

FCC Appendix RF Test Data for BLE

FCC ID : 2BU7L-2-L-TAG01P

Company : Shenzhen Tenbay IoT Technology Co., Ltd.

EUT : Lenovo TAG

Model Number : L-TAG01P

Report No. : CTA26030201601

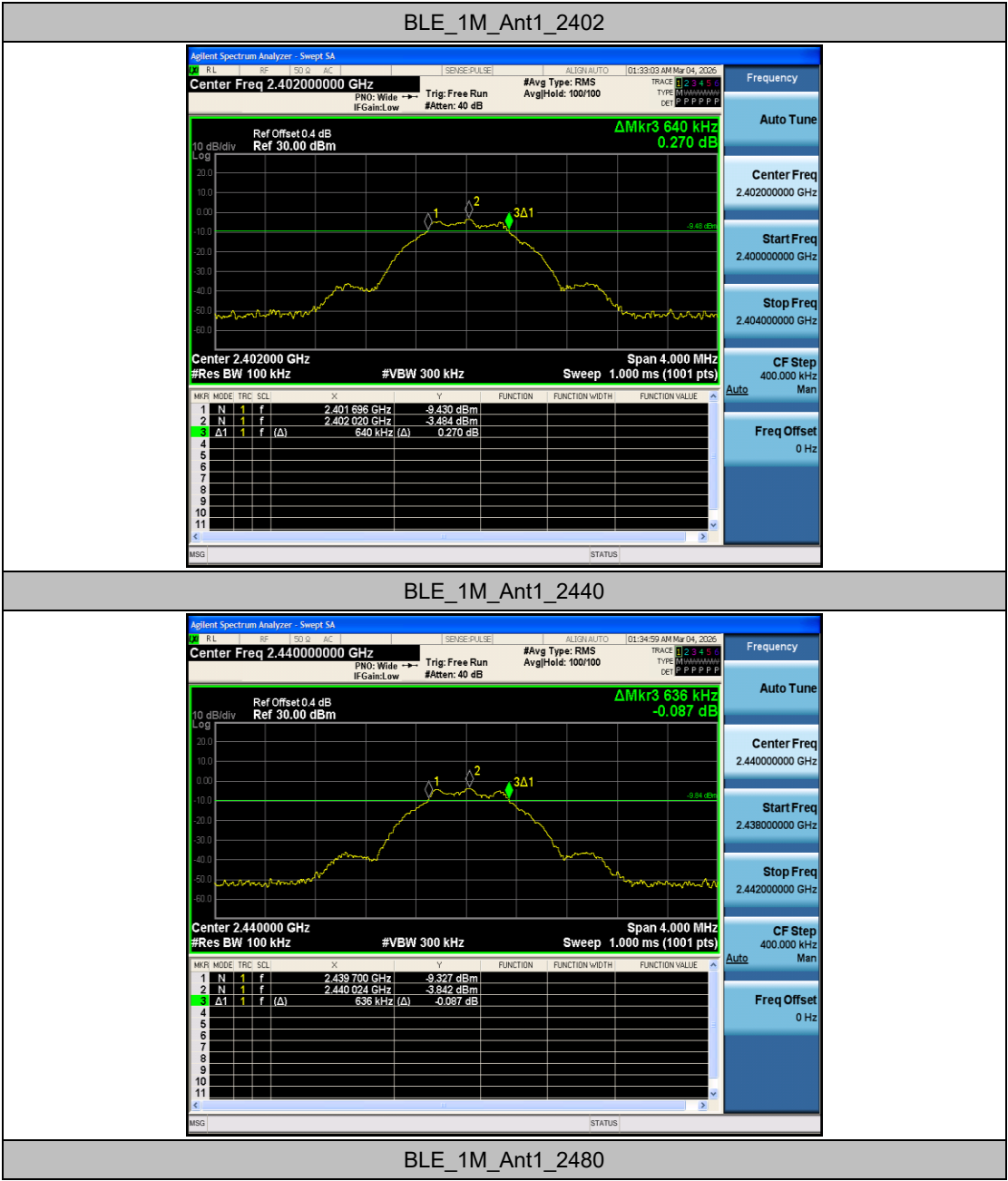
Reviewed By : Eric Wang

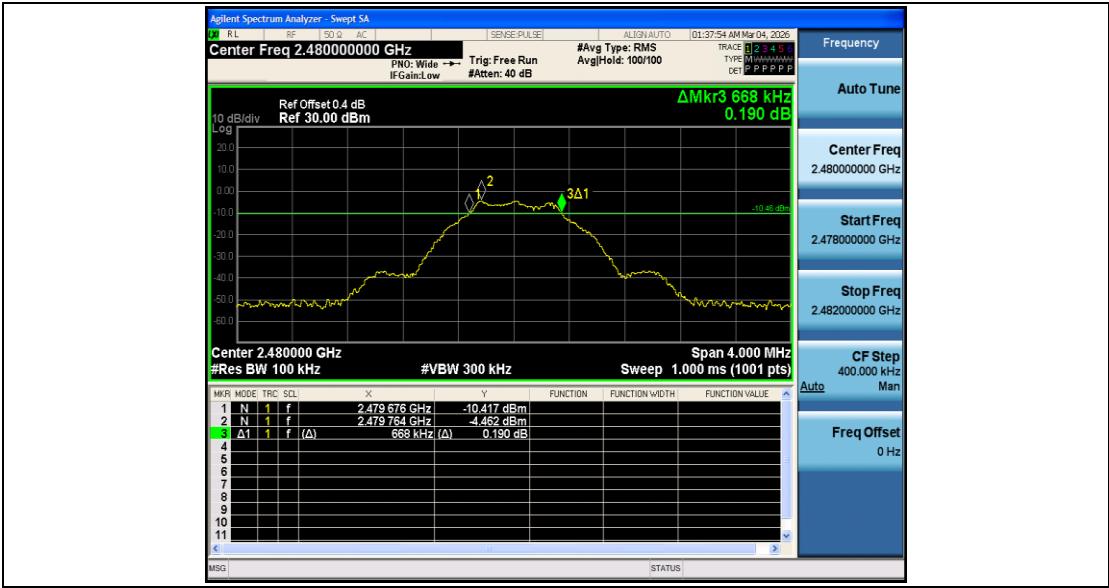
Appendix A: DTS Bandwidth

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	0.636	2439.700	2440.336	0.5	PASS
		2480	0.668	2479.676	2480.344	0.5	PASS

Test Graphs





