

Test Information:

Serial No.:	2Q05-2	Test Date:	2024/08/28
Test Site:	RF	Test Mode:	Transmitting
Tester:	Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C):	26.3	Relative Humidity: (%)	67	ATM Pressure: (kPa)	100.4
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101591	2024/04/01	2025/03/31
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
HuiXunDa	DC Block	SMA-JK 18G	DCB181108042	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

20 dB Emission Bandwidth

BDR

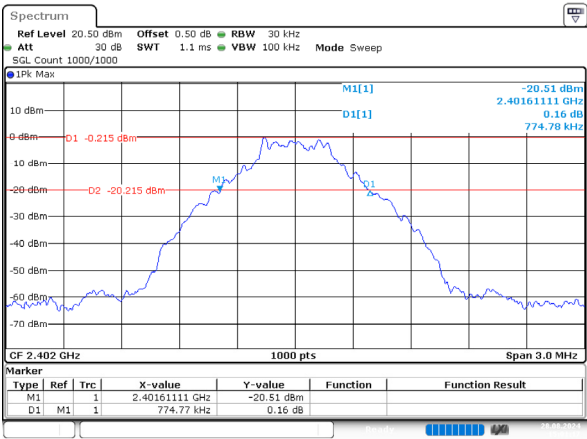
Mode	Value (MHz)
GFSK_Low	0.775
GFSK_Middle	0.775
GFSK_High	0.772

EDR

Mode	Value (MHz)
$\pi/4$ -DQPSK_Low	1.213
$\pi/4$ -DQPSK_Middle	1.213
$\pi/4$ -DQPSK_High	1.216
8DPSK_Low	1.219
8DPSK_Middle	1.219
8DPSK_High	1.219

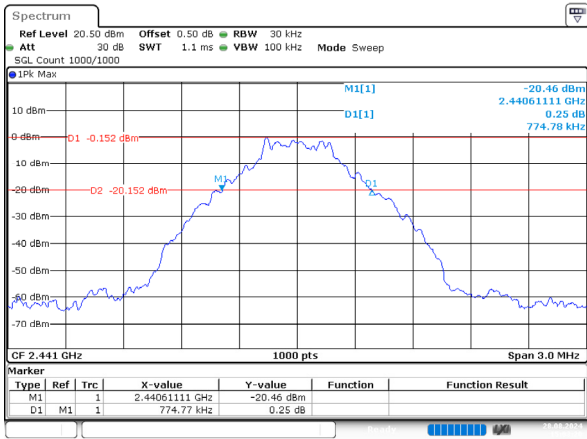
BDR

GFSK_Low 0.775MHz



ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:01:17

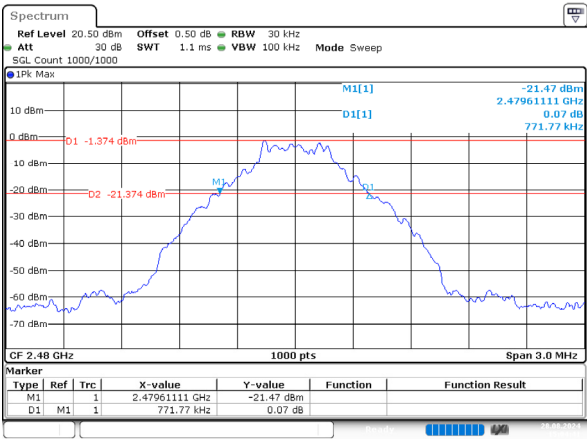
GFSK_Middle 0.775MHz



ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:03:21

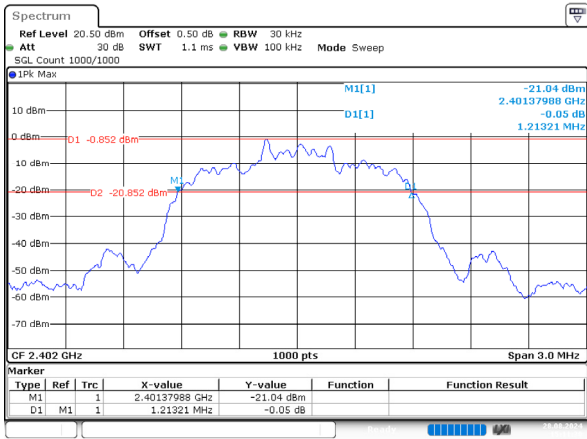
EDR

GFSK_High 0.772MHz



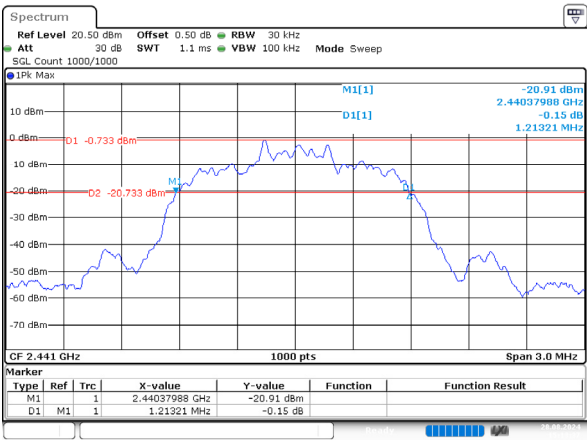
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:04:42

$\pi/4$ -DQPSK_Low 1.213MHz



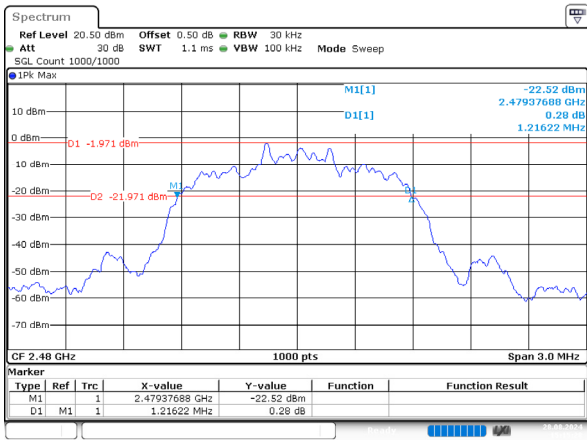
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:11:30

$\pi/4$ -DQPSK_Middle 1.213MHz



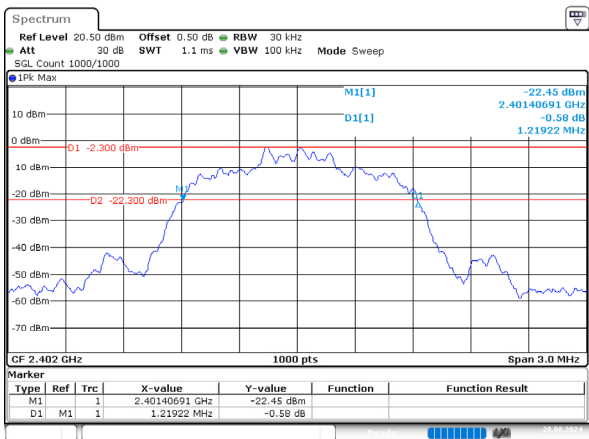
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:13:37

