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/cm²)	Averaging time (minutes)
0.3 - 1.34......................................	614	1.63	*(100)	30
1.34 - 30......................................	824/f	2.19/f	*(180/ f²)	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. Ant 0 802.11b BAND

Max Peak output Power at antenna input terminal (dBm)	19.18000
Max Peak output Power at antenna input terminal (mW)	82.79422
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2437.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.025747
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-2. Ant 0 Wi-Fi 802.11g BAND

Max Peak output Power at antenna input terminal (dBm)	24.25000
Max Peak output Power at antenna input terminal (mW)	266.07251
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2437.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.082743
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-3. Ant 0 Wi-Fi 802.11n BAND

Max Peak output Power at antenna input terminal (dBm)	24.55000
Max Peak output Power at antenna input terminal (mW)	285.10183
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2437.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.088660
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-4. Ant 0 Wi-Fi 802.11n_40 MHz BAND

Max Peak output Power at antenna input terminal (dBm)	17.71000
Max Peak output Power at antenna input terminal (mW)	59.02011
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2437.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.018354
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-5. Ant 0 Wi-Fi 802.11a (5745~5825) BAND

Max Peak output Power at antenna input terminal (dBm)	21.71000
Max Peak output Power at antenna input terminal (mW)	148.25181
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	5745.00000
Antenna Gain(typical) (dBi)	2.49000
Antenna Gain(numeric)	1.77419
Power density at prediction frequency (mW/cm²)	0.052328
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-6. Ant 0 Wi-Fi 802.11n (5745~5825) BAND

Max Peak output Power at antenna input terminal (dBm)	21.66000
Max Peak output Power at antenna input terminal (mW)	146.55478
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	5745.00000
Antenna Gain(typical) (dBi)	2.49000
Antenna Gain(numeric)	1.77419
Power density at prediction frequency (mW/cm²)	0.051729
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-7. Ant 0 Wi-Fi 802.11n_40 MHz (5755~5795) BAND

Max Peak output Power at antenna input terminal (dBm)	12.18000
Max Peak output Power at antenna input terminal (mW)	16.51962
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	5755.00000
Antenna Gain(typical) (dBi)	2.49000
Antenna Gain(numeric)	1.77419
Power density at prediction frequency (mW/cm²)	0.005831
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-8. Ant 1 802.11b BAND

Max Peak output Power at antenna input terminal (dBm)	18.78000
Max Peak output Power at antenna input terminal (mW)	75.50922
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2462.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.023482
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-9. Ant 1 Wi-Fi 802.11g BAND

Max Peak output Power at antenna input terminal (dBm)	24.20000
Max Peak output Power at antenna input terminal (mW)	263.02680
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2437.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.081796
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-10. Ant 1 Wi-Fi 802.11n BAND

Max Peak output Power at antenna input terminal (dBm)	24.27000
Max Peak output Power at antenna input terminal (mW)	267.30064
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2437.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.083125
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-11. Ant 1 Wi-Fi 802.11n_40 MHz BAND

Max Peak output Power at antenna input terminal (dBm)	18.23000
Max Peak output Power at antenna input terminal (mW)	66.52732
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	2422.00000
Antenna Gain(typical) (dBi)	1.94000
Antenna Gain(numeric)	1.56315
Power density at prediction frequency (mW/cm²)	0.020689
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-12. Ant 1 Wi-Fi 802.11a (5745~5825) BAND

Max Peak output Power at antenna input terminal (dBm)	20.98000
Max Peak output Power at antenna input terminal (mW)	125.31412
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	5745.00000
Antenna Gain(typical) (dBi)	1.45000
Antenna Gain(numeric)	1.39637
Power density at prediction frequency (mW/cm²)	0.034812
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-13. Ant 1 Wi-Fi 802.11n (5745~5825) BAND

Max Peak output Power at antenna input terminal (dBm)	21.04000
Max Peak output Power at antenna input terminal (mW)	127.05741
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	5745.00000
Antenna Gain(typical) (dBi)	1.45000
Antenna Gain(numeric)	1.39637
Power density at prediction frequency (mW/cm²)	0.035296
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

2-14. Ant 1 Wi-Fi 802.11n_40 MHz (5755~5795) BAND

Max Peak output Power at antenna input terminal (dBm)	11.50000
Max Peak output Power at antenna input terminal (mW)	14.12538
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	5755.00000
Antenna Gain(typical) (dBi)	1.45000
Antenna Gain(numeric)	1.39637
Power density at prediction frequency (mW/cm²)	0.003924
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

3. RESULTS

1. The power density level at 20 cm is 0.025747 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at . **Ant 0 802.11b BAND**
2. The power density level at 20 cm is 0.082743 **mW/cm²,** which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 0 Wi-Fi 802.11g BAND**
3. The power density level at 20 cm is 0.088660 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 0 Wi-Fi 802.11n BAND**
4. The power density level at 20 cm is 0.018354 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 0 Wi-Fi 802.11n_40 MHz BAND**
5. The power density level at 20 cm is 0.052328 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 0 Wi-Fi 802.11a (5745~5825) BAND**
6. The power density level at 20 cm is 0.051729 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 0 Wi-Fi 802.11n (5745~5825) BAND**
7. The power density level at 20 cm is 0.005831 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 0 Wi-Fi 802.11n_40 MHz (5755~5795) BAND**

8. The power density level at 20 cm is 0.023482 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at . **Ant 1 802.11b BAND**
9. The power density level at 20 cm is 0.081796 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 1 Wi-Fi 802.11g BAND**
10. The power density level at 20 cm is 0.083125 **mW/cm²,** which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 1 Wi-Fi 802.11n BAND**
11. The power density level at 20 cm is 0.020689 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 1 Wi-Fi 802.11n_40 MHz BAND**
12. The power density level at 20 cm is 0.034812 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 1 Wi-Fi 802.11a (5745~5825) BAND**
13. The power density level at 20 cm is 0.035296 **mW/cm²**, which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 1 Wi-Fi 802.11n (5745~5825) BAND**
14. The power density level at 20 cm is 0.003924 **mW/cm²,** which is below the uncontrolled exposure limit of 1.0 mW/cm² at **Ant 1 Wi-Fi 802.11n_40 MHz (5755~5795) BAND**