

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	2401.636	2402.332	0.5	PASS
		2440	0.692	2439.636	2440.328	0.5	PASS
		2480	0.696	2479.636	2480.332	0.5	PASS
BLE_2M	Ant1	2402	1.140	2401.424	2402.564	0.5	PASS
		2440	1.136	2439.428	2440.564	0.5	PASS
		2480	1.132	2479.432	2480.564	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

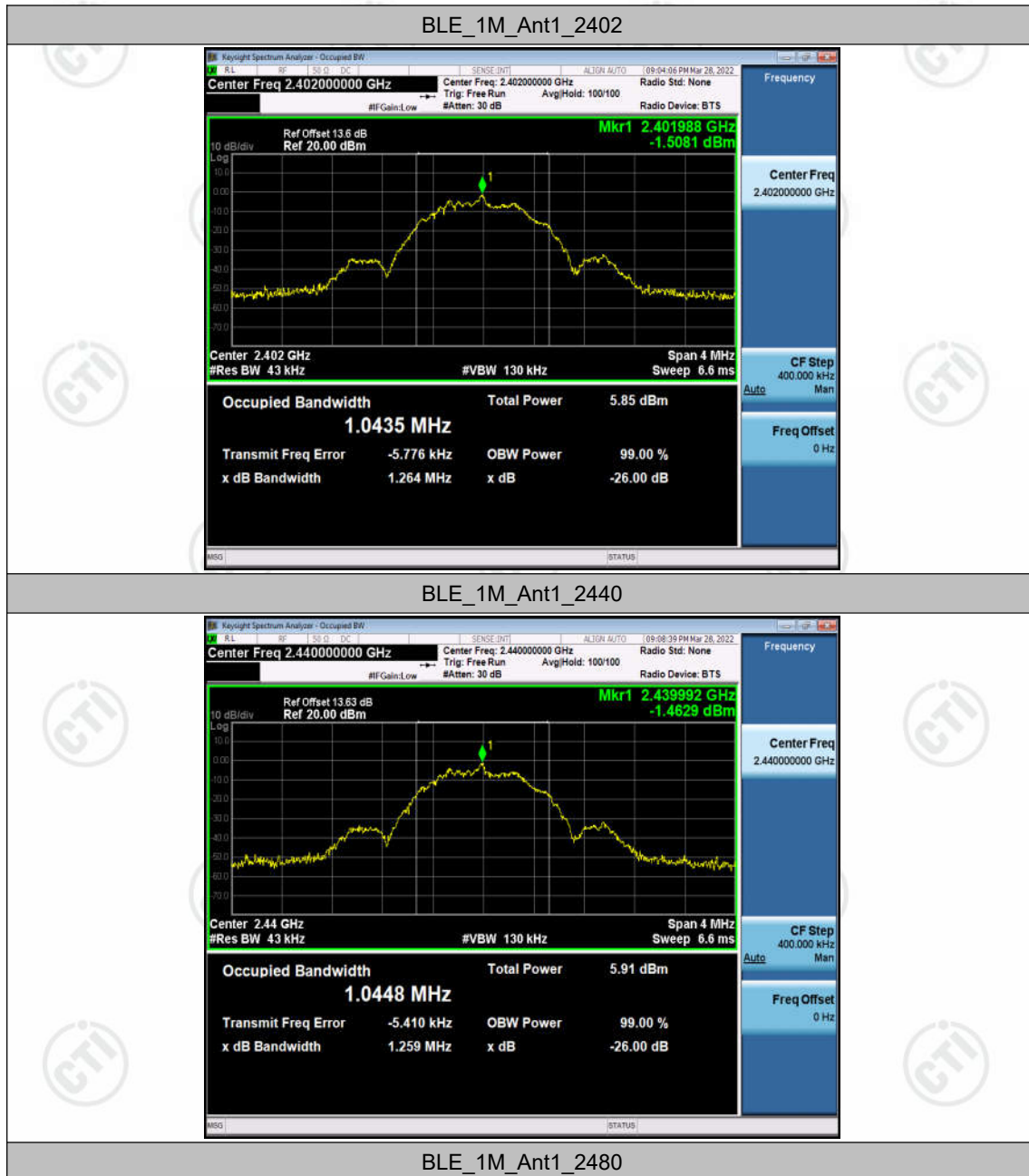


Appendix B: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0435	2401.472	2402.516	---	---
		2440	1.0448	2439.472	2440.517	---	---
		2480	1.0450	2479.470	2480.515	---	---
BLE_2M	Ant1	2402	2.0447	2400.983	2403.028	---	---
		2440	2.0481	2438.981	2441.029	---	---
		2480	2.0486	2478.981	2481.029	---	---

