

FCC Appendix RF Test Data for BLE

FCC ID : 2BYV8-HDD004

Company : shenzhenyigaoyangkejiyouxiangongsi

EUT : S1 Remote

Model Number : HDD004

Report No. : CTA26091501301

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	0.648	2401.692	2402.340	0.5	PASS
		2440	0.652	2439.688	2440.340	0.5	PASS
		2480	0.648	2479.688	2480.336	0.5	PASS

Test Graphs

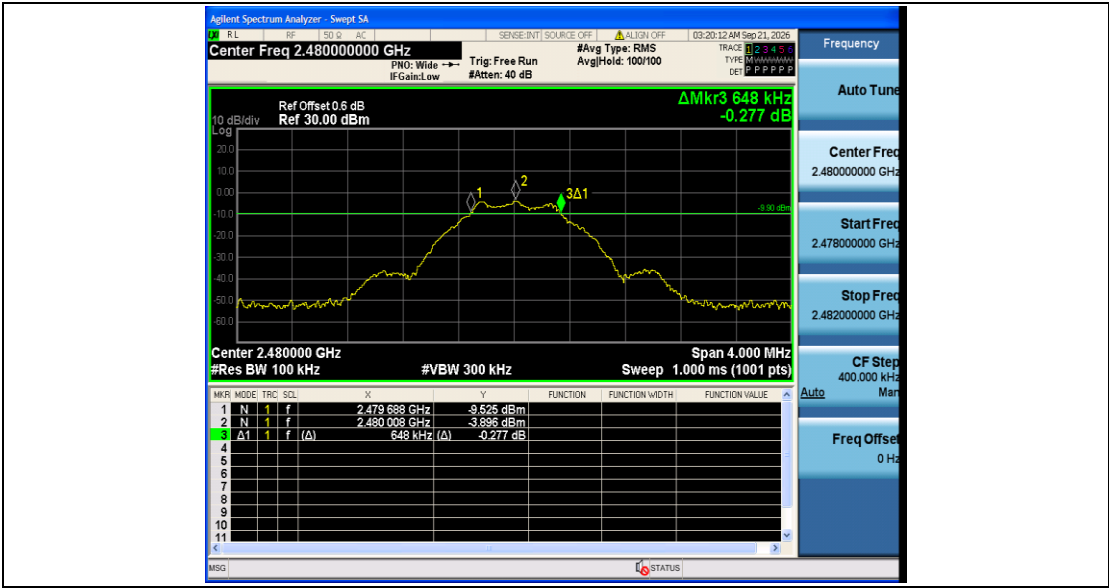
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

