



Appendix B

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

Product Name: Smart watch

Trade Mark: N/A

Test Model: FT32

Environmental Conditions

| | |
|--------------------|-------------|
| Temperature: | 25.5°C |
| Relative Humidity: | 55.0% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Simba Huang |
| Supervised by: | Seal Chen |



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 |

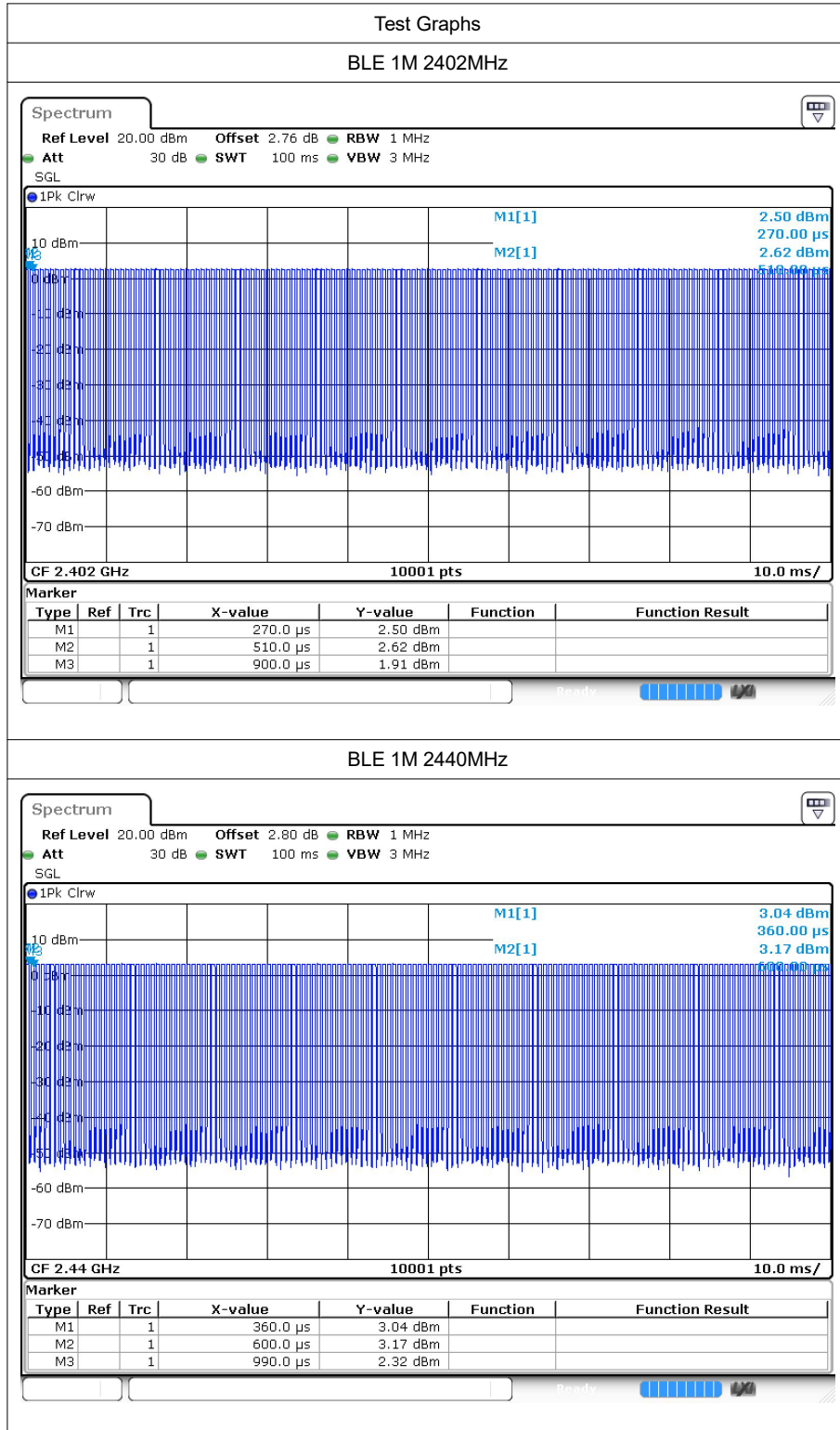


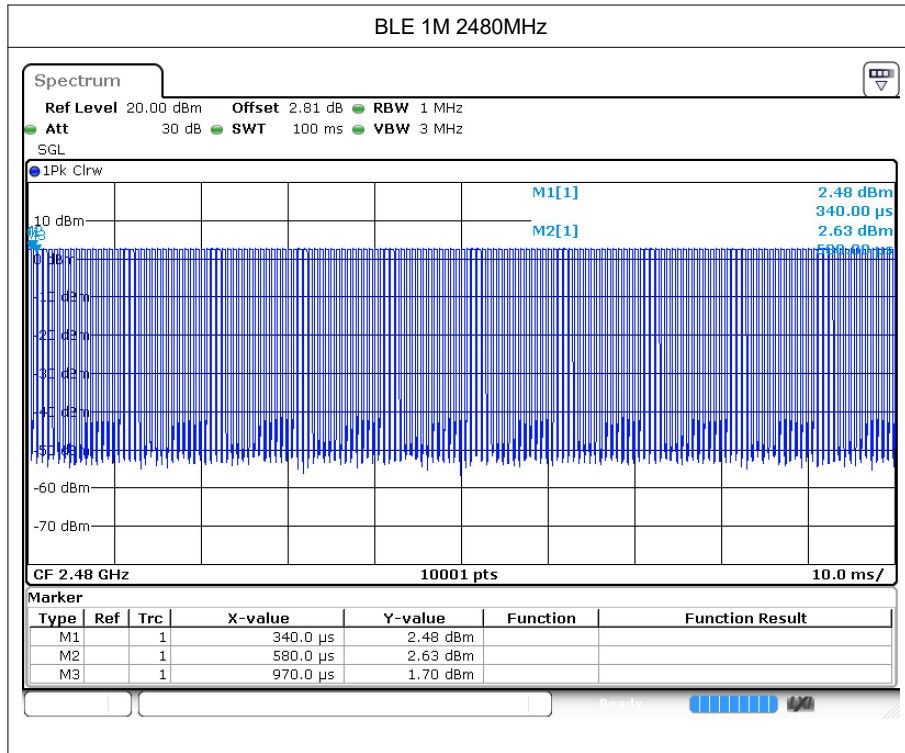
1 Duty Cycle

1.1 Test Result

| Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|--------|-----------------|----------------|-------------------|-----------|
| BLE 1M | 2402 | 64.15 | 1.93 | 2.56 |
| BLE 1M | 2440 | 64 | 1.94 | 2.56 |
| BLE 1M | 2480 | 64.27 | 1.92 | 2.56 |

