

Appendix-BLE

Conducted Test Data

Conducted Output Power

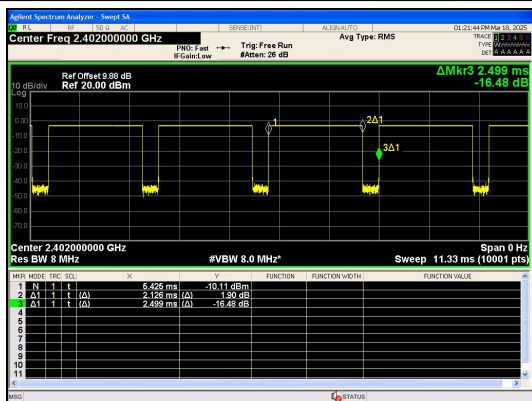
Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
BLE 1M	0	-2.48	0.57	None	≤30	PASS
	19	-3.23	0.48	None	≤30	PASS
	39	-2.63	0.55	None	≤30	PASS
BLE 2M	0	-2.44	0.57	None	≤30	PASS
	19	-3.17	0.48	None	≤30	PASS
	39	-2.56	0.56	None	≤30	PASS

Duty Cycle

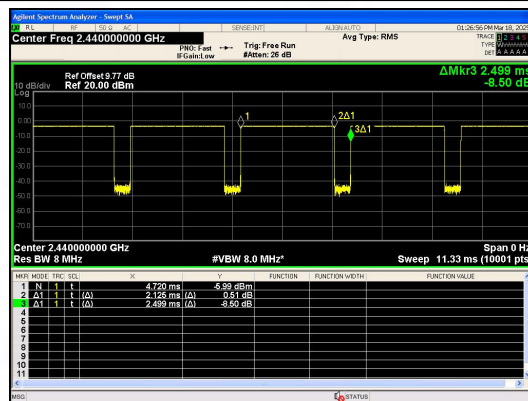
Test Result

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	2.125	2.499	85.03	0.8503	0.7043	0.4706
	39	2.126	2.499	85.08	0.8508	0.7017	0.4704
BLE 2M	0	1.070	1.875	57.08	0.5708	2.4352	0.9346
	19	1.070	1.873	57.11	0.5711	2.4329	0.9346
	39	1.070	1.874	57.09	0.5709	2.4344	0.9346