$\pi/4$ -DQPSK_High 1.216MHz



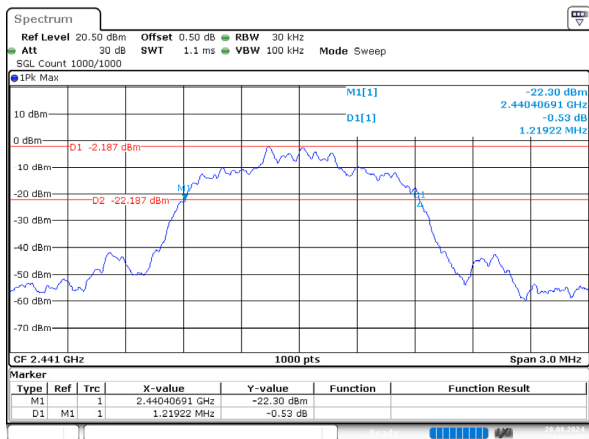
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:15:29

8DPSK_Low 1.219MHz



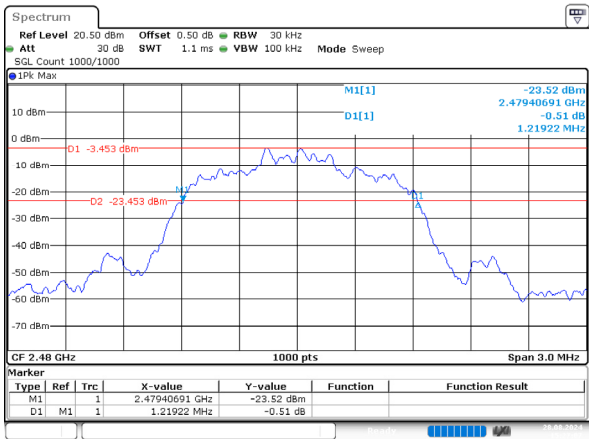
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:23:16

8DPSK_Middle 1.219MHz



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:25:28

8DPSK_High 1.219MHz



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:27:07

Channel Separation**BDR**

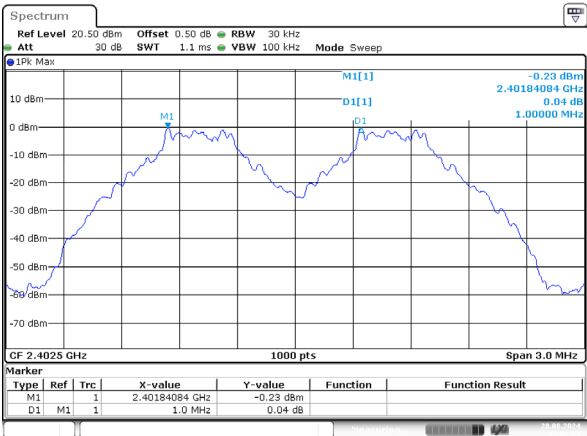
Mode	Value (MHz)	Limit (MHz)	Result
GFSK_Low	1	0.517	Pass
GFSK_Middle	1	0.517	Pass
GFSK_High	1	0.515	Pass

EDR

Mode	Value (MHz)	Limit (MHz)	Result
$\pi/4$ -DQPSK_Low	1.003	0.809	Pass
$\pi/4$ -DQPSK_Middle	1	0.809	Pass
$\pi/4$ -DQPSK_High	1	0.811	Pass
8DPSK_Low	0.997	0.813	Pass
8DPSK_Middle	1	0.813	Pass
8DPSK_High	1	0.813	Pass

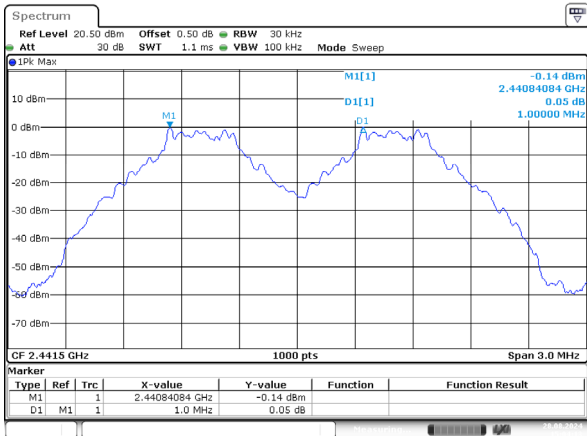
BDR

GFSK_Low 1MHz



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:02:55

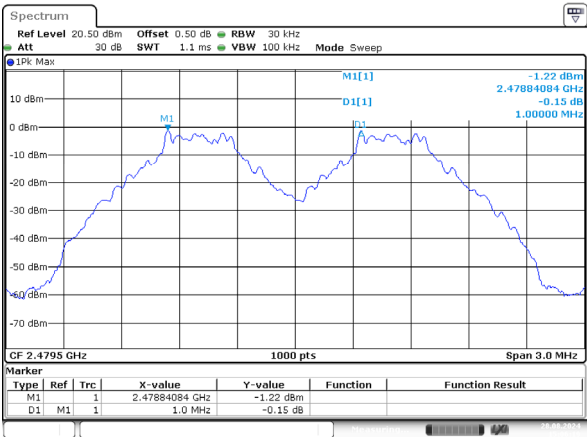
GFSK_Middle 1MHz



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:04:14

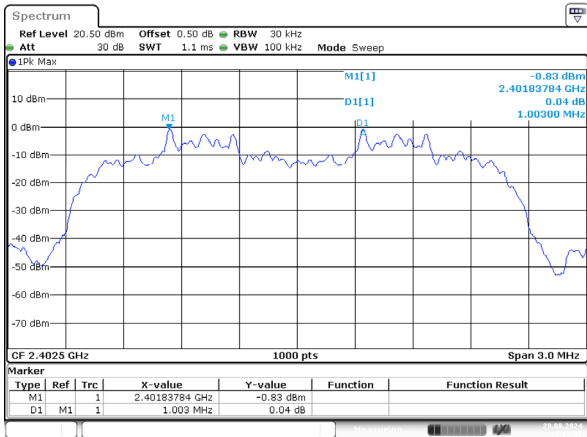
EDR

GFSK_High 1MHz



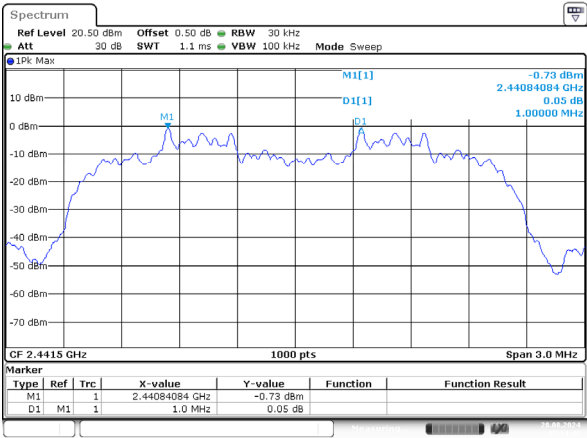
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:06:19

