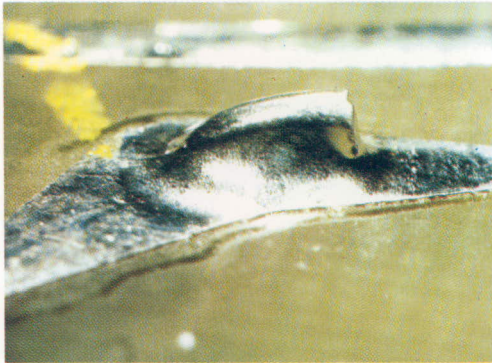
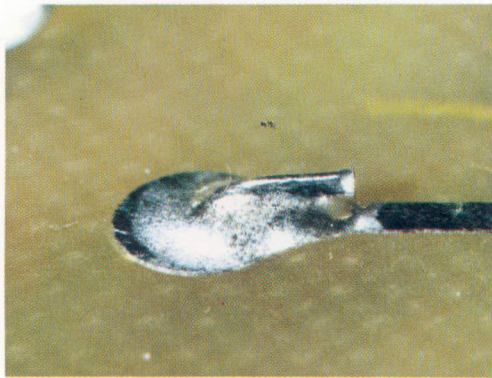


MAGNIFICATION 9X



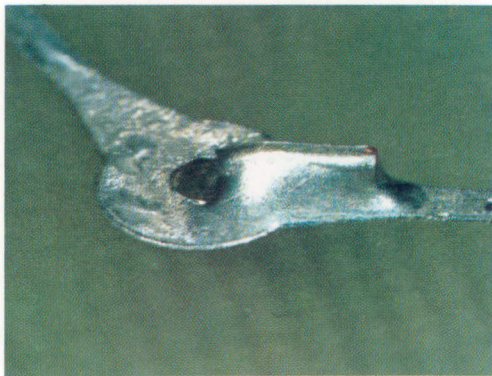
### PREFERRED

1. Good wetting of lead and pad.
2. Solder is free of surface pits and pin holes.
3. Smooth, shiny appearance.
4. Smooth, concave fillets.



### ACCEPTABLE

1. Minimum solder covering lead and pad.
2. Line of demarcation at base of lead; however, lead is wet and coverage is complete.
3. Excessive lead length will not create interference problem or reduce reliability. Rework after soldering may damage pad or component.



### ACCEPTABLE MINIMUM

1. Void around heel of lead and pad, however solder connection to circuit pad and lead is continuous from the hole for a minimum of 80 percent of the lead length and solder fillet is more than 180 degrees around lead.

**NOTE:** Condition not acceptable in combination with any other defect.



### REJECT

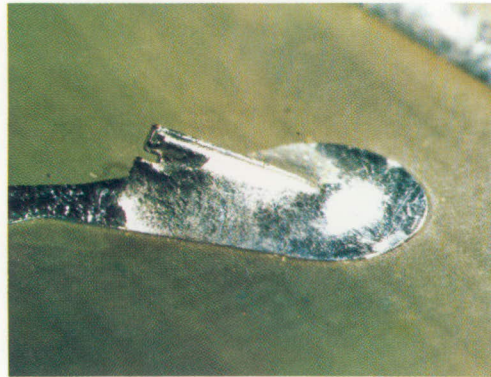
1. Insufficient solder. Less than 80 percent of the lead length soldered to circuit path with void area around heel of lead and pad.
2. Solder fillet is less than 180 degrees around lead.

MAGNIFICATION 8X



### PREFERRED

1. Good wetting of lead and pad.
2. Solder is free of surface pits and pin holes.
3. Smooth, shiny appearance.
4. Smooth, concave fillets.



### ACCEPTABLE

1. Solder incomplete at tip of lead, however, solder connection to circuit pad and lead is good with solder completely filling lead access hole.
2. Solder fillet exist between the lead and foil for at least 80 percent of the minimum lead length.



### ACCEPTABLE MINIMUM

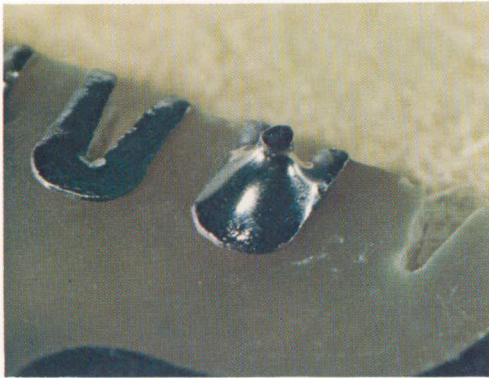
1. Heavy solder but lead is discernible.
2. Slightly convex solder fillets.
3. Smooth, dull metallic appearance.



