

FCC ID: 2AT9N-WS-L
IC: 25357-WSL
Test Data

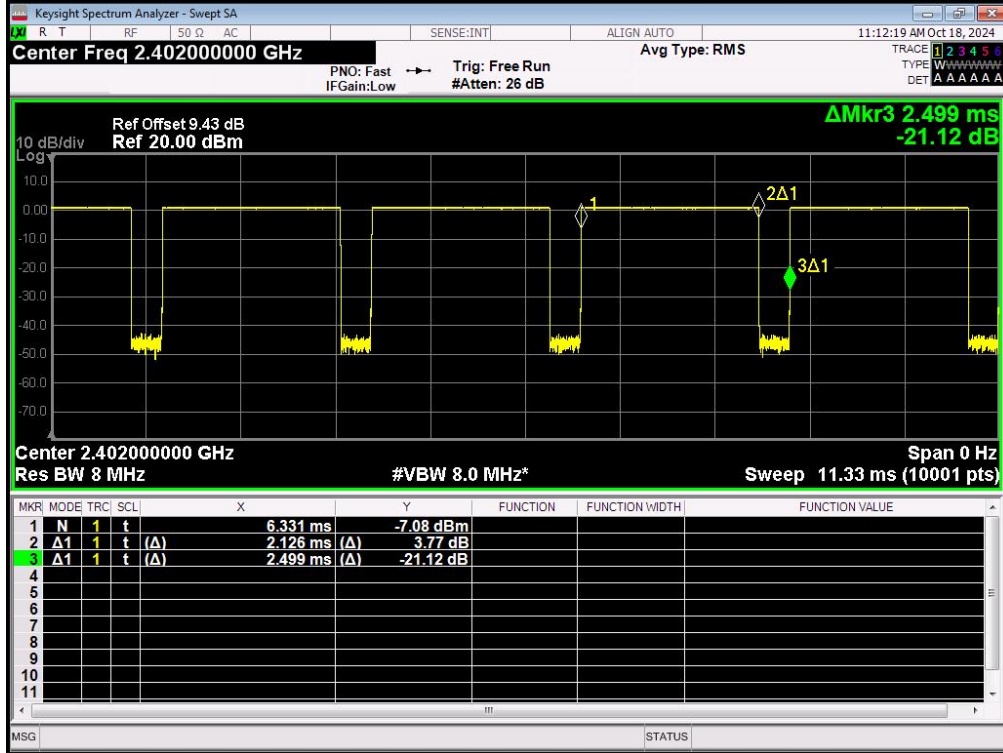
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A.1 DUTY CYCLE

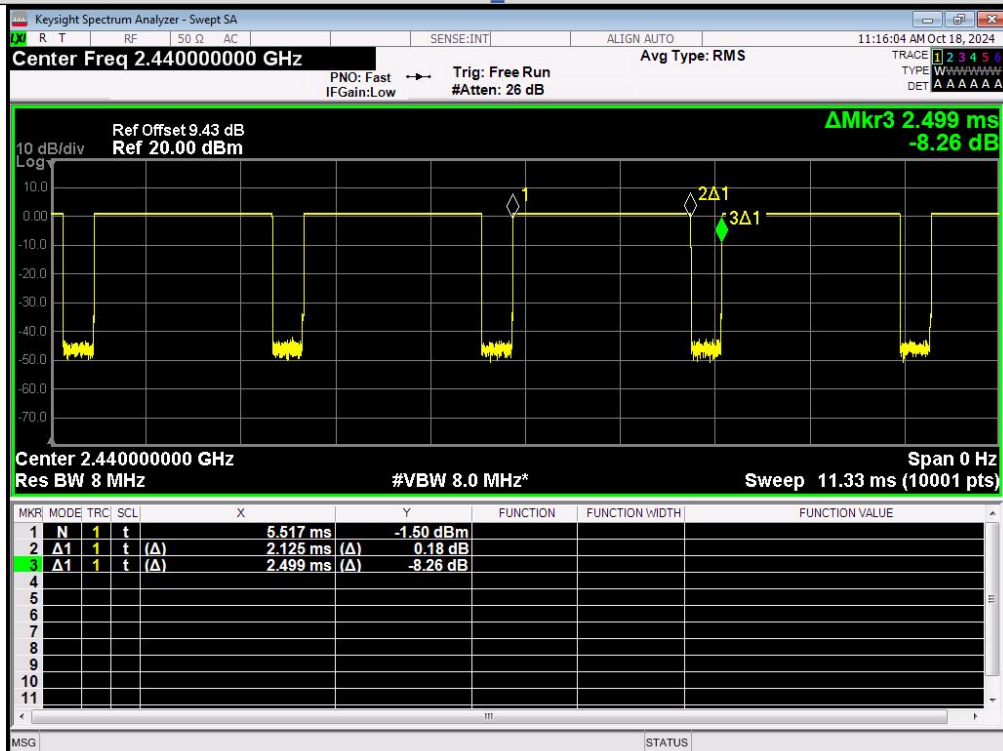
Test Result

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)
BLE 1M	0	2.126	2.499	85.08	0.8508	0.7017
	19	2.125	2.499	85.03	0.8503	0.7043
	39	2.125	2.499	85.03	0.8503	0.7043
BLE 2M	0	1.072	1.250	85.79	0.8579	0.6656
	19	1.073	1.250	85.83	0.8583	0.6636
	39	1.072	1.250	85.83	0.8583	0.6636

