



Appendix B

RF Test Data for BT (BLE) (Conducted Measurement)

Product Name: M5Stack Core v2.7



Trade Mark: M5STACK

Test Model: K001-V27

Environmental Conditions

Temperature:	25.2° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung



Contents

	Page
COVER PAGE	
1 Duty Cycle	3
1.1 Test Result	3
1.2 Test Graphs	4
2 Maximum Conducted Output Power	6
2.1 Test Result	6
2.2 Test Graphs	7
3 -6dB Bandwidth	9
3.1 Test Result	9
3.2 Test Graphs	10
4 Maximum Power Spectral Density Level	12
4.1 Test Result	12
4.2 Test Graphs	13
5 Band Edge	15
5.1 Test Result	15
5.2 Test Graphs	16
6 Conducted RF Spurious Emission	18
6.1 Test Result	18
6.2 Test Graphs	19
7 Restrict Band	22
7.1 Test Result	22
7.2 Test Graphs	23

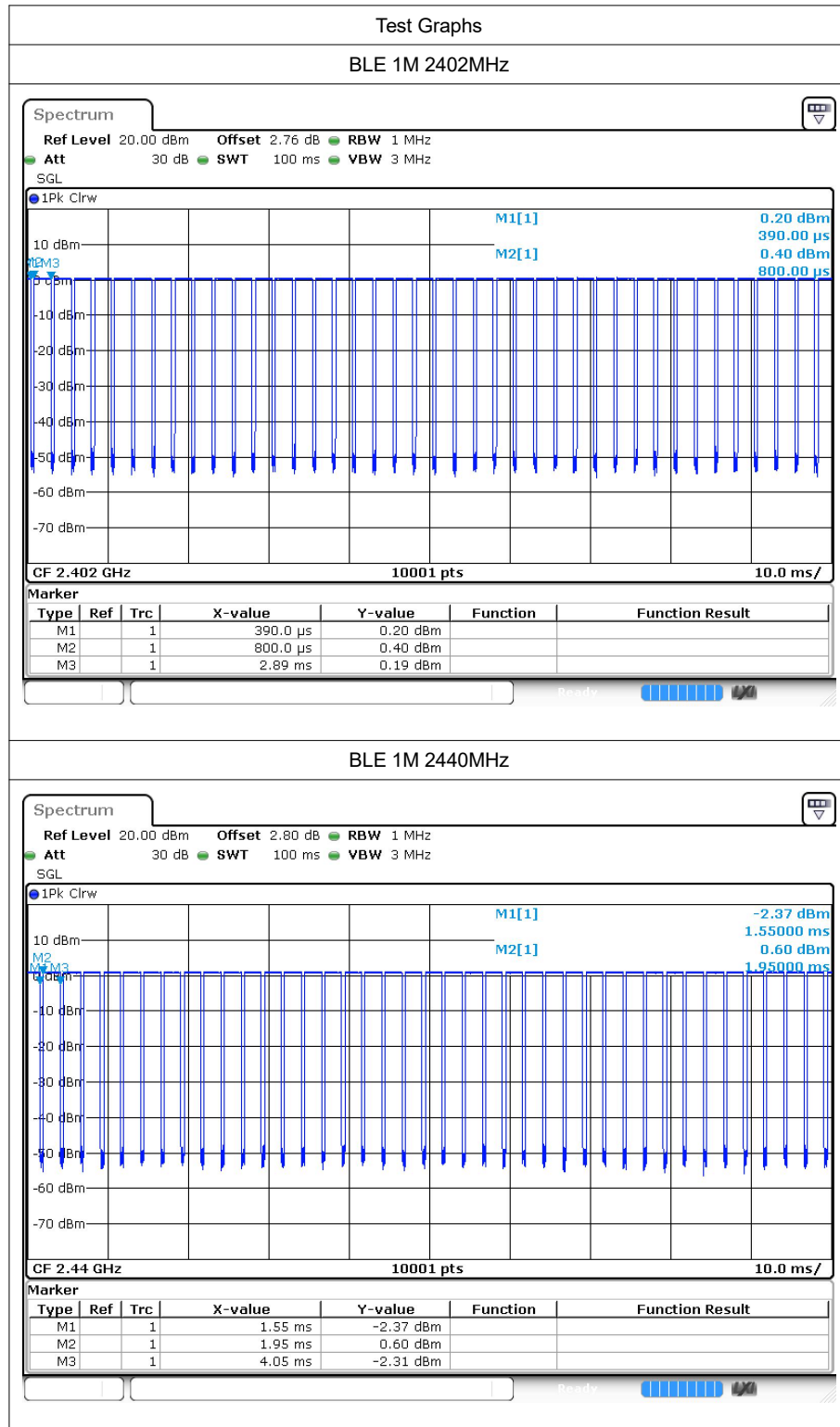


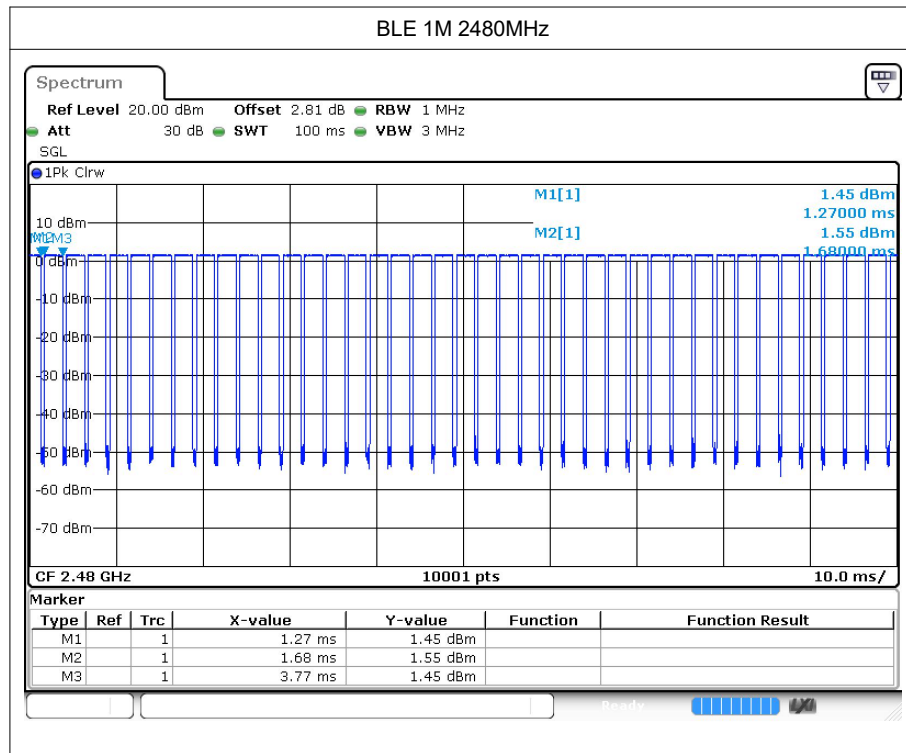
1 Duty Cycle

1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor	1/T (kHz)
BLE 1M	2402	84	0.76	0.48
BLE 1M	2440	84.4	0.74	0.48
BLE 1M	2480	84	0.76	0.48

