

Engineering Product Specifications

(产品承认书)

Customer Name (客户): _____

Customer NO. (客户料号): _____

Model No. (产品型号): _____

Product Description (品名): Quick-Acting Miniature Fuse

Part NO. (产品编号): 523 series

Remark: _____

Document Release		Date(日期)
Prepared by (制表)		
Checked by (审核)		
Approved by (批准)		

Customer Approval		Date(日期)
Signed by (承认)		
Checked by (审核)		
Approved by (批准)		

Dongguan Better Electronics Technology Co.,Ltd.

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1	2012.10.25	Draft	8	A/0	Runsong Zhong	Lianghua Guo
2	2014.07.28	Release Edition	8	B/0	Kings Luo	Wenhua Yan
3	2015.05.05	Lead standard length: 38mm change as 30mm	4	B/1	Kings Luo	Wenhua Yan
4	2015.07.30	Update UR certification		B/2	Jeffery	Gem Guo
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1. SCOPE AND DESCRIPTION



Following electronic product specifications apply to fuses of the 523 series. The 523 series is a quick-acting type miniature fuse for over-current protection.

With its high breaking capacity the 523 fuse series is ideal for supplementary protection in electrical appliances and equipment to provide excellent protection for components or circuits.

2. GENERAL INFORMATION

General Description

The 523 series quick-acting fuse with high breaking capacity for use with printed circuit boards is used in a large variety of applications. This 5x20mm device is constructed of a ceramic tube with electro-plated brass end caps. The 523 series with 250 VAC rating and 1500 Ampere breaking, offers excellent quality and is 100% tested for cold resistance and precise length.

Detailed Features

- Miniature fuse with quick-acting, high breaking capacity
- 5mm x 20mm physical dimensions
- Ceramic tube, encapsulated design with nickel - plated brass end caps
- Optional axial leads are $\Phi 0.65\text{mm} \times 38\text{mm}$ at 500mA~6.3A, $\Phi 0.8\text{mm} \times 38\text{mm}$ at 8A~10A
- Protection against harmful over-currents in primary and secondary applications.
- Lead-free, Halogen-free, RoHS compliant
- Designed compliant to IEC 60127-2/ I

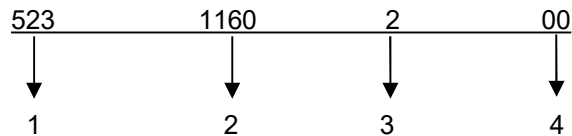
3. AGENCY APPROVALS

Agency	Agency File Number	Ampere/ Voltage Range
	40025669	250VAC: 500mA; 1.6A; 3.15A; 6.3A; 8A; 10A
	CQC08012026399	250V: 10A
	E300003	125V AC/250VAC: 500mA~10A
	2008010207298390	250V: 500mA; 1A; 3.15A; 6.3A

4. PART NUMBERING SYSTEM

4.1 Part Number

Example: 5231160200



1	Product Series	523
2	Ampere Rating/ Code	1.6A (see table 4.3 below)
3	Voltage Rating	2 – 250V 1 – 125V
4	Packaging Code	(see table 4.2 below)

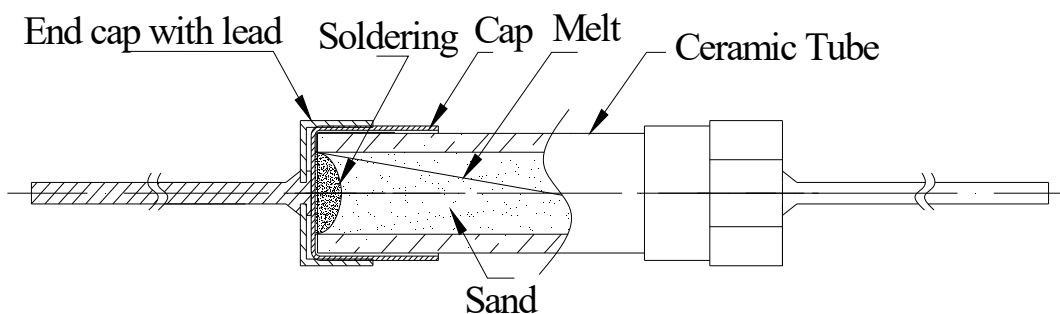
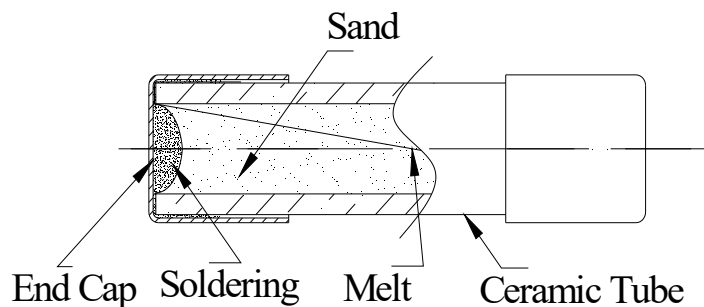
4.2 Packaging Code Table