1.2 Test Graphs





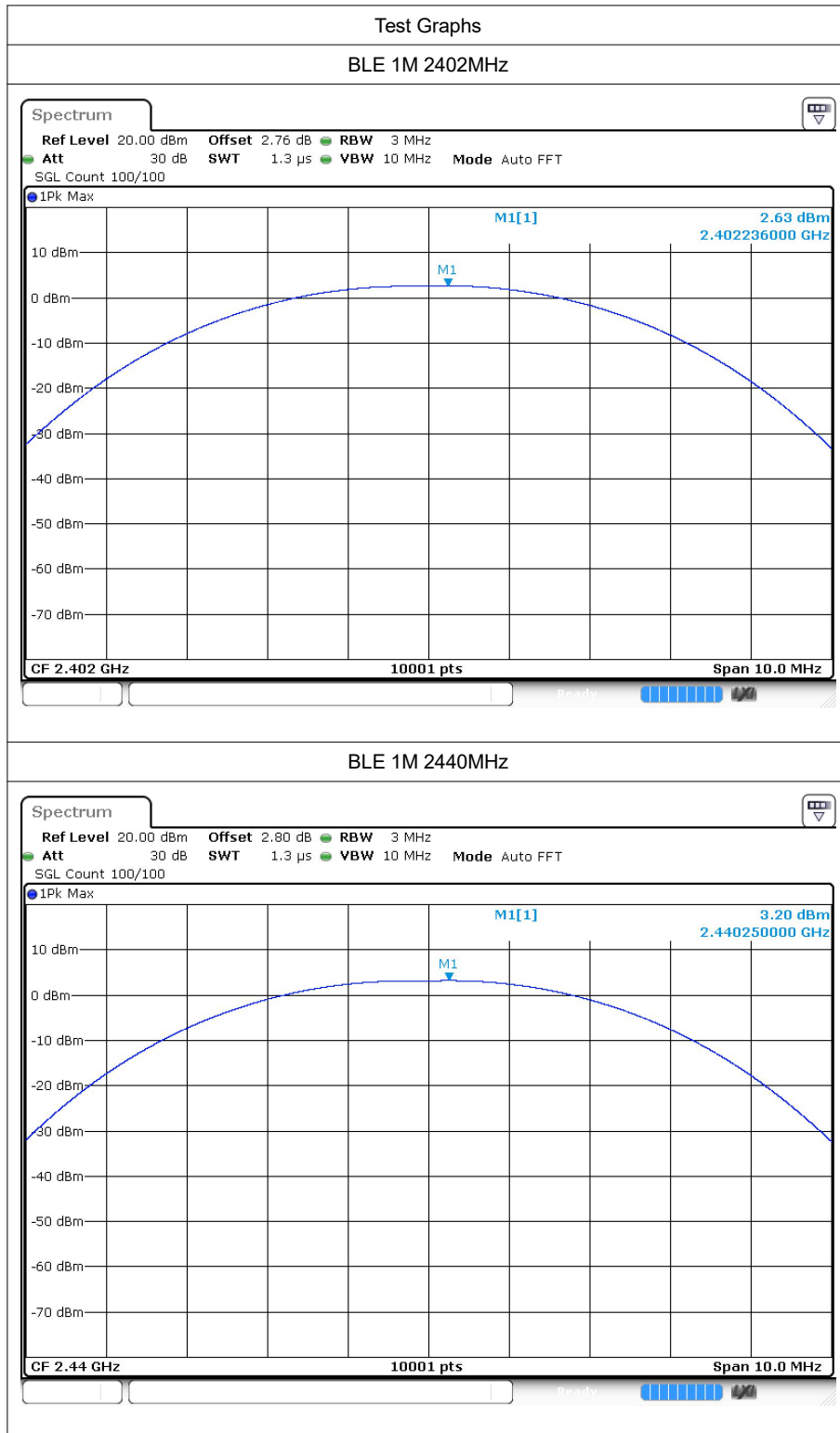


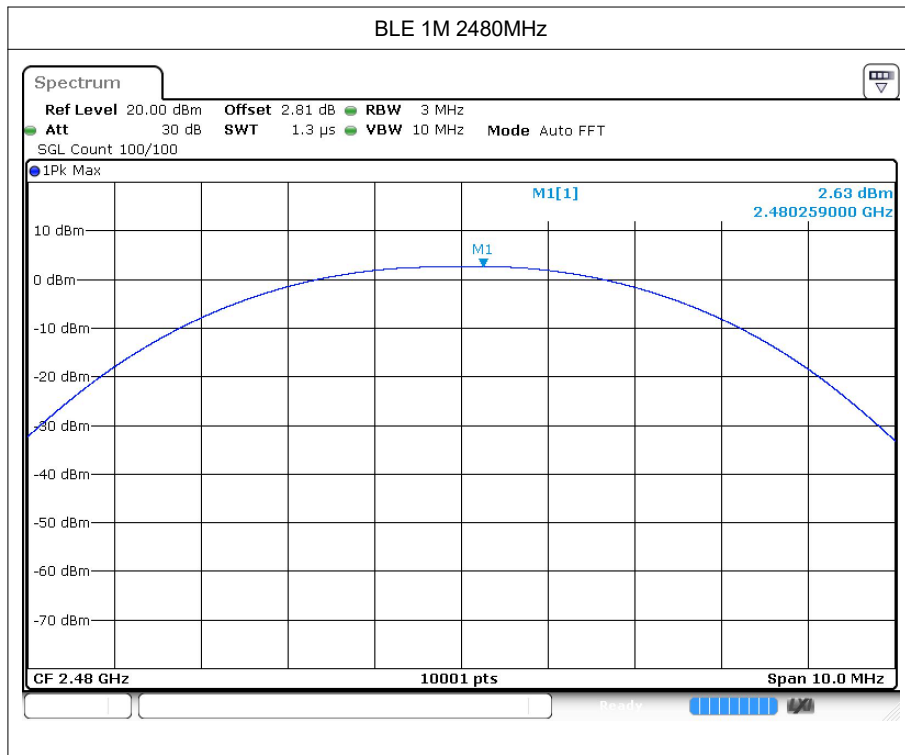
2 Maximum Conducted Output Power

2.1 Test Result

| Mode | Frequency (MHz) | Conducted Power (dBm) | Limit (dBm) | Verdict |
|--------|-----------------|-----------------------|-------------|---------|
| BLE 1M | 2402 | 2.63 | 30 | Pass |
| BLE 1M | 2440 | 3.2 | 30 | Pass |
| BLE 1M | 2480 | 2.63 | 30 | Pass |

