



## Appendix B

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

Product Name: M5 LLM630 Compute Kit



Trade Mark:

Test Model: LLM630 Compute Kit

#### 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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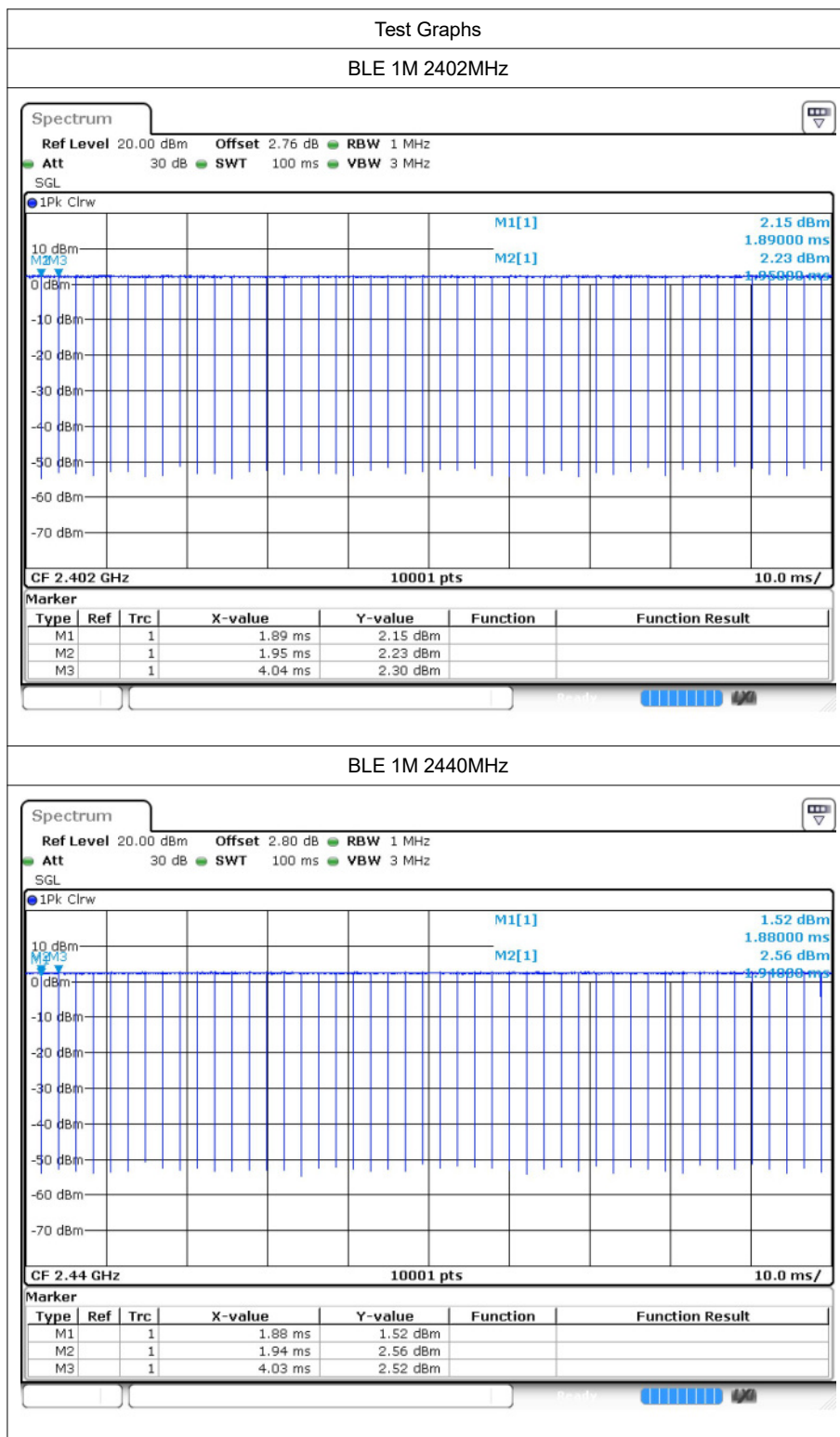


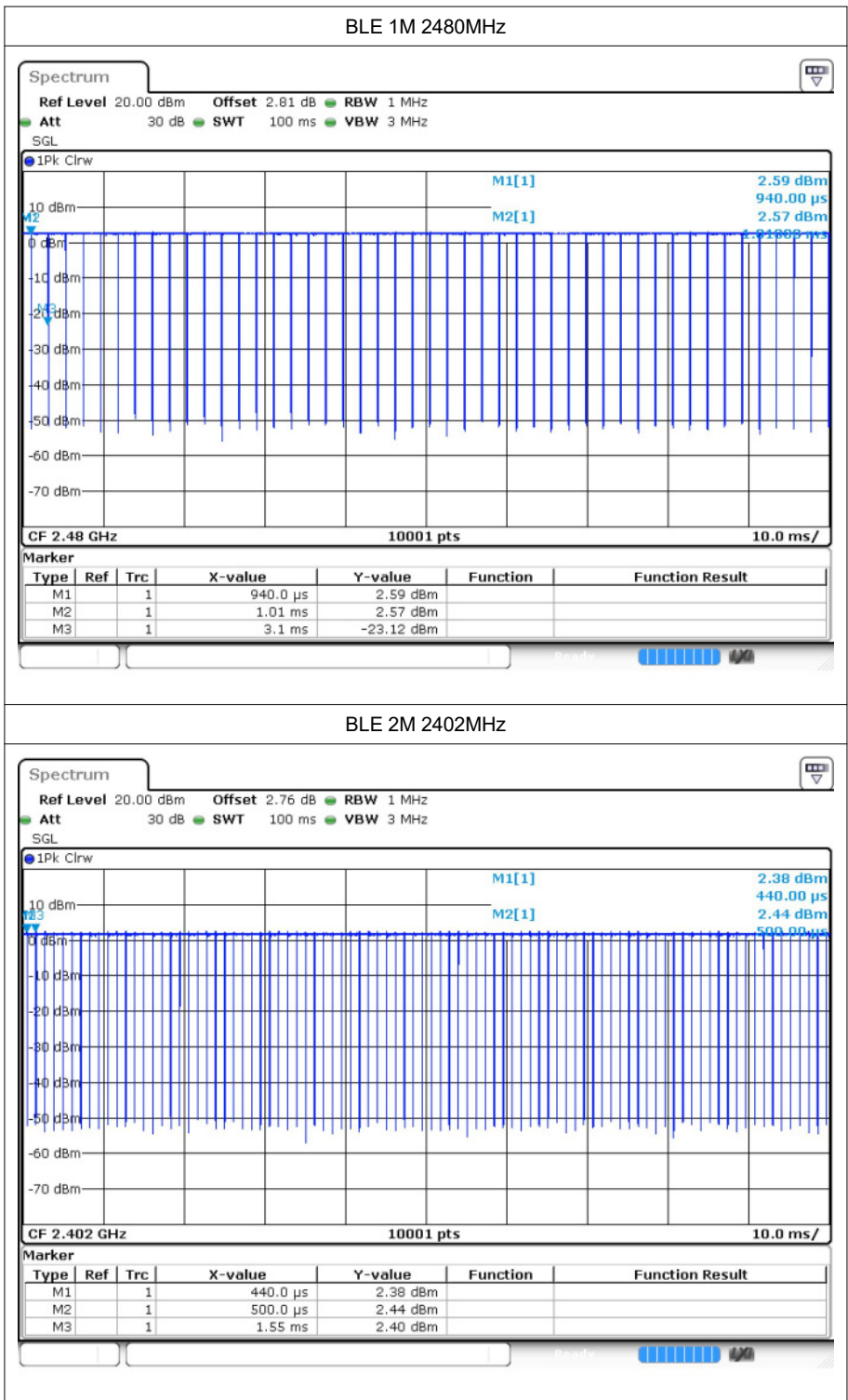
# 1 Duty Cycle

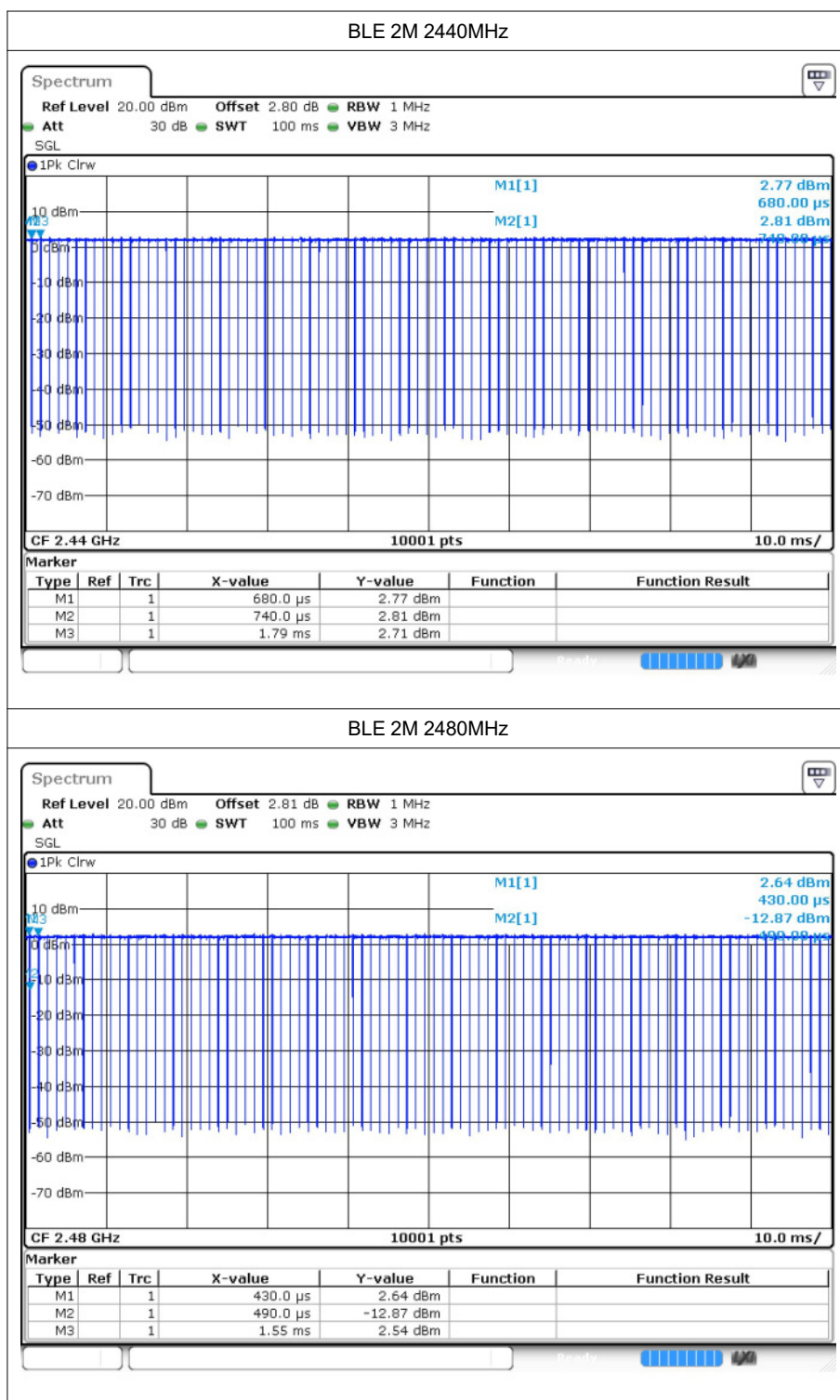
## 1.1 Test Result

| Mode   | Frequency (MHz) | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|--------|-----------------|----------------|-------------------|-----------|
| BLE 1M | 2402            | 97.63          | 0.1               | 0.48      |
| BLE 1M | 2440            | 97.63          | 0.1               | 0.48      |
| BLE 1M | 2480            | 97.56          | 0.11              | 0.48      |
| BLE 2M | 2402            | 95.37          | 0.21              | 0.95      |
| BLE 2M | 2440            | 95.4           | 0.2               | 0.95      |
| BLE 2M | 2480            | 95.36          | 0.21              | 0.94      |

