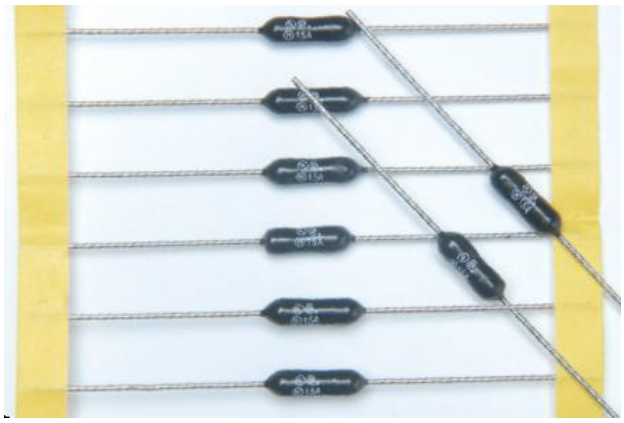
Microfuse RoHS & Pb-free
好利保险丝管



产 品 规 格 书

PRODUCT SPECIFICATION

（快断型）

(FAST-BLOW)

30N RoHS SERIES

编码：A06 HLD-PSI-8057 2022/08/31

制定：	审核：	批准：
赖凯 2022.08.31	胡兴华 2022.08.31	苏毅镇 2022.08.31
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1、适用范围/ SCOPE

本规格书适用于公司生产并获得 UL、CUL、CSA、PSE 安全标准认证的 30N RoHS 系列 HOLLY® 商标的微型保险丝管。

This specification defines the technical requirements of micro-fuse type 30N RoHS series with HOLLY® brand, which are approved by UL, CUL, CSA and PSE.

产品部件号为：	型号	额定电流	额定电压
Construction of part no.:	type	rated current	rated voltage
例如/ Example:	30N	010	H2
* 额定电压/ Rated Voltage: H1-350V		H2-250V	L-125V

产品部件号/ PART NUMBER

产品部件 Part Number	额定电流 Rated Current	额定电压 Rated Voltage	电阻 Nominal Resistance (Ohms)	I^2T 值 I^2T Value ($A^2Sec.$)
30N-0200H2/H1/L	200mA	350V/ 250V/ 125V	0.7200	0.02502
30N-0250H2/H1/L	250mA		0.5800	0.03852
30N-0300H2/H1/L	300mA		0.4800	0.06389
30N-0315H2/H1/L	315mA		0.3940	0.08730
30N-0350H2/H1/L	350mA		0.3190	0.1118
30N-0375H2/H1/L	375mA		0.3480	0.1426
30N-0400H2/H1/L	400mA		0.3400	0.1488
30N-0500H2/H1/L	500mA		0.2100	0.2581
30N-0600H2/H1/L	600mA		0.4110	0.1189
30N-0630H2/H1/L	630mA		0.3800	0.1279
30N-0700H2/H1/L	700mA		0.3400	0.1680
30N-0750H2/H1/L	750mA		0.3060	0.1978
30N-0800H2/H1/L	800mA		0.2860	0.2285
30N-010H2/H1/L	1A		0.2600	0.4373
30N-012H2/H1/L	1.2A		0.2000	0.6019
30N-013H2/H1/L	1.25A		0.1740	0.6261
30N-015H2/H1/L	1.5A		0.1500	0.9885
30N-016H2/H1/L	1.6A		0.1300	1.159
30N-020H2/H1/L	2.0A		0.1120	2.297
30N-025H2/H1/L	2.5A		0.0320	2.152
30N-030H2/H1/L	3.0A		0.0310	3.005
30N-032H2/H1/L	3.15A		0.0270	4.174
30N-035H2/H1/L	3.5A		0.0227	5.182
30N-040H2/H1/L	4.0A		0.0220	5.712
30N-050H2/H1/L	5.0A		0.0178	10.55
30N-060H2/H1/L	6.0A		0.0147	15.84

