

FCC Appendix RF Test Data for BLE

FCC ID : 2BBPB-HB6

Company : Shenzhen Hongbo Intelligent Electronics Co., Ltd

EUT : Smart Earrings

Model Number : HB6

Report No. : CTA26100900701

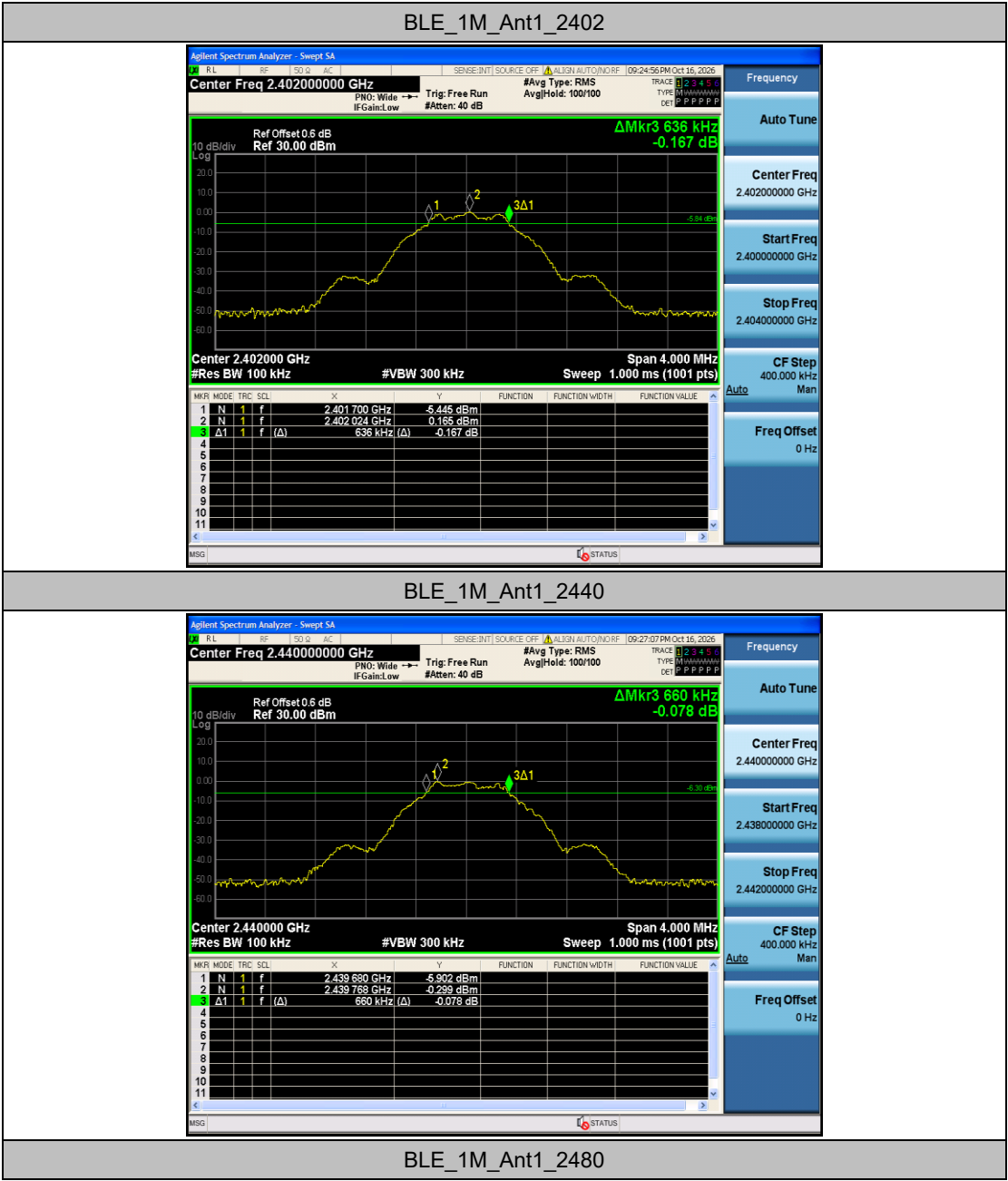
Reviewed By : Eric Wang

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.636	2401.700	2402.336	0.5	PASS
		2440	0.660	2439.680	2440.340	0.5	PASS
		2480	0.652	2479.688	2480.340	0.5	PASS

