



## Appendix B

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

Product Name: Bike Speed and Cadence Sensor

Trade Mark: N/A

Test Model: C3

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 18.8° C     |
| Relative Humidity: | 52.1%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Simba Huang |
| Supervised by:     | Seal Chen   |



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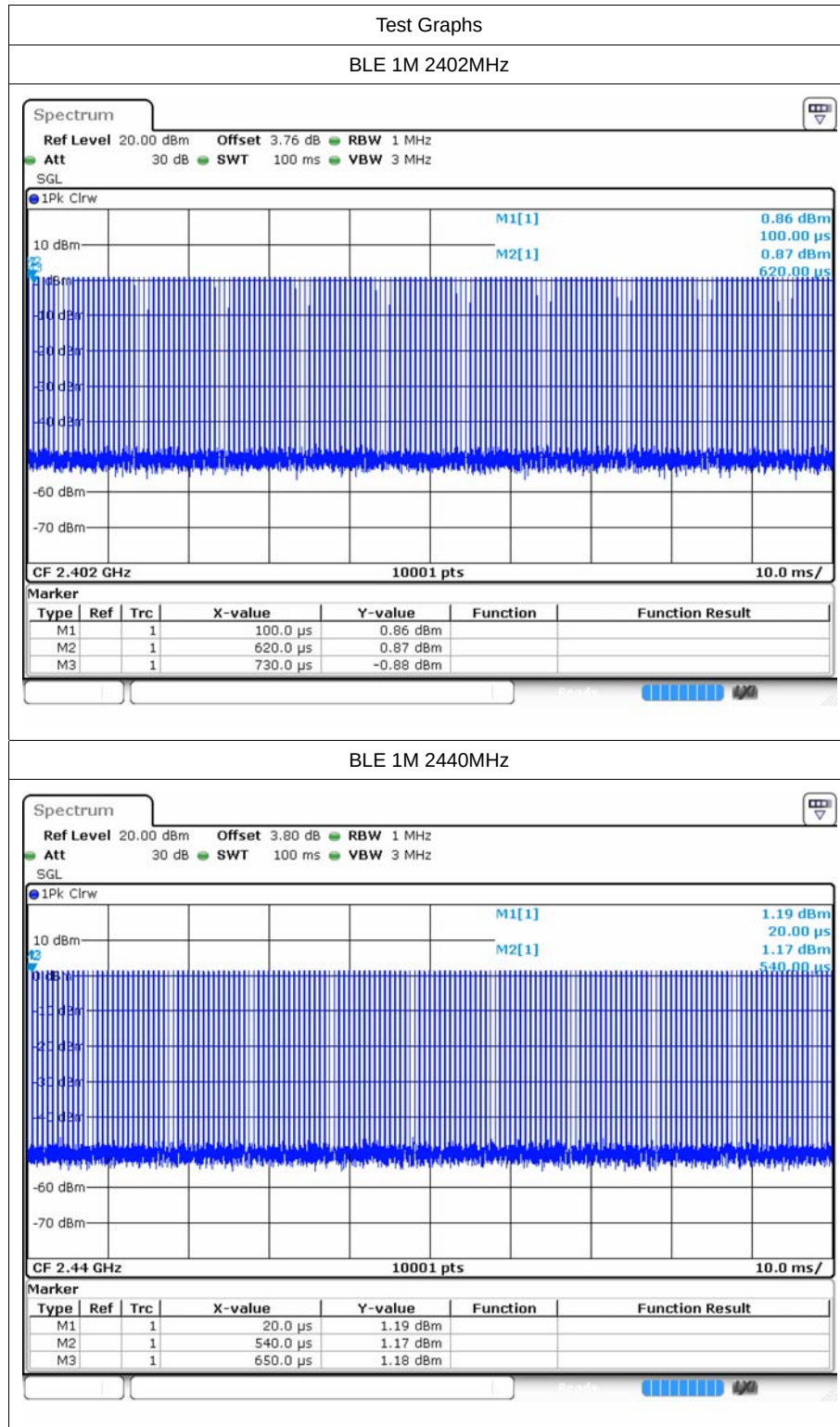


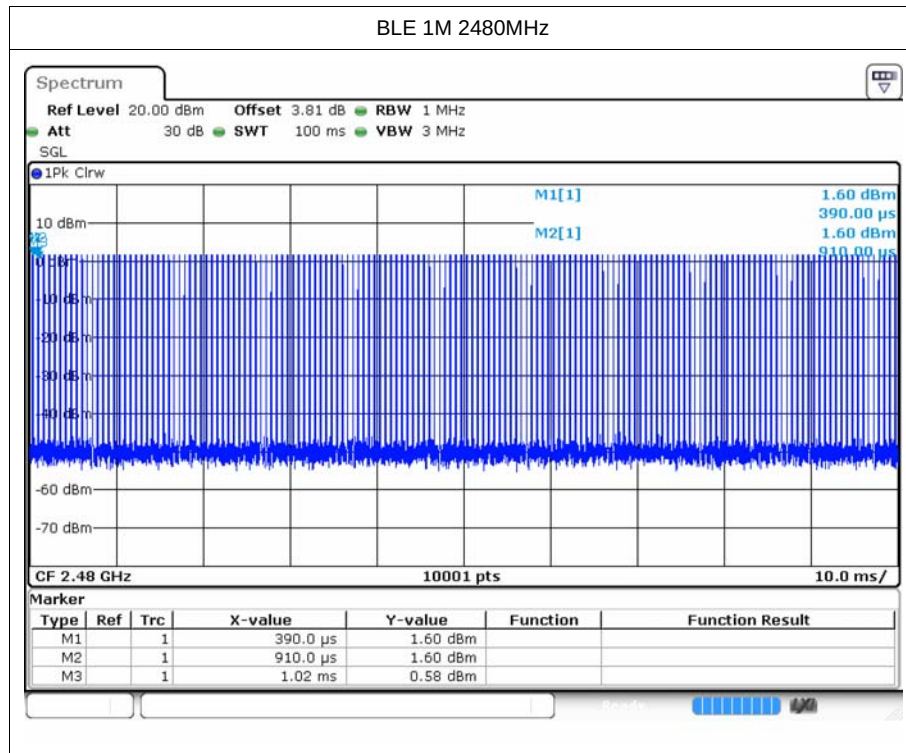
# 1 Duty Cycle

## 1.1 Test Result

| Mode   | Frequency (MHz) | Duty Cycle (%) | 1/T (kHz) |
|--------|-----------------|----------------|-----------|
| BLE 1M | 2402            | 19.21          | 9.09      |
| BLE 1M | 2440            | 18.41          | 9.09      |
| BLE 1M | 2480            | 19.2           | 9.09      |

