

DIP SOCKETS

Quick Reference Guide

Our large selection of DIP sockets ranging from 6 to 48 contacts provides a highly reliable connection between your integrated circuit (IC) devices and PCBs. Termination options include through hole and surface mounting, four-finger and dual leaf contacts, as well as a variety of plating options.

Applications

- Industrial controls
- Intelligent buildings
- Medical devices
- Military
- Other embedded systems

Benefits

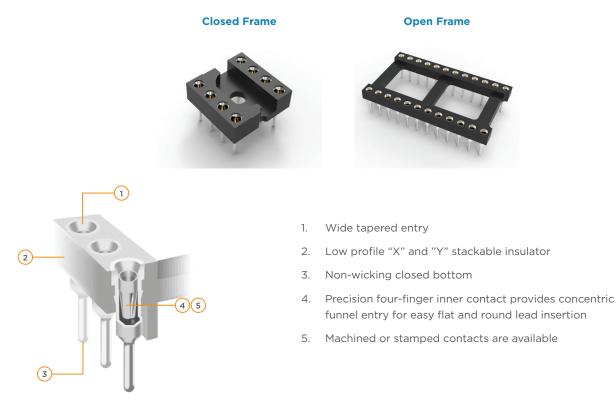
- Quick IC mating/unmating
- Easy field IC replacement
- Avoidance of IC overheating during soldering
- Flexibility of system upgrade
- Large portfolio offers product closest to your need

Features

- 6 to 48 positions
- Precision four-finger inner contacts or dual leaf contacts are optional
- Open frame and closed frame housings
- End-to-end and side-to-side stackable
- Available with a variety of plating options

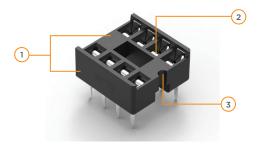
Four-Fingered Contacts

Precision machined or stamped four-finger inner contacts with open or closed frame housings facilitate highly reliable DIP sockets.



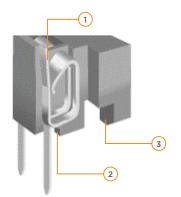
Dual Leaf Contacts

Dual leaf contacts provide a cost effective solution to the DIP socket design with superior handling characteristics.





- 2. Large target area with tapered lead-in ramps for easy DIP insertion
- 3. Polarization notch



- 1. Dual leaf contacts enlarge the contact area and ensure a low and constant contact resistance
- 2. True closed bottom design allows for no solder or flux wicking
- 3. Standoffs provide board clearance for proper cleaning after soldering

Technical Specifications

| Technical Specs | Four-Fingered Contacts | Dual Leaf Contacts |
|-------------------------|--|--|
| Insulator | Thermoplastic polyester, UL94 V-0 | 30% glass filled PBT, thermoplastic, black |
| Sleeve | Copper | |
| Contact | Beryllium copper | Phosphorous bronze |
| Sleeve Plating | Gold, tin, tin/lead | |
| Contact Plating | Gold/low gold/tin | Tin |
| Insertion Force | Machined contact- 179 Grams AVG Stamped contact- 134 Grams AVG | 300 Grams max. |
| Withdrawal Force | 63 Grams AVG | 20 Grams min. |
| Accepted IC PIN | .009" x .015" through .011" x .020", OR .016" to .021" diameter, .150/.105 long | .008"012" |
| Contact Rating | 3 Amps/pin | 1 Amp/pin |
| Contact Resistance | 10 Milliohms max. | 20 Milliohms max. |
| Dielectric Withstanding | Open frame- 1,000 Volts RMS per MIL-STD-1344, Method 3001.1 Closed frame- 1,000 Volts RMS per EIA-364-20 | 1000V AC min. |

IC components are easily pressed into the socket or removed from the socket without soldering or de-soldering.

