



preci-dip

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CONTACT TECHNOLOGY

GENERAL SPECIFICATIONS

GENERAL TECHNICAL SPECIFICATIONS

The contacts are manufactured by high speed turning process with, if necessary, additional secondary machining operation for example for flats, slots or solder cups. The preferred diameter range lies between 1 and 6 mm and contact length up to 40 mm are standard.

MATERIALS

CONTACT BODIES

- Brass CuZn36Pb3, C36000
- Brass CuZn35Pb2, C34500 for contacts with crimp terminations
- Bronze CuSn4Pb4Zn4, C54400 for contacts with compliant press-fit terminations

CLIPS

- Beryllium copper alloy C17200

SPRINGS

- Stainless steel X12CrNi177 mat. Nr 1.4310, DIN 17224
- Music wire mat. Nr 1.1211, DIN 17223

HOODS

- Stainless steel AISI 305

All these materials are compliant with RoHS requirements. Lead content of copper alloys is less than 4% in accordance with Exception 6 of the RoHS directive 2002/95/CE.

PLATING

Contact plating is made up of basis underplating acting as diffusion barrier and of finishing layer.

UNDERPLATING

- Nickel (Ni) electro-deposited, acc. to SAE-AMS-QQ-N-290
- Electroless nickel phosphorus alloy for max. corrosion and wear resistance and for lowest magnetic permeability (plating suffix N)

FINISH

- Gold (Au) acc. to ASTM B488, type II C, plating codes 1 (0.25 µm), 3 (0.75 µm), 4 (1.27 µm) and 7 (gold flash)
- Tin (pure tin Sn), plating code 8, standard tin plating with excellent solderability, RoHS compliant
- Tin-Lead (SnPb90/10) acc. to ASTM B545, plating code 9. This plating is **not RoHS compliant**.
- Silver (Ag) acc. to ASTM B700, plating code 6

ELECTRICAL AND MECHANICAL CHARACTERISTICS

See individual data pages

ENVIRONMENTAL CHARACTERISTICS

The contacts withstands 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
- 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