

SAR evaluation
FCC ID: 2AGNTL35T

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 WIFI Result and Limit (WORSE CASE IS AS BELOW. 2.4G is the worst case)

Antenna Gain (Numeric)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.074 (6.1dBi)	228.6 (23.59dBm)	0.1853	1	Complies

Note:

Antenna Gain: 6.1dBi for each one (2.4G Band)

Ant1 and Ant2 are Completely uncorrelated, So the Directional Gain is 6.1dBi

Antenna Gain (Numeric): 4.074dBi

$$ERP = 23.59 + 6.1 - 2.15 = 27.54 \text{ dBm} (567.54 \text{ mW})$$

WIFI 2.4G band and 5G band cannot transmit Simultaneously