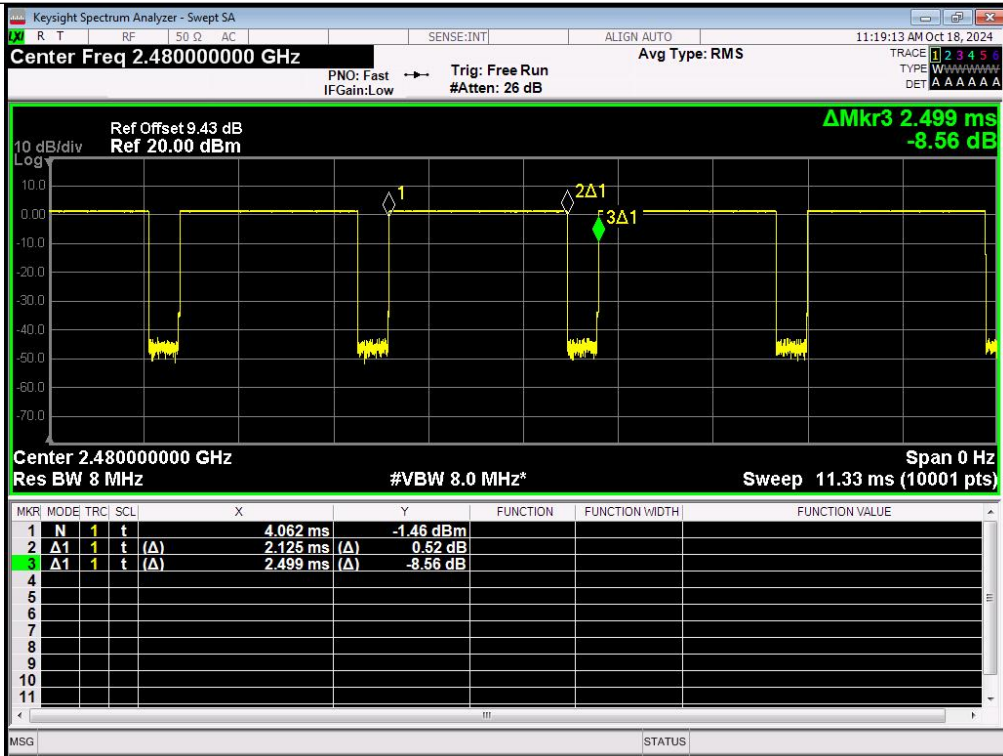
Test Graphs



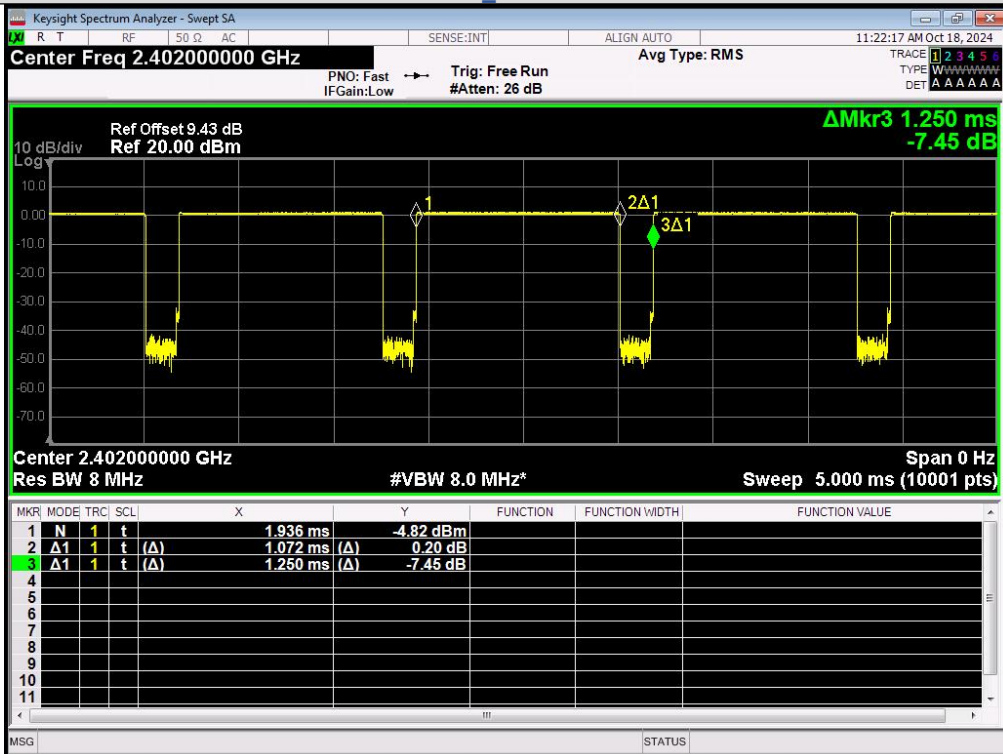
BLE 1M_Channel 0



BLE 1M_Channel 19



BLE 1M_Channel 39



BLE 2M_Channel 0



BLE 2M_Channel 19



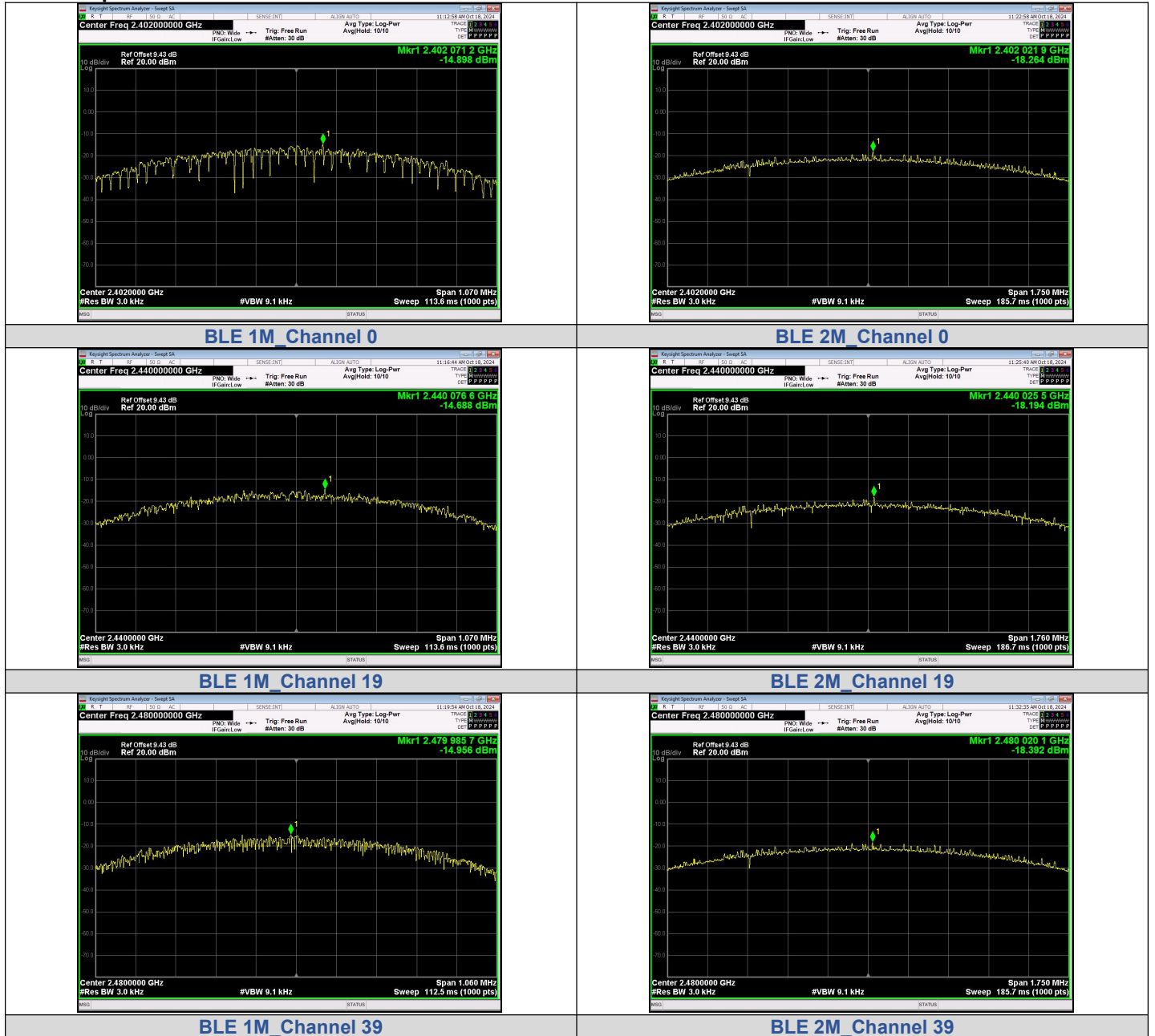
BLE 2M_Channel 39

A.2 POWER SPECTRAL DENSITY

Test Result

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-14.898	≤8	PASS
BLE 1M	19	-14.688	≤8	PASS
BLE 1M	39	-14.956	≤8	PASS
BLE 2M	0	-18.264	≤8	PASS
BLE 2M	19	-18.194	≤8	PASS
BLE 2M	39	-18.392	≤8	PASS

