

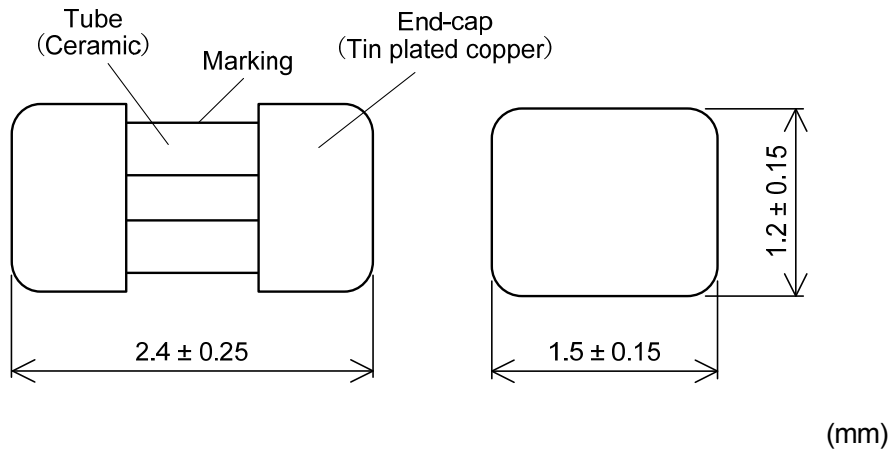
Basic Specifications for MCF2 Series

SOC

SOC product name MCF2 “Rated current” R08B4
 MCF2 “Rated current” B
 R08B4: Products packaged on tape
 B: Products packaged in a plastic bag

Certification UL248-1, UL248-14 C-UL US Listed Rated currents 125 mA–1.25 A
 Use of C -UL US Listing Mark is approved by UL when UL has tested and evaluated the products in accordance with the UL and the CSA standards and confirmed that they are in conformity with the standards.

Dimensions and construction



* The structure of this product is not completely hermetically sealed, but it satisfies the requirements of MIL-STD-202G, Method 112E, 3. Test Condition A.

Marking S “Rated current”
 ———— Rated currents below 1 A are expressed in milliamperes; however, the unit symbols “A” and “mA” are not used.
 ———— Abbreviation for SOC

Electrical characteristics

Certification	Rated voltage	Rated breaking current		Rated current (I_N)	Temperature rise	Current carrying capacity	Overload operation
C-UL US	AC 125 V	50 A	PF = 0.95–1.0	125 mA– 1.25 A	Not more than 75 K at 1.0 I_N	1.0 I_N until temperature stabilization occurs.	Within 60 s at 2.0 I_N
	DC 72 V		Resistive circuit				

Rated currents

Packaged on tape

Your part No.	SOC product name	Rated current
	MCF2 125mAR08B4	125 mA
	MCF2 160mAR08B4	160 mA
	MCF2 200mAR08B4	200 mA
	MCF2 250mAR08B4	250 mA
	MCF2 315mAR08B4	315 mA
	MCF2 400mAR08B4	400 mA
	MCF2 500mAR08B4	500 mA
	MCF2 630mAR08B4	630 mA
	MCF2 800mAR08B4	800 mA
	MCF2 1AR08B4	1 A
	MCF2 1.25AR08B4	1.25 A

Packaged in a plastic bag

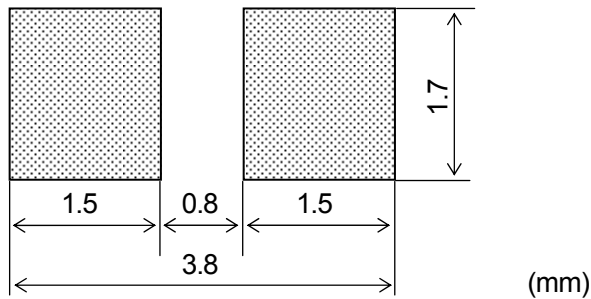
Your part No.	SOC product name	Rated current
	MCF2 125mAB	125 mA
	MCF2 160mAB	160 mA
	MCF2 200mAB	200 mA
	MCF2 250mAB	250 mA
	MCF2 315mAB	315 mA
	MCF2 400mAB	400 mA
	MCF2 500mAB	500 mA
	MCF2 630mAB	630 mA
	MCF2 800mAB	800 mA
	MCF2 1AB	1 A
	MCF2 1.25AB	1.25 A

Environment-related substances

The six hazardous substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)) specified in the EU RoHS Directive are not used intentionally in this product, except high melting temperature type solders, containing 85 wt% or more lead, that are exempted from the Directive. This product conforms to the EU RoHS Directive 2011/65/EU. Lead content as impurities is not more than 0.1 wt%.

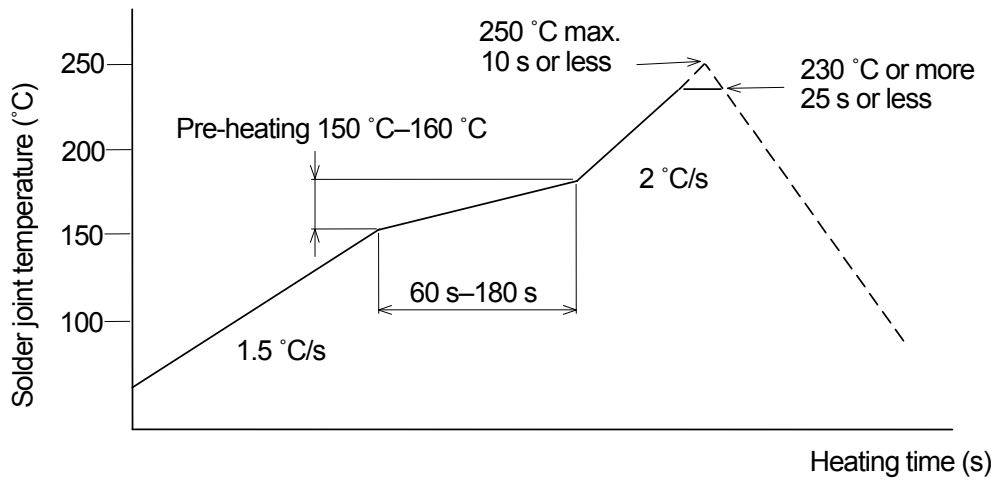
Mounting

1. Land pattern



2. Soldering conditions

1) Reflow soldering



Soldering can be repeated 2 times under the conditions above.



