

Analysis Report

Report No.: 17061009HKG-001

The Equipment Under Test (EUT) is a portable 49MHz Transmitter (Controller Unit) for a RC car.

The EUT is powered by 2*1.5V AA battery. After switch on the EUT, the car can be controlled to move forward/backward and turn left/ right by the controller.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 72.1dB μ 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 75.1dB μ V/m at 3m in frequency 49.860MHz, thus;

The EIRP = $[(FS^2 * D) / 30] = 0.0097\text{mW}$

Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.0097mW.

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

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

$$= 308.6\text{mW}$$

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.