



Appendix A

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

Product Name: E Ink Tablet, Smart E Ink Tablet, ePaper Tablet, E-bag Tablet, E-book Tablet, E-reader Tablet, Eyes protection E Ink Tablet, E-paper Tablet, Color E Ink Tablet, Color ePaper Tablet

Trade Mark: BOOX

Test Model: Leaf2

Environmental Conditions

| | |
|--------------------|-------------|
| Temperature: | 25.2°C |
| Relative Humidity: | 52.4% |
| ATM Pressure: | 101Kpa |
| Test Engineer: | Simba Huang |
| Supervised by: | Seal Chen |

Contents

Page

COVER PAGE

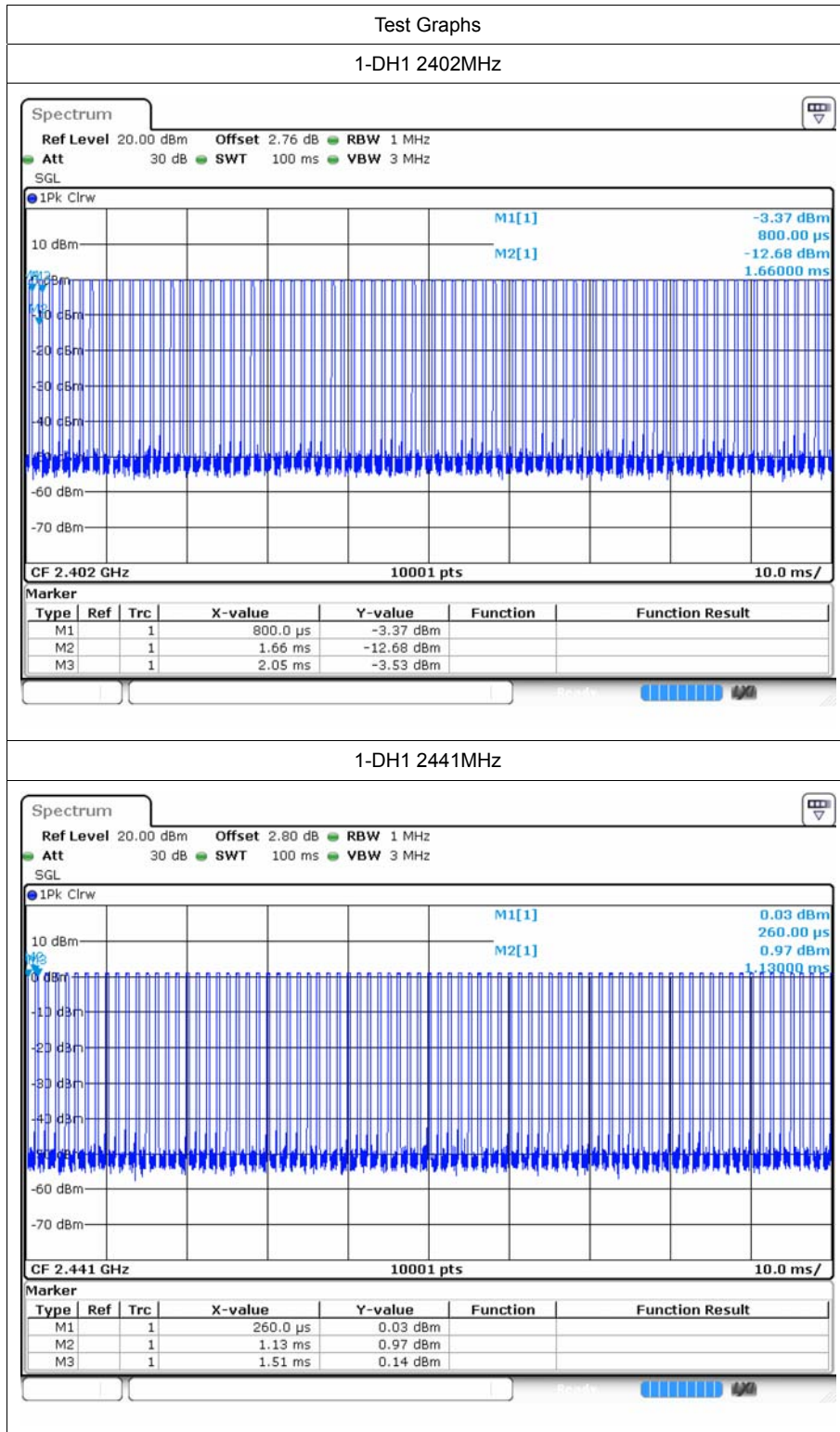
| | | |
|-----|--|----|
| 1 | Duty Cycle | 3 |
| 1.1 | Test Result..... | 3 |
| 1.2 | Test Graphs..... | 4 |
| 2 | Maximum Conducted Peak Output Power | 9 |
| 2.1 | Test Result..... | 9 |
| 2.2 | Test Graphs..... | 10 |
| 3 | 20dB Bandwidth | 15 |
| 3.1 | Test Result..... | 15 |
| 3.2 | Test Graphs..... | 16 |
| 4 | Carrier Frequency Separation | 21 |
| 4.1 | Test Result..... | 21 |
| 4.2 | Test Graphs..... | 22 |
| 5 | Hopping Channel Number..... | 24 |
| 5.1 | Test Result..... | 24 |
| 5.2 | Test Graphs..... | 25 |
| 6 | Dwell Time..... | 27 |
| 6.1 | Test Result..... | 27 |
| 6.2 | Test Graphs..... | 28 |
| 7 | RF Conducted Spurious Emissions..... | 31 |
| 7.1 | Test Result..... | 31 |
| 7.2 | Test Graphs..... | 32 |
| 8 | Band-edge for RF Conducted Emissions | 41 |
| 8.1 | Test Result..... | 41 |
| 8.2 | Test Graphs..... | 42 |
| 9 | Restrict-band band-edge measurements | 54 |
| 9.1 | Test Result..... | 54 |
| 9.2 | Test Graphs..... | 56 |

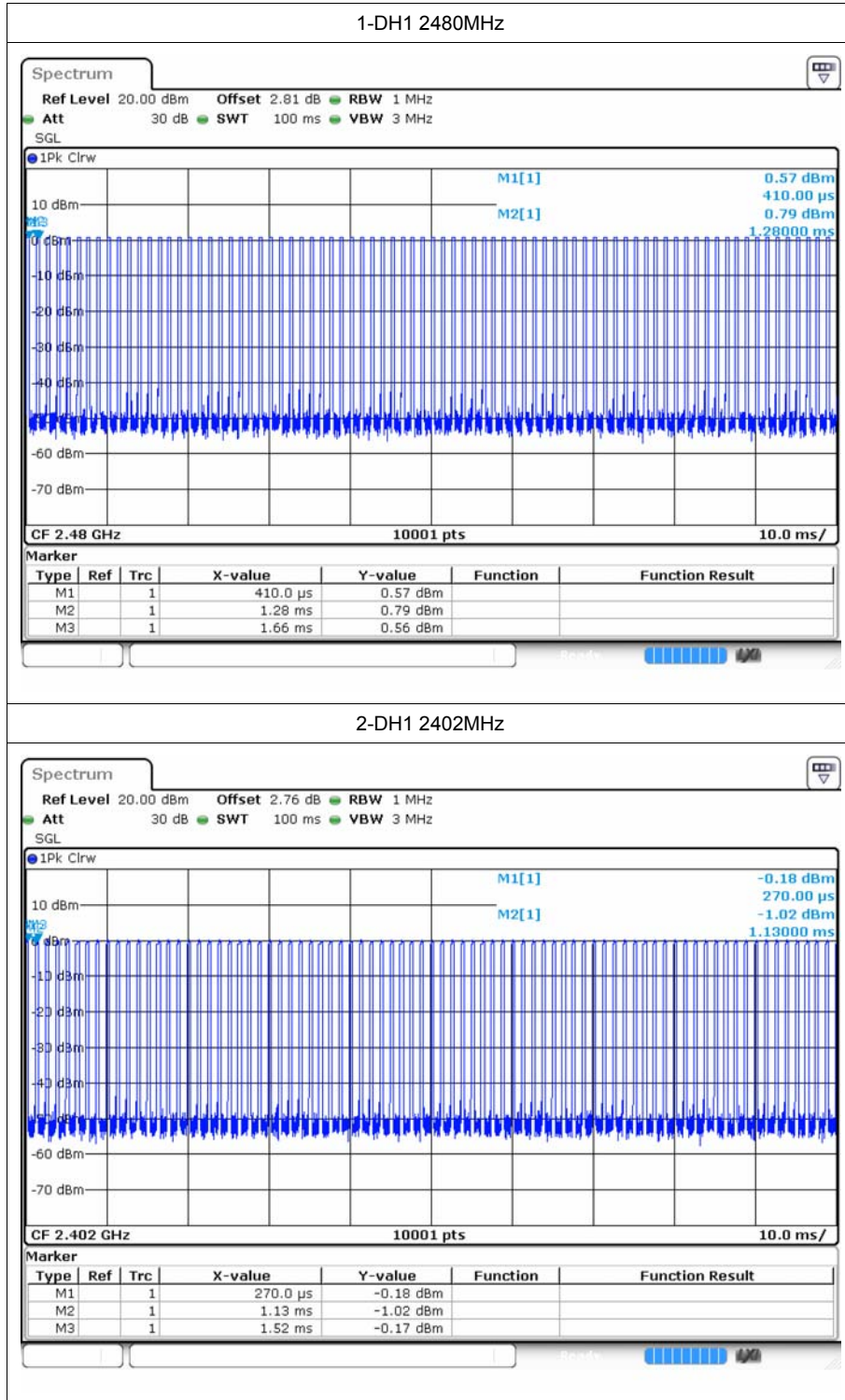
1 Duty Cycle

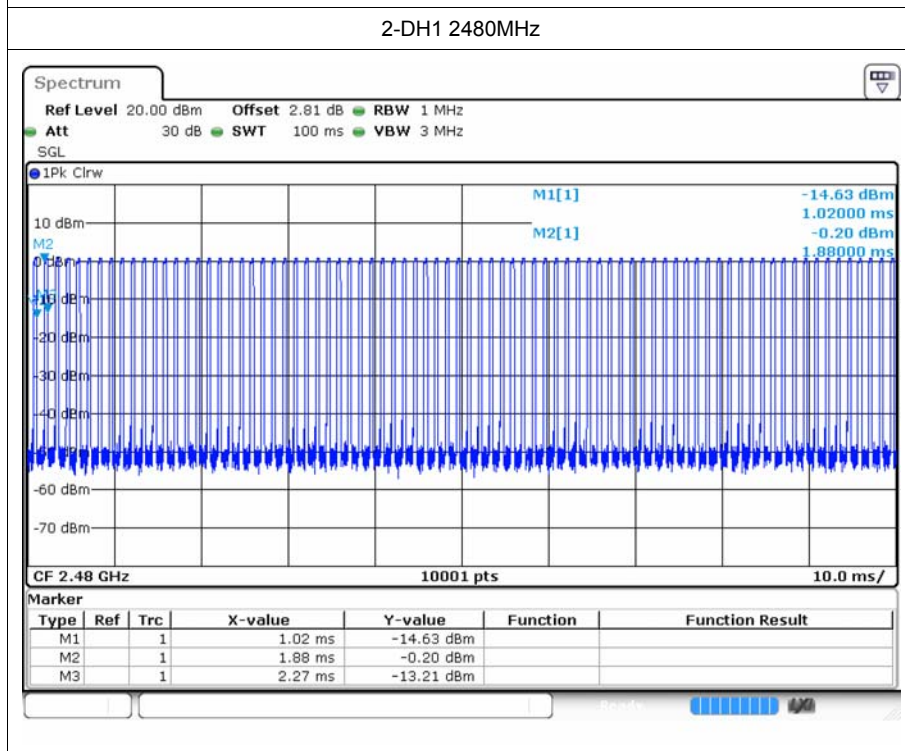
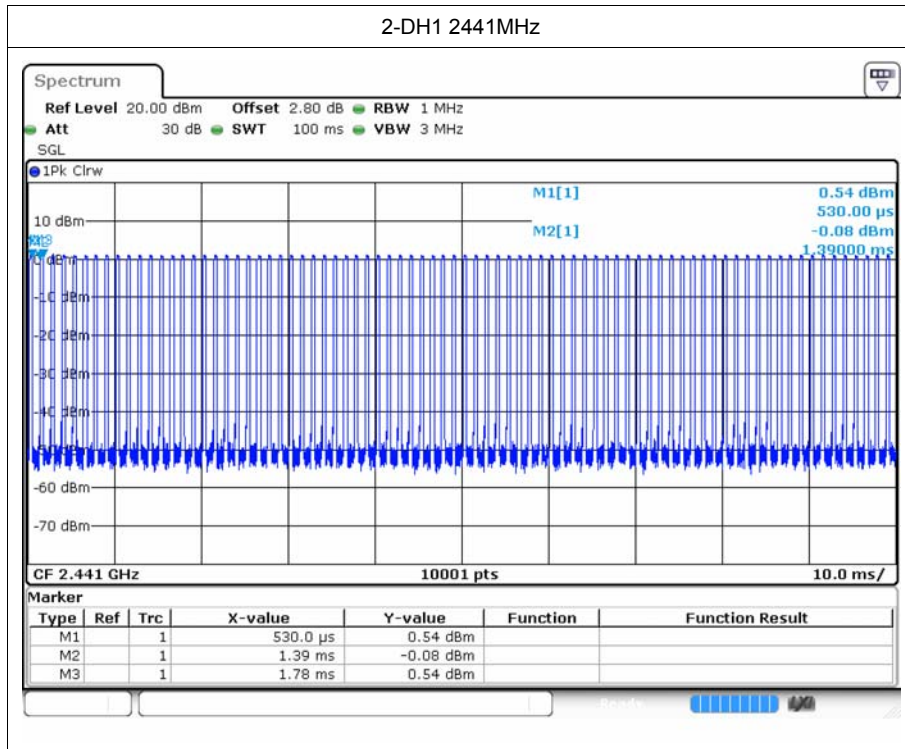
1.1 Test Result

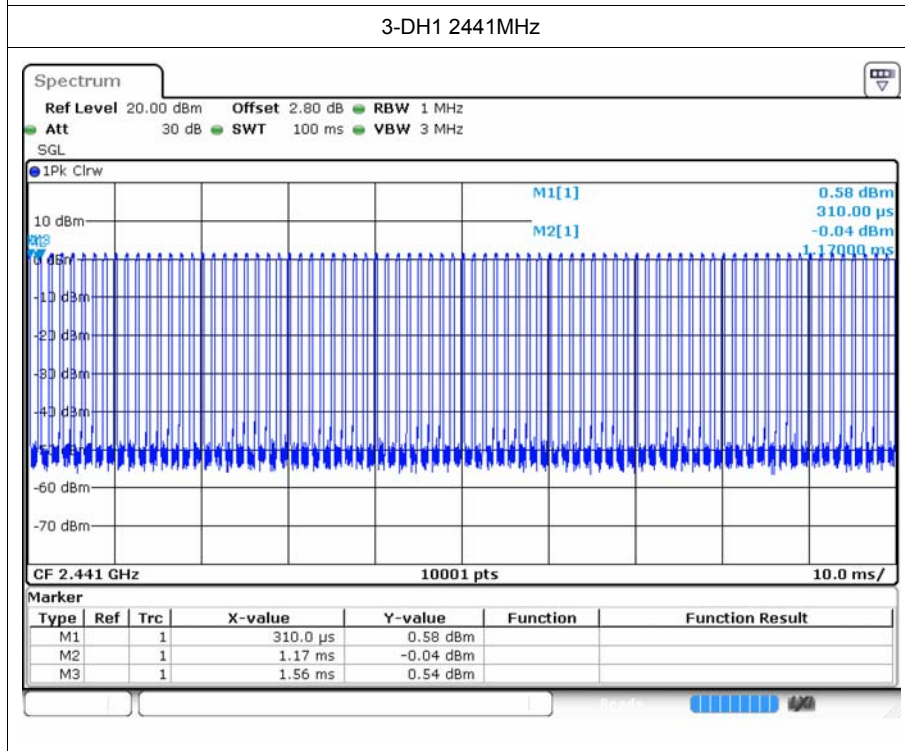
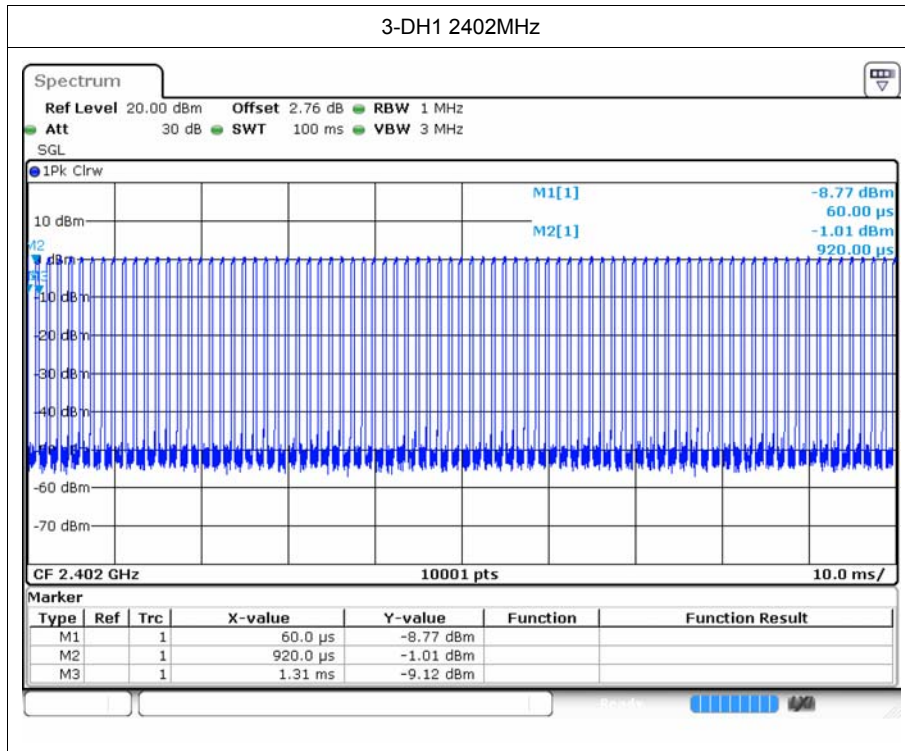
| Mode | Frequency (MHz) | Duty Cycle (%) | 1/T (kHz) |
|-------|-----------------|----------------|-----------|
| 1-DH1 | 2402 | 31.49 | 2.56 |
| 1-DH1 | 2441 | 31.21 | 2.63 |
| 1-DH1 | 2480 | 31.2 | 2.63 |
| 2-DH1 | 2402 | 32.01 | 2.56 |
| 2-DH1 | 2441 | 32 | 2.56 |
| 2-DH1 | 2480 | 32 | 2.56 |
| 3-DH1 | 2402 | 32.01 | 2.56 |
| 3-DH1 | 2441 | 32.01 | 2.56 |
| 3-DH1 | 2480 | 31.9 | 2.56 |