30N-063H2/H1/L	6.3A	350V/ 250V/ 125V	0.0136	18.58
30N-070H2/H1/L	7.0A		0.0122	23.32
30N-080H2/H1/L	8.0A		0.0098	38.20
30N-090H2/H1/L	9.0A		0.0084	54.34
30N-100H2/H1/L	10A		0.0073	75.76
30N-120H2/H1/L	12A		0.0061	110.4
30N-150H2/H1/L	15A		0.0047	250.9

2 相关标准/ APPLICABLE STANDARDS

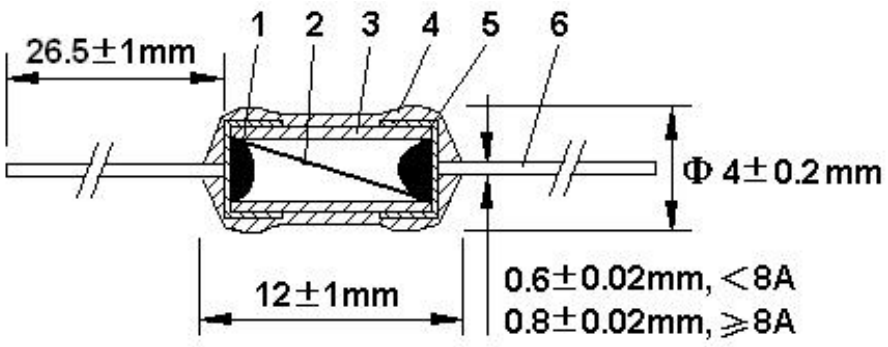
2.1 30N RoHS 系列产品适用的相关标准是 UL248-1、UL248-14、CSA C22.2 NO.248.1-00、CSA C22.2 NO.248.14-00、JIS C6575。

Applicable standards for 30N RoHS series are UL248-1, UL248-14, CSA C22.2 NO.248.1-00, CSA C22.2 NO.248.14-00 and JIS C6575.

2.2 认证情况/ APPROVED DETAILS

额定电压 RATED VOLTAGE	UL/ CUL		CSA		PSE	
	认证范围 APPROVED RANGE	认证号码 CERT. NO.	认证范围 APPROVED RANGE	认证号码 CERT. NO.	认证范围 APPROVED RANGE	认证号码 CERT. NO.
125V	100mA-125mA	E156471	100mA-15A	LR101178	1A~5A	JET 2489-31007-1001
	800mA-15A					
250V	100mA-125mA				1A~5A	JET 2489-31007-1006
	800mA-15A					
350V	800mA-15A				/	

3 构造图/ CONSTRUCTION FIG.&DIMENSION



编号/No.	品名/PART	材料名/MATERIAL MODEL	备注/NOTE
1	焊锡 Solder	含铅高温焊锡 Pb Contained High Temperature Solder	/
2	可熔体/ Element	金属丝/ Metal Wire	/
3	管体 Tube	玻璃管(125V/ 250V)或陶瓷管(350V) Glass Tube (125V/ 250V) or Ceramic Tube	/
4	绝缘涂层 Insulating Coat	黑色环氧树脂 Black Epoxy Resin	UL94-V0
5	尾线铜帽 Cap with Pig	黄铜 Brass	镀镍 Nickel Plated
6	尾线/ Pig Tail	镀锡铜线/ Tin Plated Copper	镀锡/ Tin Plated

3.1 尾线/ PIG TAIL

尾线可焊性符合 SJ/T 10669。

The solderability of the pig tail shall be complied with the standard of SJ/T 10669.

4 机械特性/ MECHANICAL PERFORMANCES

保险丝应能承受下列二项试验。/ Fuse shall be withstood following two testing.

4.1 拉力试验/ TENSILE STRENGTH

固定保险丝管的一端引线，然后在另一端引线上，沿水平轴方向施加 5N 的拉力，引线不应松动且管体不应破碎。

When one pig-tail of the specimen is fixed and then the tensile force 5N is applied to the other pig-tail in a direction to separate the end pig-tail, no looseness of pig-tails or damage of fuse-tube shall occur.

