

FCC Part 15.247**Test Information:**

Serial No.:	2J60-3	Test Date:	2024/04/03
Test Site:	RF	Test Mode:	Transmitting
Tester:	Lingling Li	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.1	Relative Humidity: (%)	48	ATM Pressure: (kPa)	101.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	100147	2024/04/01	2025/03/31
zhuoxiang	Coaxial Cable	SMA-178	211001	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**

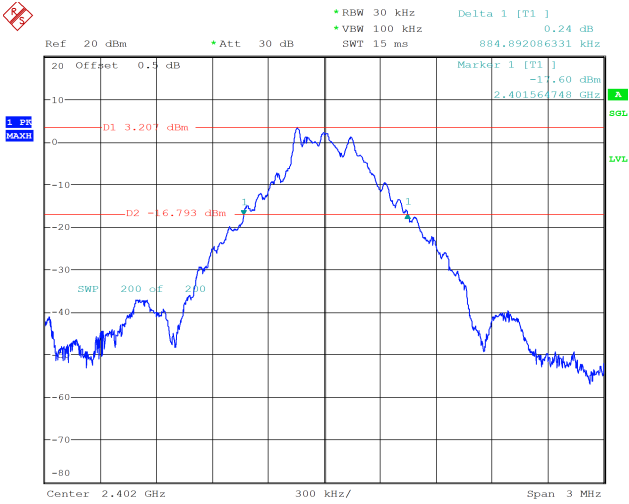
Mode	Value (MHz)
GFSK_Low	0.885
GFSK_Middle	0.885
GFSK_High	0.882

EDR

Mode	Value (MHz)
$\pi/4$ -DQPSK_Low	1.242
$\pi/4$ -DQPSK_Middle	1.242
$\pi/4$ -DQPSK_High	1.245
8DPSK_Low	1.254
8DPSK_Middle	1.252
8DPSK_High	1.252

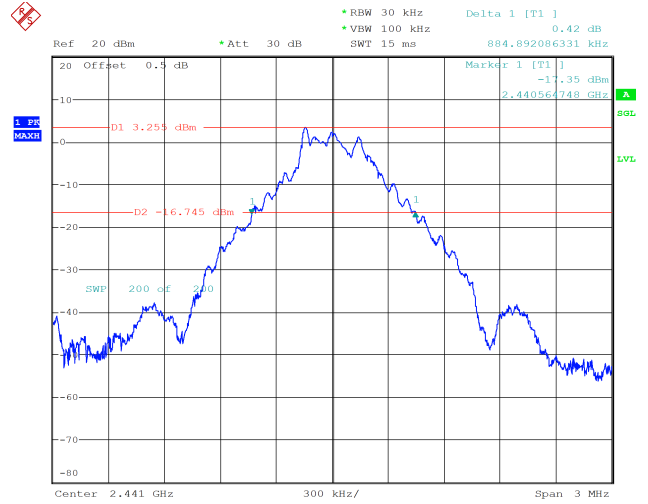
BDR

GFSK_Low 0.885 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:48:08

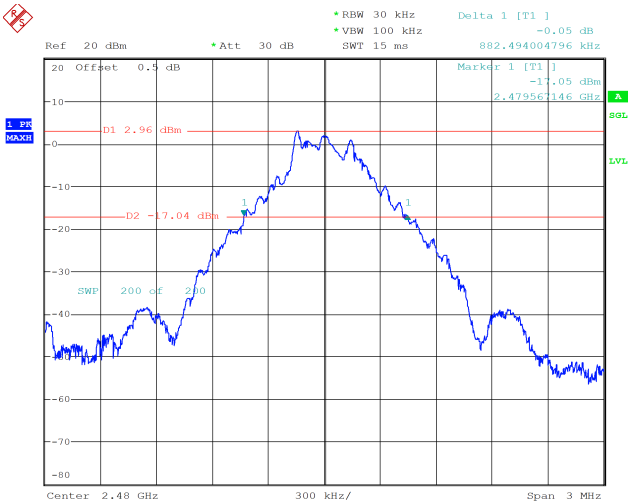
GFSK_Middle 0.885 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:51:02

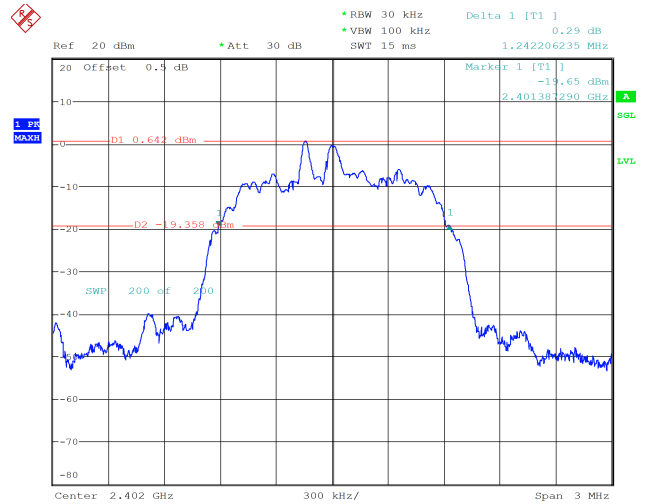
EDR

GFSK_High 0.882 MHz



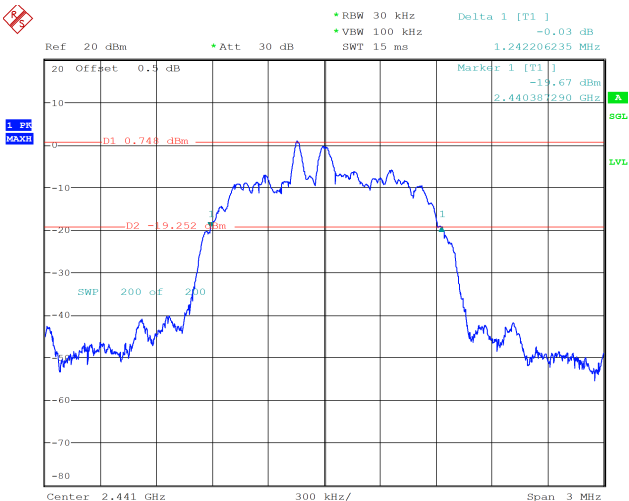
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:54:01

$\pi/4$ -DQPSK_Low 1.242 MHz



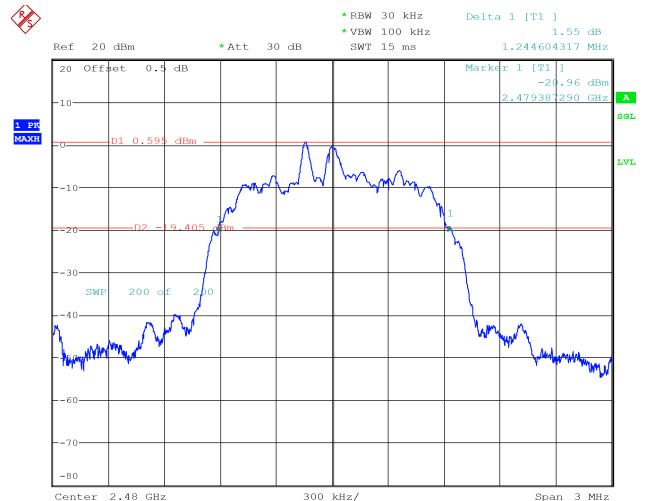
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:14:16

$\pi/4$ -DQPSK_Middle 1.242 MHz



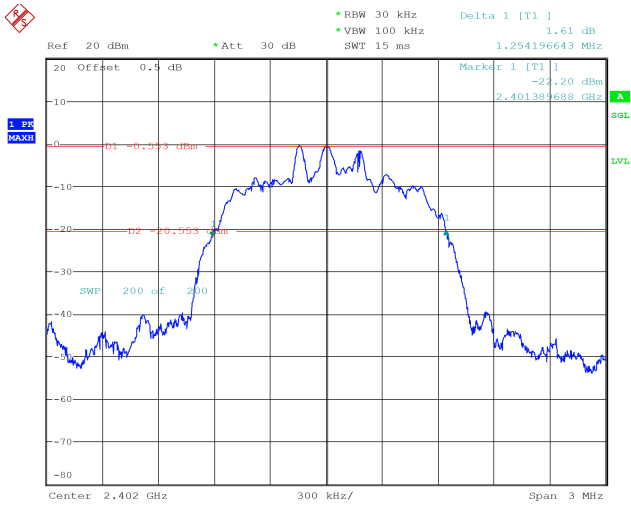
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:17:52

