

RF Exposure Statement

1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

| Frequency range (MHz) | Electric field Strength (V/m) | Magnetic field Strength (A/m) | Power density (mW/cm ²) | Averaging time (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

2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

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

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

S = Power density

P = power input to 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

2-1. CDMA BAND

| | |
|---|---------|
| Max Peak output Power at antenna input terminal (dBm) | 26.000 |
| Max Peak output Power at antenna input terminal (mW) | 398.107 |
| Prediction distance (cm) | 20.000 |
| Prediction frequency (MHz) | 824.700 |
| Antenna Gain(typical) (dBi) | -2.400 |
| Antenna Gain(numeric) | 0.575 |
| Power density at prediction frequency (mW/cm ²) | 0.04558 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 0.550 |

2-2. PCS CDMA BAND

| | |
|---|------------|
| Max Peak output Power at antenna input terminal (dBm) | 26.00 |
| Max Peak output Power at antenna input terminal (mW) | 398.107 |
| Prediction distance (cm) | 20.00000 |
| Prediction frequency (MHz) | 1880.00000 |
| Antenna Gain(typical) (dBi) | -0.30000 |
| Antenna Gain(numeric) | 0.93325 |
| Power density at prediction frequency (mW/cm ²) | 0.073915 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 1.00000 |

2-3. LTE _BAND 2

| | |
|---|------------|
| Max Peak output Power at antenna input terminal (dBm) | 26.20 |
| Max Peak output Power at antenna input terminal (mW) | 416.869 |
| Prediction distance (cm) | 20.00000 |
| Prediction frequency (MHz) | 1855.00000 |
| Antenna Gain(typical) (dBi) | -0.30000 |
| Antenna Gain(numeric) | 0.93325 |
| Power density at prediction frequency (mW/cm ²) | 0.077398 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 1.00000 |

2-4. LTE _BAND 5

| | |
|---|---------|
| Max Peak output Power at antenna input terminal (dBm) | 26.200 |
| Max Peak output Power at antenna input terminal (mW) | 416.869 |
| Prediction distance (cm) | 20.000 |
| Prediction frequency (MHz) | 826.500 |
| Antenna Gain(typical) (dBi) | -2.400 |
| Antenna Gain(numeric) | 0.575 |
| Power density at prediction frequency (mW/cm ²) | 0.04772 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 0.551 |

2-5. LTE _ BAND 4

| | |
|---|------------|
| Max Peak output Power at antenna input terminal (dBm) | 26.20 |
| Max Peak output Power at antenna input terminal (mW) | 416.869 |
| Prediction distance (cm) | 20.00000 |
| Prediction frequency (MHz) | 1712.50000 |
| Antenna Gain(typical) (dBi) | -1.60000 |
| Antenna Gain(numeric) | 0.69183 |
| Power density at prediction frequency (mW/cm ²) | 0.057376 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 1.00000 |

2-6. LTE _ BAND 17

| | |
|---|---------|
| Max Peak output Power at antenna input terminal (dBm) | 26.200 |
| Max Peak output Power at antenna input terminal (mW) | 416.869 |
| Prediction distance (cm) | 20.000 |
| Prediction frequency (MHz) | 710.000 |
| Antenna Gain(typical) (dBi) | -0.300 |
| Antenna Gain(numeric) | 0.933 |
| Power density at prediction frequency (mW/cm ²) | 0.07740 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 0.473 |

2-7. LTE _ BAND 13

| | |
|---|---------|
| Max Peak output Power at antenna input terminal (dBm) | 26.200 |
| Max Peak output Power at antenna input terminal (mW) | 416.869 |
| Prediction distance (cm) | 20.000 |
| Prediction frequency (MHz) | 782.000 |
| Antenna Gain(typical) (dBi) | -1.500 |
| Antenna Gain(numeric) | 0.708 |
| Power density at prediction frequency (mW/cm ²) | 0.05871 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 0.521 |

2-8. GSM 850 BAND

| | |
|---|----------|
| Max Peak output Power at antenna input terminal (dBm) | 34.000 |
| Max Peak output Power at antenna input terminal (mW) | 2511.886 |
| Prediction distance (cm) | 20.000 |
| Prediction frequency (MHz) | 824.200 |
| Antenna Gain(typical) (dBi) | -2.400 |
| Antenna Gain(numeric) | 0.575 |
| Power density at prediction frequency (mW/cm ²) | 0.28756 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 0.549 |

