

FCC Appendix RF Test Data for BLE

FCC ID : 2BDAL-RC48

Company : Huizhou Wanzhisheng New Energy Technology
CO., LTD

EUT : Bluetooth voice remote control

Model Number : RC-48

Report No. : CTA26041701101

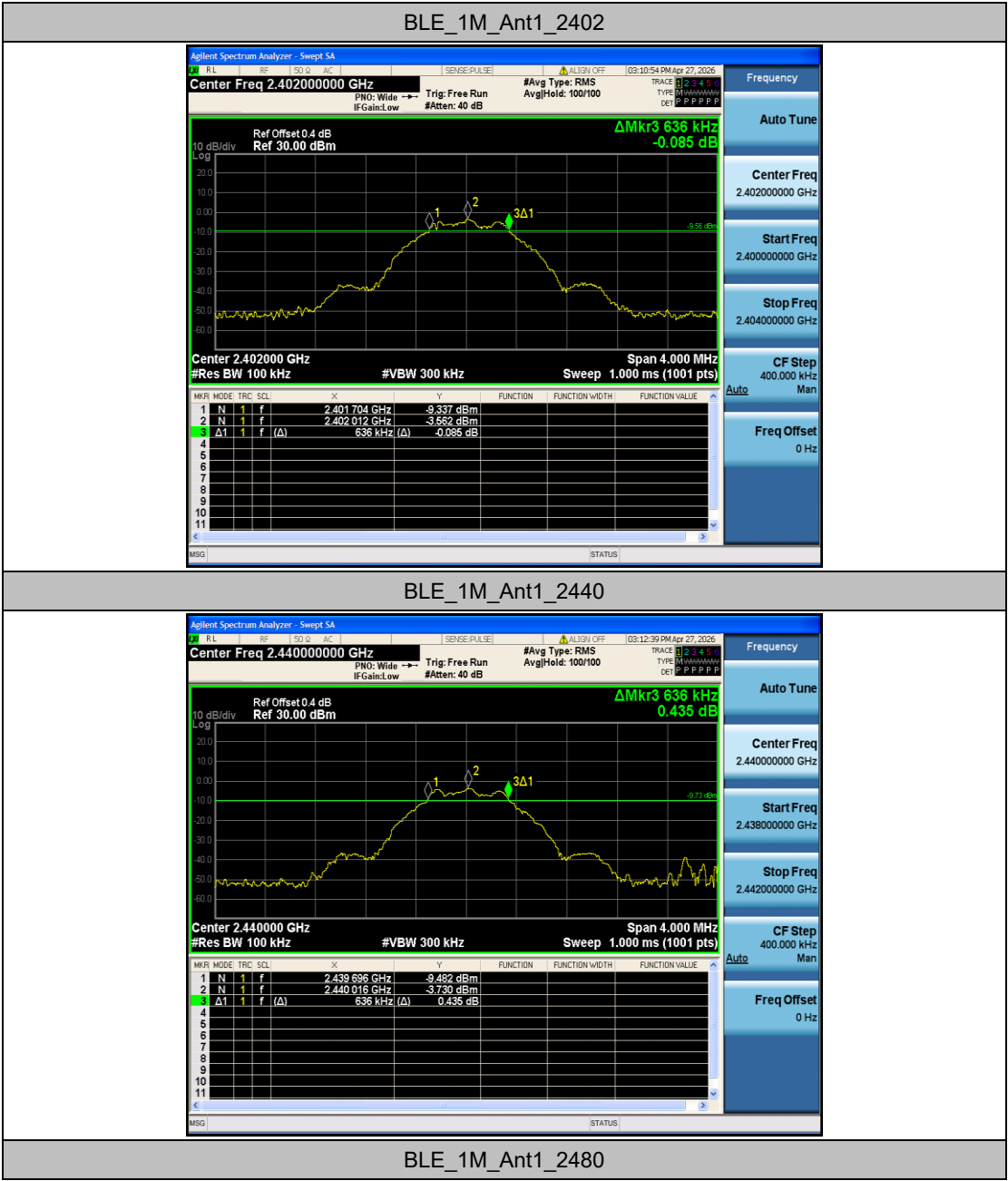
Reviewed By : Eric Wang

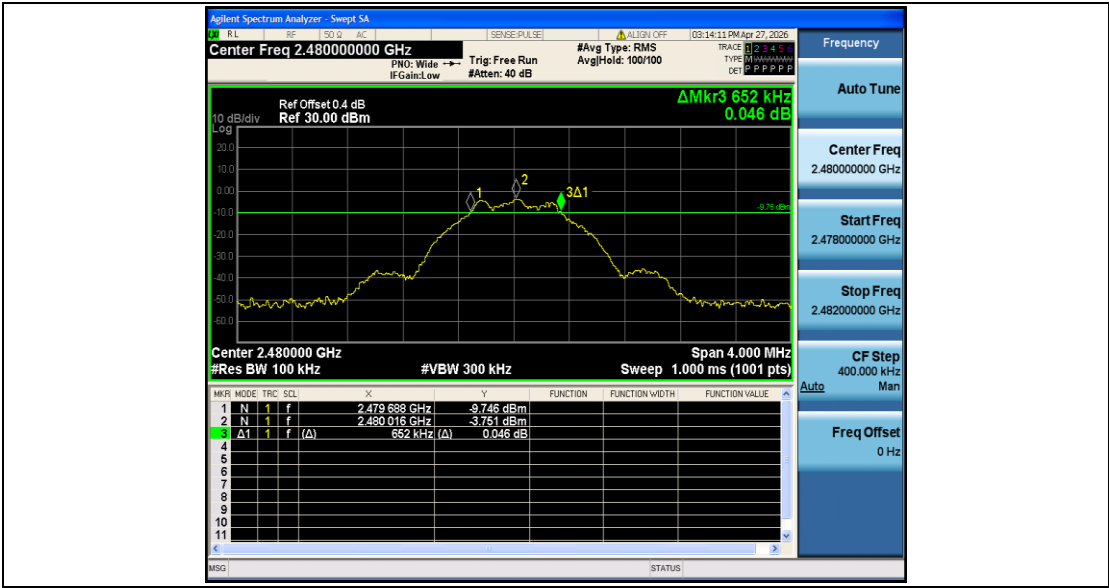
