APPENDIX A: RF EXPOSURE

From FCC 1.1310 Table 1B, the maximum permissible RF exposure for an uncontrolled environment is 1 mW/cm^2. The electric field generated for a 1 mW/cm^2 exposure (S) is calculated as follows:

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

where:
S = Power density
P = Transmitter conducted power in watts
G = Numeric gain
d = distance to radiation center

Fundamental Operating Frequency: 451.35 MHz
Maximum Rated Output Power: 1.0 Watt (1000 mW)
Antenna Gain = 3.2 dBi; Numeric Gain = 2.1

S = (1500 X 2.1)/ (4 x Pi X 20^2) = 0.63 mW/cm^2

Under normal operating conditions, the antenna is designed to maintain a separation distance of 20 cm from all persons. The EUT is mobile and fixed.

Calculated Power Density:

Antenna Gain = 3.2 dBi Conducted Power = 1500 mW	
Separation Distance = 20 cm	
FCC power density limit	Calculated Power density at 20 cm distance
1 mW/cm^2	0.63 mW/cm^2