

## 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	44.029	dBm
Max Peak output Power at antenna input terminal	25287.157	mW
Prediction distance	500.000	cm
Prediction frequency	869.750	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency( S)	0.40341	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.580	mW/cm <sup>2</sup>

**2-2 Limit (WCDMA)**

Max Peak output Power at antenna input terminal	44.020	dBm
Max Peak output Power at antenna input terminal	25234.982	mW
Prediction distance	500.000	cm
Prediction frequency	871.400	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency( S)	0.40258	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.581	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	44.090	dBm
Max Peak output Power at antenna input terminal	25645.018	mW
Prediction distance	500.000	cm
Prediction frequency	881.400	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency( S)	0.40912	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.588	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	43.999	dBm
Max Peak output Power at antenna input terminal	25113.023	mW
Prediction distance	500.000	cm
Prediction frequency	871.500	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency( S)	0.40064	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.581	mW/cm <sup>2</sup>

**3. RESULTS**

The power density level at 500 cm is 0.0341 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.580 mW/cm<sup>2</sup> at CDMA& EVDO

The power density level at 500 cm is 0.40258 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.581 mW/cm<sup>2</sup> at WCDMA

The power density level at 500 cm is 0.40912 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.588 mW/cm<sup>2</sup> at GSM & EDGE

The power density level at 500 cm is 0.40064 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.581 mW/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."