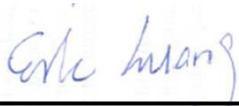


RF Exposure Evaluation Report

APPLICANT : TP-Link Technologies Co., Ltd.
EQUIPMENT : AC1200 Wi-Fi Range Extender
BRAND NAME : TP-Link
MODEL NAME : RE305
FCC ID : TE7RE305
STANDARD : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Eric Huang / Manager



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.)



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA690205	Rev. 01	Initial issue of report	Jan. 19, 2017

1. Administration Data

1.1. Testing Laboratory

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978

Applicant	
Company Name	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	
Company Name	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

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	AC1200 Wi-Fi Range Extender
Brand Name	TP-Link
Model Name	RE305
FCC ID	TE7RE305
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz
Mode	802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

**3. Maximum RF average output power among production units**

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)			
		11b	11g	HT20	HT40
2.4GHz Band	2412	20.5	19.0	18.5	
	2422				16.0
	2437	22.0	22.0	22.0	18.0
	2452				14.5
	2462	19.5	18.5	17.0	

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.2GHz Band	5180	22.0	22.0		22.0		
	5190			17.0		17.0	
	5210						16.0
	5220	22.5	22.0		22.5		
	5230			22.0		22.0	
	5240	22.0	22.0		22.0		

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.8GHz Band	5745	23.0	21.5		22.0		
	5755			21.5		22.0	
	5775						21.0
	5785	22.5	21.5		22.0		
	5795			21.5		21.5	
	5825	21.5	21.5		21.5		



4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
2.4GHz WLAN	2437.0	2.00	22.00	24.000	0.251	251.189	0.050	1.000
5GHz WLAN	5785.0	3.00	23.00	26.000	0.398	398.107	0.079	1.000

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.