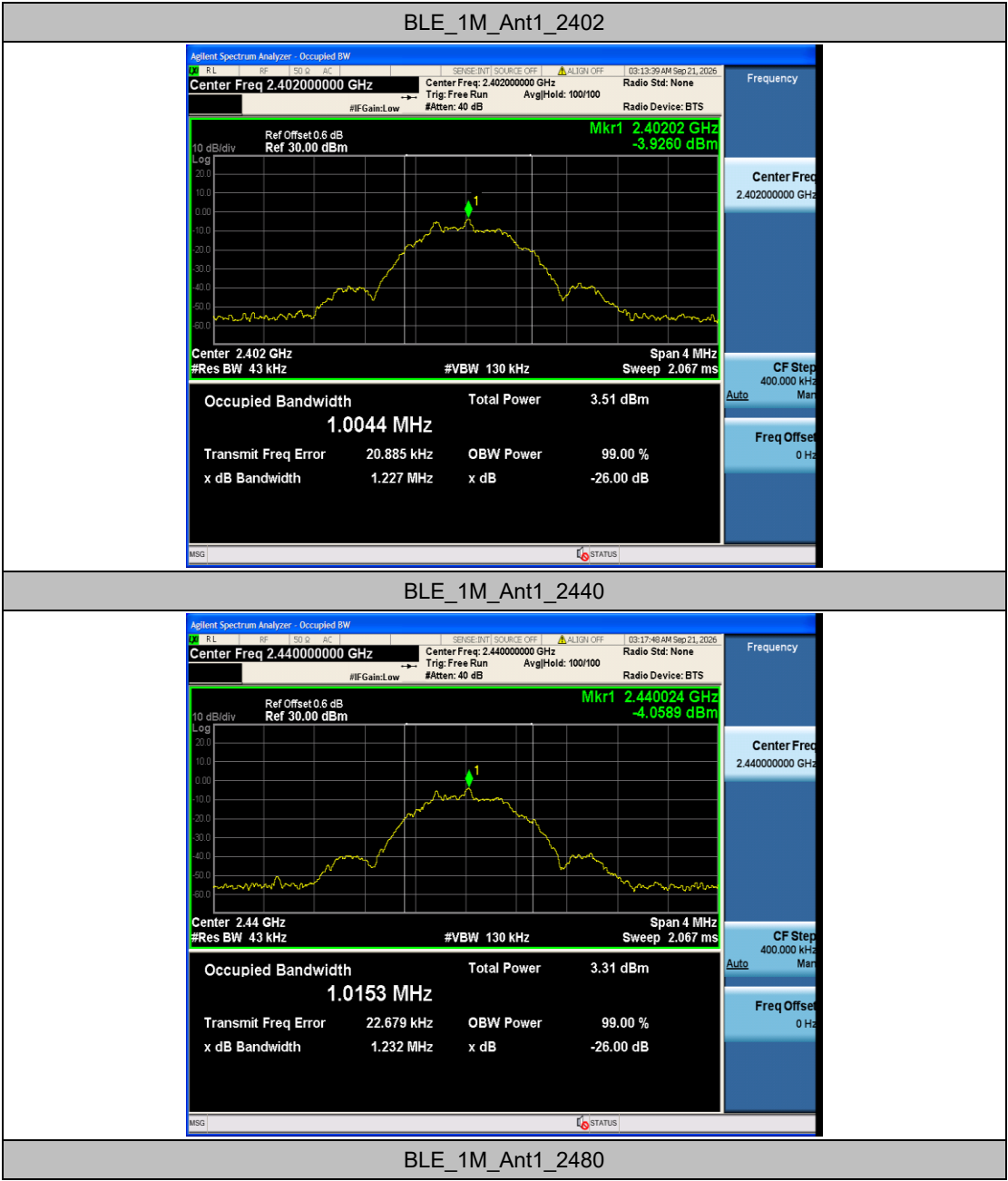


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0044	2401.5187	2402.5231	---	---
		2440	1.0153	2439.5150	2440.5303	---	---
		2480	1.0054	2479.5228	2480.5282	---	---

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	-3.19	≤30	PASS
		2440	-3.23	≤30	PASS
		2480	-3.54	≤30	PASS

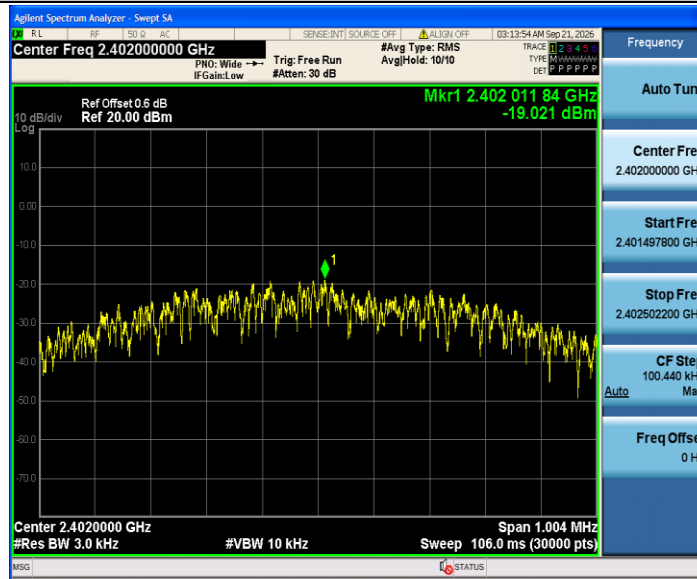
Appendix D: Maximum power spectral density

Test Result

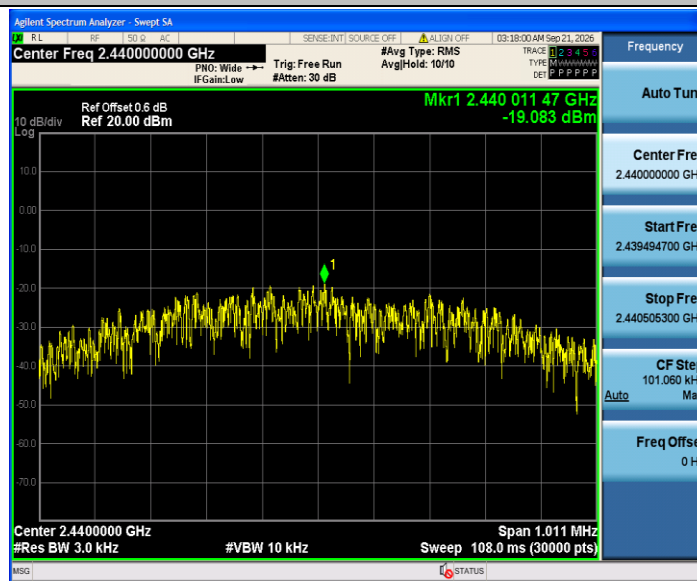
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.02	≤8.00	PASS
		2440	-19.08	≤8.00	PASS
		2480	-19.43	≤8.00	PASS

