

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**

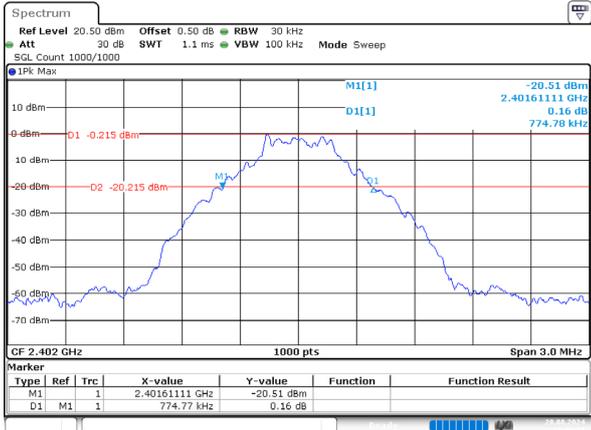
Mode	Value (MHz)
GFSK_Low	0.775
GFSK_Middle	0.775
GFSK_High	0.772

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

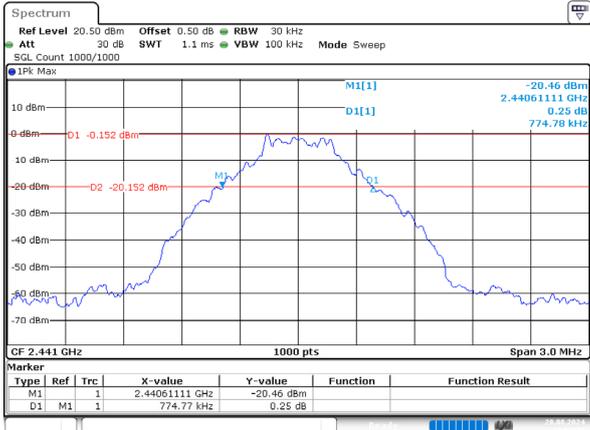
BDR

GFSK_Low 0.775MHz



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

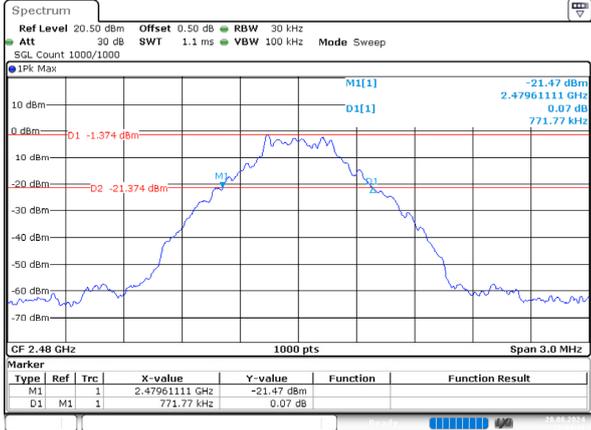
GFSK_Middle 0.775MHz



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

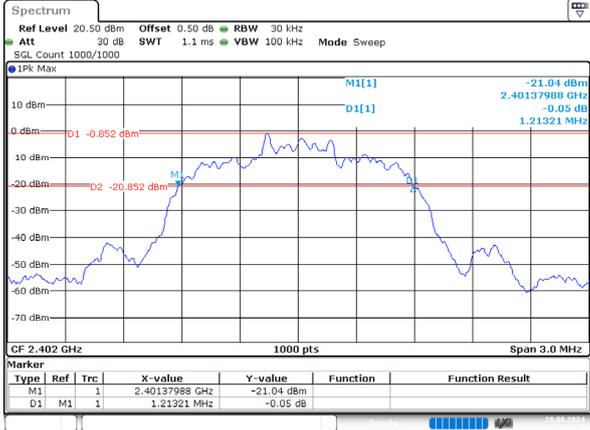
EDR

GFSK_High 0.772MHz



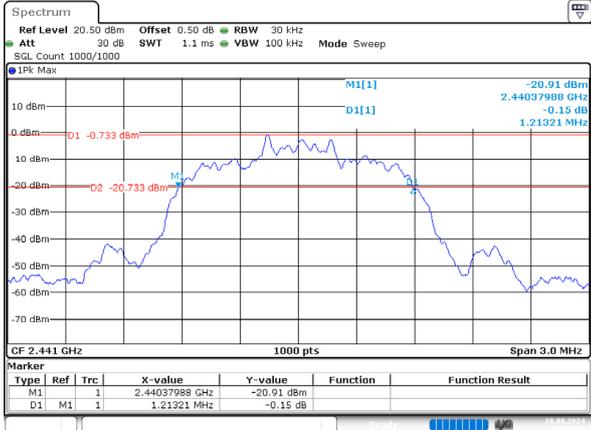
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Date: 28.AUG.2024 15:04:42

$\pi/4$ -DQPSK_Low 1.213MHz



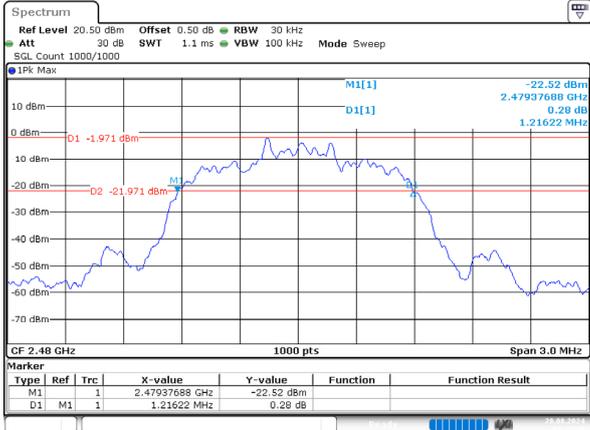
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:11:30

