# Table of Contents

## DIP Sockets
- Solder Tail Dual Leaf (DL) Contact ............................................. 5002-5007
- Four-Fingered Contact (500 Series, 700 Series, 800 Series) .......... 5008-5014
- Surface Mount (800 SM Series) ................................................. 5014, 5015
- DIP Insertion and Withdrawal Tools (TI/TW Series, TX Series) .... 5016, 5017

## SIP Sockets
- Solder Tail Dual Leaf (DL) Contact ............................................. 5018, 5019
- Terminal Strips, Four-Fingered Contact (500 Series) .................. 5020

## SIMM Sockets
- SIMM MICRO-EDGE Sockets ..................................................... 5021-5023
- SIMM II Right-Angle Sockets ................................................... 5024, 5025

## DIMM Sockets
- SO DIMM Sockets ...................................................................... 5026, 5027
- DIMM II Sockets ....................................................................... 5028-5031
- DIMM IIP (Performance) Sockets .............................................. 5032

## PLCC Sockets
- Surface Mount .......................................................................... 5033-5035
- Thru-Hole (PCS Series) ............................................................ 5036, 5037
- Thru-Hole Economy ................................................................. 5038

## PQFP Sockets
- Standard ................................................................................... 5039, 5040
- Metric ....................................................................................... 5041, 5042

## Discrete Sockets
- HOLTITE Series Press-fit Sockets, Zero Profile ......................... 5043-5047

## Adapters
- Plug Adapter Assemblies (600 Series) ........................................ 5048-5050
- Transistor Adapter Plugs (600-AG Series) .................................. 5051, 5052

## Display Sockets
- Numerical Display Sockets (500 Series) .................................... 5053
- Angle Mount DIP Sockets (500 Series) ...................................... 5054
- Ganged DIP Sockets (500 Series) .............................................. 5055

## Specialty Sockets
- Crystal Socket Assemblies (800-AG & 8004-1G Series) .............. 5056-5063
- Programming Jumper Plug Assemblies (8136-875 Series, 8136-475 Series) ................................................................. 5061, 5062
- Fuse Sockets (500 Series) ......................................................... 5063
- Crystal Oscillator Sockets (500 Series) ..................................... 5064
- Transistor & IC Low Profile Sockets (8059 Series) .................... 5065, 5066
- Transistor Sockets (8058 & 8060 Series) .................................. 5067-5070
- Lamp Sockets (8060 Series) ..................................................... 5071, 5072
- TO-3 Transistor Sockets (8080-1G Series) ................................. 5073, 5074
- Push Fit Test Jacks (8000 Series) ............................................. 5075, 5076
- Printed Circuit Test Jacks (8041 Series, 8041 Series Commercial) .. 5077, 5078
- Micro-Miniature Test Jacks (8046 Series Commercial) ............... 5079, 5080
Solder Tail Dual Leaf (DL) Contact

Product Facts
- Dual wiping contacts
- Face wipe contacts for high reliability and constant, low resistance
- Anti-overstress prevents contact damage
- Large target area with tapered lead-in ramps for easy DIP insertion
- Stackable end-to-end and side-to-side (brickwalling) for high board density
- Housing standoffs and slots facilitate board cleaning
- Family of 6 through 48 positions
- Retention-style tails or straight solder tails
- Visual polarization
- Designed for automatic machine insertion — DIP-to-socket or socket-to-board (tube loaded)
- Recognized under the Component Program of Underwriters Laboratories Inc.
- Certified by Canadian Standards Association

The Dual Leaf (DL) DIP socket family provides high quality at low cost with superior handling characteristics. Sockets are available in 6- through 48-position sizes with dual wiping contacts. The large target area of the contacts and tapered side ramps in the housing promote easy entry of a DIP package. Internal anti-overstress walls on standard versions prevent contact damage. The housings are compatible with commercially available automatic insertion equipment for socket-to-board or DIP-to-socket applications.

Standoffs provide board clearance for proper cleaning after soldering. Sockets are available with straight solder tails for clinching and are “true positioned” for automatic insertion into the pc board.

Performance Characteristics:
- Rating — Signal application only
- Contact Resistance — 20 milli-ohms max. (initial)
- 30 milli-ohms max. (after test)
- Dielectric Withstanding Voltage — 1000 VRMS min.
- Insulation Resistance — 10,000 megohms min. (initial)
- Capacitance — 0.5 picofarad max.
- Operating Temperature —
  - -40°C to +105°C (tin)
  - -55°C to +125°C (gold)
- Vibration — 15 Gs, 10-2000 Hz with 100 ma current
- Shock — 100 Gs sawtooth, 6 shocks
- Engaging Force — 340 grams max. (initial)
- Separating Force — 25 grams min. per Tyco Electronics Specification 108-1066 (Standard)
DIP Sockets

Dual Leaf (DL)

Sockets accept .008—.014 (0.2—0.36) thick IC leads

Material and Finish:

- **Housing** — Glass-filled thermoplastic, 94V-0 rated, black
- **Contacts** — Phosphor bronze or beryllium copper with tin or gold plating (see table)

**Recommended Mounting Dimensions**

**Sockets with Straight Solder Tails**

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Beryllium Copper</th>
<th>Phosphor Bronze</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>6</td>
<td>0.295</td>
<td>0.394</td>
<td>0.300</td>
</tr>
<tr>
<td></td>
<td>0.249</td>
<td>0.101</td>
<td>0.249</td>
</tr>
<tr>
<td>8</td>
<td>0.395</td>
<td>0.394</td>
<td>0.300</td>
</tr>
<tr>
<td></td>
<td>0.395</td>
<td>0.101</td>
<td>0.249</td>
</tr>
<tr>
<td>14</td>
<td>0.695</td>
<td>0.394</td>
<td>0.300</td>
</tr>
<tr>
<td></td>
<td>0.573</td>
<td>0.101</td>
<td>0.249</td>
</tr>
<tr>
<td>16</td>
<td>0.795</td>
<td>0.394</td>
<td>0.300</td>
</tr>
<tr>
<td></td>
<td>0.529</td>
<td>0.101</td>
<td>0.249</td>
</tr>
</tbody>
</table>

**Sockets with Retention Solder Tails**

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Beryllium Copper</th>
<th>Phosphor Bronze</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>6</td>
<td>0.295</td>
<td>0.394</td>
<td>0.300</td>
</tr>
<tr>
<td></td>
<td>0.249</td>
<td>0.101</td>
<td>0.249</td>
</tr>
<tr>
<td>8</td>
<td>0.395</td>
<td>0.394</td>
<td>0.300</td>
</tr>
<tr>
<td></td>
<td>0.395</td>
<td>0.101</td>
<td>0.249</td>
</tr>
</tbody>
</table>

**Note:** All socket positions have “True Closed Bottom” design which allows no solder or flux wicking at class 1 conditions of EIA 486.

1 ONLY sockets with straight solder tails are recommended for automatic insertion. All parts are packaged in plastic tubes. Sockets with retention feature are packaged in plastic tubes for handling and storage convenience only.

2 Gold thickness in contact area; tin-lead plate on solder tails.

3 Closed frame design.
DIP Sockets

Dual Leaf (DL)

Sockets accept .008—.014 [0.2—0.36] thick IC leads

Material and Finish:

Housing — Glass-filled thermoplastic, 94V-0 rated, black
Contacts — Phosphor bronze or beryllium copper with tin or gold plating (see table)

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Values in brackets are metric equivalents.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

DIP Sockets
Dual Leaf (DL)

Sockets accept .008—.014 [0.2—0.36] thick IC leads

Material and Finish:

Housing — Glass-filled thermoplastic, 94V-0 rated, black
Contacts — Phosphor bronze or beryllium copper with tin or gold plating (see table)

Dimensions are shown for reference purposes only.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Dimensions in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

1 ONLY sockets with straight solder tails are recommended for automatic insertion. All parts are packaged in plastic tubes. Sockets with retention feature are packaged in plastic tubes for handling and storage convenience only.

2 Gold thickness in contact area; tin-lead plate on solder tails.

Sockets with Straight Solder Tails

Sockets with Retention Feature Solder Tails

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Sockets with Straight Solder Tails1</th>
<th>Sockets with Retention Solder Tails1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gold Plate</td>
</tr>
<tr>
<td>14</td>
<td>.695</td>
<td>.394</td>
<td>.300</td>
</tr>
<tr>
<td>16</td>
<td>.795</td>
<td>.394</td>
<td>.300</td>
</tr>
<tr>
<td>18</td>
<td>.995</td>
<td>.394</td>
<td>.300</td>
</tr>
<tr>
<td>20</td>
<td>1.195</td>
<td>.694</td>
<td>.600</td>
</tr>
<tr>
<td>24</td>
<td>1.395</td>
<td>.694</td>
<td>.600</td>
</tr>
<tr>
<td>28</td>
<td>1.995</td>
<td>.694</td>
<td>.600</td>
</tr>
<tr>
<td>40</td>
<td>50.06</td>
<td>17.63</td>
<td>15.24</td>
</tr>
</tbody>
</table>

1 ONLY sockets with straight solder tails are recommended for automatic insertion. All parts are packaged in plastic tubes. Sockets with retention feature are packaged in plastic tubes for handling and storage convenience only.

2 Gold thickness in contact area; tin-lead plate on solder tails.
### Open Frame

**Material and Finish:**
- **Housing** — Glass-filled thermoplastic, black
- **Contacts** — Beryllium copper

**Dimensions** are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only.

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Type/Centerline</th>
<th>Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>20</td>
<td>.300</td>
<td>.996</td>
<td>.394</td>
</tr>
<tr>
<td>20</td>
<td>Wire Wrap Tail .300</td>
<td>.996</td>
<td>.394</td>
</tr>
<tr>
<td>24</td>
<td>Wire Wrap Tail .300</td>
<td>1.20</td>
<td>.394</td>
</tr>
<tr>
<td>28</td>
<td>Auto Insertable .600</td>
<td>.140</td>
<td>.694</td>
</tr>
<tr>
<td>32</td>
<td>.600</td>
<td>1.60</td>
<td>.694</td>
</tr>
</tbody>
</table>

### Economy Ladder Style,.300 Centerline

**Material and Finish:**
- **Housing** — Glass-filled thermoplastic, black
- **Contacts** — Phosphor bronze with tin plating

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>7.62</td>
<td>.300</td>
</tr>
<tr>
<td>8</td>
<td>10.16</td>
<td>.400</td>
</tr>
<tr>
<td>14</td>
<td>17.78</td>
<td>.700</td>
</tr>
<tr>
<td>16</td>
<td>20.32</td>
<td>.800</td>
</tr>
<tr>
<td>18</td>
<td>22.86</td>
<td>.900</td>
</tr>
<tr>
<td>20</td>
<td>25.40</td>
<td>1.400</td>
</tr>
<tr>
<td>22</td>
<td>27.94</td>
<td>1.100</td>
</tr>
<tr>
<td>24</td>
<td>30.48</td>
<td>1.200</td>
</tr>
<tr>
<td>28</td>
<td>35.56</td>
<td>1.400</td>
</tr>
<tr>
<td>32</td>
<td>40.64</td>
<td>1.600</td>
</tr>
</tbody>
</table>
## Economy Ladder Style, .600 Centerline

**Material and Finish:**

**Housing** — Glass-filled Thermoplastic, black

**Contacts** — Phosphor bronze with tin plating

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>24</td>
<td>30.48</td>
<td>27.94</td>
</tr>
<tr>
<td></td>
<td>1.200</td>
<td>1.100</td>
</tr>
<tr>
<td>28</td>
<td>35.56</td>
<td>33.02</td>
</tr>
<tr>
<td></td>
<td>1.400</td>
<td>1.300</td>
</tr>
<tr>
<td>32</td>
<td>40.64</td>
<td>38.10</td>
</tr>
<tr>
<td></td>
<td>1.600</td>
<td>1.500</td>
</tr>
<tr>
<td>40</td>
<td>50.80</td>
<td>48.26</td>
</tr>
<tr>
<td></td>
<td>2.000</td>
<td>1.900</td>
</tr>
<tr>
<td>42</td>
<td>53.34</td>
<td>50.08</td>
</tr>
<tr>
<td></td>
<td>2.100</td>
<td>1.970</td>
</tr>
<tr>
<td>48</td>
<td>60.96</td>
<td>58.42</td>
</tr>
<tr>
<td></td>
<td>2.400</td>
<td>2.300</td>
</tr>
</tbody>
</table>

## Economy Over-the-Component (OTC) Style, 15.24 Centerline

**Material and Finish:**

**Housing** — Glass-filled Thermoplastic, black

**Contacts** — Phosphor bronze with tin plating

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>24</td>
<td>25.10</td>
<td>27.94</td>
</tr>
<tr>
<td></td>
<td>998</td>
<td>1.100</td>
</tr>
<tr>
<td>28</td>
<td>30.12</td>
<td>33.02</td>
</tr>
<tr>
<td></td>
<td>1.190</td>
<td>1.300</td>
</tr>
<tr>
<td>32</td>
<td>35.20</td>
<td>38.10</td>
</tr>
<tr>
<td></td>
<td>1.390</td>
<td>1.500</td>
</tr>
<tr>
<td>40</td>
<td>45.36</td>
<td>48.26</td>
</tr>
<tr>
<td></td>
<td>1.790</td>
<td>1.900</td>
</tr>
<tr>
<td>42</td>
<td>47.90</td>
<td>50.08</td>
</tr>
<tr>
<td></td>
<td>1.890</td>
<td>1.970</td>
</tr>
<tr>
<td>48</td>
<td>55.52</td>
<td>58.42</td>
</tr>
<tr>
<td></td>
<td>2.190</td>
<td>2.300</td>
</tr>
</tbody>
</table>
DIP Sockets

Dual Leaf (DL), Over-the-Component (OTC) Style

Sockets accept .008—.014 (0.2—0.36) thick IC leads

Material and Finish:
Housing — Glass-filled thermoplastic, 94V-0 rated, black
Contacts — Phosphor bronze or beryllium copper with gold plating (see table)

Recommended IC Leg Length:
1) .100 [2.54] min. for a reliable contact surface.
2) .120 [3.05] max. to allow IC body to seat on socket.
3) Longer legs may be used, but IC cannot be fully seated on seating plane.

Note: All socket positions have "True Closed Bottom" design which allows no solder or flux wicking at class 1 conditions of EIA 486.

Recommended Mounting Dimensions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.595</td>
<td>1.763</td>
<td>15.24</td>
<td>15.75</td>
</tr>
<tr>
<td>B</td>
<td>.694</td>
<td>.600</td>
<td>9.65</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>.520</td>
<td>.520</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>.380</td>
<td>.380</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

Sockets with Straight Solder Tails

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

Sockets with Retention Solder Tails

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

1 Gold thickness in contact area with tin-lead plate on solder tails. All parts packaged in plastic tubes.
**Features:**
The 500 Series Socket features a precision four-finger inner contact to produce the industry standard for high reliability screw machine sockets.
- Precision four-finger inner contact provides concentric funnel entry for easy flat and round lead insertion
- Machined (Premium Series) and stamped (Economy Series) contacts are available
- "X" & "Y" stackable
- Non-wicking, closed bottom sleeve gives 100% protection against flux and solder contamination. Choice of solderless wrap or PC termination
- Accommodates 6 through 40 pin DIPS, rectangular or round leads
- Recognized under the Component Program of Underwriters Laboratories, Inc. file no. E111362
- Beryllium copper inner contact for maximum mechanical and electrical performance
- For extreme conditions involving shock and vibration, The AMP high retention series is available

**Application Dimensions:**
- PCB Thickness Range: Standard .062" and .092" (1.57 and 2.34)
- PCB Hole Size Range: .035" ± .002" (0.89 ± 0.05) PC tail, .055" ± .003" (1.40 ± 0.08) solderless wrap
- IC Pin Dimension Range: .009" x .015" (0.23 x 0.38) through .011" x .020" (0.28 x 0.51), .016" to .021" (0.41 to 0.53) round lead, .105" (2.67) min. length

**Material Specifications:**
- Insulator: Thermoplastic polyester, UL rated 94V-0
- Sleeve: Machined brass/formed copper
- Contact: Beryllium copper
- Sleeve Plating: Tin/lead or gold
- Contact Plating: Premium or Economy Series (ES) - gold or tin/lead
- Economy Series (ESL) - low gold

**Performance Specifications:**
**Mechanical**
- Shock: Passed MIL-STD-1344, Method 2004.1, Condition C, 100 G's
- Normal Force:
  - Premium Series: 125 Grams (4.4 oz.) average with .018" (0.46) dia. polished steel pin
  - Economy Series: 200 Grams (7.1 oz.) average with .018" (0.46) dia. polished steel pin
- Inner Contact Retention
  - in Sleeve: 7.5 Lbs. per line average
  - Sleeve Retention in Plastic: 3.0 Lbs. per line minimum
- Solderability: Passed MIL-STD-202F, Method 208
- Insertion Force:
  - Premium - 134 Grams (4.7 oz.) average with a .018" (0.46) dia. polished steel pin
  - Economy - 179 Grams (6.3 oz.) average with a .018" (0.46) dia. polished steel pin
- Withdrawal Force: 63 Grams (2.2 oz.) average with a .018" (0.46) dia. polished steel pin

**Electrical**
- Contact Resistance: 10 Milliohms max.
- Contact Rating: 3 Amps
- Capacitance: 1.0 pF per MIL-STD-202, Method 305 (contact to contact)
- Insulation Resistance: 5,000 Megohms min. @ 500 VDC per MIL-STD-1344, Method 3003.1
- Dielectric Withstanding Voltage: 1,000 Volts RMS per MIL-STD-1344, Method 3001.1

**Environmental**
- Humidity: Passed MIL-STD-1344, Method 1002.2, Cond. II
- Thermal Shock: Passed MIL-STD-1344, Method 1003.1, Cond. A
- Operation Temperature:
  - Gold inner contact: -55°C to +125°C
  - Tin/lead inner contact: -55°C to +105°C
For wire wrap sockets or 24 position on .400" (10.16) in high retention or .180 (4.57) tails, please consult Tyco Electronics.
FEATURES:
A disposable aluminum carrier forms the backbone of the 700 Series socket, an innovative extension of the AMP precision four-fingered, inner contact concept. Conceived for IC applications requiring maximum air flow for cooling, the 700 Series eliminates heat entrapment associated with an insulator. Additional benefits are:

- Easy solder joint inspection-easy cleaning-easy repair
- “X” & “Y” stackability for circuit flexibility and optimum use of PCB real estate
- Gang insertion of socket pins into PC boards
- 100% non-wicking of flux and solder
- Standard or low profile PCB board mounting
- Availability in 6 to 40 positions on .100”(2,54) centers and a wide variety of row spacing
- Machined (Premium Series) and stamped (Economy Series) contacts are available

APPLICATION DIMENSIONS:
- PCB Thickness Range: Standard .062” and .092” (1,57 and 2,34)
- IC Pin Dimension Range:.016” to .021” (0,41 to 0,53) dia., .105” (2,67) min. length
- PCB Hole Size Range: .035” ± .003” (0,89 ± 0,08) standard mount, .055 ± .001” (1,40 ± 0,03) low profile mount

MATERIAL SPECIFICATIONS:
Carrier .................Aluminum
Sleeve ..................Machined brass
Contact ..................Beryllium copper
Sleeve Plating ..........Tin/lead or gold
Contact Plating ..........Premium or Economy Series (ES) - gold or tin/lead
                     Economy Series (ESL) - low gold

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration ..................Passed MIL-STD-1344, Method 2005.1,
                        Condition II, 10 G’s
Shock ......................Passed MIL-STD-1344, Method 2004.1,
                        Condition C, 100 G’s
Normal Force .............125 Grams average with .018” (0,46) dia.
                        polished steel pin (Premium Series)
                        200 Grams average with .018” (0,46) dia.
                        polished steel pin (Economy Series)
Inner Contact Retention
                        in Sleeve .............7.5 Lbs. per line average
                        Sleeve Retention
                        in Plastic .............3.0 Lbs. per line minimum
Solderability ............Passed MIL-STD-202F, Method 208
Insertion Force ...........Premium - 134 Grams (4,7 oz.) average with a
                        .018” (0,46) dia. polished steel pin
                        Economy - 179 Grams (6,3 oz.) average with a
                        .018” (0,46) dia. polished steel pin
Withdrawal Force ..........63 Grams (2,2 oz.) average with a
                        (Premium and Economy) .018” (0,46) dia. polished steel pin

ELECTRICAL
Contact Resistance ......10 Milliohms max.
Contact Rating ..........3 Amps
Capacitance .............1.0 pF per MIL-STD-202, Method 305
                        (contact to contact)
Insulation Resistance ...5,000 Megohms min. @ 500 VDC
                        per MIL-STD-1344, Method 3003.1
Dielectric Withstanding
                        Voltage ................1,000 Volts RMS per MIL-STD-1344,
                        Method 3001.1

ENVIRONMENTAL
Humidity ..................Passed MIL-STD-1344, Method 1002.2, Cond. II
Thermal Shock ..............Passed MIL-STD-1344, Method 1003.1, Cond. A
Operation Temperature ....Gold inner contact -55°C to +125°C,
                        Tin/lead inner contact -55°C to +125°C
Four-Fingered Contacts Disposable Carriers

700 Series

REPLACEMENT SOCKET TERMINALS

<table>
<thead>
<tr>
<th>Gold Sleeve</th>
<th>Low Profile Mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSG-1AG12-1</td>
<td>LSG-1DG17-1</td>
</tr>
<tr>
<td>LSG-1AG14-1</td>
<td>LSG-1DG17-1</td>
</tr>
</tbody>
</table>

STANDARD MOUNT PART NUMBERS

<table>
<thead>
<tr>
<th>Economy Series Part Number</th>
<th>Premium Series Part Number</th>
<th>Number of Contacts</th>
<th>Contact Plating</th>
<th>Sleeve Plating</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>706-AG10D-ES</td>
<td>706-AG20D-ES</td>
<td>6</td>
<td>Gold</td>
<td>Gold</td>
<td>.300</td>
</tr>
<tr>
<td>708-AG10D-ES</td>
<td>708-AG20D-ES</td>
<td>8</td>
<td>Gold</td>
<td>Gold</td>
<td>.400</td>
</tr>
<tr>
<td>714-AG10D-ES</td>
<td>714-AG20D-ES</td>
<td>14</td>
<td>Gold</td>
<td>Gold</td>
<td>.600</td>
</tr>
<tr>
<td>716-AG10D-ES</td>
<td>716-AG20D-ES</td>
<td>16</td>
<td>Gold</td>
<td>Gold</td>
<td>.300</td>
</tr>
<tr>
<td>718-AG10D-ES</td>
<td>718-AG20D-ES</td>
<td>18</td>
<td>Gold</td>
<td>Gold</td>
<td>.400</td>
</tr>
<tr>
<td>720-AG10D-ES</td>
<td>720-AG20D-ES</td>
<td>20</td>
<td>Gold</td>
<td>Gold</td>
<td>.600</td>
</tr>
<tr>
<td>722-AG10D-ES</td>
<td>722-AG20D-ES</td>
<td>22</td>
<td>Gold</td>
<td>Gold</td>
<td>.300</td>
</tr>
</tbody>
</table>

LOW PROFILE PART NUMBERS

<table>
<thead>
<tr>
<th>Low Profile Part Number</th>
<th>Number of Contacts</th>
<th>Outer Sleeve Plating</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>706-AG10D</td>
<td>6</td>
<td>Gold</td>
<td>.300</td>
</tr>
<tr>
<td>708-AG10D</td>
<td>8</td>
<td>Gold</td>
<td>.400</td>
</tr>
<tr>
<td>714-AG10D</td>
<td>14</td>
<td>Gold</td>
<td>.600</td>
</tr>
<tr>
<td>716-AG10D</td>
<td>16</td>
<td>Gold</td>
<td>.300</td>
</tr>
<tr>
<td>718-AG10D</td>
<td>18</td>
<td>Gold</td>
<td>.400</td>
</tr>
<tr>
<td>720-AG10D</td>
<td>20</td>
<td>Gold</td>
<td>.600</td>
</tr>
<tr>
<td>722-AG10D</td>
<td>22</td>
<td>Gold</td>
<td>.300</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
FEATURES:
The 800 Series combines precision four-fingered inner contacts with an open ladder insulator to produce the ultimate high-reliability socket.

