

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

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

where: S = maximum power density (mW/cm²)		transmitter operating variables:		must be blank if dB values are entered	
P =	power input to the antenna ----->>	=	13.2	(dBm) - or -	(mW)
G =	gain of the antenna - worst case ----->>	=	0	(dBi) - or -	(numeric gain)
R =	distance to the center of the radiation of the antenna -->>	=	20		(cm)

(P G) / (4 * R ^ 2 * π)		=	S	(mW/cm²)
(20.89296131 1.00000) / (4 * 20 ^ 2 * π)	(mW (gain) (cm)	=	S	(mW/cm²)
(20.89296131) / (4 * 400 * π)		=	S	(mW/cm²)
(20.89296131) / (5026.548246)		=	0.004157	(mW/cm²)