



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. | 2471100100-A/3-B |
| 日期 Date | 2020.07.01 |

| | |
|-----------------|--|
| 客 户 Customer | |
|-----------------|--|

| | |
|----------------|-----------------------------|
| 品 名 Product | 2410 Size Brick Fuse |
| 系 列 Series | 247 Series |

| 料号 Part No. | 规格描述 Specification | 备注 Remark |
|--------------------|--|-----------|
| 贝特电子 Betterfuse | 2410 Low BC, Fast-Acting current fuse 125VAC/DC | |
| 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! | | | |



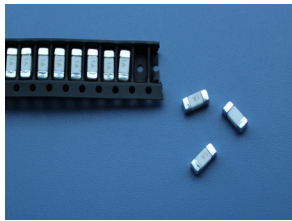
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| No. | Date | Modified Content | Page | Edition | Prepared/modified by | Checked by |
| 1 | 2016.09.09 | Draft | | A/0 | Jeffery | Ning Luo |
| 2 | 2018.05.28 | Update current | | A/1 | J.Q. | Fei Gao |
| 3 | 2019.02.21 | Update Breaking Capacity | 7 | A/2 | Xiang Xiong | Fei Gao |
| 4 | 2020.07.01 | Update content | | A/3 | YaLan Wang | Fei Gao |
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1. SCOPE AND DESCRIPTION



Following electronic product specifications apply to fuses of the 247 series. The 247 series is a fast-acting type brick fuse for over-current protection.

As the fast-acting characteristics these fuses can resist inrush current. And widely used in notebook PC, telecom system, LCD/PDP TV, wireless goods, LCD monitor, white goods, LCD/PDP panel, game console, power supply, net working and other electronics products.

2. GENERAL INFORMATION


General Description

247 brick fuse for the small size and good electrical performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics during use and also makes our brick fuses more heat and shock tolerant than typical brick fuses.

Detailed Features

- Rapid interruption of excessive current
- Compatible with reflow and wave soldering
- Ceramic body and silver plated copper terminal
- Excellent environmental integrity
- One time positive disconnect
- Lead-free, Halogen-free, RoHS compliant
- Designed to UL 248-14
- Compliant to Better's environment standard of <Technical Standard of Environmental management substances>

3. AGENCY APPROVALS

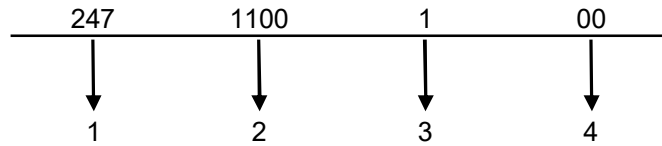
| Agency | Agency File Number | Ampere/ Voltage Range |
|---|--------------------|--|
|  | E300003 | 125VAC: 250mA~1.5A 125VDC: 250mA~1.5A |



4. PART NUMBERING SYSTEM

4.1 Part Number

Example: 2471100100



- | | | |
|---|-------------------------------|--------------------------|
| 1 |Foot print..... | 247 |
| 2 |Ampere Rating..... | 1A (see table 4.2 below) |
| 3 |Max. Voltage Rating..... | 1: 125V |
| 4 |Supplementary Code..... | Complement code |

