

Appendix: Bluetooth LE

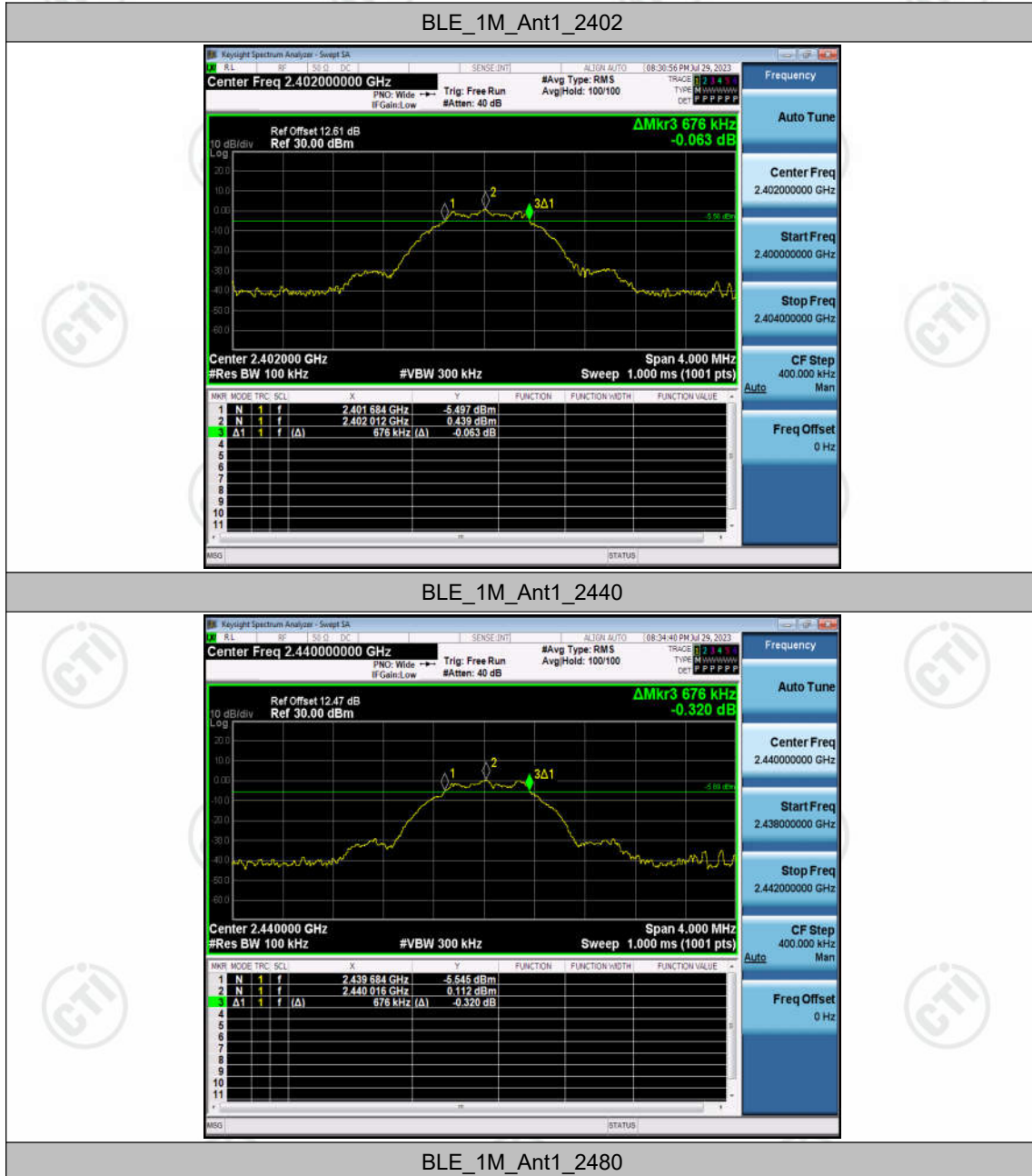
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Appendix A: DTS Bandwidth**Test Result**

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.676	2401.684	2402.360	0.5	PASS
		2440	0.676	2439.684	2440.360	0.5	PASS
		2480	0.692	2479.684	2480.376	0.5	PASS
BLE_2M	Ant1	2402	1.116	2401.472	2402.588	0.5	PASS
		2440	1.124	2439.468	2440.592	0.5	PASS
		2480	1.124	2479.456	2480.580	0.5	PASS

