

Required Components

- 2x 4.7 uF Capacitor SMD 1206 (C1 & C2)
- 2x LED SMD 1206 (LED1 & LED2)
- 2x 47K Ω Resistor SMD 1206 (R3 & R4)
- 2x 100 Ω Resistor SMD 1206 (R1 & R2)
- 2x PNP Transistor SOT323 (T1 & T2)
- 1x 20mm Battery Holder (BT)

Optional Components

- 2x SMD 805 Resistor
- 2x SMD 603 Resistor
- 2x SMD 402 Resistor
- 2x SMD 201 Resistor

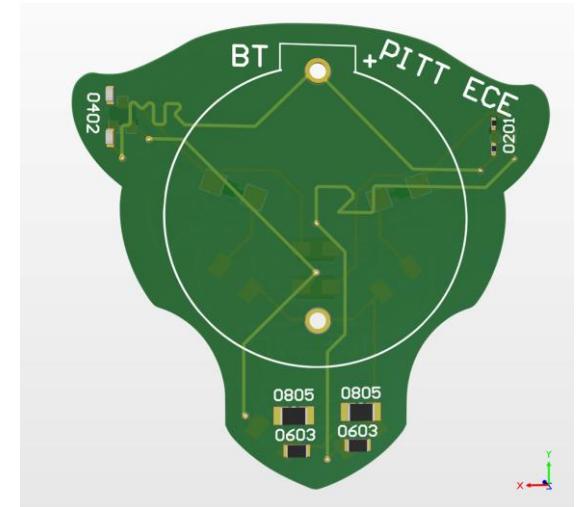
Surface Mount Soldering Practice

Overview

The purpose of this assignment is to introduce you to soldering Surface Mount Devices (SMD). Once all required components are soldered the eyes will flash back and forth. Optional components have no functional purpose and are intended to test your skills.

Steps

1. Start in the center (soldering the capacitors) note the top capacitor has the anode to the left and the lower anode is to the right
2. Solder on LEDs, both cathodes are towards the center
3. Solder on resistors followed by Transistors
4. Put battery connector on the back and solder the leads on the front of the board



Tips and Tricks

- Use tweezers!! You cannot solder small SMDs without using tweezers.
- Put a small amount of solder on one of the pads, then remelt it and use tweezers to place the component. Next add a small amount of solder to the other pad to complete the connection.
- If both sides are soldered but you need to remove the components use a hot air gun and tweezers to remove it. Or you can use two soldering irons, one to heat up each solder joint and lift the part off the board.
- Use a fine tip/point soldering tip and make sure it is clean.
- Be PATIENT, learning to solder SMDs can be challenging at first.

