Appendix

Report No.:	CISRR241203025
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

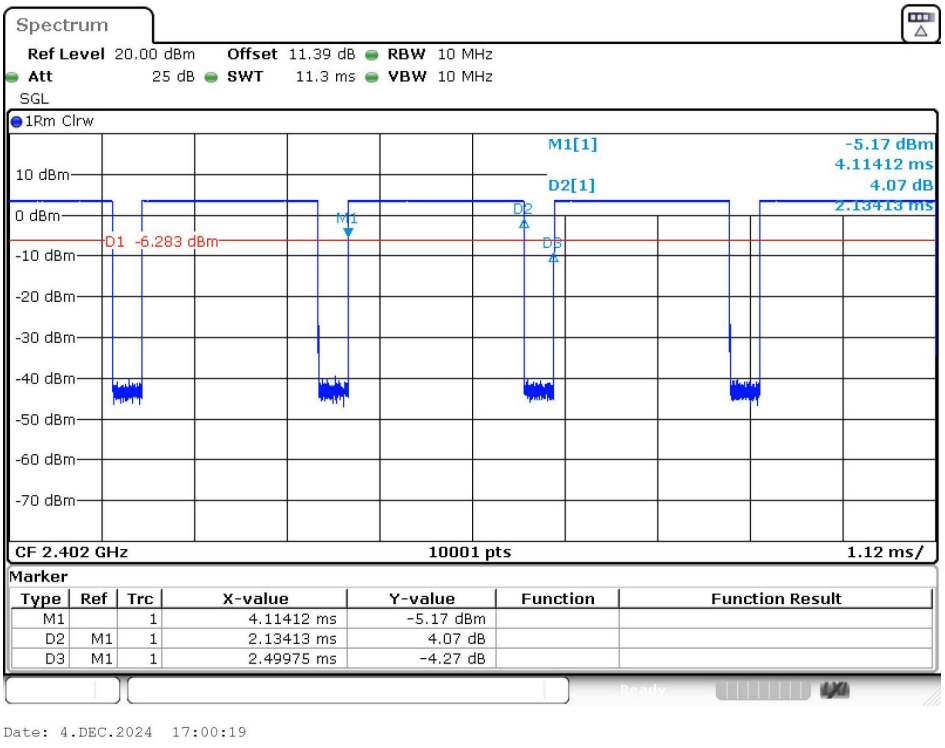
1) Duty Cycle

Test Result

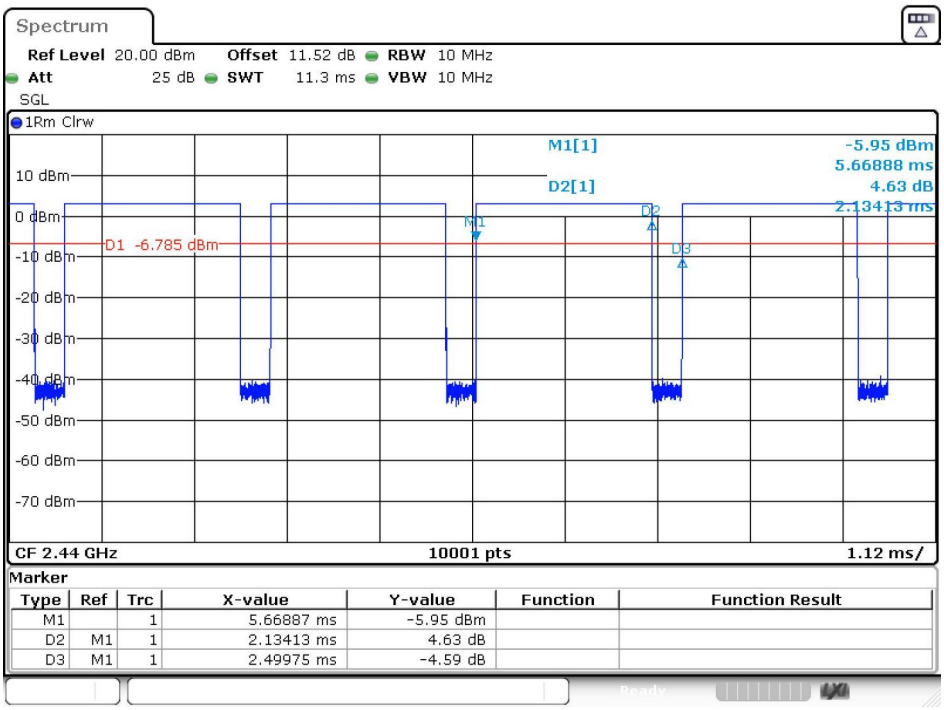
Left:

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	2.134	2.500	85.37	0.8537	0.6869	0.4686
	19	2.134	2.500	85.37	0.8537	0.6869	0.4686
	39	2.133	2.499	85.37	0.8537	0.6869	0.4688
BLE 2M	0	1.082	2.500	43.29	0.4329	3.6361	0.9242
	19	1.082	2.500	43.29	0.4329	3.6361	0.9242
	39	1.075	2.482	43.29	0.4329	3.6361	0.9302

