



## Appendix B

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

Product Name: Heart Rate Monitor Chest Strap

Trade Mark: N/A

Test Model: H1

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 25.5° C     |
| Relative Humidity: | 52.4%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Emiya lin   |
| Supervised by:     | Simba Haung |



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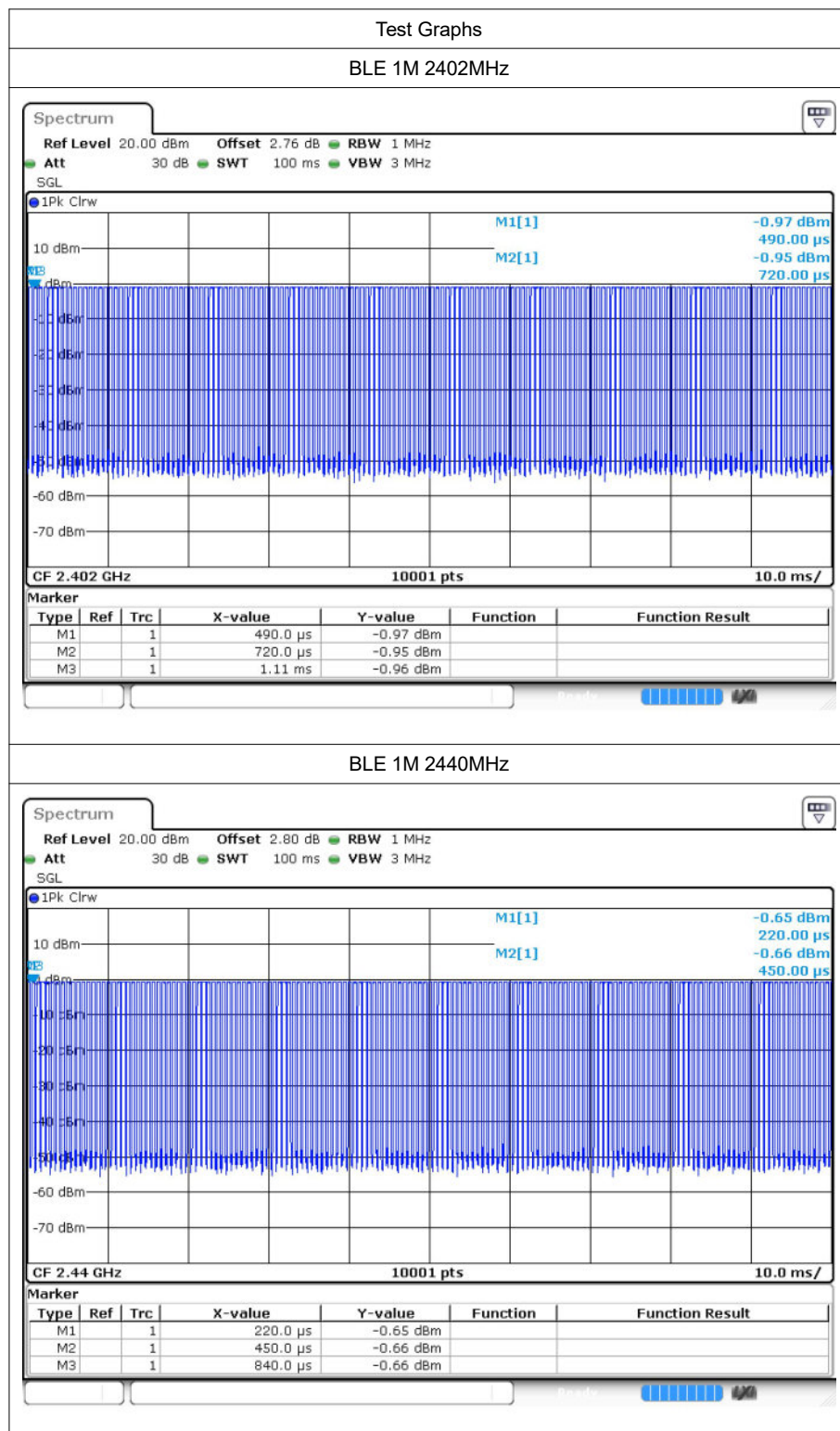


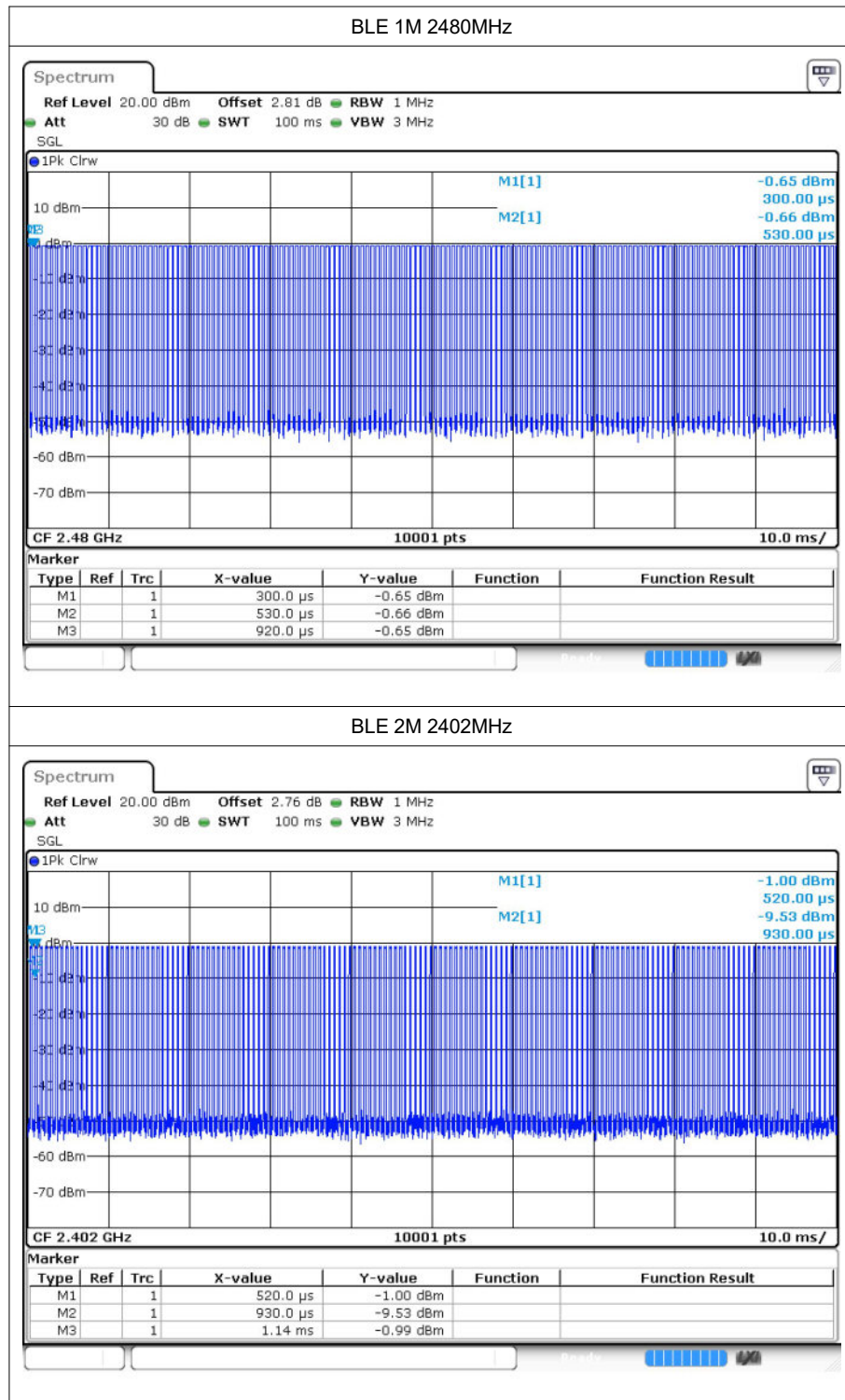
# 1 Duty Cycle

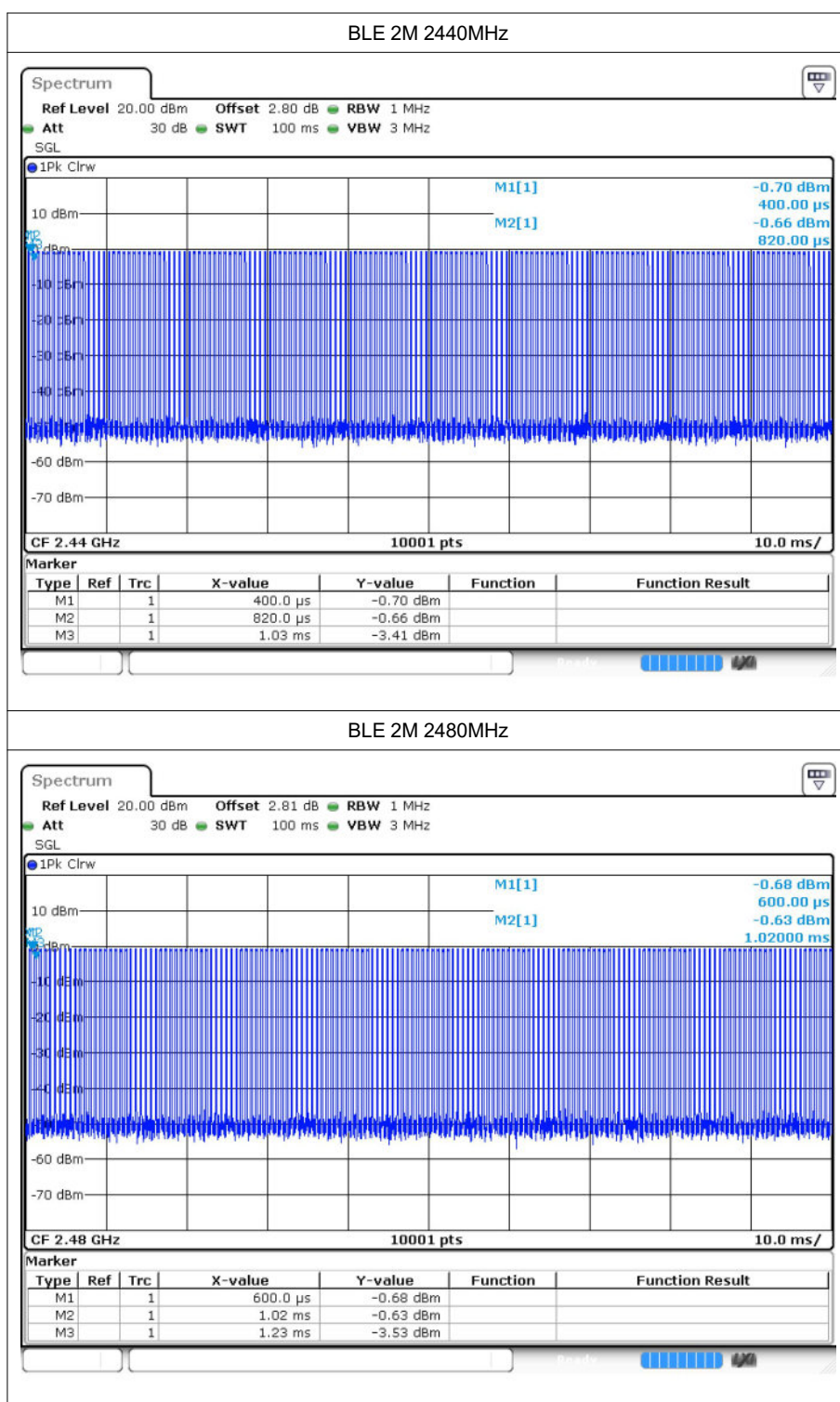
## 1.1 Test Result

| Mode   | Frequency (MHz) | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|--------|-----------------|----------------|-------------------|-----------|
| BLE 1M | 2402            | 64.79          | 1.88              | 2.56      |
| BLE 1M | 2440            | 64.8           | 1.88              | 2.56      |
| BLE 1M | 2480            | 64.8           | 1.88              | 2.56      |
| BLE 2M | 2402            | 35.2           | 4.54              | 4.76      |
| BLE 2M | 2440            | 35.2           | 4.54              | 4.76      |
| BLE 2M | 2480            | 35.2           | 4.54              | 4.76      |

