

Appendix RF test data for BLE

Duty Cycle Test Result

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	2.125	2.499	85.03	0.8503	0.7043	0.4706
	19	2.126	2.499	85.08	0.8508	0.7017	0.4704
	39	2.126	2.499	85.08	0.8508	0.7017	0.4704
BLE 2M	0	1.070	1.874	57.09	0.5709	2.4344	0.9346
	19	1.070	1.875	57.07	0.5707	2.4359	0.9346
	39	1.070	1.875	57.07	0.5707	2.4359	0.9346

Test Graphs

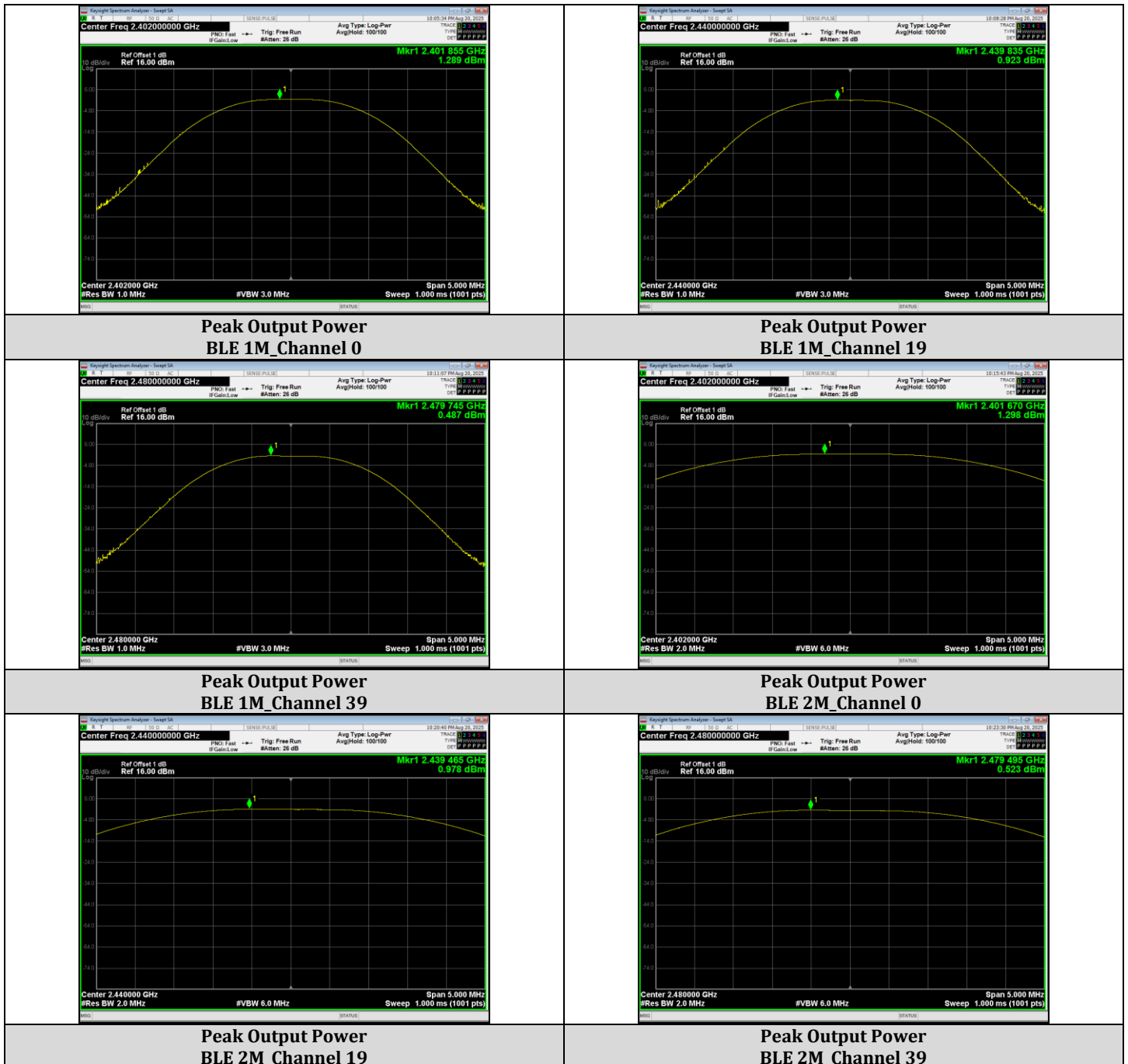


Conducted Output Power

Test Result

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	1.29	1.35	≤30	PASS
	19	0.92	1.24	≤30	PASS
	39	0.49	1.12	≤30	PASS
BLE 2M	0	1.30	1.35	≤30	PASS
	19	0.98	1.25	≤30	PASS
	39	0.52	1.13	≤30	PASS