Test Graphs

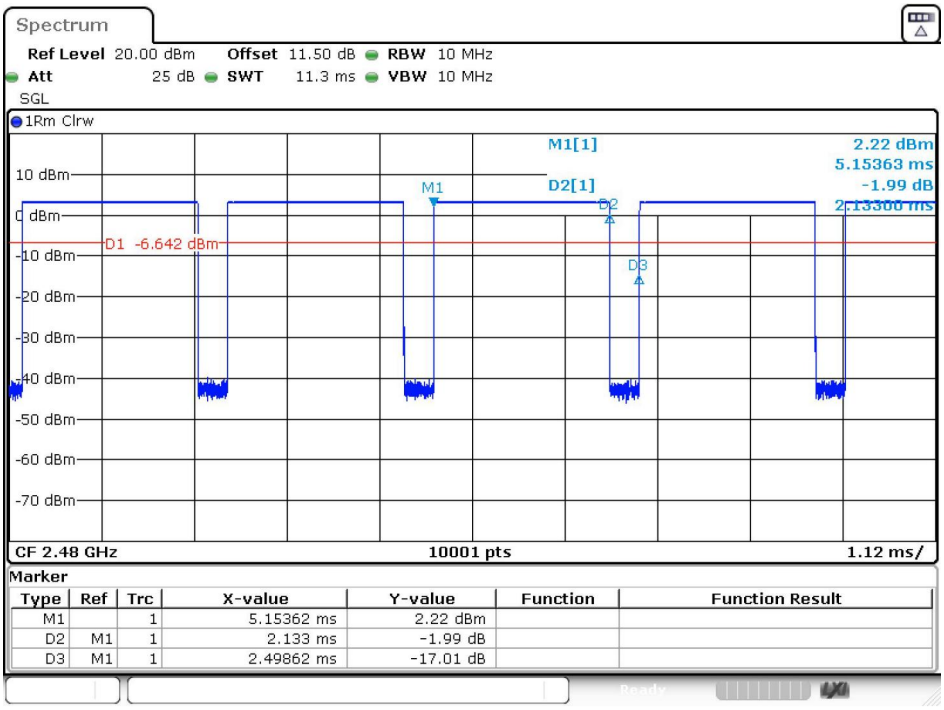


BLE 1M_Channel 0



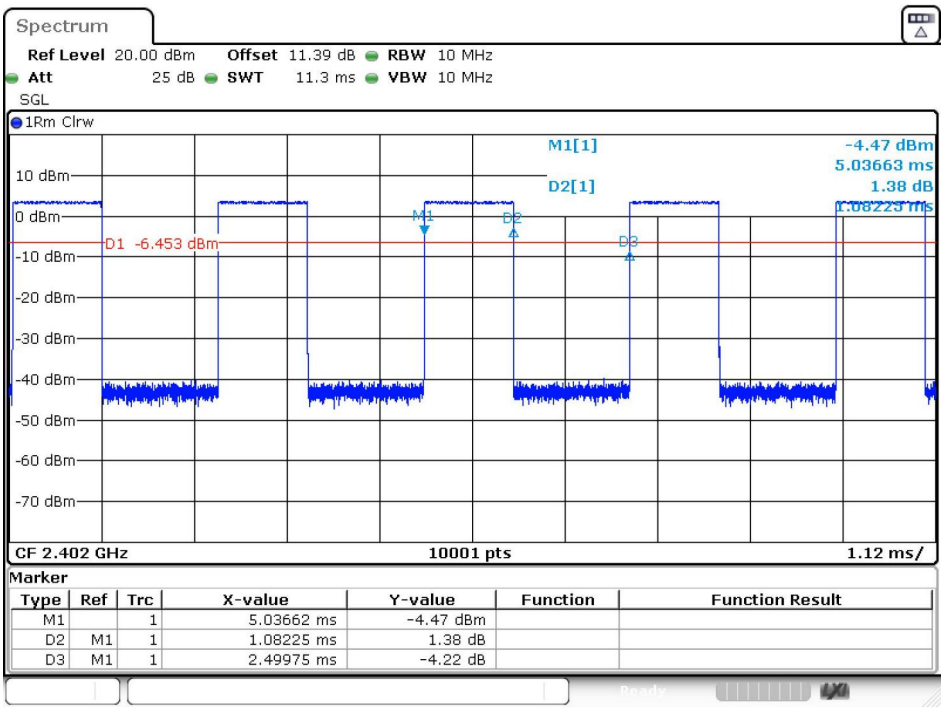
Date: 4.DEC.2024 17:02:59

BLE 1M_Channel 19



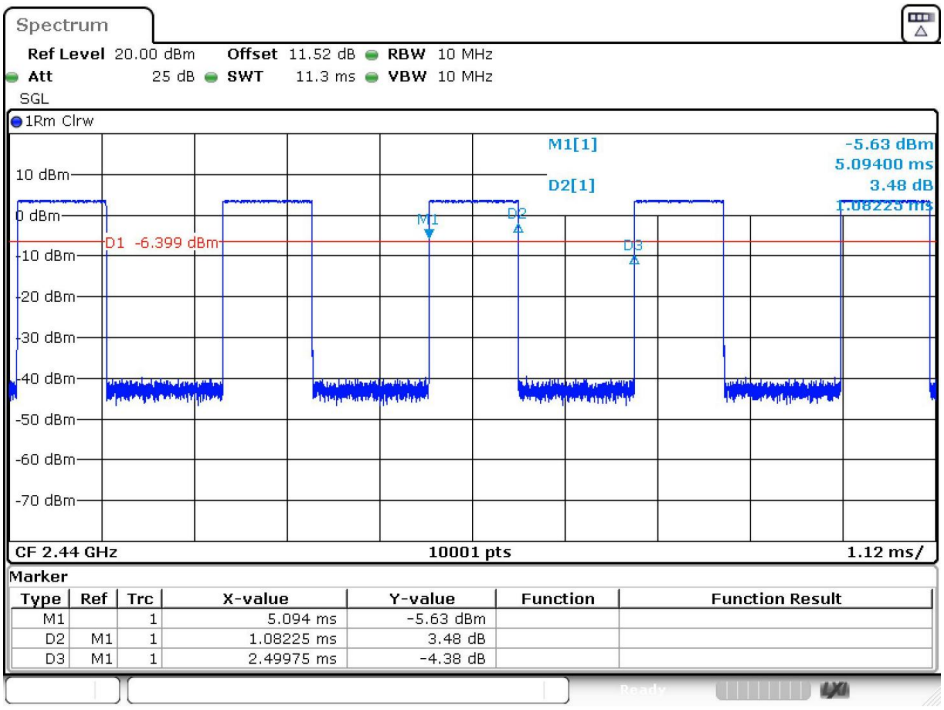
Date: 4.DEC.2024 17:05:27

BLE 1M_Channel 39



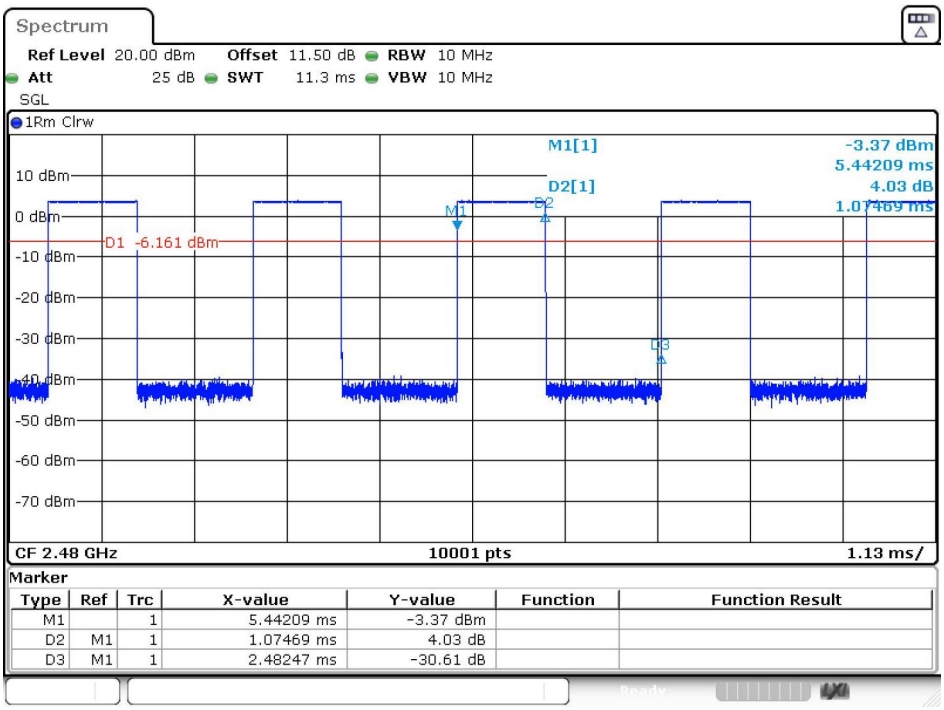
Date: 4.DEC.2024 17:08:14

BLE 2M_Channel 0



Date: 4.DEC.2024 17:10:56

BLE 2M_Channel 19

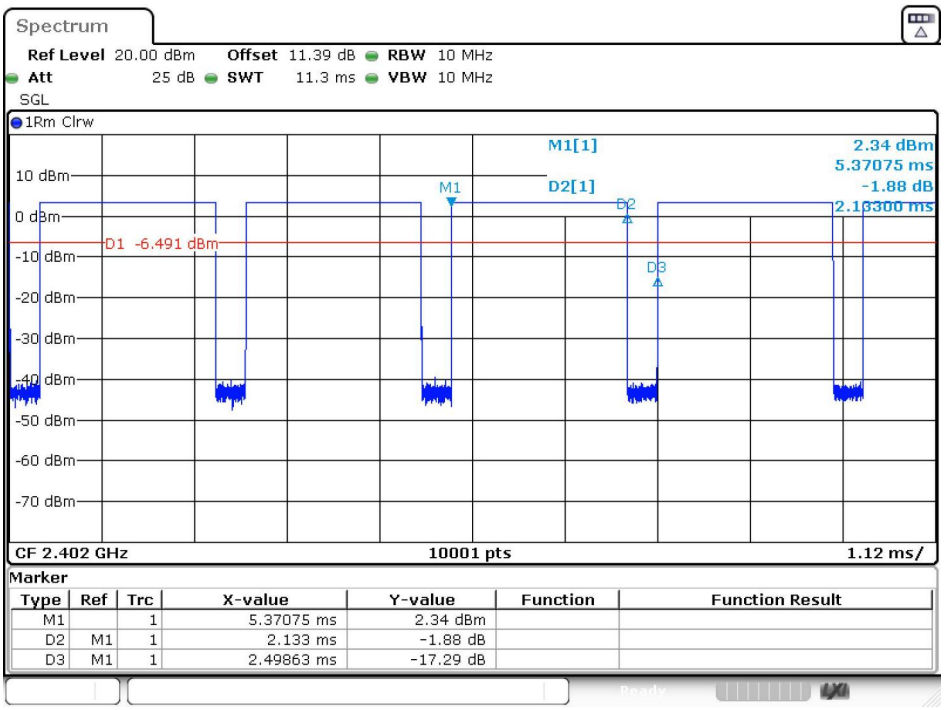


BLE 2M_Channel 39

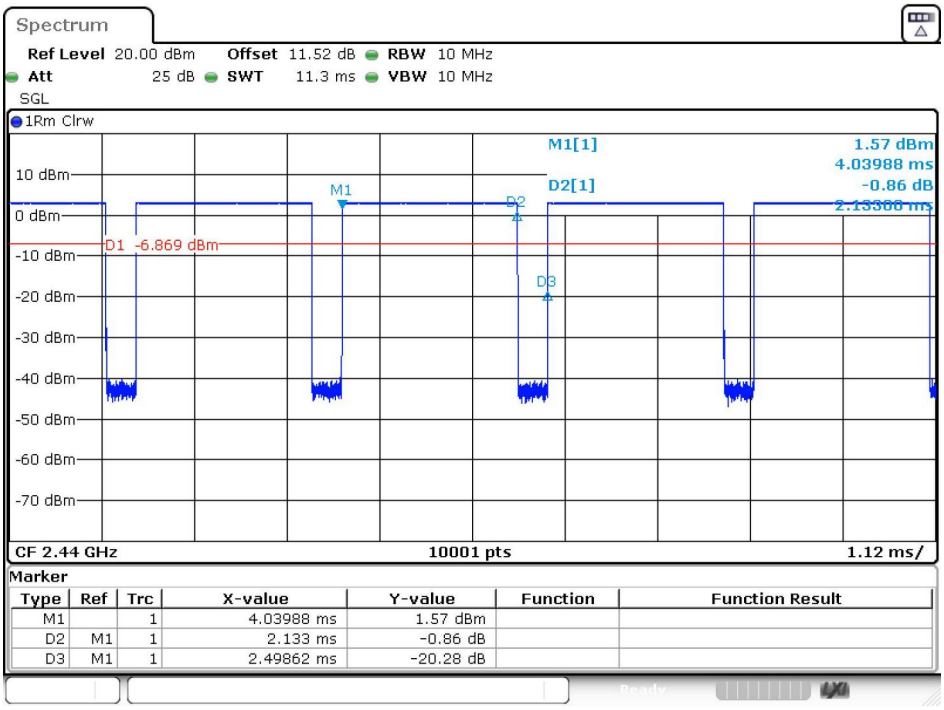
Right:

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	2.133	2.499	85.37	0.8537	0.6869	0.4688
	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	1.082	2.500	43.29	0.4329	3.6361	0.9242
	39	1.081	2.499	43.27	0.4327	3.6381	0.9251