4.2 管体强度试验/ STRENGTH OF FUSE-TUBE

保险丝管主体固定好后，在保险丝管主体的中心位置施加 15N 的压力，管体不应破碎。

When middle parts of the specimen body are supported and then the force 15N is applied to the middle part of the specimen body, no damage of the fuse-tube shall occur.

5 电气特性/ ELECTRICAL PERFORMANCE

5.1 测试条件/ TEST CONDITION

全部测试条件都应在环境温度 24℃±3℃条件下进行，在此期间温度变化不允许达到+5℃和到极限范围。

All electrical tests are conducted at an ambient temperature of 24±3℃. The ambient temperature is not allowed to vary more than 5℃ during the test, and must be within these limits.

5.2 负载能力测试/ CURRENT-CARRYING CAPACITY TEST

当保险丝通以 100%倍额定电流的条件下进行测试时，在 4 小时内电路不应断开，保险丝不被电流熔化，管体不破裂。

When a fuse is carrying 100% of rated current for continuing 4 hours and more, no open circuit, melt fusible element, or ruptured tube shall occur in any manner during this test.

5.3 温度上升试验/ TEMPERATURE RISE TEST

当保险丝通以 100%倍额定电流的条件下进行测试时，在达到热量平衡后，测量保险丝表面的温度，保险丝表面的温度上升必须等于或低于 75℃。注：温度上升=保险丝表面的温度－环境温度。

Measure the temperature of the surface of the fuse under the 100% rated current, when the thermal equilibrium reaches. The temperature rise on the surface of each fuse shall be 75℃ or less.

Note: Temp. rise = fuse temp.－ room temp..

5.4 预飞弧时间-电流特性/ PRE-ARCING TIME-CURRENT CHARACTERISTICS

保险丝通以下表规定的电流时，其熔断时间必须符合下表的要求，且铜帽不能飞脱、管体不应破裂、损坏。

When the current in the following table is passing the fuse, its opening time must be in accordance with the requirements in the following table, that is, the pre-arcing time. Moreover, neither damage of the fuse-tube nor shattering of the cap shall occur.

熔断电流/ % of Rated Current	熔断时间/ Open Time
200%	60 sec. Max.

5.5 分断能力/ BREAKING CAPACITY

这些型号的保险丝的分断能力应能达到下表规定的相应的各种安全认证的分断能力要求。保险丝分断电路后，保险丝管不应破裂、铜帽飞脱、且铜帽两端的绝缘电阻不小于 0.1MΩ。