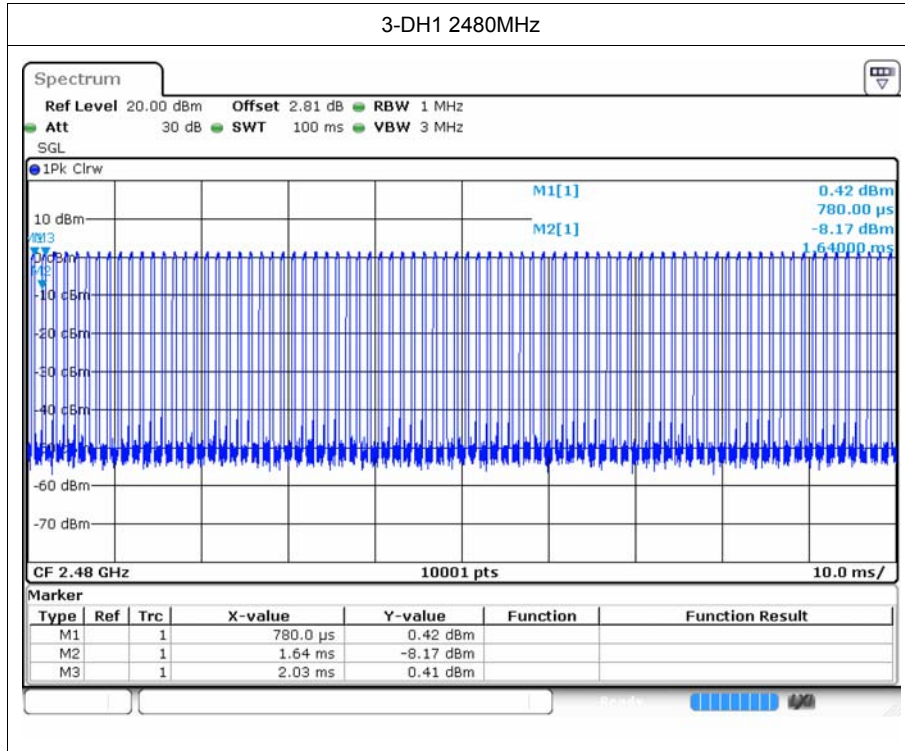
1.2 Test Graphs









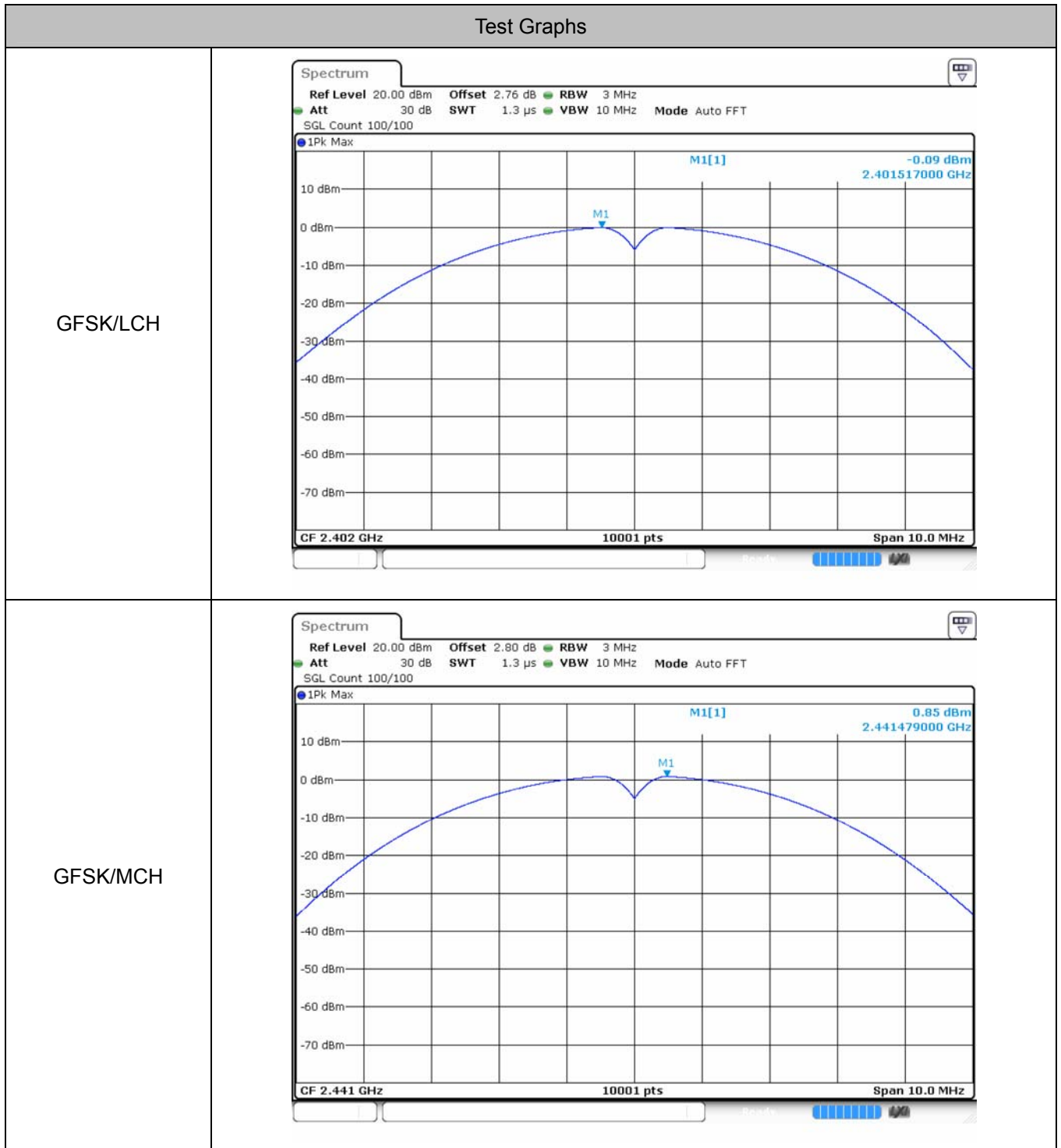


2 Maximum Conducted Peak Output Power

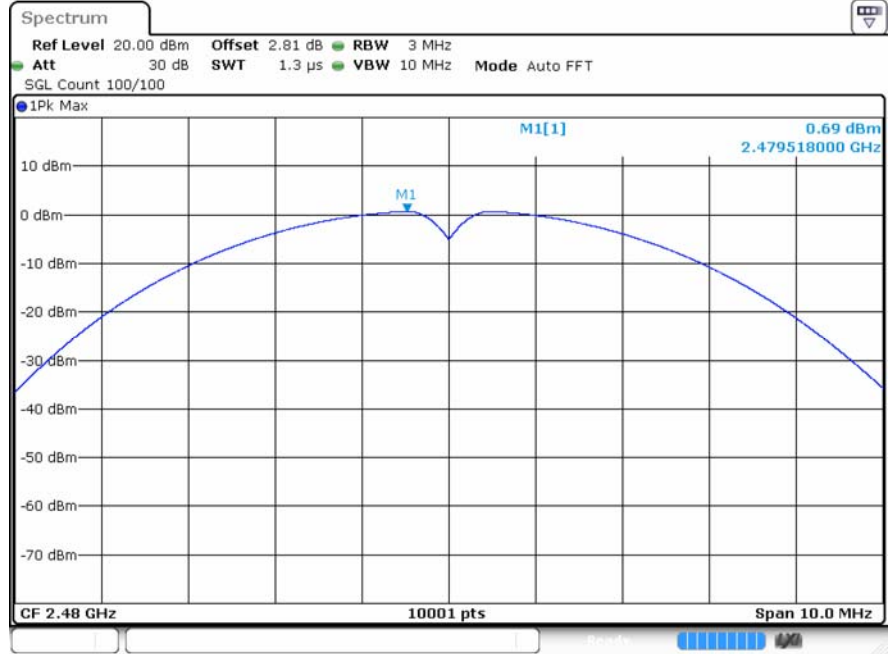
2.1 Test Result

| Mode | Channel. | Maximum Peak Output Power [dBm] | Limit [dBm] | Verdict |
|---------------|----------|---------------------------------|-------------|---------|
| GFSK | LCH | -0.09 | 21 | Pass |
| | MCH | 0.85 | 21 | Pass |
| | HCH | 0.69 | 21 | Pass |
| $\pi/4$ DQPSK | LCH | 1.15 | 21 | Pass |
| | MCH | 2.13 | 21 | Pass |
| | HCH | 1.92 | 21 | Pass |
| 8DPSK | LCH | 1.24 | 21 | Pass |
| | MCH | 2.2 | 21 | Pass |
| | HCH | 1.81 | 21 | Pass |

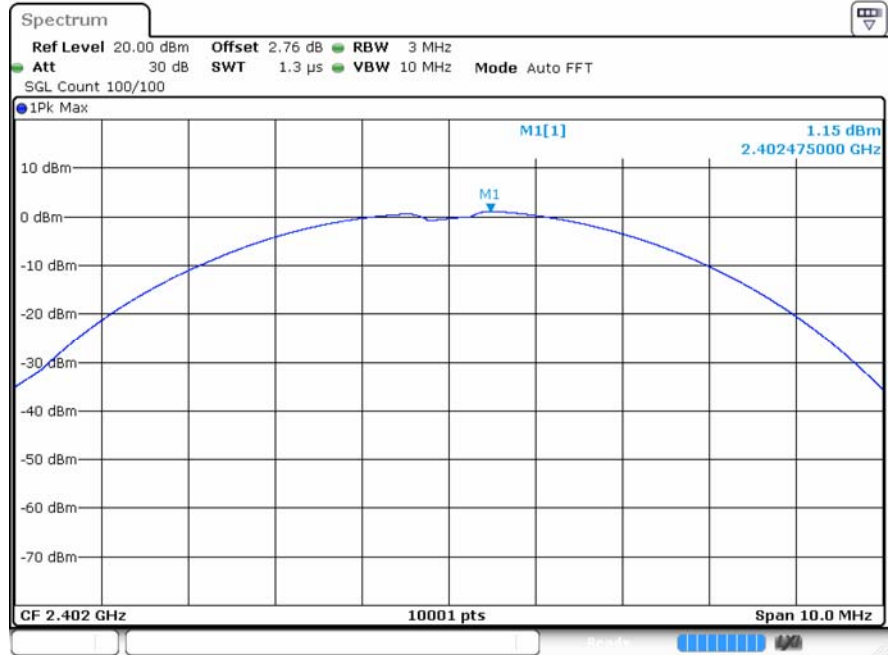
2.2 Test Graphs



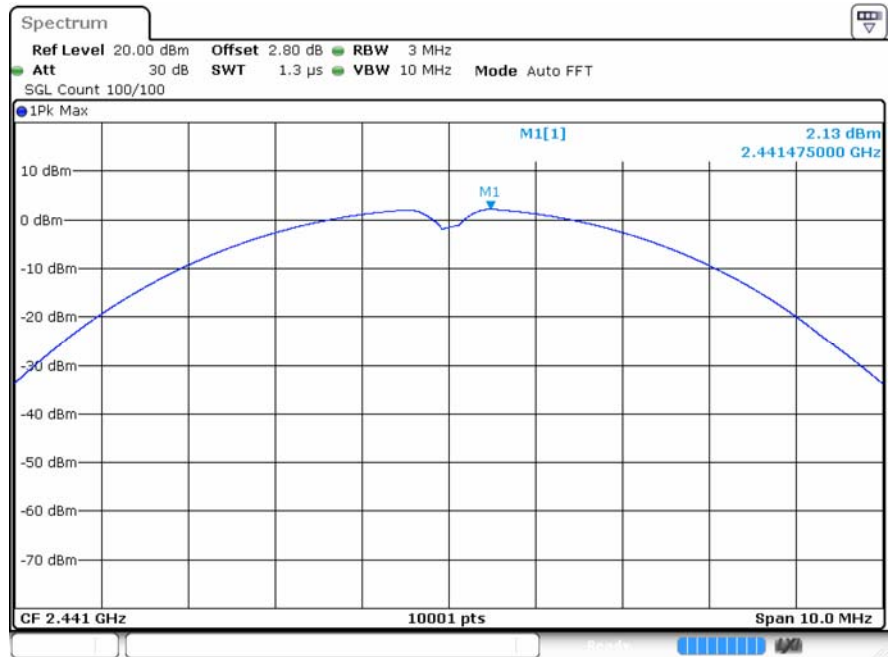
GFSK/HCH



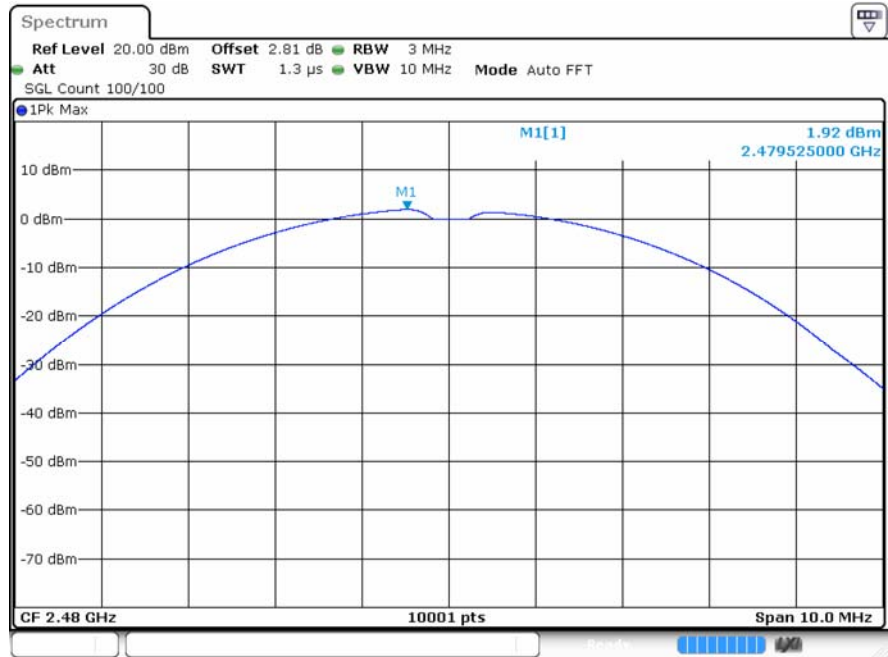
$\pi/4$ DQPSK/LCH



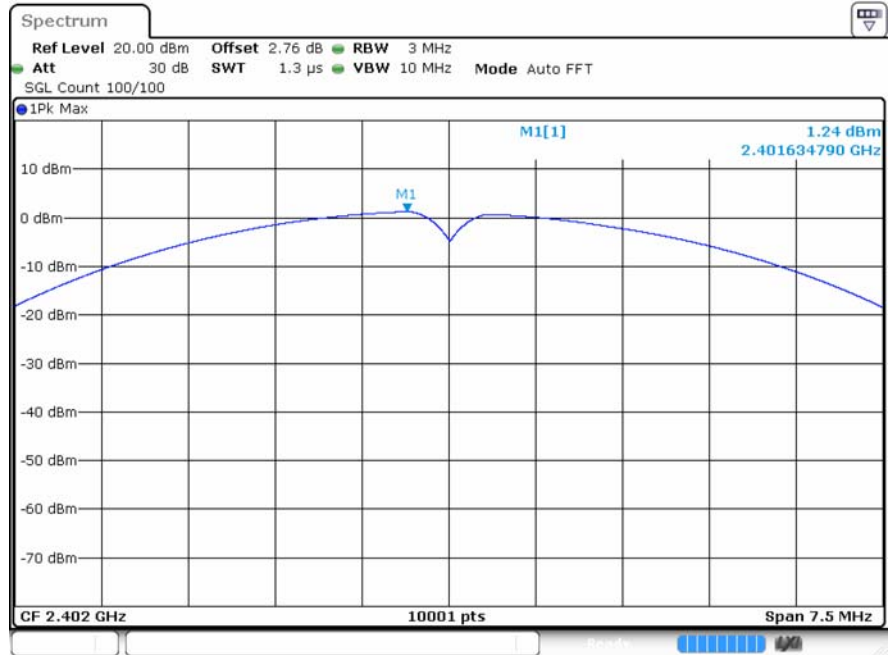
$\pi/4$ DQPSK/MCH



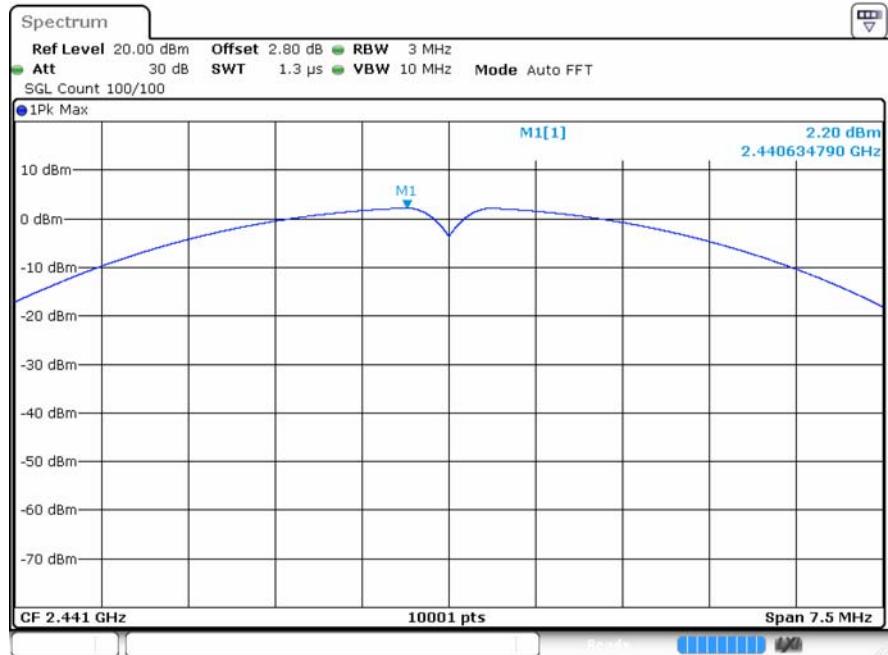
$\pi/4$ DQPSK/HCH



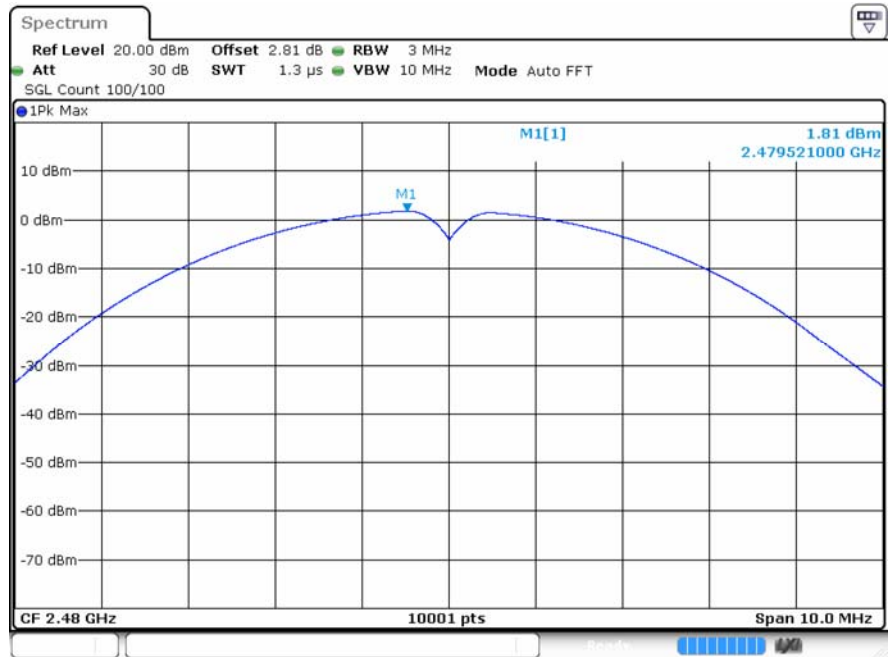
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

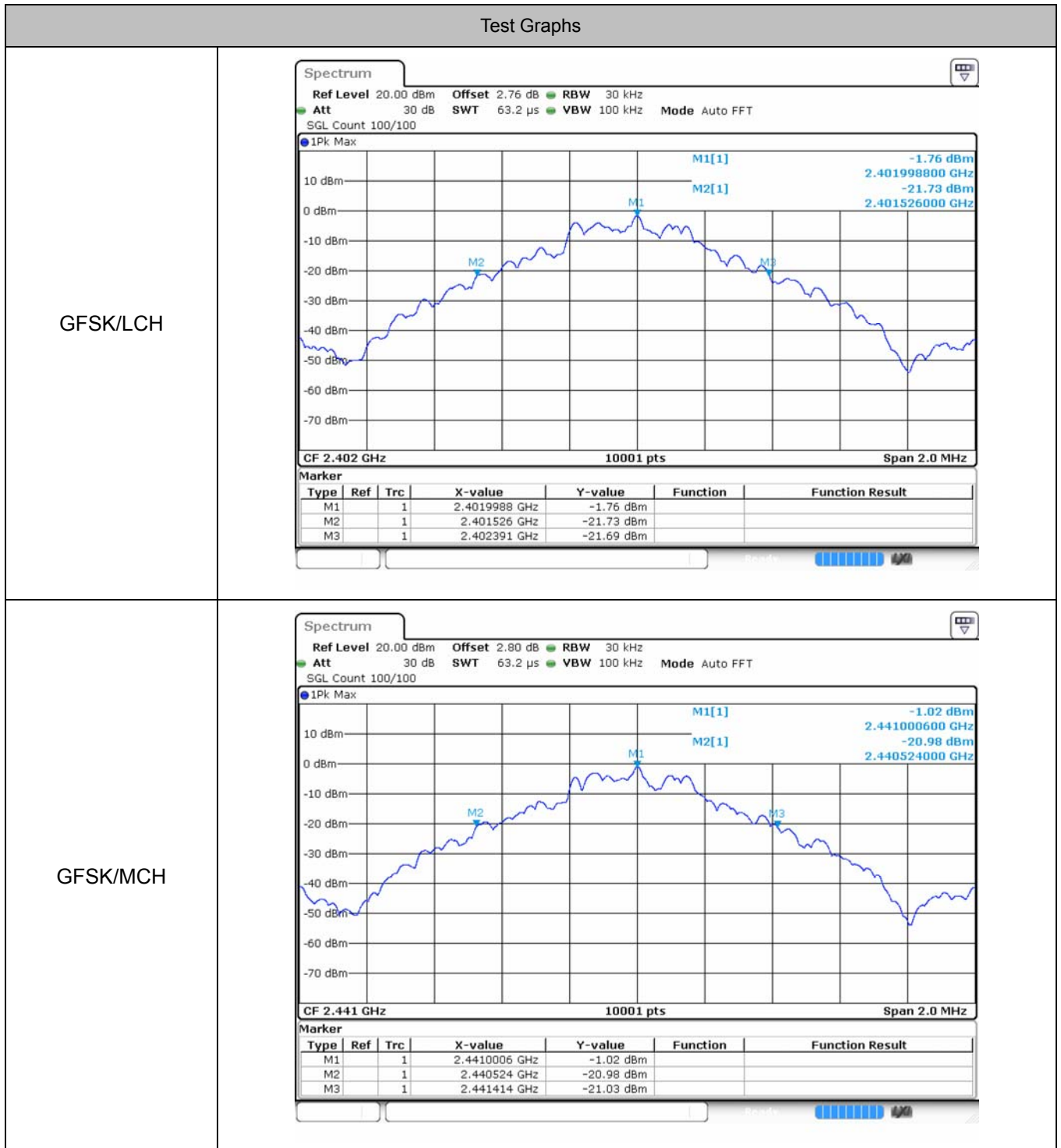


3 20dB Bandwidth

3.1 Test Result

| Mode | Channel. | 20dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|---------------|----------|----------------------|---------------|---------|
| GFSK | LCH | 0.865 | Not Specified | Pass |
| | MCH | 0.89 | Not Specified | Pass |
| | HCH | 0.879 | Not Specified | Pass |
| $\pi/4$ DQPSK | LCH | 1.388 | Not Specified | Pass |
| | MCH | 1.422 | Not Specified | Pass |
| | HCH | 1.428 | Not Specified | Pass |
| 8DPSK | LCH | 1.414 | Not Specified | Pass |
| | MCH | 1.428 | Not Specified | Pass |
| | HCH | 1.433 | Not Specified | Pass |

