

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	2.126	2.499	85.08	0.8508	0.7017	0.4704
	19	2.126	2.499	85.08	0.8508	0.7017	0.4704
	39	2.126	2.499	85.08	0.8508	0.7017	0.4704
BLE 2M	0	1.070	1.874	57.11	0.5711	2.4329	0.9346
	19	1.070	1.874	57.09	0.5709	2.4344	0.9346
	39	1.070	1.874	57.06	0.5706	2.4367	0.9346

Test Graphs

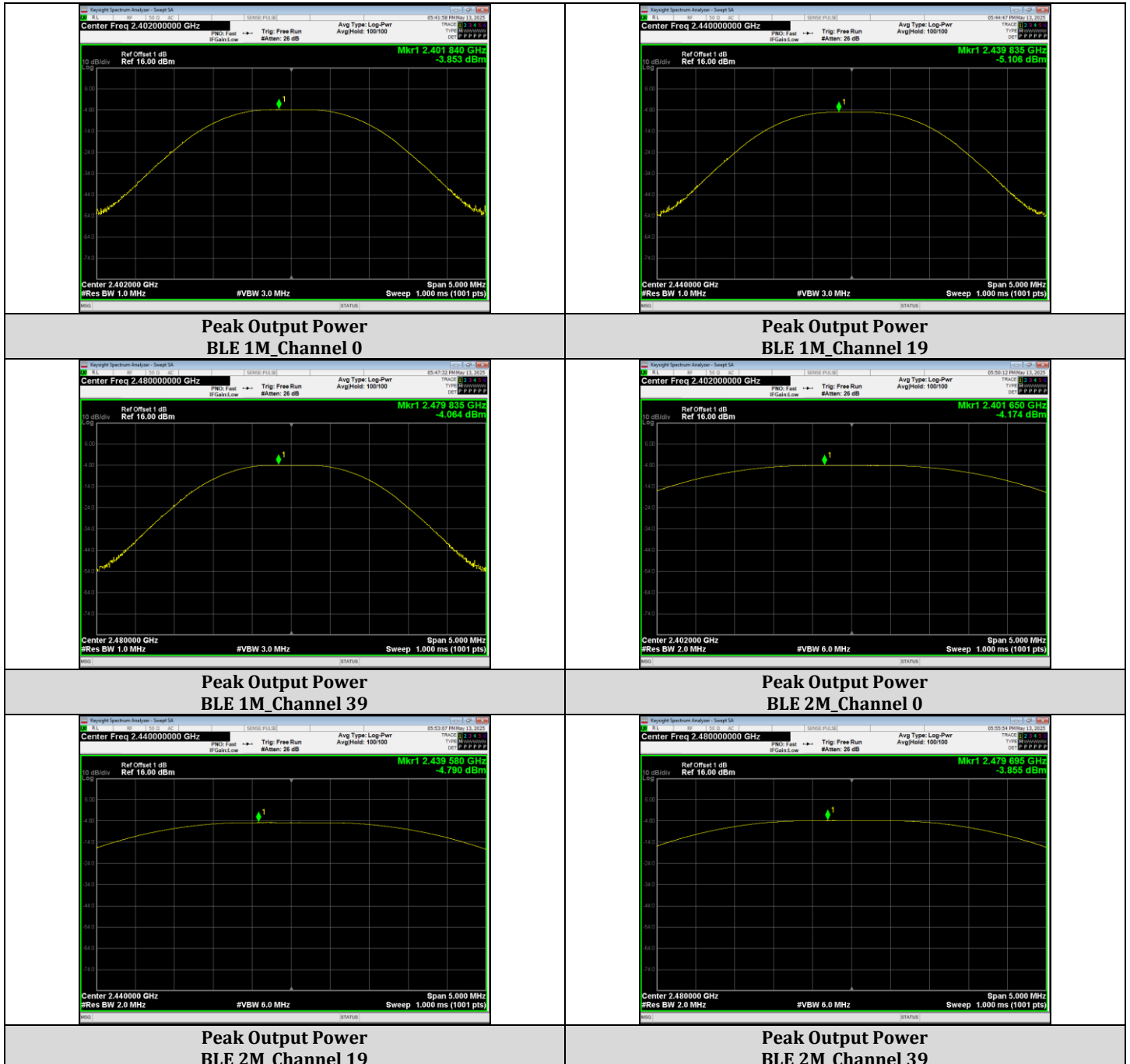


Conducted Output Power

Test Result

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	-3.85	0.41	≤30	PASS
	19	-5.11	0.31	≤30	PASS
	39	-4.06	0.39	≤30	PASS
BLE 2M	0	-4.17	0.38	≤30	PASS
	19	-4.79	0.33	≤30	PASS
	39	-3.85	0.41	≤30	PASS

