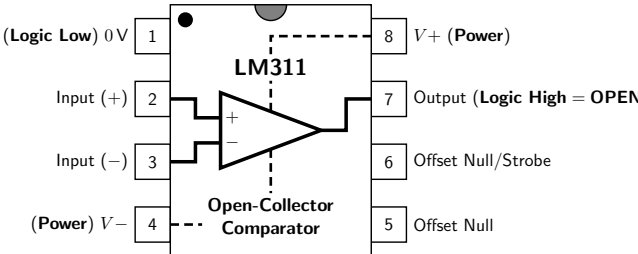
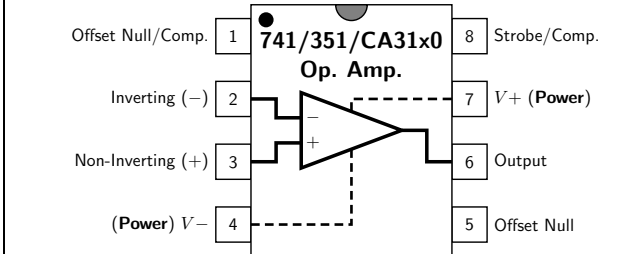
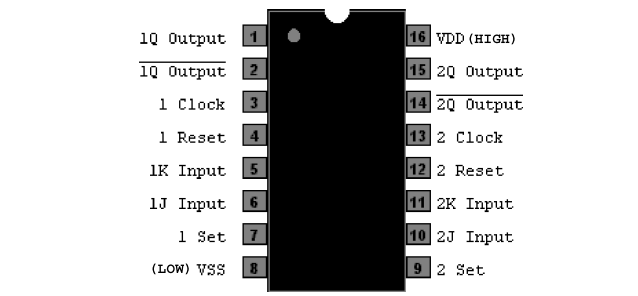
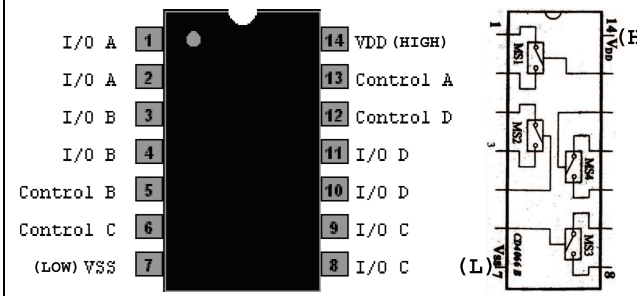
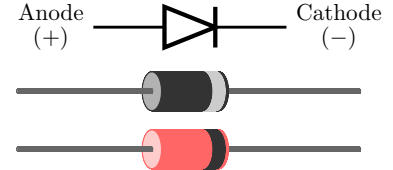
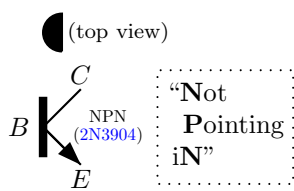
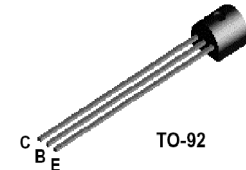
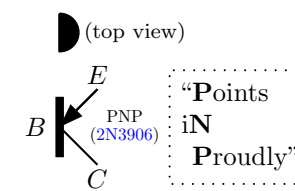
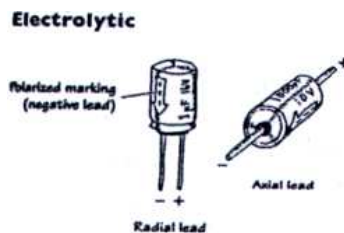



Part Pin-outs

Lab 5: Analog-to-Digital Conversion

ECE 327: *Electronic Devices and Circuits Laboratory I*

 <p style="text-align: center;">LM311 voltage comparator</p>	 <p style="text-align: center;">LM741/LF351/CA3160 op. amp.</p>
 <p style="text-align: center;">CD4027 JK-type flip-flop</p>	 <p style="text-align: center;">CD4066 solid-state switch</p>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px dashed gray; padding: 5px;"> <p>“ACE” — “Anode Current Enters”</p> <p>“CCD” — “Cathode Current Departs”</p> </div> <div style="text-align: center;">  <p>Anode (+) Cathode (-)</p> </div> <div style="border: 1px dashed gray; padding: 5px;"> <p>~0.6 V @ 1 mA</p> <p>~0.7 V @ 10 mA</p> </div> </div> <p style="text-align: center; color: blue; font-weight: bold;">1N914 silicon diode (generic small-signal diode)</p>	
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>(top view)</p> <p>“Not Pointing in”</p> </div> <div style="text-align: center;">  <p>TO-92</p> </div> <div style="border: 1px dashed gray; padding: 5px;"> <p>$V_{BE} \approx 0.65\text{ V}$</p> <p>$V_{CE, \text{saturation}} \approx 0.2\text{ V}$</p> <p>$\beta \approx 100$</p> </div> <div style="text-align: center;">  <p>(top view)</p> <p>“Points in Proudly”</p> </div> </div> <p style="text-align: center; color: blue; font-weight: bold;">2N3904 NPN/2N3906 PNP Bipolar Junction Transistor (BJT)</p>	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p>Electrolytic</p> <p>Polarized marking (negative lead)</p> <p>Radial lead</p> <p>Axial lead</p> </div> <div style="border: 1px dashed gray; padding: 5px;"> <p>“ACE” — “Anode Current Enters”</p> <p>“CCD” — “Cathode Current Departs”</p> </div> <div style="text-align: center;">  <p>100 MF 16V</p> </div> </div> <p style="text-align: center;">(Anode) + (Cathode) -</p> <p style="text-align: center; font-weight: bold;">Electrolytic capacitor</p>	