

FCC Part 15.247

Test Information:

Serial No.:	2DXO-7	Test Date:	2024/01/03
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.5	Relative Humidity: (%)	54	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	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

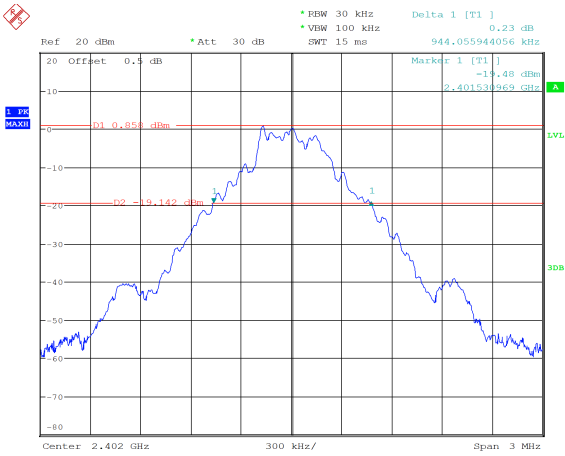
Mode	Value (MHz)
GFSK_Low	0.944
GFSK_Middle	0.944
GFSK_High	0.944

EDR

Mode	Value (MHz)
$\pi/4$ -DQPSK_Low	1.256
$\pi/4$ -DQPSK_Middle	1.253
$\pi/4$ -DQPSK_High	1.259
8DPSK_Low	1.226
8DPSK_Middle	1.229
8DPSK_High	1.226

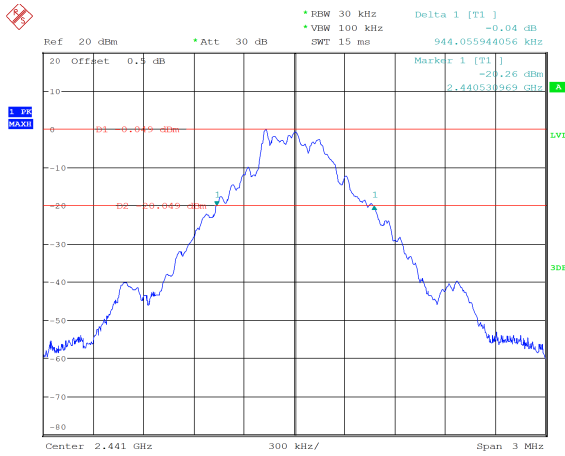
BDR

GFSK_Low 0.944 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:27:30

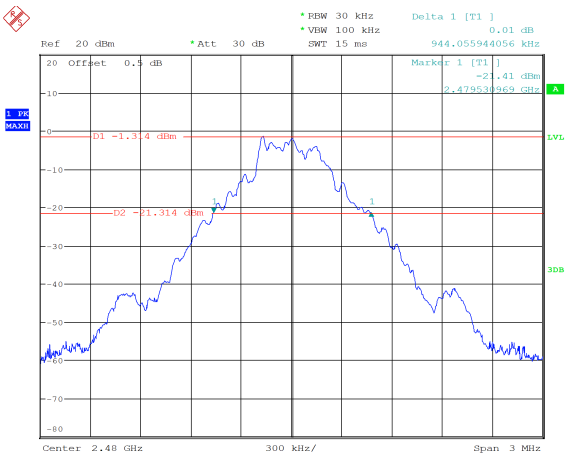
GFSK_Middle 0.944 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:29:11

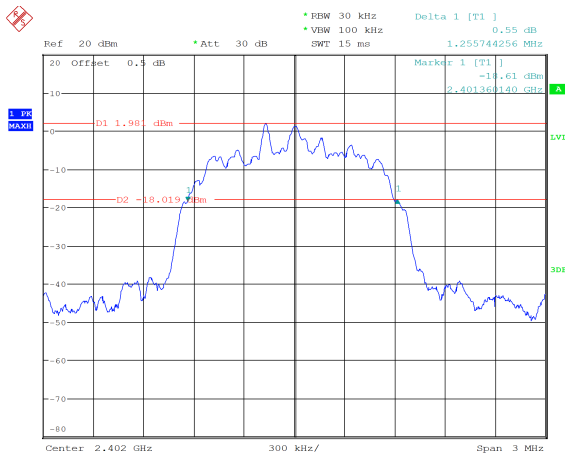
EDR

GFSK_High 0.944 MHz



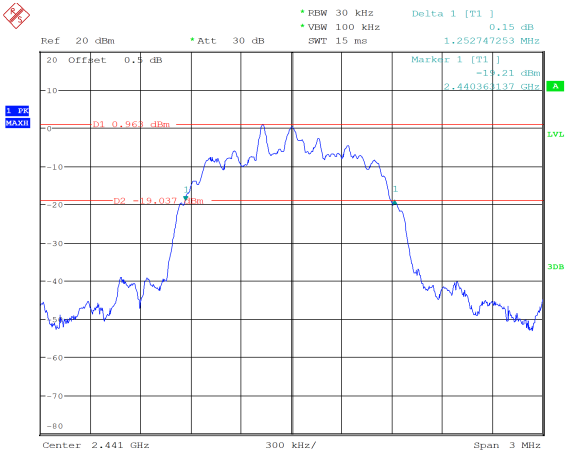
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:32:05

$\pi/4$ -DQPSK_Low 1.256 MHz



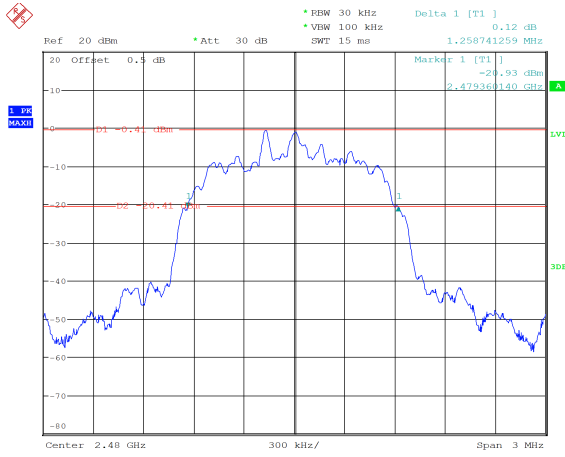
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:36:18

$\pi/4$ -DQPSK_Middle 1.253 MHz



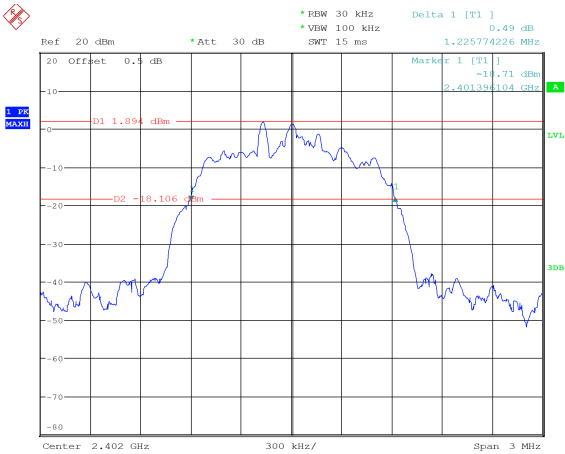
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:37:50

