



## Appendix A

### RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: POWER AMPLIFIER

Trade Mark: PYLE

Test Model: PFMRA350BW

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 24.2°C      |
| Relative Humidity: | 51.2%       |
| ATM Pressure:      | 101Kpa      |
| Test Engineer:     | Simba Huang |
| Supervised by:     | Seal Chen   |



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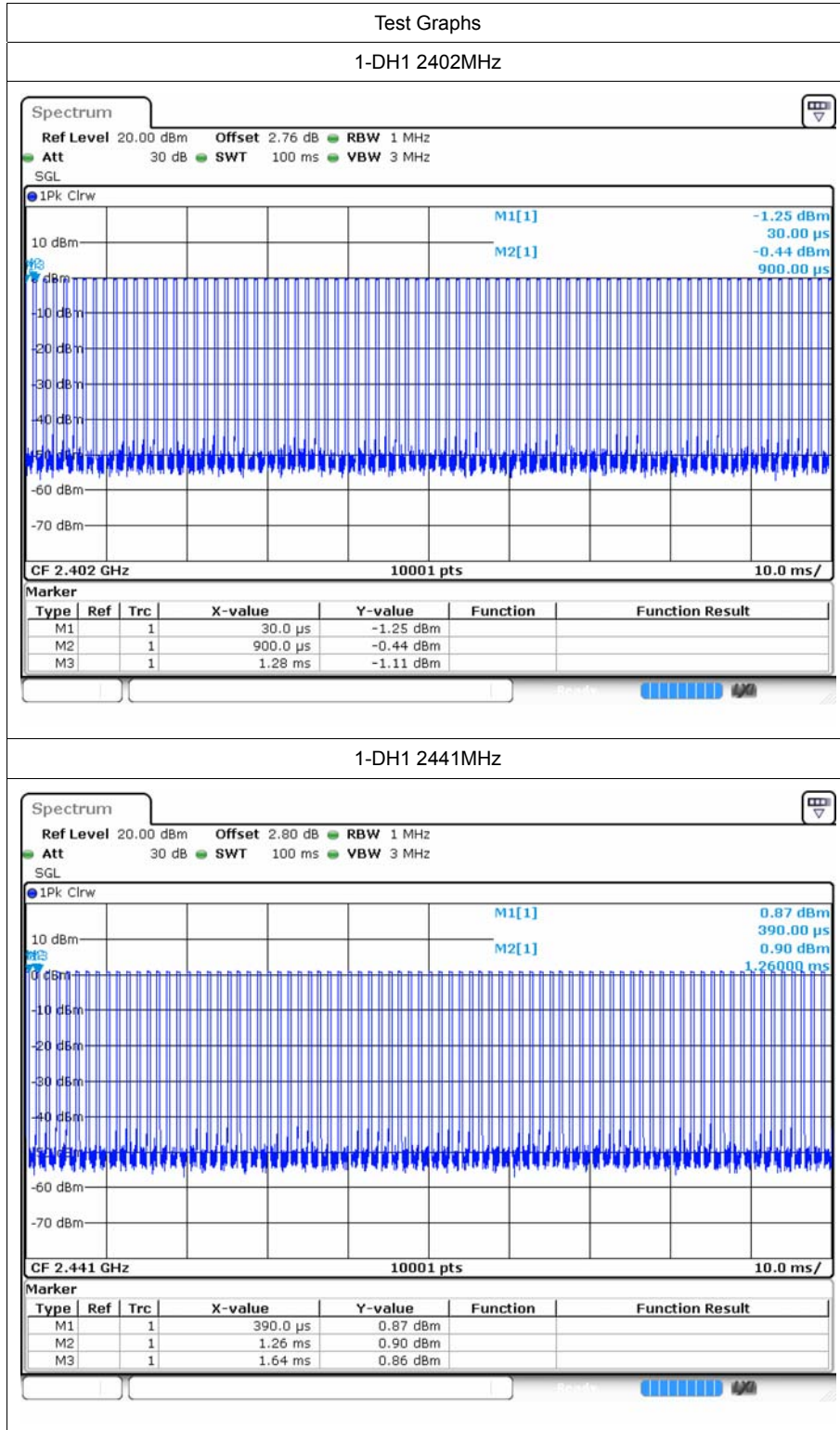


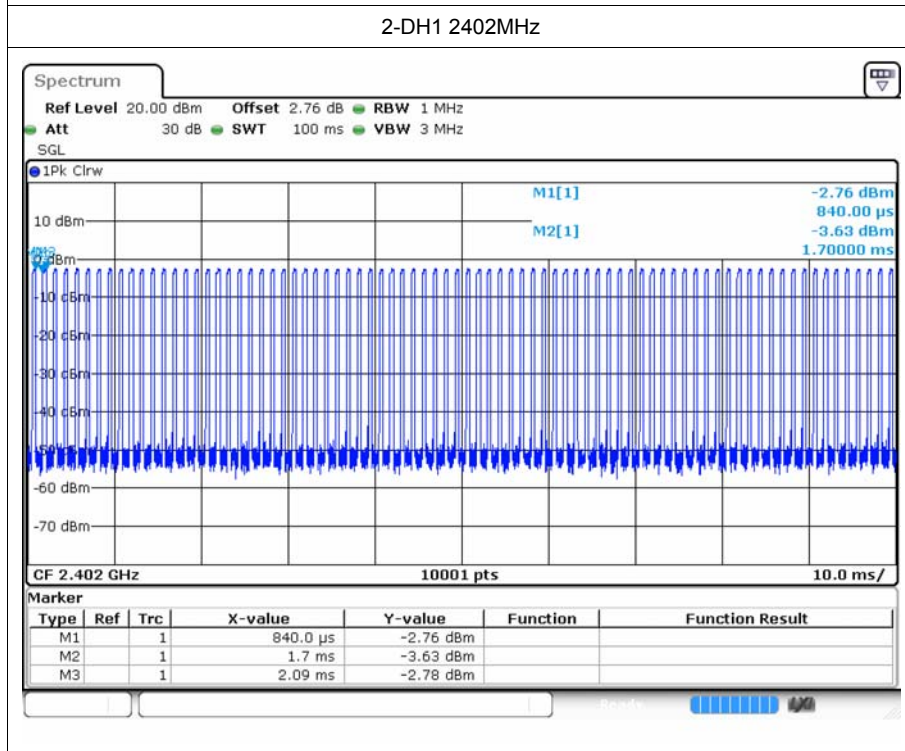
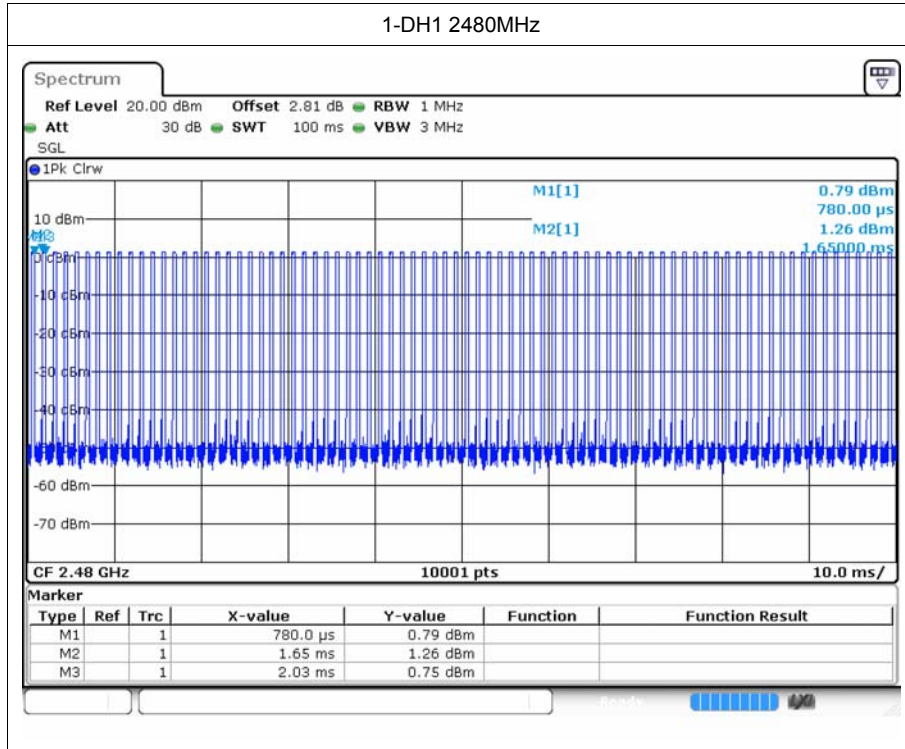
# 1 Duty Cycle

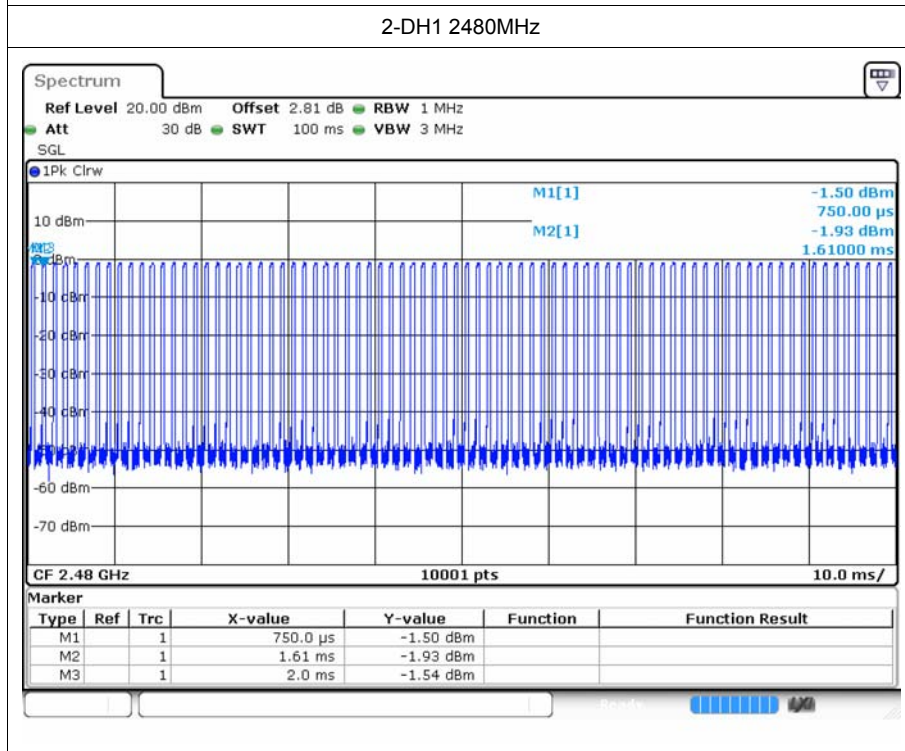
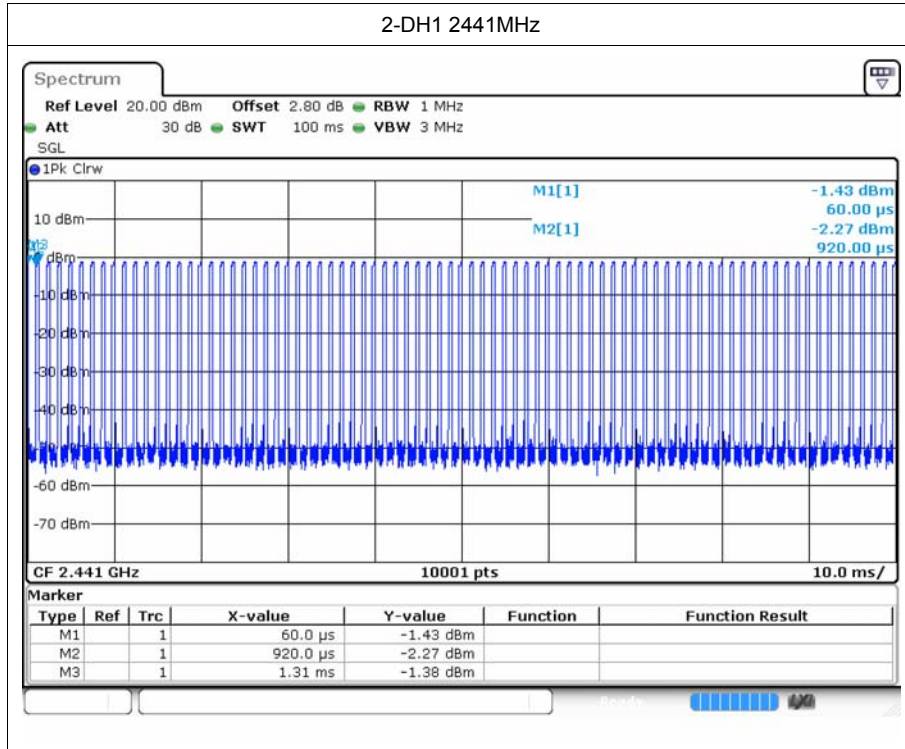
## 1.1 Test Result

| Mode  | Frequency (MHz) | Duty Cycle (%) | 1/T (kHz) |
|-------|-----------------|----------------|-----------|
| 1-DH1 | 2402            | 31.21          | 2.63      |
| 1-DH1 | 2441            | 31.2           | 2.63      |
| 1-DH1 | 2480            | 31.2           | 2.63      |
| 2-DH1 | 2402            | 32             | 2.56      |
| 2-DH1 | 2441            | 32.01          | 2.56      |
| 2-DH1 | 2480            | 32             | 2.56      |

