



## Appendix A

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

Product Name: Wireless Earphone

Trade Mark: Blackview

Test Model: AirPods 60

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 25.4 °C     |
| Relative Humidity: | 52.3%       |
| ATM Pressure:      | 101Kpa      |
| Test Engineer:     | Simba Huang |
| Supervised by:     | Seal Chen   |



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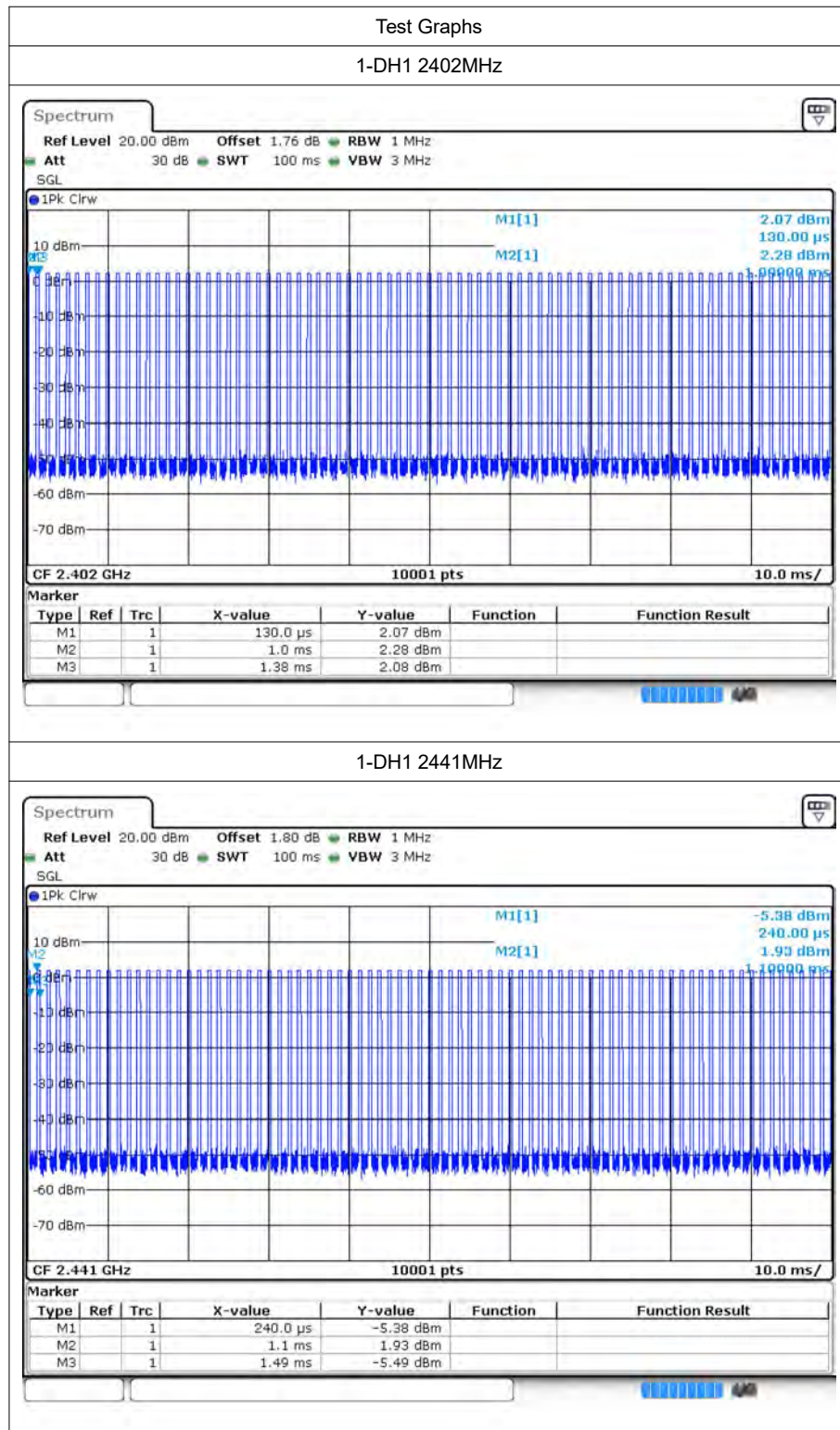
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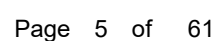
# 1 Duty Cycle

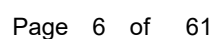
## 1.1 Test Result

| Mode  | Frequency (MHz) | Duty Cycle (%) | 1/T (kHz) |
|-------|-----------------|----------------|-----------|
| 1-DH1 | 2402            | 31.95          | 2.63      |
| 1-DH1 | 2441            | 31.9           | 2.56      |
| 1-DH1 | 2480            | 31.2           | 2.63      |
| 2-DH1 | 2402            | 32.36          | 2.5       |
| 2-DH1 | 2441            | 32.63          | 2.56      |
| 2-DH1 | 2480            | 32             | 2.56      |
| 3-DH1 | 2402            | 32.01          | 2.56      |
| 3-DH1 | 2441            | 32             | 2.56      |
| 3-DH1 | 2480            | 32.01          | 2.56      |

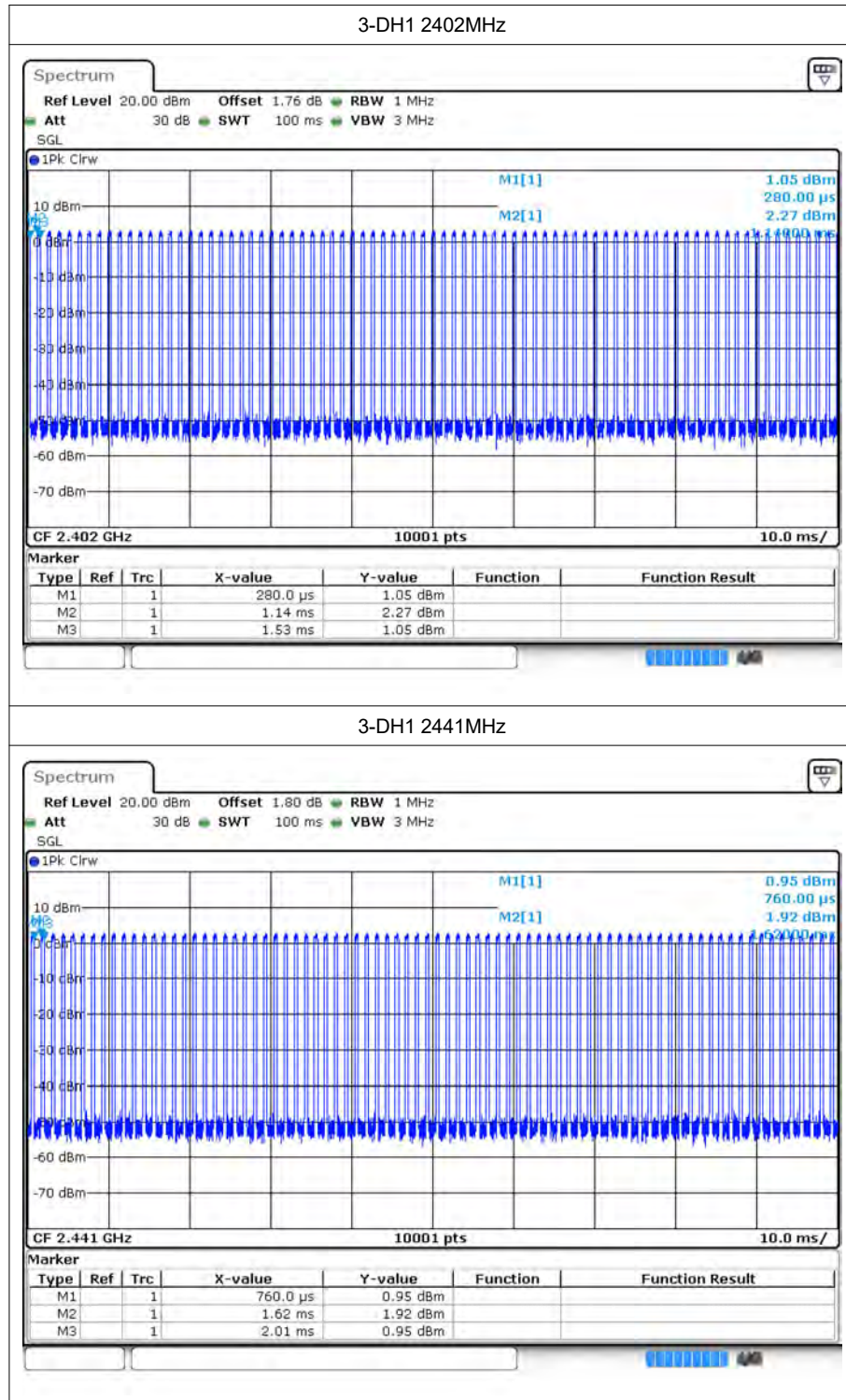
## 1.2 Test Graphs

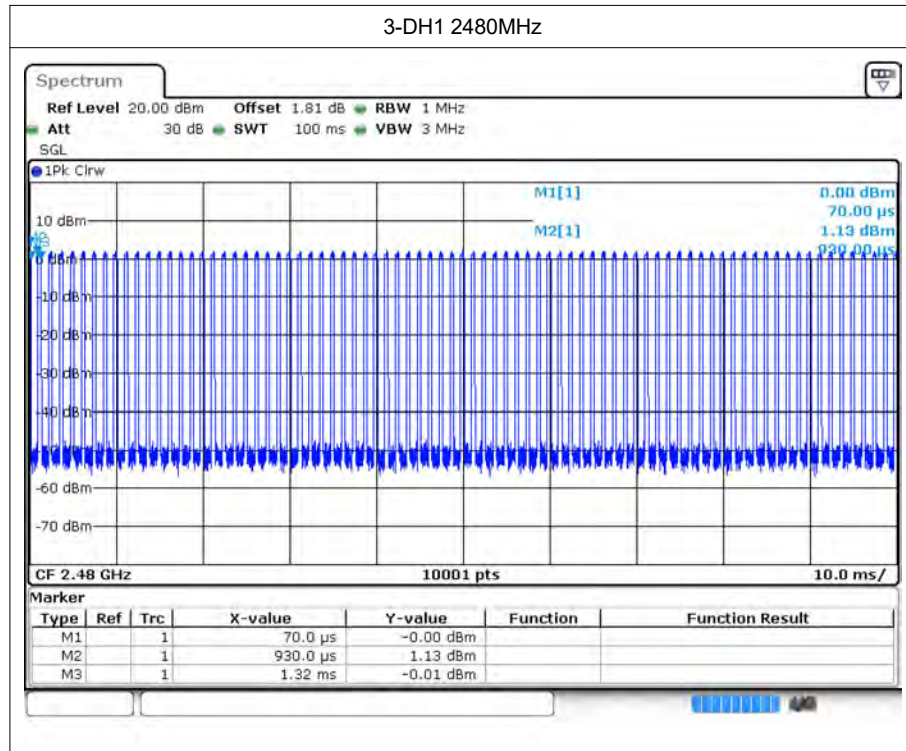












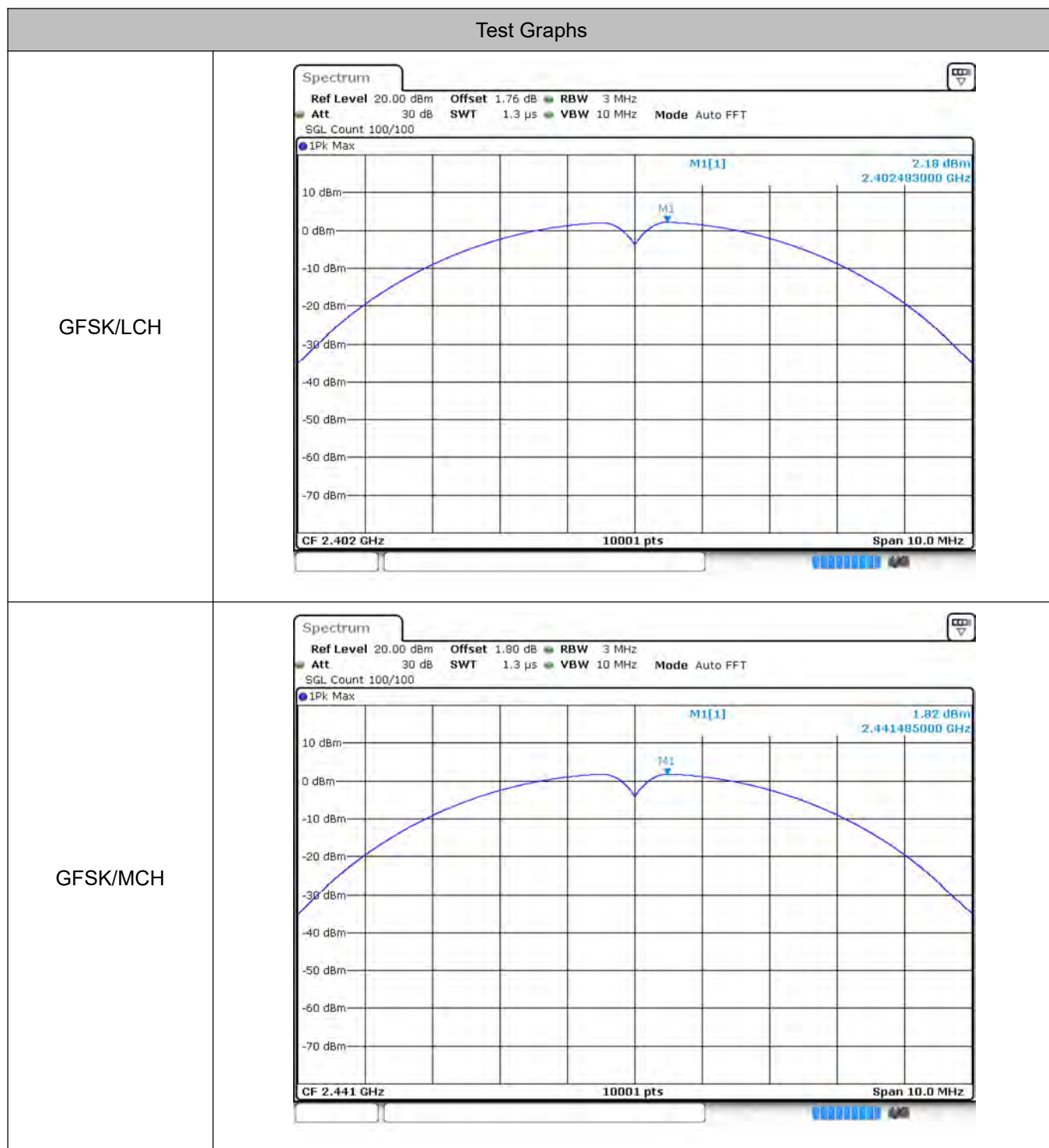


## 2 Maximum Conducted Peak Output Power

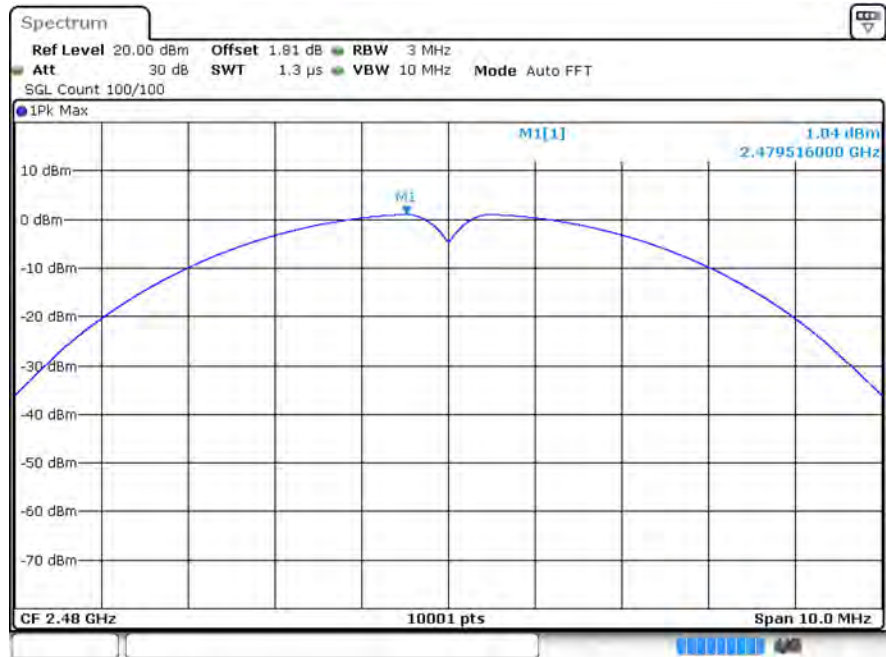
### 2.1 Test Result

| Mode          | Channel. | Maximum Peak Output Power<br>[dBm] | Limit<br>[dBm] | Verdict |
|---------------|----------|------------------------------------|----------------|---------|
| GFSK          | LCH      | 2.18                               | 21             | Pass    |
|               | MCH      | 1.82                               | 21             | Pass    |
|               | HCH      | 1.04                               | 21             | Pass    |
| $\pi/4$ DQPSK | LCH      | 2.57                               | 21             | Pass    |
|               | MCH      | 2.5                                | 21             | Pass    |
|               | HCH      | 1.5                                | 21             | Pass    |
| 8DPSK         | LCH      | 2.7                                | 21             | Pass    |
|               | MCH      | 2.45                               | 21             | Pass    |
|               | HCH      | 1.7                                | 21             | Pass    |

