

# Maximum Permissible Exposure (MPE) Compliance

BDA-PCS/E-0.5/0.5W-70-A  
FCC ID Q8KPCSHW70A

At the maximum operating frequency of 1970MHz (Downlink) and 1890MHz (Uplink) the MPE limit for the General Population/Uncontrolled Exposure is as follows: Downlink = 1.0mW/cm<sup>2</sup> and Uplink = 1.0mW/cm<sup>2</sup>.

The analysis is provided below.

Power Density (S) =  $EIRP / (4\pi R^2)$ , Therefore,  $R \geq \sqrt{EIRP / S \times 4\pi}$

*From the above calculations, with:*

Downlink Maximum Antenna Gain = 2dBi  
Downlink Maximum output power = 18dBm

Uplink Maximum Antenna Gain = 11dBi  
Uplink Maximum output power = 18dBm

S = 1.0 mW/cm<sup>2</sup>  
EIRP = 20dBm or .10W (worst case)

S = 1.0 mW/cm<sup>2</sup>  
EIRP = 29dBm or .794W (worst case)

*Therefore,*  
R= 2.82cm (Downlink)

R= 7.95cm (Uplink)

These are the minimum safe distances for the general population for each antenna.