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	DF60FR-2S-10.16C(##) DF60-∗SCFA(##)	Current (∗1)	AWG 8:45 A/pin AWG10:35 A/pin AWG12:28 A/pin
	Voltage	1000V AC/DC		

△2	Rated voltage	Rated current	Overvoltage category	IP- degree
UL	600V AC/DC	65A MAX/pin (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	IP20

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	DC6V MAX, 1A	2mΩ MAX.	X	—
Insulation resistance	1000V DC.	1000MΩMIN.	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. 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. 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. 2) No damage, crack or looseness of parts.	X	—
Environmental characteristics				
Damp heat (Steady state)	Exposed at 40 ± 2 °c, 90 to 95 %, 96 h.	1) Contact resistance: 2mΩ MAX. 2) Insulation resistance: 1000MΩ MIN. 3) No damage, crack or looseness of parts.	X	—
Rapid change of temperature	Temperature -55℃→ +85℃ Time 30min→ 30min Under 25 cycles. (The transferring time of the tank is 2-3 min) (After leaving the room temperature for 1-2h.)	1) Contact resistance: 2mΩ MAX. 2) Insulation resistance: 1000MΩ MIN. 3) No damage, crack or looseness of parts	X	—
Dry heat	Exposed at 105 ± 2℃, 250h (After leaving the room temperature for 1-2h.)	1) Contact resistance: 2mΩ MAX. 2) Insulation resistance: 1000MΩ MIN. 3) No damage, crack or looseness of parts	X	—
Cold	Exposed at -55 ± 3℃, 96h	1) Contact resistance: 2mΩ MAX. 2) Insulation resistance: 1000MΩ MIN. 3) No damage, crack or looseness of parts	X	—
Resistance to soldering heat	1)Solder bath method Solder temperature : 260℃ for Immersion,duration : 10 sec . 2)Manual soldering Soldering iron temperature : 350±10℃ Soldering time : 5 sec. No strength on contact.	Such as impaired function ,no deformation of case of excessive looseness of the terminals.	X	—
Solderability	Soldered at solder temperature, 245°c for insertion duration, 5sec.	Solder shall cover a minimum of 95 % of the surface being immersed.	X	—

Remarks
Note1: Include the temperature rising by current.
Note2: No condensing.
Note3: Apply to the unused product on packaged condition.

	Count	Description of revisions	Designed	Checked	Date
△2	2	DIS-H-00018494	TS.KUMAZAWA	SZ.ONO	20230616

Unless otherwise specifid , refer to IEC 60512.

Approved	SJ.OKAMURA	20220214
Checked	TT.OHSAKO	20220214
Designed	SN.MIWA	20220210
Drawn	SN.MIWA	20220210

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

		Drawing no.	ELC-386589-50-00
HRS	Specification sheet	Part no.	DF60FR-2P-10.16DSA(50)
	Hirose electric co., ltd.	Code no.	CL0680-4010-0-50 △2 1/2

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(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.

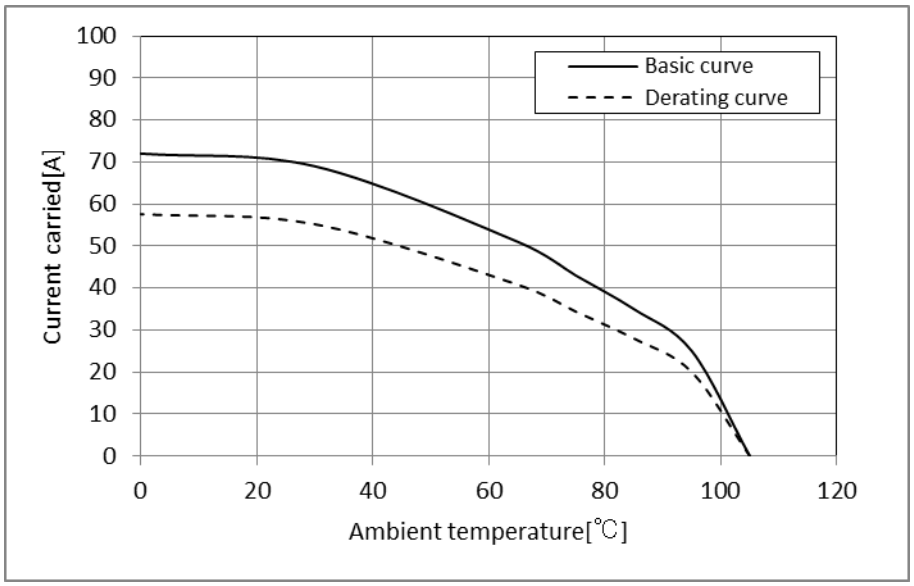
(Note 5) Indicates the current that corresponds to the RTI value (temperature at which performance is halved) of the resin when the ambient temperature is 25℃.
The value of rated current differs depending on the ambient temperature.
It is recommended to use the product within the derating curve zone.

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

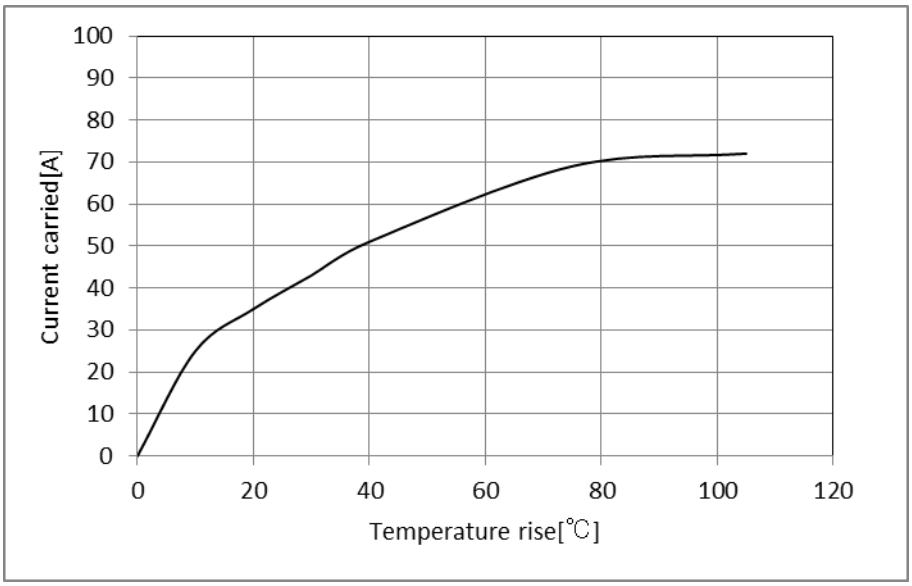
- Test specimen:Unused DF60-6P-10.16DS(27).
  Unused DF60-6S-10.16C
  Unused DF60-8SCFA
- Test cable spec:AWG 8
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



Note QT:Qualification Test AT:Assurance Test X:Applicable Test		Drawing no.	ELC-386589-50-00		
HRS	Specification sheet	Part no.	DF60FR-2P-10.16DSA(50)		
	Hirose electric co., ltd.	Code no.	CL0680-4010-0-50	⚠2	2/2

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