2.2 Test Graphs





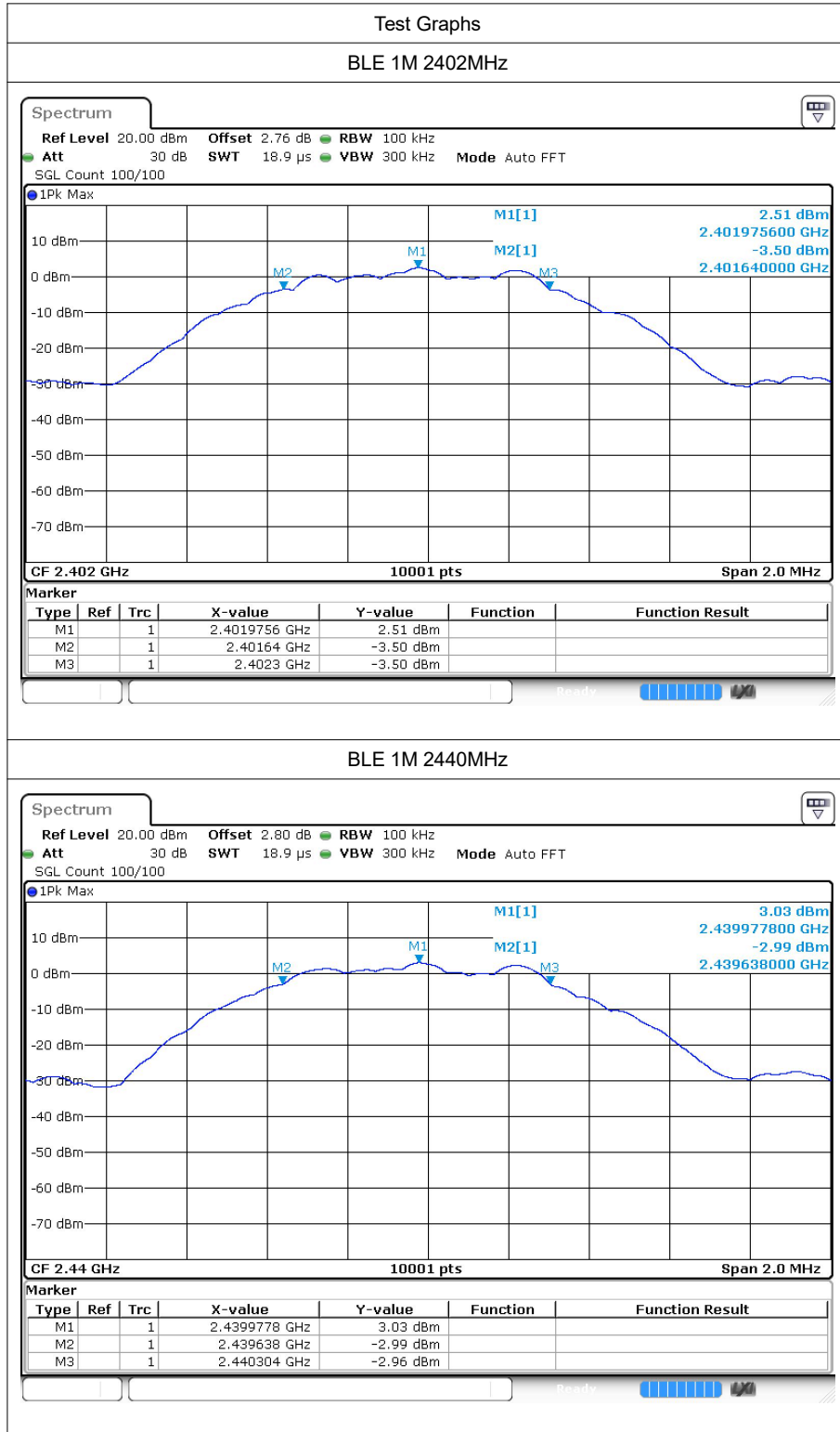


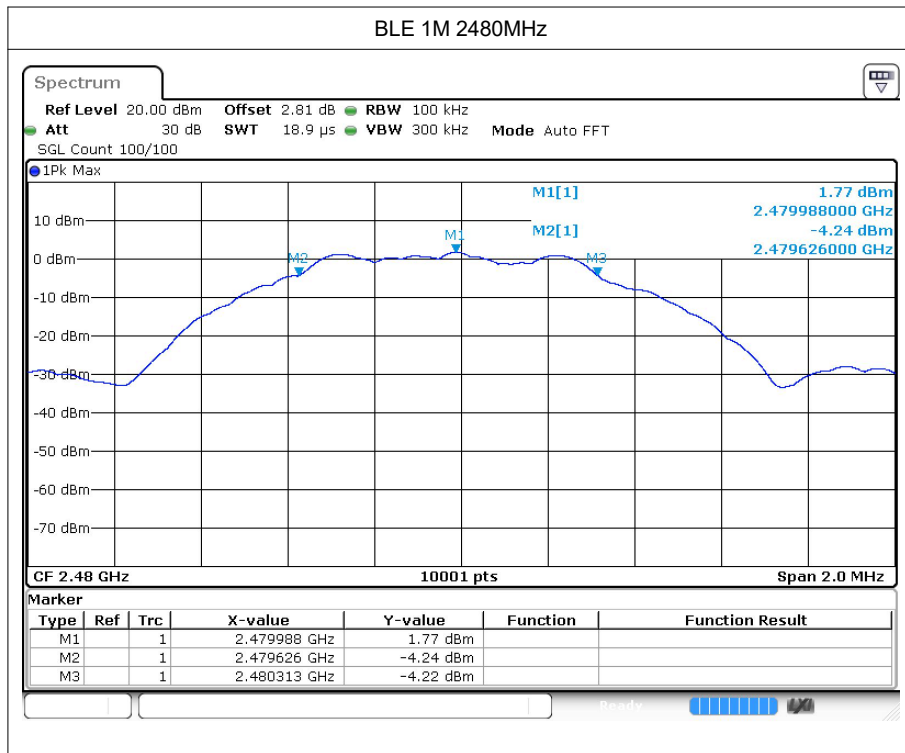
3 -6dB Bandwidth

3.1 Test Result

| Mode | Frequency (MHz) | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|--------|-----------------|-----------------------|-----------------------------|---------|
| BLE 1M | 2402 | 0.66 | 0.5 | Pass |
| BLE 1M | 2440 | 0.666 | 0.5 | Pass |
| BLE 1M | 2480 | 0.687 | 0.5 | Pass |

