



# 承 认 书

## APPROVAL SHEET

编 号 No.	
日期 Date	

客 户 Customer	
-----------------	--

品 名 Product	<b>Time-Lag Brick Fuse</b>
系 列 Series	<b>244 Series</b>

料号 Part No.	规格描述 Specification	备注 Remark
贝特电子 Betterfuse		
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	YaLan Wang		
审 核 Check	Fei Gao		
确 认 Approval	Jun Li		

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						
No.	Date	Modified Content	Page	Edition	Prepared/modified by	Checked by
1	2014.08.08	New	9	A/0	Kings Luo	Wenhua Yan
2	2015.07.27	Update 1A I2T value to 1.0; Update UR certification	7	A/3	Jeffery	Gem Guo
3	2016.01.28	Update the soldering curve	8	A/4	Jeffery	Lin Gao
4	2016.02.19	Add the CQC certification	3,7	A/5	Jeffery	Lin Gao
5	2016.04.14	Add the TUV certification	4,8	A/6	Jeffery	Helge
6	2016.04.22	Update the electronic characteristic	8	A/7	Jeffery	Helge
7	2016.08.04	Change the voltage drop, resistance, I2T value	8	A/8	Jeffery	Ning Luo
8	2016.12.06	Correct the hand soldering temperature	9	A/9	Jeffery	Wen Qiangluo
9	2017.06.02	Add the KC certification		A/10	Jeffery	Ning Luo
10	2018.03.22	Update CQC certification		B/0	J.Q.	Fei Gao
11	2018.07.18	Update Current		B/1	J.Q.	Fei Gao
12	2019.09.16	Add the TUV certification	3	B/2	YaLan Wang	Fei Gao

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## 1. SCOPE AND DESCRIPTION



Following electronic product specifications apply to fuses of the 244 series. The 244 series is a time-lag type brick fuse for over-current protection. As the time-lag 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

244 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

## 3. AGENCY APPROVALS

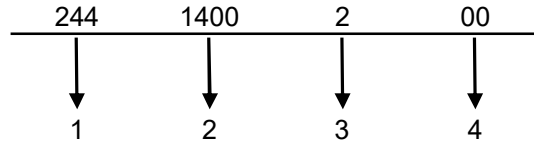
Agency	Agency File Number	Voltage / Ampere Range
	E300003	AC 125V/250V: 250mA~7A DC 125V: 250mA~7A
	CQC16012138435	250V:500mA, 1A, 2A
	R 50335764	AC 250V:500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A 3.15A, 4A, 5A, 6.3A, 7A DC 125V:500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A
	SU05042-17001 SU05042-17002	250V: 1A, 2A 250V: 500mA
	PSE16021083	250V:1A,2A



## 4. PART NUMBERING SYSTEM

### 4.1 Part Number

Example: 2441400200



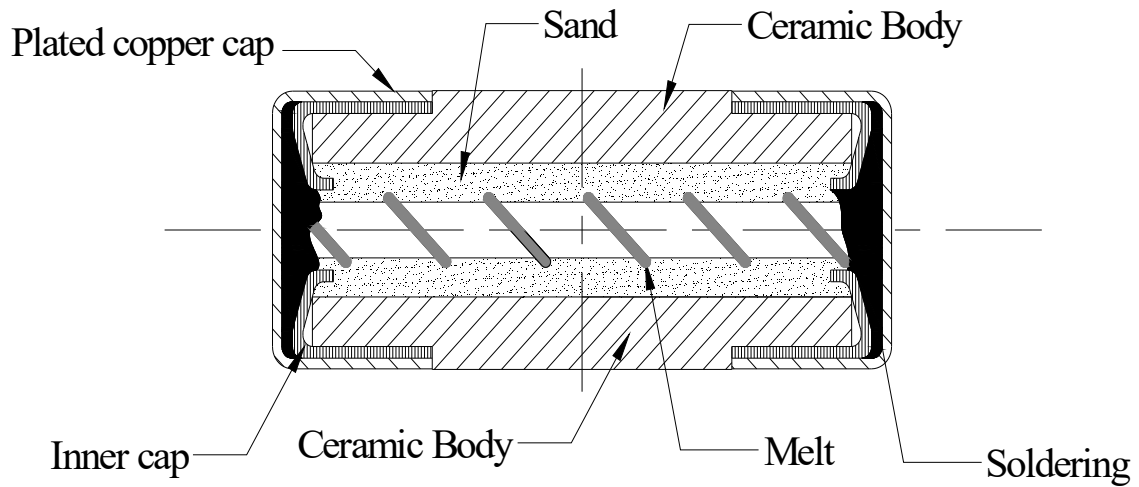
- |                           |                          |
|---------------------------|--------------------------|
| 1.Product Series.....     | 244                      |
| 2.Ampere Rating.....      | 4A (see table 4.2 below) |
| 3.Voltage Rating.....     | 1: 125V<br>2: 250V       |
| 4.Supplementary Code..... | Complement code          |