Land pattern and soldering conditions described above are examples when facilities in our company are used. Please make sufficient evaluations under the actual conditions in your company because the conditions may vary depending on facilities, solder type, solder quantity, board size, and board material.

2) Hand soldering with soldering iron

Soldering iron tip temperature: 300 °C max.

Duration: 2 s or less



Do not touch the terminal directly with a soldering iron.
Do not apply any stress to the fuse body when the body and/or terminal are/is heated.

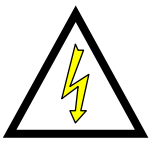


Safety Precautions When Selecting and Using Fuses

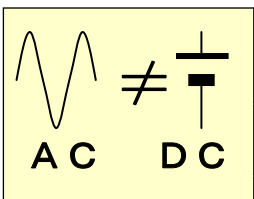
WARNING: Read and follow these precautions before selecting and using fuses. Failure to properly select, install and use fuses can result in serious injury, death or property damage. Before final fuse selection, always test the proposed fuse in your actual equipment to ensure that the fuse satisfies all your operational and safety requirements.



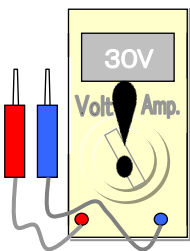
Use the fuses within the specification requirements. Exceeding specification requirements may result in injury, death or fire.



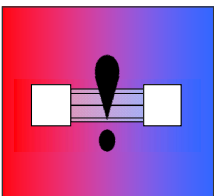
Shut down the power before touching the fuse. Failure to do so may result in electrocution or serious burns.



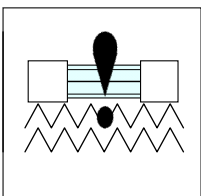
Be aware that the breaking ability of a fuse will differ depending on whether the circuit is an AC or a DC circuit. Fuses intended for use in AC circuits should therefore not be employed in DC circuits, and vice versa, as this may result in accidents such as explosion, property damage, and serious injury.



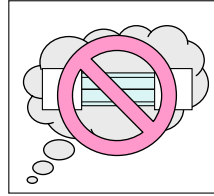
Check if the circuit voltage is large enough for the fuse operation. When the circuit voltage is too small, the fuse may not operate even though the abnormal current passes through it, because the current decreases due to the increase of the fuse resistance.



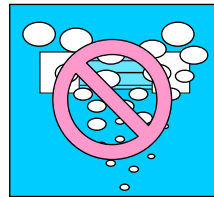
Consider the effect of the ambient temperature when you use the fuse. Electrical performance of the fuse may vary depending on the temperatures.



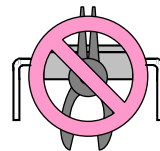
Use the fuse in a place where the vibration and impact levels are within the specified limits. Exceeding these limits may result in disconnecting the fuse-element.



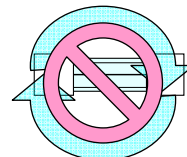
Do not use the fuse where it is exposed to high humidity, corrosive gas, and flammable gases. Doing so may result in nuisance operations, disconnection of the fuse-element, or explosion.



Do not apply ultrasonic cleaning to the fuse. Ultrasonic cleaning may result in disconnection of the fuse-element.



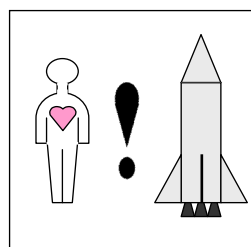
Do not form the lead when the fuse is 40 °C or more. Lead forming when the fuse is 40 °C or more may result in disconnection of the fuse-element because the load is applied to the fuse-element.



Use sample fuses only for evaluation. Do not reuse used fuses. Properly dispose of used fuses.



When inserting a fuse into a fuseholder, avoid forcing it. This may result in the fuse cracking or contact failure which will significantly reduce its ability to work properly or shorten its life.



When the fuse is used for a life support system or equipment that requires high reliability, more closely examine and evaluate the fuse in actual circuit conditions than is necessary for other general electronic equipment.

FOR REFERENCE ONLY (ご参考)

I-t Curve

このI-t特性図は、弊社が試験条件を特定して測定した実測値の平均値だけをプロットしてあります。参考値であり保証値ではありません。
ヒューズの特性はその使用条件により変化しますので、お客様にヒューズのご使用条件下で、ヒューズがお客様のご要求を満足しているかを実際にご確認頂く必要があります。