3.2 Test Graphs



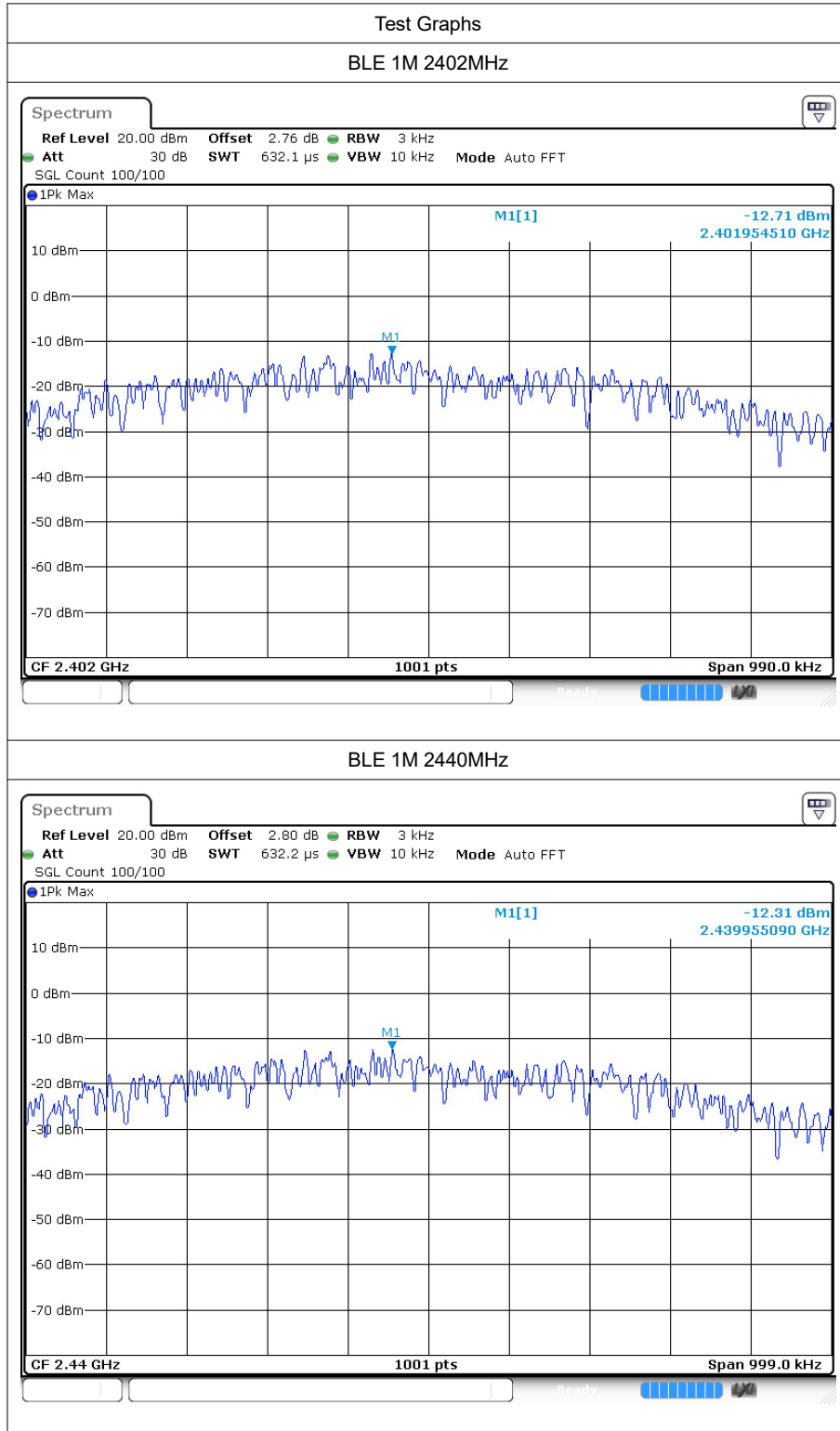


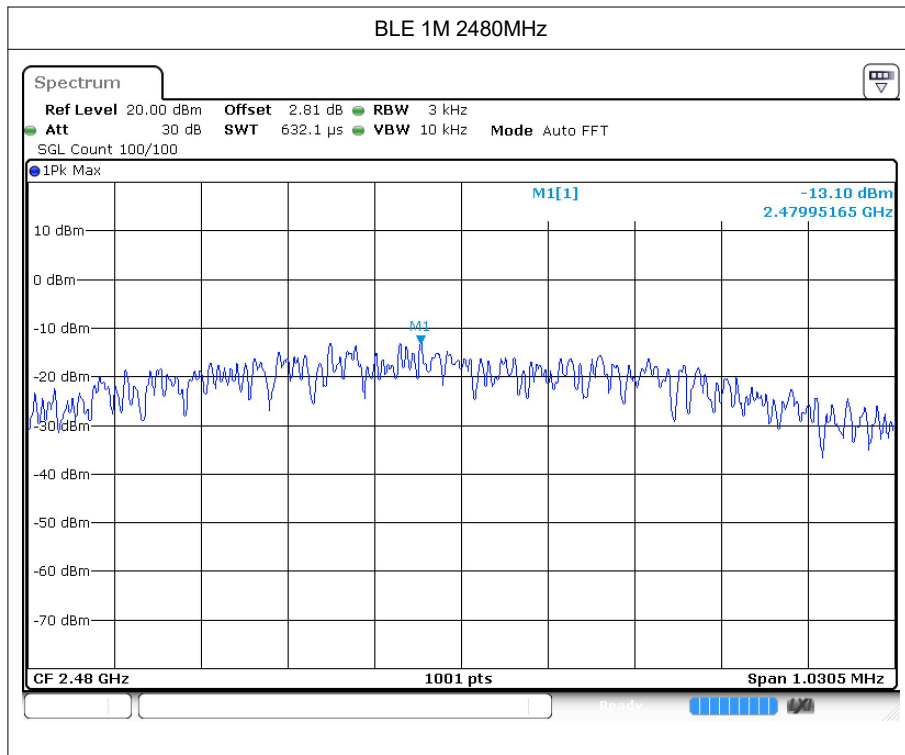
4 Maximum Power Spectral Density Level

4.1 Test Result

| Mode | Frequency (MHz) | Conducted PSD (dBm/3-100kHz) | Limit (dBm/3kHz) | Verdict |
|--------|-----------------|---------------------------------|---------------------|---------|
| BLE 1M | 2402 | -12.71 | ≤ 8 | Pass |
| BLE 1M | 2440 | -12.31 | ≤ 8 | Pass |
| BLE 1M | 2480 | -13.1 | ≤ 8 | Pass |

