



## Appendix B

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

Product Name: Ring remote control

Trade Mark: N/A

Test Model: R1

#### Environmental Conditions

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



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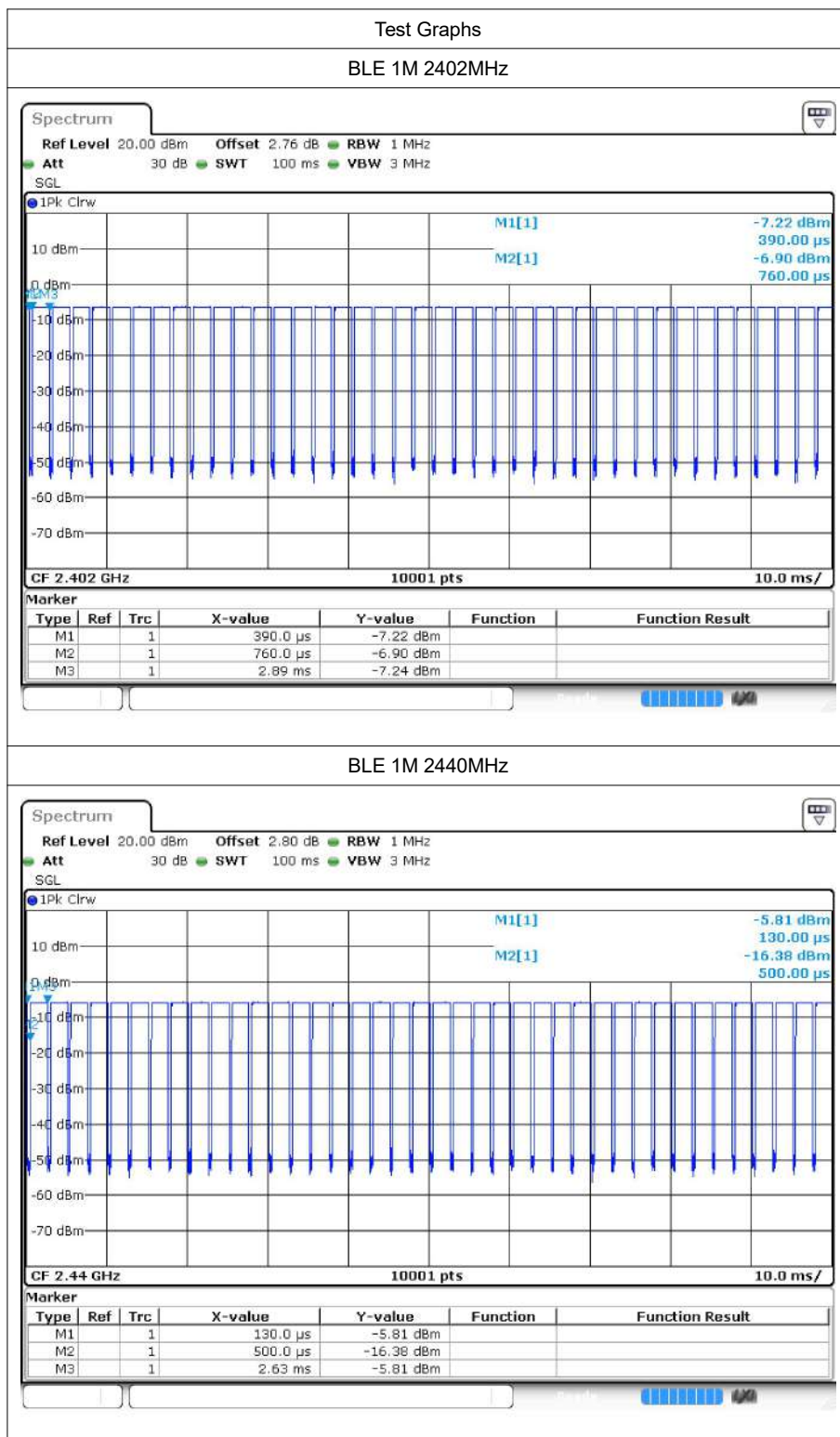


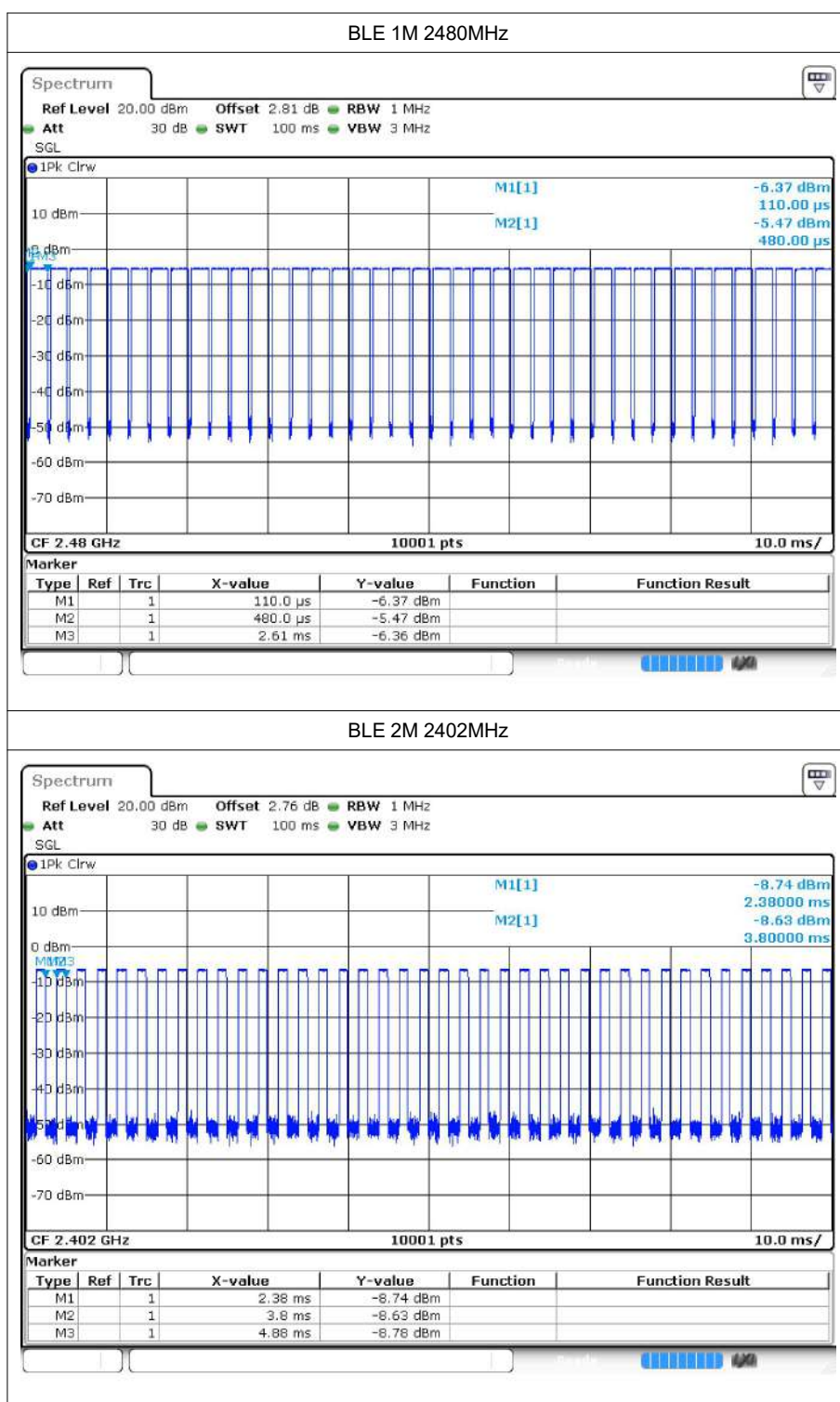
# 1 Duty Cycle

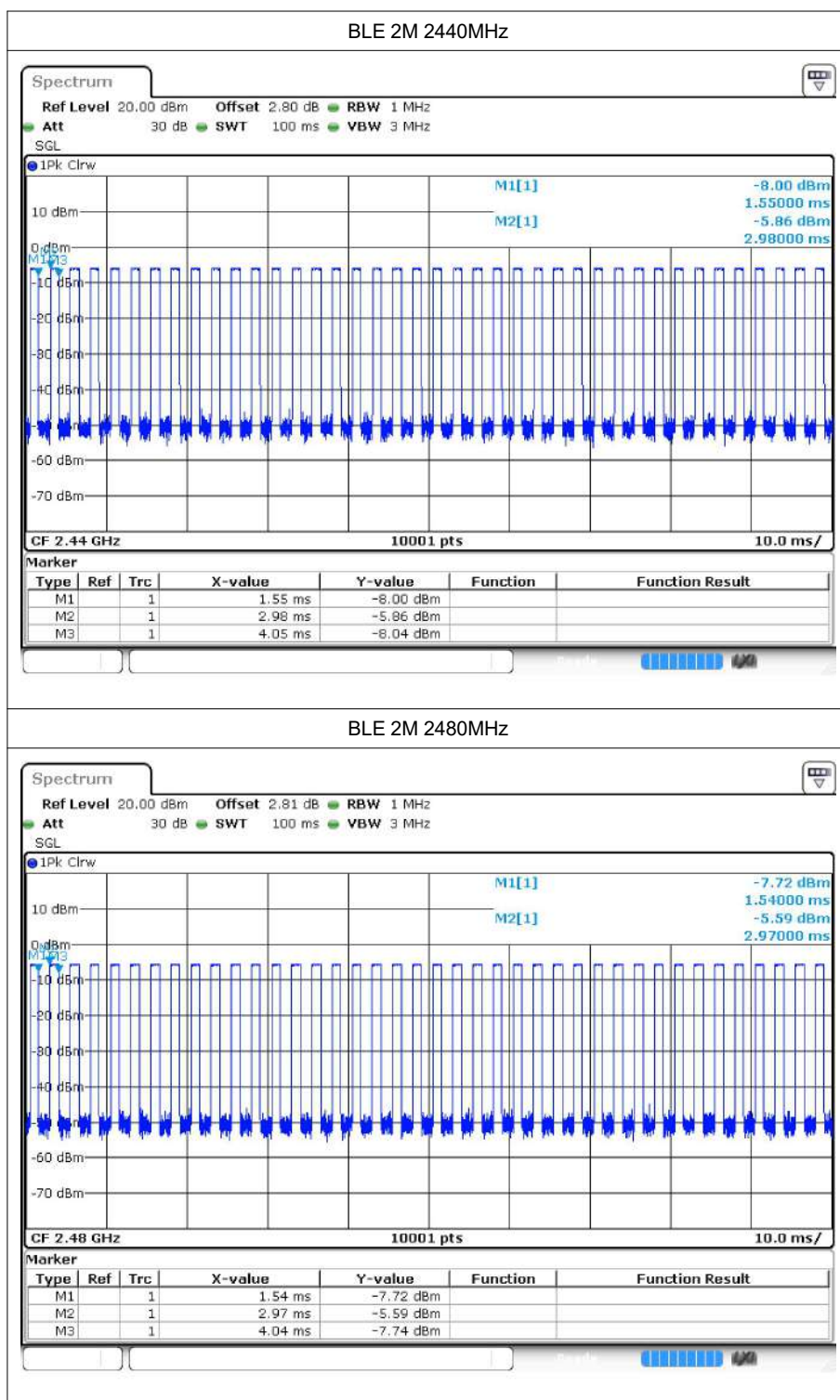
## 1.1 Test Result

| Mode   | Frequency (MHz) | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|--------|-----------------|----------------|-------------------|-----------|
| BLE 1M | 2402            | 85.6           | 0.68              | 0.47      |
| BLE 1M | 2440            | 85.6           | 0.68              | 0.47      |
| BLE 1M | 2480            | 85.6           | 0.68              | 0.47      |
| BLE 2M | 2402            | 43.6           | 3.61              | 0.93      |
| BLE 2M | 2440            | 43.2           | 3.65              | 0.93      |
| BLE 2M | 2480            | 43.2           | 3.65              | 0.93      |