1.2 Test Graphs





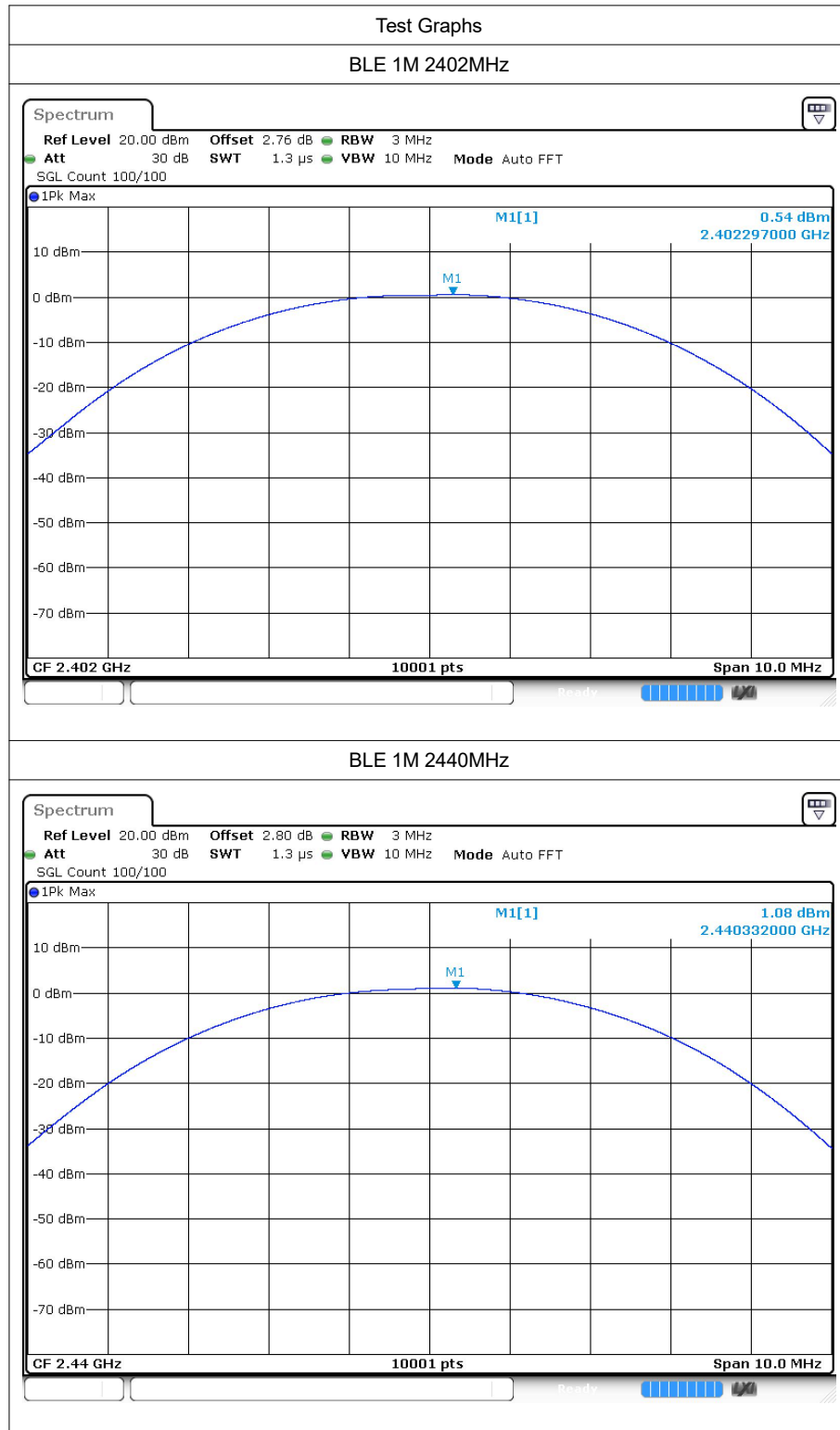


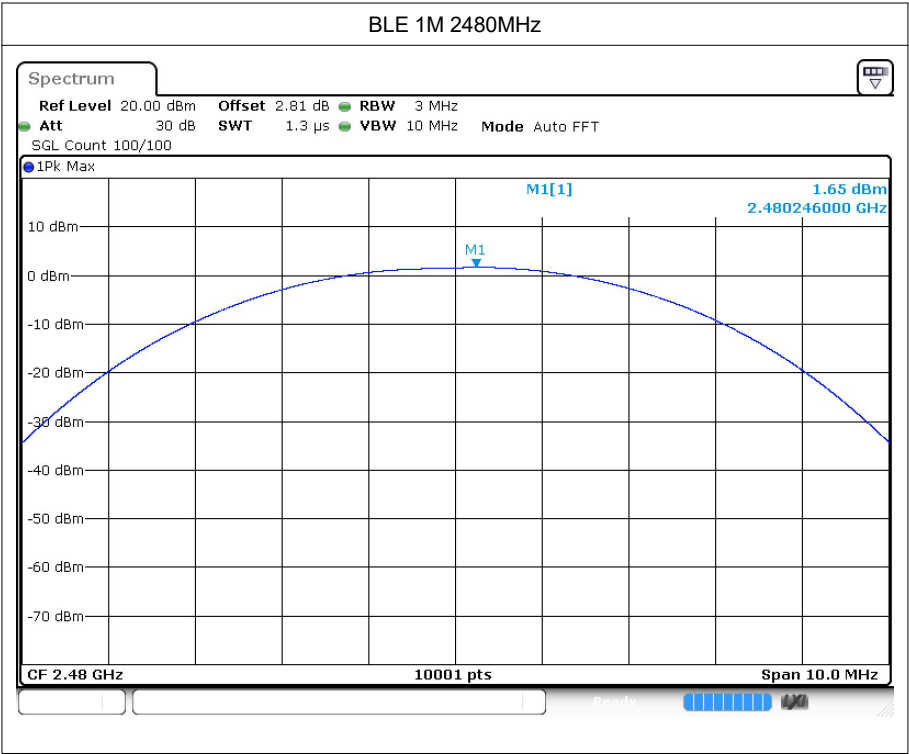
2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
BLE 1M	2402	0.54	30	Pass
BLE 1M	2440	1.08	30	Pass
BLE 1M	2480	1.65	30	Pass