$\pi/4$ -DQPSK_Low 1.003MHz



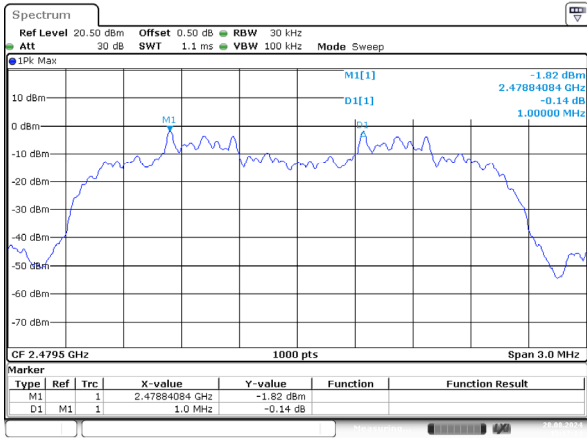
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:13:09

$\pi/4$ -DQPSK_Middle 1MHz



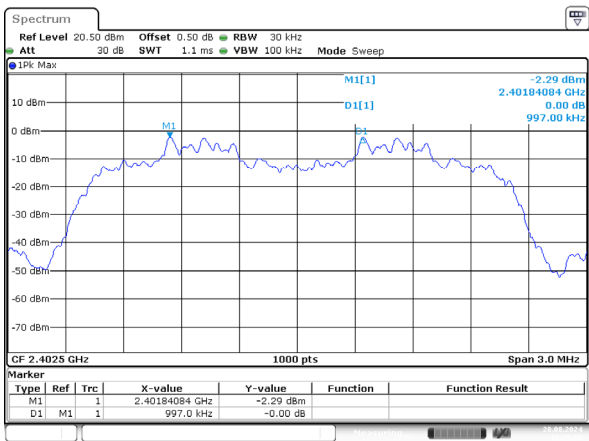
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:14:48

$\pi/4$ -DQPSK_High 1MHz



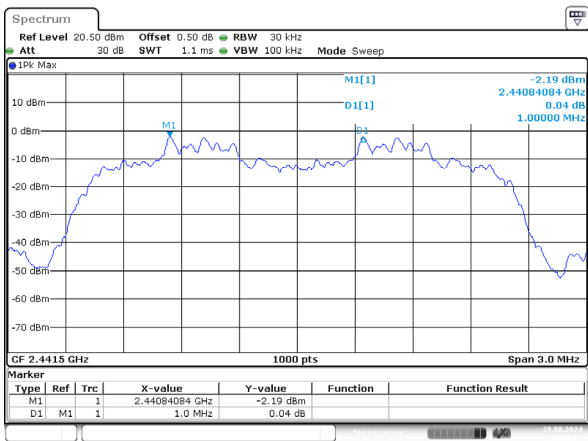
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:17:15

8DPSK_Low 0.997MHz



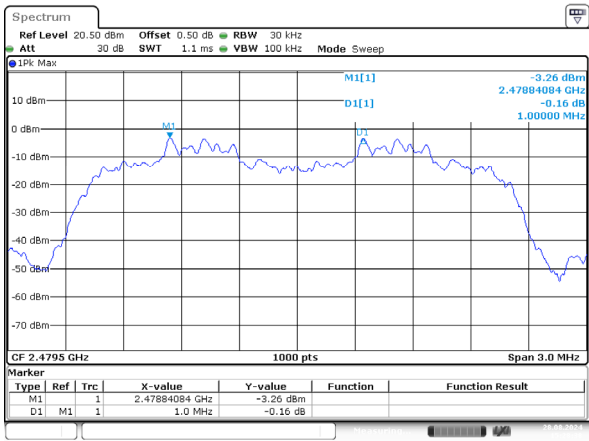
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:25:01

8DPSK_Middle 1MHz



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:26:38

8DPSK_High 1MHz



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:28:39

Number of Hopping Frequency

BDR

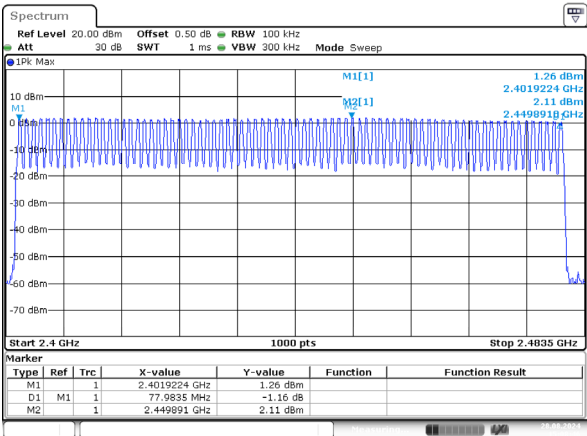
Mode	Value	Limit	Result
GFSK_Hopping	79	15	Pass

EDR

Mode	Value	Limit	Result
$\pi/4$ -DQPSK_Hopping	79	15	Pass
8DPSK_Hopping	79	15	Pass

