

FCC Appendix RF Test Data for BLE

FCC ID : 2BVOW-BJ02

Company : Shenzhen Maidehou Intelligent Manufacturing Co., Ltd.

EUT : urine alarm

Model Number : BJ02

Report No. : CTA26051802501

Reviewed By : Eric Wang

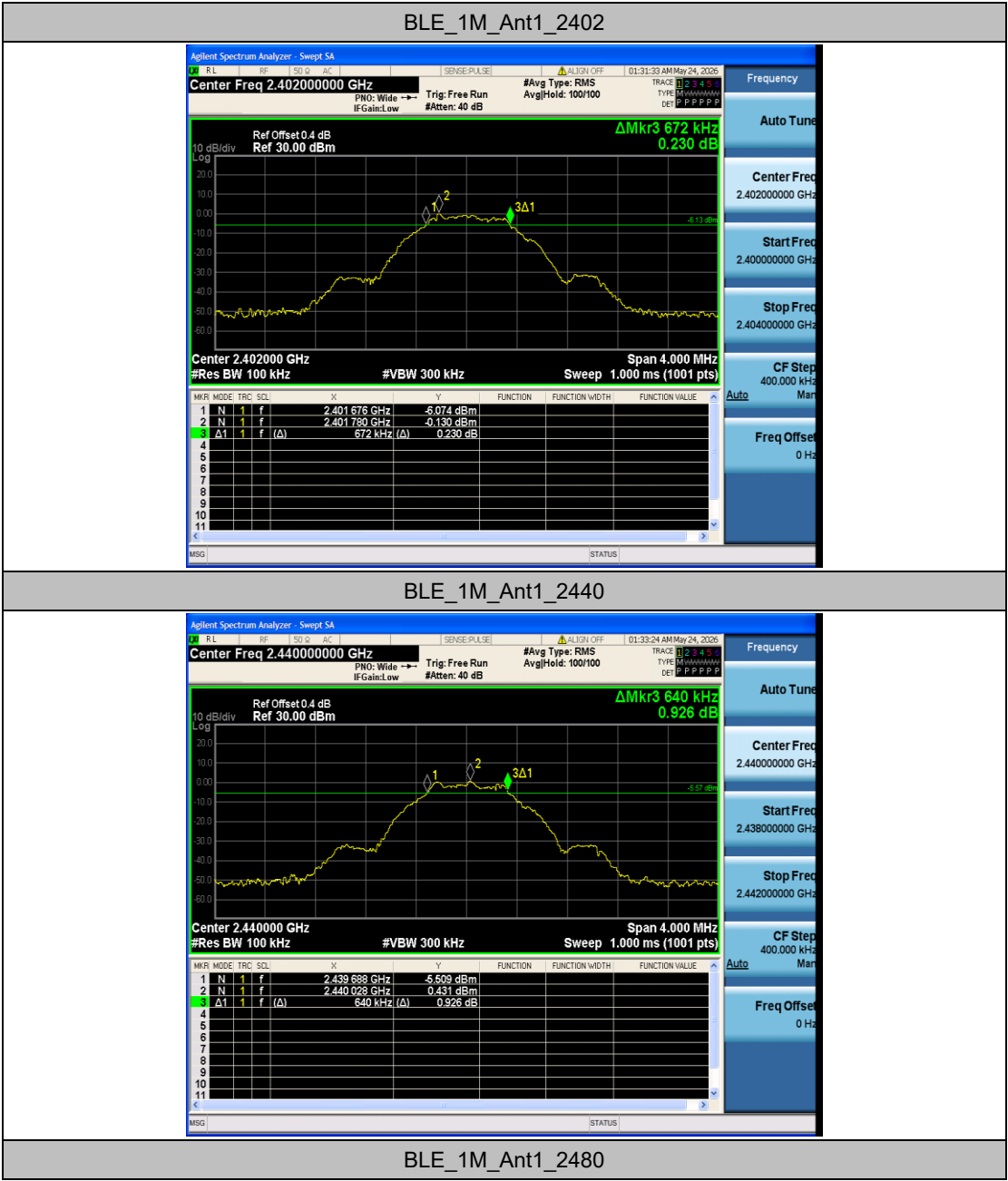
FCC Appendix RF Test Data for BLE module AC6323A

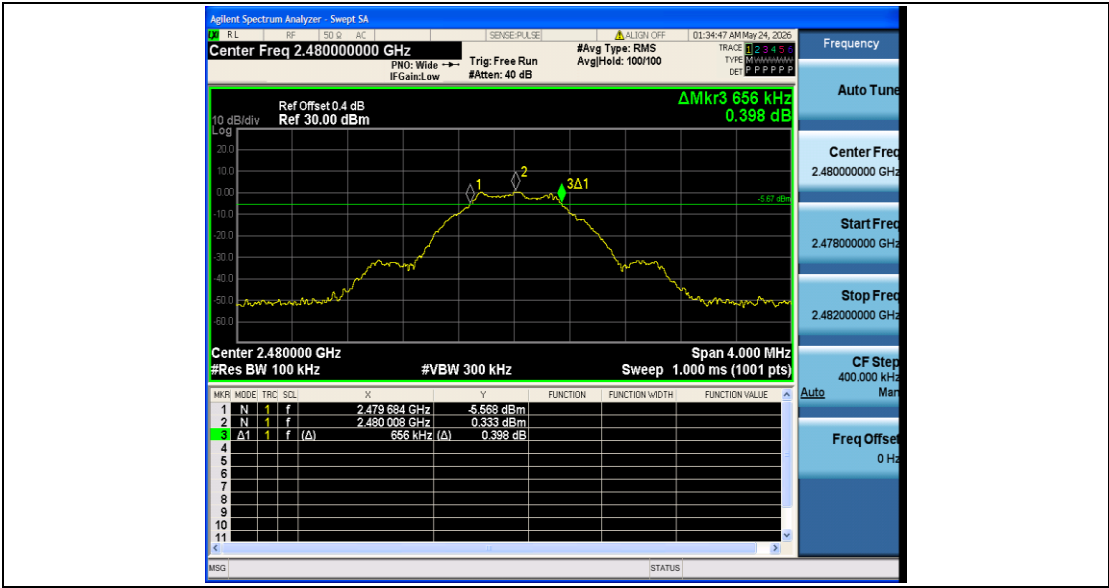
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.672	2401.676	2402.348	0.5	PASS
		2440	0.640	2439.688	2440.328	0.5	PASS
		2480	0.656	2479.684	2480.340	0.5	PASS

