Appendix A

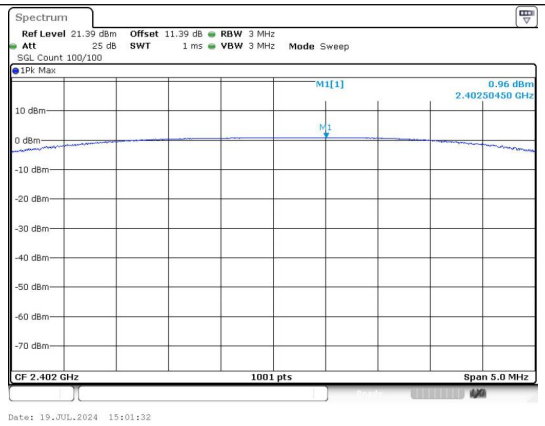
Report No.:	CISRR240618134
FCC ID:	2BG6I-MO-P20
Product Name:	MoTag
Model No.:	Mo-P20
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

Conducted Output Power

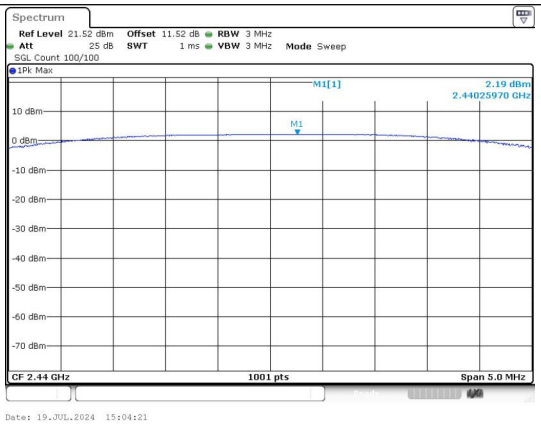
Test Result

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	0.96	1.25	≤30	PASS
	19	2.19	1.66	≤30	PASS
	39	2.84	1.92	≤30	PASS
BLE 2M	0	1.05	1.27	≤30	PASS
	19	1.38	1.37	≤30	PASS
	39	2.01	1.59	≤30	PASS

