CKC LABORATORIES, INC. Testing the Future

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Maximum Permissible Exposure Calculations

Date of Report: 4/17/07

Calculations prepared for:

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Calculations prepared by:

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Model Number: AR 1200
FCC Identification: NA

Fundamental Operating Frequency: 935-940 MHz, 940.5 MHz

Maximum Rated Output Power: 4 W/ 0.25W
Measured Output Power: 4 W/ 0.25W

MPE Limit in accordance with 1.1310(b): Limits for general population/uncontrolled exposure

MPE Limit for 1930-1990 MHz = f/1500 mW/cm^2 = 0.6 ($6\ W/m^2$)

Power Output (Watts)	Power Density Limit (mW/cm^2)	Minimum Distance (Meters)
4	**0.6**	**0.2**

$$Power\ Density\ (W/m^2) = \frac{30 \times P_t \times G}{d^2 \times Z_0}$$

P_t = Power Delivered to the Antenna
d = Distance in meters
G = Antenna Gain
Zo = Impedance of Free Space

The typical antennas to be used with the EUT are structure mount antennas which under normal operation has an antenna height of at least 5 meters. As can be seen from the MPE result, this device passes the limit specified in 1.1310 at a distance of 0.2 meter.

Calculation:

$$d = \sqrt{\frac{30 \times 4 \times 1}{6 \times 377}}$$

= 0.2 meter.