## 1.2 Test Graphs







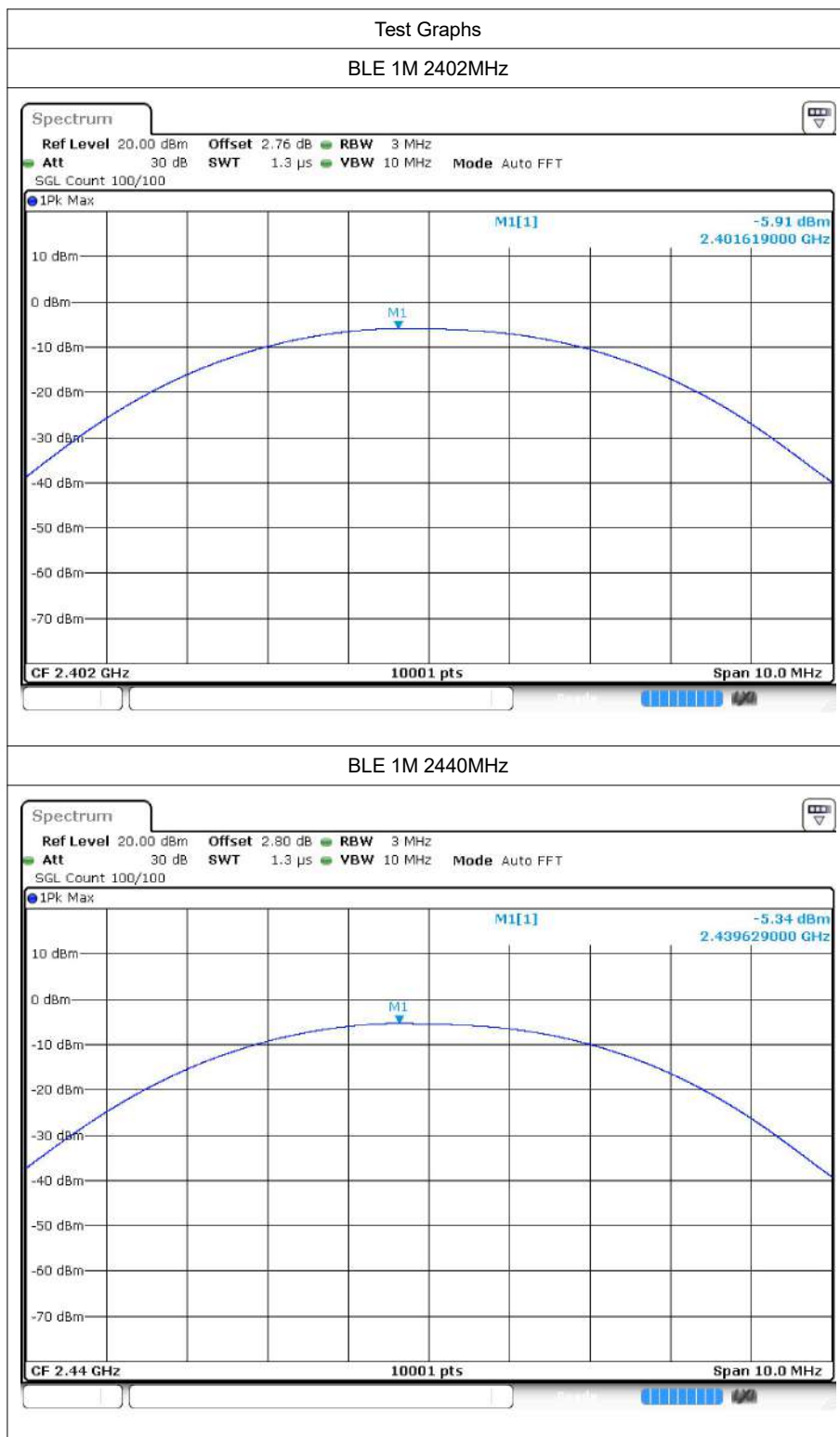


## 2 Maximum Conducted Output Power

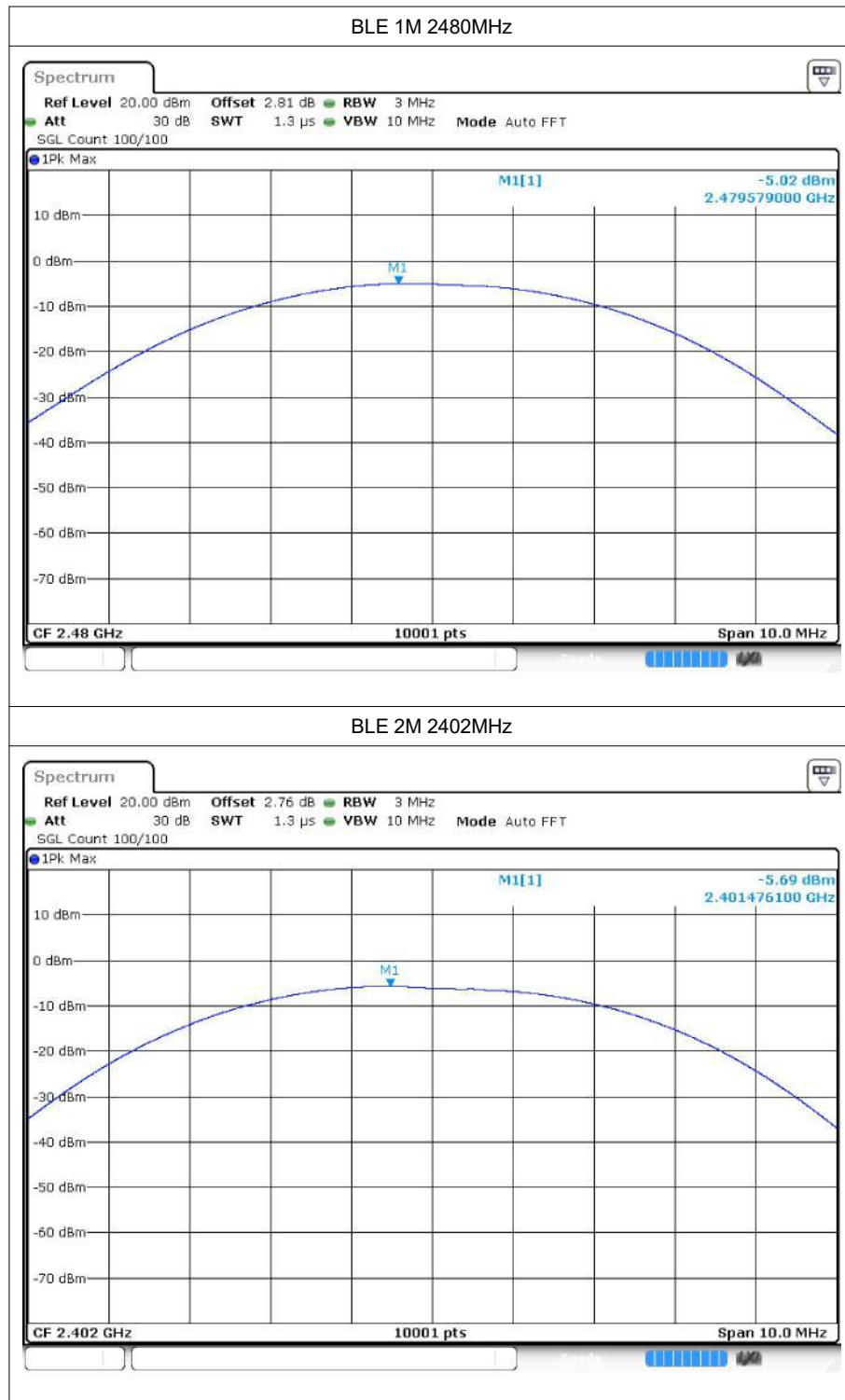
### 2.1 Test Result

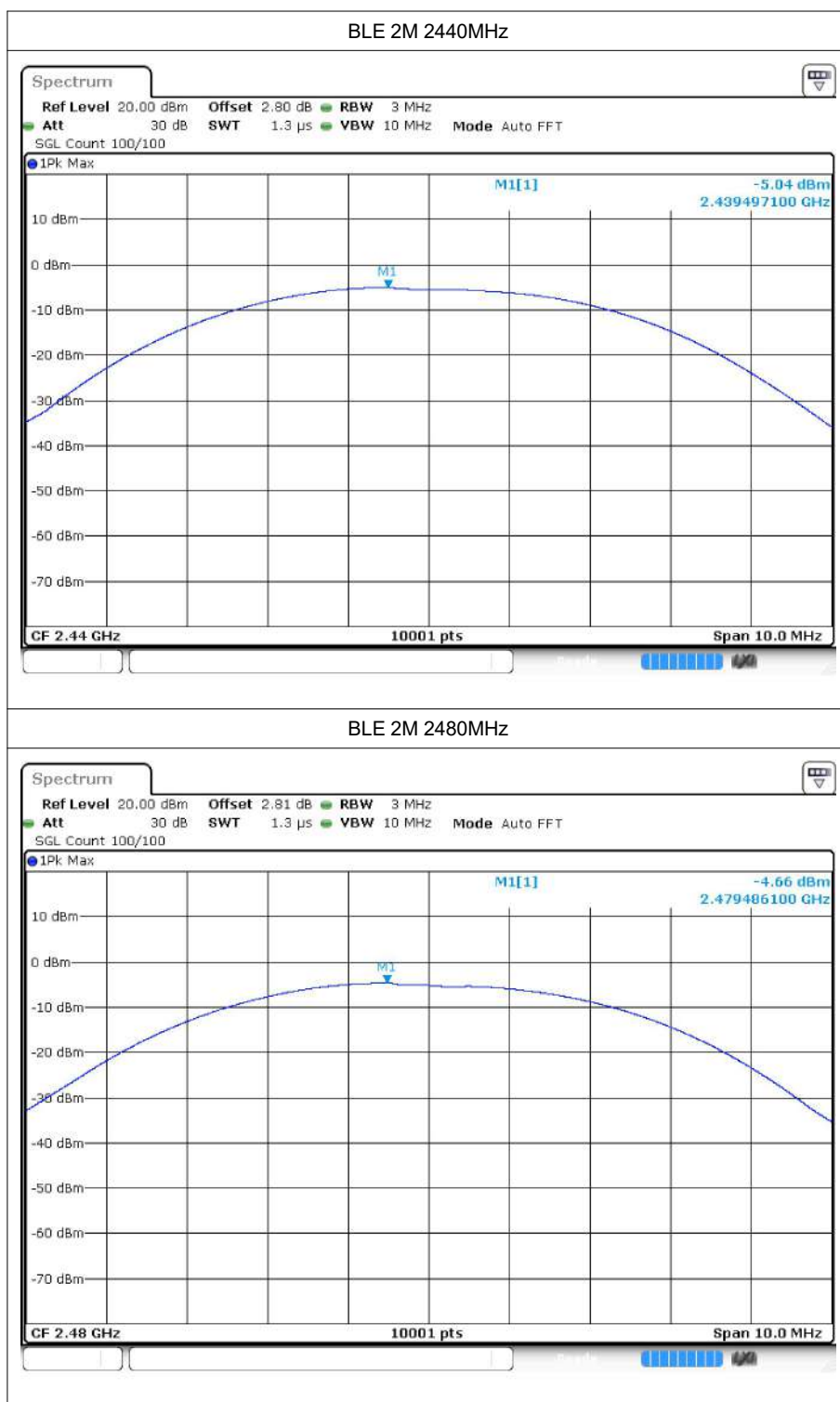
| Mode   | Frequency (MHz) | Conducted Power (dBm) | Limit (dBm) | Verdict |
|--------|-----------------|-----------------------|-------------|---------|
| BLE 1M | 2402            | -5.91                 | 30          | Pass    |
| BLE 1M | 2440            | -5.34                 | 30          | Pass    |
| BLE 1M | 2480            | -5.02                 | 30          | Pass    |
| BLE 2M | 2402            | -5.69                 | 30          | Pass    |
| BLE 2M | 2440            | -5.04                 | 30          | Pass    |
| BLE 2M | 2480            | -4.66                 | 30          | Pass    |

