

APPENDIX D: RF EXPOSURE / MPE CALCULATION

The frequency range for the EUT is 146 – 174 MHz. Per 1.1310 Table 1, the maximum power density allowed for the EUT is 1 mW/cm² for an occupational/controlled environment and 0.2 mW/cm² for an uncontrolled environment.

The antenna is a half-wave dipole with gain of 2.15 dBi (1.64 numeric).

The manufacturer's rated power of the EUT is 25 +/- 1 W. The EUT as supplied had a measured conducted power of 26.0 W. Therefore, the MPE distance shown below represents the worst case MPE distance. The EUT has a maximum 50% duty cycle; this factor has been applied to the power in the following table.

MPE is calculated per the following equation (solving for d):

$$S = (P \times G) / (4 \times \pi \times d^2)$$

where:

S = power density

P = transmitter conducted power in (W)

G = antenna numeric gain

d = distance to radiation center (m)

Power Notes	Antenna Numeric Gain	Conducted Power (W)	Minimum Separation Distance (m)	Minimum Separation Distance (cm)
EUT as supplied (also manufacturer's maximum power rating)	1.64	13.0	0.922*	92.2*

Note: * General Population/Uncontrolled Environment