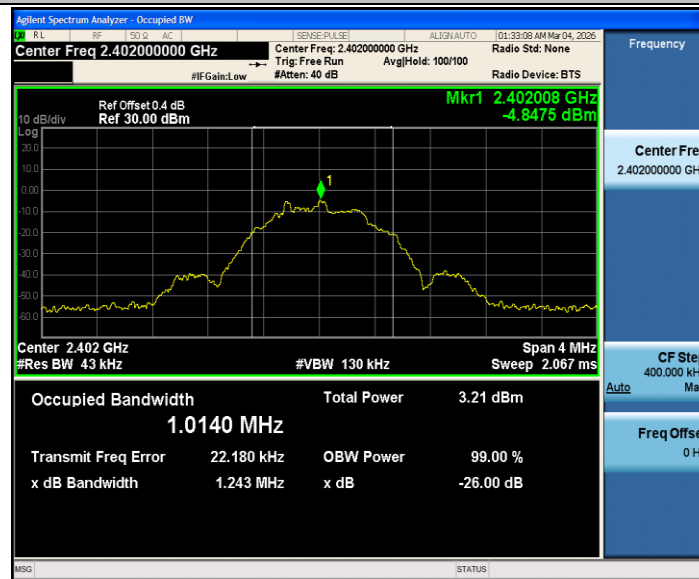
Appendix B: Occupied Channel Bandwidth

Test Result

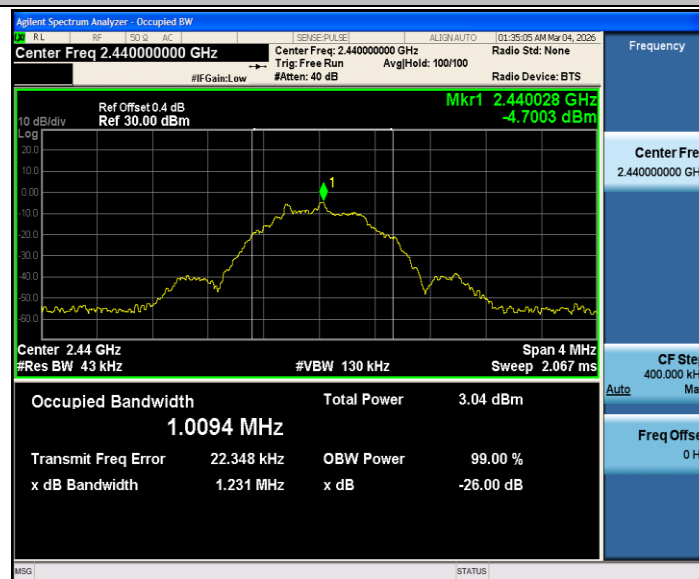
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0140	2401.5152	2402.5292	---	---
		2440	1.0094	2439.5177	2440.5271	---	---
		2480	0.99855	2479.5201	2480.5187	---	---

Test Graphs

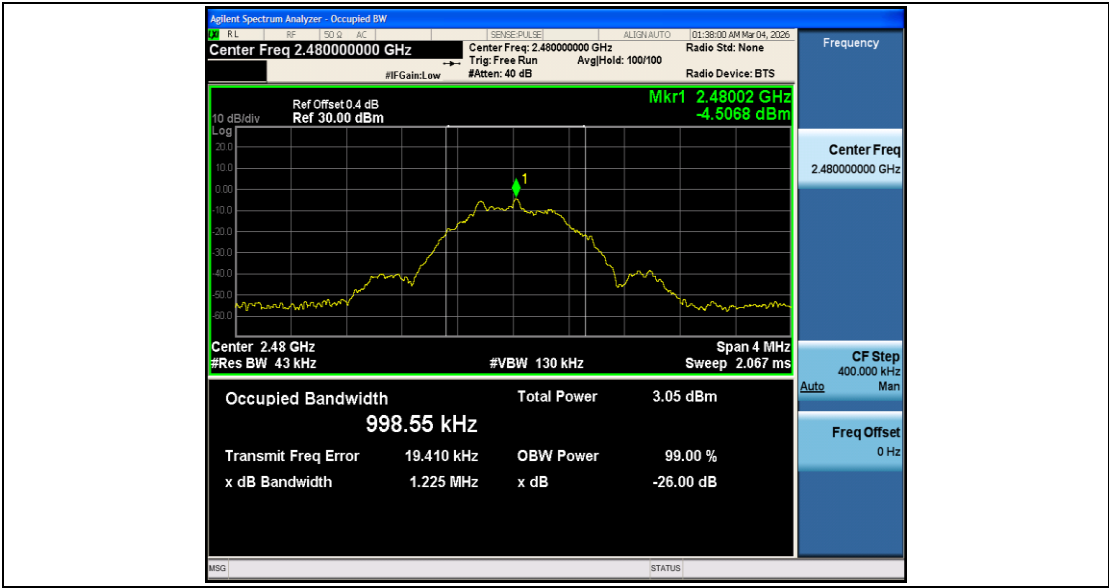
BLE_1M_Ant1_2402



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	-3.35	≤30	PASS
		2440	-3.61	≤30	PASS
		2480	-3.70	≤30	PASS

