

FCC Appendix RF Test Data for BLE

FCC ID : 2BF3Z-E12

Company : Shenzhen Taiyang Technology Co., Ltd

EUT : Headphones

Model Number : E12

Report No. : CTA26072401001

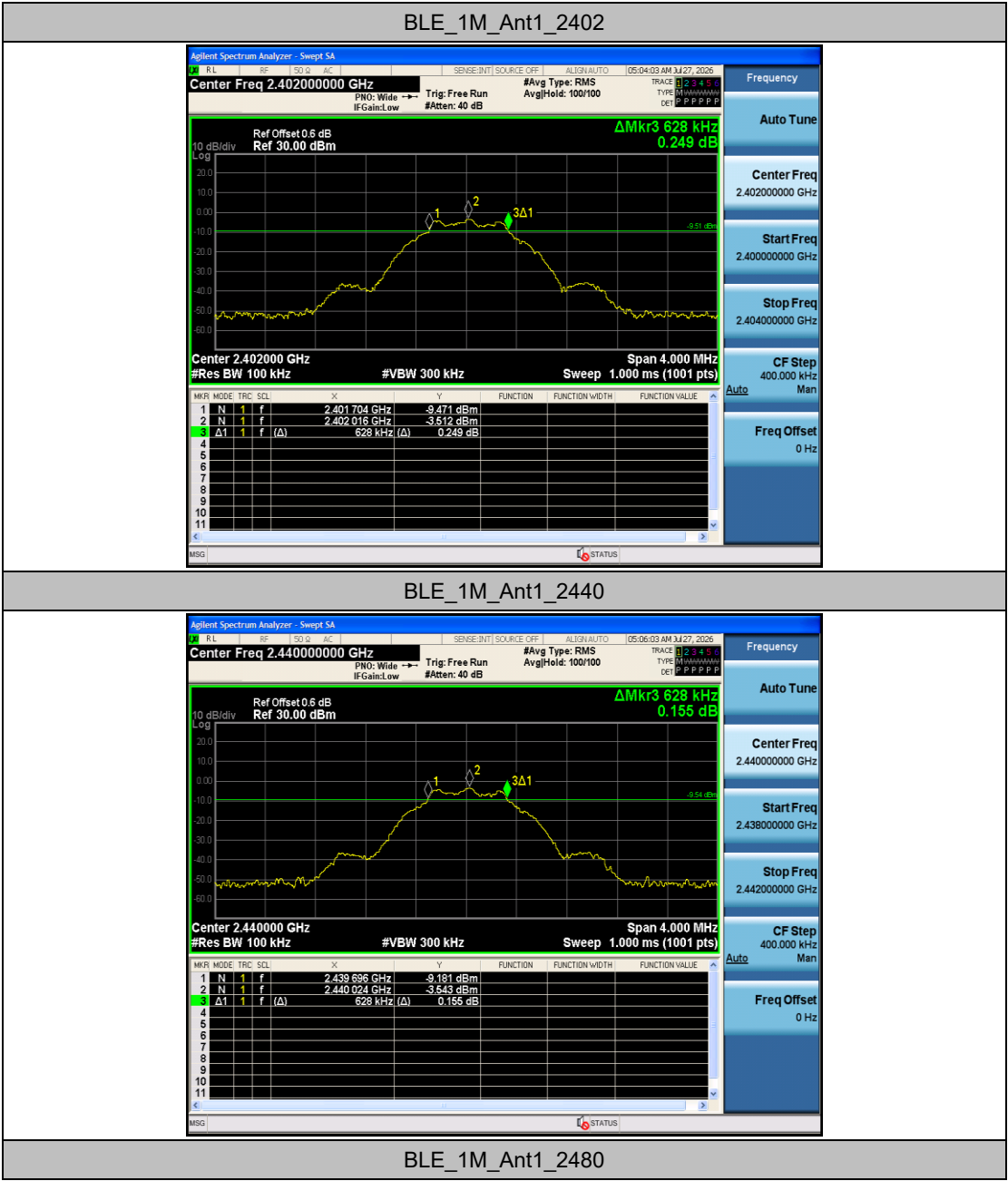
Reviewed By : Eric Wang

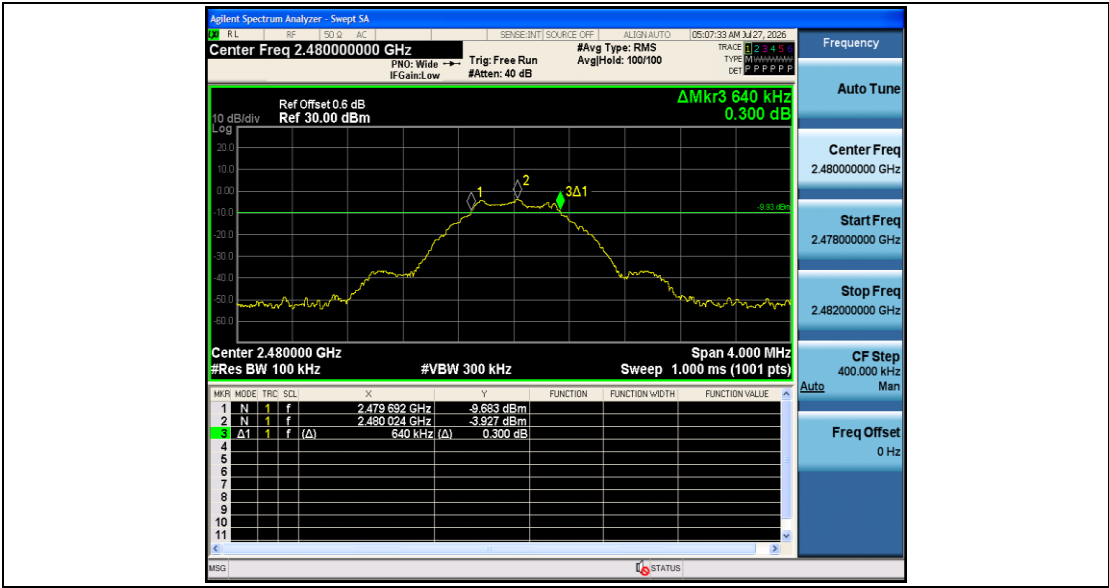
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.628	2401.704	2402.332	0.5	PASS
		2440	0.628	2439.696	2440.324	0.5	PASS