4.2 Test Graphs





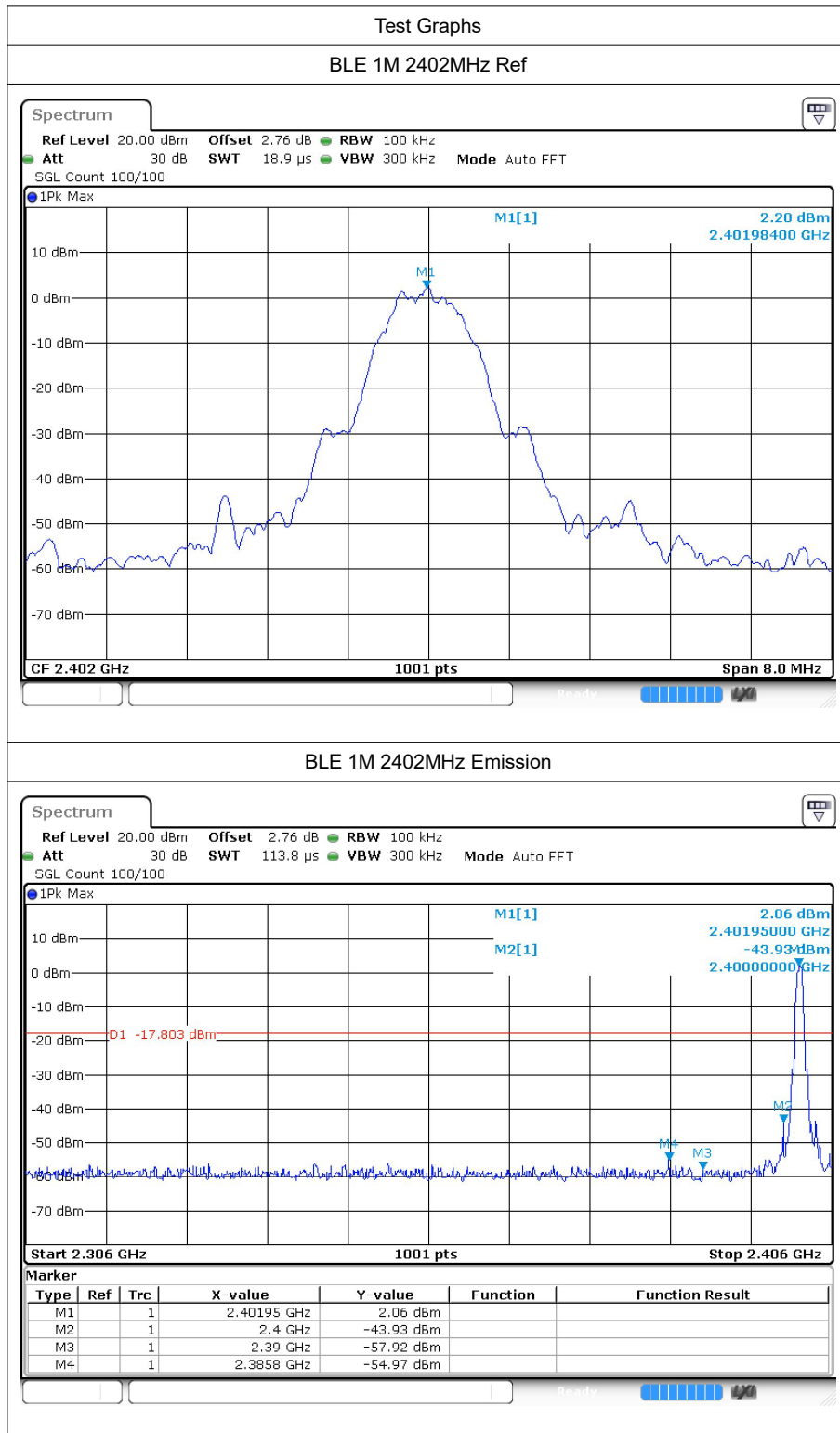


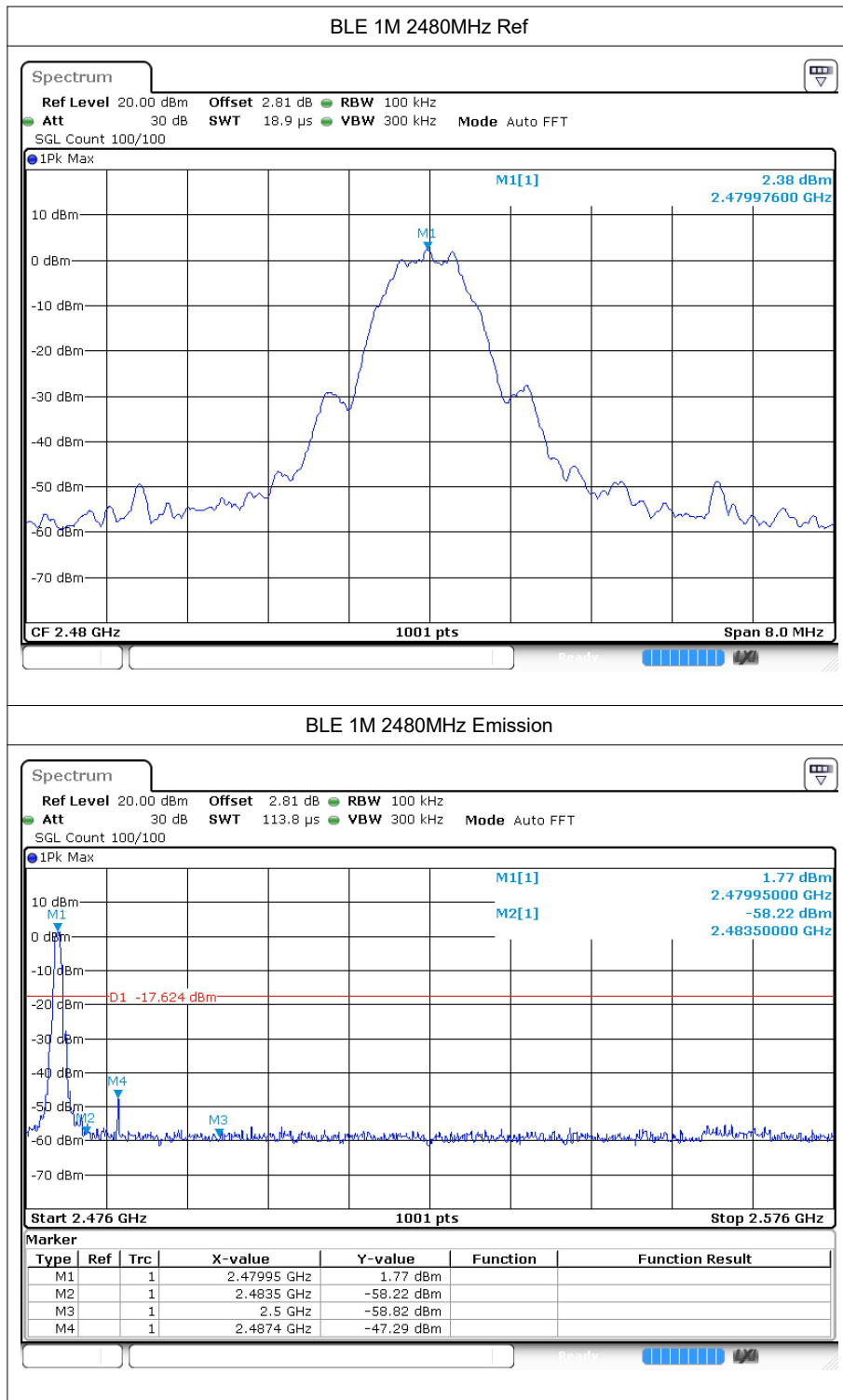
5 Band Edge

5.1 Test Result

| Mode | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402 | -57.17 | -20 | Pass |
| BLE 1M | 2480 | -49.66 | -20 | Pass |