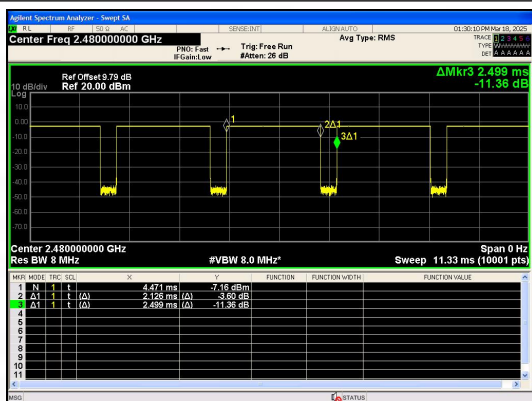
Test Graphs



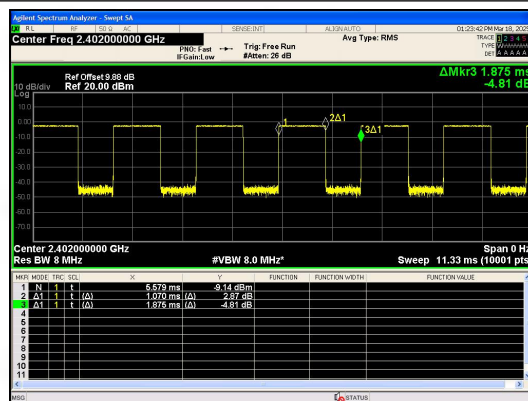
BLE 1M_Channel 0



BLE 1M_Channel 19



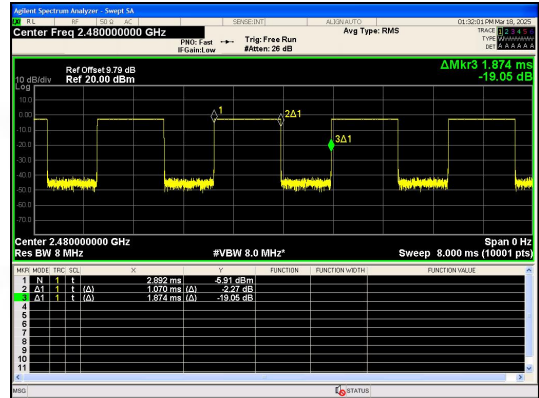
BLE 1M_Channel 39



BLE 2M_Channel 0



BLE 2M_Channel 19



BLE 2M_Channel 39

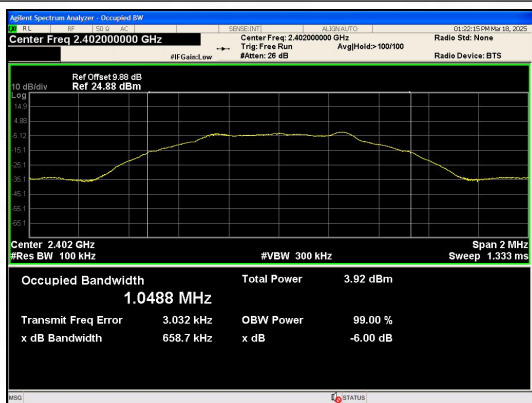
6dB Bandwidth and 99% Bandwidth

6dB Bandwidth

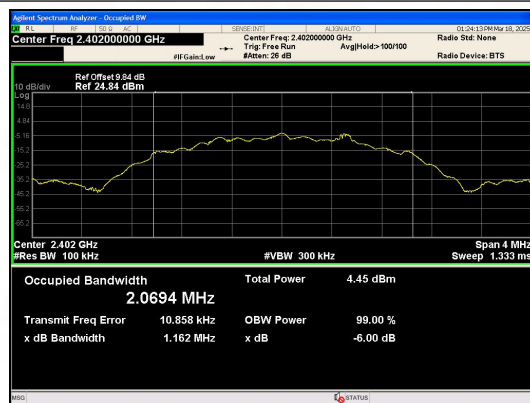
Test Result

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.6587	≥0.5	PASS
	19	2440	0.6598		PASS
	39	2480	0.6608		PASS
BLE 2M	0	2402	1.162		PASS
	19	2440	1.142		PASS
	39	2480	1.154		PASS

