

Appendix: Bluetooth LE

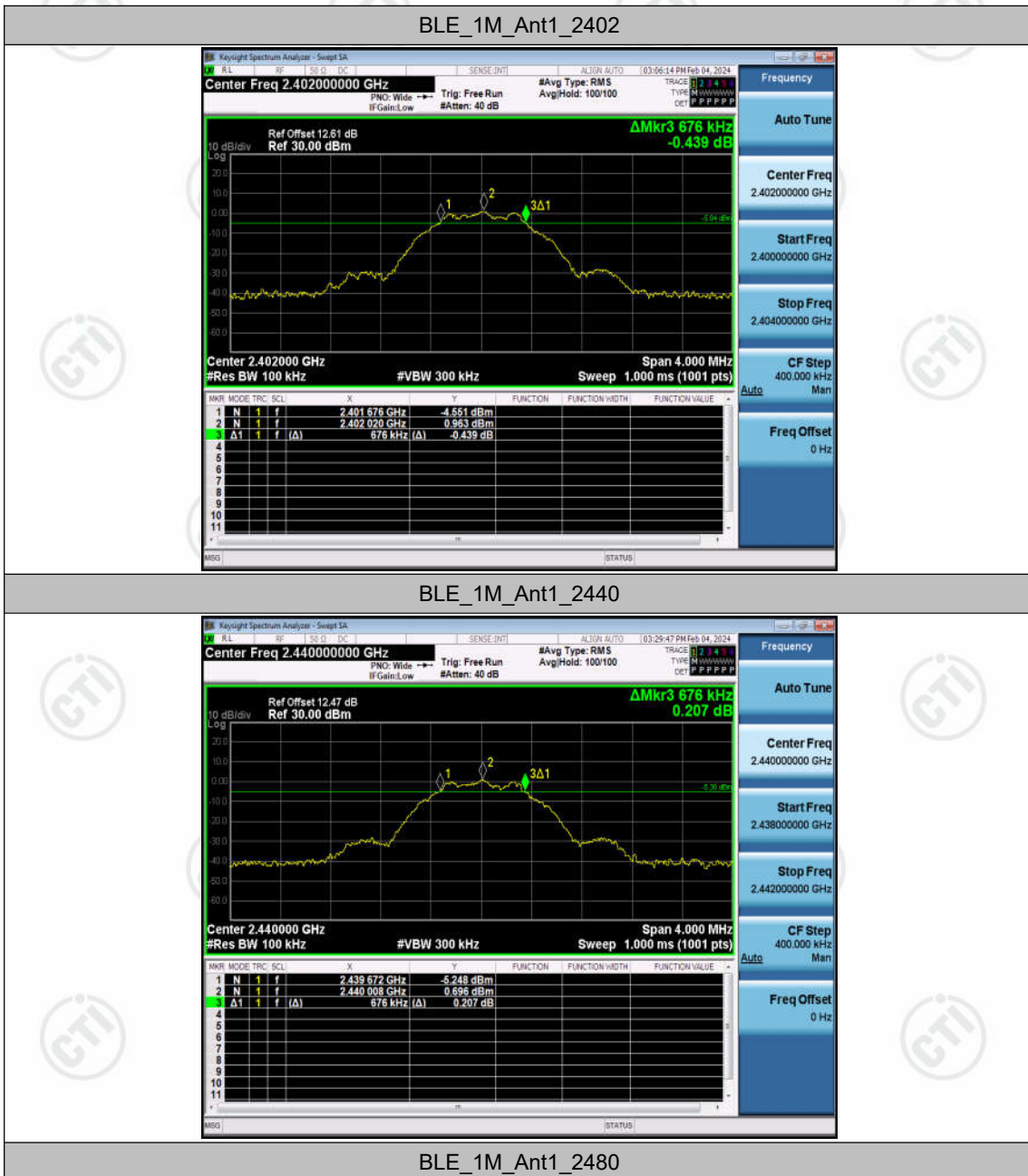
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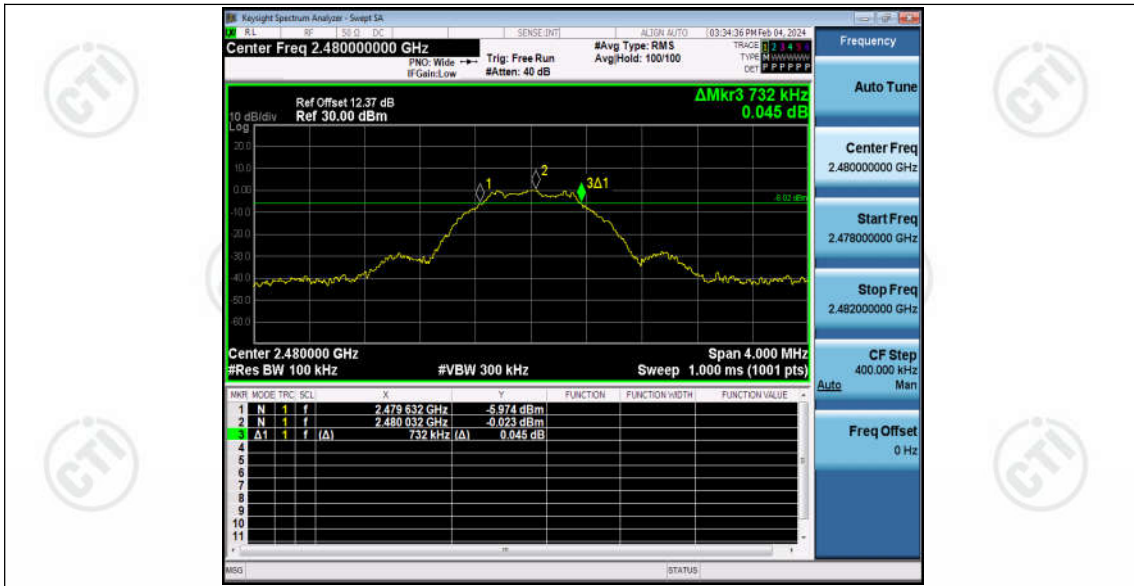
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Appendix A: DTS Bandwidth**Test Result**

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.676	2401.676	2402.352	0.5	PASS
		2440	0.676	2439.672	2440.348	0.5	PASS
		2480	0.732	2479.632	2480.364	0.5	PASS
BLE_2M	Ant1	2402	1.112	2401.456	2402.568	0.5	PASS
		2440	1.084	2439.460	2440.544	0.5	PASS
		2480	1.076	2479.464	2480.540	0.5	PASS

Test Graphs





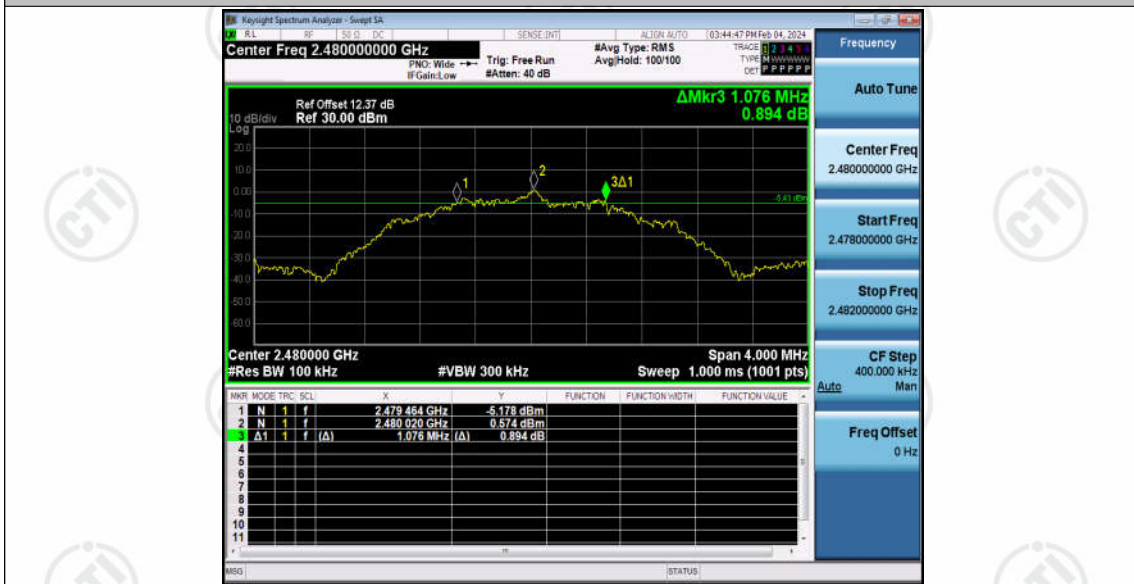
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



