

# Some Facts about the APD Prototype PCBs

# Mitch Newcomer and Susan Fowler, UPenn 3 August 2014

This document contains details about the two Penn APD Prototype PCBs being sent to Princeton for testing.

The two boards are **identical** except for size, with one being a few millimeters larger than the other. Each board requires **two positive voltage sources**: one at **3.9V** and one at **6.8V**.

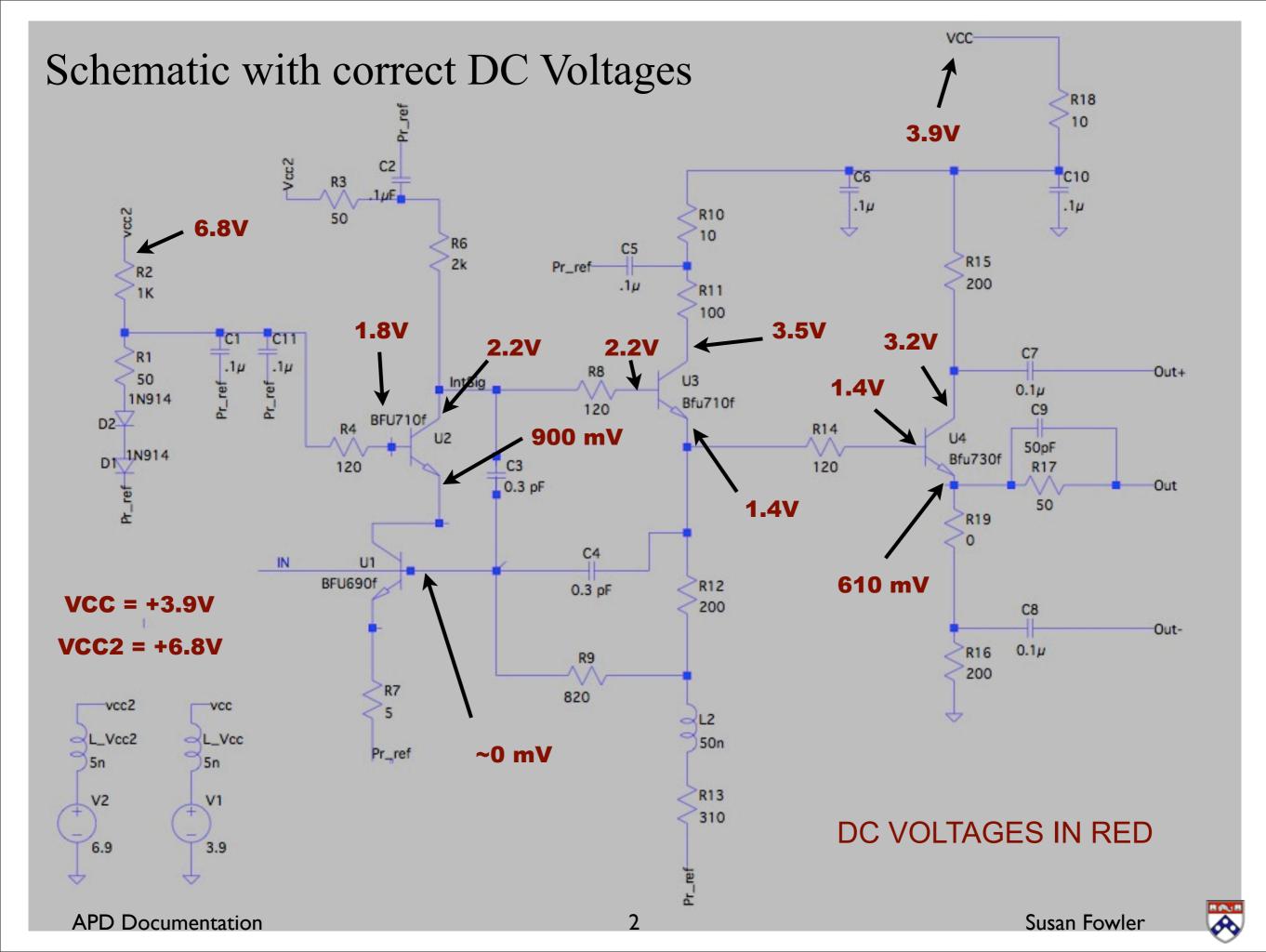
#### Contents of this document:

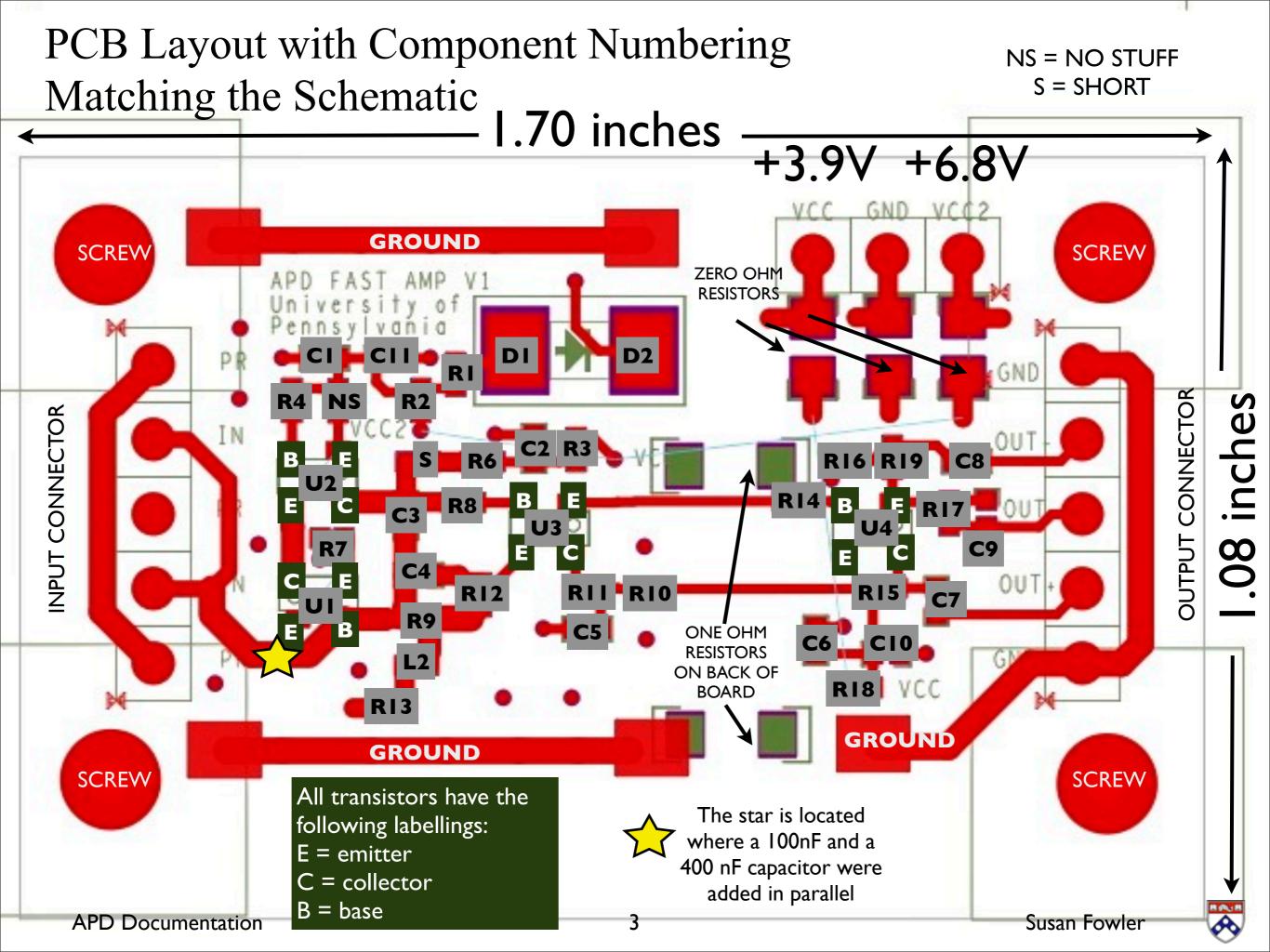
- Page 2: Schematic of the APD Circuit with the DC voltages listed (extremely useful for testing the board)
- Page 3: Layout of the PCB with some details and component numbering matching the schematic
- Pages 4-5: Photos and details of the boards with measurements, etc.
- Pages 6-7: Connector details
- Page 8: Transistor Locations
- Pages 9-10: Pictures of the unstuffed board