$\pi/4$ -DQPSK_Middle 1.213MHz



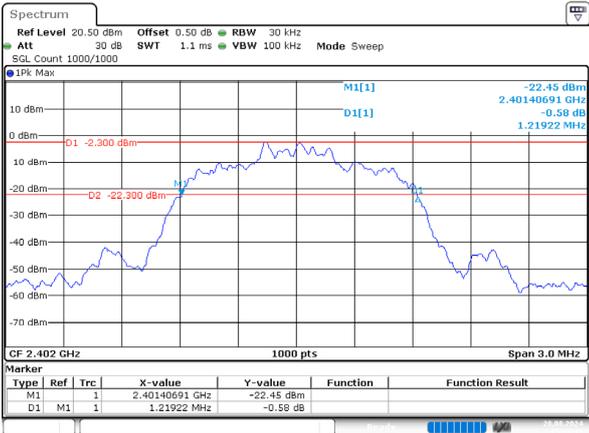
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:13:37

$\pi/4$ -DQPSK_High 1.216MHz



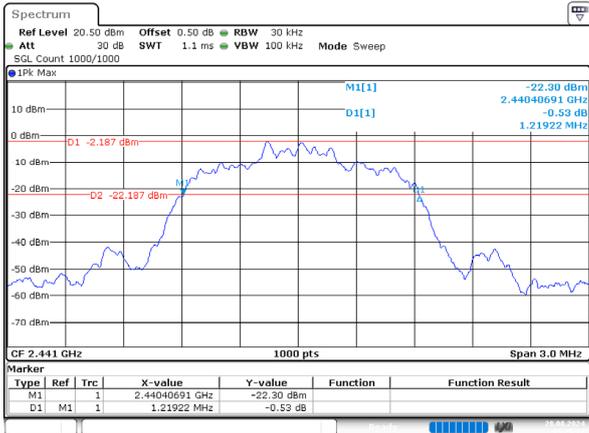
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:15:29

8DPSK_Low 1.219MHz



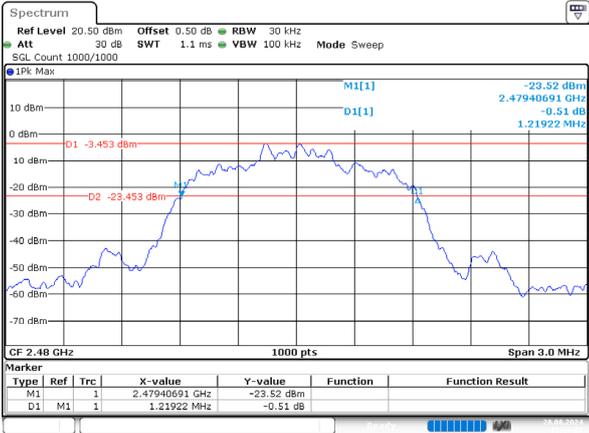
ProjectNo.:2403W26164E-RF Tester: Mack Huang
Date: 28.AUG.2024 15:23:16

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**

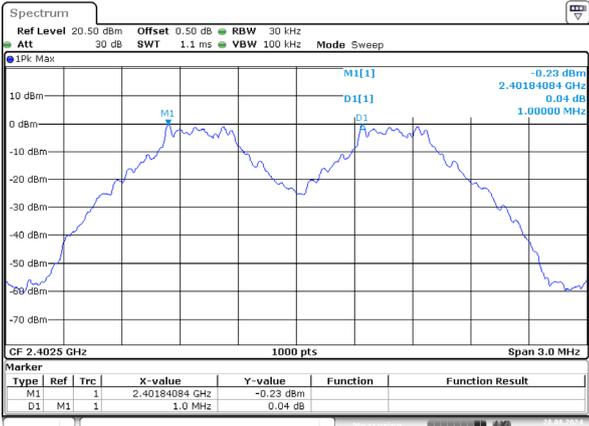
Mode	Value (MHz)	Limit (MHz)	Result
GFSK_Low	1	0.517	Pass
GFSK_Middle	1	0.517	Pass
GFSK_High	1	0.515	Pass