- Precision four-fingered inner contacts provide concentric funnel entry for easy flat and round lead insertion
- “X” & “Y” stackable. Open ladder for cooling, cleaning and inspection. Low profile
- Accommodates 8 through 64 pins DIPS, rectangular or round IC leads
- Non-wicking, closed bottom sleeve provides 100% protection against flux and solder contamination. Choice of solderless wrap or PC termination
- 🇺🇸 Recognized under the Component Program of Underwriter Laboratories, Inc. File No. E111362
- Beryllium copper inner contact for maximum mechanical and electrical performance
- Machined (Premium Series) and stamped (Economy Series) contacts are available
- For extreme conditions involving shock and vibration, The AMP high retention force contact is available

APPLICATION DIMENSIONS:
- PCB Thickness Range: Standard .062" and .092" (1.57 and 2.34)
- PCB Hole Size Range: .035" ± .002" (0.89 ± 0.05) PC tail,
  .055" ± .003" (1.40 ± 0.08) solderless wrap
- IC Pin Dimension Range: .009" x .015" (0.23 x 0.38) through
  .011" x .020" (0.28 x 0.51)
  .016" to .021" (0.41 to 0.53) round lead
  .105" (2.67) min. length

MATERIAL SPECIFICATIONS:
- Insulator: Thermoplastic polyester, UL rated 94V-0
- Sleeve: Machined brass
- Contact: Beryllium copper
- Sleeve Plating: Tin/lead or gold
- Contact Plating: Premium or Economy Series (ES) - gold or tin/lead
  Economy Series (ESL) - low gold

PERFORMANCE SPECIFICATIONS:

MECHANICAL
- Shock: Passed MIL-STD-1344, Method 2004.1, Condition C, 10 G’s
- Durability: Passed MIL-STD-1344, Method 2016 Normal Force: 125 Grams (4.4 oz.) average with .018" (0.46) dia.
  polished steel pin (Premium Series)
  200 Grams (7.1 oz.) average with .018" (0.46) dia.
  polished steel pin (Economy Series)
- Inner Contact Retention: 7.5 Lbs. per line average
- Sleeve Retention in Plastic: 3.0 Lbs. per line minimum
- Solderability: Passed MIL-STD-202F, Method 208
- Insertion Force: Premium - 134 grams (4.7 oz.) average with a .018" (0.46) dia. polished steel pin
  Economy - 179 grams (6.3 oz.) average with a .018" (0.46) dia. polished steel pin
- Withdrawal Force: 63 Grams (2.2 oz.) average with a .018" (0.46) dia. polished steel pin

ELECTRICAL
- Contact Resistance: 10 Milliohms max.
- Contact Rating: 3 Amps
- Capacitance: 1 pF per MIL-STD-202, Method 305 (contact to contact)
- Insulation Resistance: 5,000 Megohms min. @ 500 VDC per MIL-STD-1344, Method 3003.1
- Dielectric Withstanding Voltage: 1,000 Volts RMS per MIL-STD-1344, Method 3001.1

ENVIRONMENTAL
- Humidity: Passed MIL-STD-1344, Method 1002.2, Cond. II
- Thermal Shock: Passed MIL-STD-1344, Method 1003.1, Cond. A
- Operation Temperature: Gold inner contact -55°C to +125°C, Tin/lead inner contact -55°C to +105°C
# Four-Fingered Contact Open Insulator

## 800 Series

### STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Number of Contacts</th>
<th>A</th>
<th>B*</th>
<th>C</th>
<th>Number of Contacts</th>
<th>A</th>
<th>B*</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>.400 (10.16)</td>
<td></td>
<td></td>
<td>24</td>
<td>1.300 (30.48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>3.00 (17.78)</td>
<td>300 (7.62)</td>
<td>.400 (10.16)</td>
<td>28</td>
<td>1.000 (35.56)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>3.00 (20.32)</td>
<td></td>
<td></td>
<td>32</td>
<td>1.000 (40.64)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>3.00 (22.86)</td>
<td></td>
<td></td>
<td>36</td>
<td>1.000 (45.72)</td>
<td>.600 (15.24)</td>
<td>700 (17.78)</td>
</tr>
<tr>
<td>20</td>
<td>1.000 (25.40)</td>
<td></td>
<td></td>
<td>40</td>
<td>2.000 (50.80)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>1.000 (27.94)</td>
<td>400 (10.16)</td>
<td>500 (12.70)</td>
<td>42</td>
<td>2.100 (53.34)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>1.200 (30.48)</td>
<td>400 (10.16)</td>
<td></td>
<td>48</td>
<td>2.400 (60.96)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>3.00 (12.70)</td>
<td></td>
<td>64</td>
<td>3.200 (81.28)</td>
<td>900 (22.86)</td>
<td>1.000 (25.40)</td>
<td></td>
</tr>
</tbody>
</table>

* Dimension B = .005 (0.13)

### Economy Series

<table>
<thead>
<tr>
<th>Position</th>
<th>Centerline</th>
<th>Contact</th>
<th>Sleeve</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>10</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
</tbody>
</table>

### Premium Series

<table>
<thead>
<tr>
<th>Position</th>
<th>Centerline</th>
<th>Contact</th>
<th>Sleeve</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>14</td>
<td>300 (7.62)</td>
<td>Low Gold</td>
<td>Gold</td>
</tr>
<tr>
<td>16</td>
<td>300 (7.62)</td>
<td>Low Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>18</td>
<td>300 (7.62)</td>
<td>Low Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>20</td>
<td>300 (7.62)</td>
<td>Low Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>22</td>
<td>300 (7.62)</td>
<td>Low Gold</td>
<td>Tin/Lead</td>
</tr>
</tbody>
</table>

### PART NUMBERS

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

## Specifications

- Dimensions are shown for reference purposes only.
- Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
- Specifications subject to change.
- Technical Support Center: 1-800-522-6752

## Catalog 1307612

Revised 7-01
DIP Sockets

Catalog 1307612
Revised 7-01

Four Fingered Contact Open Insulator

PART NUMBERS

<table>
<thead>
<tr>
<th>Economy Series</th>
<th>Premium Series</th>
<th>Position</th>
<th>Centerline</th>
<th>Contact</th>
<th>Sleeve</th>
</tr>
</thead>
<tbody>
<tr>
<td>8S415</td>
<td>8S415</td>
<td>52</td>
<td>0.090</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>8S419</td>
<td>8S419</td>
<td>52</td>
<td>0.090</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>8S420</td>
<td>8S420</td>
<td>64</td>
<td>0.090</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>8S421</td>
<td>8S421</td>
<td>64</td>
<td>0.090</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
</tbody>
</table>

Economy and Premium Series - .180” (4.57) PC Tail Pins

<table>
<thead>
<tr>
<th>High Retention Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>8XX-AG44D-XXX - Gold contact, tin/lead sleeve</td>
</tr>
<tr>
<td>8XX-AG45D-XXX - Gold contact, gold sleeve</td>
</tr>
<tr>
<td>8XX-AG43D-XXX - Tin/lead contact, tin/lead sleeve</td>
</tr>
</tbody>
</table>

Note: Part numbers in this chart and in detail shown refer to a .125” (3.18) PC Tail Pin

For wire-wrap sockets or 24 position on .300” (7.62) or .400” (10.16) in high retention or .180” (4.57) tails, please consult Tyco Electronics.

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Surface Mount

800 SM Series

FEATURES:

Tyco Electronics offers the precision machined 800SM Series which achieves compliancy to the board surface and is designed for high temperatures typical of vapor phase and infrared reflow soldering.

• “Butt” style terminals float in plastic housing for compliancy to board surface
• Precision four-fingered inner contacts provide concentric funnel entry for easy flat or round insertion

APPLICATION DIMENSIONS:

• PCB Thickness Range: Standard .062” and .092” (1.57 and 2.34)
• IC Pin Dimension Range: .009” x .015” (0.23 x 0.38) through .011” x .020” (0.28 x 0.51)
• .016” to .021” (0.41 to 0.53) round lead .105” (2.67) min. length

MATERIAL SPECIFICATIONS:

Insulator ..................Thermoplastic polyester, UL rated 94V-0
Outer Sleeve .............Brass
Contacts ..................Beryllium copper
Sleeve Plating ............Tin/lead
Contact Plating ..........Gold or tin/lead

PERFORMANCE SPECIFICATIONS:

MECHANICAL

Vibration ..................Passed MIL-STD-1344, Method 2005.1, Condition II, 10 G’s
Shock ......................Passed MIL-STD-1344, Method 2004.1, Condition C, 100 G’s
Durability ................Passed MIL-STD-1344, Method 2016
Inner Contact Retention ............7.5 Lbs. per line average
Solderability ..............Passed MIL-STD-202F, Method 208
Insertion Force ..............179 Grams (6.3 oz.) average with a .018” (0.46)
dia. polished steel pin
Withdrawal Force ..........63 Grams (2.2 oz.) average with a .018” (0.46)
dia. polished steel pin

ELECTRICAL

Contact Resistance ............10 Milliohms max.
Contact Rating ...............3 Amps
Capacitance .................1.0 pF per MIL-STD-202, Method 305
(contact to contact)
Insulation Resistance ....5,000 Megohms min. @ 500 VDC per
MIL-STD-1344, Method 3003.1
Dielectric Withstanding
Voltage ....................1,000 Volts RMS per MIL-STD-1344,
Method 3001.1

ENVIRONMENTAL

Humidity ..................Passed MIL-STD-1344, Method 1002.2, Cond. II
Thermal Shock ..............Passed MIL-STD-1344, Method 1003.1, Cond. A
Operation Temperature ....Gold inner contact -55°C to +125°C,
Tin/lead inner contact -55°C to +105°C
### Surface Mount

#### 800 SM Series

![Diagram of 800 SM Series Sockets]

**Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.**

**Recommended Pad Pattern Tolerance ± .002 (0.05)**

#### STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Number of Contacts</th>
<th>A</th>
<th>B*</th>
<th>C</th>
<th>Number of Contacts</th>
<th>A</th>
<th>B*</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>.400 (10.16)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>24</td>
<td>1.200 (30.48)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>14</td>
<td>.700 (17.78)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>28</td>
<td>1.400 (35.36)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>16</td>
<td>.800 (20.32)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>32</td>
<td>1.600 (40.64)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>18</td>
<td>.900 (22.86)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>36</td>
<td>1.800 (45.72)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>20</td>
<td>1.000 (25.40)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>40</td>
<td>2.000 (50.80)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>22</td>
<td>1.100 (27.94)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>44</td>
<td>2.200 (55.90)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>24</td>
<td>1.200 (30.48)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>48</td>
<td>2.400 (60.96)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>24</td>
<td>1.200 (30.48)</td>
<td>.300 (7.62)</td>
<td>.400 (10.16)</td>
<td>64</td>
<td>3.200 (81.28)</td>
<td>.600 (15.24)</td>
<td>.700 (17.78)</td>
</tr>
</tbody>
</table>

* Dimension B ± .005 (0.13)

#### PART NUMBERS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Position</th>
<th>Centerline</th>
<th>Contact</th>
<th>Part Number</th>
<th>Position</th>
<th>Centerline</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>808-AG11SM</td>
<td>8</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>808-AG11SM</td>
<td>24</td>
<td>800 (20.32)</td>
<td>Gold</td>
</tr>
<tr>
<td>808-AG12SM</td>
<td>8</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>808-AG11SM</td>
<td>28</td>
<td>800 (20.32)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>814-AG11SM</td>
<td>14</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>814-AG11SM</td>
<td>28</td>
<td>800 (20.32)</td>
<td>Gold</td>
</tr>
<tr>
<td>814-AG12SM</td>
<td>14</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>814-AG11SM</td>
<td>28</td>
<td>800 (20.32)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>816-AG11SM</td>
<td>16</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>816-AG11SM</td>
<td>32</td>
<td>800 (20.32)</td>
<td>Gold</td>
</tr>
<tr>
<td>816-AG12SM</td>
<td>16</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>816-AG11SM</td>
<td>32</td>
<td>800 (20.32)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>818-AG11SM</td>
<td>18</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>818-AG11SM</td>
<td>36</td>
<td>800 (20.32)</td>
<td>Gold</td>
</tr>
<tr>
<td>818-AG12SM</td>
<td>18</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>818-AG11SM</td>
<td>36</td>
<td>800 (20.32)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>820-AG11SM</td>
<td>20</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>820-AG11SM</td>
<td>40</td>
<td>800 (20.32)</td>
<td>Gold</td>
</tr>
<tr>
<td>820-AG12SM</td>
<td>20</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>820-AG11SM</td>
<td>40</td>
<td>800 (20.32)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>822-AG11SM</td>
<td>22</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>822-AG11SM</td>
<td>42</td>
<td>800 (20.32)</td>
<td>Gold</td>
</tr>
<tr>
<td>822-AG12SM</td>
<td>22</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>822-AG11SM</td>
<td>42</td>
<td>800 (20.32)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>824-AG11SM</td>
<td>24</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>824-AG11SM</td>
<td>48</td>
<td>800 (20.32)</td>
<td>Gold</td>
</tr>
<tr>
<td>824-AG12SM</td>
<td>24</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>824-AG11SM</td>
<td>48</td>
<td>800 (20.32)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>824-AG66SM</td>
<td>24</td>
<td>300 (7.62)</td>
<td>Gold</td>
<td>824-AG14SM</td>
<td>64</td>
<td>900 (22.86)</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>824-AG14SM</td>
<td>24</td>
<td>300 (7.62)</td>
<td>Tin/Lead</td>
<td>824-AG14SM</td>
<td>64</td>
<td>900 (22.86)</td>
<td>Tin/Lead</td>
</tr>
</tbody>
</table>

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
DIP Insertion and Withdrawal Tools

TI/TW Series

The insertion and extraction of dual inline integrated circuit packages has always presented the problem of aligning all leads simultaneously. The TI/TW family of tools solve this problem with a range of tools for 8 thru 40 pin devices.

FEATURES:
- Smooth insertion and withdrawal of ICs.
- Prevents bending of IC leads while inserting and removing.
- Ensures greater socketing reliability.
- Uses limited amount of board space for support.
- Available in flexible roll pouch for convenient organization of service tool kit.

### INSERTION TOOLS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Accepts Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>TI8136-8</td>
<td>8 leads on .300 (7.62) centers</td>
</tr>
<tr>
<td>TI8136-14/16</td>
<td>14 and 16 leads on .300 (7.62) centers</td>
</tr>
<tr>
<td>TI8136-18/20</td>
<td>18 and 20 leads on .300 (7.62) centers</td>
</tr>
<tr>
<td>TI8136-22</td>
<td>22 leads on .400 (10.16) centers</td>
</tr>
<tr>
<td>TI8136-24/28</td>
<td>24 and 28 leads on .600 (15.24) centers</td>
</tr>
<tr>
<td>TI8136-32/40</td>
<td>32 thru 40 leads on .600 (15.24) centers</td>
</tr>
</tbody>
</table>

### WITHDRAWAL TOOLS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Accepts Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>TW8136-8</td>
<td>8 leads on .300 (7.62) centers</td>
</tr>
<tr>
<td>TW8136-14/20</td>
<td>14 and 16 leads on .300 (7.62) centers</td>
</tr>
<tr>
<td>TW8136-22</td>
<td>22 leads on .400 (10.16) centers</td>
</tr>
<tr>
<td>TW8136-24/28</td>
<td>24 and 28 leads on .600 (15.24) centers</td>
</tr>
<tr>
<td>TW8136-32/40</td>
<td>32 thru 40 leads on .600 (15.24) centers</td>
</tr>
<tr>
<td>TK8136-1G1</td>
<td>8 thru 40 position insertion and extraction tools in a 26-pocket, reinforced, double thick vinyl roll pouch</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
DIP Sockets

DIP Withdrawal Tools

TX Series

FEATURES:
- The extractor tool uses the shoulders of the IC socket or surface of the printed wiring board as a stable lifting platform, designed for no slippage or misalignment during removal of the IC, as often happens when using traditional IC removal tools.
- Can be grounded to protect delicate MOS devices from static discharge.
- Lead screw adjustment applies a constant parallel axial force, eliminating problems with bent or broken IC pins.
- These extractor tools remove soldered or socketed ICs from printed wiring boards. Soldered ICs are removed by applying heat to the soldered junction, while gently turning knob to exert a continuous force.

OPERATION:
Plunger button opens and closes support legs encasing the IC. Turning knob raises the IC from its socketed or soldered position.

WITHDRAWAL TOOLS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX8136-14/20</td>
<td>14 to 20 pins .300” (7.62) rows</td>
</tr>
<tr>
<td>TX8136-22</td>
<td>22 pins .400” (10.16) rows</td>
</tr>
<tr>
<td>TX8136-24</td>
<td>24 pins .600 (15.24) rows</td>
</tr>
<tr>
<td>TX8136-40</td>
<td>40 pins .600 (15.24) rows</td>
</tr>
<tr>
<td>TX8136-64</td>
<td>64 pins .900” (22.86) rows</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

IC WITHDRAWAL TOOL

The TX 8136 Family of precision lead extractor tools provide for a controlled, aligned and parallel withdrawal of ICs. This saves you many times the cost of the tool by protecting expensive IC devices from pin damage.

TX8136-40

The TX8136 Family of precision lead extractor tools provide for a controlled, aligned and parallel withdrawal of ICs. This saves you many times the cost of the tool by protecting expensive IC devices from pin damage.

TX8136-40

The TX8136 Family of precision lead extractor tools provide for a controlled, aligned and parallel withdrawal of ICs. This saves you many times the cost of the tool by protecting expensive IC devices from pin damage.

TX8136-40

The TX8136 Family of precision lead extractor tools provide for a controlled, aligned and parallel withdrawal of ICs. This saves you many times the cost of the tool by protecting expensive IC devices from pin damage.
Product Facts

- **Low Profile** — .210 [5.33] max. seating plane above pc board
- Dual wiping contacts
- Face wipe contacts for high reliability and constant, low resistance
- Anti-overstress prevents contact damage
- Large target area with tapered lead-in ramps for easy SIP insertion
- “True closed bottom” design inhibits solder wicking and flux contamination
- Stackable end-to-end and side-to-side (brickwalling) for high board density
- Housing standoffs and slots facilitate board cleaning
- Family of 3 through 25 positions
- Retention-style solder tails
- Visual polarization
- Meets the material requirements of Table 23.1 of UL 1410 Standard for Television Receivers and Video Products
- Tin or gold plated beryllium copper or tin plated phosphor bronze contacts
- Designed to meet EIA RS-415, MIL-S-83734 and stringent computer specifications
- Recognized under the Component Program of Underwriters Laboratories Inc., File E28476
- Certified by Canadian Standards Association File No. LR 7189

The Dual Leaf (DL) SIP socket family provides high quality at low cost with superior handling characteristics. Sockets are available in 3- through 25-position sizes with dual wiping contacts in tin and gold plating over beryllium copper or economical tin plated phosphor bronze. The large target area of the contacts and tapered side ramps in the housing promote easy entry of a SIP package. Internal anti-overstress walls prevent contact damage. These stackable housings feature a "true closed bottom" design which prevents solder or flux wicking at class 1 conditions of EIA 486.

Standoffs provide board clearance for proper cleaning after soldering. Sockets are available with retention feature solder tails for self retention in the pc board during handling and flow soldering.

Housings are constructed from self-extinguishing glass-filled polyester, 94V-0 rated material and meet the material requirements of Table 23.1 of UL 1410 Standard for Television Receivers and Video Products.

The DL SIP Socket family meets the requirements of EIA RS-415, MIL-S-83734 and the most stringent specifications of main-frame computer manufacturers.

