

## RF EXPOSURE

### FCC ID: 2AAIN-MNSOLBLK

#### 1. Applicable Standard

According to §15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

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

#### Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

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);

#### 2.Result:

Mode	Frequency (MHz)	Antenna Gain		Conducted Power		Evaluation Distance(cm)	Power Density (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
		(dBi)	(numeric)	(dBm)	(mW)			
GFSK	2480	4.0	2.512	4.0	2.512	20	0.00126	1

NOTE: Declare Maximum Power of the device: GFSK=3dBm,  $\pi/4$ -DQPSK=-3dBm, 8DPSK=-3dBm, the power tolerance can't be more than +-1dBm, the maximum power value of the actual test is GFSK-2480MHz (3.115dBm),  $\pi/4$ -DQPSK-2480MHz (3.299dBm), 8DPSK-2480MHz (3.507dBm).

**Result: Compliance**