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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)
	Voltage	1000V AC/DC		Applicable connector	DF60(R)-*S-10.16C(##)
	Current (*1) ⚠1	AWG10	40A	Applicable cable	AWG 10-12
		AWG12	31A		

⚠1	Rated voltage	Rated current	Overvoltage category	IP-Degree
UL	600V AC/DC	AWG10:55A/AWG12:45A (At Ambient Temp.25℃)(Note 5)	—	—
C-UL	600V AC/DC	See above(*1)(Temp. rise up 30℃MAX)	—	—
TUV	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 millivolt level method	DC6V MAX, 1A	2mΩ MAX.	X	—
Mechanical characteristics				
Contact insertion and extraction forces	1.0±0.002 by steel gauge.	Insertion force 12.0 N MAX. Extraction force 2.0 N MIN.	X	—
Mechanical operation	30times insertions and extractions.	①Contact resistance: 2 mΩ MAX. ②No damage, crack or looseness of parts.	X	—
Vibration	Frequency 10 to 500 Hz, total amplitude 1.5mm, Acceleration 98m/s^2, at 2h for 3 directions.	①No electrical discontinuity of 1μs. ②No damage, crack or looseness of parts.	X	—
Shock	490 m/s^2 duration of pulse 11 ms at 3 times each for 3 both axial directions.	①No electrical discontinuity of 1μs. ②No damage, crack or looseness of parts.	X	—
Crimp tensile strength	Apply wire tensile strength to caulking area axially until wire become loosen or breakdown.	AWG10 401N MIN AWG12 313N MIN	X	—
Environmental characteristics				
Damp heat (steady state)	Exposed at 40 ± 2℃ , 90 to 95 %, 96 h.	①Contact resistance: 2 mΩ MAX. ②No 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.)	①Contact resistance: 2 mΩ MAX. ②No damage, crack or looseness of parts.	X	—
Dry heat	Exposed at 105 ± 2℃, 250h (After leaving the room temperature for 1-2h.)	①Contact resistance: 2 mΩ MAX. ②No damage, crack or looseness of parts.	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 PCB on board .
After mounted on PCB board , operating temperature and humidity range is applied for interim storage during transportation.

	Count	Description of revisions	Designed	Checked	Date
⚠1	8	DIS-H-00002440	TS.KUMAZAWA	TS.FUKUSHIMA	17.01.06

Unless otherwise specifid , refer to IEC 60512.

Approved	KI.AKIYAMA	15.06.11
Checked	TS.FUKUSHIMA	15.06.10
Designed	TS.KUMAZAWA	15.06.10
Drawn	MI.SAKIMURA	15.06.09

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

		Drawing no.	ELC-342869-00-00	
HRS	Specification sheet	Part no.	DF60-1012SCA	
	HIROSE ELECTRIC CO., LTD.	Code no.	CL680-3022-7-00	⚠1 1/7

FORM HD0011-2-1

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△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.

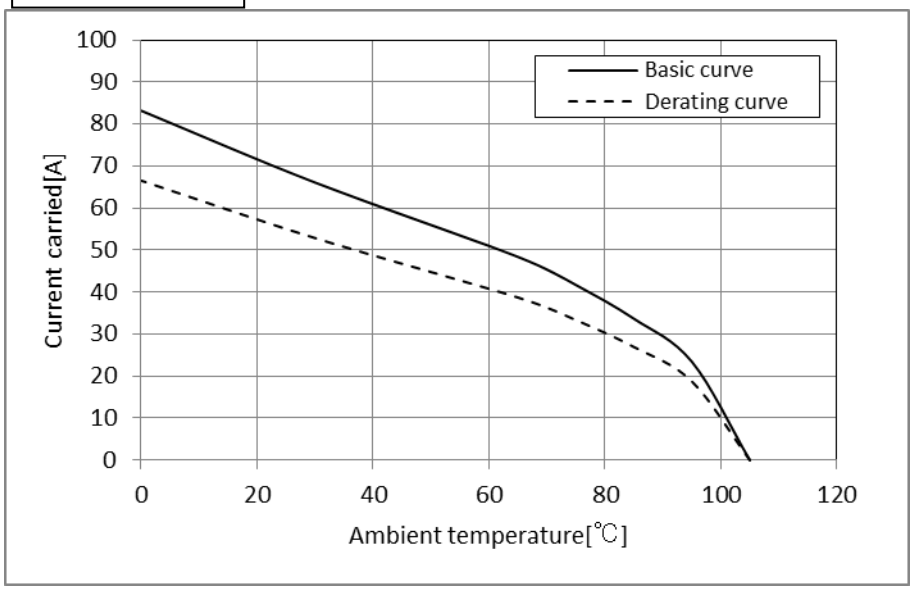
(Note 5)The value of rated current differs depending on the ambient temperature. It is recommended to use the product within the derating curve zone.