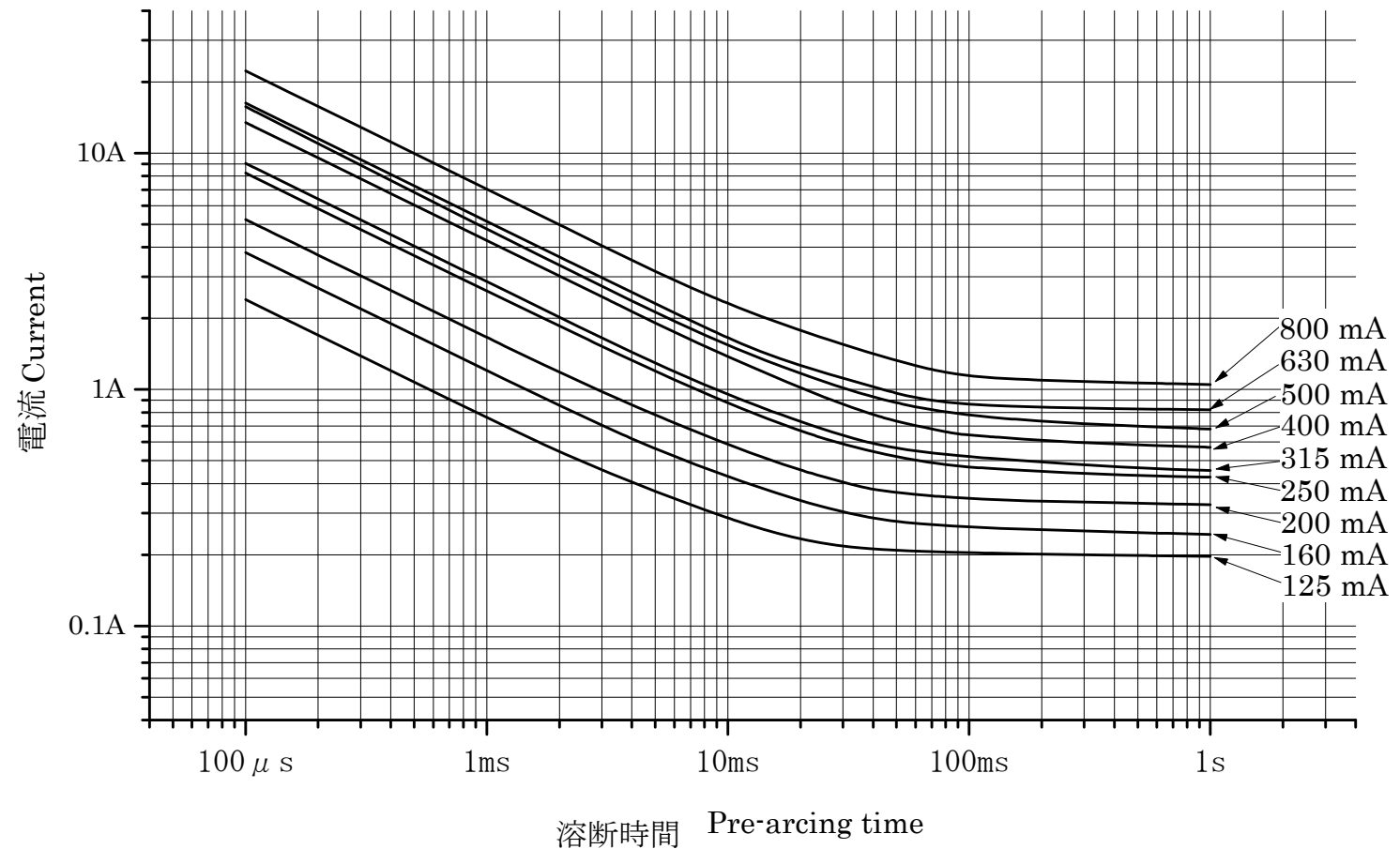
This I-t curve is a plot of the average values of the measurement obtained under the conditions specified by our company.

These data are for reference only and are not intended to infer any guaranteed values.

Characteristics of the fuse may vary depending on the usage conditions. Always test the fuse in the circuit under the actual circuit conditions.

Type: MCF2

Control No.: 141015



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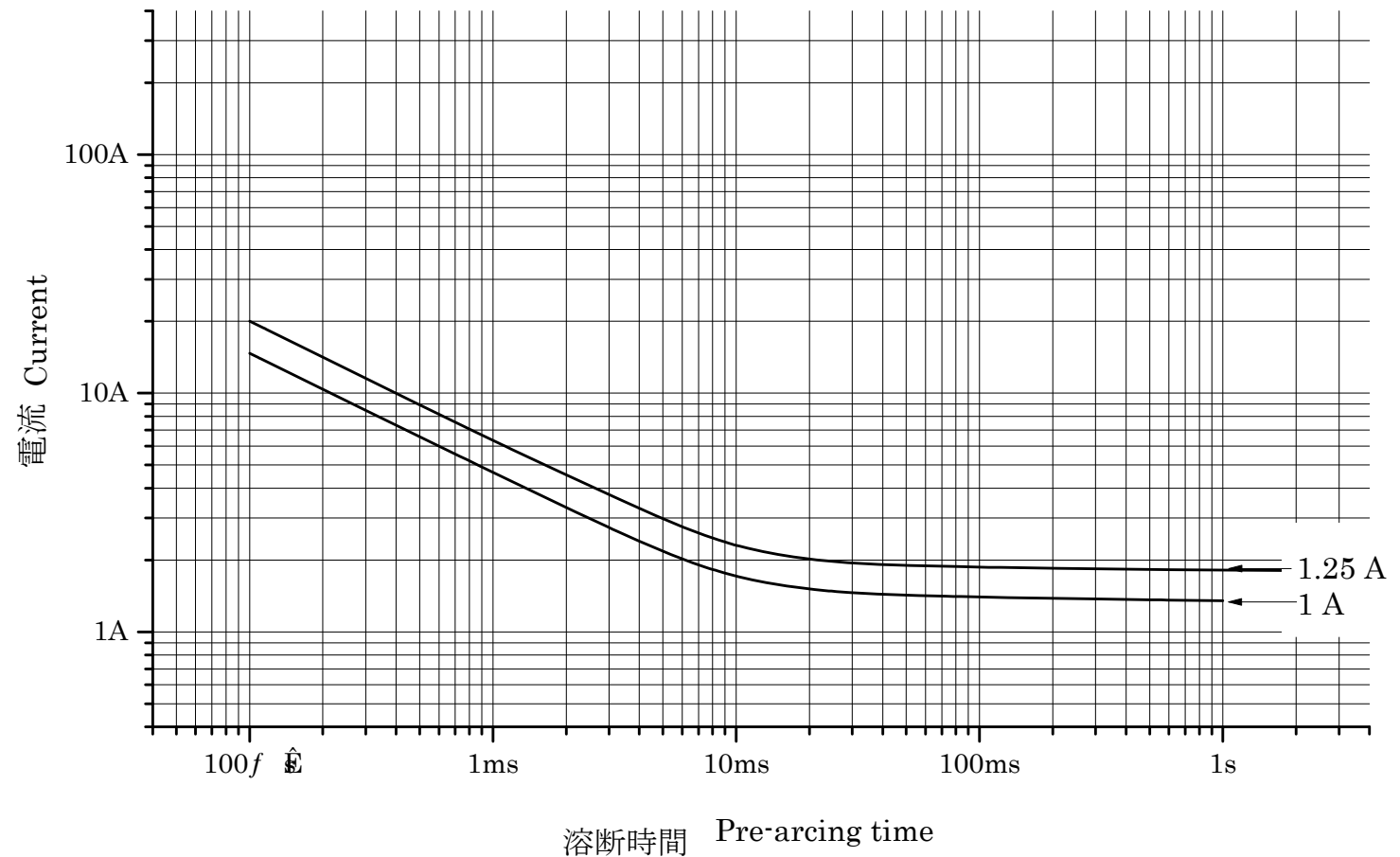
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Type: MCF2

