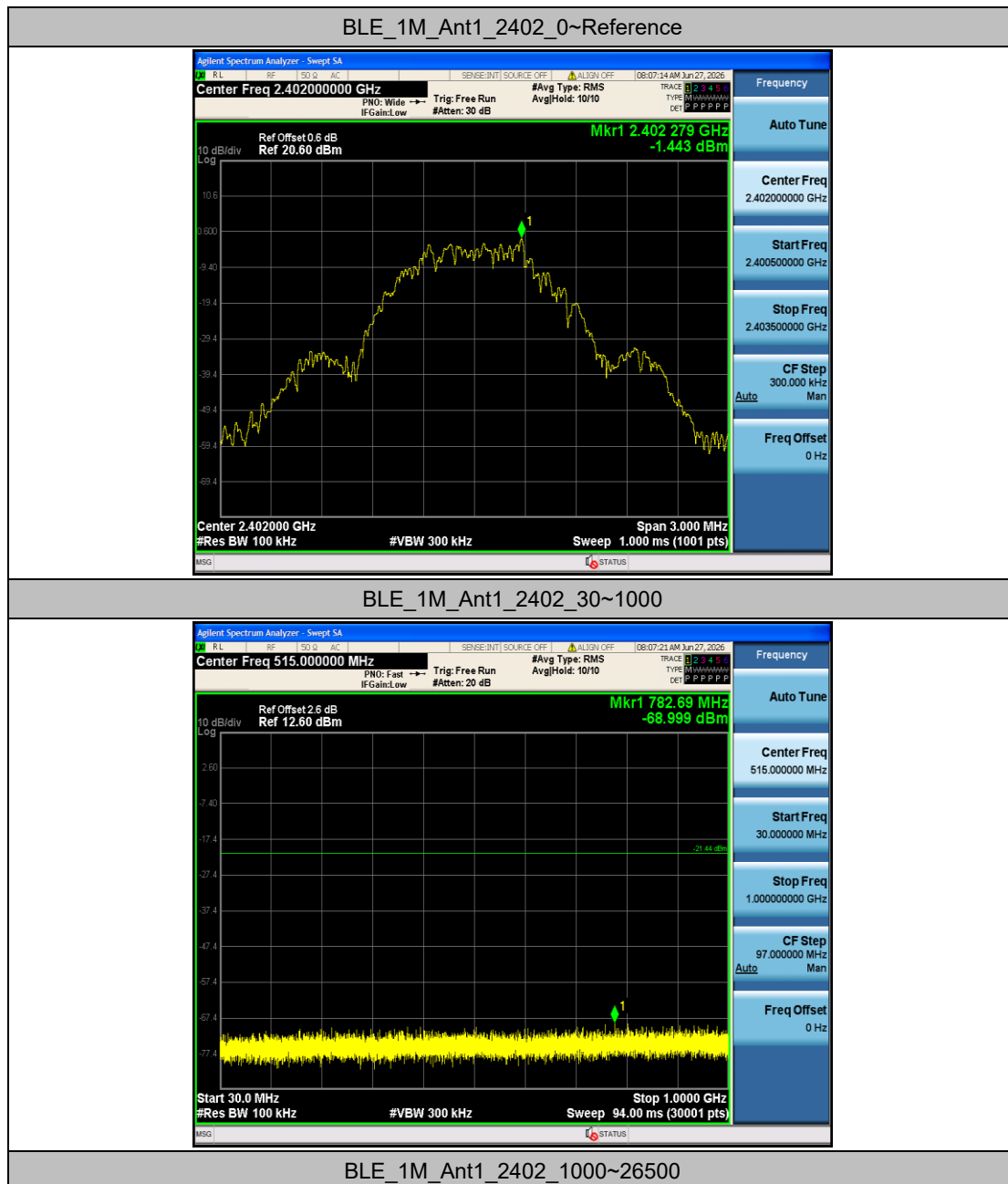


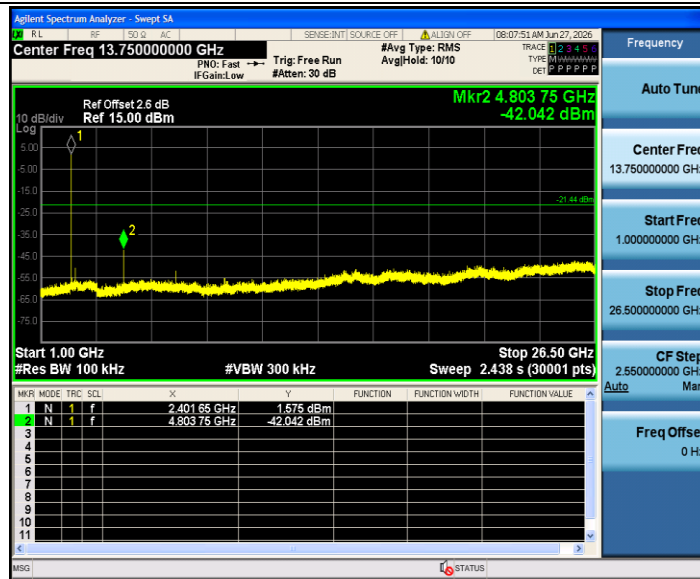
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.44	-1.44	---	PASS
			30~1000	-1.44	-69	≤-21.44	PASS
			1000~26500	-1.44	-42.04	≤-21.44	PASS
		2440	Reference	-1.67	-1.67	---	PASS
			30~1000	-1.67	-68.6	≤-21.67	PASS
