

AVR Sensitive Components

Board Safety:

Caution:

Many of the components used in this workshop are sensitive to electrostatic discharge (ESD). Please ensure that you are wearing your protective wrist strap at all times. There will be a warning slide when components are ESD and heat sensitive.

Clipping leads can sometimes cause them to separate in a rapid manner that could cause injury. Please take caution when clipping leads. Wear your safety glasses at ALL TIMES!

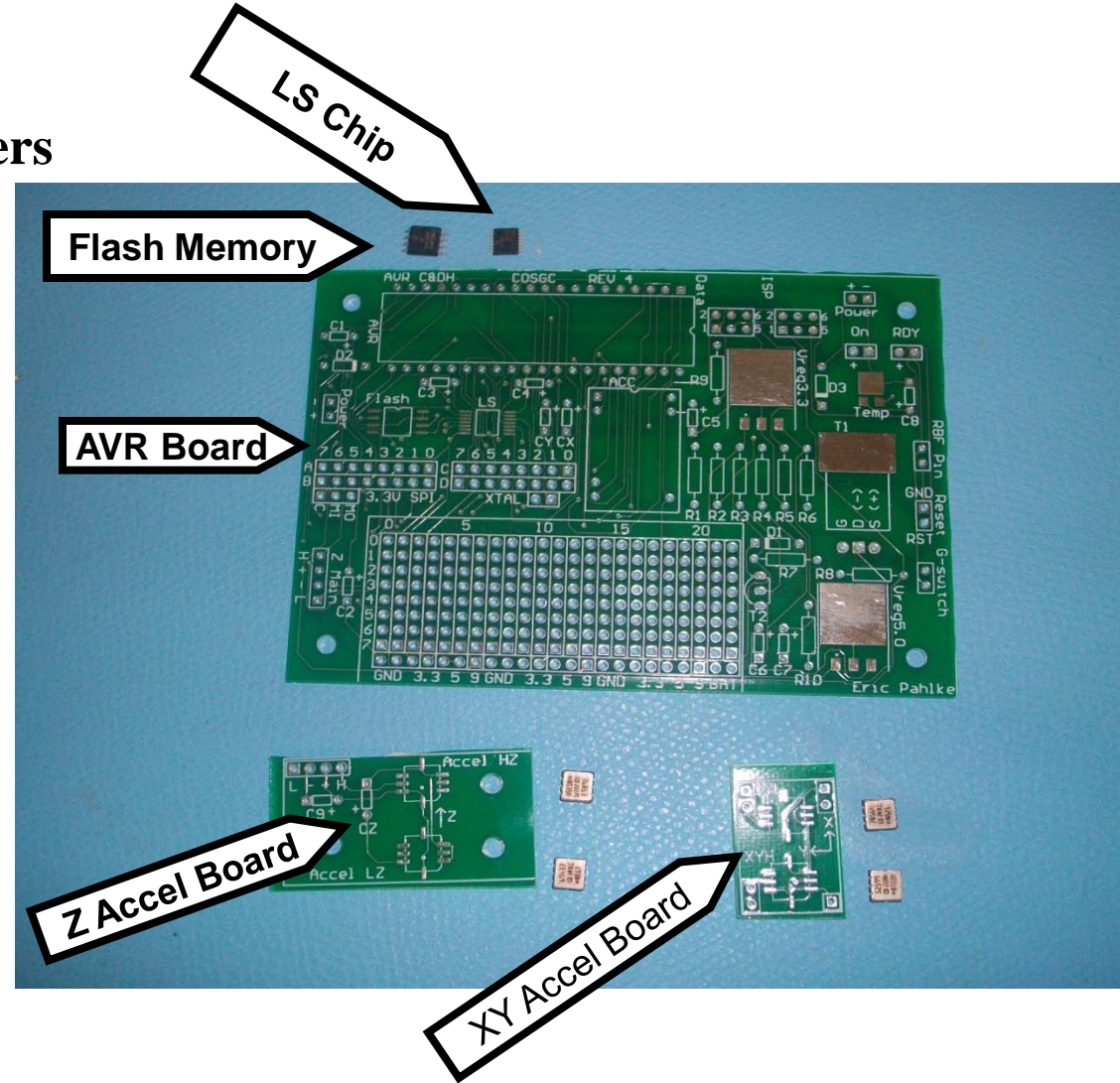
Step: Recognizing Components

- You should have 4 accelerometers

- 1 XY-low
- 1 XY-high