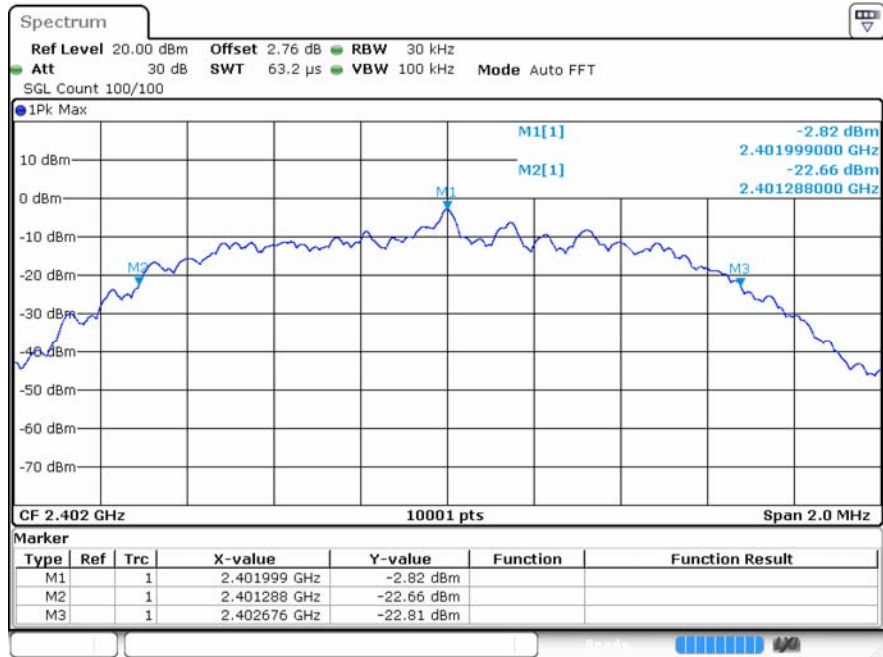
3.2 Test Graphs



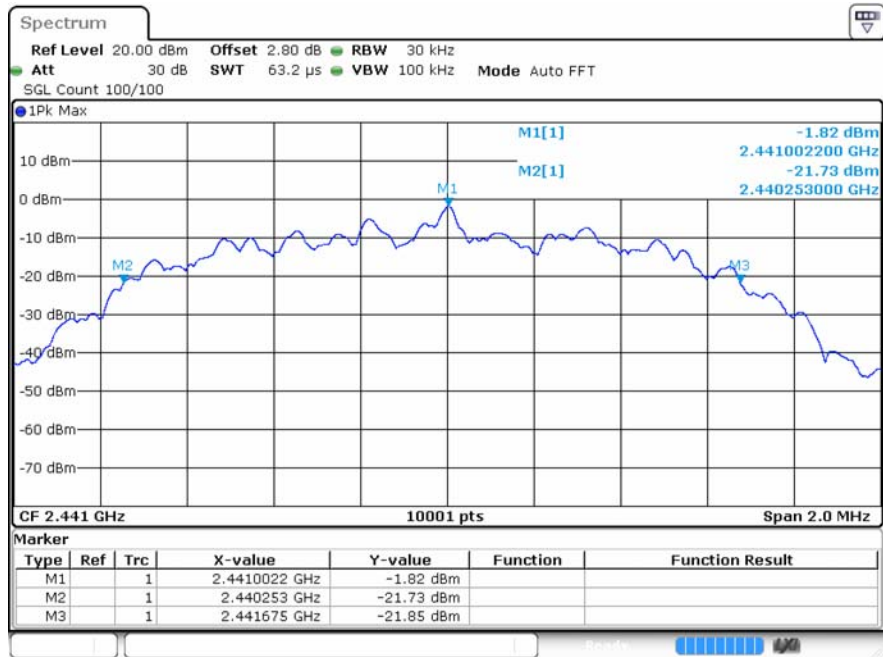
GFSK/HCH



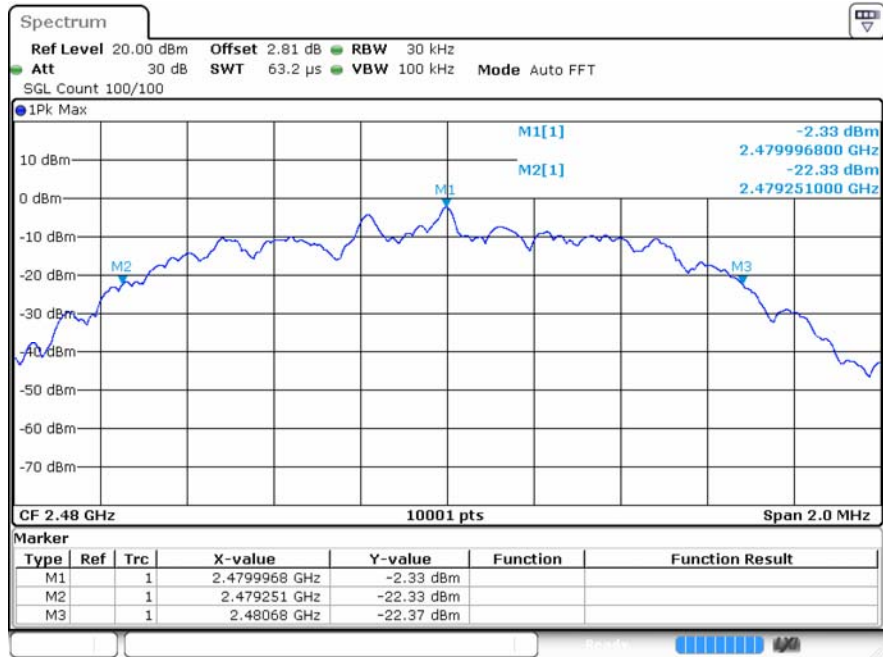
$\pi/4$ DQPSK/LCH



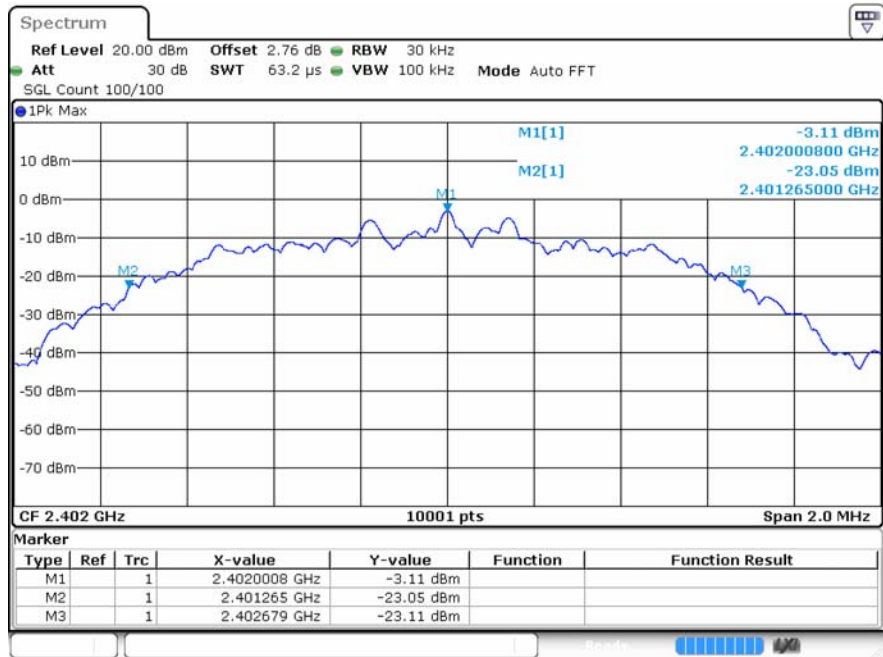
$\pi/4$ DQPSK/MCH



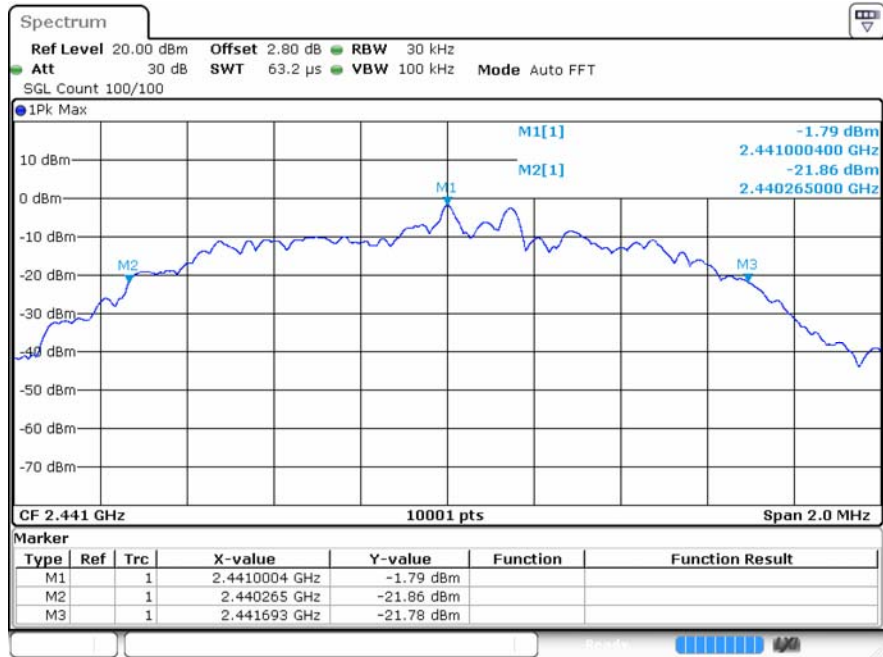
$\pi/4$ DQPSK/HCH



8DPSK/LCH

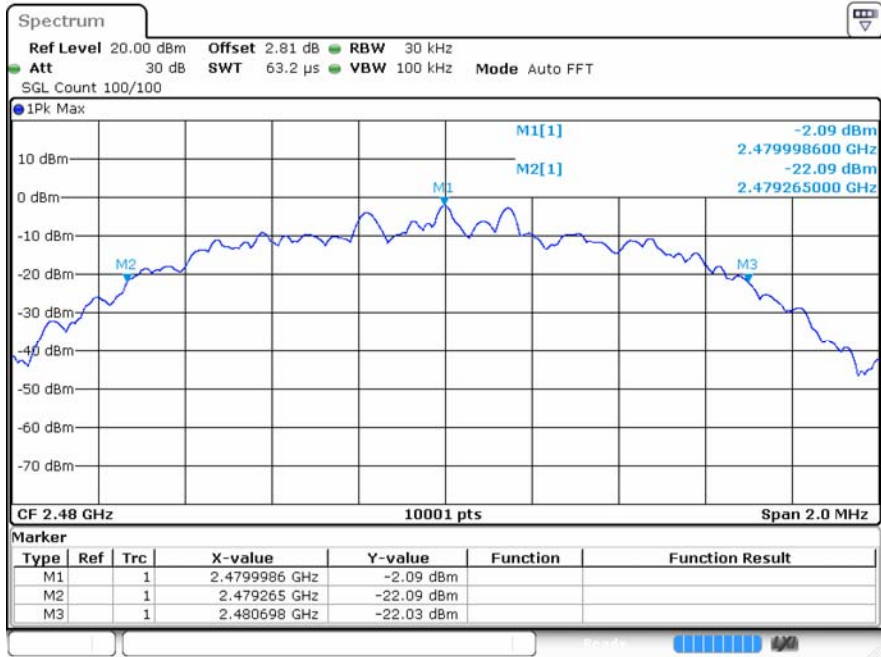


8DPSK/MCH





8DPSK/HCH

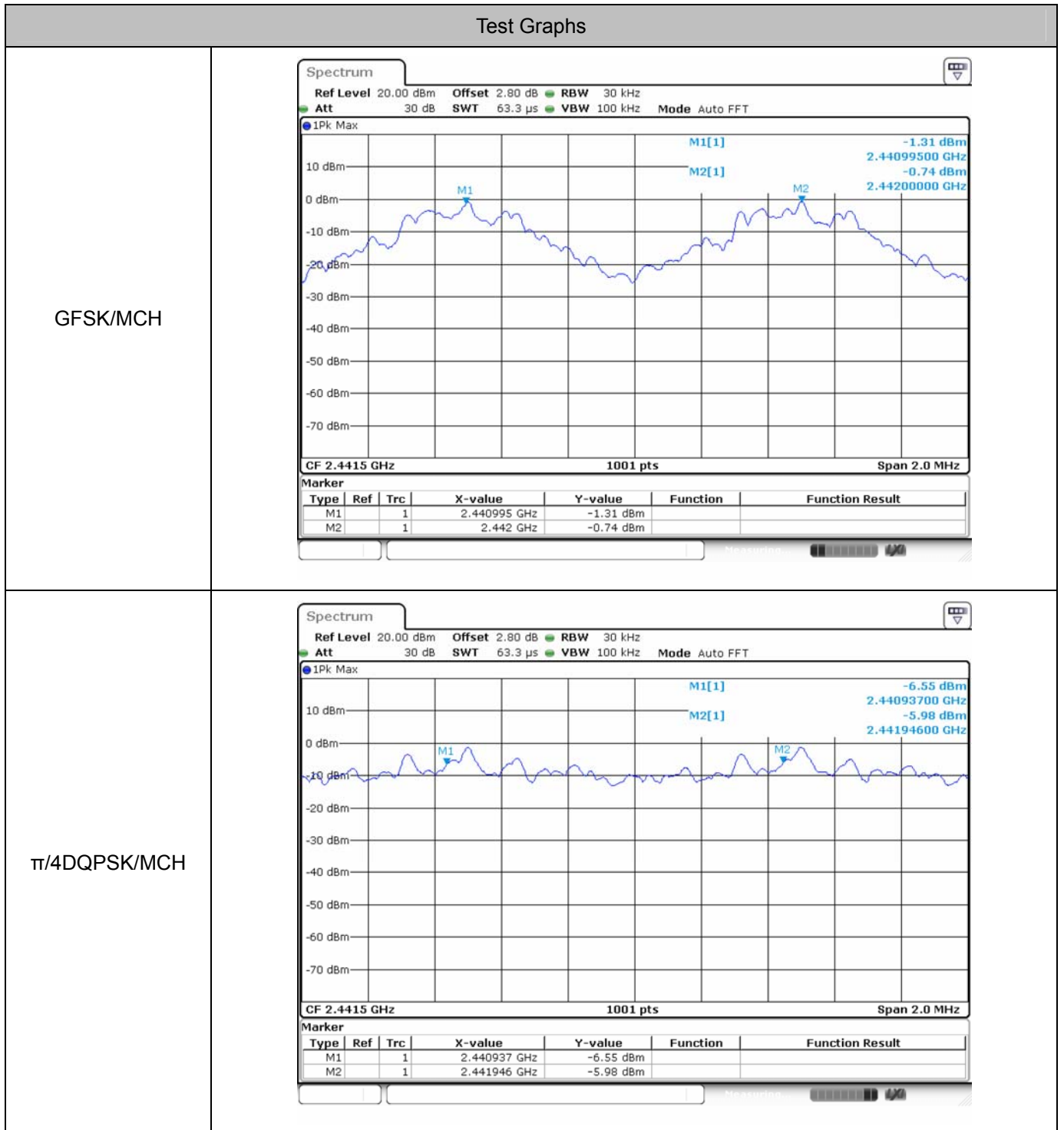


4 Carrier Frequency Separation

4.1 Test Result

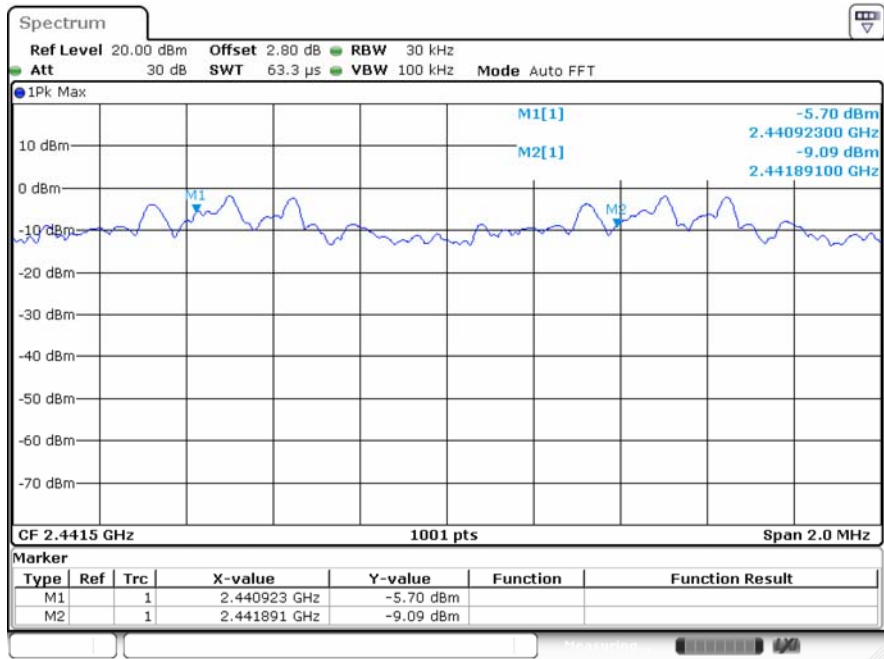
| Mode | Channel. | Carrier Frequency Separation [MHz] | Limit [MHz] | Verdict |
|---------------|----------|------------------------------------|-------------|---------|
| GFSK | MCH | 1.005 | 0.593 | Pass |
| $\pi/4$ DQPSK | MCH | 1.009 | 0.025 | Pass |
| 8DPSK | MCH | 0.968 | 0.952 | Pass |

4.2 Test Graphs





8DPSK/MCH

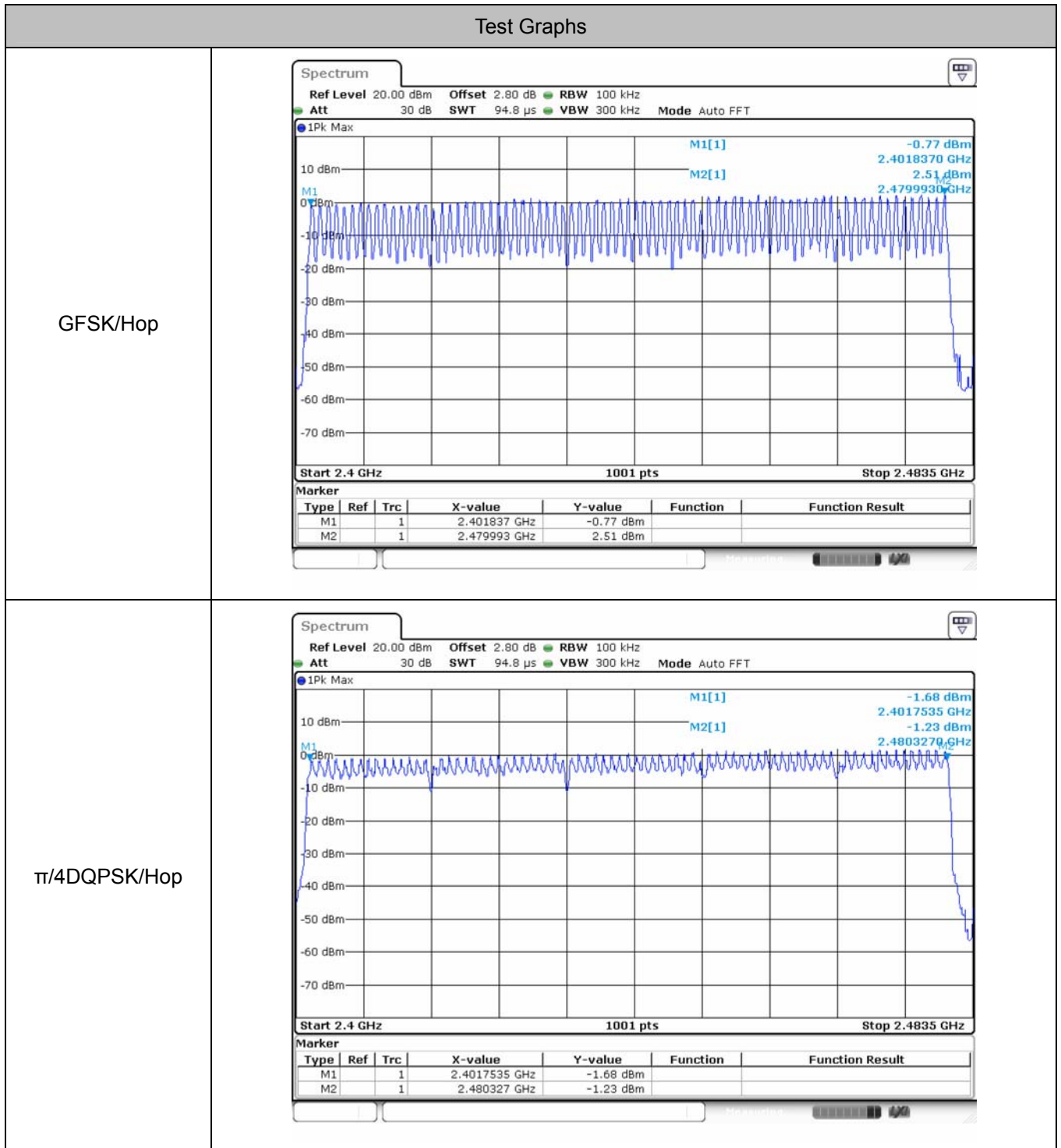


5 Hopping Channel Number

5.1 Test Result

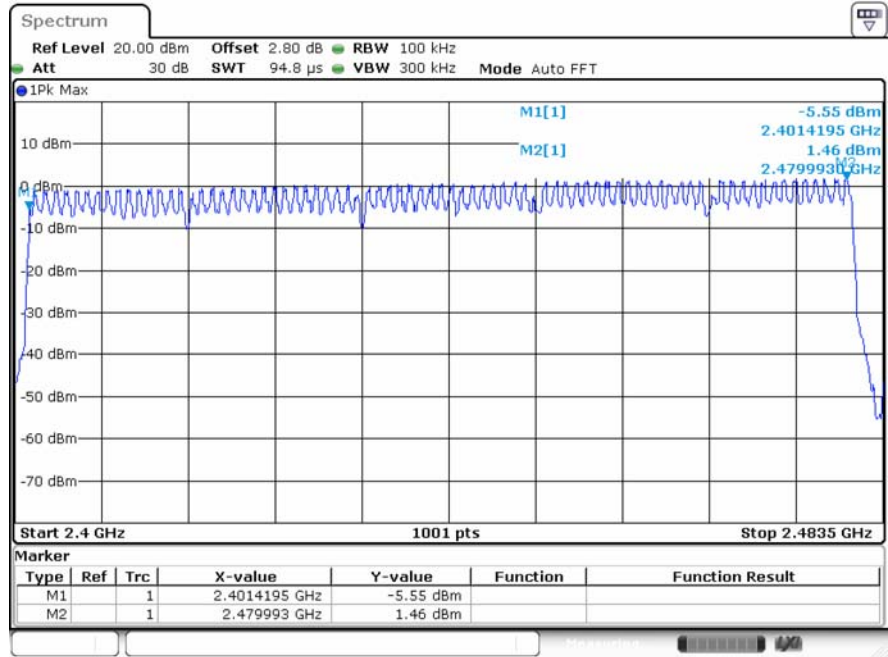
| Mode | Channel. | Number of Hopping Channel [N] | Limit [N] | Verdict |
|---------------|----------|-------------------------------|-----------|---------|
| GFSK | Hop | 79 | ≥ 15 | PASS |
| $\pi/4$ DQPSK | Hop | 79 | ≥ 15 | PASS |
| 8DPSK | Hop | 79 | ≥ 15 | PASS |