5.2 Test Graphs





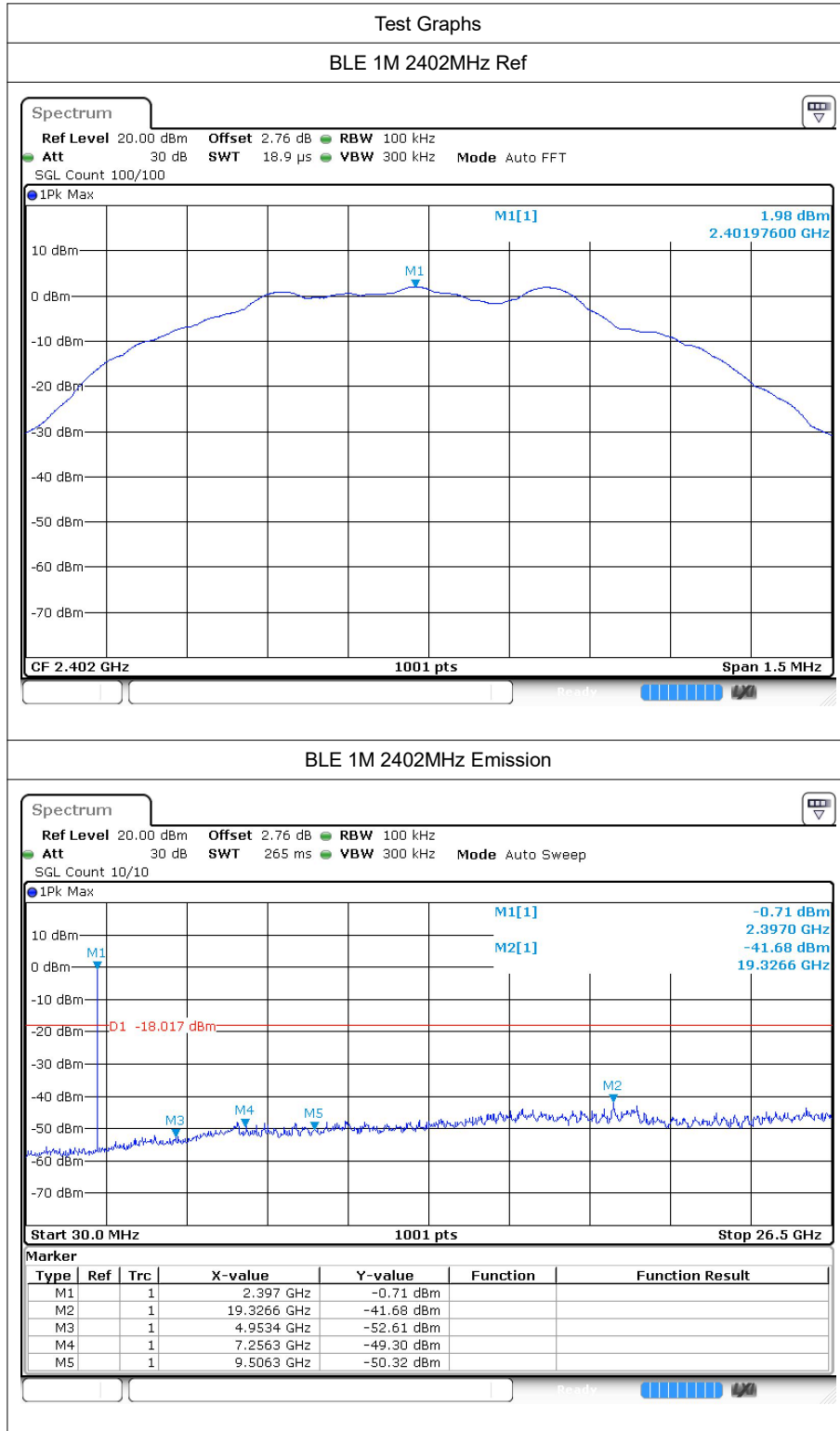


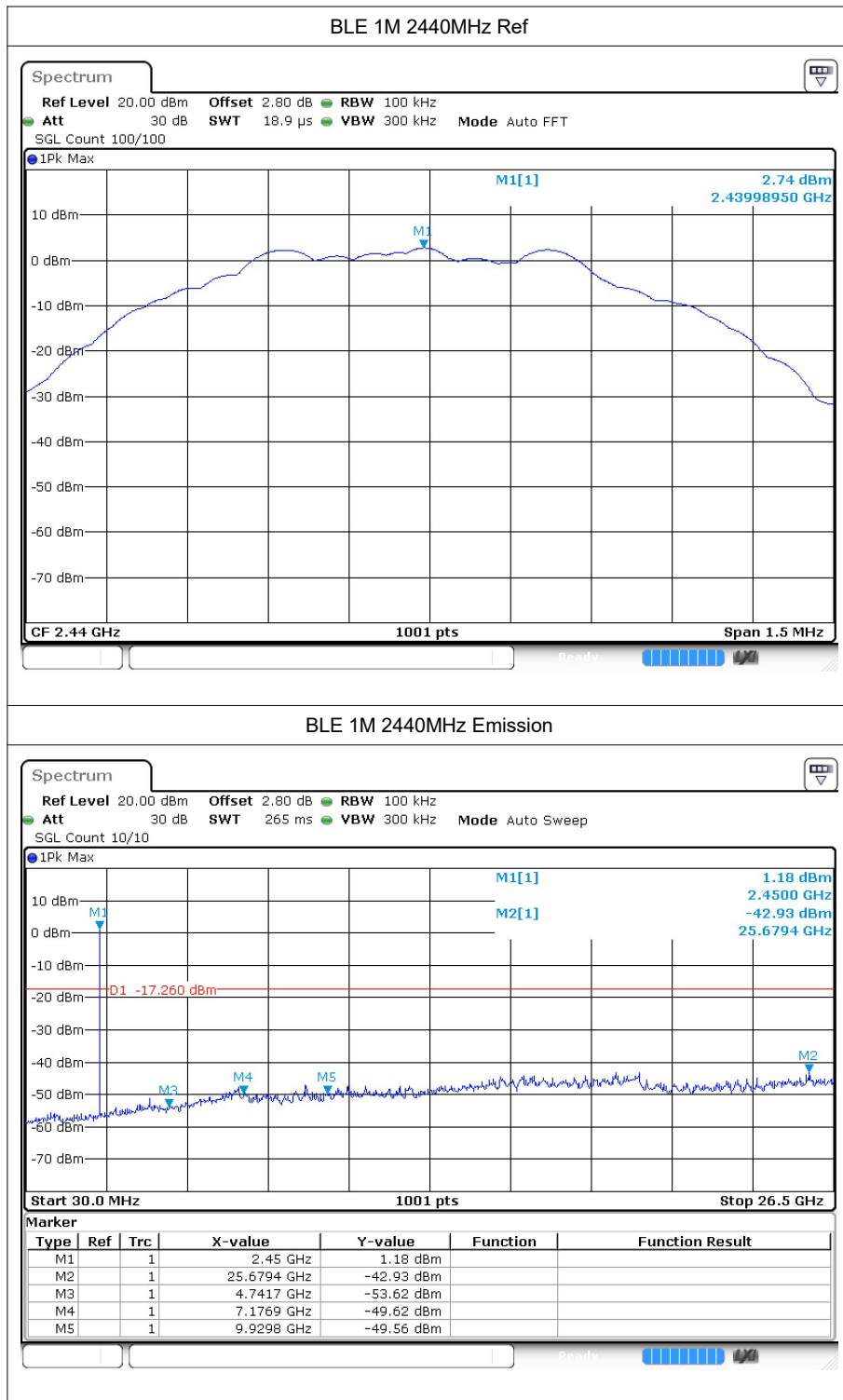
6 Conducted RF Spurious Emission

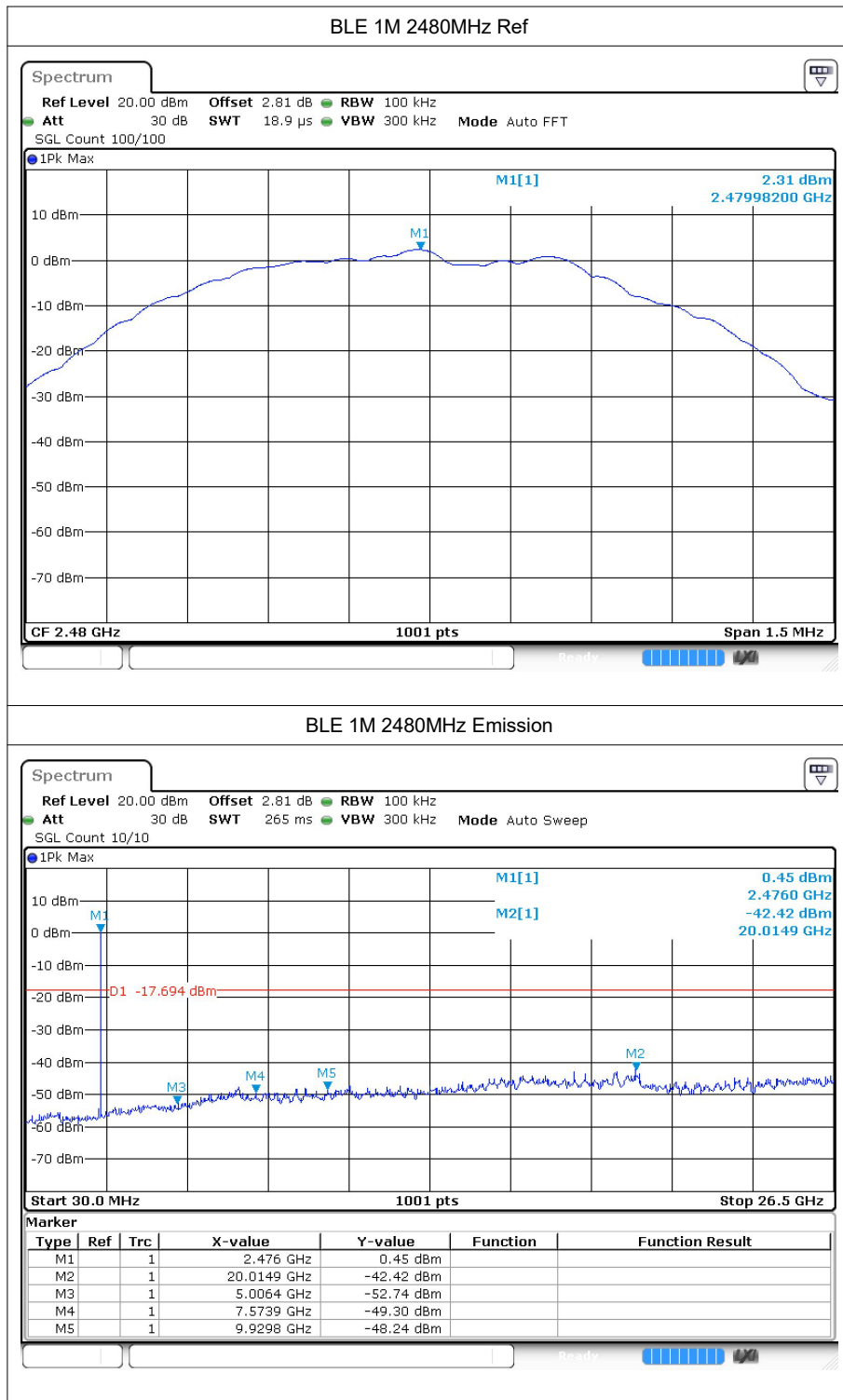
6.1 Test Result

| Mode | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402 | -43.65 | -20 | Pass |
| BLE 1M | 2440 | -45.66 | -20 | Pass |
| BLE 1M | 2480 | -44.72 | -20 | Pass |