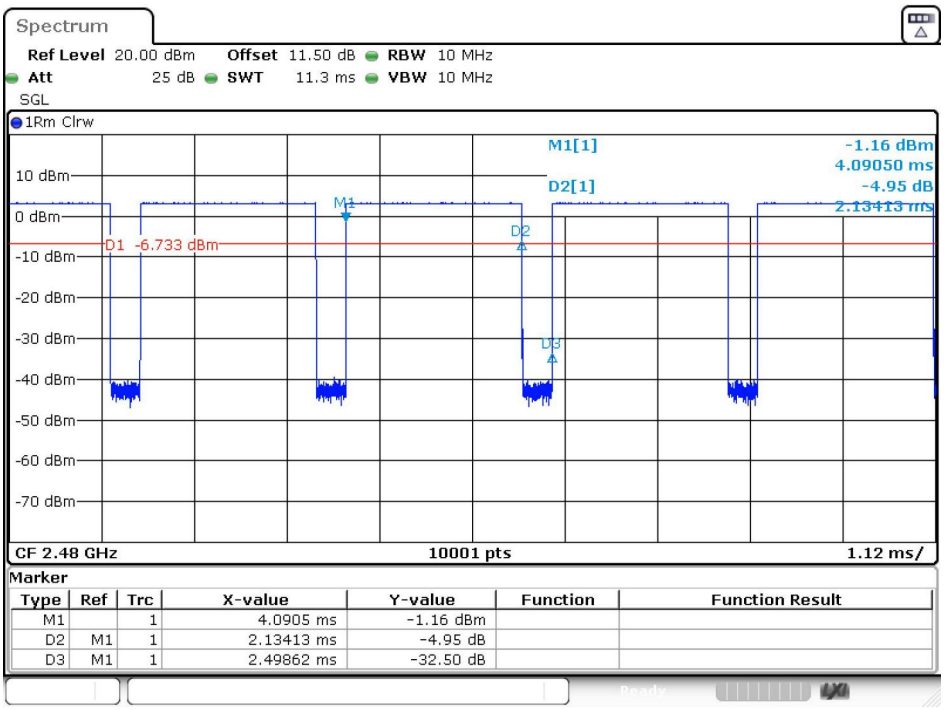
Test Graphs



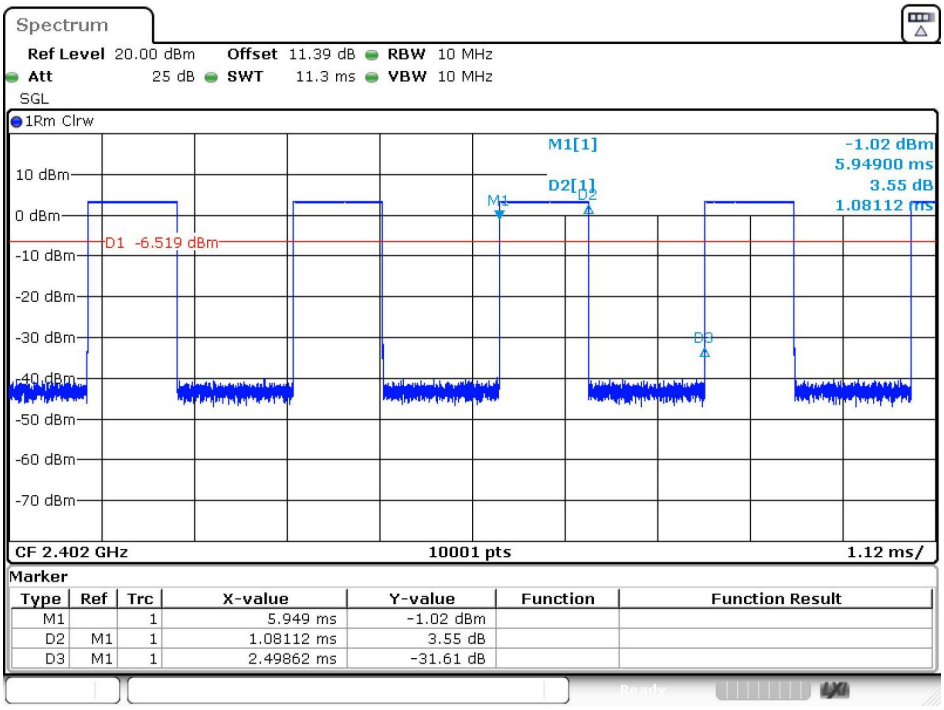
BLE 1M_Channel 0



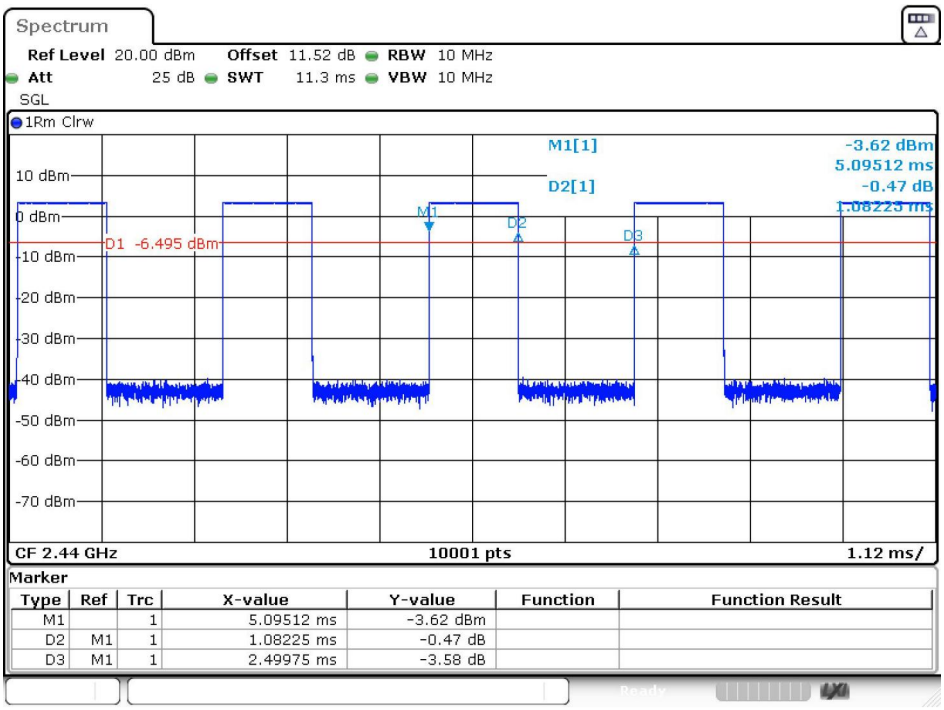
BLE 1M_Channel 19



BLE 1M_Channel 39

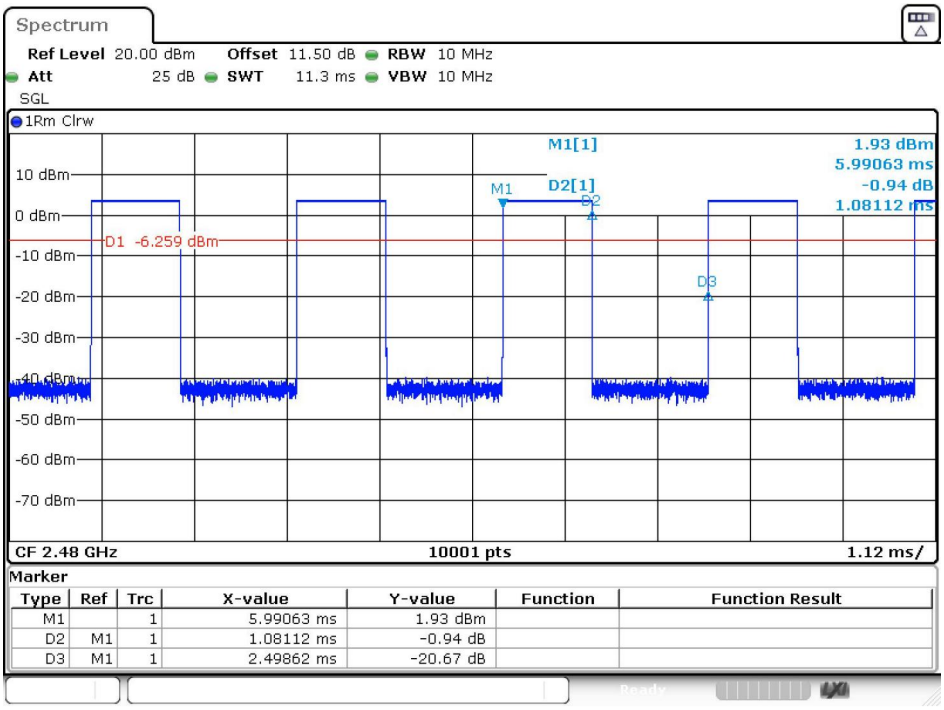


BLE 2M_Channel 0



Date: 4.DEC.2024 17:58:29

BLE 2M_Channel 19



Date: 4.DEC.2024 18:01:43

BLE 2M_Channel 39

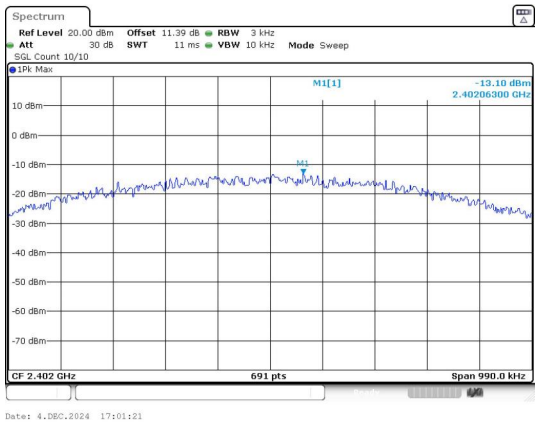
2) Power Spectral Density

Test Result

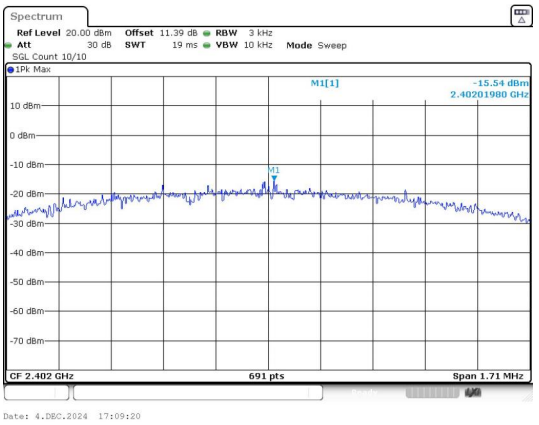
Left：

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-13.100	≤8	PASS
BLE 1M	19	-13.780	≤8	PASS
BLE 1M	39	-13.540	≤8	PASS
BLE 2M	0	-15.540	≤8	PASS
BLE 2M	19	-15.030	≤8	PASS
BLE 2M	39	-15.770	≤8	PASS

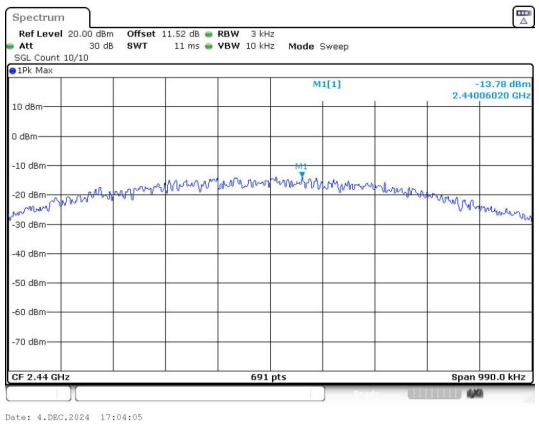
Test Graphs



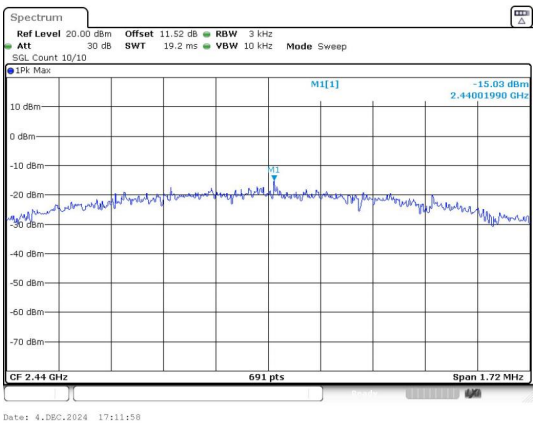
BLE 1M_Channel 0



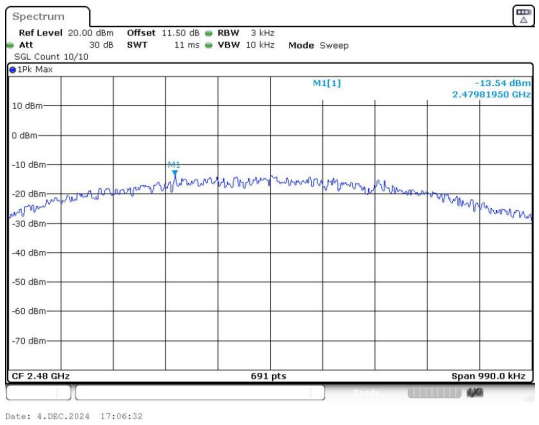
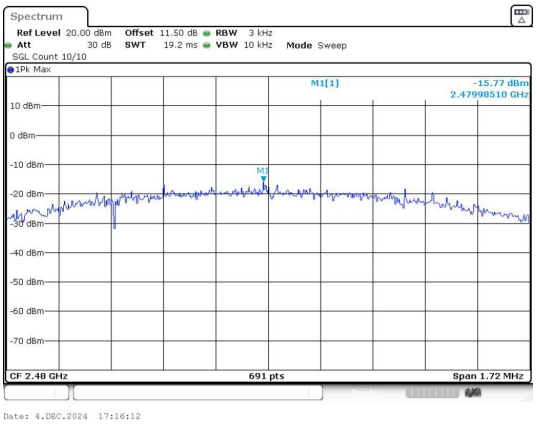
BLE 2M_Channel 0



