

Appendix A: Test Results of Bluetooth BLE

Conducted Output Power

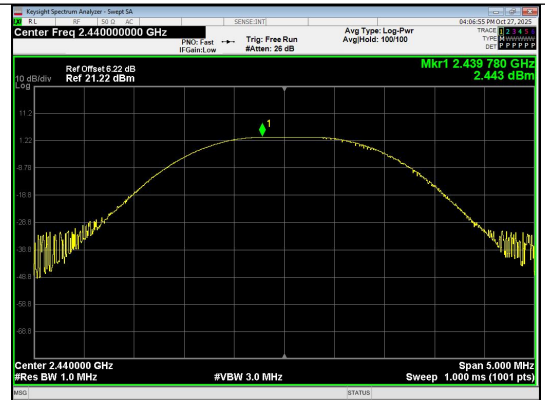
Test Result

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	3.46	2.22	≤30	PASS
	19	2.44	1.76	≤30	PASS
	39	2.66	1.85	≤30	PASS

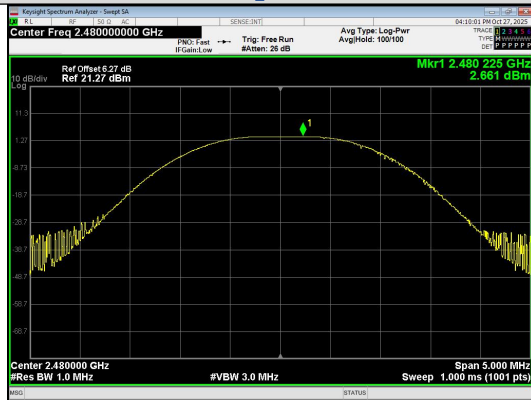
Test Graphs