$\pi/4$ -DQPSK_High 1.245 MHz



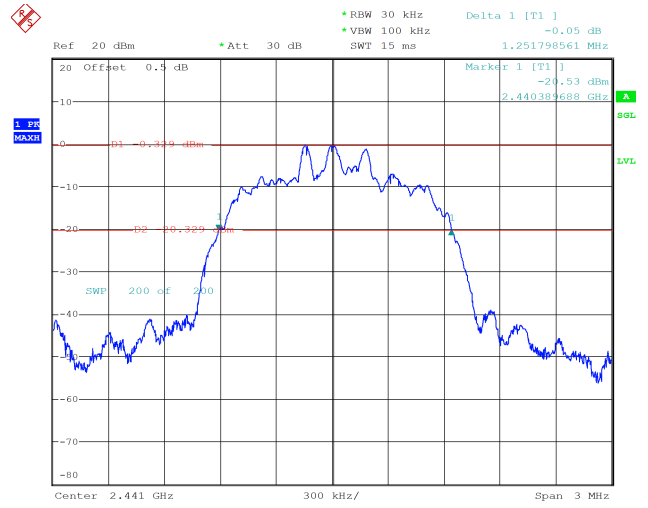
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:19:56

8DPSK_Low 1.254 MHz



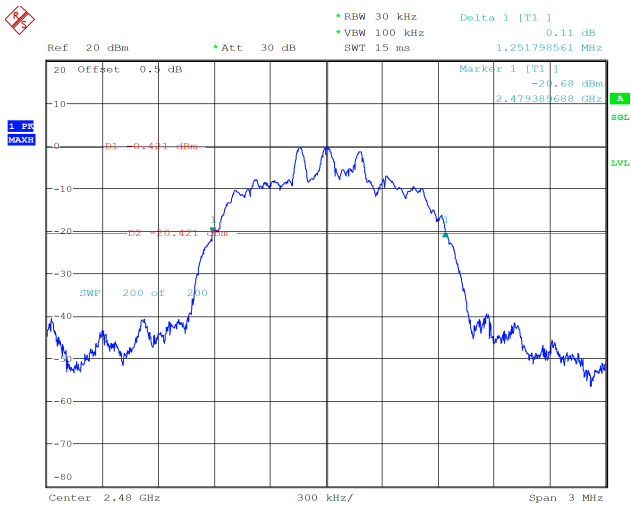
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:25:28

8DPSK_Middle 1.252 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:28:23

8DPSK_High 1.252 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:35:48

99% Occupied Bandwidth**BDR**

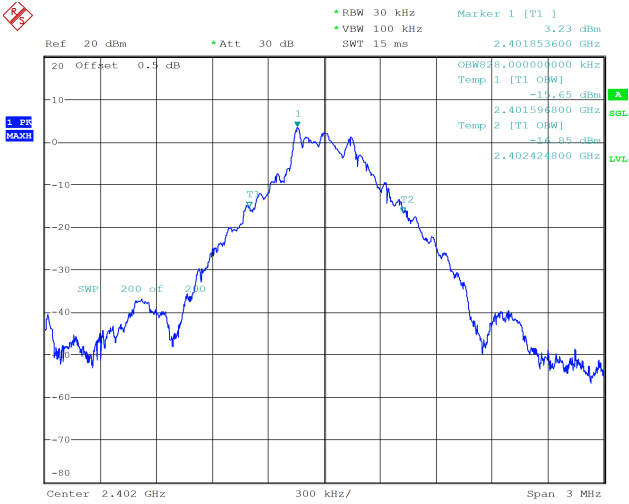
Mode	99% OBW (MHz)
GFSK_Low	0.828
GFSK_Middle	0.830
GFSK_High	0.830

EDR

Mode	99% OBW (MHz)
$\pi/4$ -DQPSK_Low	1.162
$\pi/4$ -DQPSK_Middle	1.162
$\pi/4$ -DQPSK_High	1.162
8DPSK_Low	1.142
8DPSK_Middle	1.142
8DPSK_High	1.142

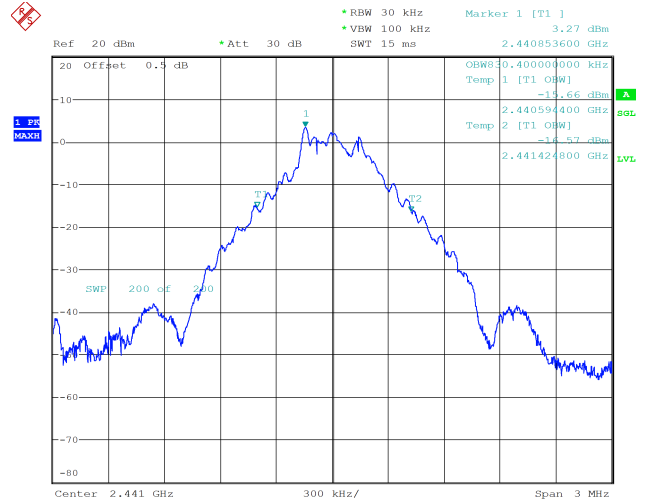
BDR

GFSK_Low 0.828 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:49:04

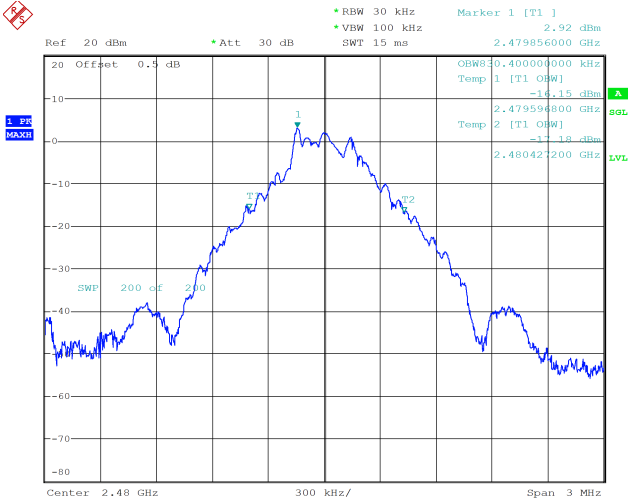
GFSK_Middle 0.830 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:51:24

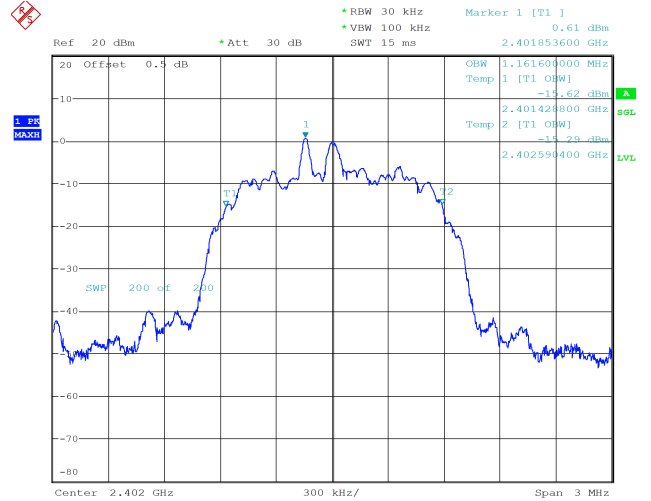
EDR

GFSK_High 0.830 MHz



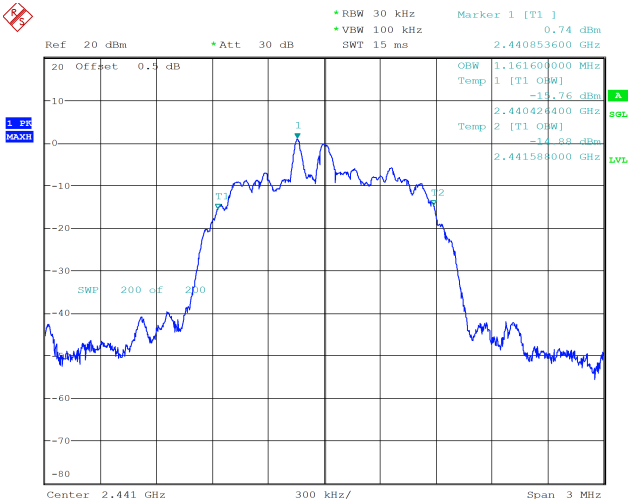
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:55:04

$\pi/4$ -DQPSK_Low 1.162 MHz



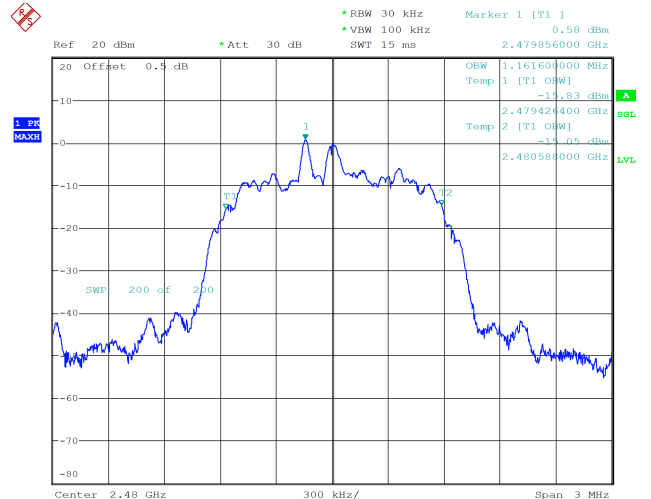
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:15:13

