§15.247 (b)(4) - RF EXPOSURE

According to §15.247(b)(4) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1093 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

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
1500-15000	/	/	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

MPE Prediction

Predication of MPE limit at a given distance

Equation from page 18 of 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: 19.67 (dBm)
Maximum peak output power at antenna input terminal: 92.68 (mW)
Prediction distance: 20 (cm)
Predication frequency: 5800 (MHz)
Antenna Gain (typical): 0 (dBi)
Maximum antenna gain: 1(numeric)
Power density at predication frequency at 20 cm: 0.018(mW/cm^2)
MPE limit for uncontrolled exposure at prediction frequency: 1.0 (mW/cm^2)

Test Result

The predicted power density level at 20 cm is 0.018 mW/cm^2. This is below the uncontrolled exposure limit of 1mW/cm^2 at 5800 MHz. The EUT is used at least 20cm away from user's body. It is determined as mobile equipment.