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MPE Calculation for EP011

The FCC requires that the calculated MPE be equal to or less than 1 mW/cm² at a distance of 20cm from the device to the body of the user. The equation for the calculation is given in OET Bulletin 65, page 19 as:

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

Where S = Power density

EIRP = Effective Isotropically Radiated Power

R = distance to the centre of radiation of the antenna

Values $S = 1 \text{ mW/cm}^2$ for General population uncontrolled exposure
(FCC Part 1.1310 Radiofrequency radiation exposure limits)

EIRP = 25.3 dBm (338.84 mW)

$R = 20 \text{ cm}$

Calculation

$$S = 338.84/12.56 \times (20)^2$$

$$S = 338.84/5024$$

$$S = 0.0675 \text{ mW}^2$$

Conclusion

The MPE value of the EP011 at 20cm meets the RF exposure limits