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## FCC 1.1310(b), Maximum Permissible Exposure Calculations RSS133 Sun clause 8 Exposure of Humans to RF Field

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Model Number: GRT10  
FCC Identification: NA

Fundamental Operating Frequency: 2403-2412MHz  
Maximum Rated Output Power: 0.001000W  
Measured Output Power: 0.000421W

MPE Limit in accordance with 1.1310(b): Limits for general population/uncontrolled exposure

$$\text{MPE Limit for 2403-2412 MHz} = 1 \text{ mW/cm}^2 \text{ (10 W/m}^2\text{)}$$

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Power Output (Watts)	Power Density Limit (mW/cm <sup>2</sup> )	Minimum Distance (Meters)
0.000421W	<b>1</b>	<b>0.00183</b>

$$\text{Power Density (W/m}^2\text{)} = \frac{30 \times P_t \times G}{d^2 \times Z_0}$$

$P_t$  = Power Delivered to the Antenna  
 $d$  = Distance in meters

$G$  = Antenna Gain  
 $Z_0$  = Impedance of Free Space

Under normal operation, the user's body is at least 4 cm away from the transmitting antenna. As can be seen from the MPE result, this device passes the limit specified in 1.1310 at a distance of 0.00183 meter.

Calculation:

$$d = \sqrt{\frac{30 \times 0.000421 \times 1}{10 \times 377}}$$

$$= 0.00183 \text{ m}$$