CETECOM ICT Services GmbH

Untertürkheimer Str. 6-10, 66117 Saarbruecken   Phone: +49 (0) 681 598-0   Fax: -9075
RSC-Laboratory   Phone: +49 (0) 681 598-8412   Fax: -8484

Test report no.: 2-4765-01-03/07   Date: 2007-12-20   Page 23 of 73

MPE calculation

These equations are generally accurate in the far field of an antenna but will over predict power density in the near field, where they could be used for making a "worst case" prediction.

$$S = PG/4\pi R^2$$

where   S = power density (in appropriate units, e.g. mW/cm^2)
        P = power input to the antenna (in appropriate units e.g. mW)
        G = power gain of the antenna in the direction of interest relative to the isotropic radiator
        R = distance to the center of radiation of the antenna (appropriate units e.g. cm)

Or

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

where   EIRP = equivalent isotropically radiated power

Calculation:

(Calculated for max. EIRP)

EIRP: 30.9 dBm   = 1230   mW

calculated at distance of 20 cm:

power density   = 1230 /4π20^2 = 0.245 mW/ cm^2

Limit:

1mW/ cm^2 is the reference level for general public exposure according to the OET Bulletin 65, Edition 97-01 Table 1.