FCC §15.247 (i), §2.1091 – RF Exposure

FCC ID:2AG5U-BIS6380E

Applied procedures / limit

According to FCC §15.247(i) and §1.1307(b)(1), 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 of the Commission's guidelines.

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

Note: f is frequency in MHz

   * = Power density limit is applicable at frequencies greater than 100 MHz

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

MPE PREDICTION

   Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: 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

TEST RESULTS

Test Channe	Frequency	Maximum Conducted Output Power（Avg）	LIMIT
	(MHz)	(dBm)	dBm
CH01	2412	15.53	30
CH06	2437	15.67	30
CH11	2462	15.53	30
TX 802.11g Mode			
CH01	2412	14.54	30
CH06	2437	14.26	30
CH11	2462	14.56	30
TX 802.11n(20) Mode			
CH01	2412	14.76	30
CH06	2437	14.53	30
CH11	2462	14.45	30

Mode	Range	Maximum peak output power (dBm)	Output power (mW)	Antenna Gain (numeric)	Power Density (S) (mW/ cm^2)	Limit of Power Density (S) (mW/ cm^2)	Result
802.11b	14~16	16	39.81	1.5(1.41)	0.0112	1	Pass
802.11g	13~15	15	31.62	1.5(1.41)	0.0089	1	Pass
802.11n-HT20	13~15	15	31.62	1.5(1.41)	0.0089	1	Pass