

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	1861.16	18.98	6.25	18.75	5	3.16
UL1710-1755	1714.95	19.89	5.89	25.12	5	3.16
UL824-869	839.3	19.55	5.49	25.47	3	2.00
UL698-716	703.328	18.9	5.21	23.39	3	2.00
UL776-787	78.62	19.2	5.21	25.06	3	2.00
DL1930-1990	1961.2	-5.36	2.55	0.16	8.5	7.08
DL2110-2155	2136.91	-5.43	2.86	0.15	8.5	7.08
DL869-894	880.7	-4.48	2.29	0.21	7	5.01
DL728-746	738.368	-4.81	2.19	0.20	7	5.01
DL746-757	749.278	-4.8	2.19	0.20	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	18.75	3.16	20	0.0118	1
UL1710-1755	25.12	3.16	20	0.0158	1
UL824-869	25.47	2.00	20	0.0101	0.56
UL698-716	23.39	2.00	20	0.0093	0.47
UL776-787	25.06	2.00	20	0.0099	0.05
DL1930-1990	0.16	7.08	20	0.0002	1
DL2110-2155	0.15	7.08	20	0.0002	1
DL869-894	0.21	5.01	20	0.0002	0.59
DL728-746	0.20	5.01	20	0.0002	0.49
DL746-757	0.20	5.01	20	0.0002	0.50

Results: PASS