## 1.2 Test Graphs





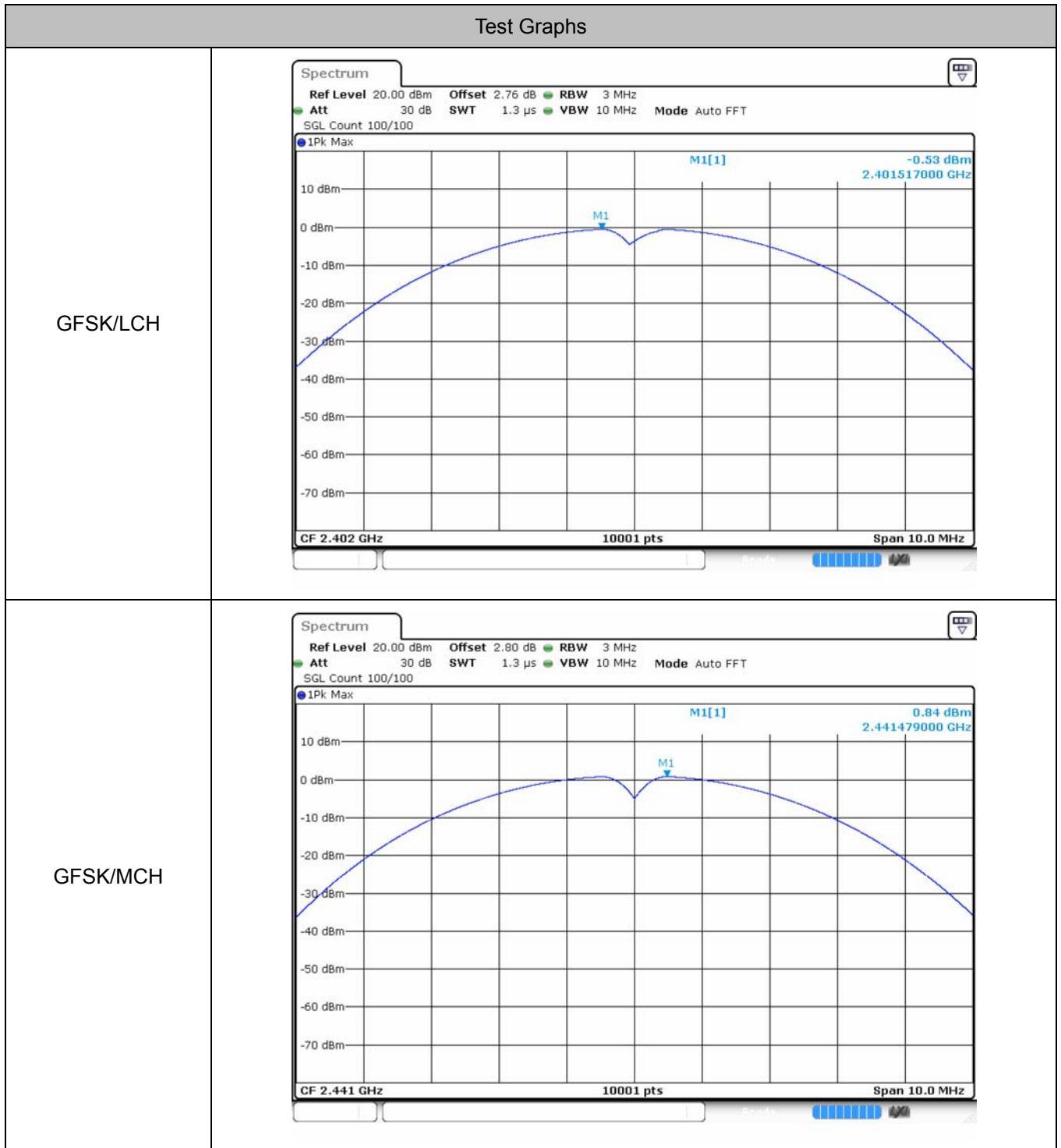


## 2 Maximum Conducted Peak Output Power

### 2.1 Test Result

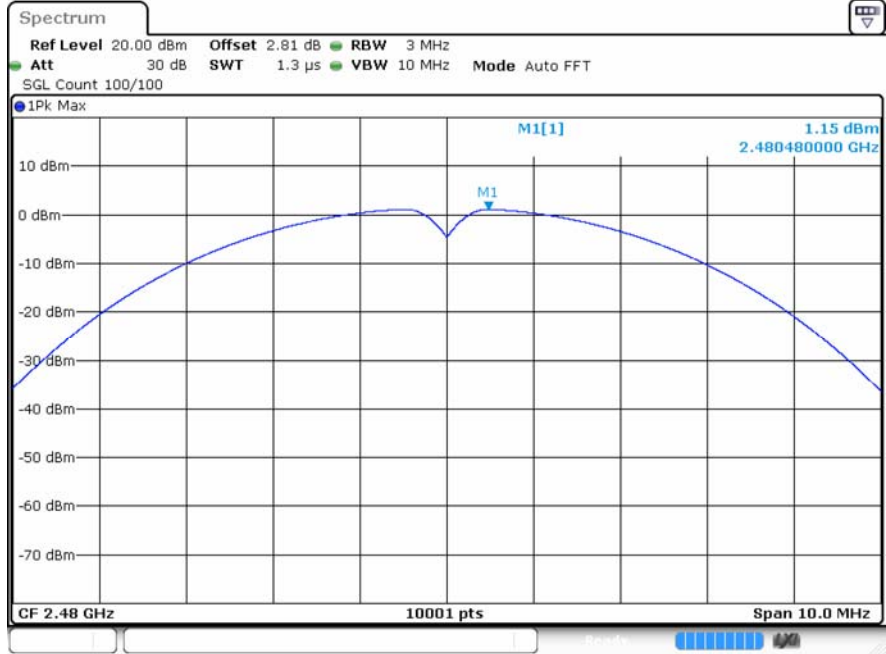
| Mode          | Channel. | Maximum Peak Output Power [dBm] | Limit [dBm] | Verdict |
|---------------|----------|---------------------------------|-------------|---------|
| GFSK          | LCH      | -0.53                           | 21          | Pass    |
|               | MCH      | 0.84                            | 21          | Pass    |
|               | HCH      | 1.15                            | 21          | Pass    |
| $\pi/4$ DQPSK | LCH      | -1.56                           | 21          | Pass    |
|               | MCH      | -0.22                           | 21          | Pass    |
|               | HCH      | -0.1                            | 21          | Pass    |

## 2.2 Test Graphs

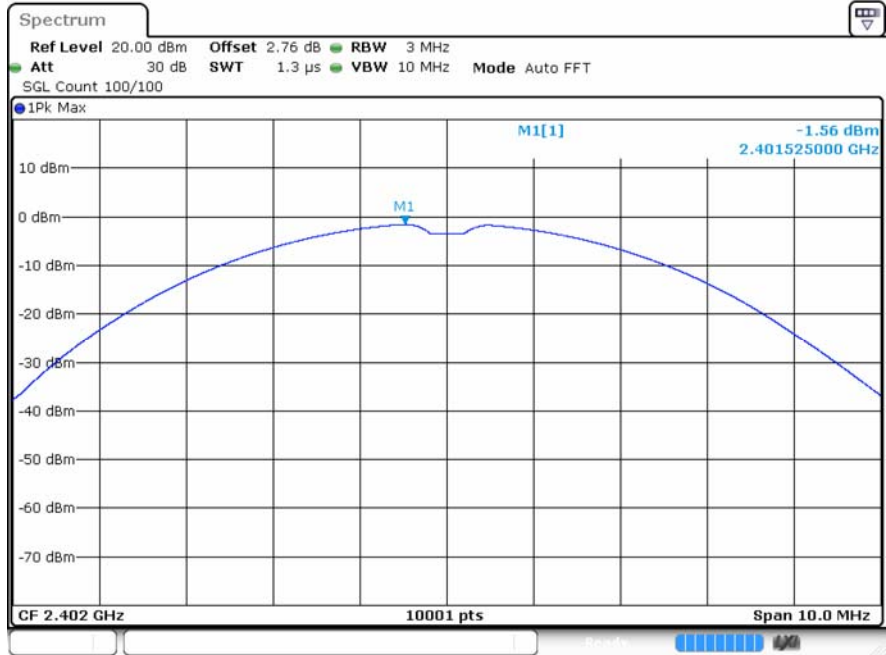




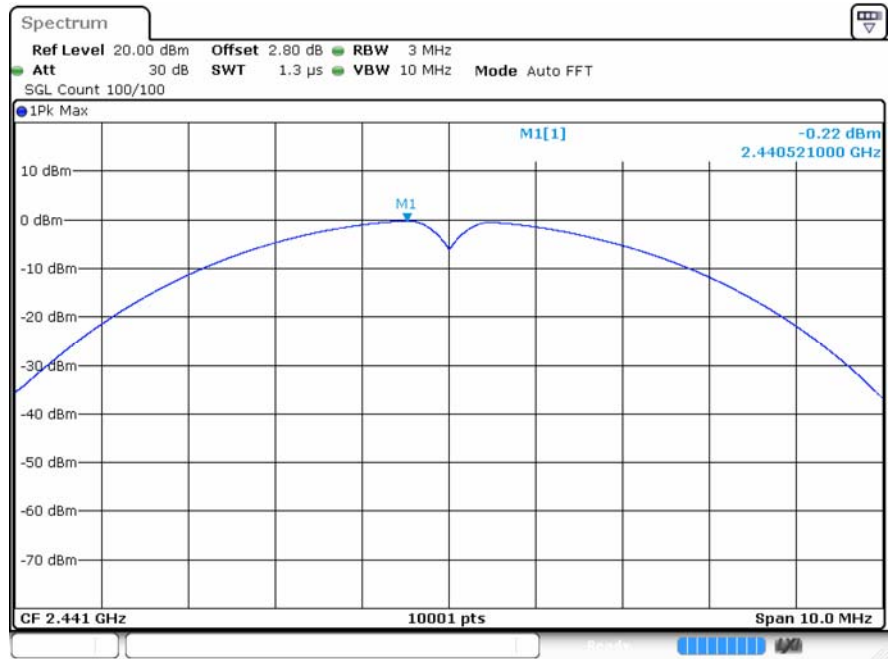
GFSK/HCH



$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH

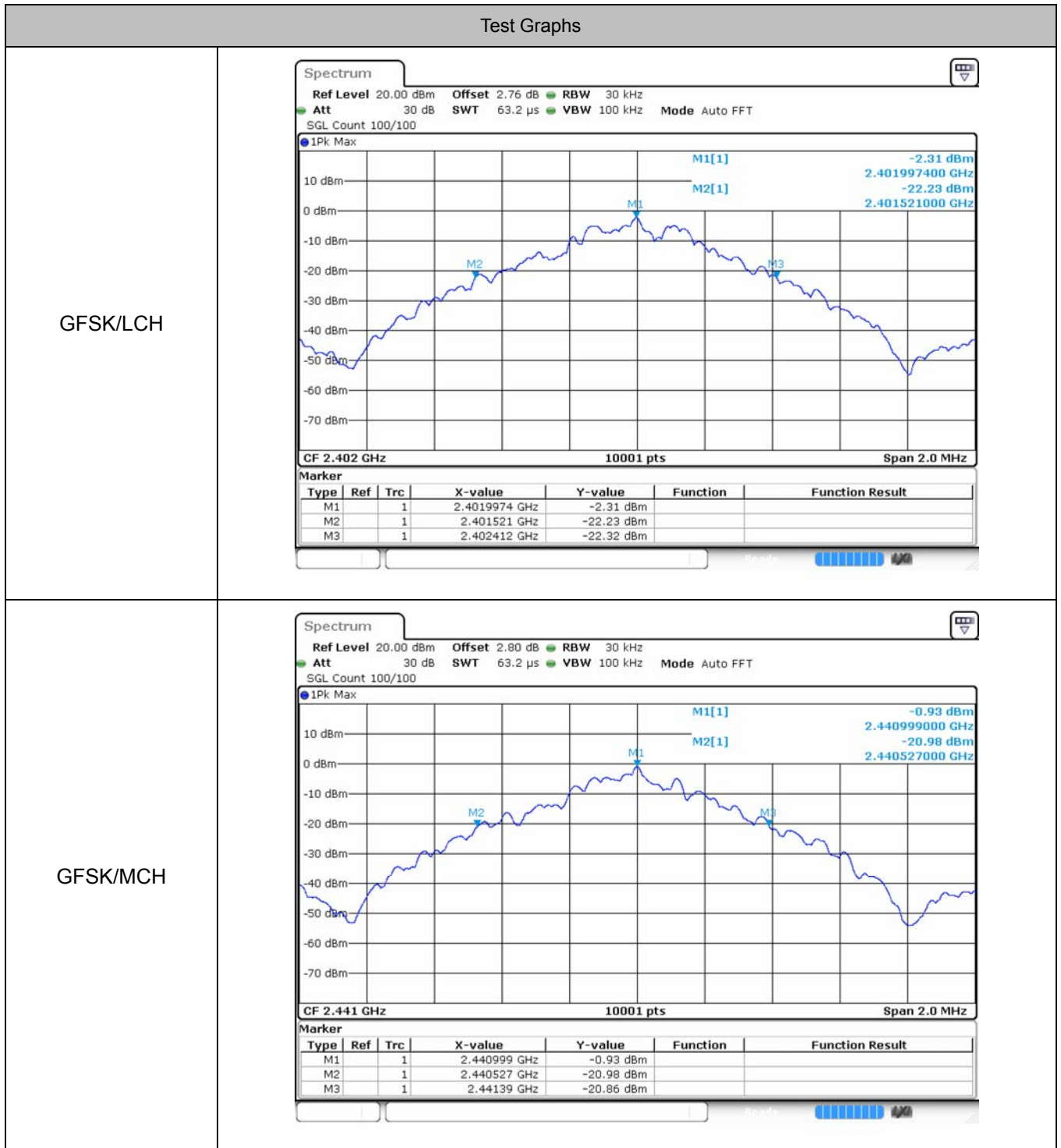


### 3 20dB Bandwidth

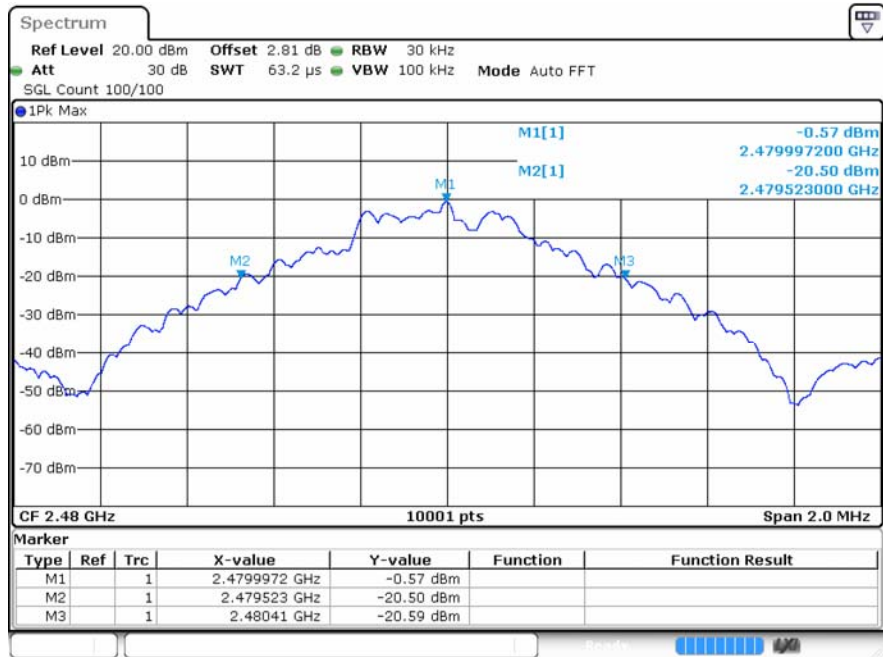
#### 3.1 Test Result

| Mode          | Channel. | 20dB Bandwidth [MHz] | Limit [MHz]   | Verdict |
|---------------|----------|----------------------|---------------|---------|
| GFSK          | LCH      | 0.891                | Not Specified | Pass    |
|               | MCH      | 0.863                | Not Specified | Pass    |
|               | HCH      | 0.887                | Not Specified | Pass    |
| $\pi/4$ DQPSK | LCH      | 1.423                | Not Specified | Pass    |
|               | MCH      | 1.426                | Not Specified | Pass    |
|               | HCH      | 1.423                | Not Specified | Pass    |

