| Applicable standard | | | | |
|---|---|---|---|---|
| Rating | Operating temperature range | -55°C to + 105°C (Note 1) | Storage temperature range | -10°C to + 60°C (Note 3) |
| | Operating humidity range | 20% to 80% (Note 2) | Storage humidity range | 40% to 70% (Note 3) |
| | Applicable connector △2 | DF60A-1S-10.16C<br>DF60-∗SCFA | Current(∗1) | 50 A |
| | | | Voltage | 1000V AC/DC |

| | Rated voltage | Rated current | Overvoltage category | IP- degree |
|---|---|---|---|---|
| UL | 600V AC/DC | 65A(At ambient temp.25℃)(Note 5) | — | — |
| C-UL | 600V AC/DC | See above(∗1)(Temp. rise up 30℃MAX) | — | — |
| TÜV | 600V AC/DC | See above(∗1) | Ⅲ | IP00 |

# 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<br>Millivolt level method | DC6V MAX, 1A | 2mΩ MAX. | X | — |
| Insulation resistance | 1000V DC. | 1000MΩ MIN. | X | — |
| Voltage proof | 3000V AC for 1 min. | No flashover or breakdown. | X | — |
| **Mechanical characteristics** | | | | |
| Mechanical operation | 30 times insertions and extractions. | ① Contact resistance: 2mΩ MAX.<br>② No damage, crack or looseness of parts. | X | – |
| Vibration | Frequency 10 to 500 Hz, total amplitude 1.5 mm, acceleration of 98 $m/s^2$, at 2 h, for 3 directions. | ① No electrical discontinuity of 1μs.<br>② No damage, crack or 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 1μs.<br>② N o damage, crack or looseness of parts. | X | – |
| **Environmental characteristics** | | | | |
| Damp heat<br>(Steady state) | Exposed at 40 ± 2 °c, 90 to 95 %, 96 h. | ① Contact resistance: 2mΩ MAX.<br>② Insulation resistance: 1000MΩ MIN.<br>③ No damage, crack or looseness of parts. | X | – |
| Rapid change of temperature | Temperature -55℃→ +85℃<br>Time 30min→ 30min<br>Under 25 cycles.<br>(The transferring time of the tank is 2-3 min)<br>(After leaving the room temperature for 1-2h.) | ① Contact resistance: 2mΩ MAX.<br>② Insulation resistance: 1000MΩ MIN.<br>③ No damage, crack or looseness of parts | X | – |
| Dry heat | Exposed at 105 ± 2℃, 250h<br>(After leaving the room temperature for 1-2h.) | ① Contact resistance: 2mΩ MAX.<br>② Insulation resistance: 1000MΩ MIN.<br>③ No damage, crack or looseness of parts | X | – |
| Resistance to soldering heat | ①Solder bath method △2<br>Solder temperature : 260℃ for<br>Immersion,duration : 10 sec .<br>②Manual soldering<br>Soldering iron temperature : 350±10℃<br>Soldering time : 5 sec.<br>No strength on contact. | Such as impaired function ,no deformation of case of excessive looseness of the terminals. △2 | X | – |
| Solderability | Soldered at solder temperature,<br>245°c for insertion duration, 5sec. | Solder shall cover a minimum of<br>95 % of the surface being immersed. | X | – |

Remarks
Note1: Include the temperature rising by current.
Note2: No condensing.
Note3: 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 | 4 | DIS-H-00005418 | TS.MIYAKI | SZ.ONO | 20191022 |

| Unless otherwise specifid , refer to IEC 60512. | | | |
|---|---|---|---|
| | Approved | KI.AKIYAMA | 20160407 |
| | Checked | TS.FUKUSHIMA | 20160407 |
| | Designed | TS.KUMAZAWA | 20160407 |
| | Drawn | TS.KUMAZAWA | 20160407 |

| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | Drawing no. | ELC-338973-27-00 |
|---|---|---|

| HRS | Specification sheet | Part no. | DF60-1P-10.16DSA(27) | |
|---|---|---|---|---|
| | Hirose electric co., ltd. | Code no. | CL680-3004-5-27 △2 | 1/2 |

FORM HD0011-2-1

(Note 4)Derating curve takes manufacturing tolerances into consideration as well as uncertainties in temperature measurement and the measuring set up and is derived from the basic curve multiplied by 0.8 calculation.