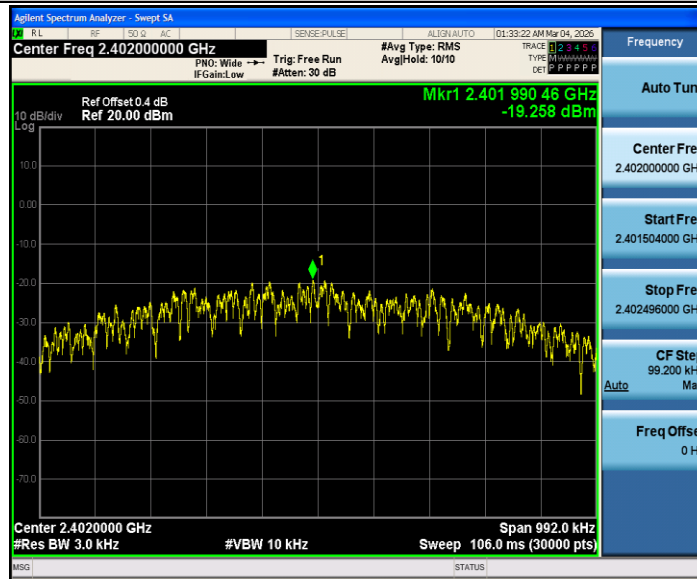
Appendix D: Maximum power spectral density

Test Result

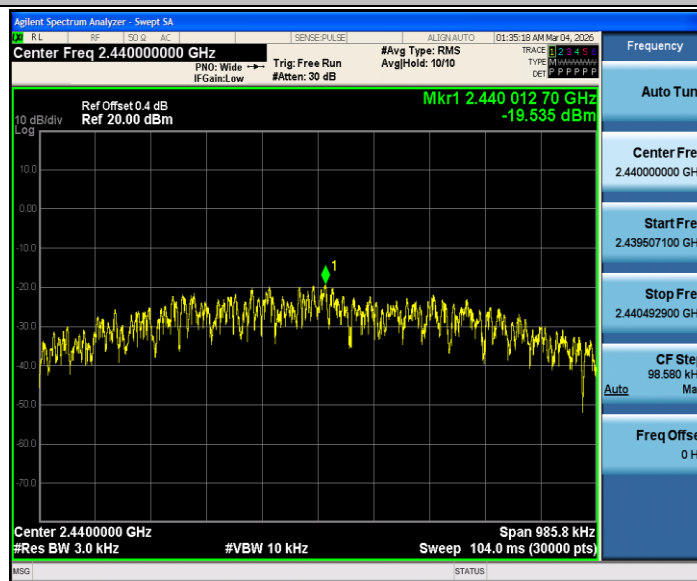
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.26	≤8.00	PASS
		2440	-19.54	≤8.00	PASS
		2480	-19.63	≤8.00	PASS

Test Graphs

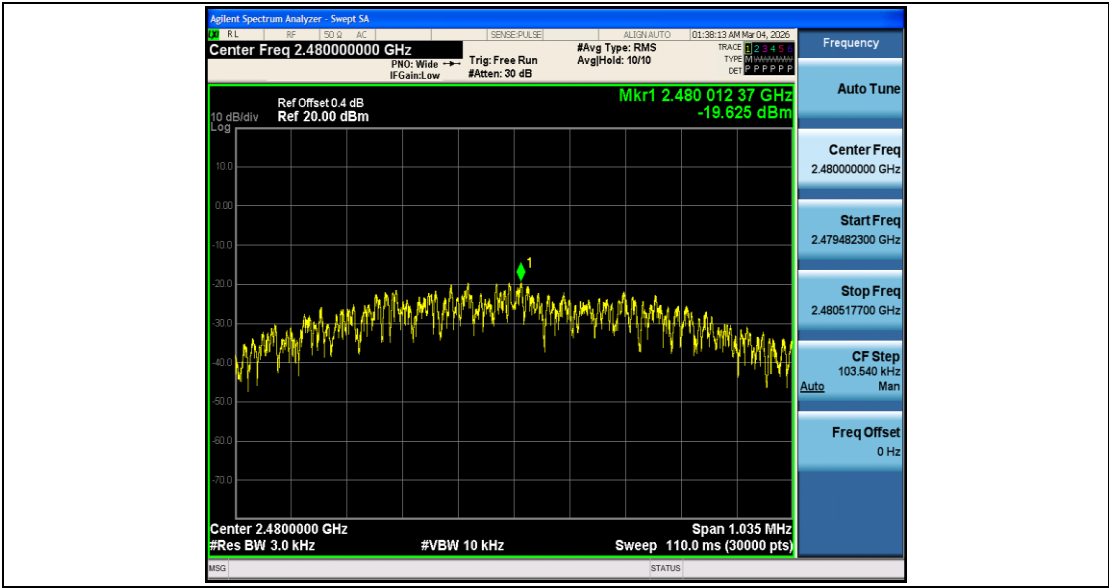
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