Test Graphs



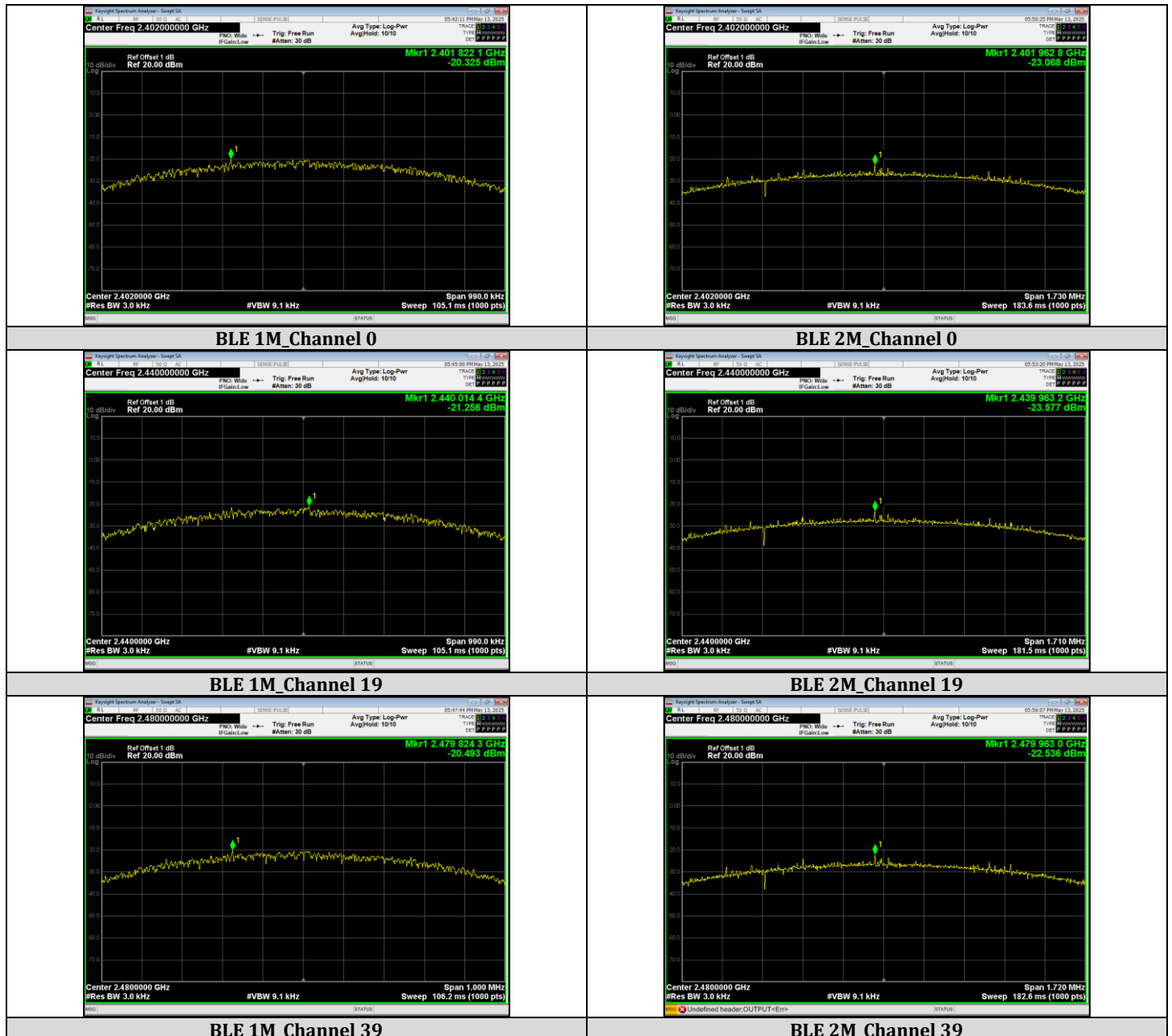


Power Spectral Density

Test Result

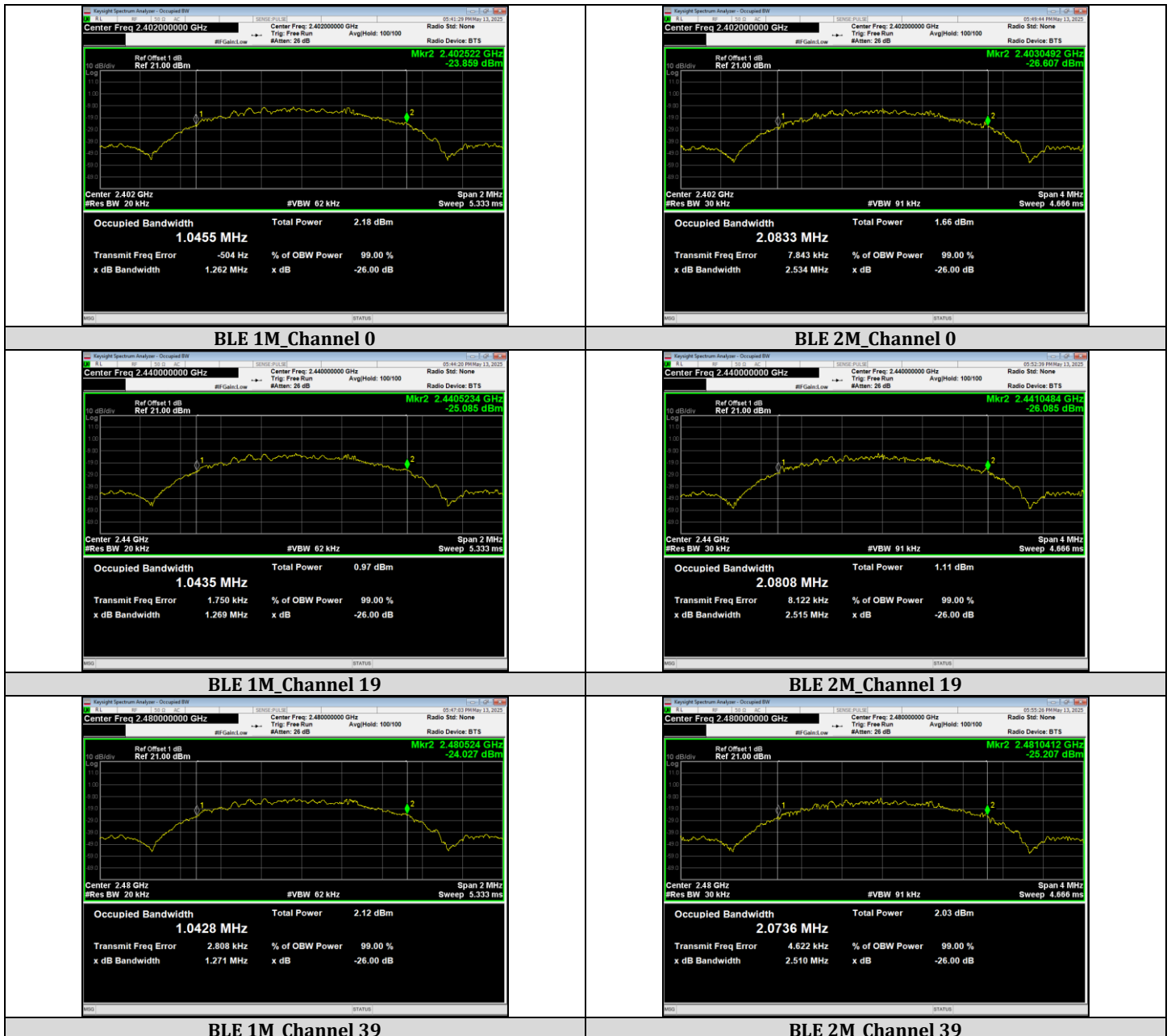
Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-20.325	≤8	PASS
BLE 1M	19	-21.256	≤8	PASS
BLE 1M	39	-20.493	≤8	PASS
BLE 2M	0	-23.068	≤8	PASS
BLE 2M	19	-23.577	≤8	PASS
BLE 2M	39	-22.536	≤8	PASS

Test Graphs



**99% Bandwidth****Test Result**

Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.0455
BLE 1M	19	2440	1.0435
BLE 1M	39	2480	1.0428
BLE 2M	0	2402	2.0833
BLE 2M	19	2440	2.0808
BLE 2M	39	2480	2.0736

Test Graphs

**6dB Bandwidth****Test Result**

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.6628	≥0.5	PASS
	19	2440	0.6618		PASS
	39	2480	0.6634		PASS
BLE 2M	0	2402	1.156		PASS
	19	2440	1.143		PASS
	39	2480	1.148		PASS