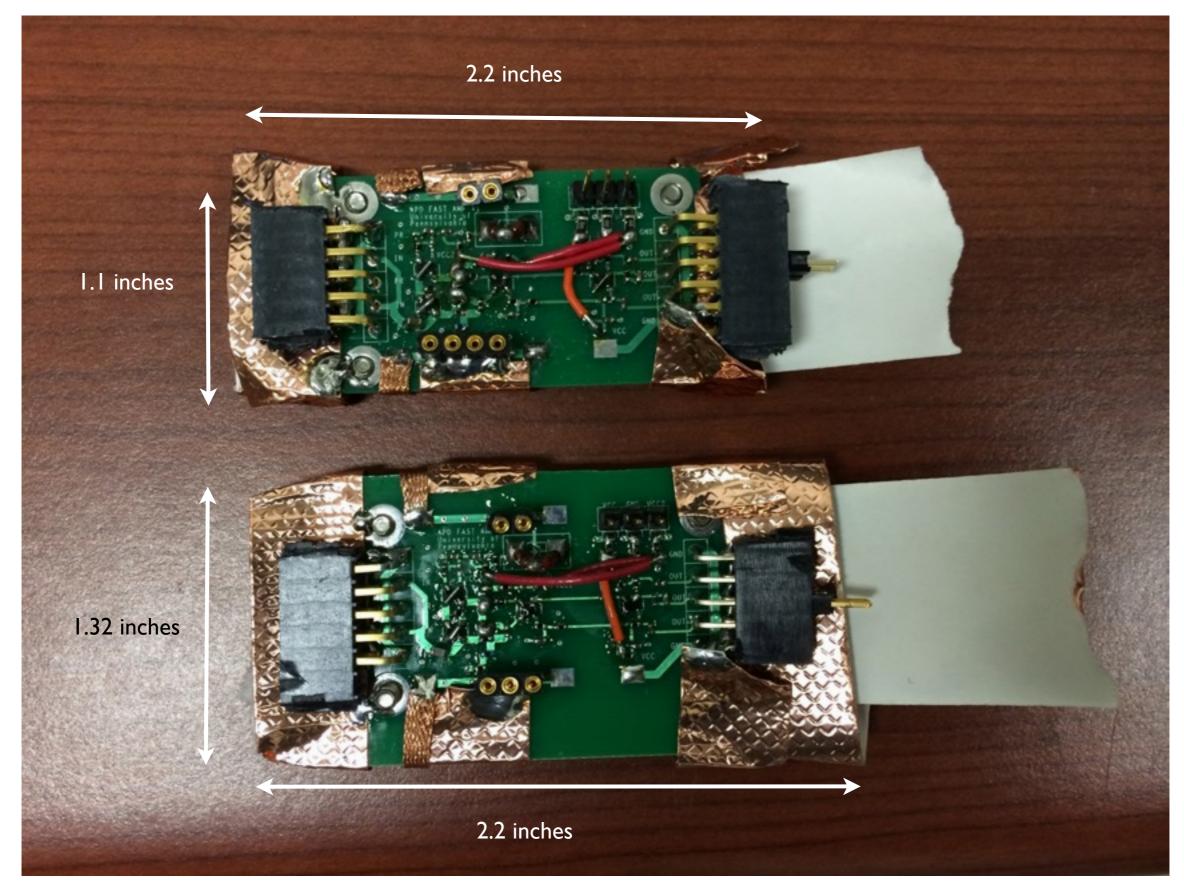
ABOVE IS A PHOTO OF THE TWO BOARDS SENT TO PRINCETON



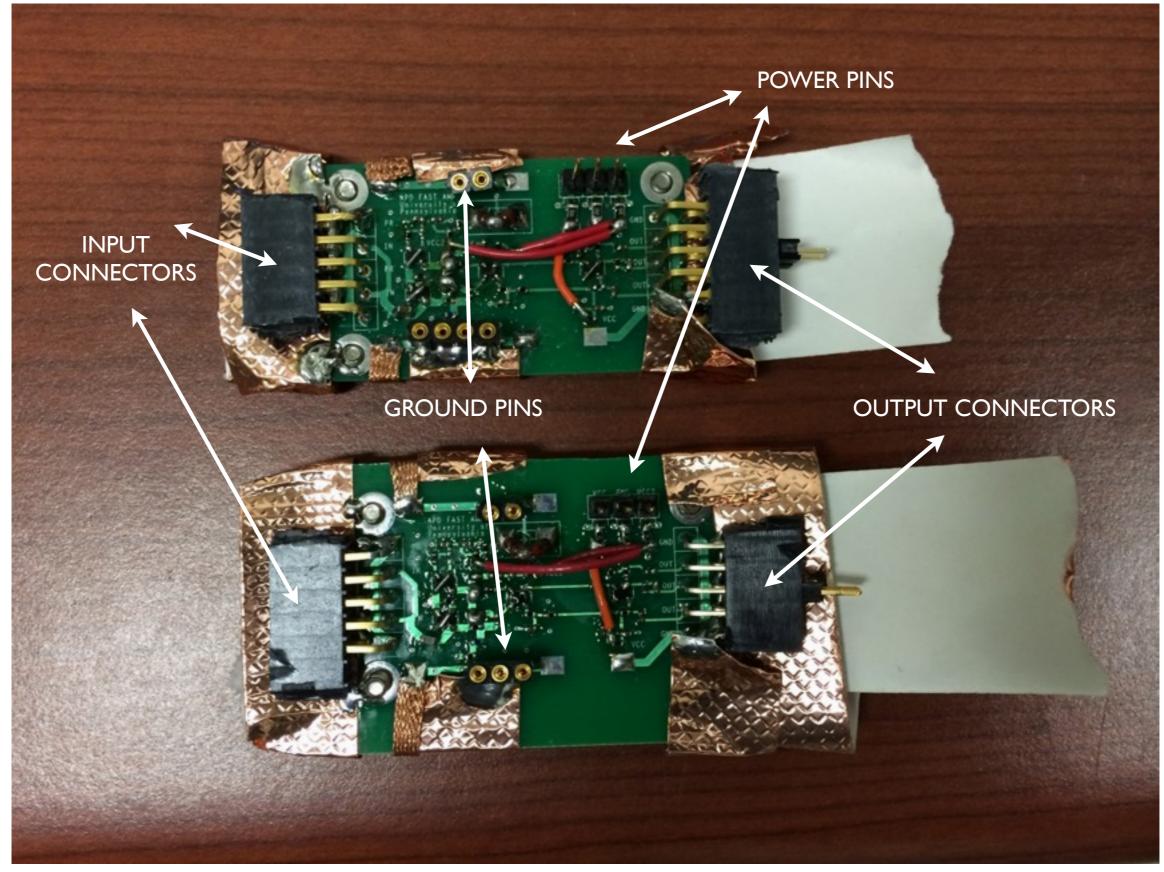




