Appendix

Report No.:	CISRR241203024
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

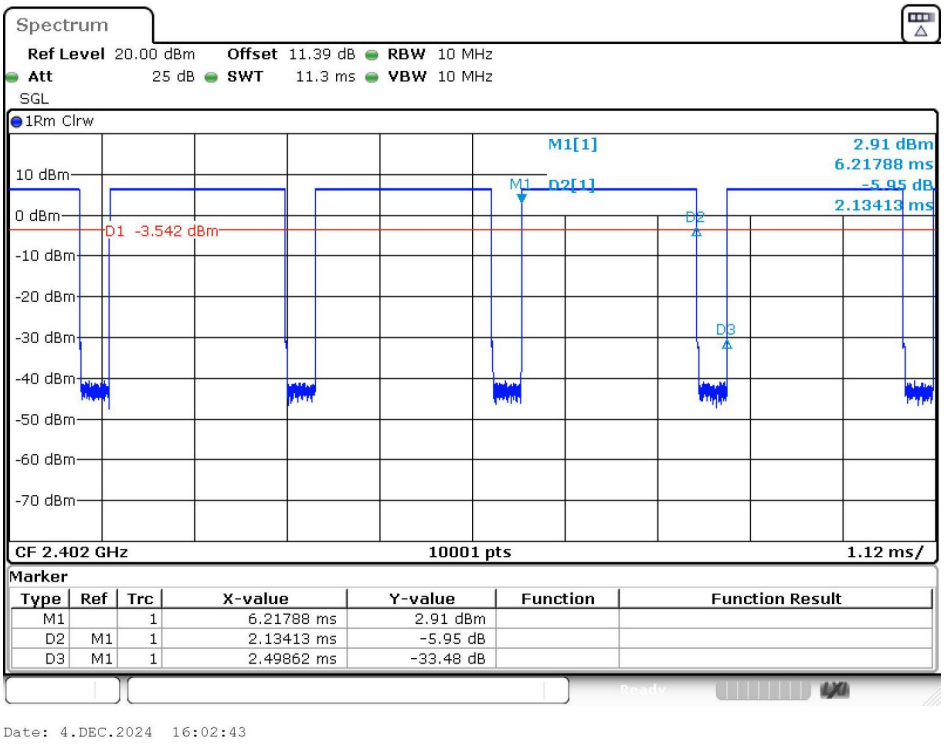
1) Duty Cycle

Test Result

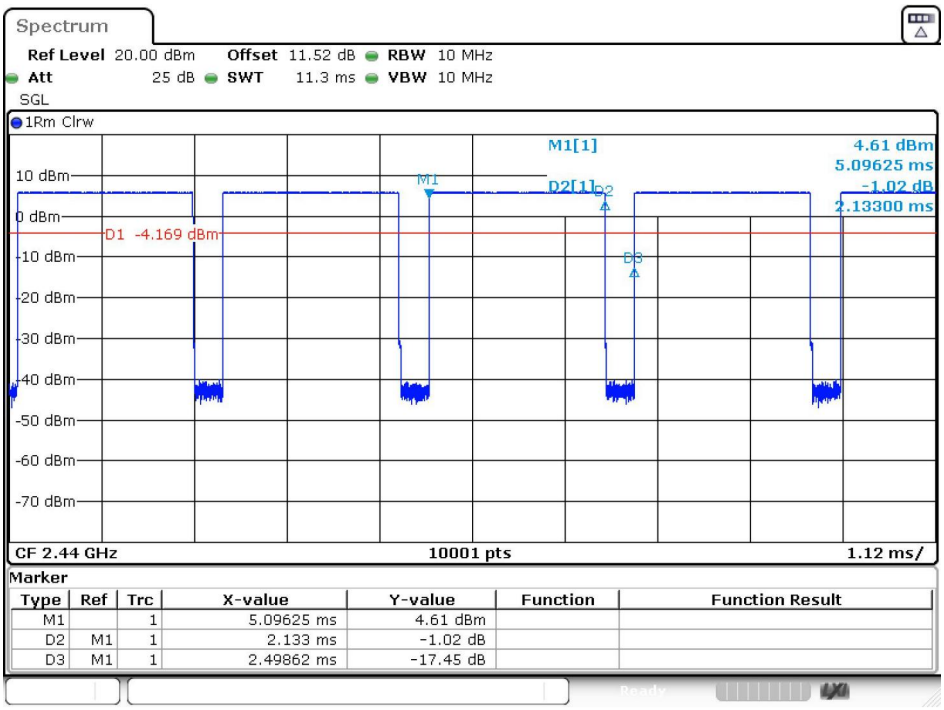
Left:

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	2.134	2.499	85.41	0.8541	0.6849	0.4686
	19	2.133	2.499	85.37	0.8537	0.6869	0.4688
	39	2.134	2.499	85.41	0.8541	0.6849	0.4686
BLE 2M	0	1.081	2.499	43.27	0.4327	3.6381	0.9251
	19	1.081	2.499	43.27	0.4327	3.6381	0.9251
	39	1.081	2.499	43.27	0.4327	3.6381	0.9251

