| CONSTRUCTION GENERAL EXAMINATION VISUALLY AND BY MEASURING INSTRUMENT. ACCORDING TO DRAWING. X X X X X X X X X | | | | | | | | | |
|---|------------|--------------|--|---|------|---|--|----------|----|
| TEMPERATURE RANGE | APPLICA | BLE STAND | ARD | | | | | | |
| SPECIFICATIONS TEM | | | E RANGE | -45°C TO +125°C(NOTES 1) | | | -10°C TO + 60°C (N | 0TE2) | |
| SPECIFICATIONS ITEM TEST METHOD REQUIREMENTS © CONSTRUCTION GENERAL EXAMINATION VISUALLY AND BY MEASURING INSTRUMENT. ACCORDING TO DRAWING. XARKING CONFIRMED VISUALLY. ZELECTRIC CHARACTERISTICS CONTACT RESISTANCE 100m A (DC OR 1000 Hz). 50mΩ MAX. X INSULATION RESISTANCE 100V DC 500M MAX. X VOLTAGE PROOF 150V AC FOR 1 min. NO FLASHOVER OR BREAKDOWN. X MECHANICAL CHARACTERISTICS WITHDRAWAL FORCES MEASURED BY APPLICABLE CONNECTOR. WITHDRAWAL FORCES MECHANICAL OPERATION 50TIMES INSERTIONS AND EXTRACTIONS. 10 CONTACT RESISTANCE 50mΩ MAX. X VIBRATION FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 2 h, FOR 3 DIRECTIONS. 20 no daMage, crack or Loosenses of Parts. X FOR 3 DIRECTIONS. 10 NO ELECTRICAL DISCONTINUITY OF 1µs. X POND TO SOME ACCORDINATION OF PULSE 11 ms AT 3 TIMES FOR SIGNAL COORDINATY OF 1µs. X ENVIRONMENTAL CHARACTERISTICS ENVIRONMENTAL CHARACTERISTICS TEMPERATURE 65-415 TO 350-4125-415 TO 35°C TEMPERATURE 10 TEMPERATURE 65-415 TO 35°C TEMPERATURE 20-40 TO 55 Mz. 30-41070 Simil No DAMAGE crack or LOOSENSS OF PARTS. Y ENVIRONMENTAL CHARACTERISTICS RAPID CHARACTERISTICS RAPID CHARACTERISTICS TEMPERATURE 50-415 TO 35°C 4150-415 TO 35°C TEMPERATURE 10 TEMPERATURE 65-415 TO 35°C 4150-415 TO 35°C TEMPERATURE 10 TEMPERATURE 65-415 TO 35°C 4150-415 TO 35°C TEMPERATURE 20-40 TO 55 Mz. 30-41070 Simil No DAMAGE crack or LOOSENSS OF PARTS. Y ENVIRONMENTAL CHARACTERISTICS RAPID CHARACTERISTICS RAPID CHARACTERISTICS RAPID CHARACTERISTICS TEMPERATURE 50-415 TO 35°C 4150-415 TO 35°C TEMPERATURE 50- | RATING | VOLTAGE | | 50V AC | APPL | ICABLE CONNECTOR | ↑ DF12#(3.0) −*DP−0. | 5V (**) | |
| ITEM | | CURRENT | | 0. 3A | | | | | |
| ITEM | | | | SPECIFICATION | ON: | S | | | |
| CONSTRUCTION GENERAL EXAMINATION VISUALLY AND BY MEASURING INSTRUMENT. ACCORDING TO DRAWING. X MARKING CONFIRMED VISUALLY. X ELECTRIC CHARACTERISTICS CONTACT RESISTANCE 100m A (DC OR 1000 Hz). 500mΩ MAX. X VINSULATION RESISTANCE 100m A (DC OR 1000 Hz). 500mΩ MAX. X VOLTAGE PROOF 150V AC FOR 1 min. NO FLASHOVER OR BREAKDOWN. X MECHANICAL CHARACTERISTICS INSERTION AND WITHDRAWAL FORCES INSERTION AND MEASURED BY APPLICABLE CONNECTOR. VITHORAWAL FORCES MECHANICAL OPERATION 50TIMES INSERTIONS AND EXTRACTIONS. 10 CONTACT RESISTANCE: 50 mΩ MAX. 20 NO DAMAGE, CRACK OR LOOSENESS OF PARTS. 10 NO ELECTRICAL DISCONTINUITY OF 1µs. X VIBRATION FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 2 h, FOR 3 DIRECTIONS. 20 NO DAMAGE, CRACK OR LOOSENESS OF PARTS. 10 NO ELECTRICAL DISCONTINUITY OF 1µs. X FOR 3 DIRECTIONS. 20 NO DAMAGE, CRACK OR LOOSENESS OF PARTS. 20 NO DAMAGE, CRAC | | TEM | | | | | JIREMENTS | QT | AT |
| CONTACT RESISTANCE CONFIRMED VISUALLY. X X X X X X X X X | CONSTR | UCTION | | | | | | | |