BLE 1M_Channel 19



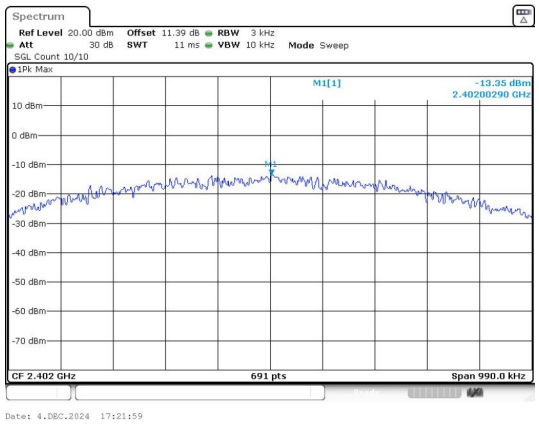
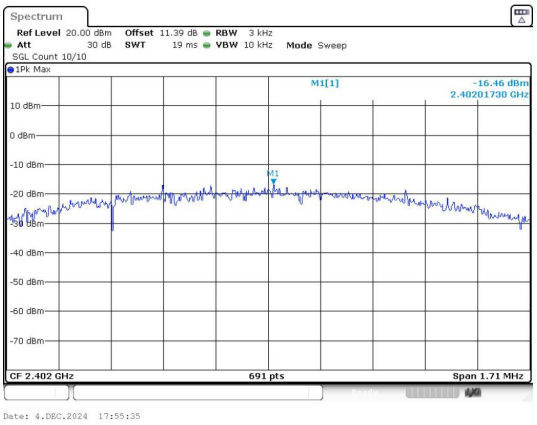
BLE 2M_Channel 19

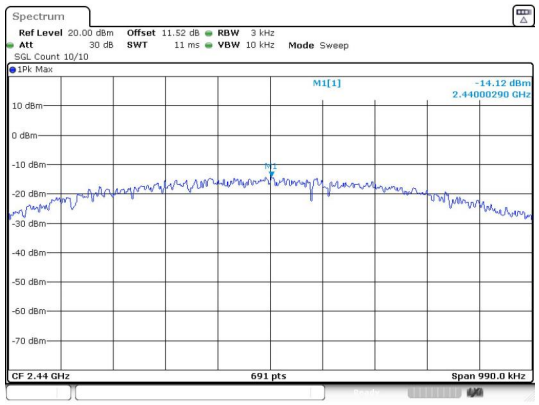
	
BLE 1M_Channel 39	BLE 2M_Channel 39

Right：

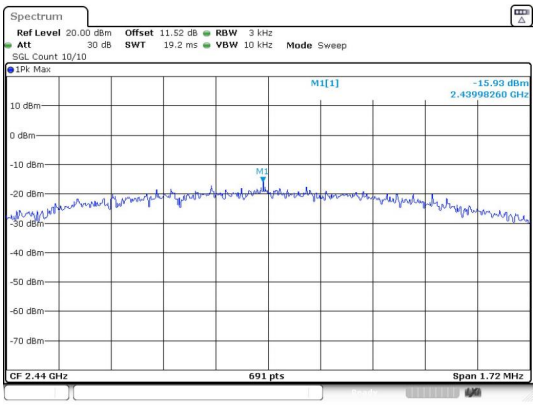
Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-13.350	≤8	PASS
BLE 1M	19	-14.120	≤8	PASS
BLE 1M	39	-13.630	≤8	PASS
BLE 2M	0	-16.460	≤8	PASS
BLE 2M	19	-15.930	≤8	PASS
BLE 2M	39	-16.010	≤8	PASS

Test Graphs

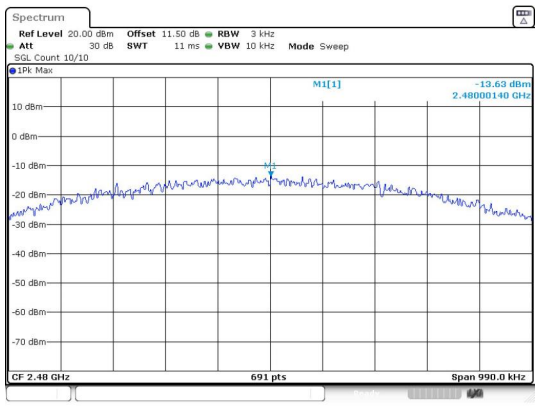
	
BLE 1M_Channel 0	BLE 2M_Channel 0



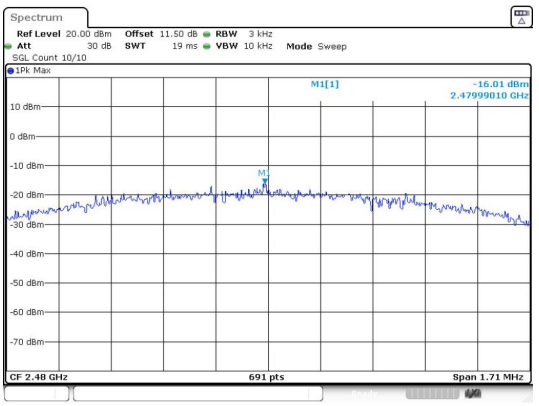
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



BLE 2M_Channel 39

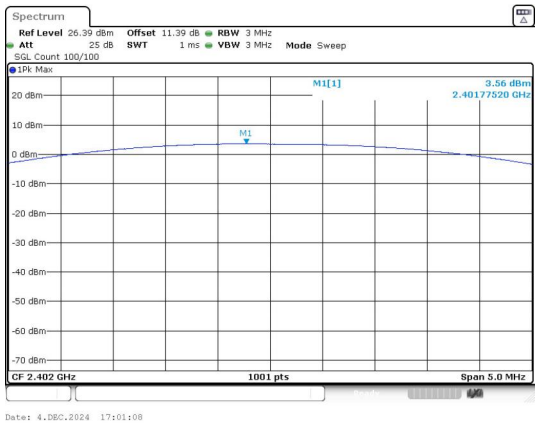
3) Conducted Output Power

Test Result

Left：

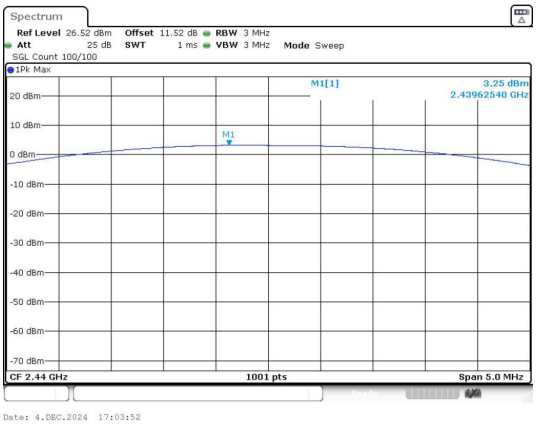
Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	3.56	2.27	≤30	PASS
	19	3.25	2.11	≤30	PASS
	39	3.40	2.19	≤30	PASS
BLE 2M	0	3.72	2.36	≤30	PASS
	19	3.66	2.32	≤30	PASS
	39	3.89	2.45	≤30	PASS

Test Graphs



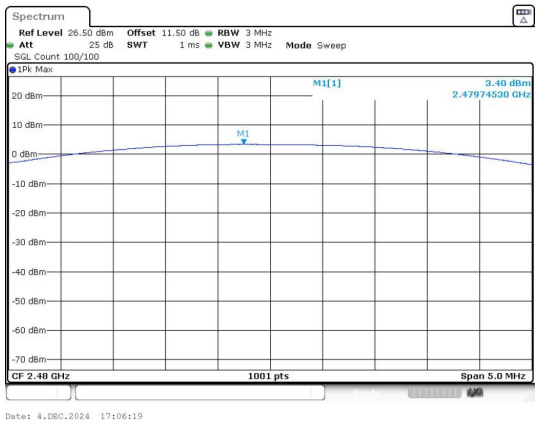
Peak Output Power

BLE 1M_Channel 0



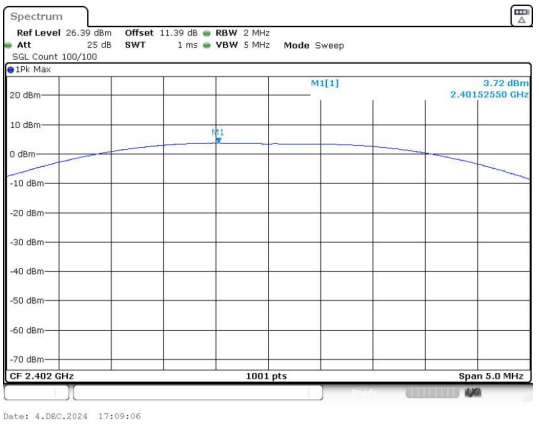
Peak Output Power

BLE 1M_Channel 19



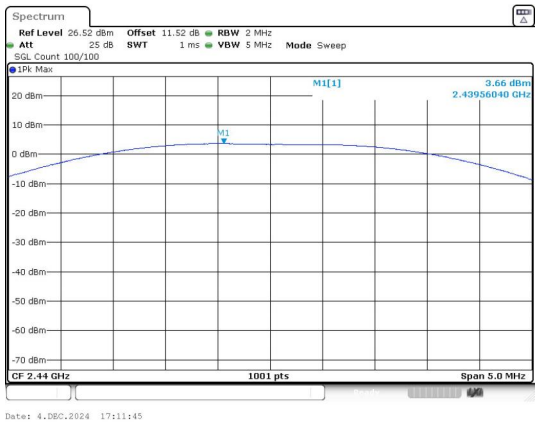
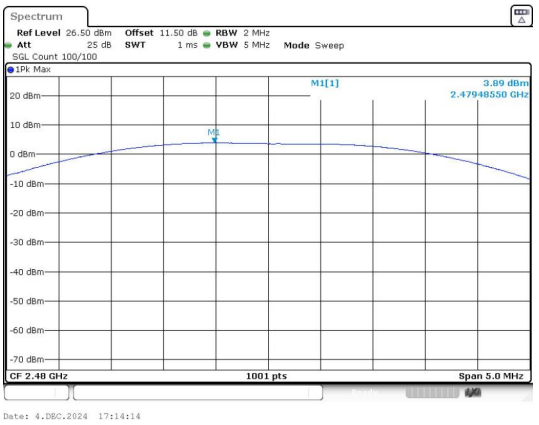
Peak Output Power