## 1.2 Test Graphs







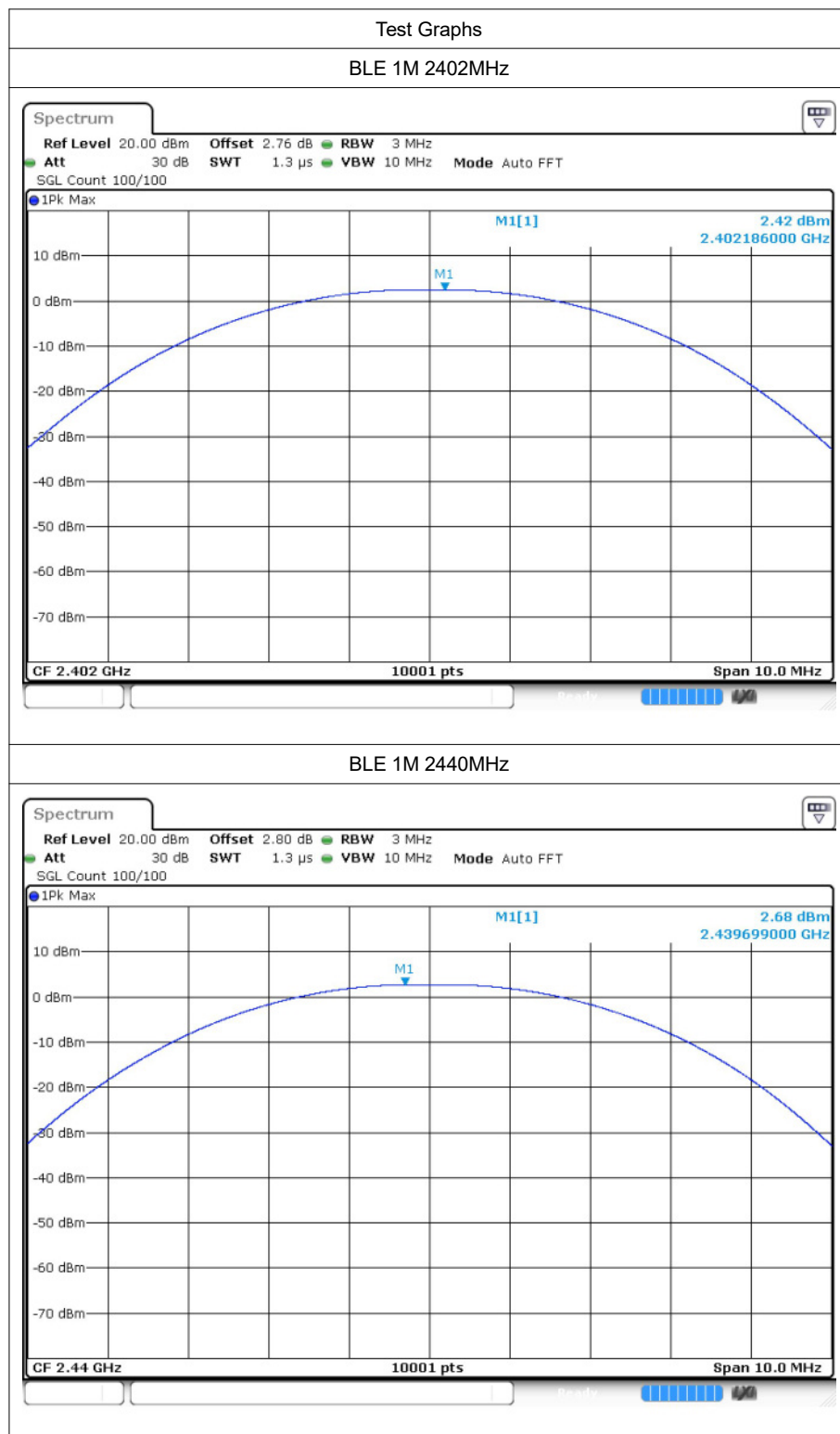


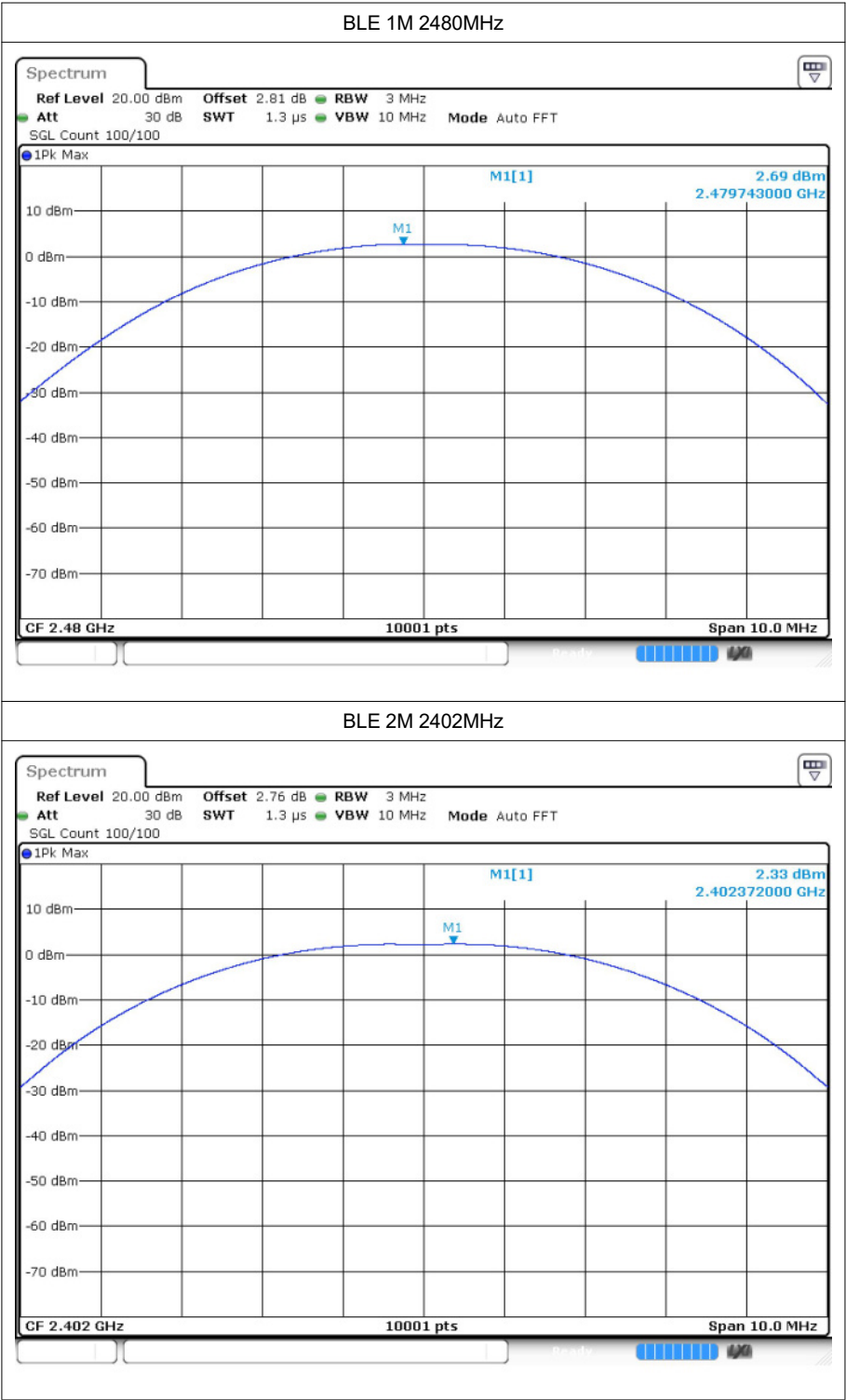
## 2 Maximum Conducted Output Power

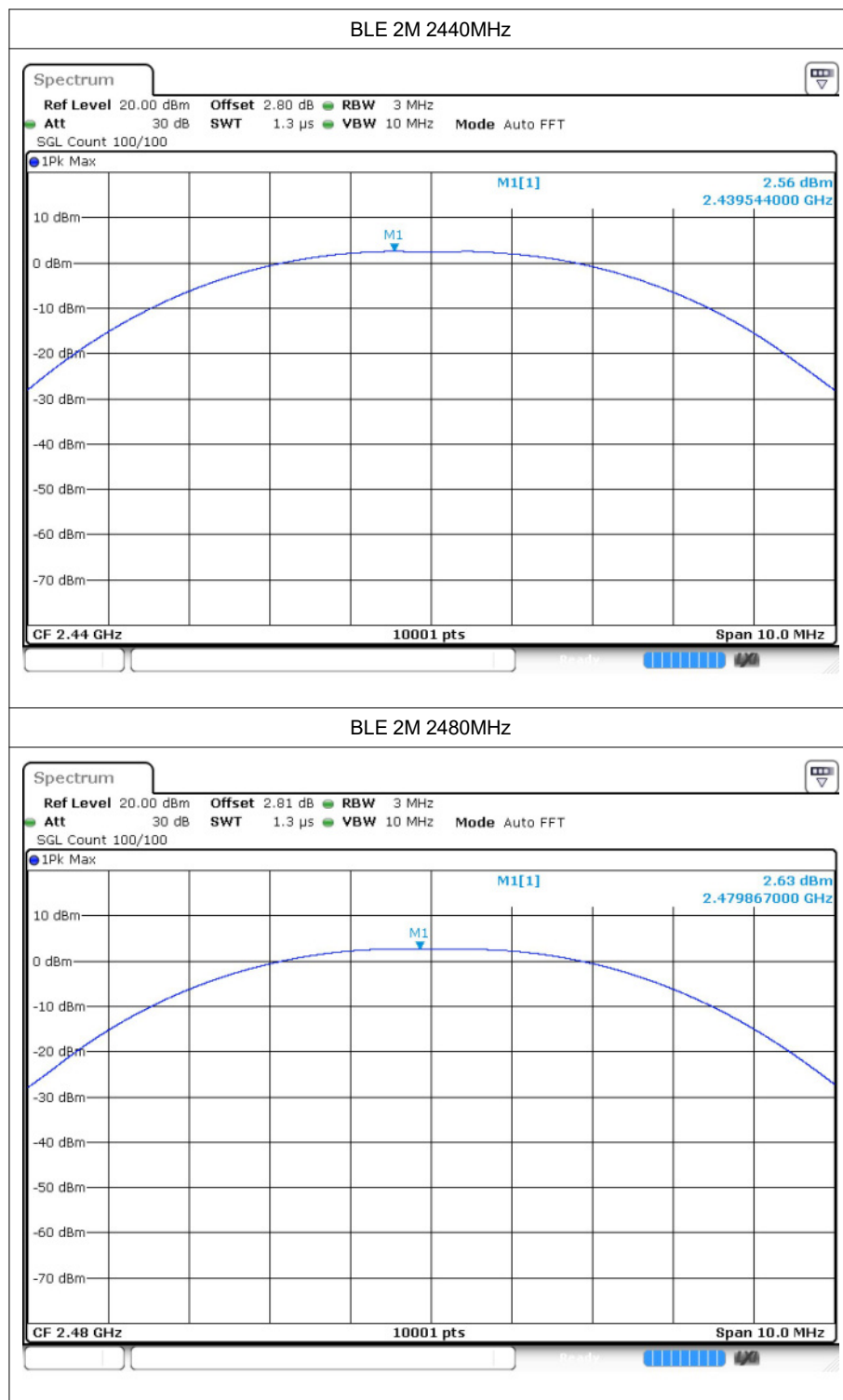
### 2.1 Test Result

| Mode   | Frequency (MHz) | Conducted Power<br>(dBm) | Limit (dBm) | Verdict |
|--------|-----------------|--------------------------|-------------|---------|
| BLE 1M | 2402            | 2.42                     | 30          | Pass    |
| BLE 1M | 2440            | 2.68                     | 30          | Pass    |
| BLE 1M | 2480            | 2.69                     | 30          | Pass    |
| BLE 2M | 2402            | 2.33                     | 30          | Pass    |
| BLE 2M | 2440            | 2.56                     | 30          | Pass    |
| BLE 2M | 2480            | 2.63                     | 30          | Pass    |

