RF Exposure Evaluation

1 Applicable Standard

According to RSS-102 RF exposure is calculated.

Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Dentisty (W/m^2)	Reference Period (minutes)
0.003-10 21	83	90	-	Instantaneous*
0.1-10	-	0.73/ f	-	6**
1.1-10	87/ f 0.5	-	-	6**
10-20	27.46	0.0728	-2	6
20-48	58.07/ f0.25	0.1540/ f0.25	8.944/ f0.5	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 f 0.3417	0.008335 f 0.3417	0.02619 f 0.6834	6
6000-15000	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/f1.2

Note: f is frequency in MHz.
* Based on nerve stimulation (NS).
** Based on specific absorption rate (SAR).

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):	37.33
Maximum peak output power at antenna input terminal (mW):	5408
Maximum antenna gain: (dBi):	17
Maximum Antenna Gain (numeric):	50.12
Prediction distance (cm):	600
Prediction frequency (MHz):	881.6
Power density at predication frequency and distance (W/m2):	0.60
MPE limit for uncontrolled exposure at predication frequency (W/m2):	2.70

Conclusion: compliant