

## WTPPS-XXXX-X & WTPPL-XXXX-X

### **Pneumatic Wire Insertion Tool Instructions**

This pneumatically driven hand insertion tool is used to simplify the insertion of wires into Zierick Torsion Lock IDC (Insulation Displacement Connector) terminals. It is the most practical and user friendly way to terminate a wire into the coined cutting/retention blades of the IDC terminal. The ZMC Torsion Lock IDC terminal supports a wide array of different wire gauge sizes that range from 30 to 14 AWG. Zierick has developed unique insertion head assemblies that correspond to the different IDC sizes and configurations.

#### Features and Benefits

The WTPPX series of hand insertion tools features a quick and powerful pneumatic hammer assembly that makes easy works of the wire insertion process. It is designed to be a fully encapsulating tool that shrouds the terminal eliminating the worries of misalignment while performing the insertion. The benefits of using the pneumatic hand tool are that it provides easy alignment and actuation. It also eliminates the physical fatigue that comes from using a manual force hand insertion tool.

For additional information please see our web site [www.Zierick.com](http://www.Zierick.com) or [http://zierick.com/pages/sm\\_idc.php](http://zierick.com/pages/sm_idc.php) to view the complete family of Zierick's Surface Mount IDCs. Our line of Through Hole IDC's can be found at [http://www.zierick.com/pages/th\\_idc.php](http://www.zierick.com/pages/th_idc.php).

Components of the  
Pneumatic Hand Tool

(See diagram # 1):

1. Wire insertion blade
  2. Pneumatic adaptor
  3. Shroud
  4. RH20 Pneumatic Hammer
  5. Trigger
- F. This is the side of the Shroud that should face the coined IDC termination slot.

