

Appendix-BLE

Conducted Test Data

Conducted Output Power

Test Result

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
BLE 1M	0	-0.84	0.82	-0.93	≤30	PASS
	19	-1.05	0.78	-1.13	≤30	PASS
	39	-2.03	0.63	-1.07	≤30	PASS

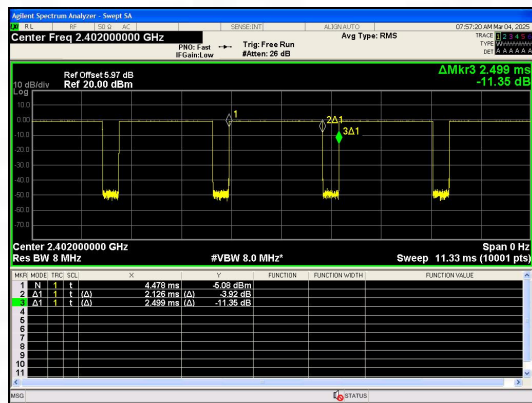
Note: Antenna gain = 2.81 dBi.

Duty Cycle

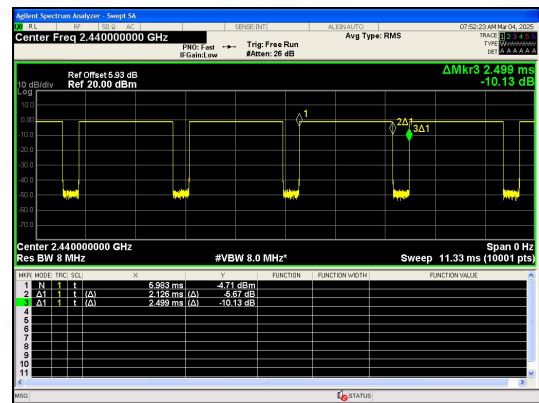
Test Result

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	2.126	2.499	85.08	0.8508	0.7017	0.4704
	19	2.126	2.499	85.08	0.8508	0.7017	0.4704
	39	2.125	2.499	85.03	0.8503	0.7043	0.4706

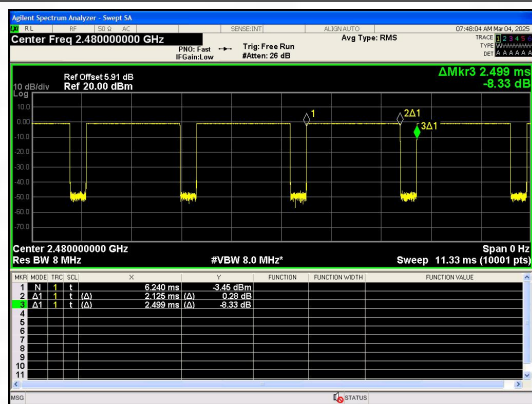
Test Graphs



BLE 1M_Channel 0



BLE 1M_Channel 19



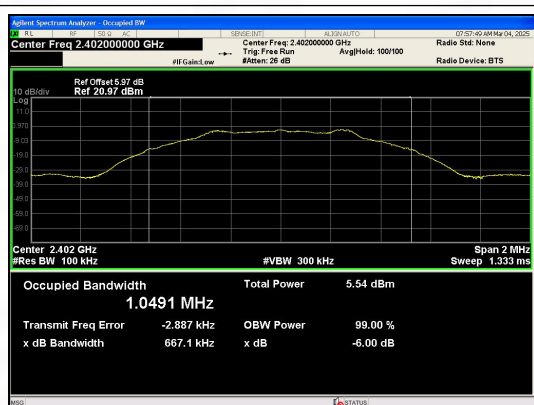
BLE 1M_Channel 39

6dB Bandwidth

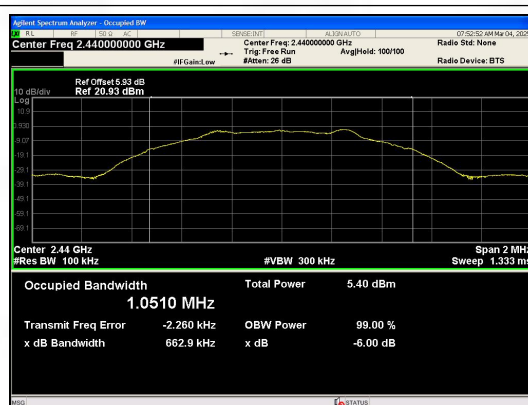
Test Result

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.6671	≥0.5	PASS
	19	2440	0.6629		PASS
	39	2480	0.6617		PASS

