

## 10 FCC §1.1307(b)(1) & §2.1091 – RF Exposure Information

### 10.1 Applicable Standard

According to FCC §1.1310 and §2.1091 (Mobile Devices) RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
<b>Limits for General Population/Uncontrolled Exposure</b>				
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

Note: f = frequency in MHz

\* = Plane-wave equivalent power density

### 10.2 MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

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

Where: 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

Lower LTE Band - Downlink

Maximum peak output power at antenna input terminal (dBm): 22.03

Maximum peak output power at antenna input terminal (mW): 159.59

Prediction distance (cm): 30

Prediction frequency (MHz): 737

Antenna Gain, typical (dBi): 15

Cable Loss (dB) 8.0

Maximum Antenna Net Gain (numeric): 5.01

Power density at predication frequency and distance (mW/cm<sup>2</sup>): 0.1592

MPE limit for uncontrolled exposure at predication frequency (mW/cm<sup>2</sup>): 0.4913

The highest power density level at 20 cm is below the MPE uncontrolled exposure limit.