DIL SOCKETS

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

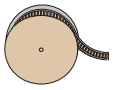
CLIP RETENTION	Min. 40 N (no displacement under axial force applied)
CONTACT (SLEEVE / CLIP) RETENTION	Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2

ELECTRICAL CHARACTERISTICS

INSULATION RESISTANCE AT 500 V AC BETWEEN ANY TWO ADJACENT CONTACTS	Min. 10'000 MΩ
CAPACITANCE BETWEEN ANY TWO ADJACENT CONTACTS	Max. 1 pF
AIR AND CREEPAGE DISTANCES BETWEEN ANY TWO ADJACENT CONTACTS (Min. 0.2 mm FOR SHRINK-DIP SOCKETS)	Min. 0.6 mm

PACKAGING

- Standard packaging for DIL sockets is tube packaging.
- SMD mount sockets available on request with Tape & Reel packaging acc. to EIA Standard 481. These products are marked with the symbol:



T & R Packaging

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, 16 h
- 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-020C, 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 (SO_2) test IEC 60068-2-42 Kc: 96 h at 25 ppm SO_2, 25 °C, 75 %rH
  3) Hydrogen sulfide (H_2S) test IEC 60068-2-43 Kd: 96 h at 12 ppm H_2S, 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 ± 0.025 mm

