EE330 Lab 11
Section 5, 8:00 am

Thyristor Device Characterization and Applications

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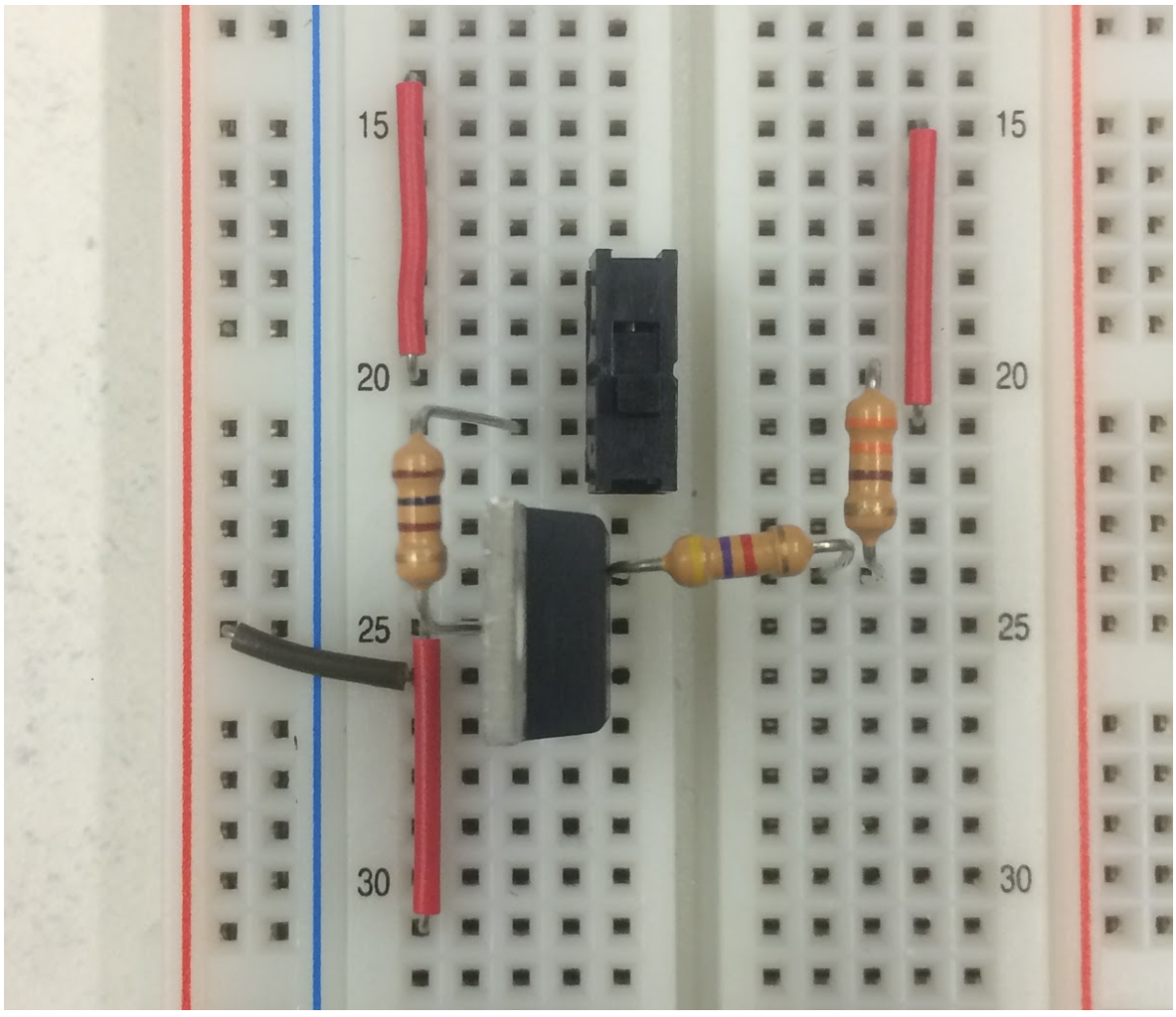
Part One: Extract $\boldsymbol{Vgt}$ and $\boldsymbol{Igt}$