Control No.: 141015



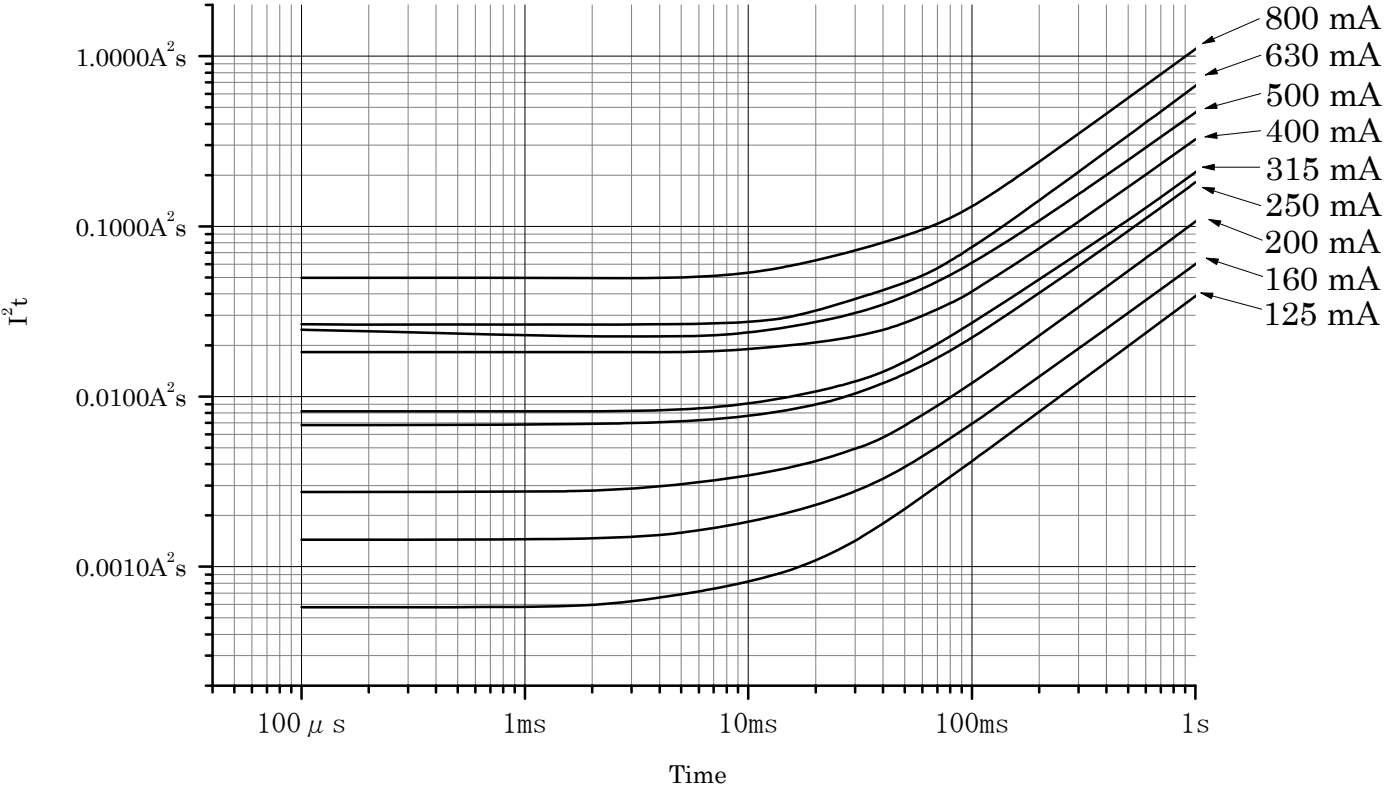
FOR REFERENCE ONLY (ご参考)

I²t-t Curve

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This I²t-t curve is a plot of the average values of the measurement obtained under the conditions specified by our company. These data are for reference only and are not intended to infer any guaranteed values. Characteristics of the fuse may vary depending on the usage conditions. Always test the fuse in the circuit under the actual circuit conditions.