CODE	DESIGNATION
00	Normal product
01	Octangular cap Ø0.65mm
02	Round Cap Ø0.65mm
03	Octangular cap Ø0.8mm
04	Round Cap Ø0.8mm
05	Octangular cap Ø1.0mm
06	Round Cap Ø1.0mm

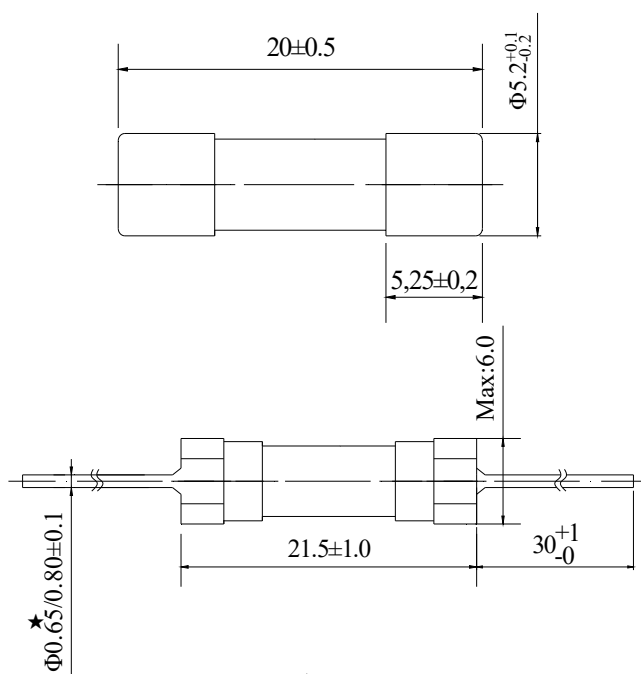
4.3. Ampere Rating Table

AMP CODE	CURRENT RATING	VOLTAGE RATING
0500	500mA	125V/250V
0630	630mA	125V/250V
0800	800mA	125V/250V
1100	1A	125V/250V
1125	1.25A	125V/250V
1160	1.6A	125V/250V
1200	2A	125V/250V
1250	2.5A	125V/250V
1315	3.15A	125V/250V
1400	4A	125V/250V
1500	5A	125V/250V
1630	6.3A	125V/250V
1800	8A	125V/250V
2100	10A	125V/250V

5. MECHANICAL SPECIFICATIONS



Dimensions (units: mm)



Note: ★
500mA~7.0A " $\Phi 0.65$ mm
8.0A~10A " $\Phi 0.80$ mm

Operating Temperature:

-55°C to 125°C

Storage Conditions:

+10°C to +60°C

Relative humidity: $\leq 75\%$ 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