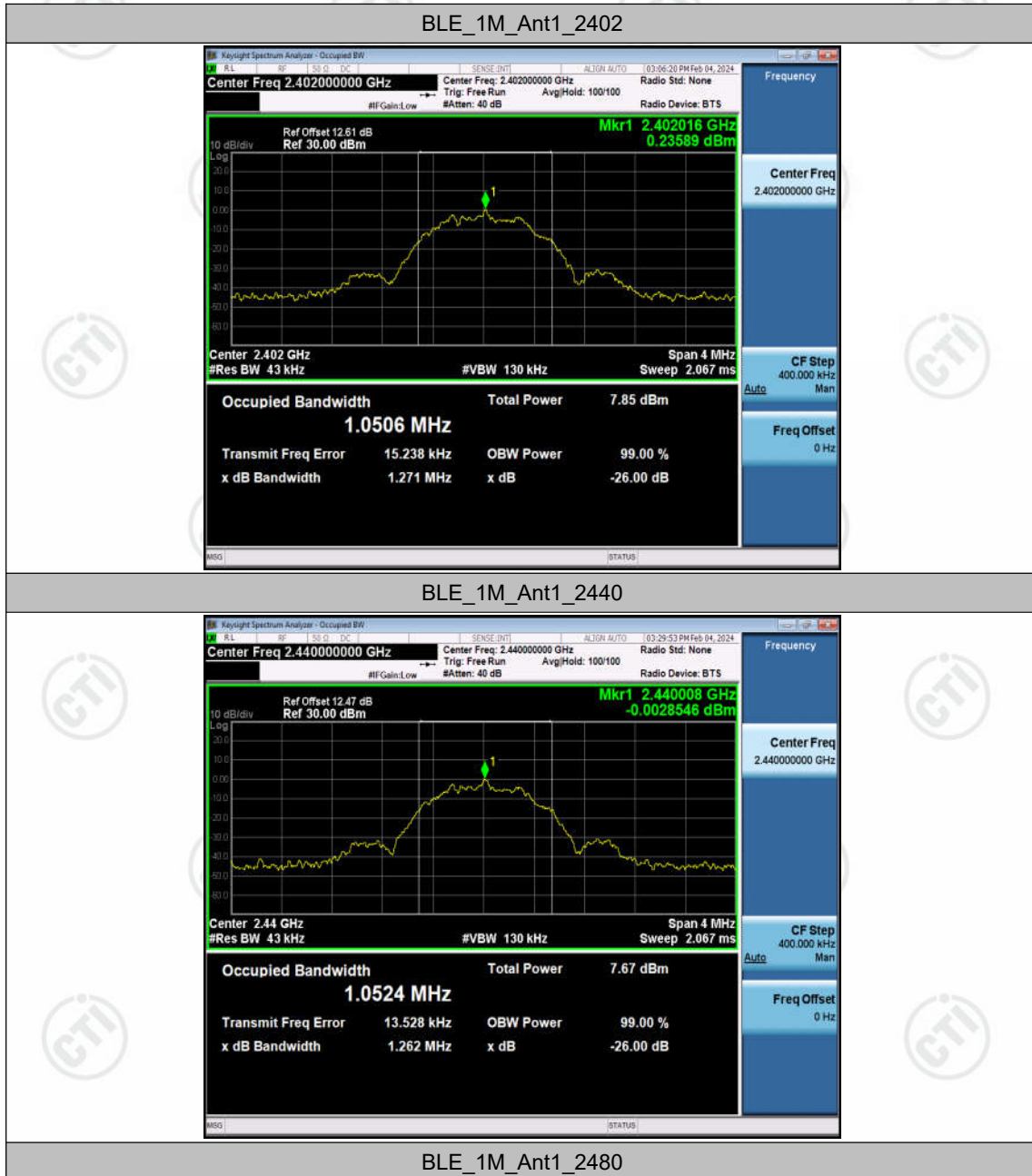
BLE_2M_Ant1_2480



Appendix B: Occupied Channel Bandwidth**Test Result**

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0506	2401.4899	2402.5405	---	---
		2440	1.0524	2439.4873	2440.5397	---	---
		2480	1.0538	2479.4890	2480.5428	---	---
BLE_2M	Ant1	2402	2.0443	2401.0082	2403.0525	---	---
		2440	2.0584	2438.9943	2441.0527	---	---
		2480	2.0617	2478.9944	2481.0561	---	---

Test Graphs





BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



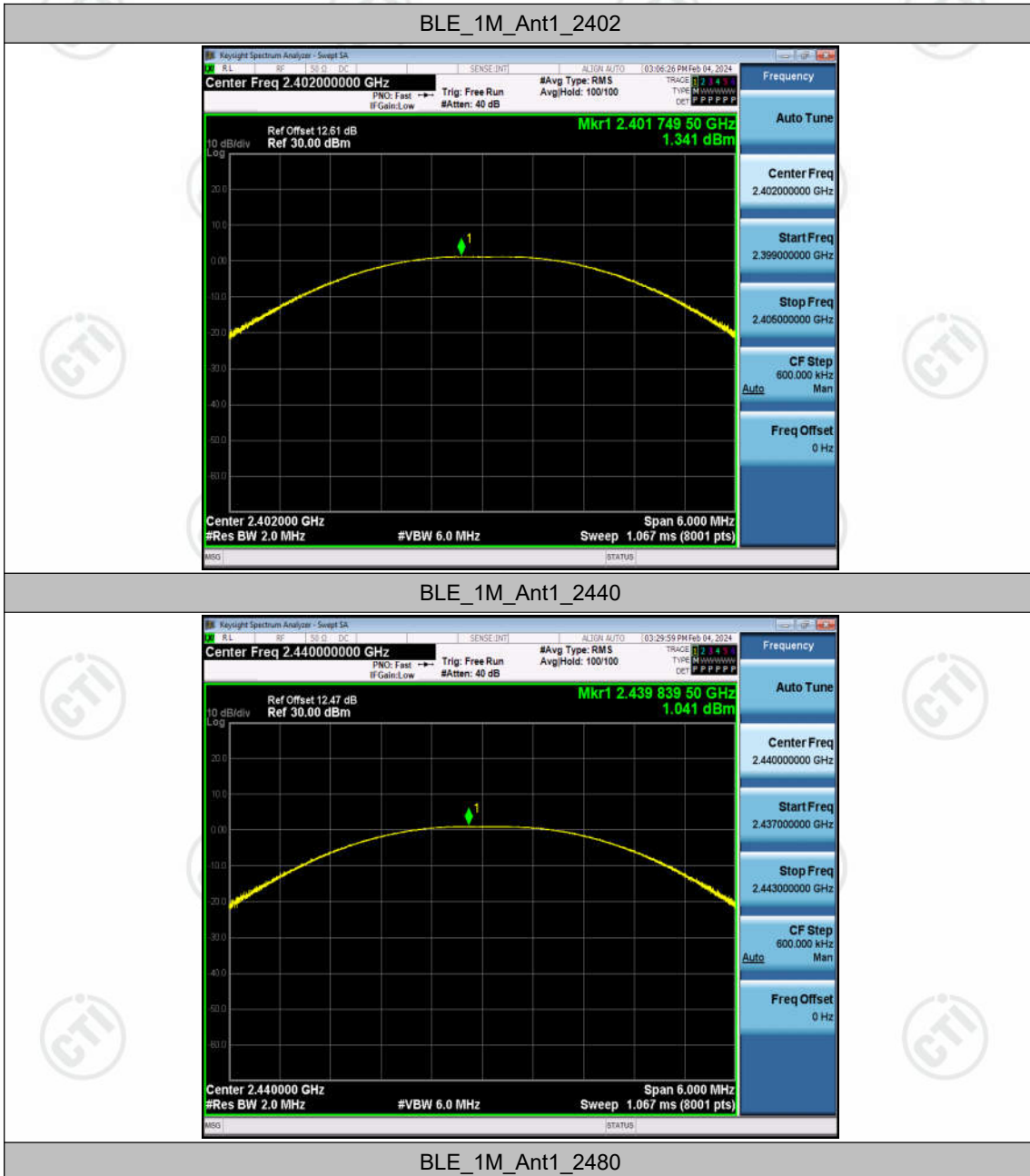
BLE_2M_Ant1_2480



Appendix C: Maximum conducted output power**Test Result Peak**

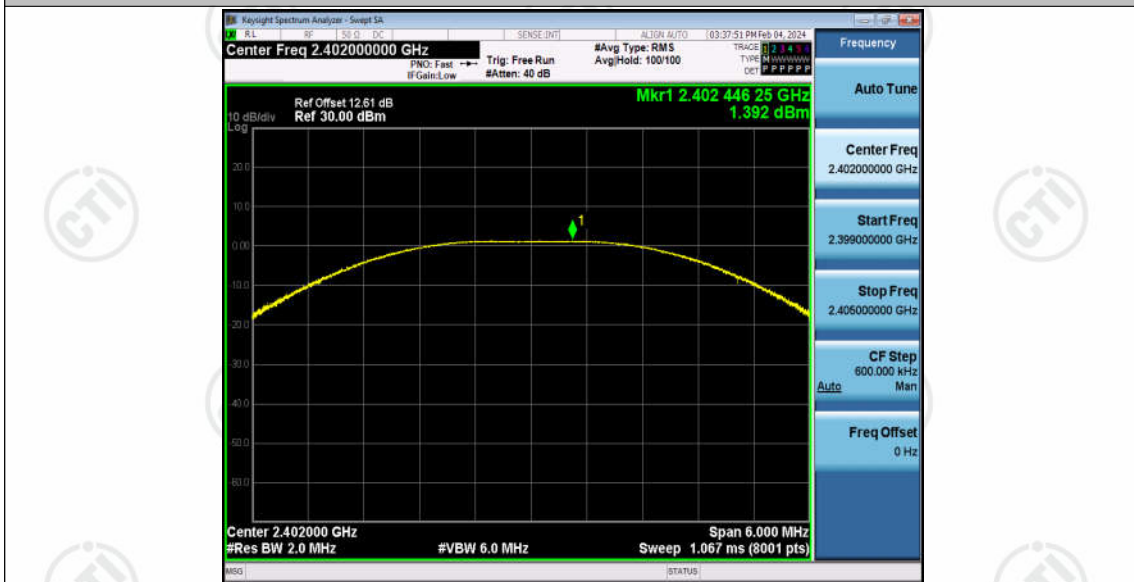
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.34	≤30	PASS
		2440	1.04	≤30	PASS
		2480	0.95	≤30	PASS
BLE_2M	Ant1	2402	1.39	≤30	PASS
		2440	1.08	≤30	PASS
		2480	0.98	≤30	PASS

