

RF EXPOSURE REPORT



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 or Supplier	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		
Product	AC750 Wi-Fi Range Extender		
Brand Name	tp-link		
Model	RE205		
Additional Model & Model Difference	N/A		
Date of tests	Aug. 01, 2017 ~ Sep. 07, 2017		
<input checked="" type="checkbox"/> FCC Part 2 (Section 2.1091) <input checked="" type="checkbox"/> KDB 447498 D01 <input checked="" type="checkbox"/> IEEE C95.1			
CONCLUSION: The submitted sample was found to <u>COMPLY</u> with the test requirement			
Tested by Harry Li Project Engineer/ EMC Department		Approved by Glyn He Supervisor/ EMC Department	
		 Date: Sep. 28, 2017	
<p>This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification</p>			

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Test Report No.: FS170725N035

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FS170725N035	Original release	Sep. 28, 2017



Test Report No.: FS170725N035

1. CERTIFICATION

PRODUCT: AC750 Wi-Fi Range Extender
BRAND NAME: tp-link
MODEL NO.: RE205
ADDITIONAL MODEL: N/A
FCC ID: TE7RE205
TEST SAMPLE: ENGINEERING SAMPLE
APPLICANT: TP-Link Technologies Co., Ltd.
TESTED DATE: May 07, 2017
STANDARDS: FCC Part 2 (Section 2.1091)
KDB 447498 D01
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 ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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:

Frequency Band	Antenna 0 Peak Gain (dBi)	Antenna 1 Peak Gain (dBi)	Total Gain (dBi)	Antenna Type
2.4GHz	2	2	5.01	Dipole Antenna
5GHz	3	/	3	Dipole Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
WLAN 2.4GHz	182.390	5.01	20	0.115010	1.0
WLAN 5GHz	149.279	3.0	20	0.059255	1.0
WLAN 2.4GHz +WLAN 5GHz	331.669	5.01	20	0.174265	1.0

CONCLUSION:

Both of the WLAN 2.4GHz and 5GHz can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is $0.115010 / 1 + 0.059255 / 1 = 0.174265$, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

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