

## Airspan 700 MHz SCRT (FCC ID:O2J-070T)

### Maximum Permitted Exposure Calculation

O2J-070T\_MPE\_calc

The equation for the MPE calculation is given in OET bulletin 65, page 19 as

$$S = \text{EIRP}/4\pi r^2$$

Where  
 $S$  = Power density ( $\text{W}/\text{m}^2$ )  
 $\text{EIRP}$  = Effective Isotropically Radiated Power =  $P \times G$  (W)  
 $r$  = Perpendicular distance from antenna

The 700 MHz SCRT operates with a maximum antenna port power of 36dBm, a maximum permitted antenna gain of 14.5 dBi, and a minimum recommended safe distance of 1.5 m.

Values  
 $P$  = 36 dBm = 3981 mW  
 $G$  = 14.5 dBi = 28.2 linear  
 $R$  = 65 cm

Limit  
 Maximum permitted value of  $S$  is given in table 1(a) – Limits for occupational / controlled Exposure in frequency range 300-1500 MHz is given by:

$$\begin{aligned} S_{\text{permitted}} &= f \text{ (MHz)}/300 \\ &= 2.327 \text{ mW}/\text{cm}^2 \text{ at } 698 \text{ MHz} \\ &= 2.487 \text{ mW}/\text{cm}^2 \text{ at } 746 \text{ MHz} \end{aligned}$$

Calculation  
 $S = 3981 * 28.2 / (4 * 3.14159 * 65^2)$   
 $S = 2.113 \text{ mW}/\text{cm}^2$

Conclusion  
 The Airspan 700 MHz SCRT meets the requirements at a distance of 65cm from the antenna.