## 1.2 Test Graphs





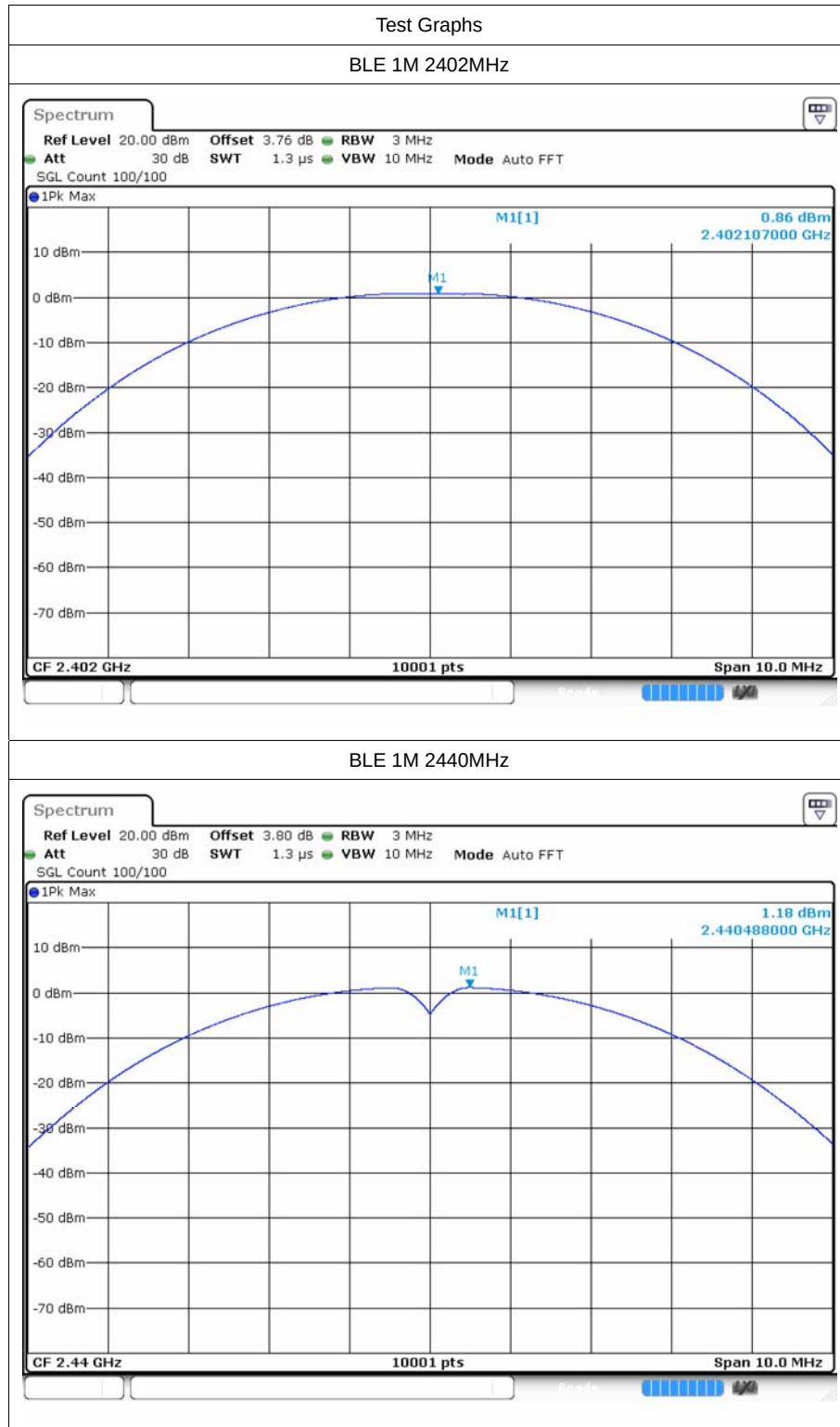


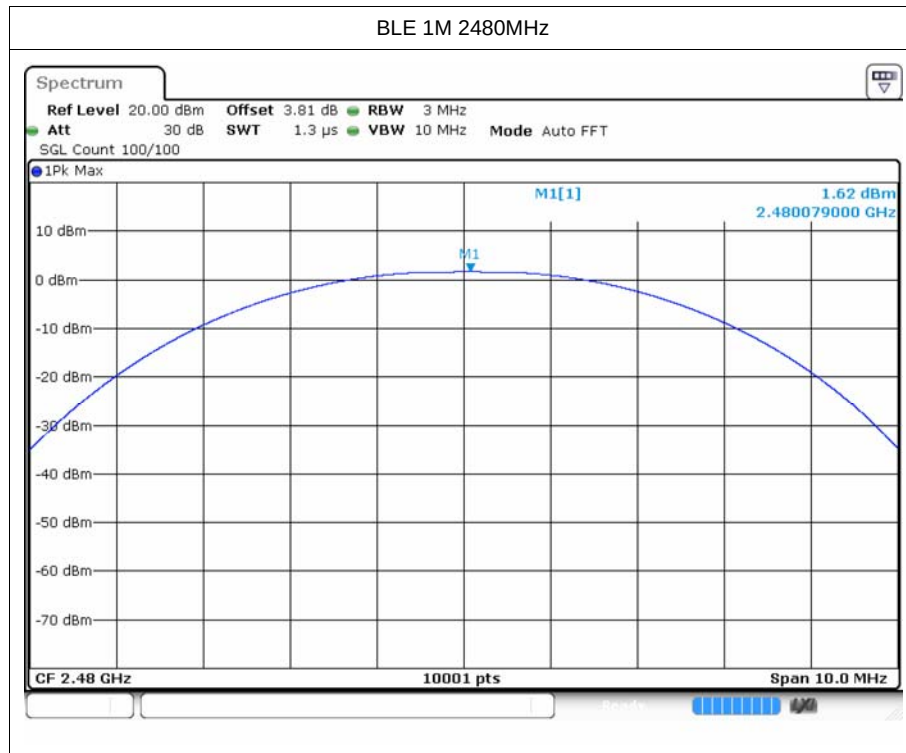
## 2 Maximum Conducted Output Power

### 2.1 Test Result

| Mode   | Frequency (MHz) | Conducted Power (dBm) | Limit (dBm) | Verdict |
|--------|-----------------|-----------------------|-------------|---------|
| BLE 1M | 2402            | 0.86                  | 30          | Pass    |
| BLE 1M | 2440            | 1.18                  | 30          | Pass    |
| BLE 1M | 2480            | 1.62                  | 30          | Pass    |

