

FCC Part 15.247

Test Information:

Serial No.:	2GSF-12	Test Date:	2024/02/02
Test Site:	RF	Test Mode:	Transmitting
Tester:	Lingling Li	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.4	Relative Humidity: (%)	55	ATM Pressure: (kPa)	101.1
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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	2023/03/31	2024/03/30
zhuoxiang	Coaxial Cable	SMA-178	211002	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).

Tester:

Lingling Li

Reviewer:

Silence Wu

20 dB Emission Bandwidth

BDR

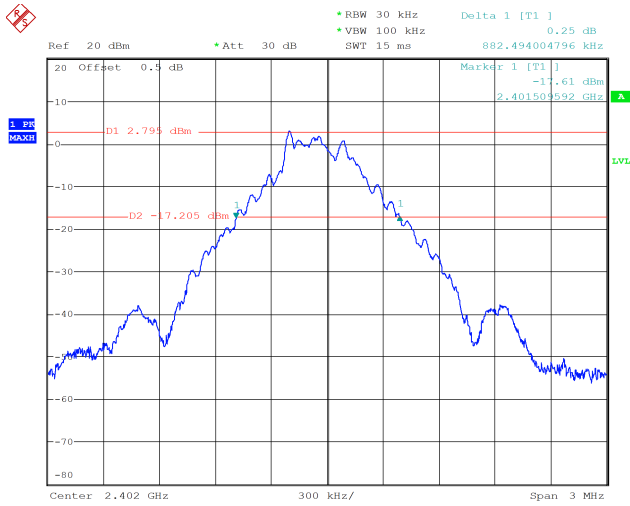
Mode	Value (MHz)
GFSK_Low	0.882
GFSK_Middle	0.885
GFSK_High	0.882

EDR

Mode	Value (MHz)
$\pi/4$ -DQPSK_Low	1.247
$\pi/4$ -DQPSK_Middle	1.223
$\pi/4$ -DQPSK_High	1.235

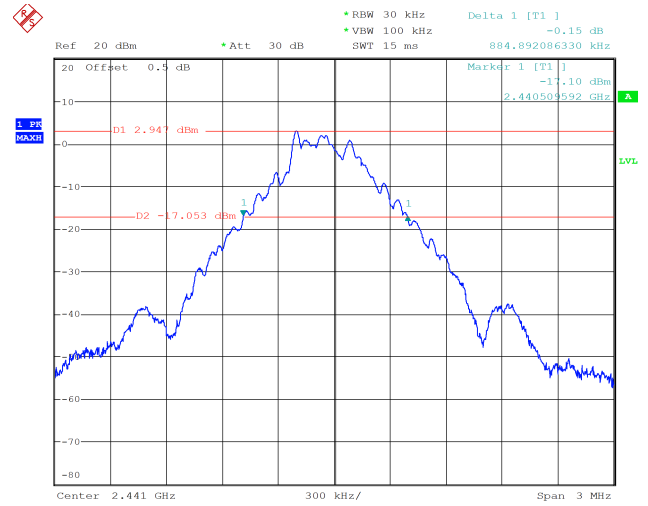
BDR

GFSK_Low 0.882 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:19:38

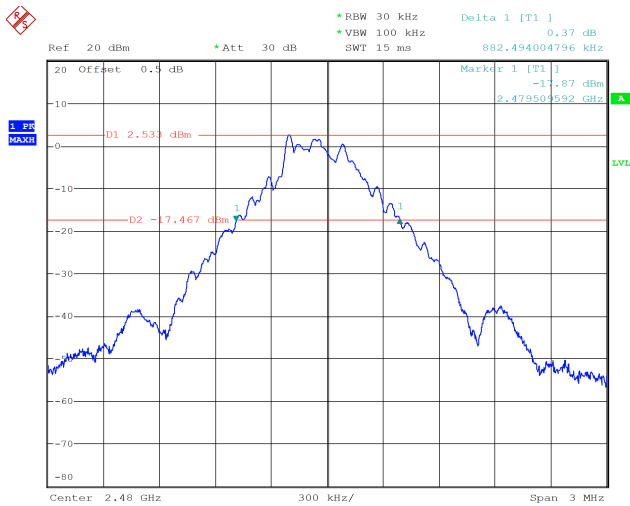
GFSK_Middle 0.885 MHz



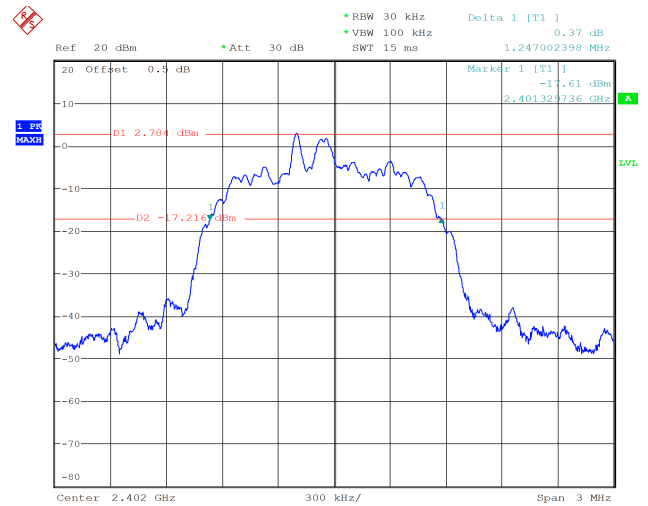
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:22:28

