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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  | -45 °C TO 125 °C (NOTES 1)   | STORAGE TEMPERATURE RANGE | -10 °C TO 60 °C (NOTES 2) |          |
|  | VOLTAGE  | 50 V AC  |                           |                           |          |
|  | CURRENT  | 0.3 A  |                           |                           |          |
| SPECIFICATIONS   |  |  |                           |                           |          |
| 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   | 20 mV AC OR LESS 1 kHz, 1 mA.  | 50 mΩ MAX.   | X                         | —                         |          |
| INSULATION RESISTANCE  | 100 V DC   | 500 MΩ MAX   | X                         | —                         |          |
| VOLTAGE PROOF  | 150 V AC FOR 1 min.  | NO FLASHOVER OR BREAKDOWN.   | X                         | —                         |          |
| <b>MECHANICAL CHARACTERISTICS</b>  |  |  |                           |                           |          |
| MECHANICAL OPERATION   | 50 TIMES INSERTIONS AND WITHDRAWALS.   | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO DAMAGE, CRACK AND 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 1 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                   | X                         | —                         |          |
| SHOCK  | 490 m/s <sup>2</sup> DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.  | ① NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                   | X                         | —                         |          |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>   |  |  |                           |                           |          |
| RAPID CHANGE OF TEMPERATURE  | TEMPERATURE -65 →15 TO 35 →125 →15 TO 35 °C<br>TIME 30 → 10 TO 15 → 30 →10 TO 15 min<br>UNDER 5 CYCLES.  | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 500 MΩ MIN.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X                         | —                         |          |
| DAMP HEAT (STEADY STATE)   | EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h.  | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 500 MΩ MIN.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X                         | —                         |          |
| CORROSION SALT MIST  | EXPOSED IN 5% SALT WATER SPRAY FOR 48 h.   | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO HEAVY CORROSION.  | X                         | —                         |          |
| SULPHUR DIOXIDE  | EXPOSED IN 25 PPM RH 75 % FOR 96 h.<br>(TEST STANDARD:JIS C 60068)   | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO HEAVY CORROSION.  | X                         | —                         |          |
| HEAT RESISTANCE OF SOLDERING   | 【RECOMMENDED TEMPERATURE PROFILE】<br>《SOLDERING AREA》<br>MAX250°C, 220°C FOR 60 SECONDS MAX.<br>《PREHEATING AREA》<br>150 TO 180°C 90~120 SECONDS.<br>MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION.<br>【RECOMMENDED MANUAL SOLDELING CONDITION】<br>SOLDERING IRON TEMPERATURE 350°C<br>SOLDERING TIME : WITHIN 3 SECONDS. | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.  | X                         | —                         |          |
| REMARKS  |  |  |                           |                           |          |
| NOTES1:INCLUDING THE TEMPERATURE RISE BY CURRENT.                                  |  |  |                           |                           |          |
| NOTES2:STORAGEIS DEFINED AS LONG-TERM STORAGE OF UNUSED PRODUCTS.                  |  |  |                           |                           |          |
| APPLY OPERATION TEMPERATURE RANGE TO PRODUCTS MOUNTED ON PCB WITHOUT POWER SUPPLY. |  |  |                           |                           |          |
| UNLESS OTHERWISE SPECIFIED , REFER TO JIS C 5402 .                                 |  |  |                           |                           |          |
|  | COUNT  | DESCRIPTION OF REVISIONS   | DESIGNED                  | CHECKED                   | DATE     |
|  |  |  |                           |                           |          |
|  |  |  | APPROVED                  | WR. FUKUCHI               | 20191023 |
|  |  |  | CHECKED                   | TS. MIYAZAKI              | 20191023 |
|  |  |  | DESIGNED                  | KT. KUSAKA                | 20191023 |
|  |  |  | DRAWN                     | KT. KUSAKA                | 20191023 |
| Note   | QT:Qualification Test AT:Assurance Test X:Applicable Test  |  | DRAWING NO.               | ELC-389308-51-01          |          |
|  | SPECIFICATION SHEET  |  | PART NO.                  | DF12NB(4.0)-30DP-0.5V(51) |          |
|  | HIROSE ELECTRIC CO., LTD.  |  | CODE NO.                  | CL537-0593-0-51           | 1/1      |