

| APPLICABLE STANDARD                                            |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
|----------------------------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------|-----|
| RATING                                                         | OPERATING TEMPERATURE RANGE | -30°C TO + 85°C (NOTE 1)                                                                       |  | STORAGE TEMPERATURE RANGE                                                                                            | -10°C TO + 60°C (NOTE 2) |                                                   |     |
|                                                                | OPERATING HUMIDITY RANGE    | 40% TO + 80%                                                                                   |  | STORAGE HUMIDITY RANGE                                                                                               | 40% TO + 70% (NOTE 2)    |                                                   |     |
|                                                                | VOLTAGE                     | 250V AC                                                                                        |  | UL • CSA RATING                                                                                                      | VOLTAGE                  | 30V AC                                            |     |
|                                                                | CURRENT                     | AWG 22 TO 26 : 2A<br>AWG 28 : 1A<br>AWG 30 : 0.5A                                              |  |                                                                                                                      | CURRENT                  | AWG 22 : 2A<br>AWG 24 TO 28 : 1A<br>AWG 30 : 0.5A |     |
| <b>SPECIFICATIONS</b>                                          |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
| ITEM                                                           |                             | TEST METHOD                                                                                    |  | REQUIREMENTS                                                                                                         |                          | QT                                                | AT  |
| <b>CONSTRUCTION</b>                                            |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
| GENERAL EXAMINATION                                            |                             | VISUALLY AND BY MEASURING INSTRUMENT.                                                          |  | ACCORDING TO DRAWING.                                                                                                |                          | X                                                 | X   |
| MARKING                                                        |                             | CONFIRMED VISUALLY.                                                                            |  |                                                                                                                      |                          | X                                                 | X   |
| <b>ELECTRIC CHARACTERISTICS</b>                                |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
| CONTACT RESISTANCE                                             |                             | 100mA (DC OR 1000 Hz).                                                                         |  | 30mΩ MAX.                                                                                                            |                          | X                                                 | —   |
| INSULATION RESISTANCE                                          |                             | 500V DC.                                                                                       |  | 1000MΩ MIN.                                                                                                          |                          | X                                                 | —   |
| VOLTAGE PROOF                                                  |                             | 650V AC FOR 1 min.                                                                             |  | NO FLASHOVER OR BREAKDOWN.                                                                                           |                          | X                                                 | —   |
| <b>MECHANICAL CHARACTERISTICS</b>                              |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
| MECHANICAL OPERATION                                           |                             | 50 TIMES INSERTIONS AND EXTRACTIONS.                                                           |  | ① CONTACT RESISTANCE: 30mΩ MAX.<br>② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                         |                          | X                                                 | —   |
| VIBRATION                                                      |                             | FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 2 h, FOR 3 DIRECTIONS.                     |  | ① NO ELECTRICAL DISCONTINUITY OF 1μs.                                                                                |                          | X                                                 | —   |
| SHOCK                                                          |                             | 490 m/s <sup>2</sup> DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.                      |  | ② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                                                            |                          | X                                                 | —   |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>                           |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
| RAPID CHANGE OF TEMPERATURE                                    |                             | TEMPERATURE -55→5 TO 35→+85 →5 TO 35 °C<br>TIME 30→5 TO 15 →30 →5 TO 15 min<br>UNDER 5 CYCLES. |  | ① CONTACT RESISTANCE: 30mΩ MAX.<br>② INSULATION RESISTANCE: 1000MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS. |                          | X                                                 | —   |
| DAMP HEAT (STEADY STATE)                                       |                             | EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h.                                                        |  | ① CONTACT RESISTANCE: 30mΩ MAX.<br>② INSULATION RESISTANCE: 500MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS.  |                          | X                                                 | —   |
|                                                                |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
