

RF Exposure Evaluation

LIMIT

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio

frequency (RF) radiation as specified in 1.1307(b)

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)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500	-	-	f/300	6
1500–100,000	-	-	5	6
(B) Limits for General Population/Uncontrolled Exposure				
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	0.073	0.2	30
300–1500	-	-	f/1500	30
1500–100,000	-	-	1.0	30

Note: f = frequency in MHz

EVALUATION METHOD

Transmission formula: $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

Pd = power density in mW/cm², **Pout** = output power to antenna in mW, **G** = gain of antenna in linear scale;

Pi = 3.1416, **R** = distance between observation point and center of the radiator in cm.

TEST RESULT

Passed **Not Applicable**

Frequency(MHz)	Maximum power (dBm)	Antenna Gain(dBi)	R(cm)	Power Density (mW/cm ²)	Limit(mW/cm ²)
824.20	30.72	2.5	31	0.174	0.549
1850.2	30.30	8.0	31	0.560	1

Frequency(MHz)	Maximum power (dBm)	Antenna Gain(dBi)	R(cm)	Power Density (mW/cm ²)	Limit(mW/cm ²)
824.20	23.52	2.5	31	0.033	0.549
1850.2	23.27	8.0	31	0.111	1

Note:

the below information is declared by the applicant,

1) WCDMA Band VIII Antenna Gain= 2.50dBi, WCDMA Band II Antenna Gain= 8.00dBi.

2) The exposure safety distance is 31cm.

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