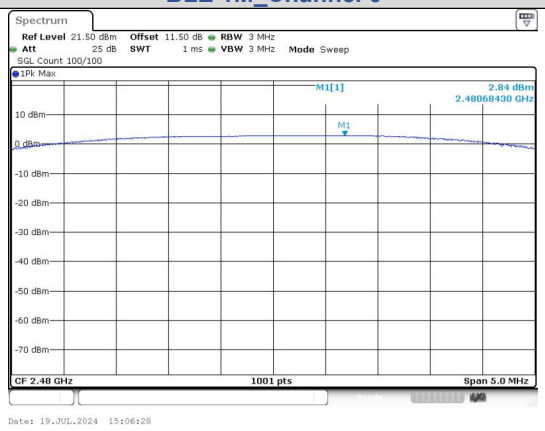
Test Graphs



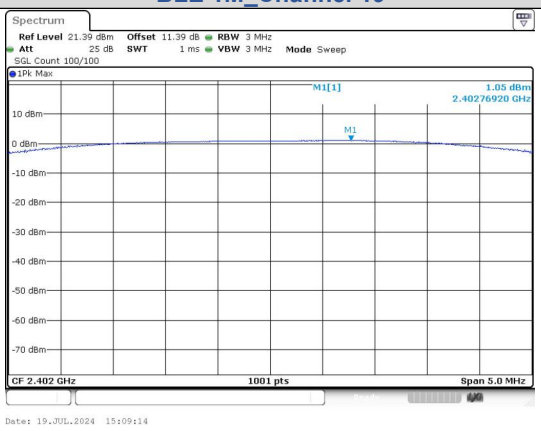
Peak Output Power
BLE 1M_Channel 0



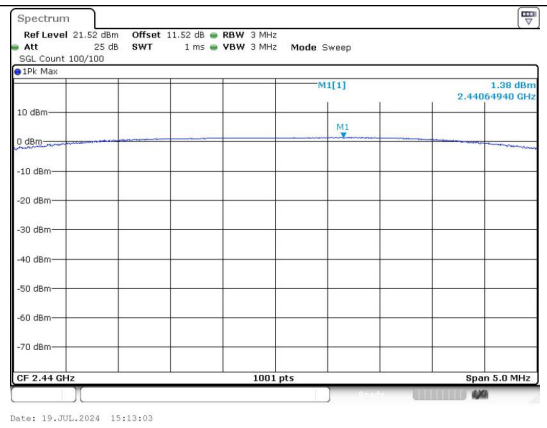
Peak Output Power
BLE 1M_Channel 19



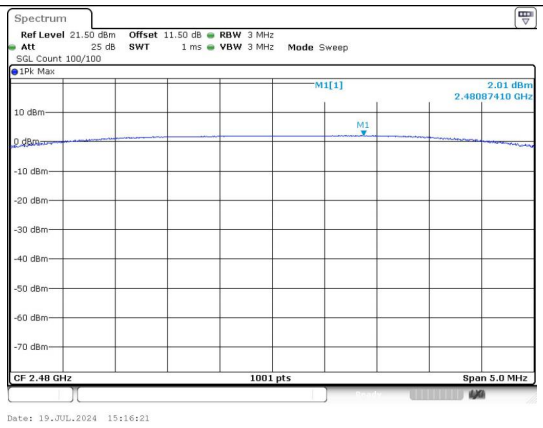
Peak Output Power
BLE 1M_Channel 39



Peak Output Power
BLE 2M_Channel 0



Peak Output Power
BLE 2M_Channel 19



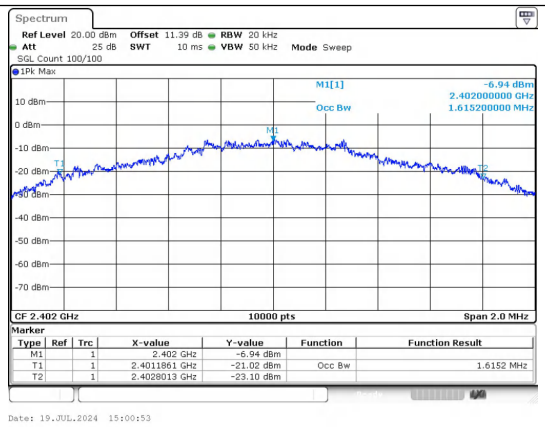
Peak Output Power
BLE 2M_Channel 39

99% Bandwidth

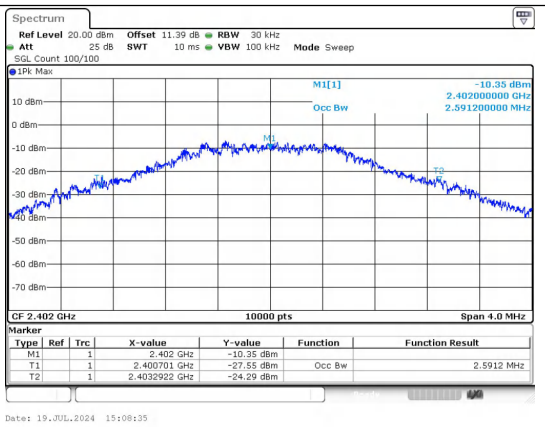
Test Result

Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.6152
BLE 1M	19	2440	1.6434
BLE 1M	39	2480	1.6530
BLE 2M	0	2402	2.5912
BLE 2M	19	2440	2.6604
BLE 2M	39	2480	2.6564

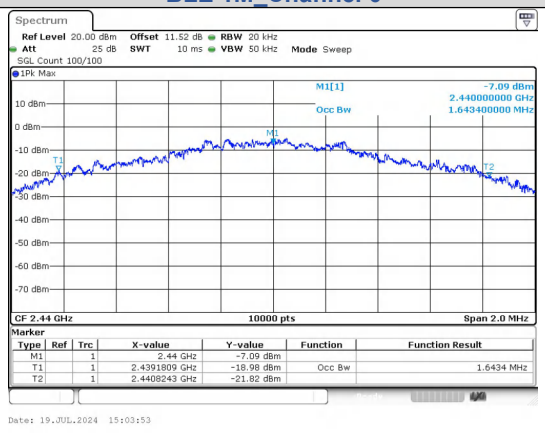
Test Graphs



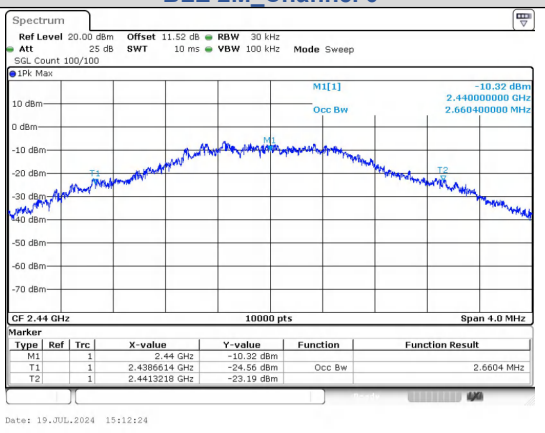
BLE 1M_Channel 0



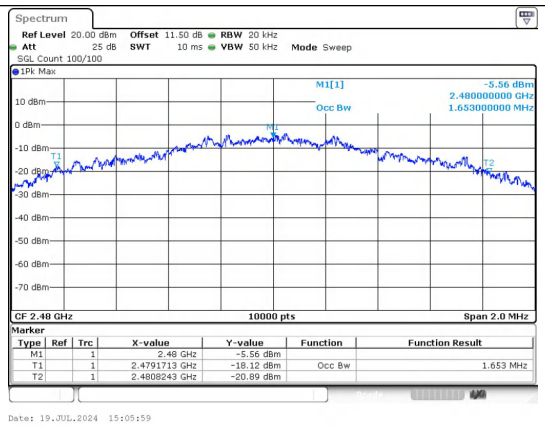
BLE 2M_Channel 0



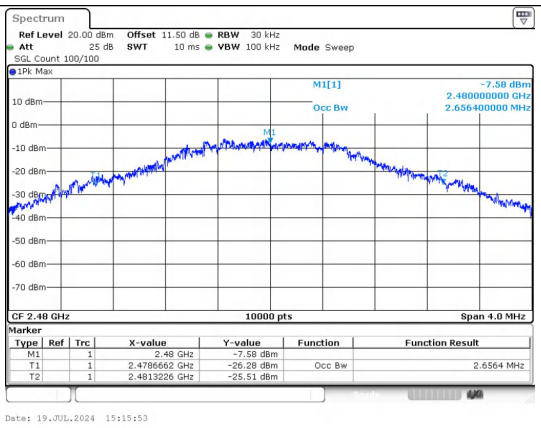
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



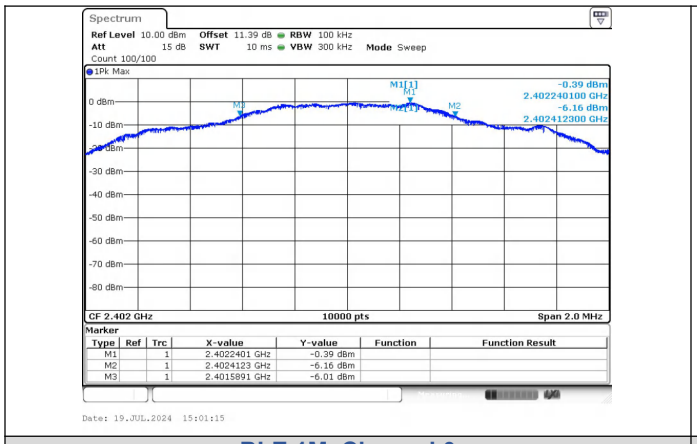
BLE 2M_Channel 39

6dB Bandwidth

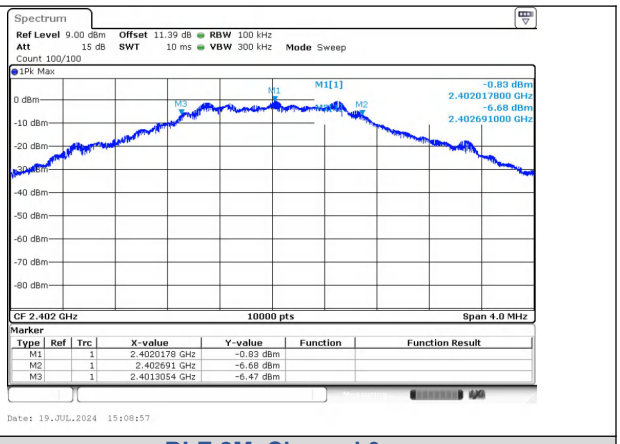
Test Result

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.8200	≥0.5	PASS
	19	2440	0.8500		PASS
	39	2480	0.8400		PASS
BLE 2M	0	2402	1.380		PASS
	19	2440	1.420		PASS
	39	2480	1.390		PASS