$\pi/4$ -DQPSK_High 1.259 MHz



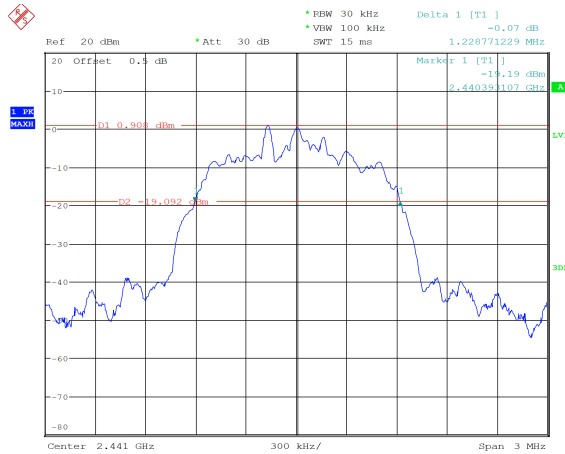
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:40:47

8DPSK_Low 1.226 MHz



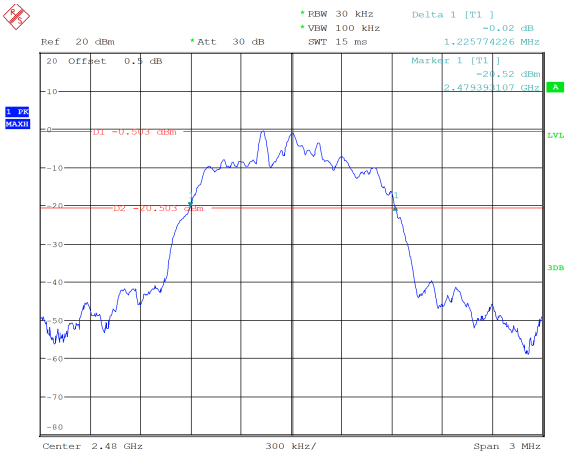
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:43:37

8DPSK_Middle 1.229 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:45:19

8DPSK_High 1.226 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:48:49

99% Occupied Bandwidth**BDR**

Mode	99% OBW (MHz)
GFSK_Low	0.858
GFSK_Middle	0.858
GFSK_High	0.855

EDR

Mode	99% OBW (MHz)
$\pi/4$ -DQPSK_Low	1.161
$\pi/4$ -DQPSK_Middle	1.158
$\pi/4$ -DQPSK_High	1.158
8DPSK_Low	1.146
8DPSK_Middle	1.143
8DPSK_High	1.143

Channel Separation

BDR

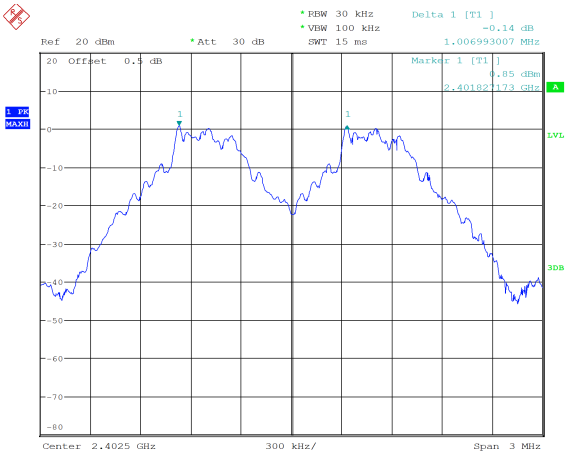
Mode	Value (MHz)	Limit (MHz)	Result
GFSK_Low	1.007	0.629	Pass
GFSK_Middle	1.001	0.629	Pass
GFSK_High	1.001	0.629	Pass

EDR

Mode	Value (MHz)	Limit (MHz)	Result
$\pi/4$ -DQPSK_Low	1.001	0.837	Pass
$\pi/4$ -DQPSK_Middle	1.001	0.835	Pass
$\pi/4$ -DQPSK_High	1.007	0.839	Pass
8DPSK_Low	1.004	0.817	Pass
8DPSK_Middle	1.007	0.819	Pass
8DPSK_High	1.004	0.817	Pass

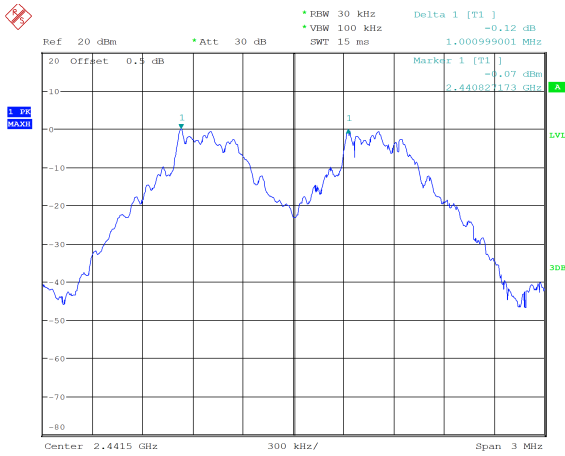
BDR

GFSK_Low 1.007 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:08:19

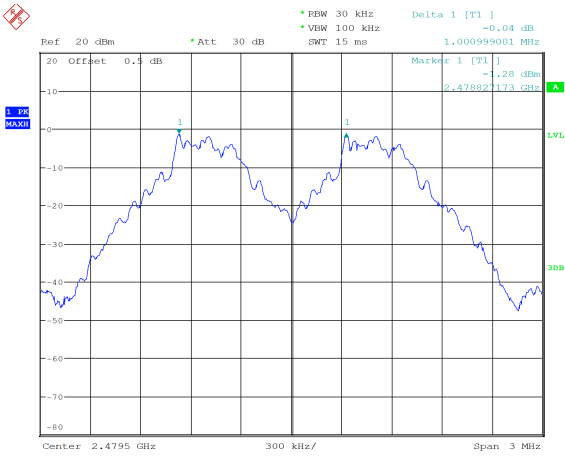
GFSK_Middle 1.001 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:09:36

