

Analysis Report

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 9.0 V DC source (1 x 9.0V battery). The EUT has a left / right control lever and a forward / backward control lever.

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 and right directions.

Antenna Type: Integral, external

Nominal field strength is 59.1dB μ V/m @ 3m

Production Tolerance of field strength is 56.1 dB μ V/m to 62.1 dB μ V/m

Antenna gain is 0dBi

Based on the Maximum allowed field strength of production tolerance was 62.1dB μ V/m at 3m in frequency 27.145MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30]$ = 0.000487mW

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.000487mW

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

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

= 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.