

Analysis Report

The Equipment Under Test (EUT), is a portable 27.145MHz Transmitter (Controller Unit) for a RC car. The EUT is powered by 1 X 9.0V alkaline battery.

After switch on the EUT, model: 89021, the car will be moved forward or backward, turned left or right based on the joystick control in the controller.

The Model: 89051, 89071, 89091, 89101, 89111, 89121, 89131, 89181, 89221, 89231, 89241, 89281, 89291, 89301, 89311, 89321, 89331, 89341, 89351, 89391, 89401, 89411, 89421, 89431, 89511, 89441, 5F633F9, 89286, 89136, 89346 and 89246 are the same as the Model: 89021 in hardware aspect. The difference in model number serves as marketing strategy. The models are different in non-conductive outer casing only.

Antenna Type: Internal, Integral

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Antenna Gain: 0dBi

Nominal rated field strength is 66.0 dB μ V/m at 3m

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 69.0dB μ V/m at 3m in frequency 0.027145GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.002\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.002mW.

The SAR Exclusion Threshold Level:

= $3.0 \cdot (\text{min. test separation distance, mm}) / \text{sqrt}(\text{freq. in GHz})$

= $3.0 \cdot 5 / \text{sqrt}(0.027145) \text{ mW}$

= 91.043 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.