| APPLICABLE STANDARD | | | | |
|---|---|---|---|---|
| RATING | Operating temperature range | -55 °C to 125 °C ***(note 1)*** | Storage temperature range | −10℃ TO 50℃(Packed condition) |
| | Voltage | 50V AC / DC | Operating or storage humidity range | Relative humidity 90％MAX(Not dewed) |
| | Current | 0.50 A | Applicable cable (FPC/FFC) | t=0.30±0.05mm, Gold plating |

# SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|---|---|---|---|---|
| **CONSTRUCTION** | | | | |
| General examination | Visually and by measuring instrument. | According to drawing. | × | × |
| Marking | Confirmed visually. | | × | × |
| **ELECTRICAL CHARACTERISTICS** | | | | |
| Voltage proof | 150 V AC for 1 min. | No flashover or breakdown. | × | — |
| Insulation resistance | 100 V DC. | 500 MΩ MIN. | × | — |
| Contact resistance | AC 20 mV MAX , 1 mA . | Initial:50 mΩ MAX、After each test:70 mΩ MAX (Including FPC/FFC bulk resistance L=8mm) | × | — |
| **MECHANICAL CHARACTERISTICS** | | | | |
| Vibration | Frequency 10 to 55 Hz, half amplitude 0.75 mm, for 10 cycles in 3 axial directions. | ① No electrical discontinuity of 1 μs.<br>② Contact resistance: 70 mΩ MAX<br>③ No damage, crack and looseness of parts. | × | — |
| Shock | 981 m/s$^2$ , duration of pulse 6 ms at 3 times in 3 both axial directions. | | × | — |
| Mechanical operation | 10 times insertions and extractions. | ① Contact resistance: 70 mΩ MAX<br>② No damage, crack and looseness of parts. | × | — |
| FPC/FFC retention force | Measured by applicable FPC/FFC. (Thickness of FPC/FFC shall be t=0.30mm at initial condition.) | Direction of extraction 15.5 N MIN (***note2***) | × | — |
| **ENVIRONMENTAL CHARACTERISTICS** | | | | |
| Rapid change of temperature | Temperature-55→+15TO+35→+125→+15TO+35°C<br>Time 30→ 2 to 3 → 30 → 2 to 3 min<br>Under 1000 cycles. | ① Contact resistance: 70 mΩ MAX<br>② Insulation resistance: 50 MΩ MIN.<br>③ No damage, crack and looseness of parts. | × | — |
| Damp heat (Steady state) | Exposed at 60±2 °C,<br>Relative humidity 90 to 95 %, 1000 h. | | × | — |
| Damp heat,cyclic | Exposed at -10 to +65 °c,<br>Relative humidity 90 to 96 %,<br>10 cycles, TOTAL 240 h. | ① Contact resistance: 70 mΩ MAX<br>② Insulation resistance: 1 MΩ MIN. (At high humidity)<br>③ Insulation resistance: 50 MΩ MIN. (At dry)<br>④ No damage, crack and looseness of parts | × | — |
| Dry heat | Exposed at 125±2℃, 1000 h. | ① Contact resistance: 70 mΩ MAX<br>② No damage, crack and looseness of parts | × | — |
| Cold | Exposed at -55±3℃, 96 h. | | × | — |
| Sulphur dioxide [JIS C 60068-2-42] | Exposed at 40±2 °C,<br>Relative humidity 80±5%<br>25±5 ppm for 96 h. | ① Contact resistance: 70 mΩ MAX | × | — |
| Solderability | Soldered at solder temperature,<br>245±0.3℃ for immersion duration,3±0.3 sec. | A new uniform coating of solder shall cover a minimum of 95 % of the surface being immersed. | × | — |
| Resistance to soldering heat | 1) Reflow soldering :<br>Peak TMP. 250 °C MAX .<br>Reflow TMP. over 220 °C 60 to 90 sec.<br>Number of reflow : 2 times<br>2) Soldering irons :<br>TMP. 400±10 °C for 5±1 sec . | No deformation of case of excessive looseness of the terminals. (***note 3***) | × | — |

| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|---|---|---|---|---|---|
| ⚠1 | 0 | | | | |

REMARK

Unless otherwise specified, refer to IEC 60512.

| | | |
|---|---|---|
| APPROVED | HS. HIRAHARA | 20230804 |
| CHECKED | HS. HIRAHARA | 20230804 |
| DESIGNED | YT. SASAKI | 20230804 |
| DRAWN | YT. SASAKI | 20230804 |

Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO. ELC-379025-00-00

HRS

SPECIFICATION SHEET

HIROSE ELECTRIC CO., LTD.

PART NO. FH69-10S-0.5SH

CODE NO. CL580-5003-0-00 ⚠1



FORM HD0011-2-1

**(*note 1*)**

The heat resistant temperature when using FFC is 105℃.

When the heat resistant temperature of FPC/FFC is less than 125℃/105℃, the heat resistant temperature of FPC/FFC is applied.

**(*note 2*)**

Stabilize the FPC/FFC to PCB or something fixed, if pull-up or pull-down force is exepected to be applied to the FPC/FFC.

There's a case witch FPC/FFC retention force doesn't fulfill the value, because FPC/FFC specification affects the result of FPC/FFC retention force.

**(*note 3*)**

Blisters which may be generated on the housing do not affect product performance.