## 2.2 Test Graphs





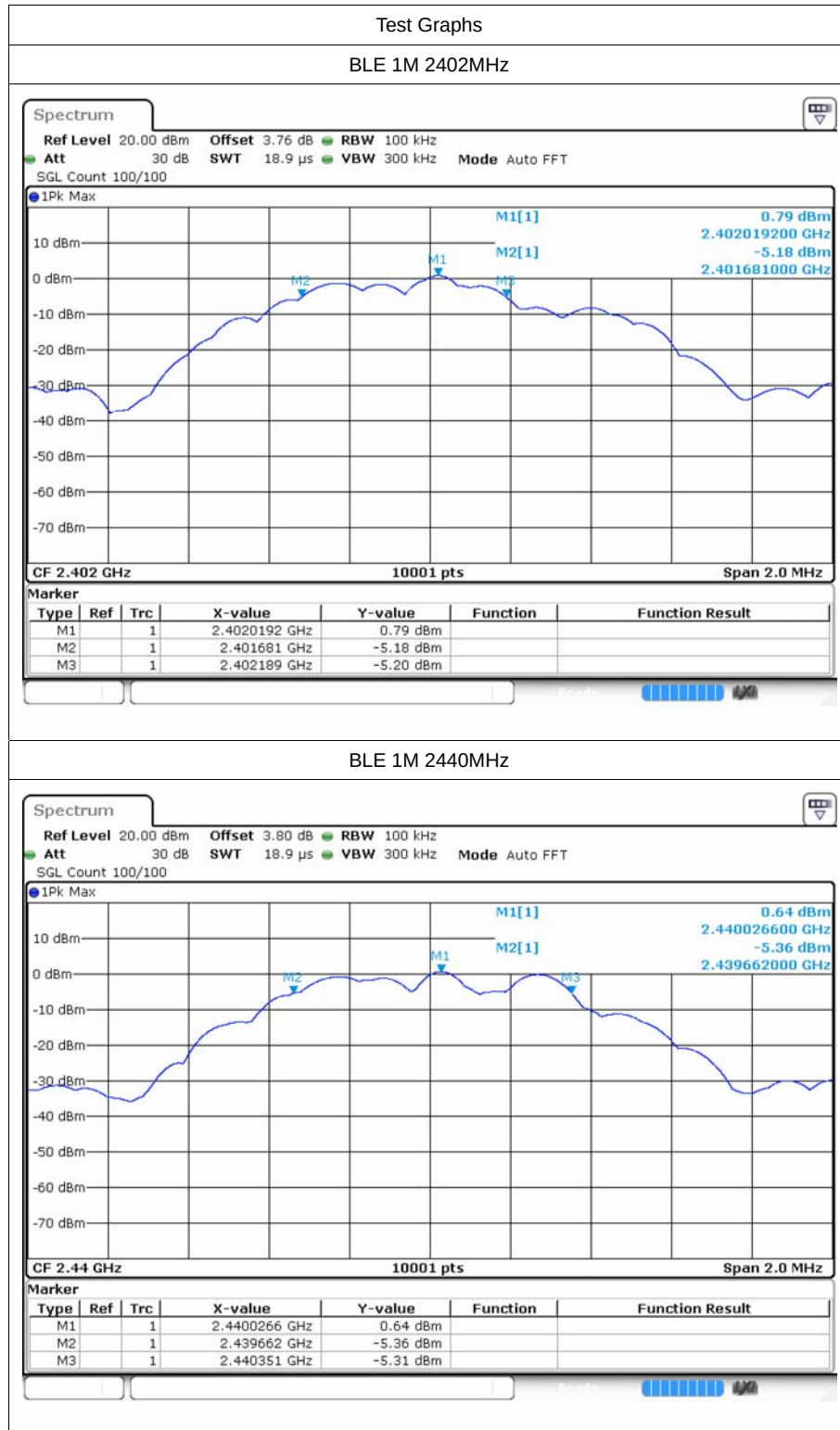


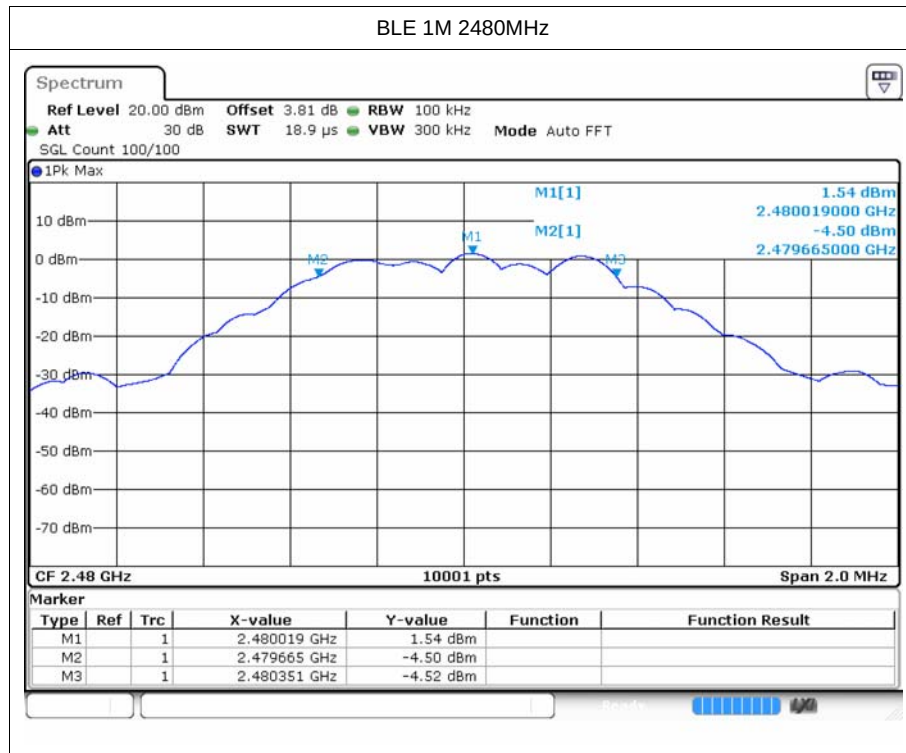
### 3 -6dB Bandwidth

#### 3.1 Test Result

| Mode   | Frequency (MHz) | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|--------|-----------------|-----------------------|-----------------------------|---------|
| BLE 1M | 2402            | 0.508                 | 0.5                         | Pass    |
| BLE 1M | 2440            | 0.69                  | 0.5                         | Pass    |
| BLE 1M | 2480            | 0.685                 | 0.5                         | Pass    |