- 1 Z-low
- 1 Z-high

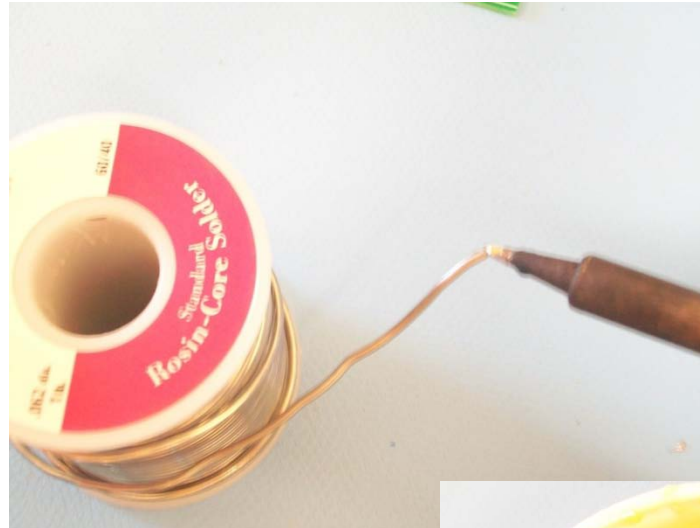
- These accelerometers are static sensitive and caution must be used when handling these components. Make sure you are grounded.

- The other two components are the Flash Memory Chip and the Level Shifter (LS) Chip. These components are also very sensitive.



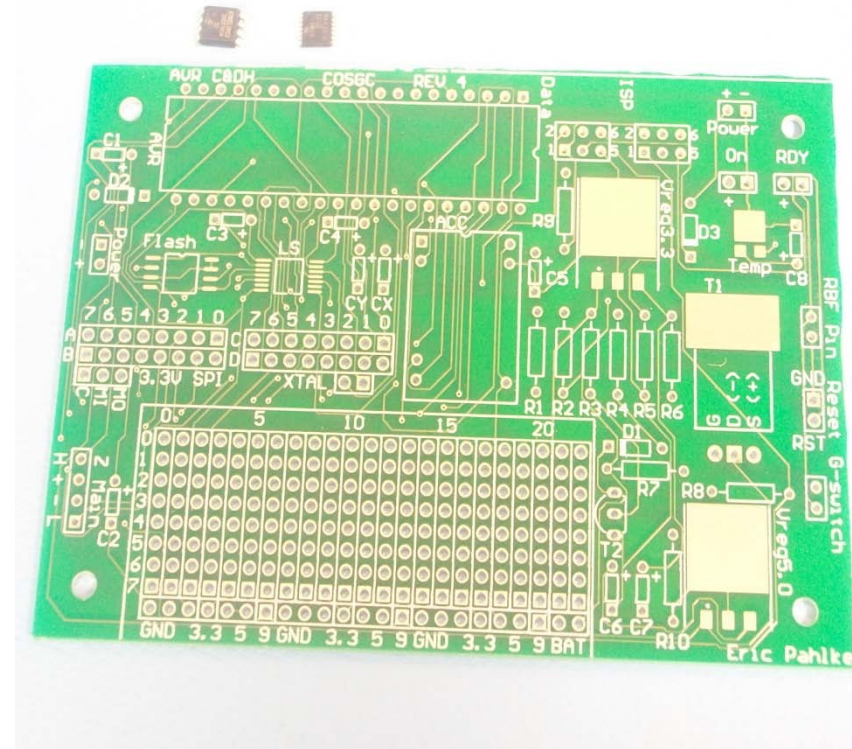
Soldering Sensitive Components

- When soldering sensitive components it is important that you do not hold the soldering iron on the component for more than 5 seconds.
- *Rosin soldering flux* helps solder flow easily and may be very helpful.