$\pi/4$ -DQPSK_Middle 1.162 MHz



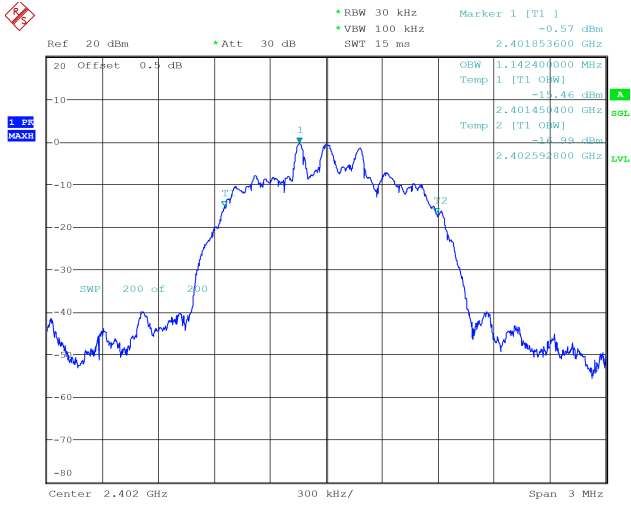
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:18:14

$\pi/4$ -DQPSK_High 1.162 MHz



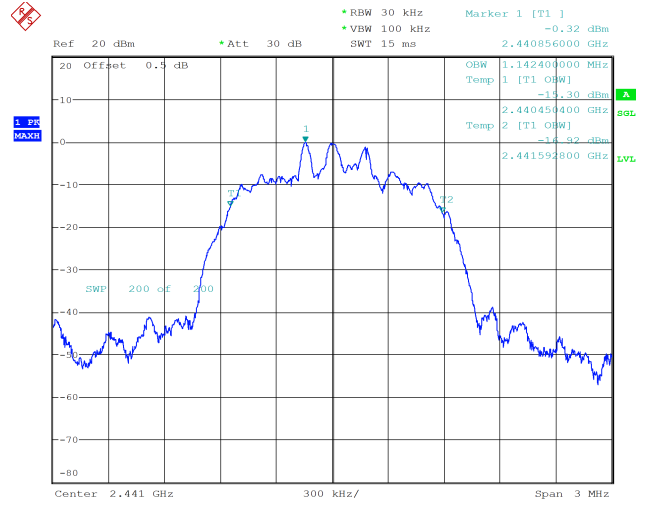
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:21:00

8DPSK_Low 1.142 MHz



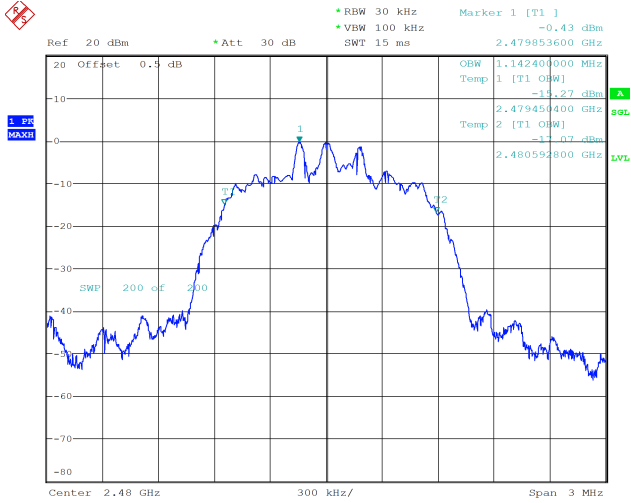
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:26:25

8DPSK_Middle 1.142 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:28:45

8DPSK_High 1.142 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:36:54

Channel Separation

BDR

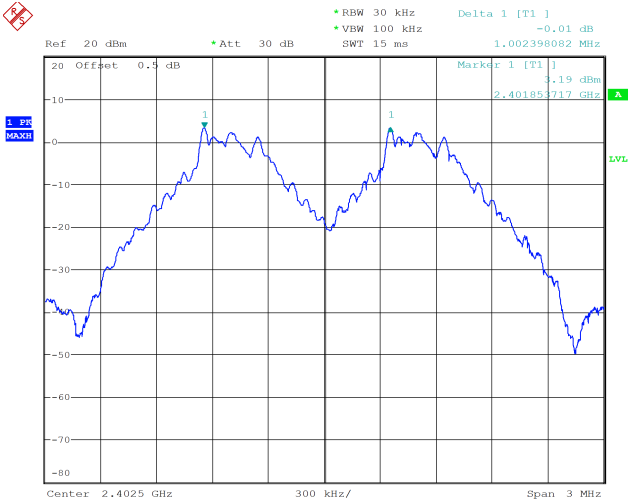
Mode	Value (MHz)	Limit (MHz)	Result
GFSK_Low	1.002	0.590	Pass
GFSK_Middle	1.002	0.590	Pass
GFSK_High	1.000	0.588	Pass

EDR

Mode	Value (MHz)	Limit (MHz)	Result
$\pi/4$ -DQPSK_Low	1.002	0.828	Pass
$\pi/4$ -DQPSK_Middle	1.002	0.828	Pass
$\pi/4$ -DQPSK_High	1.000	0.830	Pass
8DPSK_Low	1.005	0.836	Pass
8DPSK_Middle	1.005	0.835	Pass
8DPSK_High	1.000	0.835	Pass

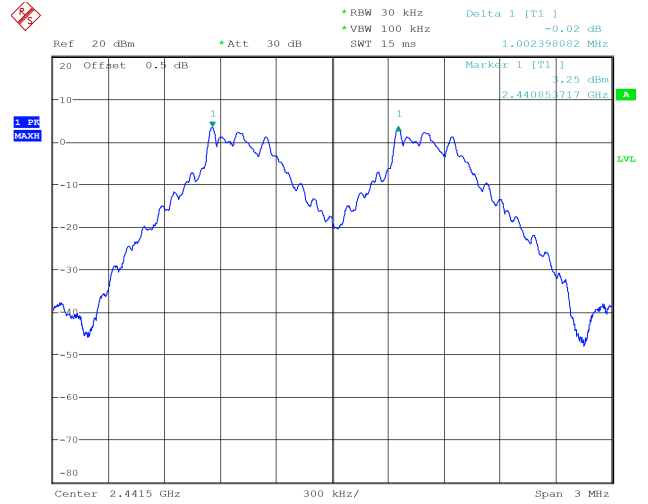
BDR

GFSK_Low 1.002 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:50:31

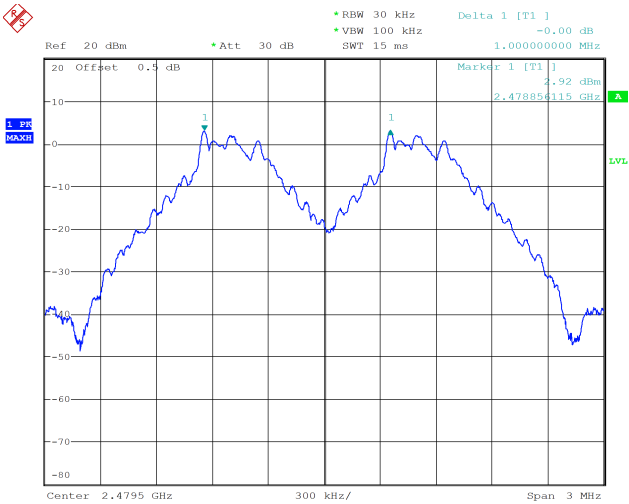
GFSK_Middle 1.002 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:53:10

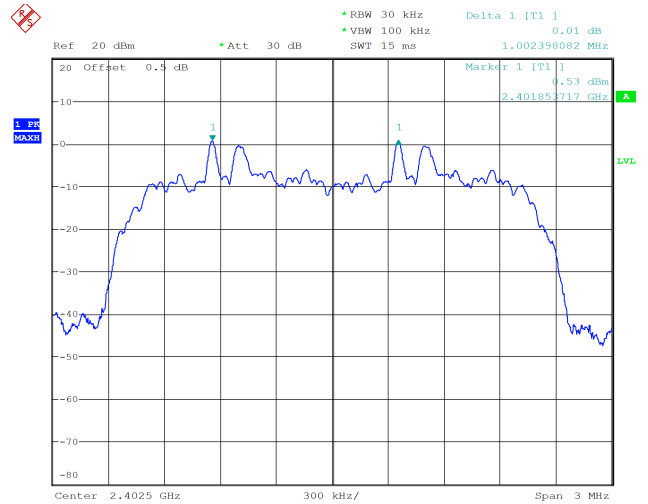
EDR

GFSK_High 1.000 MHz



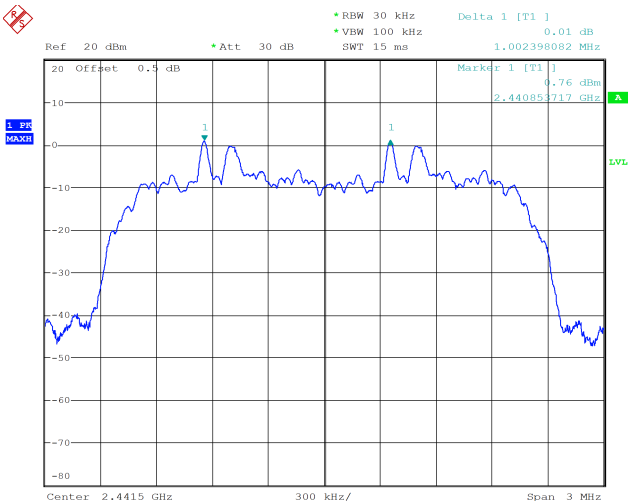
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:56:34