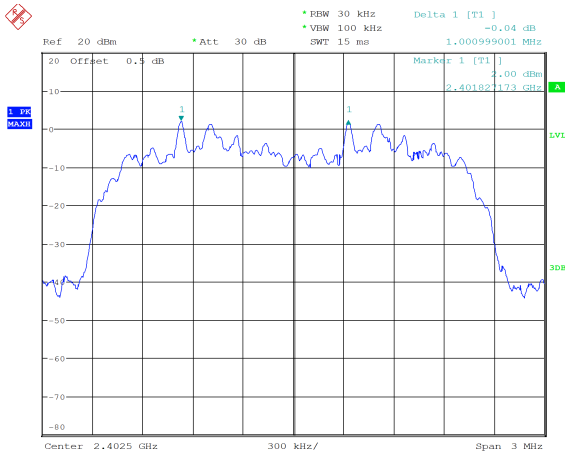
EDR

GFSK_High 1.001 MHz



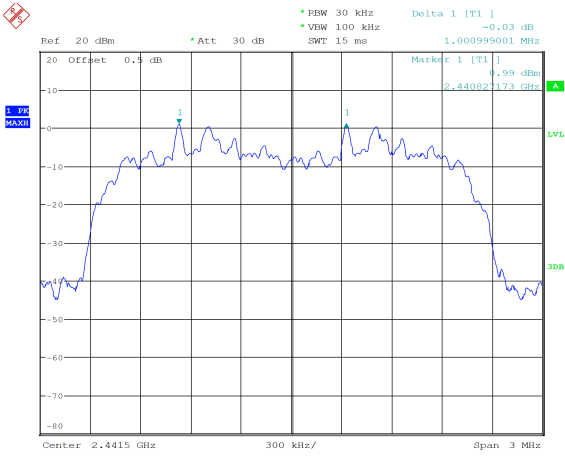
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:11:12

$\pi/4$ -DQPSK_Low 1.001 MHz



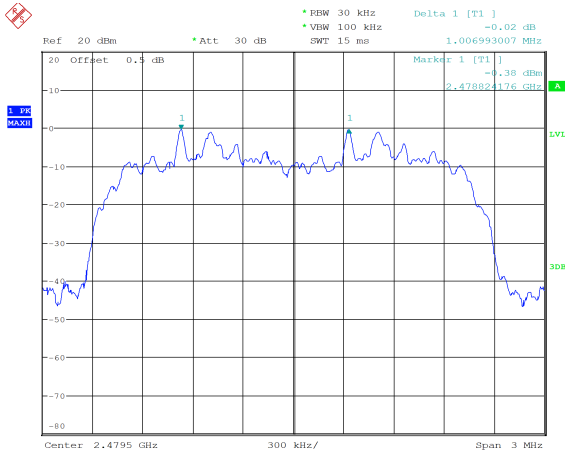
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:12:33

$\pi/4$ -DQPSK_Middle 1.001 MHz



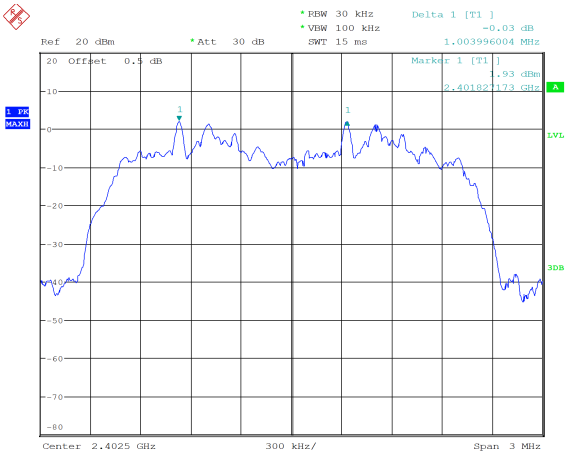
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:14:05

$\pi/4$ -DQPSK_High 1.007 MHz



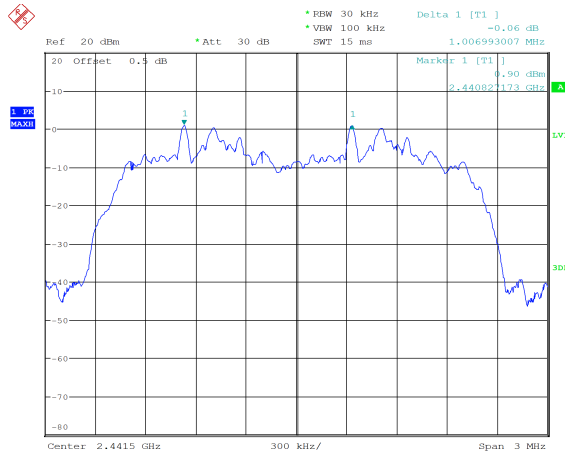
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:15:24

8DPSK_Low 1.004 MHz



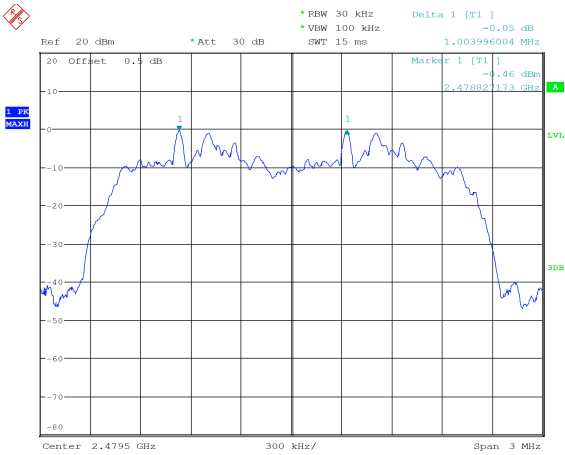
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:17:15

8DPSK_Middle 1.007 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:18:27

8DPSK_High 1.004 MHz



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:19:50

Number of Hopping Frequency**BDR**

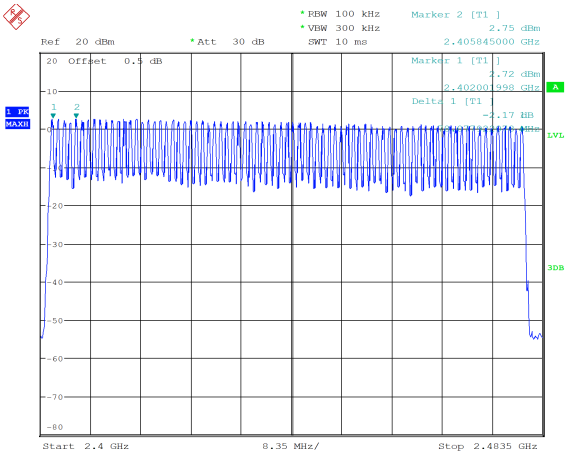
Mode	Value	Limit	Result
GFSK_Hopping	79	15	Pass