Test Graphs



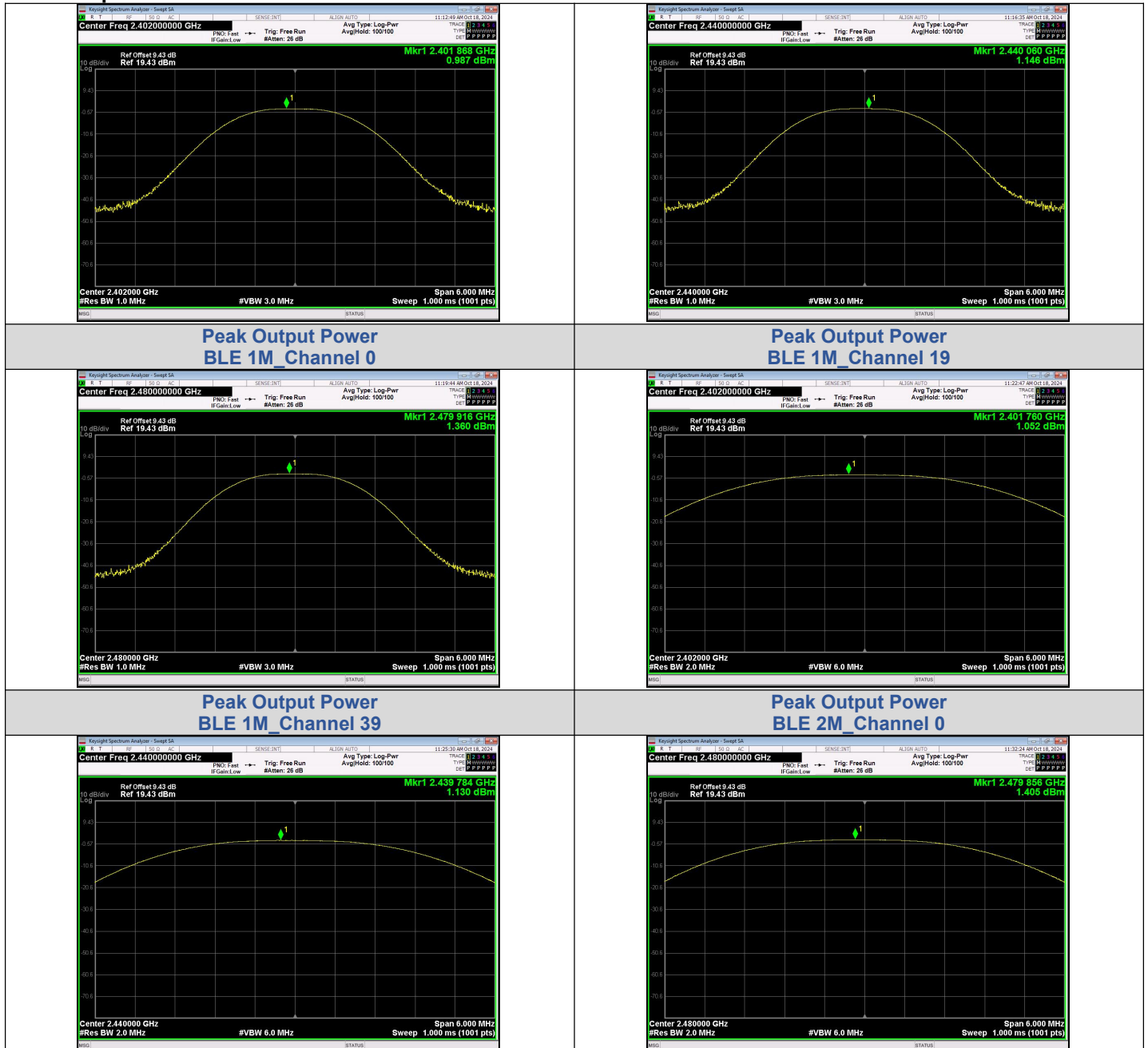
A.3 CONDUCTED PEAK OUTPUT POWER

Test Result

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
BLE 1M	0	0.987	1.26	None	≤30	PASS
	19	1.146	1.3	None	≤30	PASS
	39	1.360	1.37	None	≤30	PASS
BLE 2M	0	1.052	1.27	None	≤30	PASS
	19	1.130	1.3	None	≤30	PASS
	39	1.405	1.38	None	≤30	PASS

Mode	Channel	Peak Output Power (dBm)	Peak Power Limit (dBm)	ISED EIRP (dBm)	ISED EIRP Limit (dBm)	Max. Avg. Power (dBm)	Result
BLE 1M	0	0.987	≤30	3.587	≤36.02	None	PASS
	19	1.146	≤30	3.746	≤36.02	None	PASS
	39	1.360	≤30	3.96	≤36.02	None	PASS
BLE 2M	0	1.052	≤30	3.652	≤36.02	None	PASS
	19	1.130	≤30	3.73	≤36.02	None	PASS
	39	1.405	≤30	4.005	≤36.02	None	PASS