$\pi/4$ -DQPSK_Low 1.002 MHz



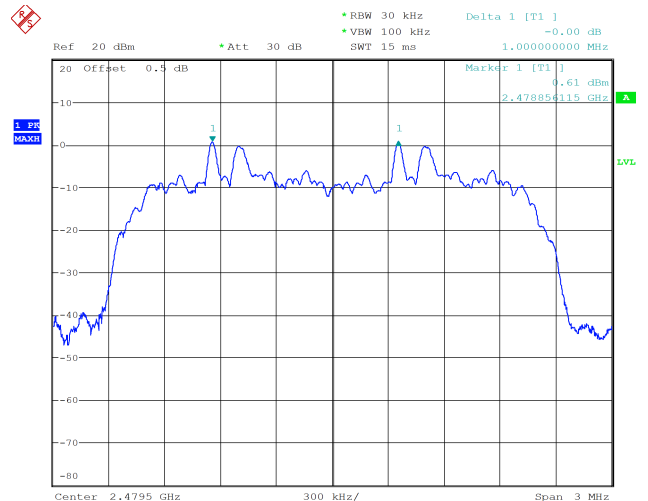
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:17:22

$\pi/4$ -DQPSK_Middle 1.002 MHz



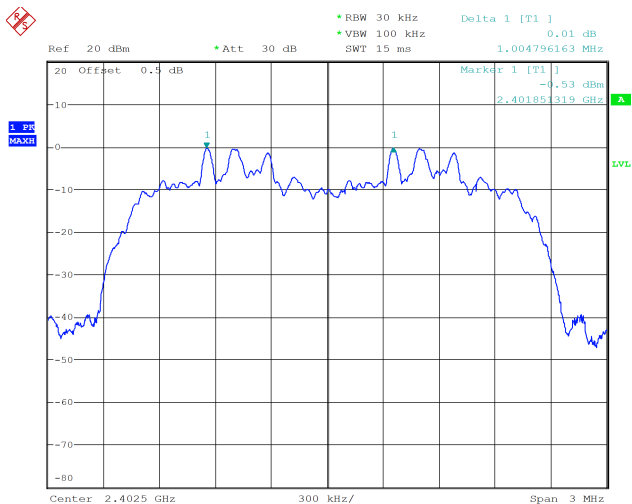
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:19:28

$\pi/4$ -DQPSK_High 1.000 MHz



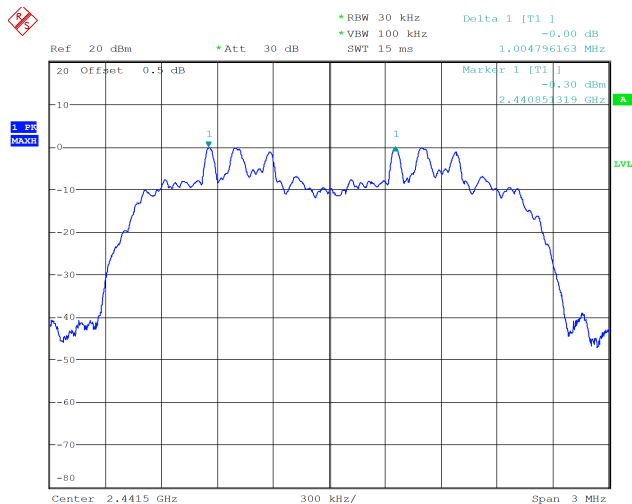
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:23:22

8DPSK_Low 1.005 MHz



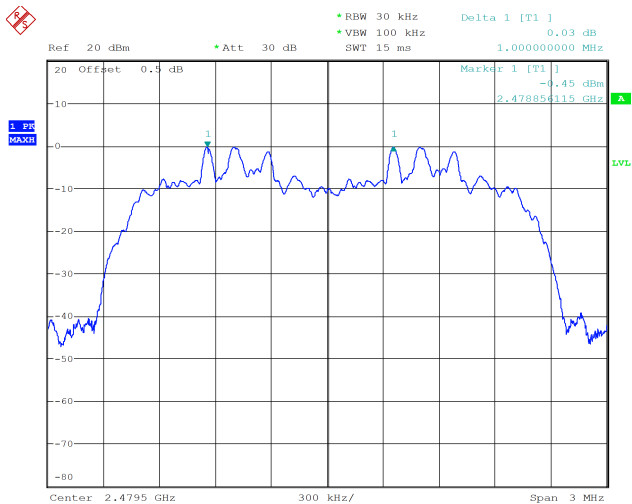
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:27:57

8DPSK_Middle 1.005 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:30:18

8DPSK_High 1.000 MHz



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:38:29

Number of Hopping Frequency**BDR**

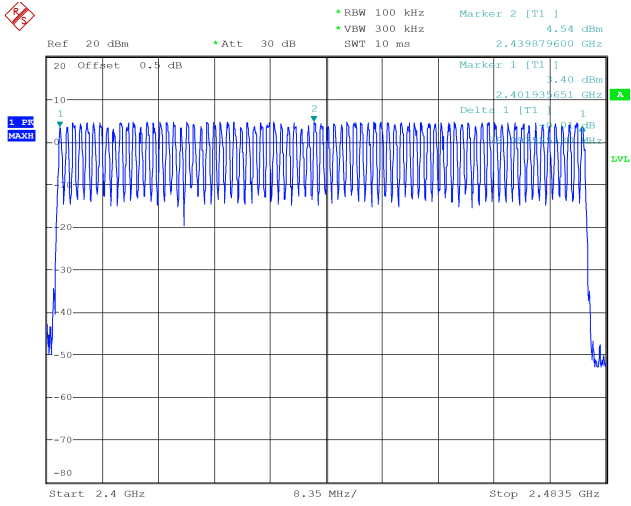
Mode	Value	Limit	Result
GFSK_Hopping	79	15	Pass

EDR

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

BDR

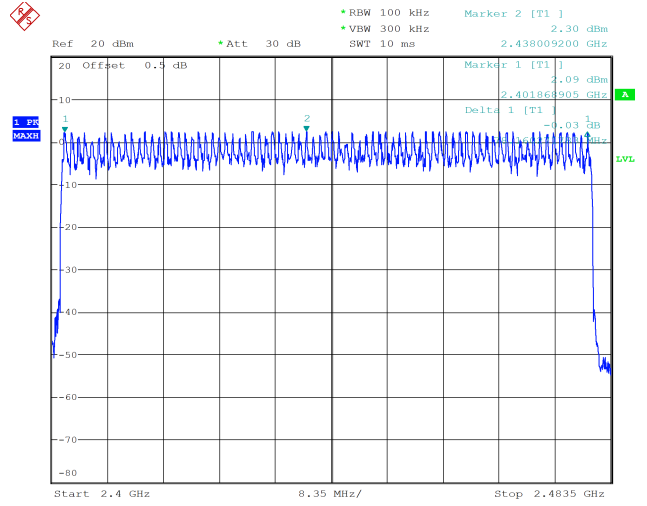
GFSK_Hopping 79



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 17:02:01

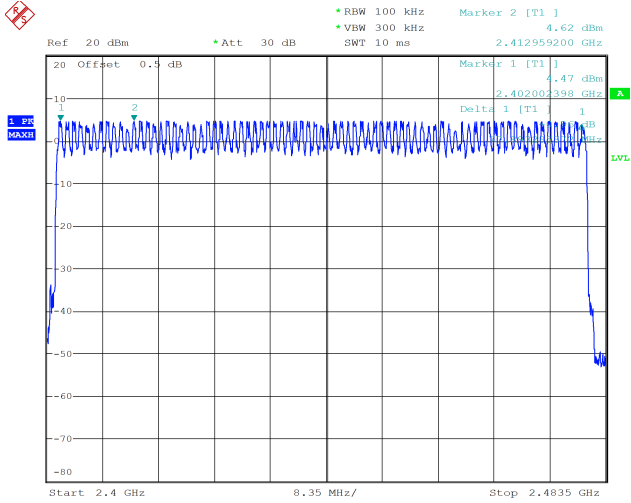
EDR

$\pi/4$ -DQPSK_Hopping 79



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 17:33:28

8DPSK_Hopping 79



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 17:16:48

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

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
GFSK_Hopping_DH1	0.392	0.125	0.400	Pass
GFSK_Hopping_DH3	1.652	0.264	0.400	Pass
GFSK_Hopping_DH5	2.910	0.310	0.400	Pass

