



## Appendix B

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

Product Name: Laser Distance Measure

Trade Mark: N/A

Test Model: BLM-60-BT

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 24.6° C     |
| Relative Humidity: | 52.4%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Emiya Lin   |
| Supervised by:     | Simba Huang |



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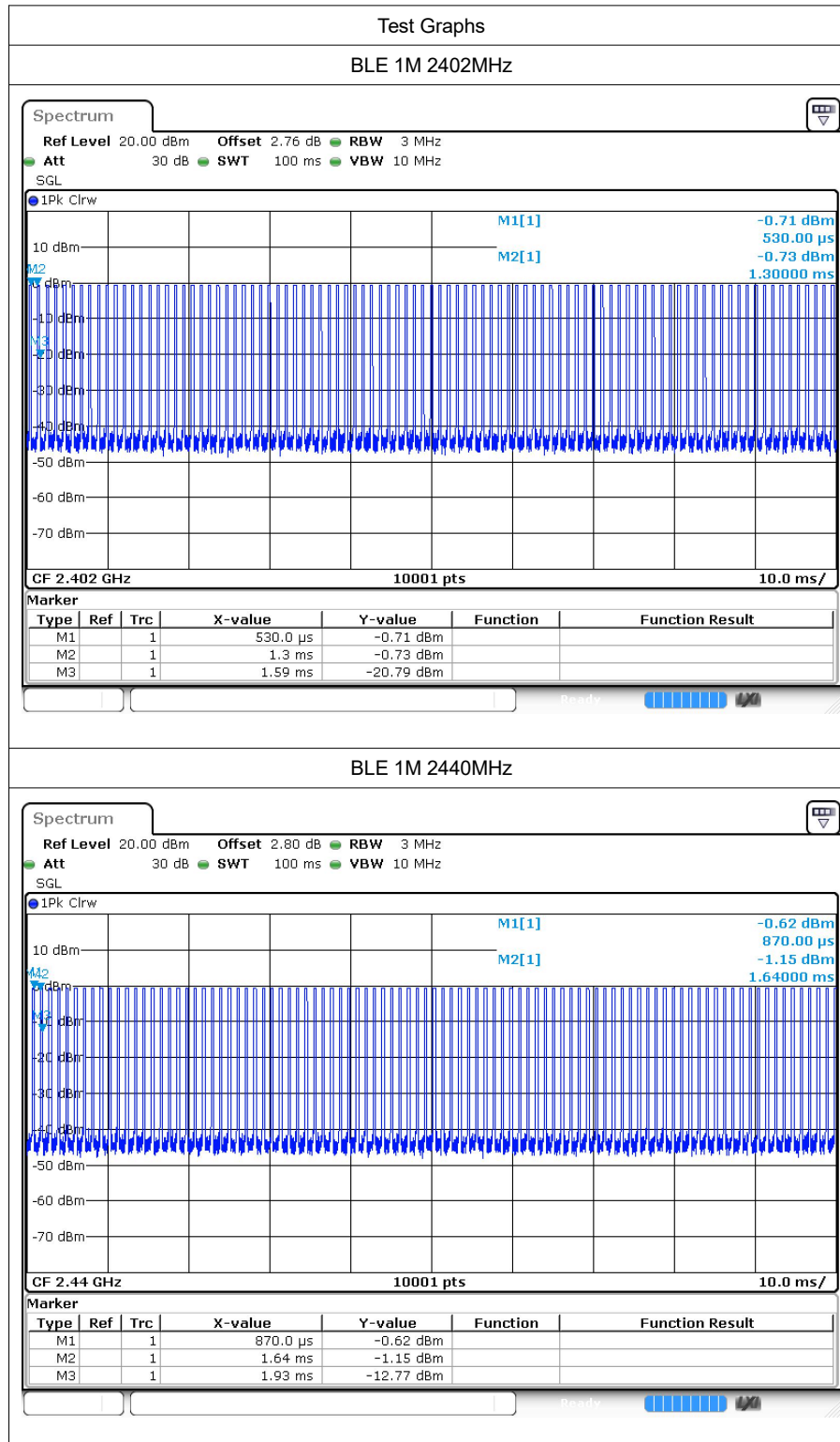


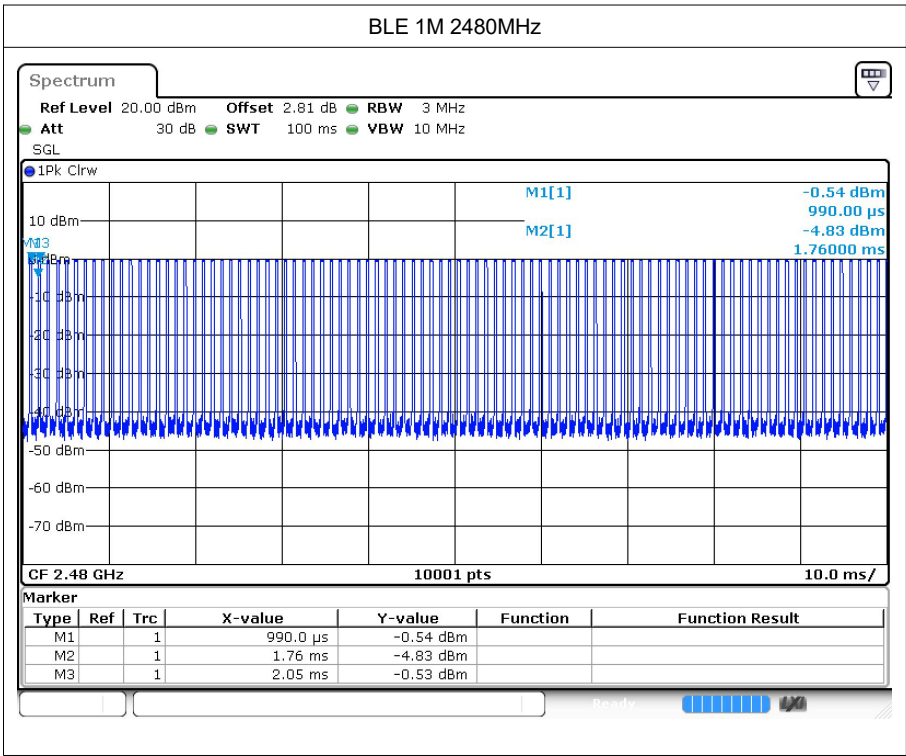
# 1 Duty Cycle

## 1.1 Test Result

| Mode   | Frequency (MHz) | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|--------|-----------------|----------------|-------------------|-----------|
| BLE 1M | 2402            | 28.5           | 5.45              | 3.45      |
| BLE 1M | 2440            | 28.48          | 5.46              | 3.45      |
| BLE 1M | 2480            | 28.36          | 5.47              | 3.45      |

