



贝特卫士®

更好的电路安全卫士!  
You build electronics, We safeguard them!

# 承 认 书

## APPROVAL SHEET

编 号 No.	0651150000-A/5-B
日期 Date	2020.06.28

客 户 Customer	
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品 名 Product	<b>0603 Size Chip Fuse</b>
系 列 Series	<b>065 series</b>

料号 Part No.	规格描述 Specification	备注 Remark
贝特电子 Betterfuse	0603 Size Low BC Fast Acting current fuse	
客 户 Customer		

环保特别提示 Special instructions for environmental protection
本产品:

供应商-贝特电子 Supplier-Betterfuse	零件承认章 Approval Signet	客 户 Customer	零件承认章 Approval Signet
制 作 Make			
审 核 Check			
确 认 Approval			

联络 Contact			
业务 Sales	电话 Telephone	手机 Cellphone	邮箱 E-mail
零件承认后敬请回签一份给我司留存, 或将承认后的封面传真 (0769-8352 1857) 至我司, 谢谢!			



Document Record						
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## 1. SCOPE AND DESCRIPTION



Following electronic product specifications apply to 065 fuses of the 065 series. The 065 series is a Fast-Acting type fuse for over-current protection.

With their small size and layout, 065 fuses are ideal for industrial products. They are widely used in cellphones, DVD players, battery packs, hard disk drives and digital cameras.

## 2. GENERAL INFORMATION


### General Description

The 065 fuses stand out due to their ultra-small size and excellent electrical performance, reliability and quality. The solder-free design provides outstanding on-off and temperature cycling characteristics during operation and also makes our chip fuses more heat and shock tolerant than typical miniature fuses.

### Detailed Features

- Pass the AEC-Q200 automotive grade certified
- Compatible with reflow and wave soldering
- Ceramic and glass construction
- Excellent environmental integrity
- Lead-free, Halogen-free, RoHS compliant
- Designed to UL 248-14

## 3. AGENCY APPROVALS

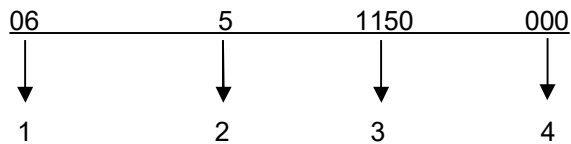
Agency	Agency File Number	Ampere/ Voltage Range
	E300003	32V DC :250mA~8.00A



**4. PART NUMBERING SYSTEM**

4.1 Part Number

Example: 065115000



- |                                     |                            |
|-------------------------------------|----------------------------|
| 1 .Foot Print .....                 | 0603                       |
| 2 .Electrical characteristics ..... | Fast-Acting (F)            |
| 3 .Ampere Rating .....              | 1.5A (see table 4.3 below) |
| 4 .Supplementary Code .....         | (see table 4.2 below)      |

4.2 Supplementary Code Table

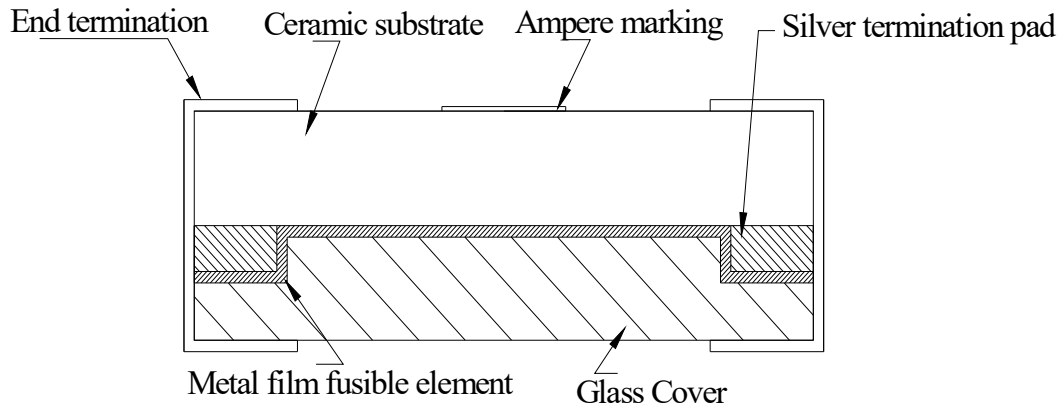
CODE	DESIGNATION
<b>000</b>	Tape-and-reel