4.2. Ampere / Voltage Rating Table

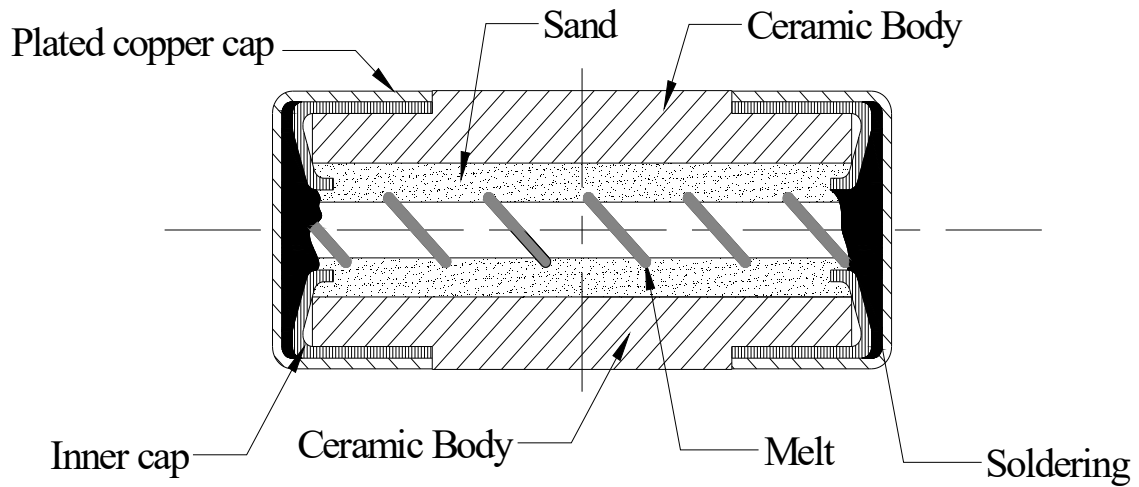
| AMP CODE | CURRENT RATING | VOLTAGE RATING |
|----------|----------------|-----------------|
| 0250 | 250mA | 125V AC;125V DC |
| 0315 | 315mA | 125V AC;125V DC |
| 0375 | 375mA | 125V AC;125V DC |
| 0500 | 500mA | 125V AC;125V DC |
| 0750 | 750mA | 125V AC;125V DC |
| 0800 | 800mA | 125V AC;125V DC |
| 1100 | 1.00A | 125V AC;125V DC |
| 1150 | 1.50A | 125V AC;125V DC |

4.2 Supplementary Code Table

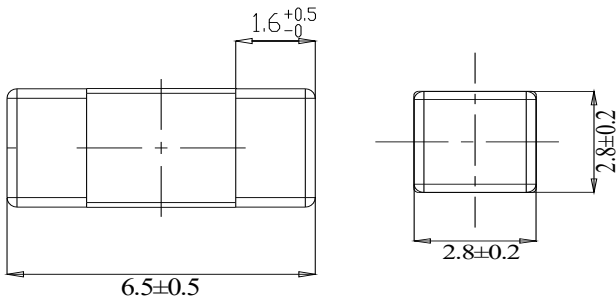
| CODE | DESIGNATION |
|------|---------------|
| 00 | Tape-and-reel |
| | |
| | |
| | |
| | |
| | |
| | |



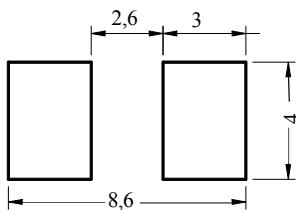
5. MECHANICAL SPECIFICATIONS



Dimensions (units: mm)



Recommended Land Pattern Unit: mm



Operating Temperature:

-55°C to +125°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



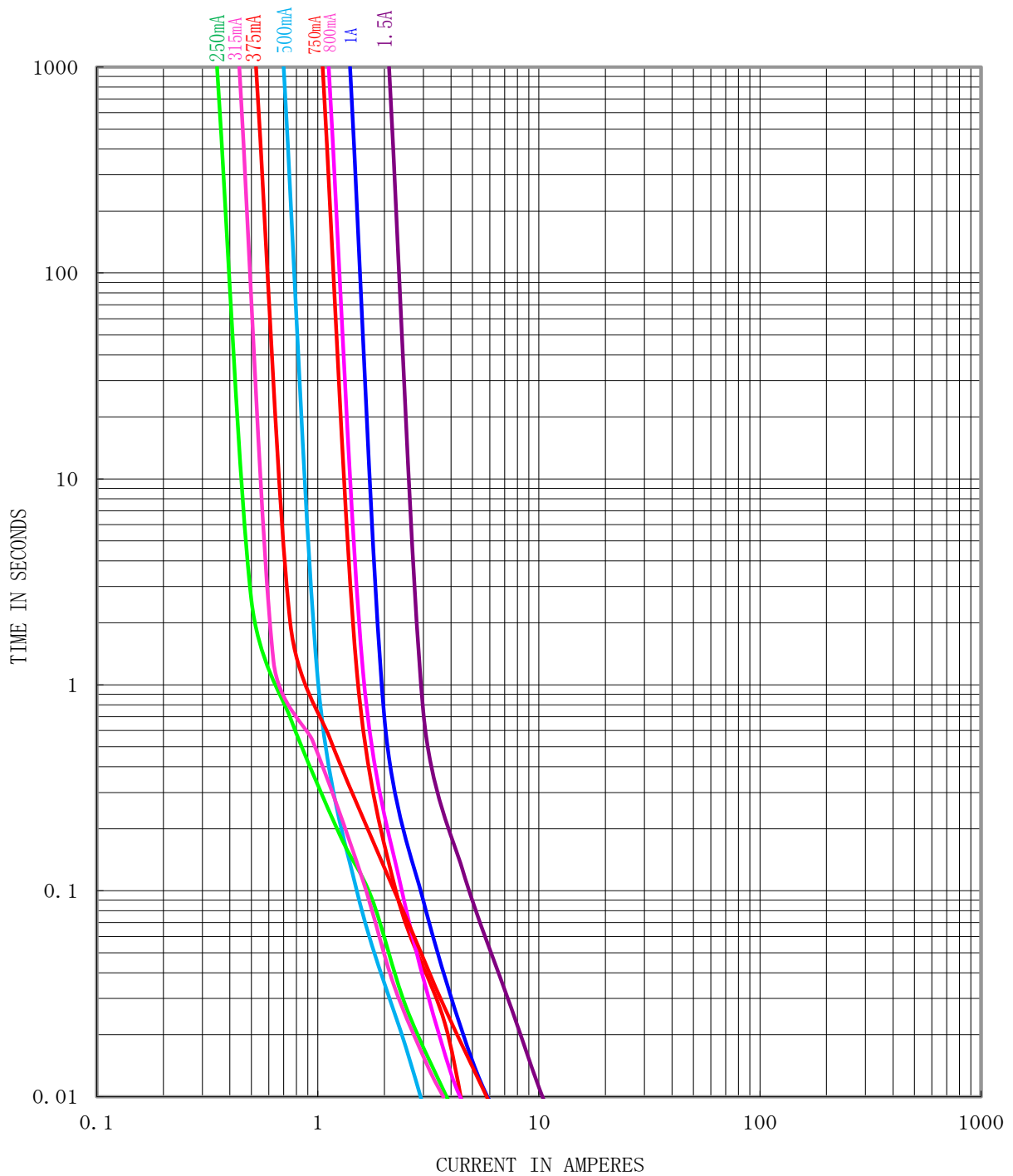
6. ELECTRICAL SPECIFICATIONS

Time vs Current Characteristics Table

(measured with constant current power supply)

| Time vs Current Characteristics: UL248-14 | | |
|---|------|------|
| Rated current | 100% | 200% |
| 250mA~1.5A | >4h | <5s |

Average Time Current (I-T Curve)





