



## Appendix C

### RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: LED PROJECTOR

Trade Mark: OSCAL

Test Model: PV800

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 25.3° C     |
| Relative Humidity: | 52.4%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Emiya lin   |
| Supervised by:     | Simba Huang |



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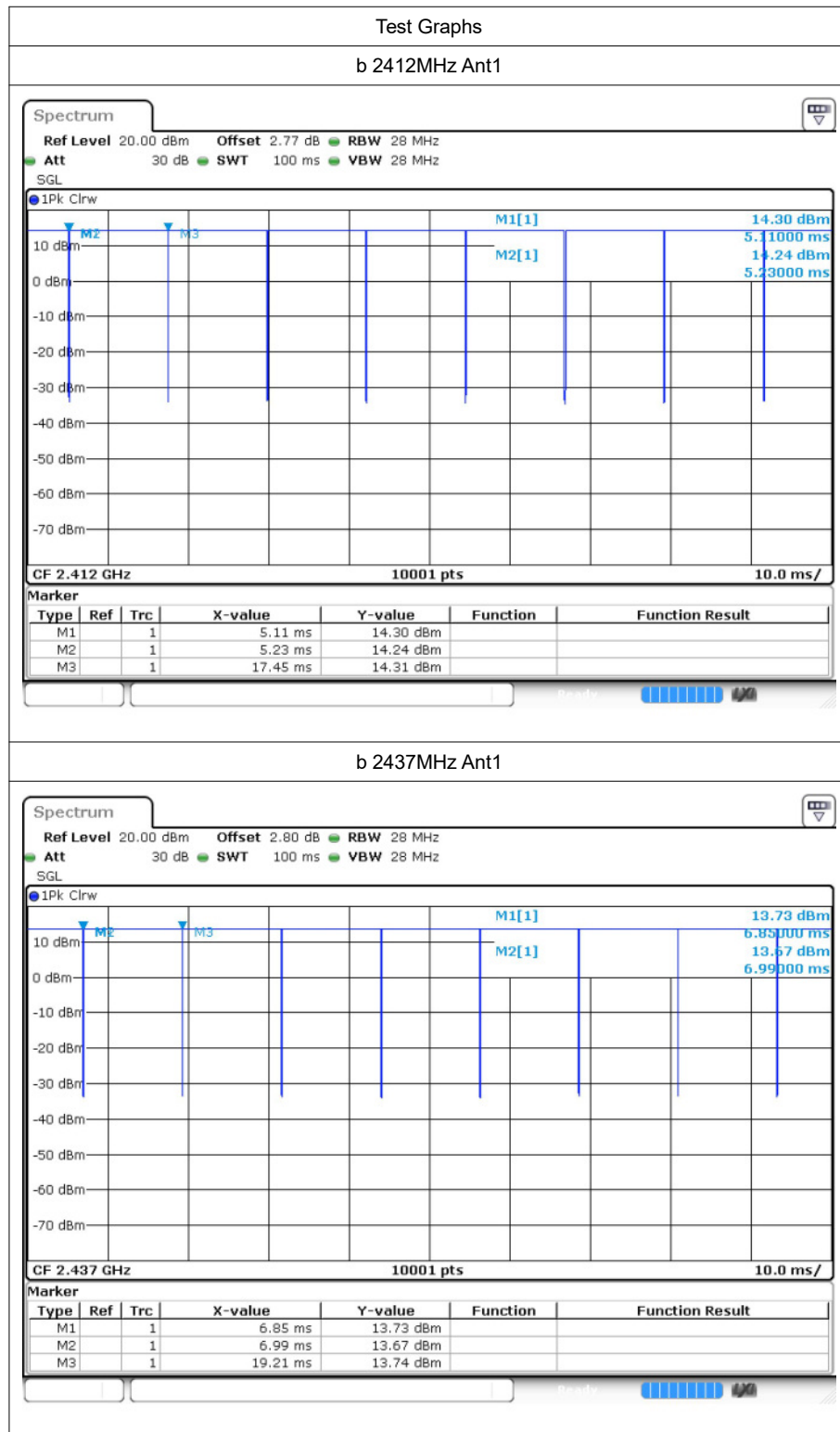