## 2.2 Test Graphs







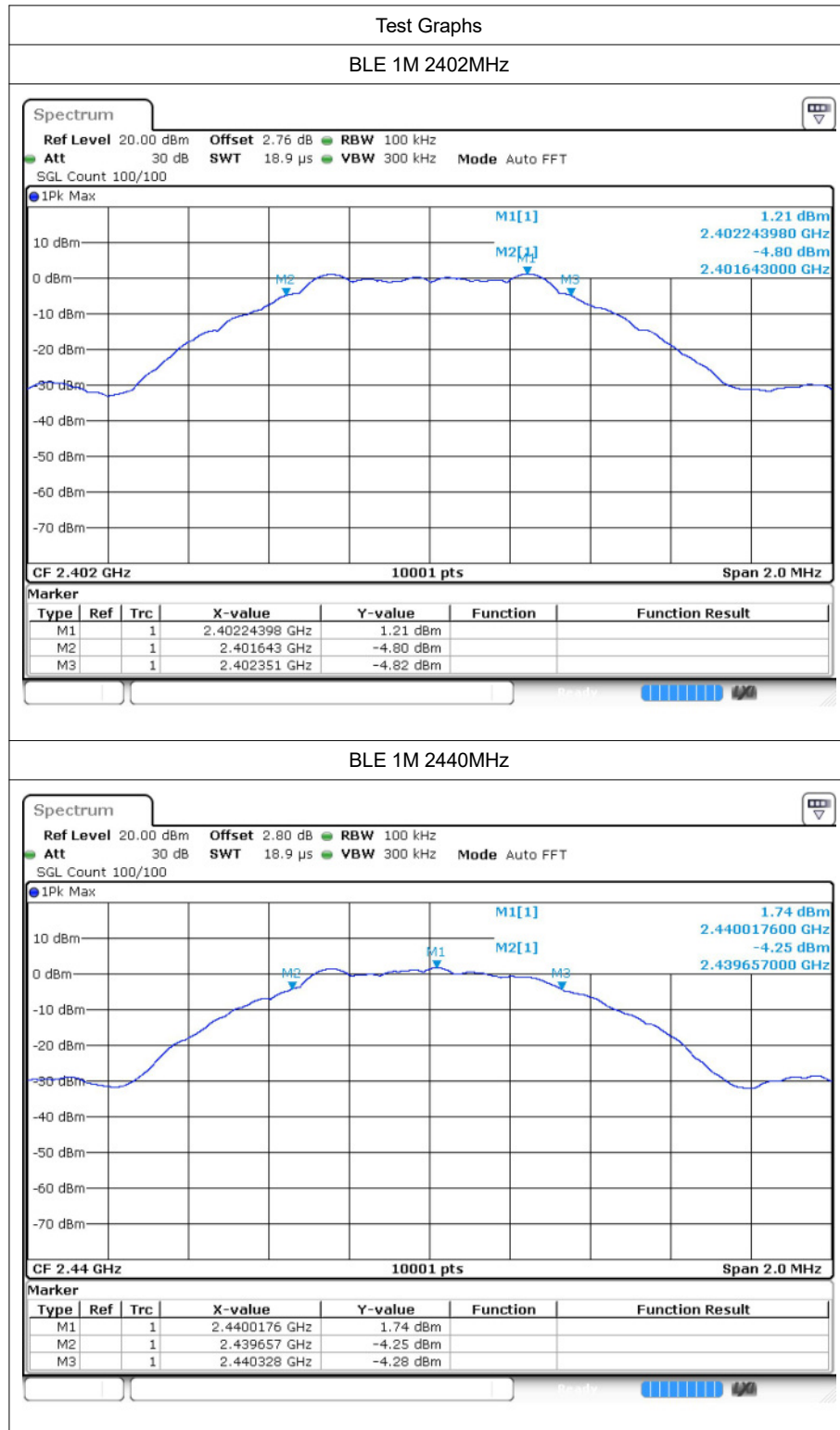


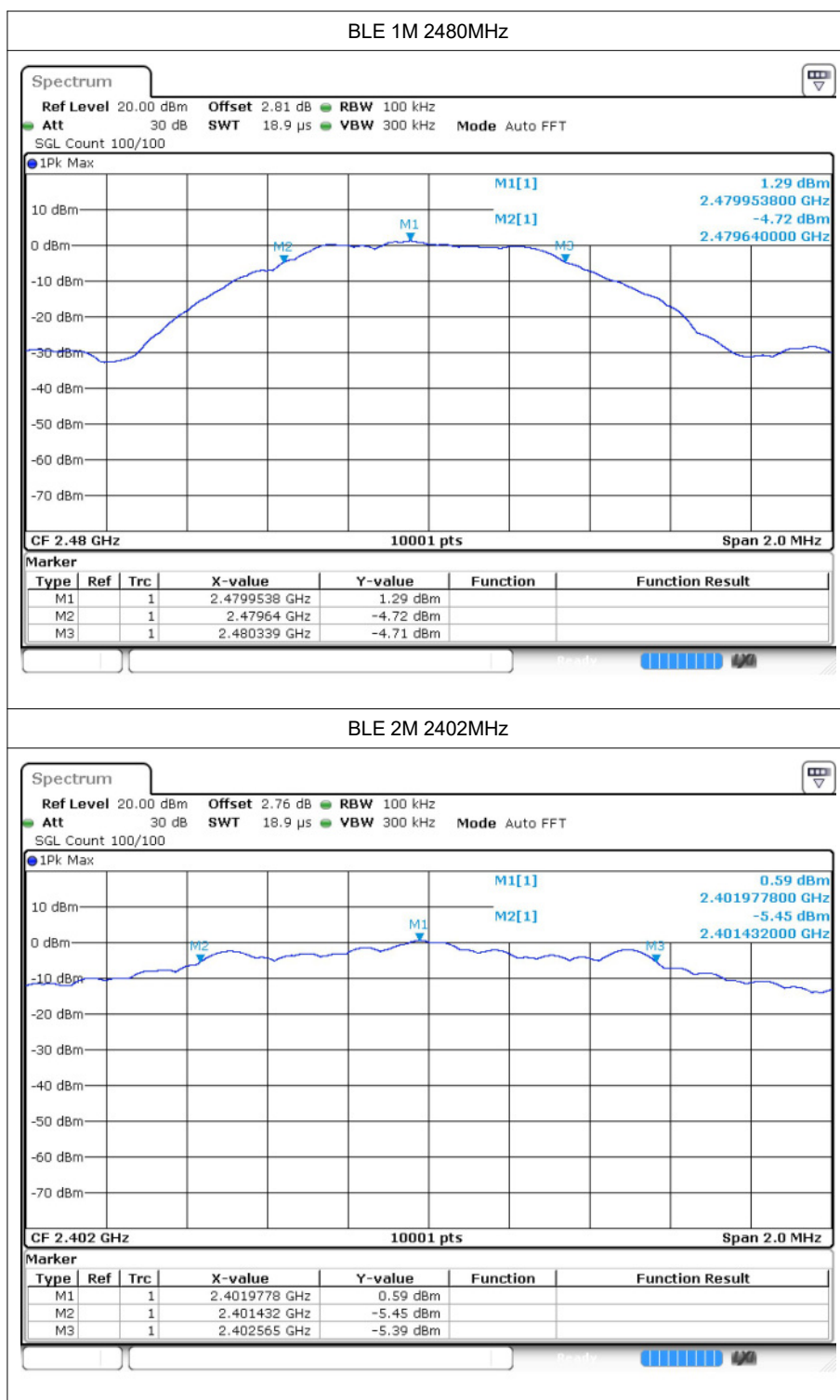
### 3 -6dB Bandwidth

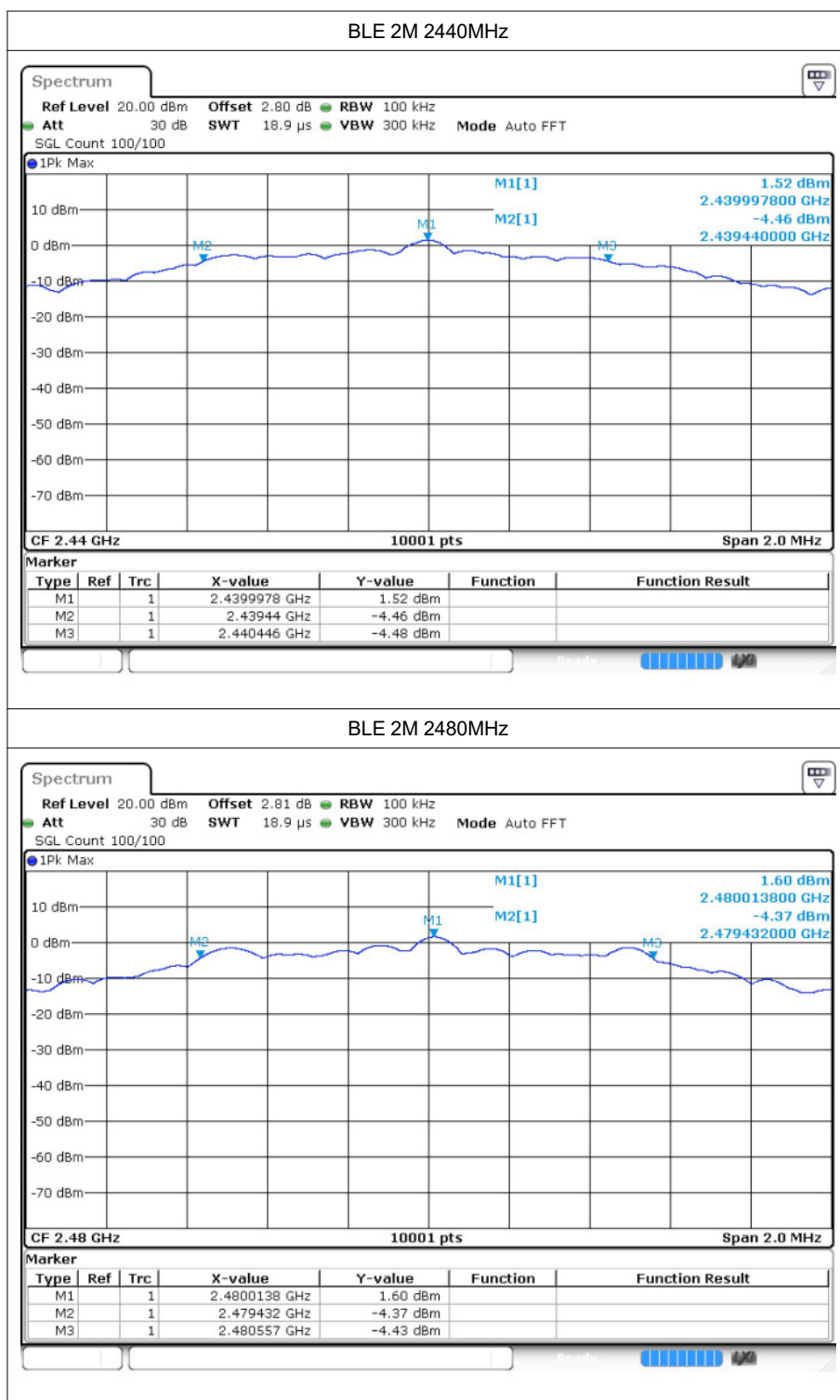
#### 3.1 Test Result

| Mode   | Frequency (MHz) | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|--------|-----------------|-----------------------|-----------------------------|---------|
| BLE 1M | 2402            | 0.708                 | 0.5                         | Pass    |
| BLE 1M | 2440            | 0.671                 | 0.5                         | Pass    |
| BLE 1M | 2480            | 0.699                 | 0.5                         | Pass    |
| BLE 2M | 2402            | 1.133                 | 0.5                         | Pass    |
| BLE 2M | 2440            | 1.007                 | 0.5                         | Pass    |
| BLE 2M | 2480            | 1.125                 | 0.5                         | Pass    |