5.2 Test Graphs





8DPSK/Hop

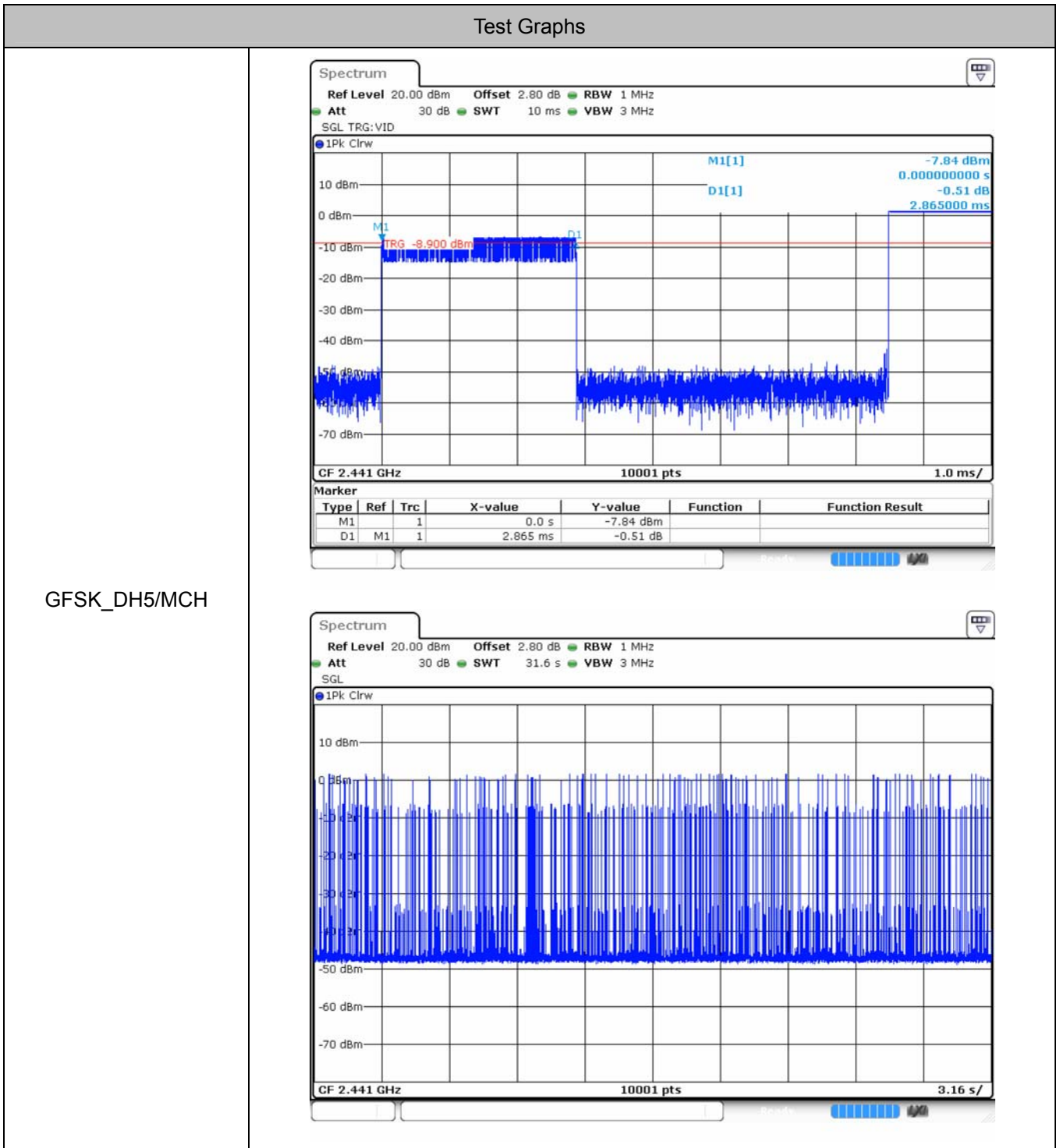


6 Dwell Time

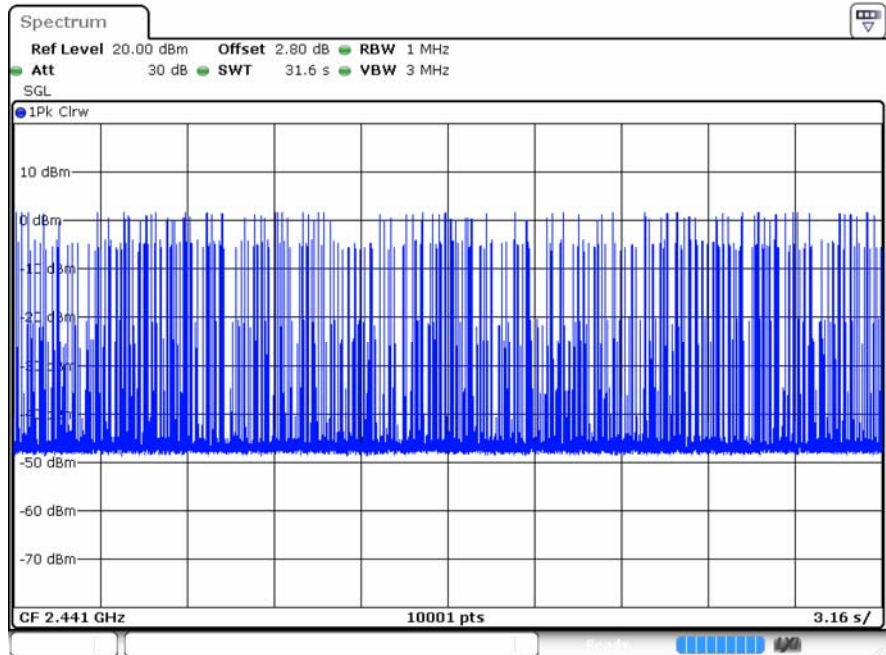
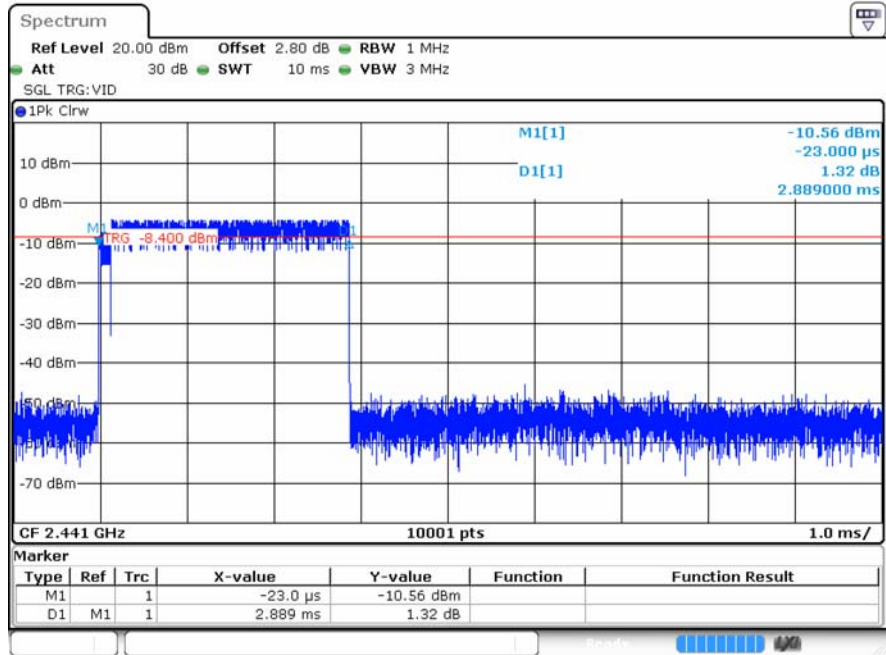
6.1 Test Result

| Mode | Packet | Channel | Burst Width [ms/hop/ch] | Total Hops[hop*ch] | Dwell Time[ms] | Limit [s] | Verdict |
|---------------|--------|---------|----------------------------|-----------------------|----------------|-----------|---------|
| GFSK | DH5 | MCH | 2.865 | 120 | 343.8 | 0.4 | Pass |
| $\pi/4$ DQPSK | 2DH5 | MCH | 2.889 | 103 | 297.567 | 0.4 | Pass |
| 8DPSK | 3DH5 | MCH | 2.892 | 119 | 344.148 | 0.4 | Pass |

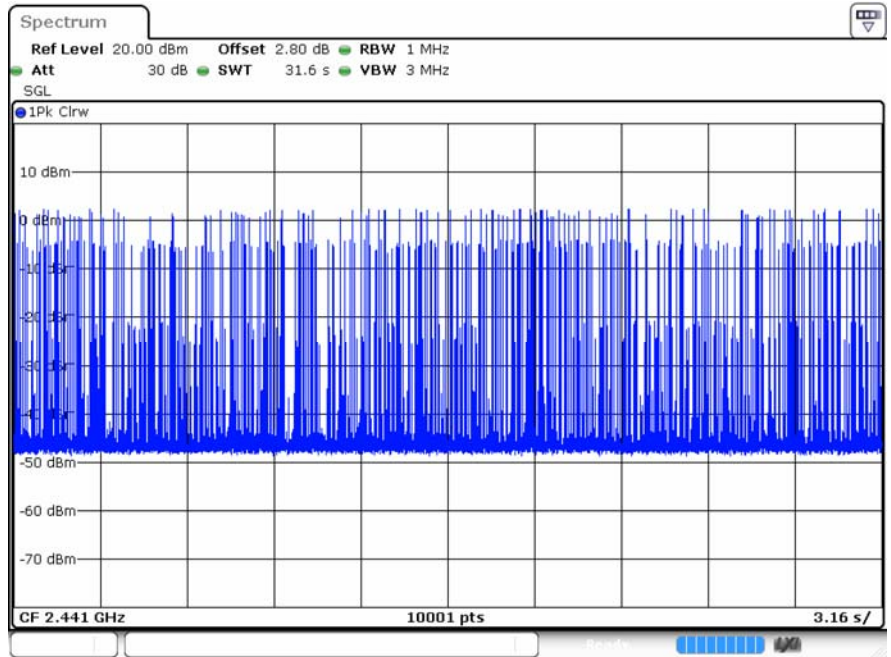
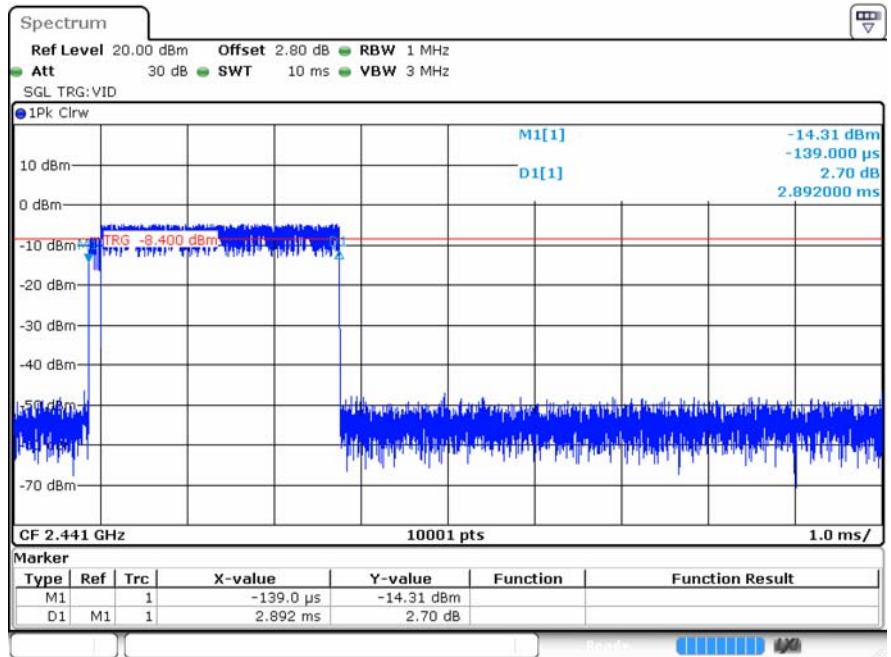
6.2 Test Graphs



$\pi/4$ DQPSK
_2DH5/MCH



8DPSK_3DH5/MCH

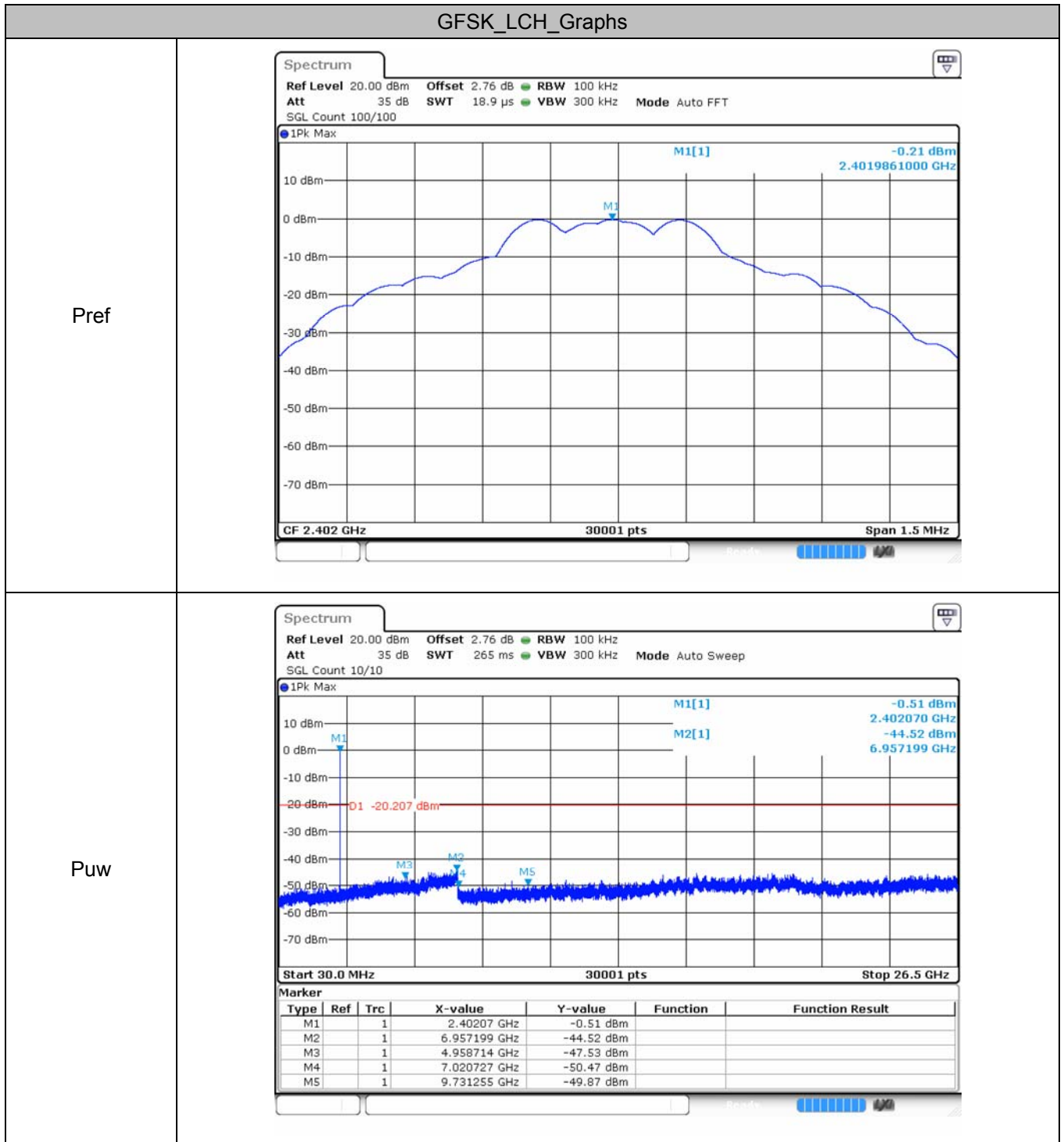


7 RF Conducted Spurious Emissions

7.1 Test Result

| Mode | Channel | Max. Level [dBc] | Limit [dBc] | Verdict |
|---------------|---------|------------------|-------------|---------|
| GFSK | LCH | -44.31 | -20 | Pass |
| | MCH | -43.83 | -20 | Pass |
| | HCH | -45.51 | -20 | Pass |
| $\pi/4$ DQPSK | LCH | -43.04 | -20 | Pass |
| | MCH | -43.14 | -20 | Pass |
| | HCH | -43.45 | -20 | Pass |
| 8DPSK | LCH | -43.14 | -20 | Pass |
| | MCH | -44.5 | -20 | Pass |
| | HCH | -43.9 | -20 | Pass |

7.2 Test Graphs

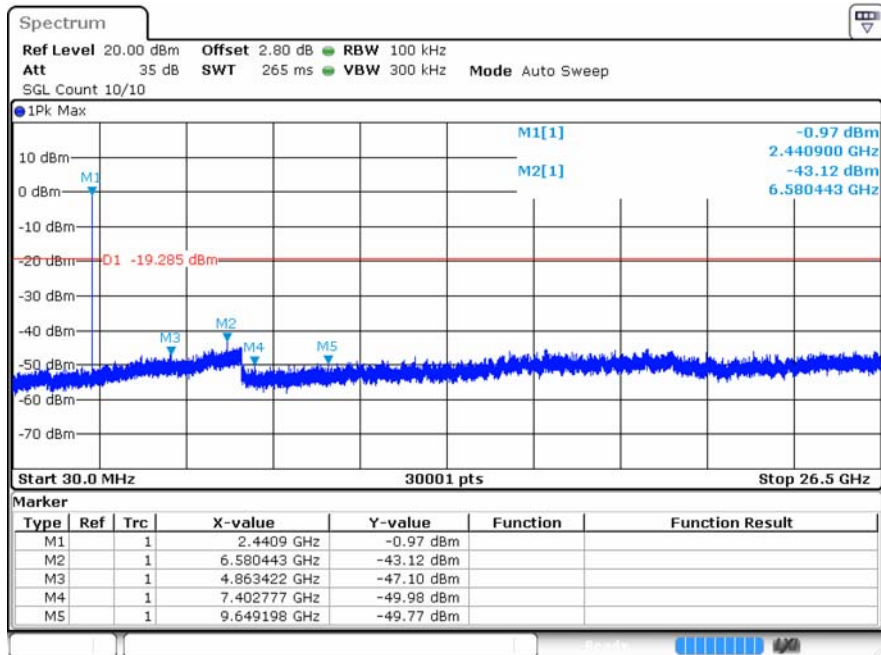


GFSK_MCH_Graphs

Pref

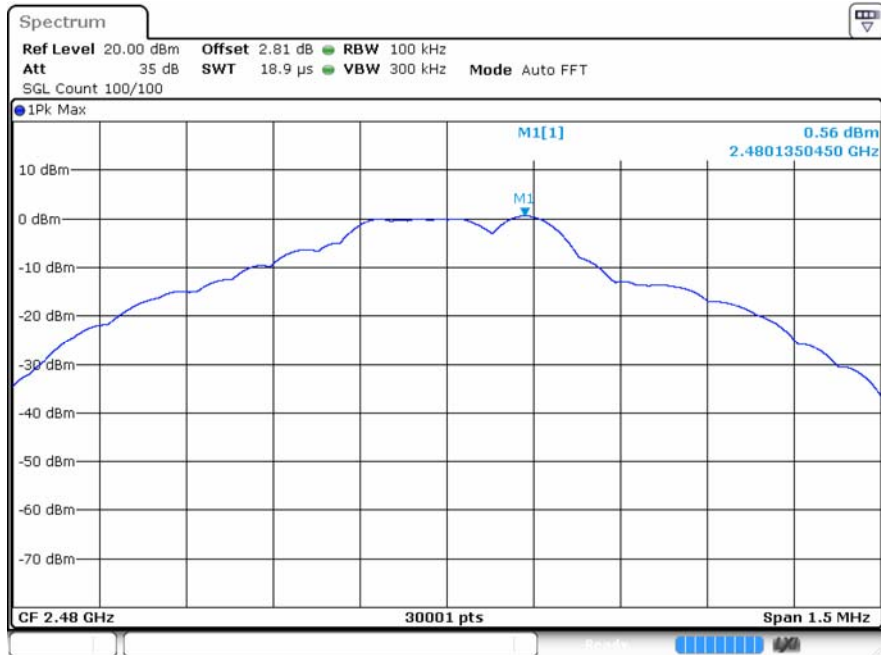


Puw

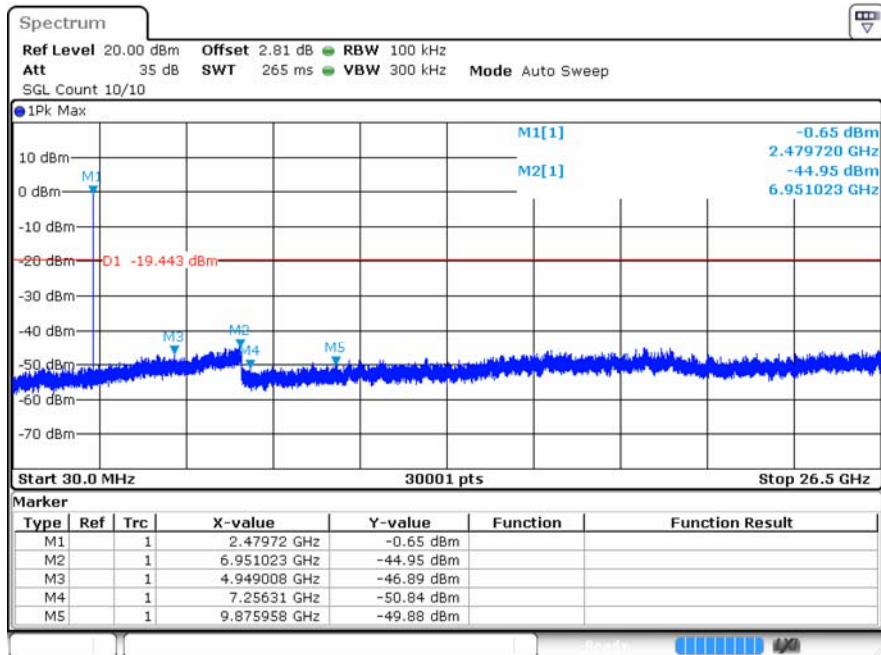


GFSK_HCH_Graphs

Pref

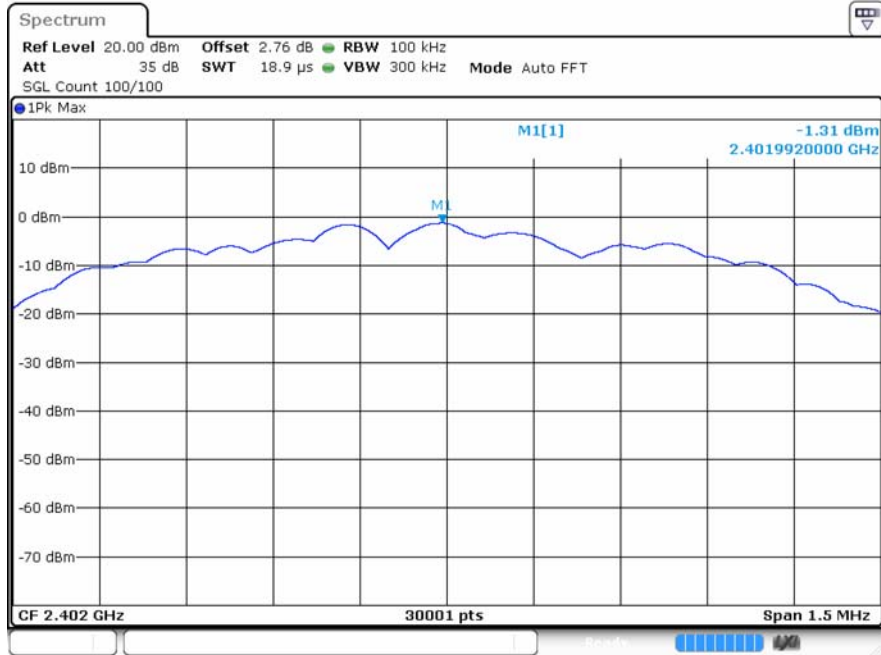


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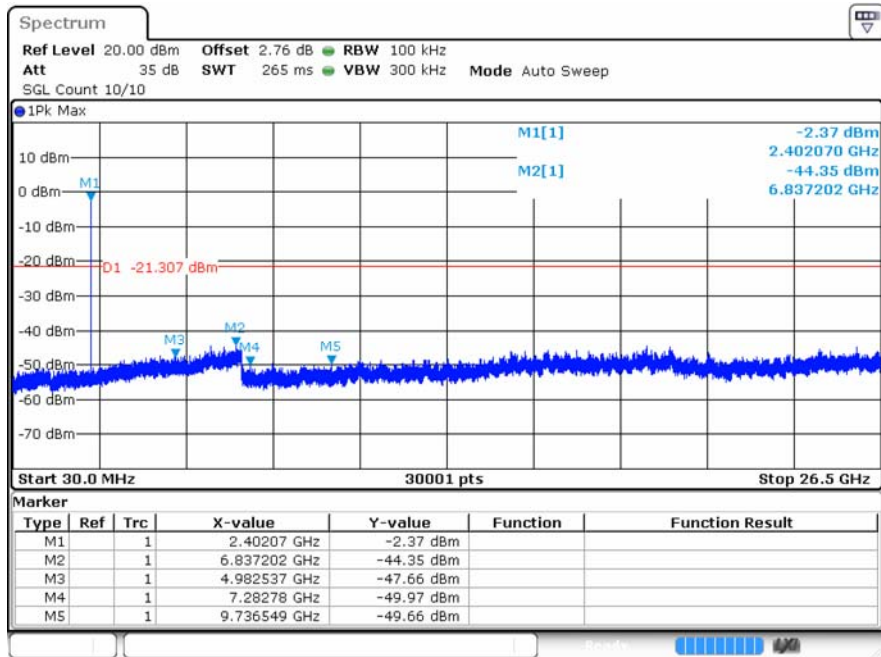