Test Graphs



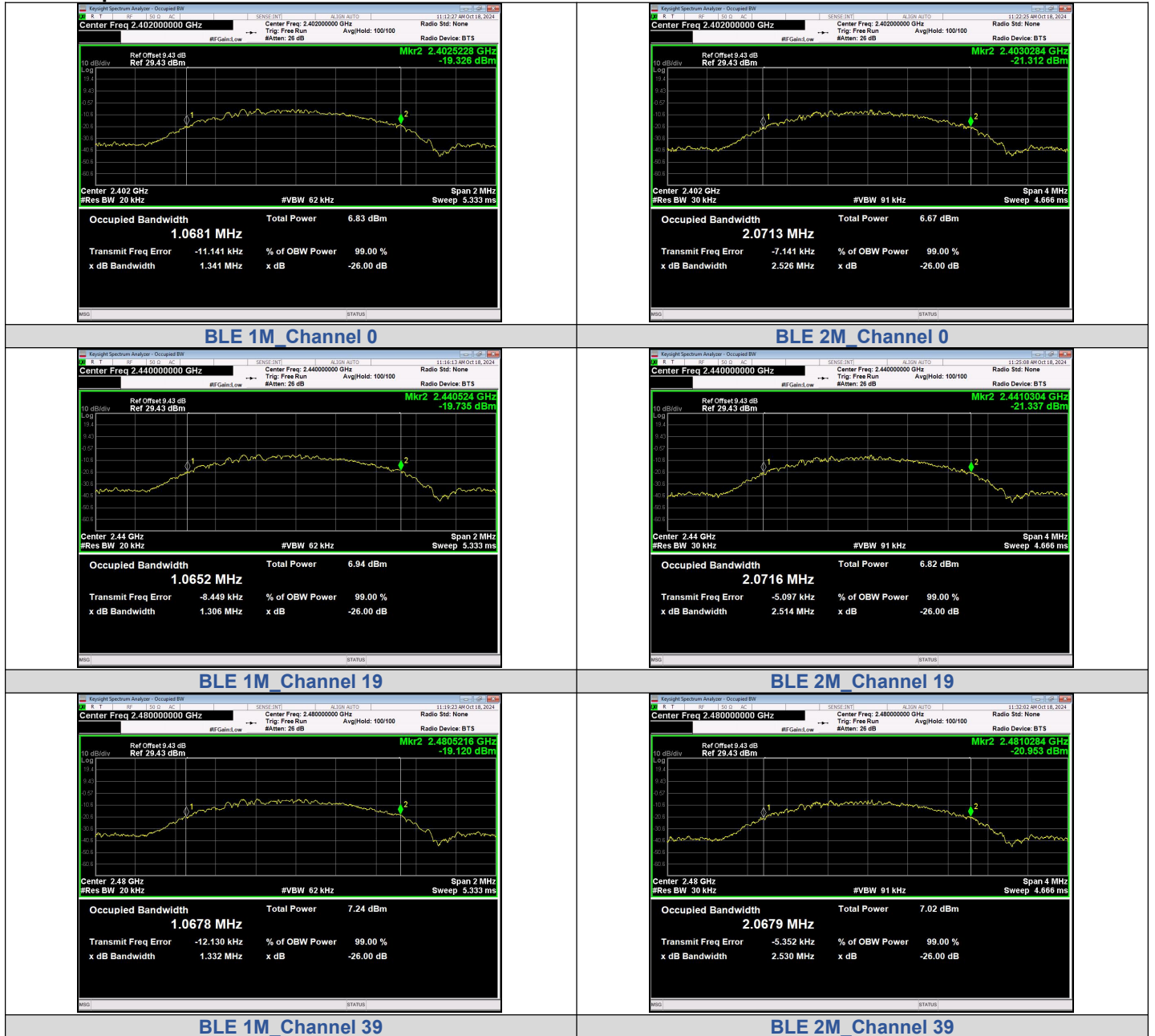
Peak Output Power BLE 2M_Channel 19	Peak Output Power BLE 2M_Channel 39
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A.4 99% BANDWIDTH

Test Result

Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.0681
BLE 1M	19	2440	1.0652
BLE 1M	39	2480	1.0678
BLE 2M	0	2402	2.0713
BLE 2M	19	2440	2.0716
BLE 2M	39	2480	2.0679

