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^2)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	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

850 Cell Band Downlink: 869-894 MHz

Maximum peak output power at antenna input terminal (dBm):	26.57
Maximum peak output power at antenna input terminal (mW):	453.94
Prediction distance (cm):	20
Prediction frequency (MHz):	881.5
Antenna Gain, typical (dBi):	3.0
Maximum Antenna Gain (numeric):	2.0
Power density at predication frequency and distance (mW/cm^2):	0.181
MPE limit for uncontrolled exposure at predication frequency (mW/cm^2):	0.588

1900 MHz PCS Band Downlink: 1930-1995 MHz

Maximum peak output power at antenna input terminal (dBm):	26.62
Maximum peak output power at antenna input terminal (mW):	459.20
Prediction distance (cm):	20
Prediction frequency (MHz):	1994.8
Antenna Gain, typical (dBi):	3.0
Maximum Antenna Gain (numeric):	2
Power density at predication frequency and distance (mW/cm^2):	0.183
MPE limit for uncontrolled exposure at predication frequency (mW/cm^2):	1.0

Results

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