



FCC PART 15.247
RSS-GEN ISSUE 5, FEBRUARY 2021 AMENDMENT2
RSS-247 ISSUE 3, AUGUST 2023
TEST REPORT

For

FCC: FitShow (Xiamen) Information Technology Co., Ltd

Unit 1302, No.1 Chengyi North Street, Software Park Phase III, Torch High tech Zone, Xiamen, China

IC: FitShow (Xiamen) Information Technology Co., Ltd.

Unit 1302, No.1 Chengyi North Street, Software Park Phase III, Torch High tech Zone, Xiamen 361000 China

FCC ID: 2AUIE-FSBTF5
IC: 34271-FSBTF5

Report Type: Original Report	Product Name: Bluetooth module
Report Number: <u>2507U02776E-RF-02</u>	
Report Date: <u>2025-07-16</u>	
Reviewed By: <u>Ash Lin</u>	
Approved By: <u>Miles Chen</u>	
Prepared By: Bay Area Compliance Laboratories Corp. (Xiamen) Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone Xiamen Tel: +86-592-3200111 www.baclcorp.com.cn	

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2507U02776E-RF-02	R1V1	2025-07-16	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	FCC: FitShow (Xiamen) Information Technology Co., Ltd IC: FitShow (Xiamen) Information Technology Co., Ltd.
Product Name:	Bluetooth module
Tested Model:	FS-BT-F5
HVIN:	FS-BT-F5
Multiple Model(s):	N/A
Trade Mark:	FitShow
Power Supply:	DC 3~5V
Maximum Peak Output Power (Conducted):	-7.37 dBm
RF Function:	Classic BT
Operating Band/Frequency:	2402-2480 MHz
Channel Number:	79
Channel Separation:	1 MHz
Modulation Type:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Antenna Type:	PCB Antenna
★Maximum Antenna Gain:	2.83dBi
EUT Received Status:	Good

Note:

1. The Maximum Antenna Gain was declared by manufacturer.
2. All measurement and test data in this report was gathered from production sample serial number: 34S8-1 (RF Conducted), 34S8-2(Conducted Emission and Radiated Emission) Assigned by the BACL(Xiamen). The EUT supplied by the applicant was received on 2025-06-16)

Objective

This test report is prepared for *FitShow (Xiamen) Information Technology Co., Ltd & FitShow (Xiamen) Information Technology Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions's rules and RSS-247 Issue 3, August 2023 and RSS-Gen, Issue 5, February 2021 Amendment 2 of the Innovation, Science and Economic Development Canada.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and KDB 558074 D01 15.247 Meas Guidance v05r02.

All tests and measurements indicated in this document were performed in accordance with RSS-247 Issue 3, August 2023 of the Innovation, Science and Economic Development Canada & RSS-Gen, Issue 5, February 2021 Amendment 2: General Requirements for Compliance of Radio Apparatus & ANSI C63.10-2020: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN1384.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the IC accredited lab under the KDB 974614 D01, the IC Designation No. : CN0176.

Measurement Uncertainty

Item		U_{lab}
Conducted Emission	150kHz-30MHz	2.45 dB
Radiated Emission	9kHz-150kHz	2.82dB
	150kHz-30MHz	2.74dB
	30MHz~200MHz	3.47dB
	200MHz~1GHz	4.86dB
	1GHz~6GHz	4.88dB
	6GHz~18GHz	4.95dB
	18GHz~26.5GHz	4.45dB
Occupied Channel Bandwidth		2%
Transmitter Conducted Power(Conducted RF power)		1.49 dB
Conducted Spurious Emission		2.92 dB
Temperature		1 °C
Humidity		5 %
Supply voltages		0.4 %

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

SYSTEM TEST CONFIGURATION

Test Mode and Voltage

The system was configured for testing in a typical mode (as normally used by a typical user).	
Test mode:	Test mode 1: Transmitting
Test voltage:	Test mode 1: DC 3.3V
Remark:	During all emission tests, the EUT was configured to measure its highest possible emission level and the worst case's test data was presented in this test report.

Description of Test Configuration

Channel list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	40	2442
1	2403
...
...	...	78	2480
39	2441	/	/

EUT was tested with Channel 0, 39 and 78.

★EUT Exercise Software

RF Test Tool: FCC_assist_1.0.2.2

Test Modes	Power Level Setting		
	Lowest Channel	Middle Channel	Highest Channel
GFSK	10	10	10
$\pi/4$ -DQPSK	10	10	10
8DPSK	10	10	10

Note: The power level was declared by the applicant.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

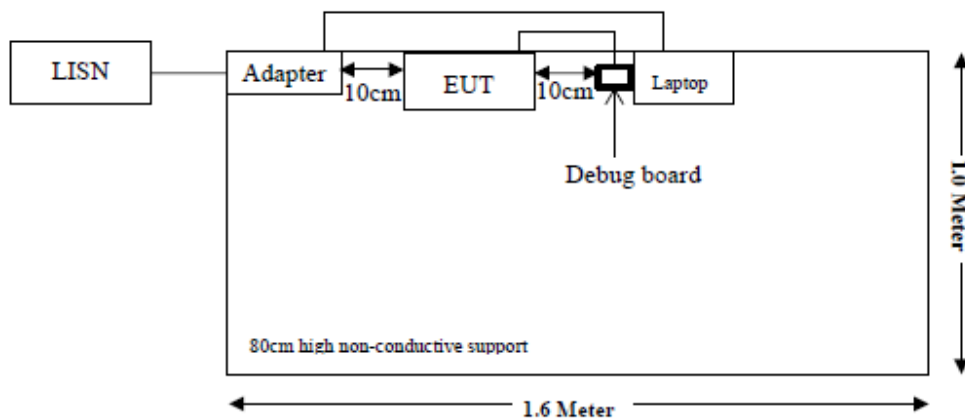
Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T480	PF1P5K4F
Unknown	Debug board	Unknown	Unknown
Lenovo	Adapter	ADLX45YDC3D	SA10R16864

External I/O Cable

Cable Description	Length (m)	From Port	To
Cable	0.1	Debug board	EUT
Power Cable	2	Adapter	Laptop
USB Cable	10	Debug board	Laptop

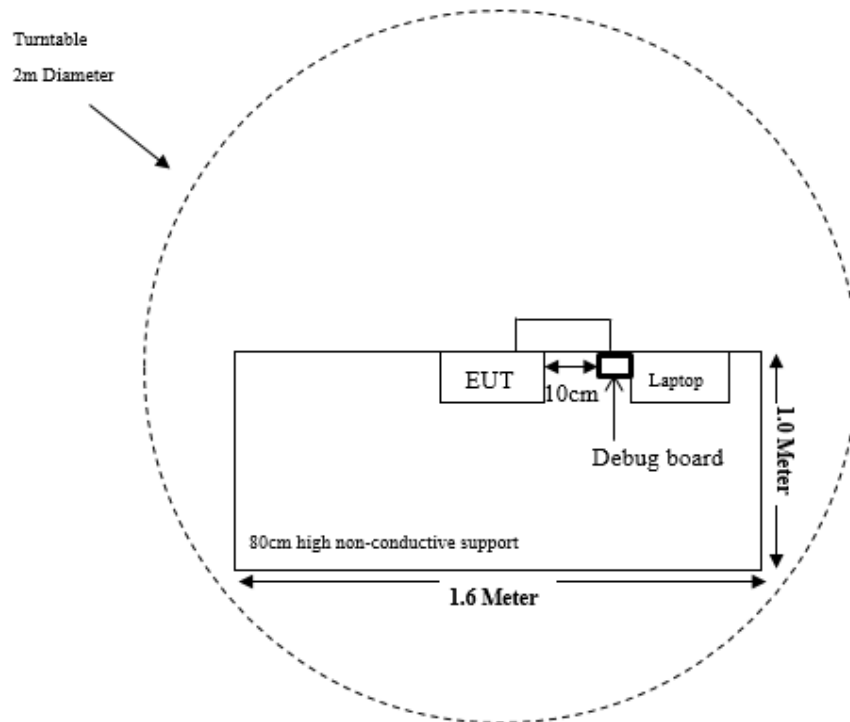
Block Diagram of Test Setup

Conducted Emission:

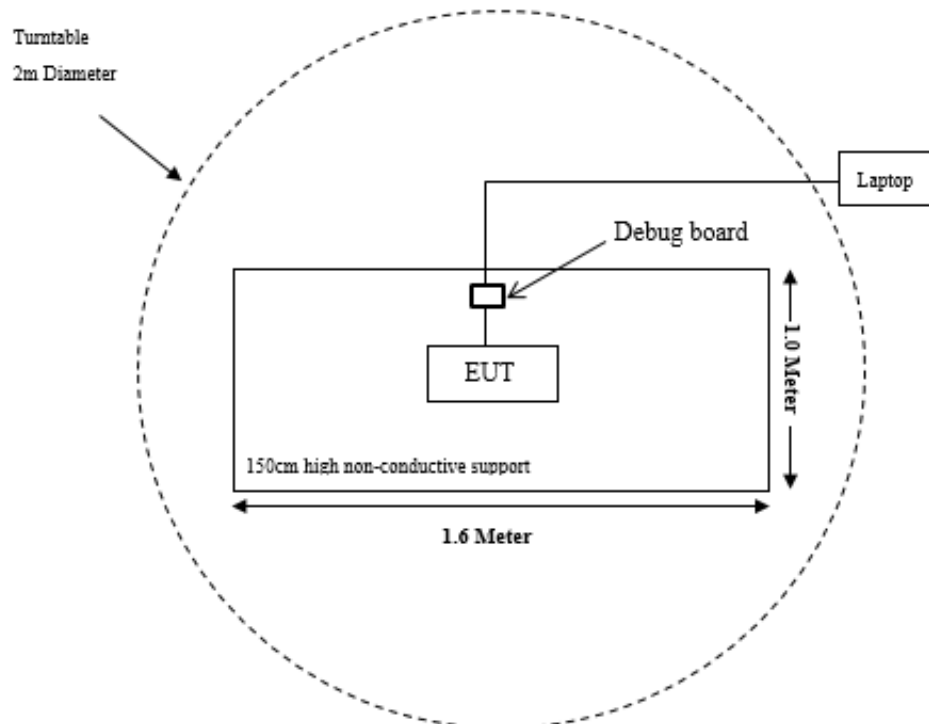


Radiated Emission:

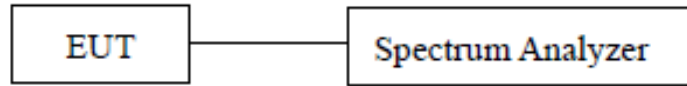
Below 1GHz:



Above 1GHz:



RF Conduction:



Note: The cable assembly insertion loss of 0.5dB was entered as an offset in the spectrum analyzer. (Actual cable loss was unavailable at the time of testing, therefore loss of 0.5dB was assumed as worst case.) This was later verified to be true by laboratory.

SUMMARY OF TEST RESULTS

Standard(s)/Rule(s)	Description of Test	Result
FCC§15.203 RSS-Gen Clause 6.8	Antenna Requirement	Compliant
FCC§15.207(a) RSS-Gen Clause 8.8	AC Line Conducted Emissions	Compliant
FCC§15.205, §15.209 & §15.247(d) RSS-Gen Clause 8.10	Radiated Emissions & Restricted Bands Emissions	Compliant
FCC§15.247(a)(1) RSS-247 Clause 5.1 b)	20 dB Emission Bandwidth	Compliant
RSS-Gen Clause 6.7	99% Occupied Bandwidth	Compliant
FCC§15.247(a)(1) RSS-247 Clause 5.1 b)	Channel Separation Test	Compliant
FCC§15.247(a)(1)(iii) RSS-247 Clause 5.1 d)	Time of Occupancy (Dwell Time)	Compliant
FCC§15.247(a)(1)(iii) RSS-247 Clause 5.1 d)	Quantity of hopping channel Test	Compliant
FCC§15.247(b)(1) RSS-247 Clause 5.4 b)	Peak Output Power Measurement	Compliant
FCC§15.247(d) RSS-247 Clause 5.5	Band edges	Compliant

TEST EQUIPMENT LIST

Test Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions					
EMI Test Receiver	Rohde & Schwarz	ESR	103105	2025/2/20	2026/2/19
LISN	Rohde & Schwarz	ENV216	100129	2025/2/20	2026/2/19
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	0357.8810.54	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC001	2025/2/20	2026/2/19
EMI Test software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESR	103103	2025/2/20	2026/2/19
Loop Antenna	Rohde & Schwarz	HFH2-Z2	830749/001	2023/7/27	2026/7/26
Antenna	Sunol Sciences	JB6	A122022-5	2023/7/27	2026/7/26
Amplifier	Sonoma	310B	120903	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC002	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	XH460B-N-2M	CC006	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	XH460B-N-12M	CC007	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	HFH2-CC	335.3609	2025/2/20	2026/2/19
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Above 1 GHz					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2025/2/20	2026/2/19
Filter Switch Unit	Decentest	DT7220FSU	DS79904	2025/2/21	2026/2/20
Multiplex Switch Test Control Set	Decentest	DT7220SCU	DS79901	2025/2/21	2026/2/20
Horn Antenna	EMCO	3115	9002-3355	2024/11/19	2027/11/18
Preamplifier	GLOBAL	1313-A100M18G	4121301	2025/1/16	2026/1/15
Coaxial Cable	XINHANGWEIBO	XH800A-N-6M	CC003	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	XH800A-N-1M	CC005	2025/2/20	2026/2/19
Horn Antenna	EMCO	3116	9407-2232	2023/7/31	2026/7/30
Preamplifier	A.H.Systems	PAM-1840	200	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	XH360A-2.92-3M	CC008	2025/2/20	2026/2/19
Coaxial Cable	XINHANGWEIBO	XH360A-2.92-1M	CC009	2025/2/20	2026/2/19
Test Software	Audix	E3	18621a	N/A	N/A
RF Conducted Test					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2025/2/20	2026/2/19
Coaxial Cable	Lianxun	RF113	N/A	Each time	N/A

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Xiamen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.203 & RSS-Gen Clause 6.8 – ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

According to RSS-Gen Clause 6.8 The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer. The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

This radio transmitter [enter the device's ISSED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

Antenna Connector Construction

The EUT has one PCB antenna for Bluetooth, which was permanently attached and the antenna gain is 2.83 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

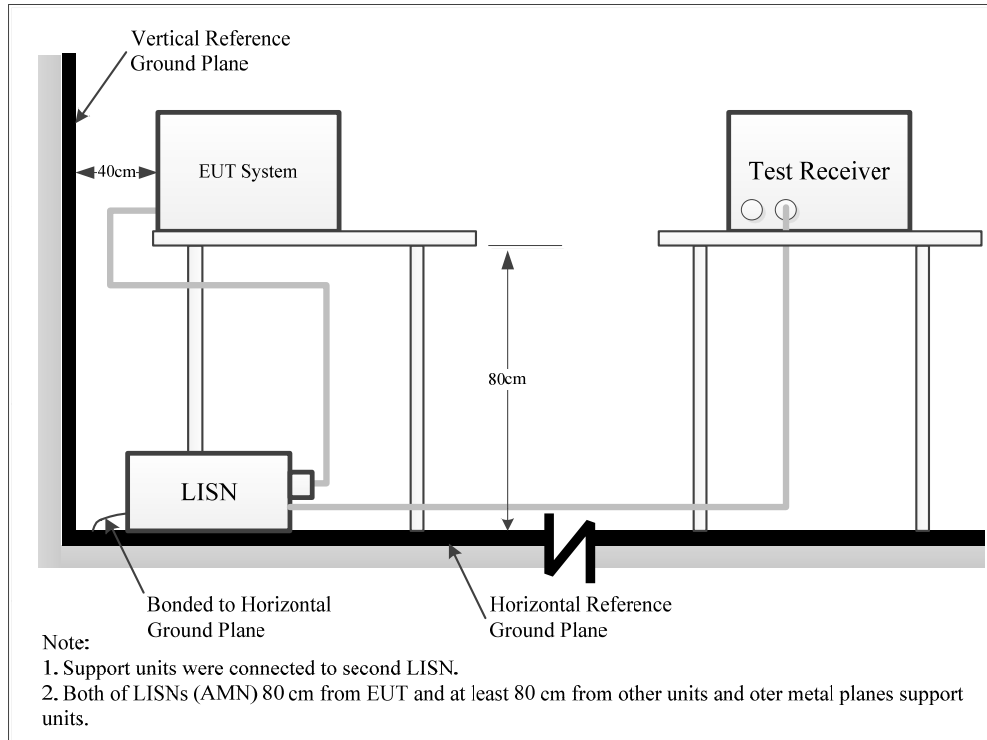
Result: Compliance

FCC §15.207 (a) & RSS-Gen Clause 8.8 – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a), RSS-Gen Clause 8.8

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10-2020. The related limit was specified in FCC Part 15.207, RSS-Gen limits.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Result & Margin Calculation

The Result is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

$$\begin{aligned}\text{Factor (dB)} &= \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Transient Limiter Attenuation (dB)} \\ \text{Result (dB}\mu\text{V)} &= \text{Reading (dB}\mu\text{V)} + \text{Factor (dB)}\end{aligned}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V)} - \text{Result (dB}\mu\text{V)}$$

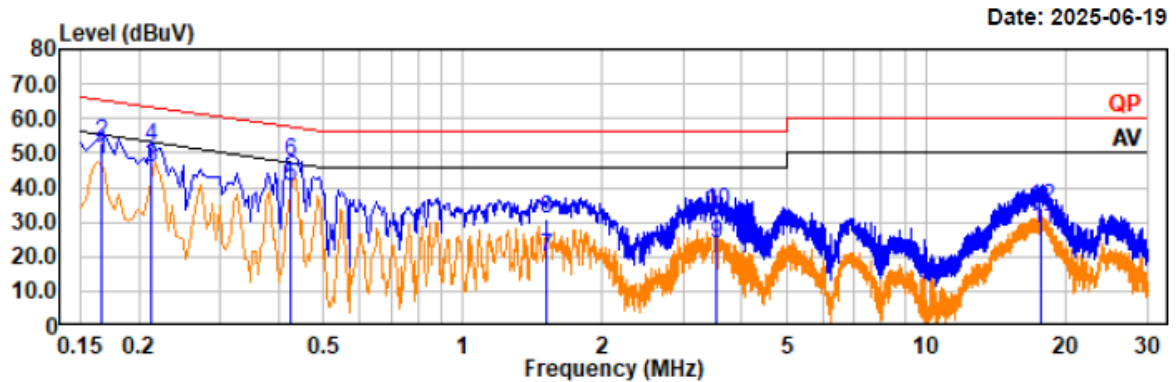
Test Data

Temperature:	24.6 °C
Relative Humidity:	58 %
ATM Pressure:	99.8 kPa
Test Date:	2025-06-19
Test Engineer:	Wlif Wu

Note: The maximum output power mode: EDR(8DPSK) high channel was tested.

Project No.: 2507U02776E-RF
 Test Mode: EDR 3DH1 2480MHZ
 EUT Model: FS-BT-F5

Temp/Humi/ATM: 24.6°C/58%/99.8kPa
 Tested by: Wlif Wu
 Power Source: DC 3.3V



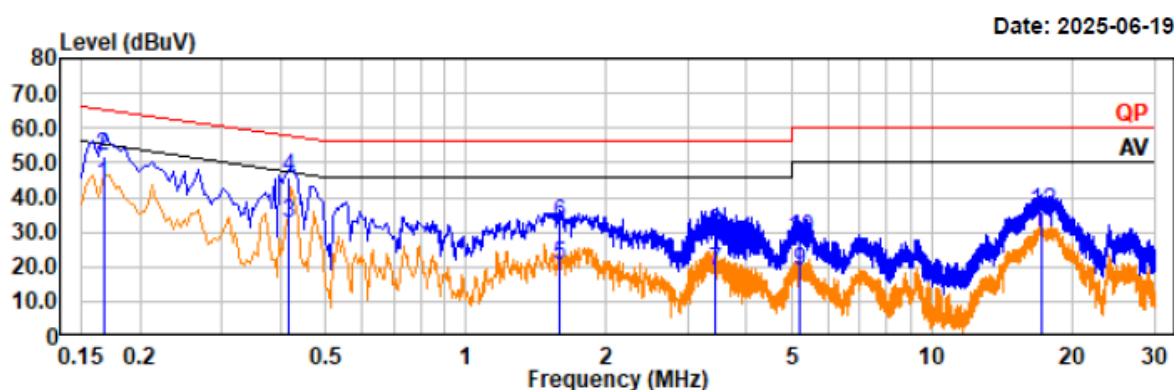
Trace: 1

Condition: IF B/W 9kHz PK/AV

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.17	28.04	20.12	48.16	55.13	6.97	Line	Average
0.17	32.76	20.12	52.88	65.13	12.25	Line	QP
0.21	25.29	20.51	45.80	53.10	7.30	Line	Average
0.21	31.33	20.51	51.84	63.10	11.26	Line	QP
0.42	19.07	20.97	40.04	47.38	7.34	Line	Average
0.42	26.28	20.97	47.25	57.38	10.13	Line	QP
1.52	-0.38	20.27	19.89	46.00	26.11	Line	Average
1.52	10.75	20.27	31.02	56.00	24.98	Line	QP
3.52	2.50	21.07	23.57	46.00	22.43	Line	Average
3.52	11.84	21.07	32.91	56.00	23.09	Line	QP
17.70	7.65	20.58	28.23	50.00	21.77	Line	Average
17.70	13.69	20.58	34.27	60.00	25.73	Line	QP

Project No.: 2507U02776E-RF
 Test Mode: EDR 3DH1 2480MHZ
 EUT Model: FS-BT-F5

Temp/Humi/ATM: 24.6°C/58%/99.8kPa
 Tested by: Wlif Wu
 Power Source: DC 3.3V



Trace: 1

Condition: IF B/W 9kHz PK/AV

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.17	23.32	20.36	43.68	55.11	11.43	Neutral	Average
0.17	31.67	20.36	52.03	65.11	13.08	Neutral	QP
0.42	11.74	20.62	32.36	47.48	15.12	Neutral	Average
0.42	25.19	20.62	45.81	57.48	11.67	Neutral	QP
1.59	-0.08	20.56	20.48	46.00	25.52	Neutral	Average
1.59	12.10	20.56	32.66	56.00	23.34	Neutral	QP
3.43	-1.05	19.67	18.62	46.00	27.38	Neutral	Average
3.43	10.15	19.67	29.82	56.00	26.18	Neutral	QP
5.18	-0.91	19.80	18.89	50.00	31.11	Neutral	Average
5.18	8.37	19.80	28.17	60.00	31.83	Neutral	QP
17.25	9.18	20.65	29.83	50.00	20.17	Neutral	Average
17.25	15.14	20.65	35.79	60.00	24.21	Neutral	QP

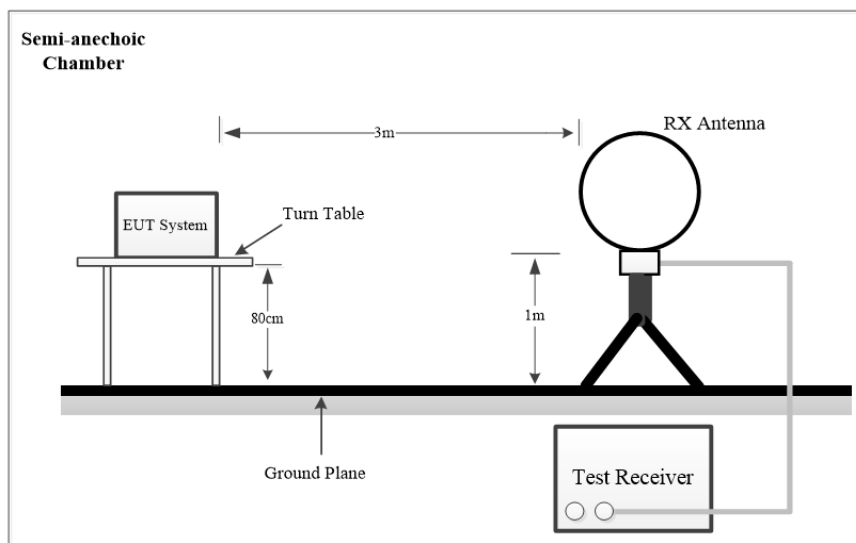
FCC §15.205, §15.209 & §15.247(d) & RSS-247 Clause 5.5, RSS-GEN ISSUE5 Clause 8.10 – RADIATED EMISSIONS

Applicable Standard

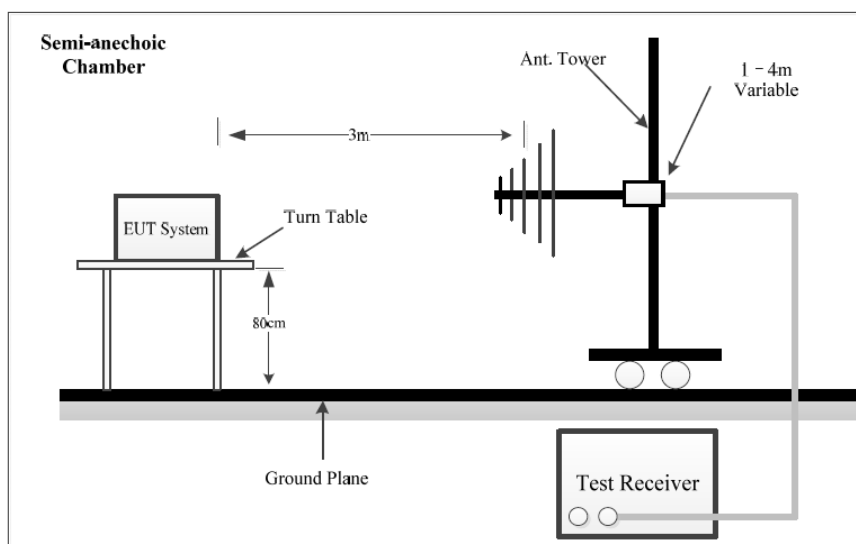
FCC §15.205; §15.209; §15.247(d); RSS-247 Clause 5.5; RSS-GEN ISSUE5 Clause 8.10

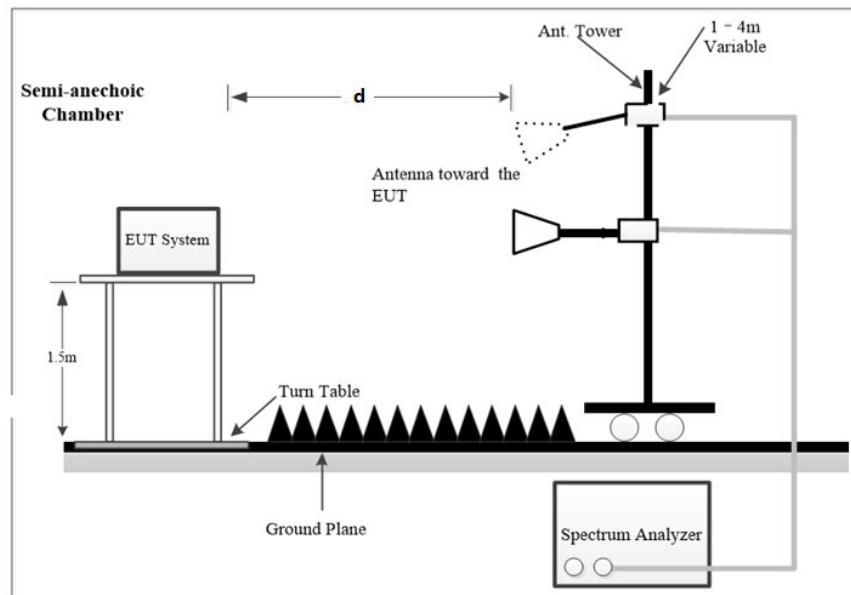
Test System Setup

9 kHz-30MHz



Below 1 GHz:



Above 1GHz:

The radiated emission tests using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209, FCC 15.247, RSS-247, RSS-Gen limits.