### 4.2. Ampere/ Voltage Rating Table

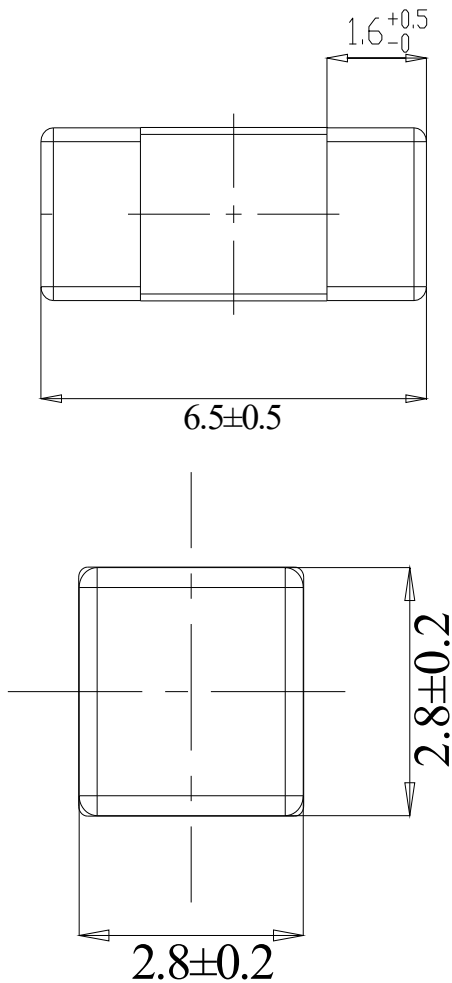
AMP CODE	AAMPERE RATING	VOLTAGE RATING
0250	250mA	250 / 125V AC; 125V DC
0315	315mA	250 / 125V AC; 125V DC
0375	375mA	250 / 125V AC; 125V DC
0400	400mA	250 / 125V AC; 125V DC
0500	500mA	250 / 125V AC; 125V DC
0630	630mA	250 / 125V AC; 125V DC
0750	750mA	250 / 125V AC; 125V DC
0800	800mA	250 / 125V AC; 125V DC
1100	1.00A	250 / 125V AC; 125V DC
1125	1.25A	250 / 125V AC; 125V DC
1160	1.60A	250 / 125V AC; 125V DC
1200	2.00A	250 / 125V AC; 125V DC
1250	2.50A	250 / 125V AC; 125V DC
1300	3.00A	250 / 125V AC; 125V DC
1315	3.15A	250 / 125V AC; 125V DC
1350	3.50A	250 / 125V AC; 125V DC
1400	4.00A	250 / 125V AC; 125V DC
1500	5.00A	250 / 125V AC; 125V DC
1700	7.00A	250 / 125V AC; 125V DC
1800	8.00A	250 / 125V AC; 125V DC
2120	12.0A	250 / 125V AC; 125V DC



## 5. MECHANICAL SPECIFICATIONS



**Dimensions** (units: mm/inch)



### 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

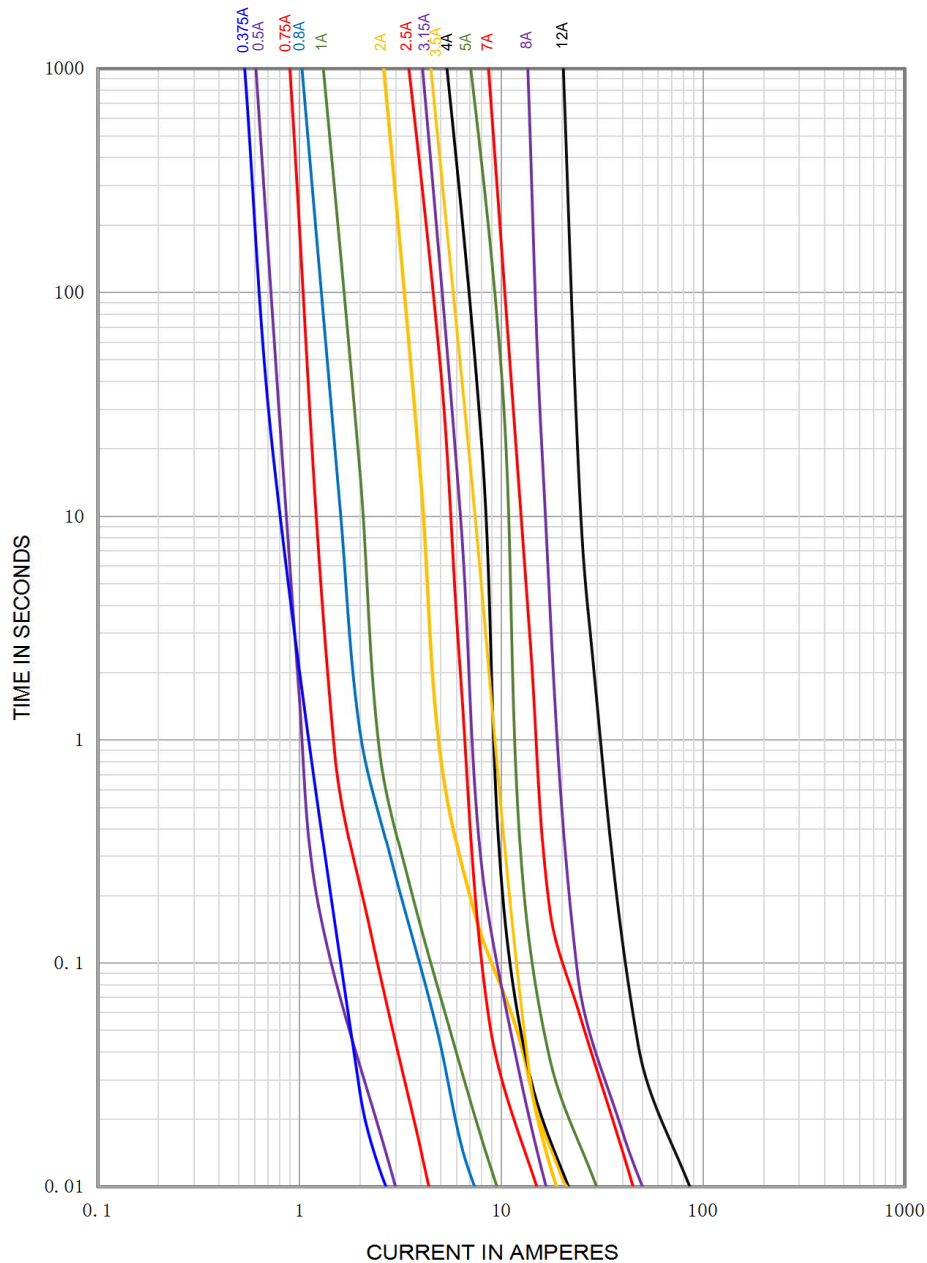
### Time vs Current Characteristics Table