4.3. Ampere / Voltage Rating Table

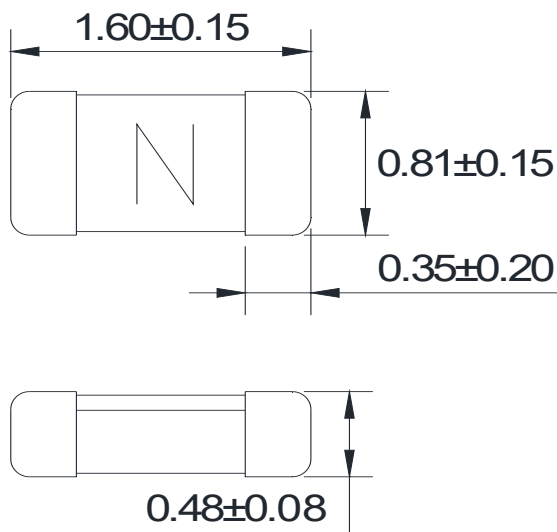
AMP CODE	AMPERE RATING	VOLTAGE RATING
<b>0250</b>	250mA	32V DC
<b>0375</b>	375mA	32V DC
<b>0500</b>	500mA	32V DC
<b>0750</b>	750mA	32V DC
<b>1100</b>	1.00A	32V DC
<b>1150</b>	1.50A	32V DC
<b>1200</b>	2.00A	32V DC
<b>1250</b>	2.50A	32V DC
<b>1300</b>	3.00A	32V DC
<b>1350</b>	3.50A	32V DC
<b>1400</b>	4.00A	32V DC
<b>1500</b>	5.00A	32V DC
<b>1600</b>	6.00A	32V DC
<b>1700</b>	7.00A	32V DC
<b>1800</b>	8.00A	32V DC



### 5. MECHANICAL SPECIFICATIONS

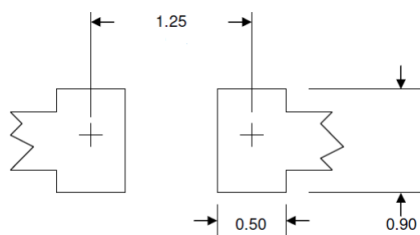


Dimensions (units: mm)



#### Recommended Land Pattern

unit: mm



#### Operating Temperature:

-55°C to +150°C

#### Storage Conditions:

+10°C to +60°C

Relative humidity: ≤ 75% yearly average  
without dew, maximum 30 days at 95%

#### Vibration Resistance:

24 cycles at 15 min. each (60068-6)

