PREDICTION OF MPE AT A GIVEN DISTANCE

Equation from page 18 of OET Bulletin 65, Edition 97-01

$S = PG / 4\pi R^2$

where: S = Power density P = Power input to the antenna
G = Antenna gain R = Distance to the center of radiation of the antenna

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled "Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure"

Frequency Range [MHz]	Power Density [mW/cm^2]	Averaging Time [minutes]
300-1500	f/1500	30
1500-100000	1.0	30

where f = Frequency (MHz)

Based on the above table the limits are for :

Part 22 device: 0.567 mW/cm^2

Part 24 device: 1 mW/cm^2

Prediction for Part 22:

P Max measured radiated power:	137mW ERP
R Distance:	**20 cm**
Pmax1 Limit where no routine evaluation is required:	1.5 W ERP
Pmax2 power limit according to §22.913(a):	7 W
Smax MPE limit for uncontrolled exposure:	0.567 mW/cm^2
Calculated power density:	**0.027 mW/cm²**

Result: Configuration complies with rules.

Prediction for Part 24:

P Max measured radiated power:	818 mW EIRP
R Distance:	**20 cm**
Pmax1 Limit where no routine evaluation is required:	3 W EIRP
Pmax2 Peak power limit according to §24.232(b):	2 W
Smax MPE limit for uncontrolled exposure:	1 mW/cm^2
Calculated power density:	**0.163 mW/cm²**

Result: Configuration complies with rules.

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