EDR

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
$\pi/4$ -DQPSK_Hopping_2DH1	0.401	0.128	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH3	1.659	0.266	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH5	2.914	0.311	0.400	Pass
8DPSK_Hopping_3DH1	0.401	0.128	0.400	Pass
8DPSK_Hopping_3DH3	1.659	0.266	0.400	Pass
8DPSK_Hopping_3DH5	2.918	0.311	0.400	Pass

Note:

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

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

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

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

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

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

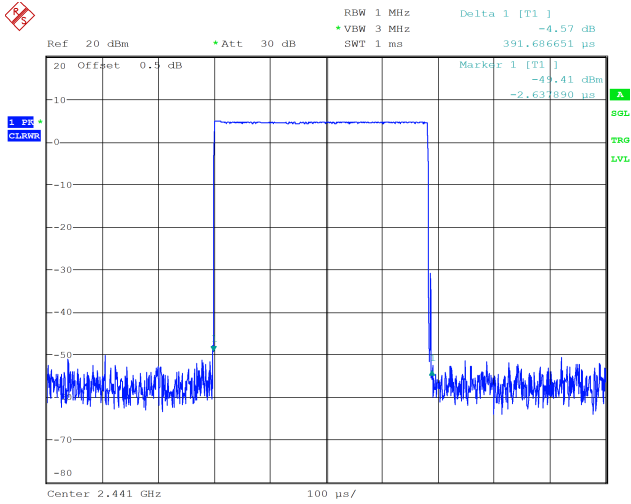
3DH1: Dwell time=Pulse time (ms) \times (1600/2/79) \times 31.6 s

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

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

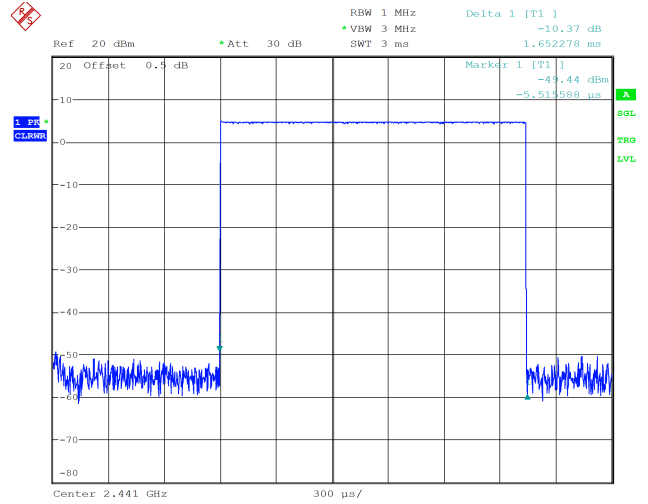
BDR

GFSK_Hopping_DH1 0.392ms



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:45:28

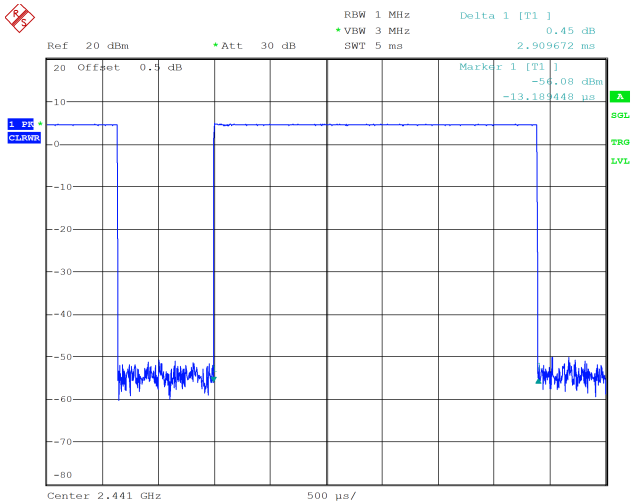
GFSK_Hopping_DH3 1.652ms



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:45:56

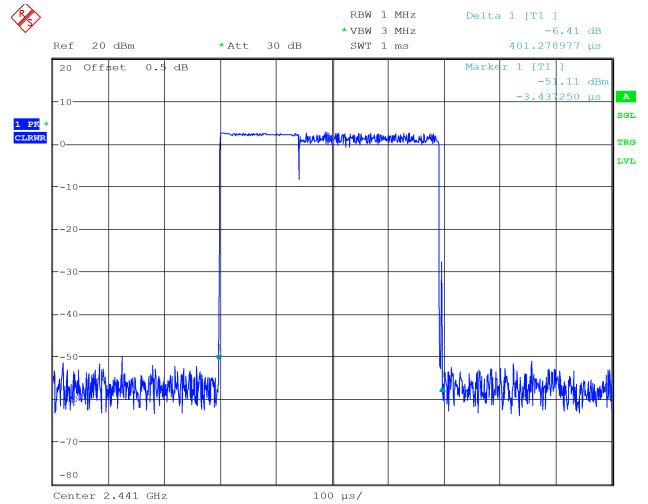
EDR

GFSK_Hopping_DH5 2.910ms



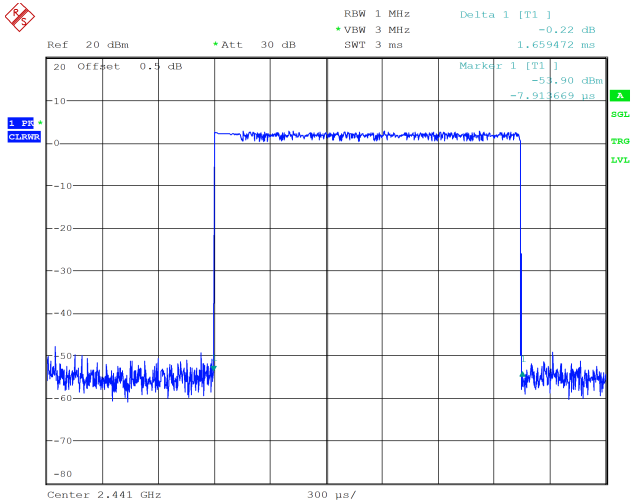
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:57:39

$\pi/4$ -DQPSK_Hopping_2DH1 0.401ms



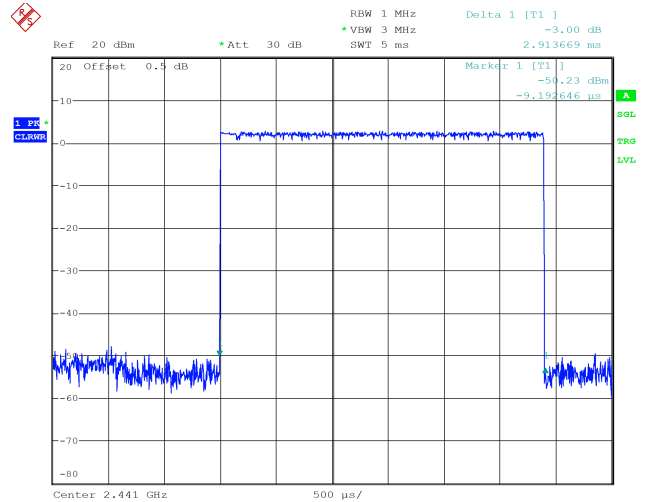
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:47:11

$\pi/4$ -DQPSK_Hopping_2DH3 1.659ms



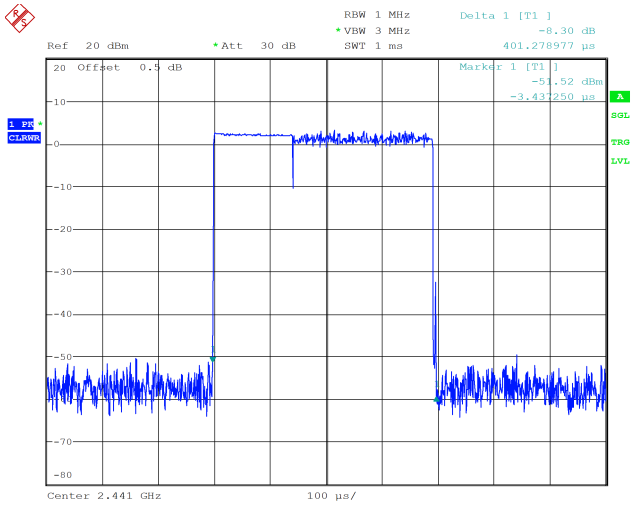
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:58:06

$\pi/4$ -DQPSK_Hopping_2DH5 2.914ms



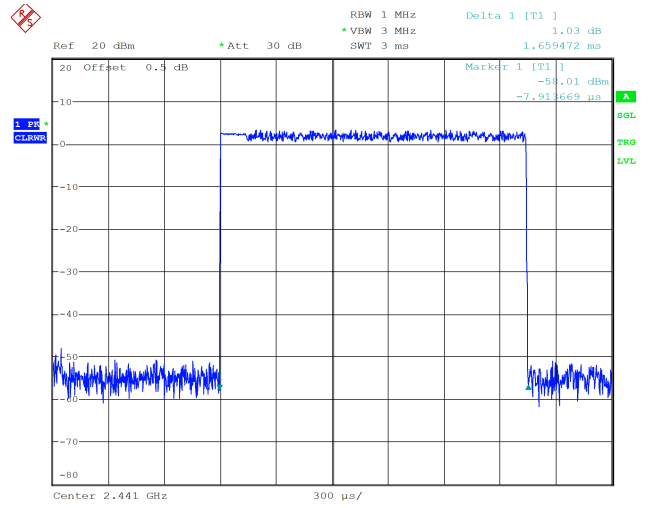
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:49:52