EDR

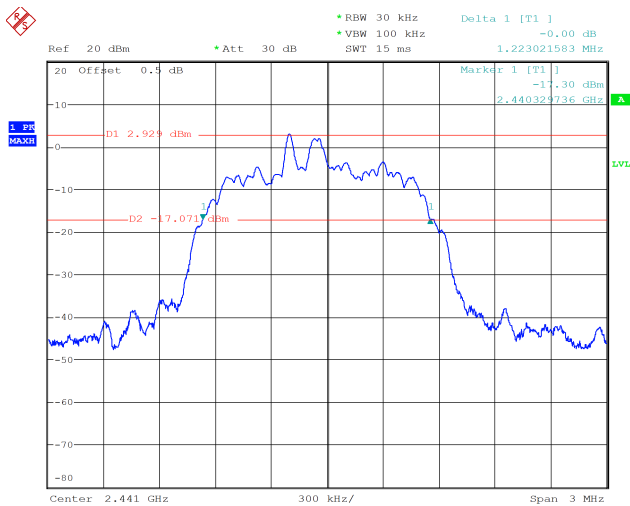
GFSK_High 0.882 MHz



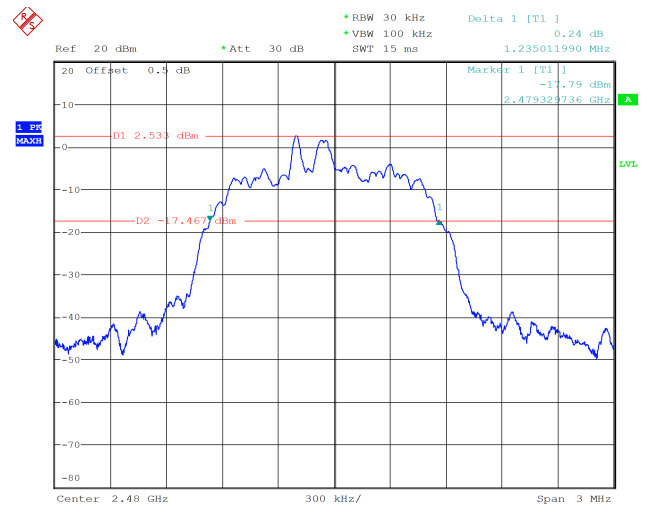
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:26:38

 $\pi/4$ -DQPSK_Low 1.247 MHz

Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:33:15

 $\pi/4$ -DQPSK_Middle 1.223 MHz

Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:35:41

 $\pi/4$ -DQPSK_High 1.235 MHz

Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:39:14

99% Occupied Bandwidth

BDR

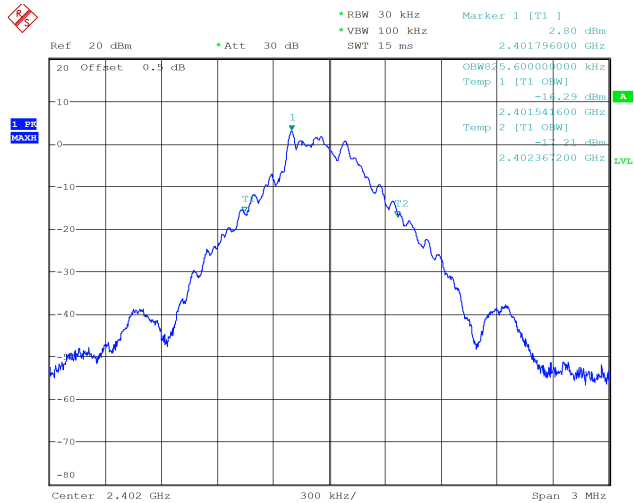
Mode	99% OBW (MHz)
GFSK_Low	0.826
GFSK_Middle	0.826
GFSK_High	0.830

EDR

Mode	99% OBW (MHz)
$\pi/4$ -DQPSK_Low	1.159
$\pi/4$ -DQPSK_Middle	1.159
$\pi/4$ -DQPSK_High	1.159

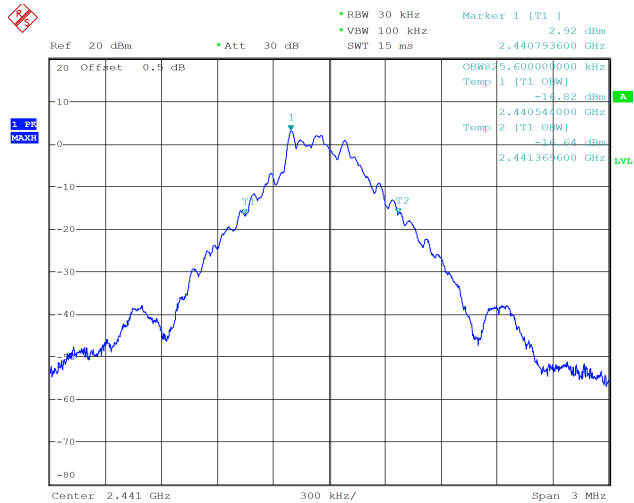
BDR

GFSK_Low 0.826 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:20:11

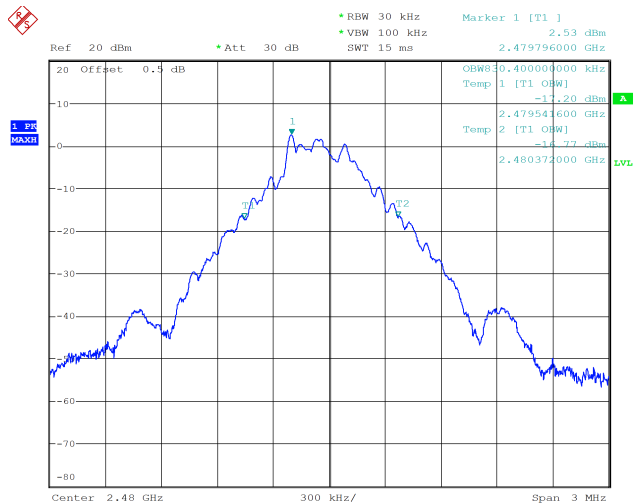
GFSK_Middle 0.826 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:23:13