## 3.2 Test Graphs







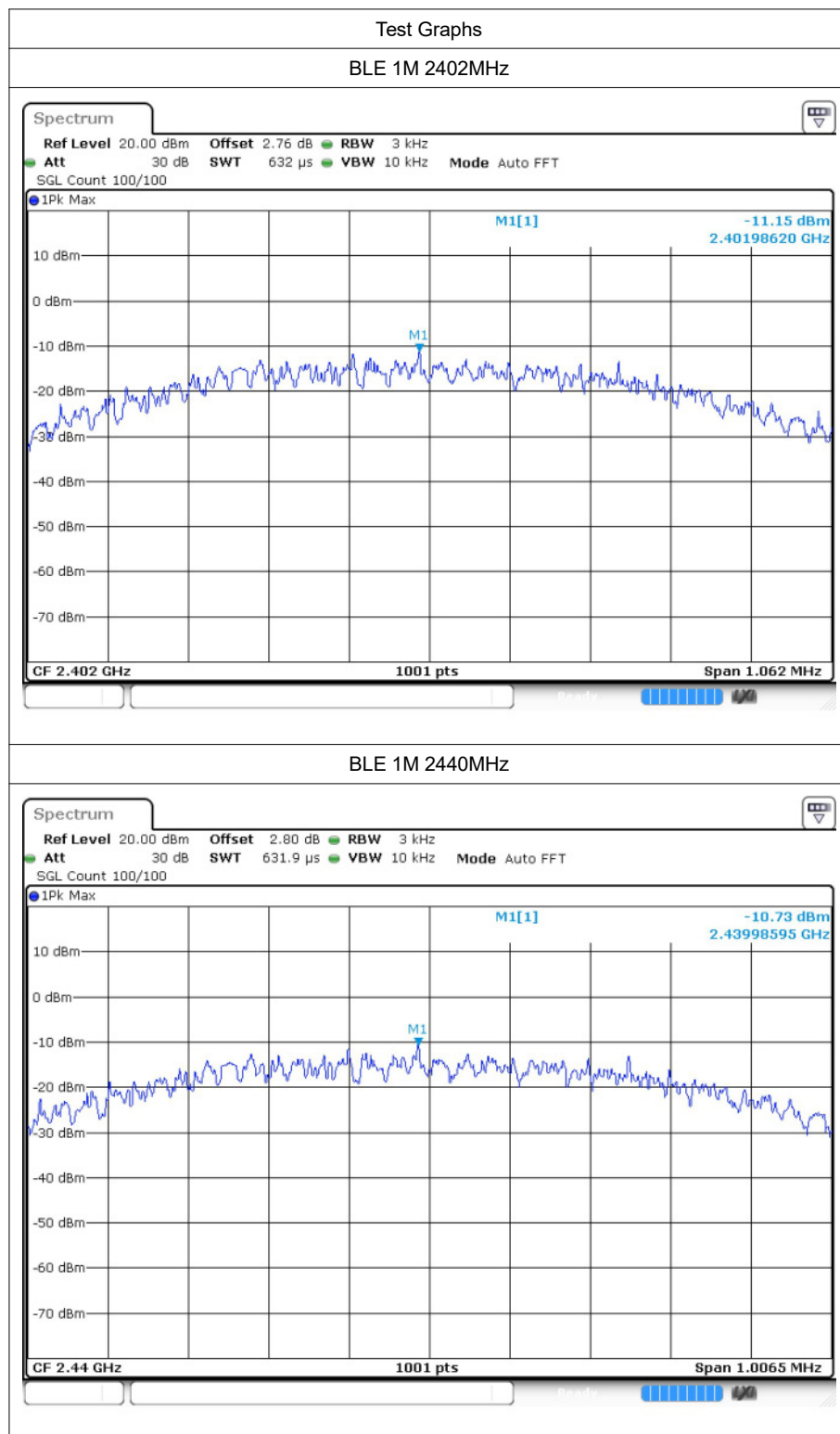


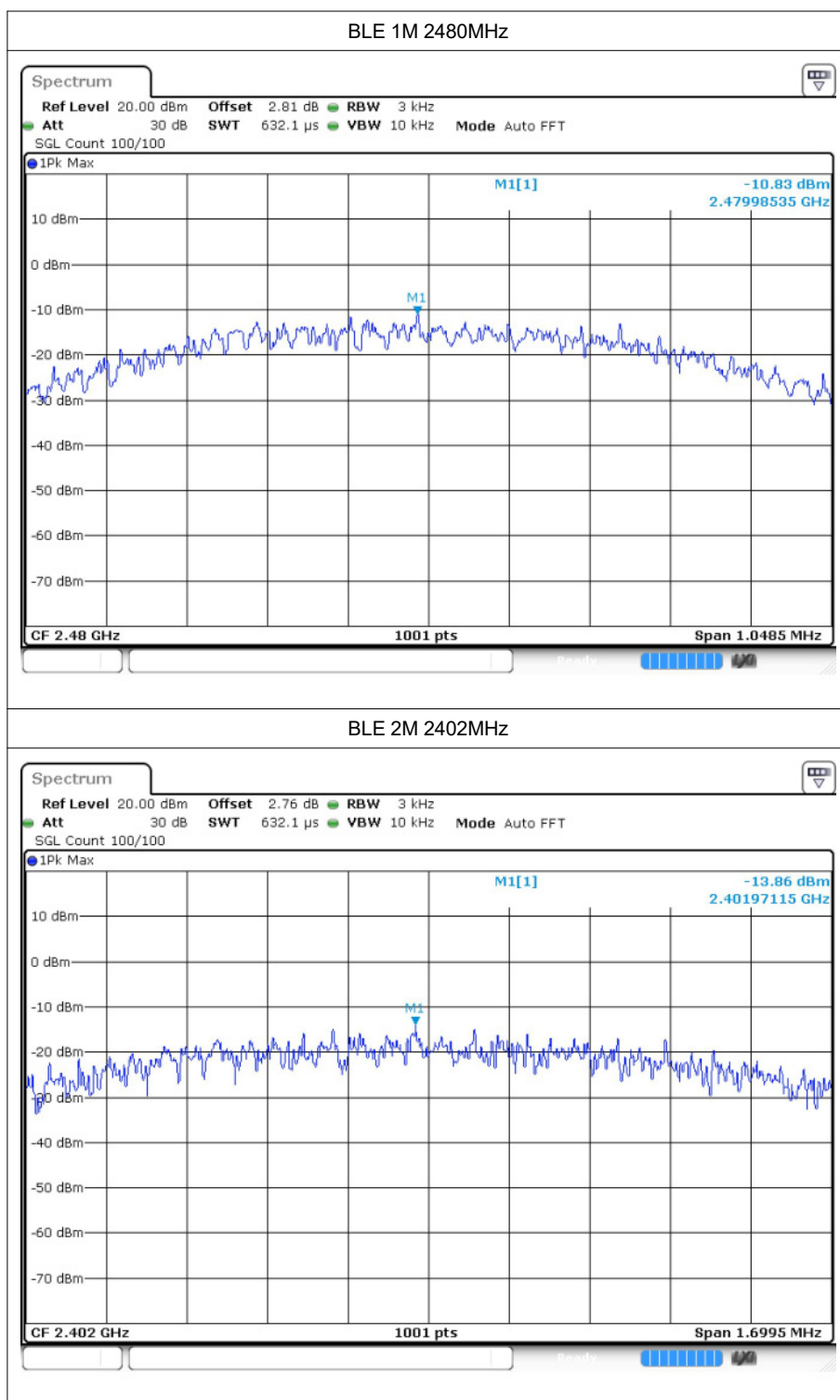
## 4 Maximum Power Spectral Density Level

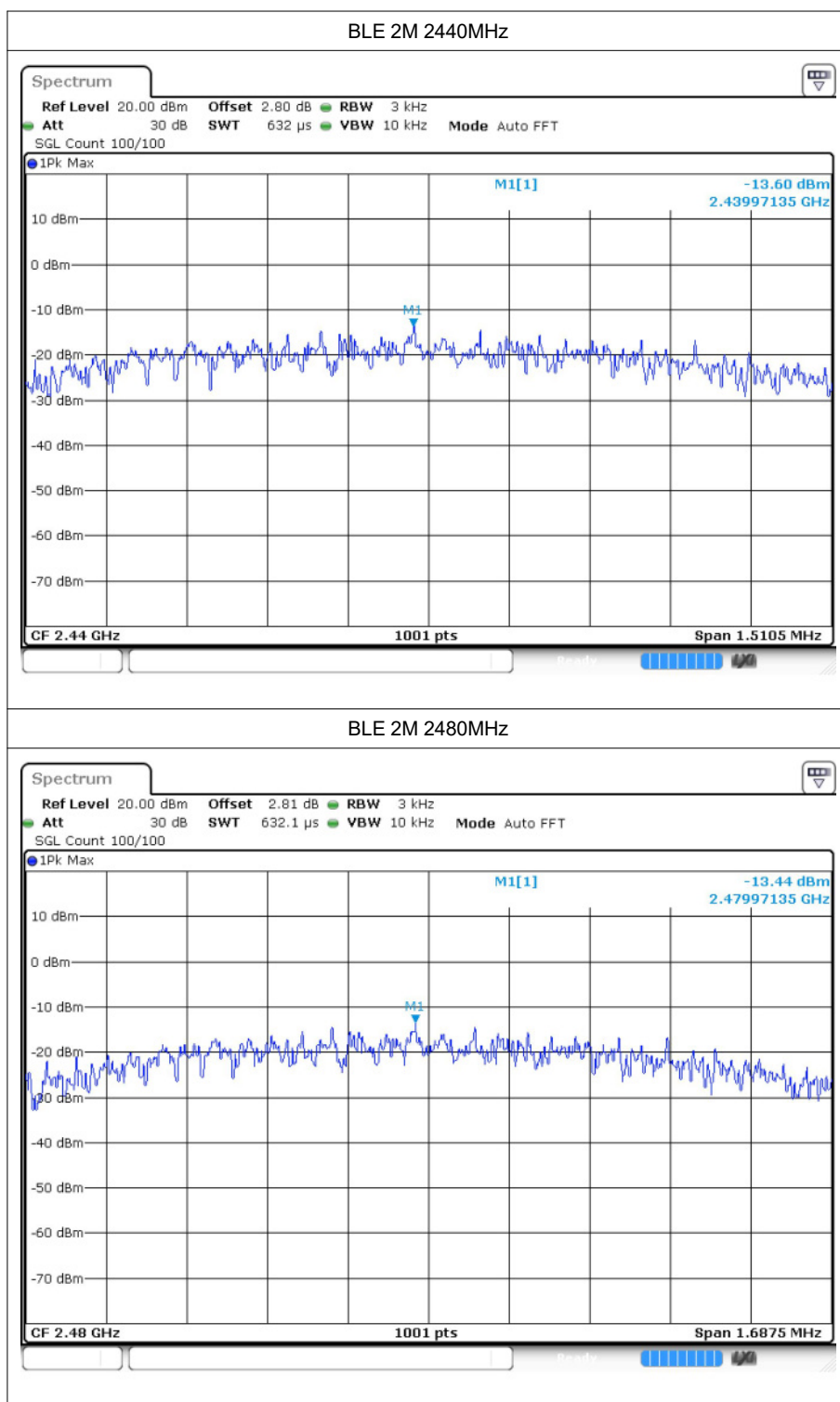
### 4.1 Test Result

| Mode   | Frequency (MHz) | Conducted PSD<br>(dBm/3-100kHz) | Limit<br>(dBm/3kHz) | Verdict |
|--------|-----------------|---------------------------------|---------------------|---------|
| BLE 1M | 2402            | -11.15                          | $\leq 8$            | Pass    |
| BLE 1M | 2440            | -10.73                          | $\leq 8$            | Pass    |
| BLE 1M | 2480            | -10.83                          | $\leq 8$            | Pass    |
| BLE 2M | 2402            | -13.86                          | $\leq 8$            | Pass    |
| BLE 2M | 2440            | -13.6                           | $\leq 8$            | Pass    |
| BLE 2M | 2480            | -13.44                          | $\leq 8$            | Pass    |