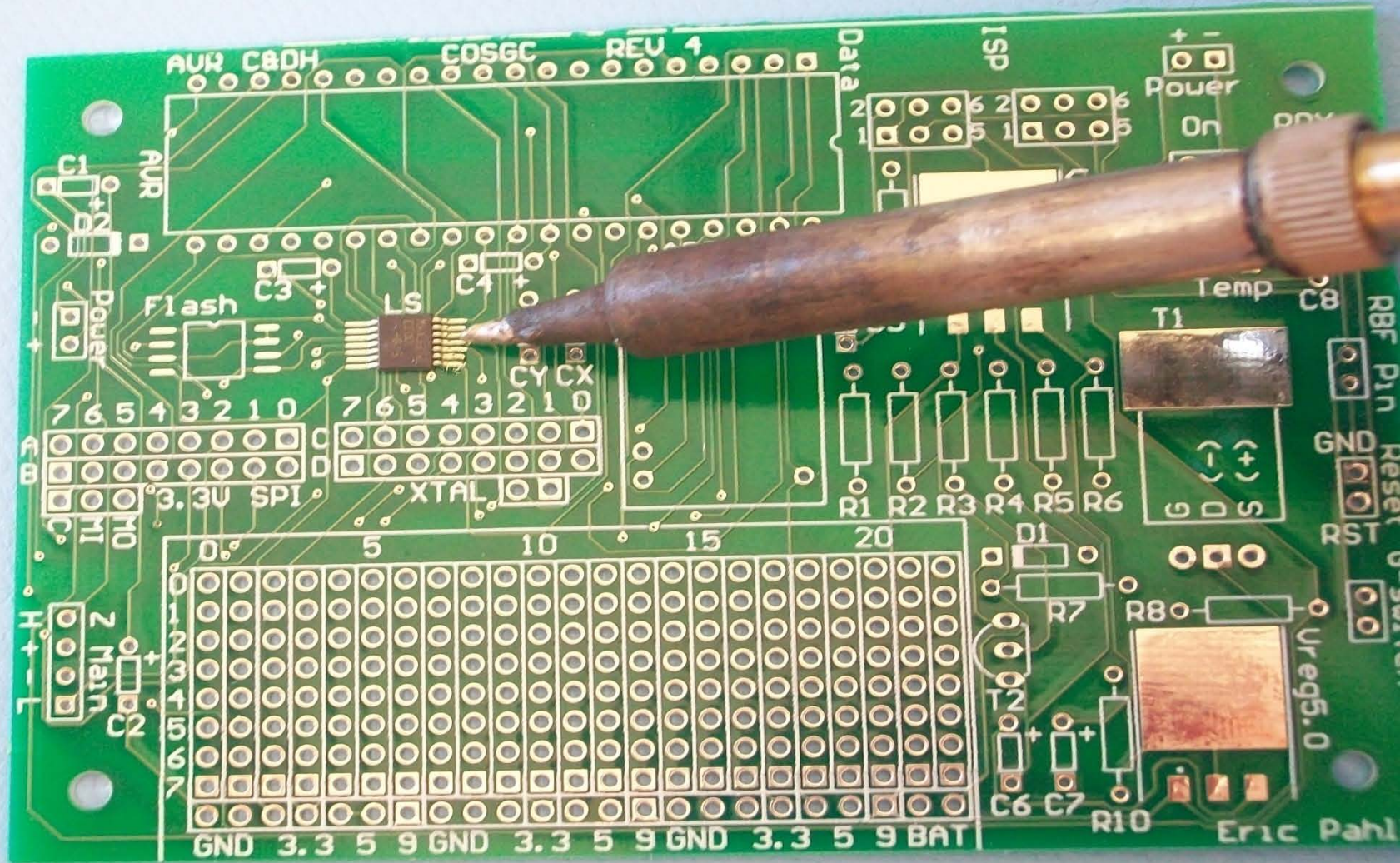


Soldering the flash memory and level shifter chips

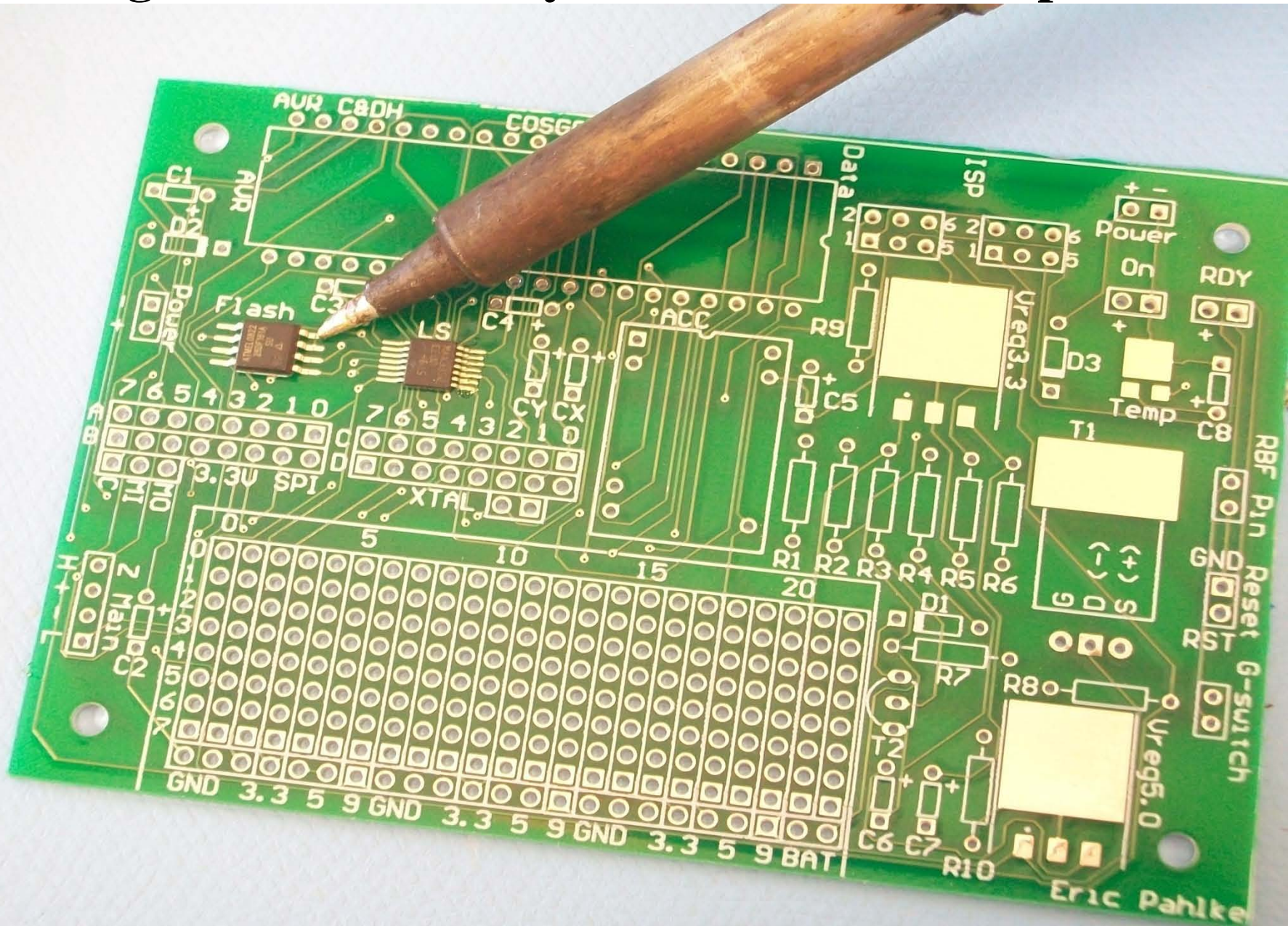
- Now we will be soldering the level shifter chip and the flash memory chip on to the AVR board.
- On the AVR board there is a spot for the flash memory (flash) and the level shifter chip (LS)
- For orientation, the small circle on the upper corner of the chips must be facing upwards on the AVR board.