Test Graphs

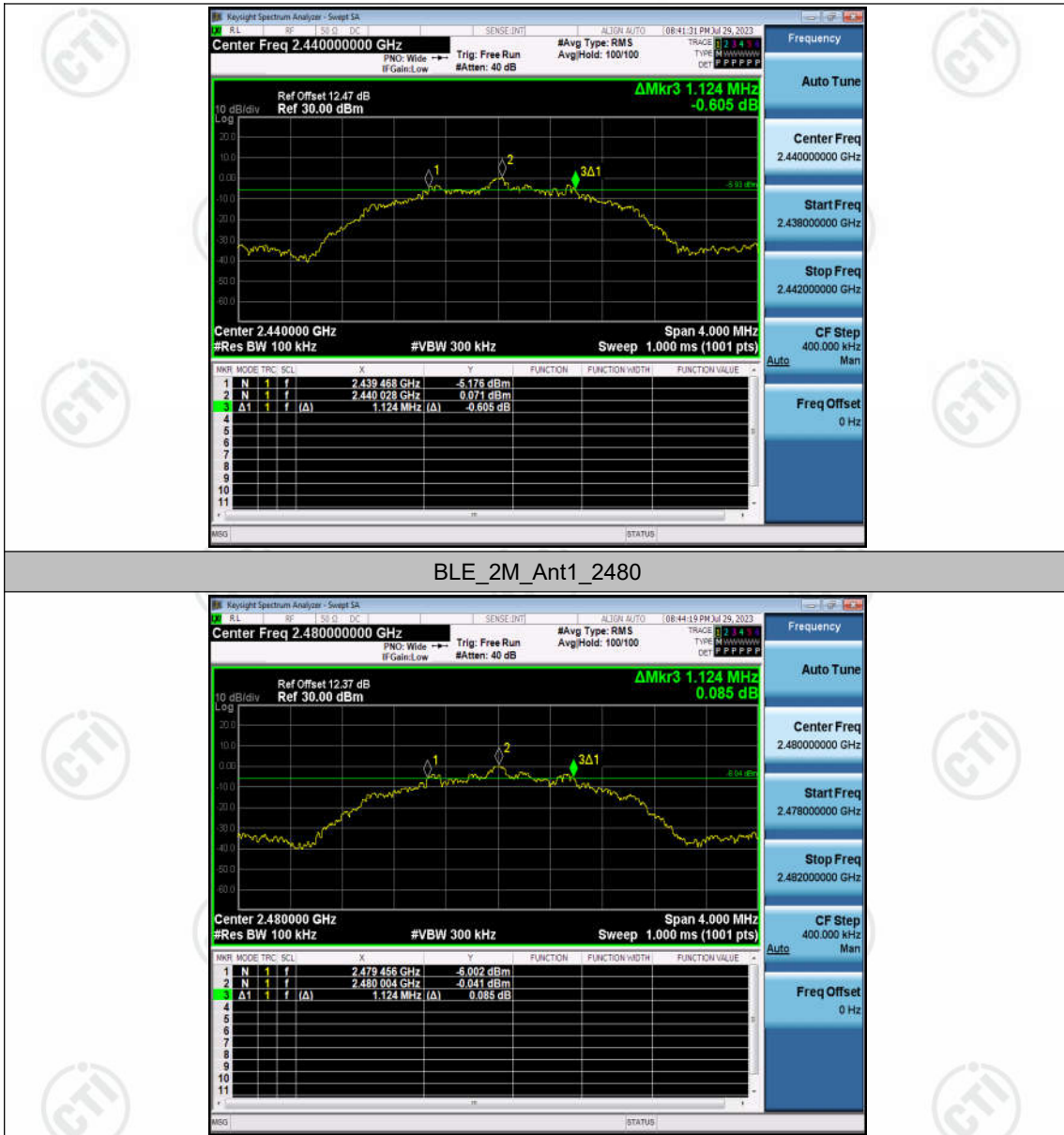




BLE_2M_Ant1_2402



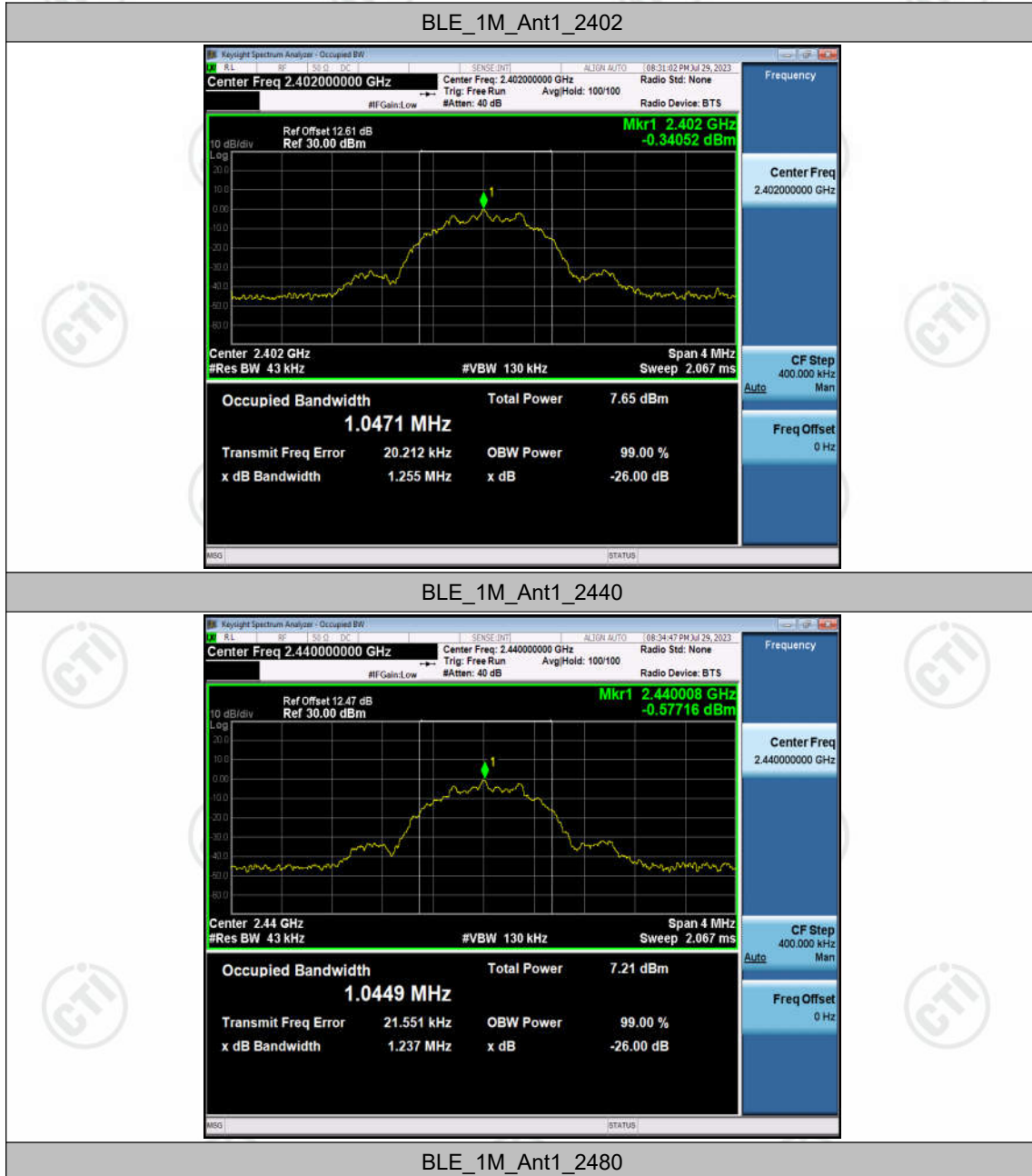
BLE_2M_Ant1_2440

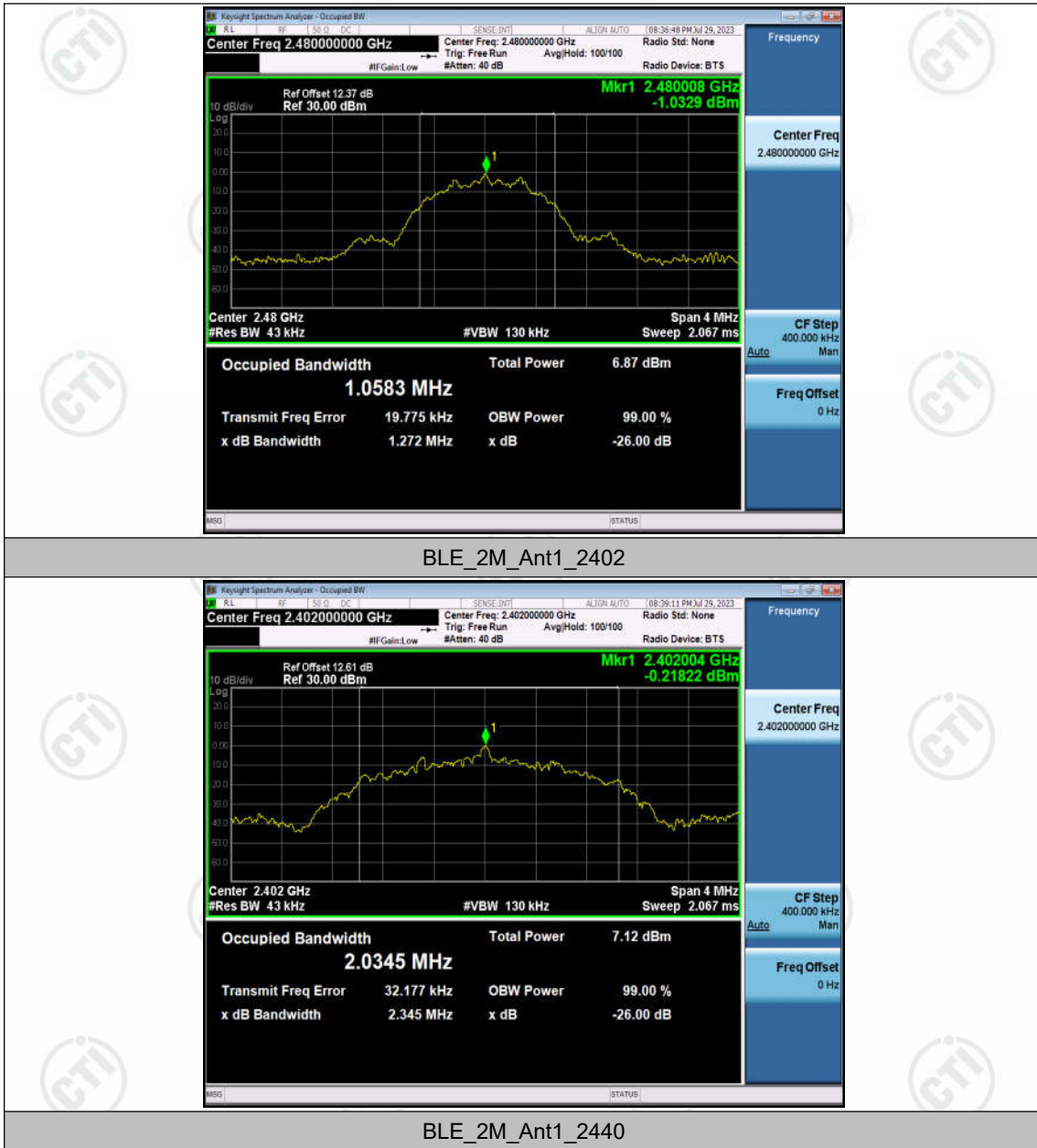


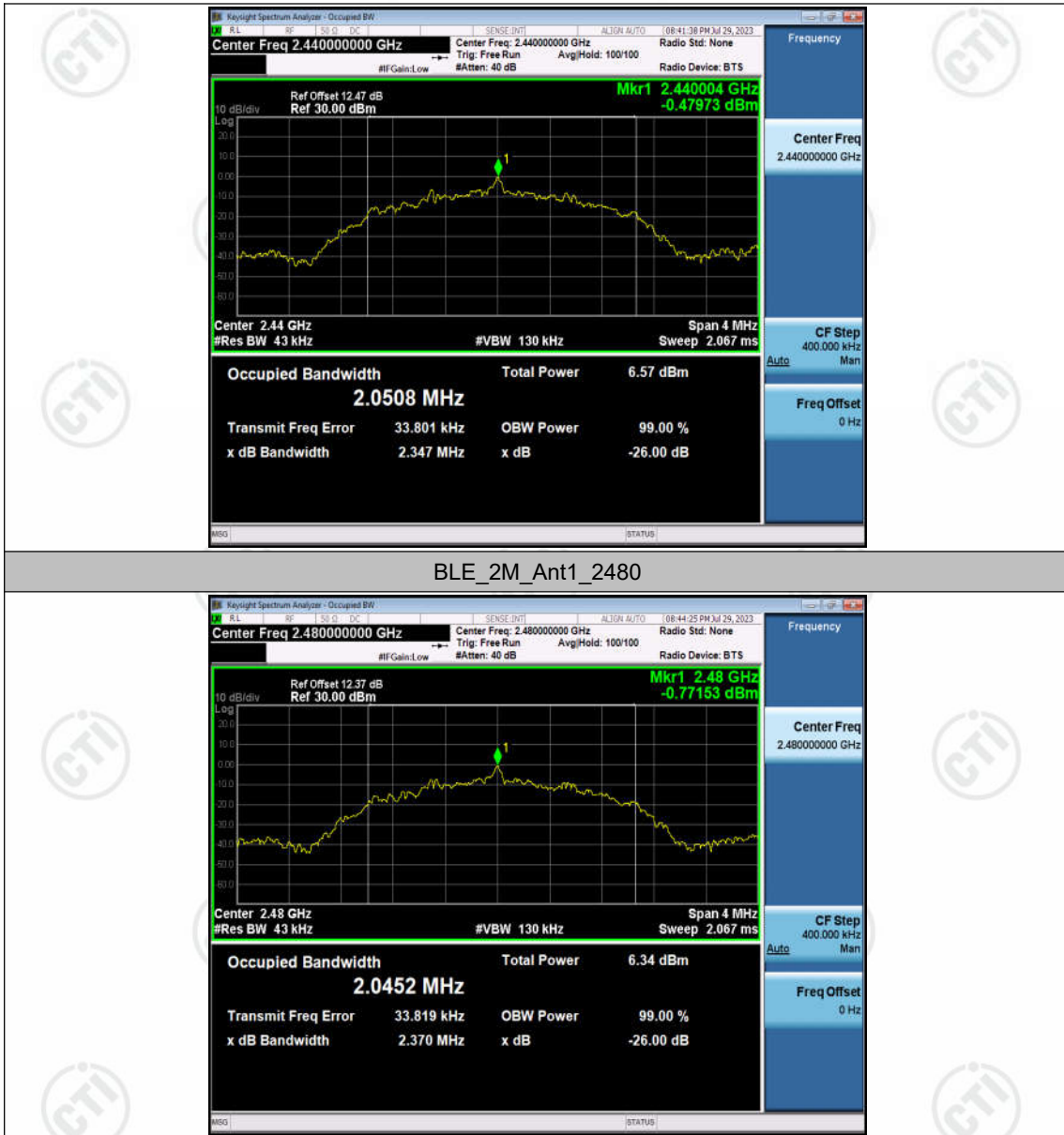
Appendix B: Occupied Channel Bandwidth**Test Result**

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	1.0471	2401.4967	2402.5438	---	---
		2440	1.0449	2439.4991	2440.5440	---	---
		2480	1.0583	2479.4906	2480.5489	---	---
BLE_2M	Ant1	2402	2.0345	2401.0149	2403.0494	---	---
		2440	2.0508	2439.0084	2441.0592	---	---
		2480	2.0452	2479.0112	2481.0564	---	---