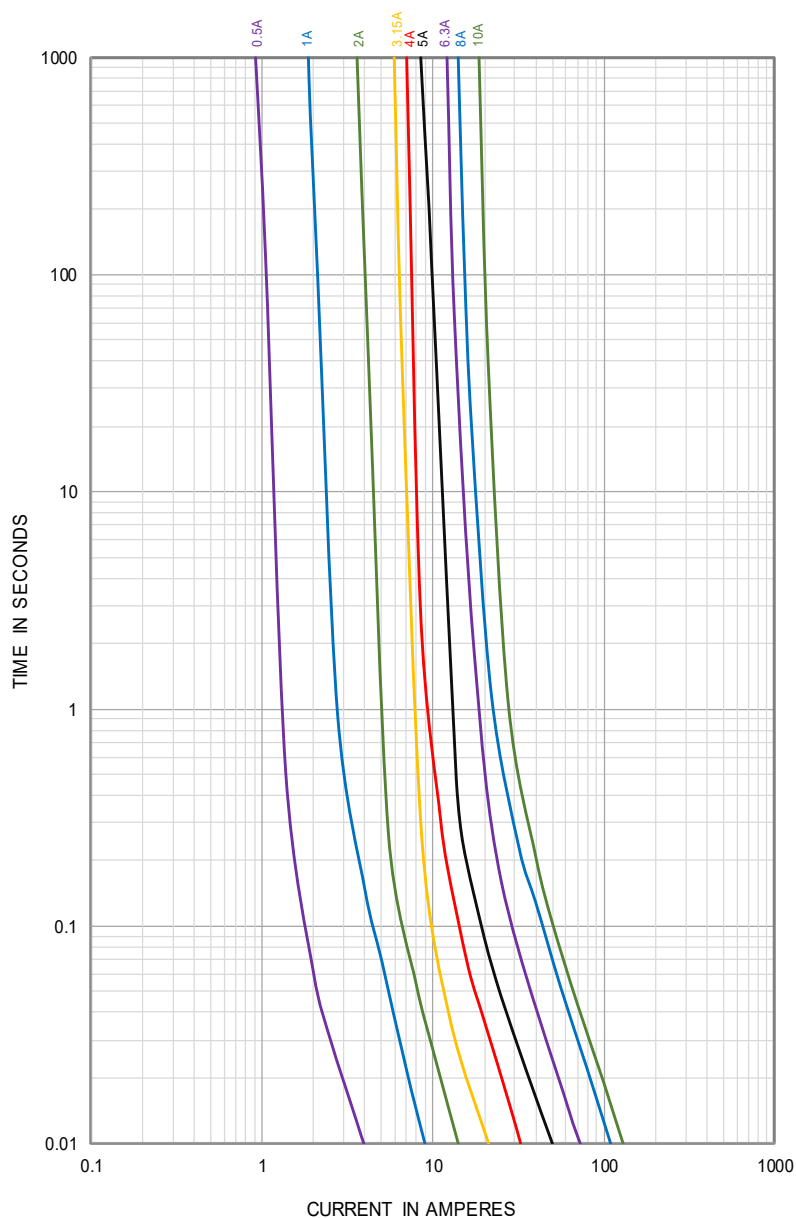
6. ELECTRICAL SPECIFICATIONS

Time vs Current Characteristics Table

(measured with constant current power supply)

Time vs Current Characteristics: IEC 60127-2/ I					
Rated Current	150%	210%	275%	400%	1000%
500mA~4.0A	>1h	<30min	10ms~2s	3ms~300ms	≤20ms
4.1A~6.3A	>1h	<30min	10ms~3s	3ms~300ms	≤20ms
6.4A~10A	>1h	<30min	40ms~20s	10ms~1s	≤30ms