EDR

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

BDR

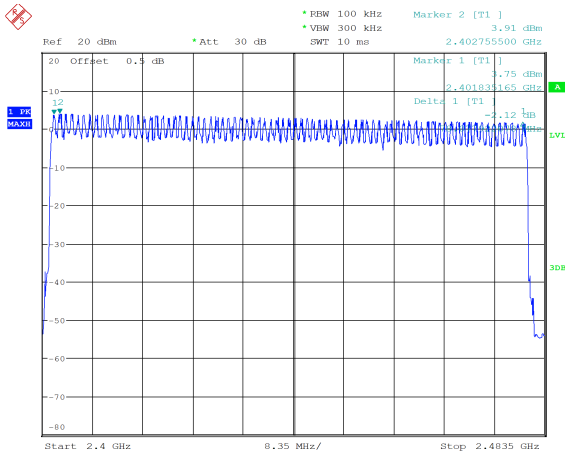
GFSK_Hopping 79



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:58:41

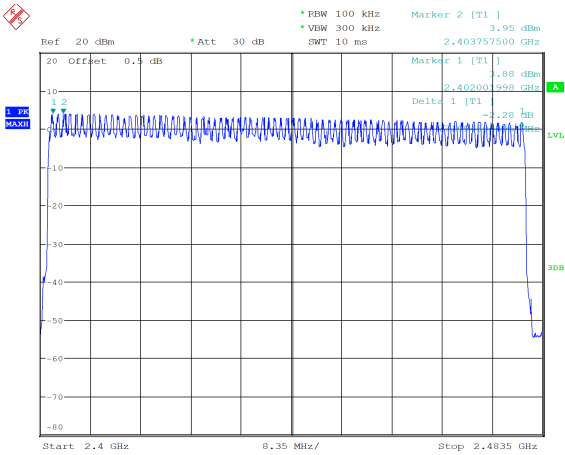
EDR

$\pi/4$ -DQPSK_Hopping 79



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 22:12:06

8DPSK_Hopping 79



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 22:28:10

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	1.651	0.264	0.400	Pass
GFSK_Hopping_DH5	2.922	0.312	0.400	Pass

EDR

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
$\pi/4$ -DQPSK_Hopping_2DH1	0.407	0.130	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH3	1.666	0.267	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH5	2.932	0.313	0.400	Pass
8DPSK_Hopping_3DH1	0.407	0.130	0.400	Pass
8DPSK_Hopping_3DH3	1.660	0.266	0.400	Pass
8DPSK_Hopping_3DH5	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

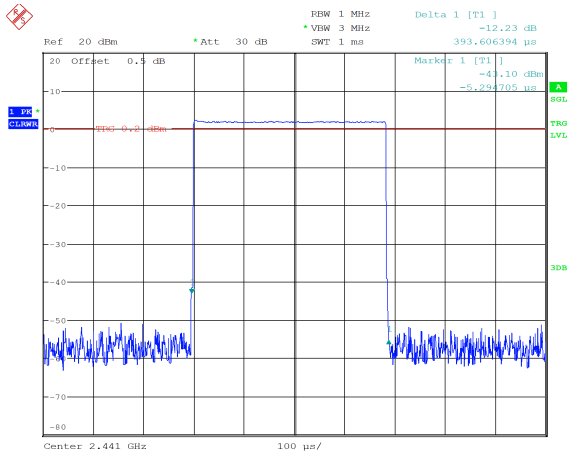
2DH3: Dwell time=Pulse time (ms) $\times$ (1600/4/79) $\times$ 31.6 s

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

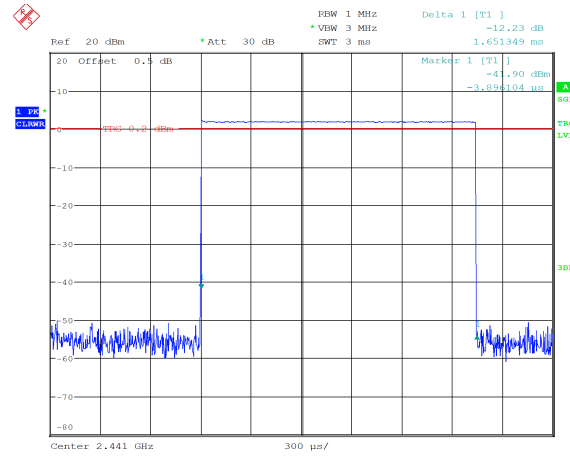
3DH1: Dwell time=Pulse time (ms) $\times$ (1600/2/79) $\times$ 31.6 s

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

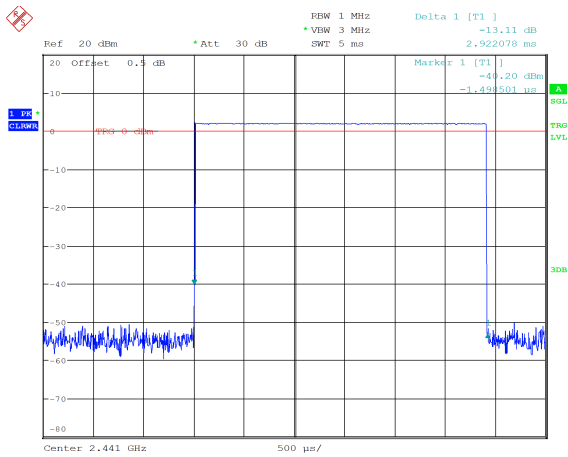
3DH5: Dwell time=Pulse time (ms) $\times$ (1600/6/79) $\times$ 31.6 s

BDR**GFSK_Hopping_DH1 0.394ms**

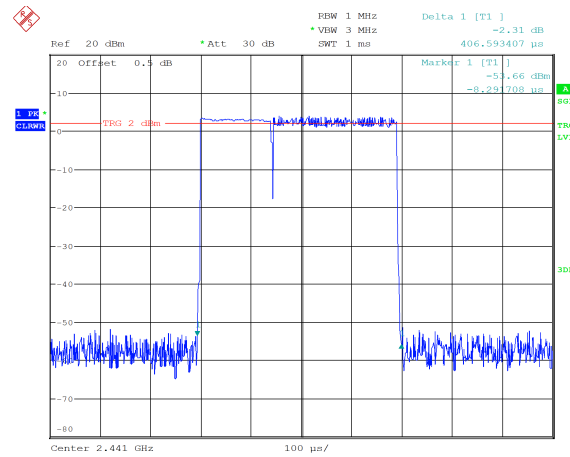
ProjectNo.:CR231168373-RF Tester:Arthur Su
 Date: 3.JAN.2024 22:30:31