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.636	2401.704	2402.340	0.5	PASS
		2440	0.636	2439.696	2440.332	0.5	PASS
		2480	0.652	2479.688	2480.340	0.5	PASS

Test Graphs



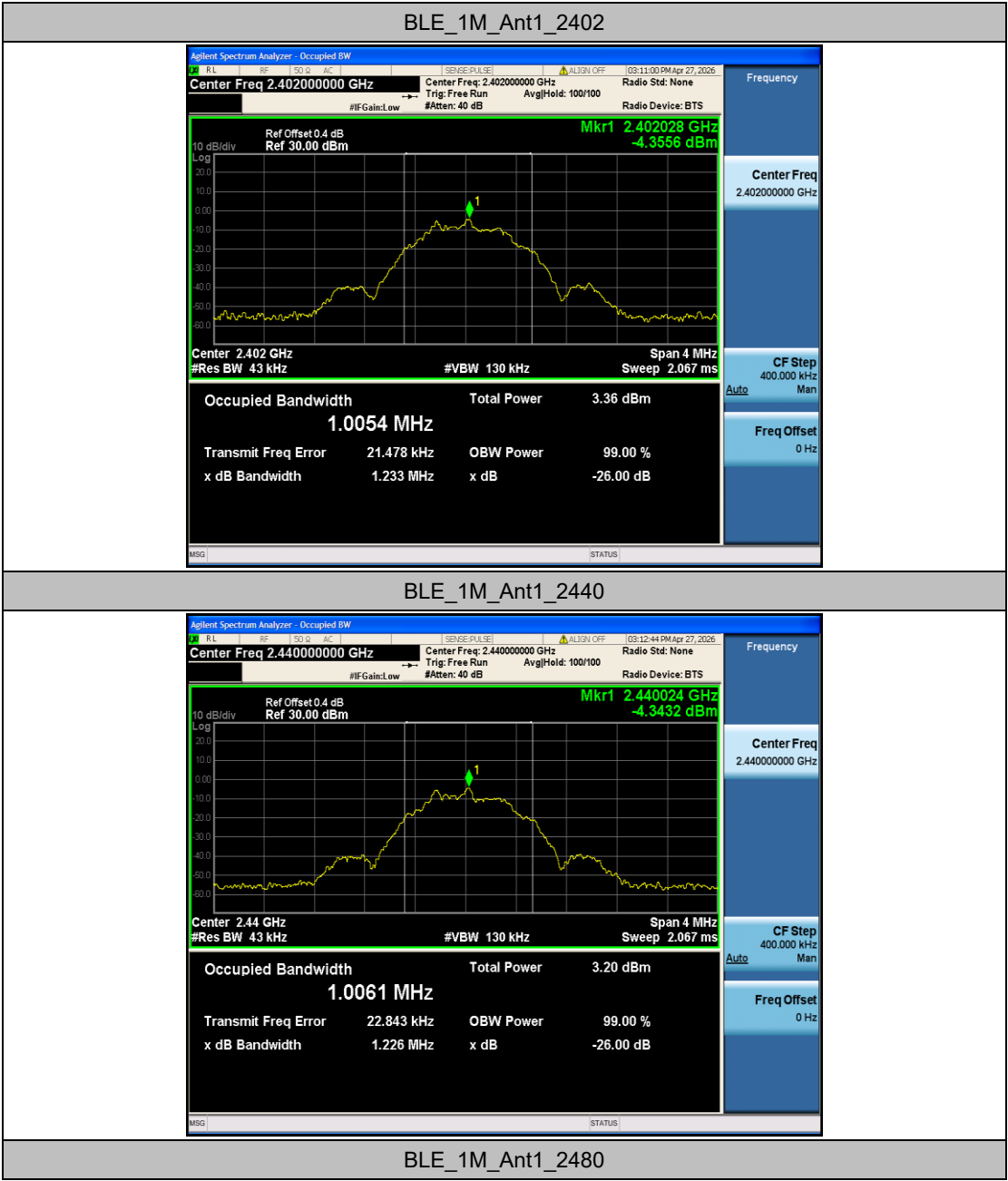


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0054	2401.5188	2402.5242	---	---
		2440	1.0061	2439.5198	2440.5259	---	---
		2480	1.0084	2479.5166	2480.5250	---	---

