

### A TOUCH CONTROL SWITCH FOR FLUORESCENT LAMPS

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The LS7539 Touch Control Step Dimmer Light Switch IC has a Mode which allows it to operate as an On-Off Switch. Although intended for use with resistive loads such as incandescent lamps (See Data Sheet, Fig. 4), the IC can be interfaced to the Magnetic Ballast of a Fluorescent Lamp.

ensures that the triac fires in each AC Half-Cycle even when the Triac Main Current has a phase delay of as much as 3ms from the AC Mains Voltage. Figure 1 shows the required interface as part of a complete Application Schematic.

The Power Factors for Magnetic Ballasts typically range from 87% for a four-lamp ceiling fixture, to 55% for a single-lamp under-the-cabinet fixture. The interface for these inductive loads requires that the 100µs OUT pulse be stretched to 3ms before application to the Triac Gate. This

A 10mA Gated Triac such as the Q5004L3 for the four-lamp fixture or the Q501E3 for the single-lamp fixture was selected as a good compromise for High Noise Immunity and Low Power.

All Resistors 1/4W, all Capacitors 16V unless otherwise specified

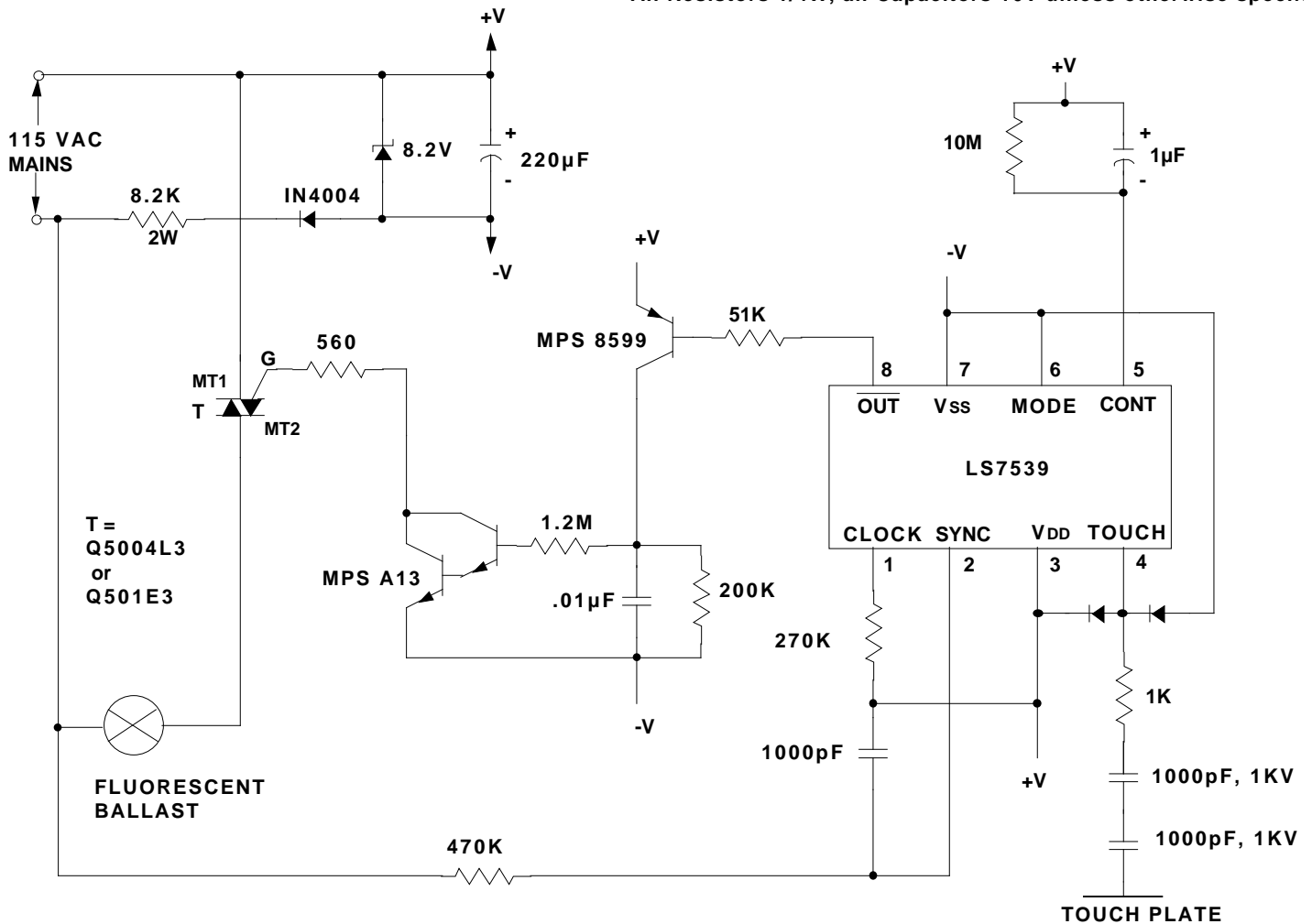


FIGURE 1. A TOUCH CONTROL ON-OFF SWITCH FOR FLUORESCENT LAMPS