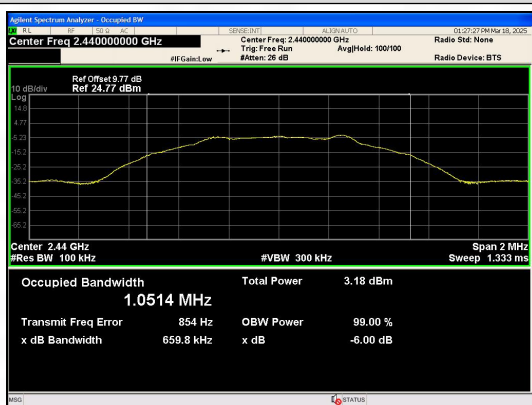
Test Graphs



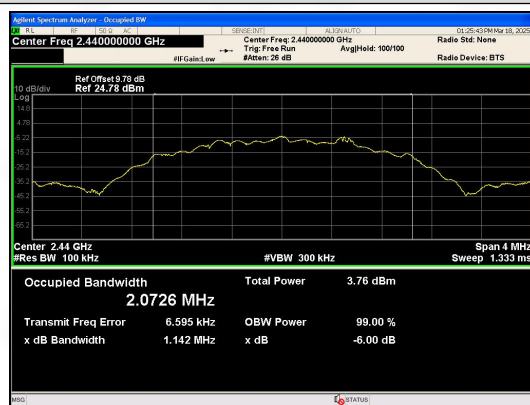
BLE 1M_Channel 0



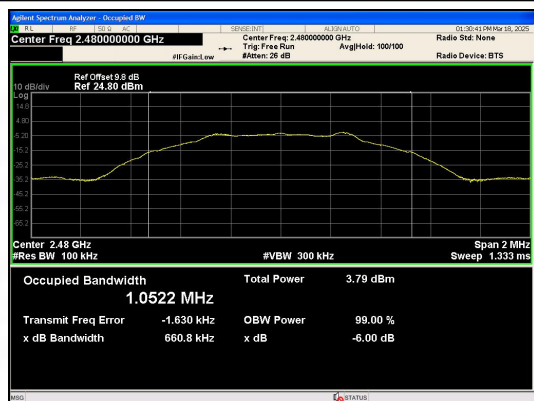
BLE 2M_Channel 0



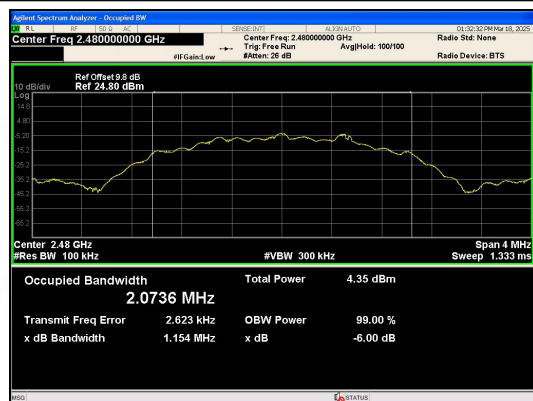
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39

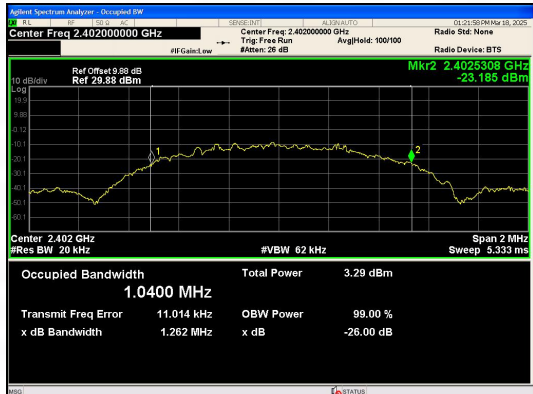




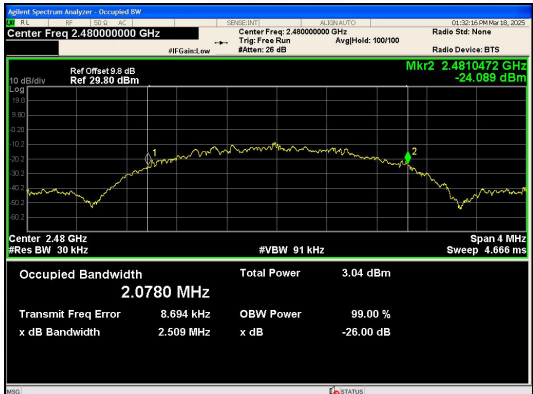


BLE 2M_Channel 39

99% Bandwidth Test Result

Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.0400
BLE 1M	19	2440	1.0462
BLE 1M	39	2480	1.0427
BLE 2M	0	2402	2.0802
BLE 2M	19	2440	2.0803
BLE 2M	39	2480	2.0780

Test Graphs

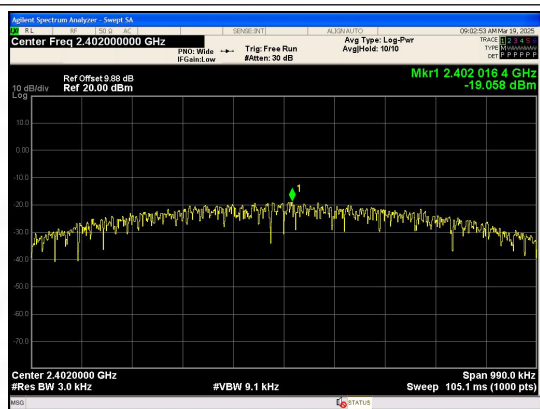
 <p>BLE 1M_Channel 0</p>	 <p>BLE 2M_Channel 0</p>
 <p>BLE 1M_Channel 19</p>	 <p>BLE 2M_Channel 19</p>
 <p>BLE 1M_Channel 39</p>	 <p>BLE 2M_Channel 39</p>

