ONE WORLD ○ OUR APPROVAL

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

LTE Model:RI7LE910NA

Maximum peak output power at device output terminal:	33.50	dBm
Cable and Jumper loss:	0.0	dB
Maximum peak output power at antenna input terminal:	33.50	dBm
	2238.721139	mW
Single Antenna gain (typical):	2.5	dBi
Number of Antennae:	1	
Total Antenna gain (typical):	2.5	dBi
	1.77827941	(numeric)
Prediction distance:	20	cm
Prediction frequency:	824.2	MHz
MPE limit for uncontrolled exposure at prediction frequency:	0.549466667	mW/cm^2
Power density at prediction frequency:	**0.792009**	**mW/cm^2**
	7.920091	W/m^2
Tx On time:	25.000000	ms
Tx period time:	100.000000	ms
Average Factor:	25.000000	%
Average Power density at prediction frequency:	1.980023	W/m^2
Percentage to limit:	36.03535478	%

ZIGBEE Model:TMB-EM0069

Maximum peak output power at device output terminal:	29.20	dBm
Cable and Jumper loss:	0.0	dB
Maximum peak output power at antenna input terminal:	29.20	dBm
	831.7637711	mW
Single Antenna gain (typical):	2.5	dBi
Number of Antennae:	1	
Total Antenna gain (typical):	2.5	dBi
	1.77827941	(numeric)
Prediction distance:	20	cm
Prediction frequency:	2400	MHz
MPE limit for uncontrolled exposure at prediction frequency:	1	mW/cm^2
Power density at prediction frequency:	**0.294259**	**mW/cm^2**
	2.942593	W/m^2
Tx On time:	10.000000	ms
Tx period time:	100.000000	ms
Average Factor:	10.000000	%
Average Power density at prediction frequency:	0.294259	W/m^2
Percentage to limit:	2.942592642	%

Total Percentage to limit:	38.97794742	%

(PSD1/Limit 1) + (PSD 2/limit 2):	0.389779474	<1