## 2.2 Test Graphs









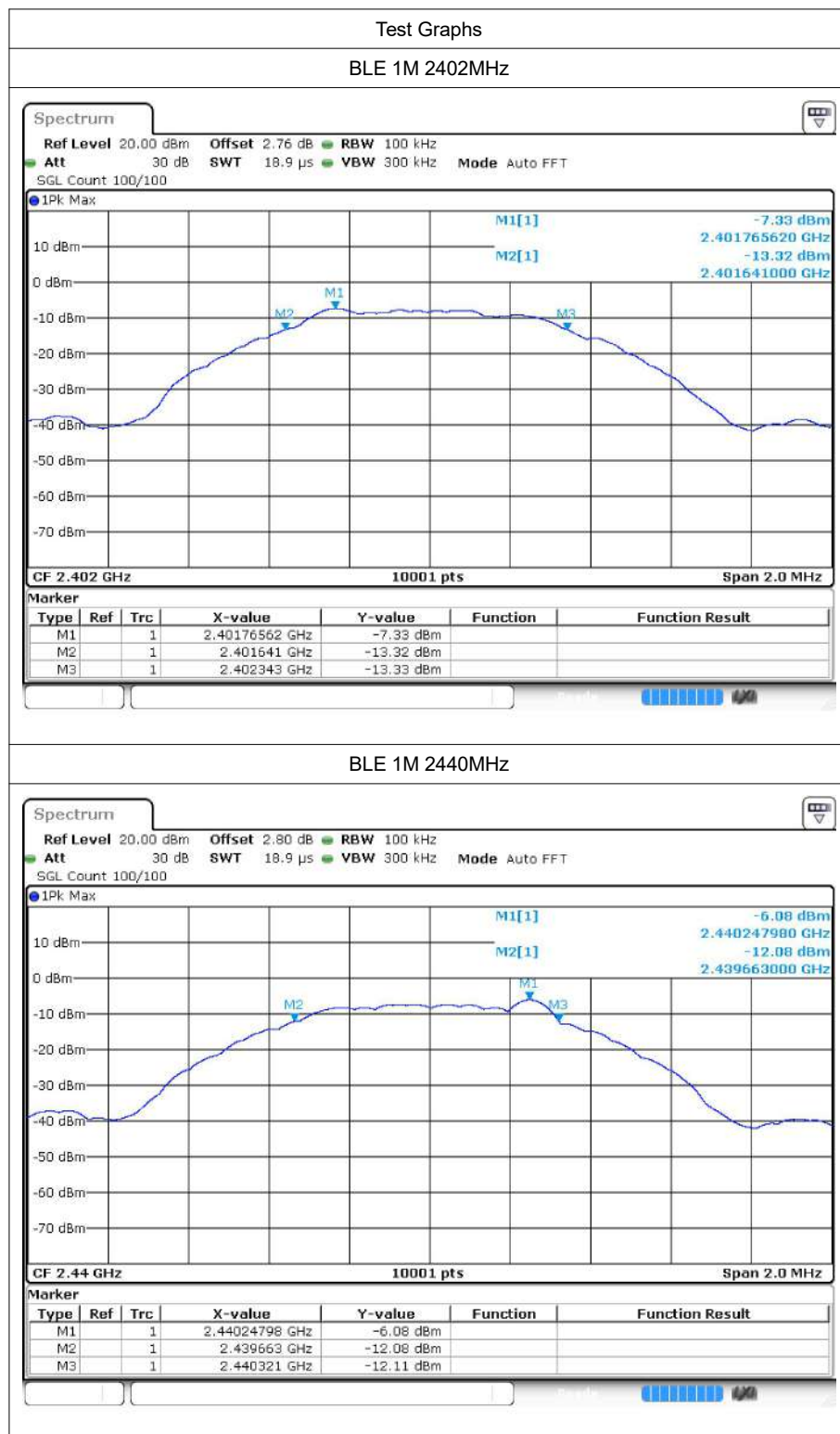


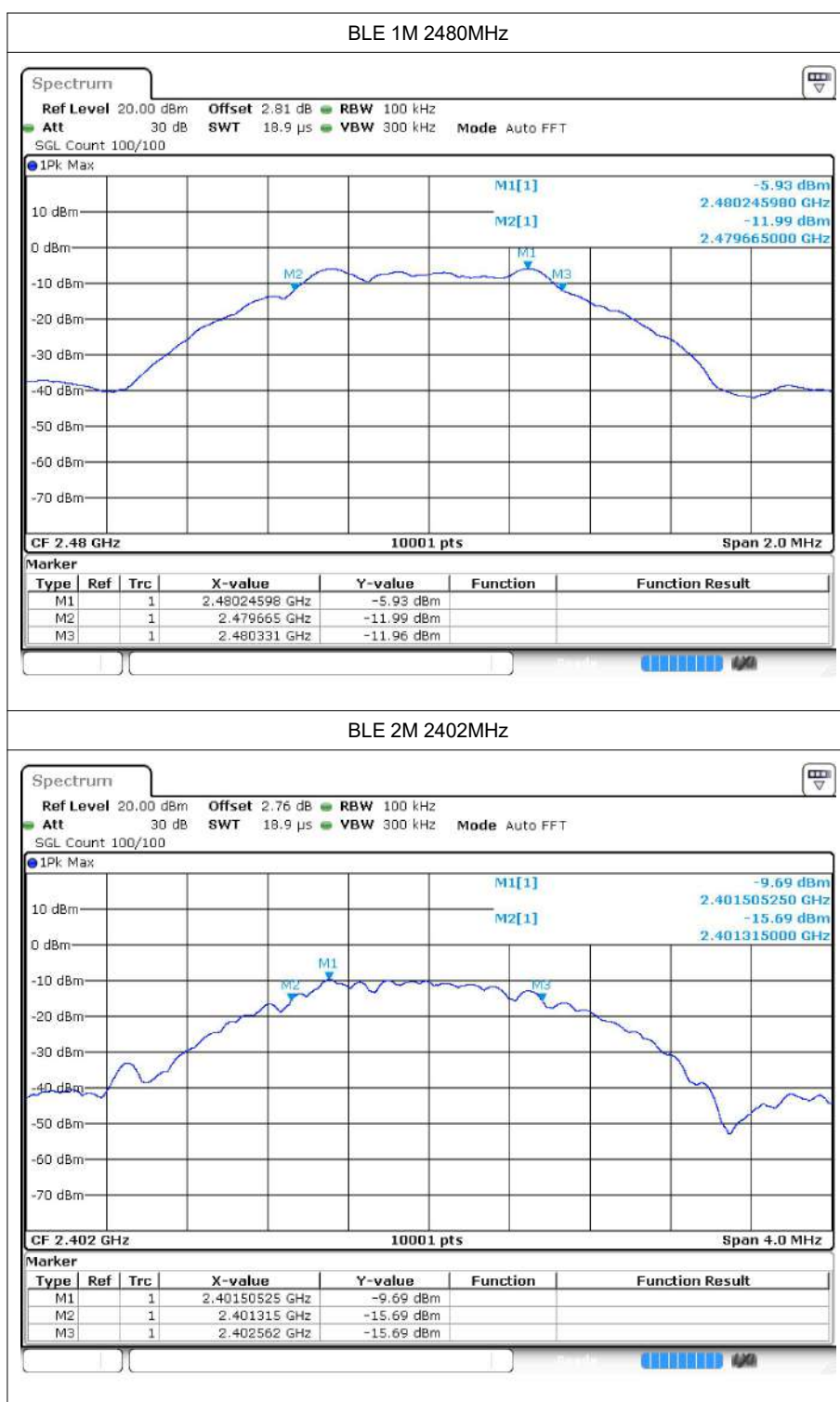
### 3 -6dB Bandwidth

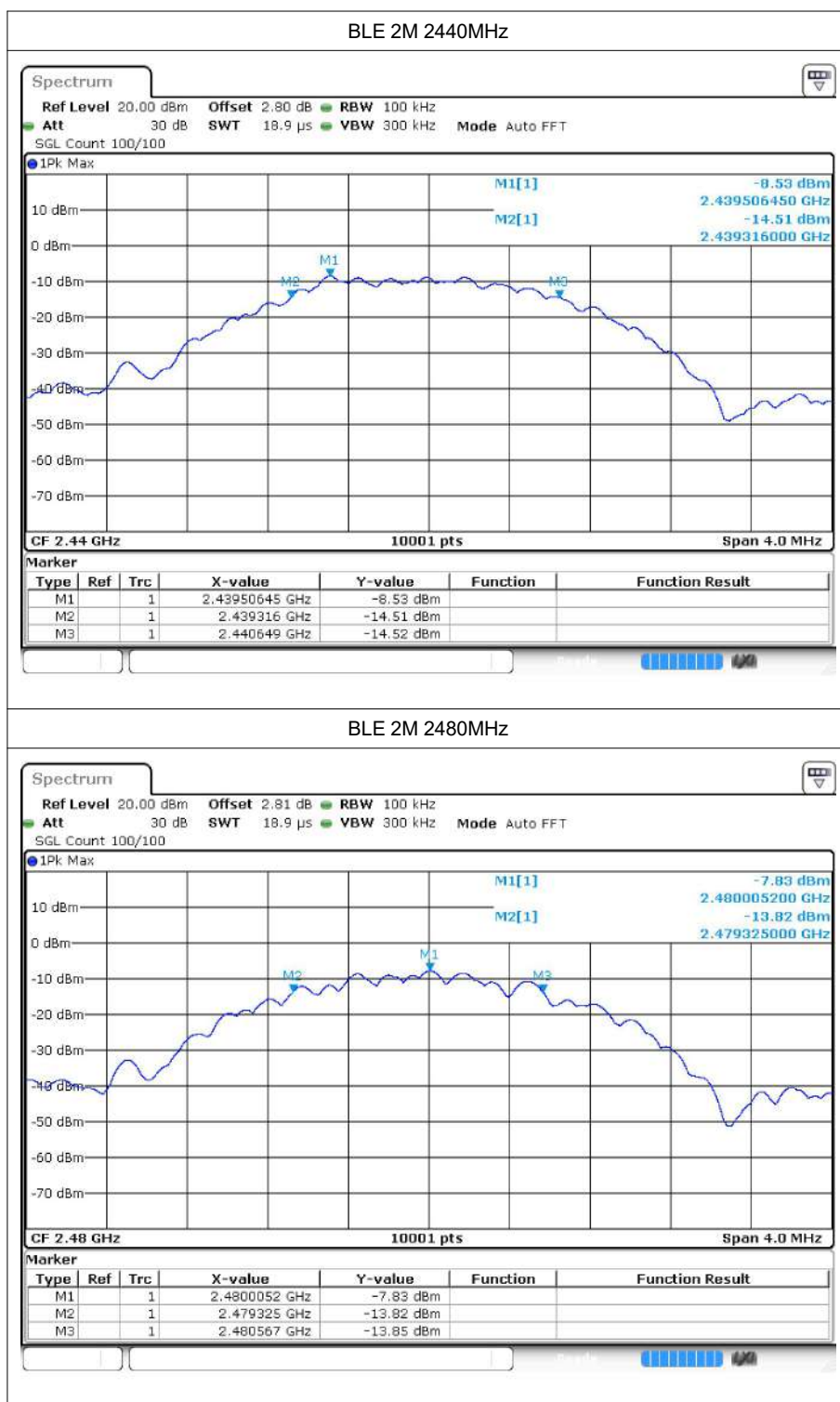
#### 3.1 Test Result

| Mode   | Frequency (MHz) | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|--------|-----------------|-----------------------|-----------------------------|---------|
| BLE 1M | 2402            | 0.702                 | 0.5                         | Pass    |
| BLE 1M | 2440            | 0.658                 | 0.5                         | Pass    |
| BLE 1M | 2480            | 0.665                 | 0.5                         | Pass    |
| BLE 2M | 2402            | 1.247                 | 0.5                         | Pass    |
| BLE 2M | 2440            | 1.334                 | 0.5                         | Pass    |
| BLE 2M | 2480            | 1.242                 | 0.5                         | Pass    |