6.2 Test Graphs







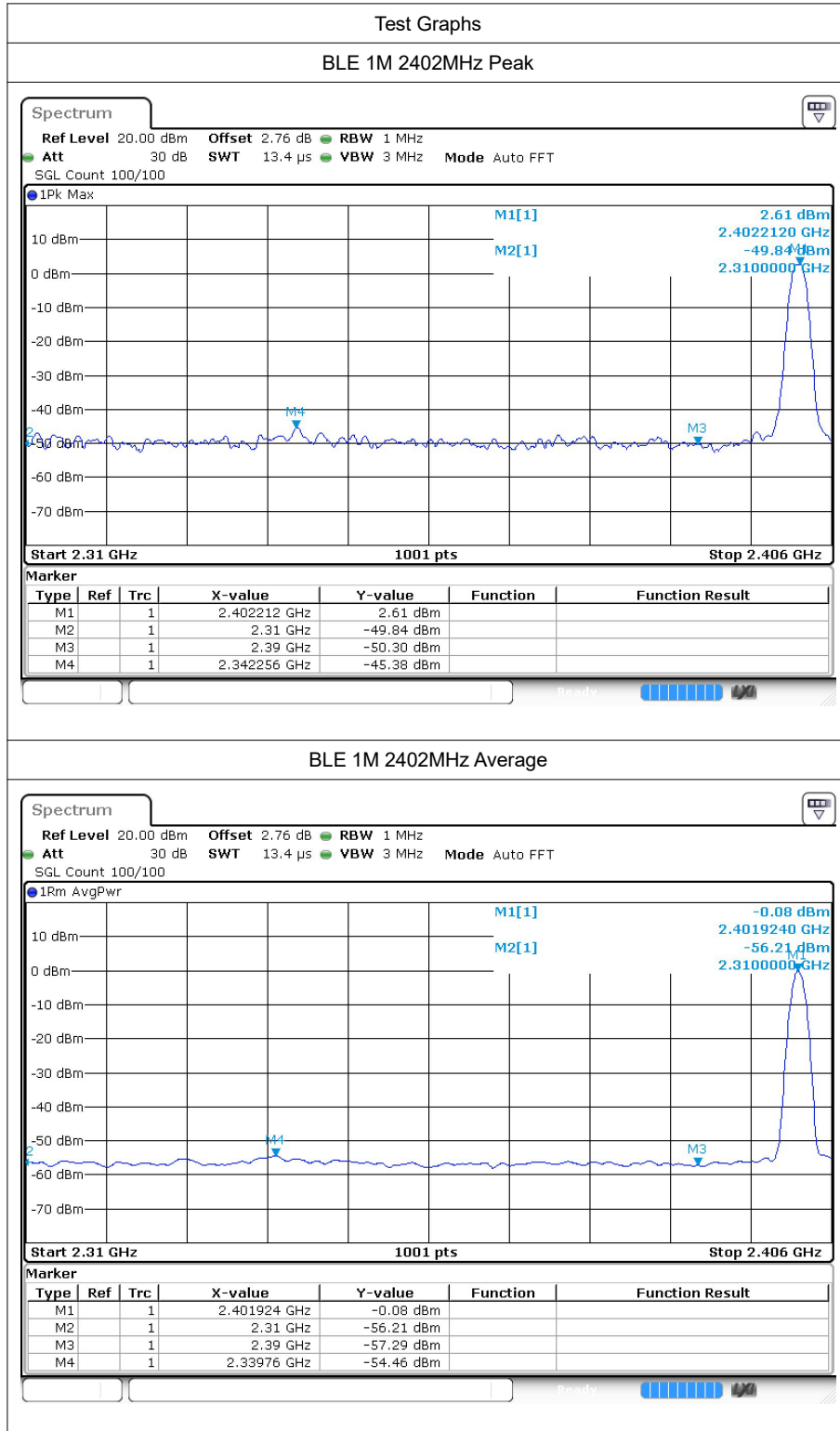


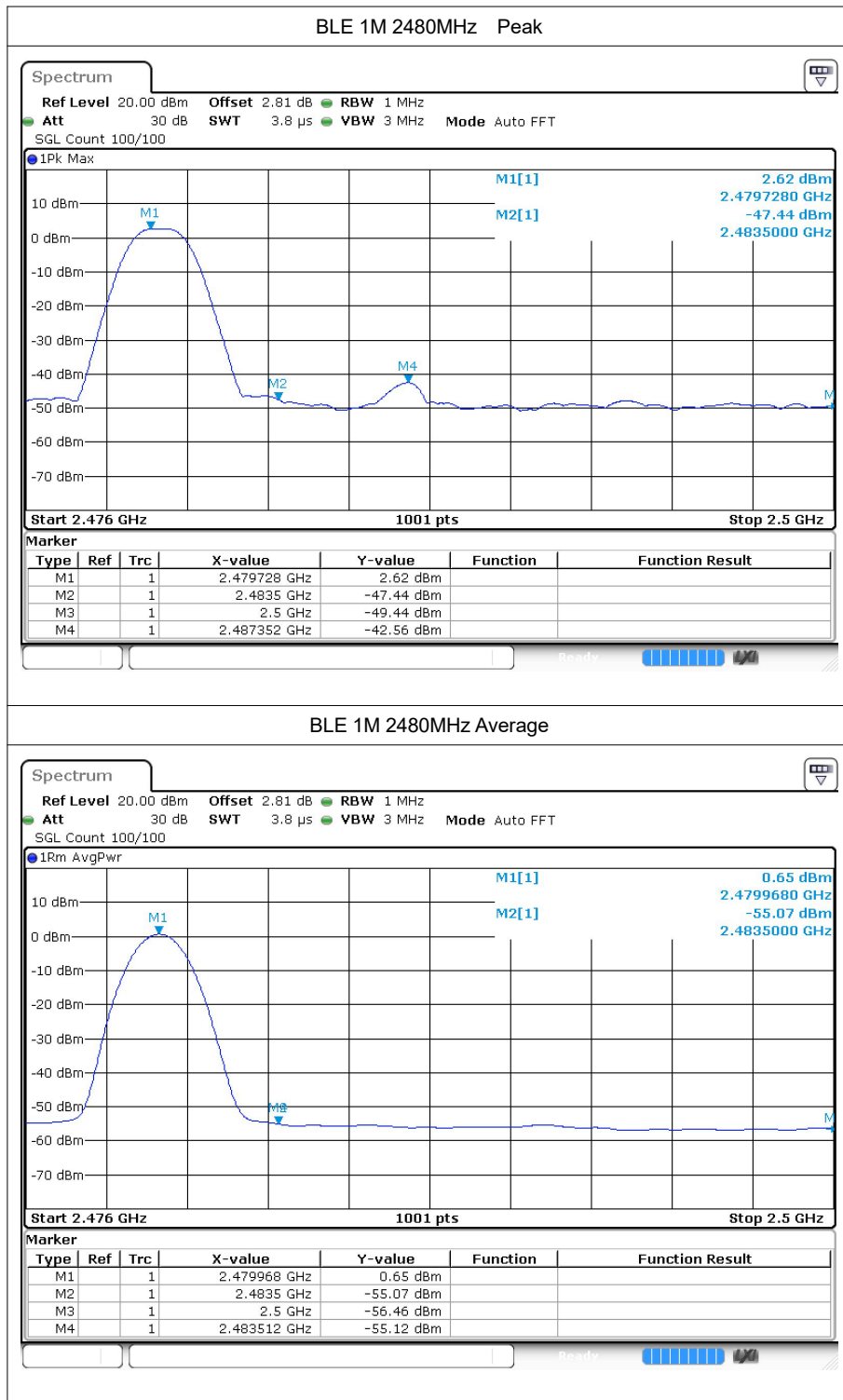
7 Restrict Band

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 | -49.84 | 2 | - | 47.42 | Peak | 74 | Pass |
| BLE 1M | 2402 | 2310 | -56.21 | 2 | 1.93 | 42.98 | Average | 54 | Pass |
| BLE 1M | 2402 | 2342.256 | -45.38 | 2 | - | 51.88 | Peak | 74 | Pass |
| BLE 1M | 2402 | 2339.76 | -54.46 | 2 | 1.93 | 44.73 | Average | 54 | Pass |
| BLE 1M | 2402 | 2390 | -50.3 | 2 | - | 46.96 | Peak | 74 | Pass |
| BLE 1M | 2402 | 2390 | -57.29 | 2 | 1.93 | 41.9 | Average | 54 | Pass |
| BLE 1M | 2480 | 2483.5 | -47.44 | 2 | - | 49.82 | Peak | 74 | Pass |
| BLE 1M | 2480 | 2483.5 | -55.07 | 2 | 1.92 | 44.11 | Average | 54 | Pass |
| BLE 1M | 2480 | 2487.352 | -42.55 | 2 | - | 54.71 | Peak | 74 | Pass |
| BLE 1M | 2480 | 2483.512 | -55.11 | 2 | 1.92 | 44.07 | Average | 54 | Pass |
| BLE 1M | 2480 | 2500 | -49.44 | 2 | - | 47.82 | Peak | 74 | Pass |
| BLE 1M | 2480 | 2500 | -56.46 | 2 | 1.92 | 42.72 | Average | 54 | Pass |

7.2 Test Graphs





---The End---