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:	-47.60	(dBm)
Maximum peak output power at antenna input terminal:	1.7378E-05	(mW)
Antenna gain(typical):	0	(dBi)
Maximum antenna gain:	1	(numeric)
Time Averaging:	100	(%)
Prediction distance:	20	(cm)
Prediction frequency:	13.56	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.978933354	(mW/cm^2)
Power density at prediction frequency:	0.000000	(mW/cm^2)

Margin of compliance:	-84.5	(dB)
This equates to	3.45724E-08	W/m^2 PASS
For information This equates to	0.003610237	V/m
For information percentage of limit is	0.000000353	

Note: 127 kHz is not evaluated, as the 127 KHz operates independantly of the certified modules.

Module	Band	Antenna Gain (dBi)	Antenna Gain Limit(1)	% MPE	13.56 MPE %	Total % MPE	Pass/Fail
RI7GE910	GSM850	-1.7	8.32	9.95405417	3.53164E-05	9.95408949	Pass
RI7GE910	PCS1900	-0.48	3.34	41.4954043	3.53164E-05	41.49543958	Pass
RI7CE910-DUAL	GSM850	-1.7	5.12	20.7969669	3.53164E-05	20.79700219	Pass
RI7CE910-DUAL	PCS1900	-0.48	6.12	21.8776162	3.53164E-05	21.87765156	Pass

Note (1) The antenna gain limit is based on the maximum antenna gain for MPE as stated in grant for compliance
Note (2) For the RI7CE910 -DUAL the worst case Antenna gain limit is used based on the gain of antenna used
during initial certification. This results in a more conservative calculation