$\pi/4$ DQPSK_LCH_Graphs

Pref

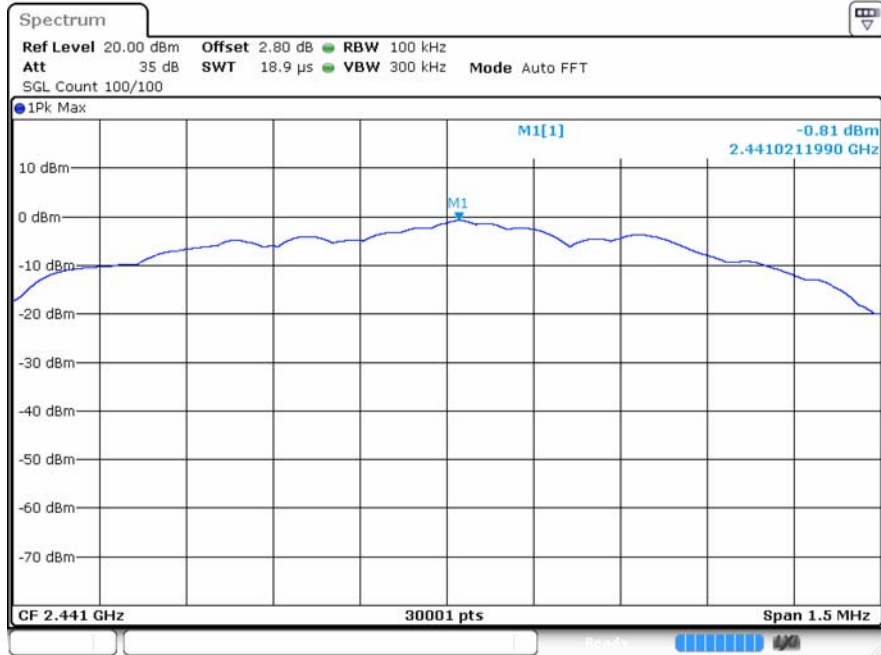


Puw

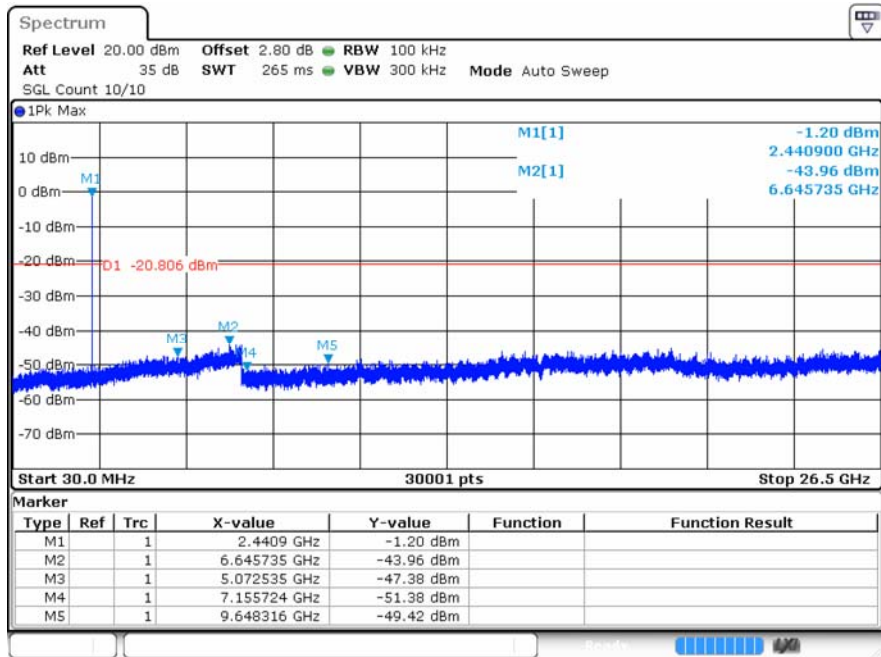


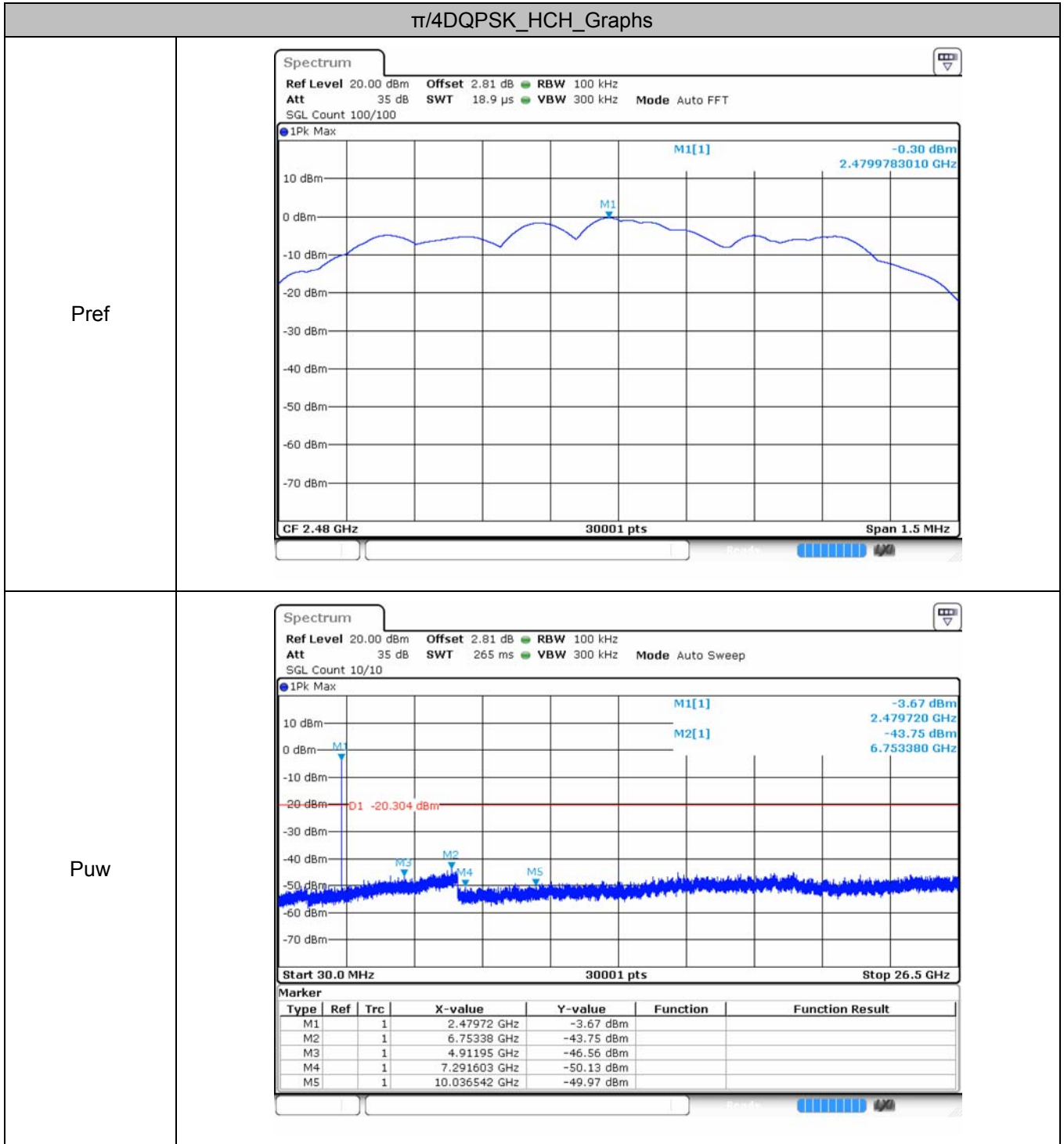
$\pi/4$ DQPSK_MCH_Graphs

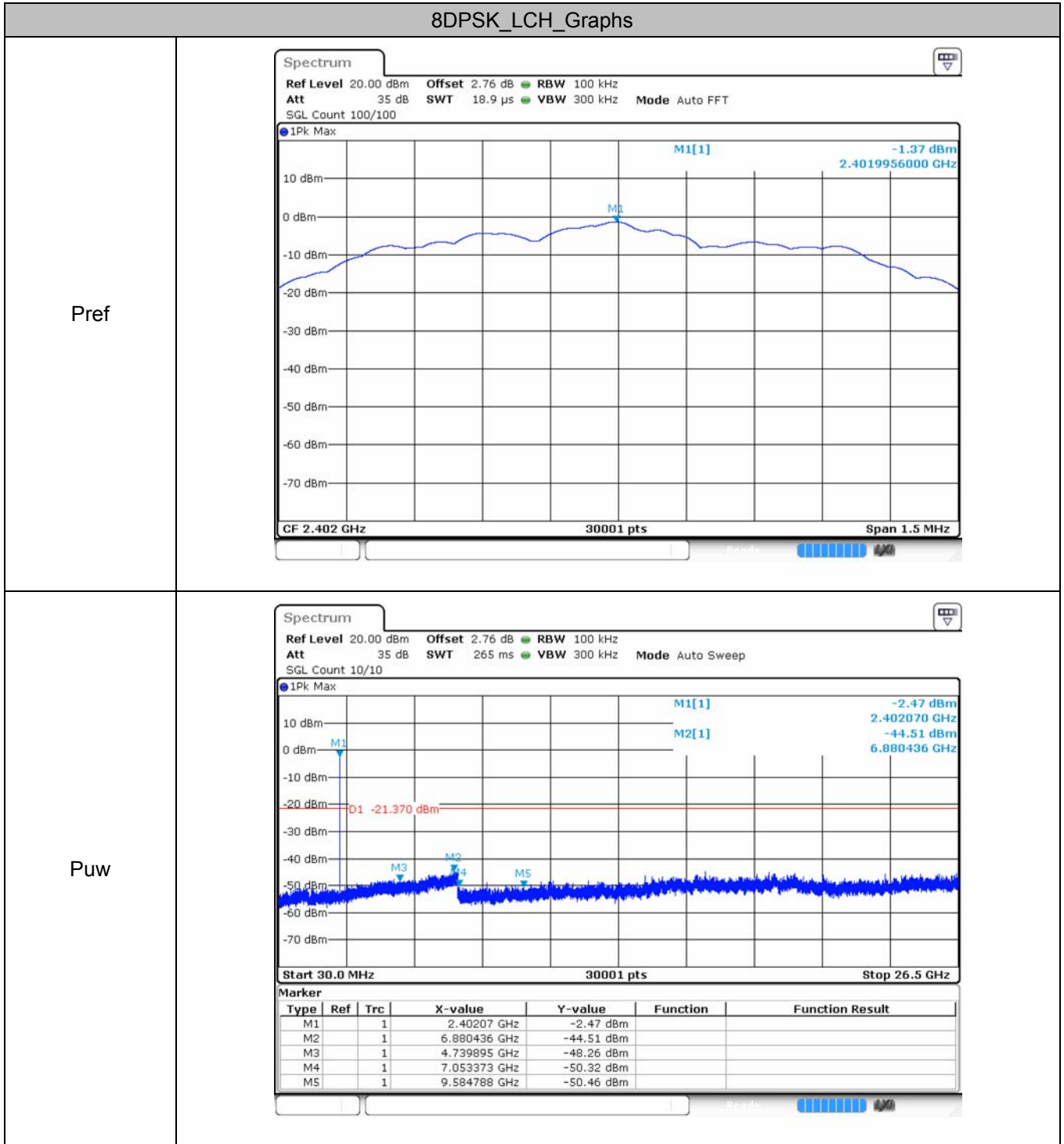
Pref



Puw

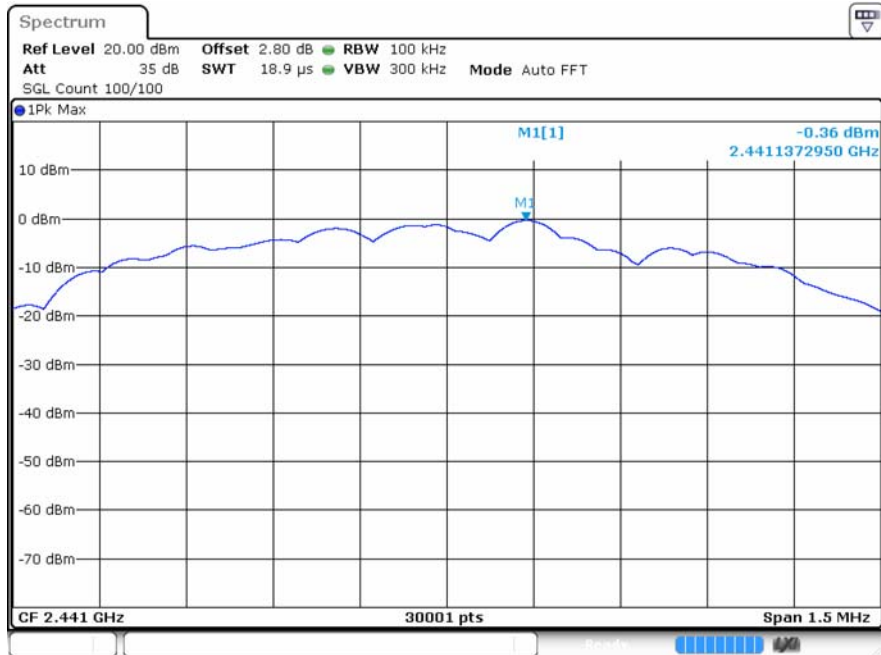




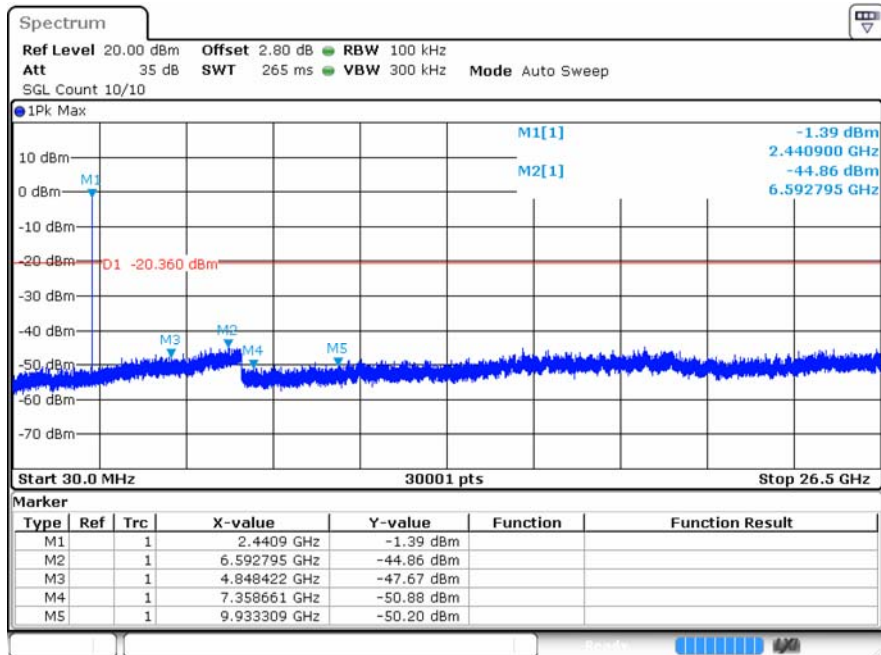


8DPSK_MCH_Graphs

Pref

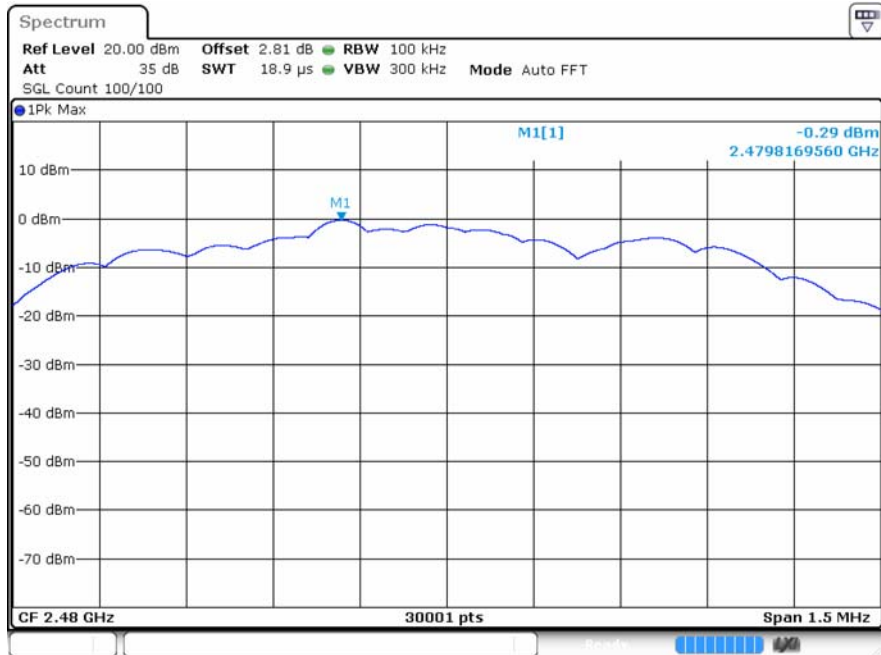


Puw

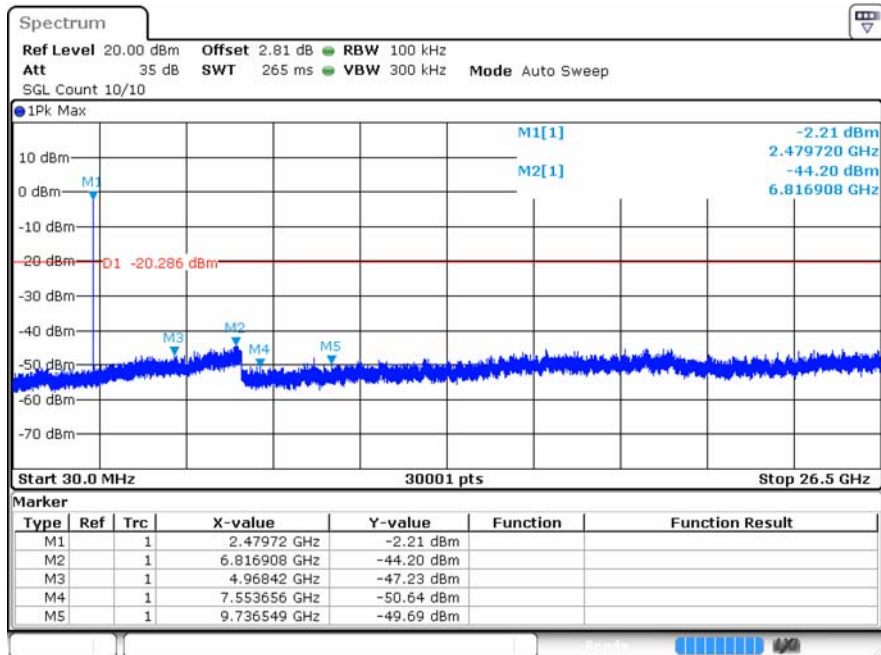


8DPSK_HCH_Graphs

Pref



Puw

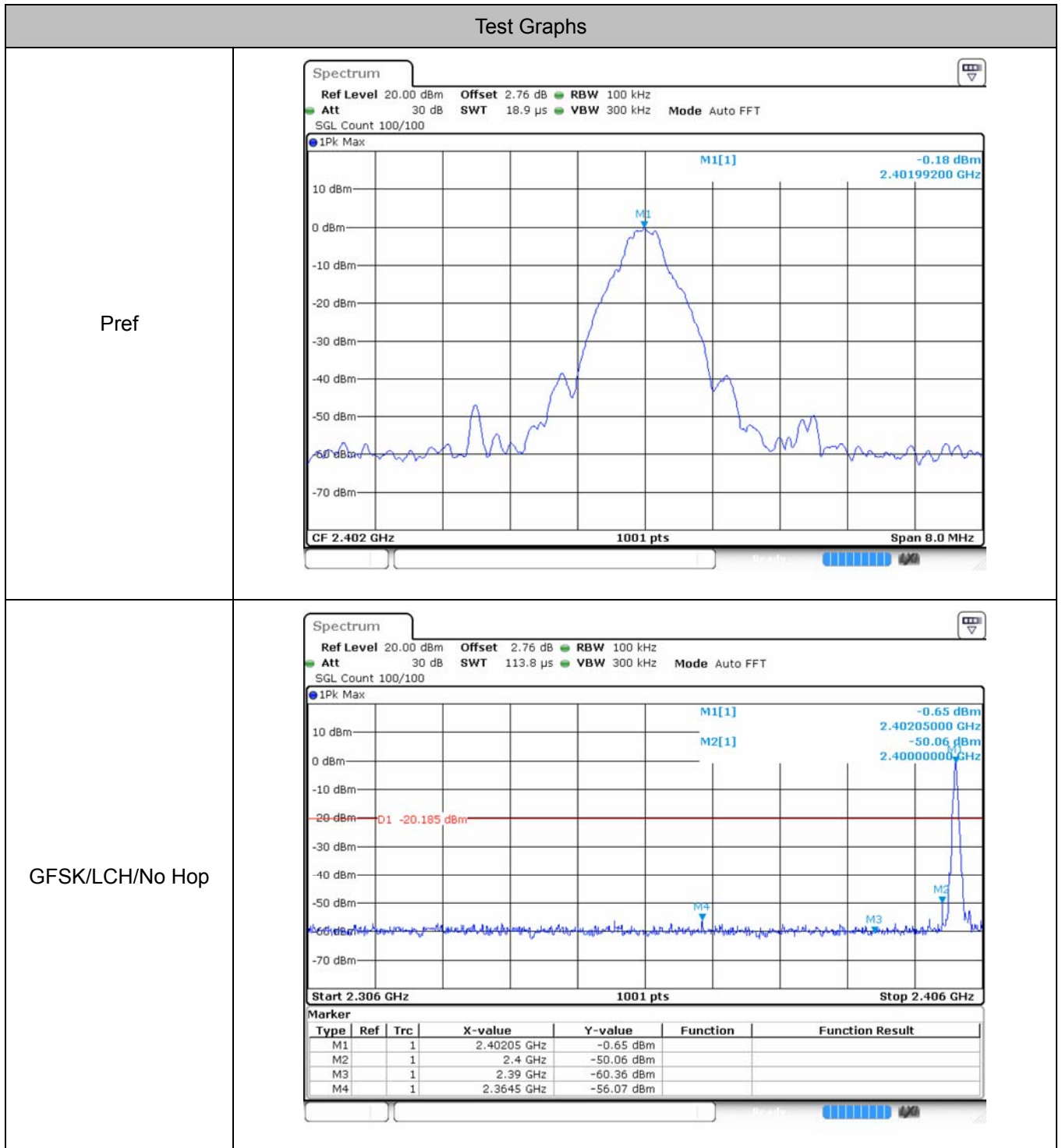


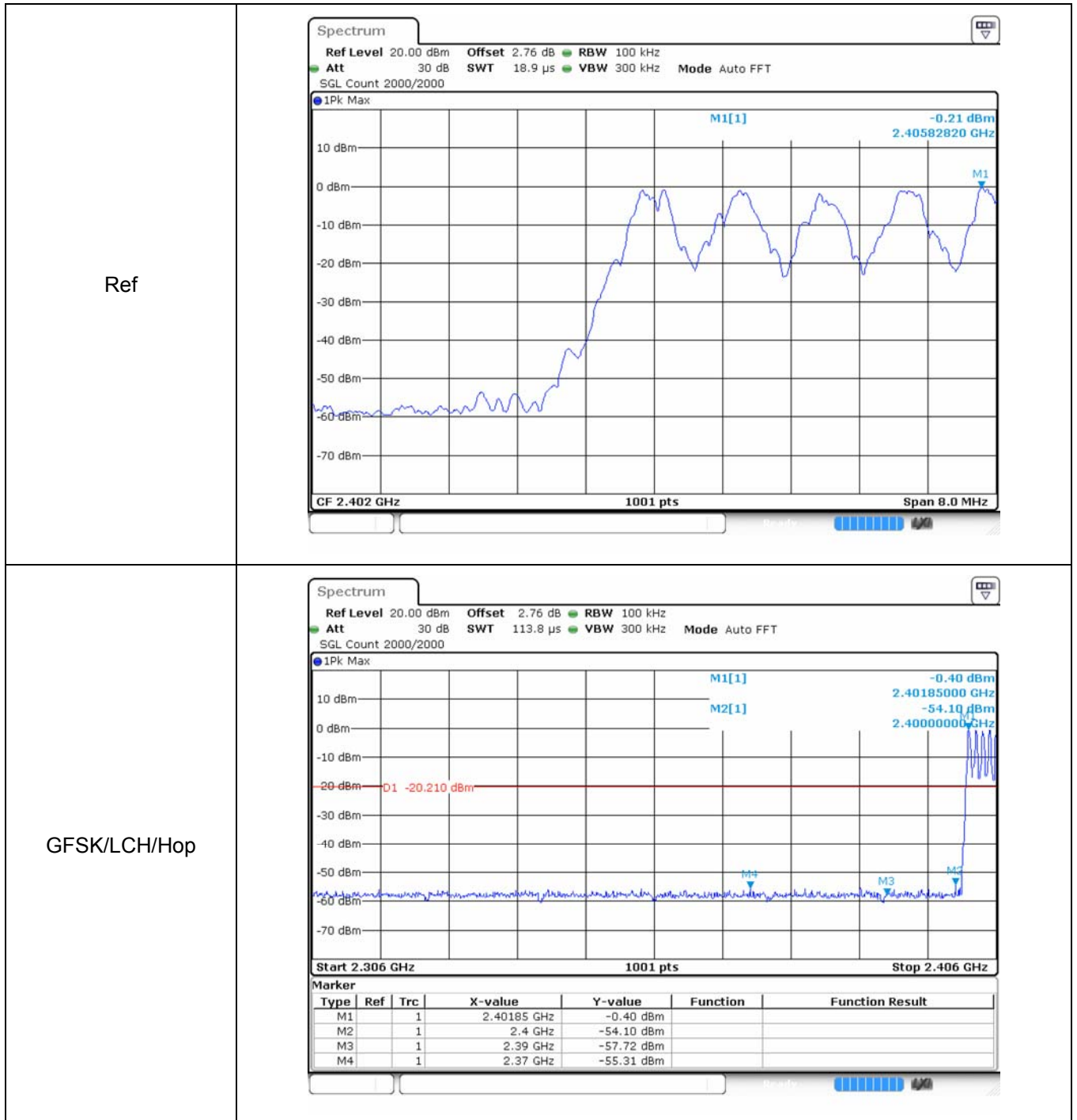
8 Band-edge for RF Conducted Emissions

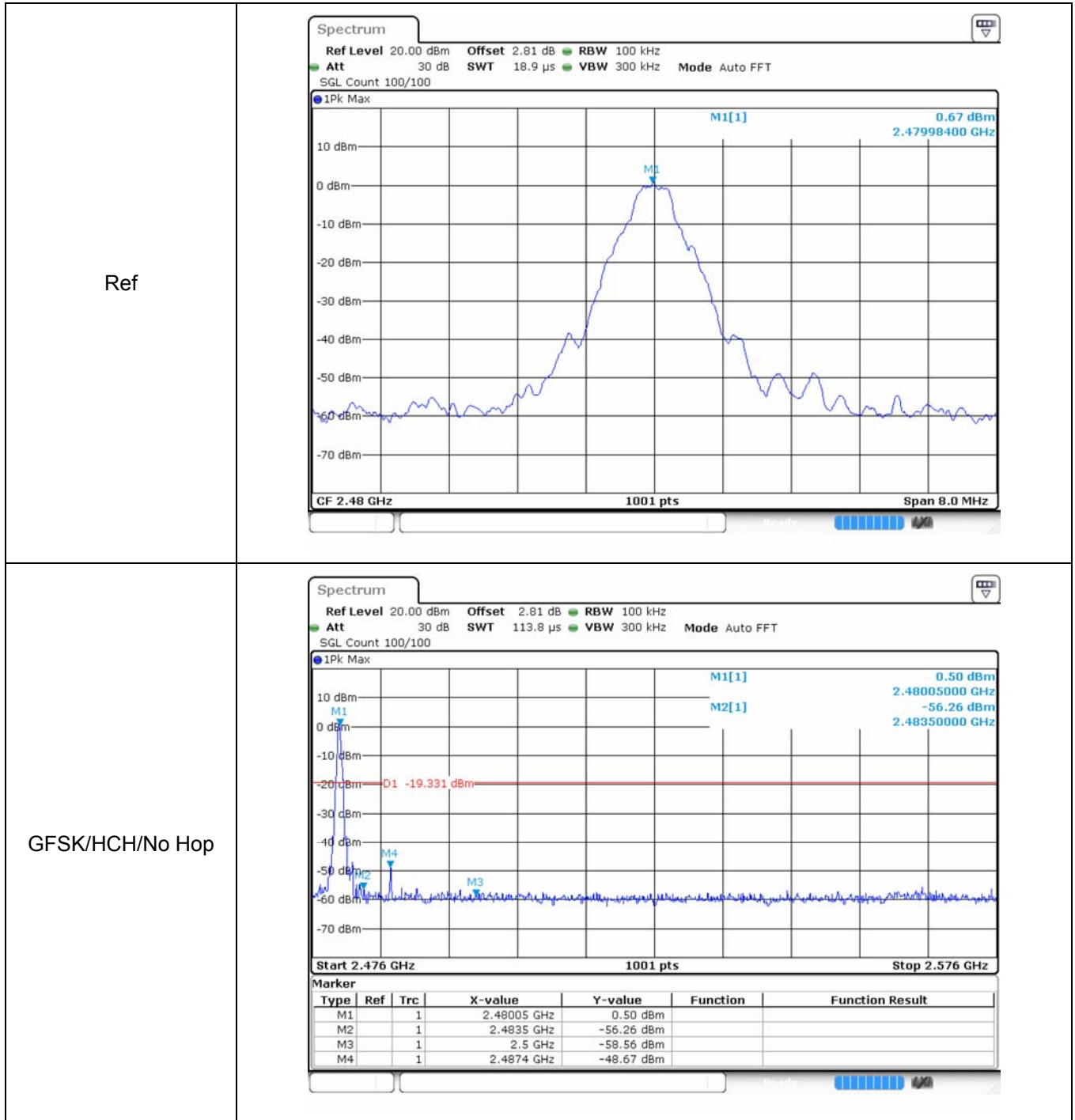
8.1 Test Result

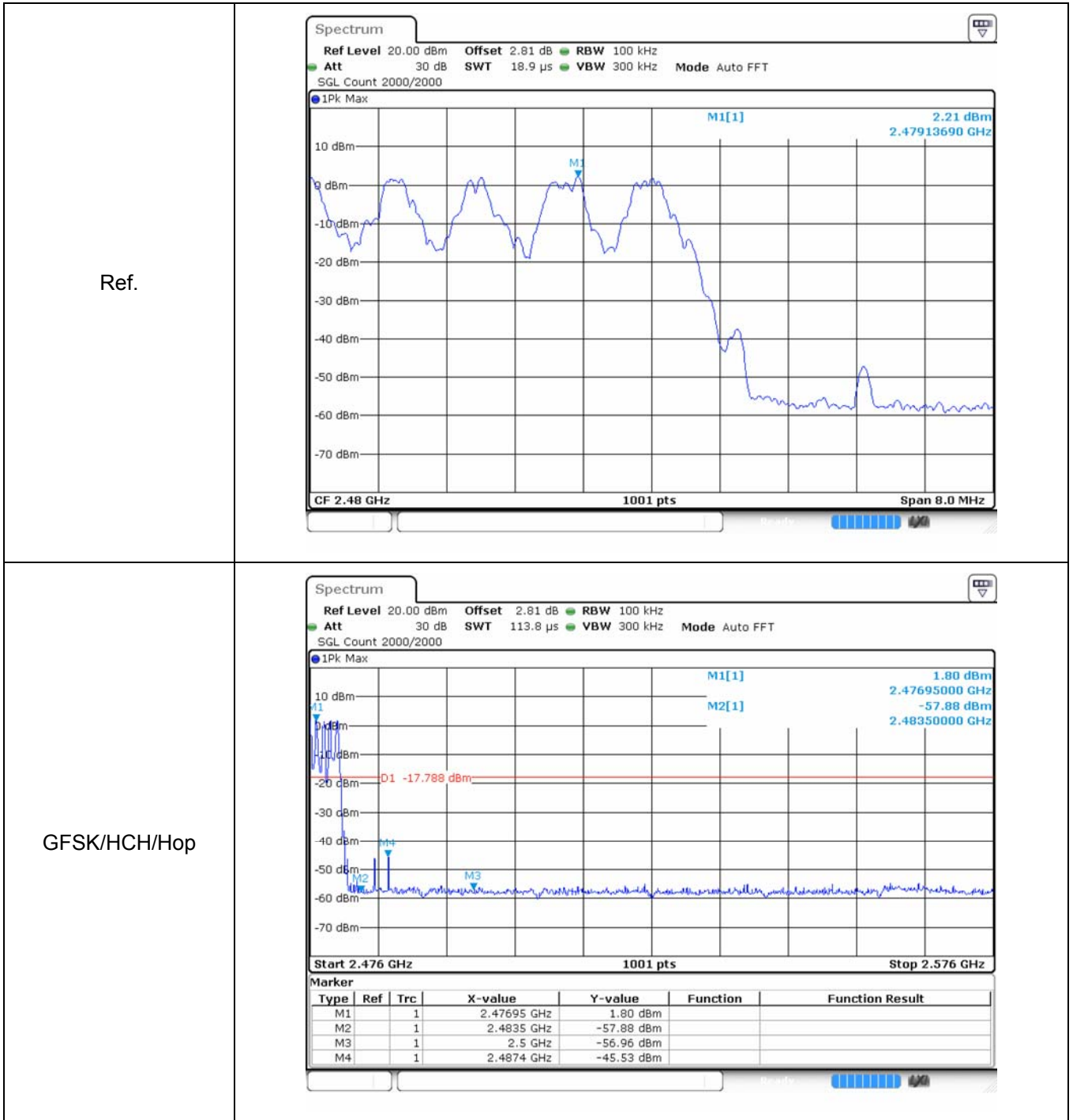
| Mode | Channel | Carrier Frequency [MHz] | Frequency Hopping | Max Spurious Level [dBc] | Limit [dBc] | Verdict |
|---------------|---------|-------------------------|-------------------|--------------------------|-------------|---------|
| GFSK | LCH | 2402 | Off | -55.88 | -20 | Pass |
| | | | On | -55.1 | -20 | Pass |
| | HCH | 2480 | Off | -49.34 | -20 | Pass |
| | | | On | -47.74 | -20 | Pass |
| $\pi/4$ DQPSK | LCH | 2402 | Off | -55.2 | -20 | Pass |
| | | | On | -53.19 | -20 | Pass |
| | HCH | 2480 | Off | -46.6 | -20 | Pass |
| | | | On | -47.07 | -20 | Pass |
| 8DPSK | LCH | 2402 | Off | -55.48 | -20 | Pass |
| | | | On | -54.05 | -20 | Pass |
| | HCH | 2480 | Off | -55.23 | -20 | Pass |
| | | | On | -56.99 | -20 | Pass |

