

Appendix: Bluetooth LE

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Appendix A: DTS Bandwidth

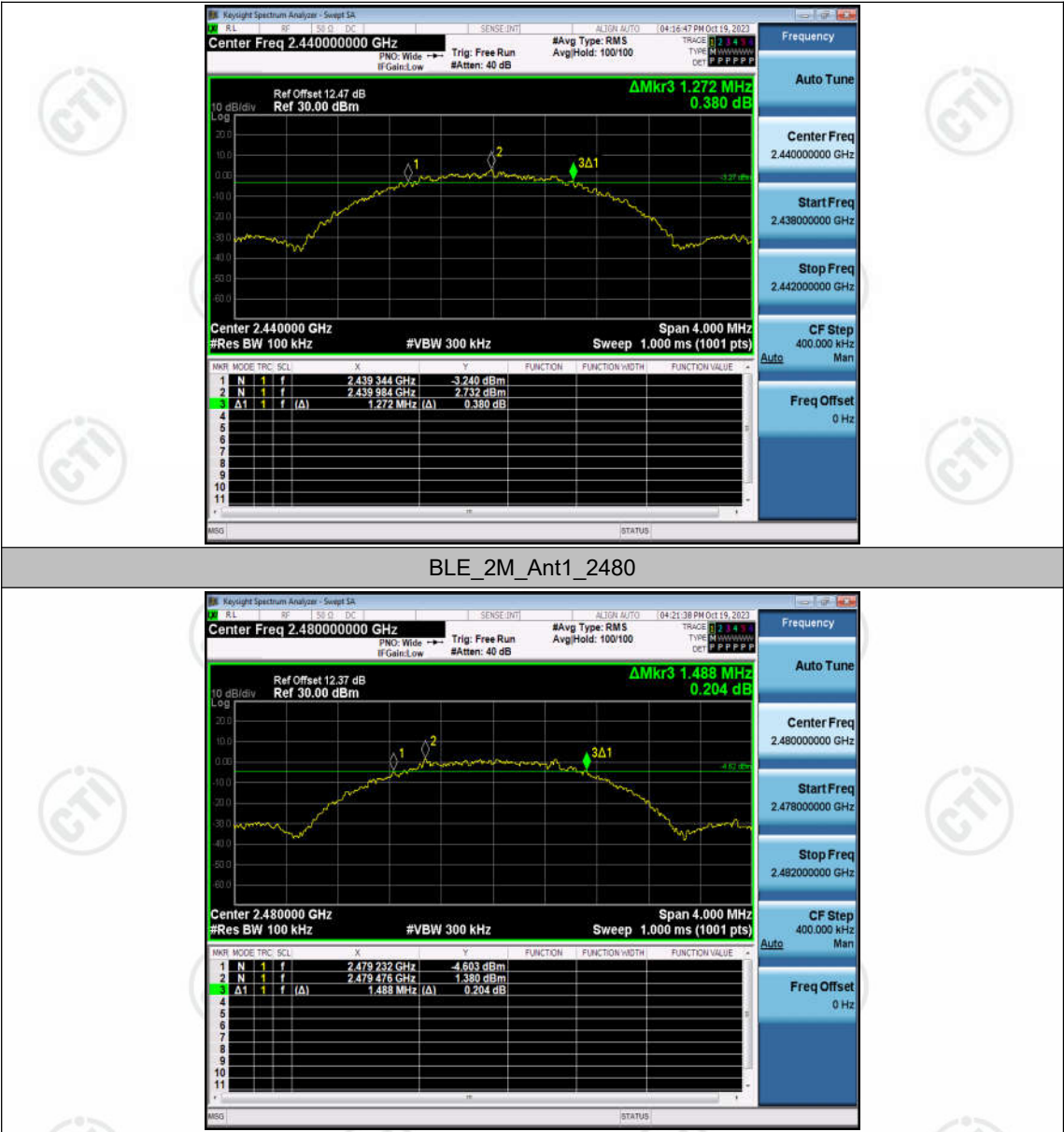
Test Result

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.696	2401.624	2402.320	0.5	PASS
		2440	0.684	2439.648	2440.332	0.5	PASS
		2480	0.692	2479.636	2480.328	0.5	PASS
BLE_2M	Ant1	2402	1.304	2401.332	2402.636	0.5	PASS
		2440	1.272	2439.344	2440.616	0.5	PASS
		2480	1.488	2479.232	2480.720	0.5	PASS