## 1.2 Test Graphs





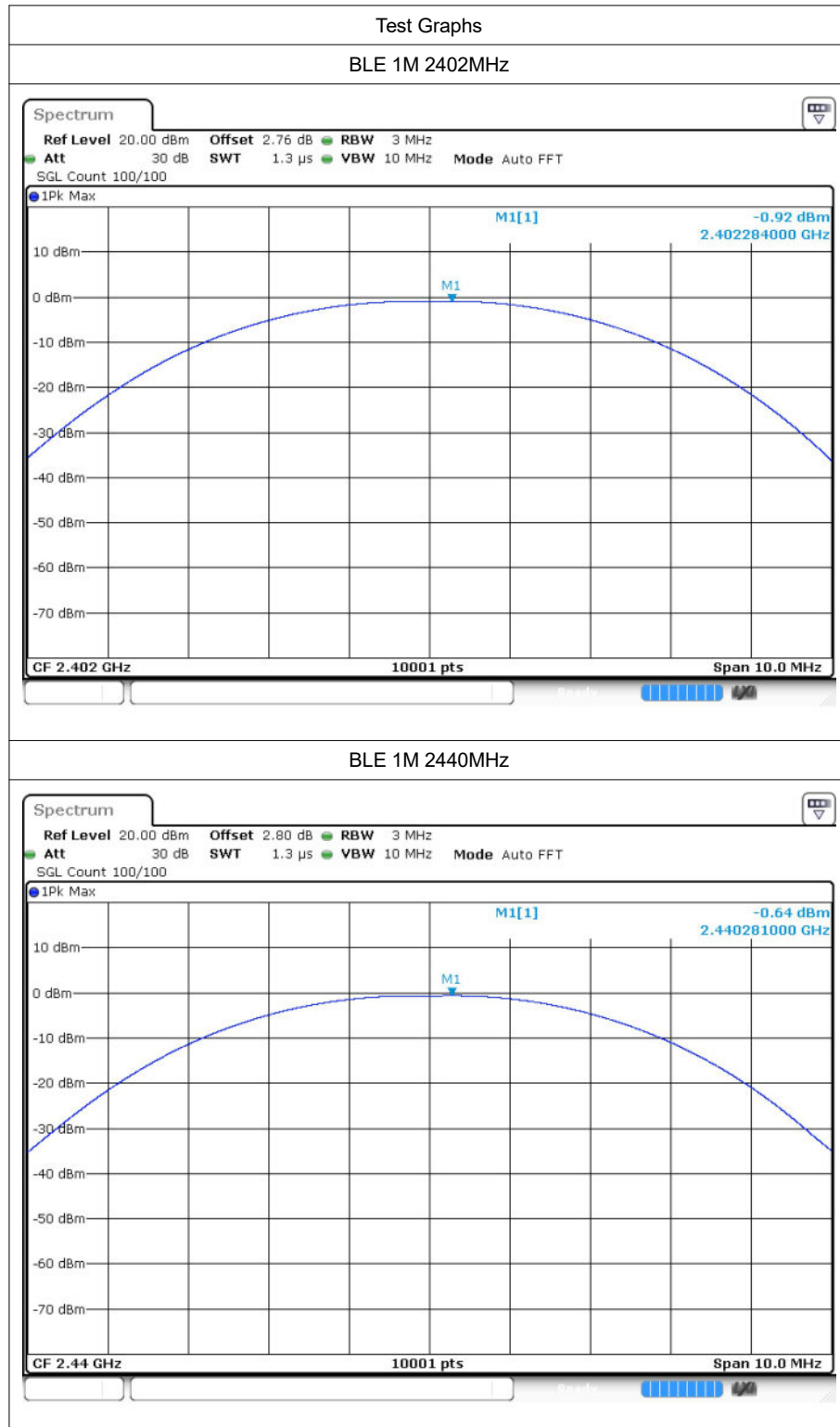


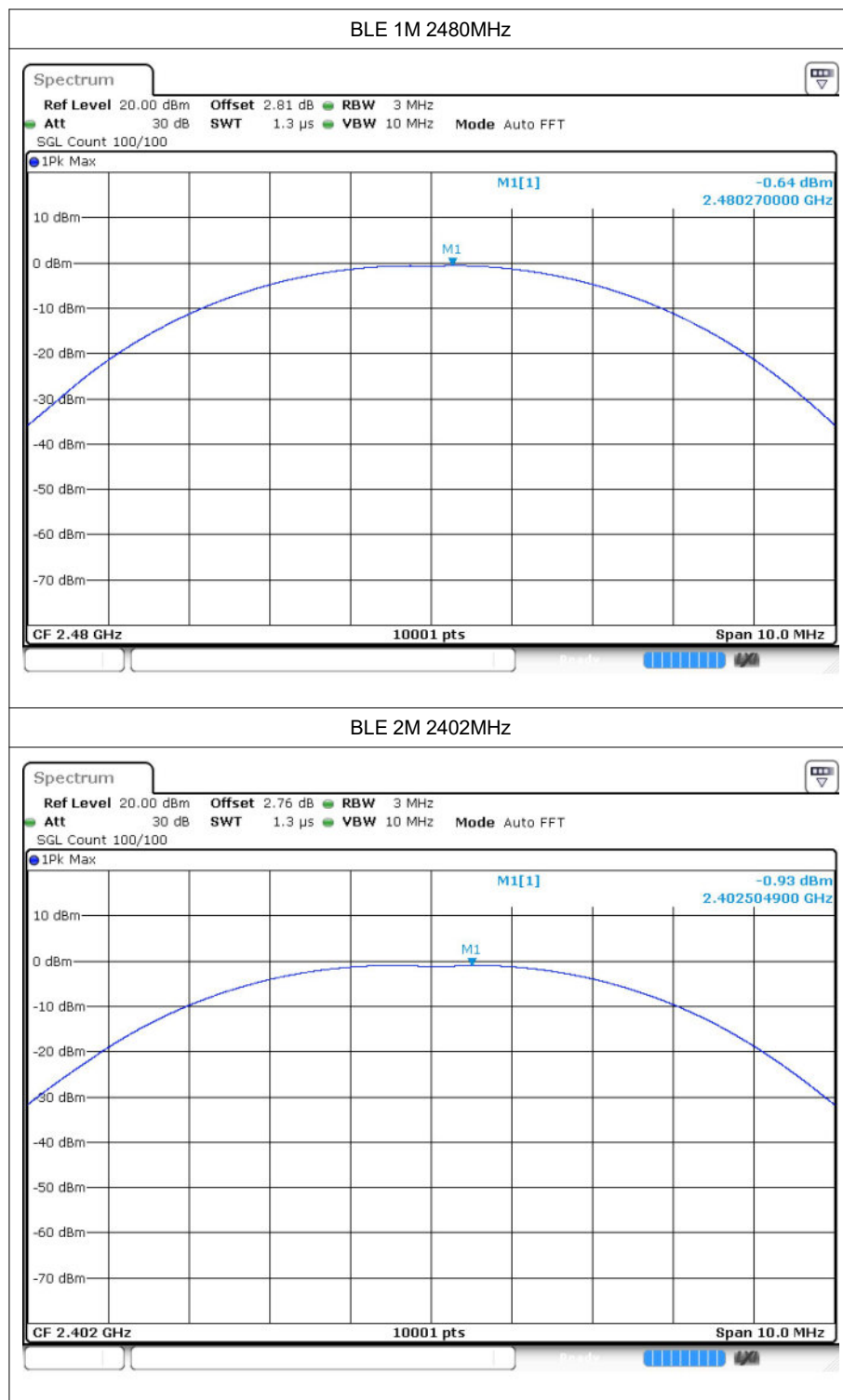
## 2 Maximum Conducted Output Power

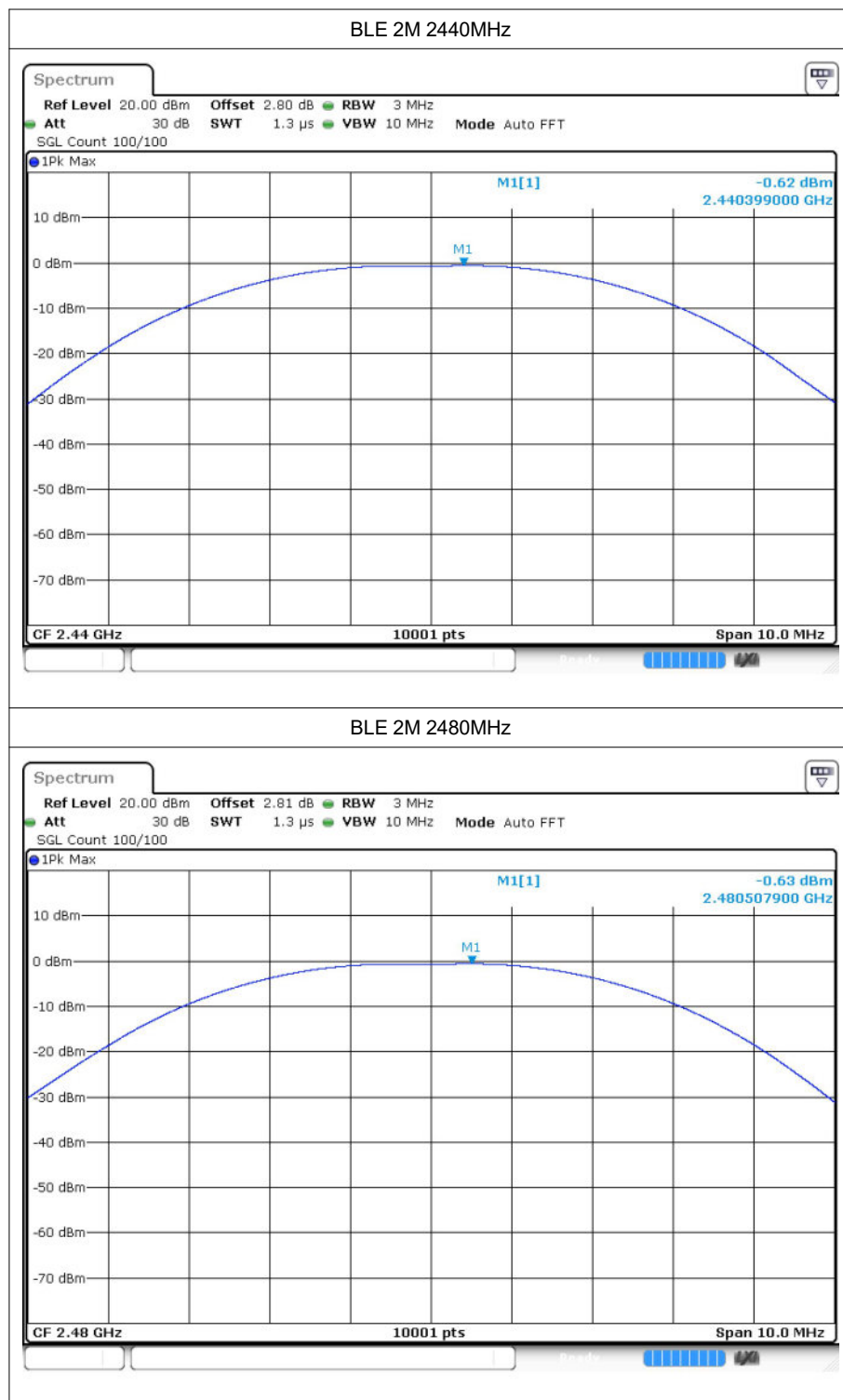
### 2.1 Test Result

| Mode   | Frequency (MHz) | Conducted Power (dBm) | Limit (dBm) | Verdict |
|--------|-----------------|-----------------------|-------------|---------|
| BLE 1M | 2402            | -0.92                 | 30          | Pass    |
| BLE 1M | 2440            | -0.64                 | 30          | Pass    |
| BLE 1M | 2480            | -0.64                 | 30          | Pass    |
| BLE 2M | 2402            | -0.93                 | 30          | Pass    |
| BLE 2M | 2440            | -0.62                 | 30          | Pass    |
| BLE 2M | 2480            | -0.63                 | 30          | Pass    |