2.2 Test Graphs





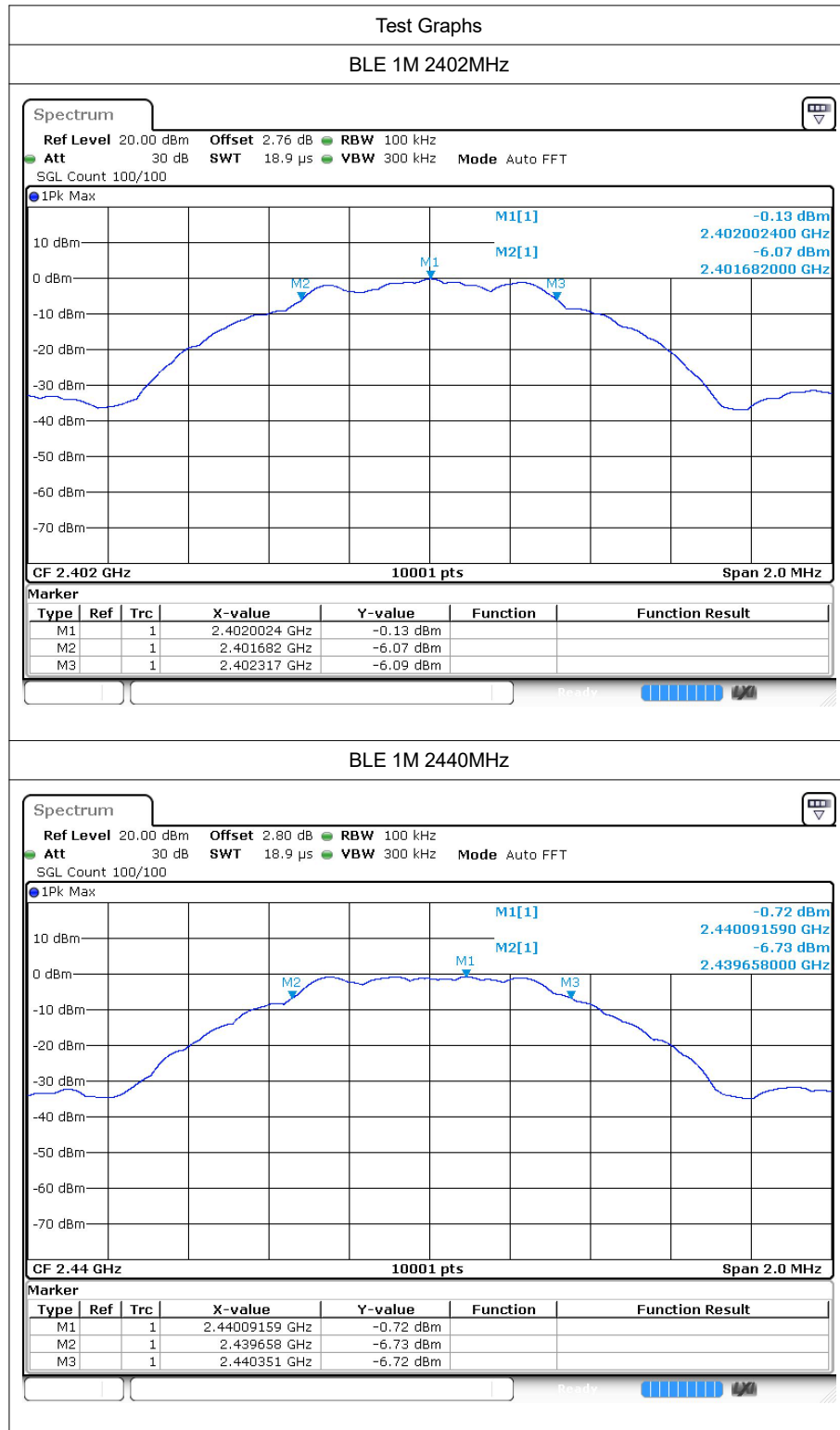


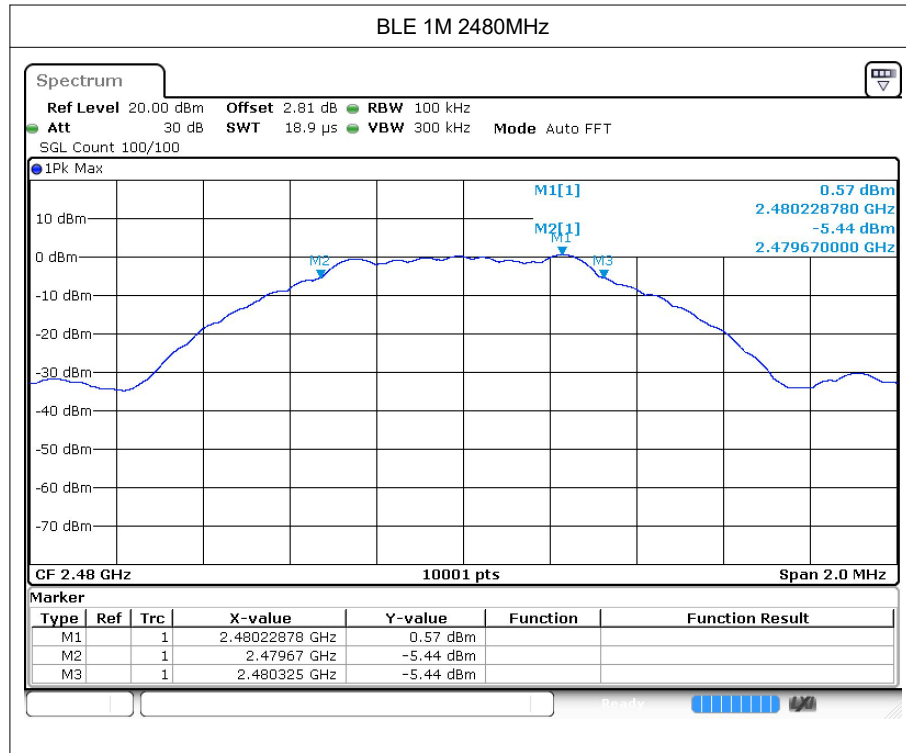
3 -6dB Bandwidth

3.1 Test Result

Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
BLE 1M	2402	0.636	0.5	Pass
BLE 1M	2440	0.693	0.5	Pass
BLE 1M	2480	0.655	0.5	Pass