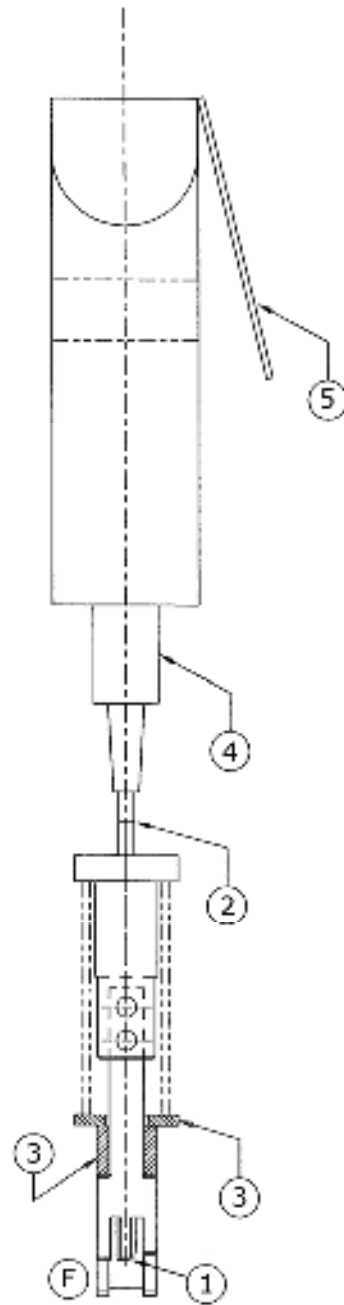


Diagram # 1

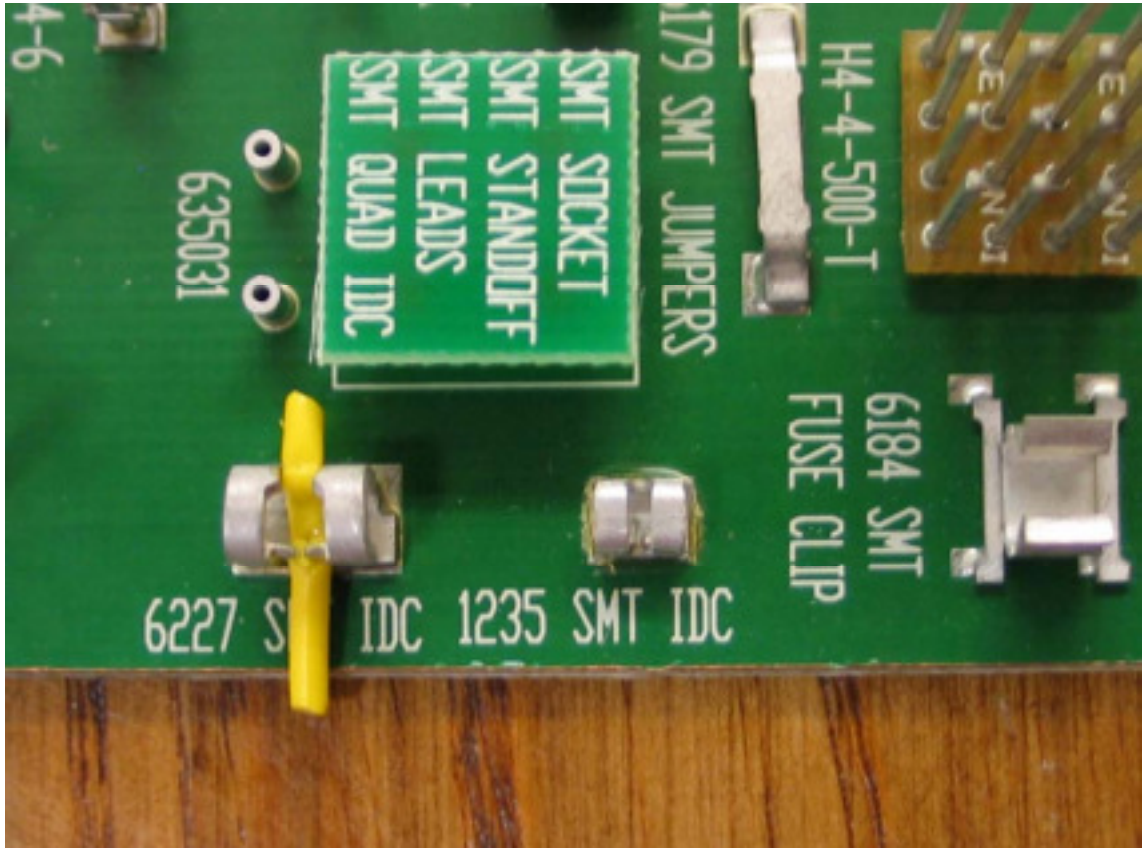
### How the WTPPX-XXXX-X works:

First the operator places the wire onto the IDC as shown in Pictures # 2 and # 3. Then the operator places the hand tool shroud on top of the IDC making sure that the hand tool is oriented vertically and the slot of the shroud is in-line with the coined cutting blades as seen in Picture # 4.

*Note:* The orientation of the insertion blade must be so that the radius of the middle insertion blade finger is facing the opposite side of the IDC away from the coined cutting edges of the IDC. This allows the wire to bend slightly up and into the strain relief slot of the IDC. The square side of the insertion finger allows the wire to be fully pushed down into the cutting / termination blades creating the connection.

