11 FCC §1.1307(b)(1) & §2.1091 - RF EXPOSURE

11.1   Applicable Standard

According to §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

11.2   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

Maximum peak output power at antenna input terminal (dBm): 37.90
Maximum peak output power at antenna input terminal (mW): 6165.95
Prediction distance (cm): 40.0
Prediction frequency (MHz): 881.6
Antenna Gain, typical (dBi): 2.0
Maximum Antenna Gain (numeric): 1.585
Power density at predication frequency and distance (mW/cm^2): 0.486
MPE limit for uncontrolled exposure at predication frequency (mW/cm^2): 0.5877

Test Result

For Downlink, the highest power density level at 40 cm is 0.486 W/cm², which is below the uncontrolled exposure limit of 0.5877mW/cm² at 881.6 MHz.