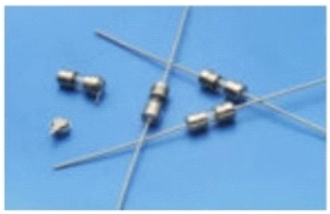
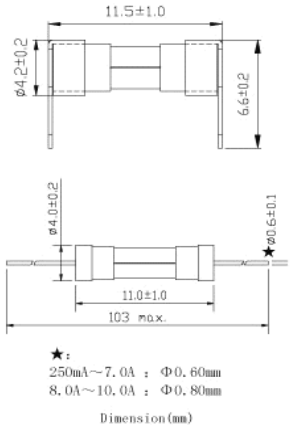
3.6*10mm / NO. 312

Time-Lag Glass Tube Fuse with Pig-Tail Series

玻璃管慢熔断保险管(带引线)





★:
250mA~7.0A : Φ0.60mm
8.0A~10.0A : Φ0.80mm

Dimension(mm)

Time-Current Characteristic(时间－电流特性)

Time-Lag (T)

Standard(标准)

UL-248-14

Materials(物料)

Tube:	Glass Tube
End Caps:	Nickel-plated brass
Axial Leads:	Nickel-plated caps Tin-plated **copper** wires

Operating Temperature(工作温度)

-55 ℃ to +125 ℃(consider de-rating)

Stock Conditions(贮存条件)

+10℃ to +60℃

relative humidity ≤75% yearly average,

without dew,maximum value for 30days-95%.

Vibration Resistance(振荡承载能力)

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

10-60Hz at 0.75mm amplitude

60-2000Hz at 10g acceleration

Solderability(可焊性)

260℃, ≤10 sec.(Wave)

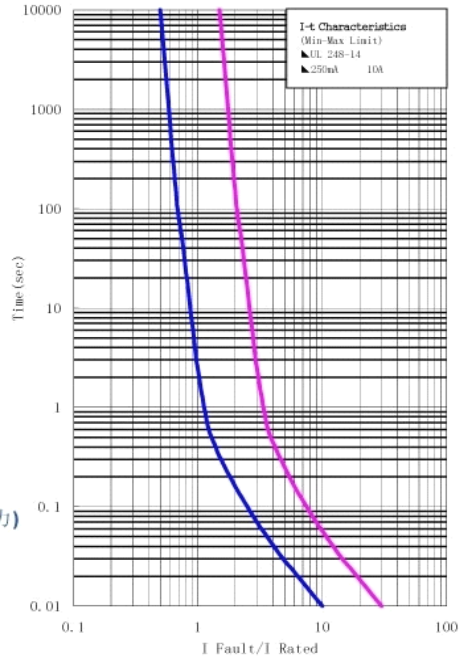
350℃, ≤3 sec.(Hand)

Soldering Heat Resistance(焊温承载能力)

260℃, 10 sec.

Packaging

00	Axial leads 30mm-bulk(1000pcs)
02	Axial leads 45mm-bulk(1000pcs)
03	without leads-bulk(2000pcs)



Electrical Characteristics: UL-248-14		
Rated Current	100%	200%
250mA~10A	>4h	5s~60s

c UL us

RoHS HF

Permissible continuous operating current is ≤ 100% at ambient temperature of 23℃ (73.4℉).

Rated Current	Amp Code	Voltage Rating	Breaking Capacity	Approvals cULus
250mA	0250	125V/250V		•
300mA	0300	125V/250V		•
315mA	0315	125V/250V		•
350mA	0350	125V/250V		•
375mA	0375	125V/250V		•
400mA	0400	125V/250V		•
500mA	0500	125V/250V		•
630mA	0630	125V/250V		•
750mA	0750	125V/250V		•
800mA	0800	125V/250V		•
1.00A	1100	125V/250V		•
1.25A	1125	125V/250V		•
1.50A	1150	125V/250V	50A 125/250VAC	•
1.60A	1160	125V/250V	50-60Hz	•
2.00A	1200	125V/250V	Cos Φ=1.0	•
2.50A	1250	125V/250V		•
3.00A	1300	125V/250V		•
3.15A	1315	125V/250V		•
3.50A	1350	125V/250V		•
4.00A	1400	125V/250V		•
5.00A	1500	125V/250V		•
6.30A	1630	125V/250V		•
7.00A	1700	125V/250V		•
8.00A	1800	125V/250V		•
10.00A	2100	125V/250V		•