10-60Hz at 0.75mm amplitude

60-2000Hz at 10g acceleration

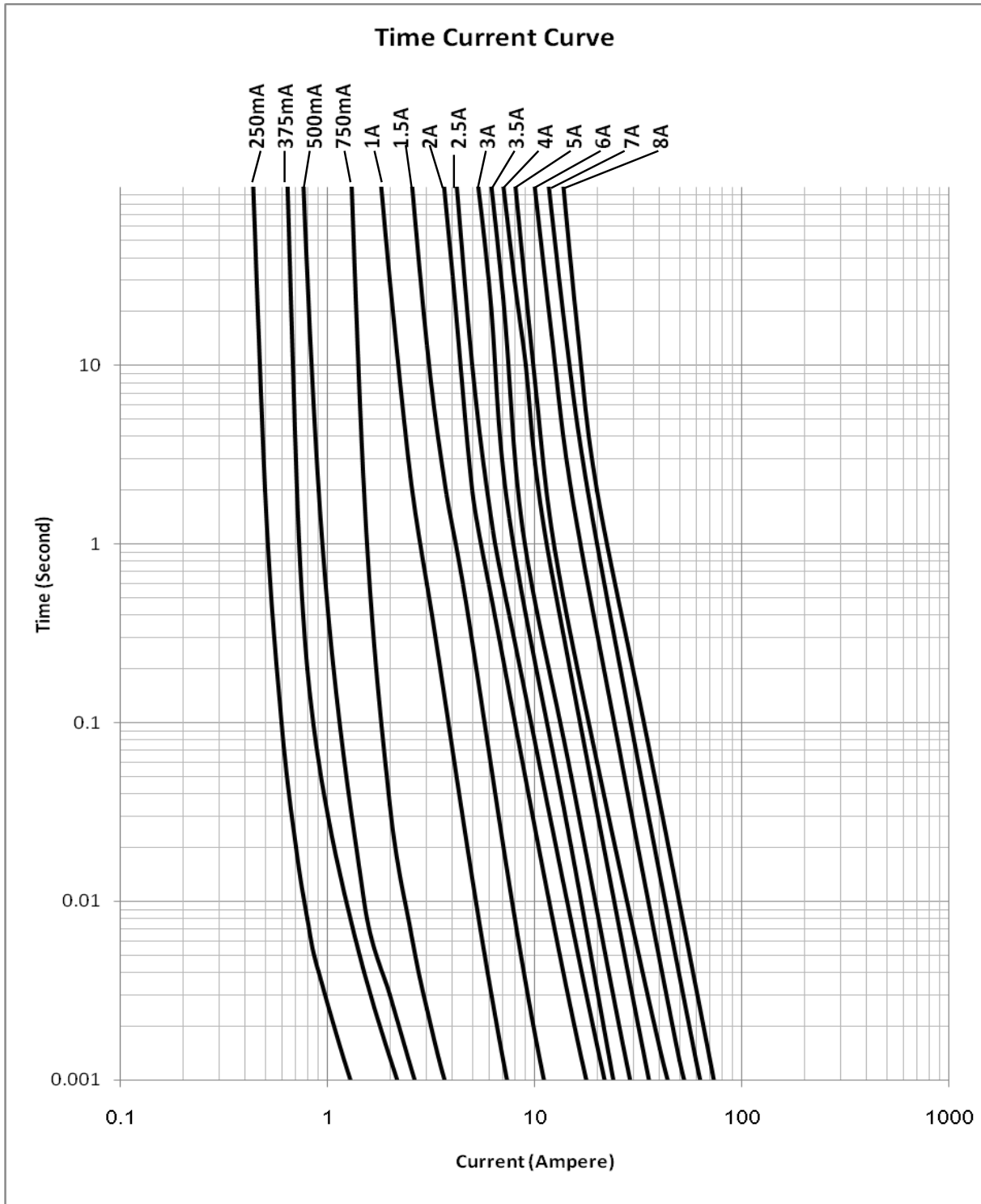


## 6. ELECTRICAL SPECIFICATIONS

### Time vs Current Characteristics Table

(measured with constant current power supply)

Time vs Current Characteristics: UL248-14		
Rated Current	100%	200%
250mA~8A	>4H	<60s