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	-3.26	≤30	PASS
		2440	-3.50	≤30	PASS
		2480	-3.47	≤30	PASS

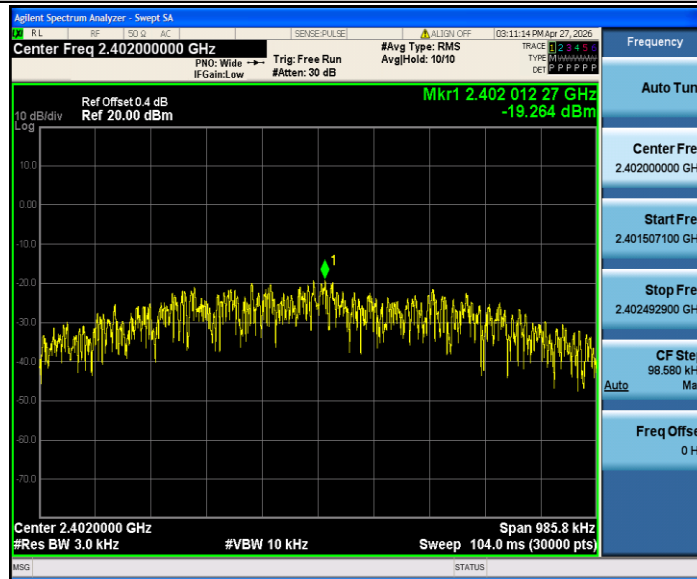
Appendix D: Maximum power spectral density

Test Result

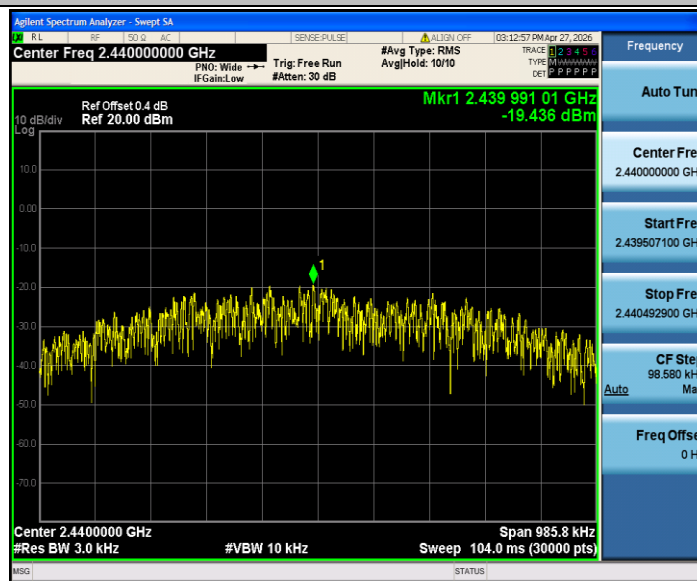
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.26	≤8.00	PASS
		2440	-19.44	≤8.00	PASS
		2480	-19.33	≤8.00	PASS

Test Graphs

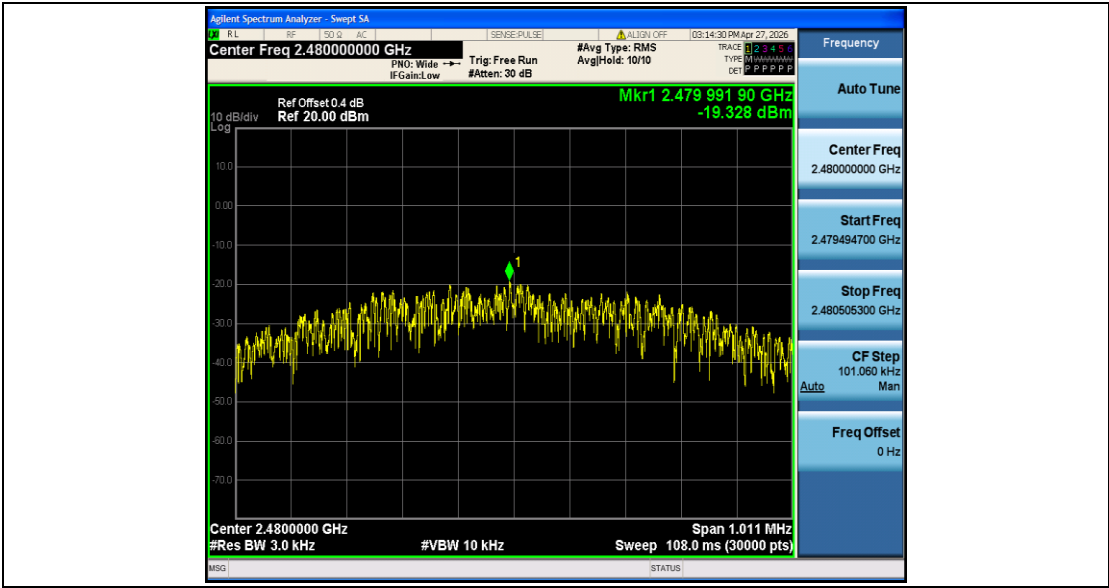
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