Test Graphs

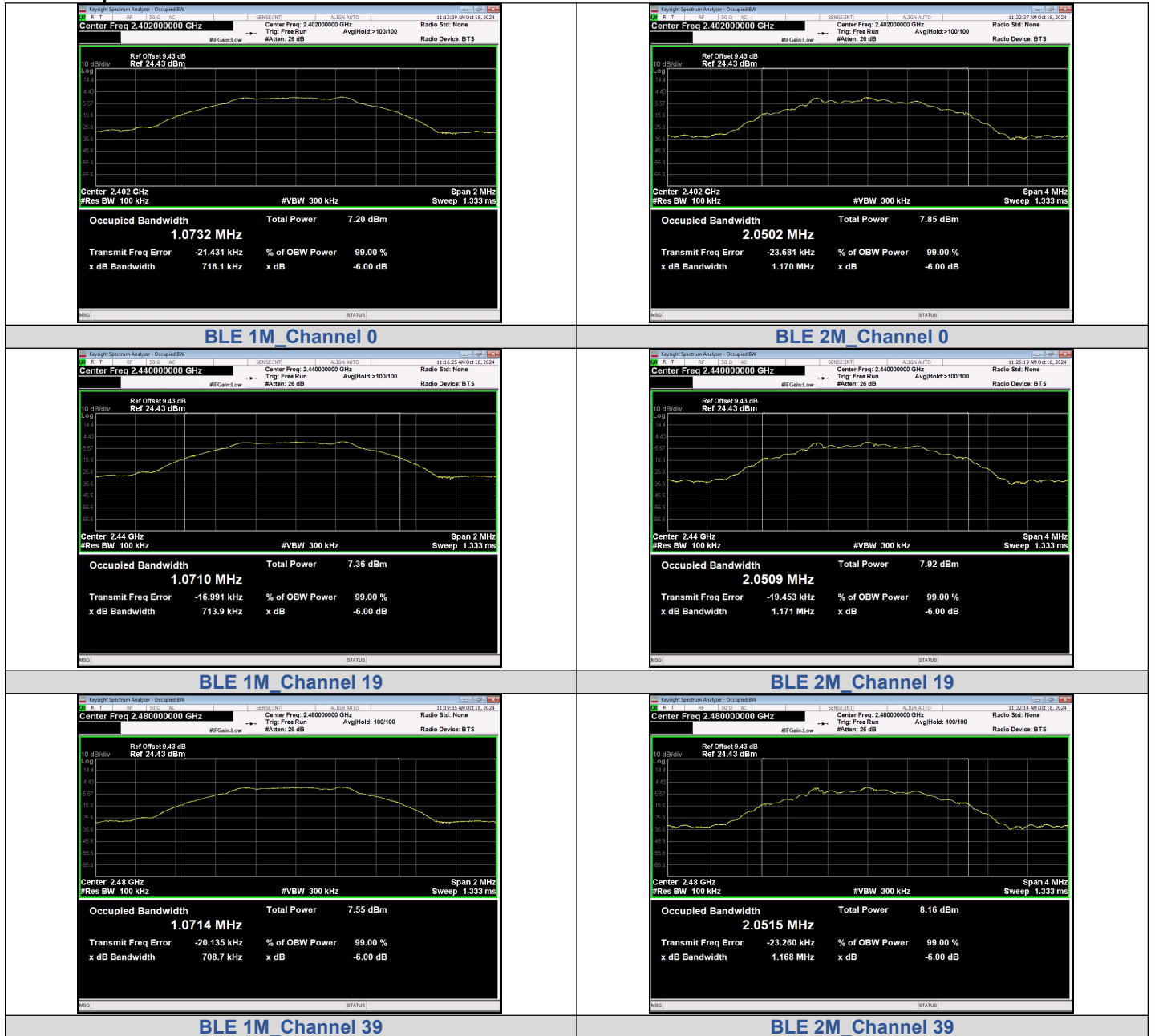


A.5 6DB BANDWIDTH

Test Result

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.7161	≥0.5	PASS
	19	2440	0.7139		PASS
	39	2480	0.7087		PASS
BLE 2M	0	2402	1.170		PASS
	19	2440	1.171		PASS
	39	2480	1.168		PASS

Test Graphs

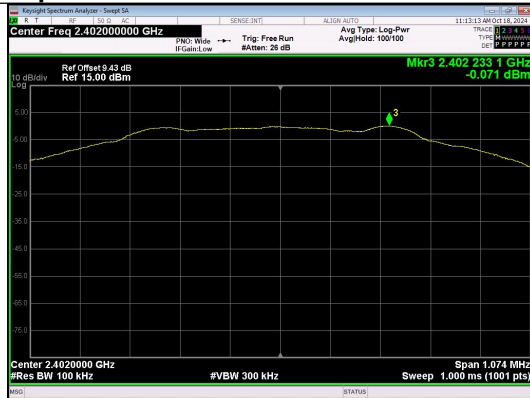


A.6 CONDUCTED OUT OF BAND EMISSION

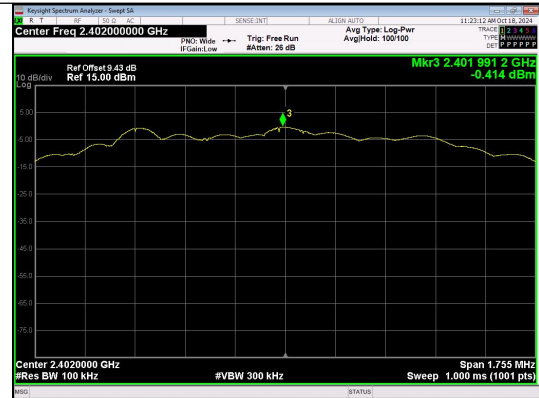
Test Result

Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2400.00	-51.318	-20.07	-31.248	PASS
		21201.3	-53.580	-20.07	-33.510	PASS
	19	21130.2	-52.611	-19.99	-32.621	PASS
		2483.50	-52.920	-19.69	-33.230	PASS
		24948.8	-53.561	-19.69	-33.871	PASS
BLE 2M	0	2400.00	-31.382	-20.41	-10.972	PASS
		21137.7	-53.551	-20.41	-33.141	PASS
	19	21550.9	-53.030	-20.32	-32.710	PASS
		2483.50	-52.094	-20.07	-32.024	PASS
		21579.7	-53.010	-20.07	-32.940	PASS