Soldering the flash memory and level shifter chips

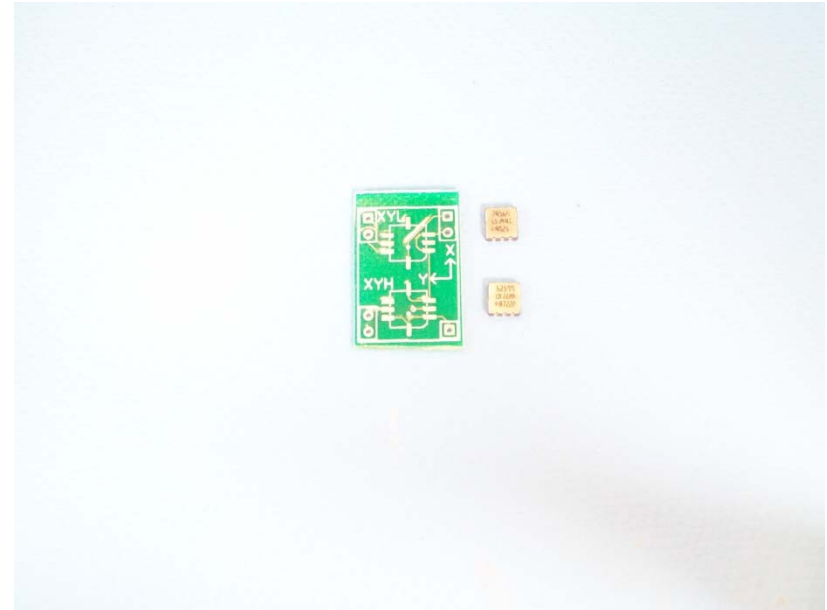


Soldering the flash memory and level shifter chips

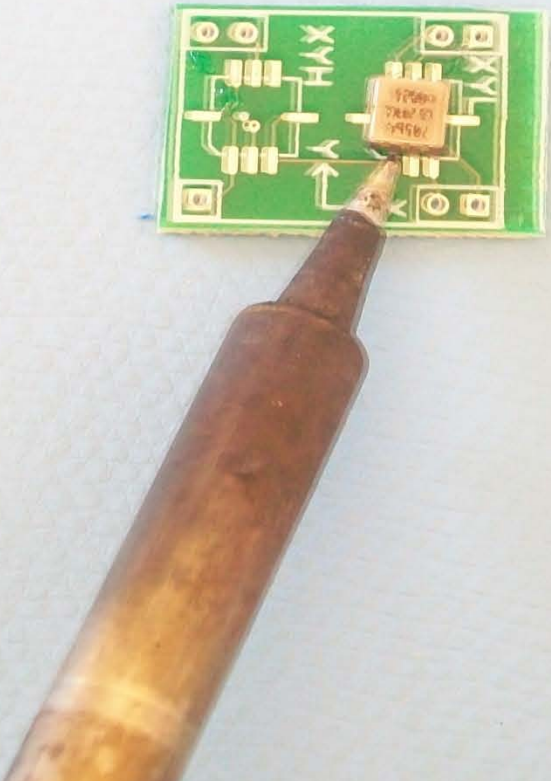


Soldering the XY Accelerometers

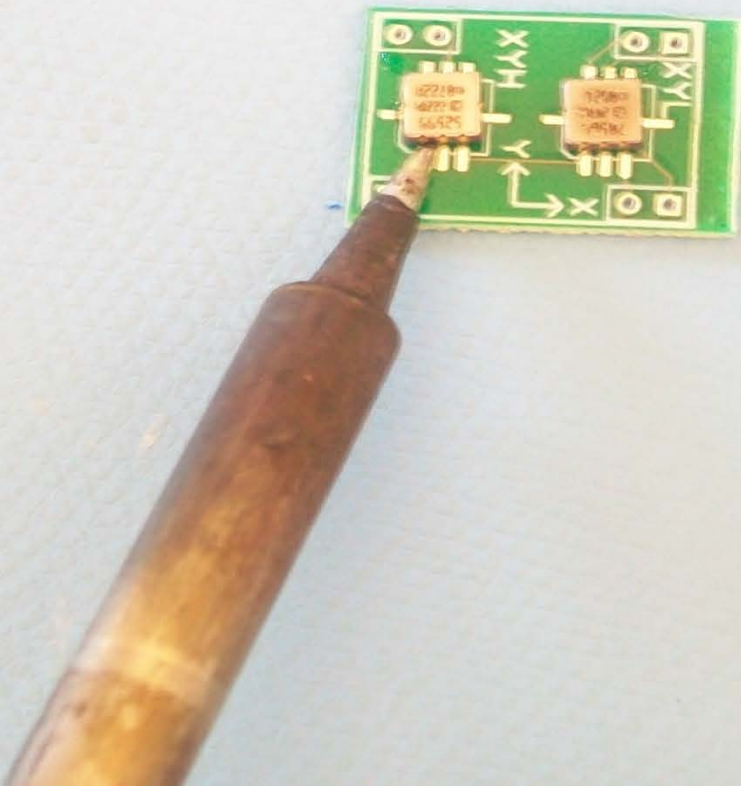
- Now you will be soldering the XY low and XY high accelerometers onto the XY accelerometer board.
- Make sure you match the corresponding accelerometer to its place on the board.
- Orient the accelerometer numbers to read left to right if board is turned where you can read 'XYH' and 'XYL'