Test Graphs



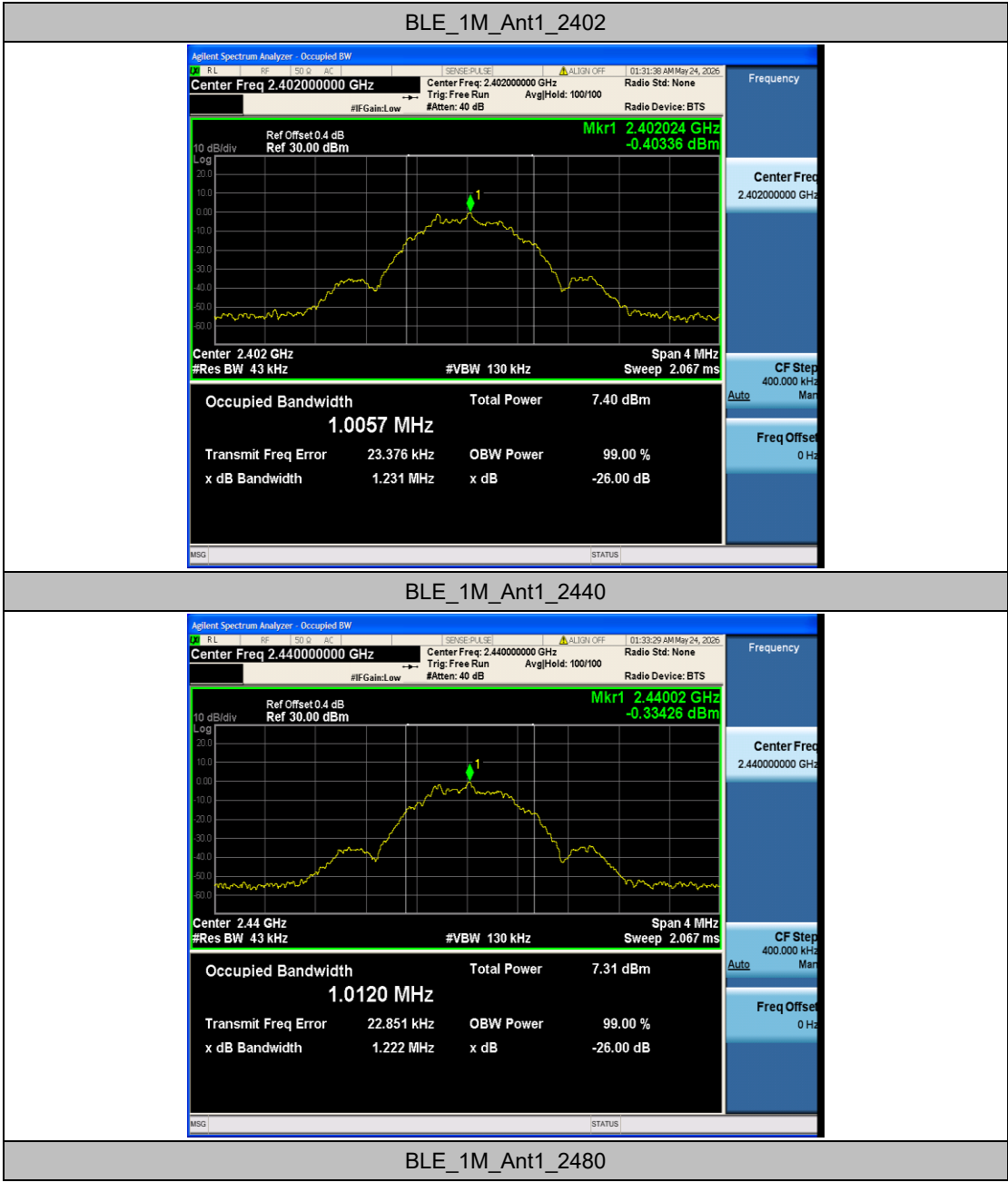


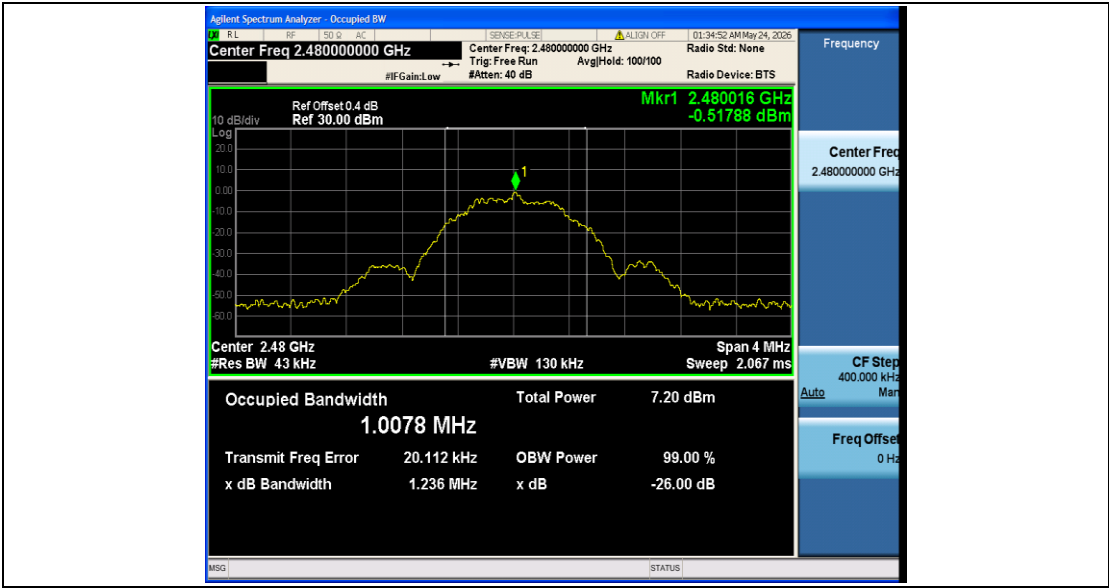
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0057	2401.5205	2402.5262	---	---
		2440	1.0120	2439.5169	2440.5289	---	---
		2480	1.0078	2479.5162	2480.5240	---	---

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	0.72	≤30	PASS
		2440	0.62	≤30	PASS
		2480	0.70	≤30	PASS

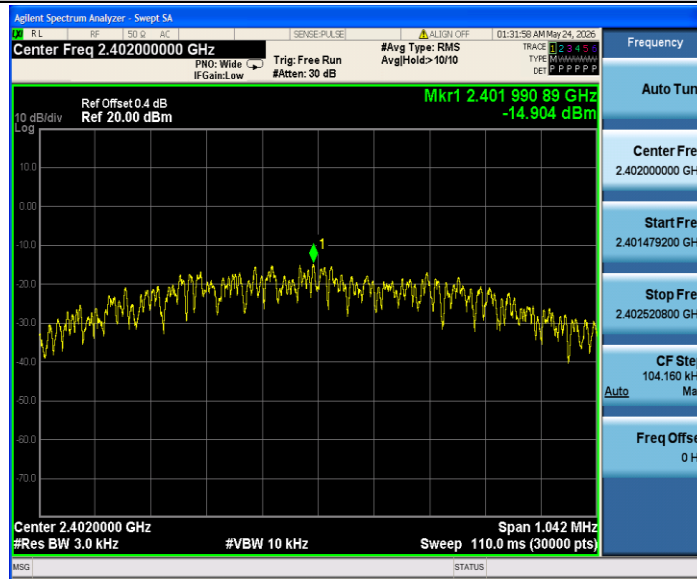
Appendix D: Maximum power spectral density

Test Result

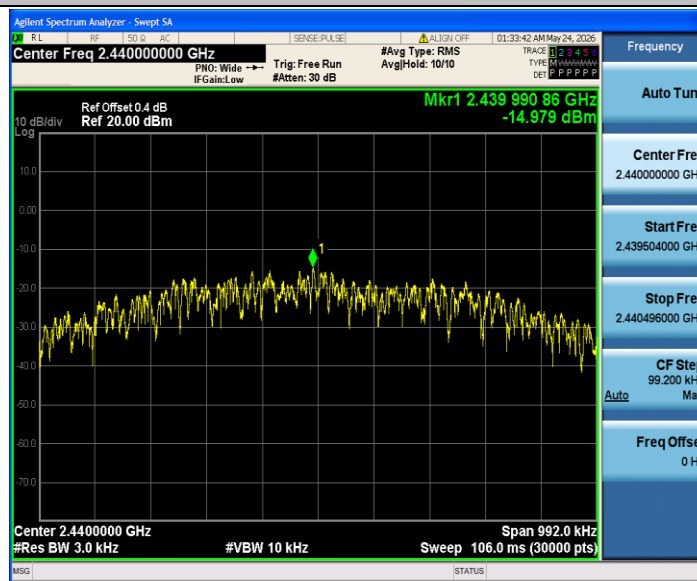
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.90	≤8.00	PASS
		2440	-14.98	≤8.00	PASS
		2480	-14.65	≤8.00	PASS

Test Graphs

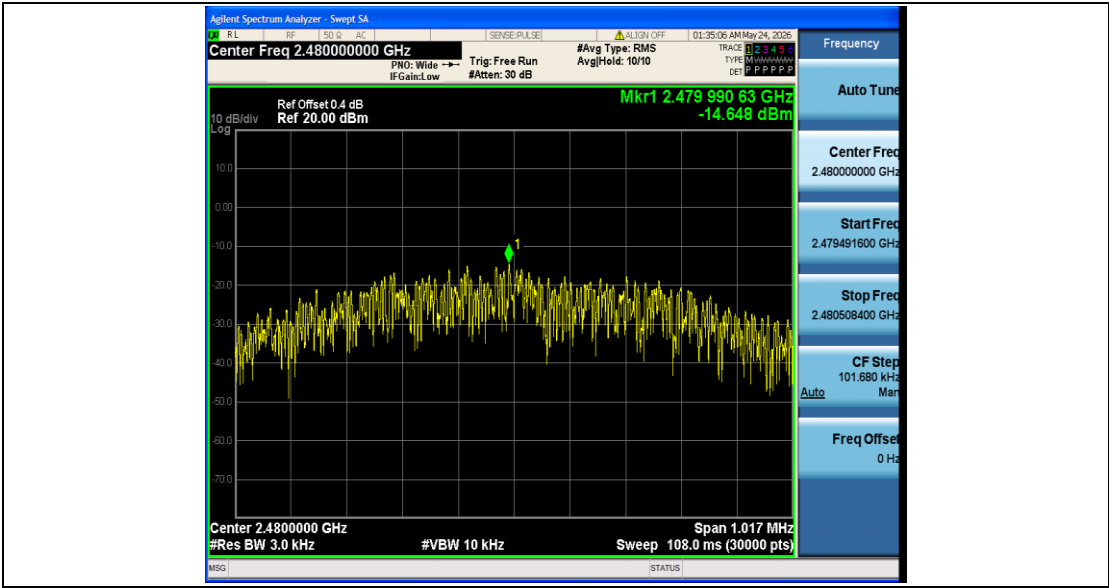
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

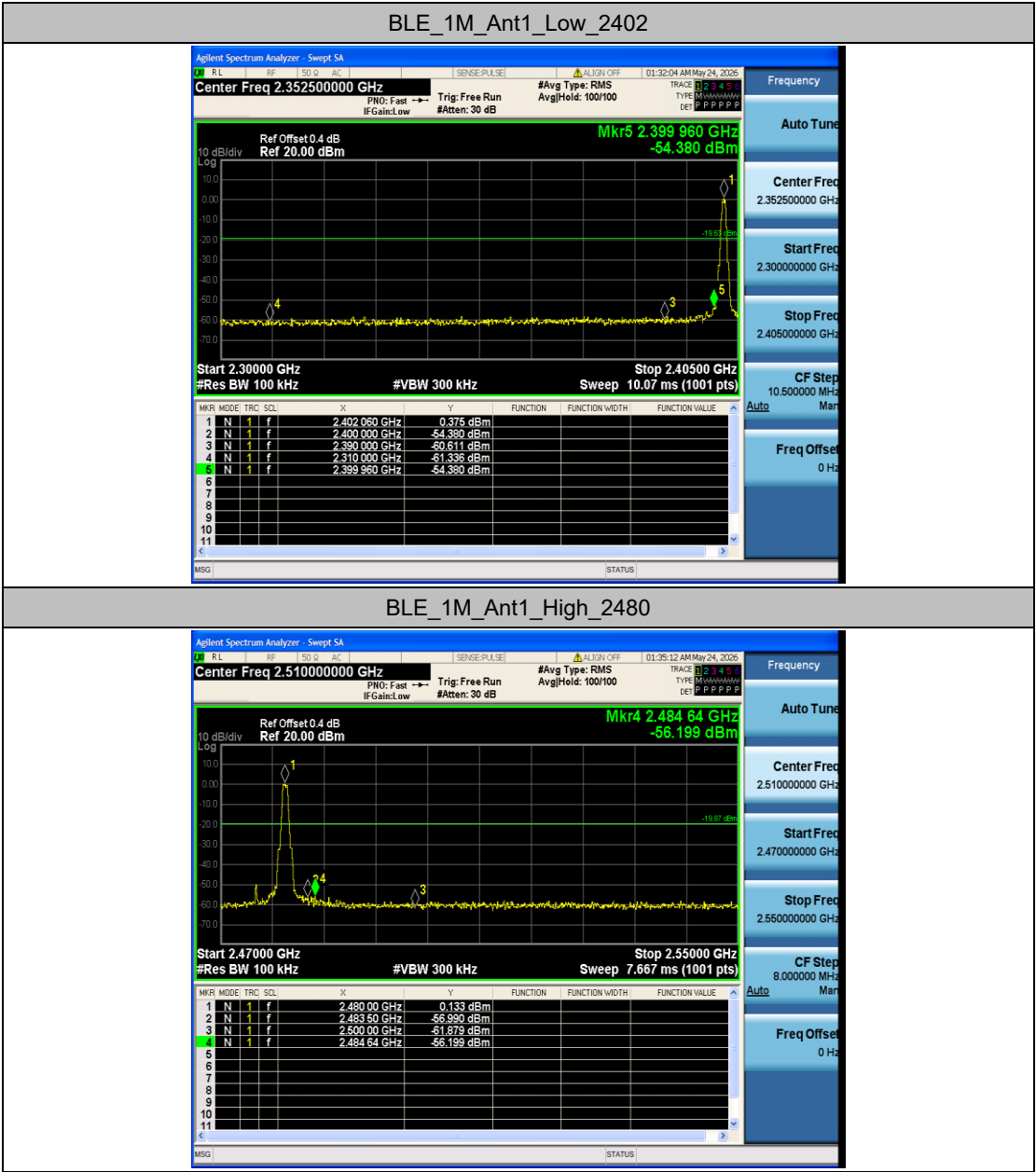


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.38	-54.38	≤-19.63	PASS
		High	2480	0.13	-56.2	≤-19.87	PASS

