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
UL1850-1915	1869.00	20.67	/	116.68	8.5	7.08
UL1710-1755	1737.00	19.84	/	96.38	8.5	7.08
UL824-869	840.95	20.76	/	119.12	8.5	7.08
UL698-716	704.00	19.96	/	99.08	8.5	7.08
UL776-787	778.90	20.19	/	104.47	8.5	7.08
DL1930-1995	1958.73	15.89	7.06	7.64	7.5	5.62
DL2110-2155	2129.26	14.69	7.26	5.53	7.5	5.62
DL869-894	880.65	16.62	5.79	12.11	6	3.98
DL728-746	731.90	14.95	5.56	8.69	5	3.16
DL746-757	748.50	15.57	5.56	10.02	5	3.16

Operation Bands	Power (mW)	Antenna gain(G)	Measure Distance(cm)	Power density ($mW/cm^{2)}$	MPE limit ($mW/cm^{2)}$
UL1850-1915	116.68	7.08	20	0.1643	1
UL1710-1755	96.38	7.08	20	0.1357	1
UL824-869	119.12	7.08	20	0.1678	0.56
UL698-716	99.08	7.08	20	0.1396	0.47
UL776-787	104.47	7.08	20	0.1471	0.52
DL1930-1995	7.64	5.62	20	0.0085	1
DL2110-2155	5.53	5.62	20	0.0062	1
DL869-894	12.11	3.98	20	0.0096	0.59
DL728-746	8.69	3.16	20	0.0055	0.49
DL746-757	10.02	3.16	20	0.0063	0.50

Results: PASS