Test Graphs



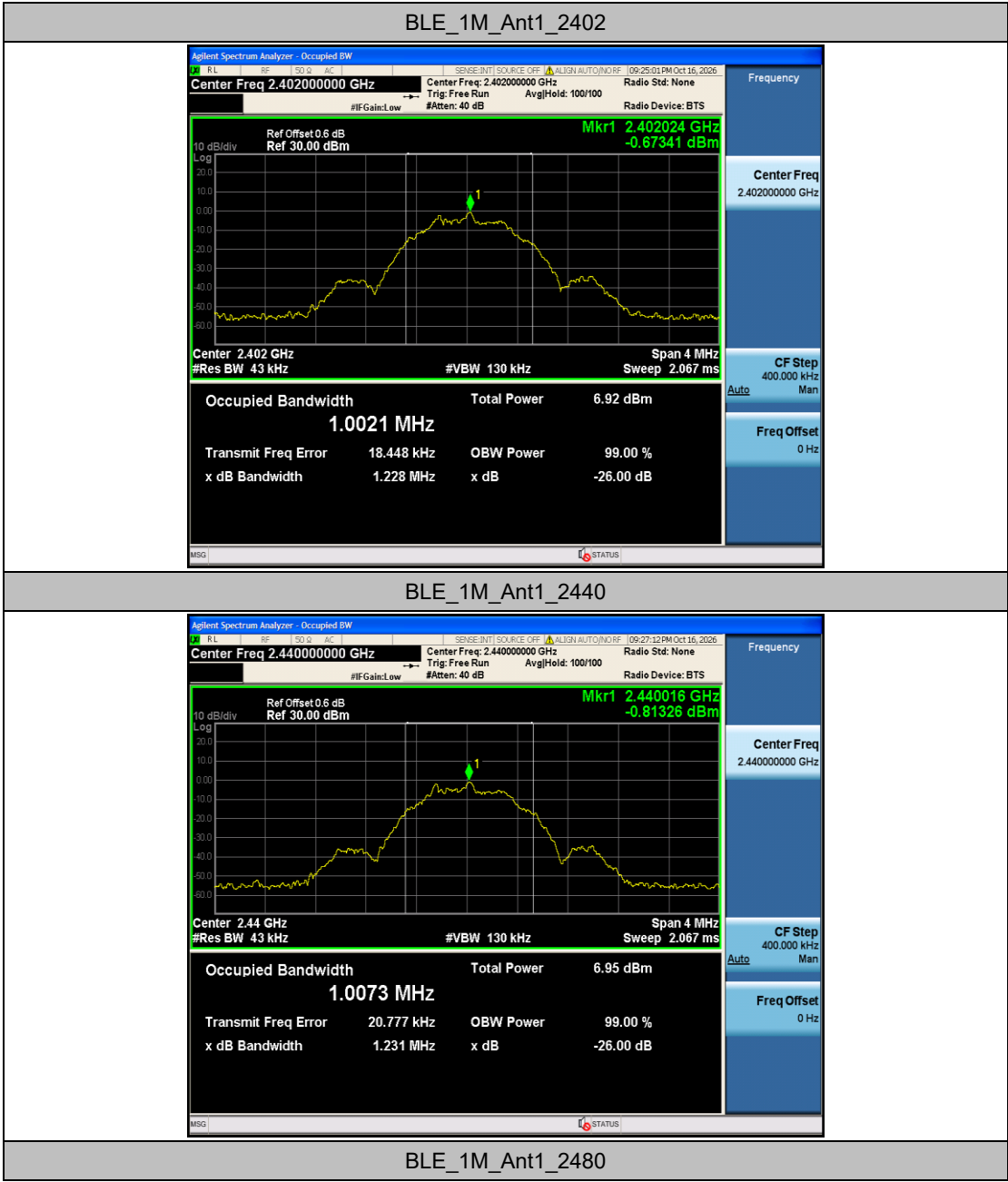


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0021	2401.5174	2402.5195	---	---
		2440	1.0073	2439.5171	2440.5244	---	---
		2480	1.0038	2479.5180	2480.5218	---	---

