FCC RF EXPOSURE REPORT

FCC ID: TE7EN020F5

Project No.	**: 1808C002**
Equipment	**: 300Mbps Wireless N Router**
Model	**: EN020-F5, TL-WR850N, TL-WR840N**
Applicant	**: TP-Link Technologies Co., Ltd.**
Address	**: Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China**
According:	**: FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091**

BTL INC.

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1. CERTIFICATION

Equipment	:	300Mbps Wireless N Router
Brand Name	:	tp-link
Test Model	:	EN020-F5
Series Model	:	TL-WR850N, TL-WR840N
Applicant	:	TP-Link Technologies Co., Ltd.
Manufacturer	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24 (floors 1,3,4,5) and 28 (floors1-4), Central Science and Technology Park,Nanshan Shenzhen, 518057 China
Date of Test	:	Aug. 02, 2018 ~ Aug. 22, 2018
Test Sample	:	Engineering Sample No.: D180806466

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-2-1808C002) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. 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

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Dipole	N/A	4
2	N/A	N/A	Dipole	N/A	4

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely correlated, then,

Direction gain = G_{ANT}+10log(N)dBi=4+10log(2), that is Directional gain=7.01.

So, the out power limit is 30-7.01+6=28.99,

the power density limit is 8-7.01+6=6.99.

3. TEST RESULTS

Antenna Gain (dBi)	Antenna Gain (numeric)	AVG Output Power (dBm)	AVG Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
7.01	5.0234	23.01	199.9862	0.19996	1	Complies

Note: the calculated distance is 20 cm.