

DIP (DUAL IN-LINE PACKAGE) SOCKET

Quick Reference Guide

TE Connectivity's (TE) DIP socket provides a separable electrical and mechanical connection between an electronic component and a printed circuit board (PCB). DIP sockets enable easy replacement of components received by such sockets. Use of DIP sockets also can minimize the risk of damage to components received by the sockets that might occur if the component were directly soldered to the PCB. 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

FEATURES

- 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

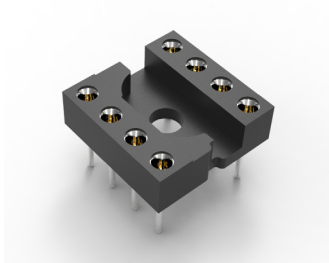
BENEFITS

- **Easy Assembly**
 - Support quick mating and un-mating
 - Enables easy replacement of the integrated circuit (IC)
- **Optimized Design**
 - Minimize the risk of IC overheating during soldering
 - Provide improved vibration resistance with multi-contact beam design
- **Better Durability**
 - Durability up to 500 cycles with gold or tin plating
 - Support flame resistance with UL 94V-0 rating with PPS (polyphenylene sulfide) housing
- **Broad Portfolios**
 - Offer various specifications to address customer demands

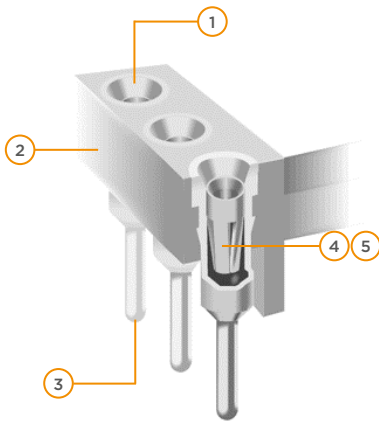
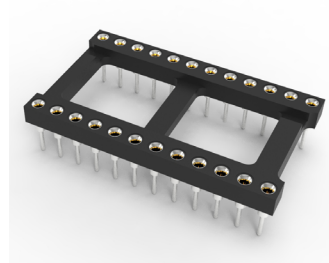
FOUR-FINGERED CONTACTS

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

Closed Frame



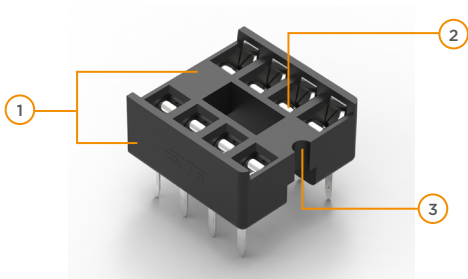
Open Frame



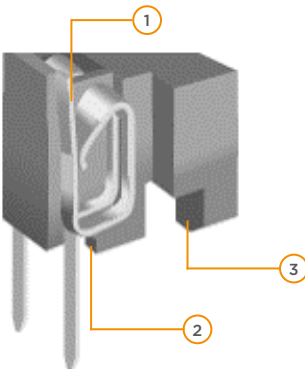
1. Wide tapered entry
2. Low profile "X" and "Y" stackable insulator
3. Non-wicking closed bottom
4. Precision four-finger inner contact provides concentric funnel entry for easy flat and round lead insertion
5. Machined or stamped contacts are available

DUAL LEAF CONTACTS

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



1. Designed for automatic machine insertion — IC-to-socket or socket-to-board
2. Large target area with tapered lead-in ramps for easy DIP insertion
3. Polarization notch



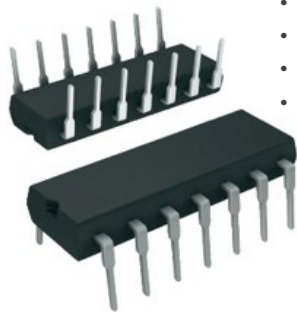
1. Dual leaf contacts enlarge the contact area and ensure a low and constant contact resistance
1. True closed bottom design allows for no solder or flux wicking
1. Standoffs provide board clearance for proper cleaning after soldering

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.

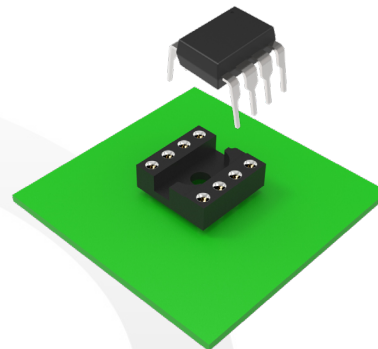
IC components are easily pressed into the socket or removed from the socket without soldering or de-soldering.

IC in DIP Package



- Microcontrollers
- DIP switches
- LED arrays
- Electromechanical relays

IC-to-Socket-to-Board

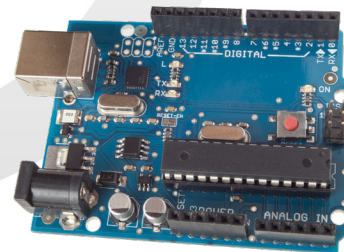


End-Use Devices



- 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

PART NUMBERS

DIP SOCKET WITH FOUR-FINGERED CONTACT

Part Number	Description	Length (mm)	Width (mm)	Height (mm)	Pitch (mm)	No. of Row	No. of Pin	Contact Plating	Packaging
2445893-1	DIP IC SOCKET 8P - SMD	10.16	10.16	5.6	2.54	2	8	Tin	Reel
2445893-2	DIP IC SOCKET 16P - SMD	20.32	10.16	5.6	2.54	2	16	Tin	Reel
2445893-3	DIP IC SOCKET 20P - SMD	25.4	10.16	5.6	2.54	2	20	Au flash	Reel
2485264-1	DIP IC SOCKET 8P	10.16	10.16	7.43	2.54	2	8	Au flash	Tube
2485264-2	DIP IC SOCKET 14P	10.16	10.16	7.43	2.54	2	8	Tin	Tube
2485264-3	DIP IC SOCKET 16P	20.32	10.16	7.43	2.54	2	16	Tin	Tube
2485264-4	DIP IC SOCKET 18P	22.86	10.16	7.43	2.54	2	18	Au flash	Tube
2485264-5	DIP IC SOCKET 18P	22.86	10.16	7.43	2.54	2	18	Tin	Tube
2485264-6	DIP IC SOCKET 20P	25.4	10.16	7.43	2.54	2	20	Tin	Tube
2485264-7	DIP IC SOCKET 28P	35.56	10.16	7.43	2.54	2	28	Au flash	Tube
2485265-1	DIP IC SOCKET 40P	50.8	17.78	7.43	2.54	2	40	Au flash	Tube
2485267-1	DIP IC SOCKET 6P - SMD	7.62	10.16	4.2	2.54	2	6	Au flash	Reel
2485267-2	DIP IC SOCKET 8P - SMD	10.16	10.16	4.2	2.54	2	8	Au flash	Reel
2485267-3	DIP IC SOCKET 10P - SMD	12.7	10.16	4.2	2.54	2	10	Au flash	Reel
2485267-4	DIP IC SOCKET 12P - SMD	15.24	10.16	4.2	2.54	2	12	Au flash	Reel

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 www.te.com to access the customer drawing and identify the specific part number.

FREQUENTLY ASKED QUESTIONS

Question 1

What is the difference between SIP and DIP sockets?

Answer 1

DIP sockets consist of two parallel rows of receptacles for IC pins, allowing for easier insertion and removal. This design enhances flexibility in IC replacement and circuit testing. SIP sockets feature a single row, suitable for applications with limited space.

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.

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