## 3.2 Test Graphs





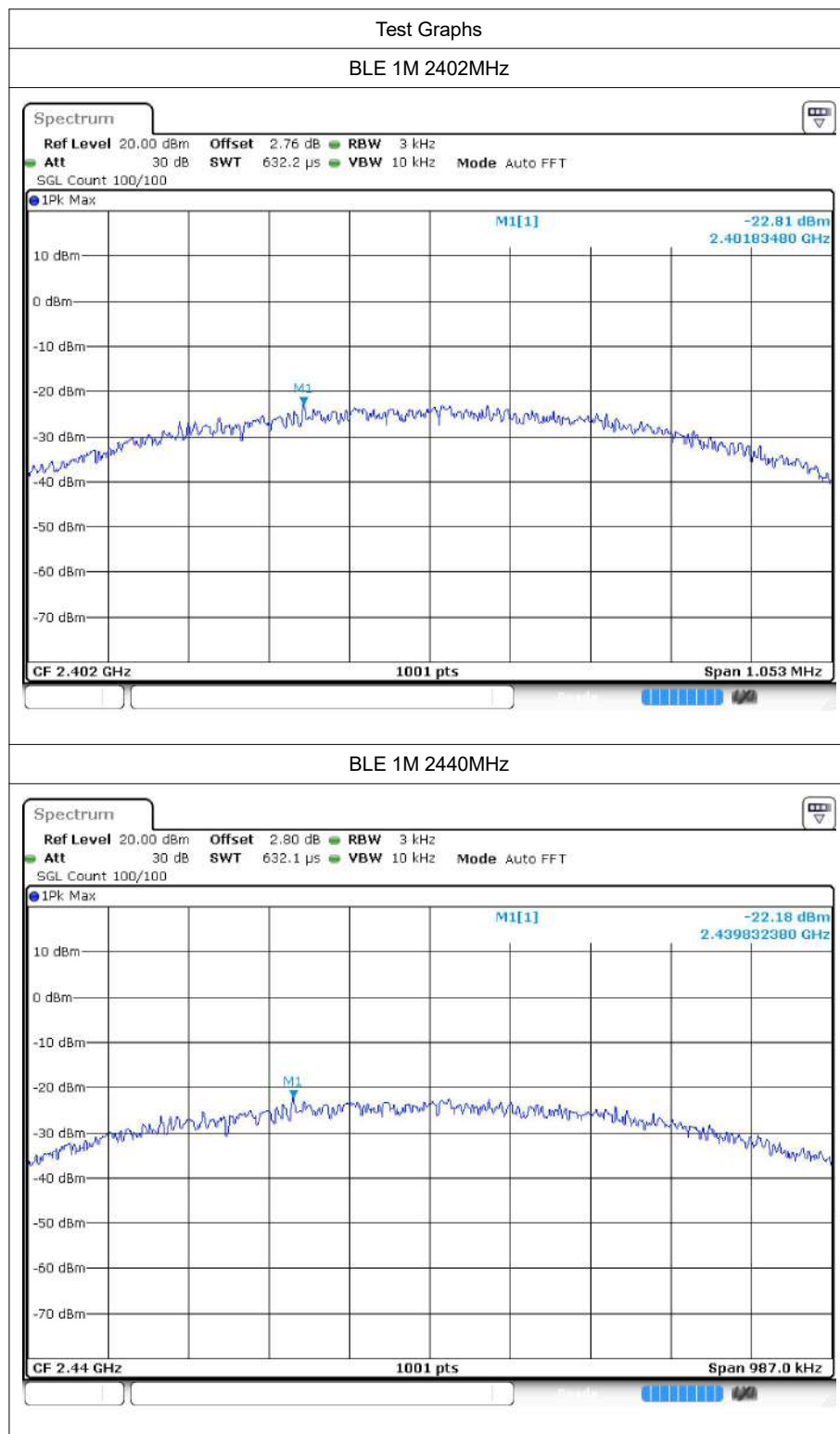


## 4 Maximum Power Spectral Density Level

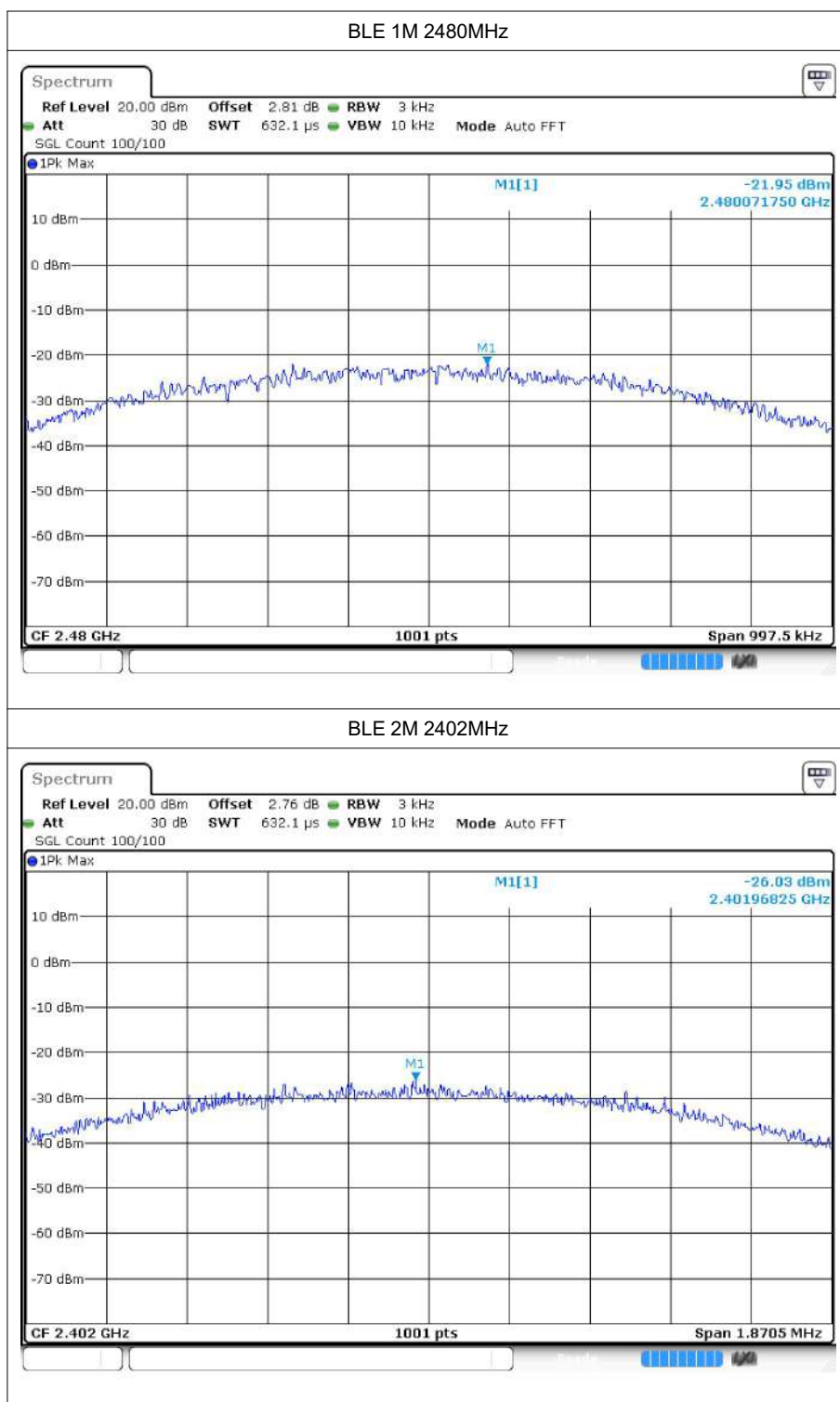
### 4.1 Test Result

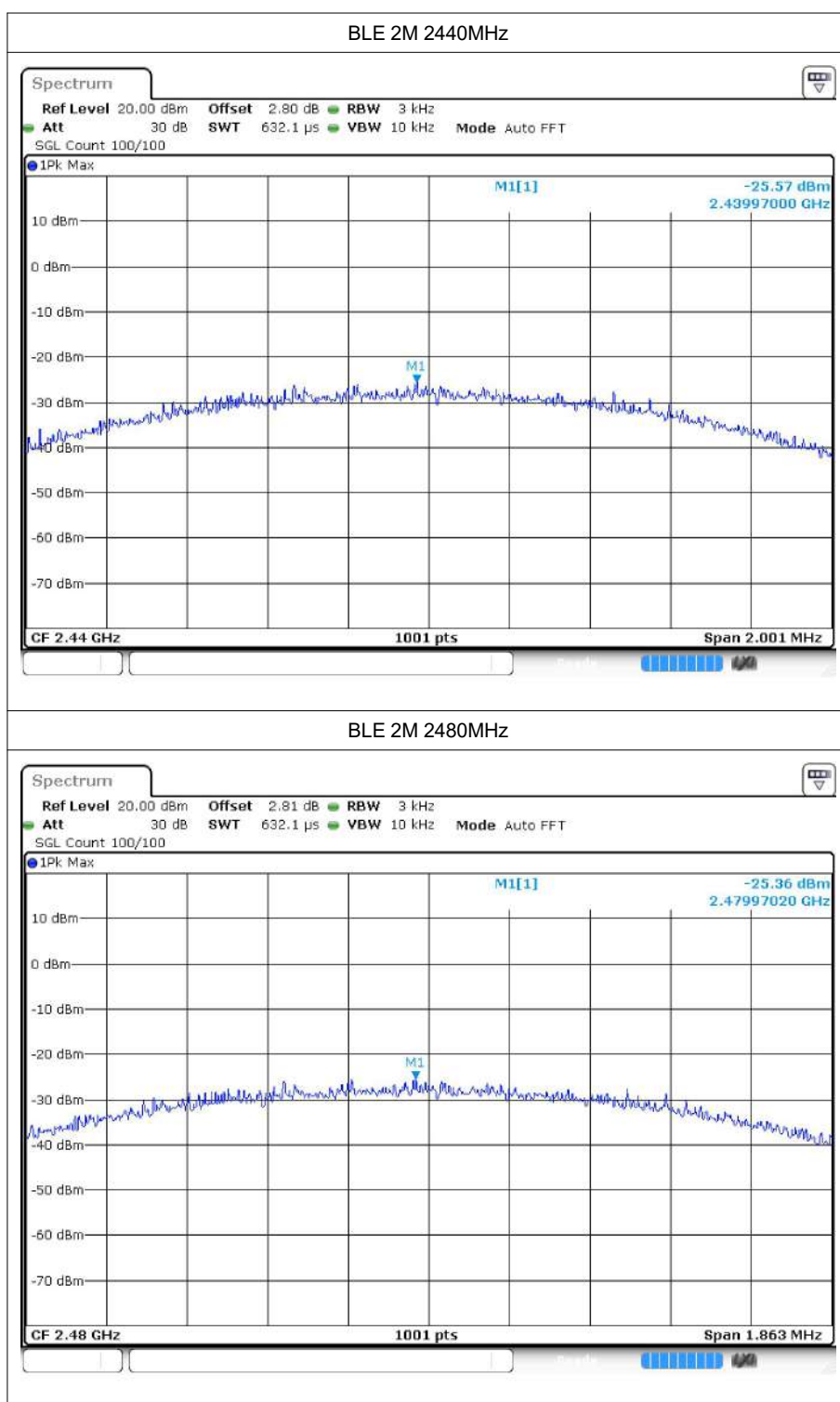
| Mode   | Frequency (MHz) | Conducted PSD<br>(dBm/3-100kHz) | Limit<br>(dBm/3kHz) | Verdict |
|--------|-----------------|---------------------------------|---------------------|---------|
| BLE 1M | 2402            | -22.81                          | $\leq 8$            | Pass    |
| BLE 1M | 2440            | -22.18                          | $\leq 8$            | Pass    |
| BLE 1M | 2480            | -21.95                          | $\leq 8$            | Pass    |
| BLE 2M | 2402            | -26.03                          | $\leq 8$            | Pass    |
| BLE 2M | 2440            | -25.57                          | $\leq 8$            | Pass    |
| BLE 2M | 2480            | -25.36                          | $\leq 8$            | Pass    |

