

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

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

where: $S =$ maximum power density (mW/cm ²)		transmitter operating variables:		must be blank if dB values are entered	
$P =$	power input to the antenna ----->>	=	20.08	(dBm) - or -	(mW)
$G =$	gain of the antenna - worst case ----->>	=	2.5	(dBi) - or -	(numeric gain)
$R =$	distance to the center of the radiation of the antenna -->>	=	20		(cm)

$$(P G) / (4 * R^2 * \pi) = S \quad (mW/cm^2)$$

$$\left(\frac{101.8591388}{(mw)} \frac{1.77828}{(gain)} \right) / \left(4 * \frac{20}{(cm)}^2 * \pi \right) = S \quad (mW/cm^2)$$

$$(181.134093) / (4 * 400 * \pi) = S \quad (mW/cm^2)$$

$$(181.134093) / (5026.548246) = 0.036035 \quad (mW/cm^2)$$