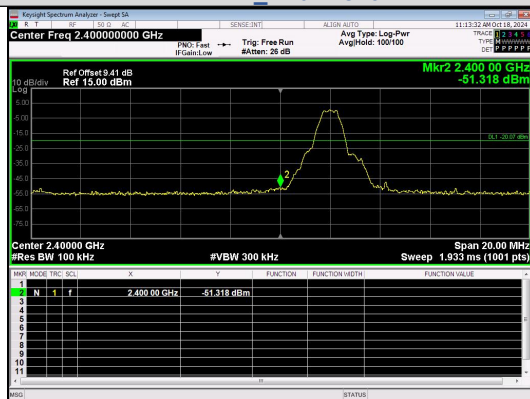
Test Graphs



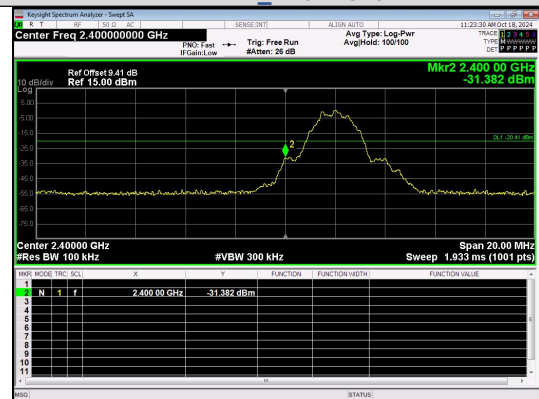
In-Band Reference Level
BLE 1M_Channel 0



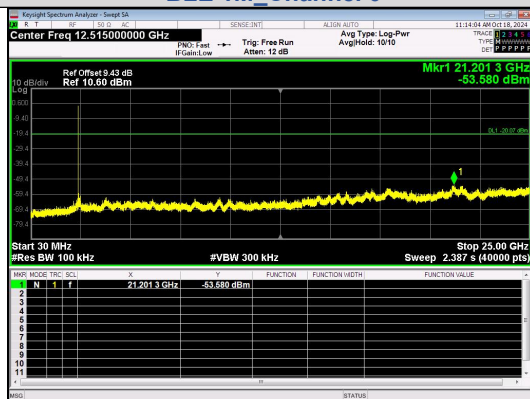
In-Band Reference Level
BLE 2M_Channel 0



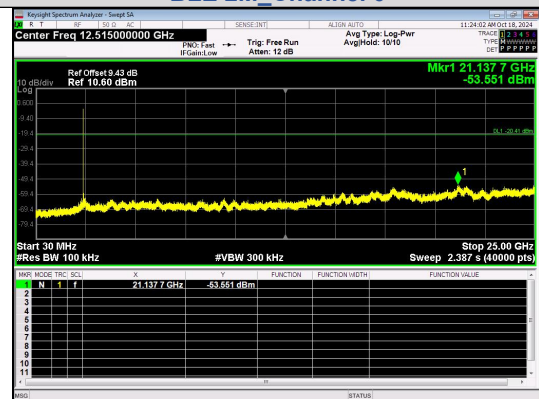
Out Of Band Emission
BLE 1M_Channel 0



Out Of Band Emission
BLE 2M_Channel 0



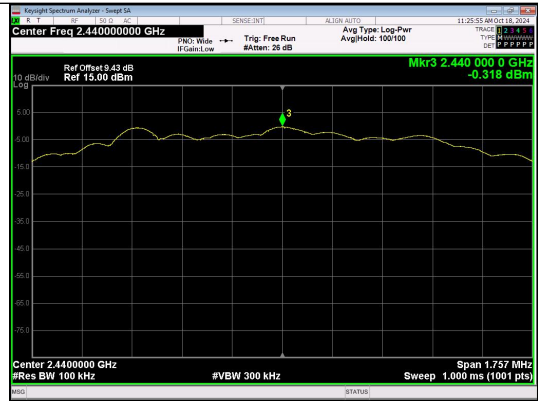
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 0



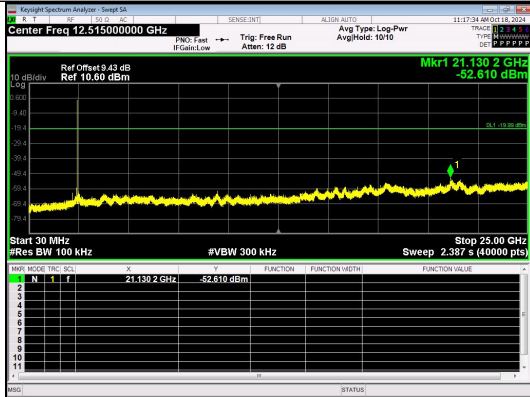
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 0