Type: MCF2
Control No.: 141015

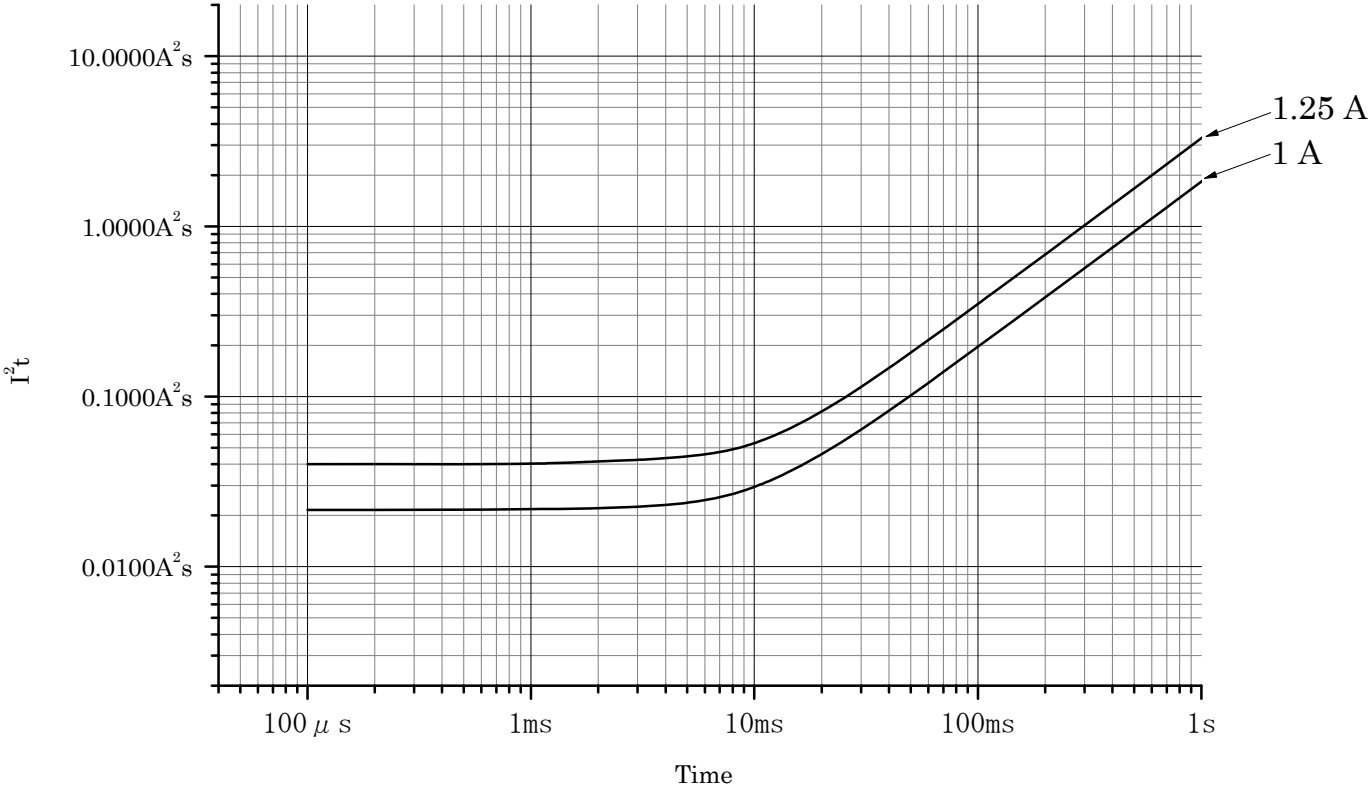


I²t-t Curve

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This I²t-t curve is a plot of the average values of the measurement obtained under the conditions specified by our company. These data are for reference only and are not intended to infer any guaranteed values. Characteristics of the fuse may vary depending on the usage conditions. Always test the fuse in the circuit under the actual circuit conditions.

Type: MCF2
Control No.: 141015



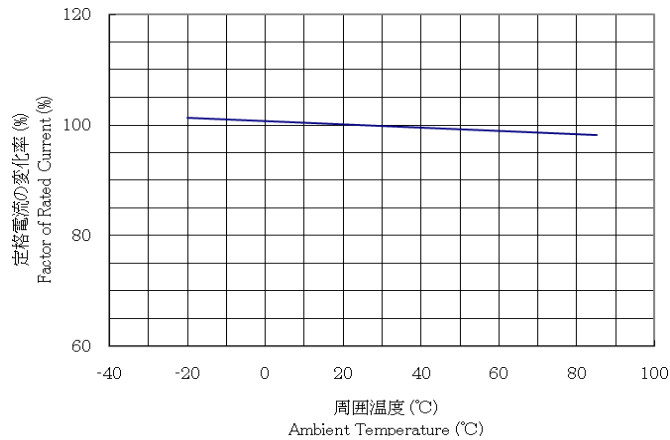
周囲温度の影響—定格電流値のリレーティング

Influence of Ambient Temperature - The Re-rating of the Rated Current

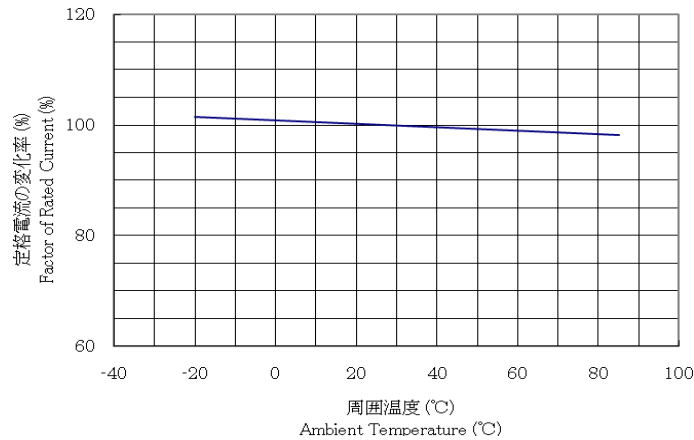
この周囲温度に対する定格電流の変化を示すグラフは、周囲温度-20 °C、25 °C及び 85 °Cに於いて弊社が特定した条件で測定した3点の実測値であり、お客様での実使用条件を考慮したものではありません。ヒューズの特性はその使用条件により変化しますので、お客様にヒューズのご使用条件下で、ヒューズがお客様のご要求を満足しているかを実際にご確認頂く必要があります。

This chart is a plot of the measurements obtained at the ambient temperatures of -20 °C, 25 °C and 85 °C under the conditions specified by SOC; therefore, conditions of your actual application are not considered in this chart. These data are for reference purposes only and are not intended to infer any guaranteed values. Fuse characteristics may vary depending on the usage conditions. Always test the fuse in the circuit under the actual circuit conditions.

