

FCC Part 15.247

Test Information:

Serial No.:	2EK3-2	Test Date:	2023/12/29~2024/01/03
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23.5-24.8	Relative Humidity: (%)	58.7-59	ATM Pressure: (kPa)	101.4-101.6
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/03/31	2024/03/30
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).

Tester:

Arthur Su

Reviewer:

panda sun

20 dB Emission Bandwidth**BDR**

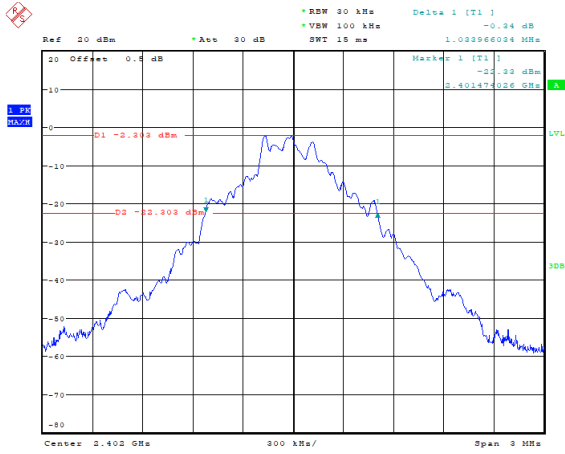
Mode	Value (MHz)
GFSK_Low	1.034
GFSK_Middle	1.034
GFSK_High	1.049

EDR

Mode	Value (MHz)
$\pi/4$ -DQPSK_Low	1.292
$\pi/4$ -DQPSK_Middle	1.307
$\pi/4$ -DQPSK_High	1.301

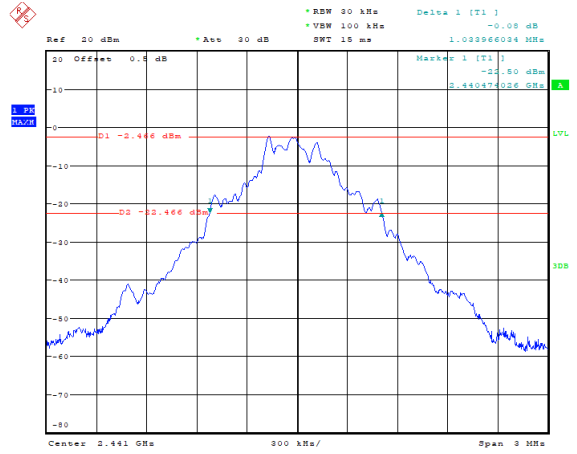
BDR

GFSK_Low 1.034 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:04:57

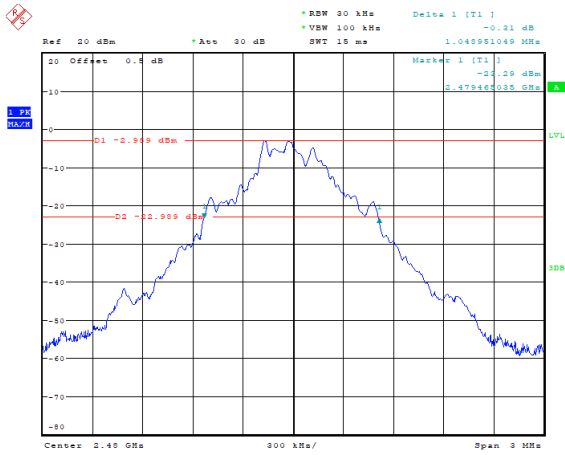
GFSK_Middle 1.034 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 14:03:39

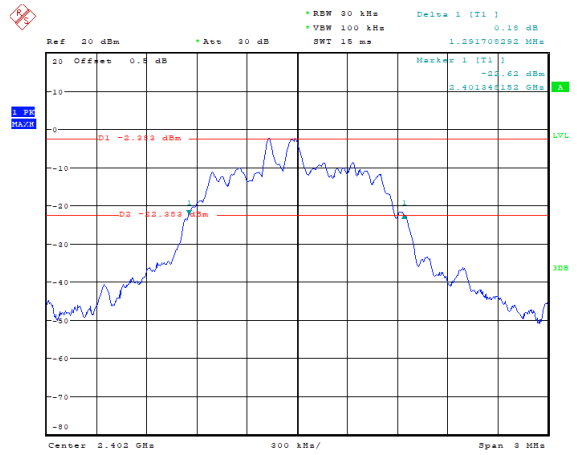
EDR

GFSK_High 1.049 MHz



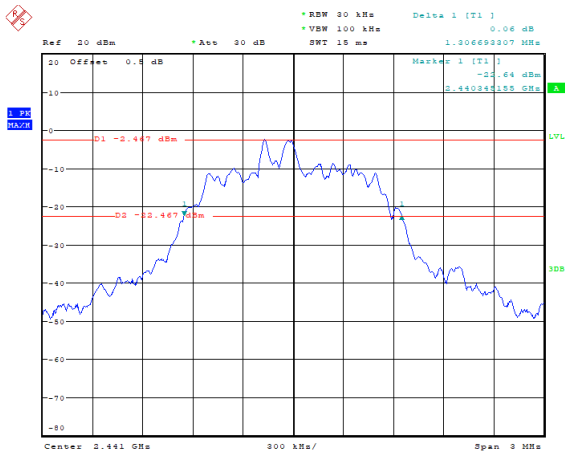
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:10:28