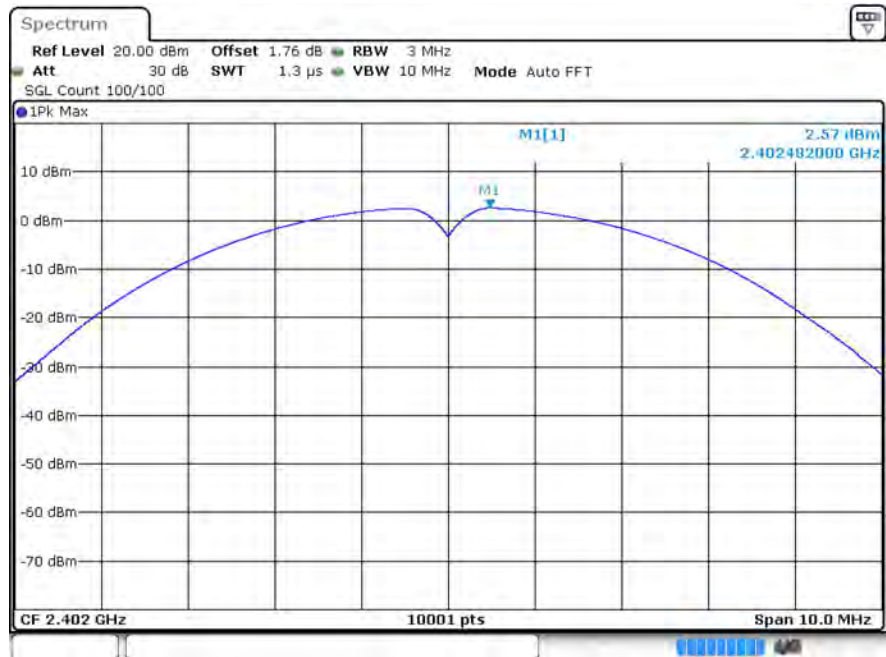
## 2.2 Test Graphs



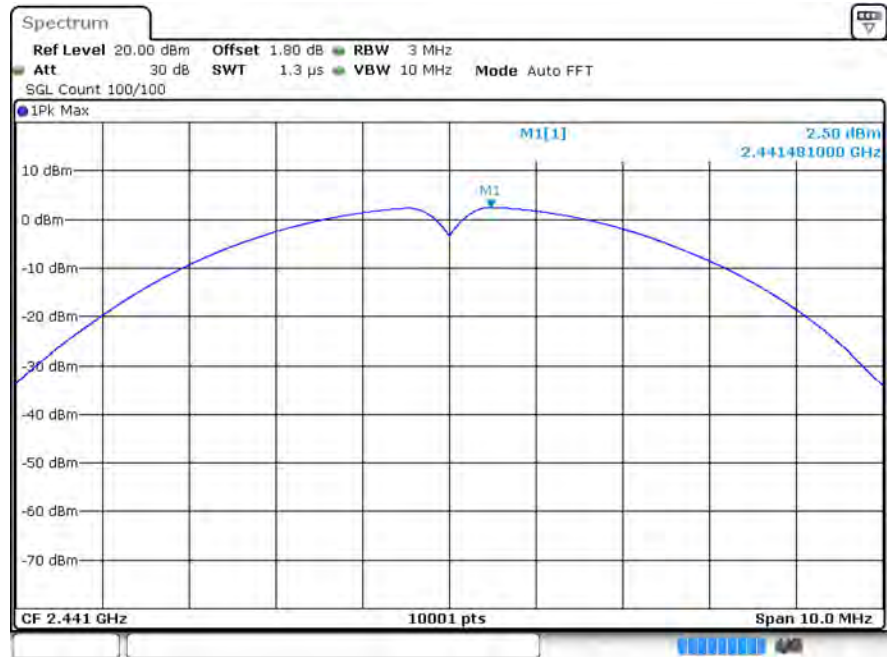
GFSK/HCH



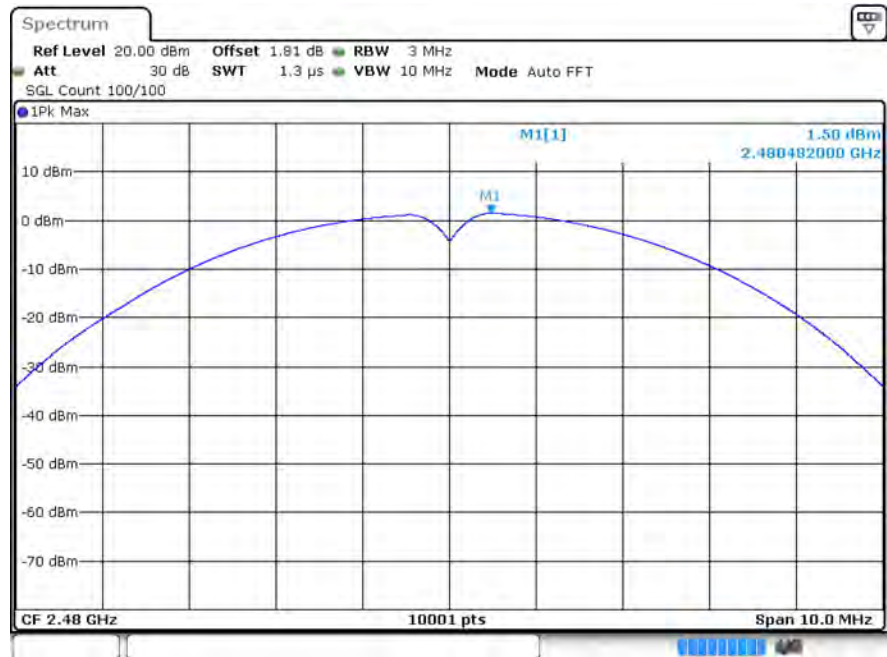
$\pi/4$ DQPSK/LCH



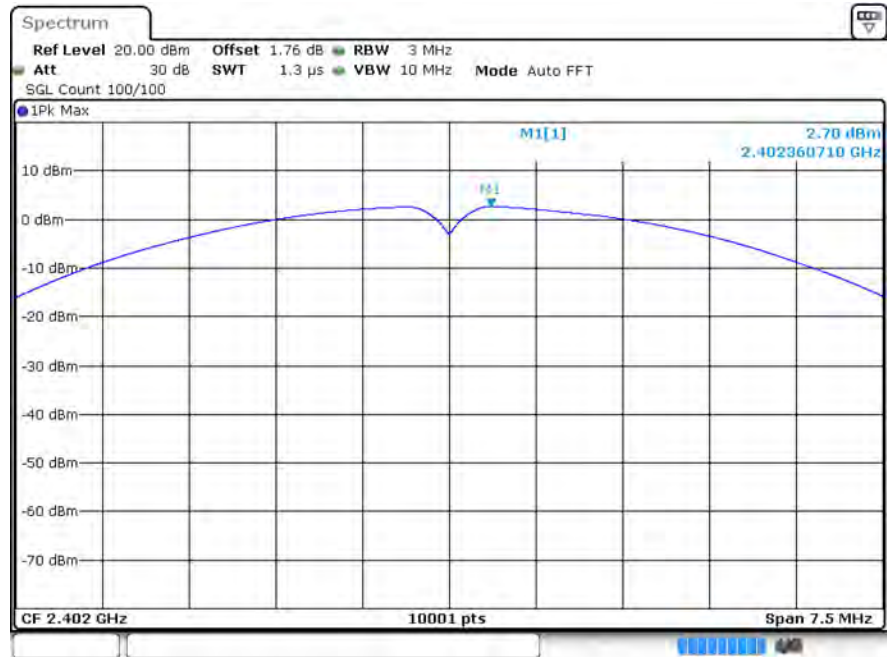
$\pi/4$ DQPSK/MCH



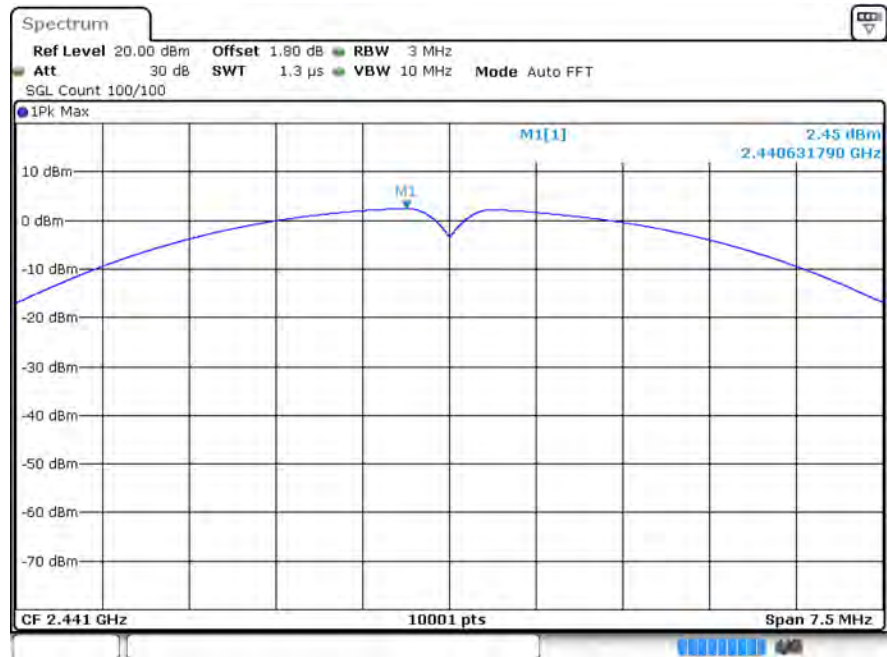
$\pi/4$ DQPSK/HCH



8DPSK/LCH

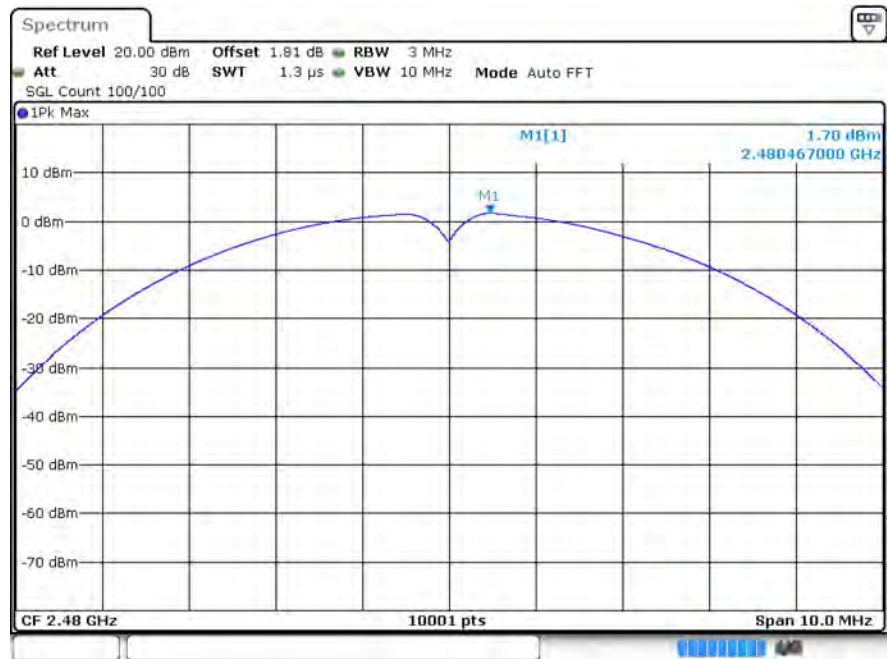


8DPSK/MCH





8DPSK/HCH

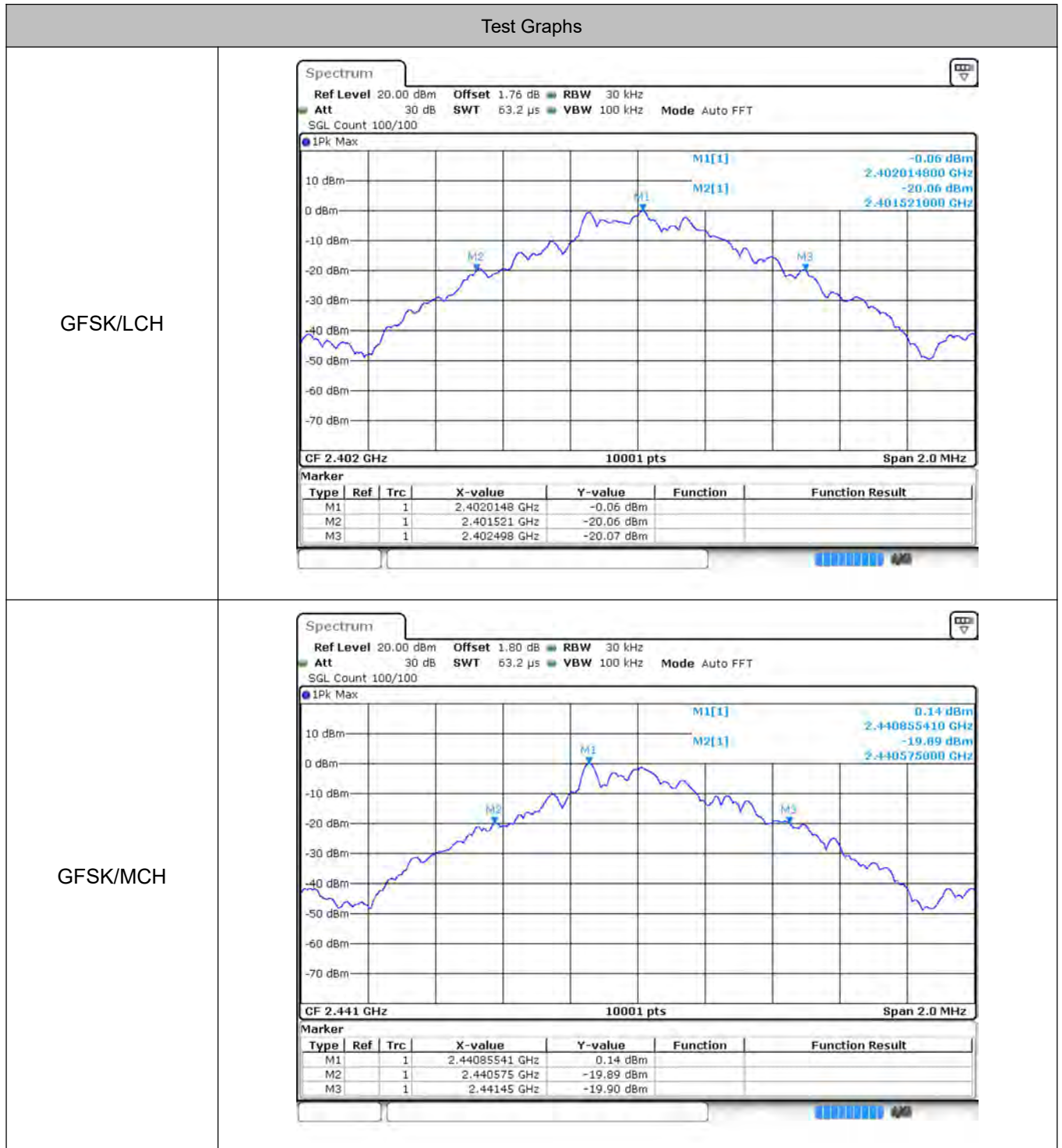


### 3 20dB Bandwidth

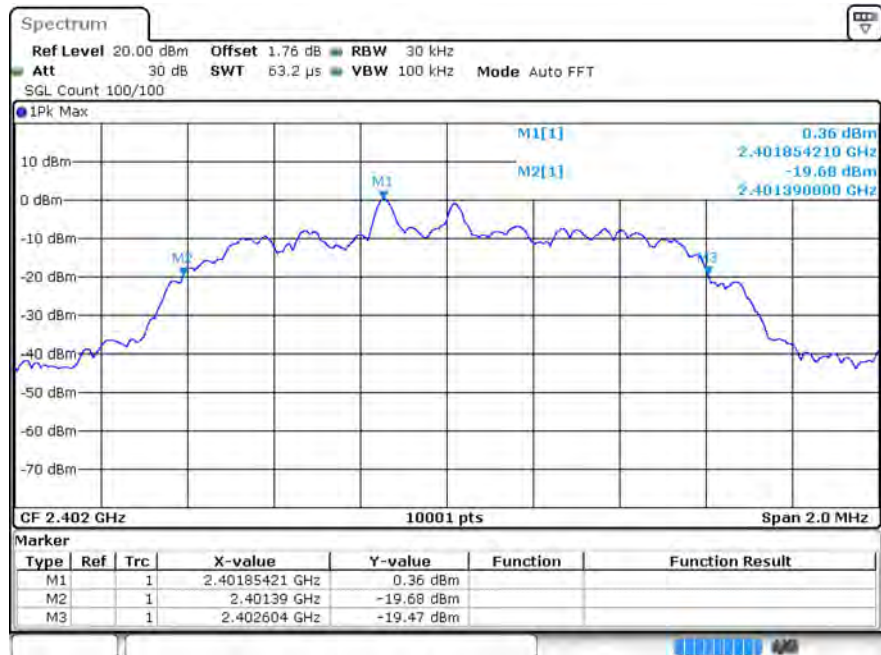
#### 3.1 Test Result

| Mode          | Channel. | 20dB Bandwidth [MHz] | Limit [MHz]   | Verdict |
|---------------|----------|----------------------|---------------|---------|
| GFSK          | LCH      | 0.977                | Not Specified | Pass    |
|               | MCH      | 0.874                | Not Specified | Pass    |
|               | HCH      | 0.954                | Not Specified | Pass    |
| $\pi/4$ DQPSK | LCH      | 1.214                | Not Specified | Pass    |
|               | MCH      | 1.197                | Not Specified | Pass    |
|               | HCH      | 1.213                | Not Specified | Pass    |
| 8DPSK         | LCH      | 1.201                | Not Specified | Pass    |
|               | MCH      | 1.208                | Not Specified | Pass    |
|               | HCH      | 1.213                | Not Specified | Pass    |