### REJECT

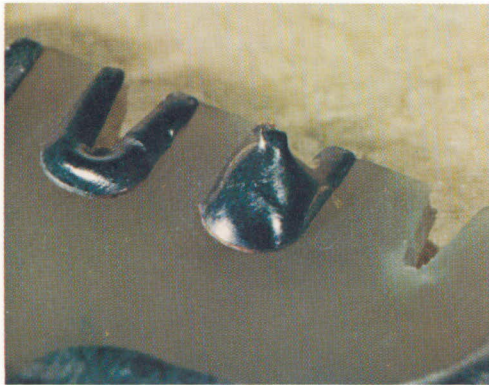
1. Excess solder. Lead not discernible. (Cannot be established that lead exists or that connection has been made.)
2. Stress cracks in surface of solder. (Evidence of too abrupt cooling or mechanical stresses during cooling cycle.)

MAGNIFICATION 10X



#### PREFERRED

1. Good wetting of lead and pad.
2. Solder is free of surface pits and pin holes.
3. Smooth, shiny appearance.
4. Smooth, concave fillets.



#### ACCEPTABLE

1. Heavy solder but lead is discernible.
2. Slightly convex solder fillets.
3. Smooth, dull metallic appearance.



#### ACCEPTABLE MINIMUM

1. Void at bottom of "V" opening, however solder connection to circuit pad and leads is at least 60% of the circumferential solderable area of the straight lead.
2. Lead length is maximum but will permit insertion of the module into the cell without interference.



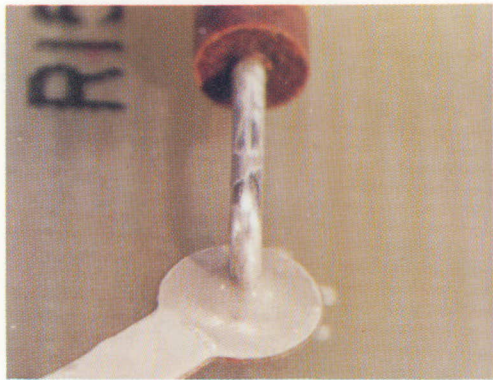
#### REJECT

1. Excess solder. Lead not discernible (cannot be established that lead exists or that connection has been made).

**NOTE:** Among other conditions for rejection not shown are:

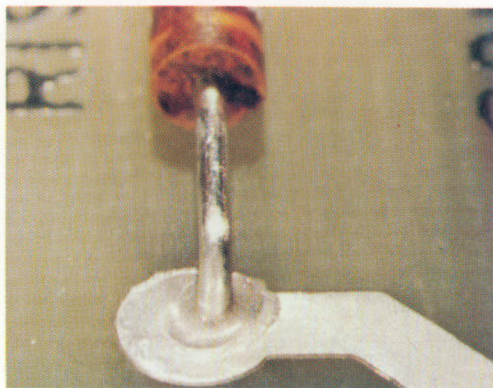
- (a) **Insufficient solder (less than 60% of the circumferential solderable area of the straight lead.**
- (b) **Excessive lead length that would interfere with insertion of module into the cell.**

MAGNIFICATION 5X



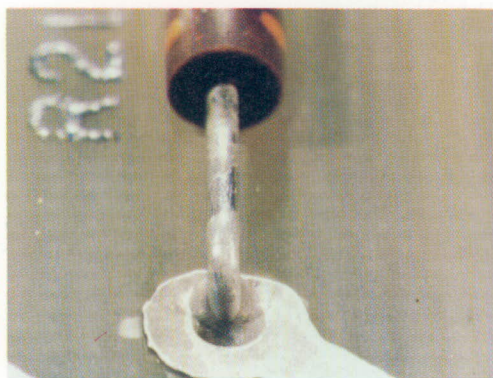
### PREFERRED

1. Solder fillet is complete between component lead and circuit pad.
2. Lead and pad are completely wetted without voids or holes.