## 1.2 Test Graphs





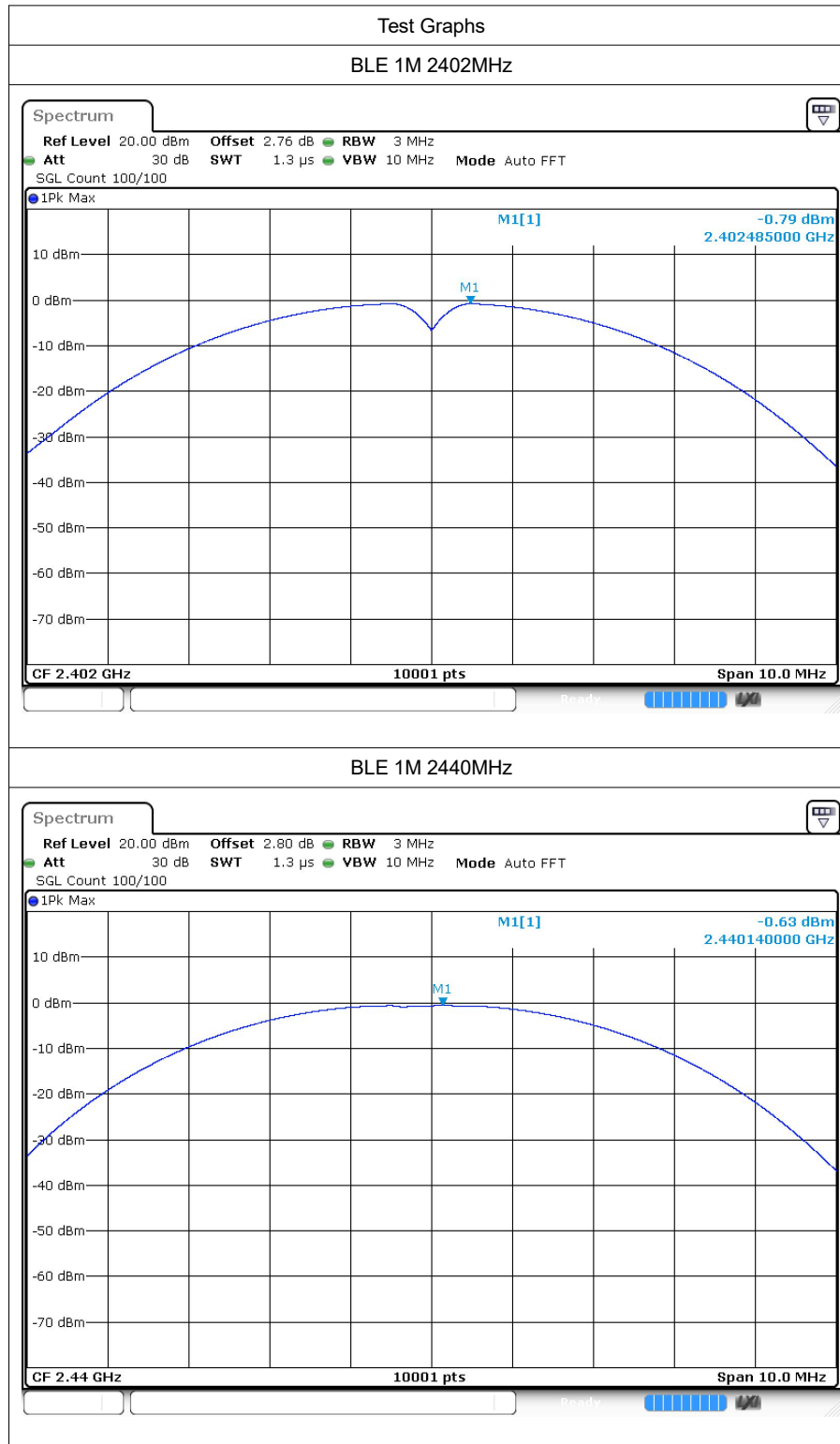


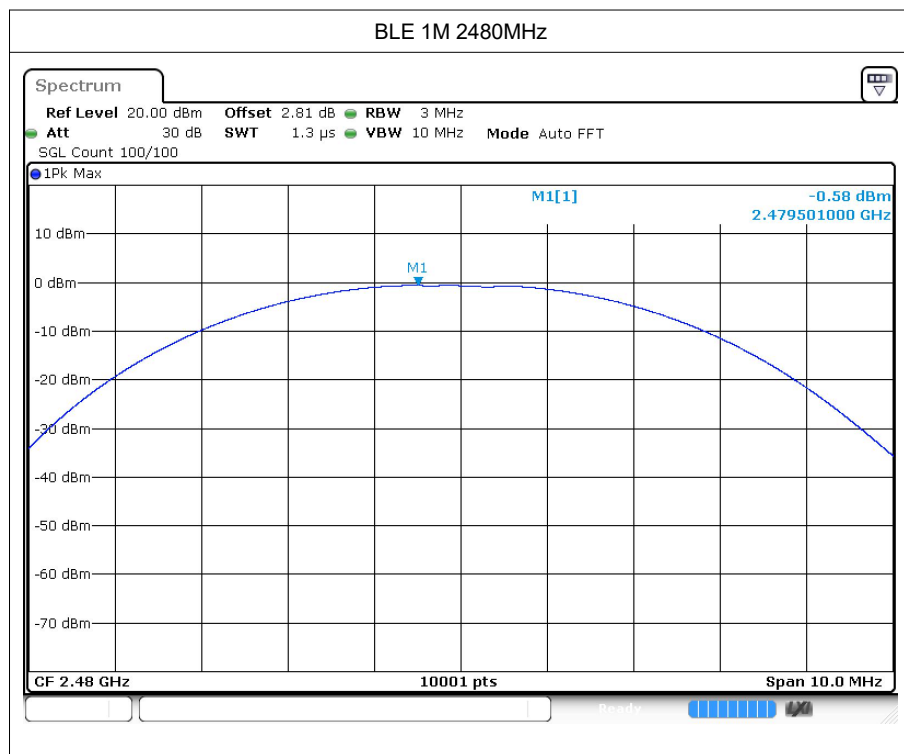
## 2 Maximum Conducted Output Power

### 2.1 Test Result

| Mode   | Frequency (MHz) | Conducted Power<br>(dBm) | Limit (dBm) | Verdict |
|--------|-----------------|--------------------------|-------------|---------|
| BLE 1M | 2402            | -0.79                    | 30          | Pass    |
| BLE 1M | 2440            | -0.63                    | 30          | Pass    |
| BLE 1M | 2480            | -0.58                    | 30          | Pass    |