		2480	0.640	2479.692	2480.332	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	1.0159	2401.5155	2402.5314	---	---
		2440	1.0108	2439.5178	2440.5286	---	---
		2480	1.0071	2479.5134	2480.5205	---	---

Test Graphs

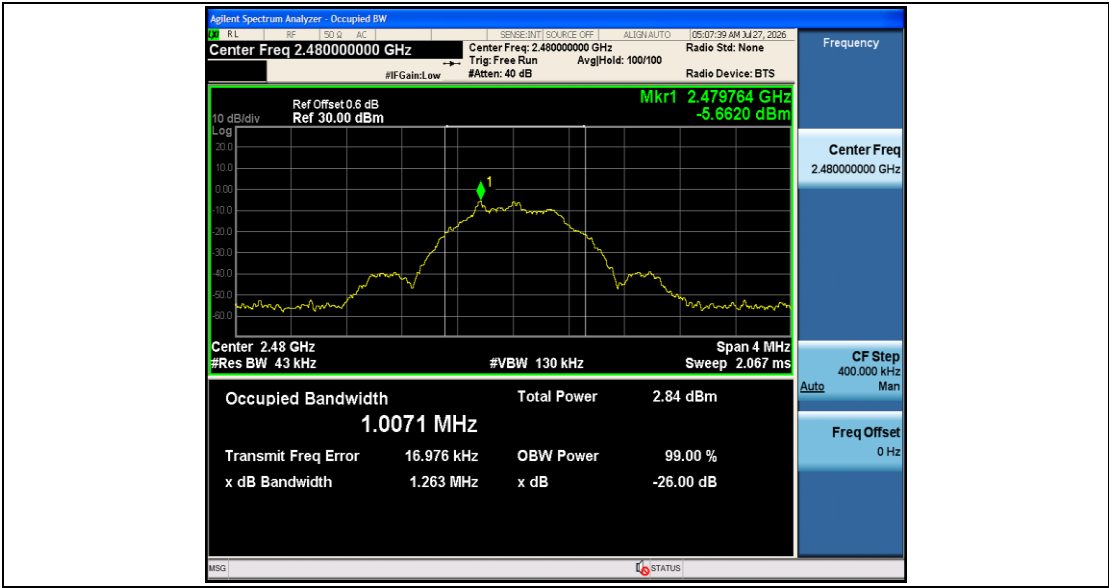
BLE_1M_Ant1_2402



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	-3.29	≤30	PASS
		2440	-3.39	≤30	PASS
		2480	-3.66	≤30	PASS

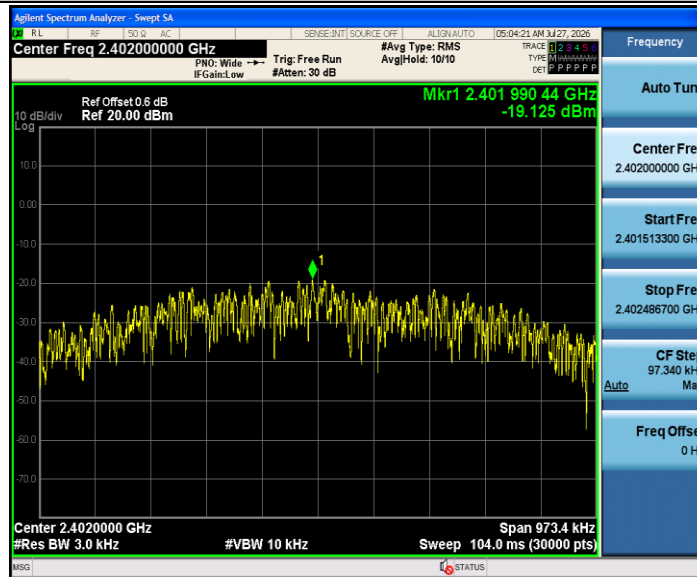
Appendix D: Maximum power spectral density