Power Spectral Density

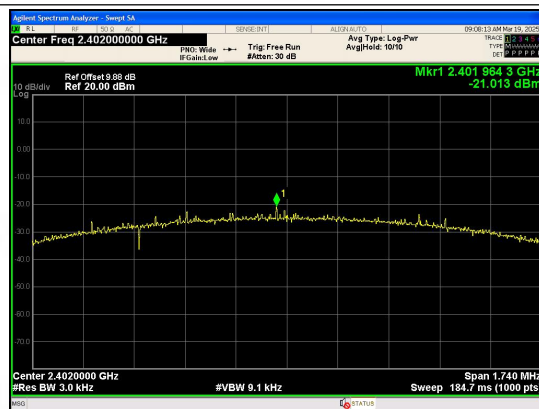
Test Result

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-19.058	≤8	PASS
BLE 1M	19	-19.591	≤8	PASS
BLE 1M	39	-18.216	≤8	PASS
BLE 2M	0	-21.013	≤8	PASS
BLE 2M	19	-21.812	≤8	PASS
BLE 2M	39	-21.778	≤8	PASS

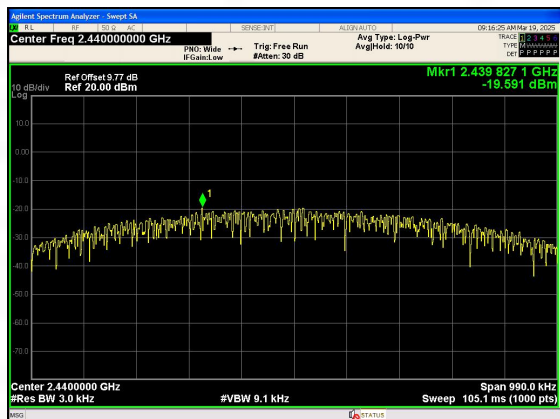
Test Graphs



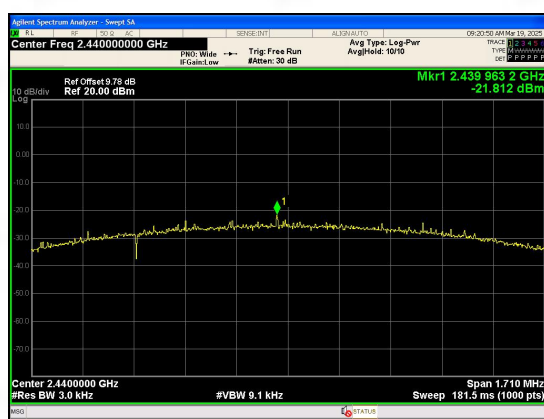
BLE 1M_Channel 0



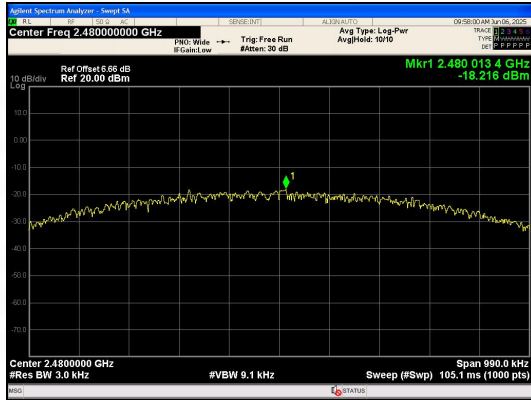
BLE 2M_Channel 0



BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



BLE 2M_Channel 39

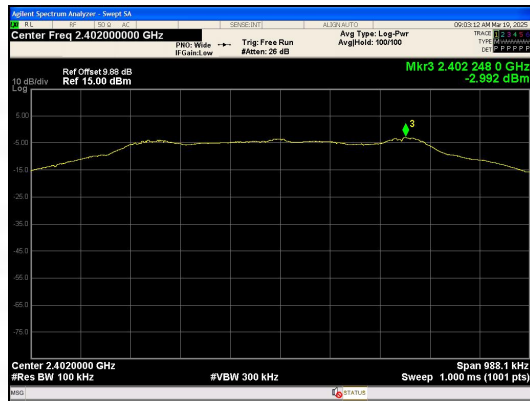
Conducted Out Of Band Emission

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.

