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| | | | | | |
|--|---|--|---|---|----------|
| APPLICABLE STANDARD | | IEC 61076-3-124 | | | |
| RATING | Operating Temperature Range | -40°C to +85°C(95%RH max) (note1,2) | Storage Temperature Range | -30°C to +60°C(95%RH max) (note1) | |
| | Voltage | 50 V AC / 60 V DC | Current | 1.5 A/pin (all pin) 3 A/pin (pin No.1,2,6,7) | |
| SPECIFICATIONS | | | | | |
| ITEM | TEST METHOD | | REQUIREMENTS | | QT AT |
| CONSTRUCTION | | | | | |
| General Examination | Examined visually and with a measuring instrument. | | According to drawing. | | X X |
| Marking | Confirmed visually. | | According to drawing. | | X X |
| ELECTRIC CHARACTERISTICS | | | | | |
| Contact Resistance | Measured at 100 mA max (DC or 1000 Hz). | | Contact : 30 mΩ max. (note3) Shield : 100 mΩ max. (note3) | X | — |
| Insulation Resistance | Measured at 500 V DC. | | 500 MΩ min. | X | — |
| Voltage Proof | 500 V DC applied for 1 min. Current leakage 2mA max. | | No flashover or breakdown. | X | — |
| Insertion Loss | Measured in the range of 1 to 500 MHz. | | 0.02 √(f) dB max. (Whenever the formula results in a value less than 0.1 dB, the requirement shall revert to 0.1 dB.) | X | — |
| Return Loss | Measured in the range of 1 to 500 MHz. | | 68 - 20log(f) dB min. (Whenever the formula results in a value greater than 30 dB, the requirement shall revert to 30 dB.) | X | — |
| Near end Crosstalk | Measured in the range of 1 to 500 MHz. | | 94 - 20log(f) dB min. (1MHz to 250MHz) 46.04 - 30log(f/250) dB min. (250MHz to 500MHz) (Whenever the formula results in a value greater than 75 dB, the requirement shall revert to 75 dB.) | X | — |
| Far end crosstalk | Measured in the range of 1 to 500 MHz. | | 83.1 - 20log(f) dB min. (Whenever the formula results in a value greater than 75 dB, the requirement shall revert to 75 dB.) | X | — |
| Transverse Conversion Loss | Measured in the range of 1 to 500 MHz. | | 68 - 20log(f) dB min. (Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.) | X | — |
| Transverse Conversion Transfer Loss | Measured in the range of 1 to 500 MHz. | | 68 - 20log(f) dB min. (Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.) | X | — |
| MECHANICAL CHARACTERISTICS | | | | | |
| Insertion and Withdrawal Forces | A maximum rate of 50 mm/min. Measured by applicable connector. | | Insertion force 25 N max. Withdrawal force 25 N max. | X | — |
| Mechanical Operation | 5000 times insertions and extractions. Mating speed : 10 mm/s max. Rest : 5s, min.(unmated) | | 1) Resistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) 2) No damage, cracks or looseness of parts. | X | — |
| Note | | | | | |
| <p>1. Non-condensing. 2. The operation temperature includes the temperature rise by current carrying</p> <p>3. The cable conductor resistance is not considered.</p> <p>4. Electrical characteristics are applicable to the contacts and shield except for contacts No. 3 and 8.</p> | | | | | |
| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
| | 18 | DIS-E-00003730 | MT.YASUDA | KI.KAGOTANI | 20210317 |
| REMARK | | | APPROVED | RI.TAKAYASU | 20170331 |
| | | | CHECKED | KI.NAGANUMA | 20170331 |
| | | | DESIGNED | SG.CHAMURA | 20170331 |
| Unless otherwise specified, refer to IEC 60512. | | | DRAWN | SG.CHAMURA | 20170331 |
| Note | QT:Qualification Test AT:Assurance Test X:Applicable Test | | DRAWING NO. | ELC-129488-01-00 | |
| HRS | SPECIFICATION SHEET | | PART NO. | IX61G-B-10P(01) | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO. | CL0251-0026-0-01 | 1/4 |

