RF EXPOSURE EVALUATION (FCC ID: MG3-7010)

Limit

According to §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.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (Minute)
Limits for Occupational / Controlled Exposure				
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

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (Minute)
Limits for General population / Uncontrolled Exposure				
0.3 – 3.0	614	1.63	(100)*	30
3.0 – 30	842/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

F = Frequency in MHz

* = Plane-wave equivalent power density

Test Data

Predication of MPE limit at a given distance 20cm

Equation from page 18 of 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

EUT OPERATION CONDITION

Make the EUT to transmit at lowest, middle and highest channel individually.

Only recorded 802.11B results (worst case)

TEST RESULTS

Antenna Gain=4dBi(Numeric 2.5), Π=3.1416

Channel	Frequency	Output Power(Ant 1+Ant2)	Output Power	Power Density	Power Density Limit	Result
	MHz	dBm	mW	mW/cm2	mW/cm2	Pass/Fail
Low	2412	15.32	34.04	0.017	0.2	Pass
Middle	2437	15.11	32.43	0.016	0.2	Pass
High	2462	14.75	29.85	0.015	0.2	Pass