

RF Exposure

FCC ID: 2A2LLFJC01GD

Applicant: FJ Dynamics Co.,Ltd.

Exposure category: General population/uncontrolled environment

EUT Type: Production Unit

Device Type: AI Safety System

Refer Standard: FCC Part 2.1091: Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)

FCC MPE Limited:

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Test Data

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Antenna Gain information

2.4G WLAN: 1.5dBi

Worst-Case mode Conducted Output Power Results for 2.4G WIFI

802.11b mode

Channel	Frequency (MHz)	Output Power(dBm)	Tune Up tolerance(dBm)
1	2412	16.73	17±1
6	2437	17.09	17±1
11	2462	17.38	17±1

Calculation results (for 2.4G WIFI): Worst-case mode

Frequency (MHz)	Maximum tune up power(dBm)	RF distance(cm)	Result (mW/cm ²)	Limit (mW/cm ²)
2412	18	20	0.024	1.0
2437	18	20	0.024	
2462	18	20	0.024	

Antenna	Mode/Channel	Calculation results(mW/cm ²)	Limit (mW/cm ²)	Ratio
WLAN	2.4G WIFI	0.024	1.0	0.024