

## Appendix A

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

Product Name: Glasses6

Trade Mark: N/A

Test Model: Glasses6

Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 25.1℃       |
| Relative Humidity: | 52.1%       |
| ATM Pressure:      | 101Kpa      |
| Test Engineer:     | Emiya lin   |
| Supervised by:     | Simba Haung |



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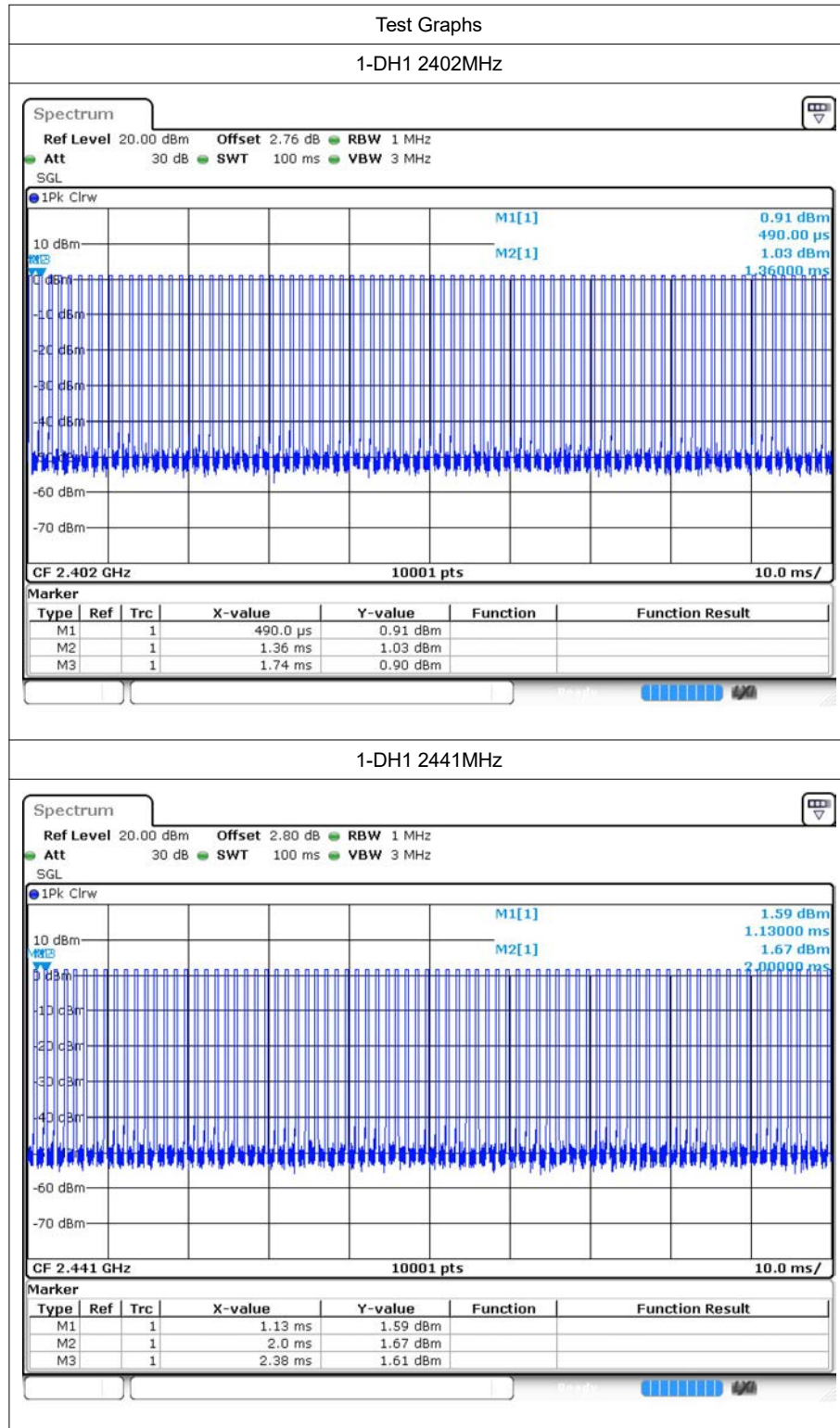
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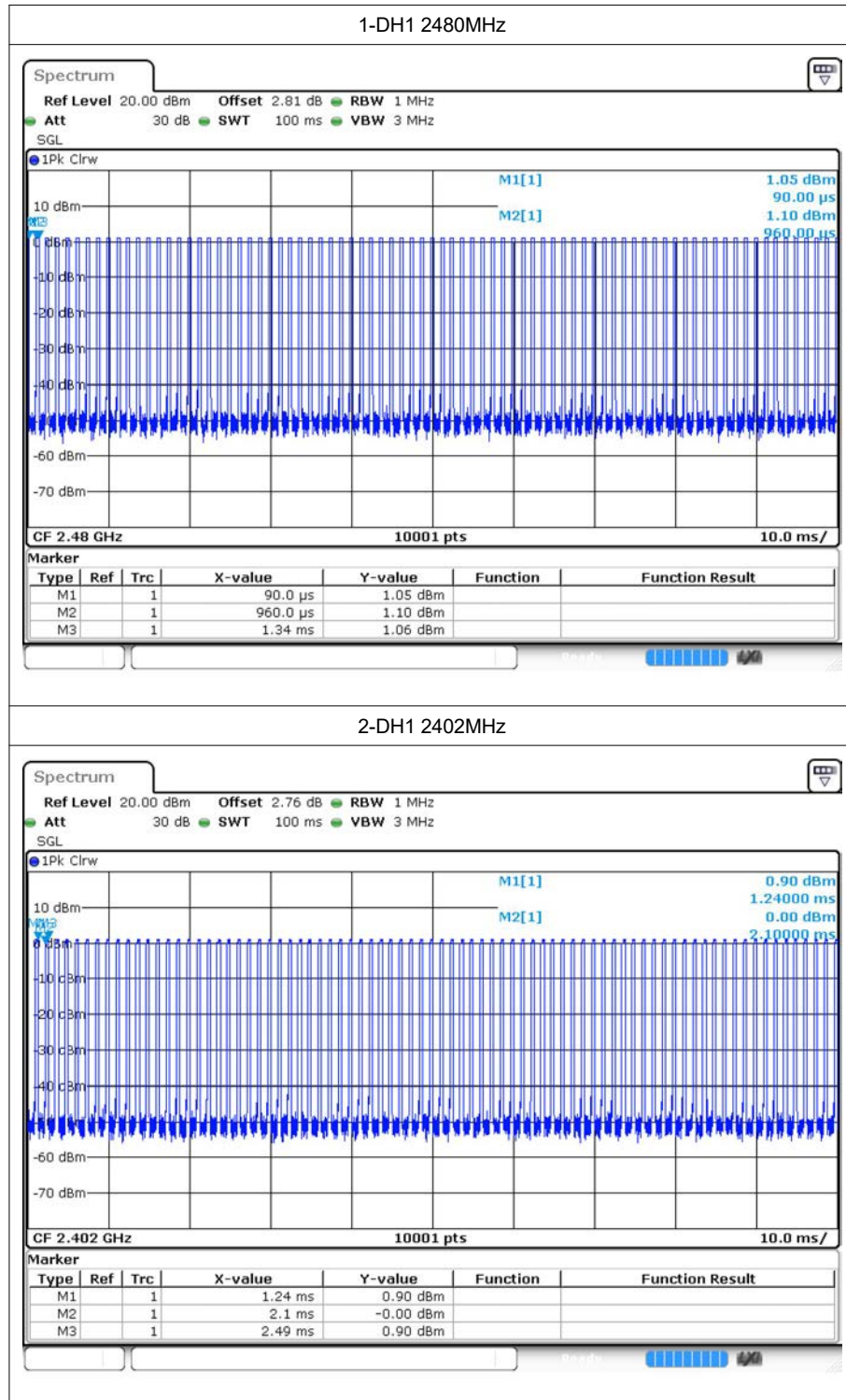
# 1 Duty Cycle

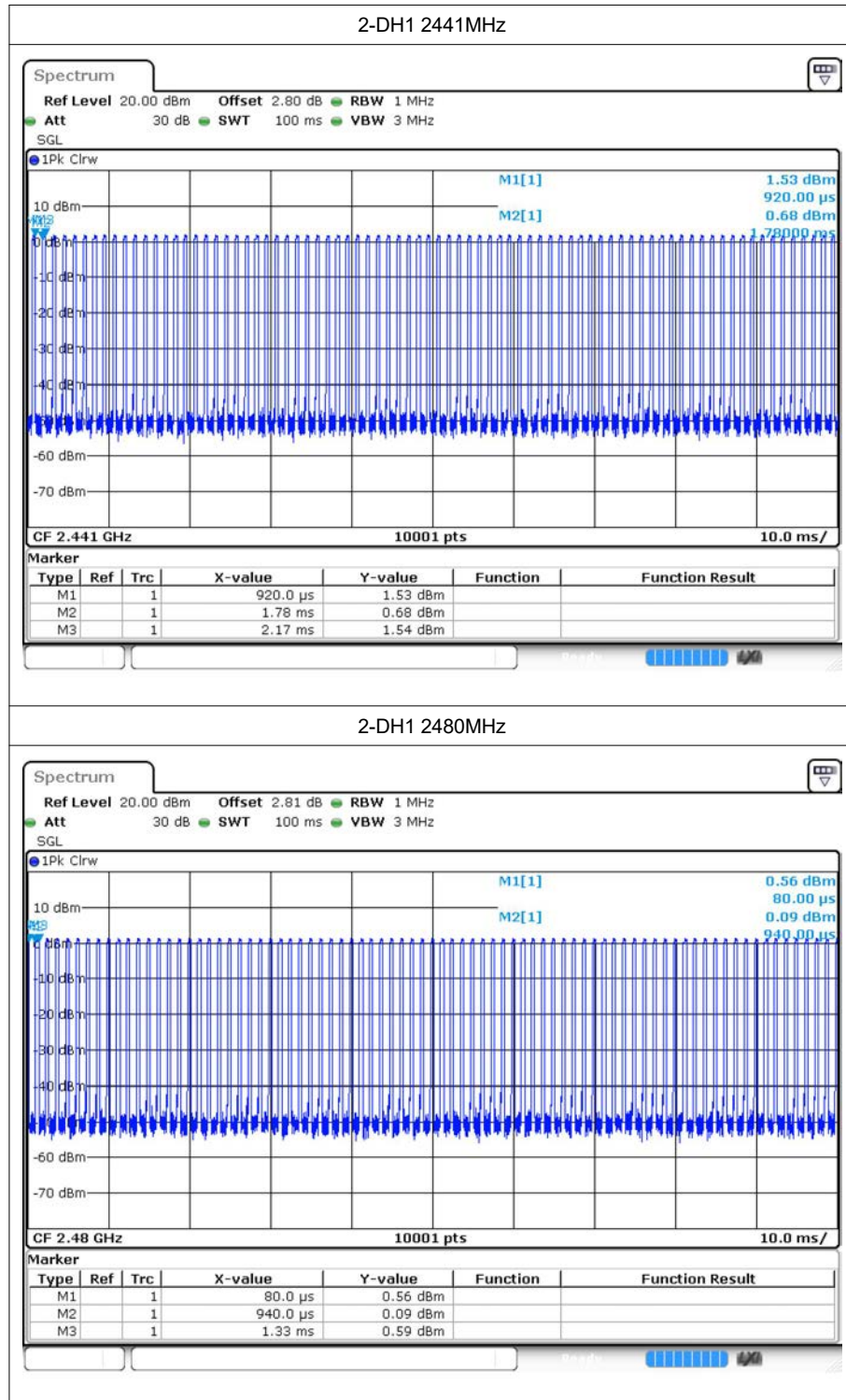
## 1.1 Test Result

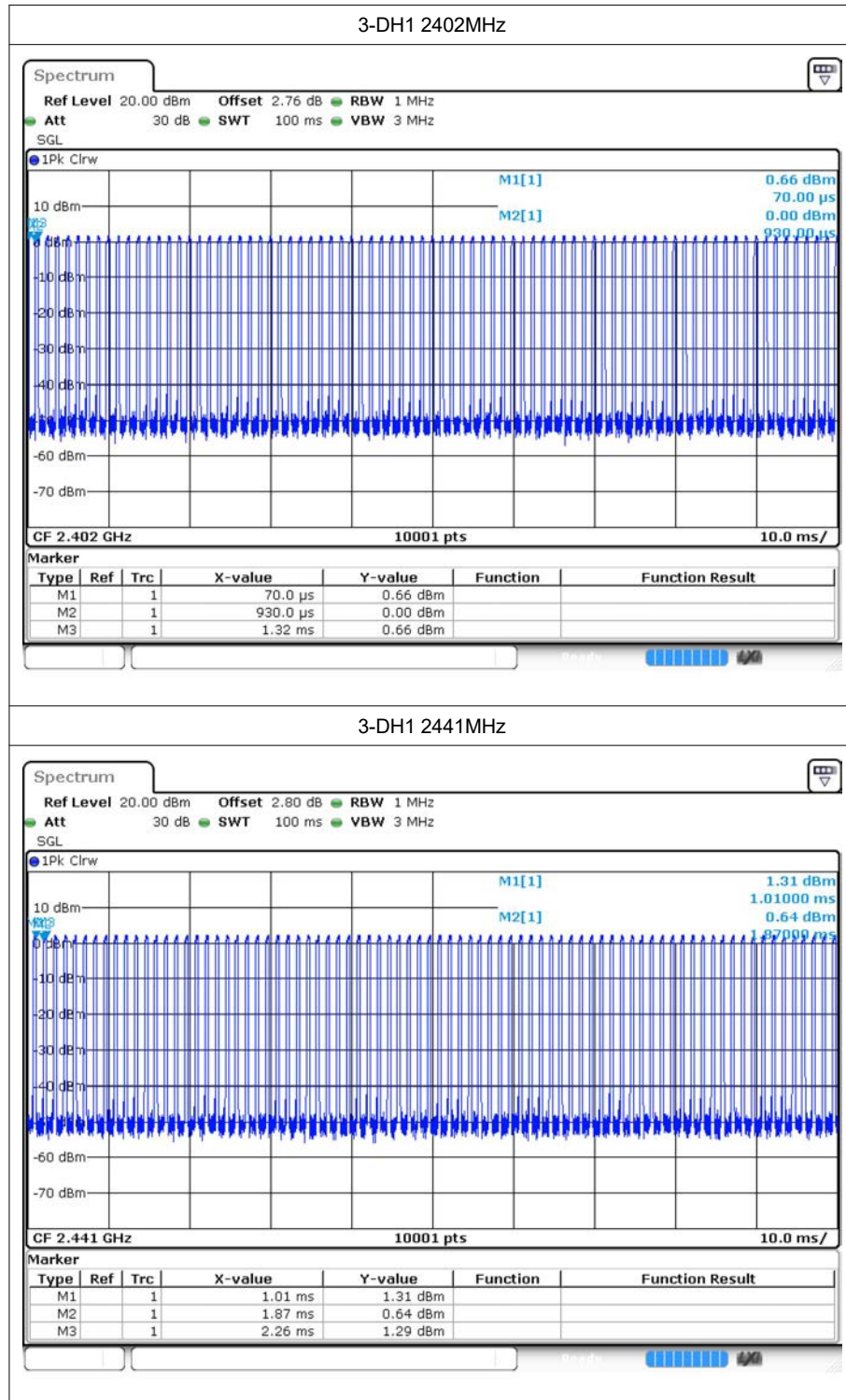
| Mode  | Frequency (MHz) | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|-------|-----------------|----------------|-------------------|-----------|
| 1-DH1 | 2402            | 31.2           | 5.06              | 2.63      |
| 1-DH1 | 2441            | 31.2           | 5.06              | 2.63      |
| 1-DH1 | 2480            | 31.21          | 5.06              | 2.63      |
| 2-DH1 | 2402            | 32             | 4.95              | 2.56      |
| 2-DH1 | 2441            | 32             | 4.95              | 2.56      |
| 2-DH1 | 2480            | 32.01          | 4.95              | 2.56      |
| 3-DH1 | 2402            | 32.01          | 4.95              | 2.56      |
| 3-DH1 | 2441            | 32             | 4.95              | 2.56      |
| 3-DH1 | 2480            | 32.01          | 4.95              | 2.56      |

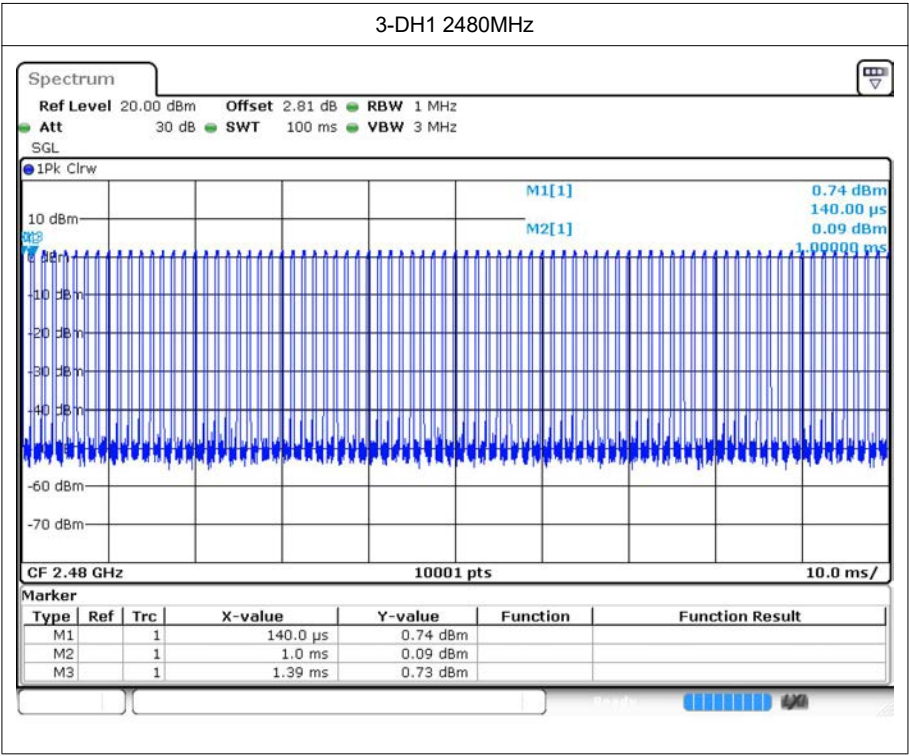
## 1.2 Test Graphs









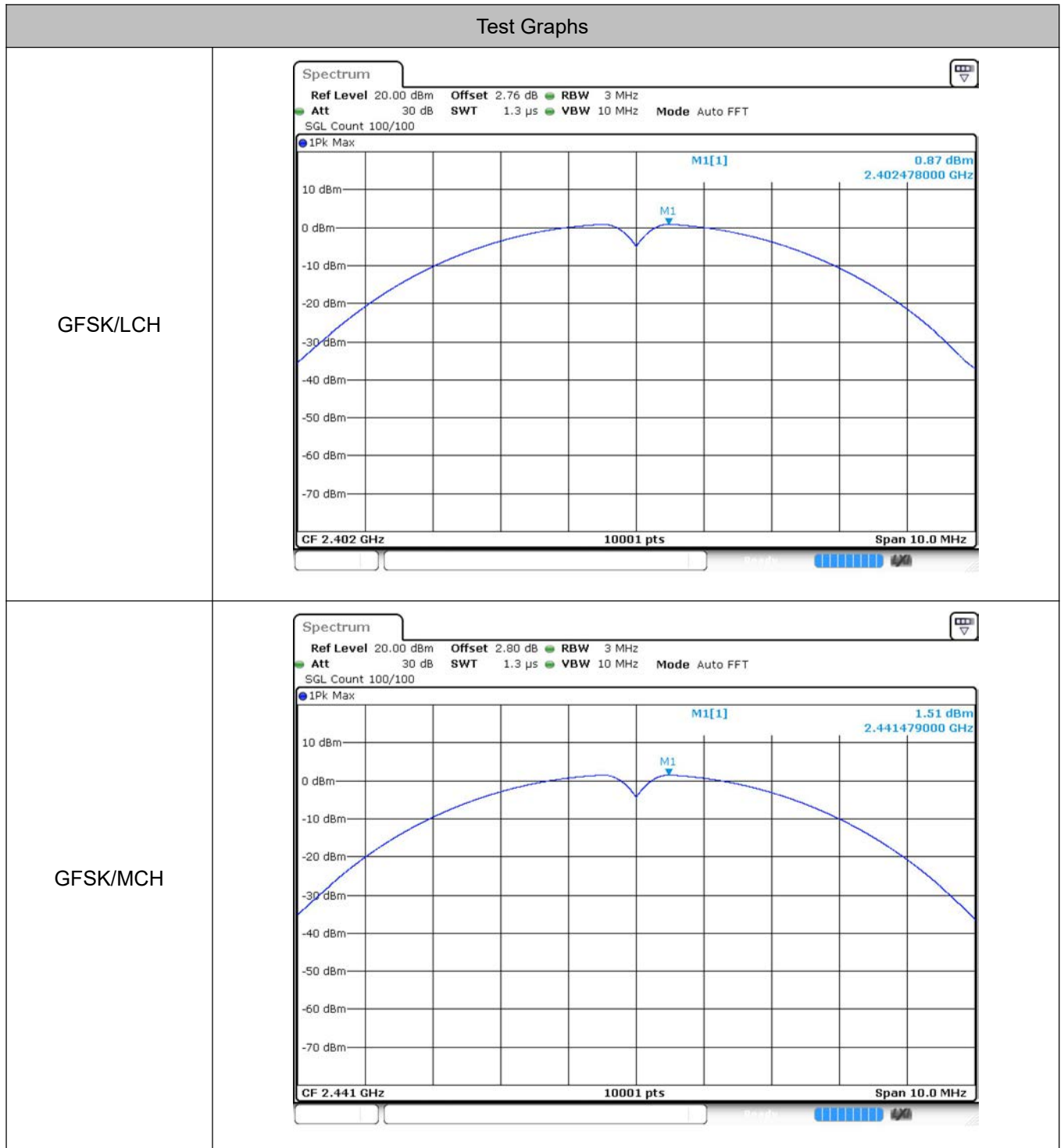


## 2 Maximum Conducted Peak Output Power

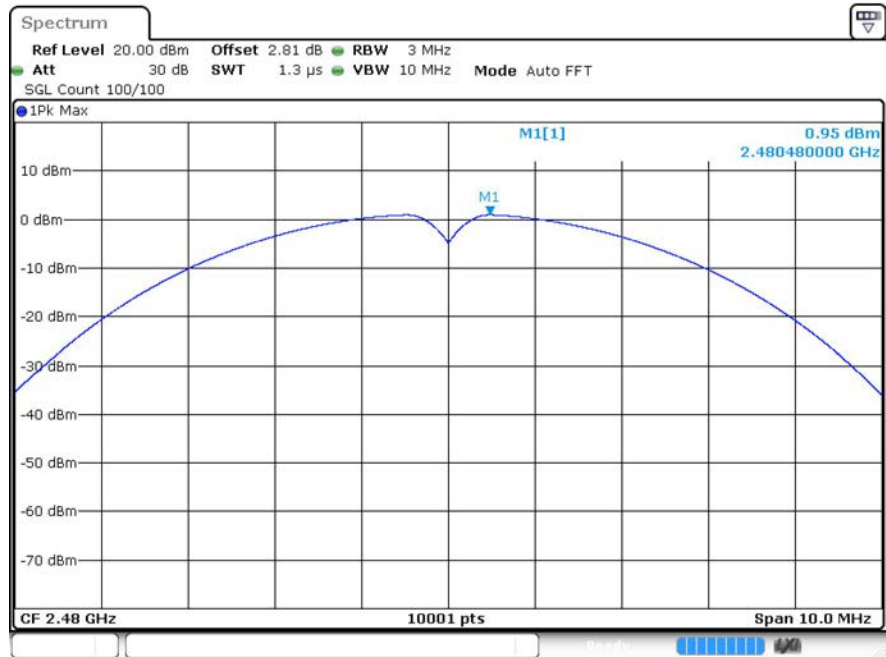
### 2.1 Test Result

| Mode          | Channel. | Maximum Peak Output Power<br>[dBm] | Limit<br>[dBm] | Verdict |
|---------------|----------|------------------------------------|----------------|---------|
| GFSK          | LCH      | 0.87                               | 21             | Pass    |
|               | MCH      | 1.51                               | 21             | Pass    |
|               | HCH      | 0.95                               | 21             | Pass    |
| $\pi/4$ DQPSK | LCH      | 2.05                               | 21             | Pass    |
|               | MCH      | 2.79                               | 21             | Pass    |
|               | HCH      | 2.2                                | 21             | Pass    |
| 8DPSK         | LCH      | 2.34                               | 21             | Pass    |
|               | MCH      | 2.66                               | 21             | Pass    |
|               | HCH      | 2.33                               | 21             | Pass    |

