

# **RF Exposure Evaluation Report**

**Application No.:** DNT2504150347R3685-05136

Gizwits IoT Technology Co., Ltd. Applicant:

8-9/F, Zhong Chuang Space, No.5, Tao Zhuang Road, Tian He District, Address of Applicant:

Guangzhou

**EUT Description:** Wireless Module

Model No.: **GEE811** 

2ASLM-GEE811 FCC ID:

DC 3.0-3.6V **Power supply** 

Trade Mark:

47 CFR Part 2.1091

Standards:

FCC KDB 447498 D01 v06

Date of Receipt: 2025/4/20

Date of Test: 2025/4/21 to 2025/5/7

Date of Issue: 2025/5/9

Test Result: **PASS** 

(Testing Engineer) Prepared By:

(Project Engineer) Reviewed By:

Approved By: (Manager)

Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.



## **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes		
V1.0		May.09, 2025	Valid	Original Report		



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### 1 General Information

## 1.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfa Road, Wusha Liwu, Chang ' an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

## 1.2 General Description of EUT

Manufacturer:	China Gizwits IoT Technology Co., Ltd.						
Address of Manufacturer:	8-9/F, Zhong Chuang Space, No.5, Tao Zhuang Road, Tian He District, Guangzhou						
EUT Description::	Wireless Module						
Test Model No.:	GEE811						
Additional Model(s):	1						
Chip Type:	ESP32-S3						
Serial Number	PR2504150347R3685						
Power Supply	DC 3.0-3.6V						
Trade Mark:	N/A						
Hardware Version:	V1.0						
Software Version:	V1.0						
Sample Type:	☐ Portable Device, ☒ Module, ☒ Mobile Device						
Antenna Type:	☐ External, ⊠ Integrated						
Antenna Gain:	⊠ Provided by applicant						
Antenna Gaill.	0dBi						

#### Remark:

\*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information, DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



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## 2 RF Exposure Evaluation

### 2.1 RF Exposure Compliance Requirement

#### **2.1.1** Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm2)	Averaging time (minutes)	
	(A) Limits for Occup	ational/Controlled Expo	sures		
0.3-3.0	614	1.63	*(100)	6	
3.0-30	1842/f	4.89/f	*(900/f2)	6	
30-300	61.4	0.163	1.0	6	
300-1500	1	1	f/300	6	
1500-100,000		\ \(\sigma\)	5	6	
	(B) Limits for General P	opulation/Uncontrolled	Exposure		
0.3-1.34	614	1.63	*(100)	30	
1.34-30	824/f	2.19/f	*(180/f2)	30	
30-300	27.5	0.073	0.2	30	
300-1500		\ \(\sigma\)	f/1500	30	
1500-100,000			1.0	30	

F=frequency in MHz

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula: Pd = (Pout\*G)/(4\* Pi \* R 2)

Where

Pd = power density in mW/cm2

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 id the limit of MPE, 1 mW/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.

<sup>\*=</sup>Plane-wave equivalent power density



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#### 2.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

#### 2.1.3 EUT RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 / 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Test Mode	Antenna	Freq(MHz)	Power [dBm]
		2402	5.68
BLE 1M	Ant1	2440	4.75
		2480	3.31
		2402	5.86
BLE 2M	Ant1	2440	4.58
		2480	2.86
		2412	18.17
11B	Ant1	2437	17.98
		2462	17.91
11G		2412	18.96
	Ant1	2437	18.61
		2462	17.99
11N20		2412	17.70
	Ant1	2437	17.23
		2462	16.58
/ /		2422	14.60
11N40	Ant1	2437	14.51
		2452	14.82

The Worst Mode	Antenna	Peak output power (dBm)	Target power (dBm)	MAX Target power (dBm)	Anten (dBi)	na gain (Linear)	Power Density (S) (mW /cm²)	Limited of Power Density (S) (mW /cm²)	Test Result	Distance (cm)
2.4G Band										
11G	Ant1	18.96	18±1	19	0	1.000	0.0158	1	Complies	20

The End Report