



CTK Co., Ltd.  
The Power Leader of Global Engineering Companies

# CTK Co., Ltd.

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## RF EXPOSURE EVALUATION

FCC ID : PROLORYPLUGCPUV10

### Standard Requirement

The following FCC Rule Parts and procedures are applicable :

*Part 1.1310 Radiofrequency radiation exposure limits*

*Part 2.1091 Radiofrequency radiation exposure evaluation : Mobile device*

*KDB447498 D01 v06 Mobile and Portable Devices RF Exposure Procedures and Equipment*

*Authorization Policies*

Table 1 below sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

Table 1—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> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			<b>1.0</b>	30

*f = frequency in MHz*

*\* = Plane-wave equivalent power density*



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### MPE calculation

$$S = \text{EIRP} / (4\pi R^2)$$

Where S : Power density  
EIRP :  $P \times G$   
P : Maximum transmitter power  
G : Antenna gain  
R : distance to the centre of radiation of the antenna

### EUT RF Exposure

#### (1) LoRa

P : 10.804 dBm (12.034 mW)  
G : -1.31 (x 0.74)  
R : 20 cm

$$S = 0.001772 \text{ mW/cm}^2$$

### Conclusion

This confirms compliance to the required Radio frequency radiation exposure limit.