| MARKING CONFIRMED VISUALLY. ELECTRIC CHARACTERISTICS CONTACT RESISTANCE 100M A (DC OR 1000 Hz). INSULATION RESISTANCE 100M C CONTACT RESISTANCE 100M C CONTACT RESISTANCE 100M C CONTACT RESISTANCE 150V AC FOR 1 min. NO FLASHOVER OR BREAKDOWN. X MECHANICAL CHARACTERISTICS INSERTION AND MEASURED BY APPLICABLE CONNECTOR. MEASURED BY APPLICABLE CONNECTOR. MEASURED BY APPLICABLE CONNECTOR. MEASURED BY APPLICABLE CONNECTOR. MECHANICAL OPERATION SOTIMES INSERTIONS AND EXTRACTIONS. 10 | | | VISUALLY | AND BY MEASURING INSTRUMENT. | | ACCORDING TO | DRAWING. | X | Ι_ |
| CONTACT RESISTANCE | MARKING | | CONFIRMED VISUALLY. | | | | X | - | |
| INSULATION RESISTANCE | ELECTRI | C CHARAC | TERIST | ICS | | | | | |
| VOLTAGE PROOF 150V AC FOR 1 min. NO FLASHOVER OR BREAKDOWN. X | CONTACT F | RESISTANCE | 100 | lm A (DC OR 1000 Hz). | | 50mΩ MAX. | | Х | - |
| MECHANICAL CHARACTERISTICS | INSULATION | RESISTANCE | 100 | V DC | | 500M Ω MAX | | Х | _ |
| MEASURED BY APPLICABLE CONNECTOR. SIGNAL INSERTION WITHDRAWAL FORCE | VOLTAGE F | PROOF | 150V AC FOR 1 min. | | | NO FLASHOVER | Х | - | |
| MEASURED BY APPLICABLE CONNECTOR. SIGNAL INSERTION WITHDRAWAL FORCE | MECHAN | IICAL CHAR | ACTER | ISTICS | | <u> </u> | | 1 | |
| MECHANICAL OPERATION 50TIMES INSERTIONS AND EXTRACTIONS. 0 CONTACT RESISTANCE: 50m MAX. (2) NO DAMAGE, CRACK OR LOOSENESS OF PARTS. VIBRATION FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 2 h, FOR 3 DIRECTIONS. 2 NO DAMAGE, CRACK OR LOOSENESS OF PARTS. SHOCK 490 m/s² DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS. ENVIRONMENTAL CHARACTERISTICS RAPID CHANGE OF TEMPERATURE -65→15 TO 35→125→15 TO 35°C TIME 30→10 TO 15→ 30→10TO15min UNDER 5 CYCLES. DAMP HEAT (STEADY STATE) EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h. CORROSION SALT MIST EXPOSED IN 5% SALT WATER SPRAY FOR 48 h. CORROSION SALT MIST EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD JEIDA-39) HEAT RESISTANCE OF SOLDERING AREA) MAX250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREA) 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION.] RECOMMENDED MANUAL SOLDELING CONDITION.] | | | MEASUF | RED BY APPLICABLE CONNECTOR. | | 31G N A L 10 14 20 30 32 36 40 50 60 | FORCE FORCE (N)MAX (N)MIN 19.8 1.5 21.3 2.1 23.4 2.6 27.0 3.4 27.6 3.6 29.0 4.0 30.6 4.2 34.2 5.0 38.0 6.0 | X | _ |
| VIBRATION FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 2 h, FOR 3 DIRECTIONS. 2 no damage, crack or looseness of parts. X 2 h or most 2 duration of Pulse 11 ms AT 3 TIMES 1 no electrical discontinuity of 1 μs. 2 no damage, crack or looseness of parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or looseness or parts. X 2 no damage, crack or l | MECHANICA | L OPERATION | 50TIMES | INSERTIONS AND EXTRACTIONS. | | ① CONTACT RE | SISTANCE: 50mΩ MAX. | X | - |