## 4.2 Test Graphs







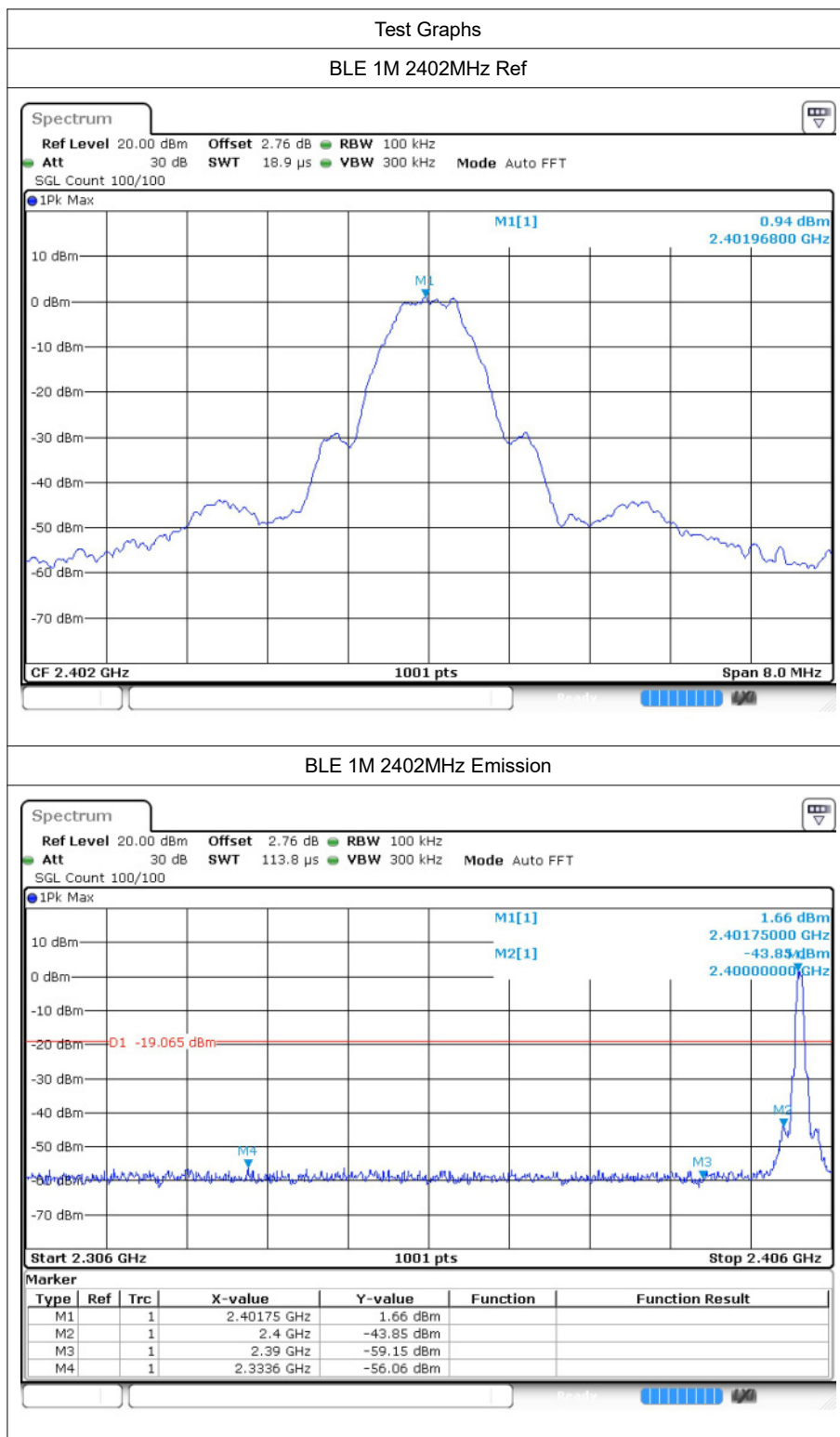


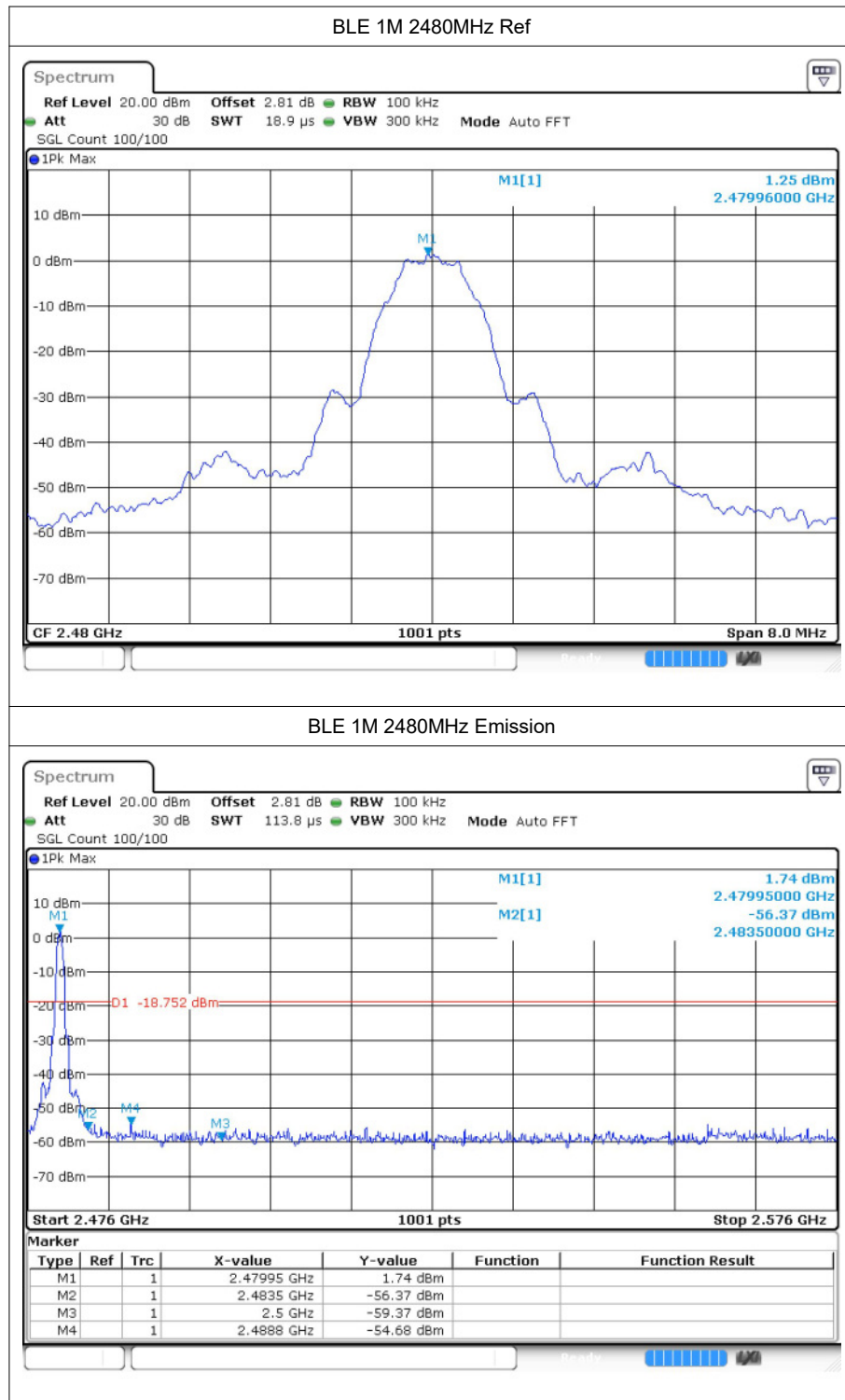
## 5 Band Edge

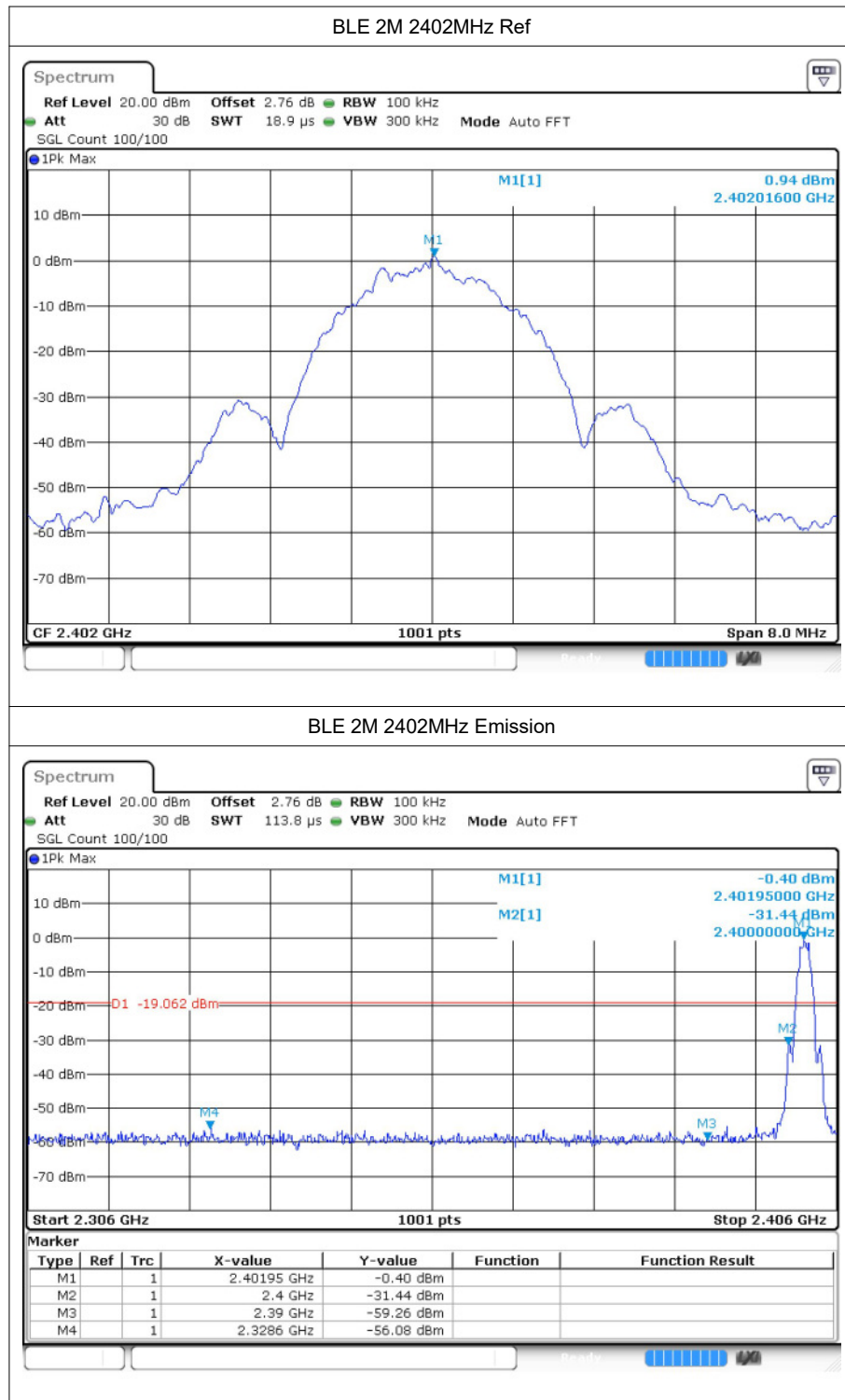
### 5.1 Test Result

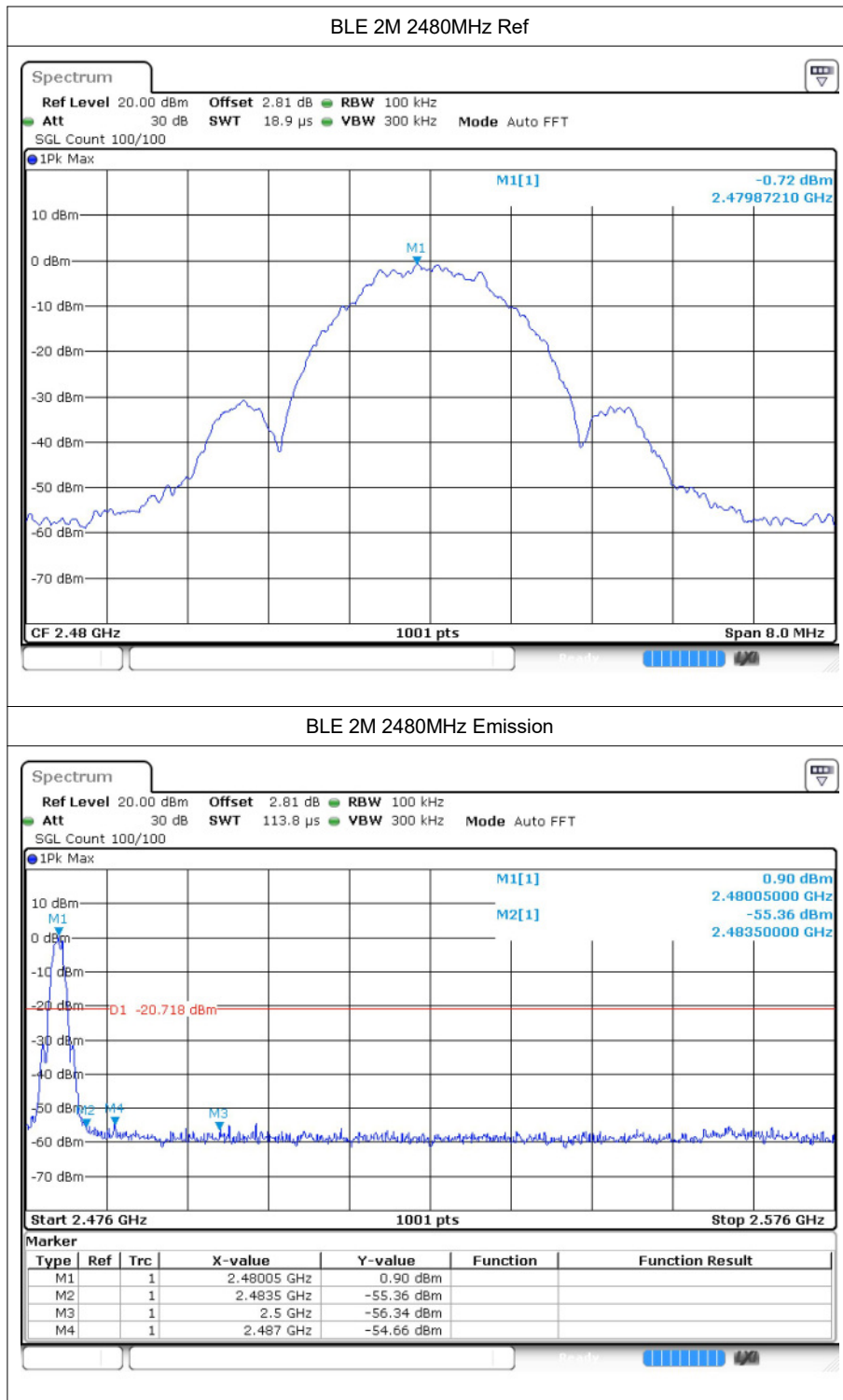
| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -57             | -20         | Pass    |
| BLE 1M | 2480            | -55.92          | -20         | Pass    |
| BLE 2M | 2402            | -57.02          | -20         | Pass    |
| BLE 2M | 2480            | -53.93          | -20         | Pass    |