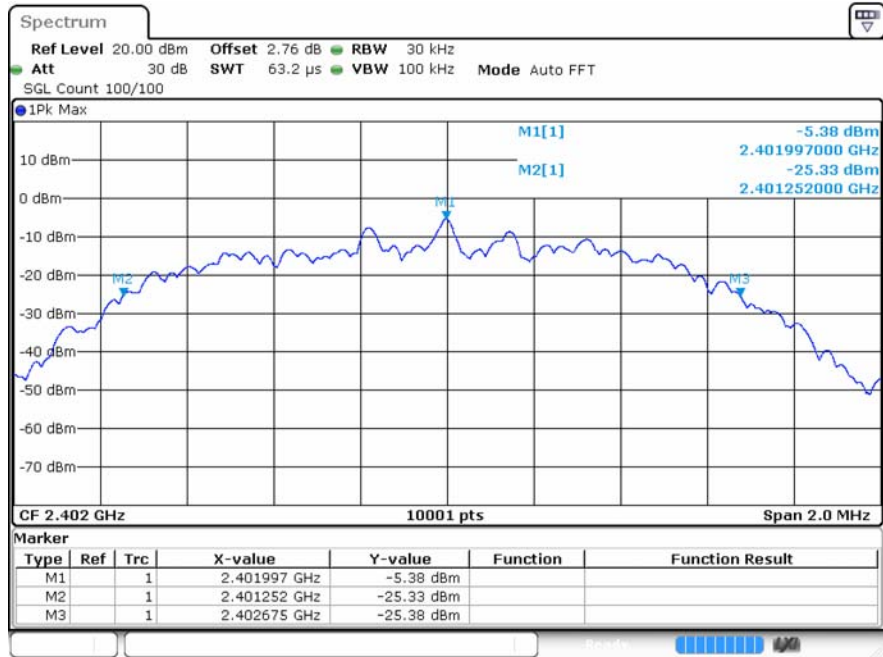
### 3.2 Test Graphs



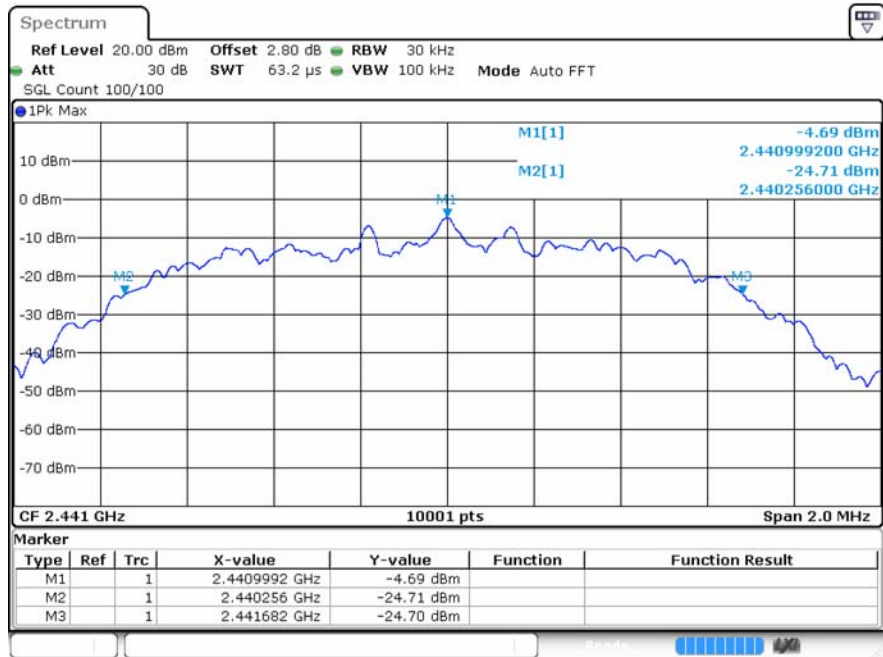
GFSK/HCH



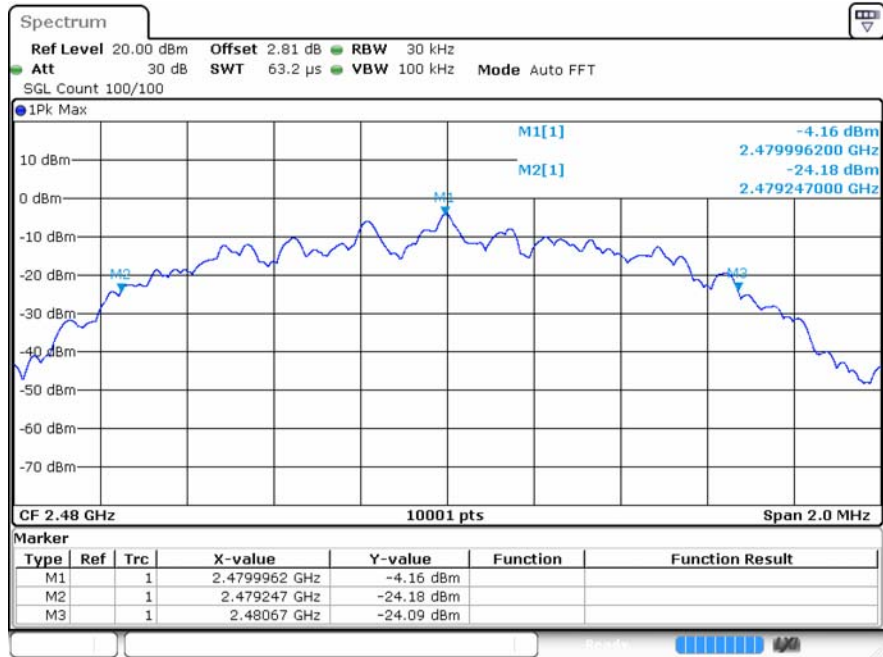
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH



## 4 Carrier Frequency Separation

### 4.1 Test Result

| Mode          | Channel. | Carrier Frequency Separation [MHz] | Limit [MHz] | Verdict |
|---------------|----------|------------------------------------|-------------|---------|
| GFSK          | MCH      | 0.999                              | 0.575       | Pass    |
| $\pi/4$ DQPSK | MCH      | 1                                  | 0.951       | Pass    |

## 4.2 Test Graphs



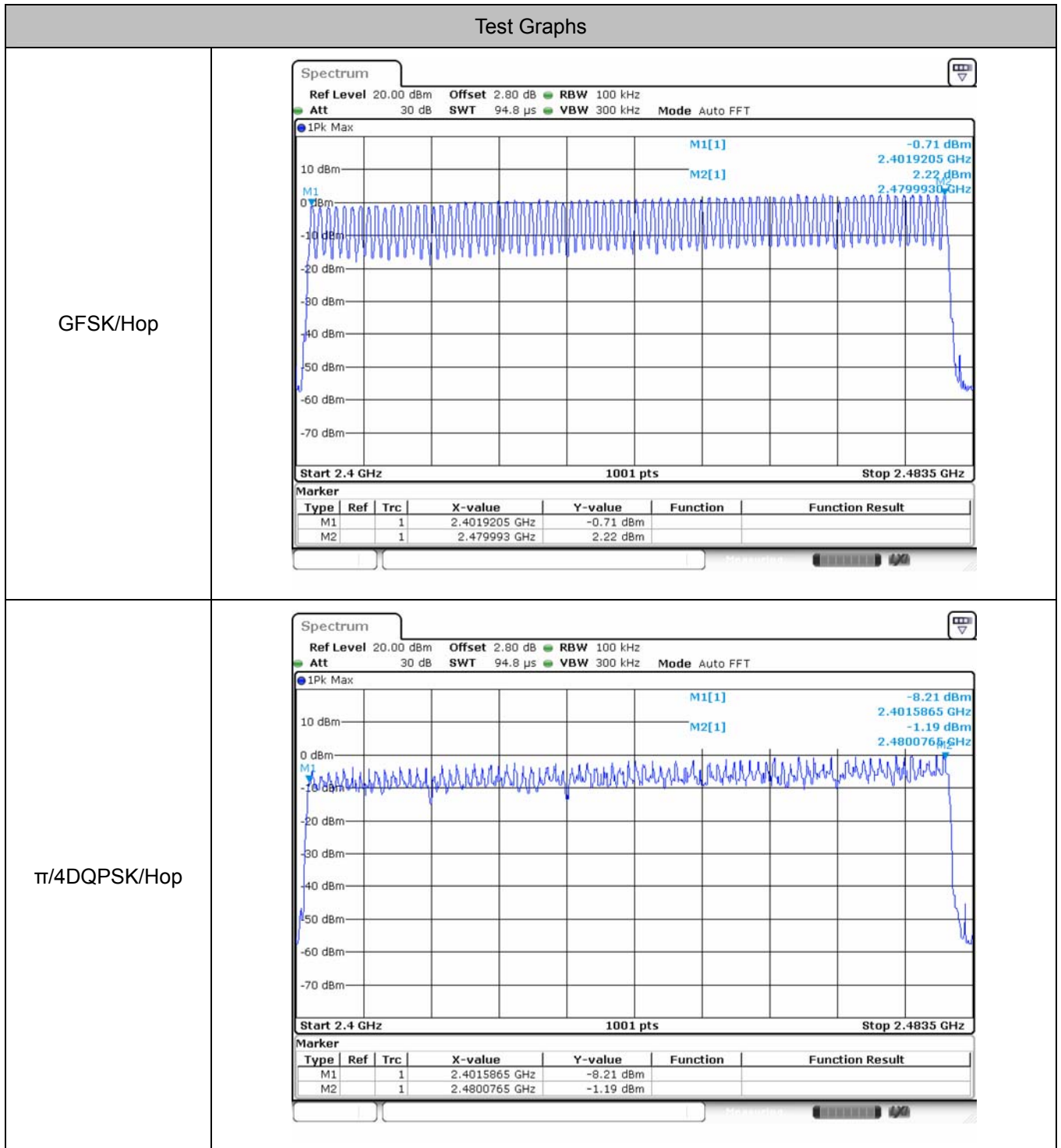


## 5 Hopping Channel Number

### 5.1 Test Result

| Mode          | Channel. | Number of Hopping Channel [N] | Limit [N] | Verdict |
|---------------|----------|-------------------------------|-----------|---------|
| GFSK          | Hop      | 79                            | $\geq 15$ | PASS    |
| $\pi/4$ DQPSK | Hop      | 79                            | $\geq 15$ | PASS    |