Test Graphs

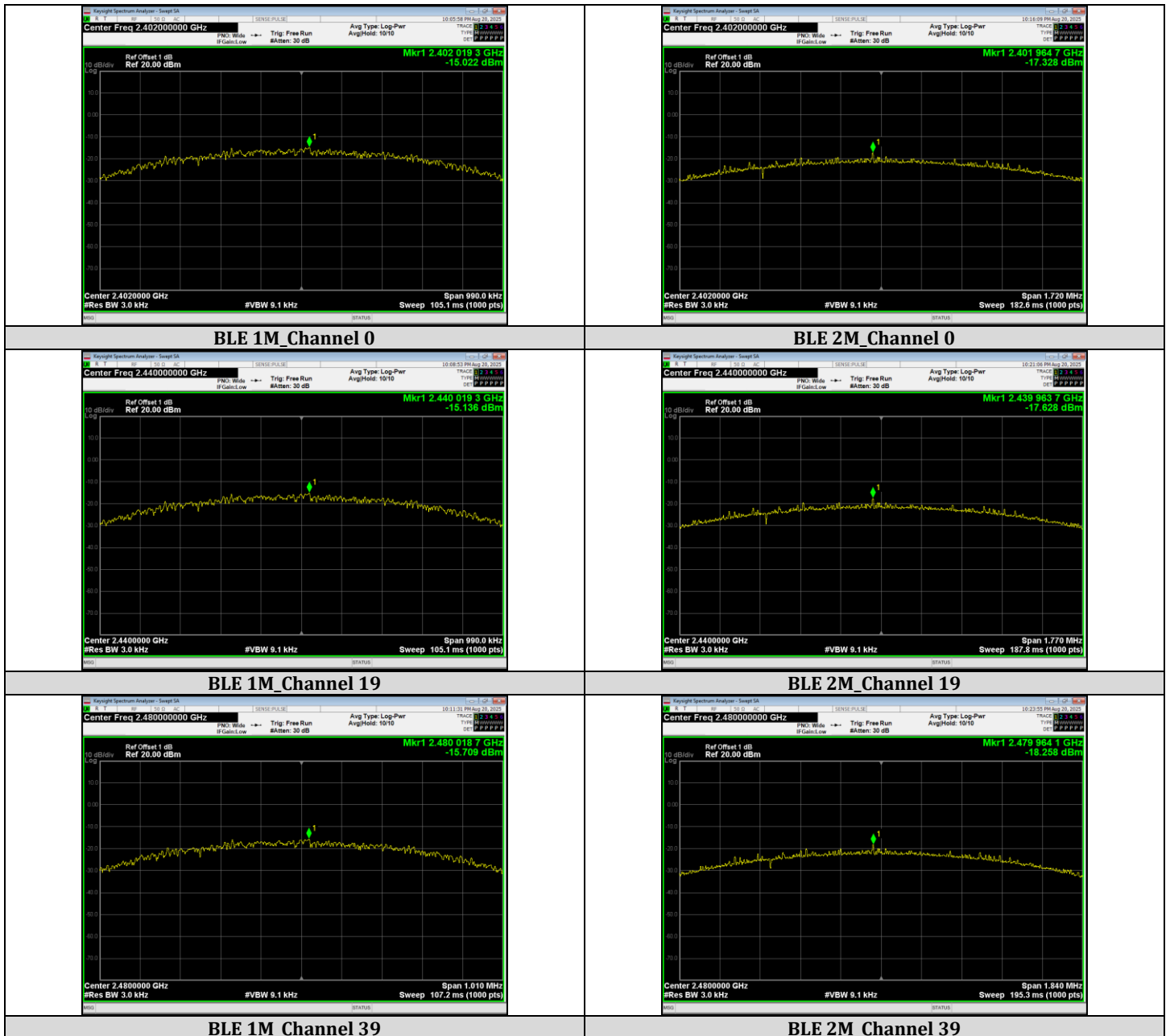


Power Spectral Density

Test Result

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-15.020	≤8	PASS
BLE 1M	19	-15.140	≤8	PASS
BLE 1M	39	-15.710	≤8	PASS
BLE 2M	0	-17.330	≤8	PASS
BLE 2M	19	-17.630	≤8	PASS
BLE 2M	39	-18.260	≤8	PASS

