May 09, 2005

Remote Controller 8238-27T
Functional Description

The EUT is a radio controller for used to control a radio control car.

The controller circuit comprises a rf generation circuit and a modulation circuit.

In the rf generation circuit, rf frequency carrier is generated continually by a crystal oscillating at 27.145 MHz when the power is switched on. However the rf signal will not further transmit forward to second stage for amplification and radiates via antenna matching network until there is presence of a modulating signal (the control signal).

In the modulation circuit, modulating signal is generated by an encoder IC. By changing the values of the variable resistors on the controller, control signal in analogue level will be set on the different input pins of the IC, A to D converting process is carried out inside IC and a series of digital data bits will be generated. The level of data bits are high enough to switch on and off (ON/OFF keying) a control gate allowing the rf carrier to pass through to next amplifying stage and hence radiates to atmosphere via the antenna network.

Three different algorithm for coding are available by selecting the ABC switch of the controller, which allows three different sets of control signals to be transmitted at same time and in the same frequency, and hence three controllers can control three cars at the same time without interfering each other.

Antenna is a telescopic design. The controller is powered by a 9V dry battery. No supply ground or signal ground is available.