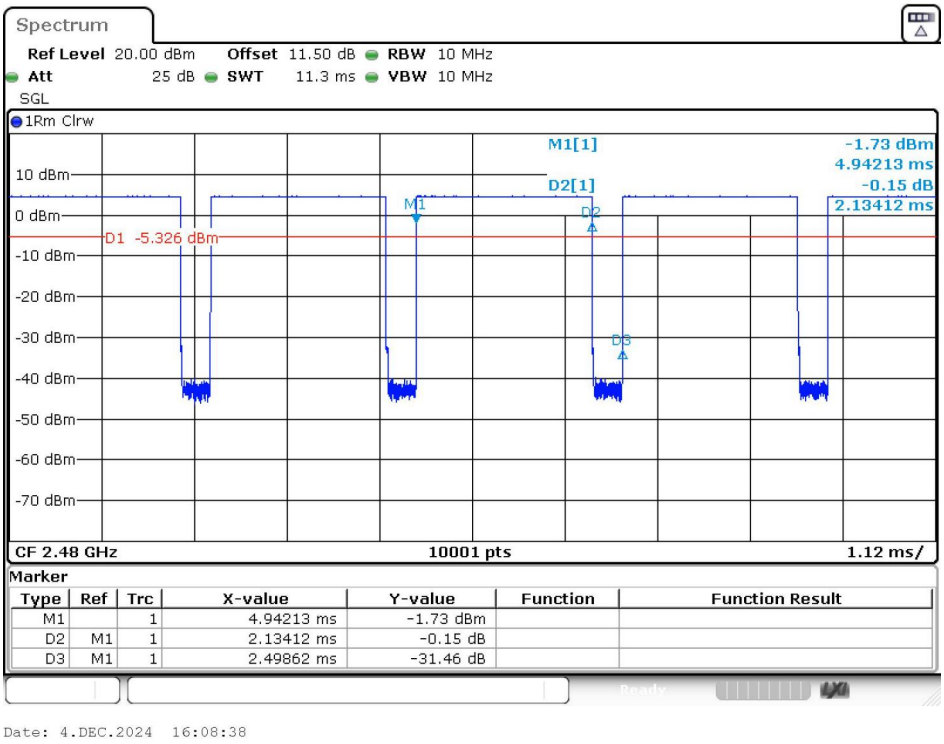
Test Graphs



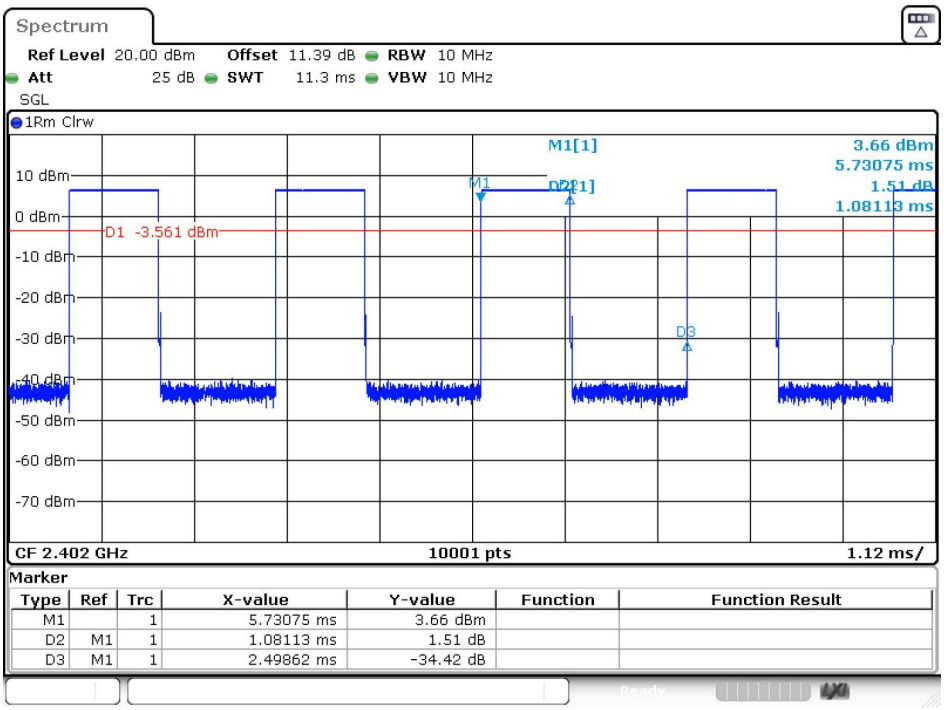
BLE 1M_Channel 0



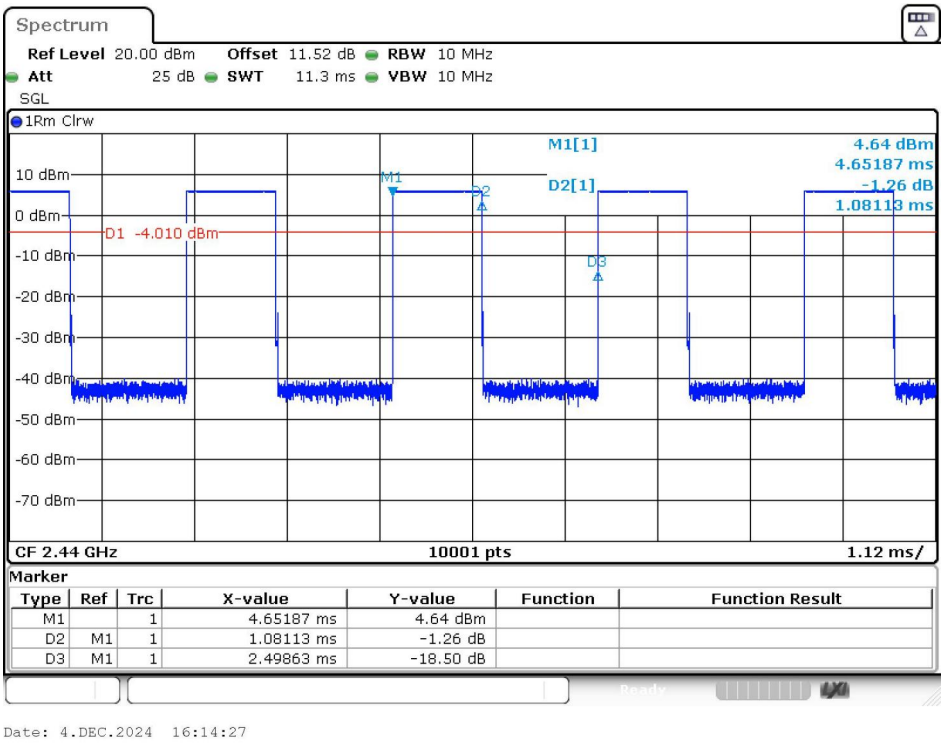
BLE 1M_Channel 19



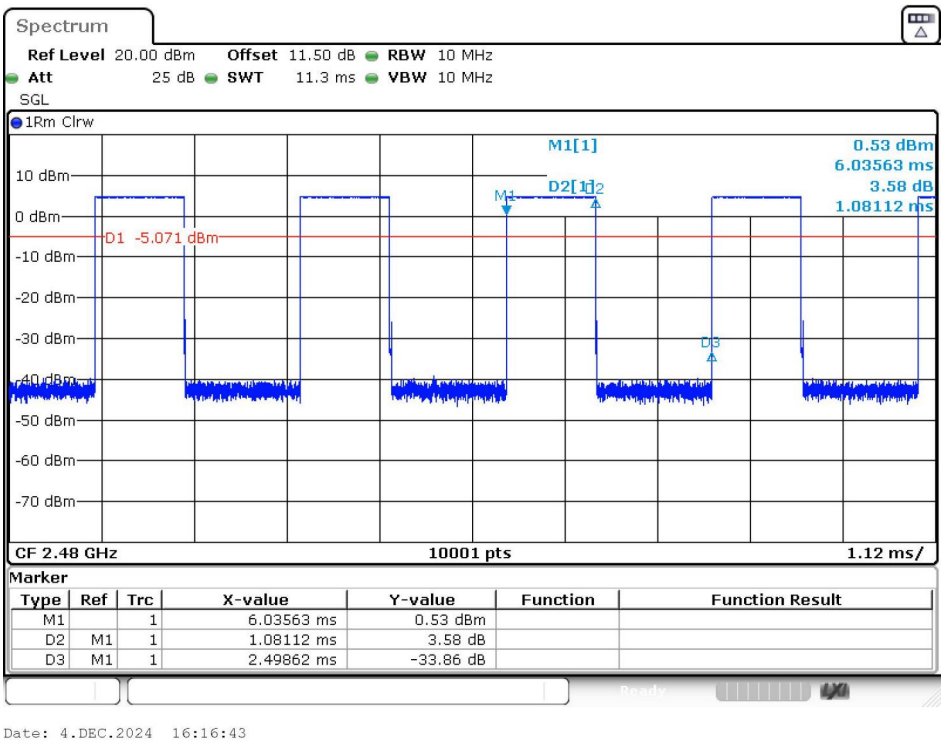
BLE 1M_Channel 39



BLE 2M_Channel 0



BLE 2M_Channel 19

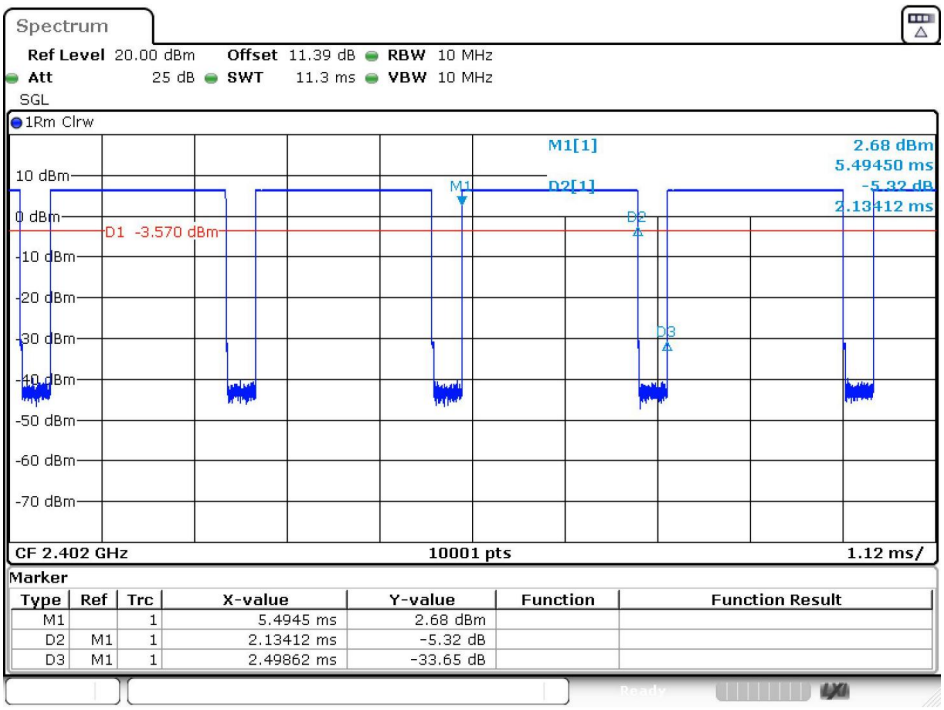


BLE 2M_Channel 39

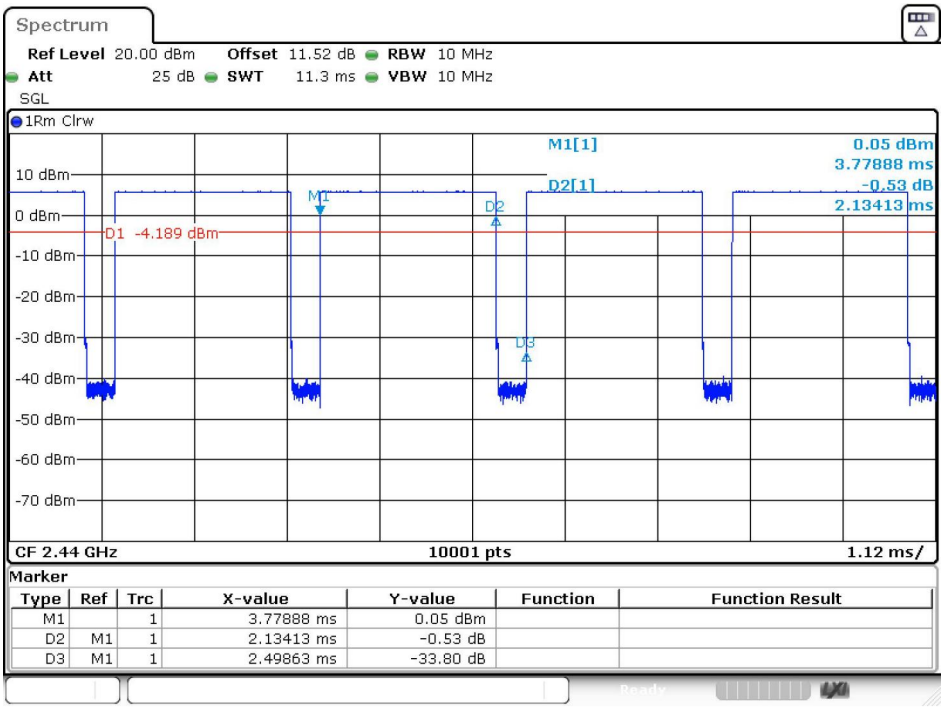
Right:

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	2.134	2.499	85.41	0.8541	0.6849	0.4686
	19	2.134	2.499	85.41	0.8541	0.6849	0.4686
	39	2.133	2.499	85.37	0.8537	0.6869	0.4688
BLE 2M	0	1.081	2.499	43.27	0.4327	3.6381	0.9251
	19	1.081	2.499	43.27	0.4327	3.6381	0.9251
	39	1.081	2.499	43.27	0.4327	3.6381	0.9251