(measured with constant current power supply)

Time vs Current Characteristics: UL-248-14		
Rated current	100%	200%
250mA~12A	>4h	<120s

### Average Time Current (I-T) Curves

Average Current Curve(I-T Curve)



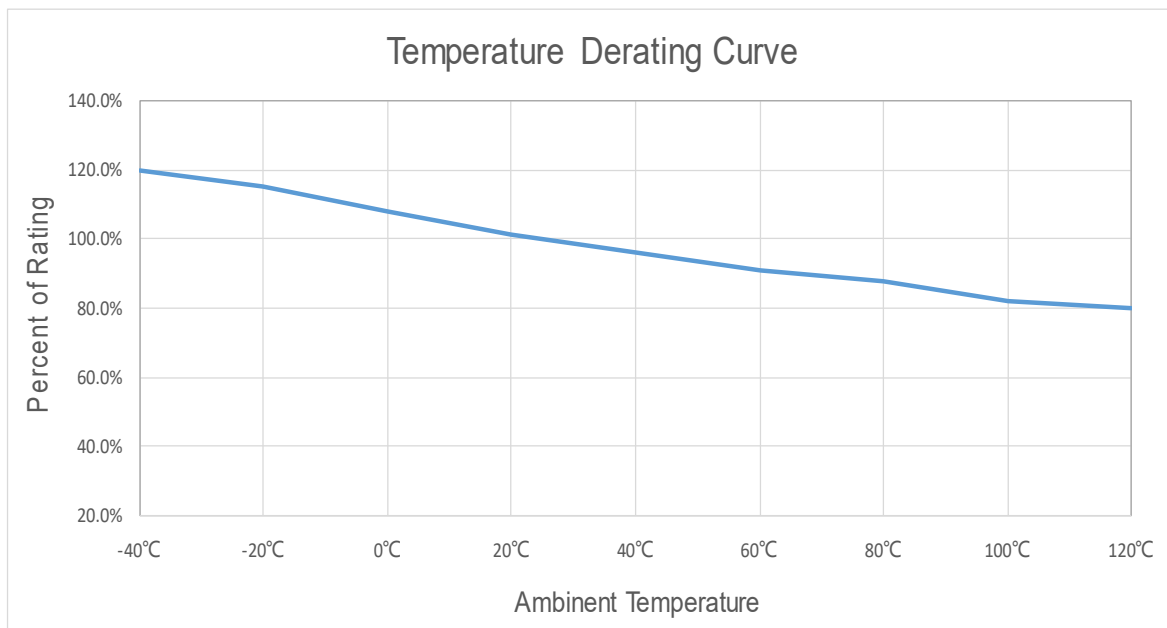


### Electrical characteristics

Electrical Characteristics at 25°C												
Amp Code	Rated Current	Max. Voltage	Typical Voltage Drop (mV)	Breaking Capacity	Typical Melting I <sup>2</sup> t(A <sup>2</sup> S)	Typical Cold Resistance (ohms)	Approvals					
							cURus	CQC	TUV	KC	PSE	
0250	250mA	250V AC 125V DC	800	100A@250V AC 100A@125V AC 50A@125V DC	0.050	0.786	●	○	○	○	○	
0315	315mA		750		0.053	1.388	●	○	○	○	○	
0375	375mA		700		0.073	0.980	●	○	○	○	○	
0400	400mA		700		0.060	0.966	●	○	○	○	○	
0500	500mA		600		0.055	0.602	●	●	●	●	○	
0630	630mA		500		0.220	0.434	●	○	●	○	○	
0750	750mA		500		0.168	0.350	●	○	○	○	○	
0800	800mA		400		0.512	0.306	●	○	●	○	○	
1100	1.00A		300		0.870	0.256	●	●	●	●	●	
1125	1.25A		300		0.830	0.188	●	○	●	○	○	
1160	1.60A		300		1.690	0.144	●	○	●	○	○	
1200	2.00A		300		3.480	0.089	●	●	●	●	●	
1250	2.50A		300		2.060	0.023	●	○	●	○	○	
1300	3.00A		300		2.160	0.022	●	○	○	○	○	
1315	3.15A		300		2.480	0.021	●	○	●	○	○	
1350	3.50A		300		4.500	0.019	●	○	○	○	○	
1400	4.00A		300		3.840	0.016	●	○	●	○	○	
1500	5.00A		300		7.500	0.012	●	○	●	○	○	
1630	6.30A		300		9.600	0.011	●	○	●	○	○	
1700	7.00A		300		12.74	0.009	●	○	●	○	○	
1800	8.00A		300		21.60	0.006	○	○	○	○	○	
2120	12.0A	300	79.00	0.005	○	○	○	○	○			

**Note:** (1) Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F)  
 (2) The current values used for calculating I<sup>2</sup>T should be within the standard 10In.  
 (3) The TUV certification only for 250VAC and 125VDC; the CQC, KC certification only for 250V; the cURus certification for all voltage.