#### Board Details: Dimensions



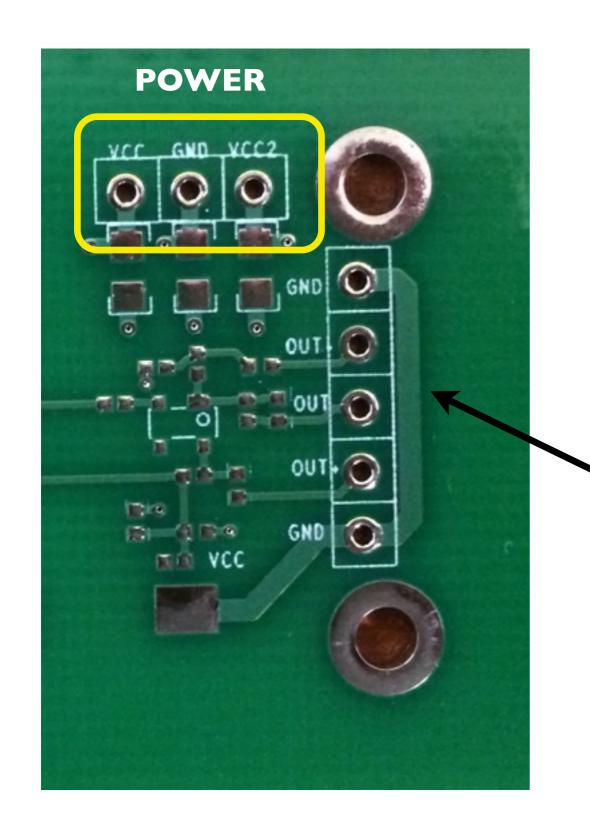
#### Board Details: Connectors and Other Details

