



RF Exposure Evaluation Declaration

Report No.: S20250910400101E05

Issue Date: 2025-12-30

Applicant: Wallys Communications Technologies Co.,Ltd

Address: Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R

FCC ID: 2AG7VDR5018S

Product: Wireless Router Module

Model No.: DR5018S, DR5018S-DB, DR5018S-5G

Trade Mark: /

FCC Rule Part(s): CFR 47, FCC Part 2.1091 Radio frequency radiation exposure evaluation: mobile devices.

Item Receipt date: Sep 25, 2025

Test Date: Sep 26 2025 ~ Nov 12, 2025



扫一扫 验真伪

Compiled By

Stone Zhang

(Stone Zhang)

Senior Test Engineer

Approved By

Line Chen

(Line Chen)

Engineer Manager

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of Fangguang Inspection & Testing Co., Ltd. Wuxi Branch

The test report must not be used by the client to claim product certifications, approval, or endorsement by NVLAP, NIST or any agency of U.S. Government.

Revision History

Report No.	Version	Description	Issue Date
S20250910400101E05	Rev. 01	/	2025-12-30

CONTENTS

Description	Page
§2.1033 General Information	4
1. Product Information	5
1.1. Equipment Description.....	5
1.2. Product Specification Subjective to this Report	5
2. RF Exposure Evaluation	7
2.1. Limits.....	7
2.2. For Simultaneous Transmissions Sources Limits	7
2.3. Test Result of RF Exposure Evaluation.....	9

§2.1033 General Information

Applicant:	Wallys Communications Technologies Co.,Ltd
Applicant Address:	Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R
Manufacturer:	Wallys Communications Technologies Co.,Ltd
Manufacturer Address:	Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R
Factory:	Wallys Communications Technologies Co.,Ltd
Factory's address:	Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R
Test Site:	Fanguang Inspection & Testing Co. Ltd
LAB ID:	CN5037
LAB registration number:	600222-0
Test Site Address:	No.8 Ningyun Rd., Xinwu District Wuxi, Jiangsu 214000 China
FCC Rule Part(s):	Part 15 Subpart E (15.407)
FCC ID:	2AG7VDR5018S
Test Device Serial No.:	S/N.: / ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

1. Product Information

1.1. Equipment Description

Product Name:	Wireless Router Module			
Model Name:	DR5018S			
Additional Model:	DR5018S-DB, DR5018S-5G			
Model Description:		P/N	Radio	Frequency
	1	DR5018S-5G	5Ghz	1G Ethernet & POE
	2	DR5018S	2.4Ghz 5Ghz	2.5G+1G Ethernet & POE
	3	DR5018S-DB	2.4Ghz 5Ghz	1G Ethernet & POE
	DR5018S-5G has 5G radio and 1x1G ethernet port and support PD feature DR5018S has 2.4G,5G radio and 1x2.5G+1x1G ethernet ports and all support PD feature DR5018S-DB has 2.4G,5G radio and 1x1G ethernet port and support PD feature			
Trade Mark:	/			
Input Voltage Range:	DC 48V			
Hardware Version:	DR5018S			
Software Version:	nornand-ipq5018-single-2167			
EUT sample number:	S20250910400101-1-1 (Conducted) S20250910400101-1-2 (Radiated)			

Note:

- There are three types of antennas for the Wireless Router Module. The antennas are DRA25, DRA2G5G5D002 and DRA2G5G6D003-SMA.
- This information is provided by the Customer and its authenticity is the responsibility of the Customer.

1.2. Product Specification Subjective to this Report

Frequency Range:	802.11b/g/n20/ax20: 2412 ~ 2462MHz 802.11n40/ax40:2422 ~ 2452MHz For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5180~5240MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5190~5230MHz, 5755~5795MHz For 802.11ac-VHT80/ax-HE80: 5210MHz, 5775MHz
Type of Modulation:	802.11a/n/ac/ax:

	OFDM/OFDMA/BPSK/QPSK/DBPSK/DQPSK/16QAM/64QAM/256QAM/ 1024QAM
Antenna Type:	Dipole Antenna
Antenna Gain:	2.4G-WiFi: DRA25 Antenna: Ant1 4.56dBi, Ant2 4.56dBi DRA2G5G5D002 Antenna: Ant1 3.00dBi, Ant2 3.00dBi DRA2G5G6D003-SMA Antenna: Ant1 4.50dBi, Ant2 4.50dBi 5G-WiFi: DRA25 Antenna: Ant1 6.13dBi, Ant2 6.13dBi DRA2G5G5D002 Antenna: Ant1 5.86dBi, Ant2 5.86dBi DRA2G5G6D003-SMA Antenna: Ant1 5.21dBi, Ant2 5.21dBi

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. For Simultaneous Transmissions Sources Limits

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of this section for P_{th} , including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

$P_{th,i}$ = the exemption threshold power (P_{th}) according to paragraph (b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i .

ERP_j = the ERP of fixed, mobile, or portable RF source j .

$ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j , at a distance of at least $\lambda/2\pi$ according to the applicable formula of paragraph (b)(3)(i)(C) of this section.

$Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

$Exposure\ Limit_k$ = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k , as applicable from § 1.1310 of this chapter.

2.3. Test Result of RF Exposure Evaluation

Product	Wireless Router Module
Test Item	RF Exposure Evaluation

Mode	Frequency (MHz)	Maximum Conducted Output Power (dBm)	Antenna Gain (dBi)	PG		MPE (mW/cm ²)	MPE Limits (mW/cm ²)
				(dBm)	(mW)		
WiFi	2412 - 2462	17.65	4.56	22.21	166.34	0.0331	1.00
RLAN	5150 - 5250 5725 - 5850	23.45	6.13	59.58	907.82	0.1806	1.00
WiFi	2412 - 2462	18.38	Directional Gain: 7.57	25.95	393.55	0.0783	1.00
RLAN	5150 - 5250 5725 - 5850	22.71	Directional Gain: 9.14	31.85	1531.09	0.3046	1.00
Simultaneous Transmission	/	/	/	/	/	0.3829	1.00

Remark 1. MPE use distance is 20cm from manufacturer declaration of user manual.

Remark 2. Use the maximum gain of all bands when evaluating.

Remark 3. The simultaneous transmission is WiFi and RLAN emission.

Remark 4. The 2.4G-WiFi Maximum Conducted Output Power is refer to original report S20241118761701E06

The Max Power Density at R (20 cm) = 0.3046mW/cm² < 1mW/cm².

So the EUT complies with the requirement.

CONCULISON:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

Statement

1. This report is invalid for the following states: without the special inspection and testing stamp or the official stamp of our institution; without the signature of the report authorized officer; if the report is altered.
2. It is forbidden to copy partial contents of the report except in full without the approval of our institution.
3. The client shall provide the test sample(s) and commission information and be responsible for their authenticity.
4. The report content is only applicable to the tested sample(s) this time.
5. If there are any objections to the report content, please submit them to our company in writing within 15 days from the date of receiving the report.
6. If the reports include both Chinese and English versions, when there are any inconsistencies caused by language, the Chinese version shall prevail.
7. This report is issued by the following laboratory premises:

No.8 Ningyun Rd., Xinwu District Wuxi, Jiangsu 214000 China

——This page is blank below this line ——