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=0.3m, as well as the gain of the used antenna, the RF power density can be obtained.

For 5GHz operation:

Calculated Result and Limit(WORSE CASE IS AS BELOW)

Antenna Gain (Numeric)	Peak Output Power (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Test Result
3.16(5dBi)	847(29.28dBm)	0.237	1	Compiles

For 2.4GHz operation:

Calculated Result and Limit(WORSE CASE IS AS BELOW)

Antenna Gain (Numeric)	Peak Output Power (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Test Result
3. 16(5dBi)	968 (29.86dBm)	0.271	1	Compiles

0.237+ 0.271=0.508<1