



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

# CTK Co., Ltd.

(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea  
Tel: +82-31-339-9970 Fax: +82-31-624-9501  
www.e-ctk.com

## RF EXPOSURE EVALUATION

FCC ID : 2AFWN-WC37FAPBDWO

### 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*



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

# CTK Co., Ltd.

(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea

Tel: +82-31-339-9970 Fax: +82-31-624-9501

www.e-ctk.com

## 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

## MPE Results

Test Mode	P [dBm]	G [dBi]	EIRP [dBm]	EIRP [mW]	R [cm]	S [mW/cm <sup>2</sup> ]	Limit [mW/cm <sup>2</sup> ]
BT	6.199	3.590	9.789	9.526	20	0.001 90	1
BLE	1.235	3.590	4.825	3.037	20	0.000 60	
WLAN 2.4 GHz	13.890	6.600	20.490	111.944	20	0.022 28	
WLAN 5 GHz	13.020	5.950	18.970	78.886	20	0.015 70	
Combined	-	-	-	-	-	0.040 48	

## Conclusion

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