

SAR evaluation

MPE Calculation Method

$$E \text{ (V/m)} = (30 \cdot P \cdot G)^{0.5} / d$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = E^2 / 377$$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = (30 \cdot P \cdot G) / (377 \cdot d^2)$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well

as the gain of the used antenna, the RF power density can be obtained.

Calculated Result and Limit (WORSE CASE IS AS BELOW)

EIRP	Power Density (S)(mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
$\{ [10^{(104.77/20)} / 10^6 \cdot x3]^2 / 30 \}$ x1000 mW = 9 mW	$9/4 \times 3.14 \times 400 =$ 0.0018	1	Complies