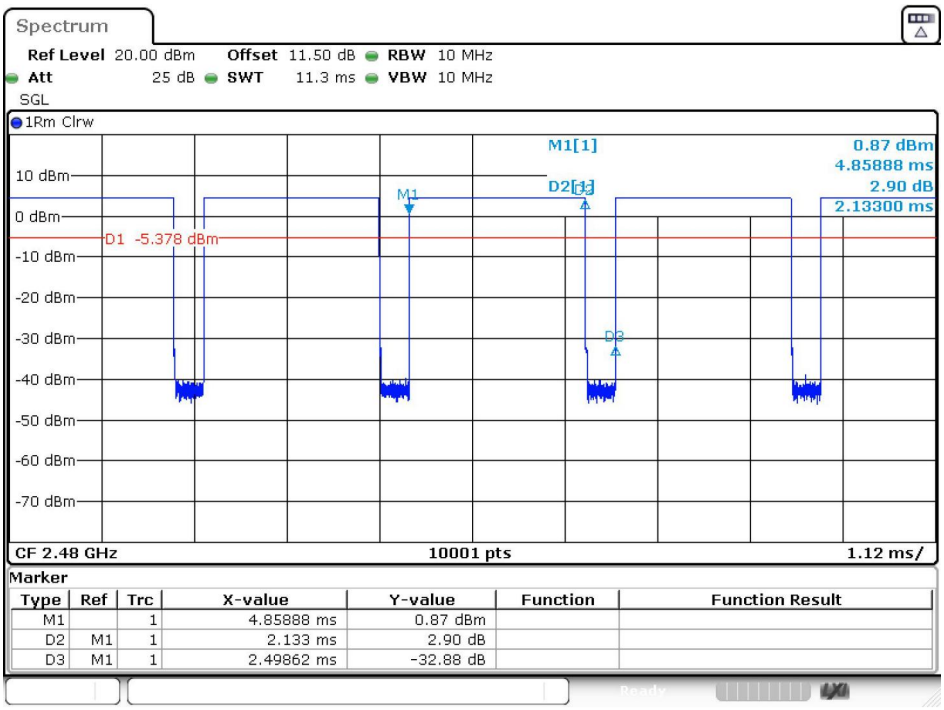
Test Graphs



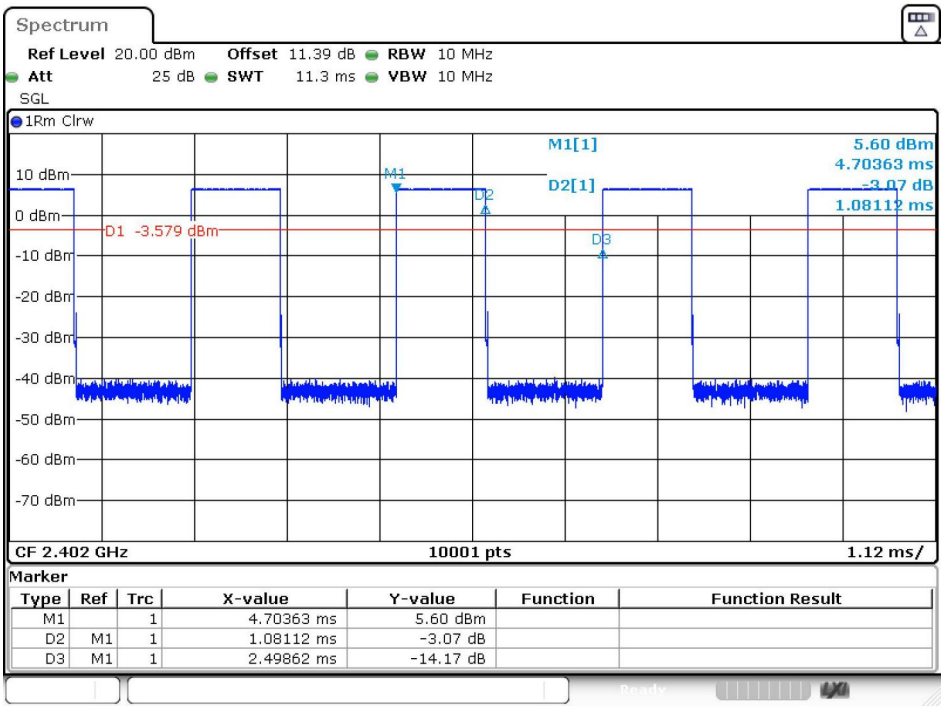
BLE 1M_Channel 0



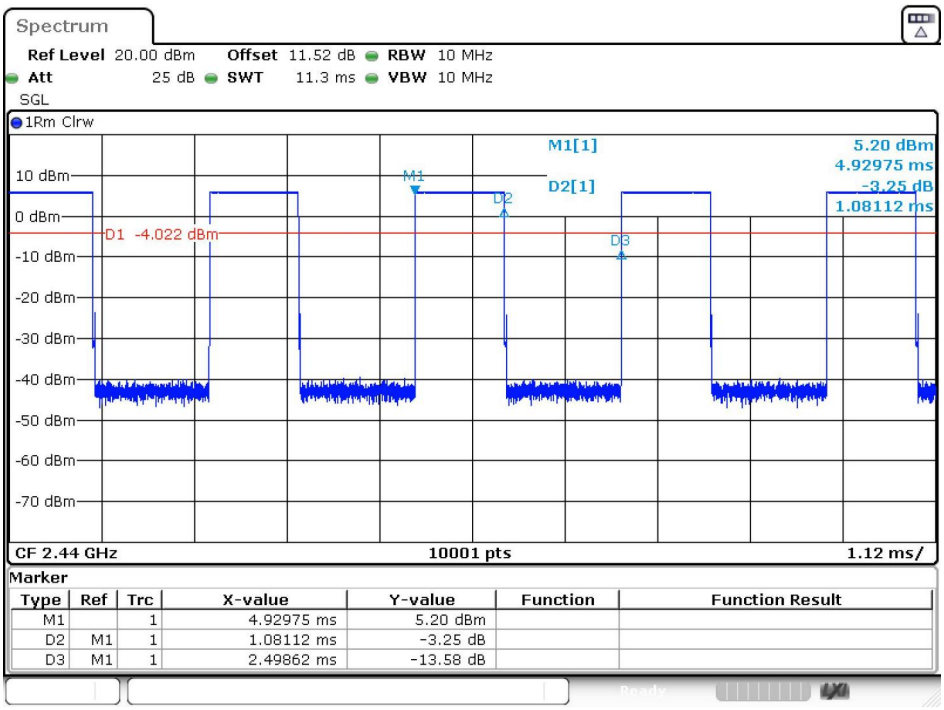
BLE 1M_Channel 19



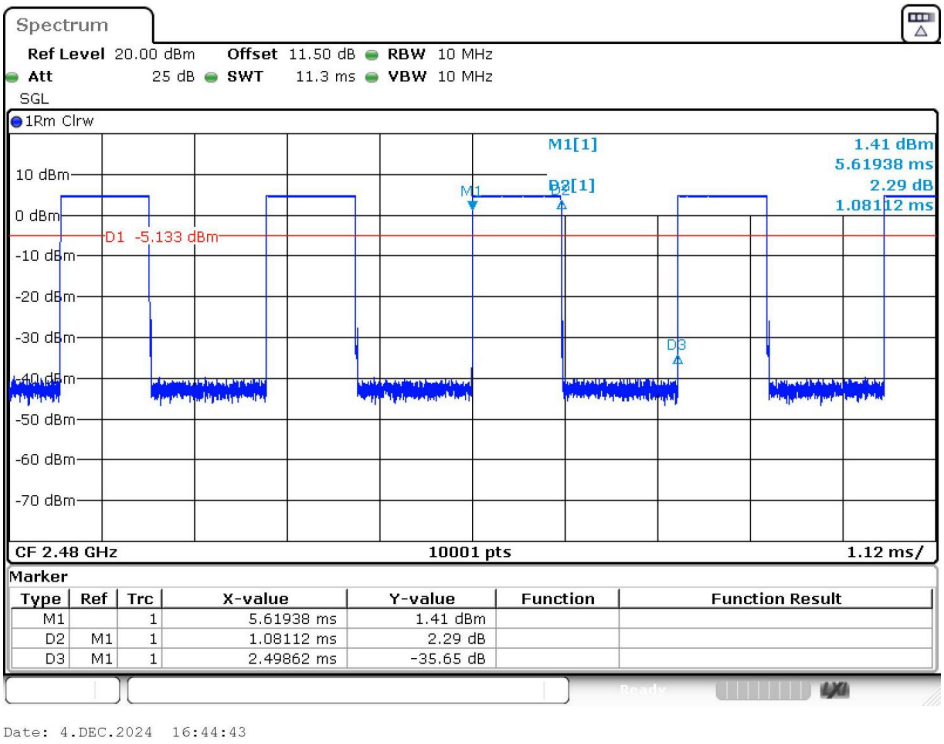
BLE 1M_Channel 39



BLE 2M_Channel 0



BLE 2M_Channel 19



BLE 2M_Channel 39

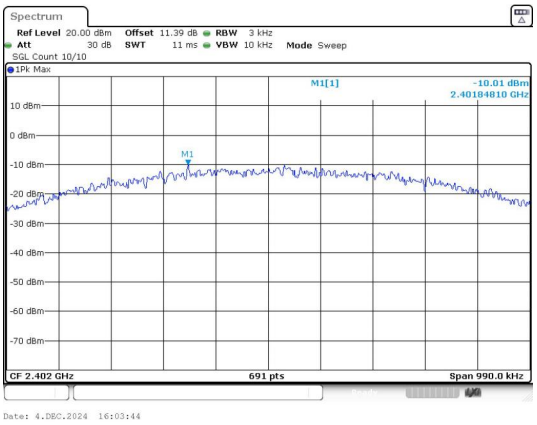
2) Power Spectral Density

Test Result

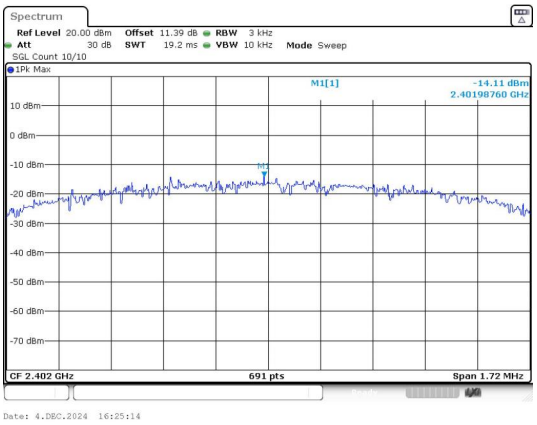
Left:

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-10.010	≤8	PASS
BLE 1M	19	-11.270	≤8	PASS
BLE 1M	39	-12.210	≤8	PASS
BLE 2M	0	-14.110	≤8	PASS
BLE 2M	19	-12.510	≤8	PASS
BLE 2M	39	-15.750	≤8	PASS

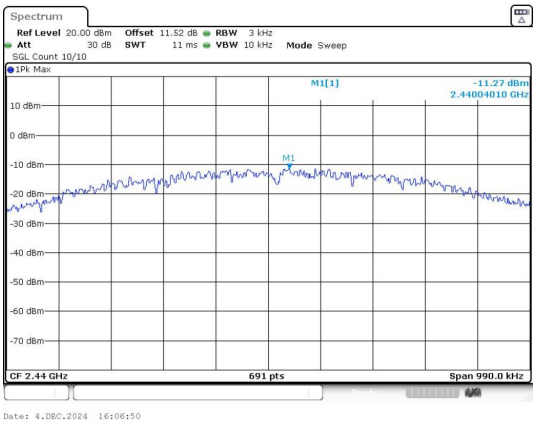
Test Graphs



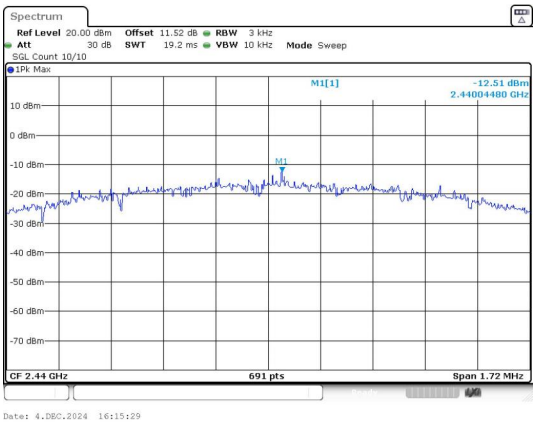
BLE 1M_Channel 0



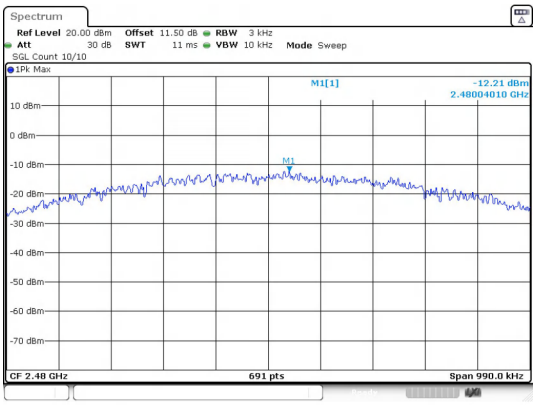
BLE 2M_Channel 0



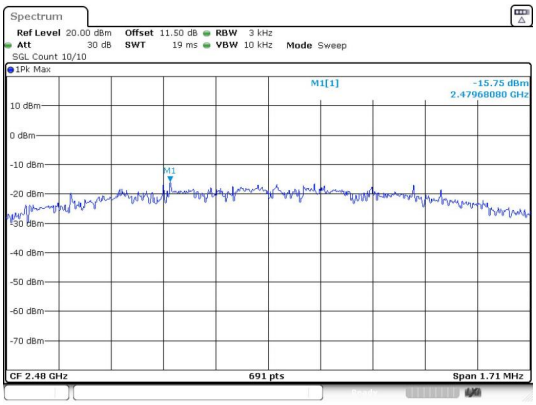
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39