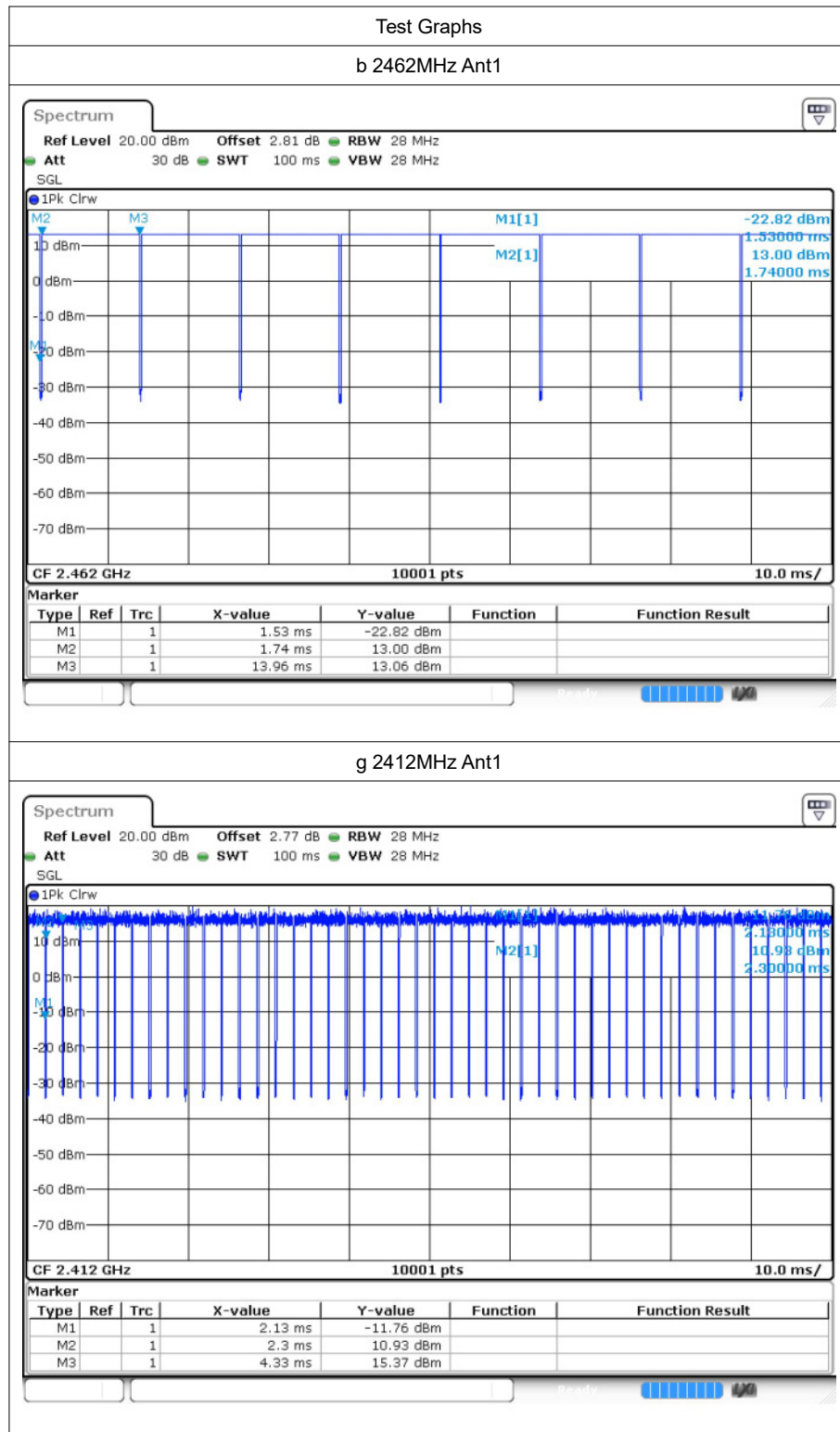
# 1 Duty Cycle

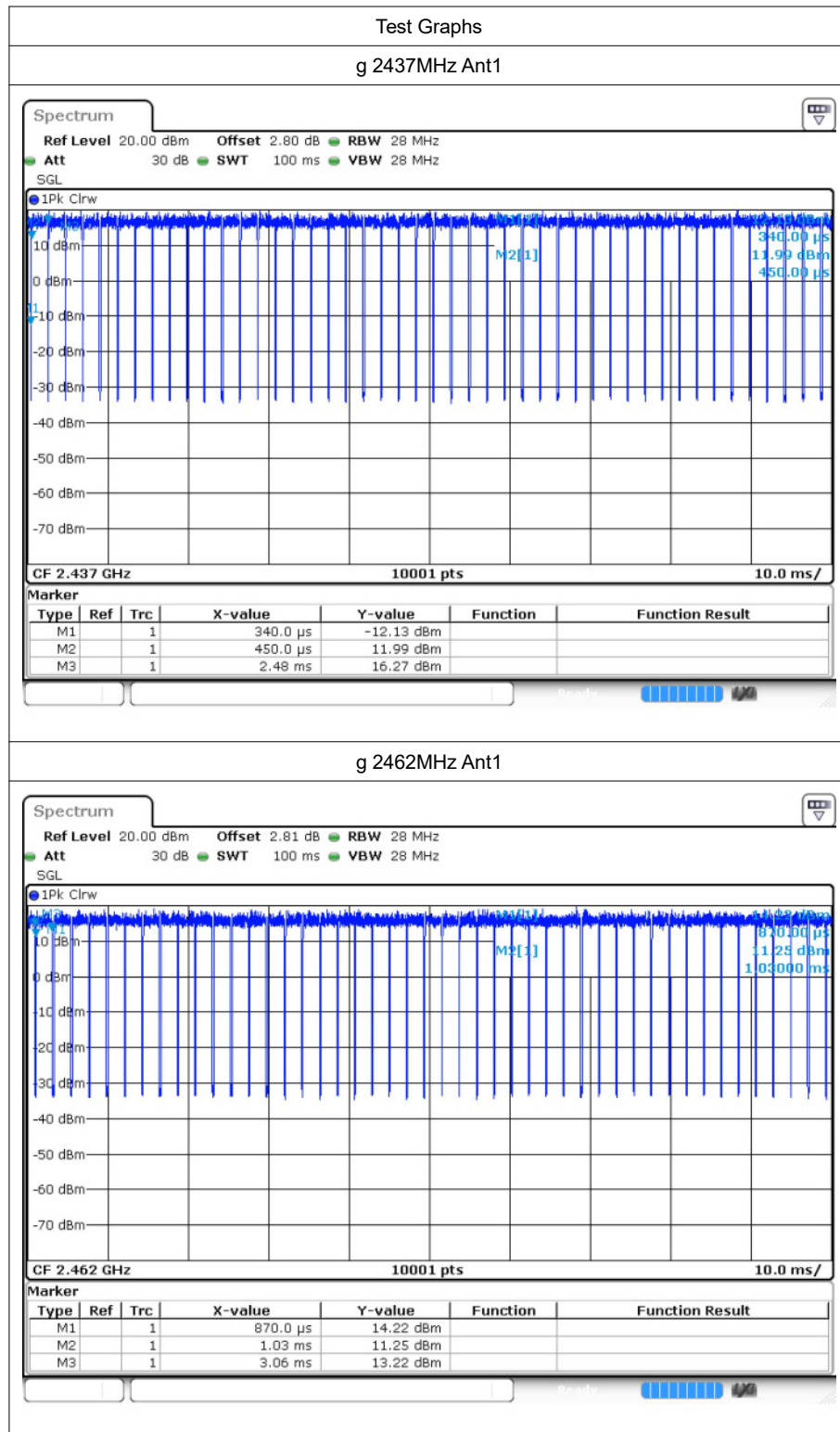
## 1.1 Test Result

| Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|------|-----------------|---------|----------------|-------------------|-----------|
| b    | 2412            | Ant1    | 99.14          | 0.04              | 0.08      |
| b    | 2437            | Ant1    | 99.24          | 0.03              | 0.08      |
| b    | 2462            | Ant1    | 98.36          | 0.07              | 0.08      |
| g    | 2412            | Ant1    | 93.28          | 0.3               | 0.49      |
| g    | 2437            | Ant1    | 93.45          | 0.29              | 0.49      |
| g    | 2462            | Ant1    | 93.48          | 0.29              | 0.49      |
| n20  | 2412            | Ant1    | 95.19          | 0.21              | 0.53      |
| n20  | 2437            | Ant1    | 92.06          | 0.36              | 0.53      |
| n20  | 2462            | Ant1    | 92.27          | 0.35              | 0.53      |
| n40  | 2422            | Ant1    | 85.27          | 0.69              | 1.06      |
| n40  | 2437            | Ant1    | 85.56          | 0.68              | 1.06      |
| n40  | 2452            | Ant1    | 85.84          | 0.66              | 1.08      |
| ax20 | 2412            | Ant1    | 93.01          | 0.31              | 0.68      |
| ax20 | 2437            | Ant1    | 90.1           | 0.45              | 0.68      |
| ax20 | 2462            | Ant1    | 93.71          | 0.28              | 0.68      |
| ax40 | 2422            | Ant1    | 83.58          | 0.78              | 1.32      |
| ax40 | 2437            | Ant1    | 83.13          | 0.8               | 1.32      |
| ax40 | 2452            | Ant1    | 82.66          | 0.83              | 1.32      |