## 5.2 Test Graphs



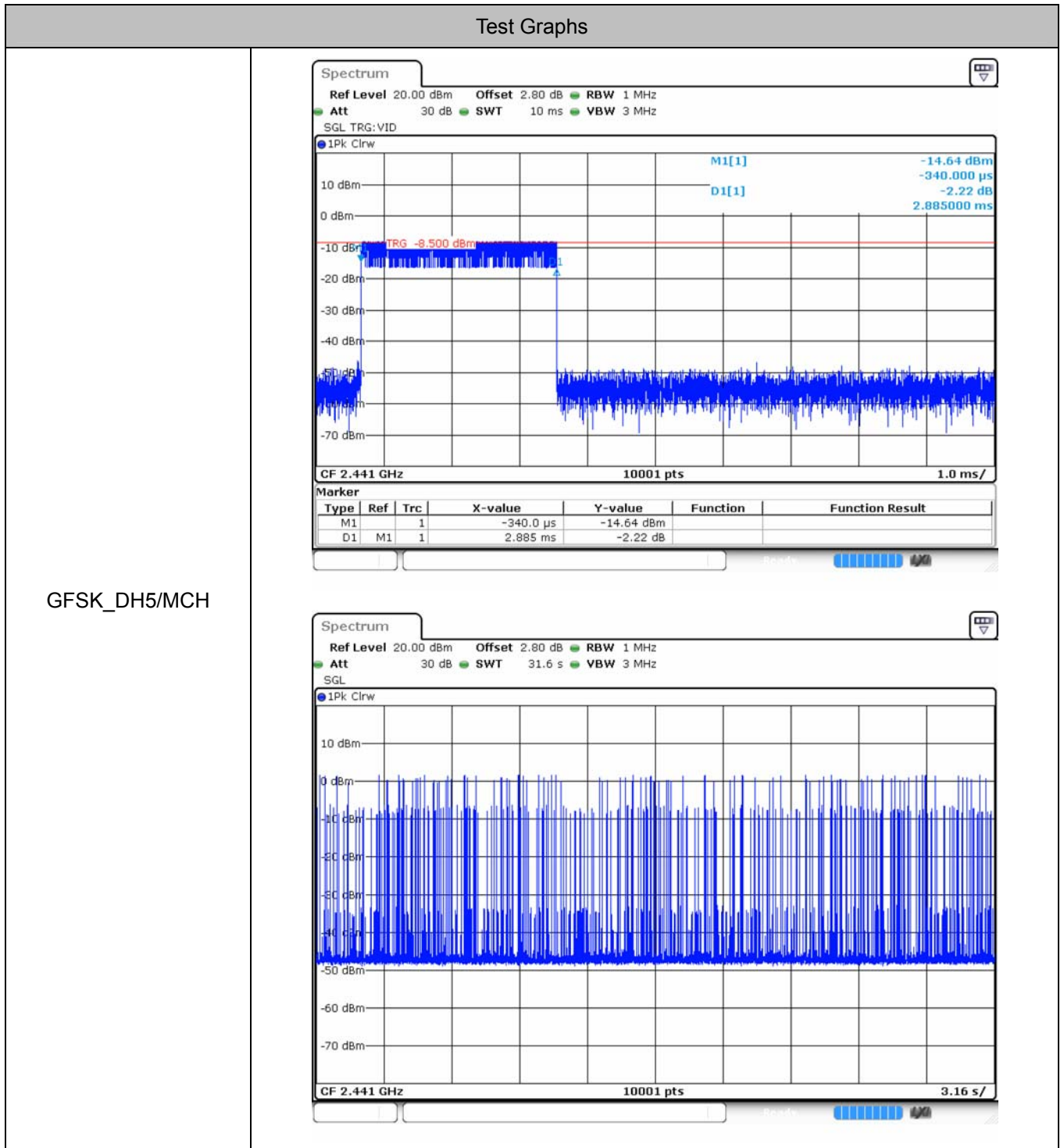


## 6 Dwell Time

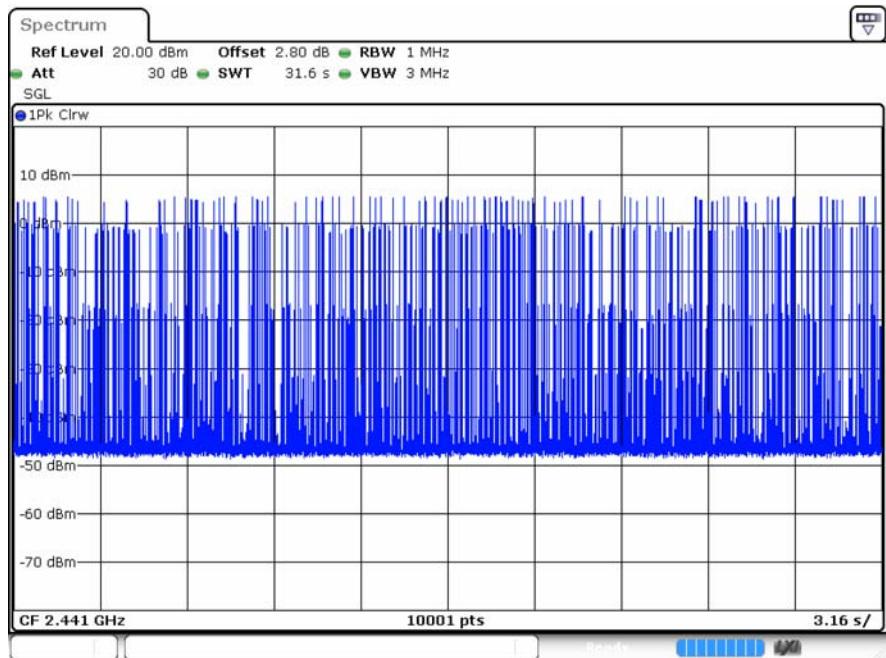
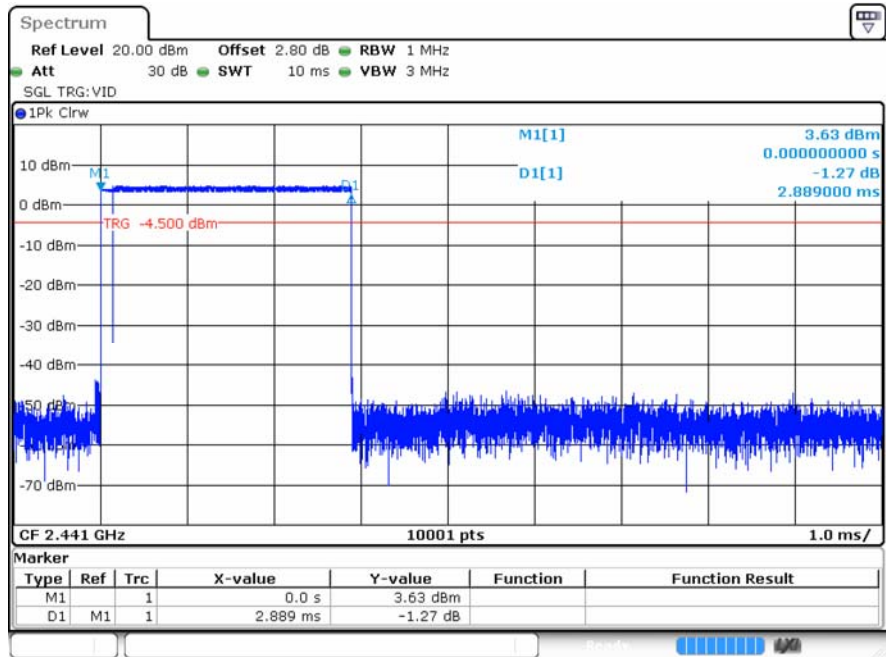
### 6.1 Test Result

| Mode          | Packet | Channel | Burst Width<br>[ms/hop/ch] | Total<br>Hops[hop*ch] | Dwell Time[ms] | Limit [s] | Verdict |
|---------------|--------|---------|----------------------------|-----------------------|----------------|-----------|---------|
| GFSK          | DH5    | MCH     | 2.885                      | 102                   | 294.27         | 0.4       | Pass    |
| $\pi/4$ DQPSK | 2DH5   | MCH     | 2.889                      | 118                   | 340.902        | 0.4       | Pass    |

## 6.2 Test Graphs



$\pi/4$ DQPSK  
\_2DH5/MCH

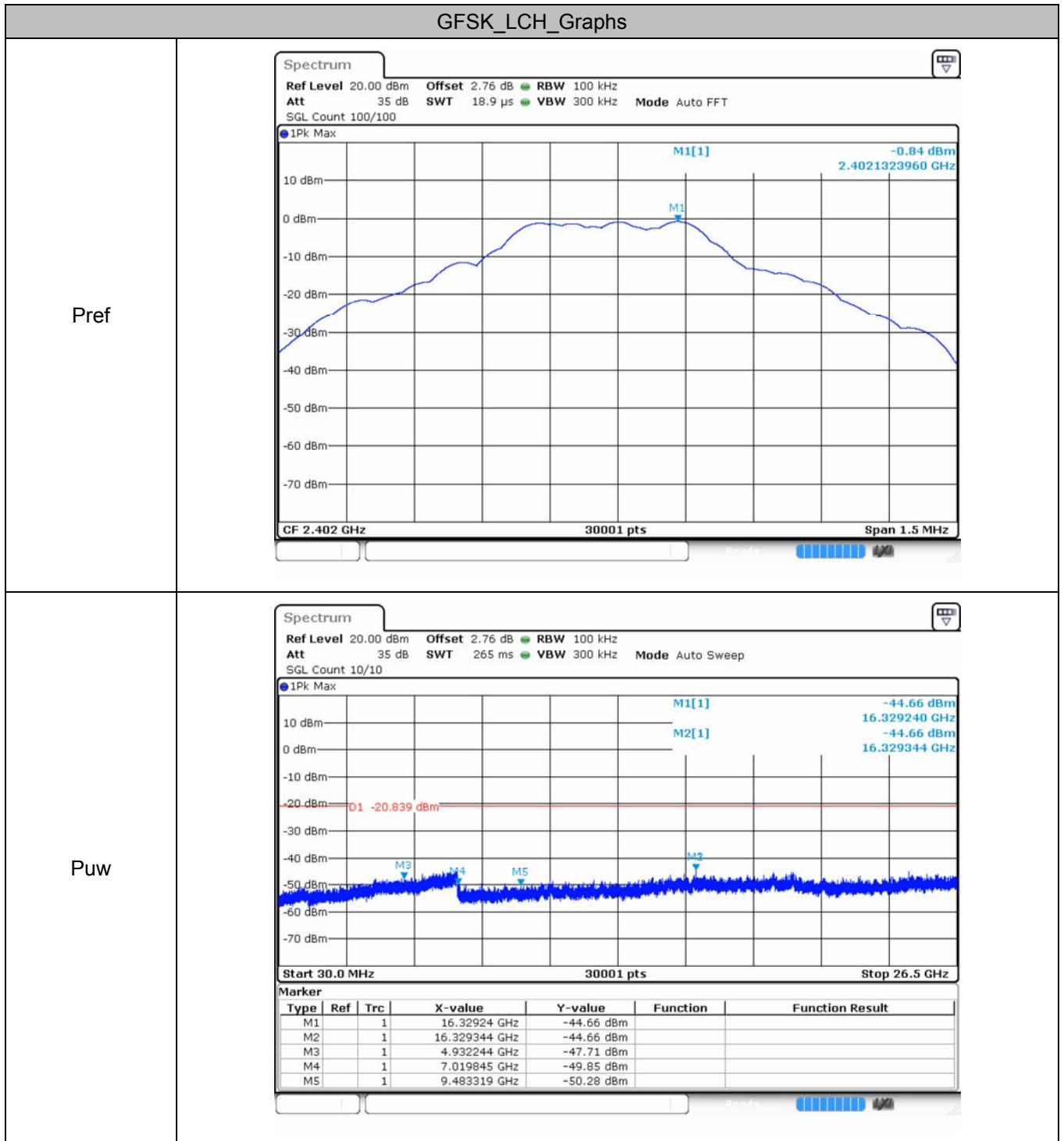


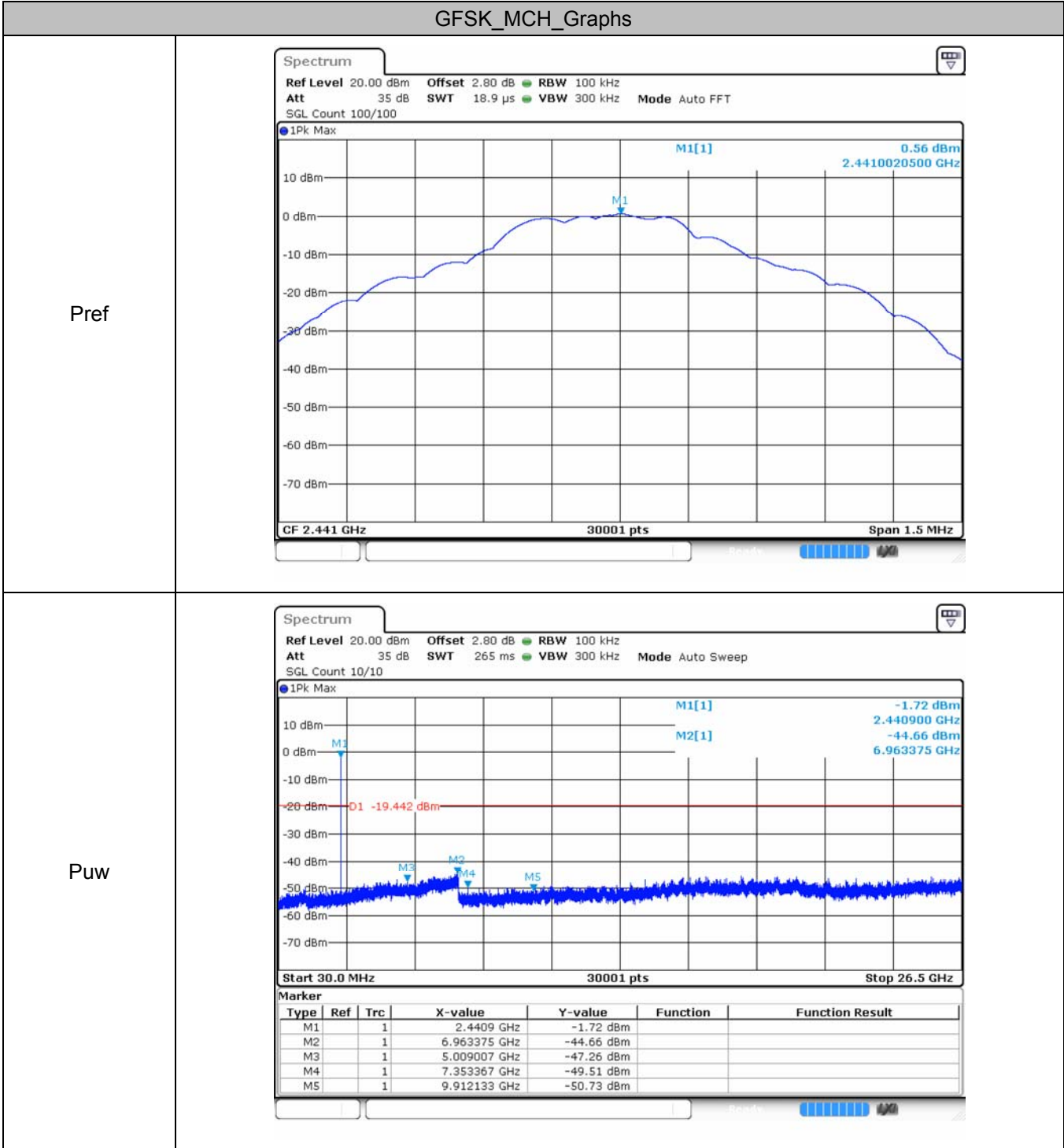
## 7 RF Conducted Spurious Emissions

### 7.1 Test Result

| Mode          | Channel | Max. Level [dBc] | Limit [dBc] | Verdict |
|---------------|---------|------------------|-------------|---------|
| GFSK          | LCH     | -43.82           | -20         | Pass    |
|               | MCH     | -45.22           | -20         | Pass    |
|               | HCH     | -45.46           | -20         | Pass    |
| $\pi/4$ DQPSK | LCH     | -40.14           | -20         | Pass    |
|               | MCH     | -41.85           | -20         | Pass    |
|               | HCH     | -42.06           | -20         | Pass    |