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| SPECIFICATIONS | | | | | |
|--|--|--|-------------|--|------------------|
| ITEM | TEST METHOD | REQUIREMENTS | QT | AT | |
| ⚠ | Vibration ,sinusoidal | Frequency 10 to 500 Hz 0.35 mm, 50 m/s ² 2hrs in each of 3 mutually perpendicular axis. | ⚠ | 1) No electrical discontinuity of 1μs. (note4) 2) No damage, cracks or looseness of parts. | X — |
| | Fretting Corrosion | 490 m/s ² , 30 times/min at 1000 times. | ⚠ | 1) No electrical discontinuity of 1μs. (note4) 2) No damage, cracks or looseness of parts. | X — |
| ⚠ | Mechanical Shock | Subject mated specimens to 300 m/s ² half-sine shock pulses of 11 milliseconds duration, 3 shocks in both directions of 3 mutually perpendicular directions (totally 18 shocks) | ⚠ | 1) No electrical discontinuity of 1μs. (note4) 2) Resistance: Contact : 80 mΩ max. (note4) Shield : 100 mΩ max. (note4) 3) No damage, cracks or looseness of parts. | X — |
| ⚠ | Effectiveness of the connector coupling device | Applying 80 N force for the mating axis direction in state in fitted with applicable connector. | | No unlocking, damage, cracks or looseness of parts. | X — |
| ⚠ | Locking device mechanical operations | 10000 cycles 20 cycles/min max | | 1) Insertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. 2) No damage, cracks or looseness of parts. | X — |
| | Wrenching Strength | Applying 25times of 30 N 1s for 2 axis direction on tip of plug case in state in fitted with applicable connector. | | No damage, cracks or looseness of parts. | X — |
| ENVIRONMENTAL CHARACTERISTICS | | | | | |
| | Rapid Change of Temperature | Subject mated specimens to 10 cycles between -55°C and 85°C with 30 minutes dwell at temp. extremes and 2 to 3 minutes transition between temperatures. | ⚠ | 1) Voltage proof : 500 V DC applied for 1 min. Current leakage 2mA max. No flashover or breakdown. 2) Resistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) 3) Insulation resistance: 500 MΩ min. (at dry) 4) No damage, cracks or looseness of parts. | X — |
| | Humidity / Temperature Cycling | Low temperature 25 °C; High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) | ⚠ | 1) Voltage proof : 500 V DC applied for 1 min. Current leakage 2mA max. No flashover or breakdown. 2) Resistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) 3) Insulation resistance: 500 MΩ min. (at dry) 4) Insertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. 5) No damage, cracks or looseness of parts. | X — |
| | Damp Heat, Steady State | Subject mated specimens to a relative humidity of 93 % at a temperature of 40°C during 21 days. | ⚠ | 1) Voltage proof : 500 V DC applied for 1 min. Current leakage 2mA max. No flashover or breakdown. 2) Resistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) 3) Insulation resistance: 500 MΩ min. (at dry) 4) Insertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. 5) No damage, cracks or looseness of parts. | X — |
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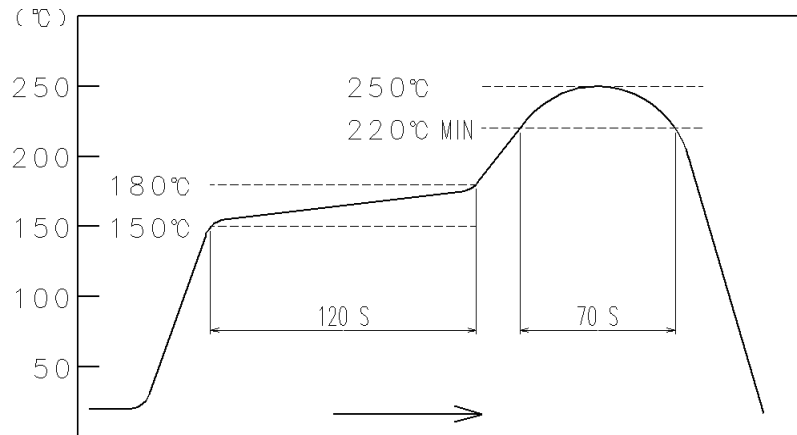
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| SPECIFICATIONS | | | | | |
|--|--|---|--|------------------|-------|
| ITEM | TEST METHOD | | REQUIREMENTS | QT | AT |
| ENVIRONMENTAL CHARACTERISTICS | | | | | |
| Dry Heat | Subject to +85 ± 2 °C, 21 days. (mating applicable connector) | ⚠ | 1) Voltage proof : 500 V DC applied for 1 min. Current leakage 2mA max. No flashover or breakdown. 2) Resistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) 3) Insulation resistance: 500 MΩ min. (at dry) 4) Insertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. 5) No damage, cracks or looseness of parts. | X | — |
| Cold | Subject to -55 ± 3 °C, 10 days. (mating applicable connector) | ⚠ | 1) Voltage proof : 500 V DC applied for 1 min. Current leakage 2mA max. No flashover or breakdown. 2) Resistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) 3) Insulation resistance: 500 MΩ min. (at dry) 4) Insertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. 5) No damage, cracks or looseness of parts. | X | — |
| Corrosion Salt Mist | Subject to 5 % salt water, 35 ± 2 °C, 48h. (leave under unmated condition.) | | No heavy corrosion of contacts. | X | — |
| Mixed Flowing Gas Corrosion | Test temperature : +25±1 °C, Relative humidity : 75±3 % H ₂ S : 10±5 ppb, NO ₂ : 200±50 ppb Cl ₂ : 10±5 ppb, SO ₂ : 200±20 ppb Leave the samples for 4 days with mated. The same is performed with unmated samples. (IEC 60512, method 4) | ⚠ | 1) Resistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) 2) No damage, cracks or looseness of parts. | X | — |
| Solderability | Soldering point immersed in solder bath of +245 ± 3 °C, 3 sec. (using type r flux) | | Solder shall cover minimum of 95 % of the surface being immersed. | X | — |
| Resistance To Soldering Heat | A profile is shown in Fig-1, under 2 cycles. | | No deformation or significant looseness of contacts. | X | — |
| | | | | | |
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SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|------|-------------|--------------|----|----|
|------|-------------|--------------|----|----|