Average Time Current (I-T) Curves

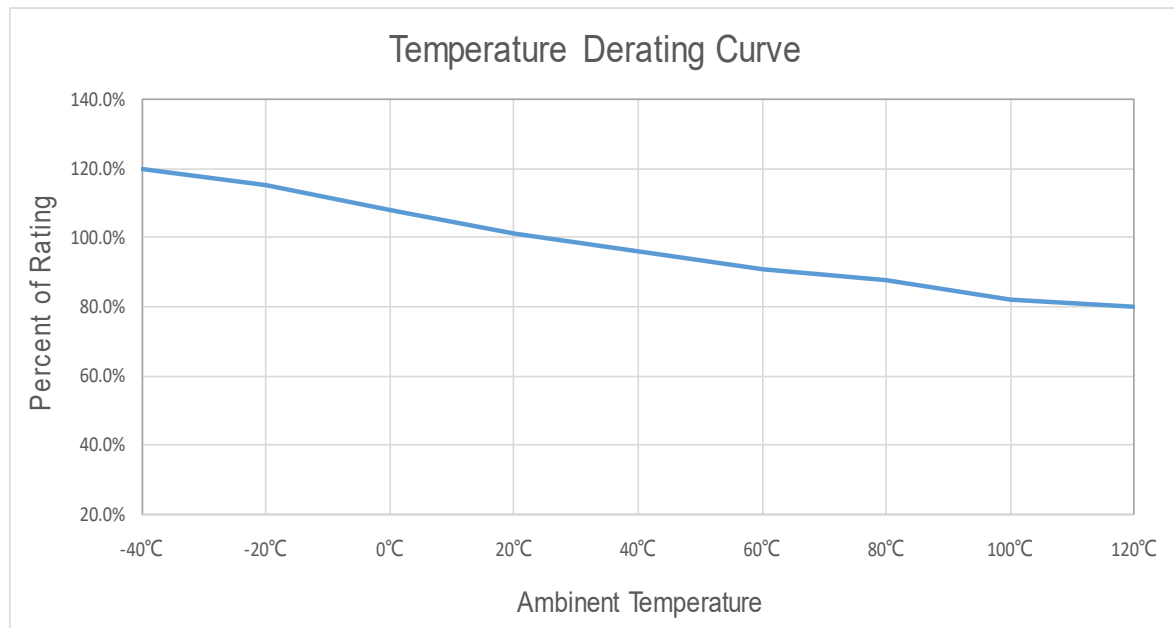


Electrical characteristics

Electrical Characteristics										
Amp Code	Rated Current	Max. Voltage	Max. Voltage Drop(mV)	Max. Power Dissipation (W)	Nominal Melting I²t(A²sec)	Breaking Capacity	Approvals			
							VDE	CQC	cURus	CCC
0500	500mA	250V AC	1800	2.5	0.152	1500A@250V AC 10kA@125V AC 50-60Hz Cosφ=0.7-0.8	●	○	●	●
0630	630mA		1500	2.5	0.24		○	○	●	○
0800	800mA		1200	2.5	0.533		○	○	●	○
1100	1.00A		1000	2.5	0.81		○	○	●	●
1125	1.25A		800	4.0	1.23		○	○	●	○
1160	1.60A		600	4.0	1.3		●	○	●	○
1200	2.00A		500	4.0	1.96		○	○	●	○
1250	2.50A		400	4.0	3.06		○	○	●	○
1315	3.15A		350	4.0	4.41		●	○	●	●
1400	4.00A		300	4.0	10.43		○	○	●	○
1500	5.00A		250	4.0	25		○	○	●	○
1630	6.30A		200	4.0	53.3		●	○	●	●
1800	8.00A		200	4.0	121		●	○	●	○
2100	10.00A		200	4.0	136		●	●	●	○

Notes: (1) Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F)
 (2) The cURus certification by 125V and 250V; the others certification only by 250V.

Temperature Derating Curve



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

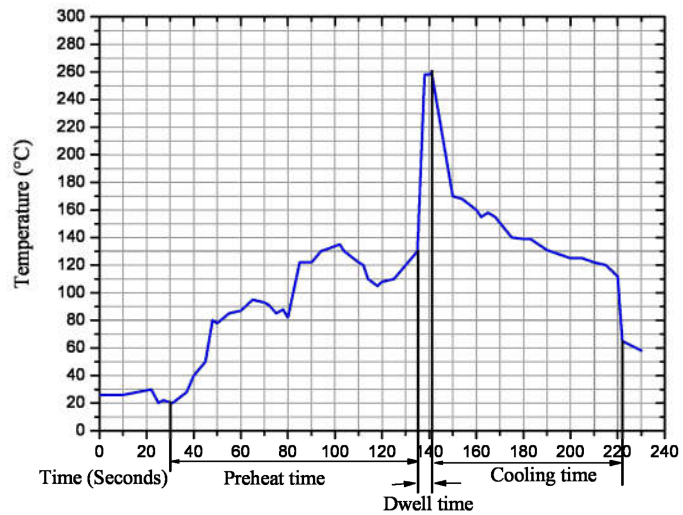
7. SOLDERING PARAMETERS

260°C. ≤5 sec (Wave Soldering)

350°C. ≤3 sec (Hand Soldering)

