

# FCC ID : 2AN5LNKG-100R

## 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 <sup>2</sup> )	Average Time
<b>(A) Limits for Occupational/Control Exposures</b>				
<b>300-1500</b>	--	--	<b>F/300</b>	<b>6</b>
<b>1500-100000</b>	--	--	<b>5</b>	<b>6</b>
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
<b>300-1500</b>	--	--	<b>F/1500</b>	<b>6</b>
<b>1500-100000</b>	--	--	<b>1</b>	<b>30</b>

### 11.1 Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

$P_d$ = Power density in mW/cm<sup>2</sup>

$P_{out}$ =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 20cm

$P_d$  the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

### 11.2 Measurement Result

Channel Freq. (MHz)	modulation	conducted power (mW)	EIRP (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm <sup>2</sup> )	Power density Limits (mW/cm <sup>2</sup> )
2.412	11b	49.09	16.91	16dBm to 18dBm	18	1.4	0.01757	1
2.437	11b	48.42	16.85	16dBm to 18dBm	18	1.4	0.01757	1
2.462	11b	62.66	17.97	16dBm to 18dBm	18	1.4	0.01757	1
2.412	11g	116.68	20.67	20.5dBm to 22.5dBm	22.5	1.4	0.04953	1
2.437	11g	146.89	21.67	20.5dBm to 22.5dBm	22.5	1.4	0.04953	1
2.462	11g	161.06	<b>22.07</b>	20.5dBm to 22.5dBm	22.5	1.4	0.04953	1
2.412	11n HT20	110.15	20.42	20dBm to 22dBm	22	1.4	0.04414	1
2.437	11n HT20	141.25	21.50	20dBm to 22dBm	22	1.4	0.04414	1
2.462	11n HT20	155.60	21.92	20dBm to 22dBm	22	1.4	0.04414	1