



2.11. RF exposure evaluation

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density

P = power input to the 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

2.1.1 Limits for Maximum Permissible Exposure

According to FCC Part 1.1307, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

According to FCC Part 1.1310 RF exposure is calculated.

| Limits for General Population/ Uncontrolled Exposure | | | |
|--|---------------------------------|----------------------------------|--|
| Frequency Range (MHz) | Electric Field Strength(E)(V/m) | Magnetic Field Strength (H)(A/m) | Power Density (S)(mW/cm ²) |
| 0.3-1.34 | 614 | 1.63 | (100)* |
| 1.34-30 | 824/f | 2.19/f | (180/f ²)* |
| 30-300 | 27.5 | 0.073 | 0.2 |
| 300-1500 | | | f/1500 |
| 1500-100,000 | | | 1.0 |



2.1.2 Test result

| | |
|--|-------------|
| Maximum peak output power at antenna input terminal(dBm): | -5.00 |
| Maximum peak output power at antenna input terminal(mW): | 0.316227766 |
| Source-based time-averaged output power: | -- |
| Prediction distance(cm): | 20 |
| Predication frequency(MHz): | 2402 |
| Antenna Gain (typical) (dBi): | 0 |
| Power density at predication frequency at <u>20</u> cm(mW/cm ²): | 6.29E-05 |
| MPE limit for RF exposure at prediction frequency(mW/cm ²): | 1.0 |

2.1.3 Conclusion

Since the test result is passed, the SAR measurement is not required.