## 1.2 Test Graphs

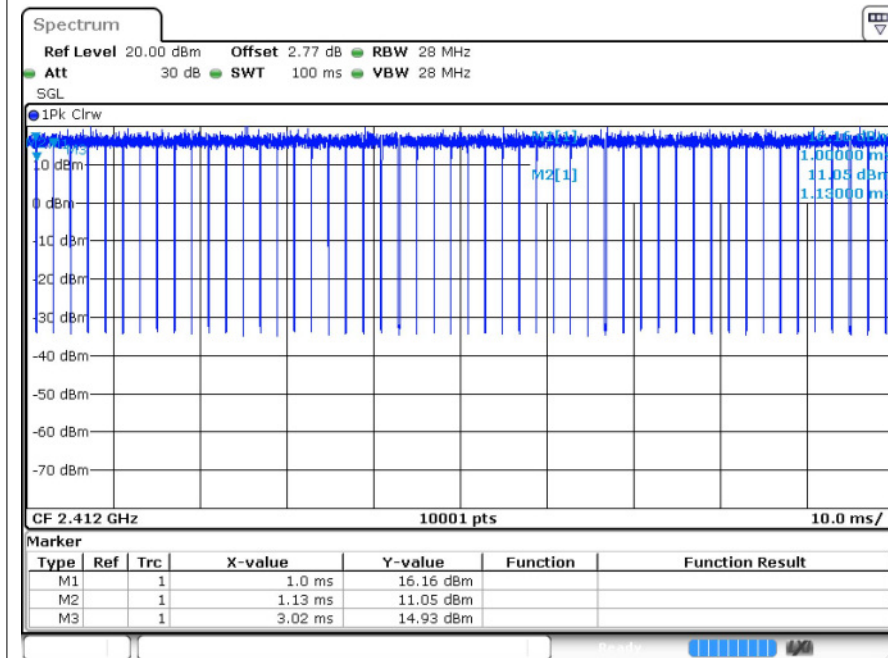




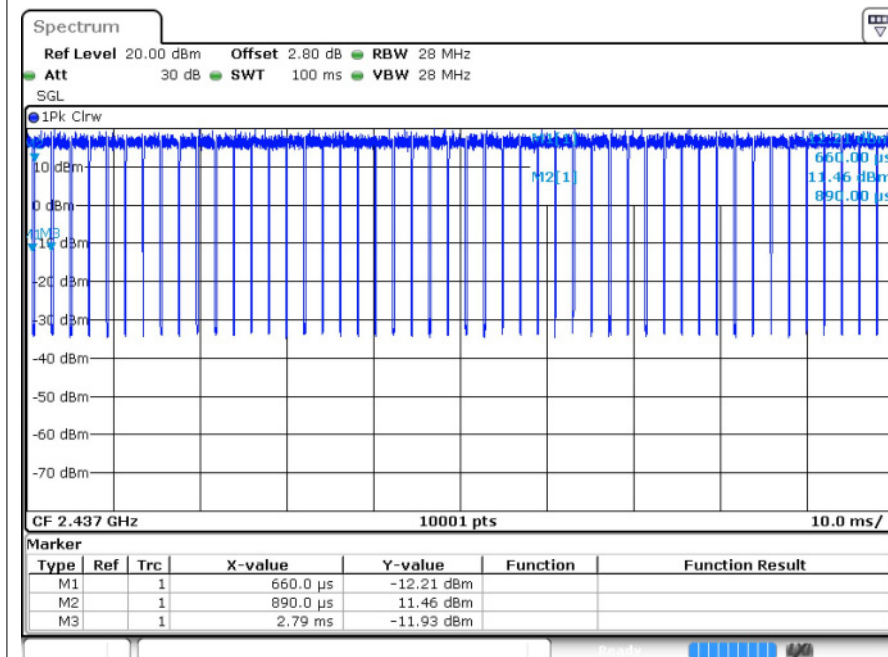


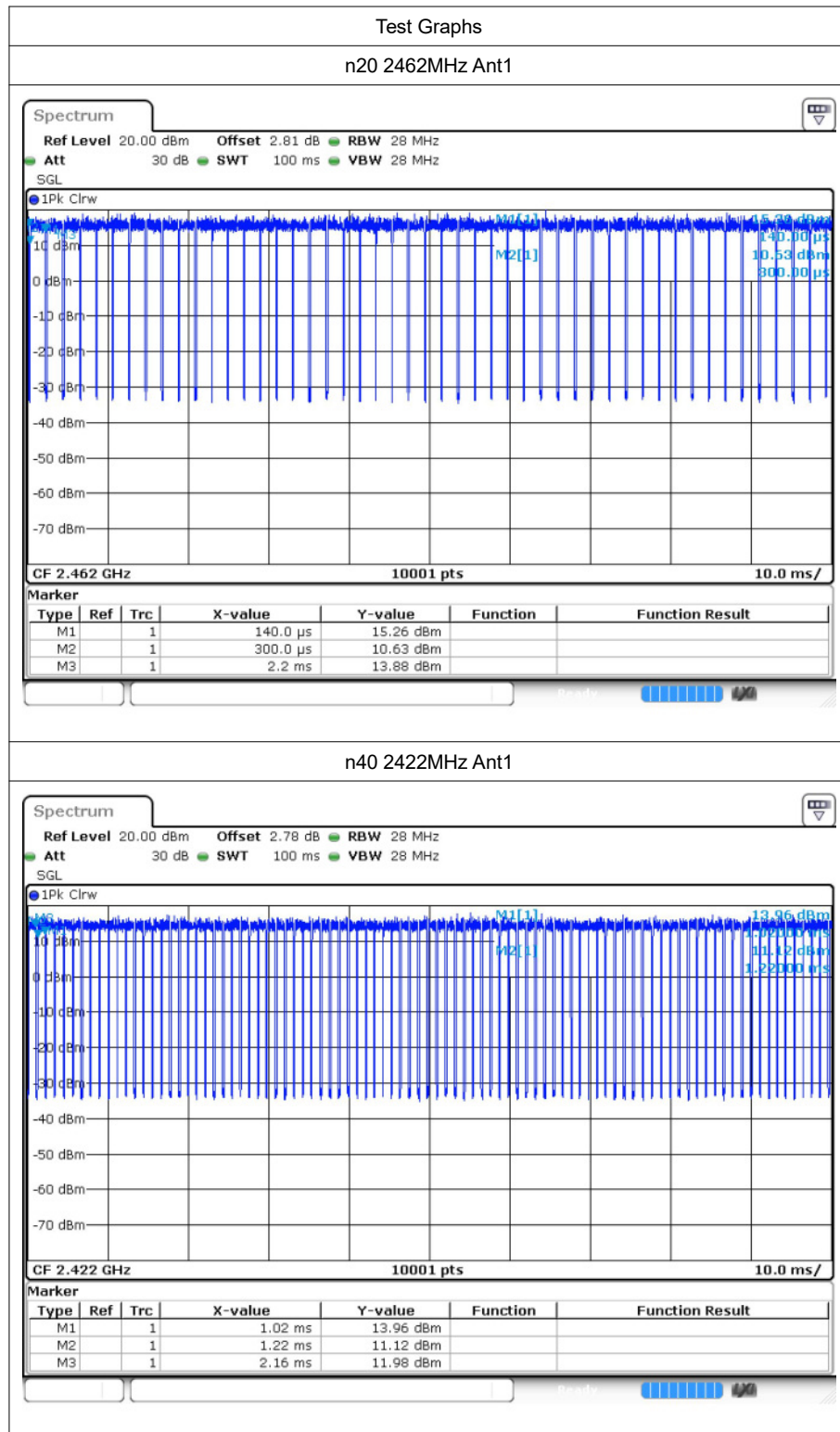
## Test Graphs

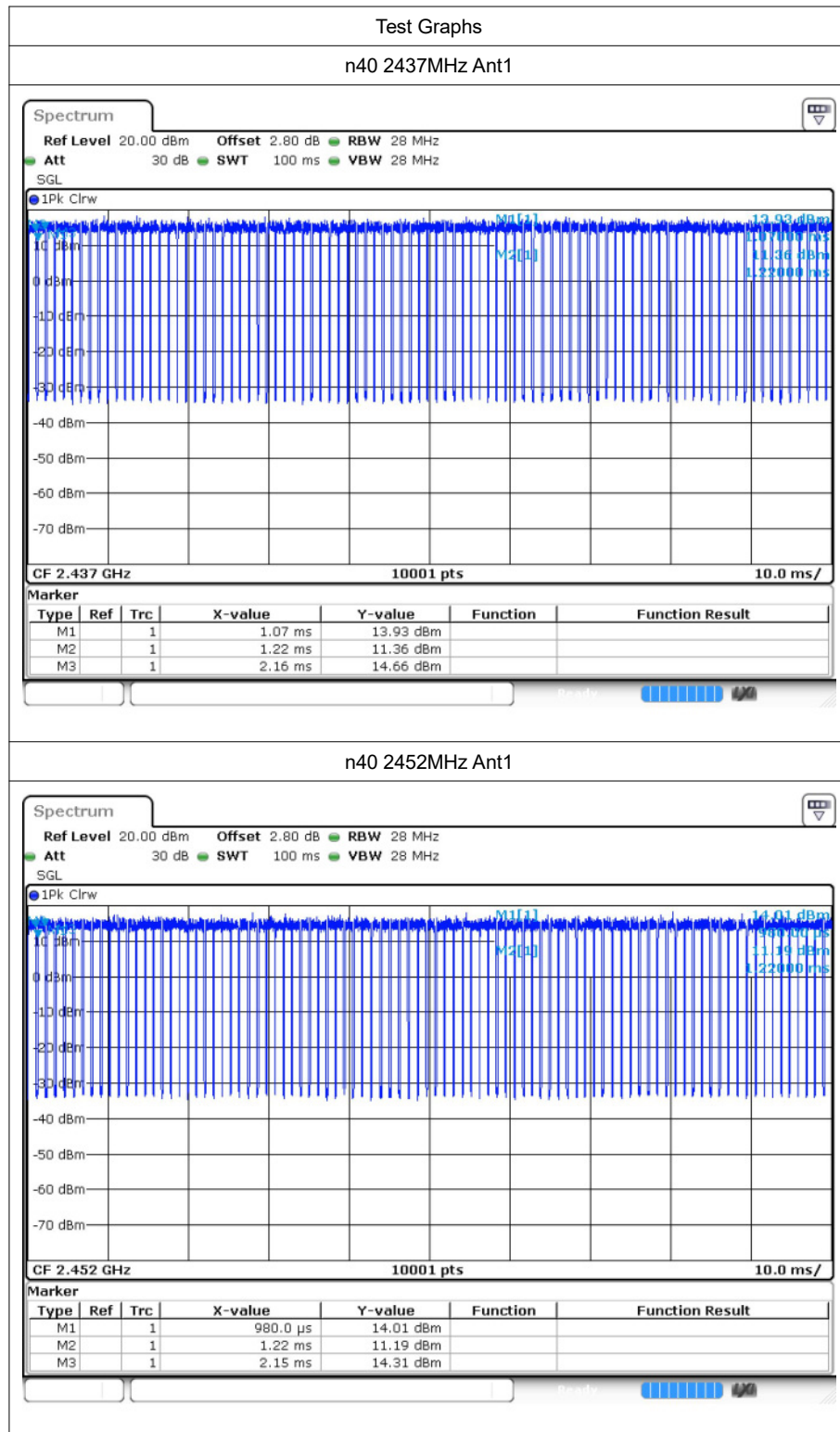
## n20 2412MHz Ant1

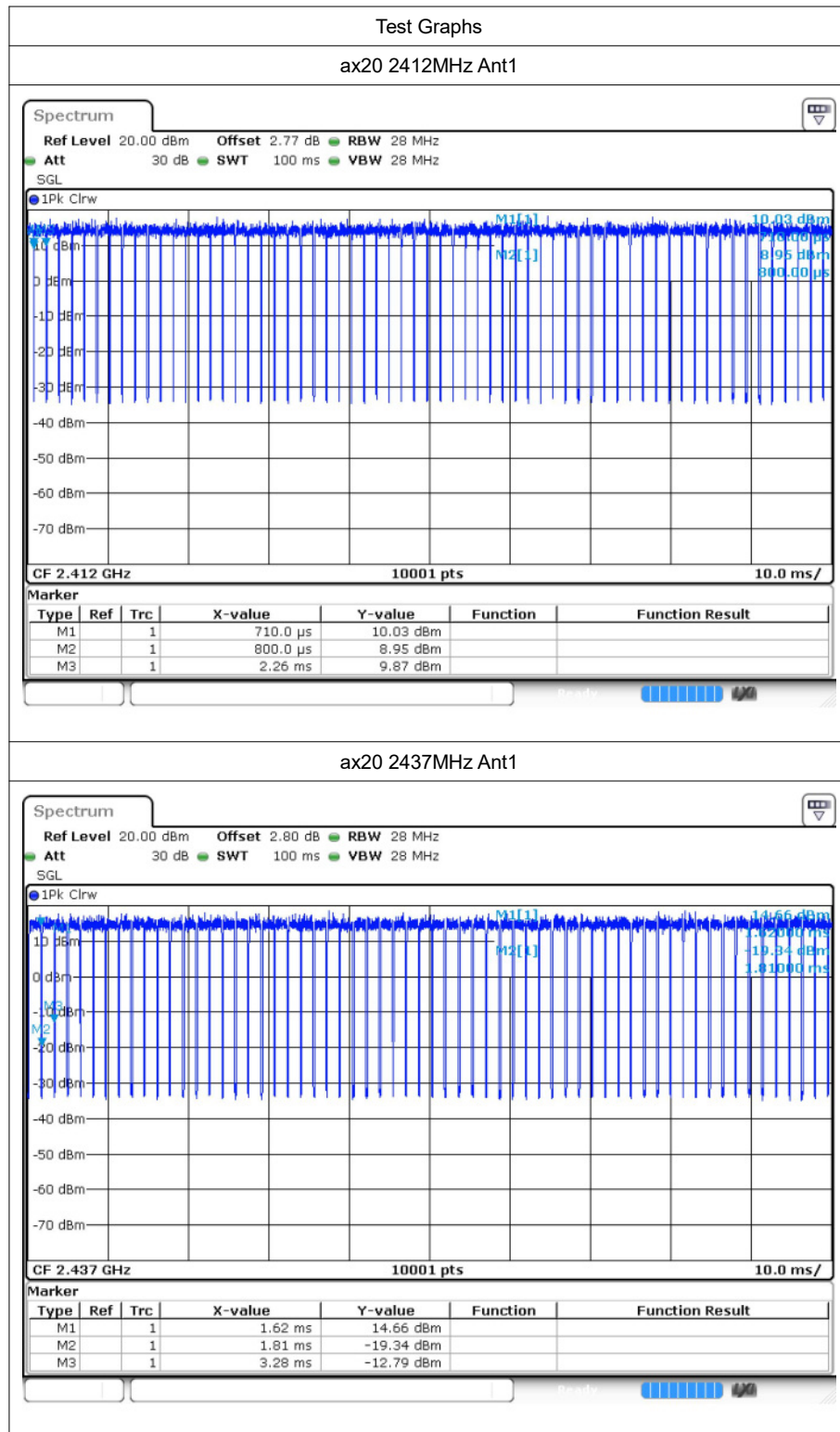


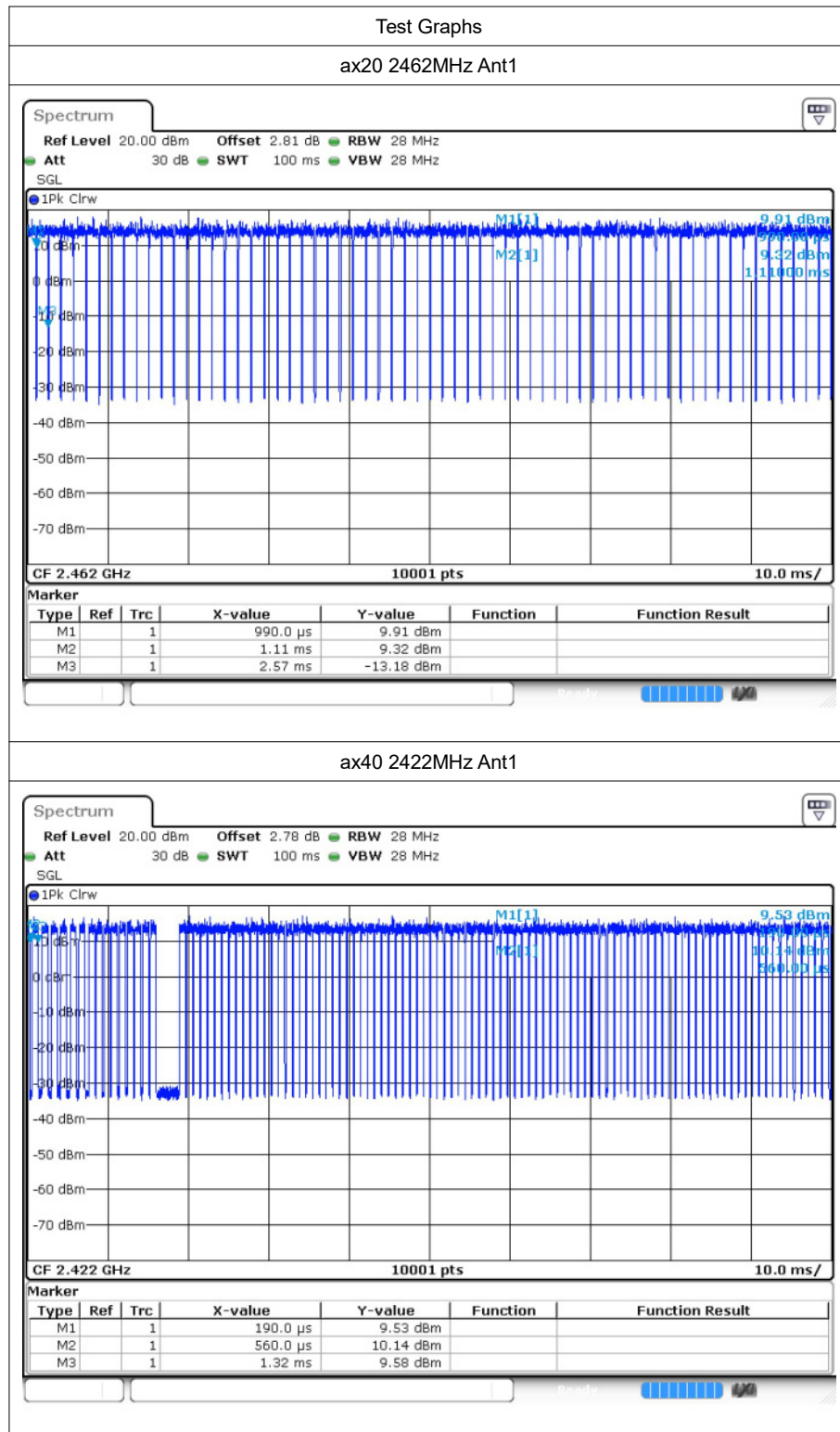
## n20 2437MHz Ant1

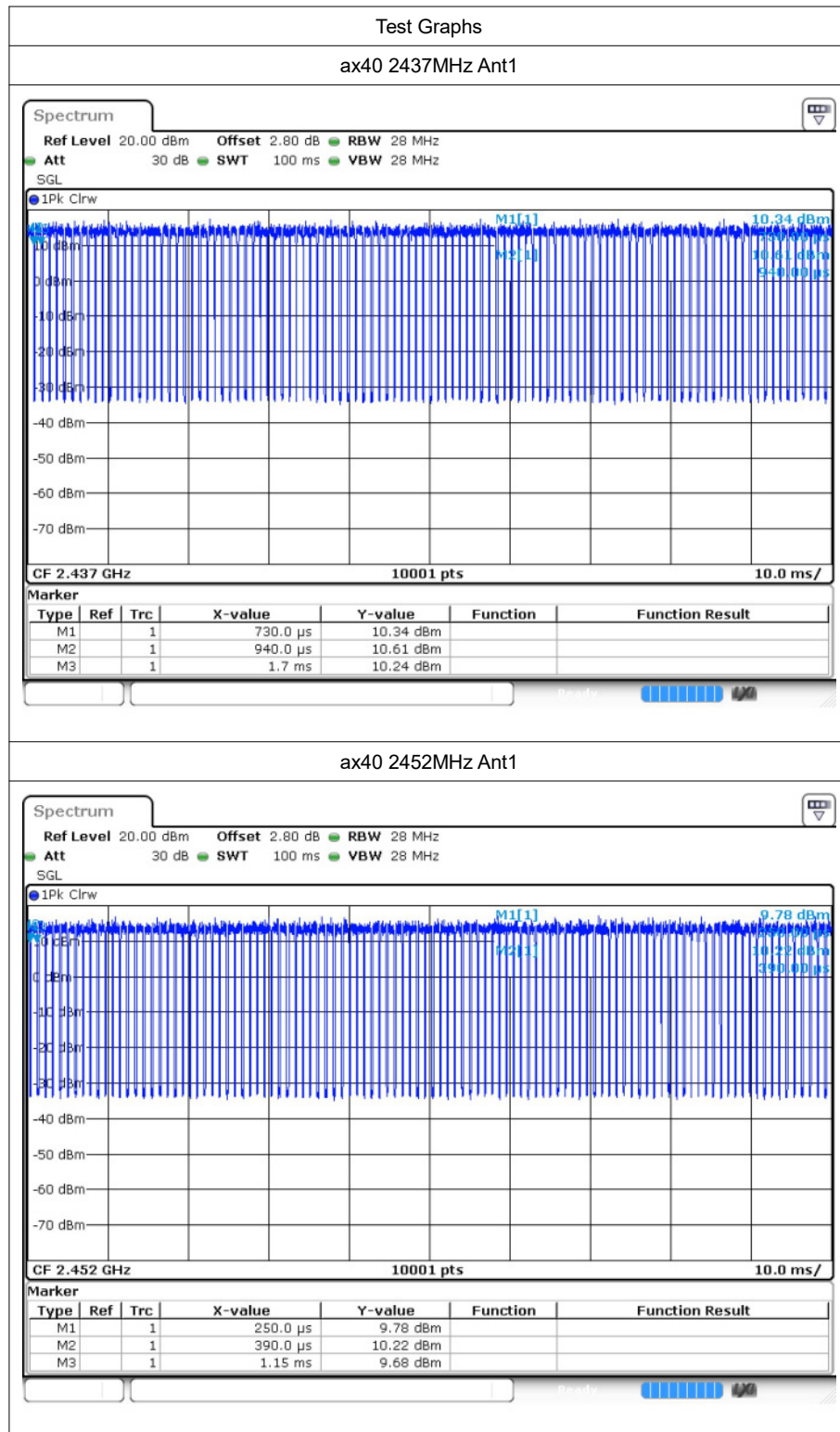












## 2 Maximum Conducted Output Power

### 2.1 Test Result

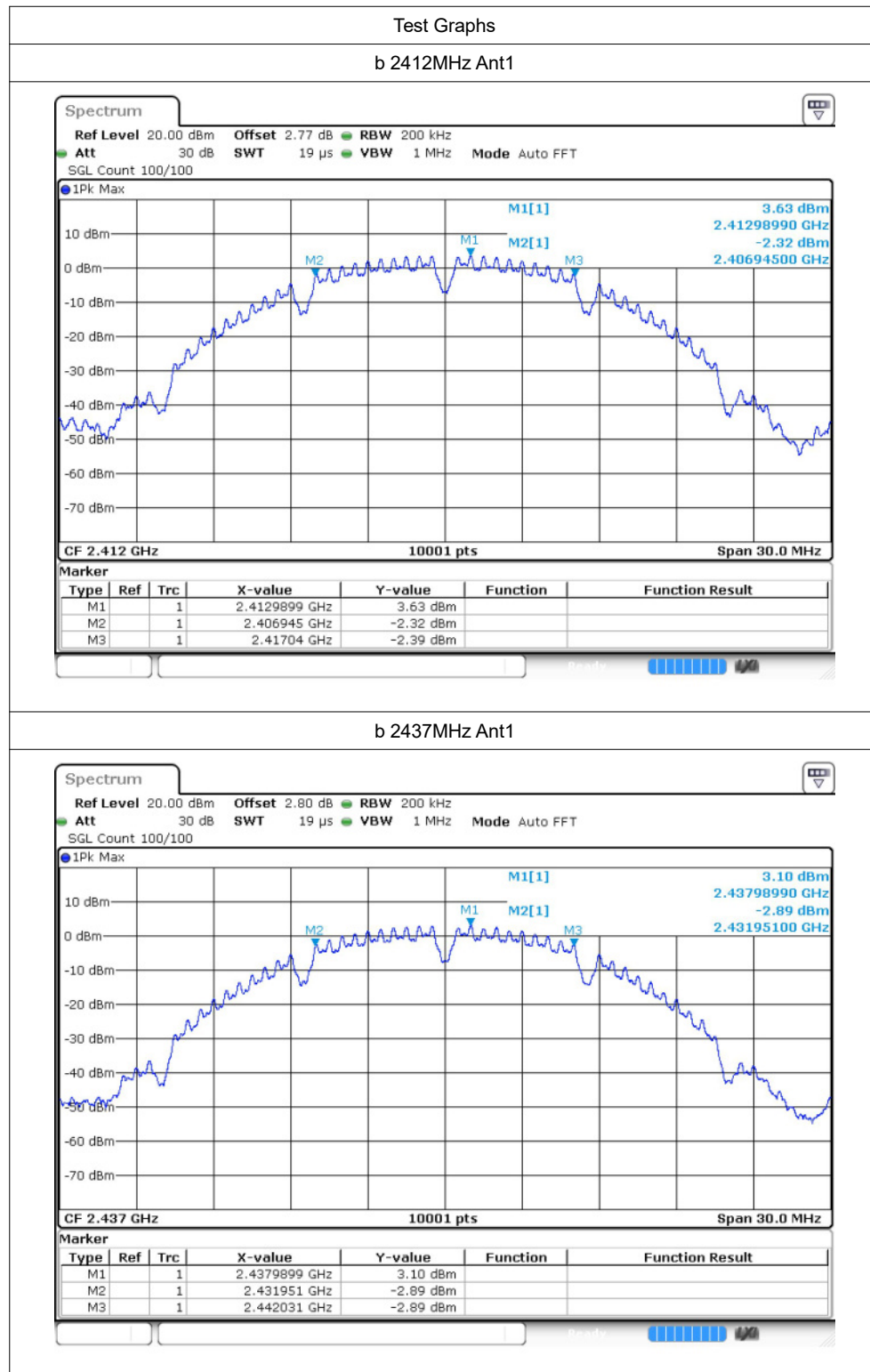
| Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|------|-----------------|---------|-----------------------|-------------|---------|
| b    | 2412            | Ant1    | 16.37                 | 30          | Pass    |
| b    | 2437            | Ant1    | 15.73                 | 30          | Pass    |
| b    | 2462            | Ant1    | 15.12                 | 30          | Pass    |
| g    | 2412            | Ant1    | 14.79                 | 30          | Pass    |
| g    | 2437            | Ant1    | 15.26                 | 30          | Pass    |
| g    | 2462            | Ant1    | 14.52                 | 30          | Pass    |
| n20  | 2412            | Ant1    | 14.74                 | 30          | Pass    |
| n20  | 2437            | Ant1    | 15.22                 | 30          | Pass    |
| n20  | 2462            | Ant1    | 14.45                 | 30          | Pass    |