BLE 1M_Channel 39



Peak Output Power

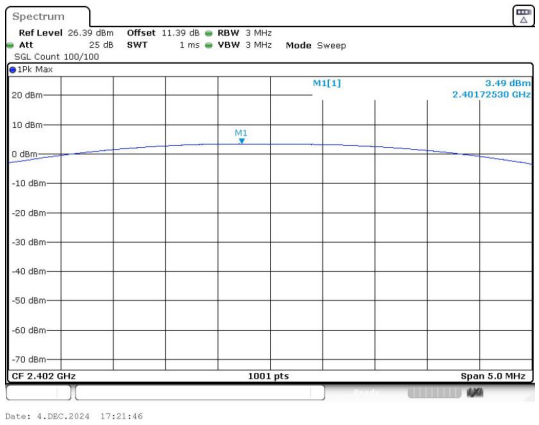
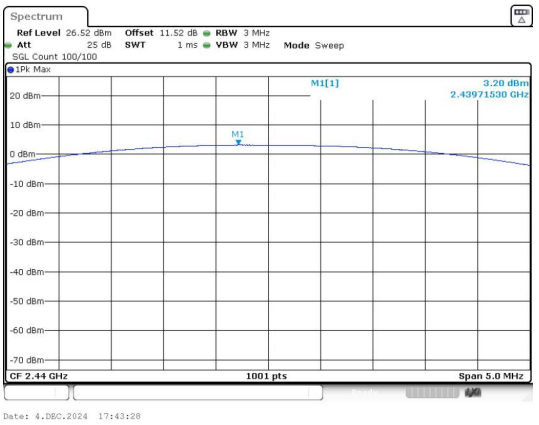
BLE 2M_Channel 0

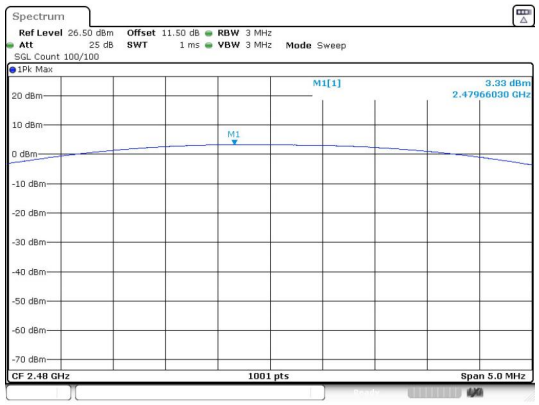
	
Peak Output Power BLE 2M_Channel 19	Peak Output Power BLE 2M_Channel 39

Right：

Mode	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
BLE 1M	0	3.49	2.23	≤30	PASS
	19	3.20	2.09	≤30	PASS
	39	3.33	2.15	≤30	PASS
BLE 2M	0	3.64	2.31	≤30	PASS
	19	3.55	2.26	≤30	PASS
	39	3.78	2.39	≤30	PASS

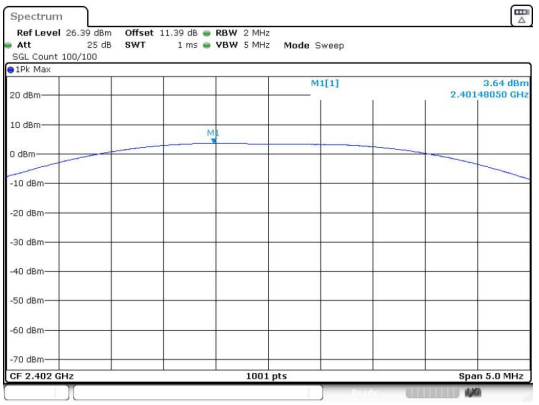
Test Graphs

	
Peak Output Power BLE 1M_Channel 0	Peak Output Power BLE 1M_Channel 19



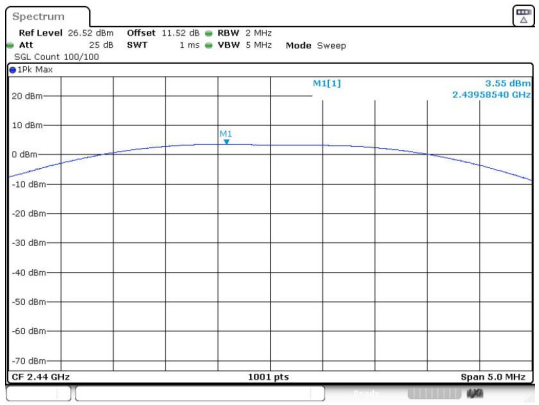
Peak Output Power

BLE 1M_Channel 39



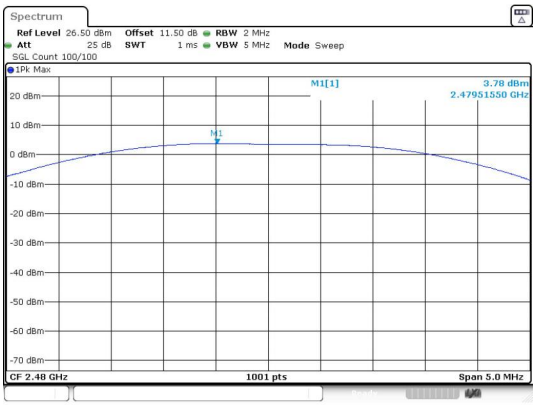
Peak Output Power

BLE 2M_Channel 0



Peak Output Power

BLE 2M_Channel 19



Peak Output Power

BLE 2M_Channel 39

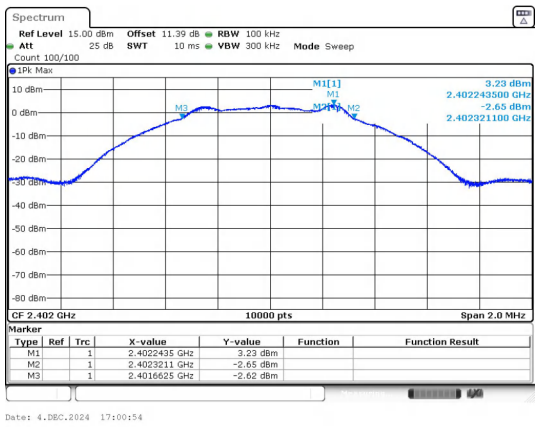
4) 6dB Bandwidth

Test Result

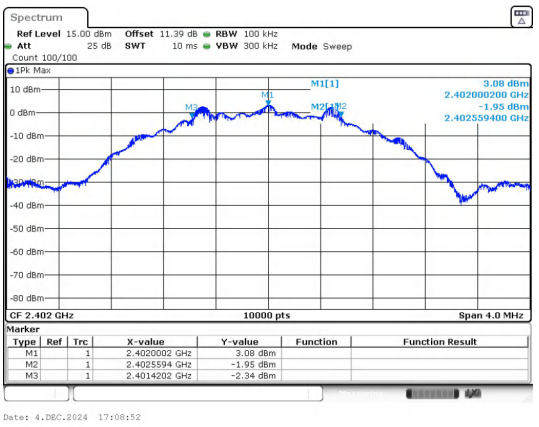
Left：

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	1.140		PASS
	19	2440	1.150		PASS
	39	2480	1.150		PASS

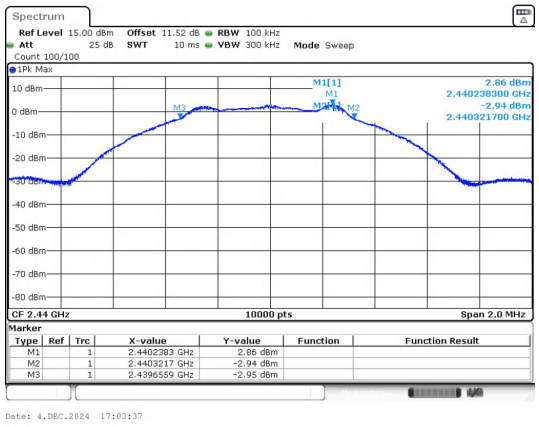
Test Graphs



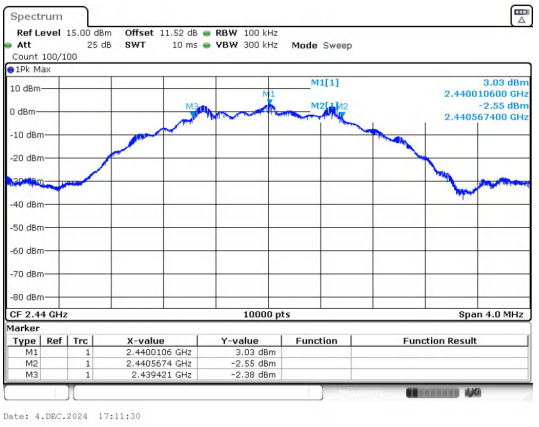
BLE 1M_Channel 0



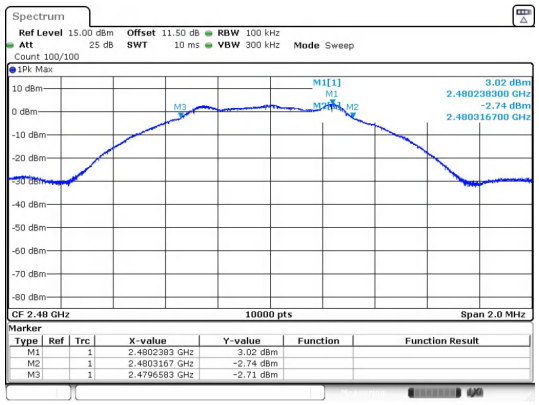
BLE 2M_Channel 0



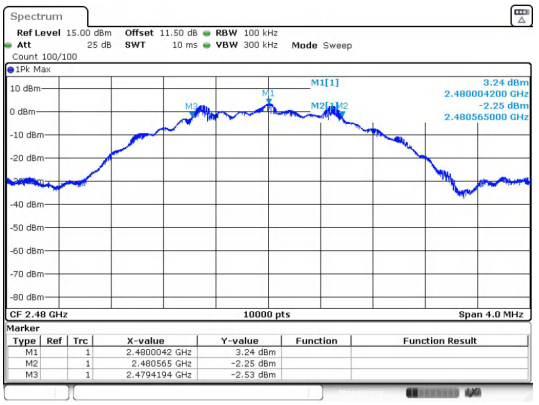
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39