Test Graphs

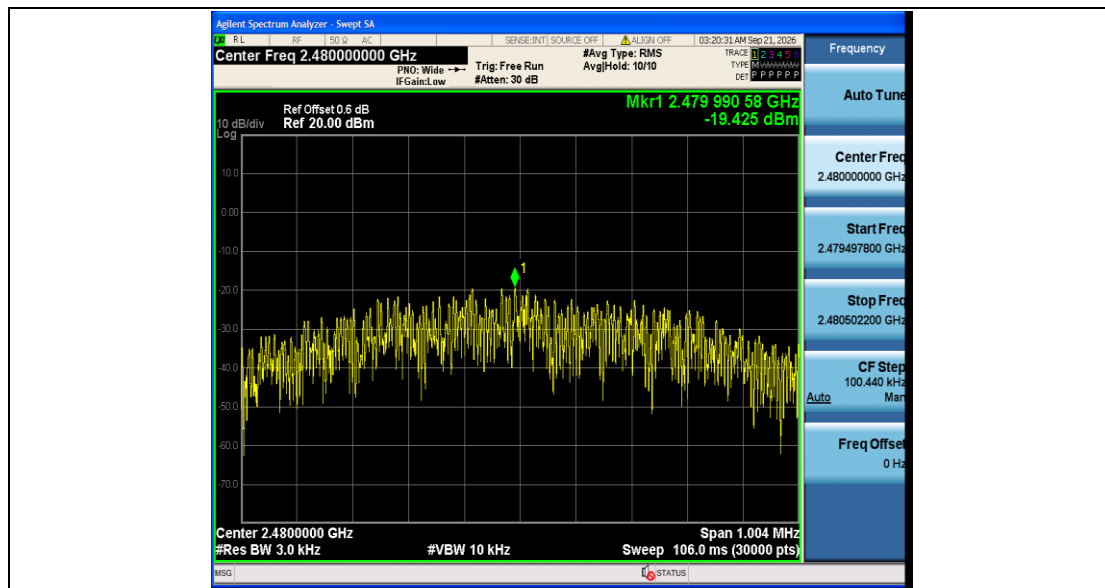
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

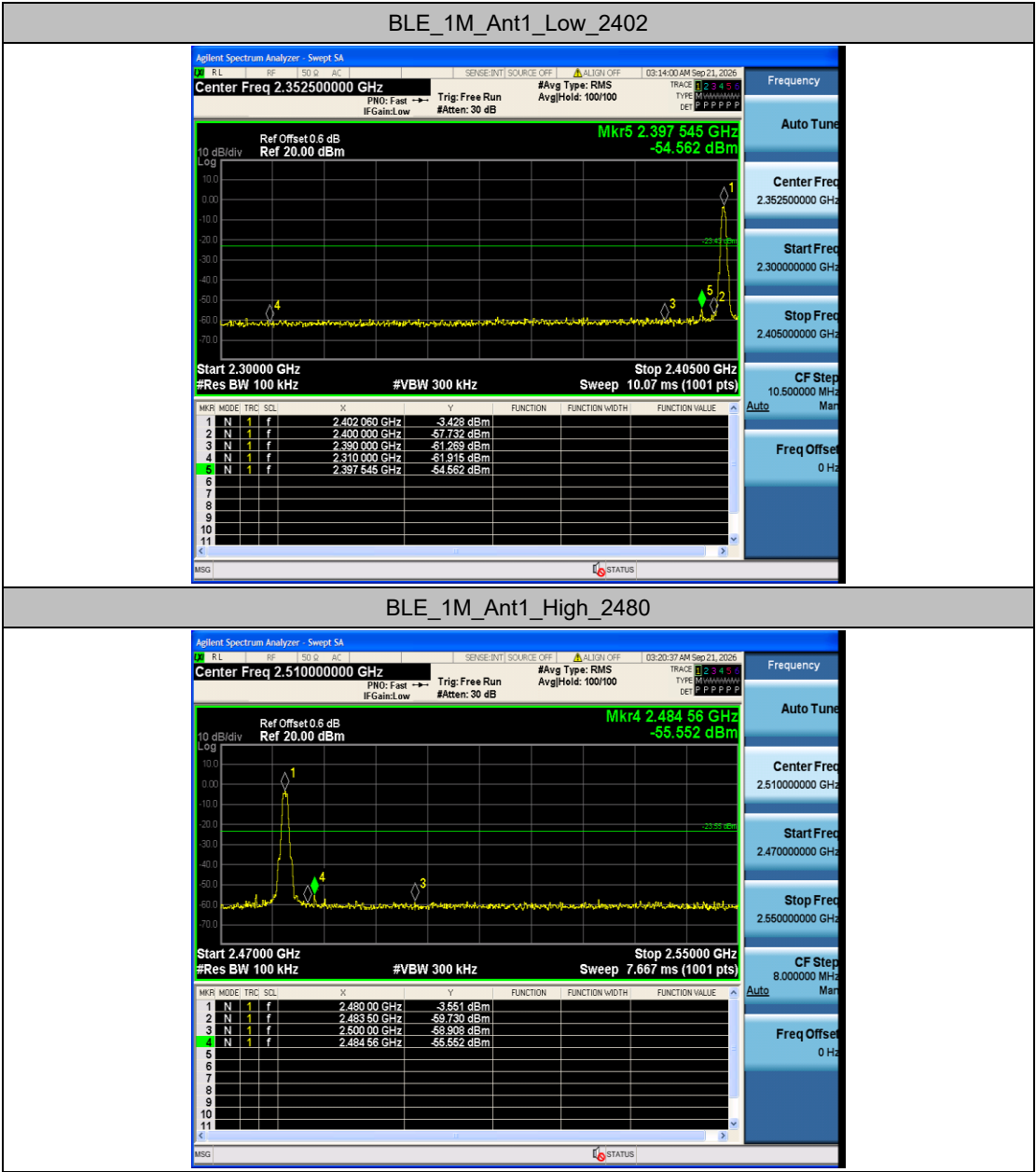


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.43	-54.56	≤-23.43	PASS
		High	2480	-3.55	-55.55	≤-23.55	PASS