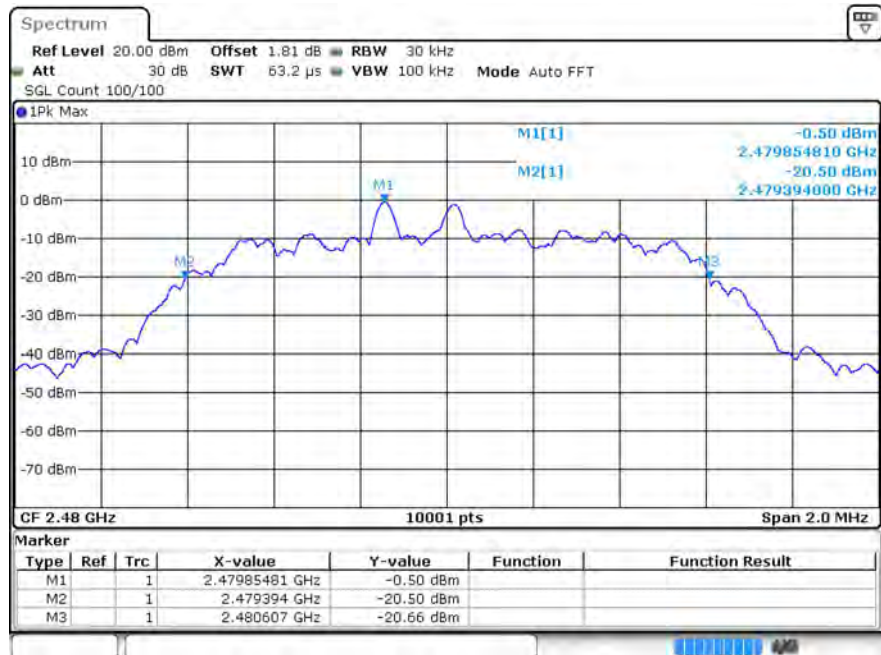
### 3.2 Test Graphs



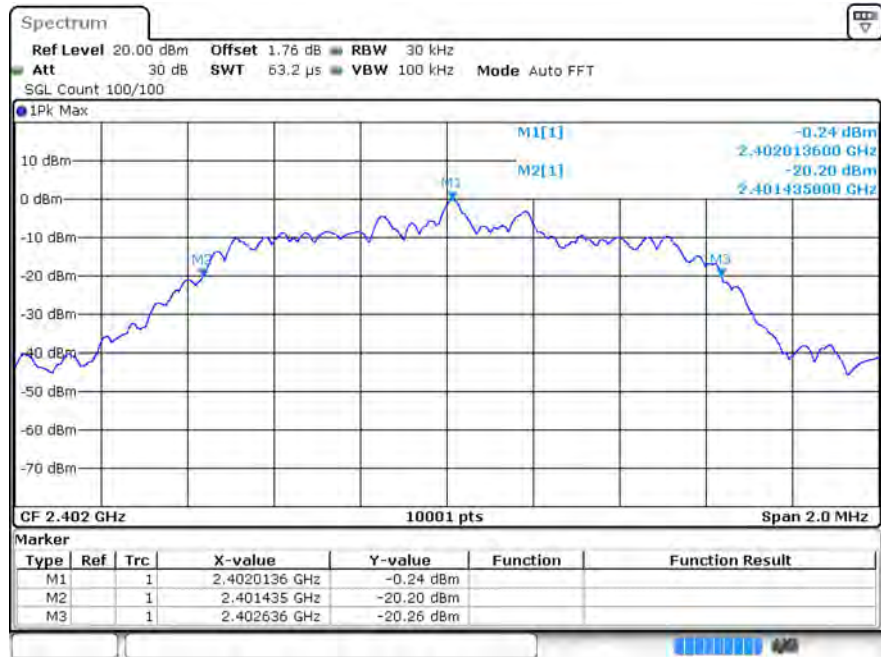
GFSK/HCH


 $\pi/4$ DQPSK/LCH


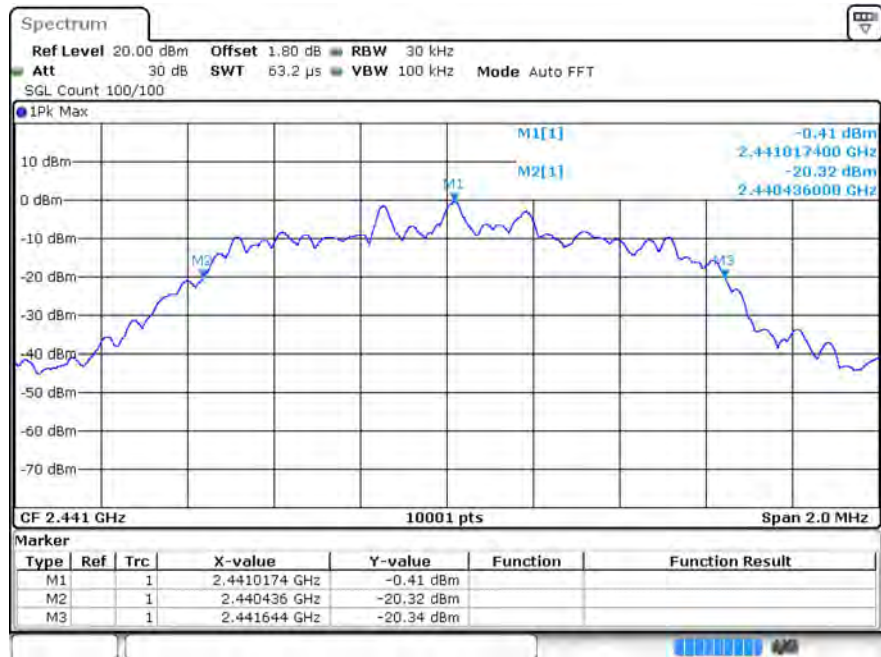
$\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH


8DPSK/LCH

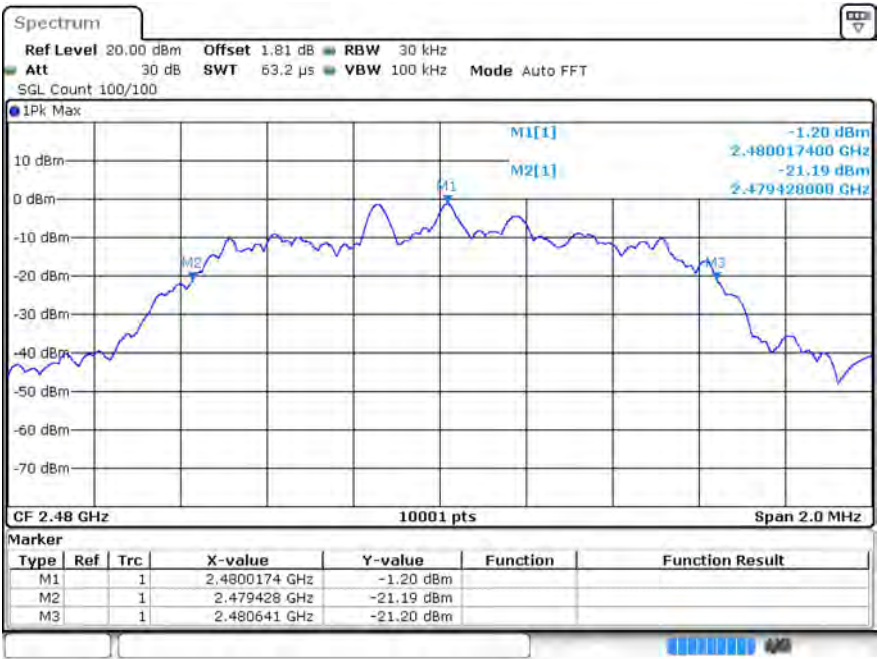


8DPSK/MCH





8DPSK/HCH

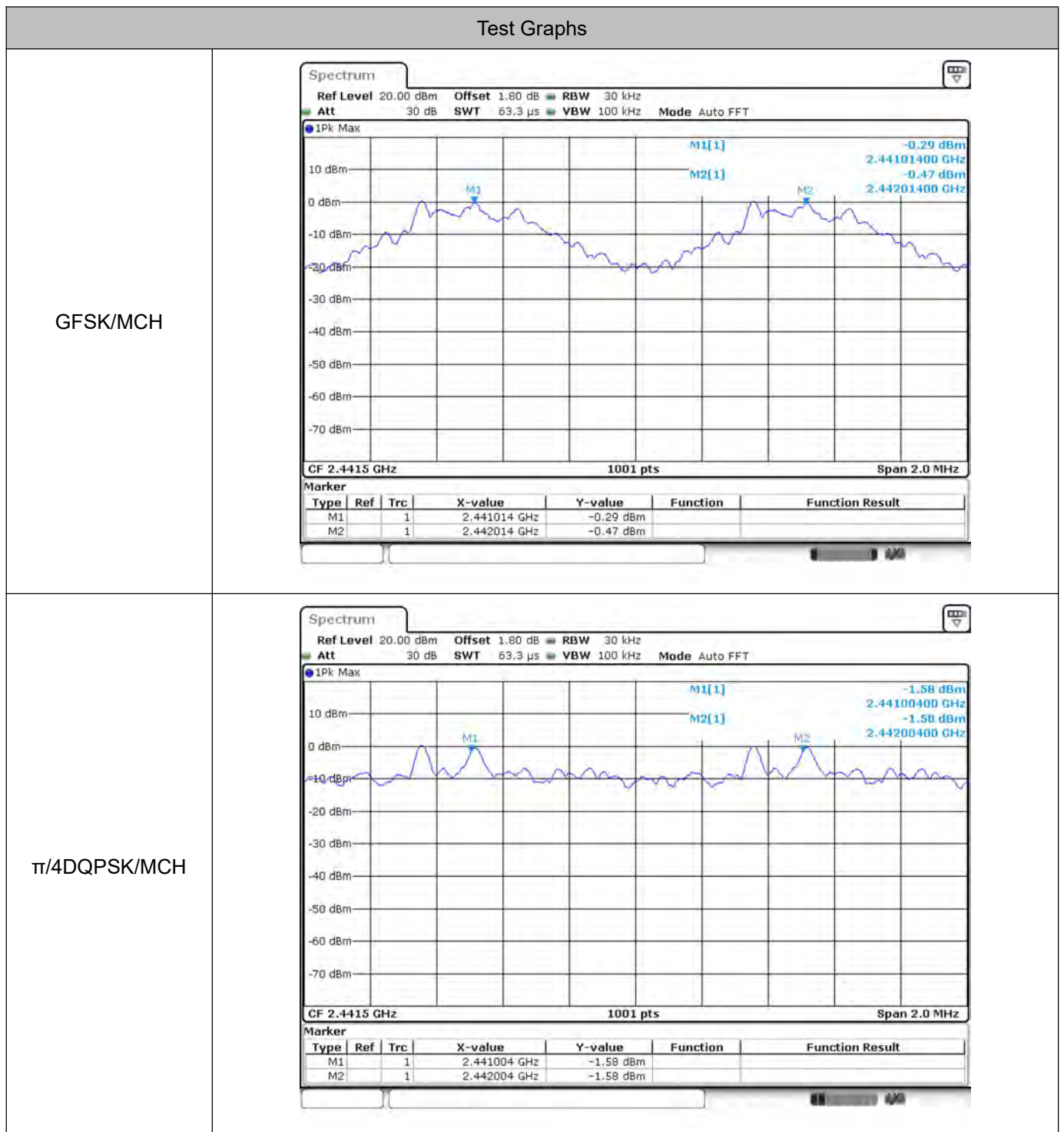


## 4 Carrier Frequency Separation

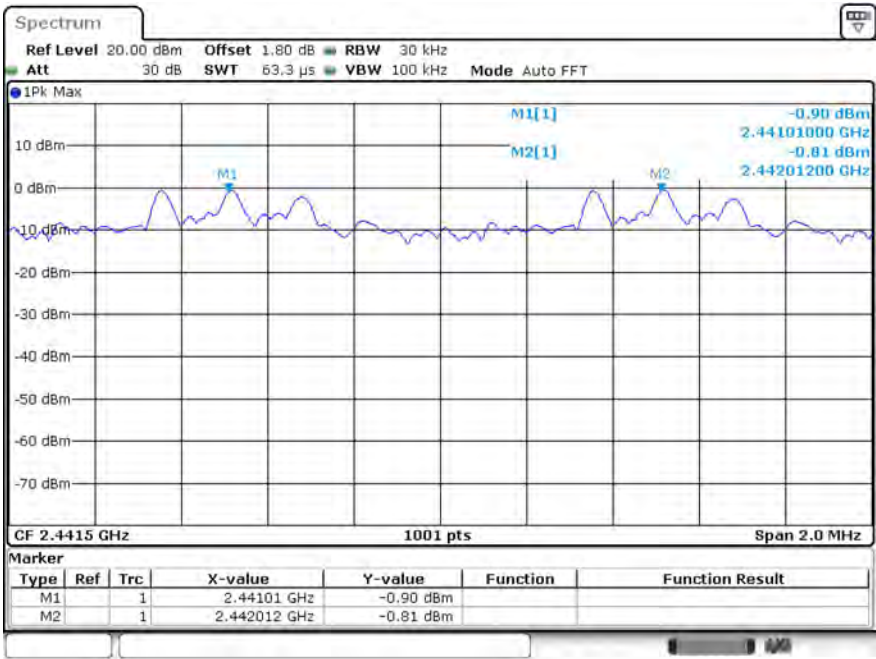
### 4.1 Test Result

| Mode          | Channel. | Carrier Frequency Separation [MHz] | Limit [MHz] | Verdict |
|---------------|----------|------------------------------------|-------------|---------|
| GFSK          | MCH      | 1                                  | 0.583       | Pass    |
| $\pi/4$ DQPSK | MCH      | 1                                  | 0.798       | Pass    |
| 8DPSK         | MCH      | 1.002                              | 0.805       | Pass    |

