Analysis Report

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 AAA size batteries. The EUT has a power ON/OFF switch and control key.

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

Antenna Type: External, Integral
Nominal field strength is 71.4dBμV/m @ 3m
Production Tolerance of field strength is 68.4 dBμV/m to 74.4 dBμV/m
Antenna gain is 0dBi

Based on the Maximum allowed field strength of production tolerance was 74.4dBμV/m at 3m in frequency 49MHz, thus;

The EIRP = [(FS*D) ^2*1000 / 30] = 0.00826mW

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 0.00826mW

The SAR Exclusion Threshold Level for 49MHz when the minimum test separation distance is < 50mm:
= [474 * (1 + log100/f(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.