**Electrical characteristics**

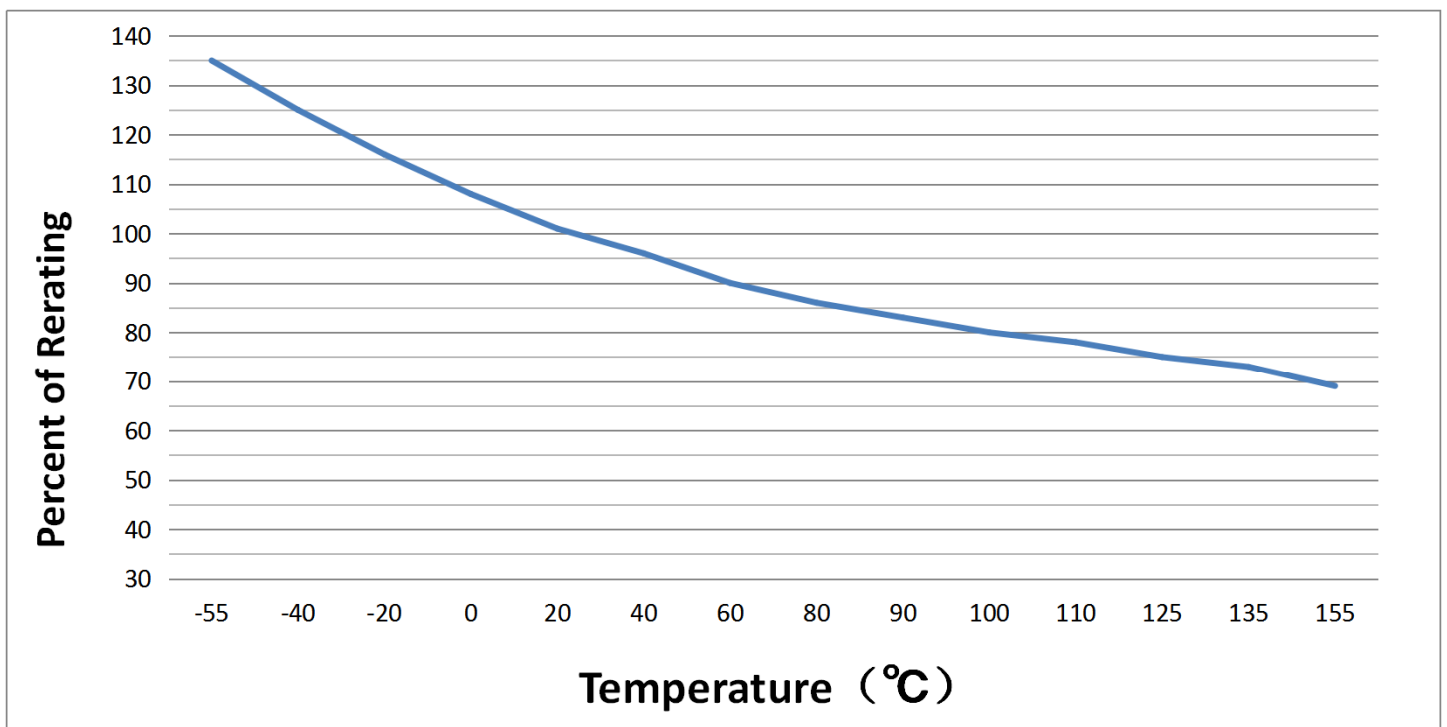
Electrial Characteristics at 25°C								
Amp Code	Rated Current	Rated Voltage DC	Typical Voltage Drop Max(mV)	Breaking Capacity	Typical Melting I <sup>2</sup> T (A <sup>2</sup> s)	Typical cold Ressistanc (mΩ)	Alpha Mark	Approvals
								cURus
0250	250mA	32V DC	890	50A@32V DC	0.00046	2200~4000	D	●
0375	375mA		585		0.00095	1250~2050	E	●
0500	500mA		580		0.0012	800~1200	F	●
0750	750mA		425		0.0095	350~550	G	●
1100	1.00A		330		0.012	215~284	B	●
1150	1.50A		268		0.047	125~173	H	●
1200	2.00A		155		0.118	57~90	K	●
1250	2.50A		138		0.145	35~58	L	●
1300	3.00A		128		0.25	27~42	O	●
1350	3.50A		125		0.55	18~35	R	●
1400	4.00A		118		0.59	17~24	S	●
1500	5.00A		108		1.25	9.5~16.5	T	●
1600	6.00A		105		1.75	8.0~14	V**	●
1700	7.00A		78		2.35	6.0~12	X**	●
1800	8.00A		73		3.1	5.0~9.0	Z**	●

**Note:** 1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)  
 2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25degrees  
 3. Typical Pre-arcing I<sup>2</sup>t are measured at 10In Current  
 \*\* For 1A-5A, the color of glass coating is Green; for others, it's Blue.  
 Specifications are subject to change without notice. Application testing is strongly recommended.