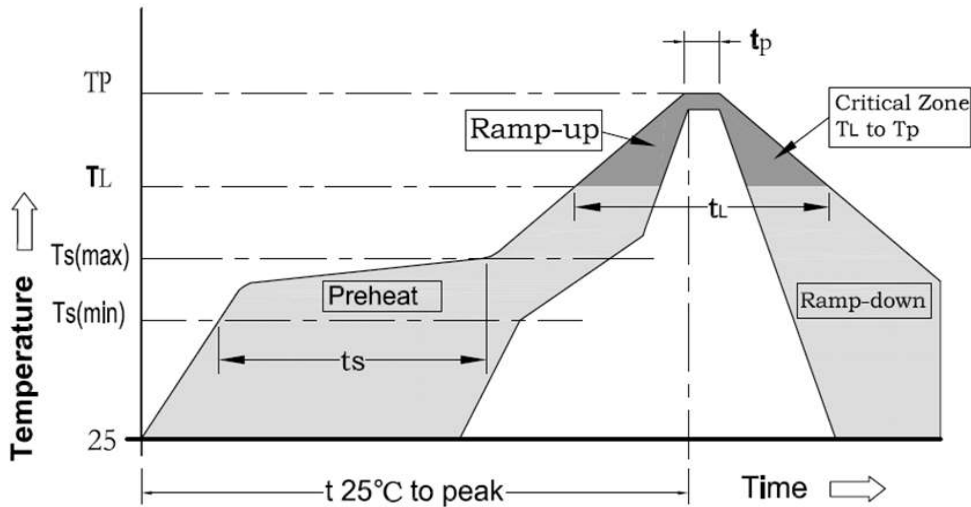
### Temperature Derating Curve



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



**7.SOLDERING PARAMETERS**



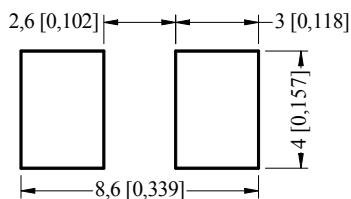
1. Infrared Reflow:  
Temperature: 260°C  
Time: 5sec Max.  
Recommend reflow profile

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

3. Hand Soldering  
Temperature: 350°C  
Time: 3sec Max.  
Soldering iron avoid touch  
Brass Cap.

Profile Feature		Pb-Free Assembly
Average Ramp-UP Rate(Tsmax to Tp)		3°C/s Max.
Preheat	Temperature Min(Ts min)	150°C
	Temperature Max(Ts max)	200°C
	Time(Tsmin to Ts max)	60sec~120sec
Peak Temperature(TP)		260°C
Time within 5°C of actual Peak Temperature(TP)		5sec
Melting tin time(TL)		20sec~40sec
Ramp-Down Rate		6°C/s Max.
Time 25°C to Peak Temperature(TP)		8 minutes Max.

Recommended Land Pattern Unit: mm[inch]



**8.ORDERING INFORMATION**

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

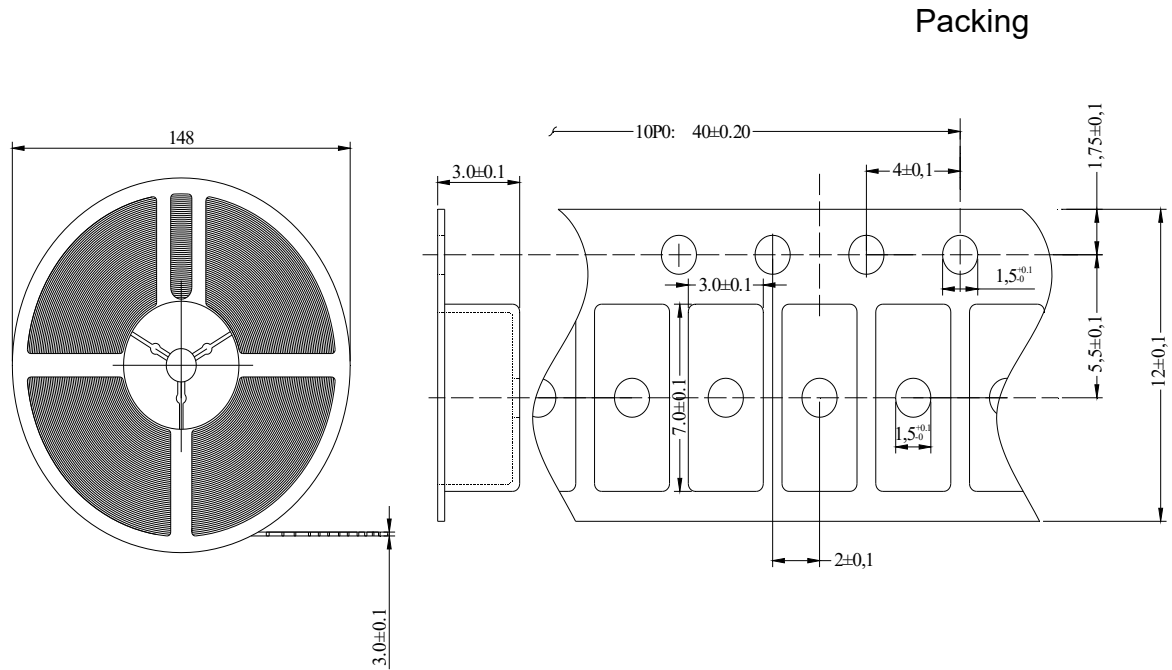
Series	Amp Code	Supplementary Code	Qty
244			





## 9.PACKING INFORMATION

### Taping detail



Quantity per reel

1000pcs

Weight per reel

234.5

© Dongguan Better Electronics Technology Co., Ltd.

东莞市贝特电子科技股份有限公司

Room 601 of 16 Block, Xinzhu Yuan, No.4, Xinzhu Road, Songshanlake Hightech Industrial Development Zone, Dongguan City, Guangdong P.R.C  
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Email: [info@betterfuse.com](mailto:info@betterfuse.com)



10.APPENDIX

Product IQ tip Tags Organize your personal workspace with custom tags LEARN MORE

Dashboard / Search / FUSES, SUPPLEMENTAL - COMPONENT | UL Product IQ

**JDYX2.E300003 - FUSES, SUPPLEMENTAL - COMPONENT**

DETAILS  
 File No.: E300003  
 UL Category (CCN): [JDYX2](#)  
 Document Type: Listing  
 Parent Category (CCN): [JC082](#)

RESOURCES  
[UL Confirmation Letter](#)  
[Guide Info \(JDYX2\)](#)

TAGS

Document Company Information Related Information

Fuses, Supplemental - Component

See General Information for Fuses, Supplemental - Component

**DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD** E300003  
 Rm 601 Of 16 Bk  
 Xinzhu Yuan No 4 Xinzhu Rd  
 Songshan Lake Hightech Industrial Development Zone  
 Dongguan, Guangdong 523808 CHINA  
**Supplemental fuses**

