

Product name: Wifi router  
Manufacturer: SAGEMCOM  
FCC Id: VW3FAST5260CV

### **Prediction of MPE limit at a given distance**

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density  
P = power input to the antenna  
G = power gain of the antenna in the direction of interest relative to an isotropic radiator  
R = distance to the center of radiation of the antenna

#### **Transmitter n°1**

Maximum peak output power at the antenna terminal: 28.90 (dBm)  
Maximum peak output power at the antenna terminal: 776.2471166 (mW)  
Antenna gain(typical): 6.4 (dBi)  
Maximum antenna gain: 4.365158322 (numeric)  
Prediction distance: 30 (cm)  
Prediction frequency: 2400 (MHz)  
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)  
  
**Power density** at prediction frequency: **0.299604** (mW/cm<sup>2</sup>)

Note : Transmitter n°1 includes the 3 antennas for 2.4GHz

Equivalent maximum gain for these 3 combined antenna has been measured and found equal to 6.4dBi

28.9 dBm is the maximum power delivered to the 3 combined antennas

#### **Transmitter n°2**

Maximum peak output power at the antenna terminal: 27.20 (dBm)  
Maximum peak output power at the antenna terminal: 524.8074602 (mW)  
Antenna gain(typical): 7 (dBi)  
Maximum antenna gain: 5.011872336 (numeric)  
Prediction distance: 30 (cm)  
Prediction frequency: 5200 (MHz)  
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)  
  
**Power density** at prediction frequency: **0.232567** (mW/cm<sup>2</sup>)

Note : Transmitter n°2 includes the 3 antennas for 5GHz

Equivalent maximum gain for these 3 combined antenna has been measured and found equal to 7dBi

22.2 dBm is the maximum power delivered to the 3 combined antennas

#### **Transmitter n°1 + Transmitter n°2:**

$$[Pd(1)/LPd(1)] + [Pd(2)/LPd(2)] = 0.53217$$

**<1**