Test Graphs





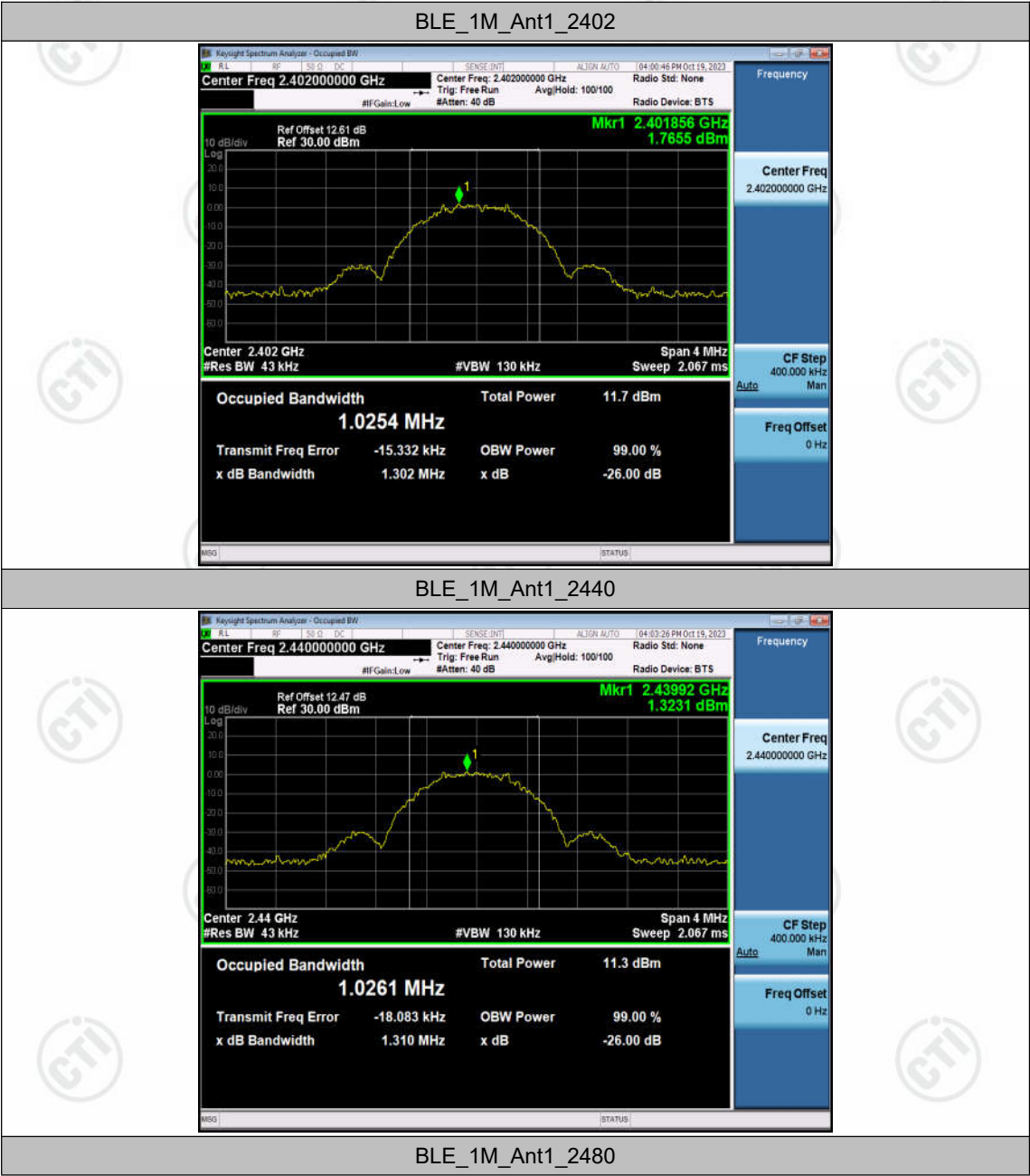


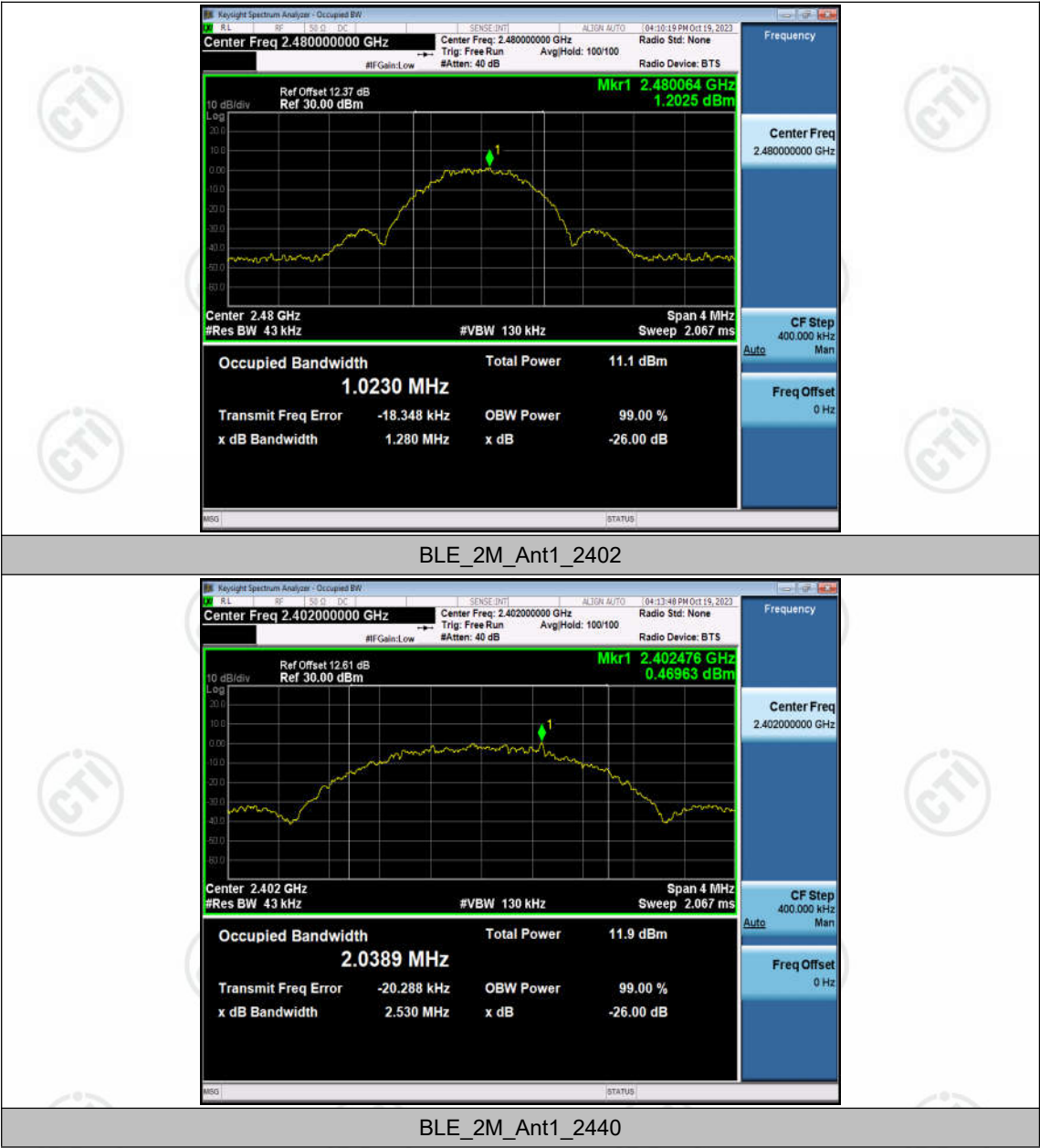
Appendix B: Occupied Channel Bandwidth

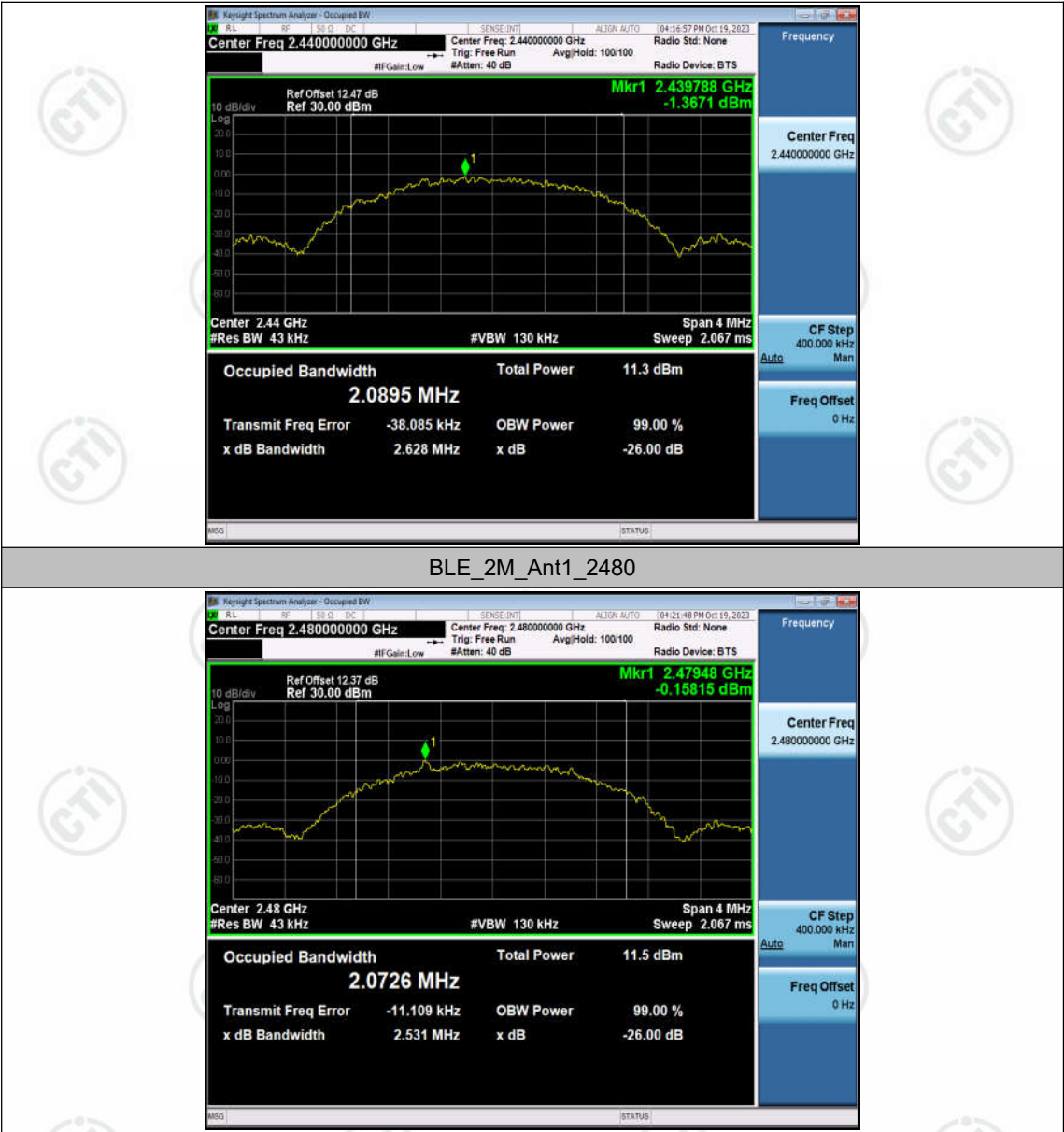
Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	1.0254	2401.4720	2402.4974	---	---
		2440	1.0261	2439.4689	2440.4950	---	---
		2480	1.0230	2479.4702	2480.4932	---	---
BLE_2M	Ant1	2402	2.0389	2400.9603	2402.9992	---	---
		2440	2.0895	2438.9172	2441.0067	---	---
		2480	2.0726	2478.9526	2481.0252	---	---

Test Graphs







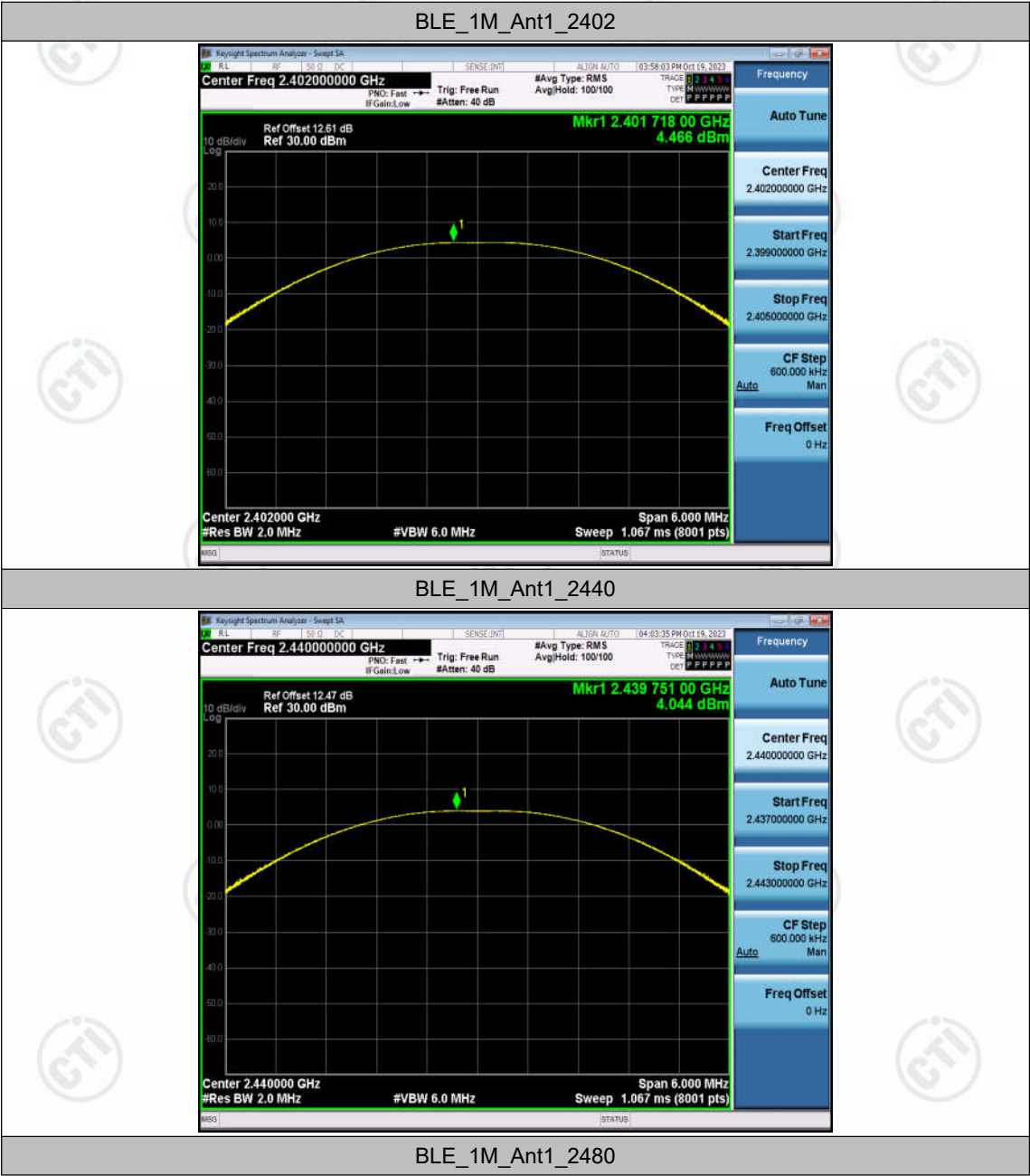
Appendix C: Maximum conducted output power

