

RADIO FREQUENCY EXPOSURE

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 2.0dBi(Max.) for 2412~2462MHz when single antenna transmits.
2. Manufacturer declared that the nearest distance between human and the EUT is 20cm.
3. Only record worst case data.

Test Results

2.4G WLAN:

Test Mode	Channel	ANT Power AVG (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	17.43	17.0 ± 1.0	63.0957	0.0199	1.0
	6	17.39	17.0 ± 1.0	63.0957	0.0199	1.0
	11	17.36	17.0 ± 1.0	63.0957	0.0199	1.0
802.11g	1	15.23	15.0 ± 1.0	39.8107	0.0126	1.0
	6	15.12	15.0 ± 1.0	39.8107	0.0126	1.0
	11	15.32	15.0 ± 1.0	39.8107	0.0126	1.0
802.11n HT20	1	14.87	15.0 ± 1.0	39.8107	0.0126	1.0
	6	14.78	15.0 ± 1.0	39.8107	0.0126	1.0
	11	14.93	15.0 ± 1.0	39.8107	0.0126	1.0
802.11n HT40	3	12.23	12.0 ± 1.0	19.9526	0.0063	1.0
	6	12.45	12.0 ± 1.0	19.9526	0.0063	1.0
	9	12.18	12.0 ± 1.0	19.9526	0.0063	1.0

Conclusion

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