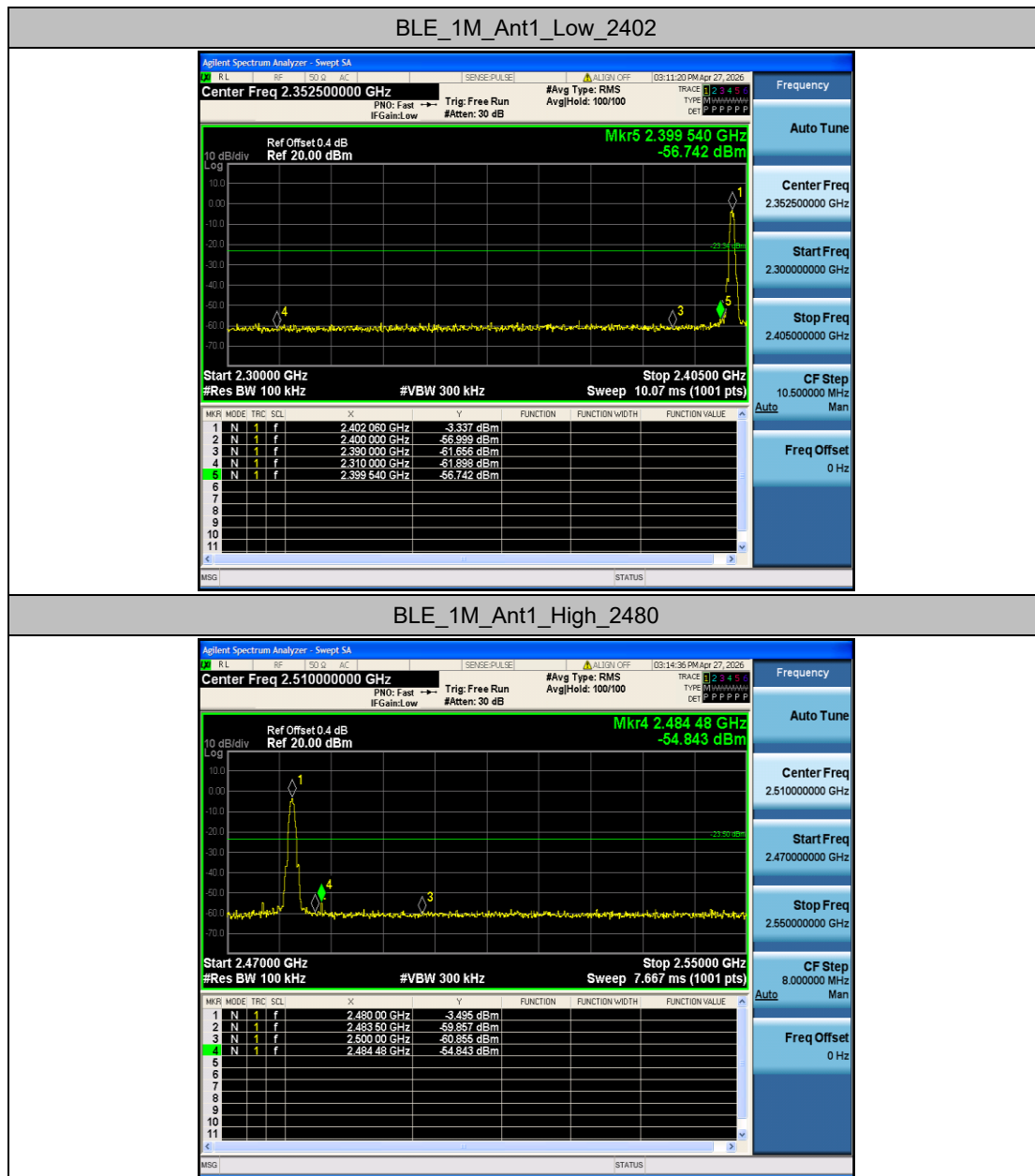


Appendix E: Band edge measurements

Test Result

TestMod e	Antenn a	ChNam e	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-3.34	-56.74	≤ -23.34	PASS
		High	2480	-3.50	-54.84	≤ -23.5	PASS

