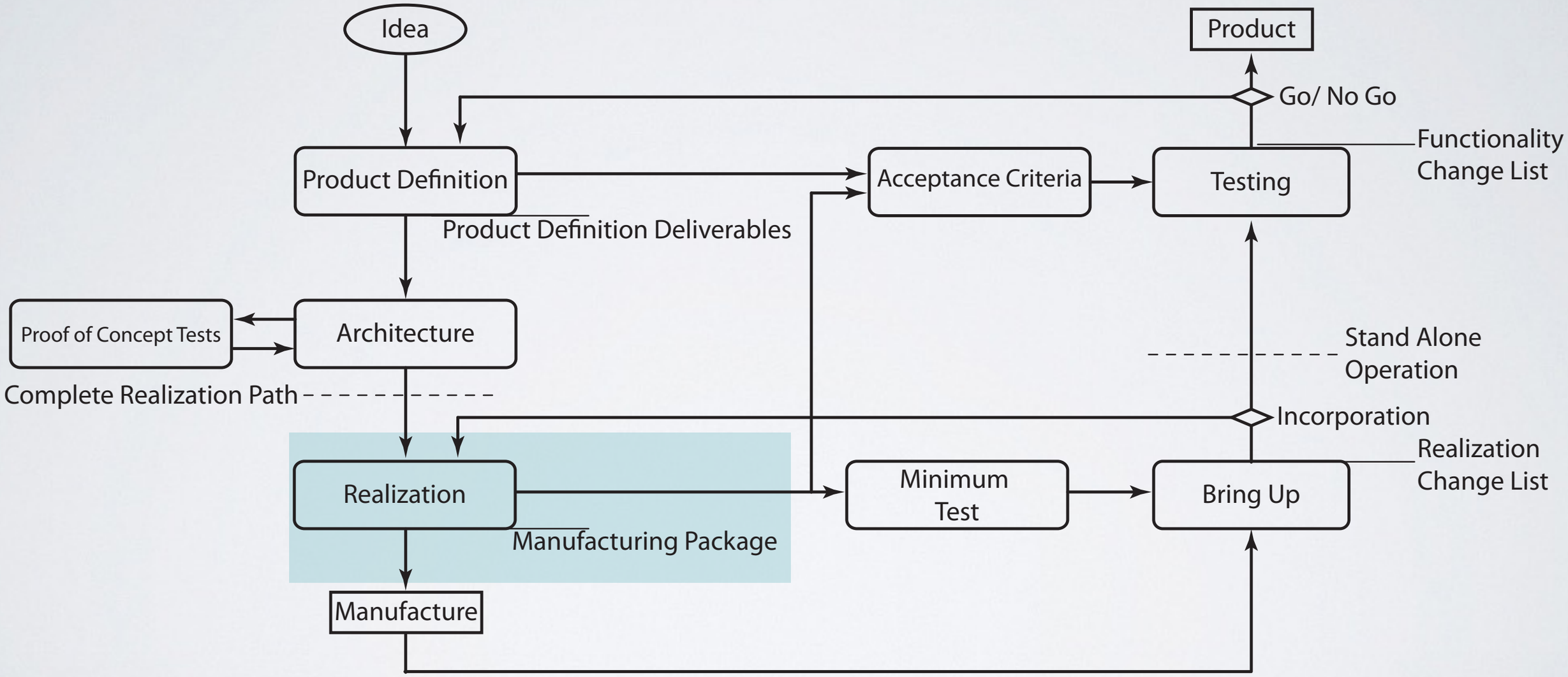
REALIZATION PHASE

The Engineer Accelerator
Malcolm Knapp

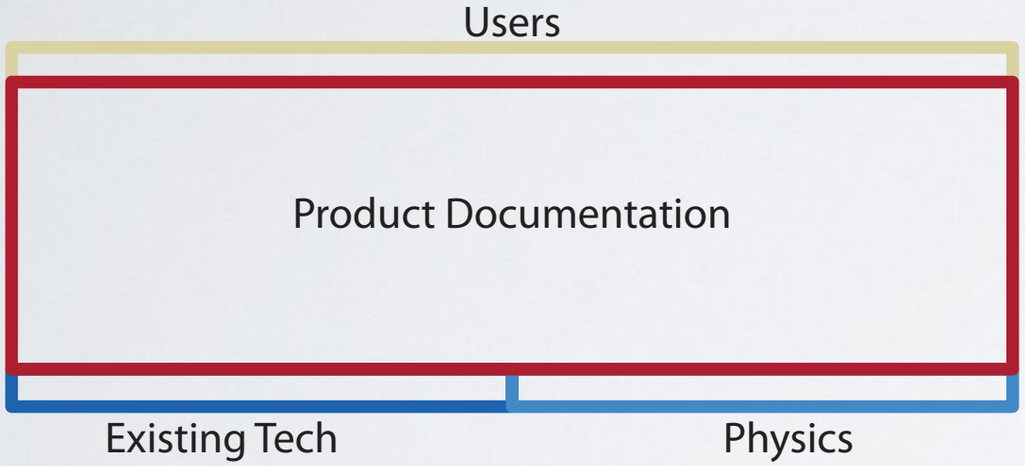
DEVELOPMENT PHASE

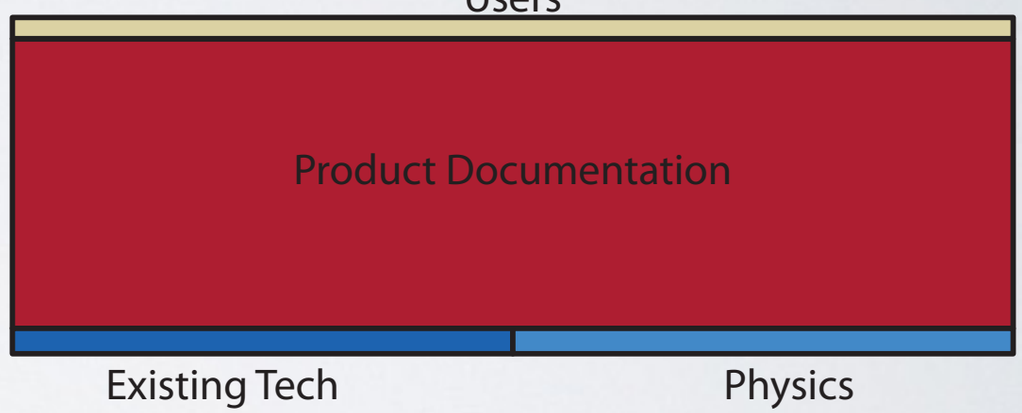


GOAL

TO GENERATE THE MANUFACTURING PACKAGE

PROCESS


Users
Product Documentation
Existing Tech
