

Product name: DCIWA384 UHD Alt US
 Manufacturer: SAGEMCOM BROADBAND SAS
 FCC Id: **VW3DCIWA384**

Prediction of MPE limit at a given distance

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

$$S = \frac{PG}{4\pi R^2} \quad (\text{formula 1}) \qquad PG = \frac{(Ed)^2}{30} \quad (\text{formula 2})$$

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

 PG = Effective Isotropic Radiated Power (EIRP)
 E = Electric field measured at distance R distance
 d = measurement distance

Transmitter n°1 (Wi-Fi: 2400-2483,5 MHz)

Maximum peak output power at the antenna terminal: 29.93 (dBm)
 Maximum peak output power at the antenna terminal: 984,0111058 (mW)
 Antenna gain(typical): 5 (dBi)
 Maximum antenna gain: 3,16227766 (numeric)
 Prediction distance: 30 (cm)
 Prediction frequency: 2412 (MHz)
 MPE limit for uncontrolled exposure at prediction frequency (limit table FCC §1.1310): 1 (mW/cm²)

Power density at prediction frequency: 0,275136 (mW/cm²) (formula 1)

Transmitter n°2 (Wi-Fi: 5150-5850 MHz)

Maximum peak output power at the antenna terminal: 27.30 (dBm)
 Maximum peak output power at the antenna terminal: 537,0317964 (mW)
 Antenna gain(typical): 8.65 (dBi)
 Maximum antenna gain: 7,328245331 (numeric)
 Prediction distance: 30 (cm)
 Prediction frequency: 5150 (MHz)
 MPE limit for uncontrolled exposure at prediction frequency (limit table FCC §1.1310): 1 (mW/cm²)

Power density at prediction frequency: 0,347975 (mW/cm²) (formula 1)

Transmitter n°3 (Bluetooth EDR: 2400-2483,5 MHz)

Maximum peak output power at the antenna terminal: 10.77 (dBm)
 Maximum peak output power at the antenna terminal: 11,93988104 (mW)
 Antenna gain(typical): 3.1 (dBi)
 Maximum antenna gain: 2,041737945 (numeric)
 Prediction distance: 30 (cm)
 Prediction frequency: 2402 (MHz)
 MPE limit for uncontrolled exposure at prediction frequency (limit table FCC §1.1310): 1 (mW/cm²)

Power density at prediction frequency: 0,002155 (mW/cm²) (formula 1)

Transmitter n°4 (Bluetooth LE: 2400-2483,5 MHz)

Maximum peak output power at the antenna terminal: 9.49 (dBm)
 Maximum peak output power at the antenna terminal: 8,892011179 (mW)
 Antenna gain(typical): 3.1 (dBi)
 Maximum antenna gain: 2,041737945 (numeric)
 Prediction distance: 30 (cm)
 Prediction frequency: 2402 (MHz)
 MPE limit for uncontrolled exposure at prediction frequency (limit table FCC §1.1310): 1 (mW/cm²)

Power density at prediction frequency: 0,001605 (mW/cm²) (formula 1)

Transmitter n°1 + Transmitter n°2 + Transmitter n°3 + Transmitter n°4 + Transmitter n°5 :

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| $[Pd(1)/LPd(1)] + [Pd(2)/LPd(2)] + [Pd(3)/LPd(3)] + [Pd(4)/LPd(4)] = 0,63 < 1$ |
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