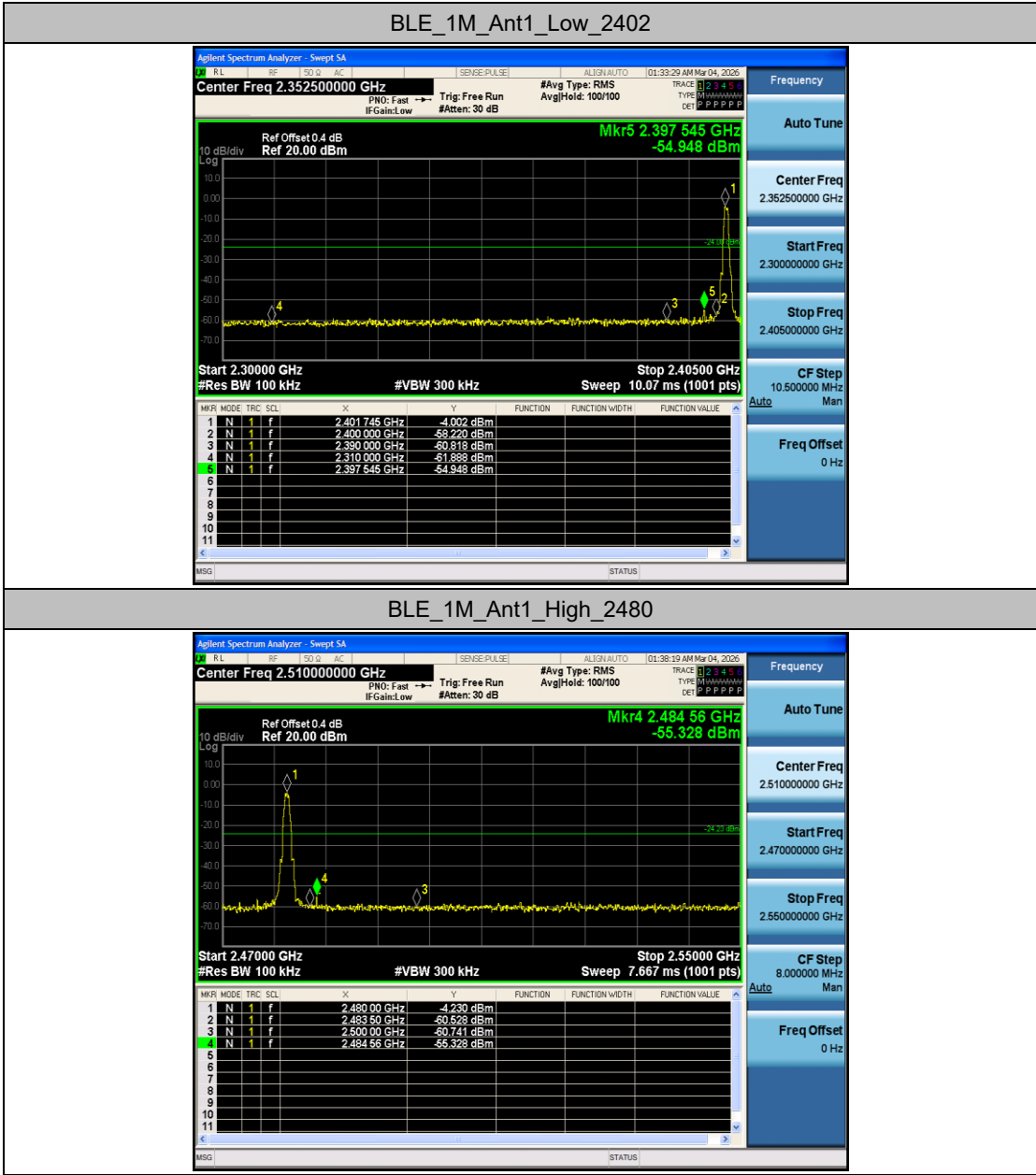


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.00	-54.95	≤-24	PASS
		High	2480	-4.23	-55.33	≤-24.23	PASS

