

**Appendix F:****MPE Calculation****Prediction of MPE limit at a given distance**

For purposes of these requirements mobile devices are defined by the Industry Canada as transmitters designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between radiating structures and the body of the user or nearby persons. These devices are normally evaluated for exposure potential with relation to the MPE limits. As the 20cm separation specified under Industry Canada rules may not be achievable under normal operation of the EUT, an RF exposure calculation is needed to show the minimum distance required to be less than 10W/m<sup>2</sup> power density limit, as required under Industry Canada rules.

Equation from IEEE C95.1

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

Where:

S = power density

R = distance to the centre of radiation of the antenna

EIRP = EUT Maximum power

**Result**

Prediction Frequency (MHz)	Maximum EIRP (W)	Power density limit (S) (W/m <sup>2</sup> )	Distance (R) cm required to be less than 10W/m <sup>2</sup>
2402	0.00006	10	0.0007