

**POWER DENSITY ESTIMATIONS BASED ON POWER OUTPUT, ANTENNA GAIN, AND DISTANCE FROM ANTENNA**

$$( P G ) / ( 4 R ^ 2 \pi ) = S$$

<b>where:</b>	<b>S =</b> maximum power density (mW/cm <sup>2</sup> )	<b>transmitter operating variables:</b>	↓ must be blank if dB values are entered ↓
<b>P =</b>	power input to the antenna ----->>	=	<b>17.45</b> (dBm) - or - (mW)
<b>G =</b>	gain of the antenna - worst case ----->>	=	<b>2</b> (dBi) - or - (numeric gain)
<b>R =</b>	distance to the center of the radiation of the antenna -->>	=	<b>20</b> (cm)

( P G ) / ( 4 * R ^ 2 * π )	=	S	(mW/cm <sup>2</sup> )
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( <b>55.59042573</b> <b>1.58489</b> ) / ( 4 * <b>20</b> <sup>2</sup> * π )	=	S	(mW/cm <sup>2</sup> )
( (mw) (gain) ) / ( 4 * (cm) <sup>2</sup> * π )			

( <b>88.1048873</b> ) / ( 4 * <b>400</b> * π )	=	S	(mW/cm <sup>2</sup> )
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( <b>88.1048873</b> ) / ( <b>5026.548246</b> )	=	<b>0.017528</b>	(mW/cm <sup>2</sup> )
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