Test Graphs Peak

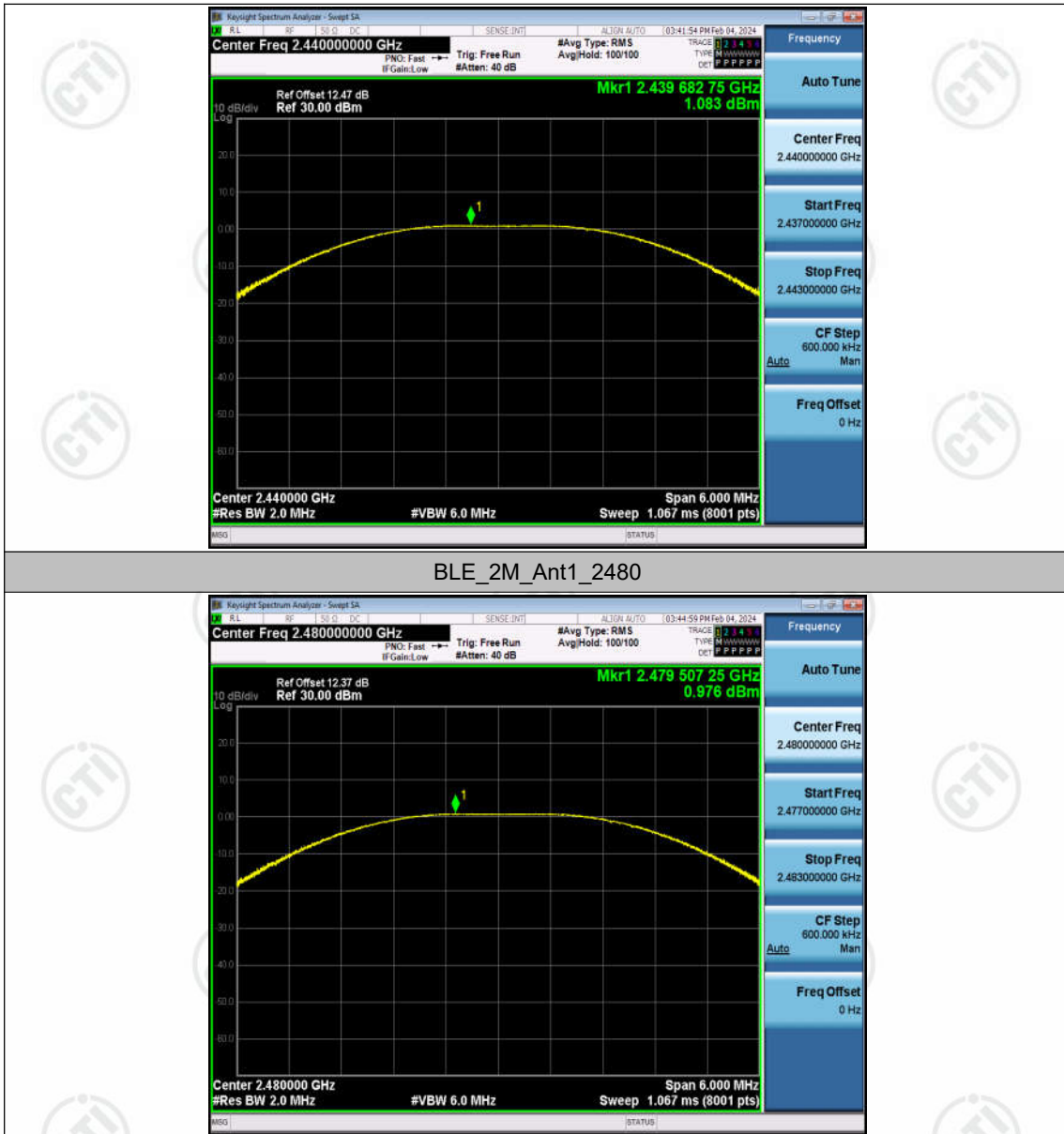




BLE_2M_Ant1_2402



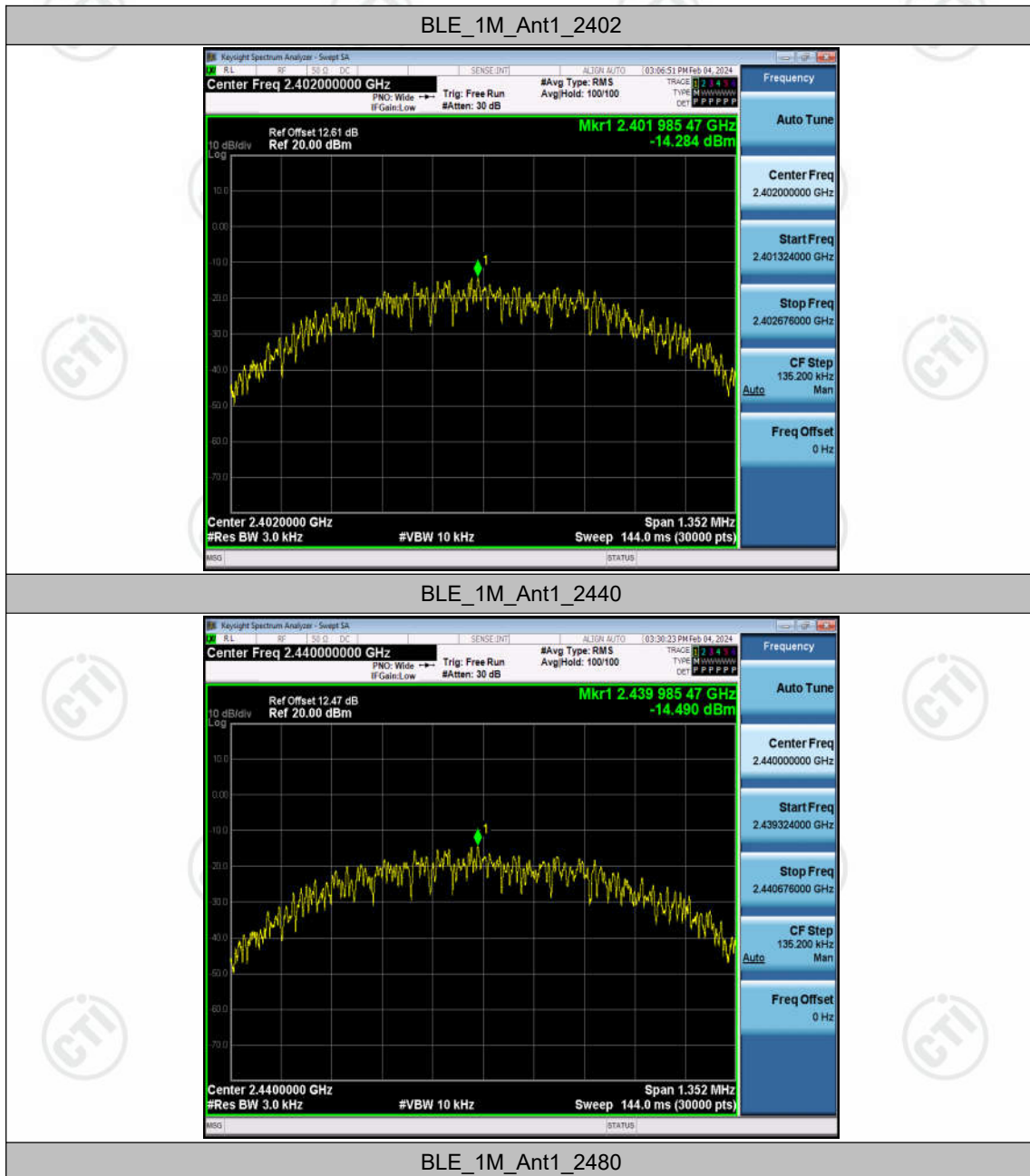
BLE_2M_Ant1_2440

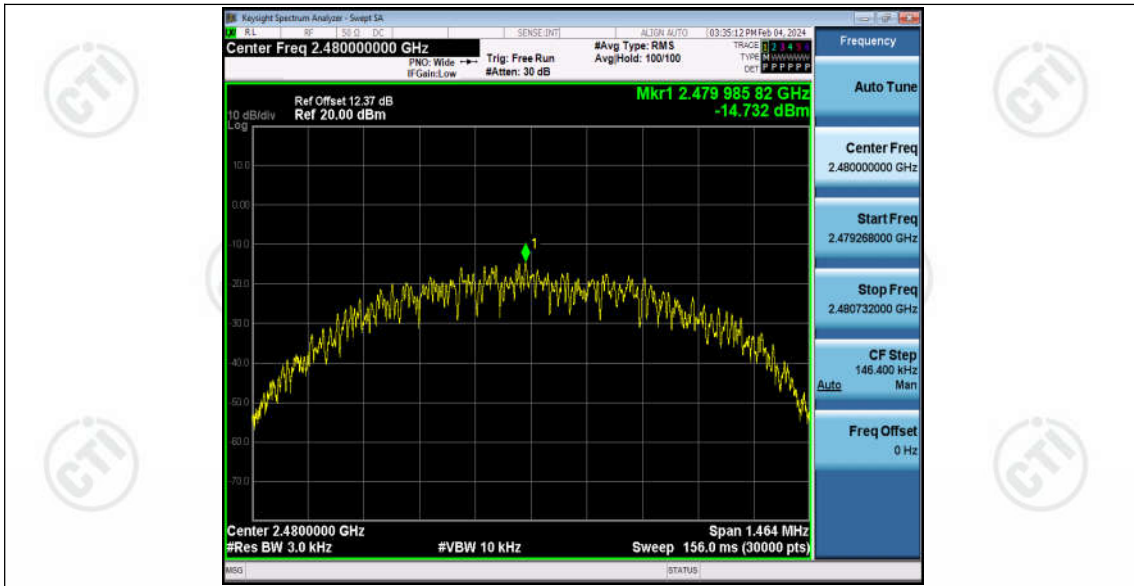


Appendix D: Maximum power spectral density**Test Result**

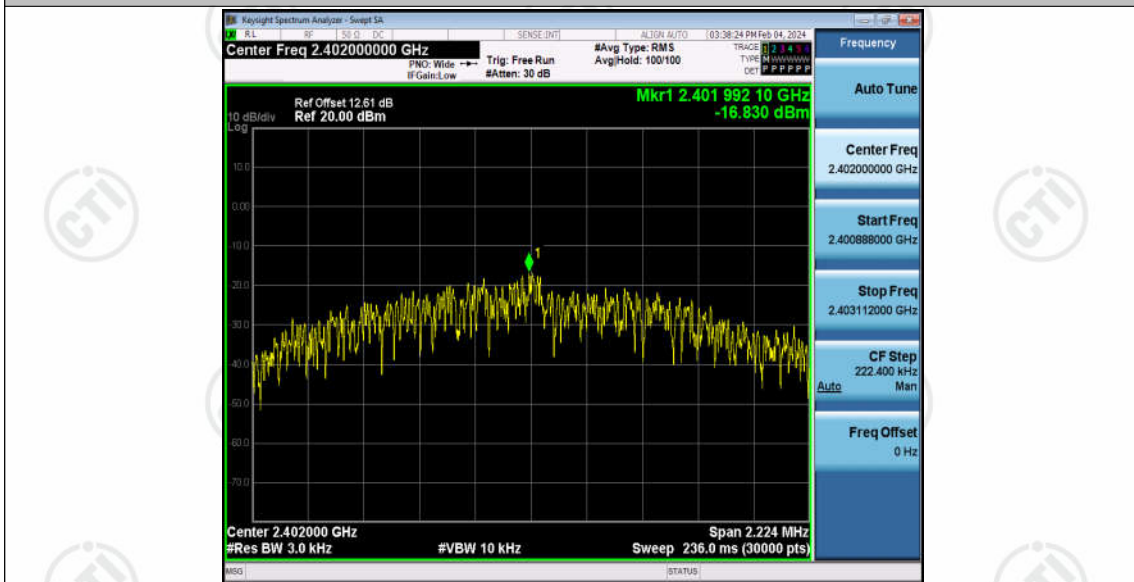
Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.28	≤8.00	PASS
		2440	-14.49	≤8.00	PASS
		2480	-14.73	≤8.00	PASS
BLE_2M	Ant1	2402	-16.83	≤8.00	PASS
		2440	-16.96	≤8.00	PASS
		2480	-17.18	≤8.00	PASS