Test Graphs



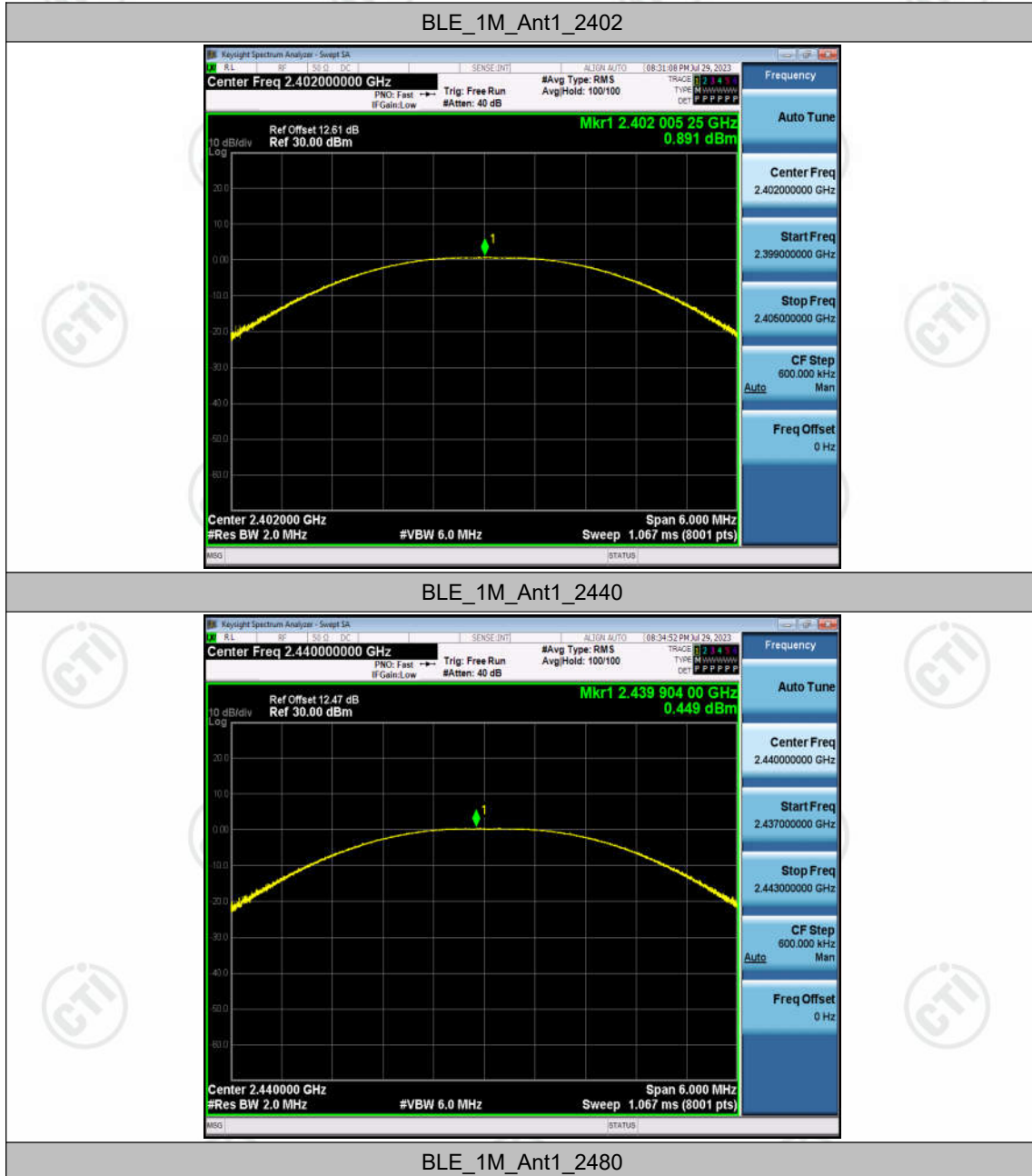


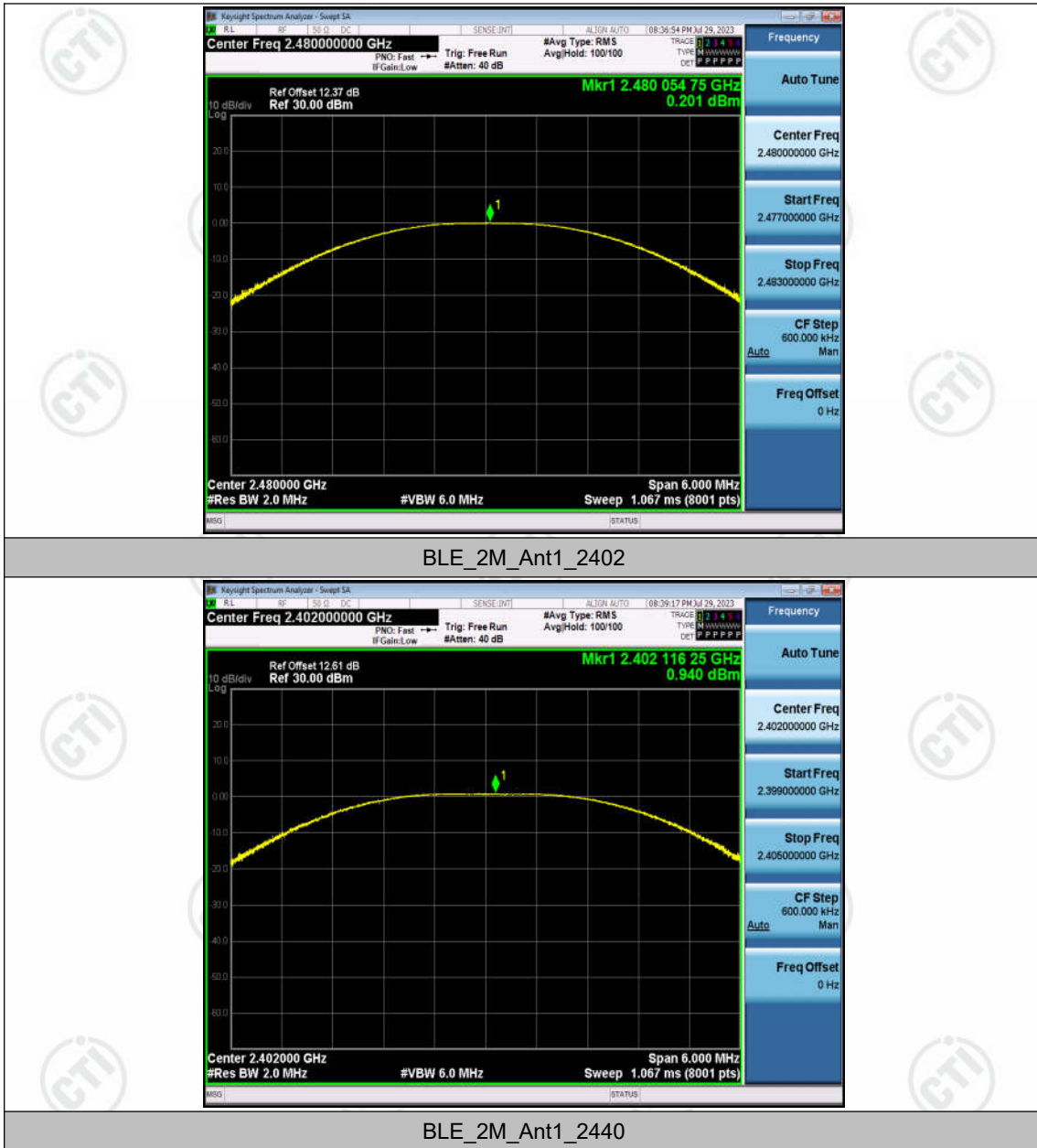


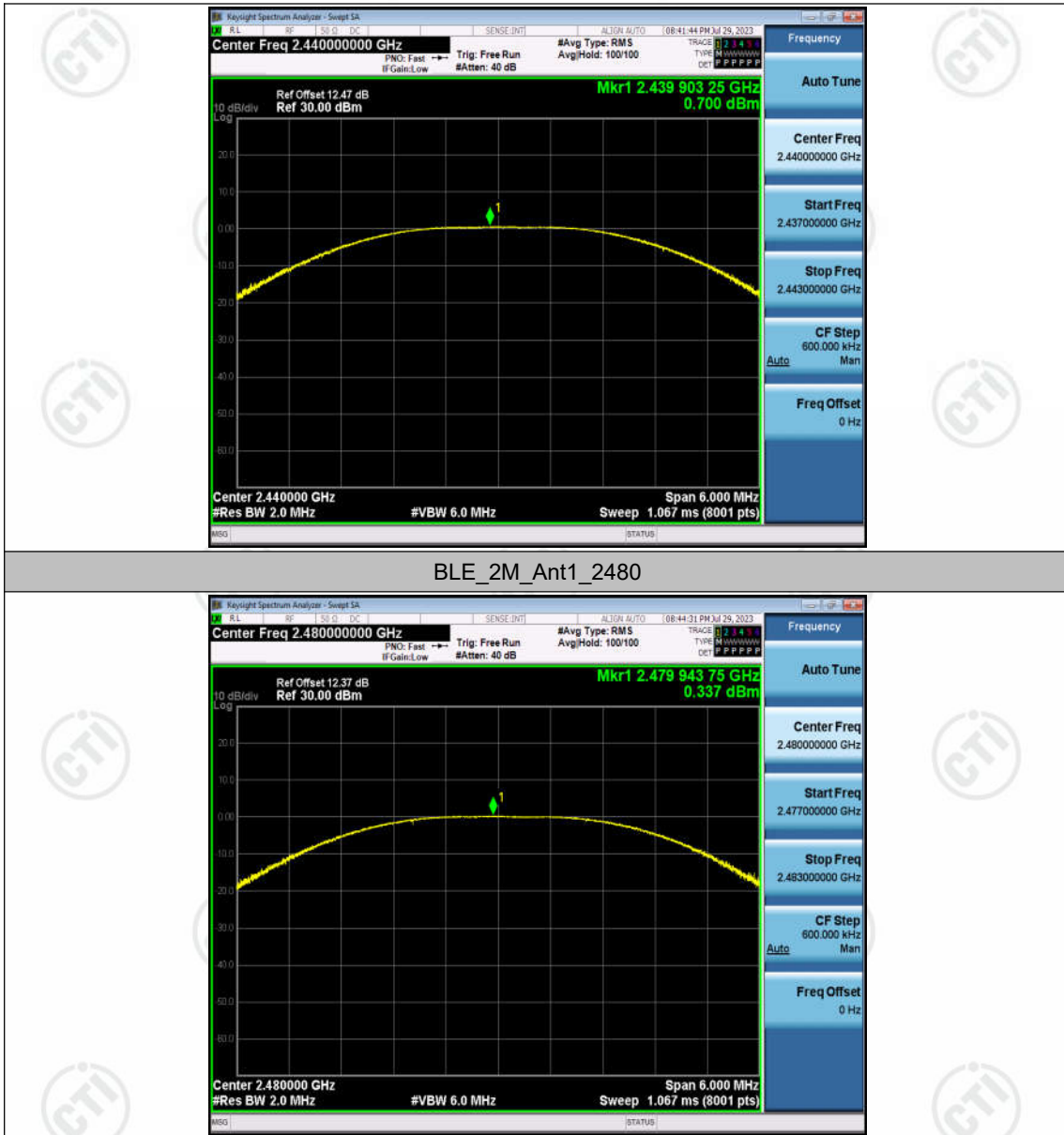
Appendix C: Maximum conducted output power**Test Result**

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.89	≤30	PASS
		2440	0.45	≤30	PASS
		2480	0.2	≤30	PASS
BLE_2M	Ant1	2402	0.94	≤30	PASS
		2440	0.7	≤30	PASS
		2480	0.34	≤30	PASS