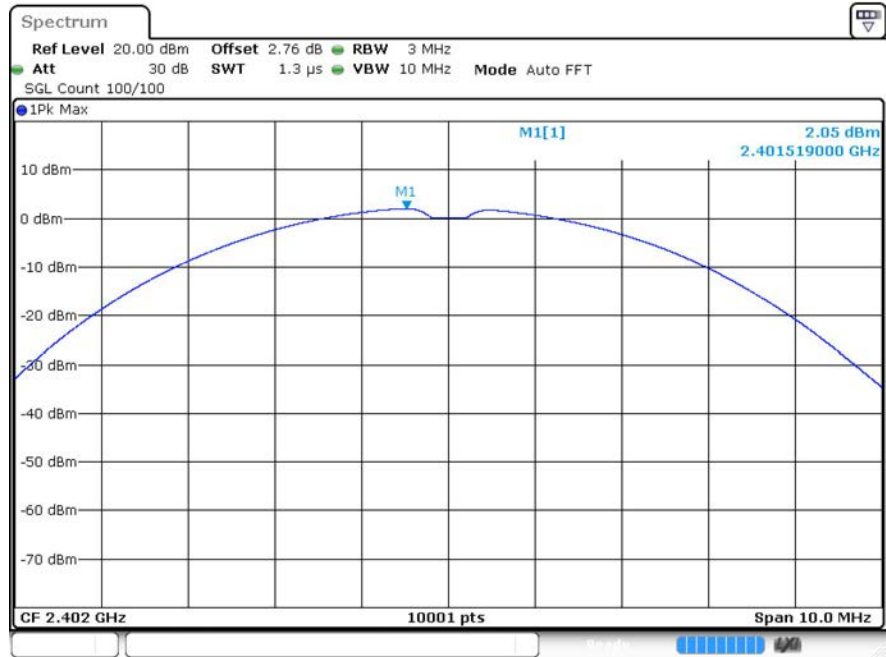
## 2.2 Test Graphs



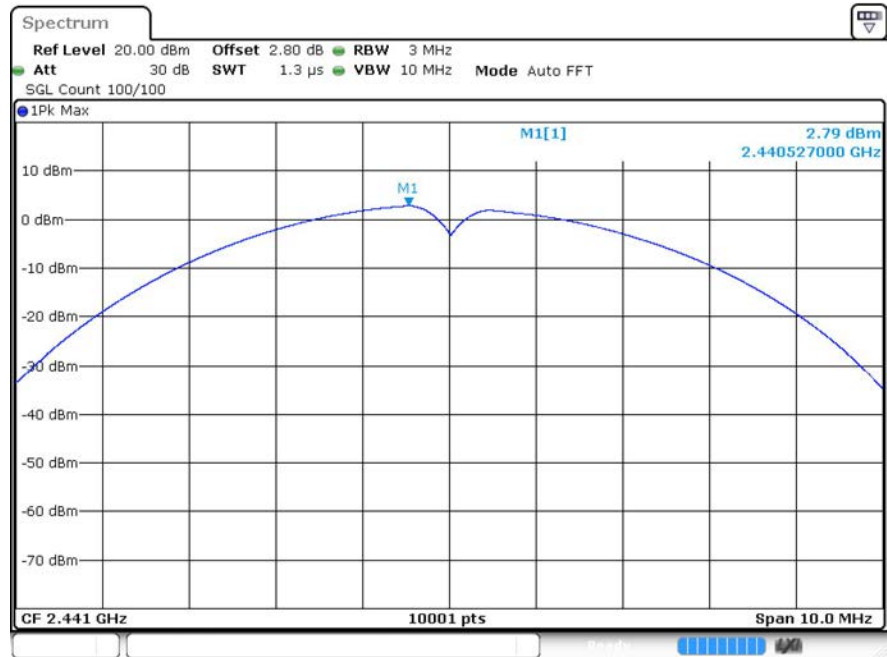
GFSK/HCH



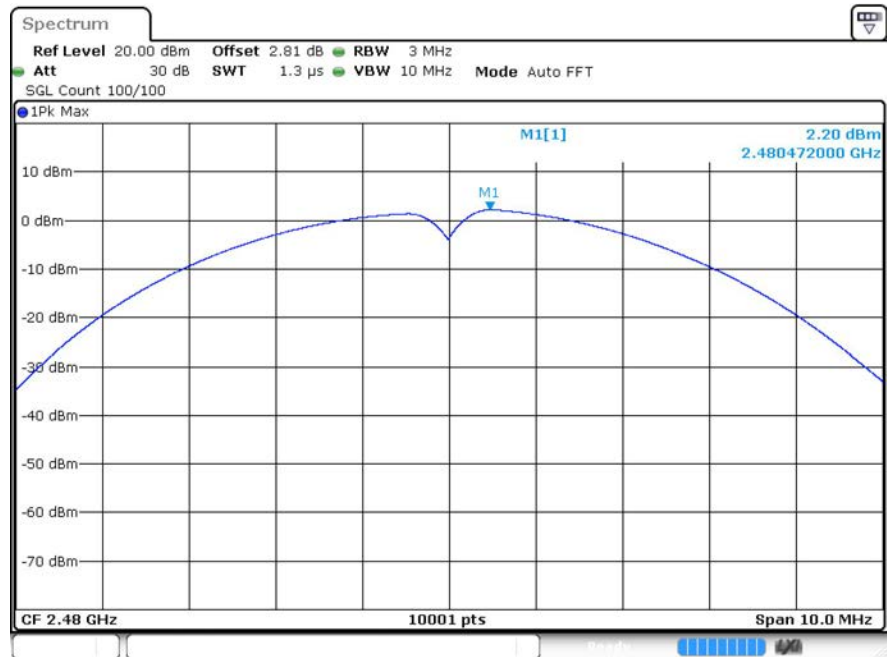
$\pi/4$ DQPSK/LCH



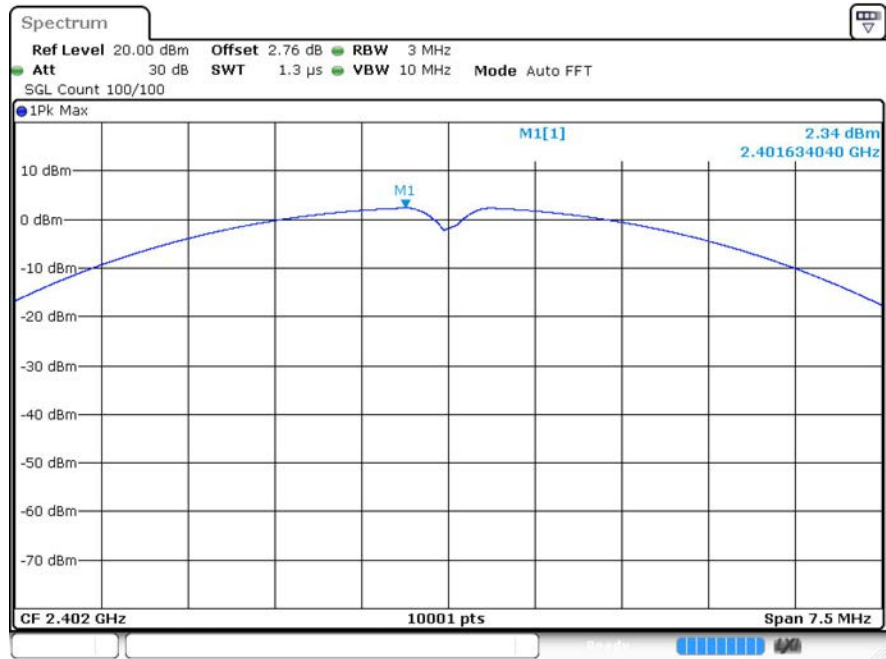
$\pi/4$ DQPSK/MCH



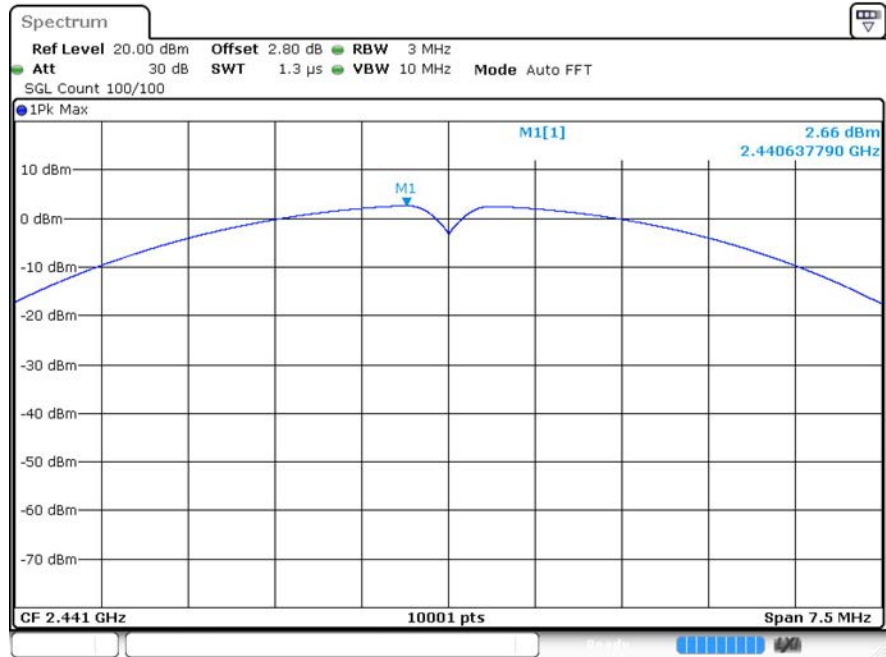
$\pi/4$ DQPSK/HCH



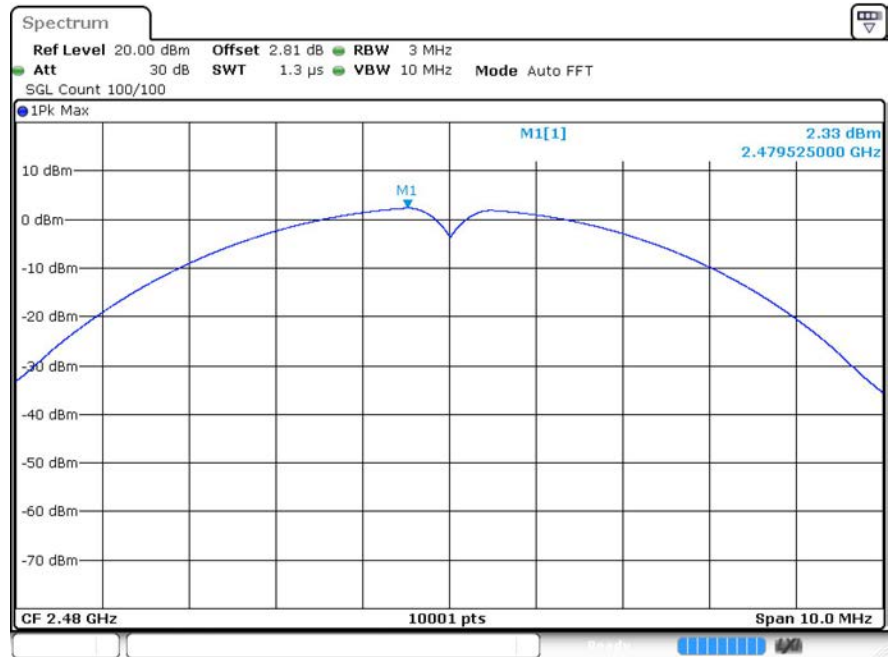
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

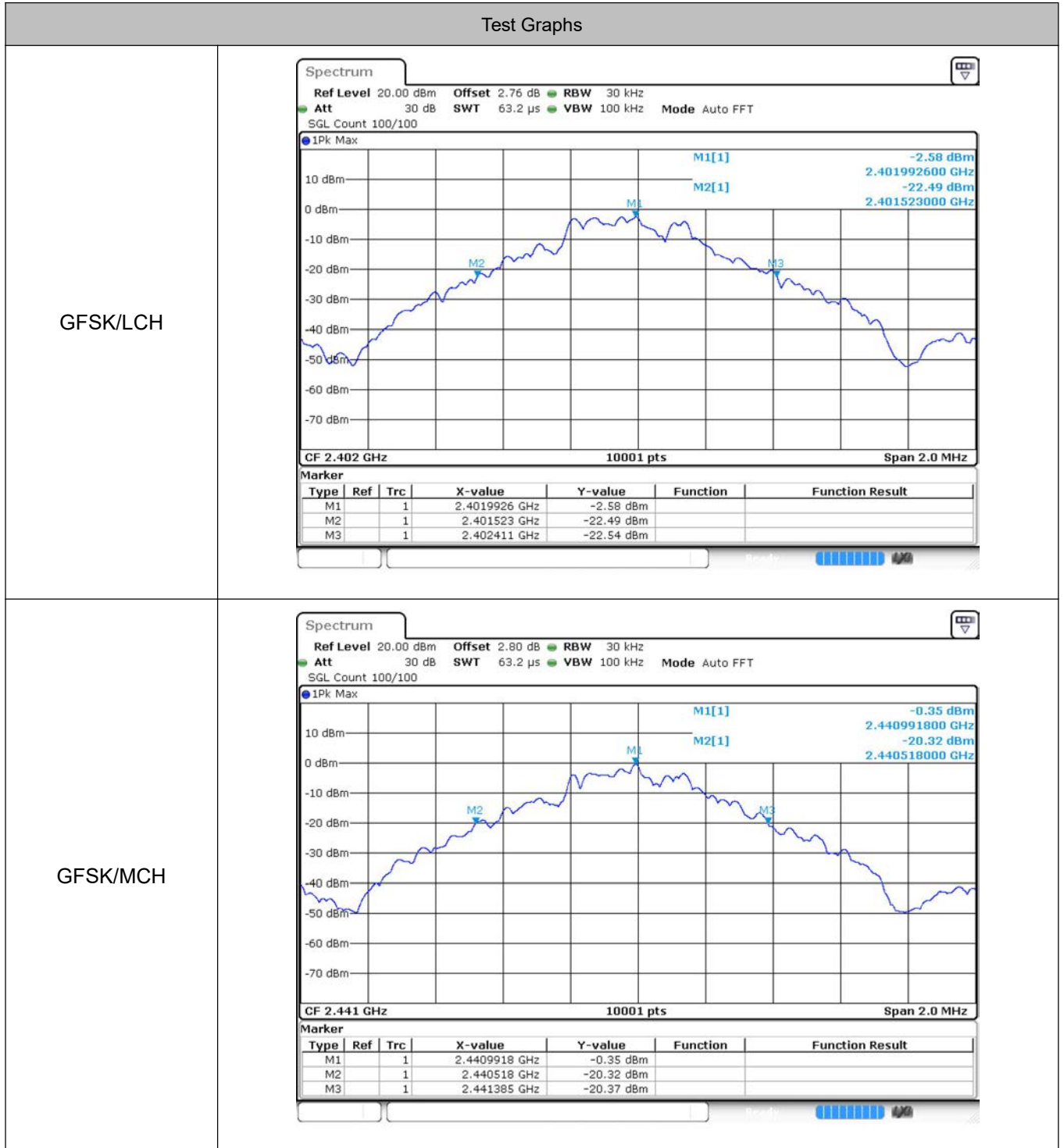


### 3 20dB Bandwidth

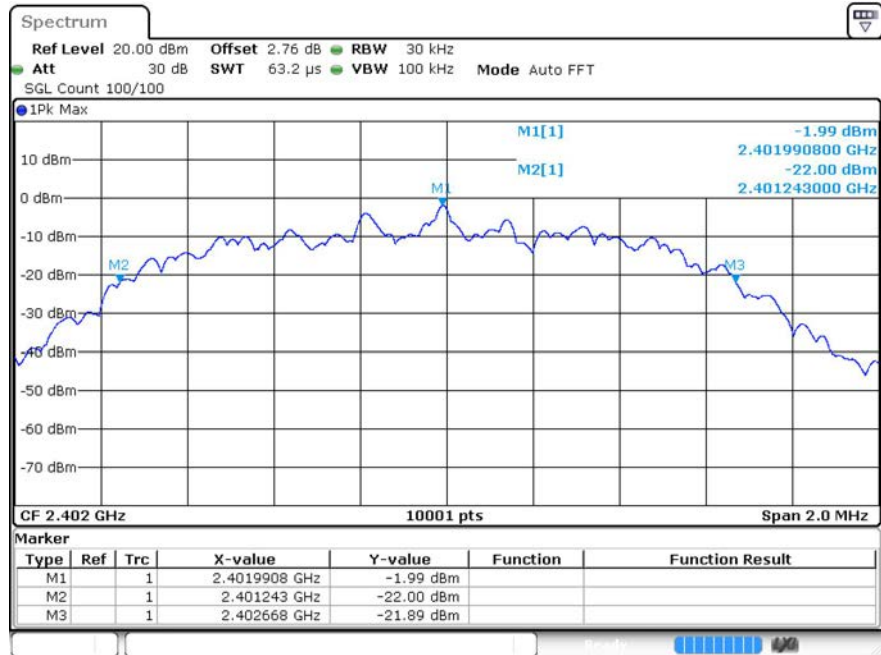
#### 3.1 Test Result

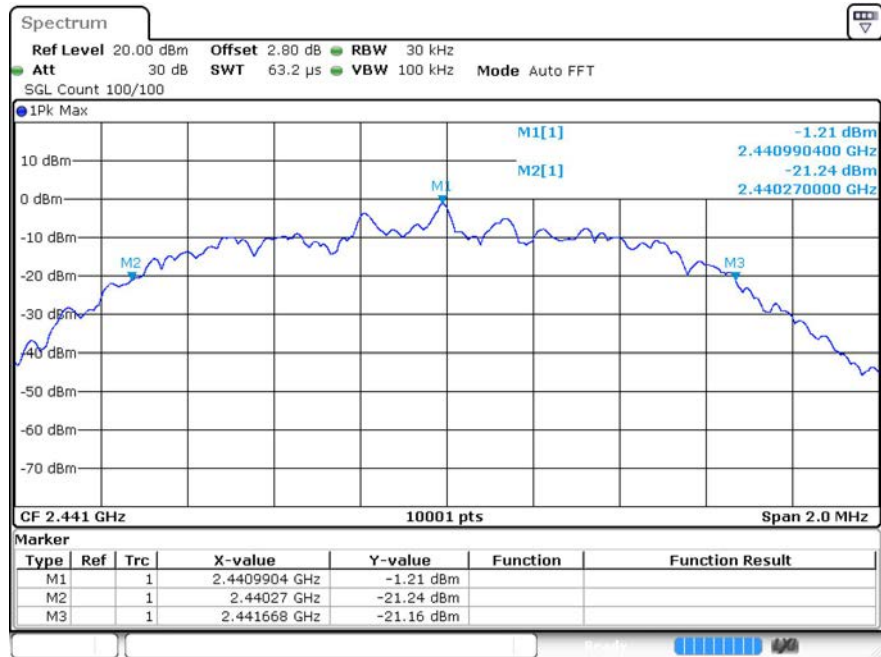
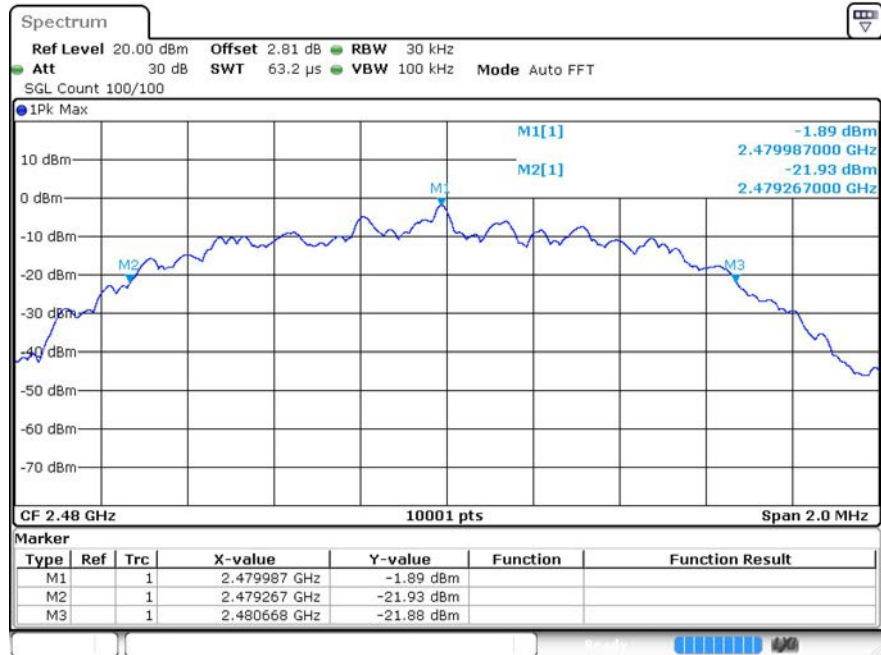
| Mode          | Channel. | 20dB Bandwidth [MHz] | Limit [MHz]   | Verdict |
|---------------|----------|----------------------|---------------|---------|
| GFSK          | LCH      | 0.888                | Not Specified | Pass    |
|               | MCH      | 0.867                | Not Specified | Pass    |
|               | HCH      | 0.919                | Not Specified | Pass    |
| $\pi/4$ DQPSK | LCH      | 1.425                | Not Specified | Pass    |
|               | MCH      | 1.398                | Not Specified | Pass    |
|               | HCH      | 1.401                | Not Specified | Pass    |
| 8DPSK         | LCH      | 1.388                | Not Specified | Pass    |
|               | MCH      | 1.425                | Not Specified | Pass    |
|               | HCH      | 1.406                | Not Specified | Pass    |

### 3.2 Test Graphs

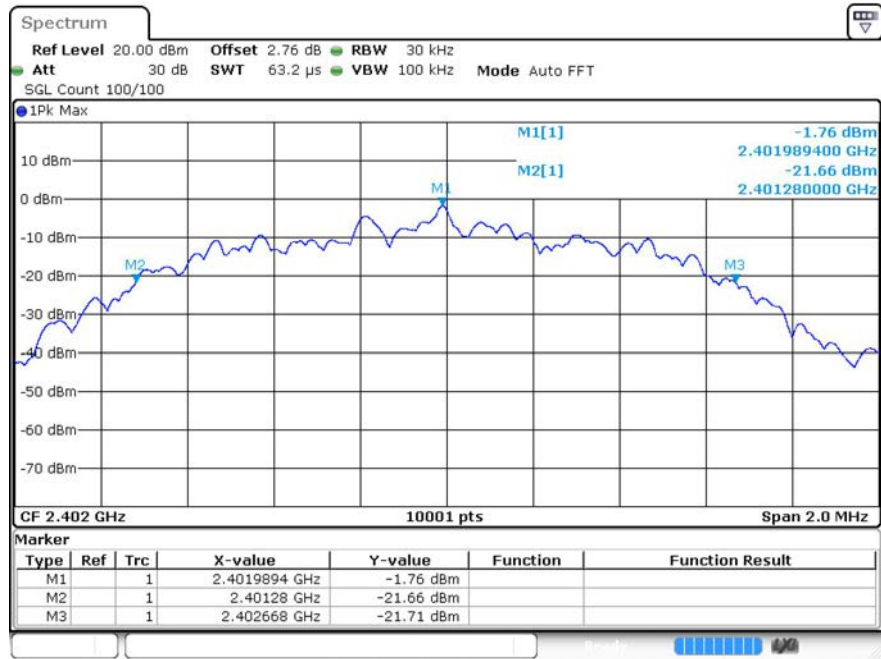


GFSK/HCH

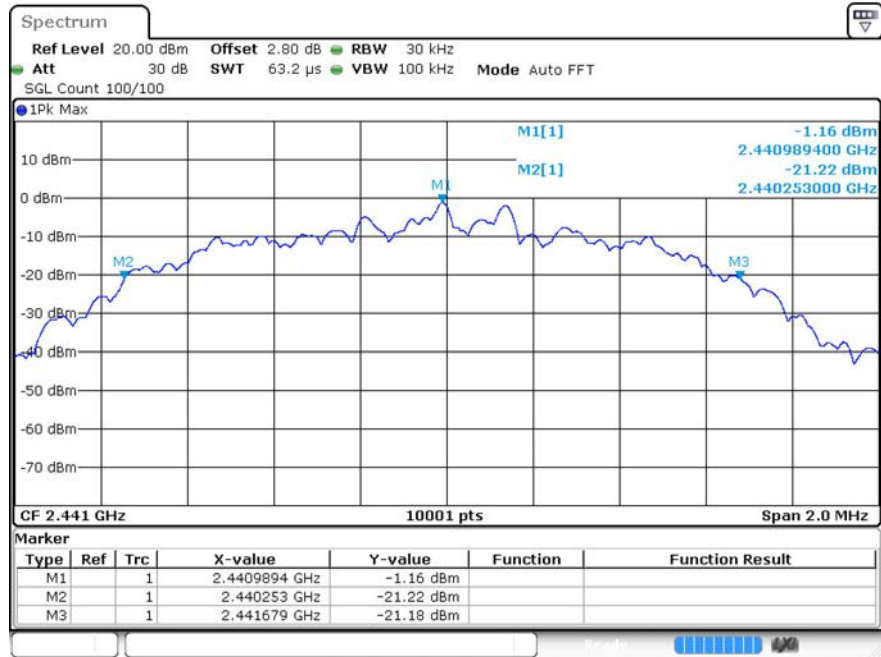

 $\pi/4$ DQPSK/LCH


$\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH


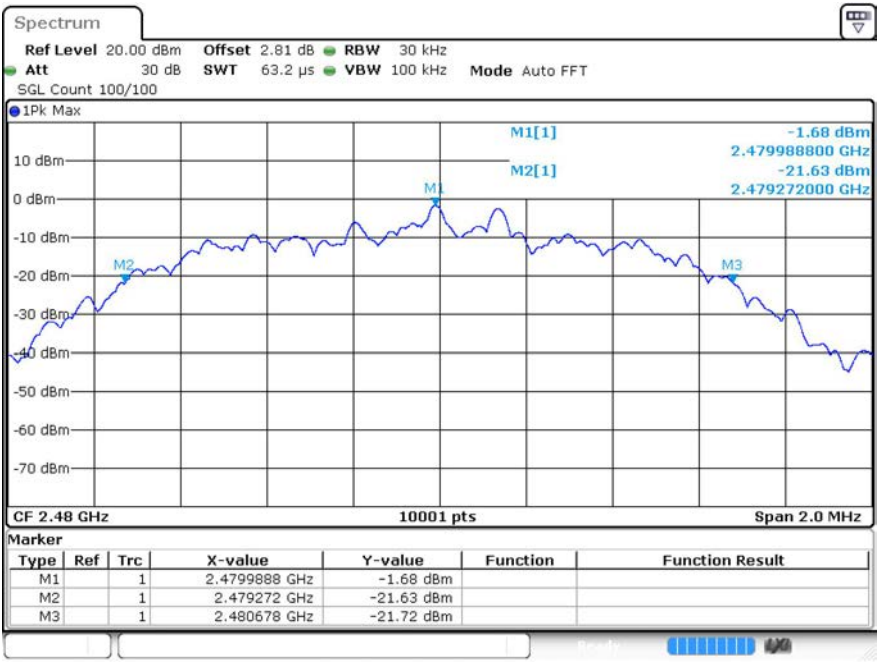
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH



## 4 Carrier Frequency Separation

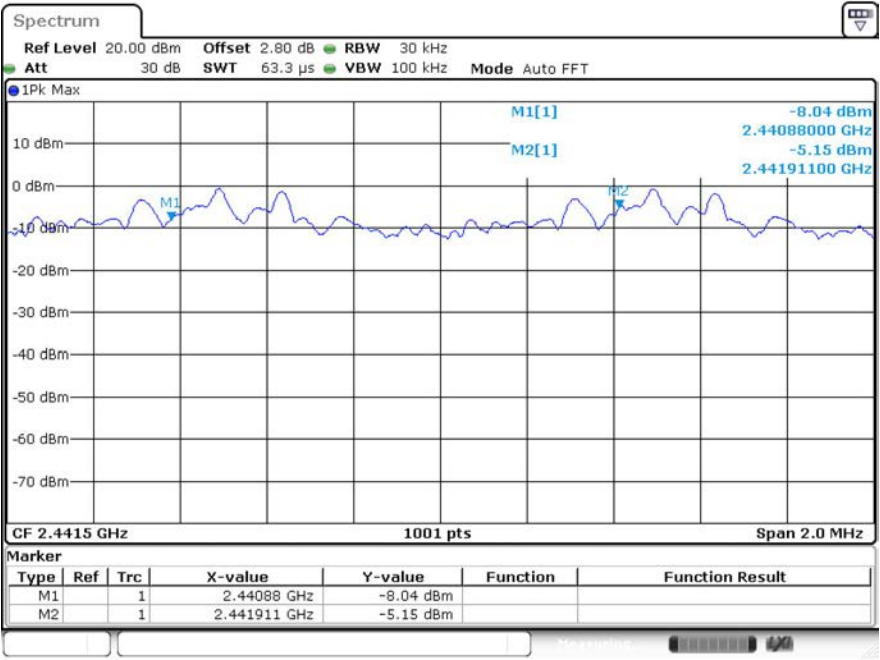
### 4.1 Test Result

| Mode          | Channel. | Carrier Frequency Separation [MHz] | Limit [MHz] | Verdict |
|---------------|----------|------------------------------------|-------------|---------|
| GFSK          | MCH      | 1.002                              | 0.578       | Pass    |
| $\pi/4$ DQPSK | MCH      | 1.001                              | 0.932       | Pass    |
| 8DPSK         | MCH      | 1.031                              | 0.95        | Pass    |

## 4.2 Test Graphs



8DPSK/MCH

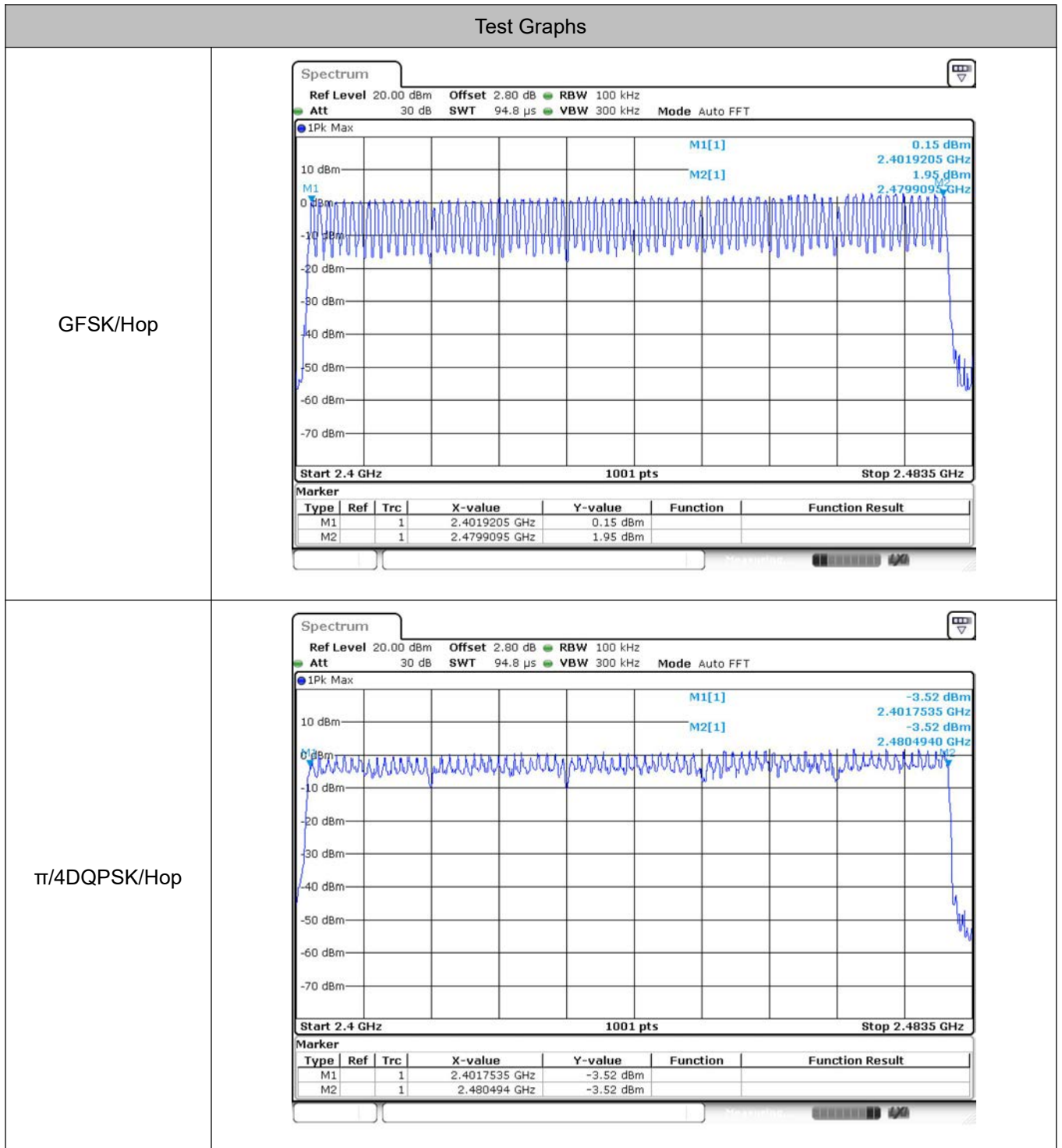


## 5 Hopping Channel Number

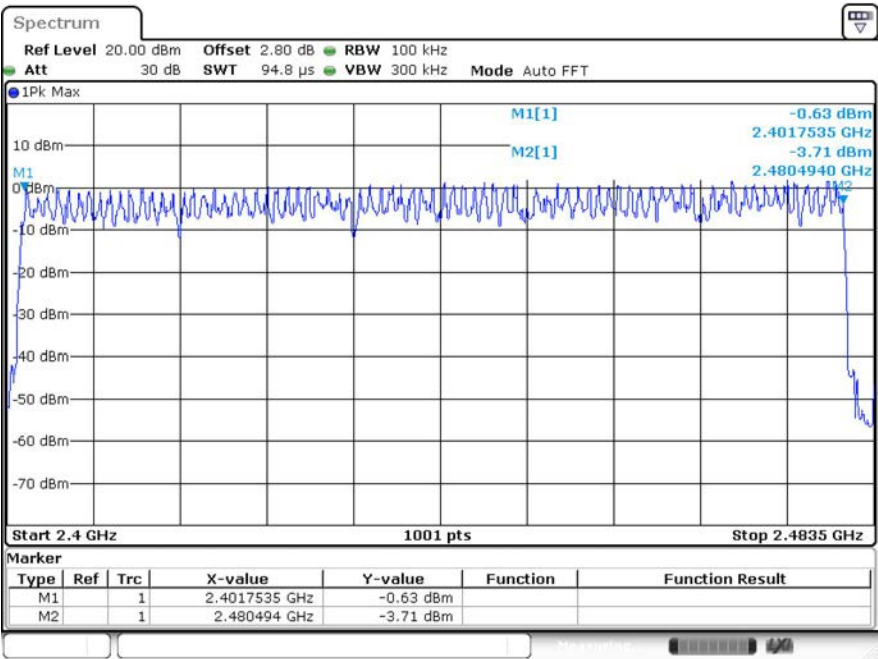
### 5.1 Test Result

| Mode          | Channel. | Number of Hopping Channel [N] | Limit [N] | Verdict |
|---------------|----------|-------------------------------|-----------|---------|
| GFSK          | Hop      | 79                            | $\geq 15$ | PASS    |
| $\pi/4$ DQPSK | Hop      | 79                            | $\geq 15$ | PASS    |
| 8DPSK         | Hop      | 79                            | $\geq 15$ | PASS    |

## 5.2 Test Graphs



8DPSK/Hop



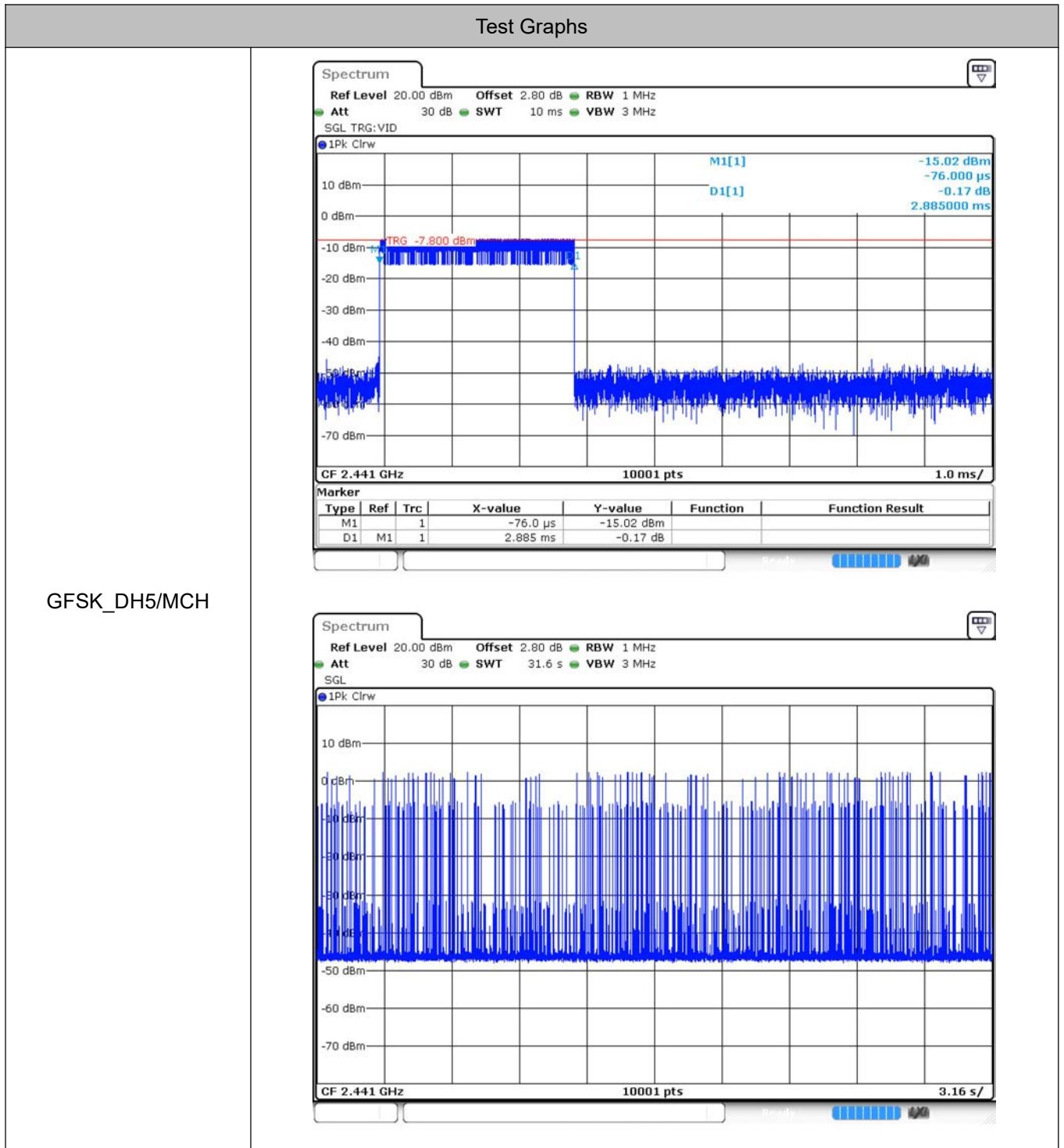


## 6 Dwell Time

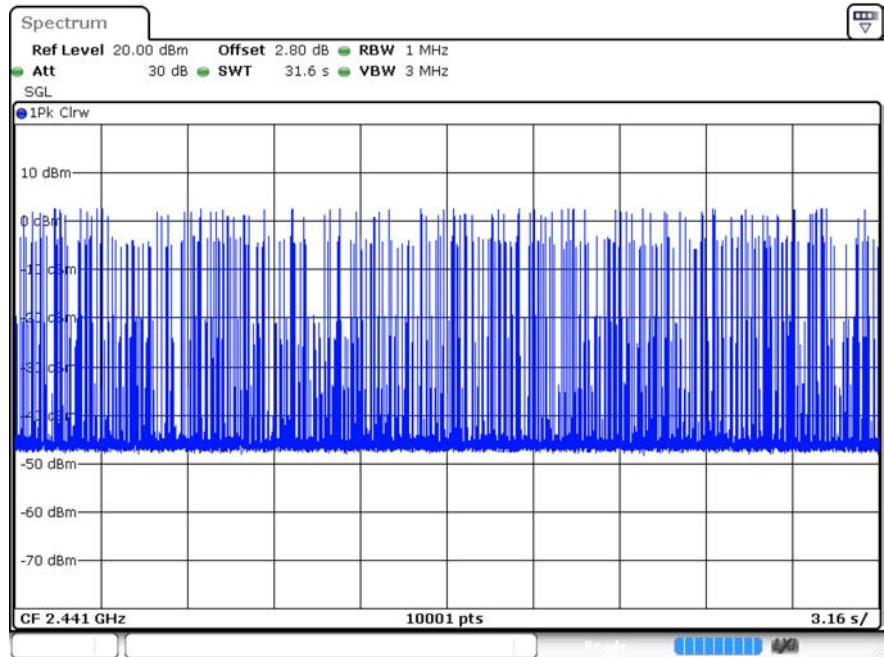
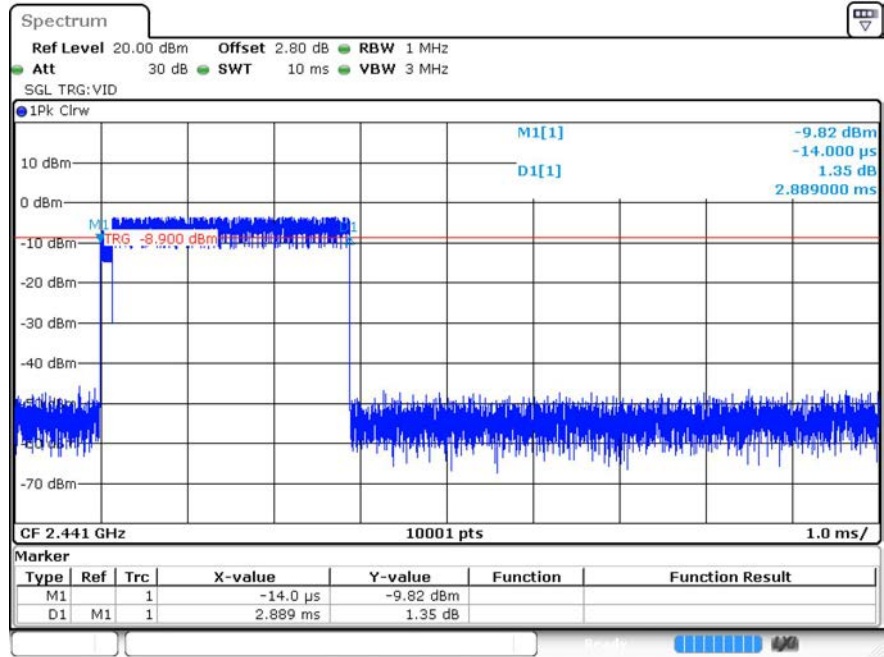
### 6.1 Test Result

