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

Note: Maximum GPRS Duty Cycle = 1/4

Maximum peak output power at antenna input terminal:	32.13	(dBm) 32.13dBm=1.633 Watts;1.633/4=408 mW
Maximum peak output power at antenna input terminal:	408.262987	(mW)
Antenna gain(typical):	3	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	824	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.549333333	(mW/cm^2)

Power density at prediction frequency:	0.162058	(mW/cm^2)
	1.620579	(W/m^2)
Maximum allowable antenna gain:	8.301657993	(dBi)

Margin of Compliance:	5.301657993 dB

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

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:	29.12	(dBm)
Maximum peak output power at antenna input terminal:	816.5823714	(mW)
Antenna gain(typical):	3	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	1900	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)

Power density at prediction frequency:	0.324138	(mW/cm^2)
	3.241381	(W/m^2)
Maximum allowable antenna gain:	7.892698554	(dBi)
Margin of Compliance:	4.892698554	dB