## 3.2 Test Graphs



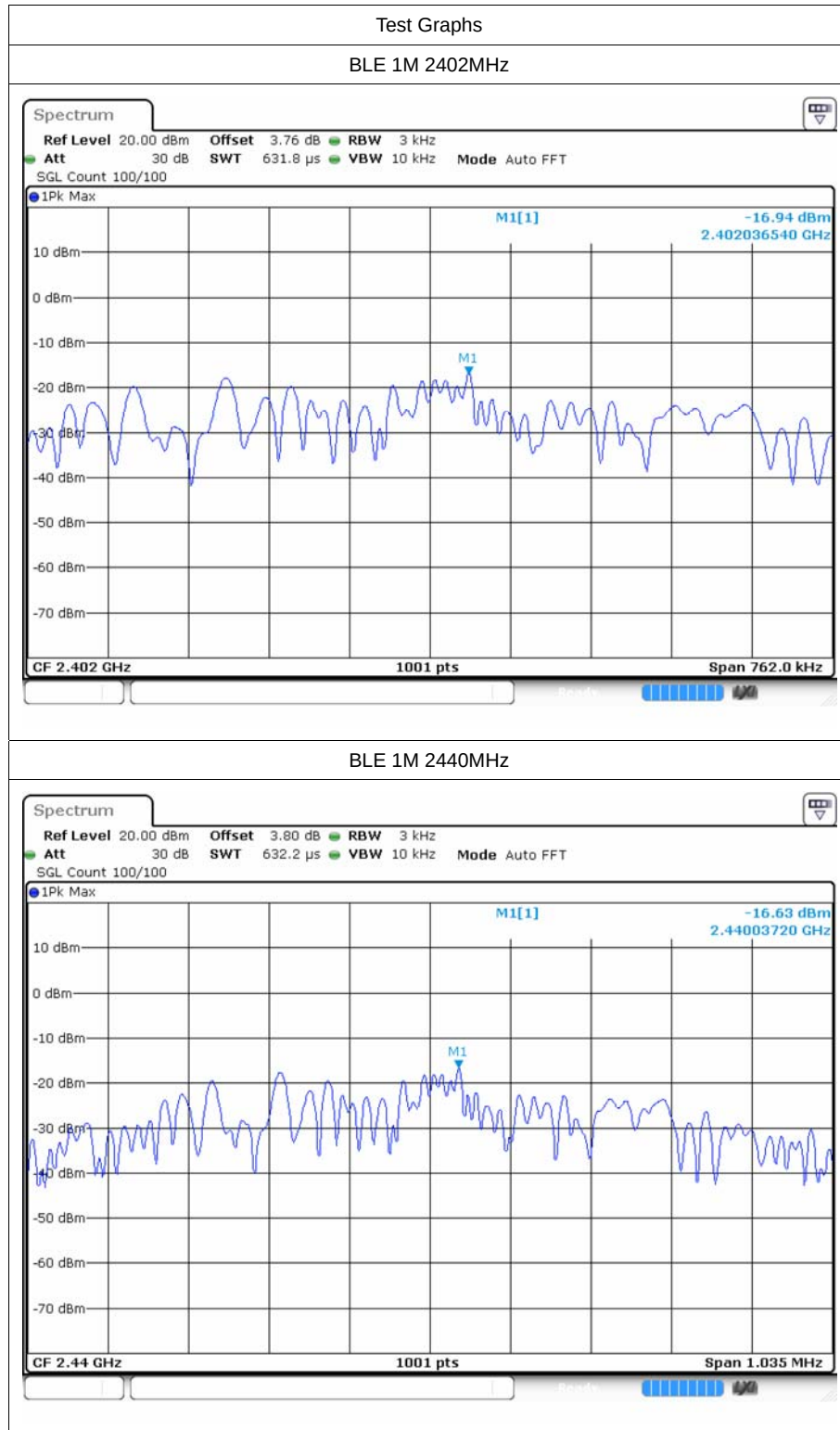


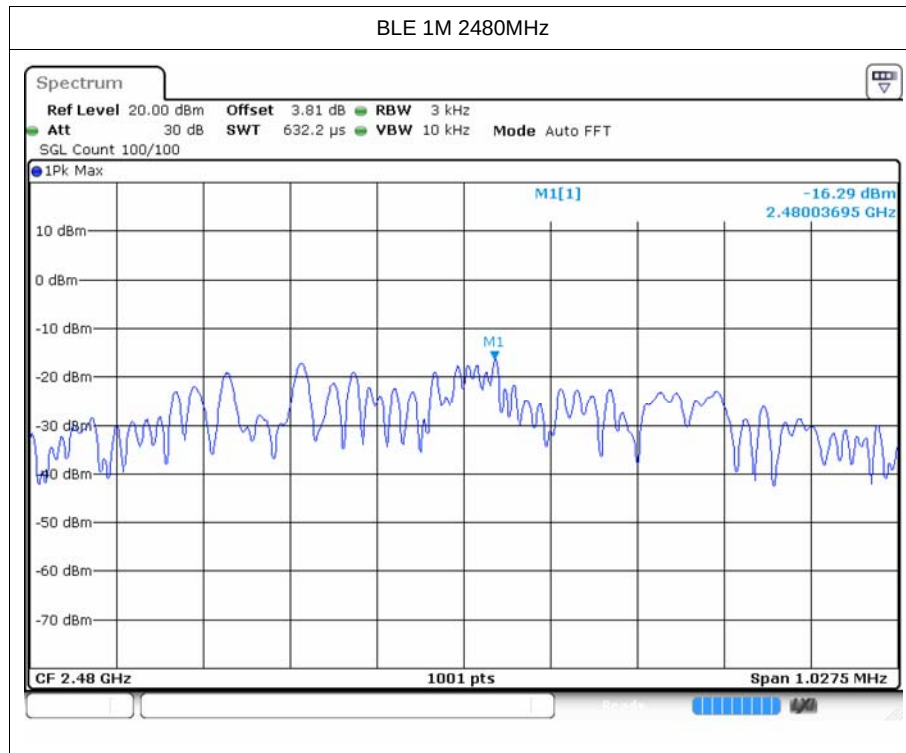
## 4 Maximum Power Spectral Density Level

### 4.1 Test Result

| Mode   | Frequency (MHz) | Conducted PSD<br>(dBm/3-100kHz) | Limit<br>(dBm/3kHz) | Verdict |
|--------|-----------------|---------------------------------|---------------------|---------|
| BLE 1M | 2402            | -16.94                          | $\leq 8$            | Pass    |
| BLE 1M | 2440            | -16.63                          | $\leq 8$            | Pass    |
| BLE 1M | 2480            | -16.29                          | $\leq 8$            | Pass    |