Test Result

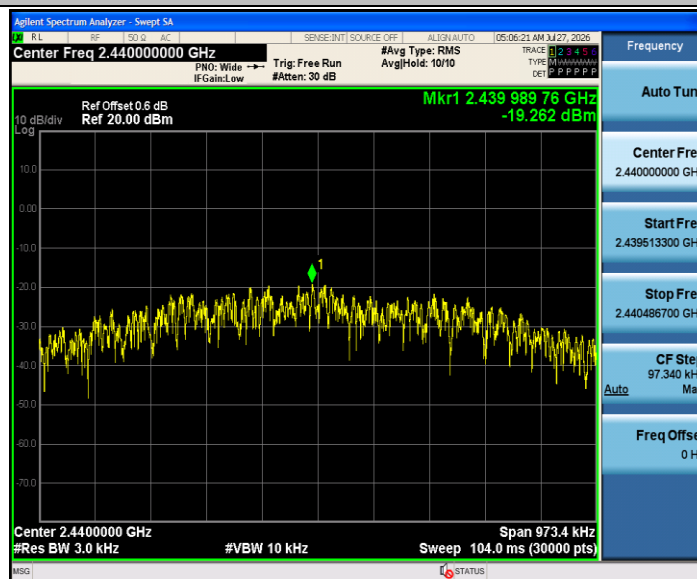
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.13	≤8.00	PASS
		2440	-19.26	≤8.00	PASS
		2480	-19.56	≤8.00	PASS

Test Graphs

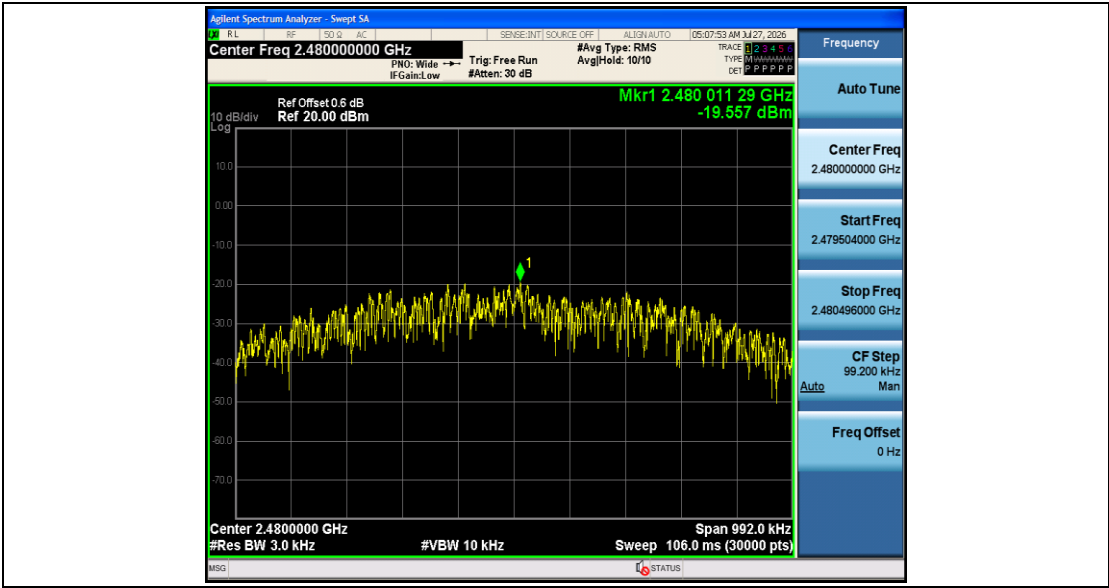
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