## 5.2 Test Graphs









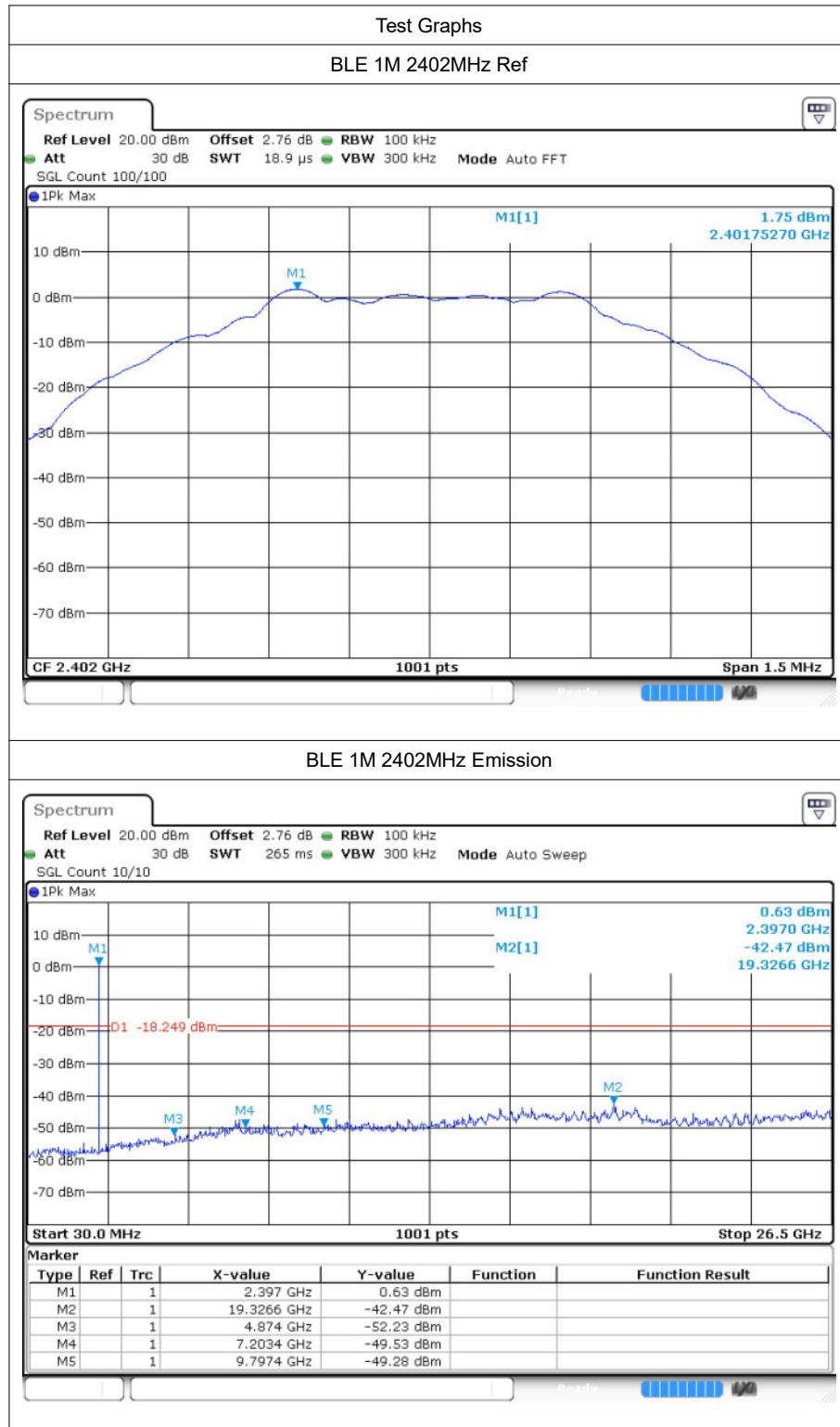


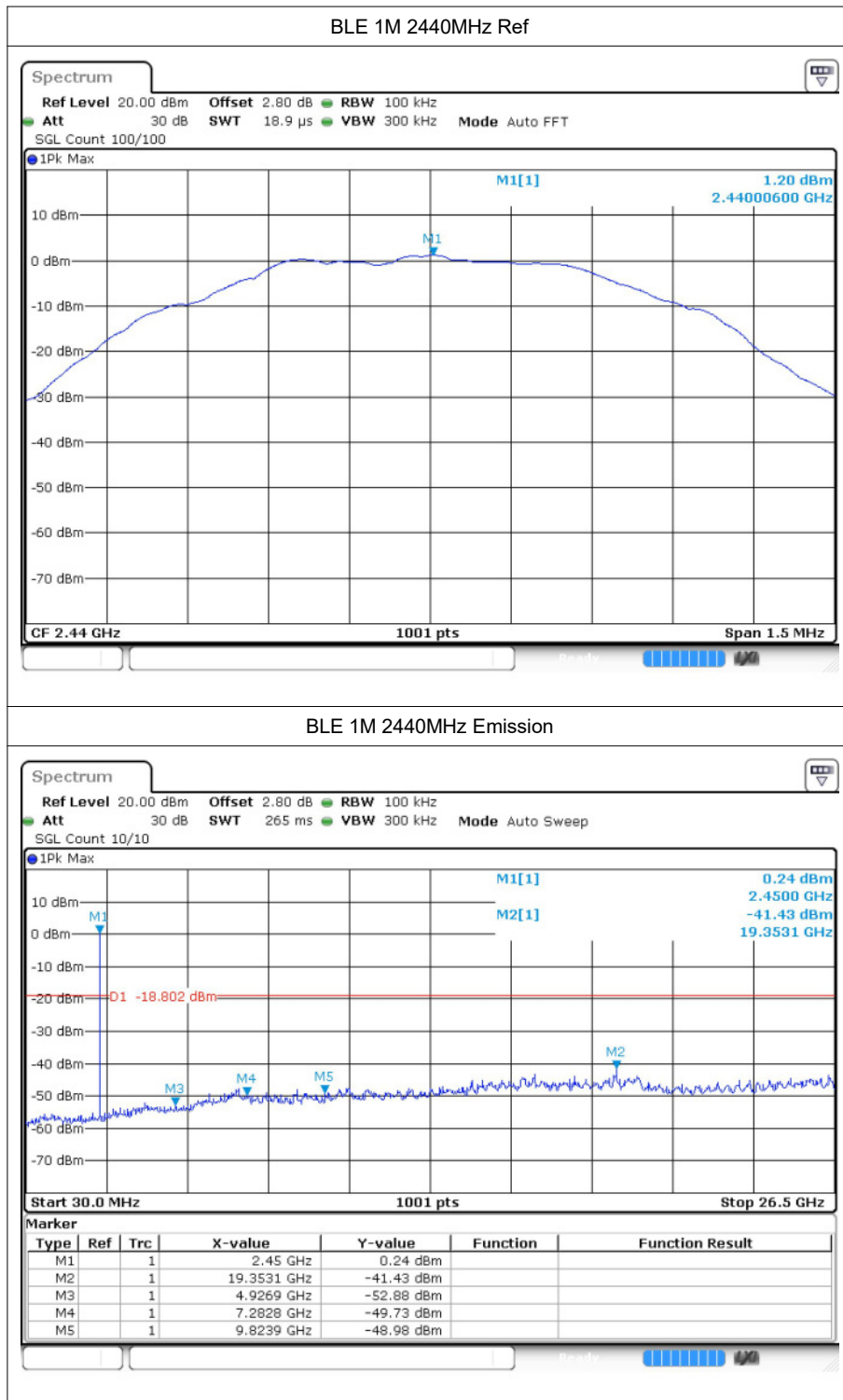
## 6 Conducted RF Spurious Emission

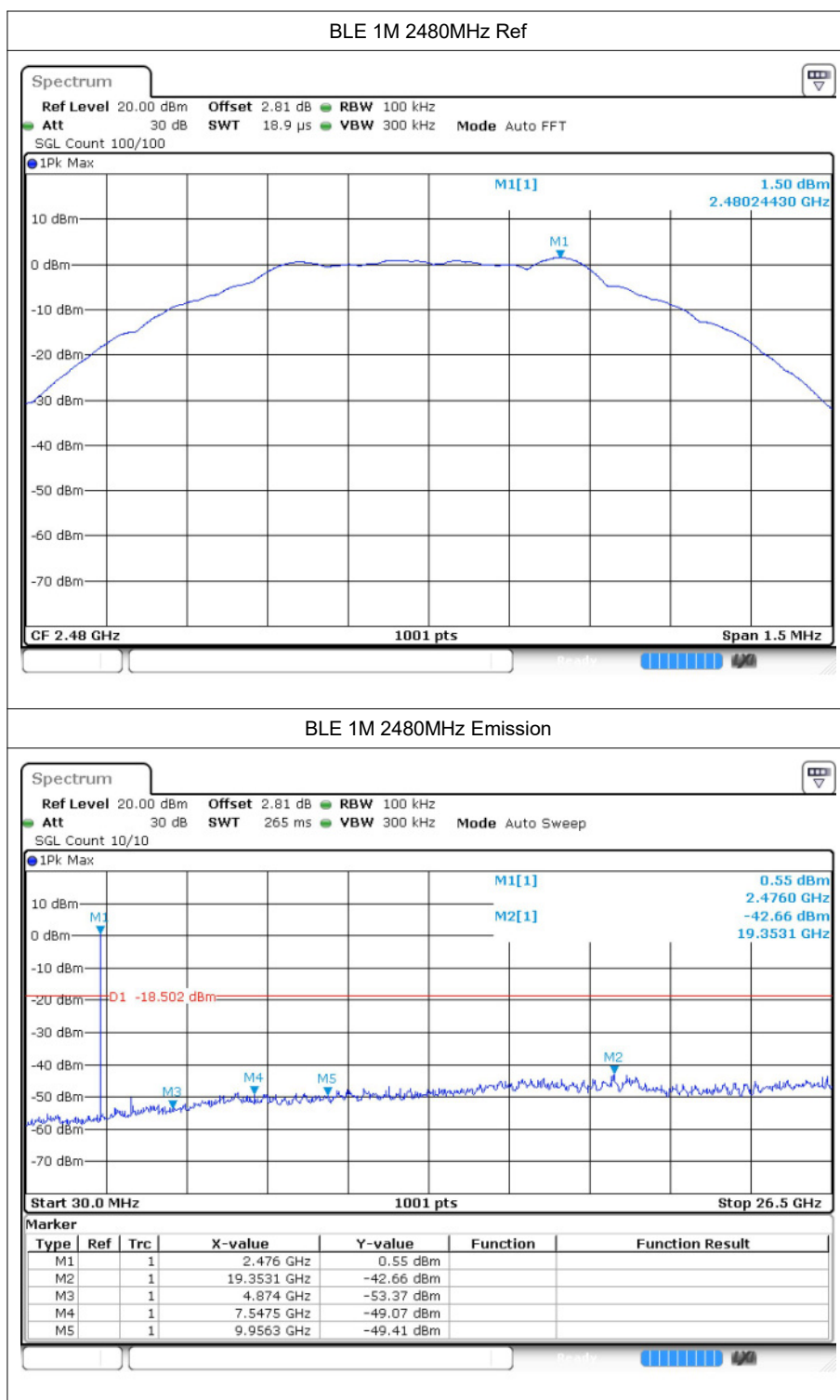
### 6.1 Test Result

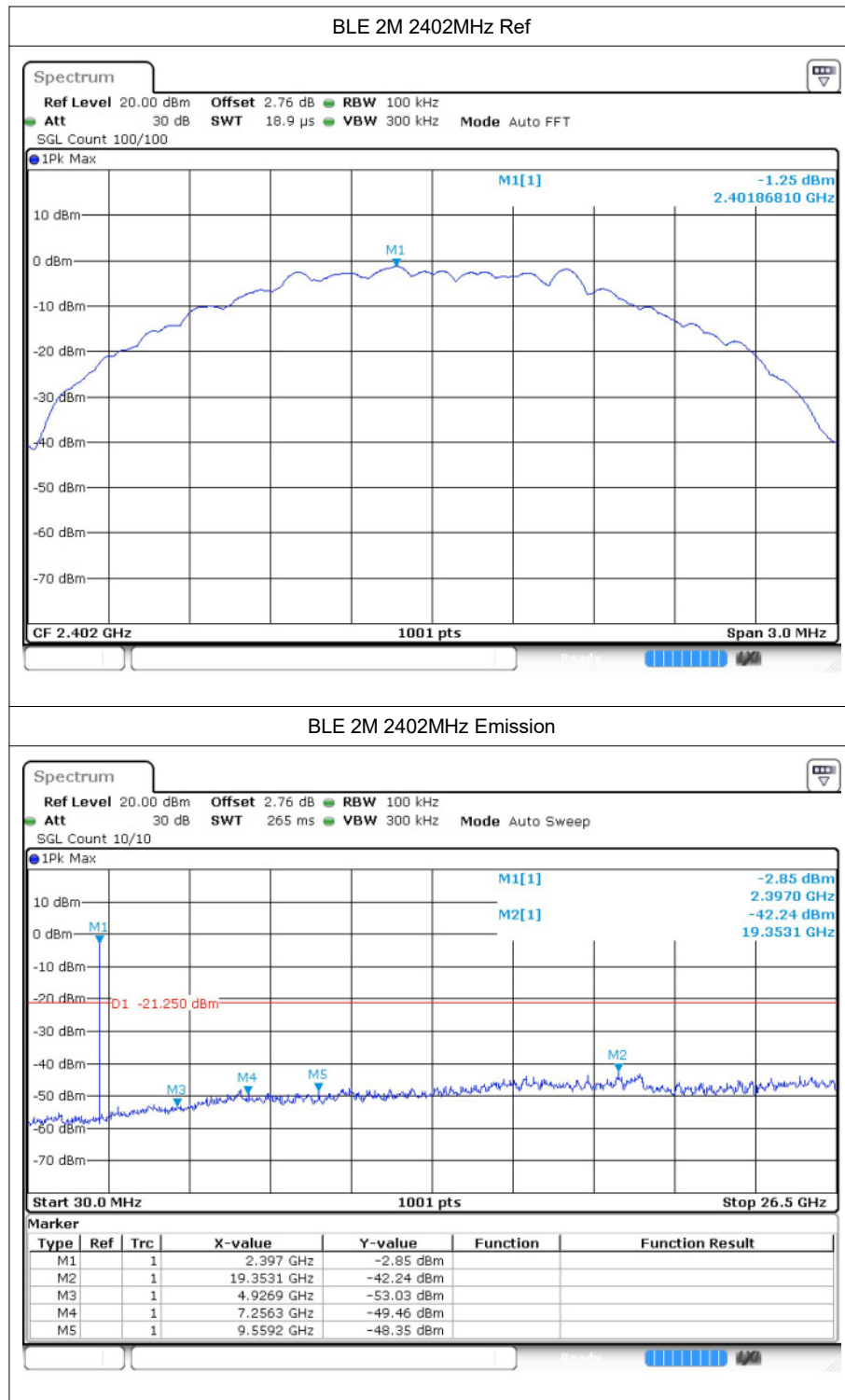
| Mode   | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|--------|-----------------|-----------------|-------------|---------|
| BLE 1M | 2402            | -44.21          | -20         | Pass    |
| BLE 1M | 2440            | -42.62          | -20         | Pass    |
| BLE 1M | 2480            | -44.16          | -20         | Pass    |
| BLE 2M | 2402            | -40.99          | -20         | Pass    |
| BLE 2M | 2440            | -44.4           | -20         | Pass    |
| BLE 2M | 2480            | -42.29          | -20         | Pass    |