## 2.2 Test Graphs







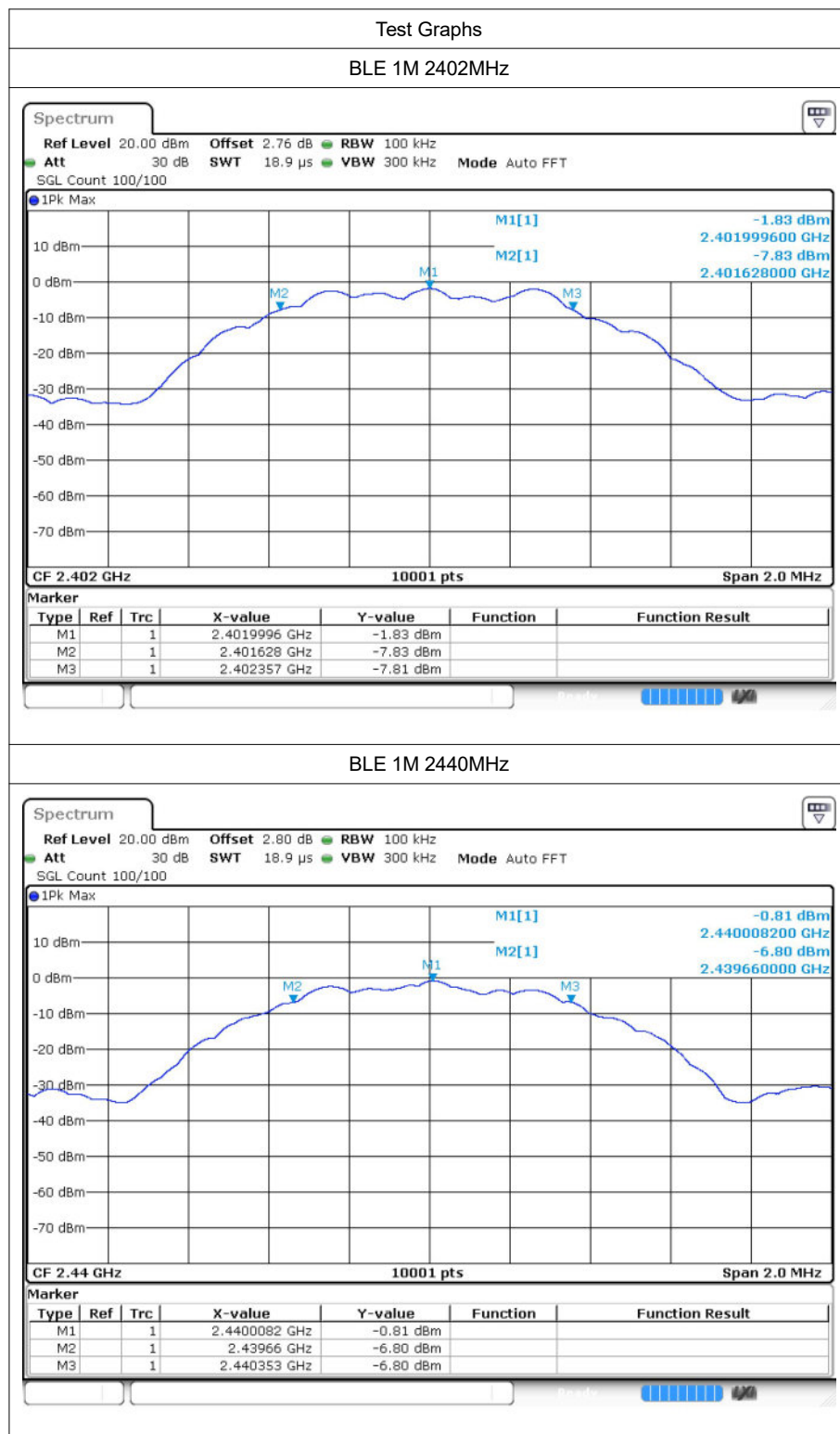


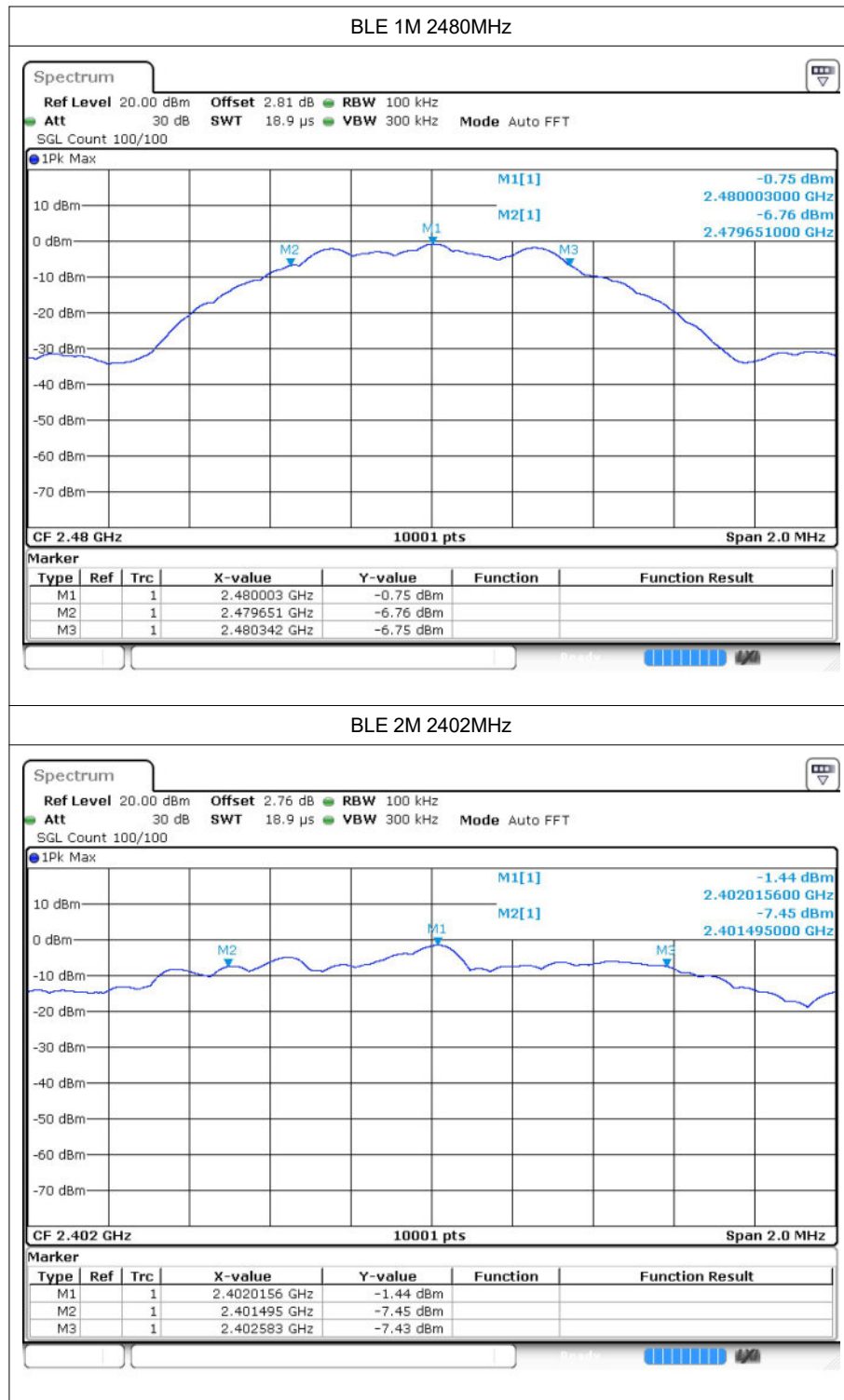
### 3 -6dB Bandwidth

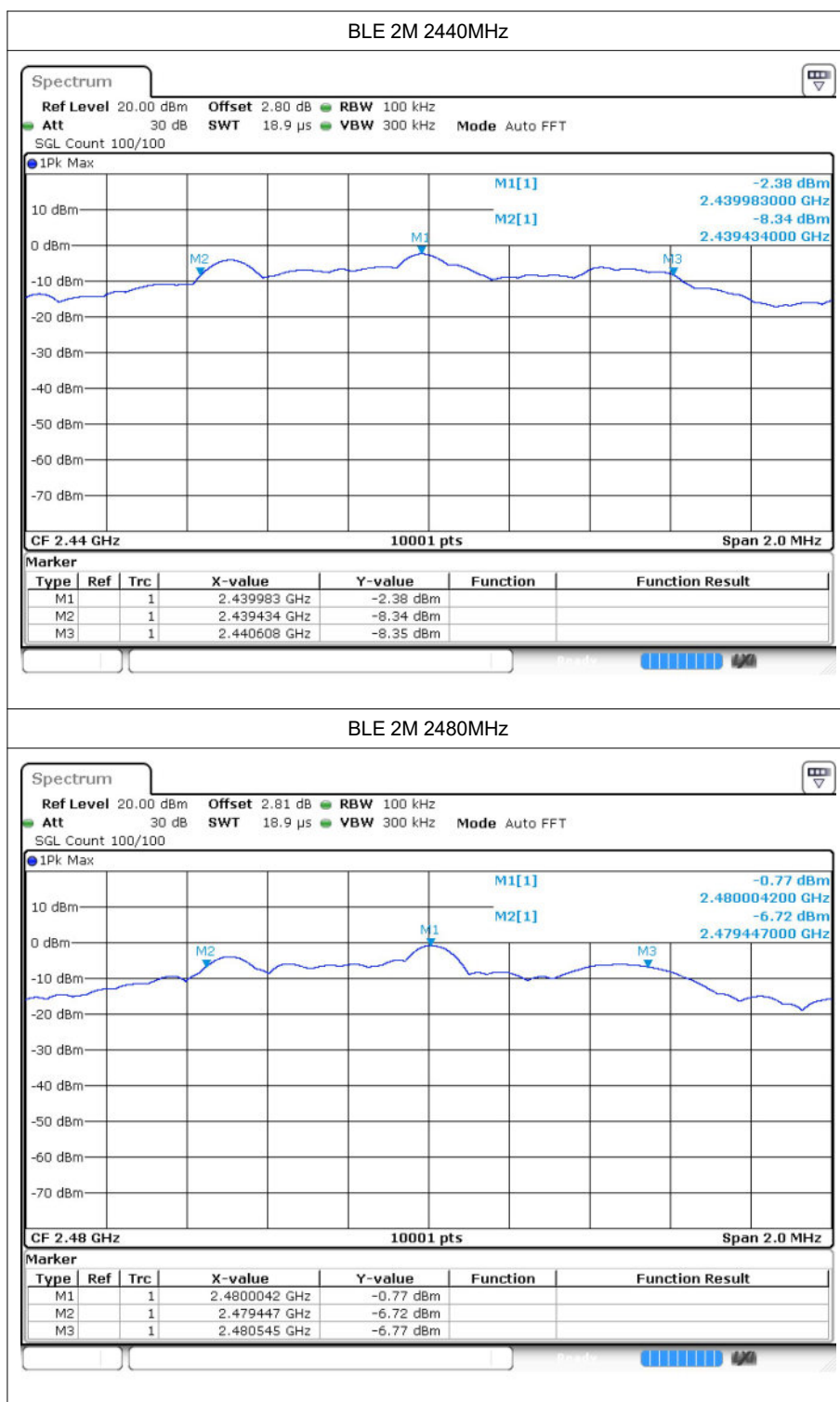
#### 3.1 Test Result

| Mode   | Frequency (MHz) | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|--------|-----------------|-----------------------|-----------------------------|---------|
| BLE 1M | 2402            | 0.729                 | 0.5                         | Pass    |
| BLE 1M | 2440            | 0.693                 | 0.5                         | Pass    |
| BLE 1M | 2480            | 0.691                 | 0.5                         | Pass    |
| BLE 2M | 2402            | 1.088                 | 0.5                         | Pass    |
| BLE 2M | 2440            | 1.175                 | 0.5                         | Pass    |
| BLE 2M | 2480            | 1.099                 | 0.5                         | Pass    |