$\pi/4$ -DQPSK_Low 1.292 MHz



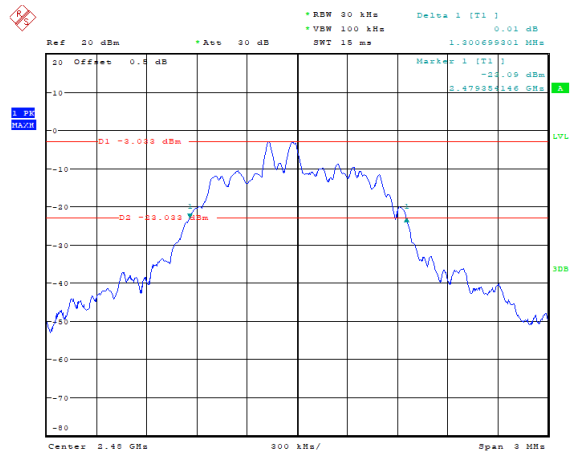
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 14:04:44

$\pi/4$ -DQPSK_Middle 1.307 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 14:05:32

$\pi/4$ -DQPSK_High 1.301 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:25:13

99% Occupied Bandwidth**BDR**

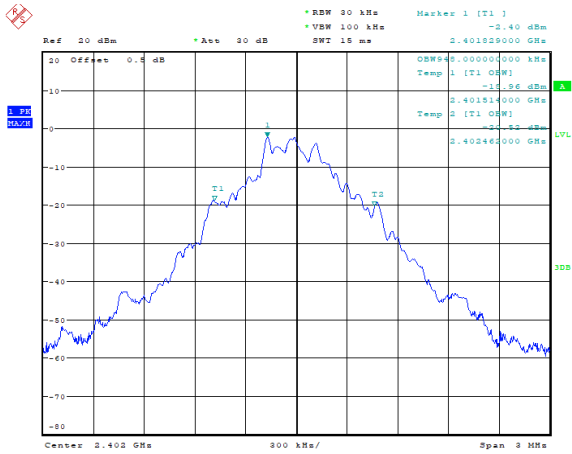
Mode	99% OBW (MHz)
GFSK_Low	0.948
GFSK_Middle	0.957
GFSK_High	0.969

EDR

Mode	99% OBW (MHz)
$\pi/4$ -DQPSK_Low	1.176
$\pi/4$ -DQPSK_Middle	1.203
$\pi/4$ -DQPSK_High	1.218

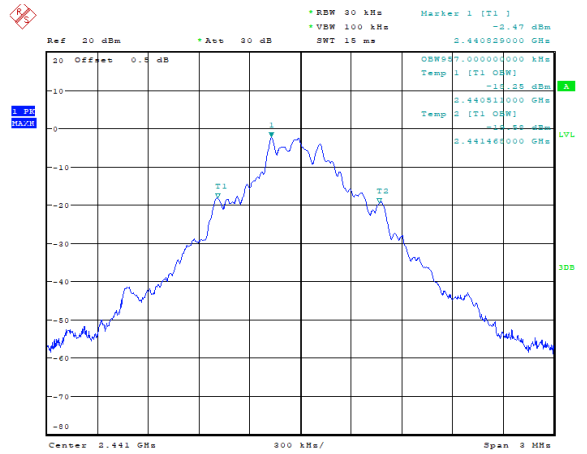
BDR

GFSK_Low 0.948 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 3.JAN.2024 09:19:34

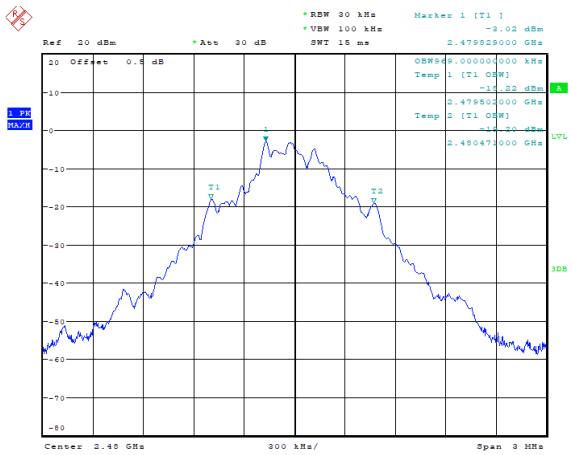
GFSK_Middle 0.957 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 3.JAN.2024 09:20:38

