RF Exposure **MPE Calculation**

KDB 447498

Prediction of MPE limit at a given distance

Equation from IEEE C95.1

$$S = \frac{EIRP}{4\pi R^2} \quad \text{re-arranged } R = \sqrt{\frac{EIRP}{S4\pi}}$$

where:

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

Note:

The EIRP was calculated by addition of the maximum conducted carrier power plus the antenna gain that takes the eirp to the maximum 4watt limit

Result

Prediction Frequency (MHz)	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Maximum EIRP (W)	Minimum Distance (cm)	Power density at distance (mW/cm^2)	Power density limit (S) (mW/cm^2)
2402	29.80	6.20	4	20	0.80	1
2440	29.98	6.02	4	20	0.80	1
2480	29.90	6.10	4	20	0.80	1