Test Graphs



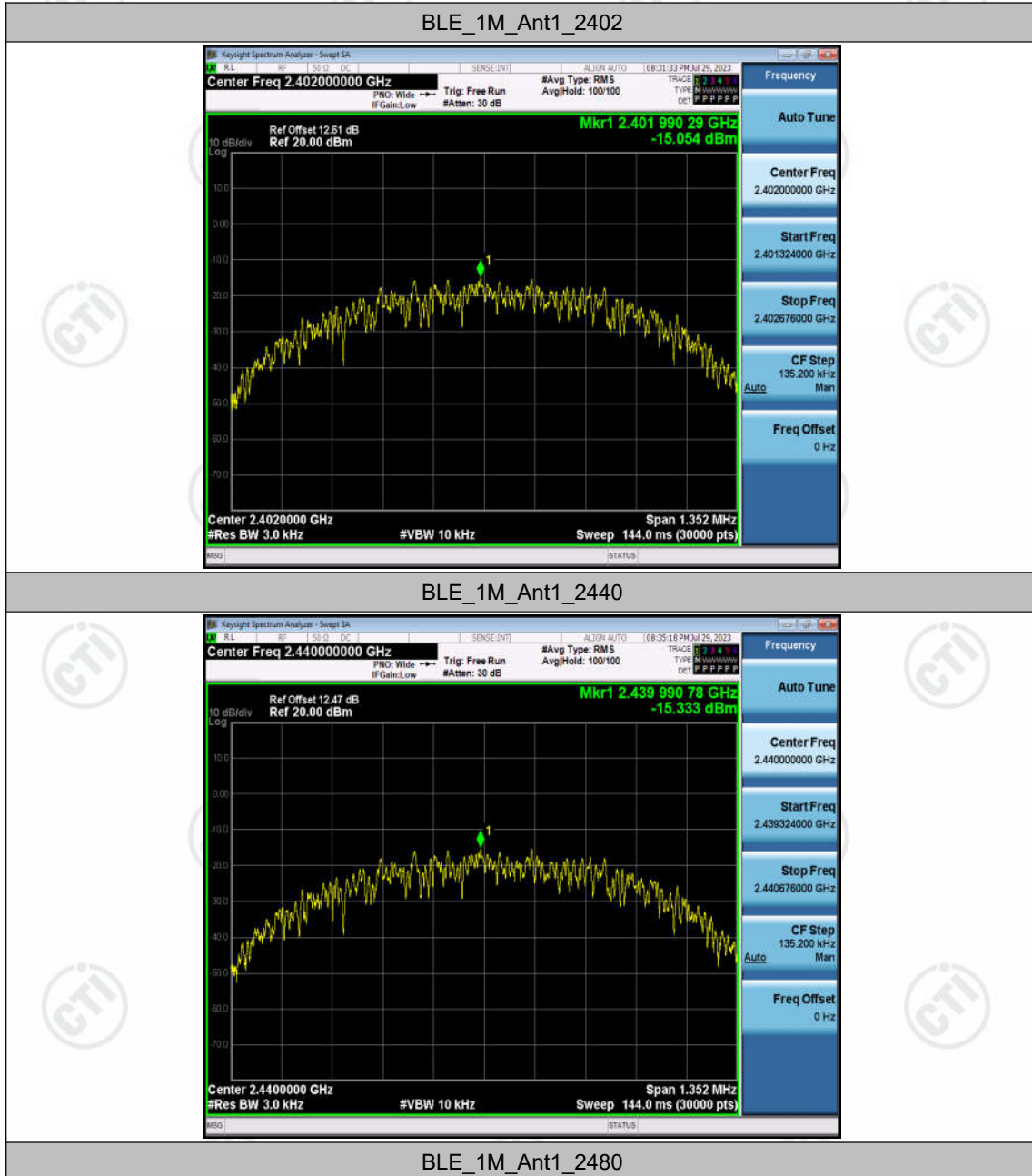


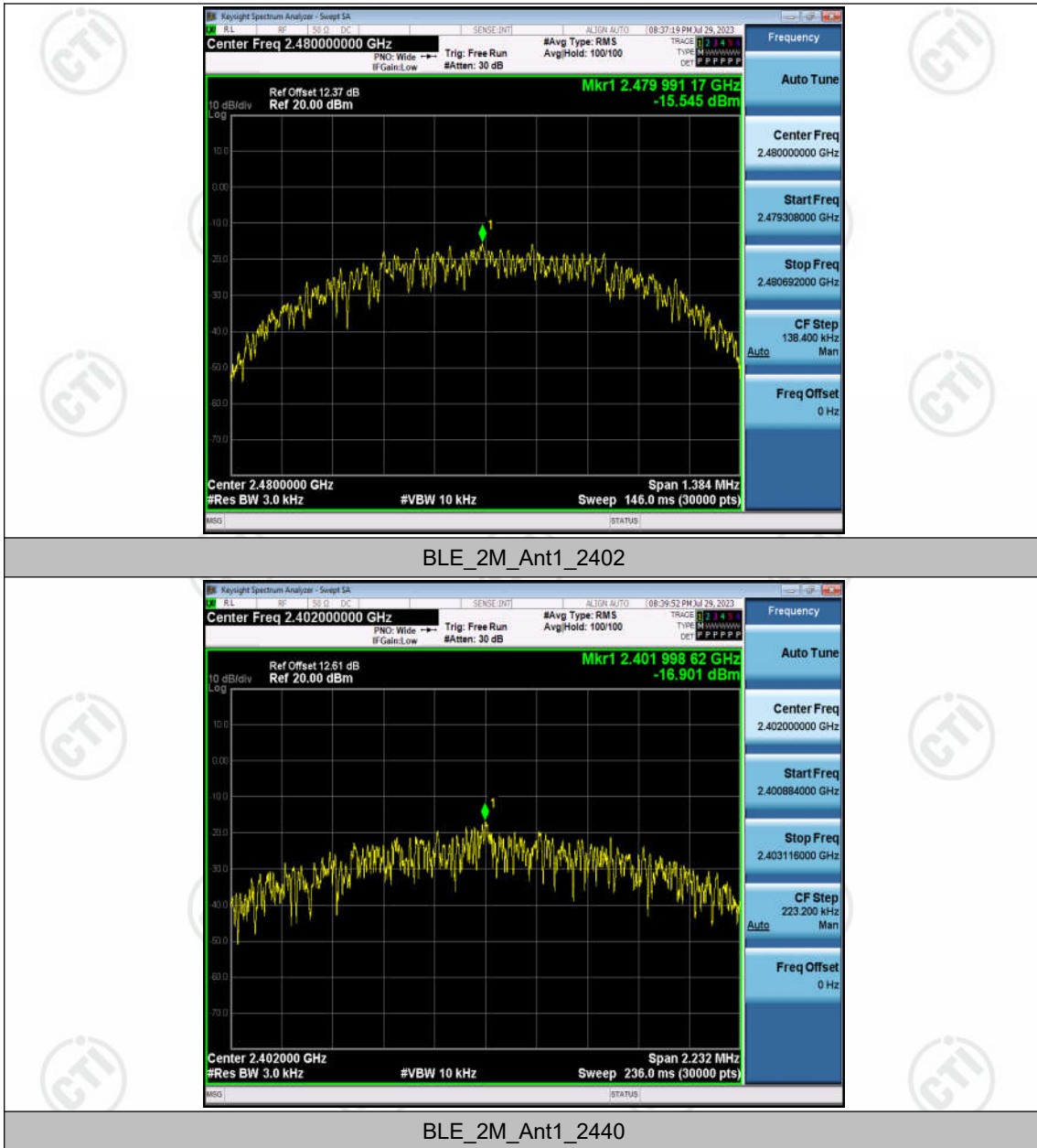


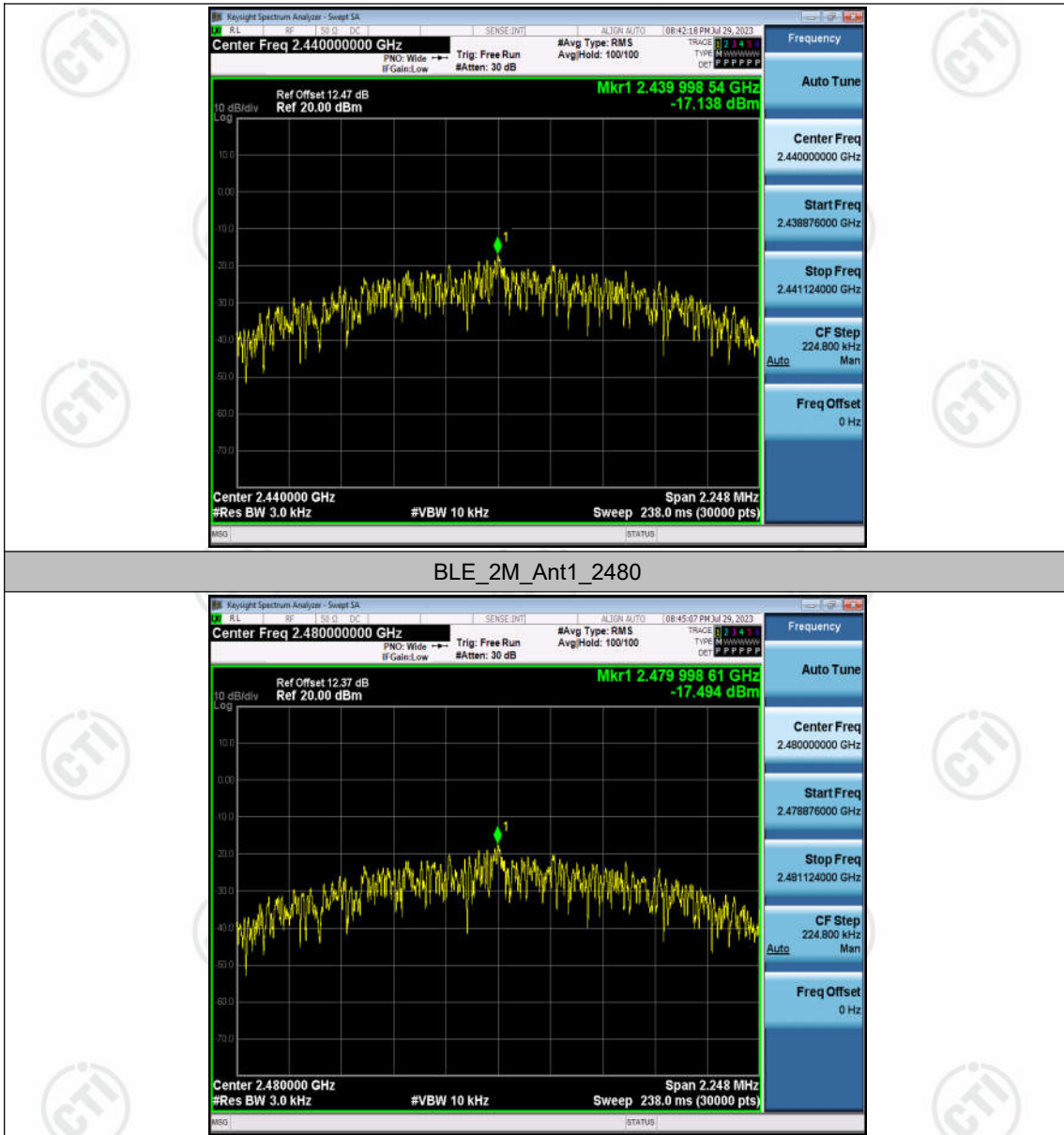
Appendix D: Maximum power spectral density**Test Result**

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.05	≤8.00	PASS
		2440	-15.33	≤8.00	PASS
		2480	-15.55	≤8.00	PASS
BLE_2M	Ant1	2402	-16.9	≤8.00	PASS
		2440	-17.14	≤8.00	PASS
		2480	-17.49	≤8.00	PASS

