

# 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
UL824-869	837.45	20.40	2.5	61.66	8	6.31
UL698-716	700.63	19.68	2.1	57.28	8	6.31
UL776-787	780.75	20.16	2.1	63.97	8	6.31
DL869-894	877.90	3.35	1.9	1.40	8	6.31
DL728-746	741.20	6.48	1.8	2.94	8	6.31
DL746-757	749.87	5.84	1.8	2.54	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> )
UL824-869	61.66	6.31	20	0.0774	0.56
UL698-716	57.28	6.31	20	0.0719	0.47
UL776-787	63.97	6.31	20	0.0803	0.52
DL869-894	1.40	6.31	20	0.0018	0.59
DL728-746	2.94	6.31	20	0.0037	0.49
DL746-757	2.54	6.31	20	0.0032	0.50

**Results: PASS**