

# Maximum Permissible Exposure(MPE) Report

## 1. Applicable Standard

FCC Part §1.1310

## 2. Requirements

Limits For Maximum Permissible Exposure (MPE)				
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	0.0173	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

## 3. MPE Calculation

Predication of MPE limit at a given distance

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

S = 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 og the antenna in the direction of interest relative to an isotropic radiator, the power gain factor,

Is normally numeric gain

R =Distance tp the center of radiation of the antenna(In appropriate units, e.g., cm

#### 4. Test Result

Operation Bands	Frequency (MHz)	Conducted power(dBm)	Cable loss (dB)	Power to Antenna(mW)	Antenna gain	
					Isotropic	Numeric
UL698-716	707.85	19.29	5.49	23.99	9	7.94
UL776-787	782.93	17.40	5.49	15.52	9	7.94
DL728-746	739.74	6.71	2.29	2.77	7	5.01
DL746-757	748.76	8.55	2.29	4.23	7	5.01

Operation Bands	Power (mW)	Antenna gain(G)	Measure Distance(cm)	Power density (mW/cm <sup>2</sup> )	MPE limit (mW/cm <sup>2</sup> )
UL698-716	23.99	7.94	20	0.038	0.465
UL776-787	15.52	7.94	20	0.025	0.517
DL728-746	2.77	5.01	20	0.003	0.485
DL746-757	4.23	5.01	20	0.004	0.497

**Results: PASS**