3.2 Test Graphs



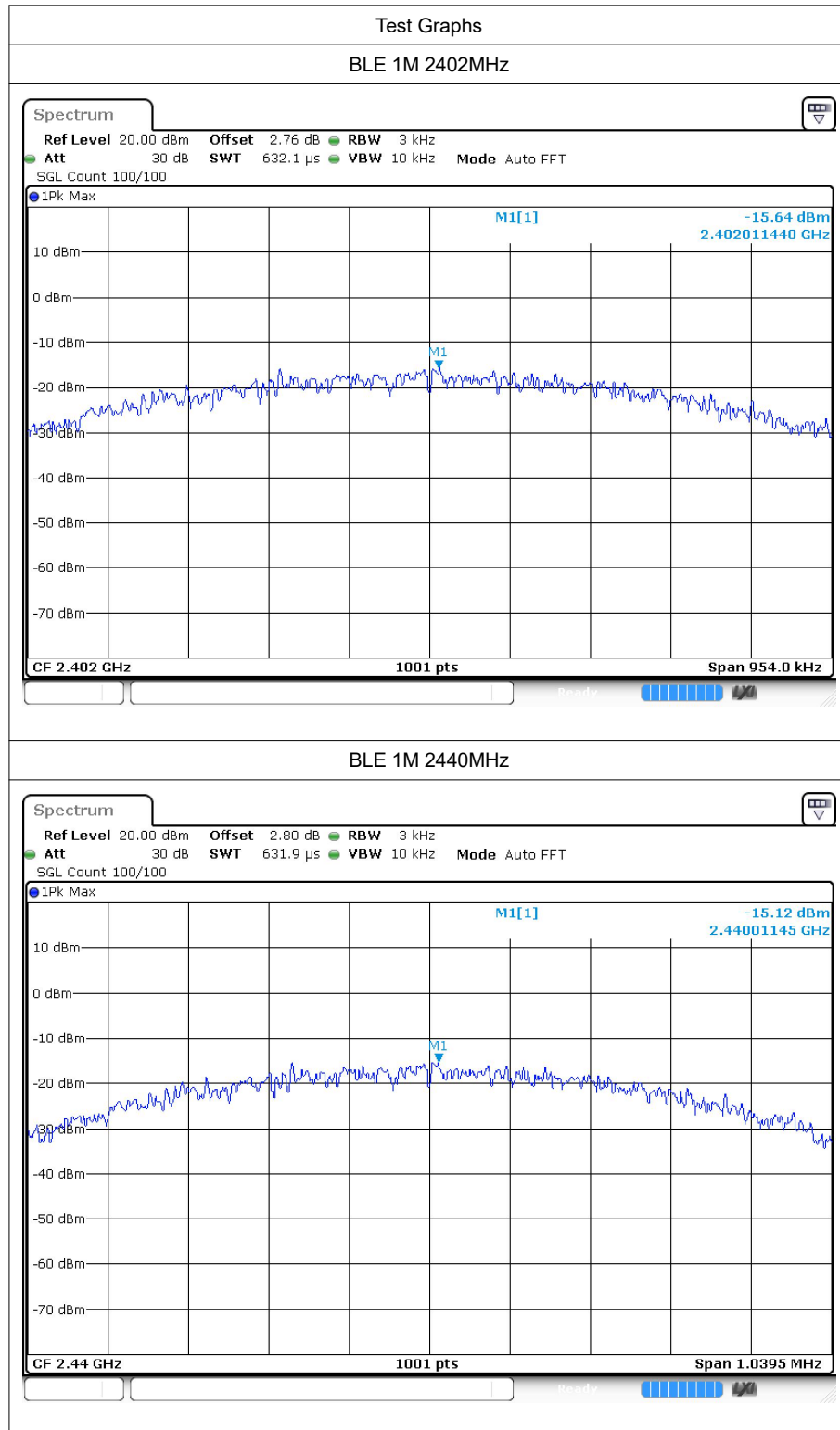


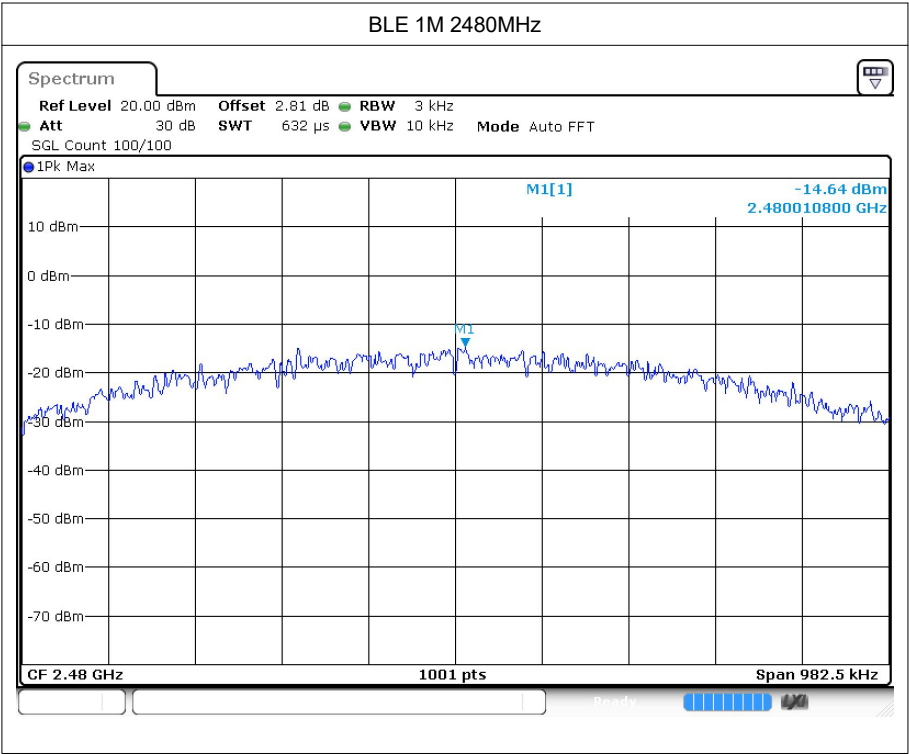
4 Maximum Power Spectral Density Level

4.1 Test Result

Mode	Frequency (MHz)	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
BLE 1M	2402	-15.64	≤8	Pass
BLE 1M	2440	-15.12	≤8	Pass
BLE 1M	2480	-14.64	≤8	Pass

