

FCC Appendix RF Test Data for BLE

FCC ID : 2A4B2-01938108

Company : Ningbo Yada Electric Products Co., Ltd

EUT : undercabinet light

Model Number : 1938108

Report No. : CTA25122600801

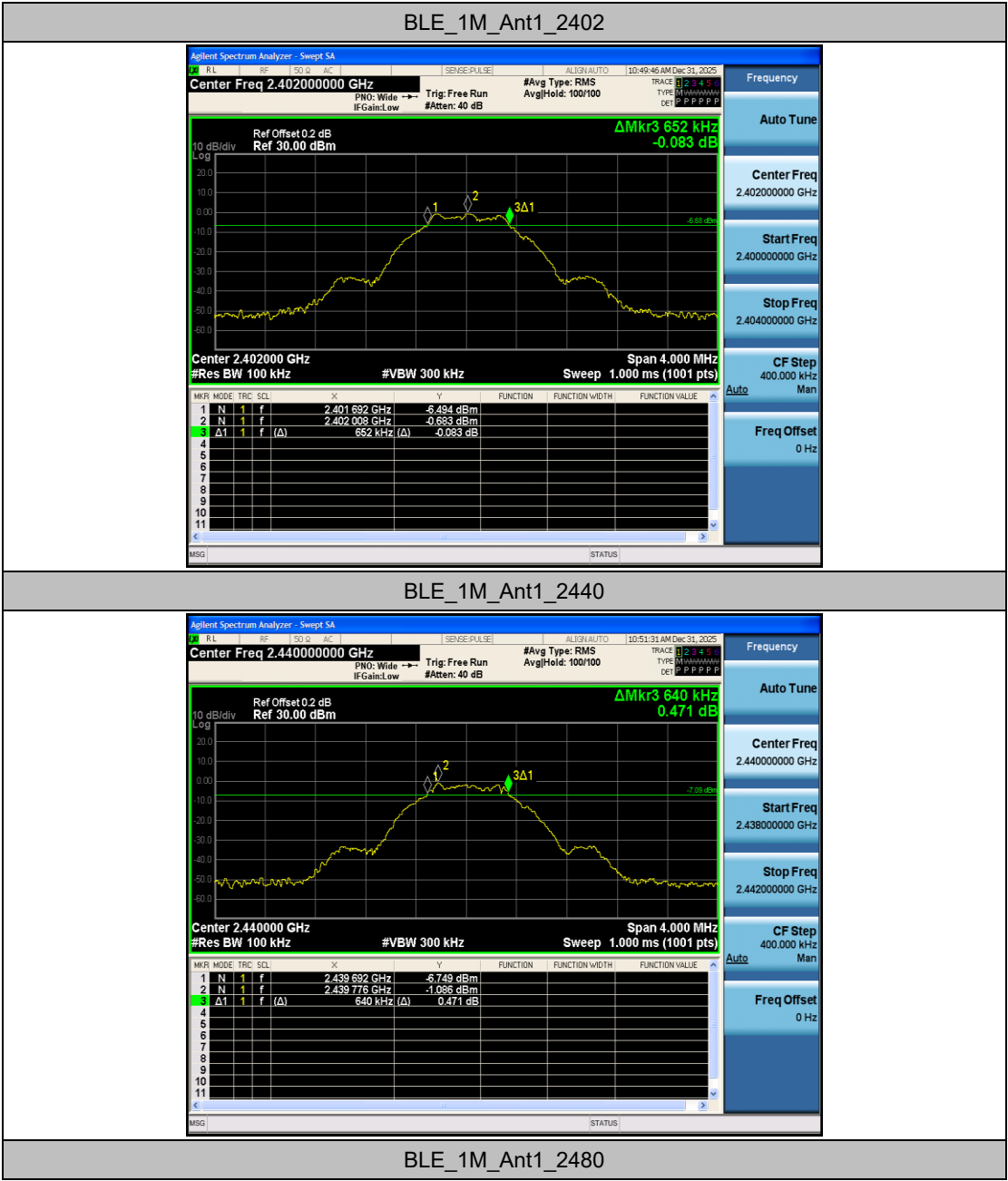
Reviewed By : Eric Wang

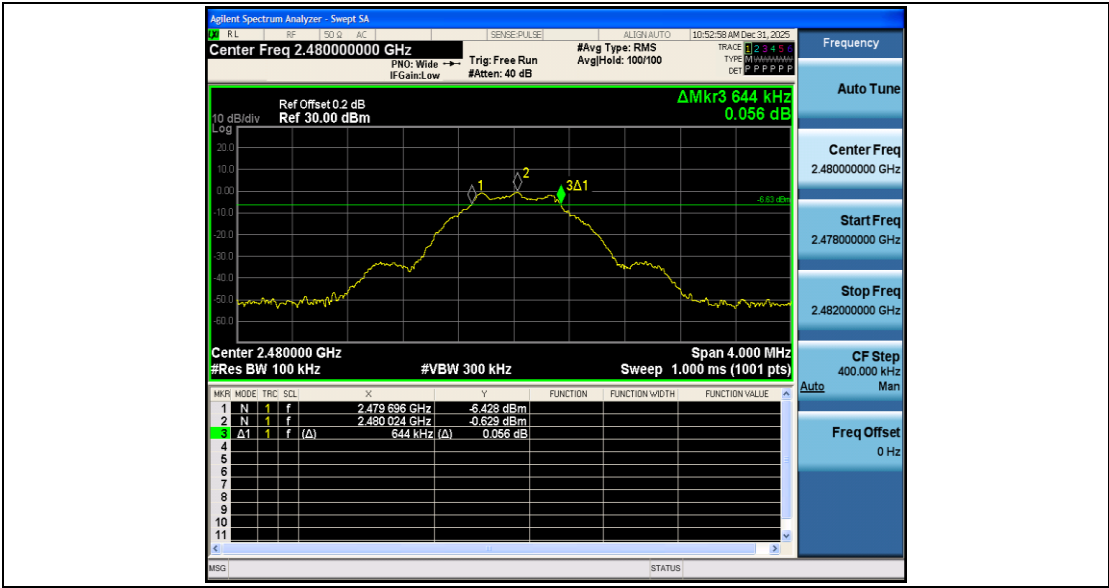
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.652	2401.692	2402.344	0.5	PASS
		2440	0.640	2439.692	2440.332	0.5	PASS
		2480	0.644	2479.696	2480.340	0.5	PASS