8DPSK_Hopping_3DH1 0.401ms



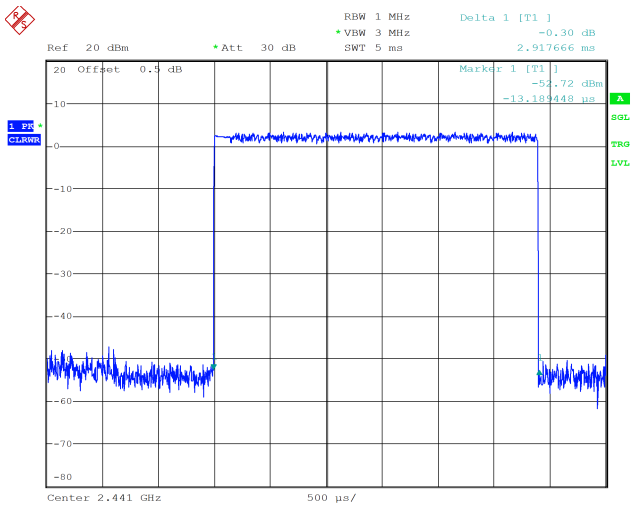
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:50:42

8DPSK_Hopping_3DH3 1.659ms



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:55:31

8DPSK_Hopping_3DH5 2.918ms



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:51:54

Maximum Conducted Output Power**BDR**

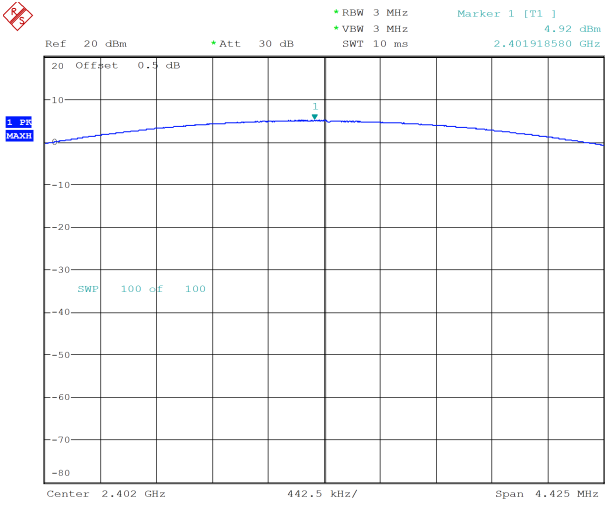
Mode	Value (dBm)	Limit (dBm)	Result
GFSK_Low	4.92	21.00	Pass
GFSK_Middle	4.98	21.00	Pass
GFSK_High	4.65	21.00	Pass

EDR

Mode	Value (dBm)	Limit (dBm)	Result
$\pi/4$ -DQPSK_Low	2.96	21.00	Pass
$\pi/4$ -DQPSK_Middle	3.11	21.00	Pass
$\pi/4$ -DQPSK_High	2.97	21.00	Pass
8DPSK_Low	3.47	21.00	Pass
8DPSK_Middle	3.69	21.00	Pass
8DPSK_High	3.57	21.00	Pass

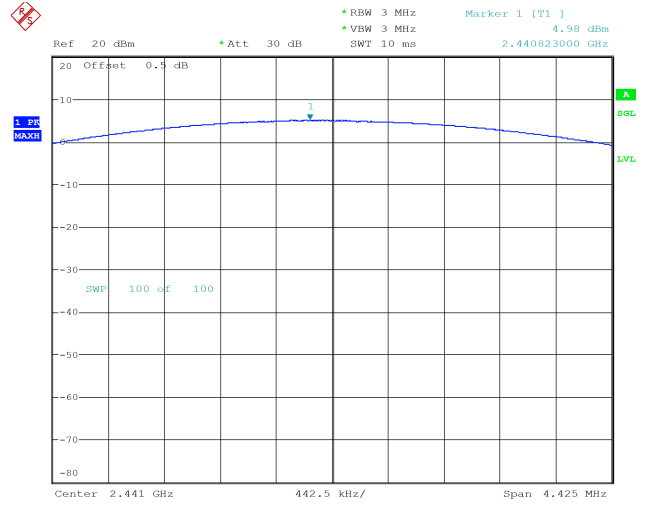
BDR

GFSK_Low 4.92 dBm



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 15:49:21

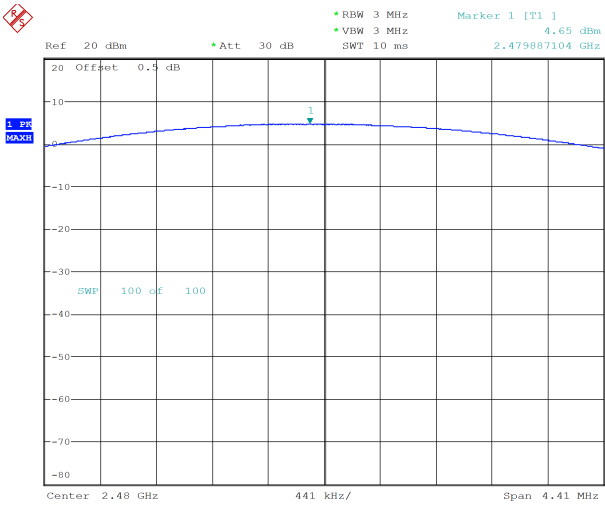
GFSK_Middle 4.98 dBm



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 15:51:50

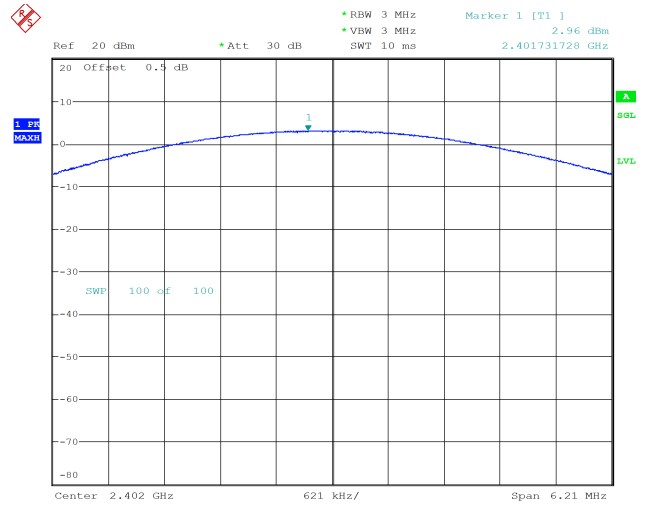
EDR

GFSK_High 4.65 dBm



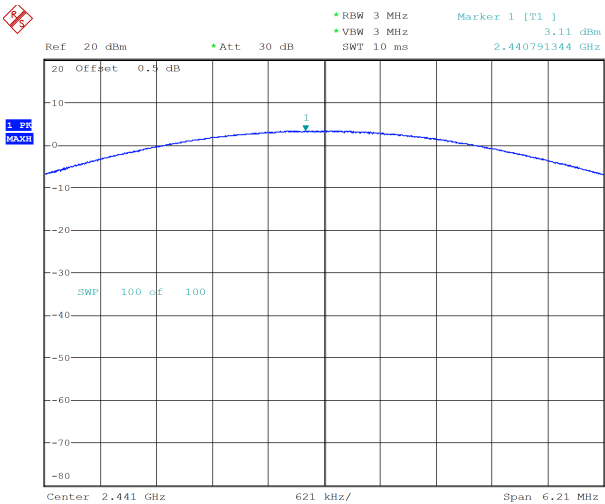
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 15:55:20

$\pi/4$ -DQPSK_Low 2.96 dBm



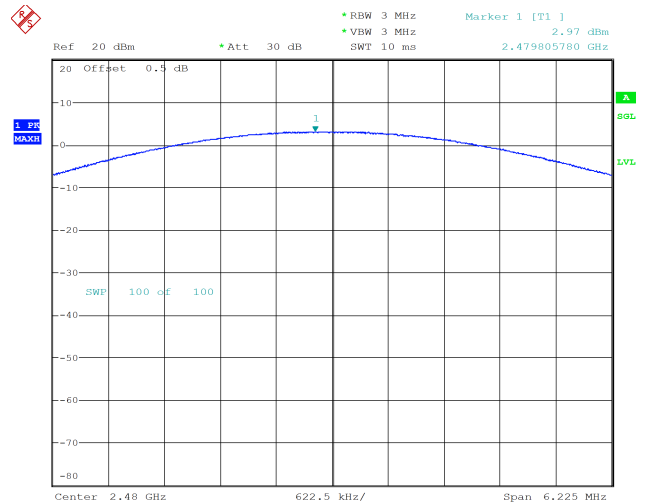
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:15:28