Test Graphs

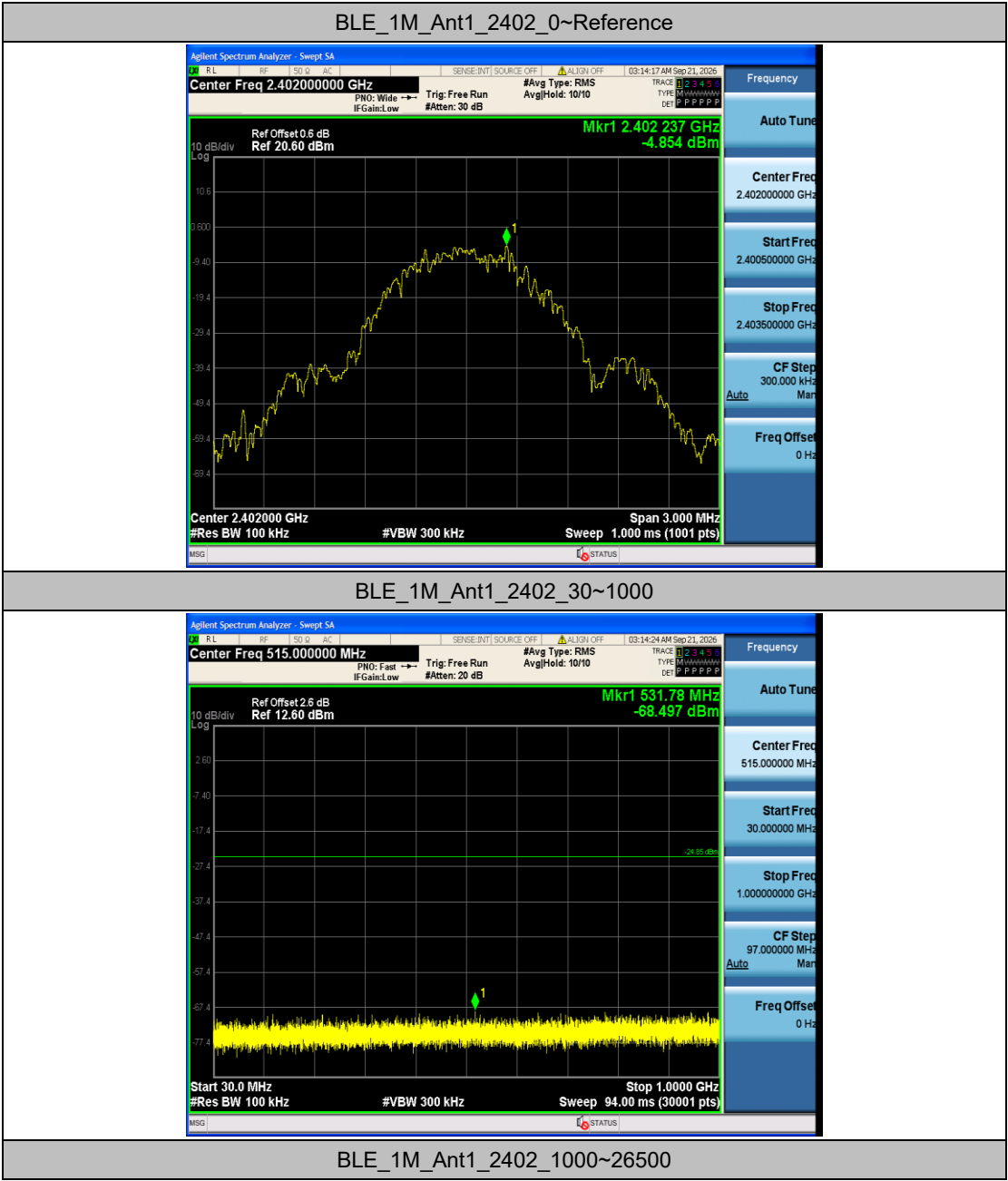


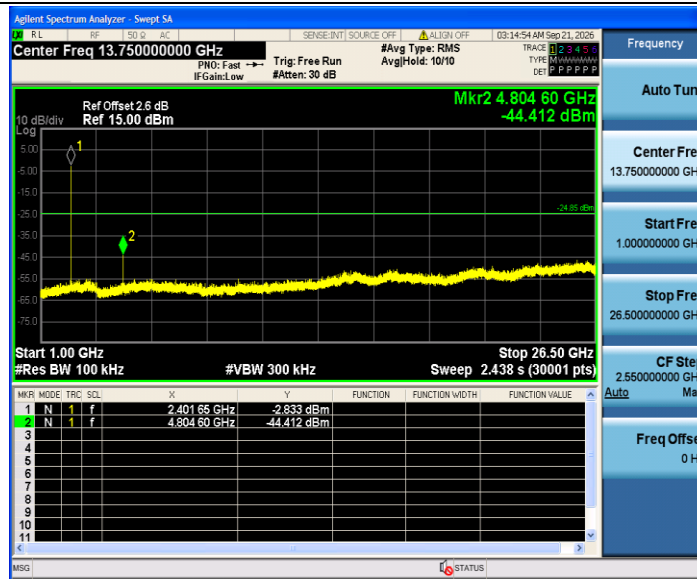
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.85	-4.85	---	PASS
			30~1000	-4.85	-68.5	≤-24.85	PASS
			1000~26500	-4.85	-44.41	≤-24.85	PASS
		2440	Reference	-4.12	-4.12	---	PASS
			30~1000	-4.12	-68.55	≤-24.12	PASS
