Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

where: S = power density
P = power input to the 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:	19.03	(dBm)
*Maximum peak output power at antenna input terminal:	80	(mW)
Antenna gain(typical):	0.5	(dBi)
Maximum antenna gain:	1.122	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	450	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.300	(mW/cm^2)
Power density at prediction frequency:	0.017857	(mW/cm^2)
Maximum allowable antenna gain:	12.753	(dBi)
Margin of Compliance:	12.253	(dB)

*Output is always limited by a restriction of supply voltage set to 8.4V giving max. Output of 80 mW. Nominal output power is < 50 mW. Calculations is made on basis of 20 cm distance.