RF Exposure Evaluation

1 Applicable Standard

According to RSS-102 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Averaging Time (minutes)
0.003-1	280	2.19	-	6
1-10	280/f	2.19/f	-	6
10-30	28	2.19/f	-	6
30-300	28	0.073	2*	6
300-1500	1.585 $f^{0.5}$	0.0042 $f^{0.5}$	f/150	6
1500-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/$f^{1.2}$
150000-300000	0.158 $f^{0.5}$	4.21 x 10^{-4} $f^{0.5}$	6.67 x 10^{-5} f	616000/$f^{1.2}$

Note: f is frequency in MHz.

* Power density limit is applicable at frequencies greater than 100 MHz.

2 MPE Prediction

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

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

Maximum peak output power at antenna input terminal (dBm):	46.11
Maximum peak output power at antenna input terminal (mW):	40832
Maximum antenna gain: (dBi):	17.00
Maximum Antenna Gain (numeric):	50.12
Prediction distance (cm):	600
Prediction frequency (MHz):	2145.00
Power density at predication frequency and distance (mW/cm2):	0.45
MPE limit for uncontrolled exposure at predication frequency (mW/cm2):	1.0

Conclusion: compliant