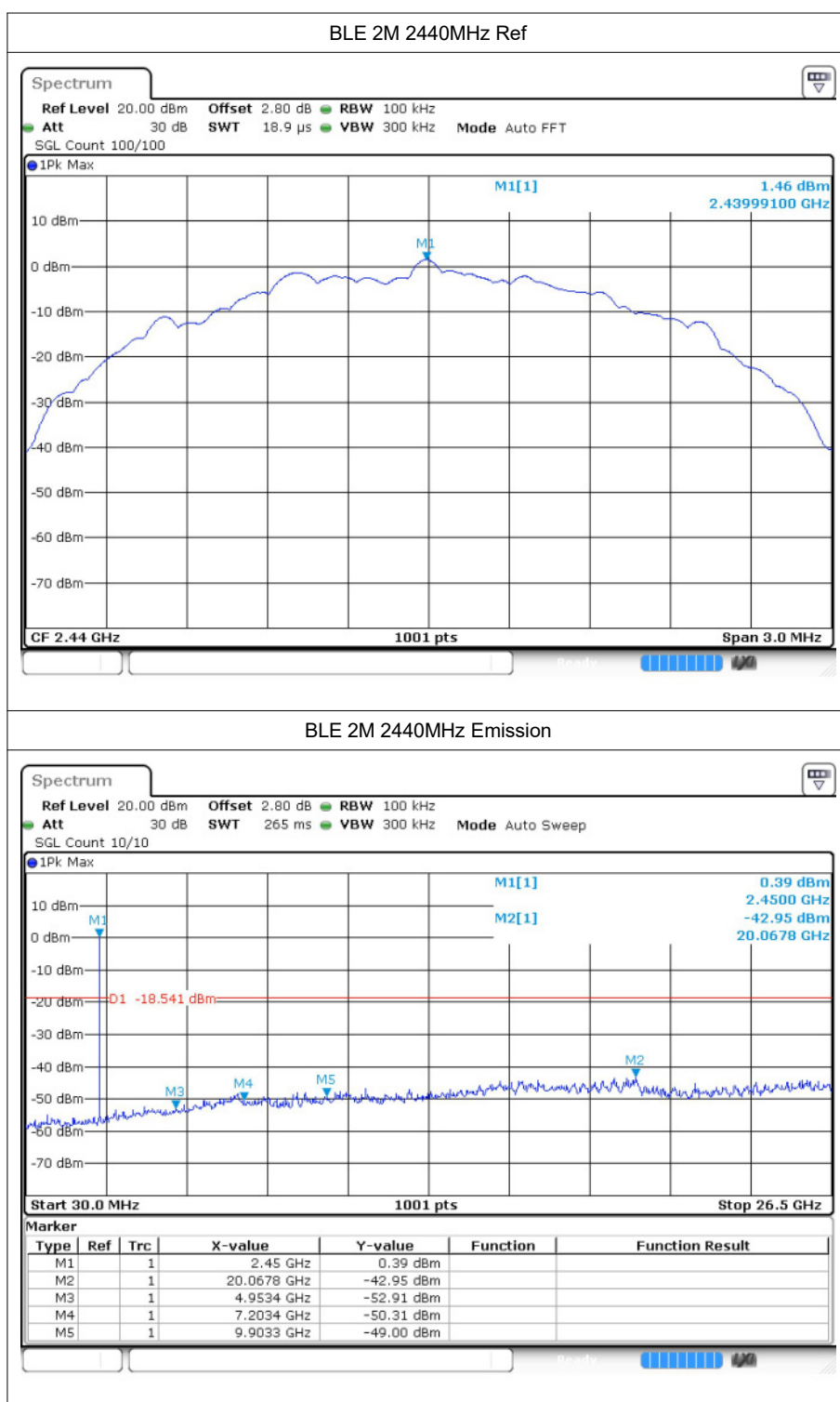
## 6.2 Test Graphs

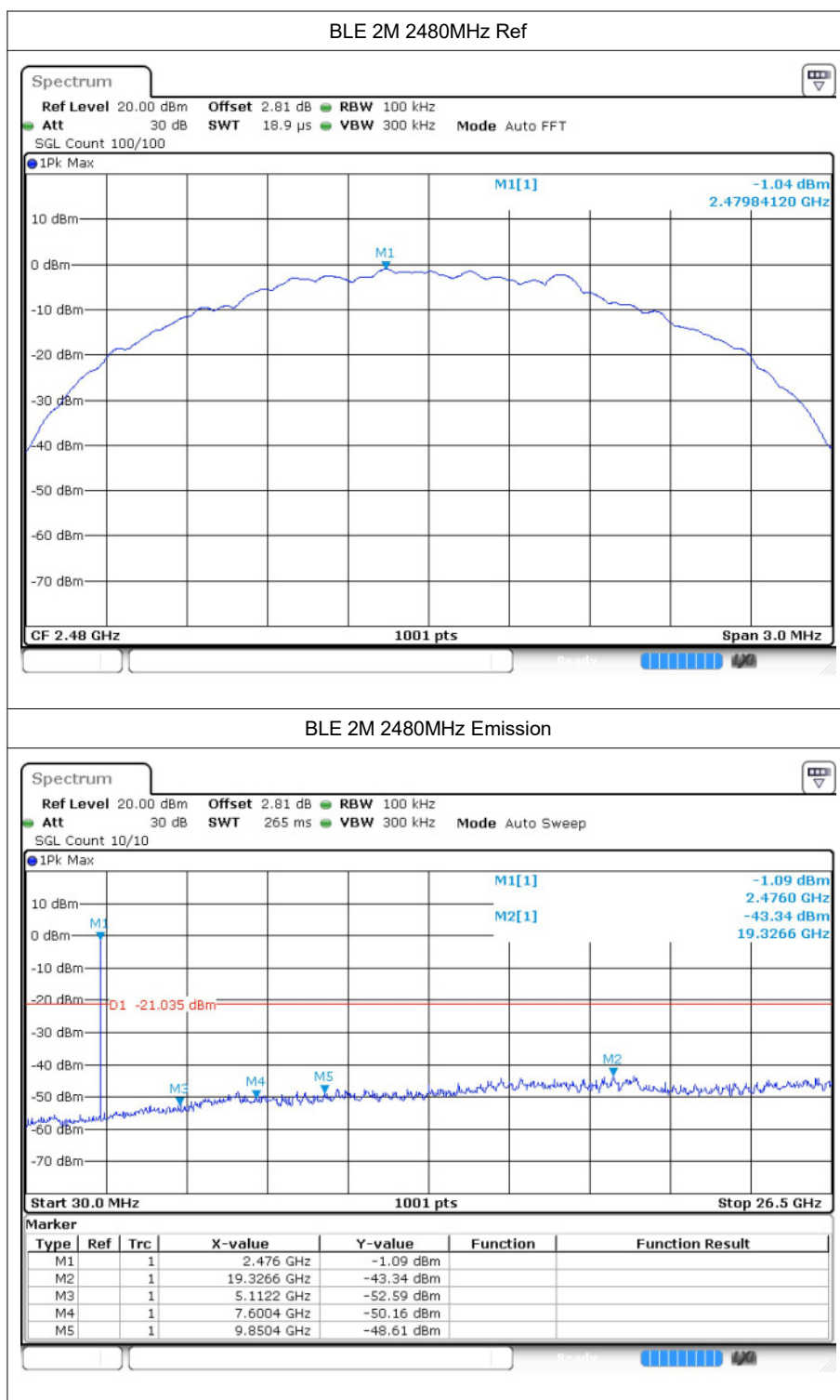












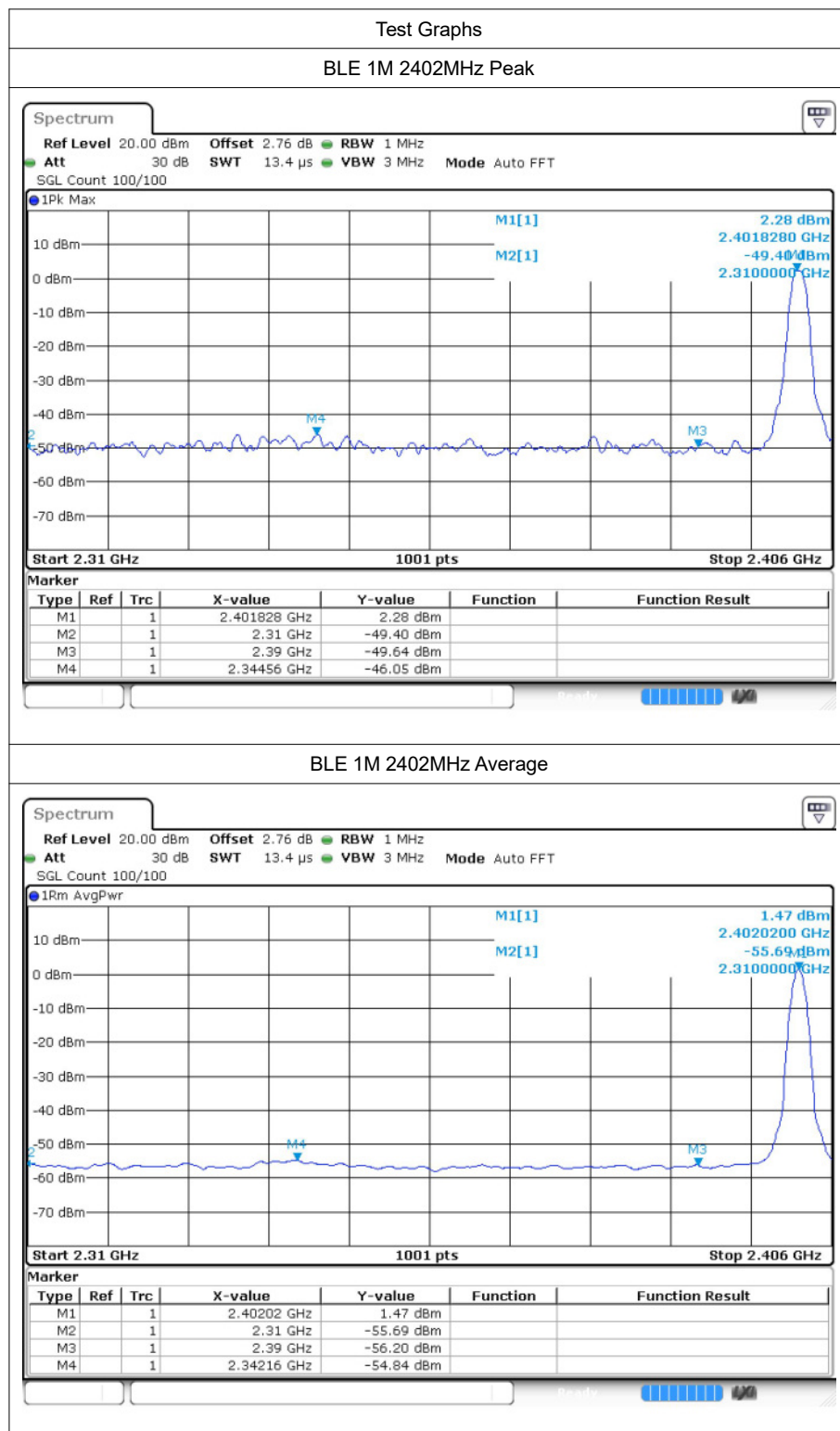


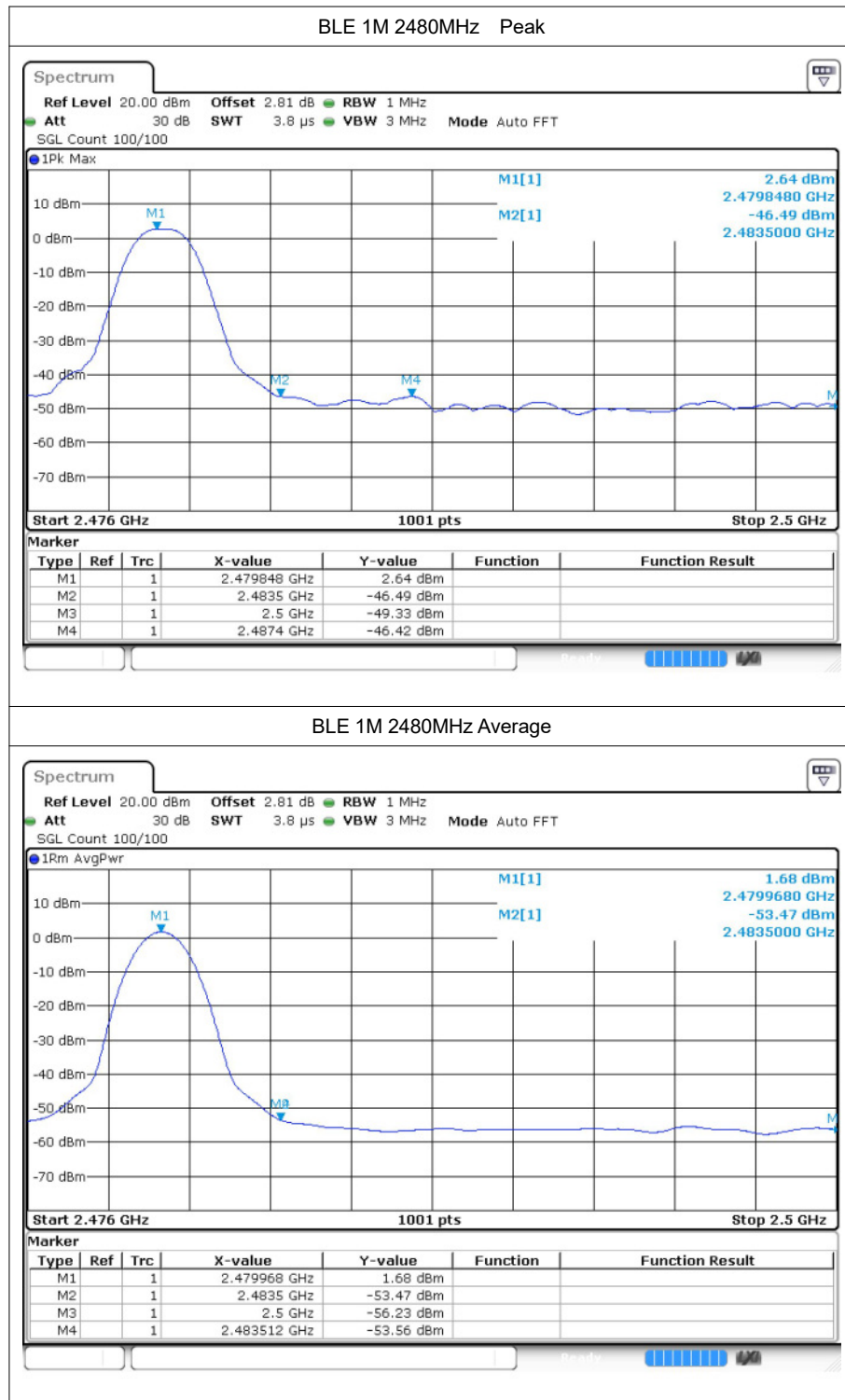
## 7 Restrict Band

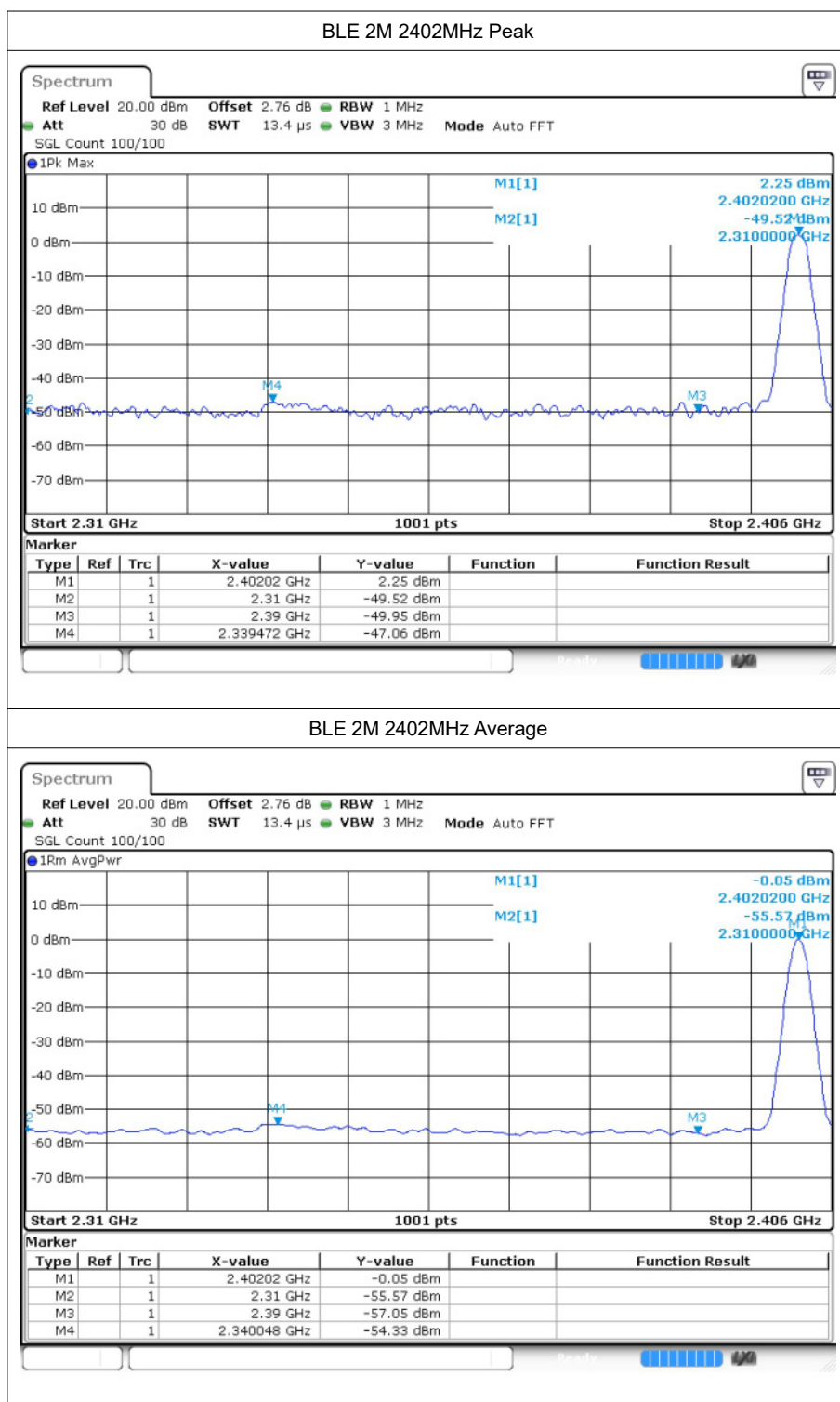
### 7.1 Test Result

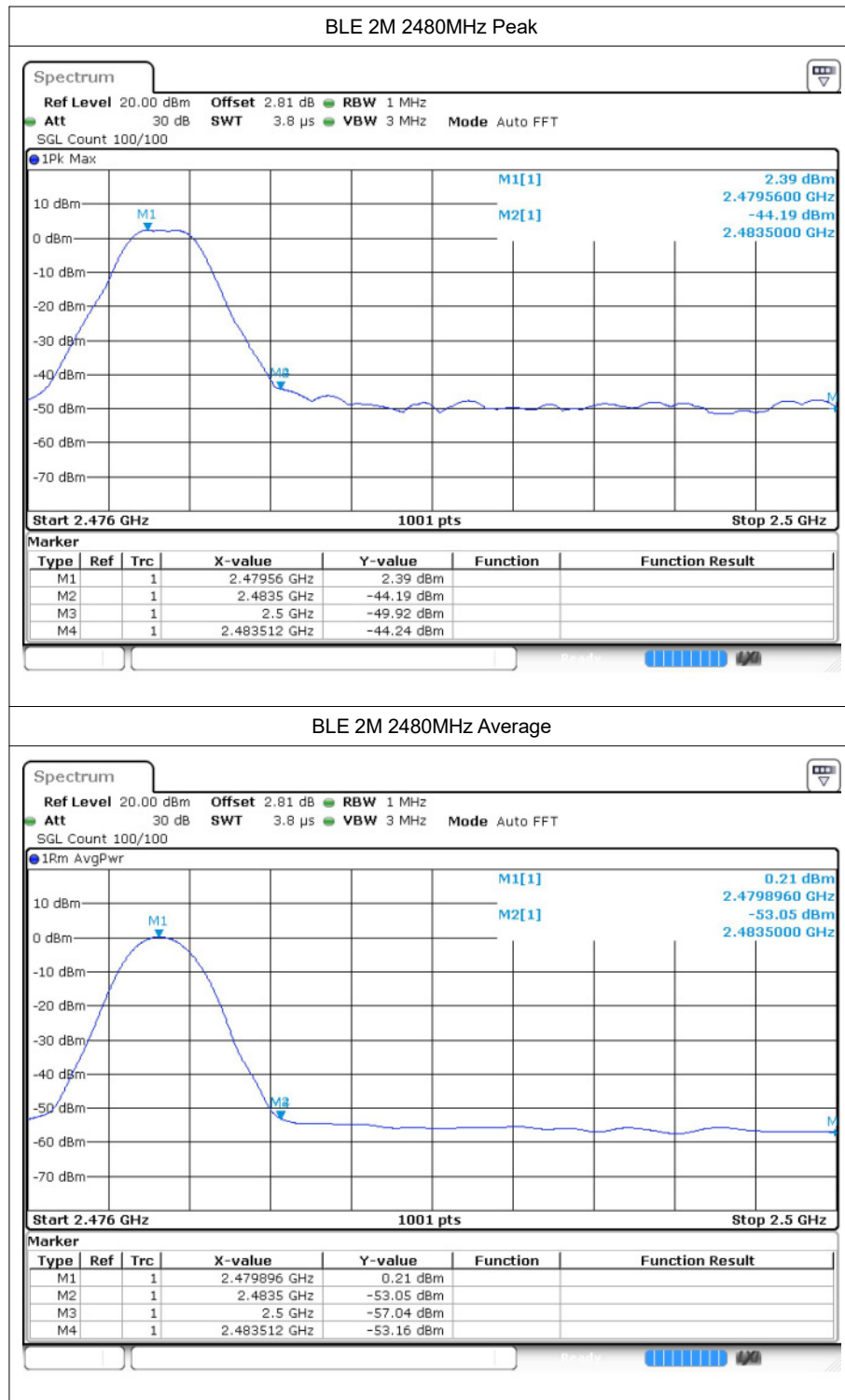
| Mode   | Frequency (MHz) | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|--------|-----------------|-----------------|-------------|------------|-------------|------------|----------|----------------|---------|
| BLE 1M | 2402            | 2310            | -49.4       | 2.656      | -           | 48.486     | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2310            | -55.69      | 2.656      | 0.1         | 42.296     | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2344.56         | -46.04      | 2.656      | -           | 51.846     | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2342.16         | -54.84      | 2.656      | 0.1         | 43.146     | Average  | 54             | Pass    |
| BLE 1M | 2402            | 2390            | -49.64      | 2.656      | -           | 48.246     | Peak     | 74             | Pass    |
| BLE 1M | 2402            | 2390            | -56.2       | 2.656      | 0.1         | 41.786     | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2483.5          | -46.49      | 2.656      | -           | 51.396     | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.5          | -53.47      | 2.656      | 0.11        | 44.526     | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2487.4          | -46.41      | 2.656      | -           | 51.476     | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2483.512        | -53.56      | 2.656      | 0.11        | 44.436     | Average  | 54             | Pass    |