Test Graphs



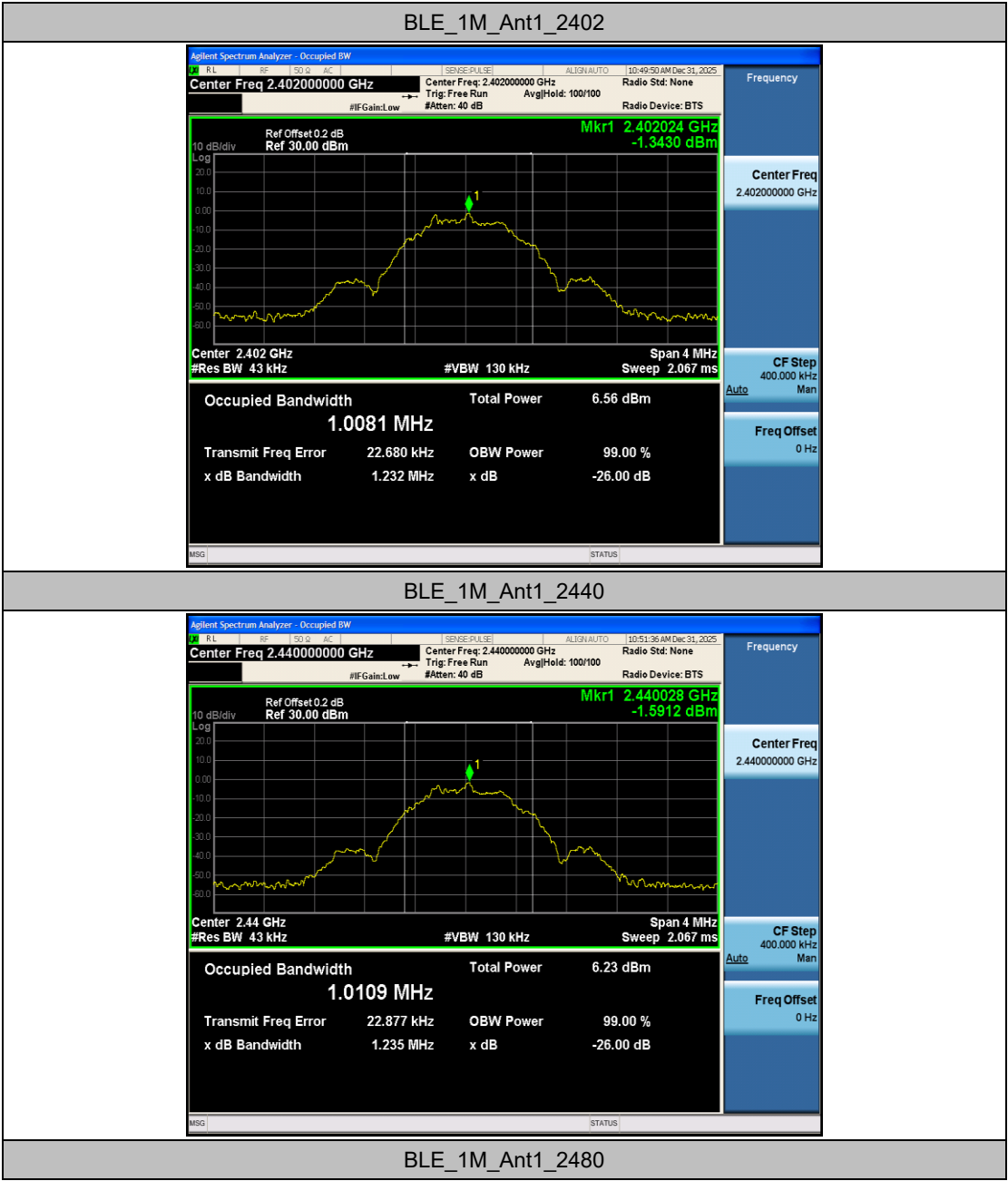


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0081	2401.5186	2402.5267	---	---
		2440	1.0109	2439.5174	2440.5283	---	---
		2480	1.0096	2479.5194	2480.5290	---	---

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	-0.18	≤30	PASS
		2440	-0.50	≤30	PASS
		2480	-0.47	≤30	PASS