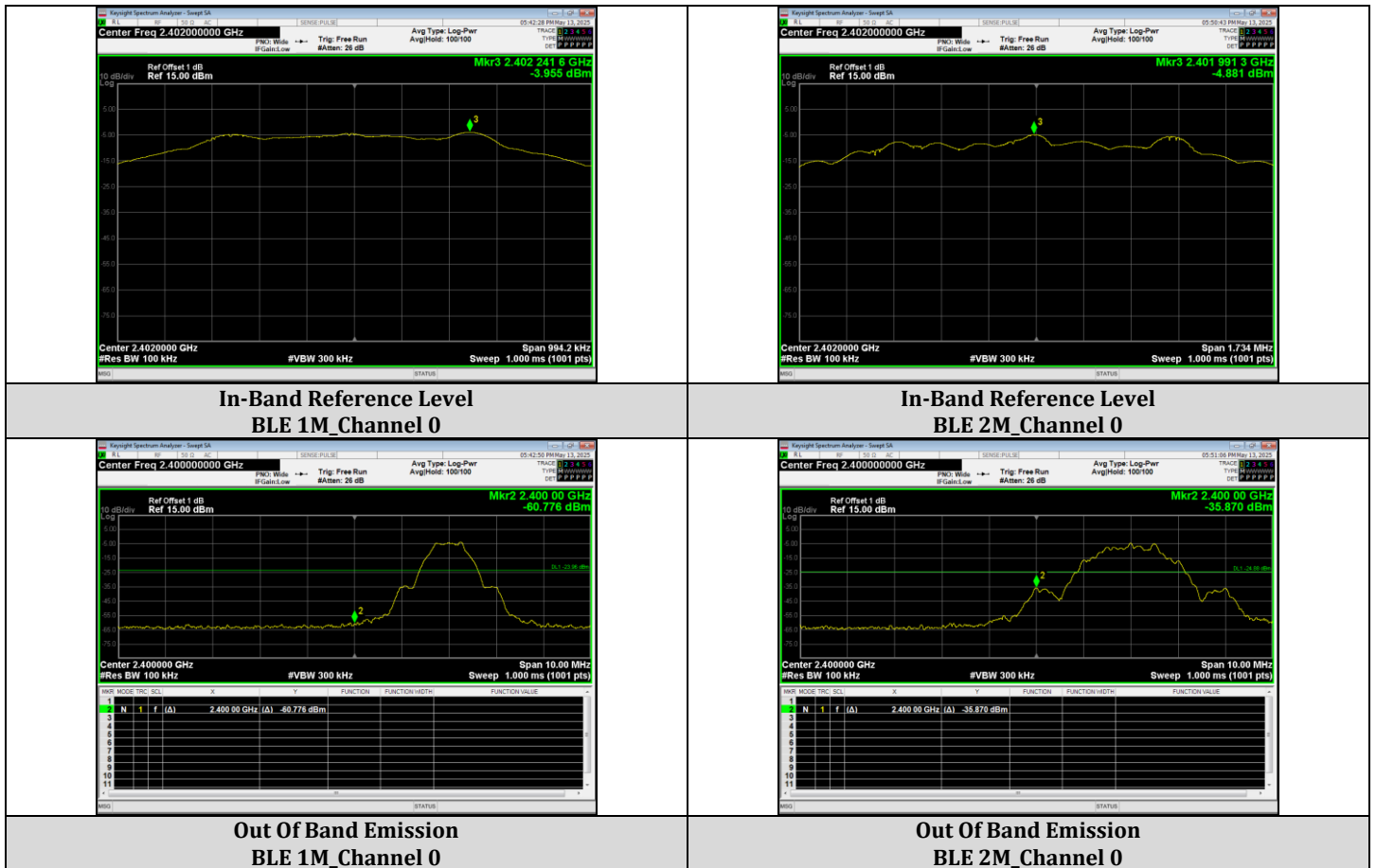
Test Graphs

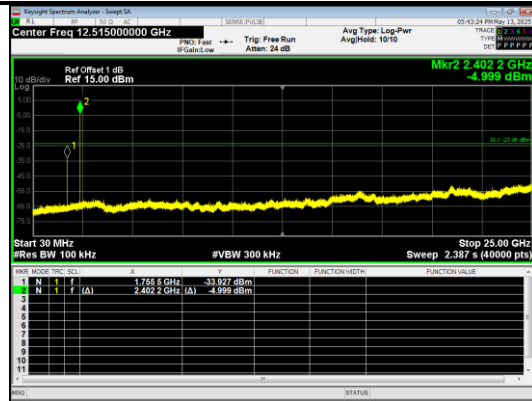
Conducted Out Of Band Emission

Test Result

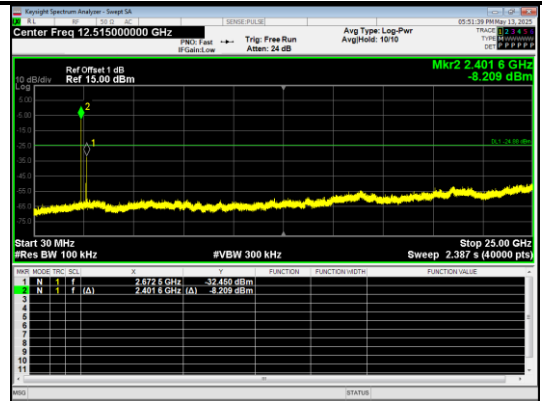
Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	1755.47	-33.927	-23.96	-9.967	PASS
		2400.00	-60.776	-23.96	-36.816	PASS
	19	1763.59	-44.044	-25.18	-18.864	PASS
	39	1761.71	-25.270	-24.12	-1.150	PASS
		2483.50	-62.145	-24.12	-38.025	PASS
BLE 2M	0	2400.00	-35.870	-24.88	-10.990	PASS