Physics

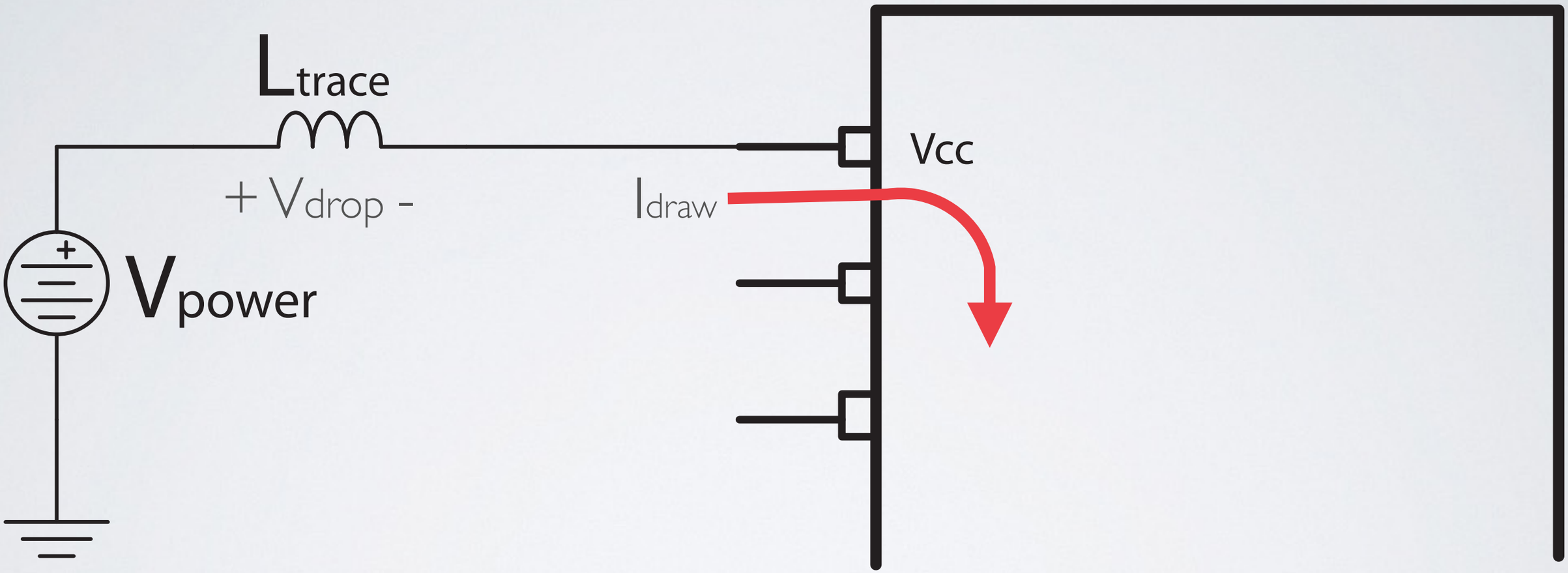

Users
Product Documentation
Existing Tech
Physics

REALIZATION ACTIVITIES

- Detailed Design
  - Bypassing
  - Damage Protection
  - ESD and EMI Protection
  - Design for Test
- Board Design
- BOM Entry
- Cable Design
- Manufacturing Package