BDR

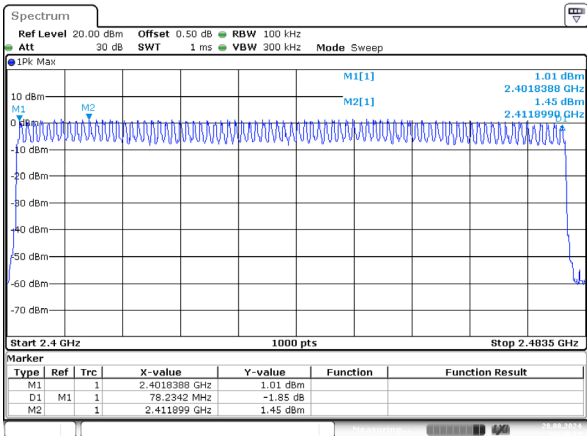
GFSK_Hopping 79



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:08:47

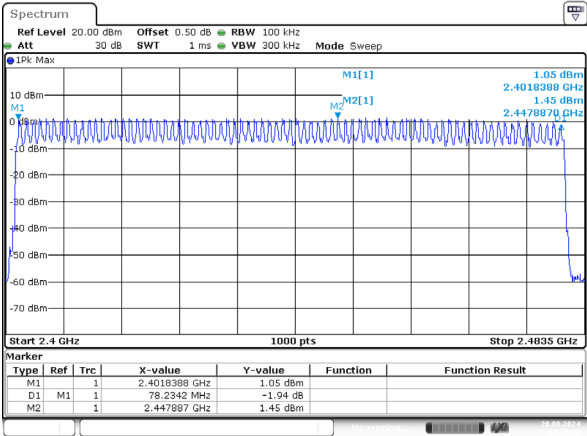
EDR

$\pi/4$ -DQPSK_Hopping 79



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:20:21

8DPSK_Hopping 79



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:31:30

Time of Occupancy (dwell time)**BDR**

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
GFSK_Hopping_DH1	0.381	0.122	0.400	Pass
GFSK_Hopping_DH3	1.643	0.263	0.400	Pass
GFSK_Hopping_DH5	2.898	0.309	0.400	Pass

EDR

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
$\pi/4$ -DQPSK_Hopping_2DH1	0.389	0.124	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH3	1.652	0.264	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH5	2.898	0.309	0.400	Pass
8DPSK_Hopping_3DH1	0.390	0.125	0.400	Pass
8DPSK_Hopping_3DH3	1.643	0.263	0.400	Pass
8DPSK_Hopping_3DH5	2.898	0.309	0.400	Pass

Note:

DH1: Dwell time = Pulse width (ms) $\times$ (1600/2/79) $\times$ 31.6 s

DH3: Dwell time = Pulse width (ms) $\times$ (1600/4/79) $\times$ 31.6 s

DH5: Dwell time = Pulse width (ms) $\times$ (1600/6/79) $\times$ 31.6 s

2DH1: Dwell time = Pulse width (ms) $\times$ (1600/2/79) $\times$ 31.6 s

2DH3: Dwell time = Pulse width (ms) $\times$ (1600/4/79) $\times$ 31.6 s

2DH5: Dwell time = Pulse width (ms) $\times$ (1600/6/79) $\times$ 31.6 s

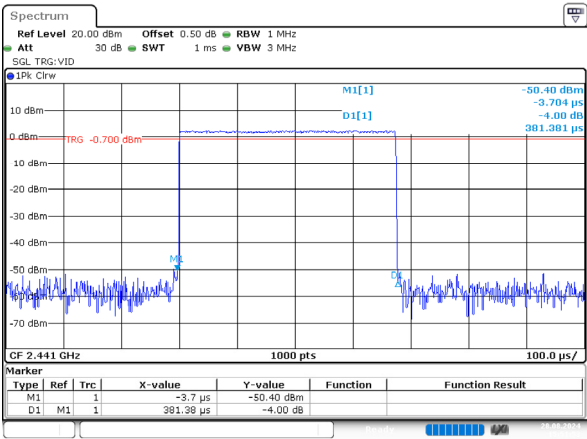
3DH1: Dwell time = Pulse width (ms) $\times$ (1600/2/79) $\times$ 31.6 s

3DH3: Dwell time = Pulse width (ms) $\times$ (1600/4/79) $\times$ 31.6 s

3DH5: Dwell time = Pulse width (ms) $\times$ (1600/6/79) $\times$ 31.6 s

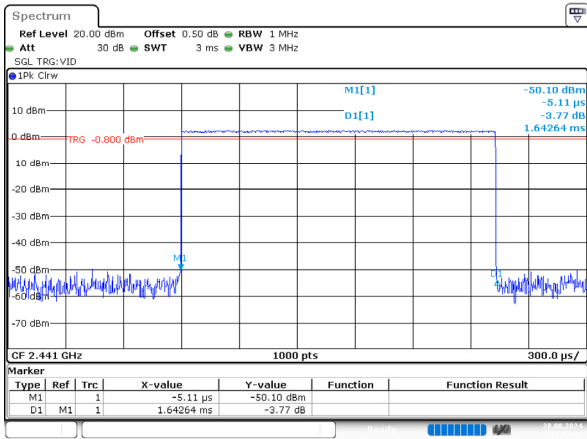
BDR

GFSK_Hopping_DH1 0.381ms



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:51:54

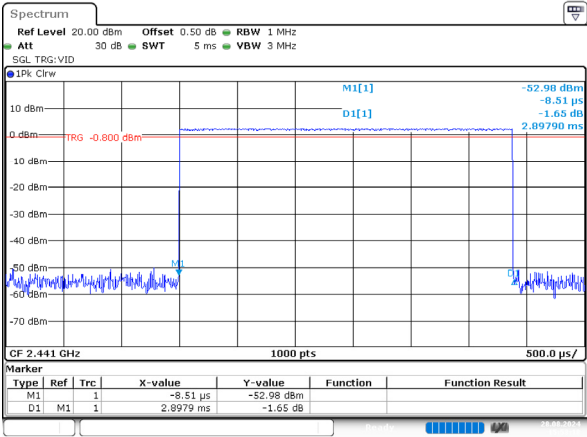
GFSK_Hopping_DH3 1.643ms



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:52:42

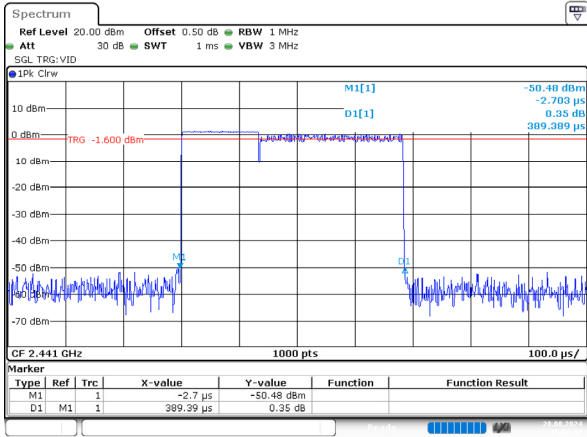
EDR

GFSK_Hopping_DH5 2.898ms



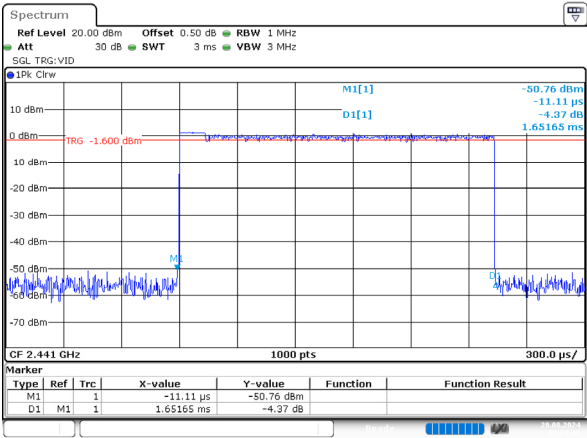
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:53:18