## 3.2 Test Graphs





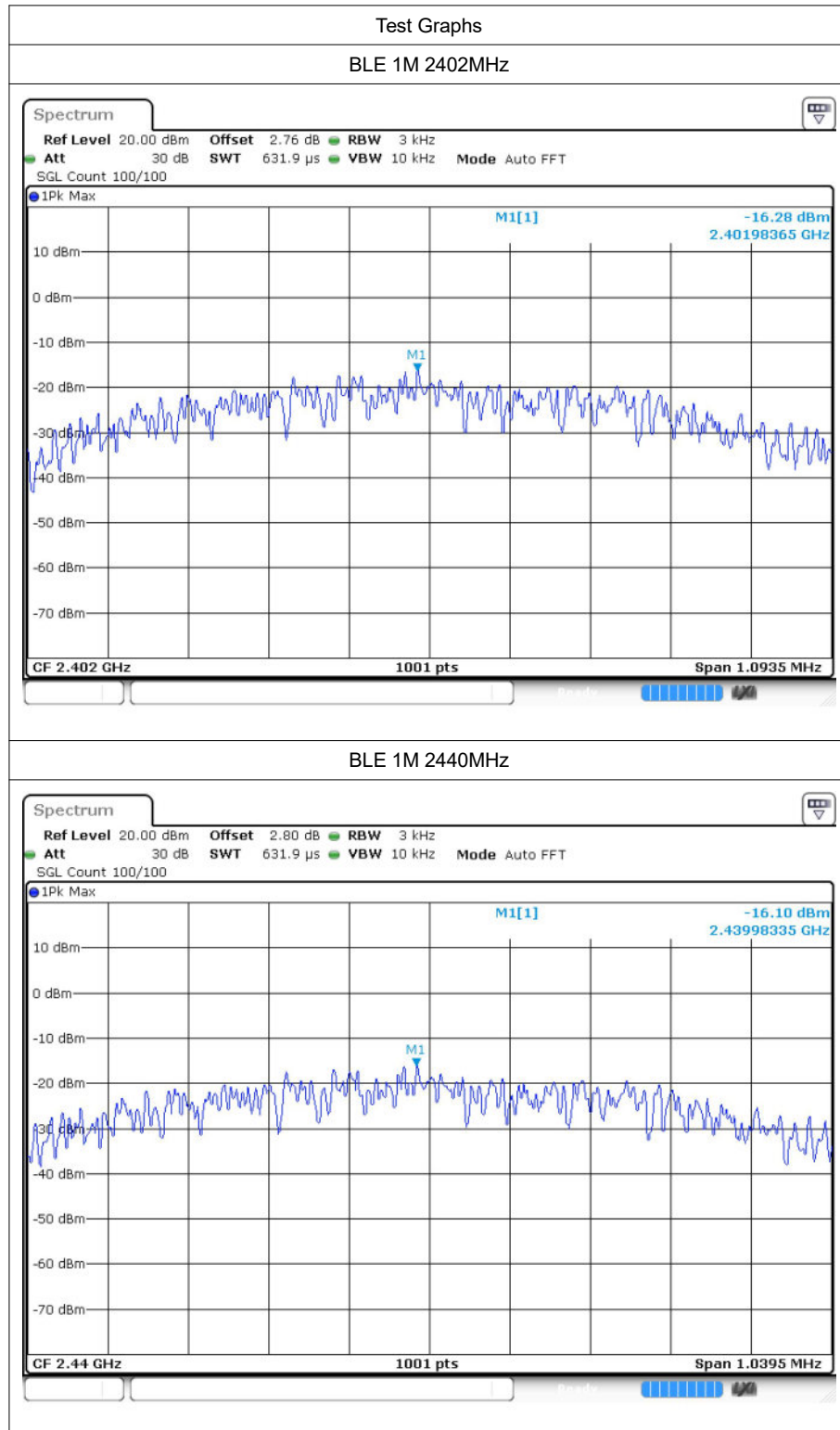


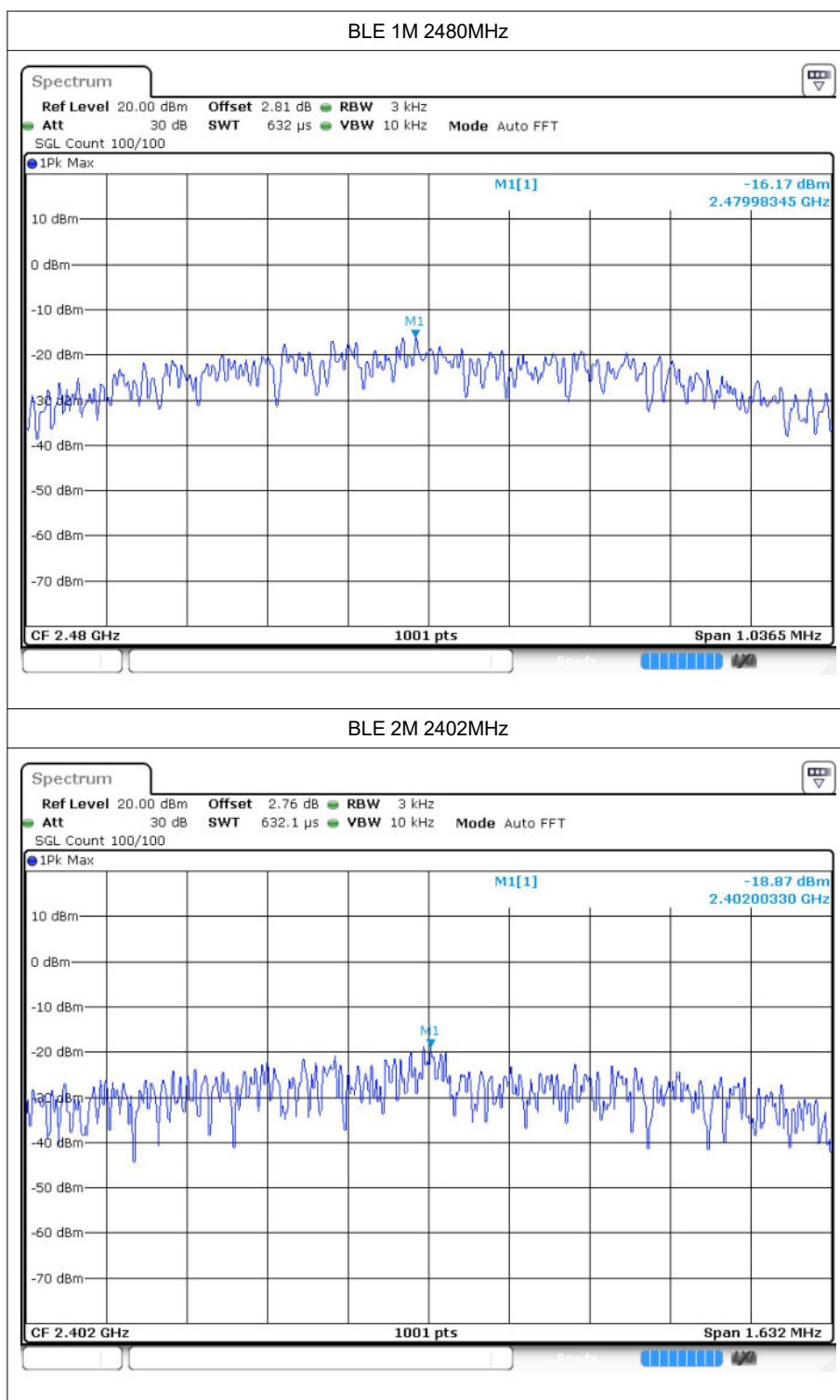
## 4 Maximum Power Spectral Density Level

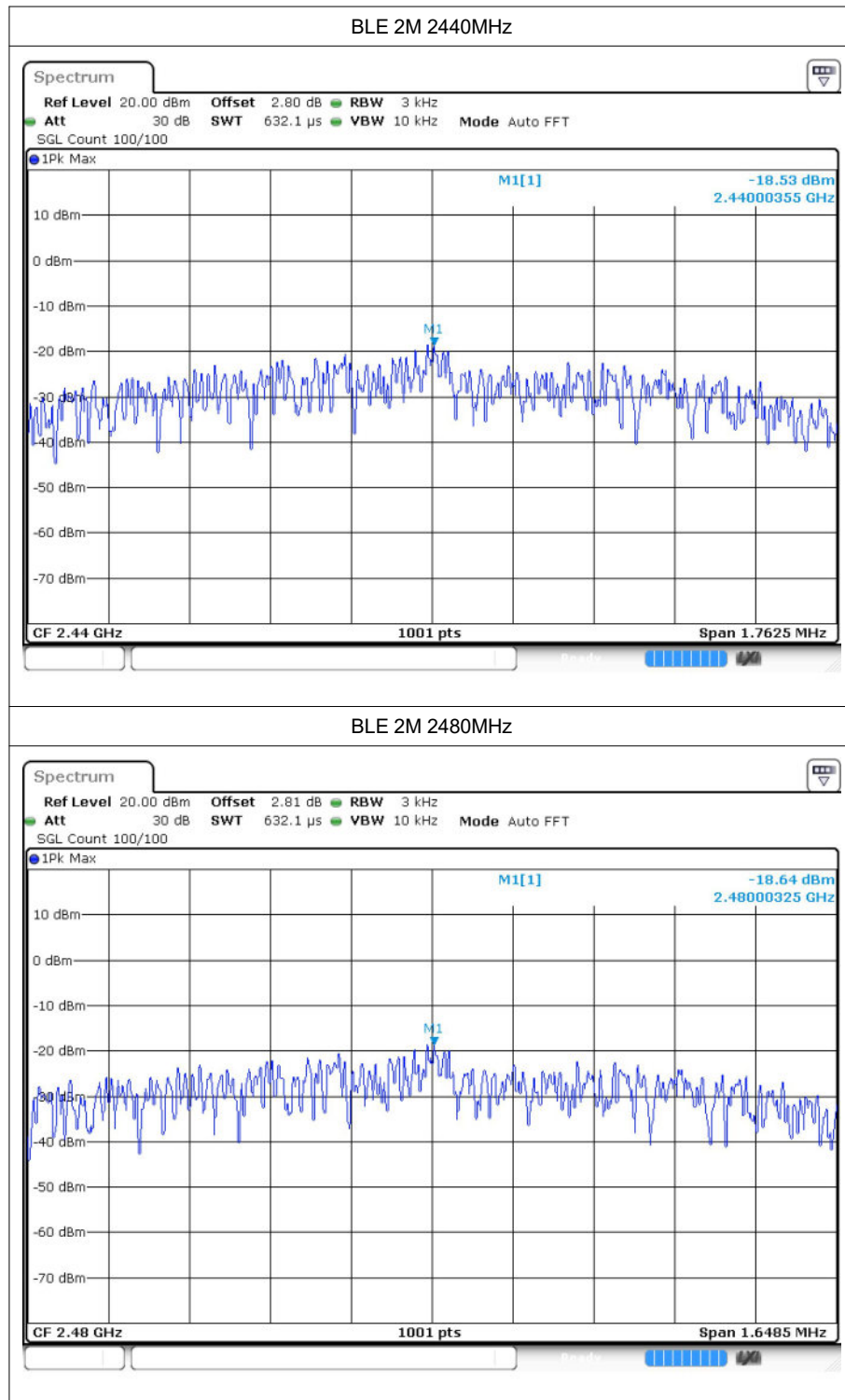
### 4.1 Test Result

| Mode   | Frequency (MHz) | Conducted PSD<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Verdict |
|--------|-----------------|-----------------------------|---------------------|---------|
| BLE 1M | 2402            | -16.28                      | $\leq 8$            | Pass    |
| BLE 1M | 2440            | -16.1                       | $\leq 8$            | Pass    |
| BLE 1M | 2480            | -16.17                      | $\leq 8$            | Pass    |
| BLE 2M | 2402            | -18.87                      | $\leq 8$            | Pass    |
| BLE 2M | 2440            | -18.53                      | $\leq 8$            | Pass    |
| BLE 2M | 2480            | -18.64                      | $\leq 8$            | Pass    |

