

## RF Exposure Evaluation

### LIMIT

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> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300	61.4	0.163	1.0	6
300–1500	-	-	f/300	6
1500–100,000	-	-	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500	-	-	f/1500	30
<b>1500–100,000</b>	-	-	<b>1.0</b>	30

Note: f = frequency in MHz

### EVALUATION METHOD

Transmission formula:  $Pd = (Pout * G) / (4 * pi * r^2)$

Where

**Pd** = power density in mW/cm<sup>2</sup>, **Pout** = output power to antenna in mW, **G** = gain of antenna in linear scale;

**Pi** = 3.1416, **R** = distance between observation point and center of the radiator in cm

### TEST RESULT

**Passed**                       **Not Applicable**

Note: only show the worse case for wifi 2.4G

Type	Maximum conducted output power(dBm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
802.11b	17.85	0.0165	1.0000	Pass
802.11g	14.64	0.0157	1.0000	Pass
802.11n(H20)	13.60	0.0062	1.0000	Pass
802.11n(H40)	12.50	0.0048	1.0000	Pass

Note:

- 1) The exposure safety distance is less than 20cm.