Test Graphs

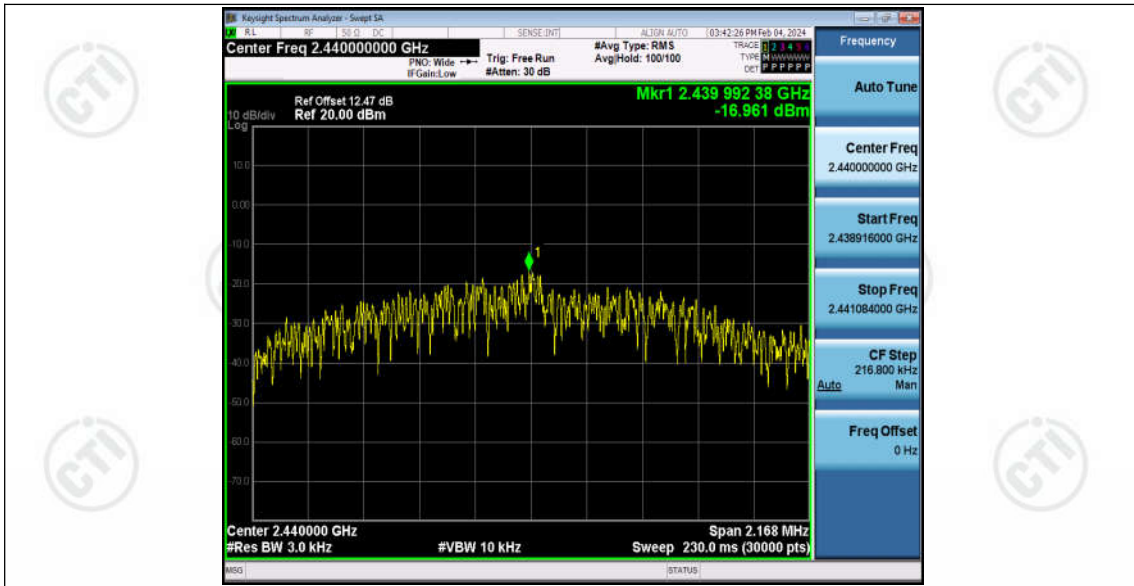




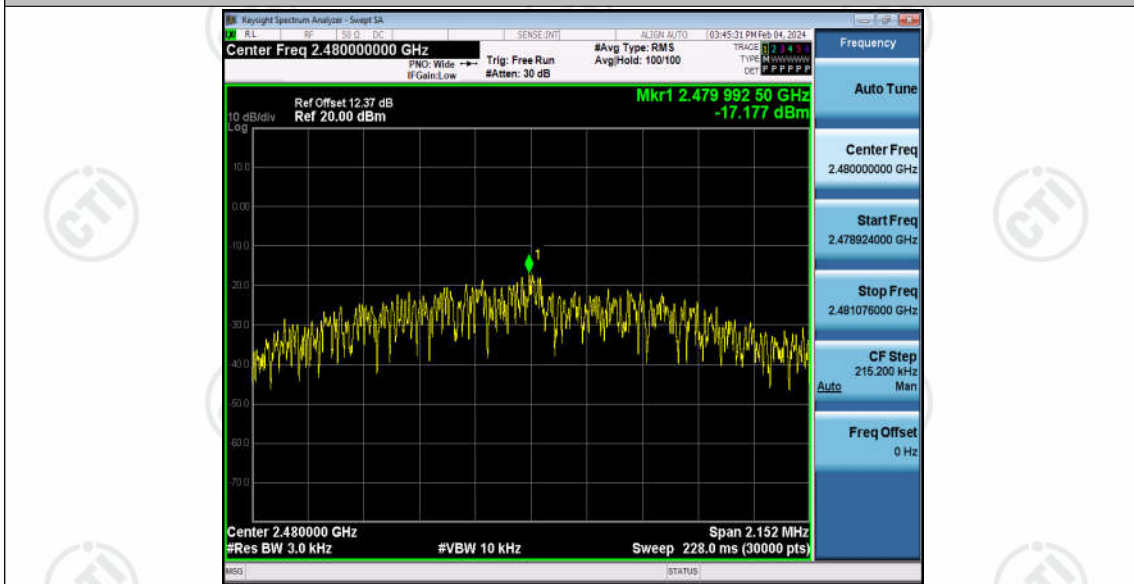
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



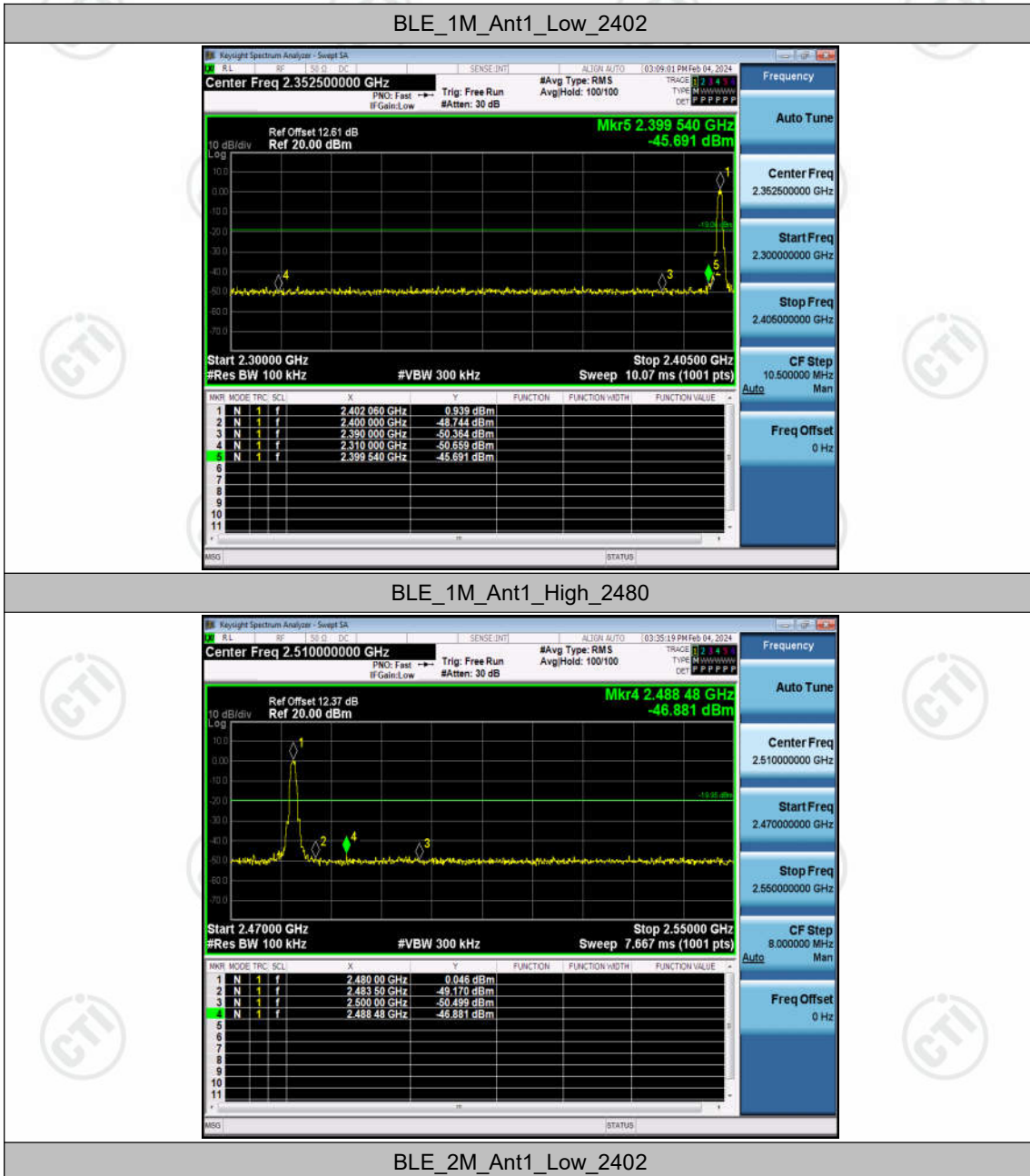
BLE_2M_Ant1_2480

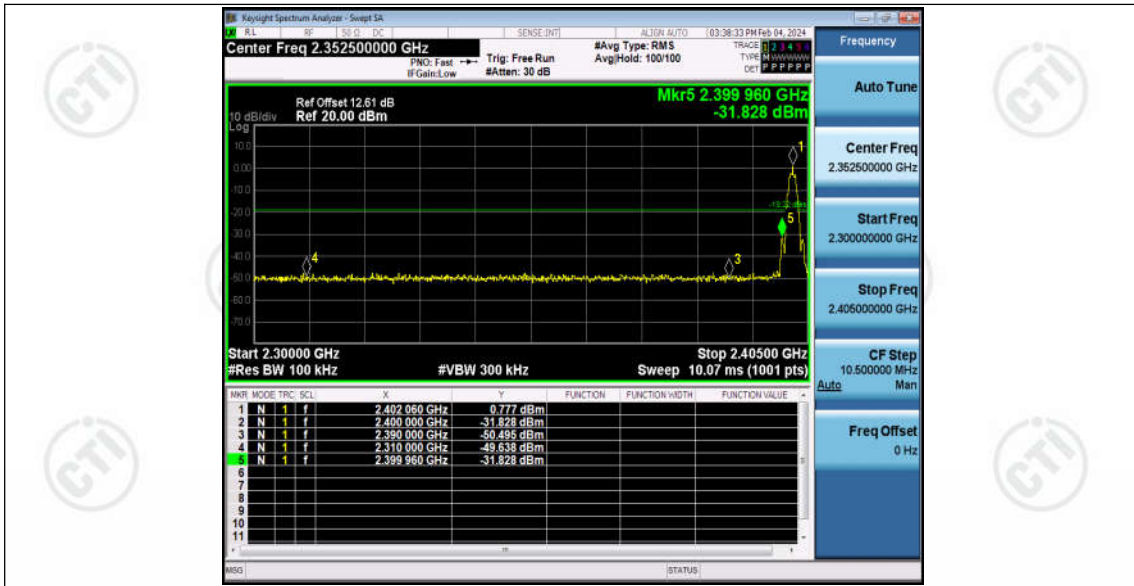


Appendix E: Band edge measurements**Test Result**

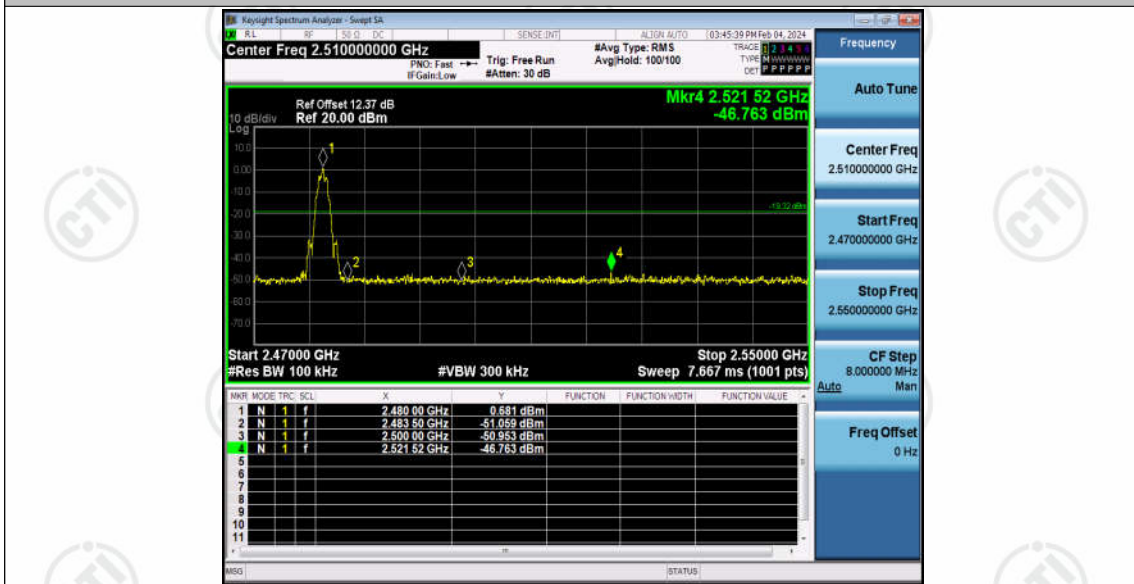
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.94	-45.69	≤-19.06	PASS
		High	2480	0.05	-46.88	≤-19.95	PASS
BLE_2M	Ant1	Low	2402	0.78	-31.83	≤-19.22	PASS
		High	2480	0.68	-46.76	≤-19.32	PASS