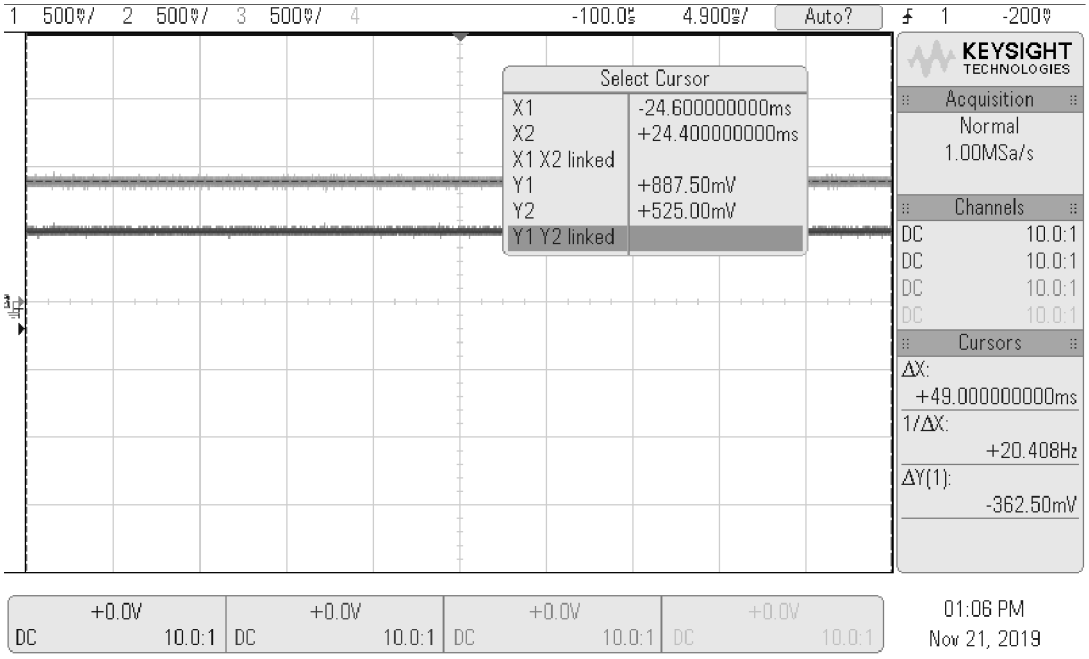
At switch

V_1 = .753 V V_3 = .90 V V_2 = .715 V

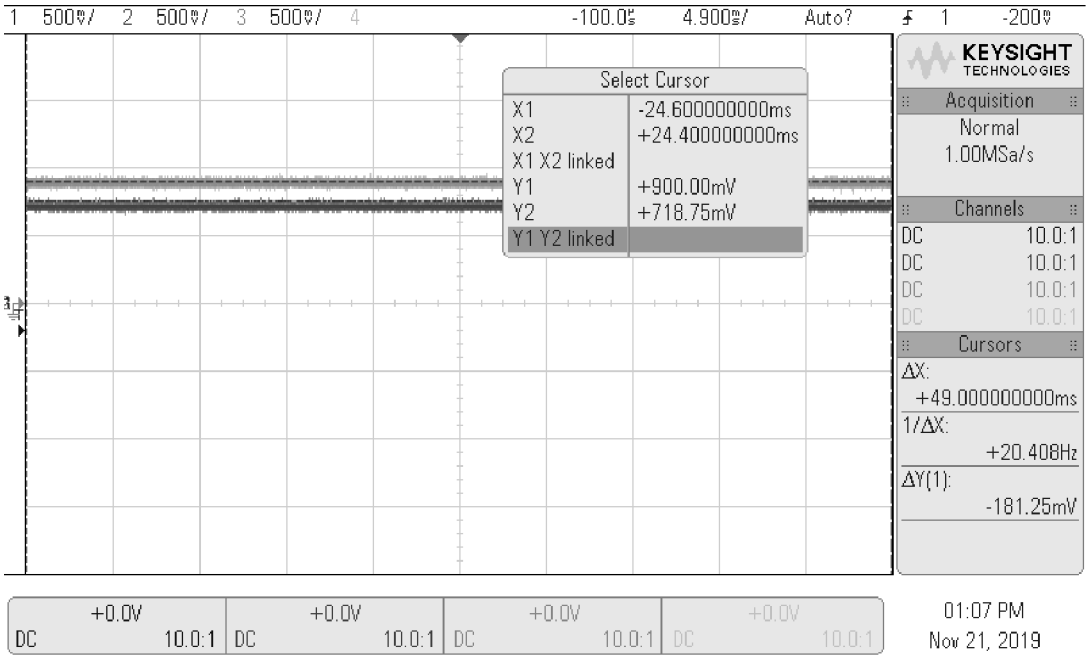
I_{GT} = (.9 - .715) / 5000 = 37 uA Datasheet: I_{GT} = 200 uA



Here, V_G = ~890 mV, and the SRC was not yet active.