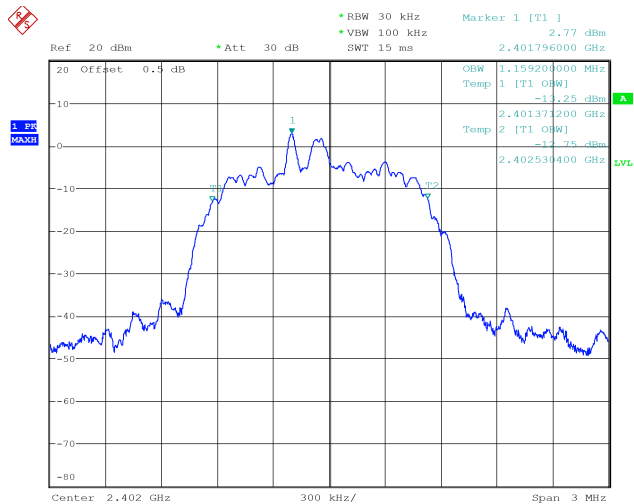
EDR

GFSK_High 0.830 MHz



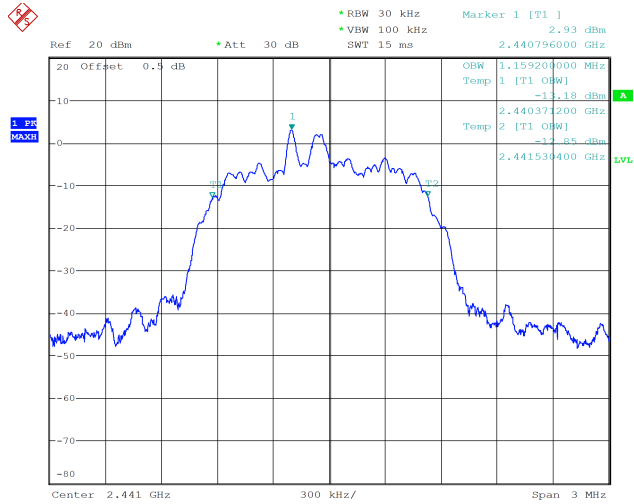
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:27:28

$\pi/4$ -DQPSK_Low 1.159 MHz



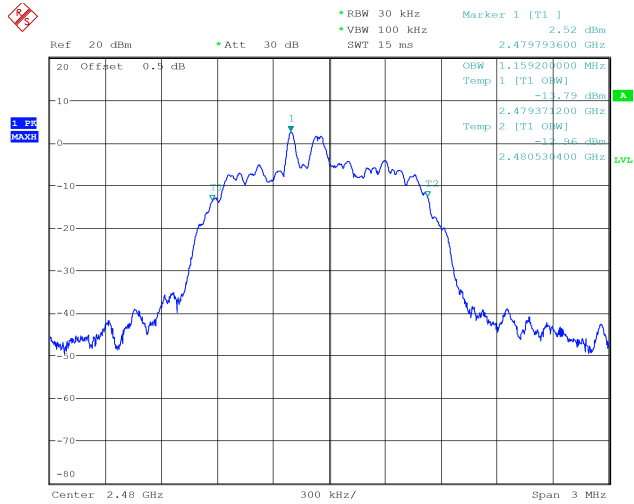
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:33:48

$\pi/4$ -DQPSK_Middle 1.159 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:36:15

$\pi/4$ -DQPSK_High 1.159 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:39:46

Channel Separation**BDR**

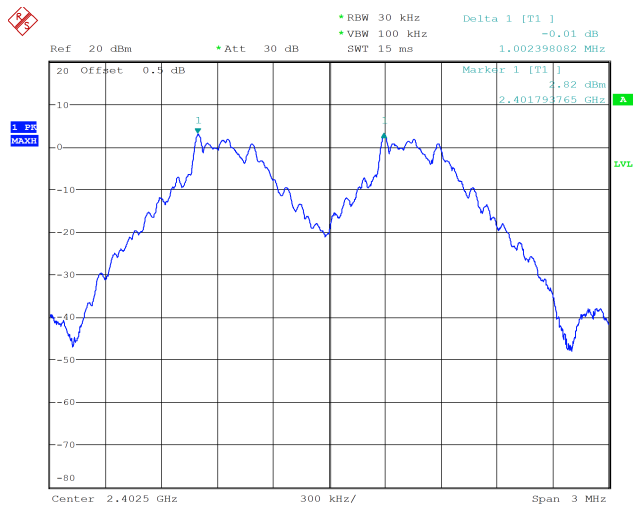
Mode	Value (MHz)	Limit (MHz)	Result
GFSK_Low	1.002	0.588	Pass
GFSK_Middle	1.000	0.590	Pass
GFSK_High	1.002	0.588	Pass

EDR

Mode	Value (MHz)	Limit (MHz)	Result
$\pi/4$ -DQPSK_Low	1.002	0.831	Pass
$\pi/4$ -DQPSK_Middle	1.002	0.815	Pass
$\pi/4$ -DQPSK_High	1.005	0.823	Pass

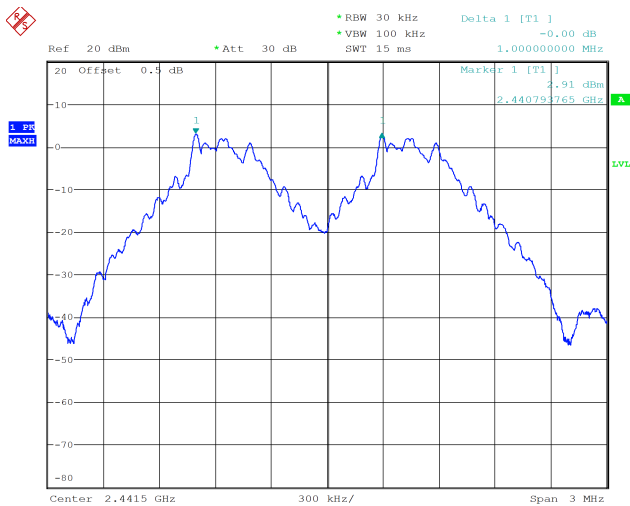
BDR

GFSK_Low 1.002 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:21:28

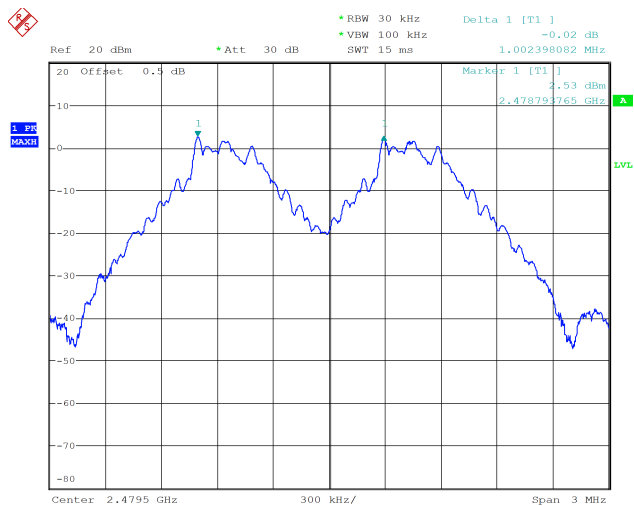
GFSK_Middle 1.000 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:24:03