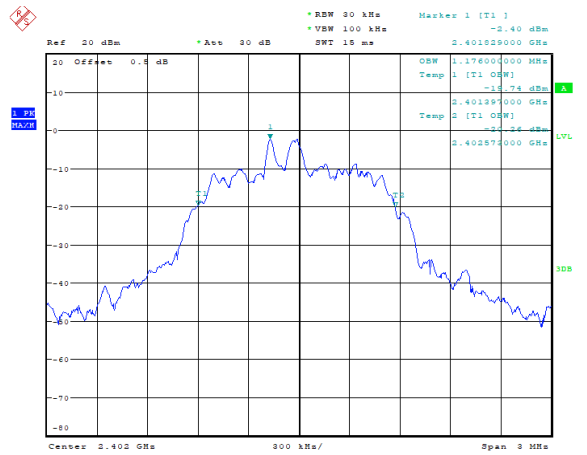
EDR

GFSK_High 0.969 MHz



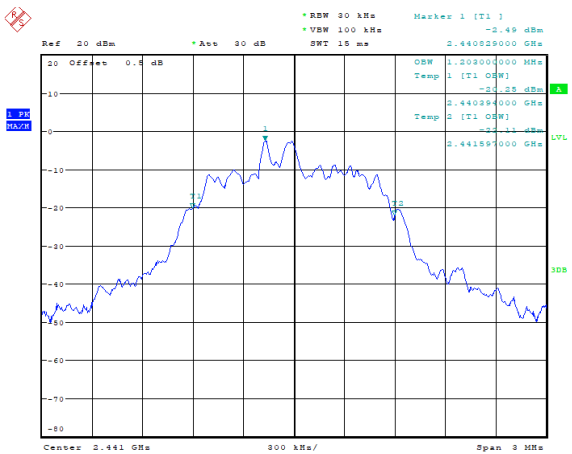
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 3.JAN.2024 09:21:23

$\pi/4$ -DQPSK_Low 1.176 MHz



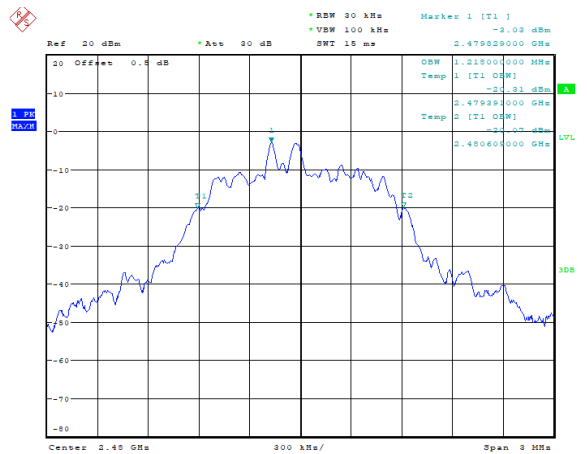
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 3.JAN.2024 09:22:07

$\pi/4$ -DQPSK_Middle 1.203 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 3.JAN.2024 09:23:04

$\pi/4$ -DQPSK_High 1.218 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 3.JAN.2024 09:23:41

Channel Separation**BDR**

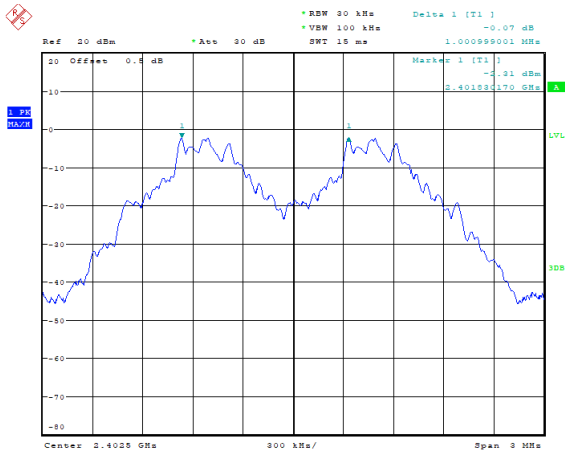
Mode	Value (MHz)	Limit (MHz)	Result
GFSK_Low	1.001	0.689	Pass
GFSK_Middle	1.004	0.691	Pass
GFSK_High	1.004	0.699	Pass

EDR

Mode	Value (MHz)	Limit (MHz)	Result
$\pi/4$ -DQPSK_Low	1.004	0.861	Pass
$\pi/4$ -DQPSK_Middle	1.004	0.869	Pass
$\pi/4$ -DQPSK_High	1.001	0.867	Pass

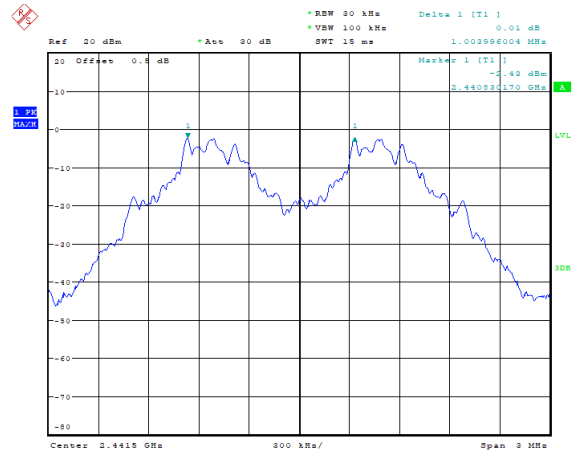
BDR

GFSK_Low 1.001 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:05:40

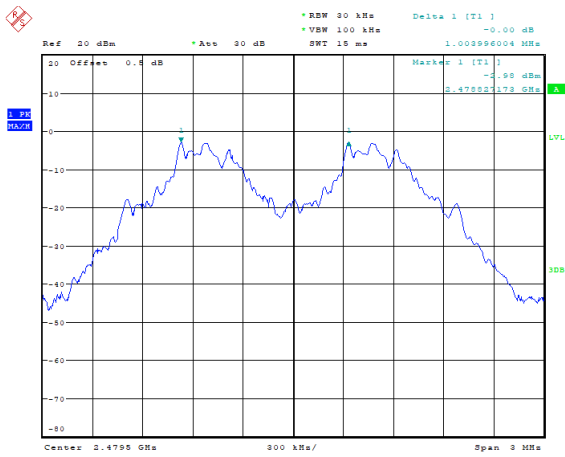
GFSK_Middle 1.004 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:07:51

