

3.6 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 ²)	Averaging time (minutes)
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

F = frequency in MHz

* = Plane-wave equivalent power density

2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

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

Max Peak output Power at antenna input terminal	23.990	dBm
Max Peak output Power at antenna input terminal	250.611	mW
Prediction distance	40.000	cm
Prediction frequency	782.000	MHz
Antenna Gain(typical)	8.000	dBi
Antenna Gain(numeric)	6.310	-
Power density at prediction frequency(S)	0.07864	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.521	mW/cm ²

Max Peak output Power at antenna input terminal	23.530	dBm
Max Peak output Power at antenna input terminal	225.424	mW
Prediction distance	40.000	cm
Prediction frequency	698.500	MHz
Antenna Gain(typical)	8.000	dBi
Antenna Gain(numeric)	6.310	-
Power density at prediction frequency(S)	0.07074	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.466	mW/cm ²

3. RESULTS

The power density level at 40cm is 0.07864 mW/cm², which is below the uncontrolled exposure limit of 0.521 mW/cm² at 782 MHz

The power density level at 40cm is 0.07074 mW/cm², which is below the uncontrolled exposure limit of 0.466 mW/cm² at 698.5 MHz