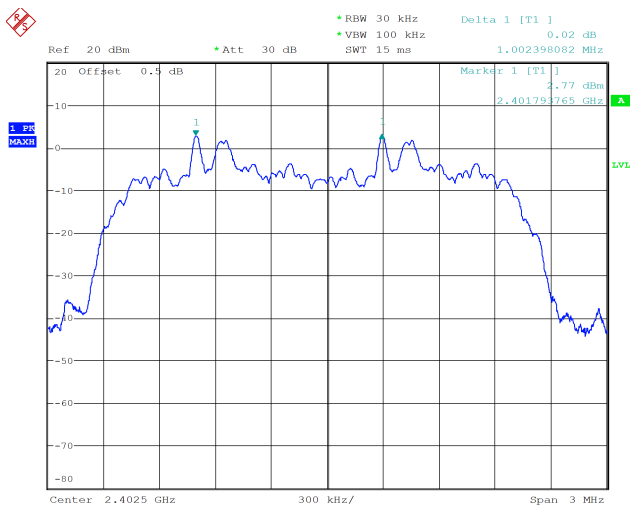
EDR

GFSK_High 1.002 MHz



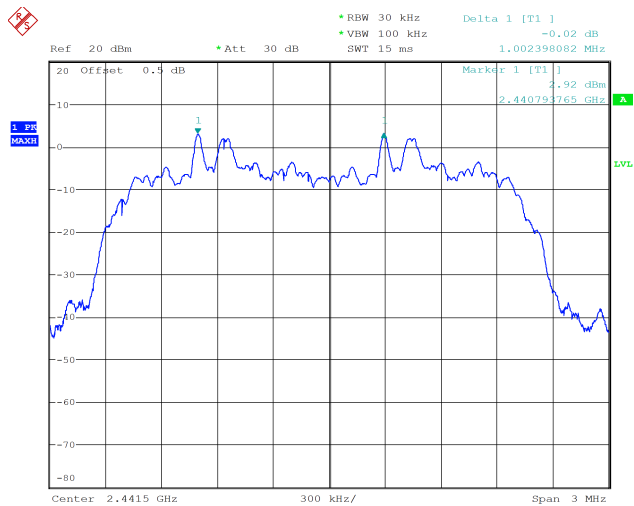
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:28:18

$\pi/4$ -DQPSK_Low 1.002 MHz



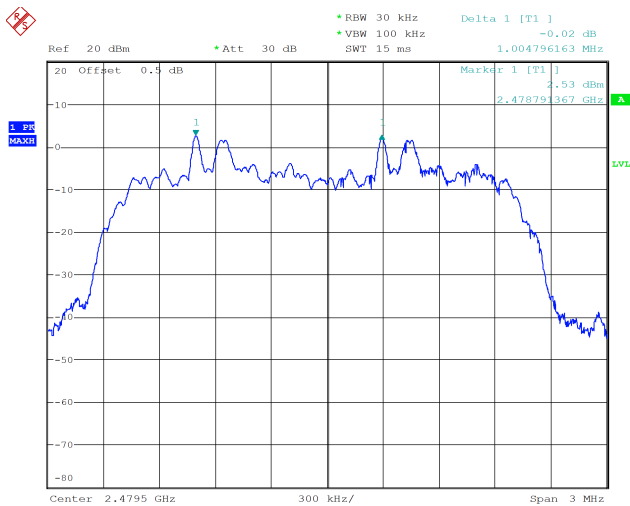
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:34:42

$\pi/4$ -DQPSK_Middle 1.002 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:37:05

$\pi/4$ -DQPSK_High 1.005 MHz



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:40:31

Number of Hopping Frequency

BDR

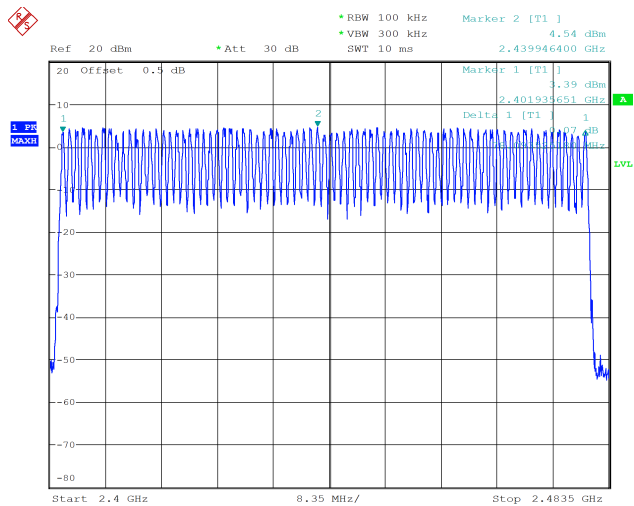
Mode	Value	Limit	Result
GFSK_Hopping	79	15	Pass

EDR

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

BDR

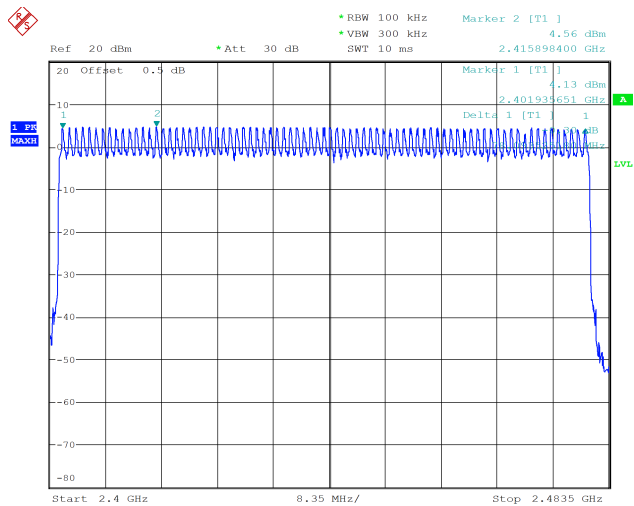
GFSK_Hopping 79



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 18:01:18

EDR

$\pi/4$ -DQPSK_Hopping 79



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 18:17:38

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	0.265	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH5	2.914	0.311	0.400	Pass

Note:

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

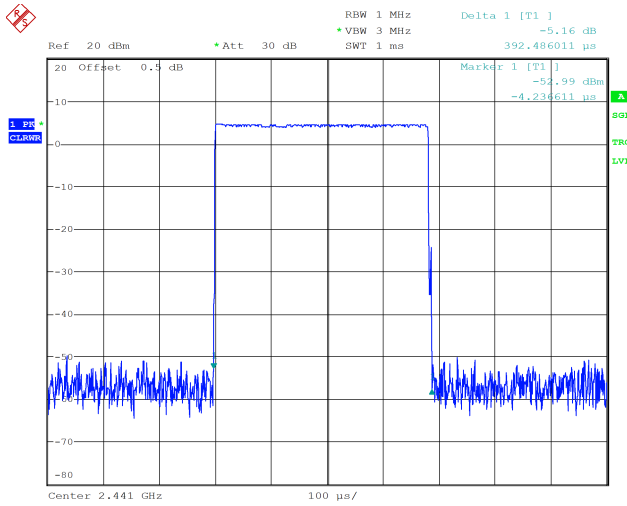
DH3:Dwell time=Pulse time (ms) $\times$ (1600/4/79) $\times$ 31.6 s

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

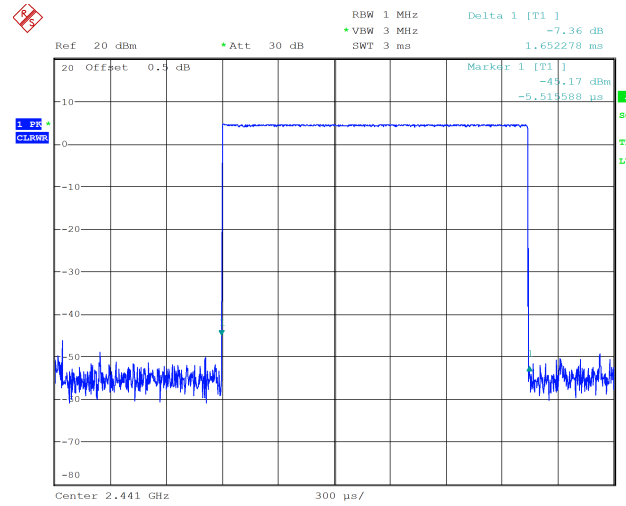
2DH1: Dwell time=Pulse time (ms) $\times$ (1600/2/79) $\times$ 31.6 s

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

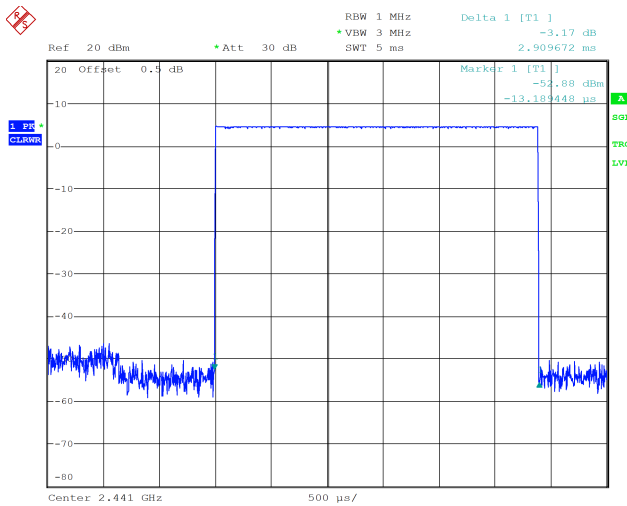
2DH5: Dwell time=Pulse time (ms) $\times$ (1600/6/79) $\times$ 31.6 s

BDR**GFSK_Hopping_DH1 0.392ms**

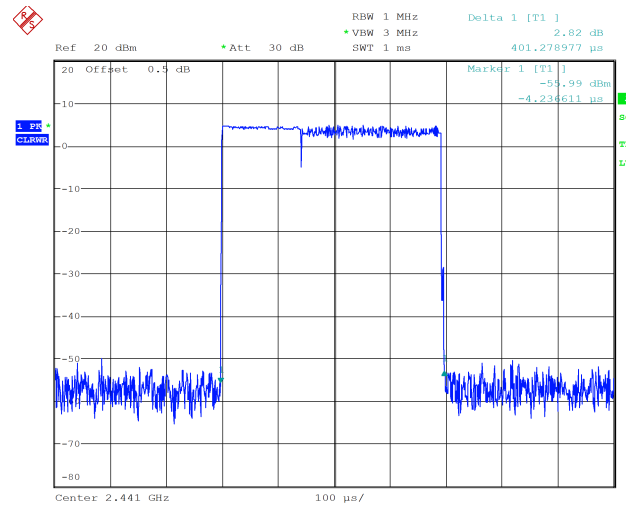
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
 Date: 2.FEB.2024 17:50:22

GFSK_Hopping_DH3 1.652ms

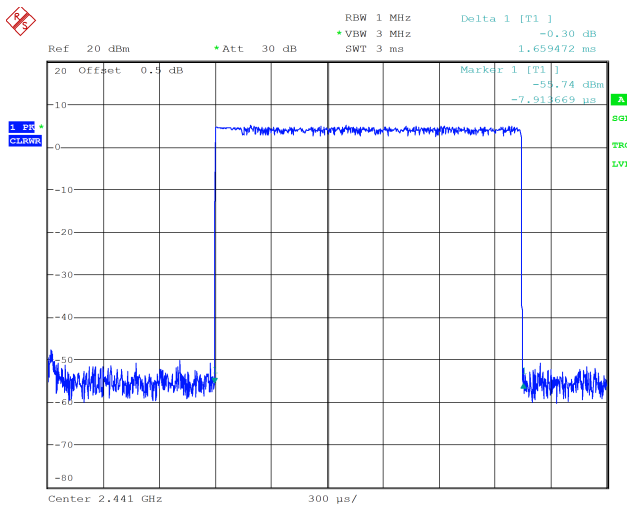
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
 Date: 2.FEB.2024 17:52:17

