

**MPE Exposure Formula:**

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

where:

**S** = power density

**P** = transmitter conducted power in (mW)

**G** = antenna numeric gain

**d** = distance to radiation center (m) or  $(.02^2) = .020$  m

**2412 MHz (802.11b)**

Enter Data in Linear Units					
Gain =	2.5	Numeric	EUT ant.:	3.96	dBi
Power =	139	mW	EUT power:	21.42	dBm
Frequency =	2412	MHz	MPE limit:	1	mW/cm <sup>2</sup>
Cable Loss =	0	dB			
EIRP =	345.14	mW		345.14	mW
R (cm) =	5.2407696		S (20cm) =	0.069	

**2437 MHz (802.11b)**

Enter Data in Linear Units					
Gain =	2.5	Numeric	EUT ant.:	3.96	dBi
Power =	132	mW	EUT power:	21.2	dBm
Frequency =	2437	MHz	MPE limit:	1	mW/cm <sup>2</sup>
Cable Loss =	0	dB			
EIRP =	328.10	mW		328.10	mW
R (cm) =	5.1096961		S (20cm) =	0.065	

**2462 MHz (802.11b)**

Enter Data in Linear Units					
Gain =	2.5	Numeric	EUT ant.:	3.96	dBi
Power =	130	mW	EUT power:	21.14	dBm
Frequency =	2462	MHz	MPE limit:	1	mW/cm <sup>2</sup>
Cable Loss =	0	dB			
EIRP =	323.59	mW		323.59	mW
R (cm) =	5.0745212		S (20cm) =	0.064	

Power output was measured using broadcom's power meter with gated function built in. The power was also verified on the ESI receiver which also has a gate function to measure it in power averaging mode for 100 sweeps. Both measurements correlate within .2 dB of each other.

### 2412 MHz (802.11g)

Enter Data in Linear Units					
Gain =	2.5	Numeric	EUT ant.:	3.96	dBi
Power =	331	mW	EUT power:	25.2	dBm
Frequency =	2412	MHz	MPE limit:	1	mW/cm <sup>2</sup>
Cable Loss =	0	dB			
EIRP =	824.14	mW		824.14	mW
R (cm) =	8.0983225		S (20cm) =	0.164	

### 2437 MHz (802.11g)

Enter Data in Linear Units					
Gain =	2.5	Numeric	EUT ant.:	3.96	dBi
Power =	414	mW	EUT power:	26.17	dBm
Frequency =	2437	MHz	MPE limit:	1	mW/cm <sup>2</sup>
Cable Loss =	0	dB			
EIRP =	1030.39	mW		1030.39	mW
R (cm) =	9.0551379		S (20cm) =	0.205	

### 2462 MHz (802.11g)

Enter Data in Linear Units					
Gain =	2.5	Numeric	EUT ant.:	3.96	dBi
Power =	275	mW	EUT power:	24.4	dBm
Frequency =	2462	MHz	MPE limit:	1	mW/cm <sup>2</sup>
Cable Loss =	0	dB			
EIRP =	685.49	mW		685.49	mW
R (cm) =	7.3857579		S (20cm) =	0.136	

Power output was measured using broadcom's power meter with gated function built in. The power was also verified on the ESI receiver which also has a gate function to measure it in power averaging mode for 100 sweeps. Both measurements correlate within .2 dB of each other.