IC in DIP Package

- Microcontrollers
- DIP switches
- LED arrays
- Electromechanical relays

IC-to-Socket-to-Board



End-Use Devices



- Intelligent security locks
- Elevators
- MRI (Magnetic Resonance Imaging) machines
- CNC (Computer Numerical Control) mill machines



Embedded Systems

- RFID door locks
- Elevator/lift control boards
- MRI scanner control boards
- CNC mill control boards

Product Matrix

DIP Socket with Four-Fingered Contact

| | RoHS Compliant | | | | | | | Not RoHS Compliant | | | | | |
|----------|----------------|------|--------------------|---------------------|--------------------|---------------------|------------|--------------------|--------------------|---------------------|--------------------|---------------------|--|
| Position | Plating | | Open Frame | | Closed Frame | | Plating | | Open Frame | | Closed Frame | | |
| ã | Contact | | Stamped Contact | Machined Contact | Stamped Contact | Machined Contact | Contact | Sleeve | Stamped Contact | Machined Contact | Stamped Contact | Machined Contact | |
| | Tin | | N/A | N/A | 1571551-1 | 1571550-1 | | | | | | | |
| | Gold Flash | Tin | N/A | N/A | 2-1571551-1 | N/A | Gold Flash | Tin/ | N/A | N/A | 1437535-8 | N/A | |
| 6 | Gold | | N/A | N/A | 4-1571551-1 | 2-1571550-1 | Gold | Lead | N/A | N/A | 1437535-7 | 6-1437529-8 | |
| | Gold | Gold | N/A | N/A | 1437535-6 | 6-1437529-5 | | | | | | | |
| | Tin | | 1571552-2 | 1571586-2 | 1571551-2 | 1571550-2 | | | | | | | |
| | Gold Flash | Tin | 2-1571552-2 | N/A | 2-1571551-2 | N/A | Gold Flash | Tin/ | 1437539-6 | N/A | 1-1437535-5 | N/A | |
| 8 | Gold | | 4-1571552-3 | 2-1571586-2 | 4-1571551-2 | 2-1571550-2 | Gold | Lead | 1437539-5 | 1437537-8 | 1-1437535-4 | 7-1437529-9 | |
| | Gold | Gold | 1437539-2 | 1437537-5 | 1-1437535-2 | 7-1437529-5 | | | | | | | |
| | Tin | | 1571552-3 | 1571586-3 | 1571551-3 | 1571550-3 | | | | | | | |
| | Gold Flash | Tin | 2-1571552-3 | N/A | 2-1571551-3 | N/A | Gold Flash | Tin/ | 1-1437539-7 | N/A | 9-1437535-4 | N/A | |
| 14 | Gold | | 4-1571552-2 | 2-1571586-3 | 4-1571551-3 | 2-1571550-3 | Gold | Lead | 1-1437539-6 | 2-1437537-4 | 9-1437535-3 | 2-1437531-0 | |
| | Gold | Gold | 1-1437539-4 | 2-1437537-1 | 9-1437535-1 | 1-1437531-7 | | | | | | | |
| | Tin | | 1571552-4 | 1571586-4 | 1571551-4 | 1571550-4 | | | | | | | |
| | Gold Flash | Tin | 2-1571552-4 | N/A | 2-1571551-4 | N/A | Gold Flash | Tin/ Lead | 2-1437539-9 | N/A | 1437536-7 | N/A | |
| 16 | Gold | | 4-1571552-4 | 2-1571586-4 | 4-1571551-4 | 2-1571550-4 | Gold | | 2-1437539-8 | 4-1437537-0 | 1437536-6 | 1437536-5 | |
| | Gold | Gold | 2-1437539-6 | 3-1437537-7 | 1437536-3 | 1437536-2 | | | | | | | |
| | Tin | | 1571552-5 | 1571586-5 | 1571551-5 | 1571550-5 | | | | | | | |
| | Gold Flash | Tin | 2-1571552-5 | N/A | 2-1571551-5 | N/A | Gold Flash | Tin/ | 4-1437539-4 | N/A | 1-1437536-6 | N/A | |
| 18 | Gold | | 4-1571552-5 | 2-1571586-5 | 4-1571551-5 | 2-1571550-5 | Gold | Lead | 4-1437539-3 | 5-1437537-7 | 1-1437536-5 | 6-1437531-9 | |
| | Gold | Gold | 4-1437539-1 | 5-1437537-6 | 1-1437536-4 | 1-1437536-3 | | | | | | | |
| | Tin | | 1571552-6 | 1571586-6 | 1571551-6 | 1571550-6 | | | | | | | |
| | Gold Flash | Tin | 2-1571552-6 | N/A | 2-1571551-6 | N/A | Gold Flash | Tin/ | 5-1437539-3 | N/A | 2-1437536-7 | N/A | |
| 20 | Gold | | 4-1571552-6 | 2-1571586-6 | 4-1571551-6 | 2-1571550-6 | Gold | Lead | 5-1437539-2 | 6-1437537-6 | 2-1437536-6 | 2-1437536-5 | |
| | Gold | Gold | 5-1437539-0 | 6-1437537-4 | 2-1437536-3 | 7-1437531-8 | | | | | | | |
| | Tin | | 1571552-7 | 1571586-7 | 1571551-7 | 1571550-7 | | | | | | | |
| | Gold Flash | Tin | 2-1571552-7 | N/A | 2-1571551-7 | N/A | Gold Flash | Tin/ | 6-1437539-3 | N/A | 3-1437536-5 | N/A | |
| 22 | Gold | | 4-1571552-7 | 2-1571586-7 | 4-1571551-7 | 2-1571550-7 | Gold | Lead | 6-1437539-2 | 7-1437537-8 | 3-1437536-4 | 1437532-2 | |
| | Gold | Gold | 6-1437539-0 | 7-1437537-7 | 3-1437536-3 | 9-1437531-9 | | | | | | | |
| 24 | Tin | | 1571552-8 | 1571586-8 | 1571551-8 | 1571550-8 | | | | | | | |
| | Gold Flash | Tin | 2-1571552-8 | N/A | 2-1571551-8 | N/A | Gold Flash | Tin/ Lead | 7-1437539-0 | N/A | 4-1437536-2 | N/A | |
| | Gold | _ | 4-1571552-8 | 2-1571586-8 | 4-1571551-8 | 2-1571550-8 | Gold | | 6-1437539-9 | 8-1437537-2 | 4-1437536-1 | 4-1437536-0 | |
| | Gold | Gold | 6-1437539-7 | 8-1437537-1 | 3-1437536-9 | 3-1437536-8 | | | | | | | |
| | Tin | _ | 1571552-9 | 1571586-9 | 1571551-9 | 1571550-9 | | | | | | | |
| | Gold Flash | | 2-1571552-9 | N/A | 2-1571551-9 | N/A | Gold Flash | Tin/ | 9-1437539-2 | N/A | 5-1437536-7 | N/A | |
| 28 | Gold | | 4-1571552-9 | 2-1571586-9 | 4-1571551-9 | 2-1571550-9 | Gold | Lead | 9-1437539-1 | 1437538-4 | 5-1437536-6 | 5-1437536-5 | |
| | Gold | Gold | 8-1437539-9 | 1437538-3 | 5-1437536-3 | 5-1437536-2 | | | | | | | |