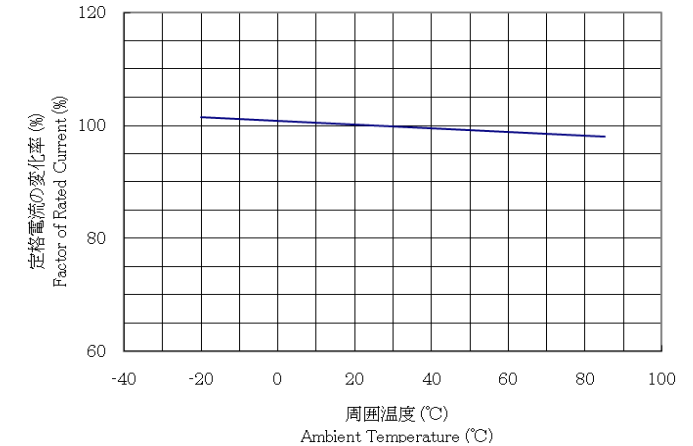
Type: MCF2 125mA Control No.: 130711



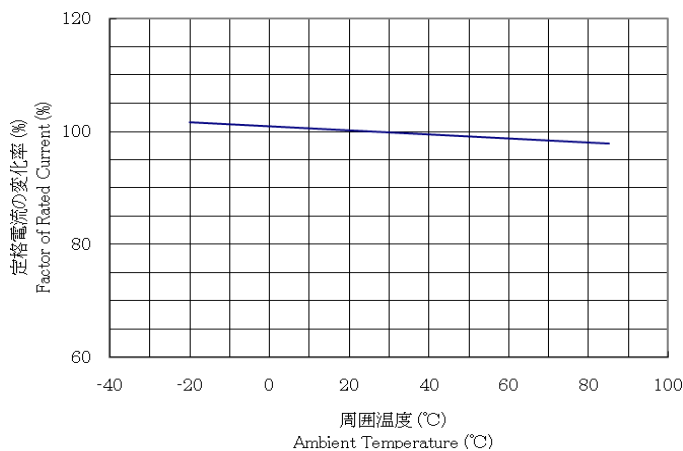
Type: MCF2 160mA Control No.: 130711



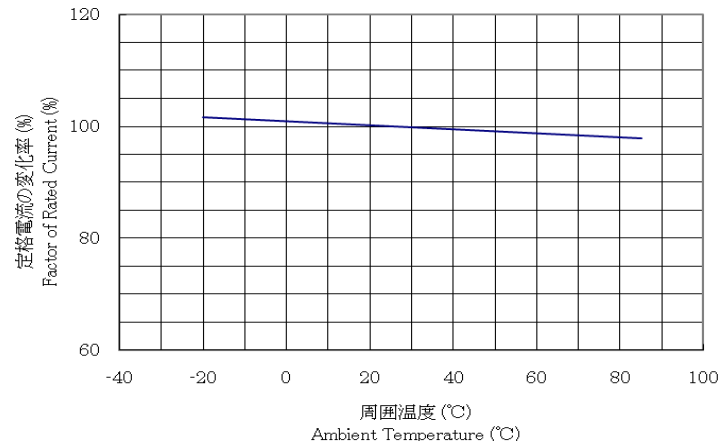
Type: MCF2 200mA Control No.: 130711



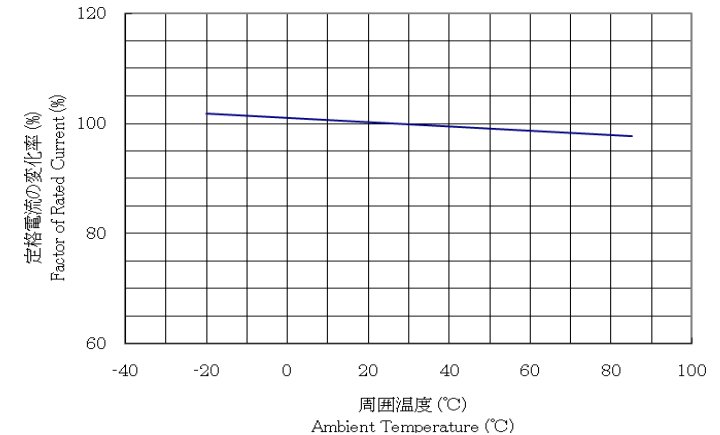
Type: MCF2 250mA Control No.: 130711



Type: MCF2 315mA Control No.: 130711



Type: MCF2 400mA Control No.: 130711



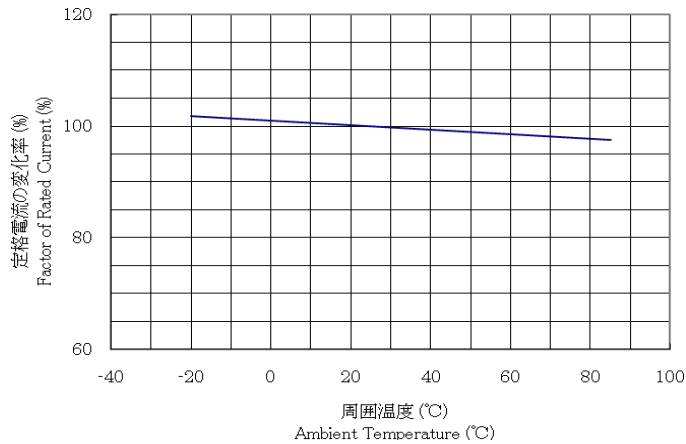
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Influence of Ambient Temperature - The Re-rating of the Rated Current

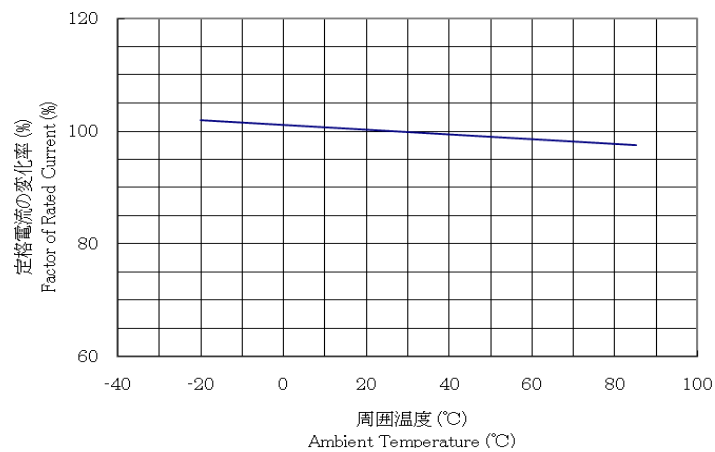
この周囲温度に対する定格電流の変化を示すグラフは、周囲温度-20 °C、25 °C及び85 °Cに於いて弊社が特定した条件で測定した3点の実測値であり、お客様での実使用条件を考慮したものではありません。ヒューズの特性はその使用条件により変化しますので、お客様にヒューズのご使用条件下で、ヒューズがお客様のご要求を満足しているかを実際にご確認頂く必要があります。