Test Graphs





BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

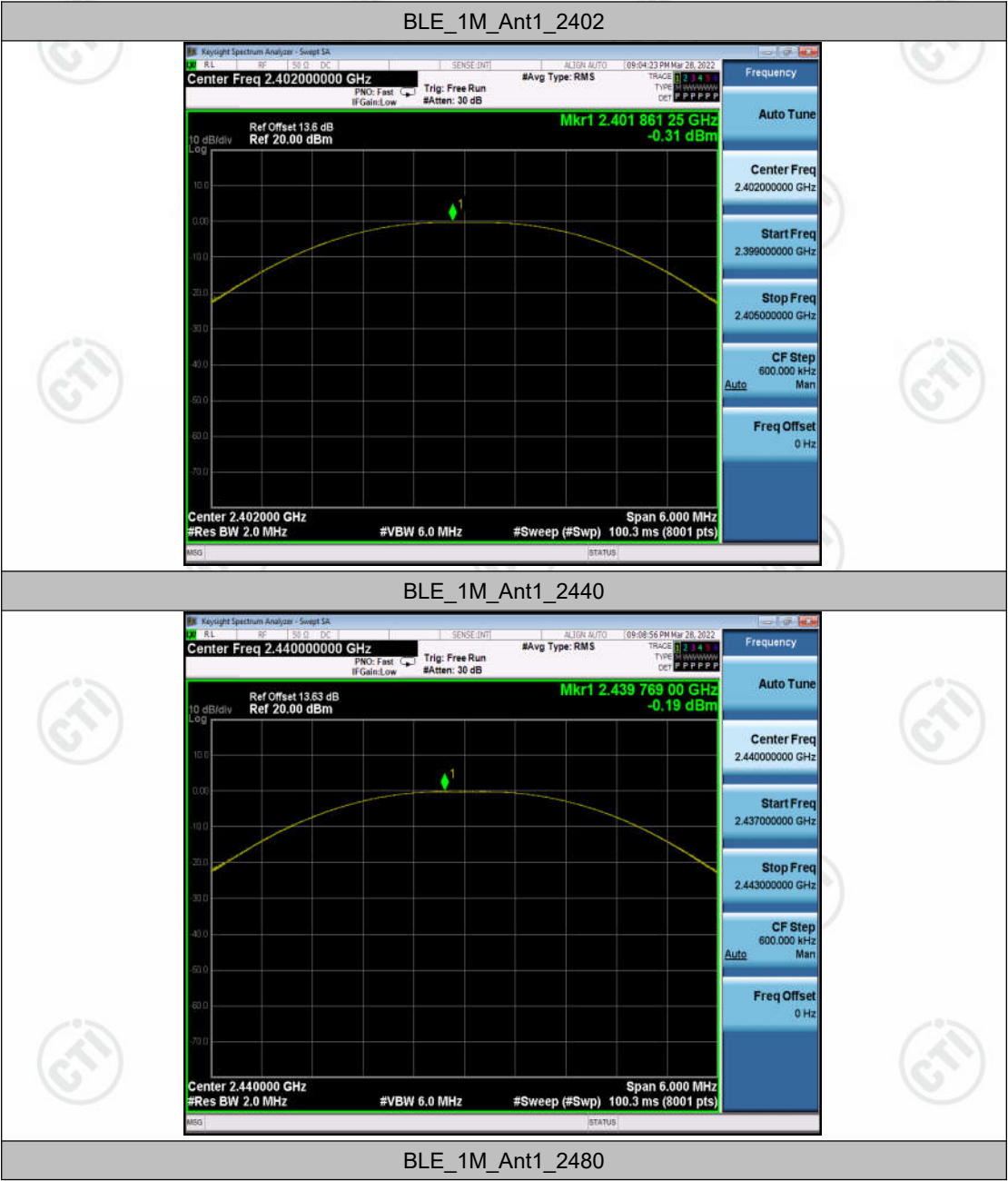


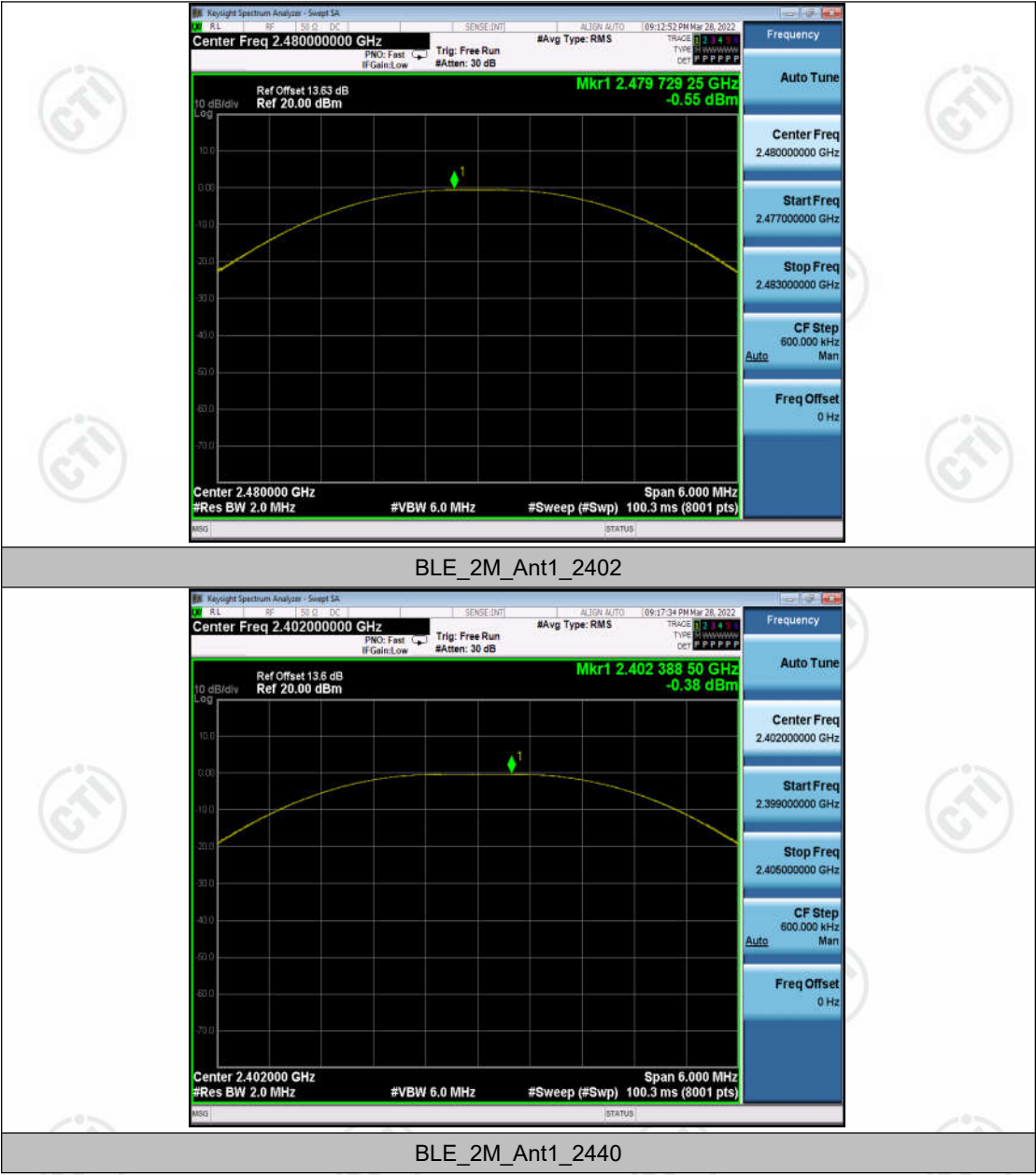
Appendix C: Maximum conducted output power

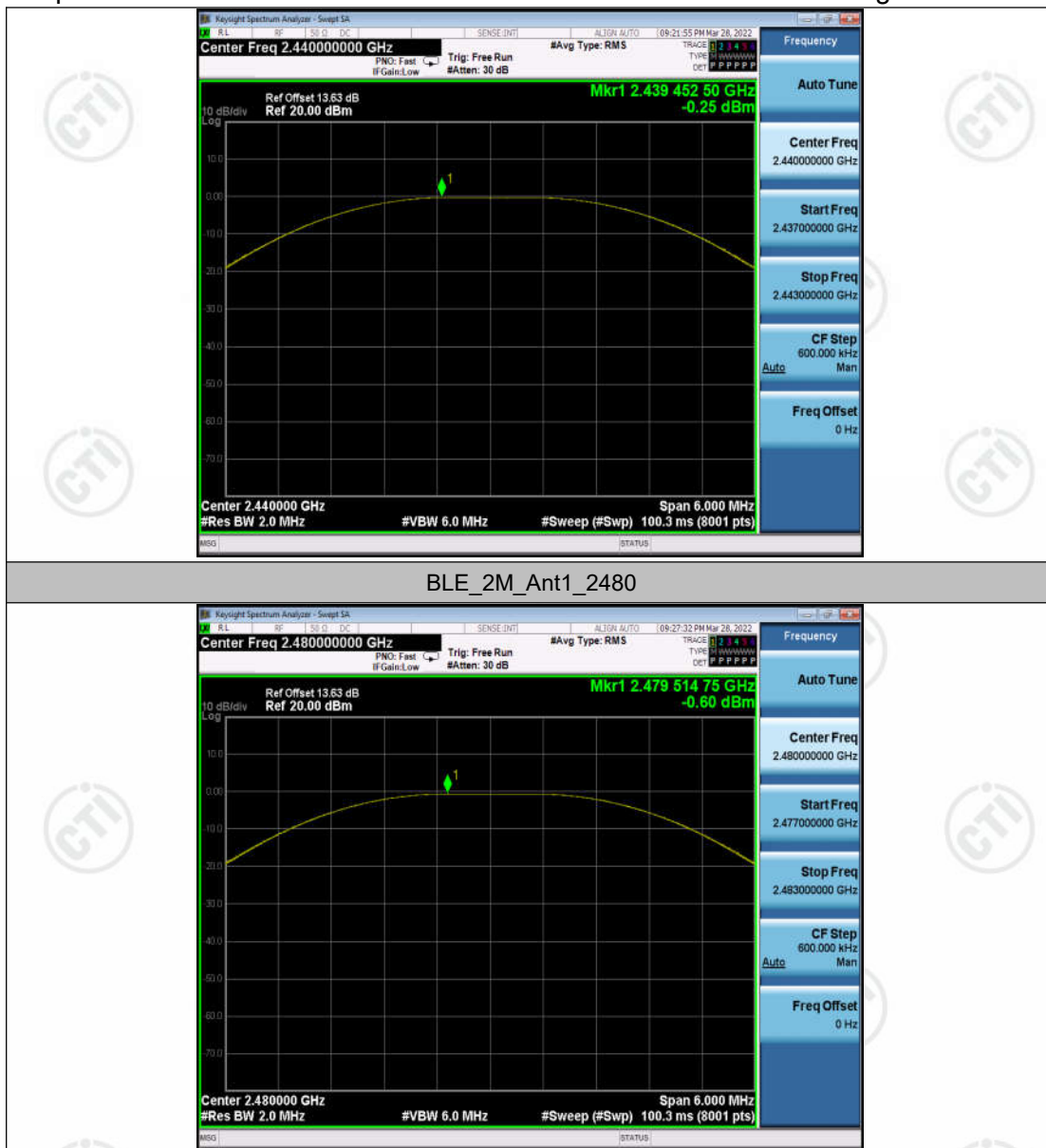
Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.31	≤30	PASS
		2440	-0.19	≤30	PASS
		2480	-0.55	≤30	PASS
BLE_2M	Ant1	2402	-0.38	≤30	PASS
		2440	-0.25	≤30	PASS
		2480	-0.60	≤30	PASS