## 4.2 Test Graphs





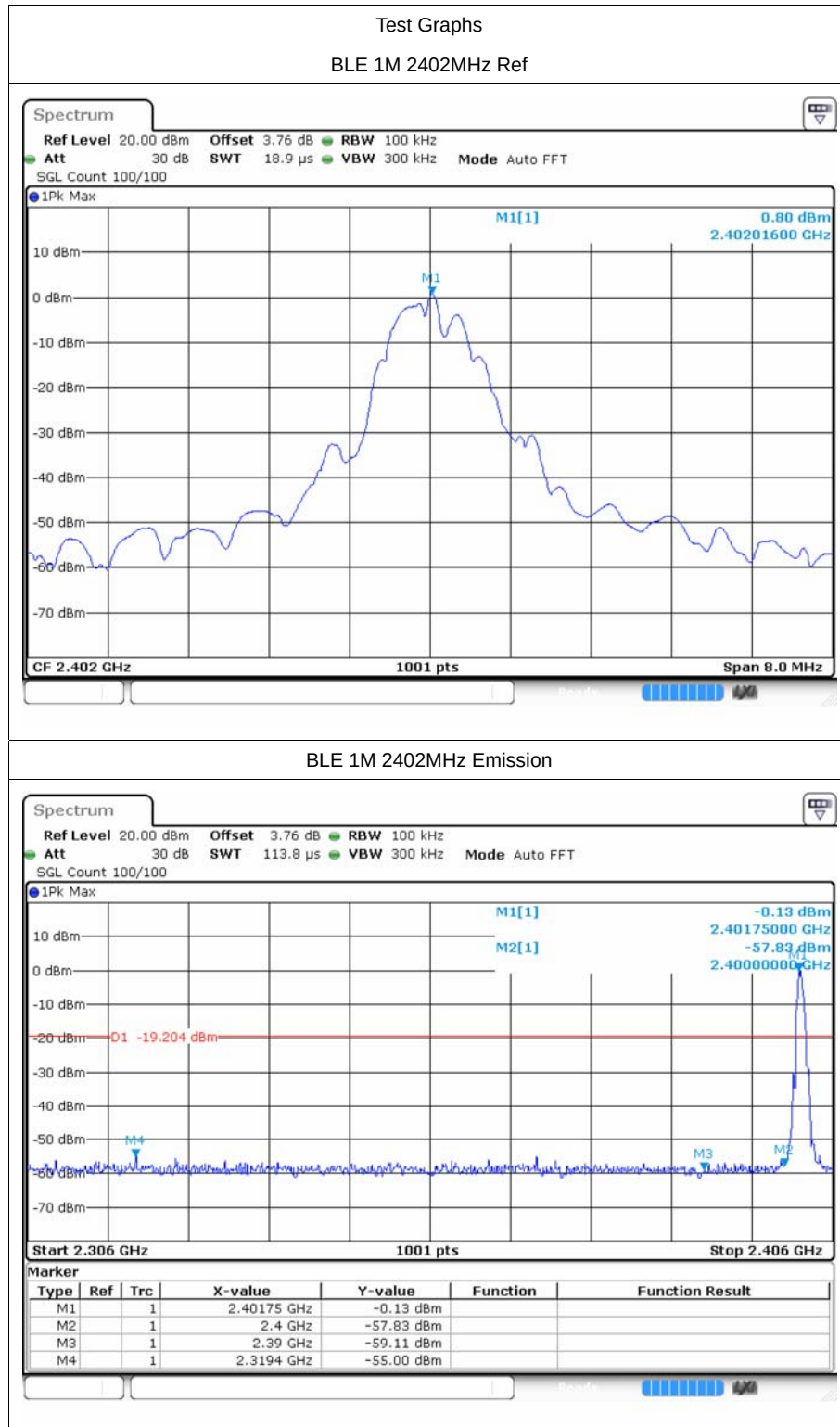


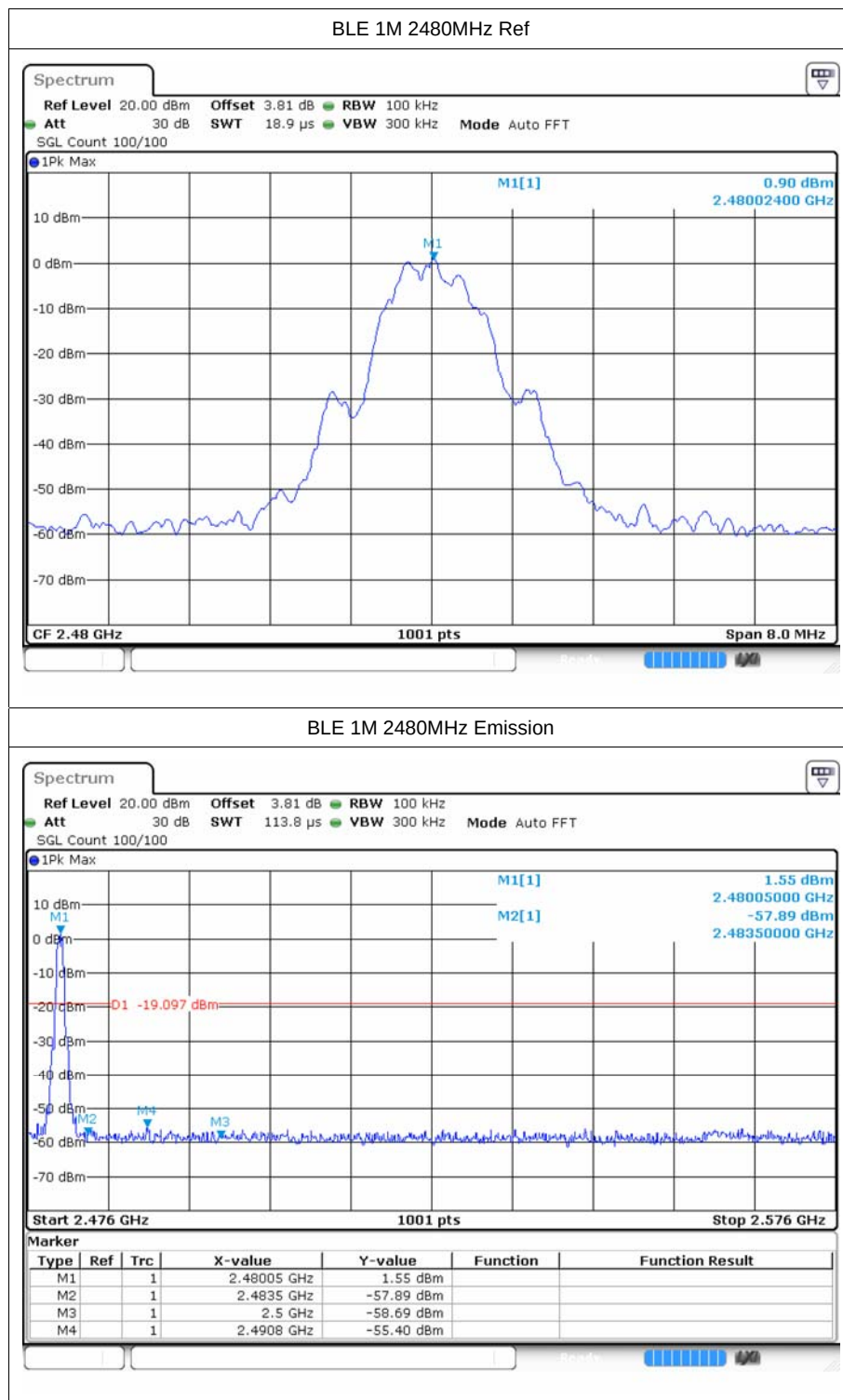
## 5 Band Edge

### 5.1 Test Result

| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -55.8           | -20         | Pass    |
| BLE 1M | 2480            | -56.3           | -20         | Pass    |

