

Product name: FAST 5566
Manufacturer: SAGEMCOM BROADBAND SAS
FCC Id: VW3FAST5566

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 (2.4 GHz)

Maximum peak output power at the antenna terminal: 27.53 (dBm)
Maximum peak output power at the antenna terminal: 566.239289 (mW)
Antenna gain(typical): 7.2 (dBi)
Maximum antenna gain: 5.248074602 (numeric)
Prediction distance: 30 (cm)
Prediction frequency: 2412 (MHz)
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: **0.262753** (mW/cm²)

*Note: Transmitter n°1 includes 3 antennas for 2.4GHz
Equivalent maximum gain for these 3 combined antenna has been measured and found equal to 7.2dBi
27.53 dBm is the maximum power delivered to the 3 combined antennas*

Transmitter n°2 (5150-5450 MHz)

Maximum peak output power at the antenna terminal: 16.30 (dBm)
Maximum peak output power at the antenna terminal: 42.65795188 (mW)
Antenna gain(typical): 6.6 (dBi)
Maximum antenna gain: 4.570881896 (numeric)
Prediction distance: 30 (cm)
Prediction frequency: 5150 (MHz)
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: **0.017240** (mW/cm²)

*Note: Transmitter n°2 includes 3 antennas for 5150-5450 MHz band
Equivalent maximum gain for these 3 combined antenna has been measured and found equal to 6.6dBi
22.8 dBm is the maximum power delivered to the 3 combined antennas*

Transmitter n°3 (5500-5850 MHz)

Maximum peak output power at the antenna terminal: 26.50 (dBm)
Maximum peak output power at the antenna terminal: 446.6835922 (mW)
Antenna gain(typical): 7.5 (dBi)
Maximum antenna gain: 5.623413252 (numeric)
Prediction distance: 30 (cm)
Prediction frequency: 5500 (MHz)
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: **0.222100** (mW/cm²)

*Note: Transmitter n°3 includes 3 antennas for 5500-5850 MHz band
Equivalent maximum gain for these 3 combined antenna has been measured and found equal to 7.5dBi
26.49 dBm is the maximum power delivered to the 3 combined antennas*

Transmitter n°1 + Transmitter n°2 + Transmitter n°3 :

[Pd(1)/LPd(1)] + [Pd(2)/LPd(2)] + [Pd(3)/LPd(3)] = **0.50209**
<1