4.2 Test Graphs





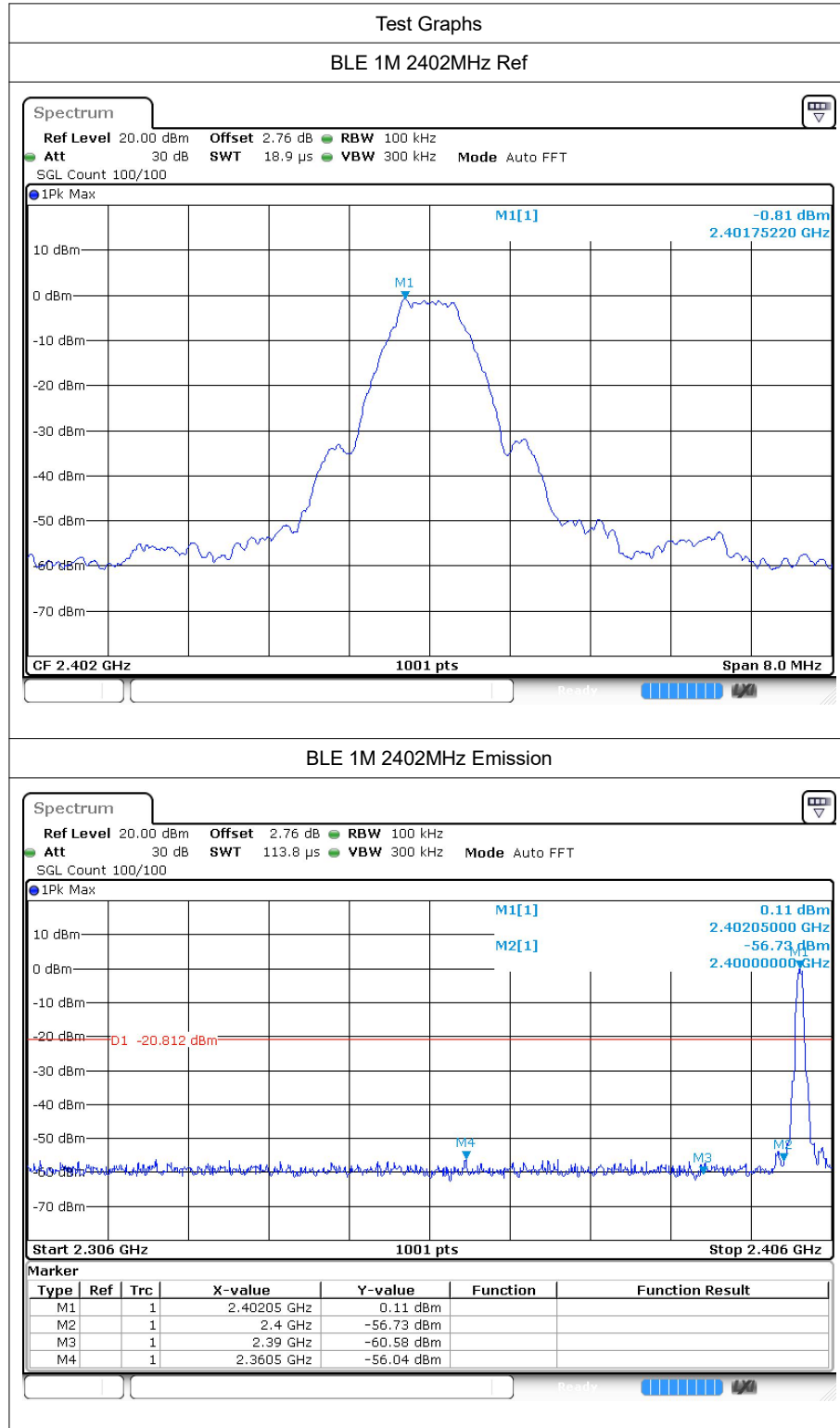


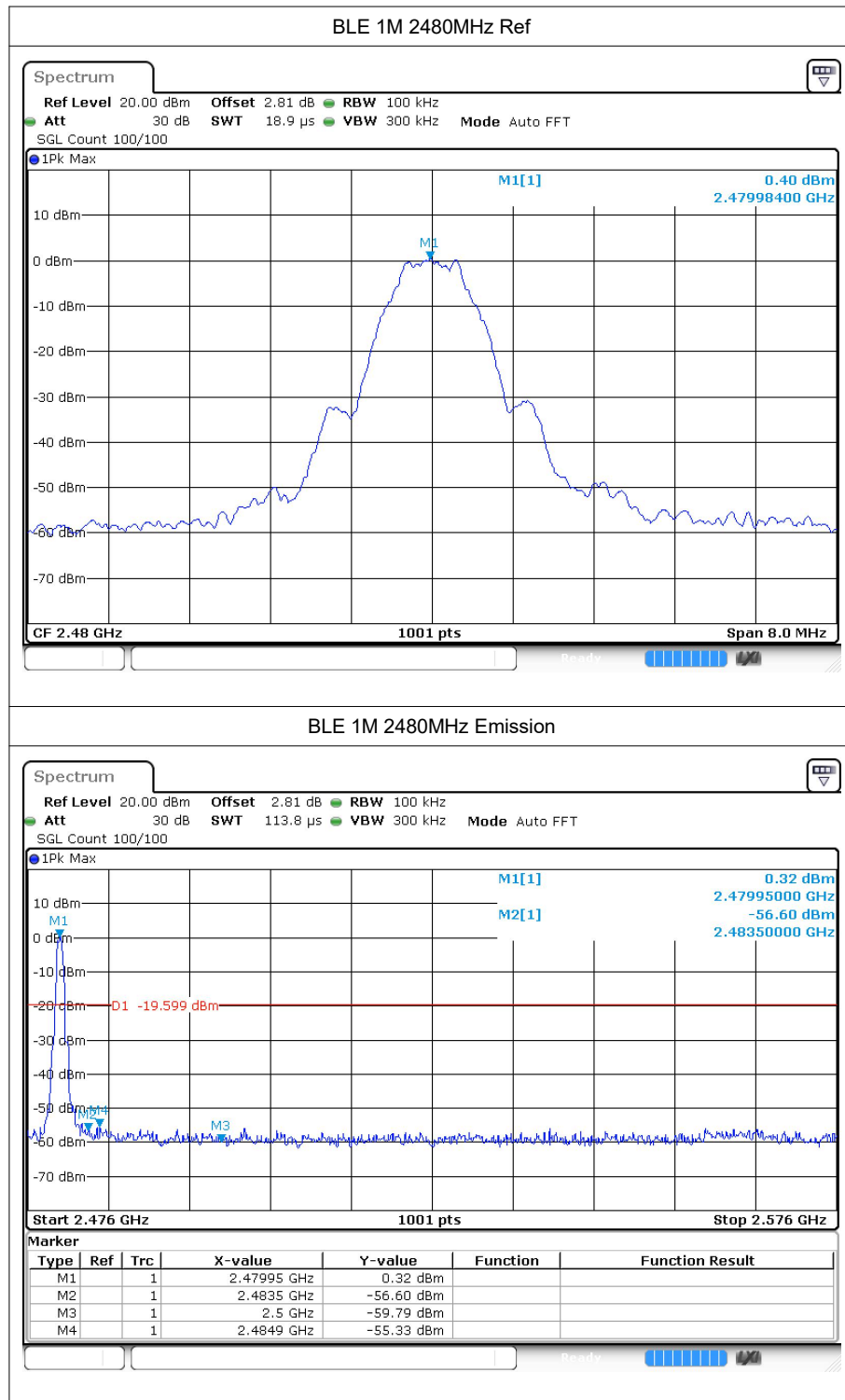
5 Band Edge

5.1 Test Result

Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
BLE 1M	2402	-55.23	-20	Pass
BLE 1M	2480	-55.73	-20	Pass