NOTE: d is testing distance;

For Radiated Emission test (1GHz-18GHz) and Bandedge Emission test, which was performed at 3 m distance.

For Radiated Emission test (18GHz-25GHz), which was performed at 1.5 m distance, according to ANSI C63.10-2020, the test result shall be extrapolated to the specified distance using an extrapolation Factor of 20dB/decade from 3m to 1.5m.

Distance extrapolation Factor = $20 \log (\text{specific distance } [3\text{m}] / \text{test distance } [1.5\text{m}]) \text{ dB} = 6 \text{ dB}$

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 25 GHz.

During the radiated emission test, the EMI Test Receiver & Spectrum Analyzer Setup was set with the following configurations:

Frequency Range	RBW	VBW	Measurement
9 kHz – 150 kHz	300Hz	1 kHz	PK
	200Hz	/	QP
150 kHz – 30 MHz	10 kHz	30 kHz	PK
	9kHz	/	QP
30 MHz – 1000 MHz	100 kHz	300 kHz	PK
	120kHz	/	QP

1GHz~25GHz:

Pre-scan:

Measurement	RBW	Video B/W	Detector
PK	1MHz	3MHz	PK
Ave	1MHz	5kHz	PK

Final measurement for emission identified during the pre-scan:

Measurement	RBW	Video B/W	Detector
PK	1MHz	3MHz	PK
Ave	1MHz	10Hz	PK

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

For each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable. The report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground parallel) unless the margin is greater than 20 dB, then the following statement shall be made: "all emissions were greater than 20 dB below the limit."

Below 1GHz, if the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 10 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

Above 1GHz, if the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is below the AV emission limit, there's no need to record the measured AV level of the emissions in the report.

Result & Margin Calculation

The Result is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

For 9 kHz to 18GHz Radiated emission test and Bandedge emissions test

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

For 18GHz to 25GHz Radiated emission test

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB) - Extrapolation factor (dB)

Extrapolation factor = 6 dB (distance = 1.5m)

Result (dBμV/m) = Reading (dBμV) + Factor (dB/m)

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV/m) - Result (dBμV/m)

The spurious emission from 9 kHz-30MHz of IC RSS-Gen standard, the unit of final result on the test plots are dB μ V/m, so the limit should be added by 51.5dB from dB μ A/m to dB μ V/m.

Test Data

Please refer to the below table and plots.

Frequency Range:	Below 1 GHz	Above 1 GHz
Temperature:	23.0°C	23.0°C
Relative Humidity:	56%	56%
ATM Pressure:	100.1kPa	100.1kPa
Test Date:	2025-06-24	2025-06-24
Test Engineer:	Wlif Wu	Wlif Wu

Note: Pre-scan in the X, Y and Z axes of orientation, the worst case Z-axis of orientation was recorded.

1) 9 kHz ~30 MHz

Pre-scan in parallel, ground-parallel and perpendicular of orientation of loop antenna, parallel is worst case.

Note: The maximum output power mode: EDR(8DPSK) high channel was tested.

Project No.: 2507U02776E-RF

Temp/Humi/ATM: 23.0°C/56%/100.1kPa

Test Mode: EDR 3DH1 2480MHz

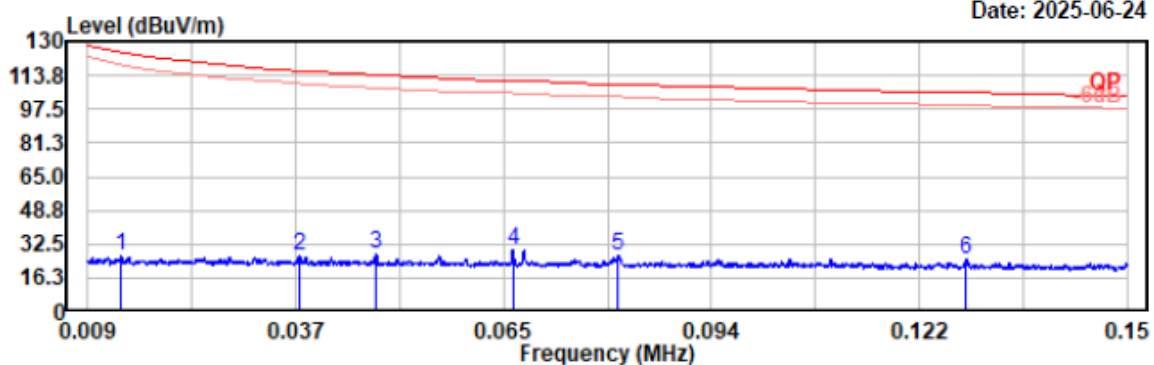
Tested by: Wlif Wu

EUT Model: FS-BT-F5

Power Source: DC 3.3V

Test distance: 3m

Date: 2025-06-24

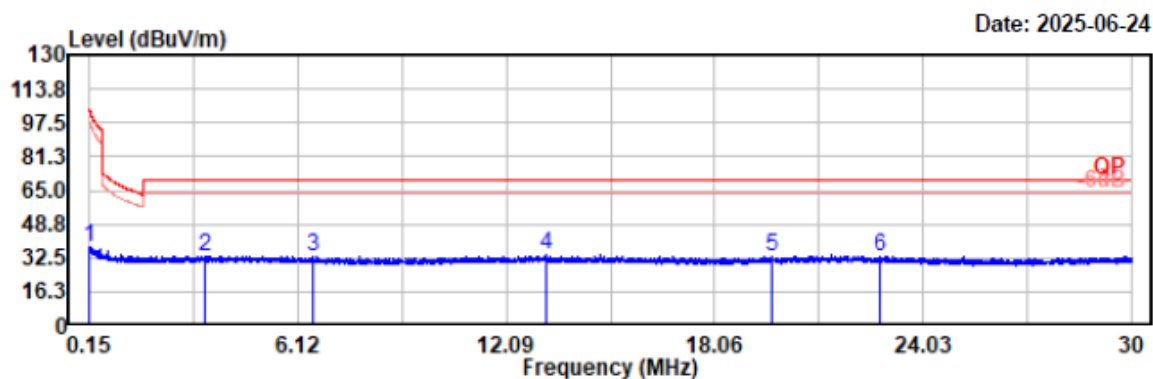


Condition: PK RBW:300Hz VBW:1kHz SWT:auto

Freq MHz	Reading dBUV	Factor dB/m	Result dBUV/m	Limit dBUV/m	Margin dB	Remark
0.014	7.03	19.63	26.66	125.01	98.35	Peak
0.038	7.15	19.91	27.06	116.10	89.04	Peak
0.048	8.07	19.91	27.98	113.97	85.99	Peak
0.067	9.59	19.84	29.43	111.13	81.70	Peak
0.081	6.81	19.72	26.53	109.45	82.92	Peak
0.128	5.78	19.73	25.51	105.45	79.94	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Condition: PK RBW:10kHz VBW:30kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
0.150	18.38	19.72	38.10	104.08	65.98	Peak
3.451	13.80	19.80	33.60	69.54	35.94	Peak
6.559	13.53	19.73	33.26	69.54	36.28	Peak
13.233	14.24	19.74	33.98	69.54	35.56	Peak
19.708	12.96	20.07	33.03	69.54	36.51	Peak
22.779	13.24	20.17	33.41	69.54	36.13	Peak

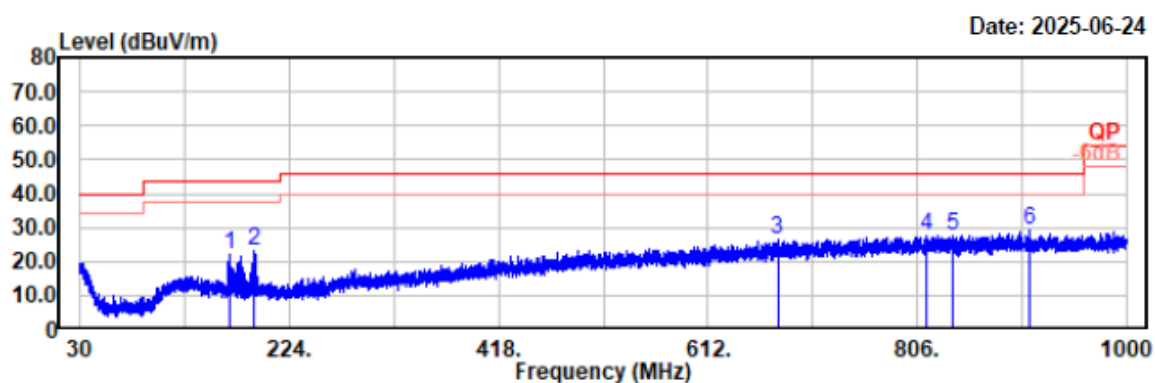
Note: $\text{dBuV/m} = \text{dBuA/m} + 51.5\text{dB}$

2) 30MHz-1GHz

Note: The maximum output power mode: EDR(8DPSK) high channel was tested.

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0℃/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

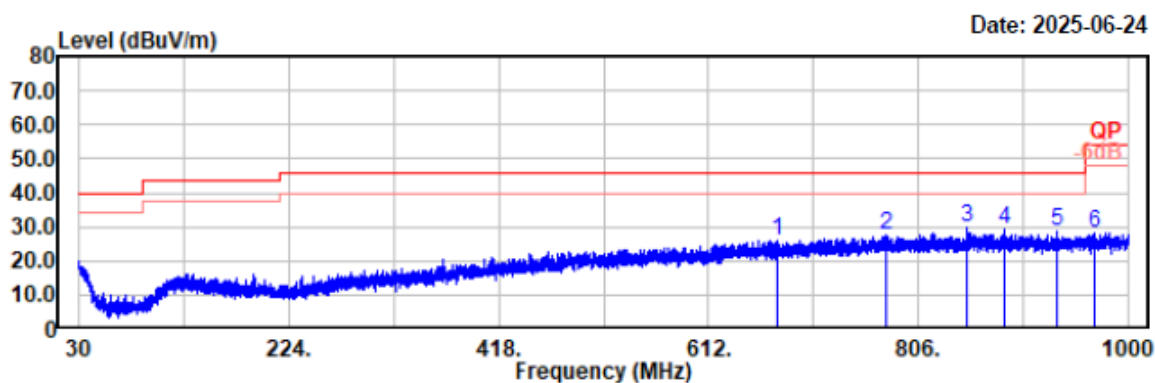


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
168.42	33.83	-11.75	22.08	43.50	21.42	Horizontal	Peak
191.51	35.33	-12.17	23.16	43.50	20.34	Horizontal	Peak
676.51	27.03	-0.64	26.39	46.00	19.61	Horizontal	Peak
813.86	26.00	1.40	27.40	46.00	18.60	Horizontal	Peak
839.37	25.88	1.80	27.68	46.00	18.32	Horizontal	Peak
910.37	26.80	2.68	29.48	46.00	16.52	Horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0℃/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



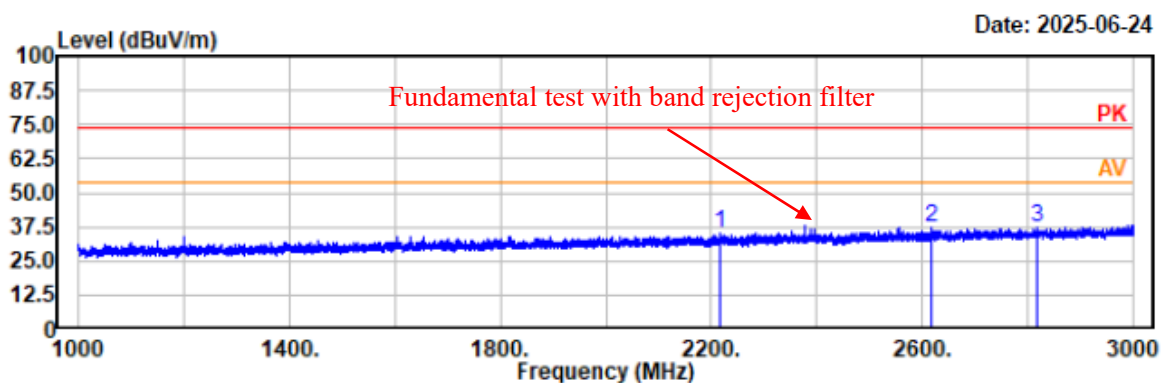
Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
674.86	26.72	-0.61	26.11	46.00	19.89	Vertical	Peak
776.12	26.65	0.98	27.63	46.00	18.37	Vertical	Peak
851.78	27.69	1.95	29.64	46.00	16.36	Vertical	Peak
884.96	26.84	2.38	29.22	46.00	16.78	Vertical	Peak
933.65	25.72	3.02	28.74	46.00	17.26	Vertical	Peak
968.96	24.78	3.43	28.21	54.00	25.79	Vertical	Peak

3) 1 GHz-3 GHz

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

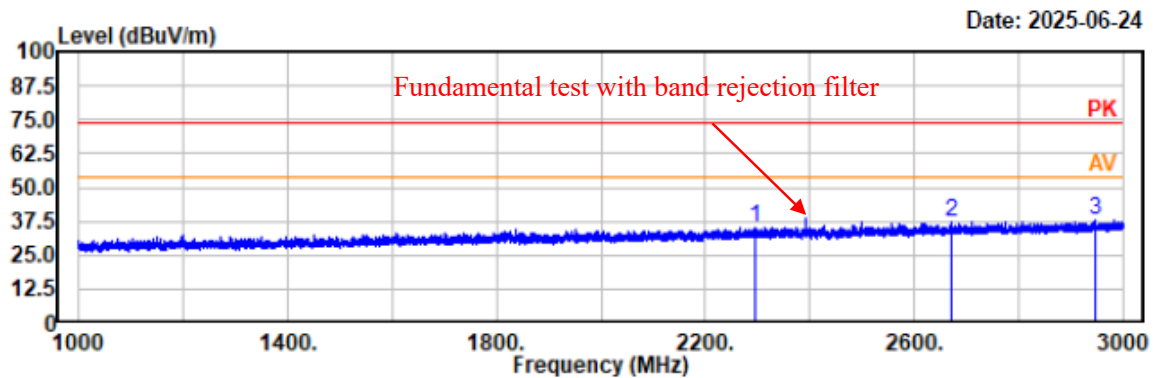


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2215.60	47.25	-11.90	35.35	74.00	38.65	horizontal	Peak
2618.80	47.73	-10.31	37.42	74.00	36.58	horizontal	Peak
2818.40	47.08	-9.73	37.35	74.00	36.65	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

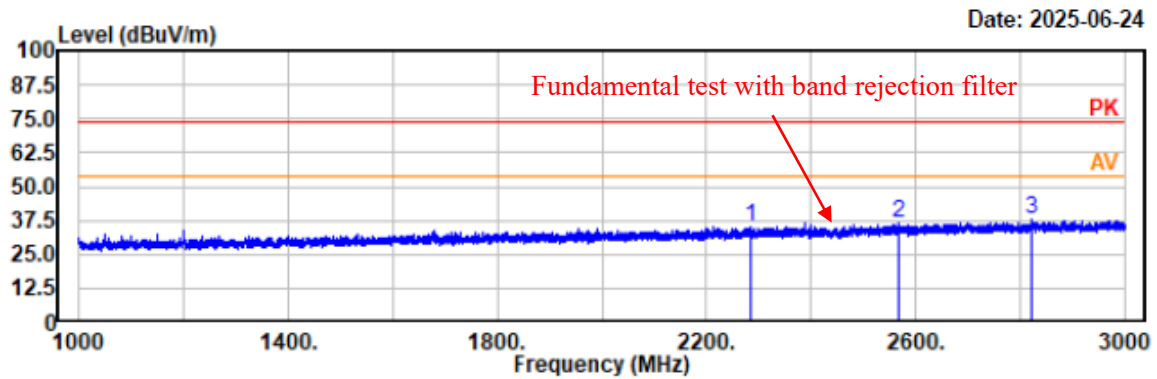


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2294.60	46.97	-11.46	35.51	74.00	38.49	vertical	Peak
2672.80	47.45	-10.11	37.34	74.00	36.66	vertical	Peak
2948.40	47.28	-9.22	38.06	74.00	35.94	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

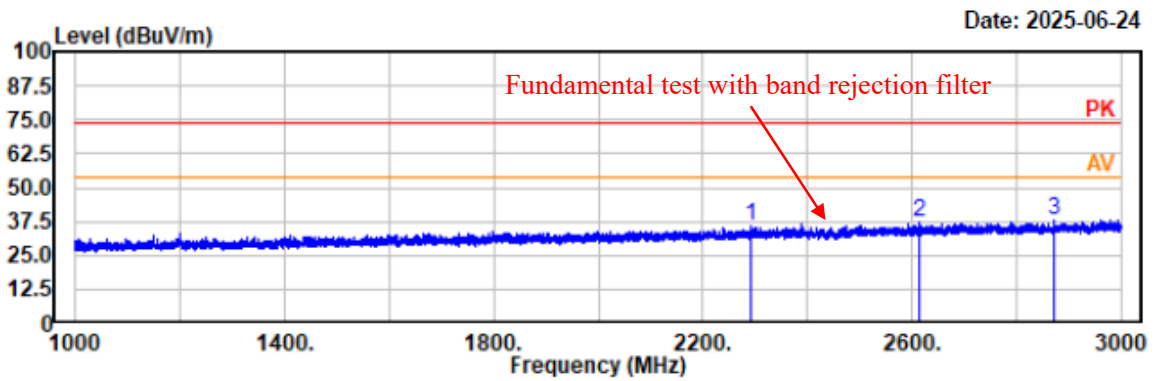


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2286.00	46.41	-11.52	34.89	74.00	39.11	horizontal	Peak
2566.80	46.75	-10.53	36.22	74.00	37.78	horizontal	Peak
2821.80	47.66	-9.71	37.95	74.00	36.05	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

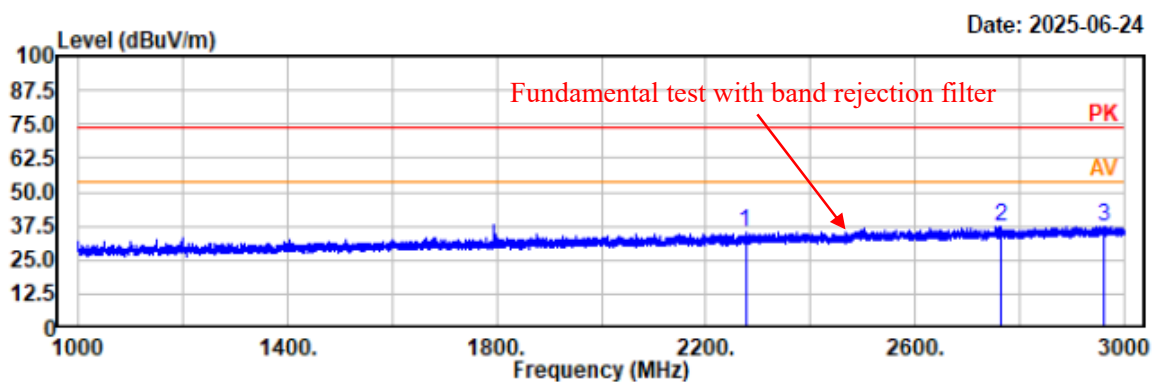


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2293.00	47.00	-11.47	35.53	74.00	38.47	vertical	Peak
2612.60	47.54	-10.34	37.20	74.00	36.80	vertical	Peak
2872.80	47.54	-9.59	37.95	74.00	36.05	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

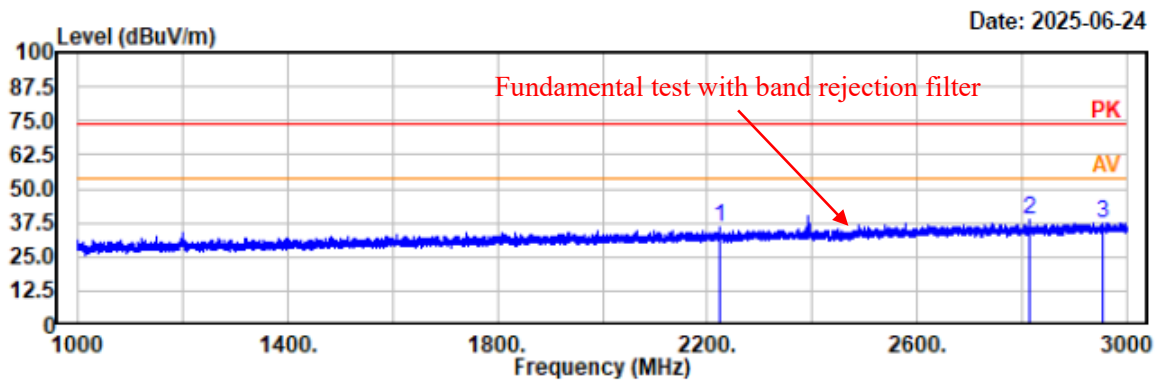


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2275.80	46.54	-11.61	34.93	74.00	39.07	horizontal	Peak
2765.60	47.22	-9.90	37.32	74.00	36.68	horizontal	Peak
2962.60	46.35	-9.14	37.21	74.00	36.79	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

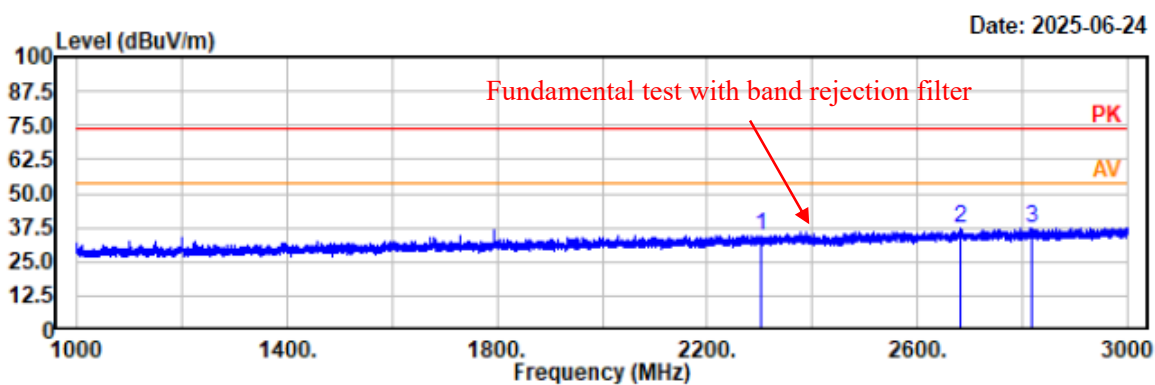


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2223.20	47.61	-11.87	35.74	74.00	38.26	vertical	Peak
2813.80	48.02	-9.74	38.28	74.00	35.72	vertical	Peak
2955.00	46.51	-9.18	37.33	74.00	36.67	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

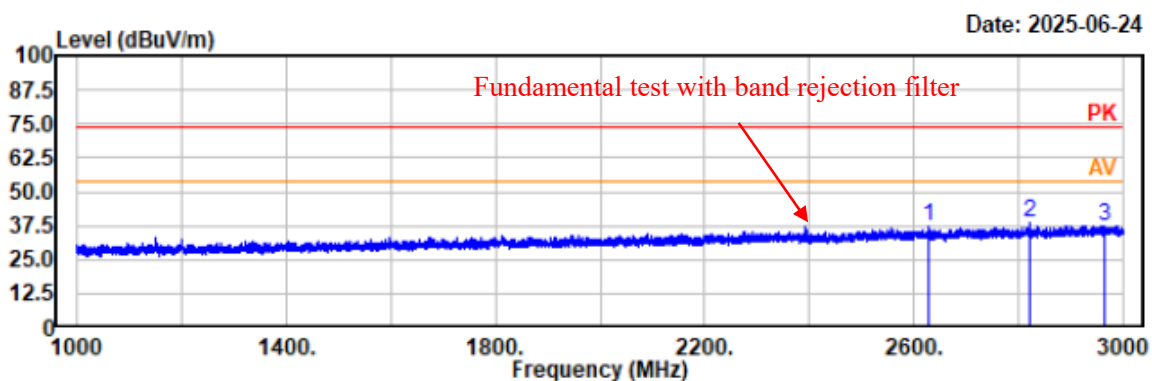


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2302.20	46.17	-11.42	34.75	74.00	39.25	horizontal	Peak
2682.60	47.01	-10.07	36.94	74.00	37.06	horizontal	Peak
2818.00	47.29	-9.73	37.56	74.00	36.44	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

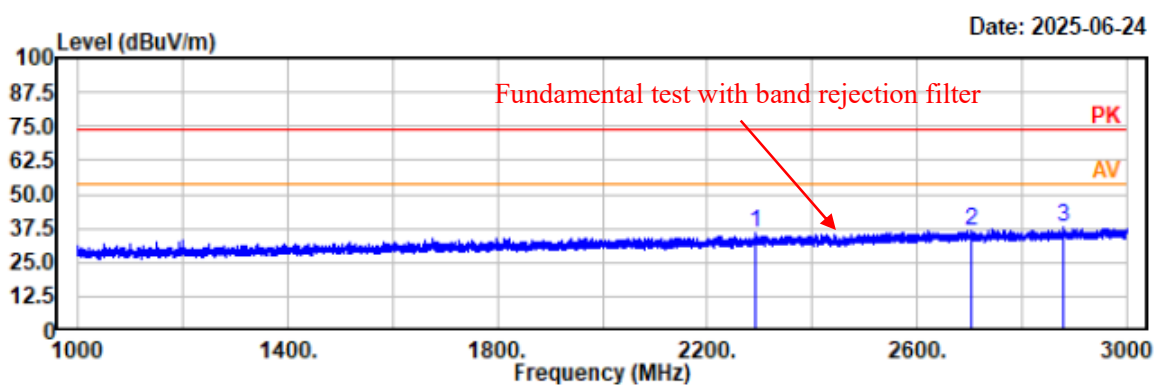


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2628.60	47.50	-10.29	37.21	74.00	36.79	vertical	Peak
2820.00	48.59	-9.73	38.86	74.00	35.14	vertical	Peak
2963.40	46.58	-9.14	37.44	74.00	36.56	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

