

RF Exposure Calculation

The following calculation is based on guidelines published in OET Bulletin 65, Supplement C, Edition 01-01, August 1997: Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.

The power density is given as:

$$\text{Power Density} = P_G / 4\pi r^2$$

where

P = Maximum Transmitter Output Power, P = 25.25 dBm (peak), P = 335 mW

G = Antenna Gain, G = 2.62 dBi, G = 1.8 (linear)

r = distance from antenna

Using the general population - uncontrolled Maximum Power Density limit of 1mW / cm² at a distance of 20 cm as given in OET Bulletin 65

$$\text{Power Density} = 335 \cdot 1.8 / 4\pi (20^2)$$

Power Density = 0.48 mW / cm² which is under the limit of 1 mW / cm².

The User Manual contains the following statement:

This device should be operated with a minimum separation of at least 20 cm between the Airport Extreme Card antennas and a person's body and must not be co-located or operated with any other antenna or transmitter.