

Evaluation of MPE limit at a given distance



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

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

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 --Conducted	25.41 dBm
	<u>0.348</u> (W)
Antenna gain(typical):	<u>2.00</u> (dBi)
Maximum antenna gain:	<u>1.58</u> (numeric)
Evaluation distance:	<u>20.00</u> (cm)
Evaluation frequency:	<u>836.52</u> (MHz)
Limit from table below:	<u>0.55768</u> (mW/cm ²)

Power density at Evaluation frequency: 0.110 (mW/cm²)

Maximum peak output power --Conducted	25.24 dBm
	<u>0.334</u> (W)
Antenna gain(typical):	<u>3.00</u> (dBi)
Maximum antenna gain:	<u>2.00</u> (numeric)
Evaluation distance:	<u>20.00</u> (cm)
Evaluation frequency:	<u>1851.25</u> (MHz)
Limit from table below:	<u>1</u> (mW/cm ²)

Power density at Evaluation frequency: 0.133 (mW/cm²)

EUT complies

FCC/LSGAC Local Official's Guide to RF

A LOCAL GOVERNMENT OFFICIAL'S GUIDE TO TRANSMITTING ANTENNA RF EMISSION SAFETY: RULES, PROCEDURES, AND PRACTICAL GUIDANCE

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

FCC regulations as long as the used antenna has a gain below 9.74 dBi.