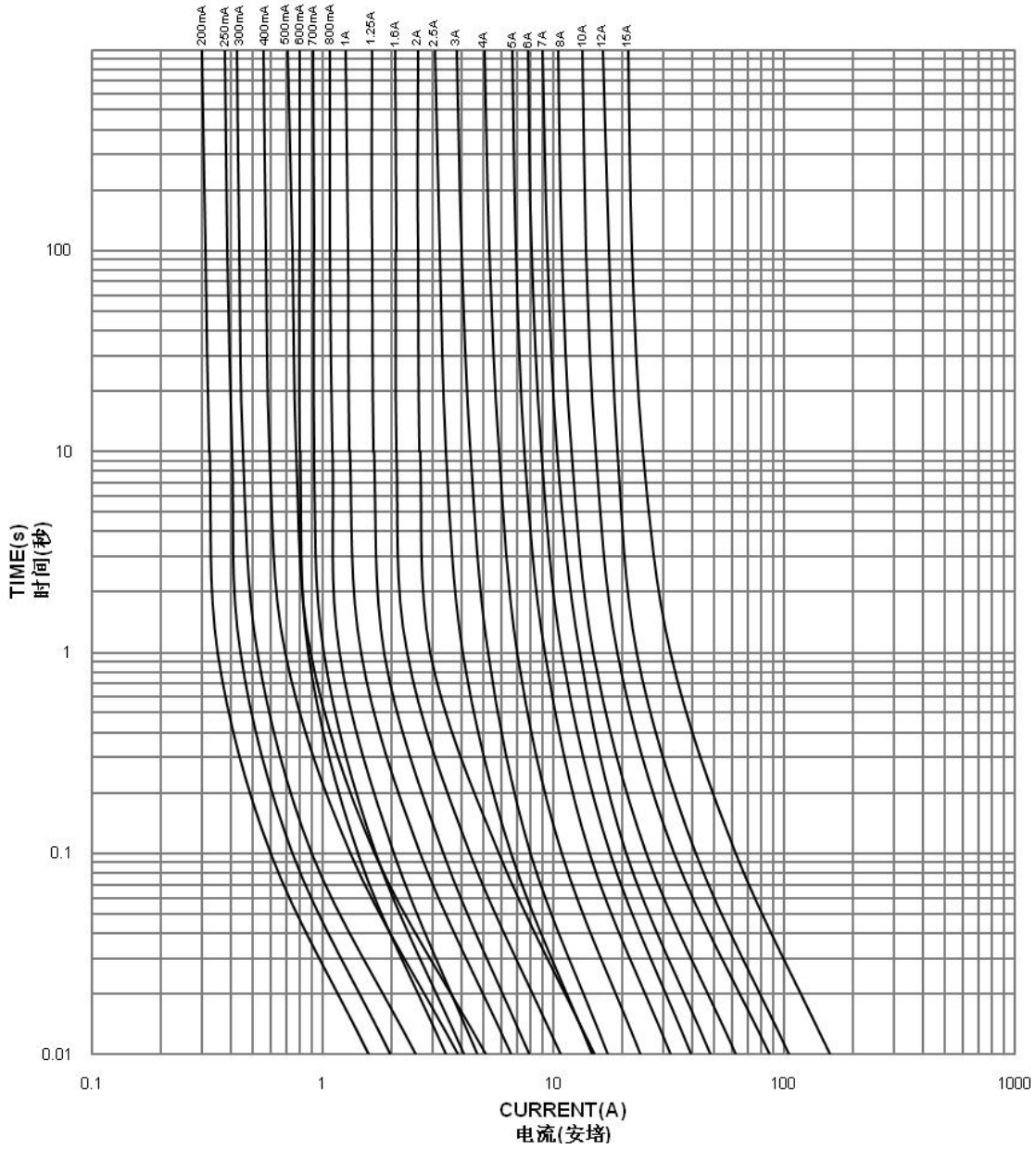
The breaking capacity should reach the interrupting rated current given in the following table. And after this test, there should be no damage of the fuse-tube or shattering of the caps. After this test, the insulation resistance between the end caps shall be not less than 0.1MΩ.

额定电压 RATED VOLTAGE	额定电流 RATED CURRENT	分断电流/ INTERRUPTING CURRENT	
		UL, CUL, CSA	PSE
125V	100mA~15A	50A	100A(1A~5A)
250V	100mA~15A	50A	
350V	100mA~15A	50A	/