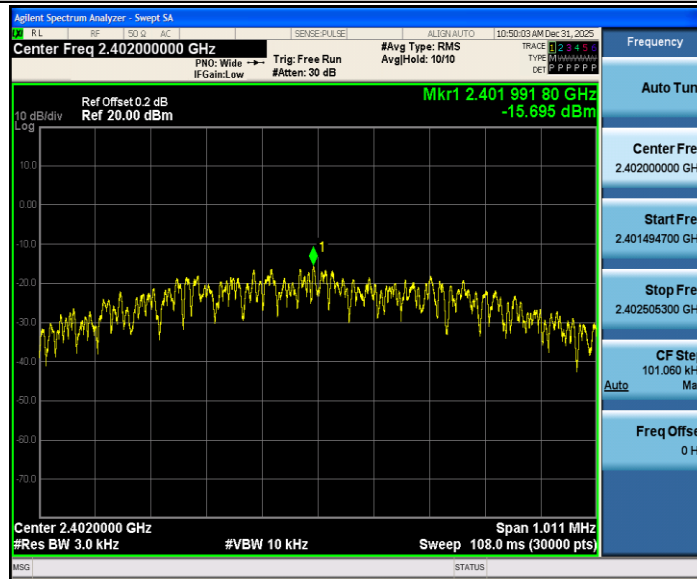
Appendix D: Maximum power spectral density

Test Result

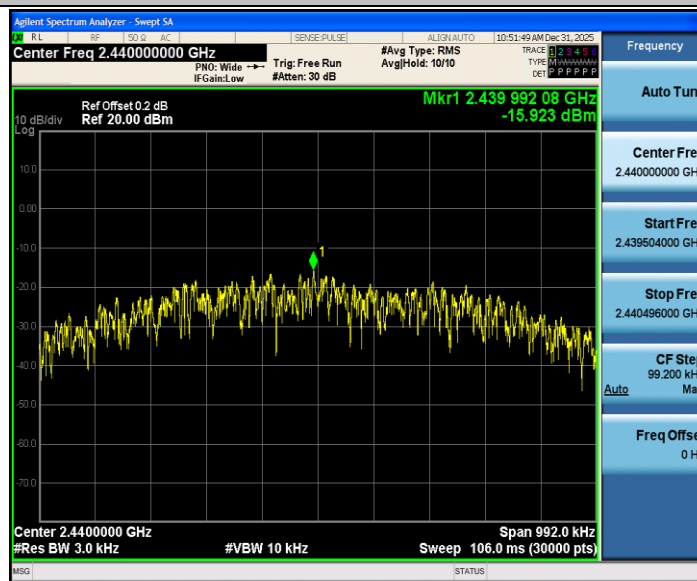
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.70	≤8.00	PASS
		2440	-15.92	≤8.00	PASS
		2480	-16.00	≤8.00	PASS

Test Graphs

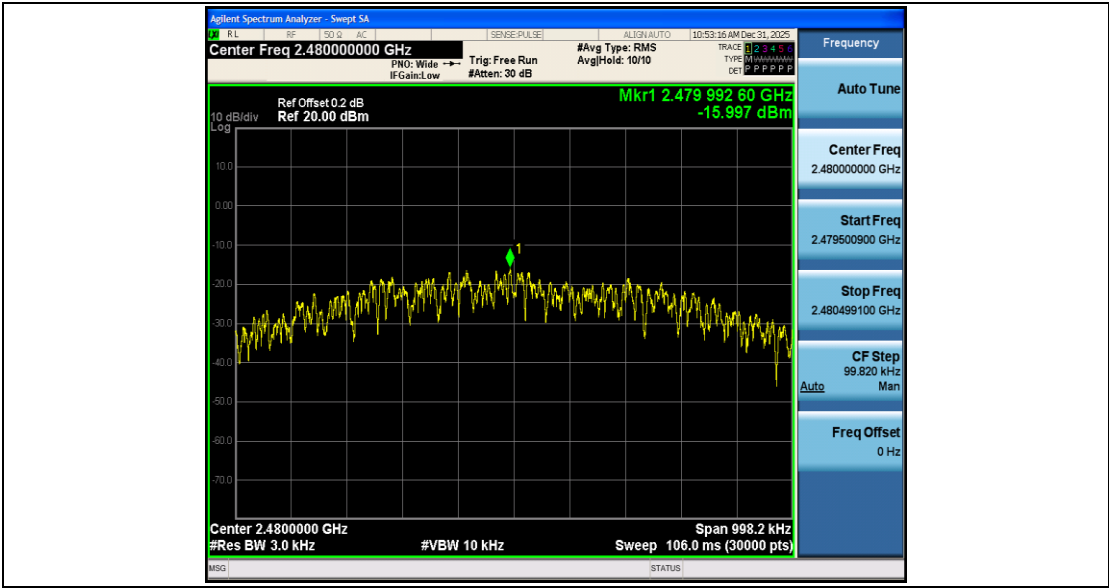
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

