

# Maximum Permissible Exposure (MPE) Calculations

This exhibit demonstrates evaluation and compliance for Human Exposure to Radiofrequency Electromagnetic Fields as outlined by the Federal Communications Commission Office of Engineering and Technology Bulletin 65

The reference documents are

- 1) Limits for Maximum Permissible Exposure (MOE). Code of Federal Regulations Title 47, Volume 1, Section 1.1310
- 2) Evaluation Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. OET Bulletin 67 Edition 97-01

Model Number : LT-700-216

FCC ID Number: OMD700-003

The Listen Model LT-700-216. FCC ID Number OMD700-003 utilizes a 216 MHz transmitter. The following worst-case emissions are based on a PPT (Peak Power Total) measurement of 12.5 dBm. The worst-case antenna gain is found to be 0.00 dBi.

Total radiated power at the transmitter is:

$$P_t = 12.5 \text{ dBm} + 0.00 \text{ dBi} = 12.5 \text{ dBm EIRP}$$

$$12.5 \text{ dBm EIRP} = .0178 \text{ Watts (17.8 mW)}$$

Power density at a distance of 3 cm from the antenna is:

$$S = \text{EIRP} / 4 \pi d^2$$

Where S is power density in units of mW/cm<sup>2</sup> and EIRP is equivalent Isotropic Radiated Power in unit of mW and r is distance to the center of radiated on the antenna in units of cm

$$S = .0178 \text{ W} / (4 \pi (3 \text{ cm})^2) = 0.16 \text{ mW/cm}^2$$

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

$$\text{MPR Limit} = 0.2 \text{ (mW/cm}^2\text{)}$$

Based on the FCC Limits for Maximum Permissible Exposure (MPE) given this device falls under the required limits.