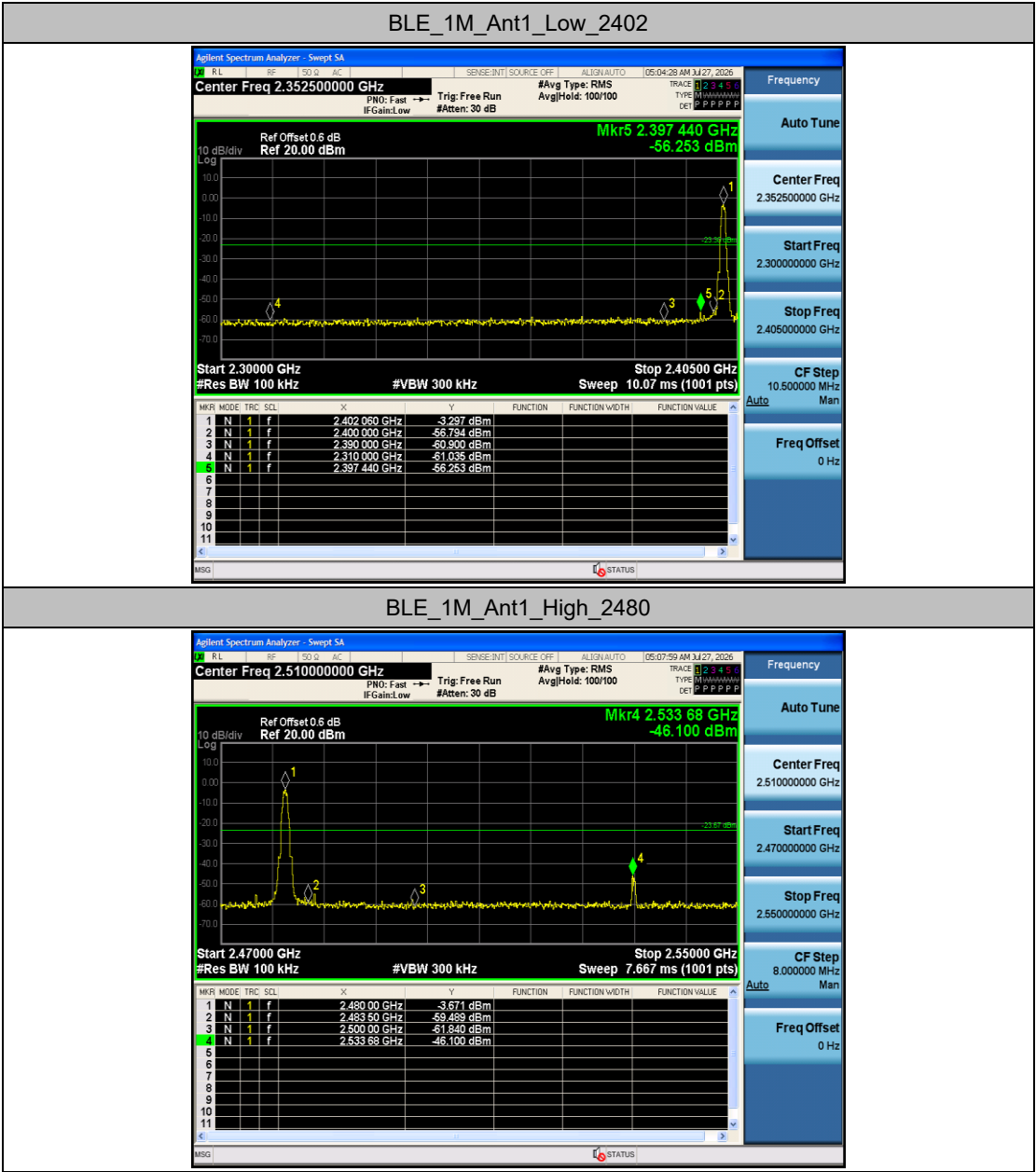


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.30	-56.25	≤ -23.3	PASS
		High	2480	-3.67	-46.1	≤ -23.67	PASS

