



**1. RF EXPOSURE TEST**

**1.1 Applied procedures / limit**

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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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

**1.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 17, 2012
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 17, 2012

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.



### 1.1.2 MPE CALCULATION METHOD

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

**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

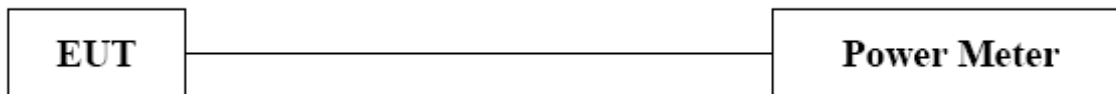
$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

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

### 1.1.3 DEVIATION FROM STANDARD

No deviation.

### 1.1.4 TEST SETUP



### 1.1.5 EUT OPERATION CONDITIONS

The EUT exercise program used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use.

The EUT has been programmed to continuously transmit during test.



**1.1.6 TEST RESULTS**

EUT :	Panel PC	Model Name :	AID-173S
Temperature :	22°C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	802.11b		

Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )
2412	0.67	1.1668	16.6600	46.3447	0.010763	1
2437	0.67	1.1668	19.9000	42.1697	0.009794	1
2462	0.67	1.1668	19.8200	37.4111	0.008689	1

EUT :	Panel PC	Model Name :	AID-173S
Temperature :	22°C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	802.11g		

Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )
2412	0.67	1.1668	17.5800	57.2796	0.013303	1
2437	0.67	1.1668	17.3700	54.5758	0.012675	1
2462	0.67	1.1668	16.6800	46.5586	0.010813	1

EUT :	Panel PC	Model Name :	AID-173S
Temperature :	22°C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	802.11n HT20		

Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )
2412	0.67	1.1668	16.3100	42.7563	0.009930	1
2437	0.67	1.1668	16.2600	42.2669	0.009816	1
2462	0.67	1.1668	15.8000	38.0189	0.008830	1



EUT :	Panel PC	Model Name :	AID-173S
Temperature :	22°C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	8802.11n HT40		

Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )
2412	0.67	1.1668	14.2400	26.5461	0.006165	1
2437	0.67	1.1668	14.1100	25.7632	0.005983	1
2462	0.67	1.1668	13.2800	21.2814	0.004943	1