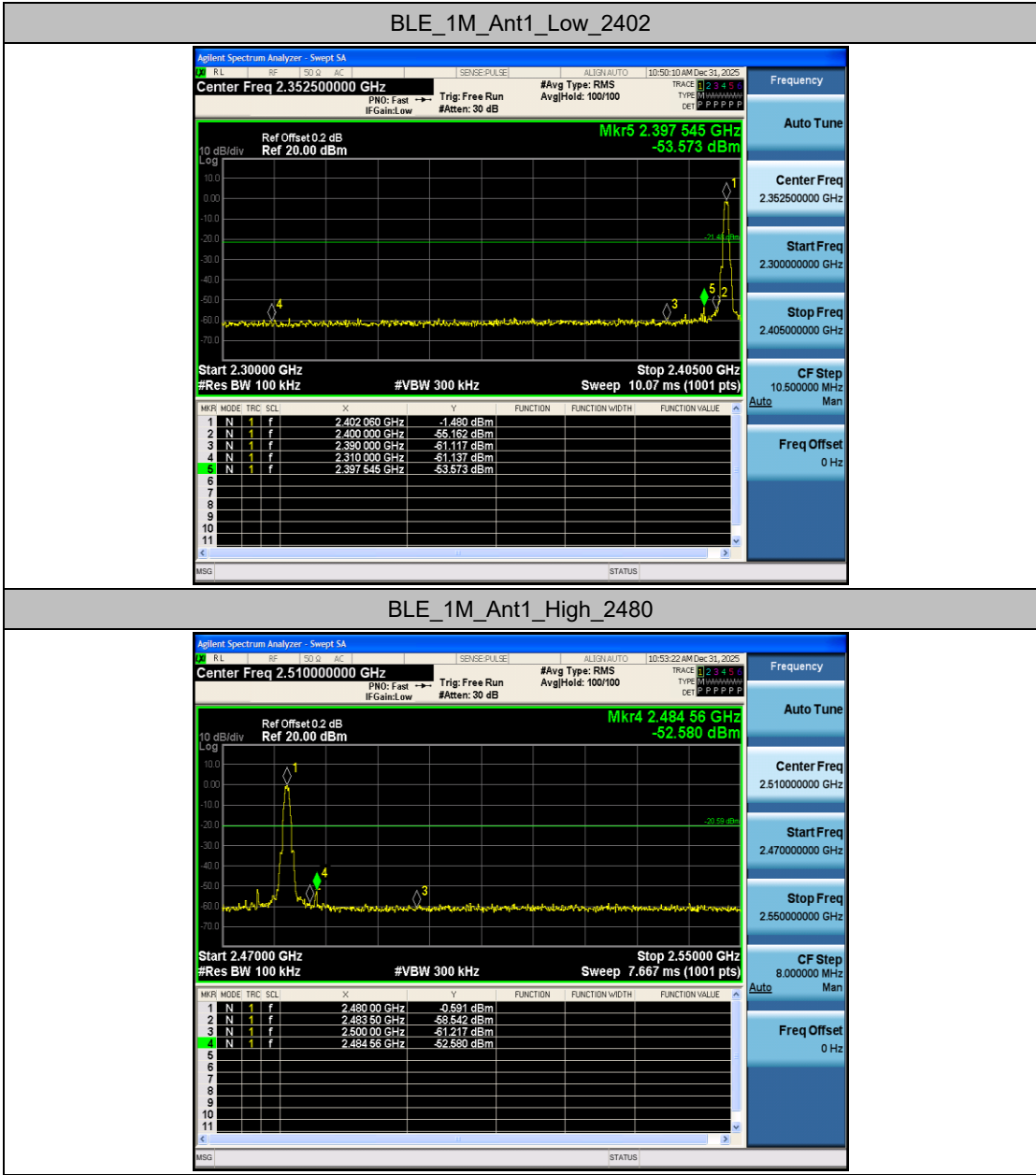


Appendix E: Band edge measurements

Test Result

TestMod e	Antenn a	ChNam e	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-1.48	-53.57	≤-21.48	PASS
		High	2480	-0.59	-52.58	≤-20.59	PASS