Peak Output Power
BLE 1M_Channel 0



Peak Output Power
BLE 1M_Channel 19



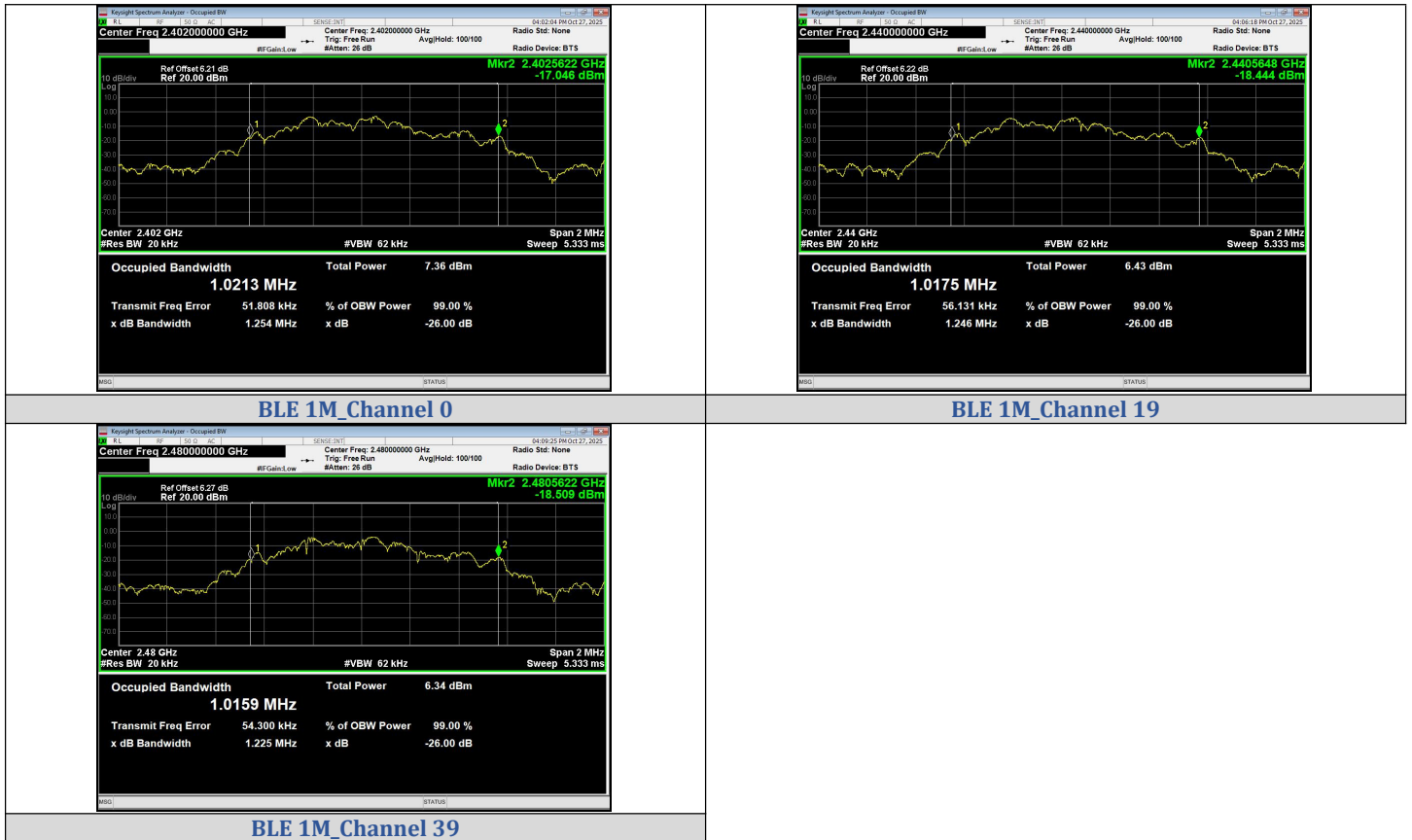
Peak Output Power
BLE 1M_Channel 39

99% Bandwidth

Test Result

Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.0213
BLE 1M	19	2440	1.0175
BLE 1M	39	2480	1.0159