Soldering Peak:

260°C - 10 sec (IEC 60068-20)



8. ORDERING INFORMATION

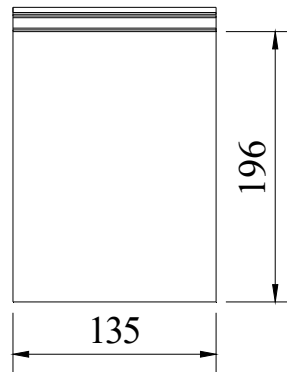
The following information are necessary in order to place your order with us correctly:

Series	Amp Code	Supplementary Code	Qty
523			

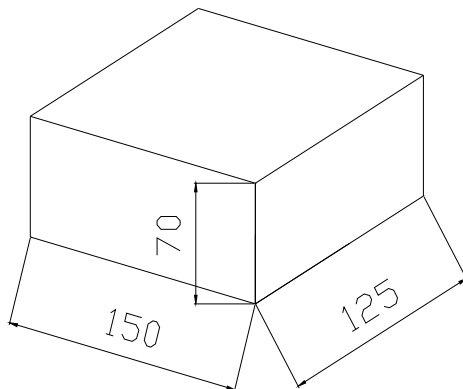
9. PACKING INFORMATION

Packing details

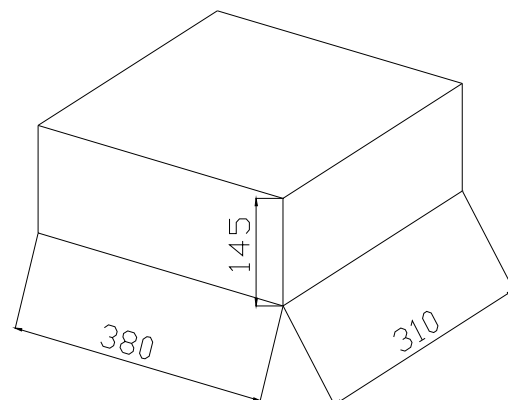
Plastic bag



Inner Box



Master Carton



Net Weight (100pcs/bag)	550g	Inner box weight	1.2kg	Master Carton Weight	12.5kg
Qty per bag	500pcs	Qty per box	1000pcs	Qty per carton	10000pcs

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东莞市贝特电子科技股份有限公司

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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 fuses

Cat. No.	Size mm(in)	Amps (A)	Volts (V)	Interrupting Rating (A)
521	5 x 20 (0.20 x 0.79)	0.315 - 10.0	125Vac	10000
		0.315 - 10.0	250Vac	100
523	5 x 20 (0.20 x 0.79)	0.5 - 10	125Vac	10000
		0.5 - 10	250Vac	1500
524	5 x 20 (0.20 x 0.79)	0.5 - 10	125Vac	10000
		0.5 - 10	250Vac	1500
		12 - 16	125Vac	10000
		12 - 16	250Vac	1500
		20 - 25	125Vac	400
		20 - 25	250Vac	200

Marking: Company name and model designation.

[Last Updated](#) on 2015-07-17

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产品认证证书

证书编号: CQC08012026399

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

管状熔断体

523 F10AH250V

产品标准和技术要求

GB9364.1-1997 IEC60127-2: 2003+A1: 2003 CQC11-462125-2009附件2

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: 2014年12月08日

证书有效期内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: 2008年10月15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>

C 0067450



PRODUCT CERTIFICATE

No.: CQC08012026399

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.

NAME, MODEL AND SPECIFICATION

Cartridge fuse-links
523 F10AH250V

THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS

GB9364.1-1997 IEC60127-2:2003+A1:2003 CQC11-462125-2009 附件2

CERTIFICATION MODEL

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

This is to certify that the above mentioned products have met the requirements of certification rules
CQC11-462125-2009.

Date of issue: Dec.08,2014

Validity of this certificate is subject to positive result of the regular follow up inspection by issuing
certification body until the expiry date.

