Maximum Permissible Exposure (MPE) Compliance

BDA-CellAB-0.5/0.5W-70-A
FCC ID Q8KCELLABHW70

At the maximum operating frequency of 894MHz (Downlink) and 849MHz (Uplink) the MPE limit for the General Population/Uncontrolled Exposure is as follows: Downlink = 0.6mW/cm2 (f/1500mW/cm2) and Uplink = 0.57mW/cm2 (f/1500mW/cm2).

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 output power = 18dBm	Uplink Maximum output power = 18dBm
S = 0.6 mW/cm2	S = 0.57 mW/cm2
EIRP = 18dBm or .063W	EIRP = 18dBm or .063W
Therefore,	
R= 2.89cm (Downlink)	R= 2.97cm (Uplink)

These are the minimum safe distances at the output of the BDA-SMR-0.5/0.5W-70-A for the general population.

From the above calculations, with maximum Antenna Gain:

Downlink Maximum Antenna Gain = 3dBi	Uplink Maximum Antenna Gain = 11dBi
Downlink Maximum output power = 18dBm	Uplink Maximum output power = 18dBm
S = 0.6 mW/cm2	S = 0.57 mW/cm2
EIRP = 21dBm or .126W (worst case)	EIRP = 29dBm or .794W (worst case)
Therefore,	
R= 4.09cm (Downlink)	R= 10.5cm (Uplink)

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