| SHOCK 490 m/s² DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS. ENVIRONMENTAL CHARACTERISTICS RAPID CHANGE OF TEMPERATURE -65→15 TO 35→125→15 TO 35°C TIME 30→10 TO 15→ 30→10TO15min UNDER 5 CYCLES. DAMP HEAT (STEADY STATE) EXPOSED IN 10 PPM FOR 96 h. CTEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING [RECOMMENDED TEMPERATURE PROFILE] SOLDERING AT 150 TO 180°C SOLDERING AREA) MAX/250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREA) 150 TO 180°C 90~120 SECONDS 1 NO ELECTRICAL DISCONTINUITY OF 1 μs. (2) NO DAMAGE, CRACK OR LOOSENESS OF PARTS. (1) CONTACT RESISTANCE: 50m Ω MAX. (2) INSULATION RESISTANCE: 500 MΩ MIN. (3) NO DAMAGE, CRACK OR LOOSENESS OF PARTS. (1) CONTACT RESISTANCE: 500 MΩ MIN. (2) INSULATION RESISTANCE: 500 MΩ MAX. (2) INSULATION RESISTANCE: 500 MΩ MAX. (2) INSULATION RESISTANCE: 500 MΩ MAX. (2) NO HEAVY CORROSION. X SULPHUR DIOXIDE EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING AREA) 150 TO 180°C 90~120 SECONDS MAX. (PREHEATING AREA) 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] | VIBRATION | | | | | ① NO ELECTRICA | AL DISCONTINUITY OF 1μs. | Х | _ |
| ENVIRONMENTAL CHARACTERISTICS RAPID CHANGE OF TEMPERATURE -65→15 TO 35→125→15 TO 35°C TEMPERATURE 30→10 TO 15→ 30→10TO15min UNDER 5 CYCLES. DAMP HEAT (STEADY STATE) EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h. CORROSION SALT MIST EXPOSED IN 5% SALT WATER SPRAY FOR 48 h. SULPHUR DIOXIDE EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING AREA) MAX250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREA) MAX150°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] | SHOCK | | | | ES | ① NO ELECTRICA | AL DISCONTINUITY OF 1μs. | Х | _ |
| RAPID CHANGE OF TEMPERATURE -65→15 TO 35→125→15 TO 35°C TEMPERATURE TIME 30→10 TO 15→ 30→10TO15min UNDER 5 CYCLES: DAMP HEAT (STEADY STATE) EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h. CORROSION SALT MIST EXPOSED IN 5% SALT WATER SPRAY FOR 48 h. SULPHUR DIOXIDE EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD; JEIDA-39) HEAT RESISTANCE OF SOLDERING (SOLDERING MAX250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREA) 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION.] [RECOMMENDED MANUAL SOLDELING CONDITION.] | ENVIRON | MENTAL C | HARAC | TERISTICS | | | | | |
| TIME 30→10 TO 15→ 30→10TO15min UNDER 5 CYCLES. DAMP HEAT (STEADY STATE) EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h. CORROSION SALT MIST EXPOSED IN 5% SALT WATER SPRAY FOR 48 h. SULPHUR DIOXIDE EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING AREA) MAX250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREA) MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] Z INSULATION RESISTANCE: 500 MΩ MIN. (3) NO DAMAGE, CRACK OR LOOSENESS OF PARTS. (CONTACT RESISTANCE: 50 mΩ MAX. (Z) NO HEAVY CORROSION. TO CONTACT RESISTANCE: 50 mΩ MAX. (Z) NO HEAVY CORROSION. NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS. | | | | | | ① CONTACT RESIS | STANCE: 50mΩ MAX. | X | |