			1000~26500	-4.12	-45.89	≤-24.12	PASS
		2480	Reference	-3.89	-3.89	---	PASS
			30~1000	-3.89	-68.47	≤-23.89	PASS
			1000~26500	-3.89	-44.89	≤-23.89	PASS

Test Graphs

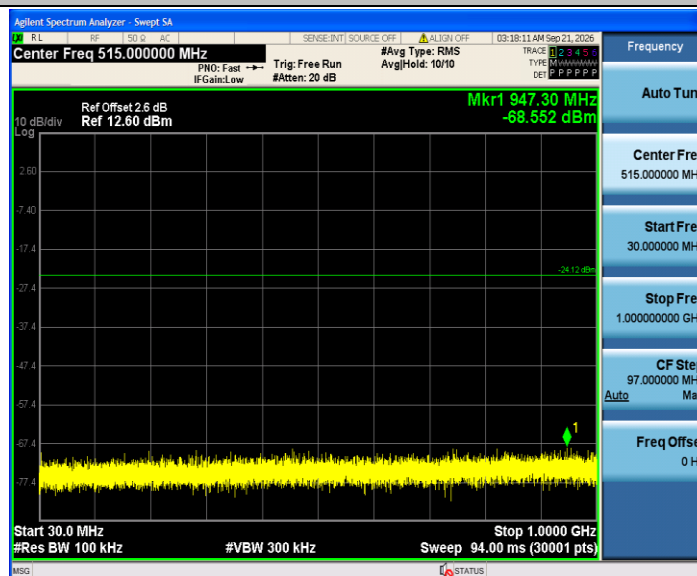




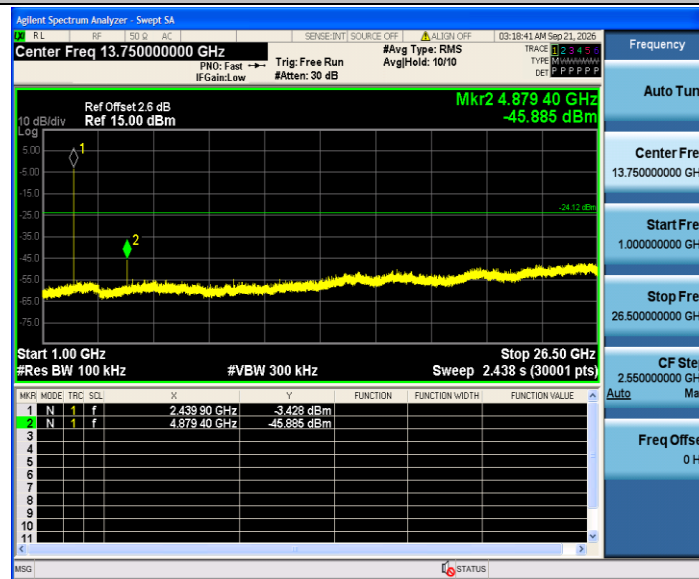
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