$\pi/4$ -DQPSK_Middle 3.11 dBm



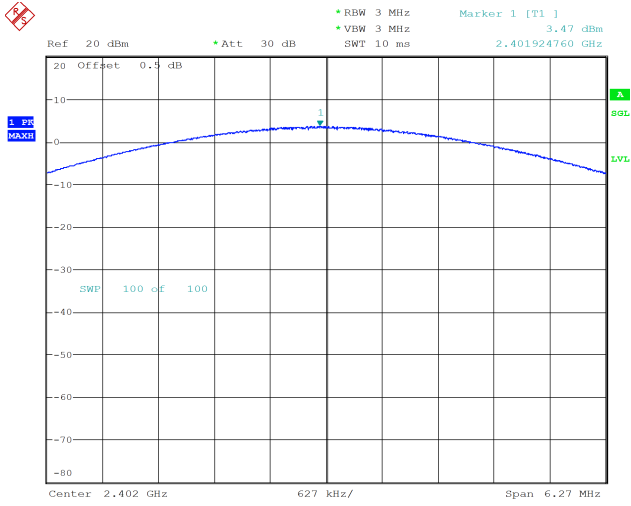
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:18:29

$\pi/4$ -DQPSK_High 2.97 dBm



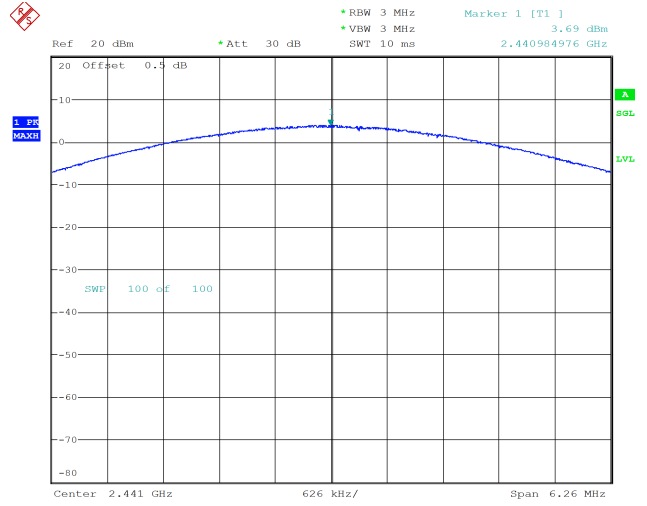
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
 Date: 3.APR.2024 16:21:35

8DPSK_Low 3.47 dBm



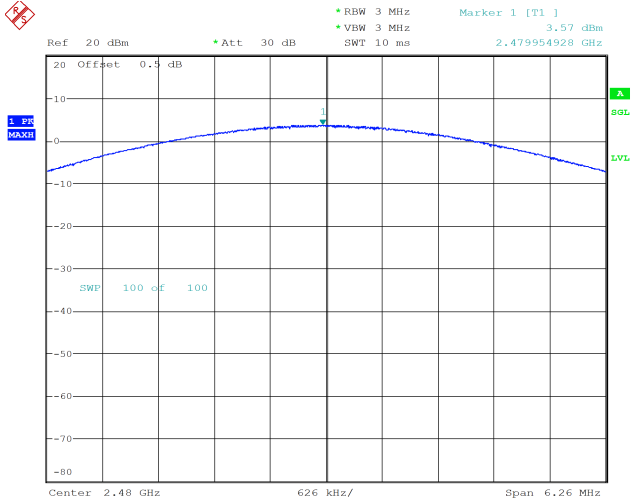
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:26:41

8DPSK_Middle 3.69 dBm



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:29:06

8DPSK_High 3.57 dBm



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:37:12

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

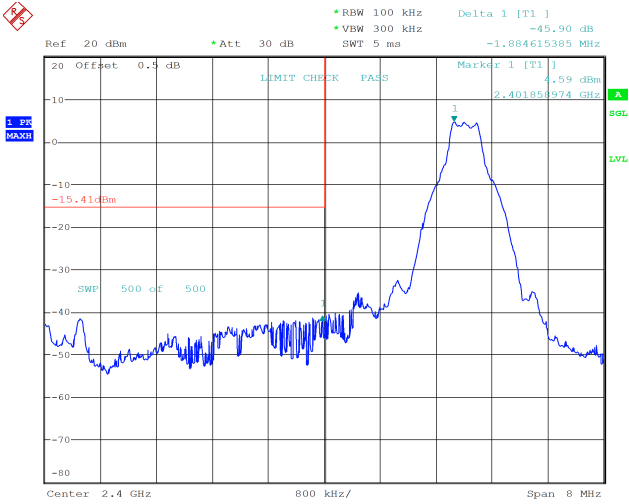
Mode	Value (dB)	Limit (dB)	Result
GFSK_Low	45.90	20.00	Pass
GFSK_High	51.79	20.00	Pass
GFSK_Hopping_Lower	46.11	20.00	Pass
GFSK_Hopping_Upper	53.96	20.00	Pass

EDR

Mode	Value (dB)	Limit (dB)	Result
$\pi/4$ -DQPSK_Low	45.84	20.00	Pass
$\pi/4$ -DQPSK_High	52.25	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Lower	46.61	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Upper	53.99	20.00	Pass
8DPSK_Low	45.68	20.00	Pass
8DPSK_High	52.65	20.00	Pass
8DPSK_Hopping_Lower	46.13	20.00	Pass
8DPSK_Hopping_Upper	53.23	20.00	Pass

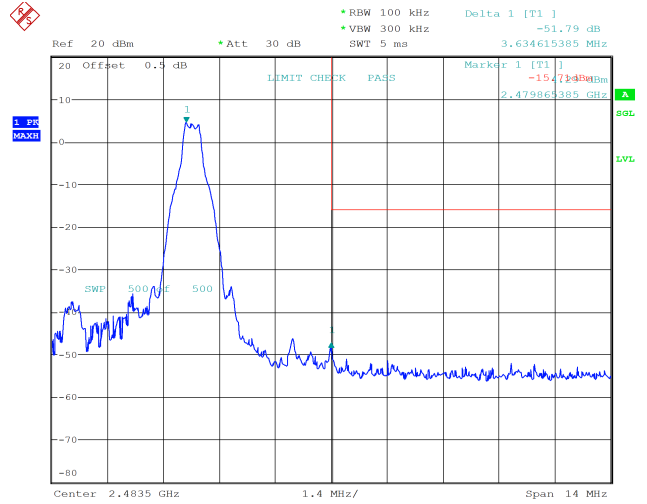
BDR

GFSK_Low 45.90 dB



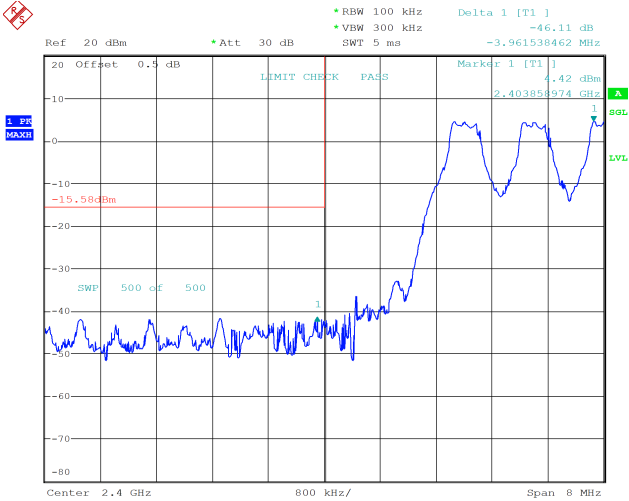
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:48:42

GFSK_High 51.79 dB



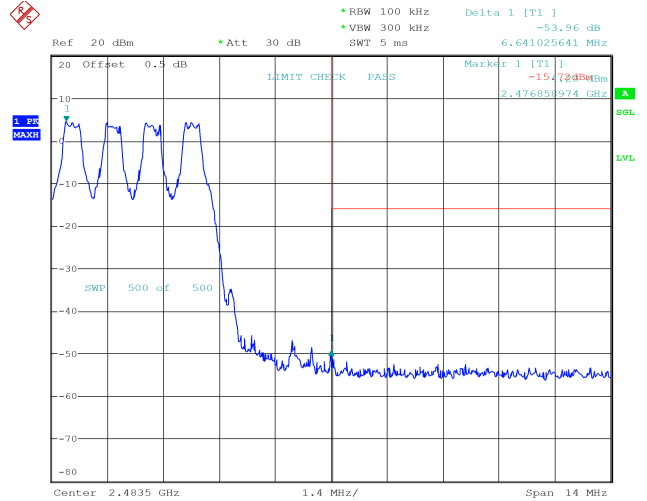
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 15:54:42