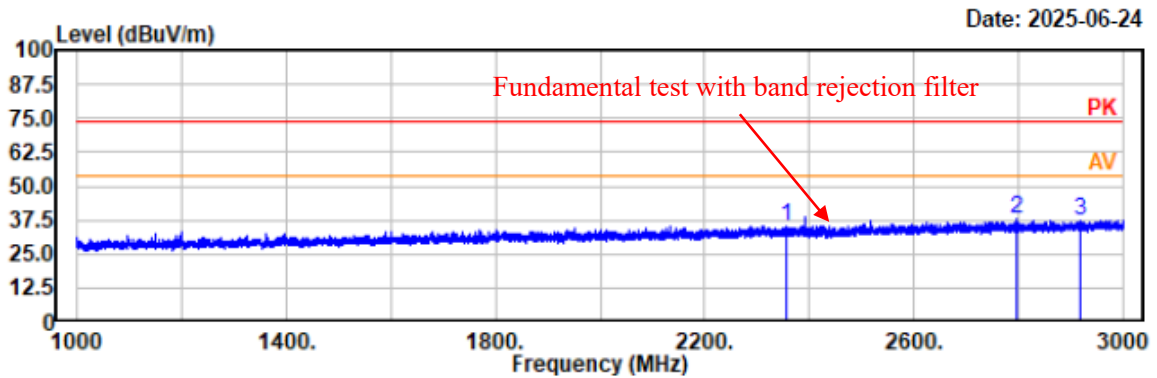


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2291.40	47.33	-11.49	35.84	74.00	38.16	horizontal	Peak
2702.20	46.70	-10.00	36.70	74.00	37.30	horizontal	Peak
2878.40	47.34	-9.58	37.76	74.00	36.24	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

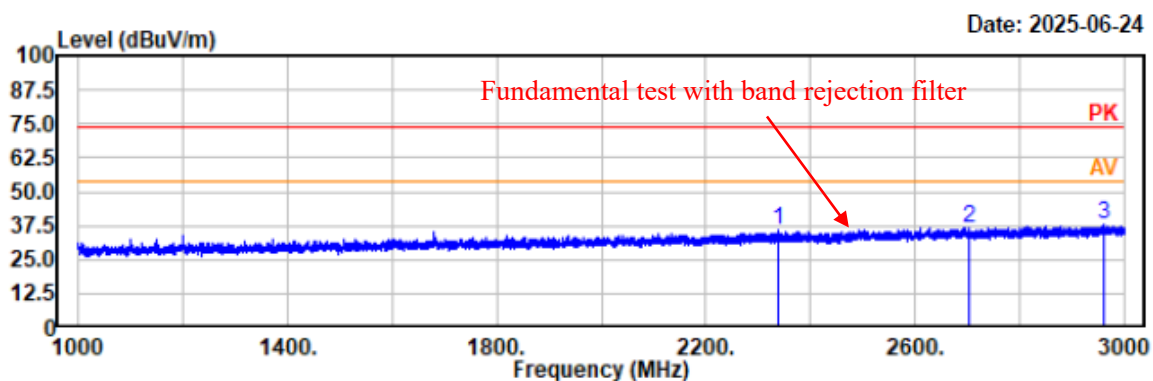


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2357.80	46.44	-11.29	35.15	74.00	38.85	vertical	Peak
2798.20	47.99	-9.80	38.19	74.00	35.81	vertical	Peak
2918.40	46.75	-9.42	37.33	74.00	36.67	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

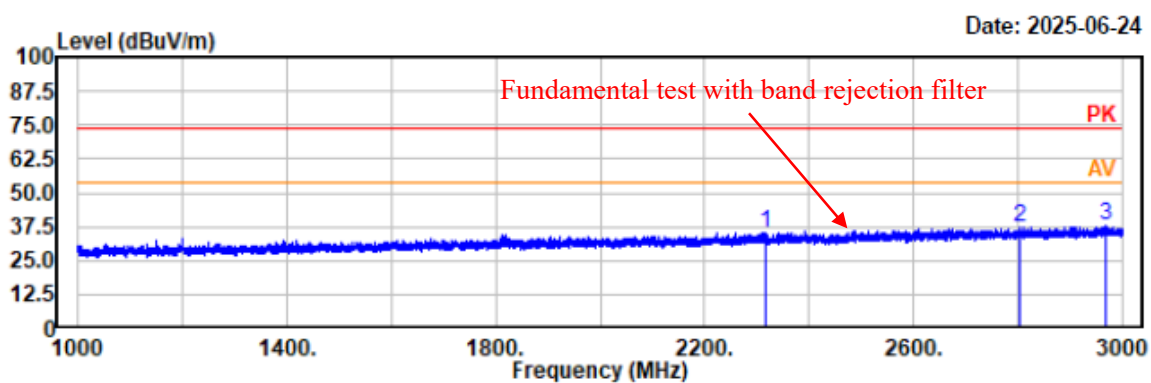


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2339.40	46.87	-11.34	35.53	74.00	38.47	horizontal	Peak
2703.00	46.56	-9.99	36.57	74.00	37.43	horizontal	Peak
2961.60	47.11	-9.14	37.97	74.00	36.03	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

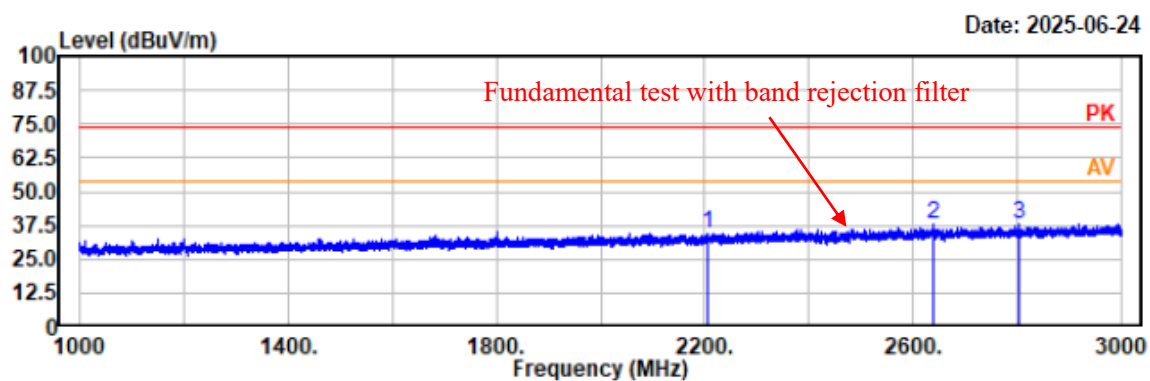


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2316.40	46.64	-11.39	35.25	74.00	38.75	vertical	Peak
2805.00	47.20	-9.77	37.43	74.00	36.57	vertical	Peak
2969.20	46.87	-9.10	37.77	74.00	36.23	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

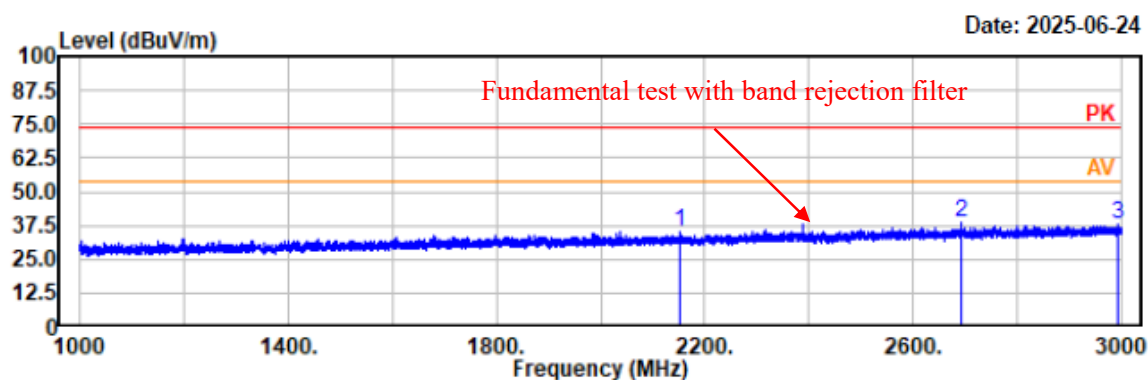


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBUV	Factor dB/m	Result dBUV/m	Limit dBUV/m	Margin dB	Polarity	Remark
2206.60	46.57	-11.93	34.64	74.00	39.36	horizontal	Peak
2639.60	47.92	-10.24	37.68	74.00	36.32	horizontal	Peak
2804.20	47.57	-9.77	37.80	74.00	36.20	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

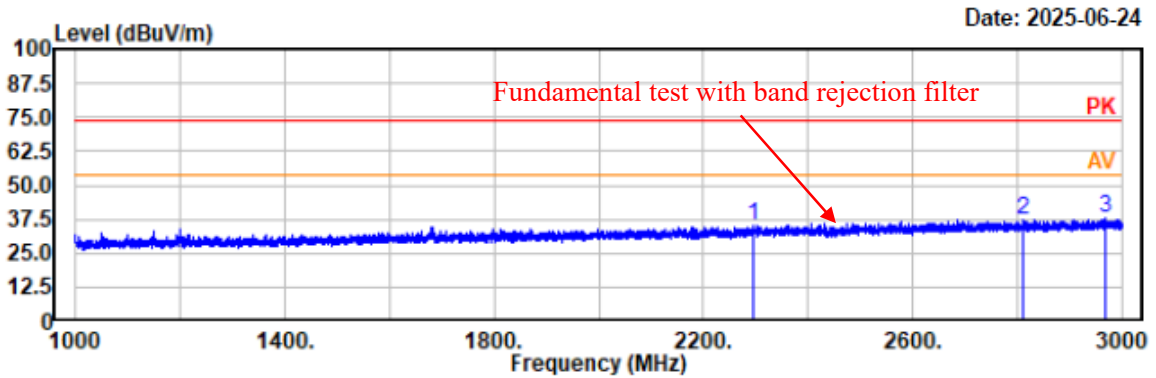


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2153.40	47.55	-12.12	35.43	74.00	38.57	vertical	Peak
2691.40	48.78	-10.03	38.75	74.00	35.25	vertical	Peak
2992.20	46.60	-8.99	37.61	74.00	36.39	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



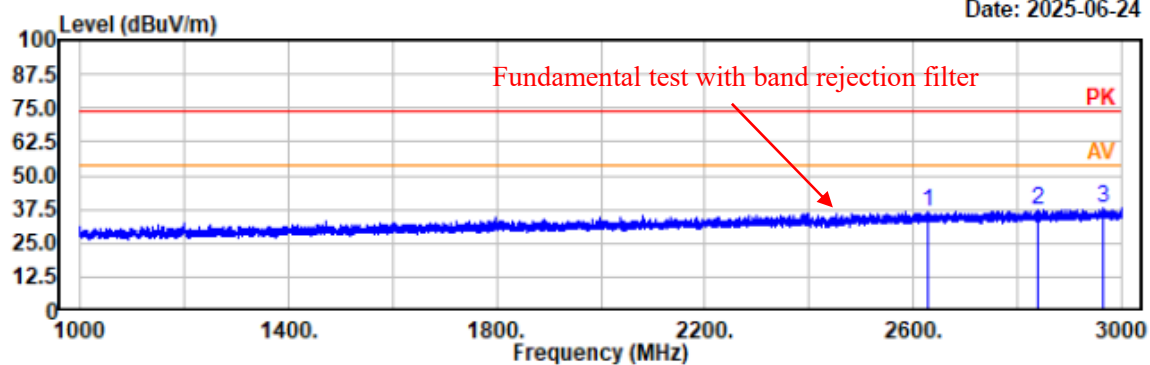
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2295.00	46.68	-11.45	35.23	74.00	38.77	horizontal	Peak
2810.80	47.00	-9.76	37.24	74.00	36.76	horizontal	Peak
2968.20	46.91	-9.11	37.80	74.00	36.20	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

Date: 2025-06-24

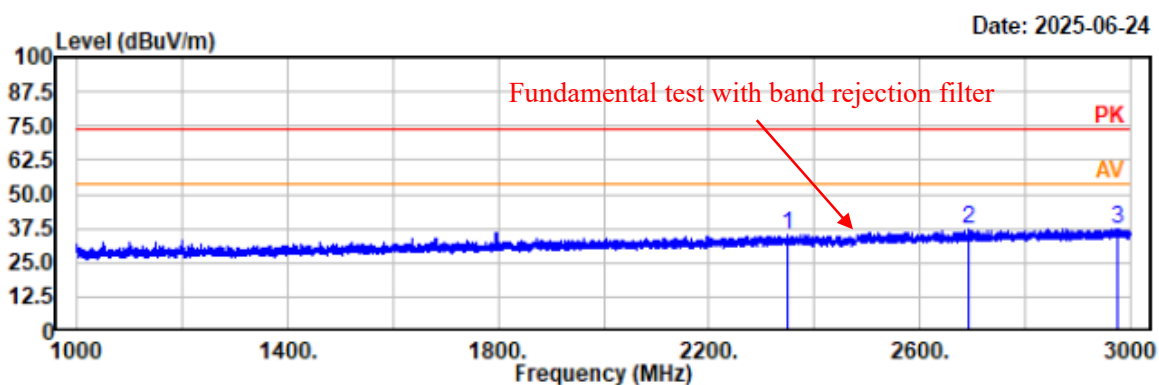


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2629.20	46.67	-10.28	36.39	74.00	37.61	vertical	Peak
2838.80	47.05	-9.65	37.40	74.00	36.60	vertical	Peak
2965.60	46.91	-9.12	37.79	74.00	36.21	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

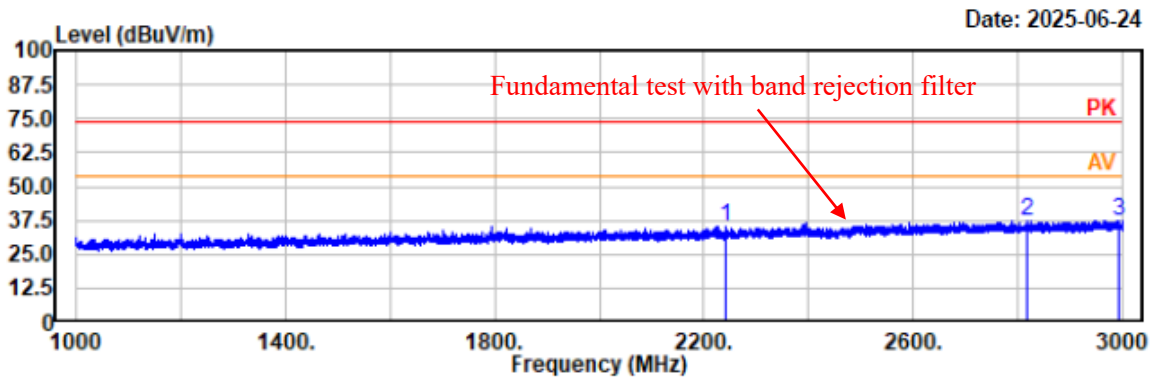


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2350.40	46.57	-11.32	35.25	74.00	38.75	horizontal	Peak
2694.20	47.37	-10.02	37.35	74.00	36.65	horizontal	Peak
2974.20	46.61	-9.07	37.54	74.00	36.46	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2241.40	46.74	-11.81	34.93	74.00	39.07	vertical	Peak
2817.40	47.24	-9.73	37.51	74.00	36.49	vertical	Peak
2994.00	46.42	-8.98	37.44	74.00	36.56	vertical	Peak

4) 3 GHz - 18 GHz

Project No.: 2507U02776E-RF

Test Mode: BDR DH1 2402MHz

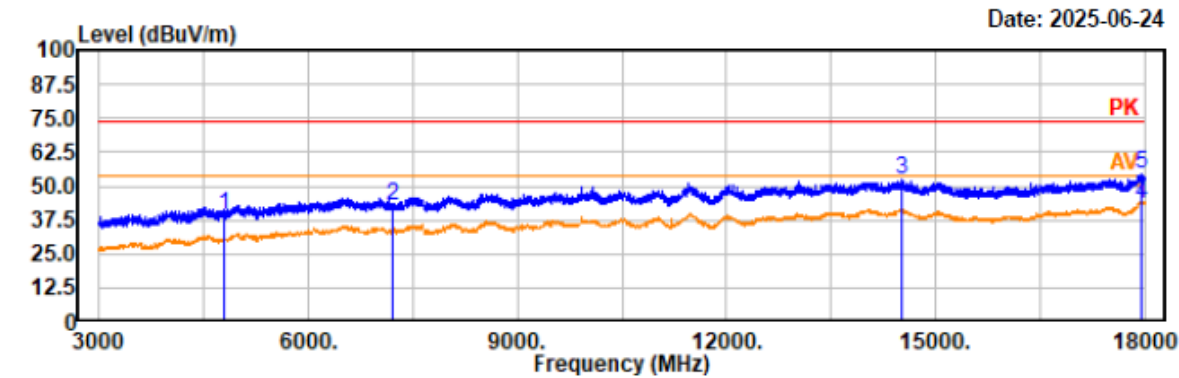
EUT Model: FS-BT-F5

Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa

Tested by: Wlif Wu

Power Source: DC 3.3V



Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto

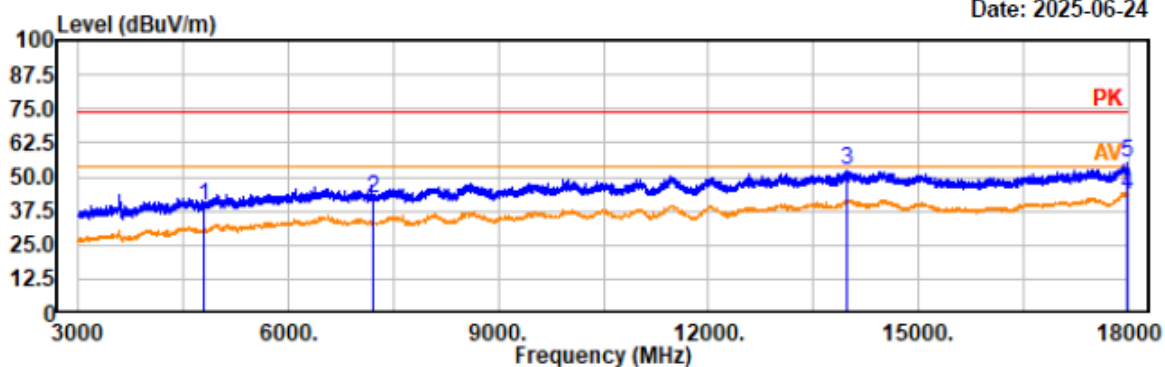
 AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4804.50	44.48	-5.24	39.24	74.00	34.76	horizontal	Peak
7206.00	45.58	-2.55	43.03	74.00	30.97	horizontal	Peak
14524.50	47.13	5.06	52.19	74.00	21.81	horizontal	Peak
17955.00	36.57	6.87	43.44	54.00	10.56	horizontal	Average
17955.00	47.27	6.87	54.14	74.00	19.86	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

Date: 2025-06-24



Trace: 1

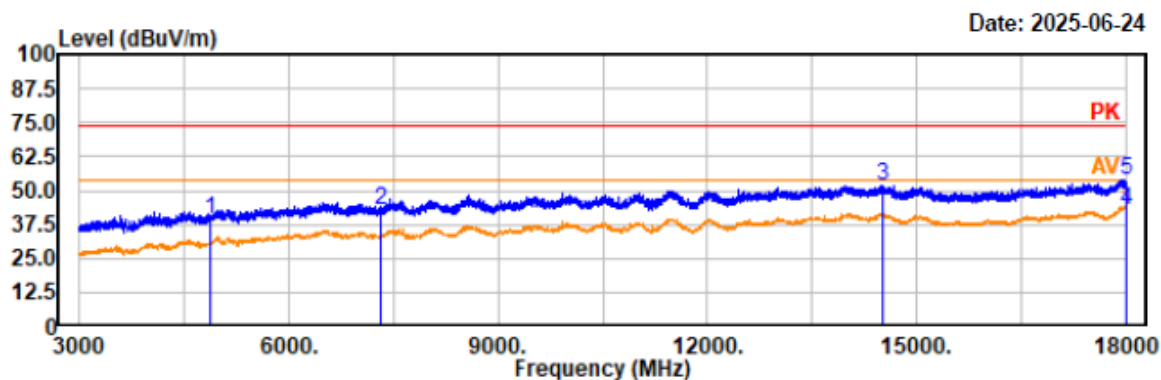
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4804.00	44.68	-5.24	39.44	74.00	34.56	vertical	Peak
7206.00	44.95	-2.55	42.40	74.00	31.60	vertical	Peak
13980.00	46.94	5.20	52.14	74.00	21.86	vertical	Peak
17988.00	36.83	6.89	43.72	54.00	10.28	vertical	Average
17988.00	48.53	6.89	55.42	74.00	18.58	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



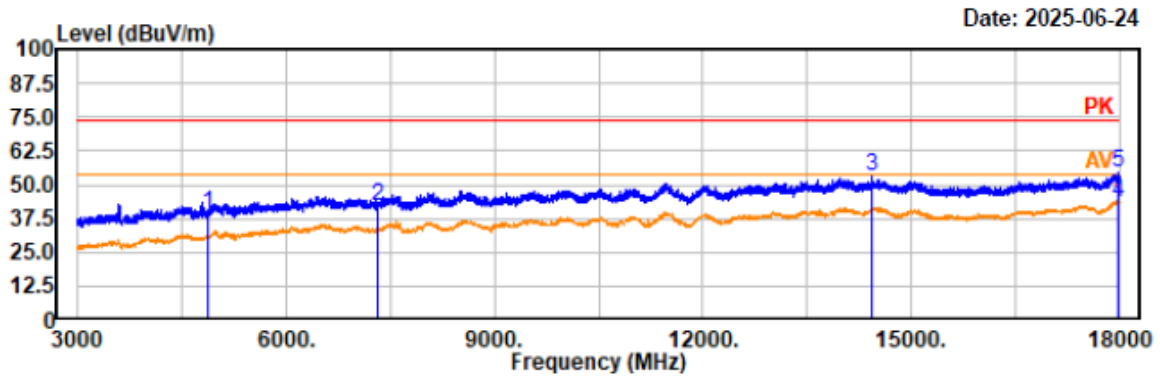
Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4882.00	44.38	-5.31	39.07	74.00	34.93	horizontal	Peak
7323.00	45.09	-2.24	42.85	74.00	31.15	horizontal	Peak
14505.00	46.80	5.06	51.86	74.00	22.14	horizontal	Peak
17999.00	35.55	6.91	42.46	54.00	11.54	horizontal	Average
17999.00	46.88	6.91	53.79	74.00	20.21	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

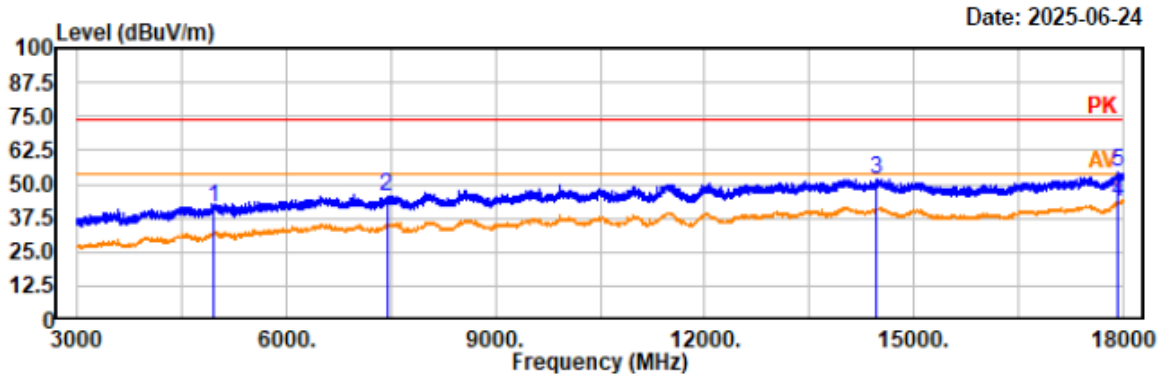
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4882.00	44.45	-5.31	39.14	74.00	34.86	vertical	Peak
7323.00	44.18	-2.24	41.94	74.00	32.06	vertical	Peak
14430.00	47.58	5.19	52.77	74.00	21.23	vertical	Peak
17971.50	36.46	6.88	43.34	54.00	10.66	vertical	Average
17971.50	47.50	6.88	54.38	74.00	19.62	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



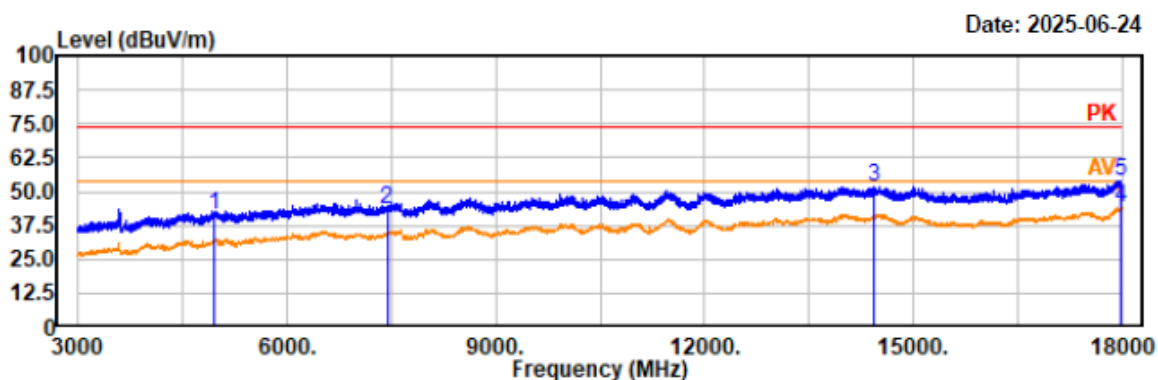
Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.00	46.40	-5.11	41.29	74.00	32.71	horizontal	Peak
7440.00	47.76	-2.03	45.73	74.00	28.27	horizontal	Peak
14472.00	46.76	5.12	51.88	74.00	22.12	horizontal	Peak
17923.50	36.46	6.83	43.29	54.00	10.71	horizontal	Average
17923.50	47.81	6.83	54.64	74.00	19.36	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



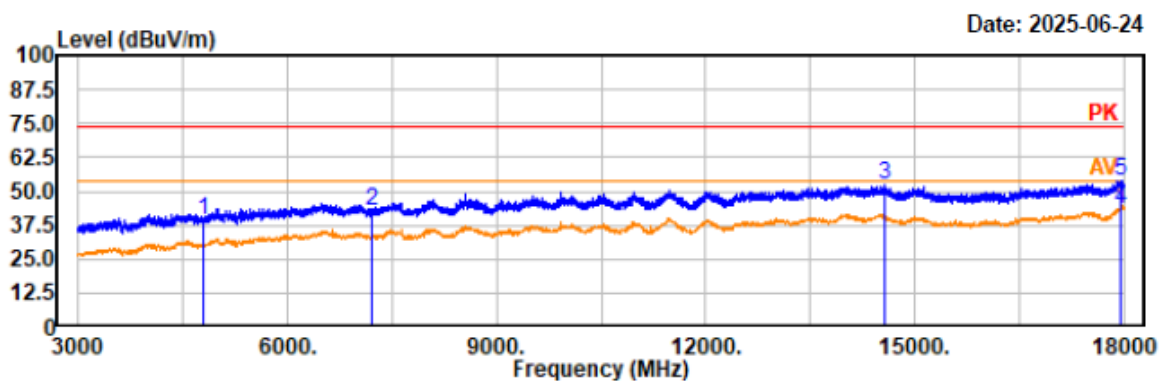
Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.00	46.21	-5.11	41.10	74.00	32.90	vertical	Peak
7440.00	45.32	-2.03	43.29	74.00	30.71	vertical	Peak
14437.50	46.43	5.18	51.61	74.00	22.39	vertical	Peak
17989.50	37.28	6.90	44.18	54.00	9.82	vertical	Average
17989.50	47.02	6.90	53.92	74.00	20.08	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

