

# FCC ID : 2AJ9T-ATLAS

## 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>				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

### 11.1 Friis transmission formula: $P_d = \frac{P_{out} \cdot G}{4 \cdot \pi \cdot R^2}$

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 antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

## 11.2 Measurement Result

Wifi 0.89dBi

Mode	Channel Freq. (MHz)	Measured 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> )
802.11b	2412	17.44	19	1.23	0.01940	1
802.11b	2437	17.51	19	1.23	0.01940	1
802.11b	2462	17.74	19	1.23	0.01940	1
802.11g	2412	15.04	16	1.23	0.00972	1
802.11g	2437	15.00	16	1.23	0.00972	1
802.11g	2462	15.52	16	1.23	0.00972	1
802.11n _HT20	2412	15.02	16	1.23	0.00972	1
802.11n _HT20	2437	15.04	16	1.23	0.00972	1
802.11n _HT20	2462	15.25	16	1.23	0.00972	1
802.11n _HT40	2422	14.23	15	1.23	0.00772	1
802.11n _HT40	2437	14.16	15	1.23	0.00772	1
802.11n _HT40	2452	14.02	15	1.23	0.00772	1