Performance Characteristics:

- **Rating** — Signal application only
- **Contact Resistance** — 20 milliohms max. (initial)
- **Dielectric Withstanding Voltage** — 1000 VRMS min.
- **Insulation Resistance** — 5000 megohms min.
- **Vibration** — 15 Gs, 10-2000-10 Hz in 20 minutes
- **Shock** — 100 Gs sawtooth, 6 shocks
- **Engaging Force** — 340 grams [3.33 N] max. (.013 [0.33] pin)
- **Separating Force** — 25 grams [0.24 N] (.008 [0.2] pin)

Technical Documents:

- **Product Specification**
  108-1066 Standard
- **Application Specification**
  114-1049
## Sockets

### Solder Tail Dual Leaf (DL)

Sockets accept .008—.014 (0.2—0.36) thick x .030 (0.76) max. wide rectangular IC leads.

**Material and Finish:**
- **Housing:** Glass-filled thermoplastic, 94V-0 rated, black
- **Contacts:** Beryllium copper with gold or tin plating, or phosphor bronze with tin plating (see table)

### Specifications

- **Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.**
- **Dimensions are shown for reference purposes only.**
- **Products for Industrial & Commercial Applications**
- **Specifications subject to change.**
- **Technical Support Center**
- 1-800-522-6752
- www.tycoelectronics.com

### Recommended Mounting Dimensions

**Recommended Mounting Dimensions**

**SIP Sockets**

- **Solder Tail Dual Leaf (DL)**
  - Sockets accept .008—.014 (0.2—0.36) thick x .030 (0.76) max. wide rectangular IC leads.

### Table of Dimensions

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Beryllium Copper</th>
<th>Phosphor Bronze</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>Tinned</td>
</tr>
<tr>
<td>3</td>
<td>.395</td>
<td>.200</td>
<td>382437-1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>10.03</td>
<td>382438-1</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>20.19</td>
<td>643640-1</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>22.73</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>.995</td>
<td>643642-1</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>1.095</td>
<td>643643-1</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>1.195</td>
<td>643644-1</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>1.295</td>
<td>643646-1</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>1.395</td>
<td>643647-1</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>1.495</td>
<td>643648-1</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>1.595</td>
<td>643649-1</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>1.695</td>
<td>643650-1</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>1.795</td>
<td>643651-1</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>1.895</td>
<td>643652-1</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>2.095</td>
<td>643653-1</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>2.195</td>
<td>643654-1</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>2.295</td>
<td>643655-1</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>2.395</td>
<td>643656-1</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>2.495</td>
<td>643657-1</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>2.595</td>
<td>643658-1</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>2.695</td>
<td>643659-1</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>2.795</td>
<td>643660-1</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>2.895</td>
<td>643661-1</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>2.995</td>
<td>643662-1</td>
</tr>
</tbody>
</table>

*Packaged in tubes.*
**Terminal Strips, Four-Fingered Contact**

**500 Series**

![Image of terminal strips](image_url)

**PART NUMBERS**

<table>
<thead>
<tr>
<th>Economy Series</th>
<th>Premium Series</th>
<th>Number of Contacts</th>
<th>Contact Plating</th>
<th>Sleeve Plating</th>
<th>Dim. A</th>
</tr>
</thead>
<tbody>
<tr>
<td>510AG91D08ESL</td>
<td></td>
<td></td>
<td>Gold</td>
<td>Gold</td>
<td></td>
</tr>
<tr>
<td>510AG91D16ESL</td>
<td>510AG91D14</td>
<td>10</td>
<td>Low Gold</td>
<td>Tin/Lead</td>
<td>1,000</td>
</tr>
<tr>
<td>510AG92D16ESL</td>
<td>510AG92D14</td>
<td></td>
<td>Gold</td>
<td>Tin/Lead</td>
<td>2,000</td>
</tr>
</tbody>
</table>

For sizes not shown or for wire-wrap termination, please consult Tyco Electronics.

**ECONOMY AND PREMIUM SERIES - .180 PC TAIL PINS**

510-AG4SD-XX, 510AG4SDXES(L) - Gold Contact, Gold Sleeve

510-AG44D-XX, 510AG44DXES(L) - Gold Contact, Tin/Lead Sleeve

510-AG42D-XX, 510AG42DXES(L) - Tin/Lead Contact, Tin/Lead Sleeve

**NOTES:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

**APPLICATION DIMENSIONS:**
- PCB Thickness Range: Standard .062" and .092" (1.57 and 2.34)
- PCB Hole Size Range: .035" ± .003" (0.89 ± 0.08) PC tail
- IC Pin Dimension Range: .009" ± .003" (0.23 ± 0.08) Solderless wrap

**MATERIAL SPECIFICATIONS:**
- Insulator: Thermoplastic polyester, UL rated 94V-0
- Inner Contact: Beryllium copper, gold or tin/lead plated
- Sleeve: Brass, gold or tin/lead plated

**PERFORMANCE SPECIFICATIONS:**

**MECHANICAL**
- Shock: Passed MIL-STD-1344, Method 2004.1, Condition C, 100 G's
- Durability: Passed MIL-STD-1344, Method 2005.1, Condition II, 10 G's

**ELECTRICAL**
- Contact Resistance: 10 Milliohms max.
- Contact Rating: 3 Amps
- Capacitance: 1.0 pF per MIL-STD-202, Method 305 (contact to contact)
- Insulation Resistance: 5,000 Megohms min. @ 500 VDC per MIL-STD-1344, Method 3003.1
- Dielectric Withstanding Voltage: 1,000 Volts RMS per MIL-STD-1344, Method 3001.1

**ENVIRONMENTAL**
- Humidity: Passed MIL-STD-1344, Method 102.2, Cond. II
- Thermal Shock: Passed MIL-STD-1344, Method 103.1, Cond. A
- Operation Temperature: Gold inner contact -55°C to +125°C
- Tin/lead inner contact -55°C to +105°C

For sizes not shown or for wire-wrap termination, please consult Tyco Electronics.

**SPECIFICATIONS:**

- Terminal Strips, Four-Fingered Contact

**FEATURES:**
- Available in strips of 1 to 20
- Breakaway feature for breaking strips into any desired shorter lengths (no special tooling required)
- Contact features closed end construction eliminating any solder or flux wicking problems
- Two-piece tapered entry closed entry inner contact and outer sleeve
- Accepts any IC lead and component leads .016" - .021" (0.41 - 0.53)
- .180 PC TAIL PINS

**ECONOMY AND PREMIUM SERIES - .180 PC TAIL PINS**

510-AG4SD-XX, 510AG4SDXES(L) - Gold Contact, Gold Sleeve

510-AG44D-XX, 510AG44DXES(L) - Gold Contact, Tin/Lead Sleeve

510-AG42D-XX, 510AG42DXES(L) - Tin/Lead Contact, Tin/Lead Sleeve

**PRODUCTS FOR INDUSTRIAL & COMMERCIAL APPLICATIONS**

Dimensions are shown for reference purposes only.
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com
Tyco Electronics offers a metal latch version of its MICRO-EDGE SIMM sockets. This feature eliminates the breakage associated with the misuse of SIMM sockets. In addition, the metal latches will prevent shaving and/or skiving, as happens with plastic latches, due to inconsistent manufacturing methods of the board edges. The metal latch MICRO-EDGE sockets are available in .050 [1.27] centerline configurations. All are available in vertical and angled/low profile designs, with and without center posts.

### Performance Characteristics:

- **Current Rating** — 1 ampere max.
- **Termination Resistance**  
  (Dry Circuit) — 30 milliohms max.  
  (initial)
- **Dielectric Withstanding Voltage** — 1.0 KVAC
- **Insulation Resistance** — 10,000 megohms min.  
  (initial)
- **Capacitance** — 1.0 picofarad max.
- **Operating Temperature** — -55°C to +105°C
- **Durability** — 25 cycles min.

### Technical Documents:

- **Product Specification**
  108-1095
- **Application Specification**
  114-1061
- **Instruction Sheet**
  408-9413
SIMM MICRO-EDGE Sockets

Single Row
(Right Polarization)

Material and Finish:

Housing — Liquid Crystal Polymer (LCP) UL 94V-0

Contacts — Phosphor bronze with .000200 [0.00508] min. thick tin-lead over .000050 [0.00127] min. thick nickel or .000030 [0.00076] min. thick gold on contact area and .000150 [0.0038] min. thick tin-lead on solder tails, all over .000050 [0.00127] min. thick nickel

Latch — Brass, nickel plated

Section A-A

Vertical, .050 [1.27] Centerline

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>72</td>
<td>3.750</td>
<td>1.750</td>
</tr>
<tr>
<td></td>
<td>95.25</td>
<td>44.45</td>
</tr>
<tr>
<td>80</td>
<td>4.150</td>
<td>1.950</td>
</tr>
</tbody>
</table>

Section A-A

Single Row
(Left Polarization)

Material and Finish:

Housing — Liquid Crystal Polymer (LCP) UL 94V-0

Contacts — Phosphor bronze with .000200 [0.00508] min. thick tin-lead over .000050 [0.00127] min. thick nickel or .000030 [0.00076] min. thick gold on contact area and .000150 [0.0038] min. thick tin-lead on solder tails, all over .000050 [0.00127] min. thick nickel

Latch — Brass, nickel plated

Section A-A

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>72</td>
<td>3.750</td>
<td>1.750</td>
</tr>
<tr>
<td></td>
<td>95.25</td>
<td>44.45</td>
</tr>
<tr>
<td>80</td>
<td>4.150</td>
<td>1.950</td>
</tr>
</tbody>
</table>
Low Profile (22°) Single Row with Optional Fluted or Split Retention Post

Material and Finish:

Housing — Liquid Crystal Polymer (LCP) UL 94V-0

Contacts — Phosphor bronze with .000200 [0.00508] min. thick tin-lead over .000050 [0.00127] min. thick nickel or .000030 [0.00076] min. thick gold on contact area and .000150 [0.0038] min. thick tin-lead on solder tails, all over .000050 [0.00127] min. thick nickel

Latch — Stainless steel

Section A-A

<table>
<thead>
<tr>
<th>No. of Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positions</td>
<td>A</td>
</tr>
<tr>
<td>72</td>
<td>3.750</td>
</tr>
<tr>
<td></td>
<td>95.25</td>
</tr>
<tr>
<td>80</td>
<td>4.150</td>
</tr>
<tr>
<td></td>
<td>105.41</td>
</tr>
</tbody>
</table>

Dimensions are shown for reference purposes only. Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com
Product Facts

- Accepts module boards in a thickness range of .047-.054 [1.19-1.37] to allow the use of JEDEC standard boards
- Polarized posts on socket provide a means of properly orienting the socket on the pc board
- Pin 1 indicator in the socket orients the module board to the socket
- .050 [1.27] centerline sockets offer three profile heights — .125 [3.18], .160 [4.06] and .250 [6.35] to allow the use of single- and dual-sided boards, and the placement of components beneath the module board if required
- Very low insertion force for easy module insertion
- Metal latches provide superior strength
- Center post on .050 [1.27] product provides retention in the pc board through the soldering process
- Recognized under the Component Program of Underwriters Laboratories Inc., File E28476
- Certified by Canadian Standards Association File No. LR 7189

Tyco Electronics developed the SIMM II Right Angle Sockets for interfacing Single In-Line Memory Module (SIMM) boards horizontally to the pc board while using a traditional cam-in approach. Available in .050 [1.27] centerline with gold and tin plating options, the sockets are designed to accept the JEDEC standard pc board thickness range of .047-.054 [1.19-1.37].

In order to allow for many different customer designs, the .050 [1.27] centerline sockets are available in three card slot heights — .125 [3.18], .160 [4.06] and .250 [6.35]. This multi-height capability allows customers to use single- or dual-sided module boards while providing the lowest overall height for packaging. The .125 [3.18] height version provides an extremely low profile interface while maintaining easy insertion and extraction within restricted packaging specifications.

A very low insertion force is required to install the module board. To install, simply angle the module into the socket card slot, then pivot the module board into position where it is secured by the locking latches. The housing is made from liquid crystal polymer (LCP), assuring strong durable ramps. The latches for the .125 [3.18] height versions are made from LCP while all other versions have metal latches. Polarizing posts coincide with mounting holes in the pc board to prevent misinsertion.

Performance Characteristics:

- Current Rating — 1 ampere max.
- Termination Resistance (Dry Circuit) — 20 milliohms max. (initial)
- Dielectric Withstanding Voltage — 1 KVAC
- Insulation Resistance — 10,000 megohms min. (initial)
- Operating Temperature — -55°C to +85°C continuous, +105°C peak
- Durability — 25 cycles min.

Technical Documents:

- Product Specification 108-1297
- Application Specification 114-1060
.050 [1.27] Centerline

Material and Finish:

- **Housing** — Liquid Crystal Polymer (LCP), glass filled, UL 94V-0
- **Contacts** — Phosphor bronze with .000150 [0.0038] min. thick tin-lead over .000050 [0.00127] min. thick nickel or Duplex .00030 [0.00076] min. thick gold on contact area and .000150 [0.0038] min. thick tin-lead on solder tails, all over .000050 [0.00127] min. thick nickel.

<table>
<thead>
<tr>
<th>Card Slot Height</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>.125</td>
<td>.315 x .304</td>
</tr>
<tr>
<td>G</td>
<td>H</td>
</tr>
<tr>
<td>3.18</td>
<td>8.26</td>
</tr>
<tr>
<td>.160</td>
<td>.360 x .339</td>
</tr>
<tr>
<td>4.06</td>
<td>9.14</td>
</tr>
<tr>
<td>.250</td>
<td>.450 x .429</td>
</tr>
<tr>
<td>6.35</td>
<td>11.43</td>
</tr>
</tbody>
</table>

Recommended PC Board Hole Pattern

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>.125 [3.18] Height(^1)</th>
<th>.160 [4.06] Height(^2)</th>
<th>.250 [6.35] Height(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>72</td>
<td>3.984</td>
<td>4.550</td>
<td>1.750</td>
<td>2.200</td>
</tr>
<tr>
<td></td>
<td>101.19</td>
<td>115.57</td>
<td>44.45</td>
<td>55.88</td>
</tr>
<tr>
<td>80</td>
<td>4.384</td>
<td>4.950</td>
<td>1.950</td>
<td>2.400</td>
</tr>
<tr>
<td></td>
<td>111.35</td>
<td>125.73</td>
<td>49.53</td>
<td>60.96</td>
</tr>
</tbody>
</table>

\(^1\) Has plastic latches (plastic latches extend .707 [17.96] from back of housing).
\(^2\) Has metal latches.
\(^3\) Note: Metal latch version shown for purposes of illustration.
SO DIMM sockets are available in a 144-position dual read-out version for SDRAM (Synchronous Dynamic Random Access Memory) and a version for SGRAM (Synchronous Graphic Random Access Memory).

For use in Frame Buffer Memory applications, where height off the board is important, this socket is ideal because of its right angle, low vertical height design.

Sockets use 0.8mm centerline technology to provide more than triple the density of standard SIMM sockets and provide highly reliable, low cost, space saving benefits. Easy aligning, cam-in module loading and dual locking levers provide for simple do-it-yourself upgrades.

The SDRAM version is available in four card slot heights of 2.1mm [0.083 in.], 3.3mm [.130 in.], 3.7mm [.146 in.] and 8.0mm [.315] for 3.3V power supplies. The SGRAM version is available in two card slot heights; 3.7mm [.146] and 8.0 [.315] for 3.3V power supplies. Hard tray and tape-and-reel packaging are available for automatic placement. Contact Tyco Electronics for part number availability.

Performance Characteristics:

- **Operating Temperature** — -55°C to +105°C
- **Termination Resistance** (Dry Circuit) — 30 milliohms max., initial ΔR=20 milliohms max., final
- **Dielectric Strength** — 1.0 KVAC
- **Insulation Resistance** — 10,000 megohms min.
- **Durability** — 25 cycles
- **PCB Matting Force** — 59.8 N [13.44 lb] max., initial

Technical Documents:

- **Product Specification** 108-1739

For complete product information, order Catalog 1307767

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Specifications subject to change.
Technical Support Center 1-800-522-6752
www.tycoelectronics.com
SO DIMM Sockets

Dual Read-Out for SDRAM Memory Modules

144 Positions — 0.8 mm SO DIMM

Material and Finish:
- **Housing**: Nylon, UL94V-0 rated; color: natural
- **Contact**: Phosphor bronze with 0.00025 mm [0.000098 in.] min. thick gold over 0.001 mm [0.0000393 in.] min. thick nickel in contact area and gold flash over 0.001 mm [0.0000393 in.] min. thick nickel in soldering area.

Dual Read-Out for SGRAM Memory Modules

144 Positions — 0.8 mm SO DIMM

Material and Finish:
- **Housing**: Nylon, UL94V-0 rated; color: natural
- **Contact**: Phosphor bronze with 0.00048 mm [0.000189 in.] min. thick gold over 0.0013-0.004 mm [0.00051-0.000157 in.] thick nickel in contact area and 0.0033-0.0064 mm [0.00013-0.000250 in.] thick tin-lead over 0.0013-0.004 mm [0.00051-0.000157 in.] thick nickel in soldering area.

For complete product information, order Catalog 1307767
Dual Read-Out for 8 Byte Memory Modules

Available from Tyco Electronics is a family of DIMM sockets for 8-Byte DRAM Dual In-Line Memory Module technology. The two-key¹ sockets are designed for 168-pin modules per JEDEC Standard MO-161. These sockets accept Standard Buffered DRAM, Synchronous DRAM and Non-Standard (Non-Buffered) DRAM modules in 5, 3.3 and future X.X volt versions. Advanced design keying provides damage protection for these various voltages.

The sockets provide twice the density of standard SIMM sockets while staying within present-day 1.27 (.050) centerline technology. In other words, the resultant pin I/O count is the same as if we were able to use 0.64 (.025) centerline spacing. The sockets have been designed to provide highly reliable, low-cost space saving benefits.

These sockets and modules provide increased memory capacity offered by 8 Byte DRAM for a 64-bit data bus. With module memory capacities that range from 2 MBytes to 512 MBytes, this module/socket combination is ideal for today's high end personal computers and work stations.

DIMM IIP (Performance Family) sockets are now available in some versions of 3.3 Volt Std. DRAM and Non-Std. (Non-Buffered) DRAM. See page 5029 for cross reference. For more information contact Tyco Electronics.

¹ A one-key version is also available.

Performance Characteristics:

- Current Rating — .5 ampere per contact
- Operating Temperature — -55°C to +105°C
- Termination Resistance (Dry Circuit) — 20 milliohms max., initial
- Dielectric Withstanding Voltage — 1.0 KVAC
- Insulation Resistance — 10,000 megohms min., initial
- Durability — 25 cycles min.
- Mating Force — 4 oz. [.1112 N] max. per contact, initial

Technical Documents:

- Product Specification 108-1582
- Application Specification 114-1107

For complete product information, order Catalog 1307767

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com
**DIMM II Sockets**

**Vertical Dual Read-Out for 8 Byte Memory Modules**

**168 Positions — JEDEC MO-161**

(Top view dimensions are the same for all variations.)

**Base Part Numbers**

390074  
390168

See table below showing complete part numbers.

**Base Part Numbers**

390215  
390240

See table below showing complete part numbers.

**Material and Finish**

**Housing & Ejector** — High temperature thermoplastic

**Contact** — Phosphor bronze with gold flash over 0.00051 [.000020] min. thick palladium-nickel over 0.00127 [.00050] min. thick nickel in contact area or 0.00381 [.000150] min. thick tin-lead over 0.00127 [.00050] min. thick nickel in soldertail area.

**Module Keying Details**

**Cross Reference — Standard to DIMM IIP Sockets**

<table>
<thead>
<tr>
<th>Part Numbers</th>
<th>Standard</th>
<th>DIMM IIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key 1 = A</td>
<td>390074-4</td>
<td>390168-4</td>
</tr>
<tr>
<td>390075-4</td>
<td>390168-5</td>
<td></td>
</tr>
<tr>
<td>390215-4</td>
<td>390215-6</td>
<td></td>
</tr>
<tr>
<td>390040-4</td>
<td>390040-5</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** 1 DIMM IIP (Performance Family) product available as replacement for these part numbers. See cross reference. Consult Tyco Electronics for additional information.

2 Has plastic retention posts in place of metal boardlocks.

For complete product information, order Catalog 1307767.
DIMM II Sockets

Right Angle Dual Read-Out for 8 Byte Memory Modules

Product Facts

- Low profile design
- Three profile heights
- Standard and reverse footprints
- Three solder tail length options
- 3.3 volts

Material and Finish

Housing — High Temperature Nylon
Contact — Phosphor Bronze
Contact area — .000003
[0.00000076] min. thick gold flash over
.000020 [0.000051] min. thick palladium nickel over .000050 [0.000127] min. thick nickel
Solder tail — .000150 [0.0038] min.
thick tin lead over .00064 [0.0163] min.

These 168 position sockets are designed to connect the DIMM II module, which is made to JEDEC specification MO-161, to the motherboard. It accepts an 8 byte DRAM DIMM module in 64 bit data bus applications. The 1.27mm [.050] pitch style accommodates a module printed circuit board thickness of 1.27mm [.050].

Electrical Characteristics:

Voltage Rating — 30 VAC max.
Current — 0.5 amp max.
Operating Temperature Range — -55° to +105°C
Dielectric Withstanding Voltage — 1000 VAC
Contact Resistance — 30 milliohms max.

