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/cm²)
300 – 1,500	**f/1500**
1,500 – 100,000	1.0

The RF Exposure level is calculated using the general equation:

$$S = P*G/ 4\pi R_2$$

The maximum measured radiated power output is
CDMA 800MHz: 24.63 dBm (~ 0.2904 W)
CDMA1900MHz: 23.79 dBm (~ 0.2393 W)

With an antenna gain [reference antenna] of
800MHz ： 0.5 [numeric]
1900MHz ： 2.0 [numeric]

R = 20 cm
π = 3.1416

Solving for S, the power density at 20 cm is
CDMA800:   **0.0289** mW/cm$_2$
CDMA1900:   **0.0952** mW/cm$_2$

The power density limit is:
For 800MHz: f/1500 = 824.7/1500 = **0.5498 mW/cm$_2$**
For 1900MHz: **1.0 mW/cm$_2$**

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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