## 7.2 Test Graphs

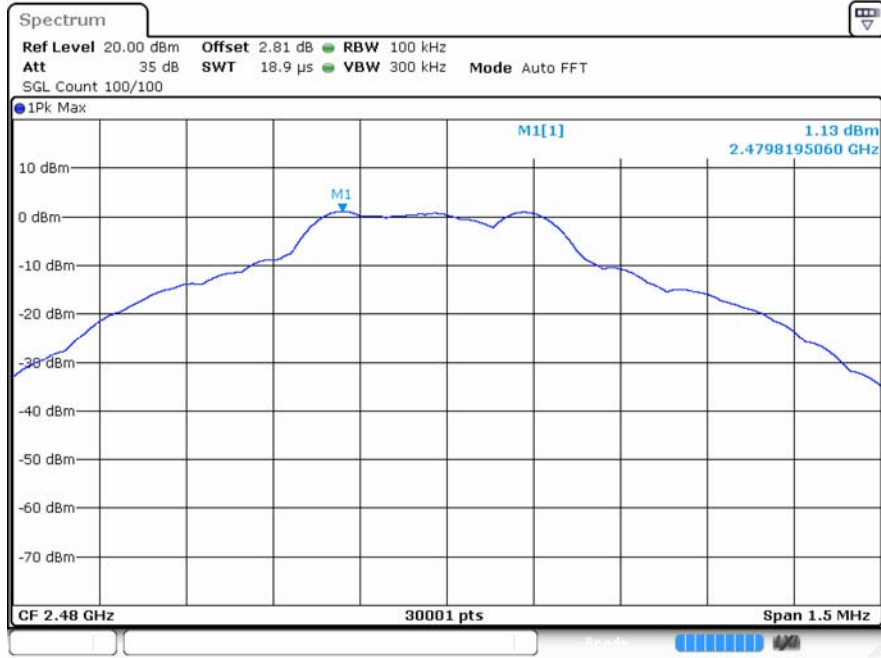




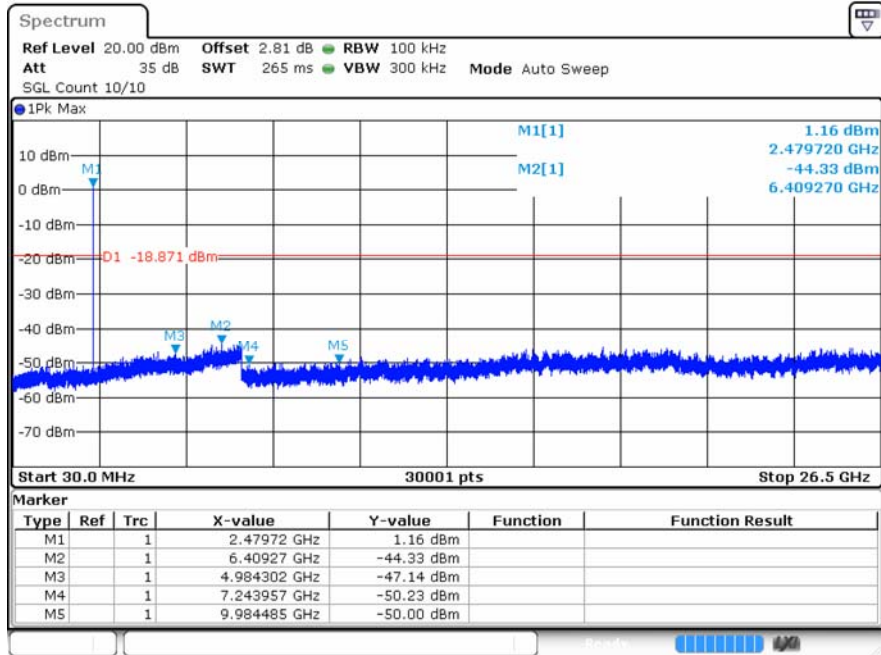


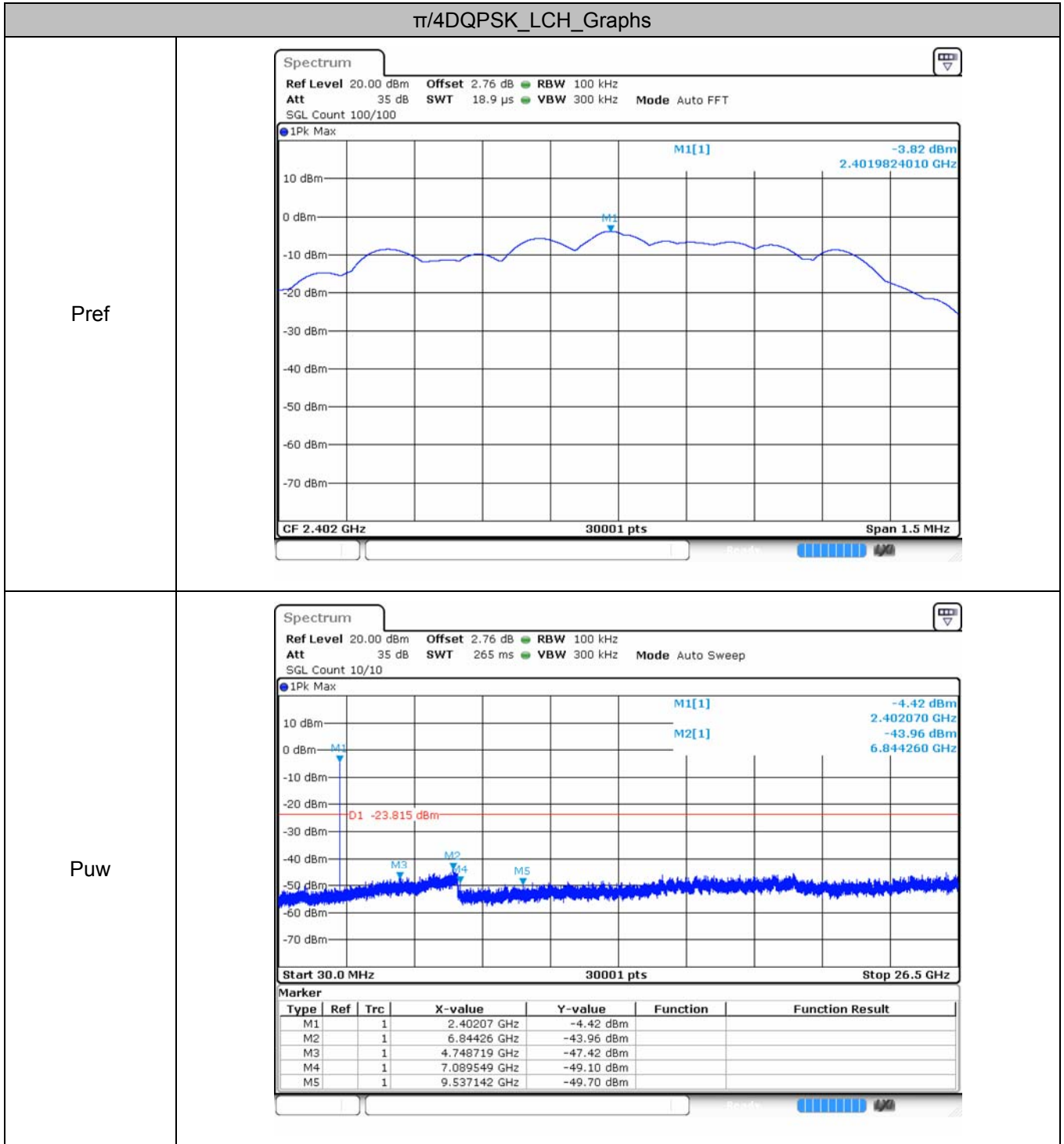
GFSK\_HCH\_Graphs

Pref



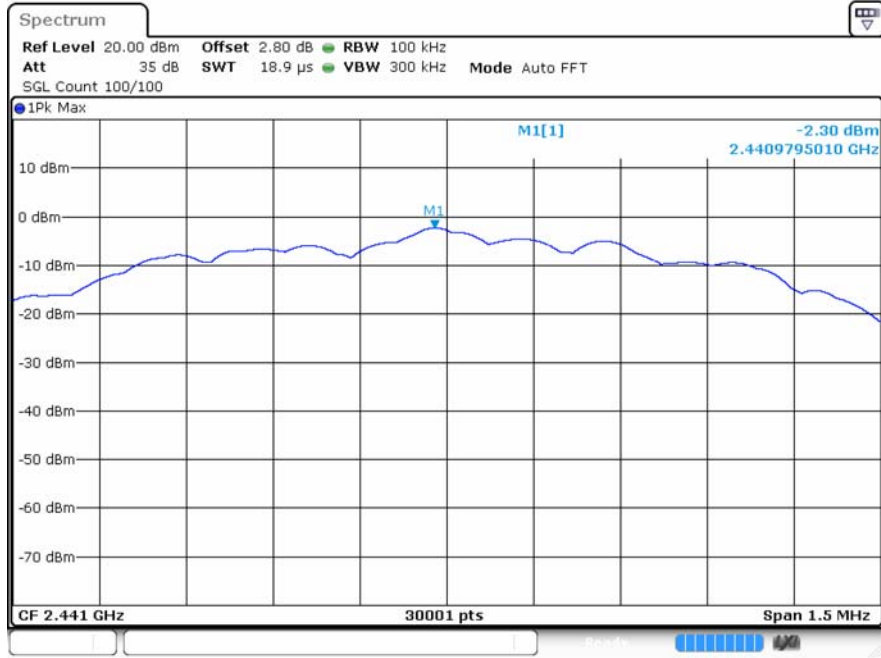
Puw



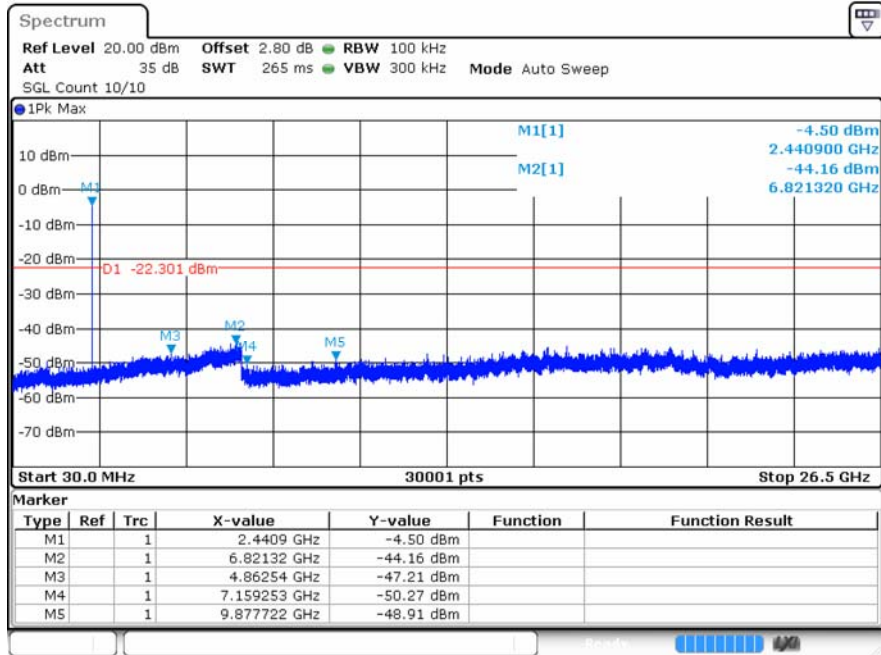


$\pi/4$ DQPSK\_MCH\_Graphs

Pref

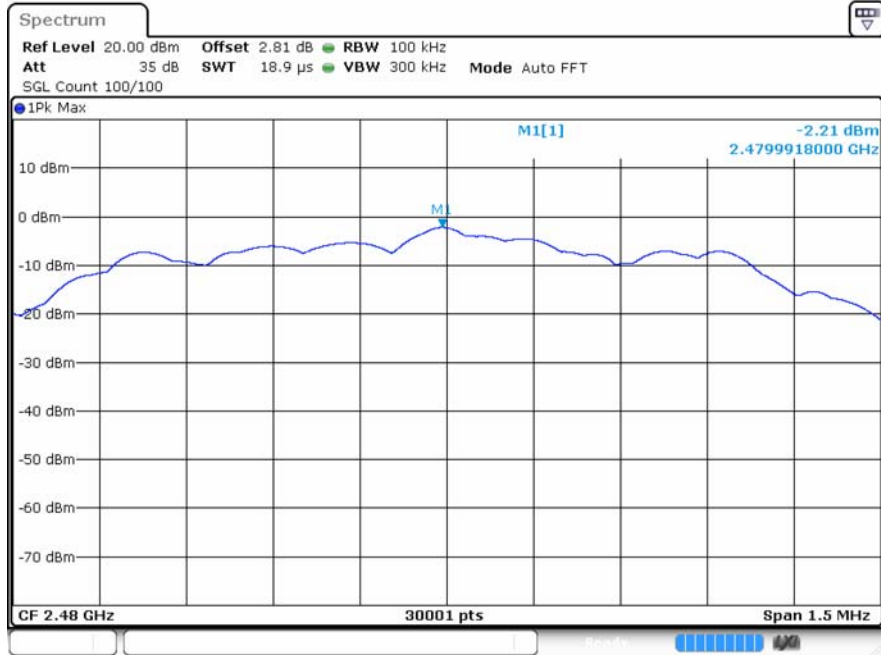


Puw

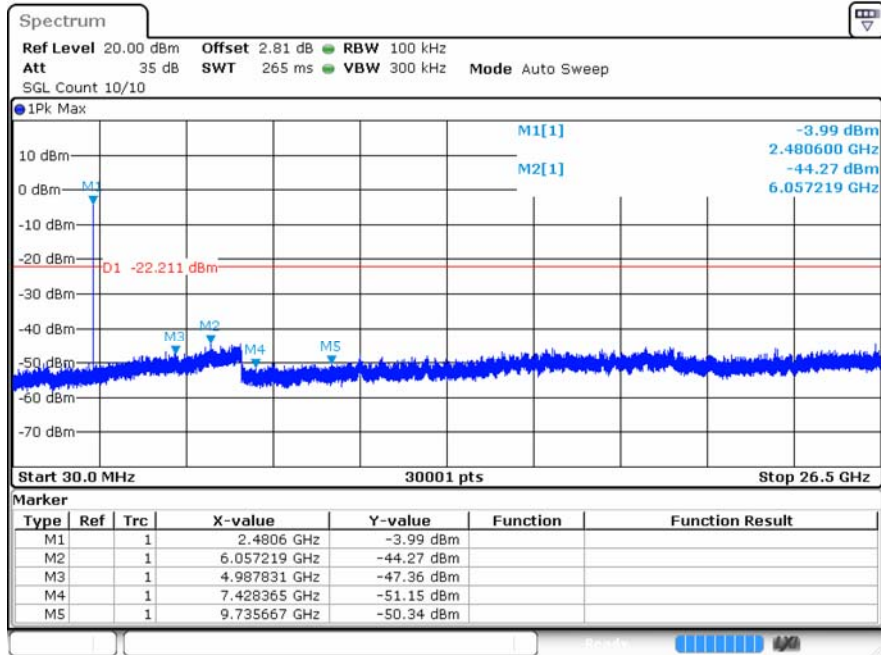


$\pi/4$ DQPSK\_HCH\_Graphs

Pref



Puw

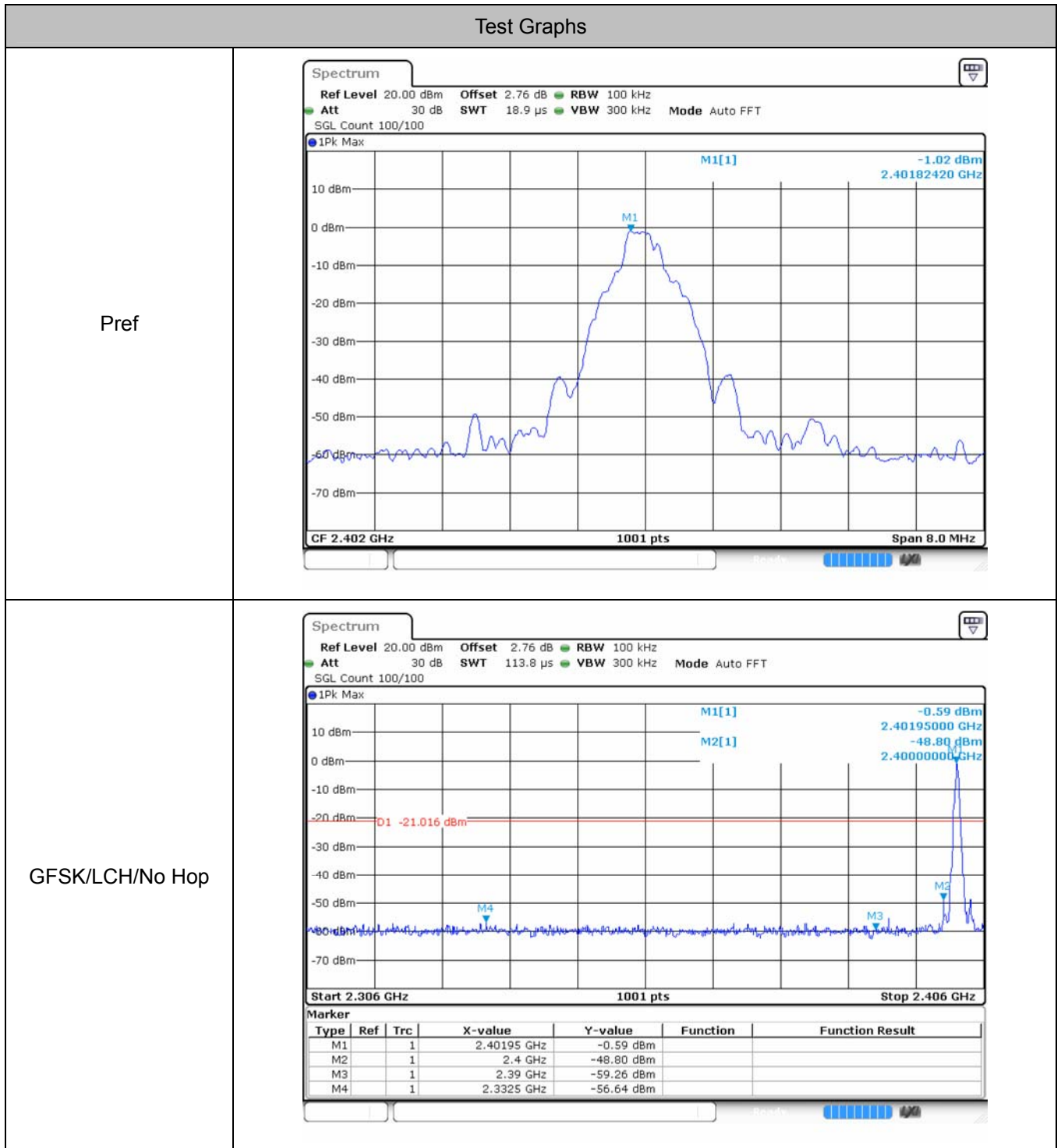


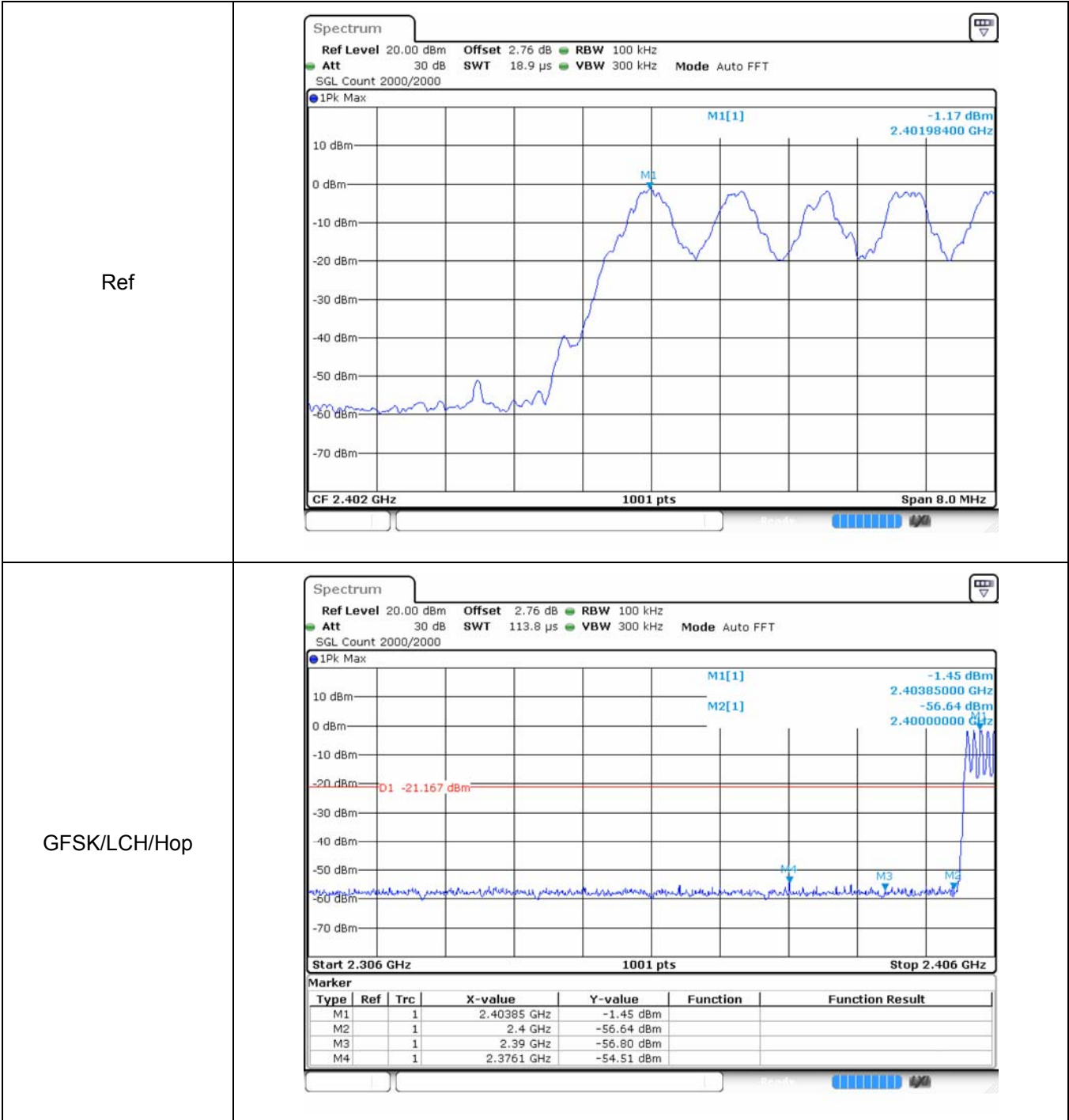
## 8 Band-edge for RF Conducted Emissions

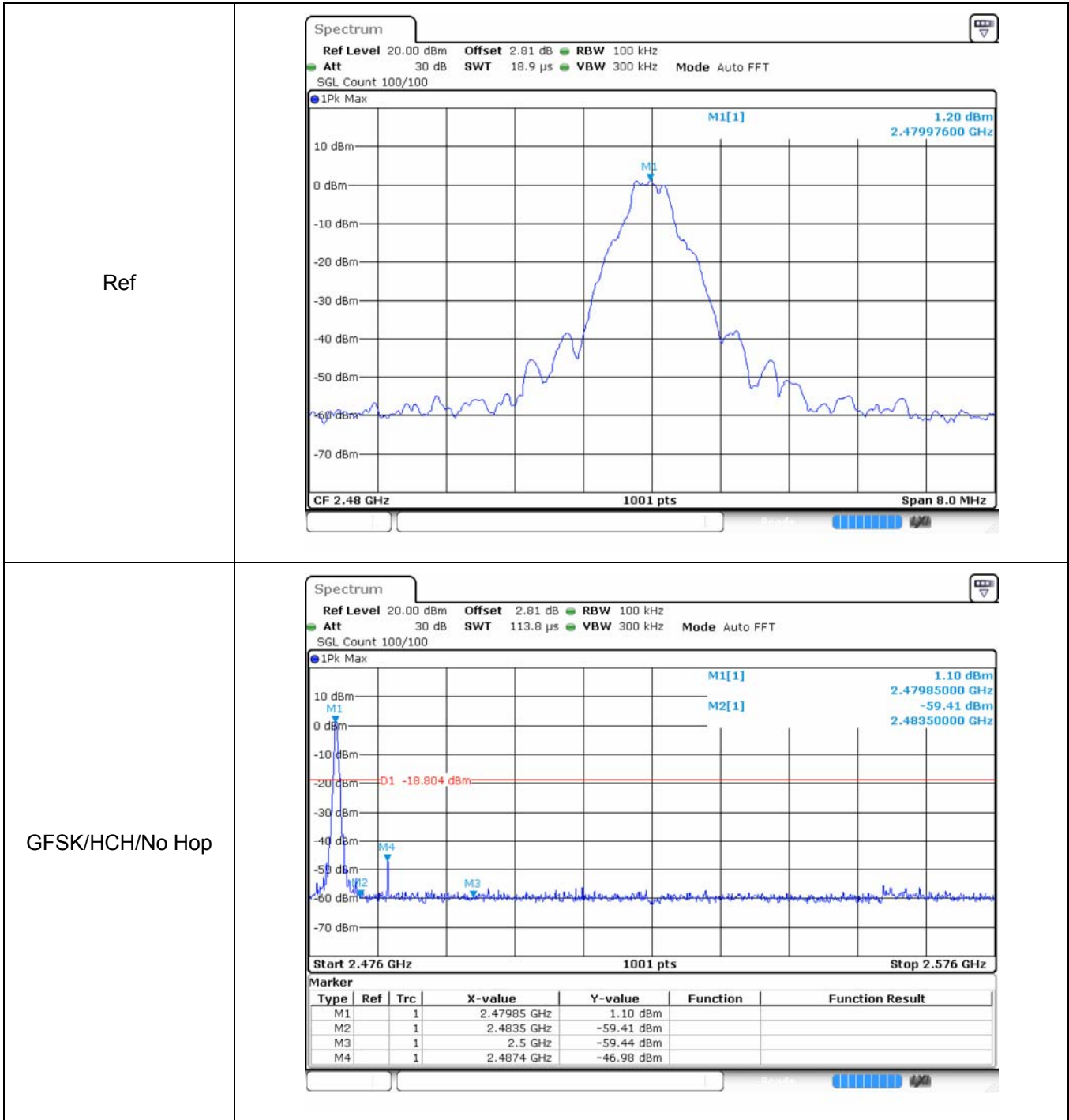
### 8.1 Test Result

| Mode          | Channel | Carrier Frequency [MHz] | Frequency Hopping | Max Spurious Level [dBc] | Limit [dBc] | Verdict |
|---------------|---------|-------------------------|-------------------|--------------------------|-------------|---------|
| GFSK          | LCH     | 2402                    | Off               | -55.62                   | -20         | Pass    |
|               |         |                         | On                | -53.33                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -48.17                   | -20         | Pass    |
|               |         |                         | On                | -49.37                   | -20         | Pass    |
| $\pi/4$ DQPSK | LCH     | 2402                    | Off               | -52.53                   | -20         | Pass    |
|               |         |                         | On                | -51.44                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -49                      | -20         | Pass    |
|               |         |                         | On                | -47.09                   | -20         | Pass    |