Test Graphs

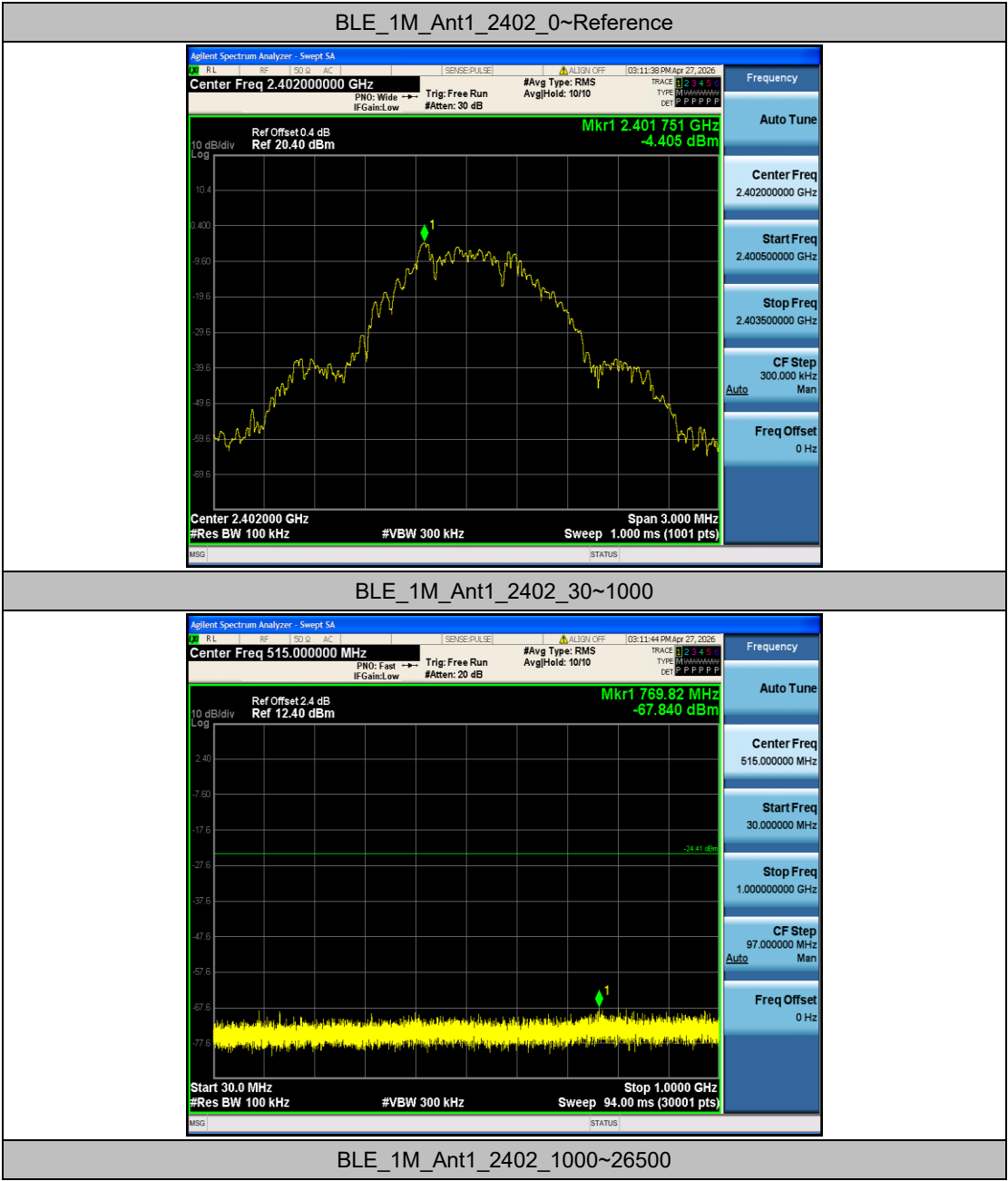


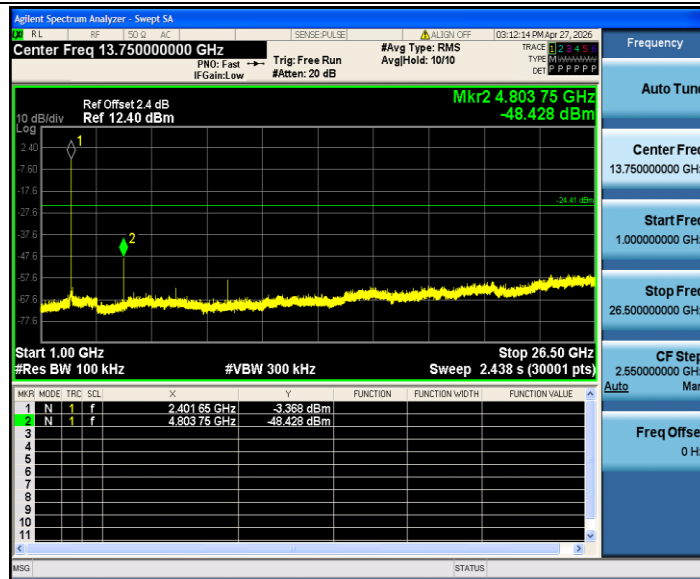
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.41	-4.41	---	PASS
			30~1000	-4.41	-67.84	≤-24.41	PASS
			1000~26500	-4.41	-48.43	≤-24.41	PASS
		2440	Reference	-3.94	-3.94	---	PASS
			30~1000	-3.94	-66.69	≤-23.94	PASS
			1000~26500	-3.94	-47.54	≤-23.94	PASS
		2480	Reference	-5.22	-5.22	---	PASS
			30~1000	-5.22	-67.17	≤-25.22	PASS
			1000~26500	-5.22	-46.77	≤-25.22	PASS