Technical Documents:

Product Specification
108-1756
Application Specification
114-1119

For complete product information, order Catalog 1307767
### Right Angle Dual Read-Out for 8 Byte Memory Modules

<table>
<thead>
<tr>
<th>DRAM Type</th>
<th>Footprint</th>
<th>Tail Length (Dim. A)</th>
<th>Housing Height (Dim. B)</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard DRAM</strong></td>
<td>Standard, with center barb</td>
<td>3.18</td>
<td>10.92</td>
<td>390175-4</td>
</tr>
<tr>
<td></td>
<td>.125</td>
<td>.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, with center barb</td>
<td>1.96</td>
<td>9.27</td>
<td>1-390175-4</td>
</tr>
<tr>
<td></td>
<td>.077</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, with center barb</td>
<td>2.84</td>
<td>7.11</td>
<td>2-390175-4</td>
</tr>
<tr>
<td></td>
<td>.112</td>
<td>.280</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reverse, with center barb</td>
<td>3.18</td>
<td>10.92</td>
<td>1-390171-4</td>
</tr>
<tr>
<td></td>
<td>.125</td>
<td>.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, without center barb</td>
<td>1.96</td>
<td>9.27</td>
<td>390172-4</td>
</tr>
<tr>
<td></td>
<td>.077</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, without center barb</td>
<td>2.84</td>
<td>9.27</td>
<td>1-390172-4</td>
</tr>
<tr>
<td></td>
<td>.112</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sync DRAM</strong></td>
<td>Standard, with center barb</td>
<td>3.18</td>
<td>10.92</td>
<td>390175-5</td>
</tr>
<tr>
<td></td>
<td>.125</td>
<td>.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, with center barb</td>
<td>1.96</td>
<td>9.27</td>
<td>1-390173-5</td>
</tr>
<tr>
<td></td>
<td>.077</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, with center barb</td>
<td>2.84</td>
<td>7.11</td>
<td>2-390173-5</td>
</tr>
<tr>
<td></td>
<td>.112</td>
<td>.280</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reverse, with center barb</td>
<td>3.18</td>
<td>10.92</td>
<td>1-390171-5</td>
</tr>
<tr>
<td></td>
<td>.125</td>
<td>.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, without center barb</td>
<td>1.96</td>
<td>9.27</td>
<td>390172-5</td>
</tr>
<tr>
<td></td>
<td>.077</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, without center barb</td>
<td>2.84</td>
<td>9.27</td>
<td>1-390172-5</td>
</tr>
<tr>
<td></td>
<td>.112</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NB DRAM</strong></td>
<td>Standard, with center barb</td>
<td>3.18</td>
<td>10.92</td>
<td>390175-6</td>
</tr>
<tr>
<td></td>
<td>.125</td>
<td>.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, with center barb</td>
<td>1.96</td>
<td>9.27</td>
<td>1-390173-6</td>
</tr>
<tr>
<td></td>
<td>.077</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, with center barb</td>
<td>2.84</td>
<td>7.11</td>
<td>2-390173-6</td>
</tr>
<tr>
<td></td>
<td>.112</td>
<td>.280</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reverse, with center barb</td>
<td>3.18</td>
<td>10.92</td>
<td>1-390171-6</td>
</tr>
<tr>
<td></td>
<td>.125</td>
<td>.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, without center barb</td>
<td>1.96</td>
<td>9.27</td>
<td>390172-6</td>
</tr>
<tr>
<td></td>
<td>.077</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard, without center barb</td>
<td>2.84</td>
<td>9.27</td>
<td>1-390172-6</td>
</tr>
<tr>
<td></td>
<td>.112</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For complete product information, order Catalog 1307767
DIMM IIP Sockets

25° Angular

These 168 position sockets are designed to connect EDO DRAM and SDRAM modules to the motherboard. The connector allows the module to be slanted at 25° from the motherboard, thereby lowering the total vertical dimension. Plastic alignment posts allow for easy insertion and improved stability during module insertion, while metal hold-downs eliminate bowing. Positive locking extractors accommodate larger modules.

<table>
<thead>
<tr>
<th>DRAM Type</th>
<th>Tail Length (Dim. A)</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard DRAM (buffered)</td>
<td>2.62 .103</td>
<td>390170-4 390195-4</td>
</tr>
<tr>
<td></td>
<td>3.18 .125</td>
<td>—</td>
</tr>
<tr>
<td>Sync DRAM</td>
<td>2.62 .103</td>
<td>390170-5 390195-5</td>
</tr>
<tr>
<td></td>
<td>3.18 .125</td>
<td>—</td>
</tr>
<tr>
<td>NB DRAM (non-buffered)</td>
<td>2.62 .103</td>
<td>390170-8 390195-8</td>
</tr>
<tr>
<td></td>
<td>3.18 .125</td>
<td>—</td>
</tr>
</tbody>
</table>

For vertical DIMM IIP sockets, see page 5029.

Product Facts
- Low profile design
- Metal board hold-downs
- Accommodates EDO DRAM and SDRAM modules
- 3.3 volts
- Applicable to PC-100 & PC-133 modules
- Recognized under the Component Program of Underwriters Laboratories Inc., File E28476
- Certified by Canadian Standards Association File No. LR 7189

Material and Finish:
- Housing and Ejector — High Temperature Nylon
- Contact — Phosphor Bronze
- Contact area — .000003 [0.000076] min. thick gold flash over .000020 [0.000051] min. thick palladium nickel over .000050 [0.000127] min. thick nickel
- Solder tail — .000150 [0.0038] min. thick tin lead over .000025 [0.00064] min. thick nickel

Technical Documents:
- Product Specification 108-1801
- Application Specification 114-1118

For complete product information, order Catalog 1307767

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Product Facts

- Low profile — only 4.6 [.181] max.* for high density pc board stacking
- Compatible footprint allows for socket or direct mounting
- Housing slots accept extraction tool for easy PLCC removal
- Corner chamfer for PLCC orientation
- Available loose piece or tape mounted
- Plastic standoffs provide clearance for heat dissipation and cleaning operations
- Housings will withstand high temperature soldering
- Open bottom housing for convenient placement of socket on pattern, 100% inspection of solder joint, and penetration of heat source to the solder pad and surface mount contact
- Top contact slots allow test probing with PLCC device in place
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association File LR 7189A-97

The AMP family of Low Profile Plastic Leaded Chip Carrier (PLCC) Sockets for surface mounting is designed to accommodate Plastic “J” leaded, tin plated devices made to JEDEC Specifications MS-018 (square packages) and MS-016-AE (rectangular packages). Available in 20, 28, 32, 44, 52, 68 and 84 positions, these sockets feature high normal force contacts made from phosphor bronze material with tin-lead over nickel plating. Sockets feature a one-piece housing that will withstand vapor-phase, I.R. or convection reflow soldering temperatures and prevent flux and solvent entrapment.

The low profile housing is only 4.6 [.181] high, maximum* allowing high density printed circuit board stacking. The open bottom design enables easy socket placement on the pc board footprint pattern facilitates inspection as well as permitting the heat source to penetrate to the solder pad and surface mount contact. The socket uses the same footprint pattern as the chip carrier.

Sockets are also available on embossed tape made to EIA Standard 481 which allows interchangeability of tape in commercially available pick-and-place equipment.
**PLCC Sockets**

**Small Outline Low Profile, Surface Mount**

---

**FEATURES:**

- Fits all sizes: 20 thru 84 positions
- Positive engagement and tool action assures smooth, level extraction of device
- Spring assisted release of device from tool after extraction

**OPERATION:**

1. Holding tool between thumb and 1st or 2nd finger at ribbed area of legs. Expand or contract legs to engage tongs in extraction slots of socket.
2. Push tool down to insure legs seat flush with the top of the socket. This will assure extraction tongs are properly positioned under device.
3. Squeeze legs between thumb and finger. Tool action will extract device in smooth positive motion.
4. Relaxing pressure on legs releases device from tool.

---

**WITHDRAWAL TOOL FOR PLCC’S**

The PCS Series Extraction Tool is designed for the removal of JEDEC dimensioned “J” leaded 4-sided plastic leaded chip carrier with leads on .050” (12.7) centers. A “Universal” tool, it is compatible with most competitor’s PLCC sockets.

---

<table>
<thead>
<tr>
<th>Number of positions</th>
<th>Dimensions</th>
<th>Tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>28</td>
<td>.664</td>
<td>.664</td>
</tr>
<tr>
<td>32</td>
<td>.666</td>
<td>.666</td>
</tr>
<tr>
<td>44</td>
<td>.866</td>
<td>.866</td>
</tr>
</tbody>
</table>

---

For complete product information, order Catalog 1307767

---

<table>
<thead>
<tr>
<th>Number of Carton</th>
<th>Quantity per Tape per</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Size Tape</td>
</tr>
<tr>
<td>822499-3</td>
<td>24mm</td>
</tr>
<tr>
<td>822499-2</td>
<td>24mm</td>
</tr>
<tr>
<td>822498-1</td>
<td>32mm</td>
</tr>
<tr>
<td>822499-1</td>
<td>44mm</td>
</tr>
</tbody>
</table>

---

**For complete product information, order Catalog 1307767**

---

Products for Industrial & Commercial Applications

Dimensions are shown for reference purposes only.

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Specifications subject to change.

Technical Support Center
1-800-522-6752

www.tycoelectronics.com
### Materials and Finish

**Housing** — Thermoplastic, UL 94V-0 rated

**Contacts** — Phosphor bronze with 0.00254 [0.000100] 90/10 Tin-lead over 0.00127 [0.000050] min. nickel all over

### Dimensions

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only.

### Specifications

Specifications subject to change.

### Technical Support Center

1-800-522-6752

www.tycoelectronics.com

---

### Industry Standard Low Profile, Surface Mount

![Diagram of PLCC Sockets](image)

---

<table>
<thead>
<tr>
<th>No. of Pos.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>15.58</td>
<td>15.58</td>
<td>5.08</td>
<td>5.08</td>
<td>16.38</td>
<td>8.48</td>
<td>8.48</td>
<td>2.75</td>
</tr>
<tr>
<td>28</td>
<td>18.12</td>
<td>18.12</td>
<td>7.62</td>
<td>7.62</td>
<td>20.00</td>
<td>11.02</td>
<td>11.02</td>
<td>2.75</td>
</tr>
<tr>
<td>32</td>
<td>18.12</td>
<td>20.66</td>
<td>7.62</td>
<td>10.16</td>
<td>21.89</td>
<td>11.02</td>
<td>13.56</td>
<td>2.60</td>
</tr>
<tr>
<td>44</td>
<td>23.20</td>
<td>23.20</td>
<td>12.70</td>
<td>12.70</td>
<td>27.20</td>
<td>16.10</td>
<td>16.10</td>
<td>2.90</td>
</tr>
<tr>
<td>52</td>
<td>25.74</td>
<td>25.74</td>
<td>15.24</td>
<td>15.24</td>
<td>30.78</td>
<td>18.64</td>
<td>18.64</td>
<td>2.75</td>
</tr>
<tr>
<td>68</td>
<td>30.82</td>
<td>30.82</td>
<td>20.32</td>
<td>20.32</td>
<td>37.98</td>
<td>23.72</td>
<td>23.72</td>
<td>2.90</td>
</tr>
<tr>
<td>84</td>
<td>35.90</td>
<td>35.90</td>
<td>25.40</td>
<td>25.40</td>
<td>45.20</td>
<td>28.80</td>
<td>28.80</td>
<td>2.90</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of Pos.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.613</td>
<td>.613</td>
<td>.200</td>
<td>.200</td>
<td>.645</td>
<td>.334</td>
<td>.334</td>
<td>.106</td>
</tr>
<tr>
<td>28</td>
<td>.713</td>
<td>.713</td>
<td>.300</td>
<td>.300</td>
<td>.790</td>
<td>.434</td>
<td>.434</td>
<td>.108</td>
</tr>
<tr>
<td>32</td>
<td>.713</td>
<td>.813</td>
<td>.300</td>
<td>.400</td>
<td>.861</td>
<td>.434</td>
<td>.534</td>
<td>.102</td>
</tr>
<tr>
<td>44</td>
<td>.913</td>
<td>.913</td>
<td>.500</td>
<td>.500</td>
<td>1.07</td>
<td>.634</td>
<td>.634</td>
<td>.114</td>
</tr>
<tr>
<td>52</td>
<td>1.01</td>
<td>1.01</td>
<td>.600</td>
<td>.600</td>
<td>1.21</td>
<td>.734</td>
<td>.734</td>
<td>.108</td>
</tr>
<tr>
<td>68</td>
<td>1.21</td>
<td>1.21</td>
<td>.800</td>
<td>.800</td>
<td>1.50</td>
<td>.934</td>
<td>.934</td>
<td>.114</td>
</tr>
<tr>
<td>84</td>
<td>1.41</td>
<td>1.41</td>
<td>1.00</td>
<td>1.00</td>
<td>1.70</td>
<td>1.13</td>
<td>1.13</td>
<td>.114</td>
</tr>
</tbody>
</table>

### Tube & Tape/Reel

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Quantity Per Carton</th>
<th>Part No.</th>
<th>Size Tape</th>
<th>Quantity Per Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>822472-1</td>
<td>11700</td>
<td>3-822472-1</td>
<td>24mm</td>
<td>5000</td>
</tr>
<tr>
<td>822472-2</td>
<td>9900</td>
<td>4-822472-2</td>
<td>32mm</td>
<td>4000</td>
</tr>
<tr>
<td>822472-3</td>
<td>8700</td>
<td>3-822472-3</td>
<td>32mm</td>
<td>4000</td>
</tr>
<tr>
<td>822472-4</td>
<td>6240</td>
<td>3-822472-4</td>
<td>44mm</td>
<td>2100</td>
</tr>
<tr>
<td>822472-5</td>
<td>3220</td>
<td>3-822472-5</td>
<td>44mm</td>
<td>2100</td>
</tr>
<tr>
<td>822472-6</td>
<td>3420</td>
<td>3-822472-6</td>
<td>44mm</td>
<td>1800</td>
</tr>
<tr>
<td>822472-7</td>
<td>2346</td>
<td>3-822472-7</td>
<td>56mm</td>
<td>1000</td>
</tr>
</tbody>
</table>

For complete product information, order Catalog 1307767

---

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Specifications subject to change.
Technical Support Center
1-800-522-6752
www.tycoelectronics.com

---

© 2003 Tyco Electronics Corporation

5035

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Specifications subject to change.
Technical Support Center
1-800-522-6752
www.tycoelectronics.com
PLCC Sockets

Catalog 1307612
Revised 7-01

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

FEATURES:
The PCS Series Chip Carrier sockets accepts Jede Type "A" plastic leaded chip carriers on .050" (1.27) centers. These dependable sockets combine positive retention of the package with high normal force to insure outstanding electrical and mechanical performance. The solder tail design allows through-hole board patterns on .100" (2.54) grid.

- High Normal force, 200 grams (7.1 oz.) min.
- Internal standoff insures proper positioning of chip carrier in socket
- Visual aids external to socket assure easy registration to printed wiring board
- Easy access for probing installed chip carrier
- Standoffs and four drain holes aid in cleaning
- PLCC Extraction Tool TX8136-20/84 PCS, see page 5034
- Accepts JEDEC PLCC's MO-047 AA-AH (20-84), MO-052 AE (32 RECT)

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration ..................Passed MIL-STD-1344, Method 2005.1, Condition II, 10 G's
Durability ..................50 Cycles minimum
Normal Force ..........200 Grams (7.1 oz.) minimum when mated to nominal size PLCC device
Mating Force ..........310 Grams (11.0 oz.) per line maximum when mated to maximum size PLCC device
Unmating Force ........31 Grams (1.1 oz) per line minimum when mated to minimum size PLCC device

ELECTRICAL
Contact Resistance ..........30 Milliohms max.
Capacitance ..........1 pF max. @ 1 kHz, MIL-STD-202, Method 305 (contact to contact)
Insulation Resistance ..........1 x 10^4 Megohms per MIL-STD-1344, Method 305.1
Dielectric Withstanding Voltage ..................600 VAC per MIL-STD-1344, Method 3001.1

ENVIRONMENTAL
Humidity ..................Passed MIL-STD-1344, Method 1002.2, Type II
Operation Temperature ....-55°C to +105°C

MATERIAL SPECIFICATIONS:
Insulator ..................PPS, UL rated 94V-0
Contact ..................Phosphor bronze
Plating ..................Tin/lead

For complete product information, order Catalog 1308409
### STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Contacts</th>
<th>A</th>
<th>B*</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCS-020A-1</td>
<td>20</td>
<td>(14.98)</td>
<td>(9.14)</td>
<td>(5.08)</td>
<td>(10.16)</td>
<td>(10.039,78)</td>
</tr>
<tr>
<td>PCS-028A-1</td>
<td>28</td>
<td>(17.52)</td>
<td>(11.68)</td>
<td>(7.62)</td>
<td>(12.70)</td>
<td>(12.57/12.32)</td>
</tr>
<tr>
<td>PCS-044A-1</td>
<td>44</td>
<td>(22.60)</td>
<td>(16.76)</td>
<td>(12.70)</td>
<td>(17.76)</td>
<td>(17.63/17.40)</td>
</tr>
<tr>
<td>PCS-052A-1</td>
<td>52</td>
<td>(25.15)</td>
<td>(19.30)</td>
<td>(15.24)</td>
<td>(20.32)</td>
<td>(20.19/19.94)</td>
</tr>
<tr>
<td>PCS-068A-1</td>
<td>68</td>
<td>(30.22)</td>
<td>(24.46)</td>
<td>(20.32)</td>
<td>(25.40)</td>
<td>(25.27/25.02)</td>
</tr>
<tr>
<td>PCS-084A-1</td>
<td>84</td>
<td>(35.31)</td>
<td>(29.54)</td>
<td>(25.40)</td>
<td>(30.48)</td>
<td>(30.35/30.10)</td>
</tr>
</tbody>
</table>

* Dimension B = 0.010 (0.25)

### 32 POSITION RECTANGULAR

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Contacts</th>
<th>A</th>
<th>B*</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
</table>

* Dimension B = 0.010 (0.25)

---

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
PLCC Sockets

Thru-Hole, Economy

Material and Finish:
Housing — Thermoplastic UL94V-0
Contacts — Phosphor bronze with tin-lead over nickel

<table>
<thead>
<tr>
<th>Positions</th>
<th>Dimensions</th>
<th>Part Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>A: 0.62</td>
<td>822473-1</td>
</tr>
<tr>
<td></td>
<td>B: 15.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 0.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 0.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 0.68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 0.35</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>A: 0.71</td>
<td>822473-2</td>
</tr>
<tr>
<td></td>
<td>B: 18.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 0.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 0.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 0.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 0.45</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>A: 0.71</td>
<td>822473-3</td>
</tr>
<tr>
<td></td>
<td>B: 18.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 0.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 0.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 0.90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 0.45</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>A: 0.92</td>
<td>822473-4</td>
</tr>
<tr>
<td></td>
<td>B: 23.18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 0.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 0.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 1.08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 0.66</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>A: 1.01</td>
<td>822473-5</td>
</tr>
<tr>
<td></td>
<td>B: 25.72</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 0.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 0.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 1.24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 0.76</td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>A: 1.21</td>
<td>822473-6</td>
</tr>
<tr>
<td></td>
<td>B: 30.80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 0.80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 0.80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 1.54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 0.96</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>A: 1.41</td>
<td>822473-7</td>
</tr>
<tr>
<td></td>
<td>B: 35.88</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 1.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 1.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 1.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 1.16</td>
<td></td>
</tr>
</tbody>
</table>

For complete product information, order Catalog 1308409
Product Facts

- .025 [0.64] centerline for high density, low cost packaging
- Low profile permits even higher density packaging with only .375 [9.53] maximum height pc boards
- High normal force and positive engagement allows for reliable service to minimize field failures
- Protective cover separates and safeguards IC leads during handling and insertion
- Closed-bottom housing aids in prevention of solder bridging between contacts
- Contacts absorb mating and reaction forces for board and housing protection
- Economical design makes socketing of semi-conductor devices more attractive
- .020 [0.51] minimum wipe contact insures reliability of tin-to-tin interface
- High temperature materials
- Sockets can be spaced a minimum of .150 [3.81] from each other

The two-piece design of the AMP socket eases the problems of handling the gullwing-led PQFP packages. The IC is first inserted into the plastic cover and then, using the insertion tool, the cover is secured over the socket housing to insert the chip into the socket. The completed assembly presents a low .375 [9.53] profile to permit close stacking of pc boards.

The cover, which is separately available, contains slots that not only protect and separate the leads, but also for proper lead-to-contact registration between chip and socket. In addition, the cover provides a rugged cost-effective method of protecting the PQFP IC during shipping, handling and assembly. Visual and mechanical polarization for proper orientation of cover and housing during mating, while spring latches in the four corners secure the cover to the housing.

Tin plated socket contacts provide a minimum .020 [0.51] wipe and exert a high normal force to the IC leads. The solder legs are arranged on a .075 x .100 [1.91 x 2.54] three-row grid to permit easy trace routing. High-temperature housing materials and a sealed bottom allow the socket to withstand the rigors of flow soldering lines and other automated assembly. Standoffs ease flux cleaning.

Available in 100- and 132-position sizes, the socket features short leads and low capacitance, making it highly compatible with high-speed circuits.