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

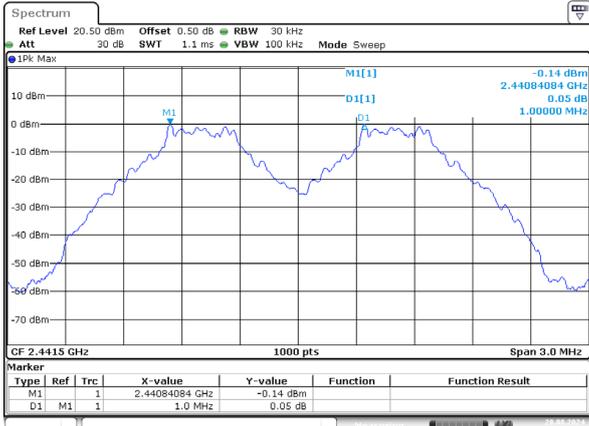
BDR

GFSK_Low 1MHz



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

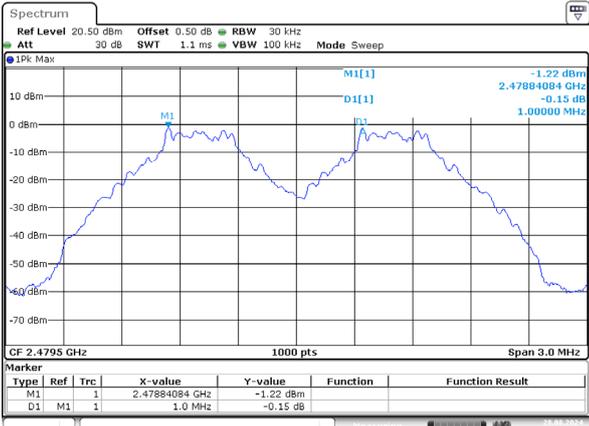
GFSK_Middle 1MHz



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

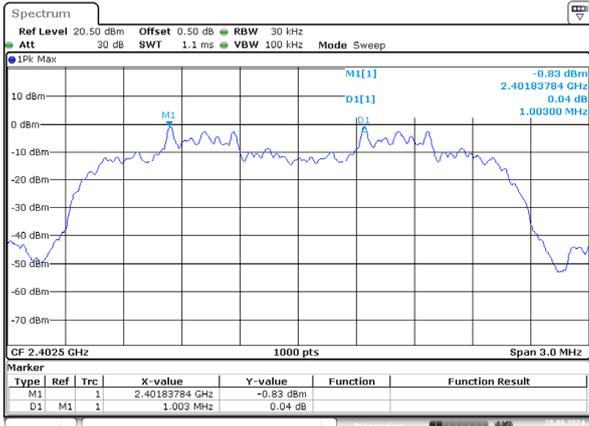
EDR

GFSK_High 1MHz



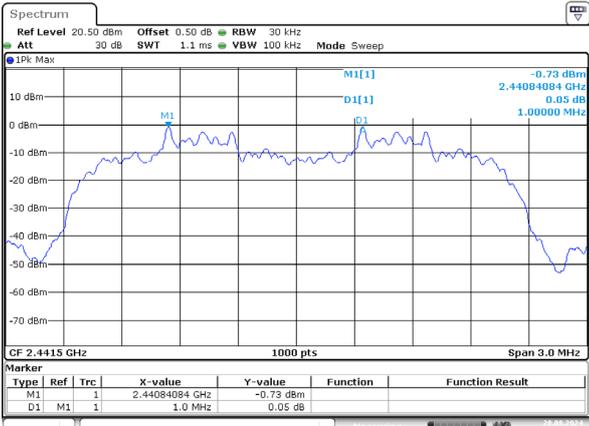
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:06:19

$\pi/4$ -DQPSK_Low 1.003MHz



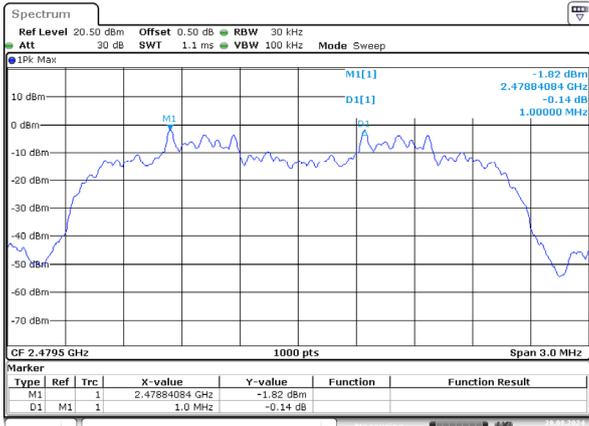
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:13:09

$\pi/4$ -DQPSK_Middle 1MHz



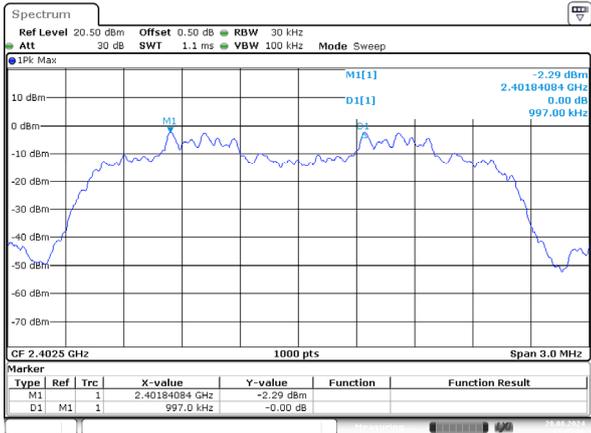
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:14:48

$\pi/4$ -DQPSK_High 1MHz



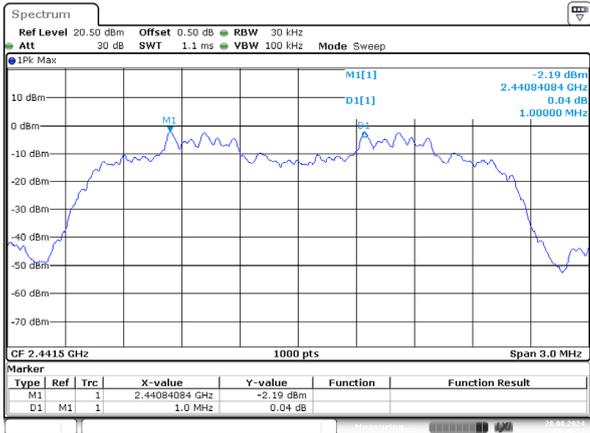
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Date: 28.AUG.2024 15:17:15

8DPSK_Low 0.997MHz



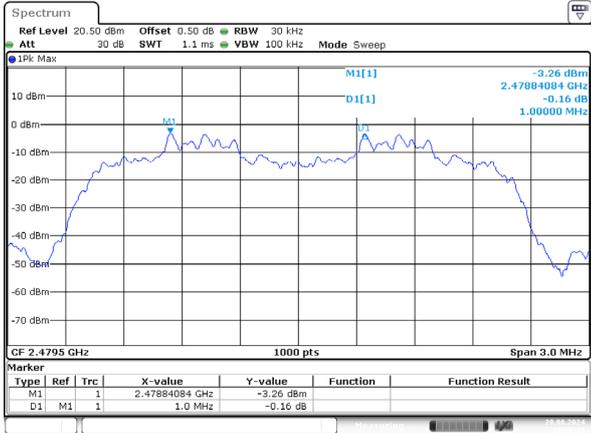
ProjectNo.:2403W26164E-RF Tester: Mack Huang
Date: 28.AUG.2024 15:25:01