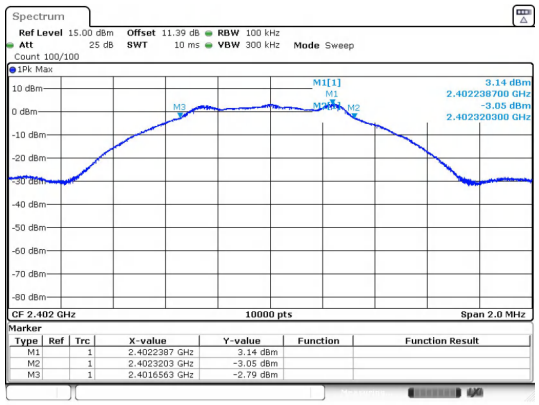


BLE 2M_Channel 39

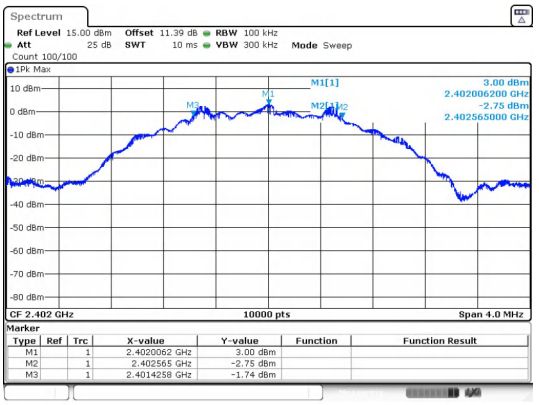
Right：

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

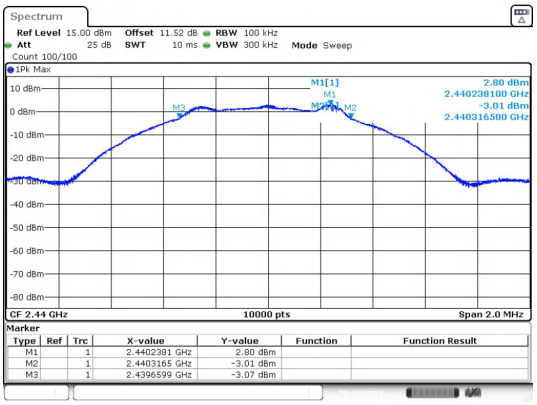
Test Graphs



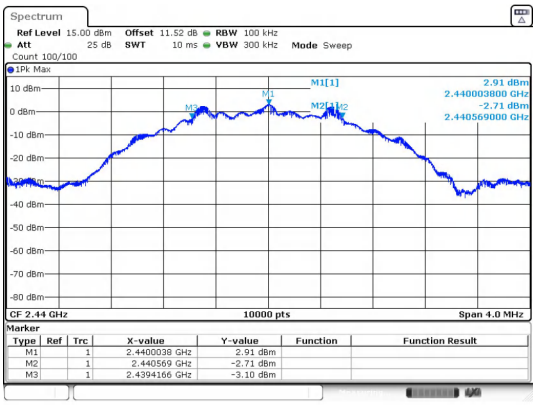
BLE 1M_Channel 0



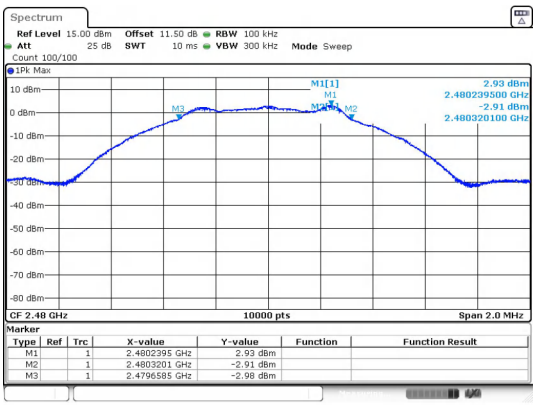
BLE 2M_Channel 0



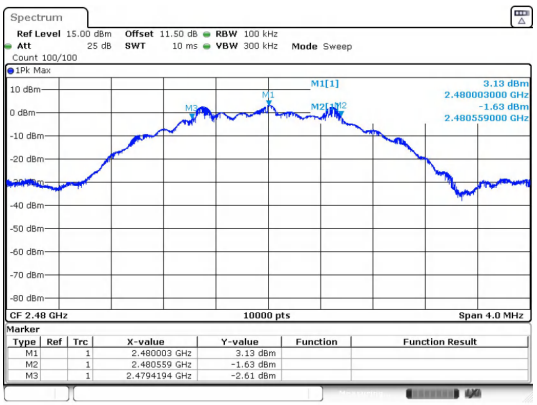
BLE 1M_Channel 19



BLE 2M_Channel 19



BLE 1M_Channel 39



BLE 2M_Channel 39

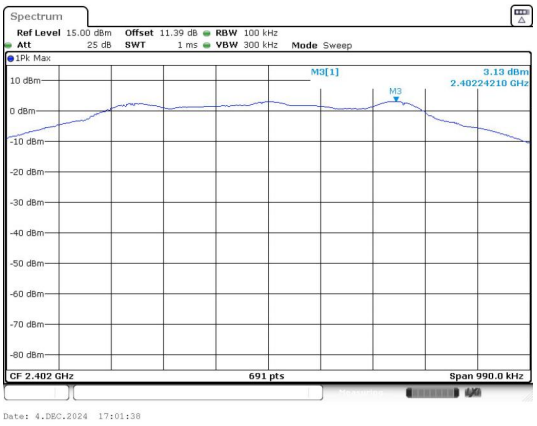
5) Conducted Out Of Band Emission

Test Result

Left:

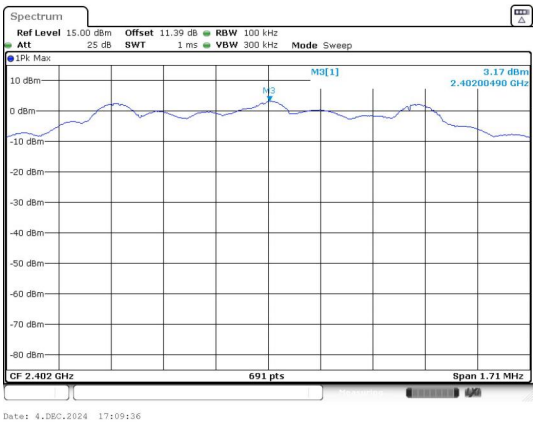
Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2398.99	-37.471	-16.87	-20.601	PASS
		2400.00	-46.220	-16.87	-29.350	PASS
		9602.20	-42.098	-16.87	-25.228	PASS
	19	9753.73	-41.675	-17.16	-24.515	PASS
	39	2483.50	-42.450	-17.0	-25.450	PASS
		9914.37	-40.564	-17.0	-23.564	PASS
BLE 2M	0	2400.00	-28.330	-16.83	-11.500	PASS
		9602.25	-42.929	-16.83	-26.099	PASS
	19	9753.73	-41.407	-16.94	-24.467	PASS
	39	2483.50	-49.420	-16.74	-32.680	PASS
		9914.37	-40.921	-16.74	-24.181	PASS

Test Graphs



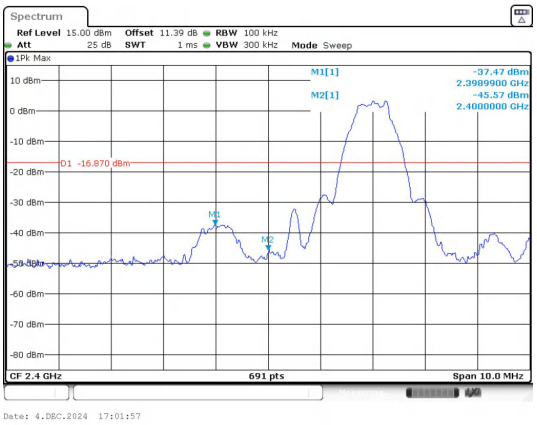
In-Band Reference Level

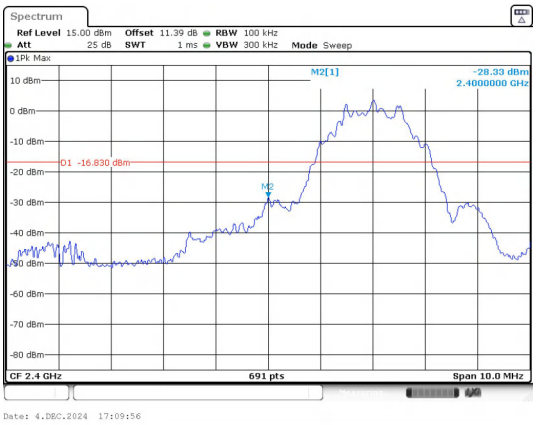
BLE 1M_Channel 0

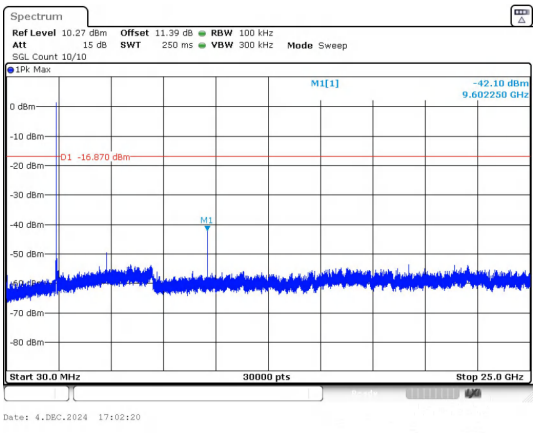
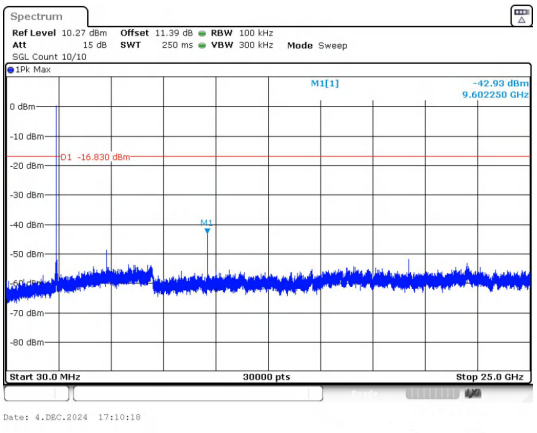
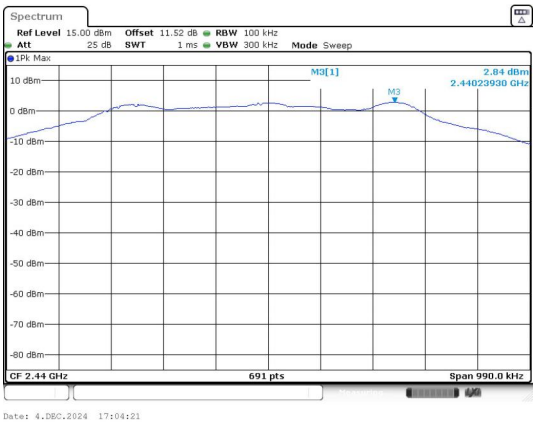
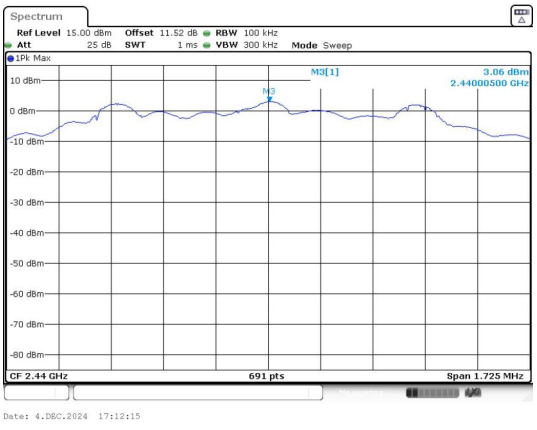
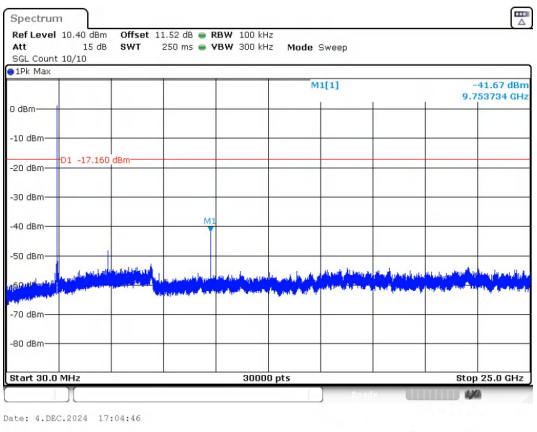
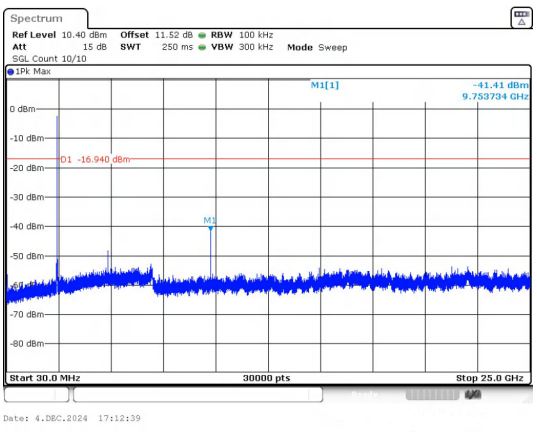