Test Graphs





Appendix C: Maximum conducted output power

Test Result Peak

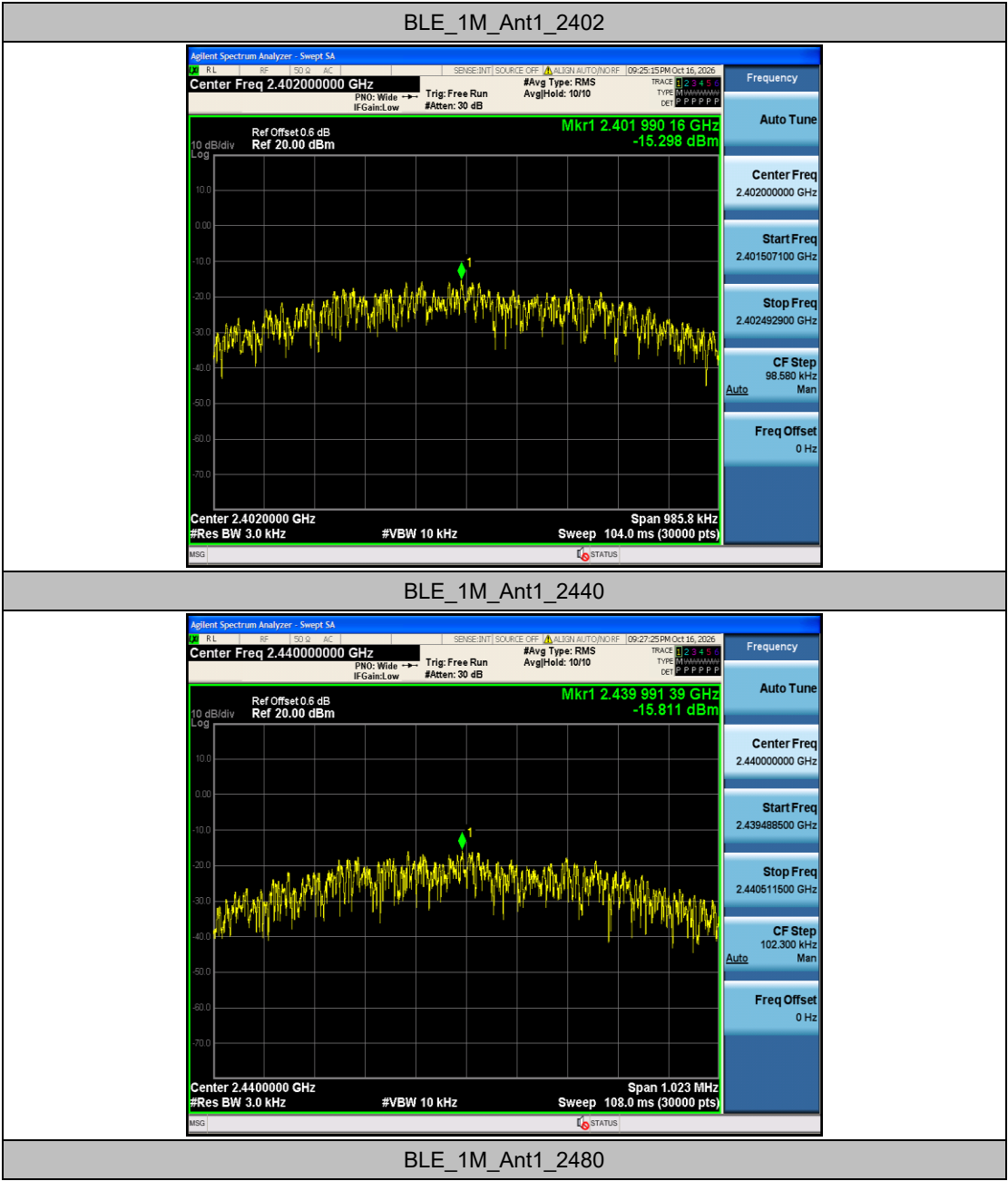
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.32	≤30	PASS
		2440	0.21	≤30	PASS
		2480	-0.01	≤30	PASS

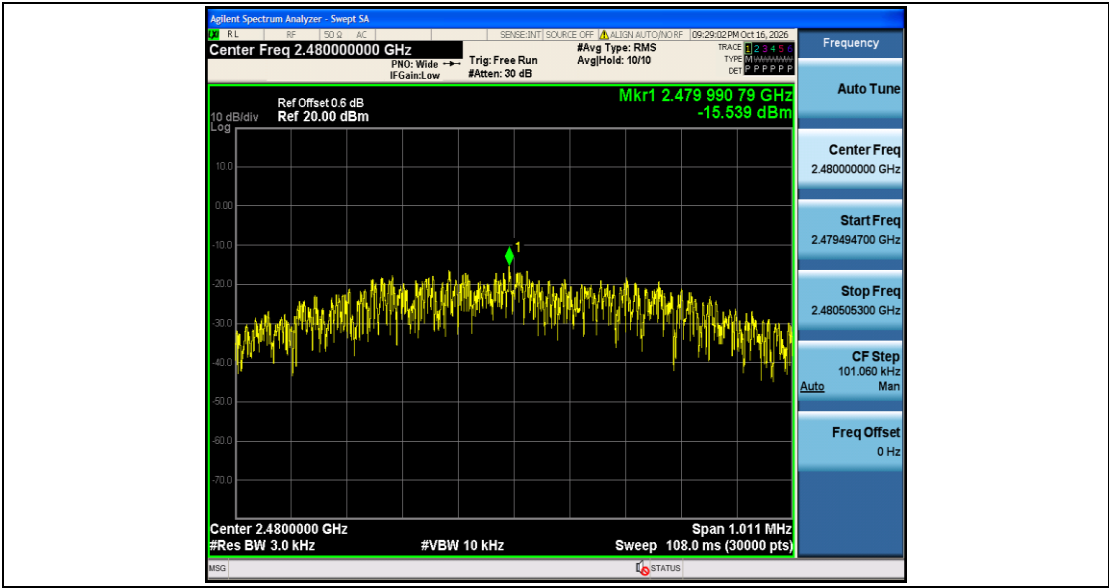
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.30	≤8.00	PASS
		2440	-15.81	≤8.00	PASS
		2480	-15.54	≤8.00	PASS