## 4.2 Test Graphs



8DPSK/MCH

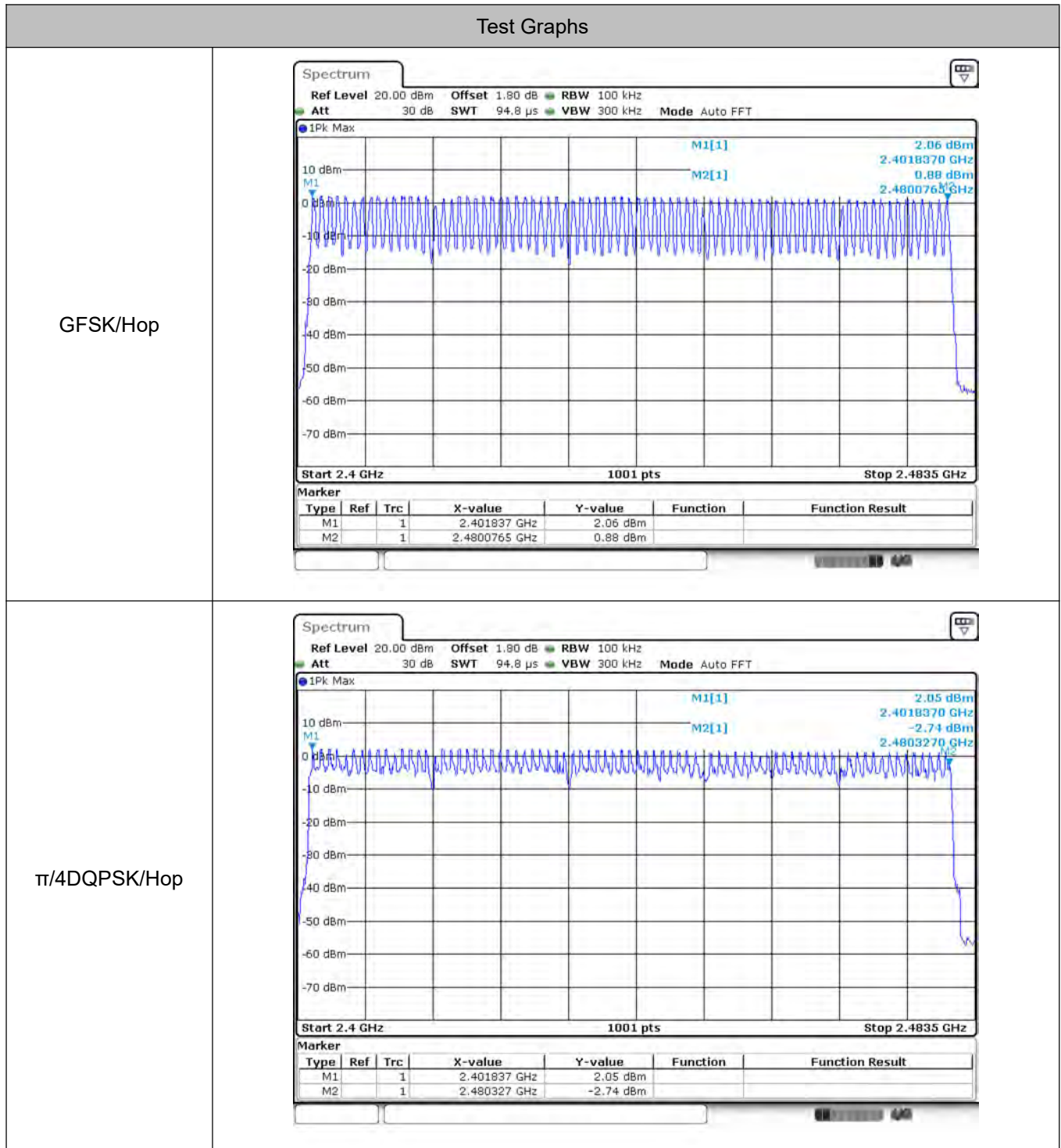


## 5 Hopping Channel Number

### 5.1 Test Result

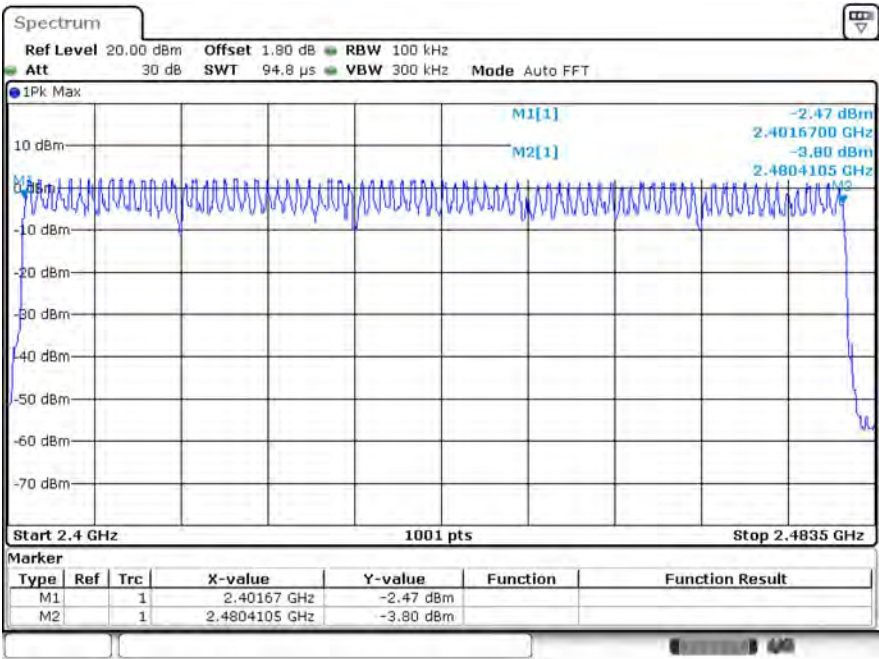
| Mode          | Channel. | Number of Hopping Channel [N] | Limit [N] | Verdict |
|---------------|----------|-------------------------------|-----------|---------|
| GFSK          | Hop      | 79                            | $\geq 15$ | PASS    |
| $\pi/4$ DQPSK | Hop      | 79                    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

## 5.2 Test Graphs





8DPSK/Hop



## 6 Dwell Time

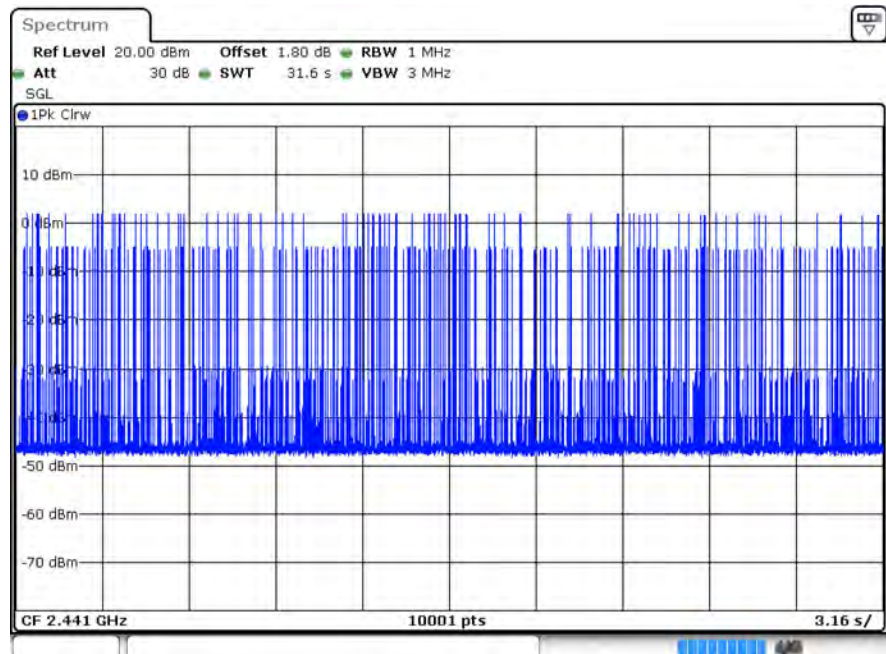
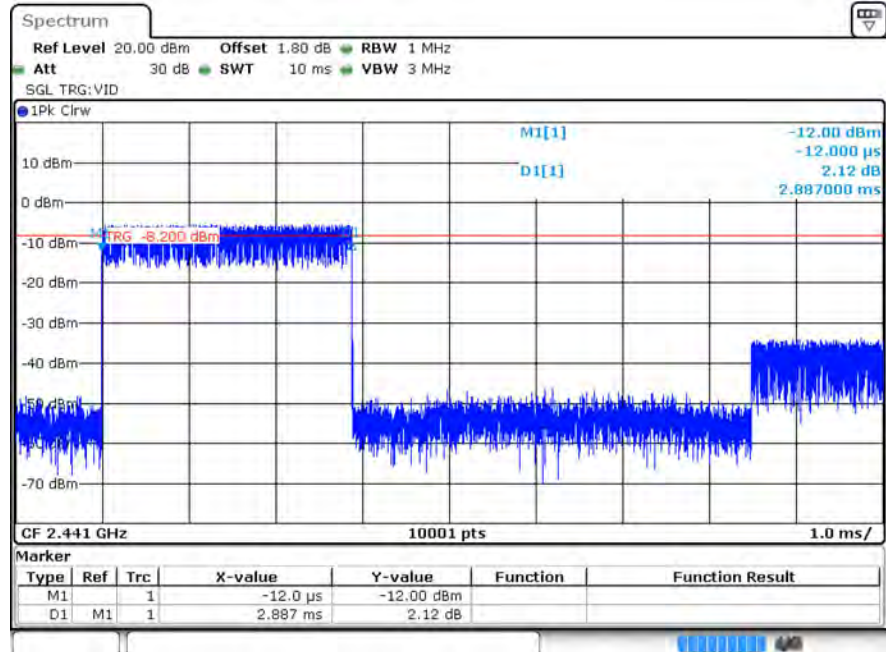
### 6.1 Test Result

| Mode          | Packet | Channel | Burst Width<br>[ms/hop/ch] | Total<br>Hops[hop*ch] | Dwell Time[ms] | Limit [s] | Verdict |
|---------------|--------|---------|----------------------------|-----------------------|----------------|-----------|---------|
| GFSK          | DH5    | MCH     | 2.887                      | 95                    | 274.265        | 0.4       | Pass    |
| $\pi/4$ DQPSK | 2DH5   | MCH     | 2.892                      | 101                   | 292.092        | 0.4       | Pass    |
| 8DPSK         | 3DH5   | MCH     | 2.893                      | 121                   | 350.053        | 0.4       | Pass    |

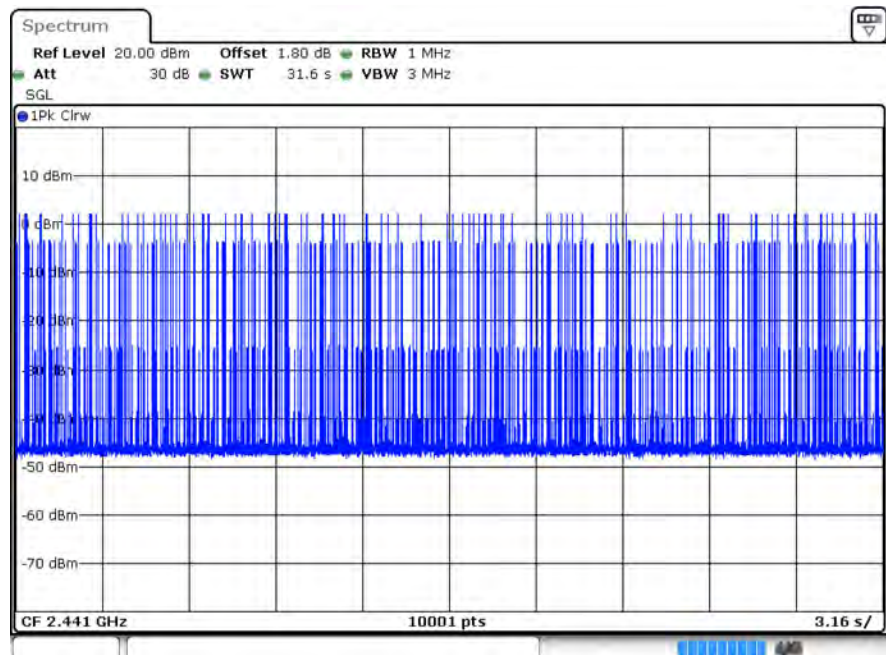
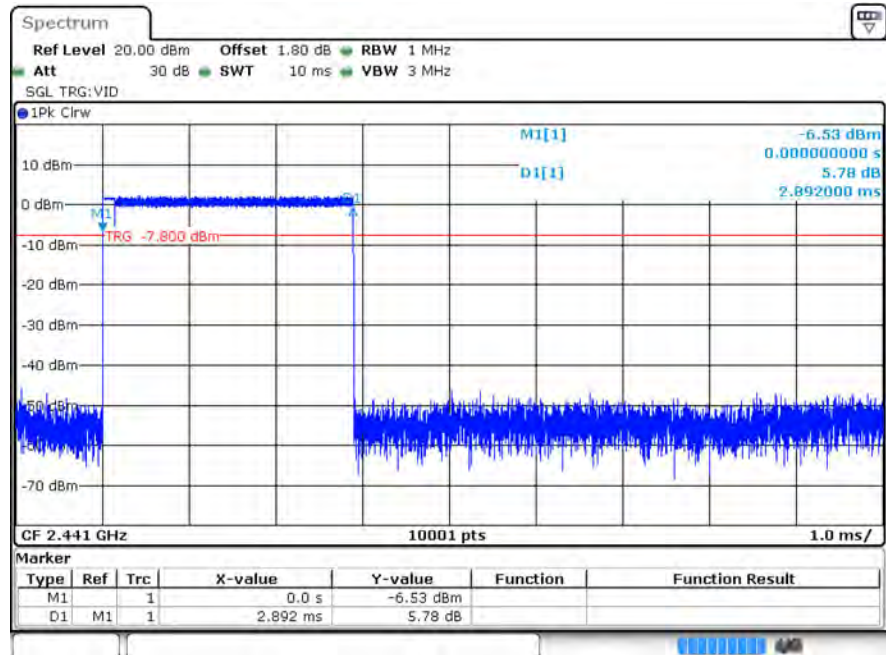
## 6.2 Test Graphs

### Test Graphs

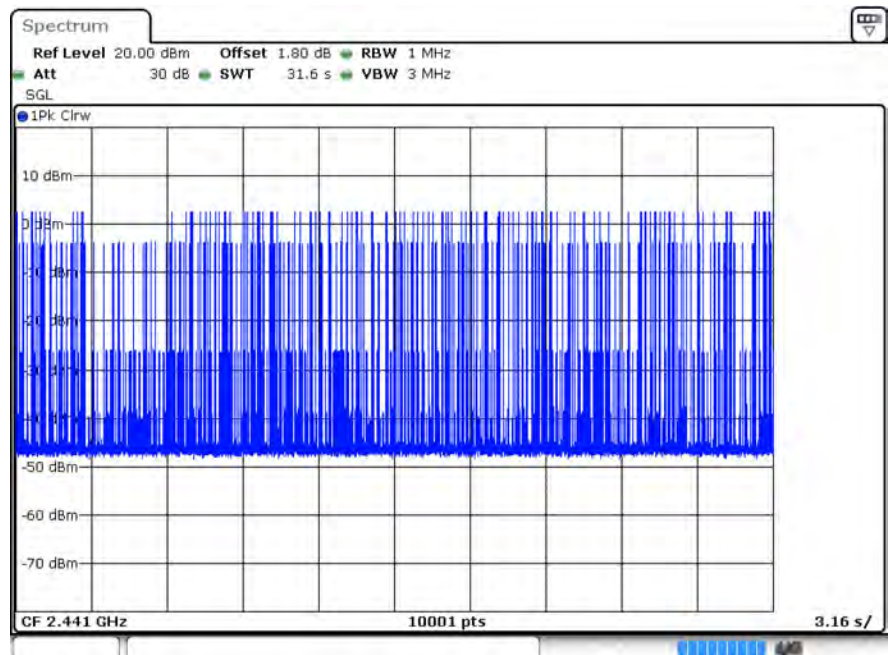
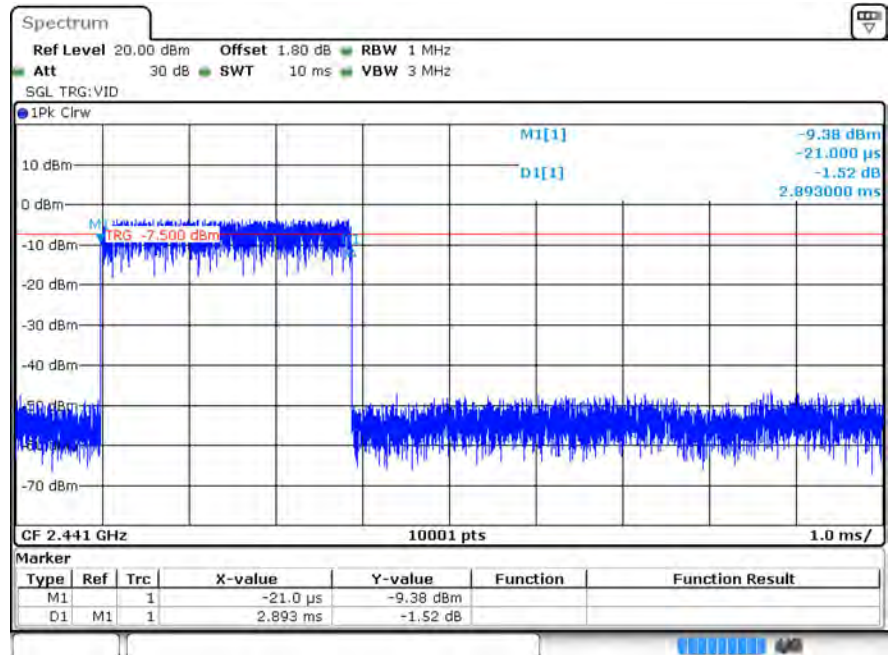
GFSK\_DH5/MCH



$\pi/4$ 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     | -44.01           | -20         | Pass    |
|               | MCH     | -42.82           | -20         | Pass    |
|               | HCH     | -43.13           | -20         | Pass    |
| $\pi/4$ DQPSK | LCH     | -44.49           | -20         | Pass    |
|               | MCH     | -43.74           | -20         | Pass    |
|               | HCH     | -43.55           | -20         | Pass    |
| 8DPSK         | LCH     | -44.17           | -20         | Pass    |
|               | MCH     | -43.73           | -20         | Pass    |
|               | HCH     | -43.54           | -20         | Pass    |



