

Maximum Permissible Exposure

FCC ID: TE7RE200

IC: 8853A-RE200

Product Name: AC750 WiFi Range Extender

Model No: RE200

1. According to FCC CFR 47 §1.1310, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Table 1 Limits for Maximum Permissible Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits For Occupational / Control Exposures (f = frequency)				
30-300	61.4	0.163	1.0	6
300-1500	...	...	f/300	6
1500-100,000	...	...	5.0	6
(B) Limits For General Population / Uncontrolled Exposure (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

2. MPE Calculation

TP-Link Technologies Co., Ltd. declares that the product described above has been evaluated and found to comply with the RF exposure limits for humans, as specified based on ANSI/FCC recommendation.

For 2.4GHz:

Based on safety distance 20cm, the antenna gain is 6.96dBi, and the power output is 4.765mW, the power density is 0.5844mW/cm²

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where S = Power Density in mW/cm²

P=27.72dBm=591.562mw

G =6.96dBi=4.966Numerical

r = 20cm

$$S = 591.562 * 4.966 / 4 * \pi * 20^2 = 0.5844 \text{ mW/cm}^2$$

For 5GHz:

Based on safety distance 20cm, the antenna gain is 4.08dBi, and the power output is 4.765mW, the power density is 0.0732mW/cm²

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where S = Power Density in mW/cm²

P=21.58dBm=143.88mw

G =4.08dBi=2.559Numerical

r = 20cm

$$S = 143.88 * 2.559 / 4 * \pi * 20^2 = 0.0732 \text{mW/cm}^2$$

Sincerely Yours,



Mr. Ben Cheng
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