SAR evaluation

MPE Calculation Method

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

Power Density: $Pd\ (W/m2) = E^2/377$

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

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

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)

Directional antennaGain (Numeric)	Peak Output Power (mW)	Power Density (s) (mW/cm^2)	Limit of Power Density (s) (mW/cm^2)	Test Result
-4.47dBi(0.357)	20.4739 (802.11b 13.112dBm)	0.00145	1	Compiles
-4.47dBi(0.357)	1.3823 (BLE 1.406dBm)	0.0001	1	Compiles