

# 11. MAXIMUM PERMISSIBLE EXPOSURE

Equipment shall meet the limits below .

1mW/cm<sup>2</sup> max at 20 cm of distance

Calculation:

$$E = \frac{\sqrt{30PG}}{d}$$

$$S = \frac{(E)^2}{3770}$$

E= Field Strenght in Volts/meter

P=Power in watt

G= Numeric Antenna Gain

d= Distance in meter

S= power Density in milliwatts/square centimeter

Arranging terms to calculate the power density at a specifica distance yields:

$$S= 0.0795 \cdot 10^{((P+G)/10)/(d^2)}$$

The power density in units of mW/cm<sup>2</sup> is converted to units of W/m<sup>2</sup> multiplying by a factor of 10.

Result

| Power Density Limit<br>mW/cm <sup>2</sup> | Output Power (erp)<br>mW | Power Density at<br>20cm<br>mW/cm <sup>2</sup> | Remark |
|-------------------------------------------|--------------------------|------------------------------------------------|--------|
| 1                                         | 21,3                     | 0,013                                          | -      |

(\*) OET Bulletin 65

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