2-9. GSM 1900 BAND

| | |
|---|------------|
| Max Peak output Power at antenna input terminal (dBm) | 32.00 |
| Max Peak output Power at antenna input terminal (mW) | 1584.893 |
| Prediction distance (cm) | 20.00000 |
| Prediction frequency (MHz) | 1909.80000 |
| Antenna Gain(typical) (dBi) | -0.30000 |
| Antenna Gain(numeric) | 0.93325 |
| Power density at prediction frequency (mW/cm ²) | 0.294259 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 1.00000 |

2-10. WCDMA 850 BAND

| | |
|---|---------|
| Max Peak output Power at antenna input terminal (dBm) | 25.000 |
| Max Peak output Power at antenna input terminal (mW) | 316.228 |
| Prediction distance (cm) | 20.000 |
| Prediction frequency (MHz) | 836.600 |
| Antenna Gain(typical) (dBi) | -2.400 |
| Antenna Gain(numeric) | 0.575 |
| Power density at prediction frequency (mW/cm ²) | 0.03620 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 0.558 |

2-11. WCDMA 1900 BAND

| | |
|---|------------|
| Max Peak output Power at antenna input terminal (dBm) | 25.00 |
| Max Peak output Power at antenna input terminal (mW) | 316.228 |
| Prediction distance (cm) | 20.00000 |
| Prediction frequency (MHz) | 1880.00000 |
| Antenna Gain(typical) (dBi) | -0.30000 |
| Antenna Gain(numeric) | 0.93325 |
| Power density at prediction frequency (mW/cm ²) | 0.058712 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 1.00000 |

2-12. WCDMA 1700 BAND

| | |
|---|------------|
| Max Peak output Power at antenna input terminal (dBm) | 25.00 |
| Max Peak output Power at antenna input terminal (mW) | 316.228 |
| Prediction distance (cm) | 20.00000 |
| Prediction frequency (MHz) | 1712.40000 |
| Antenna Gain(typical) (dBi) | -1.60000 |
| Antenna Gain(numeric) | 0.69183 |
| Power density at prediction frequency (mW/cm ²) | 0.043524 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²) | 1.00000 |

3. RESULTS

- 1) The power density level at 20 cm is **0.04558 mW/cm²**, which is below the controlled exposure limit of **0.550 mW/cm²** at **CDMA band**.
- 2) The power density level at 20 cm is **0.073915 mW/cm²**, which is below the controlled exposure limit of **1.0 mW/cm²** at **PCS CDMA band**.
- 3) The power density level at 20 cm is **0.077398 mW/cm²**, which is below the controlled exposure limit of **1.0 mW/cm²** at **LTE band 2**.
- 4) The power density level at 20 cm is **0.04772 mW/cm²**, which is below the controlled exposure limit of **0.551 mW/cm²** at **LTE band 5**.
- 5) The power density level at 20 cm is **0.057376 mW/cm²**, which is below the controlled exposure limit of **1.0 mW/cm²** at **LTE band 4**
- 6) The power density level at 20 cm is **0.07740 mW/cm²**, which is below the controlled exposure limit of **0.473 mW/cm²** at **LTE band 17**.
- 7) The power density level at 20 cm is **0.05871 mW/cm²**, which is below the controlled exposure limit of **0.521 mW/cm²** at **LTE band 13**.
- 8) The power density level at 20 cm is **0.28756 mW/cm²**, which is below the controlled exposure limit of **0.549 mW/cm²** at **GSM 850 BAND**
- 9) The power density level at 20 cm is **0.294259 mW/cm²**, which is below the controlled exposure limit of **1.0 mW/cm²** at **GSM 1900 BAND**
- 10) The power density level at 20 cm is **0.03620 mW/cm²**, which is below the controlled exposure limit of **0.558 mW/cm²** at **WCDMA 800 BAND**
- 11) The power density level at 20 cm is **0.058712 mW/cm²**, which is below the controlled exposure limit of **1.0 mW/cm²** at **WCDMA 1900 BAND**
- 12) The power density level at 20 cm is **0.043524 mW/cm²**, which is below the controlled exposure limit of **1.0 mW/cm²** at **WCDMA 1900 BAND**