$\pi/4$ -DQPSK_Hopping_2DH1 0.389ms



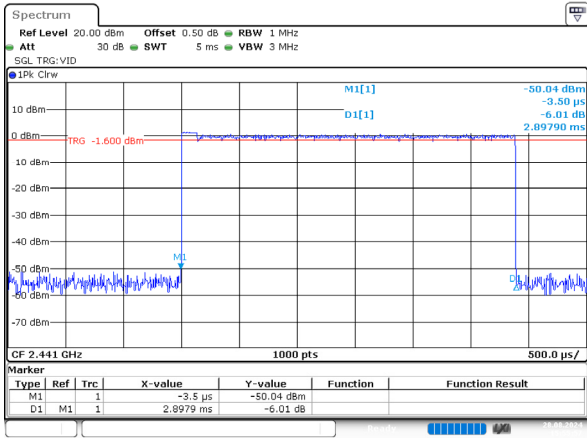
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:53:59

$\pi/4$ -DQPSK_Hopping_2DH3 1.652ms



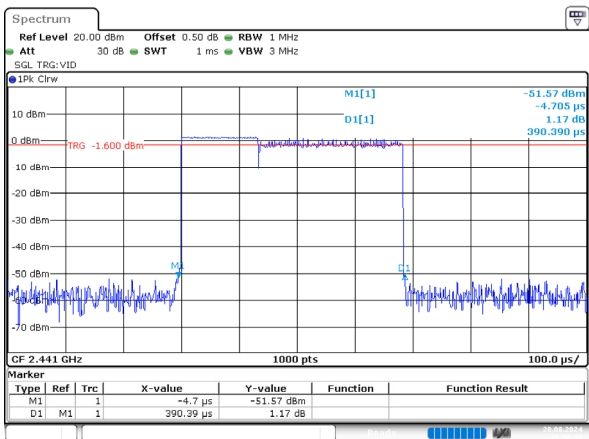
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:54:46

$\pi/4$ -DQPSK_Hopping_2DH5 2.898ms



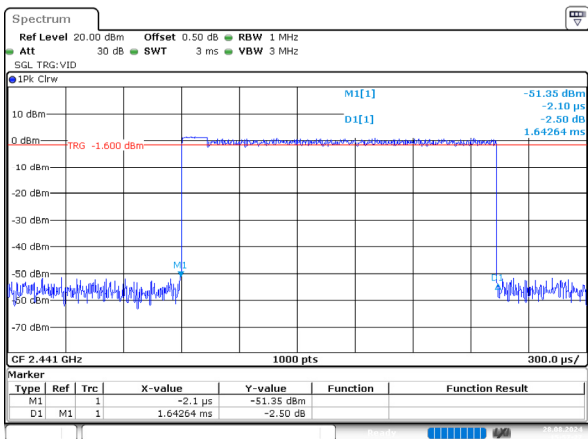
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:55:58

8DPSK_Hopping_3DH1 0.390ms



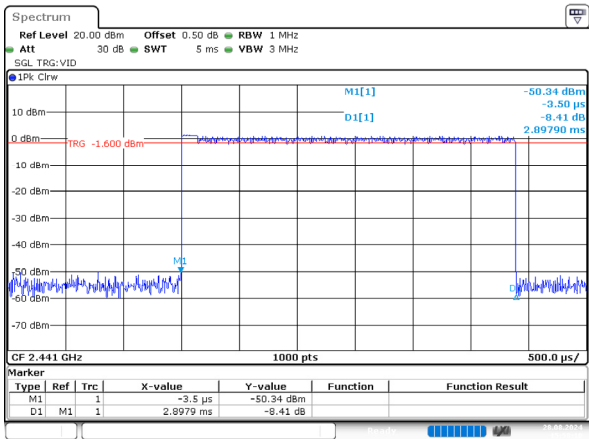
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:56:40

8DPSK_Hopping_3DH3 1.643ms



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:57:27

8DPSK_Hopping_3DH5 2.898ms



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:58:11

Maximum Conducted Output Power**BDR**

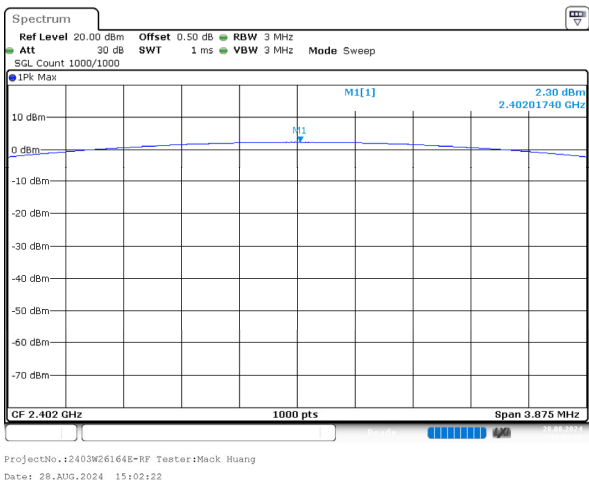
Mode	Value (dBm)	Limit (dBm)	Result
GFSK_Low	2.30	21.00	Pass
GFSK_Middle	2.37	21.00	Pass
GFSK_High	1.11	21.00	Pass

EDR

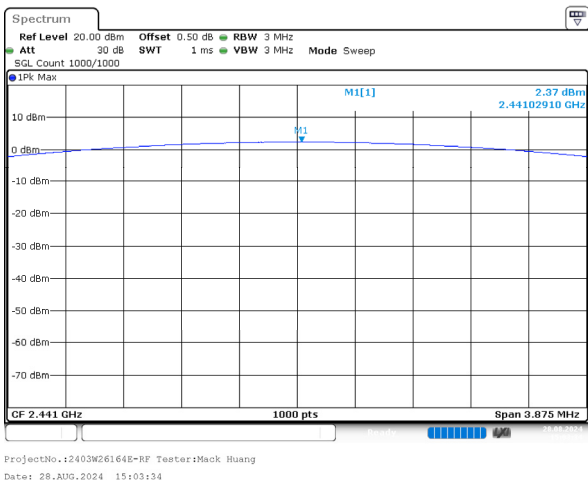
Mode	Value (dBm)	Limit (dBm)	Result
$\pi/4$ -DQPSK_Low	1.41	21.00	Pass
$\pi/4$ -DQPSK_Middle	1.51	21.00	Pass
$\pi/4$ -DQPSK_High	0.26	21.00	Pass
8DPSK_Low	1.41	21.00	Pass
8DPSK_Middle	1.50	21.00	Pass
8DPSK_High	0.26	21.00	Pass