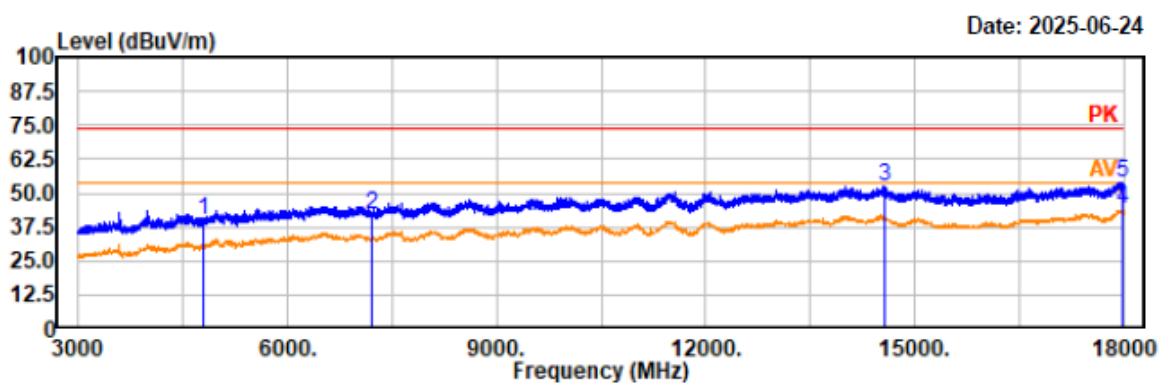
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4804.00	44.86	-5.24	39.62	74.00	34.38	horizontal	Peak
7206.00	45.29	-2.55	42.74	74.00	31.26	horizontal	Peak
14580.00	47.32	5.03	52.35	74.00	21.65	horizontal	Peak
17940.00	36.50	6.84	43.34	54.00	10.66	horizontal	Average
17940.00	47.15	6.84	53.99	74.00	20.01	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

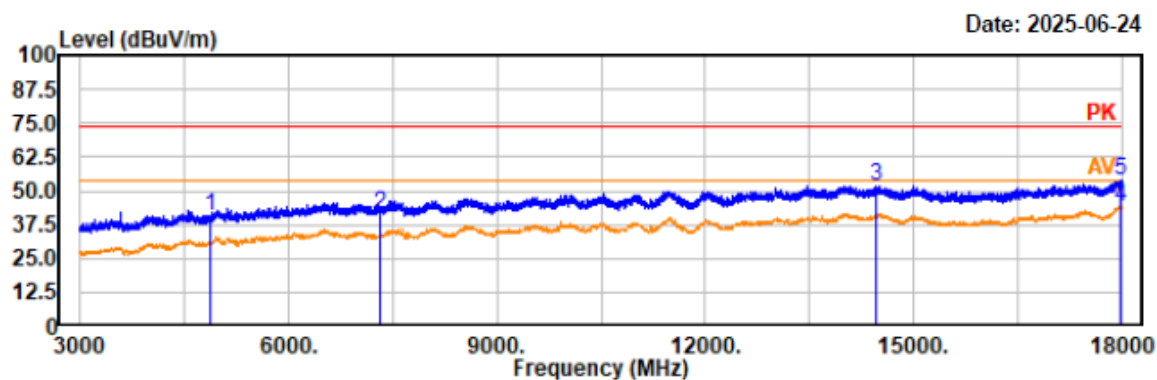
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4804.00	45.25	-5.24	40.01	74.00	33.99	vertical	Peak
7206.00	44.76	-2.55	42.21	74.00	31.79	vertical	Peak
14572.50	47.49	5.03	52.52	74.00	21.48	vertical	Peak
17986.50	37.09	6.89	43.98	54.00	10.02	vertical	Average
17986.50	47.01	6.89	53.90	74.00	20.10	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

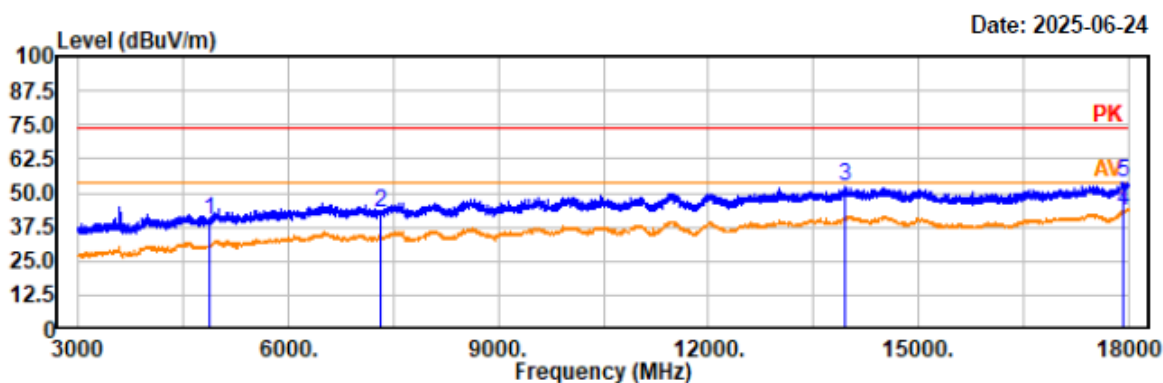
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4882.00	45.78	-5.31	40.47	74.00	33.53	horizontal	Peak
7323.00	43.89	-2.24	41.65	74.00	32.35	horizontal	Peak
14461.50	46.35	5.14	51.49	74.00	22.51	horizontal	Peak
17970.00	37.20	6.88	44.08	54.00	9.92	horizontal	Average
17970.00	46.81	6.88	53.69	74.00	20.31	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



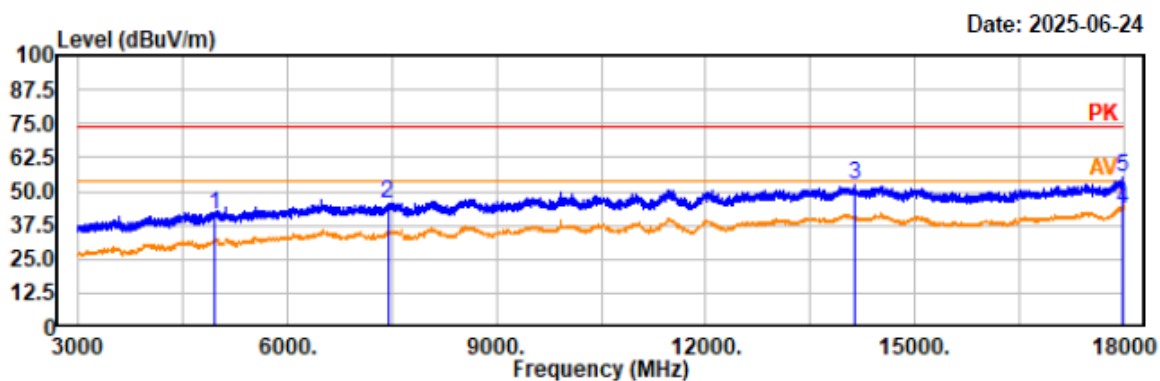
Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4882.00	45.04	-5.31	39.73	74.00	34.27	vertical	Peak
7323.00	44.70	-2.24	42.46	74.00	31.54	vertical	Peak
13950.00	47.43	5.19	52.62	74.00	21.38	vertical	Peak
17928.00	36.28	6.84	43.12	54.00	10.88	vertical	Average
17928.00	47.21	6.84	54.05	74.00	19.95	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

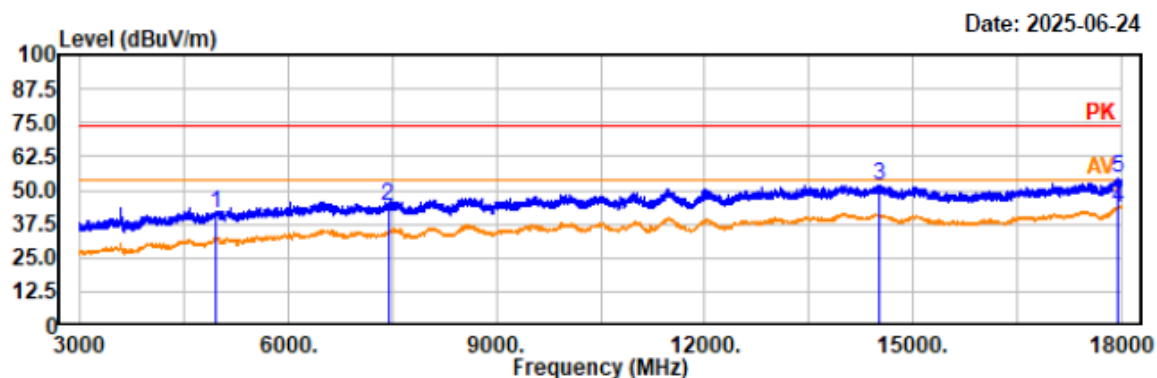
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.00	46.59	-5.11	41.48	74.00	32.52	horizontal	Peak
7440.00	47.42	-2.03	45.39	74.00	28.61	horizontal	Peak
14143.50	46.88	5.34	52.22	74.00	21.78	horizontal	Peak
17971.50	36.78	6.88	43.66	54.00	10.34	horizontal	Average
17971.50	48.14	6.88	55.02	74.00	18.98	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

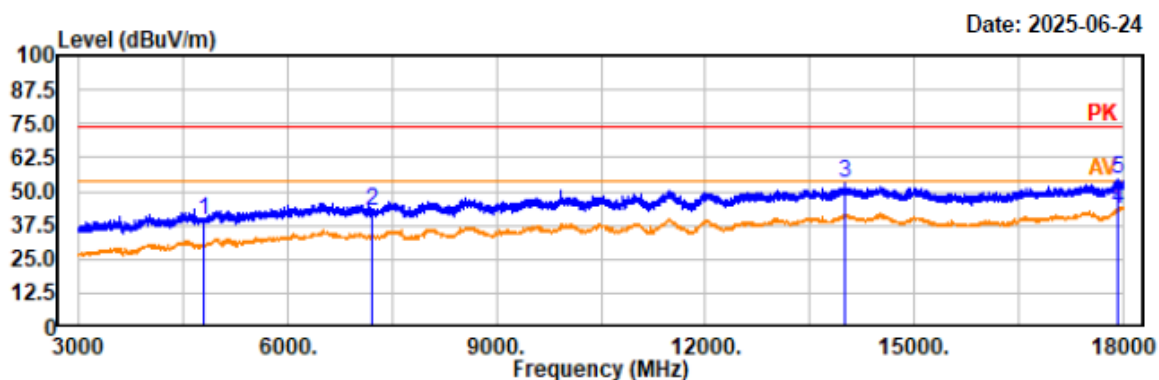
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.00	46.41	-5.11	41.30	74.00	32.70	vertical	Peak
7440.00	46.31	-2.03	44.28	74.00	29.72	vertical	Peak
14509.50	46.88	5.06	51.94	74.00	22.06	vertical	Peak
17962.50	36.25	6.86	43.11	54.00	10.89	vertical	Average
17962.50	47.77	6.86	54.63	74.00	19.37	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

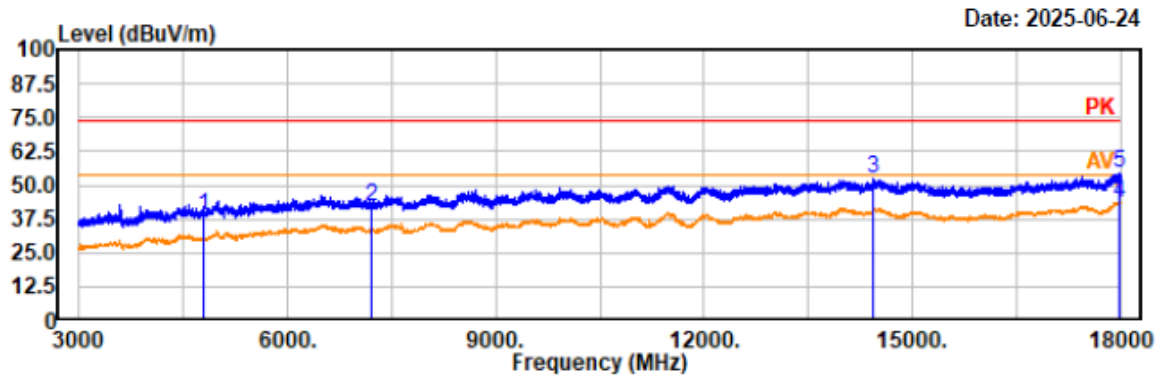
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4804.00	44.43	-5.24	39.19	74.00	34.81	horizontal	Peak
7206.00	45.09	-2.55	42.54	74.00	31.46	horizontal	Peak
14007.00	47.59	5.21	52.80	74.00	21.20	horizontal	Peak
17935.50	36.38	6.84	43.22	54.00	10.78	horizontal	Average
17935.50	47.65	6.84	54.49	74.00	19.51	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

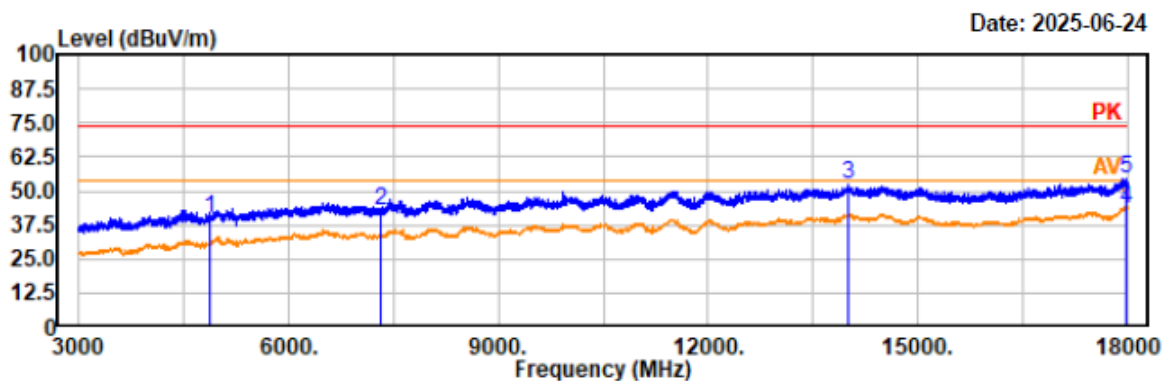
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4804.00	43.77	-5.24	38.53	74.00	35.47	vertical	Peak
7206.00	44.96	-2.55	42.41	74.00	31.59	vertical	Peak
14446.50	47.04	5.15	52.19	74.00	21.81	vertical	Peak
17991.00	36.70	6.90	43.60	54.00	10.40	vertical	Average
17991.00	47.70	6.90	54.60	74.00	19.40	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

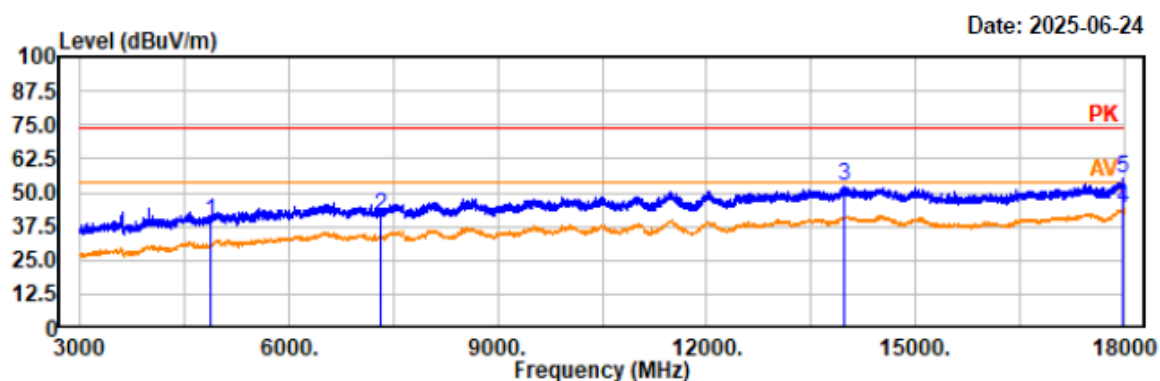
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4882.00	45.42	-5.31	40.11	74.00	33.89	horizontal	Peak
7323.00	45.08	-2.24	42.84	74.00	31.16	horizontal	Peak
13993.50	46.87	5.20	52.07	74.00	21.93	horizontal	Peak
17986.50	36.60	6.89	43.49	54.00	10.51	horizontal	Average
17986.50	47.79	6.89	54.68	74.00	19.32	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2441MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

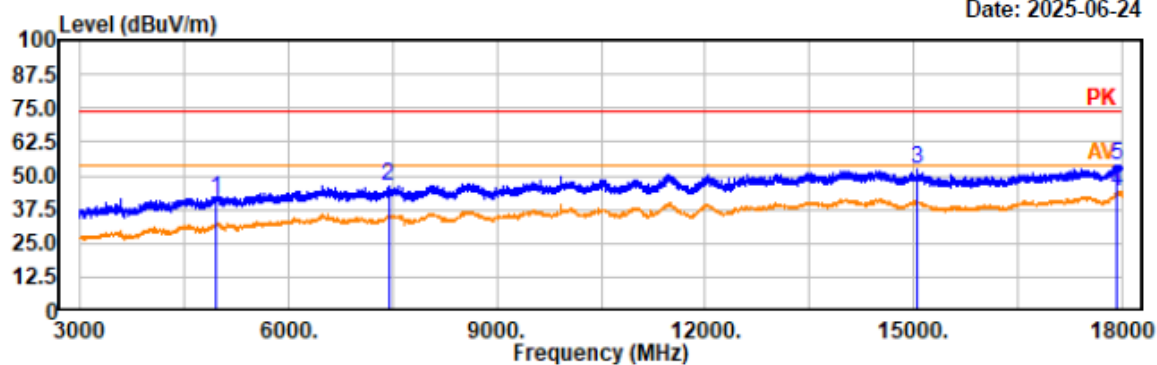
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4882.00	44.70	-5.31	39.39	74.00	34.61	vertical	Peak
7323.00	43.89	-2.24	41.65	74.00	32.35	vertical	Peak
13980.00	47.01	5.20	52.21	74.00	21.79	vertical	Peak
17983.50	37.06	6.89	43.95	54.00	10.05	vertical	Average
17983.50	47.94	6.89	54.83	74.00	19.17	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

Date: 2025-06-24



Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto

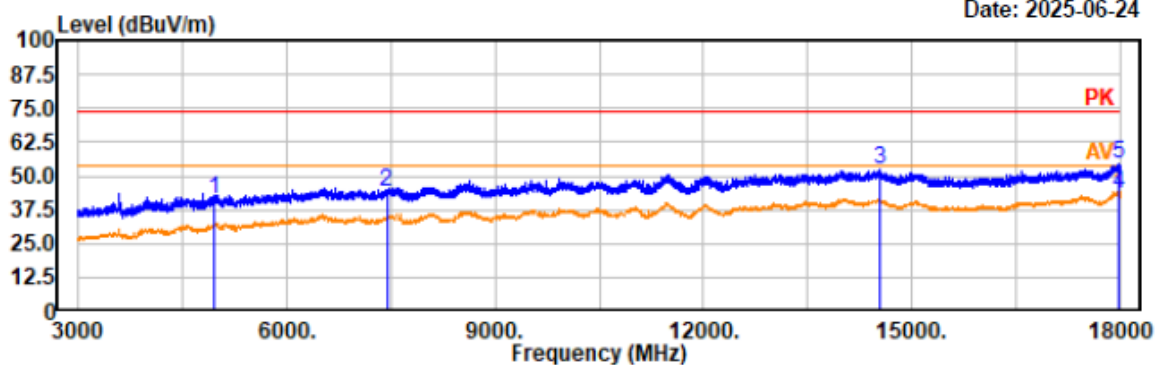
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.00	46.22	-5.11	41.11	74.00	32.89	horizontal	Peak
7440.00	47.93	-2.03	45.90	74.00	28.10	horizontal	Peak
15063.00	47.96	4.15	52.11	74.00	21.89	horizontal	Peak
17923.50	37.20	6.83	44.03	54.00	9.97	horizontal	Average
17923.50	46.89	6.83	53.72	74.00	20.28	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

Date: 2025-06-24



Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

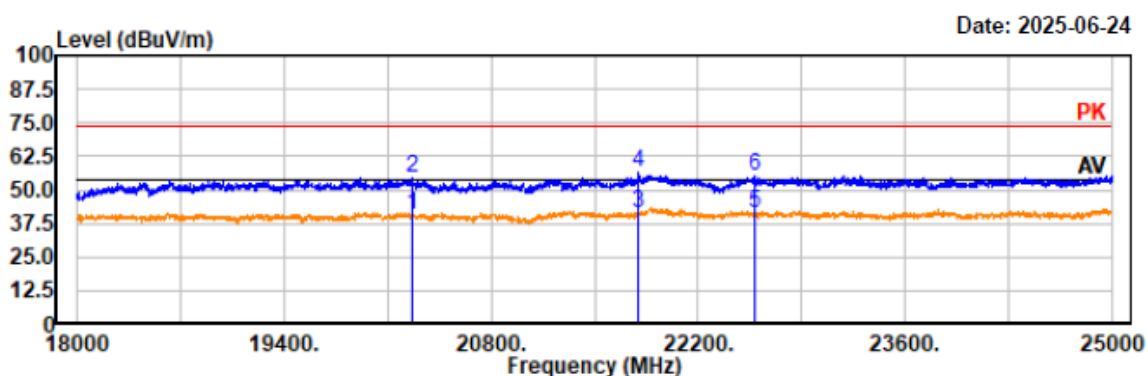
Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.00	46.32	-5.11	41.21	74.00	32.79	vertical	Peak
7440.00	45.96	-2.03	43.93	74.00	30.07	vertical	Peak
14532.00	47.02	5.05	52.07	74.00	21.93	vertical	Peak
17991.00	36.78	6.90	43.68	54.00	10.32	vertical	Average
17991.00	47.30	6.90	54.20	74.00	19.80	vertical	Peak

5) 18GHz-25GHz

Note: The maximum output power mode: EDR(8DPSK) high channel was tested.

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 1.5m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

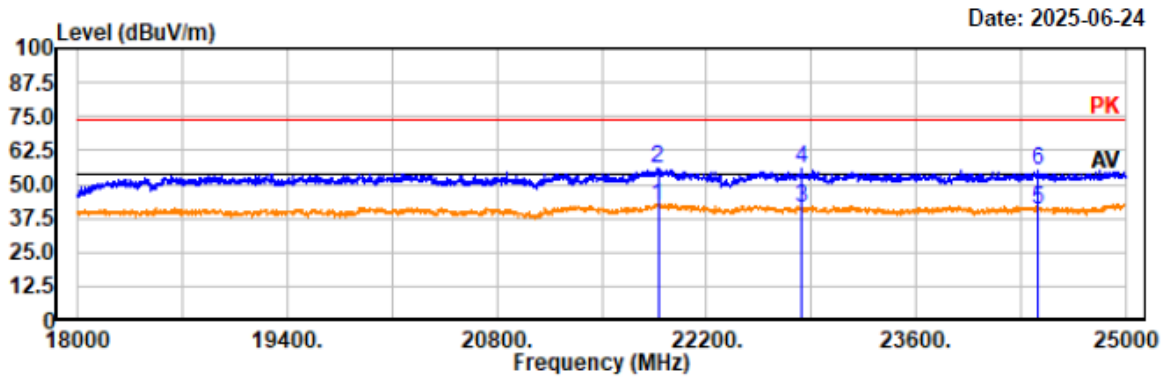
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
20263.80	36.56	3.94	40.50	54.00	13.50	horizontal	Average
20263.80	50.61	3.94	54.55	74.00	19.45	horizontal	Peak
21799.40	36.22	5.02	41.24	54.00	12.76	horizontal	Average
21799.40	51.24	5.02	56.26	74.00	17.74	horizontal	Peak
22584.80	36.12	5.07	41.19	54.00	12.81	horizontal	Average
22584.80	50.39	5.07	55.46	74.00	18.54	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 1.5m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto

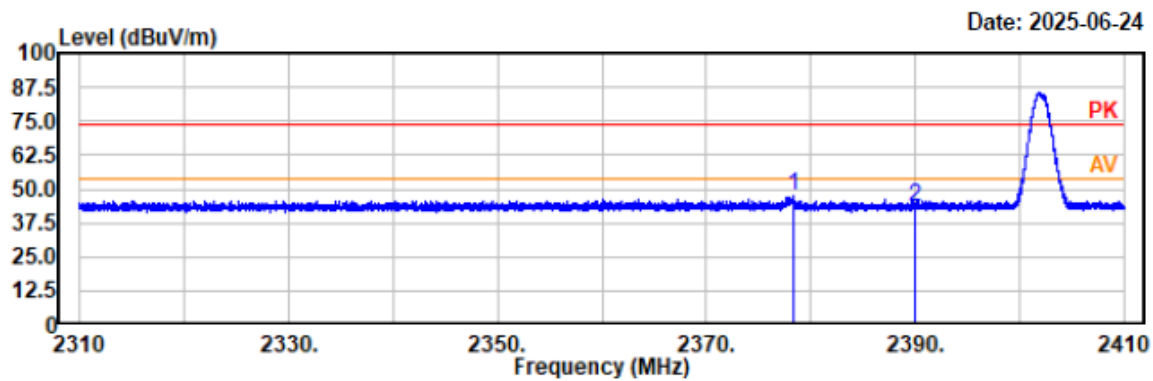
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
21876.40	36.82	5.25	42.07	54.00	11.93	vertical	Average
21876.40	50.48	5.25	55.73	74.00	18.27	vertical	Peak
22831.20	36.34	5.01	41.35	54.00	12.65	vertical	Average
22831.20	50.53	5.01	55.54	74.00	18.46	vertical	Peak
24408.60	34.39	6.09	40.48	54.00	13.52	vertical	Average
24408.60	49.08	6.09	55.17	74.00	18.83	vertical	Peak

Restricted Bands Emissions:

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

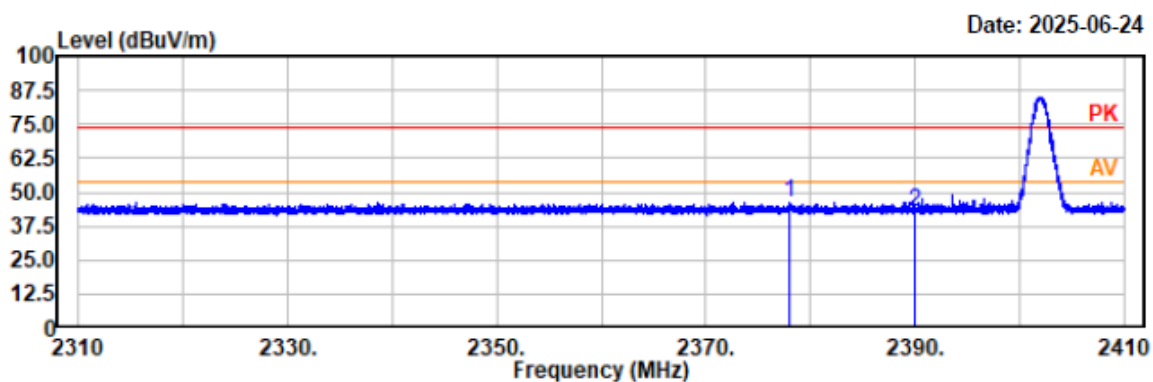


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2378.36	48.84	-1.21	47.63	74.00	26.37	horizontal	Peak
2390.00	44.63	-1.15	43.48	74.00	30.52	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

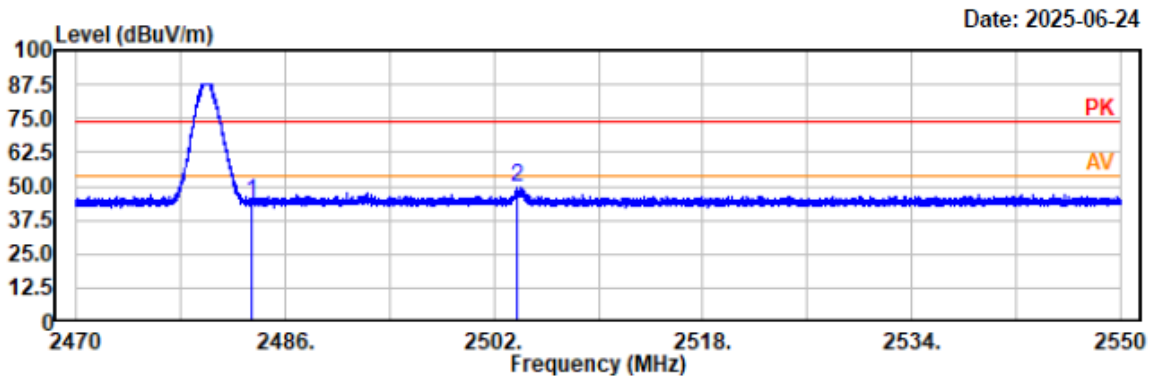


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2378.05	47.53	-1.21	46.32	74.00	27.68	vertical	Peak
2390.00	44.07	-1.15	42.92	74.00	31.08	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



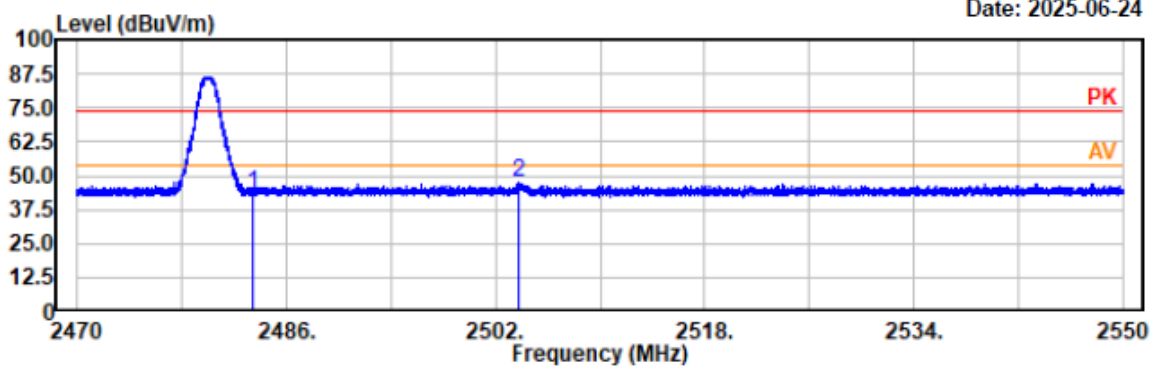
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	44.58	-0.77	43.81	74.00	30.19	horizontal	Peak
2503.74	50.62	-0.69	49.93	74.00	24.07	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: BDR DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

Date: 2025-06-24

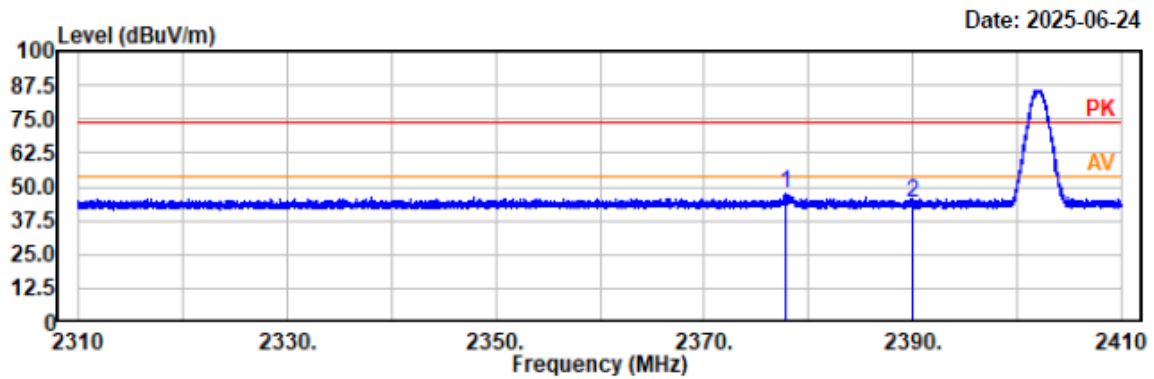


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	44.54	-0.77	43.77	74.00	30.23	vertical	Peak
2503.78	48.27	-0.69	47.58	74.00	26.42	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

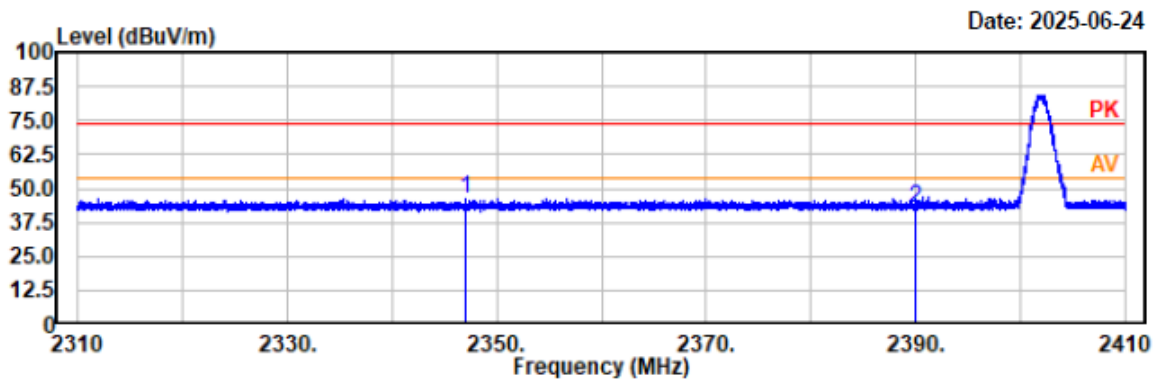


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2377.87	48.69	-1.21	47.48	74.00	26.52	horizontal	Peak
2390.00	45.11	-1.15	43.96	74.00	30.04	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

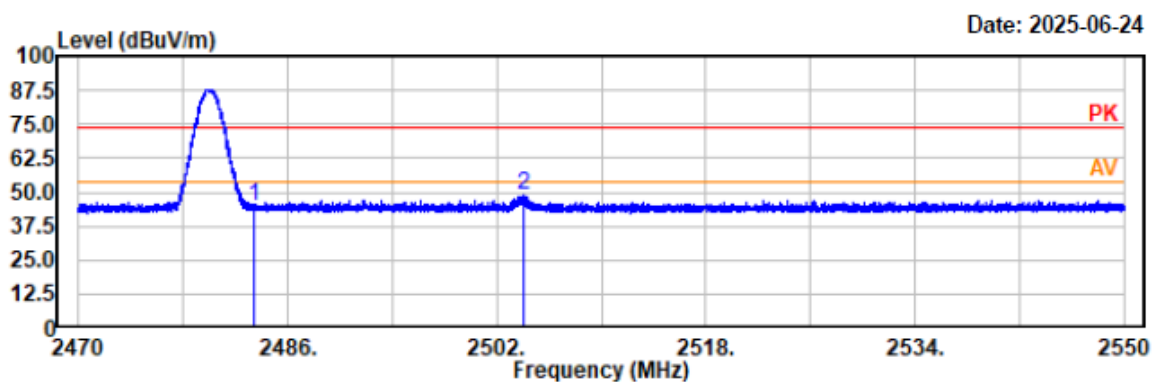


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2347.03	47.46	-1.33	46.13	74.00	27.87	vertical	Peak
2390.00	43.64	-1.15	42.49	74.00	31.51	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



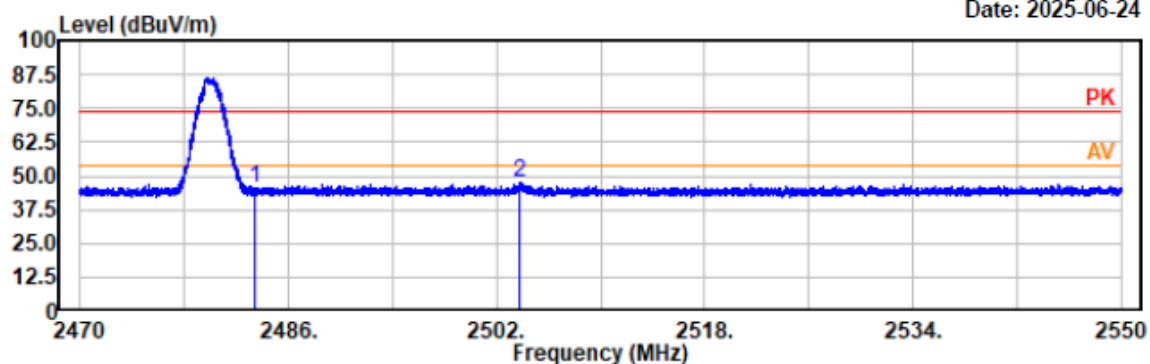
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	45.49	-0.77	44.72	74.00	29.28	horizontal	Peak
2504.03	49.66	-0.69	48.97	74.00	25.03	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 2DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

Date: 2025-06-24

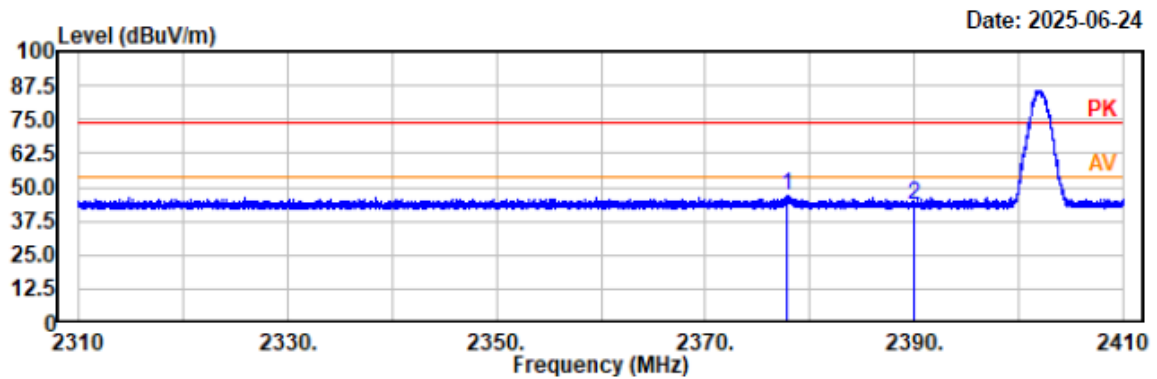


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	46.30	-0.77	45.53	74.00	28.47	vertical	Peak
2503.75	48.38	-0.69	47.69	74.00	26.31	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

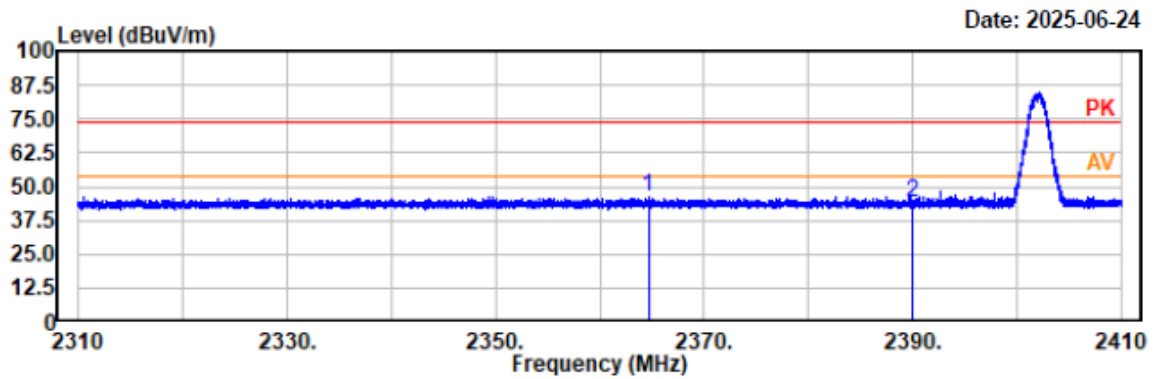


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2377.77	48.36	-1.21	47.15	74.00	26.85	horizontal	Peak
2390.00	44.73	-1.15	43.58	74.00	30.42	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2402MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



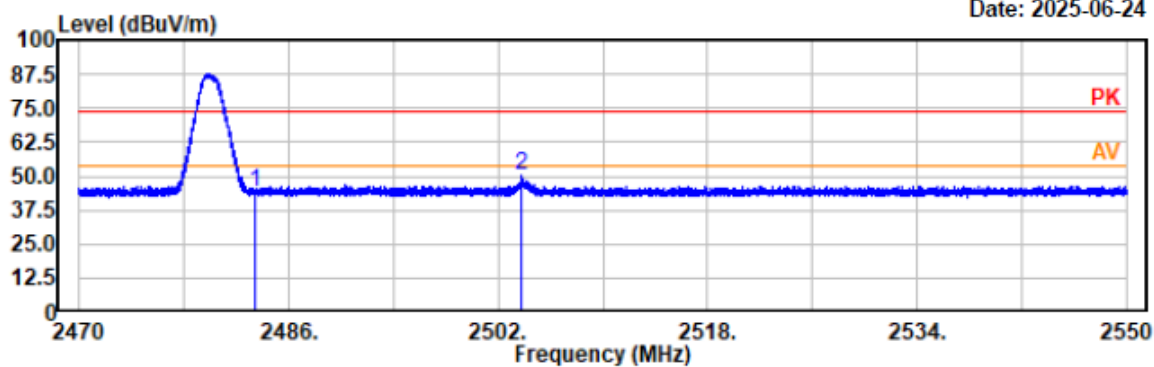
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2364.66	47.59	-1.26	46.33	74.00	27.67	vertical	Peak
2390.00	45.03	-1.15	43.88	74.00	30.12	vertical	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V

Date: 2025-06-24

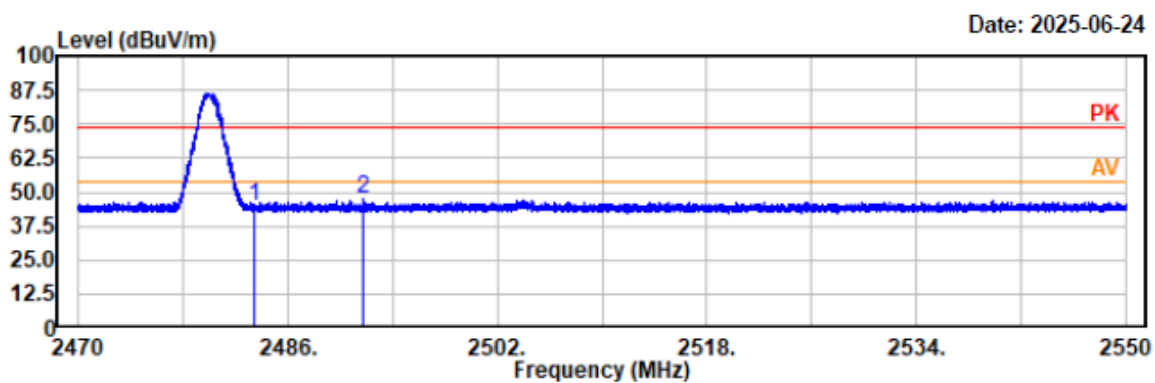


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	44.76	-0.77	43.99	74.00	30.01	horizontal	Peak
2503.79	50.80	-0.69	50.11	74.00	23.89	horizontal	Peak

Project No.: 2507U02776E-RF
Test Mode: EDR 3DH1 2480MHz
EUT Model: FS-BT-F5
Test distance: 3m

Temp/Humi/ATM: 23.0°C/56%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 3.3V



Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	45.42	-0.77	44.65	74.00	29.35	vertical	Peak
2491.75	48.11	-0.73	47.38	74.00	26.62	vertical	Peak

FCC §15.247(a) (1) & RSS-247 ISSUE 3 Clause 5.1 b) -CHANNEL SEPARATION TEST

Applicable Standard

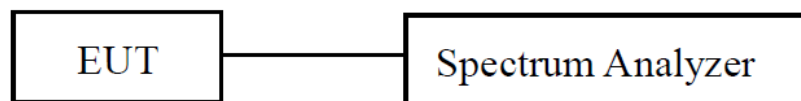
FCC §15.247 (a)(1)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW.

RSS-247 ISSUE 3 Clause 5.1 b)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 7.8.2

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span: Wide enough to capture the peaks of two adjacent channels.
- b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
- c) Video (or average) bandwidth (VBW) \geq RBW.
- d) Sweep: No faster than coupled (auto) time.
- e) Detector function: Peak.
- f) Trace: Max-hold.
- g) Allow the trace to stabilize.

Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Compliance of an EUT with the appropriate regulatory limit shall be determined. A plot of the data shall be included in the test report.

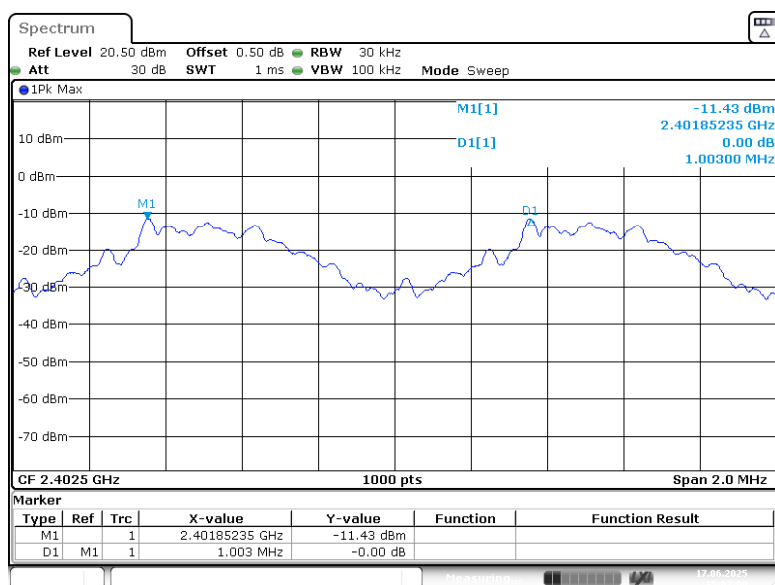
Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the carrier separation need only be measured for one of those modulation schemes or data rates.

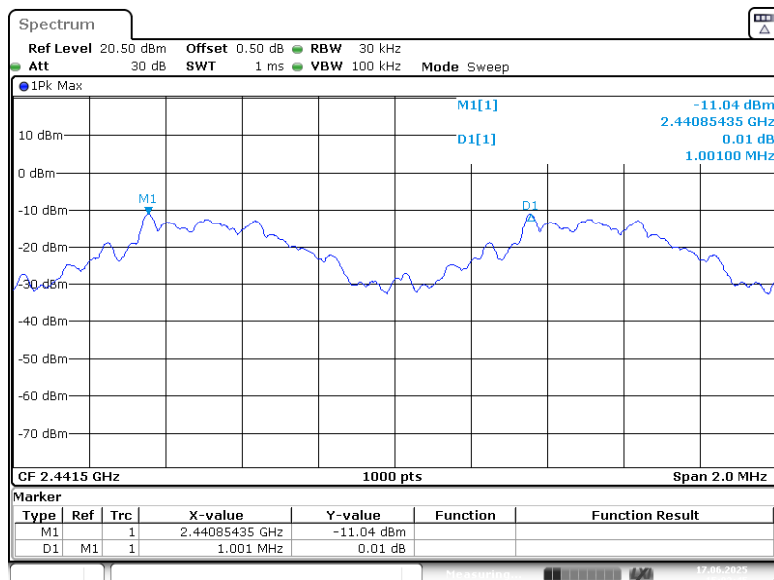
Test Data

Test Mode:		Transmitting		Test Engineer:		Braylon Ma	
Test Date:		2025-06-17		Environment:		Temp.: 23.6°C Humi.: 56% Atm :100.2kPa	
Mode	Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Result		
BDR (GFSK)	Low	2402	1.003	0.857	Pass		
	Middle	2441	1.001	0.851	Pass		
	High	2480	1.003	0.843	Pass		

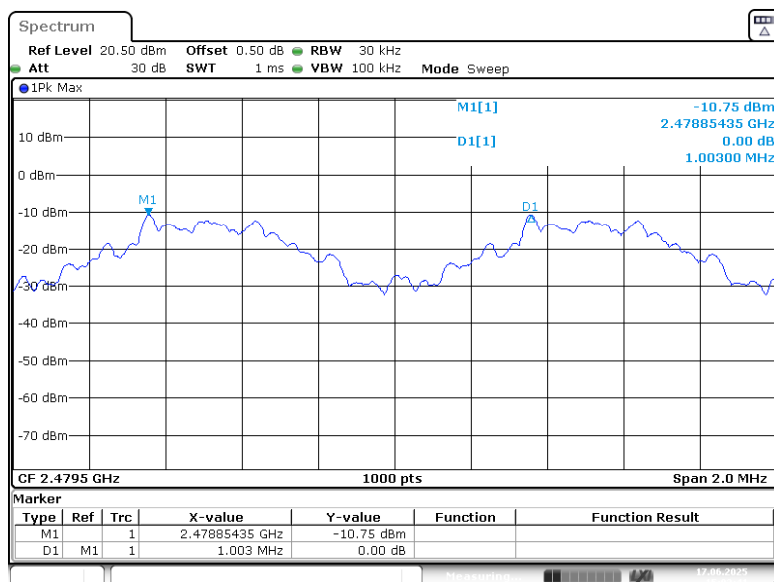
Note:

1. Limit = 20 dB bandwidth*2/3
2. Only BDR (GFSK) mode result is reported since EDR($\pi/4$ -DQPSK, 8DPSK) has the same channel plan.

BDR (GFSK): Low Channel

BDR (GFSK): Middle Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 15:02:45

BDR (GFSK): High Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 15:03:41

FCC §15.247(a) (1) & RSS-247 ISSUE 3 Clause 5.1 b) – 20 dB EMISSION BANDWIDTH

Applicable Standard

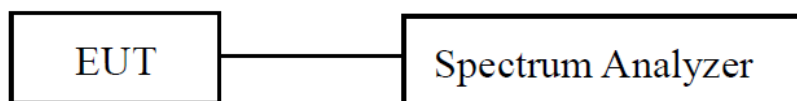
FCC §15.247 (a)(1)

Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

RSS-247 ISSUE 3 Clause 5.1 b)

Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 6.9.2

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be at least three times RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (\text{OBW/RBW})]$ below the reference level. Specific guidance is given in 4.1.6.2
- d) Steps a) through c) might require iteration to adjust within the specified tolerances.
- e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “–xx dB down” requirement; that is, if the requirement calls for measuring the –20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- f) Set detection mode to peak and trace mode to max-hold.
- g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

h) Determine the “-xx dB down amplitude” using [(reference value) – xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.

