

Calculation

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	-15.53000	dBm
Max Peak output Power at antenna input terminal	0.028	mW
Prediction distance	20.00000	cm
Prediction frequency	2405.00000	MHz
Antenna Gain(typical)	5.49000	dBi
Antenna Gain(numeric)	3.53997	–
Power density at prediction frequency (S)	0.00197	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.00000	mW/cm ²

3. RESULTS

The power density level at 20 cm is 0.00197 mW/cm², which is below the uncontrolled exposure limit of 1.0 mW/cm² at 2405 MHz