Date of original certification: Oct.15,2008

President:

Wang Kejiao



CHINA QUALITY CERTIFICATION CENTRE

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

C 0067450

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Technology Co., Ltd.
Room 601 of 16 Block, Xinzhu Yuan
No 4, Xinzhu Road
523808 DONGGUAN
CHINA

ist berechtigt, für ihr Produkt /
is authorized to use for their product

G-Sicherungseinsatz
Cartridge fuse-link

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Tested and certified according to

DIN EN 60127-1 (VDE 0820-1):2015-12; EN 60127-1:2006+A1:2011+A2:2015
DIN EN 60127-2 (VDE 0820-2):2015-07; EN 60127-2:2014
IEC 60127-1:2006
IEC 60127-1:2006/AMD1:2011
IEC 60127-1:2006/AMD2:2015
IEC 60127-2:2014

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Zertifizierungsstelle / Certification

J. Richter

Aktenzeichen: 5015514-1170-0006 / 228748

File ref.:

Ausweis-Nr. 40025669

Certificate No.

Weitere Bedingungen siehe Rückseite und Folgeblätter /
further conditions see overleaf and following pages

Offenbach, 2008-10-27

(letzte Änderung / updated 2016-11-21)

Blatt 1
Page

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Aktenzeichen / *File ref.*

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letzte Änderung / *updated*

2016-11-21

Datum / *Date*

2008-10-27

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This supplement is only valid in conjunction with page 1 of the Certificate No. 40025669.

G-Sicherungseinsatz Cartridge fuse-link

Typ(en) / *Type(s)*

523-Serie(s)

Bemessungsspannung <i>Rated voltage</i>	AC 250 V
Bemessungsstrom <i>Rated current</i>	500 mA; 1,6 A; 3,15 A; 6,3 A; 8 A; 10 A
Normblatt <i>Standard sheet</i>	1
Maße in mm <i>Dimension in mm</i>	5 x 20
Kennzeichnung der Charakteristik <i>Characteristic symbol</i>	F
Kennzeichnung des Ausschaltvermögens <i>Breaking capacity symbol</i>	H
Bemessungsausschaltvermögen <i>Rated breaking capacity</i>	1500 A
Zeit/Strom-Charakteristik <i>Time/current-characteristic</i>	flink <i>quick-acting</i>

Fortsetzung siehe Blatt 3 /
continued on page 3

VDE Prüf- und Zertifizierungsinstitut Zeichengenehmigung

Ausweis-Nr. / Blatt /
Certificate No. Page
40025669 3

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2016-11-21

Datum / *Date*

2008-10-27

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Anmerkung
Remark

Die Prüfspannung in Abschnitt 9.2 war DC 125 V.
The test voltage in clause 9.2 was DC 125 V.

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VDE Testing and Certification Institute
Fachgebiet CC2
Section CC2

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2016-11-21

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This supplement is part of the Certificate No. 40025669.

G-Sicherungseinsatz Cartridge fuse-link

Fertigungsstätte(n)
Place(s) of manufacture

Referenz/*Reference*
30017543

Dongguan Better Electronics
Technology Co., Ltd.
Nanmen Village
Hengkeng Administrative Zone
523413 LIAOBU TOWN, DONGGUAN
Guangdong
CHINA

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
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Section CC2

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Ausweis-Nr. / Infoblatt /
Certificate No. Info sheet
40025669

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523808 DONGGUAN, Guangdong, CHINA

Aktenzeichen / File ref.

5015514-1170-0006 / 228748 / CC2 / EUL

letzte Änderung / updated

2016-11-21

Datum / Date

2008-10-27

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Basis for the use are the general terms and conditions of the VDE Testing and Certification Institute (www.vde.com\terms-institute). The right to use the mark is granted only to the mentioned company with the named places of manufacture and the listed products with the related type references. The place of manufacture shall be equipped in a way that a constant manufacturing of the certified construction is assured.

The approval is valid as long as the VDE specifications are in force, on which the certification is based on, unless it is withdrawn according to the VDE Testing and Certification Procedure (PM102E).

The validity period of a VDE-GS-Mark Approval may be prolonged on request. In case of changes in legal and / or normative requirements, the validity period of a VDE-GS-Mark Approval may be shortened.

Products containing the biocide dimethylfumarate (DMF) may not be marketed or made available on the EC market according to the Commission Decision 2009/251/EC.

The approval is solely signed on the first page.