Test Graphs





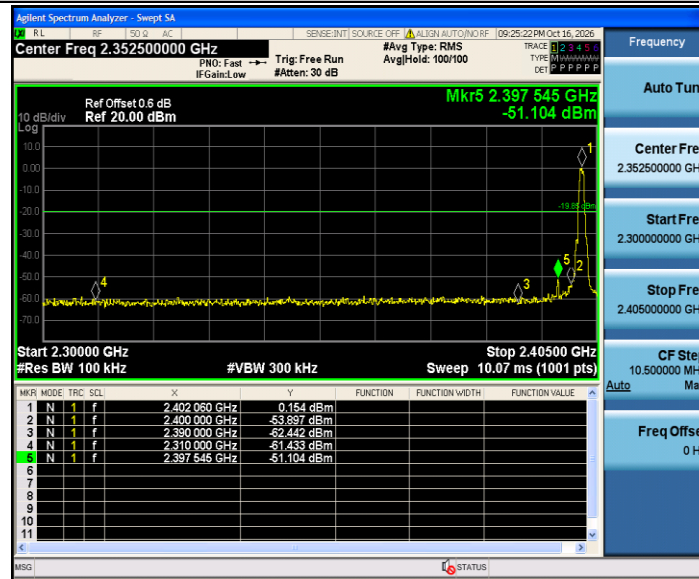
Appendix E: Band edge measurements

Test Result

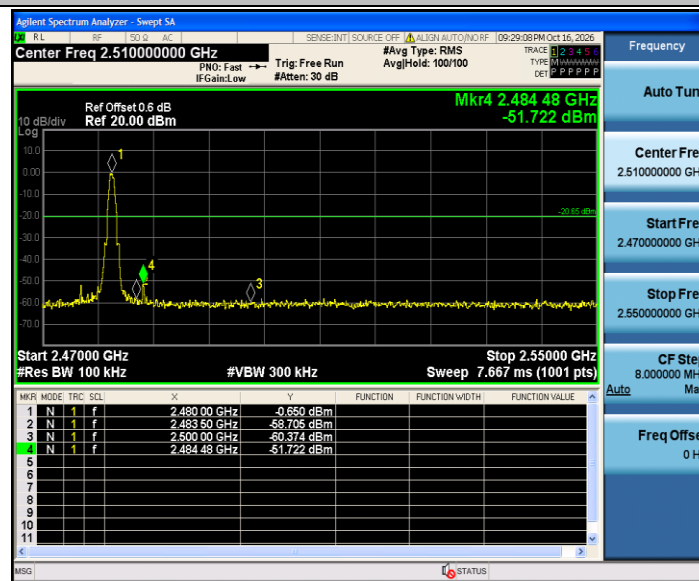
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.15	-51.1	≤-19.85	PASS
		High	2480	-0.65	-51.72	≤-20.65	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