Test Graphs





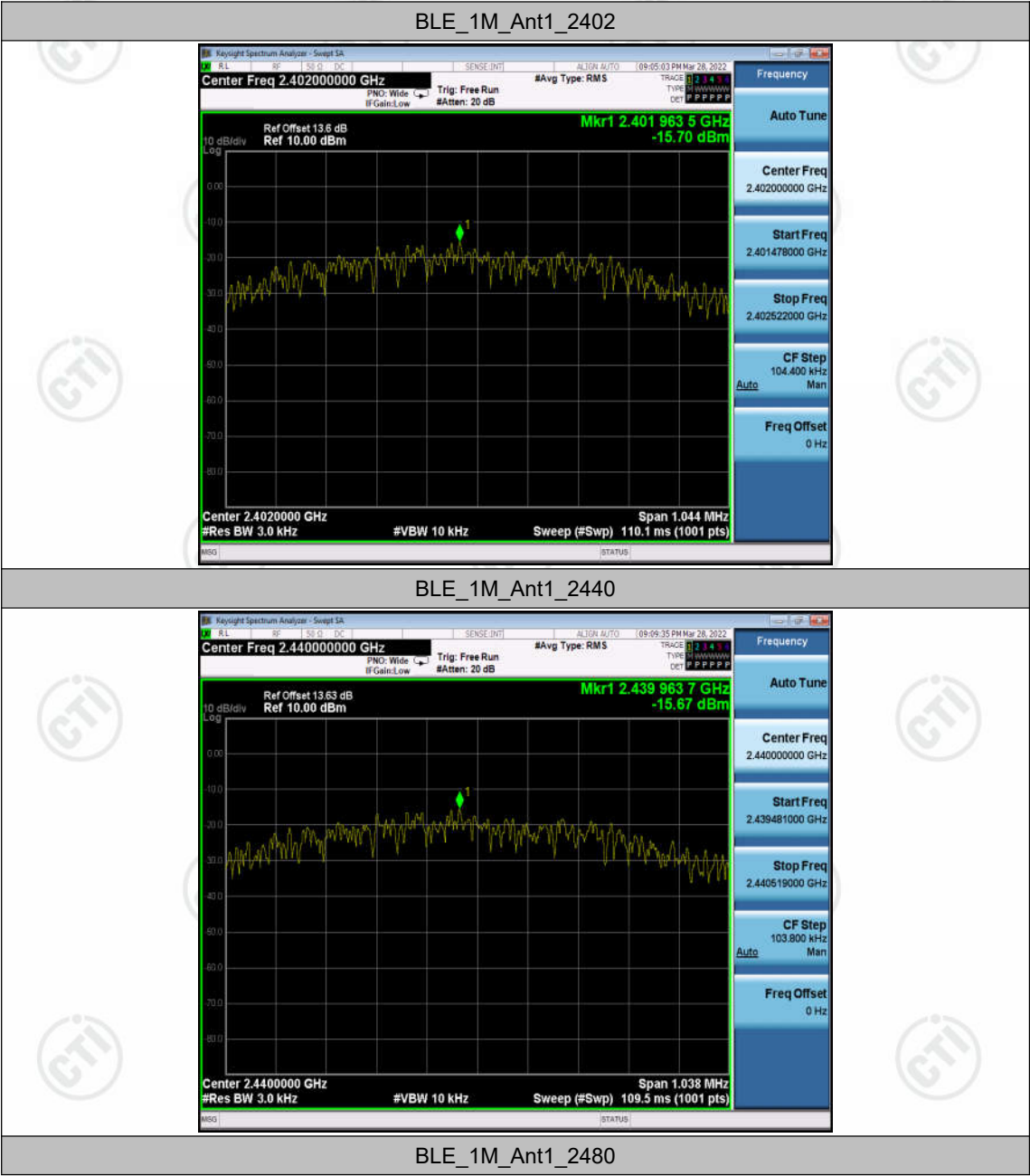


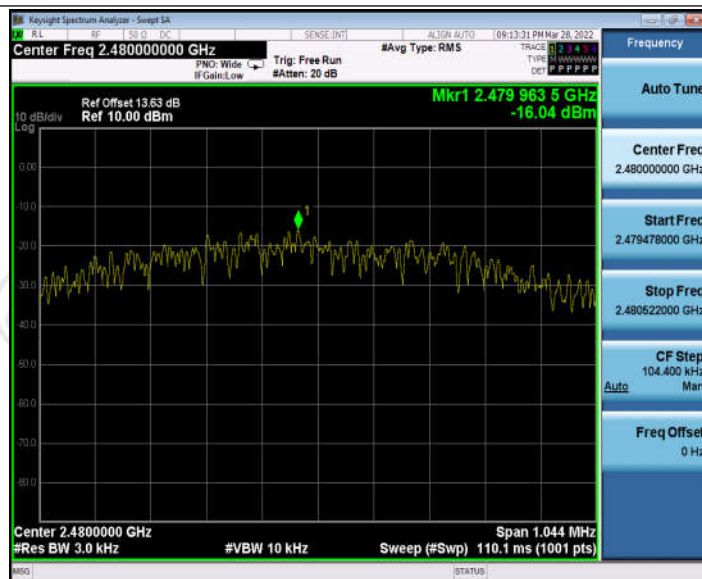
Appendix D: Maximum power spectral density

Test Result

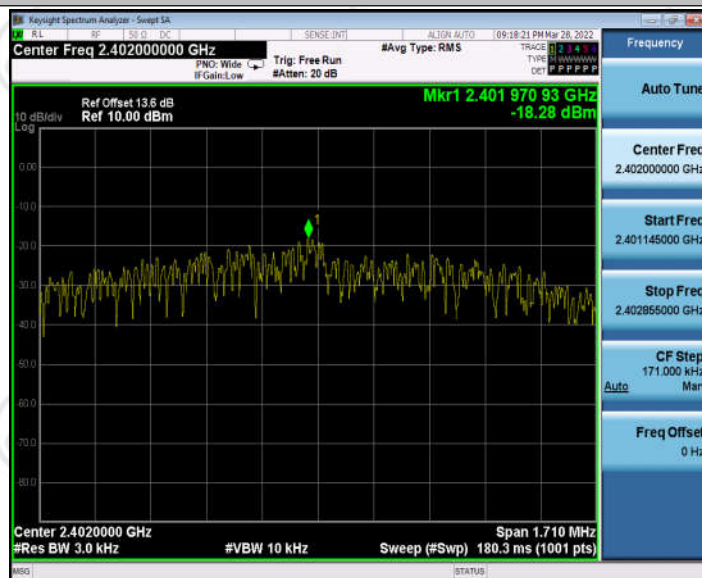
Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.7	≤8.00	PASS
		2440	-15.67	≤8.00	PASS
		2480	-16.04	≤8.00	PASS
BLE_2M	Ant1	2402	-18.28	≤8.00	PASS
		2440	-18.1	≤8.00	PASS
		2480	-18.52	≤8.00	PASS