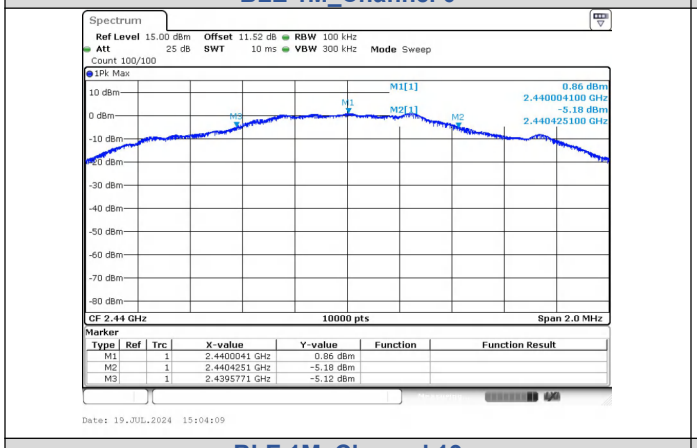
Test Graphs



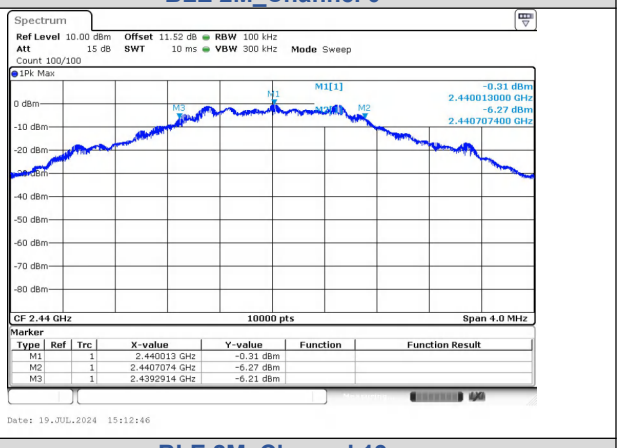
BLE 1M_Channel 0



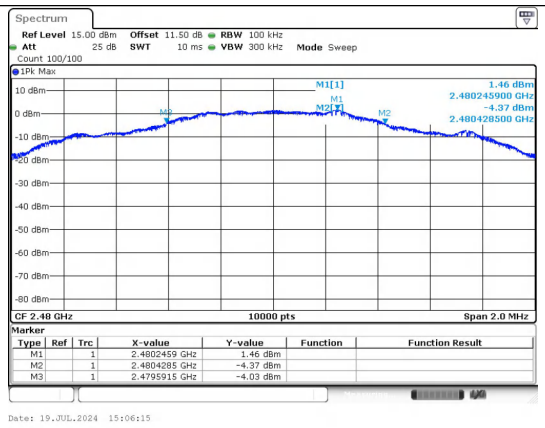
BLE 2M_Channel 0



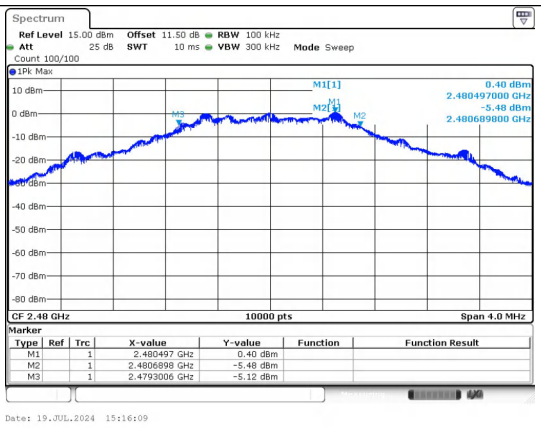
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



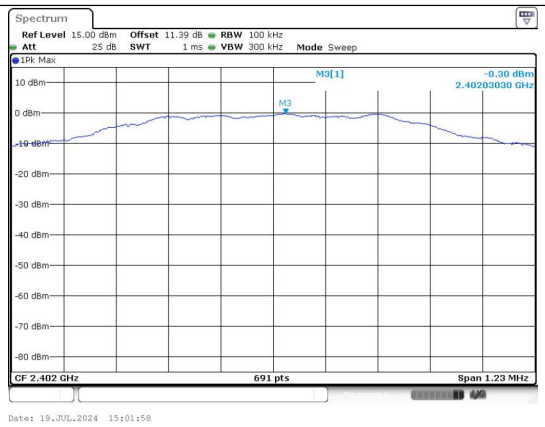
BLE 2M_Channel 39

Conducted Out Of Band Emission

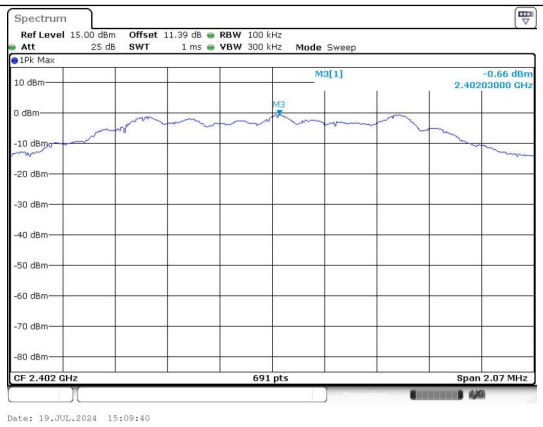
Test Result

Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2400.00	-48.245	-20.3	-27.945	PASS
		9608.08	-48.916	-20.3	-28.616	PASS
	19	9761.23	-49.271	-19.19	-30.081	PASS
	39	2483.50	-48.931	-18.55	-30.381	PASS
		9920.20	-46.587	-18.55	-28.037	PASS
BLE 2M	0	2400.00	-30.121	-20.66	-9.461	PASS
		9608.08	-48.884	-20.66	-28.224	PASS
	19	9760.39	-45.845	-20.22	-25.625	PASS
	39	2483.50	-49.226	-19.65	-29.576	PASS
		9921.03	-47.234	-19.65	-27.584	PASS