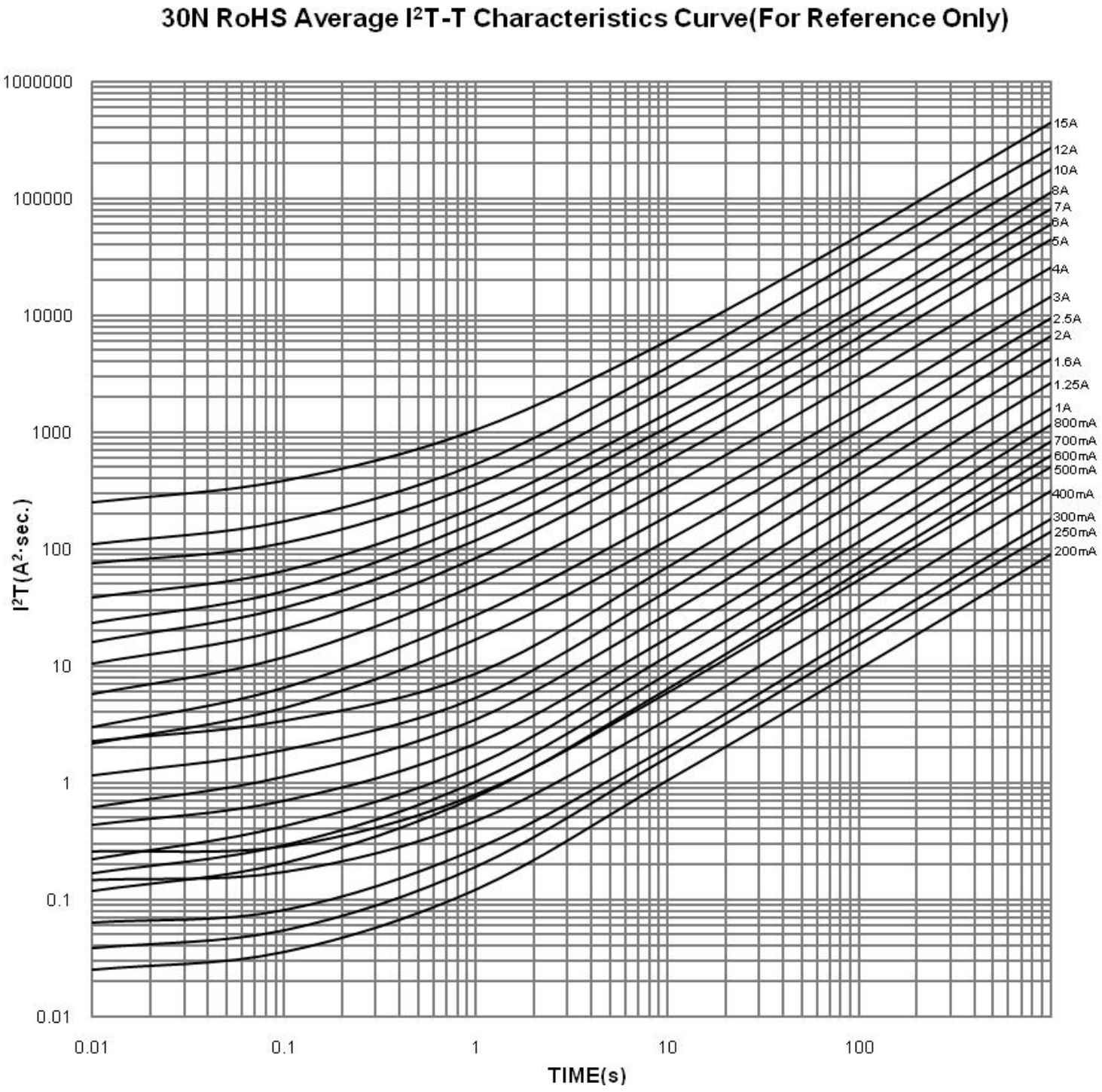
5.6 平均 I-T 特性曲线图(仅供参考)/ THE AVERAGE I-T CHARACTERISTICS CURVE(FOR REFERENCE ONLY)

30N RoHS平均I-T 曲线图(仅供参考)

30N RoHS AVERAGE I-T CHARACTERISTICS CURVE(FOR REFERENCE ONLY)



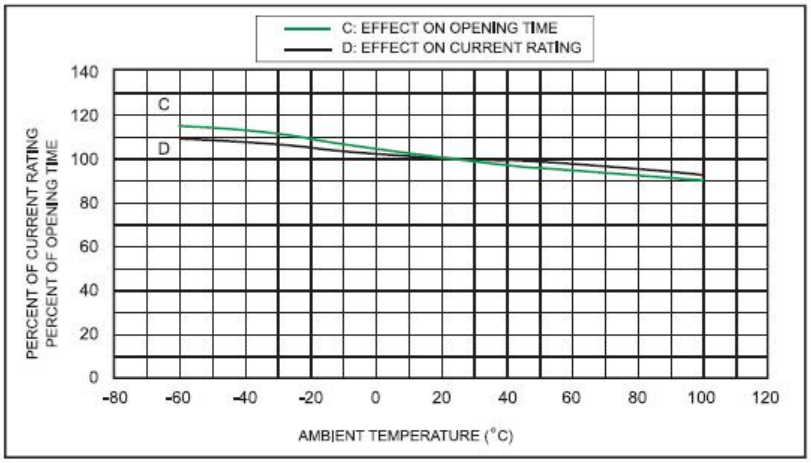
5.7 平均 I²T-T 特性曲线图(仅供参考)/ THE AVERAGEI²T-T CHARACTERISTICS CURVE(FOR REFERENCE ONLY)



