

Product name: Smart Sleep Dock
Manufacturer: WITHINGS
FCC Id: XNAWSD01

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 : wifi

Maximum peak output power at the antenna terminal: 21.87 (dBm)
Maximum peak output power at the antenna terminal: 153.815464 (mW)
Antenna gain(typical): 3.3 (dBi)
Maximum antenna gain: 2.13796209 (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: **0.065423** (mW/cm²)

Maximum allowable antenna gain: **15.14269855** (dBi)

Transmitter n°2: BlueTooth - (commun antenna with wifi)

Maximum peak output power at the antenna terminal: 8.50 (dBm)
Maximum peak output power at the antenna terminal: 7.079457844 (mW)
Antenna gain(typical): 3.3 (dBi)
Maximum antenna gain: 2.13796209 (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: **0.003011** (mW/cm²)

Maximum allowable antenna gain: **28.51269855** (dBi)

Transmitter n°1 + Transmitter n°2:

$$[Pd(1)/LPd(1)] + [Pd(2)/LPd(2)] = 0.06843 < 1$$