Test Graphs

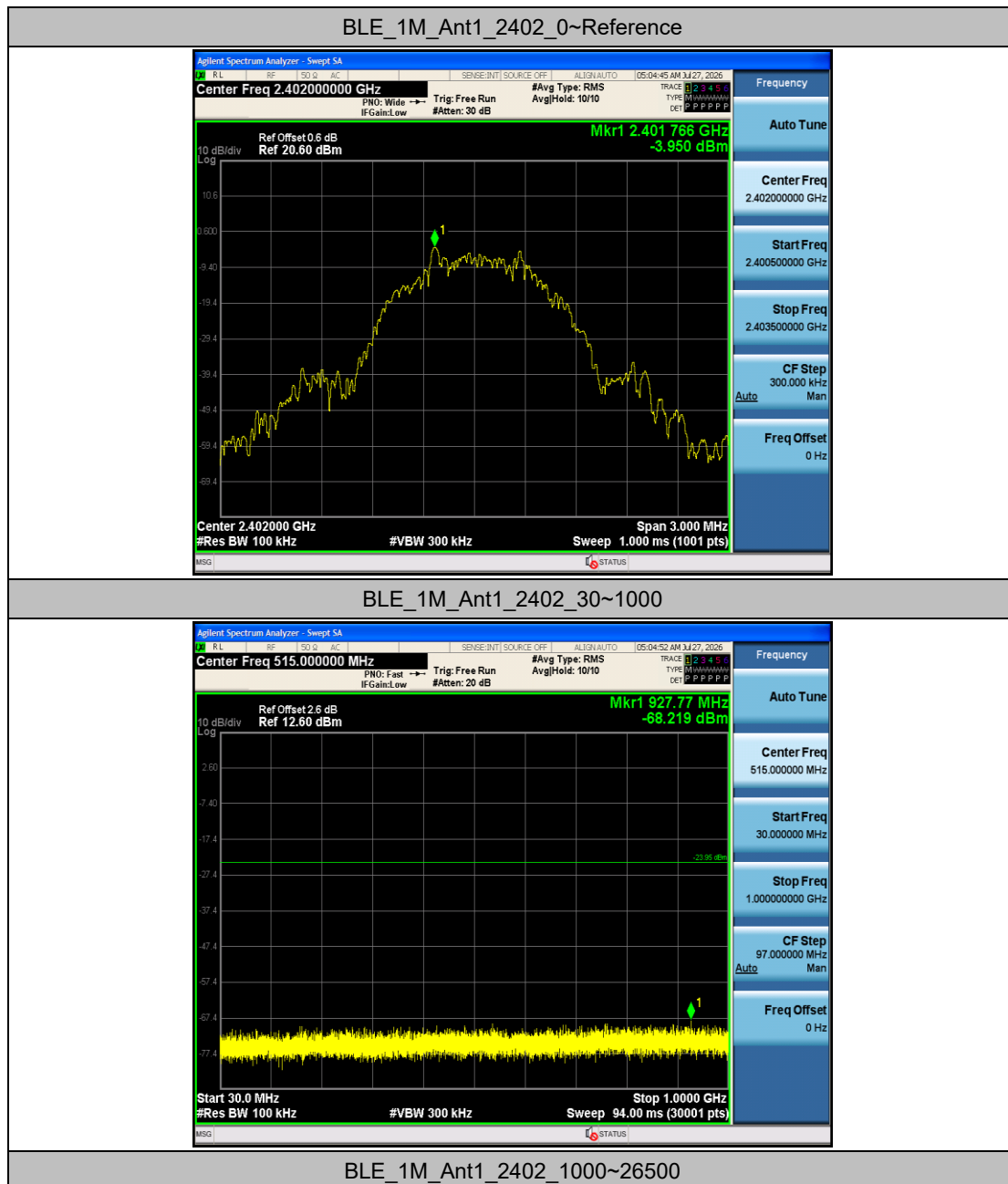


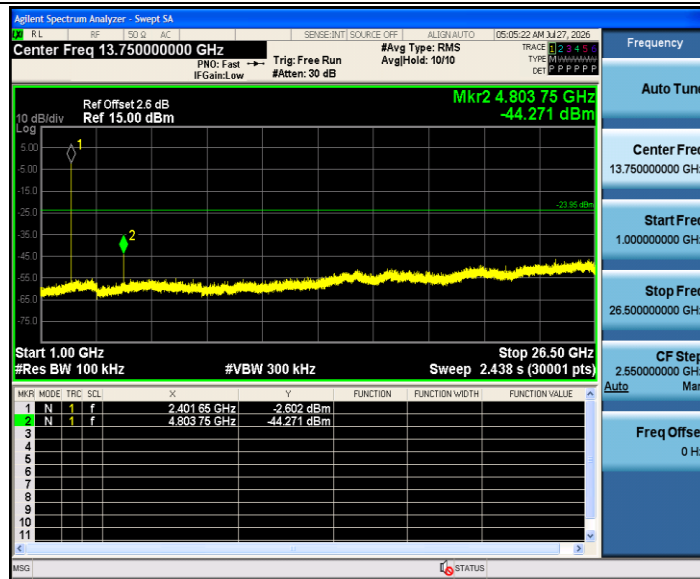
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.95	-3.95	---	PASS
			30~1000	-3.95	-68.22	≤-23.95	PASS
			1000~26500	-3.95	-44.27	≤-23.95	PASS
		2440	Reference	-4.45	-4.45	---	PASS
			30~1000	-4.45	-67.26	≤-24.45	PASS
			1000~26500	-4.45	-45.05	≤-24.45	PASS
		2480	Reference	-5.76	-5.76	---	PASS
			30~1000	-5.76	-68.86	≤-25.76	PASS
			1000~26500	-5.76	-45.48	≤-25.76	PASS