Soldering the XY accelerometers



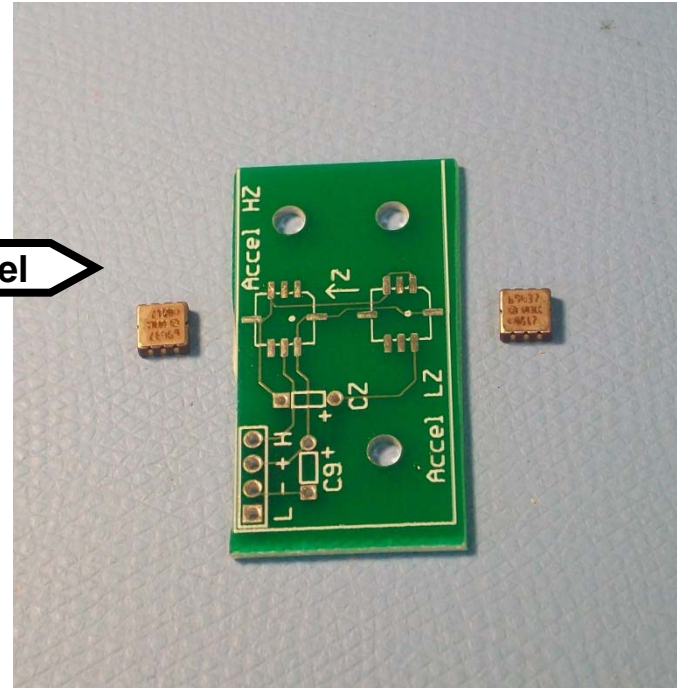
Soldering the XY Accelerometers



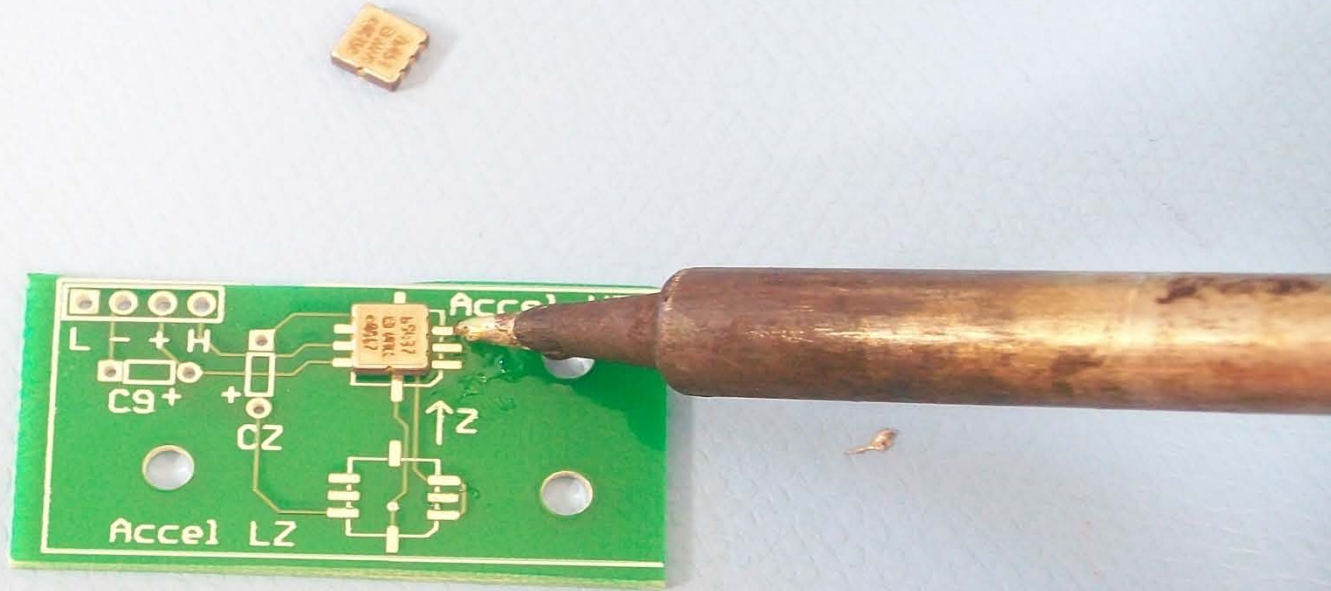
Soldering the Z accelerometers

- Next, we will be soldering the Z low and high accelerometers onto the Z axis board
- Make sure you match the corresponding accelerometer to its place on the board.
- Orient the accelerometer numbers to read left to right if board is turned clockwise