| BLE 1M | 2480            | 2500            | -49.33      | 2.656      | -           | 48.556     | Peak     | 74             | Pass    |
| BLE 1M | 2480            | 2500            | -56.23      | 2.656      | 0.11        | 41.766     | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2310            | -49.52      | 2.656      | -           | 48.366     | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2310            | -55.57      | 2.656      | 0.21        | 42.526     | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2339.472        | -47.06      | 2.656      | -           | 50.826     | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2340.048        | -54.32      | 2.656      | 0.21        | 43.776     | Average  | 54             | Pass    |
| BLE 2M | 2402            | 2390            | -49.95      | 2.656      | -           | 47.936     | Peak     | 74             | Pass    |
| BLE 2M | 2402            | 2390            | -57.05      | 2.656      | 0.21        | 41.046     | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2483.5          | -44.19      | 2.656      | -           | 53.696     | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2483.5          | -53.05      | 2.656      | 0.21        | 45.046     | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2483.512        | -44.24      | 2.656      | -           | 53.646     | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2483.512        | -53.16      | 2.656      | 0.21        | 44.936     | Average  | 54             | Pass    |
| BLE 2M | 2480            | 2500            | -49.92      | 2.656      | -           | 47.966     | Peak     | 74             | Pass    |
| BLE 2M | 2480            | 2500            | -57.04      | 2.656      | 0.21        | 41.056     | Average  | 54             | Pass    |

## 7.2 Test Graphs









---The End---