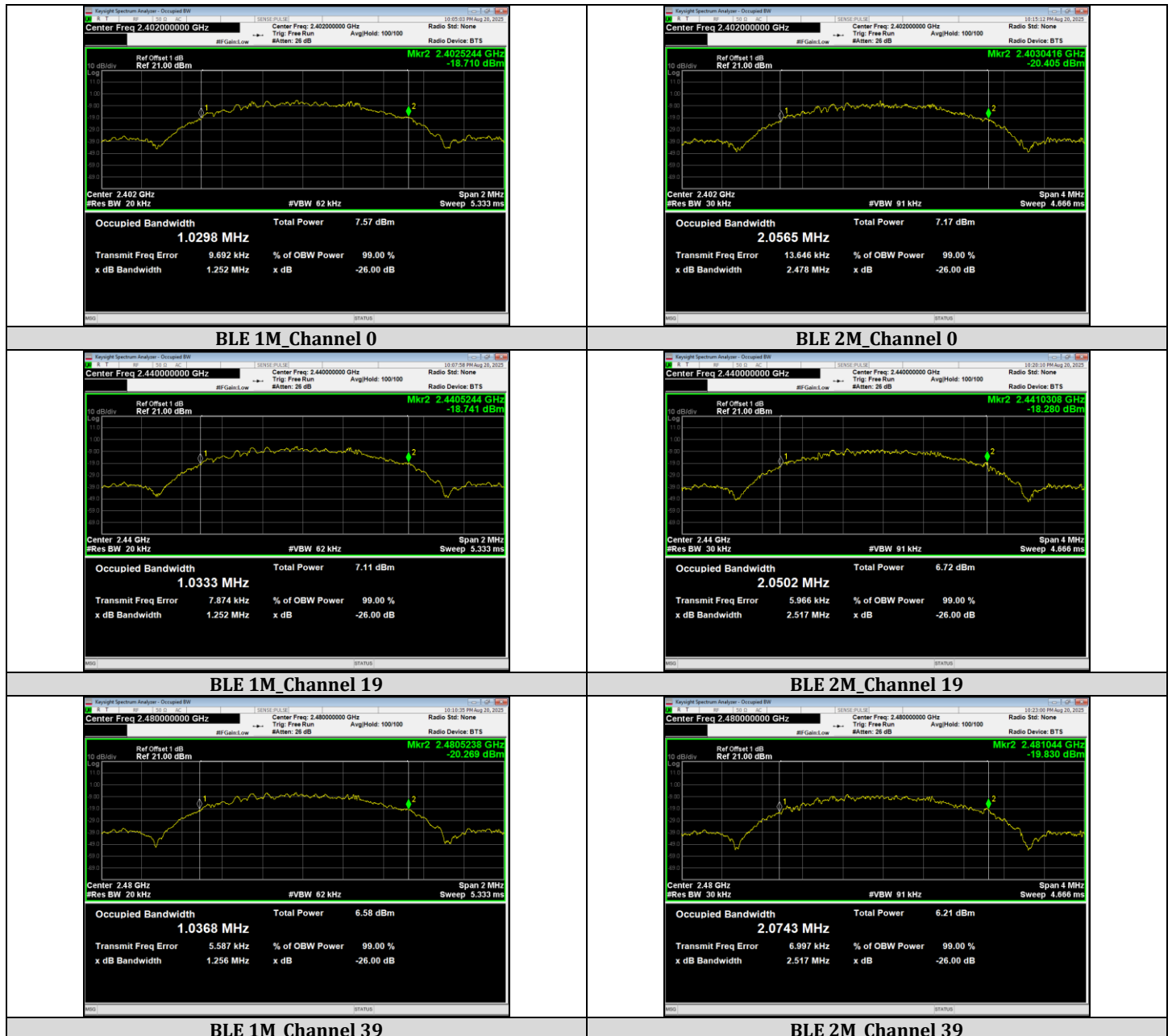
Test Graphs



99% Bandwidth Test Result

Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.0298
BLE 1M	19	2440	1.0333
BLE 1M	39	2480	1.0368
BLE 2M	0	2402	2.0565
BLE 2M	19	2440	2.0502
BLE 2M	39	2480	2.0743

Test Graphs



6dB Bandwidth

Test Result

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.6600	≥0.5	PASS
	19	2440	0.6600		PASS
	39	2480	0.6700		PASS
BLE 2M	0	2402	1.150		PASS
	19	2440	1.180		PASS
	39	2480	1.230		PASS