## 4.2 Test Graphs









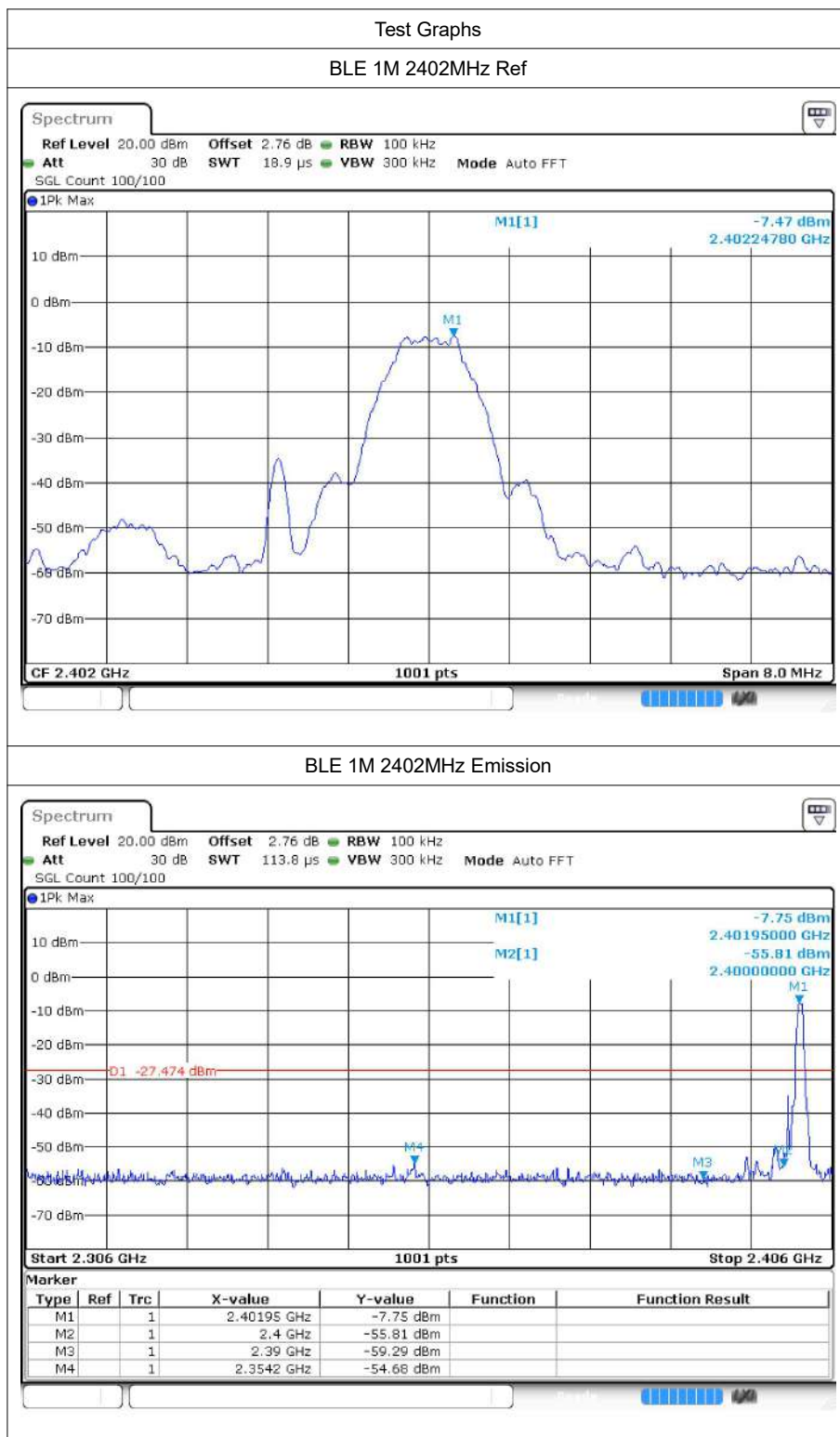


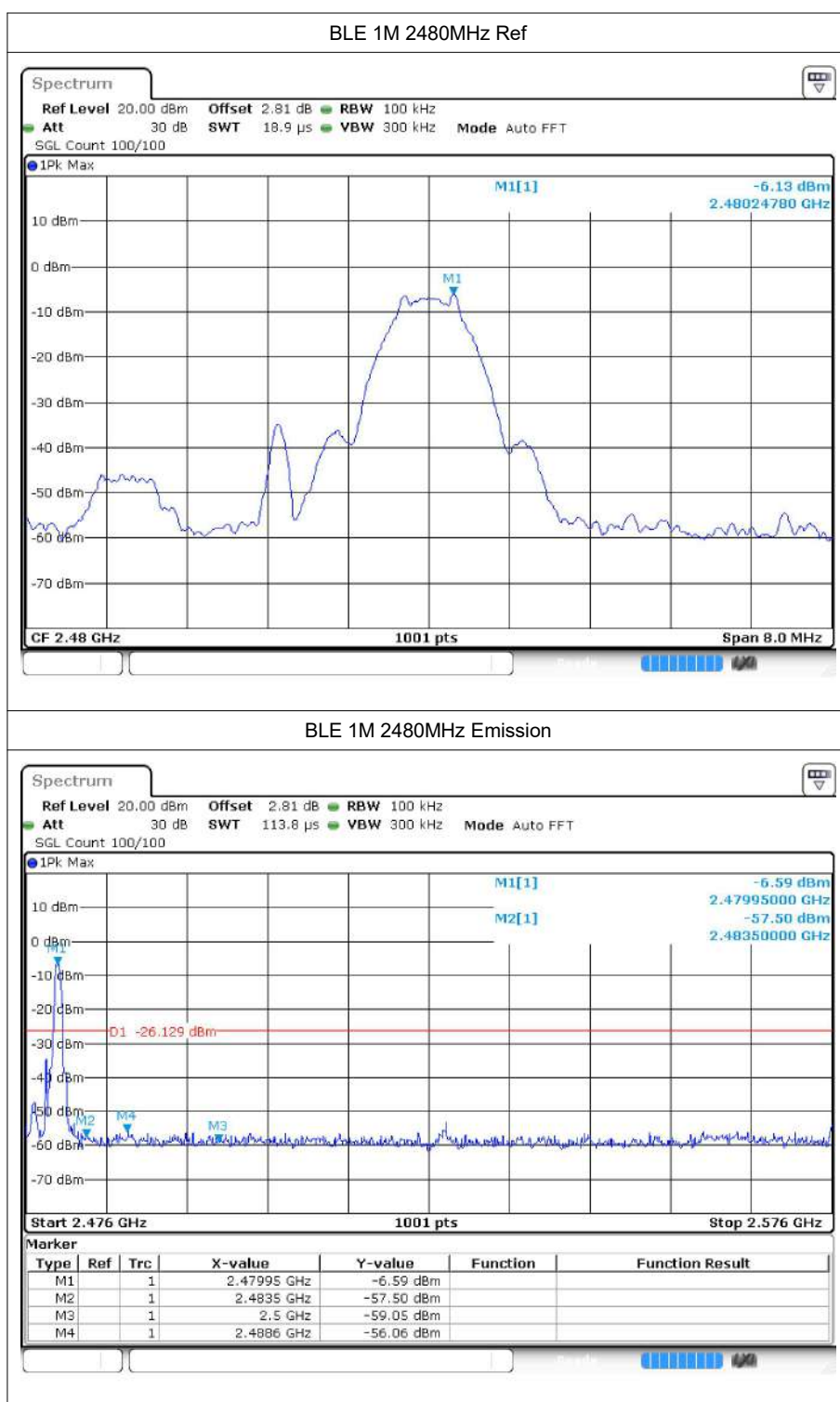
## 5 Band Edge

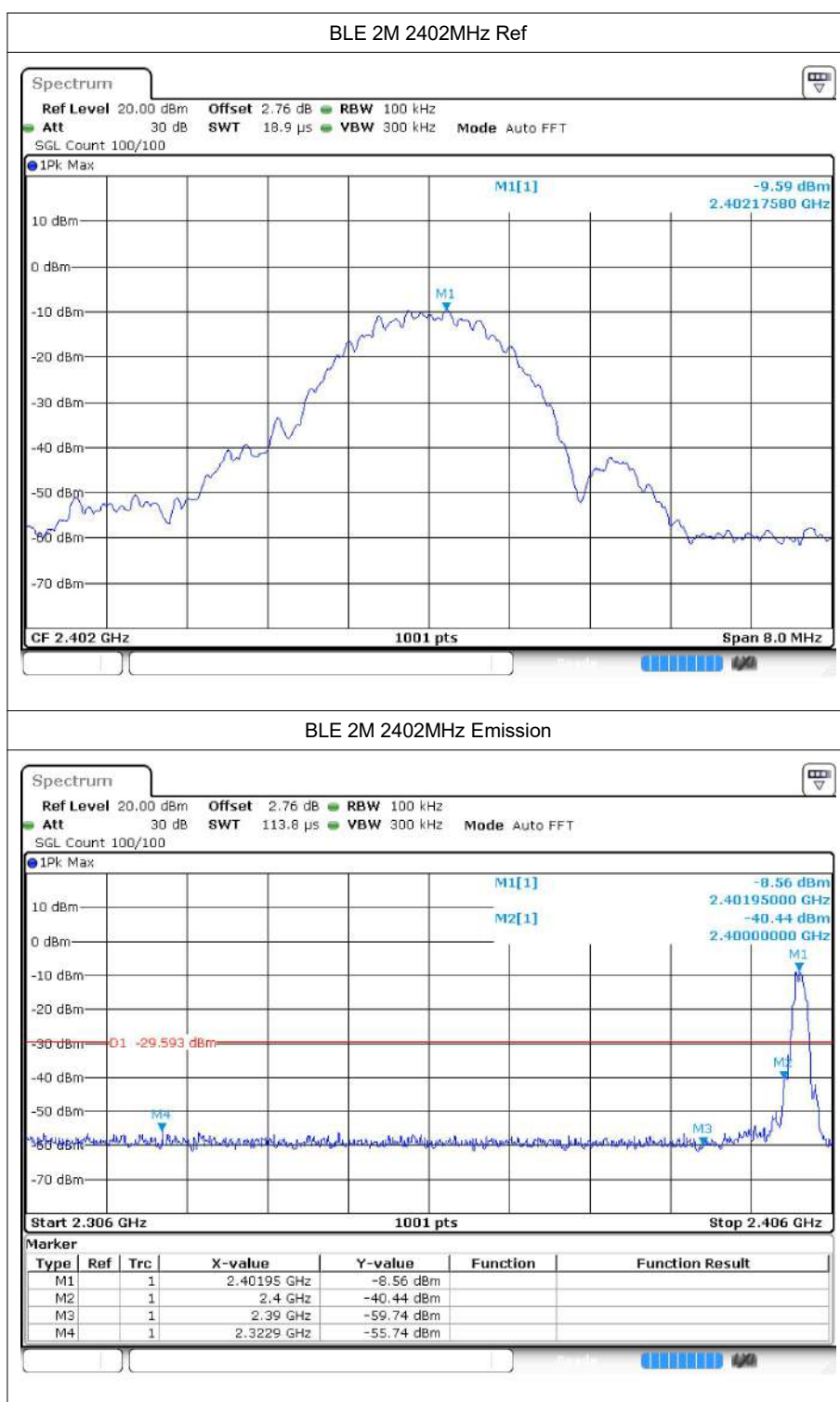
### 5.1 Test Result

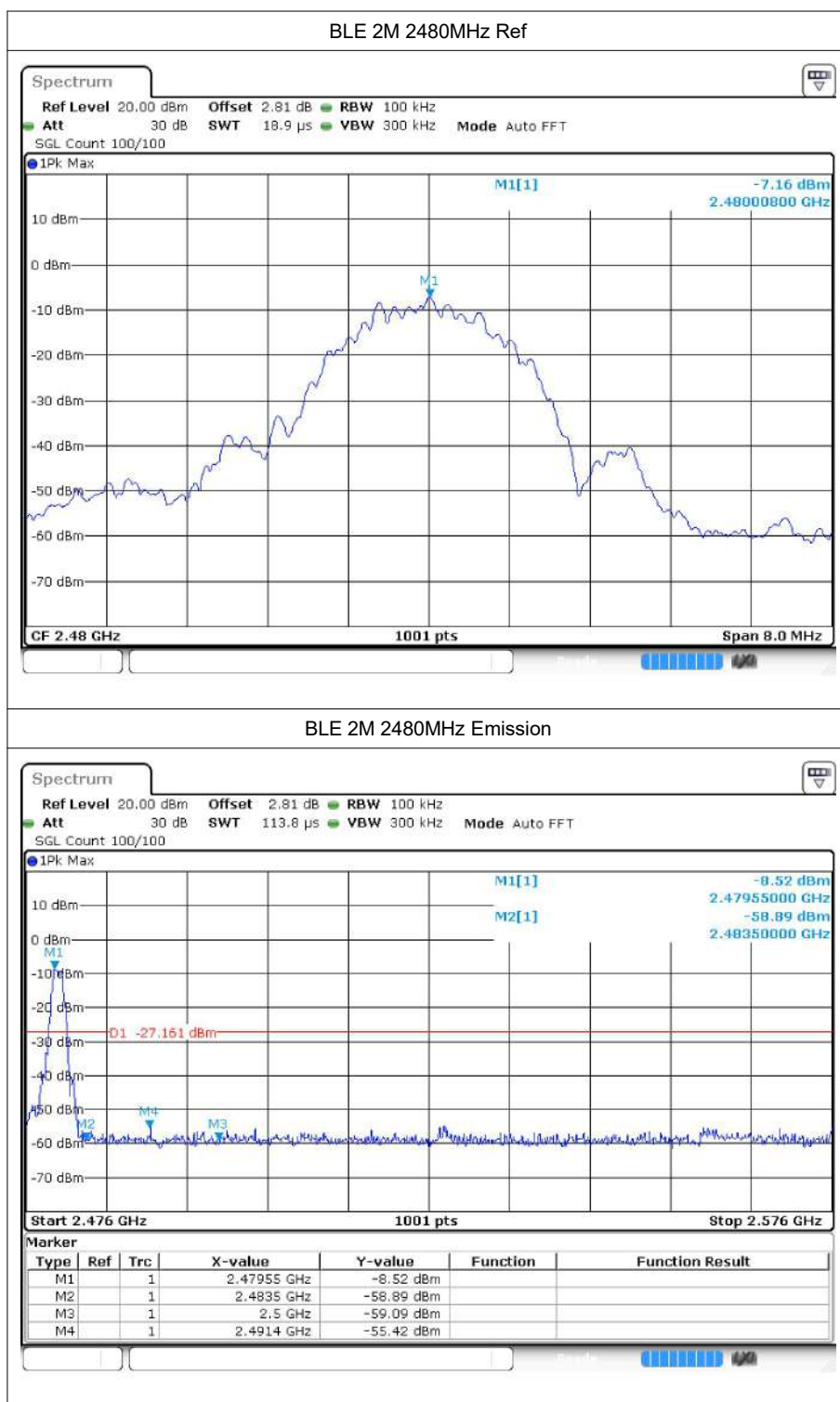
| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -47.21          | -20         | Pass    |
| BLE 1M | 2480            | -49.92          | -20         | Pass    |
| BLE 2M | 2402            | -46.15          | -20         | Pass    |
| BLE 2M | 2480            | -48.25          | -20         | Pass    |