Performance Characteristics:

- Current Rating — 1 ampere max.
- Operating Temperature — +55°C to +105°C
- Dielectric Withstanding Voltage — 750 VAC min.
- Capacitance (Adjacent Contacts) — 1 picofarad max.
- Durability — 15 insertion/withdrawal cycles

Technical Documents:

- Product Specification 108-1223
- Application Specification 114-1070
- Test Report 501-90
- Instruction Sheets 408-3289 Hand Tools
  408-9772 Pneumatic Tools
Materials and Finish:
Housing — High temperature thermoplastic, 94V-0 rated, black
Cover — Polyphenylene sulfide (PPS), 94V-0 rated, black
Contacts — Phosphor bronze with .000050 [0.00127] nickel

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Insertion Hand Tools
100 Position
Part Number 822253-1
132 Position
Part Number 822253-2

Extraction Tool
Part Number 822254-1

Conventional Replacement for
No. of Dimensions AMP Sockets 3M TEXTOOL Sockets

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>Dimensions</th>
<th>Conventional AMP Sockets</th>
<th>Replacement for 3M TEXTOOL Sockets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>Housing Sub-Assembly</td>
</tr>
<tr>
<td>100</td>
<td>1.140</td>
<td>.750</td>
<td>821949-4</td>
</tr>
<tr>
<td></td>
<td>28.96</td>
<td>19.05</td>
<td></td>
</tr>
<tr>
<td>132</td>
<td>1.340</td>
<td>.950</td>
<td>821949-5</td>
</tr>
<tr>
<td></td>
<td>34.04</td>
<td>24.13</td>
<td></td>
</tr>
</tbody>
</table>

1 Conventional footprint.
2 Reverse footprint.

Packaging Quantities:
100 Position — 19 Pcs./Tube, 54 Tubes/Box, Total = 1026 Pcs./Box
132 Position — 16 Pcs./Tube, 45 Tubes/Box, Total = 720 Pcs./Box

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Specifications subject to change.
Technical Support Center
1-800-522-6752
www.tycoelectronics.com
JEDEC (EIAJ) Metric Quad Flat Pack ICs

Product Facts
- Closed bottom design prevents solder wicking and bridging
- Standoffs facilitate flushing of solder fluxes from under socket
- Horizontal normal force reduces the stress on latches
- Contact wiping removes oxides from package leads
- High pressure tin contacts provide high normal force for interface reliability
- Molded separation ribs for contact to lead alignment
- Components molded of high temperature materials
- Mechanical and visual polarization allows pin #1 alignment
- Cover provides means for handling and testing bumperless packages
- Cover secures device for handling regardless of corner configuration
- Socket design is not sensitive to package stand-off dimension
- Socketing eases prototype evaluation
- Socketing provides repairability in the field
- Socketing enables equipment configuration at the manufacturing level
- Socketing minimizes device damage problems due to SMT temperatures
- Socketing allows field updating
- Socketing utilizes conventional through-hole soldering processes
- Socket design is compatible with robotic assembly

The AMP Metric PQFP socket provides a method for through-hole socketing of JEDEC (EIAJ) bumperless metric quad flat pack devices. The socket is designed to accept PQFP-style 28mm x 28mm packages on .65mm spacing per proposed JEDEC (EIAJ) Standard MO-108. The socket features a two-piece design that allows the device to be first inserted into the plastic cover. Then the cover with the device is secured over the socket housing using the AMP insertion tool. This system protects the delicate gullwing leads and ensures proper lead-to-contact registration.

Available in 144- and 160-position versions, the socket features high temperature housing materials and a sealed bottom allowing it to withstand the rigors of flow soldering lines and automated assembly.

Technical Documents:
- Product Specification 108-1348
- Application Specification 114-1070
- Instruction Sheets 408-3289 Hand Tools 408-9772 Penumatic Tool
For JEDEC Metric Quad Flat Pack ICs

Materials and Finish:
Housing and Cover — High temperature thermoplastic, 94V-0 rated
Contacts — Phosphor bronze with 0.00508 [0.000200] tin-lead over 0.00127 [0.000050] nickel

Performance Characteristics:
Voltage Rating — 250 VAC
Termination Resistance, Dry Circuit — 20 milliohms max, initial
Dielectric Withstanding Voltage — 750 VAC
Insulation Resistance — 5000 megohms
Capacitance — 1 picofarad max.
Durability — 15 cycles
Mating Force — 2.22 N [0.5 lb.] max.
Contact Retention — 3.34 N [12 oz.]
Physical Shock — 50 Gs
Vibration — 15 Gs
Temperature Rating — 255°C to 1105°C

Insertion Hand Tool
Part Number 822253-4

Extraction Tool
Part Number 822254-1
FEATURES:
The solderless zero-profile HOLTITE Socket contact is designed to be press-fit into the plated-thru hole of a printed wiring board. This unique design allows the plated-thru hole to become the component socket. The outer conical shape of the HOLTITE Socket contact sizes the plated-thru hole when pressed into place. The precision-machined geometry allows for the controlled displacement of plated material without damaging the hole, or affecting the normal mechanical and electrical contact performance.

• Lowest socket profile
The profile of the printed wiring board with the HOLTITE Socket contact installed is less than the length of the IC or component lead, offering the lowest socketing profile, permitting card rack spacing as low as .400”, identical to that of direct soldering.

• Precision-machined, tapered-entry, four finger contact
The underlying contact design used in the HOLTITE Socket system has a proven record of reliability after more than fifteen years’ usage in both commercial and military applications.

• Retains minimum component lead lengths
The socketing technique provides the shortest distance between the component seating plane and the contact engagement zone for maximum retention of short component leads.

• Maximum heat dissipation
Open contact design permits air flow through the board, increasing heat dissipation and extending component life.

• Solderless, gas-tight, press-fit insertion
The solderless, pluggable system saves the time and cost of soldering, plus minimizing the potential for heat damage, warpage and corrosive residue contamination.

• Removes artwork design restrictions
Use of the HOLTITE Socket solderless system removes certain artwork restrictions necessary for wave soldering and solder joint construction. Line spacing can be made as tight as electrical parameters allow without solder bridging or the need for soldermask. Terminal areas can be reduced in diameter without the need of a base for solder fillets. Ground plane areas can be increased without concern for heat-induced warpage.

• Immediate conversion to the HOLTITE Socket system
Existing printed wiring designs can be converted by simply changing the drilled hole diameter prior to plating.

MATERIAL SPECIFICATIONS:
Carrier Strip......................MYLAR
Contact ............................Beryllium copper
Finish.........................Gold or tin/lead plated

PERFORMANCE SPECIFICATIONS: 5P HOLTITE SOCKETS

MECHANICAL
Vibration ..................Passed MIL-STD-202, Method 204, 20 G’s
Durability ..................Passed MIL-STD-1344, Method 2016, 50 cycles
Insertion Force ..........92 Grams (3.2 oz.) average with a .018” polished steel pin and a .043” plated thru hole
Withdrawal Force .......103 Grams (3.6 oz.) average with a .018” polished steel pin and a .043” plated thru hole
Contact Retention in Board 5 Lb. minimum

ELECTRICAL
Contact Resistance ..........10 Milliohms max.
Contact Rating ..........3 Amps

ENVIRONMENTAL
Humidity ..................Passed MIL-STD-202, Method 106
Thermal Shock ............Passed MIL-STD-202, Method 107, Cond. F
Operation Temp. ........ Gold contact -55°C to +125°C, Tin/lead contact -55°C to +105°C

For performance specifications on 6P, 8P and 12P HOLTITE Sockets, please consult Tyco Electronics.
## HOLTITE Series Press-Fit Sockets, Zero Profile

### Recommended Hole Size and Lead Size

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Recommended Lead Size</th>
<th>Recommended Primary Drill Size</th>
<th>A Dim. Finished Plated-Thru Hole Size</th>
<th>B Dim. Contact Diameter</th>
<th>C Dim. Maximum Profile</th>
<th>Board Thickness</th>
<th>Plated-Thru Hole Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>8134-HC-5P2 (Gold)</td>
<td>Rectangular Lead 0.011 x 0.018 (0.028 x 0.046) (±0.05) or Round Lead 0.016 - 0.021 (0.406 - 0.533) Diameter</td>
<td>0.0453 (1.15)</td>
<td>0.041 ± 0.002 (1.04 ± 0.05)</td>
<td>0.044 ± 0.005 (1.12 ± 0.01)</td>
<td>0.100 (2.54)</td>
<td>.030 (0.75) Minimum</td>
<td>Electro-deposited Tin/Lead over Electro-deposited Tin/Lead over .001 (0.0254) Minimum Thick Copper Plate</td>
</tr>
<tr>
<td>8134-HC-6P2 (Gold)</td>
<td>Round Lead 0.020 - 0.030 (0.51 - 0.76) Diameter</td>
<td>0.0635 (1.61)</td>
<td>0.058 ± 0.002 (1.47 ± 0.05)</td>
<td>0.0625 ± 0.005 (1.59 ± 0.01)</td>
<td>0.140 (3.56)</td>
<td>.0003 - 0.0005 (0.0076 - 0.0127) Electro-deposited Tin/Lead over .001 (0.0254) Minimum Thick Copper Plate</td>
<td></td>
</tr>
<tr>
<td>8134-HC-8P2 (Gold)</td>
<td>Round Lead 0.025 - 0.035 (0.64 - 0.89) Diameter</td>
<td>Also suitable for use with .025 sq. post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8134-HC-12P2 (Gold)</td>
<td>Rectangular Lead 0.035 - 0.045 (0.89 - 1.14) Diameter</td>
<td>0.0875 (2.22)</td>
<td>0.082 ± 0.002 (2.08 ± 0.05)</td>
<td>0.0860 ± 0.005 (2.18 ± 0.01)</td>
<td>0.160 (4.06)</td>
<td>.050 (1.27) Minimum</td>
<td></td>
</tr>
<tr>
<td>8134-HC-3P2 (Gold)</td>
<td>Rectangular Lead 0.011 x 0.018 (0.028 x 0.046) (±0.05) or Round Lead 0.016 - 0.021 (0.406 - 0.533) Diameter</td>
<td>0.0453 (1.15)</td>
<td>0.041 ± 0.002 (1.04 ± 0.05)</td>
<td>0.044 ± 0.005 (1.12 ± 0.01)</td>
<td>0.100 (2.54)</td>
<td>.030 (0.75) Minimum</td>
<td>Electro-deposited Tin/Lead over .001 (0.0254) Minimum Thick Copper Plate</td>
</tr>
</tbody>
</table>

### Table 1: Part Numbers

<table>
<thead>
<tr>
<th>Military Part Number</th>
<th>Augat Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M83505/6-001</td>
<td>M8134-HC-5P2</td>
</tr>
<tr>
<td>M83505/6-002</td>
<td>M8134-HC-6P2</td>
</tr>
<tr>
<td>M83505/6-003</td>
<td>M8134-HC-8P2</td>
</tr>
<tr>
<td>M83505/6-004</td>
<td>M8134-HC-12P2</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
HOLTITE Series Press-Fit Sockets, Zero Profile, on Reel

### HOLTITE SOCKET SIP PATTERN REELS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Contact Plating</th>
<th>Number of Contacts per Pattern</th>
<th>Contact Style</th>
<th>Part Number</th>
<th>Contact Plating</th>
<th>Number of Contacts per Pattern</th>
<th>Contact Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>322-HCSS5P2-100</td>
<td>Gold</td>
<td>2500 Contacts</td>
<td>5P2</td>
<td>322-HCSS5P2-100</td>
<td>Gold</td>
<td>5000 Contacts</td>
<td>5P2</td>
</tr>
<tr>
<td>322-HCSS5P3-100</td>
<td>Tin/Lead</td>
<td>357</td>
<td>5P3</td>
<td>322-HCSS5P3-100</td>
<td>Tin/Lead</td>
<td>5000 Contacts</td>
<td>5P3</td>
</tr>
<tr>
<td>322-HCSS6P2-100</td>
<td>Gold</td>
<td>313</td>
<td>6P2</td>
<td>322-HCSS6P2-100</td>
<td>Gold</td>
<td>5000 Contacts</td>
<td>6P2</td>
</tr>
<tr>
<td>322-HCSS6P3-100</td>
<td>Tin/Lead</td>
<td>278</td>
<td>6P3</td>
<td>322-HCSS6P3-100</td>
<td>Tin/Lead</td>
<td>5000 Contacts</td>
<td>6P3</td>
</tr>
<tr>
<td>322-HCSS8P2-100</td>
<td>Gold</td>
<td>208</td>
<td>8P2</td>
<td>322-HCSS8P2-100</td>
<td>Gold</td>
<td>5000 Contacts</td>
<td>8P2</td>
</tr>
<tr>
<td>322-HCSS8P3-100</td>
<td>Tin/Lead</td>
<td>179</td>
<td>8P3</td>
<td>322-HCSS8P3-100</td>
<td>Tin/Lead</td>
<td>5000 Contacts</td>
<td>8P3</td>
</tr>
<tr>
<td>322-HCSS14P2-100*</td>
<td>Gold</td>
<td>156</td>
<td>14P2</td>
<td>322-HCSS14P2-100*</td>
<td>Gold</td>
<td>5000 Contacts</td>
<td>14P2</td>
</tr>
<tr>
<td>322-HCSS14P3-100*</td>
<td>Tin/Lead</td>
<td>139</td>
<td>14P3</td>
<td>322-HCSS14P3-100*</td>
<td>Tin/Lead</td>
<td>5000 Contacts</td>
<td>14P3</td>
</tr>
</tbody>
</table>

### HOLTITE SOCKET SIP PATTERN REELS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Contact Plating</th>
<th>Number of Contacts per Pattern</th>
<th>Number of Patterns per Reel</th>
<th>Row Spacing</th>
<th>Contact Style</th>
<th>Contacts per Reel</th>
</tr>
</thead>
<tbody>
<tr>
<td>322-HCSS5P2-100</td>
<td>Gold</td>
<td>Universal on .100&quot;</td>
<td></td>
<td>300&quot;</td>
<td>SP Series</td>
<td>5000</td>
</tr>
<tr>
<td>322-HCSS5P3-100</td>
<td>Tin/Lead</td>
<td>8 Positions on .100&quot;</td>
<td></td>
<td>300&quot;</td>
<td>SP Series</td>
<td>5000</td>
</tr>
<tr>
<td>322-HCSS6P2-100</td>
<td>Gold</td>
<td>14 Positions on .100&quot;</td>
<td></td>
<td>400&quot;</td>
<td>SP Series</td>
<td>5000</td>
</tr>
<tr>
<td>322-HCSS6P3-100</td>
<td>Tin/Lead</td>
<td>16 Positions on .100&quot;</td>
<td></td>
<td>400&quot;</td>
<td>SP Series</td>
<td>5000</td>
</tr>
<tr>
<td>322-HCSS8P2-100</td>
<td>Gold</td>
<td>Universal on .100&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>322-HCSS8P3-100</td>
<td>Tin/Lead</td>
<td>22 Positions on .100&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>322-HCSS14P2-100*</td>
<td>Gold</td>
<td>Universal on .100&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>322-HCSS14P3-100*</td>
<td>Tin/Lead</td>
<td>24 Positions on .100&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>322-HCSS8P2-632</td>
<td>Gold</td>
<td>28 Positions on .100&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>322-HCSS8P3-632</td>
<td>Tin/Lead</td>
<td>32 Positions on .100&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>322-HCSS14P2-640</td>
<td>Gold</td>
<td>40 Positions on .100&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Application notes and tooling information appear on page 5046 & 5047.

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
OVERVIEW
The AMP HOLTITE Socket contact is a solderless, zero-profile contact designed to be contained within the barrel of a plated-thru hole. The unique design allows the contact and the plated-thru hole to form a zero-profile component socket which provides both the normal forces and the low contact resistance required to mechanically retain and electrically interconnect a broad range of electronic parts and components.

The outer shape of the HOLTITE Socket contact allows the plated-thru hole to elastically conform during insertion. The precision machined geometry allows for the controlled deformation of plated material without damaging the plated-thru hole or affecting the normal electrical and mechanical contact performance.

MATERIALS AND DESIGN
HOLTITE Socket contacts are precision machined from double-drawn solid beryllium-copper wire, and then heat treated. Beryllium copper is used because of its spring properties after heat treating. The copper affords excellent conductivity, while the beryllium lends hardness and durability to the finished contact.

The HOLTITE Socket contact has been machined as a seamless heat treated part, which gives it more uniform and repeatable spring properties than those of a stamped contact used in an identical through hole diameter. This uniformity of normal forces minimizes variations in contact resistance and is designed for the proper insertion/withdrawal forces on mating parts.

The HOLTITE Socket contact has been designed to provide a solderless gas tight electrical connection with mating parts. The angled contact opening greatly facilitates lead entry (especially important when automatically inserting IC’s), and reduces the possibility of lead or plating damage. Two locking collars provide contact retention through a controlled elastic deformation, and a machined groove between the collars provides a relief for the compressive radial forces of the plated-thru hole plating material. Concentration of the forces and elastic deformation in this manner locks the contact in place.

A transition region below the lower collar serves as a relief area for any plastic deformation of plating material that may occur as the contact is inserted into the plated-thru hole. This relief provides the consistency of contact normal forces over slight variations in hole size, because plated-thru hole walls (under prescribed plating tolerances) will not come into contact with the beam of the HOLTITE Socket fingers.

HOLES REQUIREMENTS
The fingers of 5P series HOLTITE Socket contacts will protrude out of circuit boards that are less than 3/32” (2.38 mm) thick. Care in board handling should be exercised in this case to prevent damage to the exposed contact fingers. This is not a concern in board thicknesses of 3/32” or greater because the contact fingers are entirely contained within the plated-thru hole.

The press fit technology used for installing HOLTITE Socket contacts is directly dependent on the hole size tolerance. The tolerances of the primary and finished hole sizes in a printed circuit board must be sufficiently narrow for adequate compressive stress between the hole walls and the locking collars of the contact.

The primary (drilled) hole size is a very important dimension. Finished hole tolerances should NOT be maintained by drilling over-sized holes and then plating down to the correct size, because copper and tin/lead alone will not create the compressive forces necessary to retain the HOLTITE Socket contact over time and temperature ranges. Drilling undersized holes, on the other hand, may introduce problems such as excessive contact insertion forces, board warpage and crazing around the hole. Holes should be drilled from the component insertion side of the board, whenever possible, to avoid creating drill-exit burrs on the press-fit portion of the thru-hole.
SOCKET ASSEMBLY AND TOOLING
A HOLTITE Socket is created in the circuit board by inserting a Holtite contact directly into a plated-thru hole. The selective loading of contacts into plated-thru holes defines the socket outline. There are several alternatives for loading contacts into a plated-thru hole, ranging form “one at a time” hand loading tools available from Tyco Electronics to a simple flat press.

HOLTITE SOCKET PRINTED WIRING CONTACT KIT
Part Number 398-HK-001 (Gold HOLTITE Sockets) and 398-HK-002 (Tin/Lead HOLTITE Sockets)
This “starter” kit is primarily designed to allow the loading of HOLTITE Socket contacts into a limited number of prototype boards as well as random individual loading into production boards.

The kit consists of: 5P Series and 6P Series HOLTITE Socket contacts, combination insertion tool and NO-GO gages for each, and a spring-loaded seating tool. The two insertion tools are color coded. The red end of each tool is NO-GO gage used for “quick check” hole size inspection. The insertion portion of the tools is designed to remove HOLTITE Socket contacts from their carrier cards and selectively insert them into plated-thru holes. Individual pressing and seating is then accomplished with the spring-loaded seating tools.

Quantities of approximately 1,000 5P and 2000 6P Series HOLTITE Socket contacts are supplied on cards with 0.100” grid spacing.

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

SPRING LOADED HAND TOOL

HOLTITE SOCKET TIPS
Tip # 399-HT-112 is for use with 5P HOLTITE Sockets and is blue in color.
Tip #399-HT-113 is for use with 6P, 8P, & 12P HOLTITE Sockets and is white in color.

PNEUMATIC HAND TOOL SYSTEM
This is a pneumatically operated system designed to individually seat Holtite contacts after they have been inserted into plated-thru holes. The system consists of a small control box connected by pneumatic tubing to a hand held impact tool. The tip of the hand tool is inserted into the contact and impact button is depressed. The contact is accurately seated into plated-thru hole. Pressure adjustments of the control box and variable tip sizes on the hand tool, allow this system to work with any size HOLTITE Sockets contact.

This system is particularly useful when loading random contacts, and is designed for low-volume production. The contact seating method provided by this system works very well in conjunction with HOLTITE Sockets contacts packaged on mylar carrier strips. The contacts, in this case remain secured in the MYLAR carrier until they have been seated in the plated-thru hole. The mylar carrier, at that point can be removed and discarded.