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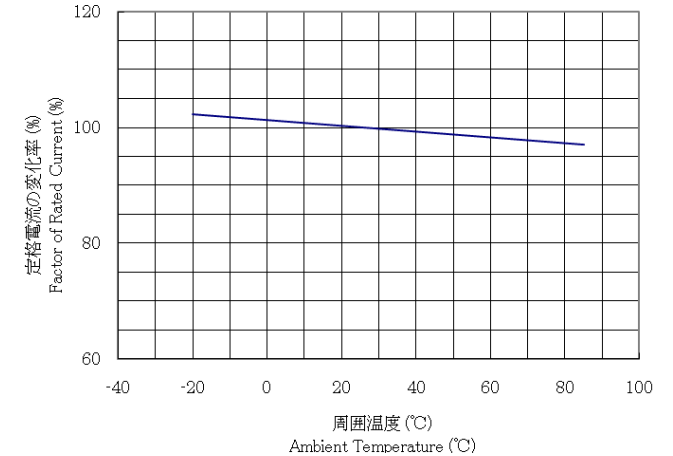
Type: MCF2 500mA Control No.: 130711



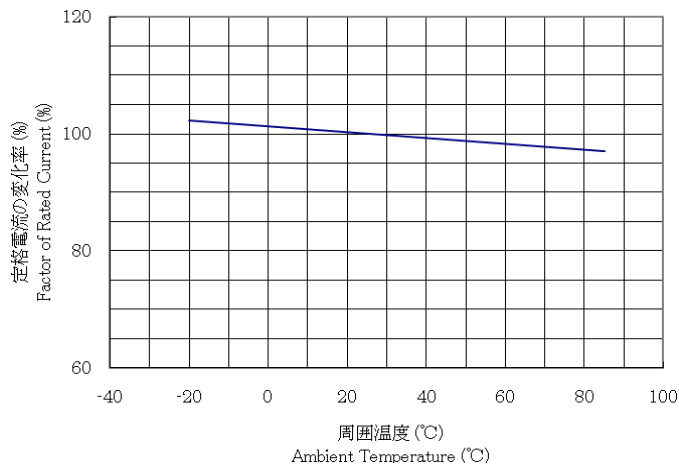
Type: MCF2 630mA Control No.: 130711



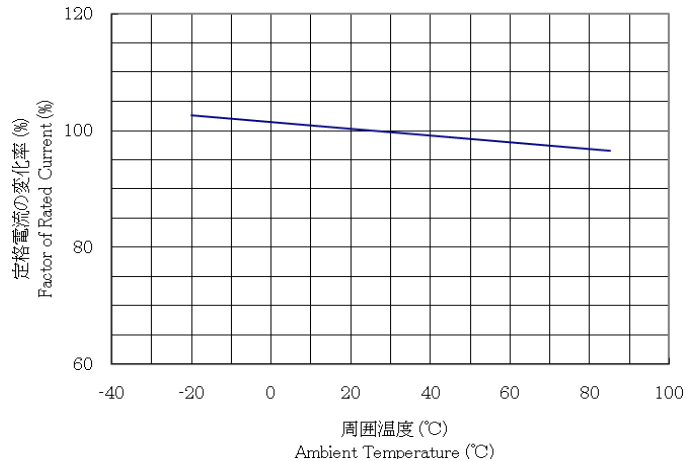
Type: MCF2 800mA Control No.: 130711



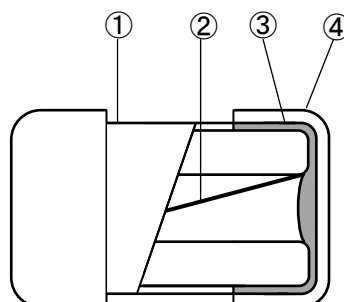
Type: MCF2 1A Control No.: 130711



Type: MCF2 1.25A Control No.: 130711



1. Construction



No.	Part Name	Materials and finish
①	Case	Ceramic
②	Fuse-element	—
③	Solder	Pb-5.0Ag-2.5Sn
④	End-cap	Tin plated copper

2. Usage conditions

Ambient temperature: -20 °C—+85 °C

Note: Current carrying capacity of the fuse may vary depending on the ambient temperature.

Ambient humidity: 85% RH or less

3. Storage conditions and storage period

Products packaged as delivered can be stored for 1 year from our shipment.

Ambient temperature: -20 °C—+40 °C (No condensation)

Ambient humidity: 85% RH or less

Ambient atmosphere:

- Not exposed to corrosive gas or sea breeze.
- No visible dust.
- Not exposed to direct sunlight.

Load: No application of load that may cause deformation or degradation of the product.

4. Typical cold resistance (for reference only)

Rated current	Typical cold resistance	Rated current	Typical cold resistance
125 mA	1450 mΩ	500 mA	200 mΩ
160 mA	760 mΩ	630 mA	190 mΩ
200 mA	740 mΩ	800 mA	135 mΩ
250 mA	380 mΩ	1 A	105 mΩ
315 mA	360 mΩ	1.25 A	76 mΩ
400 mA	230 mΩ		

1. Packaging

1.1 Tape configuration

This product shall be packaged as per Type II-Blister carrier tape with single sprocket holes (the width of the tape is 8 mm) stipulated in JIS C 0806-3 Packaging of components for automatic handling Part 3: Packaging of surface mount components on continuous tapes (see Figure 1).