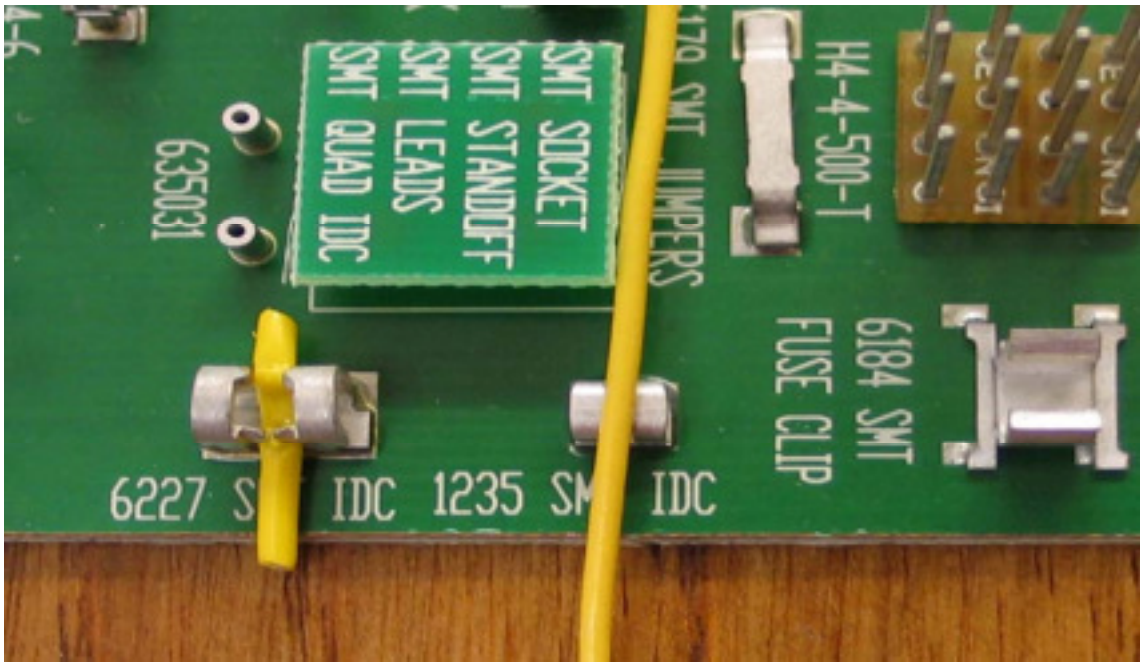
Next, while holding the Pneumatic Hand Tool firmly down onto the PCB, the operator squeezes the trigger (Part # 5 in Diagram # 1), until the pneumatic hammer actuates and terminates the wire. Once the wire is inserted, the operator will release the trigger which returns the tool to its start position, and inspect the termination. Repeat these steps for each insertion.

**Zierick recommends practicing this procedure before using the actual production PCBs.**

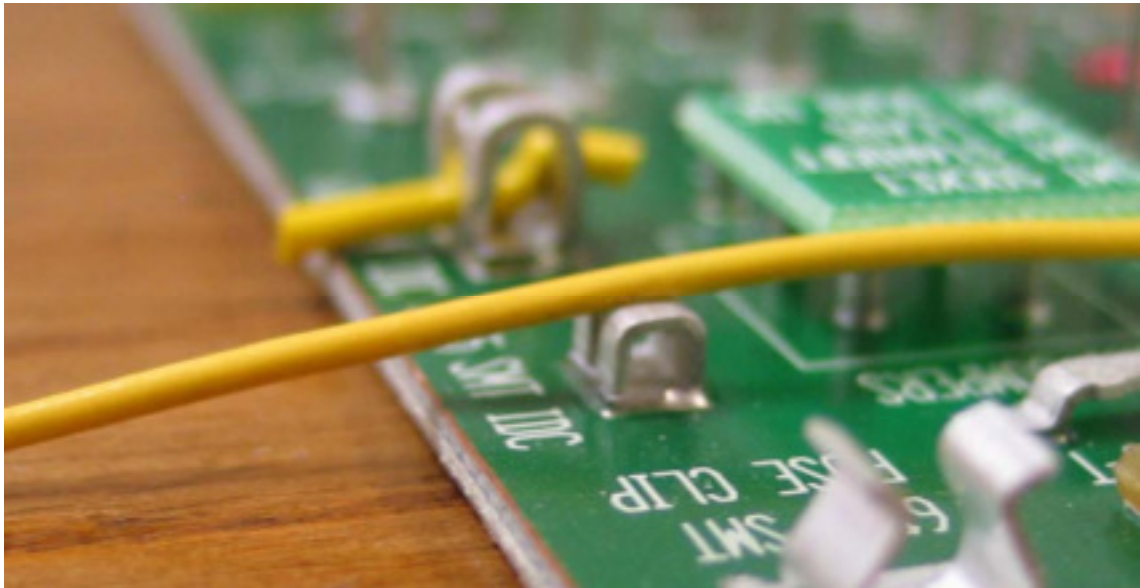


Picture # 1

There are two different IDCs on this board. The larger one (PN 6227) shows proper termination of the wire. The smaller IDC (PN 1235) will be used as our example.