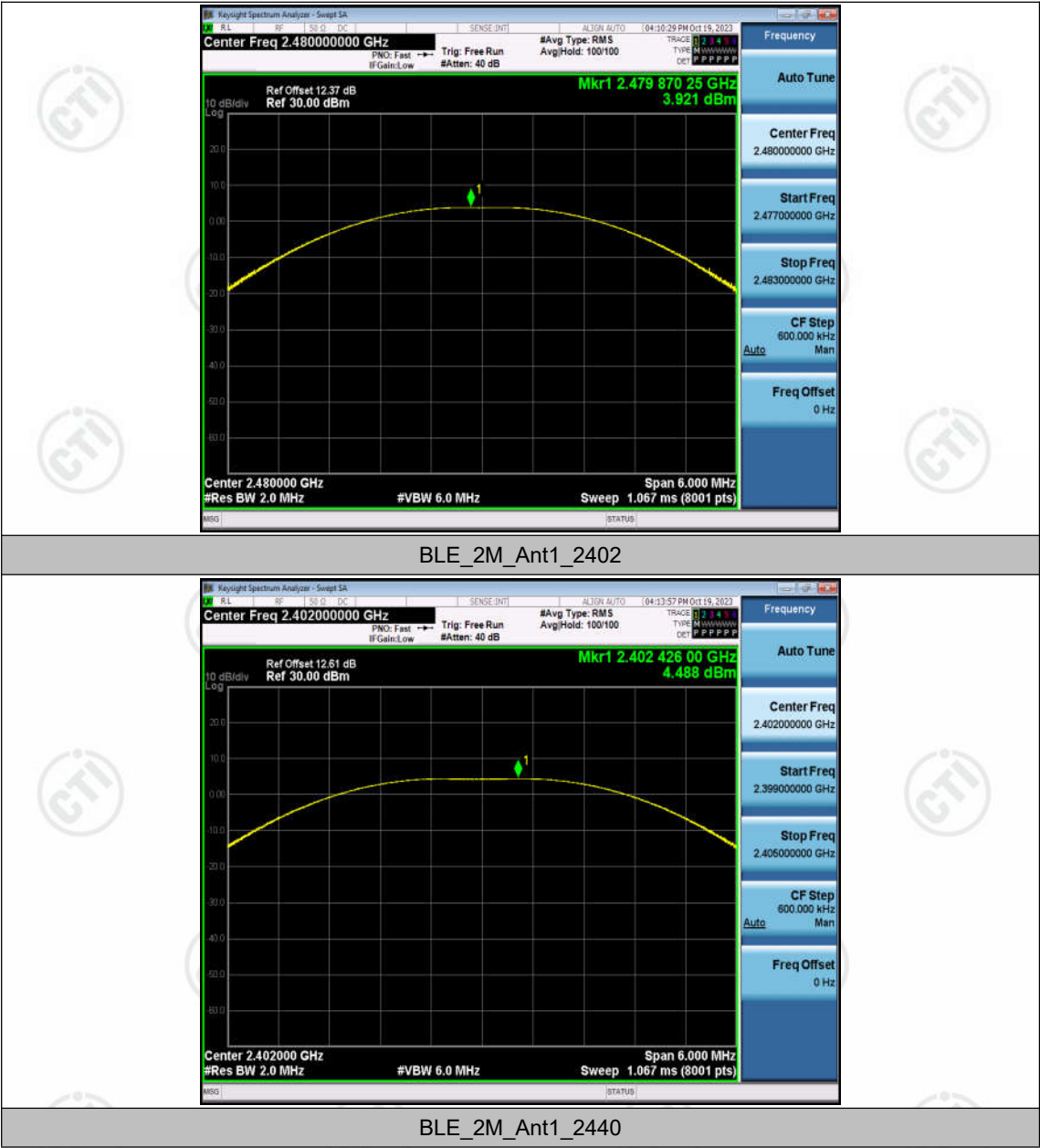
Test Result Peak

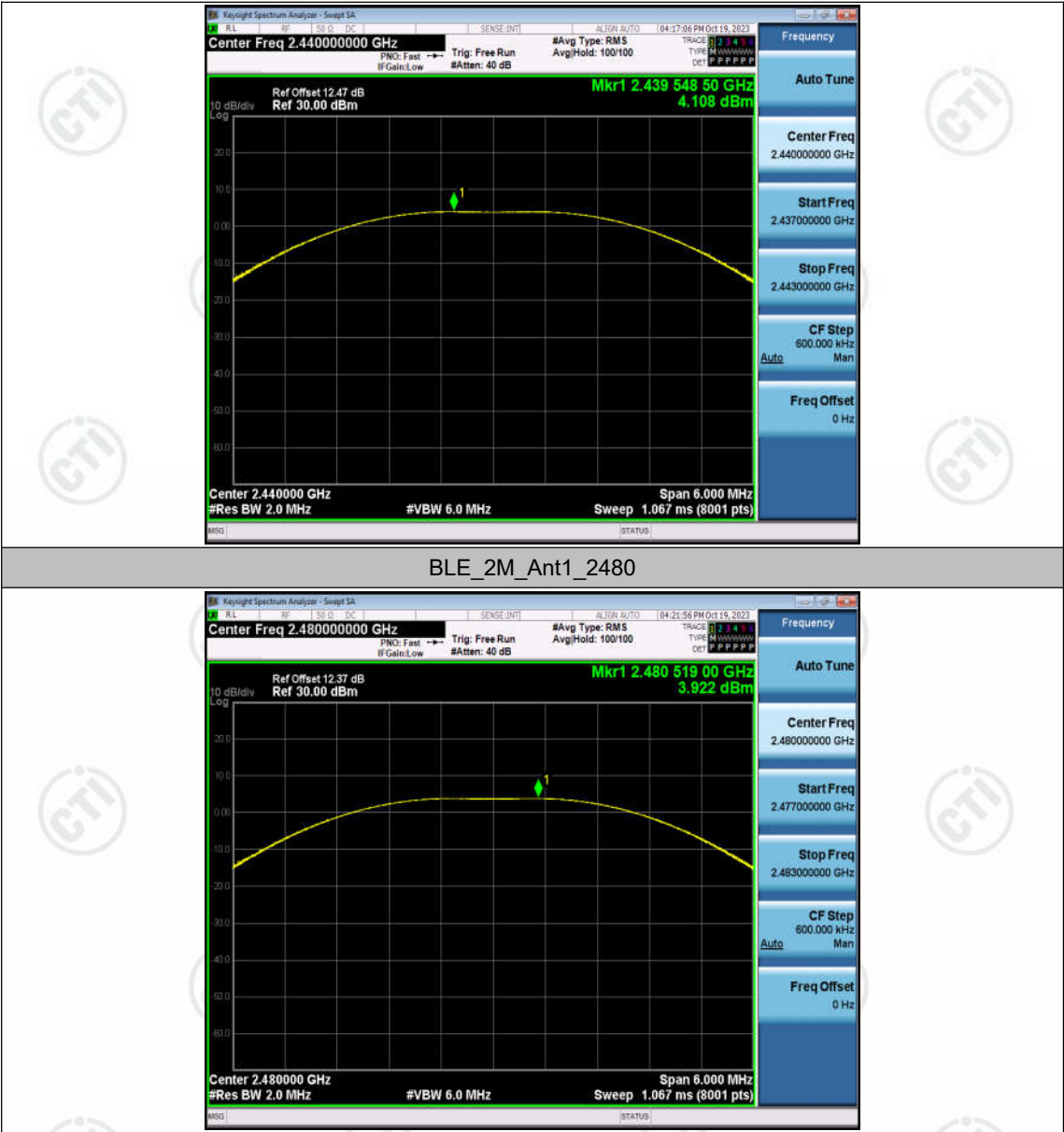
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
BLE_1M	Ant1	2402	4.47	≤30	7.55	≤36	PASS
		2440	4.04	≤30	7.12	≤36	PASS
		2480	3.92	≤30	7.00	≤36	PASS
BLE_2M	Ant1	2402	4.49	≤30	7.57	≤36	PASS
		2440	4.11	≤30	7.19	≤36	PASS
		2480	3.92	≤30	7.00	≤36	PASS

Note: EIRP=Conducted Peak Power+Antenna gain;

Test Graphs Peak





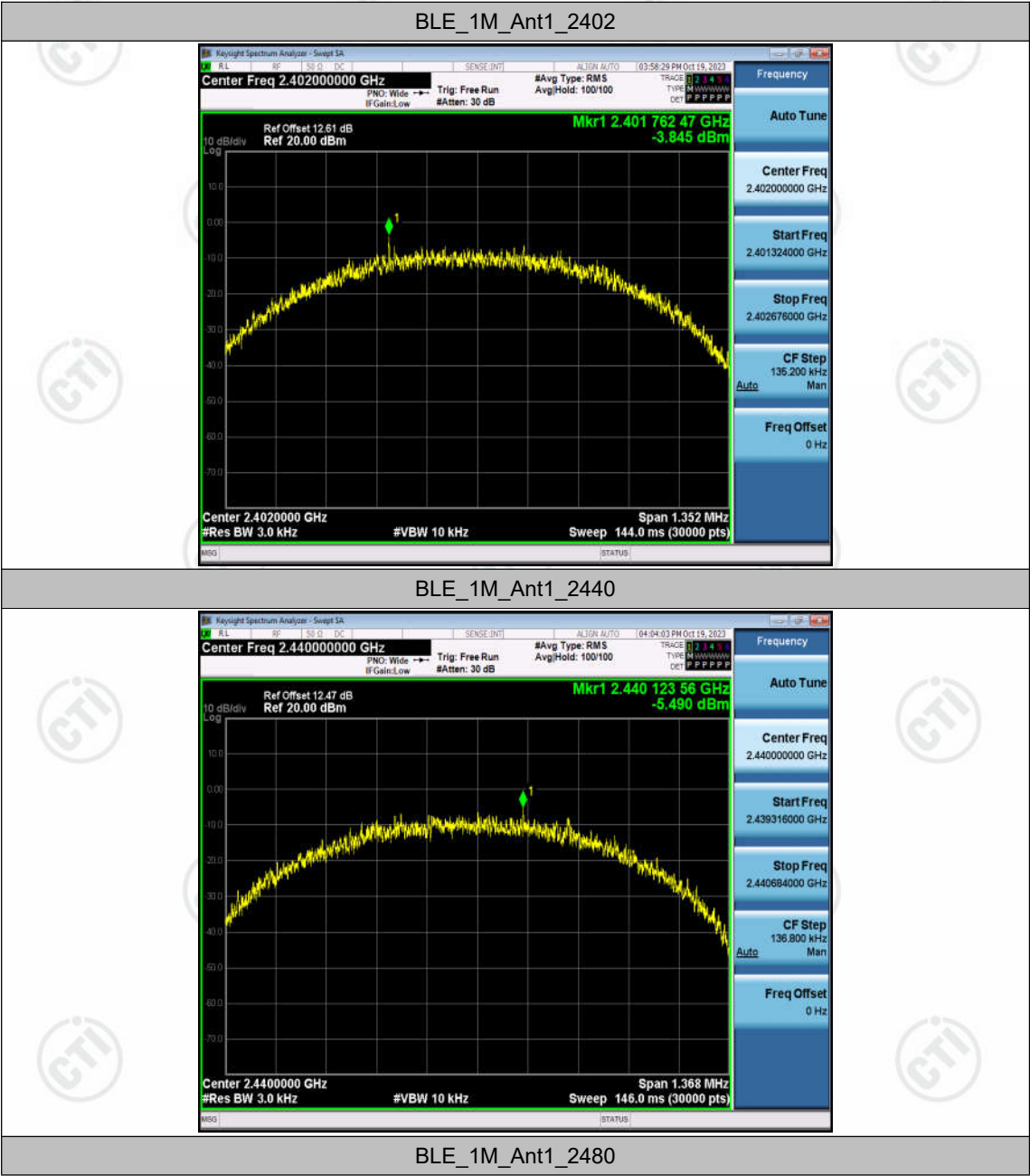


Appendix D: Maximum power spectral density

Test Result

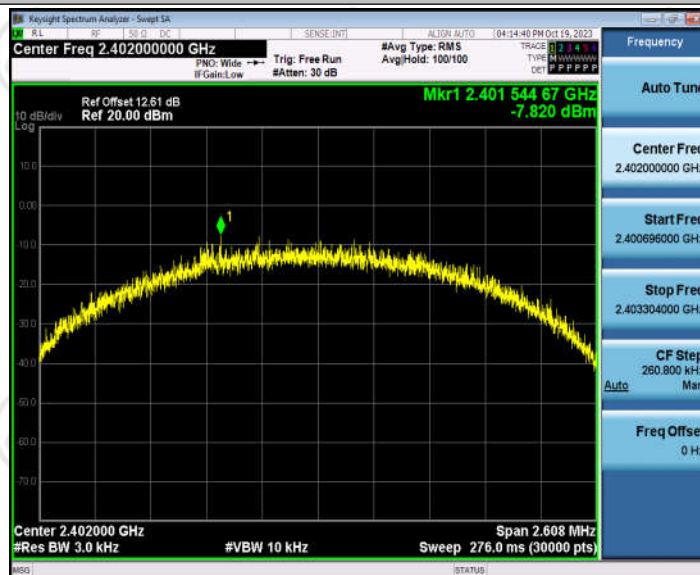
Test Mode	Antenna	Frequency [MHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-3.85	≤8.00	PASS
		2440	-5.49	≤8.00	PASS
		2480	-5.1	≤8.00	PASS
BLE_2M	Ant1	2402	-7.82	≤8.00	PASS
		2440	-8.88	≤8.00	PASS
		2480	-7.43	≤8.00	PASS