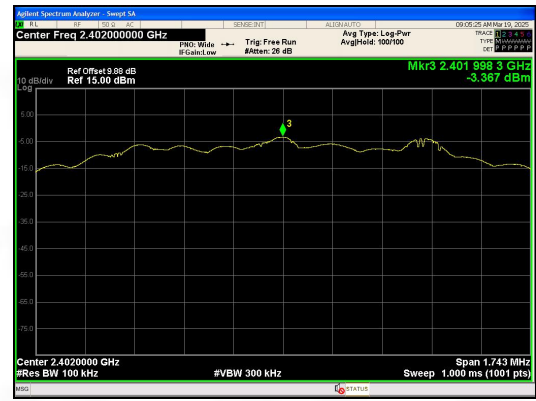
Test Result

Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2356.80	-51.367	-22.99	-28.377	PASS
		2400.00	-54.683	-22.99	-31.693	PASS
		4803.60	-68.561	-22.99	-45.571	PASS
		7206.40	-63.128	-22.99	-40.138	PASS
		9609.10	-66.934	-22.99	-43.944	PASS
		24644.2	-55.613	-22.99	-32.623	PASS
	19	4881.05	-67.957	-24.18	-43.777	PASS
		7319.37	-64.723	-24.18	-40.543	PASS
		9758.94	-69.122	-24.18	-44.942	PASS
		24771.5	-56.313	-24.18	-32.133	PASS
	39	2483.50	-53.038	-23.24	-29.798	PASS
		4958.45	-68.270	-23.24	-45.030	PASS
		7441.72	-67.072	-23.24	-43.832	PASS
		9918.74	-68.797	-23.24	-45.557	PASS
		24636.1	-56.360	-23.24	-33.120	PASS
BLE 2M	0	2400.00	-35.040	-23.37	-11.670	PASS
		4803.02	-67.770	-23.37	-44.400	PASS
		7207.00	-66.484	-23.37	-43.114	PASS
		9609.74	-67.279	-23.37	-43.909	PASS
		24566.8	-56.509	-23.37	-33.139	PASS
	19	4878.55	-67.935	-24.55	-43.385	PASS
		7318.74	-66.797	-24.55	-42.247	PASS
		9758.94	-69.096	-24.55	-44.546	PASS
		24624.8	-56.354	-24.55	-31.804	PASS
	39	2483.50	-53.516	-24.14	-29.376	PASS
		4959.08	-66.867	-24.14	-42.727	PASS
		7439.22	-68.448	-24.14	-44.308	PASS
		9918.74	-69.525	-24.14	-45.385	PASS
		24682.9	-56.442	-24.14	-32.302	PASS

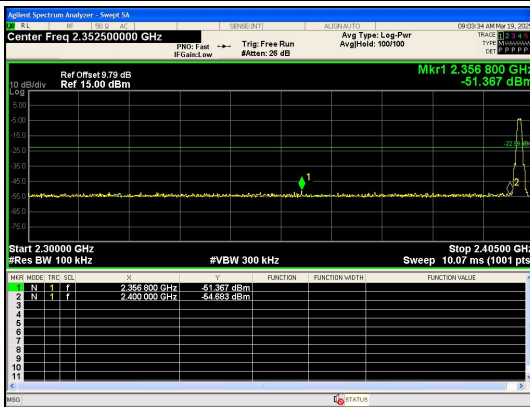
Test Graphs



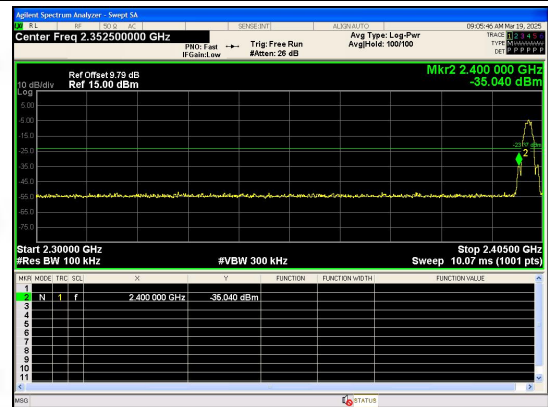
In-Band Reference Level
BLE 1M_Channel 0



