

Analysis Report

The Equipment Under Test (EUT) is a transmitter of a RC system, which is operating at 27.145MHz as dictated by a crystal. The EUT is powered by 1 x 3V sizeAA battery. 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. It can charge the receiver by plug in the charging port over the receiver.

Antenna Type: Integral, external

Nominal field strength is 52.1dB μ V/m @ 3m

Production Tolerance of field strength is 49.1 dB μ V/m to 55.1 dB μ V/m

Antenna gain is 0dBi

Based on the Maximum allowed field strength of production tolerance was 55.1dB μ V/m at 3m in frequency 27.145MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.0000971\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.0000971mW

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

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

$$= 371.2\text{mW}$$

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.