Holtite contacts in mylar are most commonly packaged on reels in the form of continuous strips. Custom socket patterns can be produced to satisfy individual customer requirements.
Plug Adapter Assemblies

600 Series

FEATURES:
The 600 Series is a high quality machined pin molded adaptor which is used to assemble hybrid and special network circuits. The .018" (0.46) diameter precision pin allows the adaptor to be plugged into socket or wire wrapable panels repeatedly.
• Precision machined pins
• Used for interposing discrete components
• Terminals are the same dimension as IC board patterns
• Option of round, solder pocket or slotted pin styles
• Thermoplastic polyester insulators
• Large variety of styles:
  8, 14, 16, 20 pins - .300" (7.62) between rows
  22 pins - .400"(10.16) between rows
  14, 16, 24, 28, 32, 36, and 40 pins - .600" (15.24) between rows
  14 & 16 pins - .800" (20.32) between rows

MATERIAL SPECIFICATIONS:
Insulator ................ Thermoplastic polyester, UL rated 94V-0
Pins .................. Phosphor bronze, gold or tin/lead plated

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration ..................... Tested to a frequency range of 10 to 2,000 Hz and returned to 10Hz in three perpendicular planes at a double amplitude of .06" (1.52) or 20 Gs, whichever was less per MIL-STD-202, Method 204
Mechanical Shock ............. Will meet the requirements of MIL-STD-202, Method 213 when subjected to a shock test at 150 G's acceleration

ELECTRICAL
Current Rating ................ 5 Amps when tested with a 30-gauge wire attached. Terminal will have a maximum 30°C temperature rise above ambient
Capacitance .................. At a test frequency of 1 KHz, adjacent and/or terminal all at guard potential
  Adjacent terminal:
  AG and CG solder tail .......... .36pF
  BG (solder pocket) ............. .42pF
  Opposite Terminal:
  AG and CG solder tail .......... .025pF
  BG (solder pocket) ............. .034pF
Dielectric Withstanding ..
Voltage ..................... 1,000 VRMS @ 30 inches mercury, .500 VRMS when tested @ 0.9 inches mercury, tested per MIL-STD-202, Method 301
Insulation Resistance ...... 1 x 1012 Ohms, tested to MIL-STD-202, Method 302, tested @ 500 Volts

ENVIRONMENTAL
Thermal Shock ............... No visual damage when tested in accordance with MIL-STD-202, Method 107, test condition F for 5 consecutive cycles of -65°C to +150°C
Operating
Temperatures ................ -65°C to +125°C
Salt Spray .................. No visual evidence of corrosion on Gold terminals when tested per MIL-STD-202, Method 101 Test condition B for 48 hours and a 5% salt solution
## 600 Series

### Plug Adapter Assemblies

#### STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Number of Pins</th>
<th>Pin Style</th>
<th>Gold Part Number</th>
<th>Tin Part Number</th>
<th>“A” Max.</th>
<th>“B” Typ.</th>
<th>“C”</th>
<th>“D1”</th>
<th>“D2”</th>
<th>“D3”</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Round</td>
<td>608-AG1</td>
<td>608-AG1T</td>
<td>400</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>608-BG2</td>
<td>608-BG2T</td>
<td>300</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>608-CG1</td>
<td>608-CG1T</td>
<td>200</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1C</td>
</tr>
<tr>
<td>14</td>
<td>Round</td>
<td>614-AG1</td>
<td>614-AG1T</td>
<td>300</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>614-BG2</td>
<td>614-BG2T</td>
<td>200</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>614-CG1</td>
<td>614-CG1T</td>
<td>100</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1C</td>
</tr>
<tr>
<td>14</td>
<td>Round</td>
<td>616-AG1</td>
<td>616-AG1T</td>
<td>200</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>616-BG2</td>
<td>616-BG2T</td>
<td>100</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>616-CG1</td>
<td>616-CG1T</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2C</td>
</tr>
<tr>
<td>16</td>
<td>Round</td>
<td>616-AG1</td>
<td>616-AG1T</td>
<td>100</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>616-BG2</td>
<td>616-BG2T</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>616-CG1</td>
<td>616-CG1T</td>
<td>25</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1C</td>
</tr>
<tr>
<td>16</td>
<td>Round</td>
<td>616-AG1</td>
<td>616-AG1T</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>616-BG2</td>
<td>616-BG2T</td>
<td>25</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>616-CG1</td>
<td>616-CG1T</td>
<td>13</td>
<td>6.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3C</td>
</tr>
<tr>
<td>18</td>
<td>Round</td>
<td>616-AG1</td>
<td>616-AG1T</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>616-BG2</td>
<td>616-BG2T</td>
<td>25</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>616-CG1</td>
<td>616-CG1T</td>
<td>13</td>
<td>6.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1C</td>
</tr>
<tr>
<td>20</td>
<td>Round</td>
<td>620-AG1</td>
<td>620-AG1T</td>
<td>100</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>620-BG2</td>
<td>620-BG2T</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>620-CG1</td>
<td>620-CG1T</td>
<td>25</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1C</td>
</tr>
<tr>
<td>22</td>
<td>Round</td>
<td>622-AG1</td>
<td>622-AG1T</td>
<td>150</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>622-BG2</td>
<td>622-BG2T</td>
<td>75</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>622-CG1</td>
<td>622-CG1T</td>
<td>38</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1C</td>
</tr>
<tr>
<td>24</td>
<td>Round</td>
<td>624-AG1</td>
<td>624-AG1T</td>
<td>200</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>624-BG2</td>
<td>624-BG2T</td>
<td>100</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>624-CG1</td>
<td>624-CG1T</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2C</td>
</tr>
<tr>
<td>28</td>
<td>Round</td>
<td>628-AG1</td>
<td>628-AG1T</td>
<td>250</td>
<td>125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>628-BG2</td>
<td>628-BG2T</td>
<td>125</td>
<td>62.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>628-CG1</td>
<td>628-CG1T</td>
<td>62.5</td>
<td>31.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2C</td>
</tr>
<tr>
<td>32</td>
<td>Round</td>
<td>632-AG1</td>
<td>632-AG1T</td>
<td>300</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>632-BG2</td>
<td>632-BG2T</td>
<td>150</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>632-CG1</td>
<td>632-CG1T</td>
<td>75</td>
<td>37.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2C</td>
</tr>
<tr>
<td>36</td>
<td>Round</td>
<td>636-AG1</td>
<td>636-AG1T</td>
<td>350</td>
<td>175</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>636-BG2</td>
<td>636-BG2T</td>
<td>175</td>
<td>87.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2B</td>
</tr>
<tr>
<td></td>
<td>Slotted</td>
<td>636-CG1</td>
<td>636-CG1T</td>
<td>87.5</td>
<td>43.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2C</td>
</tr>
<tr>
<td>40</td>
<td>Round</td>
<td>640-AG1</td>
<td>640-AG1T</td>
<td>400</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2A</td>
</tr>
<tr>
<td></td>
<td>Solder Pocket</td>
<td>640-BG2</td>
<td>640-BG2T</td>
<td>200</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2B</td>
</tr>
</tbody>
</table>

* Dimension C ± .010 (0.25)

** Dimension D1, D2, D3 ± .005 (0.13)

Soldercap Wrap Styles:
3-Level Soldercap Wrap: add “T” to printed circuit Part Number. Ex: 608-AG1T

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

### Technical Support Center
1-800-522-6752
www.tycoelectronics.com
Adapters

Plug Adapter Assemblies

600 Series

SOLDER STYLE TERMINALS

**Fig. 1**

**Fig. 2**

**Fig. 3**

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
FEATURES:
The 600-AG family of FR4 glass epoxy machined pin adaptors, converts standard 6 thru 10 lead round style transistor packages to standard 14 and 16 pin I.C. formats. These adaptors are used to mount circuits directly to wire wrappable panels that have 14 or 16 pin sockets, plug directly into DIP sockets or solder directly to printed wiring panels.

- TO-5 adaptors with .300" (7.62) centers between rows of pins, mount directly to any 14 or 16 pin packaging panel
- Feed thru pins/style, for convenient use as test points
- .018" (0.46) Dia. pins for multiple insertion into socket contacts
- .026" (0.66) Dia. mounting holes enable mounting transistor directly or for mounting a transistor socket for greater flexibility
- Adapters with .600" (15.24) centers designed for use on universal packaging panels
- Traces plated with electro tin for easy soldering

MATERIAL SPECIFICATIONS:
Insulator: 0.062" (1.57) Thick FR4 glass epoxy, UL rated 94V-2 or better
Plating: Electro tin
Pin: Phosphor bronze
Plating: Gold

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Solderability Passed MIL-STD-202, Method 208

ELECTRICAL
Capacitance 4 pF
Bulk Resistance 10 Milliohms max.
Current Rating 5 Amps DC per pin
Operating Voltage 500 Volts, not to exceed limit of interconnected device
Dielectric Withstanding Voltage 1,000 Volts @ sea level, 300 Volts @ 50,000 feet
Insulation Resistance 2 x 10^7 Ohms

ENVIRONMENTAL
Operating Temperature -50°C to +125°C

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
Transistor Adapter Plugs

600-AG Series

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

PART NUMBERS / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Figure</th>
<th>Pin Count</th>
<th>Pin Circle</th>
<th>A *</th>
<th>B *</th>
<th>C **</th>
<th>D Ref.</th>
<th>E ***</th>
<th>F ***</th>
<th>G **</th>
<th>H ***</th>
</tr>
</thead>
</table>

* Dimension A, B ± .010
** Dimension C, E, G ± .005
*** Dimension F, H ± .015

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
FEATURES:
Offers a wide range of LED and ganged unit sockets to allow for total flexibility and size variations while incorporating the design features of our standard 500 Series sockets.

- Two-piece tapered entry socket terminal — four-fingered, gold plated inner contact and machined tin/lead plated outer sleeve.
- Available in either solderless wrap or printed circuit termination.
- Horizontal or right angle mounting.

MATERIAL SPECIFICATIONS (Figures 1, 2, 3):
Inner Contact ....................Four-fingered beryllium copper, gold
Outer Sleeve ....................Machined brass, tin/lead plated
Insulator..........................Thermoplastic polyester UL rated 94V-0

MATERIAL SPECIFICATIONS (Figure 4):
Inner Contact ....................Four-fingered beryllium copper, gold
Outer Sleeve ....................Brass, tin/lead plated
Board ..................Glass epoxy, tin-plated copper circuitry
Terminal ....................Phosphor bronze, solder-coated
Spacer ......................Delrin

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration ....................Passed MIL-STD-1344, Method 2005.1, Condition II, 10 G's
Shock ........................Passed MIL-STD-1344, Method 2004.1, Condition C, 100 G's
Normal Force ....................200 Grams (7.0 oz.) average with .018" (0.46) dia. polished steel pin
Insertion Force .............179 Grams (6.3 oz.) average with .018 (0.46)" dia. polished steel pin
Withdrawal Force ..........63 Grams (2.2 oz.) average with .018" (0.46) dia. polished steel pin
Solderability ....................Passed MIL-STD-202F, Method 208
Sleeve Retention
in Plastic .............3.5 Lbs. per line minimum solderless wrap;
3 Lbs. PC tail
Inner Contact
Retention .............7.5 Lbs. per line average

ELECTRICAL
Contact Resistance ..............10 Milliohms
Contact Rating ..................3 Amps
Capacitance ....................1.0 pF per MIL-STD-202, Method 305 (contact to contact)
Insulation Resistance ...........5,000 Megohms min. @ 500 VDC per MIL-STD-1344, Method 3003.1
Dielectric Withstanding
Voltage ......................1,000 Volts RMS per MIL-STD-1344,
Method 3001.1

ENVIRONMENTAL
Humidity ....................Passed MIL-STD-1344, Method 1002.2, Cond. II
Thermal Shock ..............Passed MIL-STD-1344, Method 1003.1, Cond. A
Operation Temperature ....Gold inner contact -55°C to +125°C
Tin/lead inner contact -55°C to +105°C
Display Sockets

500 Series

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only.

Products for Industrial & Commercial Applications

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

FIGURE 1

Solder Pocket

0.38 (9.71) x 0.81 (20.65) Deep

Solderless Wrap

0.25 (6.4) x 0.03 (0.08) Sq. Typ.

FIGURE 2

Horizontal Right Angle

FIGURE 3

Horizontal Right Angle

FIGURE 4

Vertical Right Angle

PART NUMBERS / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Figure</th>
<th>Number of Contacts</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>508-AG5D</td>
<td>1</td>
<td>8</td>
<td>Right angle mtg., printed circuit</td>
</tr>
<tr>
<td>508-AG4A</td>
<td>2</td>
<td>8</td>
<td>Horizontal mtg., solder pocket</td>
</tr>
<tr>
<td>508-AG4B</td>
<td>2</td>
<td>8</td>
<td>Horizontal mtg., 3 level solderless wrap</td>
</tr>
</tbody>
</table>

PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Contacts</th>
<th>A Max.</th>
<th>B Max.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>508-AG5D</td>
<td>8</td>
<td>0.400</td>
<td></td>
<td>One Hole Only</td>
</tr>
<tr>
<td>514-AG5D</td>
<td>14</td>
<td>0.700</td>
<td></td>
<td>Right angle mtg., printed circuit</td>
</tr>
<tr>
<td>516-AG5D</td>
<td>16</td>
<td>0.800</td>
<td></td>
<td>One Hole Only</td>
</tr>
<tr>
<td>518-AG5D</td>
<td>18</td>
<td>0.900</td>
<td></td>
<td>Right angle mtg., printed circuit</td>
</tr>
<tr>
<td>520-AG5D</td>
<td>20</td>
<td>1.000</td>
<td></td>
<td>One Hole Only</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
GANGED UNIT ASSEMBLIES:
The 508 Series numbers in part block are individual sockets. Add required
dash number to appropriate socket part number for ganged unit
assemblies. With or without extrusion extension (serves as mounting
ears). Units with extrusion extensions are furnished with four No. 2 x 1/4”
long self-tapping screws.

EXTRUSION:
Extrusion for ganging also available separately, part number 508-5G1.
Simply add suffix number to indicate length. Each extrusion is
furnished with No. 2 x 1/4” long self-tapping screws, quantity same as
number of holes in extrusion.

MOUNTING TAB:
Part number 508-4P is used for mounting ganged unit assemblies.
Sold separately if required.

MATERIAL SPECIFICATIONS:
Inner Contact...........Four-fingered beryllium copper, gold
Outer Sleeve ...............Machined brass, tin/lead plated
Insulator....................Thermoplastic polyester UL rated 94V-0
Extrusion ..................Vinyl
Mounting Tab .............Stainless steel .032 (.81) thick

HOW TO ORDER

508-AG8D-3E

<table>
<thead>
<tr>
<th>Socket Part Number</th>
<th>Number of Units</th>
<th>Mounting Ears</th>
</tr>
</thead>
</table>
| 508-AG8D-5         |                | Blank - No mounting ears

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration ..................Passed MIL-STD-1344, Method 2005.1,
Condition II, 10 G’s
Shock.......................Passed MIL-STD-1344, Method 2004.1,
Condition C, 100 G’s
Normal Force ..............200 Grams (7.0 oz.) average with .018” (0.46) dia.
polished steel pin
Insertion Force ...........179 Grams (6.3 oz.) average with .018” (0.46) dia.
polished steel pin
Withdrawal Force .........63 Grams (2.2 oz.) average with .018” (0.46) dia.
polished steel pin
Solderability ..............Passed MIL-STD-202F, Method 208
Sleeve Retention in Plastic.................3.0 Lbs. per line minimum PC tail
Inner Contact Retention ..................7.5 Lbs. per line average

ELECTRICAL
Contact Resistance ...10 Milliohms
Contact Rating ...........3 Amps
Capacitance ..................1.0 pF per MIL-STD-202, Method 305
(contact to contact)
Insulation Resistance ......5,000 Megohms min. @ 500 VDC per
MIL-STD-1344, Method 3003.1
Dielectric Withstanding Voltage ..................1,000 Volts RMS per MIL-STD-1344,
Method 3001.1

ENVIRONMENTAL
Humidity ..................Passed MIL-STD-1344, Method 1002.2, Cond. II
Thermal Shock ..............Passed MIL-STD-1344, Method 1003.1, Cond. A
Operation Temperature ....Gold inner contact -55°C to +125°C
Tin/lead inner contact -55°C to +105°C

Note: Before ordering, see Cross Reference in Section 15 for
equivalent Tyco Electronics Part Number.
8000-AG & 8004-1G Series

FEATURES:
The crystal socket assembly is a high quality component manufactured with superior materials designed for dependable mechanical and electrical life. Developed for use with a broad spectrum of crystal sizes, the crystal package can easily be inserted and removed without removing and adjusting latches and/or screws. Once the crystal has been installed it will not shake loose even under severe vibration.

- 8000 Series miniature style is designed to accommodate HC-6/µ, HC-13/µ, HC-14/µ, HC-27/µ, HC-36/µ, and HC-48/µ crystal sizes
- 8004 Series subminiature style is designed to accommodate HC-18/µ, HC-25/µ, HC-42/µ, HC-43/µ, HC-49/µ, and HC-50/µ crystal sizes
- Contact designs include flow-solder, horizontal solder eyelet and right angle solder eyelet tails, in both machined sleeve and stamped contact variations
- Provides maximum protection of crystal devices in severe shock and vibration environments
- Insulators offered in teflon and nylon materials
- Broad range of clip and contact materials
- Acts as additional heat sink to protect crystal against temperature variations

MATERIAL SPECIFICATIONS:
Insulators ...................... Teflon or blue nylon
Contacts ....................... Beryllium copper
Contact Plating ............. Gold or tin
Holding Clips ..................... Beryllium copper alloy, cadmium plated with gold iridite

PERFORMANCE SPECIFICATIONS: 8000 SERIES

MECHANICAL
Vibration ......................... 10 to 2,000 Hz at 15 G's with crystal mounted, no movement of crystal or damage assembly

ELECTRICAL
Bulk Resistance .................. 15 Milliohms @ 30 millivolts
Capacitance to Ground
(Contact to Holding Clip) ........ 5pF @ 1,000 Hz
Capacitance Between Contacts ............ 3pF @ 1,000 Hz
Dielectric Withstanding Voltage .............. 2,500 RMS @ sea level, 400 RMS @ 70,000 ft.

ENVIRONMENTAL
Temperature Range
(For Crystal Socket Only) ........... -55°C to + 125°C
Salt Spray ......................... 5% for 48 hours, no breakdown of plating or damage to base metal

PERFORMANCE SPECIFICATIONS: 8004 SERIES

MECHANICAL
Vibration ......................... 10 to 2,000 Hz @ 15 G's

ELECTRICAL
Bulk Resistance .................. 10 Milliohms
Capacitance to Ground
(Contact to Holding Clip) ........ 8pF
Capacitance Between Contacts ............ 5 pF
Dielectric Withstanding Voltage .............. 2,500 RMS

ENVIRONMENTAL
Temperature Range
(For Crystal Socket Only) ........... -55°C to + 125°C
Salt Spray ......................... 5% solutions for 48 hours
## Crystal Socket Assemblies

### 8000-AG & 8004-1G Series

#### PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Socket Part Number</th>
<th>Figure</th>
<th>Description</th>
<th>Contact Material</th>
<th>Contact Design</th>
<th>Contact Plating</th>
<th>Insulation Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>8004-23G1</td>
<td>2</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G16</td>
<td>2</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G17</td>
<td>1</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G18</td>
<td>2</td>
<td>Printed circuit mount without anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G19</td>
<td>1</td>
<td>Horizontal mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G20</td>
<td>1</td>
<td>Horizontal mount without anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G21</td>
<td>1</td>
<td>Horizontal mount without anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
</tbody>
</table>

### Accepts .017 (0.43) Diameter Leads Crystal Styles: HC-18µ, HC-43µ, HC-49µ

<table>
<thead>
<tr>
<th>Socket Part Number</th>
<th>Figure</th>
<th>Description</th>
<th>Contact Material</th>
<th>Contact Design</th>
<th>Contact Plating</th>
<th>Insulation Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>8000-AG1</td>
<td>3</td>
<td>Horizontal mount with anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG2</td>
<td>3</td>
<td>Horizontal mount without anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG3</td>
<td>4</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG4</td>
<td>3</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG5</td>
<td>5</td>
<td>Printed circuit mount without anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
</tbody>
</table>

### Accepts .040 (1.02) Diameter Leads Crystal Styles: HC-25µ, HC-42µ, HC-50µ

<table>
<thead>
<tr>
<th>Socket Part Number</th>
<th>Figure</th>
<th>Description</th>
<th>Contact Material</th>
<th>Contact Design</th>
<th>Contact Plating</th>
<th>Insulation Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>8004-1G16</td>
<td>2</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G17</td>
<td>1</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G18</td>
<td>2</td>
<td>Printed circuit mount without anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G19</td>
<td>1</td>
<td>Horizontal mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8004-1G20</td>
<td>1</td>
<td>Horizontal mount without anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
</tbody>
</table>

### Accepts .050 (1.27) Diameter Leads Crystal Styles: HC-6µ, HC-13µ, HC-14µ, HC-27µ, HC-36µ, HC-48µ

<table>
<thead>
<tr>
<th>Socket Part Number</th>
<th>Figure</th>
<th>Description</th>
<th>Contact Material</th>
<th>Contact Design</th>
<th>Contact Plating</th>
<th>Insulation Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>8000-AG1</td>
<td>3</td>
<td>Horizontal mount with anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG2</td>
<td>3</td>
<td>Horizontal mount without anti-rotating tab</td>
<td>Beryllium</td>
<td>Machined</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG3</td>
<td>4</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG4</td>
<td>3</td>
<td>Printed circuit mount with anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
<tr>
<td>8000-AG5</td>
<td>5</td>
<td>Printed circuit mount without anti-rotating tab</td>
<td>Phosphor Bronze</td>
<td>Stamped</td>
<td>Gold</td>
<td>Teflon</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
Crystal Socket Assemblies

8000-AG & 8004-1G Series

FIGURE 1

Dimensions are shown for reference purposes only.

Specialty Sockets
Crystal Socket Assemblies

8000-AG & 8004-1G Series

FIGURE 2

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

5058

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
8000-AG & 8004-1G Series

FIGURE 3

Crystal Outline Drawing

As Required

0.040 (1.02) or (1.27)
Dial.

0.050
Dial.

2.34
(5.95)

To clear contacts
dia. 2 holes

to clear tabs of
spot welded insert
(4 places)

.101 ± .003
(2.57 ± 0.08)

.030
(0.76)

Max.

0.047 ± .156
(1.19 ± 3.97)

.016 ± .002
(0.41 ± 0.05)

Min.

.047 ± .156
(1.19 ± 3.97)

.234 + .010 - .003
(5.94 + 0.25 - 0.08)

Dial. 2 holes

.486 ± .010
(12.34 ± 0.25)

.344
(8.73)

.750
(19.05)

Crystals are shown for
reference purposes only.

Dimensions are in inches
and millimeters unless otherwise
specified. Values in brackets
are metric equivalents.

Specifications subject to
change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

Note: Before ordering, see
Cross Reference in Section 15 for
equivalent Tyco Electronics
Part Number.

Products for Industrial &
Commercial Applications
Dimensions are shown for
reference purposes only.
Dimensions are in inches
and millimeters unless otherwise
specified. Values in brackets
are metric equivalents.
Specifications subject to
change.

5059

300
(7.62)

.047 ± .015
(1.19 ± 0.38)

.486 ± .015
(12.34 ± 0.38)

.404
(10.22)

As Required

Horizontal or
Vertical Mtg.

.859
(21.83)

Max.

.093
(2.36)

Dia. 3 Holes

.438
(11.11)

Max.

.300
(7.62)

.Min.

.328 ± .031
(8.33 ± 0.79)

.109
(2.76)

Min.

.486 ± .010
(12.34 ± 0.25)

.250
(6.35)

.486 ± .010
(12.34 ± 0.25)

.344
(8.73)

.486 ± .010
(12.34 ± 0.25)

.243
(6.17)

For Vertical Mounting

For Horizontal or Printed Circuit Mounting

Horizontal Printed
Circuit Mtg.

.047 ± .015
(1.19 ± 0.38)

Tail Slot

.013 ± .002
(0.33 ± 0.05)

To match contacts
dia. 2 holes

To match
anti-rotate tab

These 2 holes only if anti-
rotate tab is used

To match
anti-rotate tab

These 2 holes only if no
anti-rotate tab is used to match
.093 (2.36) dia. holes in clip

2 Holes

.234 + .010 - .003
(5.94 + 0.25 - 0.08)

Dial. 2 holes

.486 ± .010
(12.34 ± 0.25)

.243
(6.17)

For Vertical Mounting

For Horizontal or Printed Circuit Mounting

Horizontal Printed
Circuit Mtg.