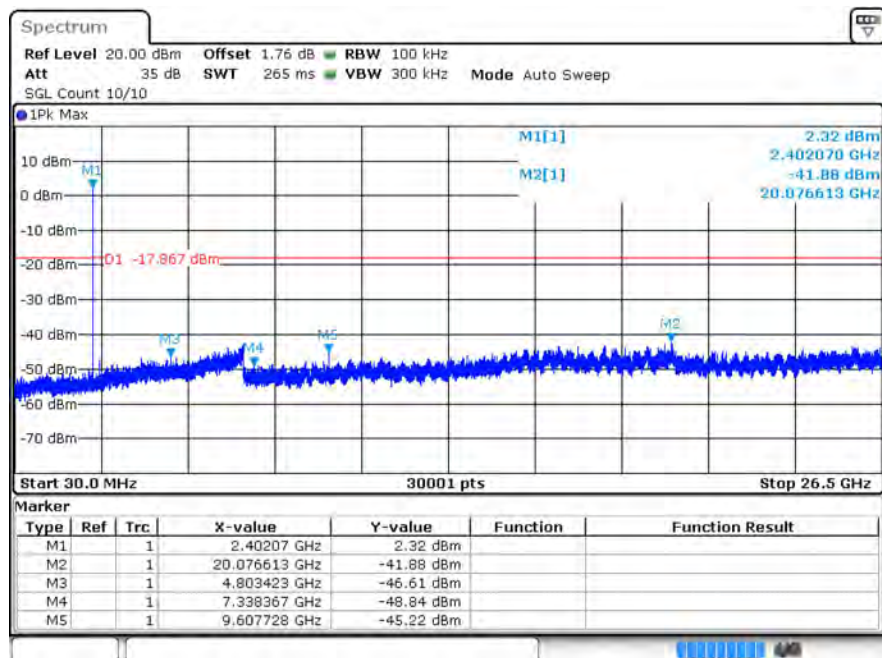
## 7.2 Test Graphs

GFSK\_LCH\_Graphs

Pref



Puw

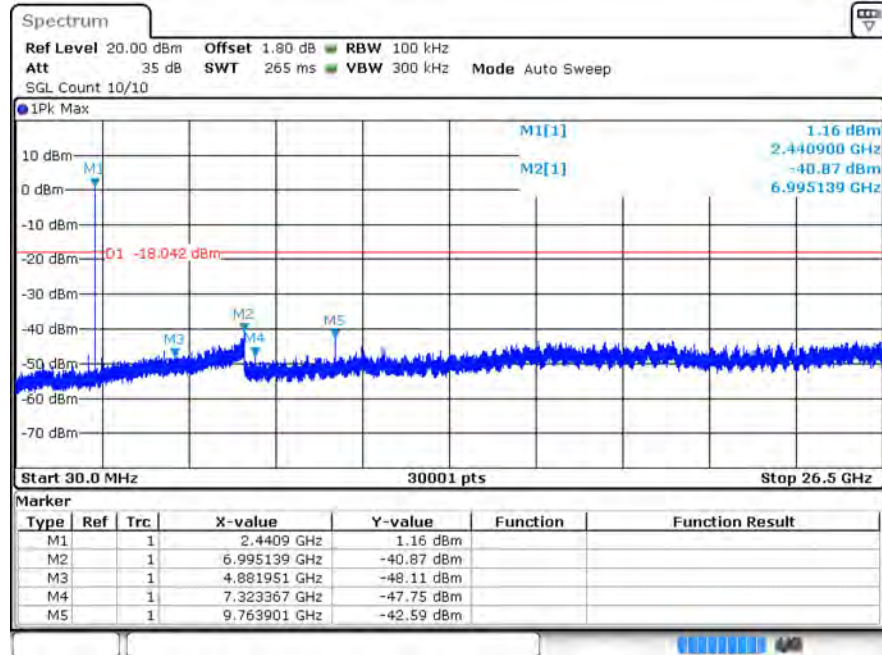


## GFSK\_MCH\_Graphs

Pref



Puw

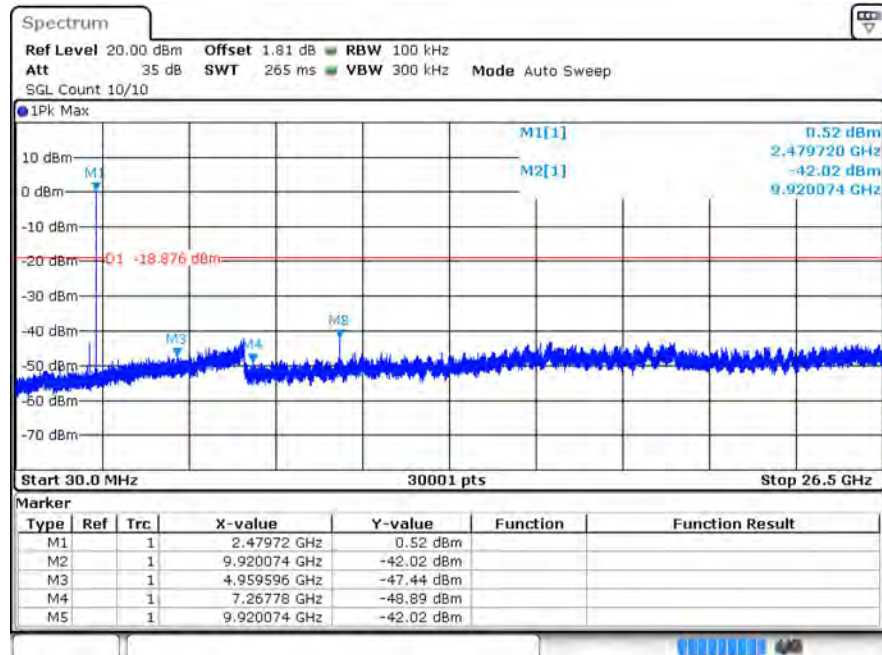


## GFSK\_HCH\_Graphs

Pref



Puw

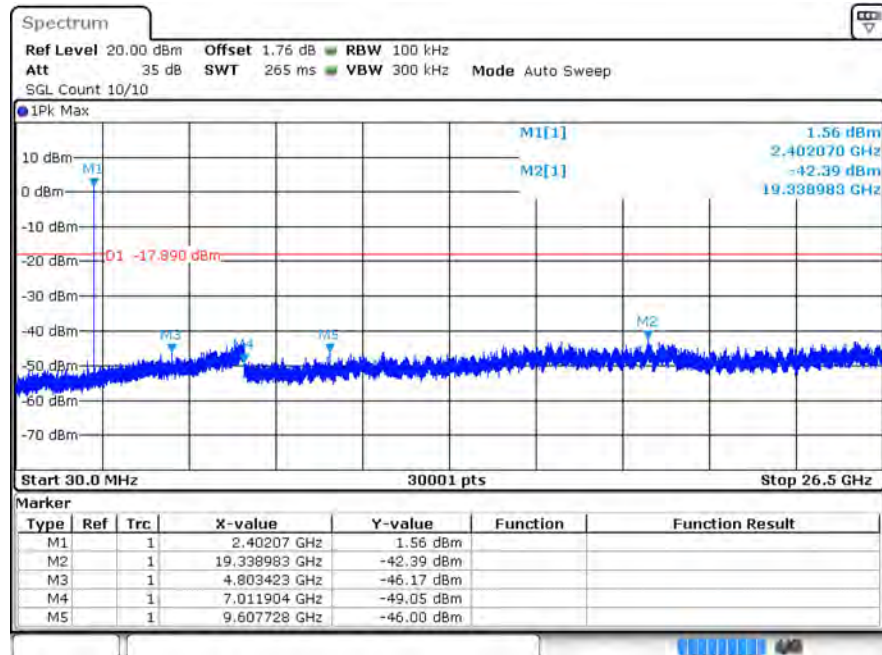


# $\pi/4$ DQPSK\_LCH\_Graphs

Pref



Puw



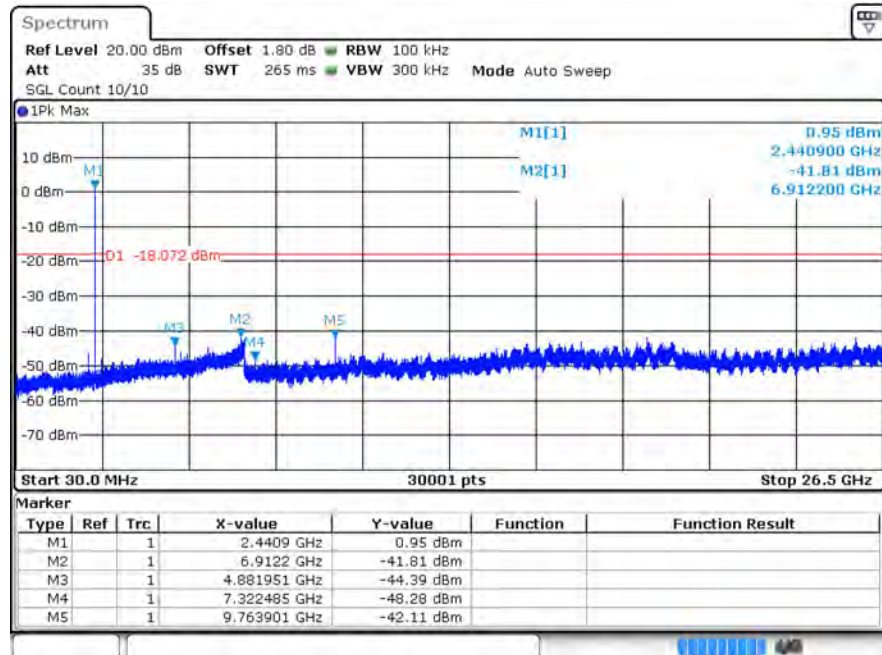


### $\pi/4$ DQPSK\_MCH\_Graphs

Pref



Puw

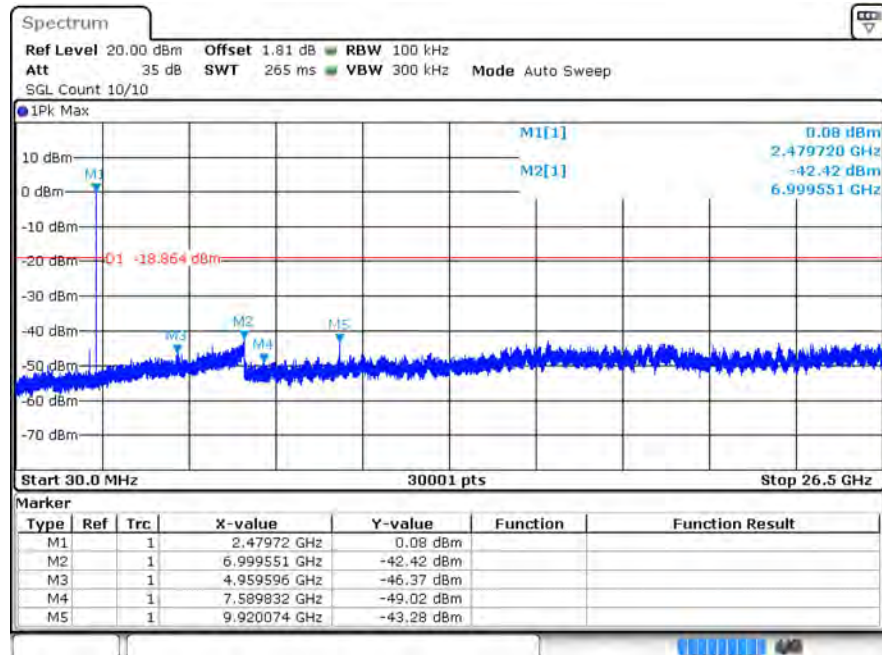


### $\pi/4$ DQPSK\_HCH\_Graphs

Pref

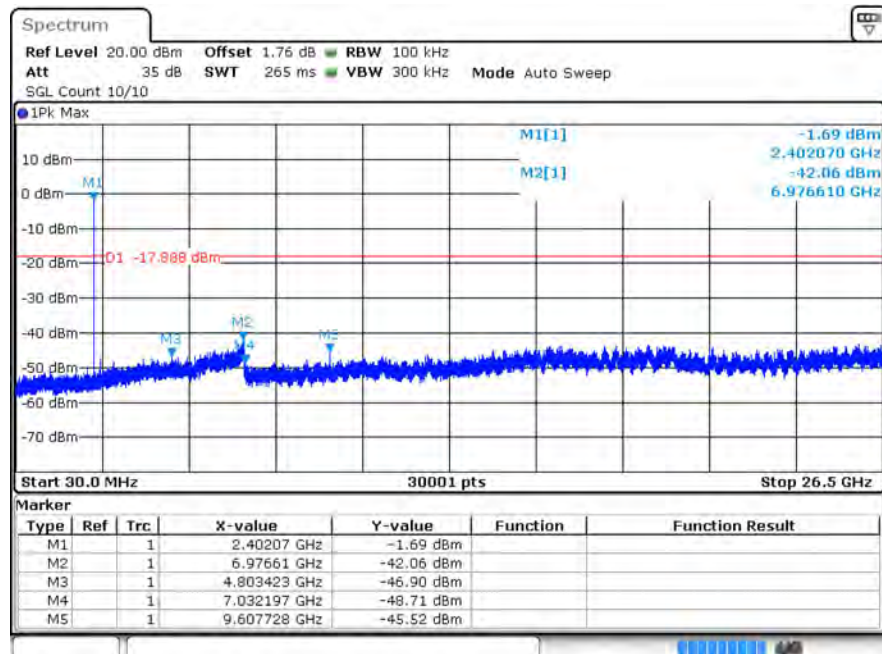


Puw





Puw

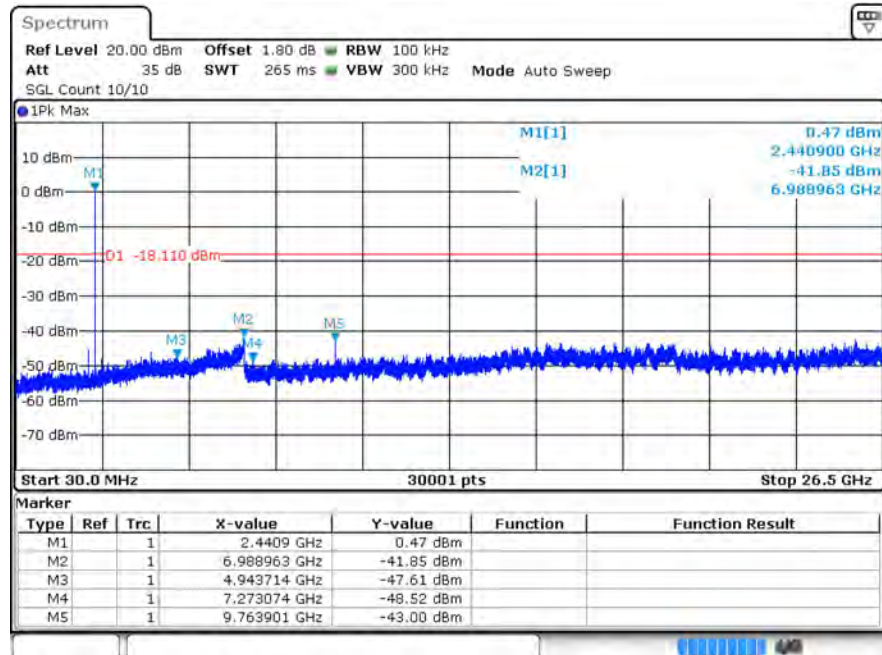


## 8DPSK\_MCH\_Graphs

Pref



Puw

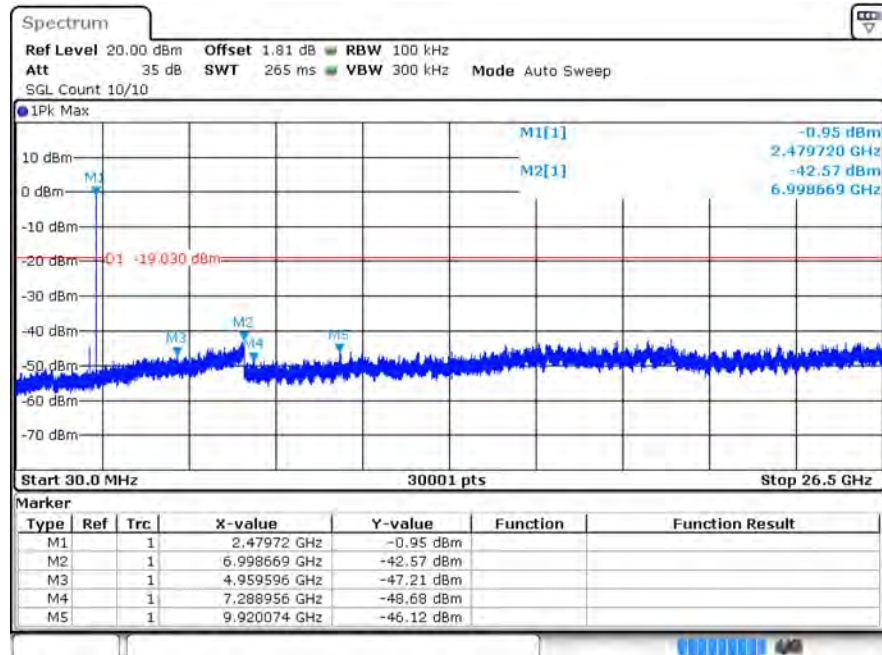


## 8DPSK\_HCH\_Graphs

Pref



Puw

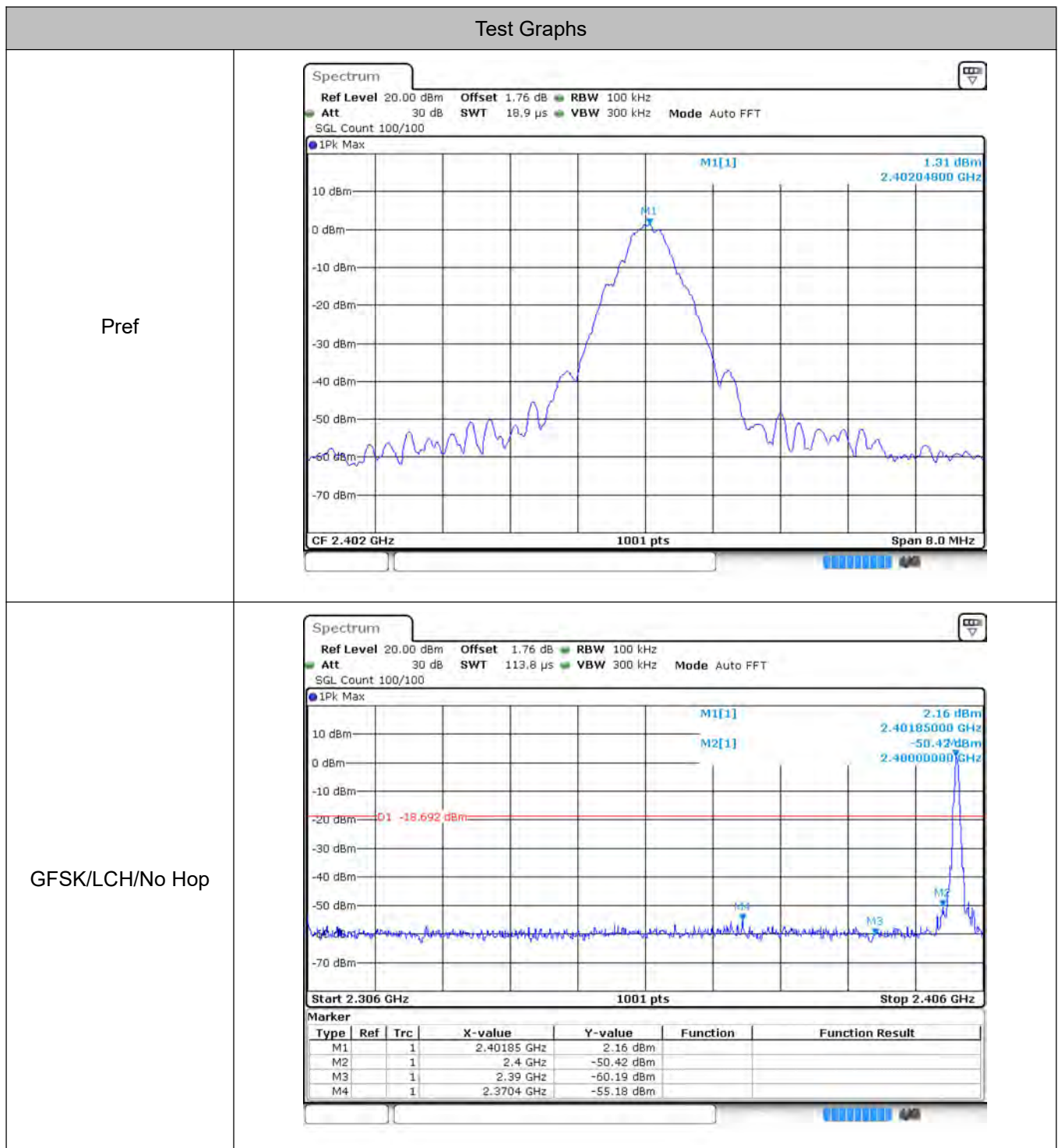


## 8 Band-edge for RF Conducted Emissions

### 8.1 Test Result

| Mode          | Channel | Carrier Frequency [MHz] | Frequency Hopping | Max Spurious Level [dBc] | Limit [dBc] | Verdict |
|---------------|---------|-------------------------|-------------------|--------------------------|-------------|---------|
| GFSK          | LCH     | 2402                    | Off               | -56.49                   | -20         | Pass    |
|               |         |                         | On                | -53.71                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -58.16                   | -20         | Pass    |
|               |         |                         | On                | -52.63                   | -20         | Pass    |