EDR**GFSK_Hopping_DH5 2.910ms**

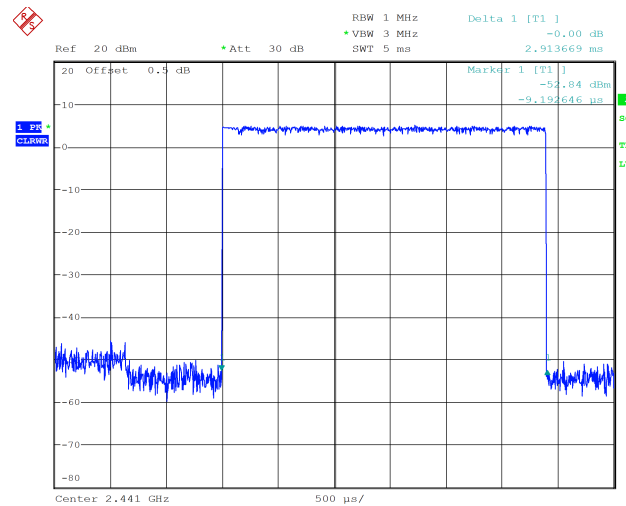
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
 Date: 2.FEB.2024 17:53:28

 $\pi/4$ -DQPSK_Hopping_2DH1 0.401ms

Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
 Date: 2.FEB.2024 17:55:29

 $\pi/4$ -DQPSK_Hopping_2DH3 1.659ms

Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
 Date: 2.FEB.2024 17:56:49

 $\pi/4$ -DQPSK_Hopping_2DH5 2.914ms

Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
 Date: 2.FEB.2024 17:58:14

Maximum Conducted Output Power**BDR**

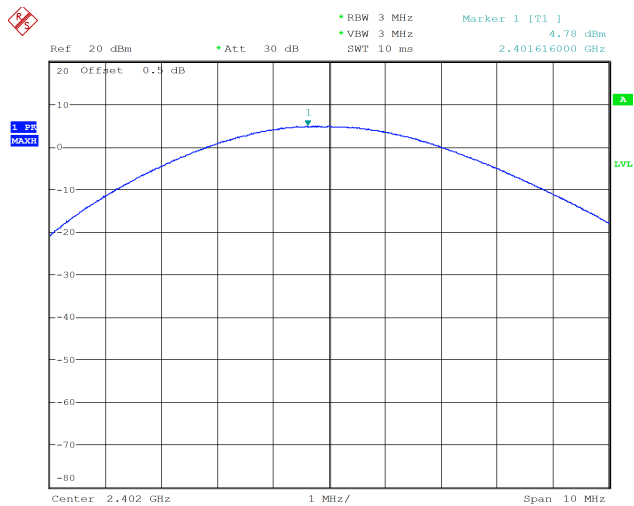
Mode	Value (dBm)	Limit (dBm)	Result
GFSK_Low	4.78	21.00	Pass
GFSK_Middle	4.82	21.00	Pass
GFSK_High	4.39	21.00	Pass

EDR

Mode	Value (dBm)	Limit (dBm)	Result
$\pi/4$ -DQPSK_Low	5.23	21.00	Pass
$\pi/4$ -DQPSK_Middle	5.32	21.00	Pass
$\pi/4$ -DQPSK_High	4.91	21.00	Pass