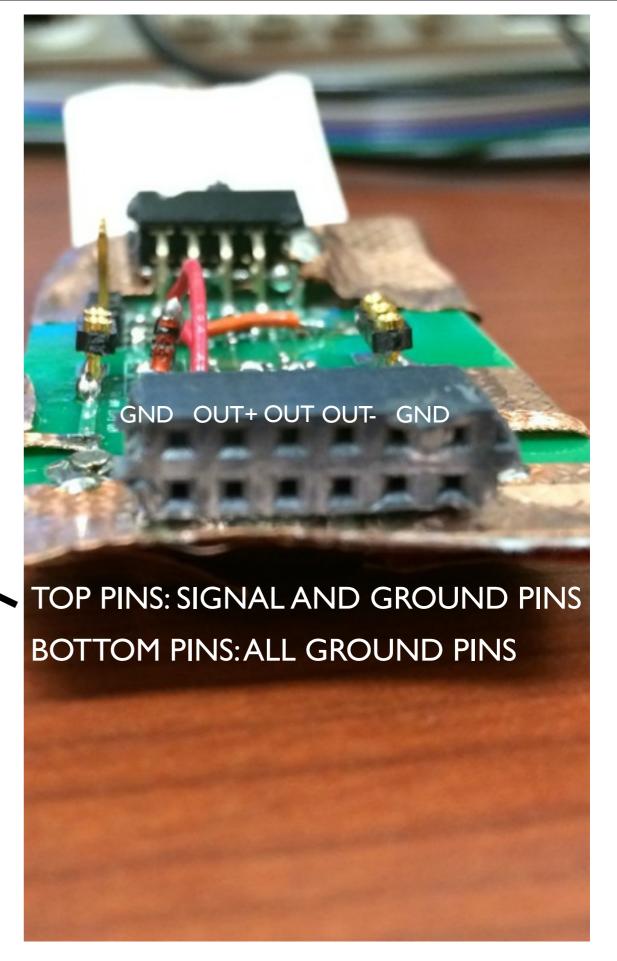


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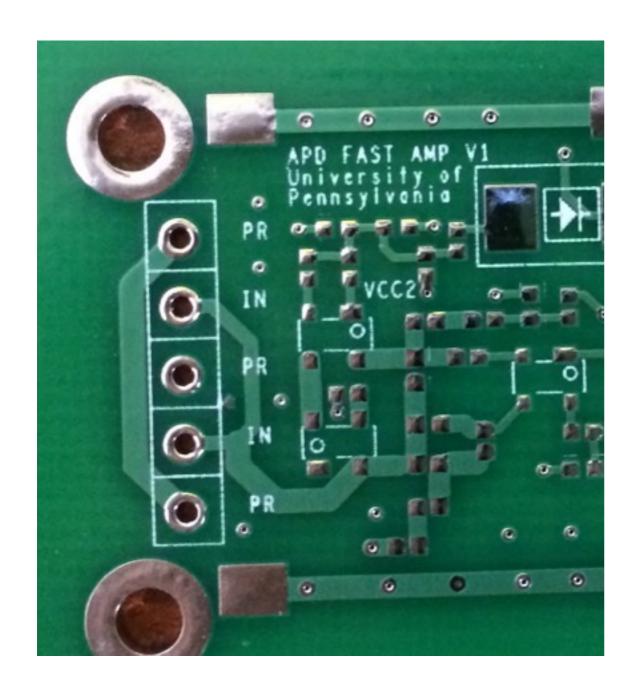