Test Graphs

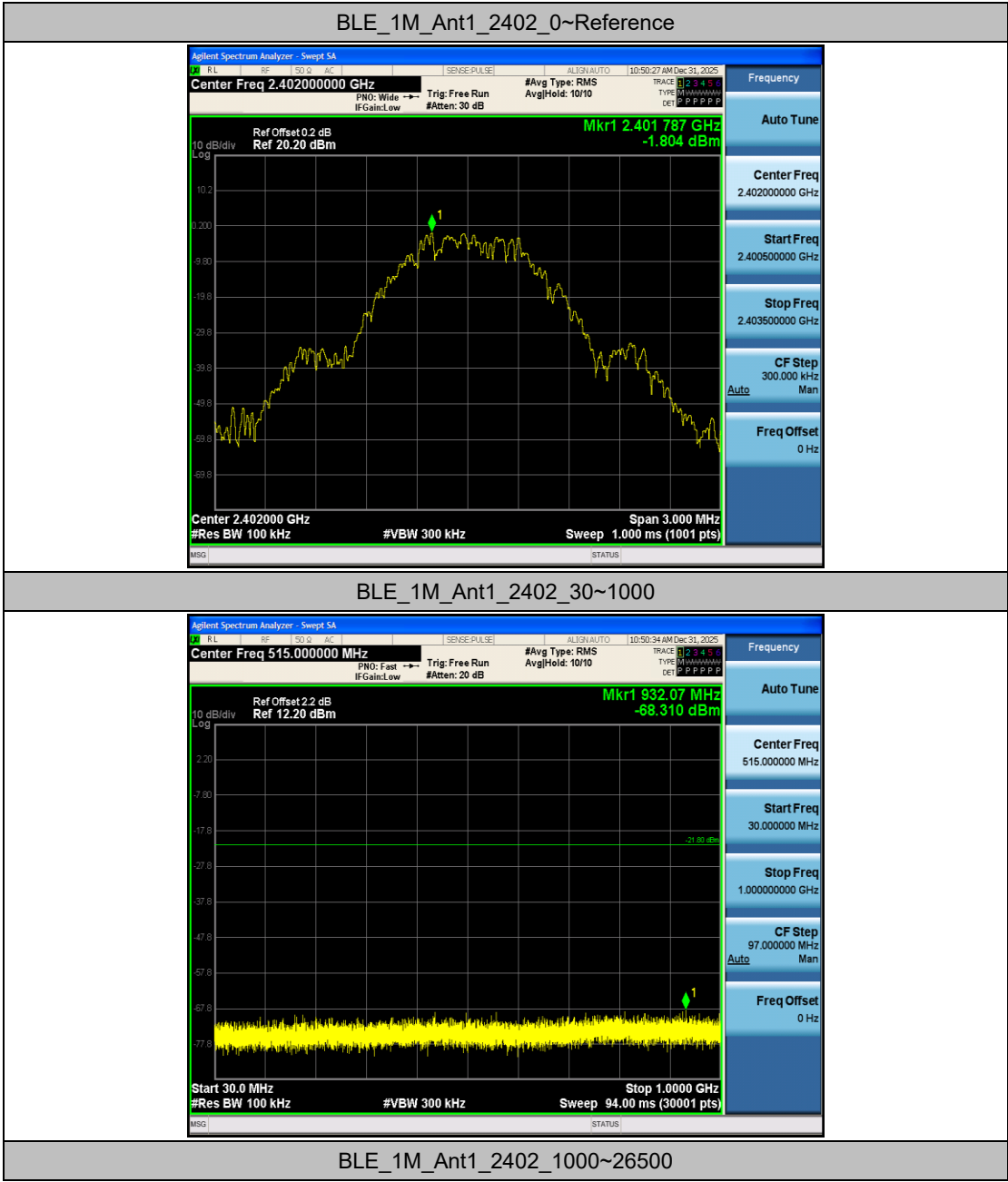


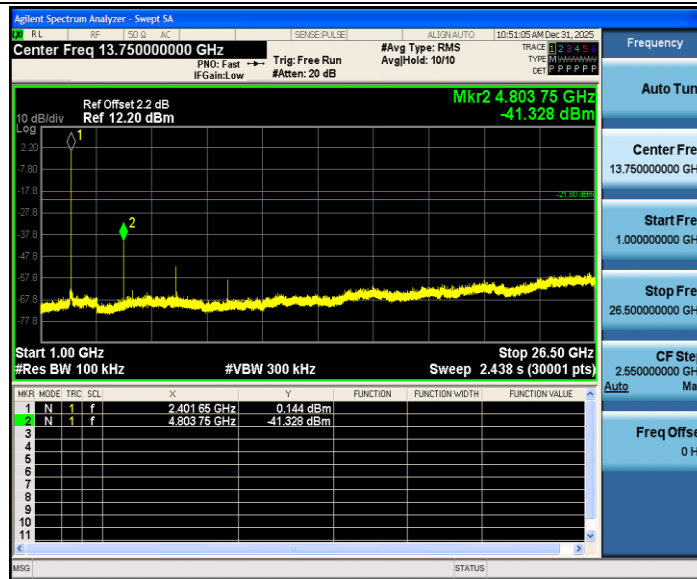
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.80	-1.80	---	PASS
			30~1000	-1.80	-68.31	≤-21.8	PASS
			1000~26500	-1.80	-41.33	≤-21.8	PASS
		2440	Reference	-1.88	-1.88	---	PASS
			30~1000	-1.88	-68.64	≤-21.88	PASS
			1000~26500	-1.88	-42.9	≤-21.88	PASS
		2480	Reference	-2.32	-2.32	---	PASS
			30~1000	-2.32	-68.61	≤-22.32	PASS
			1000~26500	-2.32	-42.07	≤-22.32	PASS