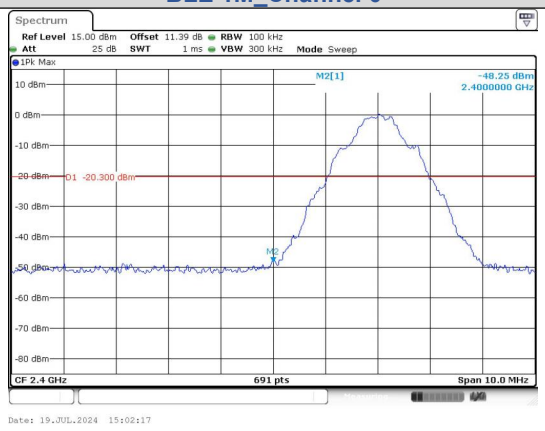
Test Graphs



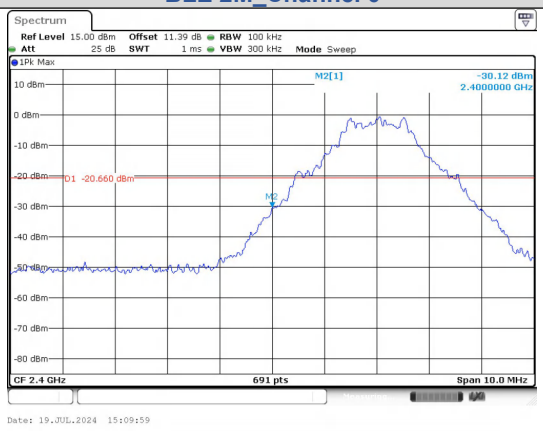
In-Band Reference Level
BLE 1M_Channel 0



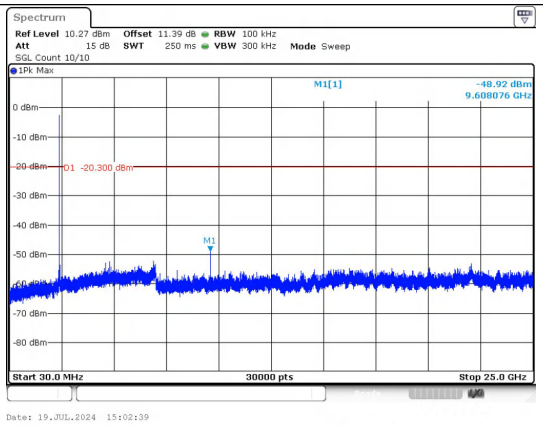
In-Band Reference Level
BLE 2M_Channel 0



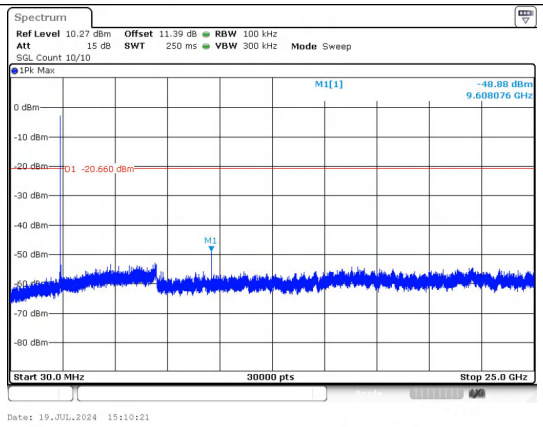
Out Of Band Emission
BLE 1M_Channel 0



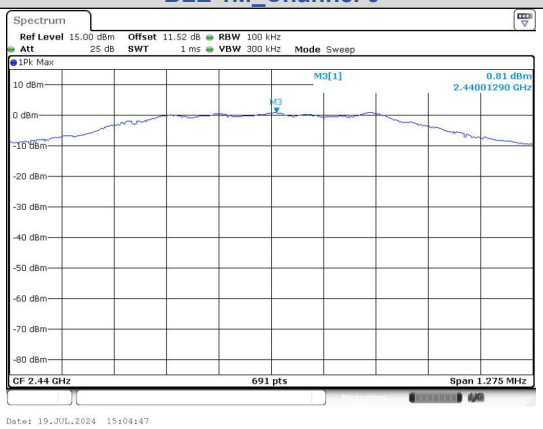
Out Of Band Emission
BLE 2M_Channel 0



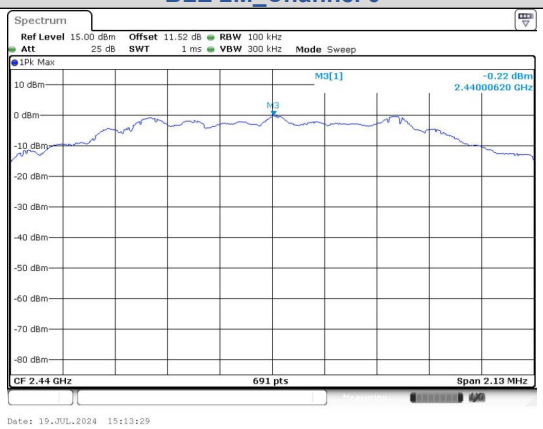
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 0



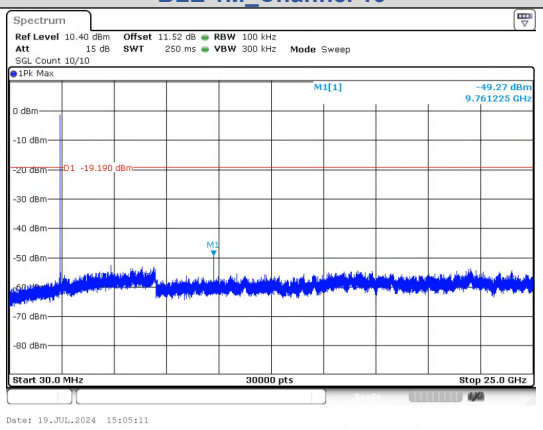
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 0