## 5.2 Test Graphs





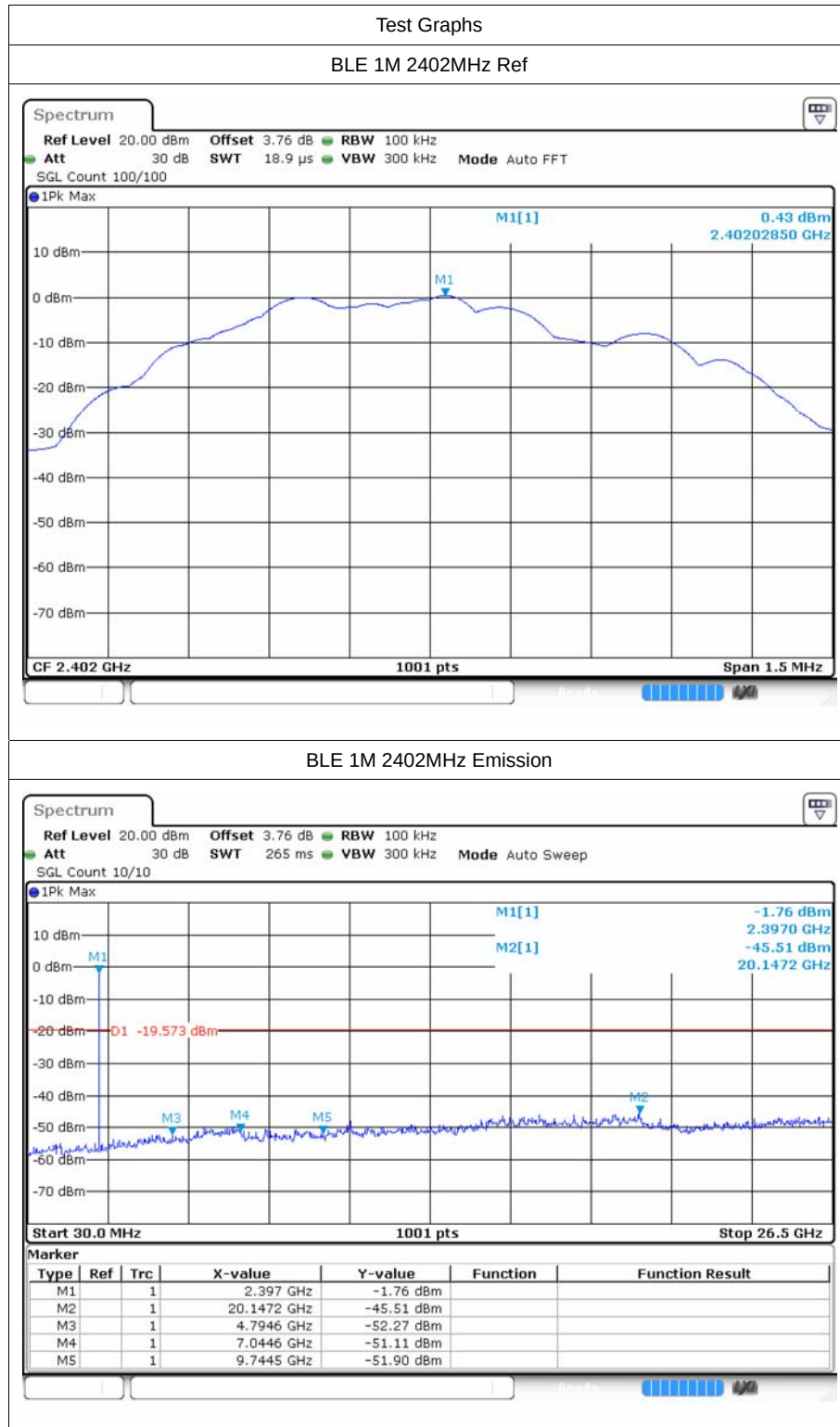


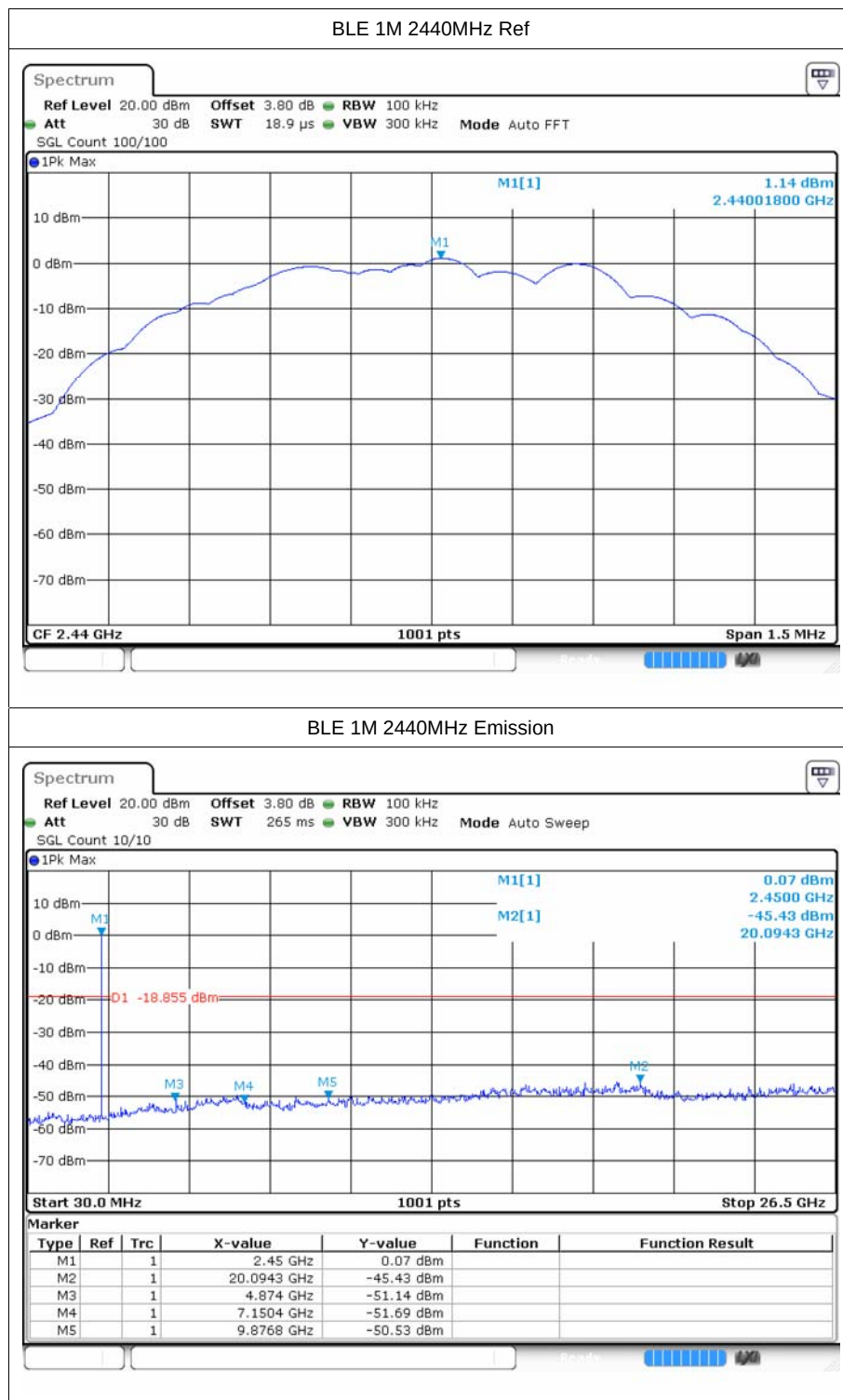
## 6 Conducted RF Spurious Emission

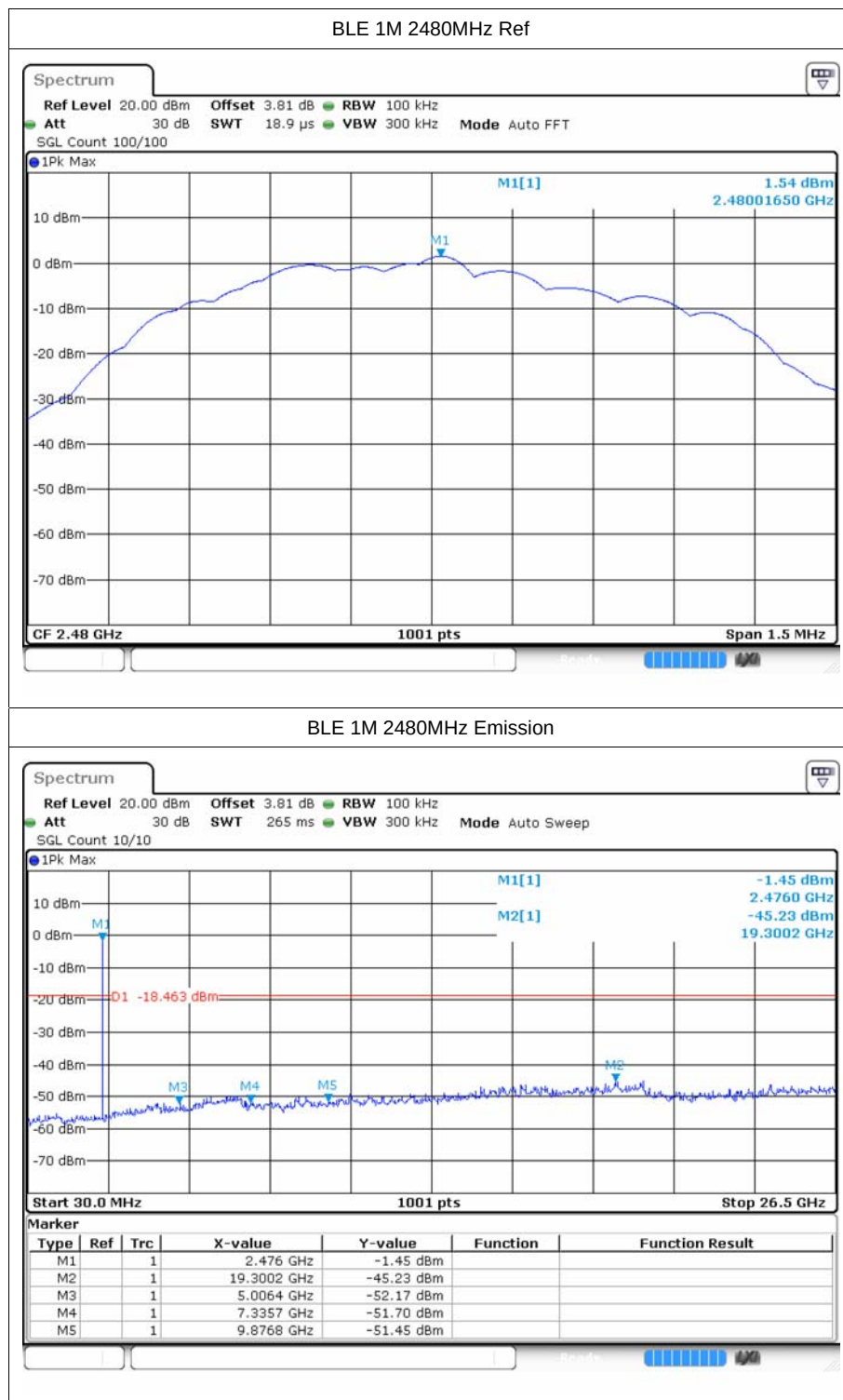
### 6.1 Test Result

| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -45.94          | -20         | Pass    |
| BLE 1M | 2440            | -46.56          | -20         | Pass    |
| BLE 1M | 2480            | -46.76          | -20         | Pass    |