5.2 Test Graphs





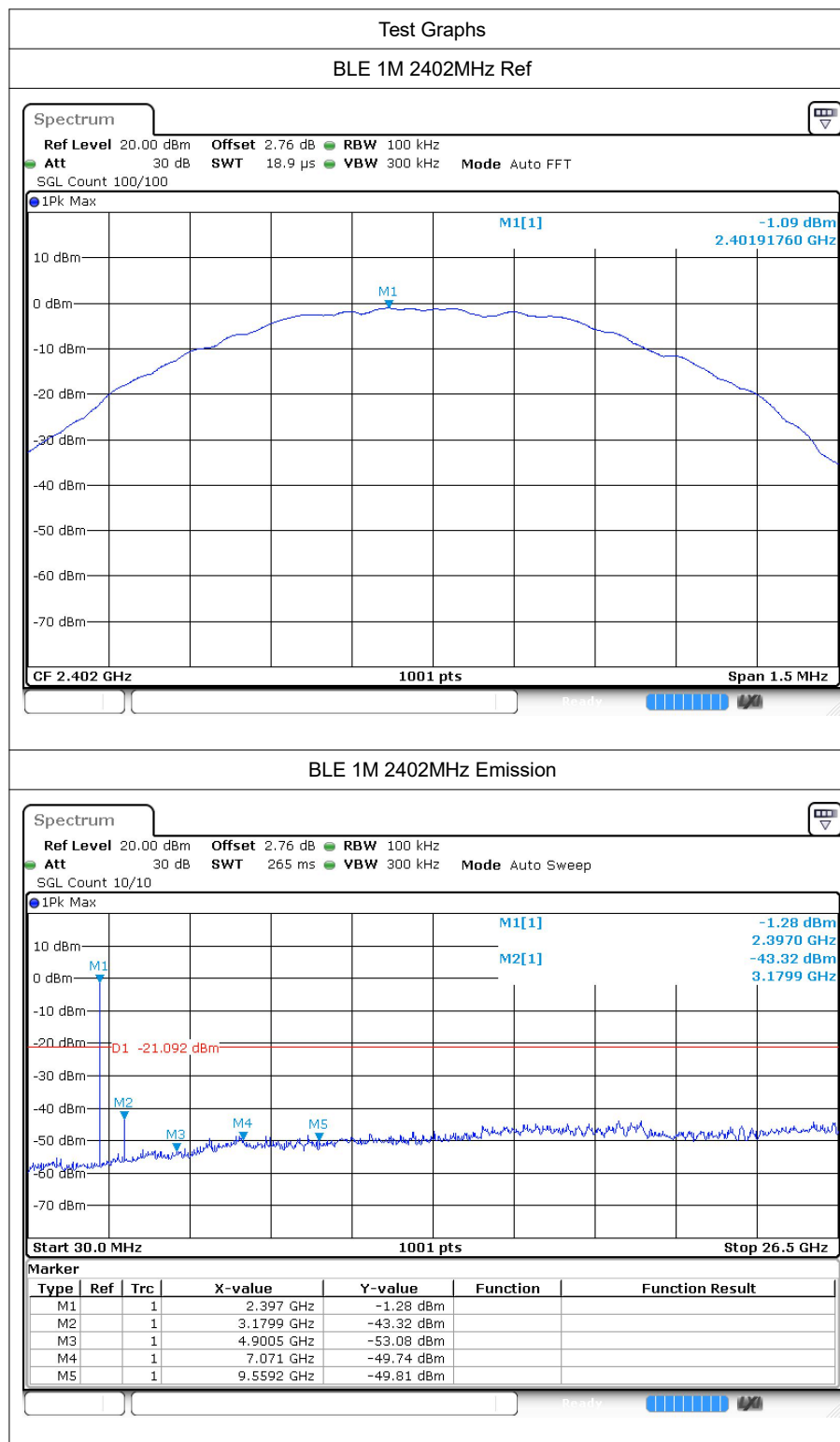


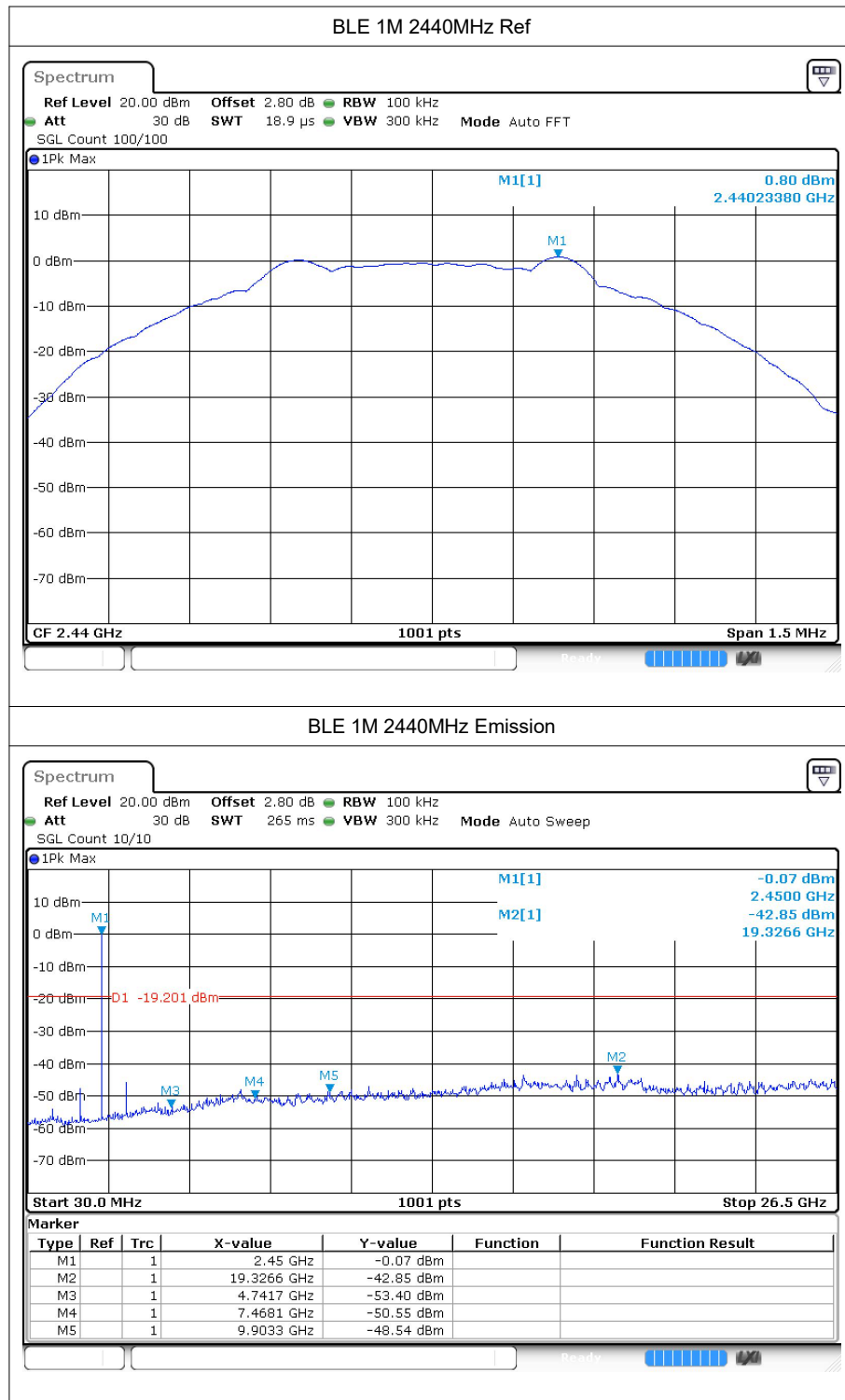
6 Conducted RF Spurious Emission

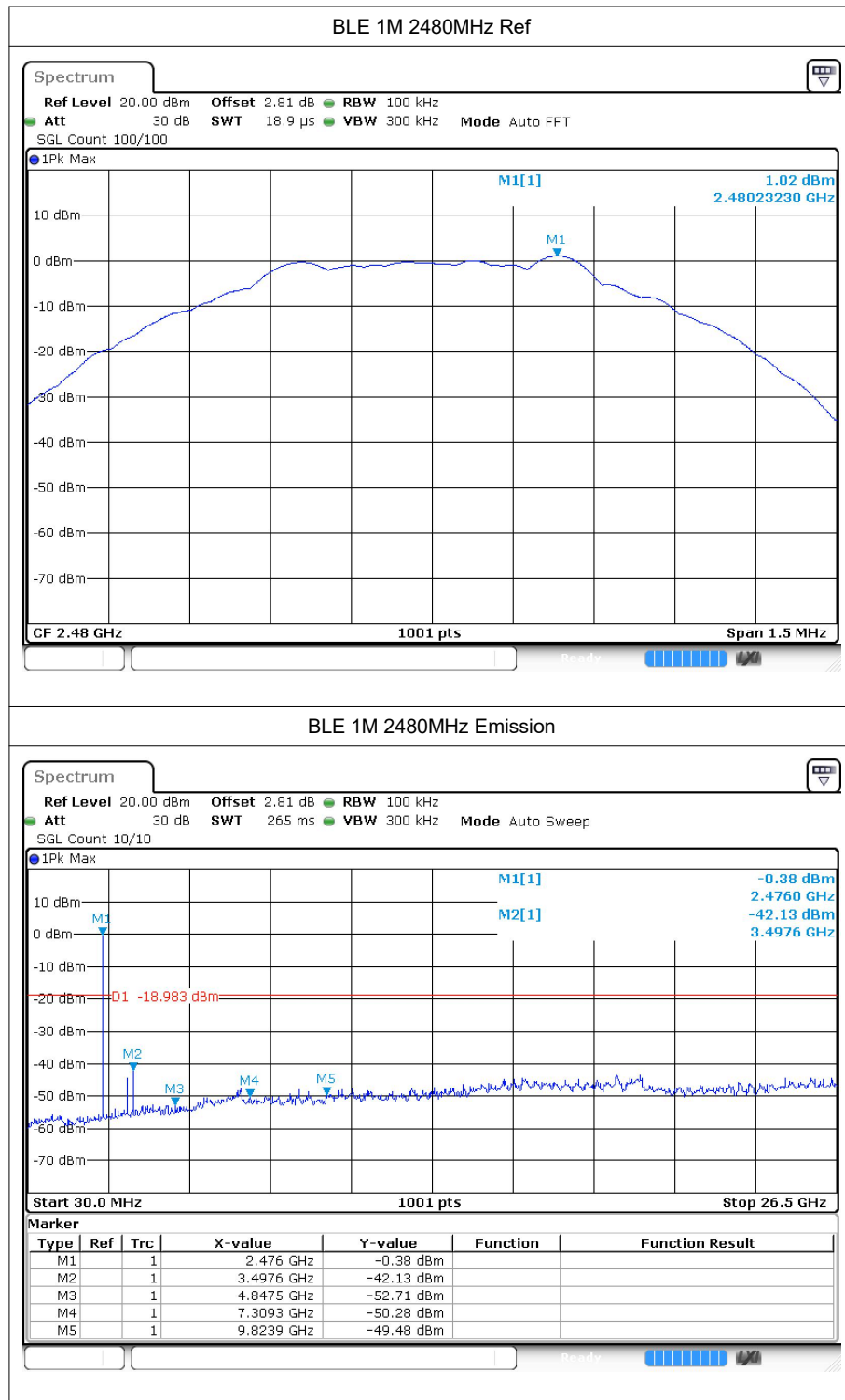
6.1 Test Result

Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
BLE 1M	2402	-42.22	-20	Pass
BLE 1M	2440	-43.65	-20	Pass
BLE 1M	2480	-43.15	-20	Pass