Test Graphs





BLE_2M_Ant1_High_2480

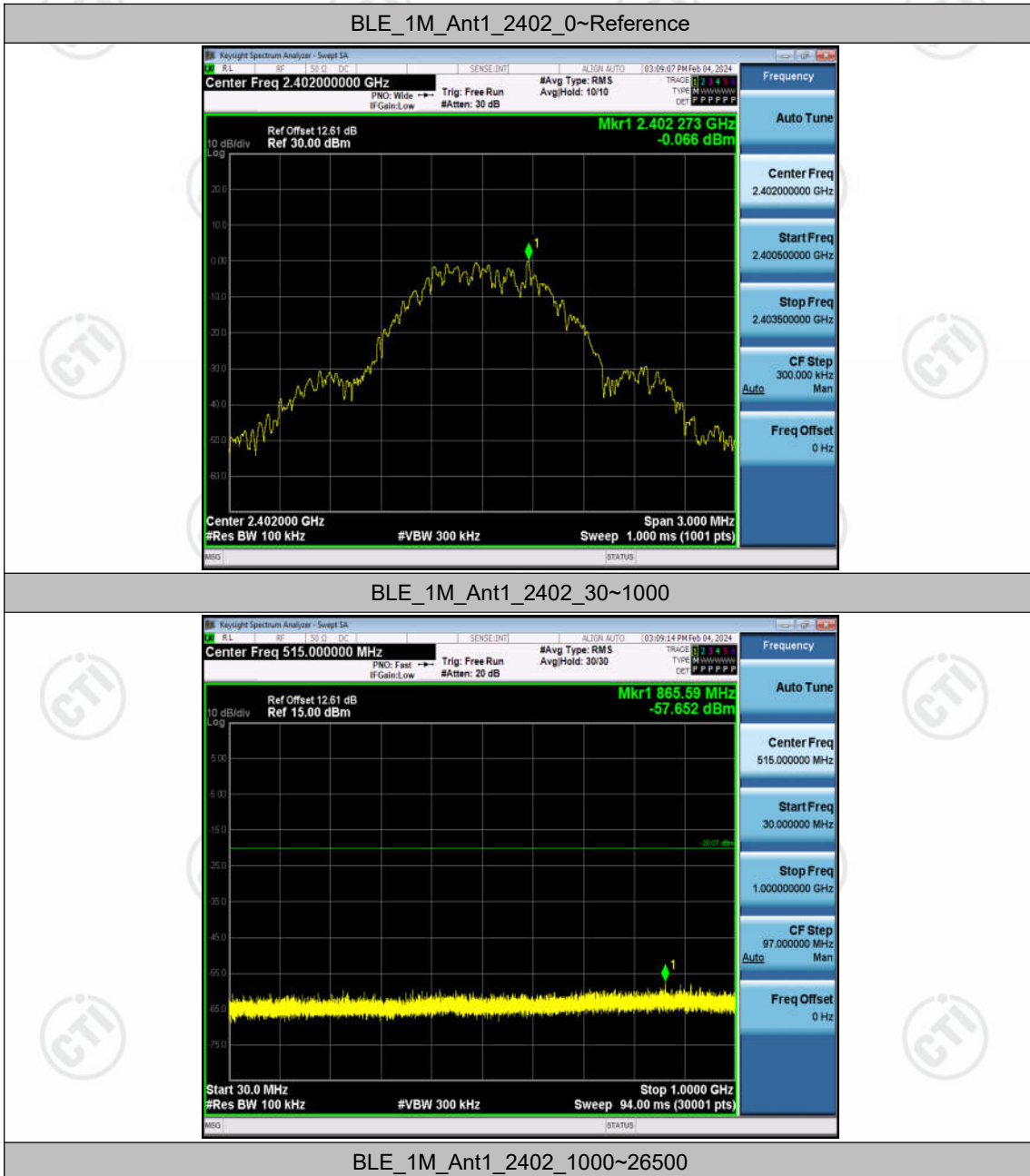


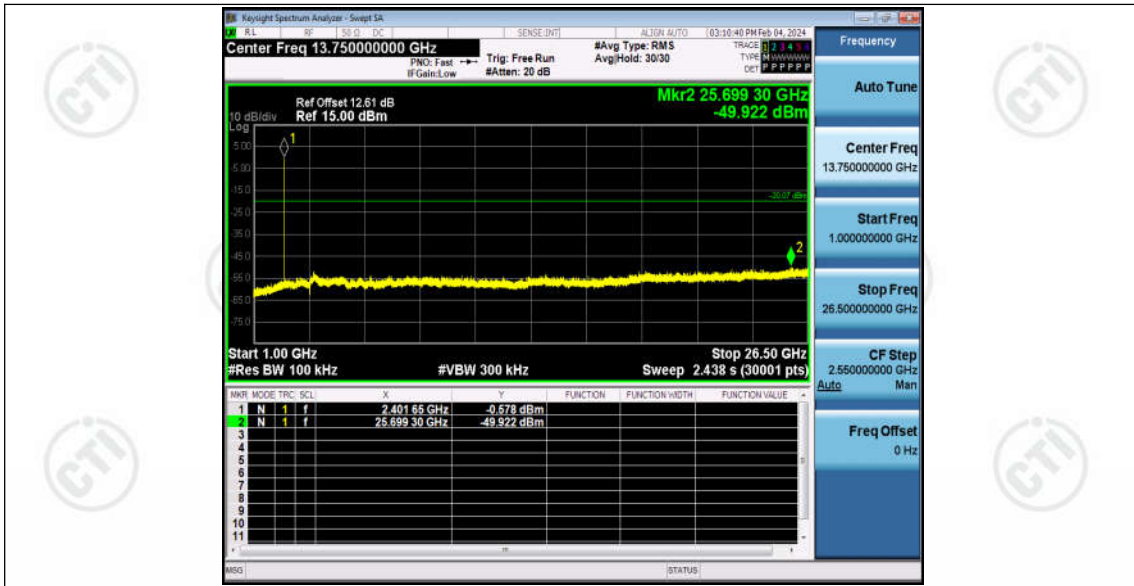
Appendix F: Conducted Spurious Emission

Test Result

Test Mode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.07	-0.07	---	PASS
			30~1000	-0.07	-57.65	≤-20.07	PASS
			1000~26500	-0.07	-49.92	≤-20.07	PASS
		2440	Reference	0.01	0.01	---	PASS
			30~1000	0.01	-58.11	≤-19.99	PASS
			1000~26500	0.01	-43.95	≤-19.99	PASS
		2480	Reference	-1.64	-1.64	---	PASS
			30~1000	-1.64	-58.32	≤-21.64	PASS
			1000~26500	-1.64	-50.29	≤-21.64	PASS
BLE_2M	Ant1	2402	Reference	-0.29	-0.29	---	PASS
			30~1000	-0.29	-58.34	≤-20.29	PASS
			1000~26500	-0.29	-49.89	≤-20.29	PASS
		2440	Reference	0.23	0.23	---	PASS
			30~1000	0.23	-58.23	≤-19.77	PASS
			1000~26500	0.23	-50.93	≤-19.77	PASS
		2480	Reference	-2.18	-2.18	---	PASS
			30~1000	-2.18	-58.23	≤-22.18	PASS
			1000~26500	-2.18	-49.87	≤-22.18	PASS