Test Graphs



Appendix F: Conducted Spurious Emission

Test Result

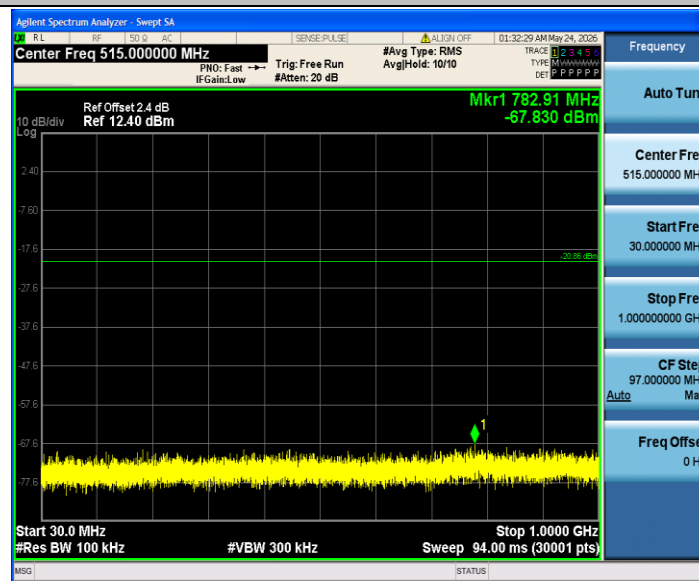
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.86	-0.86	---	PASS
			30~1000	-0.86	-67.83	≤-20.86	PASS
			1000~26500	-0.86	-42.06	≤-20.86	PASS
		2440	Reference	-1.48	-1.48	---	PASS
			30~1000	-1.48	-68.26	≤-21.48	PASS
			1000~26500	-1.48	-39.39	≤-21.48	PASS
		2480	Reference	0.31	0.31	---	PASS
			30~1000	0.31	-67.87	≤-19.69	PASS
			1000~26500	0.31	-39.27	≤-19.69	PASS

Test Graphs

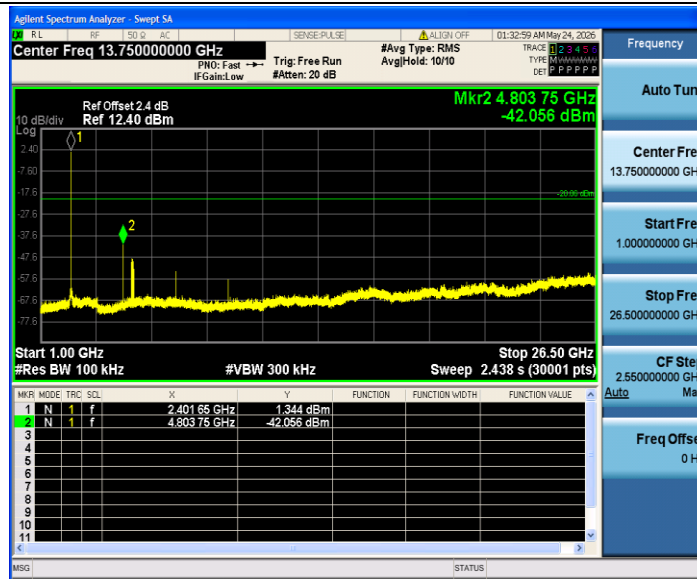
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



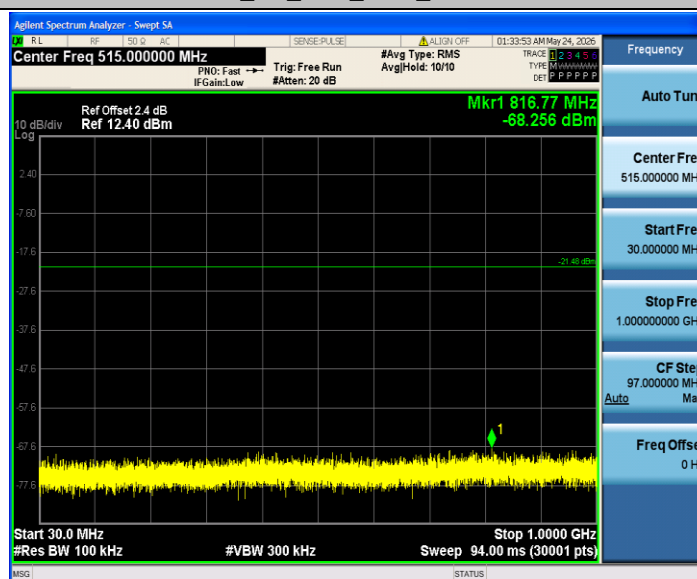
BLE_1M_Ant1_2402_1000~26500



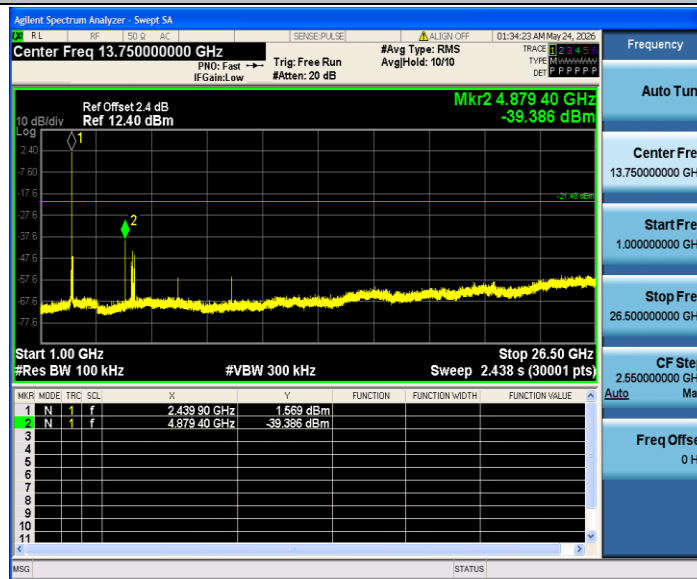
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



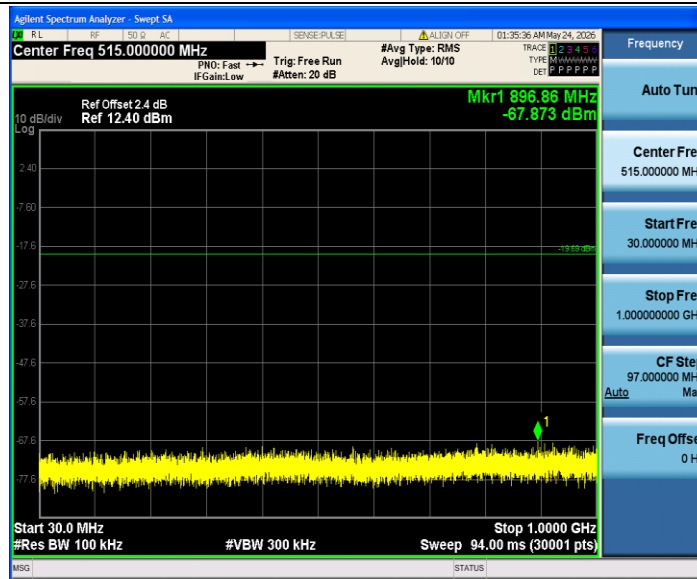
BLE_1M_Ant1_2440_1000~26500



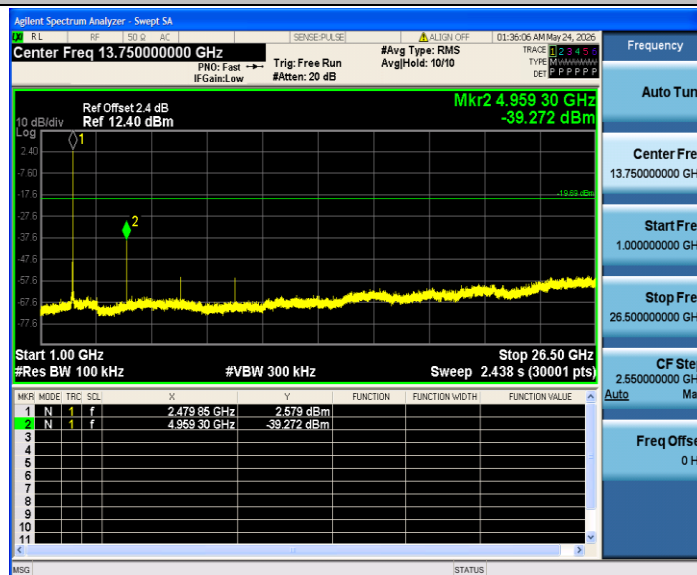
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