Test Graphs

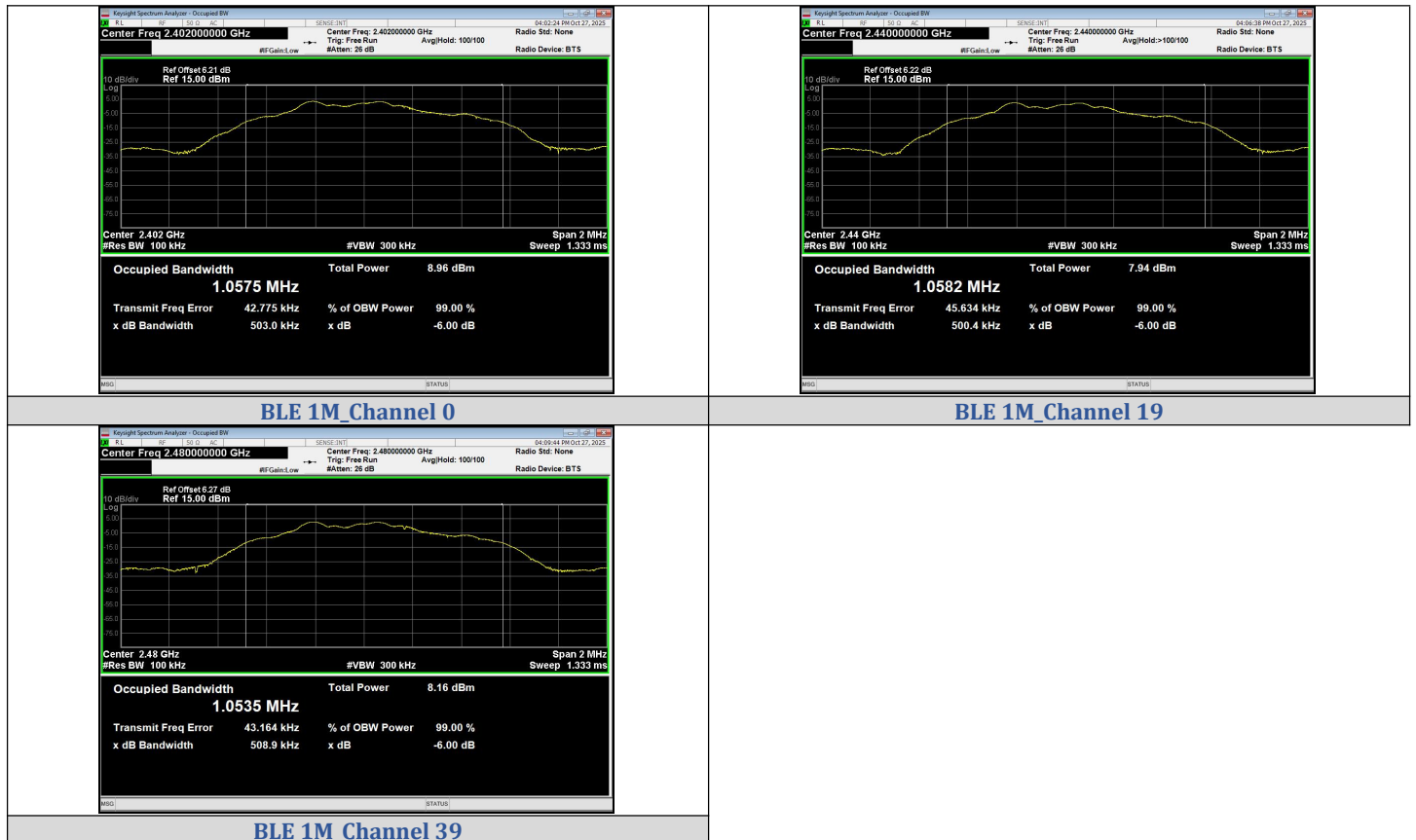


6dB Bandwidth

Test Result

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.5030	≥0.5	PASS
	19	2440	0.5004		PASS
	39	2480	0.5089		PASS