## 5.2 Test Graphs











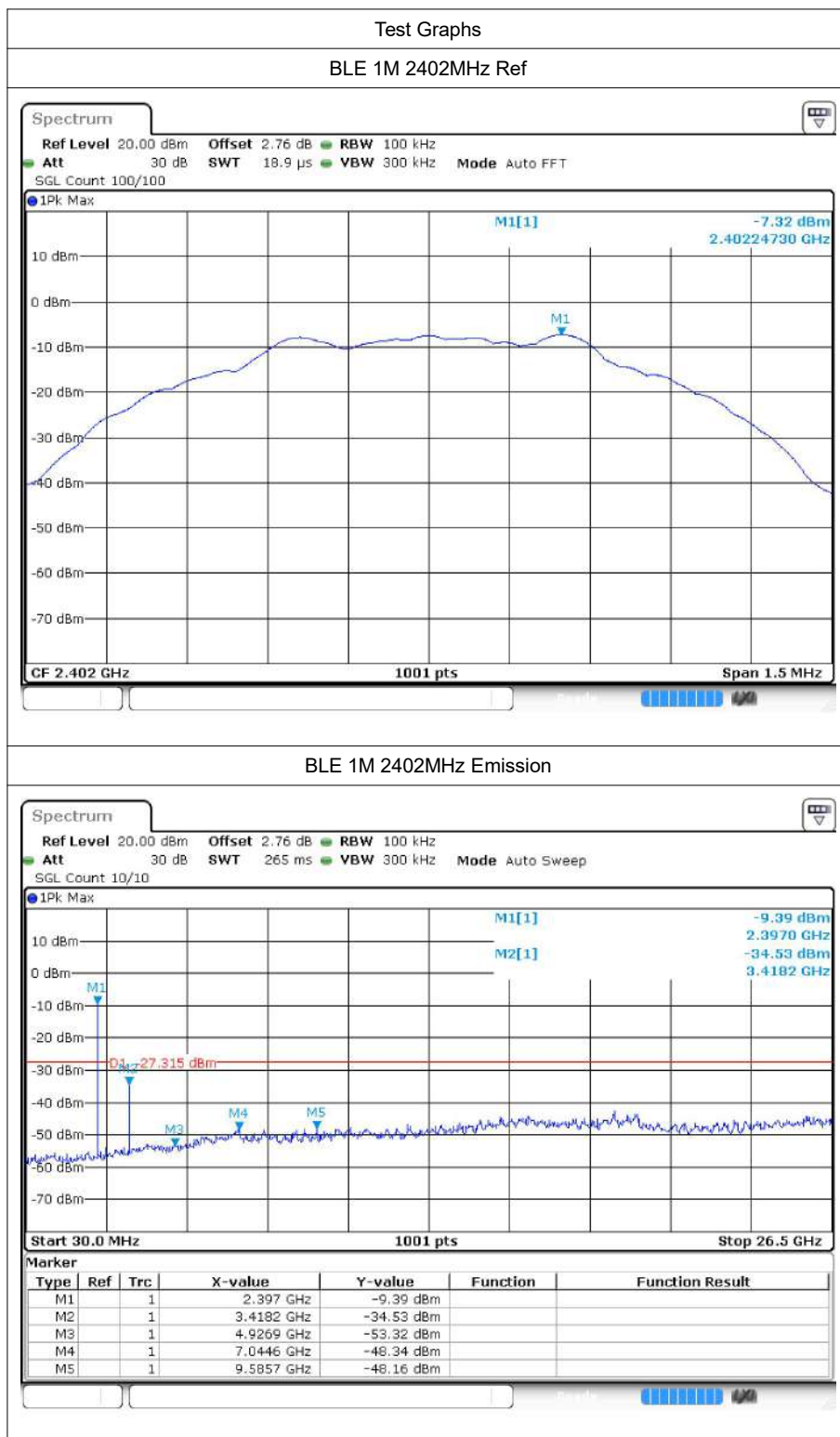
## 6 Conducted RF Spurious Emission

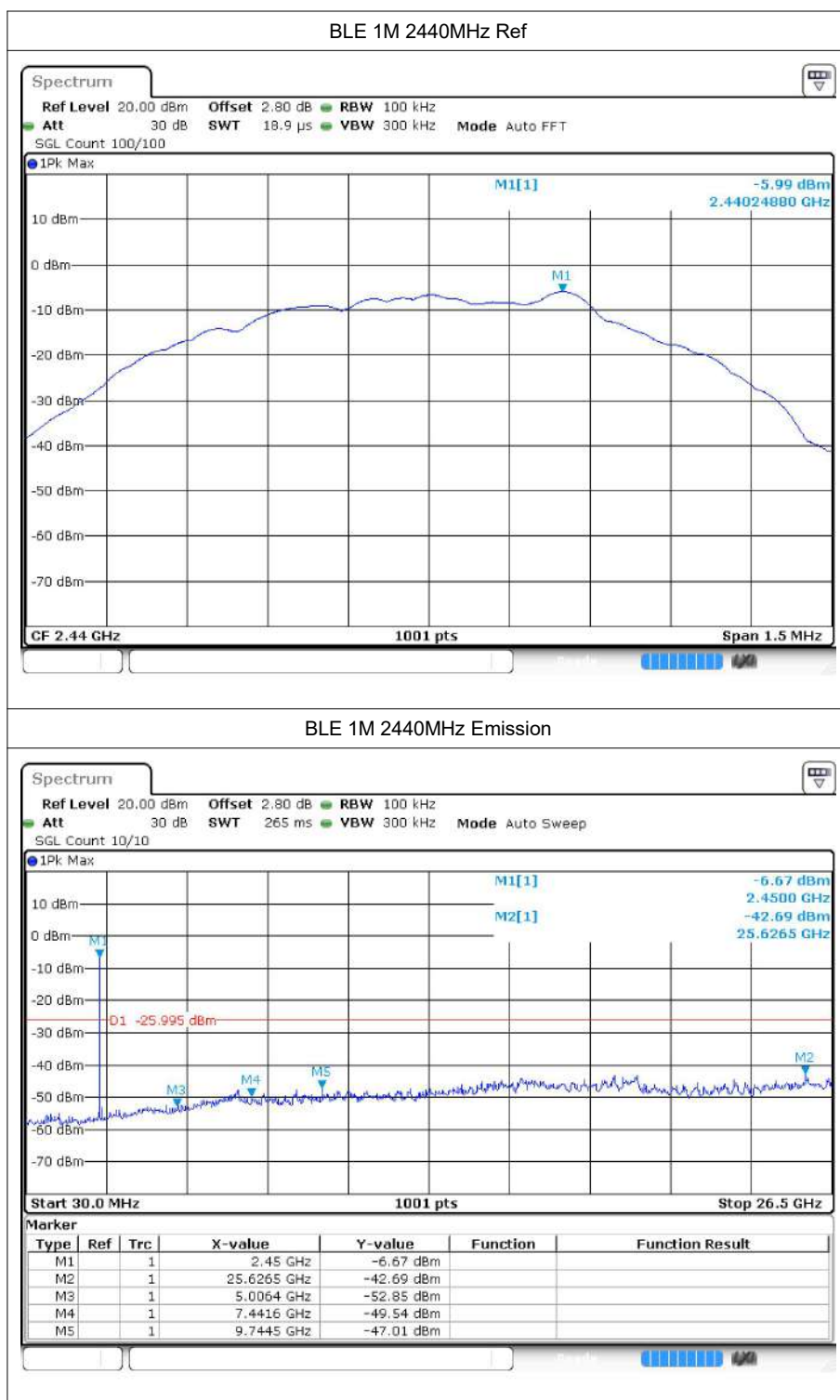
### 6.1 Test Result

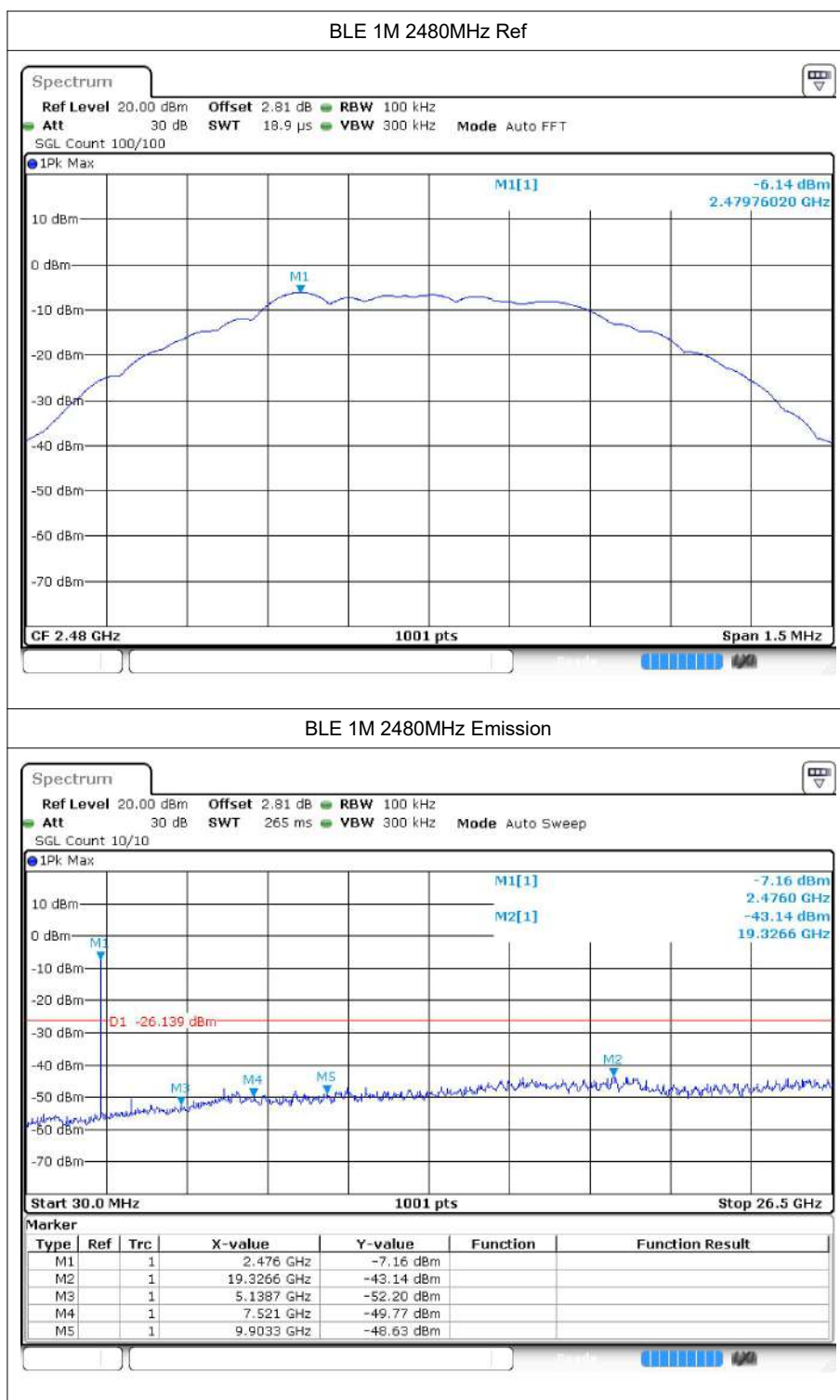
| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -27.2           | -20         | Pass    |
| BLE 1M | 2440            | -36.7           | -20         | Pass    |
| BLE 1M | 2480            | -37             | -20         | Pass    |
| BLE 2M | 2402            | -33.9           | -20         | Pass    |
| BLE 2M | 2440            | -34.87          | -20         | Pass    |
| BLE 2M | 2480            | -35.24          | -20         | Pass    |

