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/cm2)
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 2.4G WLAN (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 Mode		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)
2.4GWLAN	802.11b	1	18.65	18.0±1.0	79.4328	0.0499	1.0
		6	18.21	18.0±1.0	79.4328	0.0499	1.0
		11	18.66	18.0±1.0	79.4328	0.0499	1.0
	802.11g	1	15.58	15.0±1.0	63.0597	0.0250	1.0
		6	15.32	15.0±1.0	63.0597	0.0250	1.0
		11	15.45	15.0±1.0	63.0597	0.0250	1.0
	802.11n20	1	14.65	14.0±1.0	63.0597	0.0199	1.0
		6	14.21	14.0±1.0	63.0597	0.0199	1.0
		11	14.55	14.0±1.0	63.0597	0.0199	1.0
	802.11n40	3	13.48	13.0±1.0	39.8107	0.0158	1.0
		6	13.95	13.0±1.0	39.8107	0.0158	1.0
		9	13.62	13.0±1.0	39.8107	0.0158	1.0

Note: The estimation distance is 20cm.

Conclusion

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