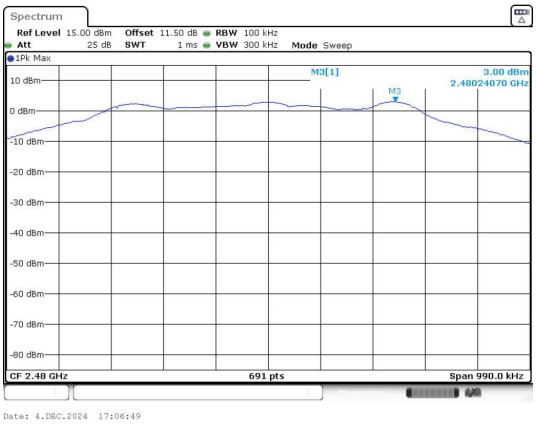
In-Band Reference Level

BLE 2M_Channel 0



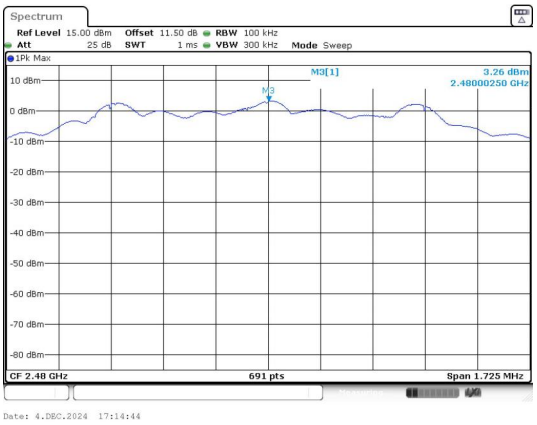


Out Of Band Emission BLE 1M_Channel 0	Out Of Band Emission BLE 2M_Channel 0
	
30.0 MHz - 25000.0 MHz BLE 1M_Channel 0	**30.0 MHz - 25000.0 MHz BLE 2M_Channel 0**
	
In-Band Reference Level BLE 1M_Channel 19	**In-Band Reference Level BLE 2M_Channel 19**
	
30.0 MHz - 25000.0 MHz BLE 1M_Channel 19	**30.0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



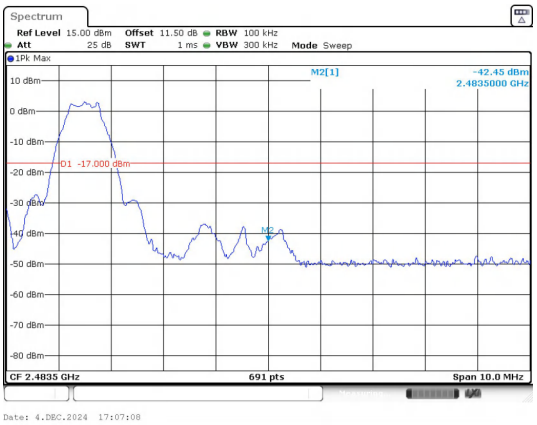
In-Band Reference Level

BLE 1M_Channel 39



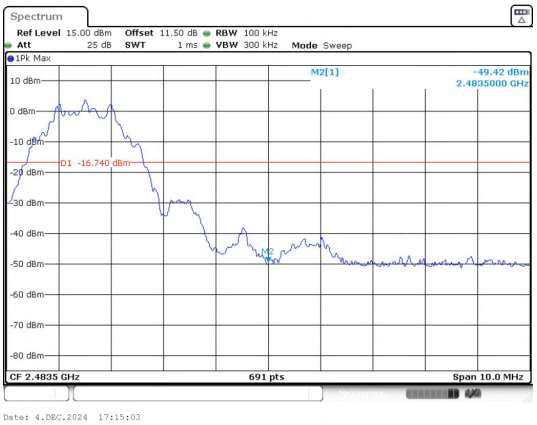
In-Band Reference Level

BLE 2M_Channel 39



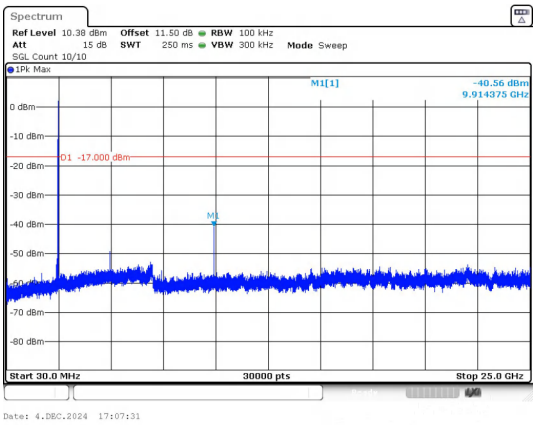
Out Of Band Emission

BLE 1M_Channel 39



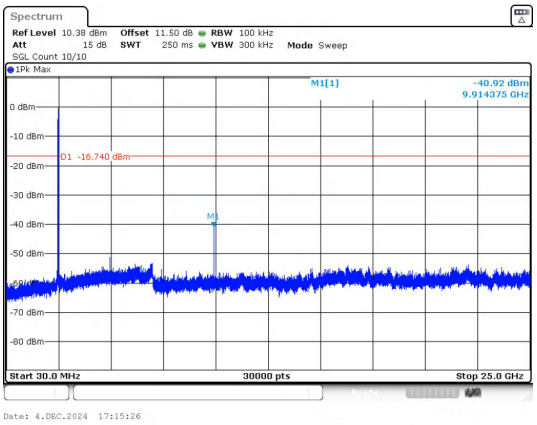
Out Of Band Emission

BLE 2M_Channel 39



30.0 MHz - 25000.0 MHz

BLE 1M_Channel 39



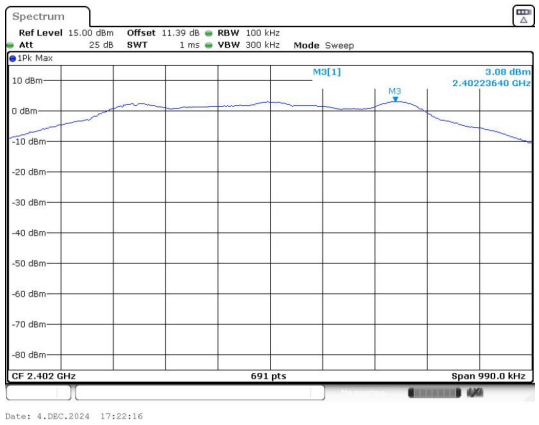
30.0 MHz - 25000.0 MHz

BLE 2M_Channel 39

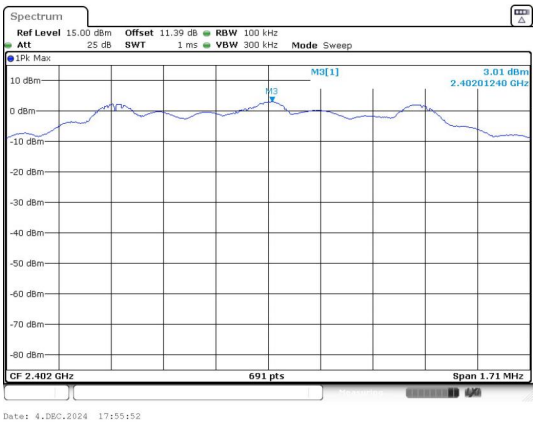
Right:

Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2398.97	-37.256	-16.92	-20.336	PASS
		2400.00	-46.880	-16.92	-29.960	PASS
		9602.20	-42.214	-16.92	-25.294	PASS
	19	9753.73	-41.650	-17.22	-24.430	PASS
	39	2483.50	-42.750	-17.06	-25.690	PASS
		9914.37	-41.089	-17.06	-24.029	PASS
BLE 2M	0	2400.00	-28.240	-16.99	-11.250	PASS
		9602.25	-42.886	-16.99	-25.896	PASS
	19	9753.73	-42.194	-17.05	-25.144	PASS
	39	2483.50	-48.170	-16.84	-31.330	PASS
		9914.37	-40.941	-16.84	-24.101	PASS

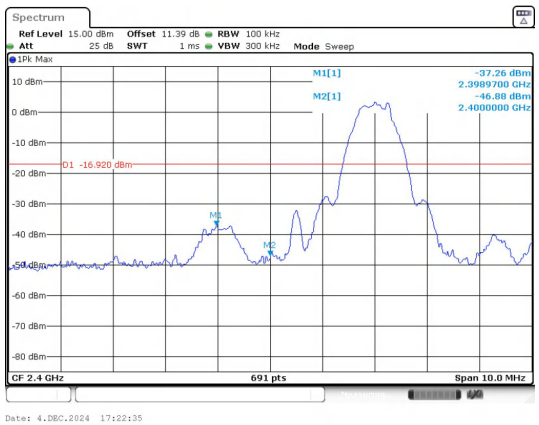
Test Graphs



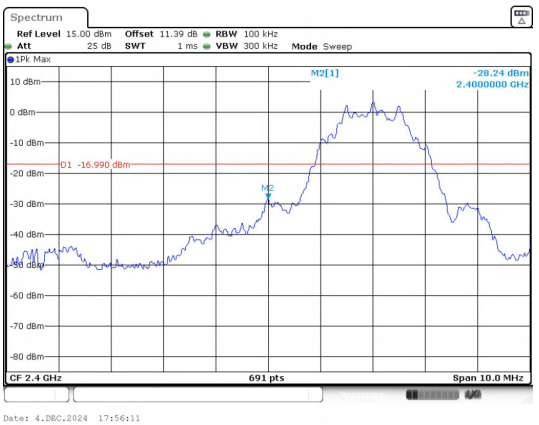
In-Band Reference Level
BLE 1M_Channel 0



