FCC RF Exposure Evaluation

FOR

Shenzhen Neewer Technology Co., Ltd.

2.4G wireless module

Test Model: RF02

Additional Model No.: RF01

Prepared for	:	Shenzhen Neewer Technology Co., Ltd.
Address	:	ROOM 1901-1903, Block A, LU SHAN BUILDING NO.3023 CHUNFENG RD LUO HU DISTRICT, SHENZHEN, GUANGDONG, 518001, CHINA
Prepared by	:	Guangzhou LCS Compliance Testing Laboratory Ltd.
Address	:	No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China
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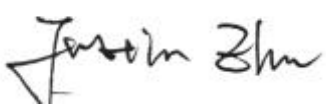
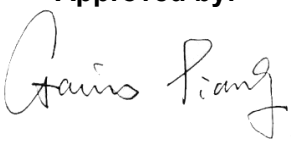
Web	:	www.LCS-cert.com
Mail	:	webmaster@LCS-cert.com
Date of receipt of test sample	:	May 23, 2025
Number of tested samples	:	2
Sample No.	:	A250509069-1, A250509069-2
Sample number	:	Prototype
Date of Test	:	May 23, 2025 ~ July 14, 2025
Date of Report	:	July 15, 2025

RF Exposure Evaluation	
Report Reference No. ..... :	**LCSC04285003EB**
Date of Issue..... :	July 15, 2025
Testing Laboratory Name..... :	**Guangzhou LCS Compliance Testing Laboratory Ltd.**
Address..... :	No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China
Testing Location/ Procedure..... :	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's Name..... :	**Shenzhen Neewer Technology Co., Ltd.**
Address..... :	ROOM 1901-1903, Block A, LU SHAN BUILDING NO.3023 CHUNFENG RD LUO HU DISTRICT, SHENZHEN, GUANGDONG, 518001, CHINA
Test Specification	
Standard..... :	FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06 FCC CFR 47 part1 1.1310 FCC CFR 47 part2 2.1091
Test Report Form No..... :	TRF-4-E-214 A/0
TRF Originator..... :	Guangzhou LCS Compliance Testing Laboratory Ltd.
Master TRF..... :	Dated 2011-03

Test Item Description..... :	**2.4G wireless module**
Trade Mark..... :	NEEWER
Test Model..... :	RF02
Ratings..... :	DC 3.3V
Result ..... :	**PASS**

Compiled by:	**Supervised by:**	**Approved by:**
		
Lifeng Le / File administrators	Justin Zhu / Technique Director	Gavin Liang/ Manager

FCC -- RF Exposure Evaluation

Test Report No. :	**LCSC04285003EB**	July 15, 2025 Date of issue

Test Model.....	: RF02
EUT.....	: 2.4G wireless module
Applicant.....	**: Shenzhen Neewer Technology Co., Ltd.**
Address.....	: ROOM 1901-1903, Block A, LU SHAN BUILDING NO.3023 CHUNFENG RD LUO HU DISTRICT, SHENZHEN, GUANGDONG, 518001, CHINA
Telephone.....	: /
Fax.....	: /
Manufacturer.....	**: Shenzhen Neewer Technology Co., Ltd.**
Address.....	: ROOM 1901-1903, Block A, LU SHAN BUILDING NO.3023 CHUNFENG RD LUO HU DISTRICT, SHENZHEN, GUANGDONG, 518001, CHINA
Telephone.....	: /
Fax.....	: /
Factory.....	**: Shenzhen Neewer Technology Co., Ltd.**
Address.....	: ROOM 1901-1903, Block A, LU SHAN BUILDING NO.3023 CHUNFENG RD LUO HU DISTRICT, SHENZHEN, GUANGDONG, 518001, CHINA
Telephone.....	: /
Fax.....	: /

Test Result	**PASS**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Report Version	Issue Date	Revision Content	Revised By
000	July 15, 2025	Initial Issue	--

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Description **Page**

1. Product Information

EUT	: 2.4G wireless module
Test Model	: RF02
Additional Model No.	: RF01
Model Declaration	: PCB board, structure and internal of these model(s) are the same, So no additional models were tested
Ratings	: DC 3.3V
Hardware Version	: /
Software Version	: /
2.4G	:
Frequency Range	: 2412.75MHz-2464.25MHz
Channel Number	: 32 channels
Modulation Type	: GFSK
Antenna Description	: FPC Antenna, -0.19dBi(Max.)
Exposure category	: General population/uncontrolled environment
EUT Type	: Production Unit
Device Type	: Mobile Device

Note: For a more detailed antenna description, please refer to the antenna specifications or the anten na report provided by the customer.

2.Evaluation method and Limit

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission’s guidelines.
In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.
In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modelled or measured field strengths or power density, is ≤ 1.0. The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

3. Limit

3. Refer Evaluation Method

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.
FCC CFR 47 part1 1.1310: Radiofrequency radiation exposure limits.
FCC CFR 47 part2 2.1091: Radiofrequency radiation exposure evaluation: portable devices

3. 2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
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	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for Occupational/Uncontrolled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	(180/f²)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density

4. MPE Calculation Method

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$

Where: S=power density
P=power input to antenna
G=power gain of the antenna in the direction of interest relative to an isotropic radiator
R=distance to the center of radiation of the antenna

5. Antenna Information

EUT can only use antennas certificated as follows provided by manufacturer;

Internal/External Identification	Antenna type and antenna number	Operate frequency band	Maximum antenna gain	Notes
Internal	FPC Antenna	2412.75-2464.25MHz	-0.19dBi	2.4G Antenna

6. Conducted Power
Test Procedure

TX frequency range: 2464.25MHz

Device category: Mobile Device (Distance: 20cm) Max. Field Strength: 99.79dBuV/m @3m

EIRP=E-104.8+20logD=99.79-104.8+20log3=4.53dBm

Maximum Conducted Output Power: 4.34dBm

Turn-up: 5.0±1dBm

7. Evaluation Results

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna refer to antenna information, the RF power density can be obtained.

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm2)	MPE Limits (mW/cm2)
	dBm	mW				
GFSK	6.0	3.9811	-0.19	0.9572	0.0008	1.0000

Remark:
1. Output power including tune up tolerance;
2. Output power was adjust to duty cycle at 100% if measured duty cycle less than 98%;
3. MPE evaluate distance is 20cm from user manual provide by manufacturer.

8. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

9. Description of Test Facility

Site Description

CAB identifier is CN0169.
CNAS Registration Number is L11555

EMC Lab. : A2LA Certificate Number: 5099.01
FCC Designation Number is CN1379
ISED Designation Number is 29125.

10. Measurement Uncertainty

Test Item		Frequency Range	Uncertainty	Note
Radiation Uncertainty	:	9KHz~30MHz	±3.10dB	(1)
		30MHz~200MHz	±2.96dB	(1)
		200MHz~1000MHz	±3.10dB	(1)
		1GHz~26.5GHz	±3.80dB	(1)
		26.5GHz~40GHz	±3.90dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	±1.63dB	(1)
Power disturbance	:	30MHz~300MHz	±1.60dB	(1)
Occupied Channel Bandwidth	:	1GHz-40GHz	±5%	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

.....THE END OF REPORT.....