

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a 1:10 Elite Trophy Trucks X2 Assortment (18" / 46cm) operating at 2.4G Band. The EUT can be powered by DC 6.0V (4 x 1.5V AAA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 0dBi

The nominal conducted output power specified: -5.2 dBm (± 3 dB)

The nominal radiated output power (e.i.r.p) specified: -5.2 dBm (± 3 dB)

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 90.0 dB μ V/m at 3m in the frequency 2410MHz

The EIRP = [(FS*D) ^2 / 30] mW = -5.23dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 89.4 dB μ V/m at 3m in the frequency 2475MHz

The EIRP = [(FS*D) ^2 / 30] mW = -5.83dBm

which is within the production variation.

The maximum conducted output power specified is -2.2dBm= 0.603mW

The SAR Exclusion Threshold Level:

$$\begin{aligned} P_{th}(mW) &= ERP_{20cm} * (d/20cm)^x \quad (X = -\log_{10} \left(\frac{60}{ERP_{20cm} \sqrt{f}} \right)) \\ &= 3060 * (0.5/20)^{1.9} mW \\ &= 2.72 mW \end{aligned}$$

Since max. power of the source-based time-averaging conducted output power and effective radiated power (ERP) is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

Note: EIRP is higher than ERP, thus EIRP is compared with the Exclusion Threshold.