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-800B-072

FCC ID Number: OMD800-002

The Listen Model LT-800-072. FCC ID Number OMD800-002 utilizes a 72 MHz transmitter. The following worst-case emissions are based on a PPT (Peak Power Total) measurement of 18.1 dBm. The worst-case antenna gain is found to be 0.0 dBi.

Total radiated power at the transmitter is:

$Pt = 18.1$ dBm $+ 0.00$ dBi $= 18.1$ dBm EIRP

18.1 dBm EIRP $= .0647$ Watts (64.7 mW)

Power density at a distance of 20 cm from the antenna is:

$S = EIRP / 4 \pi d^2$

Where S is power density in units of mW/cm² and EIRP is equivalent Isotropic Radiated Power in unity of mW and r is distance to the center of radiated on the antenna in units of cm

$S = .0647$ W $/ (4 \pi(20$ cm$)^2) = 0.013$ mW/cm²

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

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

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