Test Graphs

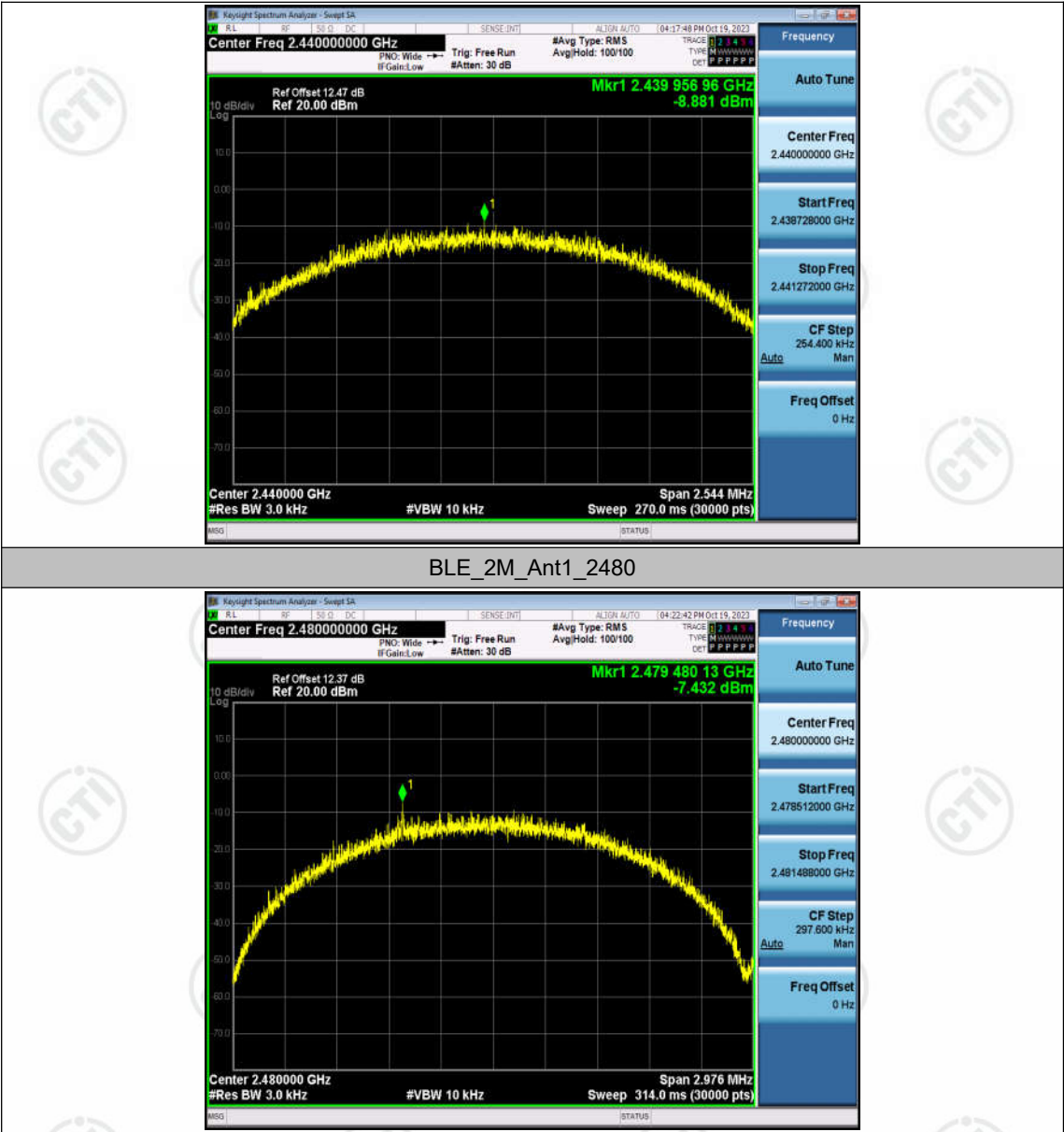




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440

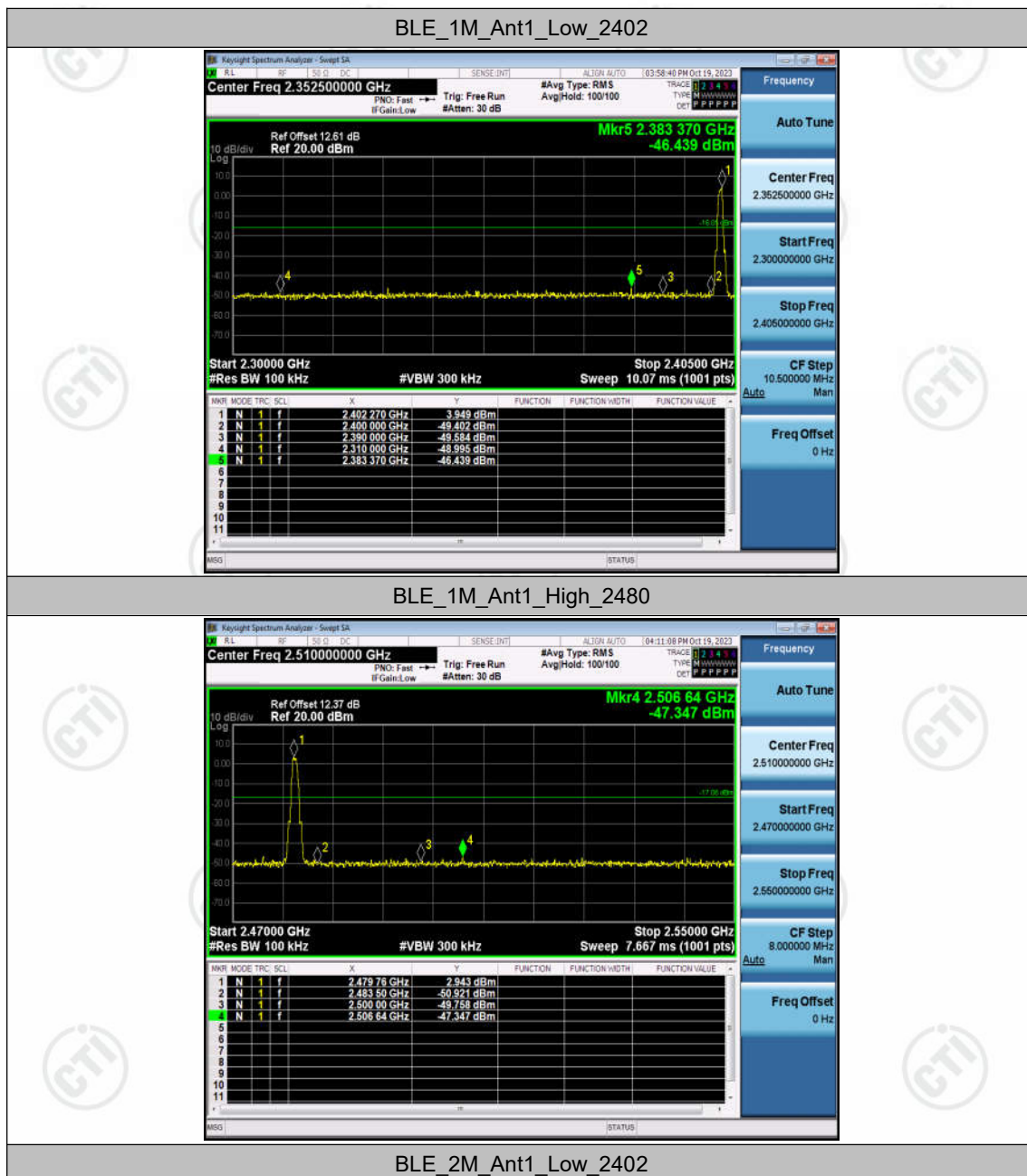


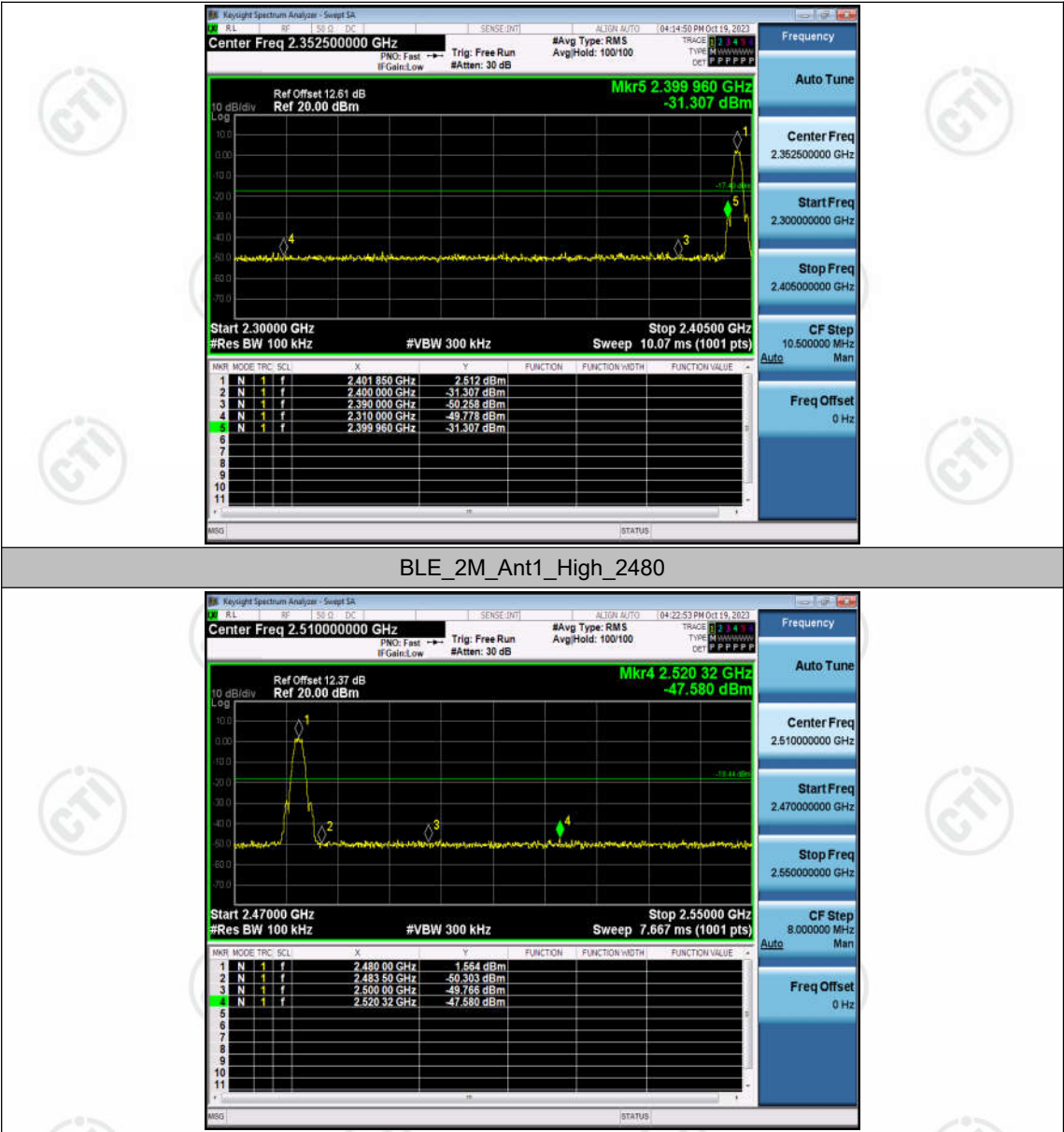
Appendix F: Band edge measurements

Test Result

Test Mode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	3.95	-46.44	≤-16.05	PASS
		High	2480	2.94	-47.35	≤-17.06	PASS
BLE_2M	Ant1	Low	2402	2.51	-31.31	≤-17.49	PASS
		High	2480	1.56	-47.58	≤-18.44	PASS