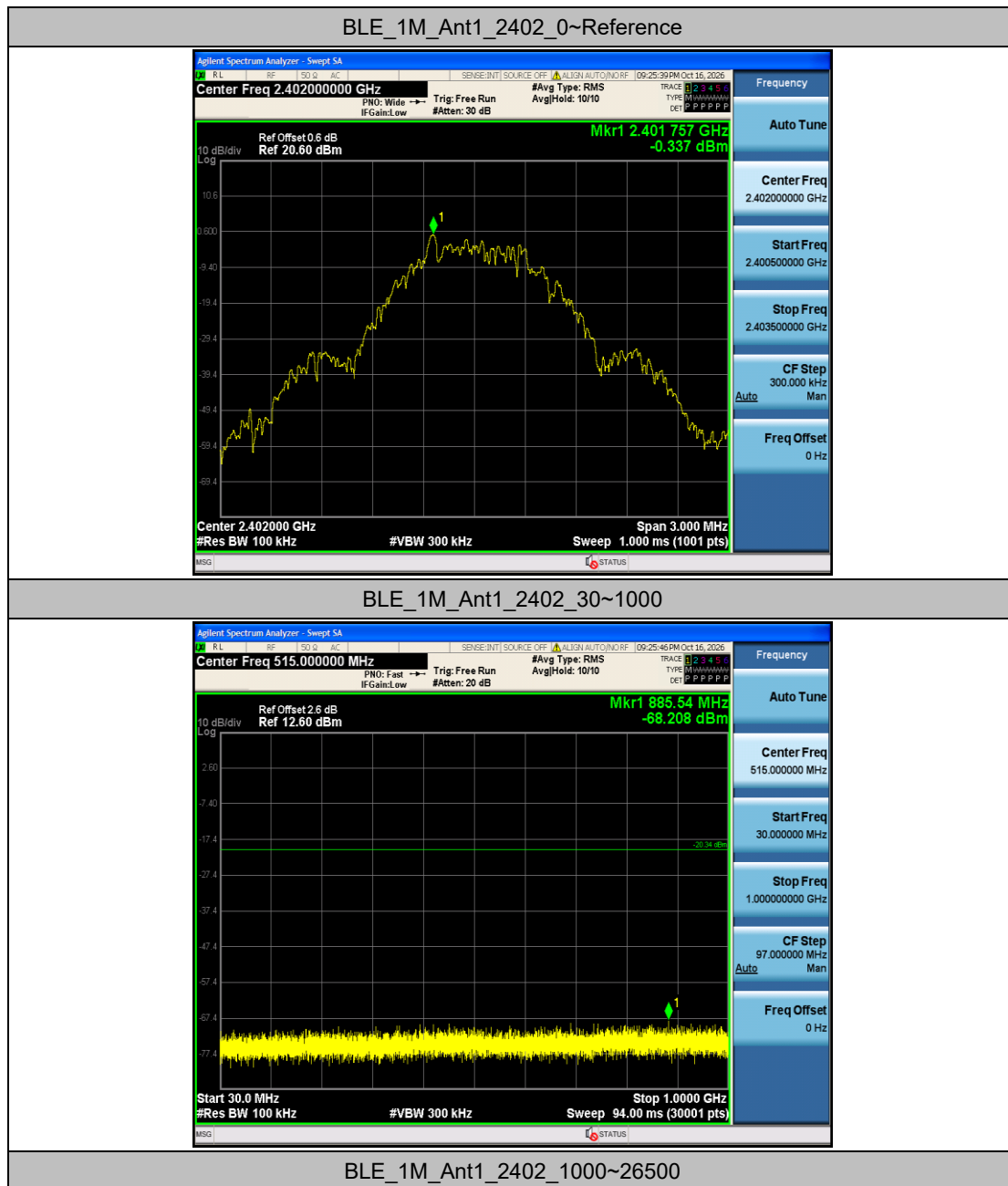


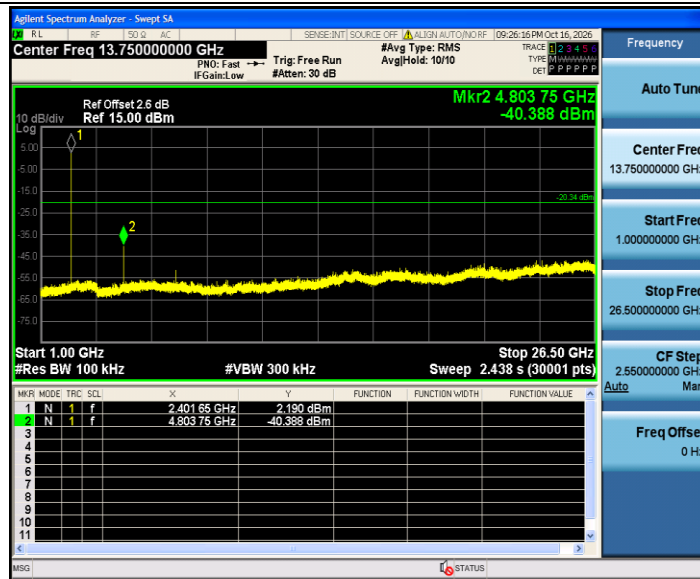
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.34	-0.34	---	PASS
			30~1000	-0.34	-68.21	≤-20.34	PASS
			1000~26500	-0.34	-40.39	≤-20.34	PASS
		2440	Reference	-0.91	-0.91	---	PASS
			30~1000	-0.91	-68.07	≤-20.91	PASS
			1000~26500	-0.91	-39.67	≤-20.91	PASS
		2480	Reference	-1.46	-1.46	---	PASS
			30~1000	-1.46	-68.43	≤-21.46	PASS
			1000~26500	-1.46	-39.81	≤-21.46	PASS

Test Graphs

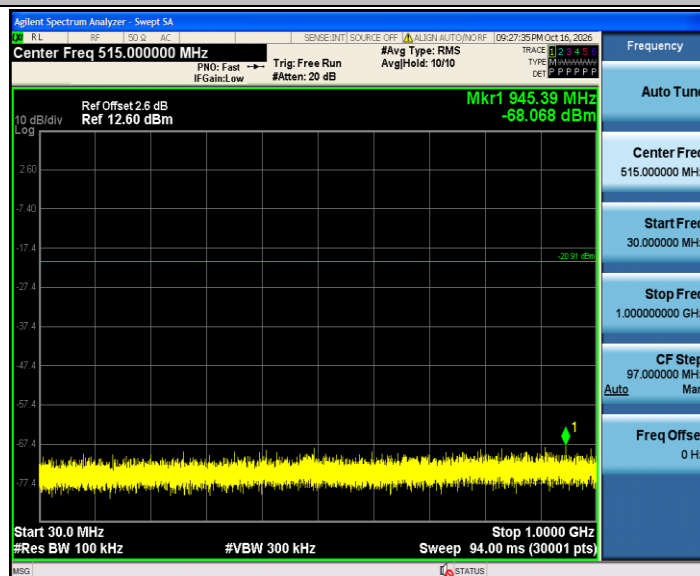




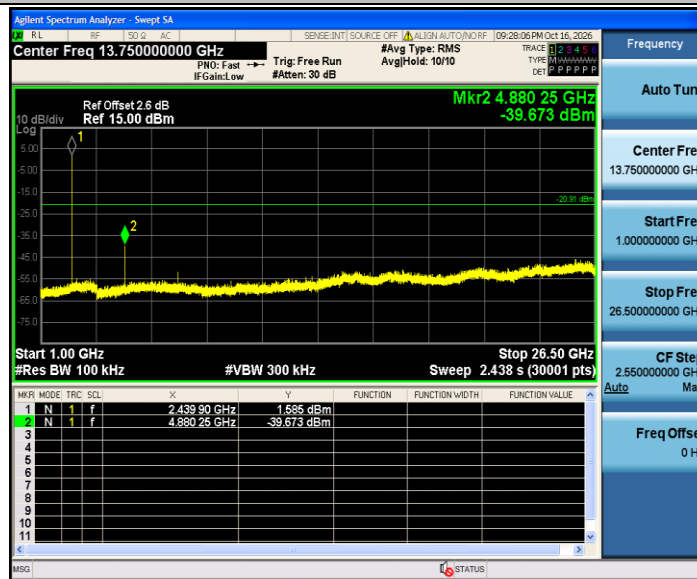
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