Order information

Qty.	Order-number	Series	AmpCode	Voltage	packaging
		312			

National High-tech Enterprise SC 32C National Technical Committee Member of China BSI ISO 9001 certified company MOODY ISO 14001 certified company
国家高新技术企业 SC 32C 国内专家组成员单位 BSI ISO 9001认证企业 穆迪 ISO 14001认证企业
BETTER ELECTRONICS TECHNOLOGY CO.,LTD.
东莞市贝特电子科技股份有限公司
www.betterfuse.com

Dongguan Better Electronics Technology co.,ltd.
NanMen Village, HengKen Administrative Zone
Liao Bu Town, Dongguan, Guangdong. China.
Tel:+86 769 8323 8731
Fax:+86 769 8352 1857
Web: www.betterfuse.com

ISO 9001:2008
FM 517959

Client :

Presented list:

APPROVAL SHEET

File NO. :

Part No.	Product discription	Client P/N	Approval result

Signature:

Prepared by	Checked By	Approved By

Prepared by	Checked By	Approved By

Supplier:

Date:

Customer:

Date:

Noted: Please return one copy of it to us once you approve and chop it, so that we can record client's information and ensure client's requirements can be met in the future. If order of this item is placed without special instruction before returning the copy to us, we will think you have approved this approval sheet

Contents

1. SCOPE

1.1 This Specification applies to 312 series Subminiature fuses.

2. GENERAL

2.1 General Information

- Time-Lag Low breaking capacity
- 3.6mmX10mm physical size
- Glass tube nicked plated brass end cap construction
- Optional axial leads are 0.60mmX30mm .（8A-10 are 0.8mmX30mm）
- Optional sleeve is flexible flour polymer
- Designed to UL248-14 (250mA – 10A)
- RoHS compliant and HF

2.2 General Description

312 Time-Lag Low breaking capacity fuse protection for the PC board is used in a variety of applications. This 3.6X10mm device is constructed of Glass with electroplated brass end caps. The 312 with a 250 VAC rating and 50A Ampere breaking capacity offers excellent assurance with its 100% cold Resistance, and length testing.

3. MANUFACTURER

Dongguan Better Electronics Technology co.,ltd.
NanMen Village, HengKen Administrative Zone
Liao Bu Town, Dongguan, Guangdong. China.

4. Agency Approvals

Agency	Agency File Number
c UL us	E300003

CATALOG SYMBOL AND PART NUMBERING SYSTEM

4.1 Catalog Symbol

4.1.1 Example -312xxxxxx

312	0250	2	00
↓	↓	↓	↓
1	2	3	4

1) Series: 312
2) Ampere Code/Rating: 0.25A
3) Voltage Rating: 2 250V
   1 125V
4) Package Code: 00

4.2 Part Numbering System

4.2.1 Packaging Code

Catalog	Designation
00	Axial leads 30mm-bulk(1000PCS)
02	Axial leads 45mm-bulk(1000PCS)
03	Without leads-bulk(2000PCS)