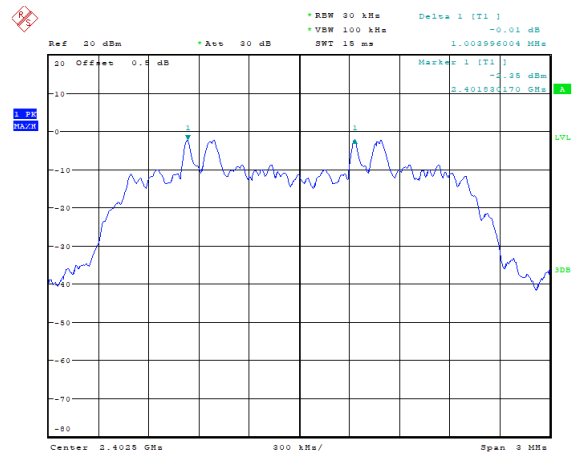
EDR

GFSK_High 1.004 MHz



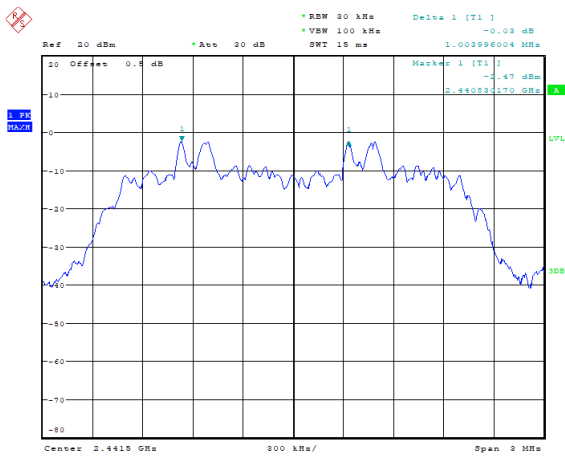
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:11:15

$\pi/4$ -DQPSK_Low 1.004 MHz



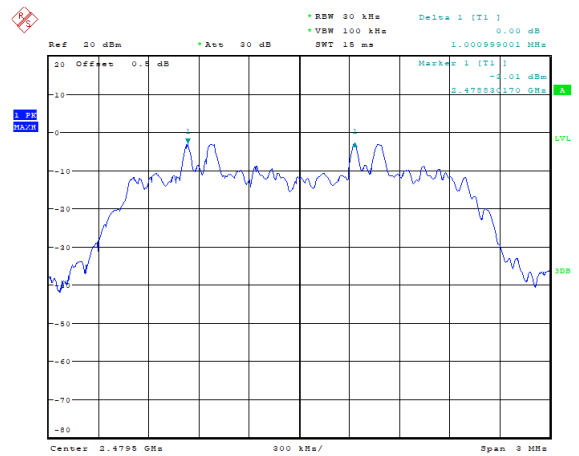
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:19:41

$\pi/4$ -DQPSK_Middle 1.004 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:21:48

$\pi/4$ -DQPSK_High 1.001 MHz



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:26:20

Number of Hopping Frequency**BDR**

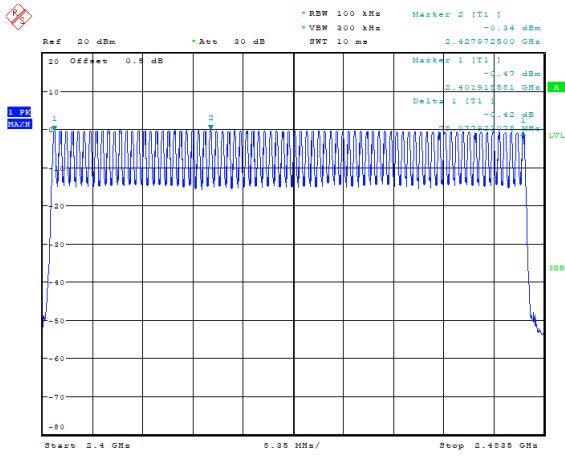
Mode	Value	Limit	Result
GFSK_Hopping	79	15	Pass

EDR

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

BDR

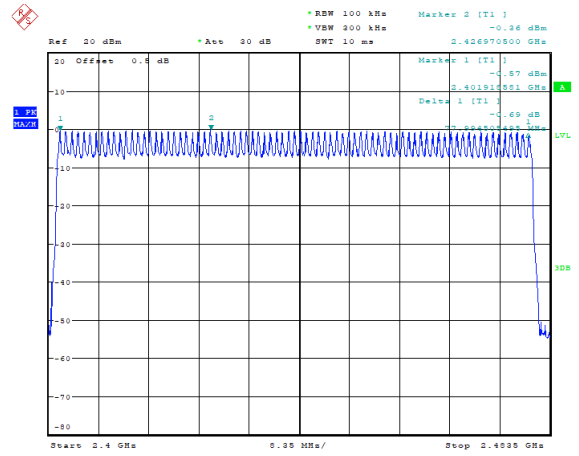
GFSK_Hopping 79



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29,DEC,2023 13:03:23

EDR

$\pi/4$ -DQPSK_Hopping 79



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29,DEC,2023 13:13:26

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

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
GFSK_Hopping_DH1	0.394	0.126	0.400	Pass
GFSK_Hopping_DH3	1.657	0.265	0.400	Pass
GFSK_Hopping_DH5	2.932	0.313	0.400	Pass

