KDB 447498

Prediction of MPE limit at a given distance

Equation from IEEE C95.1

$$S = \frac{EIRP}{4\pi R^2} \text{ re - arranged } R = \sqrt{\frac{EIRP}{S\,4\pi}}$$

where:

S = power density
R = distance to the centre of radiation of the antenna
EIRP = EUT Maximum power

Note:

The EIRP was measured by substation method

Result

Prediction Frequency (MHz)	EIRP (mW)	Maximum Duty Cycle	Time Averaged EIRP (mW)	Minimum Distance (cm)	Power density at distance (mW/cm^2)	Power density limit (S) (mW/cm^2)
5150 – 5350	1261.827	85%	1072.553	9.3	0.9868	1