Test Graphs

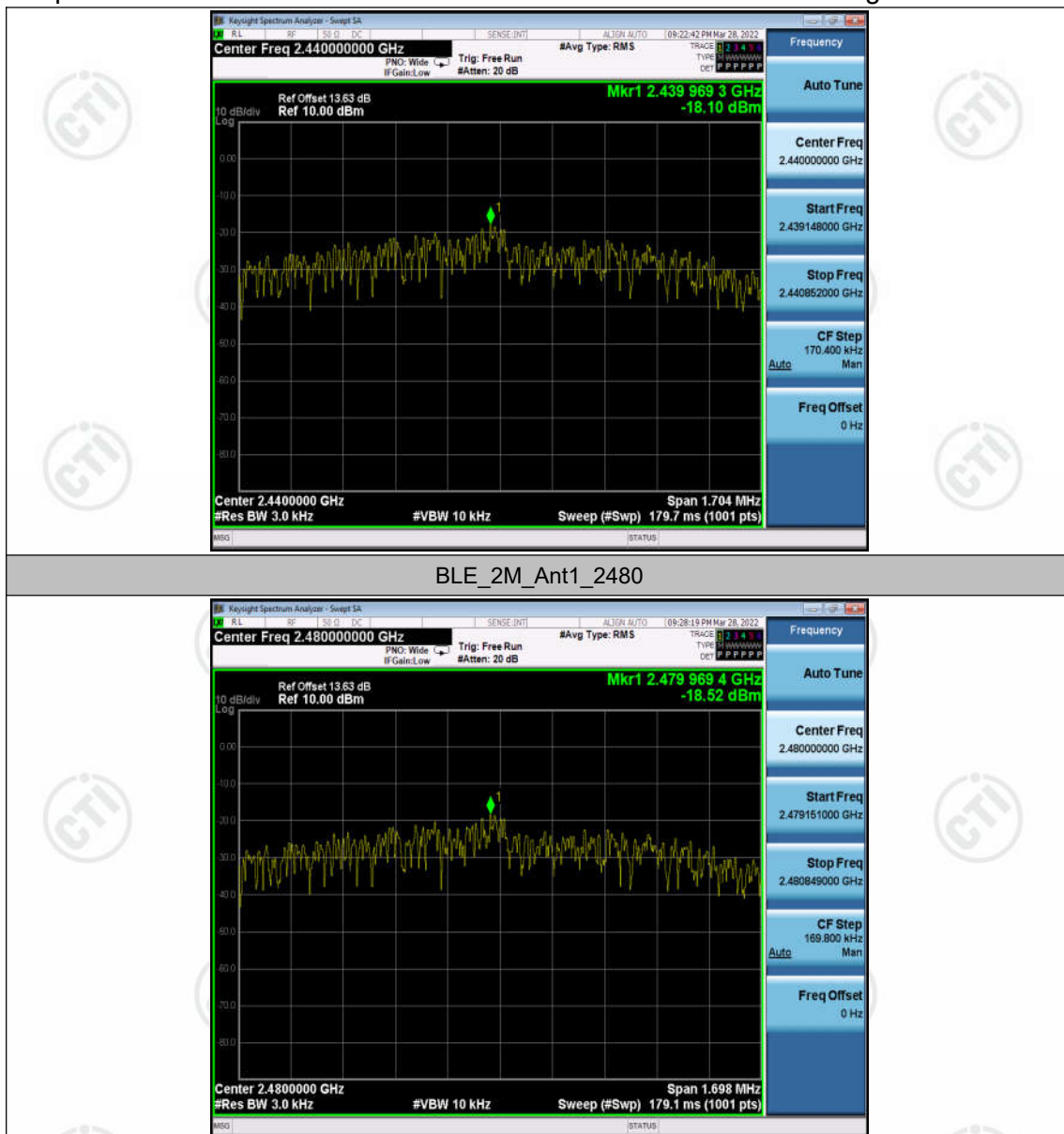




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440

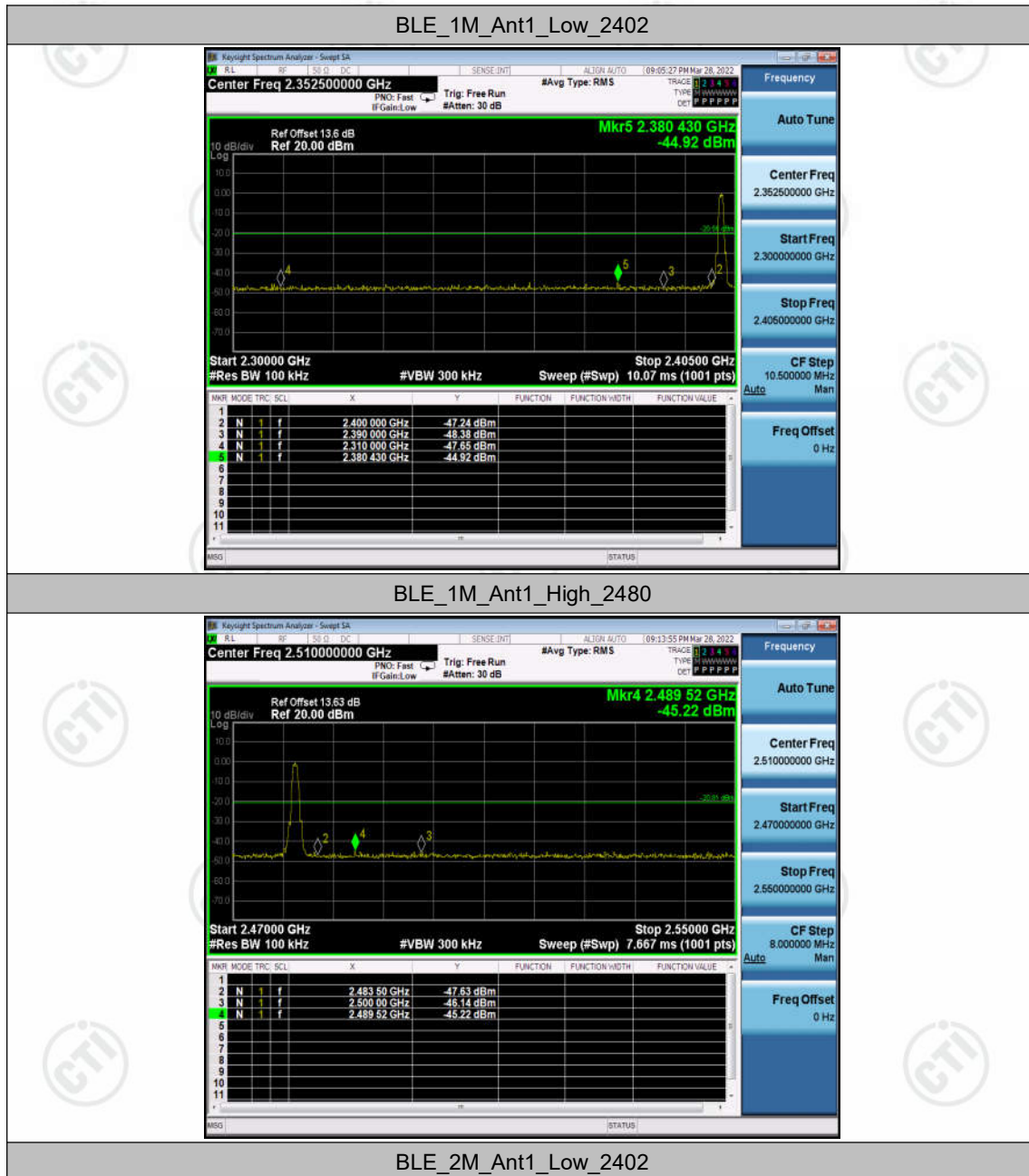


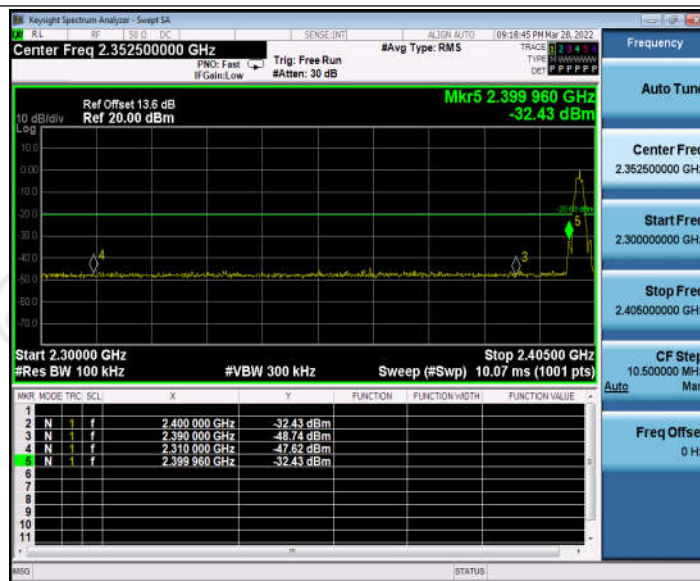
Appendix E: Band edge measurements

Test Result

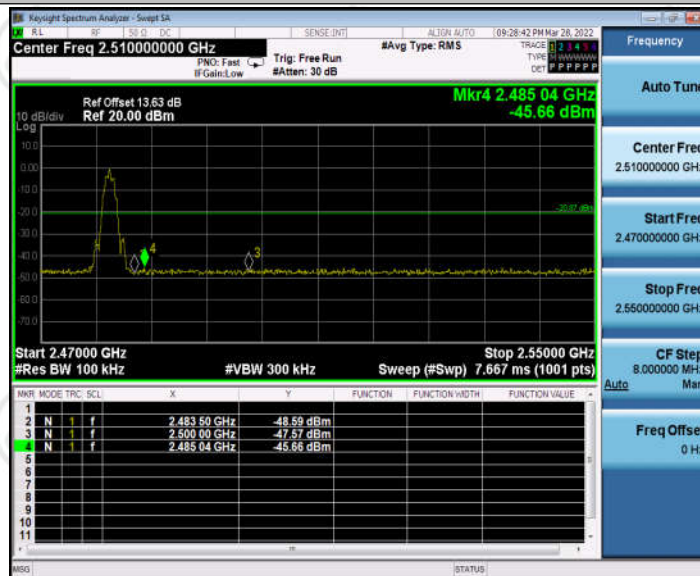
Test Mode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.56	-44.92	≤-20.56	PASS
		High	2480	-0.81	-45.22	≤-20.81	PASS
BLE_2M	Ant1	Low	2402	-0.63	-32.43	≤-20.63	PASS
		High	2480	-0.87	-45.66	≤-20.87	PASS