Test Graphs





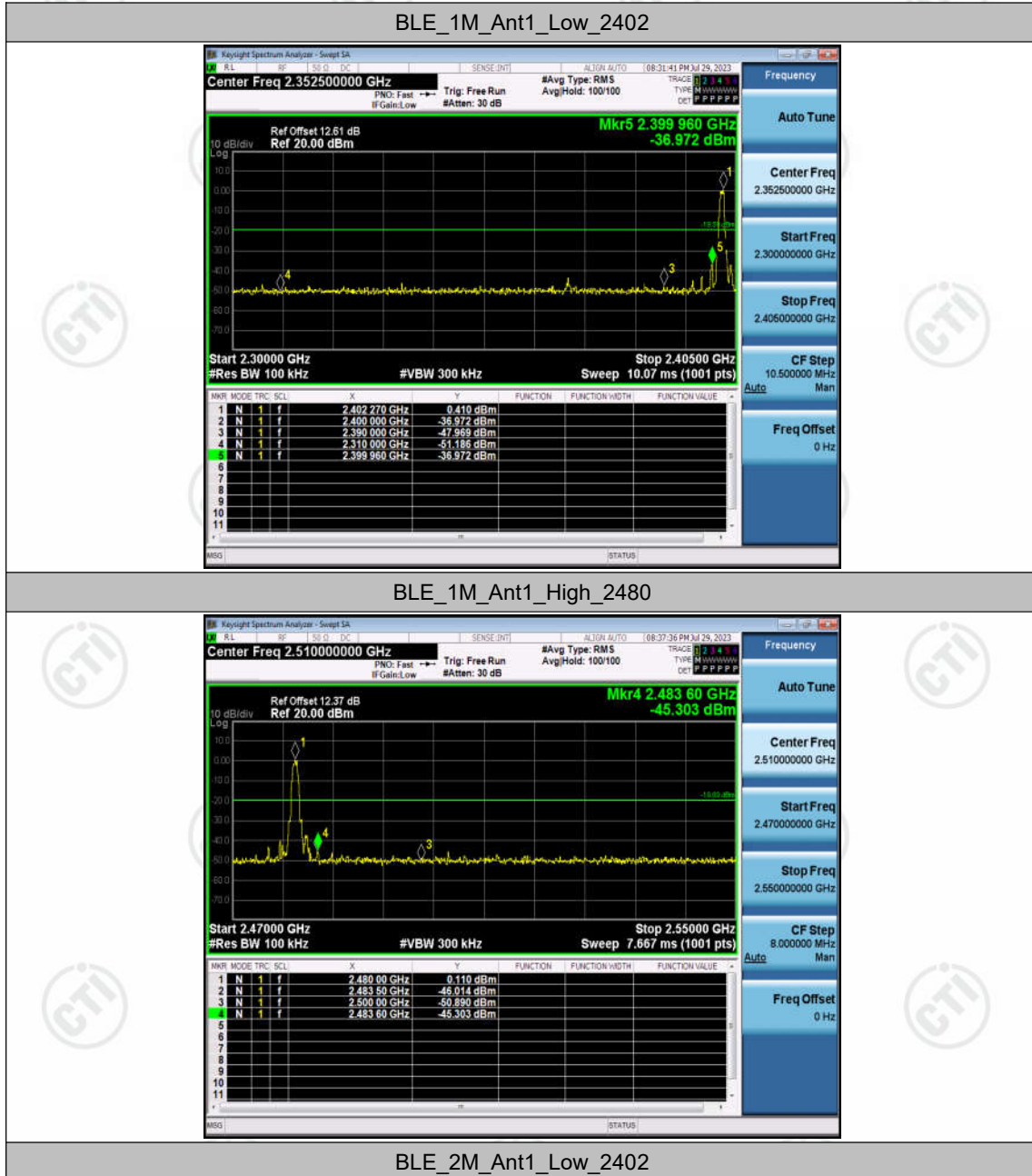


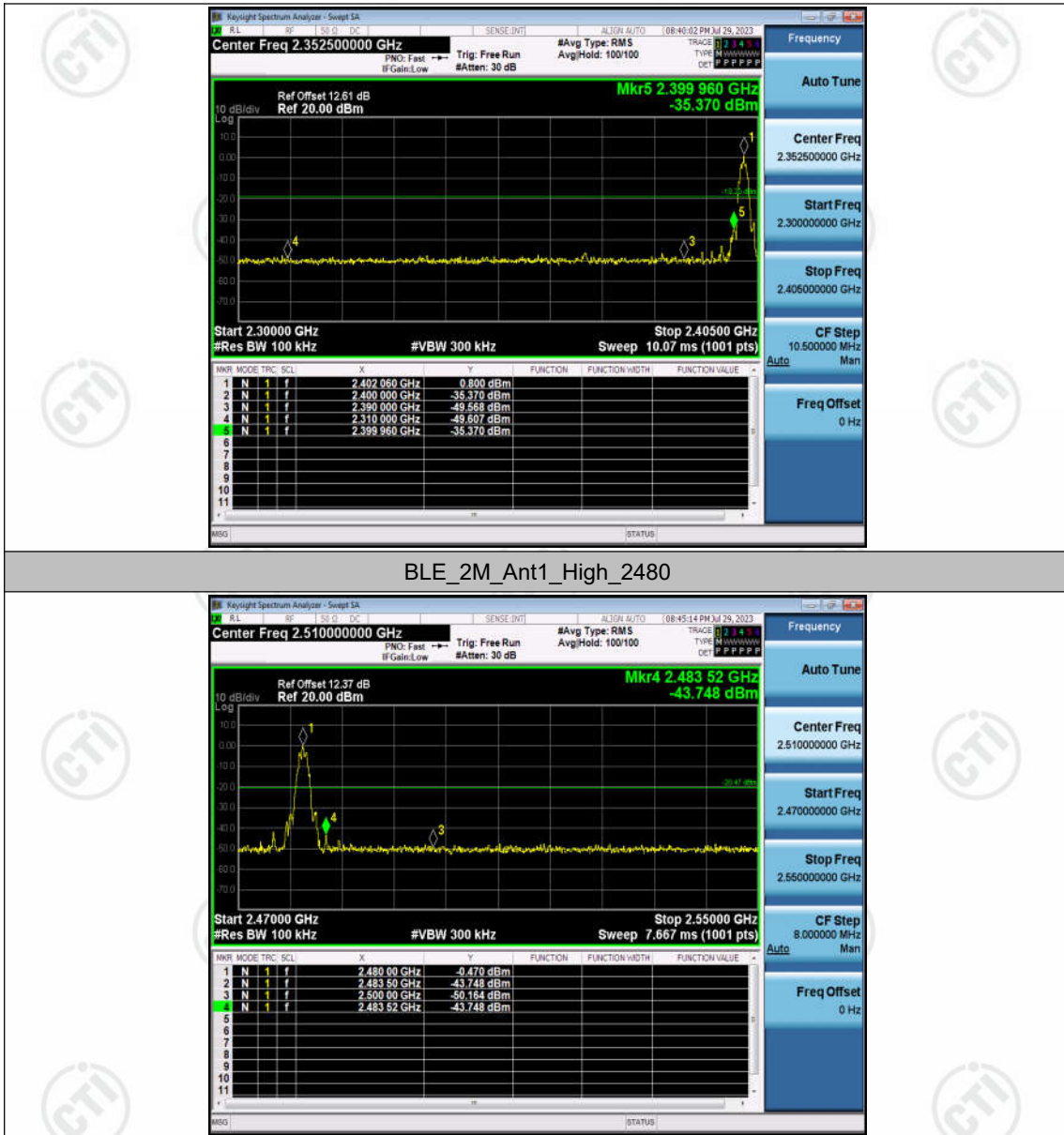
BLE_2M_Ant1_2480

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	0.41	-36.97	≤-19.59	PASS
		High	2480	0.11	-45.3	≤-19.89	PASS
BLE_2M	Ant1	Low	2402	0.80	-35.37	≤-19.2	PASS
		High	2480	-0.47	-43.75	≤-20.47	PASS

Test Graphs



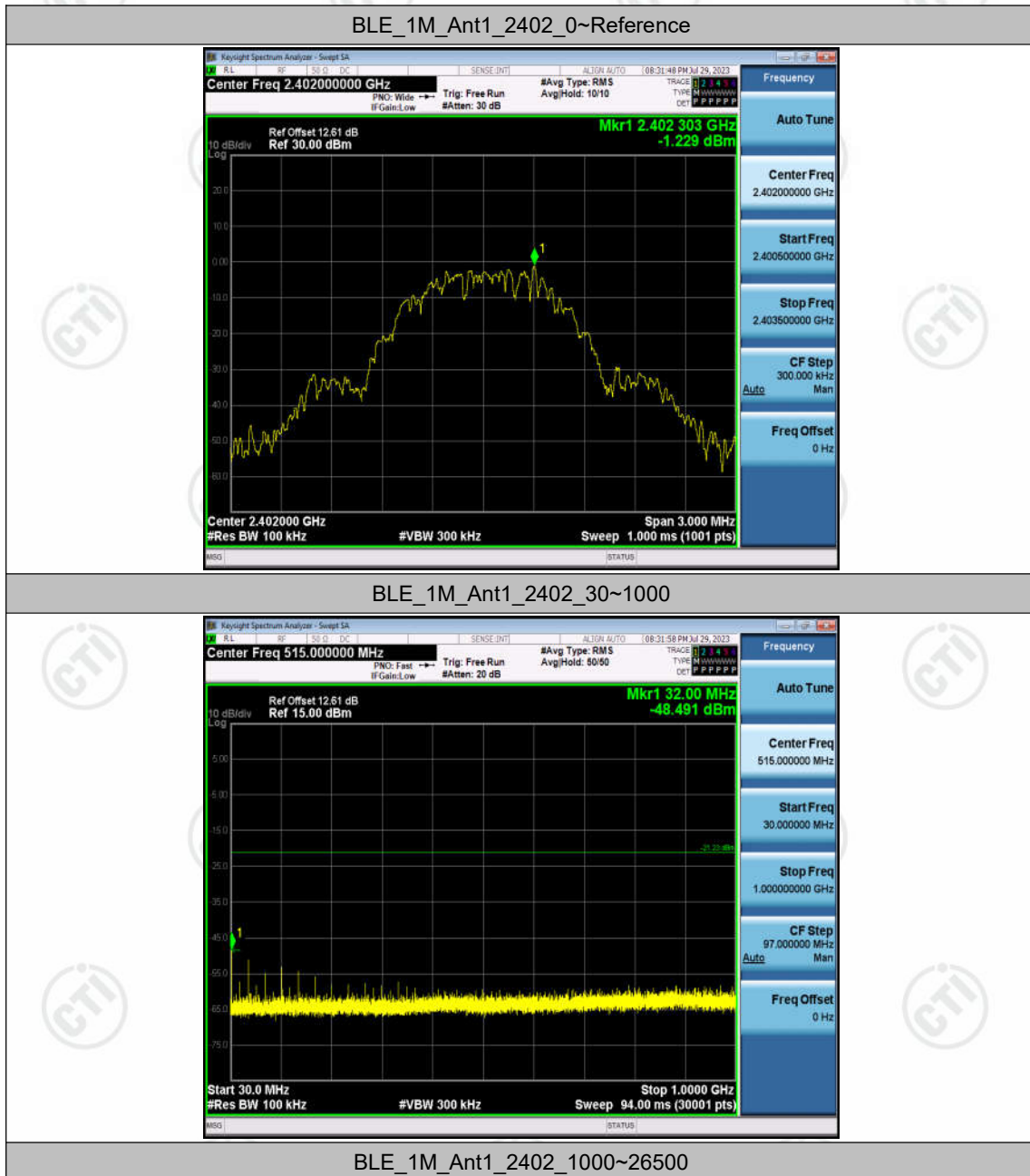


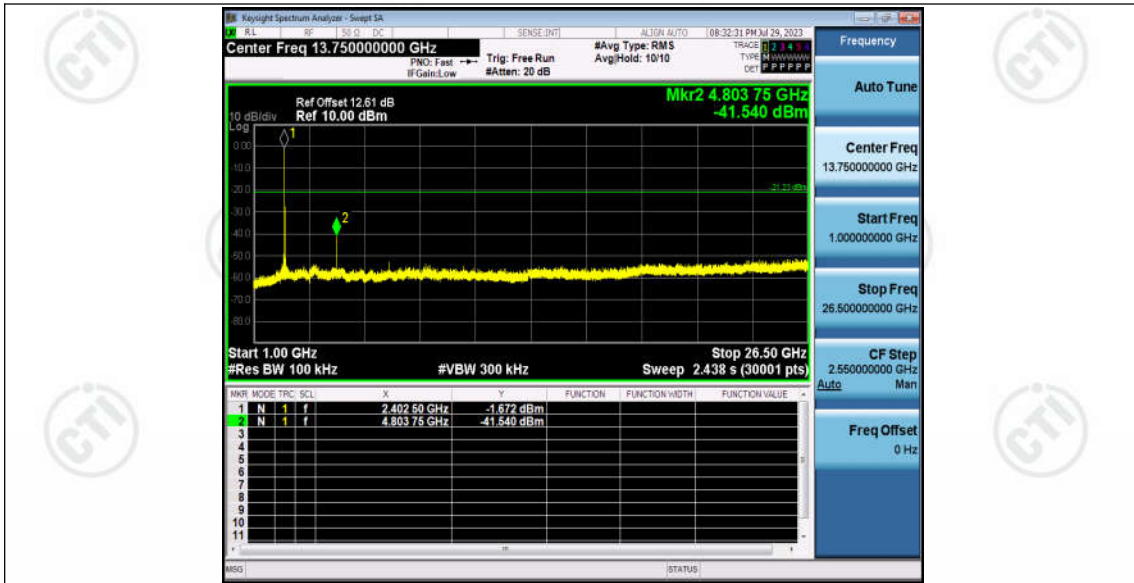
Appendix F: Conducted Spurious Emission

Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.23	-1.23	---	PASS
			30~1000	---	-48.49	≤-21.23	PASS
			1000~26500	---	-41.54	≤-21.23	PASS
		2440	Reference	-0.70	-0.70	---	PASS
			30~1000	---	-48.78	≤-20.7	PASS
			1000~26500	---	-43.01	≤-20.7	PASS
		2480	Reference	-1.23	-1.23	---	PASS
			30~1000	---	-48.24	≤-21.23	PASS
			1000~26500	---	-41.87	≤-21.23	PASS
BLE_2M	Ant1	2402	Reference	-2.53	-2.53	---	PASS
			30~1000	---	-48.49	≤-22.53	PASS
			1000~26500	---	-43.09	≤-22.53	PASS
		2440	Reference	-0.10	-0.10	---	PASS
			30~1000	---	-48.37	≤-20.1	PASS
			1000~26500	---	-39.8	≤-20.1	PASS
		2480	Reference	-2.78	-2.78	---	PASS
			30~1000	---	-48.97	≤-22.78	PASS
			1000~26500	---	-44.42	≤-22.78	PASS