BDR

GFSK_Low 2.30dBm

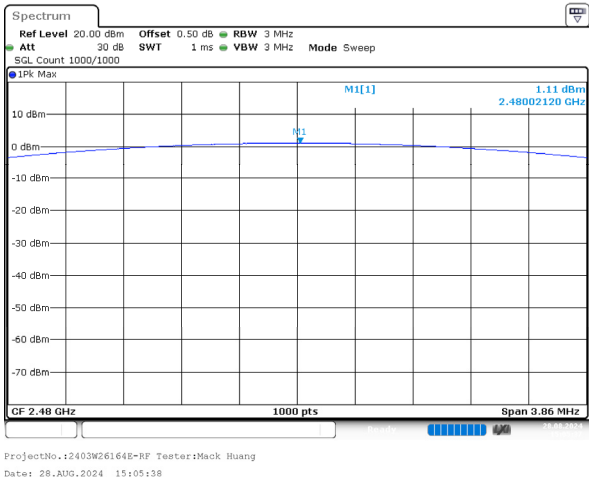


GFSK_Middle 2.37dBm

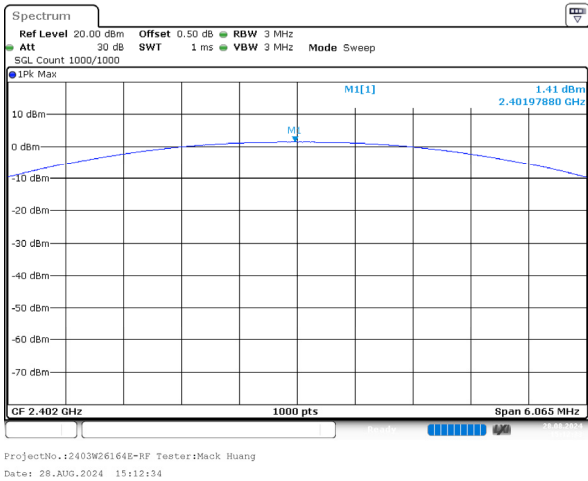


EDR

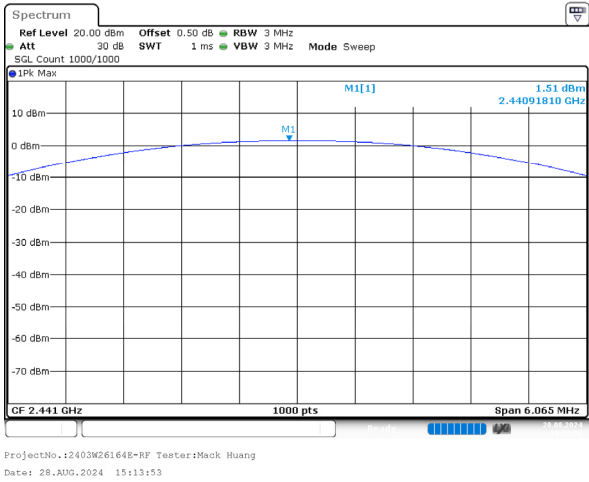
GFSK_High 1.11dBm



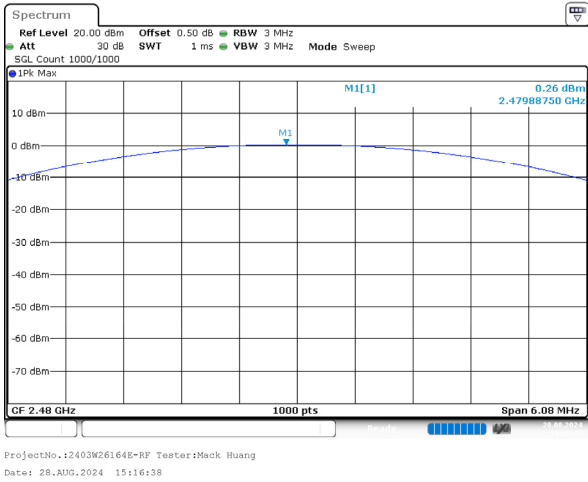
$\pi/4$ -DQPSK_Low 1.41dBm



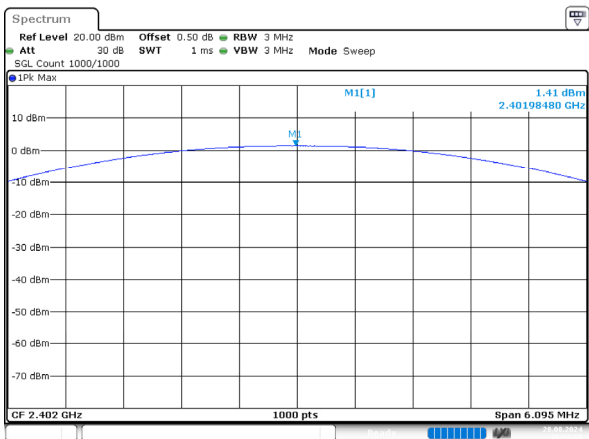
$\pi/4$ -DQPSK_Middle 1.51dBm



$\pi/4$ -DQPSK_High 0.26dBm

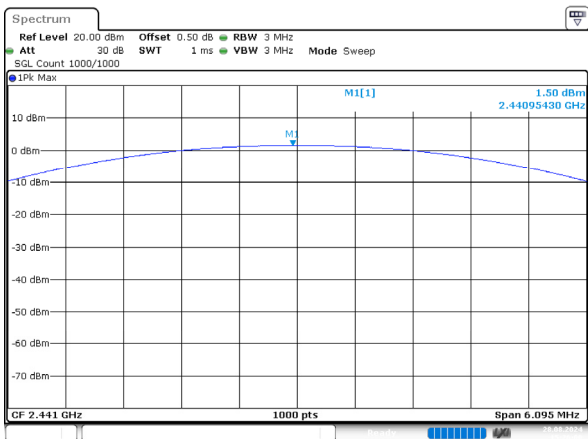


8DPSK_Low 1.41dBm



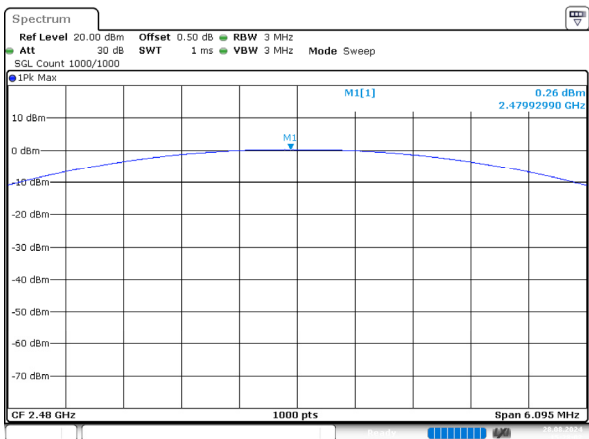
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:24:19