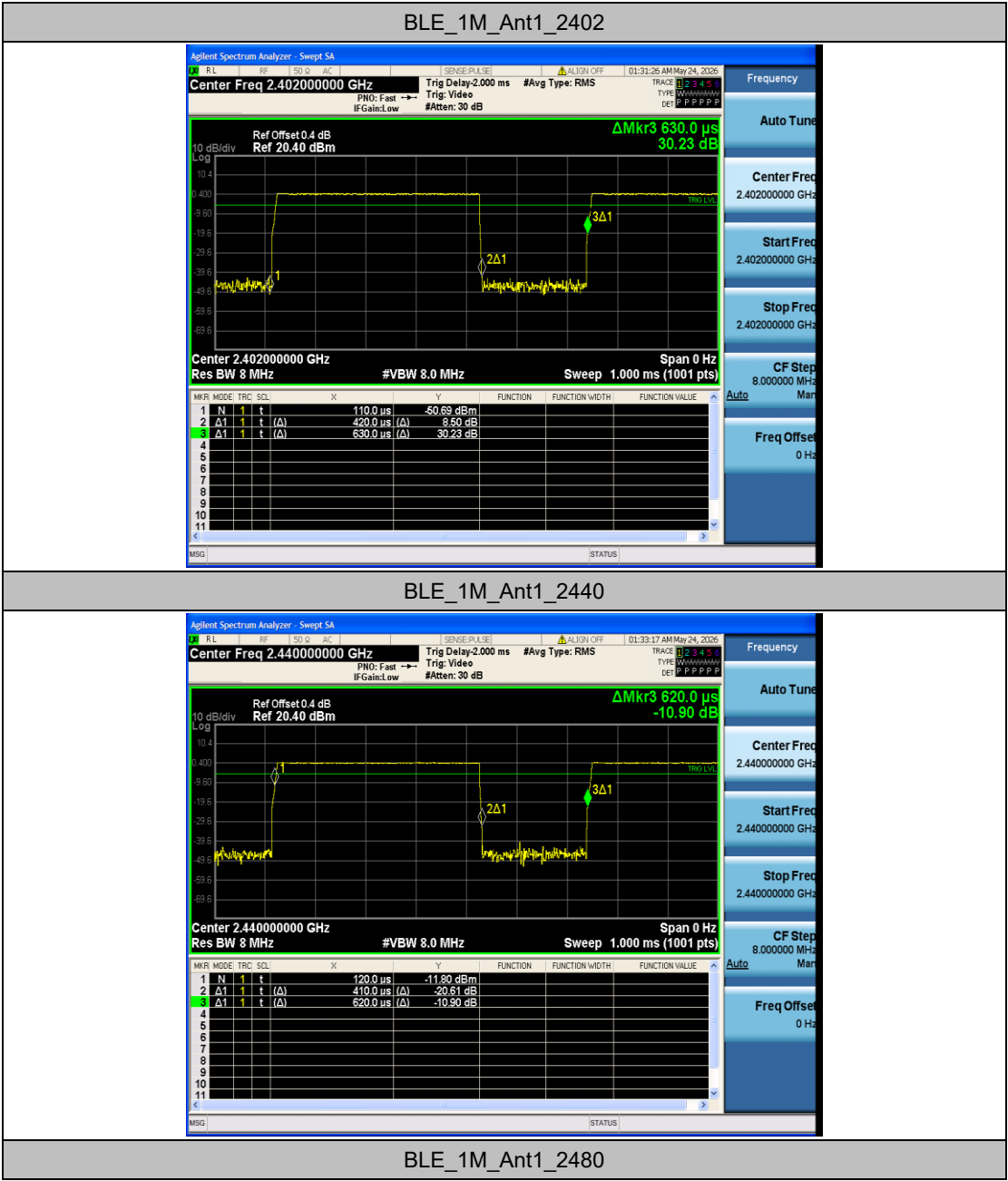


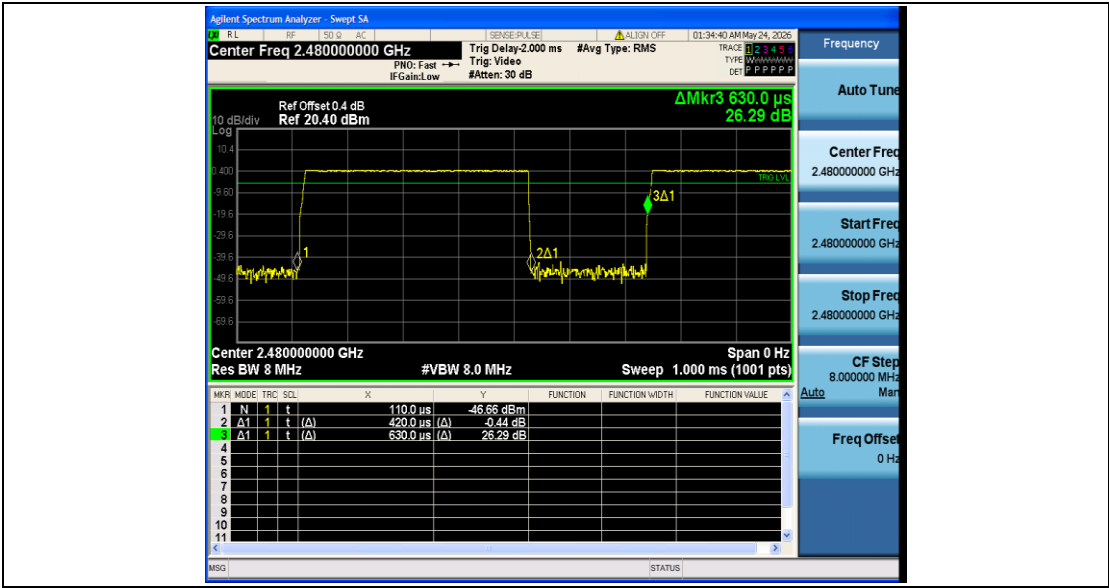
Appendix G: Duty Cycle

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	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.42	0.63	0.6667	66.67	1.76	---	---

Test Graphs





Appendix H: Emissions in Restricted Bands

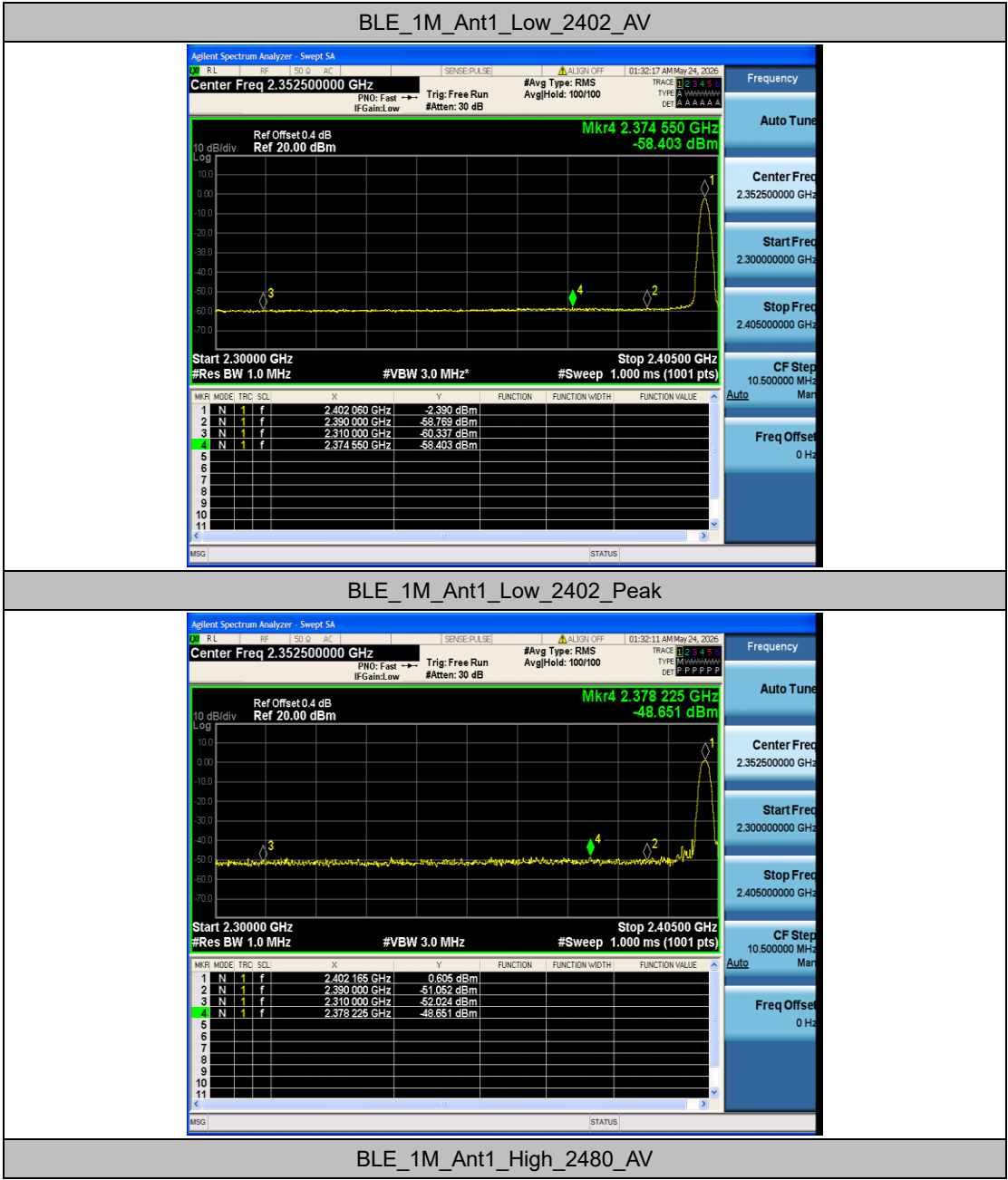
Test Result

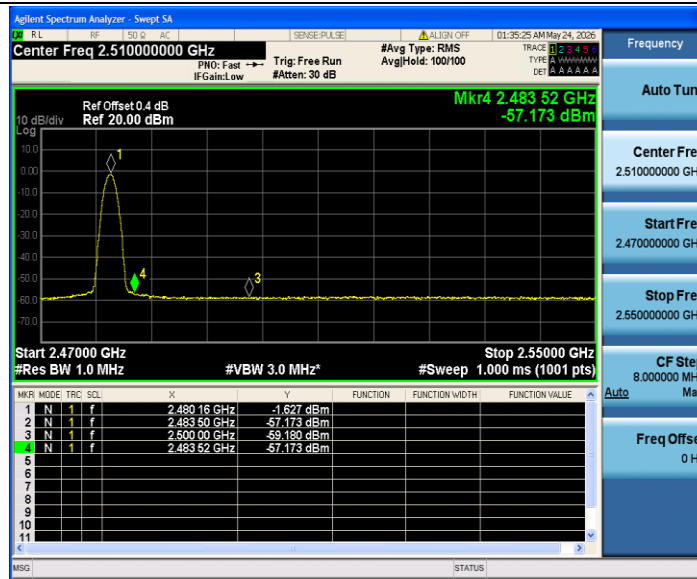
TestMode	Antenna	Channel	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.34	2.00	1.76	38.62	≤54	PASS
				AV	2374.550	-58.4	2.00	1.76	40.56	≤54	PASS
				AV	2390.000	-58.77	2.00	1.76	40.19	≤54	PASS
				Peak	2310.000	-52.02	2.00	0.00	45.18	≤74	PASS
				Peak	2378.225	-48.65	2.00	0.00	48.55	≤74	PASS
				Peak	2390.000	-51.05	2.00	0.00	46.15	≤74	PASS
		High	2480	AV	2483.500	-57.17	2.00	1.76	41.79	≤54	PASS
				AV	2483.520	-57.17	2.00	1.76	41.79	≤54	PASS
				AV	2500.000	-59.18	2.00	1.76	39.78	≤54	PASS
				Peak	2483.500	-48.35	2.00	0.00	48.85	≤74	PASS
				Peak	2485.040	-43.43	2.00	0.00	53.77	≤74	PASS
				Peak	2500.000	-51.26	2.00	0.00	45.94	≤74	PASS

Note:

