

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

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

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

3. RESULTS

3-1. GSM 850 BAND

Max Peak output Power at antenna input terminal (dBm)	33.170
Max Peak output Power at antenna input terminal (mW)	2074.914
Prediction distance (cm)	30.000
Prediction frequency (MHz)	848.800
Antenna Gain(typical) (dBi)	1.620
Antenna Gain(numeric)	1.452
Power density at prediction frequency (mW/cm ²)	0.26641
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	0.566

3-2. GSM 1900 BAND

Max Peak output Power at antenna input terminal (dBm)	30.000
Max Peak output Power at antenna input terminal (mW)	1000.00000
Prediction distance (cm)	30.000
Prediction frequency (MHz)	1909.800
Antenna Gain(typical) (dBi)	4.360
Antenna Gain(numeric)	2.72898
Power density at prediction frequency (mW/cm ²)	0.24129
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	1.00000

3-3. WCDMA 850 BAND

Max Peak output Power at antenna input terminal (dBm)	23.640
Max Peak output Power at antenna input terminal (mW)	231.206
Prediction distance (cm)	30.000
Prediction frequency (MHz)	846.600
Antenna Gain(typical) (dBi)	1.620
Antenna Gain(numeric)	1.452
Power density at prediction frequency (mW/cm ²)	0.02969
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	0.564

3-4. WCDMA 1900 BAND

Max Peak output Power at antenna input terminal (dBm)	23.700
Max Peak output Power at antenna input terminal (mW)	234.42288
Prediction distance (cm)	30.000
Prediction frequency (MHz)	1880.000
Antenna Gain(typical) (dBi)	4.060
Antenna Gain(numeric)	2.54683
Power density at prediction frequency (mW/cm ²)	0.05279
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	1.00000

3-5. BT BAND

Max Peak output Power at antenna input terminal (dBm)	2.140
Max Peak output Power at antenna input terminal (mW)	1.63682
Prediction distance (cm)	30.000
Prediction frequency (MHz)	2402.000
Antenna Gain(typical) (dBi)	-0.820
Antenna Gain(numeric)	0.82794
Power density at prediction frequency (mW/cm ²)	0.00012
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	1.00000

1) The power density level at 30 cm is **0.26641 mW/cm²**, which is below the controlled exposure limit of **0.566 mW/cm²** at **GSM 850 band**.

2) The power density level at 30 cm is **0.24129 mW/cm²**, which is below the controlled exposure limit of **1.000 mW/cm²** at **GSM 1900 band**.

3) The power density level at 30 cm is **0.02969 mW/cm²**, which is below the controlled exposure limit of **0.564 mW/cm²** at **WCDMA 850 band**.

4) The power density level at 30 cm is **0.05279 mW/cm²**, which is below the controlled exposure limit of **1.000 mW/cm²** at **WCDMA 1900 band**.

5) The power density level at 30 cm is **0.00012 mW/cm²**, which is below the controlled exposure limit of **1.000 mW/cm²** at **BT band**.