RF Exposure Evaluation Declaration

Report No.: S2025042443600103
Issue Date: 06-09-2025

Applicant:	Jiangsu Shushi Technology Co., Ltd.
Address:	NO.9 Nanxu Road,RunZhou District,Zhenjiang,Jiangsu,China
FCC ID:	2BAGQ-3RSH06027BWZ
Application Type:	Certification
Product:	Smart Hub WZ3
Model No.:	3RSH06027BWZ
Trade Mark:	THIRDREALITY
FCC Rule Part(s):	CFR 47, FCC Part 2.1091 Radio frequency radiation exposure evaluation: mobile devices.
Item Receipt date:	Apr. 24, 2025
Test Date:	Apr. 25 ~ May. 27, 2025

Compiled By: Stone Zhang. (Stone Zhang) Senior Test Engineer

Approved By: Line Chen (Line Chen) Engineer Manager

FANGGUANG INSPECTION & TESTING CO.,LTD. APPROVED(02)

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.

Revision History

Report No.	Version	Description	Issue Date
S2025042443600103	Rev. 01	/	06-09-2025

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§2.1033 General Information

Applicant:	Jiangsu Shushi Technology Co., Ltd.
Applicant Address:	NO.9 Nanxu Road,RunZhou District,Zhenjiang,Jiangsu,China
Manufacturer:	Jiangsu Shushi Technology Co., Ltd.
Manufacturer Address:	NO.9 Nanxu Road,RunZhou District,Zhenjiang,Jiangsu,China
Factory:	Shushi (Zhenjiang) Intelligent Technology Co., Ltd.
Factory Address:	NO.9 Nanxu Road,RunZhou District,Zhenjiang,Jiangsu,China
Test Site:	Fangguang Inspection & Testing Co., Ltd.
LAB ID:	CN5037
Test Site Address:	No.8 Ningyun Rd., Xinwu District Wuxi, Jiangsu 214000 China
FCC Rule Part(s):	FCC Part 2.1091
FCC ID:	2BAGQ-3RSH06027BWZ
Test Device Serial No.:	S/N.: / ☐ Production ☒ Pre-Production ☐ Engineering

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	Smart Hub WZ3
Test Model:	3RSH06027BWZ
Trade Mark:	THIRDREALITY
Input Voltage Range:	AC 120V 60Hz
Software Version:	03.00.62.00
Hardware Version:	REV0.5
EUT sample number:	S20250424436001-1-1/-1-2

Note:This information is provided by the Customer and its authenticity is the responsibility of the Customer.

1.2. Product Specification Subjective to this Report

Operating Frequency	Zigbee: 2405~2480MHz 802.11b/g/n-HT20: 2412 ~ 2462MHz
Number of Channels	Zigbee: 16 802.11b/g/n-HT20: 11
Channel Spacing	Zigbee: 5MHz 802.11b/g/n-HT20: 5MHz
Type of modulation	Zigbee: O-QPSK 802.11g/n-HT20: OFDM
Antenna Type:	PCB Antenna
Antenna Gain:	2.0dBi

Note:The maximum Antenna Gain was declared by the manufacturer.

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: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd is the limit of MPE, $1mW/cm^2$. 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.

For simultaneous transmission exposure cases, calculation formula is:

$$\sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

2.2. Calculation Method

Temperature:	26.3 °C
Relative Humidity:	36 %
ATM Pressure:	101.6 kPa
Test Data:	2025-05-26
Test Engineer:	Stone Zhang

Product	Smart Hub WZ3
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)		
Zigbee	2405	11.21	2.0	13.21	20.94	0.0042	1.00
802.11b	2412	17.19	2.0	19.19	82.99	0.0165	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. For simultaneous transmission is Zigbee and WLAN (worst case).

$$\sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ \ Limit_k} = 0.0042+0.0165=0.0207<1.$$

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. Information about laboratory sites involved in our company:

   No.2, Fangda Road, Yunpu Industrial Zone, Huangpu District, Guangzhou, Guangdong, China (Huangpu Laboratory)

   Building 2 and Building 3, GRGTest Science and Technology Industrial Park, No.8, Chuangyun Road, Panyu District, Guangzhou, Guangdong, China (Panyu Laboratory)

   Building G9, China Sensor Network International Innovation Park, No.200, Linghu Avenue, Wuxi, Jiangsu, China (Wuxi Innovation Park Laboratory)

   Building 3, Maoxuan Industrial Park, No.81, Jinma Road, Hongshan Subdistrict, Xinwu District, Wuxi, Jiangsu, China (Maoxuan Industrial Park Laboratory)

   3/F., Comprehensive Laboratory Building, No.8, Ningyun Road, Xinwu District, Wuxi, Jiangsu, China (Ningyun Road Laboratory)

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