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**

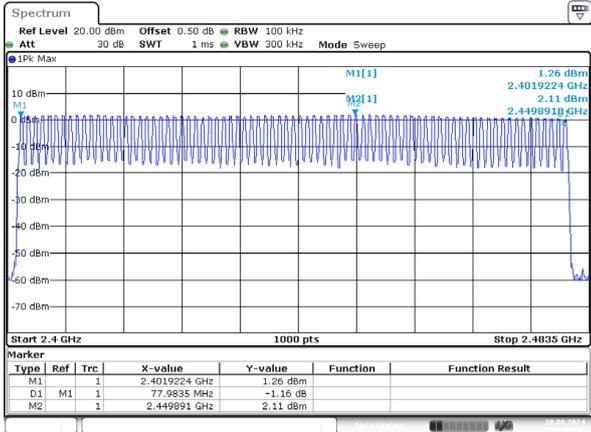
Mode	Value	Limit	Result
GFSK_Hopping	79	15	Pass

EDR

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

BDR

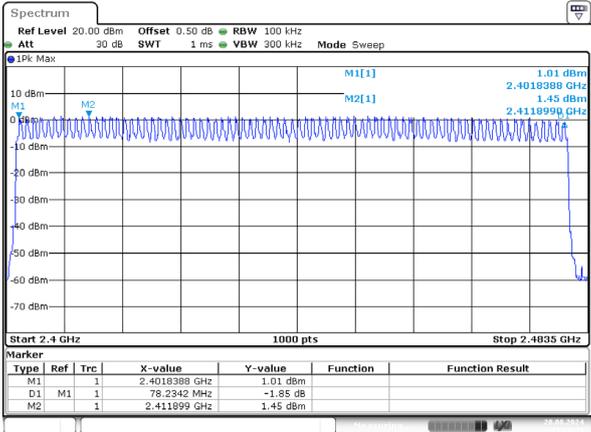
GFSK_Hopping 79



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

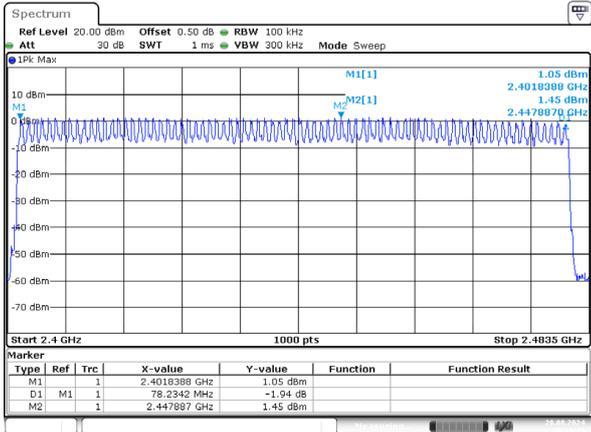
EDR

$\pi/4$ -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

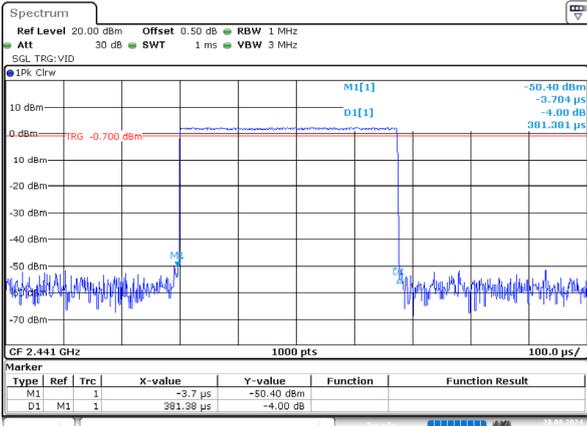
3DH1: Dwell time=Pulse width (ms) \times (1600/2/79) \times 31.6 s

