§1.1307(b)(1) & §2.1091 - 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				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1824/f	4.89/f	*($900/f^2$)	6
30-300	1.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-15000	/	/	5	6

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: 47.17 (dBm)
Maximum peak output power at antenna input terminal: 52119 (mW)
Predication frequency: 136 (MHz)
Antenna Gain (typical): 2.1 (dBi)
Maximum antenna gain: 1.62 (numeric)
MPE limit for uncontrolled exposure at prediction frequency: 1.0 (mW/cm^2)
Power density at predication distance: 82 cm

Test Result

The predicted distance at 1.0 mW/cm^2 power density level is 82 cm. The EUT is defined as mobile device.