

SAR evaluation
FCC ID: 2BAZV-NBOX2PRO

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)

| Antenna Gain (Numeric) | Peak Output Power (mW) | Power Density (S) (mW/cm ²) | Limit of Power Density (S) (mW/cm ²) | Test Result |
|---------------------------|------------------------|---|--|-------------|
| 3.475 (5.41dBi) | 28.379 (14.53dBm) | 0.01962 | 1 | Compiles |

Note:

Antenna Gain: 2.40dBi (2.4G Band)

Assembly Antenna Gain: 5.41dBi

Assembly Antenna Gain (Numeric): 3.475dBi

ERP=14.53+5.41-2.15=17.79dBm(60.117mW)

WIFI 2.4G band and 5G band cannot transmit Simultaneously

Calculated 5G Result and Limit (WORSE CASE IS AS BELOW)

| Antenna Gain (Numeric) | Peak Output Power (mW) | Power Density (S) (mW/cm ²) | Limit of Power Density (S) (mW/cm ²) | Test Result |
|---------------------------|------------------------|---|--|-------------|
| 3.656 (5.63dBi) | 2.421 (3.84dBm) | 0.0018 | 1 | Compiles |

Note:

Antenna Gain: 2.62dBi (5G Band)

Assembly Antenna Gain: 5.63dBi

Assembly Antenna Gain (Numeric): 3.656dBi

ERP=3.84+5.63-2.15=7.32dBm(5.395mW)

WIFI 2.4G band and 5G band cannot transmit Simultaneously