

Product name: PLS62-W
Manufacturer: TRIMBLE EUROPE BV
FCC Id: NZI-120271

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°1a (UMTS Band 2)

FCC ID: NZI-120271 Maximum peak output power at the antenna terminal: 25,00 (dBm)
Maximum peak output power at the antenna terminal: 316,227766 (mW)
Antenna gain(typical): 2,15 (dBi)
Maximum antenna gain: 1,640589773 (numeric)
Prediction distance: 20 (cm)
Prediction frequency: 1850 (MHz)
MPE limit for uncontrolled exposure at prediction frequency (limit table FCC §1.1310): 1 (mW/cm²)

Power density at prediction frequency: 0,103212 (mW/cm²) (formula 1)

Transmitter n°1b (UMTS Band 4)

FCC ID: NZI-120271 Maximum peak output power at the antenna terminal: 25,00 (dBm)
Maximum peak output power at the antenna terminal: 316,227766 (mW)
Antenna gain(typical): 2,15 (dBi)
Maximum antenna gain: 1,640589773 (numeric)
Prediction distance: 20 (cm)
Prediction frequency: 1710 (MHz)
MPE limit for uncontrolled exposure at prediction frequency (limit table FCC §1.1310): 1 (mW/cm²)

Power density at prediction frequency: 0,103212 (mW/cm²) (formula 1)

Transmitter n°1c (UMTS Band5)

FCC ID: NZI-120271 Maximum peak output power at the antenna terminal: 25,00 (dBm)
Maximum peak output power at the antenna terminal: 316,227766 (mW)
Antenna gain(typical): 5,15 (dBi)
Maximum antenna gain: 3,273406949 (numeric)
Prediction distance: 20 (cm)
Prediction frequency: 824 (MHz)
MPE limit for uncontrolled exposure at prediction frequency (limit table FCC §1.1310): 0,549333333 (mW/cm²)

Power density at prediction frequency: 0,205935 (mW/cm²) (formula 1)

Transmitter n°2 (Bluetooth: 2402-2480 MHz)

FCC ID: Z64-WL18DBMOD Maximum peak output power at the antenna terminal: 12,20 (dBm)
Maximum peak output power at the antenna terminal: 16,59586907 (mW)
Antenna gain(typical): 3,2 (dBi)
Maximum antenna gain: 2,089296131 (numeric)
Prediction distance: 20 (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: 0,006898 (mW/cm²) (formula 1)

Transmitter N°1a + Transmitter N°2 :	[Pd(1a)/LPd(1a)] + [Pd(2)/LPd(2)] = 0,11	<1
Transmitter N°1b + Transmitter N°2 :	[Pd(1b)/LPd(1b)] + [Pd(2)/LPd(2)] = 0,11	<1
Transmitter N°1c + Transmitter N°2 :	[Pd(1c)/LPd(1c)] + [Pd(2)/LPd(2)] = 0,38	<1