

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 ²)	Averaging time (minutes)
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	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/cm²)

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
UL1850-1910	1884.04	19.54	6.25	21.33	10.5	11.22
UL824-869	835.94	20.01	5.49	28.31	9	7.94
UL776-787	783.19	20.08	5.21	30.69	9	7.94
DL1930-1990	1947.50	11.03	2.55	7.05	8.5	7.08
DL869-894	881.10	5.25	2.29	1.98	7	5.01
DL746-757	750.97	4.09	2.19	1.55	7	5.01

Operation Bands	Power (mW)	Antenna gain(G)	Measure Distance(cm)	Power density (mW/cm ²)	MPE limit (mW/cm ²)
UL1850-1910	21.33	11.22	20	0.0476	1
UL824-869	28.31	7.94	20	0.0447	0.56
UL776-787	30.69	7.94	20	0.0485	0.52
DL1930-1990	7.05	7.08	20	0.0099	1
DL869-894	1.98	5.01	20	0.0020	0.59
DL746-757	1.55	5.01	20	0.0015	0.50

Results: PASS