

ATTACHMENT

RF EXPOSURE EVULATION

1.1 Limit

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

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength	Magnetic field Strength	Power density	Averaging time
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

1.2 MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

Power density at the specific separation:

$S = PG / (4R^2 \pi)$ $S = (5.50 * 2.35) / (4 * 20^2 * \pi)$ $S = 0.0026 \text{ mW/cm}^2$	<p>Where,</p> <p>S = Maximum power density (mW/cm²)</p> <p>P = Power input to the antenna (mW)</p> <p>G = Numeric power gain of the antenna</p> <p>R = Distance to the center of the radiation of the antenna (20 cm = limit for MPE)</p>
---	--

1.3 MAXIMUM PERMISSIBLE EXPOSURE Prediction

- Calculated under the worst-case conditions of each mode.

(Measured power 7.40 dBm \pm 0.5dB)

802.11 b Mode

Max Peak output Power at antenna input terminal	7.40	dBm
Max Peak output Power at antenna input terminal	5.50	mW
Prediction distance	5	mm
Prediction frequency	2412	MHz
Antenna Gain(typical)	3.71	dBi
Antenna Gain(numeric)	2.35	-

For 100 MHz to 6 GHz and test separation distances \leq 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})]$

$\cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR

$[(5.5)/(5)] \cdot [\sqrt{2.412}] = 0.706 \leq 3.0$

Thus, SAR for this device is not required.