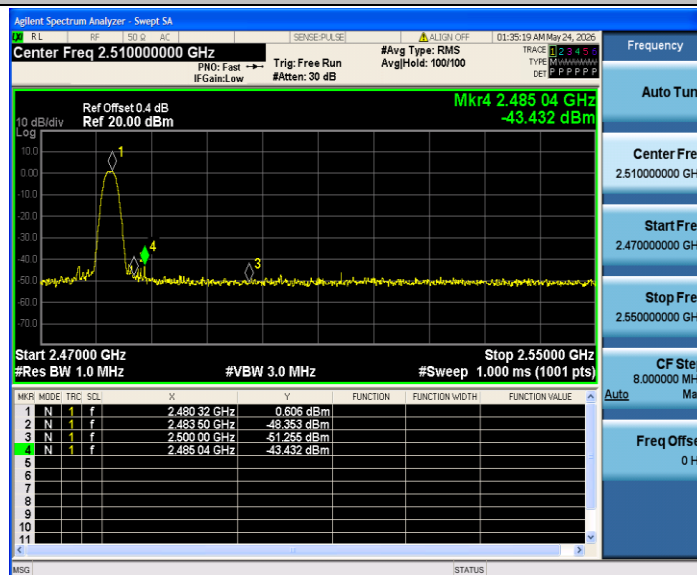
- The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs





BLE_1M_Ant1_High_2480_Peak



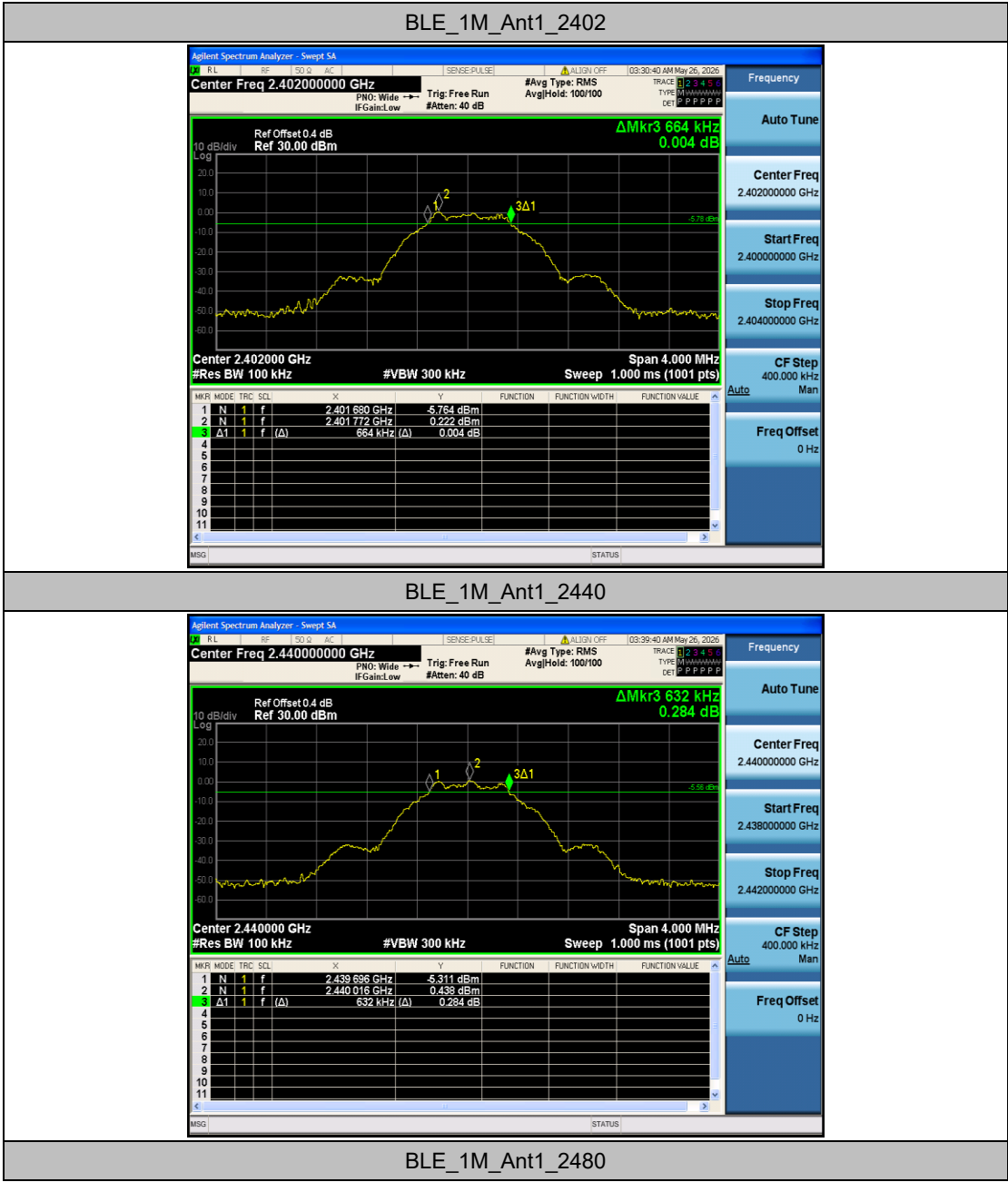
FCC Appendix RF Test Data for BLE module C126446

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.680	2402.344	0.5	PASS
		2440	0.632	2439.696	2440.328	0.5	PASS
		2480	0.664	2479.680	2480.344	0.5	PASS

Test Graphs



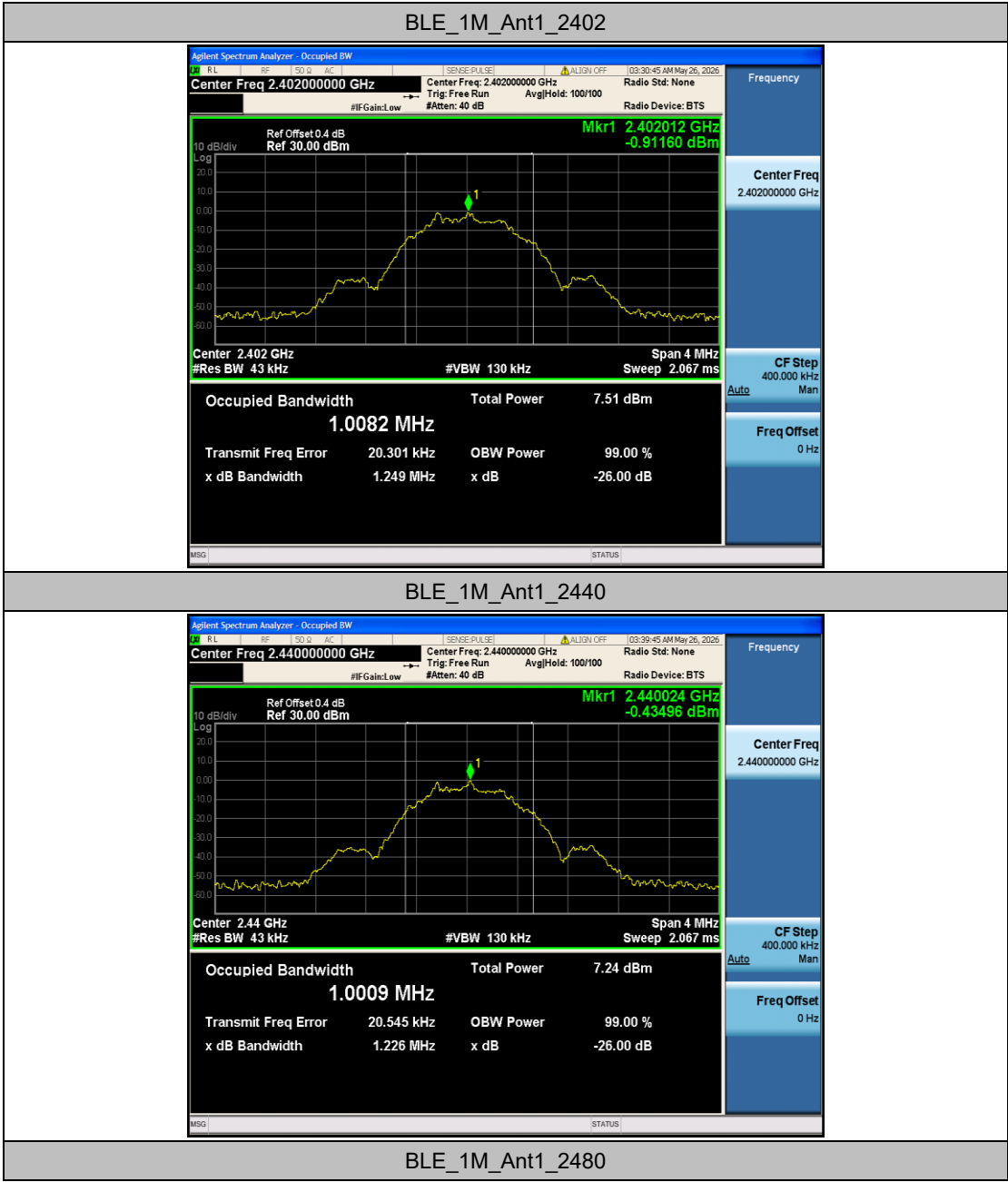


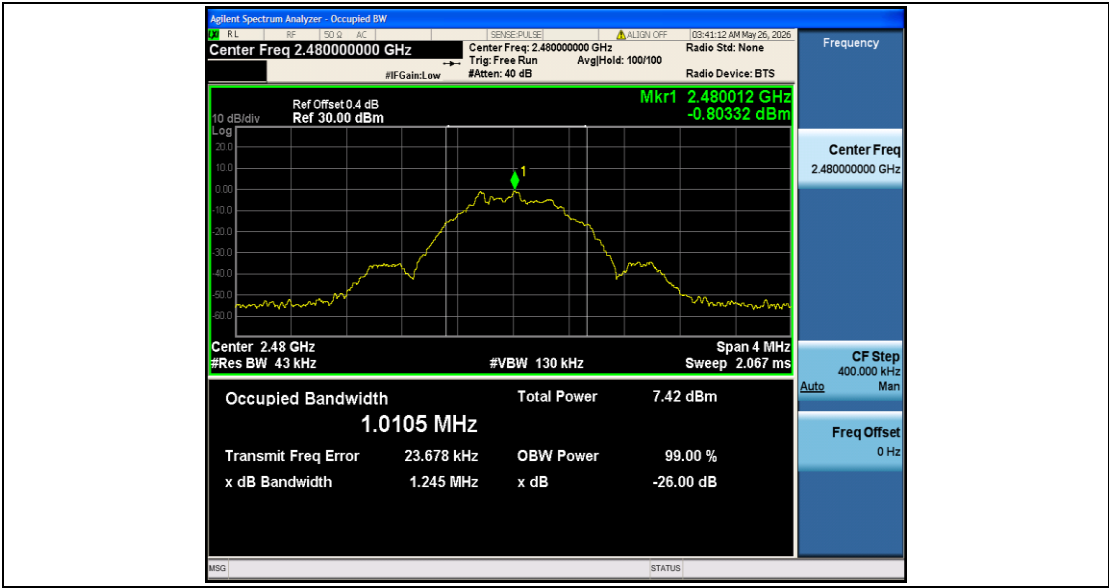
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0082	2401.5162	2402.5244	---	---
		2440	1.0009	2439.5201	2440.5210	---	---
		2480	1.0105	2479.5184	2480.5289	---	---