Test Graphs



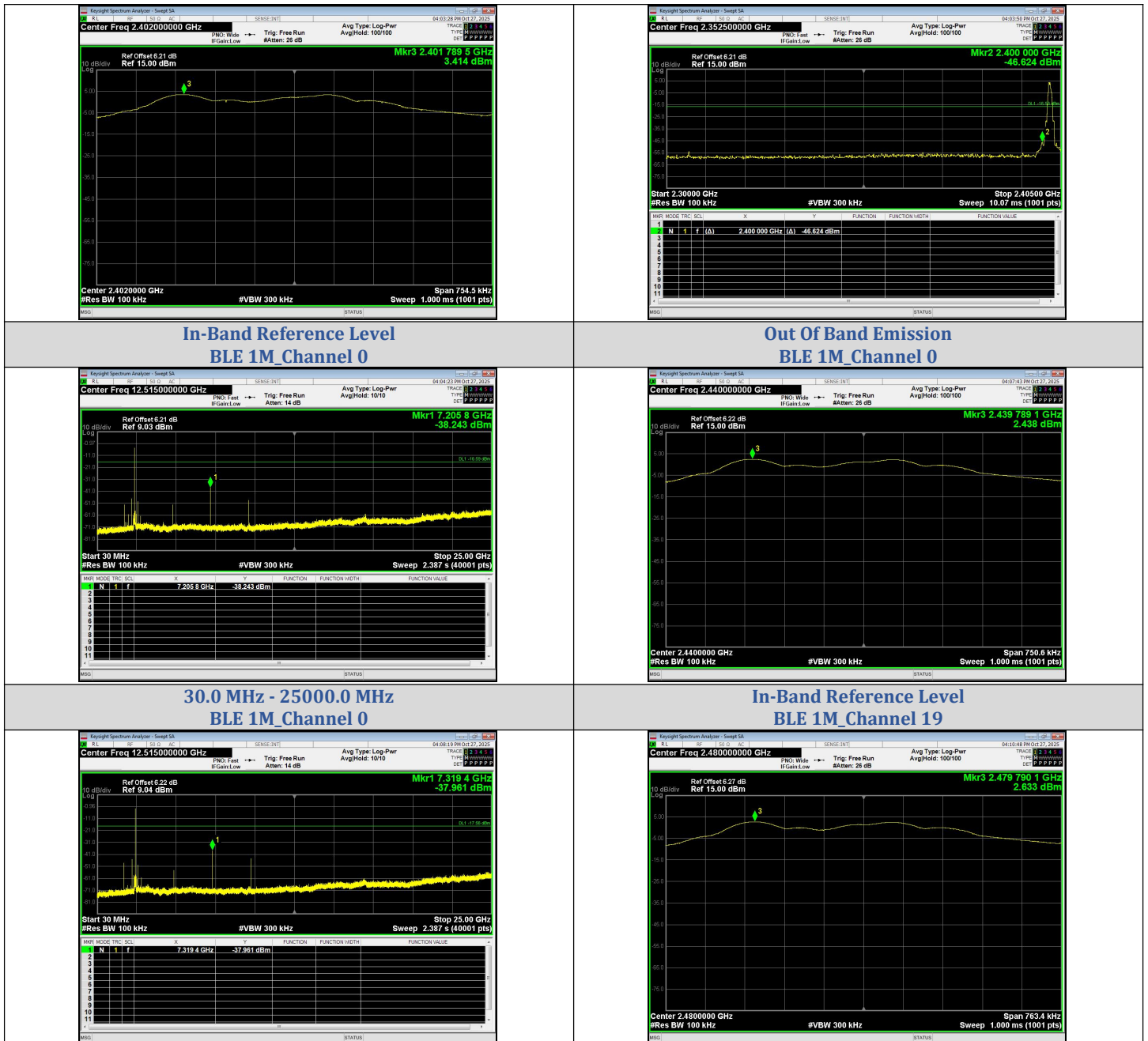
Conducted Spurious & Band Edge Emission

Test Result

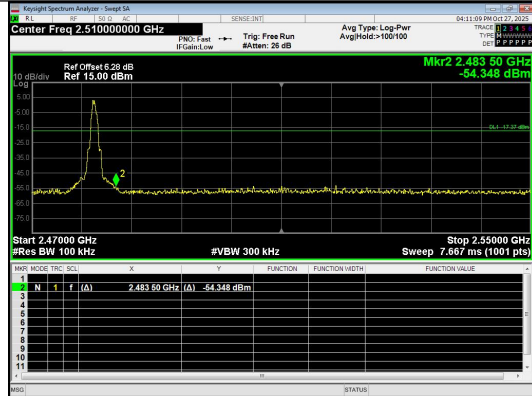
Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2400.00	-46.624	-16.59	-30.034	PASS
		7205.75	-38.243	-16.59	-21.653	PASS
	19	7319.37	-37.961	-17.56	-20.401	PASS
	39	2483.50	-54.348	-17.37	-36.978	PASS
		7440.47	-40.662	-17.37	-23.292	PASS

Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs

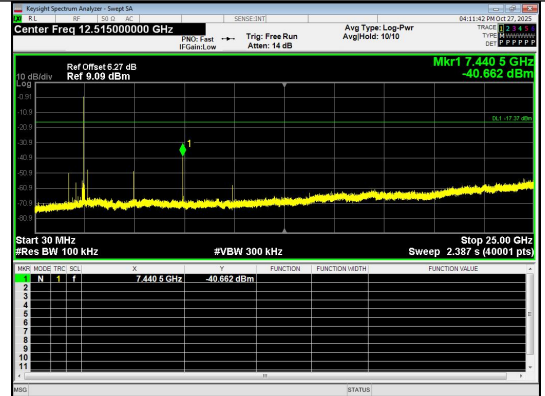


30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



Out Of Band Emission
BLE 1M_Channel 39

In-Band Reference Level
BLE 1M_Channel 39



30.0 MHz - 25000.0 MHz
BLE 1M_Channel 39

Duty Cycle

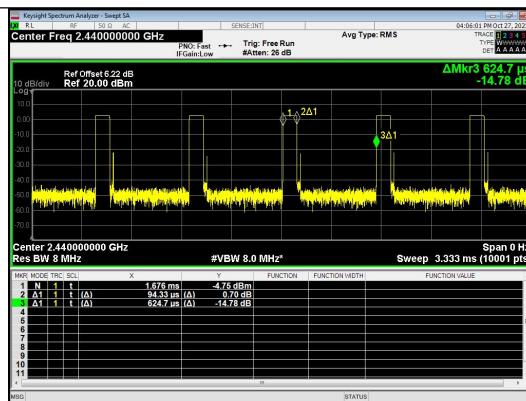
Test Result

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	0.094	0.625	15.10	0.1510	8.2102	10.6383
	19	0.094	0.625	15.10	0.1510	8.2102	10.6383
	39	0.094	0.625	15.10	0.1510	8.2102	10.6383

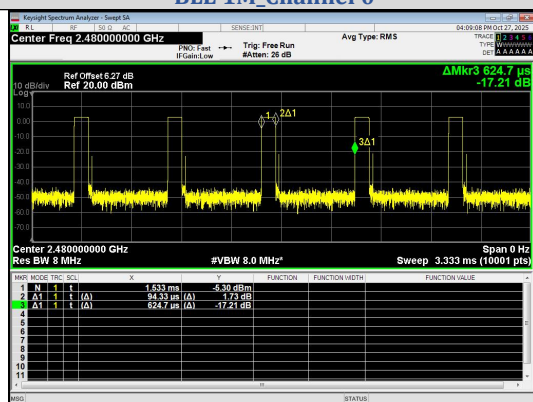
Test Graphs



BLE 1M Channel 0



BLE 1M Channel 19



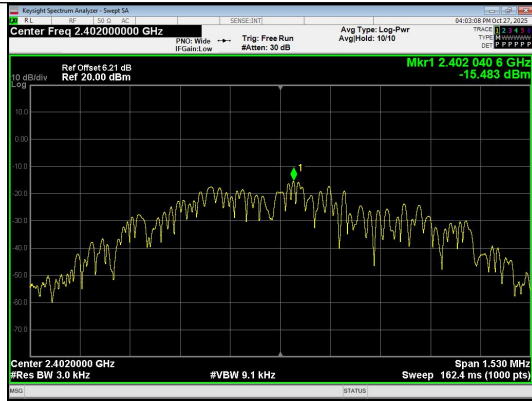
BLE 1M Channel 39

Power Spectral Density

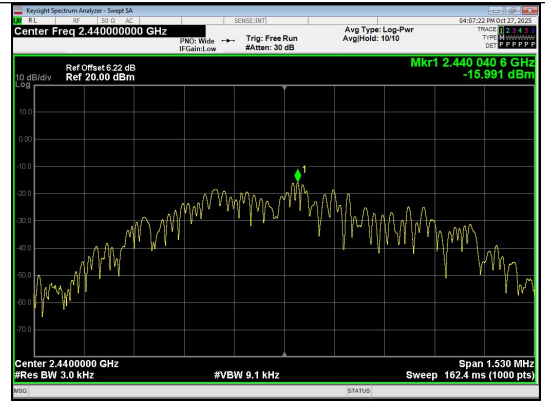
Test Result

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-15.480	≤8	PASS
BLE 1M	19	-15.990	≤8	PASS
BLE 1M	39	-15.890	≤8	PASS

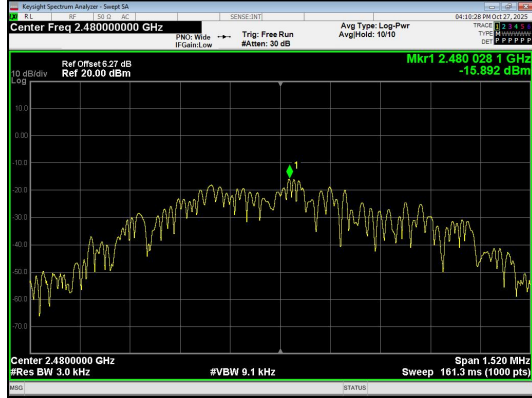
Test Graphs



BLE 1M_Channel 0



BLE 1M_Channel 19



BLE 1M_Channel 39