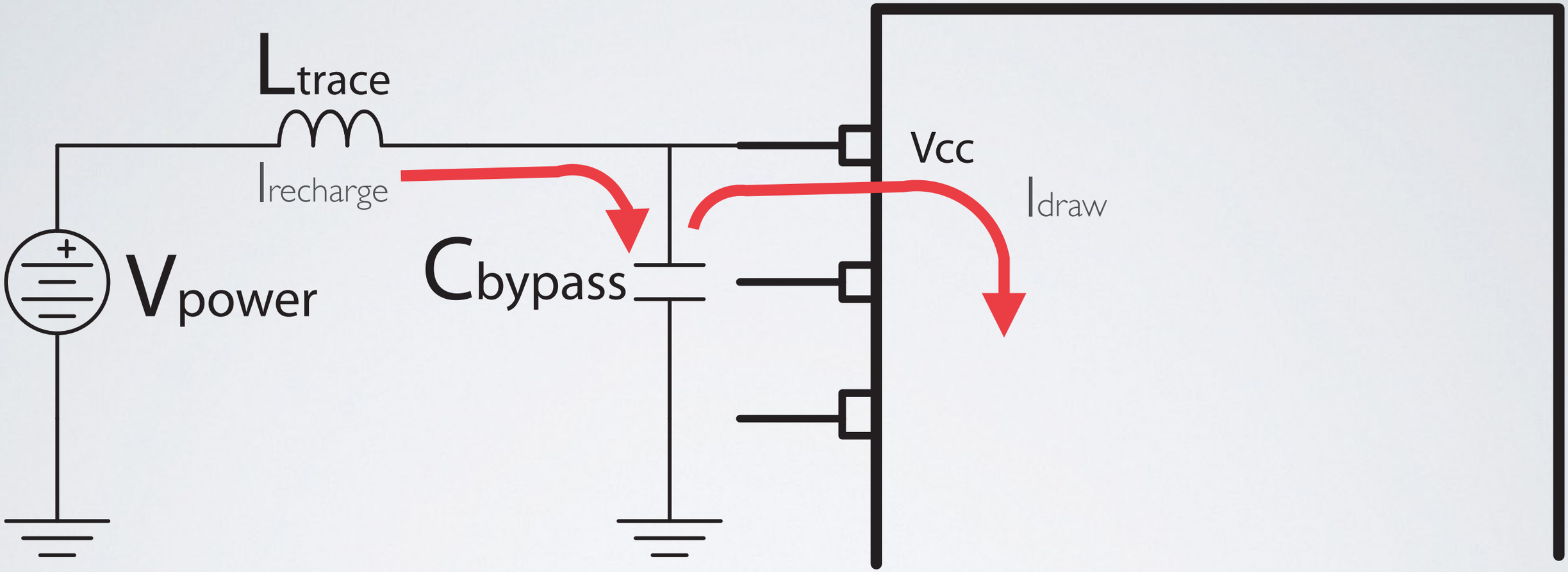
DETAILED DESIGN

BYPASSING



Vcc = Vpower -Vdrop

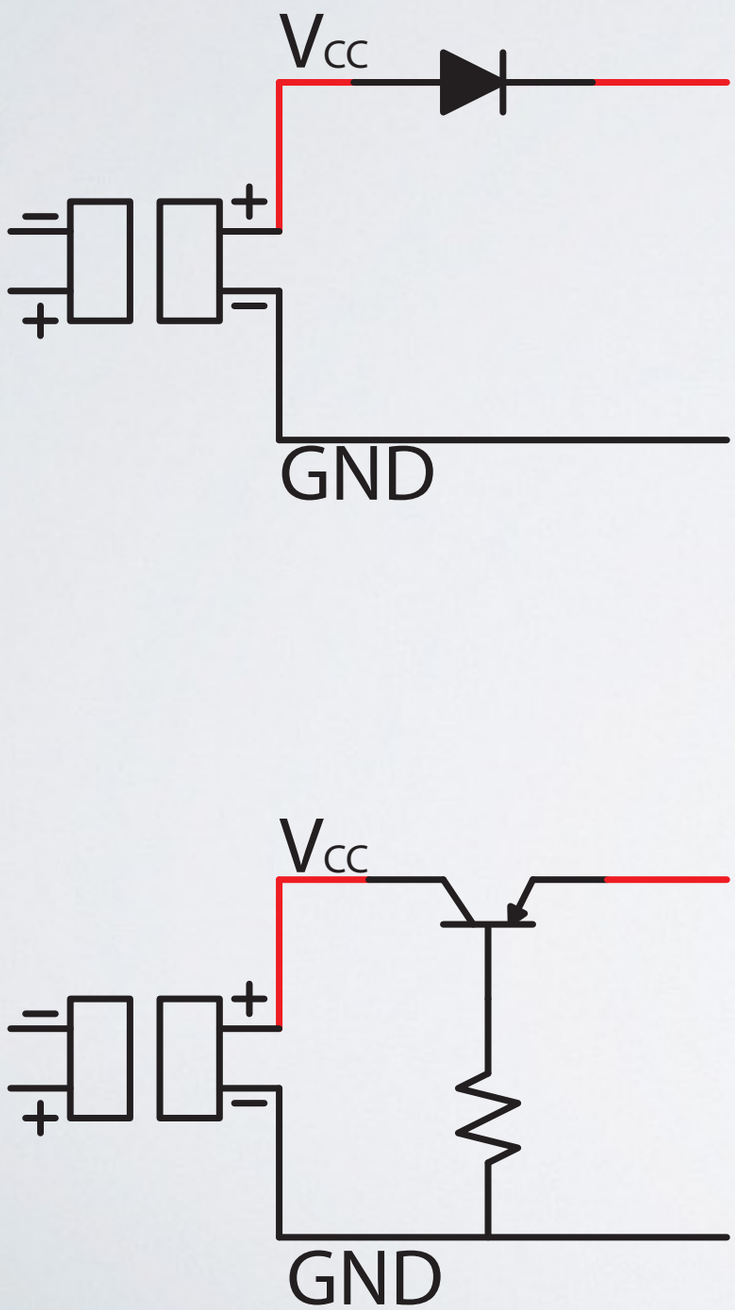