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

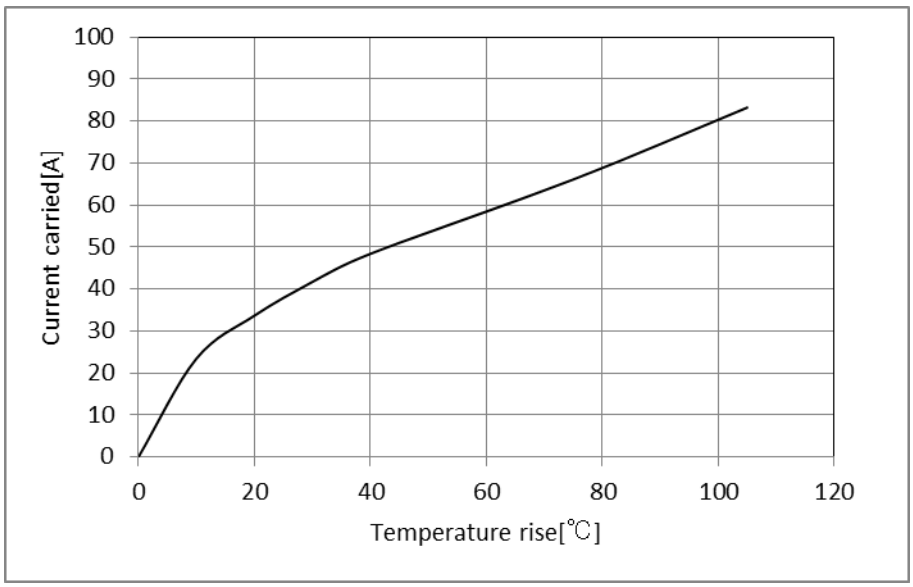
- Test specimen:Unused DF60-2P-10.16DS(27).
  Unused DF60-2S-10.16C
  Unused DF60-1012SCFA
- Test cable spec:AWG 10
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20773)

[Reference]

Derating curve



Temperature rise curve



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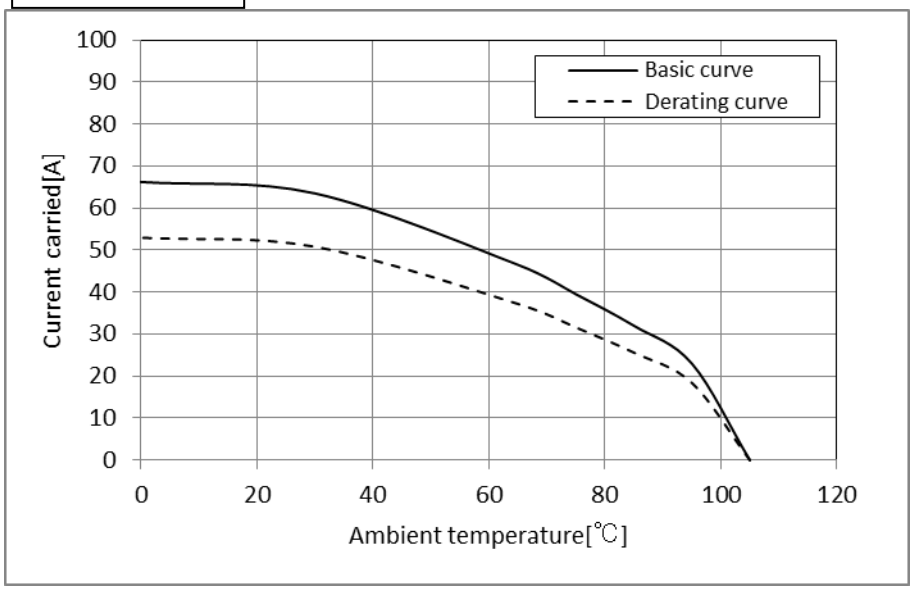
△1