8DPSK_Middle 1.50dBm



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:26:01

8DPSK_High 0.26dBm



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:28:03

100 kHz Bandwidth of Frequency Band Edge**BDR**

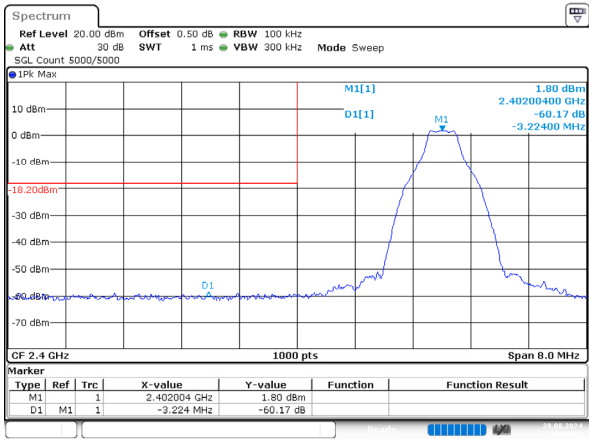
Mode	Value (dB)	Limit (dB)	Result
GFSK_Low	60.17	20.00	Pass
GFSK_High	59.03	20.00	Pass
GFSK_Hopping_Lower	60.69	20.00	Pass
GFSK_Hopping_Upper	56.88	20.00	Pass

EDR

Mode	Value (dB)	Limit (dB)	Result
$\pi/4$ -DQPSK_Low	59.40	20.00	Pass
$\pi/4$ -DQPSK_High	58.05	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Lower	59.40	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Upper	57.92	20.00	Pass
8DPSK_Low	58.58	20.00	Pass
8DPSK_High	58.29	20.00	Pass
8DPSK_Hopping_Lower	59.30	20.00	Pass
8DPSK_Hopping_Upper	54.12	20.00	Pass

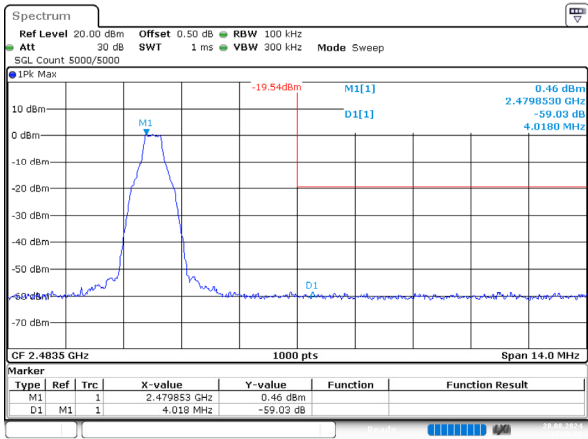
BDR

GFSK_Low 60.17dB



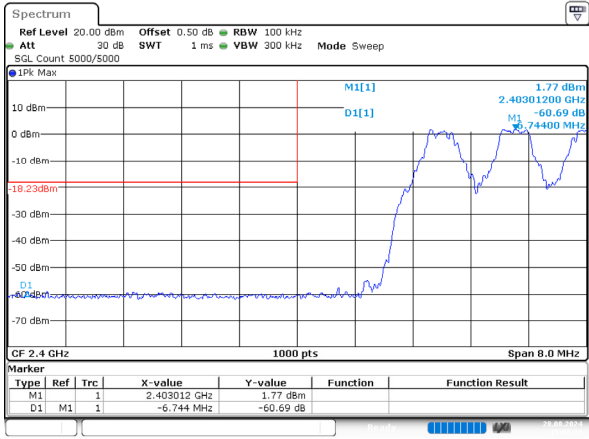
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:02:07

GFSK_High 59.03dB



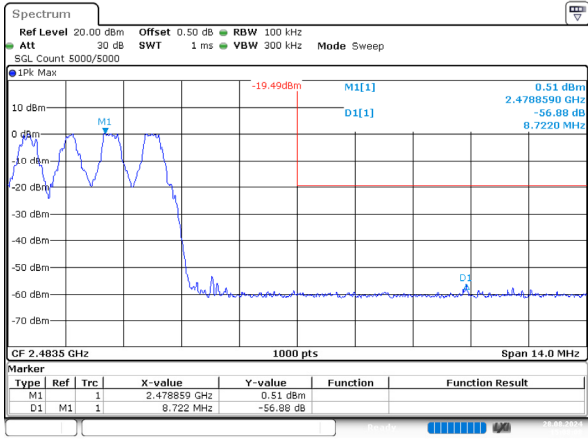
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:05:22

