

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 <sup>2</sup> ) |                                                             | transmitter operating variables: |                     | must be blank if dB values are entered |                |
|--------------------------------------------------------|-------------------------------------------------------------|----------------------------------|---------------------|----------------------------------------|----------------|
| P =                                                    | power input to the antenna ----->>                          | =                                | 14.301 (dBm) - or - |                                        | (mW)           |
| G =                                                    | gain of the antenna - worst case ----->>                    | =                                | 5.46 (dBi) - or -   |                                        | (numeric gain) |
| R =                                                    | distance to the center of the radiation of the antenna -->> | =                                | 20                  |                                        | (cm)           |

|                                                       |   |          |                       |
|-------------------------------------------------------|---|----------|-----------------------|
| ( P G ) / ( 4 * R <sup>2</sup> * π )                  | = | S        | (mW/cm <sup>2</sup> ) |
| ( 26.92154624 3.51560 ) / ( 4 * 20 <sup>2</sup> * π ) | = | S        | (mW/cm <sup>2</sup> ) |
| ( 94.64550656 ) / ( 4 * 400 * π )                     | = | S        | (mW/cm <sup>2</sup> ) |
| ( 94.64550656 ) / ( 5026.548246 )                     | = | 0.018829 | (mW/cm <sup>2</sup> ) |