DIP Socket with Four-Fingered Contact (continued)

| | RoHS Compliant | | | | | | Not RoHS Compliant | | | | | |
|----------|----------------|-------|--------------------|---------------------|--------------------|---------------------|--------------------|--------------|--------------------|---------------------|--------------------|---------------------|
| Position | Plating | | Open Frame | | Closed Frame | | Plating | | Open Frame | | Closed Frame | |
| Δ. | Contact | | Stamped Contact | Machined Contact | Stamped Contact | Machined Contact | Contact | Sleeve | Stamped Contact | Machined Contact | Stamped Contact | Machined Contact |
| | Tin | | 1-1571552-0 | 1-1571586-0 | 1-1571551-0 | 1-1571550-0 | | | | | | |
| 70 | Gold Flash | Tin | 3-1571552-0 | N/A | 3-1571551-0 | N/A | Gold Flash | Tin/ | 1437540-3 | N/A | 6-1437536-5 | N/A |
| 32 | Gold | | 5-1571552-0 | 3-1571586-0 | 5-1571551-0 | 3-1571550-0 | Gold | Lead | 1437540-2 | 2-1437538-2 | 6-1437536-4 | 6-1437532-1 |
| | Gold | Gold | 1437540-1 | 2-1437538-1 | 6-1437536-3 | 5-1437532-8 | | | | | | |
| | Tin | | 1-1571552-1 | 1-1571586-1 | 1-1571551-1 | 1-1571550-1 | | | | | | |
| | Gold Flash | Tin | 3-1571552-1 | N/A | 3-1571551-1 | N/A | Gold Flash | Tin/ | 1-1437540-1 | N/A | N/A | N/A |
| 36 | Gold | | 5-1571552-1 | 3-1571586-1 | 5-1571551-1 | 3-1571550-1 | Gold | Lead | 1-1437540-0 | 2-1437538-7 | 7-1437536-2 | 7-1437532-1 |
| | Gold | Gold | N/A | N/A | 7-1437536-1 | N/A | | | | | | |
| | Tin | | 1-1571552-2 | 1-1571586-2 | 1-1571551-2 | 1-1571550-2 | | | | | | |
| 40 | Gold Flash | Tin | 3-1571552-2 | N/A | 3-1571551-2 | N/A | Gold Flash | Tin/ | 1-1437540-7 | N/A | 7-1437536-6 | N/A |
| 40 | Gold | | 5-1571552-2 | 3-1571586-2 | 5-1571551-2 | 3-1571550-2 | Gold | Lead | 1-1437540-6 | 3-1437538-0 | 7-1437536-5 | 7-1437536-4 |
| | Gold | Gold | 1-1437540-4 | 2-1437538-9 | 7-1437536-3 | 7-1437532-6 | | | | | | |
| 48 | Tin | n Tin | 1-1571552-4 | 1-1571586-4 | N/A | N/A | | | | | | |
| | Gold Flash | | 3-1571552-4 | N/A | N/A | N/A | Gold Flash | Tin/ Lead | 4-1437538-2 | N/A | N/A | N/A |
| | Gold | | 5-1571552-4 | 3-1571586-4 | N/A | N/A | Gold | | 2-1437540-6 | 4-1437538-1 | N/A | N/A |
| | Gold | Gold | 2-1437540-5 | 3-1437538-9 | N/A | N/A | | | | | | |