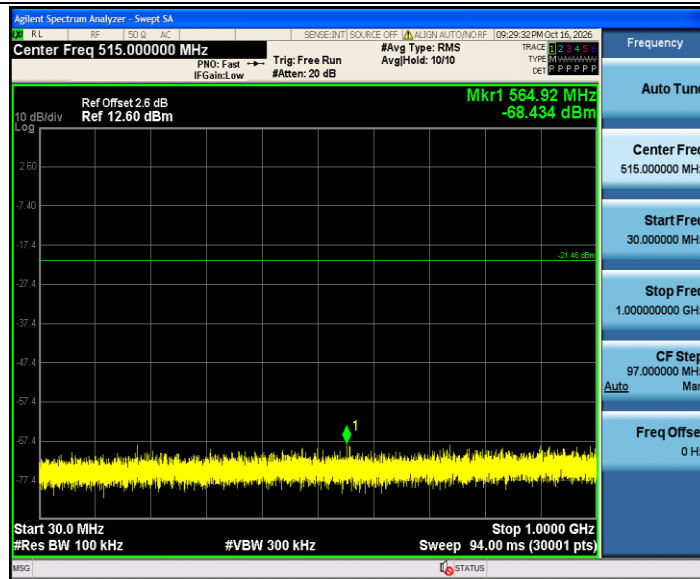
BLE_1M_Ant1_2440_1000~26500



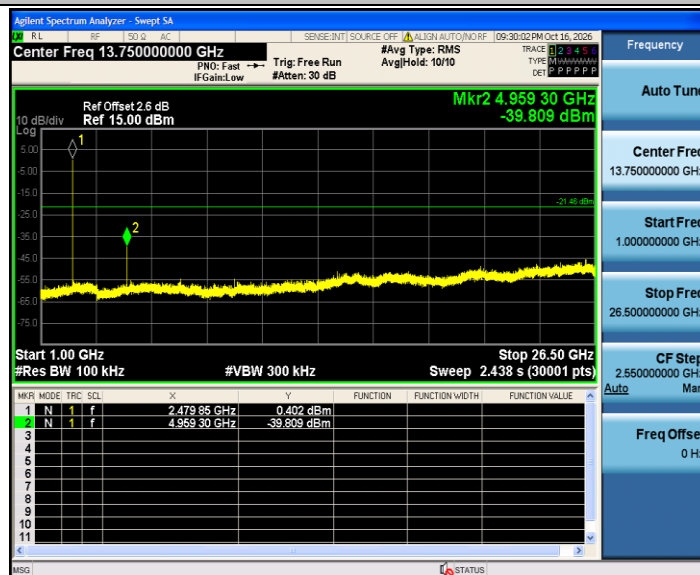
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

