

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:	<small>must be blank if dB values are entered</small>	
	P =	power input to the antenna ----->>	=	27.2 (dBm) - or -	(mW)
	G =	gain of the antenna - worst case ----->>	=	9.01 (dBi) - or -	(numeric gain)
	R =	distance to the center of the radiation of the antenna -->>	=	20	(cm)

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

$$\left(\frac{524.8074602}{(mw)} \quad \frac{7.96159}{(gain)} \right) / \left(4 * \frac{20}{(cm)}^2 * \pi \right) = S \quad (mW/cm^2)$$

$$(4178.303666) / (4 * 400 * \pi) = S \quad (mW/cm^2)$$

$$(4178.303666) / (5026.548246) = 0.831247 \quad (mW/cm^2)$$