| $\pi/4$ DQPSK | LCH     | 2402                    | Off               | -57.86                   | -20         | Pass    |
|               |         |                         | On                | -53.78                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -58.01                   | -20         | Pass    |
|               |         |                         | On                | -53.59                   | -20         | Pass    |
| 8DPSK         | LCH     | 2402                    | Off               | -58.47                   | -20         | Pass    |
|               |         |                         | On                | -54.33                   | -20         | Pass    |
|               | HCH     | 2480                    | Off               | -56.75                   | -20         | Pass    |
|               |         |                         | On                | -55.54                   | -20         | Pass    |

## 8.2 Test Graphs

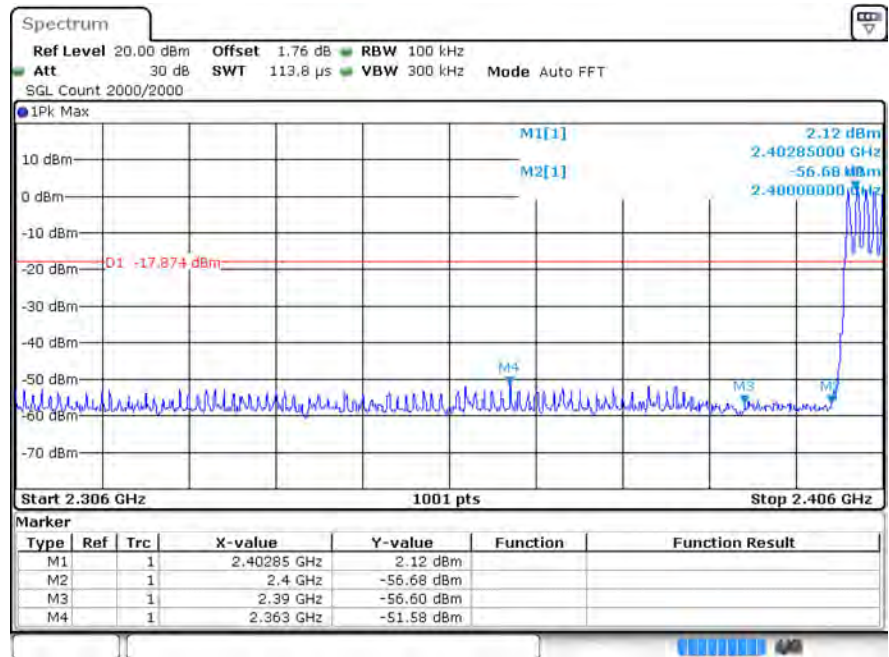




Ref



GFSK/LCH/Hop

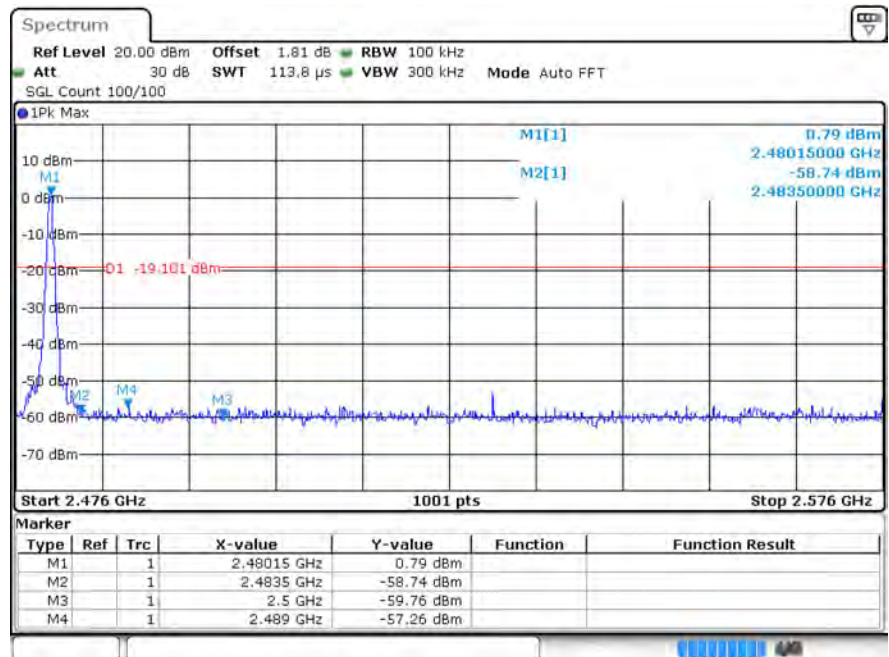




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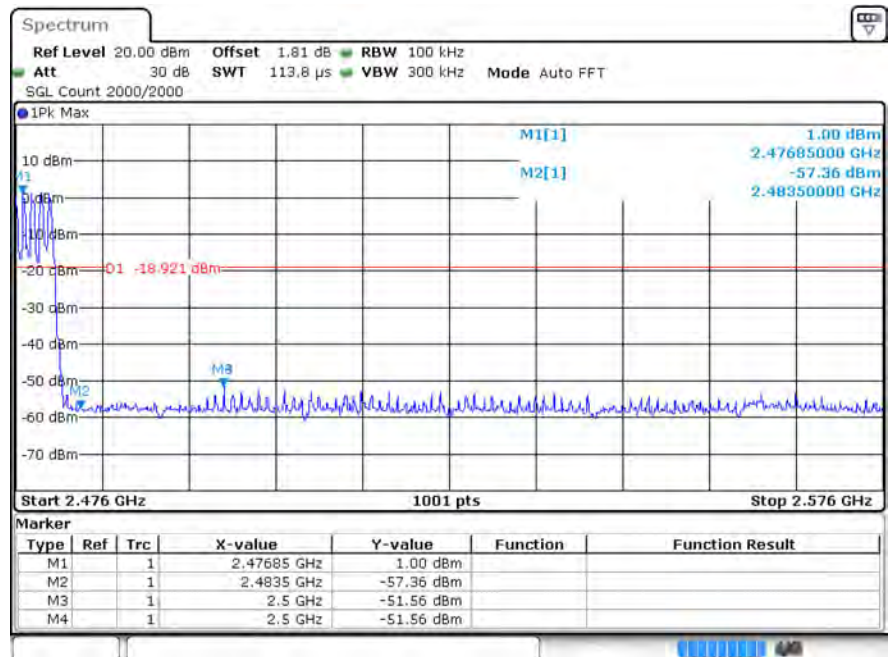
GFSK/HCH/No Hop



Ref.



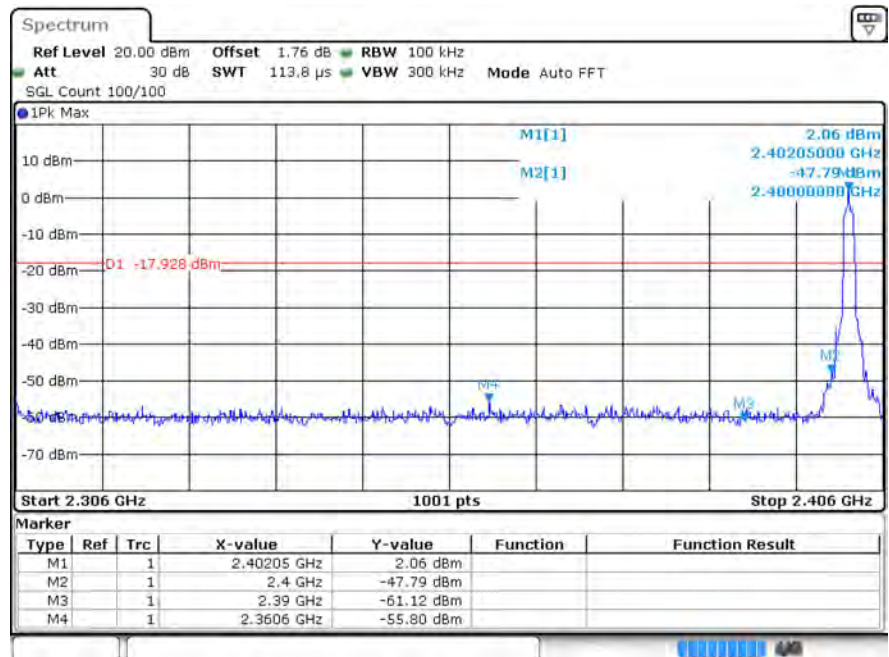
GFSK/HCH/Hop



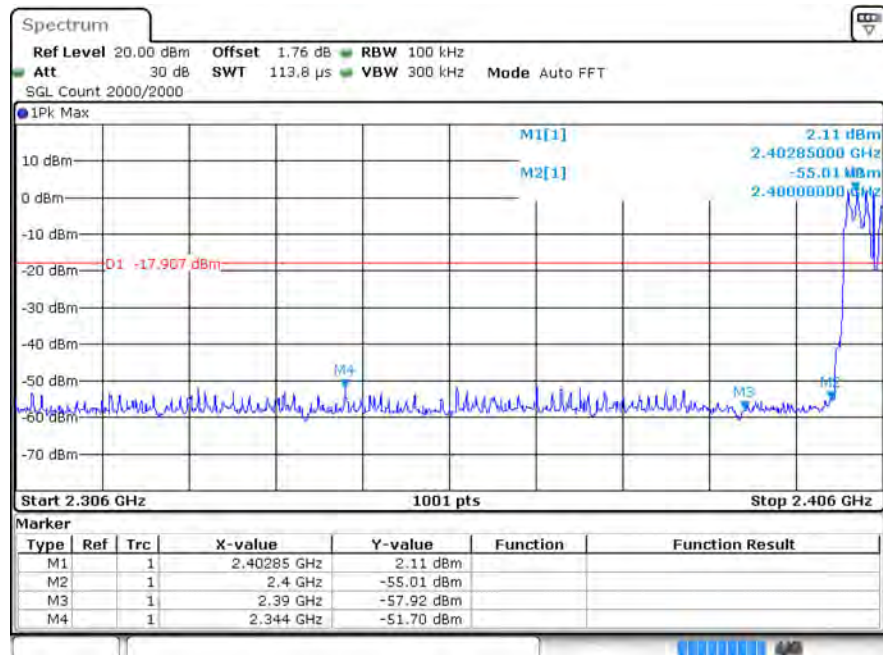
Ref



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

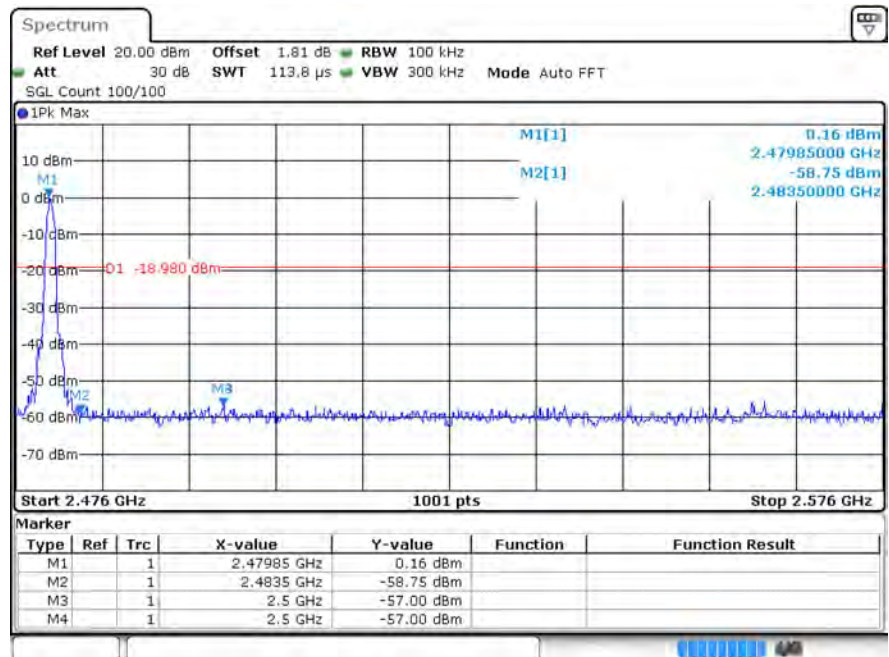


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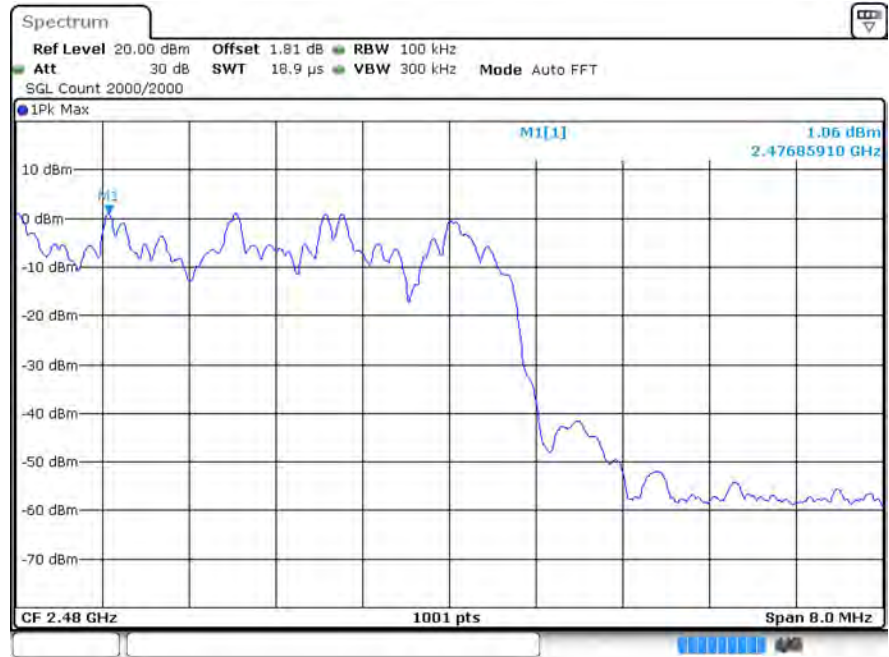
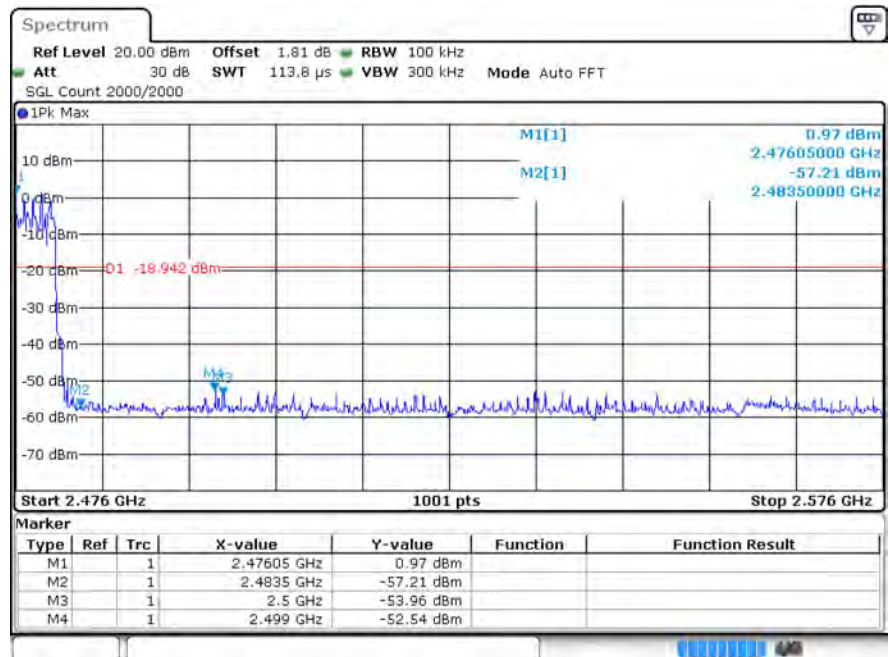