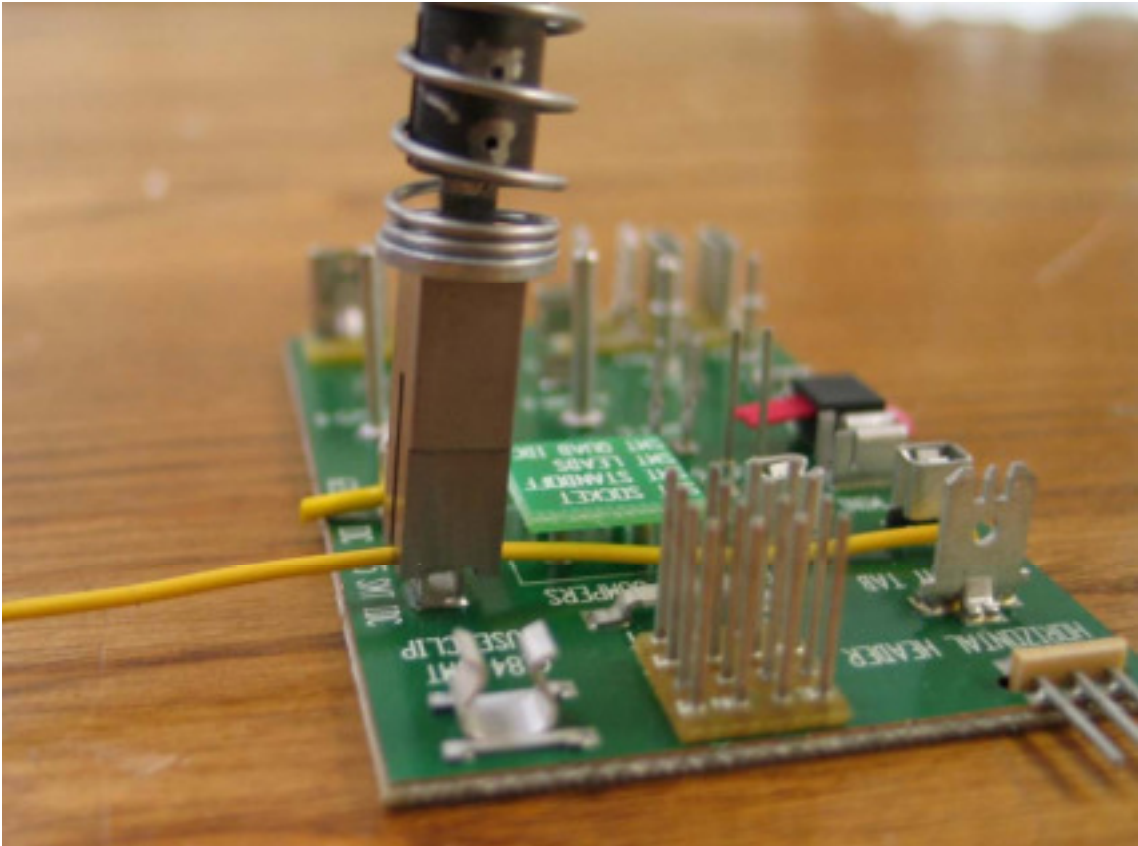


Picture # 2



Picture # 3

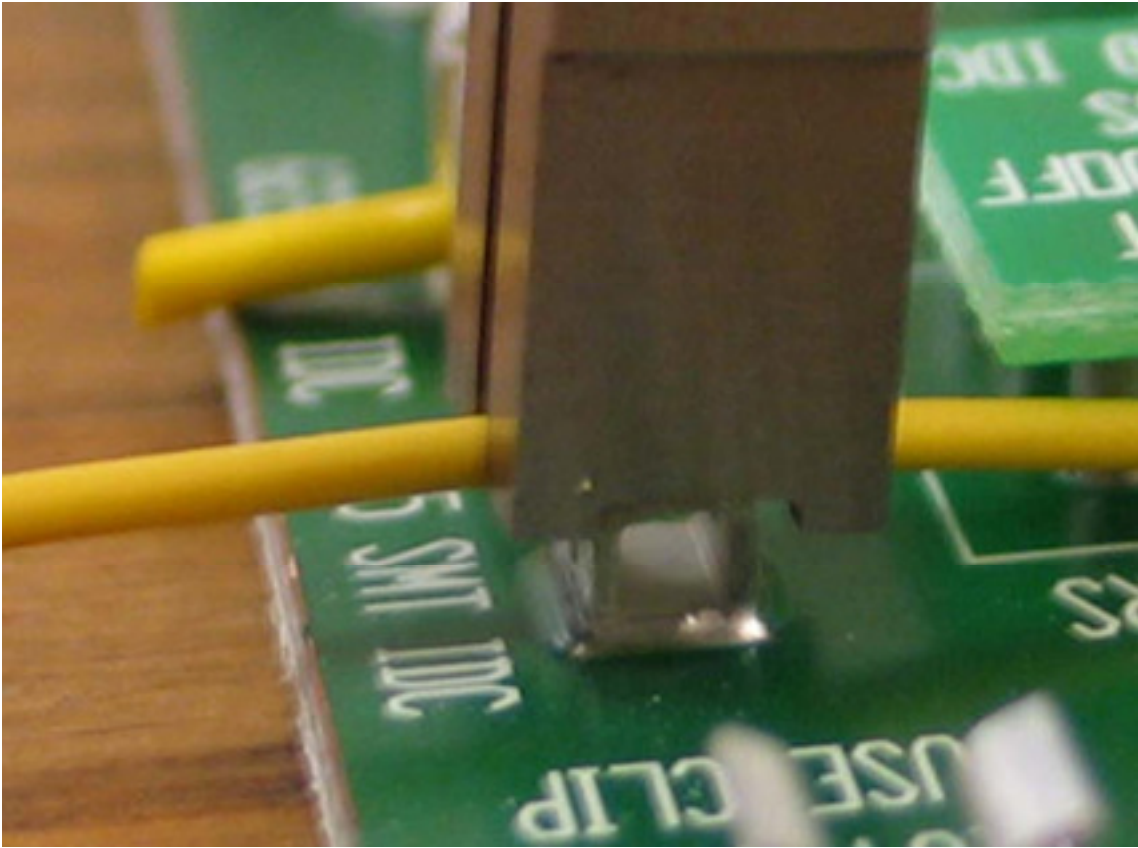
These photos show the IDC with the wire in position for termination.