(Note 7) Measurement method of derating curve is shown below.

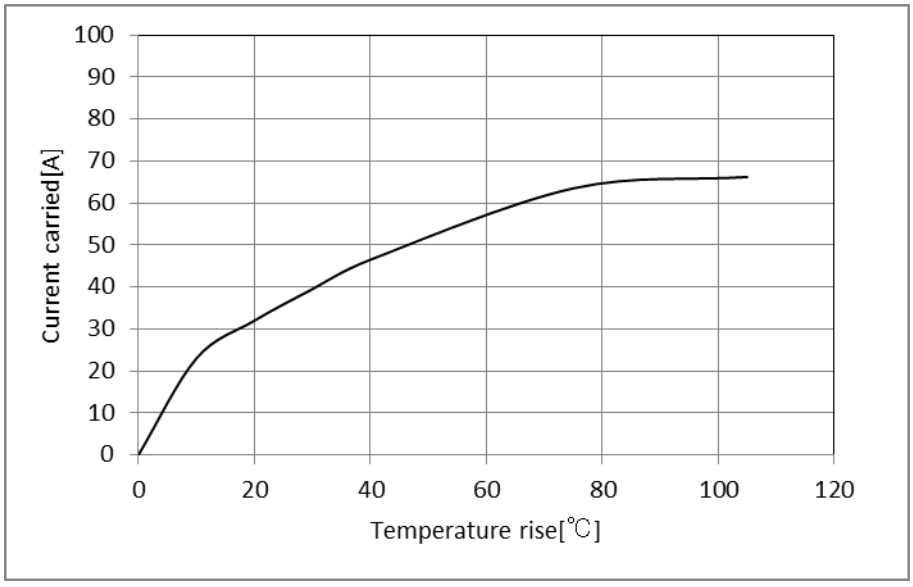
- Test specimen:Unused DF60-3P-10.16DS(27).
  Unused DF60-3S-10.16C
  Unused DF60-1012SCFA
- Test cable spec:AWG 10
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



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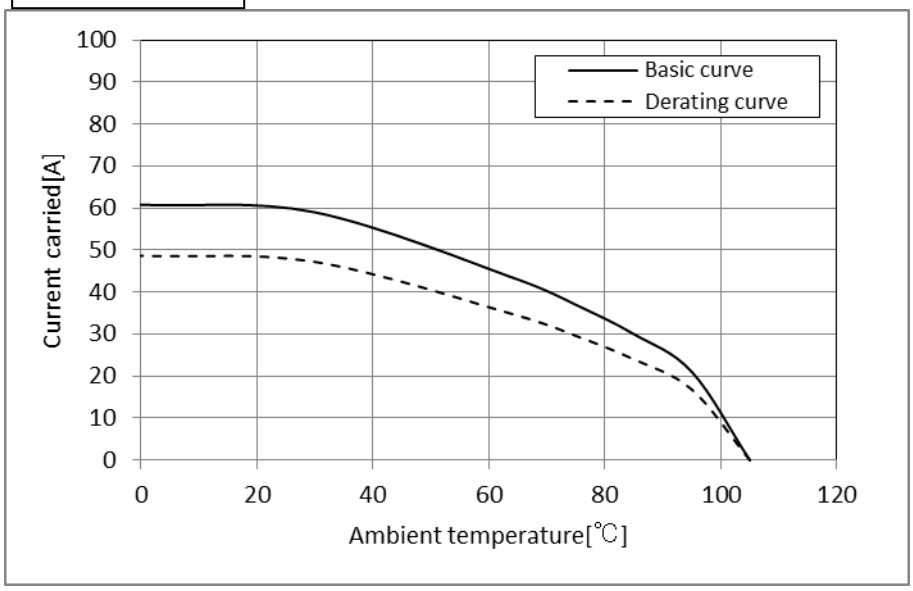
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(Note 8) Measurement method of derating curve is shown below.