5.8 焊接参数/ SOLDERING PARAMETERS

波峰焊----260℃，最大 10 秒。/ Wave soldering-----260℃, 10seconds Maximum.

5.9 环境温度对负载能力的影响/ AMBIENT TEMPERATURE EFFECT ON CURRENT-CARRYING CAPACITY



(Ⅱ) Effect on rating and opening time in 5In of fast-blow and slow-blow fuse

5.10 电阻测试/ COLD RESISTANCE TEST

环境温度为 25±2℃，测试电流不大于保险丝额定电流的 10%。

Input 10% of fuse rated current to fuse for cold resistance test at surrounding temperature of 25±2℃.

6 产品标志/ MARKING

6.1 保险丝上的标志应易于看清。

The relevant markings shall be marked on the caps of the fuse and shall be easily visible.

6.2 每个保险丝应标有下列标记。

The markings for every fuse shall be prescribed as below according to the types.

1)安全认证标志/ Safety approval logo:

2)商标/ Trademark Ⓗ

3)额定电流/ Rated Current

注：额定电压和型号名称在包装标签上标识。

Note: The rated voltage and type should be marked on the packing label.

7 包装要求/ PACKING DETAILS

7.1 外箱包装方式/ EXTERNAL CARTON PACKING

7.1.1 无编带型产品/ NO LEADS TAPING TYPE PRODUCT

7.1.1.1 参考尺寸：长×宽×高＝470×400×230mm。

Reference Dimension: length×width×height＝470×400×230mm.

7.1.1.2 包装细节：200 个/袋；4 袋/盒；25 盒/箱。

Packing Details: 200EA/ bag; 4 bags/ box; 25 boxes/ Carton.

7.1.2 编带型产品/ LEADS TAPING TYPE PRODUCT

7.1.2.1 参考尺寸：长×宽×高＝400×270×220mm。

Reference Dimension: length×width×height＝400×270×220mm.

7.1.2.2 包装细节：1500 个/盒；10 盒/每箱。

Packing Details: 1500EA/ box; 10boxes/ External Carton.

产品的包装应能达到防潮、抗振的作用，以防在运输或贮存过程中产品受潮或损坏。

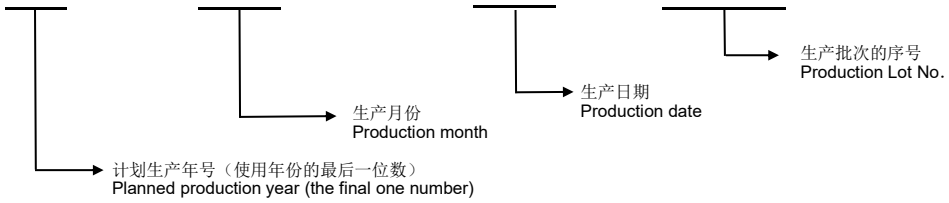
Packing shall be so carried out that the products will not absorb moisture or be damaged during transportation or storage.

7.2 标签/ LABEL

标签应包括型号、额定电流、额定电压、分断电流、商标、安全标志、批量号码、公司名称、RoHS 标志、绿色“G”和“QA”标志。

The label in the smallest package in which the fuses are put shall contain the Type, Rated current, Rated voltage, Interrupting rating, Trademark, Safety approval logo, Lot. No., Company name, “RoHS” mark, green “G” and “QA” mark.

例批量号/Example Lot No. □ □□ □□ □□□



8 环境参数/ ENVIRONMENT PARAMETERS

8.1 工作温度/ Operating Temperature: -55℃～125℃.