Test Graphs



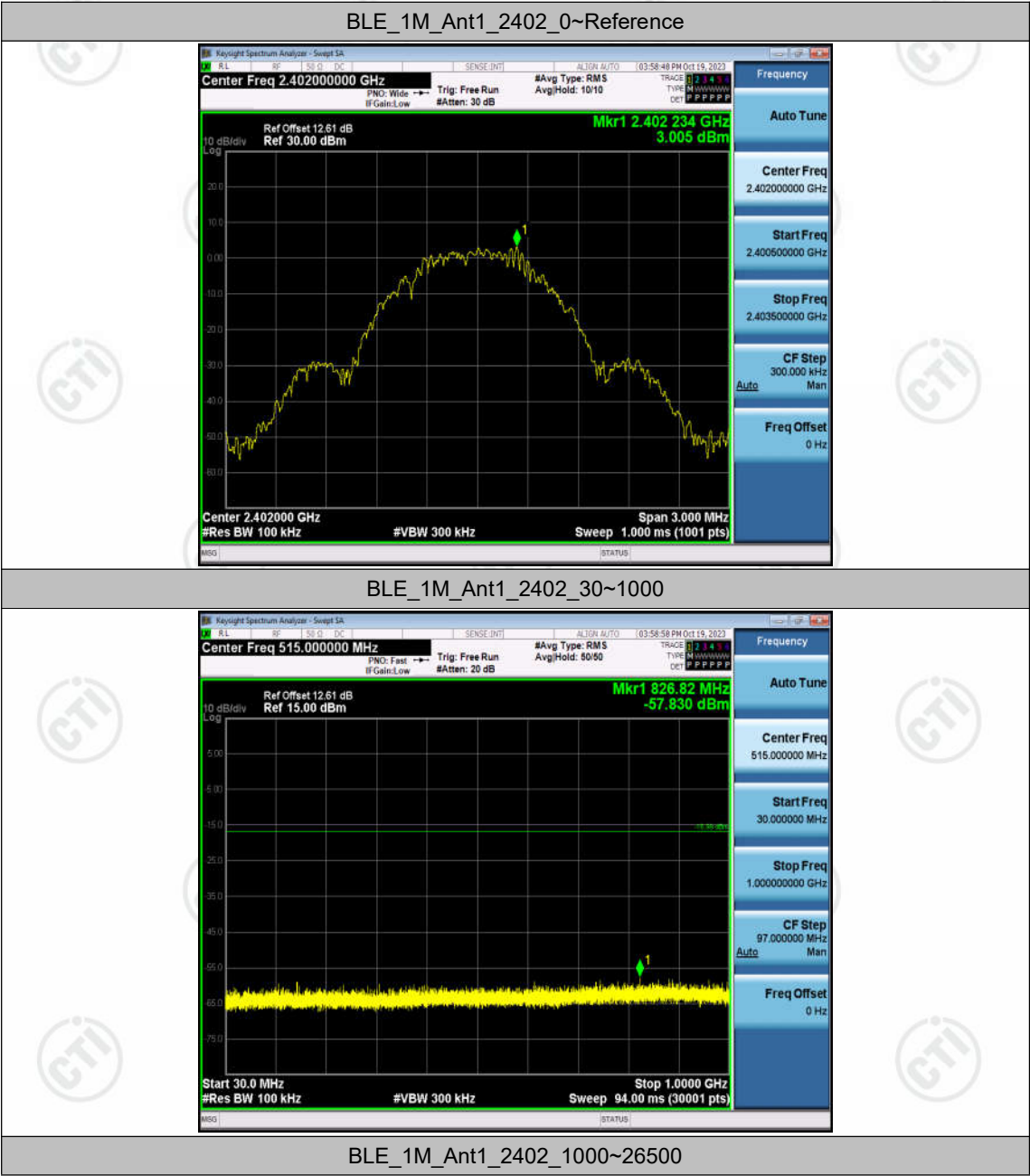


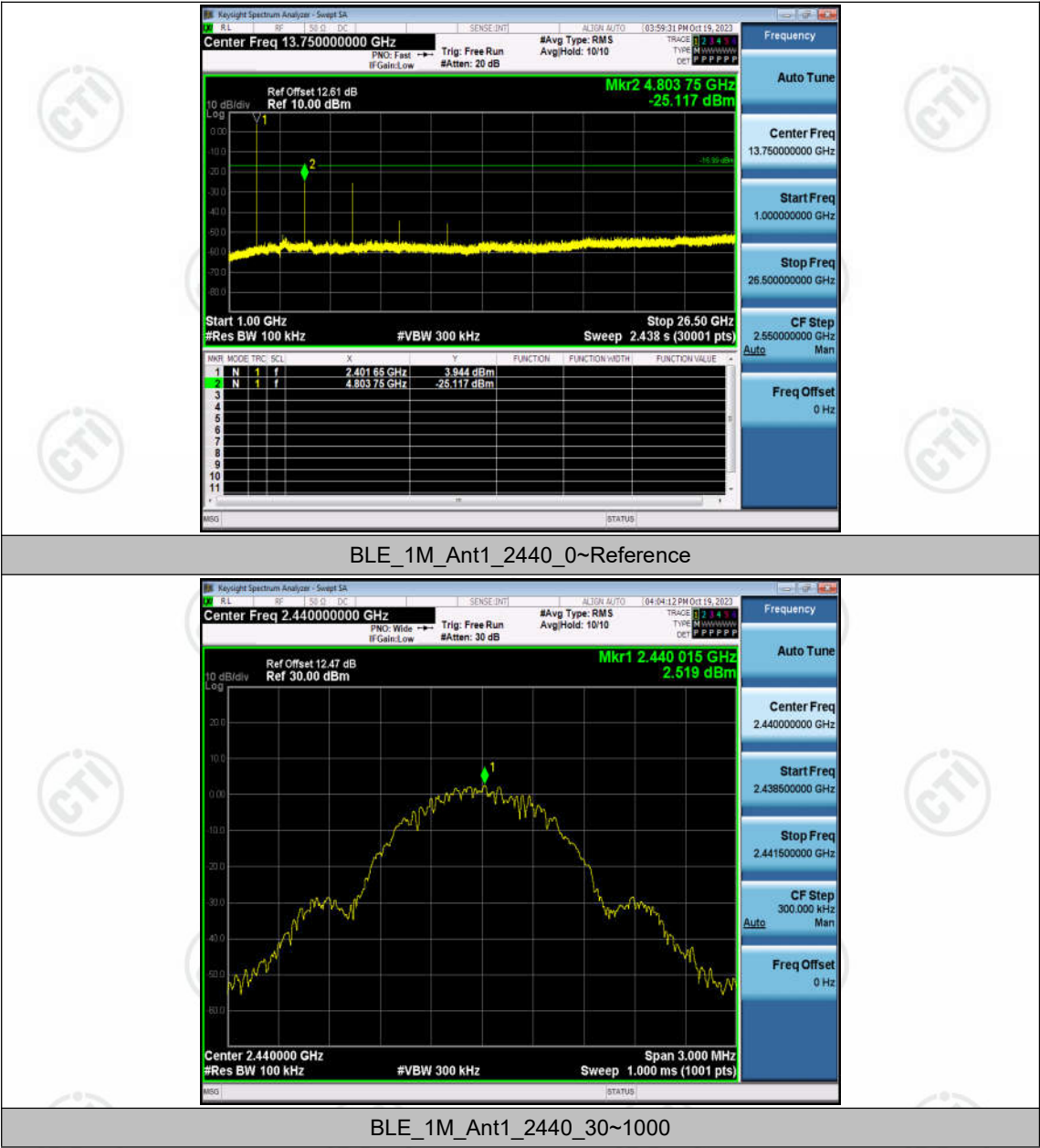
Appendix G: Conducted Spurious Emission

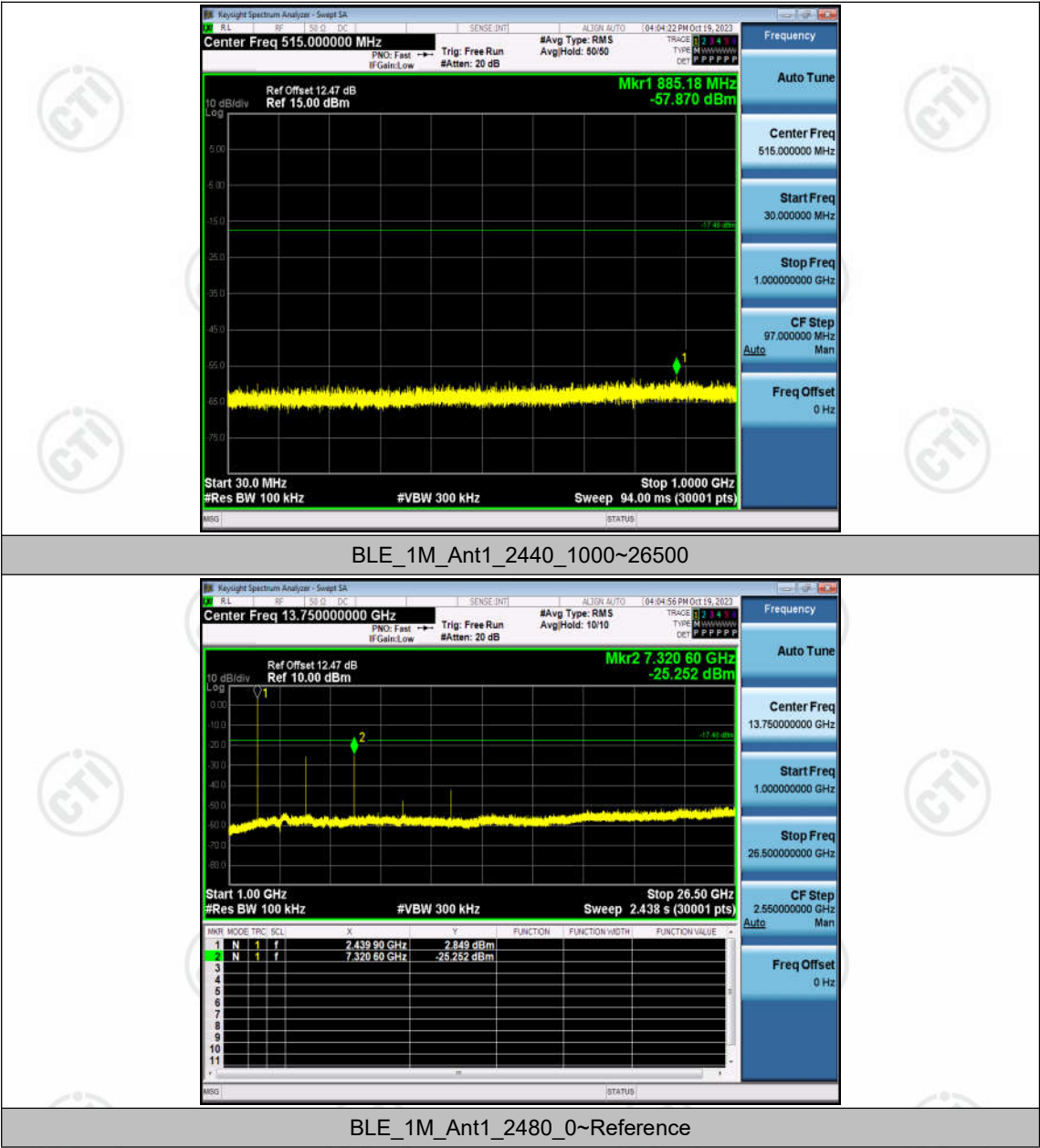
Test Result

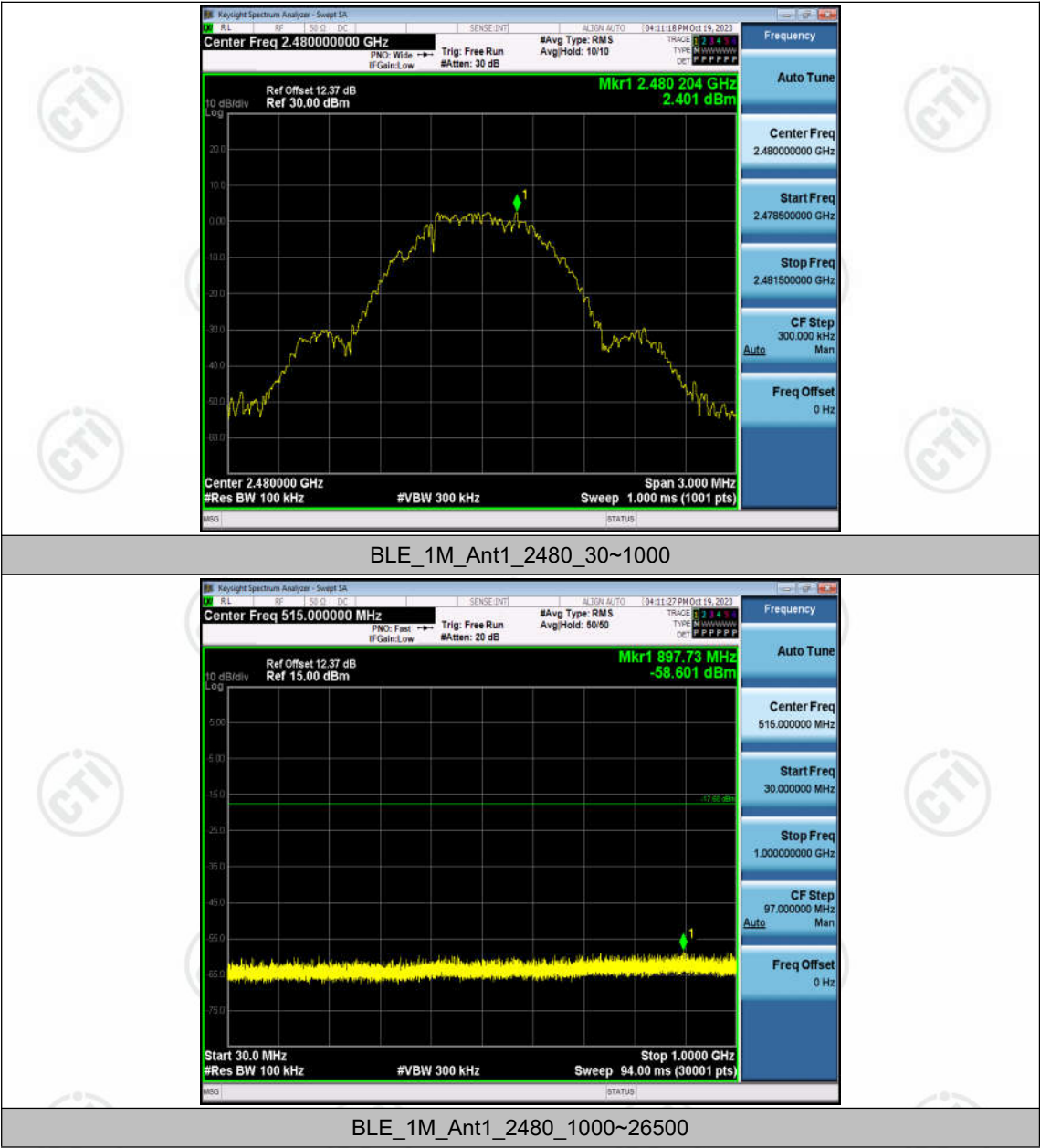
Test Mode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	2402	Reference	3.01	3.01	---	PASS
			30~1000	3.01	-57.83	≤-16.99	PASS
			1000~26500	3.01	-25.12	≤-16.99	PASS
		2440	Reference	2.52	2.52	---	PASS
			30~1000	2.52	-57.87	≤-17.48	PASS
			1000~26500	2.52	-25.25	≤-17.48	PASS
		2480	Reference	2.40	2.40	---	PASS
			30~1000	2.40	-58.6	≤-17.6	PASS
			1000~26500	2.40	-24.66	≤-17.6	PASS
BLE_2M	Ant1	2402	Reference	0.78	0.78	---	PASS
			30~1000	0.78	-58.05	≤-19.22	PASS
			1000~26500	0.78	-25.8	≤-19.22	PASS
		2440	Reference	-0.08	-0.08	---	PASS
			30~1000	-0.08	-58.31	≤-20.08	PASS
			1000~26500	-0.08	-27.02	≤-20.08	PASS
		2480	Reference	0.21	0.21	---	PASS
			30~1000	0.21	-58.18	≤-19.79	PASS
			1000~26500	0.21	-25.64	≤-19.79	PASS