## 4.2 Test Graphs





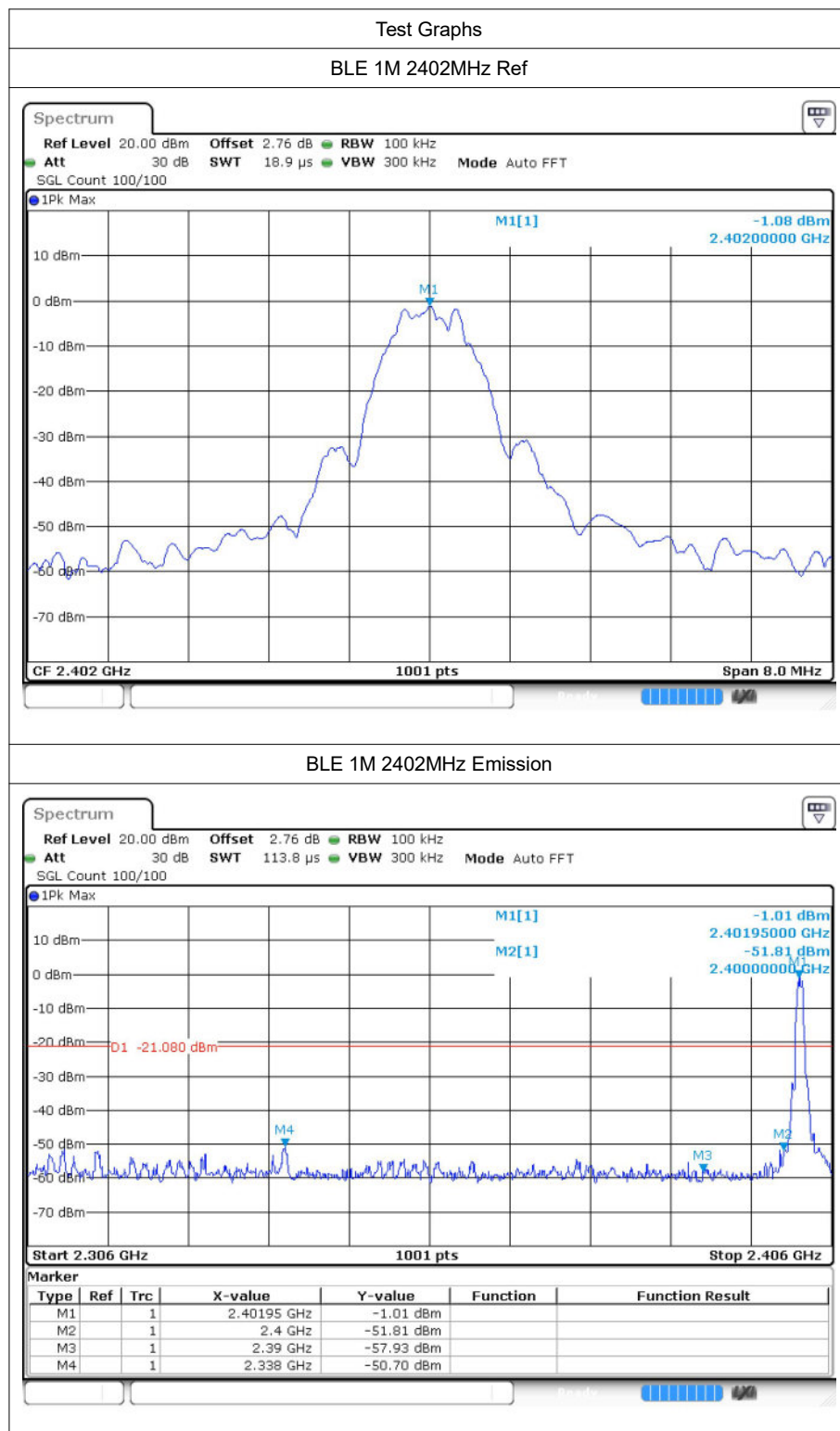


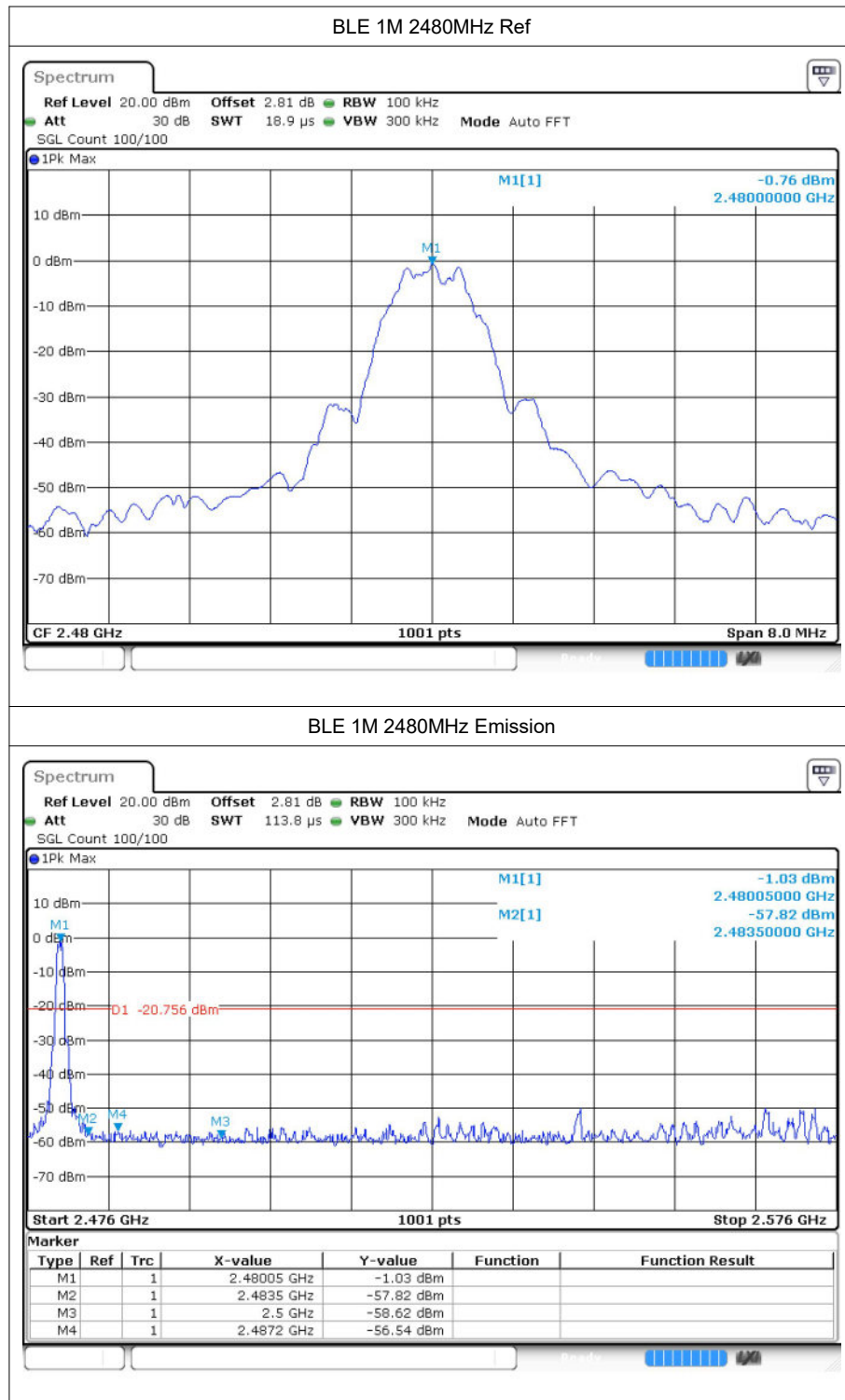
## 5 Band Edge

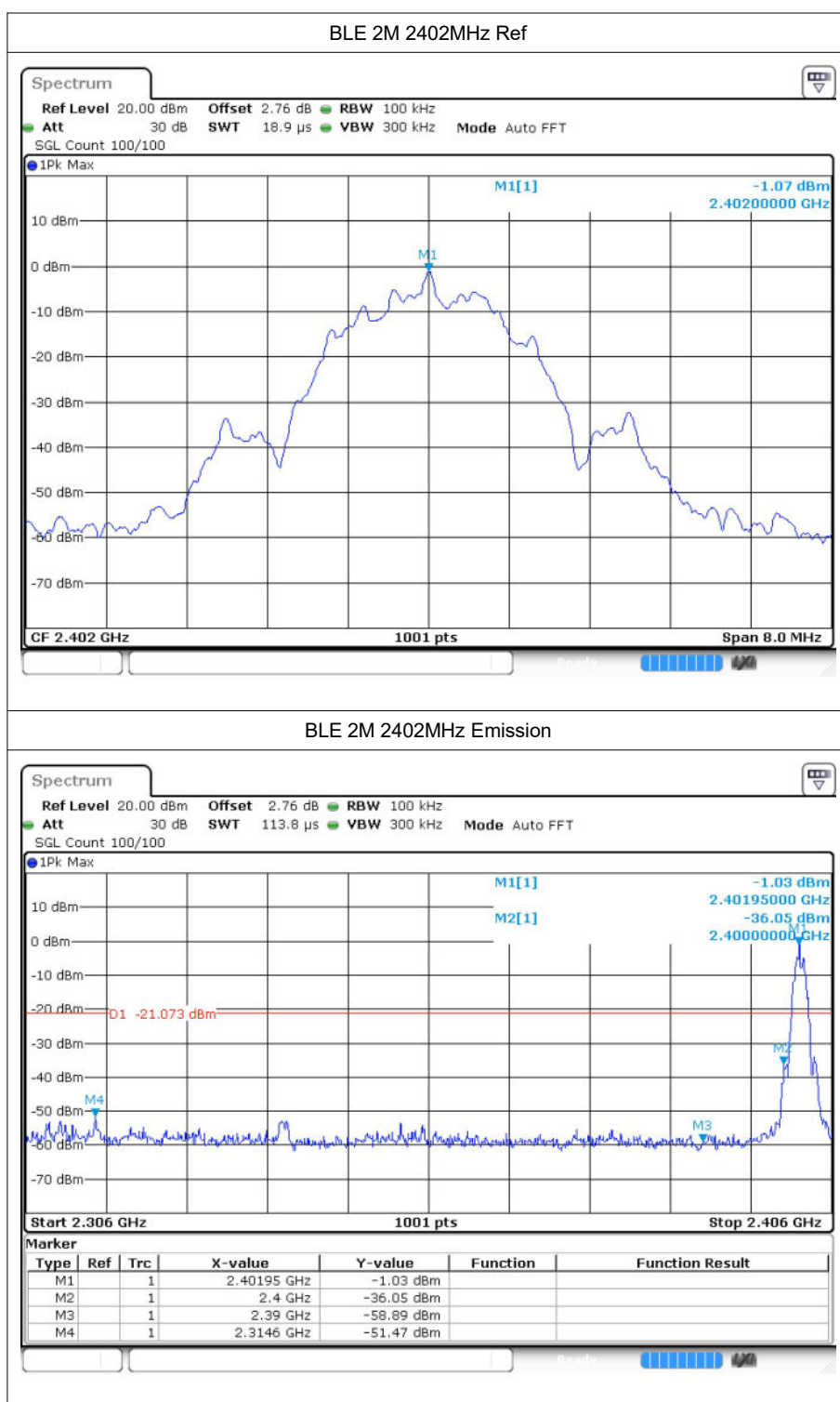
### 5.1 Test Result

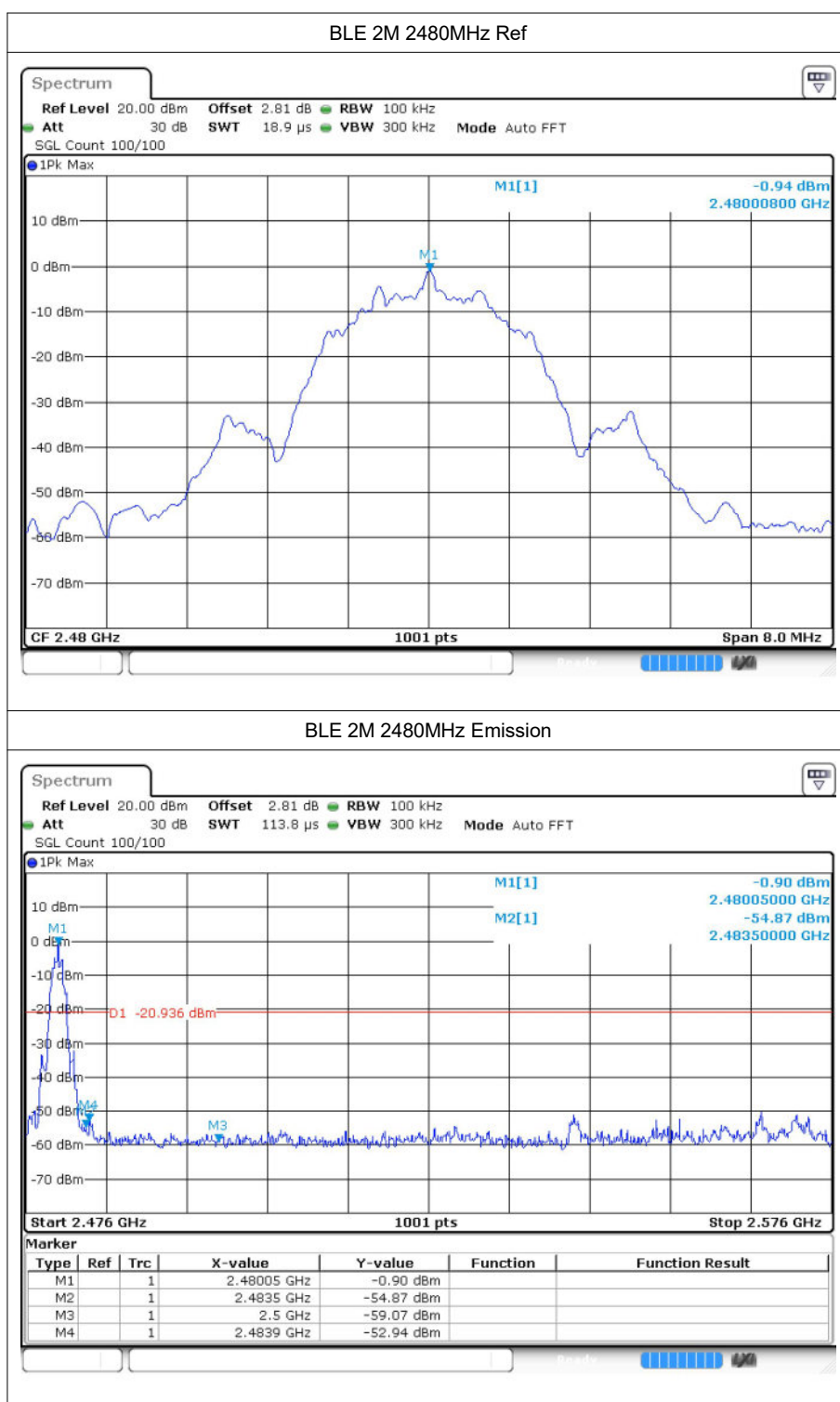
| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -49.62          | -20         | Pass    |
| BLE 1M | 2480            | -55.78          | -20         | Pass    |
| BLE 2M | 2402            | -50.4           | -20         | Pass    |
| BLE 2M | 2480            | -51.99          | -20         | Pass    |