Electrical characteristics

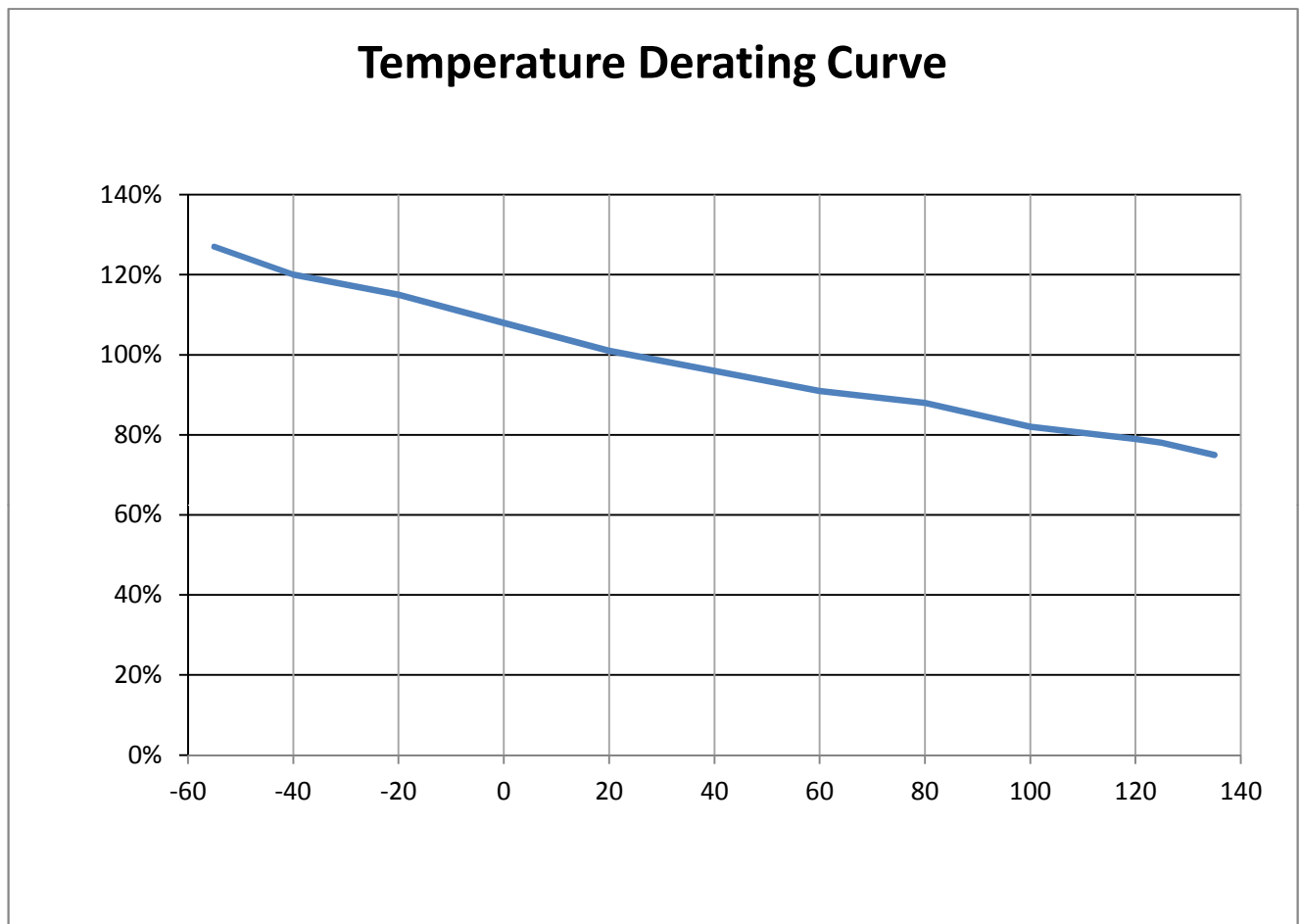
| Electrical Characteristics at 25°C | | | | | | | |
|------------------------------------|---------------|--------------------|-----------------------------|---------------------------|--|----------------------|-----------|
| Amp Code | Rated Current | Rated Voltage | Breaking Capacity | Typical Voltage Drop (mV) | Nominal Melting I ² t(A ² sec) | Cold Resistance (mΩ) | Approvals |
| | | | | | | | cURus |
| 0250 | 250mA | 125V AC 125V DC | 100A@125V AC 50A@125V DC | 300 | 0.144 | 519.4~964.6 | ● |
| 0315 | 315mA | | | 300 | 0.137 | 361.2~670.8 | ● |
| 0375 | 375mA | | | 300 | 0.335 | 275.1~510.9 | ● |
| 0500 | 500mA | | | 600 | 0.090 | 520.1~965.9 | ● |
| 0750 | 750mA | | | 500 | 0.160 | 280.7~521.3 | ● |
| 0800 | 800mA | | | 500 | 0.203 | 238.7~443.3 | ● |
| 1100 | 1.00A | | | 500 | 0.900 | 172.9~321.1 | ● |
| 1150 | 1.50A | | | 350 | 1.069 | 100.8~187.2 | ● |

Note: (1) Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F).