BYPASSING



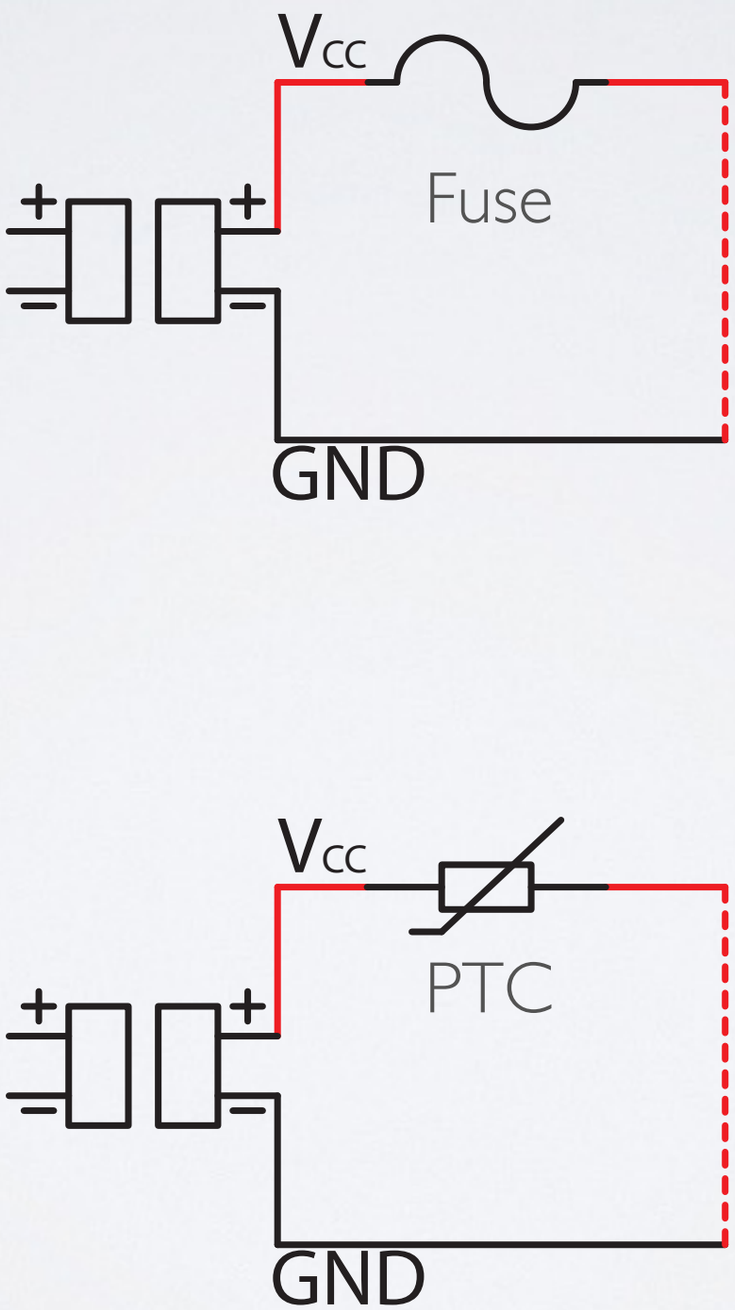
Place Bypass capacitor by each power pin