Test Graphs

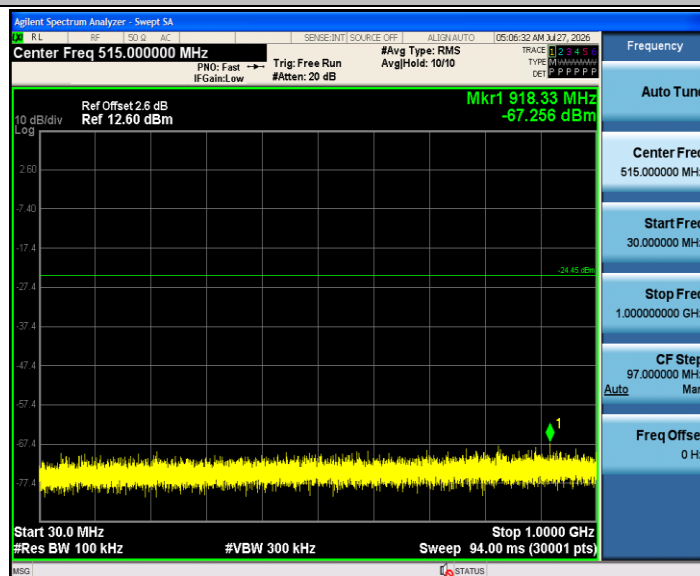




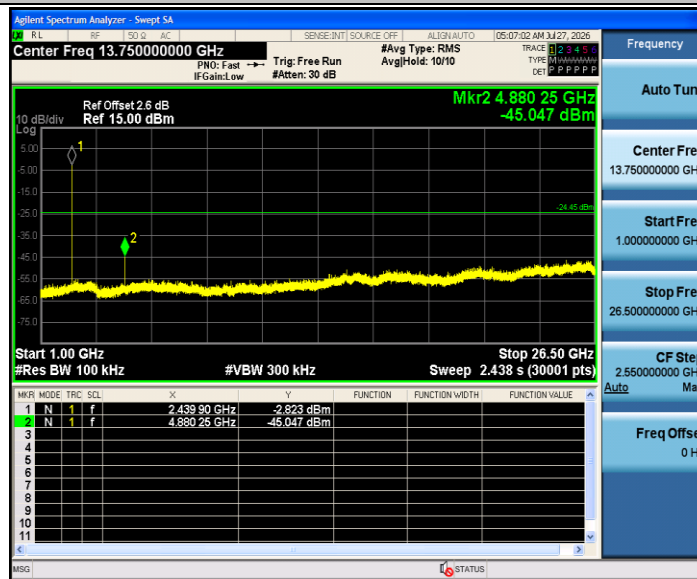
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



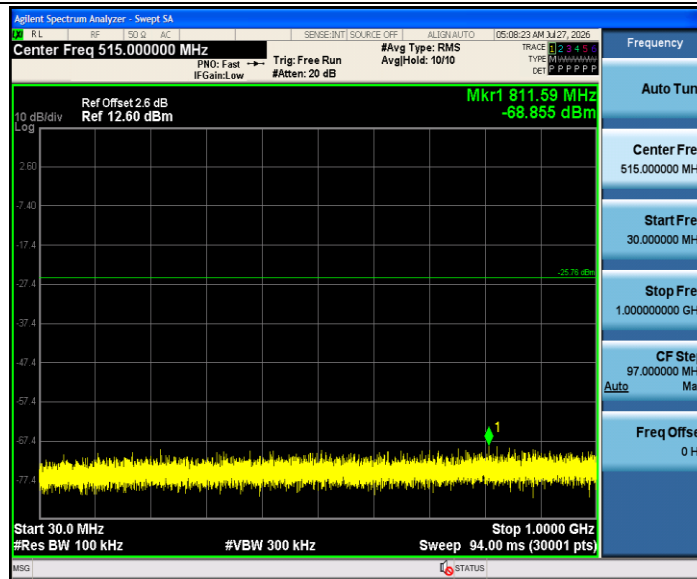
BLE_1M_Ant1_2440_1000~26500



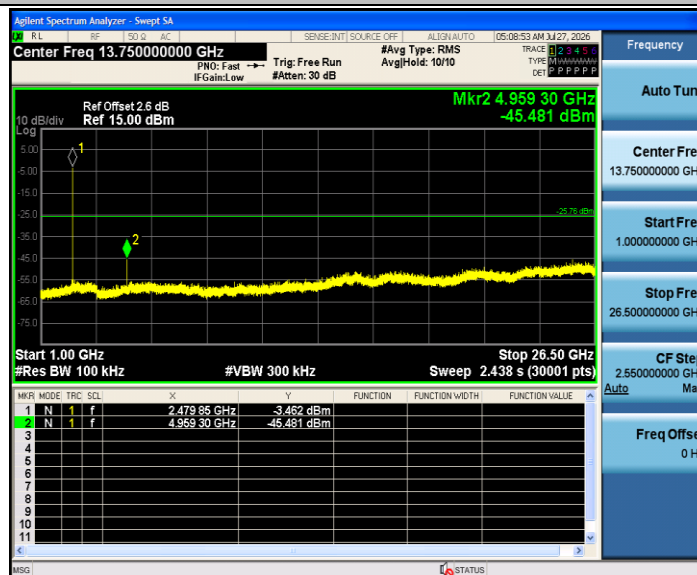
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



