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| Applicable standard | | | | | |
|---|---|---|---|---|---|
| Rating | Operating Temperature Range | -55 to +105°C (Note1) | Storage Temperature Range | | -10 °C to +60°C (Note3) |
| | Operating Humidity Range | 20% to 80% (Note2) | Storage Humidity Range | | 40% to 70% (Note3) |
| | Voltage | 250 V AC/DC | UL・C-UL Rating | Voltage | 30 V AC/DC |
| | Current | AWG 22 to 24 : 2.0A<br>AWG 26 : 1.5A<br>AWG 28 : 1.0A<br>AWG 30 : 0.5A | | Current | 2.0A |
| | | | Applicable Connector | | DF51-18DS-2C |
| | | | Applicable Contact | | DF11-****SC(F)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 Millivolt Level Method | 20mV MAX, 1mA (DC or 1000Hz). | 30 mΩ MAX. | X | — |
| Insulation Resistance | 500 V DC. | 1000 MΩ MIN. | X | — |
| Voltage Proof | 650 V AC for 1 min. | No flashover or breakdown. | X | — |
| **Mechanical Characteristics** | | | | |
| Mechanical Operation | 50 times insertion and extraction. | 1.Contact resistance: 30 mΩ MAX.<br>2.No damage, crack or looseness of parts. | X | — |
| Mating and unmating force | It takes out and inserts with a conformity connector. | 1.Insertion Force :53.9 N MAX.<br>2.Extraction Force :4.5 N MIN. | X | — |
| Vibration | Frequency 10 to 55 Hz, single amplitude 0.75 mm, at 10 cycles for 3 direction. | 1.No electrical discontinuity of 1μs.<br>2.No damage, crack or looseness of parts. | X | — |
| Shock | Acceleration 490 $m/s^2$ duration of pulse 11 ms at 3 times for 3 directions. | | X | — |
| **Environmental Characteristics** | | | | |
| Damp Heat (Steady State) | Exposed at 40 ± 2°C , humidity 90 to 95 %, 96 h.<br>(After leaving the room temperature for 1 to 2h.) | 1.Contact resistance: 30 mΩ MAX.<br>2.Insulation resistance: 500 MΩ MIN.<br>3.No damage, crack or looseness of parts. | X | — |
| Rapid Change Of Temperature | Temperature -55°C→ +105°C<br>Time 30min→ 30min<br>Under 5 Cycles.<br>(The transferring time of the tank is 2 to 3 MIN)<br>(After leaving the room temperature for 1 to 2h.) | 1.Contact resistance: 30 mΩ MAX.<br>2.Insulation resistance: 1000 MΩ MIN.<br>3.No damage, crack or looseness of parts. | X | — |
| Dry Heat | Exposed at 105±2°C, 96h | 1.Contact resistance: 30 mΩ MAX.<br>2.Insulation resistance: 1000 MΩ MIN.<br>3.No damage, crack or looseness of parts. | X | — |
| Cold | Exposed at -55±3°C, 96h | 1.Contact resistance: 30 mΩ MAX.<br>2.Insulation resistance: 1000 MΩ MIN.<br>3.No damage, crack or looseness of parts. | X | — |

Remarks
Note 1:Include the temperature rising by current.
Note 2:No condensing
Note 3:Apply to the condition of long term storage for unused products before mount on pcb,
After mounted on pcb, operating temperature and humidity range is applied for interim storage during transportation.

| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|---|---|---|---|---|---|
| △2 | 2 | DIS-H-00005270 | TS.MIYAKI | SZ.ONO | 20190912 |

| | | |
|---|---|---|
| APPROVED | HS.OKAWA | 20180529 |
| CHECKED | ST.WADA | 20180529 |
| DESIGNED | TH.SATO | 20180528 |
| DRAWN | TH.SATO | 20180528 |

Unless otherwise specified, refer to IEC 60512.

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

| | | | |
|---|---|---|---|
| | | DRAWING NO. | ELC-363562-50-00 |
| HRS | SPECIFICATION SHEET | PART NO. | DF51A-18DP-2DS(50) |
| | HIROSE ELECTRIC CO., LTD. | CODE NO. | CL543-5064-0-50 △2 1/2 |

FORM HD0011-2-1

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# Specifications

| Item | Test method | Requirements | QT | AT |
|---|---|---|---|---|
| Resistance To Soldering Heat | 1)Solder bath method ⚠2<br>Soldered at solder temperature,<br>260°c for in immersion , duration, 5 s.<br>2)Manual soldering<br>Soldering iron temperature :270℃,<br>Soldering time :3s.<br>No strength on contact. | Such as impaired function ,no deformation of case of excessive looseness of the terminals. ⚠2 | X | — |
| Solderability | Soldering temperature : 245°C<br>Duration of immersion :soldering, for 5 sec. | New uniform coating of solder shall cover minimum of 95 % of the surface Being immersed. | X | — |

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

DRAWING NO. ELC-363562-50-00

HRS SPECIFICATION SHEET

PART NO. DF51A-18DP-2DS(50)

HIROSE ELECTRIC CO., LTD.

CODE NO CL543-5064-0-50 ⚠2



FORM HD0011-2-2