GFSK_Hopping_DH3 1.651ms

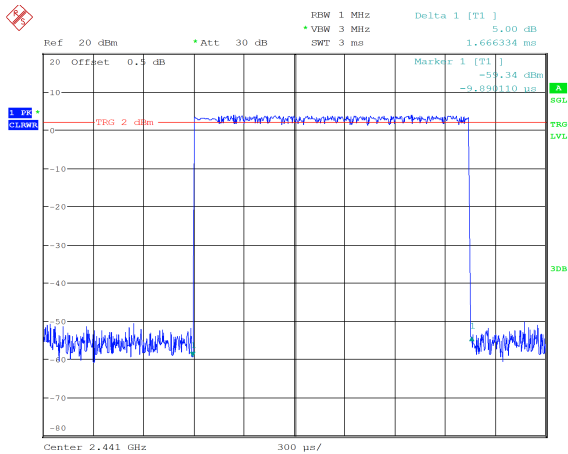
ProjectNo.:CR231168373-RF Tester:Arthur Su
 Date: 3.JAN.2024 22:31:54

EDR**GFSK_Hopping_DH5 2.922ms**

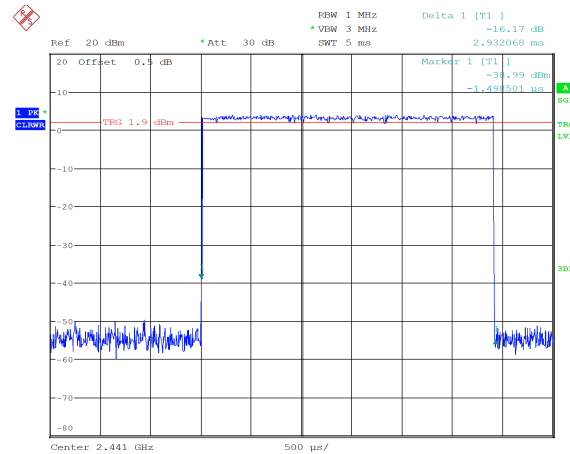
ProjectNo.:CR231168373-RF Tester:Arthur Su
 Date: 3.JAN.2024 22:33:12

 $\pi/4$ -DQPSK_Hopping_2DH1 0.407ms

ProjectNo.:CR231168373-RF Tester:Arthur Su
 Date: 3.JAN.2024 22:34:37

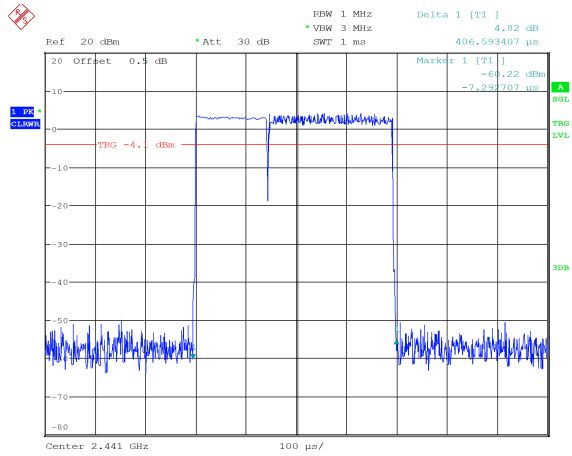
 $\pi/4$ -DQPSK_Hopping_2DH3 1.666ms

ProjectNo.:CR231168373-RF Tester:Arthur Su
 Date: 3.JAN.2024 22:43:02

 $\pi/4$ -DQPSK_Hopping_2DH5 2.932ms

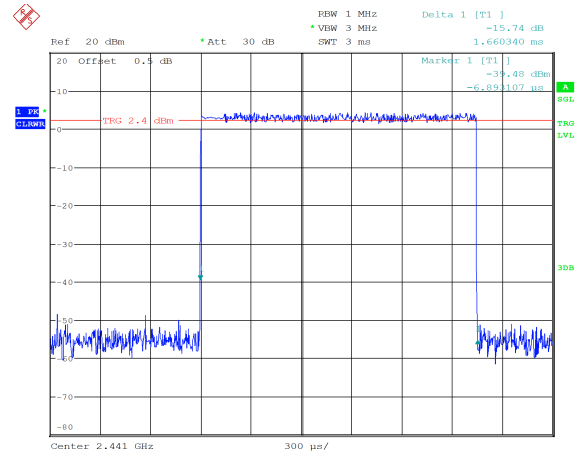
ProjectNo.:CR231168373-RF Tester:Arthur Su
 Date: 3.JAN.2024 22:37:09

8DPSK_Hopping_3DH1 0.407ms



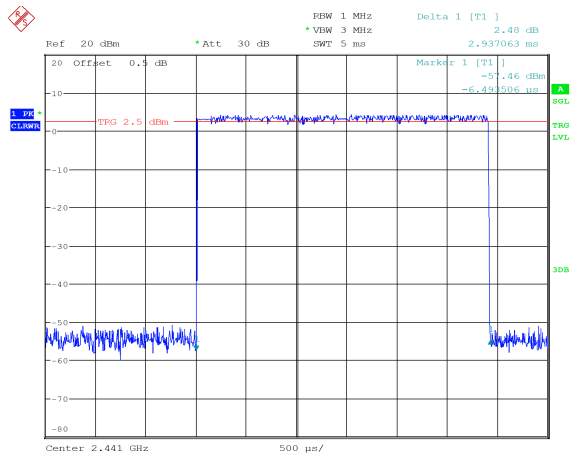
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 22:38:29

8DPSK_Hopping_3DH3 1.660ms



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 22:39:52

8DPSK_Hopping_3DH5 2.937ms



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 22:41:12

Maximum Conducted Output Power**BDR**

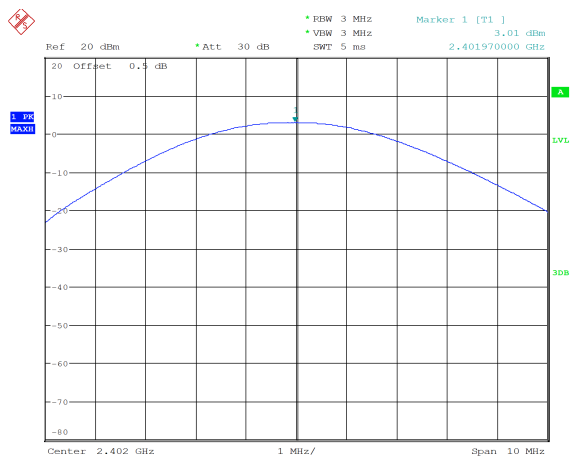
Mode	Value (dBm)	Limit (dBm)	Result
GFSK_Low	3.01	21.00	Pass
GFSK_Middle	2.06	21.00	Pass
GFSK_High	0.78	21.00	Pass

EDR

Mode	Value (dBm)	Limit (dBm)	Result
$\pi/4$ -DQPSK_Low	5.33	21.00	Pass
$\pi/4$ -DQPSK_Middle	4.40	21.00	Pass
$\pi/4$ -DQPSK_High	3.03	21.00	Pass
8DPSK_Low	5.81	21.00	Pass
8DPSK_Middle	4.85	21.00	Pass
8DPSK_High	3.52	21.00	Pass