**Fig - 1 Resistance to soldering heat
(temperature at top surface of connector)**

Recommended profile refers to Fig - 2.
(temperature at SMT leads)

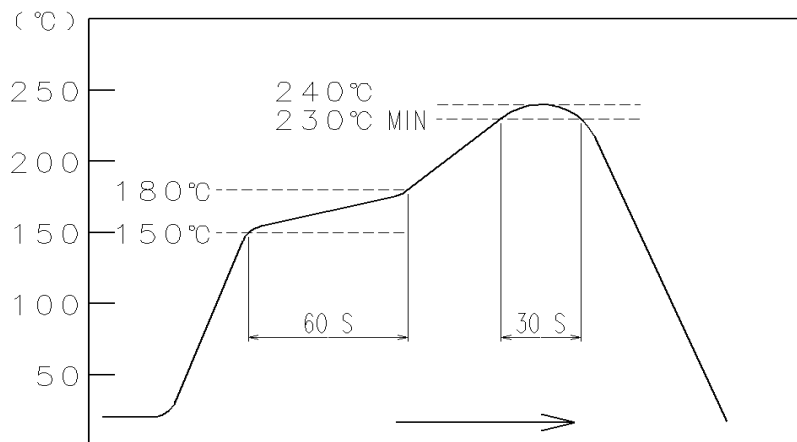


Fig - 2 Recommended reflow profile temperature

| | | | |
|--|---------------------------|------------------------------|--------------------------|
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