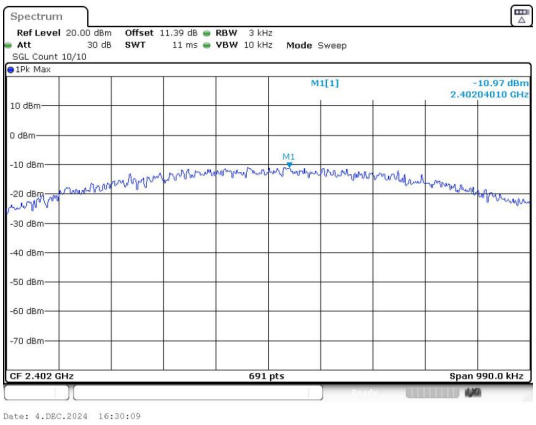


BLE 2M_Channel 39

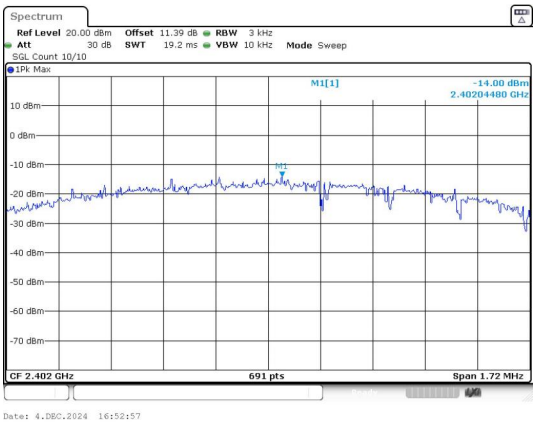
Right：

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-10.970	≤8	PASS
BLE 1M	19	-11.330	≤8	PASS
BLE 1M	39	-12.130	≤8	PASS
BLE 2M	0	-14.000	≤8	PASS
BLE 2M	19	-13.520	≤8	PASS
BLE 2M	39	-13.880	≤8	PASS

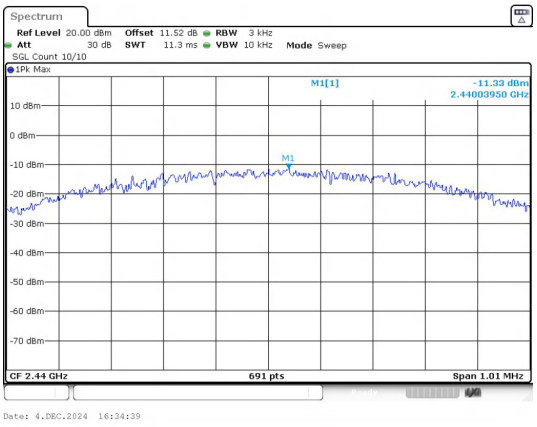
Test Graphs



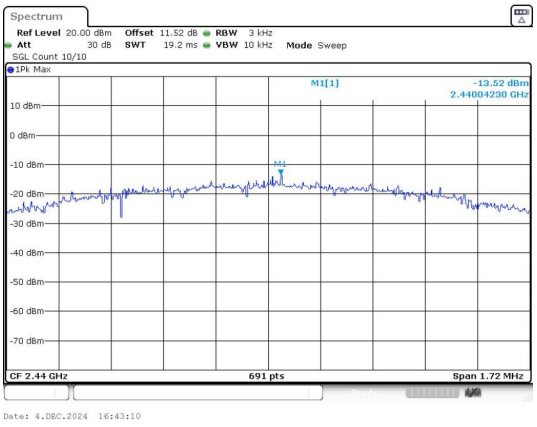
BLE 1M_Channel 0



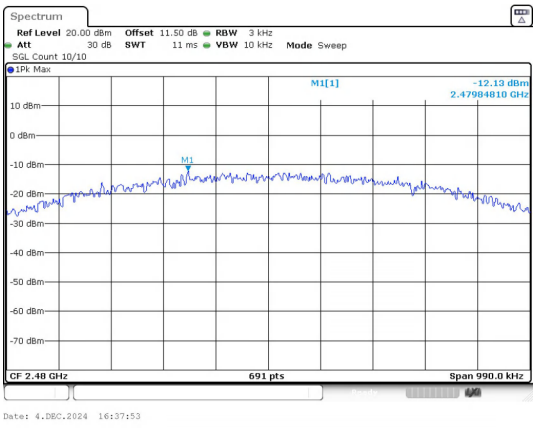
BLE 2M_Channel 0



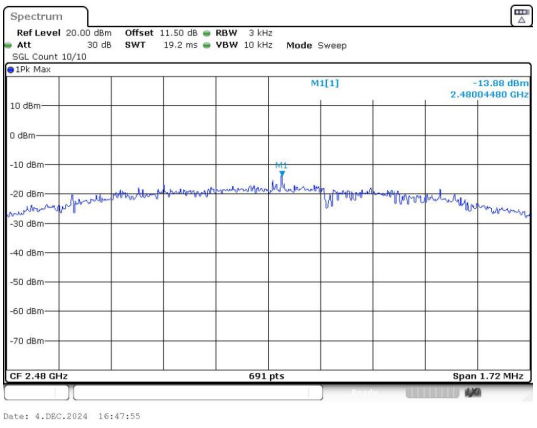
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



BLE 2M_Channel 39

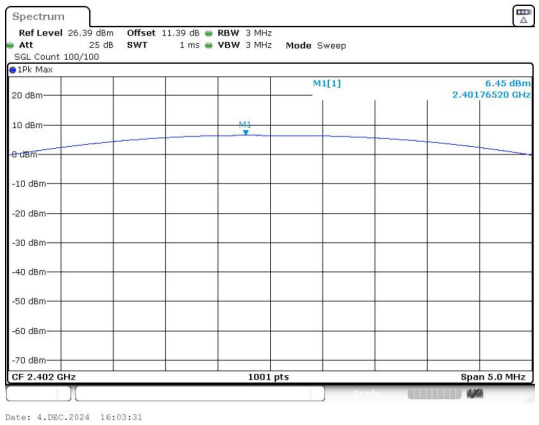
3) Conducted Output Power

Test Result

Left:

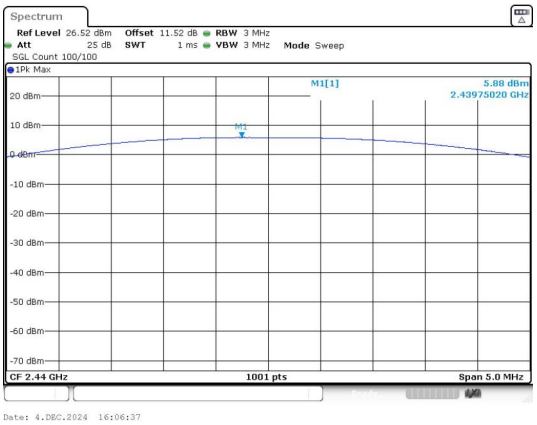
Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	6.45	4.42	≤30	PASS
	19	5.88	3.87	≤30	PASS
	39	4.71	2.96	≤30	PASS
BLE 2M	0	6.55	4.52	≤30	PASS
	19	6.07	4.05	≤30	PASS
	39	4.99	3.16	≤30	PASS

Test Graphs



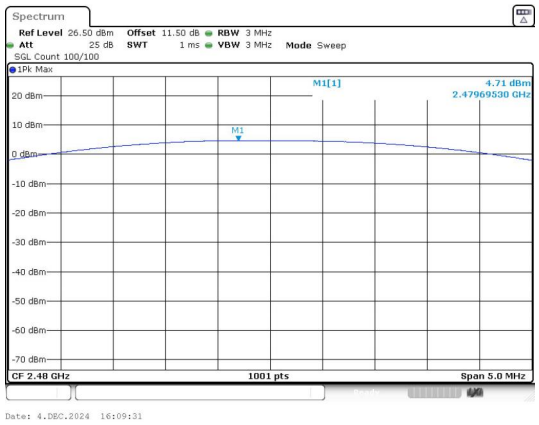
Peak Output Power

BLE 1M_Channel 0



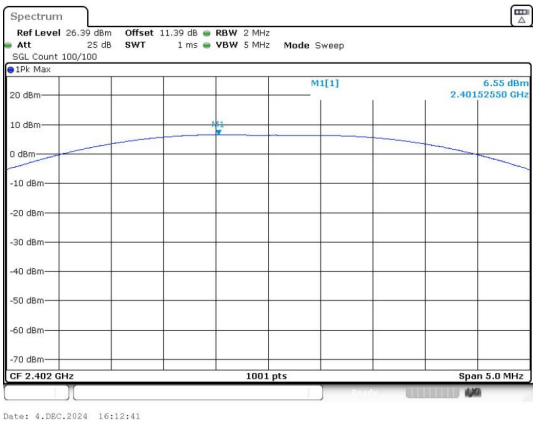
Peak Output Power

BLE 1M_Channel 19



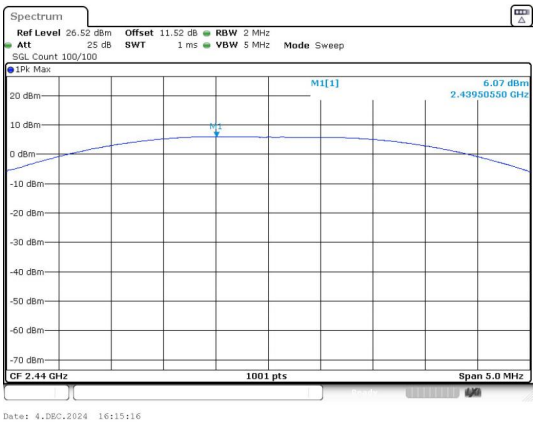
Peak Output Power

BLE 1M_Channel 39

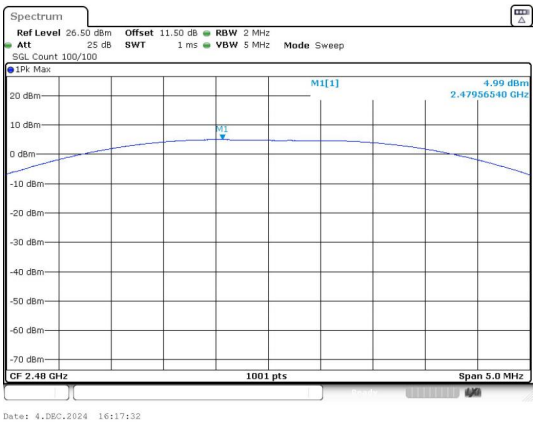


Peak Output Power

BLE 2M_Channel 0



Peak Output Power
BLE 2M_Channel 19

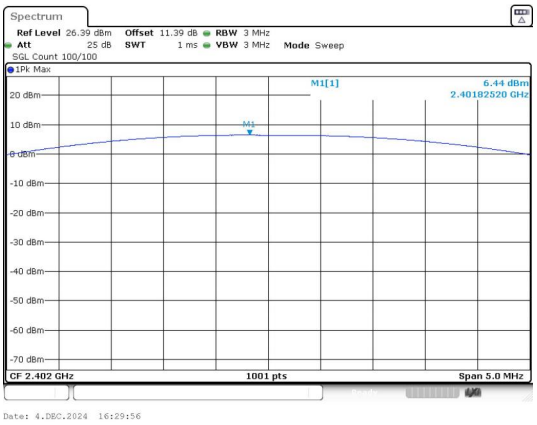


Peak Output Power
BLE 2M_Channel 39

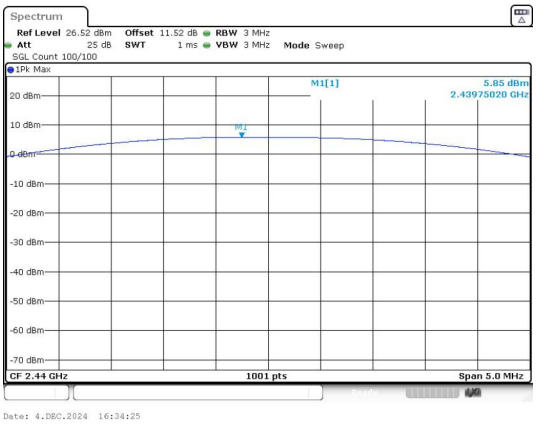
Right：

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	6.44	4.41	≤30	PASS
	19	5.85	3.85	≤30	PASS
	39	4.69	2.94	≤30	PASS
BLE 2M	0	6.52	4.49	≤30	PASS
	19	6.04	4.02	≤30	PASS
	39	4.93	3.11	≤30	PASS