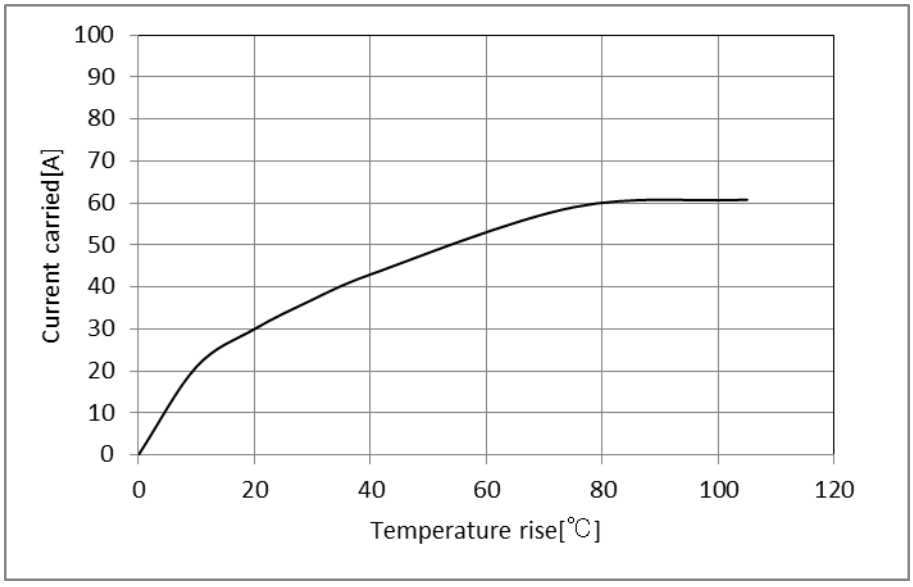
- Test specimen:Unused DF60-6P-10.16DS(27).
  Unused DF60-6S-10.16C
  Unused DF60-1012SCFA
- Test cable spec:AWG 10
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



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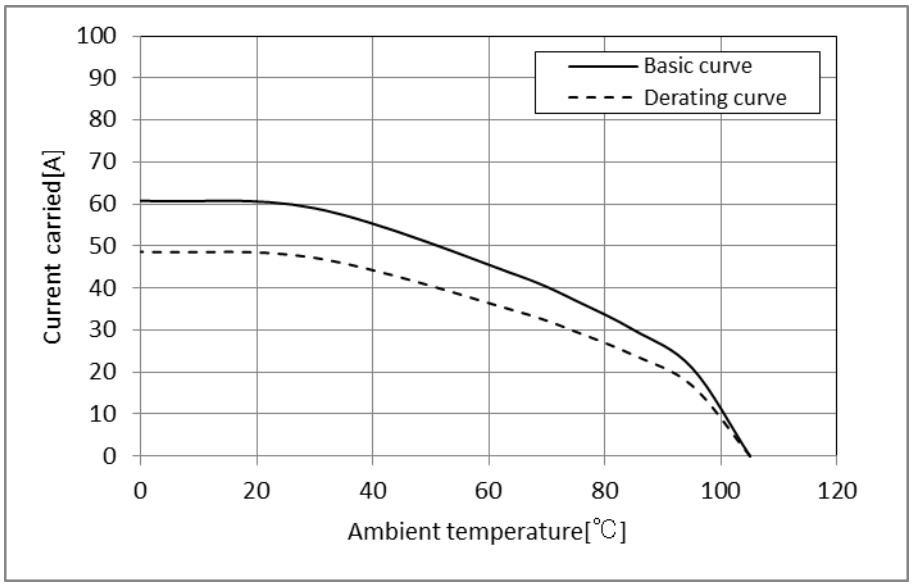
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(Note 9) Measurement method of derating curve is shown below.