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

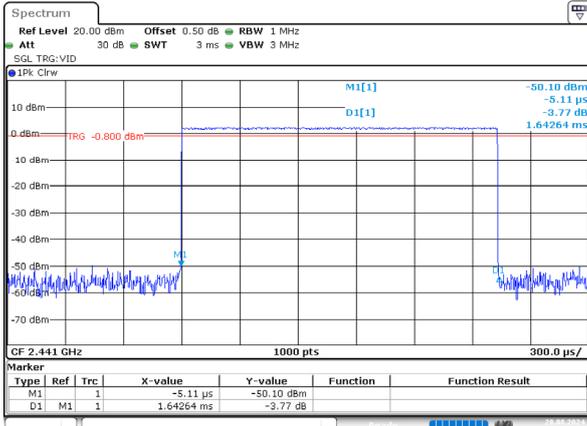
BDR

GFSK_Hopping_DH1 0.381ms



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

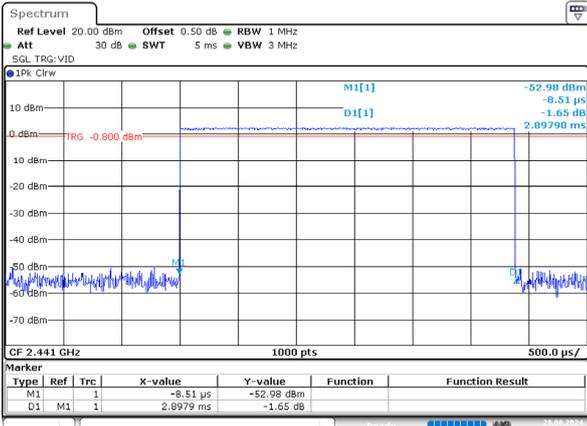
GFSK_Hopping_DH3 1.643ms



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

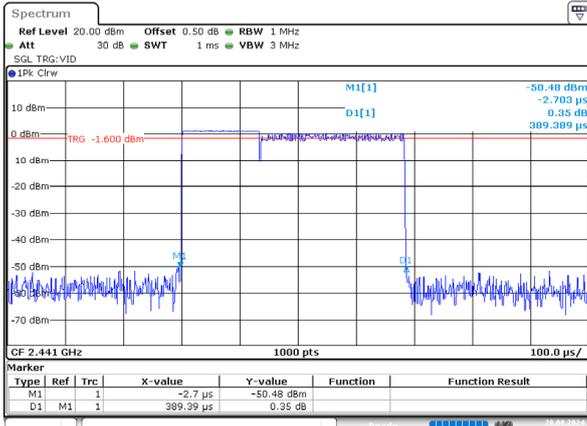
EDR

GFSK_Hopping_DH5 2.898ms



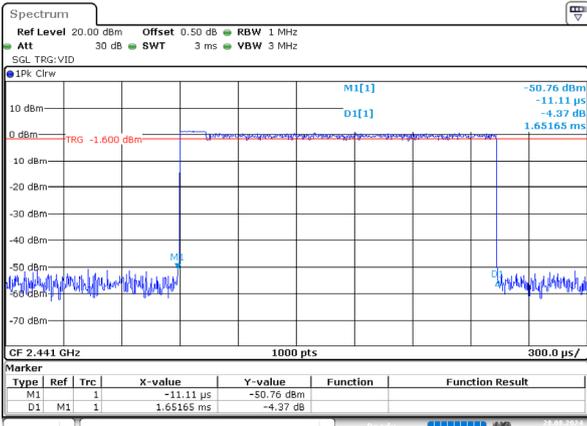
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:53:18

$\pi/4$ -DQPSK_Hopping_2DH1 0.389ms



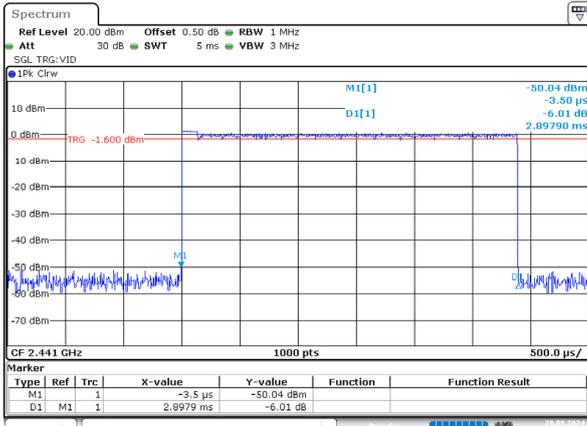
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:53:59

$\pi/4$ -DQPSK_Hopping_2DH3 1.652ms



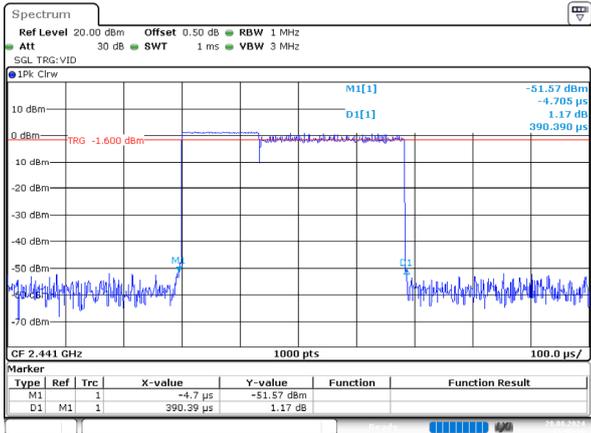
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Date: 28.AUG.2024 15:54:46

$\pi/4$ -DQPSK_Hopping_2DH5 2.898ms



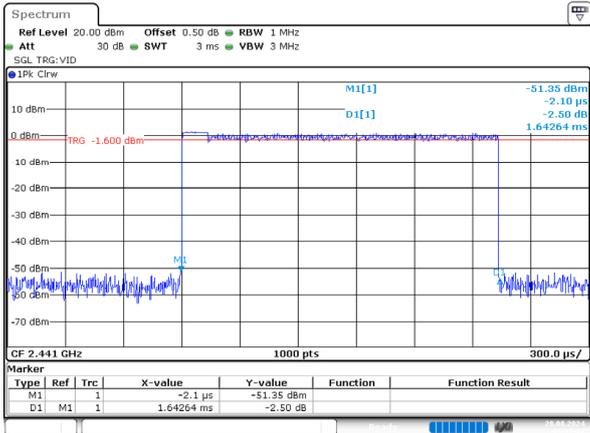
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Date: 28.AUG.2024 15:55:58

8DPSK_Hopping_3DH1 0.390ms



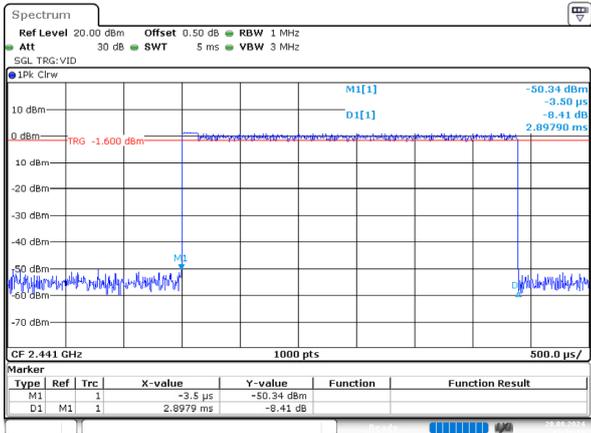
ProjectNo.:2403W26164E-RF Tester: Mack Huang
Date: 28.AUG.2024 15:56:40

