

# DELTA PROBES FOR SOP AND TSOP

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## Introduction

Small Outline Packages (SOP) parts are commonly used with memories and other types of integrate circuits that can be accommodated with a relatively small number of pins. With their small size and efficient packaging SOP parts are found in a wide array of applications from palm-sized devices to computers and instrumentation.

While convenient in terms of their small size, SOP packages require care when selecting probing solutions to aid in debugging prototypes that incorporate them. Because of their small lead pitch and overall size, probing SOP packages using conventional clips can result in shorted pins or intermittent connections.

## Delta Probe

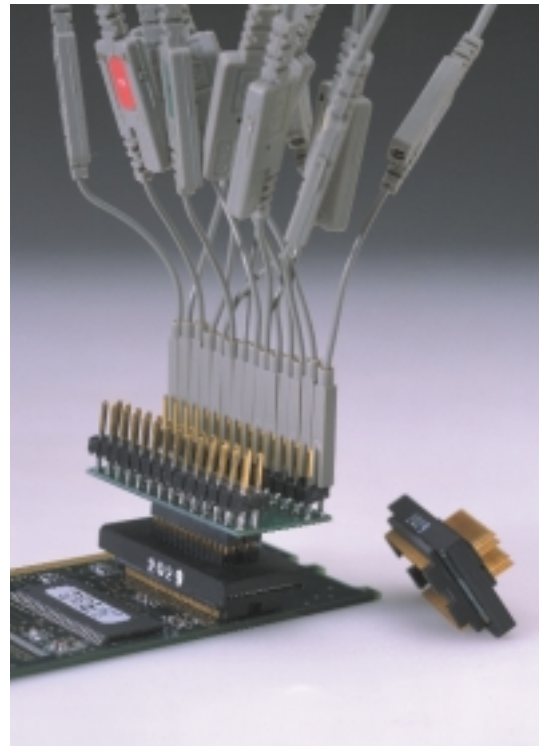
The Delta Probes for SOP packages support SOP packages which can be viewed in the table. These probes incorporate the innovative wedge probe tips that interlock in-between the pins of the package. Other clips connect by pressing on the outside edges of the pins. The Delta Probe is superior in that it delivers a robust and redundant electrical contact to each pin of the part thus ensuring a reliable and repeatable connection that is unsurpassed by any other probing technology.

Because the wedges of the Delta Probe fit in between the pins of your SOP part, shorting pins is virtually impossible. In

addition, since the Delta Probe attaches from above the part, it requires almost no keep-out area and is less likely to cause mechanical interference compared to conventional clips.

## Easy to Connect

The Delta Probe for SOP packages contains a transition board that is intended for connecting to the flying leads of your measurement equipment (such as a logic analyzer).



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## Durability

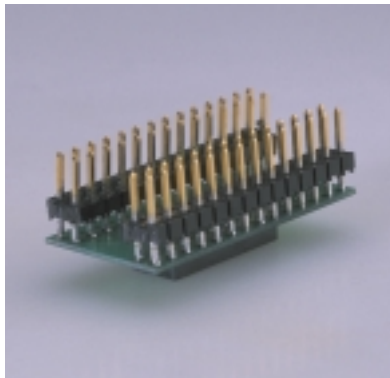
The Delta Probes have been refined and tested to ensure you will have consistent and repeatable connections. Our lab tests have shown that an excess of 1,000 insertions and removals can be performed with no degradation in the reliability of the connection.

## Low Electrical Intrusion

Low resistance (<1.0 ohms) and capacitance (<1.5 pf) inherent to the design of the Delta Probe ensures the fidelity of the signals conveyed to your oscilloscope or logic analyzer.

## Key Features

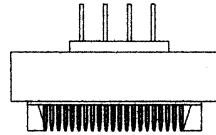
- Snap-on fit
- Redundant connections
- Supports SOP and TSOP packages listed in the table below



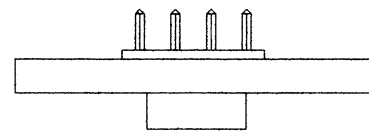
### SPECIFICATIONS

Voltages: Both 3.3v and 5v  
 Electrical loading on target system:  
 capacitance < 1.5 pf, resistance: < 1.0 ohm  
 Insertions: supports multiple insertions

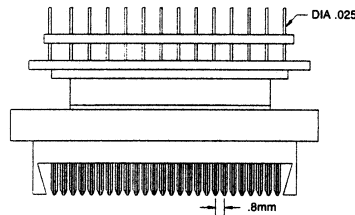
TYPE I SOP



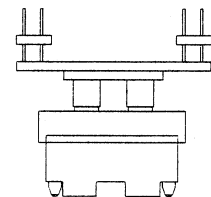
TYPE I  
TRANSITION BOARD



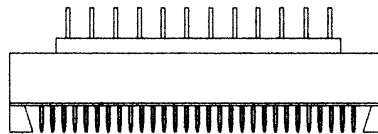
54 PIN TSOP



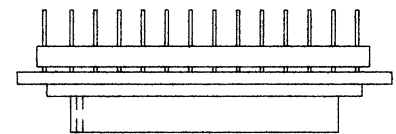
TRANSITION BOARD



TYPE II SOP



TYPE II  
TRANSITION BOARD



### TYPE I PROBES SOP; .5mm PITCH

8800-0139	32 Pin w/ 0.050" header
8800-0148	32 Pin w/.100centerTrans.Bd.
8800-0140	40 Pin w/ 0.050" header
8800-0149	40 Pin w/.100centerTrans.Bd.
8800-0141	48 Pin w/ 0.050" header
8800-0150	48 Pin w/.100centerTrans.Bd.
8800-0145	32, 40, & 48 Pin Transition Board

### TYPE II; SOP .8mm PITCH

8800-0109	50 Pin w/ 0.050" header
8800-0111	50 Pin w/.100centerTrans.Bd.
8800-0110	54 Pin w/ 0.050" header
8800-0112	54 Pin w/.100centerTrans.Bd.
8800-0091	56 Pin w/o 0.050" header
8800-0151	56 Pin w/.100centerTrans.Bd.
8800-0092	50, 54, & 56 Pin Transition Board



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