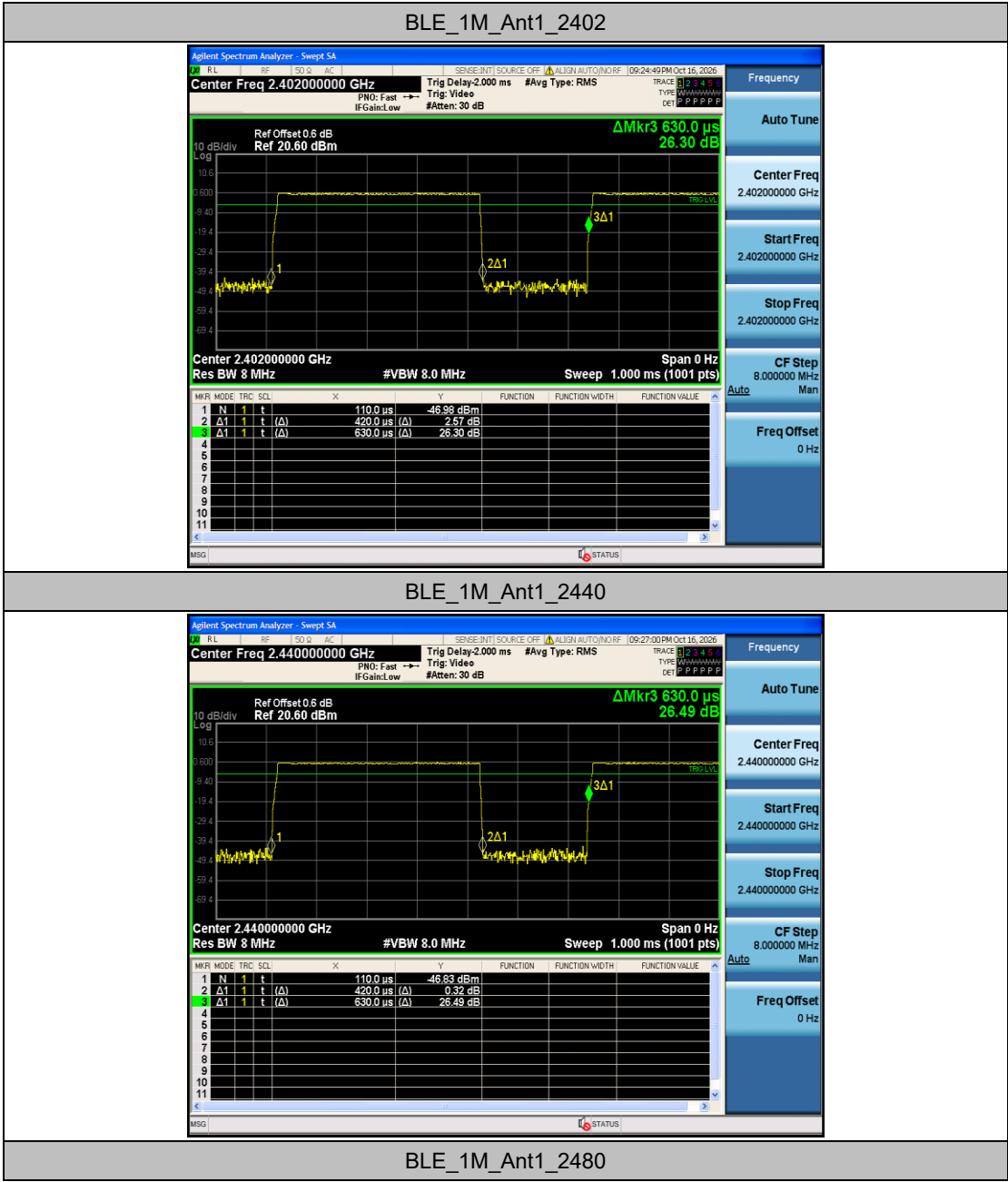


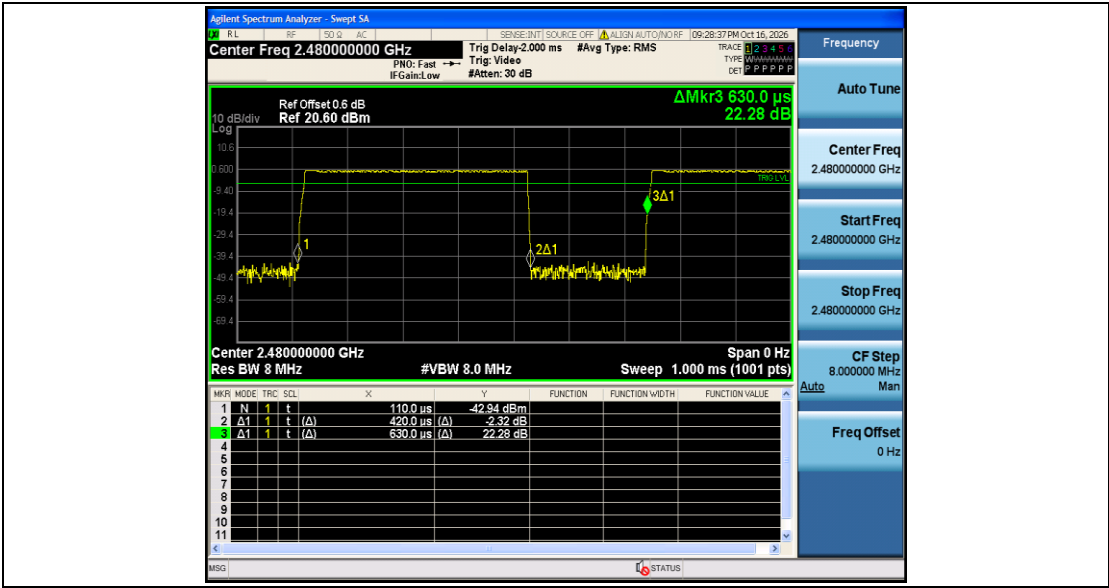
Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.42	0.63	0.6667	66.67	1.76	---	---
		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