Test Graphs

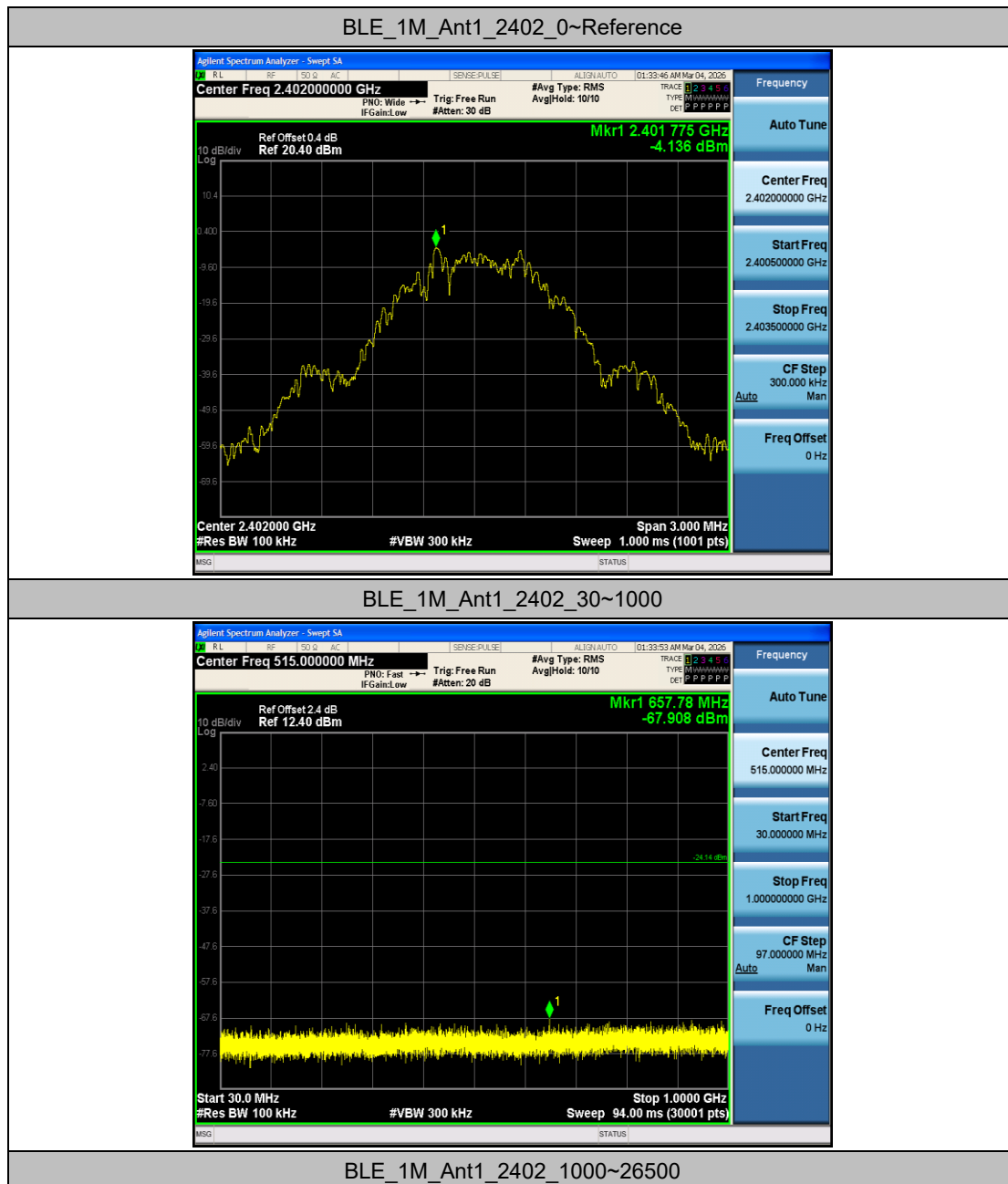


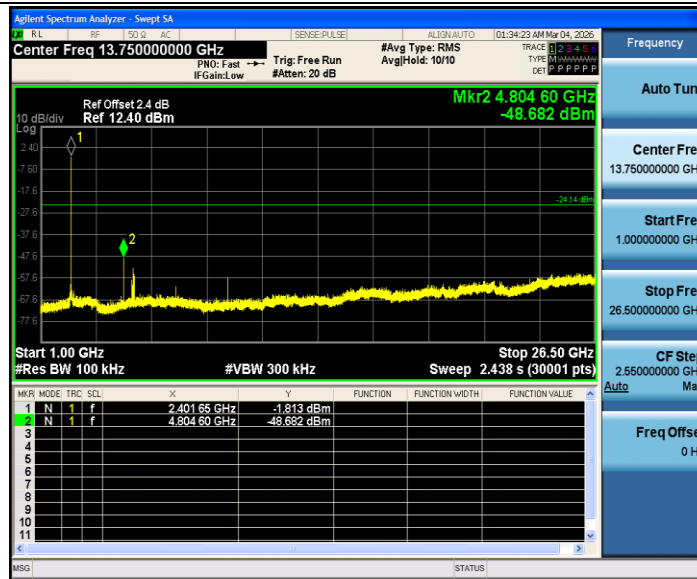
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.14	-4.14	---	PASS
			30~1000	-4.14	-67.91	≤-24.14	PASS
			1000~26500	-4.14	-48.68	≤-24.14	PASS
		2440	Reference	-4.53	-4.53	---	PASS
			30~1000	-4.53	-67.96	≤-24.53	PASS
			1000~26500	-4.53	-50.12	≤-24.53	PASS
		2480	Reference	-5.56	-5.56	---	PASS
			30~1000	-5.56	-67.49	≤-25.56	PASS
			1000~26500	-5.56	-46.85	≤-25.56	PASS