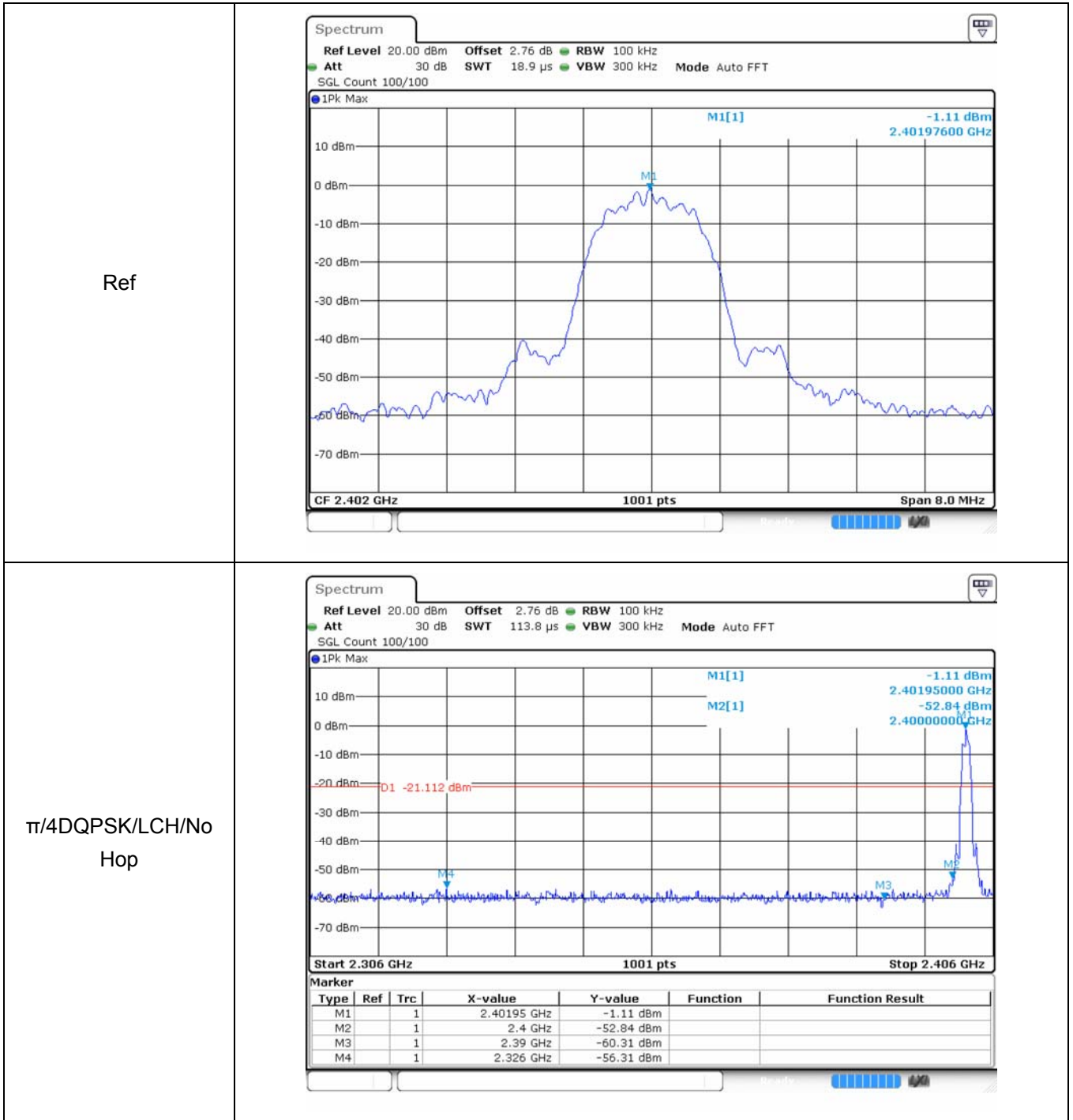
8.2 Test Graphs

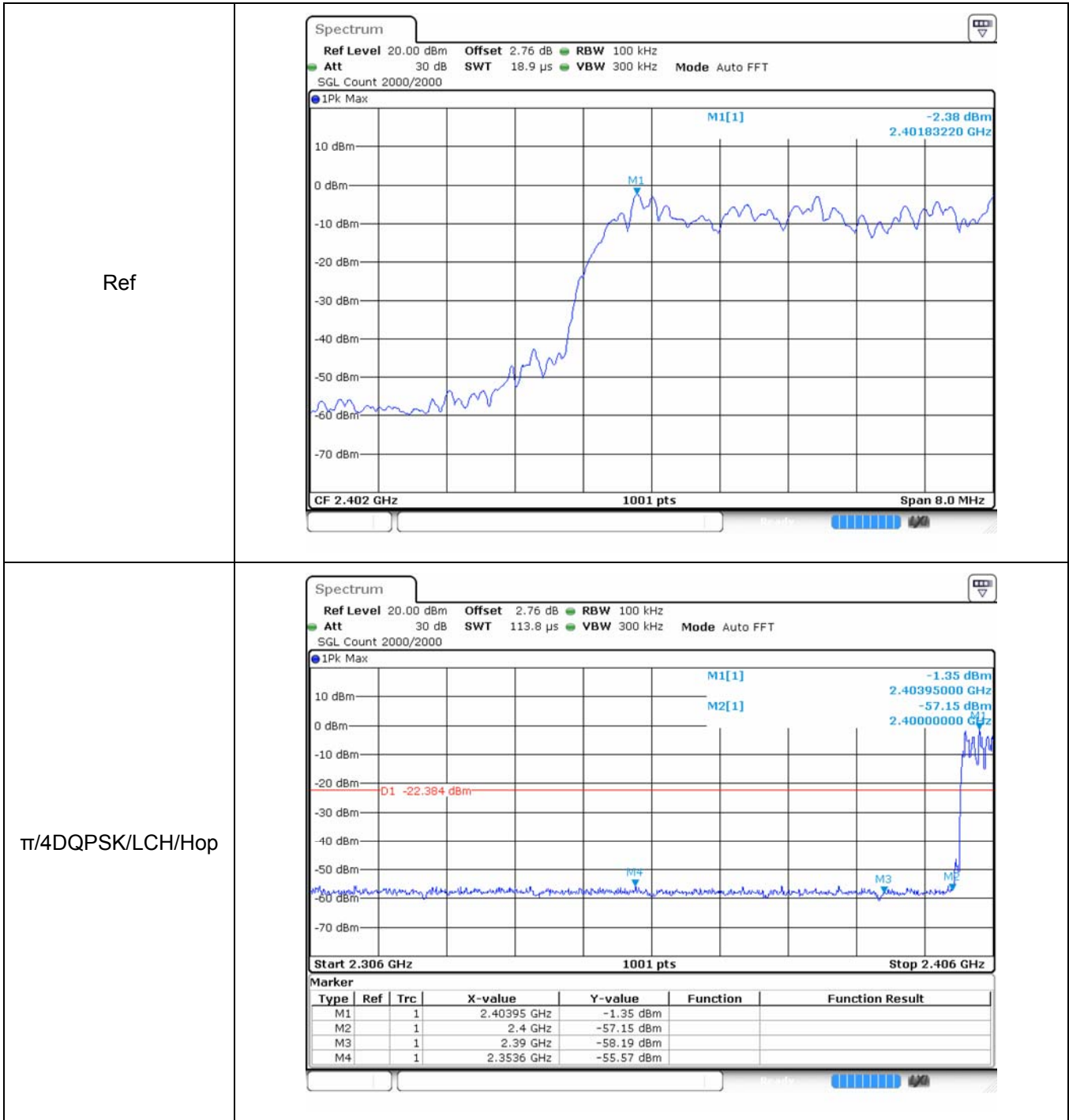


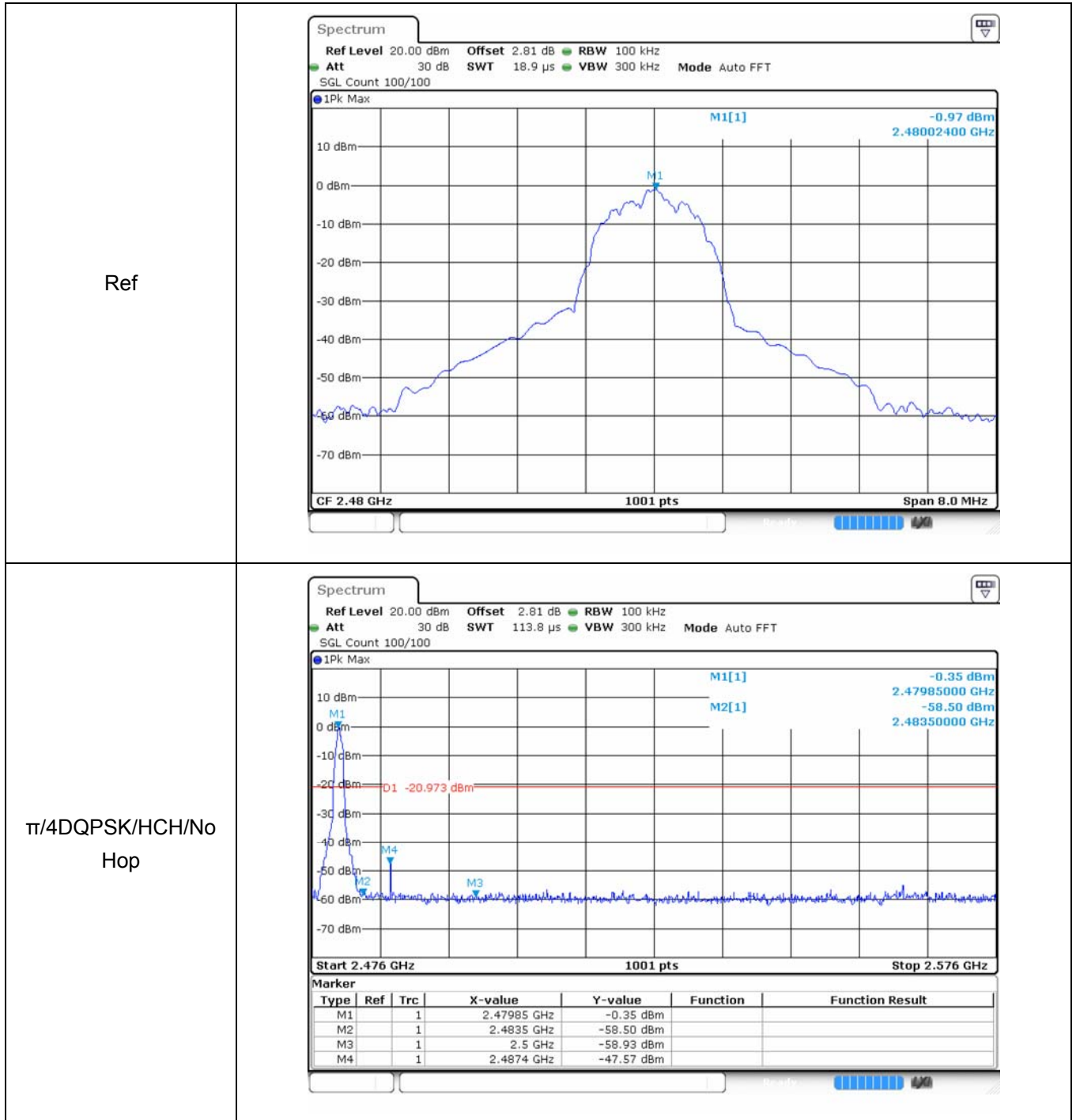


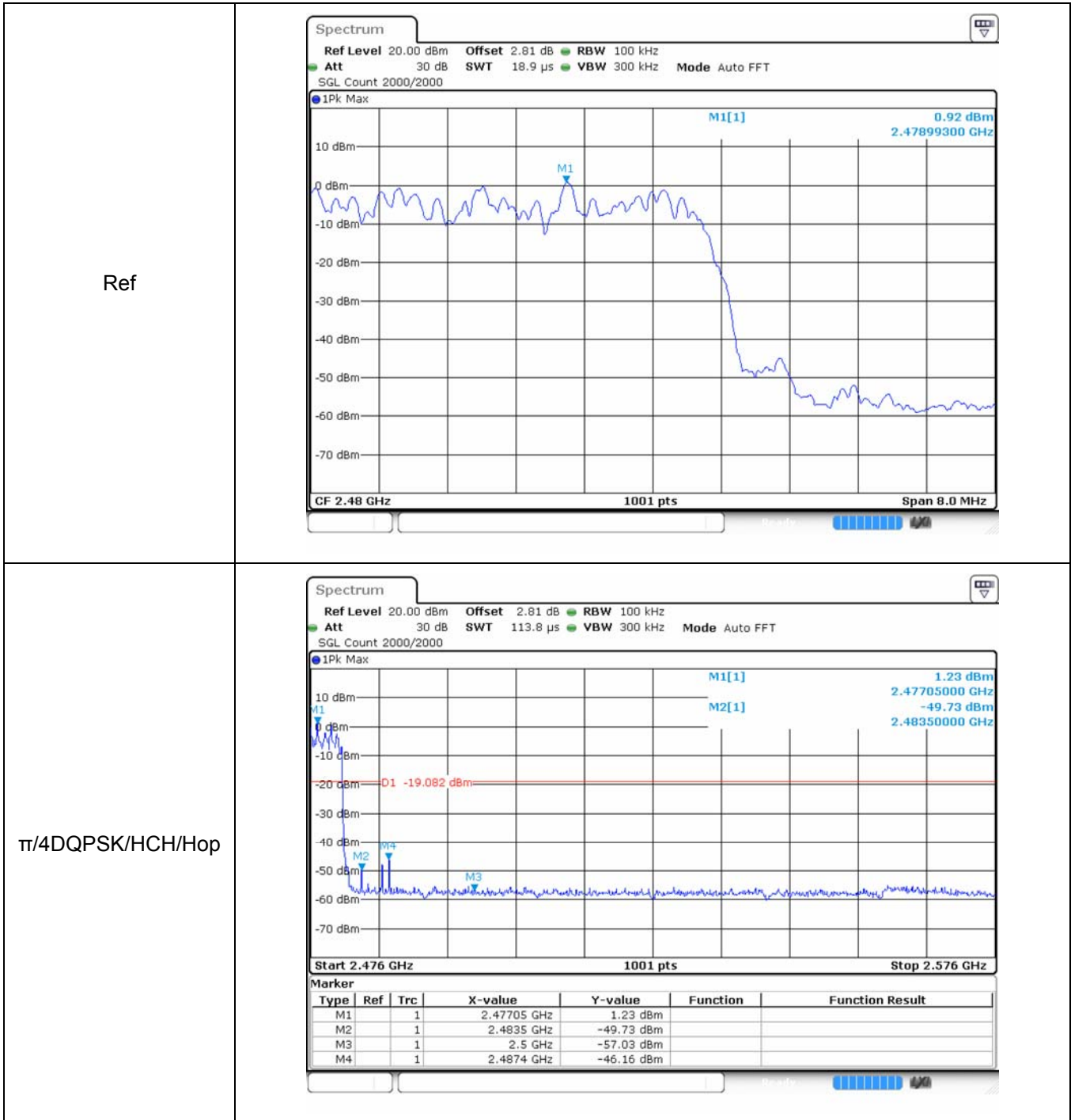


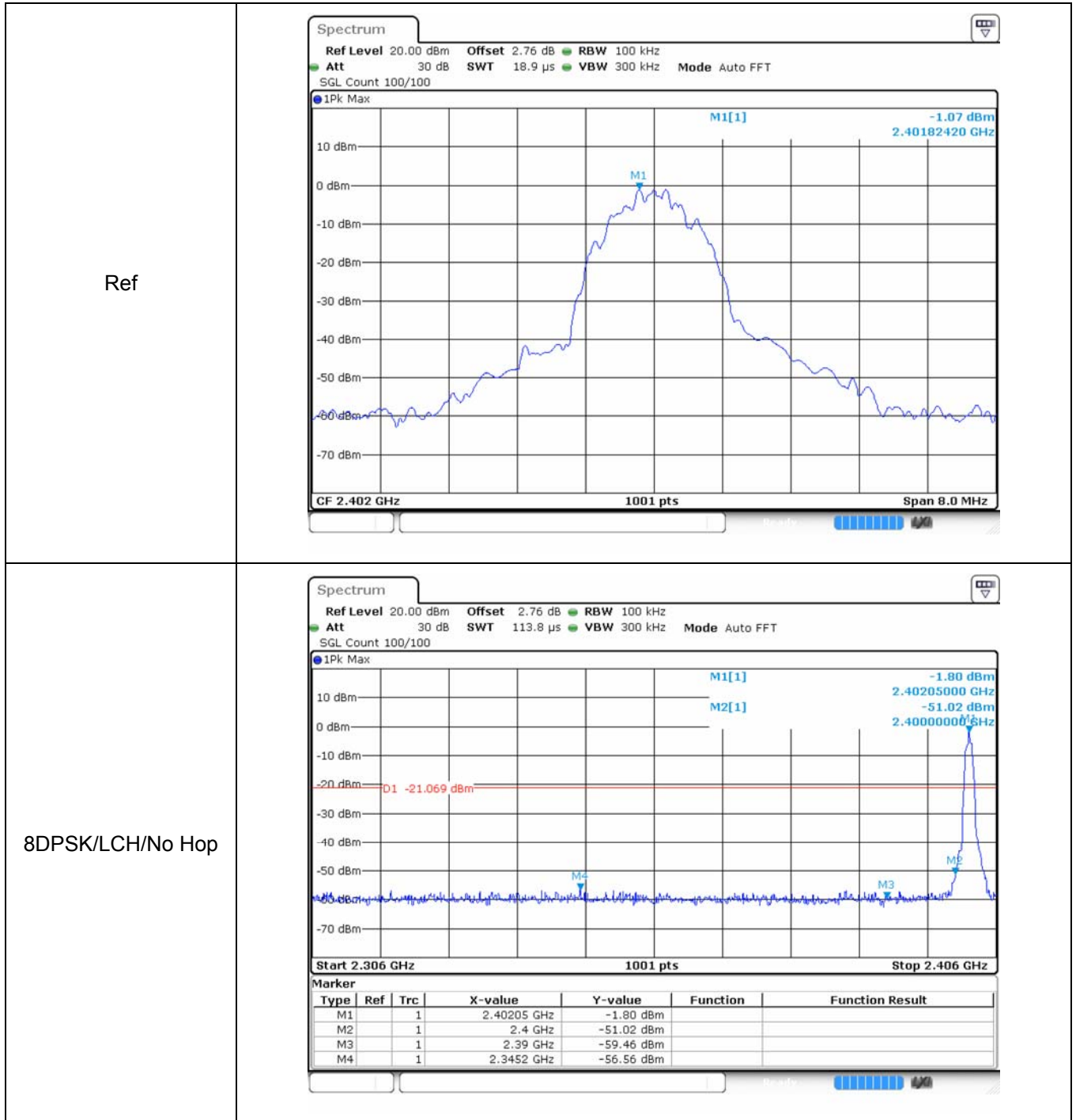


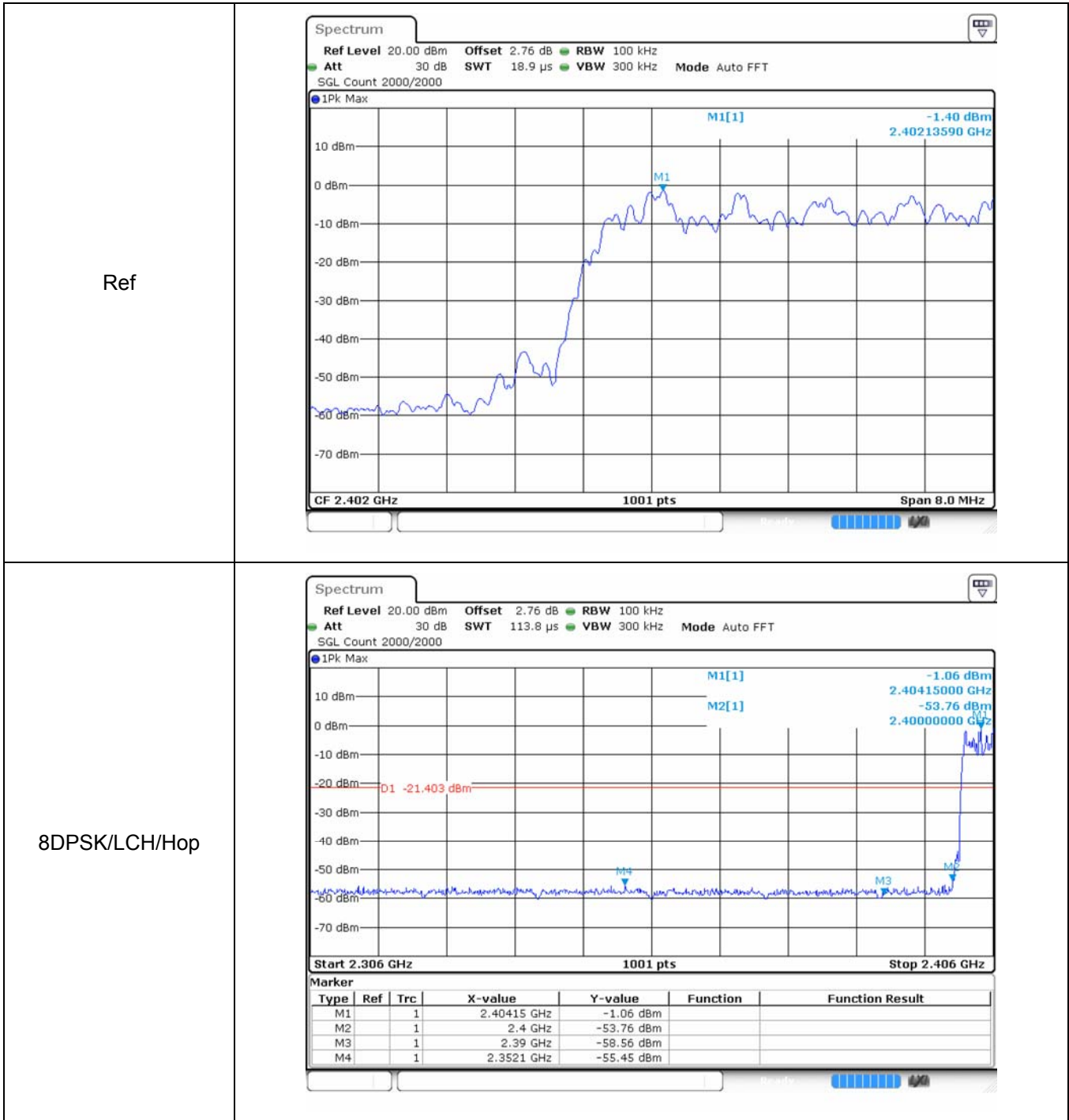


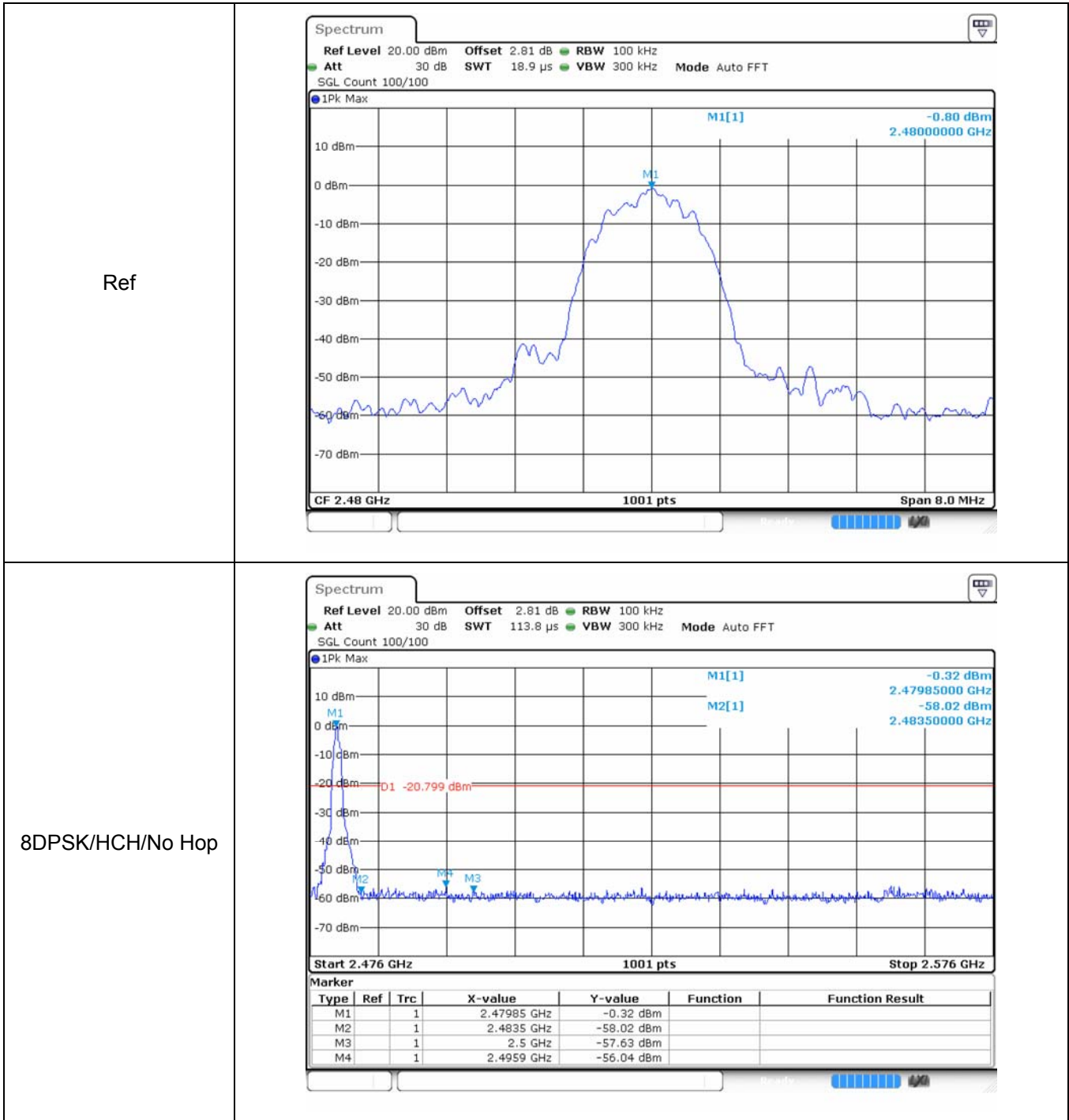


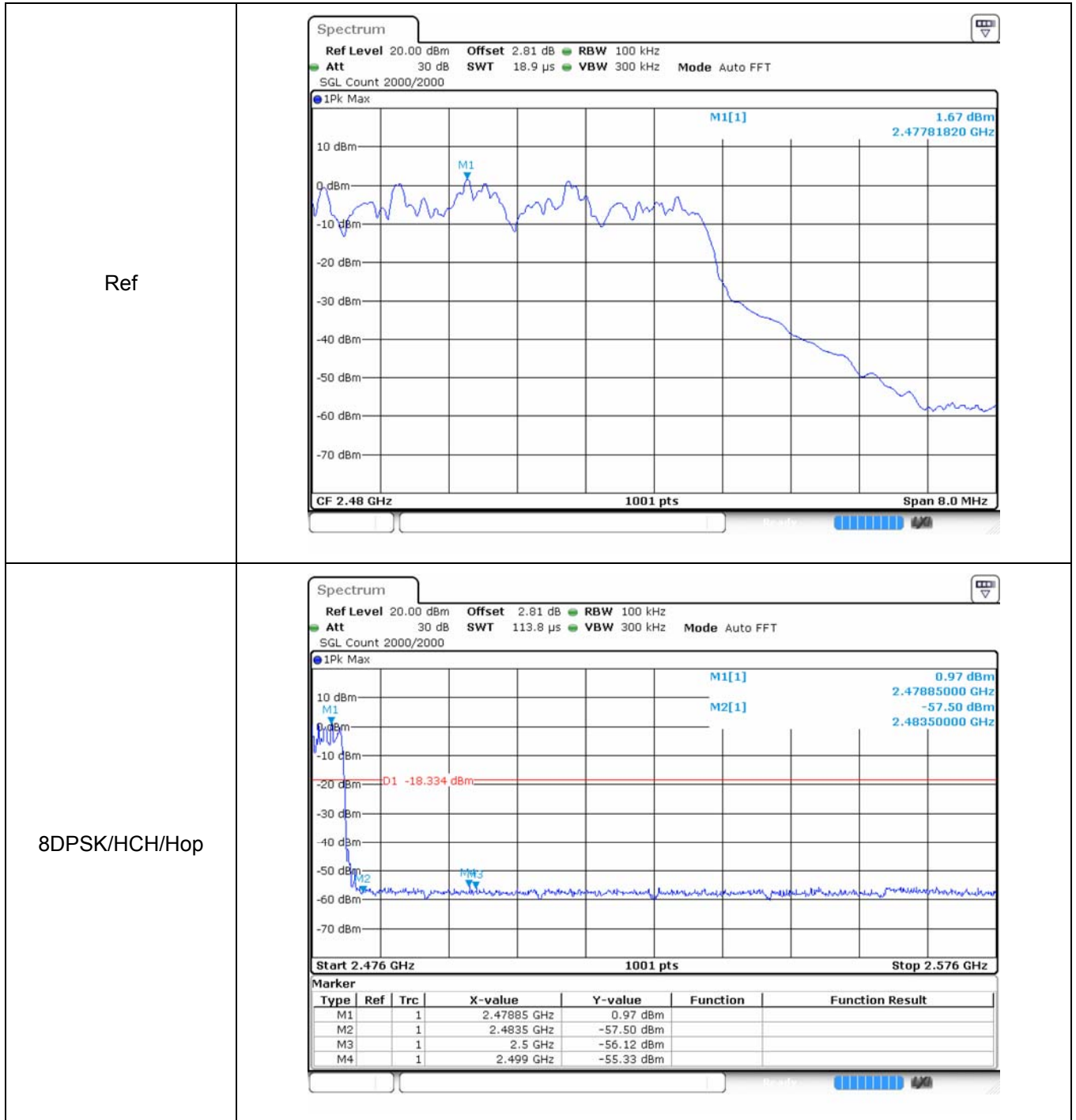












9 Restrict-band band-edge measurements

9.1 Test Result

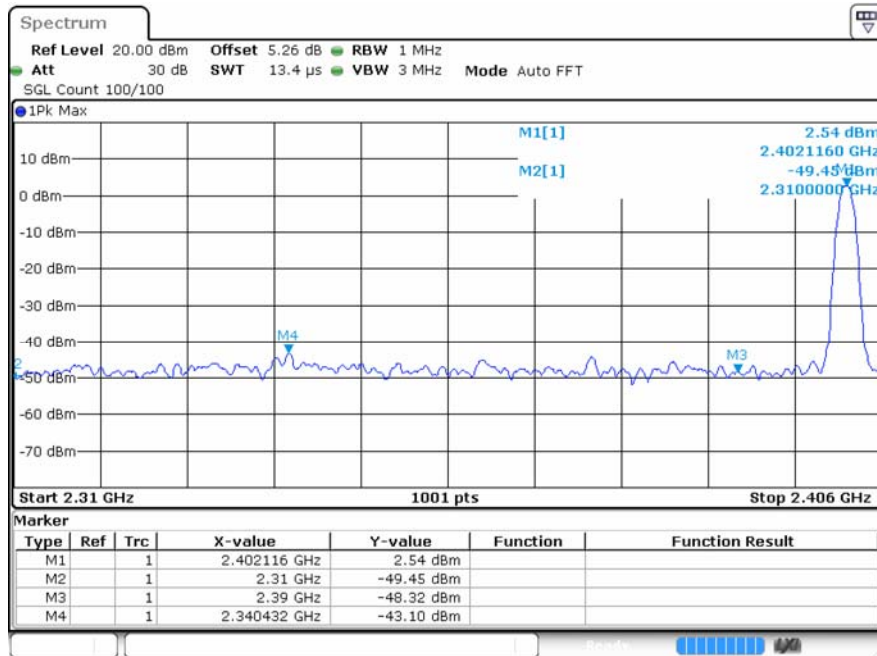
| Test Mode | Hopping | Freq. | Power [dBm] | Gain | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|---------|----------|-------------|------|------------|----------|----------------|---------|
| GFSK | Off | 2310.0 | -49.45 | 2.5 | 48.31 | PEAK | 74 | Pass |
| | Off | 2310.0 | -55.25 | 2.5 | 42.51 | AV | 54 | Pass |
| | Off | 2340.432 | -43.1 | 2.5 | 54.66 | PEAK | 74 | Pass |
| | Off | 2341.872 | -53.92 | 2.5 | 43.84 | AV | 54 | Pass |
| | Off | 2390.0 | -48.31 | 2.5 | 49.45 | PEAK | 74 | Pass |
| | Off | 2390.0 | -56.32 | 2.5 | 41.44 | AV | 54 | Pass |
| | Off | 2483.5 | -47.83 | 2.5 | 49.93 | PEAK | 74 | Pass |
| | Off | 2483.5 | -54.71 | 2.5 | 43.05 | AV | 54 | Pass |
| | Off | 2487.472 | -42.56 | 2.5 | 55.2 | PEAK | 74 | Pass |