			1000~26500	-1.67	-40.56	≤-21.67	PASS
		2480	Reference	-1.57	-1.57	---	PASS
			30~1000	-1.57	-67.4	≤-21.57	PASS
			1000~26500	-1.57	-41.58	≤-21.57	PASS

Test Graphs

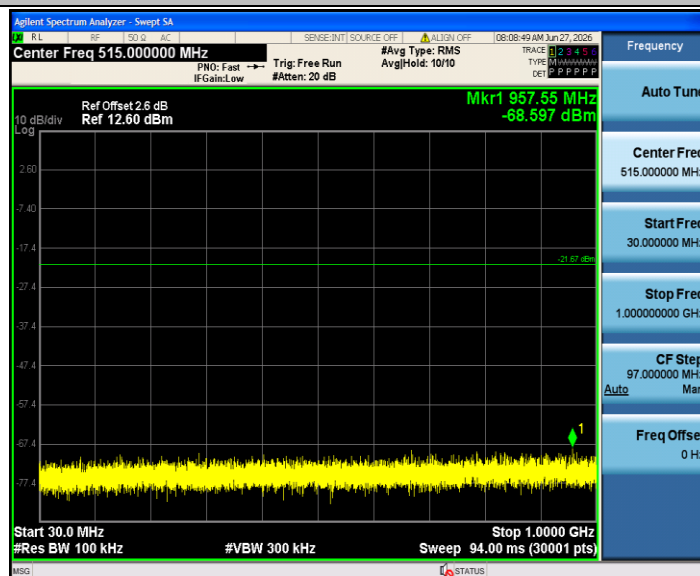




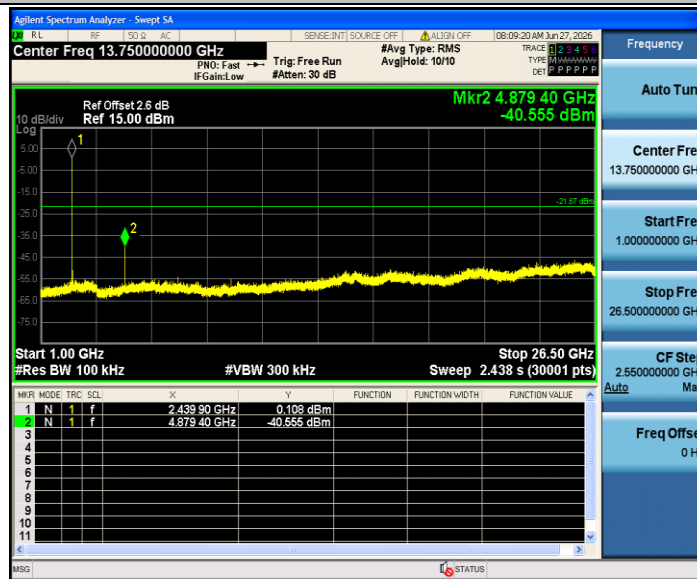
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