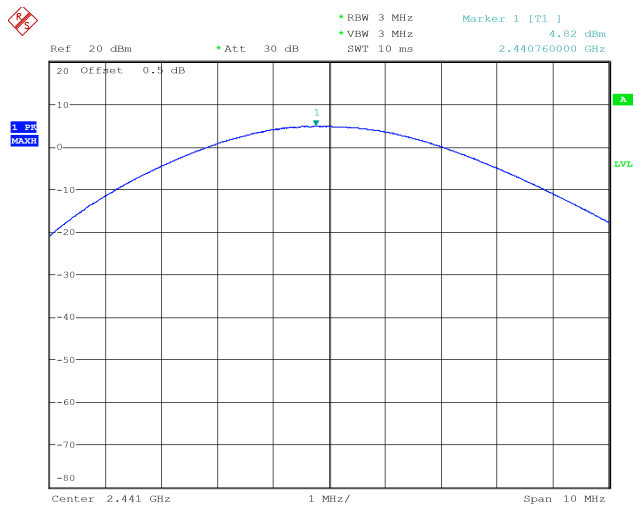
BDR

GFSK_Low 4.78 dBm



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:17:43

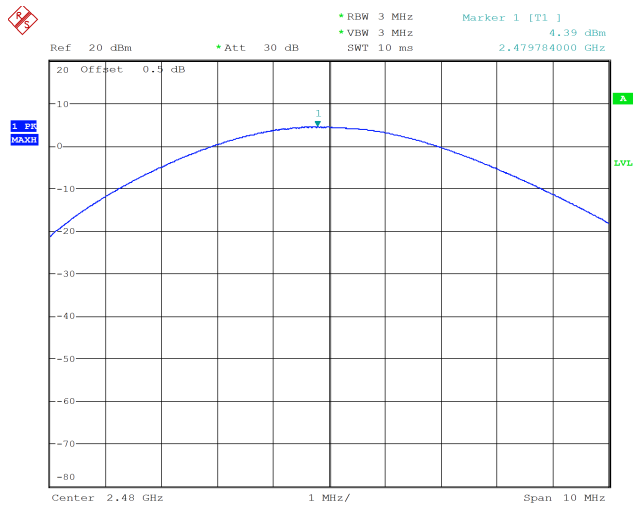
GFSK_Middle 4.82 dBm



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:21:56

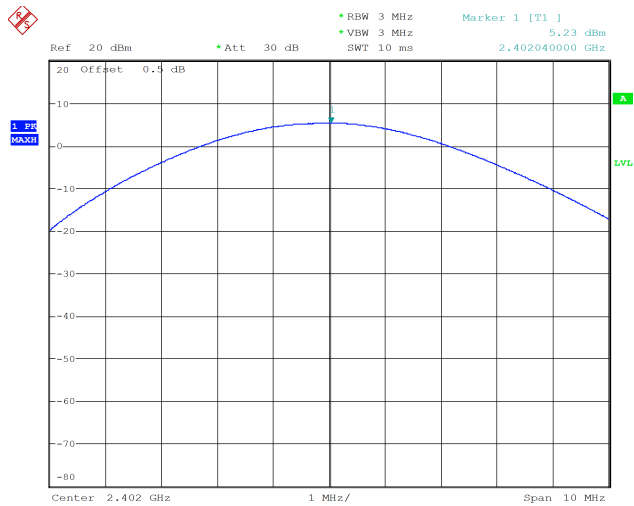
EDR

GFSK_High 4.39 dBm



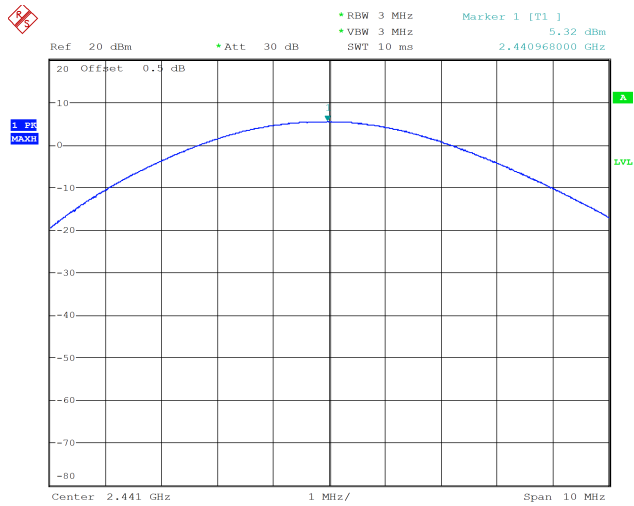
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:24:25

$\pi/4$ -DQPSK_Low 5.23 dBm



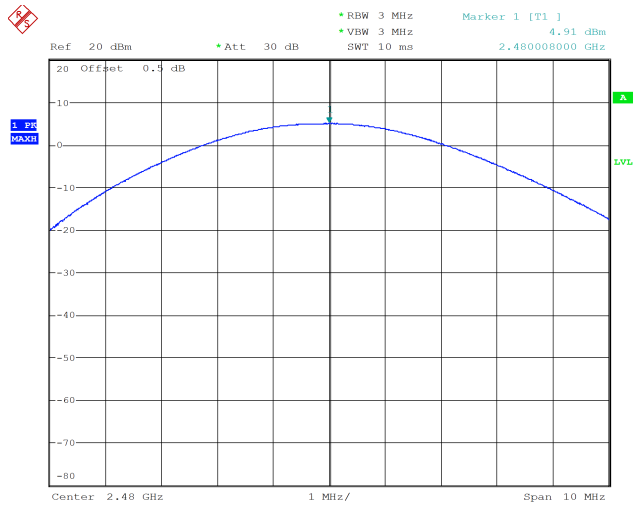
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:31:27

$\pi/4$ -DQPSK_Middle 5.32 dBm



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:35:09

$\pi/4$ -DQPSK_High 4.91 dBm



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:37:27

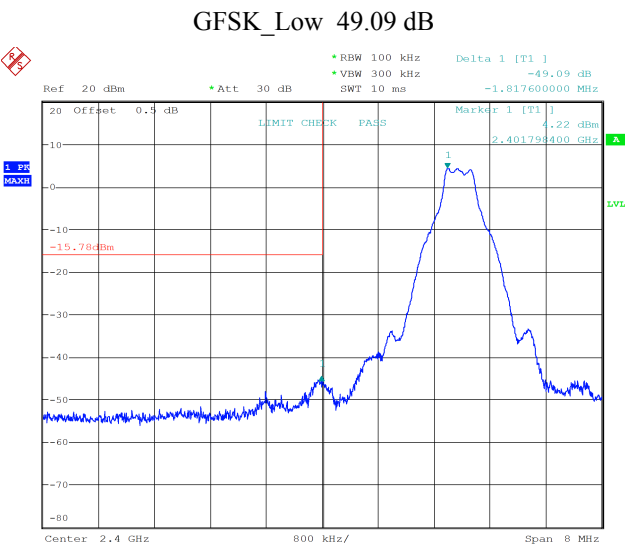
100 kHz Bandwidth of Frequency Band Edge**BDR**

Mode	Value (dB)	Limit (dB)	Result
GFSK_Low	49.09	20.00	Pass
GFSK_High	55.82	20.00	Pass
GFSK_Hopping_Lower	49.98	20.00	Pass
GFSK_Hopping_Upper	55.31	20.00	Pass

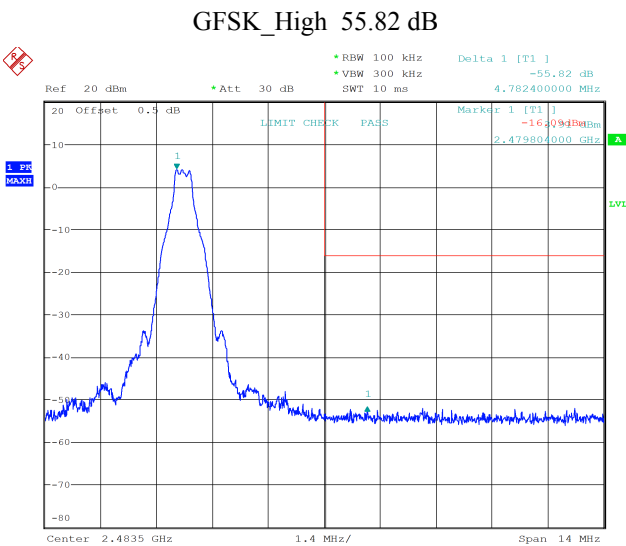
EDR

Mode	Value (dB)	Limit (dB)	Result
$\pi/4$ -DQPSK_Low	48.18	20.00	Pass
$\pi/4$ -DQPSK_High	56.18	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Lower	49.69	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Upper	55.99	20.00	Pass

