

## 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 (700 Band LTE 5MHz)**

Max Peak output Power at antenna input terminal	37.05	dBm
Max Peak output Power at antenna input terminal	5069.907	mW
Prediction distance	300.000	cm
Prediction frequency	760.500	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.1	-
Power density at prediction frequency( S)	0.22467	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.507	mW/cm <sup>2</sup>

**2-2 Limit (700 Band iDEN)**

Max Peak output Power at antenna input terminal	37.070	dBm
Max Peak output Power at antenna input terminal	5093.309	mW
Prediction distance	300.000	cm
Prediction frequency	758.013	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.1	-
Power density at prediction frequency( S)	0.22571	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.505	mW/cm <sup>2</sup>

**2-3 Limit (800 Band iDEN)**

Max Peak output Power at antenna input terminal	37.040	dBm
Max Peak output Power at antenna input terminal	5058.247	mW
Prediction distance	300.000	cm
Prediction frequency	851.013	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency( S)	0.22415	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.567	mW/cm <sup>2</sup>

**3. RESULTS**

The power density level at 300 cm is 0.22467mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.507 mW/cm<sup>2</sup> at 700 Band LTE 5MHz

The power density level at 300 cm is 0.22571 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.505 mW/cm<sup>2</sup> at 700 Band iDEN

The power density level at 300 cm is 0.22415 mW/cm<sup>2</sup>, which is below the uncontrolled exposure limit of 0.567 mW/cm<sup>2</sup> at 800 Band iDEN

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