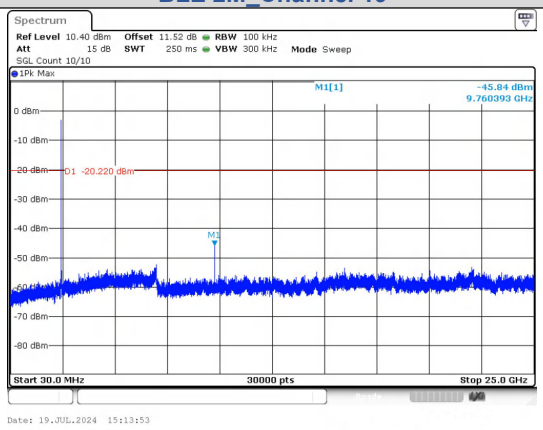
In-Band Reference Level
BLE 1M_Channel 19



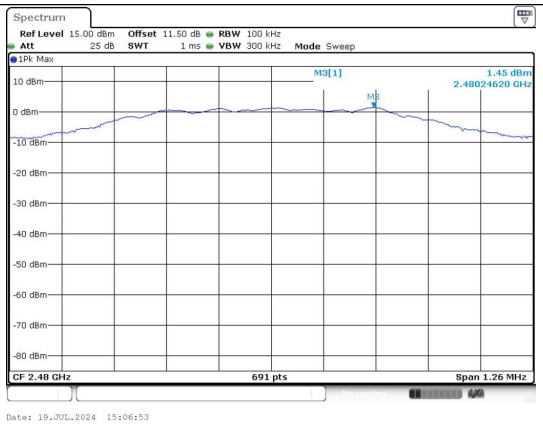
In-Band Reference Level
BLE 2M_Channel 19



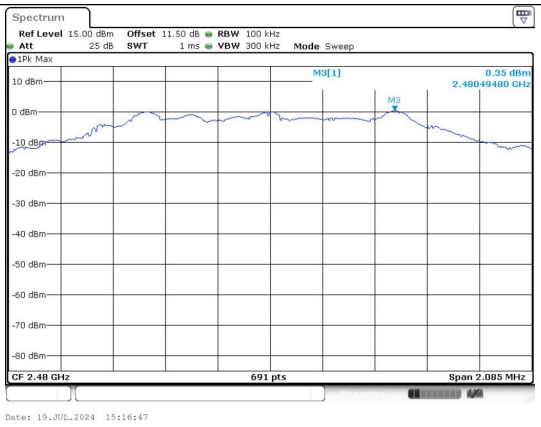
30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



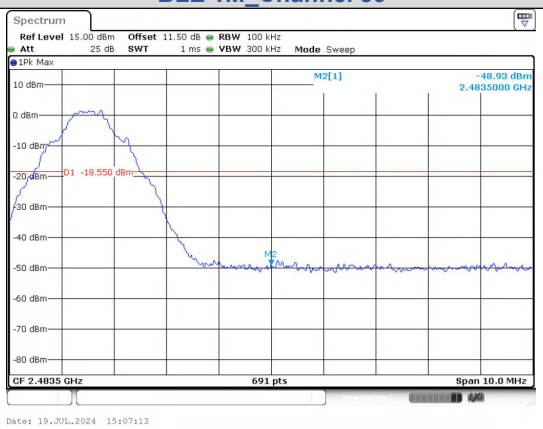
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 19



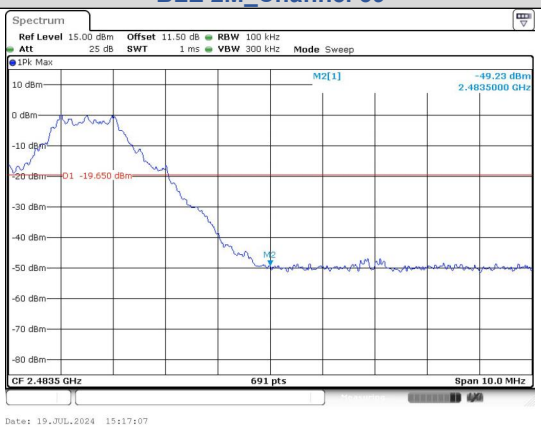
In-Band Reference Level
BLE 1M_Channel 39



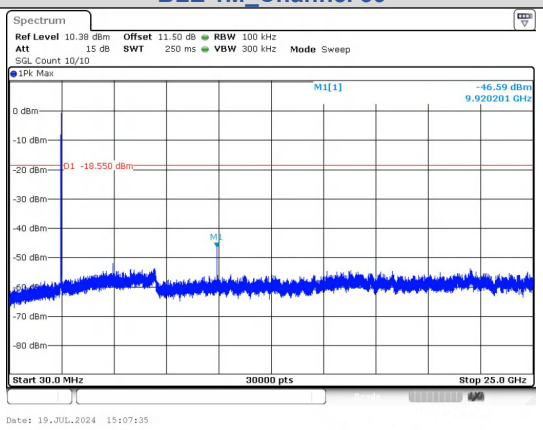
In-Band Reference Level
BLE 2M_Channel 39