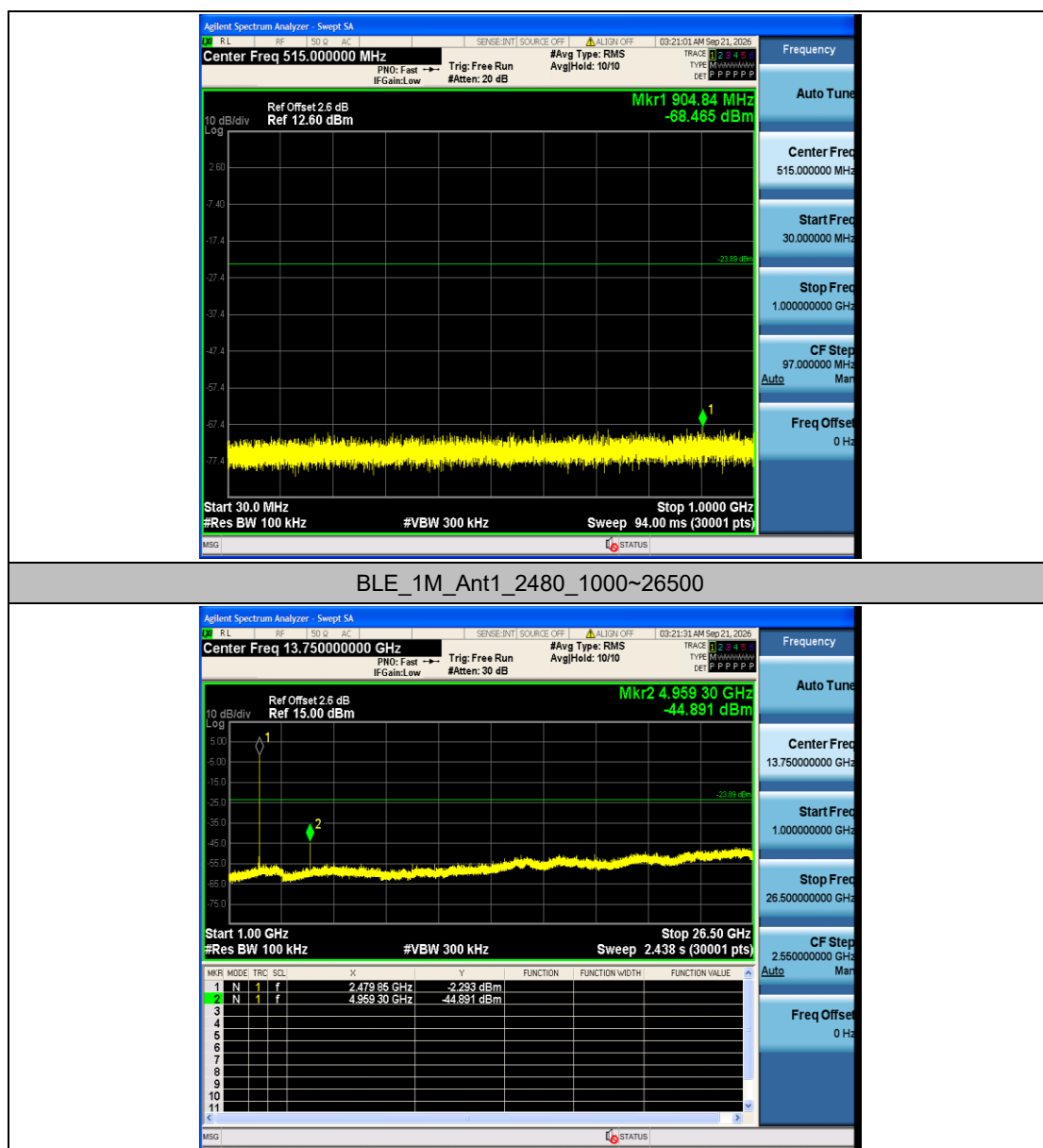
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000