## 2.2 Test Graphs





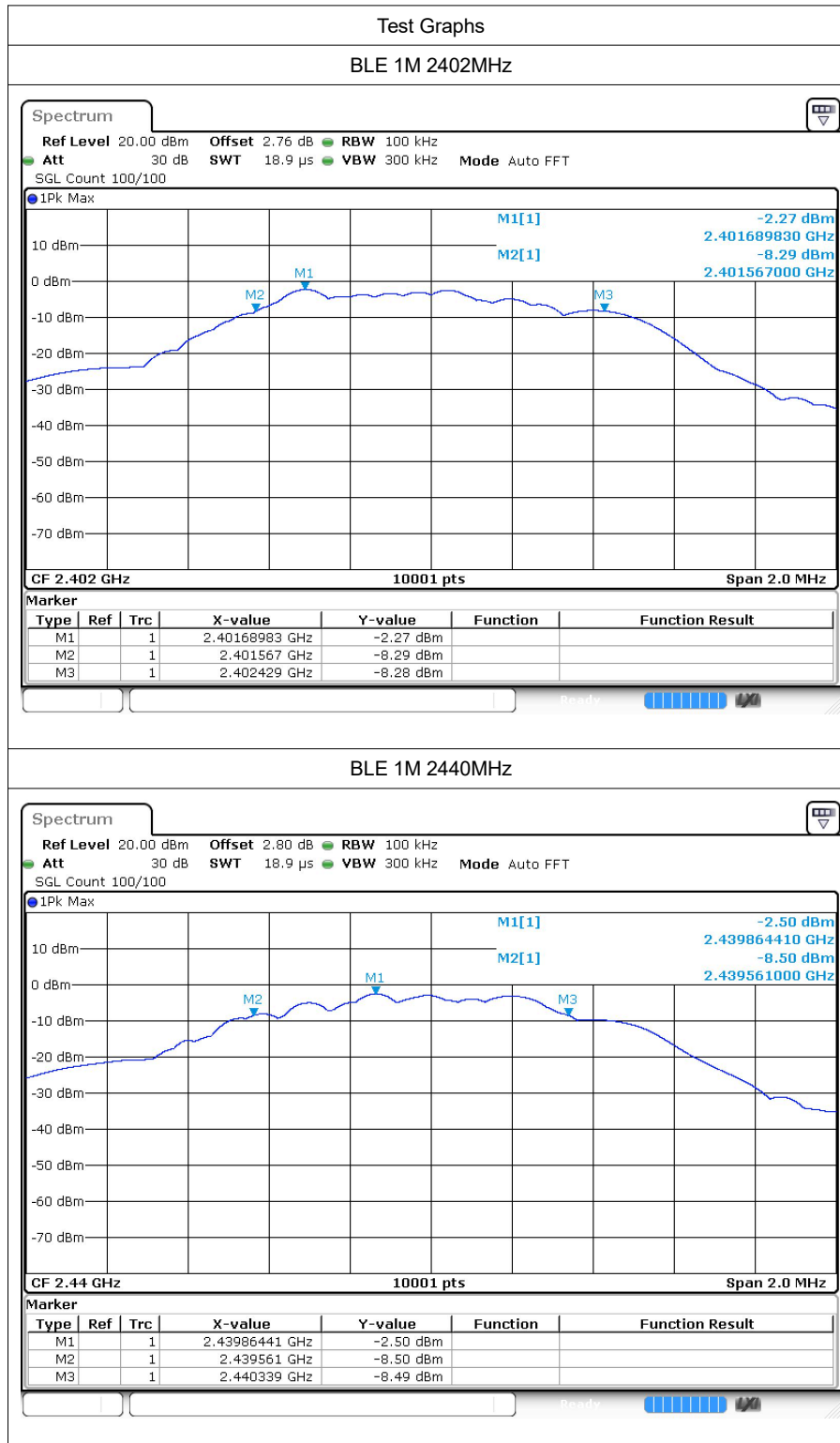


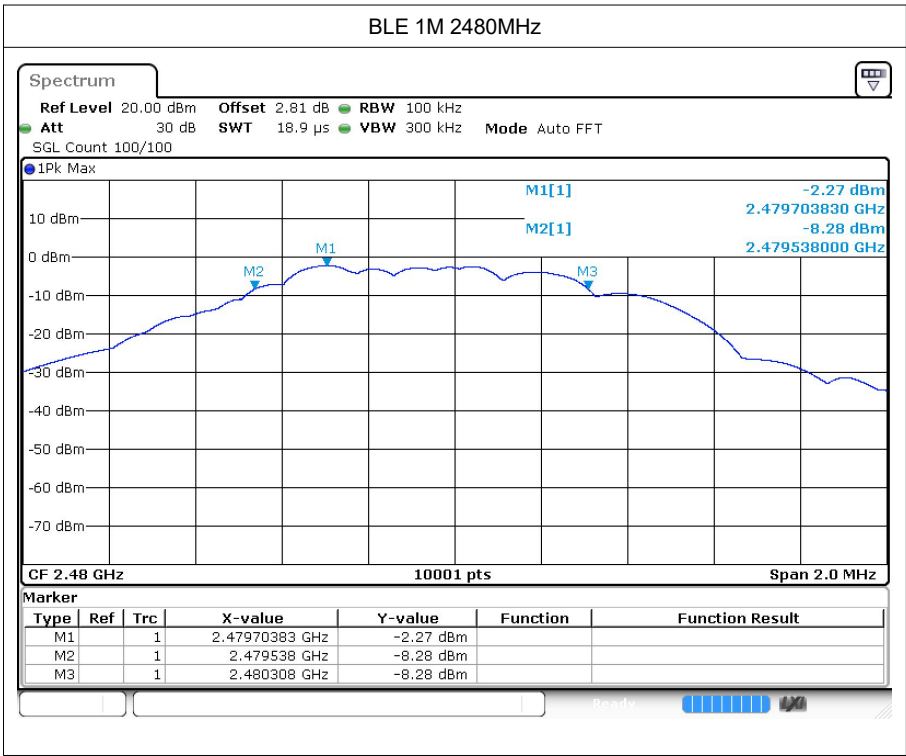
### 3 6 dB Bandwidth

#### 3.1 Test Result

| Mode   | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit 6 dB Bandwidth (MHz) | Verdict |
|--------|-----------------|----------------------|----------------------------|---------|
| BLE 1M | 2402            | 0.861                | 0.5                        | Pass    |
| BLE 1M | 2440            | 0.778                | 0.5                        | Pass    |
| BLE 1M | 2480            | 0.77                 | 0.5                        | Pass    |