| n40  | 2422            | Ant1    | 14.93                 | 30          | Pass    |
| n40  | 2437            | Ant1    | 15.5                  | 30          | Pass    |
| n40  | 2452            | Ant1    | 15.12                 | 30          | Pass    |
| ax20 | 2412            | Ant1    | 14.62                 | 30          | Pass    |
| ax20 | 2437            | Ant1    | 15.2                  | 30          | Pass    |
| ax20 | 2462            | Ant1    | 14.43                 | 30          | Pass    |
| ax40 | 2422            | Ant1    | 14.5                  | 30          | Pass    |
| ax40 | 2437            | Ant1    | 14.85                 | 30          | Pass    |
| ax40 | 2452            | Ant1    | 14.54                 | 30          | Pass    |

### 3 -6dB Bandwidth

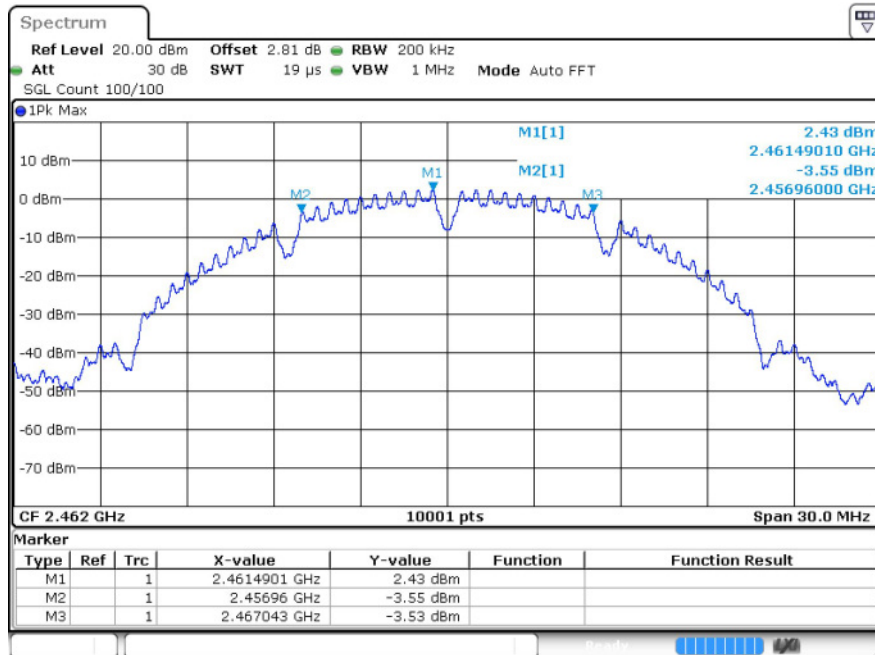
#### 3.1 Test Result

| Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|------|-----------------|---------|-----------------------|-----------------------------|---------|
| b    | 2412            | Ant1    | 10.095                | 0.5                         | Pass    |
| b    | 2437            | Ant1    | 10.08                 | 0.5                         | Pass    |
| b    | 2462            | Ant1    | 10.083                | 0.5                         | Pass    |
| g    | 2412            | Ant1    | 16.332                | 0.5                         | Pass    |
| g    | 2437            | Ant1    | 16.143                | 0.5                         | Pass    |
| g    | 2462            | Ant1    | 16.305                | 0.5                         | Pass    |
| n20  | 2412            | Ant1    | 17.553                | 0.5                         | Pass    |
| n20  | 2437            | Ant1    | 17.577                | 0.5                         | Pass    |
| n20  | 2462            | Ant1    | 17.556                | 0.5                         | Pass    |
| n40  | 2422            | Ant1    | 36.264                | 0.5                         | Pass    |
| n40  | 2437            | Ant1    | 36.42                 | 0.5                         | Pass    |
| n40  | 2452            | Ant1    | 36.354                | 0.5                         | Pass    |
| ax20 | 2412            | Ant1    | 18.642                | 0.5                         | Pass    |
| ax20 | 2437            | Ant1    | 18.825                | 0.5                         | Pass    |
| ax20 | 2462            | Ant1    | 18.96                 | 0.5                         | Pass    |
| ax40 | 2422            | Ant1    | 37.11                 | 0.5                         | Pass    |
| ax40 | 2437            | Ant1    | 37.452                | 0.5                         | Pass    |
| ax40 | 2452            | Ant1    | 37.506                | 0.5                         | Pass    |