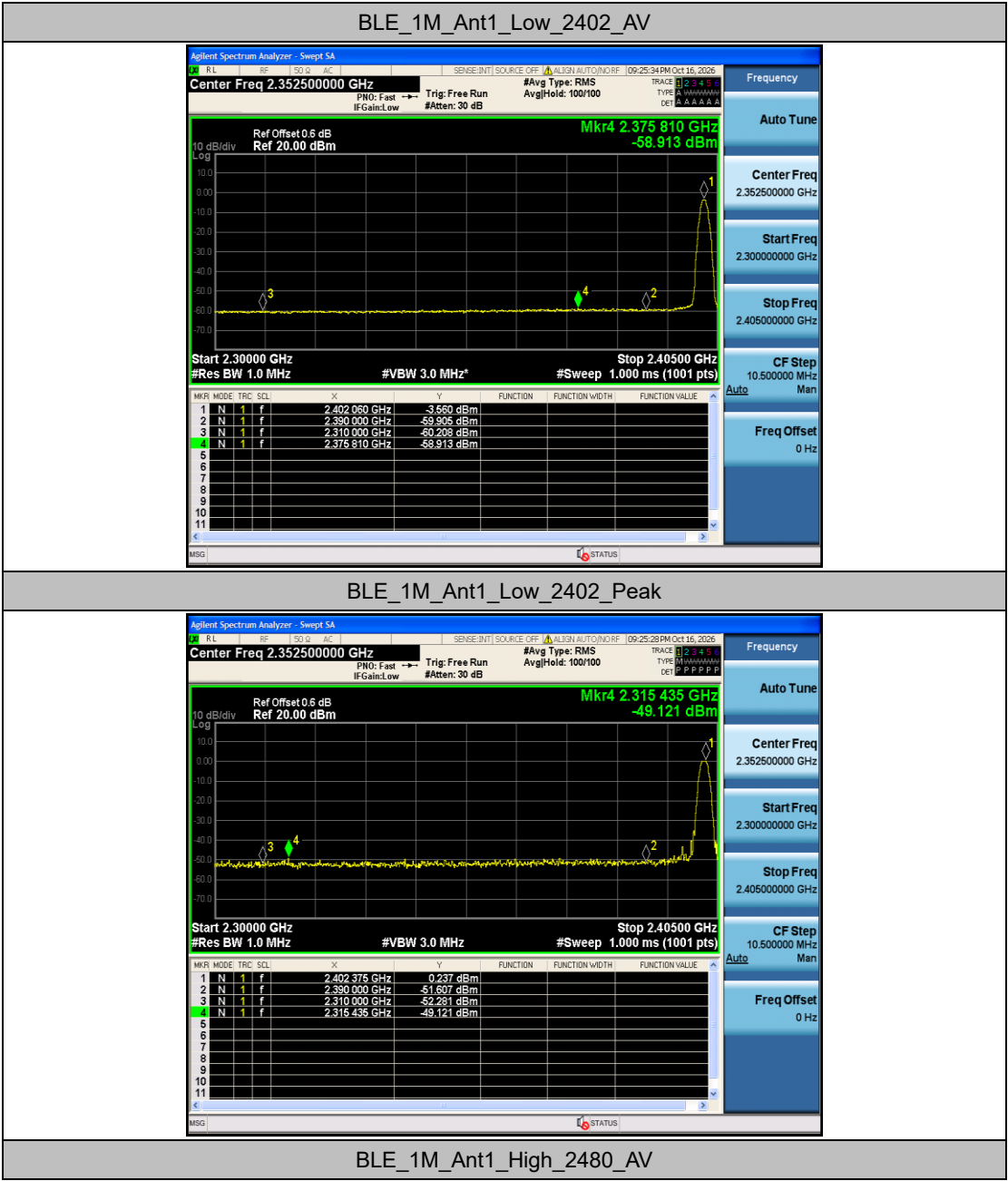
Test Result

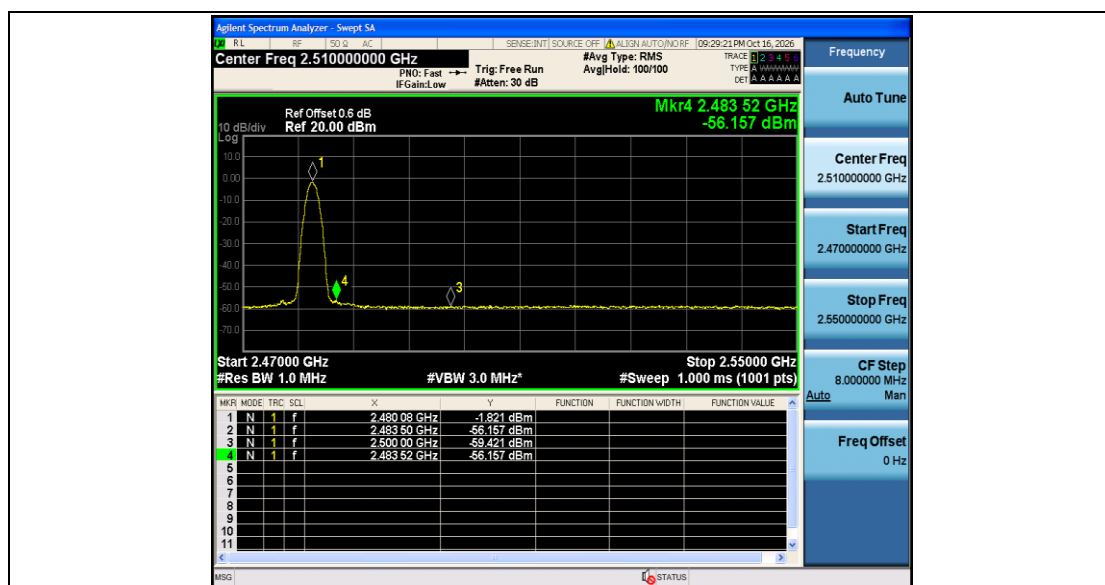
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.21	2.00	1.76	38.75	≤54	PASS
				AV	2375.810	-58.91	2.00	1.76	40.05	≤54	PASS
				AV	2390.000	-59.91	2.00	1.76	39.05	≤54	PASS
				Peak	2310.000	-52.28	2.00	0.00	44.92	≤74	PASS
				Peak	2315.435	-49.12	2.00	0.00	48.08	≤74	PASS
				Peak	2390.000	-51.61	2.00	0.00	45.59	≤74	PASS
		High	2480	AV	2483.500	-56.16	2.00	1.76	42.80	≤54	PASS
				AV	2483.520	-56.16	2.00	1.76	42.80	≤54	PASS
				AV	2500.000	-59.42	2.00	1.76	39.54	≤54	PASS
				Peak	2483.500	-48.87	2.00	0.00	48.33	≤74	PASS
				Peak	2484.640	-43.87	2.00	0.00	53.33	≤74	PASS
				Peak	2500.000	-51.96	2.00	0.00	45.24	≤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