Test Graphs

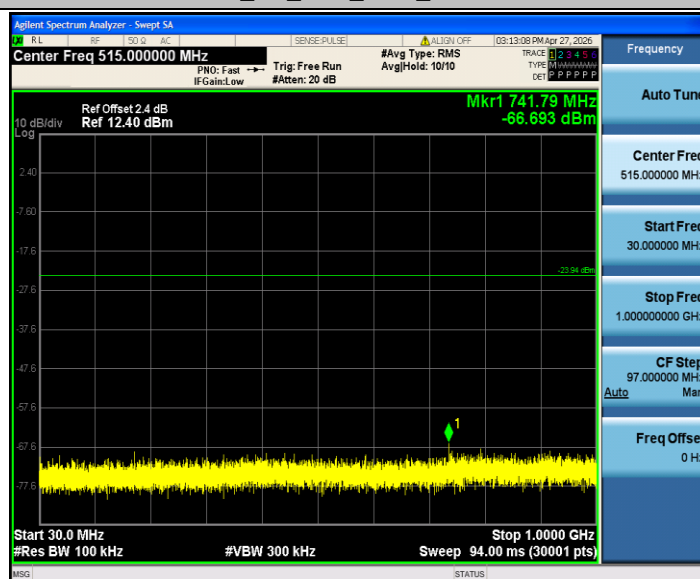




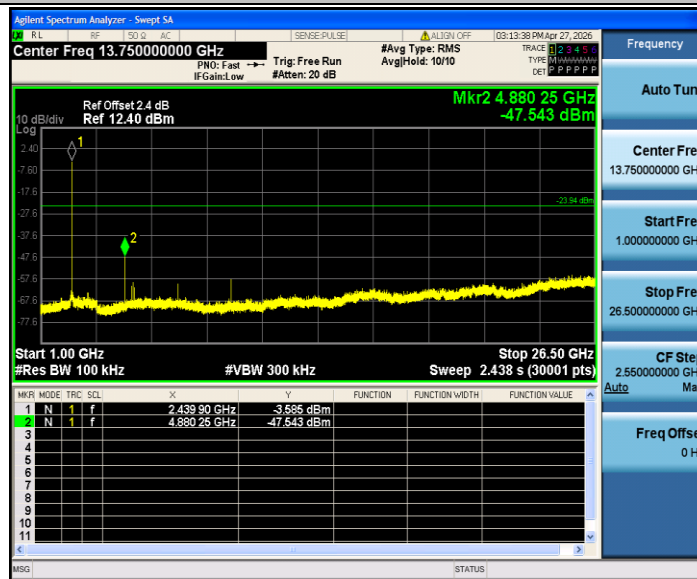
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



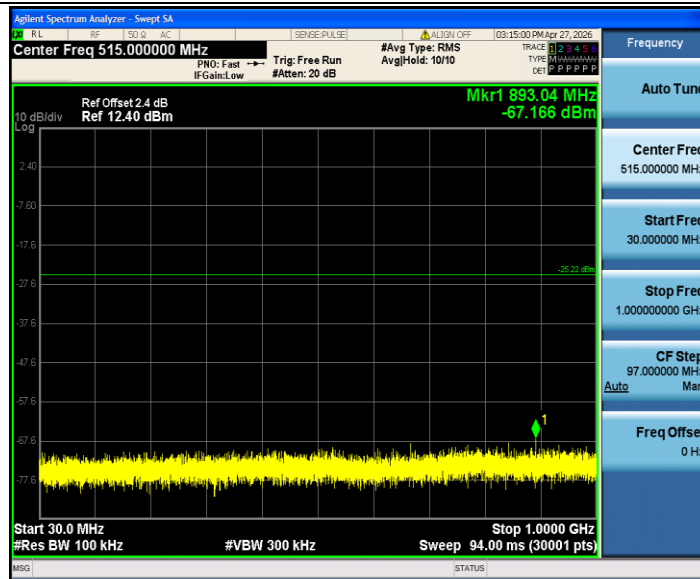
BLE_1M_Ant1_2440_1000~26500



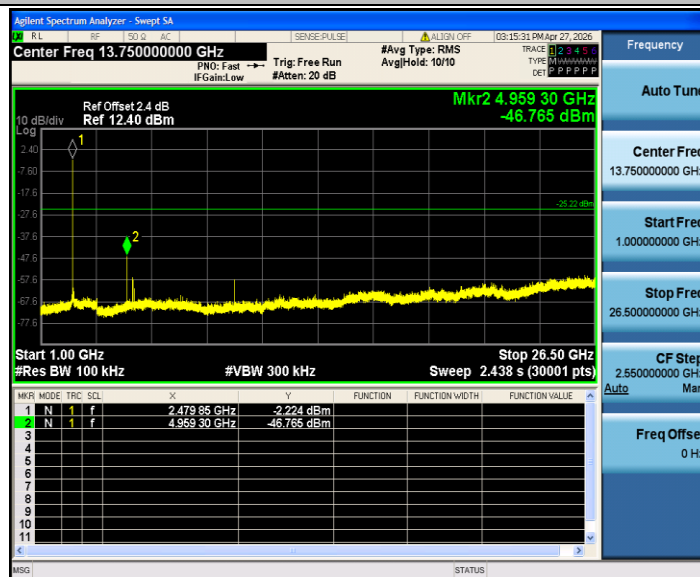
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