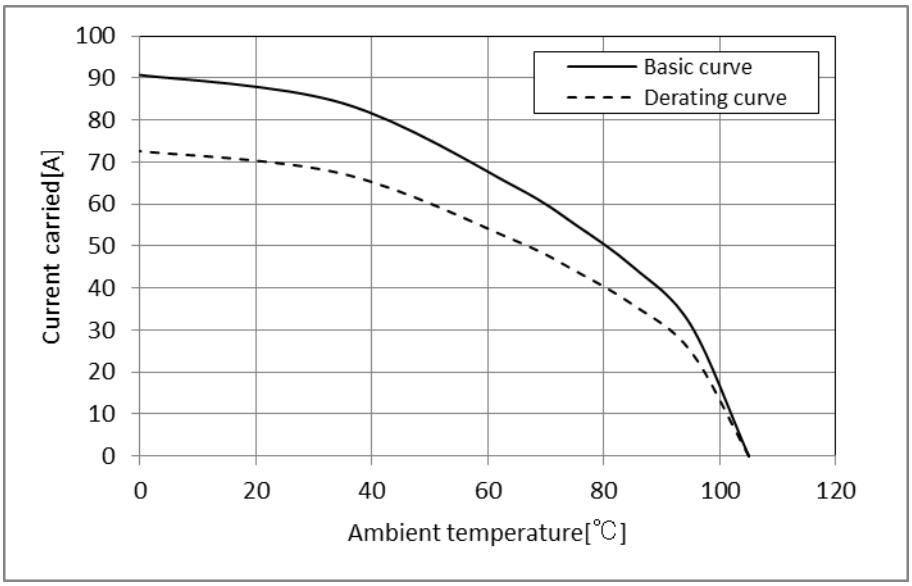
(Note 5) Indicates the current that corresponds to the RTI value (temperature at which performance is halved) of the resin when the ambient temperature is 25℃. △2
The value of rated current differs depending on the ambient temperature.
It is recommended to use the product within the derating curve zone.

(Note 6) Measurement method of derating curve is shown below.

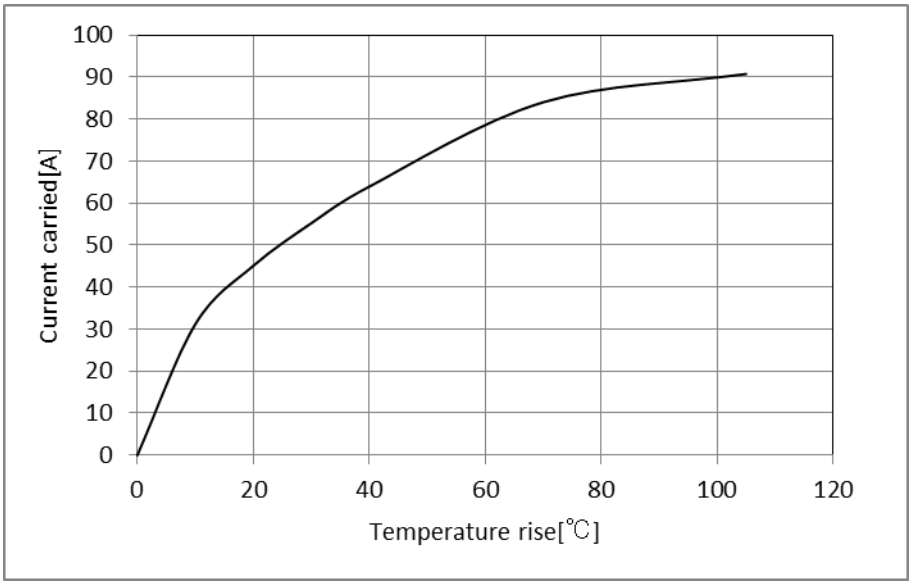
- Test specimen:Unused DF60-2P-10.16DS(27).
  Unused DF60-2S-10.16C
  Unused DF60-8SCFA
- Test cable spec:AWG 8
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20766)

[Reference]

Derating curve




Temperature rise curve




| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | | Drawing no. | ELC-338973-27-00 | | |
|---|---|---|---|---|---|
| HRS | Specification sheet | Part no. | DF60-1P-10.16DSA(27) | | |
| | Hirose electric co., ltd. | Code no. | CL680-3004-5-27 | △2 | 2/2 |