承 认 书 APPROVAL SHEET

编号No.	9331500K01-A/1-B
日期 Date	2020.06.30

客户									
Customer									
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Product		Box Sup	miniature Fuse	:					
系 列 Series		933 Serie	es						
料号 Part No.			规格描述 Specific	cation	备	拴注 Remark			
贝特电子			Square plastic		ast-				
Betterfuse			Acting current	fuse					
客户									
Customer									
环保特别提示 S	pecial instru	ctions for en	vironmental protec	ction					
本产品:									
供应商-贝特电子	供应商-贝特电子 零件承认章 客 户 零件承认章								
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联络 Contact								
业务 Sales	电话 Telephone	手机 Cellphone	邮箱 E-mail					
零件承认后	└ 汝请回签一份给我司留存,或将	· 承认后的封面传真(0769-8						

Approval



Do	cument R	ecord				
No.	Date	Modified Content	Page	Edition	Prepared/modified by	Checked by
1	2016.09.09	Draft		A/0	Jeffery	Wenhua Yan
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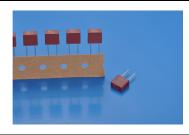
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1. SCOPE AND DESCRIPTION



Following electronic product specifications apply to fuses of the 933 series. The 933 series is a fast-acting type subminiature fuse for over-current protection.

Its main applications are for consumer electronics, LED drivers, power supplies, battery chargers and controllers for industrial use.

2. GENERAL INFORMATION

General Description

The 933 series provides protection for printed circuit boards used in a large variety of applications that need fuses with fast-acting, low breaking capacity. The subminiature device is constructed of a plastic cap and base with a tin plated copper lead wire. It offers excellent mounting characteristics and is 100% tested for cold resistance.

Detailed Features

- · Subminiature fuse with quick-acting, low breaking capacity
- Small, rectangular and leaded design minimizes board space and eliminates the need for additional mounting components
- Plastic cap / brown thermoplastic fuse body.
- · 0.6mm lead wires made of tin plated copper.
- Protection against harmful over-currents in primary and secondary applications.
- · Lead-free, Halogen-free, RoHS compliant
- Designed according to IEC60127

3. AGENCY APPROVALS

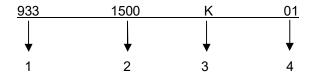
Agency	Agency File Number	Voltage / Ampere Range
c FL °us	E300003	400V AC: 0.1~10A; 250V DC: 0.1~10A;



4. PART NUMBERING SYSTEM

4.1 Part Number

Example: 9331500K01



4.2. Ampere / Voltage Rating Table

AMP CODE	CURRENT RATING	VOLTAGE RATING
0630	630mA	400V AC; 250V DC
0800	800mA	400V AC; 250V DC
1100	1.00A	400V AC; 250V DC
1125	1.25A	400V AC; 250V DC
1160	1.60A	400V AC; 250V DC
1200	2.00A	400V AC; 250V DC
1250	2.50A	400V AC; 250V DC
1315	3.15A	400V AC; 250V DC
1400	4.00A	400V AC; 250V DC
1500	5.00A	400V AC; 250V DC
1630	6.30A	400V AC; 250V DC
1800	8.00A	400V AC; 250V DC
2100	10.00A	400V AC; 250V DC

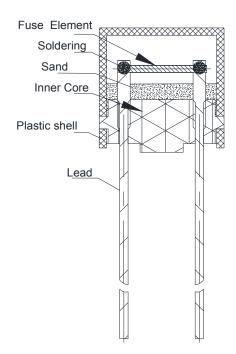
4.3. Supplementary Code Table

CODE	DESIGNATION			
00	Special products			
01	Taping			
02	bulk			
05	Lead wire:3.5±0.5			
06	Lead wire:4±0.5			
	•			
	•			
	•			
78	Taping			

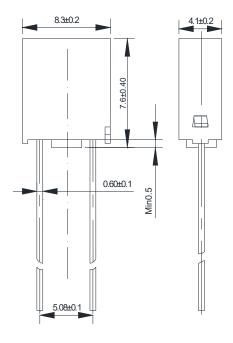


5. CONSTRUCTION AND MECHANICAL CHARACTERISTICS

Construction (cross section)



Dimensions (unit: mm)



Long Leads: L=18.8±1.5mm

Short Leads: L=4.3±0.3mm

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

The dimension of 5.08 ± 0.1 mm is the distance between PIN center holes





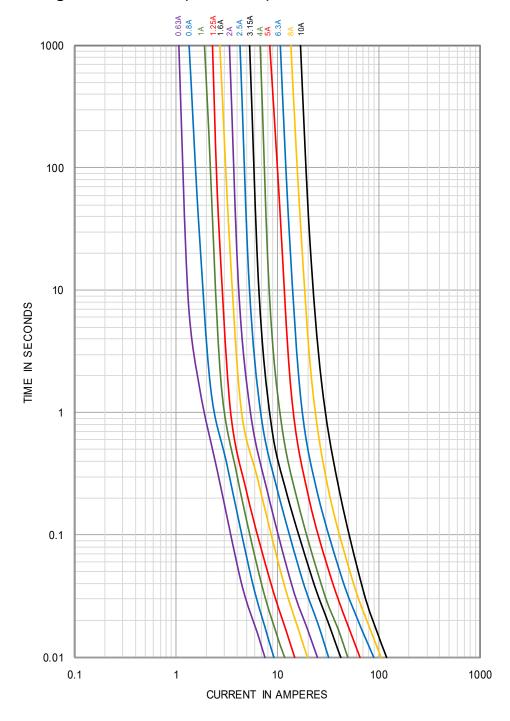
6. ELECTRICAL SPECIFICATIONS

Time vs Current Characteristics Table

(measured with constant current power supply) (according to IEC60127)

