



PEP Certification Corp.

Maximum Permissible Exposure (MPE)

The modular use shall be at least 20cm distance away from human body.

MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \cdot P \cdot G}}{d}$$

$$\text{Power Density} = Pd(\text{mW/cm}^2) = \frac{E^2}{3770}$$

Combine these two formulas can be changed to

$$Pd = \frac{30 \times P \times G}{3770 \times d^2}$$

Note:

1. "E" means Electric field (V/m)
2. "P" means Peak RF output power (W)
3. "G" means EUT Antenna numeric gain (numeric)
4. "d" means the minimum mobile separation distance is 0.2m between radiator and human body.



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Antenna Gain (Dipole Antenna)

Antenna R Gain: The maximum Gain is 2.43 dBi.

Antenna L Gain: The maximum Gain is 2.43 dBi.

ANT	Modulation Type	Channel	Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)	Limit of Power Density (mW/cm ²)
R	802.11b	01	2412	23.58	0.1102	< 1
		06	2437	23.60	0.1107	
		11	2462	23.68	0.1128	
	802.11g	01	2412	22.91	0.0945	
		06	2437	22.65	0.0890	
		11	2462	22.86	0.0934	
L	802.11b	01	2412	23.68	0.1128	< 1
		06	2437	23.82	0.1165	
		11	2462	24.08	0.1237	
	802.11g	01	2412	23.20	0.1010	
		06	2437	23.11	0.0989	
		11	2462	23.23	0.1017	
R+L	802.11n HT20	01	2412	24.46	0.1350	< 1
		06	2437	24.61	0.1397	
		11	2462	24.15	0.1257	
	802.11n HT40	03	2422	24.20	0.1272	
		06	2437	24.23	0.1280	
		09	2452	24.19	0.1269	



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Antenna Gain (PCB Antenna)

Antenna R Gain: The maximum Gain is 2 dBi.

Antenna L Gain: The maximum Gain is 2 dBi.

ANT	Modulation Type	Channel	Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)	Limit of Power Density (mW/cm ²)
R	802.11b	01	2412	23.58	0.0907	<1
		06	2437	23.60	0.0911	
		11	2462	23.68	0.0928	
	802.11g	01	2412	22.91	0.0778	
		06	2437	22.65	0.0732	
		11	2462	22.86	0.0769	
L	802.11b	01	2412	23.68	0.0928	<1
		06	2437	23.82	0.0959	
		11	2462	24.08	0.1018	
	802.11g	01	2412	23.20	0.0831	
		06	2437	23.11	0.0814	
		11	2462	23.23	0.0837	
R+L	802.11n HT20	01	2412	24.46	0.1111	<1
		06	2437	24.61	0.1150	
		11	2462	24.15	0.1035	
	802.11n HT40	03	2422	24.20	0.1047	
		06	2437	24.23	0.1054	
		09	2452	24.19	0.1044	