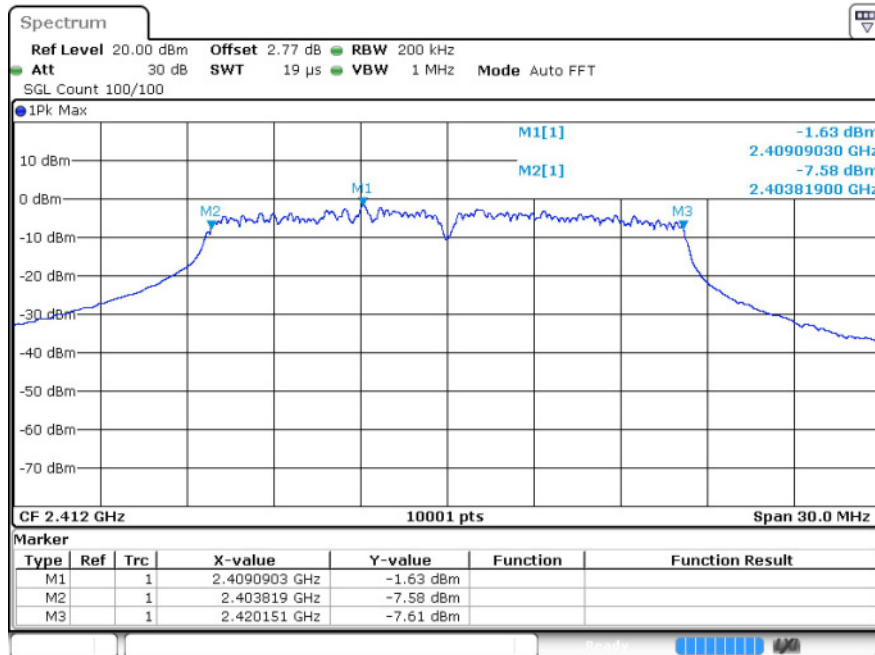
### 3.2 Test Graphs



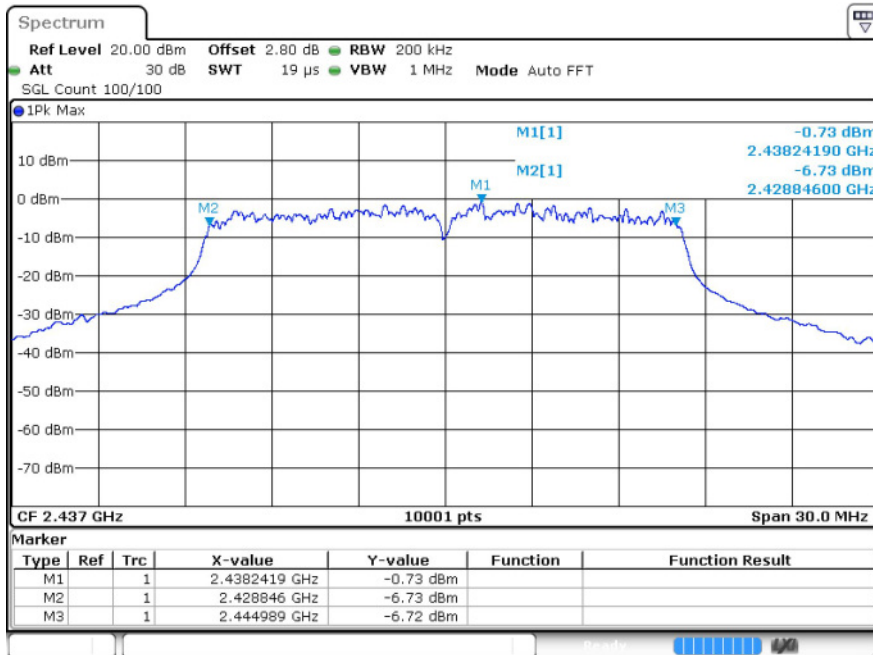
b 2462MHz Ant1



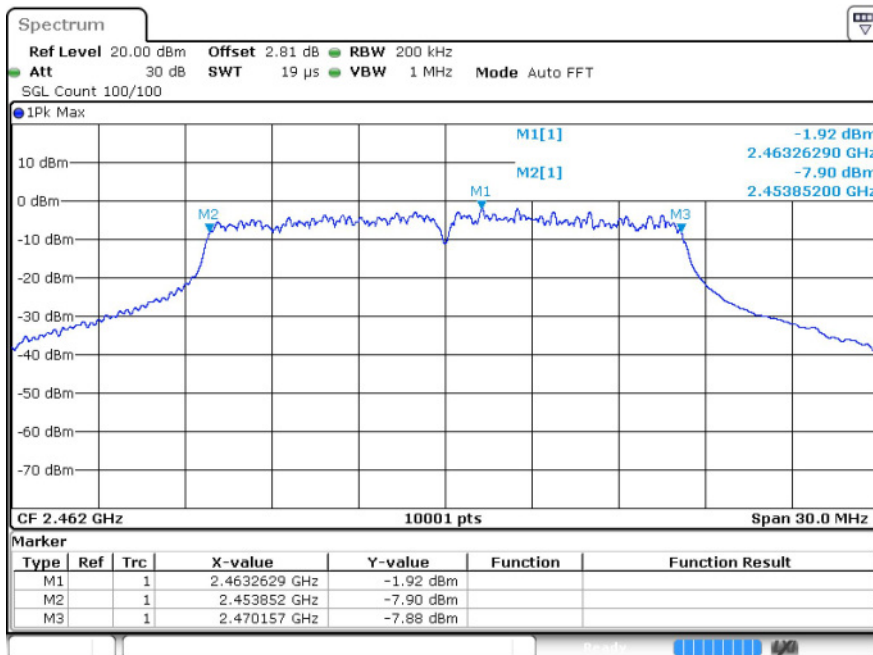
g 2412MHz Ant1

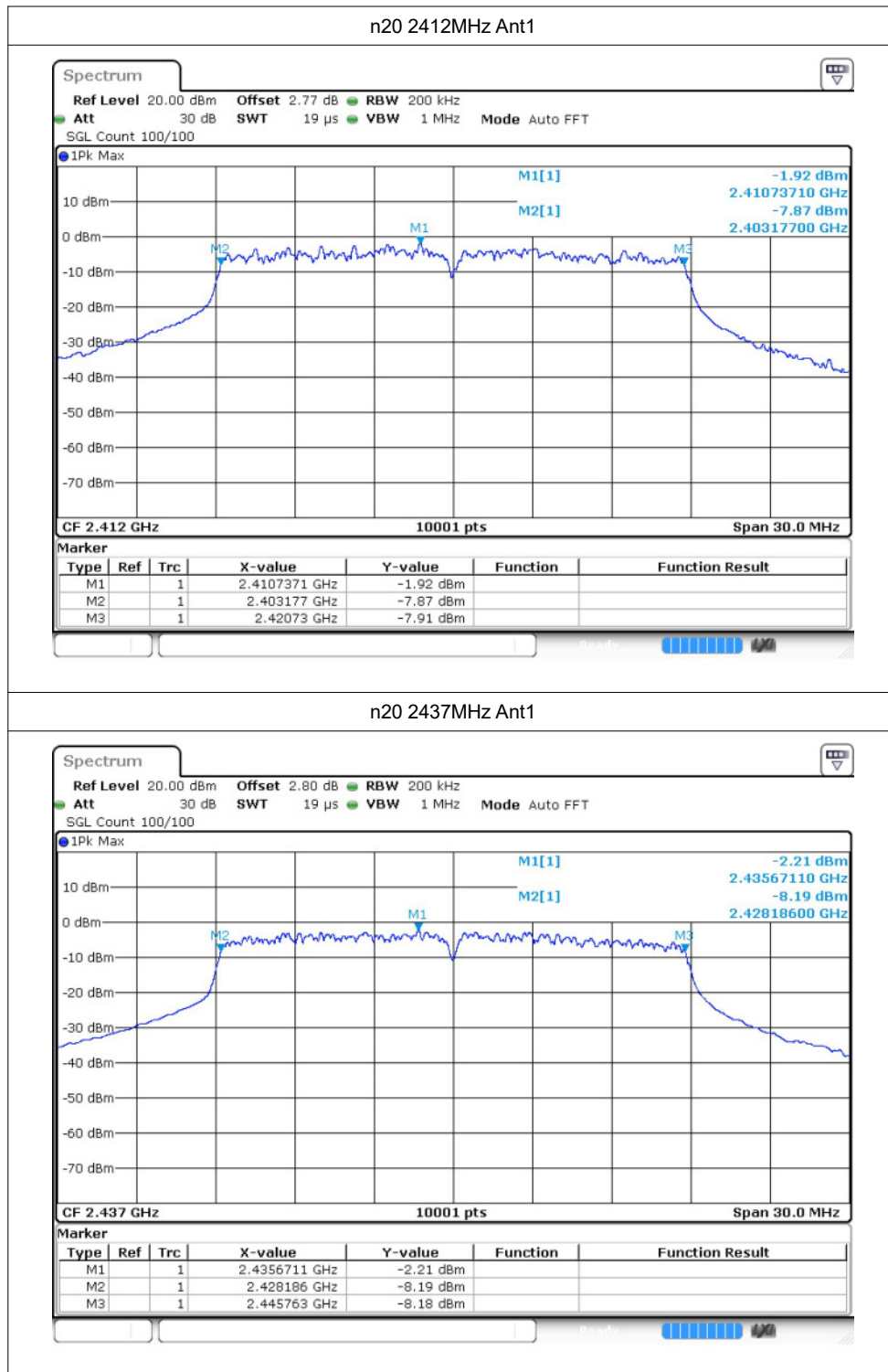


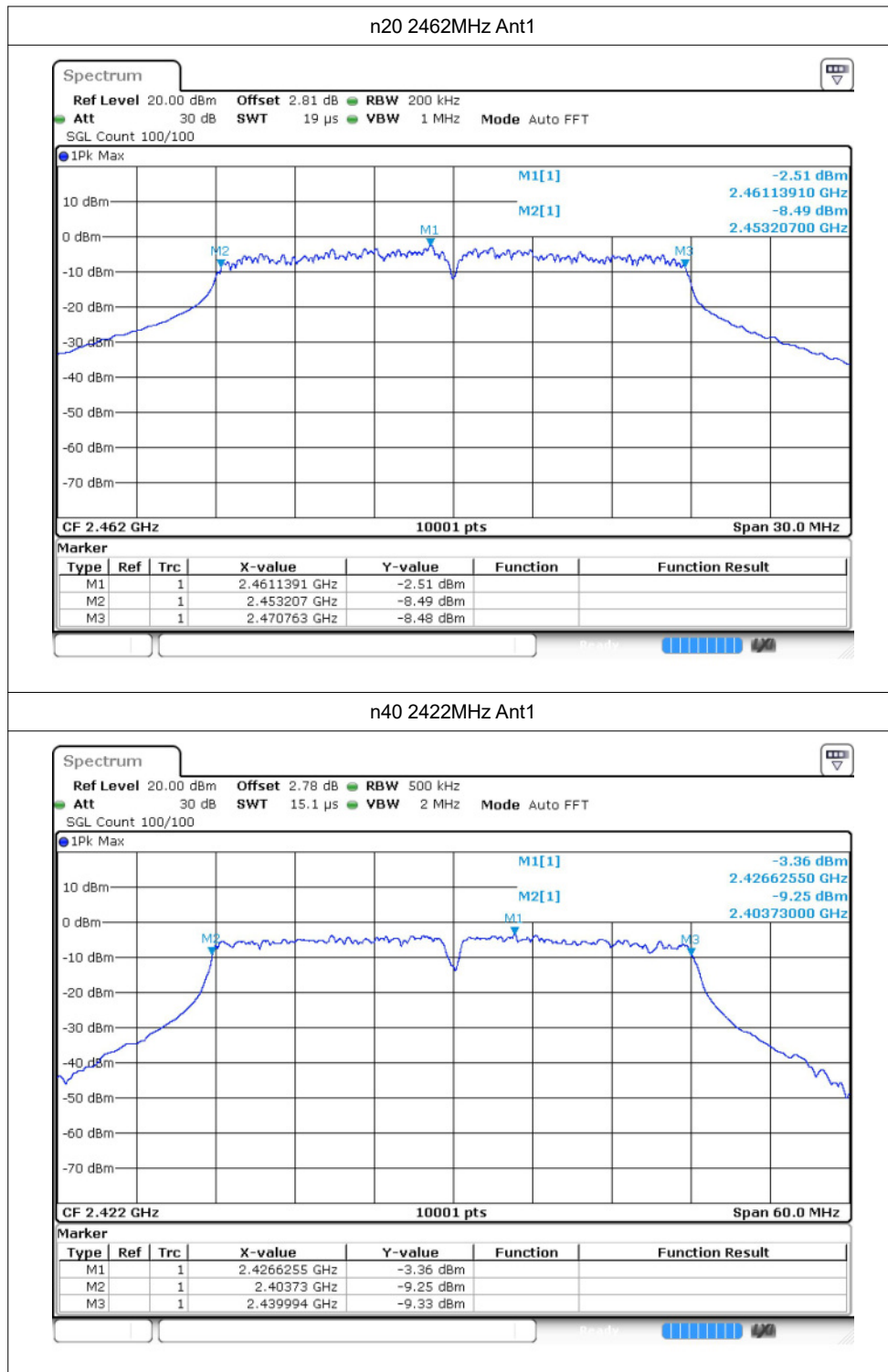
g 2437MHz Ant1

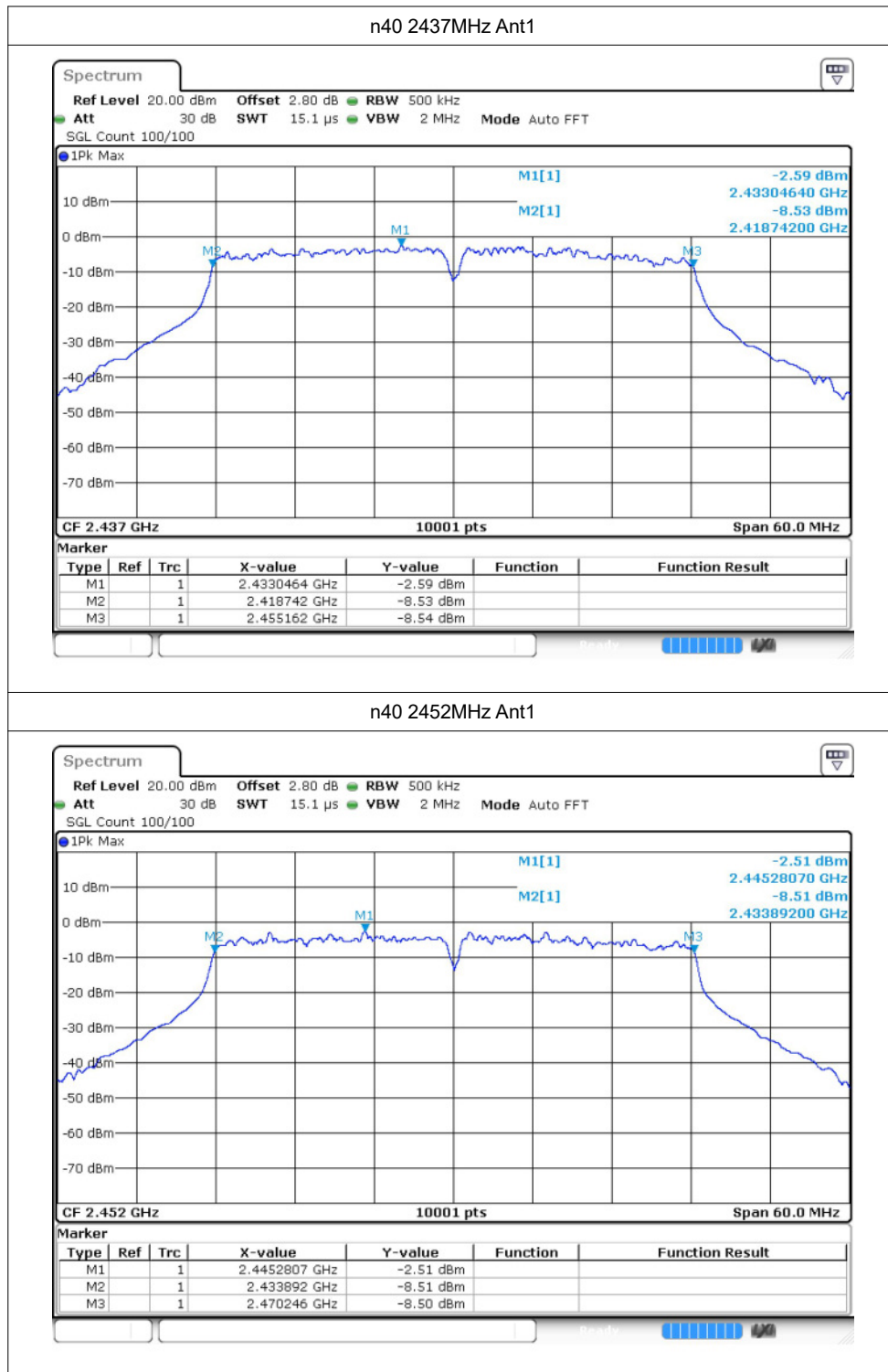


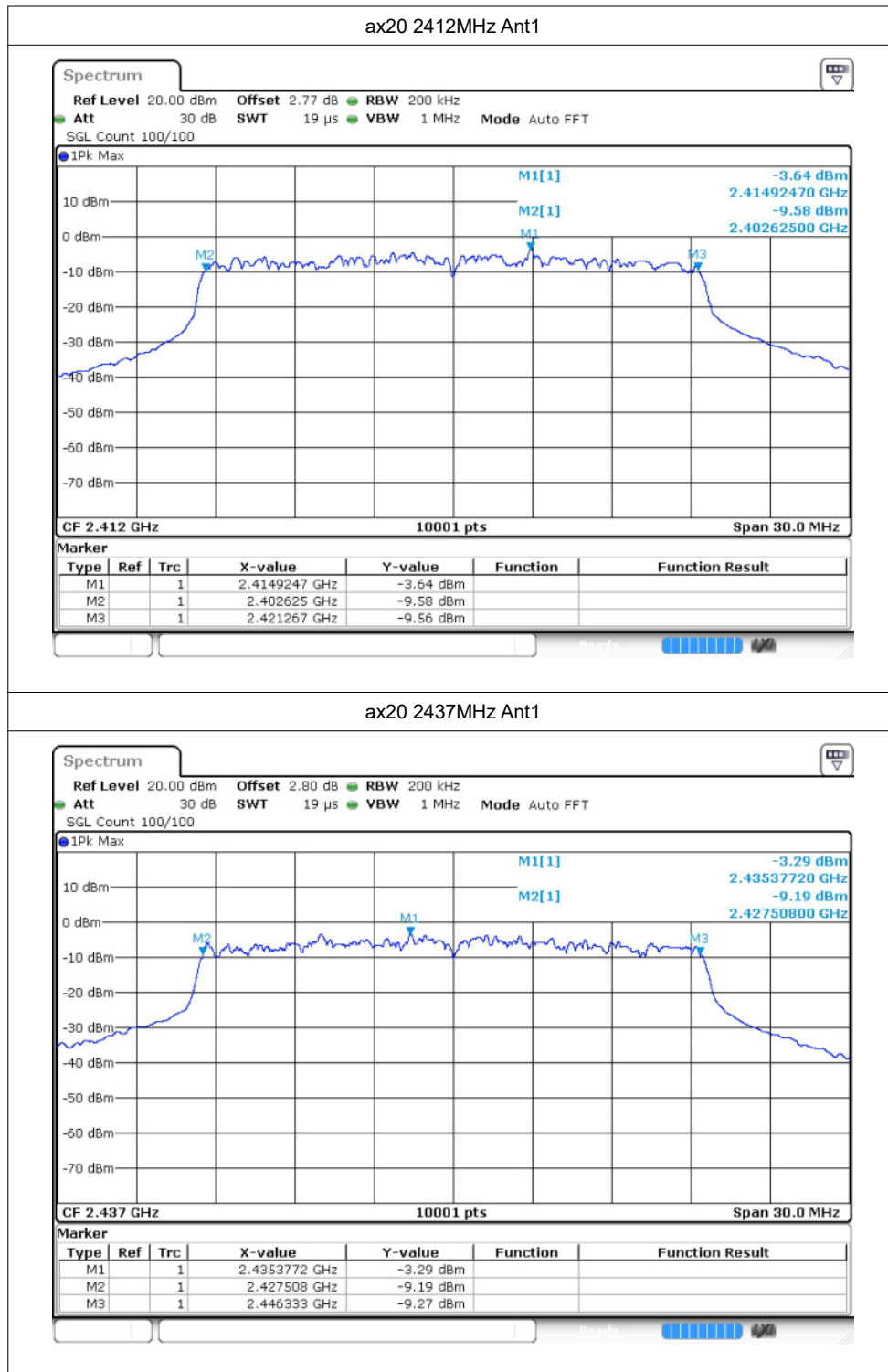
g 2462MHz Ant1

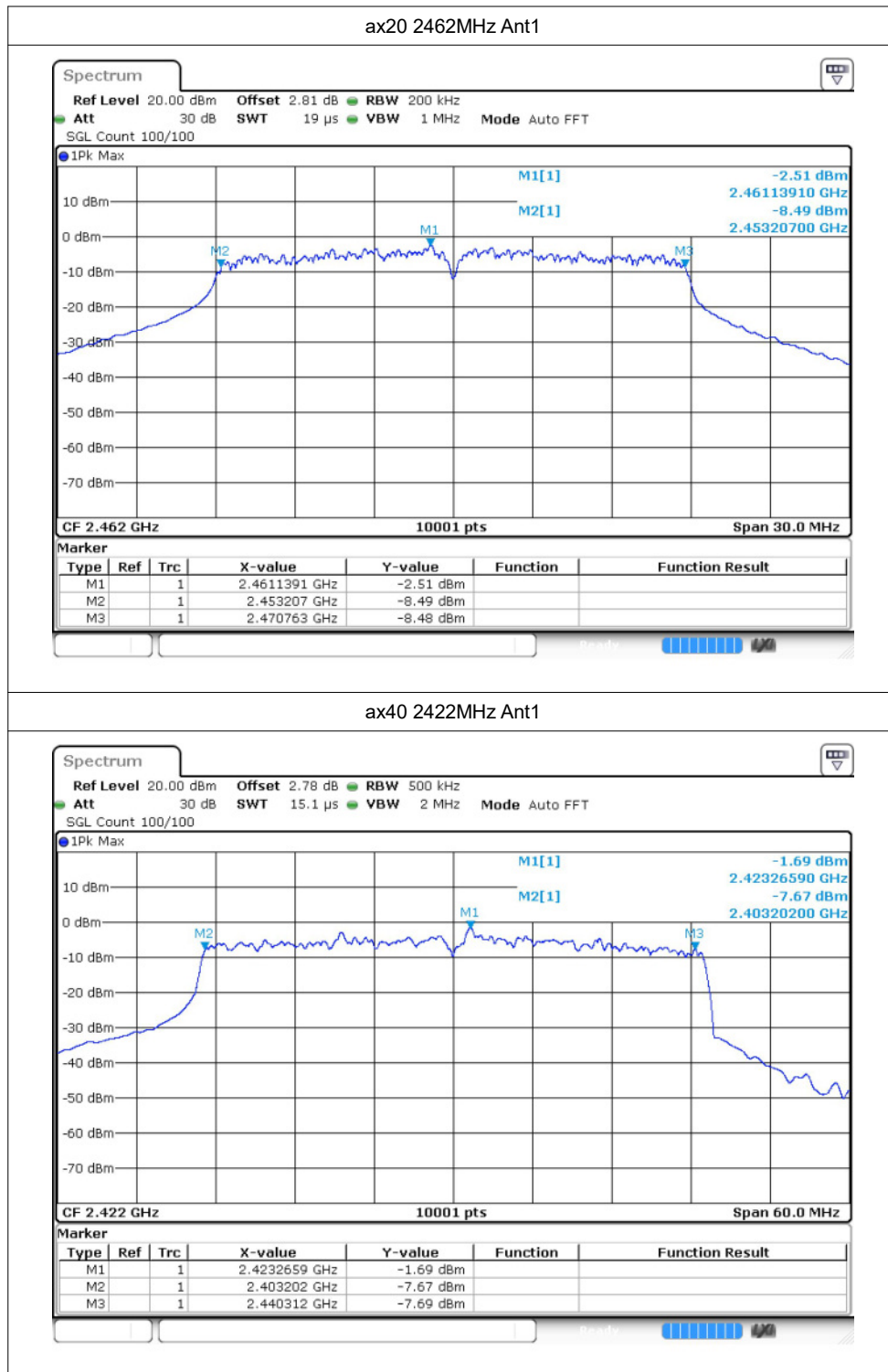




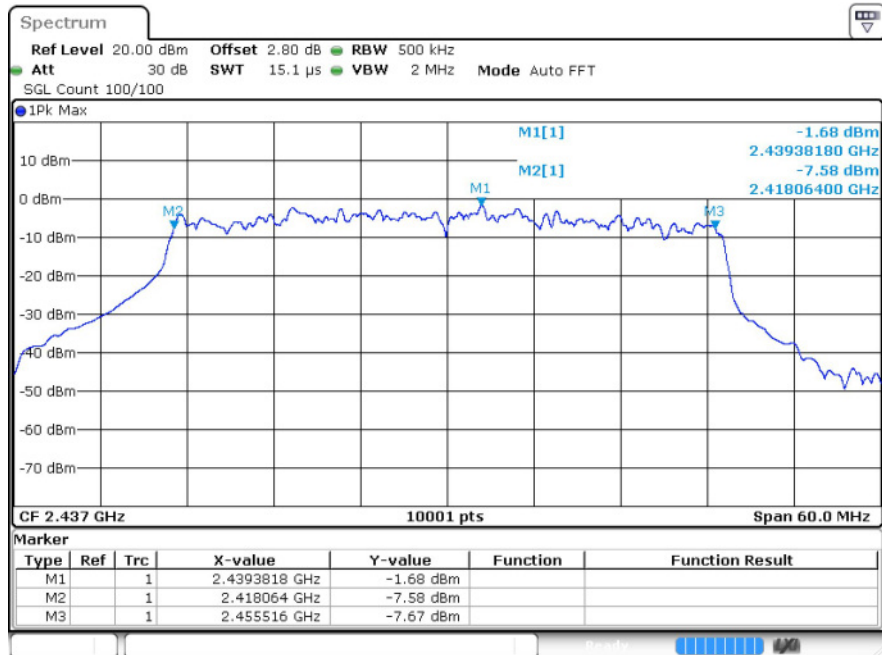




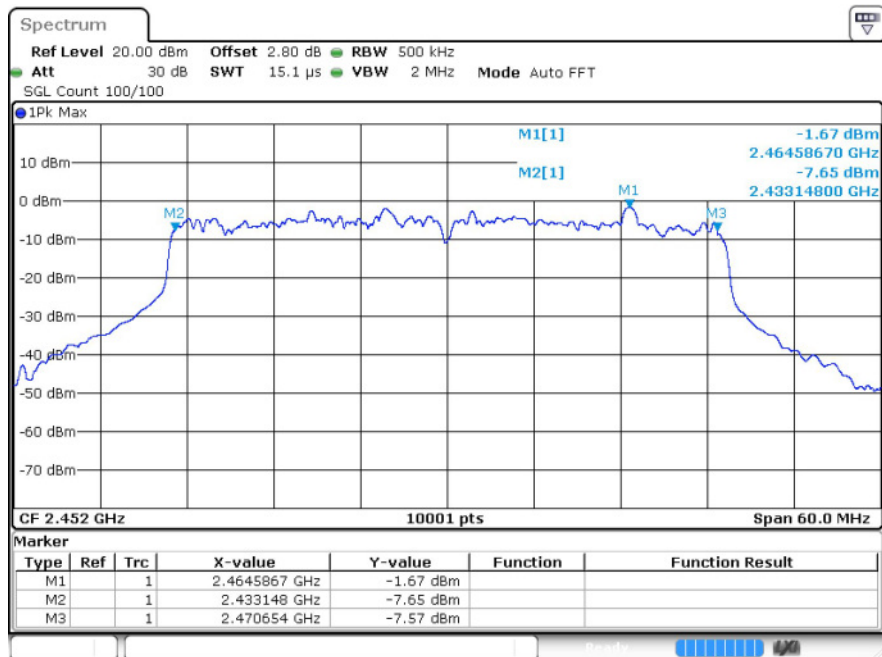




ax40 2437MHz Ant1



ax40 2452MHz Ant1



## 4 Maximum Power Spectral Density Level

### 4.1 Test Result

| Mode | Frequency (MHz) | Antenna | Conducted PSD<br>(dBm/3-100kHz) | Limit<br>(dBm/3kHz) | Verdict |
|------|-----------------|---------|---------------------------------|---------------------|---------|
| b    | 2412            | Ant1    | -9.22                           | ≤8                  | Pass    |