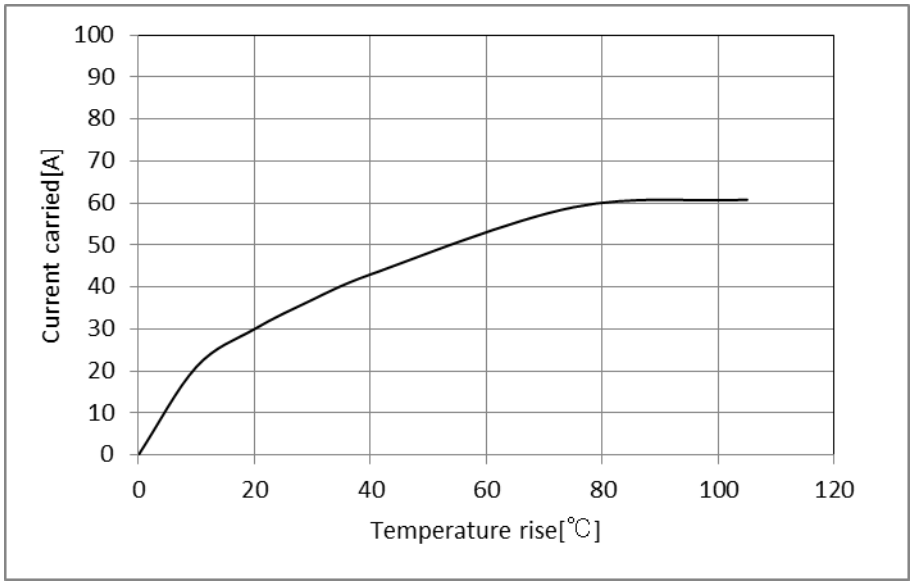
- Test specimen:Unused DF60-1P-10.16DS(27).
  Unused DF60-1S-10.16C
  Unused DF60-1012SCFA
- Test cable spec:AWG 12
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



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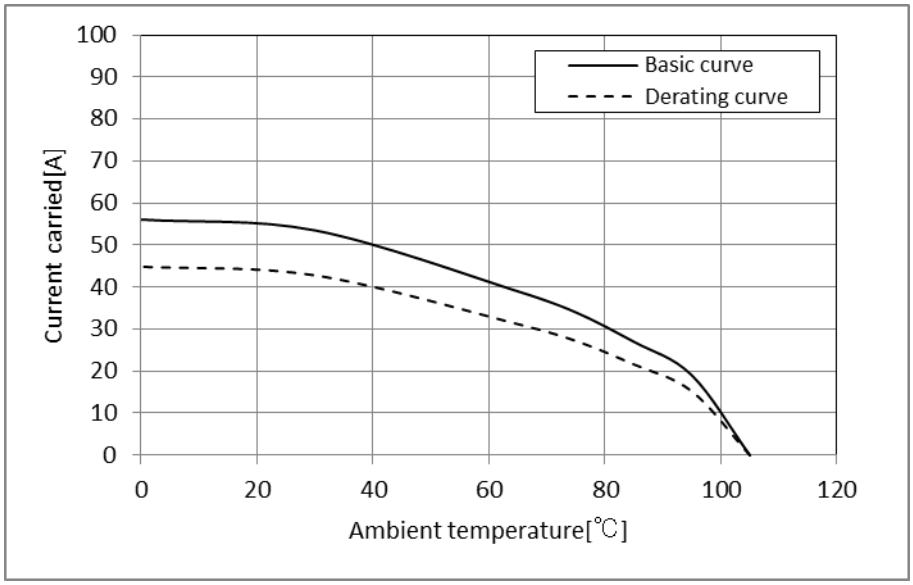
△1

(Note 10) Measurement method of derating curve is shown below.