| 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                      | 101                   | 291.789        | 0.4       | Pass    |
| 8DPSK         | 3DH5   | MCH     | 2.892                      | 103                   | 297.876        | 0.4       | Pass    |

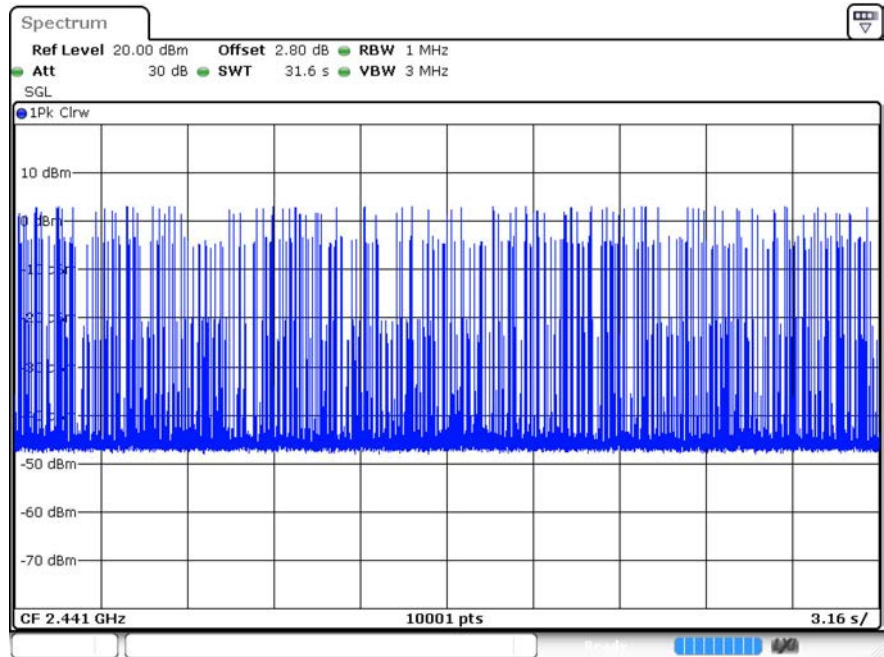
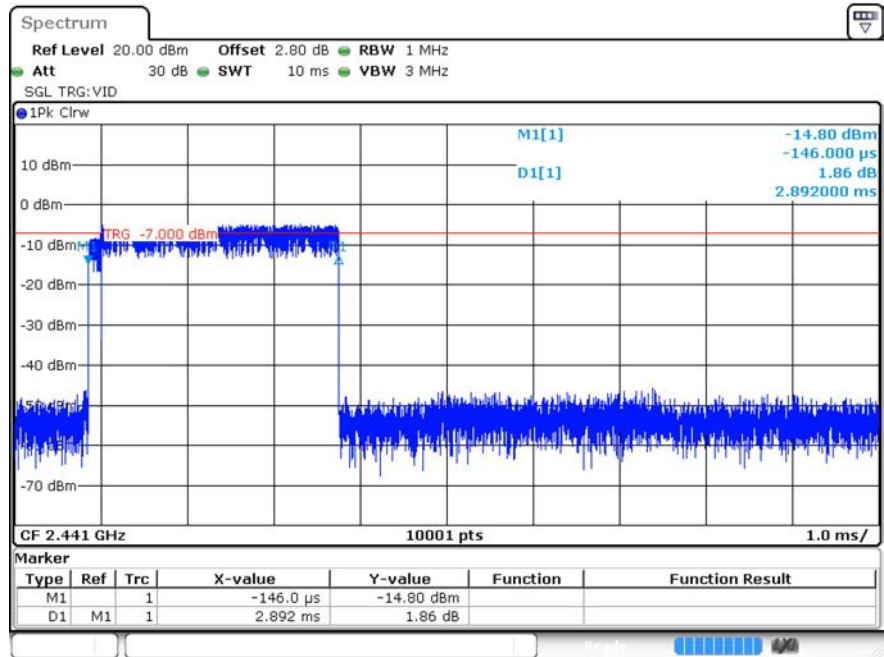
## 6.2 Test Graphs



$\pi/4$ DQPSK  
\_2DH5/MCH



8DPSK\_3DH5/MCH



## 7 RF Conducted Spurious Emissions

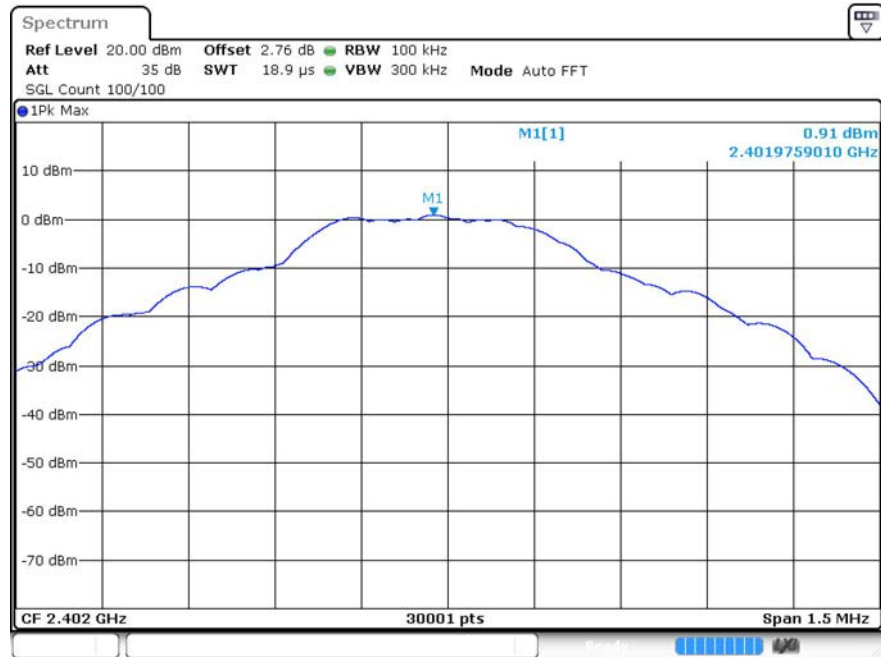
### 7.1 Test Result

| Mode          | Channel | Max. Level [dBc] | Limit [dBc] | Verdict |
|---------------|---------|------------------|-------------|---------|
| GFSK          | LCH     | -42.37           | -20         | Pass    |
|               | MCH     | -41.6            | -20         | Pass    |
|               | HCH     | -42.31           | -20         | Pass    |
| $\pi/4$ DQPSK | LCH     | -40.56           | -20         | Pass    |
|               | MCH     | -41.39           | -20         | Pass    |
|               | HCH     | -40.18           | -20         | Pass    |
| 8DPSK         | LCH     | -40.23           | -20         | Pass    |
|               | MCH     | -40.73           | -20         | Pass    |
|               | HCH     | -41.63           | -20         | Pass    |

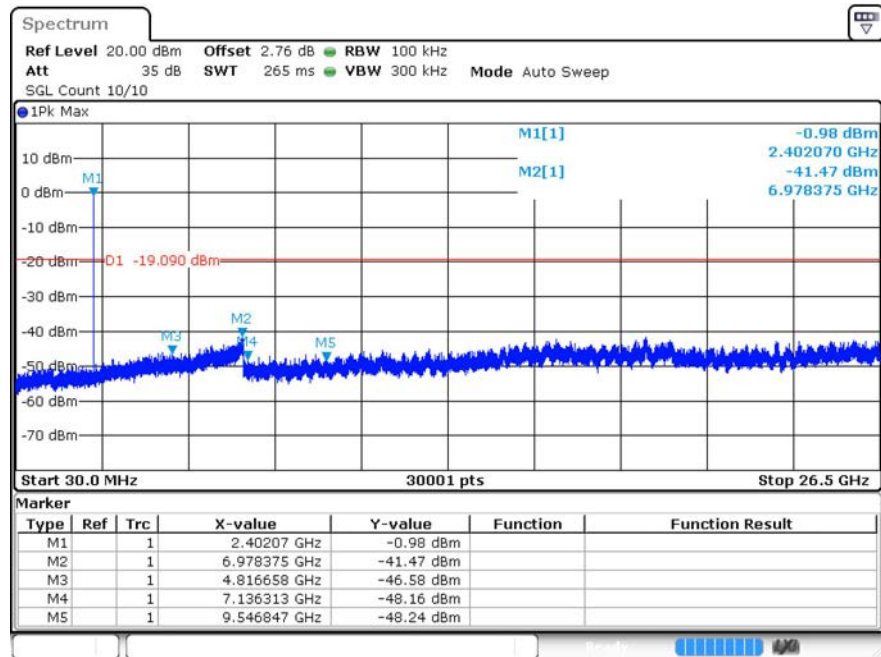
## 7.2 Test Graphs

GFSK\_LCH\_Graphs

Pref

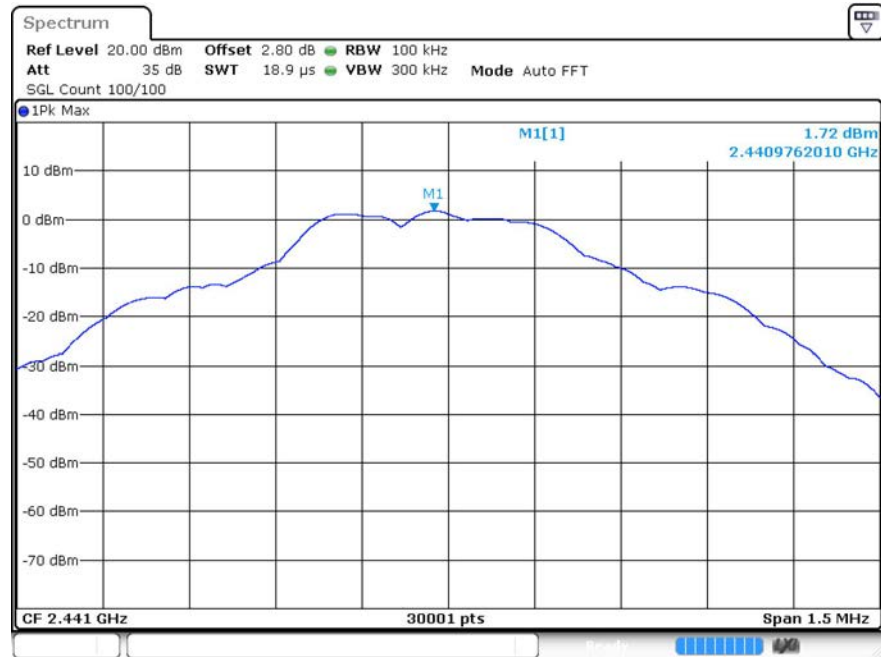


Puw

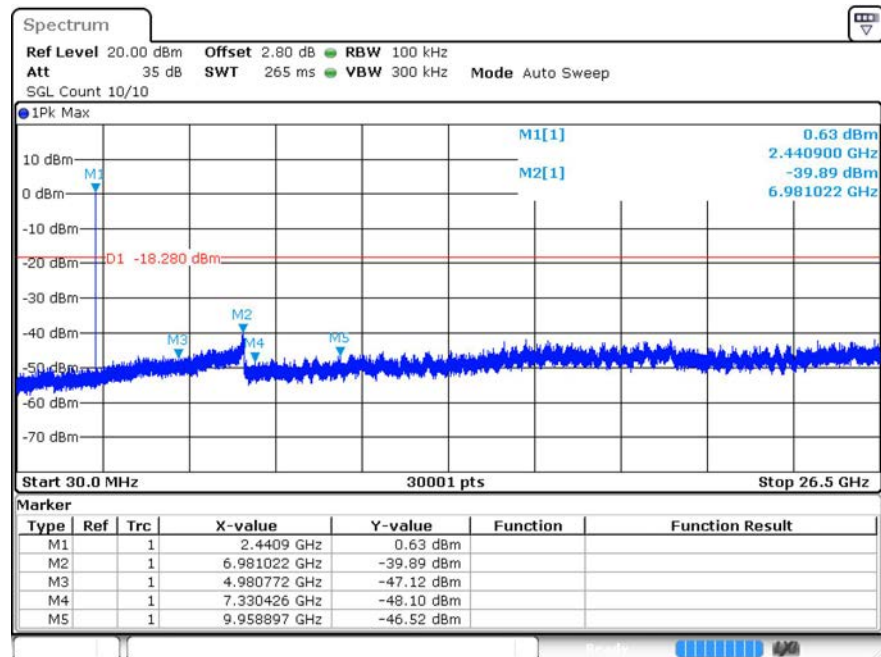


## GFSK\_MCH\_Graphs

Pref

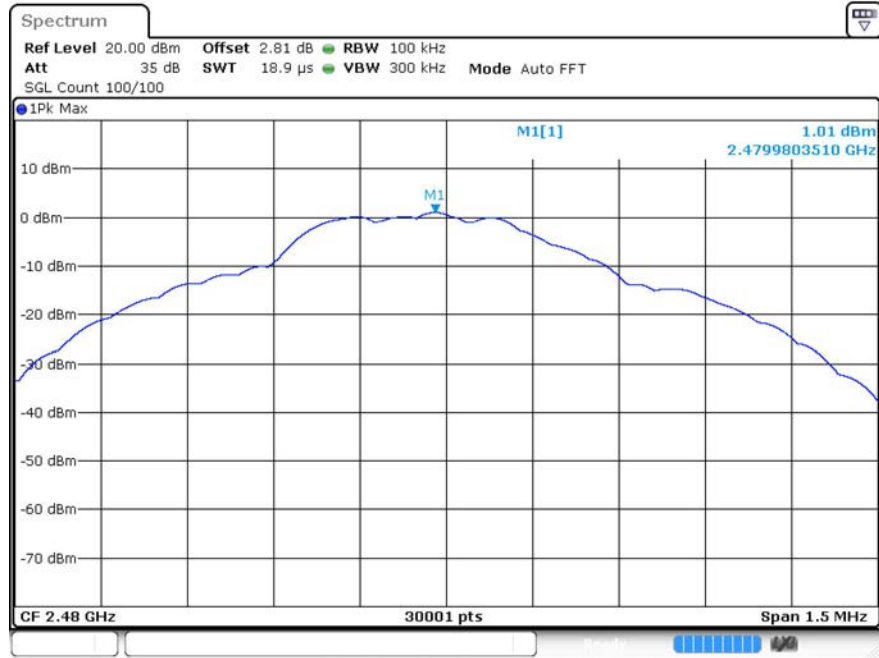


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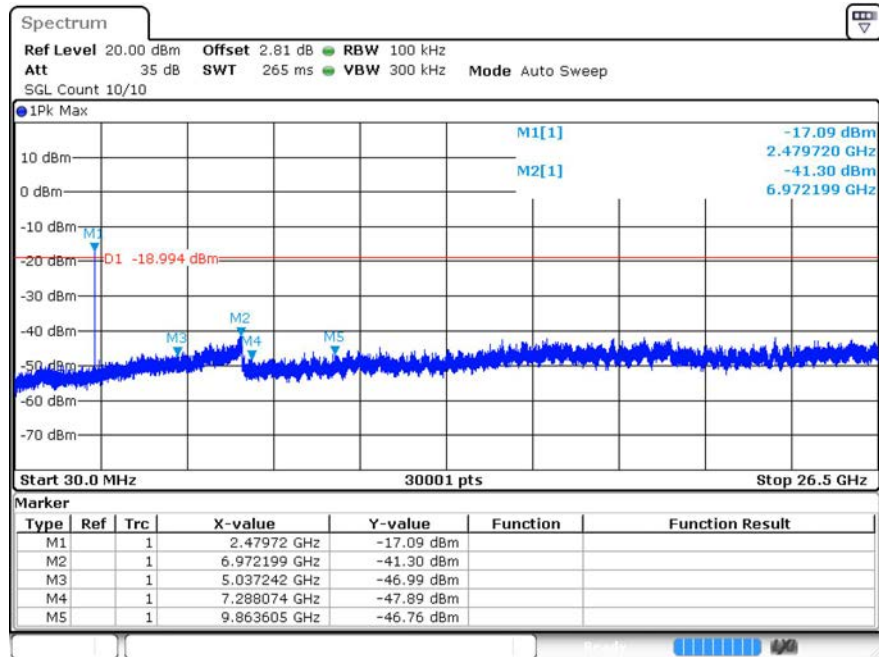


## GFSK\_HCH\_Graphs

Pref

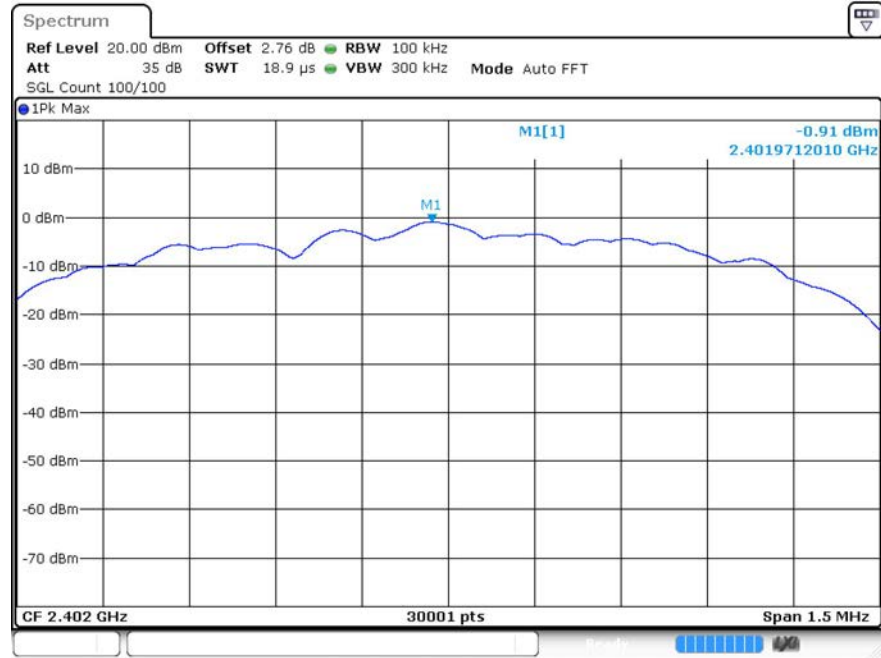


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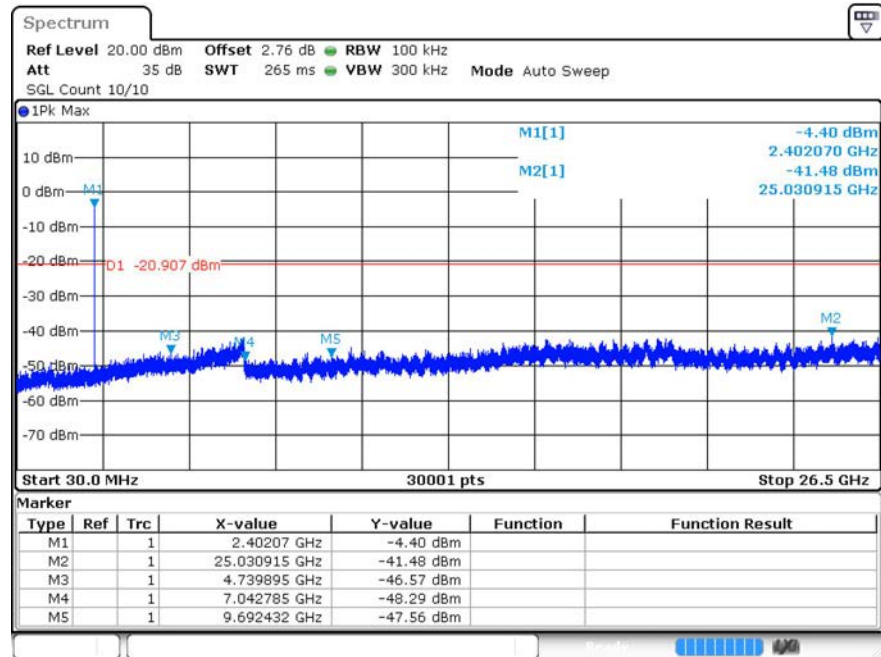