DAMAGE PROTECTION

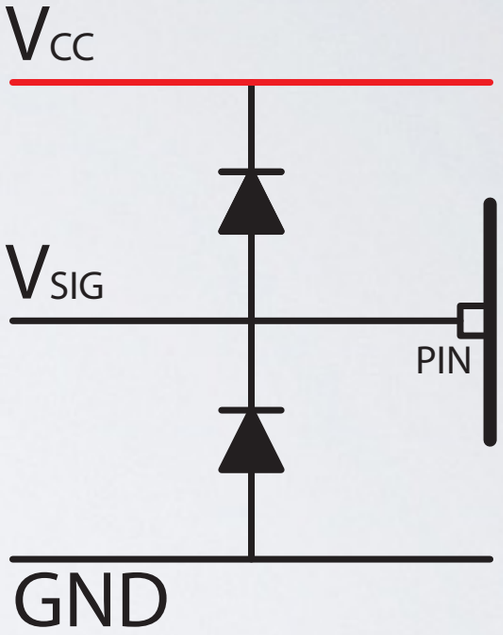
Reverse Polarity

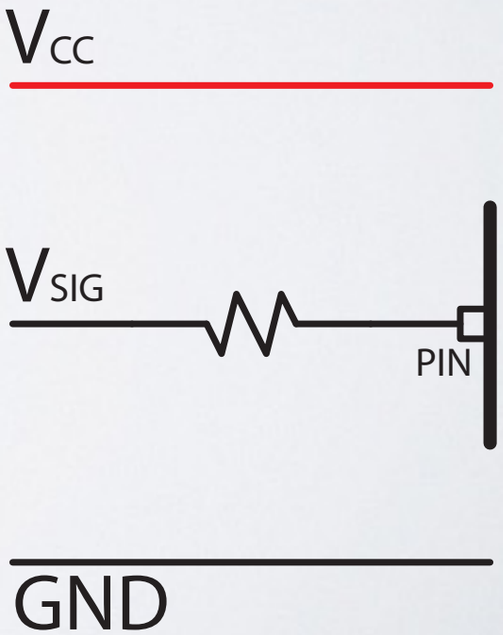


Short Circuit

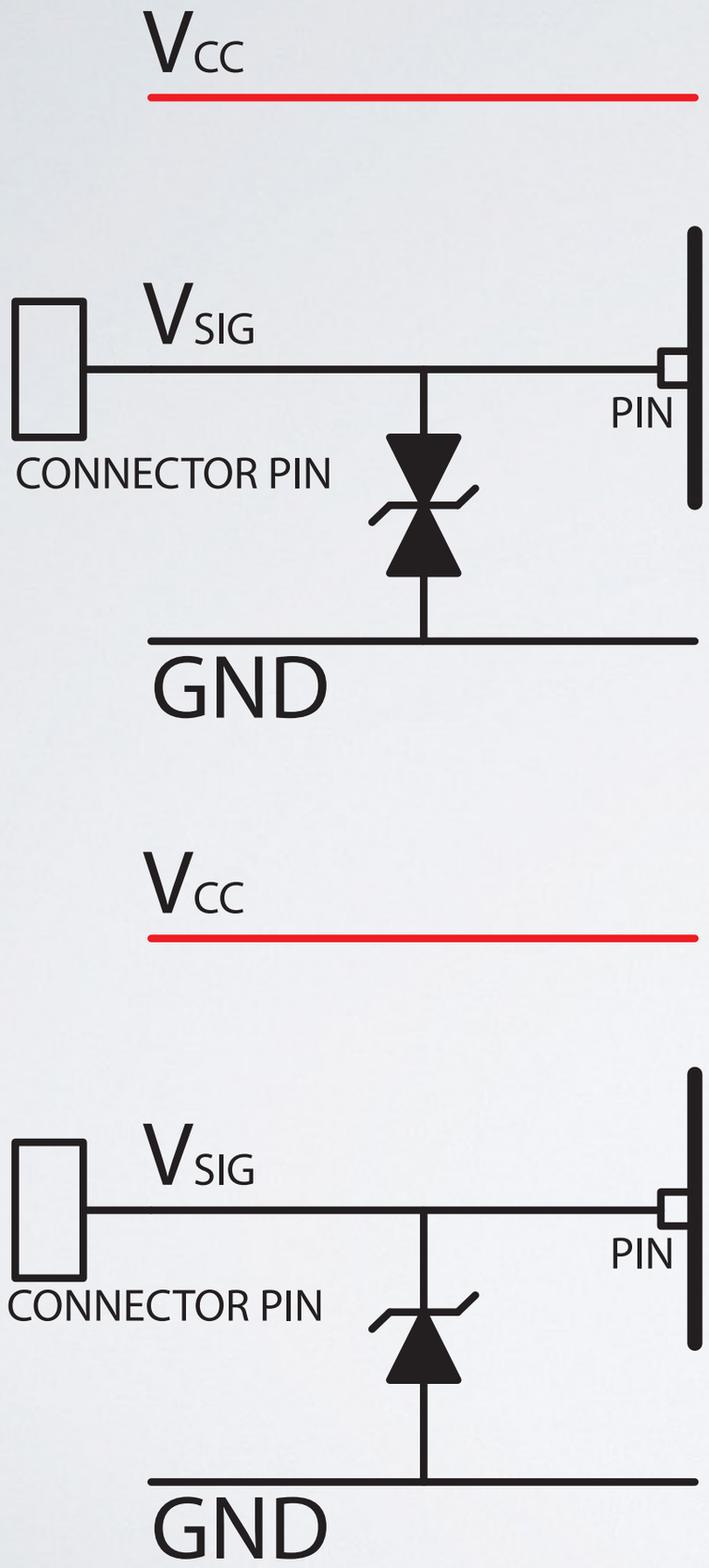


Over Voltage Over Current

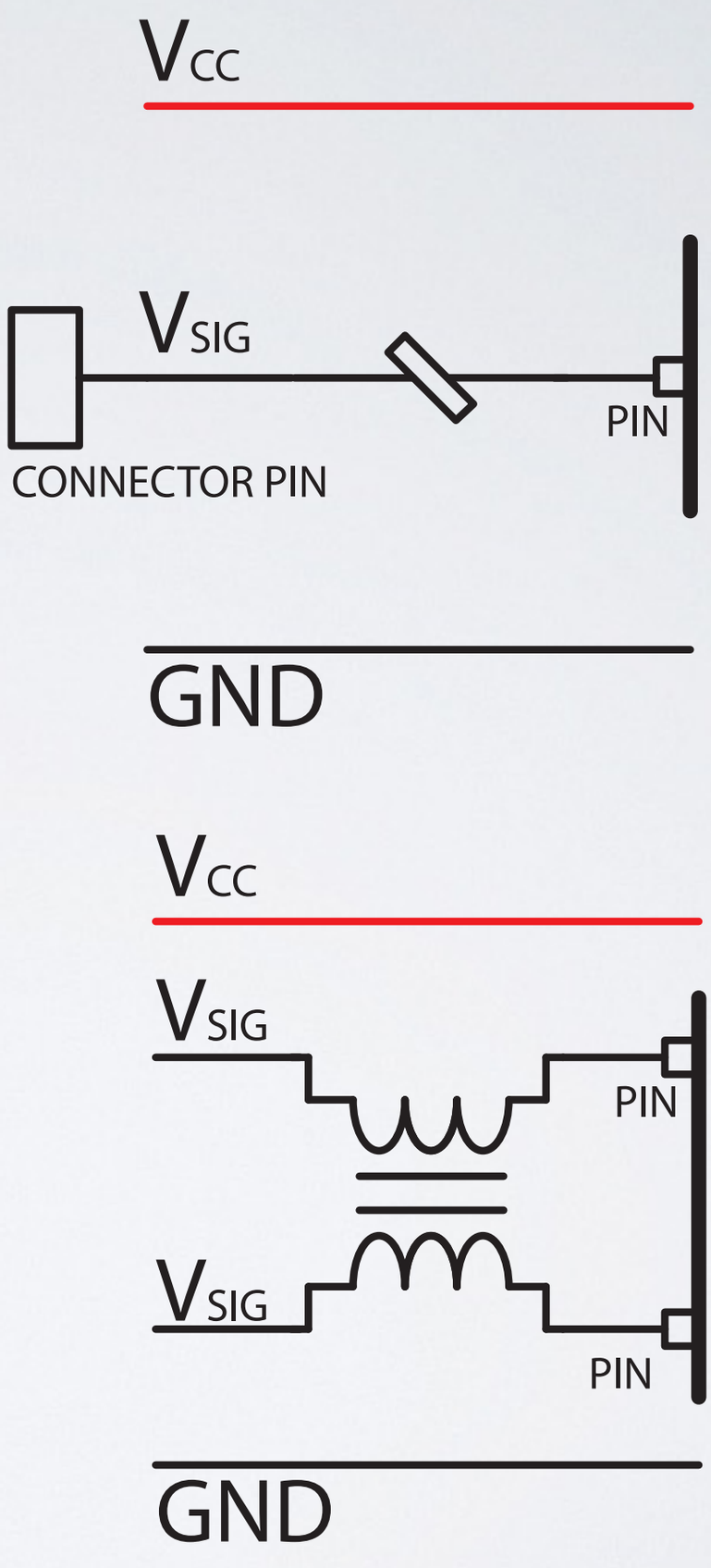