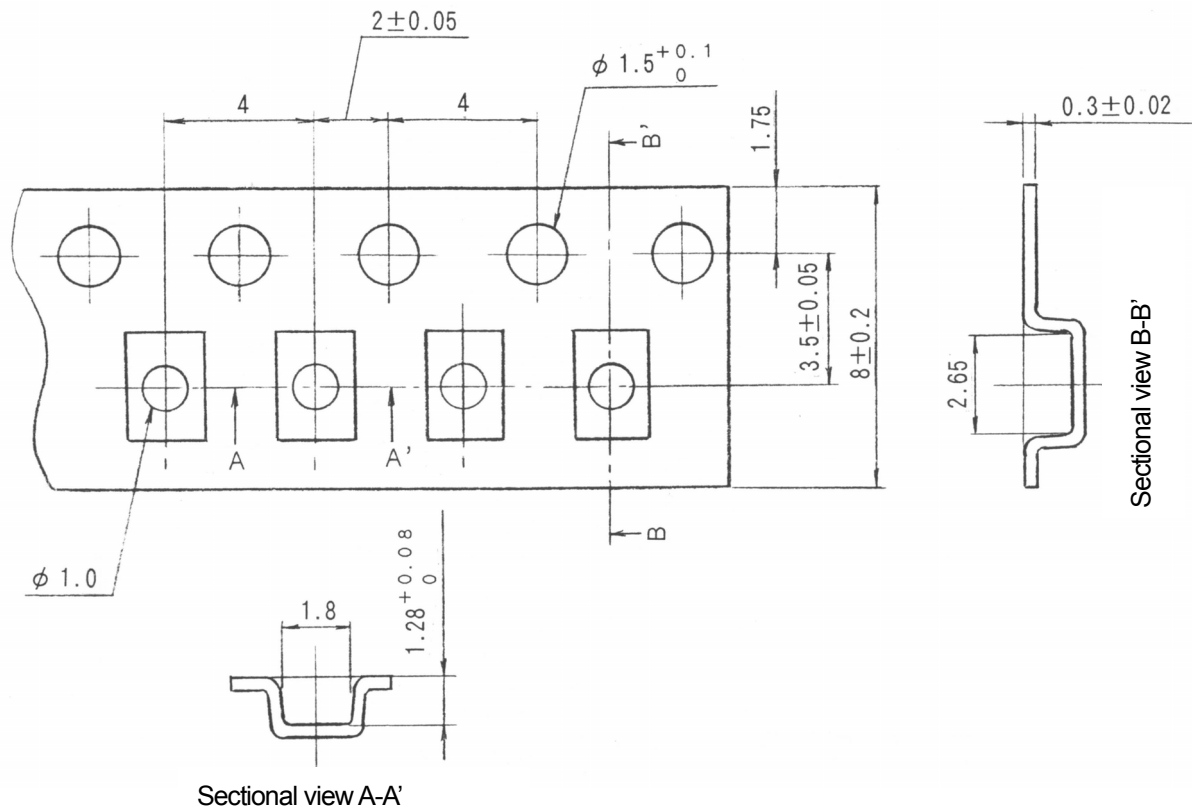
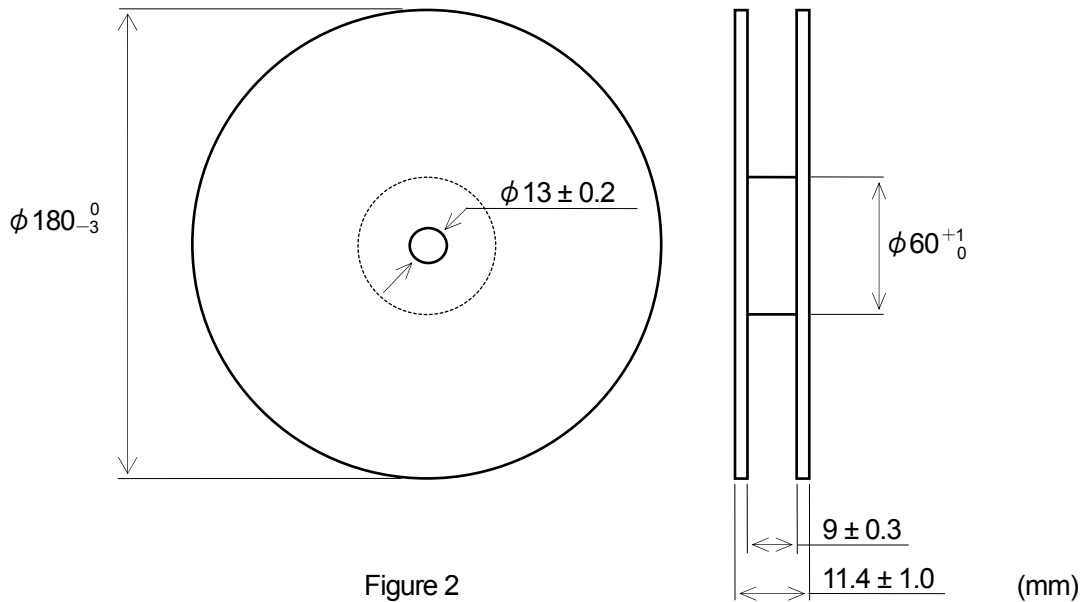


Figure 1

(mm)

1.2 Reel configuration

The reel used for packaging this product is mostly in accordance with JIS C 0806-3 Packaging of components for automatic handling-Part 3: Packaging of surface mount components on continuous tapes (see Figure 2).



1.3 Packing quantity

The packaging code consists of a symbol “R08B” representing a reel configuration and a mounting hole pitch “4” added as a suffix. Quantity to be packed is as in the table below.

Packaging code	Quantity
R08B4	2,000 pcs.

1.4 Contents of marking

The following information shall be indicated on one side of the reel.

- Your part number (by request)
- Lot No.
- Quantity of fuses
- Packaged date
- Packaging code
- Country of origin
- Manufacturer
- Production facilities
- Indications specified by the applicable standards

2. Lot number

The lot number indicates the following:

