





# RF EXPOSURE REPORT

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

Manufacturer or Supplier	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
Product	300Mbps Wi-Fi Range Extender
Brand Name	TP-Link
Model	TL-WA850RE
Additional Model & Model Difference	N/A
Date of tests	Dec. 05, 2016 ~ Dec. 16, 2016

- FCC Part 2 (Section 2.1091)
- KDB 447498 D01 V06
- IEEE C95.1

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Harry Li Project Engineer/ EMC Department	Approved by Glyn He Supervisor / EMC Department
	
	Date: Jan. 16, 2017

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**BUREAU**  
**VERITAS**

Test Report No.: FS161205N022

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FS161205N022	Original release	Jan. 16, 2017

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## 1. CERTIFICATION

**PRODUCT:** 300Mbps Wi-Fi Range Extender

**BRAND NAME:** TP-Link

**MODEL NO.:** TL-WA850RE

**ADDITIONAL MODEL:** N/A

**FCC ID:** TE7WA850REV4

**TEST SAMPLE:** ENGINEERING SAMPLE

**APPLICANT:** TP-Link Technologies Co., Ltd.

**TESTED DATE:** Oct. 10, 2016

**STANDARDS:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 V06

IEEE C95.1



## 2. RF EXPOSURE LIMIT

### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm <sup>2</sup> )	AVERAGE TIME (minutes)
<b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b>				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

## 3. MPE CALCULATION FORMULA

$$Pd = (Pout * G) / (4 * pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

## 4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



## 5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	Total Gain (dBi)	Antenna Type
Chain 0	2	5.01	Dipole Antenna
Chain 1	2		Dipole Antenna

Note: Total Gain=2+10log(N=2)=2+(3.01)=5.01dBi

## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
WLAN 2.4GHz	224.433	2	20	0.708	1.0

--- END ---