Test Graphs





BLE_2M_Ant1_High_2480

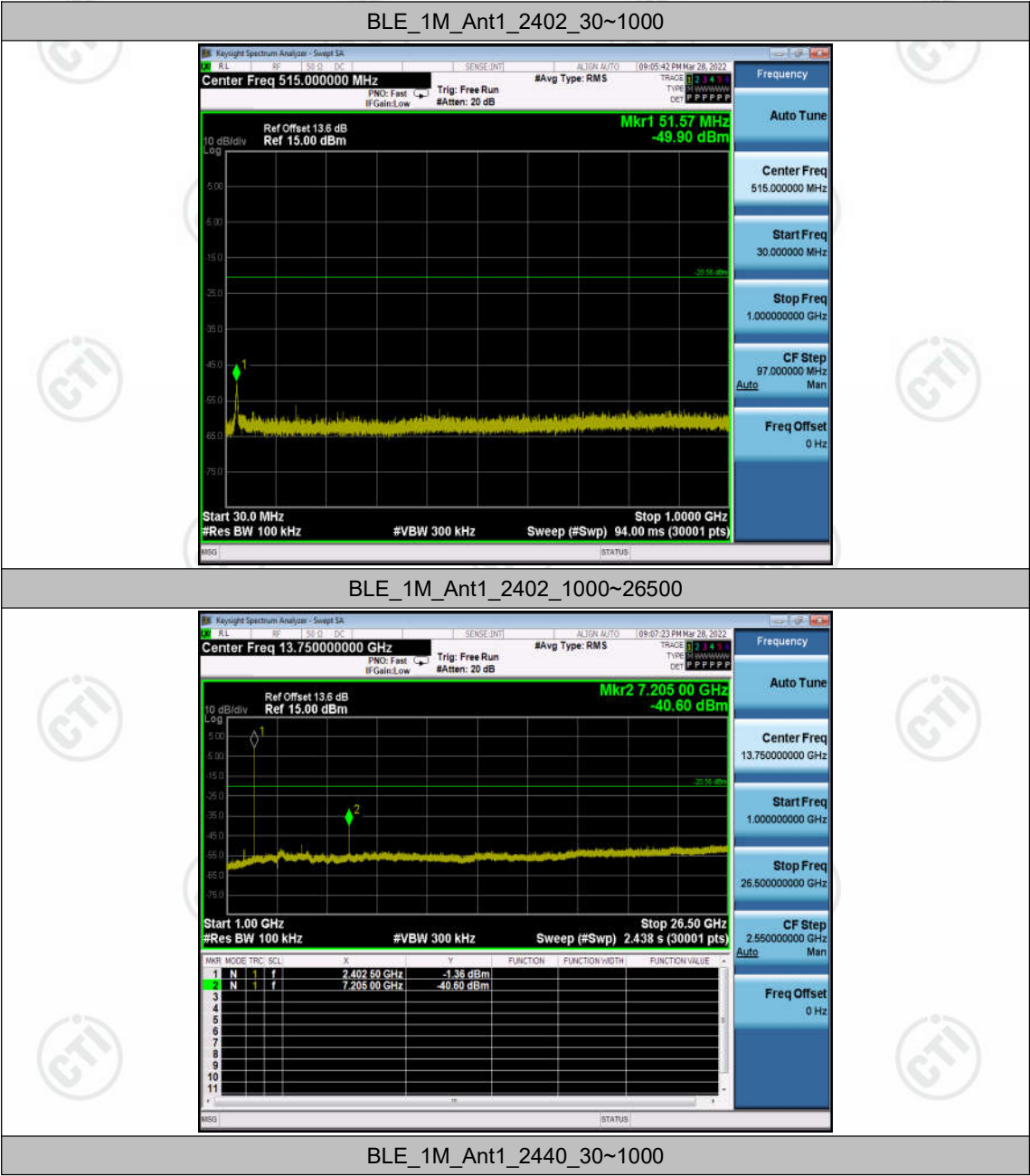


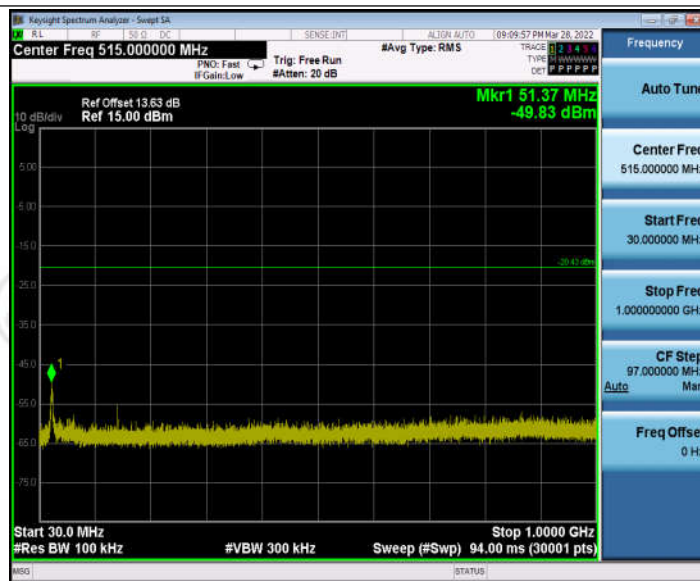
Appendix F: Conducted Spurious Emission

Test Result

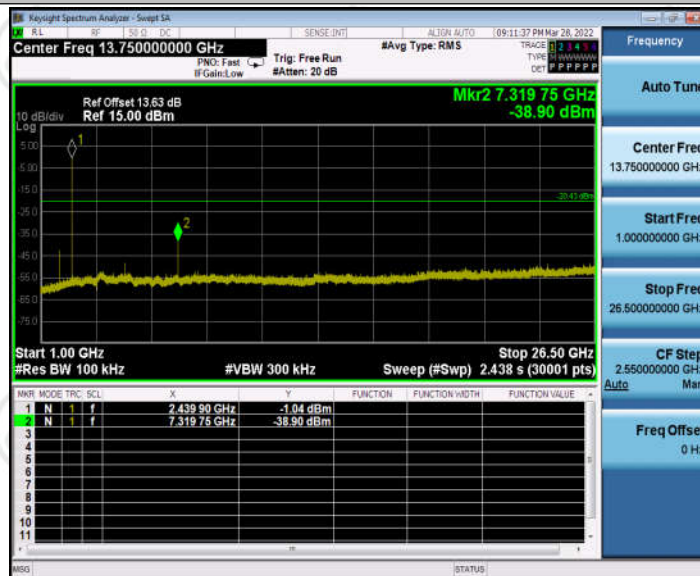
Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	-0.56	-49.9	≤-20.56	PASS
			1000~26500	-0.56	-40.61	≤-20.56	PASS
		2440	30~1000	-0.43	-49.83	≤-20.43	PASS
			1000~26500	-0.43	-38.9	≤-20.43	PASS
		2480	30~1000	-0.81	-49.18	≤-20.81	PASS
			1000~26500	-0.81	-39.01	≤-20.81	PASS
BLE_2M	Ant1	2402	30~1000	-0.63	-50.19	≤-20.63	PASS
			1000~26500	-0.63	-39.53	≤-20.63	PASS
		2440	30~1000	-0.51	-43.3	≤-20.51	PASS
			1000~26500	-0.51	-42.68	≤-20.51	PASS
		2480	30~1000	-0.87	-50.15	≤-20.87	PASS
			1000~26500	-0.87	-35.38	≤-20.87	PASS