.013 ± .002
(0.33 ± 0.05)

To match contacts
dia. 2 holes

To match
anti-rotate tab

These 2 holes only if anti-
rotate tab is used

To match
anti-rotate tab

These 2 holes only if no
anti-rotate tab is used to match
.093 (2.36) dia. holes in clip

2 Holes

.234 + .010 - .003
(5.94 + 0.25 - 0.08)

Dial. 2 holes

.300
(7.62)

.047 ± .015
(1.19 ± 0.38)

.486 ± .010
(12.34 ± 0.25)

.243
(6.17)

For Vertical Mounting

For Horizontal or Printed Circuit Mounting

Horizontal Printed
Circuit Mtg.

.013 ± .002
(0.33 ± 0.05)

To match contacts
dia. 2 holes

To match
anti-rotate tab

These 2 holes only if anti-
rotate tab is used

To match
anti-rotate tab

These 2 holes only if no
anti-rotate tab is used to match
.093 (2.36) dia. holes in clip

2 Holes

.234 + .010 - .003
(5.94 + 0.25 - 0.08)

Dial. 2 holes

.486 ± .010
(12.34 ± 0.25)

.243
(6.17)

For Vertical Mounting

For Horizontal or Printed Circuit Mounting

Horizontal Printed
Circuit Mtg.

.013 ± .002
(0.33 ± 0.05)

To match contacts
dia. 2 holes

To match
anti-rotate tab

These 2 holes only if anti-
rotate tab is used

To match
anti-rotate tab

These 2 holes only if no
anti-rotate tab is used to match
.093 (2.36) dia. holes in clip

2 Holes

.234 + .010 - .003
(5.94 + 0.25 - 0.08)

Dial. 2 holes

.486 ± .010
(12.34 ± 0.25)

.243
(6.17)

For Vertical Mounting

For Horizontal or Printed Circuit Mounting

Horizontal Printed
Circuit Mtg.

.013 ± .002
(0.33 ± 0.05)

To match contacts
dia. 2 holes

To match
anti-rotate tab

These 2 holes only if anti-
rotate tab is used

To match
anti-rotate tab

These 2 holes only if no
anti-rotate tab is used to match
.093 (2.36) dia. holes in clip

2 Holes

.234 + .010 - .003
(5.94 + 0.25 - 0.08)

Dial. 2 holes

.486 ± .010
(12.34 ± 0.25)

.243
(6.17)
Specialty Sockets

Catalog 1307612
Revised 7-01

8000-AG & 8004-1G Series

FIGURE 5

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Specifications subject to change.
Technical Support Center
1-800-522-6752
www.tycoelectronics.com

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
FEATURES:
8136-475 Series of programmed jumper plugs offer the unique combination of low cost and flexible signal path selection. Standard configurations are supplied programmed across rows. Special configurations are available side by side and across row, intermixed programmed signal path variations.
- Low profile; only .100" (2.54) high, “X” & “Y” stackability
- Available with gold or tin plating
- Available in standard units of 1,2,3,4,7,8,9 (double pin)
- Jumper pin assembly spans .300" (7.62) centers to connect opposing contacts in I.C. patterns, or .100" (2.54) centers to connect adjacent pins
- Also available in special configurations combining .100" (2.54) center shorting pins with .300" (7.62) center pins
- To allow greater flexibility, individual jumper pins and insulators are available for installation by the customer (simple press assembly)

MATERIAL SPECIFICATIONS:
Insulator.........................Thermoplastic polyester, UL rated 94V-0
Pin ............................Phosphor bronze
Plating .........................Gold or tin

PERFORMANCE SPECIFICATIONS:
MECHANICAL
Solderability ..................MIL-STD-202, Method 208

ELECTRICAL
Current Rating..................3 Amps DC
Operating Voltage..............500 Volts RMS at atmospheric pressure
Dielectric Withstanding
Voltage .........................2,500 Volts RMS for 5 seconds
Bulk Resistance ...............10 Milliohms at 0.20 Amps DC
Insulation Resistance ......2 x 10^9 Ohms at 90% relative humidity

ENVIRONMENTAL
Operating Temperature .......-65°C to +125°C

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
**Specialty Sockets**

**Programming Jumper Plug Assemblies**

**8136-475 Series**

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

<table>
<thead>
<tr>
<th>Size</th>
<th>Part Number</th>
<th>Dimension A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulator-1 Unit</td>
<td>8136-477P1</td>
<td>.100 (2.54)</td>
</tr>
<tr>
<td>Insulator-2 Units</td>
<td>8136-652P6</td>
<td>.200 (5.08)</td>
</tr>
<tr>
<td>Insulator-3 Units</td>
<td>8136-652P1</td>
<td>.300 (7.62)</td>
</tr>
<tr>
<td>Insulator-4 Units</td>
<td>8136-652P2</td>
<td>.400 (10.16)</td>
</tr>
<tr>
<td>Insulator-7 Units</td>
<td>8136-652P3</td>
<td>.700 (17.78)</td>
</tr>
<tr>
<td>Insulator-8 Units</td>
<td>8136-652P4</td>
<td>.800 (20.32)</td>
</tr>
<tr>
<td>Insulator-9 Units</td>
<td>8136-652P5</td>
<td>.900 (22.86)</td>
</tr>
</tbody>
</table>

Gold Part Number  | Figure | Number of Units | Dim. A |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8136-475G1</td>
<td>1</td>
<td>1</td>
<td>-----</td>
</tr>
<tr>
<td>8136-475G2</td>
<td>2</td>
<td>2</td>
<td>200 (5.08)</td>
</tr>
<tr>
<td>8136-475G3</td>
<td>2</td>
<td>3</td>
<td>300 (7.62)</td>
</tr>
<tr>
<td>8136-475G4</td>
<td>2</td>
<td>4</td>
<td>400 (10.16)</td>
</tr>
<tr>
<td>8136-475G7</td>
<td>2</td>
<td>7</td>
<td>700 (17.78)</td>
</tr>
<tr>
<td>8136-475G8</td>
<td>2</td>
<td>8</td>
<td>800 (20.32)</td>
</tr>
<tr>
<td>8136-475G9</td>
<td>2</td>
<td>9</td>
<td>900 (22.86)</td>
</tr>
<tr>
<td>8136-651P2 (gold)</td>
<td>3</td>
<td>Jumper Pin</td>
<td>100 (2.54)</td>
</tr>
<tr>
<td>8136-651P3 (tin)</td>
<td>3</td>
<td>Jumper Pin</td>
<td>100 (2.54)</td>
</tr>
<tr>
<td>8136-650P2 (gold)</td>
<td>3</td>
<td>Jumper Pin</td>
<td>300 (7.62)</td>
</tr>
<tr>
<td>8136-650P3 (tin)</td>
<td>3</td>
<td>Jumper Pin</td>
<td>300 (7.62)</td>
</tr>
</tbody>
</table>

* For tin-plated version of Figs. 1&2, use suffix "T" after part number. Example: 8136-475G1T.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com
FEATUERES:
AMP offers a SIP style socket for use with PC fuses.
- Precision four-finger inner contact provides concentric funnel entry for easy flat and round lead insertion
- Non-wicking, closed bottom sleeve gives 100% protection against flux and solder contamination
- BeCu inner contact for maximum mechanical and electrical performance

APPLICATION DIMENSIONS:
- PCB Thickness Range: Standard .062" and .092" (1.57 and 2.34)
- PCB Hole Size Range: .035" ± .003" (0.89 ± 0.08) PC tail
- IC Pin Dimension Range: .009" x .015" (0.23 x 0.38) through .111" x .020" (0.28 x 0.51)
  .016" to .021" (0.41 to 0.53) round lead, .105"(2.67) min. length

MATERIAL SPECIFICATIONS:
Insulator.........................Thermoplastic polyester, UL rated 94V-0
Inner Contact...............Four-fingered beryllium copper,
gold over nickel plated
Outer Sleeve...............Machined brass, gold over nickel or
tin/lead over copper plated

PART NUMBER
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Contact Plating</th>
<th>Sleeve Plating</th>
</tr>
</thead>
<tbody>
<tr>
<td>510-21114</td>
<td>Gold</td>
<td>Tin/Lead</td>
</tr>
<tr>
<td>510-21232</td>
<td>Tin/Lead</td>
<td>Tin/Lead</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration ................Passed MIL-STD-1344, Method 2005.1,
  Condition II, 10 G’s
Shock ........................Passed MIL-STD-1344, Method 2004.1,
  Condition C, 100 G’s
Durability ................Passed MIL-STD-1344, Method 2016
Normal Force...............200 Grams (7.1 oz.) average with .018" (0.46)
  dia. polished steel pin
Inner Contact Retention........7.5 Lbs. per line average
Sleeve Retention in Plastic...............3.0 Lbs. per line minimum
Solderability ...............Passed MIL-STD-202F, Method 208
Insertion Force ............179 Grams (6.3 oz.) average with a .018" (0.46)
  dia. polished steel pin
Withdrawal Force ...........63 Grams (2.2 oz.) average with a .018" (0.46)
  dia. polished steel pin

ELECTRICAL
Contact Resistance .........10 Milliohms max.
Contact Rating...............3 Amps
Capacitance ................1.0 pF per MIL-STD-202, Method 305
  (contact to contact)
Insulation Resistance......5,000 Megohms min. @ 500 VDC per
  MIL-STD-1344, Method 3003.1
Dielectric Withstanding Voltage..............1,000 Volts RMS per MIL-STD-1344,
  Method 3001.1

ENVIRONMENTAL
Humidity ......................Passed MIL-STD-1344, Method 1002.2, Cond. II
Thermal Shock ...............Passed MIL-STD-1344, Method 1003.1, Cond. A
Operation Temperature ...Gold inner contact -55°C to +125°C
  Tin/lead inner contact -55°C to +105°C
## 500 Series

### FEATURES:
- Accommodates any component leads with .016" to .021" (0.41 x 0.53) diameter
- Withstands most severe environmental conditions including military requirements of high shock and vibration
- Low profile
- Contact features closed end construction eliminating any solder or flux wicking problems
- Two-piece tapered entry socket terminal features a four-finger, inner contact and machined outer sleeve

### APPLICATION DIMENSIONS:
- PCB Thickness Range: Standard .062" and .092" (1.57 and 2.34)
- PCB Hole Size Range: .035" ± .003" (0.89 ± 0.08) PC tail, .055" ± .003" (1.40 ± 0.08) solderless wrap
- IC Pin Dimension Range: .016" to .021" (0.41 to 0.53) round lead, .105"(2.67) min. length

### MATERIAL SPECIFICATIONS:
- Insulator: Thermoplastic polyester, UL rated 94V-0
- Inner Contact: Four-fingered beryllium copper, gold over nickel plated
- Outer Sleeve: Machined brass, gold over nickel or tin/lead over copper plated

### PERFORMANCE SPECIFICATIONS:

#### MECHANICAL
- Shock: Passed MIL-STD-1344, Method 2004.1, Condition C, 100 G’s
- Normal Force: 200 Grams (7.1 oz.) average with .018” (0.46) dia. polished steel pin
- Inner Contact Retention: 7.5 Lbs. per line average
- Sleeve Retention: 3.0 Lbs. per line minimum
- Solderability: Passed MIL-STD-202F, Method 208
- Insertion Force: 179 Grams (6.3 oz.) average with a .018” (0.46) dia. polished steel pin
- Withdrawal Force: 63 Grams (2.2 oz.) average with a .018” (0.46) dia. polished steel pin

#### ELECTRICAL
- Contact Resistance: .10 Milliohms max.
- Contact Rating: 3 Amps
- Capacitance: 1.0 pF per MIL-STD-202, Method 305 (contact to contact)
- Insulation Resistance: 5,000 Megohms min. @ 500 VDC per MIL-STD-1344, Method 3003.1
- Dielectric Withstanding Voltage: 1,000 Volts RMS per MIL-STD-1344, Method 3001.1

#### ENVIRONMENTAL
- Humidity: Passed MIL-STD-1344, Method 1002.2, Cond. II
- Thermal Shock: Passed MIL-STD-1344, Method 1003.1, Cond. A
- Operation Temperature: Gold inner contact -55°C to +125°C, Tin/lead inner contact -55°C to +105°C

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

### PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Contacts</th>
<th>Contact Plating</th>
<th>Sleeve Plating</th>
<th>Termination Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>504-AG11D</td>
<td>4</td>
<td>Gold</td>
<td>Tin/Lead</td>
<td>Printed Circuit</td>
</tr>
<tr>
<td>504-AG12D</td>
<td></td>
<td>Tin/Lead</td>
<td>Tin/Lead</td>
<td>Solderless Wire Wrap</td>
</tr>
<tr>
<td>504-AG10D</td>
<td></td>
<td>Gold</td>
<td>Tin/Lead</td>
<td>Solderless Wire Wrap</td>
</tr>
<tr>
<td>504-AG11E</td>
<td></td>
<td>Gold</td>
<td>Tin/Lead</td>
<td>Solderless Wire Wrap</td>
</tr>
</tbody>
</table>
**FEATURES:**
The 8059 Series TO-5 transistor sockets are manufactured with a beryllium copper precision four fingered inner contact and brass outer sleeve. Insulators are molded in five brilliant polyamide colors, for rapid visual identification of socket pin count or pin circle. This inexpensive family of transistor sockets is available with either gold or tin/lead sleeves for even more economy.

- **Ultra low profile**
- **Closed entry design - no distortion or damage to contact with misaligned or oversized lead**
- **Gold plated contacts, choice of gold or tin/lead plated leads**
- **Sockets accept .016 to .020 (0.41 to 0.51) diameter leads**
- **Five brilliant colors for easy identification when mounted on PCB**
- **Closed end sleeve design completely eliminates the possibility of flux or solder wicking into the contact area**
- **Large tapered entry for easy insertion of transistor devices**

**MATERIAL SPECIFICATIONS:**

- **Insulator:** Glass filled polyamide nylon, UL rated 94V-0
- **Sleeve:** Brass
- **Contact:** Beryllium copper
- **Plating:** Contact : Gold, Sleeve : Tin/lead or gold

**PERFORMANCE SPECIFICATIONS:**

**MECHANICAL**

- **Vibration:** Passed MIL-STD-1344, Method 2005, 15 G’s, 10 to 200 cycles
- **Mechanical Shock:** Passed MIL-STD-1344, Method 2004, 10 G’s, 1 to 9,000 cycles
- **Durability:** 50 Insertions and withdrawals, MIL-S-83502/1, Sec 4.7.12
- **Insertion Force:** 4.0 lb. Max., .020 dia. +.0000 probe -.0002
- **Withdrawal Force:** 14 Grams (1/2 oz.) min., .016 dia. +.0002 probe -.0001
- **Solderability:** MIL-STD-202, Method 208

**ELECTRICAL**

- **Bulk Contact Resistance:** 20 Milliohms max per MIL-S-83502/1
- **Current Rating:** 3 Amps DC
- **Operating Voltage:** 750 VDC
- **Dielectric Withstanding Voltage:** 600 VAC per MIL-STD-1344, Method 3001
- **Insulation Resistance:** 2 x 10^6 Megohms, MIL-STD-1344, Method 3003
- **Capacitance:** 2pF Max., MIL-STD-202, Method 208

**ENVIRONMENTAL**

- **Operating Temperature:** -55°C to +125°C
- **Corrosive Atmosphere:** 30 Milliohms, ammonium polysulfide 10 ppm per MIL-S-83502/1 sec. 4.7.17
- **Moisture Resistance:** 30 Milliohms max., MIL-STD-202, Method 106
- **Thermal Shock:** MIL-STD-1344, Method 1003

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
### Specialty Sockets

#### Transistor & IC Low Profile Sockets

**8059 Series**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Contacts</th>
<th>Pin Circle</th>
<th>Contact Plating</th>
<th>Sleeve Plating</th>
<th>Insulator Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>8059-4G1</td>
<td>3</td>
<td>.200</td>
<td>Gold</td>
<td>Gold</td>
<td>Red</td>
</tr>
<tr>
<td>8059-2G1</td>
<td>4</td>
<td>.200 (5.08)</td>
<td>Gold</td>
<td>Gold</td>
<td>Blue</td>
</tr>
<tr>
<td>8059-2G2</td>
<td>4</td>
<td>.200 (5.08)</td>
<td>Gold</td>
<td>Tin/Lead</td>
<td>Green</td>
</tr>
<tr>
<td>8059-4G4</td>
<td>8</td>
<td>.230</td>
<td>Gold</td>
<td>Gold</td>
<td>Orange</td>
</tr>
<tr>
<td>8059-2G3</td>
<td>10</td>
<td>.230 (5.84)</td>
<td>Gold</td>
<td>Gold</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

---

**PART NUMBER / STANDARD CONFIGURATIONS**

**Figure A**

- Cut transistor leads .110 / .200 (2.79 / 5.08)
- Contacts recessed .010 (0.25) below insulator surface
- .125 (3.18) Dia. shoulder
- .125 (3.18) ± .010 (0.25) Ref.
- .090 ± .002 (1.52 ± 0.05) Rad.
- .142 (3.61) Max.

**Figure B**

- Cut transistor leads .110 / .200 (2.79 / 5.08)
- Contacts recessed .010 (0.25) below insulator surface
- .125 (3.18) ± .010 (0.25) Dia. shoulder
- .090 ± .002 (1.52 ± 0.05) Rad.
- .142 (3.61) Max.

**Figure C**

- Contacts recessed .010 (0.25) below insulator surface
- .125 (3.18) ± .010 (0.25) Dia. shoulder

**Figure D**

- Cut transistor leads .135 / .160 (3.42 / 4.08)
- .125 (3.18) ± .010 (0.25) Dia. shoulder

---

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
8058 & 8060 Series

FEATURES:
The 8058/8060 family of teflon sockets, with beryllium copper contacts, offers many features which allow them to be utilized in the most severe applications. Low profile for close board spacing, closed sleeve for 100% prevention of solder and flux wicking. A choice of many terminal styles for greater packaging selection and ease of use. Many of these sockets meet or exceed MIL-S-83502/2 and MIL-S-83502/5.

- Two-piece socket terminal - four fingered inner contact and machined outer sleeve
- Low profile for tight space applications
- Sockets accept 0.41/.016 to 0.51/.020 diameter leads
- Printed circuit, solder pocket and turret style terminations available
- Closed entry-design no distortion or damage to contact with misaligned or oversized leads

MATERIAL SPECIFICATIONS:
Insulator ......................Teflon
Sleeve .........................Brass
Contact Plating ...............Beryllium copper
Plating ........................Contact gold, sleeve gold

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration .................Passed MIL-STD -1344, Method 2005, 15 G's, 10 to 2,000 cycles
Mechanical Shock ...........Passed MIL-STD -1344, Method 2004, 10 G's, 1 to 9,000 cycles
Durability ..................50 Insertions and withdrawals, MIL-S-83502/1, Sec. 4.7.12
Insertion Force ..............4.0 lb. max., .020 dia. +.0000 probe - .0002
Withdrawal Force ............14 Grams (1/2 oz.) min. .016 dia. +.0002 probe - .0001
Solderability .................MIL-STD-202, Method 208

ELECTRICAL
Bulk Contact
Resistance ...............20 Milliohms max. per MIL-S-83502/1
Current Rating .............3 Amp DC, contact rating
 Operating Voltage .......500 VDC @ atmospheric pressure
Dielectric Withstanding
Voltage ......................600 VAC per MIL-STD-1344, Method 3001
Insulation Resistance .......2 x 10^6 Megohms, MIL-STD-1344, Method 3003
Capacitance ...............2 pF Max., MIL-STD-202, Method 305

ENVIRONMENTAL
Operating Temperature .......-55°C to +125°C
Corrosive Atmosphere .......30 milliohms, ammonium polysulfide 10 ppm per MIL-S-83502/1 Sec. 4.7.17
Moisture Resistance .........30 Milliohms max., MIL-STD-202, Method 106
Thermal Shock ...............MIL-STD-1344, Method 1003
### 8058 & 8060 Series

#### Transistor Sockets

**PART NUMBER / STANDARD CONFIGURATIONS**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Figure</th>
<th>No. of Contacts</th>
<th>Pin Circle</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E*</th>
<th>F Max.</th>
<th>Terminal Style</th>
<th>Mounting Hole</th>
<th>Transistor Lead Length</th>
<th>Polarization Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8058-1G52</td>
<td>1</td>
<td>3</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>265</td>
<td>373</td>
<td>410</td>
<td>0.160</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>N</td>
</tr>
<tr>
<td>M8058-4G29</td>
<td>3</td>
<td>3</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Solder Pocket</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>3</td>
<td>3</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Solder Pocket</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>4</td>
<td>3</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.302</td>
<td>Printed Circuit</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>6</td>
<td>6</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>373</td>
<td>410</td>
<td>0.315</td>
<td>N/A</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-3G63</td>
<td>6</td>
<td>6</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>373</td>
<td>410</td>
<td>0.315</td>
<td>N/A</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>7</td>
<td>3</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.500</td>
<td>Wirewrap</td>
<td>B</td>
<td>125/155</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>1</td>
<td>4</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>265</td>
<td>373</td>
<td>410</td>
<td>0.315</td>
<td>Wirewrap</td>
<td>N/A</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>3</td>
<td>4</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>265</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Solder Pocket</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>4</td>
<td>4</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.347</td>
<td>Printed Circuit</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>7</td>
<td>4</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.317</td>
<td>Printed Circuit</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>2</td>
<td>5</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.094</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>3</td>
<td>5</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Solder Pocket</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>6</td>
<td>6</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>373</td>
<td>410</td>
<td>0.125</td>
<td>N/A</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>7</td>
<td>6</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>373</td>
<td>410</td>
<td>0.125</td>
<td>N/A</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>2</td>
<td>8</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>3</td>
<td>8</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>4</td>
<td>8</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>6</td>
<td>8</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>2</td>
<td>10</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>3</td>
<td>10</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>4</td>
<td>10</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>5</td>
<td>10</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>6</td>
<td>10</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>373</td>
<td>410</td>
<td>0.140</td>
<td>Turret</td>
<td>B</td>
<td>156/218</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>5</td>
<td>12</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>375</td>
<td>373</td>
<td>410</td>
<td>0.155</td>
<td>Printed Circuit</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>M8058-1G52</td>
<td>6</td>
<td>12</td>
<td>280</td>
<td>280</td>
<td>280</td>
<td>375</td>
<td>373</td>
<td>410</td>
<td>0.125</td>
<td>N/A</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