| DAMP HEAT (STEADY STATE) EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h. ① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 50 mΩ MAX. ② IND DAMAGE, CRACK OR LOOSENESS OF PARTS. CORROSION SALT MIST EXPOSED IN 5% SALT WATER SPRAY FOR 48 h. ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO HEAVY CORROSION. SULPHUR DIOXIDE EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING (SOLDERING AREA) MAX250°C, 220°C FOR 60 SECONDS MAX. 《PREHEATING AREA) 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] | TEMPERAT | URE | 1 | | | - | | | - |
| (STEADY STATE) (2) INSULATION RESISTANCE: 500 MΩ MIN. (3) NO DAMAGE, CRACK OR LOOSENESS OF PARTS. CORROSION SALT MIST EXPOSED IN 5% SALT WATER SPRAY FOR 48 h. (1) CONTACT RESISTANCE: 50 mΩ MAX. (2) NO HEAVY CORROSION. SULPHUR DIOXIDE EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING AREA) MAX250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREA) 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] | DAMB HEAT | - | | | | , | | — | |
| ② NO HEAVY CORROSION. SULPHUR DIOXIDE EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING SOLDERING MAX250°C, 220°C FOR 60 SECONDS MAX. 《PREHEATING AREA》 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] | | | EXPOSE | DAI 40 ± 2°C, 90 1O 95 %, 96 h. | | ② INSULATION RE | SISTANCE: 500 MΩ MIN. | X | - |
| (TEST STANDARD: JEIDA-39) HEAT RESISTANCE OF SOLDERING (SOLDERING AREA) MAX250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREA) 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] | CORROSION | I SALT MIST | EXPOSED |) IN 5% SALT WATER SPRAY FOR 48 h. | | ~ | | Х | - |
| SOLDERING AREAN MAX250°C, 220°C FOR 60 SECONDS MAX. (PREHEATING AREAN) 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] | SULPHUR DI | IOXIDE | | | | 1~ | | Х | - |
| SOLDERING TIME : WITHIN 3 SECONDS. REMARKS | SOLDERING | | 《SOLDEI MAX28 《PREHE 150 TO MAXIM SAME 【RECOM SOLDE | RING AREA) 50°C, 220°C FOR 60 SECONDS MAX. ATING AREA) 0 180°C 90~120 SECONDS. IUM TWICE ACTION IS ALLOWED UNDER 1 CONDITION. IMENDED MANUAL SOLDELING CONDITION ERING IRON TEMPERATURE 350°C | | | | | |

NOTE1:INCLUDING THE TEMPERATURE RISE BY CURRENT.

NOTE2:STORAGEIS DEFINED AS LONG-TERM STORAGE OF UNUSED PRODUCTS. APPLY OPERATION TEMPERATURE RANGE TO PRODUCTS MOUNTED ON PCB WITHOUT POWER SUPLLY. OPERATION TEMPERATURE FOR TAPE-AND-REAL PRODUCTS SHALL BE -10 TO 50°C.MOUNT CONNECTORS WITHIN 12HOURS AFTER TAKING OUT FROM THE PACKAGE.

UNLESS OTHERWISE SPECIFIED , REFER TO JIS C 5402 .

| OIVE | | in the content of the | | | | | | | |
|----------|---------|--|-------------|------------|------------------------|---------------|-----|------------|--|
| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | | CHECKED | | D. | ATE | |
| Δ | 2 | DIS-H-001988 | YH. MICHIDA | | TS.MIYAZAKI | | 07. | 04. 24 | |
| | | | | APPRO | VED | TS. SAKATA | 04. | 04. 12. 17 | |
| | | | | | | TS. SAKATA | | 04. 12. 17 | |
| | | | DESIGNED | | AR. TAKAHASHI | 04. 12. 15 | | | |
| | | | DRAWN | | YH. MICHIDA | .MICHIDA 04.1 | | | |
| Note | e QT:Qu | QT:Qualification Test AT:Assurance Test X:Applicable Test DRAWING NO. ELC4 | | ELC4-16350 | 4-04 | i | | | |
| | | SPECIFICATION SHEET | PART NO. | | DF12(3.0)-*DS-0.5V(86) | | | | |
| | | HIROSE ELECTRIC CO., LTD. | CODE NO. | | | CL537 | | 1/1 | |