MPE CALCULATON FOR FCCID: EFCHT500

The antenna gain on the HT500 was 2.3dBi and the maximum power input to the antenna was measured to be 390mW. Using the formula below, the power density at a distance of 20cm was calculated.

$$PD = (Power\ Delivered\ to\ Antenna) / 4*Pi*r^2$$

$$PD = .39mW / 4*Pi*(20cm)^2$$

$$PD = 0.07mW/cm^2$$

By comparing this computed MPE value at a distance of 20cm from the antenna ($0.07mW/cm^2$) to the limit for general population / uncontrolled exposure below ($1.0\ mW/cm^2$), it is obvious that the MPE limits are not exceeded.

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
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

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