

MPE Calculation page

Garmin

Model: A1AVGB01

Test Number: 110621B

MPE Calculator

MPE uses EIRP for calculation. EIRP is based on TX power added to the antenna gain in dBi.

dBi = dB gain compared to an isotropic radiator.

S = power density in mW/cm^2

Antenna Gain (dBi)

1

Output Power

dBd + 2.17 = dBi

dBi to dBd

2.2

Tx Frequency (MHz)

2441

Maximum (Watts)

0.002000

Antenna Gain (dBd)

-1.17

Cable Loss (dB)

0.0

(dBm)

3.01

Antenna minus cable (dBi)

1.00

Calculated ERP (mw)

1.528

EIRP = Po(dBm) + Gain (dB)

Calculated EIRP (mw)

2.518

Radiated (EIRP) dBm

4.010

ERP = EIRP - 2.17 dB

Occupational Limit

Power density (S)

EIRP

= mW/cm^2

4 p r^2

r (cm) EIRP (mW)

Radiated (ERP) dBm

1.840

5.00000 mW/cm^2

50.00000 W/m^2

General Public Limit

1.00000 mW/cm^2

10.00000 W/m^2

FCC radio frequency radiation exposure limits per 1.1310

Frequency (MHz)

Occupational Limit

Public Limit

300-1,500

f/300

f/1500

1,500-10,000

5

1

FCC radio frequency radiation exposure limits per 1.1310

Frequency (MHz)

Occupational Limit @ Tx Freq

Public Limit @ Tx Freq (mW/cm^2)

300-1,500 (mW/cm2)

8.136666667

1.627333333

300-1,500 (W/m2)

81.36666667

16.27333333

1,500-10,000 (mW/cm2)

5

1

1,500-10,000 (W/m2)

50

10

EIRP

S

S

Distance

Distance

Distance

Distance

milliwatts

mW/cm^2

W/m^2

cm

meter

inches

Feet

2.518

0.00200

0.02004

10.00

0.10

3.94

0.01

2.518

0.00247

0.02474

9.00

0.09

3.54

0.01

2.518

0.00313

0.03131

8.00

0.08

3.15

0.01

2.518

0.00409

0.04089

7.00

0.07

2.76

0.01

2.518

0.00557

0.05566

6.00

0.06

2.36

0.01

2.518

0.00801

0.08015

5.00

0.05

1.97

0.00

2.518

0.01252

0.12523

4.00

0.04

1.57

0.00

2.518

0.02226

0.22263

3.00

0.03

1.18

0.00

2.518

0.05009

0.50091

2.00

0.02

0.79

0.00

2.518

0.20036

2.00364

1.00

0.01

0.39

0.00

2.518

0.24736

2.47363

0.90

0.009

0.35

0.001

2.518

0.31307

3.13069

0.80

0.008

0.31

0.001

2.518

0.40891

4.08907

0.70

0.007

0.28

0.001

2.518

0.55657

5.56567

0.60

0.006

0.24

0.001

2.518

0.80146

8.01457

0.50

0.005

0.20

0.000

2.518

1.25228

12.52276

0.40

0.004

0.16

0.000

2.518

2.22627

22.26269

0.30

0.003

0.12

0.000

Occupational Limit minimum Distance (meters)

Occupational Limit minimum Distance (cm / inches)

Public Limit minimum distance (meters)

Public Limit minimum distance (cm / inches)

Frequency (MHz)

300-1,500

N/A

N/A

N/A

N/A

1,500-10,000

N/A

N/A

N/A

N/A