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	0.70	≤30	PASS
		2440	0.58	≤30	PASS
		2480	0.63	≤30	PASS

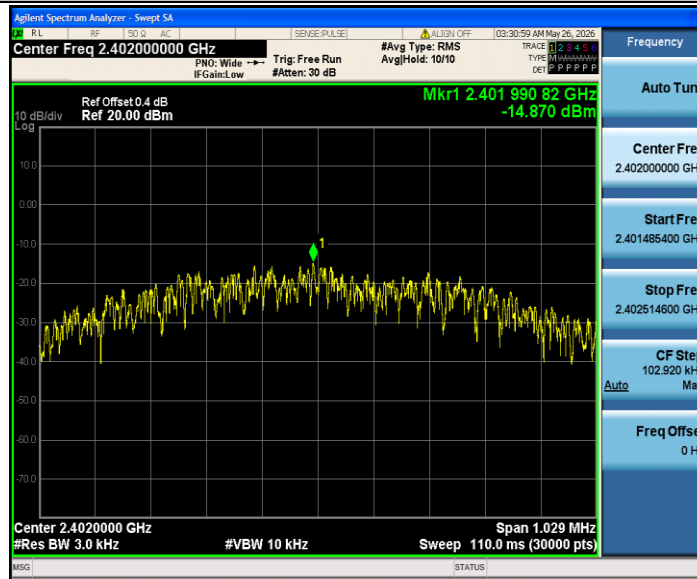
Appendix D: Maximum power spectral density

Test Result

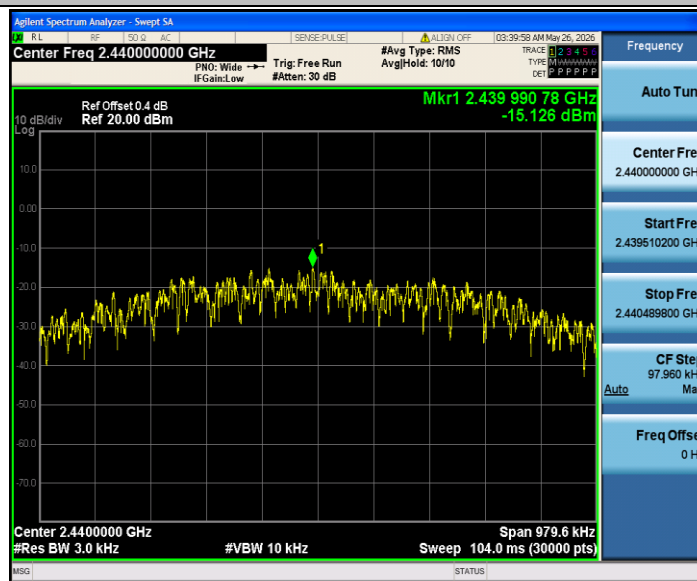
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.87	≤8.00	PASS
		2440	-15.13	≤8.00	PASS
		2480	-14.76	≤8.00	PASS

Test Graphs

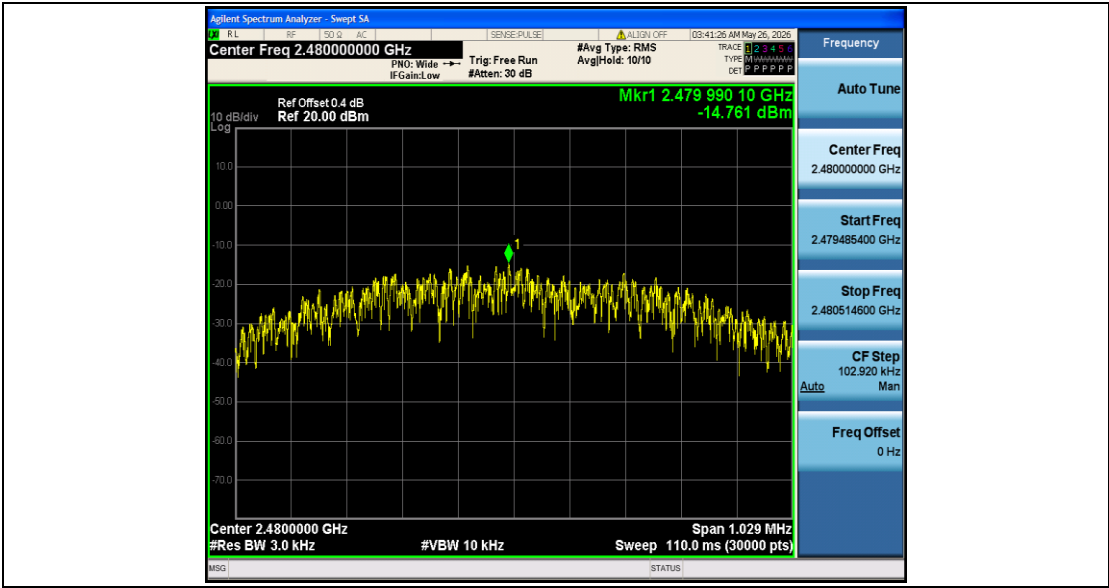
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

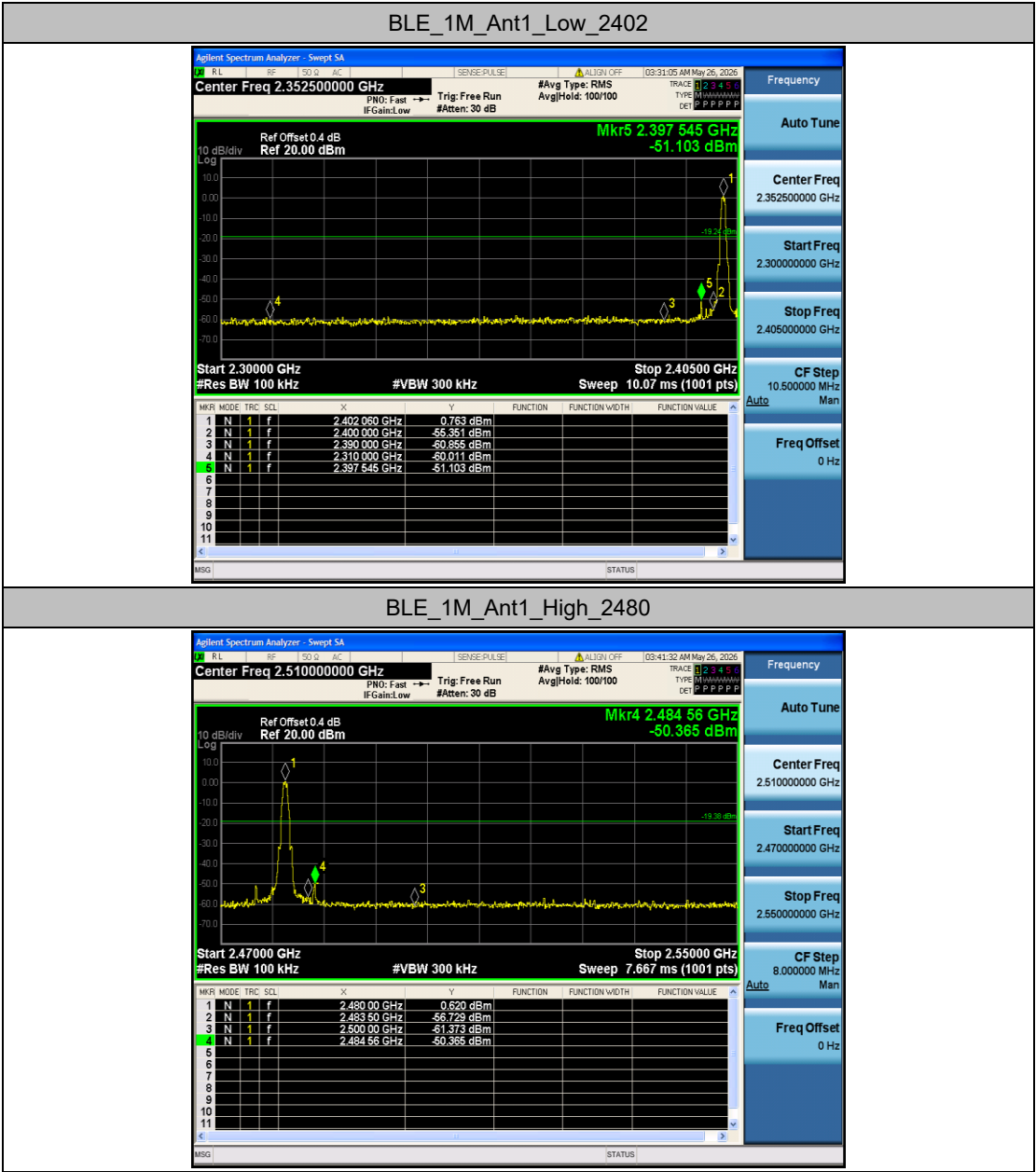


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.76	-51.1	≤ -19.24	PASS
		High	2480	0.62	-50.37	≤ -19.38	PASS

