

RF EXPOSURE EVALUATION

Applicant : ATEN Technology, Inc., dba IOGEAR

Applicant Address : 19641 da Vinci Foothill Ranch California
92610, USA

Kind of Product : Wireless HD Kit

Equipment model name : GWAV8141K

Antenna type : Dipole antenna Gain: 0.667dBi

Frequency Range : 5150MHz ~ 5250MHz

Number of channels : 2

Channel Spacing : 40 MHz

* * MPE Calculations * *

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user. The MPE calculation for this exposure is shown below.

The peak radiated output power (EIRP) is calculated as follows:

<p>EIRP = P + G EIRP = 14.247 dBm</p>	<p>Where, P = Power input to the antenna (mW) G = Power gain of the antenna (dBi)</p>
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The numeric gain(G) of the antenna with a gain specified in dB is determined by:

$$G = \text{Log}^{-1} (\text{dB antenna gain} / 10)$$

$$G = \text{Log}^{-1} (0.667 / 10)$$

$$G = 1.17$$

Power density at the specific separation:

<p>$S = PG / (4R^2 \pi)$ $S = (22.80 * 1.17 / (4 * 20^2 * \pi))$ $S = 0.0053 \text{ mW/cm}^2$</p>	<p>Where, S = Maximum power density (mW/cm²) P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20cm = limit for MPE)</p>
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The Maximum permissible exposure (MPE) for the general population is 1 mW/cm². The power density at 20cm does not exceed the 1 mW/cm² limit.

Estimated safe separation:

<p>$R = \sqrt{(PG / 4 \pi)}$ $R = \sqrt{(22.80 * 1.17 / 4 \pi)}$ $R = 1.45 \text{ cm}$</p>	<p>Where, P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20cm = limit for MPE)</p>
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