

## RADIO FREQUENCY EXPOSURE

### 1. Limit

According to §1.1310 and §2.1091 RF exposure is calculated.

**Table: Limits for General Population/Uncontrolled Exposure**

Frequency Range (MHz)	Power Density (S) (mW/cm <sup>2</sup> )
0.3–1.34	*(100)
1.34–30	*(180/f <sup>2</sup> )
30–300	0.2
300–1500	f/1500
1500–100,000	1.0

F = frequency in MHz

\* = Plane-wave equivalent power density

### Maximum Permissible Exposure

The MPE was calculated at 20cm to show compliance with the power density limit.

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna.

Note:

1. Manufacturer declared that the maximum antenna gain is 1.50 dBi(Max.) for 2412~2462MHz(So the G for calculate the MPE is 1.41) .
2. Manufacturer declared that the nearest distance between human and the EUT is 20cm.
3. Only record worst case data.

## 2 Test Results

### Standalone MPE

Test	Channel	ANT Power AVG (dBm)	ANT Max. Tune Up Power (dBm)	ANT Max. Tune Up Power (mW)	ANT MPE (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
802.11b	1	18.73	18.0±1.0	79.4328	0.0223	1.0
	6	18.57	18.0±1.0	79.4328	0.0223	1.0
	11	18.77	18.0±1.0	79.4328	0.0223	1.0
802.11g	1	16.25	16.0±1.0	50.1187	0.0141	1.0
	6	16.13	16.0±1.0	50.1187	0.0141	1.0
	11	16.20	16.0±1.0	50.1187	0.0141	1.0
802.11n20	1	15.87	16.0±1.0	50.1187	0.0141	1.0
	6	15.78	16.0±1.0	50.1187	0.0141	1.0
	11	15.93	16.0±1.0	50.1187	0.0141	1.0
802.11n40	3	14.23	14.0±1.0	31.6228	0.0089	1.0
	6	14.45	14.0±1.0	31.6228	0.0089	1.0
	9	14.18	14.0±1.0	31.6228	0.0089	1.0

### Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.