Test Graphs

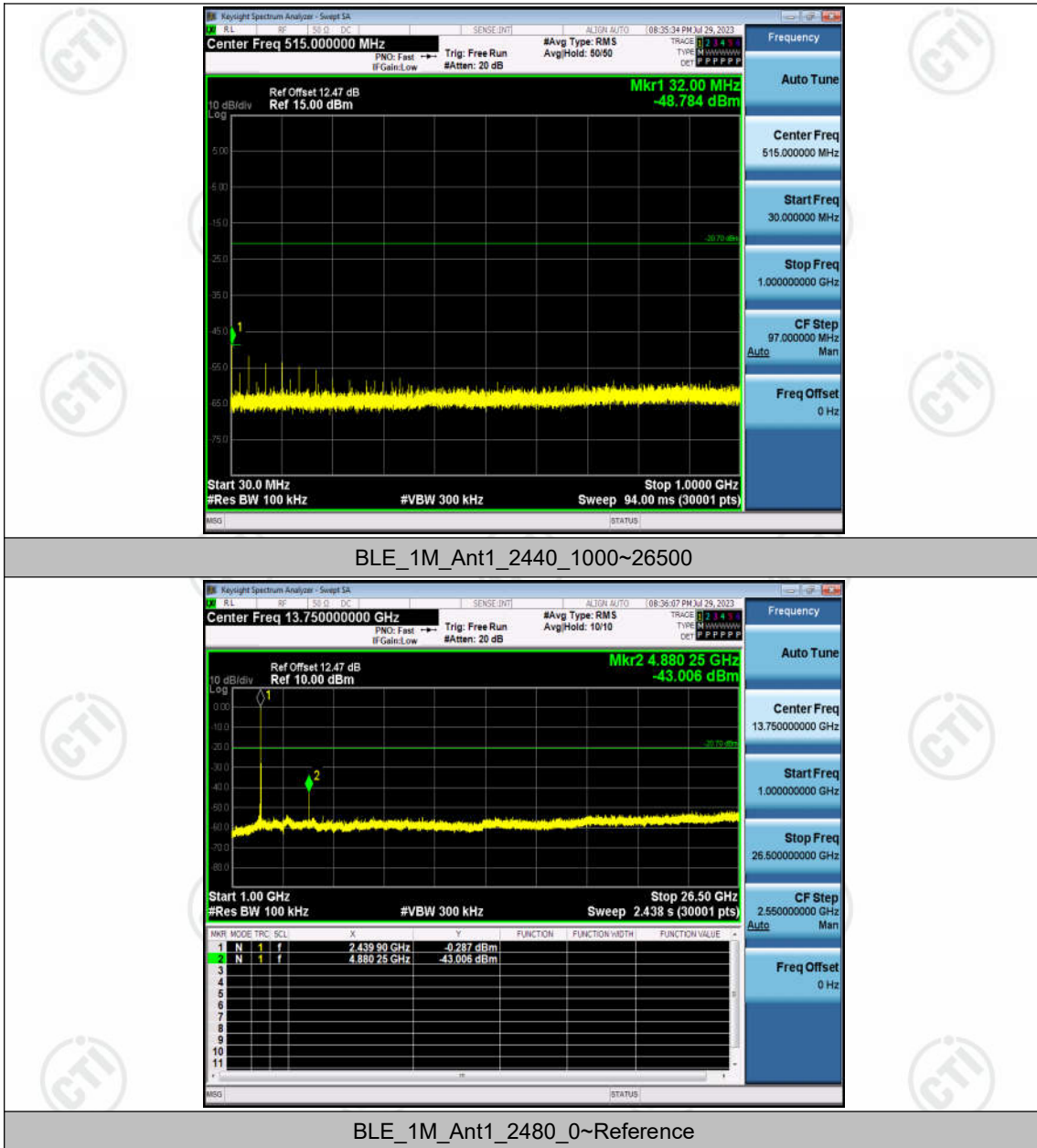


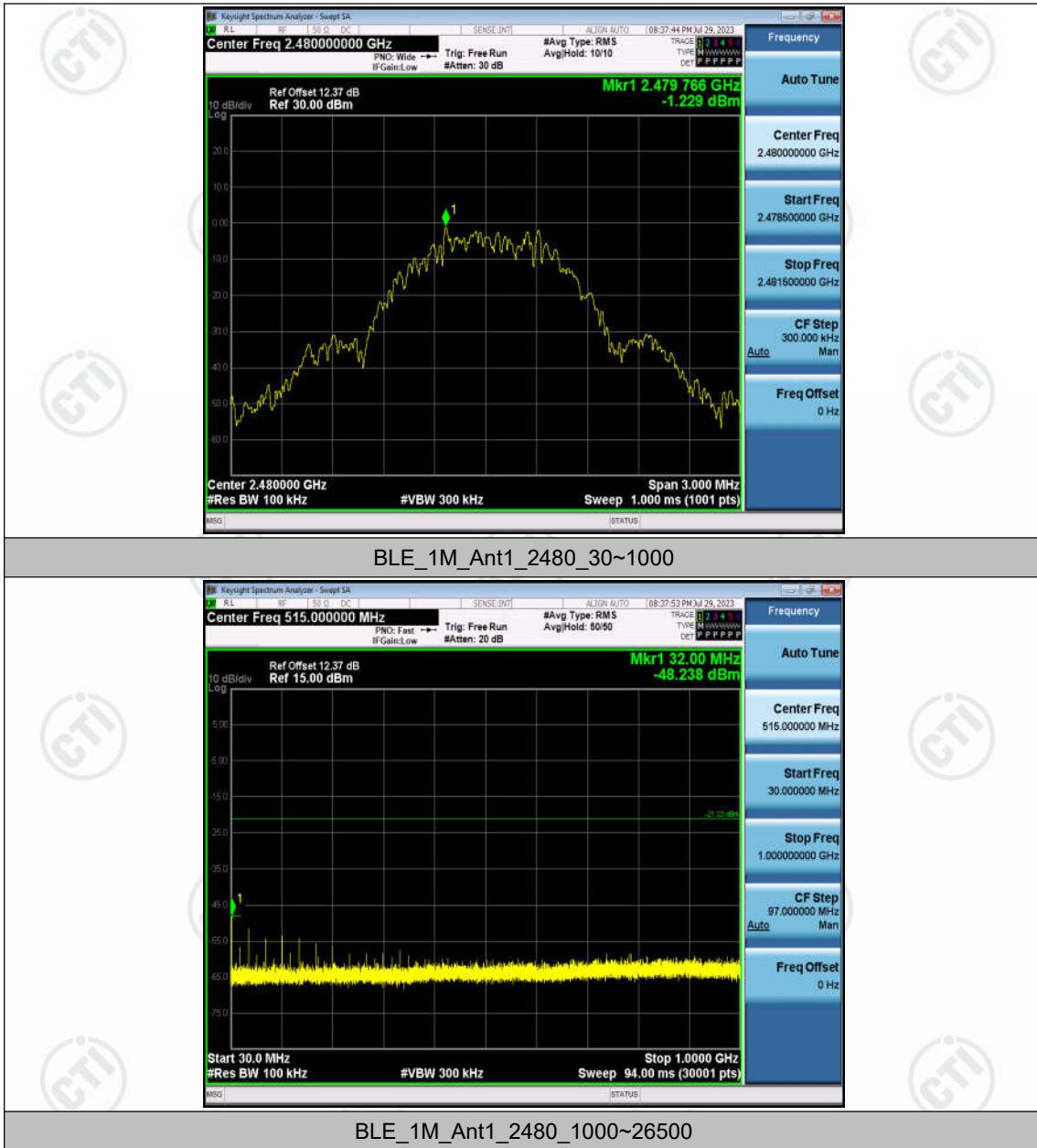


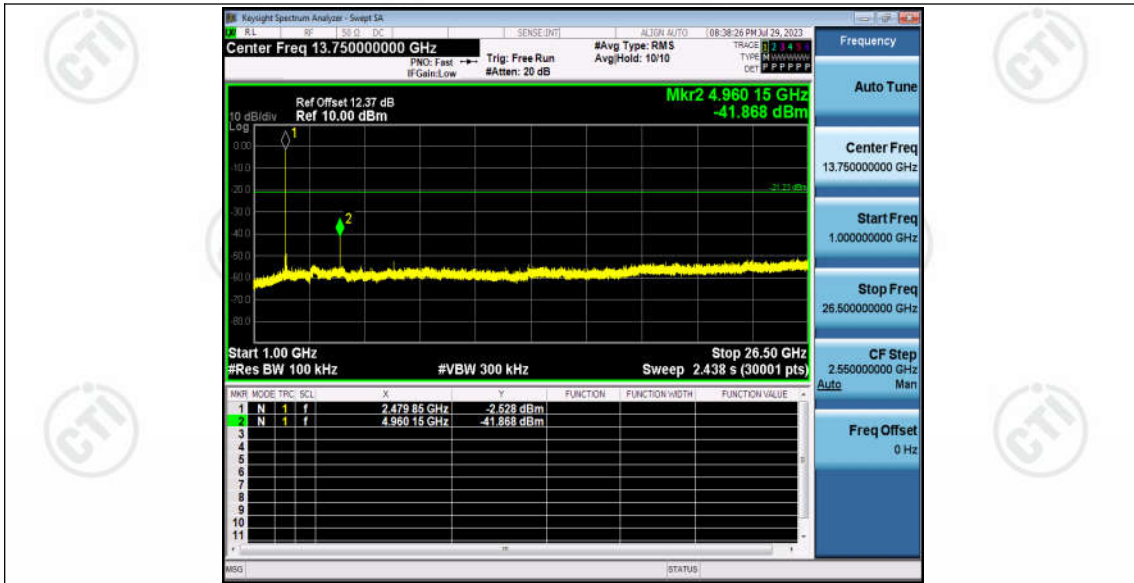
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