Test Graphs

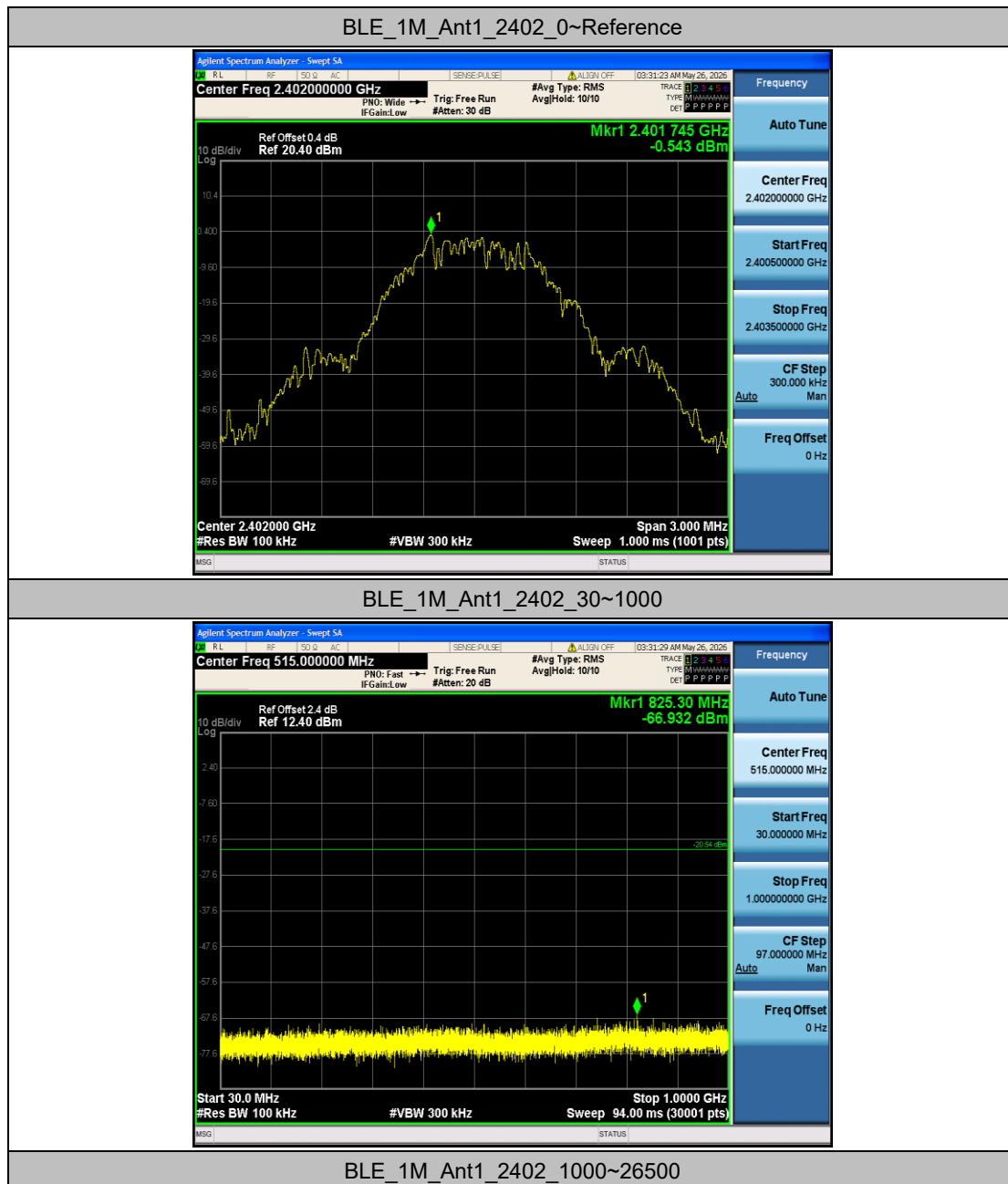


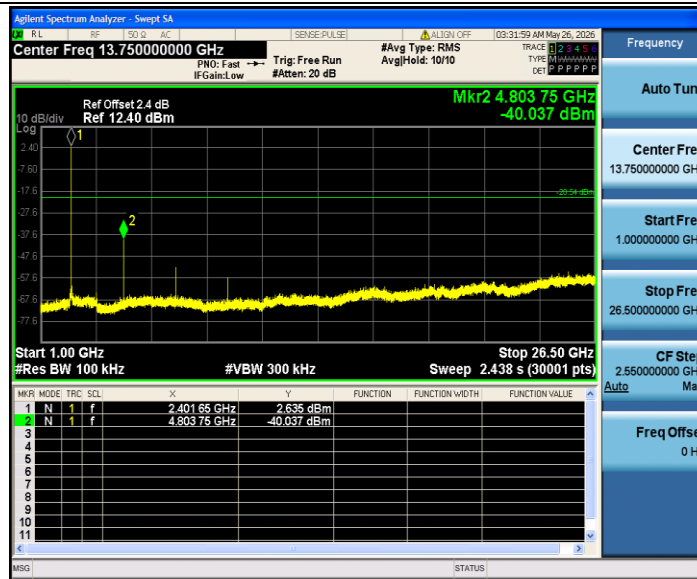
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.54	-0.54	---	PASS
			30~1000	-0.54	-66.93	≤-20.54	PASS
			1000~26500	-0.54	-40.04	≤-20.54	PASS
		2440	Reference	-0.76	-0.76	---	PASS
			30~1000	-0.76	-68.52	≤-20.76	PASS
			1000~26500	-0.76	-38.98	≤-20.76	PASS
		2480	Reference	0.14	0.14	---	PASS
			30~1000	0.14	-68	≤-19.86	PASS
			1000~26500	0.14	-38.35	≤-19.86	PASS

Test Graphs

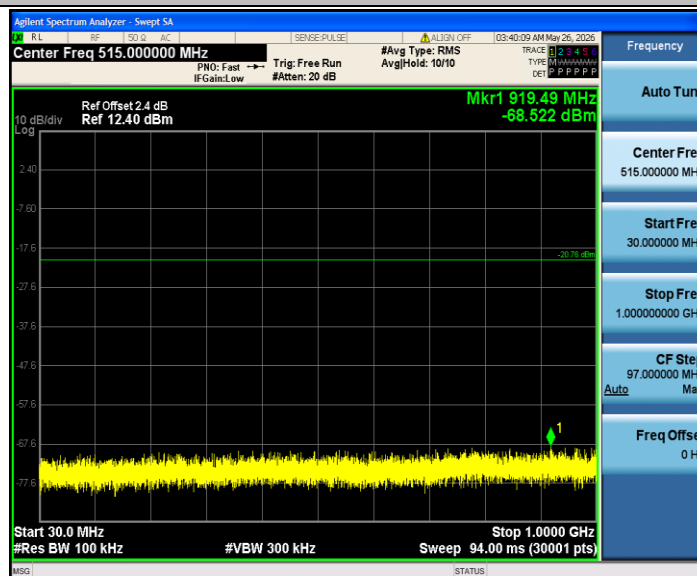




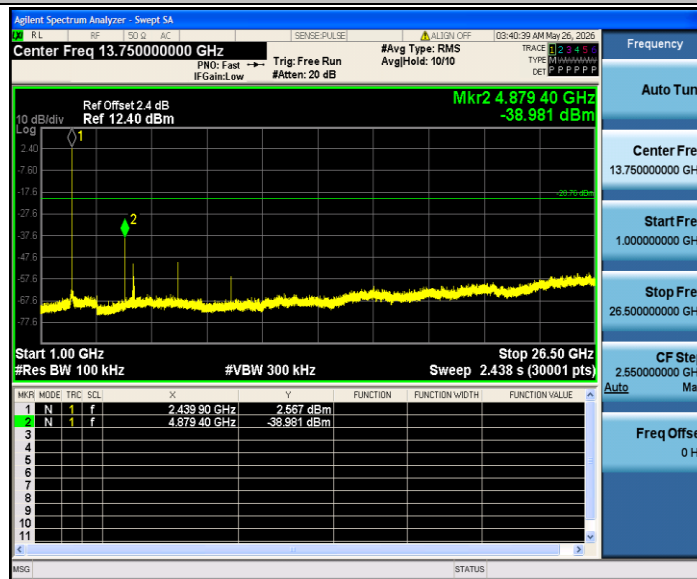
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



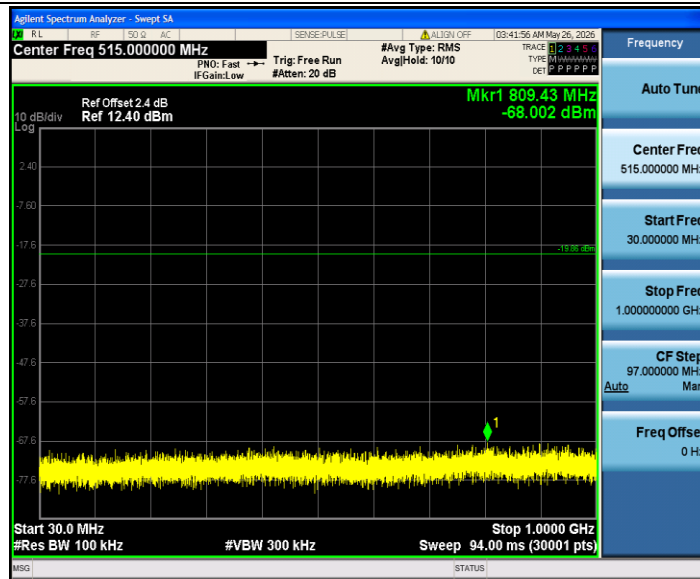
BLE_1M_Ant1_2440_1000~26500



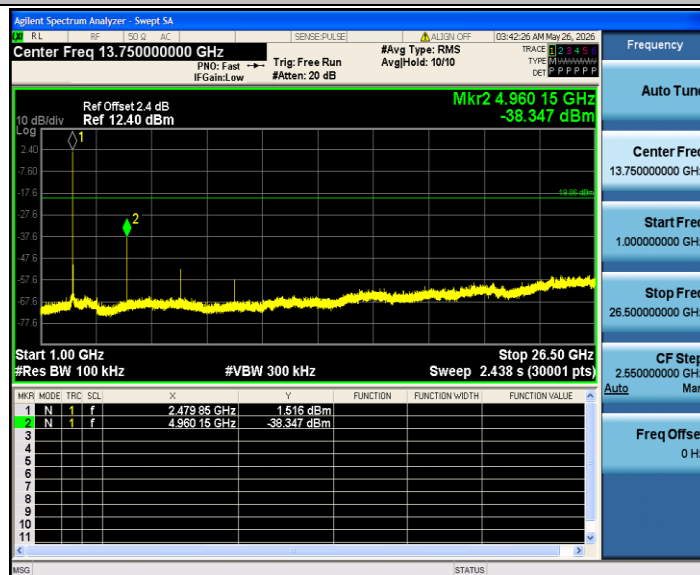
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