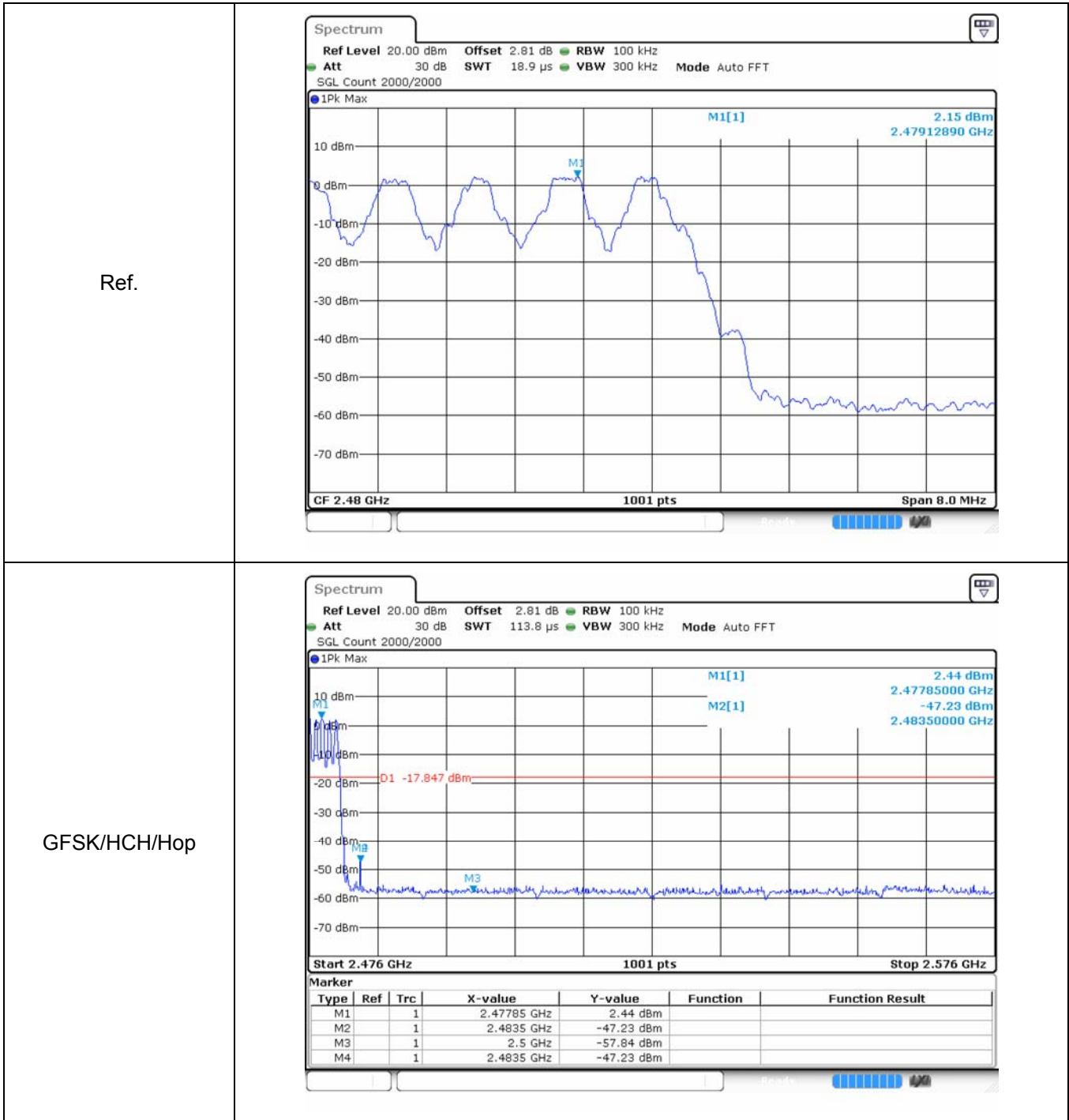
## 8.2 Test Graphs

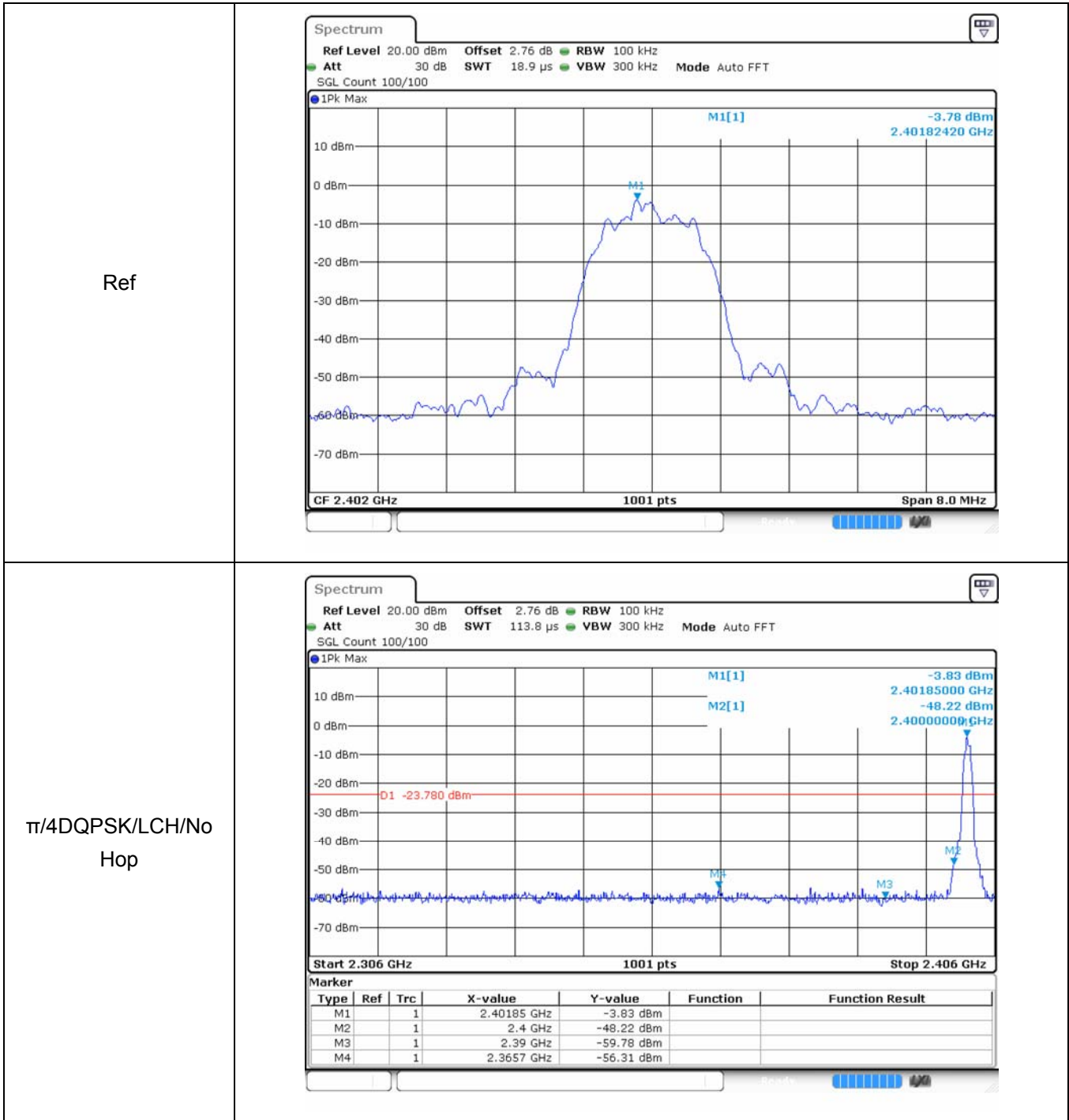


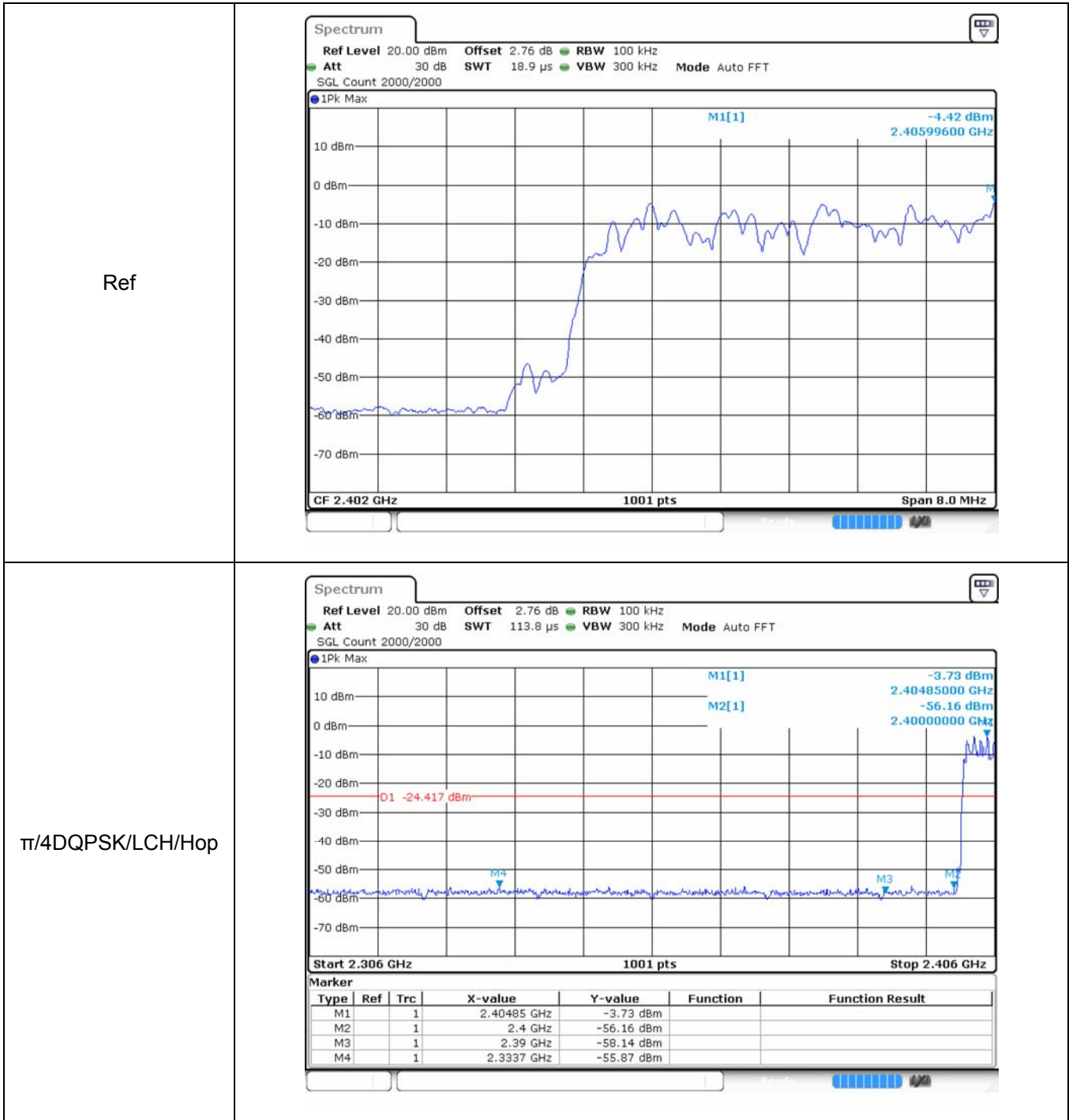


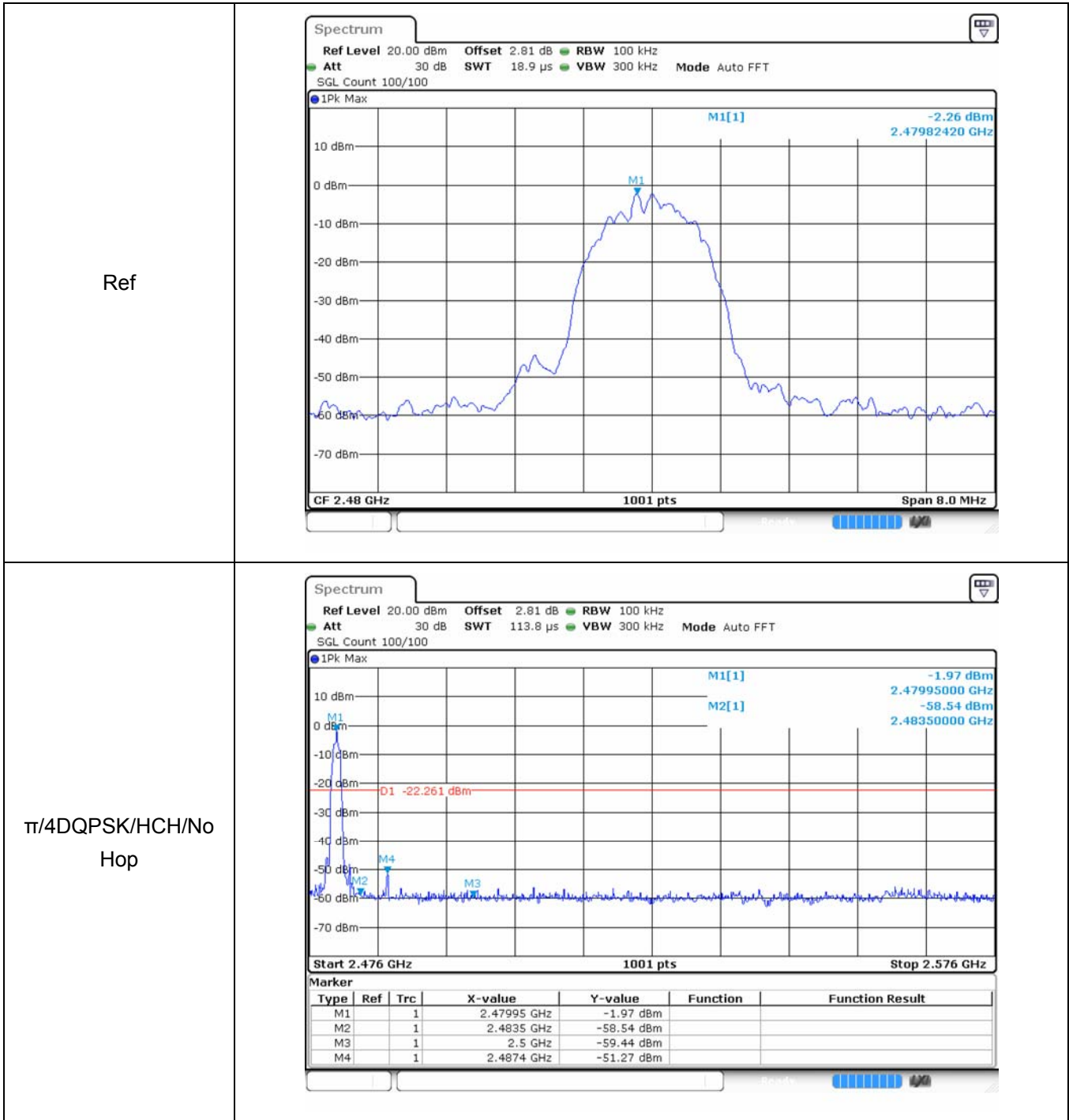


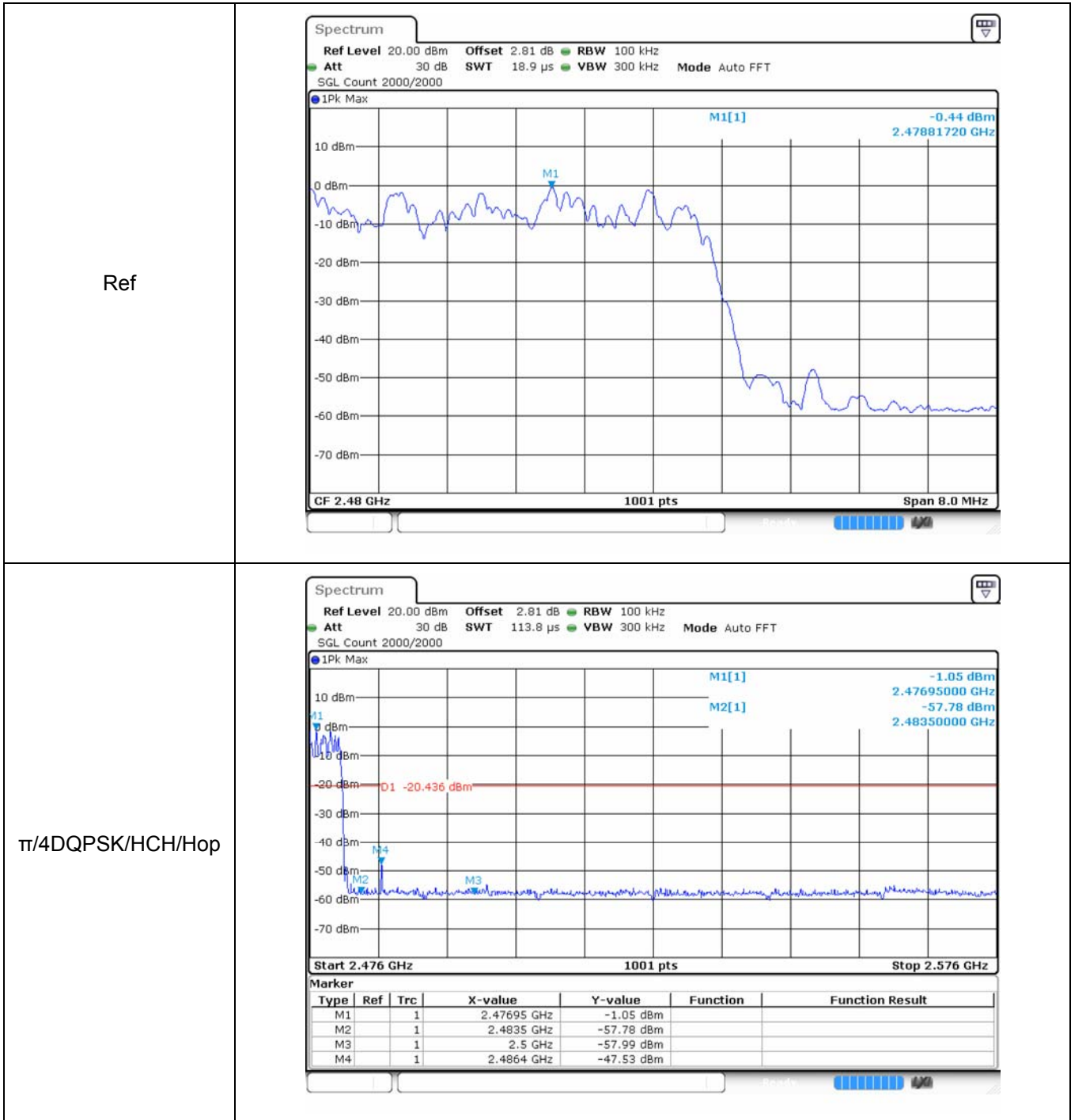












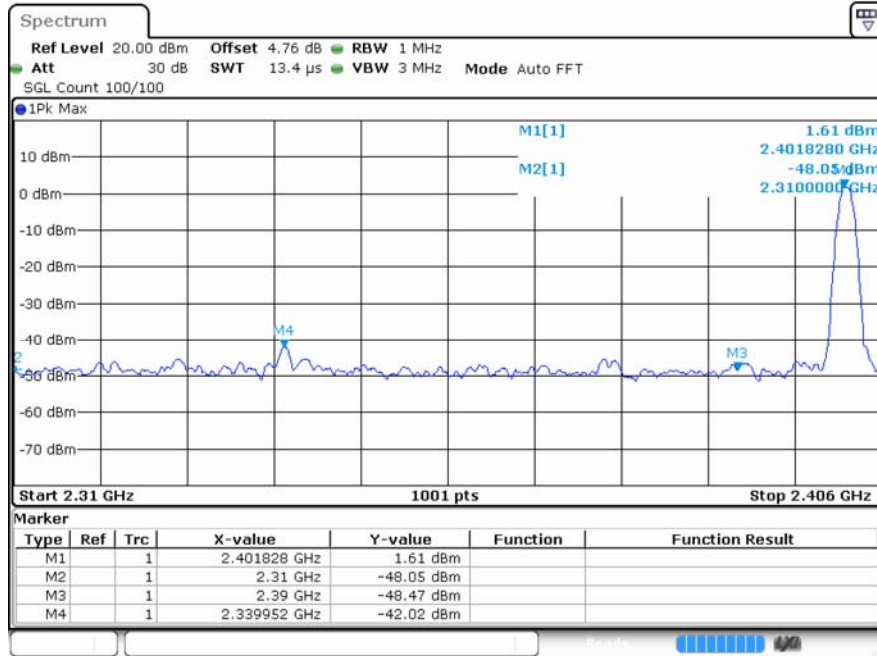
## 9 Restrict-band band-edge measurements