### Board Details: Output Connector

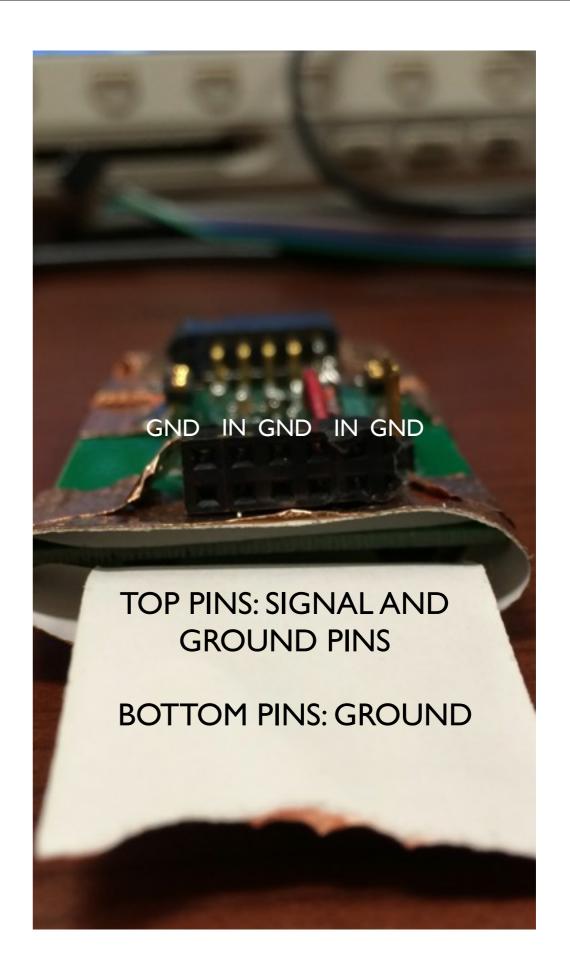




#### Board Details: Input Connector

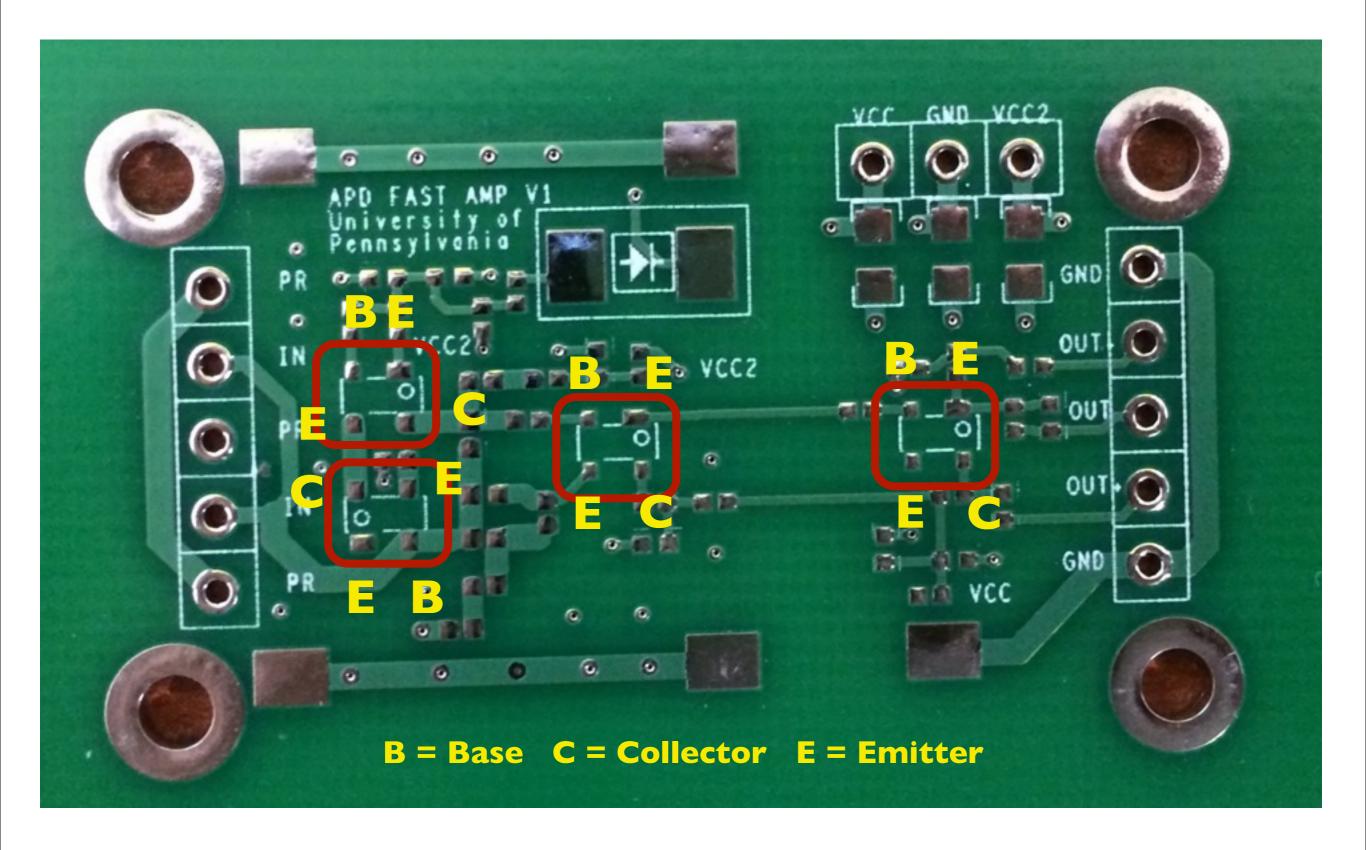


PR = INPUT GROUND

