MPE Calculations

FCC part 1.1310, Table 1 limits the power density for uncontrolled exposure to 1mW/ cm^2 for systems operating in the DTS and UNII bands. 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 method detailed in OET Bulletin 65. This uses Friis' equation:

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

Re-arranging for the distance at which the power density is $1mW/cm^2$ gives:

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

Frequency	MPE Limit (mW/cm^2)	Output Power (mW)	Max. Antenna Gain (dBi)	EIRP (mW)	Pd at 20cm (mW/cm^2)
2412 to 2467 MHz	1.00	87.1	8.5	616.6	0.1

The device is not a portable device (i.e. intended to be worn on the body or be hand-held) and not intended to be fixed mounted on permanent structures, so it is classified as being a mobile device. The user's manual specifies a minimum separation distance of 20cm, consistent with this classification.

As shown in the calculations above, the power density 20cm from the device is below the maximum permitted level for uncontrolled exposure.