Cat. No.	Size mm(in)	Amps (A)	Volts (V)	Interrupting Rating (A)
<b>244, 245, 246 and 247</b>				
	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

Markings: Company name and model designation. Last Updated on 2019-07-05

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# 产品认证证书

证书编号：CQC16012138435

## 申请人名称及地址

东莞市贝特电子科技股份有限公司  
东莞市松山湖高新技术产业开发区新竹路4号新竹苑16座办公601

## 制造商名称及地址

东莞市贝特电子科技股份有限公司  
东莞市松山湖高新技术产业开发区新竹路4号新竹苑16座办公601

## 生产企业名称及地址

东莞市贝特电子科技股份有限公司(V003591)  
东莞市寮步镇横坑南门村第二工业区C座、B座

## 产品名称和系列、规格、型号

通用模件熔断体  
244 T500L250V; 244 T1L250V; 244 T2L250V

## 产品标准和技术要求

GB/T9364.1-2015; GB/T9364.4-2016

## 认证模式

产品型式试验+初次工厂检查+获证后监督

上述产品符合 CQC11-462125-2009 认证规则的要求，特发此证。

发证日期：2018年03月14日

本证书的有效性依据发证机构的定期监督获得保持。

本证书为变更证书，证书首次颁发日期：2016年01月28日

主任：\_\_\_\_\_



## 中国质量认证中心

中国·北京·南四环西路188号9区100070

<http://www.cqc.com.cn>



# PRODUCT CERTIFICATE

CERTIFICATE NO.: CQC16012138435

## NAME AND ADDRESS OF THE APPLICANT

Dongguan Better Electronics Technology Co., Ltd.  
Room 601 of 16 Block, Xinzhu Yuan, No. 4 Xinzhu Road, Songshanlake Hightech Industrial Development  
Zone, Dongguan City

## NAME AND ADDRESS OF THE MANUFACTURER

Dongguan Better Electronics Technology Co., Ltd.  
Room 601 of 16 Block, Xinzhu Yuan, No. 4 Xinzhu Road, Songshanlake Hightech Industrial Development  
Zone, Dongguan City

## NAME AND ADDRESS OF THE FACTORY

Dongguan Better Electronics Technology Co., Ltd. (V003591)  
NanMen Village, HengKen Administrative Zone LiaoBu Town, Dongguan, Guangdong, China

## PRODUCT NAME, MODEL AND SPECIFICATION

Universal modular fuse-links(UMF)  
244 T500L250V; 244 T1L250V; 244 T2L250V

## THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS

GB/T9364.1-2015; GB/T9364.4-2016

## TYPE OF CERTIFICATION SCHEMES

Type Testing of Product + Initial Factory Inspection + Follow up Factory Inspection

This is to certify that the above mentioned product(s) complies with the requirements of certification  
rules of CQC11-462125-2009 .

Valid from: Mar.14,2018

The validity of the certificate is subject to positive result of the regular follow up inspection by issuing  
certification body.

Date of original issued: Jan.28,2016

President: \_\_\_\_\_

Wang Kejiao



## CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan Xilu, Beijing 100070 P.R.China  
<http://www.cqc.com.cn>

C 0111787



# 適合証明書

Certificate of Conformity

証明書番号 Certificate No.

PSE16021083

申請者照会番号 Applicant Reference

CJP2016102004-1320

発行年月日 Date of Issue

2016年12月6日

申請者 Applicant

DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO.,LTD

製造工場 Factory

DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO.,LTD

ROOM 601 OF 16 BLOCK, XINZHUYUAN, NO 4, XINZHU ROAD, SONGSHANLAKE HIGHTECH INDUSTRIAL DEVELOPMENT ZONE, DONGGUAN CITY, GUANGDONG PROVINCE, P.R.CHINA 523808

NANMEN VILLAGE, HENGKENG ADMINISTRATIVE ZONE LIAOBU TOWN, DONGGUAN, GUANGDONG, P.R.CHINA 523413



検査の方法 Standard for Certificate

- 電気用品の技術基準の解釈 別表第十二 国際規格等に準拠した基準 J60127-1(H26); J60127-4(H22)
- 施行規則別表第四 Appendix 4 of the Enforcement Regulations

特定電気用品名 :

Name of Specified Electrical Appliance and Material

その他の包装ヒューズ

Other enclosed fuses

型式の区分 :

Type Classification

(「添付書類」参照)

(Refer to Attachment)

モデル名 :

Model

244 T1L250V、244 T2L250V

製造事業者 :

Manufacturer

DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO.,LTD

証明書の有効期間 :

Validity of Certificate

2023年12月5日までに有効です。

This certificate is expired on Dec. 5th, 2023

これは、上記申請者より申請のあった上記特定電気用品及び製造工場が、電気用品安全法第八条第一項に規定する技術基準及び同法第九条第二項の経済産業省令で定める基準に適合していることを証明するものです。

This is to certify that the above-mentioned Specified Electrical Appliances and Materials and the factory which the above-mentioned applicant applied for have been complied with the Technical Requirements stipulated by Article 8, Paragraph 1 of the Electrical Appliance and Material Safety Law and the requirements stipulated by the METI Ordinance specified in Article 9, paragraph 2 of the said law.