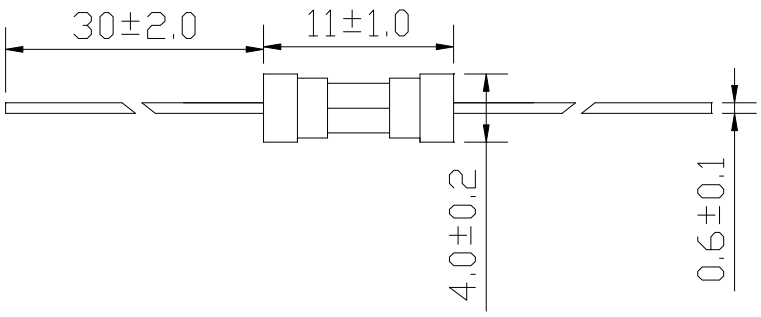
4.2.2 Ampere Rating

Amp code	Current Rating	Voltage Rating
0250	250mA	125V/250V
0300	300mA	125V/250V
0315	315mA	125V/250V
0350	350mA	125V/250V
0375	375mA	125V/250V
0400	400mA	125V/250V
0500	500mA	125V/250V
0630	630mA	125V/250V
0750	750mA	125V/250V
0800	800mA	125V/250V
1100	1.00A	125V/250V
1125	1.25A	125V/250V
1150	1.50A	125V/250V
1160	1.60A	125V/250V
1200	2.00A	125V/250V
1250	2.50A	125V/250V
1300	3.00A	125V/250V
1315	3.15A	125V/250V
1350	3.50A	125V/250V
1400	4.00A	125V/250V
1500	5.00A	125V/250V
1630	6.30A	125V/250V
1700	7.00A	125V/250V
1800	8.00A	125V/250V
2100	10.00A	125V/250V

5. MECHANICAL SPECIFICATIONS

Dimensions (Drawings not to scale)

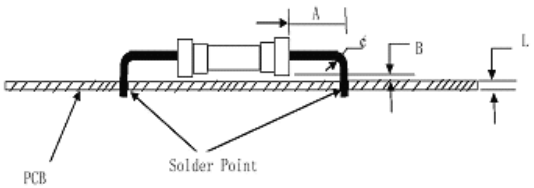
5.1.1 Top View mm



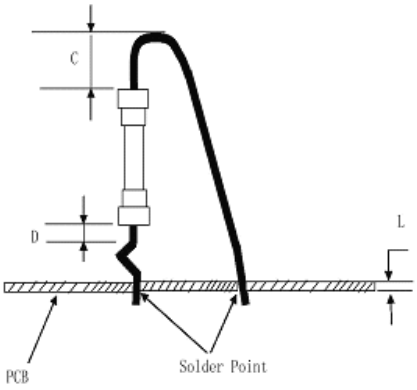
6. Installation and Soldering For Products

7.1Forming and Installation .

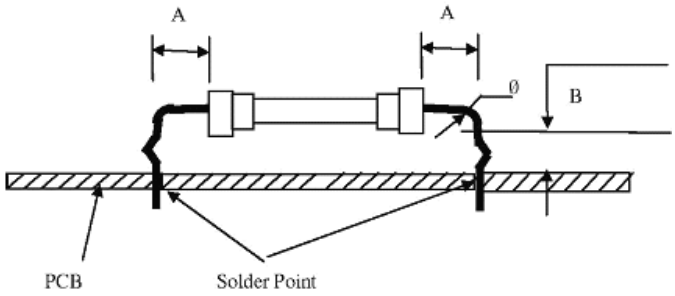
The part can be formed as below shapes to install on the PCB ,but the dimensions must meet below requirements ,and the lead cannot be bent more than 3 times.



P1



P2



P3

7.2Lead Tensile

Lead Tensile:,

The lead can be pulled with a force of 10+/-1N in the direction of axis in a period of 10+/-1Sec.

Lead bending :

The lead can be bended two times with a force (Dia. Of Lead from 0.5mm to 0.8mm ,Force is 5+/-1N ;Dia. Of Lead from 0.8mm to 1.25mm ,Force is 10+/-1N).

7.3Soldering Methods

Wave Solder--260°C,10sec.

Reflow Solder—Not Recommended.

