

# 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	1887	22.08	5.18	48.98	10	10.00
UL824-869	835.2	21.19	3.4	60.12	9	7.94
UL698-716	708.1	19.14	3.0	41.11	9	7.94
UL776-787	781	18.75	3.1	36.73	9	7.94
DL1930-1995	1946	2.59	0	1.82	3	2.00
DL869-894	880	4.34	0	2.72	3	2.00
DL728-746	741.1	3.58	0	2.28	3	2.00
DL746-757	750.5	2.80	0	1.91	3	2.00

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	48.98	10.00	20	0.0974	1
UL824-869	60.12	7.94	20	0.0950	0.56
UL698-716	41.11	7.94	20	0.0649	0.47
UL776-787	36.73	7.94	20	0.0580	0.52
DL1930-1995	1.82	2.00	20	0.0007	1
DL869-894	2.72	2.00	20	0.0011	0.59
DL728-746	2.28	2.00	20	0.0009	0.49
DL746-757	1.91	2.00	20	0.0008	0.50

**Results: PASS**