### $\pi/4$ DQPSK\_LCH\_Graphs

Pref

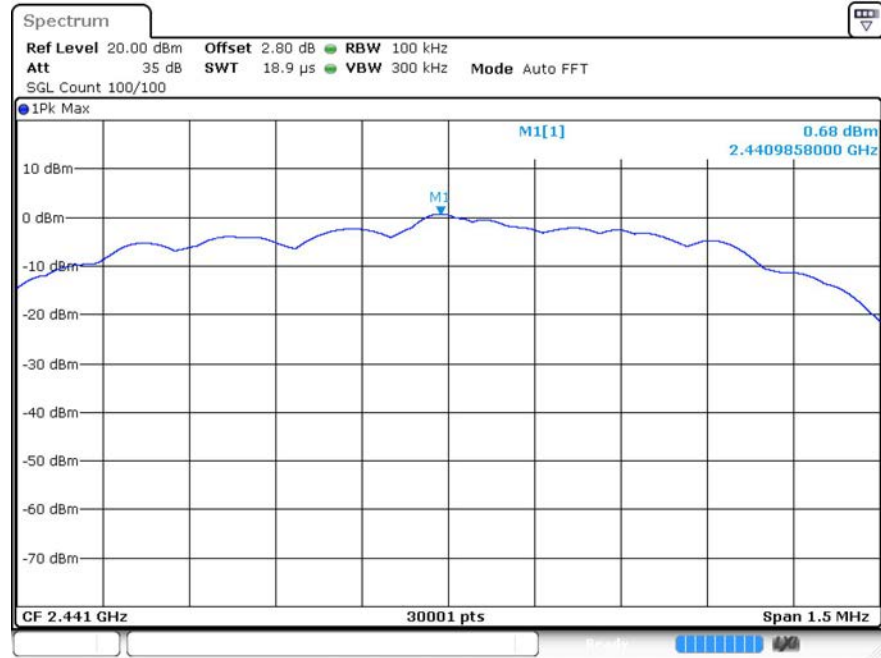


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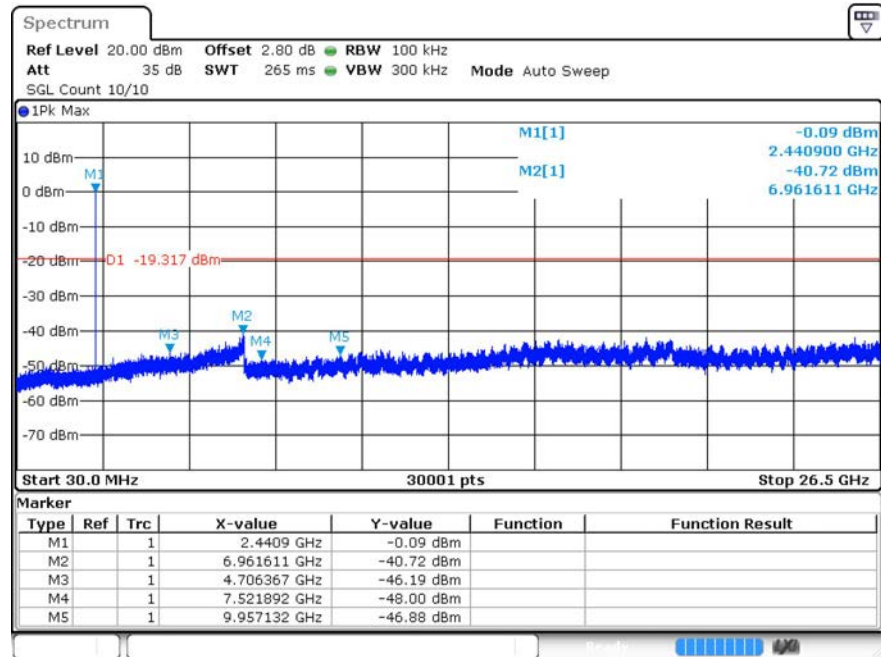


# $\pi$ /4DQPSK\_MCH\_Graphs

Pref

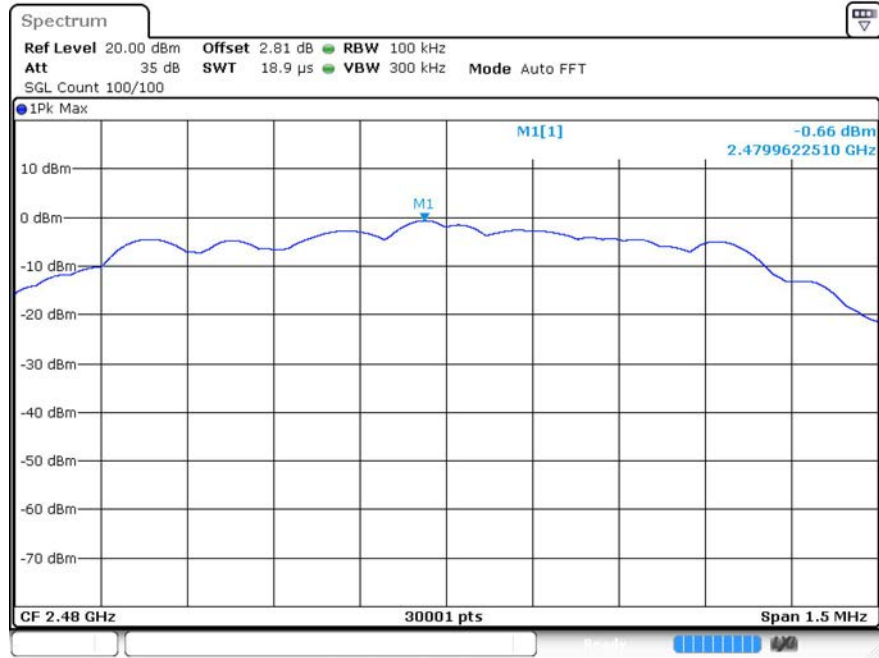


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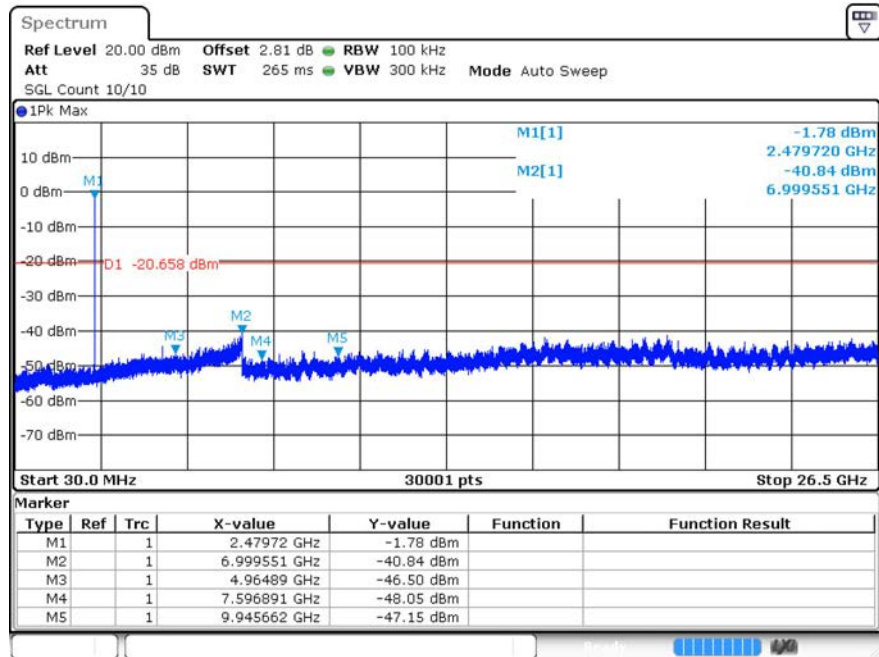


# $\pi/4$ DQPSK\_HCH\_Graphs

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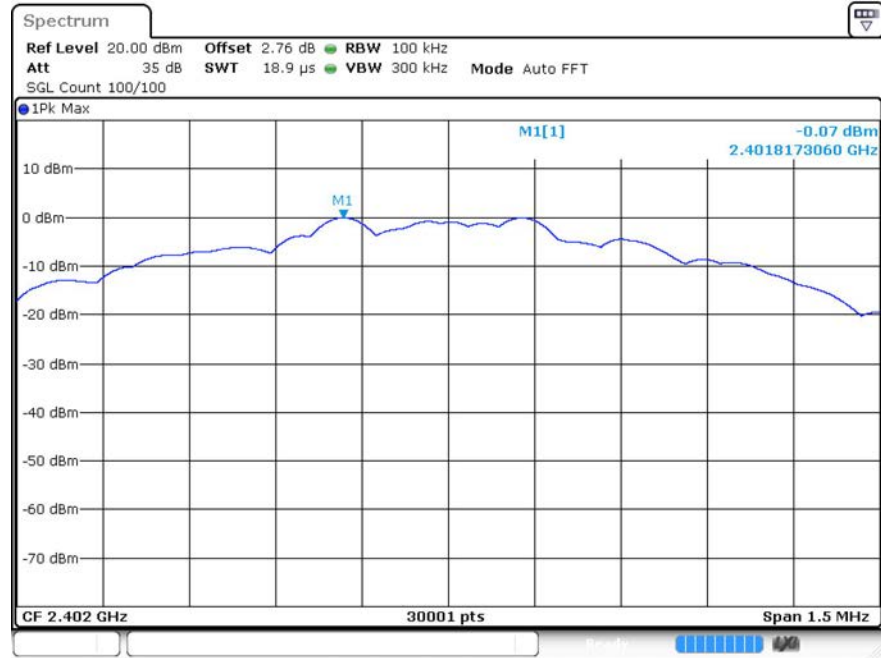


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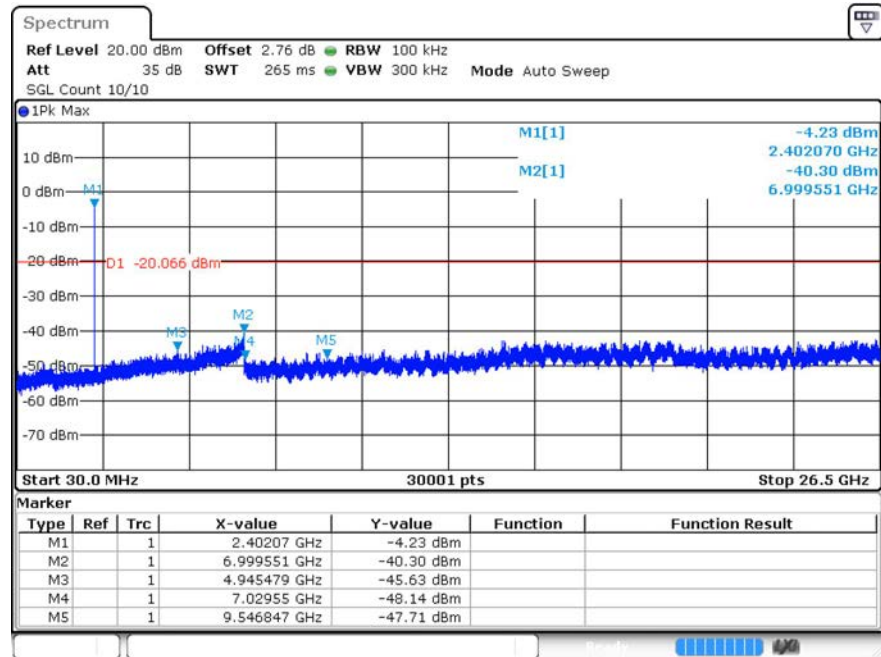


## 8DPSK\_LCH\_Graphs

Pref

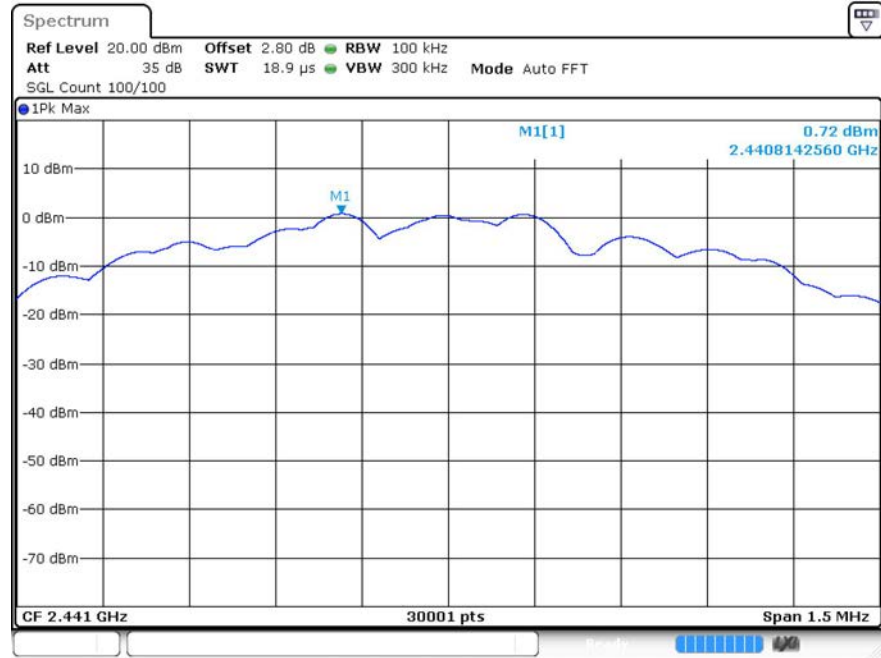


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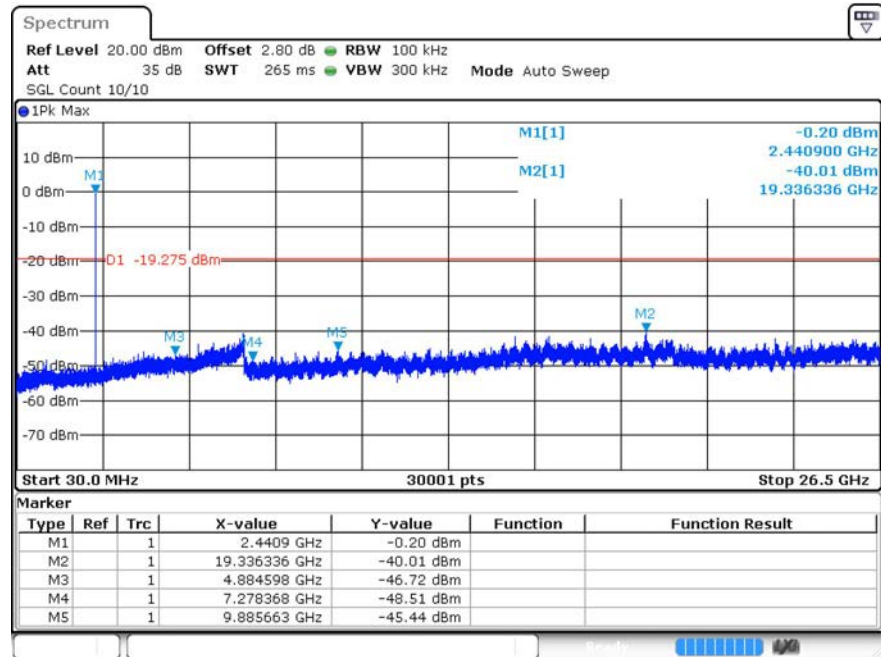


## 8DPSK\_MCH\_Graphs

Pref

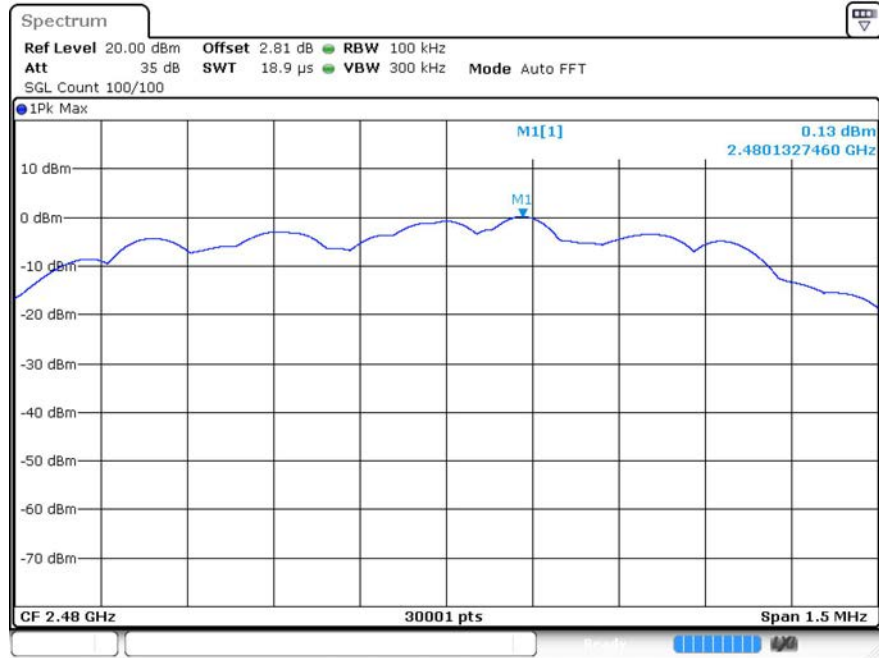


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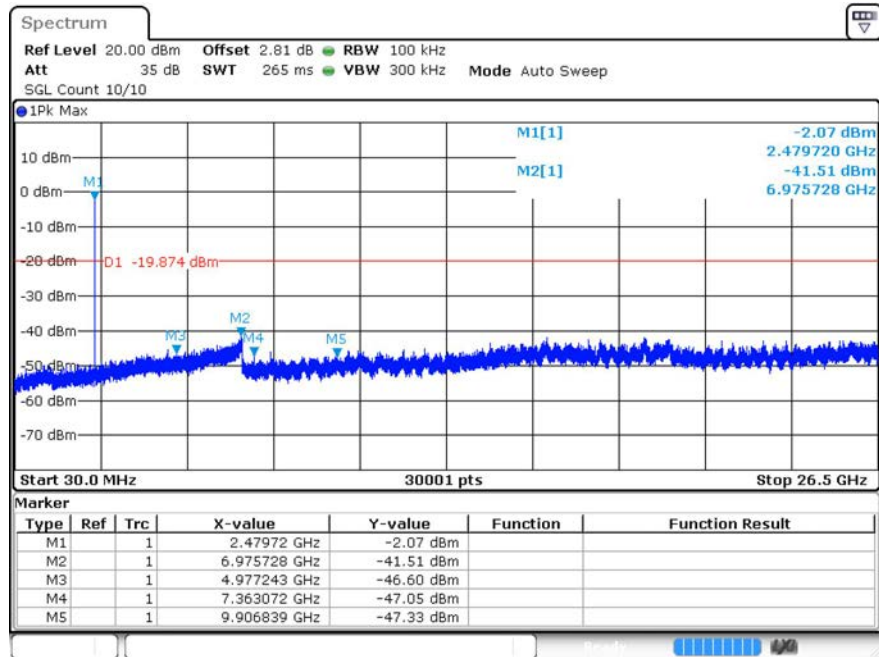