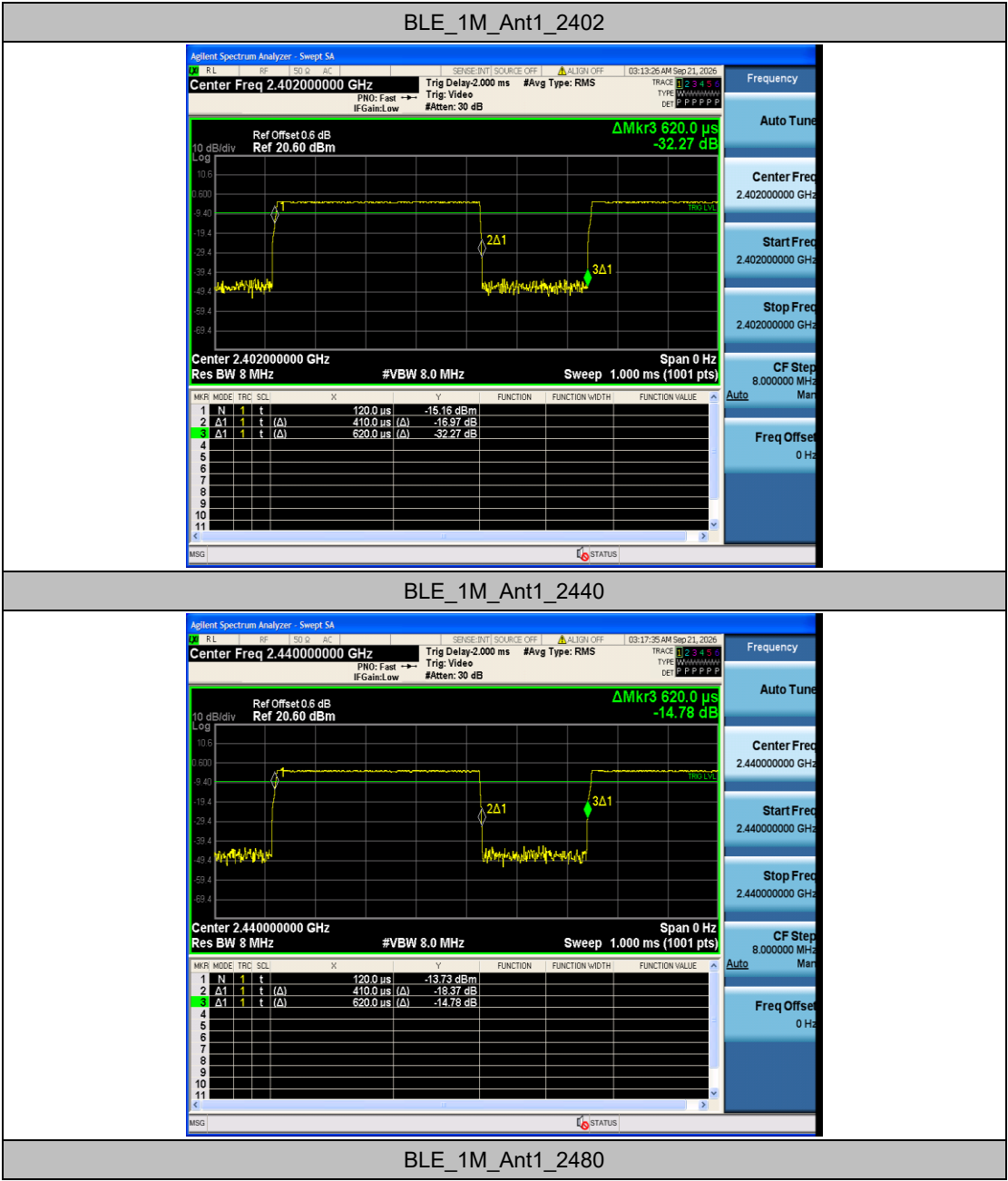


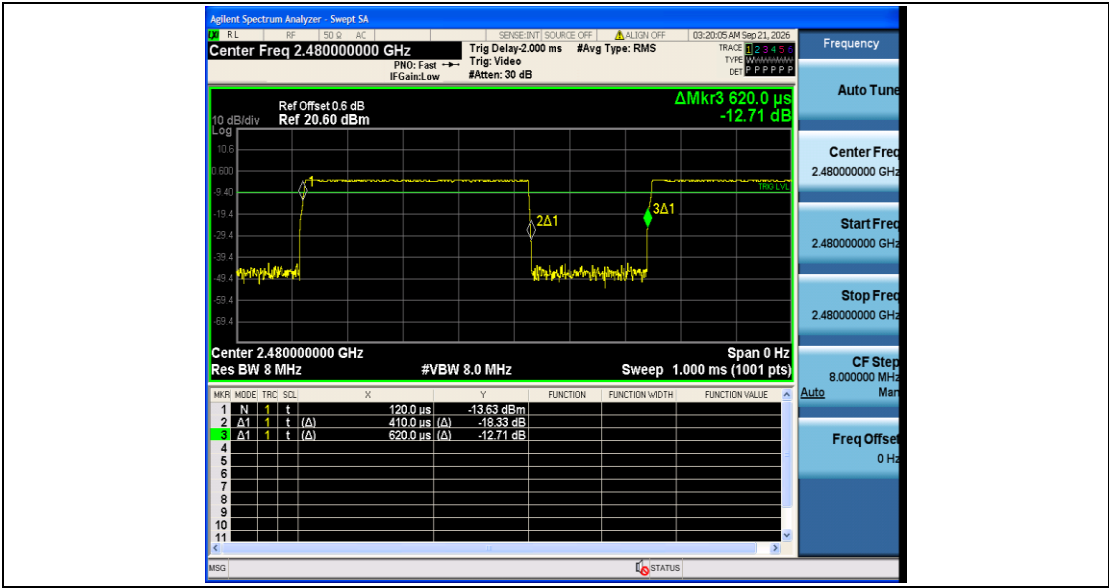
Appendix G: Duty Cycle

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

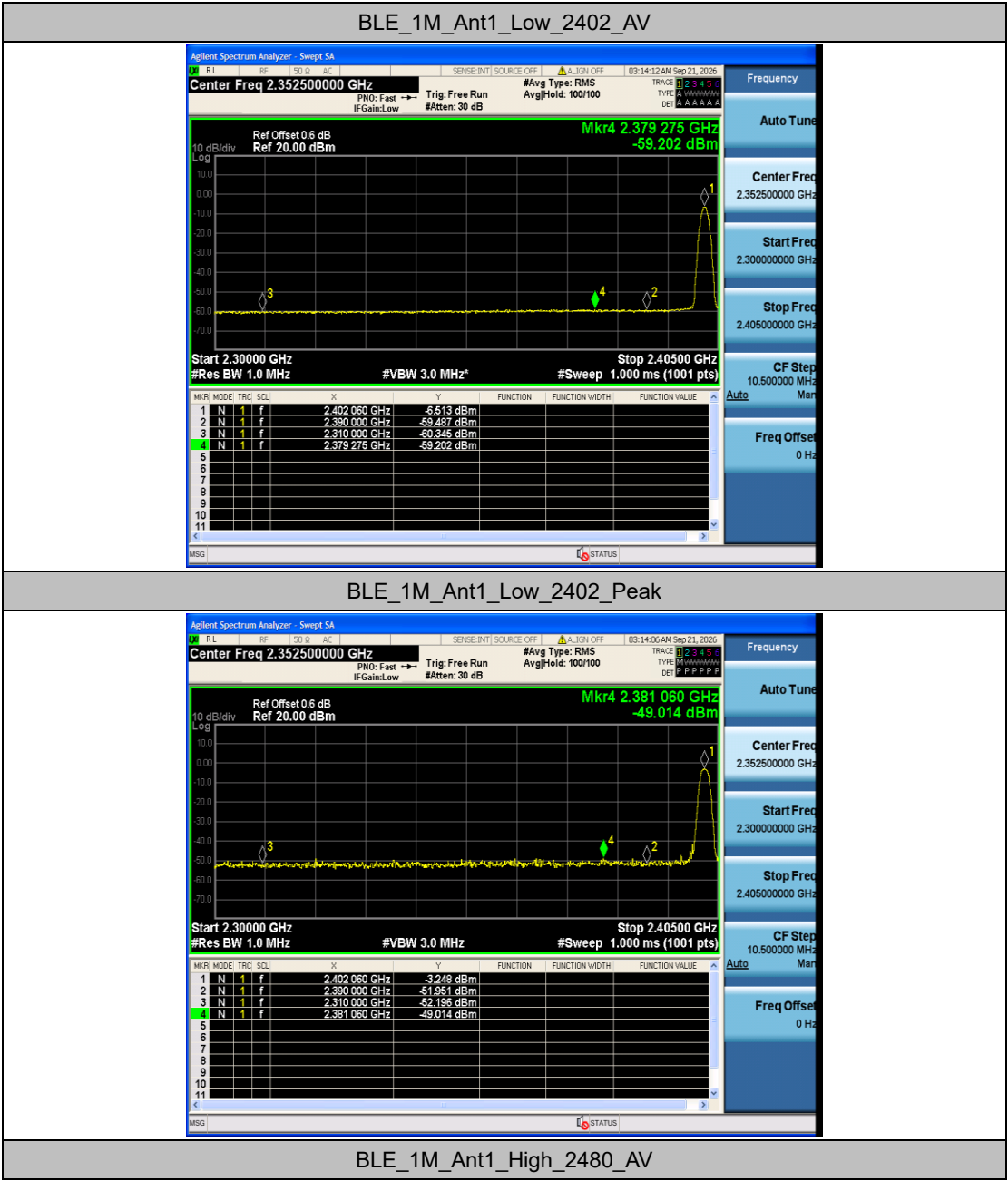
Test Result

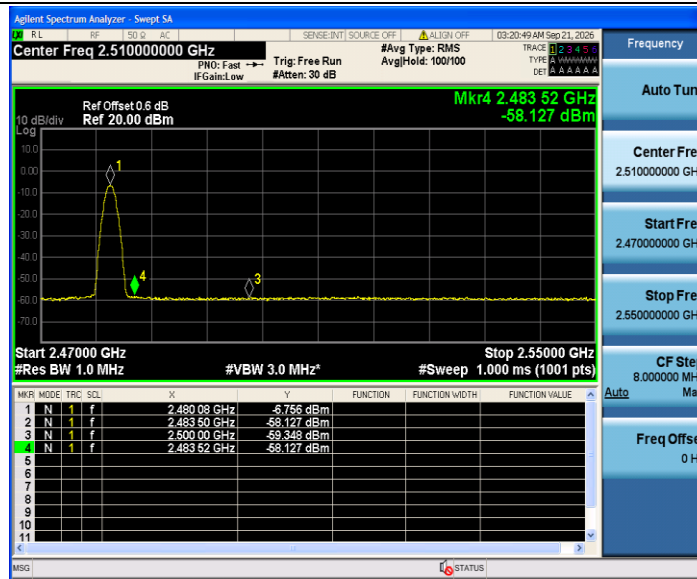
TestMod e	Antenn a	ChNam e	Freq(MH z)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.35	2.90	1.80	39.55	≤54	PASS
				AV	2379.275	-59.2	2.90	1.80	40.7	≤54	PASS
				AV	2390.000	-59.49	2.90	1.80	40.41	≤54	PASS
				Peak	2310.000	-52.2	2.90	0.00	45.9	≤74	PASS
				Peak	2381.060	-49.01	2.90	0.00	49.09	≤74	PASS
				Peak	2390.000	-51.95	2.90	0.00	46.15	≤74	PASS
		High	2480	AV	2483.500	-58.13	2.90	1.80	41.77	≤54	PASS
				AV	2483.520	-58.13	2.90	1.80	41.77	≤54	PASS
				AV	2500.000	-59.35	2.90	1.80	40.55	≤54	PASS
				Peak	2483.500	-49.73	2.90	0.00	48.37	≤74	PASS
				Peak	2484.640	-46.27	2.90	0.00	51.83	≤74	PASS
				Peak	2500.000	-52	2.90	0.00	46.1	≤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

