

Maximum Permissible Exposure

FCC ID: 2AYT3-AC300
Model/Type reference: AC300

Applicable Standard

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission’s guideline.

Remark: 1) For BLE: The maximum output power for antenna is 5.10dBm (3.24mW) at 2440MHz, 2.0dBi antenna gain(with 1.58numeric antenna gain.)

For WIFI: The maximum output power for antenna is 17.56dBm (57.02mW) at 2412MHz, 2.0dBi antenna gain(with 1.58numeric antenna gain.)

2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where $E =$ Field Strength in Volts / meter

$P =$ Power in Watts

$G =$ Numeric antenna gain

$d =$ Distance in meters

$S =$ Power Density in milliwatts / square centimeter

Substituting the MPE safe distance using d=20cm into above equation.

Yields: $S = 0.000199 * P * G$

Mode	Power(mW)	numeric antenna gain	Power density (mW/cm ²)	Limit (mW/cm ²)	Result
BLE	3.24	1.58	0.001019	1.0	PASS
WIFI	57.02	1.58	0.017928		

The device contain transmitters (BLE & WIFI) can transmit multiple transmission modes at the same time.

Maximum Emissions Level			
Mode	Power density (mW/cm ²)	Limit (mW/cm ²)	Result
BLE & WIFI	0.018947	1.0	Pass

Result:

Base on the calculation value, No SAR measurement is required.