MPE Calculation

Because the intended use of the test sample as a fixed device a theoretical MPE related evaluation as an example is done below, for information purposes.
FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.
The prediction for power density in the far-field of the antenna can be made by use of the general equation below.
This equation is generally accurate in the far-field but will over-predict power density in the near field, where it could be used for making a "worst case" or conservative prediction.

$$S = \frac{P\,G}{4\,\pi\,R^2}$$

S – Power Density P – Output power ERP R – Distance
D – Cable Loss AG – Antenna Gain G= AG-D

1900 MHz

Item	Unit	Value	Remarks
P	mW	184	Average value
D	dB	10	Measured value
AG	dBi	3	Peak gain
G		2	Calculated Value
R	cm	20	Assumed value
S	mW/cm^2	**0.038**	Calculated value

850MHz

Item	Unit	Value	Remarks
P	mW	576	Average value
D	dB	10	Measured value
AG	dBi	3	Peak gain
G		2	Calculated Value
R	cm	20	Assumed value
S	mW/cm^2	**0.115**	Calculated value

Limits:

Limit for General Population / Uncontrolled Exposure	
Frequency (MHz)	Power Density ($mW/cm^{2)}$
1500 – 100.000	1,0
824-890	0.549