### 3.2 Test Graphs



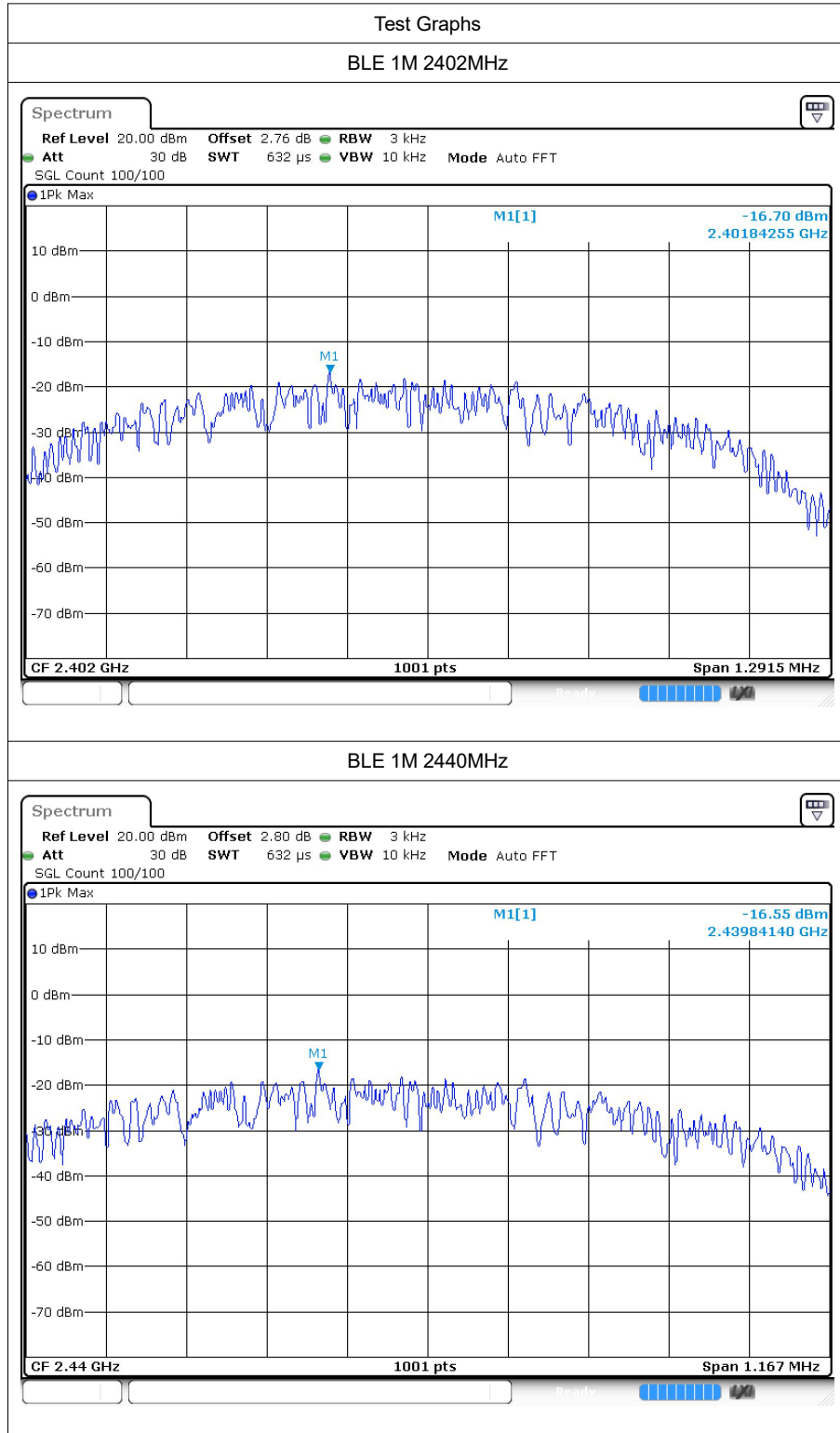


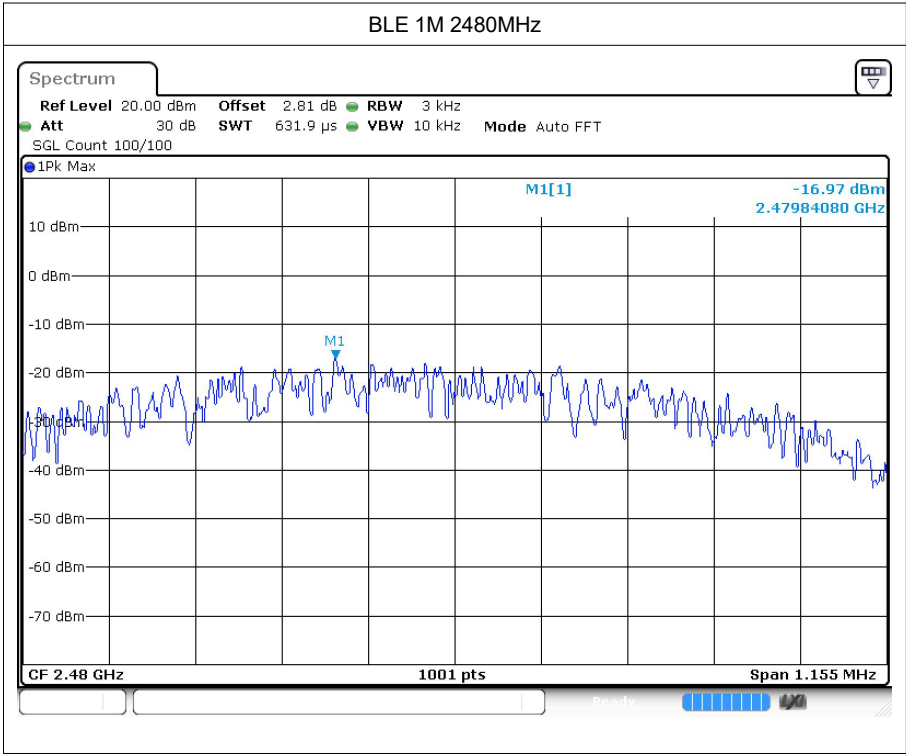
## 4 Maximum Power Spectral Density Level

### 4.1 Test Result

| Mode   | Frequency (MHz) | Conducted PSD<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Verdict |
|--------|-----------------|-----------------------------|---------------------|---------|
| BLE 1M | 2402            | -16.7                       | ≤8                  | Pass    |
| BLE 1M | 2440            | -16.55                      | ≤8                  | Pass    |
| BLE 1M | 2480            | -16.97                      | ≤8                  | Pass    |