## 6.2 Test Graphs







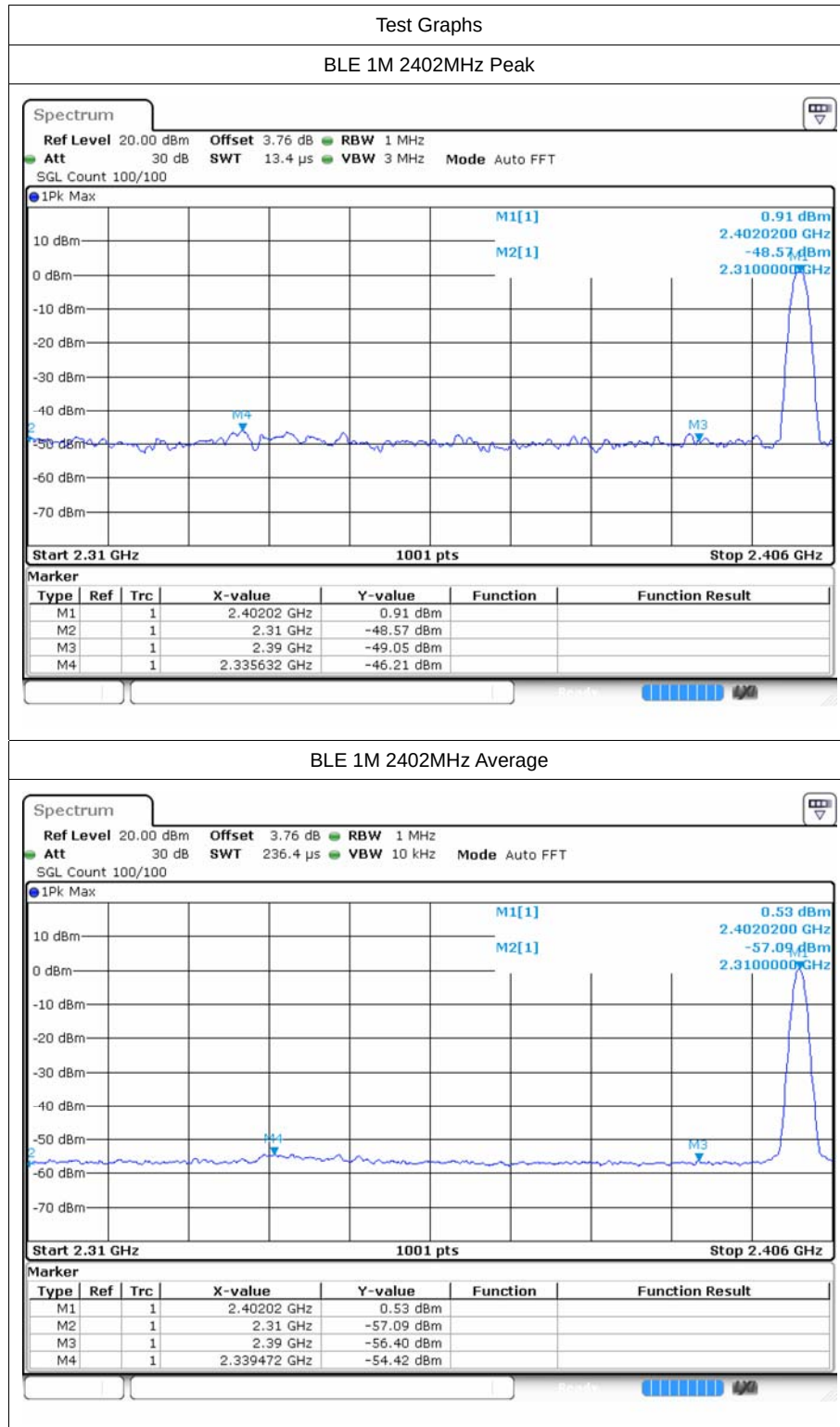


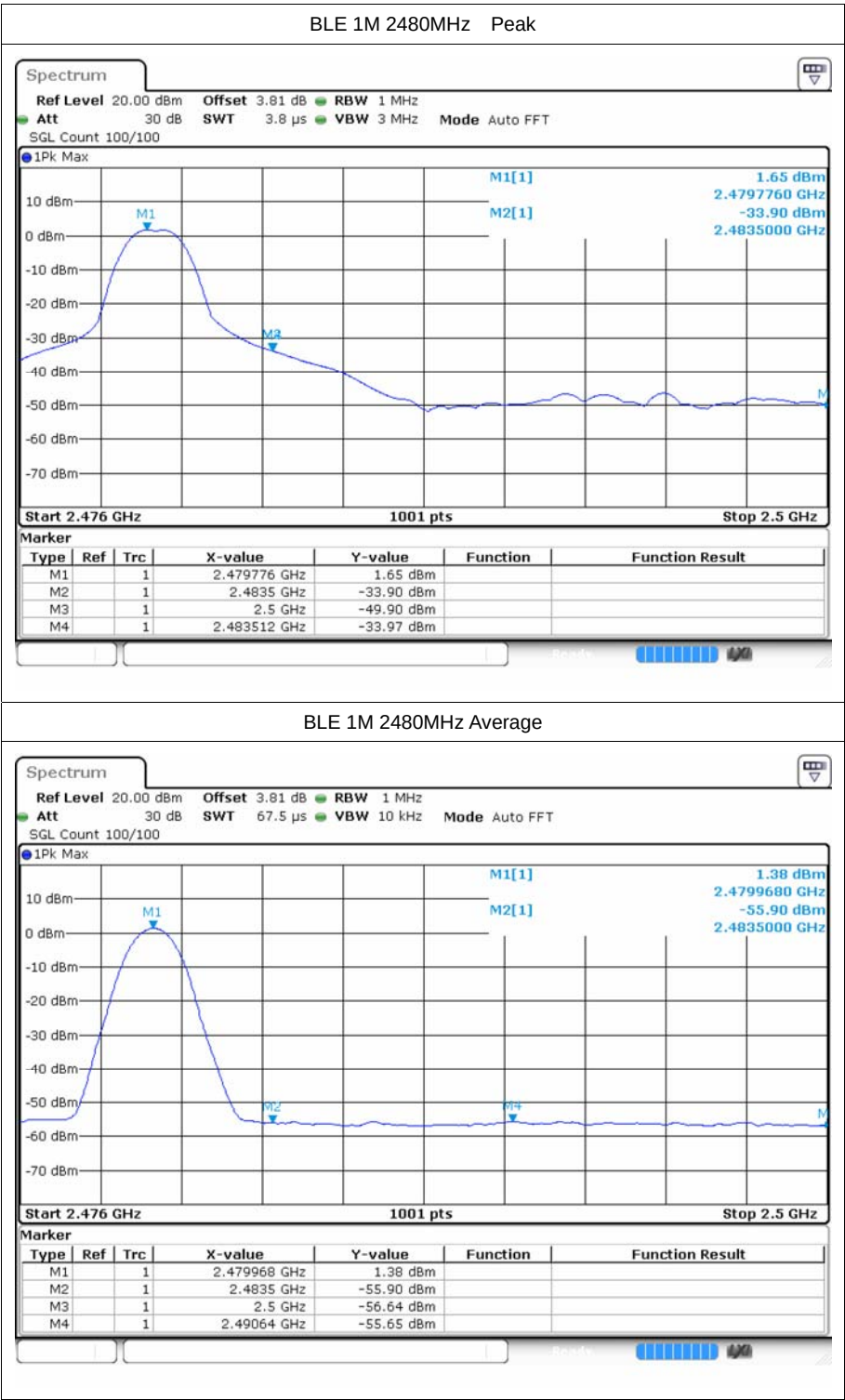
## 7 Restrict Band

### 7.1 Test Result

| Mode   | Frequency (MHz) | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|--------|-----------------|-----------------|-------------|------------|------------|----------|----------------|---------|
| BLE 1M | 2402            | 2310            | -48.56      | 2          | 48.7       | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2310            | -57.09      | 2          | 40.17      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2335.632        | -46.2       | 2          | 51.06      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2339.472        | -54.41      | 2          | 42.85      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2390            | -49.05      | 2          | 48.21      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2390            | -56.39      | 2          | 40.87      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2483.5          | -33.97      | 2          | 63.29      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.5          | -55.92      | 2          | 41.34      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2483.512        | -33.97      | 2          | 63.29      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2490.64         | -55.64      | 2          | 41.62      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2500            | -49.9       | 2          | 47.36      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2500            | -56.63      | 2          | 40.63      | Average  | 54             | Pass    |

## 7.2 Test Graphs





---The End---