

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a Car unit for R/C VEHICLE model: BY35066-24GR operating at 2.4GHz band. It is powered by 1 x DC 9.6V rechargeable battery. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: -17.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -17.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 78.4.0dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -16.83dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 75.9dB μ V/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -19.33dBm

which is within the production variation.

The maximum radiated output power specified is -14dBm = 0.04mW

The source- based time-averaging output power

= $0.04 \cdot \text{Duty cycle}$ mW < 0.1 mW (Duty cycle < 100%)

The SAR Exclusion Threshold Level:

= $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

= $3.0 \cdot 5 / \sqrt{(2.480)}$ mW

= 9.53 mW

Since the source-based time-averaging output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 15.0435ms

Effective period of the cycle = 2.5652ms

Duty Cycle = $2.5652 / 15.0435 = 0.1705 = 17.05\%$

FCC ID: BY35066-24GR