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

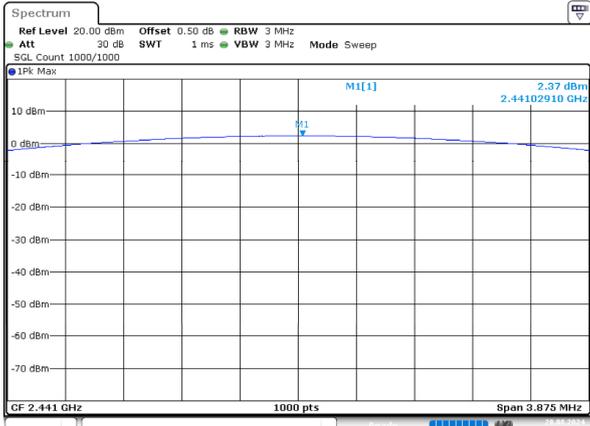
BDR

GFSK_Low 2.30dBm



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:02:22

GFSK_Middle 2.37dBm



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:03:34

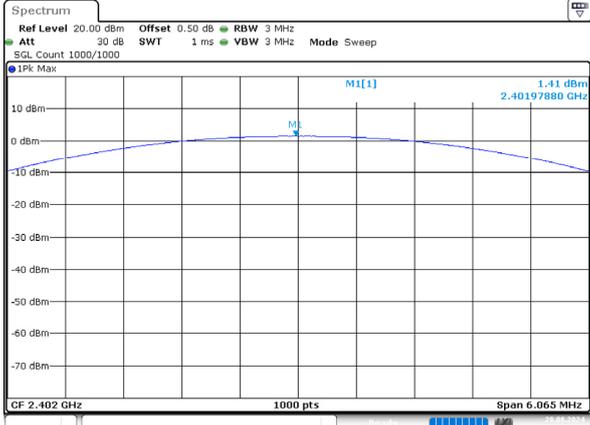
EDR

GFSK_High 1.11dBm



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:05:38

$\pi/4$ -DQPSK_Low 1.41dBm



ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:12:34

$\pi/4$ -DQPSK_Middle 1.51dBm



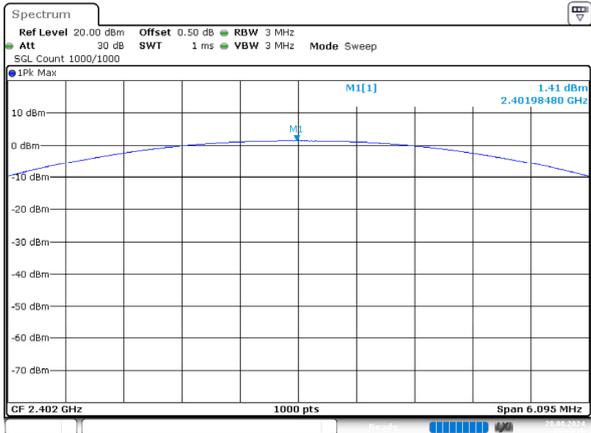
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Date: 28.AUG.2024 15:13:53

$\pi/4$ -DQPSK_High 0.26dBm



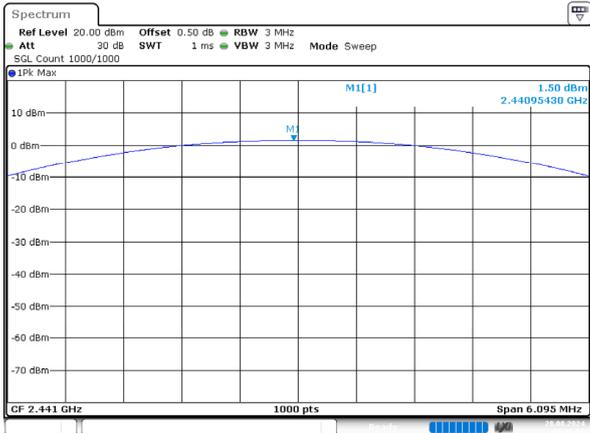
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:16:38

8DPSK_Low 1.41dBm



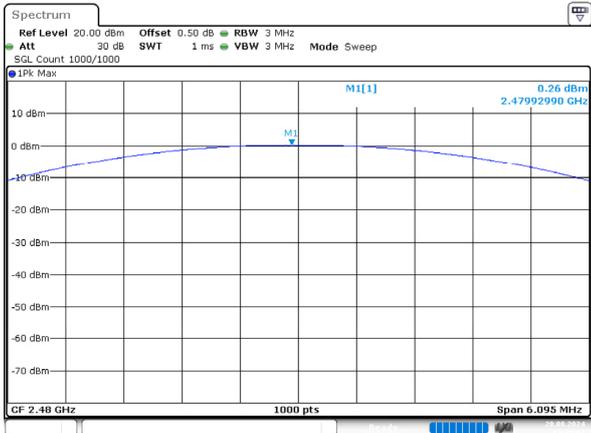
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:24:19

