



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

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## RF EXPOSURE EVALUATION

FCC ID : 2A55XHN-04BLE

### Standard Requirement

The following FCC Rule Parts and procedures are applicable :

*Part 1.1310 Radiofrequency radiation exposure limits*

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*

**Limit : 1 mW/cm<sup>2</sup>**



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### MPE calculation

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

Where

S : Power density

EIRP : P x G

P : Maximum transmitter power

G : Antenna gain

R : distance to the centre of radiation of the antenna

### Band 2 MPE calculation

P : 1.330 mW (1.238 dBm)

G : 2.4 dBi

R : 20 cm

$$S = 10^{((1.238+2.4) / 10)} / 4\pi / 20^2$$

$$S = 0.000459 \text{ mW/cm}^2$$

### Conclusion

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