

## 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 - 100.000	.....	.....	1.0	30

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	44.12	dBm
Max Peak output Power at antenna input terminal	25822.602	mW
Prediction distance	500.000	cm
Prediction frequency	878.000	MHz
Antenna Gain(typical)	14.800	dBi
Antenna Gain(numeric)	30.200	-
Power density at prediction frequency( S)	0.24823	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.585	mW/cm <sup>2</sup>

**2-2 Limit (WCDMA)**

Max Peak output Power at antenna input terminal	44.04	dBm
Max Peak output Power at antenna input terminal	25351.286	mW
Prediction distance	500.000	cm
Prediction frequency	878.000	MHz
Antenna Gain(typical)	14.800	dBi
Antenna Gain(numeric)	30.200	-
Power density at prediction frequency( S)	0.24370	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.585	mW/cm <sup>2</sup>

**2-3 Limit (GSM &EDGE)**

Max Peak output Power at antenna input terminal	44.180	dBm
Max Peak output Power at antenna input terminal	26181.830	mW
Prediction distance	500.000	cm
Prediction frequency	878.000	MHz
Antenna Gain(typical)	14.800	dBi
Antenna Gain(numeric)	30.200	-
Power density at prediction frequency( S)	0.25168	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.585	mW/cm <sup>2</sup>

**2-4 Limit (LTE 5MHz)**

Max Peak output Power at antenna input terminal	44.040	dBm
Max Peak output Power at antenna input terminal	25351.286	mW
Prediction distance	500.000	cm
Prediction frequency	881.500	MHz
Antenna Gain(typical)	14.800	dBi
Antenna Gain(numeric)	30.200	-
Power density at prediction frequency( S)	0.24370	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.588	mW/cm <sup>2</sup>

**3. RESULTS**

The power density level at 500 cm is 0.24823 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.585 mW/cm<sup>2</sup> at CDMA& EVDO

The power density level at 500 cm is 0.24370 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.585 mW/cm<sup>2</sup> at WCDMA

The power density level at 500 cm is 0.25168 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.585 mW/cm<sup>2</sup> at GSM & EDGE

The power density level at 500 cm is 0.24370 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.588mW/cm<sup>2</sup> at LTE

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