

▣ RF Exposure information

This product is RF Antenna part of main controller installed Car. and operated separate distance more than 20 cm from person also fixed with in a car.

The RF Exposure can be verified by the below calculated RF exposure evaluation and MPE (Maximum permissible exposure). This product is not required RF evaluation according to 1.1310 of FCC Part 1, and under 2.5.2 of RSS-102

RF Exposure information in accordance with IC requirement

The following calculation has been used to verify the compliance with the IC RF Exposure requirement.

- Maximum conducted peak power : 81.85 mW (See the Test report clause 5.4.6 of 5.4)
- Antenna gain: -0.675 dBi = -2.825dBd (0.52:Numerical ANT gain)See a antenna specification
- ERP(mW) :is calculated as 81.85 mW x 0.52(Numerical ANT gain) = 42.56 mW_{ERP}
- EIRP(dBm) = ERP(dBm)+2.15, or EIRP(mW) = ERP(mW)x1.64
- EIRP(mW) of this EUT is 42.56 mWx1.64 = 69.80 mW_{EIRP}

According to the above calculated formula, Power_{EIRP} of this product is less than 2.5W of IC requirement.

RF Exposure information in accordance with FCC requirement

This product is comply with Table(B) of 47 CFR 1.1310 titled Limits for Maximum Permissible Exposure (MPE) Limits for General Population / Uncontrolled Exposure

Table (B): Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Powr Density (mW/cm ²)	Averaging Time (minutes)
300 – 1 500	f/1500	30
1 500 – 10 000	1.0	30

The applicable limits for this product is :f/1500 mW/cm² (f = frequency in MHz) => 0.610 (mW/cm²)

The MPE limits can be guaranteed as the calculation below shows

MPE calculation formula is $S = P.G/4.\pi.R^2 [S: f/ 1500 (mW/cm^2)]$

Where,

S = power density in mW/cm²

P = power input to the antenna in mW

G = power gain of the antenna in the direction of interest relative to an isotropic radiation

R = distance to the centre of radiation of the antenna in cm (Y cm prediction distance)

The final calculated value by using the above equation is 69.80 mW / 4x3.14x(20 cm)² ≙ 0.014(mW/cm²)

The MPE value of 0.014(mW/cm²) for this product is less than FCC limitation of 0.610 (mW/cm²)