Test Graphs

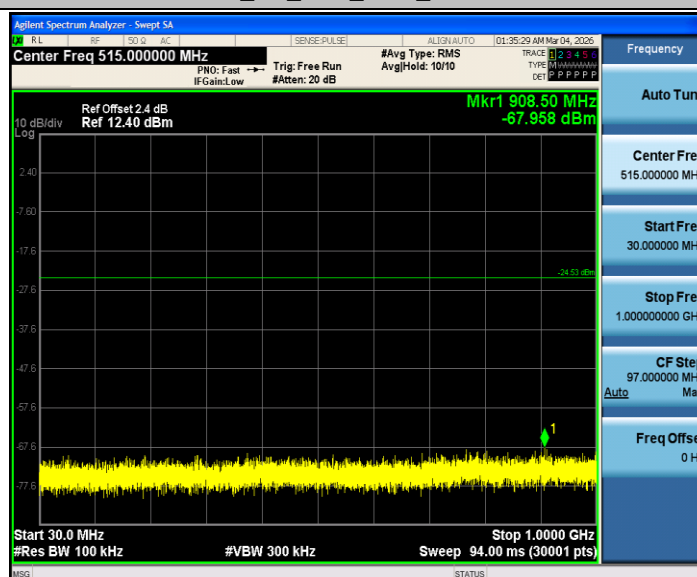




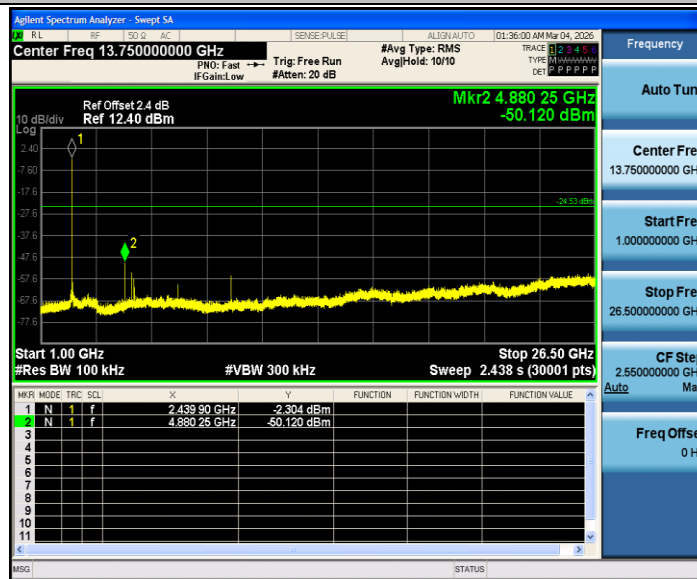
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



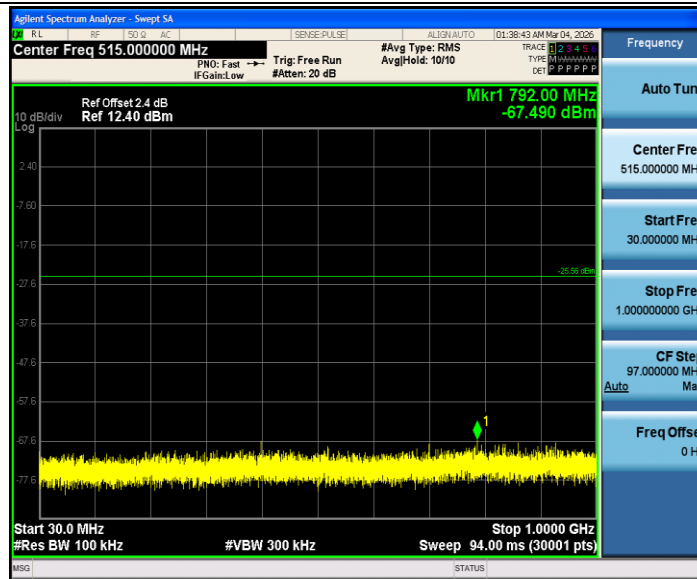
BLE_1M_Ant1_2440_1000~26500



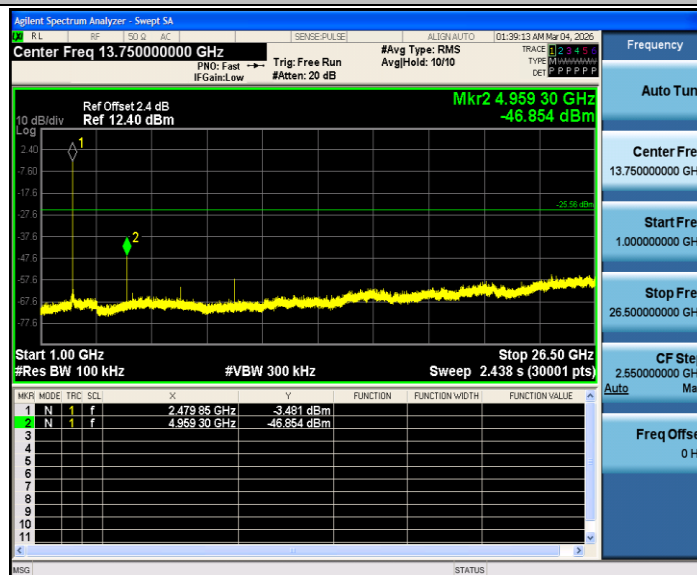
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

