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.

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REPORT ISSUED HISTORY

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

1. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

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

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

Antenna Specification:
For 2.4GHz:

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

Note:
This EUT supports CDD, and all antennas have the same gain,
Directional gain = G_{ANT} + Array Gain.
For power spectral density measurements, N_{ANT} = 2, N_{SS} = 1.
Directional gain = G_{ANT} + Array Gain = G_{ANT} + 10 log (N_{ANT}/ N_{SS}) dB =3.07+10log(2/1)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	TP-LINK®	3101503116	Dipole	Weld	4.37	UNII-1
2	TP-LINK®	3101503116	Dipole	Weld	4.94	UNII-3

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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