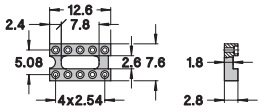
PCB HOLE PLATING

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

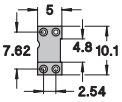
DUAL-IN-LINE SOCKETS

INSULATOR BODIES / STANDARD, OPEN FRAME

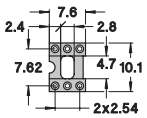
210 Fig. 1



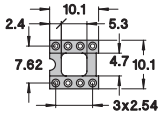
304 Fig. 2



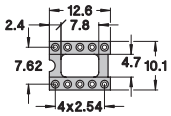
306 Fig. 3



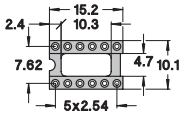
308 Fig. 4



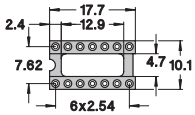
310 Fig. 5



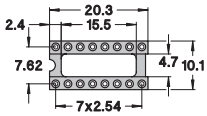
312 Fig. 6



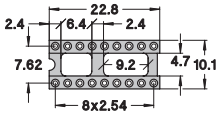
314 Fig. 7



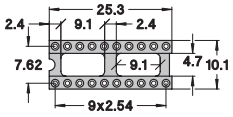
316 Fig. 8



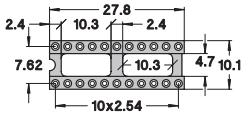
318 Fig. 9



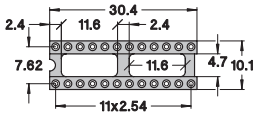
320 Fig. 10



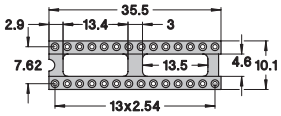
322 Fig. 11



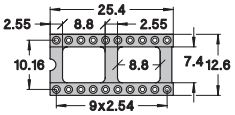
324 Fig. 12



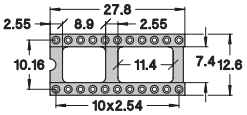
328 Fig. 13



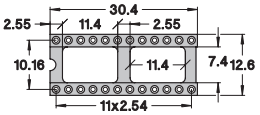
420 Fig. 14



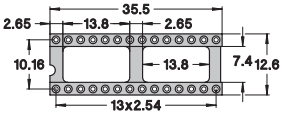
422 Fig. 15



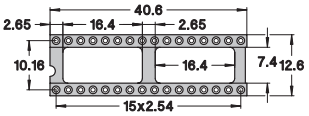
424 Fig. 16



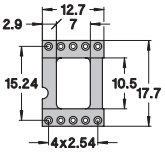
428 Fig. 17



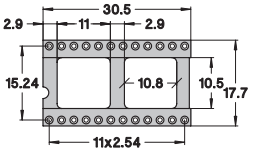
432 Fig. 18



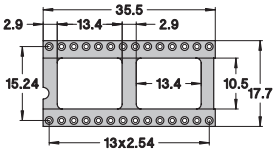
610 Fig. 19



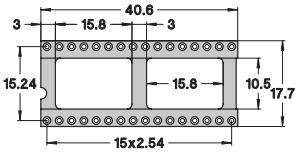
624 Fig. 20



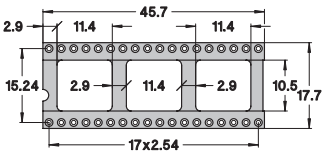
628 Fig. 21



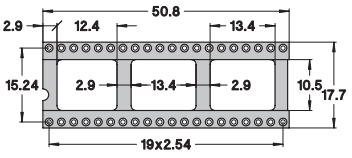
632 Fig. 22



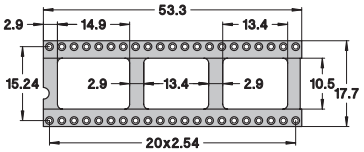
636 Fig. 23



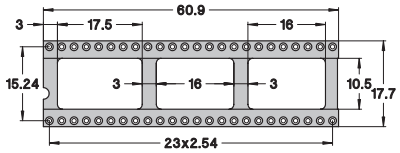
640 Fig. 24



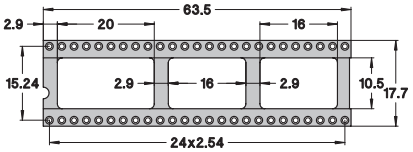
642 Fig. 25



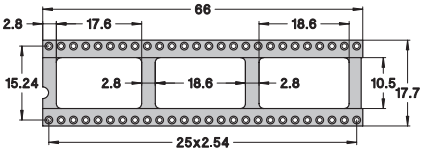
648 Fig. 26



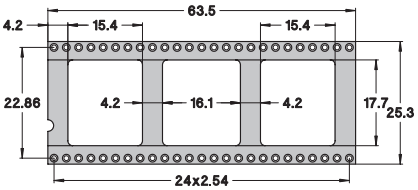
650 Fig. 27



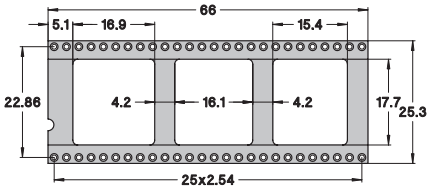
652 Fig. 28



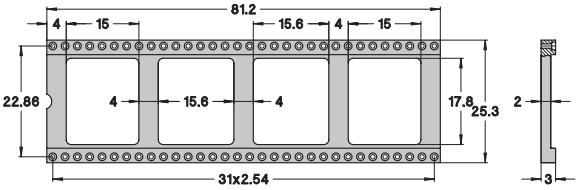
950 Fig. 29



952 Fig. 30

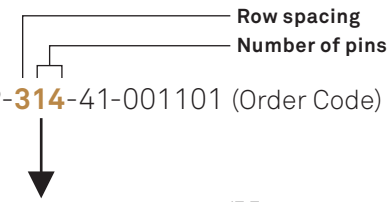


964 Fig. 31

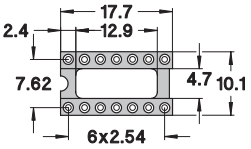


ORDERING INFORMATION

Example:



314
Fig. 7



preci-dip

DUAL-IN-LINE SOCKETS

OPEN FRAME / SOLDER TAIL

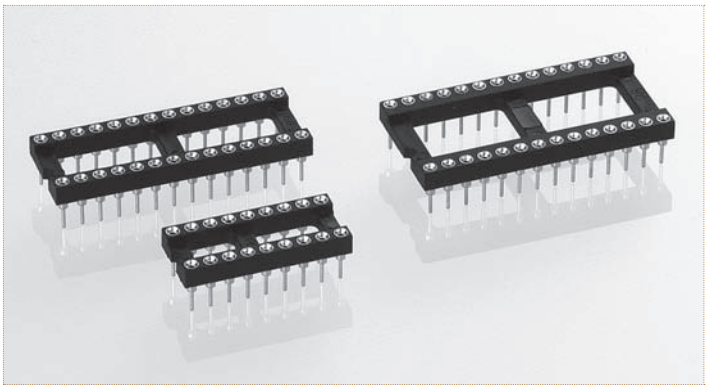
Open frame standard low profile DIL Sockets.

TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

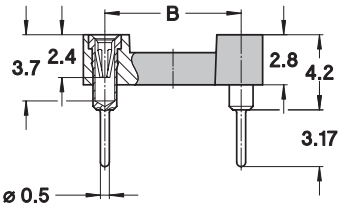
INSULATOR	Black glass filled polyester PCT-GF30-FR
FLAMMABILITY	UL 94V-0
SLEEVE	Brass CuZn36Pb3 (C36000)
CONTACT CLIP (4 FINGER)	Beryllium copper (C17200)
ACCEPTED PIN Ø	0.40 to 0.56 mm
FORCES	2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm)
MECHANICAL LIFE	Min. 500 cycles
MECHANICAL LIFE	Min. 100 cycles
RATED CURRENT	1 A
CONTACT RESISTANCE	Max. 10 mΩ
DIELECTRIC STRENGTH	Min. 1'000 VRMS

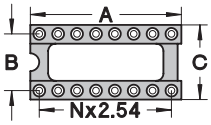
ORDERING INFORMATION ROHS COMPLIANT PARTS

PP PLATING CODE	SLEEVE	CLIP
87	Tin	Flash gold
83	Tin	0.75 µm gold



Other plating on request (see page 178 for plating specs).





NO. OF POLES	A	B	C	SEE PAGE 128	ORDER CODES
10	12.6	5.08	7.6	Fig. 1	110-**PP**-210-41-001101
4	5.0	7.62	10.1	Fig. 2	110-**PP**-304-41-001101
6	7.6	7.62	10.1	Fig. 3	110-**PP**-306-41-001101
8	10.1	7.62	10.1	Fig. 4	110-**PP**-308-41-001101
10	12.6	7.62	10.1	Fig. 5	110-**PP**-310-41-001101
12	15.2	7.62	10.1	Fig. 6	110-**PP**-312-41-001101
14	17.7	7.62	10.1	Fig. 7	110-**PP**-314-41-001101
16	20.3	7.62	10.1	Fig. 8	110-**PP**-316-41-001101
18*	22.8	7.62	10.1	Fig. 9	110-**PP**-318-41-001101
20*	25.3	7.62	10.1	Fig. 10	110-**PP**-320-41-001101
22*	27.8	7.62	10.1	Fig. 11	110-**PP**-322-41-001101
24*	30.4	7.62	10.1	Fig. 12	110-**PP**-324-41-001101
28	35.5	7.62	10.1	Fig. 13	110-**PP**-328-41-001101
20	25.4	10.16	12.6	Fig. 14	110-**PP**-420-41-001101
22	27.8	10.16	12.6	Fig. 15	110-**PP**-422-41-001101
24	30.4	10.16	12.6	Fig. 16	110-**PP**-424-41-001101
28	35.5	10.16	12.6	Fig. 17	110-**PP**-428-41-001101
32	40.6	10.16	12.6	Fig. 18	110-**PP**-432-41-001101
10	12.7	15.24	17.7	Fig. 19	110-**PP**-610-41-001101
24*	30.5	15.24	17.7	Fig. 20	110-**PP**-624-41-001101
28*	35.5	15.24	17.7	Fig. 21	110-**PP**-628-41-001101
32*	40.6	15.24	17.7	Fig. 22	110-**PP**-632-41-001101
36	45.7	15.24	17.7	Fig. 23	110-**PP**-636-41-001101
40*	50.8	15.24	17.7	Fig. 24	110-**PP**-640-41-001101
42	53.3	15.24	17.7	Fig. 25	110-**PP**-642-41-001101
48*	60.9	15.24	17.7	Fig. 26	110-**PP**-648-41-001101
50	63.5	15.24	17.7	Fig. 27	110-**PP**-650-41-001101
52	66.0	15.24	17.7	Fig. 28	110-**PP**-652-41-001101
50	63.5	22.86	25.3	Fig. 29	110-**PP**-950-41-001101
52	66.0	22.86	25.3	Fig. 30	110-**PP**-952-41-001101
64	81.2	22.86	25.3	Fig. 31	110-**PP**-964-41-001101

OPTIONS

1 **Insulators without center bar** *
Open frame insulators 318, 320, 322, 324, 624, 628, 632, 640 and 648 available on special request without center bars; add suffix 151 to the part number. Example 110-83-628-41-001101 becomes 110-83-628-41-001**151**

2 **Sockets with increased solder tail length of 4.2 mm** allowing application on multilayer PCBs up to 3.4 mm thickness replace **110**-..-...-..-..... by **111**-..-...-..-.....

3 **Sockets with soft brass pin series** 110-..-...-..-**005101**, please consult

4 **For DIL Sockets with closed frame insulators** replace **110**-... by **210**-... Please consult for available pin numbers