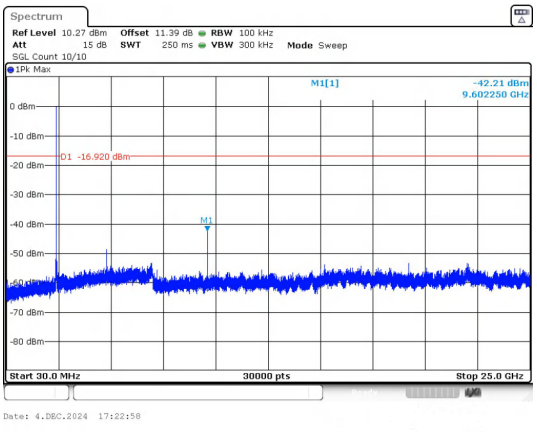
In-Band Reference Level
BLE 2M_Channel 0



Out Of Band Emission
BLE 1M_Channel 0

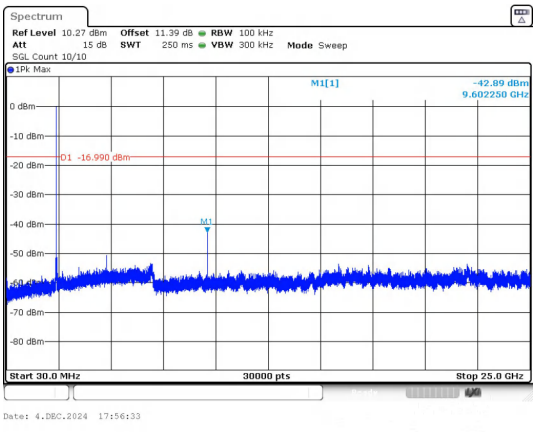


Out Of Band Emission
BLE 2M_Channel 0



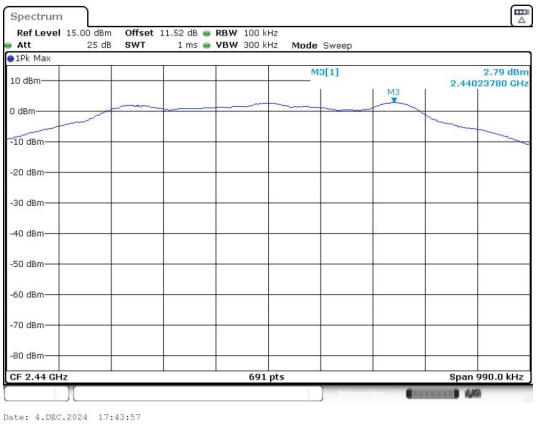
30.0 MHz - 25000.0 MHz

BLE 1M_Channel 0



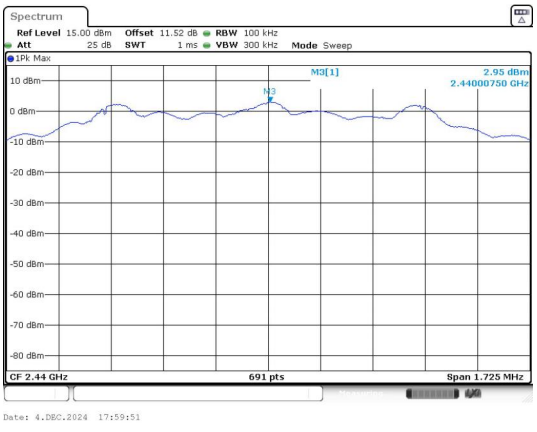
30.0 MHz - 25000.0 MHz

BLE 2M_Channel 0



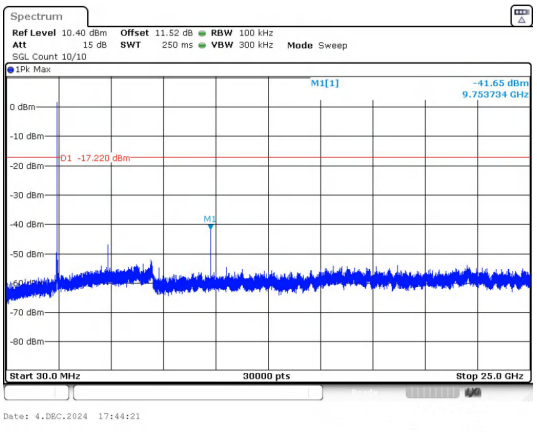
In-Band Reference Level

BLE 1M_Channel 19



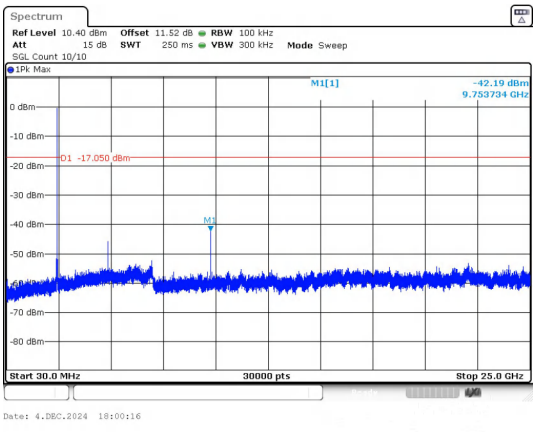
In-Band Reference Level

BLE 2M_Channel 19



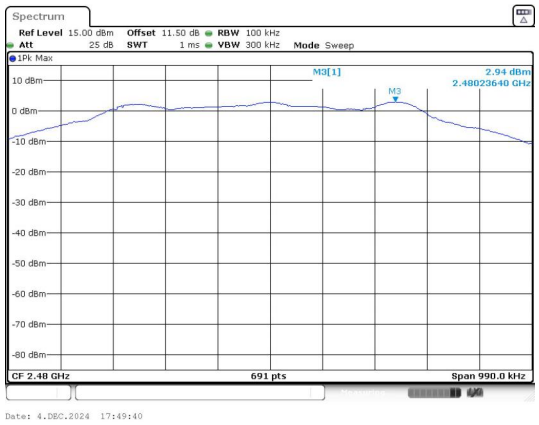
30.0 MHz - 25000.0 MHz

BLE 1M_Channel 19



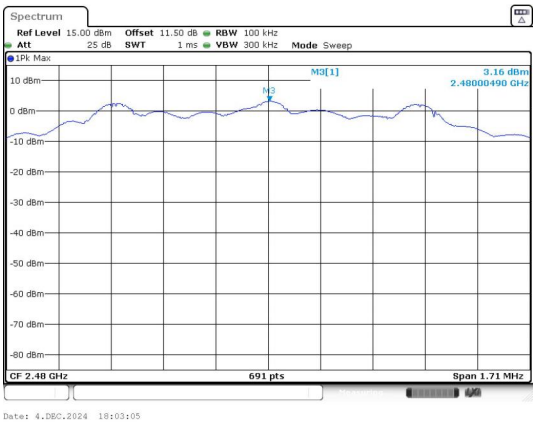
30.0 MHz - 25000.0 MHz

BLE 2M_Channel 19



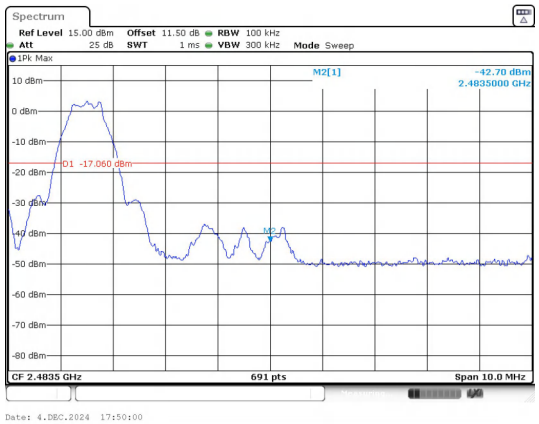
In-Band Reference Level

BLE 1M_Channel 39



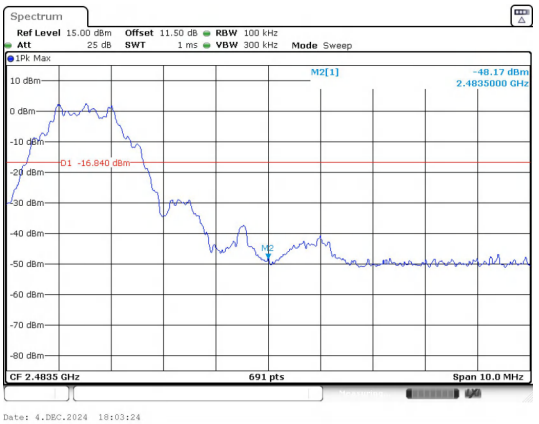
In-Band Reference Level

BLE 2M_Channel 39



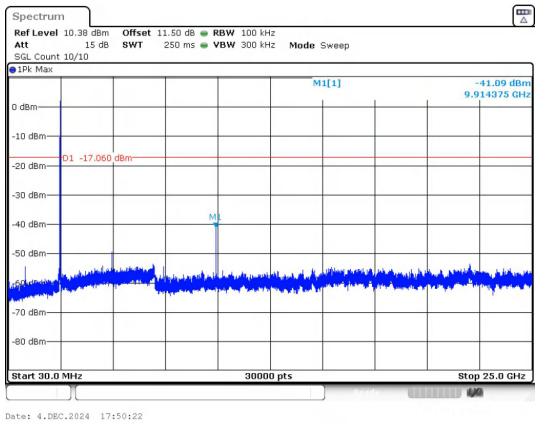
Out Of Band Emission

BLE 1M_Channel 39



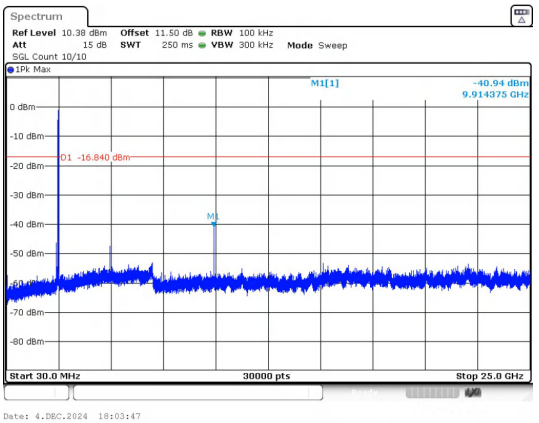
Out Of Band Emission

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-----