Test Graphs

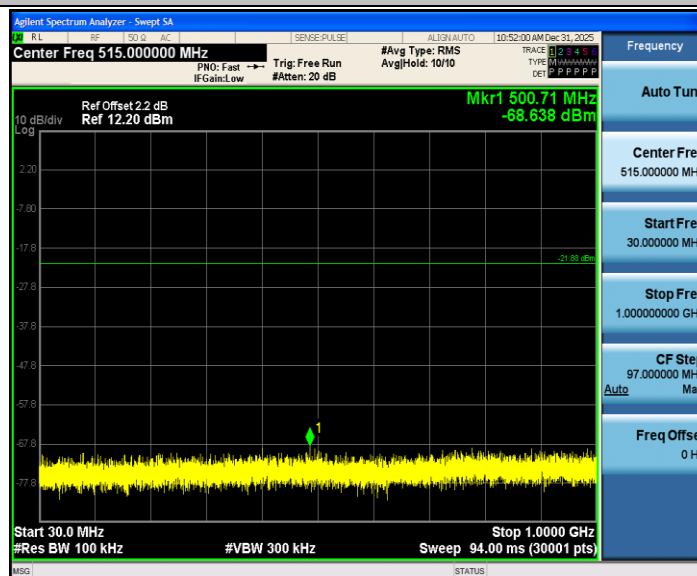




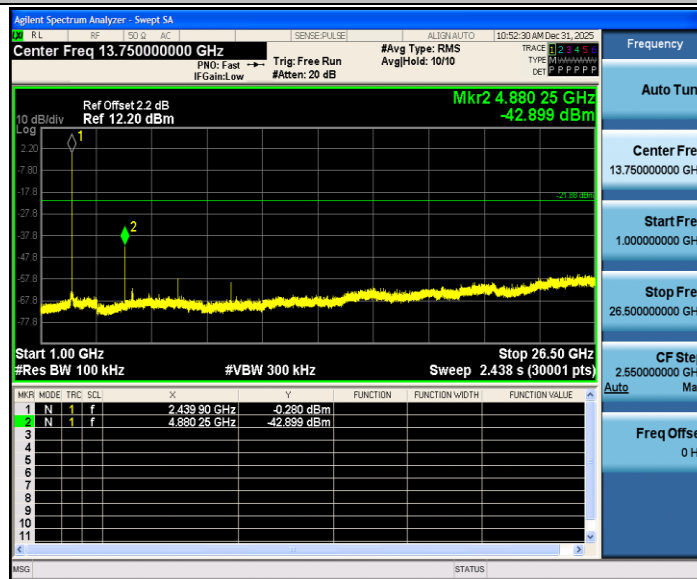
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



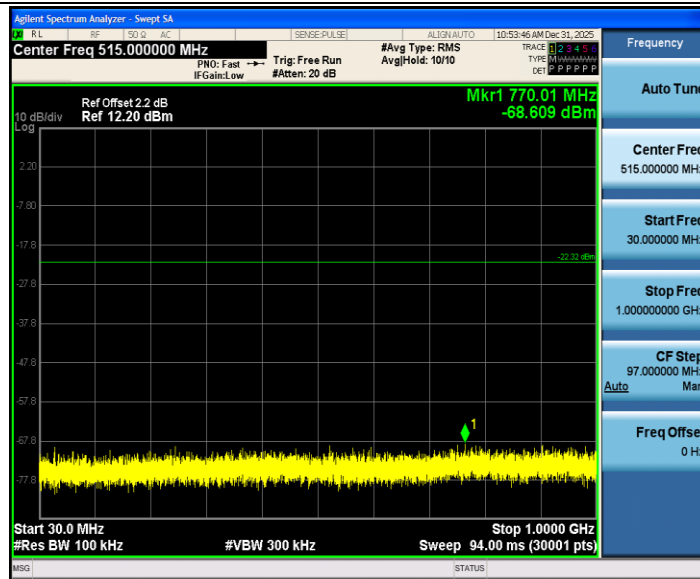
BLE_1M_Ant1_2440_1000~26500



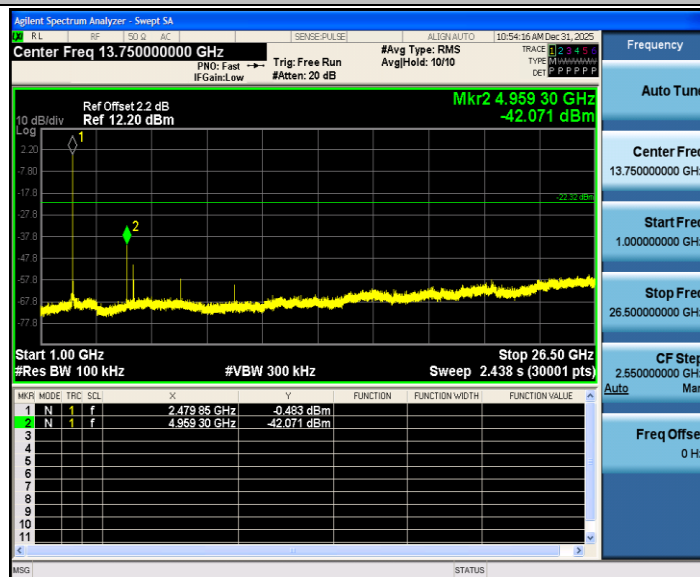
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