(2) The current values used for calculating I²T should be 8~10ms.

(3) The product without sand when the current is no more than 375mA.

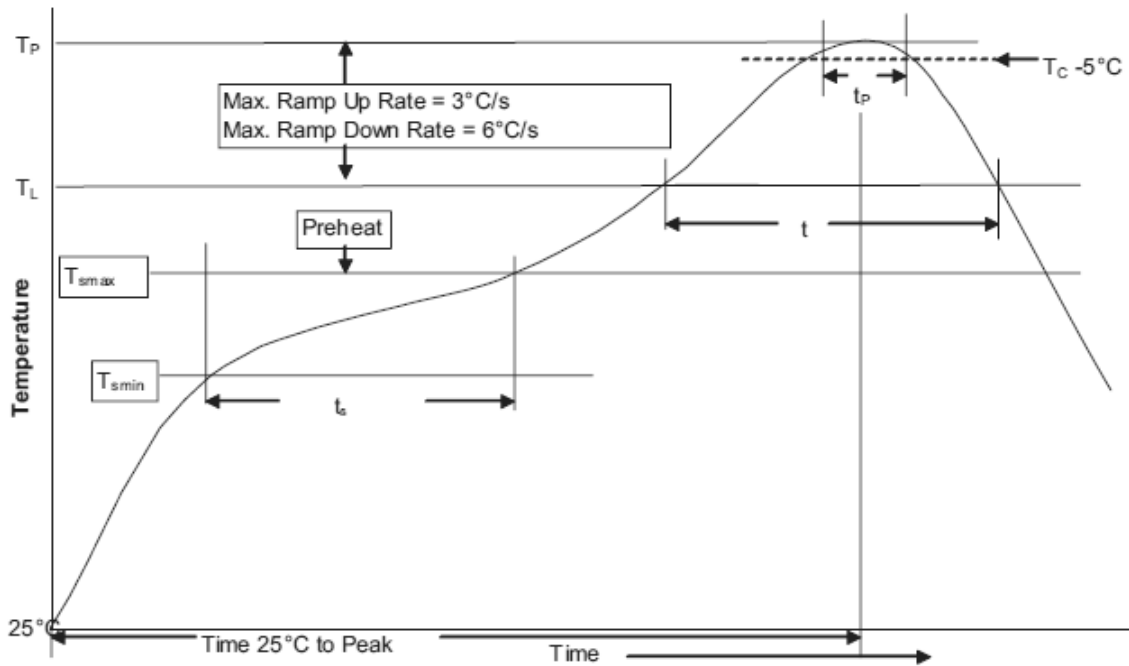
Temperature Derating Curve



$$\text{Calculation for ideal fuse selection} = \frac{\text{Operating Current (A)}}{\text{Rating (\%} \times 0.75)}$$



7. SOLDERING PARAMETERS



1. Infrared Reflow:

Temperature: 260°C

Time: 30sec Max.

Recommend reflow profile

2. Wave Soldering

Reservoir

Temperature: 260°C

Time in Reservoir: 10sec Max.

| Profile Feature | | Lead (Pb)free solder |
|---|-----------------------------|----------------------|
| Average Ramp-UP Rate (Tsmmax to Tp) | | 3°C/s Max. |
| Preheat and soak | Temperature min.(Tsmmin) | 150°C |
| | Temperature max.(Tsmmax) | 200°C |
| | Time (Tsmmin to Tsmmax)(ts) | 60~120s |
| Liquidous temperature(TL) Time at liquidous(tL) | | 217°C 60~150s |
| Peak package body temperature(Tp) | | 260°C |
| Time (tp) within 5°C of the specified classification temperature (Tc) | | 30s |
| Average ramp-down rate (Tp to Tsmmax) | | 6°C/s 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:

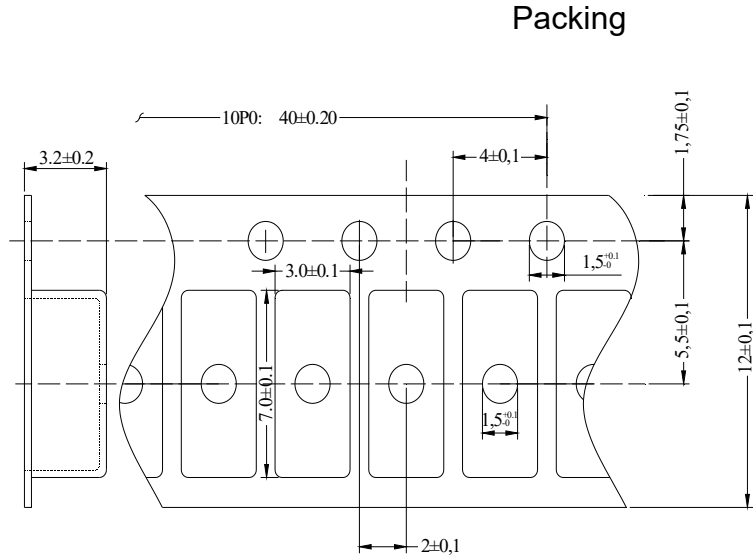
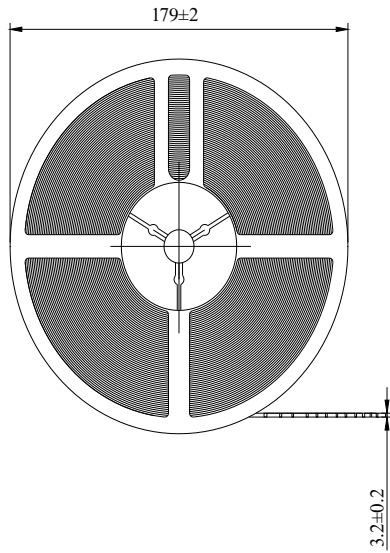
| Series | Amp Code | Supplementary Code | Qty |
|--------|----------|--------------------|-----|
| 247 | | | |



PACKING INFORMATION

Taping detail

Unit:mm



| | | | |
|-------------------|---------|-----------------|--------|
| Quantity per reel | 1000pcs | Weight per reel | 234.5g |
|-------------------|---------|-----------------|--------|

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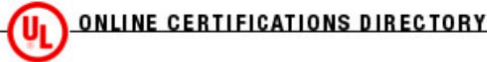
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Email: info@betterfuse.com

**JDYX2.E300003**
Fuses, Supplemental - Component

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Fuses, Supplemental - Component

See General Information for Fuses, Supplemental - Component

DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD

E300003

Rm 601 Of 16 Blk

Xinzhu Yuan No 4 Xinzhu Rd

Songshanlake Hightech Industrial Development Zone

Dongguan, Guangdong 523808 CHINA

Supplemental micro fuses

| Cat. No. | Size mm(in) | Amps (A) | Volts (V) | Interrupting Rating (A) |
|------------------------------|---|-------------|--------------|----------------------------|
| 061 | 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 |
| 063 | 1.6 x 0.81 x 0.48 (0.06 x 0.03 x 0.02) | 1 - 5 | 32Vdc | 50 |
| 244, 245, 246 and 247 | | | | |
| | 6.5 x 2.8 x 2.8 (0.26 x 0.11 x 0.11) | 0.25 - 7 | 125Vac | 100 |
| | | 0.25 - 7 | 250Vac | 100 |
| | | 0.25 - 7 | 350Vac | 50 |
| | | 0.25 - 7 | 125Vdc | 50 |

Marking: Company name and model designation.

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