 $\pi/4$ DQPSK/LCH/Hop




Ref


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


Ref

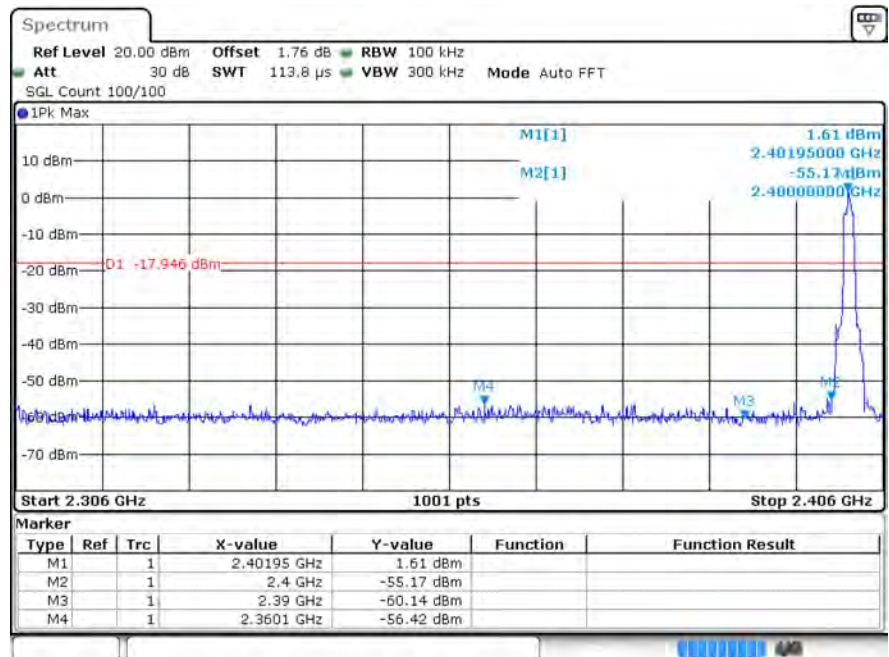

 $\pi/4$ DQPSK/HCH/Hop




Ref



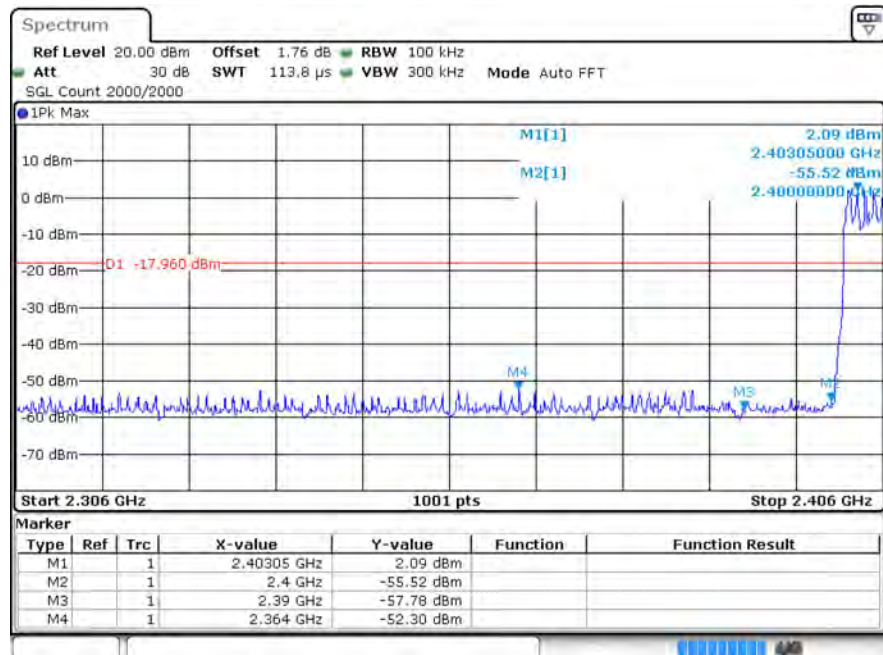
8DPSK/LCH/No Hop



Ref



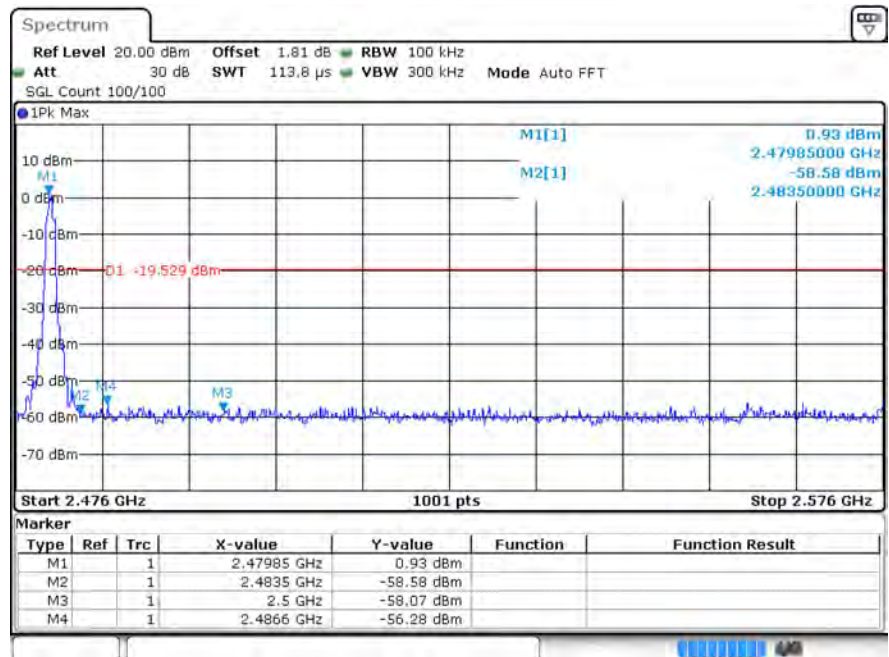
8DPSK/LCH/Hop



Ref



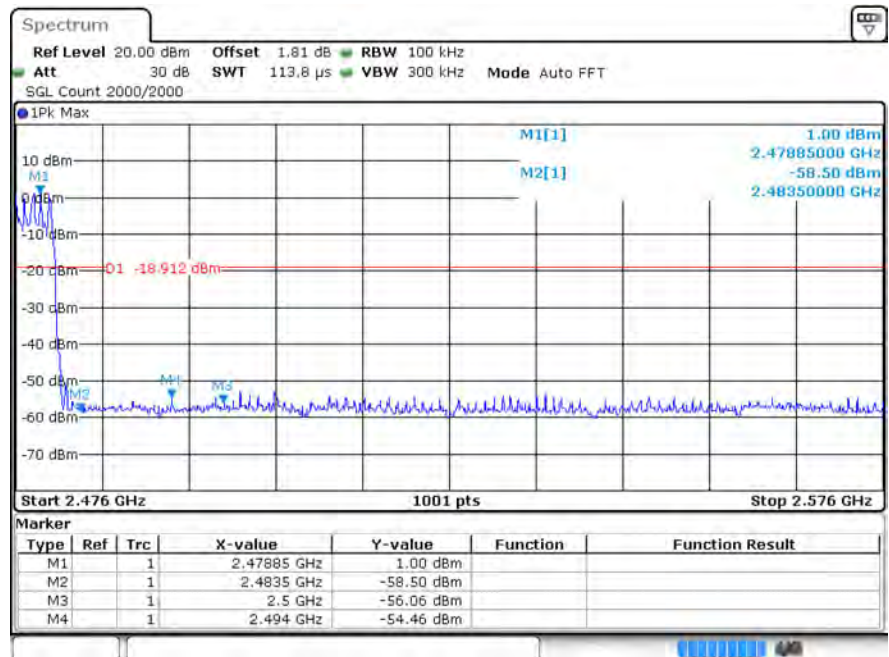
8DPSK/HCH/No Hop



Ref



8DPSK/HCH/Hop



## 9 Restrict-band band-edge measurements

### 9.1 Test Result

| Test Mode     | Hopping | Freq.    | Power [dBm] | Gain | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|---------|----------|-------------|------|------------|----------|----------------|---------|
| GFSK          | Off     | 2310.0   | -48.15      | 2    | 49.11      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -57.86      | 2    | 39.4       | AV       | 54             | Pass    |
|               | Off     | 2339.28  | -45.7       | 2    | 51.56      | PEAK     | 74             | Pass    |
|               | Off     | 2338.512 | -55.69      | 2    | 41.57      | AV       | 54             | Pass    |
|               | Off     | 2390.0   | -50.24      | 2    | 47.02      | PEAK     | 74             | Pass    |
|               | Off     | 2390.0   | -57.71      | 2    | 39.55      | AV       | 54             | Pass    |
|               | Off     | 2483.5   | -47.5       | 2    | 49.76      | PEAK     | 74             | Pass    |
|               | Off     | 2483.5   | -57.19      | 2    | 40.07      | AV       | 54             | Pass    |
|               | Off     | 2492.704 | -47.23      | 2    | 50.03      | PEAK     | 74             | Pass    |
|               | Off     | 2483.872 | -56.53      | 2    | 40.73      | AV       | 54             | Pass    |
|               | Off     | 2500.0   | -49.35      | 2    | 47.91      | PEAK     | 74             | Pass    |
|               | Off     | 2500.0   | -56.92      | 2    | 40.34      | AV       | 54             | Pass    |
| $\pi/4$ DQPSK | Off     | 2310.0   | -48.91      | 2    | 48.35      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -57.89      | 2    | 39.37      | AV       | 54             | Pass    |
|               | Off     | 2343.888 | -46.29      | 2    | 50.97      | PEAK     | 74             | Pass    |
|               | Off     | 2342.16  | -56.03      | 2    | 41.23      | AV       | 54             | Pass    |
|               | Off     | 2390.0   | -50.97      | 2    | 46.29      | PEAK     | 74             | Pass    |
|               | Off     | 2390.0   | -57.77      | 2    | 39.49      | AV       | 54             | Pass    |
|               | Off     | 2483.5   | -48.87      | 2    | 48.39      | PEAK     | 74             | Pass    |
|               | Off     | 2483.5   | -56.23      | 2    | 41.03      | AV       | 54             | Pass    |
|               | Off     | 2494.912 | -47.33      | 2    | 49.93      | PEAK     | 74             | Pass    |
|               | Off     | 2483.512 | -56.23      | 2    | 41.03      | AV       | 54             | Pass    |
|               | Off     | 2500.0   | -48.57      | 2    | 48.69      | PEAK     | 74             | Pass    |
|               | Off     | 2500.0   | -57.19      | 2    | 40.07      | AV       | 54             | Pass    |
| 8DPSK         | Off     | 2310.0   | -51.32      | 2    | 45.94      | PEAK     | 74             | Pass    |
|               | Off     | 2310.0   | -58.01      | 2    | 39.25      | AV       | 54             | Pass    |
|               | Off     | 2340.72  | -43.46      | 2    | 53.8       | PEAK     | 74             | Pass    |
|               | Off     | 2338.512 | -55.68      | 2    | 41.58      | AV       | 54             | Pass    |

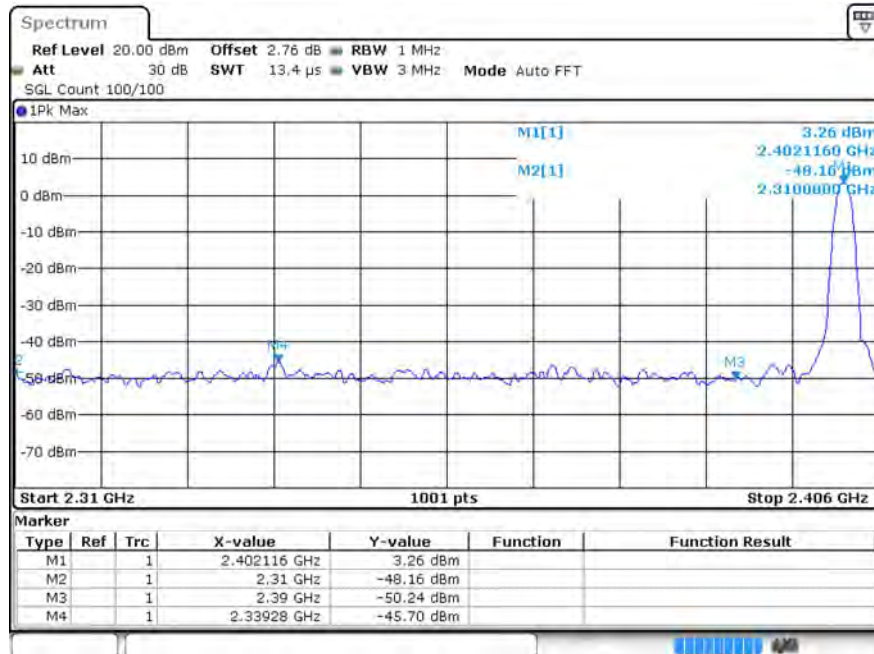




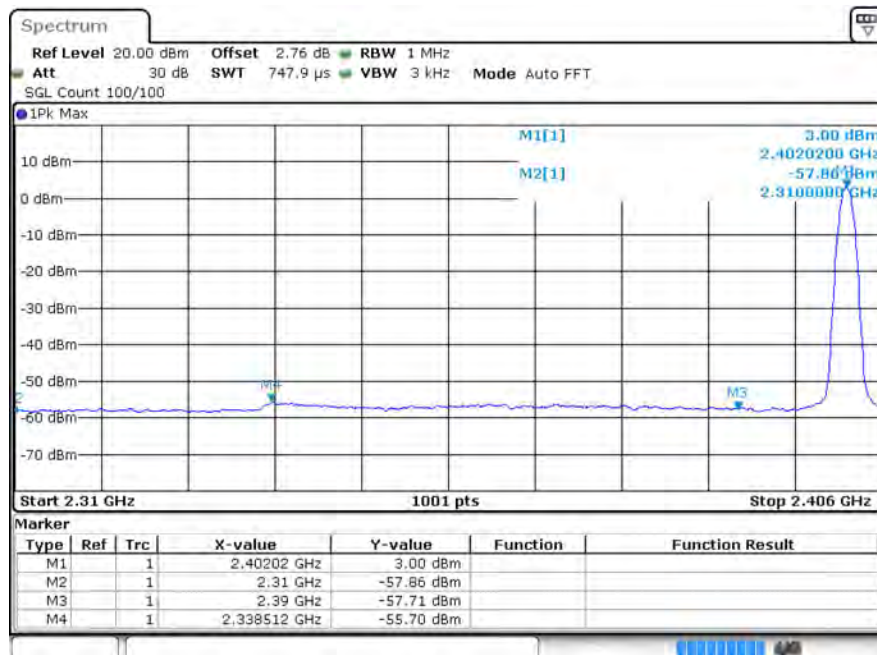
|  |     |          |        |   |       |      |    |      |
|--|-----|----------|--------|---|-------|------|----|------|
|  | Off | 2390.0   | -47.59 | 2 | 49.67 | PEAK | 74 | Pass |
|  | Off | 2390.0   | -57.31 | 2 | 39.95 | AV   | 54 | Pass |
|  | Off | 2483.5   | -48.74 | 2 | 48.52 | PEAK | 74 | Pass |
|  | Off | 2483.5   | -56.77 | 2 | 40.49 | AV   | 54 | Pass |
|  | Off | 2485.936 | -46.71 | 2 | 50.55 | PEAK | 74 | Pass |
|  | Off | 2499.616 | -56.72 | 2 | 40.54 | AV   | 54 | Pass |
|  | Off | 2500.0   | -47.89 | 2 | 49.37 | PEAK | 74 | Pass |
|  | Off | 2500.0   | -57.16 | 2 | 40.1  | AV   | 54 | Pass |

## 9.2 Test Graphs

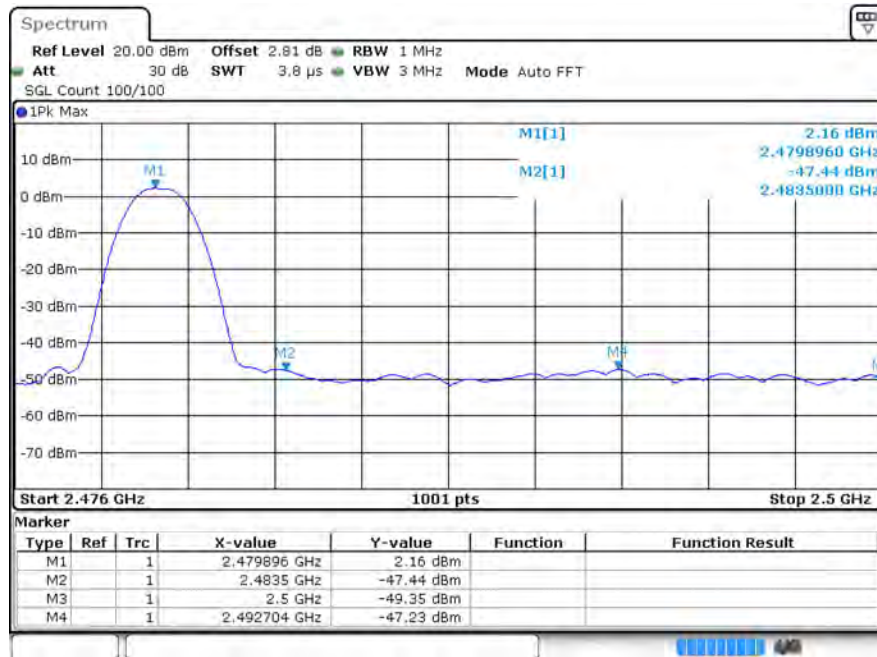
Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK (Low Channel)