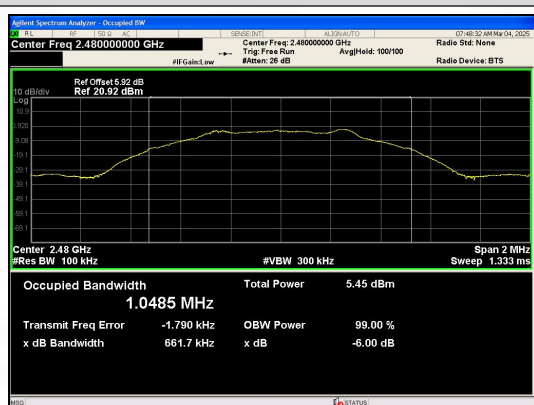
Test Graphs



BLE 1M_Channel 0



BLE 1M_Channel 19



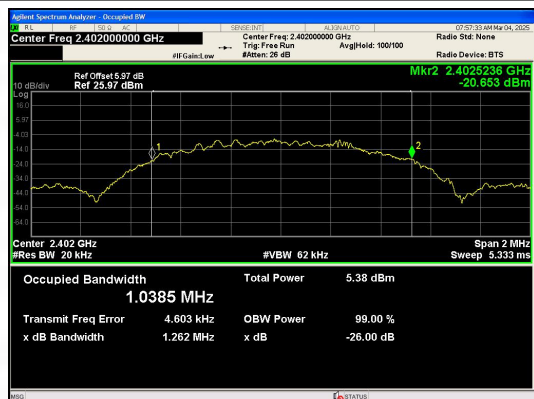
BLE 1M_Channel 39

99% Bandwidth

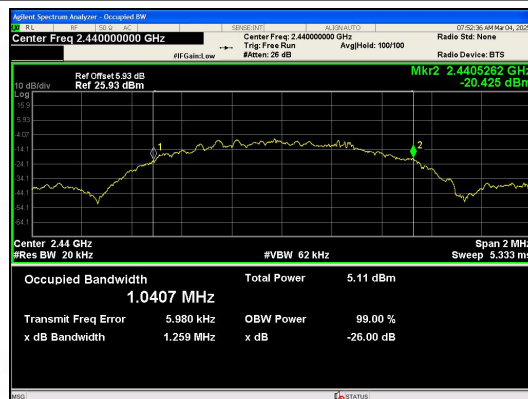
Test Result

Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.0385
BLE 1M	19	2440	1.0407
BLE 1M	39	2480	1.0384

Test Graphs



BLE 1M_Channel 0



BLE 1M_Channel 19



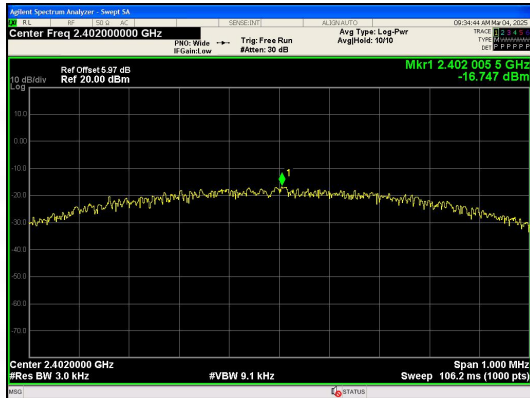
BLE 1M_Channel 39

Power Spectral Density

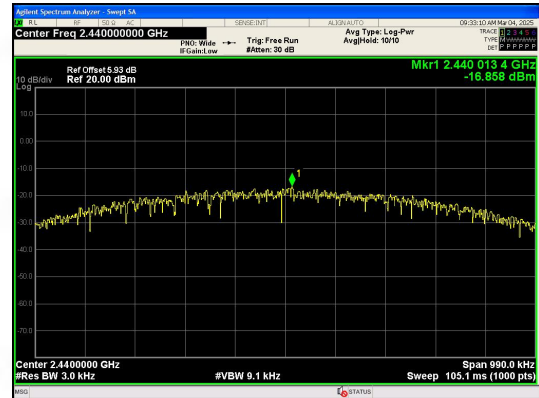
Test Result

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-16.747	≤8	PASS
BLE 1M	19	-16.858	≤8	PASS
BLE 1M	39	-16.537	≤8	PASS

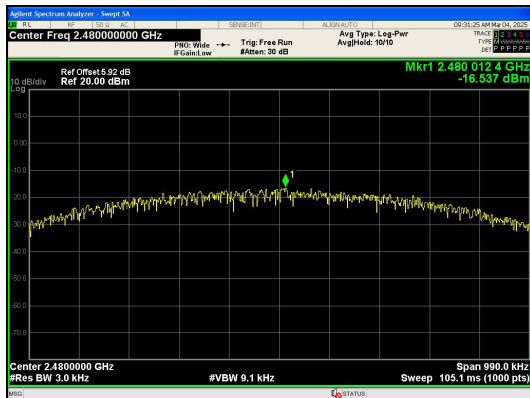
Test Graphs



BLE 1M_Channel 0



BLE 1M_Channel 19



BLE 1M_Channel 39

Conducted Out Of Band Emission

Note: The maximum loss of the test system for testing at 30MHz-26.5GHz is 17.2dB. The offset on the test chart is the offset of the main frequency, and the margin is sufficient to offset the difference between the maximum loss of the system and the offset of the main frequency.

