Nemko

Choose Scandinavian trust

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

Tx Lte

Fundamental transmit (prediction) frequency:	1850	MHz
Field Strength at 3 m(measured)	125.3	dBuV/m
EIRP	30.07	dBm
Tx On time:	1.000	ms
Tx period time:	1.000	ms
Average factor:	100	%
MPE limit for uncontrolled exposure at prediction frequency:	1	mW/cm^2
	10	W/m^2
Minimum calculated prediction distance for compliance:	9	cm
Typical (declared) distance:	20	cm
Average power density at prediction frequency:	**0.202176**	**mW/cm^2**
	2.02176	W/m^2
Margin of Compliance:	**6.94270**	**dB**
Maximum allowable antenna gain:	6.94270	dBi
% to limit:	20.21762536	%

Tx WIFI

Fundamental transmit (prediction) frequency:	2462	MHz
Field Strength at 3 m(measured)	114.4	dBuV/m
EIRP	19.17	dBm
Tx On time:	1.000	ms
Tx period time:	1.000	ms
Average factor:	100	%
MPE limit for uncontrolled exposure at prediction frequency:	1	mW/cm^2
	10	W/m^2
Minimum calculated prediction distance for compliance:	3	cm
Typical (declared) distance:	20	cm
Average power density at prediction frequency:	**0.016434**	**mW/cm^2**
	0.16434	W/m^2
Margin of Compliance:	**17.84270**	**dB**
Maximum allowable antenna gain:	17.84270	dBi
% to limit:	1.643350286	%
% to limit:	**21.86097565**	**%** Less than 100%