|                                                                | COUNT                       | DESCRIPTION OF REVISIONS                                                                       |  | DESIGNED                                                                                                             | CHECKED                  | DATE                                              |     |
| △                                                              |                             |                                                                                                |  |                                                                                                                      |                          |                                                   |     |
|                                                                |                             |                                                                                                |  | APPROVED                                                                                                             | TS. SAKATA               | 09. 12. 16                                        |     |
|                                                                |                             |                                                                                                |  | CHECKED                                                                                                              | TS. FUKUSHIMA            | 09. 12. 15                                        |     |
|                                                                |                             |                                                                                                |  | DESIGNED                                                                                                             | TH. YOSHIZAWA            | 09. 12. 15                                        |     |
|                                                                |                             |                                                                                                |  | DRAWN                                                                                                                | YK. NAKATSU              | 09. 12. 09                                        |     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |                             |                                                                                                |  | DRAWING NO.                                                                                                          |                          | ELC4-328653-00                                    |     |
| <b>HRS</b>                                                     | SPECIFICATION SHEET         |                                                                                                |  | PART NO.                                                                                                             | DF11CZ-*DS-2V (52)       |                                                   |     |
|                                                                | HIROSE ELECTRIC CO., LTD.   |                                                                                                |  | CODE NO.                                                                                                             | CL543                    | △                                                 | 1/2 |

| SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                  |                                  |                |   |
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| ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TEST METHOD                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REQUIREMENTS                                                                                     | QT                               | AT             |   |
| RESISTANCE TO SOLDERING HEAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1) AUTOMATIC SOLDERING (REFLOW)<br>《REFLOW AREA》<br>MAX 250°C      WITHIN 10 sec.<br>MIN 230°C      WITHIN 60 sec.<br>《PREHEATING AREA》<br>150 TO 180°C      90 TO 120 sec.<br>PUT THROUGH IN REFROW FURNACE<br>TWICE. LEAVE IN AMBIENT TEMPERATURE<br>AND HUMIDITY FOR 1 HOUR. CONNECTOR<br>TEMPERATURE TO BE AMBIENT FOR<br>SECOND REFLOW.<br>2) MANUAL SOLDERING<br>SOLDERING IRON TEMPERATURE :290±10°C,<br>SOLDERING TIME :3s.<br>NO STRENGTH ON CONTACT. | NO DEFORMATION OF CASE OF<br>EXCESSIVE LOOSENESS OF THE<br>TERMINALS.                            | X                                |                | — |
| SOLDERABILITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SOLDERED AT SOLDER TEMPERATURE,<br>230±5°C FOR IN IMMERSION , DURATION, 3 s.                                                                                                                                                                                                                                                                                                                                                                                   | A NEW UNIFORM COATING OF SOLDER<br>SHALL COVER MINIMUM OF 95 % OF THE<br>SURFACE BEING IMMersed. | X                                |                | — |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                  |                                  |                |   |
| REMARKS<br>NOTE 1:INCLUDING THE TEMPERATURE RISE BY CURRENT.<br>NOTE 2:APPLY TO THE CONDITION OF LONG TERM STORAGE    FOR UNUSED PRODUCTS BEFORE PCB ON BOARD,<br>AFTER PCB BOARD , OPERATING TEMPERATURE AND HUMIDITY RANGE IS APPLIED FOR INTERIM<br>STORAGE DURING TRANSPORTATION.<br>NOTE 3:THE TEMPERATURE PROFILE SHALL BE APPLIED WITHIN 168 HOURS AFTER OPENING MOISTURE-PROOF<br>PACKAGING. WHEN 168 HOURS PASSED AFTER OPENING , APPLY THE BOTTOM REQUIREMENTS.<br>《REFLOW AREA》<br>MAX 240°C      WITHIN 10 sec.<br>MIN 230°C      WITHIN 60 sec.<br>《PREHEATING AREA》<br>150 TO 180°C      90 TO 120 s. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                  |                                  |                |   |
| Unless otherwise specifid , refer to JIS C 5402.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                  |                                  |                |   |
| Note    QT:Qualification Test    AT:Assurance Test X:Applicable Test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRAWING NO.                                                                                      |                                  | ELC4-328653-00 |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SPECIFICATION SHEET                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                  | PART NO.      DF11CZ-*DS-2V (52) |                |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | HIROSE ELECTRIC CO., LTD.                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                  | CODE NO      CL543       2/2     |                |   |