## 8DPSK\_HCH\_Graphs

Pref



Puw

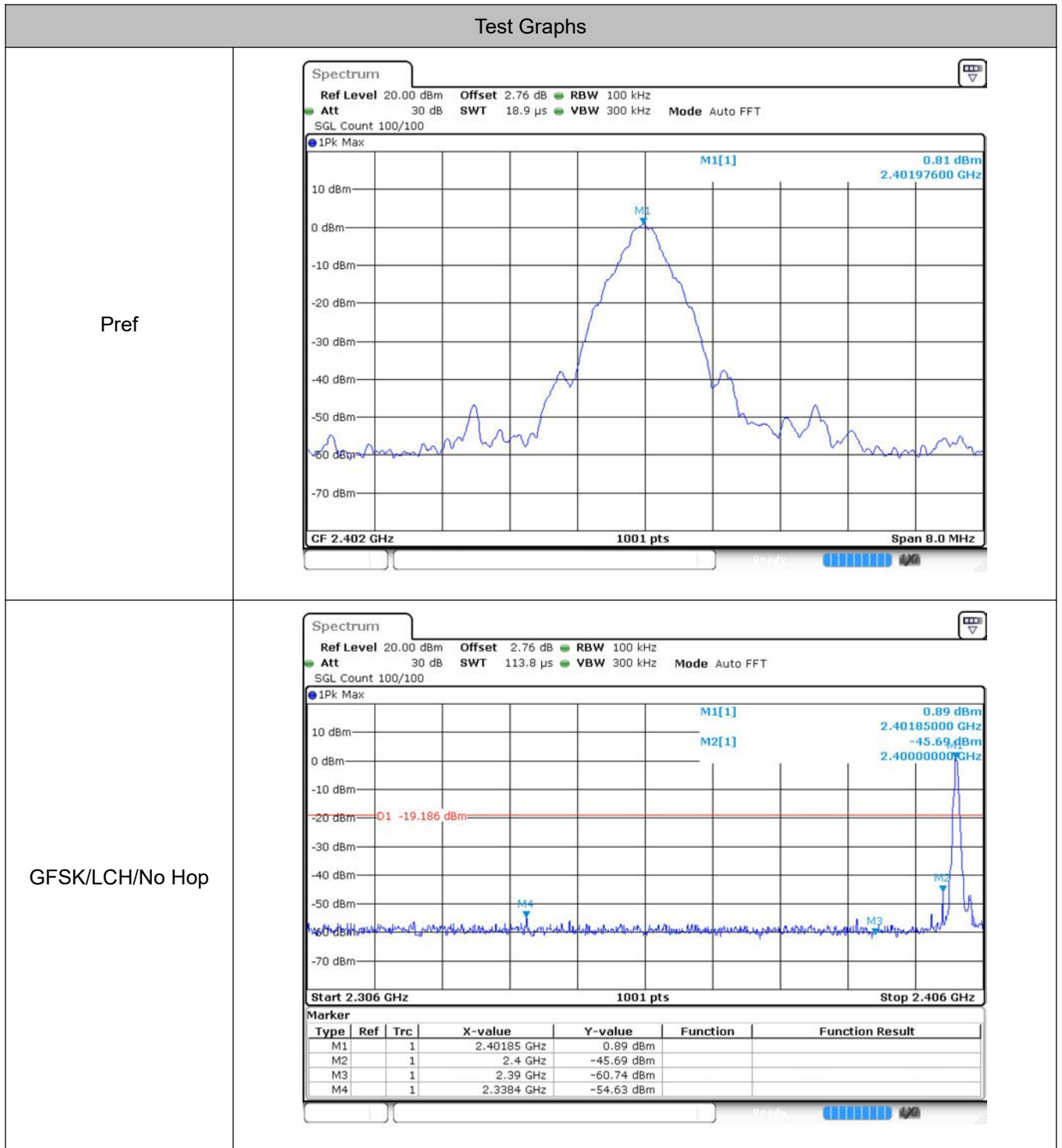


## 8 Band-edge for RF Conducted Emissions

### 8.1 Test Result

| Mode          | Channel | Carrier Frequency [MHz] | Frequency Hopping | Max Spurious Level [dBc] | Limit [dBc] | Verdict |
|---------------|---------|-------------------------|-------------------|--------------------------|-------------|---------|
| GFSK          | LCH     | 2402                    | Off               | -55.44                   | -20         | Pass    |
|               |         |                         | On                | -54.86                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -52.28                   | -20         | Pass    |
|               |         |                         | On                | -49.75                   | -20         | Pass    |
| $\pi/4$ DQPSK | LCH     | 2402                    | Off               | -54.93                   | -20         | Pass    |
|               |         |                         | On                | -54.19                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -46.55                   | -20         | Pass    |
|               |         |                         | On                | -48.47                   | -20         | Pass    |
| 8DPSK         | LCH     | 2402                    | Off               | -55.91                   | -20         | Pass    |
|               |         |                         | On                | -54.38                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -51.57                   | -20         | Pass    |
|               |         |                         | On                | -47.23                   | -20         | Pass    |

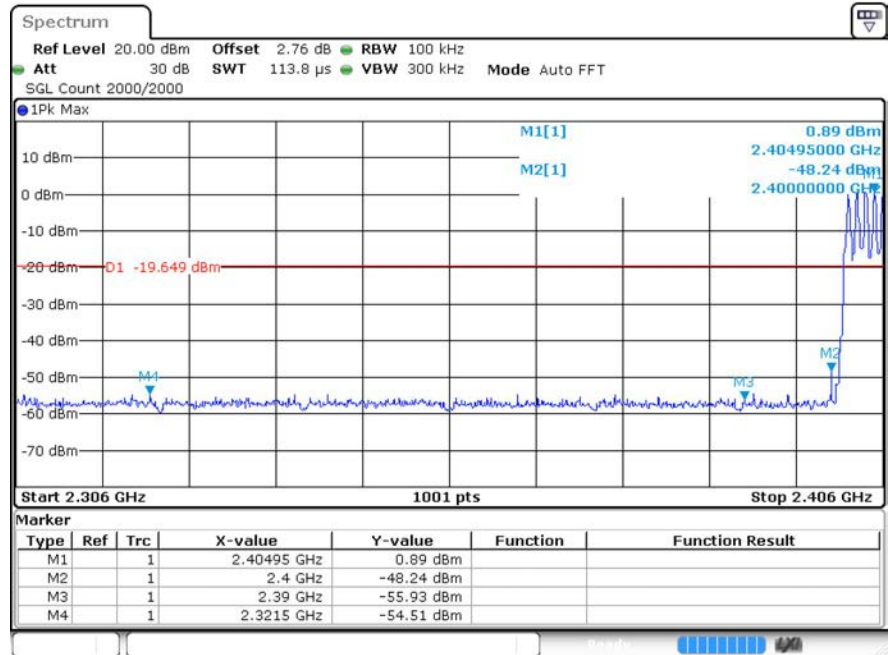
## 8.2 Test Graphs



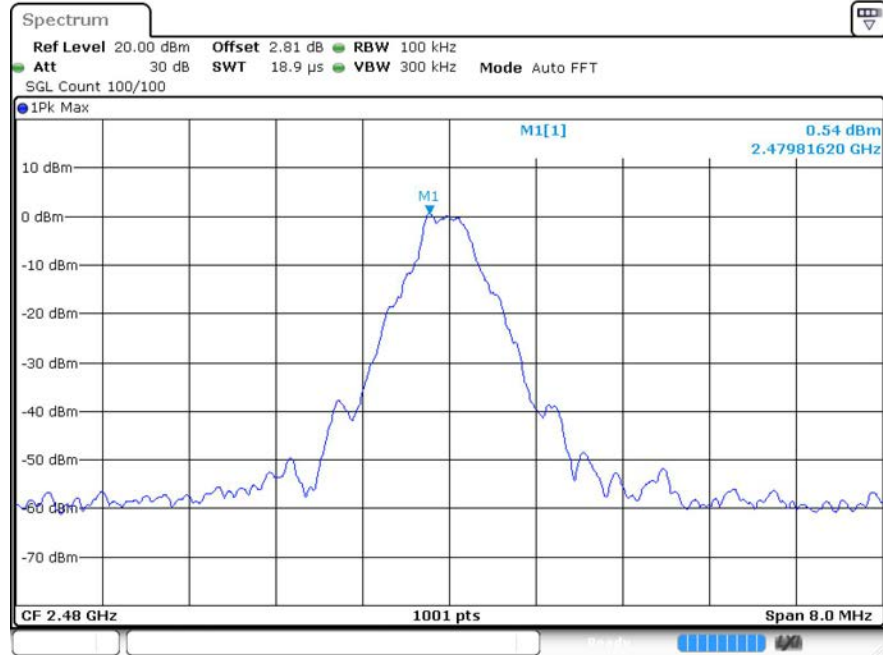
Ref



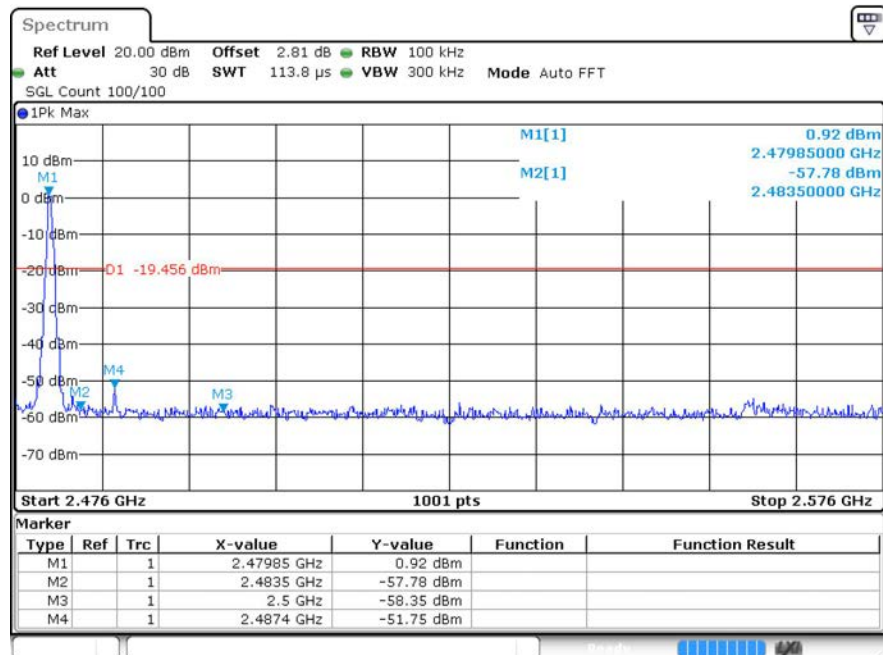
GFSK/LCH/Hop



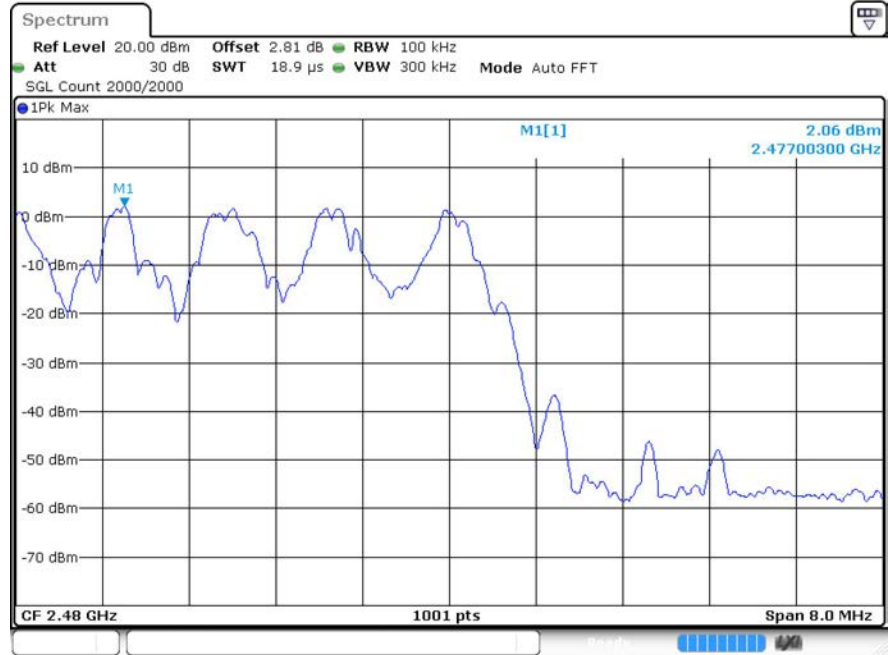
Ref



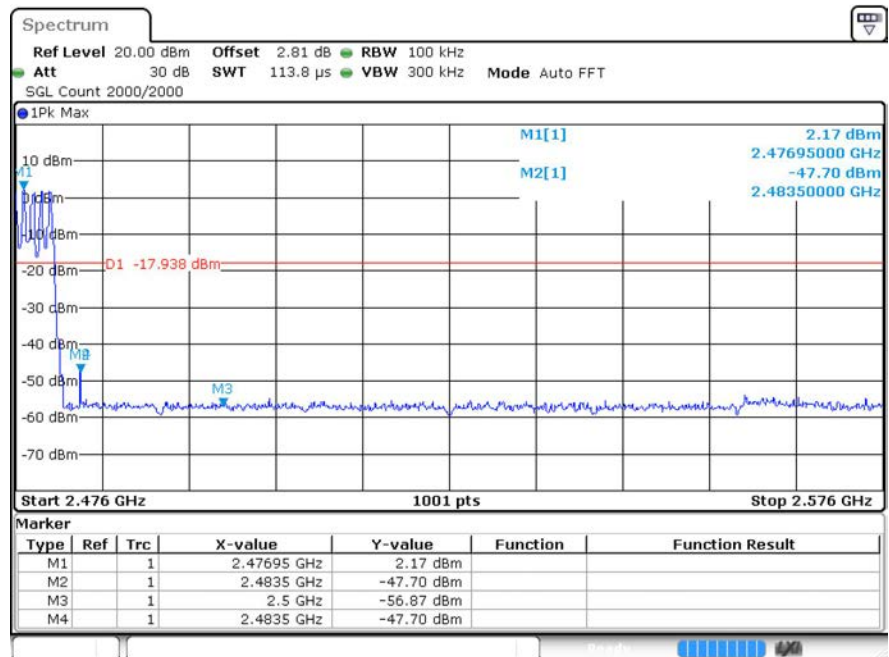
GFSK/HCH/No Hop



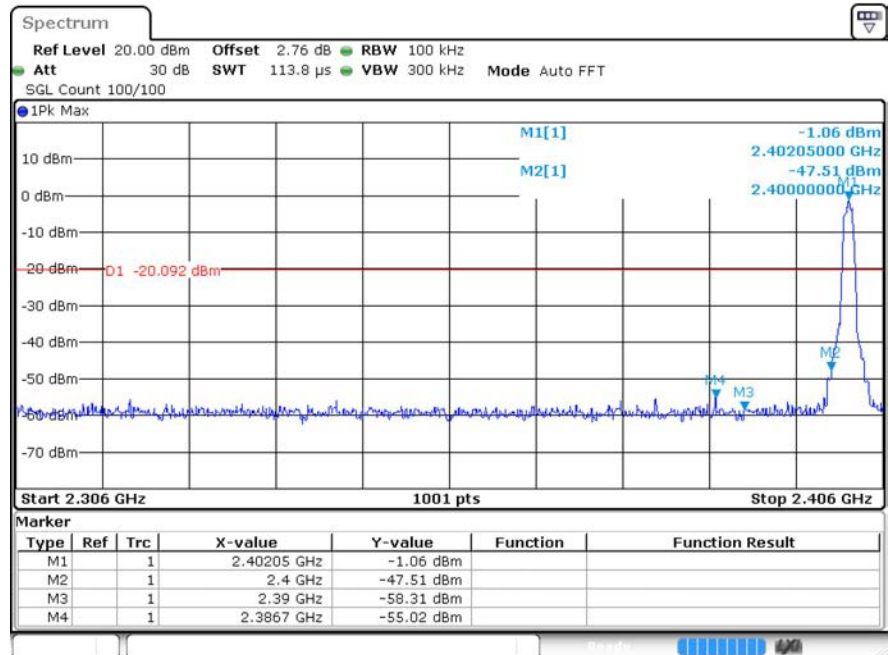
Ref.



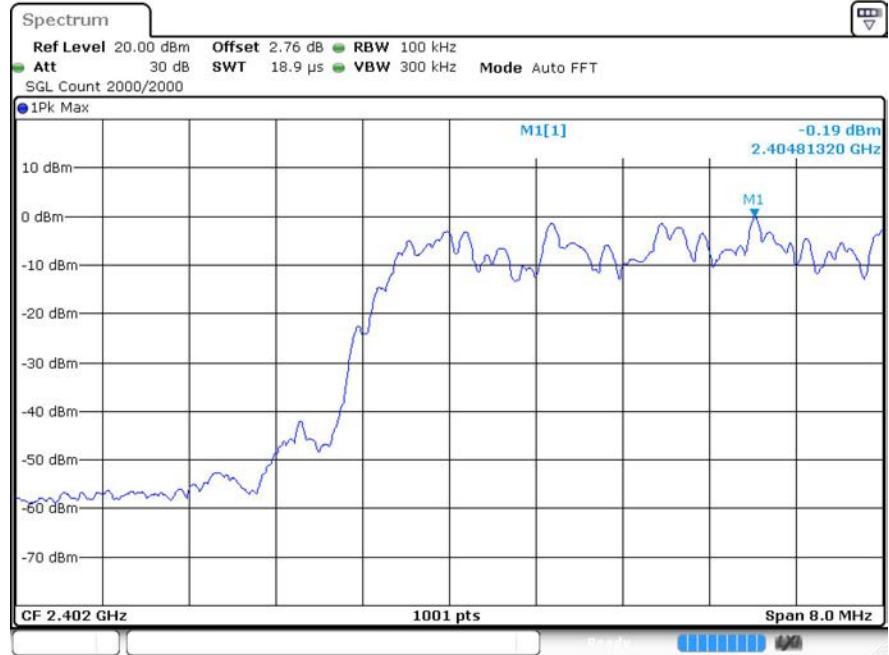
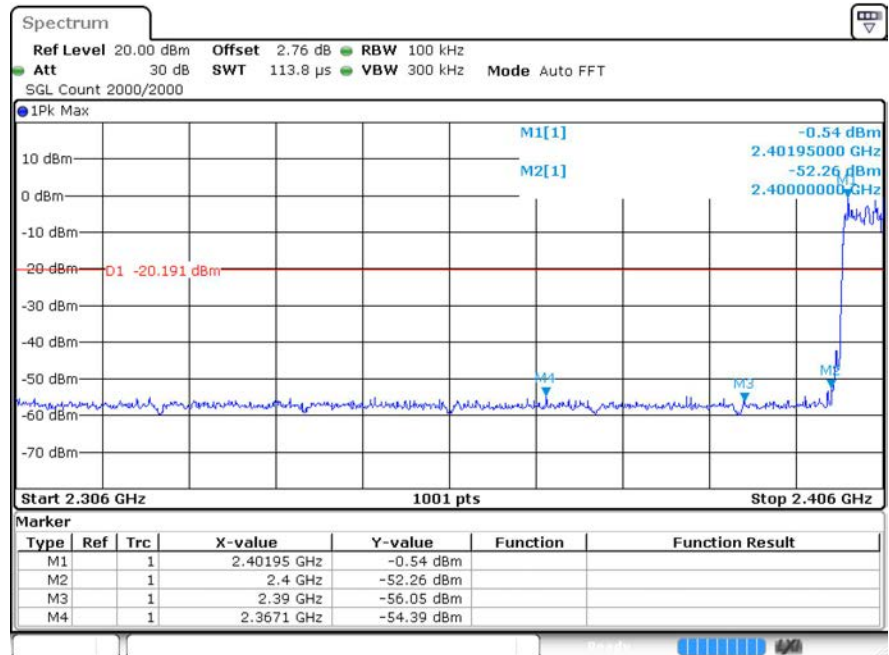
GFSK/HCH/Hop



