

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 ²)
0.3–1.34	*(100)
1.34–30	*(180/f ²)
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 5.0dBi (Max.) for 2412~2462MHz (So the G for calculate the MPE is 3.16).
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 (dBm)	ANT Max. Tune Up Power (dBm)	ANT Max. Tune Up Power (mW)	ANT MPE (mW/cm ²)	Limit (mW/cm ²)
802.11b	1	17.59	17.0±1.0	63.0957	0.0397	1.0
	6	17.99	17.0±1.0	63.0957	0.0397	1.0
	11	17.65	17.0±1.0	63.0957	0.0397	1.0
802.11g	1	15.32	15.0±1.0	39.8107	0.0250	1.0
	6	15.56	15.0±1.0	39.8107	0.0250	1.0
	11	15.62	15.0±1.0	39.8107	0.0250	1.0
802.11n20	1	14.85	14.0±1.0	31.6228	0.0199	1.0
	6	14.49	14.0±1.0	31.6228	0.0199	1.0
	11	14.22	14.0±1.0	31.6228	0.0199	1.0
802.11n40	3	13.32	13.0±1.0	25.1189	0.0158	1.0
	6	13.45	13.0±1.0	25.1189	0.0158	1.0
	9	13.62	13.0±1.0	25.1189	0.0158	1.0

Conclusion

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