

Maximum Permissible exposure (MPE)

Reference document:	47 CFR §15.247(i) & §1.1307(b)(1)	
Test Requirements:	According to §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 guideline.	
Limit	1mW/cm ²	Pass
Calculation Result*:	Power Density = 0.0033mW/cm ² at a sphere of 20cm. The SAR measurement is not required.	

At the frequency of 900MHz, a sphere of 20cm is in the far field of the antenna, therefore, equation (3) given in OET Bulletin 65 is used to estimate the MPE.

$$S = \frac{PG}{4\pi R^2}$$

S=power density

P=power input to the antenna, 10.52mW

G=power gain of the antenna, 1.59 (2dBi)

R= distance to the center of the antenna, 20cm

This calculation results in an estimation of 0.0033mW/cm² at a sphere of 20cm.