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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 | -55 °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 |
|---|---|---|---|---|
| **CONSTRUCTION** | | | | |
| GENERAL EXAMINATION | VISUALLY AND BY MEASURING INSTRUMENT. | ACCORDING TO DRAWING. | X | X |
| MARKING | CONFIRMED VISUALLY. | | X | X |
| **ELECTRIC CHARACTERISTICS** | | | | |
| 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 | — |
| **MECHANICAL CHARACTERISTICS** | | | | |
| 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 $m/s^2$ 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 | — |
| **ENVIRONMENTAL CHARACTERISTICS** | | | | |
| RAPID CHANGE OF TEMPERATURE | TEMPERATURE -65 →15 TO 35 →125 →15 TO 35 °C<br>TIME 30 → 2 TO 3 → 30 → 2 TO 3 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 | — |
| SULPHUR DIOXIDE | EXPOSED IN 25 PPM RH 75 % FOR 96 h.<br>(TEST STANDARD:JEIDA-38) | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO HEAVY CORROSION. | X | — |
| HEAT RESISTANCE OF SOLDERING | 【RECOMMENDED TEMPERATURE PROFILE】<br>《SOLDERING AREA》<br>MAX250℃, 220℃ FOR 60 SECONDS MAX.<br>《PREHEATING AREA》<br>150 TO 180℃ 90～120 SECONDS.<br>MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION.<br>【RECOMMENDED MANUAL SOLDELING CONDITION 】<br>SOLDERING IRON TEMPERATURE 350℃<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 SUPLLY.

UNLESS OTHERWISE SPECIFIED , REFER TO JIS C 5402 .

| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|---|---|---|---|---|---|
| ⚠0 | | | | | |

| | | | |
|---|---|---|---|
| APPROVED | WR. FUKUCHI | 20200716 |
| CHECKED | TS. MIYAZAKI | 20200716 |
| DESIGNED | KT. KUSAKA | 20200716 |
| DRAWN | RN. IIDA | 20200715 |

Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO. ELC-389282-51-01

SPECIFICATION SHEET

HIROSE ELECTRIC CO., LTD.

PART NO. DF12NB(3.0)-50DP-0.5V(51)

CODE NO. CL537-0393-0-51 ⚠0 1/1

FORM HD0011-2-1