## 5.2 Test Graphs









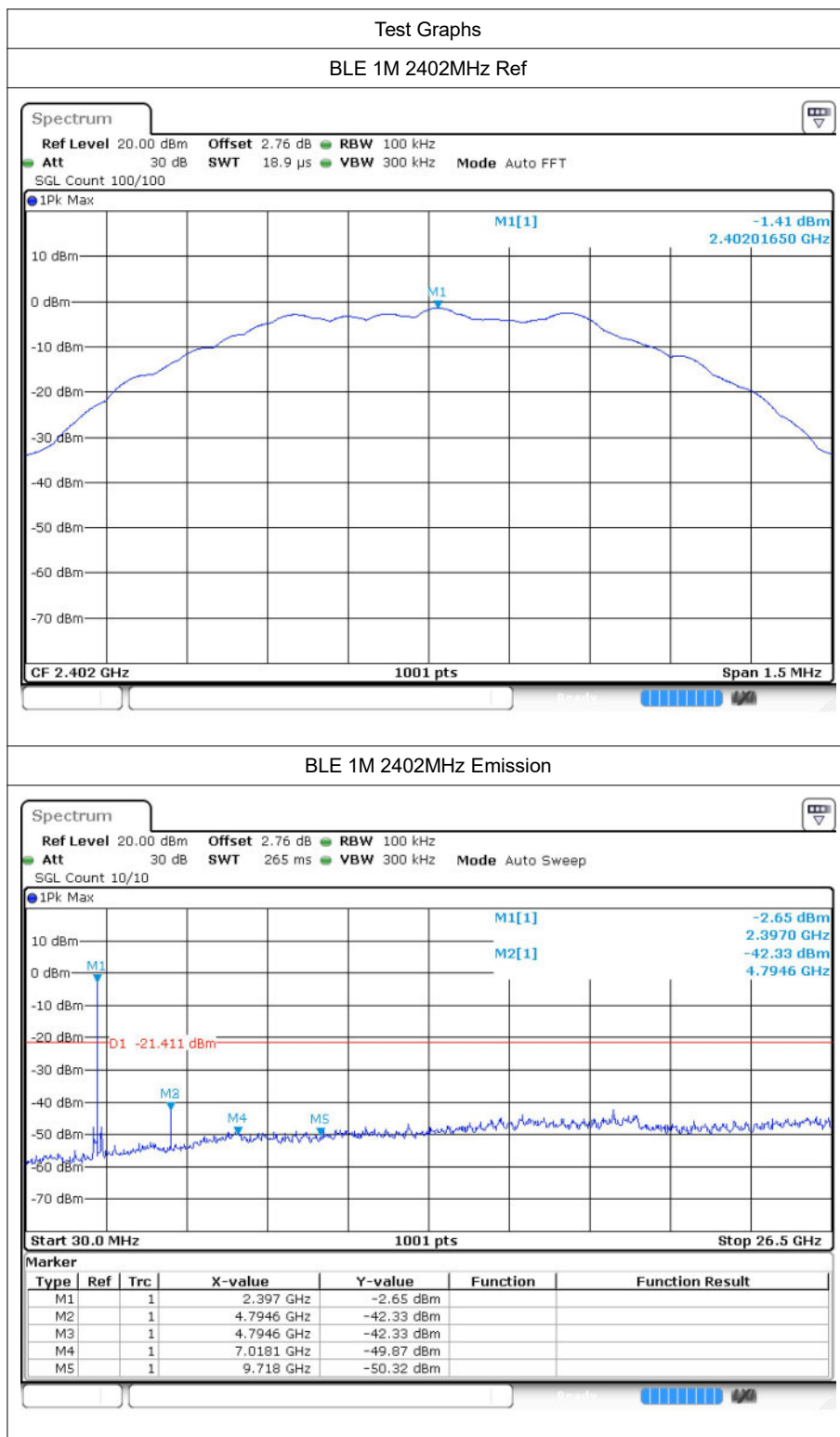


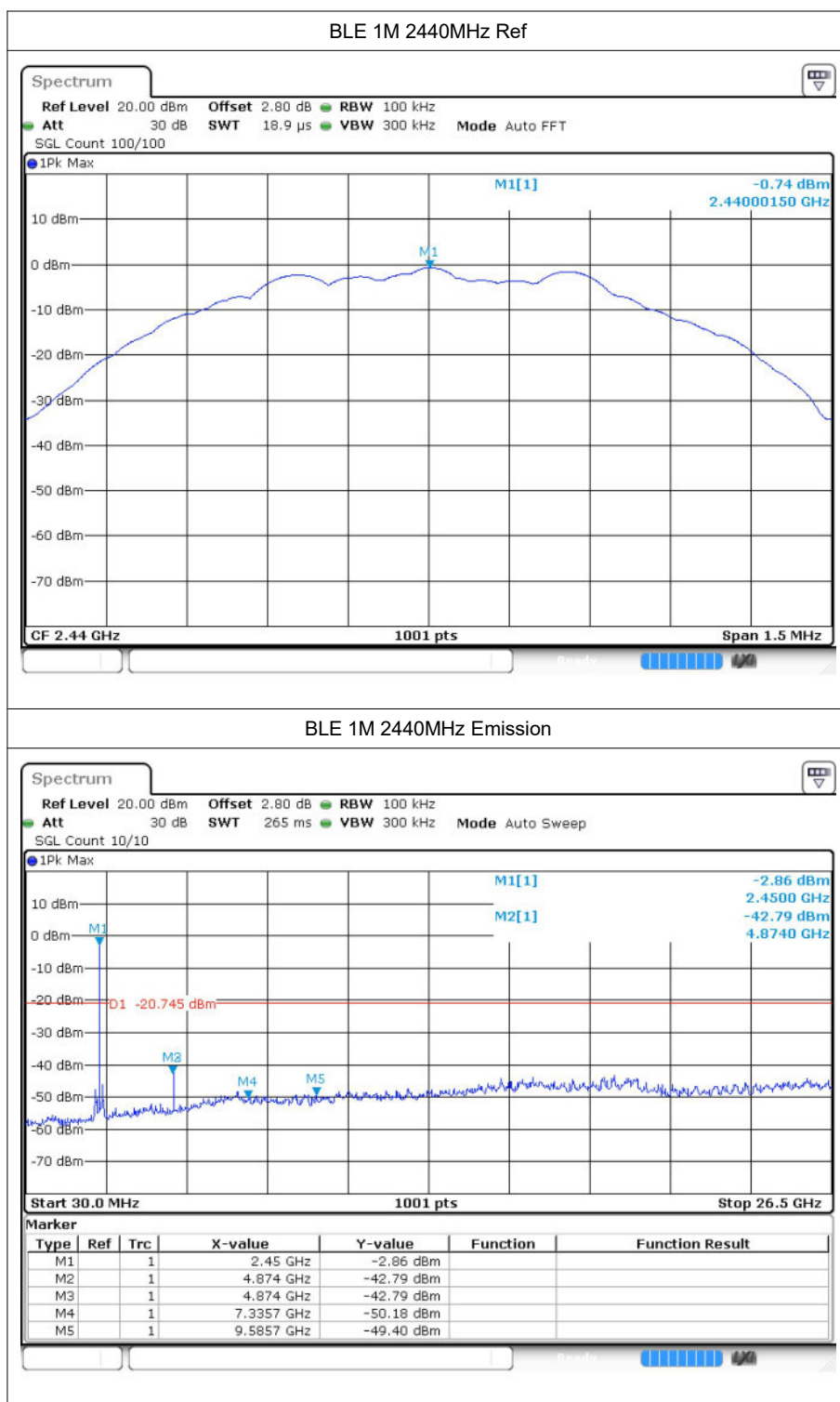
## 6 Conducted RF Spurious Emission

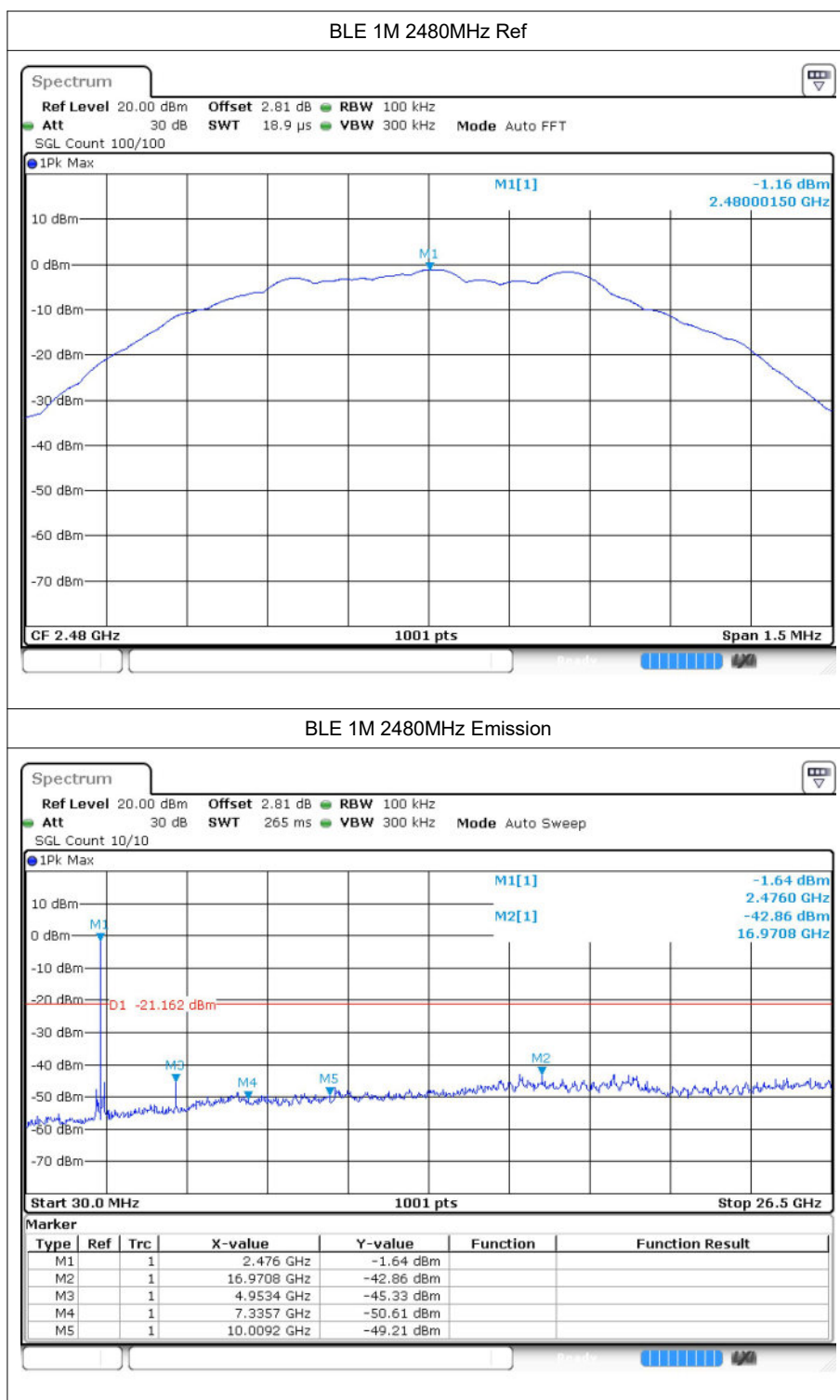
### 6.1 Test Result

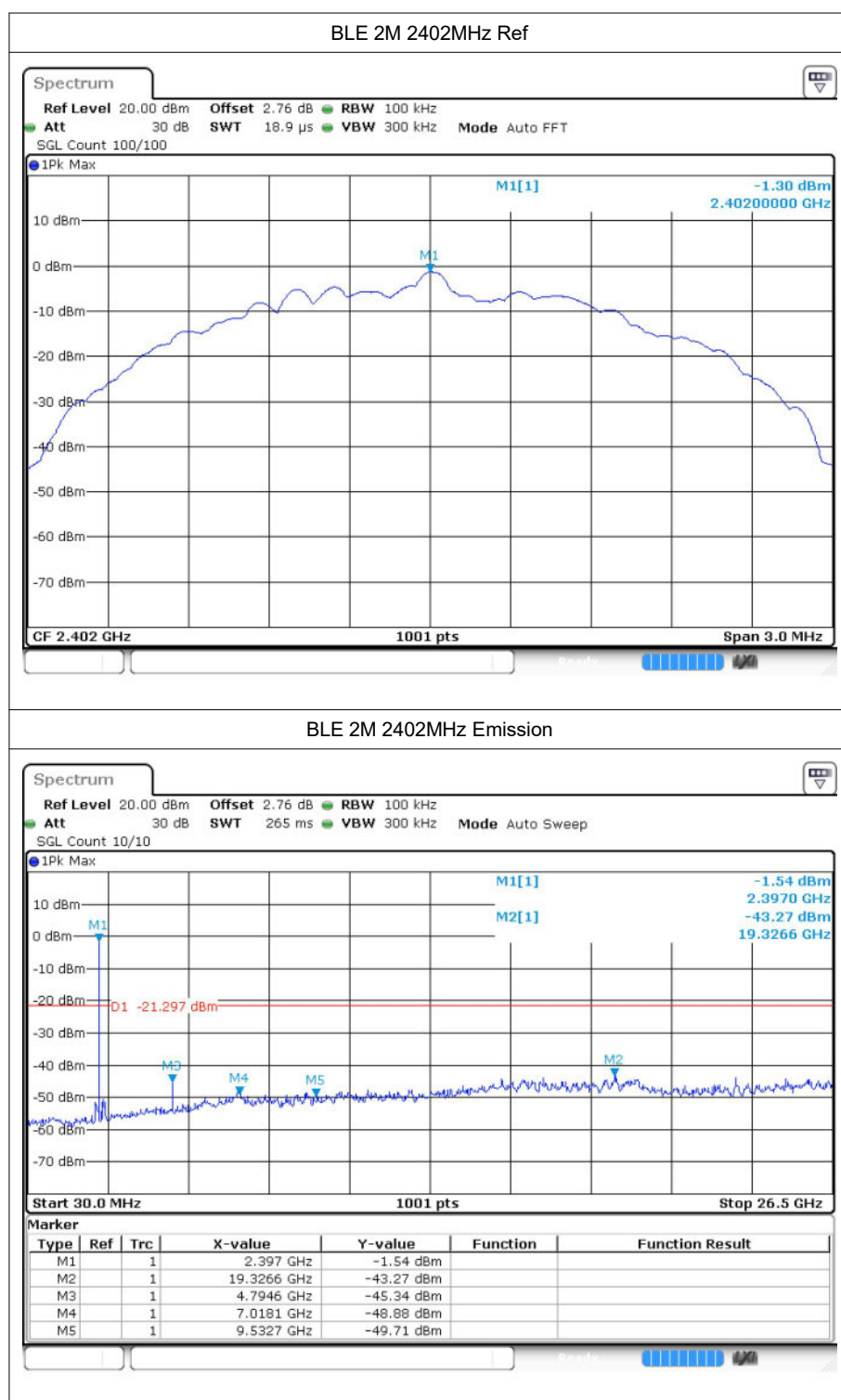
| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -40.92          | -20         | Pass    |
| BLE 1M | 2440            | -42.04          | -20         | Pass    |
| BLE 1M | 2480            | -41.69          | -20         | Pass    |
| BLE 2M | 2402            | -41.97          | -20         | Pass    |
| BLE 2M | 2440            | -42.5           | -20         | Pass    |
| BLE 2M | 2480            | -41.64          | -20         | Pass    |