Picture # 4

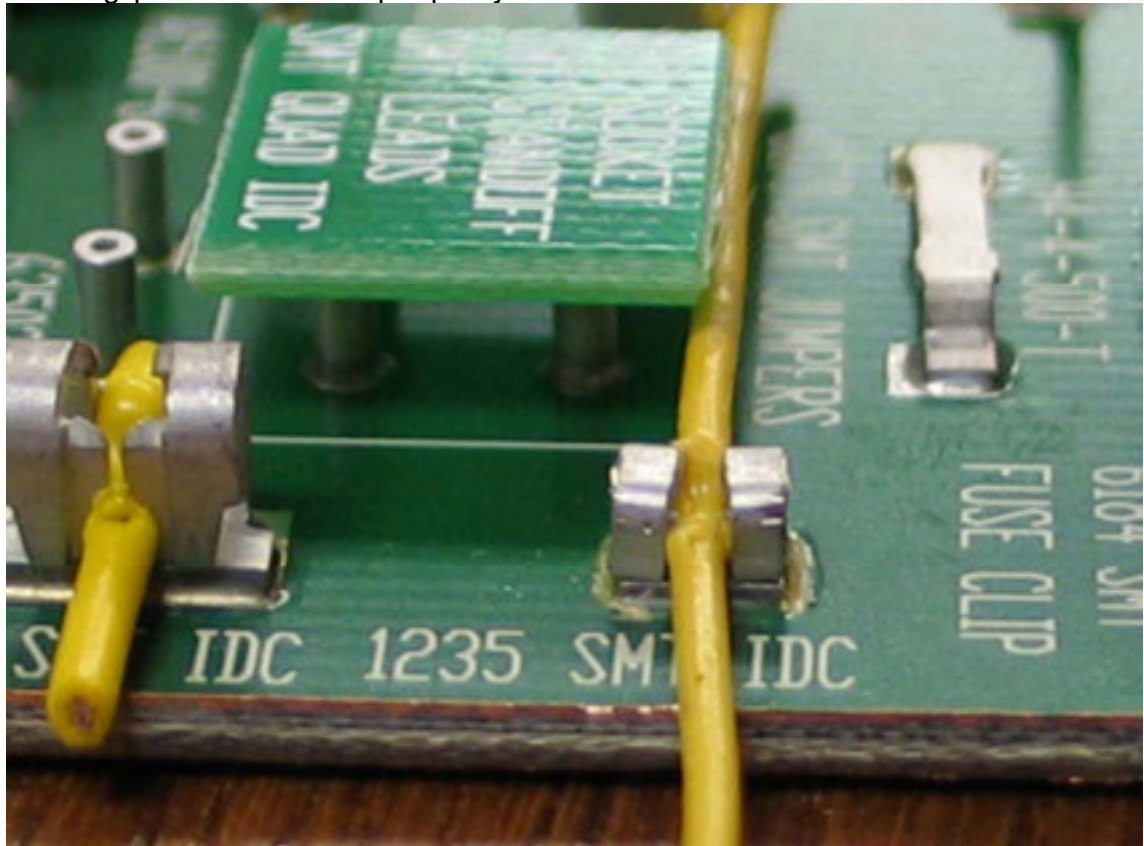
Picture # 4 (above) and the close-up (below) show the proper placement of the Shroud on top of the wire and the IDC.