7. Operating Temperature

-55℃ to +125℃(consider de-rating)

8. ELECTRICAL SPECIFICATIONS

8.1 Time vs. Current Characteristic (Measured with a constant current power supply)

UL248-14

Rated Current	100%	200%
250mA~10A	>4H	3Sec~60Sec

8.2 Electrical characteristics

Rated Current	Amp Code	Voltage Rating	Breaking Capacity	Approvals cUlus
250mA	0250	125V/250V	50A/250VAC 50-60Hz Cosφ=1.0	●
300mA	0300	125V/250V		●
315mA	0315	125V/250V		●
350mA	0350	125V/250V		●
375mA	0375	125V/250V		●
400mA	0400	125V/250V		●
500mA	0500	125V/250V		●
630mA	0630	125V/250V		●
750mA	0750	125V/250V		●
800mA	0800	125V/250V		●
1.00A	1100	125V/250V		●
1.25A	1125	125V/250V		●
1.50A	1150	125V/250V		●
1.60A	1160	125V/250V		●
2.00A	1200	125V/250V		●
2.50A	1250	125V/250V		●
3.00A	1300	125V/250V		●
3.15A	1315	125V/250V		●
3.50A	1350	125V/250V		●
4.00A	1400	125V/250V		●
5.00A	1500	125V/250V		●
6.30A	1630	125V/250V		●
7.00A	1700	125V/250V		●
8.00A	1800	125V/250V		●
10.00A	2100	125V/250V		●

Note:

- AC interrupting rating (Measured at rated voltage with a unity power factor)
- Typical Voltage Drop (Measured at rated current after temperature stabilizes)

8.3 AGENCY CERTIFICATION AND APPROVAL INFORMATION

Rating	1st. Cap marking	2nd. Cap marking
250mA	250mA 250V	ⓑ 312
300mA	300mA 250V	ⓑ 312
315mA	315mA 250V	ⓑ 312
350mA	350mA 250V	ⓑ 312
375mA	375mA 250V	ⓑ 312
400mA	400mA 250V	ⓑ 312
500mA	500mA 250V	ⓑ 312
630mA	630mA 250V	ⓑ 312
750mA	750mA 250V	ⓑ 312
800mA	800mA 250V	ⓑ 312
1.00A	1.0A 250V	ⓑ 312
1.25A	1.25A 250V	ⓑ 312
1.50A	1.5A 250V	ⓑ 312
1.60A	1.6A 250V	ⓑ 312
2.00A	2A 250V	ⓑ 312
2.50A	2.5A 250V	ⓑ 312
3.00A	3A 250V	ⓑ 312
3.15A	3.15A 250V	ⓑ 312
3.50A	3.5A 250V	ⓑ 312
4.00A	4A 250V	ⓑ 312
5.00A	5A 250V	ⓑ 312
6.30A	6.3A 250V	ⓑ 312
7.00A	7A 250V	ⓑ 312
8.00A	8A 250V	ⓑ 312
10.00A	10A 250V	ⓑ 312

*Notion :The certification symbols and mark is based on actual goods。

9. TEMPERATURE DERATING CURVE

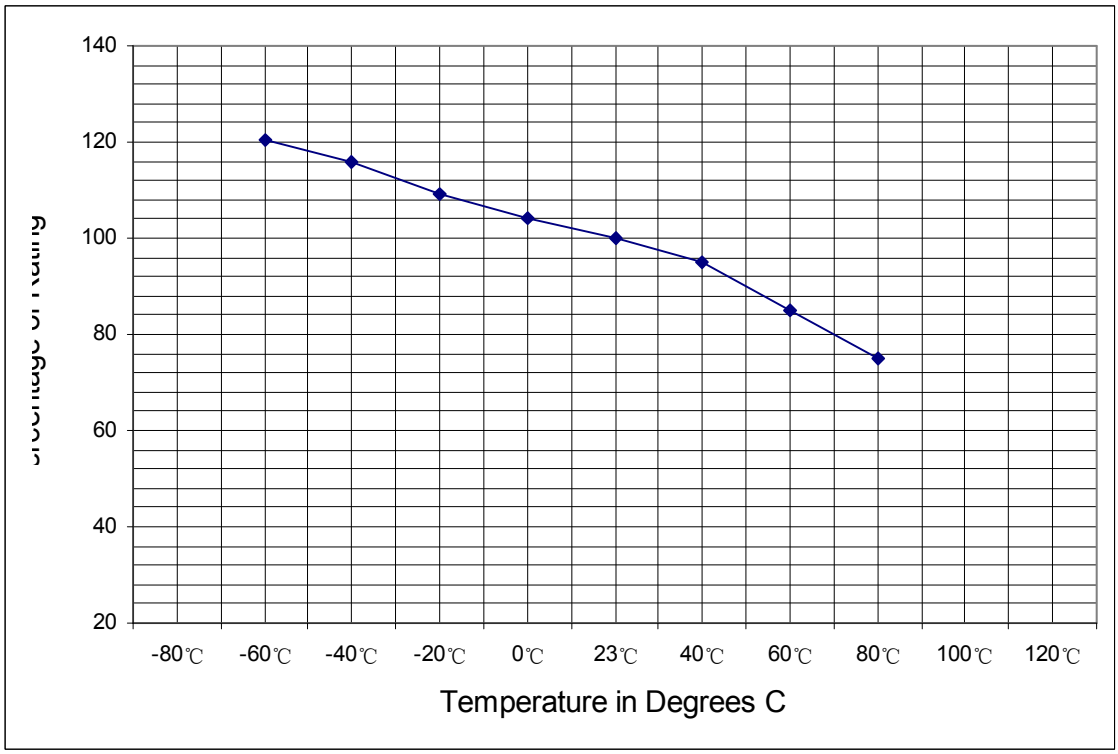


Chart o correction actor

ENVIRONMENTAL (RELIABILITY/QUALI ICATION) DATA

10. End

Certificate of Compliance

Certificate Number **20090401 – E300003**
Report Reference **E300003, 2007-08-22**
Issue Date **2009-04-01**

Underwriters Laboratories Inc.®

Issued to:

DONGGUAN BETTER ELECTRONIC TECHNOLOGY CO
NAMEN VILLAGE
HENGKEN ADMINISTRATIVE ZONE
LIAOBU TOWN, DONGGUAN,
GUANGDONG.523413 CHINA

This is to certify that representative samples of

Fuses, Supplemental

Size	Cat. No.	Amps	V ac	Interrupting Rating (kA)
6.35 x 32 mm	611	0.5	125/250	10 kA, 125 V ac, 35 A, 250 V ac
6.35 x 32 mm		1.0-3.0A	125/250	10 kA, 125 V ac, 100 A, 250 V ac
6.35 x 32 mm		4.0-10A	125/250	10 kA, 125 V ac, 200 A, 250 V ac
3.6 x 10 mm	311 and 312	0.25-10A	125/250	50 A, 125/250 Vac
20 x 5 mm	522	1-15	125/250	10 kA, 125 V ac, 100 A, 250 V ac
6.35 x 32 mm	611	12-20	125/250	10 kA, 125 V ac, 200 A, 250 V ac
11 x 3.9 mm	332	0.25-10.0	125/250	50 A, 125 Vac, 50 A, 250 Vac
20 x 5 mm	521	0.315-10.0	125/250	10 kA, 125 V ac, 100 A, 250 V ac
11 x 3.9 mm	334	0.25-10.0	125/250	50 A, 125 Vac, 50 A, 250 Vac
20 x 5 mm	524	0.5-10.0	125/250	10 kA, 125 Vac, 1.5 kA, 250 Vac

Have been investigated by Underwriters Laboratories Inc.® in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:

The basic standards used to investigate products in this category are UL 248-I, "Low-Voltage Fuses - Part 1: General Requirements," and UL 248-14, "Low-Voltage Fuses - Part 14: Supplemental Fuses."

Additional Information:

None

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers: c UL us the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product

Issued by: Ronika Lal

Ronika Lal, Customer Service Professional
Underwriters Laboratories Inc.

Reviewed by: Nicholas K Roumbos

Nicholas K Roumbos, Senior Project Engineer
Underwriters Laboratories Inc.

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