FCC §15.247(i) & §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to FCC §15.247(i) and §2.1091 (Mobile Devices) RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

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
1500-100,000	/	/	1.0	30

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

MPE Prediction

Predication of MPE limit at a given distance, Equation from 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 (dBm):	8.49
Maximum peak output power (mW):	7.063
Prediction distance (cm):	20.0
Prediction frequency (MHz):	2443
Antenna Gain, typical (dBi):	1.0
Maximum Antenna Gain (numeric):	1.259
Power density at predication frequency and distance (mW/cm^2):	0.0014
MPE limit for uncontrolled exposure at predication frequency (mW/cm^2):	1.0

Result:

The predicted power density level at 20 cm is 0.0014 mw/cm^2 which is below the uncontrolled exposure limit of 1.0 mw/cm^2, The EUT is used at least 20 cm away from user's body. It is determined as mobile equipment and complies with the MPE limit.