| | Off | 2486.8 | -54.47 | 2.5 | 43.29 | AV | 54 | Pass |
| | Off | 2500.0 | -47.32 | 2.5 | 50.44 | PEAK | 74 | Pass |
| | Off | 2500.0 | -56.09 | 2.5 | 41.67 | AV | 54 | Pass |
| $\pi/4$ DQPSK | Off | 2310.0 | -47.37 | 2.5 | 50.39 | PEAK | 74 | Pass |
| | Off | 2310.0 | -55.73 | 2.5 | 42.03 | AV | 54 | Pass |
| | Off | 2338.992 | -43.15 | 2.5 | 54.61 | PEAK | 74 | Pass |
| | Off | 2339.856 | -53.87 | 2.5 | 43.89 | AV | 54 | Pass |
| | Off | 2390.0 | -46.9 | 2.5 | 50.86 | PEAK | 74 | Pass |
| | Off | 2390.0 | -55.94 | 2.5 | 41.82 | AV | 54 | Pass |
| | Off | 2483.5 | -46.15 | 2.5 | 51.61 | PEAK | 74 | Pass |
| | Off | 2483.5 | -53.95 | 2.5 | 43.81 | AV | 54 | Pass |
| | Off | 2486.416 | -44.6 | 2.5 | 53.16 | PEAK | 74 | Pass |
| | Off | 2483.512 | -53.95 | 2.5 | 43.81 | AV | 54 | Pass |
| | Off | 2500.0 | -46.32 | 2.5 | 51.44 | PEAK | 74 | Pass |
| | Off | 2500.0 | -55.81 | 2.5 | 41.95 | AV | 54 | Pass |
| 8DPSK | Off | 2310.0 | -47.3 | 2.5 | 50.46 | PEAK | 74 | Pass |
| | Off | 2310.0 | -55.58 | 2.5 | 42.18 | AV | 54 | Pass |
| | Off | 2344.464 | -44.37 | 2.5 | 53.39 | PEAK | 74 | Pass |
| | Off | 2342.256 | -54.22 | 2.5 | 43.54 | AV | 54 | Pass |