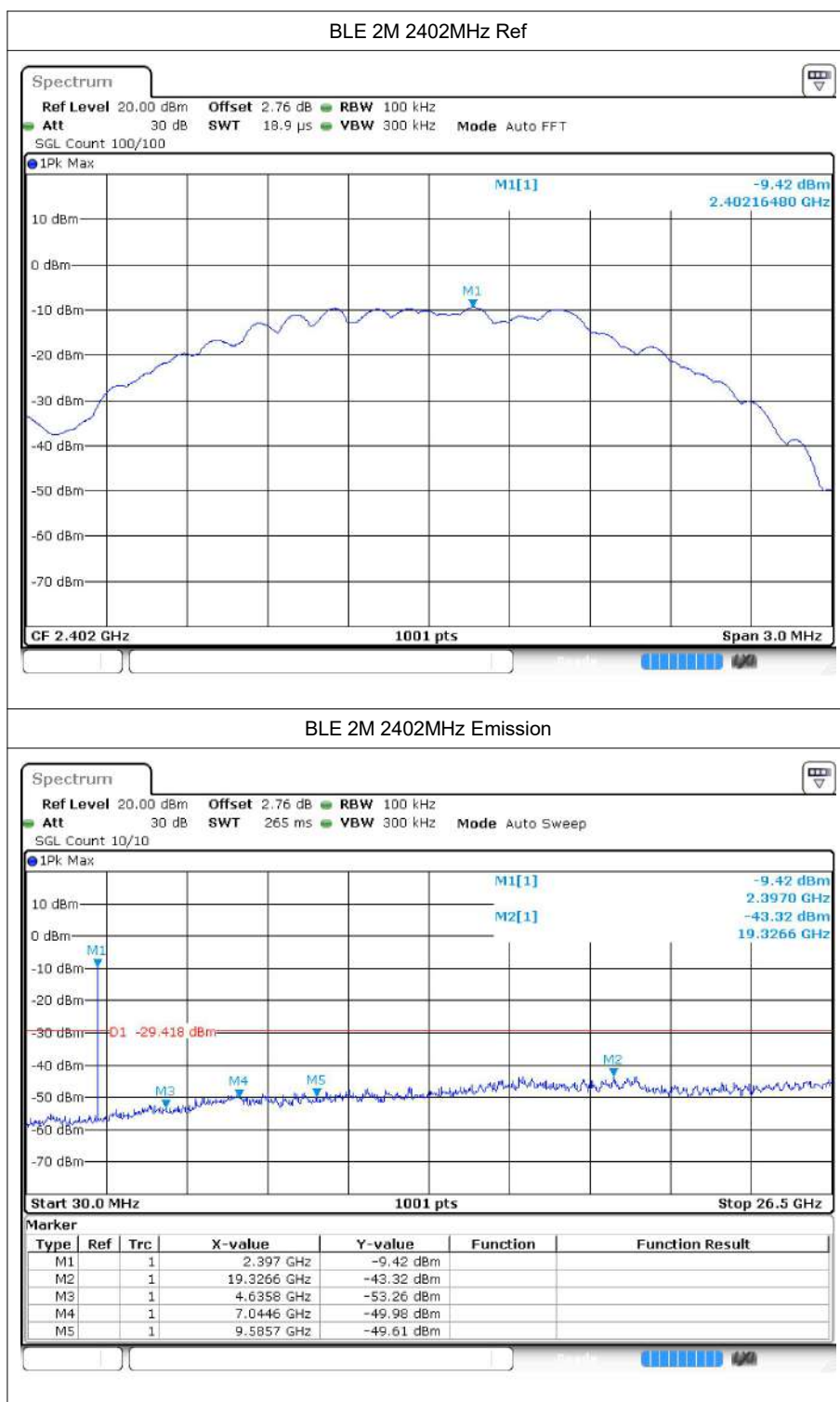


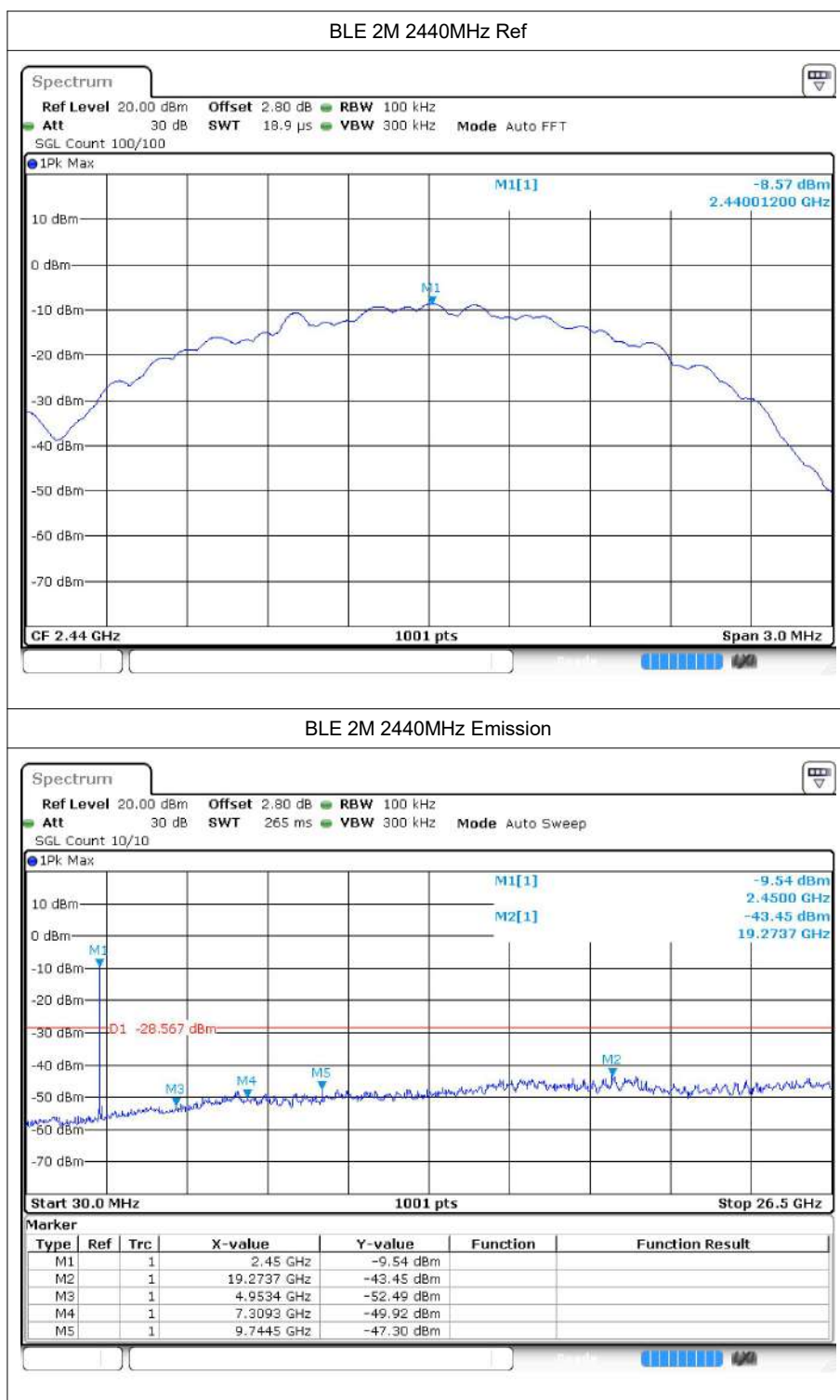
## 6.2 Test Graphs

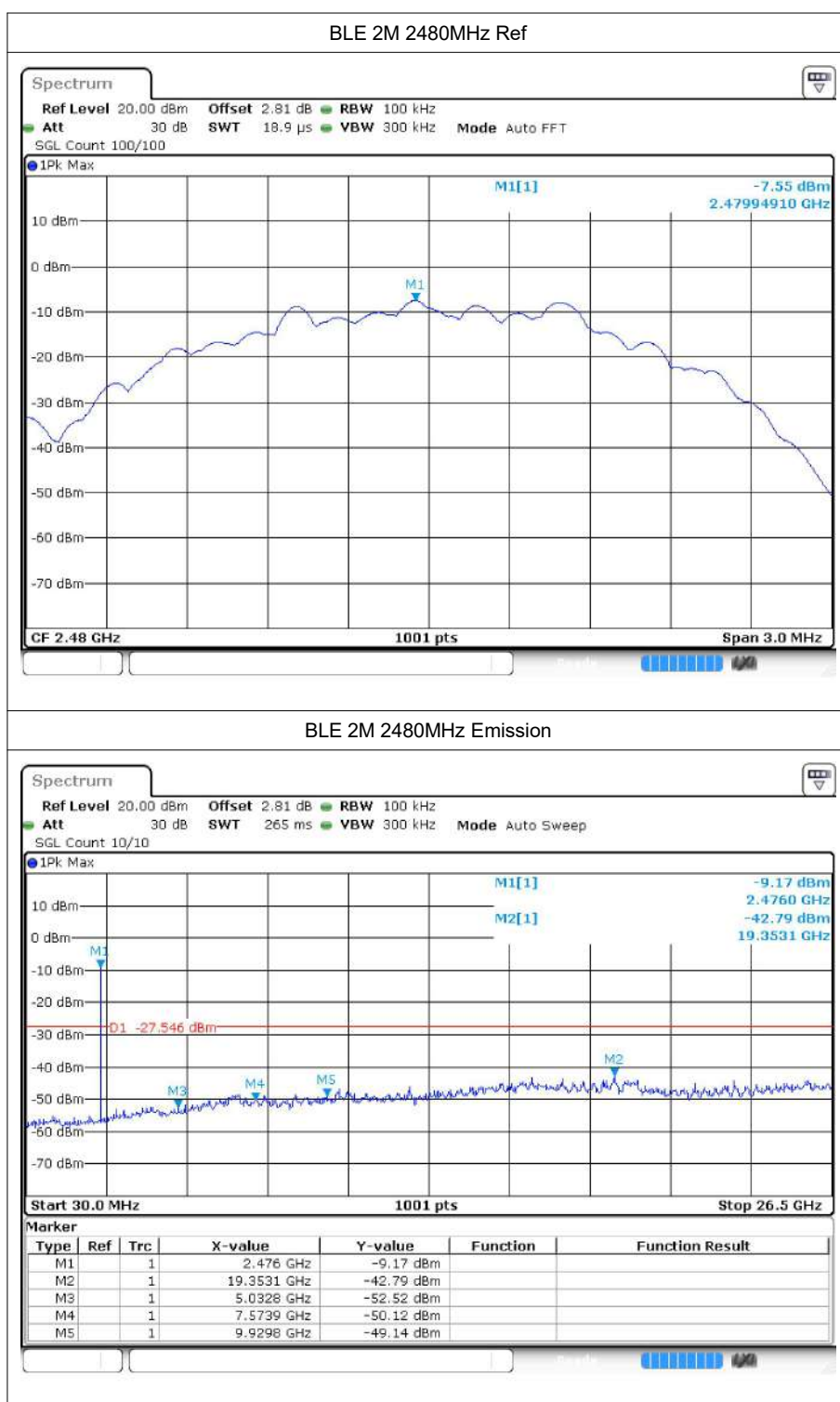














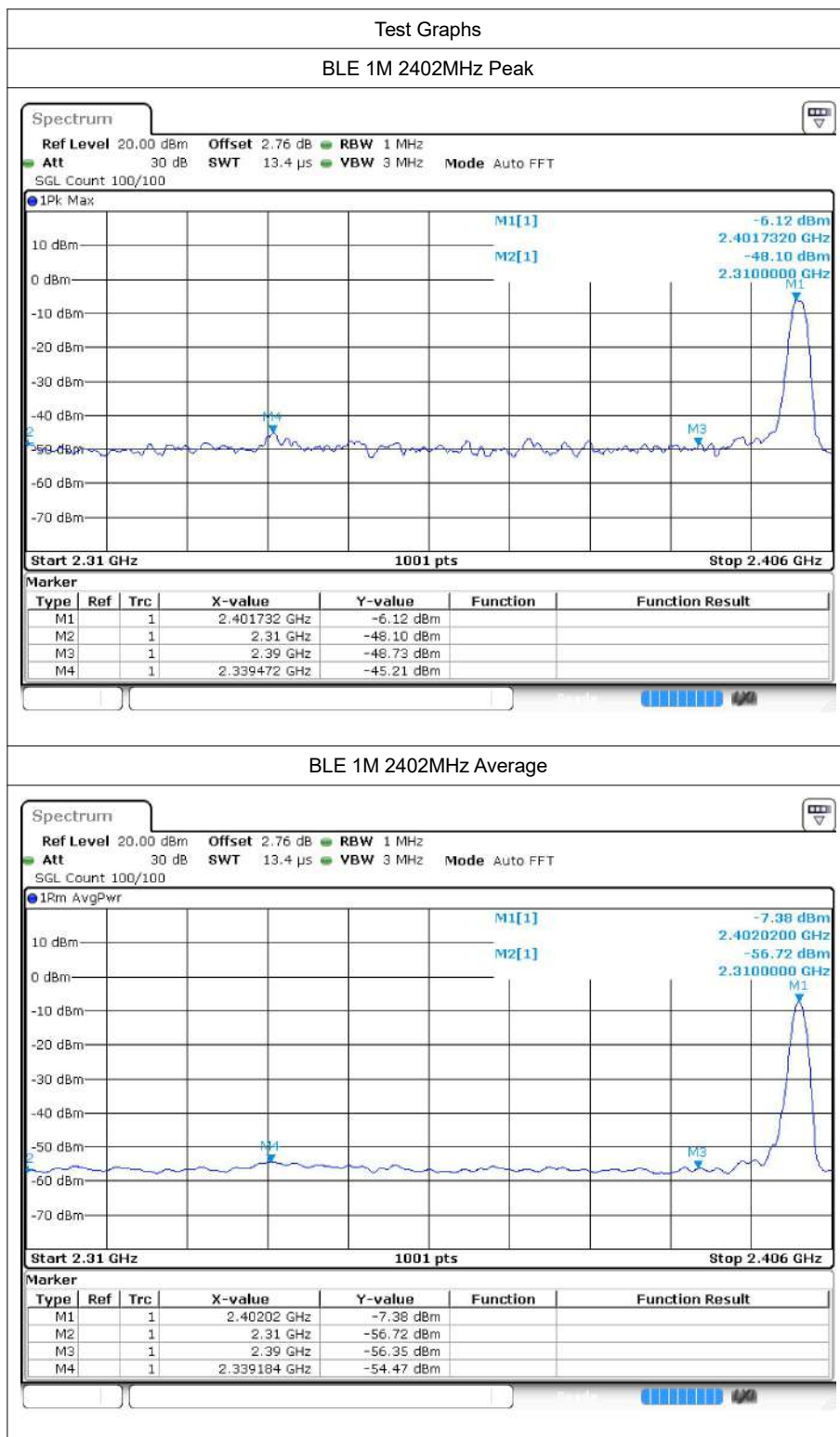
## 7 Restrict Band

### 7.1 Test Result

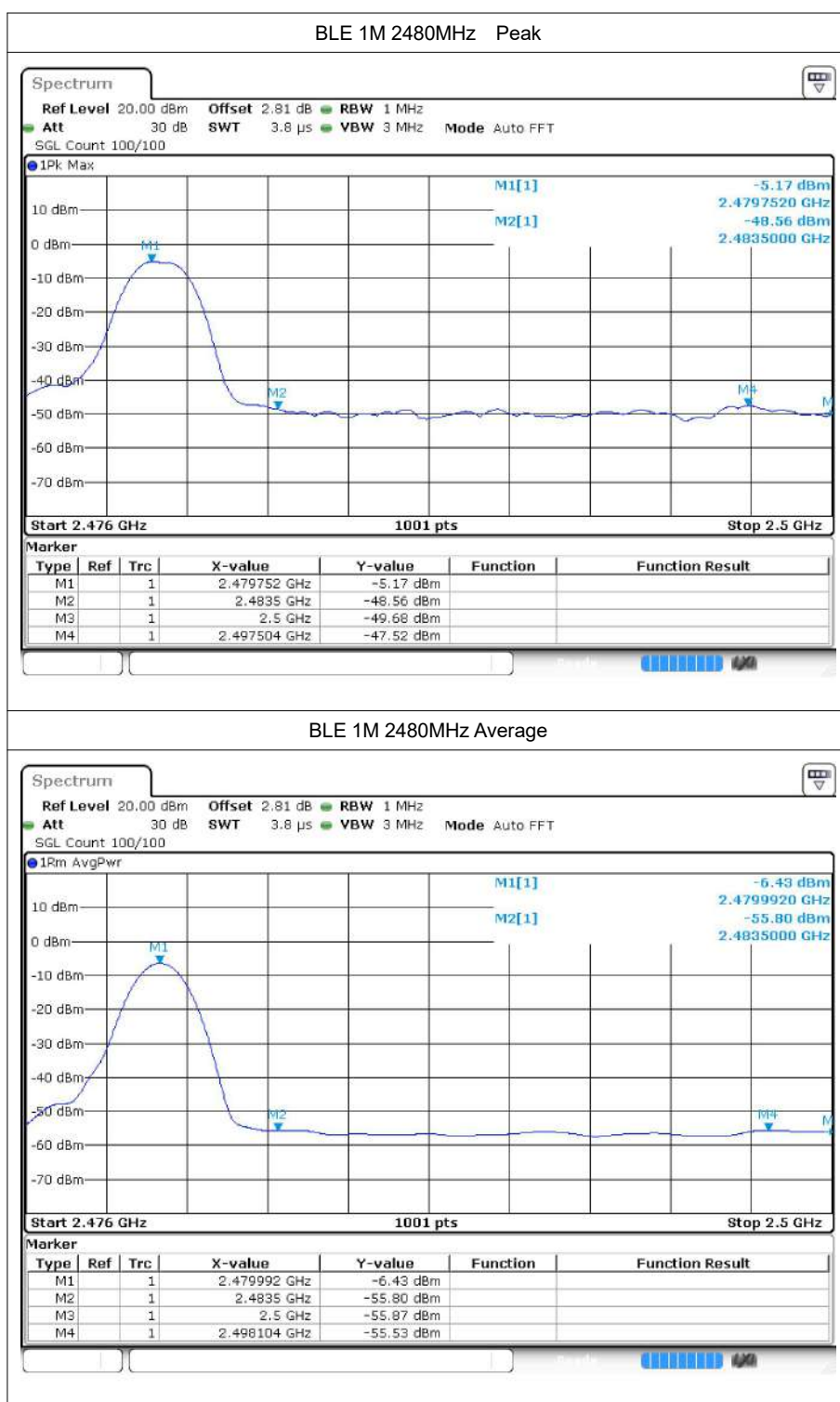
| Mode   | Frequency (MHz) | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|--------|-----------------|-----------------|-------------|------------|-------------|------------|----------|----------------|---------|
| BLE 1M | 2402            | 2310            | -48.1       | 4.41       | -           | 51.57      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2310            | -56.72      | 4.41       | 0.68        | 43.63      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2339.472        | -45.2       | 4.41       | -           | 54.47      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2339.184        | -54.47      | 4.41       | 0.68        | 45.88      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2390            | -48.73      | 4.41       | -           | 50.94      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2390            | -56.35      | 4.41       | 0.68        | 44         | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2483.5          | -48.56      | 4.41       | -           | 51.11      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.5          | -55.8       | 4.41       | 0.68        | 44.55      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2497.504        | -47.51      | 4.41       | -           | 52.16      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2498.104        | -55.52      | 4.41       | 0.68        | 44.83      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2500            | -49.68      | 4.41       | -           | 49.99      