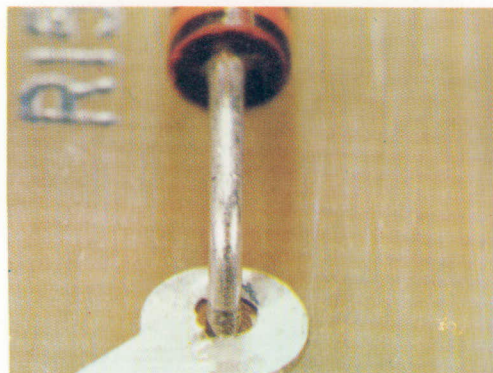
### ACCEPTABLE

1. Solder fillet is sunken but solder flow is continuous between lead and pad. Surfaces are well wetted.



### ACCEPTABLE MINIMUM

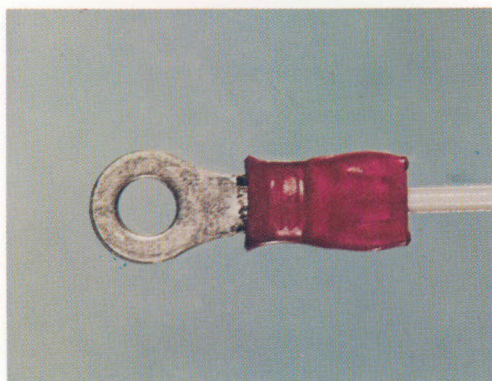
1. Solder void at heel of component lead, but solder fillet is at least 80 percent complete.



### REJECT

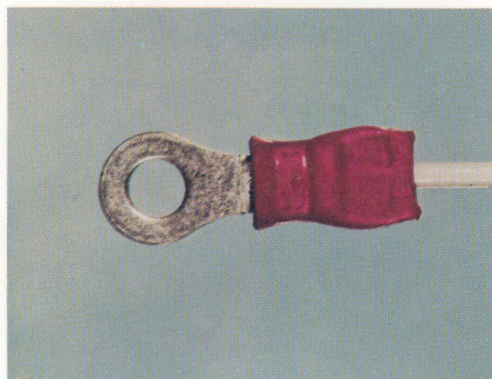
1. Solder has failed to fill plated through hole.
2. Lead and circuit pad are not joined by a continuous solder fillet.
3. Indication of contamination.

#### MAGNIFICATION 5X



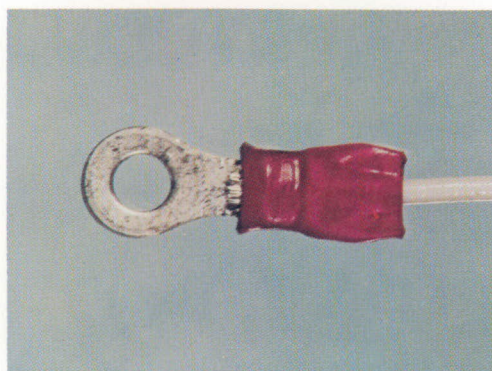
#### PREFERRED

1. a) Barrel crimping indent is well formed and properly positioned.  
b) Wire insulation grip impression is well formed and provides proper support without crushing the insulation.  
c) Correct crimp tool jaws used, indicated by one (1) dot in barrel crimp (red lug).
2. End of bare conductor protrudes through crimp barrel approximately 1/32 inch.



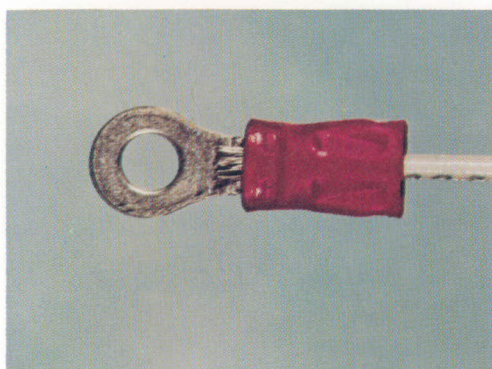
#### ACCEPTABLE

1. Bare conductor protrudes through crimp barrel the minimum distance. (Flush with crimp barrel).



#### ACCEPTABLE MINIMUM

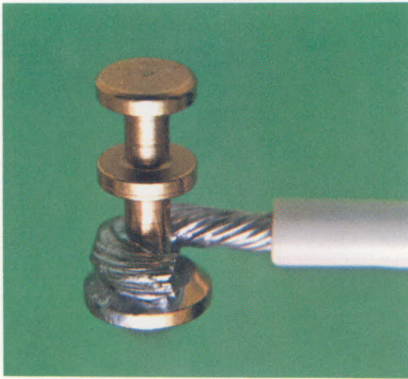
1. Bare conductor protrudes through crimp barrel the maximum distance but does not exceed 1/16 inch.