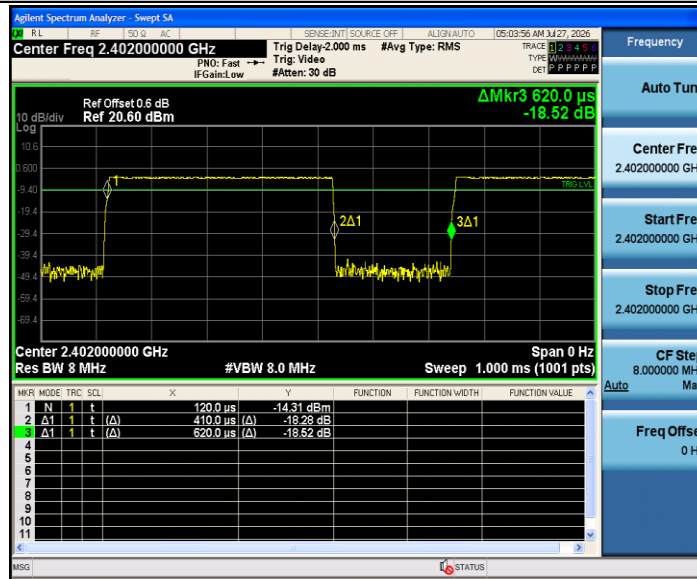
Appendix G: Duty Cycle

Test Result

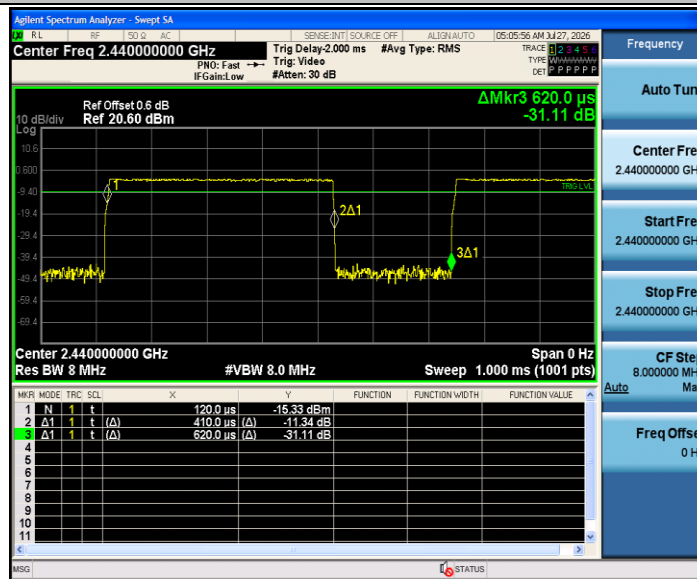
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.62	0.6613	66.13	1.80	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.41	0.62	0.6613	66.13	1.80	---	---

Test Graphs

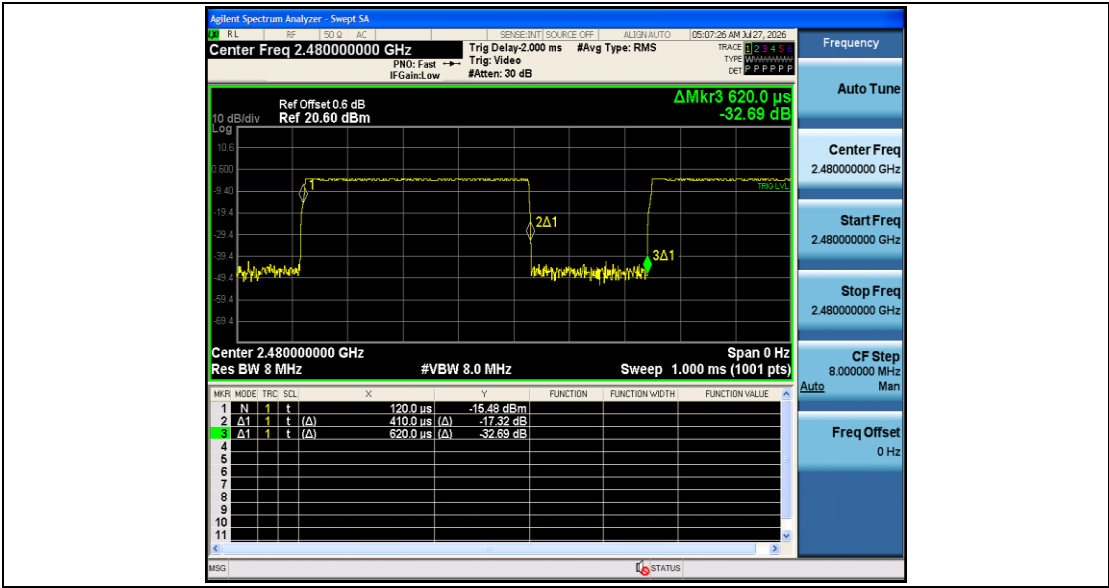
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