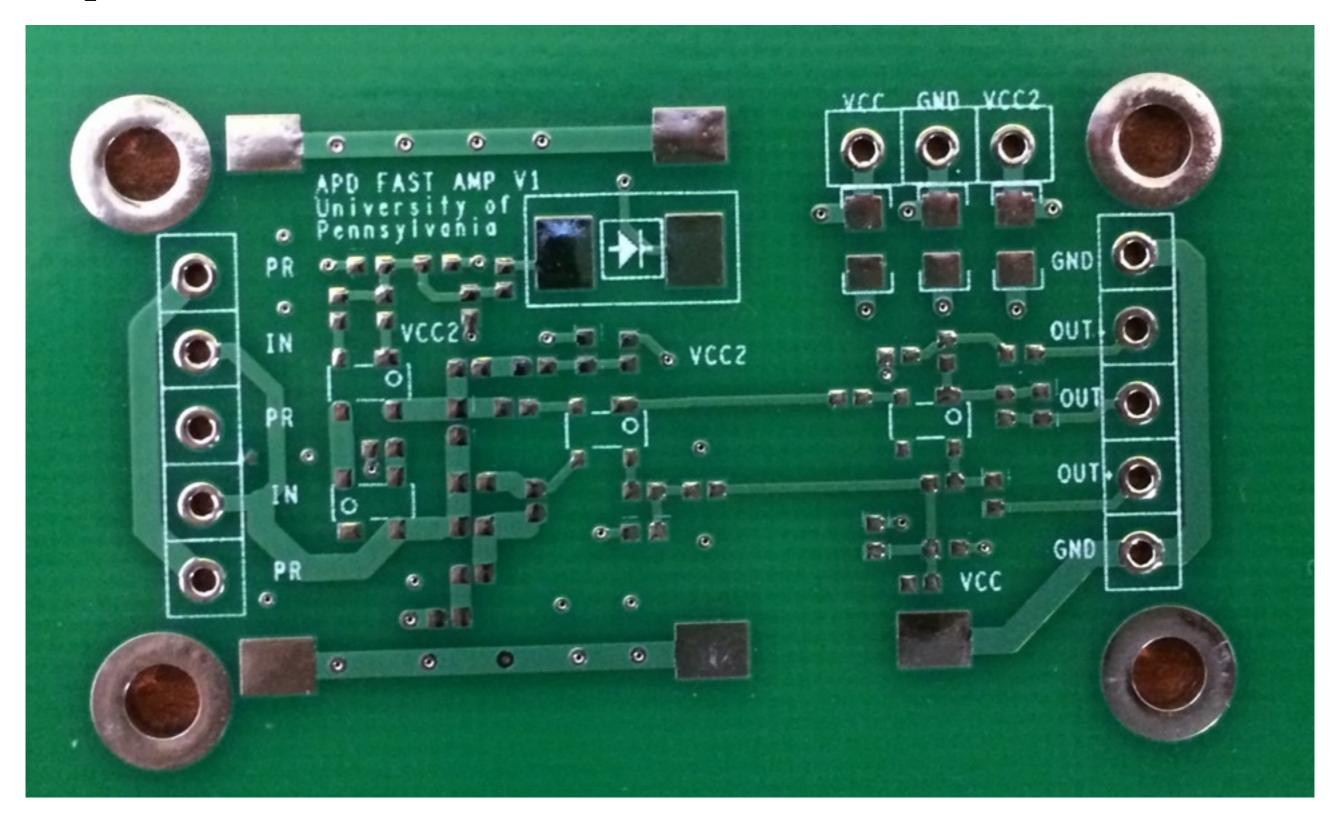


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#### **Board Details: Transistor Locations**



# Top of the Board



### Bottom of the Board

