

# 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)	Max. Output power(dBm)	Cable loss (dB)	Power to Antenna(mW)	Antenna gain	
					Isotropic	Numeric
UL1850-1915	1858.58	22.22	3.6	72.78	10	10.00
UL1710-1755	1715.40	23.10	3.6	89.13	10	10.00
UL824-869	837.20	22.48	2.5	99.54	8	6.31
DL1930-1995	1956.26	3.49	3.1	1.09	10	10.00
DL2110-2155	2122.06	4.37	3.2	1.31	10	10.00
DL869-894	878.95	4.73	1.9	1.92	8	6.31

Operation Bands	Power (mW)	Antenna gain(G)	Measure Distance(cm)	Power density (mW/cm <sup>2</sup> )	MPE limit (mW/cm <sup>2</sup> )
UL1850-1915	72.78	10.00	20	0.1448	1
UL1710-1755	89.13	10.00	20	0.1773	1
UL824-869	99.54	6.31	20	0.1249	0.56
DL1930-1995	1.09	10.00	20	0.0022	1
DL2110-2155	1.31	10.00	20	0.0026	1
DL869-894	1.92	6.31	20	0.0024	0.59

**Results: PASS**