

Ipot cradle RF exposure calculation

Frequency	Maximum Conducted Power (dBm)	Maximum Conducted Power (mW)	Max ant. Gain(dBi)
5736 MHz	4.32	2.70	3.72
5762 MHz	5.56	3.60	3.72
5814 MHz	7.17	<u>5.21</u>	3.72

According to 447498 D01 Section 4) c) iii)

For Hand SAR:

$$1000 \times (5.732 \text{ GHz})^{-0.5} = 417.68 \text{ mW}$$

For Body SAR:

$$300 \times (5.732 \text{ GHz})^{-0.5} = 125.30 \text{ mW}$$

The maximum output power 5.21 mW for this device is below the powers listed above.

MPE Calculation:

$$\begin{aligned} S &= PG/4\pi R^2 = 0.0024 \text{ mW/cm}^2 \quad (\text{Limit: } 1 \text{ mW/cm}^2) \\ \text{Maximum distance} &= 0.99 \text{ cm} \quad (\text{Limit: } 20 \text{ cm}) \end{aligned}$$

Prediction of MPE limit at a given distance(WLAN)



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

Maximum peak output power at antenna input terminal: 7.17 (dBm)

Maximum peak output power at antenna input terminal: 5.211947111 (mW)

Antenna gain(typical): 3.72 (dBi)

Maximum antenna gain: 2.355049284 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 5762 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: **0.002442** (mW/cm²)

Maximum allowable antenna gain: 29.84269855 (dBi)

Antenna Gain Margin of Compliance: 26.12269855 (dB)

Maximum Distance: 0.99 (cm)

Test result : PASS