

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: 20 (cm)
Prediction frequency: 2400 (MHz)
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: **0.674109** (mW/cm²)

Maximum allowable antenna gain: **8.112698554** (dBi)

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: 22.20 (dBm)
Maximum peak output power at the antenna terminal: 165.9586907 (mW)
Antenna gain(typical): 7 (dBi)
Maximum antenna gain: 5.011872336 (numeric)
Prediction distance: 20 (cm)
Prediction frequency: 5200 (MHz)
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: **0.165474** (mW/cm²)

Maximum allowable antenna gain: **14.81269855** (dBi)

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:

$$[Pd(1)/LPd(1)] + [Pd(2)/LPd(2)] = 0.83958$$

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