## 4.2 Test Graphs





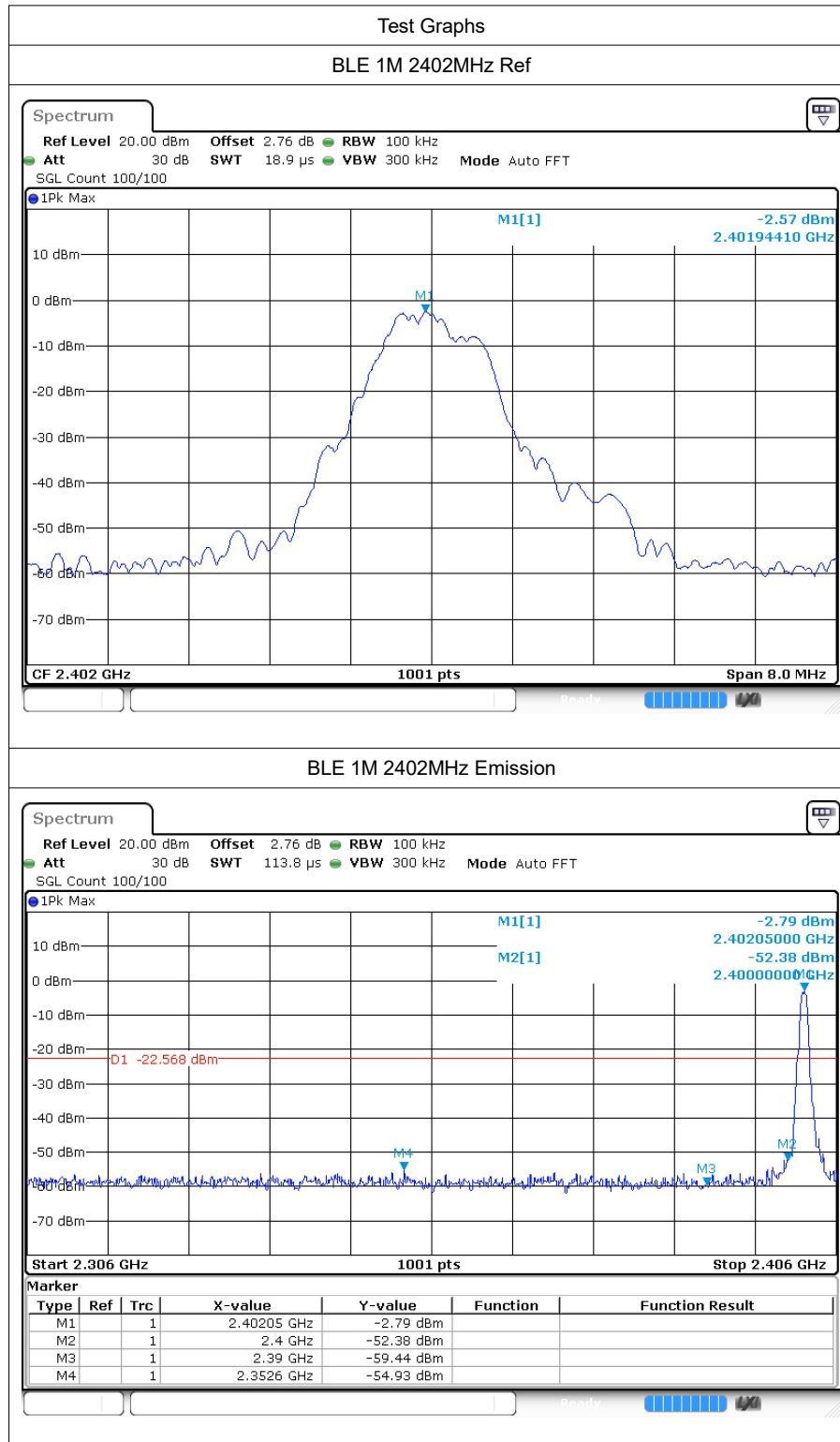


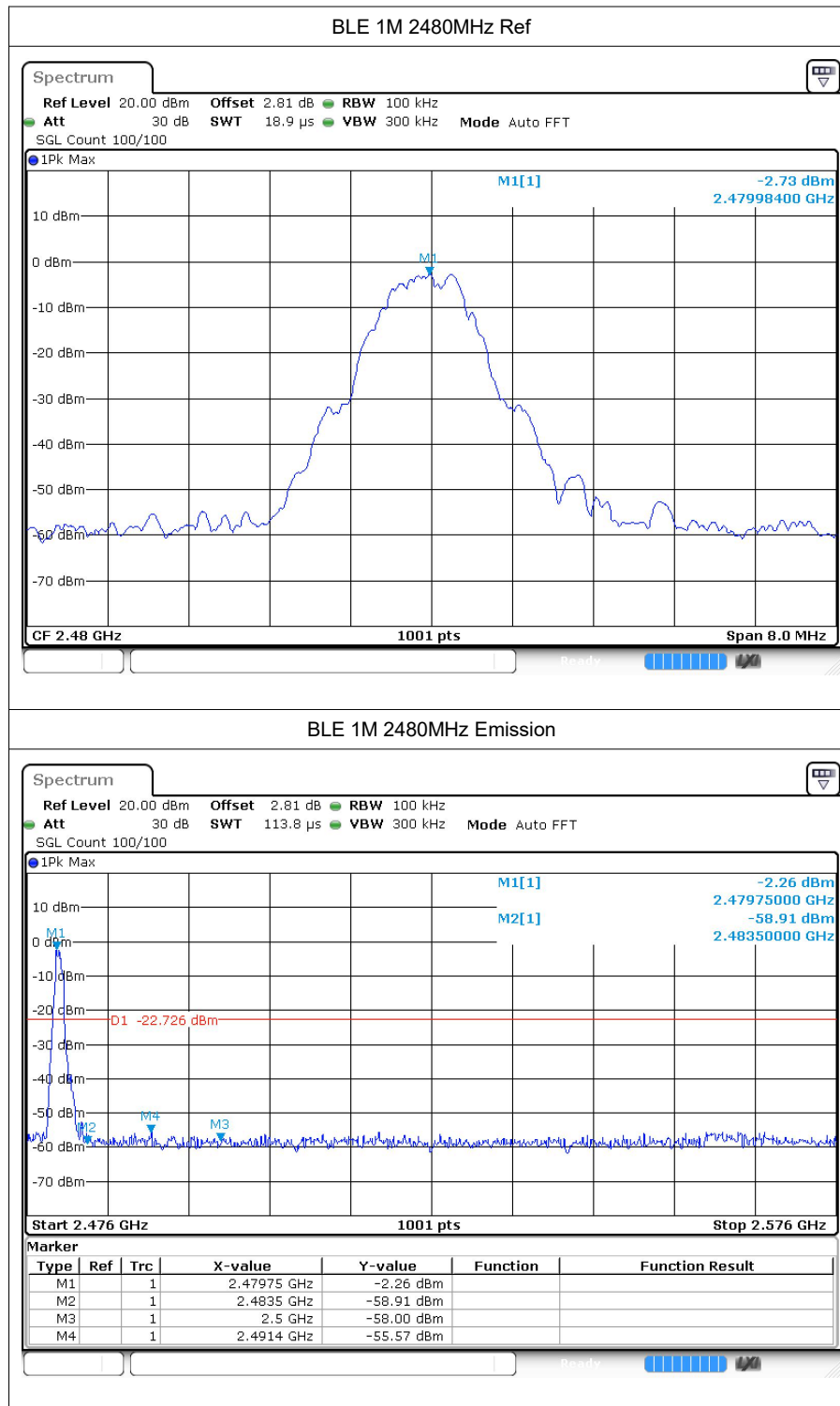
## 5 Band Edge

### 5.1 Test Result

| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -52.36          | -20         | Pass    |
| BLE 1M | 2480            | -52.83          | -20         | Pass    |

