



RF Exposure Evaluation Report

Application No.: DNT2510100880R11233-13864
Applicant: Meizhou Ruijie Commerce and Trade Co., Ltd.
Address of Applicant: No. 8 Qishanxia, Guanzhuang Village, Luogang Town, Xingning City
EUT Description: 4G LTE CPE Router
Model No.: L803A
FCC ID: 2BS7S-L803A
Power supply: DC 12V From Adapter Input AC 100-240V, 50/60Hz
Trade Mark: /
47 CFR Part 2.1091
Standards: FCC KDB 447498 D01 v06
Date of Receipt: 2025/10/10
Date of Test: 2025/10/10 to 2025/10/31
Date of Issue: 2025/10/31
Test Result: **PASS ***

Prepared By: Wayne Lin (Testing Engineer)

Reviewed By: Pencils Chen (Project Engineer)

Approved By: Heise Shen (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.

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Oct. 31, 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 Xinfu Road, Wusha Liwu, Chang ' an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

1.2 General Description of EUT

Manufacturer:	Meizhou Ruijie Commerce and Trade Co., Ltd.
Address of Manufacturer:	No. 8 Qishanxia, Guanzhuang Village, Luogang Town, Xingning City
EUT Description::	4G LTE CPE Router
Model No.:	L803A
Additional Model(s):	/
Chip Type:	ASR18035
Serial Number	PR2510100880R11233
Power Supply	DC 12V From Adapter Input AC 100-240V, 50/60Hz
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
	2.4GWIFI:5.48dBi LTE Band 2:5.89dBi; LTE Band 4:2.92dBi; LTE Band 5:4.39dBi; LTE Band 12:4.4dBi; LTE Band 13:4.03dBi; LTE Band 17:4.4dBi; LTE Band 25:5.89dBi; LTE Band 26:4.39dBi; LTE Band 38:4.24dBi; LTE Band 41:3.55dBi; LTE Band 66:3.93dBi;

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.



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/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	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
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: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

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, 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.



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]
11B	Ant1	2412	16.56
		2437	17.42
		2462	15.86
11G	Ant1	2412	18.16
		2437	16.00
		2462	16.69
11N20SISO	Ant1	2412	13.63
		2437	14.03
		2462	12.75
11N40SISO	Ant1	2422	18.55
		2437	19.26
		2452	18.71
11AX20SISO	Ant1	2412	18.43
		2437	13.19
		2462	16.75
11AX40SISO	Ant1	2422	19.96
		2437	18.06
		2452	18.15

The Worst Mode	Antenna	Peak output power (dBm)	Target power (dBm)	MAX Target power (dBm)	Antenna gain		Power Density (S) (mW /cm²)	Limited of Power Density (S) (mW /cm²)	Test Result	Distance (cm)
					(dBi)	(Linear)				
2.4G Band										
11B	Ant1	17	17±1	18	5.48	3.5318	0.0443	1	Complies	20
11G	Ant1	18	18±1	19	5.48	3.5318	0.0558	1	Complies	20
11N20	Ant1	14	14±1	15	5.48	3.5318	0.0222	1	Complies	20
11N40	Ant1	19	19±1	20	5.48	3.5318	0.0703	1	Complies	20
11AX20	Ant1	18	18±1	19	5.48	3.5318	0.0558	1	Complies	20
11AX40	Ant1	19	19±1	20	5.48	3.5318	0.0703	1	Complies	20



Operating band	Frequency (Mhz)	Antenna Gain (dBi)	EIRP (dBm)	Target Power (dBm)	Output power to antenna (dBm)	Power density at R=20 cm (mW/cm ²)	Limit (mW/cm ²)	Conduction
LTE Band 2	1909.9	5.89	28.06	22±1	23	0.154	1	Pass
LTE Band 4	1710.7	2.92	26.92	24±1	25	0.123	1	Pass
LTE Band 5	848.9	4.39	30.32	25±1	26	0.396	0.55	Pass
LTE Band 12	701.5	4.4	25.8	23±1	24	0.138	0.466	Pass
LTE Band 13	755.9	4.03	25.28	23±1	24	0.126	0.52	Pass
LTE Band 17	713.5	4.4	25.58	25±1	24	0.138	0.471	Pass
LTE Band 25	1850.7	5.89	29.75	23±1	24	0.194	1	Pass
LTE Band 26	847.5	4.39	26.09	23±1	24	0.137	0.543	Pass
LTE Band 38	2595	4.24	28.61	24±1	25	0.167	1	Pass
LTE Band 41	2595	3.55	27.53	23±1	24	0.113	1	Pass
LTE Band 66	1710.7	3.93	27.38	23±1	24	0.124	1	Pass

2.4GWIFI+LTE

Radio WIFI	Radio LTE	Total Radio	Result
0.0703	0.396	0.2883	Complies

This confirmed that the device comply with MPE limit.

The End Report