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2500            | -55.87      | 4.41       | 0.68        | 44.48      | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2310            | -50.55      | 4.41       | -           | 49.12      | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2310            | -56.69      | 4.41       | 3.61        | 46.59      | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2344.944        | -45.17      | 4.41       | -           | 54.5       | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2344.176        | -54.74      | 4.41       | 3.61        | 48.54      | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2390            | -49.45      | 4.41       | -           | 50.22      | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2390            | -57.86      | 4.41       | 3.61        | 45.42      | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2483.5          | -50.01      | 4.41       | -           | 49.66      | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2483.5          | -56.51      | 4.41       | 3.65        | 46.81      | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2485.576        | -46.99      | 4.41       | -           | 52.68      | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2499.904        | -55.83      | 4.41       | 3.65        | 47.49      | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2500            | -47.2       | 4.41       | -           | 52.47      | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2500            | -55.83      | 4.41       | 3.65        | 47.49      | Average  | 54             | Pass    |

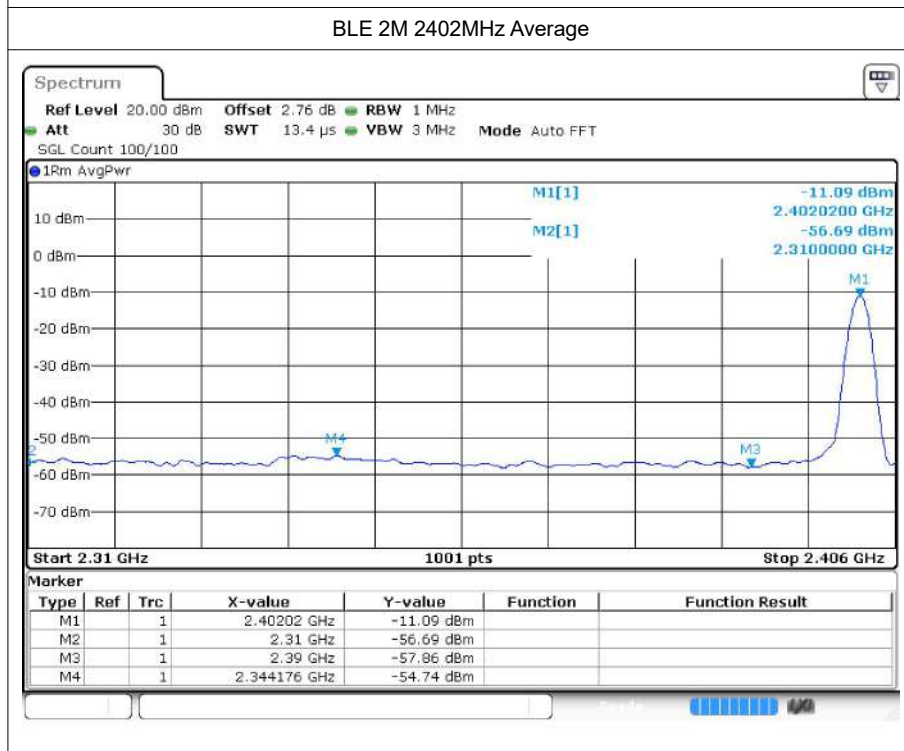
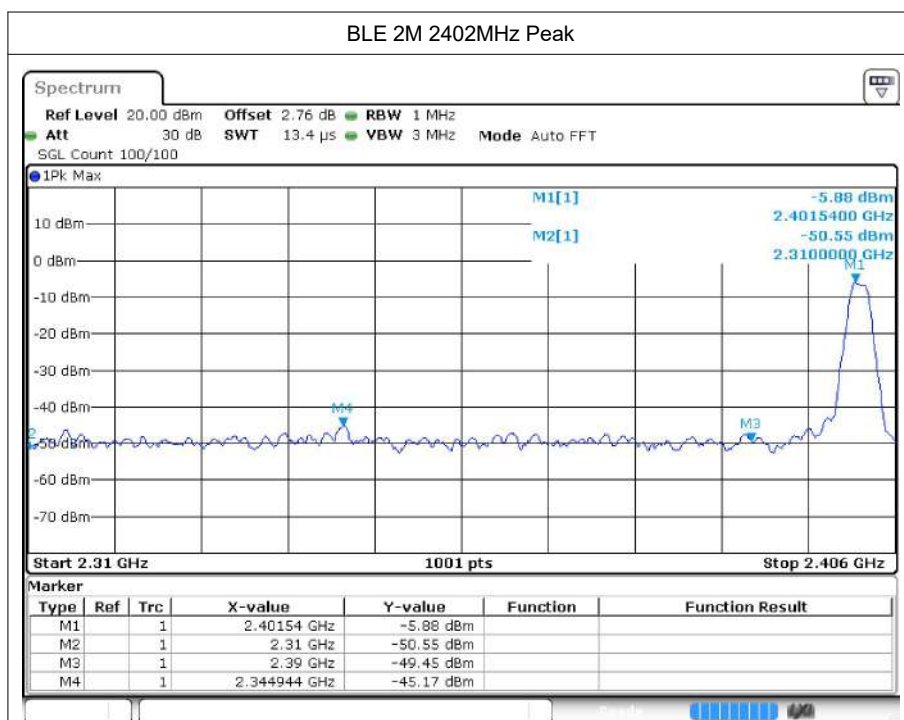


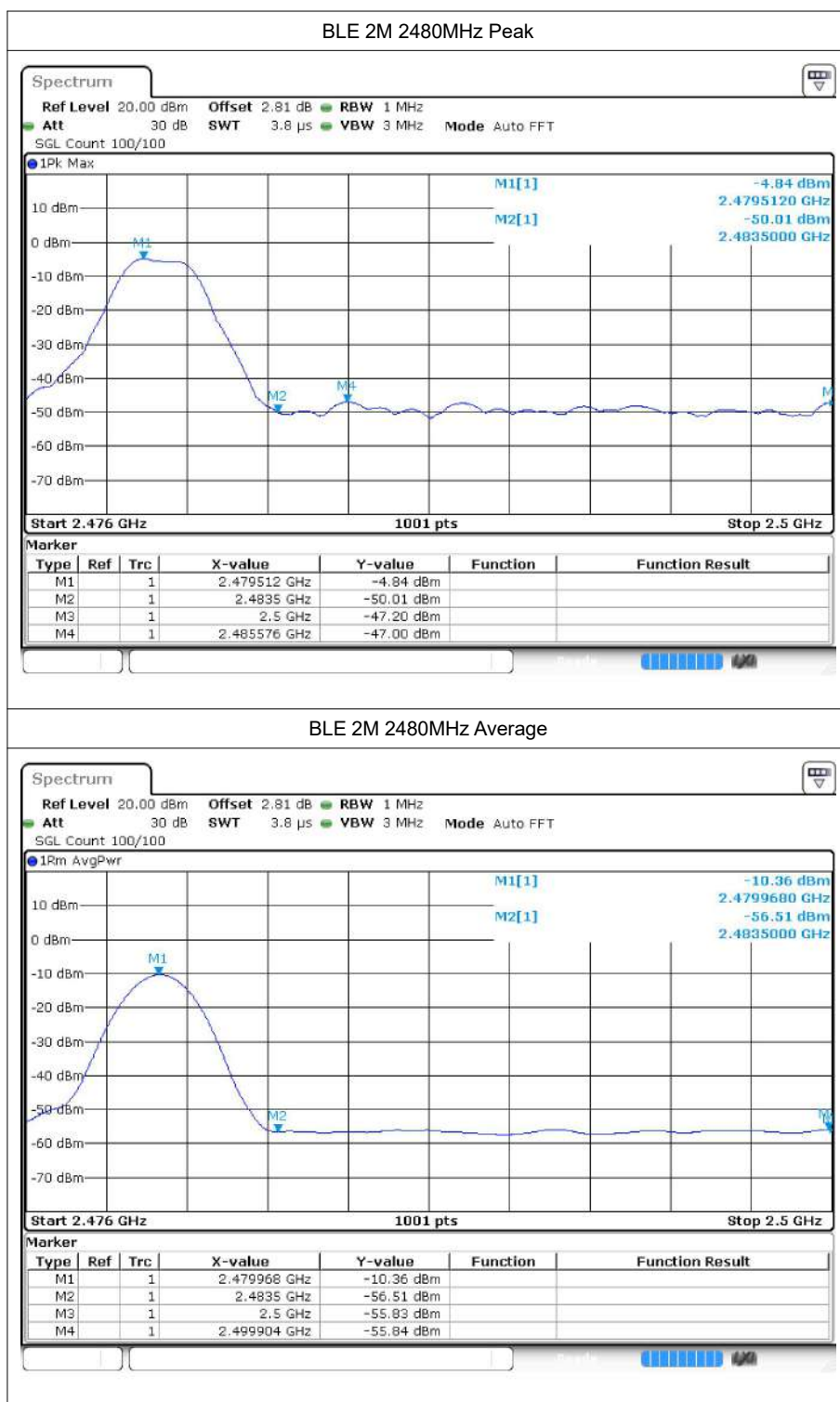
## 7.2 Test Graphs











---The End---