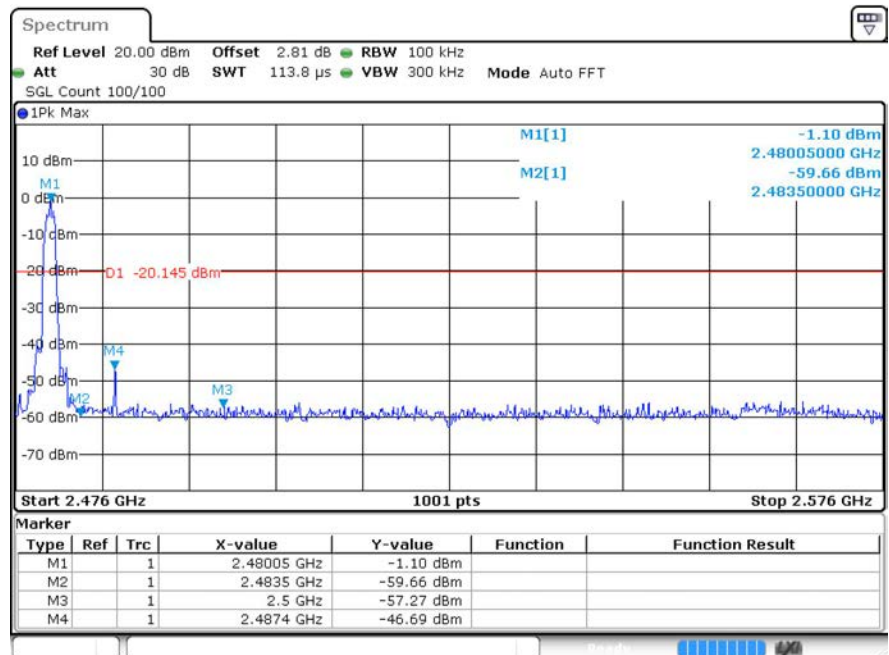
Ref


 $\pi/4$ DQPSK/LCH/No Hop


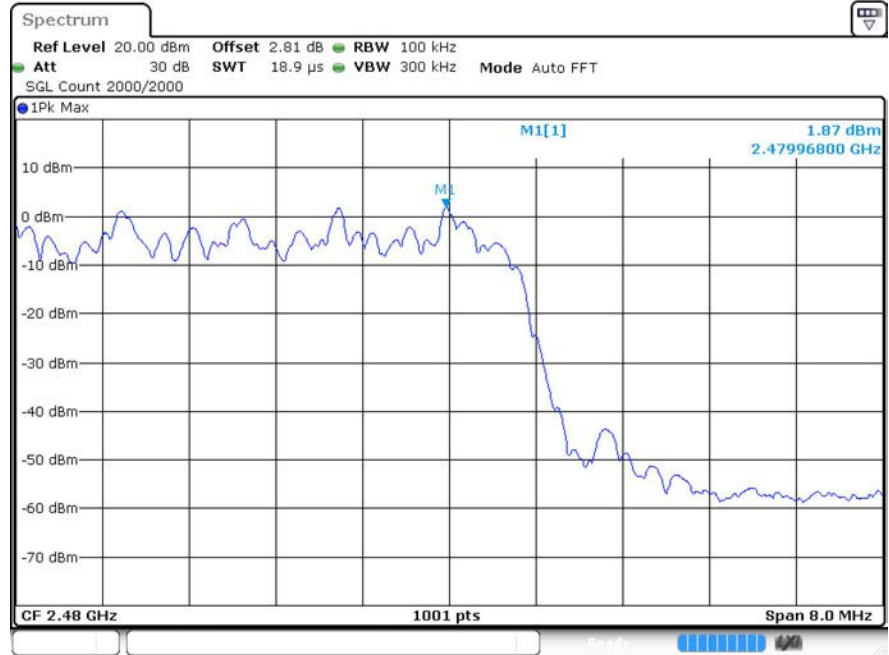
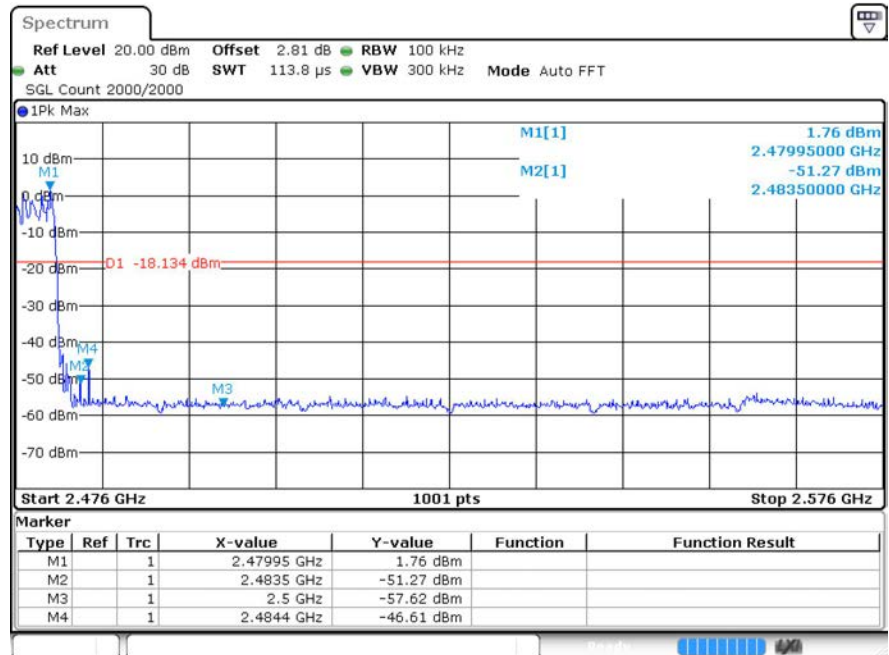
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 $\pi/4$ DQPSK/LCH/Hop


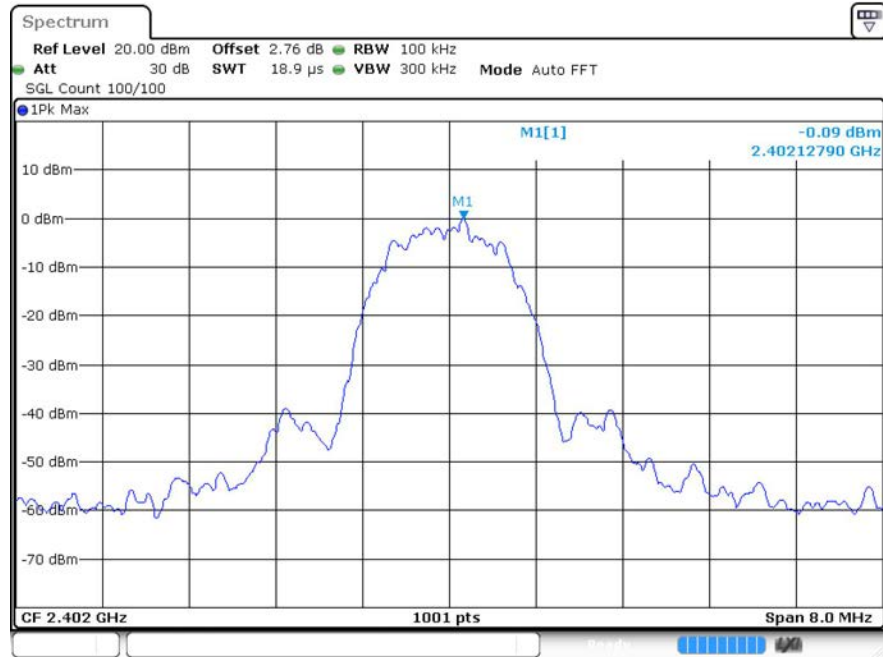
Ref


 $\pi/4$ DQPSK/HCH/No Hop


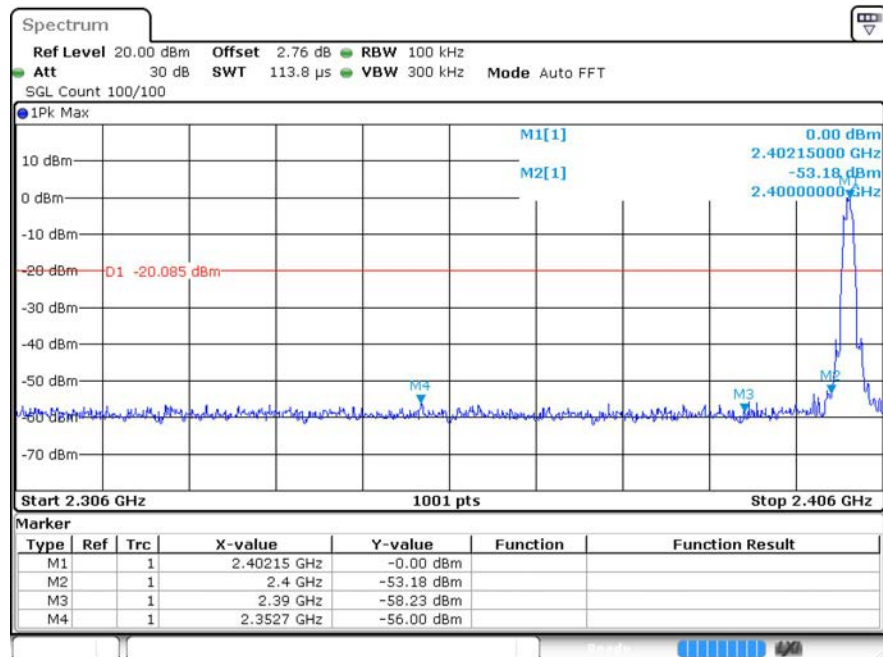
Ref


 $\pi/4$ DQPSK/HCH/Hop


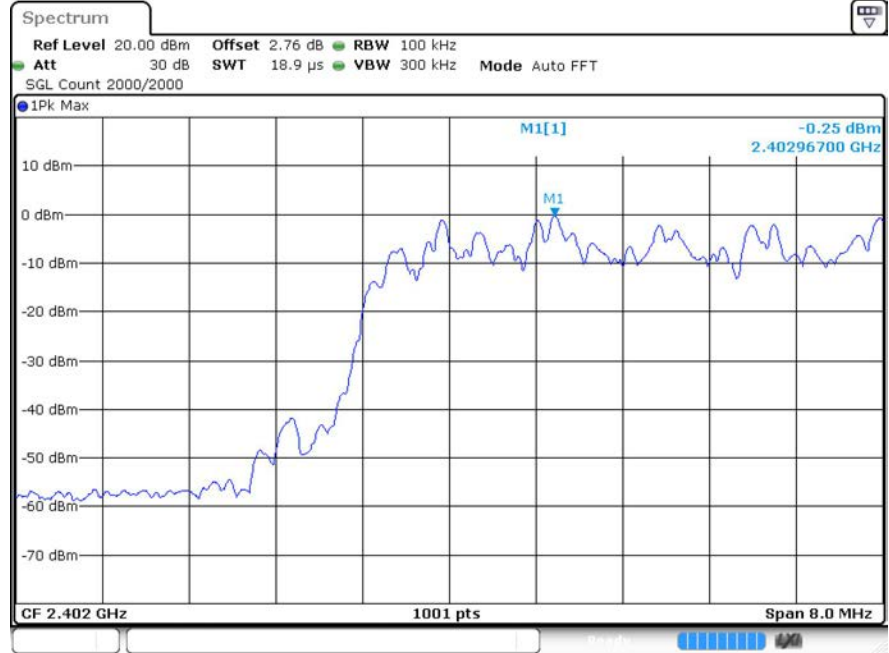
Ref



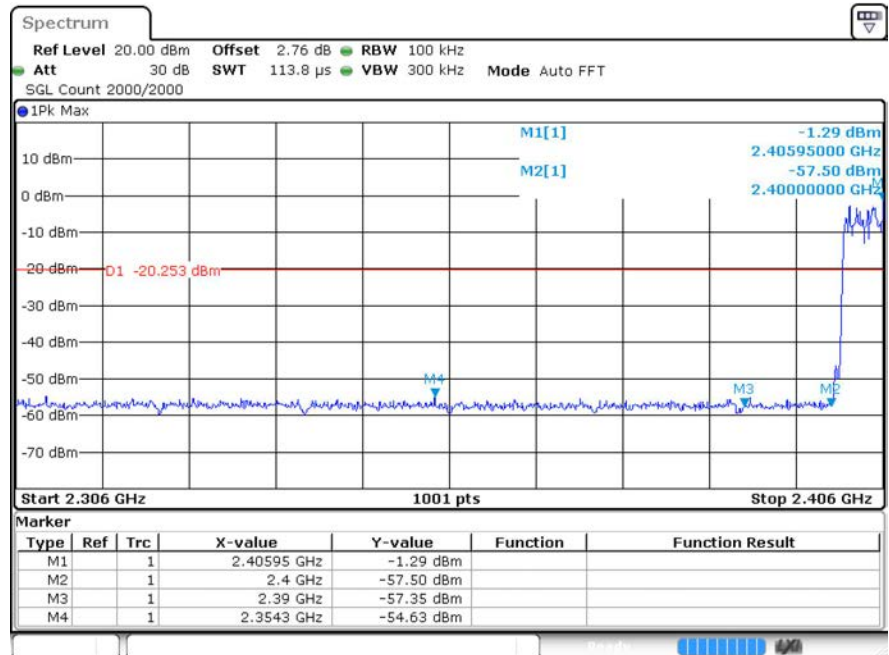
8DPSK/LCH/No Hop



Ref



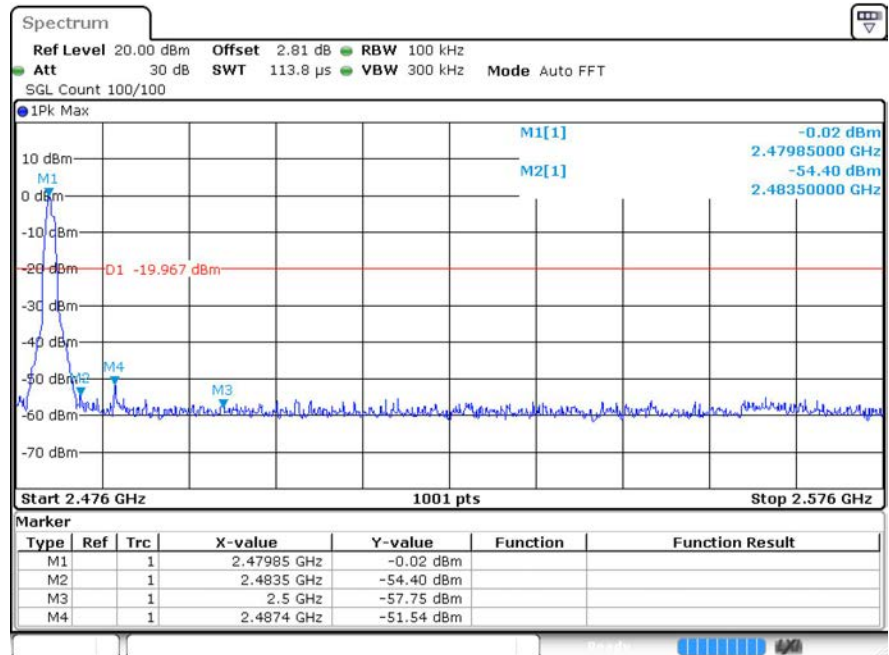
8DPSK/LCH/Hop



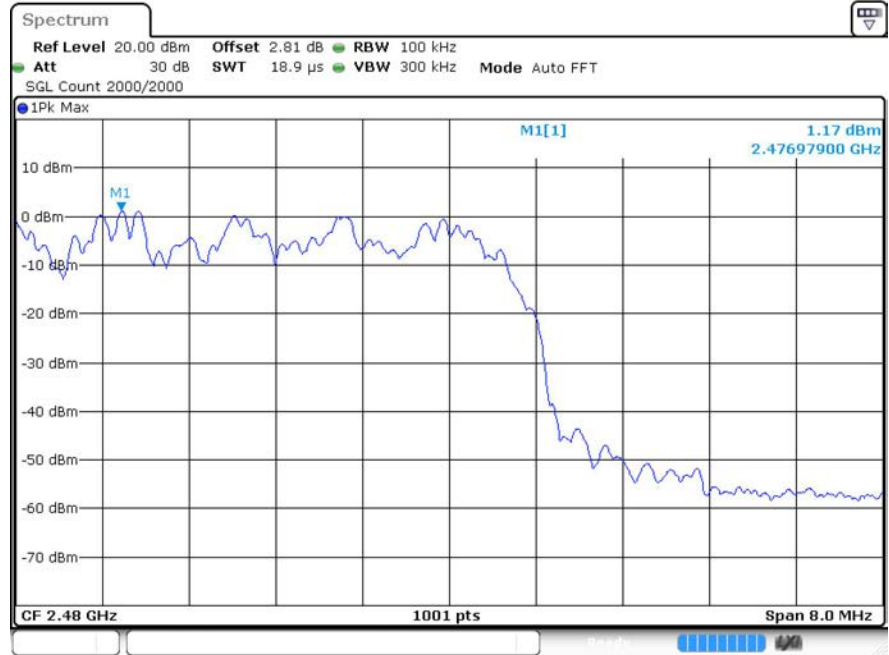
Ref



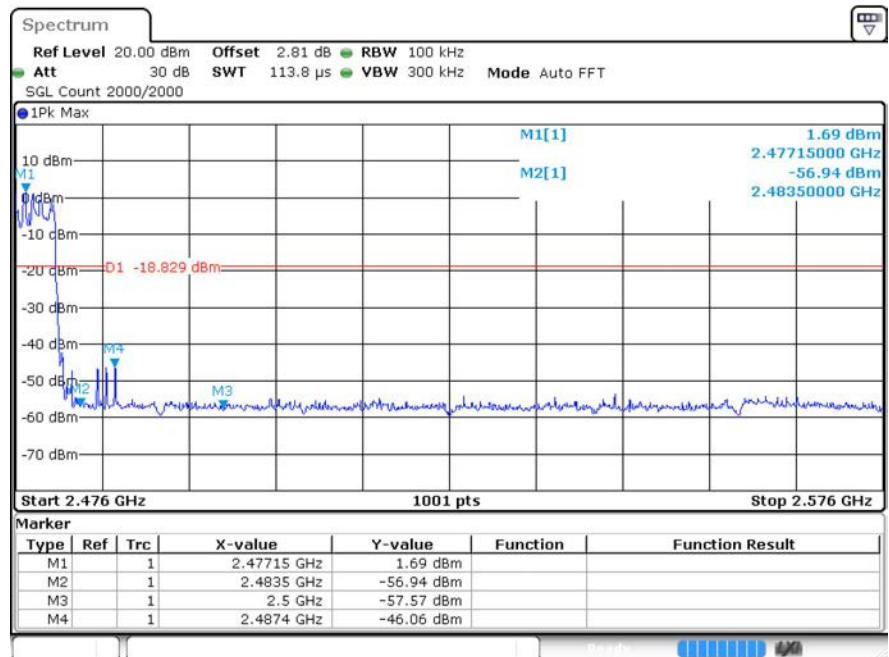
8DPSK/HCH/No Hop



Ref



8DPSK/HCH/Hop



## 9 Restrict-band band-edge measurements

### 9.1 Test Result

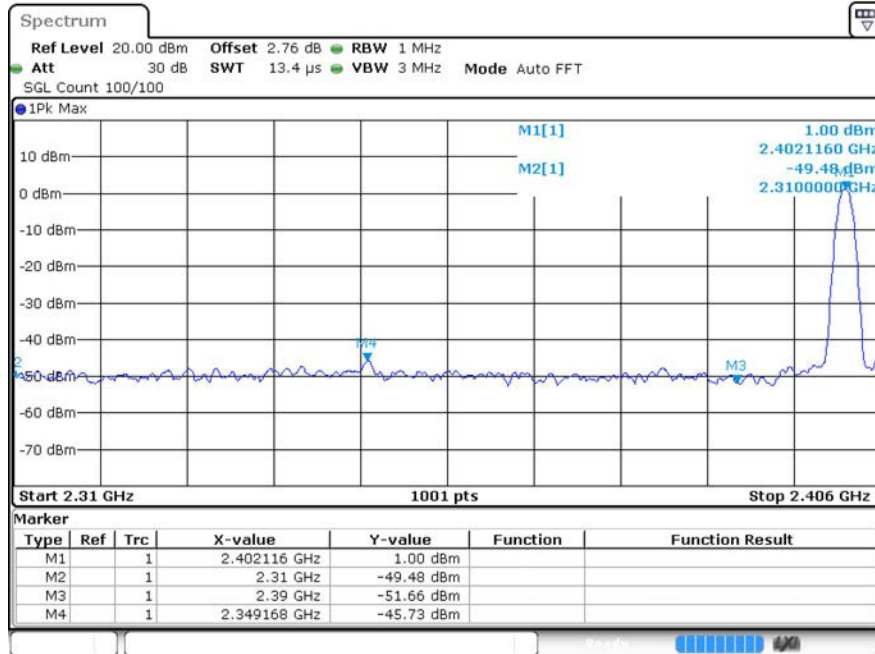
| Test Mode     | Hopping | Freq.    | Power [dBm] | Gain | Duty Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|---------|----------|-------------|------|-------------|------------|----------|----------------|---------|
| GFSK          | Off     | 2310.0   | -49.48      | 2    | -           | 47.78      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -56.51      | 2    | 5.06        | 45.81      | AV       | 54             | Pass    |
|               | Off     | 2349.168 | -45.72      | 2    | -           | 51.54      | PEAK     | 74             | Pass    |
|               | Off     | 2338.224 | -54.45      | 2    | 5.06        | 47.87      | AV       | 54             | Pass    |
|               | Off     | 2390.0   | -51.66      | 2    | -           | 45.6       | PEAK     | 74             | Pass    |
|               | Off     | 2390.0   | -57.03      | 2    | 5.06        | 45.29      | AV       | 54             | Pass    |
|               | Off     | 2483.5   | -49.87      | 2    | -           | 47.39      | PEAK     | 74             | Pass    |
|               | Off     | 2483.5   | -56.51      | 2    | 5.06        | 45.81      | AV       | 54             | Pass    |
|               | Off     | 2487.472 | -44.83      | 2    | -           | 52.43      | PEAK     | 74             | Pass    |
|               | Off     | 2492.632 | -55.77      | 2    | 5.06        | 46.55      | AV       | 54             | Pass    |
|               | Off     | 2500.0   | -51.17      | 2    | -           | 46.09      | PEAK     | 74             | Pass    |
|               | Off     | 2500.0   | -56.79      | 2    | 5.06        | 45.53      | AV       | 54             | Pass    |
| $\pi/4$ DQPSK | Off     | 2310.0   | -50.48      | 2    | -           | 46.78      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -56.33      | 2    | 4.95        | 45.88      | AV       | 54             | Pass    |
|               | Off     | 2330.928 | -47.15      | 2    | -           | 50.11      | PEAK     | 74             | Pass    |
|               | Off     | 2339.664 | -54.11      | 2    | 4.95        | 48.1       | AV       | 54             | Pass    |
|               | Off     | 2390.0   | -49.8       | 2    | -           | 47.46      | PEAK     | 74             | Pass    |
|               | Off     | 2390.0   | -56.85      | 2    | 4.95        | 45.36      | AV       | 54             | Pass    |
|               | Off     | 2483.5   | -48.52      | 2    | -           | 48.74      | PEAK     | 74             | Pass    |
|               | Off     | 2483.5   | -56.17      | 2    | 4.95        | 46.04      | AV       | 54             | Pass    |
|               | Off     | 2487.424 | -45.52      | 2    | -           | 51.74      | PEAK     | 74             | Pass    |
|               | Off     | 2487.424 | -55.55      | 2    | 4.95        | 46.66      | AV       | 54             | Pass    |
|               | Off     | 2500.0   | -50.23      | 2    | -           | 47.03      | PEAK     | 74             | Pass    |
|               | Off     | 2500.0   | -56.37      | 2    | 4.95        | 45.84      | AV       | 54             | Pass    |
| 8DPSK         | Off     | 2310.0   | -50.83      | 2    | -           | 46.43      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -56.66      | 2    | 4.95        | 45.55      | AV       | 54             | Pass    |
|               | Off     | 2338.32  | -46.49      | 2    | -           | 50.77      | PEAK     | 74             | Pass    |
|               | Off     | 2343.504 | -54.13      | 2    | 4.95        | 48.08      | AV       | 54             | Pass    |