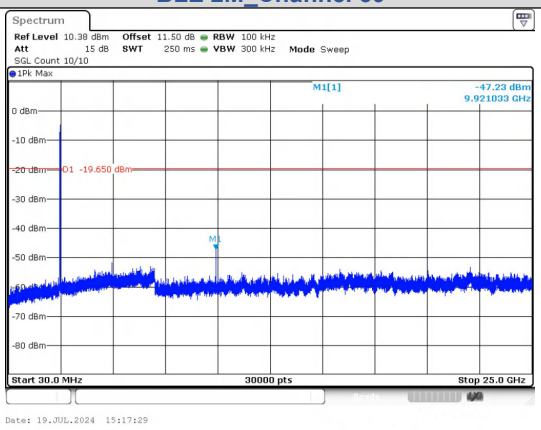
Out Of Band Emission
BLE 1M_Channel 39



Out Of Band Emission
BLE 2M_Channel 39



30.0 MHz - 25000.0 MHz
BLE 1M_Channel 39



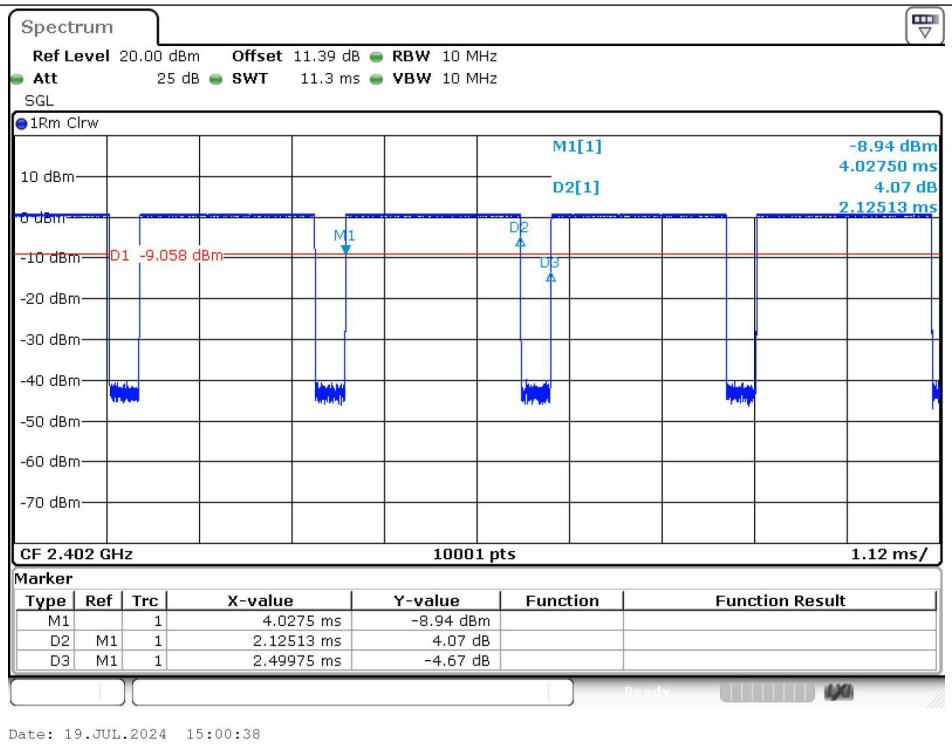
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 39

Duty Cycle

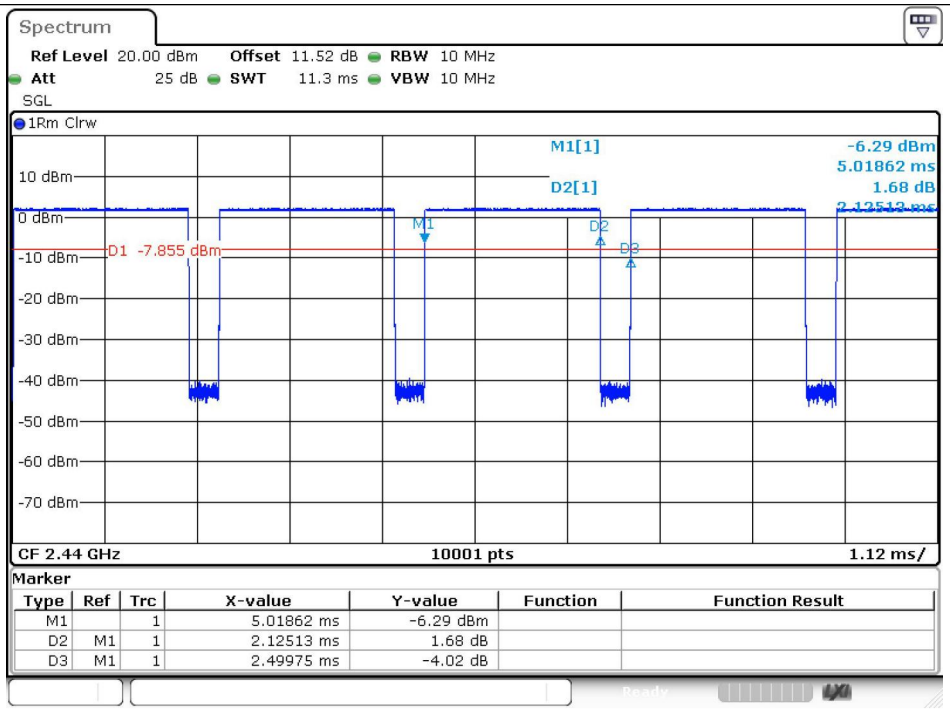
Test Result

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	2.125	2.500	85.01	0.8501	0.7053	0.47
	19	2.125	2.500	85.01	0.8501	0.7053	0.47
	39	2.125	2.500	85.01	0.8501	0.7053	0.47
BLE 2M	0	1.072	2.499	42.91	0.4291	3.6744	0.93
	19	1.072	2.499	42.91	0.4291	3.6744	0.93
	39	1.073	2.500	42.93	0.4293	3.6724	0.93