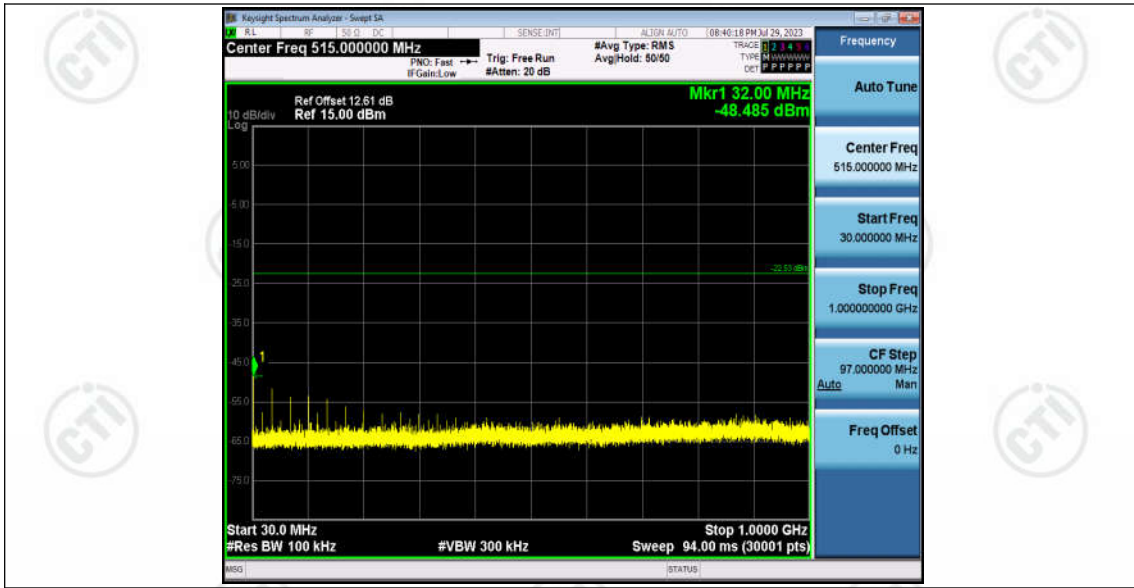




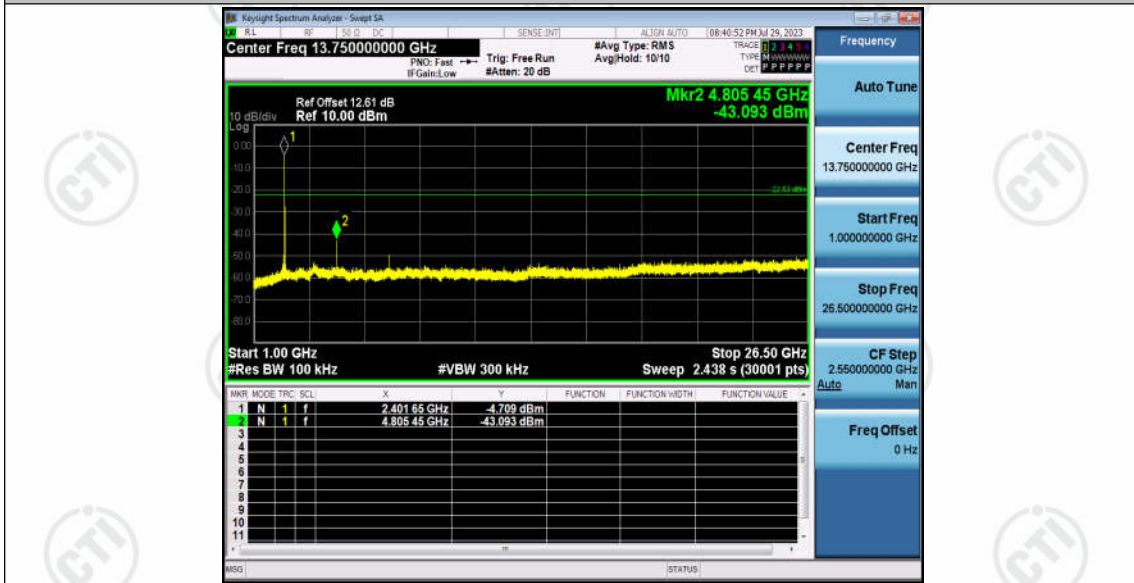
BLE_2M_Ant1_2402_0~Reference



BLE_2M_Ant1_2402_30~1000



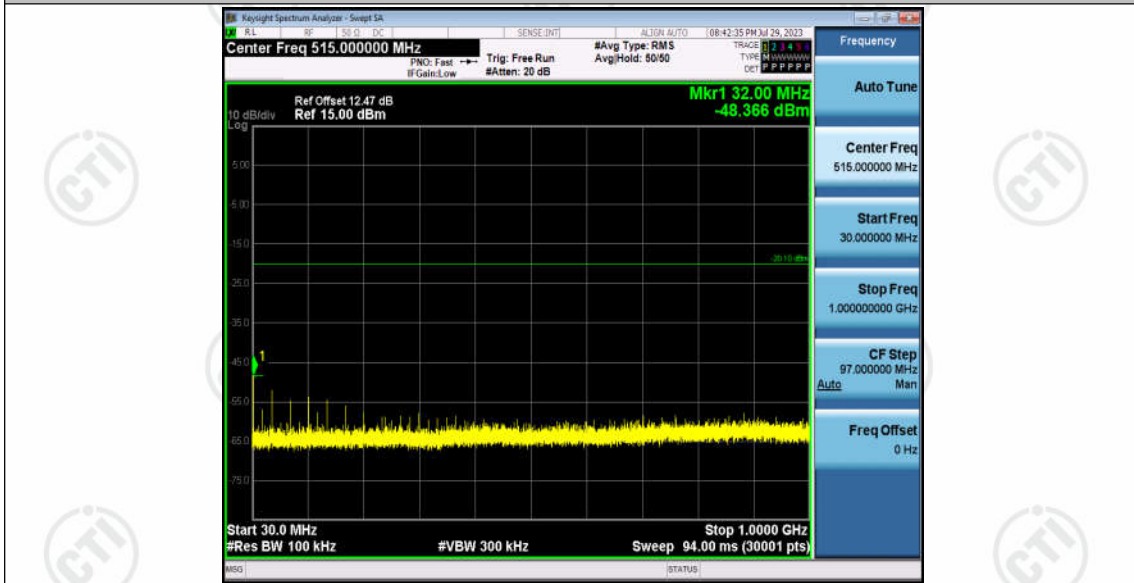
BLE_2M_Ant1_2402_1000~26500



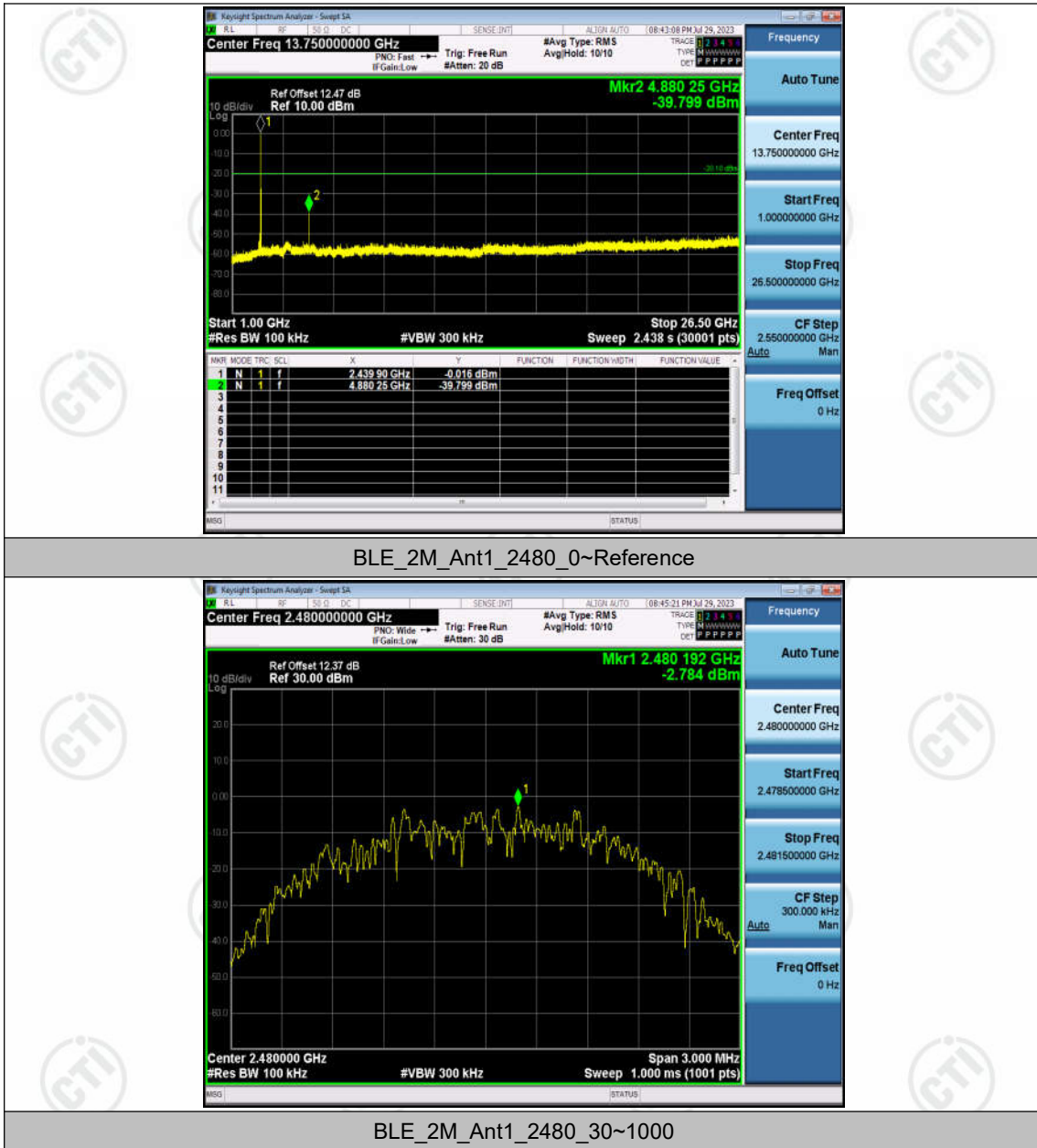
BLE_2M_Ant1_2440_0~Reference

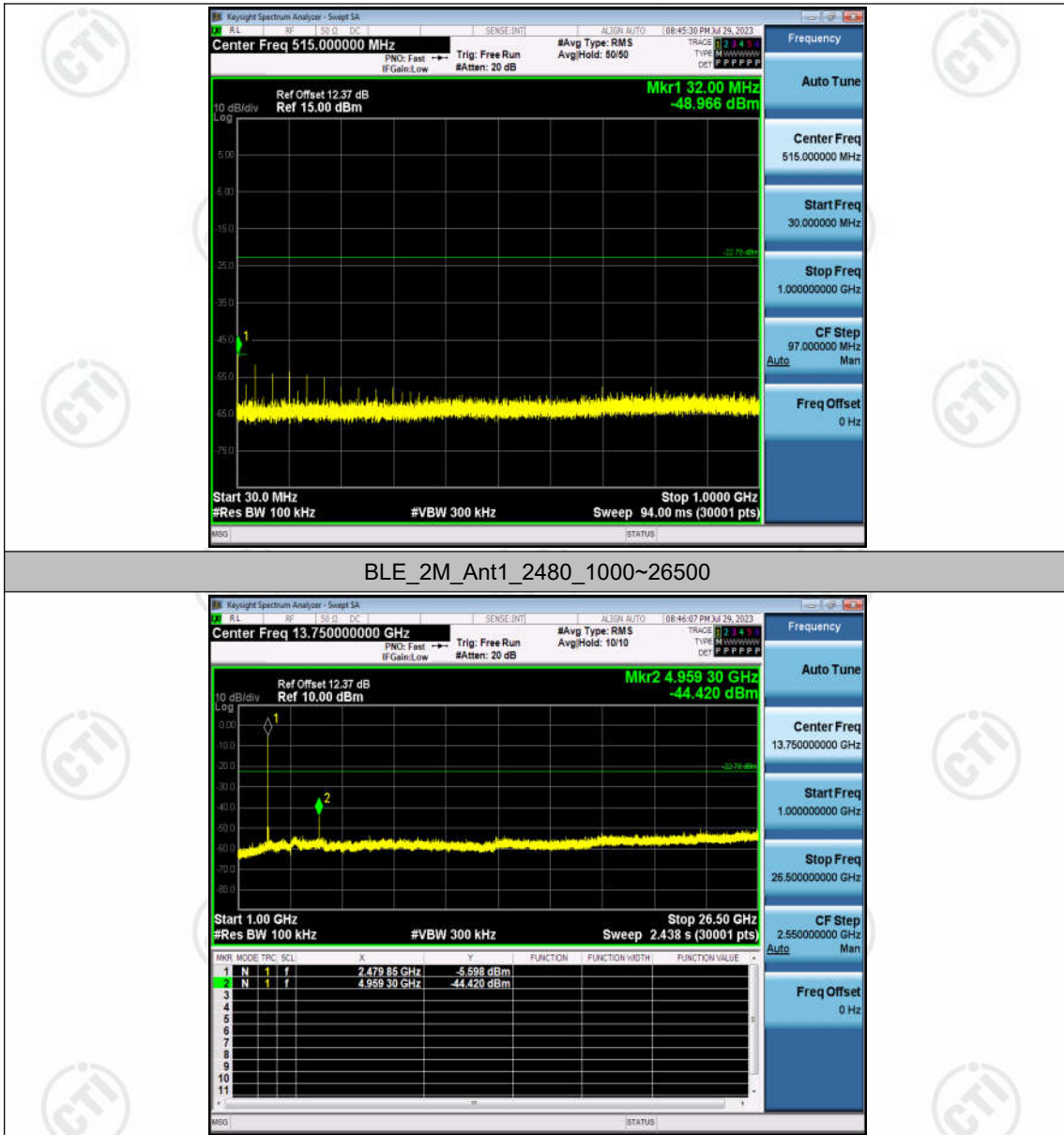


BLE_2M_Ant1_2440_30~1000



BLE_2M_Ant1_2440_1000~26500

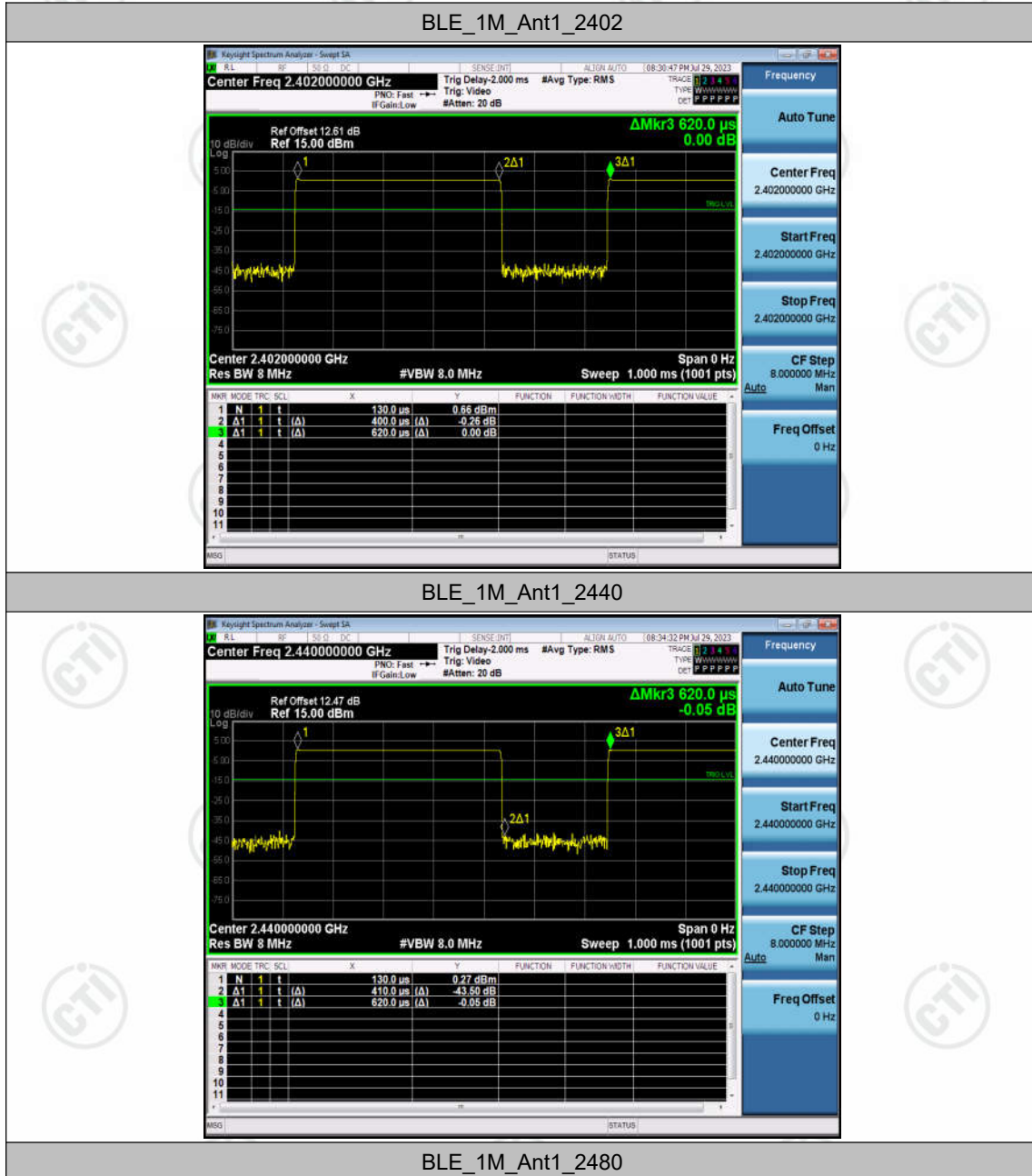


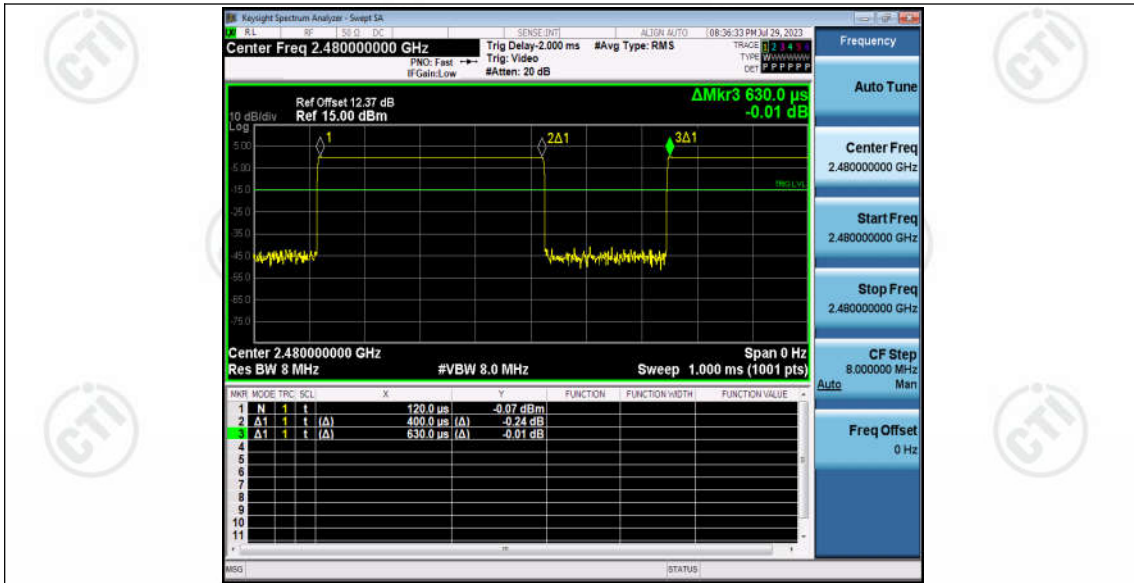