8.2 储存温度/ Storage Temperature: -55℃～85℃.

9 信赖性试验/RELIABILITY TEST

项目/ Item	试验要求/ Test Requirement	试验条件/ Test Condition
高温试验 High Temperature Test	试验后保险丝管的电阻符合范围；电气特性符合：200%≤60 秒(In＜1A)或 200%≤1~60 秒(In≥1A)、100%≥4 小时。 After high temperature test, the resistance value of the fuses shall be in range. Electrical Characteristics: 200%≤60 seconds(In＜1A) or 200%≤60 seconds((In≥1A), 100%≥4hours.	测试温度：105±2℃，测试时间：1000 小时。 Test Temperature: 105±2℃, Test Time: 1000hours.
低温试验 Low Temperature Test	试验后保险丝管的电阻符合范围；电气特性符合：200%≤60 秒(In＜1A)或 200%≤1~60 秒(In≥1A)、100%≥4 小时。 After low temperature test, the resistance value of the fuses shall be in range. Electrical Characteristics: 200%≤60 seconds(In＜1A) or 200%≤60 seconds((In≥1A), 100%≥4hours.	测试温度：-20±2℃，测试时间：1000 小时。 Test Temperature: -20±2℃, Test Time: 1000hours.
高湿试验 High Humidity Test	试验后保险丝管的电阻符合范围；电气特性符合：200%≤60 秒(In＜1A)或 200%≤1~60 秒(In≥1A)、100%≥4 小时。 After high humidity test, the resistance value of the fuses shall be in range. Electrical Characteristics: 200%≤60 seconds(In＜1A) or 200%≤60 seconds((In≥1A), 100%≥4hours.	测试温度：40±2℃，测试湿度：90%~95% RH，测试时间：96 小时。 Test Temperature: 40±2℃, Test Humidity: 90%~95% RH, Test Time: 96hours.
热冲击试验 Thermal Shock Test	试验后保险丝管的电阻符合范围；电气特性符合：200%≤60 秒(In＜1A)或 200%≤1~60 秒(In≥1A)、100%≥4 小时。 After thermal shock test, the resistance value of the fuses shall be in range. Electrical Characteristics: 200%≤60 seconds(In＜1A)	每个循环：-40℃放置 30 分钟后 85℃放置 30 分钟，测试 10 循环。 -40℃/ 30mins→85℃/ 30mins, 10 cycles.

	or 200%≤60 seconds((In≥1A), 100%≥4hours.	
落下、冲击试验 Falling Shock Test	保险丝管绝缘涂层无缺陷破裂、缺损、不能脱落。两端引线不能损坏，应能经受专用的设备外加的轴向拉力 10N，保持 1 分钟。保险丝管体必须无缺陷破裂、缺损。试验后保险丝管的电阻符合范围；电气特性符合：200%≤60 秒(In＜1A)或 200%≤1~60 秒(In≥1A)、100%≥4 小时。 The insulating resin of fuse should have no defects such as crack and injury or be shelled. The means of attachment shall be sufficient to withstand an axial pull of 10N applied to each pig tail for 1 minute. The pig tail shall be not damaged. The fuse body shall have no defects such as crack and injury. After falling shock test, the resistance value of the fuses shall be in range. Electrical Characteristics: 200%≤60 seconds(In＜1A) or 200%≤60 seconds((In≥1A), 100%≥4hours.	一箱 15,000 个或 20,000 个保险丝管从一米高自由落下，跌落 20 次。 15,000EA or 20,000EA fuses/ one external carton, Falling Height: 1 meter, Falling Times: 20.
可焊性试验 Solderability Test	试验后尾线表面的焊锡覆盖率>95%。 After solderability test, solder coverage of fuse's pig tail will be no more than 95%.	预涂助焊剂 5±1 秒后，浸入 245±5℃的无铅焊锡 5±0.5 秒。 Immerse to flux 5±1sec. then dip in solder bath 245±5℃, 5±0.5sec..