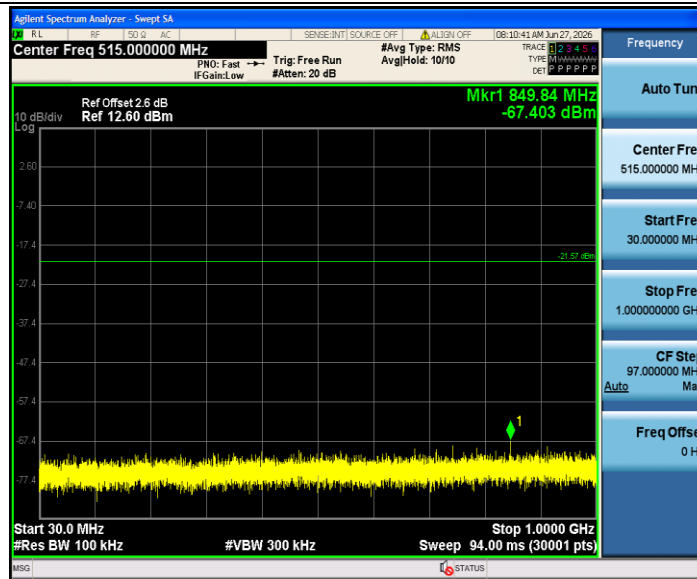
BLE_1M_Ant1_2440_1000~26500



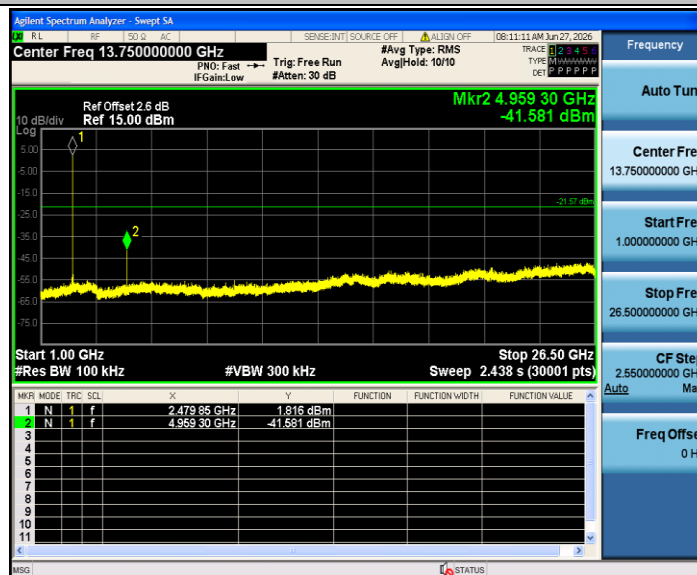
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