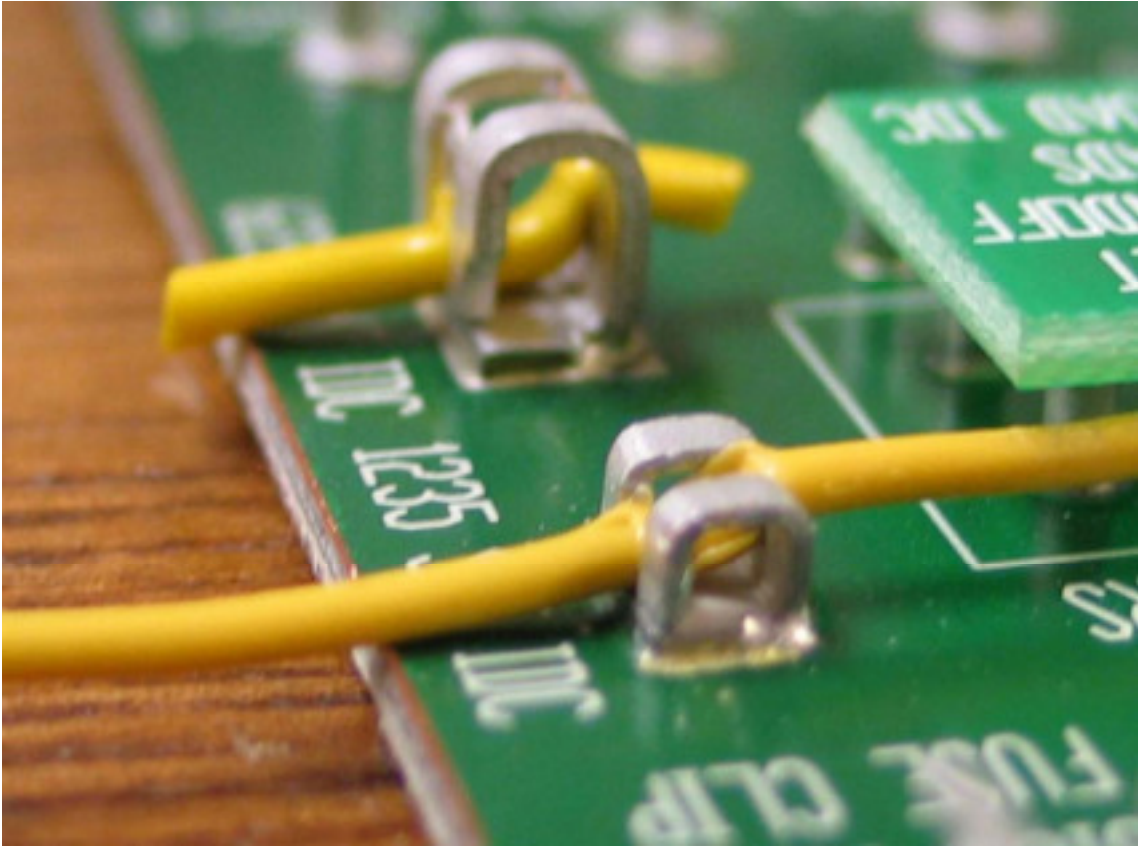
Picture # 5 Close-Up

The following photos show a properly terminated wire.

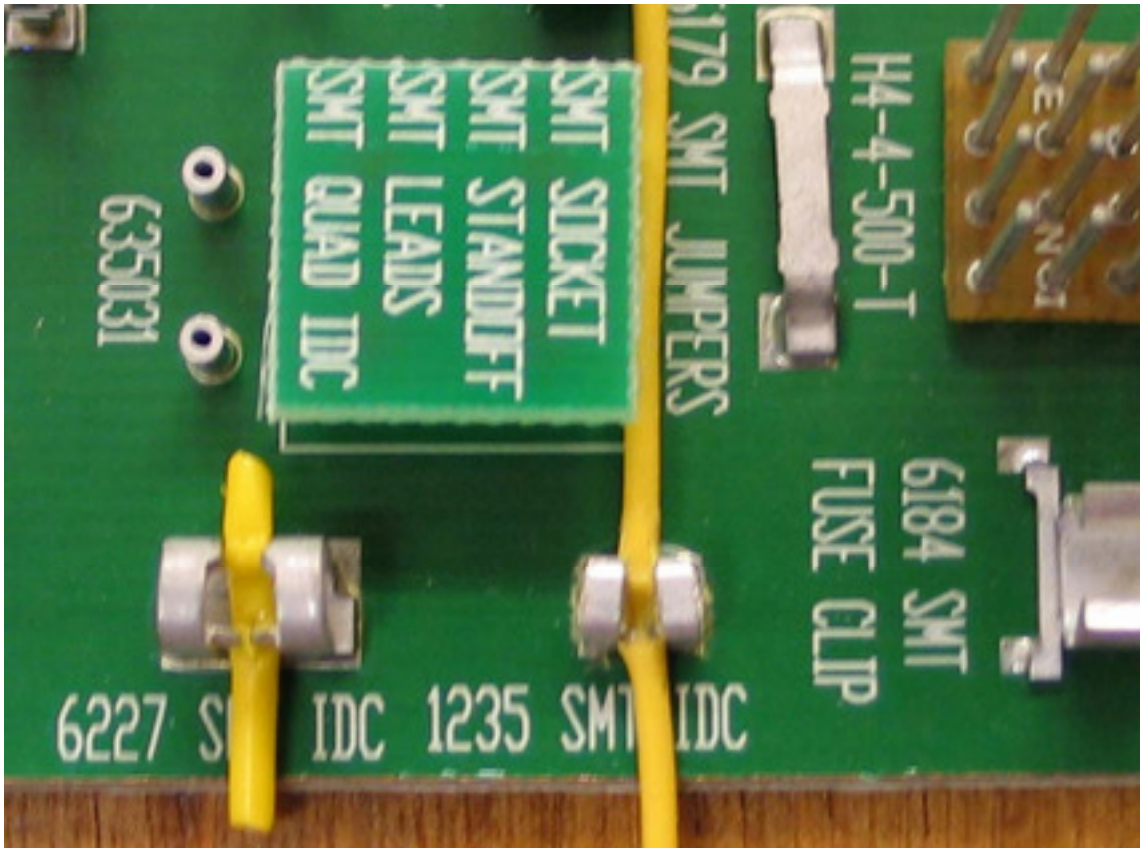


Picture # 6 Correctly Terminated Wire





Picture # 7 Correctly Terminated Wire



Picture # 8 Correctly Terminated Wire