EDR

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
$\pi/4$ -DQPSK_Hopping_2DH1	0.404	0.129	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH3	1.663	0.266	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH5	2.937	0.313	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

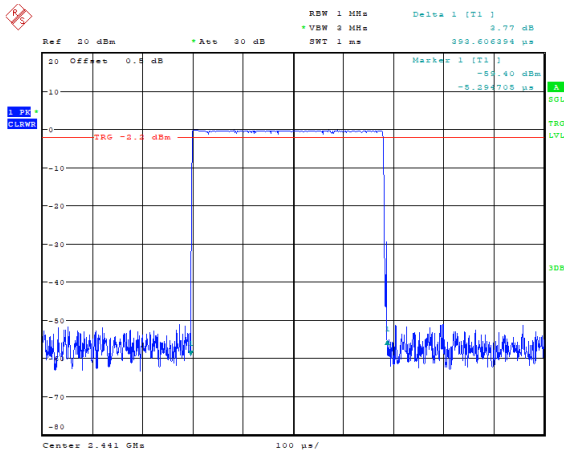
2DH1: Dwell time=Pulse time (ms) \times (1600/2/79) \times 31.6 s

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

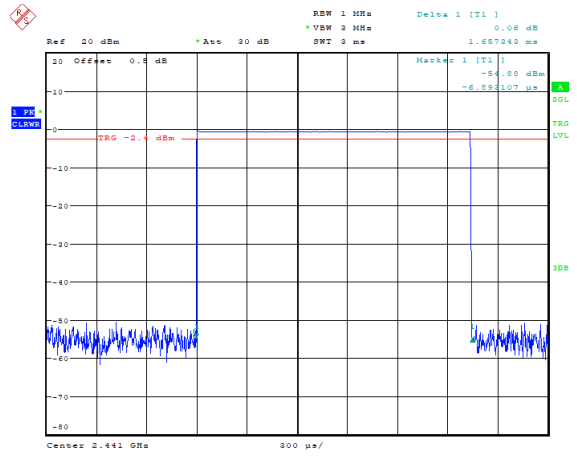
BDR

GFSK_Hopping_DH1 0.394ms



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 11:06:16

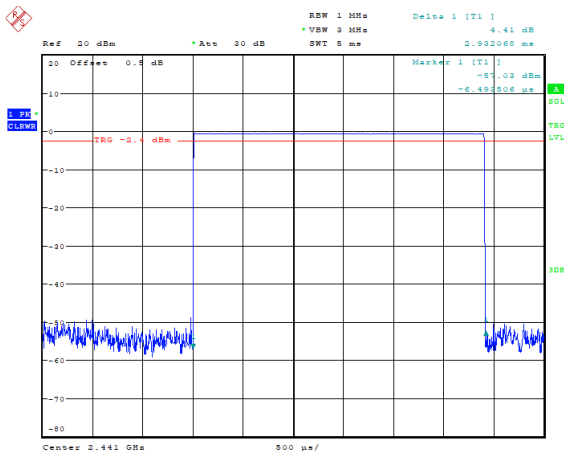
GFSK_Hopping_DH3 1.657ms



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 11:09:29

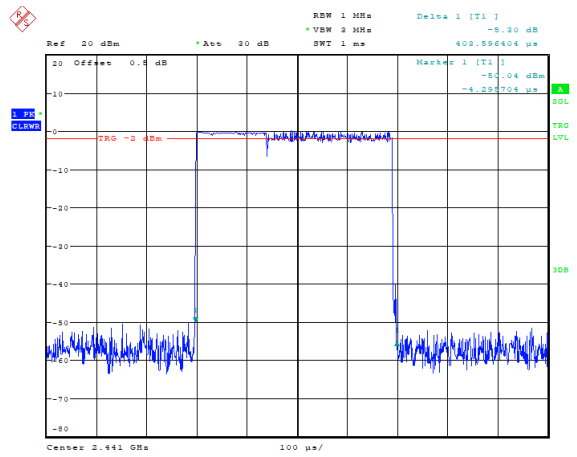
EDR

GFSK_Hopping_DH5 2.932ms



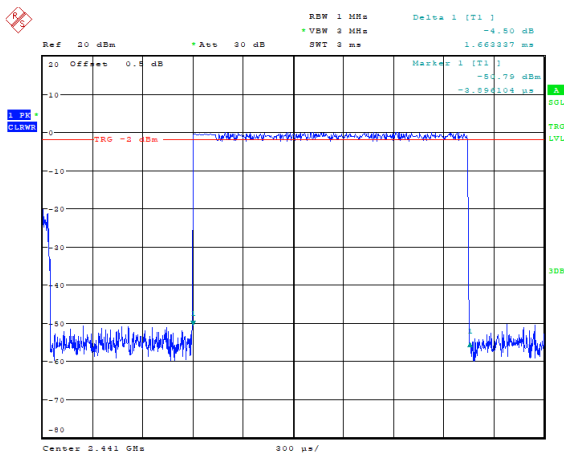
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 11:11:21

$\pi/4$ -DQPSK_Hopping_2DH1 0.404ms



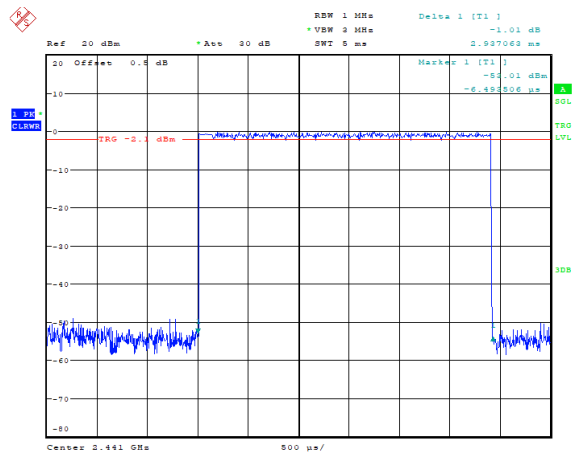
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 11:13:58

$\pi/4$ -DQPSK_Hopping_2DH3 1.663ms



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 11:15:26

$\pi/4$ -DQPSK_Hopping_2DH5 2.937ms



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 3.JANUARY.2024 09:40:08

Maximum Conducted Output Power**BDR**

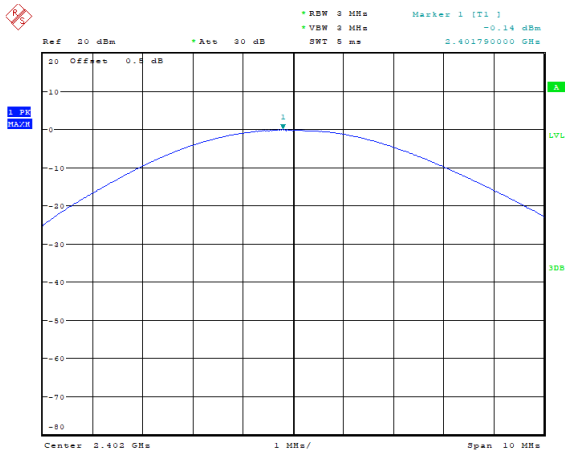
Mode	Value (dBm)	Limit (dBm)	Result
GFSK_Low	-0.14	21.00	Pass
GFSK_Middle	-0.13	21.00	Pass
GFSK_High	-0.60	21.00	Pass

EDR

Mode	Value (dBm)	Limit (dBm)	Result
$\pi/4$ -DQPSK_Low	0.52	21.00	Pass
$\pi/4$ -DQPSK_Middle	0.51	21.00	Pass
$\pi/4$ -DQPSK_High	0.06	21.00	Pass