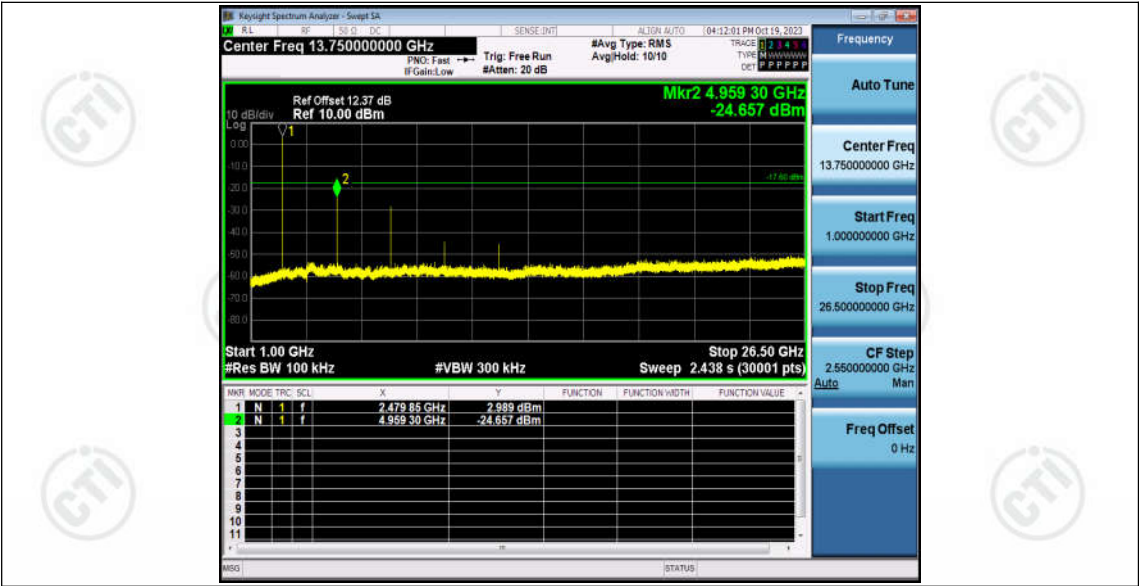
Test Graphs







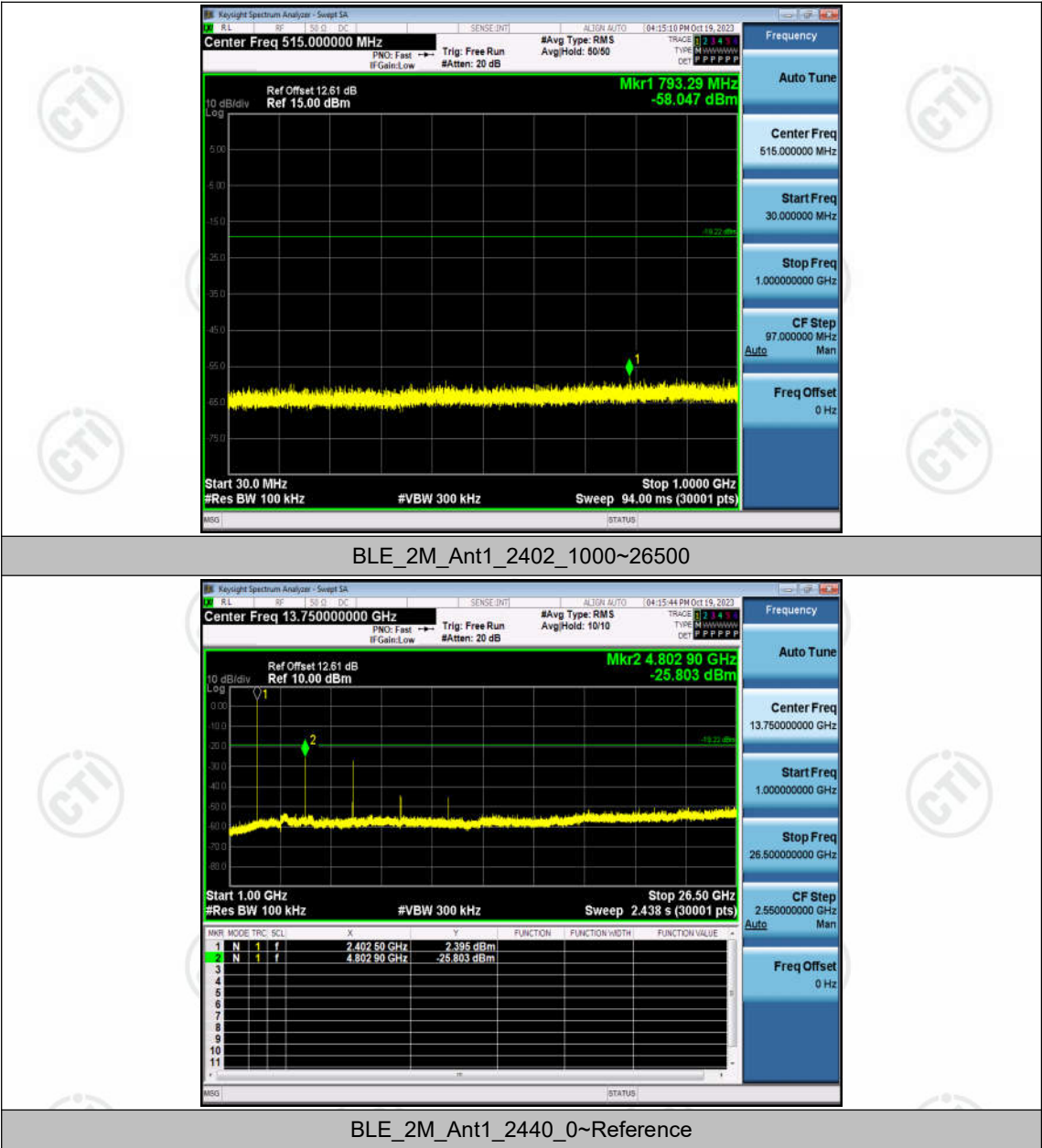


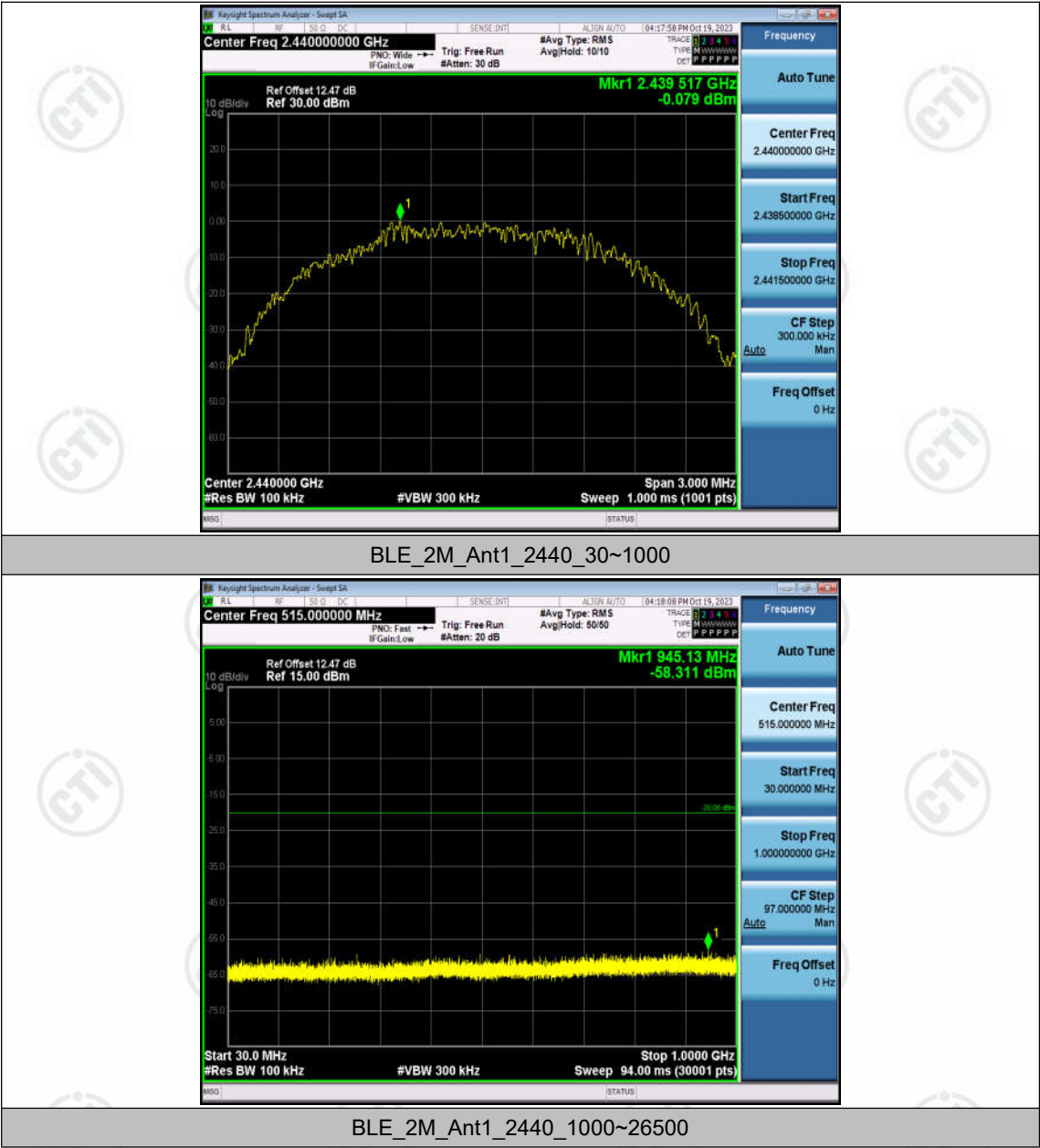


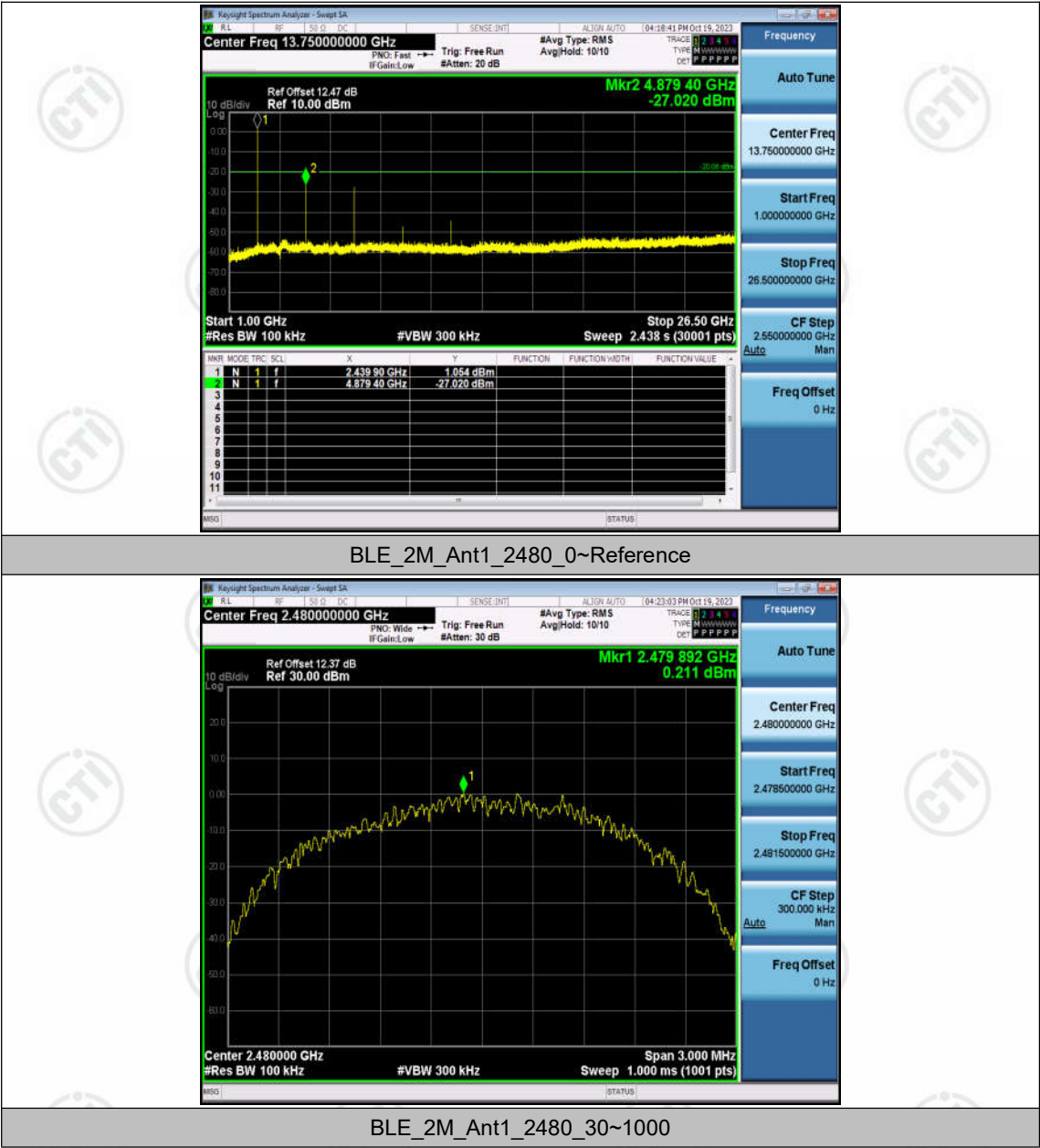
BLE_2M_Ant1_2402_0~Reference