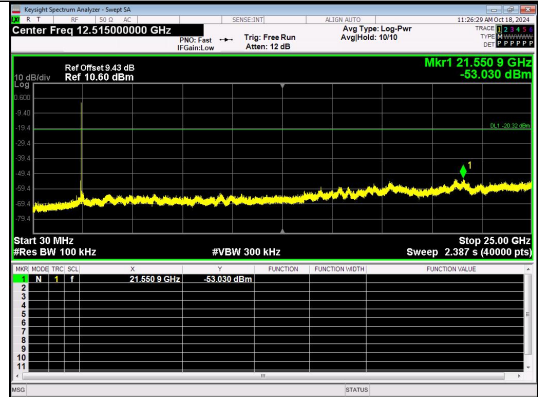
In-Band Reference Level
BLE 1M_Channel 19



In-Band Reference Level
BLE 2M_Channel 19



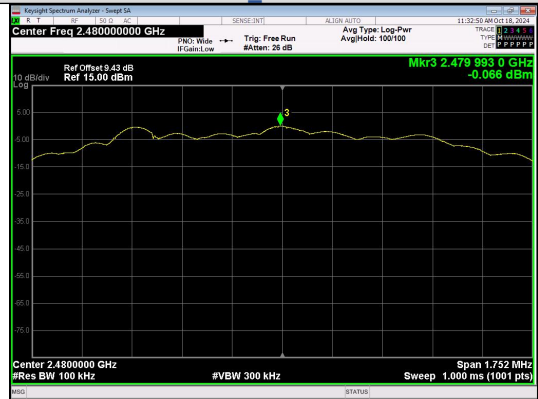
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



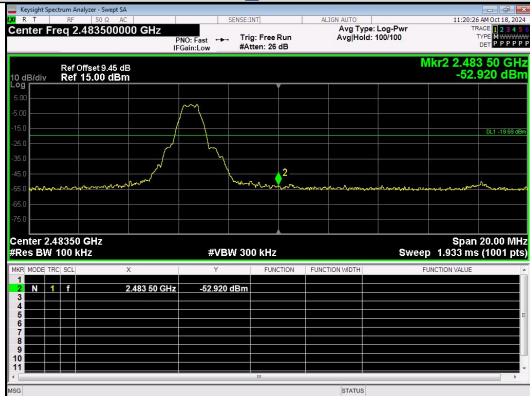
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 19



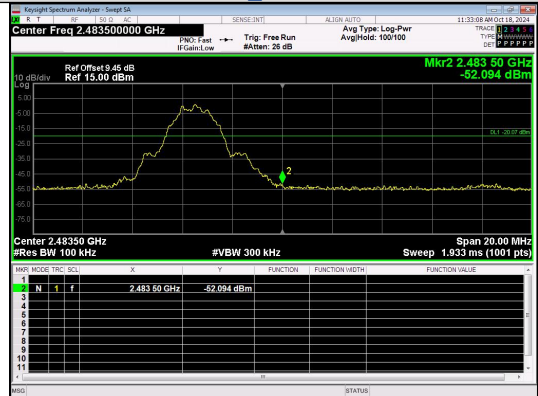
In-Band Reference Level
BLE 1M_Channel 39



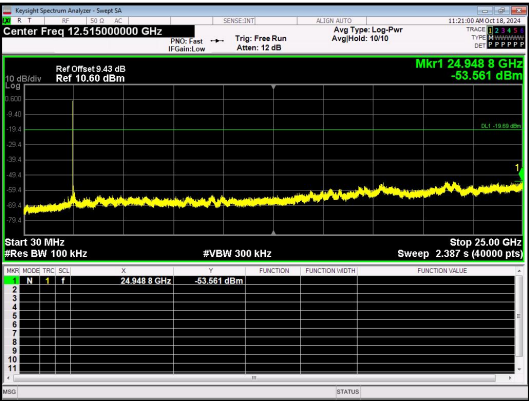
In-Band Reference Level
BLE 2M_Channel 39



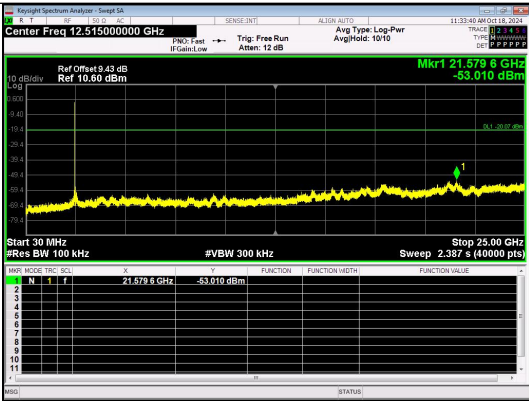
Out Of Band Emission
BLE 1M_Channel 39



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