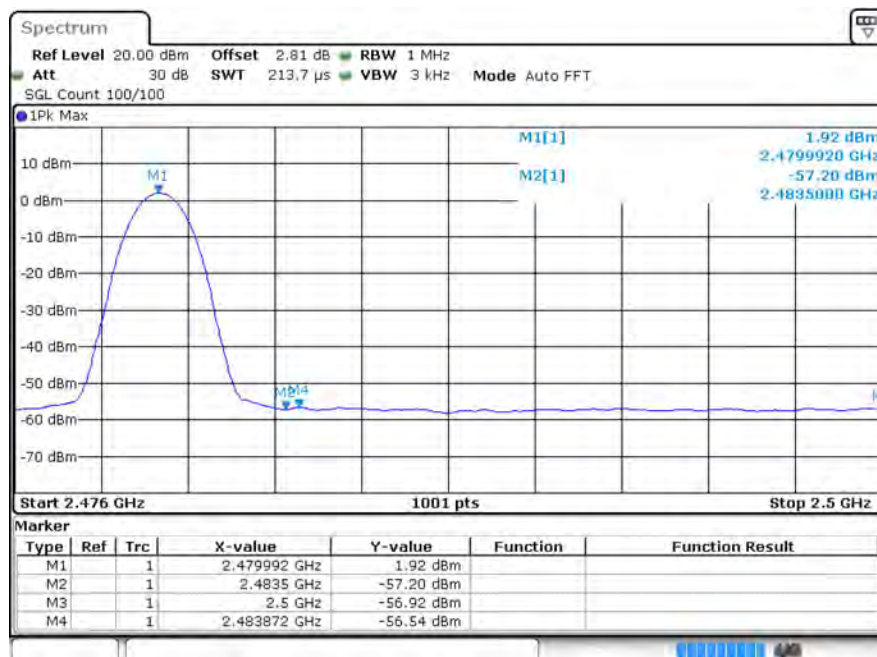
Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average (Low Channel)



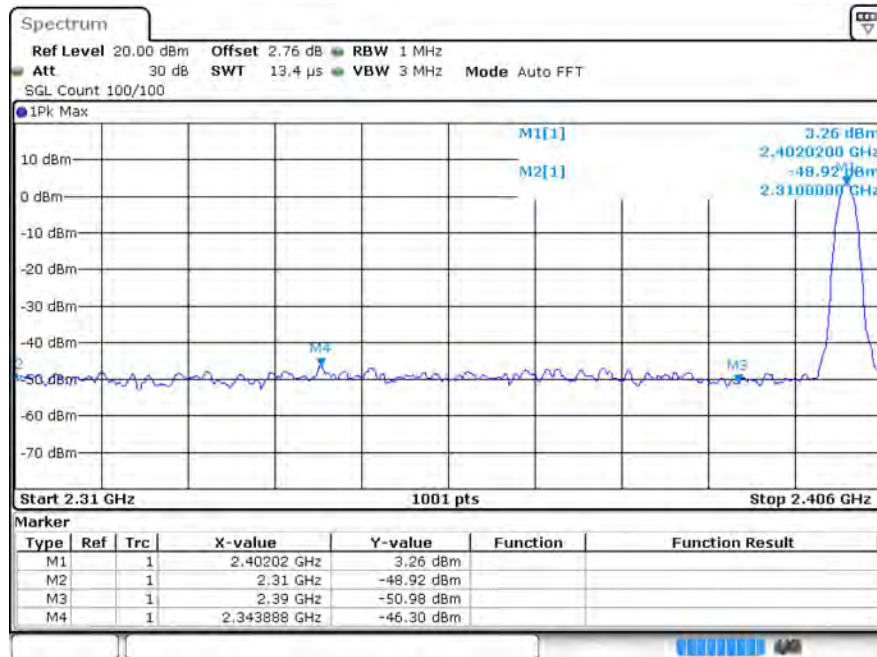
## Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK (High Channel)



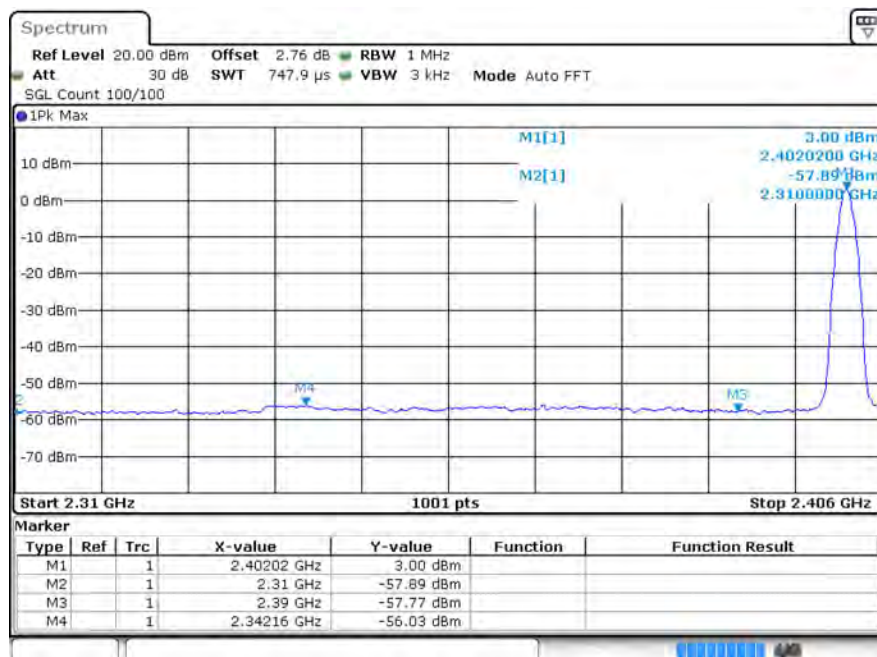
## Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average (High Channel)



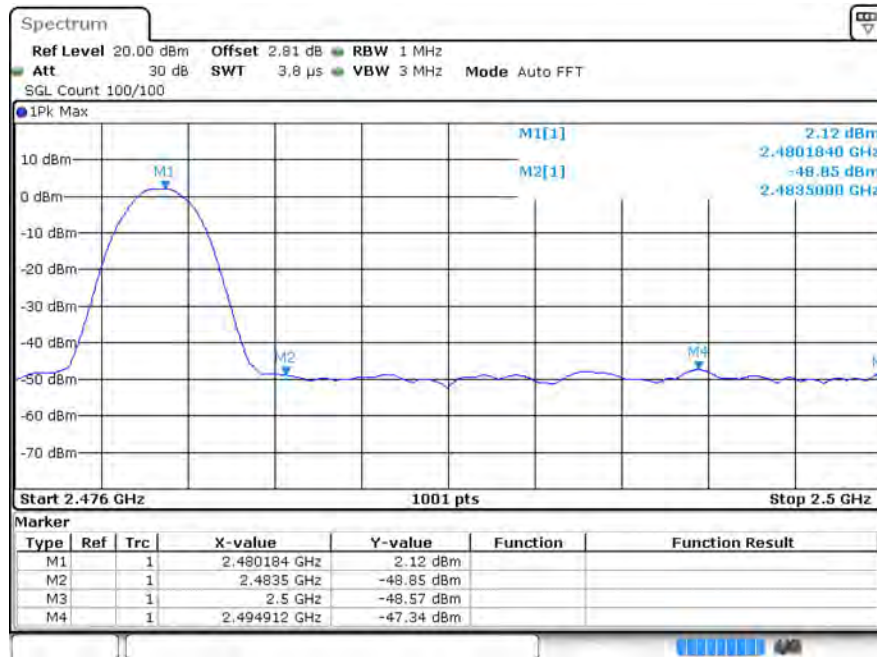
## Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (Low Channel)



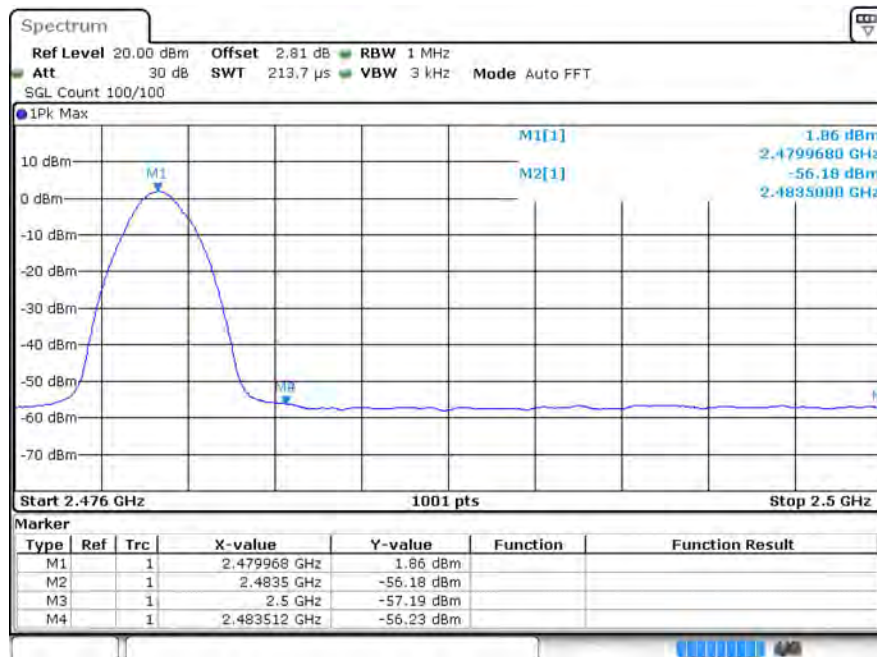
## Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (Low Channel)



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

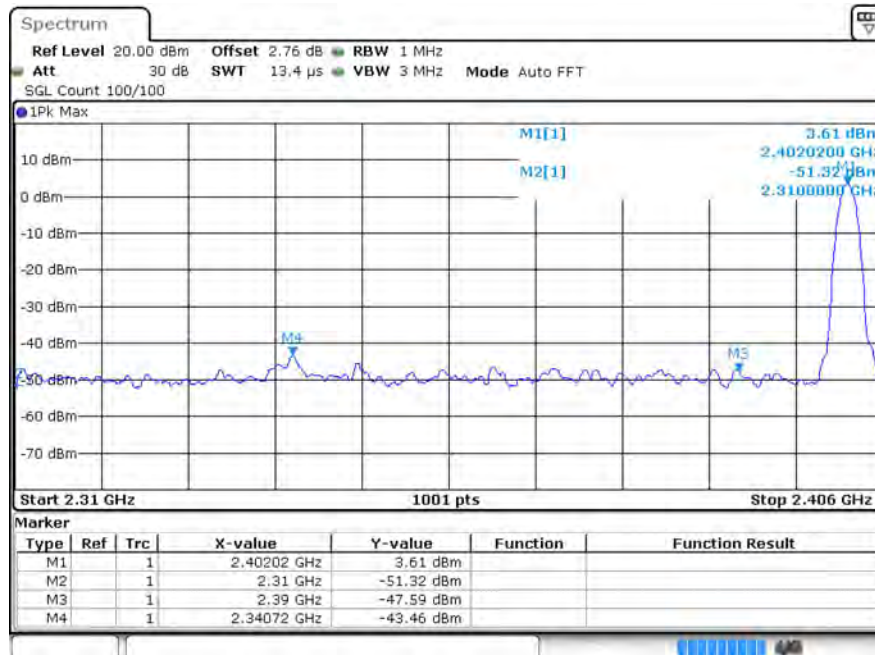


## Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (High Channel)

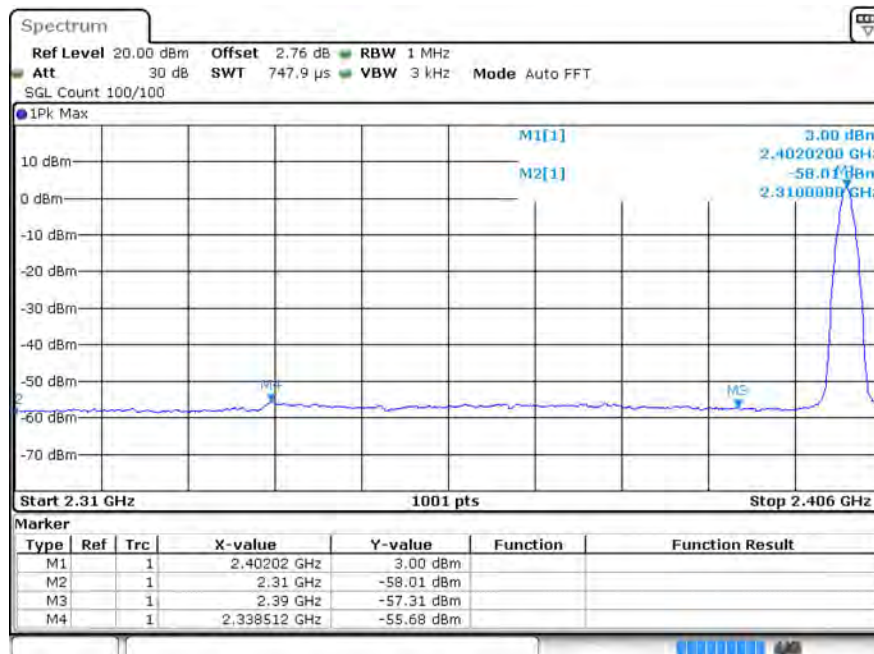




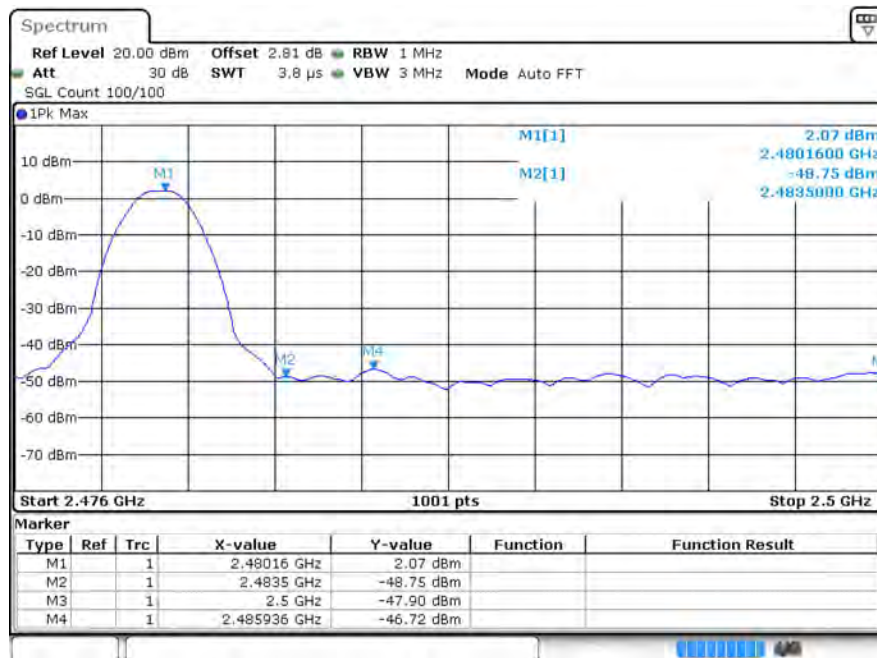
## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (Low Channel)



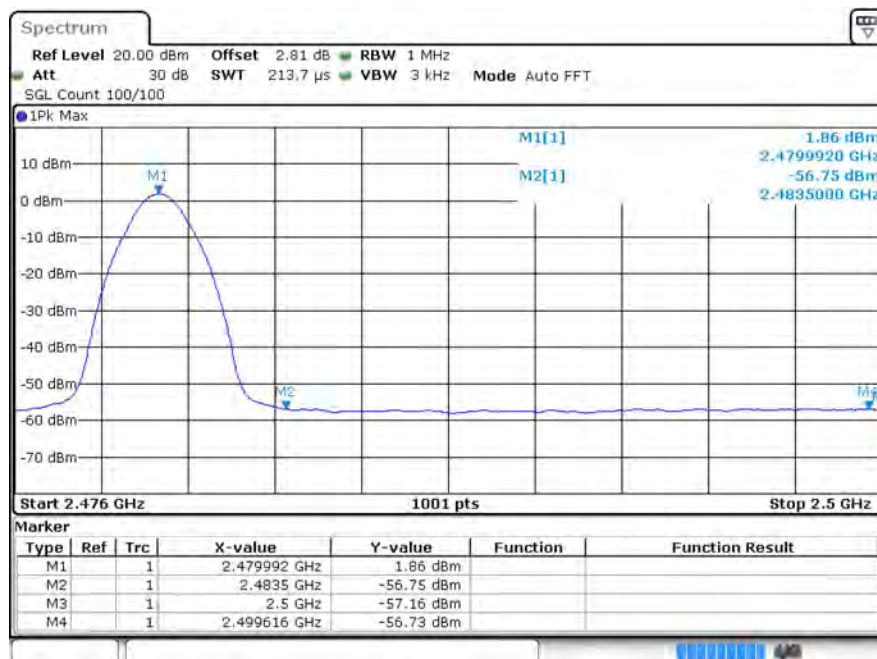
## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_Average (Low Channel)



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



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



---The End---