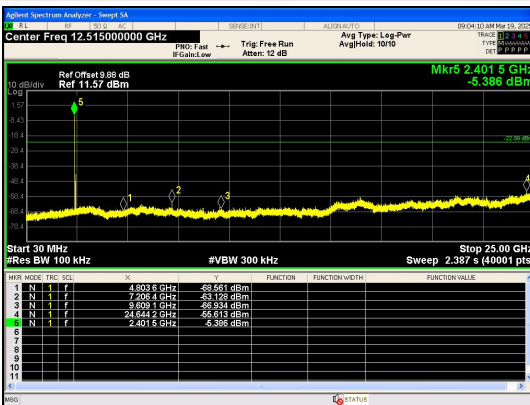
In-Band Reference Level
BLE 2M_Channel 0



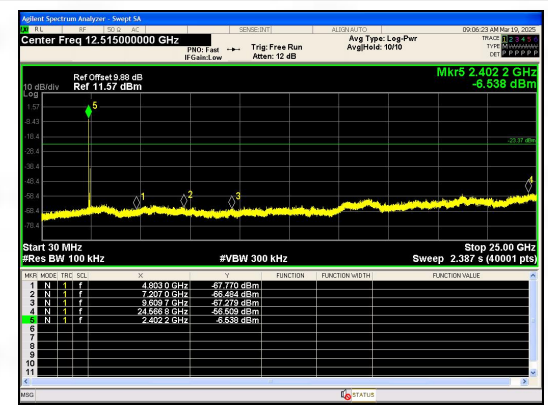
Out Of Band Emission
BLE 1M_Channel 0



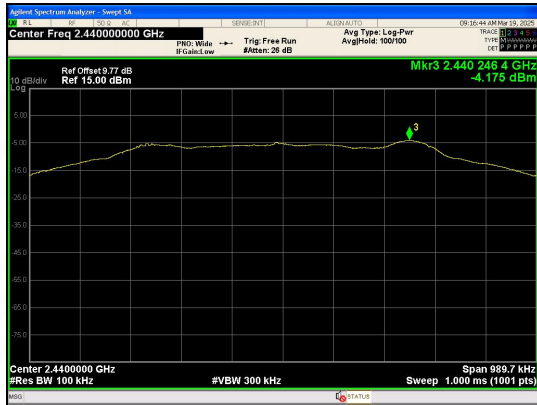
Out Of Band Emission
BLE 2M_Channel 0



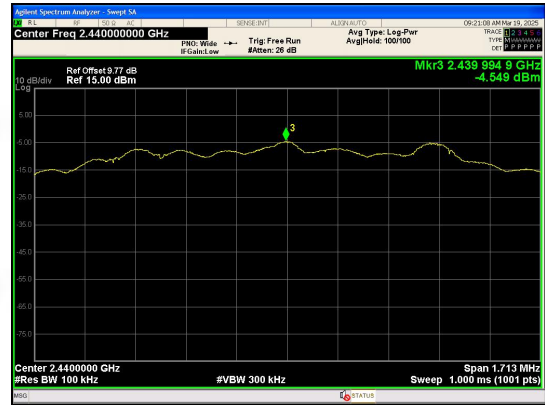
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 0



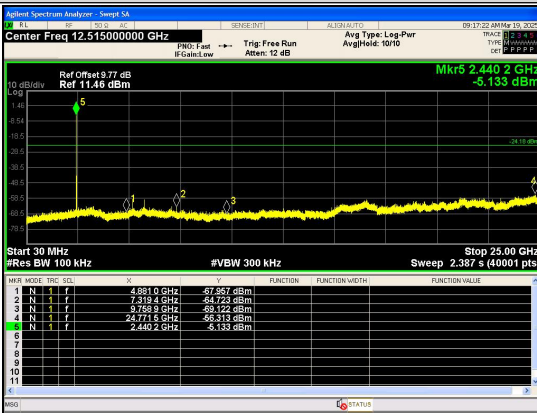
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 0



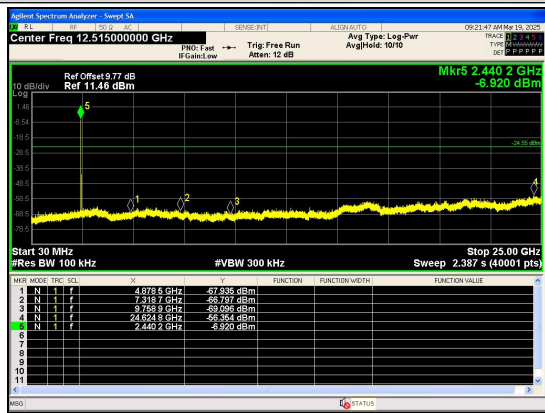
In-Band Reference Level
BLE 1M_Channel 19