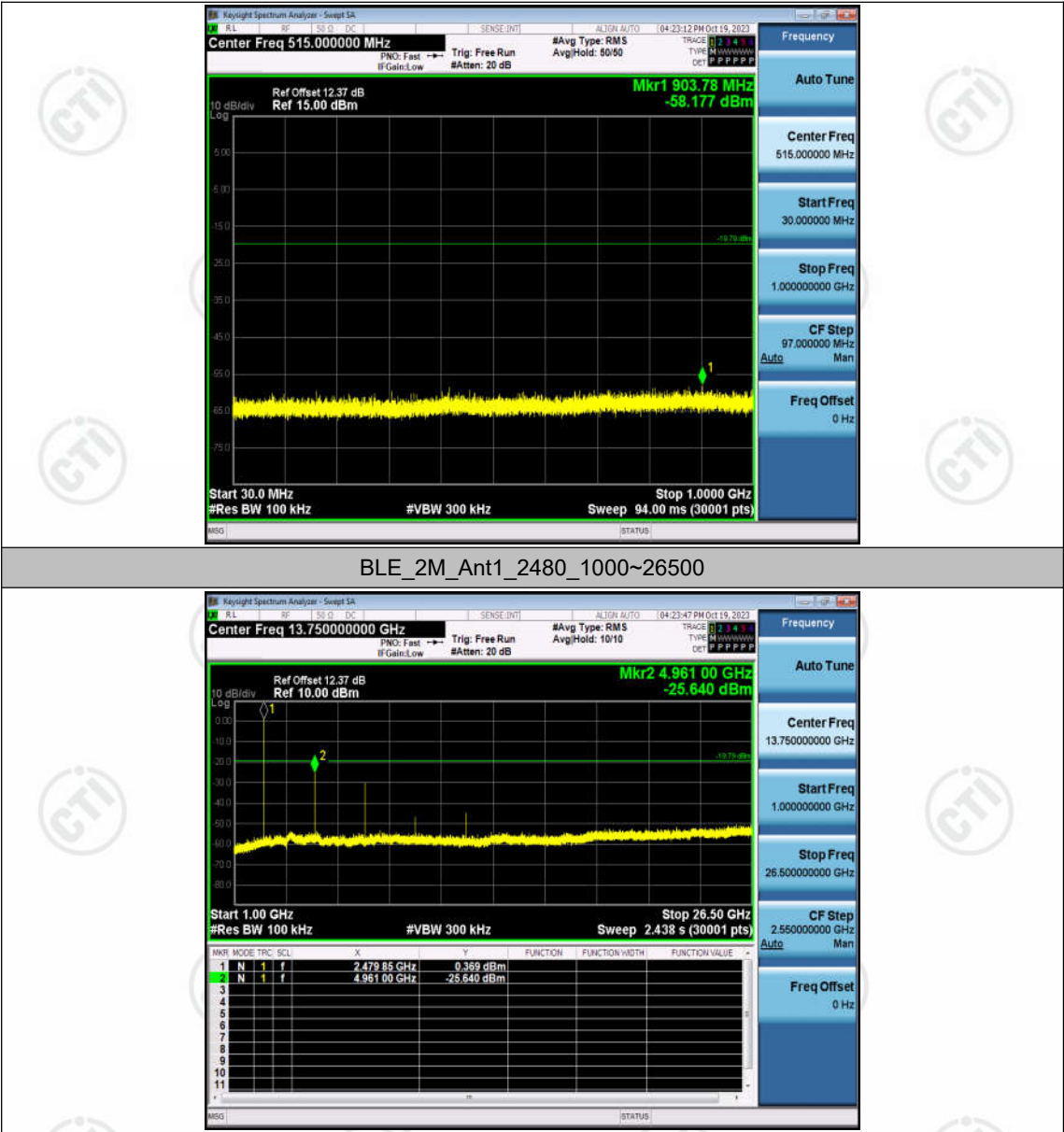


BLE_2M_Ant1_2402_30~1000







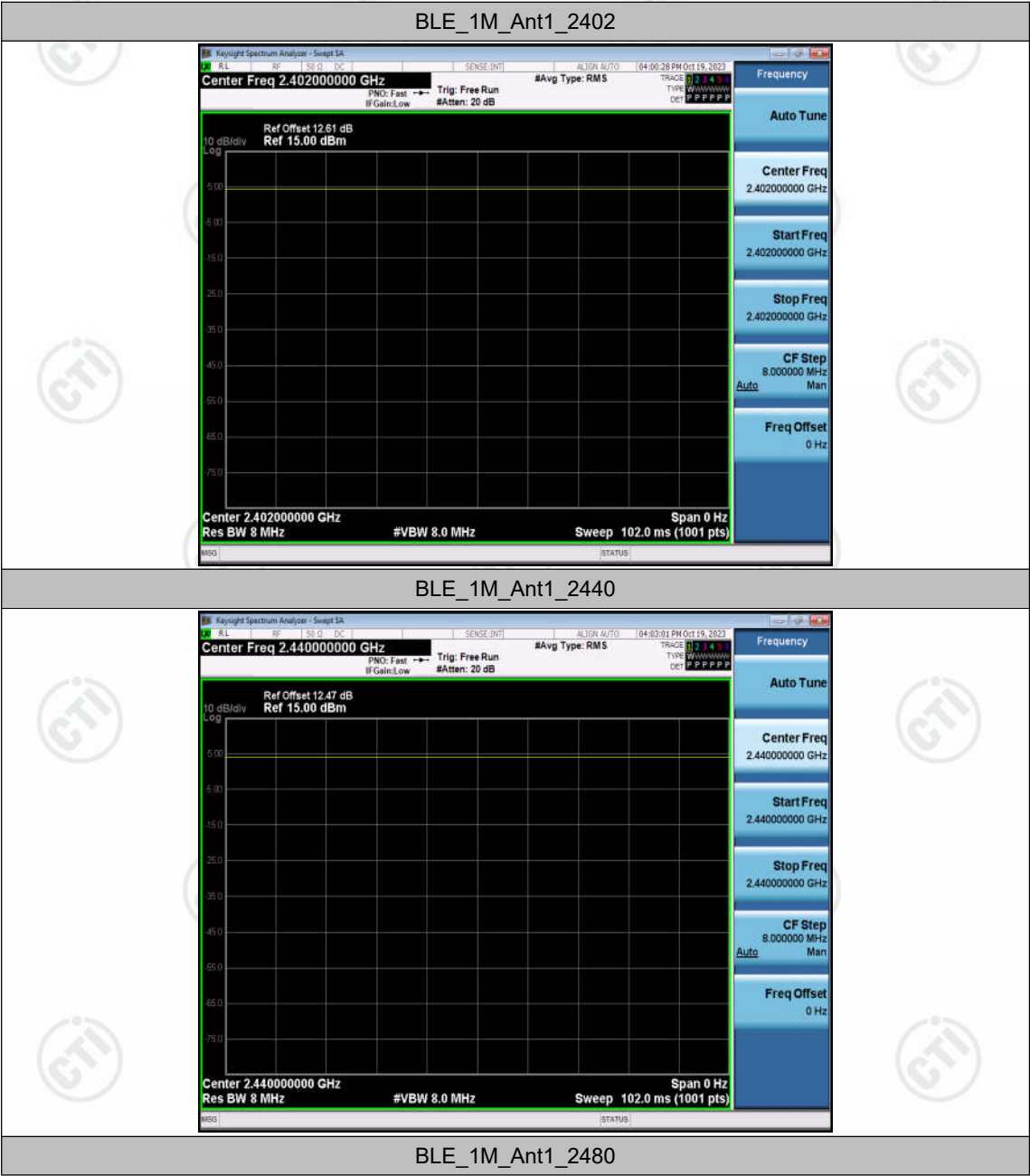


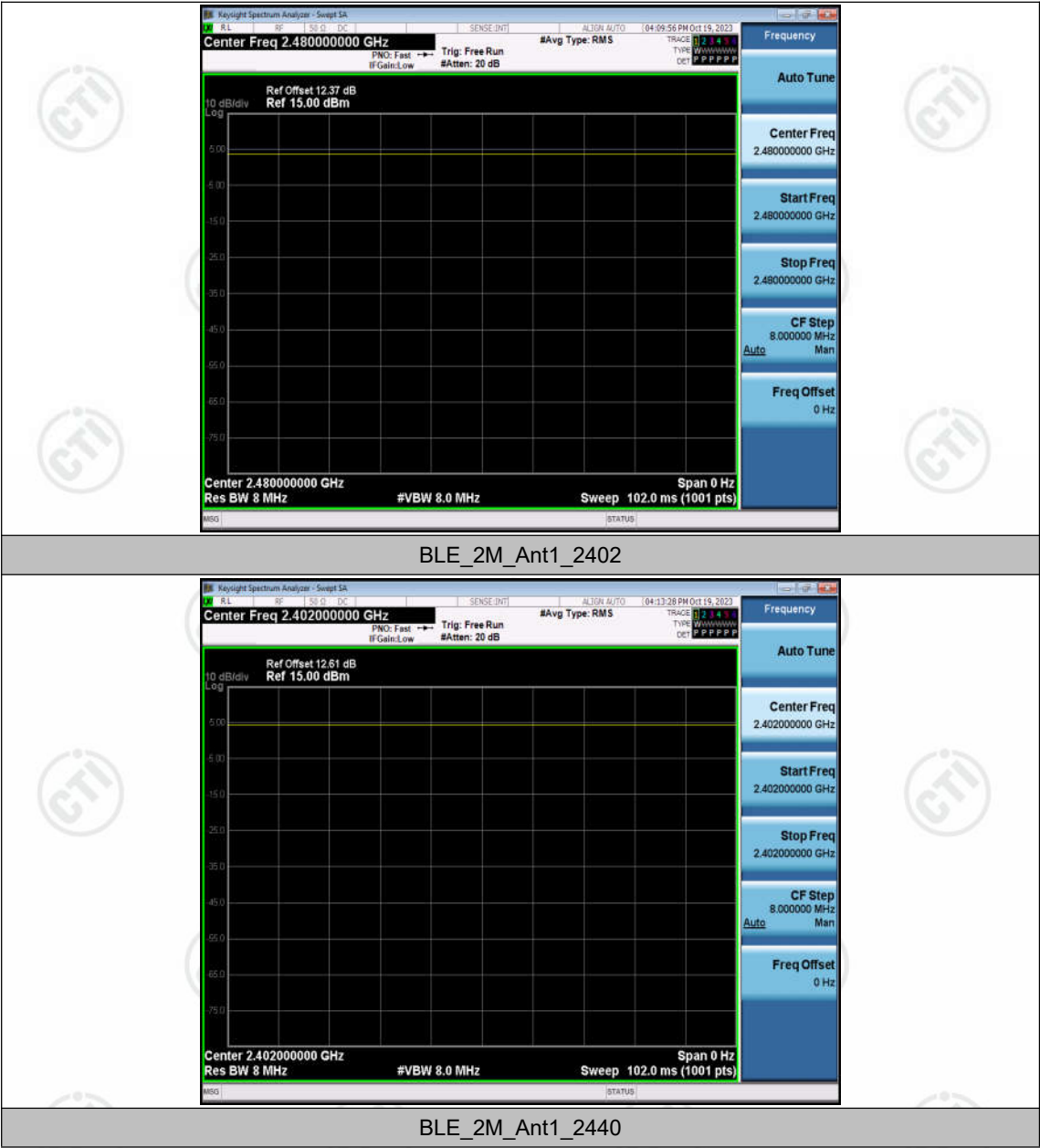
Appendix H: Duty Cycle

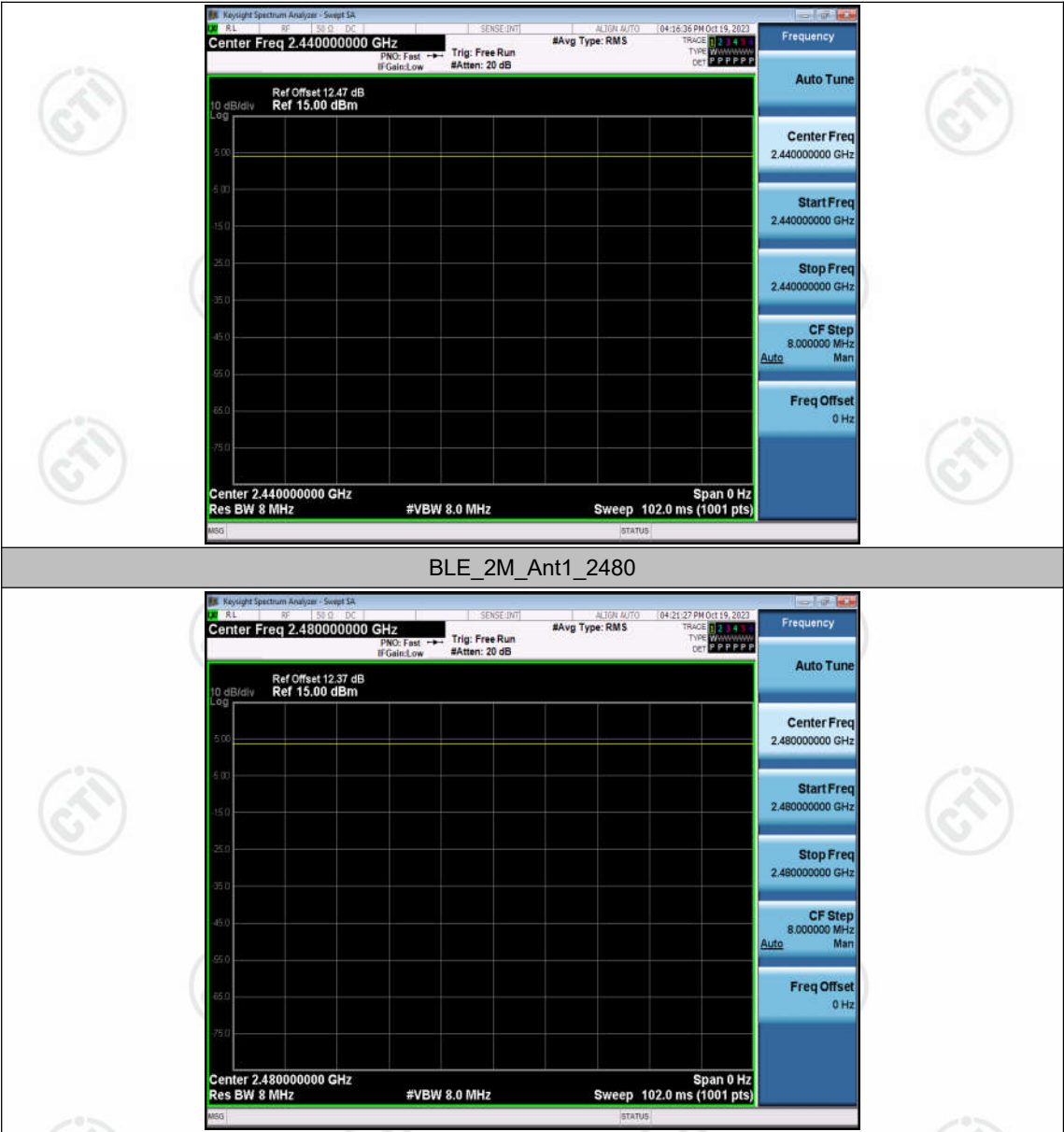
Test Result

Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
BLE_1M	Ant1	2402	0.00	0.00	100	0
		2440	0.00	0.00	100	0
		2480	0.00	0.00	100	0
BLE_2M	Ant1	2402	0.00	0.00	100	0
		2440	0.00	0.00	100	0
		2480	0.00	0.00	100	0

Test Graphs







END OF REPORT