* Dimension E* = 0.031

(9.79 mm)

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
## 8058 & 8060 Series

### Transistor Sockets

### 8058 & 8060 Series

#### PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Figure</th>
<th>Number of Contacts</th>
<th>Pin Circle</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E*</th>
<th>F Max.</th>
<th>Terminal Style</th>
<th>Mtg. Hole Style</th>
<th>Transistor Lead Length</th>
<th>Polarization Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>8058-1G5</td>
<td>3</td>
<td>3</td>
<td>.100</td>
<td>100</td>
<td>268</td>
<td>227</td>
<td>255</td>
<td>.146</td>
<td>.350</td>
<td>Solder Pocket</td>
<td>A</td>
<td>156/218</td>
<td>N</td>
</tr>
<tr>
<td>8058-1G7</td>
<td>3</td>
<td>3</td>
<td>.100</td>
<td>100</td>
<td>320</td>
<td>227</td>
<td>255</td>
<td>.084</td>
<td>.427</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8058-1G9</td>
<td>2</td>
<td>3</td>
<td>.100</td>
<td>100</td>
<td>268</td>
<td>227</td>
<td>255</td>
<td>.094</td>
<td>.372</td>
<td>Turret</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8058-1G1</td>
<td>4</td>
<td>3</td>
<td>.100</td>
<td>100</td>
<td>.330</td>
<td>227</td>
<td>255</td>
<td>.240</td>
<td>.580</td>
<td>Printed Circuit</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8058-1G3</td>
<td>5</td>
<td>3</td>
<td>.100</td>
<td>200</td>
<td>.410</td>
<td>227</td>
<td>255</td>
<td>.170</td>
<td>.616</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8060-1G5</td>
<td>6</td>
<td>3</td>
<td>.100</td>
<td>150</td>
<td>.195</td>
<td>N/A</td>
<td>255</td>
<td>.103</td>
<td>N/A</td>
<td>Solder Pocket</td>
<td>A</td>
<td>125/155</td>
<td>P</td>
</tr>
<tr>
<td>8060-1G7</td>
<td>6</td>
<td>3</td>
<td>.100</td>
<td>150</td>
<td>.195</td>
<td>N/A</td>
<td>255</td>
<td>.103</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8060-1G9</td>
<td>3</td>
<td>4</td>
<td>.100</td>
<td>100</td>
<td>265</td>
<td>227</td>
<td>255</td>
<td>.146</td>
<td>.350</td>
<td>Solder Pocket</td>
<td>A</td>
<td>156/218</td>
<td>N</td>
</tr>
<tr>
<td>8060-1G1</td>
<td>2</td>
<td>4</td>
<td>.100</td>
<td>100</td>
<td>265</td>
<td>227</td>
<td>255</td>
<td>.094</td>
<td>.310</td>
<td>Turret</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8060-1G3</td>
<td>4</td>
<td>4</td>
<td>.100</td>
<td>100</td>
<td>.330</td>
<td>227</td>
<td>255</td>
<td>.240</td>
<td>.553</td>
<td>Printed Circuit</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8060-1G4</td>
<td>5</td>
<td>4</td>
<td>.100</td>
<td>200</td>
<td>.390</td>
<td>227</td>
<td>255</td>
<td>.187</td>
<td>.530</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8060-1G6</td>
<td>6</td>
<td>4</td>
<td>.100</td>
<td>150</td>
<td>.195</td>
<td>N/A</td>
<td>255</td>
<td>.103</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Dimension E: ± .031 (0.79)

All part numbers prefixed with (M) meet MIL-83502/1 or MIL-83502/6.

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
Transistor Sockets

8058 & 8060 Series

**Figure A**
Recommended Chassis Cutout for all 8060 Series panel mount applications

**Figure B**
Recommended Chassis Cutout for all 8058 Series panel mount applications

---

**Figure 1**

**Figure 2**

**Figure 3**

**Figure 4**

**Figure 5**

**Figure 6**

**Figure 7**

---

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
8060 Series

FEATURES:
The high reliability four-fingered contact and machined sleeve, TEFON, 8060 family of L.E.D. sockets offer the ability to socket on a lead L.E.D. lamp. Available with solder pocket, turret or printed circuit terminals for convenient packaging. These sockets eliminate the need to unsolder a device when service is required, yet will stand up to many severe environments.

• Fast "Push-fit" mounting assures low installation cost
• Contact reliability achieved through smooth wiping leaf contact
• Low contact resistance

MATERIAL SPECIFICATIONS:
Insulator ..................... TEFON
Contact ..................... Beryllium copper
Finish: Gold
Terminal Sleeve .......... Brass
Finish: Gold

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration .................. Passed MIL-STD - 1344, Method 2005, 15 G's, 10 to 2,000 cycles
Mechanical Shock ....... Passed MIL-STD - 1344, Method 2004, 10 G's, 1 to 9,000 cycles
Durability .................. 50 Insertions and withdrawals, MIL-S-83502/1, sec. 4.7.12
Insertion Force .......... 4.0 Lb. max., .020 dia. +.0000 probe -.0002
Withdrawal Force ......... 14 Grams (1/2 Oz.) min., .016 dia. +.0002 probe -.0001
Solderability .............. MIL-STD-202, Method 208

ELECTRICAL
Bulk Contact
Rating .................. 20 Milliohms max. per MIL-S-83502/1
Current Rating .......... 3 Amp DC
Operating Voltage ...... 750 VDC
Dielectric Withstanding
Voltage .................. 600 VAC per MIL-STD-1344, Method 3001
Insulation Resistance .. 5,000 Megohms @ 500 VDC per MIL-STD-1344, Method 3003.1
Capacitance .............. 2 pF Max. per MIL-STD-202, Method 305

ENVIRONMENTAL
Operating Temperature ... -55°C to +125°C
Corrosive Atmosphere .... 30 Milliohms, ammonium polysulfide 10 ppm per MIL-S-83502/1 sec. 4.7.17
Moisture Resistance ...... 30 Milliohms max. per MIL-STD-202, Method 106
Thermal Shock .......... MIL-STD-1344, Method 1003
Lamp Sockets

8060 Series

Figure 1

Figure 2

Figure 3

Figure 4

Recommended mounting hole .221 ±.001 (5.61 ± 0.03) - Break lending edge .015 (0.38) x 82° countersink

PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Figure</th>
<th>Accept Lead Diameter</th>
<th>Cut Component Lead Length</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>8060-IG21</td>
<td>1</td>
<td>.016 – .020 (0.41 – 0.51)</td>
<td>.025 (0.63)</td>
<td>.105 (2.67)</td>
</tr>
<tr>
<td>8060-IG23</td>
<td>2</td>
<td>.016 – .020 (0.41 – 0.51)</td>
<td>.125 (3.18)</td>
<td>.305 (7.75)</td>
</tr>
<tr>
<td>8060-IG34</td>
<td>3</td>
<td>.016 – .020 (0.41 – 0.51)</td>
<td>.025 (0.63)</td>
<td>—</td>
</tr>
<tr>
<td>8060-IG36</td>
<td>4</td>
<td>.016 – .020 (0.41 – 0.51)</td>
<td>.317 (8.05)</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
FEAT URES: 
The 8080-1G family of TO-3 Power Transistor Sockets is used for both small and large signal devices. Used in power supplies, power amplifiers, sweep amplifiers, and machine controlled equipment. These sockets are designed to constantly perform.

- Contact rating 10 amps, 20 Amps for 8080-1G4 VDE style
- Sockets accept components with .040 (1,02) .002 -.003 (+0,05 -0,08) diameter lead or .060 (1,52) +.002 -.003 (+0,05 -0,08) diameter leads
- Integral mounting saddle has 20 inch pounds min. thread strength
- Dialyl phthalate and phenolic insulators

MATERIAL SPECIFICATIONS:
Insulator.......................... Black phenolic or green diallyl phthalate, UL rated 94V-0
Mounting Saddle ............... Brass, heat treated
Saddle Plating ................. Electro-tin
Insulating Washer .............. Mica .003 (0,08) thick
Contacts ......................... Beryllium copper
Contact Plating ............... Tin, silver or gold

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration .......................... 10 - 2,000 Hz, MIL-STD-202, Method 204, Condition B, transistor installed
Durability ........................ 50 Insertions per MIL-STD-12883
Insertion Force .................... 6 Pounds max. per MIL-STD-12883
Withdrawal Force ................ 18 Pounds min., 6 pounds max. per MIL-STD-12883
Thread Strength ................. 20 Inch pounds minimum

ELECTRICAL
Bulk Resistance .................. Gold 15 milliohms, per MIL-STD-12883
Tin 25 milliohms max.
Silver 25 milliohms max.
Current Rating ................. 10 Amps DC
Insulation Resistance .......... 1,000 Megohms per MIL-STD-202
Dielectric Withstanding
Voltage ......................... 1,500 Volts RMS

ENVIRONMENTAL
Operating Temperature ...... -55°C to +125°C.
Mechanical Shock .............. Passed MIL-STD-12833, with transistor inserted at test gage
8080-1G Series

PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Insulator</th>
<th>Contact Plating</th>
<th>Solder Lugs</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>8080-1G1</td>
<td>Phenolic</td>
<td>Electro-Tin</td>
<td>Two Solder Lugs</td>
<td>4</td>
</tr>
<tr>
<td>8080-1G2</td>
<td>Diallyl Phthalate</td>
<td>Silver</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>8080-1G3</td>
<td>Phenolic</td>
<td>Electro-Tin</td>
<td>One Solder Lug</td>
<td>4</td>
</tr>
<tr>
<td>8080-1G4</td>
<td>Diallyl Phthalate</td>
<td>Gold</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>8080-1G5</td>
<td>Phenolic</td>
<td>Electro-Tin</td>
<td>One Solder Lug</td>
<td>4</td>
</tr>
</tbody>
</table>

Recommended Chassis Cutout

<table>
<thead>
<tr>
<th>Standard Configuration</th>
<th>Recommended Chassis Cutout</th>
</tr>
</thead>
<tbody>
<tr>
<td>8080-1G1 and 8080-1G4</td>
<td>Drill and countersink for #4 flat head screw or rivet.</td>
</tr>
<tr>
<td>8080-1G2</td>
<td>Two places</td>
</tr>
<tr>
<td>8080-1G3</td>
<td>One Solder Lug</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
Specialty Sockets

Push Fit Test Jacks

8000 Series

FEATURES:
(8000-MG, 8007, and 8011 Series)
The 8000 Series is a line of sub-miniature “Push-Fit” test jacks used in many applications such as meter probe inputs, crystal sockets, circuit test point identification and many others. A complete line of test points which will accommodate .040 (1.02); .050 (1.27); .080 (2.03) and .090 (2.29) diameter pins.

- Teflon insulator for extreme environments
- Gold or tin plating available
- Brightly colored Nylon for fast test point identification
- Tapered entry to guide test probe

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

PERFORMANCE SPECIFICATIONS:

ELECTRICAL
Bulk Contact
- Resistance ......................10 Milliohms maximum
- Current Rating.............5 Amps DC
- Operating Voltage .........1,500 Volts RMS @ sea level
- Dielectric Withstanding Voltage ..........................2,500 Volts RMS @ sea level
- Insulation Resistance........5,000 x 10^6 Ohms
- Capacitance ......................4pF @ 5 MHz.

ENVIRONMENTAL
- Operating Temperature ....-65°C to +125°C
# Push Fit Test Jacks

## 8000 Series

![Diagram of Push Fit Test Jacks](image)

**Figure 1**

**Figure 1A**

**Figure 2**

**Figure 3**

## PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Figure</th>
<th>A *</th>
<th>Insulator Material &amp; Color</th>
<th>Contact Material and Plating</th>
<th>Mtg. Hole B **</th>
<th>Probe Diameter</th>
<th>Part Number</th>
<th>Figure</th>
<th>A *</th>
<th>Insulator Material &amp; Color</th>
<th>Contact Material and Plating</th>
<th>Mtg. Hole B **</th>
<th>Probe Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>8011-8G1</td>
<td>2</td>
<td>.17</td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Gold</td>
<td>.162</td>
<td>.040</td>
<td>8011-8G2</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Green</td>
<td>Phos. Bronze, Tin</td>
<td>.080</td>
<td>.172</td>
</tr>
<tr>
<td>8011-8G5</td>
<td>1</td>
<td>.18</td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Tin</td>
<td>.050</td>
<td>.050</td>
<td>8011-8G3</td>
<td>3</td>
<td>.77</td>
<td>Nylon, White</td>
<td>Phos. Bronze, Tin</td>
<td>.080</td>
<td>.172</td>
</tr>
<tr>
<td>8000-MG1</td>
<td>1A</td>
<td>.17</td>
<td>Nylon, Blue</td>
<td>Phos. Bronze, Gold</td>
<td>.172</td>
<td>.080</td>
<td>8011-8G4</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Brown</td>
<td>Beryllium Copper, Tin</td>
<td>.090</td>
<td></td>
</tr>
<tr>
<td>8000-MG5</td>
<td></td>
<td></td>
<td>Nylon, White</td>
<td>Phos. Bronze, Tin</td>
<td></td>
<td></td>
<td>8011-8G2</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Purple</td>
<td>Beryllium Copper, Tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8000-MG6</td>
<td></td>
<td></td>
<td>Nylon, Black</td>
<td>Phos. Bronze, Tin</td>
<td></td>
<td></td>
<td>8011-8G1</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Blue</td>
<td>Beryllium Copper, Tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8011-8G7</td>
<td></td>
<td></td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Gold</td>
<td>.080</td>
<td>.080</td>
<td>8011-8G6</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Black</td>
<td>phos. Bronze, Tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8011-8G8</td>
<td></td>
<td></td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Gold</td>
<td></td>
<td></td>
<td>8011-8G1</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Black</td>
<td>phos. Bronze, Tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8011-8G9</td>
<td></td>
<td></td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Gold</td>
<td></td>
<td></td>
<td>8011-8G1</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Black</td>
<td>phos. Bronze, Tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8011-8G10</td>
<td></td>
<td></td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Gold</td>
<td></td>
<td></td>
<td>8011-8G1</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Black</td>
<td>phos. Bronze, Tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8011-8G11</td>
<td></td>
<td></td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Gold</td>
<td></td>
<td></td>
<td>8011-8G1</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Black</td>
<td>phos. Bronze, Tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8011-8G12</td>
<td></td>
<td></td>
<td>TEFLOM, Natural</td>
<td>Phos. Bronze, Gold</td>
<td></td>
<td></td>
<td>8011-8G1</td>
<td>3</td>
<td>.77</td>
<td>Nylon, Black</td>
<td>phos. Bronze, Tin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Dimension “A” ± .002 (0.05)
** Dimension “B” ± .03 (0.003)

**Note:** Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
**8041 Series**

The 8041 Series printed wiring board mounted test jacks require very little mounting space. Used in many applications as signal test points, they are also used as electromechanical interfaces from daughter cards to mother boards. Test jack M8041-1G4-1 is qualified to MIL-C-39024/11. This series test jack accepts .080 (2.03) inch dia. test probes in either side or top side entry models.

- Low profile for close board-to-board stacking
- Test jack cannot be damaged by using oversized probe
- Probe side entry or top and side entry, both qualified to MIL-C-39024/11

**FEATURES:**

- Dimple on printed circuit terminals, retains test jack in P.W.B. during flow soldering
- Ten brilliant insulation colors available for quick test point reference
- Top entry allows test jack to be probed while being used as an interconnection socket

**MATERIAL SPECIFICATIONS:**

- Insulator: Nylon
- Contacts: Beryllium copper
- Platings: Gold

**PERFORMANCE SPECIFICATIONS:**

**MECHANICAL**

- Vibration: 15 G's, 0 - 55 Hz monitored for 10 micro seconds opening per MIL-STD-202, Method 201
- Mechanical Shock: 50 G's, monitored for 10 micro seconds opening per MIL-STD-202, Method 202
- Durability: 500 Insertions
- Insertion Force: 0.080 (2.03) dia. pin., 5.0 lb. max.
- Withdrawal Force: 0.080 (2.03) dia. pin., 227 grams (8 oz.) min.
- Permeability: 2.0 Mu max. MIL-I-17214
- Solderability: Passed MIL-STD-202, Method 208

**ELECTRICAL**

- Bulk Contact Resistance: 4 Milliohms @ 5 Amps, military; 5 Milliohms @ 5 Amps, commercial
- Current Rating: 5 Amps DC
- Operating Voltage: 1,500 Volts RMS @ sea level, 350 Volts RMS @ 50,000 feet
- Dielectric Withstanding Voltage: 2,500 Volts RMS @ sea level, 500 Volts RMS @ 50,000 feet per MIL-STD-202, Method 301
- Insulation Resistance: 5,000 x 10^6 Ohms, MIL-C-39024 Section 4.6.5
- Capacitance: 1 pF @ 5 MHZ

**ENVIRONMENTAL**

- Operating Temperature: -65°C to +125°C
- Salt spray: 4 Milliohms @ 5 Amps per MIL-STD-202, Method 101
- Humidity: 1.000 x 10^9 Ohms per MIL-STD-202, Method 101
- Thermal Shock: -65°C to +125°C per MIL-STD-202, Method 107

**Note:** Military Test Reference applies specifically to MIL-Qualified Components.
8041 Series Commercial

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Recommended Footprint

PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Insulator Color</th>
<th>Side Entry Hole Part Number</th>
<th>Top and Side Entry Hole Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>8041-1G9</td>
<td>8041-1G9</td>
</tr>
<tr>
<td>Red</td>
<td>8041-1G4</td>
<td>8041-1G4</td>
</tr>
<tr>
<td>Black</td>
<td>8041-1G6</td>
<td>8041-1G6</td>
</tr>
<tr>
<td>Brown</td>
<td>8041-1G3</td>
<td>8041-1G3</td>
</tr>
<tr>
<td>Green</td>
<td>8041-1G7</td>
<td>8041-1G7</td>
</tr>
<tr>
<td>Orange</td>
<td>8041-1G5</td>
<td>8041-1G5</td>
</tr>
<tr>
<td>Blue</td>
<td>8041-1G8</td>
<td>8041-1G8</td>
</tr>
<tr>
<td>Yellow</td>
<td>8041-1G2</td>
<td>8041-1G2</td>
</tr>
<tr>
<td>Gray</td>
<td>8041-1G10</td>
<td>8041-1G10</td>
</tr>
<tr>
<td>Violet</td>
<td>8041-1G11</td>
<td>8041-1G11</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.
FEASURS:
The 8046 Series micro-miniature PC board mounting test jack uses the absolute minimum amount of PC board space. It can be used both as a test jack and an electromechanical interface for mother and daughter boards. The 8046-6G Series is qualified to MIL-C-39024/18. This series test jack accommodates .080” (2.03) diameter probes or interface pins. Commercial versions are available.

- Low profile for close board-to-board spacing
- Can be mounted in a row on .200” (5.08) centers
- Ten brilliant insulation colors available for quick test point reference
- Low cost and high reliability

MATERIAL SPECIFICATIONS:
Insulator: Teflon
Contact: Phosphor bronze
Plating: Gold

PERFORMANCE SPECIFICATIONS:

MECHANICAL
Vibration: 15 G’s @ 10 to 2,000 Hz per MIL-STD-202, Method 204
Mechanical Shock: 100 G’s per MIL-STD-202, Method 213
Durability: 150 Insertion and withdrawal cycles
Insertion Force: 10 Lbs. max.
Withdrawal Force: 0.5 Lbs. min.
Solderability: Passed MIL-STD-202, Method 208

ELECTRICAL
Bulk Contact
Resistance: 4 Milliohms @ 5 Amps, military; 5 milliohms @ 5 Amps commercial
Current Rating: 5 Amps DC
Operating Voltage: 1,000 Volts RMS @ sea level, 350 Volts RMS @ 50,000 feet
Dielectric Withstanding Voltage: 1,500 Volts RMS @ sea level, 350 Volts RMS @ 50,000 feet, MIL-C-39024, test 2 for 15 seconds
Insulation Resistance: 5,000 x 10^6 Ohms
Capacitance: 1pF

ENVIRONMENTAL
Operating Temperature: -65°C to +150°C
Salt Spray: 4 Milliohms @ 5 Amps, MIL-STD-202, Method 101
Humidity: 1,000 x 10^6 Ohms per MIL-STD-202, Method 103
Thermal Shock: -65°C to +200°C per MIL-STD-202, Method 107

NOTE: Military Test Reference Applies Specifically to MIL-Qualified Components.
Specialty Sockets

Micro-Miniature Test Jacks

8046 Series Commercial

PART NUMBER / STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>40 Micro-inches Gold</th>
<th>Insulator Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>8046-1G1</td>
<td>Natural</td>
</tr>
<tr>
<td>8046-1G2</td>
<td>Yellow</td>
</tr>
<tr>
<td>8046-1G3</td>
<td>Brown</td>
</tr>
<tr>
<td>8046-1G4</td>
<td>Red</td>
</tr>
<tr>
<td>8046-1G5</td>
<td>Orange</td>
</tr>
<tr>
<td>8046-1G6</td>
<td>Black</td>
</tr>
<tr>
<td>8046-1G7</td>
<td>Green</td>
</tr>
<tr>
<td>8046-1G8</td>
<td>Blue</td>
</tr>
<tr>
<td>8046-1G9</td>
<td>Gray</td>
</tr>
<tr>
<td>8046-1G10</td>
<td>Violet</td>
</tr>
<tr>
<td>8046-1G11</td>
<td>White</td>
</tr>
</tbody>
</table>

Note: Before ordering, see Cross Reference in Section 15 for equivalent Tyco Electronics Part Number.

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Specifications subject to change.

Technical Support Center
1-800-522-6752
www.tycoelectronics.com

Products for Industrial & Commercial Applications
Dimensions are shown for reference purposes only.