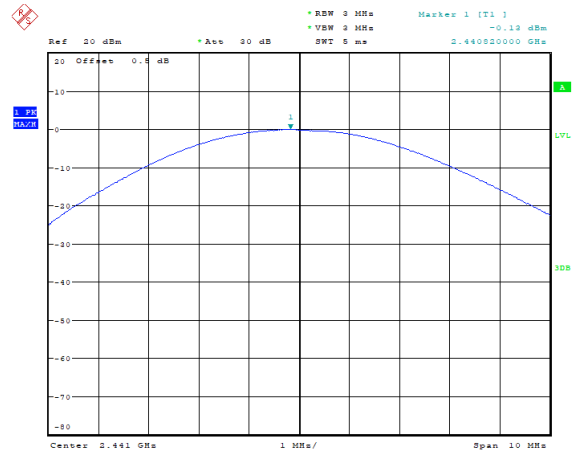
BDR

GFSK_Low -0.14 dBm



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:03:34

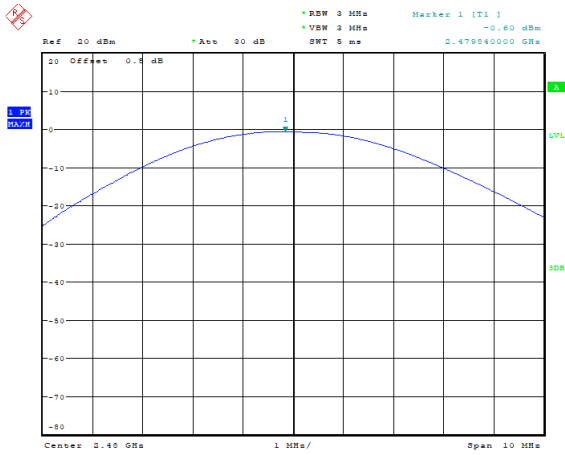
GFSK_Middle -0.13 dBm



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:06:24

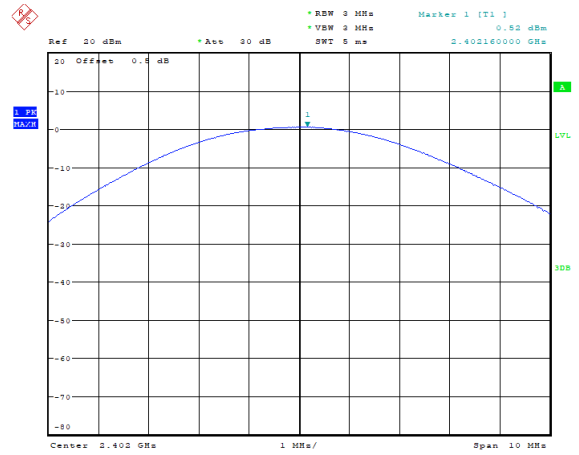
EDR

GFSK_High -0.60 dBm



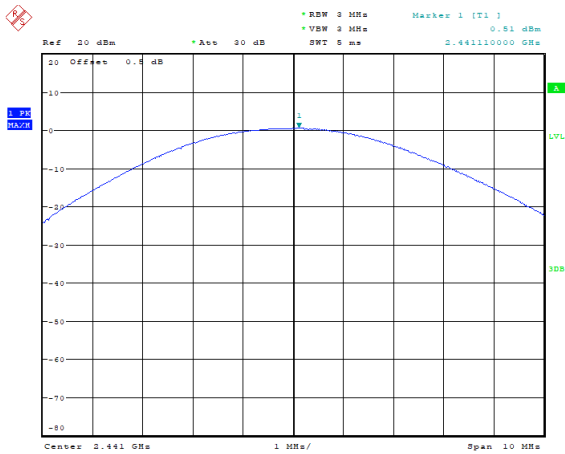
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:08:44

$\pi/4$ -DQPSK_Low 0.52 dBm



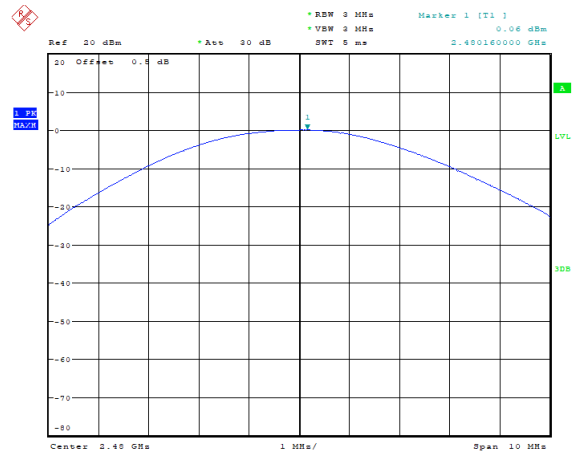
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:17:46

$\pi/4$ -DQPSK_Middle 0.51 dBm



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:20:21

$\pi/4$ -DQPSK_High 0.06 dBm



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DECEMBER.2023 10:23:30

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

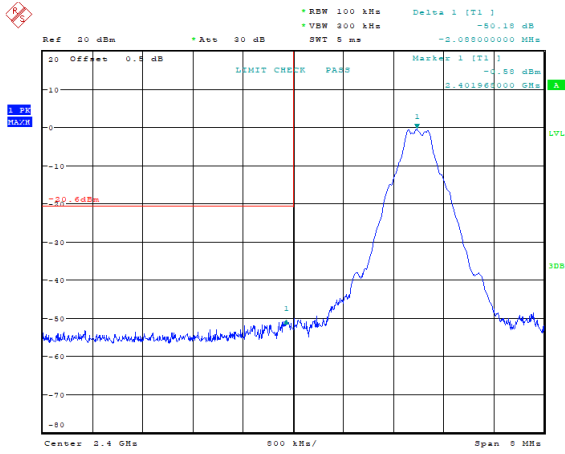
Mode	Value (dB)	Limit (dB)	Result
GFSK_Low	50.18	20.00	Pass
GFSK_High	51.73	20.00	Pass
GFSK_Hopping_Lower	49.47	20.00	Pass
GFSK_Hopping_Upper	51.88	20.00	Pass

EDR

Mode	Value (dB)	Limit (dB)	Result
$\pi/4$ -DQPSK_Low	49.56	20.00	Pass
$\pi/4$ -DQPSK_High	51.44	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Lower	50.03	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Upper	51.56	20.00	Pass

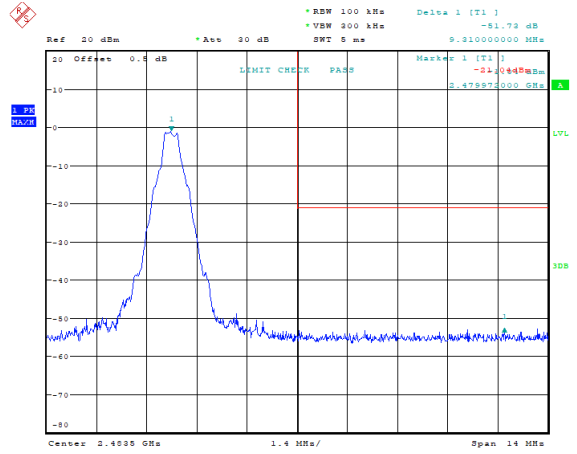
BDR

GFSK_Low 50.18 dB



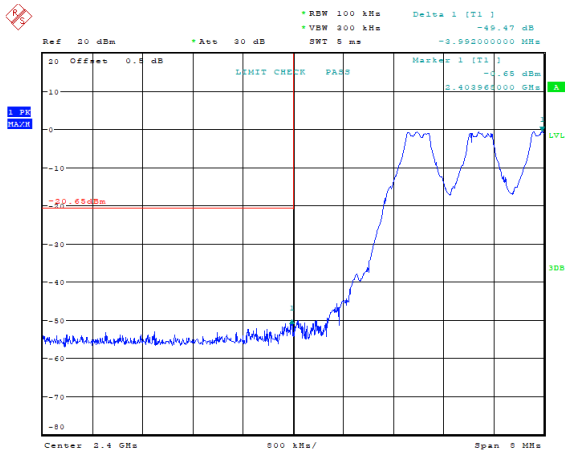
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DEC.2023 10:04:23