Test Graphs





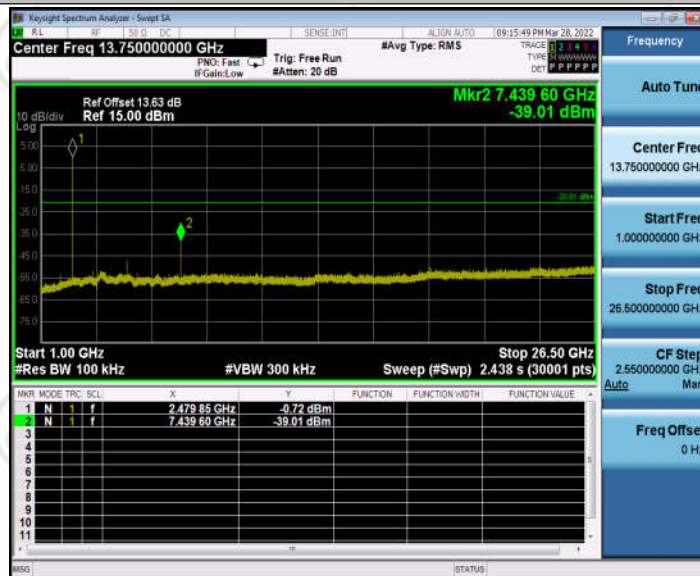
BLE_1M_Ant1_2440_1000~26500



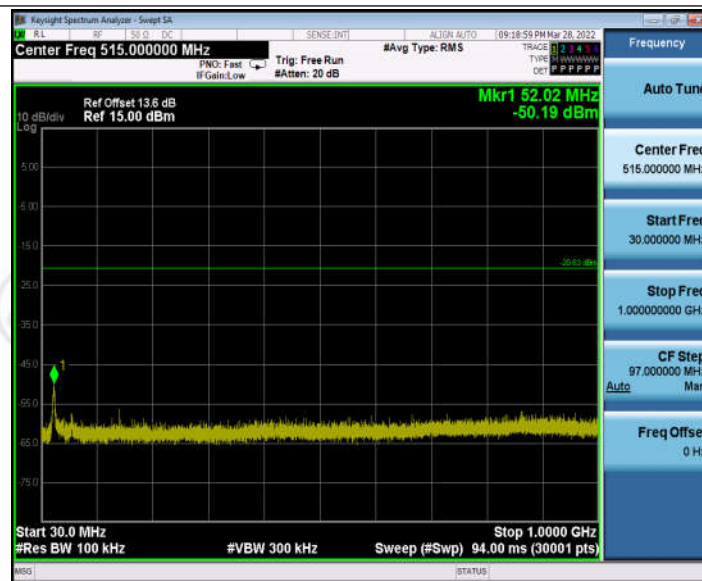
BLE_1M_Ant1_2480_30~1000



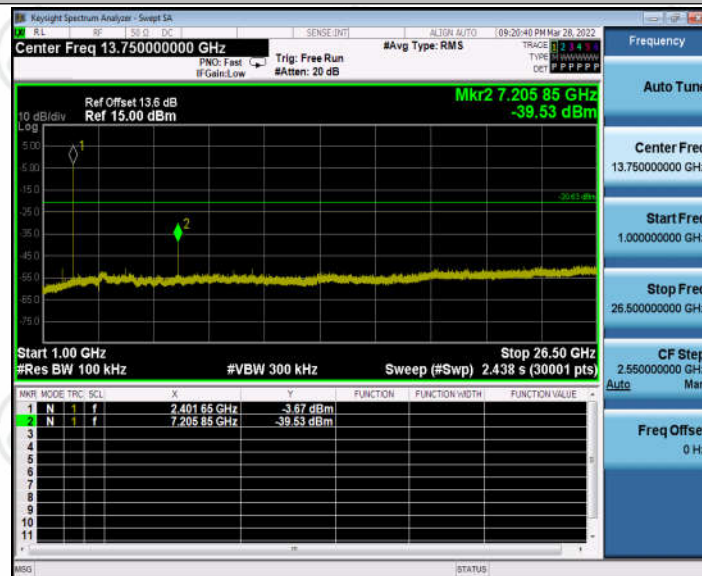
BLE_1M_Ant1_2480_1000~26500



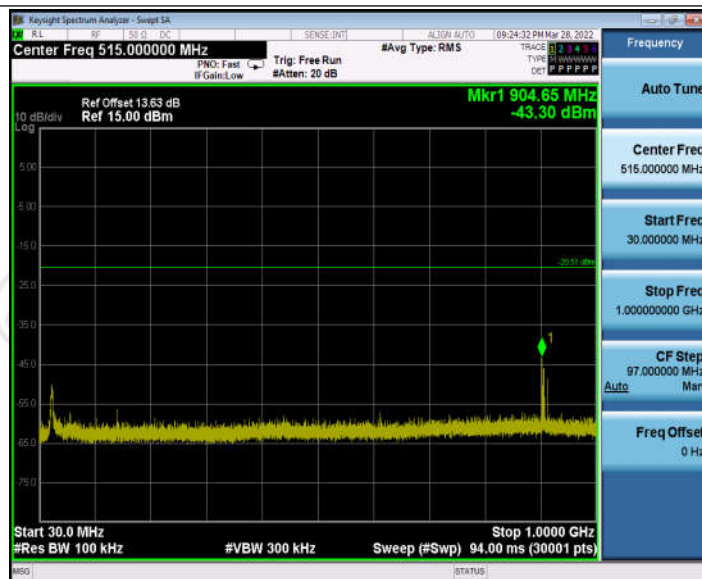
BLE_2M_Ant1_2402_30~1000



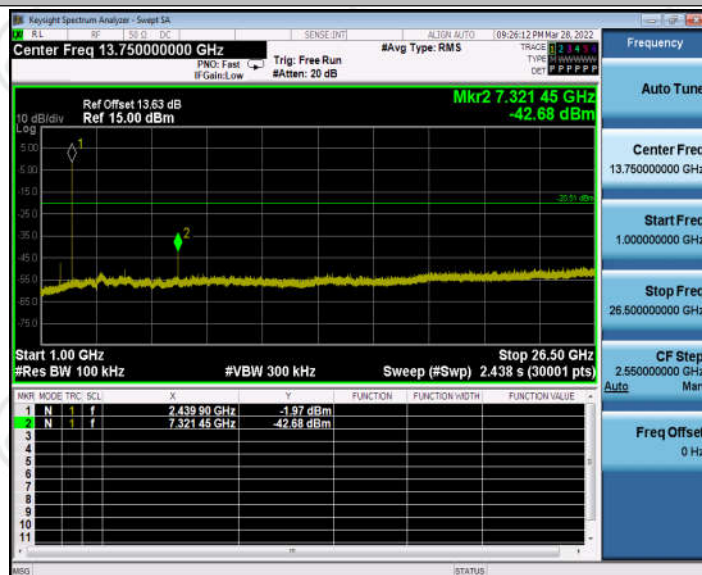
BLE_2M_Ant1_2402_1000~26500



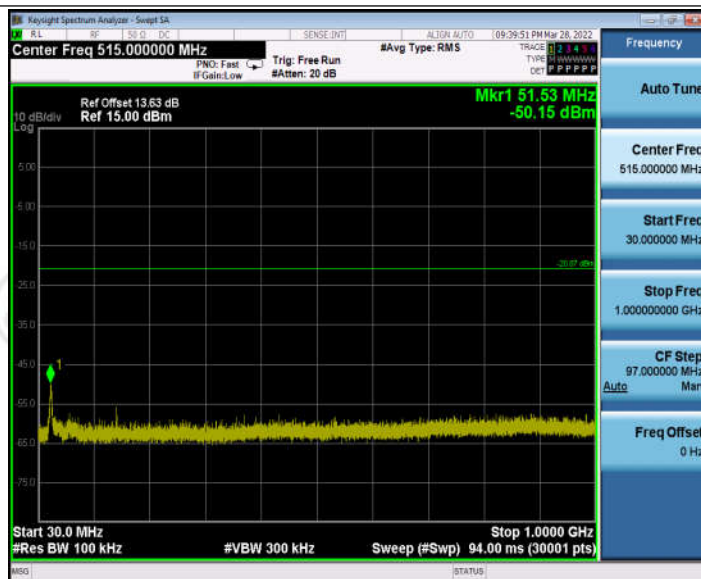
BLE_2M_Ant1_2440_30~1000



