



Excellence in Compliance Testing

Certification Exhibit

**FCC ID: UIDTG862
IC: 6670A-TG862**

**FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-210**

ACS Project Number: 11-0038

**Manufacturer: ARRIS International, Inc.
Model: TG862G, TG862G/CT**

RF Exposure

1. Maximum Permissible Exposure

1.1. Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	-----	-----	F/1500	30
1500-100,000	-----	-----	1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

1.2. MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{Pd}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{P}{4\pi d^2 G}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body

(m) The formula can be changed to

$$Pd = \frac{P}{4\pi d^2 G}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

1.3. Calculated Result and Limit – 802.11b/g

Antenna Type : PCB Antenna

Max Conducted Power for IEEE 802.11b/g: 25.12dBm

Test Mode	Min. User Distance (cm)	Gain (dBi)	Numeric Gain	Conducted Power (dBm)	Conducted Power (mW)	Power Density (mW/cm ²)
2.4G	20	2.98	1.986095	25.12	325.0873	0.1285

1.4. Calculated Result and Limit – 802.11n

Antenna Type : PCB Antenna

Max Conducted Power for IEEE 802.11n: 26.46dBm

Test Mode	Min. User Distance (cm)	Gain (dBi)	Numeric Gain	Conducted Power (dBm)	Conducted Power (mW)	Power Density (mW/cm ²)
2.4G	20	5.99	3.971915	26.46	442.5884	0.3499