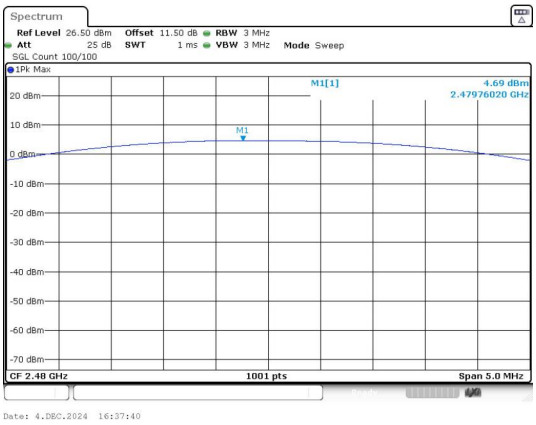
Test Graphs



Peak Output Power
BLE 1M_Channel 0

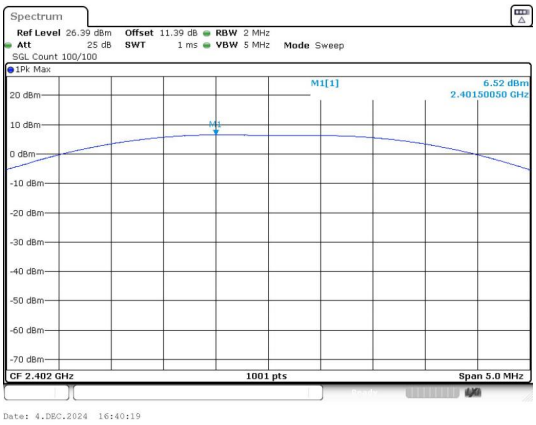


Peak Output Power
BLE 1M_Channel 19



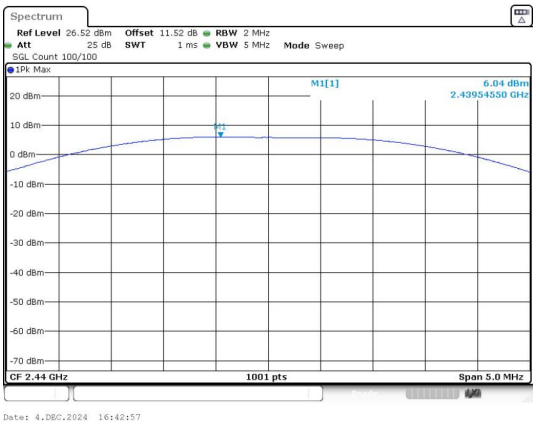
Peak Output Power

BLE 1M_Channel 39



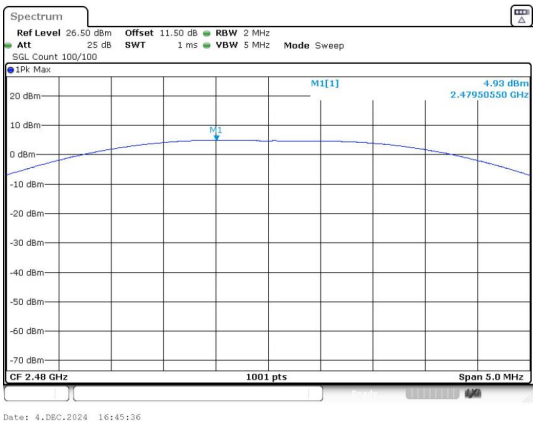
Peak Output Power

BLE 2M_Channel 0



Peak Output Power

BLE 2M_Channel 19



Peak Output Power

BLE 2M_Channel 39

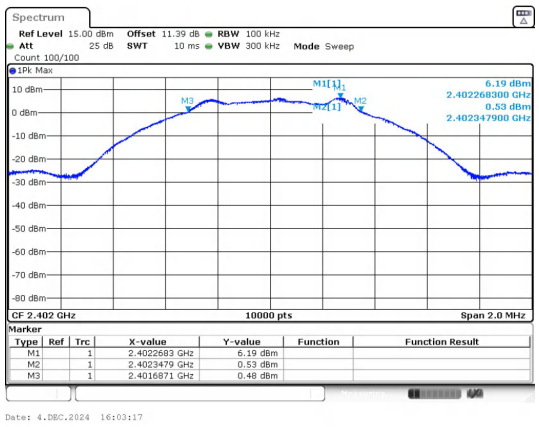
4) 6dB Bandwidth

Test Result

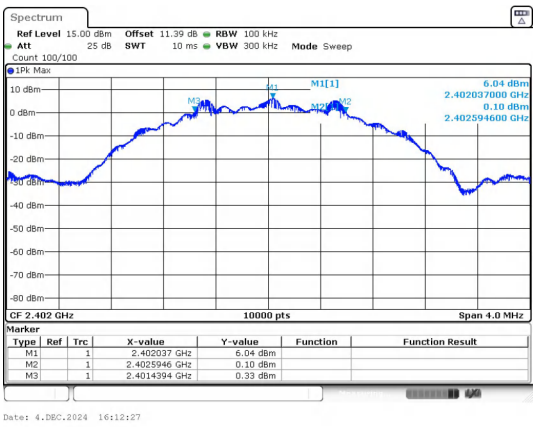
Left:

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.6600	≥0.5	PASS
	19	2440	0.6600		PASS
	39	2480	0.6600		PASS
BLE 2M	0	2402	1.150		PASS
	19	2440	1.150		PASS
	39	2480	1.140		PASS

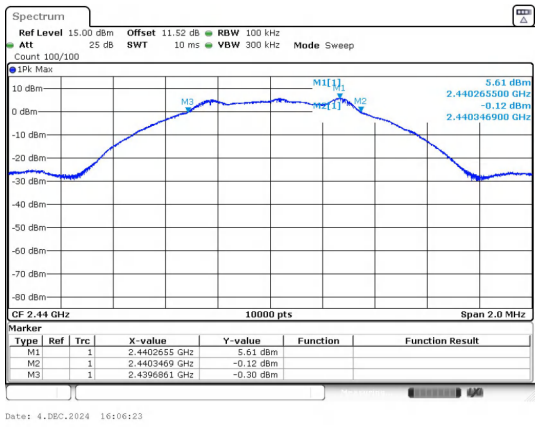
Test Graphs



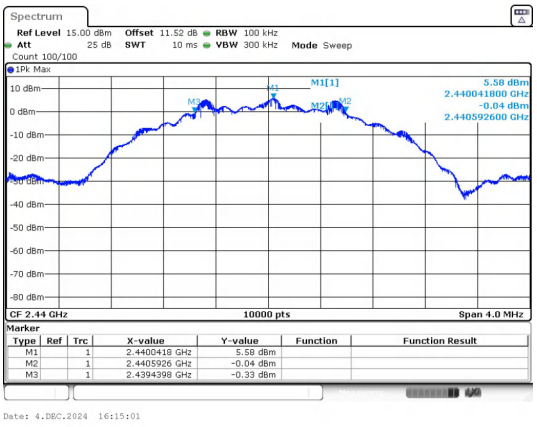
BLE 1M_Channel 0



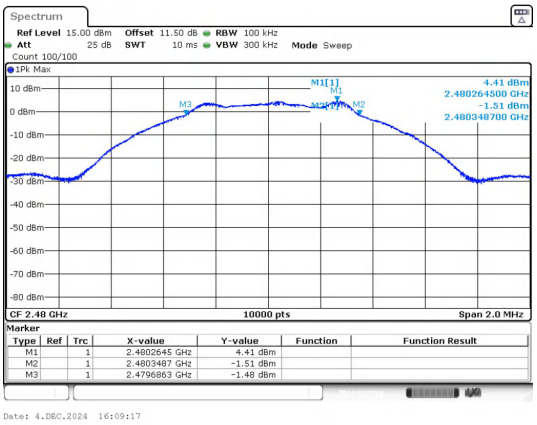
BLE 2M_Channel 0



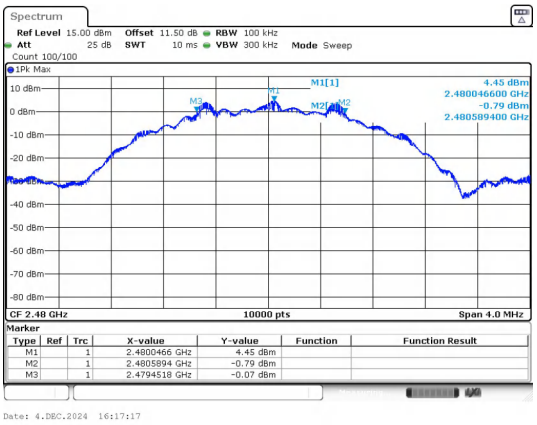
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39

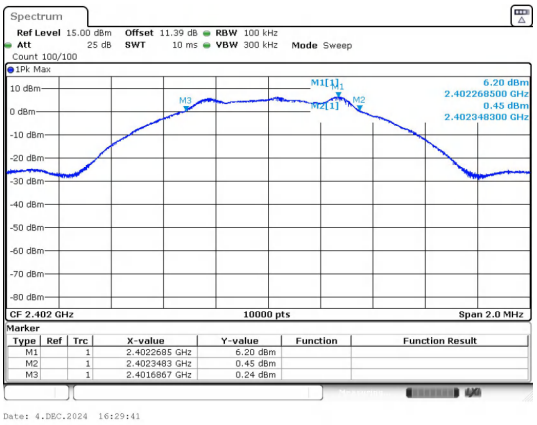


BLE 2M_Channel 39

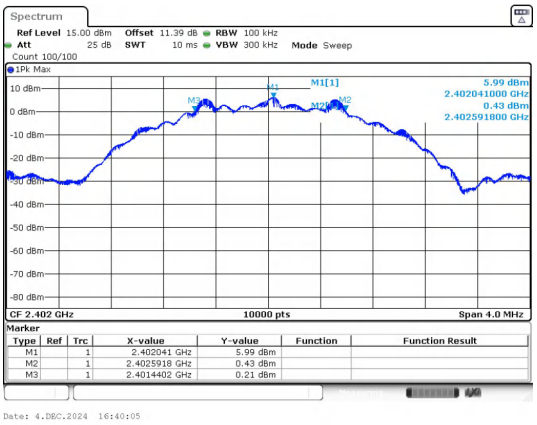
Right:

Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.6600	≥0.5	PASS
	19	2440	0.6700		PASS
	39	2480	0.6600		PASS
BLE 2M	0	2402	1.150		PASS
	19	2440	1.150		PASS
	39	2480	1.150		PASS

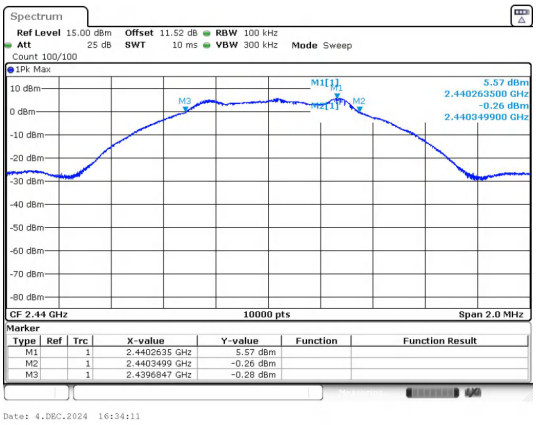
Test Graphs



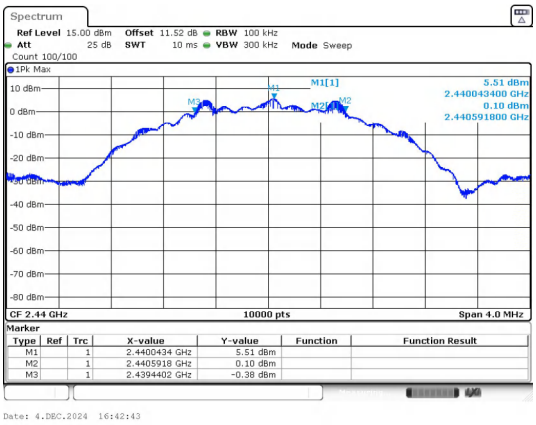
BLE 1M_Channel 0



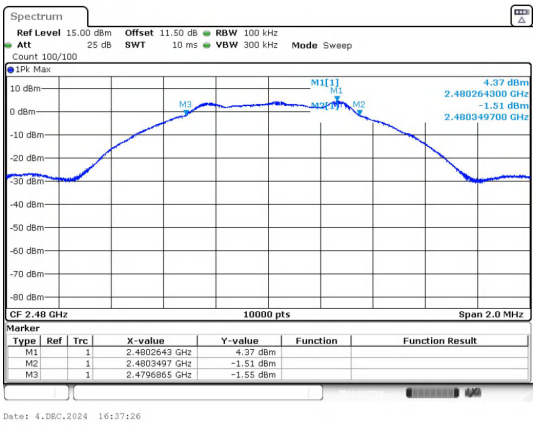
BLE 2M_Channel 0



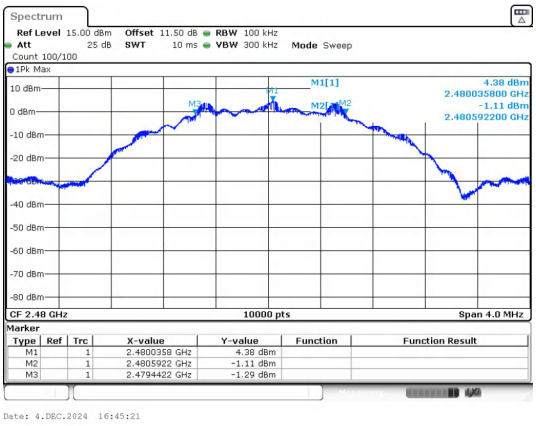
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



BLE 2M_Channel 39

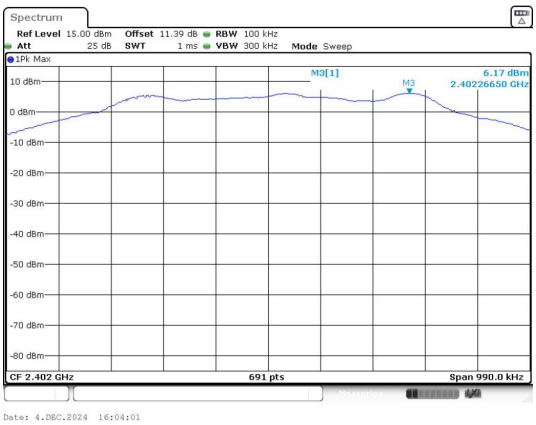
5) Conducted Out Of Band Emission

Test Result

Left:

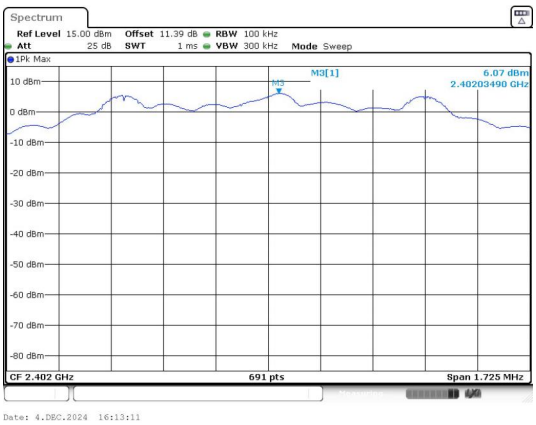
Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2395.28	-41.508	-13.83	-27.678	PASS
		2400.00	-48.730	-13.83	-34.900	PASS
		7205.10	-41.735	-13.83	-27.905	PASS
	19	9753.73	-39.347	-14.4	-24.947	PASS
	39	2483.50	-44.300	-15.6	-28.700	PASS
		9914.37	-39.799	-15.6	-24.199	PASS
BLE 2M	0	2400.00	-26.060	-13.93	-12.130	PASS
		9602.25	-43.195	-13.93	-29.265	PASS
	19	9753.73	-39.428	-14.43	-24.998	PASS
	39	2483.50	-49.930	-15.54	-34.390	PASS
		9914.37	-39.495	-15.54	-23.955	PASS

Test Graphs



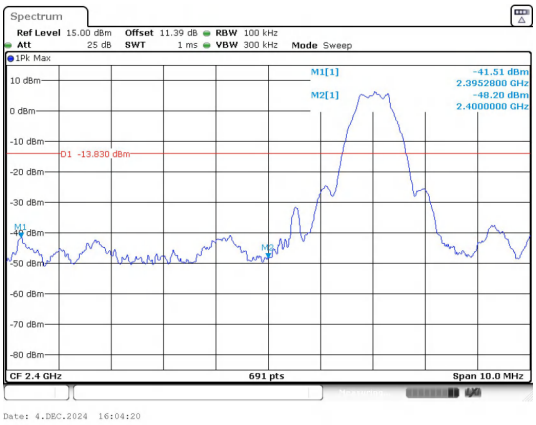
In-Band Reference Level

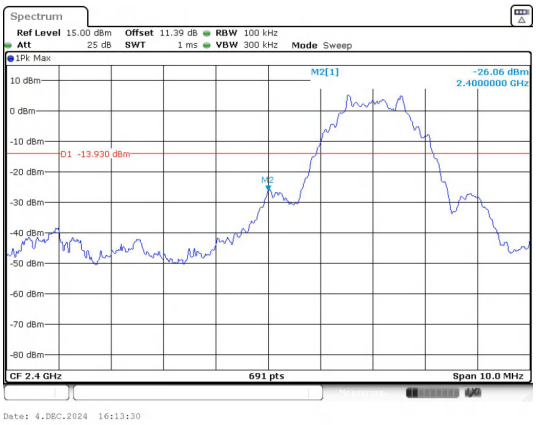
BLE 1M_Channel 0

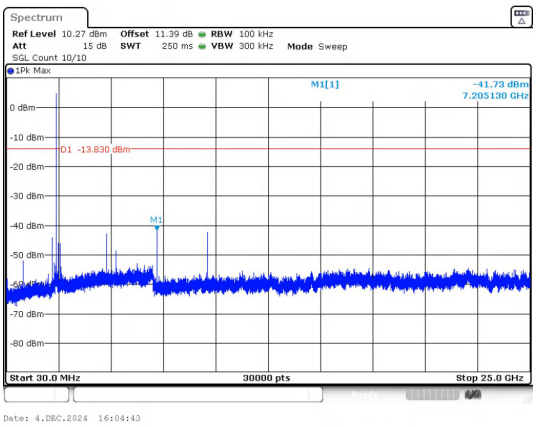
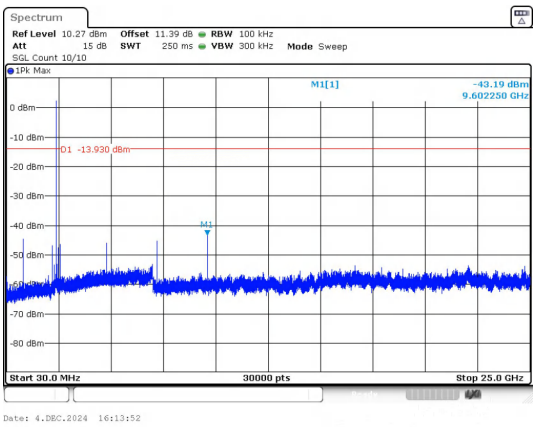
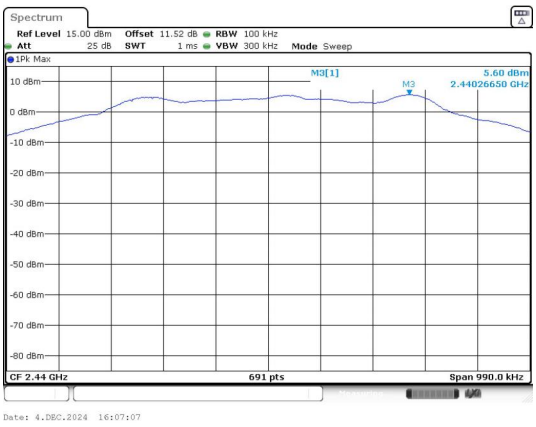
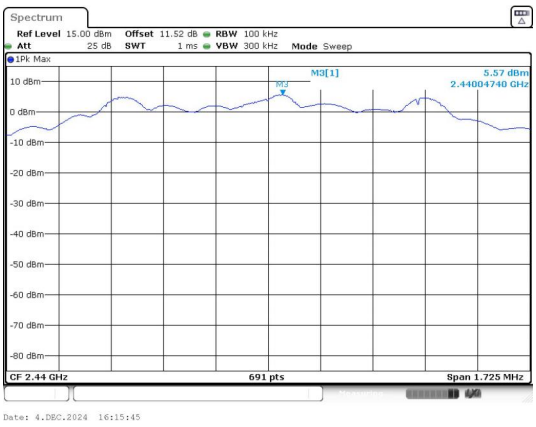
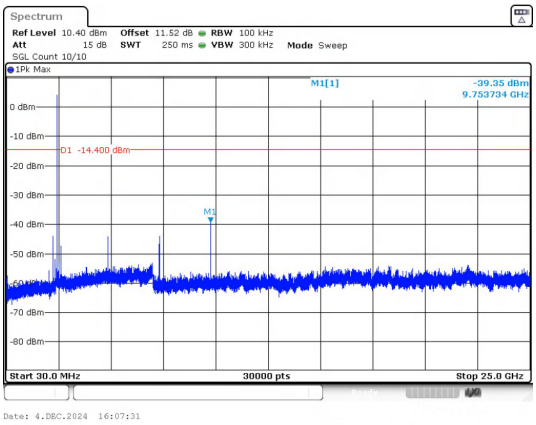
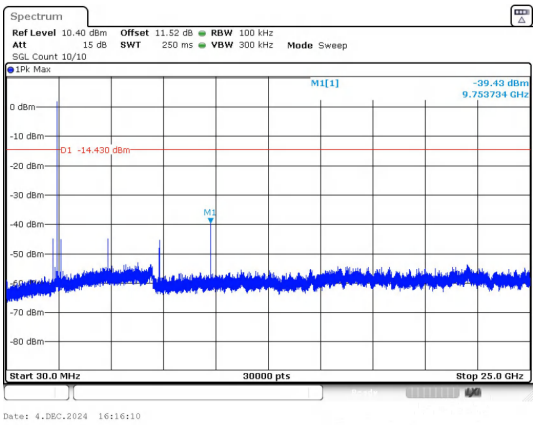