Test Graphs

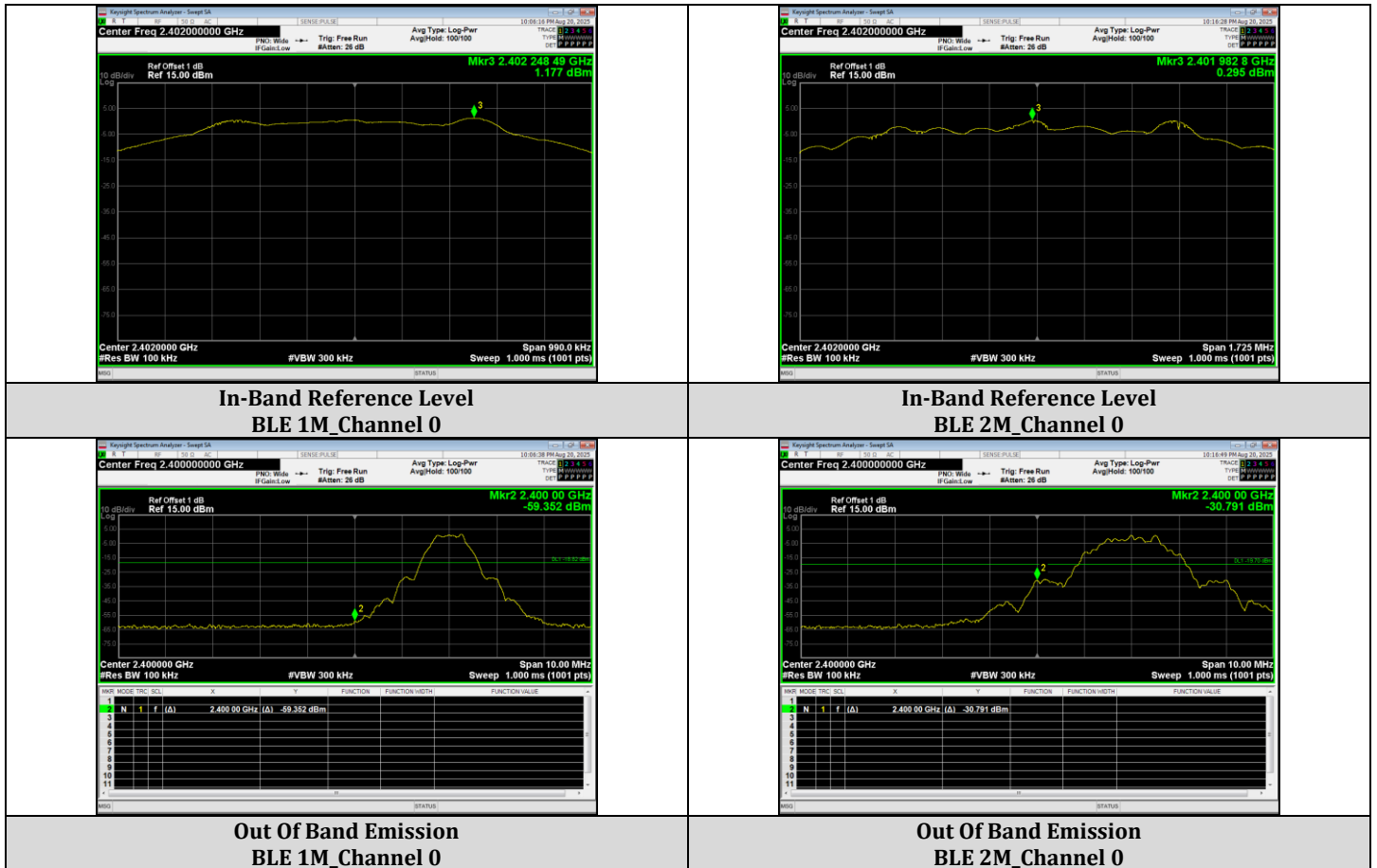


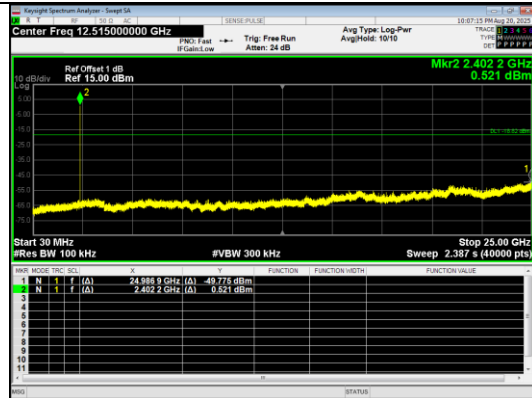
Conducted Out Of Band Emission

Test Result

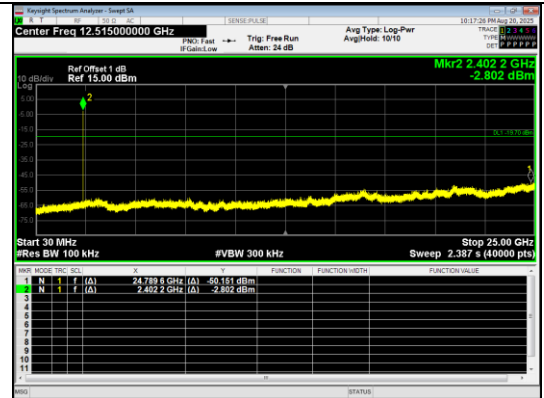
Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2400.00	-59.350	-18.82	-40.530	PASS
		24986.9	-49.775	-18.82	-30.955	PASS
	19	24990.0	-49.405	-19.23	-30.175	PASS
	39	2483.50	-63.310	-19.7	-43.610	PASS
		24919.5	-49.653	-19.7	-29.953	PASS
BLE 2M	0	2400.00	-30.790	-19.7	-11.090	PASS
		24789.6	-50.151	-19.7	-30.451	PASS
	19	24994.4	-49.453	-20.05	-29.403	PASS
	39	2483.50	-58.300	-20.68	-37.620	PASS
