

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
UL1850-1915	1887.02	18.85	3.6	33.50	10	10.00
UL1710-1755	1717.19	18.84	3.6	33.42	10	10.00
UL824-869	836.03	19.82	2.5	53.95	8	6.31
UL698-716	705.06	19.63	2.1	56.62	8	6.31
DL1930-1995	1944.87	2.42	3.1	0.86	10	10.00
DL2110-2155	2130.67	2.49	3.2	0.85	10	10.00
DL869-894	872.11	2.62	1.9	1.18	8	6.31
DL728-746	741.84	4.82	1.8	2.00	8	6.31

Operation Bands	Power (mW)	Antenna gain(G)	Measure Distance(cm)	Power density (mW/cm ²)	MPE limit (mW/cm ²)
UL1850-1915	33.50	10.00	20	0.0666	1
UL1710-1755	33.42	10.00	20	0.0665	1
UL824-869	53.95	6.31	20	0.0677	0.56
UL698-716	56.62	6.31	20	0.0711	0.47
DL1930-1995	0.86	10.00	20	0.0017	1
DL2110-2155	0.85	10.00	20	0.0017	1
DL869-894	1.18	6.31	20	0.0015	0.58
DL728-746	2.00	6.31	20	0.0025	0.49

Results: PASS