

FCC RF EXPOSURE REPORT

FCC ID: TE7C24

Project No. : 1911C007B
Equipment : AC750 Dual Band Wi-Fi Router
Brand Name : tp-link
Test Model : Archer C24
Series Model : N/A
Applicant : TP-Link Technologies Co., Ltd.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Manufacturer : TP-Link Technologies Co., Ltd.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Date of Receipt : May. 15, 2020
Date of Test : May. 19, 2020~Jun. 23, 2020
Issued Date : Jul. 06, 2020
Report Version : R00
Test Sample : Engineering Sample No.: DG2020051555
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1
FCC Title 47 Part 2.1091, OET Bulletin 65 Supplement C

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



Prepared by : Simon Ling



Approved by : Ethan Ma



Certificate #5123.02

Add: No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

Tel: +86-769-8318-3000

Web: www.newbtl.com

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Jul. 06, 2020

1. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

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

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

Antenna Specification:

For 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		3101503043	Dipole	Weld	3.07
2		3101503043	Dipole	Weld	3.07

Note:

This EUT supports CDD, and all antennas have the same gain,

Directional gain = $G_{ANT} + \text{Array Gain}$.

For power spectral density measurements, $N_{ANT} = 2$, $N_{SS} = 1$.

Directional gain = $G_{ANT} + \text{Array Gain} = G_{ANT} + 10 \log (N_{ANT}/N_{SS}) \text{ dB} = 3.07 + 10 \log (2/1) \text{ dBi} = 6.08$.

Then, the power density limit is $8 - (6.08 - 6) = 7.92$.

For power measurements, Array Gain = 0 dB ($N_{ANT} \leq 4$), so the Directional gain = 3.07.

For 5GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)	Note
1		3101503116	Dipole	Weld	4.37	UNII-1
2		3101503116	Dipole	Weld	4.94	UNII-3

2. TEST RESULTS

For 2.4GHz:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Average Output Power (dBm)	Max. Average Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.07	2.0277	22.11	162.5549	0.06561	1	Complies

For 5GHz UNII-1:

Antenna Gain (dBi)	Antenna 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
4.37	2.7353	21.98	157.7611	0.08589	1	Complies

For 5GHz UNII-3:

Antenna Gain (dBi)	Antenna 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
4.94	3.1189	21.96	157.0363	0.09749	1	Complies

For the max simultaneous transmission MPE:

Power Density (S) (mW/cm ²)	Power Density (S) (mW/cm ²)	Total	Limit of Power Density (S) (mW/cm ²)	Test Result
2.4GHz	5GHz			
0.06561	0.09749	0.16210	1	Complies

Note: The calculated distance is 20 cm.
Output power including tune up tolerance.

End of Test Report