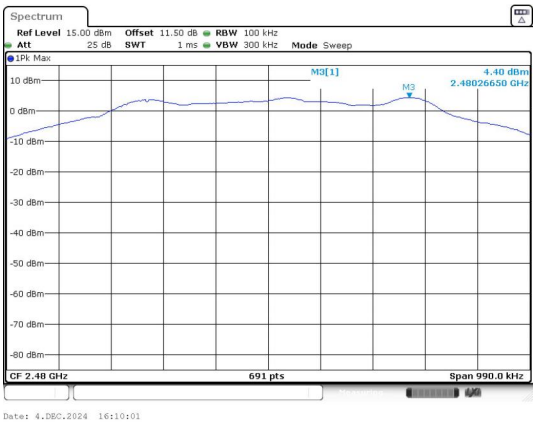
In-Band Reference Level

BLE 2M_Channel 0



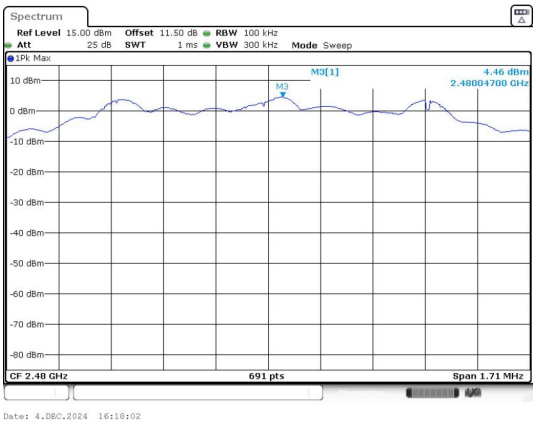


Out Of Band Emission BLE 1M_Channel 0	Out Of Band Emission BLE 2M_Channel 0
	
30.0 MHz - 25000.0 MHz BLE 1M_Channel 0	**30.0 MHz - 25000.0 MHz BLE 2M_Channel 0**
	
In-Band Reference Level BLE 1M_Channel 19	**In-Band Reference Level BLE 2M_Channel 19**
	
30.0 MHz - 25000.0 MHz BLE 1M_Channel 19	**30.0 MHz - 25000.0 MHz BLE 2M_Channel 19**



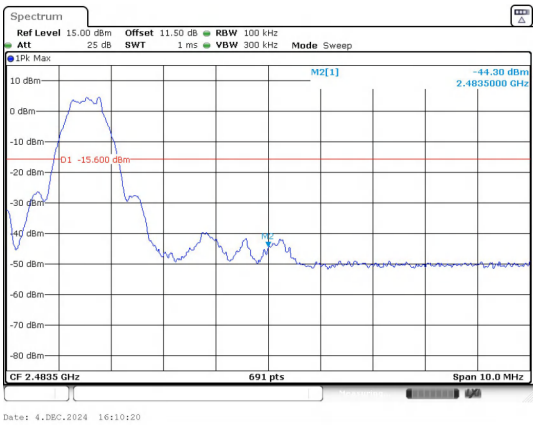
In-Band Reference Level

BLE 1M_Channel 39



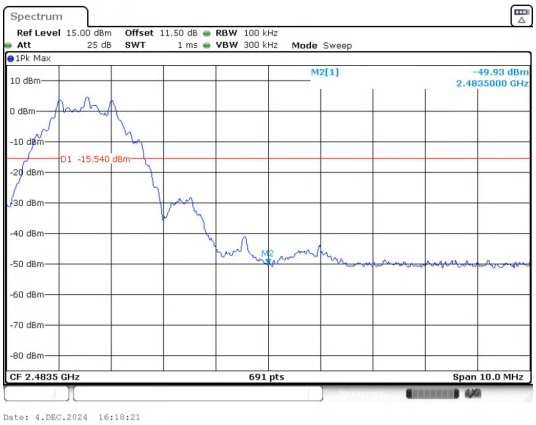
In-Band Reference Level

BLE 2M_Channel 39



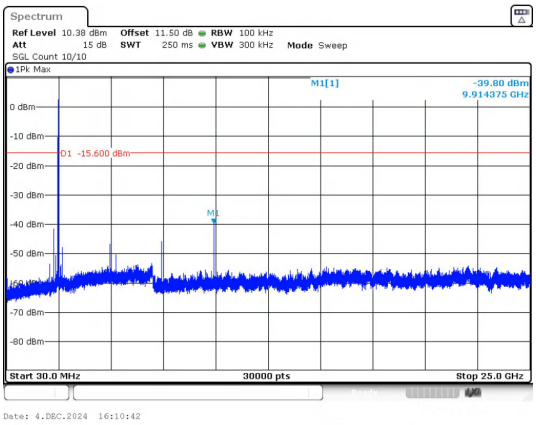
Out Of Band Emission

BLE 1M_Channel 39



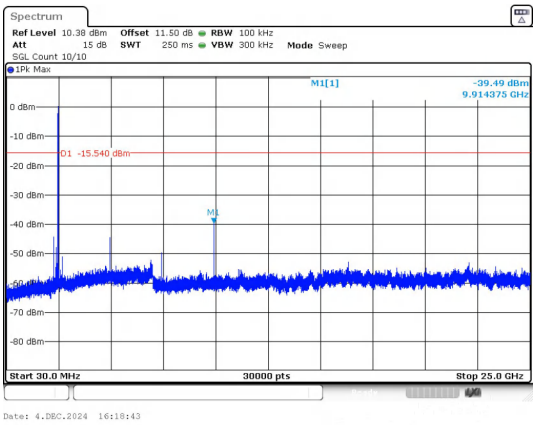
Out Of Band Emission

BLE 2M_Channel 39



30.0 MHz - 25000.0 MHz

BLE 1M_Channel 39



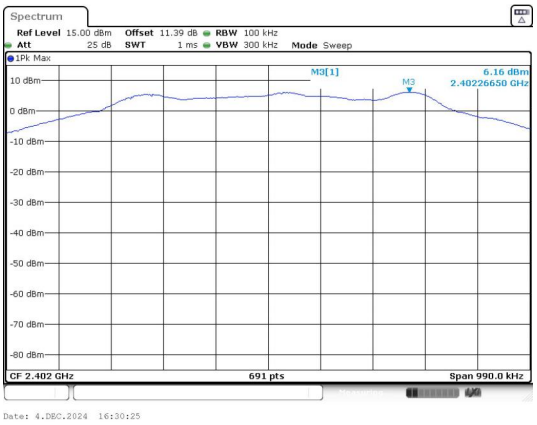
30.0 MHz - 25000.0 MHz

BLE 2M_Channel 39

Right:

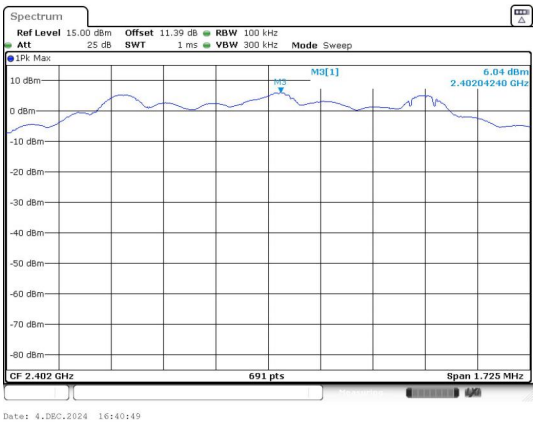
Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2396.79	-42.266	-13.84	-28.426	PASS
		2400.00	-48.140	-13.84	-34.300	PASS
		7205.10	-42.453	-13.84	-28.613	PASS
	19	9753.73	-39.192	-14.44	-24.752	PASS
	39	2483.50	-45.460	-15.64	-29.820	PASS
		9914.37	-39.560	-15.64	-23.920	PASS
BLE 2M	0	2400.00	-26.120	-13.96	-12.160	PASS
		9602.25	-42.928	-13.96	-28.968	PASS
	19	9753.73	-39.797	-14.45	-25.347	PASS
	39	2483.50	-48.990	-15.6	-33.390	PASS
		9914.37	-39.652	-15.6	-24.052	PASS