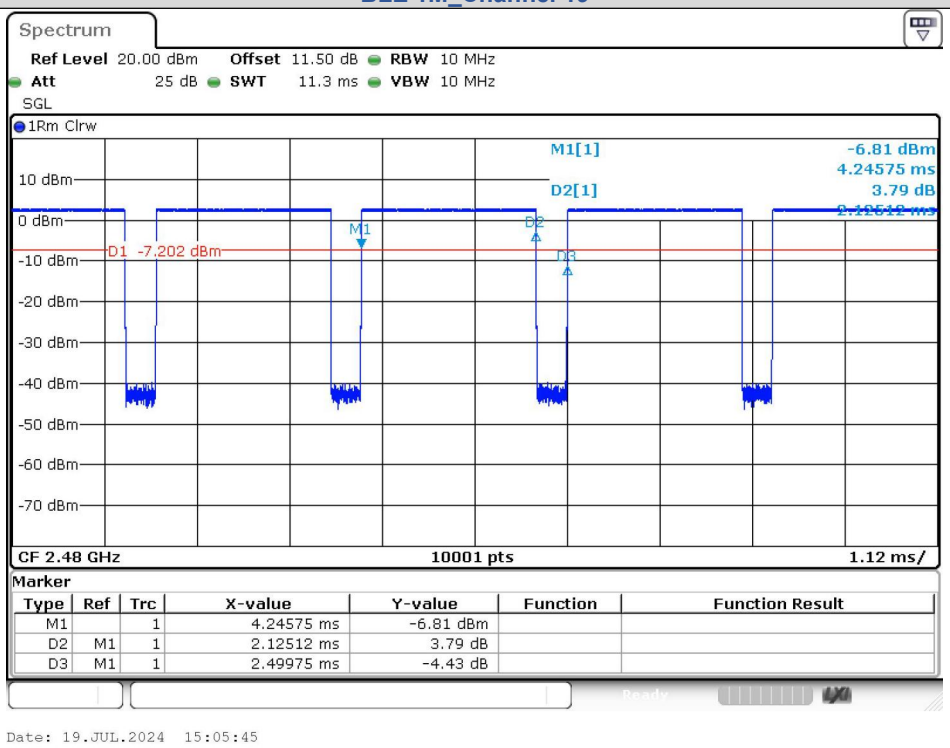
Test Graphs



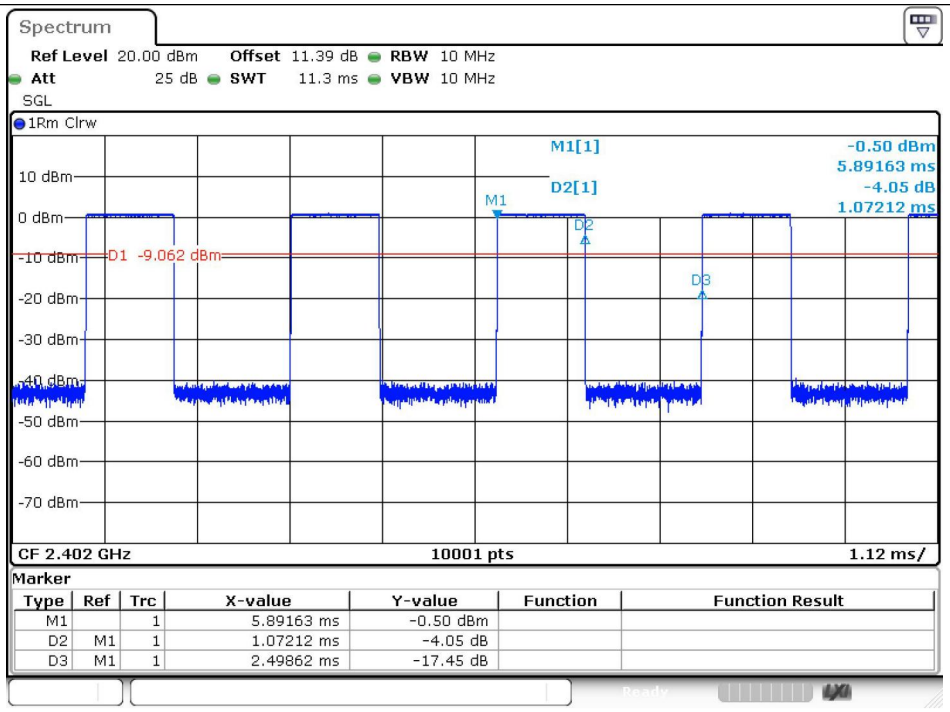
BLE 1M_Channel 0



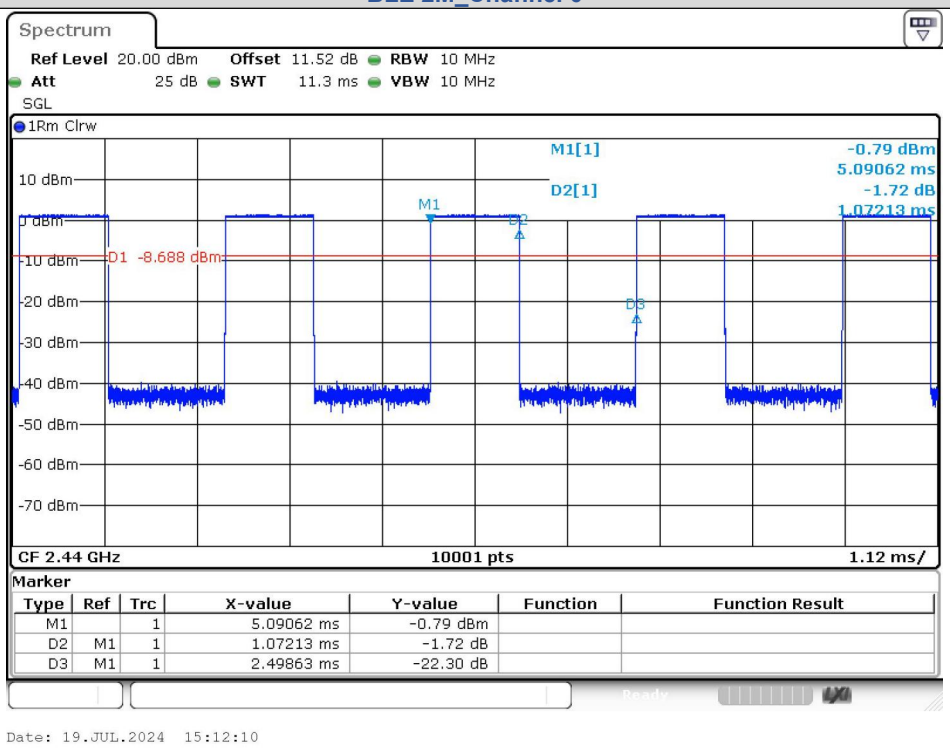
BLE 1M_Channel 19



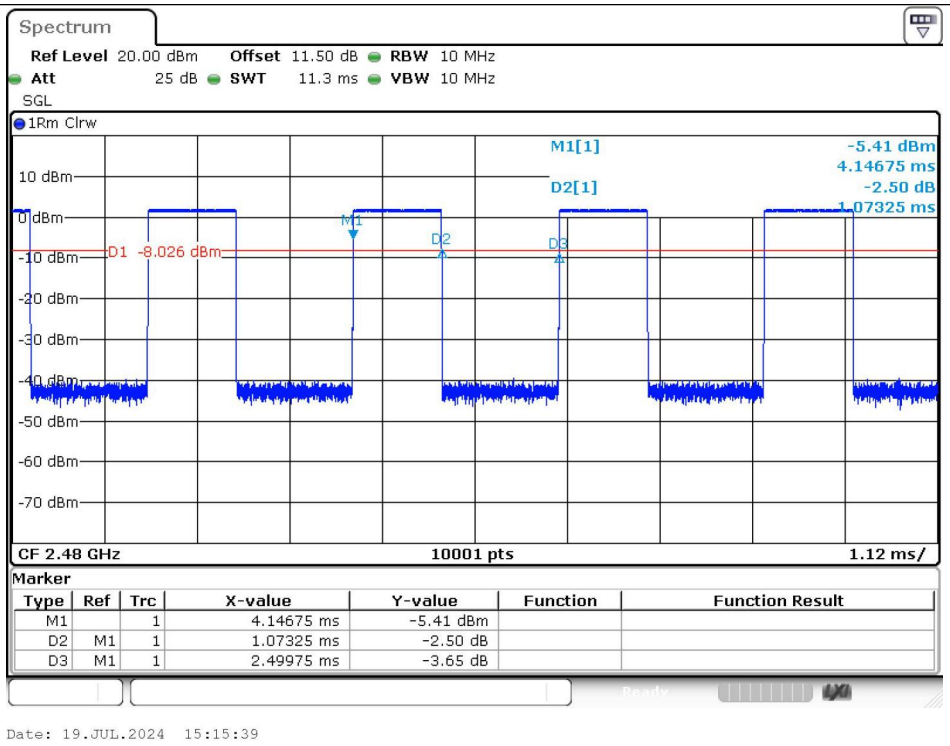
BLE 1M_Channel 39



BLE 2M_Channel 0



BLE 2M_Channel 19



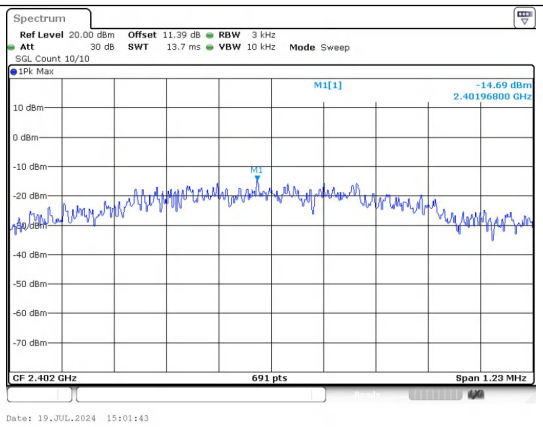
BLE 2M_Channel 39

Power Spectral Density

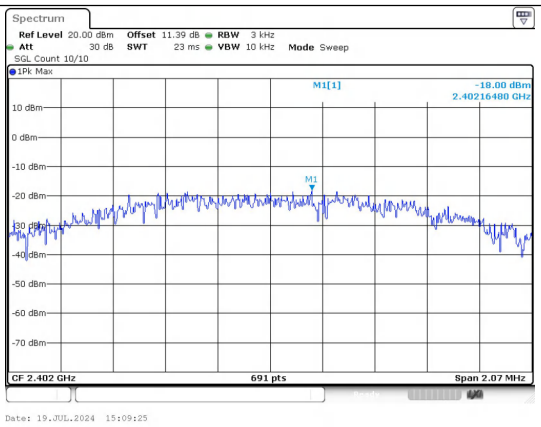
Test Result

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-14.689	≤8	PASS
