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:	22.00	(dBm)
Maximum peak output power at antenna input terminal:	158.4893192	(mW)
Antenna gain(typical):	12	(dBi)
Maximum antenna gain:	15.84893192	(numeric)
Time Averaging:	100	(%)
Prediction distance:	20	(cm)
Prediction frequency:	1885	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)
Power density at prediction frequency:	0.499724	(mW/cm^2)
Margin of compliance:	-3.0	(dB)
This equates to	4.997239276	W/m^2