		24322.0	-49.338	-20.68	-28.658	PASS

Test Graphs





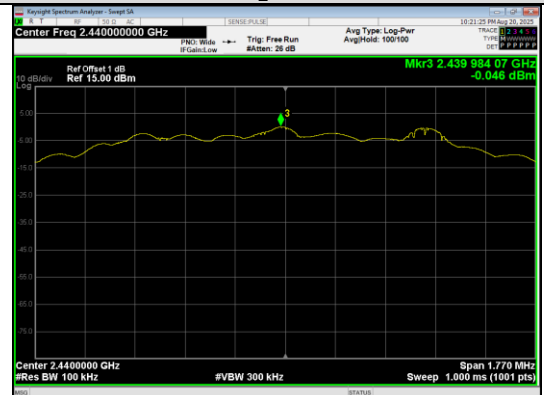
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 0



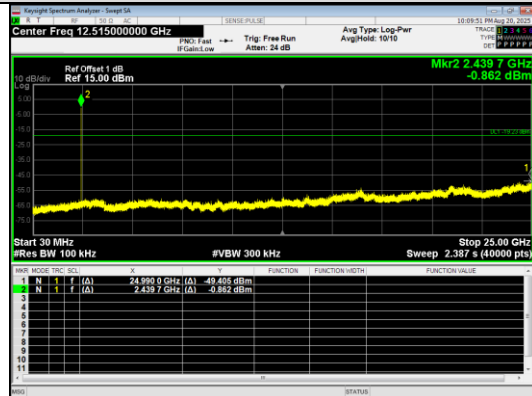
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 0



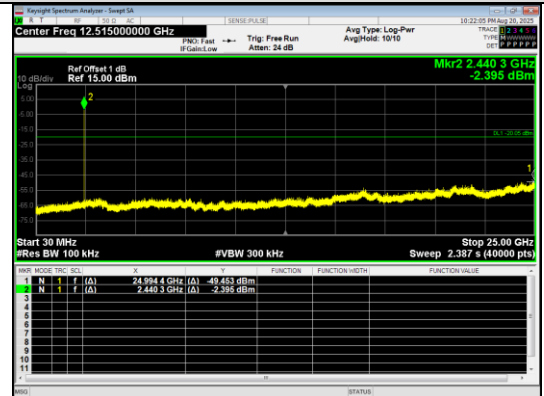
In-Band Reference Level
BLE 1M_Channel 19



In-Band Reference Level
BLE 2M_Channel 19



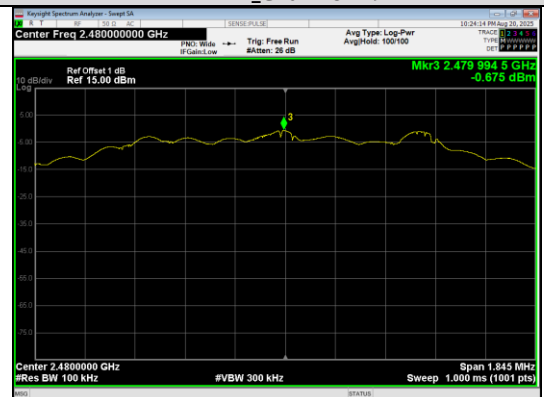
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



30.0 MHz - 25000.0 MHz
BLE 2M_Channel 19



In-Band Reference Level



In-Band Reference Level

