

Analysis Report

Report No.: 13070300HKG-001

The Equipment Under Test (EUT) is a portable transmitter of a RC Car operating at 27.145 MHz as dictated by a crystal. The EUT is powered by a 4.5 V DC source (3x 1.5V "AAA" batteries). The EUT has 5 control buttons to control the RC Car moving left, right, forward, backward and turbo.

After switching ON the EUT and the receiver of the RC Car, activating the control levers on the EUT can control the receiver moving forward, backward, left, right or turbo.

Antenna Type: External, integral

Antenna Gain: 0dBi

Nominal rated field strength: 75.0dB 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 78.0dB μ V/m at 3m in frequency 27.145MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.019mW$

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

Conducted Power = 0.019mW.

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

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

= $[474 * (1 + \log_{10}(27.145))]/2$

= 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.