Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2. Caipin Road, Science City, GETDD, Guangzhou, Guangdong, China

Report No.: 200601191GZU-002

FCC ID: 2AGCCAEH-W4G1

RF Exposure Compliance Requirement

Model no.: AEH-W4G1

1. Standard requirement

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 level 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 0.2m 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/cm²)	Averaging Times $\lvert E \rvert^2$,$\lvert H \rvert^2$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
1500-100000	--	--	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/cm²)	Averaging Times $\lvert E \rvert^2$,$\lvert H \rvert^2$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
1500-100000	--	--	1.0	30

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

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2. MPE Calculation Method

$E (V/m) = (30*P*G)^{0.5}/d$ Power Density: $Pd(W/m^2) = E^2/377$

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

$Pd = (30*P*G)/(377*d^2)$

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.

3. Calculated Result and Limit

(1)802.11b 11Mbps data rate:

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
2412	1.259	14.10	25.70	0.0064	1	Complies
2437	1.259	14.23	26.49	0.0066	1	Complies
2462	1.259	14.19	26.24	0.0066	1	Complies

(2) 802.11g 54Mbps data rate:

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
2412	1.259	13.77	23.82	0.0060	1	Complies
2437	1.259	14.11	25.76	0.0065	1	Complies
2462	1.259	14.28	26.79	0.0067	1	Complies

(3) 802.11n HT20 72.2Mbps data rate:

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
2412	1.259	13.98	25.00	0.0063	1	Complies
2437	1.259	14.29	26.85	0.0067	1	Complies
2462	1.259	14.45	27.86	0.0070	1	Complies

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(4) 802.11n HT20 150Mbps data rate:

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
2412	1.259	13.17	20.75	0.0052	1	Complies
2437	1.259	13.31	21.43	0.0054	1	Complies
2462	1.259	13.43	22.03	0.0055	1	Complies

Test Location:

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All tests were performed at:

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China