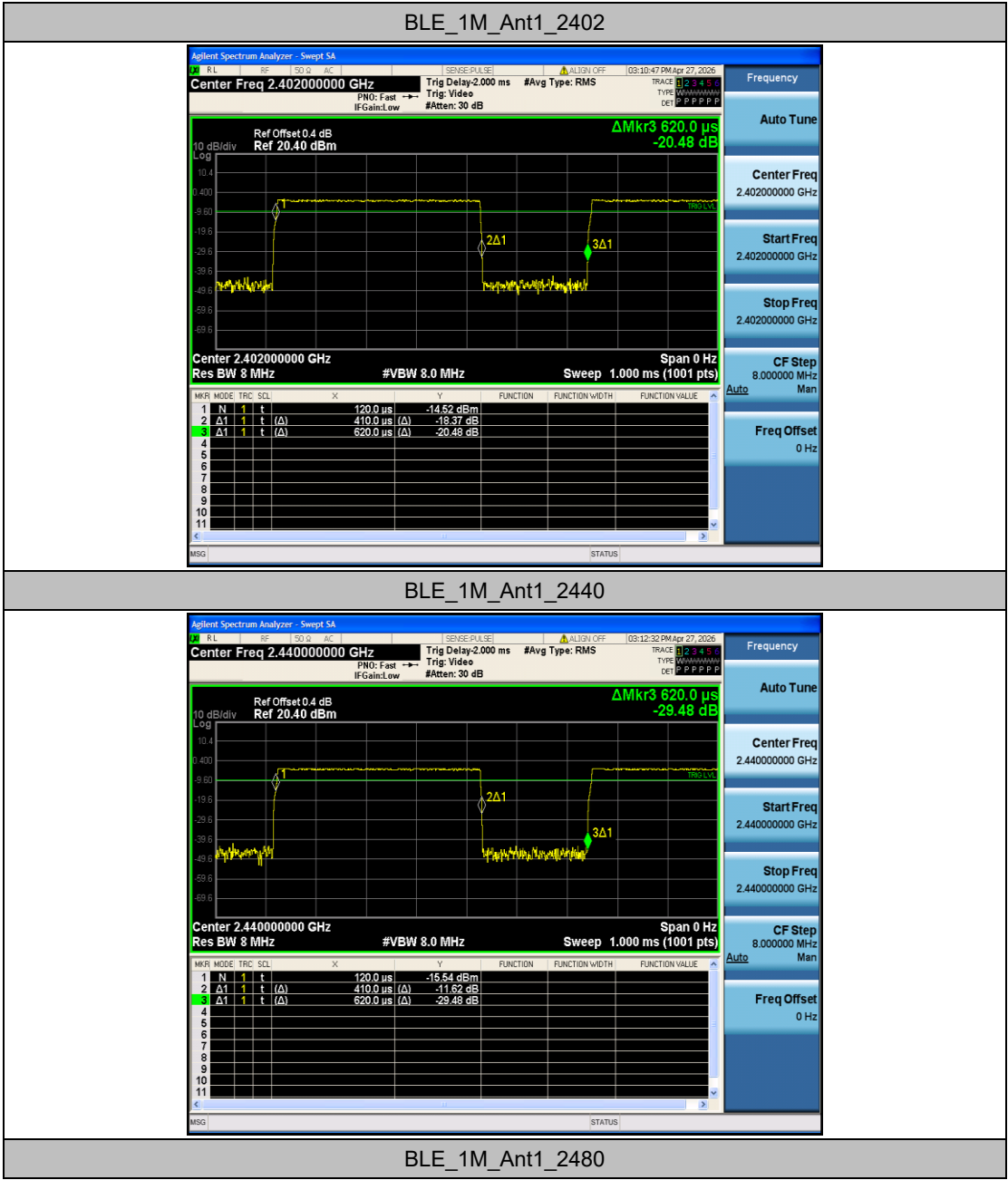


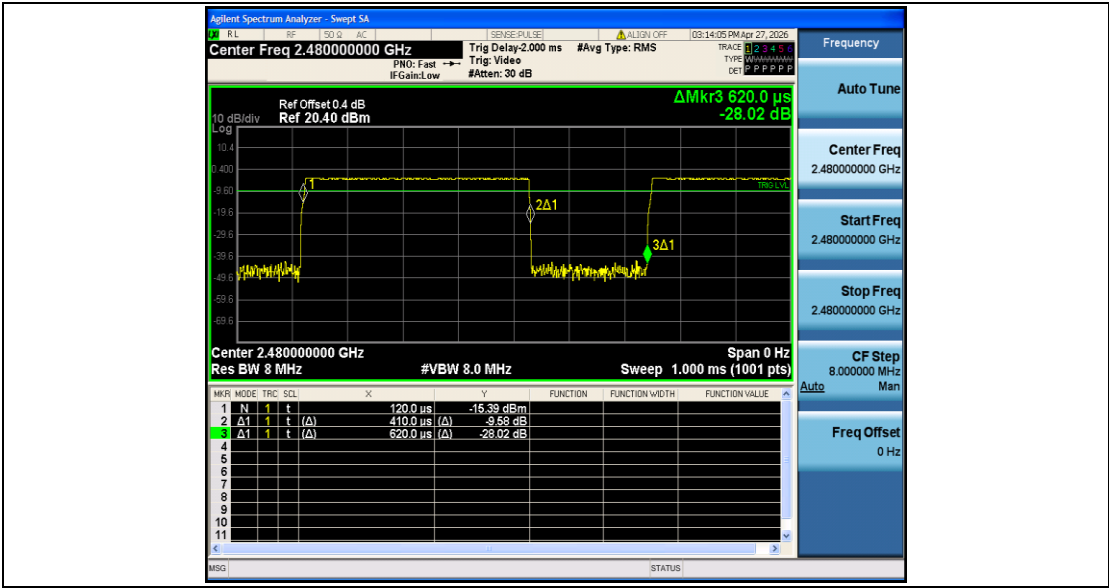
Appendix G: Duty Cycle

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

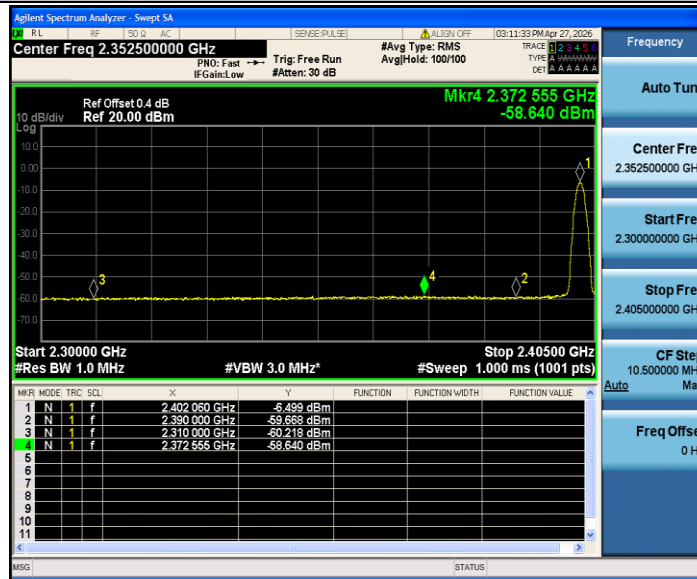
TestMode	Antenna	Channel Name	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	EIRP [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.22	2.00	1.80	-56.42	≤-41.20	38.78	≤54	PASS
				AV	2372.555	-58.64	2.00	1.80	-54.84	≤-41.20	40.36	≤54	PASS
				AV	2390.000	-59.67	2.00	1.80	-55.87	≤-41.20	39.33	≤54	PASS
				Peak	2310.000	-52.34	2.00	0.00	-50.34	≤-21.20	44.86	≤74	PASS
				Peak	2311.550	-49.09	2.00	0.00	-47.09	≤-21.20	48.11	≤74	PASS