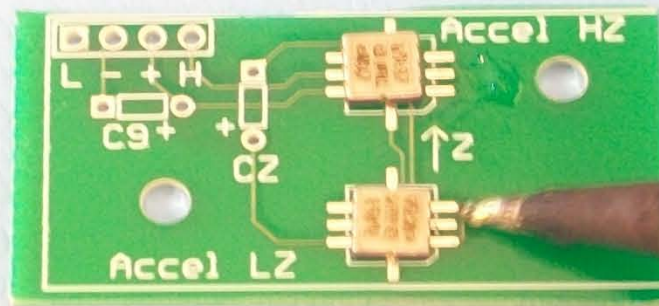
Z Accel



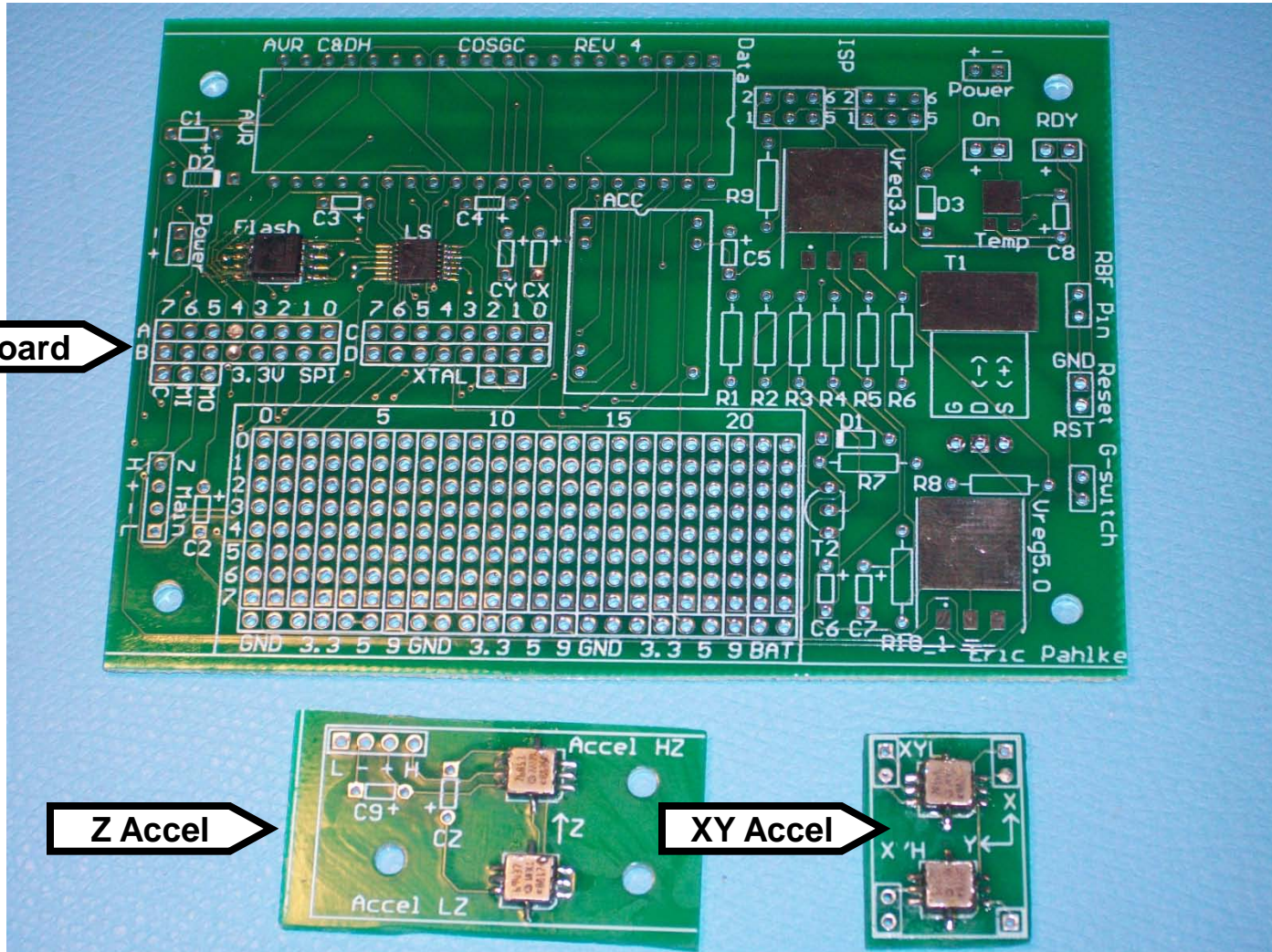
Soldering the Z accelerometers



Soldering the Z accelerometers



Finished Products



AVR Board

Z Accel

XY Accel