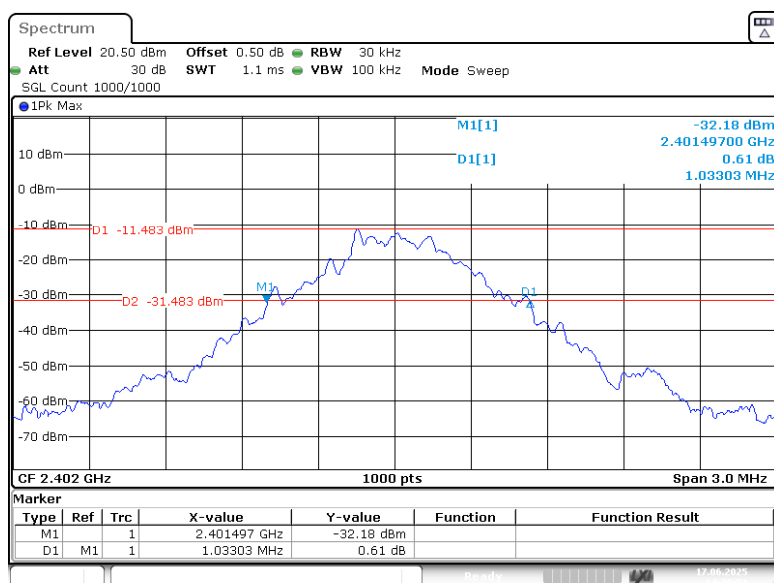
i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).

j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

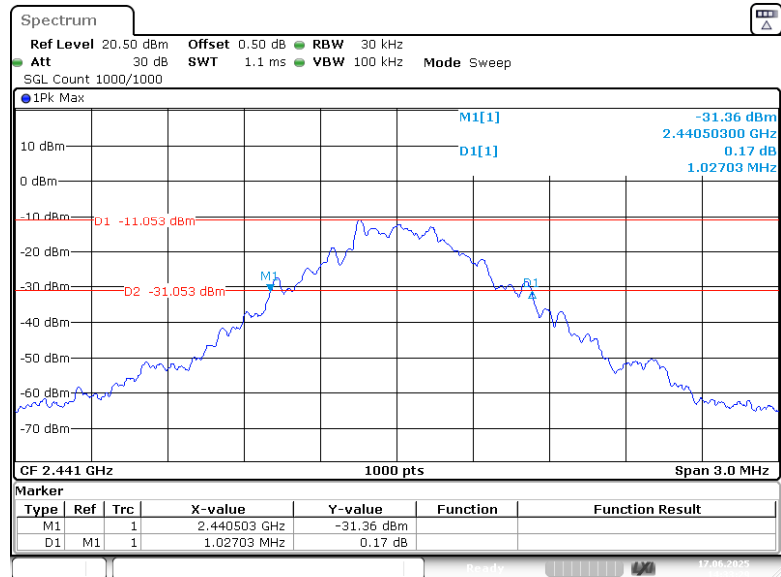
k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-06-17	Environment:	Temp.: 23.6°C Humi.: 56% Atm :100.2kPa
Mode	Channel	Frequency (MHz)	20 dB Emission Bandwidth (MHz)
BDR Mode (GFSK)	Low	2402	1.033
	Middle	2441	1.027
	High	2480	1.027
EDR ($\pi/4$ -DQPSK)	Low	2402	1.285
	Middle	2441	1.276
	High	2480	1.264
EDR (8DPSK)	Low	2402	1.249
	Middle	2441	1.258
	High	2480	1.252

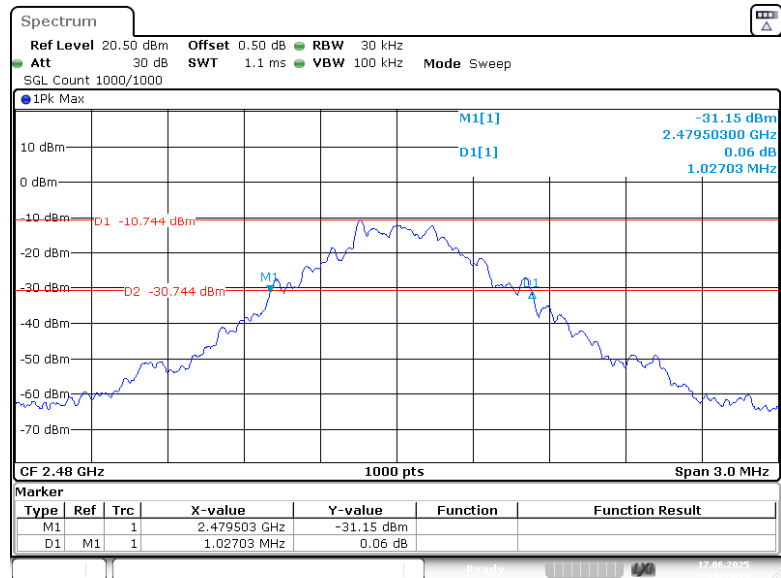
BDR(GFSK) : Low Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:30:50

BDR(GFSK) : Middle Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

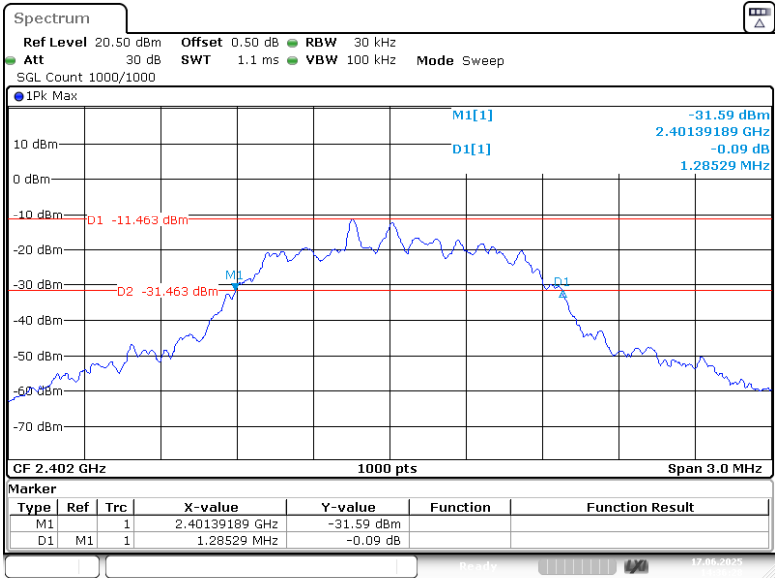
Date: 17.JUN.2025 14:33:29

BDR(GFSK) : High Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

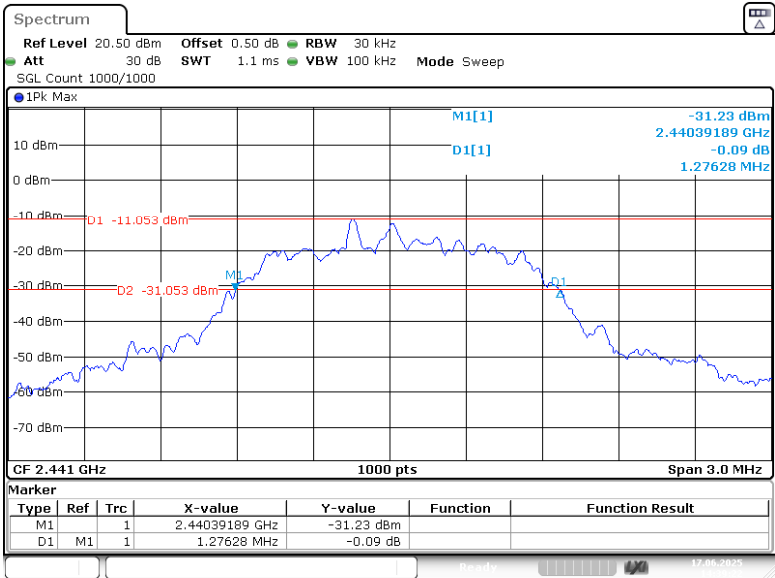
Date: 17.JUN.2025 14:34:19

EDR ($\pi/4$ -DQPSK): Low Channel

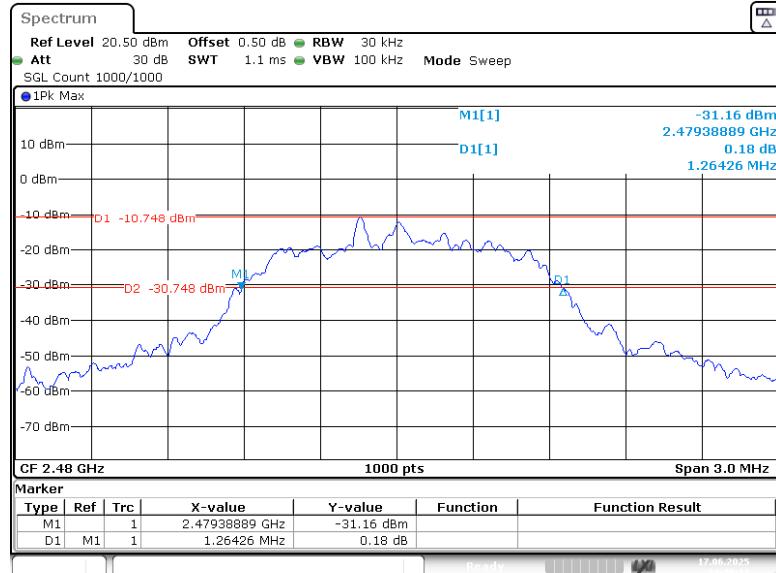


ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:36:28

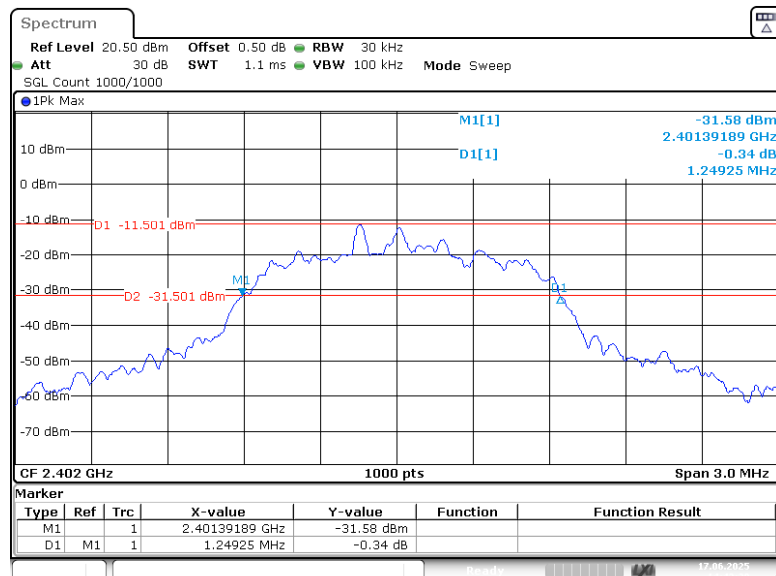
EDR($\pi/4$ -DQPSK): Middle Channel



ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:39:23

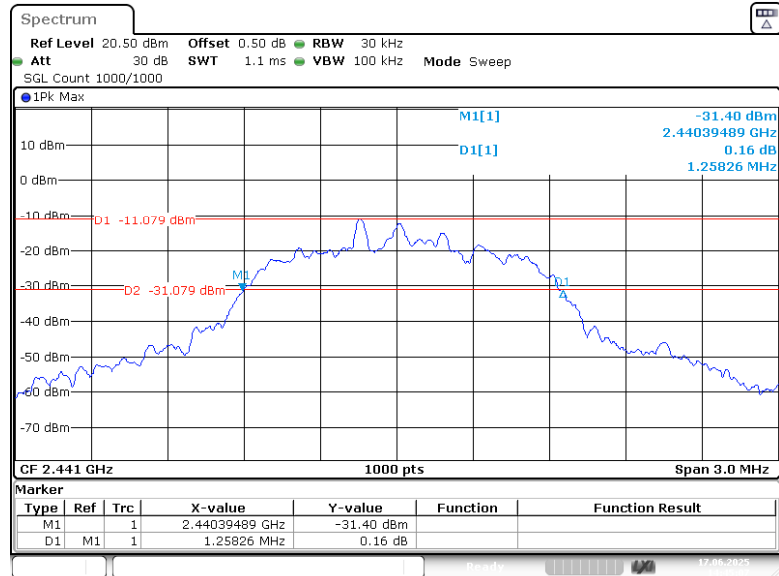
EDR ($\pi/4$ -DQPSK): High Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:40:12

EDR (8DPSK): Low Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:42:29

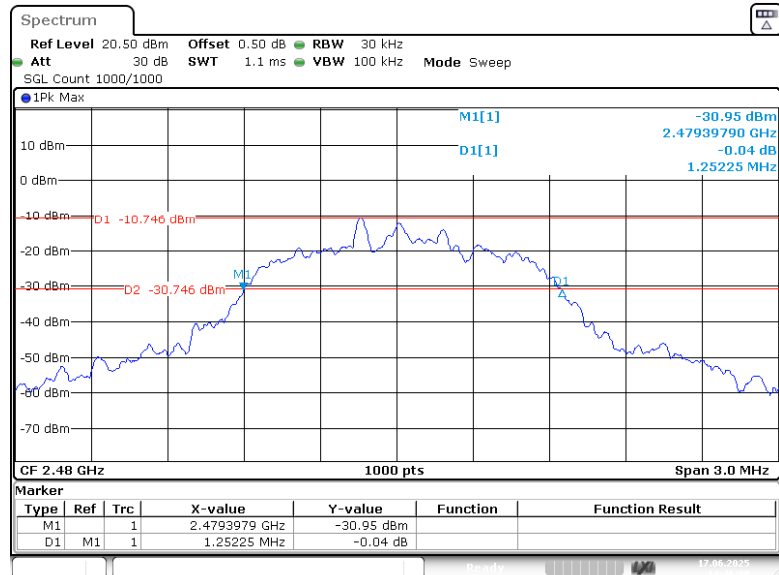
EDR (8DPSK): Middle Channel



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:45:06

EDR (8DPSK): High Channel



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:46:00

RSS-Gen ISSUE 5 Clause 6.7 99% Occupied Bandwidth

Applicable Standard

According to RSS-Gen Issue 5 Clause 6.7

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

In some cases, the “x dB bandwidth” is required, which is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated x dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.

The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:

The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

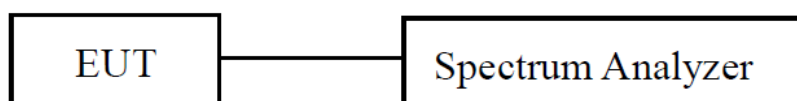
The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.

The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.

The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

EUT Setup

Test Procedure

According to ANSI C63.10-2020 Section 6.9.3

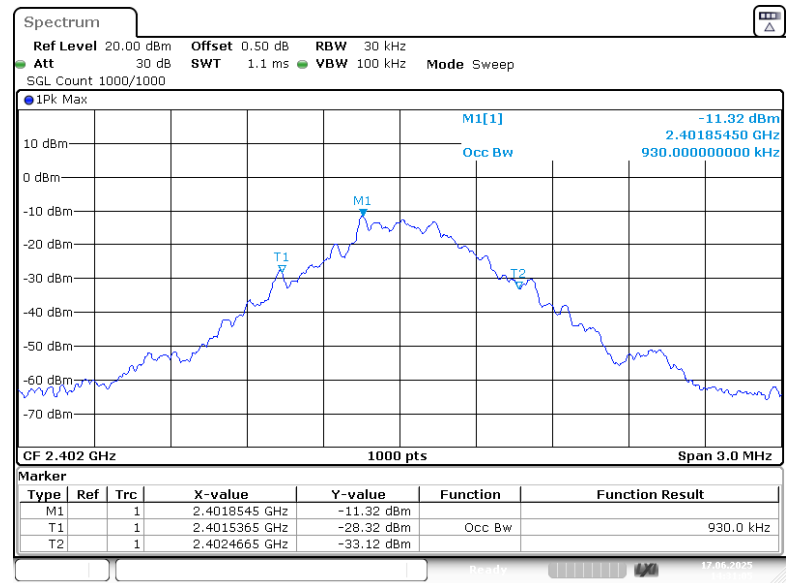
The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.6.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-06-17	Environment:	Temp.: 23.6°C Humi.: 56% Atm :100.2kPa
Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (MHz)
BDR (GFSK)	Low	2402	0.93
	Middle	2441	0.948
	High	2480	0.951
EDR ($\pi/4$ -DQPSK)	Low	2402	1.203
	Middle	2441	1.2
	High	2480	1.194
EDR (8DPSK)	Low	2402	1.182
	Middle	2441	1.182
	High	2480	1.179

BDR (GFSK): Low Channel

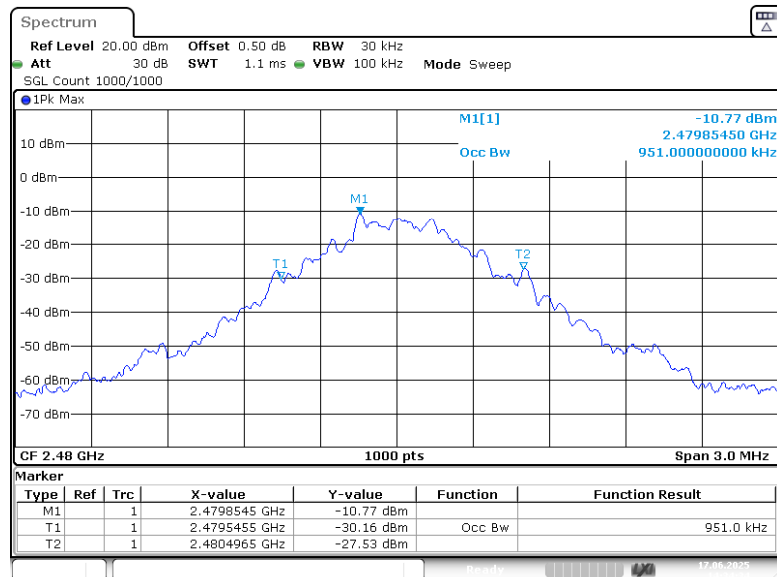


ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:31:05

BDR (GFSK): Middle Channel

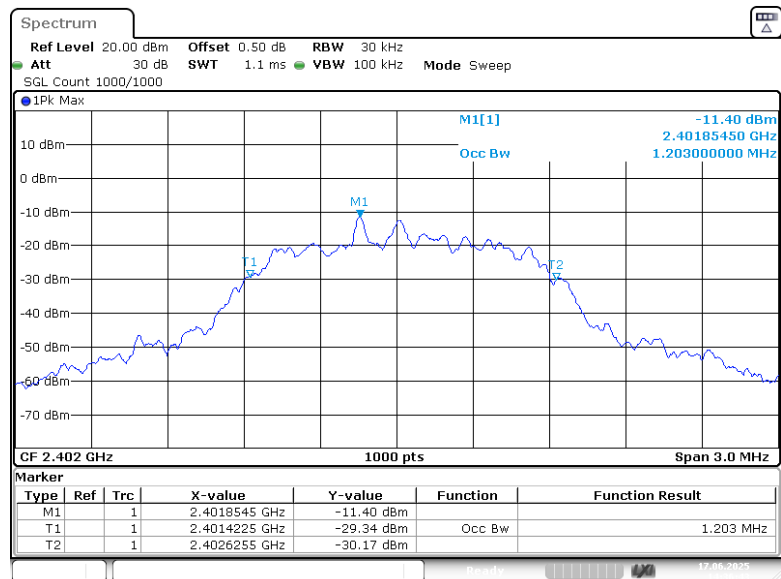
ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:33:45

BDR (GFSK): High Channel

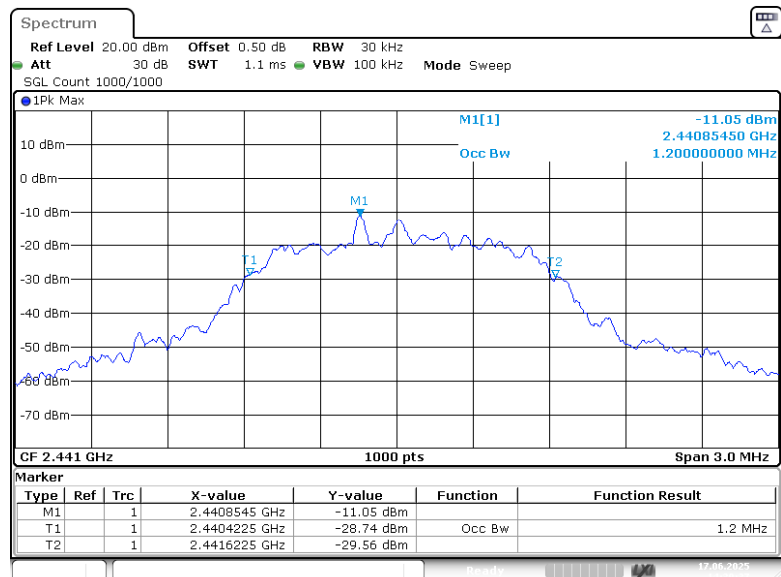
ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:34:34

EDR ($\pi/4$ -DQPSK): Low Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

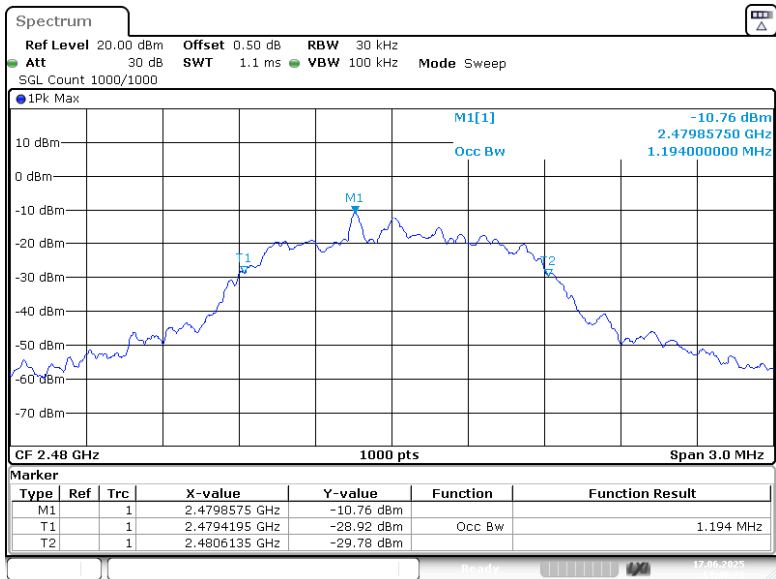
Date: 17.JUN.2025 14:36:43

EDR ($\pi/4$ -DQPSK): Middle Channel

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:39:38

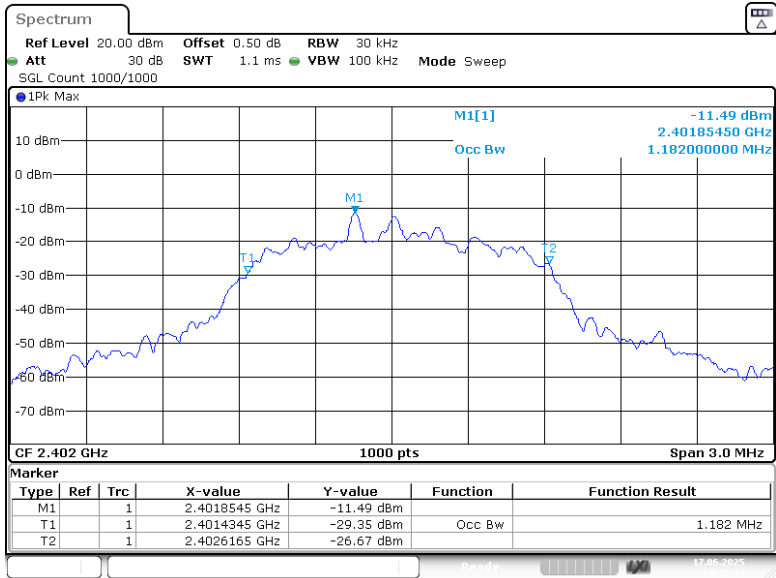
EDR ($\pi/4$ -DQPSK):High Channel



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:40:27

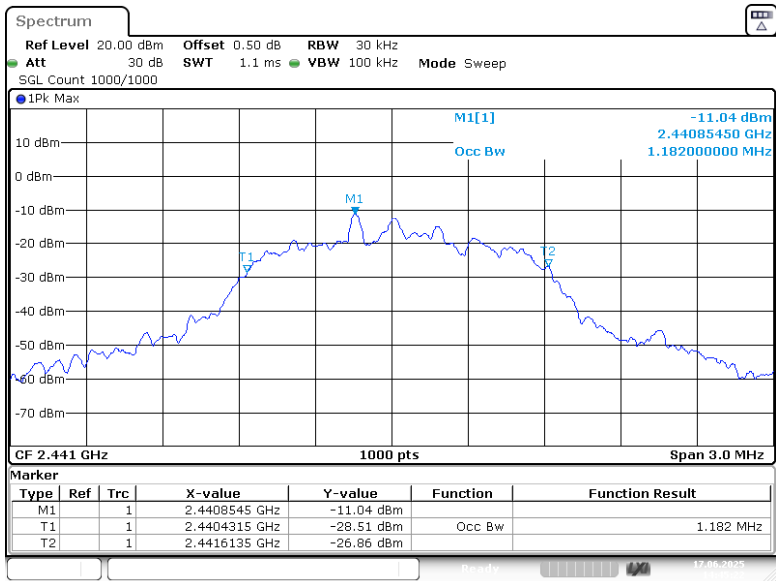
EDR (8DPSK):Low Channel



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:42:44

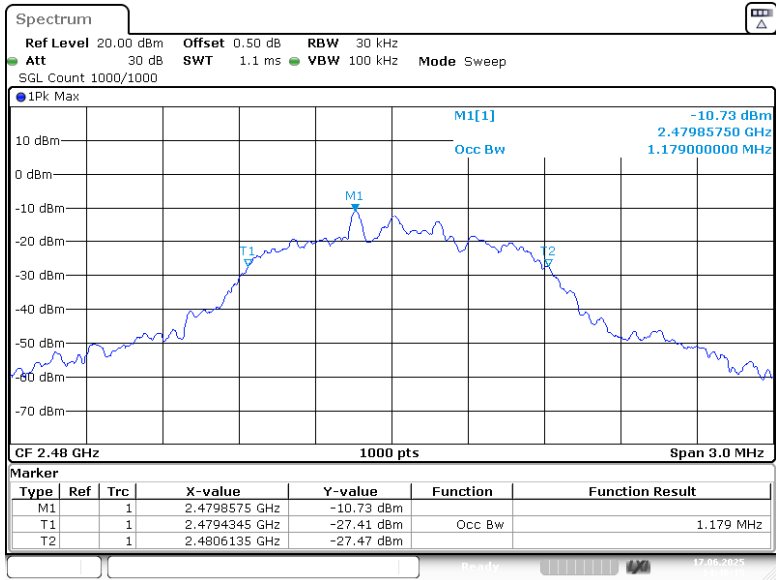
EDR (8DPSK):Middle Channel



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:45:22

EDR (8DPSK):High Channel



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:46:15

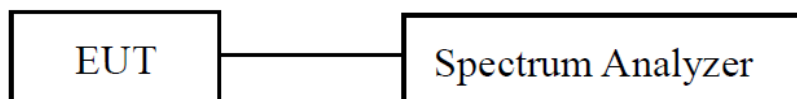
FCC §15.247(a) (1) (iii) & RSS-247 Clause 5.1 d) -QUANTITY OF HOPPING CHANNEL TEST

Applicable Standard**FCC §15.247(a) (1) (iii)**

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

RSS-247 Clause 5.1 d)

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

EUT Setup**Test Procedure**

According to ANSI C63.10-2020 Section 7.8.3

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

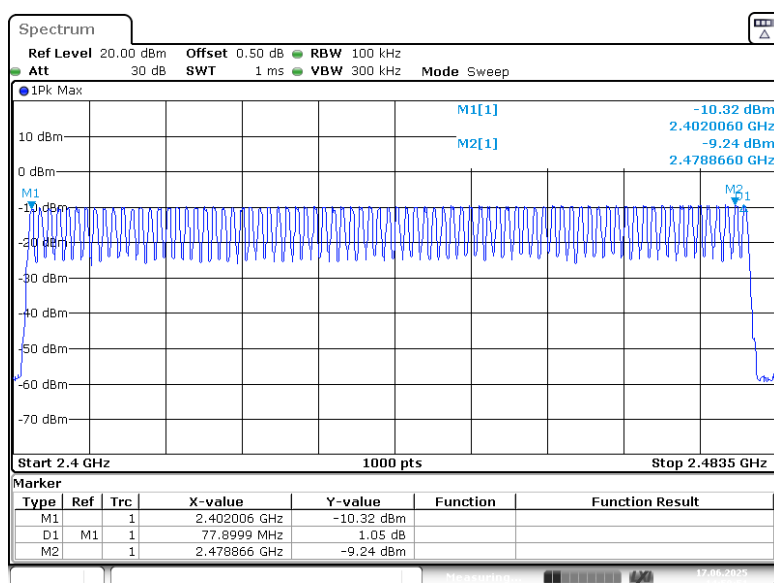
- a) Span: The frequency band of operation. Depending on the number of channels the device supports, it could be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- c) VBW \geq RBW.
- d) Sweep: No faster than coupled (auto) time.
- e) Detector function: Peak.
- f) Trace: Max-hold.
- g) Allow the trace to stabilize.

It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A spectral plot of the data shall be included in the test report.