				Peak	2390.000	-52.07	2.00	0.00	-50.07	≤-21.20	45.13	≤74	PASS
		High	2480	AV	2483.500	-58.48	2.00	1.80	-54.68	≤-41.20	40.52	≤54	PASS
				AV	2484.480	-58.06	2.00	1.80	-54.26	≤-41.20	40.94	≤54	PASS
				AV	2500.000	-59.44	2.00	1.80	-55.64	≤-41.20	39.56	≤54	PASS
				Peak	2483.500	-49.69	2.00	0.00	-47.69	≤-21.20	47.51	≤74	PASS
				Peak	2484.560	-46.03	2.00	0.00	-44.03	≤-21.20	51.17	≤74	PASS
				Peak	2500.000	-50.2	2.00	0.00	-48.2	≤-21.20	47.00	≤74	PASS

Note:

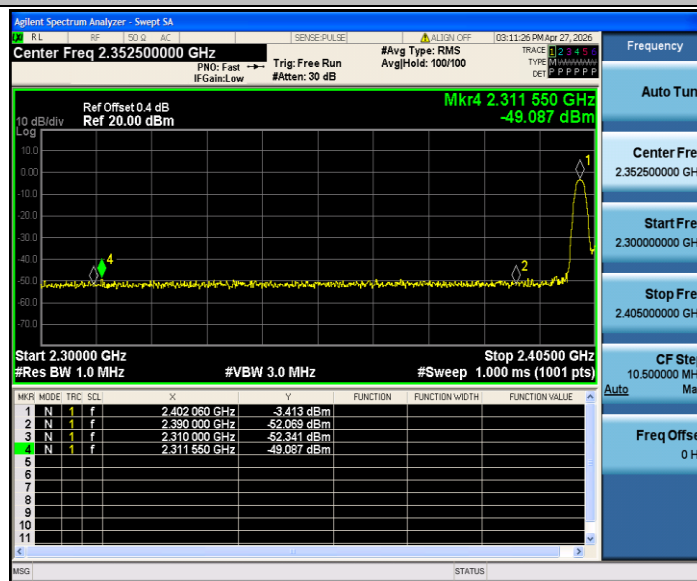
- The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

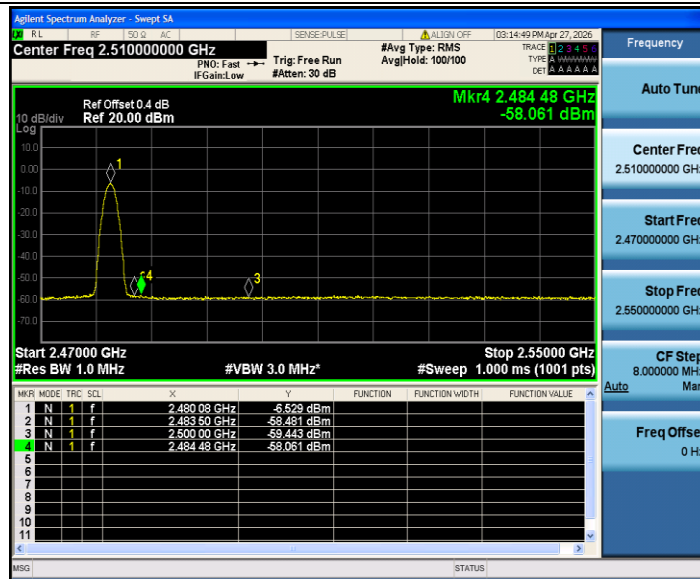
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

