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USING THE LS7538, LS7539 IN A WALL SWITCH

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This IC was designed to be an inexpensive Step Power Switch for resistive loads where both AC Mains Hot and Neutral are available. The difficulty in using this IC as a wall switch is that AC Neutral is not available to provide a proper Sync signal for the IC. (See Figure 4 of Data Sheet).

Figure 1 illustrates how to use AC Ground, which is normally available along with AC Hot in the wall switch box, to supply the required Sync Waveform. U.L. guidelines allow up to 500µA of current between AC Hot and AC Ground. Two 240K resistors are used in series for Fail-Safe considerations.

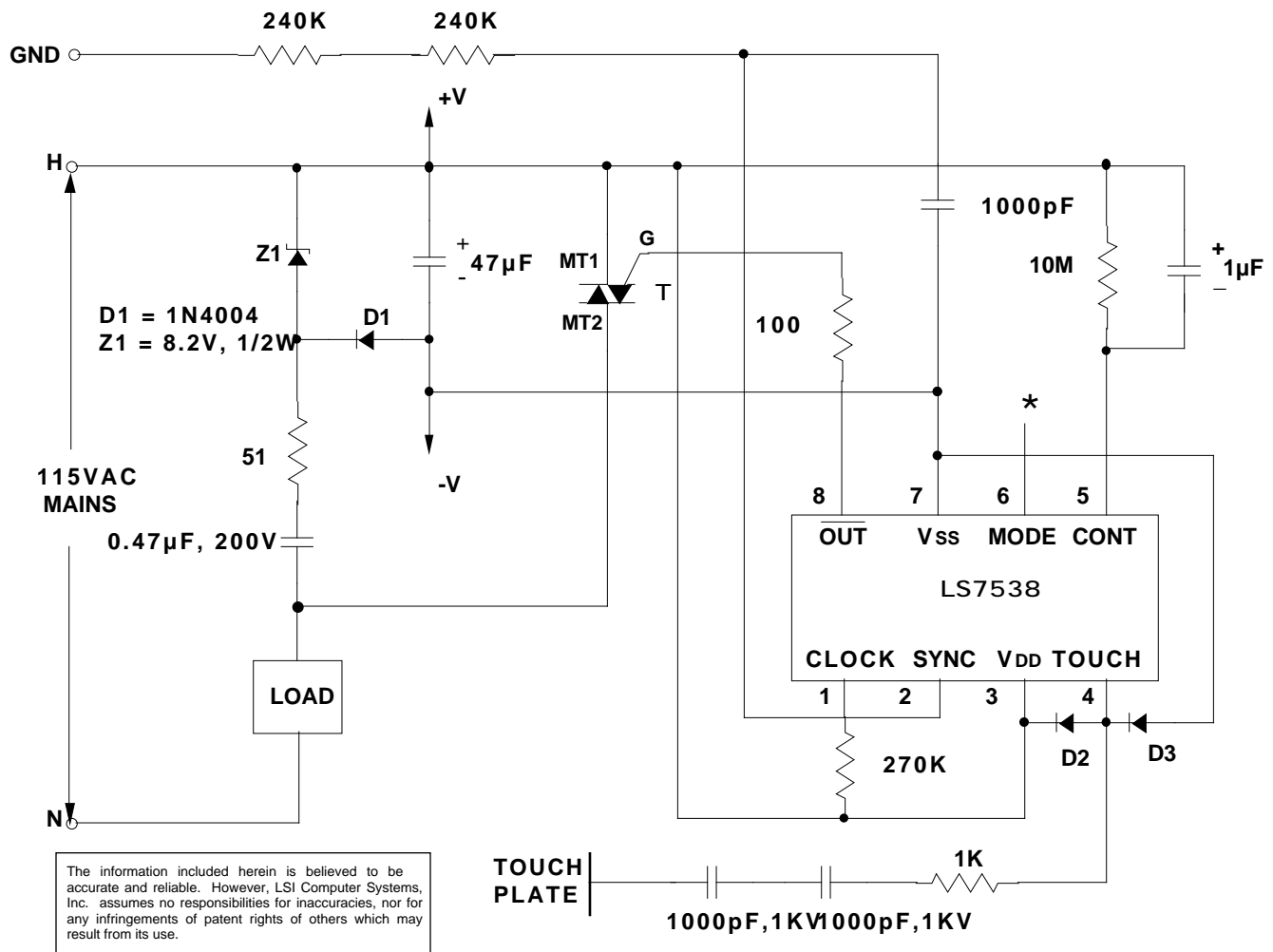


FIGURE 1. A Touch Wall Switch Lamp Dimmer Using the LS7538, LS7539 IC.

* Connect to ~~VDD~~, VSS or Float according to desired operation. (See Data Sheet)

All resistors 1/4W, Capacitors 16V, unless otherwise noted. D2 = D3 = 1N4148