Appendix G: Duty Cycle**Test Result**

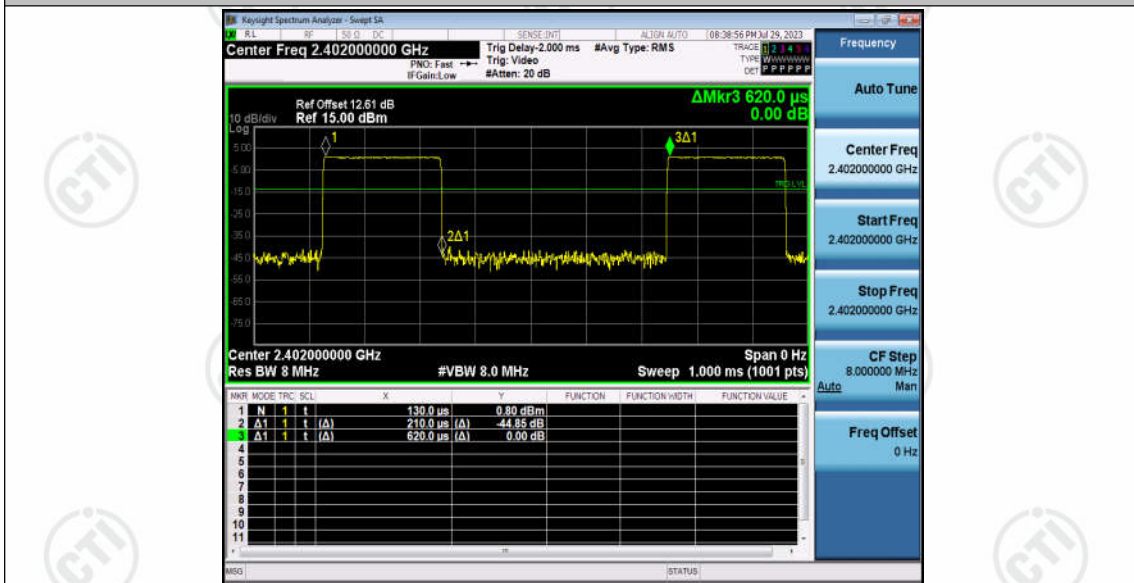
Test Mode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.40	0.62	64.52	1.90
		2440	0.41	0.62	66.13	1.80
		2480	0.40	0.63	63.49	1.97
BLE_2M	Ant1	2402	0.21	0.62	33.87	4.70
		2440	0.21	0.62	33.87	4.70
		2480	0.21	0.63	33.33	4.77

Test Graphs

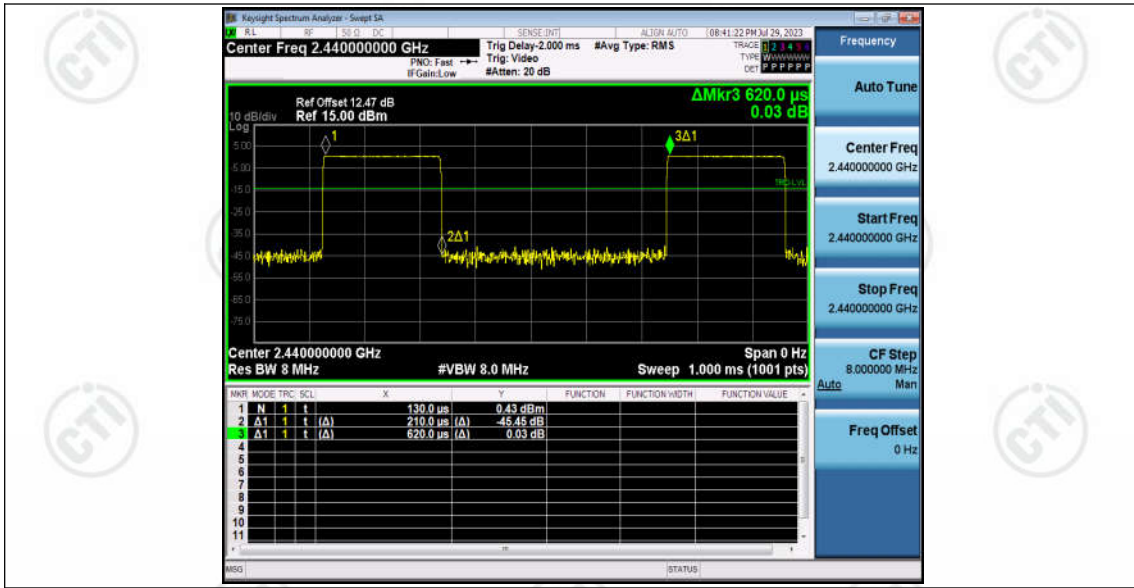




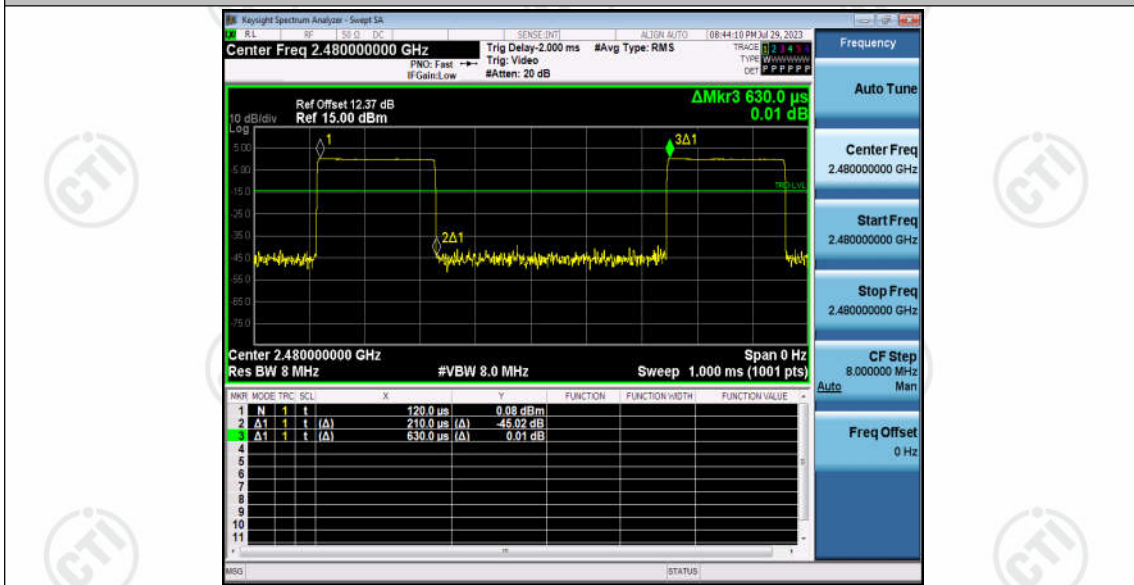
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



*** End of Report ***