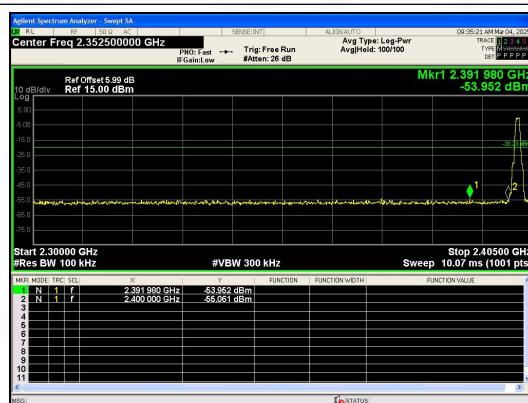
Test Result

Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2391.98	-53.952	-20.23	-33.722	PASS
		2400.00	-55.061	-20.23	-34.831	PASS
		4803.60	-63.616	-20.23	-43.386	PASS
		7205.80	-62.568	-20.23	-42.338	PASS
		9606.60	-66.181	-20.23	-45.951	PASS
		24626.1	-53.981	-20.23	-33.751	PASS
	19	4879.80	-63.076	-20.53	-42.546	PASS
		7319.99	-65.275	-20.53	-44.745	PASS
		9759.56	-67.176	-20.53	-46.646	PASS
		24658.5	-54.353	-20.53	-33.823	PASS
	39	2483.50	-56.817	-20.3	-36.517	PASS
		4960.33	-63.170	-20.3	-42.870	PASS
		7440.47	-65.859	-20.3	-45.559	PASS
		9920.62	-68.797	-20.3	-48.497	PASS
		24800.2	-53.290	-20.3	-32.990	PASS

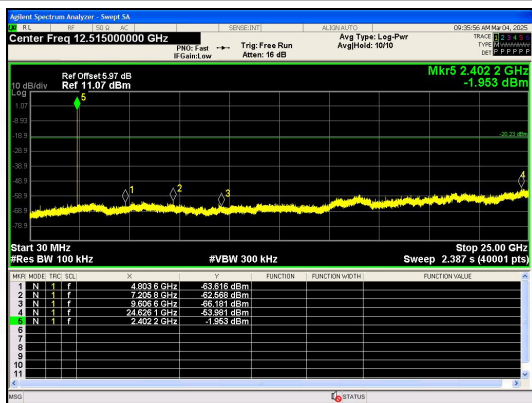
Test Graphs



In-Band Reference Level
BLE 1M_Channel 0



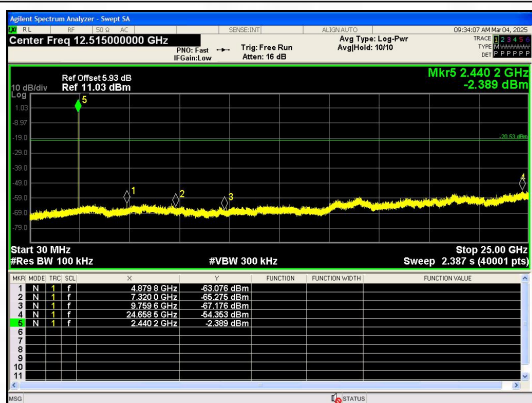
Out Of Band Emission
BLE 1M_Channel 0



30.0 MHz - 25000.0 MHz
BLE 1M_Channel 0



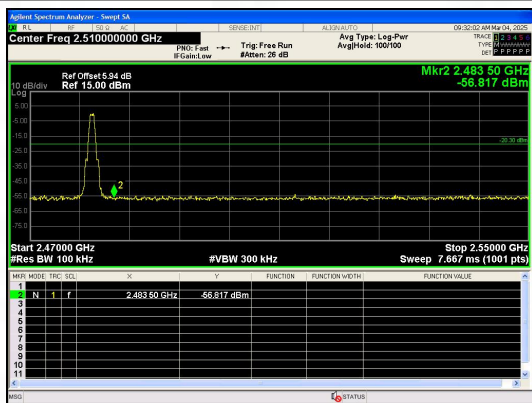
In-Band Reference Level
BLE 1M_Channel 19



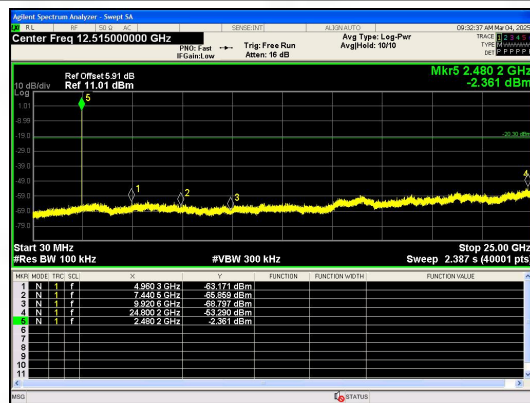
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



In-Band Reference Level
BLE 1M_Channel 39



Out Of Band Emission
BLE 1M_Channel 39



30.0 MHz - 25000.0 MHz
BLE 1M_Channel 39