## 5.2 Test Graphs



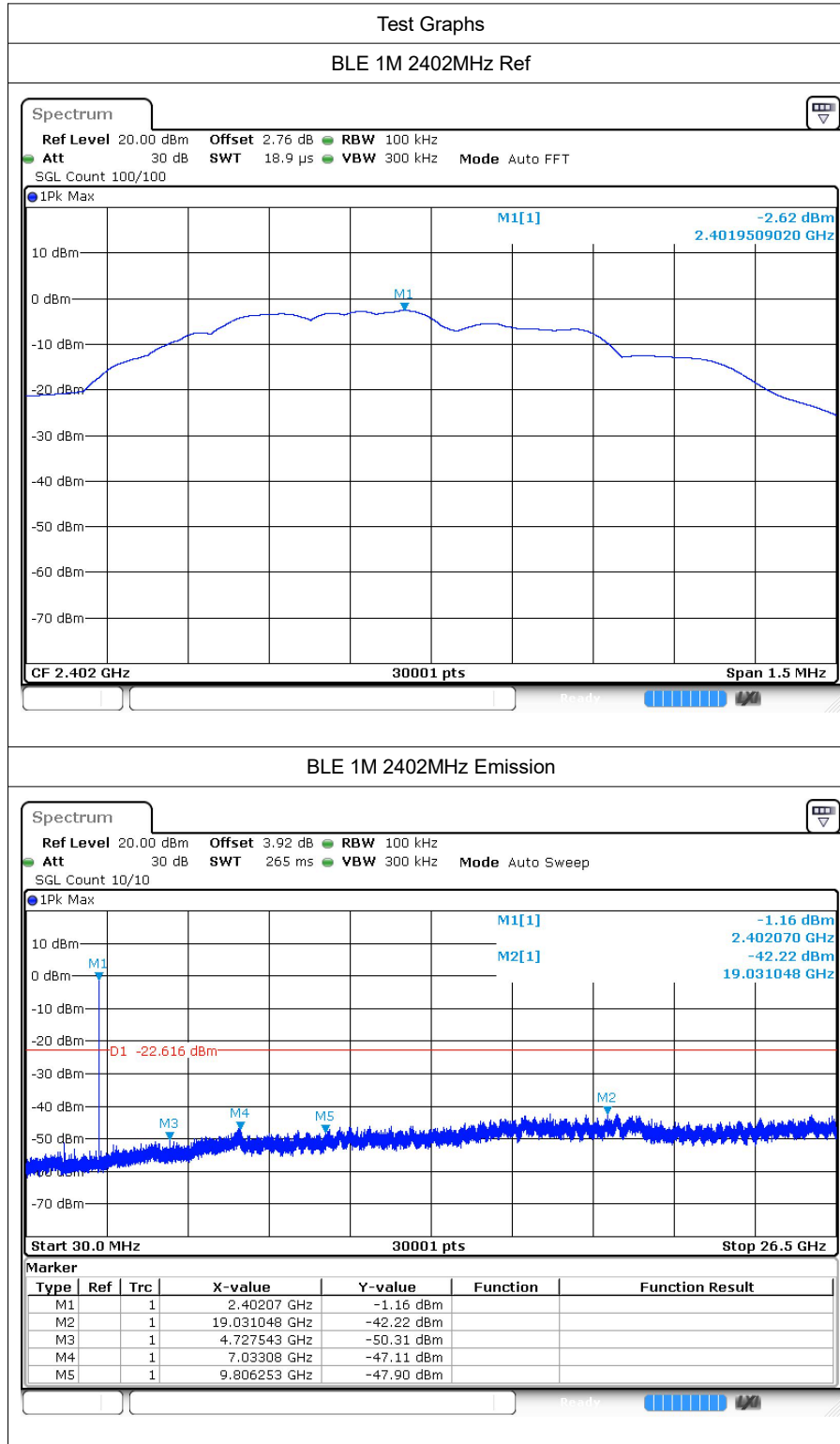


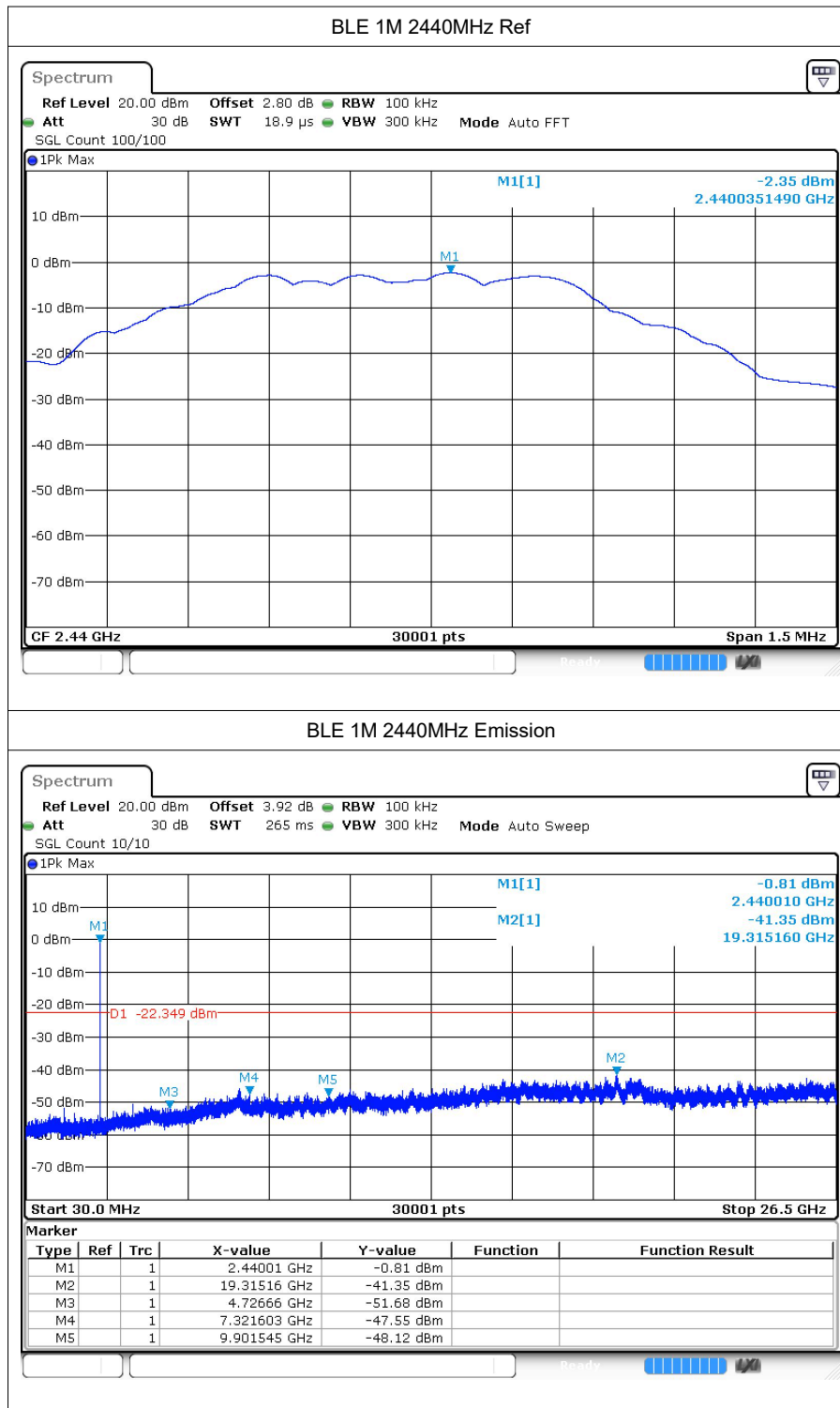
## 6 Conducted RF Spurious Emission

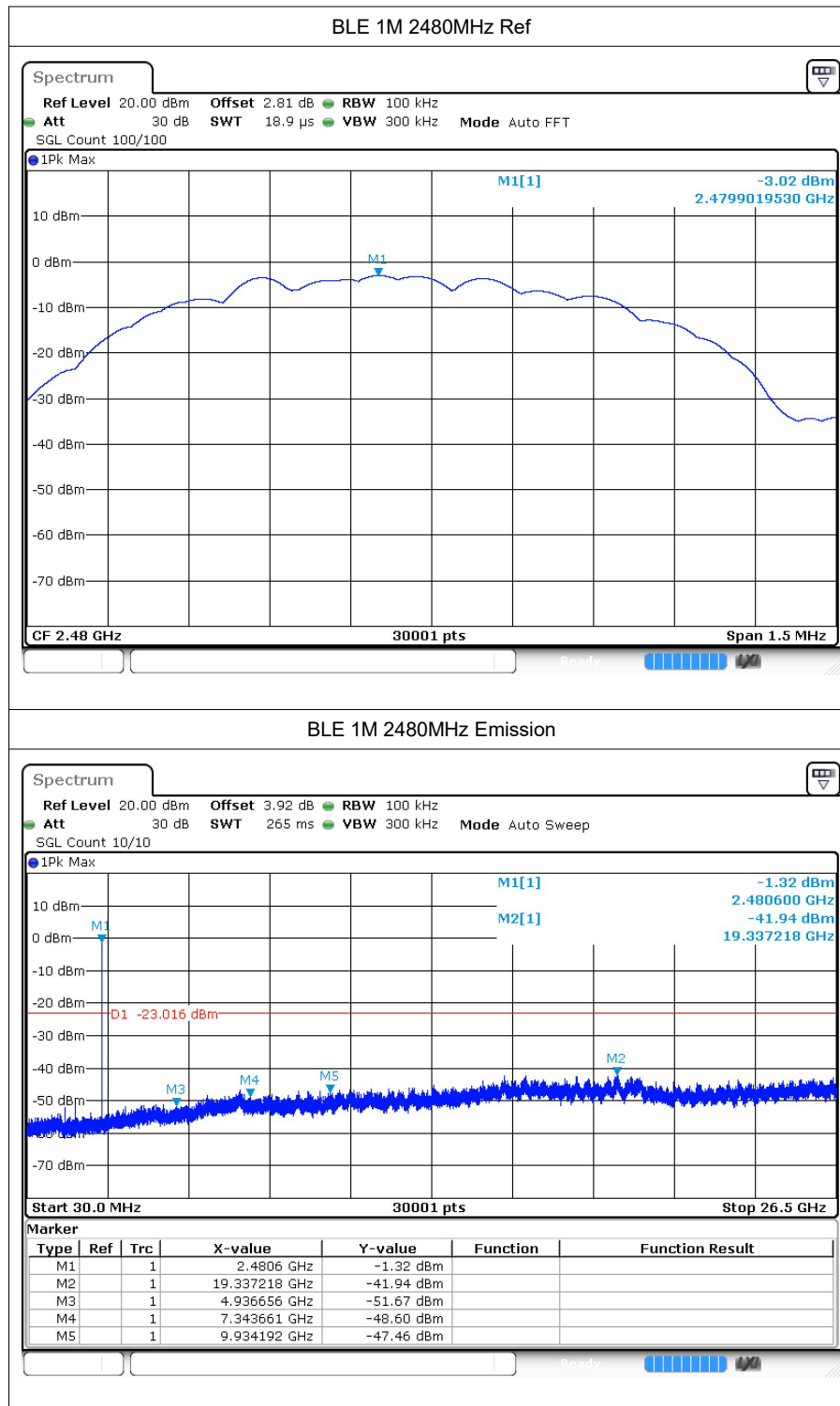
### 6.1 Test Result

| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -39.6           | -20         | Pass    |
| BLE 1M | 2440            | -39             | -20         | Pass    |
| BLE 1M | 2480            | -38.91          | -20         | Pass    |