Test Graphs

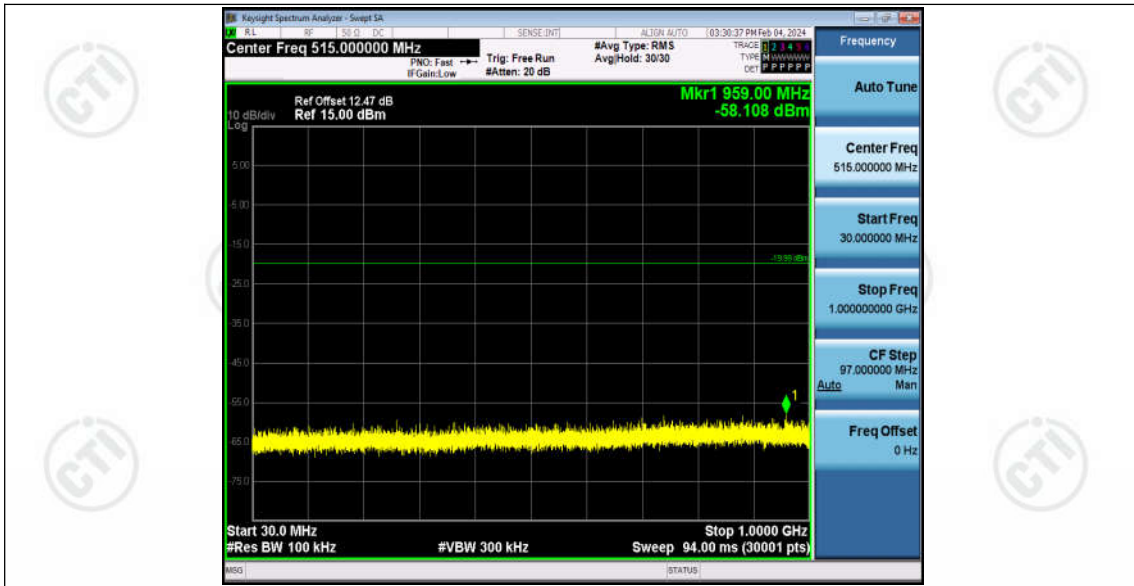




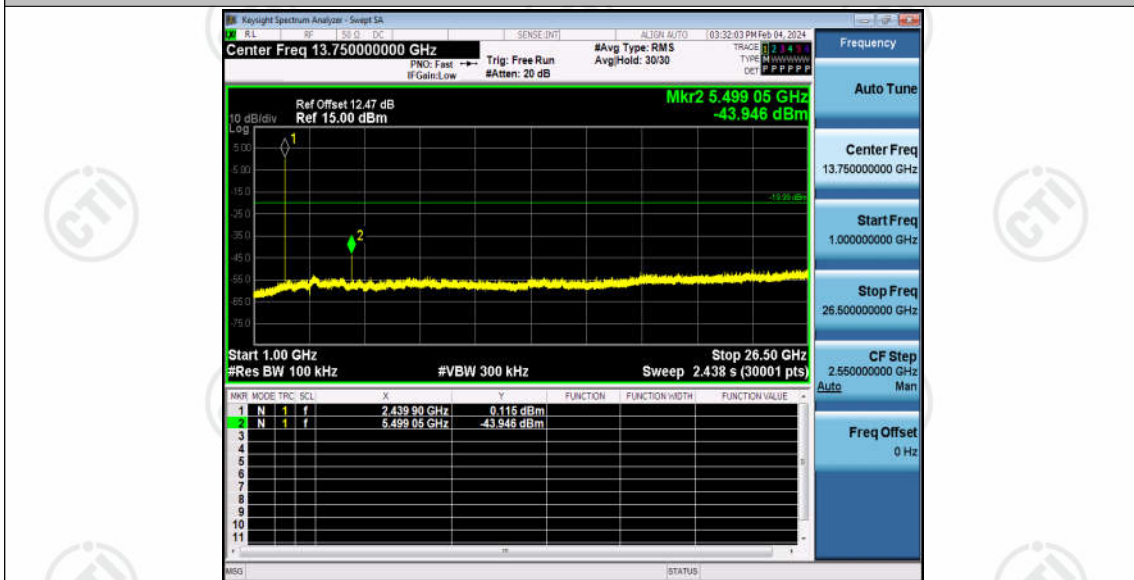
BLE_1M_Ant1_2440_0~Reference



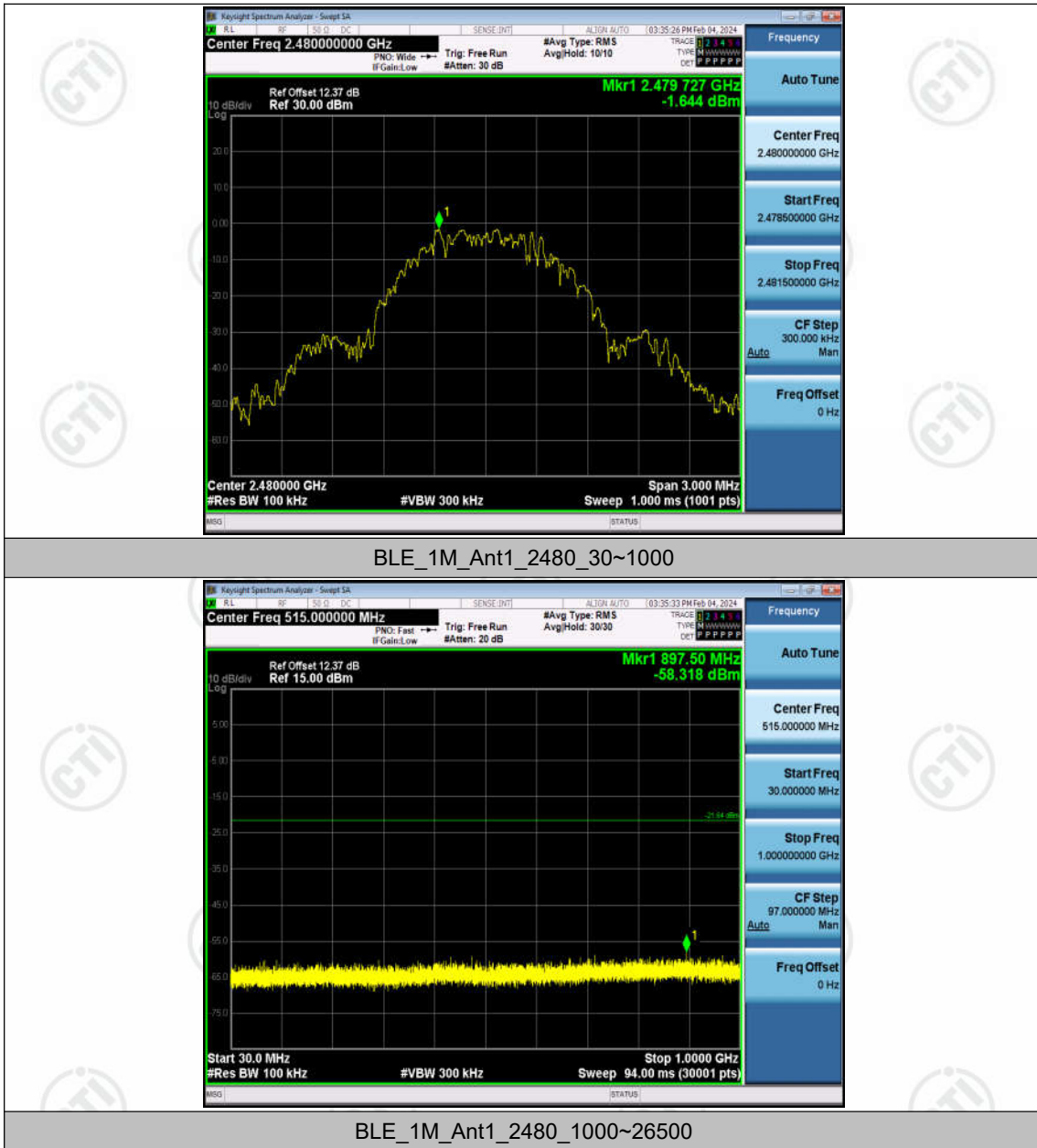
BLE_1M_Ant1_2440_30~1000

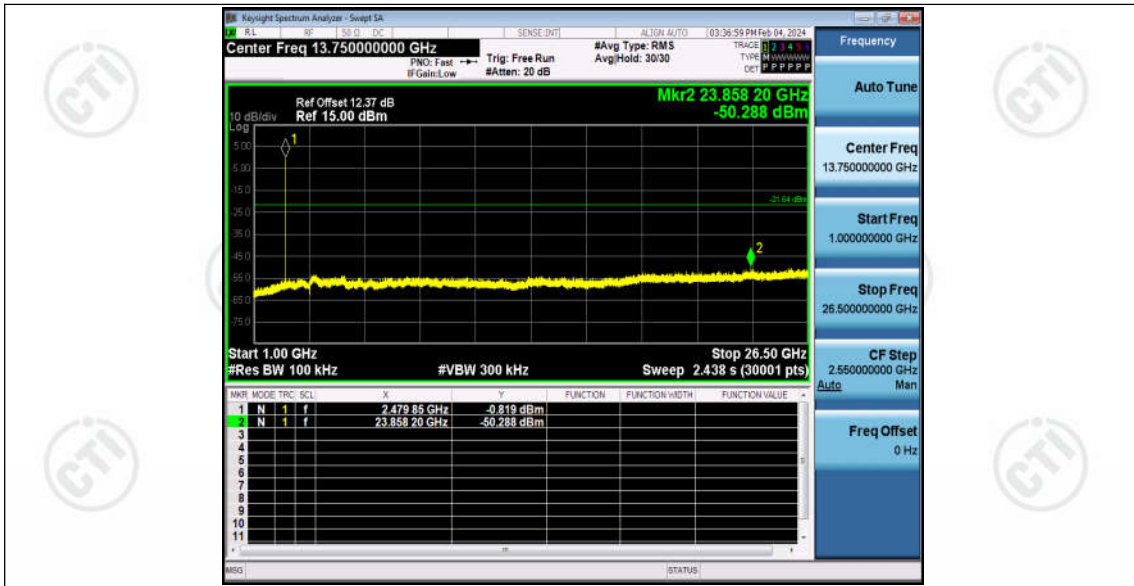


BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

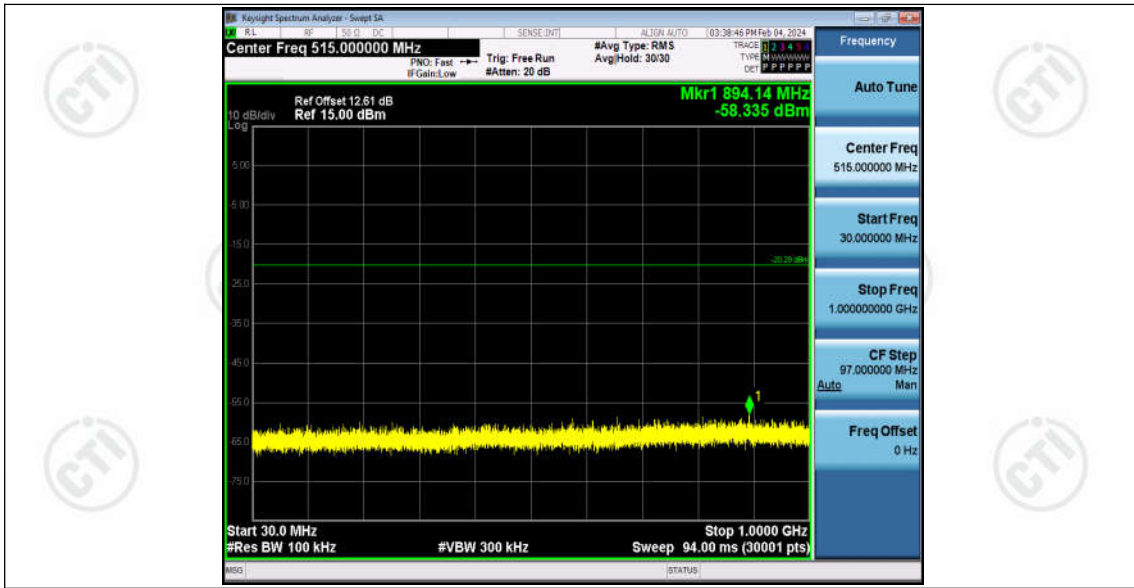




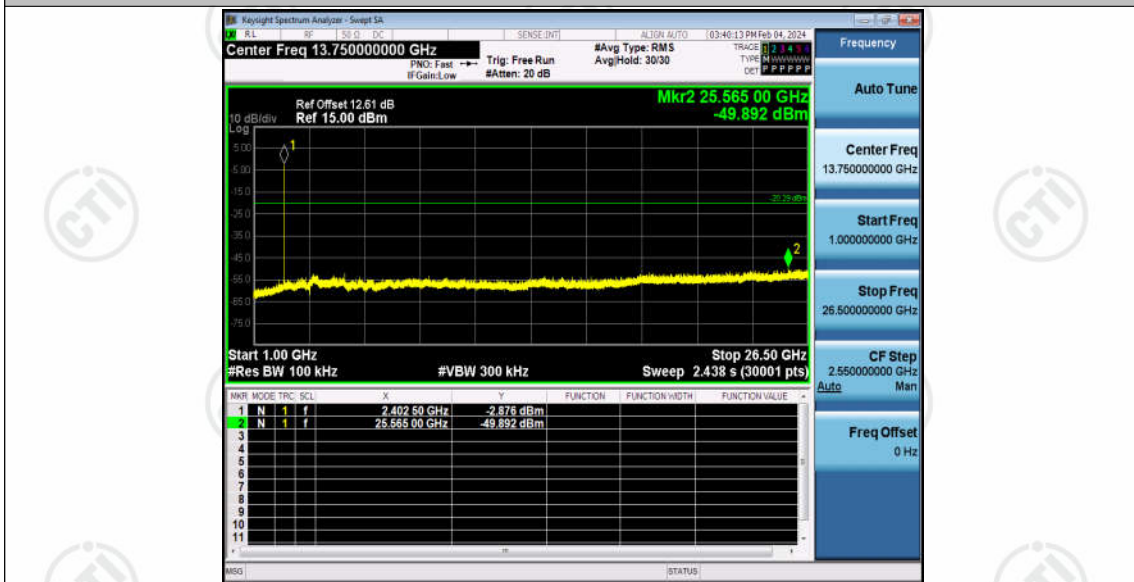
BLE_2M_Ant1_2402_0~Reference