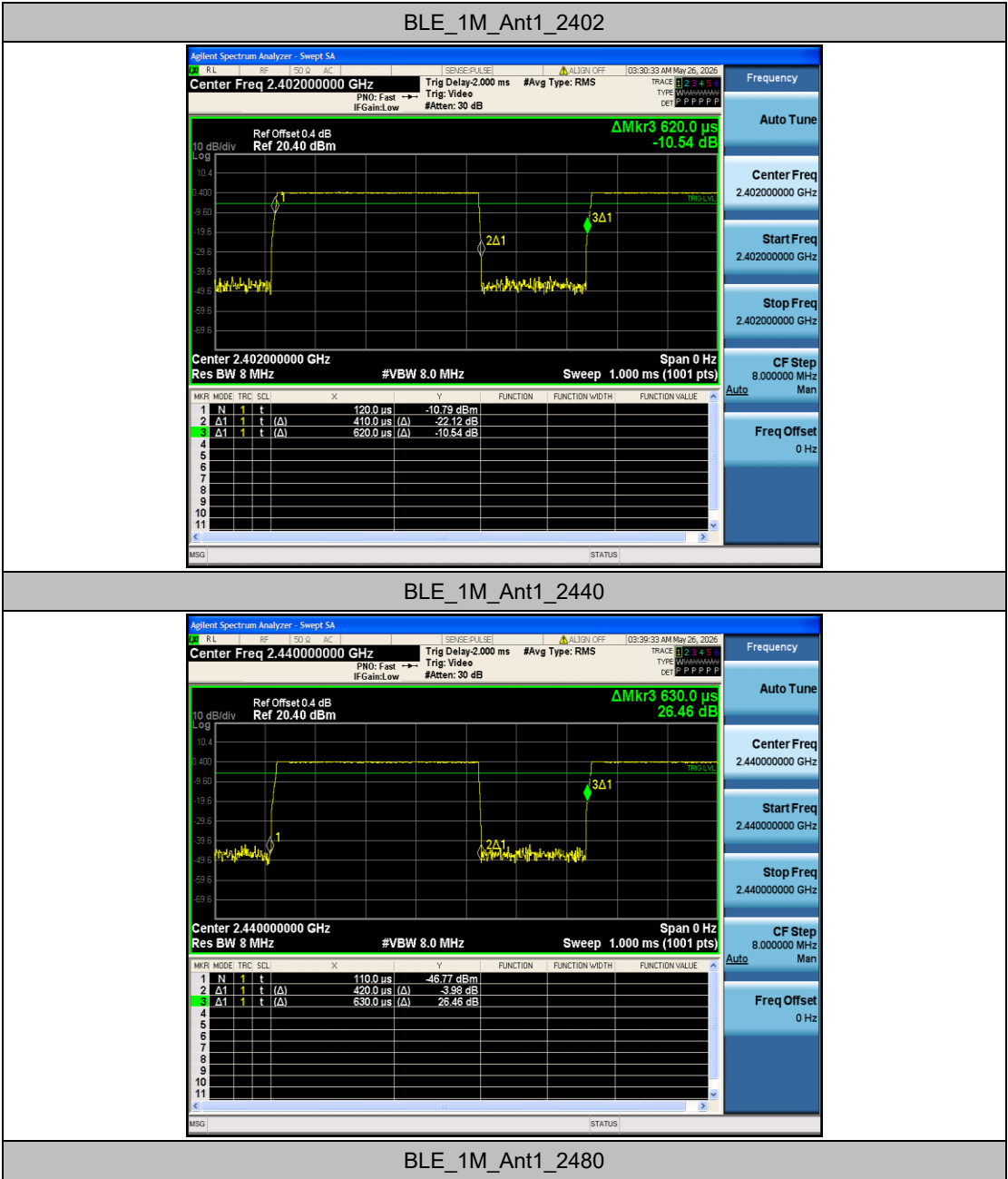


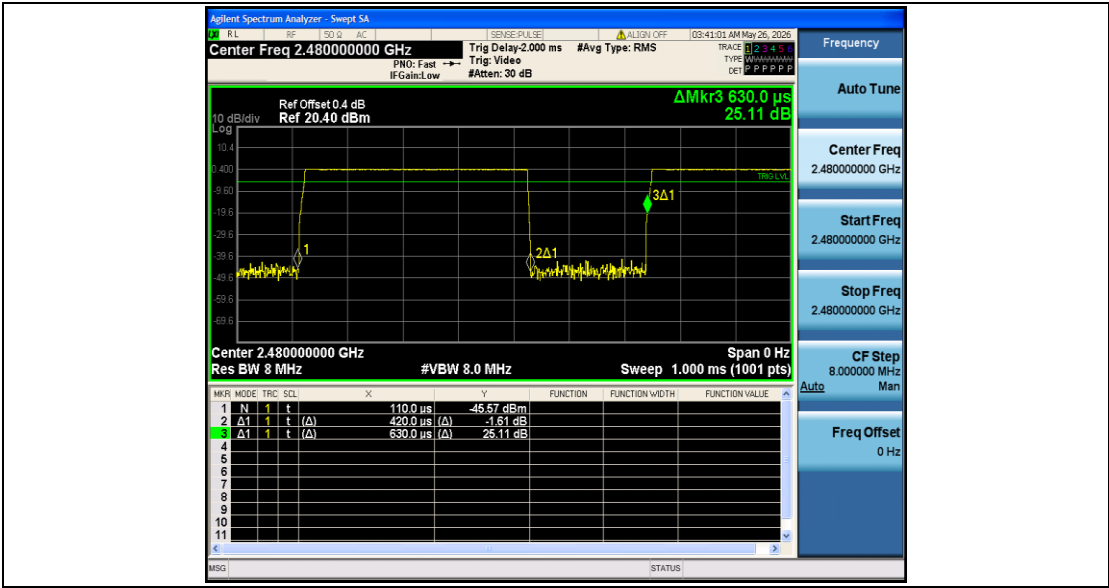
Appendix G: Duty Cycle

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	0.42	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

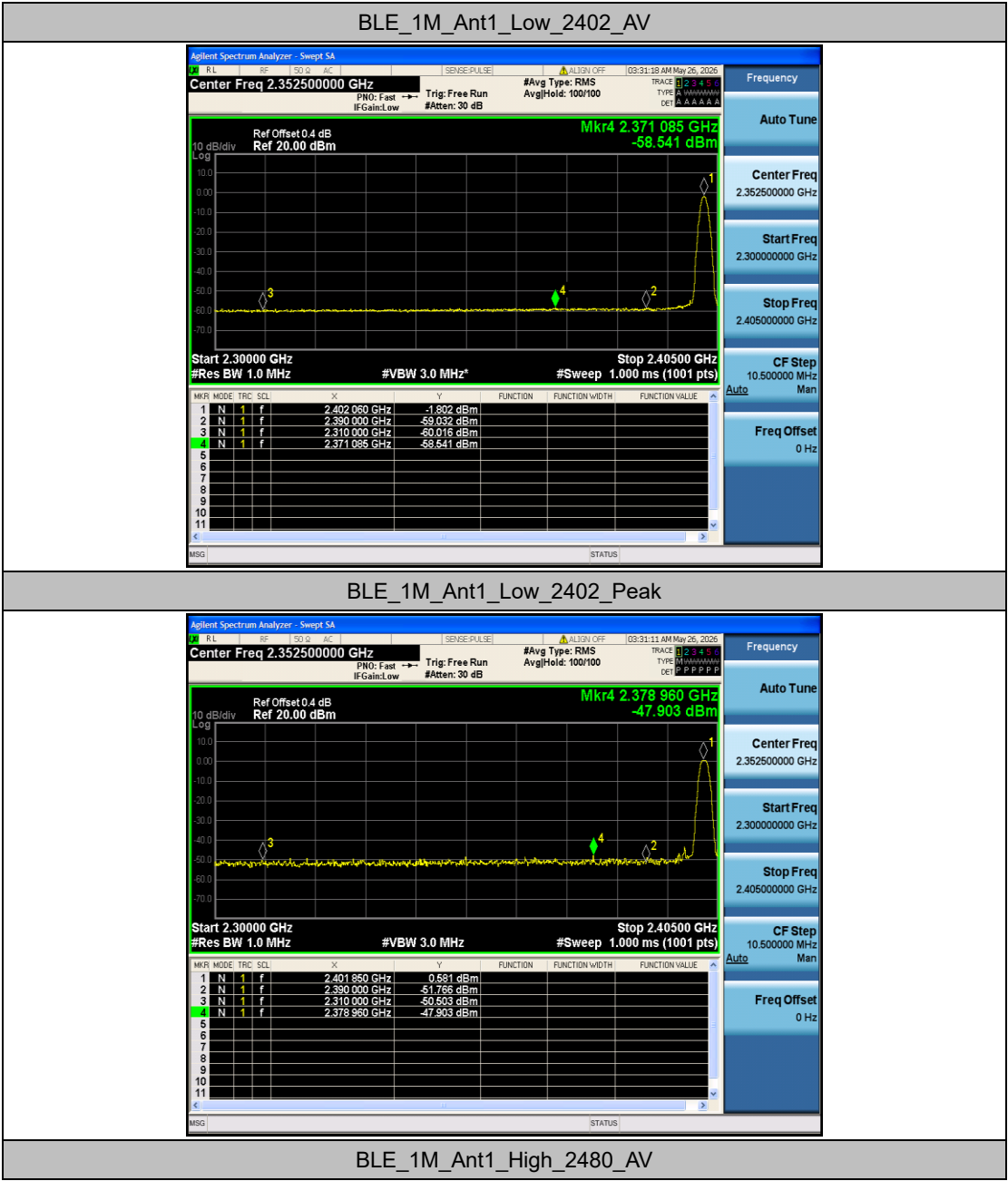
Test Result

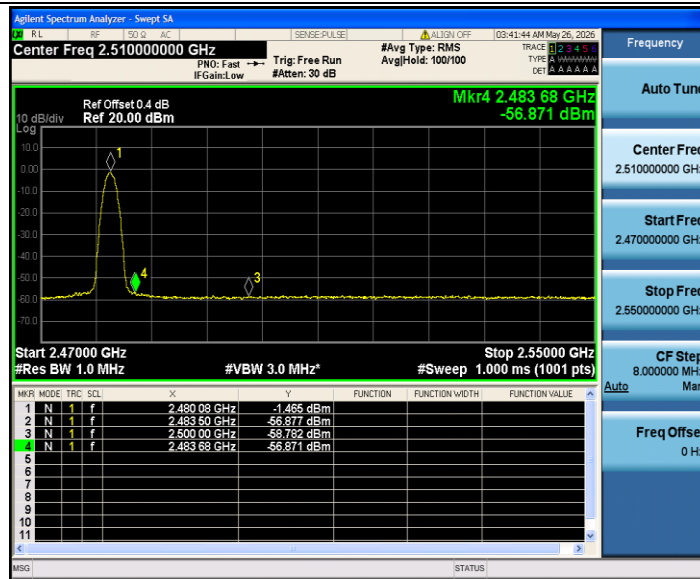
TestMode	Antenna	Channel	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.02	2.00	1.80	38.98	≤54	PASS
				AV	2371.085	-58.54	2.00	1.80	40.46	≤54	PASS
				AV	2390.000	-59.03	2.00	1.80	39.97	≤54	PASS
				Peak	2310.000	-50.5	2.00	0.00	46.70	≤74	PASS
				Peak	2378.960	-47.9	2.00	0.00	49.30	≤74	PASS
				Peak	2390.000	-51.77	2.00	0.00	45.43	≤74	PASS
		High	2480	AV	2483.500	-56.88	2.00	1.76	42.08	≤54	PASS
				AV	2483.680	-56.87	2.00	1.76	42.09	≤54	PASS
				AV	2500.000	-58.78	2.00	1.76	40.18	≤54	PASS
				Peak	2483.500	-50.27	2.00	0.00	46.93	≤74	PASS
				Peak	2484.240	-43.63	2.00	0.00	53.57	≤74	PASS
				Peak	2500.000	-50.65	2.00	0.00	46.55	≤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