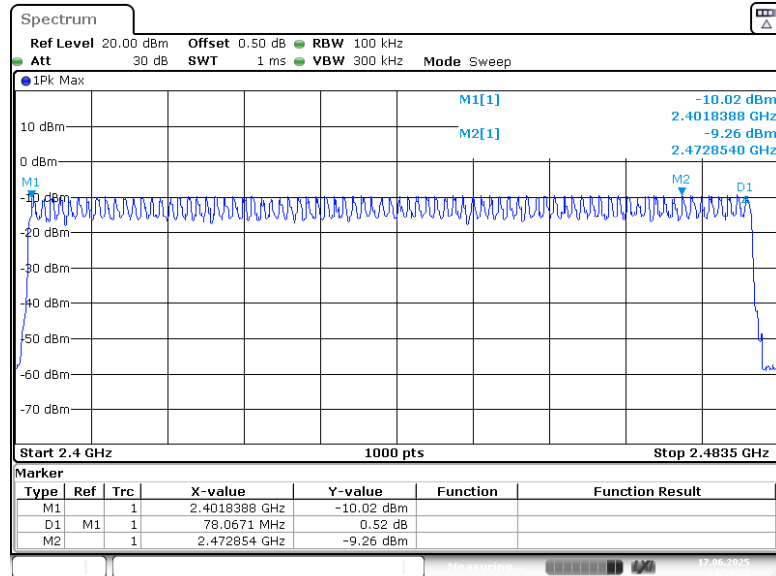
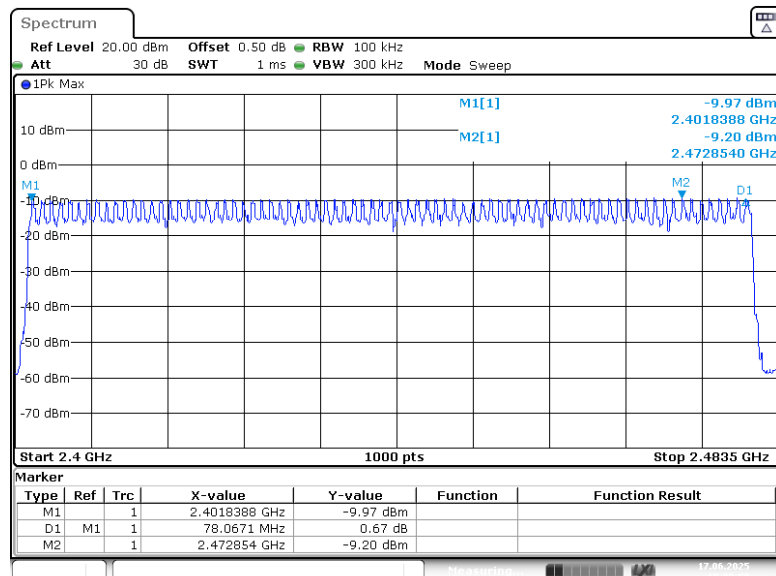
Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the number of channels need only be measured for one of those modulation schemes or data rates.

Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-06-17	Environment:	Temp.: 23.6°C Humi.: 56% Atm :100.2kPa
Mode	Frequency Range (MHz)	Number of Hopping Channel (CH)	Limit (CH)
BDR (GFSK)	2400-2483.5	79	≥15
EDR (π/4-DQPSK)	2400-2483.5	79	≥15
EDR (8DPSK)	2400-2483.5	79	≥15

BDR (GFSK): Number of Hopping Channels

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:58:51

EDR ($\pi/4$ -DQPSK): Number of Hopping Channels**EDR (8DPSK): Number of Hopping Channels**

FCC §15.247(a) (1) (iii) & RSS-247 ISSUE 3 Clause 5.1 d)- TIME OF OCCUPANCY (DWELL TIME)

Applicable Standard

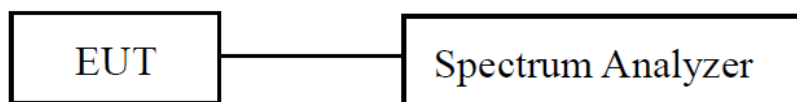
FCC §15.247(a) (1) (iii)

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

RSS-247 ISSUE 3 Clause 5.1 d)

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 7.8.4

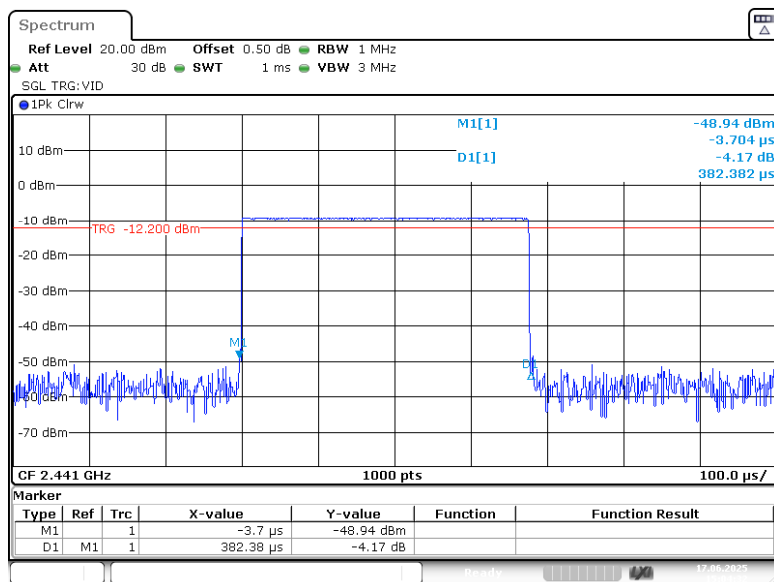
Use the following spectrum analyzer settings to determine the dwell time per hop:

- a) Span: Zero span, centered on a hopping channel.
- b) RBW shall be \leq channel spacing and where possible RBW should be set $\gg 1 / T$, where T is the expected transmission time per hop.
- c) Sweep time: Set so that the start of the first transmission and end of the last transmission for the hop are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period = $1/\text{hopping rate}$) should achieve this.
- d) Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed. The trigger level might need adjustment to reduce the chance of triggering when the system hops on an adjacent channel.
- e) Detector function: Peak.
- f) Trace: Clear-write, single sweep.
- g) Place markers at the start of the first transmission on the channel and at the end of the last transmission. The dwell time per hop is the time between these two markers.

To determine the number of hops on a channel in the regulatory observation period repeat the measurement using a longer sweep time. When the device uses a single hopping sequence the period of measurement should be sufficient to capture at least 2 hops. When the device uses a dynamic hopping sequence, or the sequence varies, the period of measurement may need to capture multiple hops to better determine the average time of occupancy. Count the number of hops on the channel across the sweep time.

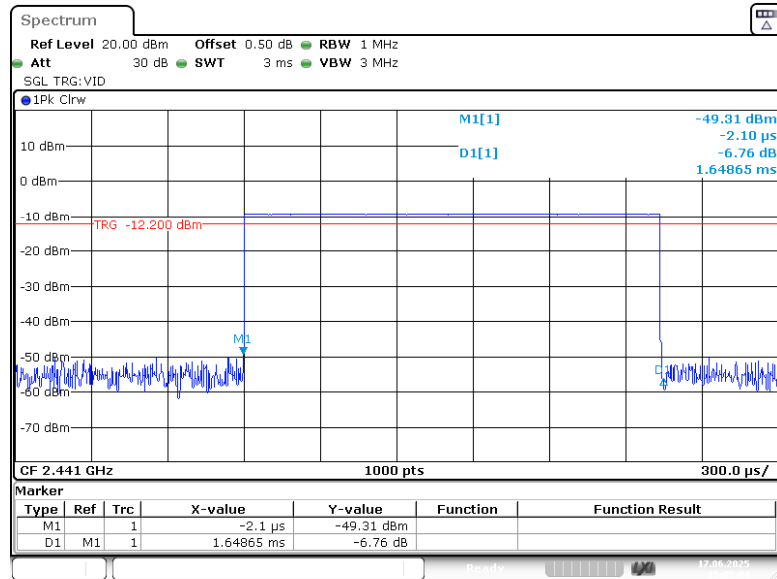
Test Data

Test Mode:		Transmitting		Test Engineer:	Braylon Ma
Test Date:		2025-06-17		Environment:	Temp.: 23.6°C Humi.: 56% Atm :100.2kPa
Test Modes	Packet Type	Test Frequency (MHz)	Pulse width (ms)	Dwell times (s)	Limit (s)
BDR Mode (GFSK)	DH1	2441	0.382	0.122	0.400
	DH3	2441	1.649	0.264	0.400
	DH5	2441	2.903	0.310	0.400
EDR Mode ($\pi/4$ -DQPSK)	2DH1	2441	0.395	0.126	0.400
	2DH3	2441	1.652	0.264	0.400
	2DH5	2441	2.908	0.310	0.400
EDR Mode (8DPSK)	3DH1	2441	0.395	0.126	0.400
	3DH3	2441	1.649	0.264	0.400
	3DH5	2441	2.913	0.311	0.400
DH1/2DH1/3DH1:Dwell time=Pulse time (ms) \times (1600/2/79) \times 31.6 s DH3/2DH3/3DH3:Dwell time=Pulse time (ms) \times (1600/4/79) \times 31.6 s DH5/2DH5/3DH5:Dwell time=Pulse time (ms) \times (1600/6/79) \times 31.6 s					

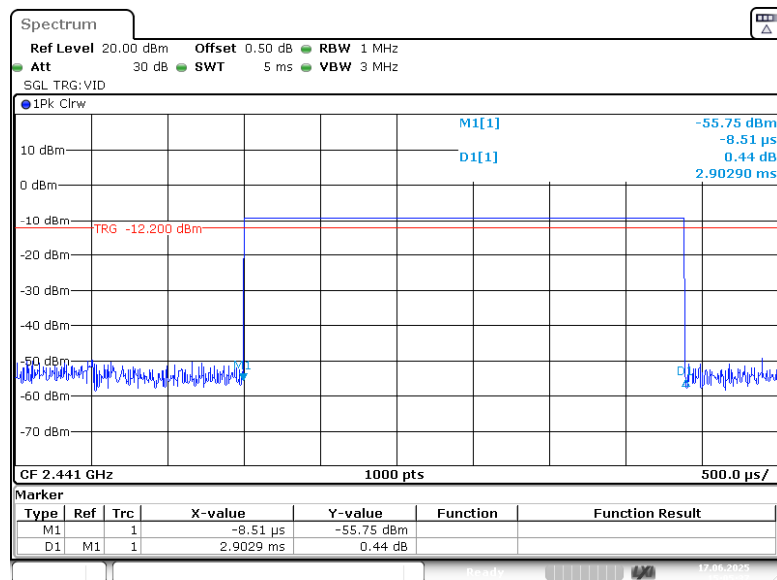
BDR (GFSK)_Hopping_DH1

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 15:04:32

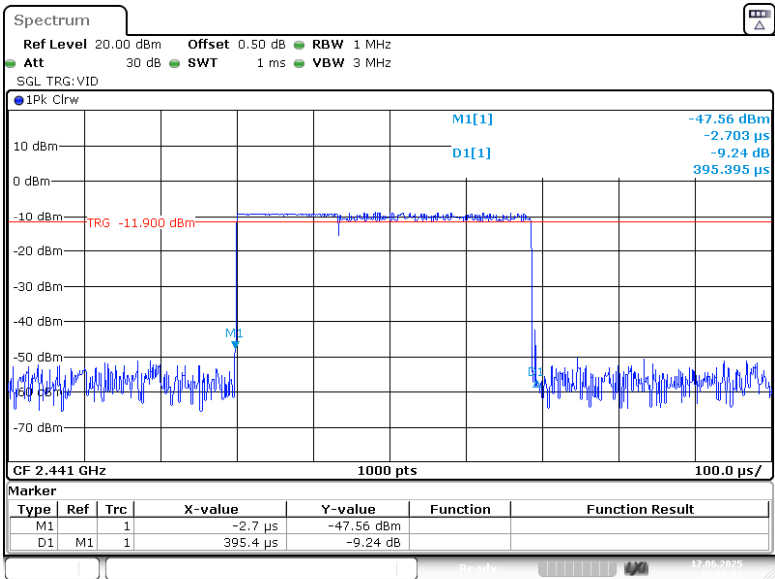
BDR (GFSK)_Hopping_DH3



BDR (GFSK)_Hopping_DH5

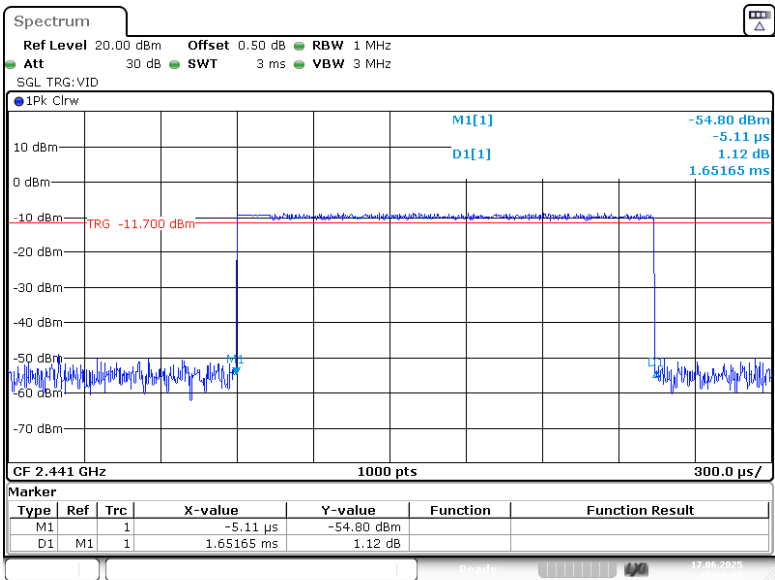


EDR ($\pi/4$ -DQPSK)_Hopping_2DH1

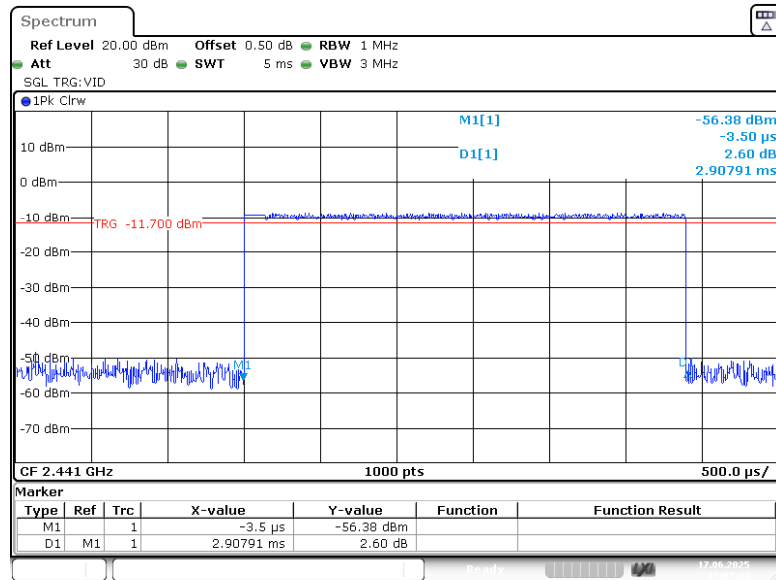


ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 15:06:12

EDR ($\pi/4$ -DQPSK)_Hopping_2DH3

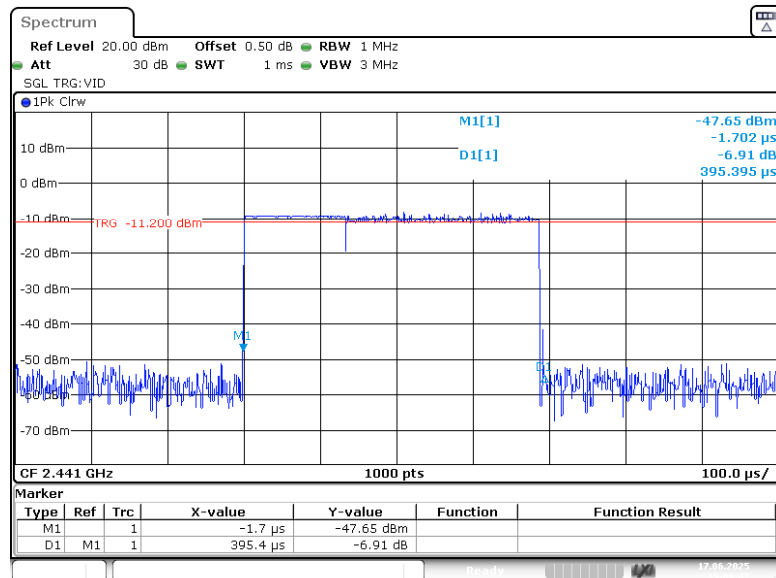


ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 15:06:59

EDR ($\pi/4$ -DQPSK)_Hopping_2DH5

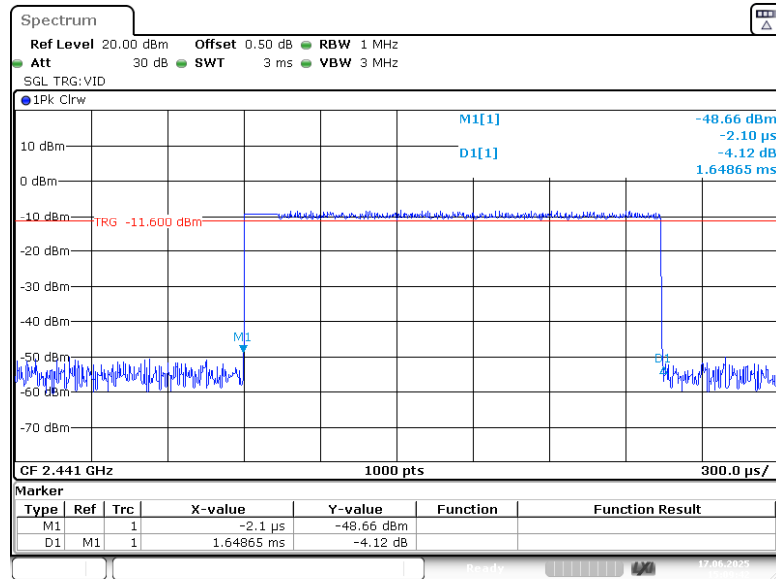
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 15:07:35

EDR (8DPSK)_Hopping_3DH1

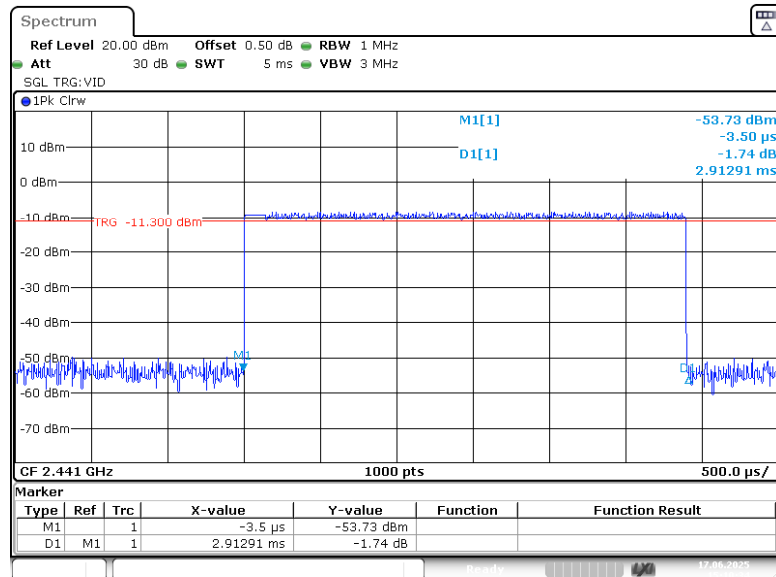


ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 15:09:07

EDR (8DPSK) _Hopping_3DH3



EDR (8DPSK) _Hopping_3DH5



FCC §15.247(b) (1) & RSS-247 ISSUE 3 Clause 5.4 b) - PEAK OUTPUT POWER MEASUREMENT

Applicable Standard

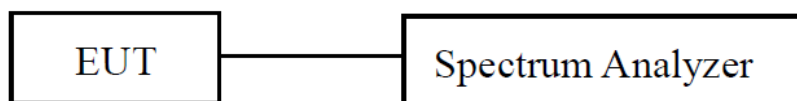
FCC§15.247(b) (1)

For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. And for all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.

According to RSS-247 ISSUE 3 Clause 5.4 b)

For FHSs operating in the band 2400–2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

EUT Setup



Test Procedure

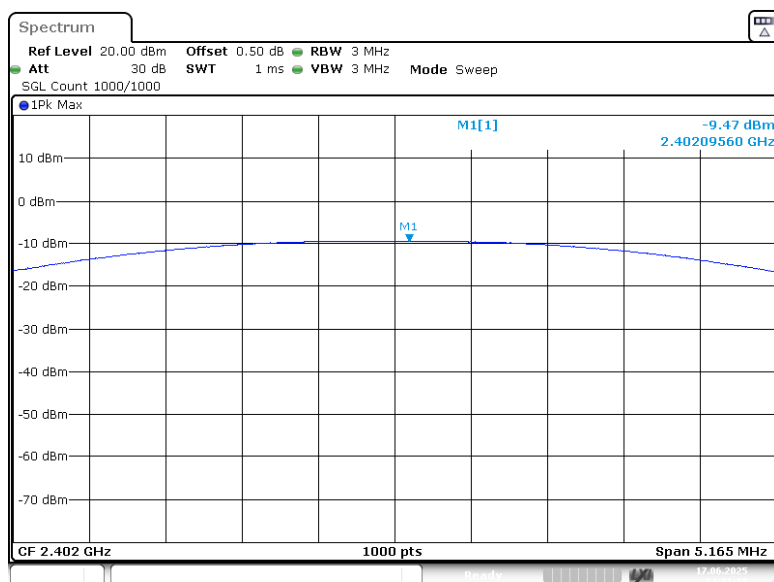
According to ANSI C63.10-2020 Section 7.8.5

This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. Frequency hopping shall be disabled for this test. Use the following spectrum analyzer setting:

- a) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
- b) RBW > 20 dB bandwidth of the emission being measured.
- c) VBW ≥ RBW.
- d) Sweep: No faster than coupled (auto) time.
- e) Detector function: Peak.
- f) Trace: Max-hold.
- g) Allow trace to stabilize.
- h) Use the marker-to-peak function to set the marker to the peak of the emission.
- i) The indicated level is the peak output power, after any corrections for external attenuators and cables.
- j) A plot of the test results and setup description shall be included in the test report.

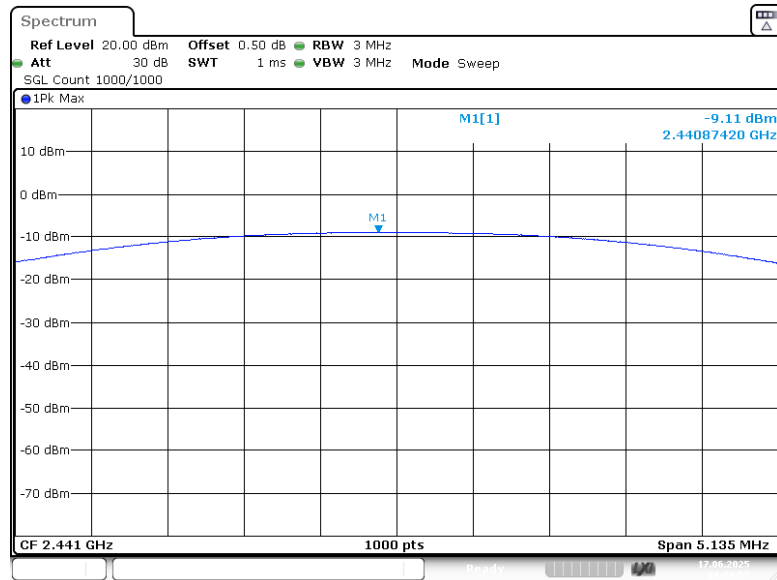
Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-06-17	Environment:	Temp.: 23.6°C Humi.: 56% Atm :100.2kPa
Mode	Frequency (MHz)	Peak Conducted Output Power (dBm)	Limit (dBm)
BDR (GFSK)	2402	-9.47	21
	2441	-9.11	21
	2480	-8.83	21
EDR ($\pi/4$ -DQPSK)	2402	-8.62	21
	2441	-8.29	21
	2480	-7.97	21
EDR (8DPSK)	2402	-8.05	21
	2441	-7.7	21
	2480	-7.37	21
Antenna Gain(dBi):	2.83	Max.EIRP(dBm):	-4.54
EIRP Limit for RSS-247: 36 dBm			

BDR(GFSK): 2402MHz

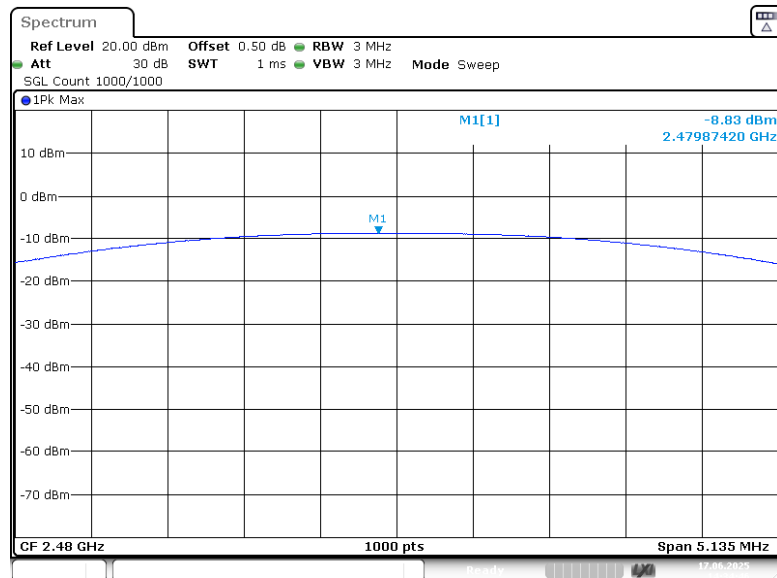
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:31:18

BDR(GFSK): 2441MHz



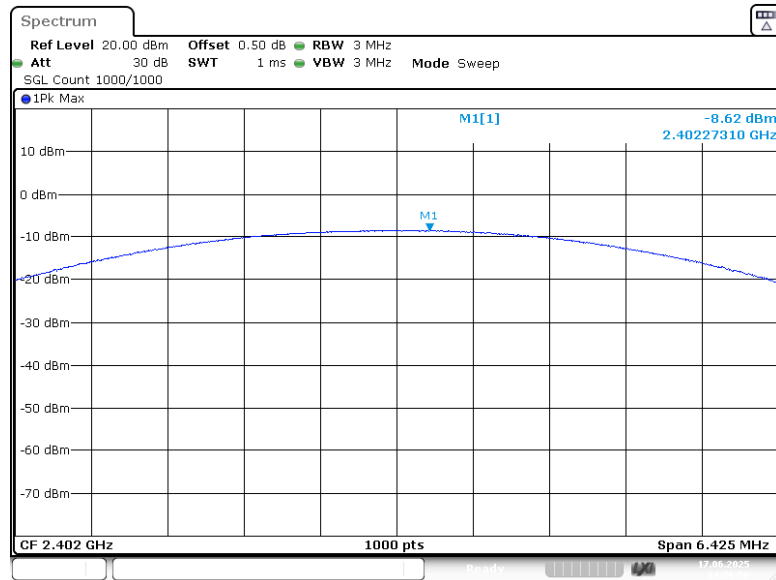
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:33:57