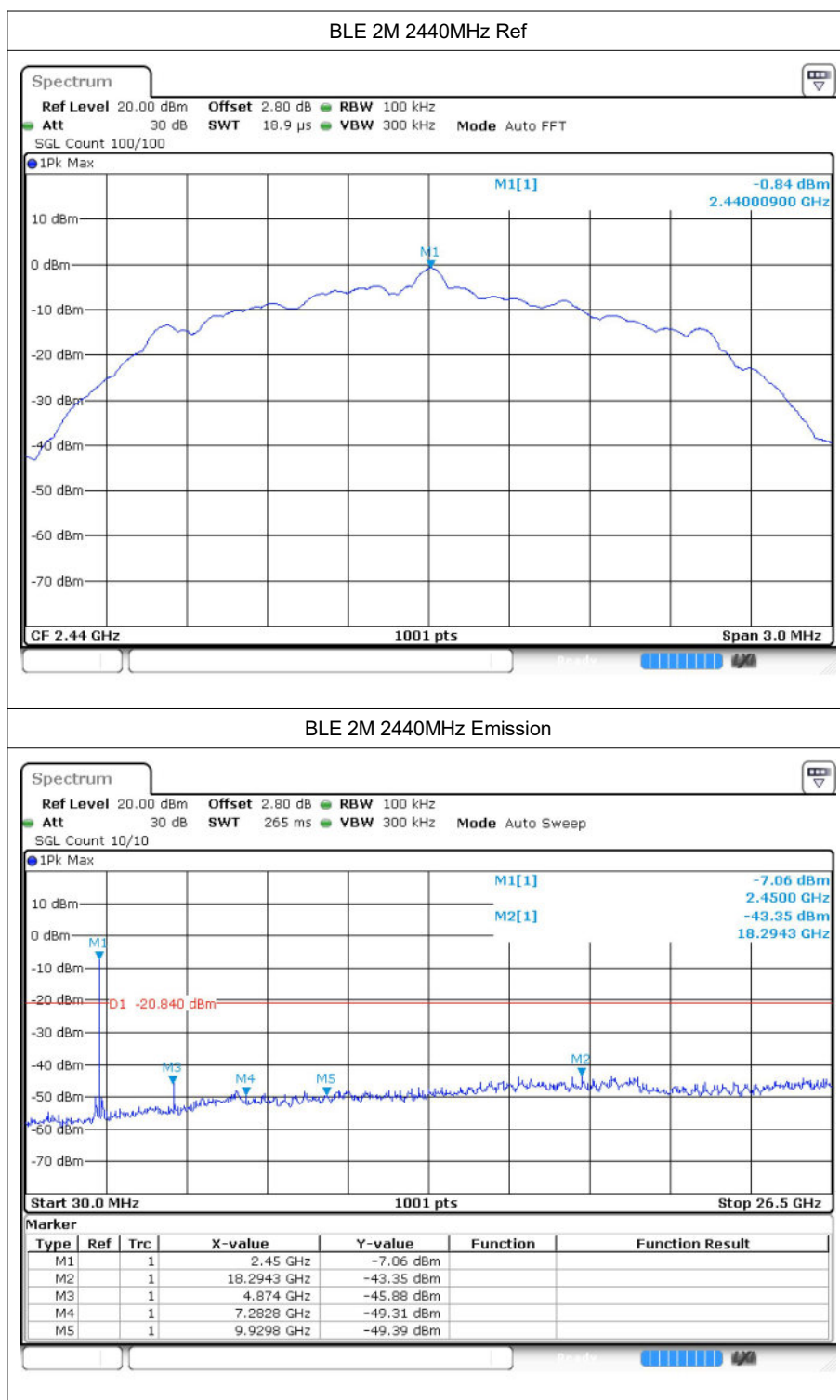
## 6.2 Test Graphs

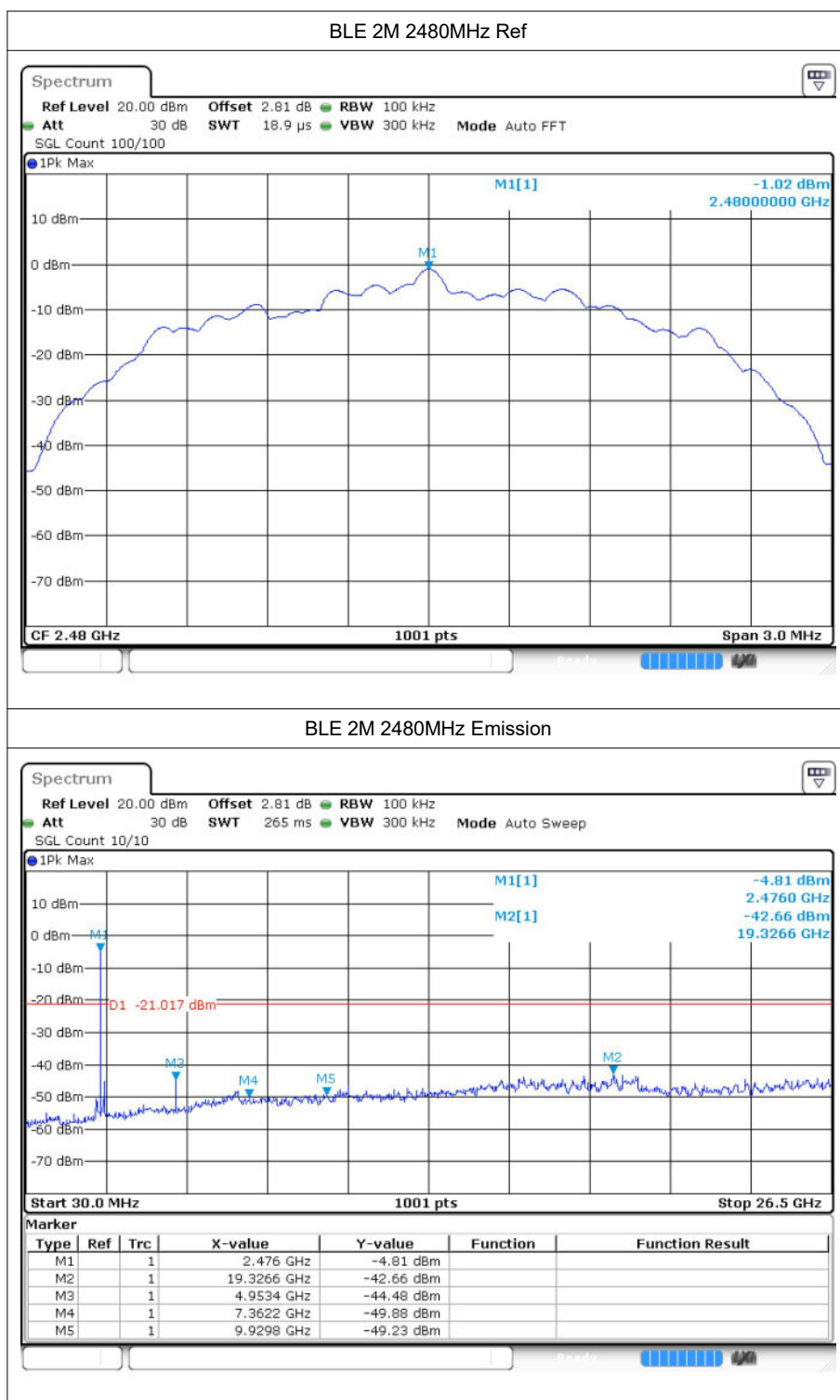












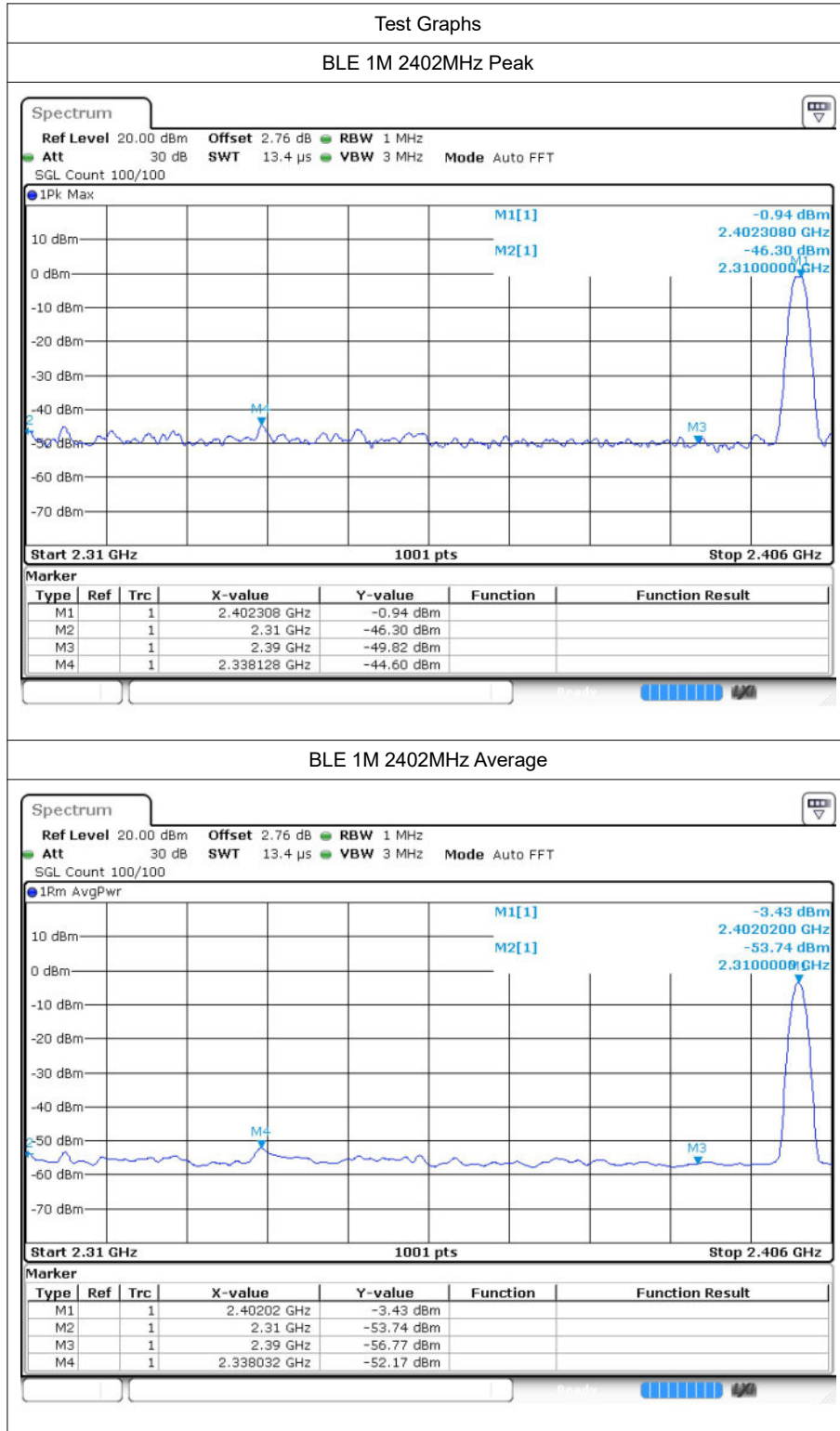


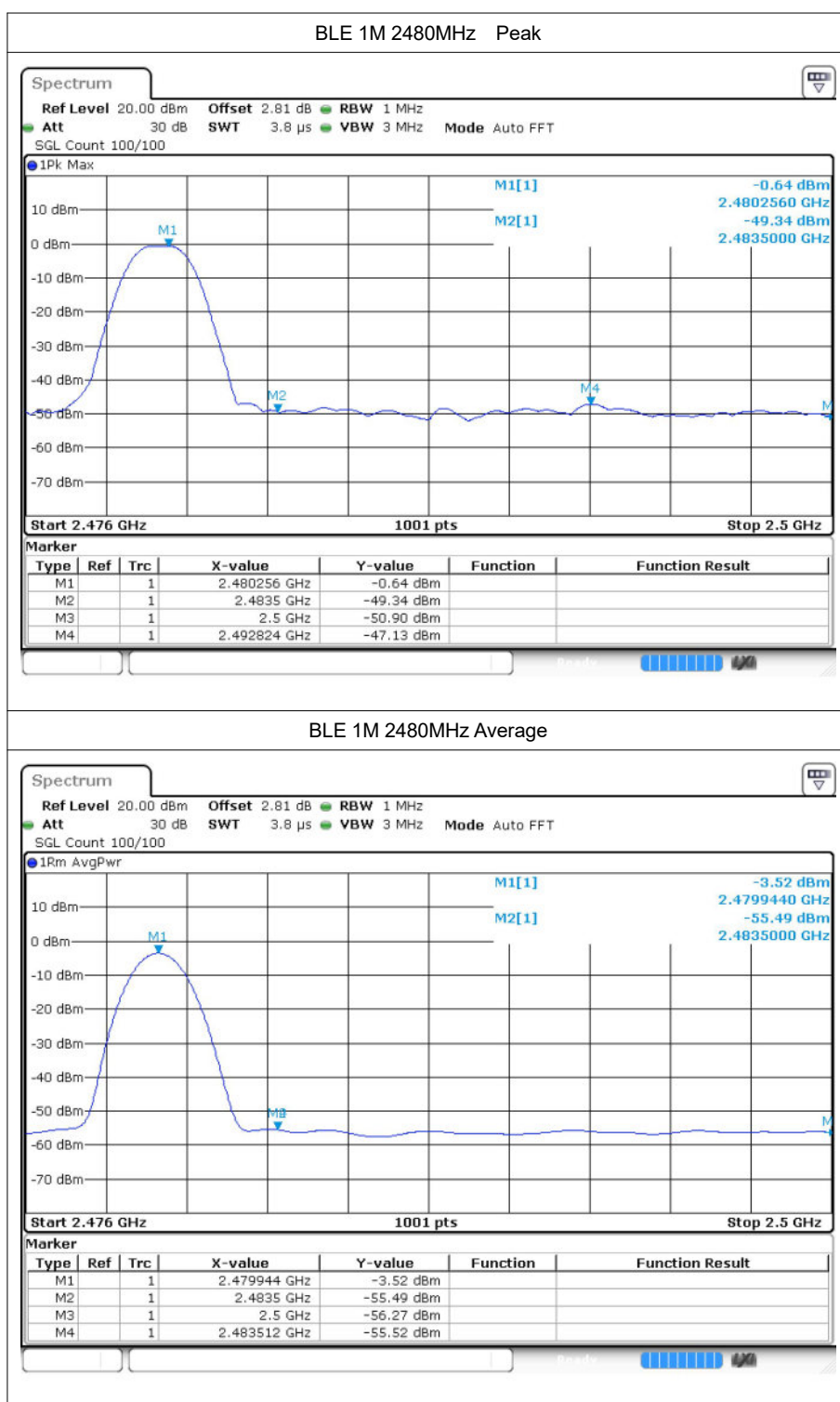
## 7 Restrict Band

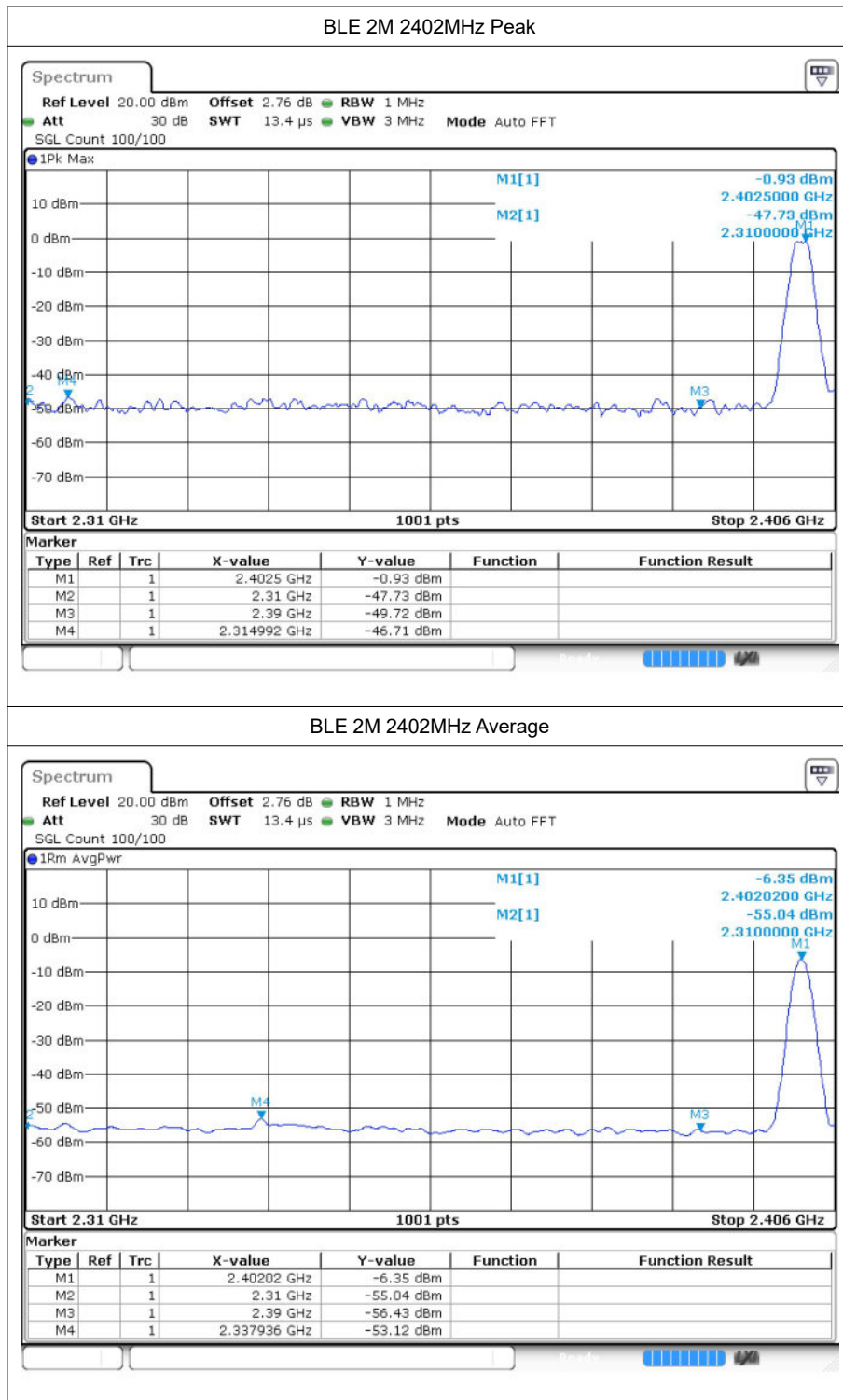
### 7.1 Test Result

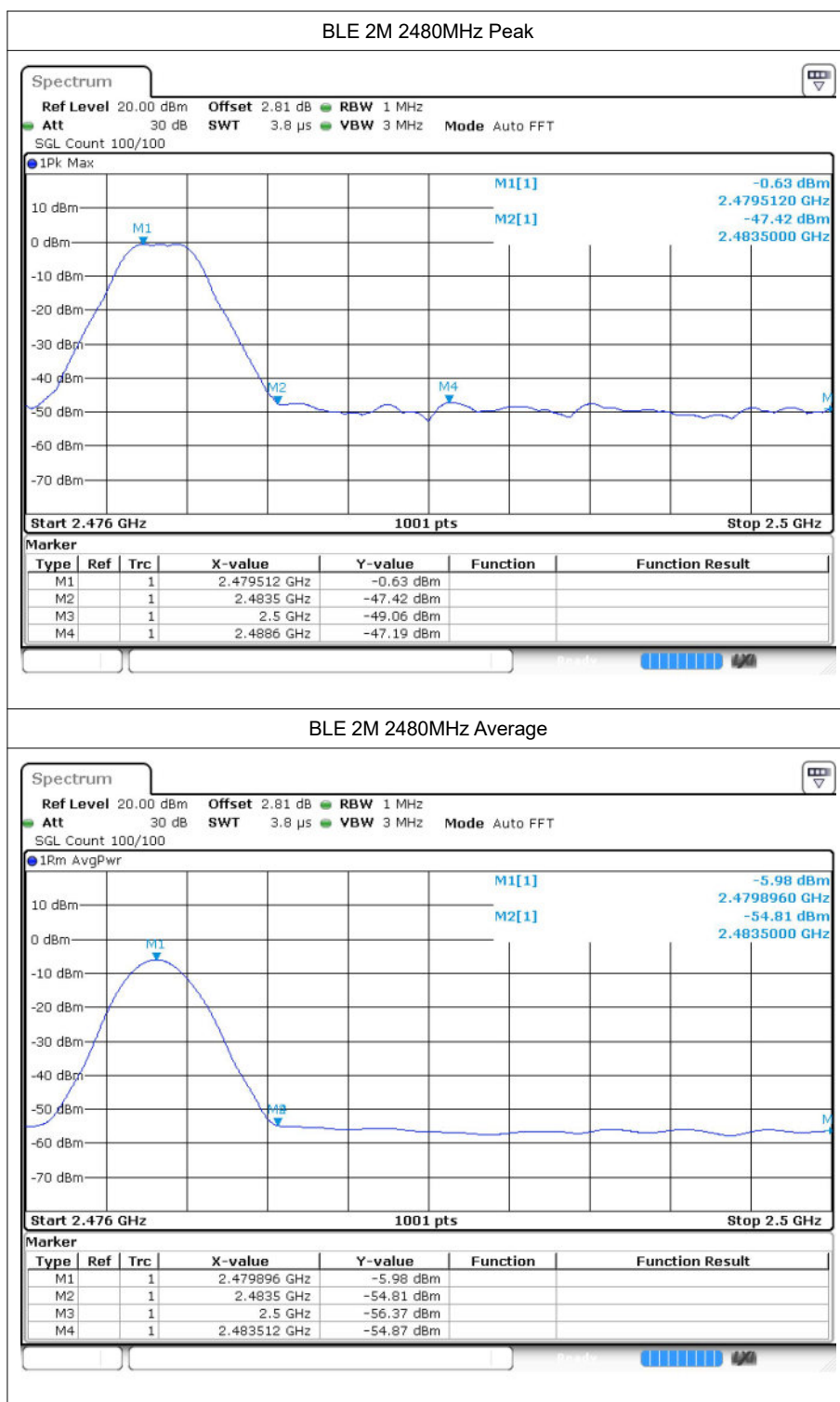
| Mode   | Frequency (MHz) | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|--------|-----------------|-----------------|-------------|------------|-------------|------------|----------|----------------|---------|
| BLE 1M | 2402            | 2310            | -46.3       | 5.3        | -           | 54.23      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2310            | -53.74      | 5.3        | 1.88        | 48.67      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2338.128        | -44.59      | 5.3        | -           | 55.94      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2338.032        | -52.16      | 5.3        | 1.88        | 50.25      | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2390            | -49.82      | 5.3        | -           | 50.71      | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2390            | -56.77      | 5.3        | 1.88        | 45.64      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2483.5          | -49.34      | 5.3        | -           | 51.19      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.5          | -55.49      | 5.3        | 1.88        | 46.92      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2492.824        | -47.12      | 5.3        | -           | 53.41      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.512        | -55.51      | 5.3        | 1.88        | 46.90      | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2500            | -50.9       | 5.3        | -           | 49.63      | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2500            | -56.27      | 5.3        | 1.88        | 46.14      | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2310            | -47.73      | 5.3        | -           | 52.80      | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2310            | -55.04      | 5.3        | 4.54        | 50.03      | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2314.992        | -46.71      | 5.3        | -           | 53.82      | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2337.936        | -53.11      | 5.3        | 4.54        | 51.96      | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2390            | -49.72      | 5.3        | -           | 50.81      | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2390            | -56.43      | 5.3        | 4.54        | 48.64      | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2483.5          | -47.42      | 5.3        | -           | 53.11      | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2483.5          | -54.81      | 5.3        | 4.54        | 50.26      | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2488.6          | -47.18      | 5.3        | -           | 53.35      | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2483.512        | -54.87      | 5.3        | 4.54        | 50.20      | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2500            | -49.06      | 5.3        | -           | 51.47      | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2500            | -56.37      | 5.3        | 4.54        | 48.70      | Average  | 54             | Pass    |

## 7.2 Test Graphs









---The End---