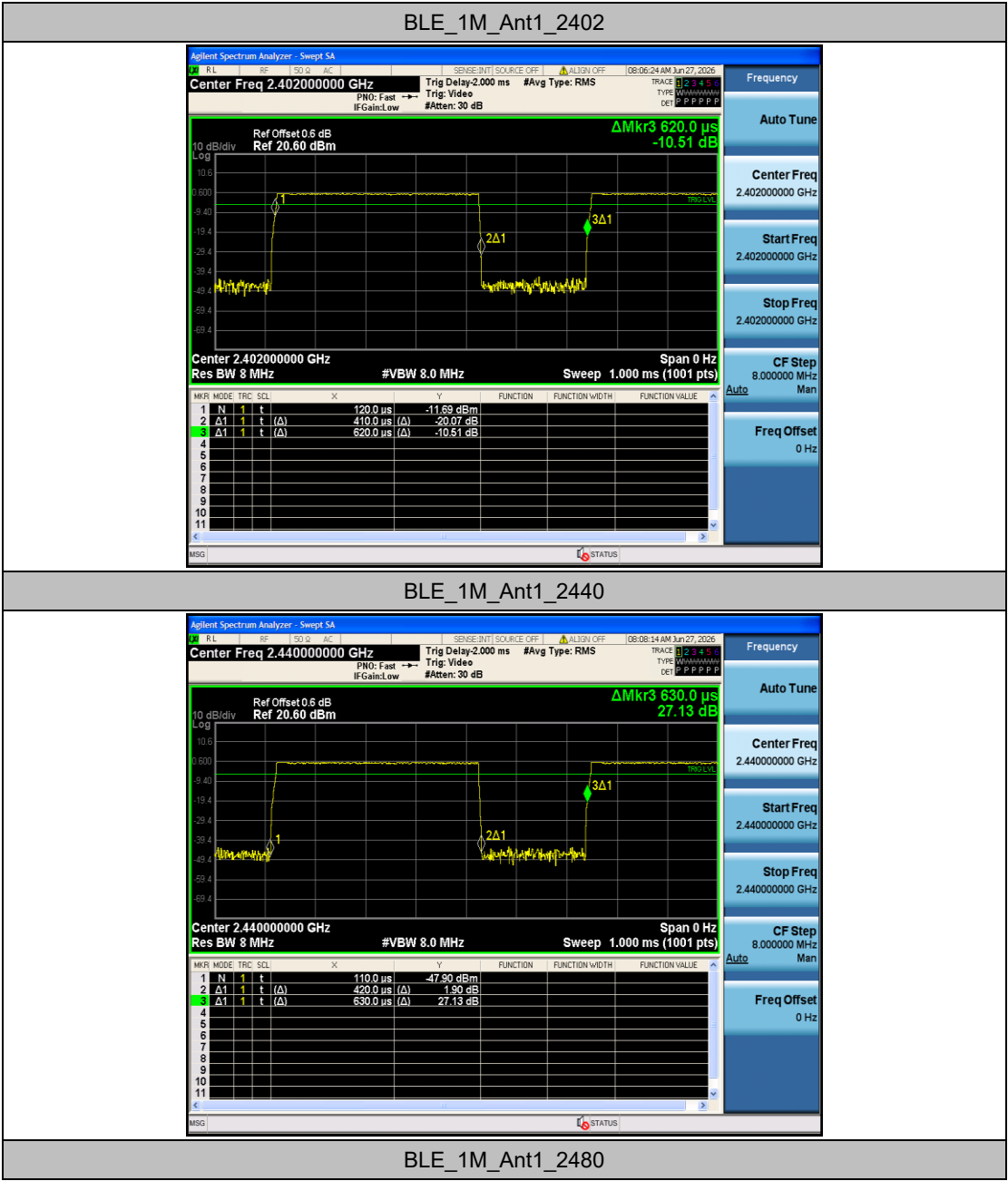


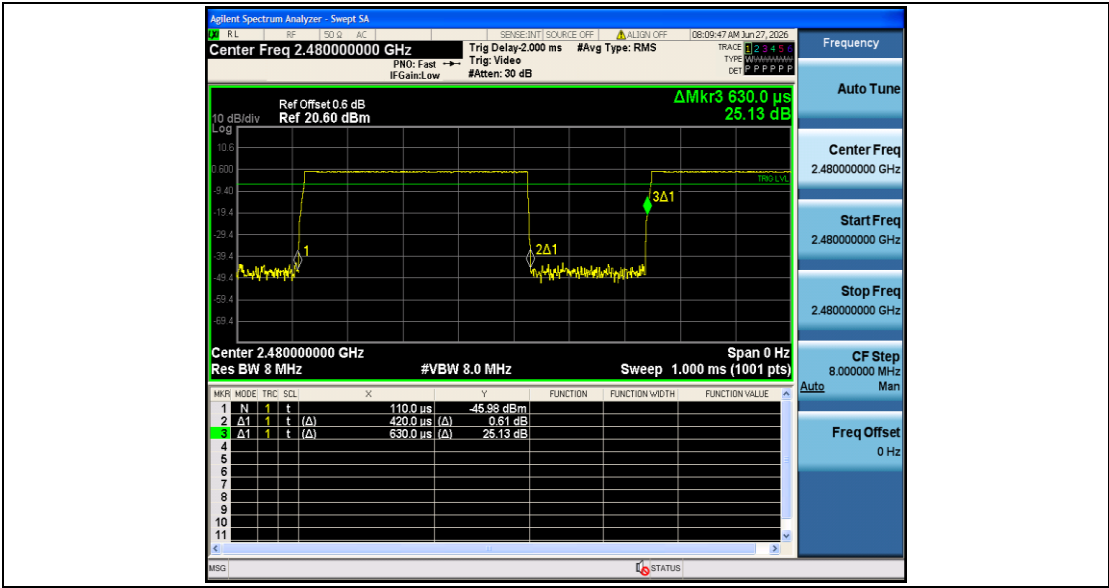
Appendix G: Duty Cycle

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	0.42	0.63	0.6667	66.67	1.76	---	---
		2480	0.42	0.63	0.6667	66.67	1.76	---	---