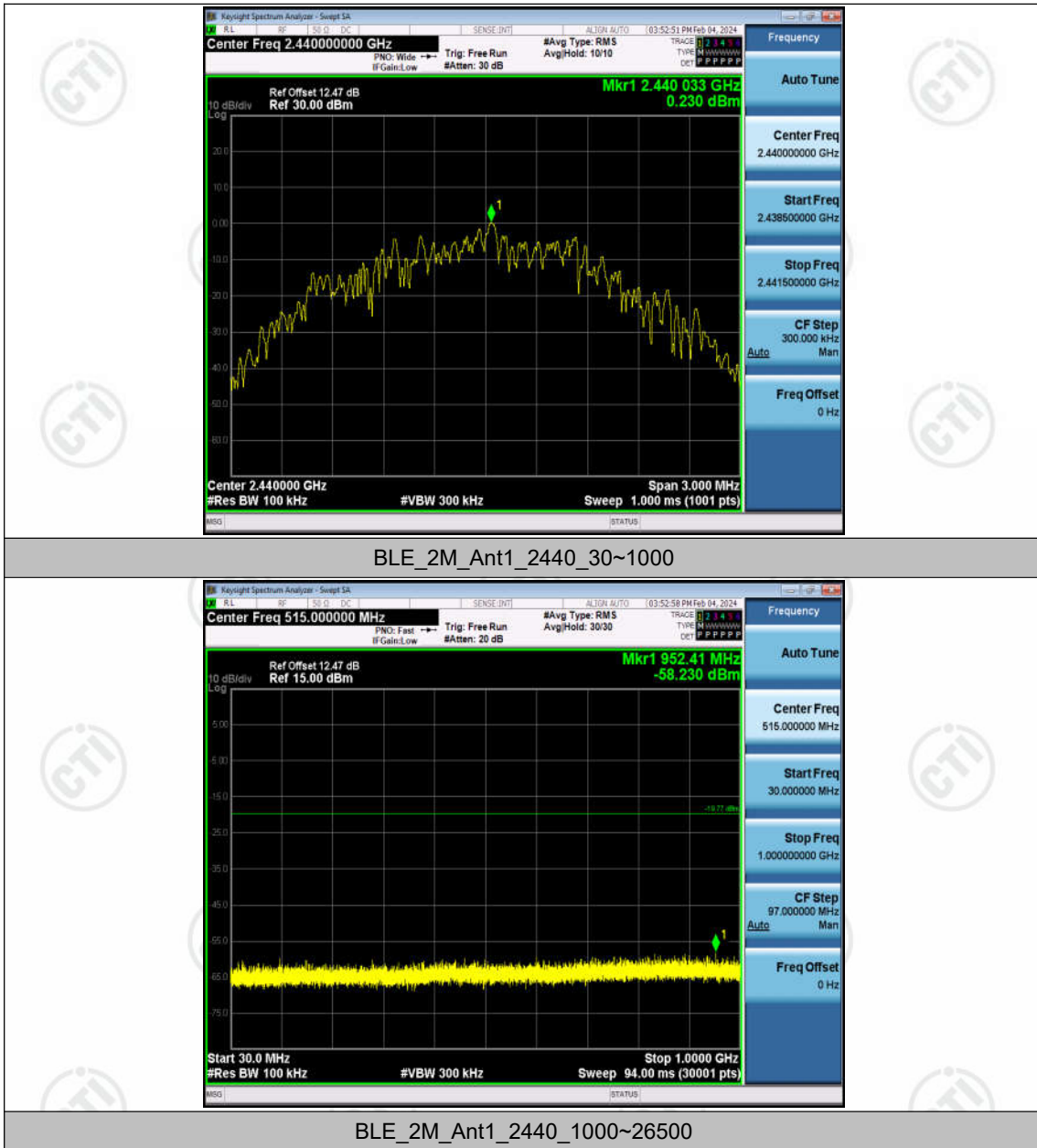
BLE_2M_Ant1_2402_30~1000

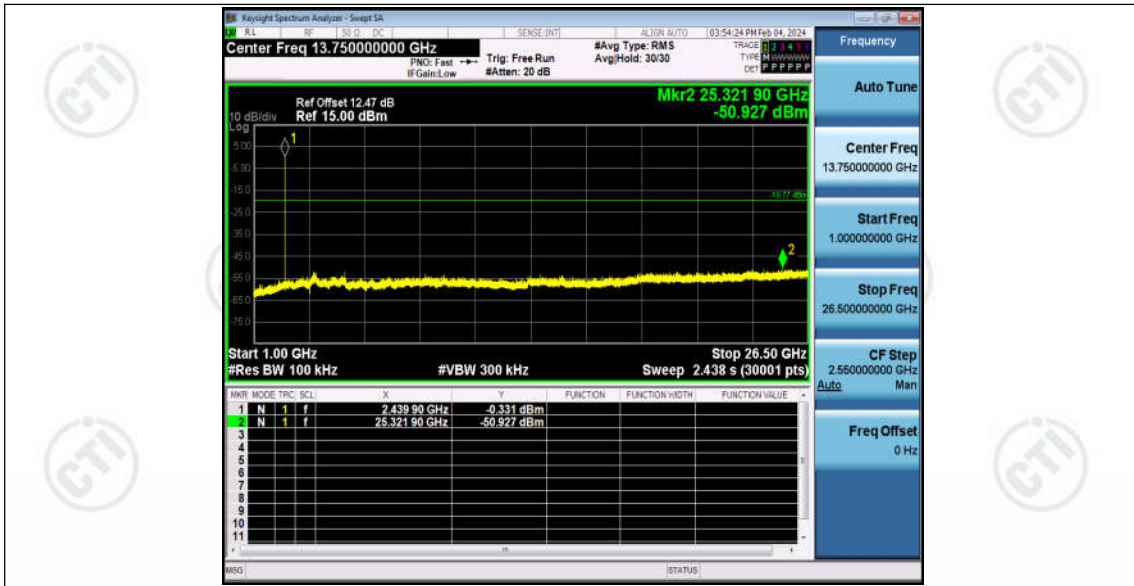


BLE_2M_Ant1_2402_1000~26500



BLE_2M_Ant1_2440_0~Reference

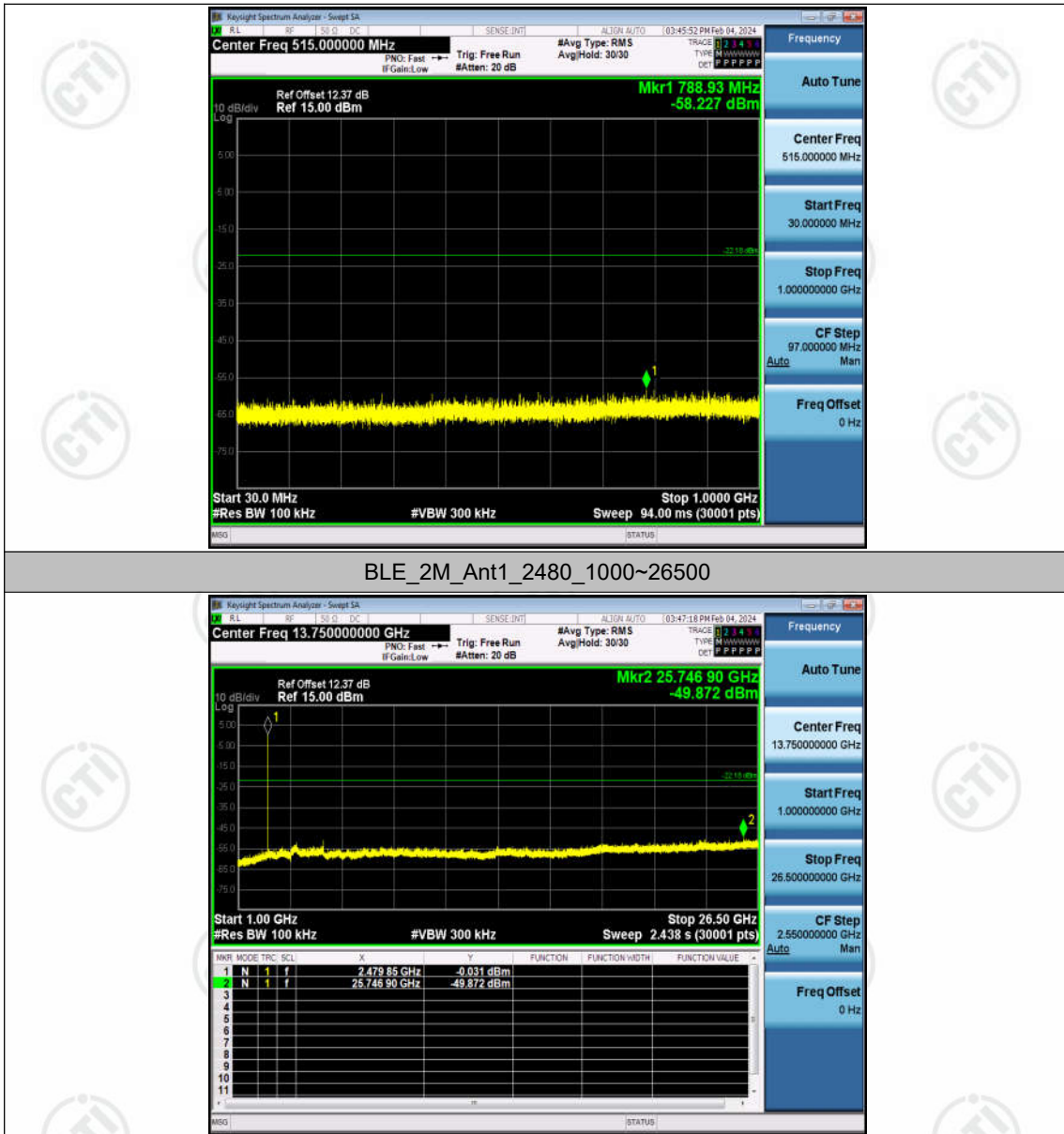




BLE_2M_Ant1_2480_0~Reference



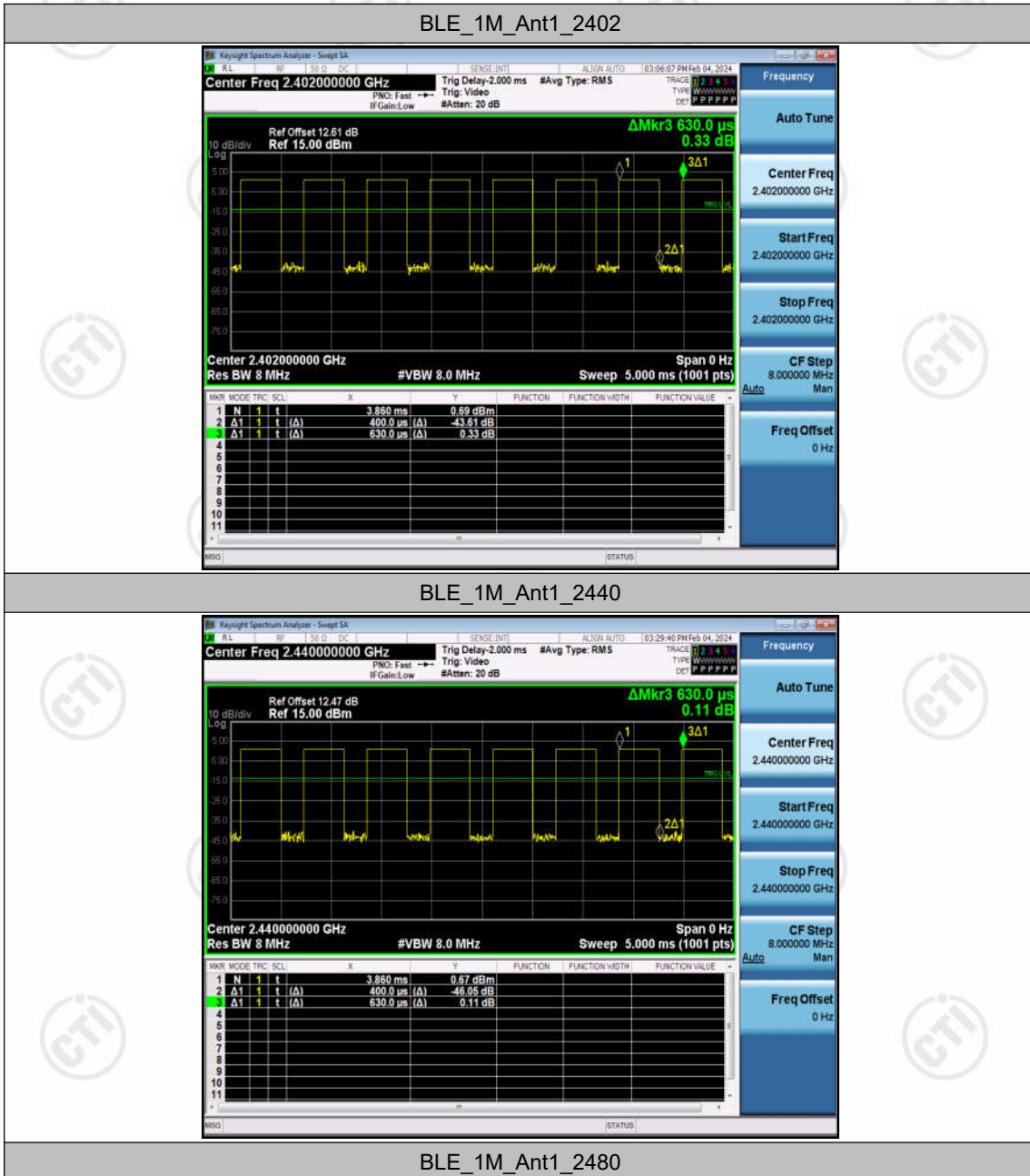
BLE_2M_Ant1_2480_30~1000

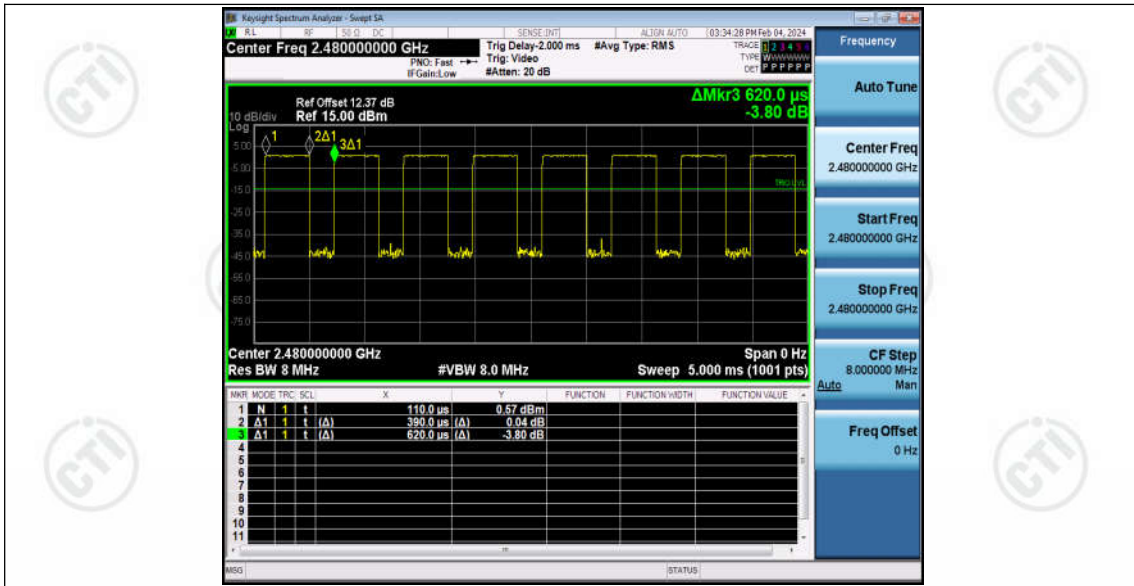


Appendix G: Duty Cycle**Test Result**