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**

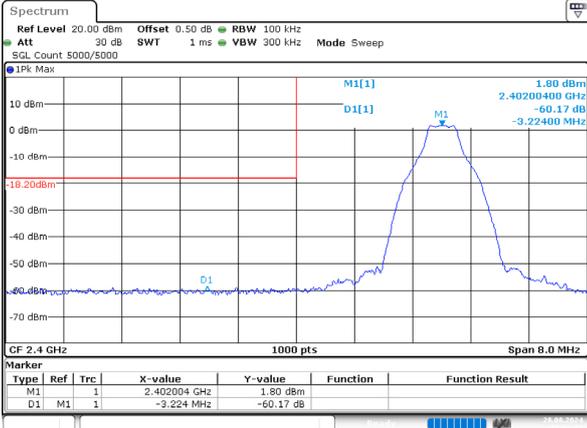
Mode	Value (dB)	Limit (dB)	Result
GFSK_Low	60.17	20.00	Pass
GFSK_High	59.03	20.00	Pass
GFSK_Hopping_Lower	60.69	20.00	Pass
GFSK_Hopping_Upper	56.88	20.00	Pass

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

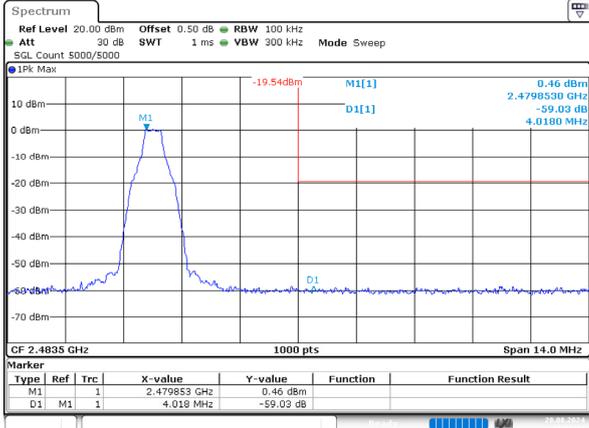
BDR

GFSK_Low 60.17dB



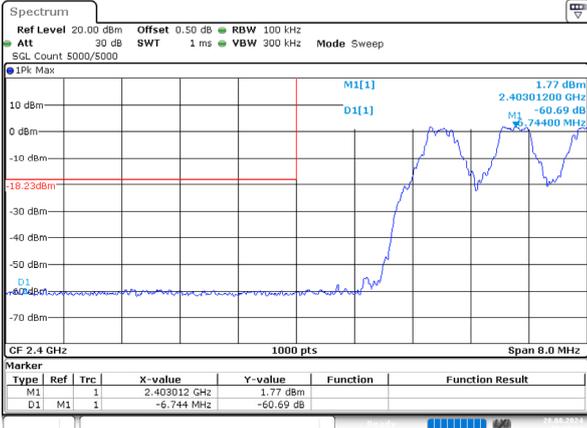
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:02:07

GFSK_High 59.03dB



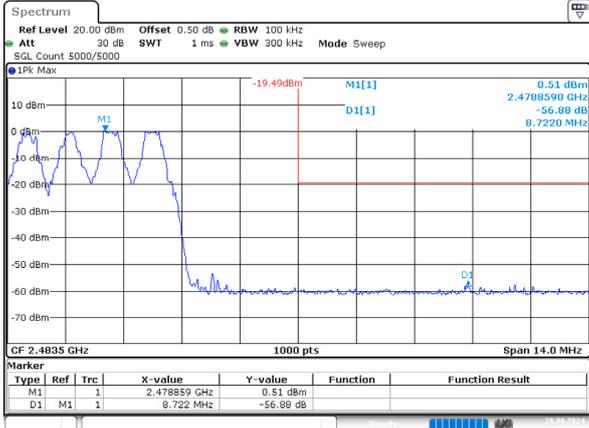
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:05:22

GFSK_Hopping_Lower 60.69dB



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

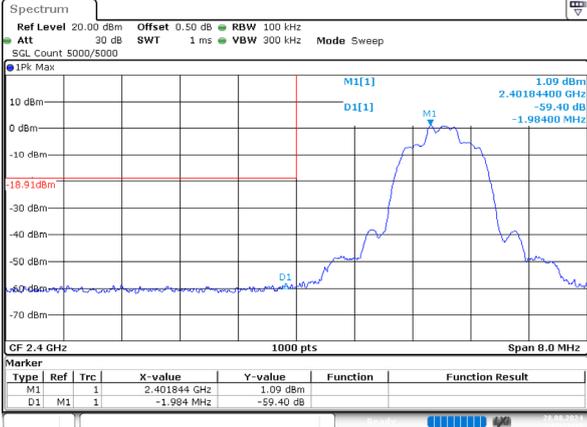
GFSK_Hopping_Upper 56.88dB



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

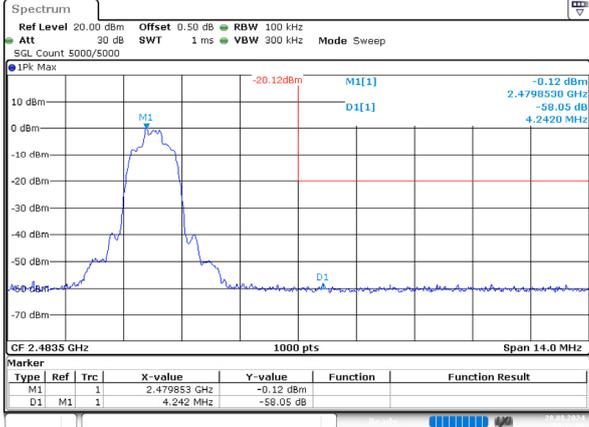
EDR

$\pi/4$ -DQPSK_Low 59.40dB



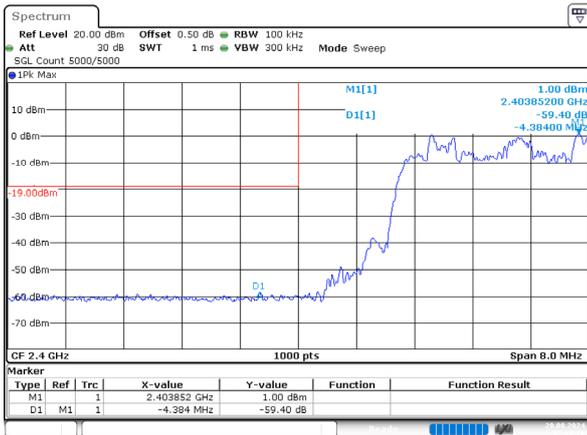
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:12:19

