

FCC RF EXPOSURE REPORT

FCC ID: 2BH7FWR846N

Project No. : 2410G044A
Equipment : 300Mbps Wireless Router
Brand Name : tp-link
Test Model : TL-WR846N
Series Model : N/A
Applicant : TP-Link Systems Inc.
Address : 10 Mauchly, Irvine, CA 92618
Manufacturer : TP-Link Systems Inc.
Address : 10 Mauchly, Irvine, CA 92618
Date of Receipt : Mar. 27, 2025
Date of Test : Mar. 31, 2025 ~ Apr. 23, 2025
Issued Date : May 09, 2025
Report Version : R00
Test Sample : Engineering Sample No.: DG20250327123
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091 & KDB 447498 D01 v06

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc. (Dongguan).

Prepared by :


Sheldon Ou

Approved by :


Chay Cai

No.3, Jinshagang 1st Road, Dalang, Dongguan, Guangdong People's Republic of China

Tel: +86-769-8318-3000

Web: www.newbtl.com

Service mail: btl_qa@newbtl.com

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2410G044A	R00	Original Report.	May 09, 2025	Valid

1. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$$

where:

S = power density

P = power input to the 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

2. ANTENNA SPECIFICATION

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)	Note
1	TP-Link Systems Inc.	TL-WR846N-ant1	Dipole	N/A	6.23	TX
2	TP-Link Systems Inc.	TL-WR846N-ant2	Dipole	N/A	6.59	RX
3	TP-Link Systems Inc.	TL-WR846N-ant3	Dipole	N/A	6.75	RX
4	TP-Link Systems Inc.	TL-WR846N-ant4	Dipole	N/A	6.22	TX

Note:

- 1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = $G_{ANT} + \text{Array Gain}$.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=6.23.
- 2) The antenna gain is provided by the manufacturer.

3. CALCULATED RESULT

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
6.23	4.1976	23.35	216.2719	0.18070	1	Complies

Note:

- (1) The calculated distance is 20 cm.
- (2) Output power including tune up tolerance.

End of Test Report