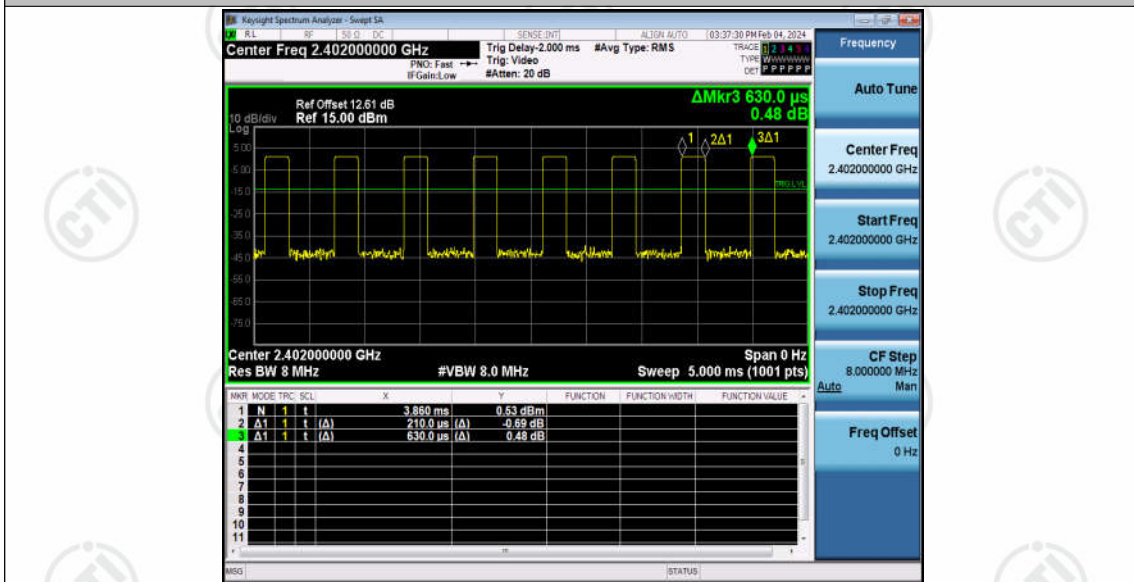
Test Mode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.40	0.63	63.49	1.97
		2440	0.40	0.63	63.49	1.97
		2480	0.39	0.62	62.90	2.01
BLE_2M	Ant1	2402	0.21	0.63	33.33	4.77
		2440	0.21	0.63	33.33	4.77
		2480	0.21	0.63	33.33	4.77

Test Graphs

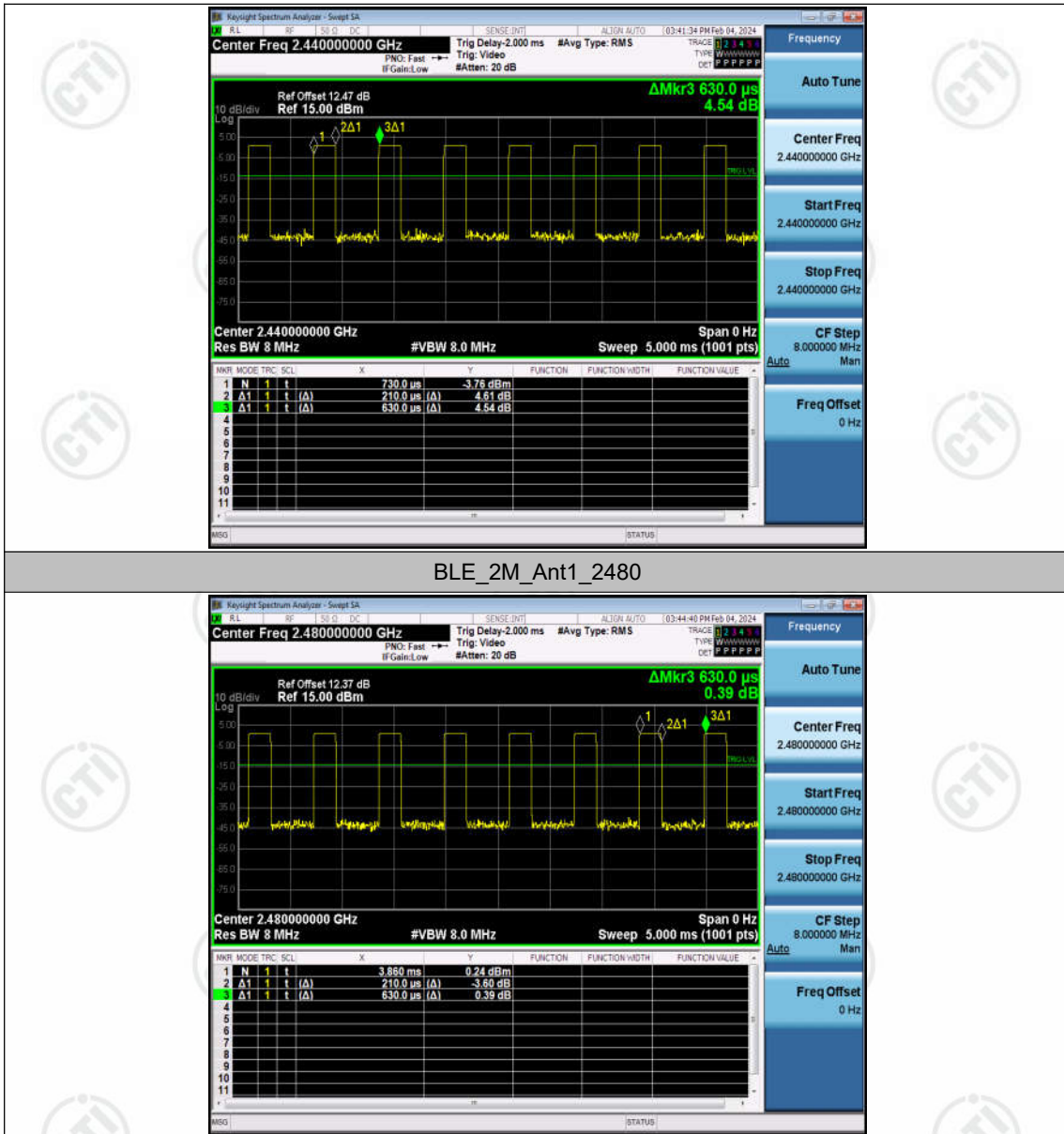




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



*** End of Report ***