

## RF EXPOSURE STATEMENT

### 1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

#### (B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
0.3 -				
1.34.....	614	1.63	*(100)	30
1.34 - 30.....	824/f	2.19/f	*(180/ f <sup>2</sup> )	30
30 - 300.....	27.5	0.073	0.2	30
300 - 1500.....	.....	.....	f/1500	30
1500 -	.....	.....	1.0	30
100.000.....				

F = frequency in MHz

\* = Plane-wave equivalent power density

### 2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

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

S = Power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

**2-1 Limit (CDMA & EVDO)**

Max Peak output Power at antenna input terminal	44.10	dBm
Max Peak output Power at antenna input terminal	25703.96	mW
Prediction distance	500.00	cm
Prediction frequency	2153.75	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.410	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm <sup>2</sup>

**2-2 Limit (WCDMA)**

Max Peak output Power at antenna input terminal	44.09	dBm
Max Peak output Power at antenna input terminal	25644.84	mW
Prediction distance	500.00	cm
Prediction frequency	2152.60	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.409	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm <sup>2</sup>

**2-3 Limit (LTE 5MHz)**

Max Peak output Power at antenna input terminal	44.17	dBm
Max Peak output Power at antenna input terminal	2612.61	mW
Prediction distance	500.00	cm
Prediction frequency	2132.50	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.417	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm <sup>2</sup>

**2-4 Limit (LTE 10MHz)**

Max Peak output Power at antenna input terminal	44.04	dBm
Max Peak output Power at antenna input terminal	25351.29	mW
Prediction distance	500.00	cm
Prediction frequency	2132.50	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.404	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm <sup>2</sup>

**3. RESULTS**

The power density level at 500 cm is 0.410 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 1.0 mW/cm<sup>2</sup> at CDMA& EVDO

The power density level at 500 cm is 0.409 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 1.0 mW/cm<sup>2</sup> at WCDMA

The power density level at 500 cm is 0.417 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 1.0 mW/cm<sup>2</sup> at LTE 5MHz

The power density level at 500 cm is 0.404 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 1.0 mW/cm<sup>2</sup> at LTE 10 MHz

Note: "RF exposure will be addressed at time of installation and the use of higher gain antennas may require larger separation distances."