Analysis Report

Report No.: HK12080103-3
FCC ID: OTA56812TX49

The Equipment Under Test (EUT) is a portable transmitter for a RC car, which is operating at 49.860MHz as dictated by a crystal. The EUT is powered by 1 x 9V Alkaline Battery. The EUT has a power ON/OFF switch, two control levers and a LED indicator.

After switching ON the EUT and 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, unique dedicated, telescope-type antenna with unique antenna connector
Antenna Gain: 0.5dBi
Nominal rated field strength: 75.1dBuV/m at 3m
Maximum allowed field strength of production tolerance: +/- 5dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 80.1dBuV/m at 3m in frequency 49.860MHz, thus;

The EIRP = [(FS*D) ^2*1000 / 30] = 0.031mW
or EIRP = 10 log(0.031) = -15.1dBm
Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain
= – 15.1 – 0.5
= – 15.6 dBm

So;

Conducted Power = 10 ^ (– 15.6 / 10) = 0.028mW

The SAR Exclusion Threshold Level for 49.860MHz 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.