BLE 1M	19	-13.815	≤8	PASS
BLE 1M	39	-13.773	≤8	PASS
BLE 2M	0	-18.004	≤8	PASS
BLE 2M	19	-17.693	≤8	PASS
BLE 2M	39	-16.866	≤8	PASS

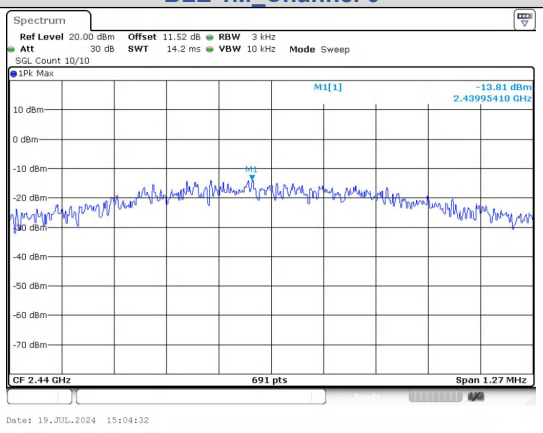
Test Graphs



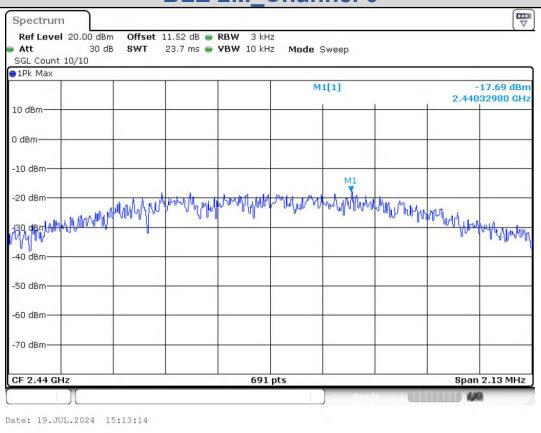
BLE 1M_Channel 0



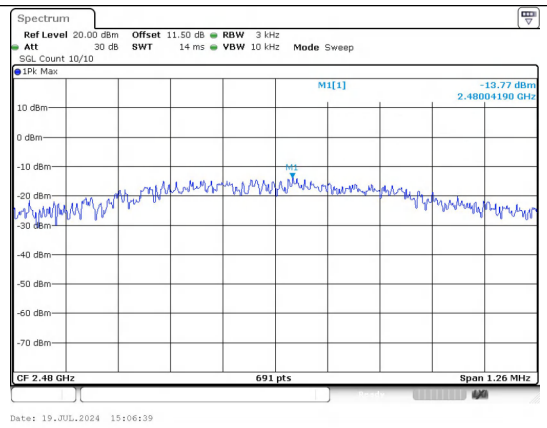
BLE 2M_Channel 0



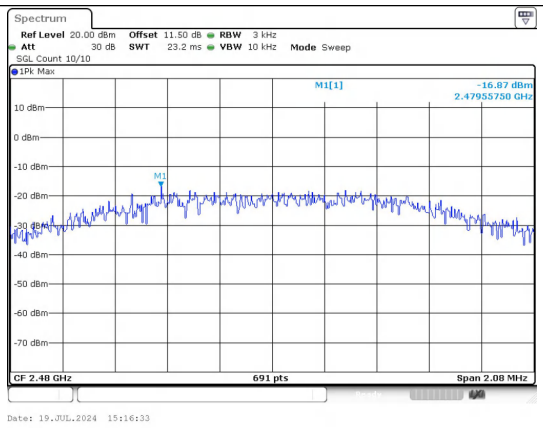
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



BLE 2M_Channel 39