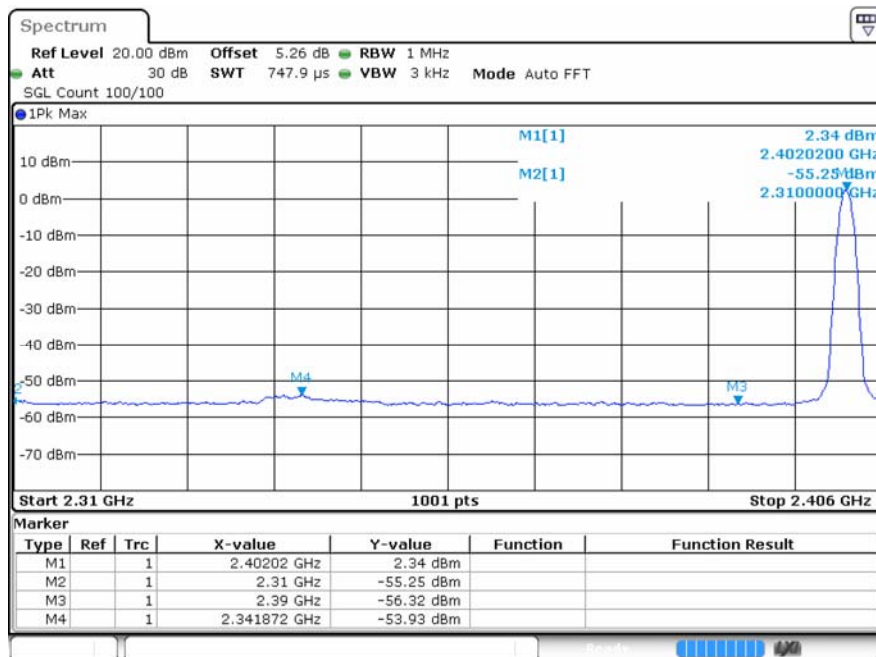
| | | | | | | | |
|-----|----------|--------|-----|-------|------|----|------|
| Off | 2390.0 | -47.55 | 2.5 | 50.21 | PEAK | 74 | Pass |
| Off | 2390.0 | -55.79 | 2.5 | 41.97 | AV | 54 | Pass |
| Off | 2483.5 | -47.19 | 2.5 | 50.57 | PEAK | 74 | Pass |
| Off | 2483.5 | -53.91 | 2.5 | 43.85 | AV | 54 | Pass |
| Off | 2487.376 | -42.91 | 2.5 | 54.85 | PEAK | 74 | Pass |
| Off | 2483.728 | -53.69 | 2.5 | 44.07 | AV | 54 | Pass |
| Off | 2500.0 | -46.58 | 2.5 | 51.18 | PEAK | 74 | Pass |
| Off | 2500.0 | -55.29 | 2.5 | 42.47 | AV | 54 | Pass |

9.2 Test Graphs

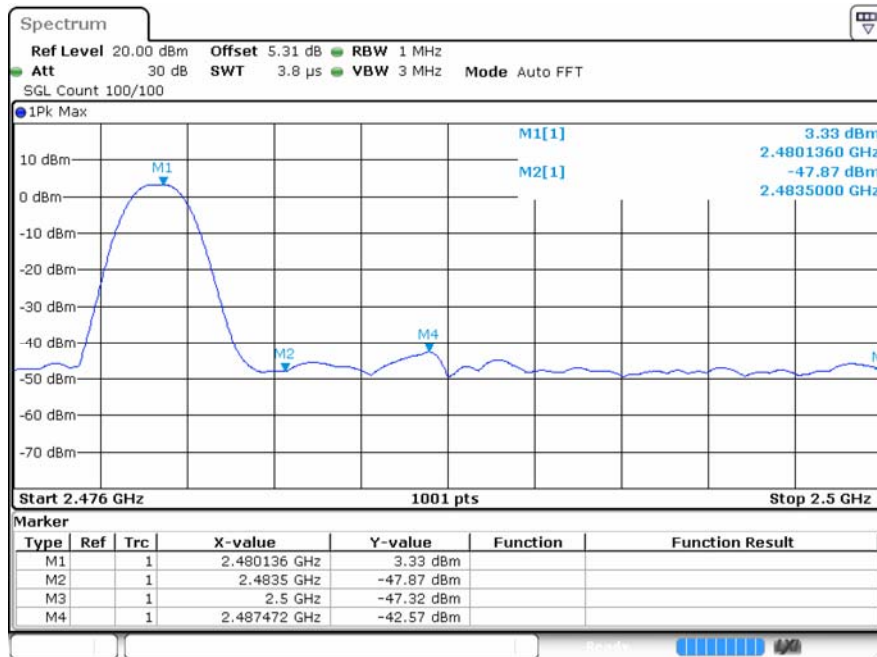
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



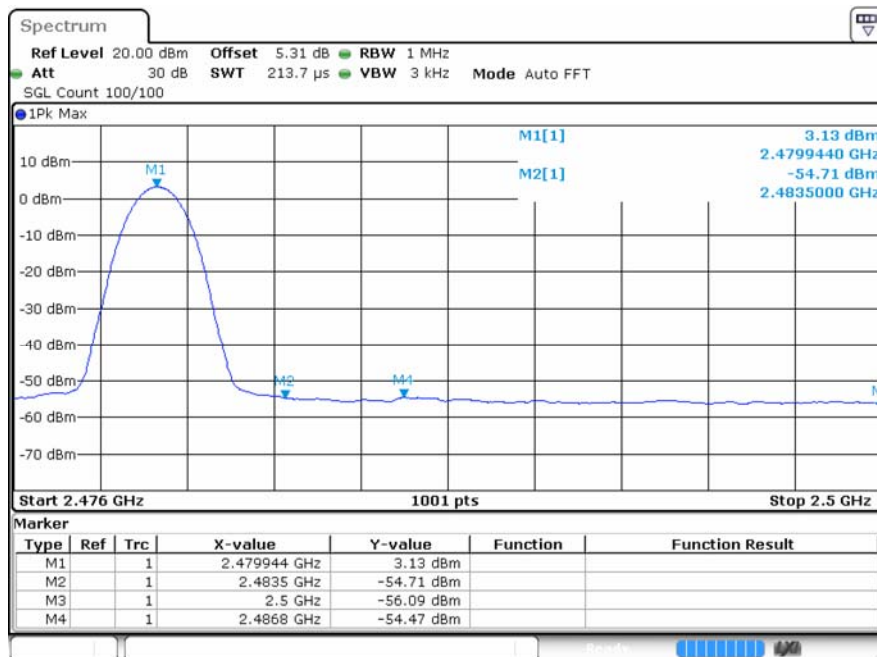
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



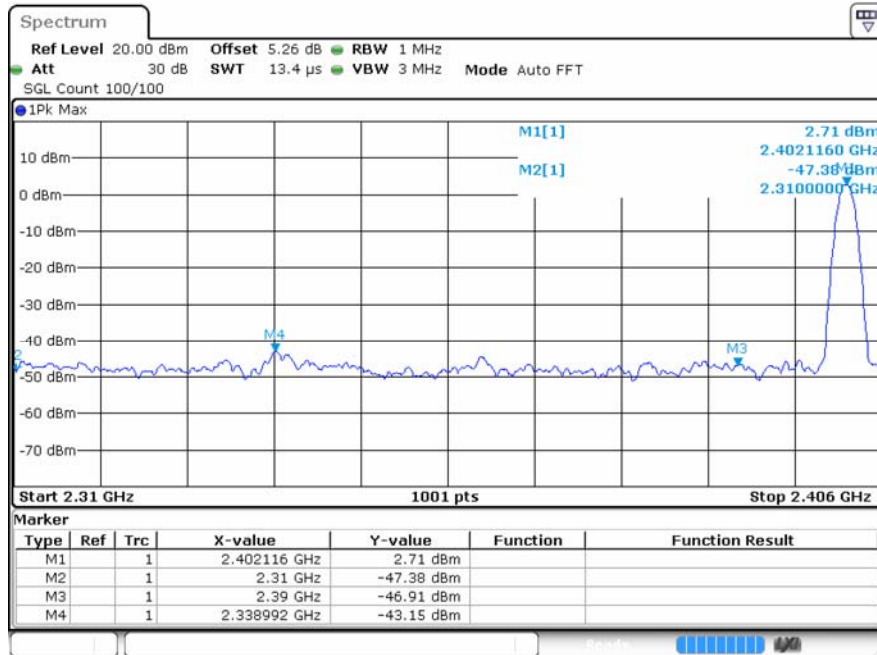
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



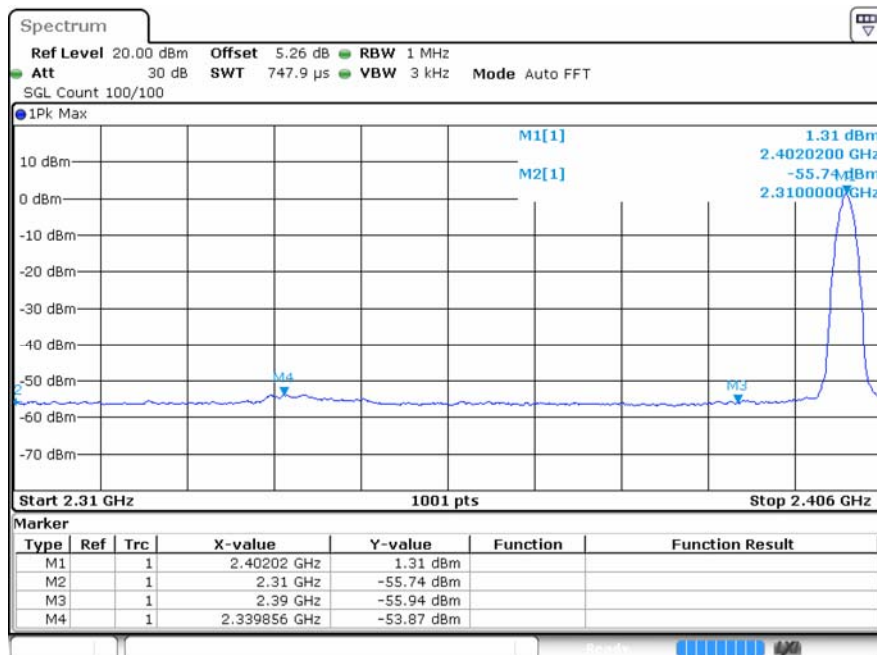
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



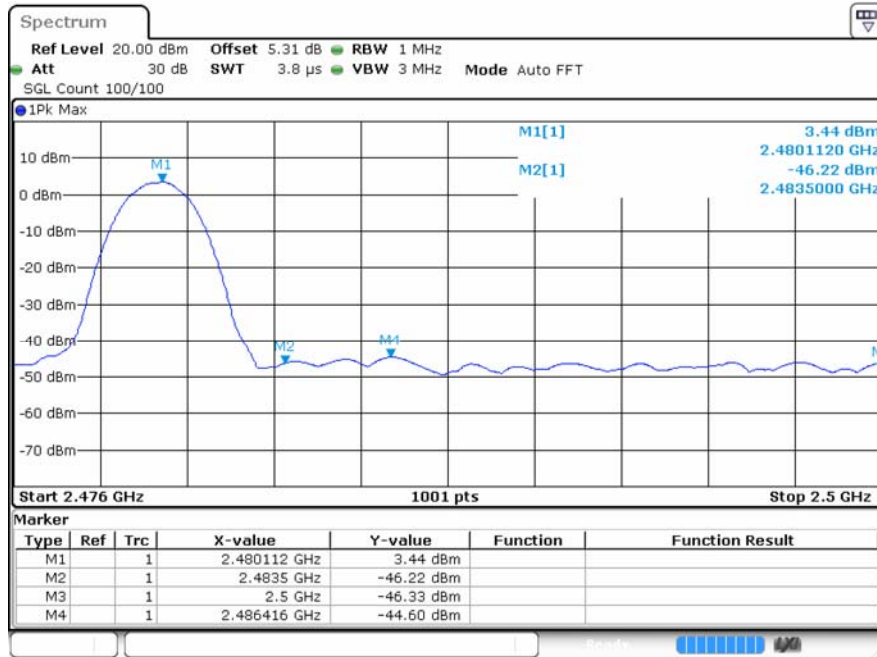
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



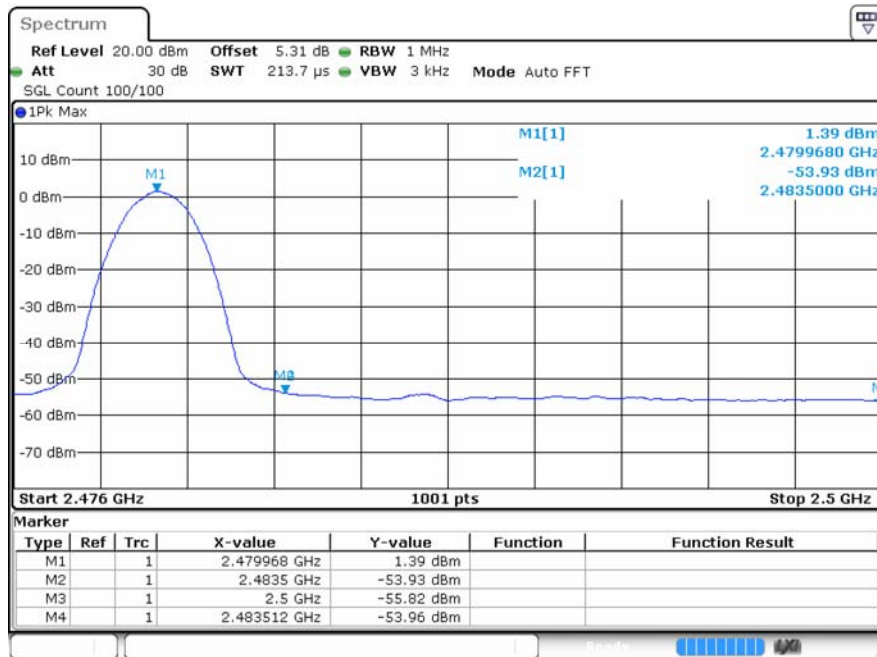
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



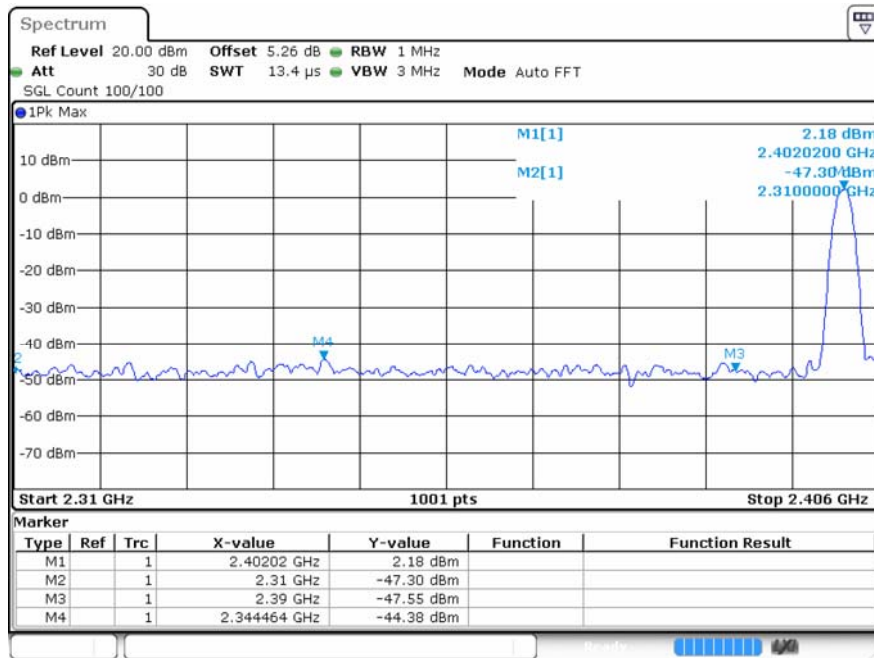
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



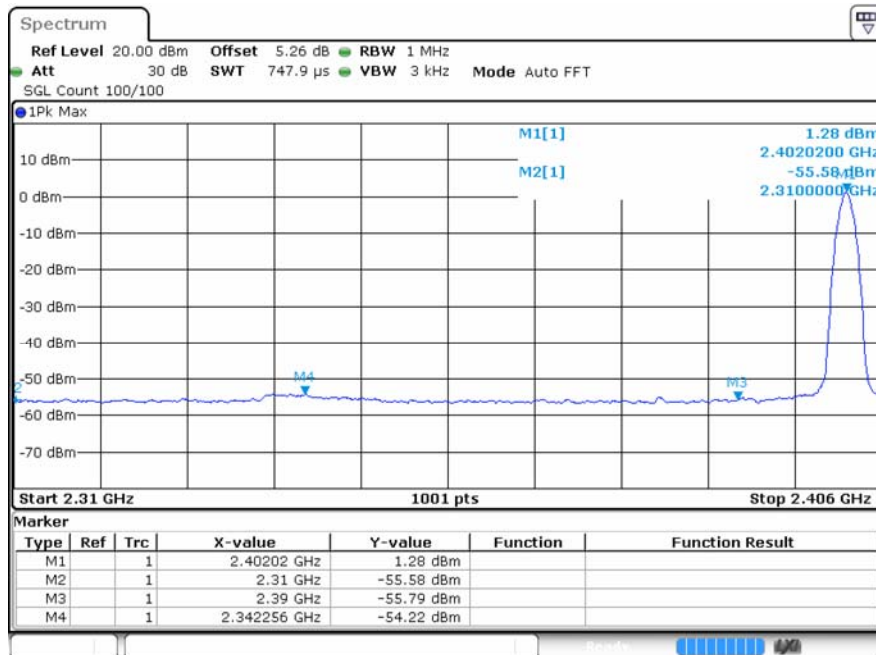
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



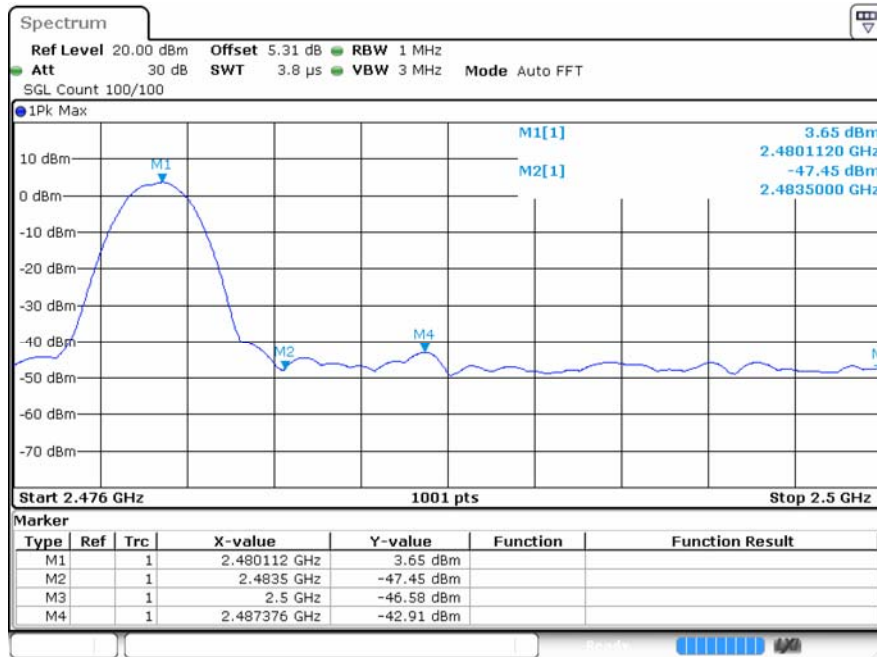
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



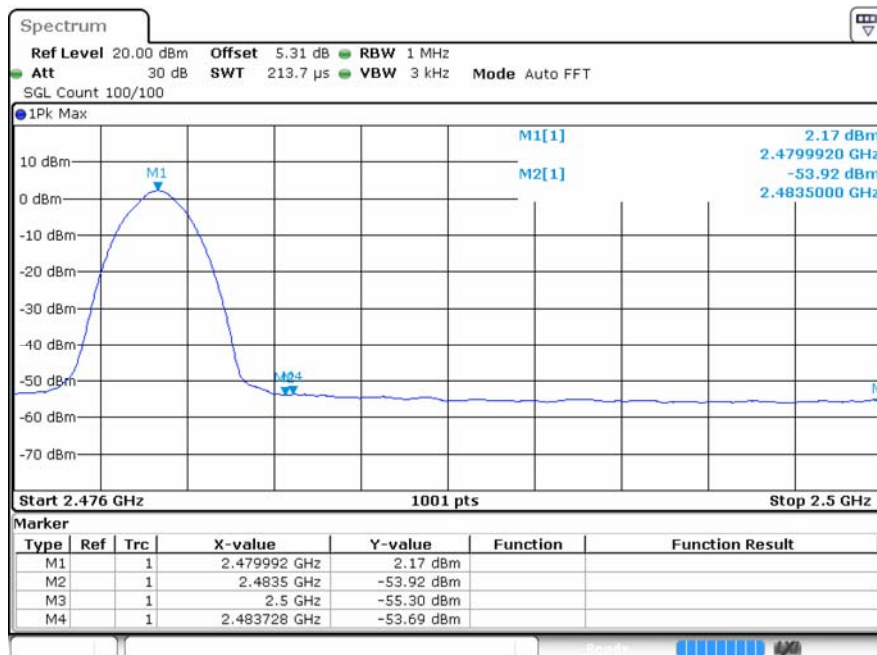
Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (Low Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (High Channel)



---The End---