

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	1854	19.11	4.5	28.91	7	5.01
UL1710-1755	1731	20.95	4.3	46.24	7	5.01
UL824-869	833	18.51	3.7	30.27	8	6.31
UL698-716	708.8	18.13	3.5	29.04	8	6.31
UL776-787	779.4	19.79	3.7	40.64	8	6.31
DL1930-1990	1941	11.62	2.2	8.75	4	2.51
DL2110-2155	2113	12.47	2.3	10.40	4	2.51
DL869-894	877.4	12.30	1.5	12.02	5	3.16
DL728-746	743.5	11.43	1.3	10.30	6	3.98
DL746-757	748.5	12.25	1.3	12.45	5.5	3.55

Operation Bands	Power (mW)	Antenna gain(G)	Measure Distance(cm)	Power density (mW/cm ²)	MPE limit (mW/cm ²)
UL1850-1915	28.91	5.01	20	0.0288	1
UL1710-1755	46.24	5.01	20	0.0461	1
UL824-869	30.27	6.31	20	0.0380	0.56
UL698-716	29.04	6.31	20	0.0365	0.47
UL776-787	40.64	6.31	20	0.0510	0.52
DL1930-1995	8.75	2.51	20	0.0044	1
DL2110-2155	10.40	2.51	20	0.0052	1
DL869-894	12.02	3.16	20	0.0076	0.58
DL728-746	10.30	3.98	20	0.0082	0.50
DL746-757	12.45	3.55	20	0.0088	0.50

Results: PASS