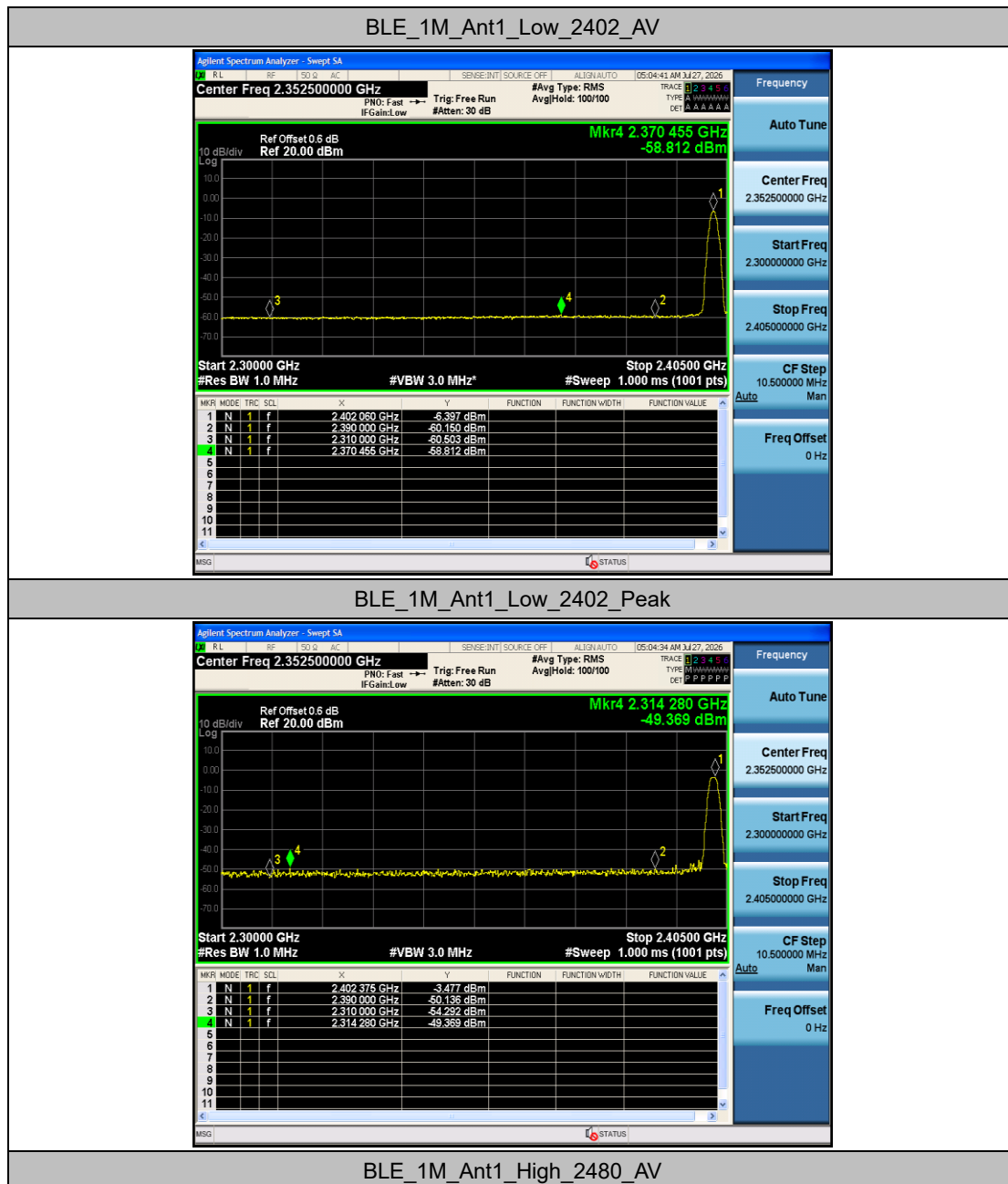
Test Result

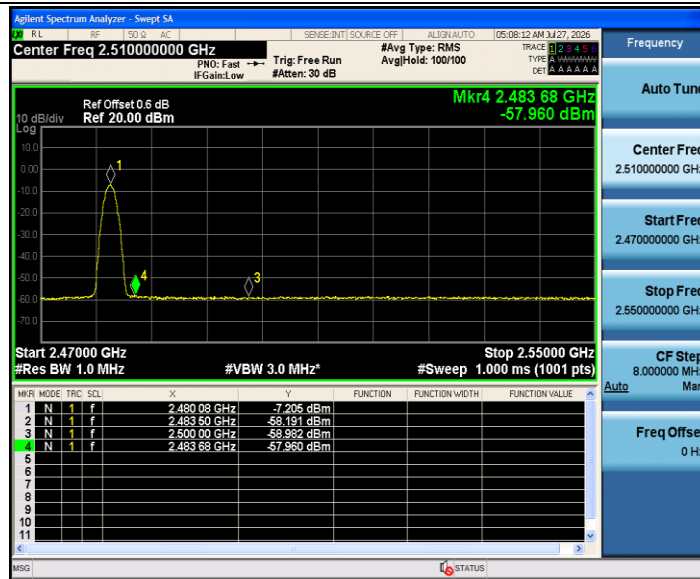
TestMode	Antenna	Channel	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.5	2.7	1.80	39.2	≤54	PASS
				AV	2370.455	-58.81	2.7	1.80	40.89	≤54	PASS
				AV	2390.000	-60.15	2.7	1.80	39.55	≤54	PASS
				Peak	2310.000	-54.29	2.7	0.00	43.61	≤74	PASS
				Peak	2314.280	-49.37	2.7	0.00	48.53	≤74	PASS
				Peak	2390.000	-50.14	2.7	0.00	47.76	≤74	PASS
		High	2480	AV	2483.500	-58.19	2.7	1.80	41.51	≤54	PASS
				AV	2483.680	-57.96	2.7	1.80	41.74	≤54	PASS
				AV	2500.000	-58.98	2.7	1.80	40.72	≤54	PASS
				Peak	2483.500	-51.01	2.7	0.00	46.89	≤74	PASS
				Peak	2484.320	-44.54	2.7	0.00	53.36	≤74	PASS
				Peak	2500.000	-50.85	2.7	0.00	47.05	≤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