Test Graphs





Appendix H: Emissions in Restricted Bands

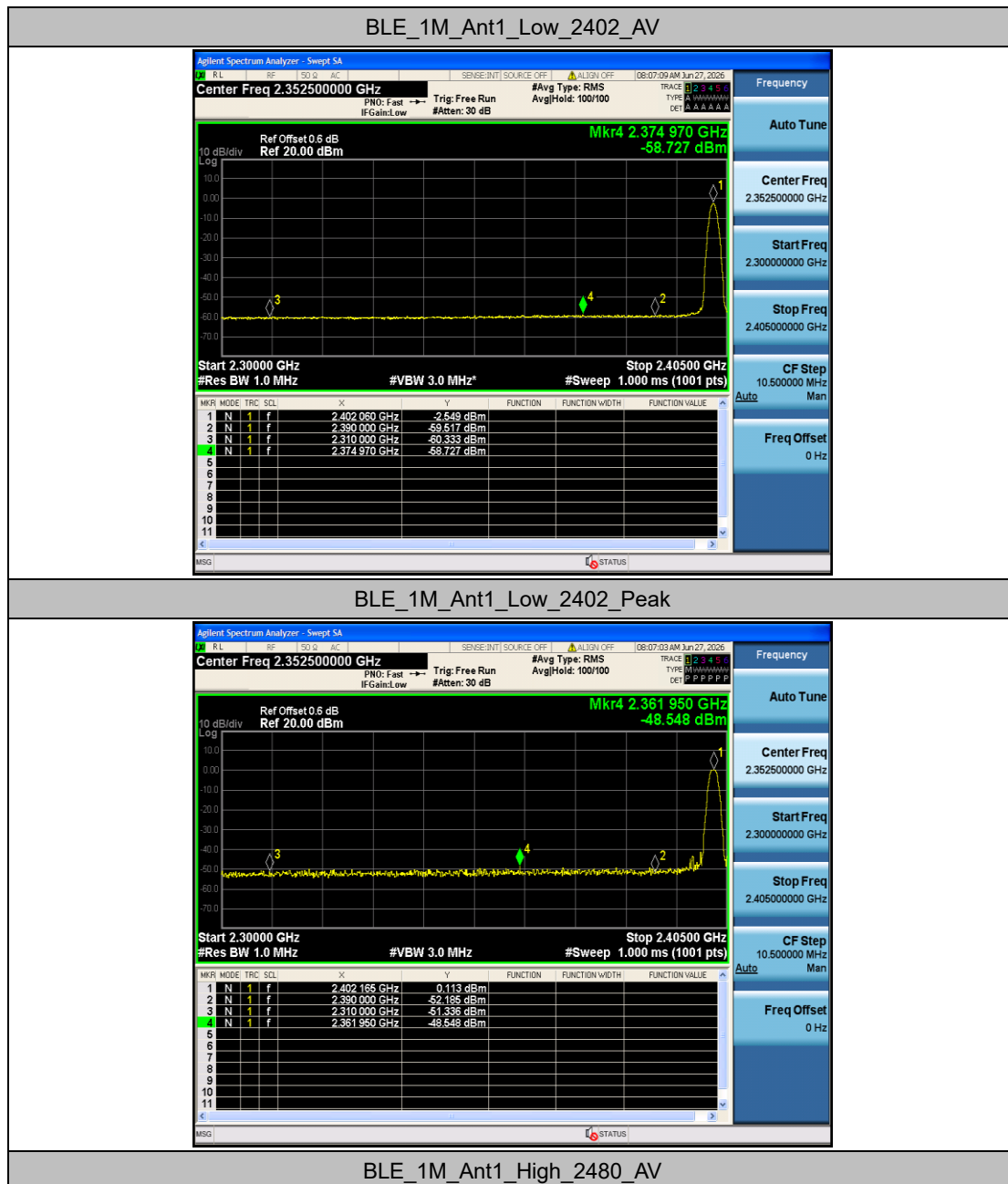
Test Result

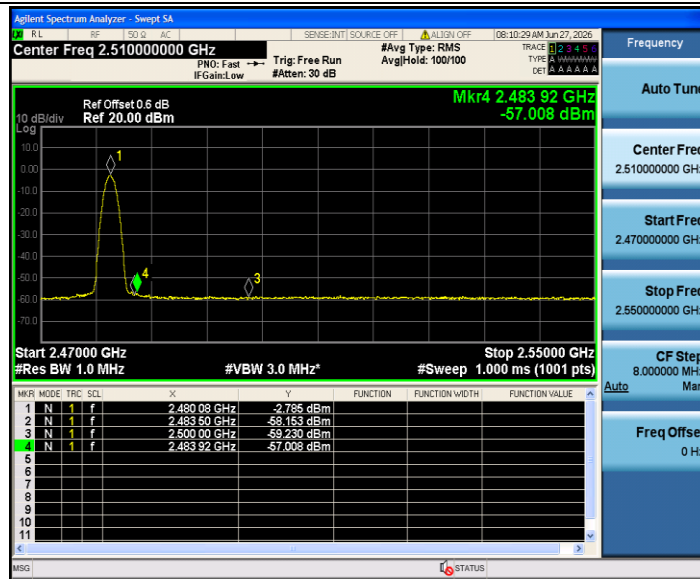
TestMode	Antenna	Channel Name	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.33	2.00	1.80	38.67	≤54	PASS
				AV	2374.970	-58.73	2.00	1.80	40.27	≤54	PASS
				AV	2390.000	-59.52	2.00	1.80	39.48	≤54	PASS
				Peak	2310.000	-51.34	2.00	0.00	45.86	≤74	PASS
				Peak	2361.950	-48.55	2.00	0.00	48.65	≤74	PASS
				Peak	2390.000	-52.19	2.00	0.00	45.01	≤74	PASS
		High	2480	AV	2483.500	-58.15	2.00	1.76	40.81	≤54	PASS
				AV	2483.920	-57.01	2.00	1.76	41.95	≤54	PASS
				AV	2500.000	-59.23	2.00	1.76	39.73	≤54	PASS
				Peak	2483.500	-49.55	2.00	0.00	47.65	≤74	PASS
				Peak	2484.320	-42.82	2.00	0.00	54.38	≤74	PASS
				Peak	2500.000	-51.63	2.00	0.00	45.57	≤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_High_2480_Peak

