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/cm^2)

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	1879.52	22.16	4.5	58.34	7	5.01
UL1710-1755	1749.60	24.29	4.3	99.77	7	5.01
UL824-869	836.10	24.36	3.7	116.41	8	6.31
UL698-716	711.18	19.36	3.5	38.55	8	6.31
UL776-787	779.87	22.01	3.7	67.76	8	6.31
DL1930-1990	1964.00	11.57	2.2	8.65	4	2.51
DL2110-2155	2122.12	11.84	2.3	8.99	4	2.51
DL869-894	877.90	11.32	1.5	9.59	5	3.16
DL728-746	731.10	10.58	1.3	8.47	6	3.98
DL746-757	748.66	10.84	1.3	8.99	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	58.34	5.01	20	0.0582	1
UL1710-1755	99.77	5.01	20	0.0995	1
UL824-869	116.41	6.31	20	0.1461	0.56
UL698-716	38.55	6.31	20	0.0484	0.47
UL776-787	67.76	6.31	20	0.0851	0.52
DL1930-1995	8.65	2.51	20	0.0043	1
DL2110-2155	8.99	2.51	20	0.0045	1
DL869-894	9.59	3.16	20	0.0060	0.59
DL728-746	8.47	3.98	20	0.0067	0.49
DL746-757	8.99	3.55	20	0.0063	0.50

Results: PASS