BDR(GFSK): 2480MHz



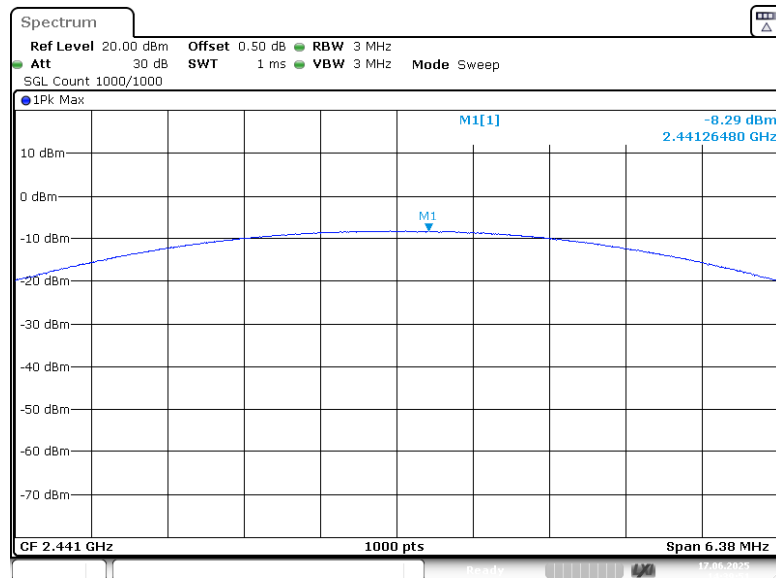
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:34:47

EDR($\pi/4$ -DQPSK): 2402MHz



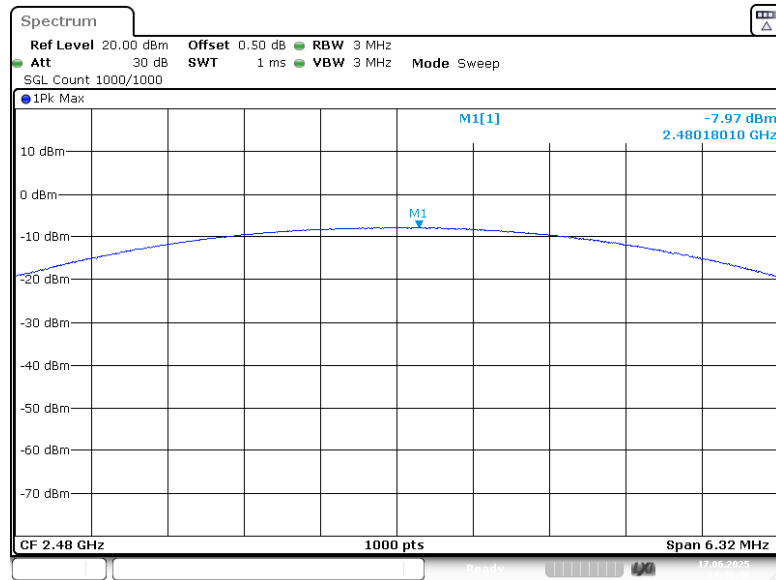
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:36:56

EDR($\pi/4$ -DQPSK): 2441MHz



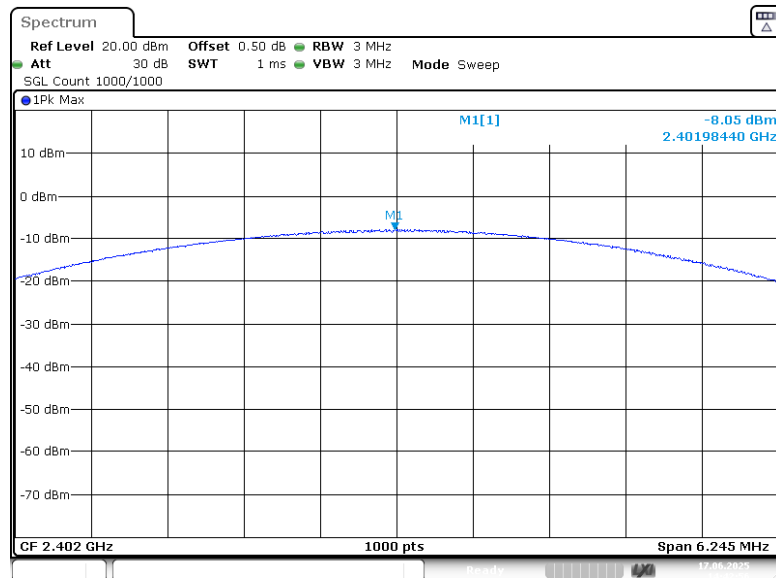
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:39:50

EDR($\pi/4$ -DQPSK): 2480MHz



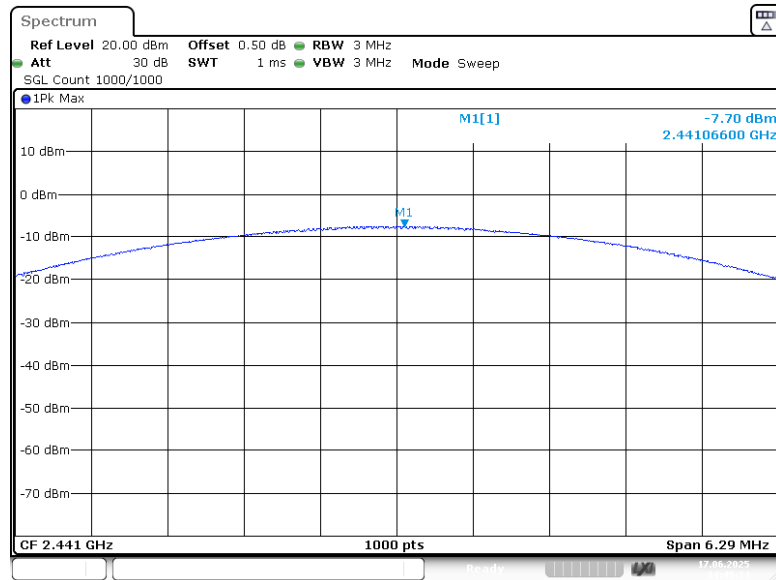
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:40:40

EDR(8DPSK): 2402MHz



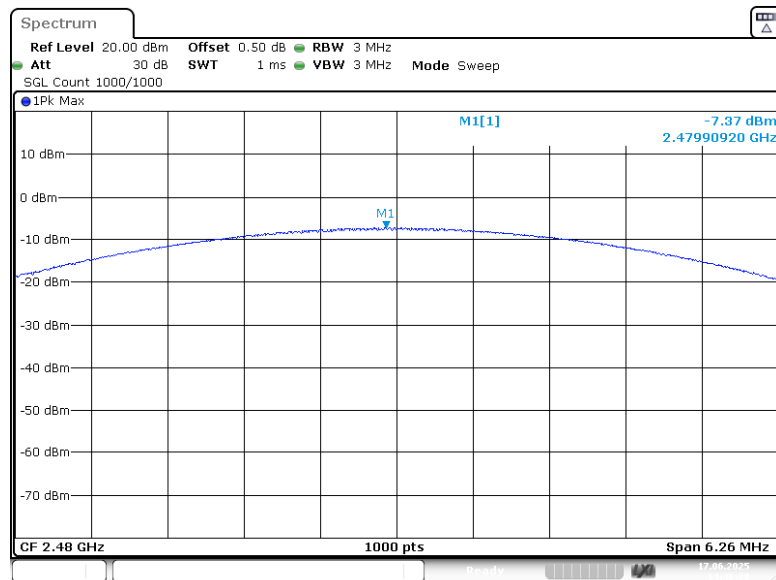
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:42:57

EDR(8DPSK): 2441MHz



ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:45:34

EDR(8DPSK): 2480MHz



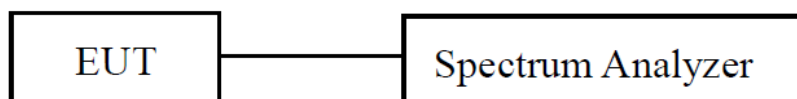
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
 Date: 17.JUN.2025 14:46:28

FCC §15.247(d) & RSS-247 ISSUE 3 Clause 5.5- BAND EDGES TESTING**Applicable Standard****FCC §15.247 (d)**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates Compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to RSS-247 ISSUE 3 Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below general field strength limits specified in RSS-Gen is not required.

EUT Setup**Test Procedure**

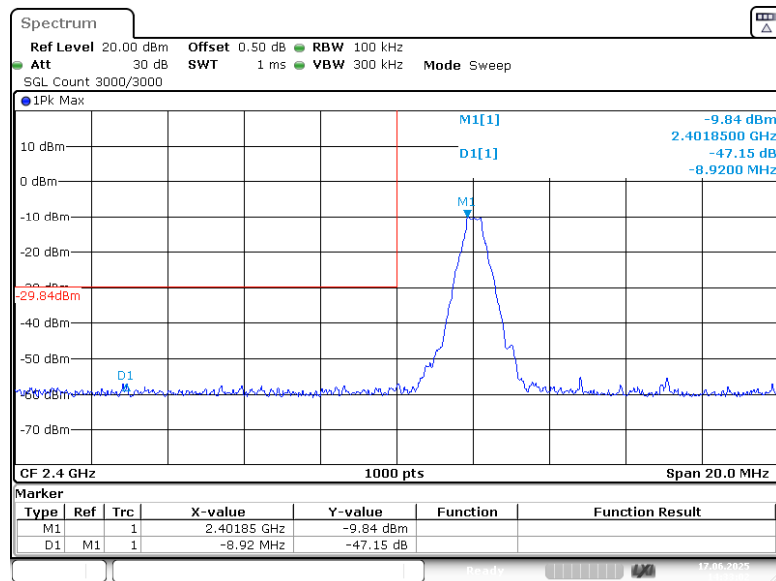
According to ANSI C63.10-2020 Section 7.8.7.2 & Clause 6.10

- 1) Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band-edge, as well as any modulation products that fall outside of the authorized band of operation.
- 2) Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2.
- 3) Attenuation: Auto (at least 10 dB preferred).
- 4) Sweep time: No faster than coupled (auto) time.
- 5) Resolution bandwidth: 100 kHz.
- 6) Video bandwidth: 300 kHz.
- 7) Detector: Peak.
- 8) Trace: Max-hold.

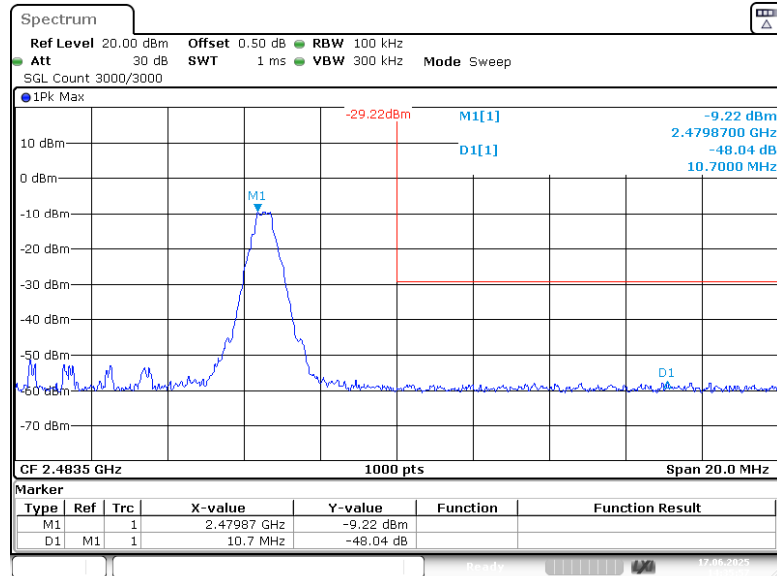
Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-06-17	Environment:	Temp.: 23.6°C Humi.: 56% Atm :100.2kPa

Please refer to the below plots:

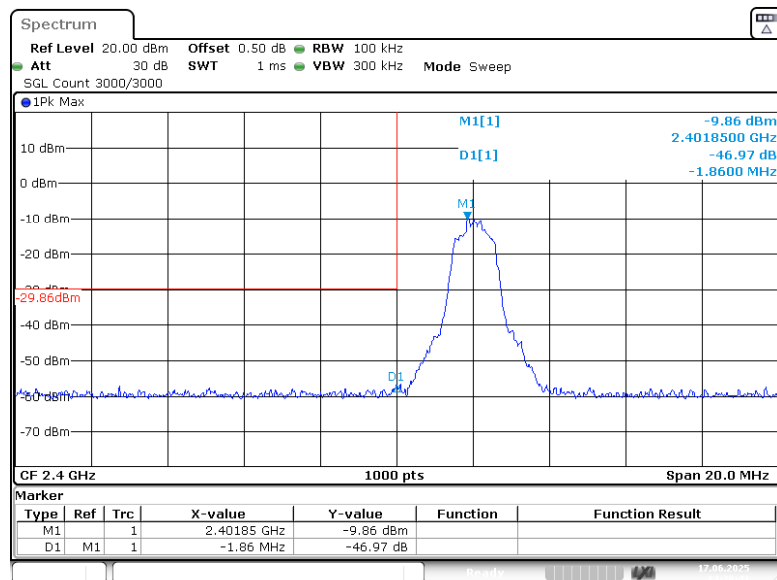
Band Edge**BDR (GFSK): Left Side**

ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:33:02

BDR (GFSK): Right Side

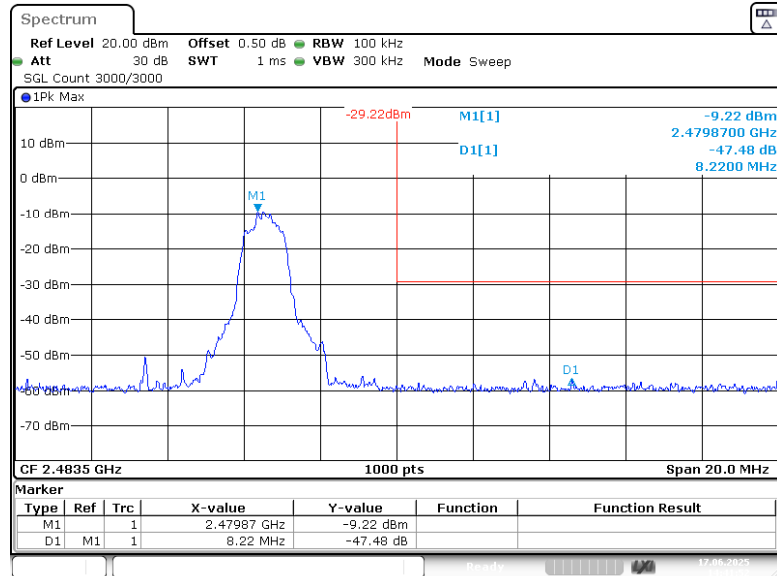
ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:35:57

EDR ($\pi/4$ -DQPSK): Left Side

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

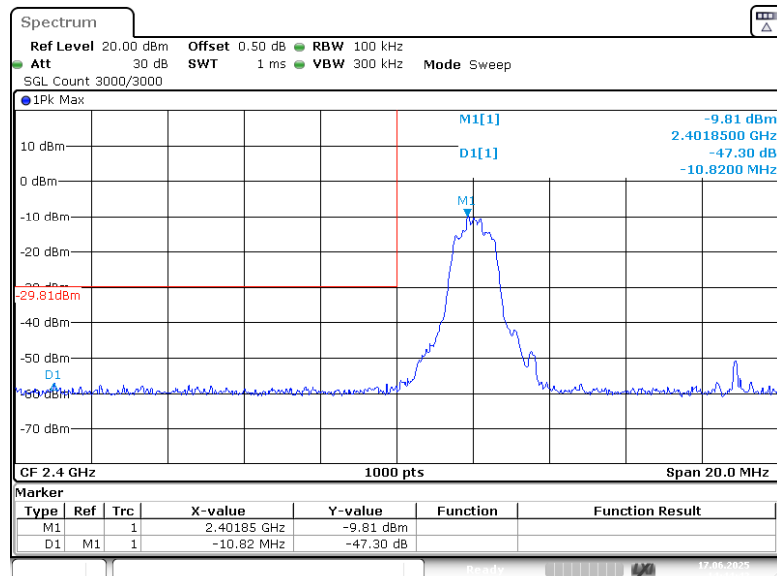
Date: 17.JUN.2025 14:38:41

EDR ($\pi/4$ -DQPSK): Right Side

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:41:52

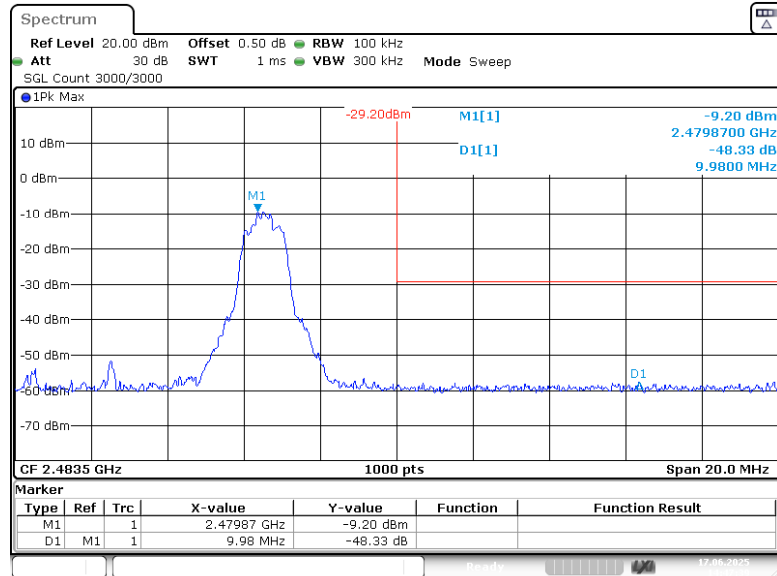
EDR (8DPSK): Left Side



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

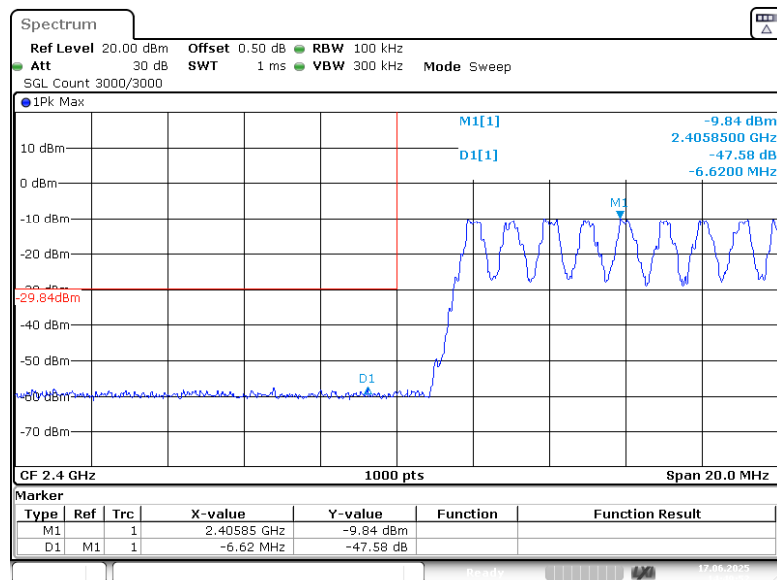
Date: 17.JUN.2025 14:44:41

EDR (8DPSK): Right Side



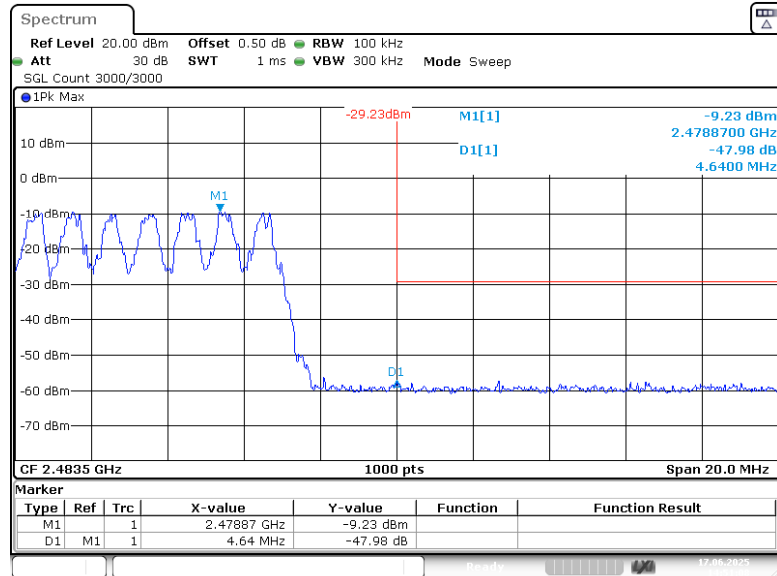
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:47:40

BDR (GFSK): Left Side - Hopping



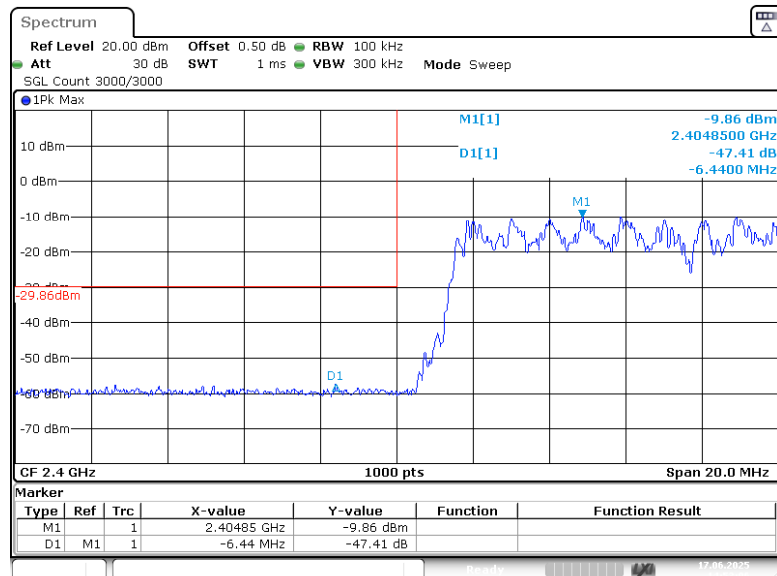
ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:49:52

BDR (GFSK): Right Side - Hopping

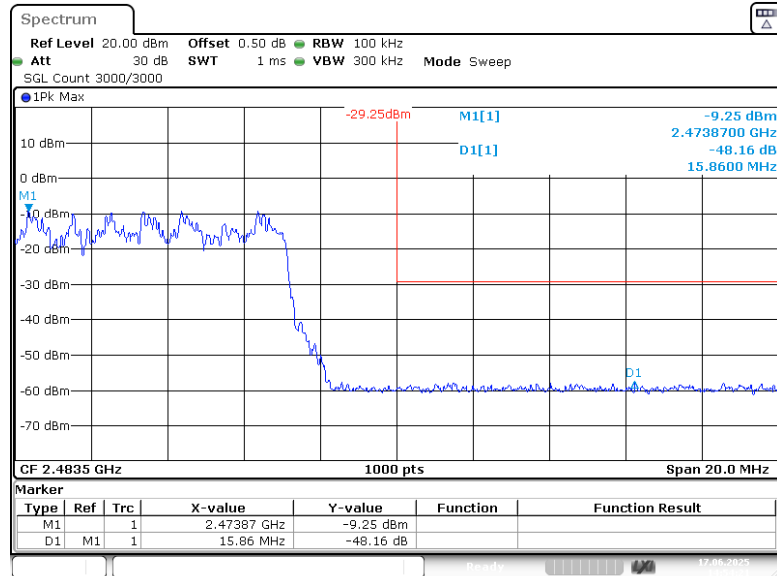


ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:51:09

EDR ($\pi/4$ -DQPSK): Left Side - Hopping

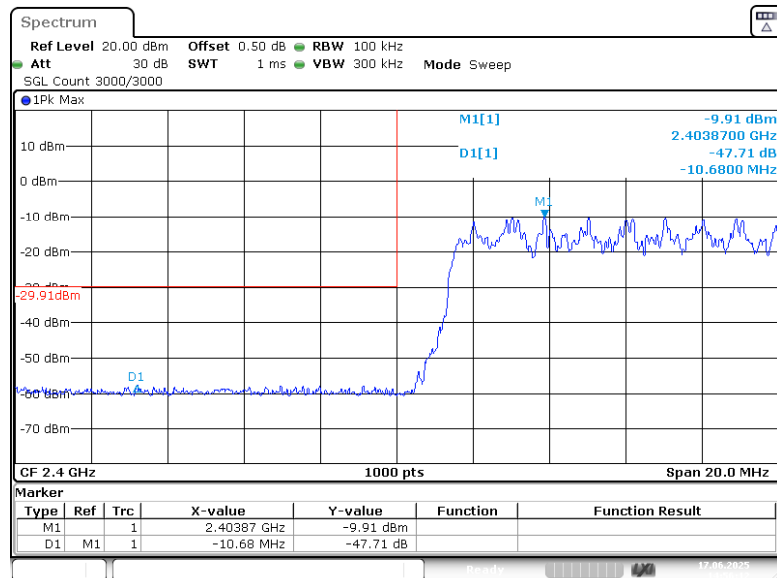


ProjectNo.:2507U02776E-RF Tester:Braylon Ma
Date: 17.JUN.2025 14:53:05

EDR ($\pi/4$ -DQPSK): Right Side - Hopping

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

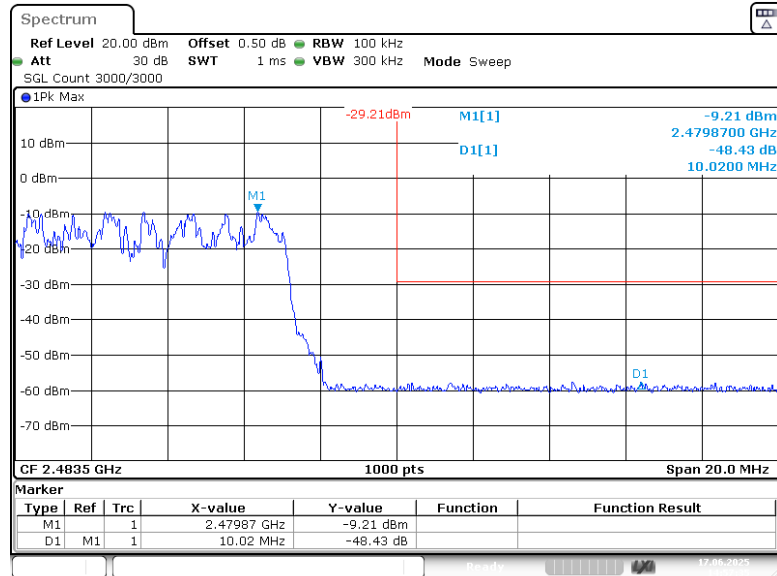
Date: 17.JUN.2025 14:54:20

EDR (8DPSK): Left Side - Hopping

ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:56:12

EDR (8DPSK): Right Side - Hopping



ProjectNo.:2507U02776E-RF Tester:Braylon Ma

Date: 17.JUN.2025 14:57:34

EUT PHOTOGRAPHS

Please refer to the attachment 2507U02776E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2507U02776E-RF-INP EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2507U02776E-RF-TSP_TEST SETUP PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95% confidence interval.
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******* END OF REPORT *******