中国品質認証センター  
CHINA QUALITY  
CERTIFICATION CENTRE

氏名  
Name

発行者  
Issued by



中国100070北京市南四环西路188号9区

Section 9, No.188, Nansihuan Xilu, Beijing 100070, China

PJ 0003939



# 適合証明書

Certificate of Conformity

添付書類 Attachment 1

証明書番号(Certificate No.):  
PSE16021083

発行日 Date of Issue:  
2016年12月6日

## 【 型式の区分 Type Classification 】

特定電気用品:  
(Name of Specified Electrical Appliance and Material)

その他の包装ヒューズ  
Other enclosed fuses

要素	区分
定格電圧	(1) 125V以下のもの (2) 125Vを超えるもの
定格電流 (定格電流表示のあるものの場合に限る。)	(1) 5A以下のもの (2) 5Aを超え15A以下のもの (3) 15Aを超え30A以下のもの (4) 30Aを超え60A以下のもの (5) 60Aを超え100A以下のもの (6) 100Aを超えるもの
適用電動機の定格容量 (定格電流表示のないものの場合に限る。)	(1) 単相で200W以下のもの (2) 単相で200Wを超え400W以下のもの (3) 単相で400Wを超え750W以下のもの (4) 単相で750Wを超えるもの (5) 3相で750W以下のもの (6) 3相で750Wを超え2.2kW以下のもの (7) 3相で2.2kWを超え3.7kW以下のもの (8) 3相で3.7kWを超え7.5kW以下のもの (9) 3相で7.5kWを超えるもの
可溶体の主材料	(1) 銀のもの (2) アルミニウムのもの (3) 亜鉛のもの (4) 鉛のもの (5) 銅のもの (6) その他のもの

中国品質認証センター  
CHINA QUALITY  
CERTIFICATION CENTRE

氏名  
Name

発行者  
Issued by



中国100070北京市南四環西路188号9区

Section 9, No.188, Nansihuan Xilu, Beijing 100070, China



# 適合証明書

Certificate of Conformity

添付書類 Attachment 2

証明書番号(Certificate No.) :  
PSE16021083

発行日 Date of Issue :  
2016年12月6日

## 【 型式の区分 Type Classification 】

特定電気用品 :  
(Name of Specified Electrical Appliance and Material)

その他の包装ヒューズ  
Other enclosed fuses

可溶体の数	(1) 1のもの (2) 2以上のもの
再使用 (管形ヒューズを除く。)	(1) できるもの (2) できないもの
内部充てん物	(1) あるもの (2) ないもの
筒 (内筒を除く。) の材料	(1) フェノール樹脂のもの (2) ファイバーのもの (3) 磁器のもの又はガラスのもの (4) ポリエステル樹脂のもの (5) メラミン樹脂のもの (6) ユリア樹脂のもの (7) その他のもの
端子	(1) 刃形のもの (2) 筒形のもの (3) 締付け形のもの (4) リード線付きのもの (5) その他のもの
排気孔	(1) あるもの (2) ないもの
溶断の表示	(1) あるもの (2) ないもの
用途	(1) 電動機用のもの (2) 電子機器用のもの (3) 短絡保護専用のもの (4) その他のもの

中国品質認証センター  
CHINA QUALITY  
CERTIFICATION CENTRE

氏名  
Name

発行者  
Issued by



中国100070北京市南四环西路188号9区

Section 9, No.188, Nansihuan Xilu, Beijing 100070, China



# 適合証明書

Certificate of Conformity

添付書類 Attachment 3

証明書番号(Certificate No.) :  
PSE16021083

発行日 Date of Issue :  
2016年12月6日

## 【 型式の区分 Type Classification 】

特定電気用品 :  
(Name of Specified Electrical Appliance and Material)

その他の包装ヒューズ  
Other enclosed fuses

<p>定格遮断電流</p>	<p>(1) 100A以下のもの  (2) 100Aを超え300A以下のもの  (3) 300Aを超え500A以下のもの  (4) 500Aを超え1,000A以下のもの  (5) 1,000Aを超え1,500A以下のもの  (6) 1,500Aを超え2,500A以下のもの  (7) 2,500Aを超え5,000A以下のもの  (8) 5,000Aを超え7,500A以下のもの  (9) 7,500Aを超え10,000A以下のもの  (10) 10,000Aを超え15,000A以下のもの  (11) 15,000Aを超え20,000A以下のもの  (12) 20,000Aを超え25,000A以下のもの  (13) 25,000Aを超え30,000A以下のもの  (14) 30,000Aを超えるもの</p>
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中国品質認証センター  
CHINA QUALITY  
CERTIFICATION CENTRE

氏名  
Name

発行者  
Issued by



中国100070北京市南四環西路188号9区

Section 9, No.188, Nansihuan Xilu, Beijing 100070, China



# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50335764

Blatt *Page*  
0001

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

*Date of Issue*

05-YFC-16073087 001

12.04.2016

(day/mo/yr)

**Genehmigungsinhaber *License Holder***

Dongguan Better Electronics  
Technology Co., Ltd.  
Room 601 of 16 Block, Xinzhu Yuan  
No 4, Xinzhu Road, Songshanlake  
Hightech Ind. Development Zone  
Dongguan City, Guangdong Province  
P.R. China

**Fertigungsstätte *Manufacturing Plant***

Dongguan Better Electronics  
Technology Co., Ltd.  
Nanmen Village, Hengkeng  
Administrative Zone, Liaobu Town  
Dongguan, Guangdong  
P.R. China

**Prüfzeichen *Test Mark***



**Geprüft nach *Tested acc. to***

EN 60127-1:2006+A1+A2

EN 60127-4:2005+A1+A2

**Zertifiziertes Produkt (Geräteidentifikation)**

*Certified Product (Product Identification)*

**Lizenzentgelte - Einheit**

*License Fee - Unit*

Fuse Link (Universal modular fuse-links (UMF))

Type Designation	: 244	13
Trade Mark	: Better (logo)	
Rated Voltage	: 1) AC 250V; 50Hz/60Hz 2) DC 125V	
Rated Current (In)	: 500mA; 630mA; 800mA; 1A; 1,25A; 1,6A; 2A; 2,5A; 3,15A	
Standard Sheet	: 2	
Time/Current Characteristic	: T	
Rated Breaking Capacity	: 1) 100A 2) 50A	

**Remark :**

The labelling requirements acc. to EU Directive 2001/95 have to be observed for distribution within the EEA. The installation has to be carried out according to installation instruction accompanying the products.