## 6.2 Test Graphs







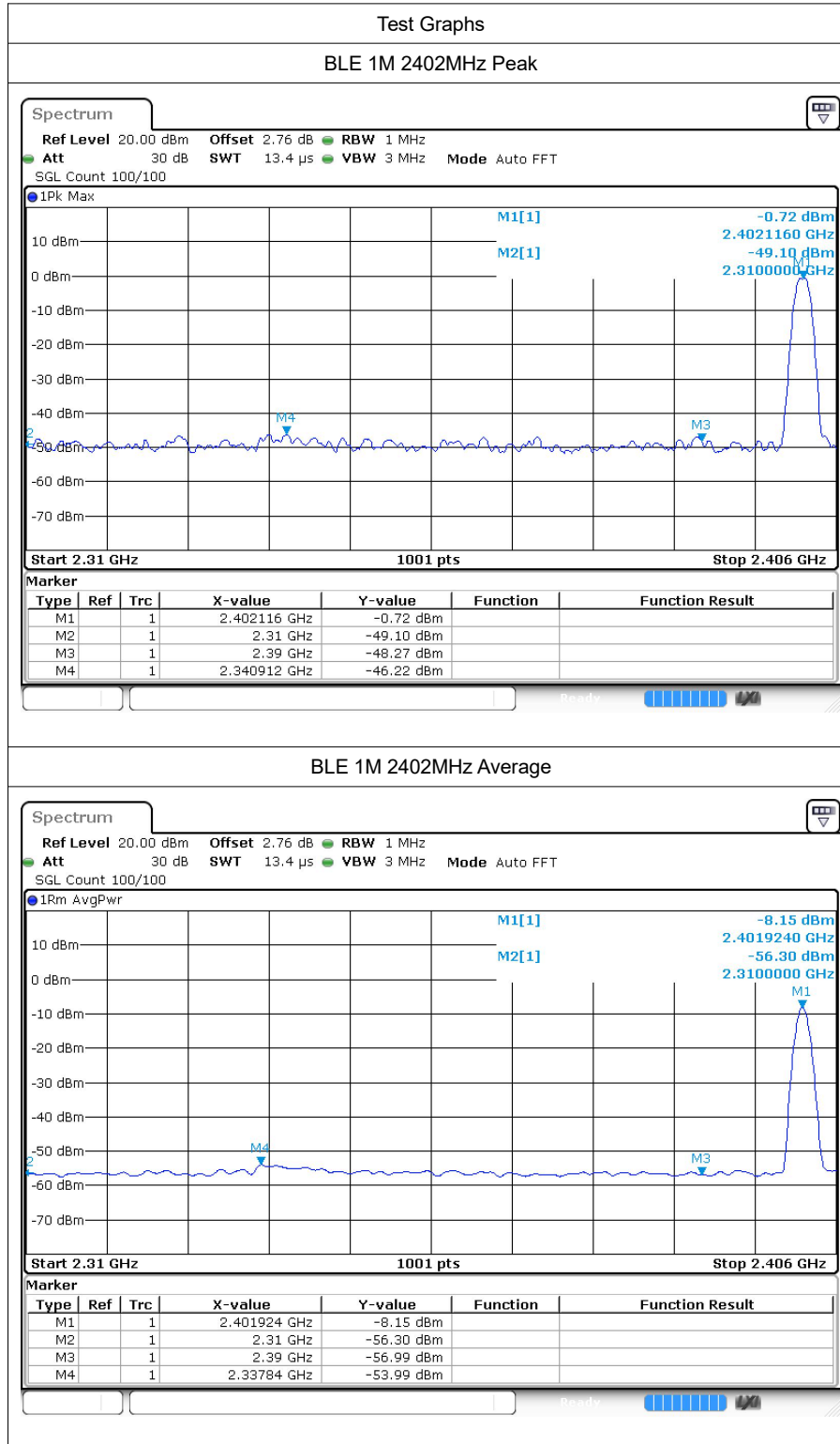


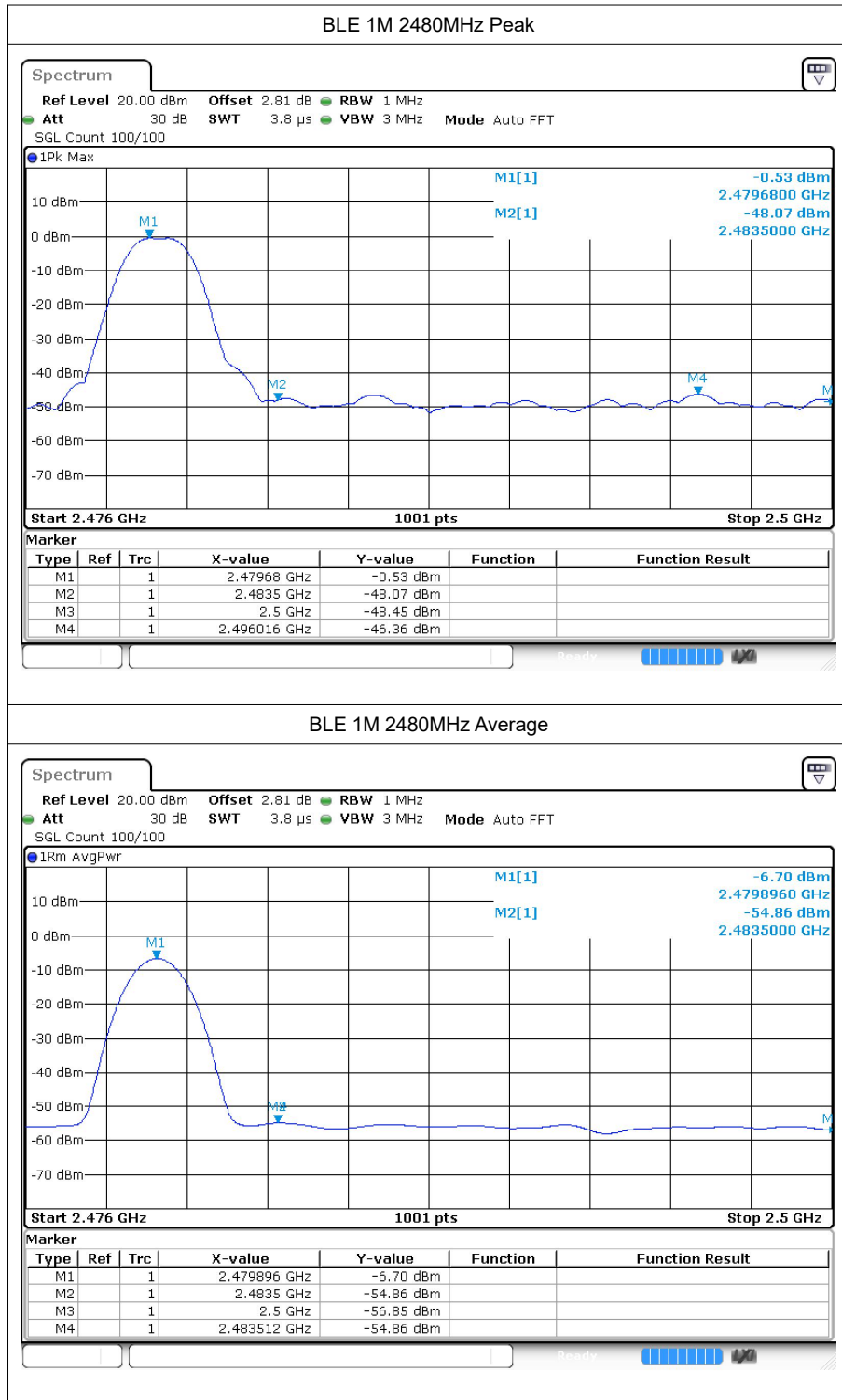
## 7 Restrict Band

### 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            | -49.1       | 2.04       | -           | 48.2       | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2310            | -56.3       | 2.04       | 5.45        | 46.45      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2340.912        | -46.21      | 2.04       | -           | 51.09      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2337.84         | -53.99      | 2.04       | 5.45        | 48.76      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2390            | -48.27      | 2.04       | -           | 49.03      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2390            | -56.99      | 2.04       | 5.45        | 45.76      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2483.5          | -48.07      | 2.04       | -           | 49.23      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.5          | -54.86      | 2.04       | 5.47        | 47.91      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2496.016        | -46.35      | 2.04       | -           | 50.95      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.512        | -54.85      | 2.04       | 5.47        | 47.92      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2500            | -48.45      | 2.04       | -           | 48.85      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2500            | -56.85      | 2.04       | 5.47        | 45.92      | Average  | 54             | Pass    |

## 7.2 Test Graphs





---The End---