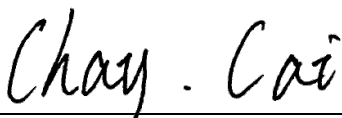


# FCC RF EXPOSURE REPORT

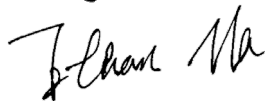
## FCC ID: TE7RE105V5

**Project No.** : 2002C070  
**Equipment** : 300Mbps Wi-Fi Range Extender  
**Brand Name** : tp-link  
**Test Model** : RE105  
**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** : Feb. 26, 2020  
**Date of Test** : Feb. 27, 2020 ~ Mar. 24, 2020  
**Issued Date** : Mar. 30, 2020  
**Report Version** : R00  
**Test Sample** : Engineering Sample No.: DG2020022618  
**Standard(s)** : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091  
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 | Mar. 30, 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

Table for Filed Antenna

| Ant. | Brand                                                                             | P/N        | Antenna Type | Connector | Gain (dBi) |
|------|-----------------------------------------------------------------------------------|------------|--------------|-----------|------------|
| 1    |  | 3101503088 | Dipole       | IPEX      | 2.25       |
| 2    |  | 3101502809 | Dipole       | IPEX      | 2.25       |

Note:

This EUT supports CDD, and all antennas have the same gain, so Directional gain= $G_{ANT}$ +Array Gain,

For power spectral density measurements, Array Gain= $10\log(N_{ANT}/N_{SS})$  dB, that is Directional

gain= $2.25+10\log(2/1)=5.26$ .

For Power measurements, Array Gain = 0 dB ( $N_{ANT} \leq 4$ ), so the Directional gain= $2.25$ .

## 2. TEST RESULTS

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Average Output Power (dBm) | Max. Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|------------------------|----------------------------|---------------------------------|--------------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.25                   | 1.6788                     | 25.01                           | 316.9567                       | 0.10591                                 | 1                                                | Complies    |

Note: The calculated distance is 20 cm.

Output power including tune up tolerance.

End of Test Report