#### REJECT

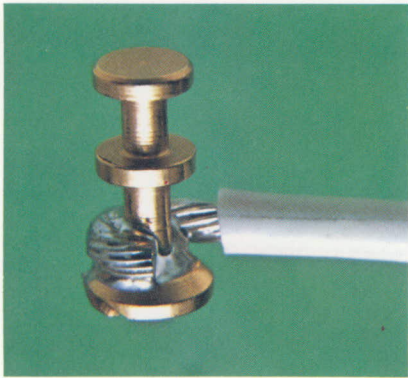
1. a) Barrel crimping indent is only partially located over the lug barrel. Lug was not fully inserted into the crimp jaws.  
b) Incorrect crimp tool jaws used (indicated by two (2) dots in barrel crimp for blue lug). Insufficient pressure applied.  
c) Wire insulation grip pressure is insufficient to provide proper gripping of the insulation.
2. Bare conductor protrudes through crimp barrel in excess of 1/16 inch.

MAGNIFICATION 6X



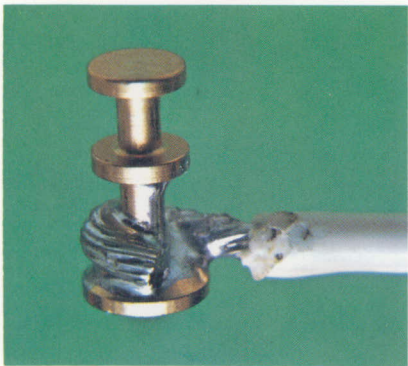
### PREFERRED

1. Exposed bare wire is optimum.
2. Trim is neat and even.
3. Insulation is unmarked.



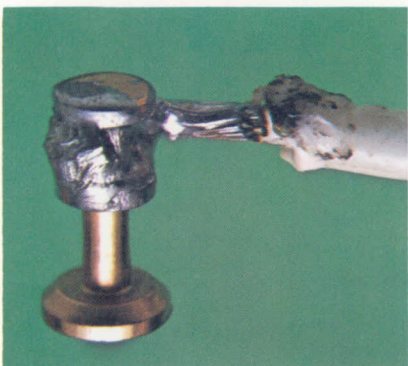
### ACCEPTABLE

1. Insulation clearance is less than optimum but within the limits established by contract.



### ACCEPTABLE MINIMUM

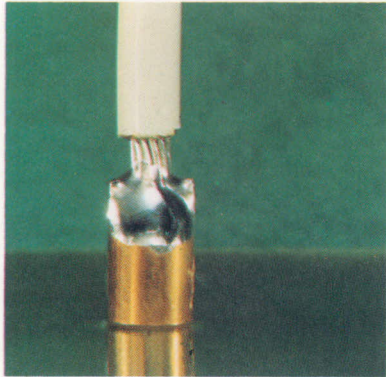
1. Insulation trim is slightly irregular.
2. Minor scorch marks on insulation.



### REJECT

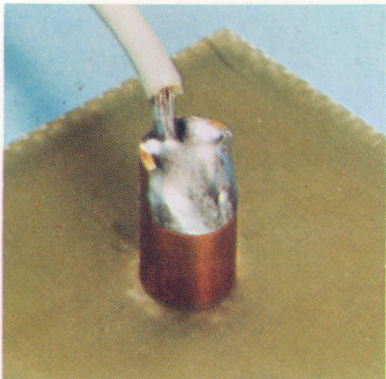
1. Insulation clearance exceeds contract tolerances.
2. Insulation is burned and charred.

MAGNIFICATION 5X



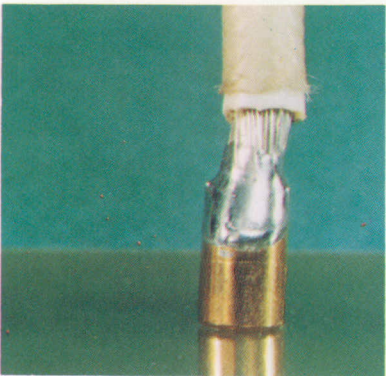
### PREFERRED

1. Conductor is correct size for cup application to afford easy entry and support during solder operation.



### ACCEPTABLE

1. Conductor is minimum size for cup application.



### ACCEPTABLE

1. Conductor is maximum for cup application, however all strands are within cup and fully seated.



### REJECT

1. Conductor is too big for cup application.
2. Connection contains loose strands and strands have been cut to reduce size of conductor to fit cup.