		2672.52	-32.450	-24.88	-7.570	PASS
	19	1759.22	-28.014	-25.47	-2.544	PASS
	39	2483.50	-61.362	-24.47	-36.892	PASS
		24968.2	-49.413	-24.47	-24.943	PASS

Test Graphs

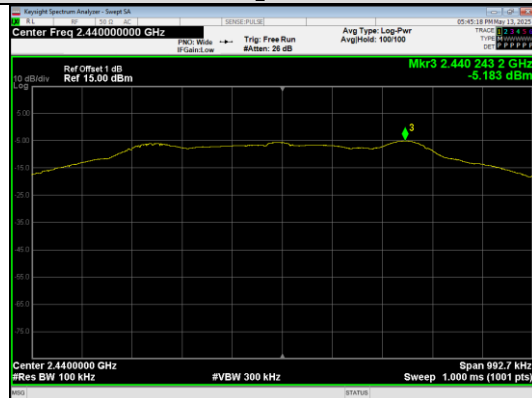




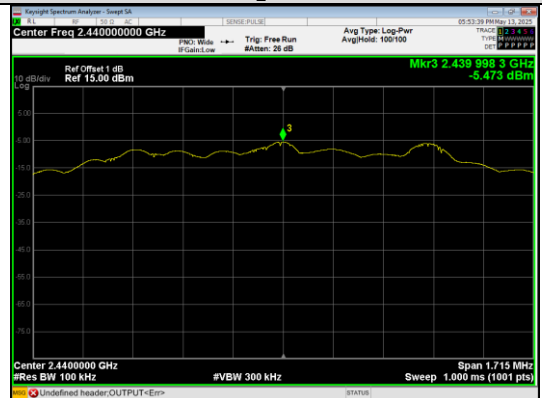
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 0



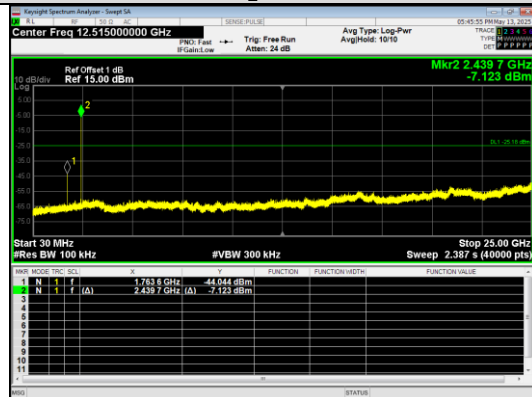
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 0



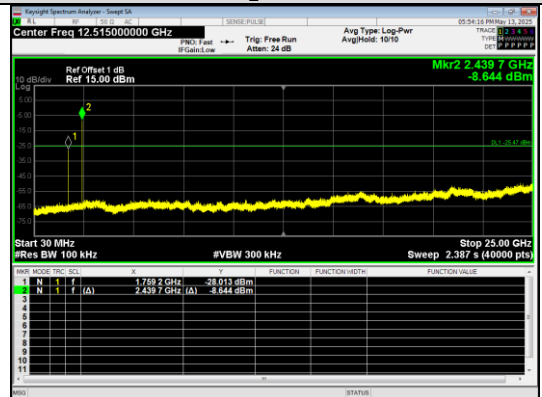
In-Band Reference Level
BLE 1M_Channel 19



