

RF Exposure / MPE Calculation

Dear Reviewer,

As specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure(MPE), Limits for General Population/Uncontrolled Exposure:

Frequency range (MHz)	Power density (mW/cm ²)
300 – 1,500	f/1500
1,500 – 100,000	1.0

The RF Exposure level is calculated using the general equation:

$$S = P / 4\pi R^2$$

The maximum measured radiated power output is

CDMA 800MHz: 23.95 dBm (~ 0.24831 W)

CDMA1900MHz: 24.04 dBm (~ 0.25293 W)

With an antenna gain of

800MHz : 0.8 dBi

1900MHz : 3.0 dBi

R = 20 cm

π = 3.1416

Solving for S, the power density at 20 cm is

CDMA800: **0.0494** mW/cm²

CDMA1900: **0.0504** mW/cm²

The power density limit is:

For 800MHz: $f/1500 = 824.7/1500 = \mathbf{0.5498}$ mW/cm²

For 1900MHz: **1.0** mW/cm²

So, the power density limit is well kept with this antenna gain.

Please contact us if you have any additional questions.

Best Regards

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