

Unit Name: Power Electronics Simulation 1

Title

Brightness controller for low power lamps

Details

The circuit given here can be used to control the brightness of low power incandescent lamps. The circuit is based on IC NE555 which is wired as an astable multi-vibrator with variable duty cycle.

The output of IC is connected to the base of transistor Q1. The Q1 drives the lamp. The duty cycle of the multi-vibrator can be varied by varying the POT R4. As a result, the brightness of the lamp varies according to the position of the POT R4. The same circuit can be also used for speed control of small DC motors.