$\pi/4$ -DQPSK_High 58.05dB



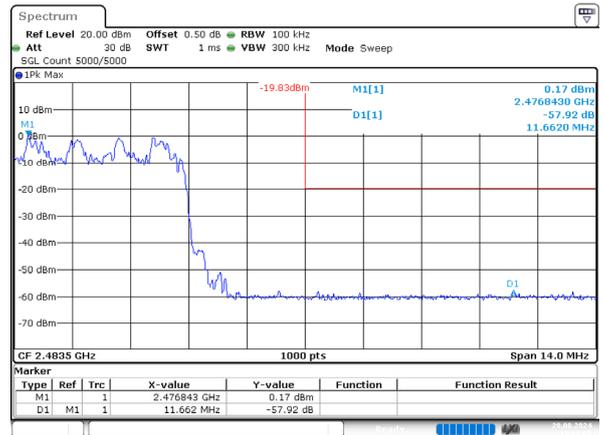
ProjectNo.:2403W26164E-RF Tester:Mack Huang
Date: 28.AUG.2024 15:16:09

$\pi/4$ -DQPSK_Hopping_Lower 59.40dB



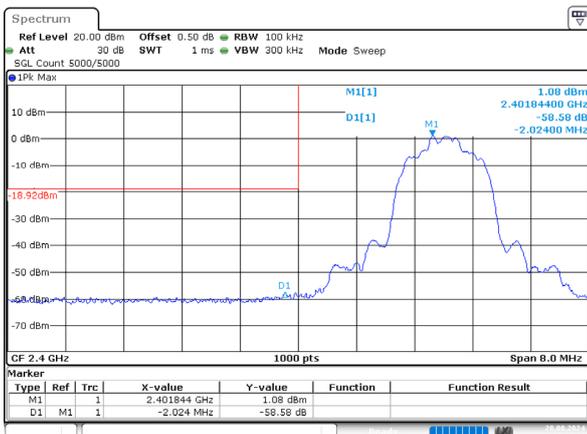
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:18:21

$\pi/4$ -DQPSK_Hopping_Upper 57.92dB



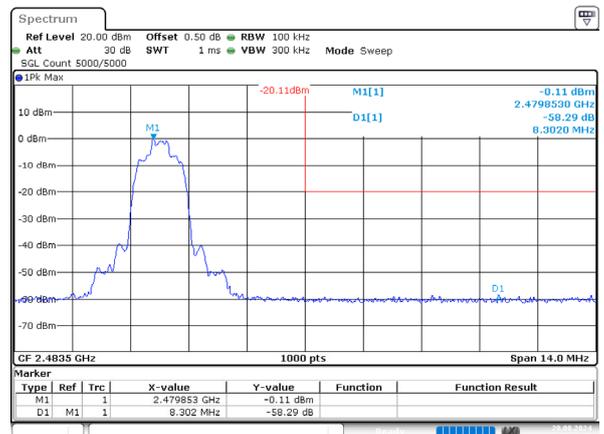
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:19:10

8DPSK_Low 58.58dB



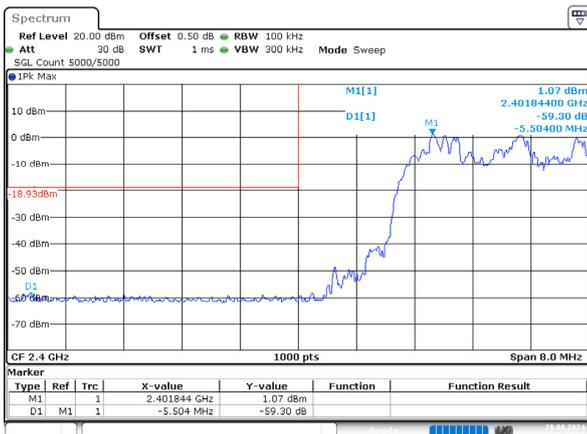
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:24:04

8DPSK_High 58.29dB



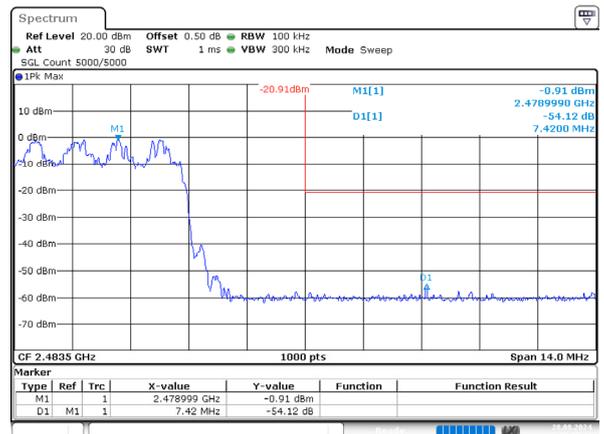
ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:27:48

8DPSK_Hopping_Lower 59.30dB



ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:29:51

8DPSK_Hopping_Upper 54.12dB



ProjectNo.:2403W26164E-RF Tester:MacK Huang
Date: 28.AUG.2024 15:30:43