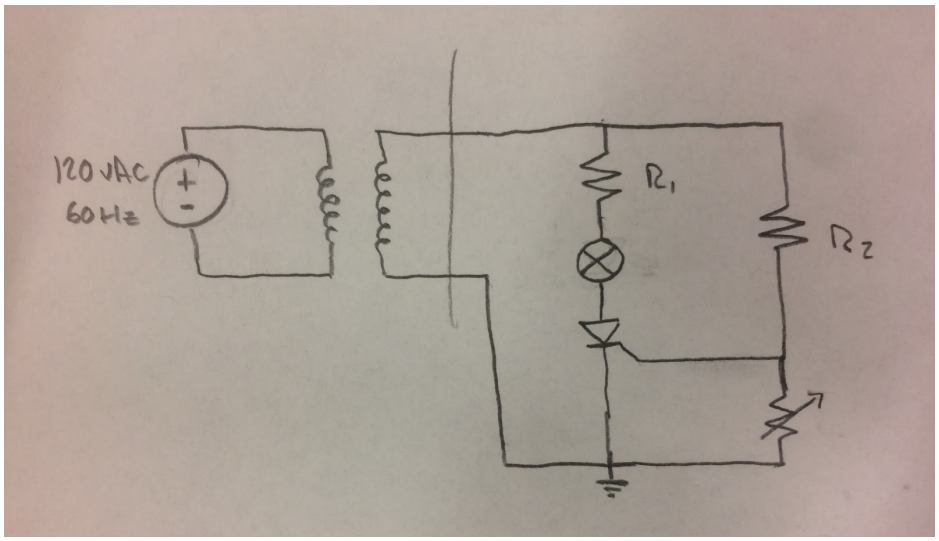


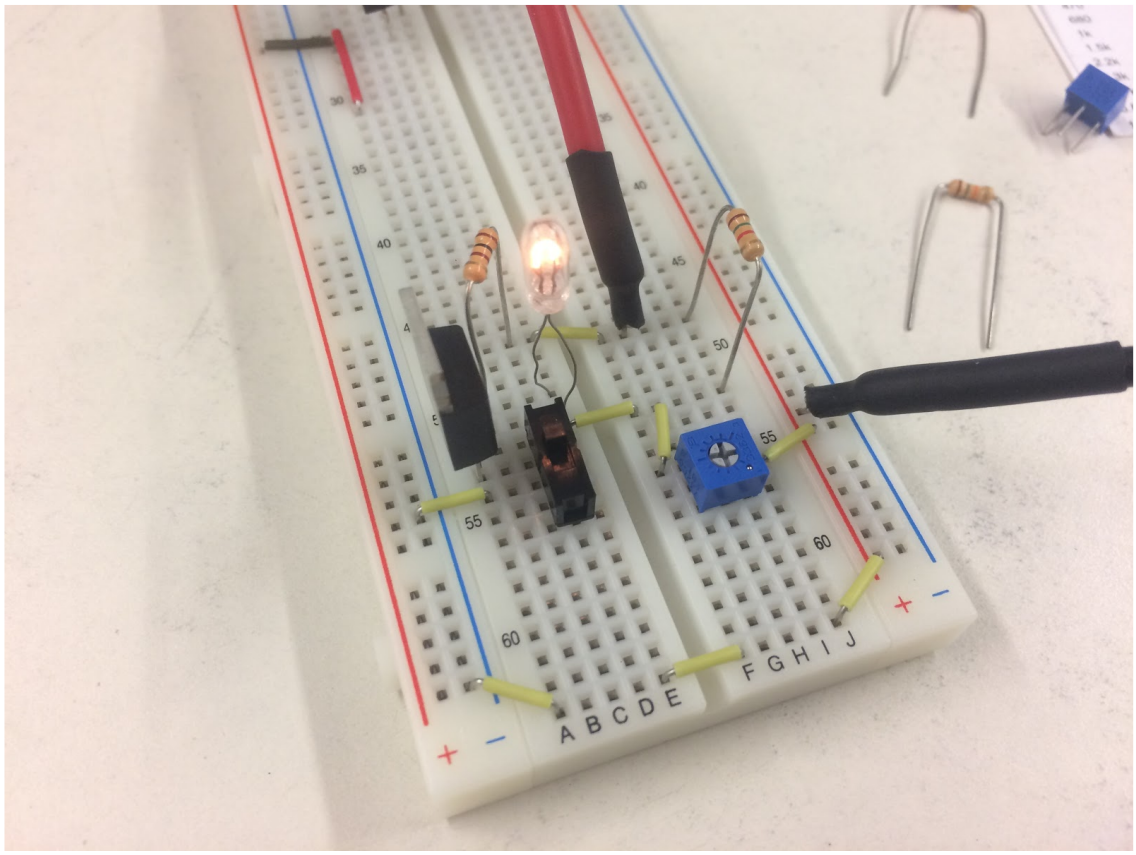
Here, V_G = 900 mV, and the SRC was active.



Part Two: Light Dimmer

The light dimmer circuit design is shown below:





Part Three: Burglar Alarm

The burglar alarm circuit schematic is shown below: