MPE Calculations

FCC part 1.1310, Table 1 limits the power density for uncontrolled exposure to 1mW/ cm^2 for systems operating in FCC Part 22H and 24E. The distance, d(cm) from the antenna at which the power density, P_d (mW/cm^2) is below this limit is calculated from the maximum EIRP, P_t (mW) using the equation:

$$P_d = P_t/(4 \pi d^2)$$

Re-arranging for the distance at which the power density is 1mW/cm2 gives:

$$d = \sqrt{(P_t/(4 \pi))}$$

Frequency	Maximum Output Power (dBm)	EIRP (mW)	Pd at 20cm	Calculated distance (in cm) where Pd < 1mW/ cm2
824-849 MHz	18	63.1	0.01255	2.24
1850 – 1910 MHz	25.8	380.2	0.0756	5.50

The minimum distance from the antenna that the power density is 1mW/ cm^2 and the calculated minimum distance is 2.24 cm (22H&RSS-129) and 5.5 cm (24E&RSS-133).

This information is detailed in the user manual as follow:

To satisfy FCC RF exposure compliance requirements for a mobile transmitting device, this device and its antenna should generally maintain a separation distance of 20cm or more from a person's body.