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In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

| APPLICABLE STANDARD | | | | | |
|---|---|--------------------------|---|---|---|
| RATING | OPERATING TEMPERATURE RANGE | -40 °C TO 125 °C | STORAGE TEMPERATURE RANGE | -10 °C TO 50 °C (PACKED CONDITION) | |
| | VOLTAGE | 50 V AC / DC | OPERATING OR STORAGE HUMIDITY RANGE | RELATIVE HUMIDITY 90 % MAX (NOT DEWED) | |
| | CURRENT | 0.5 A | APPLICABLE CABLE | t=0.3±0.05mm, GOLD PLATING HEAT RESISTANCE:125°C | |
| SPECIFICATIONS | | | | | |
| ITEM | TEST METHOD | | REQUIREMENTS | QT | AT |
| CONSTRUCTION | | | | | |
| GENERAL EXAMINATION | VISUALLY AND BY MEASURING INSTRUMENT. | | ACCORDING TO DRAWING. | x | x |
| MARKING | CONFIRMED VISUALLY. | | | x | x |
| ELECTRICAL CHARACTERISTICS | | | | | |
| CONTACT RESISTANCE | AC 20 mV MAX (1 KHz) , 1 mA . | | 50 mΩ MAX. INCLUDING FPC, FFC BULK RESISTANCE (L=8mm) | x | x |
| INSULATION RESISTANCE | 100 V DC. | | 500 MΩ MIN. | x | x |
| VOLTAGE PROOF | 150 V AC FOR 1 min. | | NO FLASHOVER OR BREAKDOWN. | x | x |
| MECHANICAL CHARACTERISTICS | | | | | |
| MECHANICAL OPERATION | 20 TIMES INSERTIONS AND EXTRACTIONS. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | - |
| VIBRATION | FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, - m/s ² FOR 10 CYCLES IN 3 AXIAL DIRECTIONS. | | ① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 50 mΩ MAX. | x | - |
| SHOCK | 981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS. | | ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | - |
| FPC RETENTION FORCE | MEASURED BY APPLICABLE FPC. (THICKNESS OF FPC SHALL BE t=0.30mm AT INITIAL CONDITION.) | | DIRECTION OF INSERTION: 0.4N × n MIN. (n:NUMBER OF CONTACTS) (note 1) | x | - |
| ENVIRONMENTAL CHARACTERISTICS | | | | | |
| RAPID CHANGE OF TEMPERATURE | TEMPERATURE -40→+15T ₀ +35→+125→+15T ₀ +35°C TIME 30→ 2T ₀ 3 → 30 → 2T ₀ 3 min UNDER 1000 CYCLES. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 50 MΩ MIN. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | - |
| DAMP HEAT (STEADY STATE) | EXPOSED AT 60±2°C, RELATIVE HUMIDITY 90 TO 95 %, 1000 h. | | | x | - |
| DAMP HEAT, CYCLIC | EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES, TOTAL 240 h. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 1 MΩ MIN. (AT HIGH HUMIDITY) ③ INSULATION RESISTANCE: 50 MΩ MIN. (AT DRY) ④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | - |
| DRY HEAT | EXPOSED AT 125±2 °C, 1000 h. | | ① CONTACT RESISTANCE: 50 mΩ MAX. | x | - |
| COLD | EXPOSED AT -40±3 °C, 1000 h. | | ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | - |
| CORROSION SALT MIST | EXPOSED AT 35±2 °C , 5 % SALT WATER SPRAY FOR 96 h. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR. | x | - |
| SULPHUR DIOXIDE [JIS C 60068-2-42] | EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 25±5 ppm FOR 96 h. | | | x | - |
| HYDROGEN SULPHIDE [JIS C 60068-2-43] | EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 10 TO 15 ppm FOR 96 h. | | | x | - |
| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|  | | | | | |
| REMARK | | | APPROVED | HS. SAKAMOTO | 20200123 |
| | | | CHECKED | HS. SAKAMOTO | 20200123 |
| | | | DESIGNED | KN. KOBAYASHI | 20200122 |
| Unless otherwise specified, refer to IEC 60512. | | | DRAWN | NM. YONEYAMA | 20200122 |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | | | DRAWING NO. | | ELC-380099-98-00 |
|  | SPECIFICATION SHEET | | PART NO. | FH28K-*S-0. 5SH (98) | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO. | CL586 |  1/2 |


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SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|------------------------------|---|--|----|----|
| RESISTANCE TO SOLDERING HEAT | 1) REFLOW SOLDERING (MAX 2 CYCLES) PEAK TMP. 250 °C MAX . REFLOW TMP. OVER 230 °C WITHIN 60 sec. PRE-HEAT 150 TO 200°C FOR 90 TO 120 sec. 2) SOLDERING IRONS : TMP. 350±10°C FOR 5±1 sec . | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS. | x | — |
| SOLDERABILITY | SOLDERED AT SOLDER TEMPERATURE, 245±3 °C FOR IMMERSION DURATION, 3±0.3 sec. | A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMersed. | x | — |

(note 1)

THERE'S A CASE WHICH FPC/FFC RETENTION FORCE DOESN'T FULFILL THE VALUE,
BECAUSE FPC/FFC SPECIFICATION AFFECTS THE RESULT OF FPC/FFC RETENTION FORCE.

| | | | | | |
|--|---------------------------|-------------|----------|----------------------|---|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | | DRAWING NO. | | ELC-380099-98-00 | |
| HRS | SPECIFICATION SHEET | | PART NO. | FH28K-*S-0. 5SH (98) | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO | CL586 |  2/2 |