In-Band Reference Level
BLE 2M_Channel 19



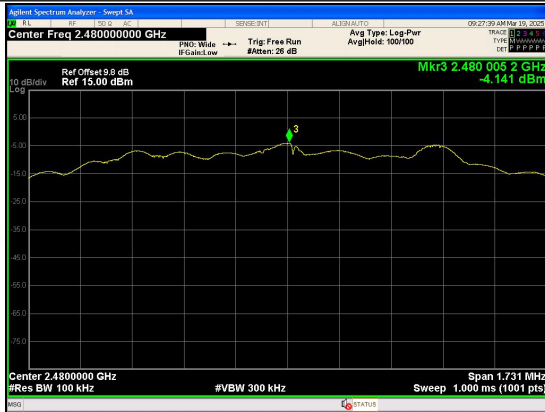
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



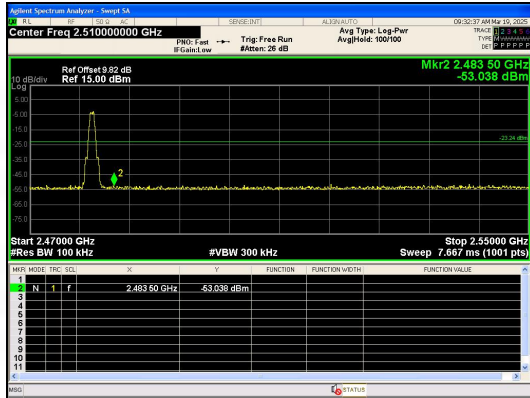
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 19



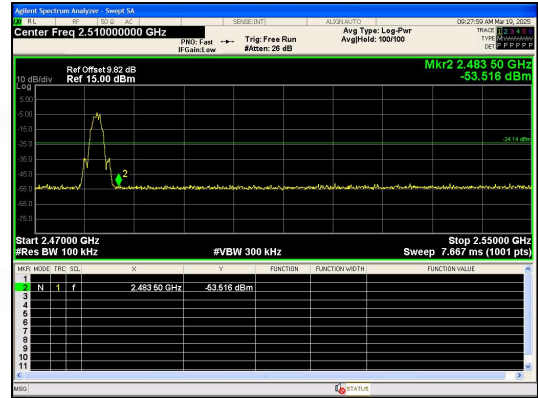
In-Band Reference Level
BLE 1M_Channel 39



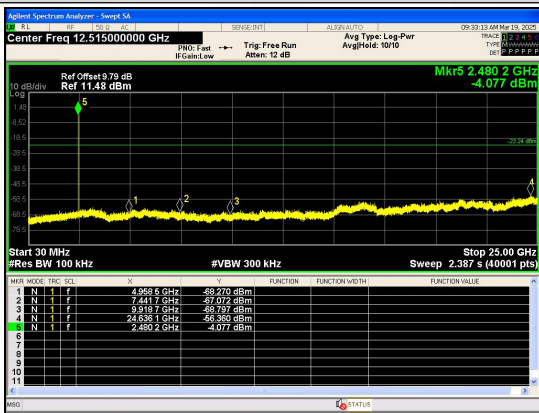
In-Band Reference Level
BLE 2M_Channel 39



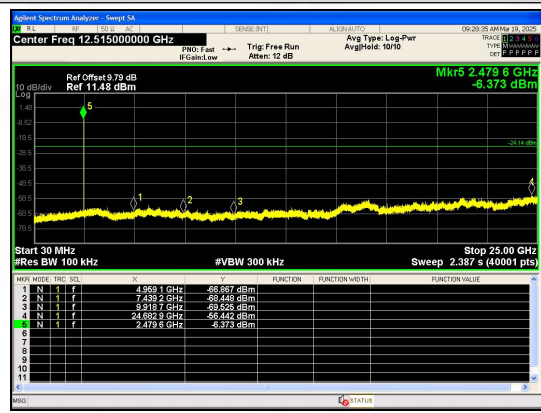
Out Of Band Emission
BLE 1M_Channel 39



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