13

**ANLAGE (Appendix) : 1**

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht. This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

**TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg**

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com  
Fax: +49 221 806-3935 http://www.tuv.com/safety



# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50335764

Blatt *Sheet*  
0002

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*  
05-YFC-16073087 002

Ausstellungsdatum  
09.11.2018

*Date of Issue*  
(day/mo/yr)

**Genehmigungsinhaber *License Holder***

Dongguan Better Electronics  
Technology Co., Ltd.  
Room 601 of 16 Block, Xinzhuoyuan  
No 4, Xinzhu Road, Songshanlake  
Hightech Ind. Development Zone  
Dongguan City, Guangdong Province  
P. R. China

**Fertigungsstätte *Manufacturing Plant***

Dongguan Better Electronics  
Technology Co., Ltd.  
Nanmen Village, Hengkeng  
Administrative Zone, Liaobu Town  
Dongguan, Guangdong  
P. R. China

**Prüfzeichen *Test Mark***



**Geprüft nach *Tested acc. to***

EN 60127-1:2006+A1+A2  
EN 60127-4:2005+A1+A2  
IEC 60127-1:2006+A1+A2  
IEC 60127-4:2005+A1+A2

**Zertifiziertes Produkt (Geräteidentifikation)  
*Certified Product (Product Identification)***

**Lizenzentgelte - Einheit  
*License Fee - Unit***

Fuse Link (Universal modular fuse-links(UMF))

as page 0001

Change

Test Requirement : See above

**Remark :**

The labelling requirements acc. to EU Directive 2001/95 have to be observed for distribution within the EEA.  
The installation has to be carried out according to installation instruction accompanying the products.

*Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht. This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.*

**TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg**

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com  
Fax: +49 221 806-3935 <http://www.tuv.com/safety>



# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50335764

Blatt *Sheet*  
0003

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

*Date of Issue*

05-YFC-16073087 003

10.09.2019

(day/mo/yr)

**Genehmigungsinhaber *License Holder***

Dongguan Better Electronics  
Technology Co., Ltd.  
Room 601 of 16 Block, Xinzhu Yuan  
No 4, Xinzhu Road, Songshanlake  
Hightech Ind. Development Zone  
Dongguan City, Guangdong Province  
P. R. China

**Fertigungsstätte *Manufacturing Plant***

Dongguan Better Electronics  
Technology Co., Ltd.  
Nanmen Village, Hengkeng  
Administrative Zone, Liaobu Town  
Dongguan, Guangdong  
P. R. China

**Prüfzeichen *Test Mark***



Regular Production  
Surveillance  
Safety  
Type Approved  
  
www.tuv.com  
ID 1419033645

**Geprüft nach *Tested acc. to***

EN 60127-1:2006+A1+A2  
EN 60127-4:2005+A1+A2  
IEC 60127-1:2006+A1+A2  
IEC 60127-4:2005+A1+A2

**Zertifiziertes Produkt (Geräteidentifikation)**  
*Certified Product (Product Identification)*

**Lizenzentgelte - Einheit**  
*License Fee - Unit*

Fuse Link (Universal modular fuse-links (UMF))

as pages 0001-0002

**Addition**

Rated Current (In) : 4A, 5A, 6,3A, 7A 2  
Rated Voltage : AC 250V, 50Hz/60Hz  
Rated Breaking Capacity : 100A

**Remark :**

The labelling requirements acc. to EU Directive 2001/95 have to be observed for distribution within the EEA. The installation has to be carried out according to installation instruction accompanying the products.

2

**ANLAGE (Appendix): 1.1**

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht. This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

**TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg**

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com  
Fax: +49 221 806-3935 http://www.tuv.com/safety



접수번호 : 17-018202-01  
(Receipt No.)



# 안전인증서

## Safety Certificate

안전인증번호 : SU05042-17001  
(Certificate No.)

제조업자/수입업자명 : Dongguan Better Electronics Technology Co.,Ltd.  
(Manufacturer/importer)

주소 : 2nd Industrial Zone, Nanmen Village, Hengkeng, Liao Bu Town,  
(Address) Dongguan, Guangdong, China

제품명 : 퓨즈(Universal Modular Fuse-links)  
(Product)

기본모델명 : 244 T2L250V  
(Basic Model)

파생모델명 : 244 T1L250V  
(Series Model)

정격/안전기준상의 모델구분 : T2 A, AC 250 V  
(Rating)

시험기준 : KC60127-4(2015-09), K60127-1(2011-12)  
(Standard)

본 인증서는 제조국명 : 중국  
제조업자명 : Dongguan Better Electronics Technology Co.,Ltd  
제조공장의 주소 : 2nd Industrial Zone, Nanmen Village, Hengkeng, Liao Bu T  
own, Dongguan, Guangdong, China  
의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항·제4항 또는 제10조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2),9(4) or10 (2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2017 년 04 월 10 일  
Year month day

### 한국산업기술시험원장

### KOREA TESTING LABORATORY



\* 이 인증서는 「전기용품 및 생활용품 안전관리법 시행규칙」에 따른 제품의 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

첨부서류	1. 전기용품의 안전관리부품 및 재질목록(List of Critical Components) 2. 기본모델·파생모델의 내용 (Descriptions of the basic and series model) 3. 안전인증의 변경 현황 (Revisions Status)
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첨부 1 : 전기용품의 안전관리부품 및 재질목록  
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Brass cap	Dongguan Better Electronics Technology Co., Ltd.	-	1)2.60 mm x 1.6 mm x 0.15 mm H65~H68 brass 2)2.30 mm x 1.3 mm x 0.10 mm H65~H68 brass	-
Ceramic tube	HuNan XingHua HengSheng electronic factory	-	5.4 mm x 2.5 mm x 0.6 mm AL2O3 85 %, SiO2 15 %	-
Element wire	Dongguan Better Electronics Technology Co., Ltd.	-	Sn:20 %,Cu:80 %	-
Solder	Shenzhen YongAn Flux Co., LTD	-	Sn 99.3 %,Cu 0.7 %	-
Filler	Fujian Pingtan Material	-	Quartz sand	-

유의사항 (Attention) :

1. 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.

