



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

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## RF EXPOSURE EVALUATION

FCC ID : 2AFWN-CM01WTA11M

### 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*

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 (mW/cm<sup>2</sup>)

EIRP : P + T + G (dBm)

P : Maximum transmitter power (dBm)

G : Antenna gain (dBi)

R : distance to the centre of radiation of the antenna (cm)

T : Power tolerance (dB)

**Safety distance(R) : 20 cm**

Mode	Conducted Output power [dBm]	Antenna Gain [dBi]	Power tolerance [dB]	Power density [mW/cm <sup>2</sup> ]	Limit [mW/cm <sup>2</sup> ]
BLE	5.82	3.999	+ 1.5	0.002 70	1
802.11b	11.54		+ 1.5	0.010 07	1
802.11g	13.06		+ 1.5	0.014 28	1
802.11n-HT20	13.05		+ 1.5	0.014 25	1

## Conclusion

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

-BT and WLAN do not operate simultaneously.