

# Analysis Report

Report No.: HK13030912-1

The Equipment Under Test (EUT) is a transmitter of a RC system, which is operating at 49.860MHz as dictated by a crystal. The EUT is powered by 2 x 1.5V AA size batteries. The EUT has a pair of control key and a red LED indicator.

After switching ON the corresponding car(i.e. receiver), activating the control key on the EUT can control the car moving forward, backward, left and right.

Antenna Type: External integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 69.7dB $\mu$ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 72.7dB $\mu$ V/m at 3m in frequency 49.860MHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.006\text{mW}$

Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.006mW.

The SAR Exclusion Threshold Level for 49.860MHz when the minimum test separation distance is < 50mm:

=  $[474 * (1 + \log_{10}(100/f(\text{MHz})))]/2$

= 308.6mW

Since the above conducted output power is well below the SAR Exclusion Threshold level, so the EUT is considered to comply with SAR requirement without testing.