Test Graphs



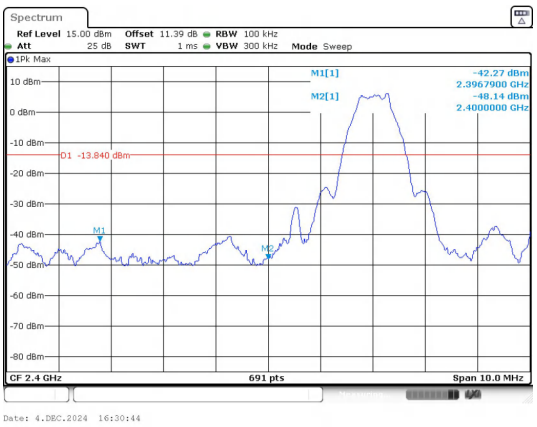
In-Band Reference Level

BLE 1M_Channel 0



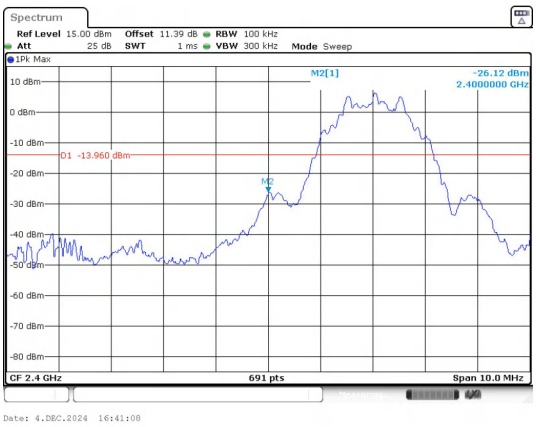
In-Band Reference Level

BLE 2M_Channel 0



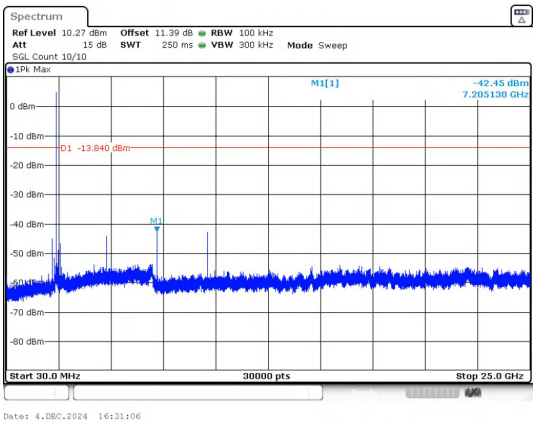
Out Of Band Emission

BLE 1M_Channel 0



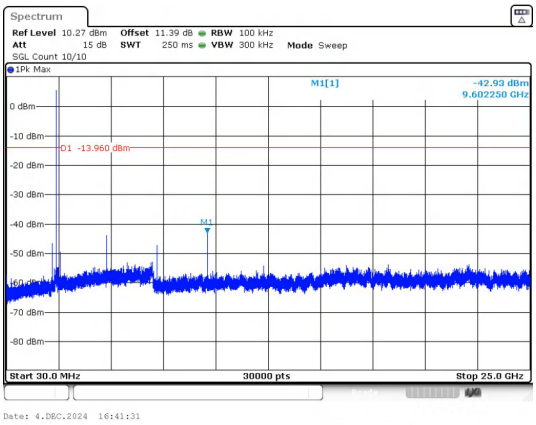
Out Of Band Emission

BLE 2M_Channel 0



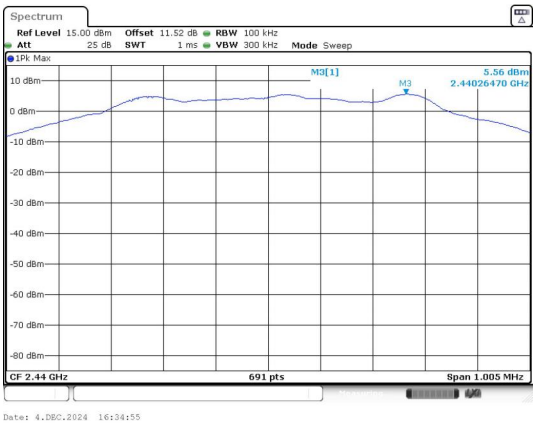
30.0 MHz - 25000.0 MHz

BLE 1M_Channel 0



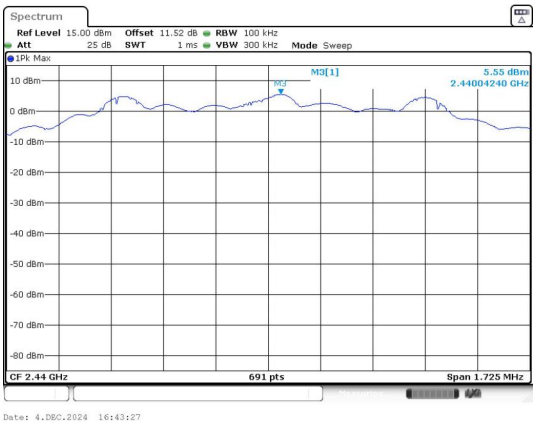
30.0 MHz - 25000.0 MHz

BLE 2M_Channel 0



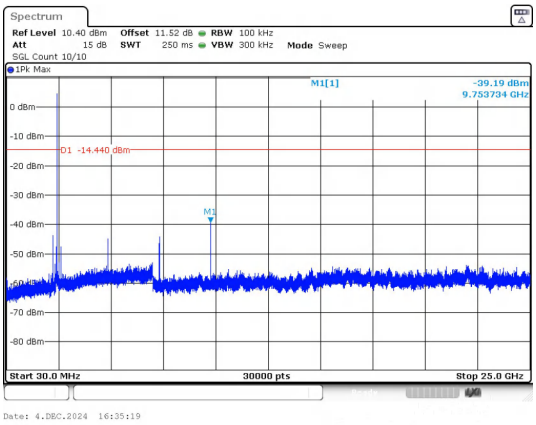
In-Band Reference Level

BLE 1M_Channel 19



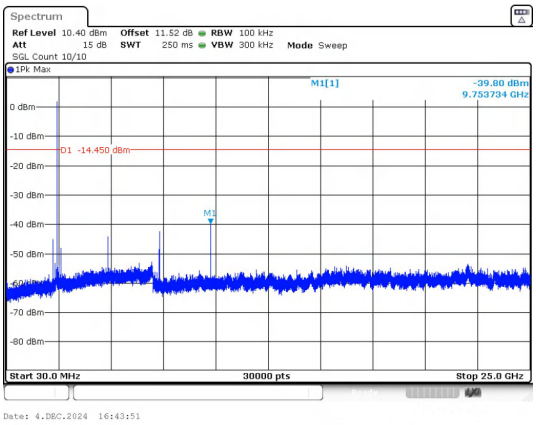
In-Band Reference Level

BLE 2M_Channel 19



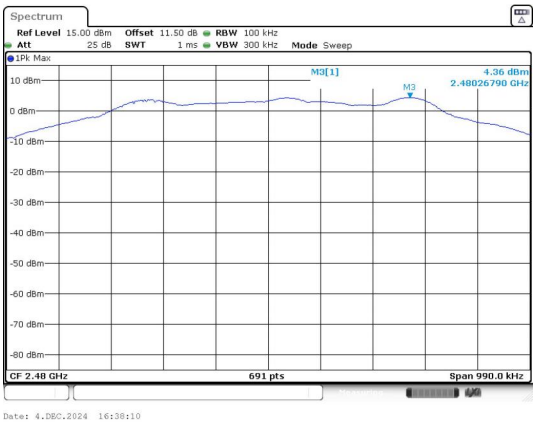
30.0 MHz - 25000.0 MHz

BLE 1M_Channel 19



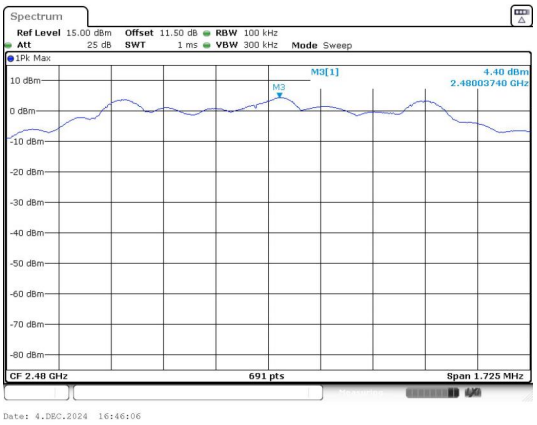
30.0 MHz - 25000.0 MHz

BLE 2M_Channel 19



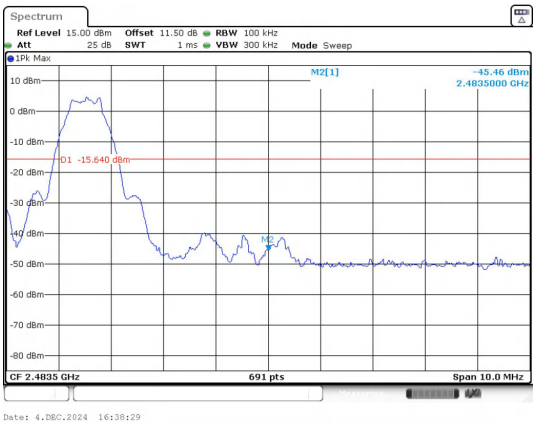
In-Band Reference Level

BLE 1M_Channel 39



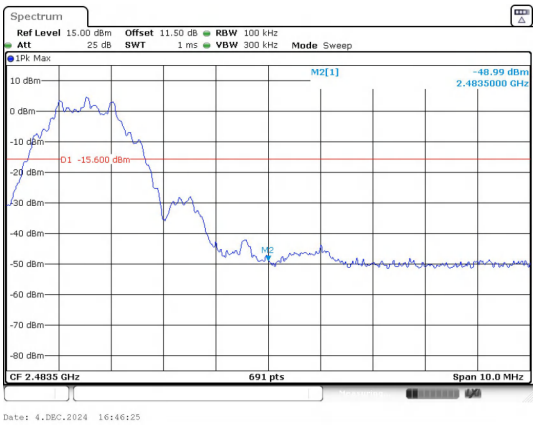
In-Band Reference Level

BLE 2M_Channel 39



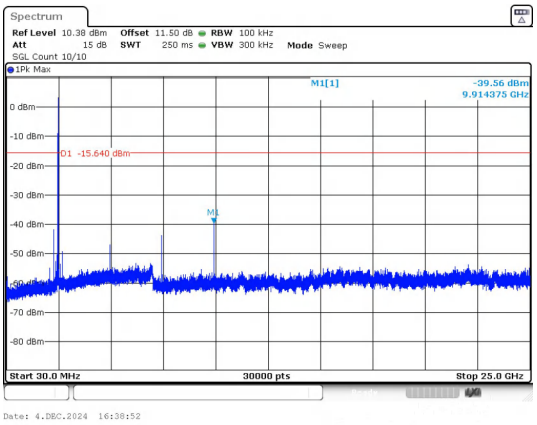
Out Of Band Emission

BLE 1M_Channel 39



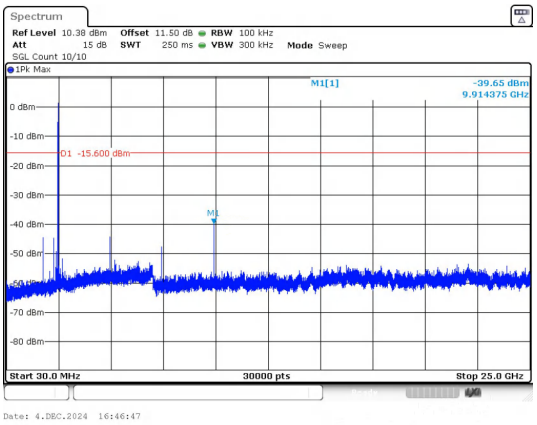
Out Of Band Emission

BLE 2M_Channel 39



30.0 MHz - 25000.0 MHz

BLE 1M_Channel 39



30.0 MHz - 25000.0 MHz

BLE 2M_Channel 39

------End of the report-----