



|  |                             |   |                                     |   |                  |
|--|-----------------------------|---|-------------------------------------|---|------------------|
| APPLICABLE STANDARD  |                             |   |                                     |   |                  |
| RATING   | OPERATING TEMPERATURE RANGE | -40 °C TO 105 °C  | STORAGE TEMPERATURE RANGE           | -40 °C TO 105 °C (MOUNTED ON PCB)   |                  |
|  | VOLTAGE                     | 50 V AC / DC  | OPERATING OR STORAGE HUMIDITY RANGE | RELATIVE HUMIDITY 90 % MAX (NOT DEWED)  |                  |
|  | CURRENT                     | 0.5 A (note 1)  | APPLICABLE CABLE                    | t=0.3±0.05mm, GOLD PLATING  |                  |
| 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   |                             | 1mA(DC OR 1000Hz).  |                                     | 50 mΩ MAX.<br>INCLUDING FPC,FFC BULK RESISTANCE<br>(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.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.  | X —              |
| 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: 50 mΩ MAX.  | X —              |
| SHOCK  |                             | 981 m/s <sup>2</sup> , 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.<br>(CONNECTOR,FPC AT INITIAL CONDITION.<br>THICKNESS OF FPC SHALL BE t=0.30mm )   |                                     | DIRECTION OF INSERTION: 0.4×n N MIN<br>( n : NUMBER OF CONTACTS).   | X —              |
| ENVIRONMENTAL CHARACTERISTICS  |                             |   |                                     |   |                  |
| RAPID CHANGE OF TEMPERATURE  |                             | TEMPERATURE -40→+15T <sub>0</sub> +35→+105→+15T <sub>0</sub> +35°C<br>TIME 30→ 2 T <sub>0</sub> 3 → 30 → 2 T <sub>0</sub> 3 min.<br>UNDER 5 CYCLES. |                                     | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 50 MΩ MIN.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.   | X —              |
| DAMP HEAT (STEADY STATE)   |                             | EXPOSED AT 40±2 °C,<br>RELATIVE HUMIDITY 90 TO 95 %, 96 h.  |                                     |   | X —              |
| DAMP HEAT,CYCLIC   |                             | EXPOSED AT -10 TO +65 °C,<br>RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES,TOTAL 240 h.   |                                     | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 1 MΩ MIN.<br>(AT HIGH HUMIDITY)<br>③ INSULATION RESISTANCE: 50 MΩ MIN.<br>(AT DRY)<br>④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X —              |
| DRY HEAT   |                             | EXPOSED AT 105±2 °C, 96 h.  |                                     | ① CONTACT RESISTANCE: 50 mΩ MAX.  | X —              |
| COLD   |                             | EXPOSED AT -40±3°C, 96 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.<br>② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.   | X —              |
| SULPHUR DIOXIDE<br>[JIS C 60068-2-42]                                  |                             | EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 25±5 ppm FOR 96 h.   |                                     |   | X —              |
| HYDROGEN SULPHIDE<br>[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             |
| 0  |                             |   |                                     |   |                  |
| REMARK   |                             |   | APPROVED                            | NF. MIYAZAKI  | 15. 03. 24       |
| STORAGE TEMPERATURE RANGE IN THE EMBOSSED CARRIER TAPE : -10 TO +50 °C |                             |   | CHECKED                             | HS. SAKAMOTO  | 15. 03. 24       |
|  |                             |   | DESIGNED                            | HK. KINOUCHI  | 15. 03. 24       |
| Unless otherwise specified, refer to JIS C 5402.                       |                             |   | DRAWN                               | HK. KINOUCHI  | 15. 03. 24       |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test         |                             |   | DRAWING NO.                         |   | ELC-363488-00-00 |
| HRS  | SPECIFICATION SHEET         |   | PART NO.                            | FH52E-*(*) SA-1SH   |                  |
|  | HIROSE ELECTRIC CO., LTD.   |   | CODE NO.                            | CL580   | △ 1/2            |

| SPECIFICATIONS  |   |  |                   |   |     |
|---|---|--|-------------------|---|-----|
| ITEM  | TEST METHOD   | REQUIREMENTS   | QT                | AT  |     |
| RESISTANCE TO SOLDERING HEAT  | 1) REFLOW SOLDERING (TO BE 2 TIMES MAX.)<br>PEAK TMP. 250 °C MAX<br>REFLOW TMP. OVER 230 °C WITHIN 60 sec.<br>PRE-HEATING. 150 TO 200°C<br>90 TO 120 sec.<br>2)SOLDERING IRONS : 350 ± 10 °C,<br>FOR 5± 1 sec . | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                              | ×                 | —   |     |
| 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. | ×                 | —   |     |
| <p>(note 1)</p> <p>WHEN THE SAME VALUE OF CURRENT ARE APPLIED TO ALL CONTACTS AT THE SAME TIME IN ONCE, SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.</p> |   |  |                   |   |     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test  |   | DRAWING NO.  | ELC-363488-00-00  |   |     |
|    | SPECIFICATION SHEET   | PART NO.   | FH52E-*(*) SA-1SH |   |     |
|   | HIROSE ELECTRIC CO., LTD.   | CODE NO  | CL580             |  | 2/2 |