

| APPLICABLE STANDARD                                                                                                                                                                 |                             |                                                                                                                           |                           |                                                                                              |          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------|----------|
| RATING                                                                                                                                                                              | OPERATING TEMPERATURE RANGE | -55 °C TO 85 °C <sup>(1)</sup>                                                                                            | STORAGE TEMPERATURE RANGE | -10 °C TO 60 °C <sup>(2)</sup>                                                               |          |
|                                                                                                                                                                                     | VOLTAGE                     | 200 V AC                                                                                                                  | OPERATING HUMIDITY RANGE  | 40 % TO 80 %                                                                                 |          |
|                                                                                                                                                                                     | CURRENT                     | 1 A                                                                                                                       | STORAGE HUMIDITY RANGE    | 40 % TO 70 % <sup>(2)</sup>                                                                  |          |
| SPECIFICATIONS                                                                                                                                                                      |                             |                                                                                                                           |                           |                                                                                              |          |
| ITEM                                                                                                                                                                                |                             | TEST METHOD                                                                                                               |                           | REQUIREMENTS                                                                                 | QT AT    |
| CONSTRUCTION                                                                                                                                                                        |                             |                                                                                                                           |                           |                                                                                              |          |
| GENERAL EXAMINATION                                                                                                                                                                 |                             | VISUALLY AND BY MEASURING INSTRUMENT.                                                                                     |                           | ACCORDING TO DRAWING.                                                                        | × ×      |
| MARKING                                                                                                                                                                             |                             | CONFIRMED VISUALLY.                                                                                                       |                           |                                                                                              | × ×      |
| ELECTRIC CHARACTERISTICS                                                                                                                                                            |                             |                                                                                                                           |                           |                                                                                              |          |
| CONTACT RESISTANCE                                                                                                                                                                  |                             | 100 mA (DC or 1000 Hz).                                                                                                   |                           | 15 mΩ MAX.                                                                                   | × -      |
| INSULATION RESISTANCE                                                                                                                                                               |                             | 500 V DC.                                                                                                                 |                           | 1000 MΩ MIN.                                                                                 | × -      |
| VOLTAGE PROOF                                                                                                                                                                       |                             | 650 V AC FOR 1 min.                                                                                                       |                           | NO FLASHOVER OR BREAKDOWN.                                                                   | × -      |
| MECHANICAL CHARACTERISTICS                                                                                                                                                          |                             |                                                                                                                           |                           |                                                                                              |          |
| MECHANICAL OPERATION                                                                                                                                                                |                             | 500 TIMES INSERTIONS AND EXTRACTIONS.                                                                                     |                           | ① CONTACT RESISTANCE: 15 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.               | × -      |
| VIBRATION                                                                                                                                                                           |                             | FREQUENCY 10 TO 55 Hz,<br>AMPLITUDE : 1.5 mm,<br>AT 2 h FOR 3 DIRECTION.                                                  |                           | ① NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.         | × -      |
| SHOCK                                                                                                                                                                               |                             | 490 m/s <sup>2</sup> , DURATION OF PULSE 11 ms<br>AT 3 TIMES FOR 3 DIRECTIONS.                                            |                           |                                                                                              | × -      |
| ENVIRONMENTAL CHARACTERISTICS                                                                                                                                                       |                             |                                                                                                                           |                           |                                                                                              |          |
| DAMP HEAT (STEADY STATE)                                                                                                                                                            |                             | EXPOSED AT 40±2 °C, 90 ~ 95 %, 96 h.                                                                                      |                           | ① CONTACT RESISTANCE: 15 mΩ MAX.<br>② INSULATION RESISTANCE: 1000 MΩ MIN.                    | × -      |
| RAPID CHANGE OF TEMPERATURE                                                                                                                                                         |                             | TEMPERATURE-65→+15~+35→+125→+15~+35°C<br>TIME 30 → 10~15 → 30 → 10~15 min<br>UNDER 5 CYCLES.                              |                           | ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                   | × -      |
| CORROSION SALT MIST                                                                                                                                                                 |                             | EXPOSED IN 5 % SALT WATER SPRAY FOR 48 h.                                                                                 |                           | ① CONTACT RESISTANCE: 15 mΩ MAX.<br>② NO HEAVY CORROSION.                                    | × -      |
| HYDROGEN SULPHIDE                                                                                                                                                                   |                             | EXPOSED IN 3 PPM FOR 120 h.                                                                                               |                           |                                                                                              | × -      |
| RESISTANCE TO SOLDERING HEAT                                                                                                                                                        |                             | 1) SOLDER BATH: SOLDER TEMPERATURE, 260±5 °C FOR IMMERSION, DURATION, 10±1 s.<br>2) SOLDERING IRONS : 360 °C FOR 5 s MAX. |                           | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                              | × -      |
| SOLDERABILITY                                                                                                                                                                       |                             | SOLDERED AT SOLDER TEMPERATURE, 245±3 °C, FOR IMMERSION DURATION, 2 s.                                                    |                           | A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMersed. | × -      |
|                                                                                                                                                                                     |                             |                                                                                                                           |                           |                                                                                              |          |
|                                                                                                                                                                                     | COUNT                       | DESCRIPTION OF REVISIONS                                                                                                  | DESIGNED                  | CHECKED                                                                                      | DATE     |
| △                                                                                                                                                                                   |                             |                                                                                                                           |                           |                                                                                              |          |
| REMARK <sup>(1)</sup> TEMPERATURE RISE INCLUDED WHEN ENERGIZED.<br><sup>(2)</sup> THIS STORAGE INDICATES A LONG-TERM STORAGE STATE FOR THE UNUSED PRODUCT BEFORE THE BOARD MOUNTED. |                             |                                                                                                                           | APPROVED                  | HS. OKAWA                                                                                    | 06.03.02 |
|                                                                                                                                                                                     |                             |                                                                                                                           | CHECKED                   | HS. OZAWA                                                                                    | 06.03.02 |
|                                                                                                                                                                                     |                             |                                                                                                                           | DESIGNED                  | KY. NAKAMURA                                                                                 | 06.03.02 |
|                                                                                                                                                                                     |                             |                                                                                                                           | DRAWN                     | AK. SUZUKAWA                                                                                 | 06.03.02 |
| Unless otherwise specified, refer to MIL-STD-202.                                                                                                                                   |                             |                                                                                                                           |                           |                                                                                              |          |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                                                                                                      |                             |                                                                                                                           | DRAWING NO.               | ELC4-152864-21                                                                               |          |
| <b>HRS</b>                                                                                                                                                                          | SPECIFICATION SHEET         |                                                                                                                           | PART NO.                  | HIF3B#-**PA-2. 54DSA (71)                                                                    |          |
|                                                                                                                                                                                     | HIROSE ELECTRIC CO., LTD.   |                                                                                                                           | CODE NO.                  | CL610                                                                                        | △ 1/1    |