

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. LTE Band 2

Average Peak output Power at antenna input terminal	26.000	dBm
Average Peak output Power at antenna input terminal	398.107	mW
Prediction distance	20.000	cm
Prediction frequency	1930.000	MHz
Antenna Gain(typical)	4.000	dBi
Antenna Gain(numeric)	2.512	-
Power density at prediction frequency(S)	0.199	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

3-2. LTE Band 4

Average Peak output Power at antenna input terminal	26.000	dBm
Average Peak output Power at antenna input terminal	398.107	mW
Prediction distance	20.000	cm
Prediction frequency	2110.000	MHz
Antenna Gain(typical)	4.000	dBi
Antenna Gain(numeric)	2.512	-
Power density at prediction frequency(S)	0.199	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

3-3. AWS-3

Average Peak output Power at antenna input terminal	26.000	dBm
Average Peak output Power at antenna input terminal	398.107	mW
Prediction distance	20.000	cm
Prediction frequency	2155.000	MHz
Antenna Gain(typical)	4.000	dBi
Antenna Gain(numeric)	2.512	-
Power density at prediction frequency(S)	0.199	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

(UNII 1 BAND)

3-4 802.11a (5180 ~5240)

Average Peak output Power at antenna input terminal	22.500	dBm
Average Peak output Power at antenna input terminal	177.828	mW
Prediction distance	20.000	cm
Prediction frequency	5180.000	MHz
Antenna Gain(typical)	4.000	dBi
Antenna Gain(numeric)	2.512	-
Power density at prediction frequency(S)	0.089	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

(UNII 3 BAND)

3-5 802.11a (5745 ~5825)

Average Peak output Power at antenna input terminal	26.500	dBm
Average Peak output Power at antenna input terminal	446.684	mW
Prediction distance	20.000	cm
Prediction frequency	5745.000	MHz
Antenna Gain(typical)	4.000	dBi
Antenna Gain(numeric)	2.512	-
Power density at prediction frequency(S)	0.223	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²