| b    | 2437            | Ant1    | -9.38                           | ≤8                  | Pass    |
| b    | 2462            | Ant1    | -11.9                           | ≤8                  | Pass    |
| g    | 2412            | Ant1    | -16.29                          | ≤8                  | Pass    |
| g    | 2437            | Ant1    | -15.79                          | ≤8                  | Pass    |
| g    | 2462            | Ant1    | -16.13                          | ≤8                  | Pass    |
| n20  | 2412            | Ant1    | -15.85                          | ≤8                  | Pass    |
| n20  | 2437            | Ant1    | -15.29                          | ≤8                  | Pass    |
| n20  | 2462            | Ant1    | -15.9                           | ≤8                  | Pass    |
| n40  | 2422            | Ant1    | -19.29                          | ≤8                  | Pass    |
| n40  | 2437            | Ant1    | -19.22                          | ≤8                  | Pass    |
| n40  | 2452            | Ant1    | -19.88                          | ≤8                  | Pass    |
| ax20 | 2412            | Ant1    | -4.58                           | ≤8                  | Pass    |
| ax20 | 2437            | Ant1    | -4.03                           | ≤8                  | Pass    |
| ax20 | 2462            | Ant1    | -7.22                           | ≤8                  | Pass    |
| ax40 | 2422            | Ant1    | -7.34                           | ≤8                  | Pass    |
| ax40 | 2437            | Ant1    | -7.02                           | ≤8                  | Pass    |
| ax40 | 2452            | Ant1    | -7.42                           | ≤8                  | Pass    |

## 4.2 Test Graphs