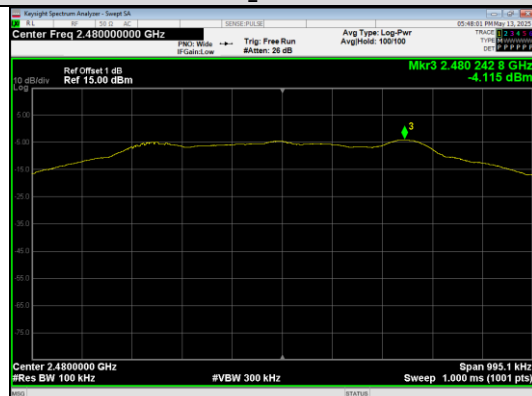
In-Band Reference Level
BLE 2M_Channel 19



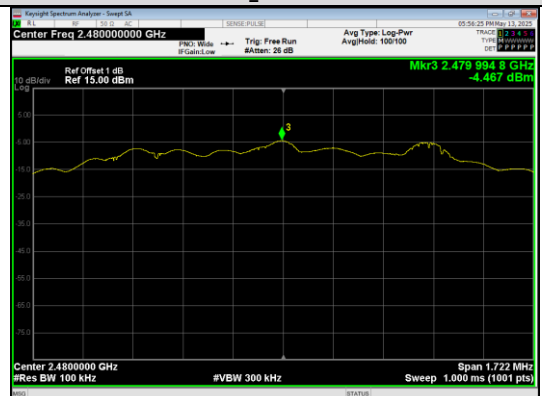
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



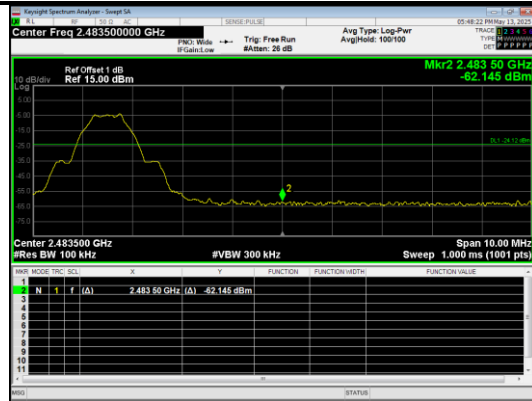
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 19



In-Band Reference Level
BLE 1M_Channel 39



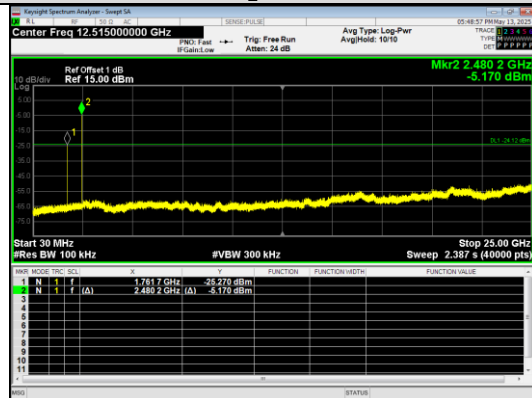
In-Band Reference Level
BLE 2M_Channel 39



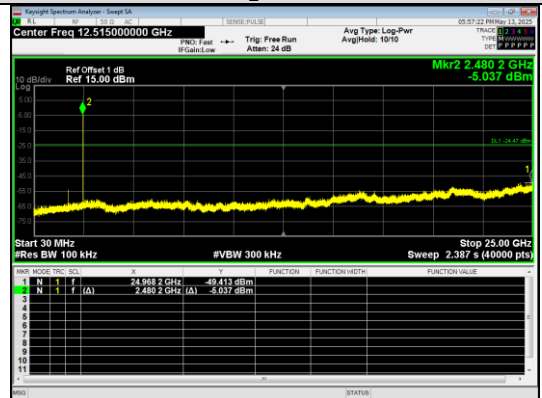
Out Of Band Emission
BLE 1M_Channel 39



Out Of Band Emission
BLE 2M_Channel 39



30.0 MHz - 25000.0 MHz
BLE 1M_Channel 39



30.0 MHz - 25000.0 MHz
BLE 2M_Channel 39

***** End of Report *****