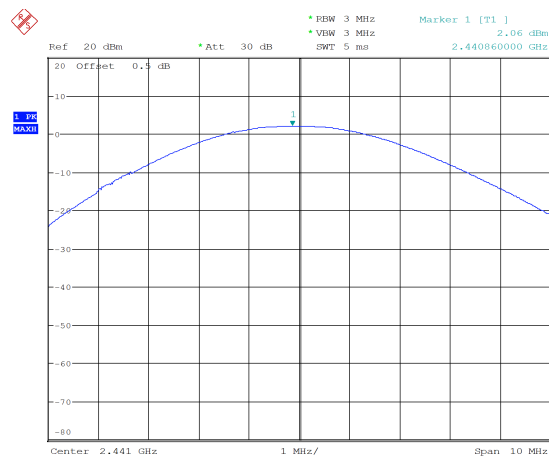
BDR

GFSK_Low 3.01 dBm



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:25:59

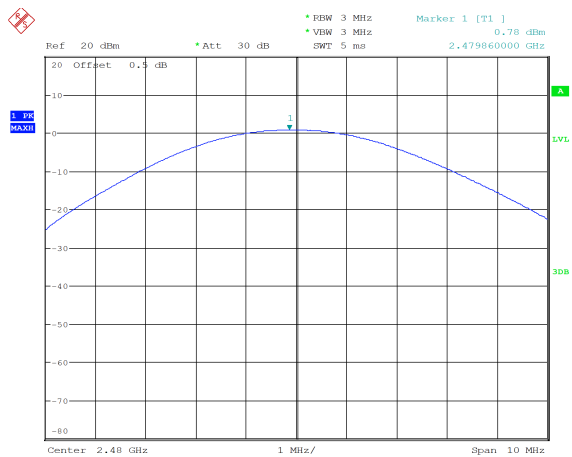
GFSK_Middle 2.06 dBm



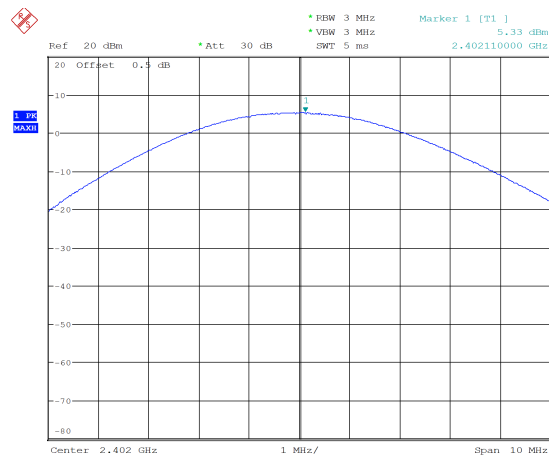
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:28:38

EDR

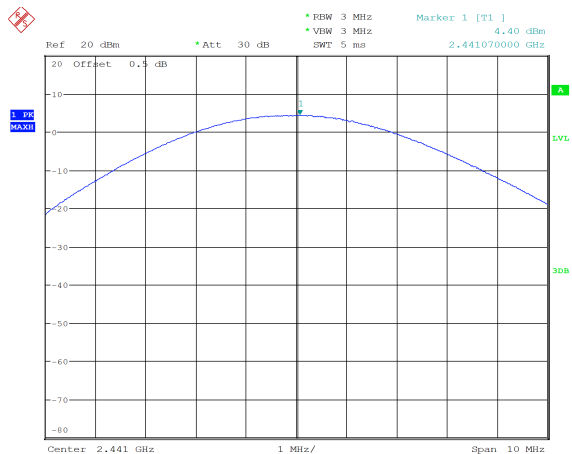
GFSK_High 0.78 dBm



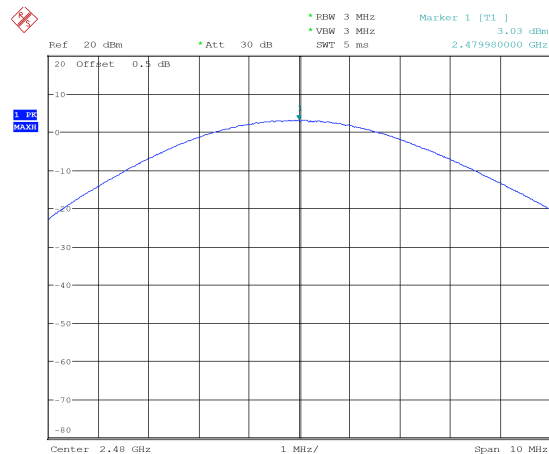
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:30:18

 $\pi/4$ -DQPSK_Low 5.33 dBm

ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:34:55

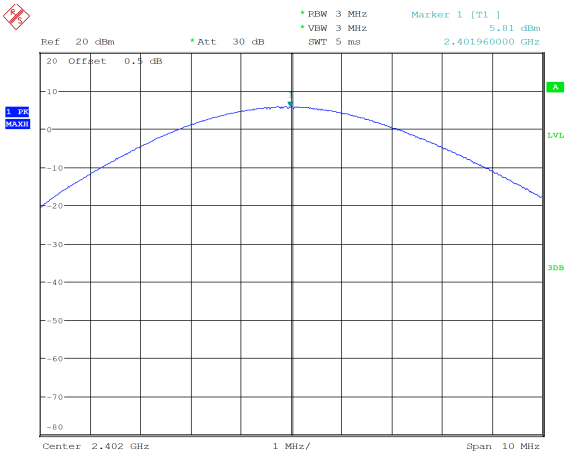
 $\pi/4$ -DQPSK_Middle 4.40 dBm

ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:37:24

 $\pi/4$ -DQPSK_High 3.03 dBm

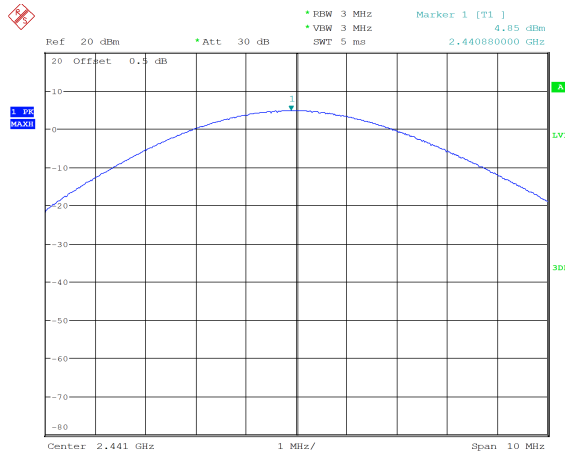
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:39:14