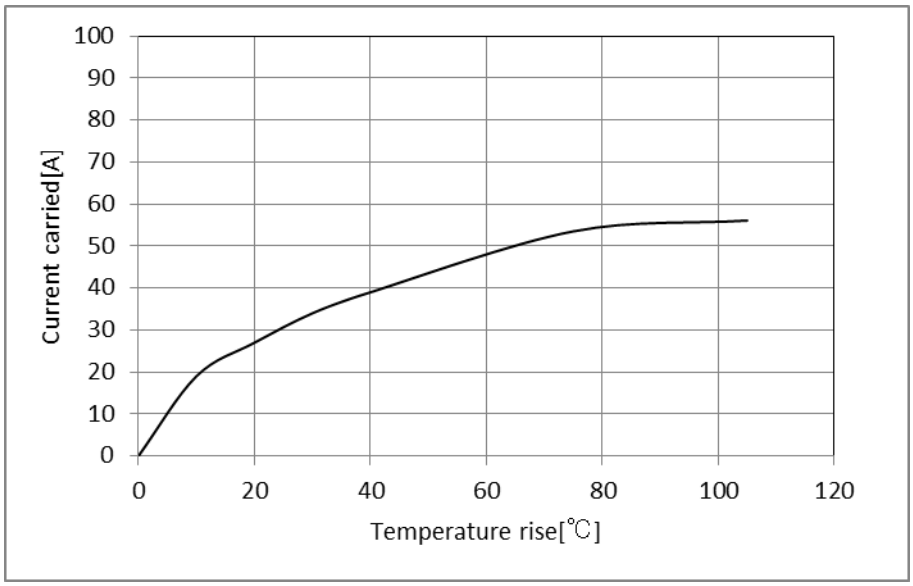
- Test specimen:Unused DF60-3P-10.16DS(27).
  Unused DF60-3S-10.16C
  Unused DF60-1012SCFA
- Test cable spec:AWG 12
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



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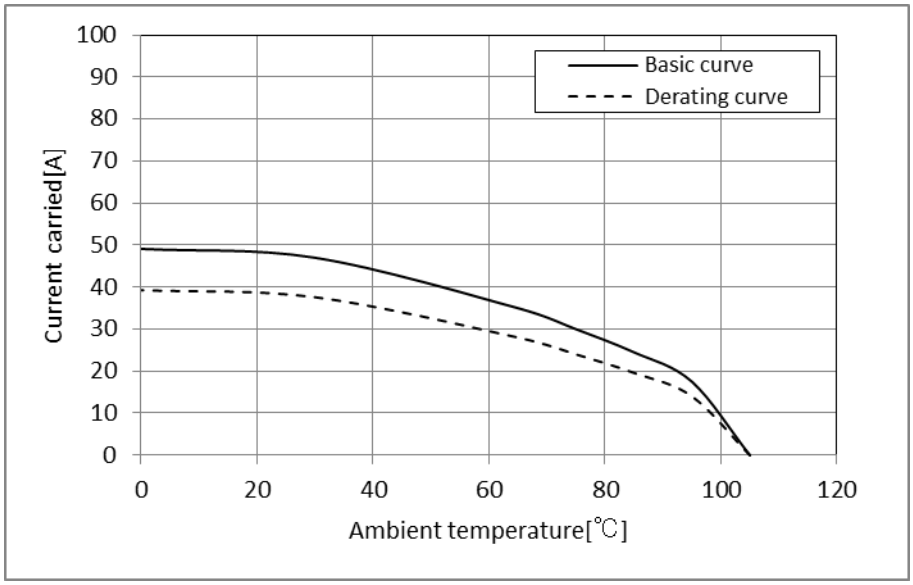
△1

(Note 11) Measurement method of derating curve is shown below.

- Test specimen:Unused DF60-6P-10.16DS(27).
  Unused DF60-6S-10.16C
  Unused DF60-1012SCFA
- Test cable spec:AWG 12
- Test condition: Turn on electricity under the static state and measure.
  (Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve

