FCC ID: O5301601RX24G

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm^2)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

11.1 Friis transmission formula: Pd= (Pout*G)\ ($4*pi*R^2$)

Where
Pd= Power density in mW/cm^2
Pout=output power to antenna in mW
G= Numeric gain of the antenna relative to isotropic antenna
Pi=3.1416
R= distance between observation point and center of the radiator in cm
Pd the limit of MPE,$1mW/cm^2$. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.
mW = 10^(dBm/10)

11.2 Measurement Result
Operation Frequency: 2412MHz~2462MHz
Power density limited: $1mW/ cm^{2;}$
Antenna gain: PCB Antenna 2dBi ;

802.11b:

Channel Frequency (MHz)	Output power (mW)	Output power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Power density at 20cm(mW/cm2)	Power density Limits (mW/cm2)
2412	108.893	20.37	21±1	22	1.58	0.04997	1
2437	114.551	20.59	21±1	22	1.58	0.04997	1
2462	141.906	21.52	21±1	22	1.58	0.04997	1

802.11g:

Channel Frequency (MHz)	Output power (mW)	Output power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Power density at 20cm(mW/cm2)	Power density Limits (mW/cm2)
2412	371.535	25.7	26±1	27	1.58	0.15803	1
2437	393.550	25.95	26±1	27	1.58	0.15803	1
2462	477.529	26.79	26±1	27	1.58	0.15803	1

802.11n HT20:

Channel Frequency (MHz)	Output power (mW)	Output power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Power density at 20cm(mW/cm2)	Power density Limits (mW/cm2)
2412	372.392	25.71	26±1	27	1.58	0.15803	1
2437	381.066	25.81	26±1	27	1.58	0.15803	1
2462	453.942	26.57	26±1	27	1.58	0.15803	1

802.11n HT40:

Channel Frequency (MHz)	Output power (mW)	Output power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Power density at 20cm(mW/cm2)	Power density Limits (mW/cm2)
2422	158.125	21.99	22±1	23	1.58	0.06291	1
2437	169.044	22.28	22±1	23	1.58	0.06291	1
2452	190.546	22.8	22±1	23	1.58	0.06291	1