

Maximum Permissible Exposure.

This device has a target peak rated conducted power output of 1W (30 dBm) with a peak Antenna gain of 5.9 dBi, when taking into account cable losses. This is an effective isotropic radiated power of 35.9 dBm, or 3.89W.

This device is designed for use at distances larger than 1 meter as per the user manual, however 1 meter is used as worst case for the purpose of calculation.

As per RSS-102, Table 4, for above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. W/m^2 must be below $0.02619 f^{0.6834}$

Limit:

For 902 MHz, this $0.02619 \times 902^{0.6834} W$

Which is $2.7 W/m^2$

Which is $0.27 mW/cm^2$

As per FCC KDB 447498 D01, 7.1 which references FCC 2.1019(d)(2) for distances greater than 20 cm, which references FCC 1.1310 Table 1, and presuming general population, the equation is Power density(mW/cm^2) must be less $0.6 mW/cm^2$.

As per the worst case calculations, the device $0.28 mW/cm^2$, which is below the $0.6 mW/cm^2$ requirement.



Time-averaged maximum E.I.R.P= $30+3.59=35.9dBm$ (3.89 W)

At 100 cm(worst case), power density $P_d = 3890mw / (4 \times \pi \times (100^2)) = 0.03mW/cm^2$.

This is under the $0.6 mW/cm^2$ FCC limit and under the $0.27 mW/cm^2$ ISED limit.