



preci-dip

DIL SOCKETS

SERIES
299

299-PP-XXX-XX-00X101
2.54 mm, Right angle, Solder tail

Right angle DIL Sockets for components to be mounted perpendicularly to the PCB such as displays



TECHNICAL SPECS.:

| | |
|--|---|
| Insulator | Black glass filled polyester PCT-GF30-FR |
| Flammability | UL 94V-O |
| Sleeve | Brass CuZn36Pb3 (C36000) |
| Contact | Clip (4 finger): Beryllium copper (C17200) |
| Accepted pin \varnothing | 0.40 to 0.56 mm |
| Insertion force | 2 N typ. |
| Withdrawal force | 1 N typ. (polished steel gauge \varnothing 0.43 mm) |
| Mechanical life | Min. 100 cycles |
| Rated current | 1 A |
| Contact resistance | Max. 10 m |
| Dielectric strength | Min. 1000 V RMS |

ORDERING INFORMATION:

| | | |
|-----------------|--------|-------------------|
| PP Plating code | Sleeve | Clip |
| 87 | Tin | Gold flash |
| 83 | Tin | Gold 0.75 μ m |

For complete part number replace XX with the code given below left

ADVANCED INFORMATION:

| | | | | | | | |
|----------------------|--------------|----------|----------|----------|----------|----------|------------|
| Order Codes | Poles | A | B | C | D | E | See |
| 299-PP-210-10-001101 | 10 | 12.6 | 5.08 | 7.6 | | | Fig. 1 |

| | | | | | |
|----------------------|----|------|-------|------|--------|
| 299-PP-608-10-002101 | 8 | 10.1 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-610-10-002101 | 10 | 12.6 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-612-10-002101 | 12 | 15.2 | 15.24 | 10.1 | Fig. 3 |
| 299-PP-614-10-002101 | 14 | 17.7 | 15.24 | 10.1 | Fig. 3 |
| 299-PP-616-10-002101 | 16 | 20.1 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-618-10-002101 | 18 | 22.8 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-620-10-002101 | 20 | 25.3 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-622-10-002101 | 22 | 27.8 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-624-10-002101 | 24 | 30.4 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-626-10-002101 | 26 | 33.0 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-628-10-002101 | 28 | 35.5 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-630-10-002101 | 30 | 38.0 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-632-10-002101 | 32 | 40.6 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-636-10-002101 | 36 | 45.7 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-640-10-002101 | 40 | 50.6 | 15.24 | 17.7 | Fig. 3 |
| 299-PP-648-10-002101 | 48 | 61.0 | 15.24 | 17.7 | Fig. 3 |

TECHNICAL ASSISTANCE

GENERAL SPECIFICATIONS:

The values listed below are general specs applying for PRECI-DIP DIL sockets. Please see individual catalog page for additional and product specific technical data.

| | |
|-----------------------------|------------------|
| Operating temperature range | -55 ... +125 °C |
| Climatic category (IEC) | 55/125/21 |
| Operating humidity range | annual mean 75 % |
| Max working voltage | 100 VRMS/150 VDC |

PRECI-DIP sockets are recognized by Underwriters Laboratories Inc. and listed under "Connectors for Use in Data, Signal, Control and Power Applications", File Nr. E174442.

MECHANICAL CHARACTERISTICS:

| | |
|-----------------------------------|---|
| Clip retention | Min. 40 N (no displacement under axial force applied) |
| Contact (sleeve / clip) retention | Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2 |

ELECTRICAL CHARACTERISTICS:

| | |
|--|--|
| Insulation resistance between any two adjacent contacts | Min. 10'000 M at 500 V AC |
| Capacitance between any two adjacent contacts | Max. 1 pF |
| Air and creepage distances between any two adjacent contacts | Min. 0.6 mm (Min. 0.2 mm FOR SHRINK-DIP SOCKETS) |

ENVIRONMENTAL CHARACTERISTICS:

The sockets withstand the following environmental tests without mechanical and electrical defects:

- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min, 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests no contact interruption >50 ns does appear.

- Solderability J-STD-002A, Test A, 245°C, 5 s solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-0020C, 260°C, 20 s
- Moisture sensitivity J-STD-020C level 1
- Resistance to corrosion :
 - 1) Salt spray test IEC 60068-2-11.Ka: 48 h
 - 2) Sulfur dioxide (SO₂) test IEC 60068-2-42 Kc: 96 h at 25 ppm SO₂, 25 °C, 75 %rH
 - 3) Hydrogen sulfide (H₂S) test IEC 60068-2-43 Kd: 96 h at 12 ppm H₂S, 25 °C, 75 %rH

SOLDERLESS COMPLIANT PRESS-FIT CHARACTERISTICS:

PRESS-FIT CHARACTERISTICS MEASURED ACC. TO IEC 60352-5

- Press-in force: 90 N max. (at min. hole dia.) / 65 N typ.
- Push-out force: 30 N min. (at max. hole dia.) / 50 N typ.
- Push-out 3rd cycle: 20 N min. (at max. hole dia.)

PCB HOLE DIMENSIONS

- 2.54 mm grid: Finished hole Ø: 1 + 0.09/-0.06 mm | Drilled hole Ø: 1.15 ± 0.02 mm

PCB HOLE PLATING

- PCB surface finish: Hole plating
- Tin: 5-15 μm tin over min. 25 μm copper
- Copper: min. 25 μm copper
- Gold over nickel: 0.05-0.2 μm gold over 2.5-5 μm nickel over min. 25 μm copper