GFSK_Hopping_Lower 46.11 dB



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:11:55

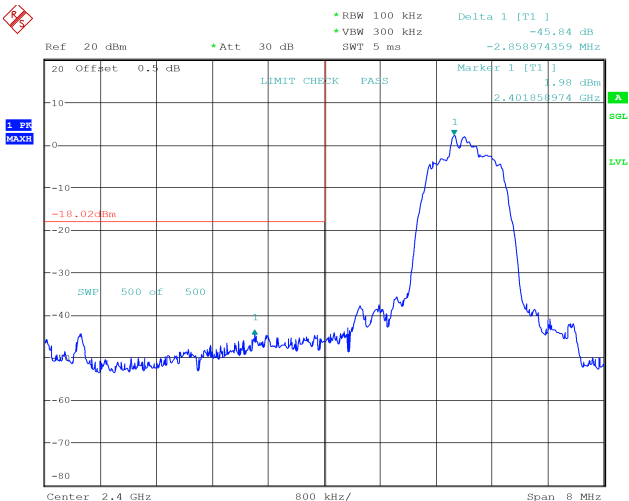
GFSK_Hopping_Upper 53.96 dB



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:13:47

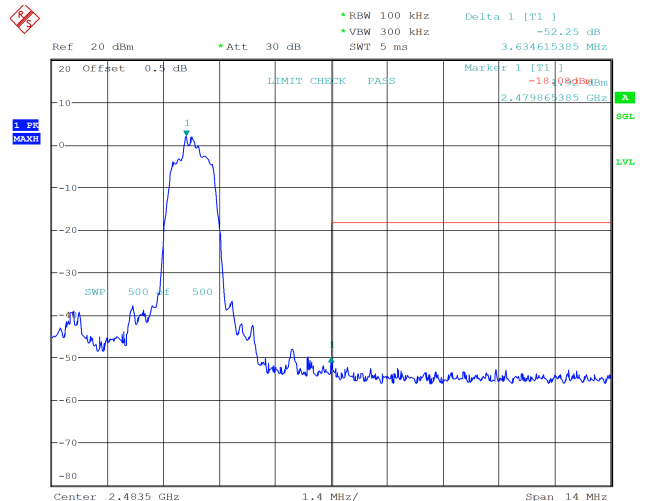
EDR

$\pi/4$ -DQPSK_Low 45.84 dB



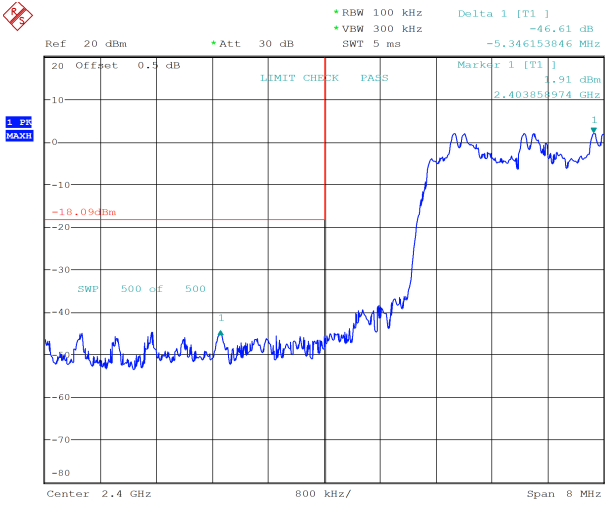
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:14:49

$\pi/4$ -DQPSK_High 52.25 dB



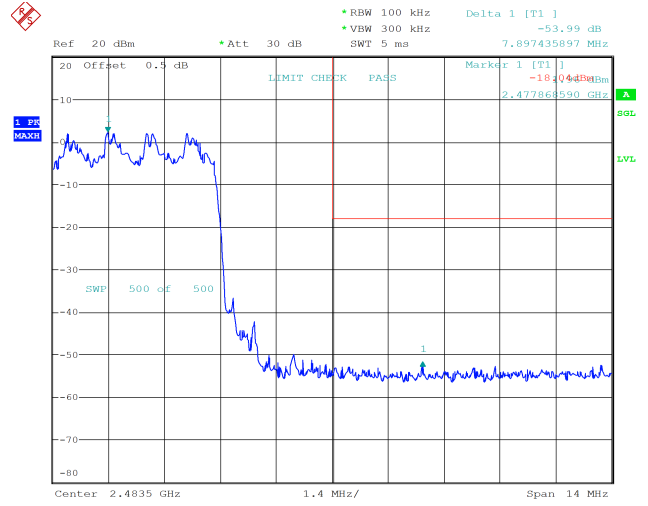
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:20:37

$\pi/4$ -DQPSK_Hopping_Lower 46.61 dB



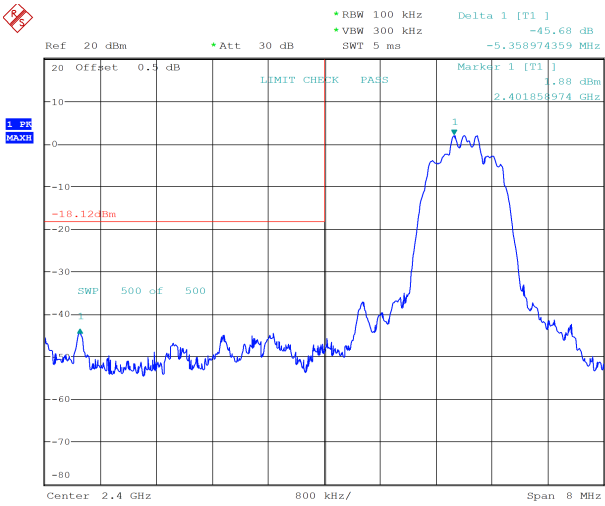
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:23:58

$\pi/4$ -DQPSK_Hopping_Upper 53.99 dB



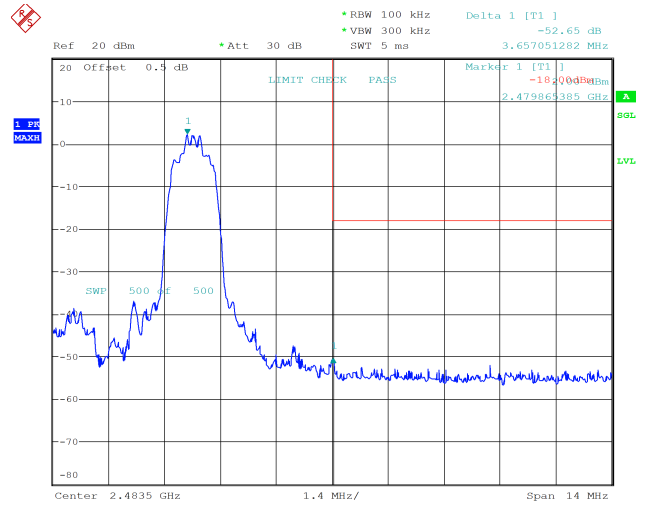
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:24:54

8DPSK_Low 45.68 dB



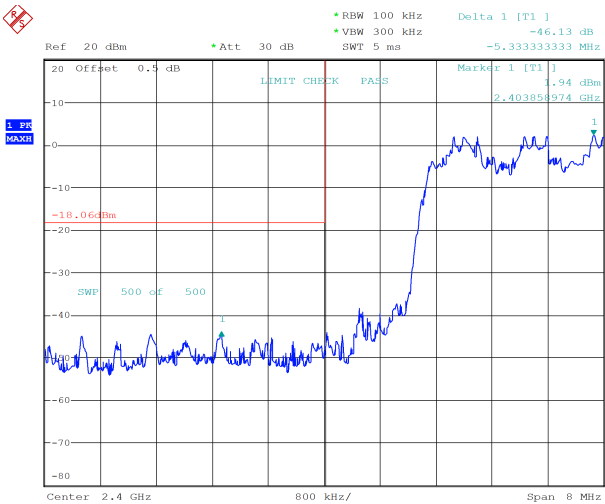
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:26:01

8DPSK_High 52.65 dB



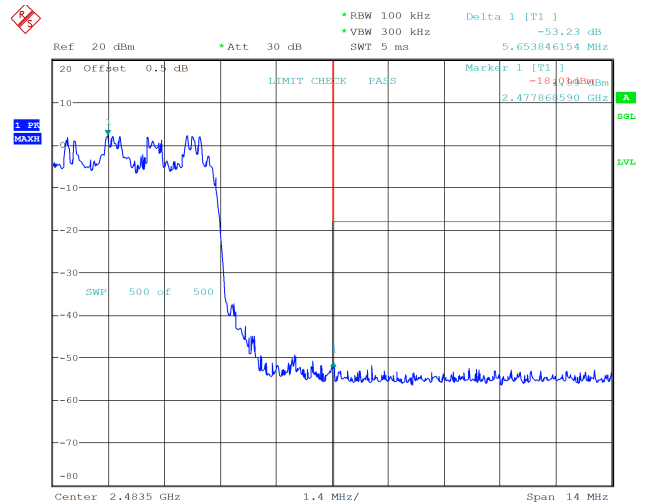
Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:36:29

8DPSK_Hopping_Lower 46.13 dB



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:39:11

8DPSK_Hopping_Upper 53.23 dB



Comment: ProjectNo.:CR240315580-RF Tester:Lingling Li
Date: 3.APR.2024 16:40:09