DIP Socket with Dual Leaf Contact

| Part Number | Description | Position | Centerline (mm) | Solder Type | Contact Plating** |
|-------------|------------------------------------|----------|--------------------|--------------|----------------------|
| 1-2199298-1 | 6P, DIP SKT, 300 CL, LDR, PB FREE | 6 | 7.62 | Through Hole | Tin |
| 1-2199298-2 | 8P, DIP SKT, 300 CL, LDR, PB FREE | 8 | 7.62 | Through Hole | Tin |
| 1-2199298-3 | 14P, DIP SKT, 300 CL, LDR, PB FREE | 14 | 7.62 | Through Hole | Tin |
| 1-2199298-4 | 16P, DIP SKT, 300 CL, LDR, PB FREE | 16 | 7.62 | Through Hole | Tin |
| 1-2199298-5 | 18P, DIP SKT, 300 CL, LDR, PB FREE | 18 | 7.62 | Through Hole | Tin |
| 1-2199298-6 | 20P, DIP SKT, 300 CL, LDR, PB FREE | 20 | 7.62 | Through Hole | Tin |
| 1-2199298-8 | 24P, DIP SKT, 300 CL, LDR, PB FREE | 24 | 7.62 | Through Hole | Tin |
| 1-2199298-9 | 28P, DIP SKT, 300 CL, LDR, PB FREE | 28 | 7.62 | Through Hole | Tin |
| 1-2199299-2 | 28P, DIP SKT, 600 CL, LDR, PB FREE | 28 | 15.24 | Through Hole | Tin |
| 1-2199300-2 | 32P, DIP SKT, 600 CL, OTC, PB FREE | 32 | 15.24 | Through Hole | Tin |
| 1-2199299-5 | 40P, DIP SKT, 600 CL, LDR, PB FREE | 40 | 15.24 | Through Hole | Tin |

Once you determine the correct base number, please visit to <u>www.te.com</u> to access the customer drawing and identify the specific part number.

Frequently Asked Questions

Question 1

DIP packages can be assembled onto a PCB through either wave soldering or through socketing. When should I use a socket?

Answer 1

Benefits of using a socket include: component test, upgrade and exchange, flexibility in IC design, assembly and cost savings.

Question 2

What's the difference between stamped contact and machined contact?

Answer 2

Stamping and machining are types of connector manufacturing technologies. TE has developed and produced DIP socket contacts using stamping technology as an alternative to traditional screw machined contacts, which is an economical option.

Question 3

What does "300 CL/600 CL, LDR, OTC" mean in the description of DIP sockets with dual leaf contacts?

Answer 3

300 CL means the centerline of the product is 0.3in (7.62mm). So, 600 CL means the centerline is 0.6in (15.24mm). LDR means that the frame is ladder style and OTC means the frame is over-the-component style.

TE Technical Support Center

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|-------------------|--------------------|
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| Germany: | 49.0.6251.133.1999 |
| UK: | 44.0.800.267666 |
| France: | 33.0.1.3420.8686 |
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1-1773906-9 01/17



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