GFSK_High 51.73 dB



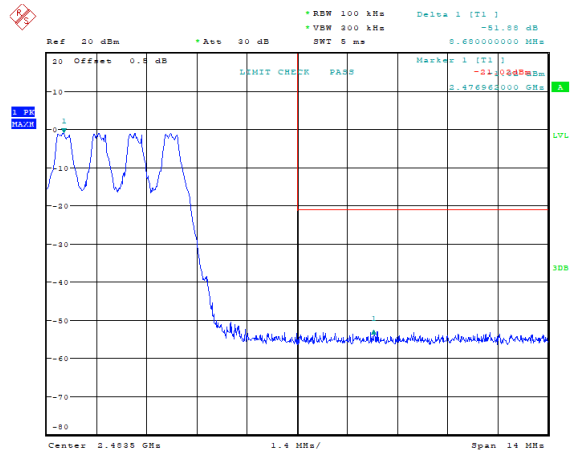
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DEC.2023 10:09:58

GFSK_Hopping_Lower 49.47 dB



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DEC.2023 10:14:37

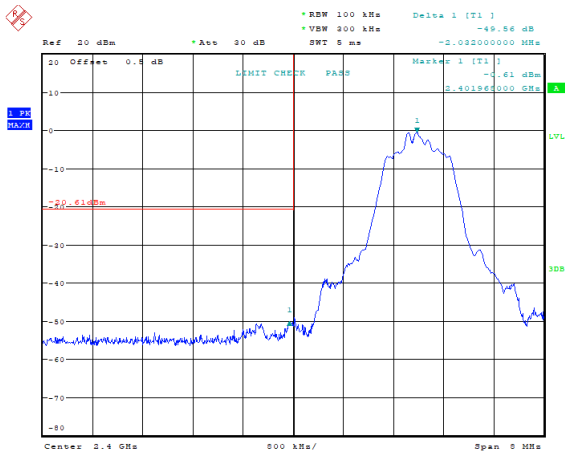
GFSK_Hopping_Upper 51.88 dB



ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DEC.2023 10:16:39

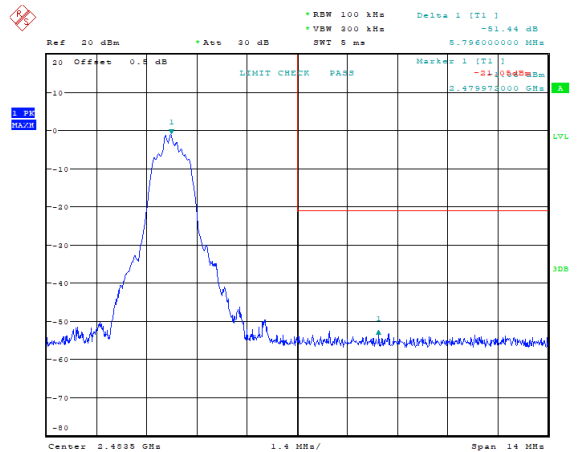
EDR

$\pi/4$ -DQPSK_Low 49.56 dB



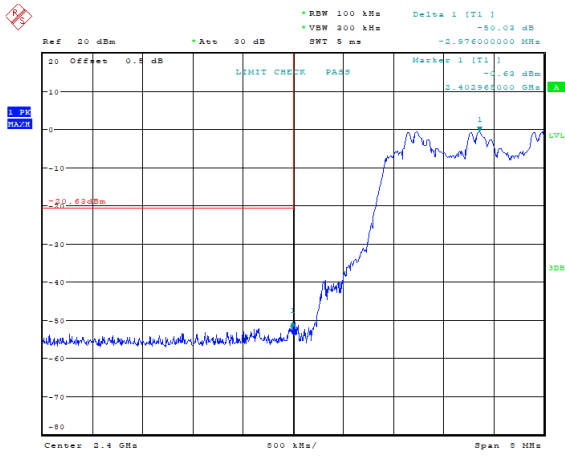
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DEC.2023 10:18:37

$\pi/4$ -DQPSK_High 51.44 dB



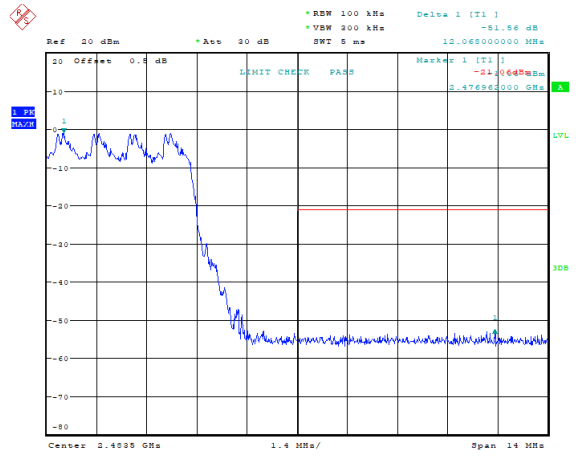
ProjectNo.:CR231168287-RF Tester:Arthur Su
Date: 29.DEC.2023 10:24:42

$\pi/4$ -DQPSK_Hopping_Lower 50.03 dB



ProjectNo.:CR231168287-RF Tester:Arthur Su
 Date: 29,DEC,2023 10:27:52

$\pi/4$ -DQPSK_Hopping_Upper 51.56 dB



ProjectNo.:CR231168287-RF Tester:Arthur Su
 Date: 29,DEC,2023 10:29:34