

MPE Calculations

The device is a module that is typically used in mobile host systems and is not intended for general use in portable devices (i.e. devices intended to be worn on the body or be hand-held). The installation manual specifies a minimum separation distance of at least 23cm from the host system to persons when using the module within the limitations of the grant and without additional rf exposure evaluations being performed. The maximum output power is 1 Watt and the maximum eirp is 4 Watts.

FCC part 1.1310, Table 1 limits the power density for uncontrolled exposure. The power density, P_d (mW/cm^2) calculated from the maximum EIRP, P_t (mW) and the distance, d (m), between the transmitting antenna and the closest person, can be calculated using:

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

Frequency	MPE Limit (mW/cm^2)	Output Power (mW)	Max. Antenna Gain (dBi)	EIRP (mW)	P_d at 20cm (mW/cm^2)	Distance where P_d = limit (cm)
902 to 928 MHz	0.60	1000.0	6.0	3981.1	0.8	23.0

As shown in the calculations above, the power density 23cm from the device is below the maximum permitted level for uncontrolled exposure.

Additional, host-specific, rf exposure evaluation data may be used to justify use on host systems used within 23 cm of persons. This evaluation is limited to use in host systems that provide a separation of at least 23cm from persons when operated.