GFSK_Hopping_Lower 60.69dB



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:07:24

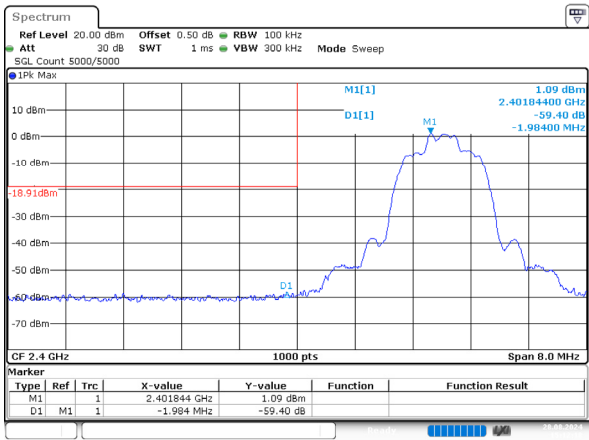
GFSK_Hopping_Upper 56.88dB



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:08:09

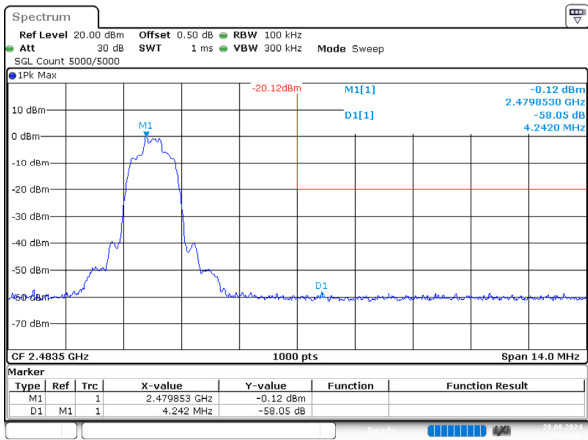
EDR

$\pi/4$ -DQPSK_Low 59.40dB



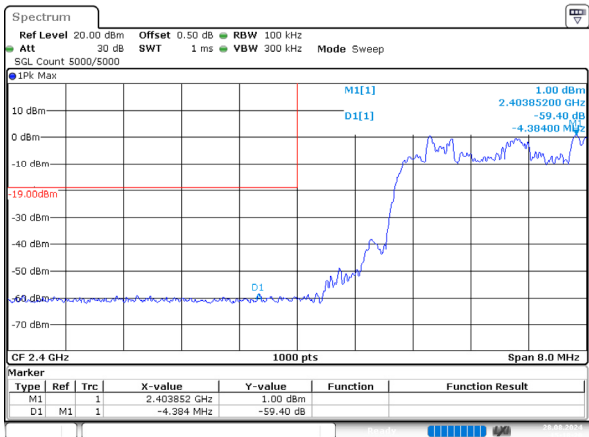
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:12:19

$\pi/4$ -DQPSK_High 58.05dB



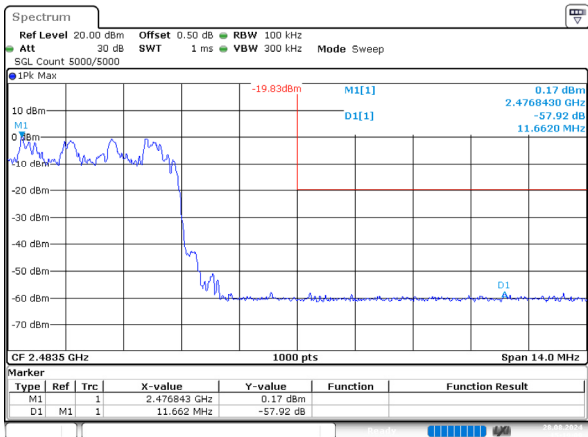
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:16:09

$\pi/4$ -DQPSK_Hopping_Lower 59.40dB



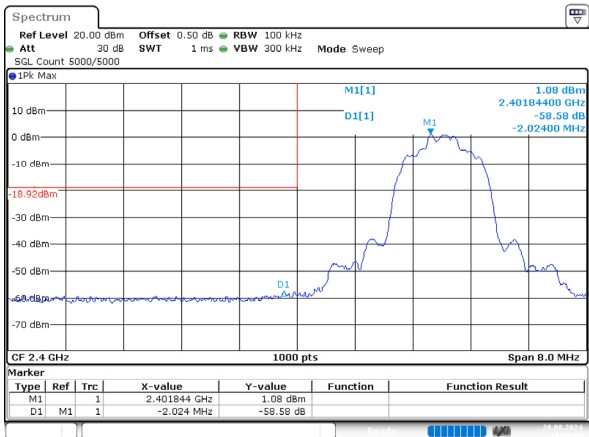
ProjectNo.:2403W26164E-RF Testers:Mack Huang
Date: 28.AUG.2024 15:18:21

$\pi/4$ -DQPSK_Hopping_Upper 57.92dB



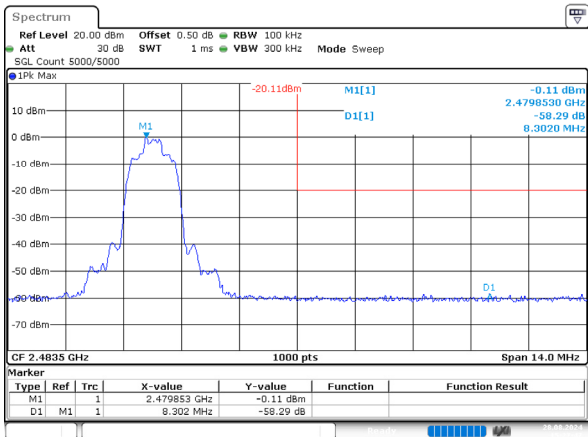
ProjectNo.:2403W26164E-RF Testers:Mack Huang
Date: 28.AUG.2024 15:19:10

8DPSK_Low 58.58dB



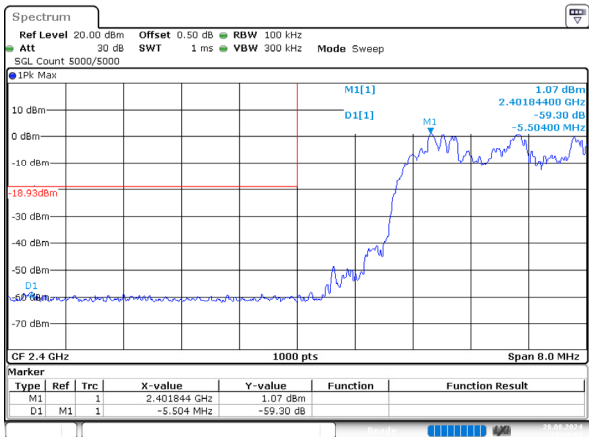
ProjectNo.:2403W26164E-RF Testers:Mack Huang
Date: 28.AUG.2024 15:24:04

8DPSK_High 58.29dB



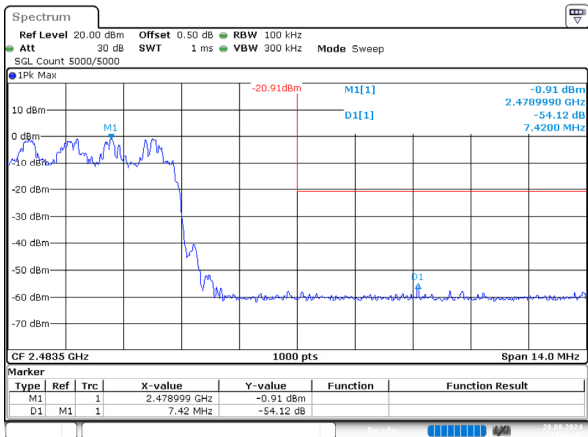
ProjectNo.:2403W26164E-RF Testers:Mack Huang
Date: 28.AUG.2024 15:27:48

8DPSK_Hopping_Lower 59.30dB



ProjectNo.:2403W26164E-RF Testers:Mack Huang
Date: 28.AUG.2024 15:29:51

8DPSK_Hopping_Upper 54.12dB



ProjectNo.:2403W26164E-RF Testers:Mack Huang
Date: 28.AUG.2024 15:30:43