

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

# FCC ID: 2AMMG-FKV02

## 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/ cm²)	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

Note: f is frequency in 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/ cm²)	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

<sup>\* =</sup> Power density limit is applicable at frequencies greater than 100 MHz

<sup>\* =</sup> 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, R=0.2m

#### **TEST RESULTS**

	Tune up Produce power	Maximu m peak output power (dBm)	Output power to antenn a (mW)	Antenna Gain (numeric)	Power Density (S) (mW/ cm2)	Limit (mW / cm2	Result
802.11b (2.4G Hz WIFI)	9±1	10	10	1.995 (3dBi)	0.00397	1	Pass
Zigbee	5±1	6	3.98	1.995 (3dBi)	0.00158	1	Pass