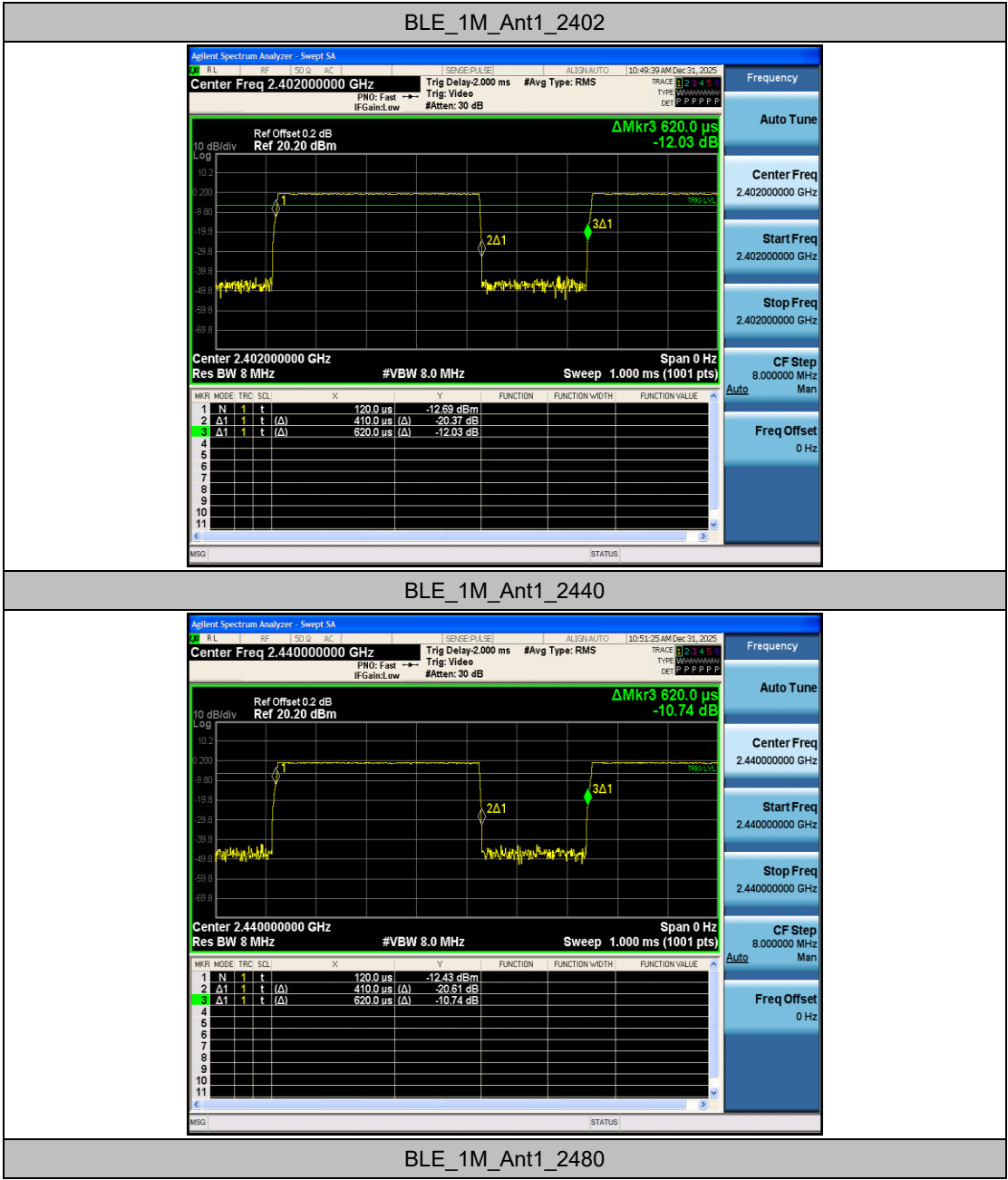


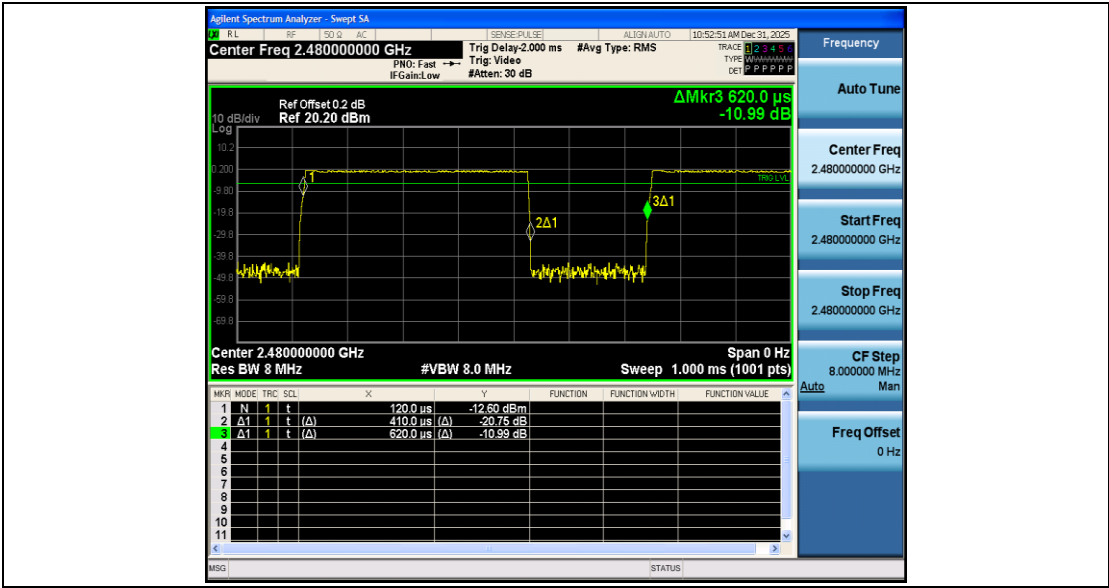
Appendix G: Duty Cycle

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





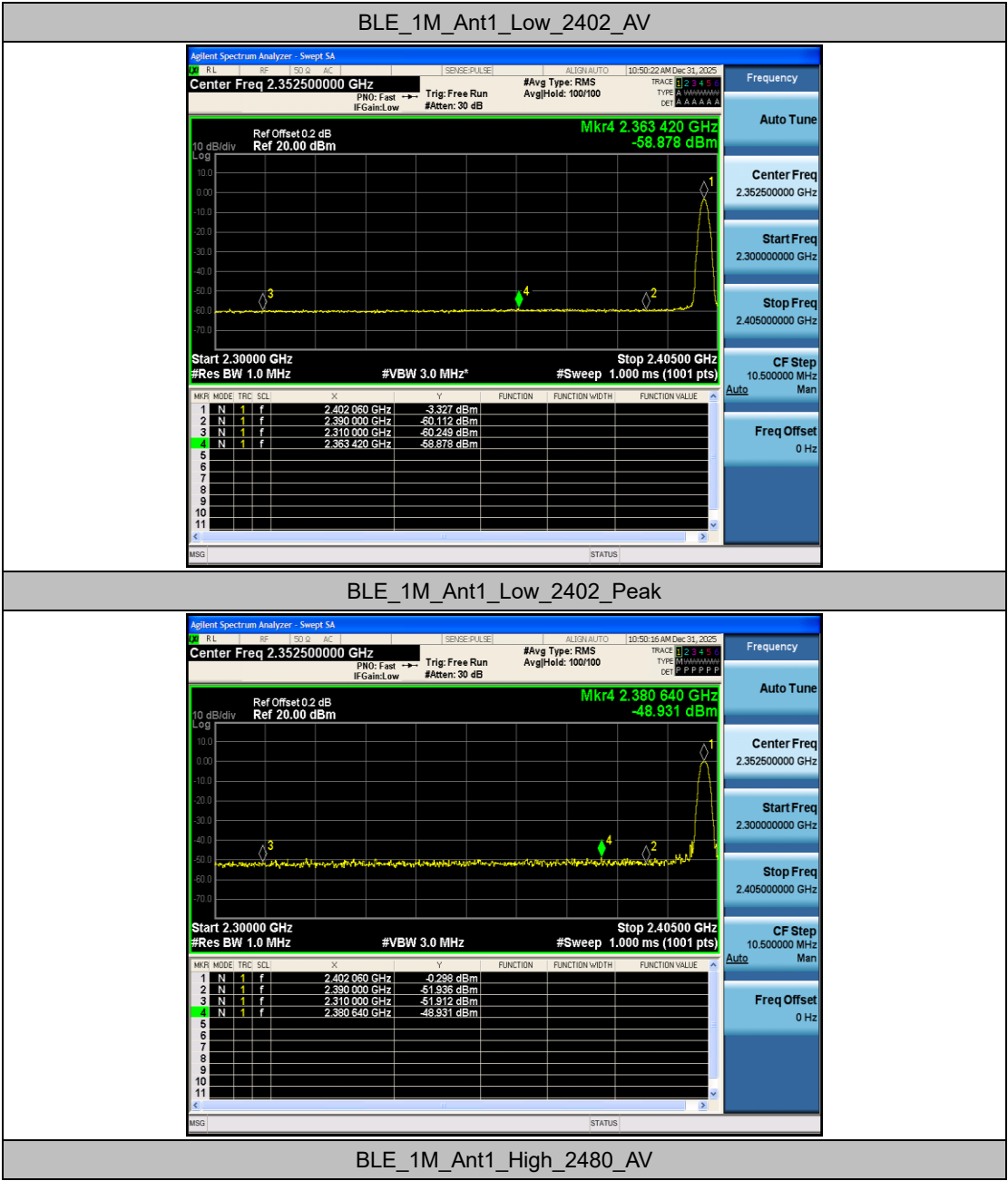
Appendix H: Emissions in Restricted Bands

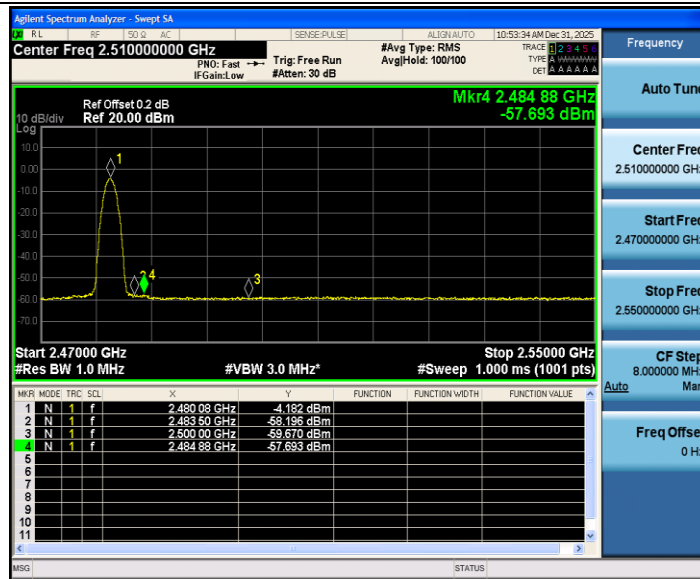
Test Result

TestMod e	Antenn a	ChNam e	Freq(MH z)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.25	2.00	36.95	≤54	PASS
				AV	2363.420	-58.88	2.00	38.32	≤54	PASS
				AV	2390.000	-60.11	2.00	37.09	≤54	PASS
				Peak	2310.000	-51.91	2.00	45.29	≤74	PASS
				Peak	2380.640	-48.93	2.00	48.27	≤74	PASS
				Peak	2390.000	-51.94	2.00	45.26	≤74	PASS
		High	2480	AV	2483.500	-58.2	2.00	39.00	≤54	PASS
				AV	2484.880	-57.69	2.00	39.51	≤54	PASS
				AV	2500.000	-59.67	2.00	37.53	≤54	PASS
				Peak	2483.500	-48.53	2.00	48.67	≤74	PASS
				Peak	2484.320	-46.17	2.00	51.03	≤74	PASS
				Peak	2500.000	-51.71	2.00	45.49	≤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

