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

Maximum peak output power at the antenna terminal:	<u>8.20</u> (dBm)
Maximum peak output power at the antenna terminal:	6.60693448 (mW)
Antenna gain(typical):	0 (dBi)
Maximum antenna gain:	1 (numeric)
Prediction distance:	20 (cm)
Prediction frequency:	889.2 (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.5928 (mW/cm^2)

Power density at prediction frequency: 0.001314 (mW/cm^2)

BC0

## Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01
$$4\pi R^{2}$$

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

Maximum peak output power at the antenna terminal:	13.50 (dBm)
Maximum peak output power at the antenna terminal:	22.38721139 (mW)
Antenna gain(typical):	<u>0</u> (dBi)
Maximum antenna gain:	<u> </u>
Prediction distance:	<u>    20</u> (cm)
Prediction frequency:	1956.25 (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1 (mW/cm^2)
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Power density at prediction frequency: 0.004454 (mW/cm^2)

BC1

EVDO

## Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01
$$4\pi R^{2}$$

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

Maximum peak output power at the antenna terminal:	<u>15.40</u> (dBm)
Maximum peak output power at the antenna terminal:	34.67368505 (mW)
Antenna gain(typical):	<u>0</u> (dBi)
Maximum antenna gain:	<u> </u>
Prediction distance:	<u>    20 </u> (cm)
Prediction frequency:	<u>1956.25</u> (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1 (mW/cm^2)

Power density at prediction frequency: 0.006898 (mW/cm^2) One-X

## Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01
$$4\pi R^{2}$$

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

Maximum peak output power at the antenna terminal:	<u>9.60</u> (dBm)
Maximum peak output power at the antenna terminal:	9.120108394 (mW)
Antenna gain(typical):	<u> </u>
Maximum antenna gain:	<u> </u>
Prediction distance:	<u>    20 </u> (cm)
Prediction frequency:	<u>1956.25</u> (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	<u>1</u> (mW/cm^2)
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Power density at prediction frequency: 0.001814 (mW/cm^2)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01
$$4\pi R^{2}$$

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

Maximum peak output power at the antenna terminal:	5.74 (dBm)
Maximum peak output power at the antenna terminal:	3.749730022 (mW)
Antenna gain(typical):	<u> </u>
Maximum antenna gain:	<u> </u>
Prediction distance:	<u> </u>
Prediction frequency:	<u>862.9</u> (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.575267 (mW/cm^2)

Power density at prediction frequency: 0.000746 (mW/cm^2)

BC10

## Combined All Radios [ Pd(1) / LPd(1) ] + [ Pd(2) / LPd(2) ] + ..... + [ Pd(n) / LPd(n) ] < 1,

then device complies with FCC's RF radiation exposure limit for general population for a mobile device.

Where;

Pd(n) = Power density of n<sup>th</sup> transmitter at 20cmLPd(n) = Power density limit for the n<sup>th</sup> transmitter

The highest gain values were used for antenna gain.

	BC0	BC1	EVDO	One-X	BC10			
power:	0.00131441	0.00445379	0.00689811	0.00181439	0.00074600			
limit:	0.59280000	1.00000000	1.00000000	1.00000000	0.57526667			
power/limit:	0.00221729	0.00445379	0.00689811	0.00181439	0.00129679	sum:	0.0167	
						limit:	1.0000	
						Result: F	Result: PASS	