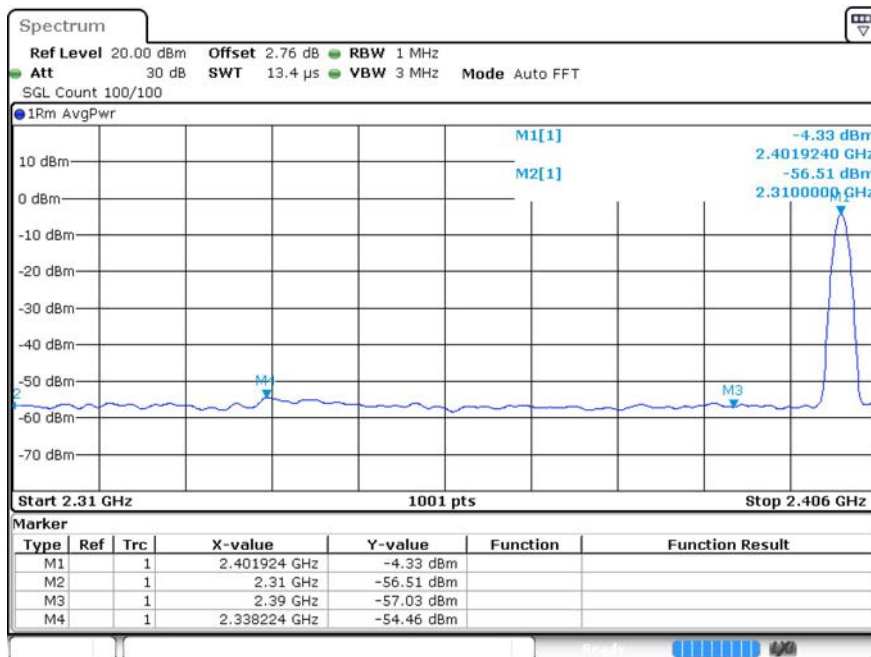
|     |          |        |   |      |       |      |    |      |
|-----|----------|--------|---|------|-------|------|----|------|
| Off | 2390.0   | -51.82 | 2 | -    | 45.44 | PEAK | 74 | Pass |
| Off | 2390.0   | -56.65 | 2 | 4.95 | 45.56 | AV   | 54 | Pass |
| Off | 2483.5   | -47.52 | 2 | -    | 49.74 | PEAK | 74 | Pass |
| Off | 2483.5   | -55.79 | 2 | 4.95 | 46.42 | AV   | 54 | Pass |
| Off | 2496.376 | -46.21 | 2 | -    | 51.05 | PEAK | 74 | Pass |
| Off | 2485.36  | -55.37 | 2 | 4.95 | 46.84 | AV   | 54 | Pass |
| Off | 2500.0   | -48.91 | 2 | -    | 48.35 | PEAK | 74 | Pass |
| Off | 2500.0   | -56.54 | 2 | 4.95 | 45.67 | AV   | 54 | Pass |

## 9.2 Test Graphs

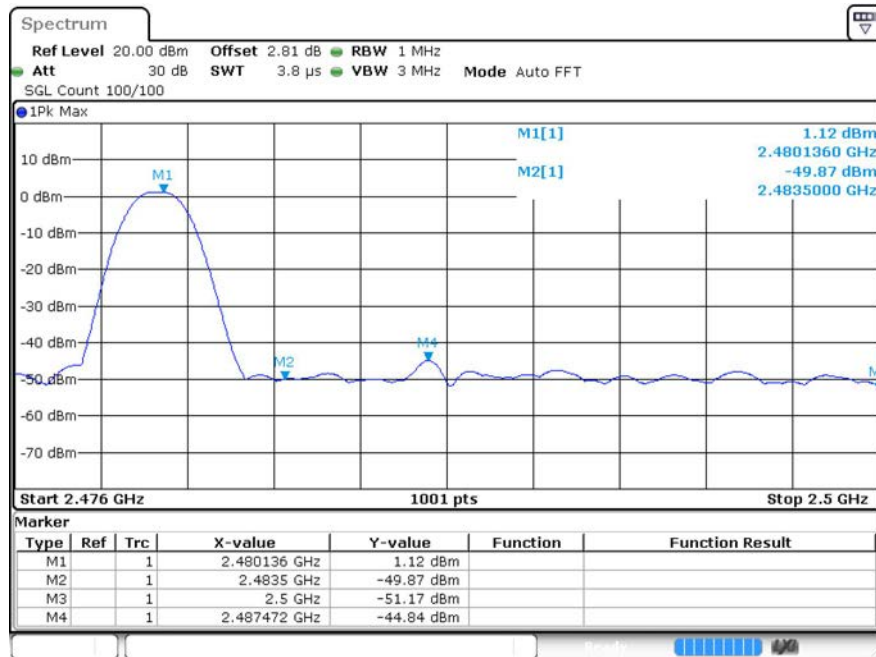
Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK (Low Channel)



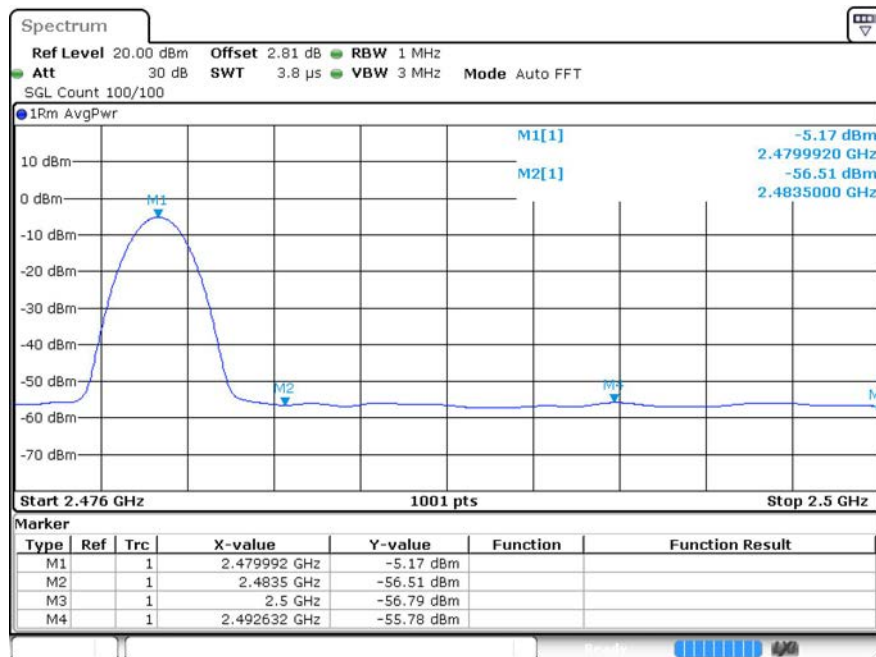
Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average (Low Channel)



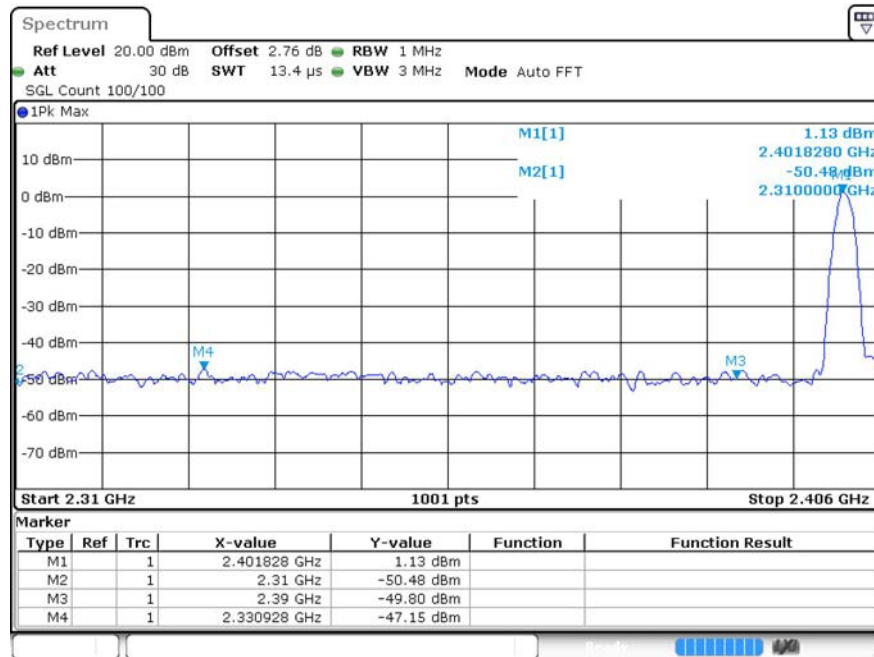
## Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK (High Channel)



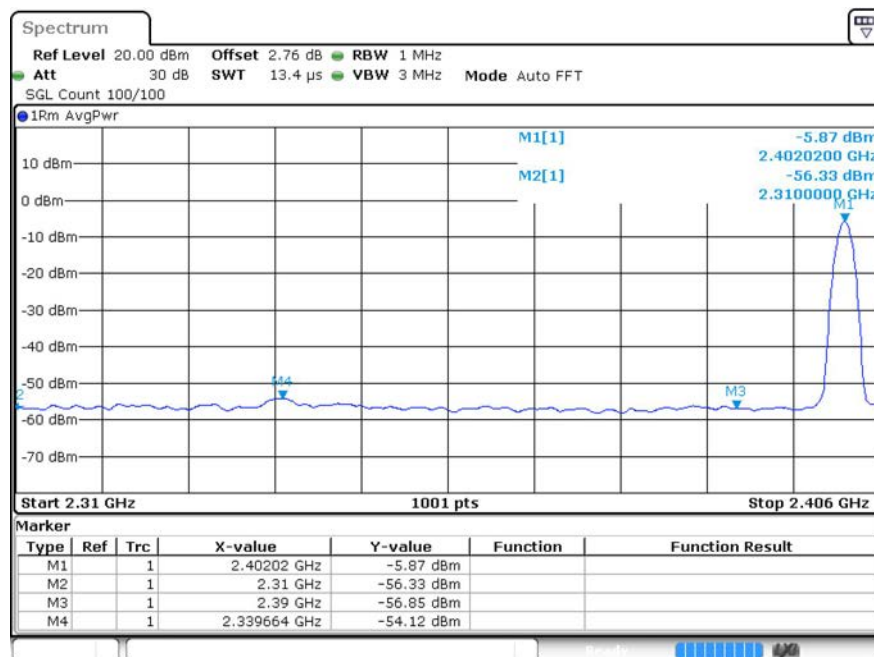
## Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average (High Channel)



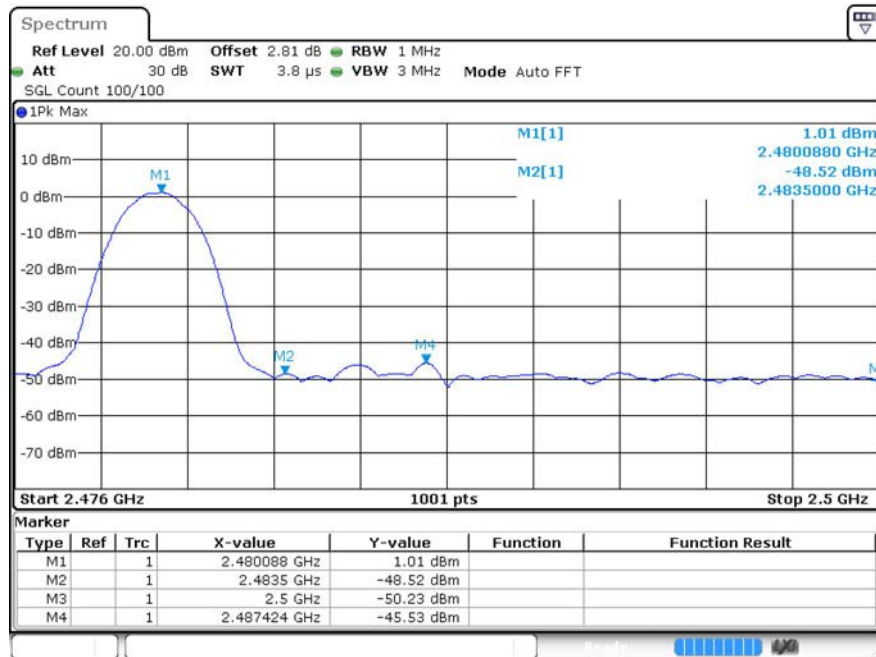
## Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (Low Channel)



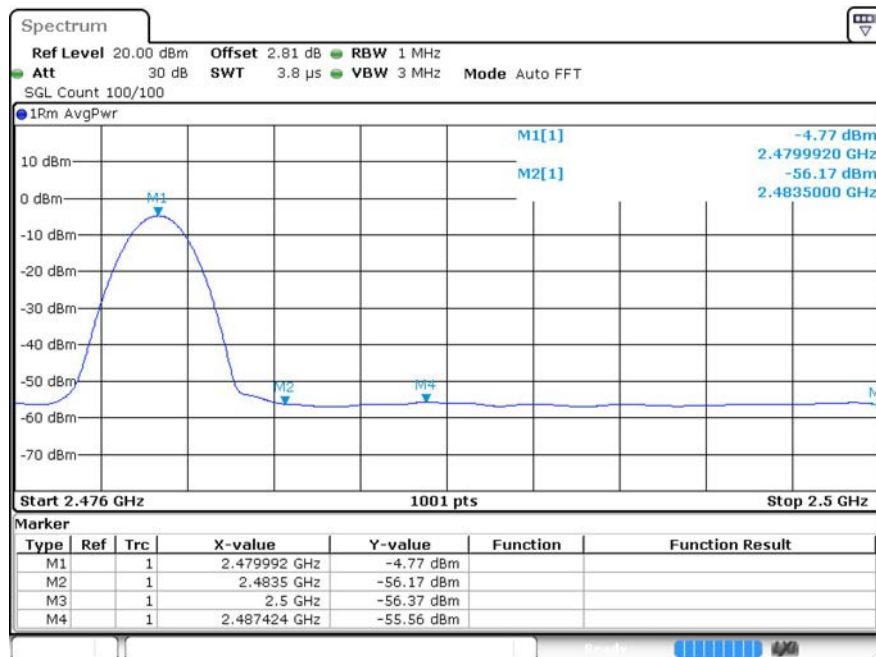
## Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (Low Channel)



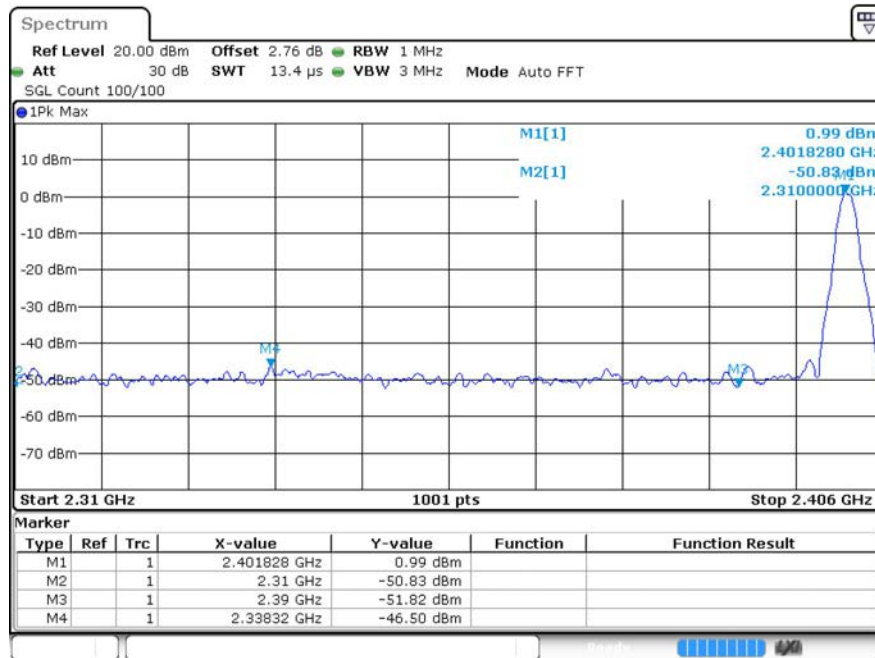
### Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (High Channel)



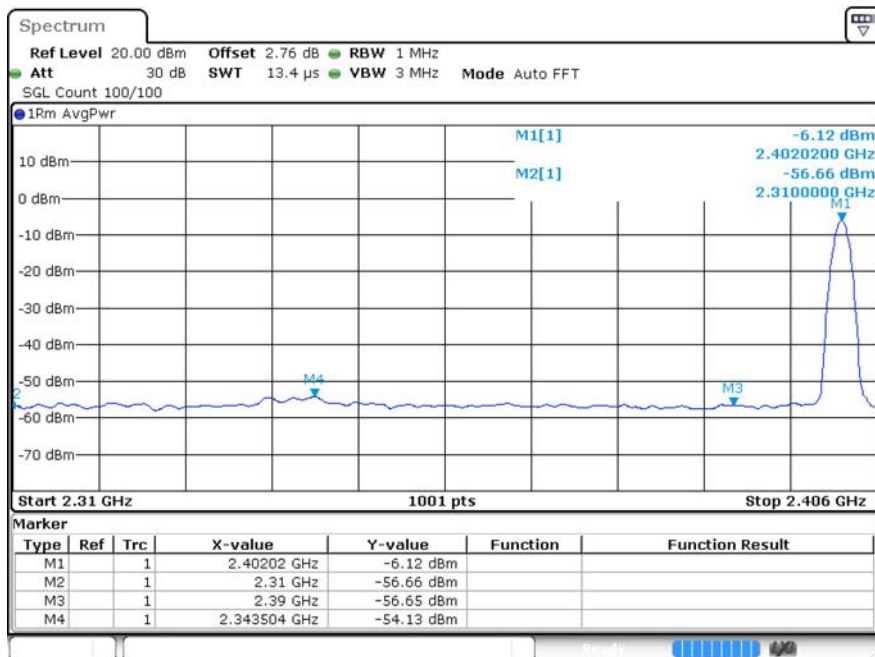
### Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (High Channel)



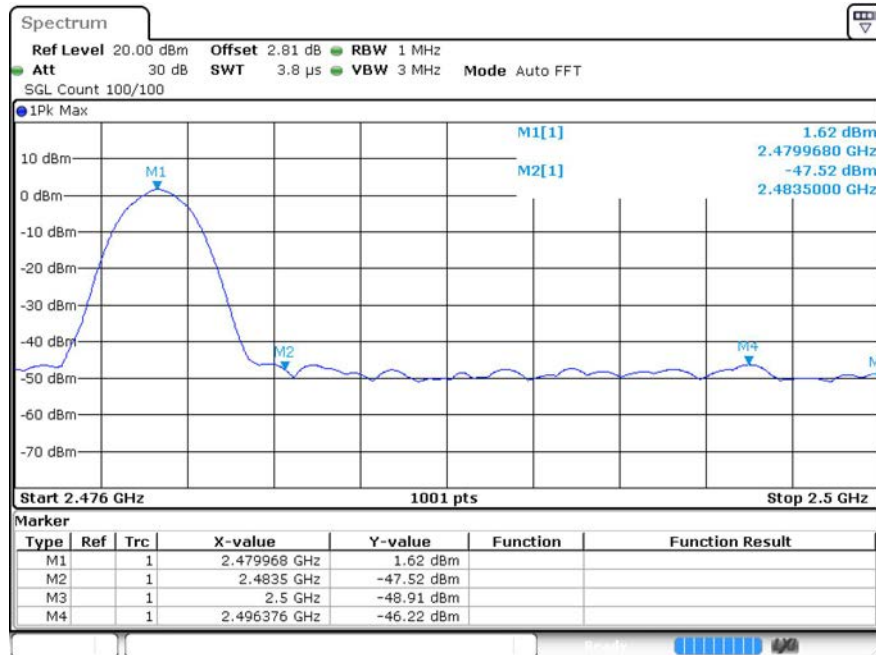
## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (Low Channel)



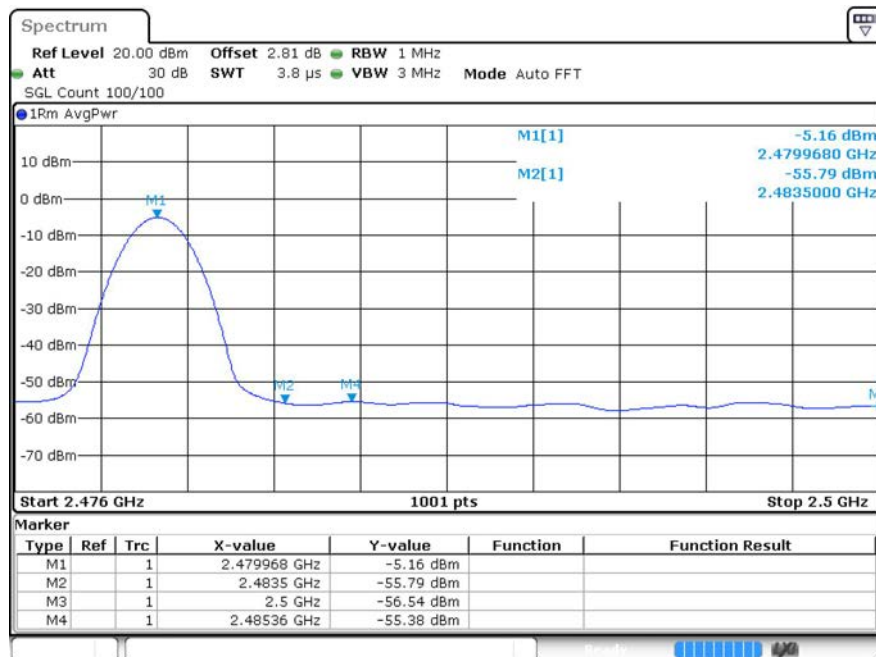
## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_Average (Low Channel)



## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (High Channel)



## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_Average (High Channel)



---The End---