6.2 Test Graphs







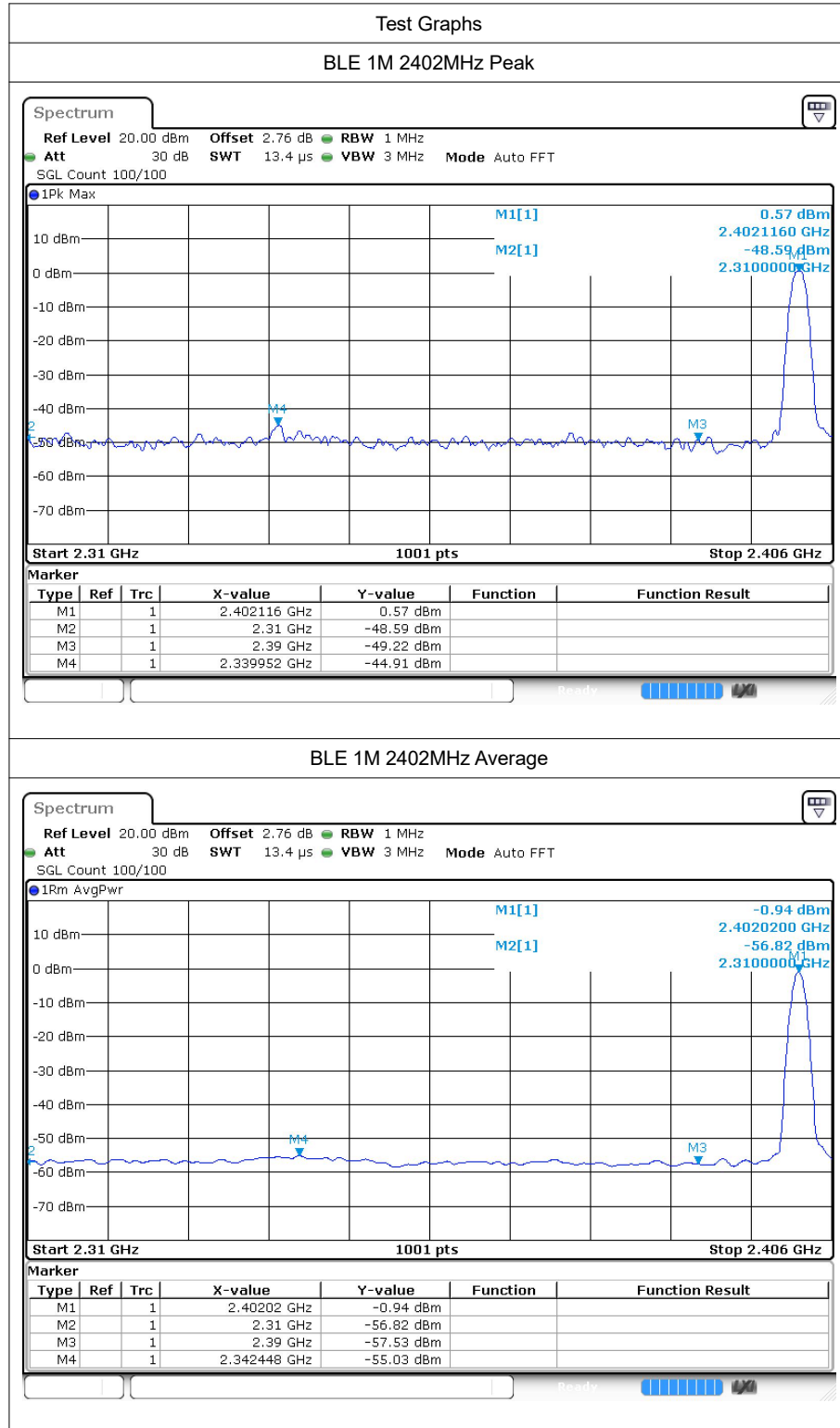


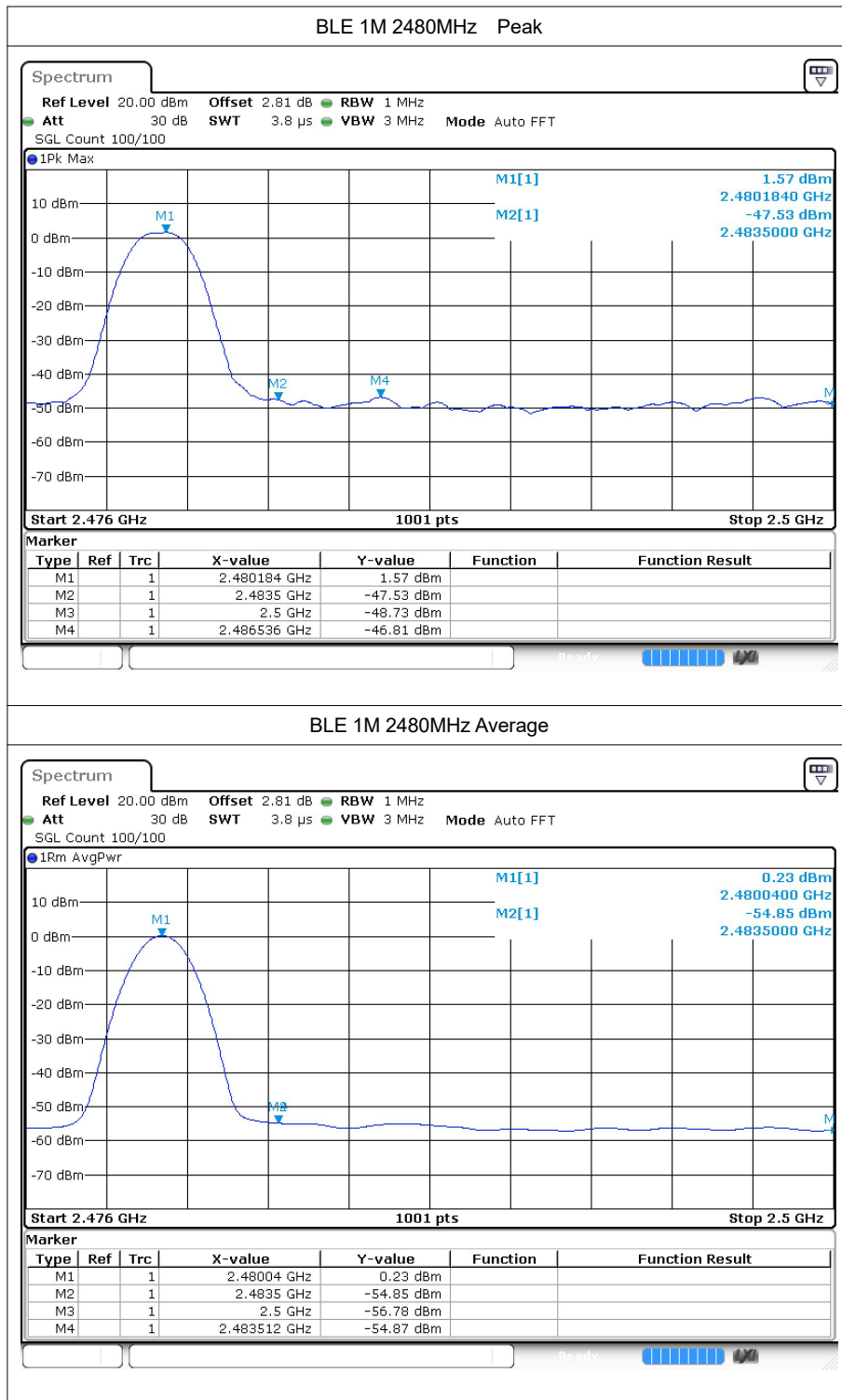
7 Restrict Band

7.1 Test Result

Mode	Frequency (MHz)	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
BLE 1M	2402	2310	-48.59	2.46	-	49.13	Peak	74	Pass
BLE 1M	2402	2310	-56.82	2.46	0.76	41.66	Average	54	Pass
BLE 1M	2402	2339.952	-44.9	2.46	-	52.82	Peak	74	Pass
BLE 1M	2402	2342.448	-55.02	2.46	0.76	43.46	Average	54	Pass
BLE 1M	2402	2390	-49.22	2.46	-	48.5	Peak	74	Pass
BLE 1M	2402	2390	-57.53	2.46	0.76	40.95	Average	54	Pass
BLE 1M	2480	2483.5	-47.53	2.46	-	50.19	Peak	74	Pass
BLE 1M	2480	2483.5	-54.85	2.46	0.76	43.63	Average	54	Pass
BLE 1M	2480	2486.536	-46.8	2.46	-	50.92	Peak	74	Pass
BLE 1M	2480	2483.512	-54.87	2.46	0.76	43.61	Average	54	Pass
BLE 1M	2480	2500	-48.73	2.46	-	48.99	Peak	74	Pass
BLE 1M	2480	2500	-56.78	2.46	0.76	41.7	Average	54	Pass

7.2 Test Graphs





---The End---