

Analysis Report

Report No.: 13060060HKG-001

The Equipment Under Test (EUT) is a transmitter of a RC Car system, which is operating at 27.145MHz as dictated by a crystal. The EUT is powered by 3 x 1.5V AAA size batteries. The EUT has a pair of control keys, two separate control keys.

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

Antenna Type: External, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 67.0dB 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 70.0dB μ V/m at 3m in frequency 27.145MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.003\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.003mW.

The SAR Exclusion Threshold Level for 27.145MHz when the minimum test separation distance is < 50mm:

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

= 371.2mW

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.