**Temperature Derating Curve**

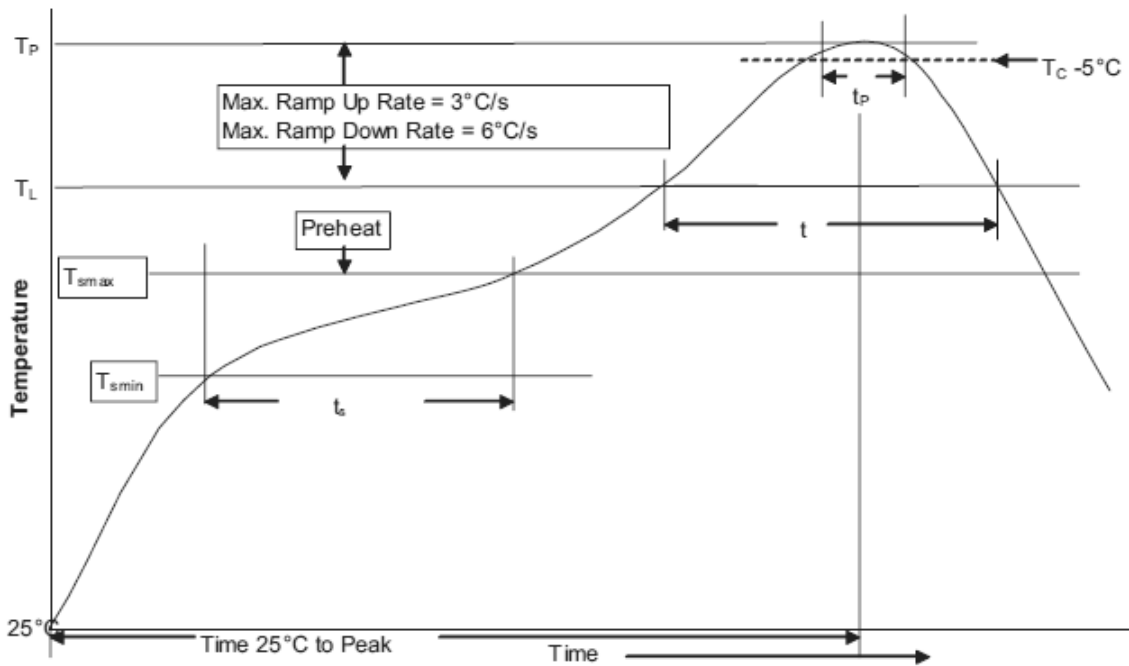
Normal ambient temperature: 23+/-3°C

Operating temperature: -55 ~ 150°C, with proper correction factor applied





**7.SOLDERING PARAMETERS**



**1.Infrared Reflow:**

Temperature:260°C  
Time:30 sec. Max.

**2.Wave Soldering**

Reservoir Temperature:260°C  
Time in Reservoir:10 sec. Max.

Profile Feature		Pb-Free Solder
Average ramp-up rate( $T_{smax}$ to $T_P$ )		3°C/s Max.
Preheat	Temperature Min( $T_{smin}$ )	150°C
	Temperature Max( $T_{smax}$ )	200°C
	Time( $T_{smin}$ to $T_{smax}$ )	60 ~ 120 sec.
Liquidous temperature( $T_L$ )		217°C
Time at liquidous( $t_L$ )		60 ~ 150 sec.
Peak package body temperature( $T_P$ )		260°C
Time( $t_p$ ) within 5°C of specified classification temperature( $T_C$ )		30 sec.
Average ramp-down rate( $T_P$ to $T_{smax}$ )		6°C/sec. Max.
Time(25°C to Peak Temperature)		8 minutes Max.