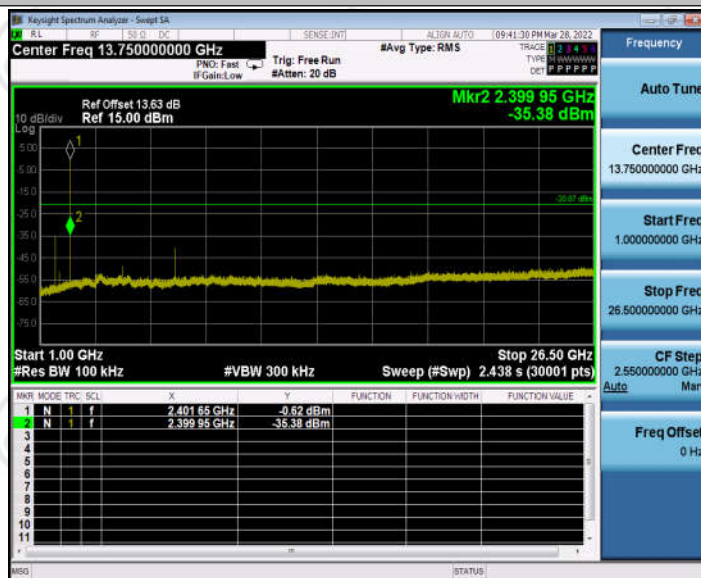
BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500



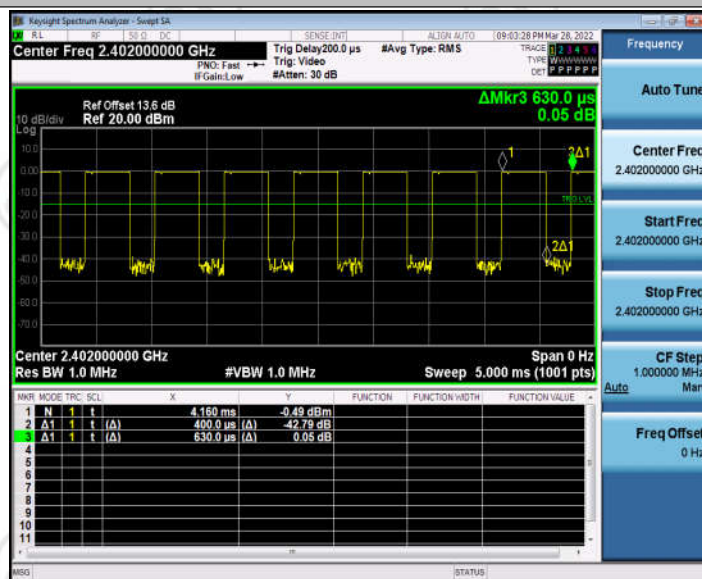
Appendix G: Duty Cycle

Test Result

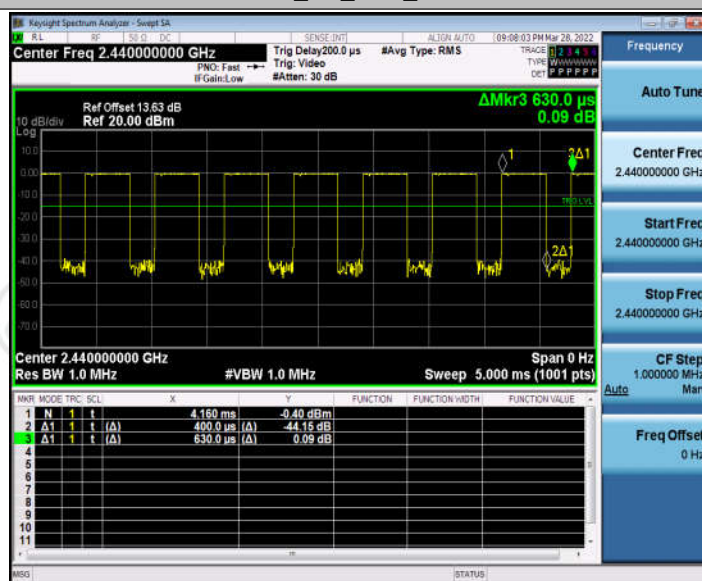
Test Mode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.40	0.63	63.49	1.97
		2440	0.40	0.63	63.49	1.97
		2480	0.40	0.63	63.49	1.97
BLE_2M	Ant1	2402	0.21	0.63	33.33	4.77
		2440	0.21	0.63	33.33	4.77
		2480	0.21	0.63	33.33	4.77

Test Graphs

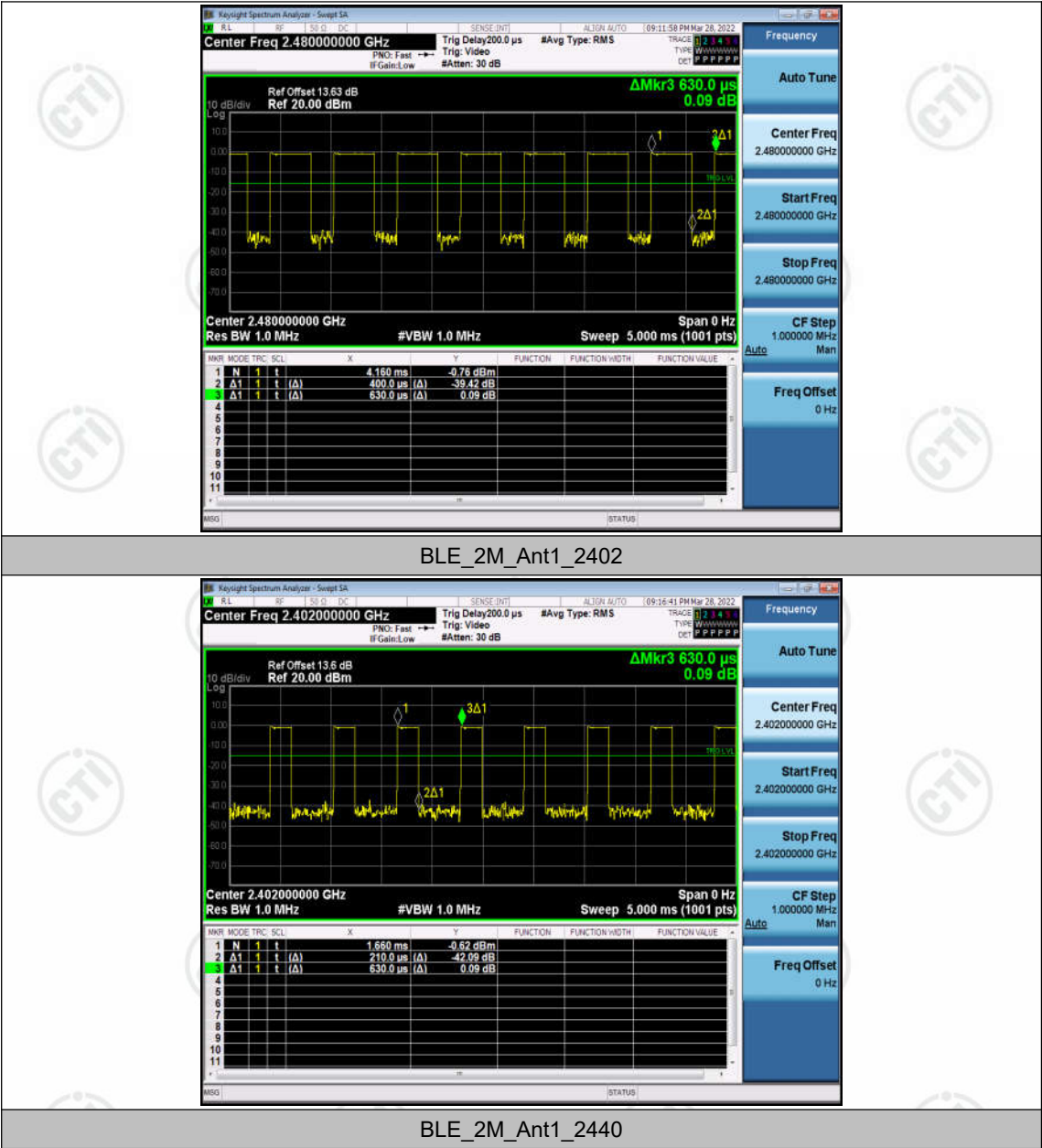
BLE_1M_Ant1_2402

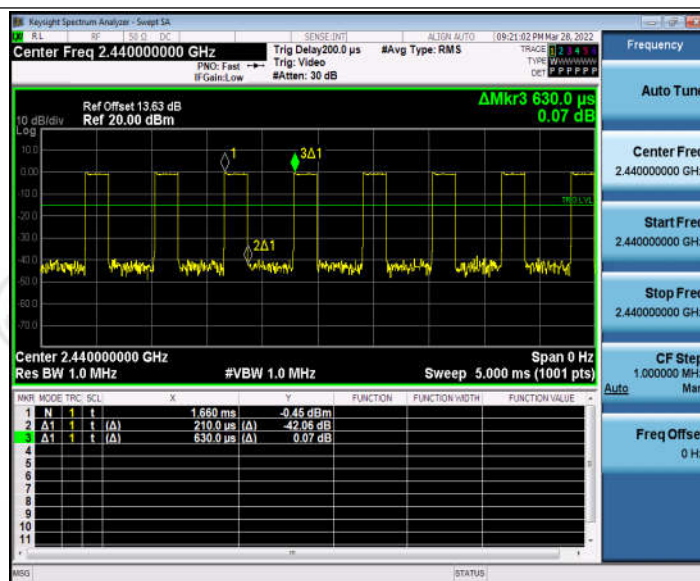


BLE_1M_Ant1_2440

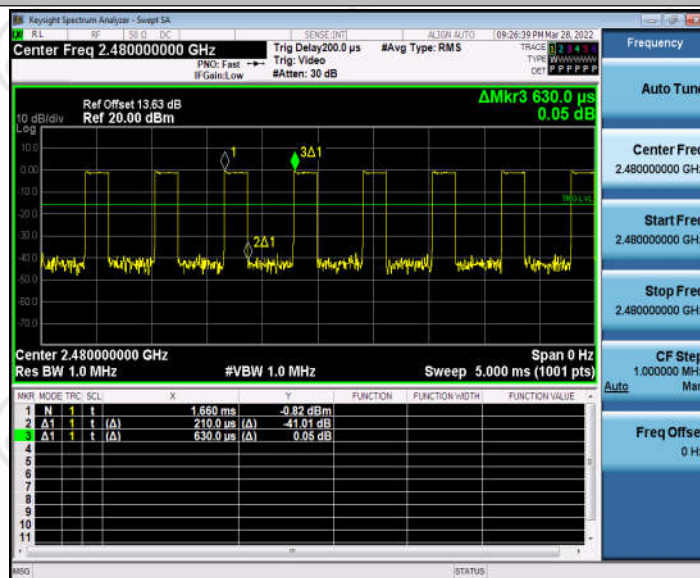


BLE_1M_Ant1_2480





BLE_2M_Ant1_2480



End of report