### 9.1 Test Result

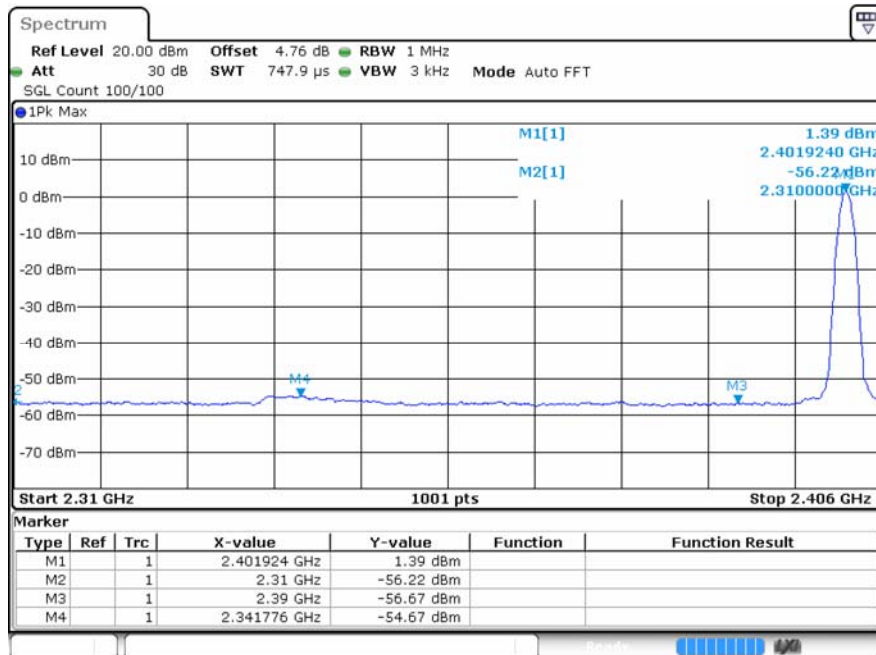
| Test Mode     | Hopping | Freq.    | Power [dBm] | Gain | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|---------|----------|-------------|------|------------|----------|----------------|---------|
| GFSK          | Off     | 2310.0   | -48.05      | 2    | 49.21      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -56.21      | 2    | 41.05      | AV       | 54             | Pass    |
|               | Off     | 2339.952 | -42.01      | 2    | 55.25      | PEAK     | 74             | Pass    |
|               | Off     | 2341.776 | -54.66      | 2    | 42.6       | AV       | 54             | Pass    |
|               | Off     | 2390.0   | -48.46      | 2    | 48.8       | PEAK     | 74             | Pass    |
|               | Off     | 2390.0   | -56.66      | 2    | 40.6       | AV       | 54             | Pass    |
|               | Off     | 2483.5   | -47.91      | 2    | 49.35      | PEAK     | 74             | Pass    |
|               | Off     | 2483.5   | -55.03      | 2    | 42.23      | AV       | 54             | Pass    |
|               | Off     | 2485.96  | -44.92      | 2    | 52.34      | PEAK     | 74             | Pass    |
|               | Off     | 2487.184 | -54.45      | 2    | 42.81      | AV       | 54             | Pass    |
|               | Off     | 2500.0   | -47.39      | 2    | 49.87      | PEAK     | 74             | Pass    |
|               | Off     | 2500.0   | -56.39      | 2    | 40.87      | AV       | 54             | Pass    |
| $\pi/4$ DQPSK | Off     | 2310.0   | -49.62      | 2    | 47.64      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -56.36      | 2    | 40.9       | AV       | 54             | Pass    |
|               | Off     | 2339.76  | -45.07      | 2    | 52.19      | PEAK     | 74             | Pass    |
|               | Off     | 2338.128 | -54.09      | 2    | 43.17      | AV       | 54             | Pass    |
|               | Off     | 2390.0   | -47.29      | 2    | 49.97      | PEAK     | 74             | Pass    |
|               | Off     | 2390.0   | -56.84      | 2    | 40.42      | AV       | 54             | Pass    |
|               | Off     | 2483.5   | -47.89      | 2    | 49.37      | PEAK     | 74             | Pass    |
|               | Off     | 2483.5   | -54.64      | 2    | 42.62      | AV       | 54             | Pass    |
|               | Off     | 2491.912 | -44.09      | 2    | 53.17      | PEAK     | 74             | Pass    |
|               | Off     | 2483.512 | -54.64      | 2    | 42.62      | AV       | 54             | Pass    |
|               | Off     | 2500.0   | -47.86      | 2    | 49.4       | PEAK     | 74             | Pass    |
|               | Off     | 2500.0   | -56.22      | 2    | 41.04      | AV       | 54             | Pass    |

## 9.2 Test Graphs

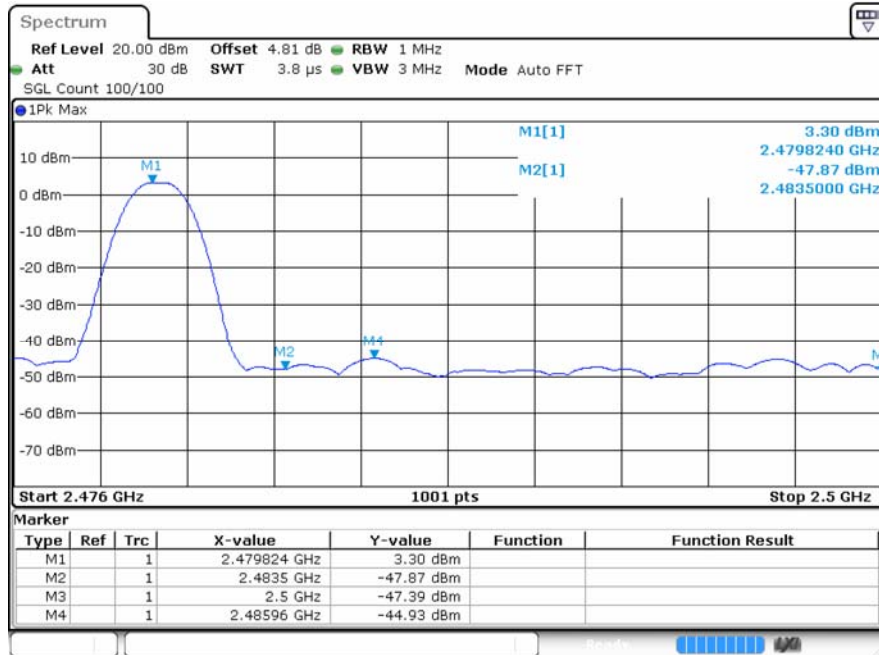
Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK (Low Channel)



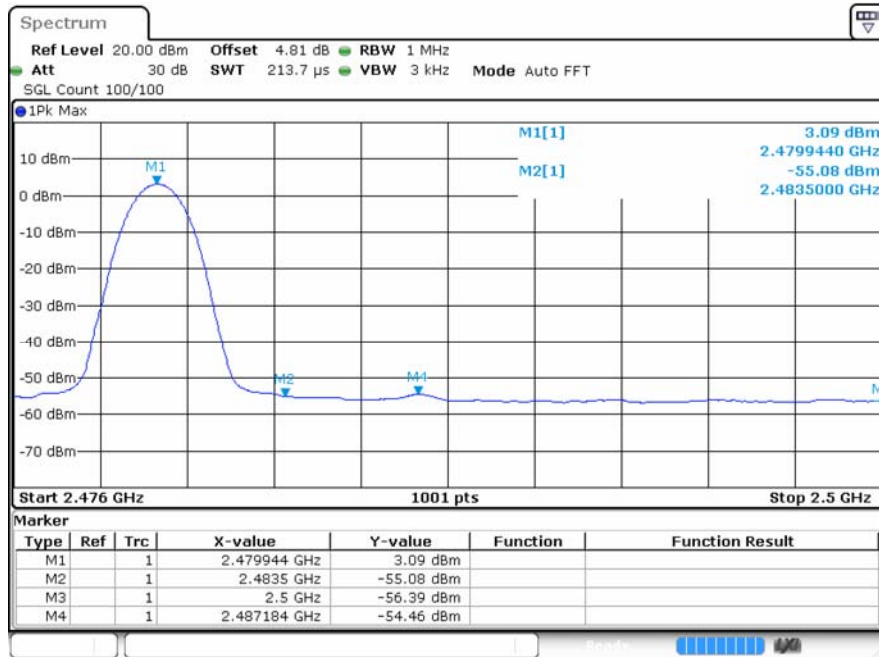
Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average (Low Channel)



Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (High Channel)

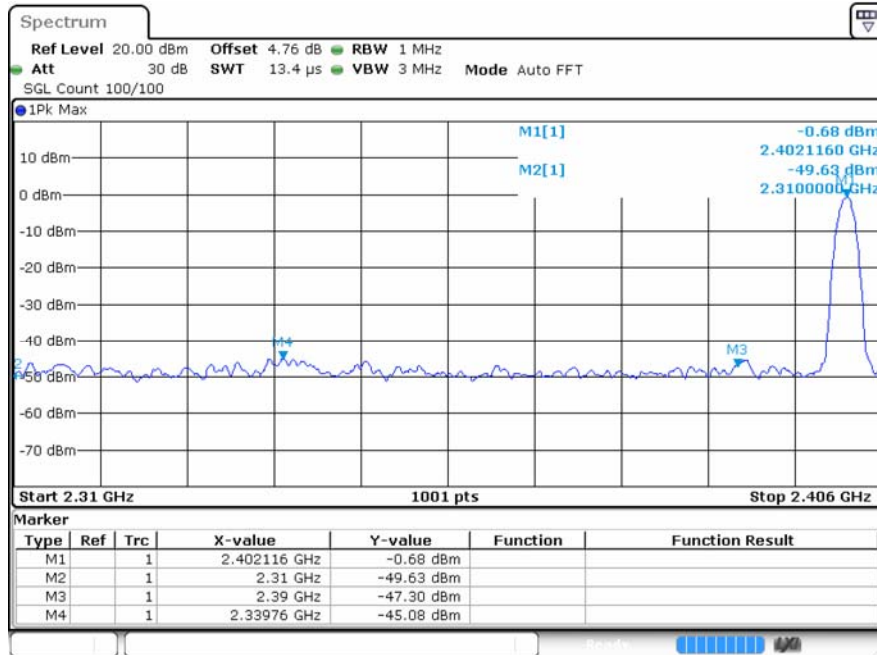


Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (High Channel)

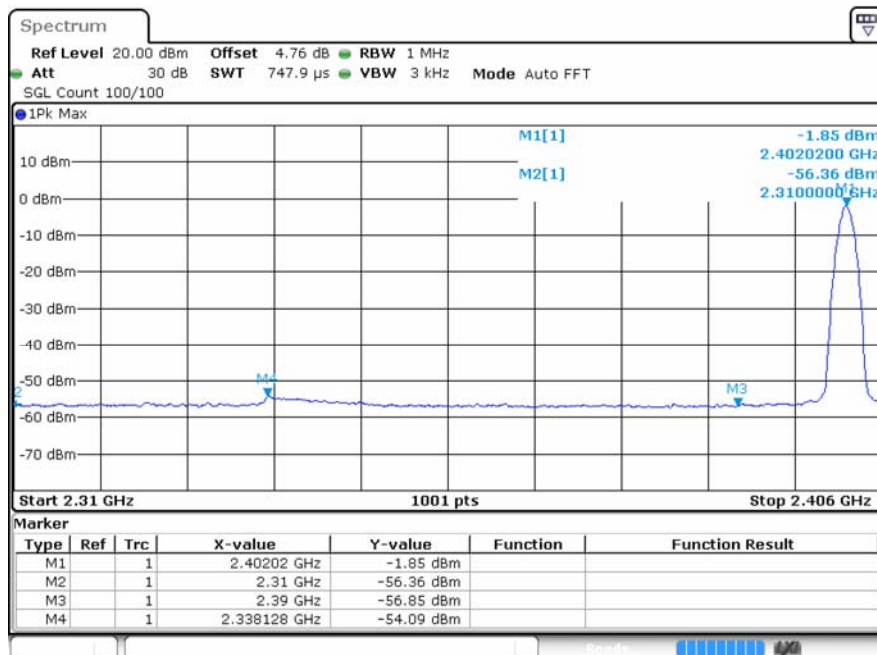




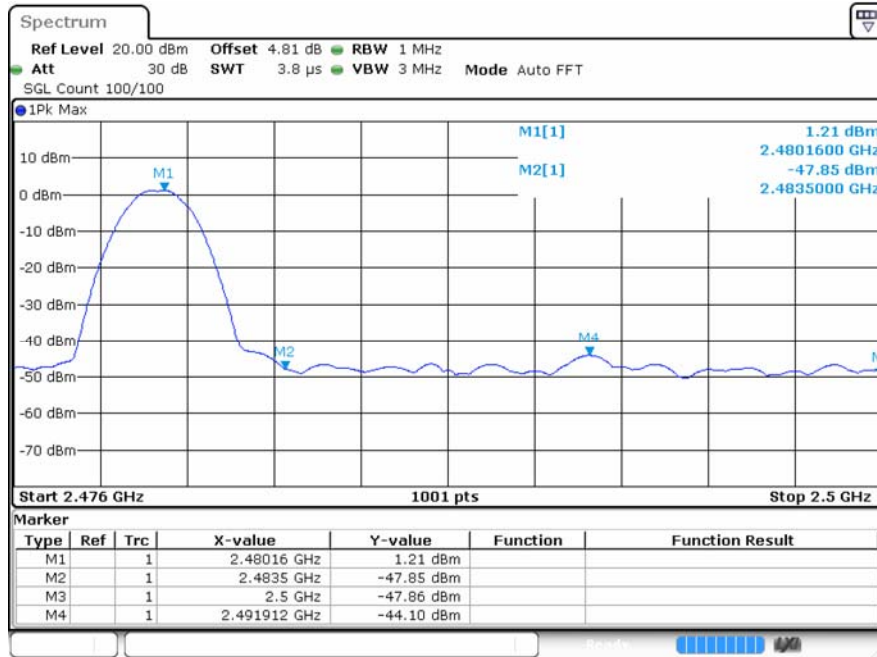
Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (Low Channel)



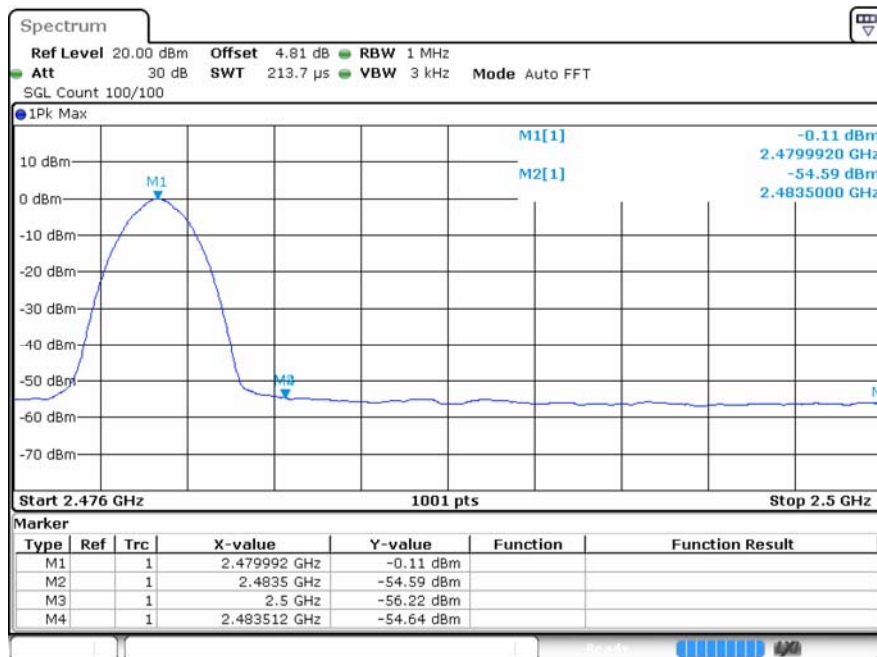
Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (Low Channel)



Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (High Channel)



Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (High Channel)



---The End---