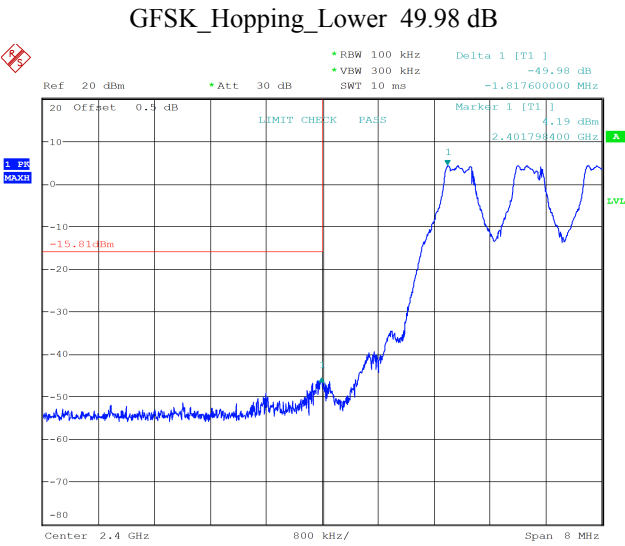
BDR



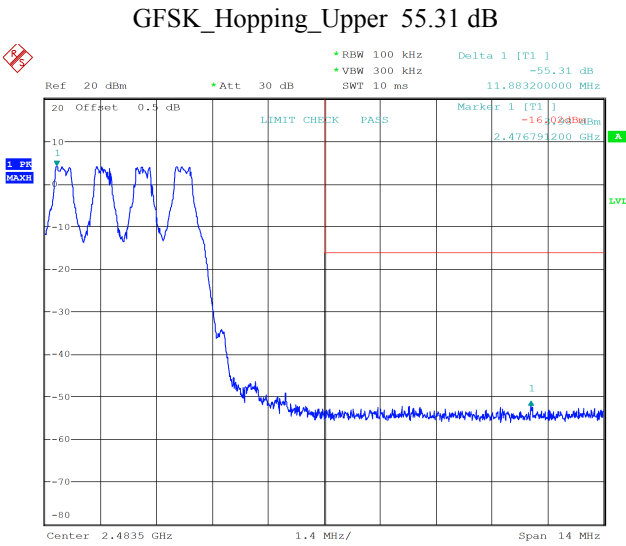
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:19:00



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:25:45

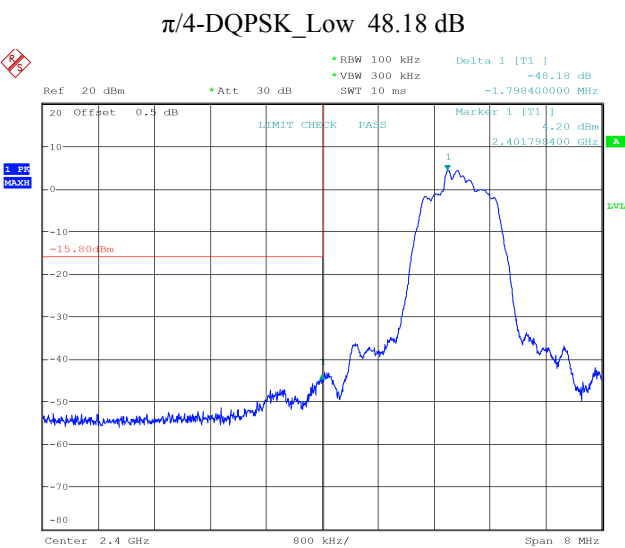


Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:29:20

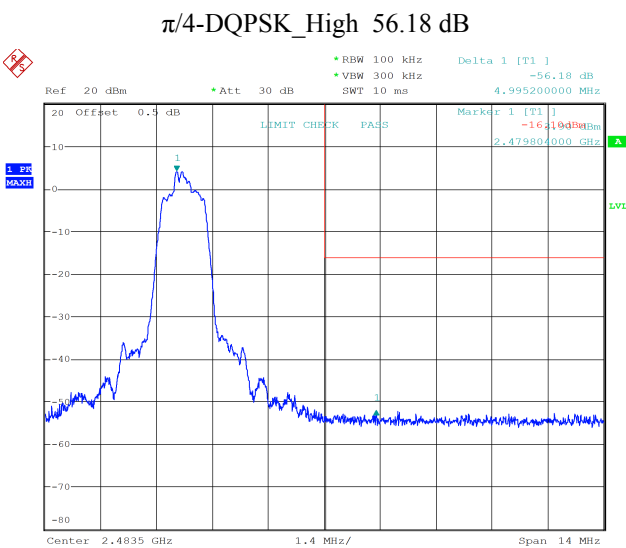


Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:30:40

EDR

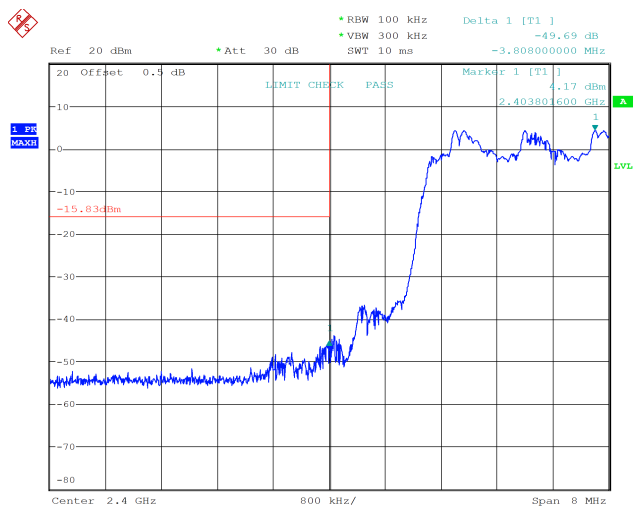


Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:32:34



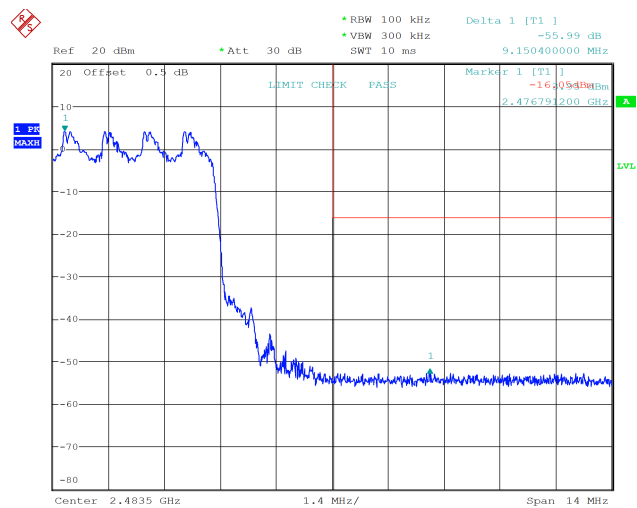
Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:38:40

$\pi/4$ -DQPSK_Hopping_Lower 49.69 dB



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:41:37

$\pi/4$ -DQPSK_Hopping_Upper 55.99 dB



Comment: ProjectNo.:CR240104183-RF Tester:Lingling Li
Date: 2.FEB.2024 17:42:57