*As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiple listing or changing the items above, the certification revision shall be applied.*

2. 인증변경신청 없이 임의로 변경하는 경우는, 전기용품 및 생활용품 안전관리법 시행규칙 제 20 조제 1 항 또는 제 36 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.

*The Safety Certification will be cancelled under the Article 20(1), 36(1) of the Enforcement Rule of the Electrical appliances and Consumer Products Safety Control Act if the contents of the Certification is altered without our authorization.*

**첨부 2 : 기본모델 · 파생모델의 내용**  
 Description of the basic and series model

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
244 T1L250V	Rated current 1 A
제품특기사항 및 시험조건 Remarks & Test conditions	
<p>1. Review report No.: 17-018202-01 (2017.04.07.)</p> <p>2. Product Description</p> <ul style="list-style-type: none"> <li>- AC 250 V, 2 A, Time-lag(T), Low-breaking capacity</li> <li>- Surface mount fuse link</li> <li>- Rated Breaking capacity : 100 A</li> <li>- Standard sheet 2</li> </ul>	
<p>□ 본 제품의 검토내용에 관하여 의문사항이 있으시면 아래 연락처로 문의하시기 바랍니다.          검토 담당자 : 인증산업본부 인증심사센터 신 종욱 / 02-8601-1437</p> <p>□ <i>If you have any question on product review, please contact the person below :</i>  <i>Job holder: Certification Business Division, Certification Evaluation Center, J.U.Shin / +82 2 860-1437</i></p>	

FP511-05

**첨부 3 : 안전인증의 변경 현황**  
 Revisions Status

변경발급 내용 Contents of Certificate Revisions
Not applicable

FP511-06

접수번호 : 17-018202-02  
(Receipt No.)



# 안전인증서

## Safety Certificate

안전인증번호 : SU05042-17002  
(Certificate No.)

제조업자/수입업자명 : Dongguan Better Electronics Technology Co.,Ltd.  
(Manufacturer/importer)

주소 : 2nd Industrial Zone, Nanmen Village, Hengkeng, Liao Bu Town,  
(Address) Dongguan, Guangdong, China

제품명 : 퓨즈(Universal Modular Fuse-links)  
(Product)

기본모델명 : 244 T500L250V  
(Basic Model)

파생모델명 : Not Applicable  
(Series Model)

정격/안전기준상의 모델구분 : T500 mA, AC 250 V  
(Rating)

시험기준 : KC60127-4(2015-09), K60127-1(2011-12)  
(Standard)

본 인증서는 제조국명 : 중국  
제조업자명 : Dongguan Better Electronics Technology Co.,Ltd  
제조공장의 주소 : 2nd Industrial Zone, Nanmen Village, Hengkeng, Liao Bu T  
own, Dongguan, Guangdong, China  
의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항·제4항 또는 제10조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2),9(4) or10 (2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2017 년 04 월 10 일  
Year month day

### 한국산업기술시험원장

### KOREA TESTING LABORATORY



\* 이 인증서는 「전기용품 및 생활용품 안전관리법 시행규칙」에 따른 제품의 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

첨부서류	1. 전기용품의 안전관리부품 및 재질목록(List of Critical Components) 2. 기본모델·파생모델의 내용 (Descriptions of the basic and series model) 3. 안전인증의 변경 현황 (Revisions Status)
------	---

첨부 1 : 전기용품의 안전관리부품 및 재질목록  
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Brass cap	Dongguan Better Electronics Technology Co., Ltd.	-	1)2.60 mm x 1.6 mm x 0.15 mm H65~H68 brass 2)2.30 mm x 1.3 mm x 0.10 mm H65~H68 brass	-
Ceramic tube	HuNan XingHua HengSheng electronic factory	-	5.4 mm x 2.5 mm x 0.6 mm AL2O3 85 %, SiO2 15 %	-
Element wire	Dongguan Better Electronics Technology Co., Ltd.	-	Sn:20 %,Cu:80 %	-
Solder	Shenzhen YongAn Flux Co., LTD	-	Sn 99.3 %,Cu 0.7 %	-
Filler	Fujian Pingtan Material	-	Quartz sand	-

유의사항 (Attention) :

- 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.

*As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiple listing or changing the items above, the certification revision shall be applied.*

- 인증변경신청 없이 임의로 변경하는 경우는, 전기용품 및 생활용품 안전관리법 시행규칙 제 20 조제 1 항 또는 제 36 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.

*The Safety Certification will be cancelled under the Article 20(1), 36(1) of the Enforcement Rule of the Electrical appliances and Consumer Products Safety Control Act if the contents of the Certification is altered without our authorization.*



**첨부 2 : 기본모델 · 파생모델의 내용**  
 Description of the basic and series model

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
Not applicable	
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Review report No.: 17-018202-02 (2017.04.07.)  2. Product Description - AC 250 V, 500 mA, Time-lag(T), Low-breaking capacity - Surface mount fuse link - Rated Breaking capacity : 100 A - Standard sheet 2	
<input type="checkbox"/> 본 제품의 검토내용에 관하여 의문사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 검토 담당자 : 인증산업본부 인증심사센터 신 종욱 / 02-8601-1437 <input type="checkbox"/> <i>If you have any question on product review, please contact the person below :</i> <i>Job holder: Certification Business Division, Certification Evaluation Center, J.U.Shin / +82 2 860-1437</i>	

FP511-05

**첨부 3 : 안전인증의 변경 현황**  
 Revisions Status

변경발급 내용 Contents of Certificate Revisions
Not applicable

FP511-06