Rated Current	150%	210%	275%	400%	1000%
630mA~10A	>1h	<30min	10ms~3s	3ms~300ms	≤20ms

Average Time Current (I-T Curves)





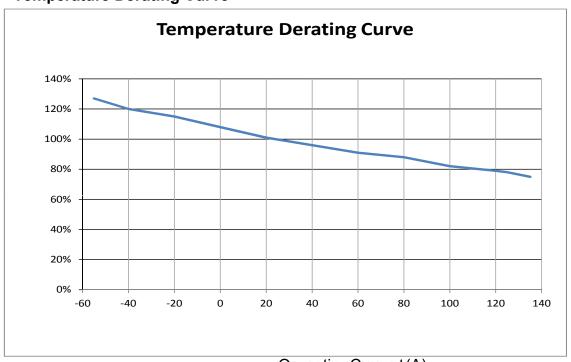
Electrical Characteristics

Electrical Ch	Electrical Characteristics at 25℃							
Amp	Rated	Rated	Cold	Nominal	Breaking	Approval		
Code	Current	Voltage	Resistance (mΩ)	Melting I²t (A²sec)	Capacity	cURus		
0630	630mA		/	1		•		
0800	800mA		/	1		•		
1100	1.00A		44.1~81.9	1.44		•		
1125	1.25A		31.5~58.5	2.25		•		
1160	1.60A		24.5~45.5	4.00		•		
1200	2.00A	250VDC 400VAC	23.5~43.6	6.25		•		
1250	2.50A		17.5~32.5	10.24	100A@250VDC 100A@400VAC	•		
1315	3.15A		13.6~25.2	17.6		•		
1400	4.00A		10.1~18.7	25.0		•		
1500	5.00A		8.05~15.0	42.3		•		
1630	6.30A		5.18~9.62	81.0		•		
1800	8.00A		4.03~7.48	110		•		
2100	10.00A		2.94~5.46	144		•		

Notes: (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 within the standard range of 8ms ~ 10ms.

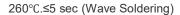
Temperature Derating Curve



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



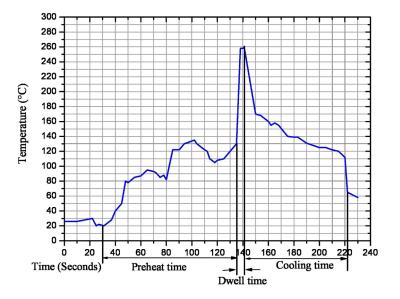
7. SOLDERING PARAMETERS



350°C.≤3 sec (Hand Soldering)

Soldering Peak:

260°C - 10 sec (IEC 60068-20)



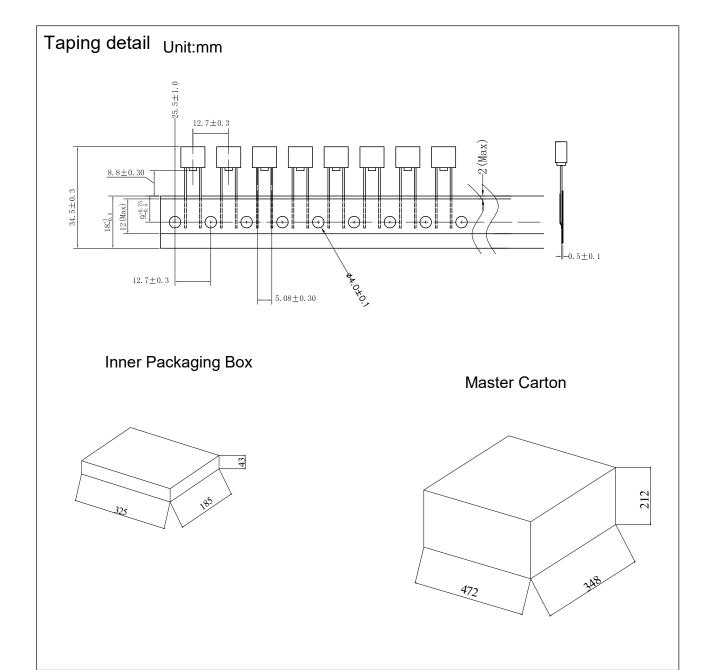
8. ORDERING INFORMATION

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

Series	Amp Code	Supplementary Code	Qty
933			



9. PACKING INFORMATION



Net Weight
(1000pcs+Taping)0.54KgMaster Carton Weight6.10KgQty Per Box1000pcsQty Per Carton10000pcs

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ONLINE CERTIFICATIONS DIRECTORY

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
XINZHUYUAN NO 4 XINZHU RD
SONGSHANLAKE HIGHTECH INDUSTRIAL DEVELOPMENT ZONE
DONGGUAN, GUANGDONG 523808 CHINA

Supplemental fuses: pigtail leads

Cat. No.	Size mm(in)	Amps (A)	Volts (V)	Interrupting Rating (A)
316	3.9 x 12 (0.15 x 0.47)	0.25 - 10	250Vac	150
931 and 933	8.5 x 4 x 8.5 (0.33 x 0.16 x 0.33)	0.1 - 10	125Vac	130
		0.1 - 10	250Vac	130
		0.1 - 10	400Vac	100
		0.1 - 10	250Vdc	100

Supplemental micro fuses: surface mount

Cat. No.	Size mm(in)	Amps (A)	Volts (V)	Interrupting Rating (A)
065, 066, 062,064, 067 or 068, followed by ampere 0-8.				
	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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