

# Maximum Permissible Exposure Compliance Requirement

## 1. LIMITS

The limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm <sup>2</sup> )	Averaging time(minutes)
300MHz~1.5GHz	F/1500	30
1.5GHz~100GHz	1.0	30

Frequency(MHz)	Power density(mW/cm <sup>2</sup> )	Averaging time(minutes)
2412	1.0	30
2437	1.0	30
2462	1.0	30

## 2. EUT RF Exposure

The Max Conducted Peak Output Power is 25.29dBm (338.6mW) in channel 1 of 802.11n20;

The EUT has two antennas. The max conducted peak output power of antenna 0 is 23.85dBm (242.66mW). The antenna gain of this antenna is 11dBi. The max conducted peak output power of antenna 1 is 19.81dBm (95.71mW). The antenna gain of this antenna is 11dBi.

11dB logarithmic terms convert to numeric result is nearly 12.59.

According to the formula  $S = \frac{PG}{4R^2\pi}$ , we can calculate S which is MPE.

Now , R=20 cm, P<sub>0</sub>=242.66mW, G<sub>0</sub>=12.59; P<sub>1</sub>=95.71mW, G<sub>1</sub>=12.59.

$$So, S = \frac{PG}{4R^2\pi} = \frac{242.66 * 12.59 + 95.71 * 12.59}{4 * 400 * 3.14} = 0.8479 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

**So the MPE comply the requirement.**