**8.ORDERING INFORMATION**

The following information are necessary in order to place your order with us correctly:

Series	Amp Code	Supplementary Code	Qty
065			



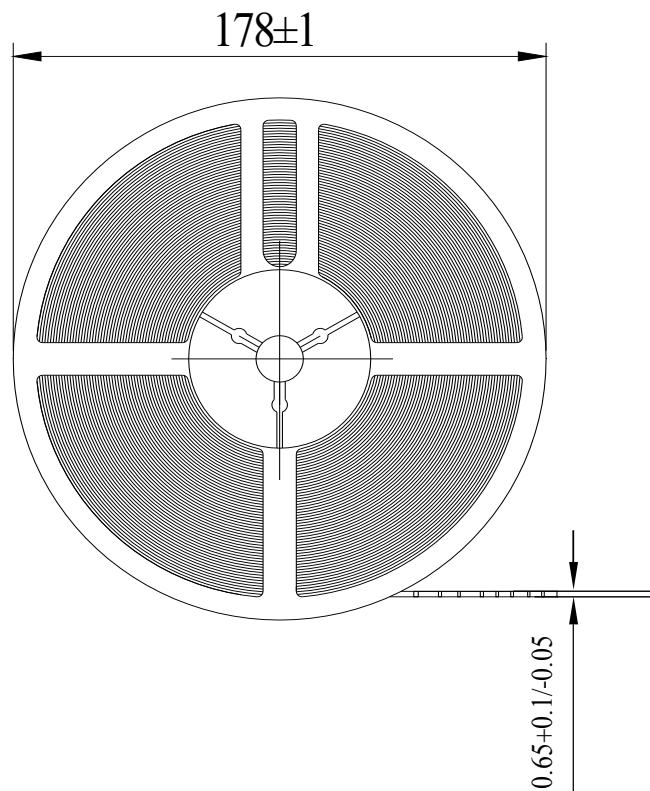


## 9.PACKING INFORMATION

### Taping details

#### Packing

Unit: mm



Quantity Per Reel

5000 pcs

Quantity Carton Box

50000pcs

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Email: [info@betterfuse.com](mailto:info@betterfuse.com)



## 10. APPENDIX



ONLINE CERTIFICATIONS DIRECTORY

**JDYX2.E300003  
Fuses, Supplemental - Component**[Page Bottom](#)**Fuses, Supplemental - Component**[See General Information for Fuses, Supplemental - Component](#)

**DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD**  
 RM 601 OF 16 BLK  
 XINZHUYUAN NO 4 XINZHU RD  
 SONGSHANLAKE HIGHTECH INDUSTRIAL DEVELOPMENT ZONE  
 DONGGUAN, GUANGDONG 523808 CHINA

E300003

**Supplemental micro fuses**

Cat. No.	Size mm(in)	Amps (A)	Volts (V)	Interrupting Rating (A)
<b>061</b>	1.6 x 0.81 x 0.48 (0.06 x 0.03 x 0.02)	0.25 - 1	32Vdc	50
		1.25 - 5	32Vdc	35
<b>063</b>	1.6 x 0.81 x 0.48 (0.06 x 0.03 x 0.02)	1 - 5	32Vdc	50
		<b>125, 126, 122, 127, 128, 129 or 131, followed by ampere rating 0.1-30.</b>		
	3.2 x 1.6 x 0.65 (0.13 x 0.06 x 0.03)	0.1 - 30	24Vdc	300
		0.1 - 7	32Vdc	50
		0.1 - 5	72Vdc	50
		0.1 - 3	125Vdc	50
		0.1 - 5	125Vac	50
		0.1 - 5	63Vdc	50

**Supplemental micro fuses: surface mount**

Cat. No.	Size mm(in)	Amps (A)	Volts (V)	Interrupting Rating (A)
<b>065, 066, 062, 064, 067 or 068, followed by ampere 0-8.</b>				
	1.6 x 0.81 x 0.65 (0.06 x 0.03 x 0.03)	0.1 - 1.5	63Vdc	50
		0.1 - 8	32Vdc	50

Marking: Company name and model designation.

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