8DPSK_Low 5.81 dBm



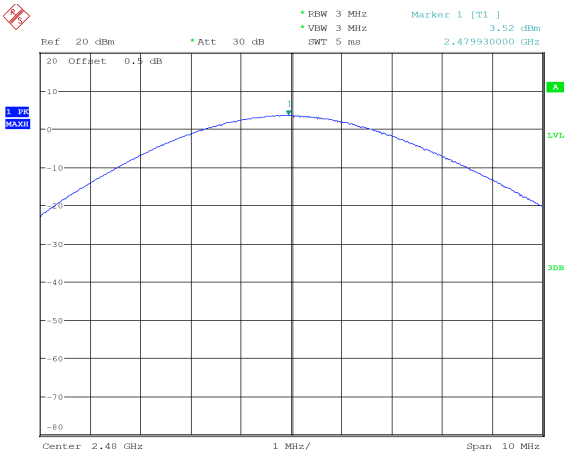
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:42:10

8DPSK_Middle 4.85 dBm



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:44:47

8DPSK_High 3.52 dBm



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:46:39

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

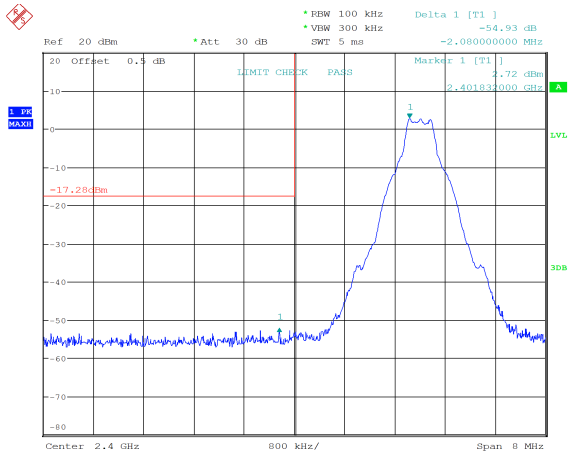
Mode	Value (dB)	Limit (dB)	Result
GFSK_Low	54.93	20.00	Pass
GFSK_High	53.63	20.00	Pass
GFSK_Hopping_Lower	55.31	20.00	Pass
GFSK_Hopping_Upper	53.19	20.00	Pass

EDR

Mode	Value (dB)	Limit (dB)	Result
$\pi/4$ -DQPSK_Low	55.54	20.00	Pass
$\pi/4$ -DQPSK_High	54.28	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Lower	55.64	20.00	Pass
$\pi/4$ -DQPSK_Hopping_Upper	54.43	20.00	Pass
8DPSK_Low	55.87	20.00	Pass
8DPSK_High	54.13	20.00	Pass
8DPSK_Hopping_Lower	56.38	20.00	Pass
8DPSK_Hopping_Upper	53.88	20.00	Pass

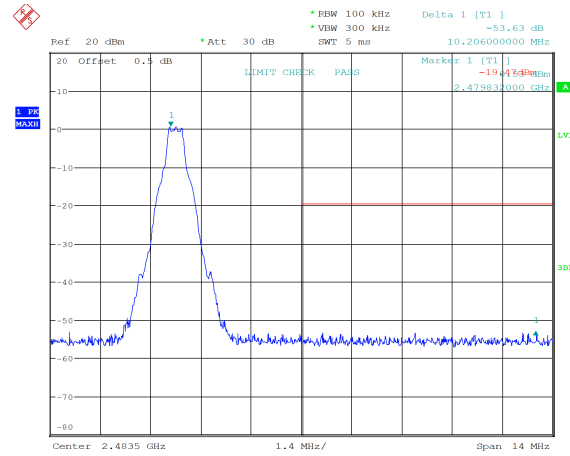
BDR

GFSK_Low 54.93 dB



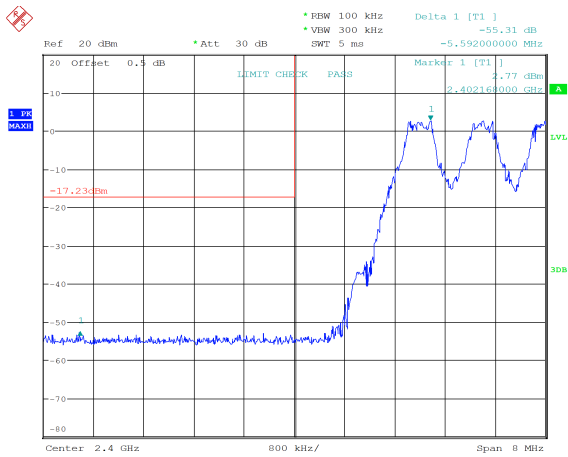
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:26:53

GFSK_High 53.63 dB



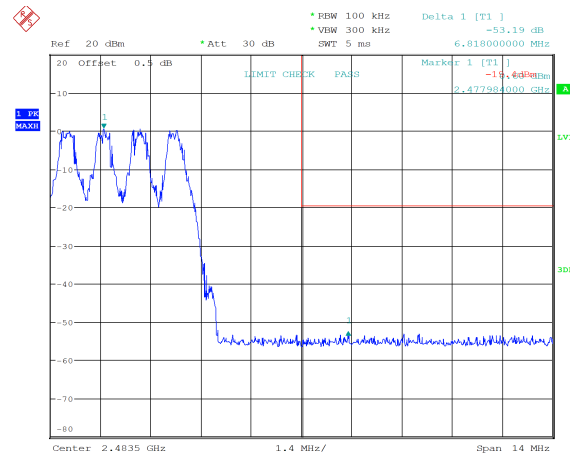
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:31:28

GFSK_Hopping_Lower 55.31 dB



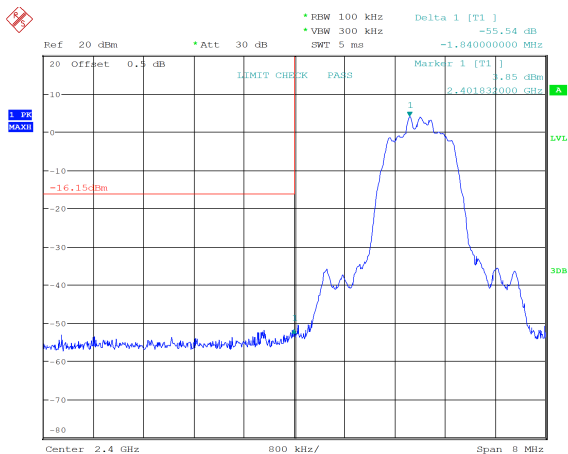
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:26:06

GFSK_Hopping_Upper 53.19 dB

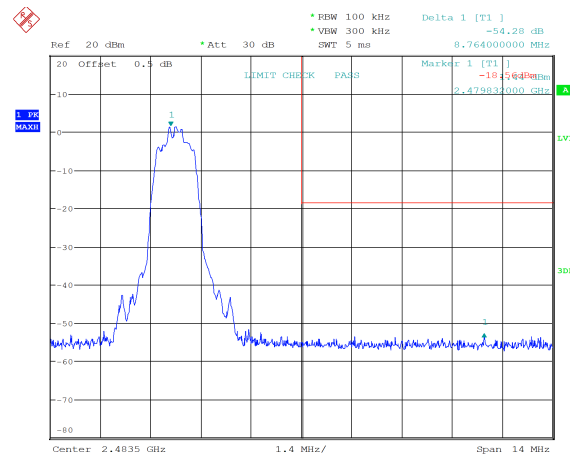


ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:28:30

EDR

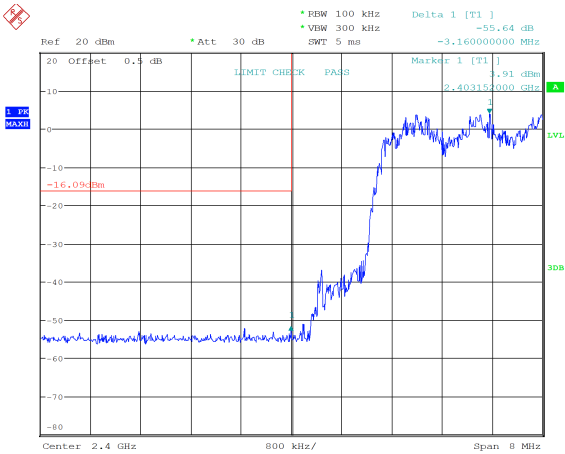
 $\pi/4$ -DQPSK_Low 55.54 dB

ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:35:46

 $\pi/4$ -DQPSK_High 54.28 dB

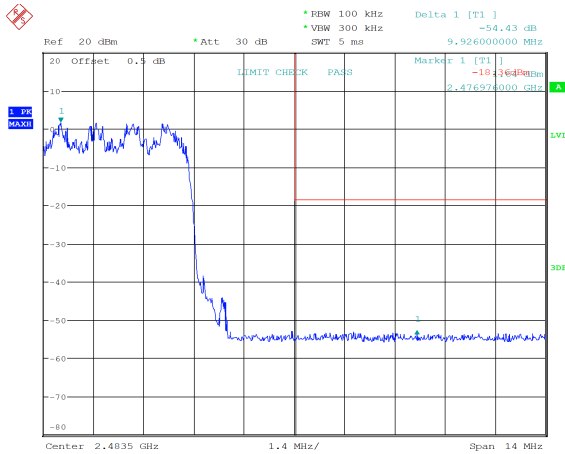
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:40:18

$\pi/4$ -DQPSK_Hopping_Lower 55.64 dB



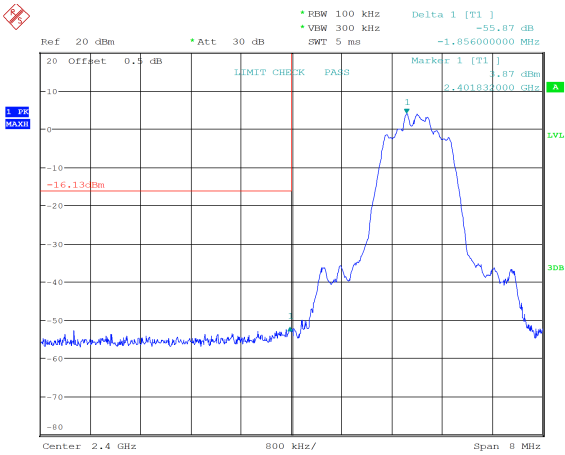
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:32:46

$\pi/4$ -DQPSK_Hopping_Upper 54.43 dB



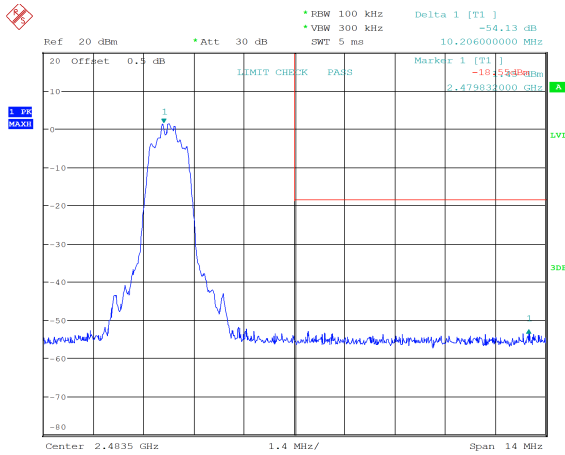
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:40:14

8DPSK_Low 55.87 dB



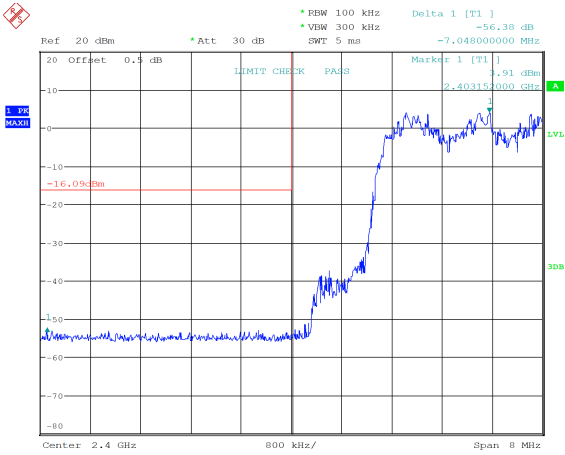
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:43:05

8DPSK_High 54.13 dB



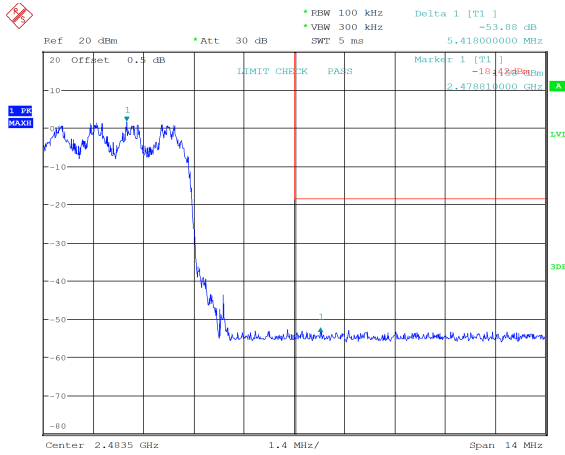
ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 20:48:09

8DPSK_Hopping_Lower 56.38 dB



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:45:14

8DPSK_Hopping_Upper 53.88 dB



ProjectNo.:CR231168373-RF Tester:Arthur Su
Date: 3.JAN.2024 21:51:22