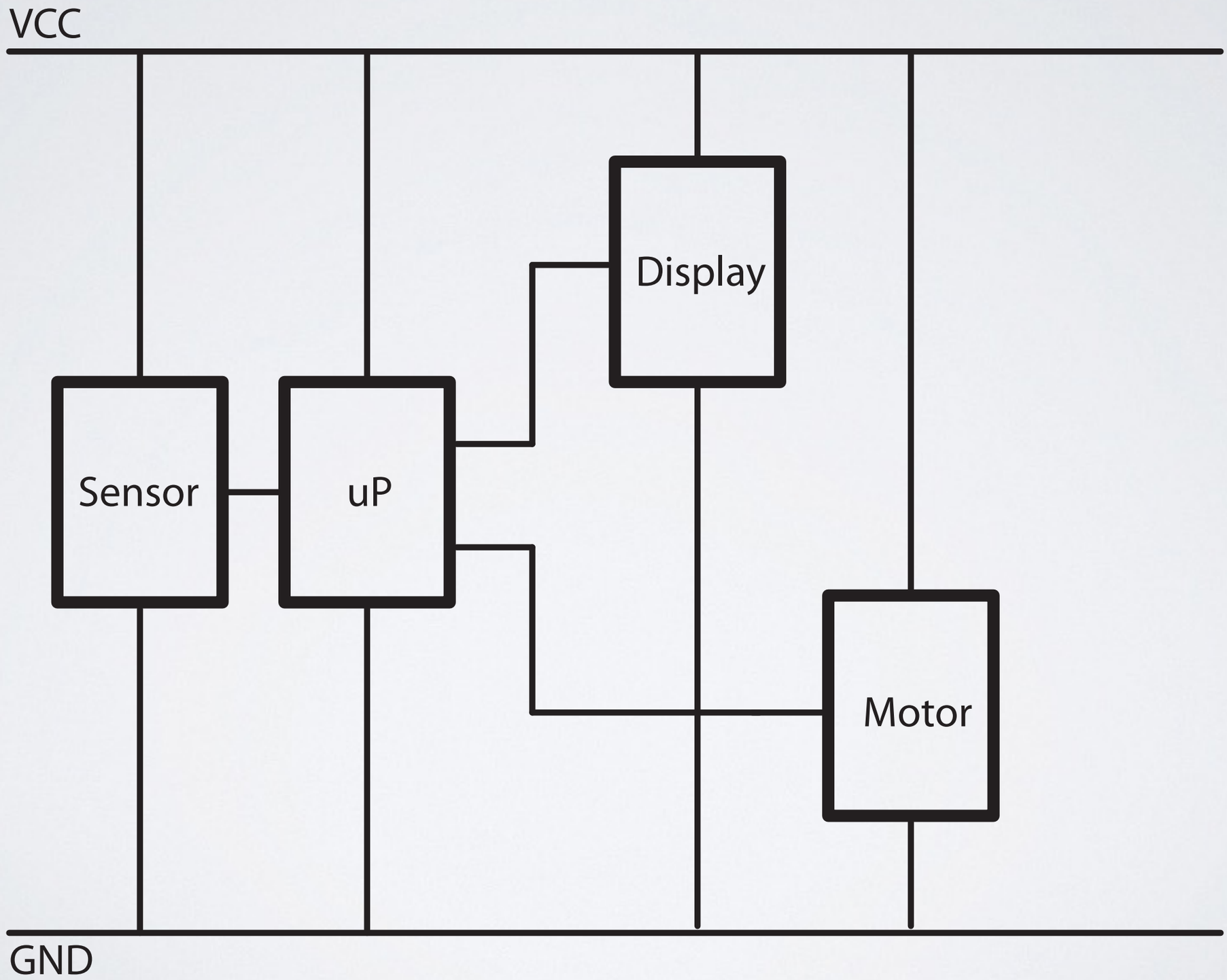
ESD Protection



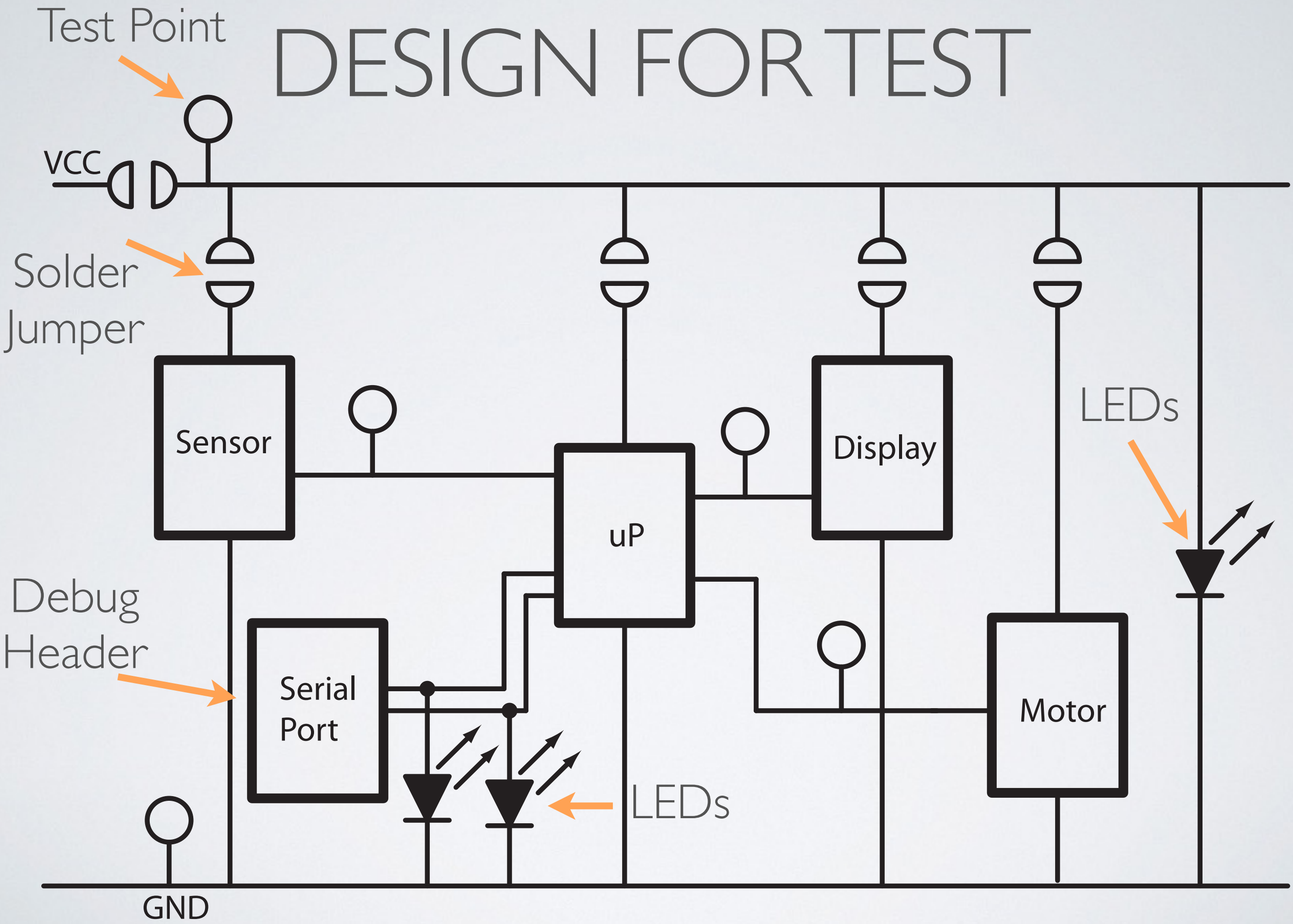
EMI Protection



DESIGN FOR TEST



DESIGN FOR TEST



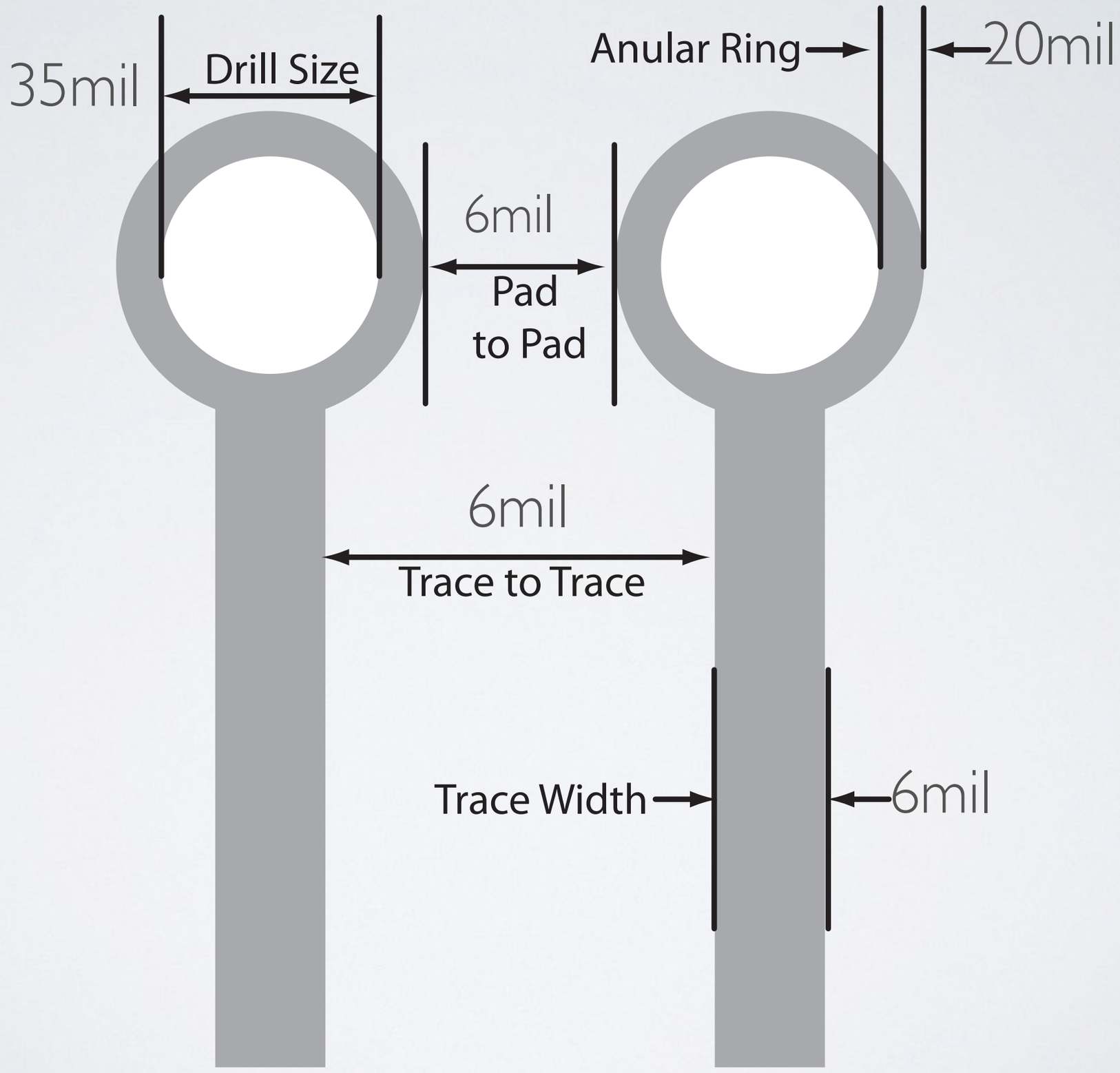
CONSTRAINTS

- Design Guidelines
- Manufacturing
- Physical
  - Thermal
  - Electromagnetic Interference

SCHEMATIC DESIGN GUIDELINES

LAYOUT DESIGN GUIDELINES

LAYOUT DESIGN RULES



DELIVERABLES

- PCB
  - Library
  - Schematic Capture
  - Layout
- Full BOM
- Cable Definition
- Manufacturing Package

DESIGN REVIEW

- Design File Release for Review
- Feedback
- Determination of Resolution
- Design File Update and Role Rev
- Design File Resolution Check
- Design File Release

PHASE TRANSITION

- Design Review completed

- Release of the Manufacturing Package