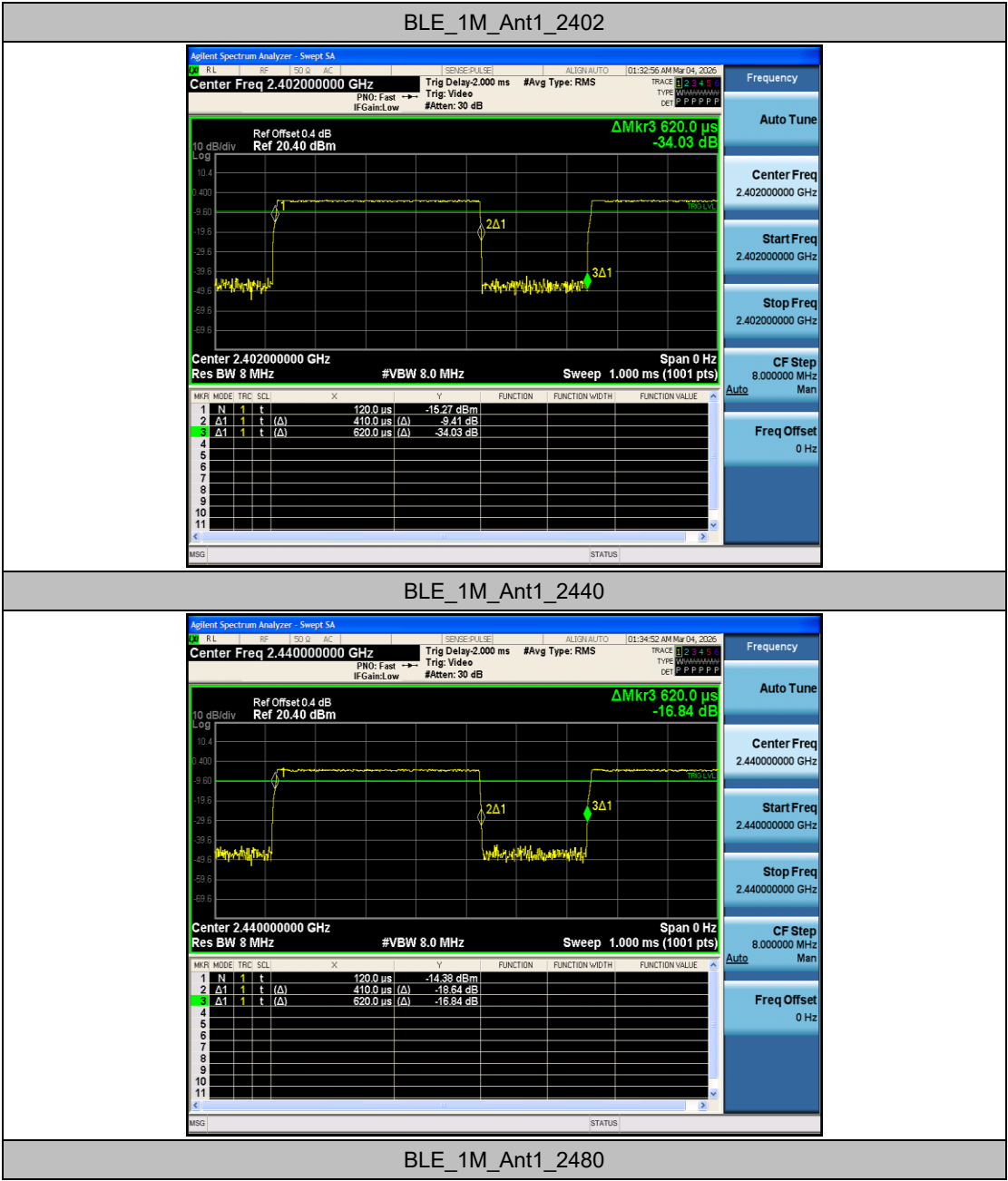


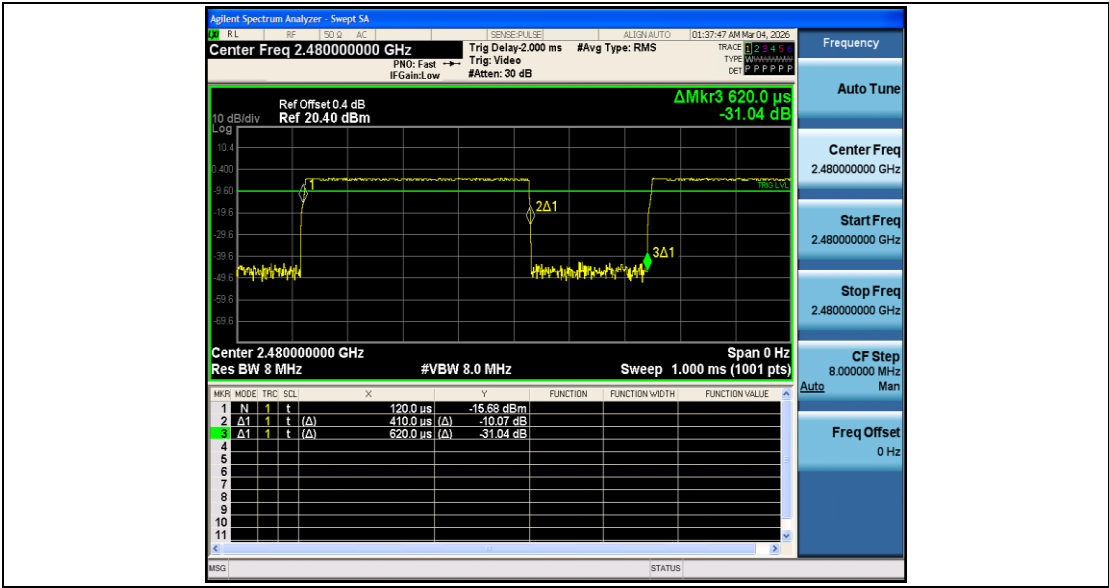
Appendix G: Duty Cycle

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

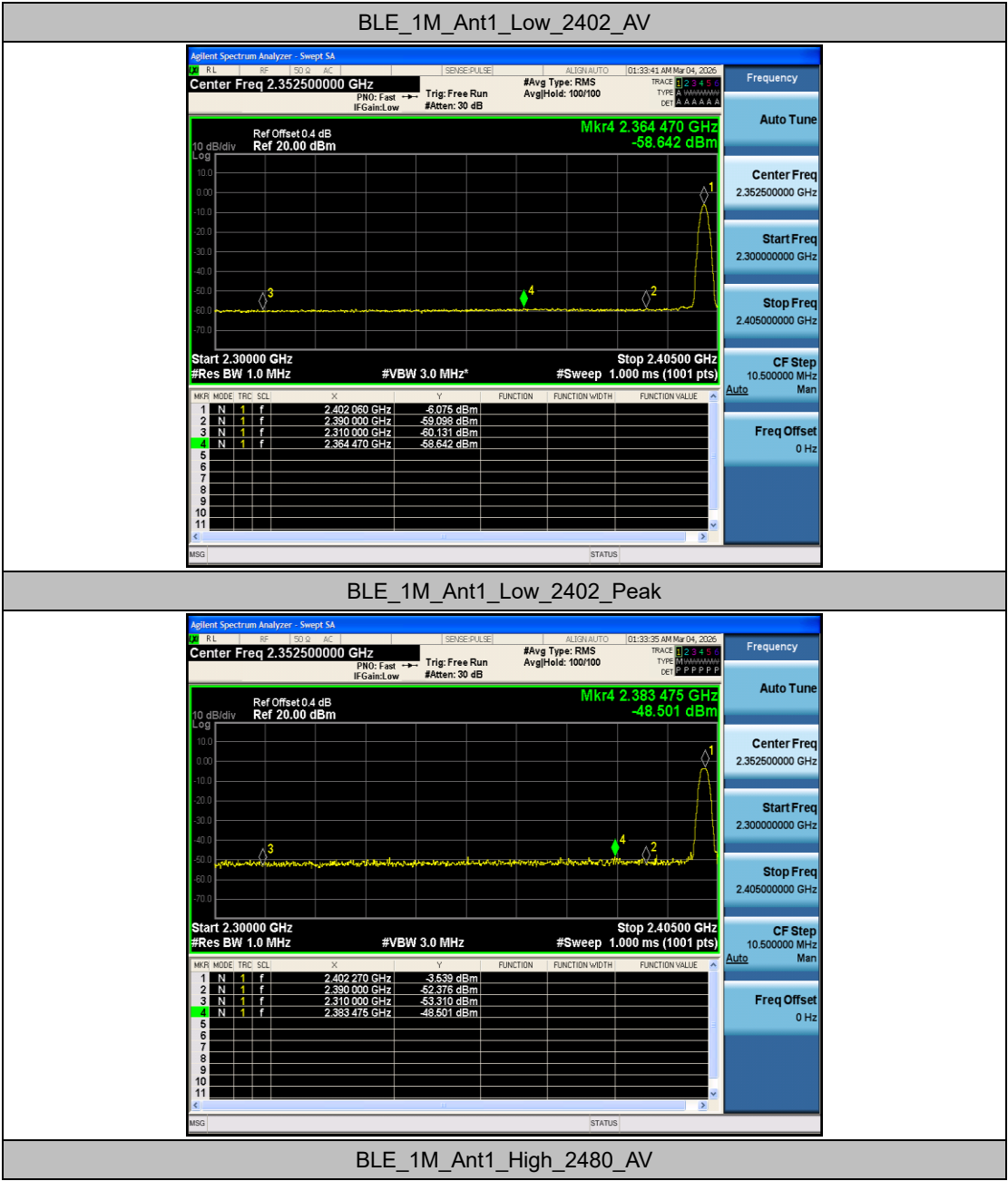
Test Result

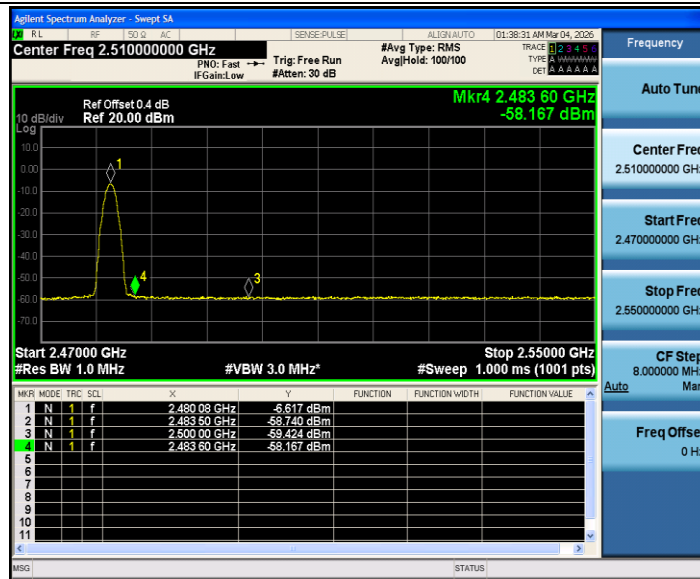
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.13	2.7	1.80	39.57	≤54	PASS
				AV	2364.470	-58.64	2.7	1.80	41.06	≤54	PASS
				AV	2390.000	-59.1	2.7	1.80	40.60	≤54	PASS
				Peak	2310.000	-53.31	2.7	0.00	44.59	≤74	PASS
				Peak	2383.475	-48.5	2.7	0.00	49.40	≤74	PASS
				Peak	2390.000	-52.38	2.7	0.00	45.52	≤74	PASS
		High	2480	AV	2483.500	-58.74	2.7	1.80	40.96	≤54	PASS
				AV	2483.600	-58.17	2.7	1.80	41.53	≤54	PASS
				AV	2500.000	-59.42	2.7	1.80	40.28	≤54	PASS
				Peak	2483.500	-51.78	2.7	0.00	46.12	≤74	PASS
				Peak	2484.560	-45.84	2.7	0.00	52.06	≤74	PASS
				Peak	2500.000	-50.94	2.7	0.00	46.96	≤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

