

## 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

### STX3

Maximum peak output power at antenna input terminal:	192 mW
Single Antenna gain (typical):	3 dBi
Number of Antennae:	1
Total Antenna gain (typical):	3 dBi
	1.995262315 (numeric)
Prediction distance:	20 cm
Prediction frequency:	1611 MHz
MPE limit for uncontrolled exposure at prediction frequency:	1 mW/cm <sup>2</sup>
<b>Power density at prediction frequency:</b>	<b>0.076213 mW/cm<sup>2</sup></b>
	0.762134 W/m <sup>2</sup>
Tx On time:	100.000000 ms
Tx period time:	100.000000 ms
Average Factor:	100.000000 %
Average Power density at prediction frequency:	0.762134 W/m <sup>2</sup>
Percentage to limit:	7.621340645 %

**BMD-300 Model:2AA9B04**

Radiated field strength @ 3m:	87.80	dBuV/m
Cable and Jumper loss:	0.0	dB
EIRP:	-7.43	dBm
	0.180717413	mW
Single Antenna gain (typical):	0	dBi
Number of Antennae:	1	
Total Antenna gain (typical):	0	dBi
	1	(numeric)
Prediction distance:	20	cm
Prediction frequency:	2440	MHz
MPE limit for uncontrolled exposure at prediction frequency:	1	mW/cm <sup>2</sup>
<b>Power density at prediction frequency:</b>	<b>0.000036</b>	<b>mW/cm<sup>2</sup></b>
	0.000360	W/m <sup>2</sup>
Tx On time:	100.000000	ms
Tx period time:	100.000000	ms
Average Factor:	100.000000	%
Average Power density at prediction frequency:	0.000360	W/m <sup>2</sup>
Percentage to limit:	0.003595259	%

Total Percentage to limit:	7.624935903	%
----------------------------	-------------	---

(PSD1/Limit 1) + (PSD 2/limit 2):	0.076249359	<1
-----------------------------------	-------------	----