

 XIAMEN DEXIAN ELECTRONICS TECHNOLOGY CO., LTD	PRODUCT SPECIFICATION	ISSUED DATE:	2019/09/06
		REV. NO.:	A00
	SERIES: 5DT(P)	DOC. NO.:	DX-PSI-005
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制定 PREPARED BY		审核 CHECKED BY		批准 APPROVED BY	
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1 适用范围/ SCOPE

本规格书适用于公司按照 IEC 60127 标准生产的 5DT(P) RoHS 系列 DXFUSE® 商标的小型保险丝管。

This specification defines the technical requirements of miniature fuse type 5DT(P) RoHS series with DXFUSE® brand, which are according to IEC 60127.

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: 5DT(P) 020 H

* 型号/ Type: 5DT(P) P - 尾线/ Pig Tail, 额定电压/ Voltage Rating: H - 250V.

产品部件号/ PART NUMBER

产品部件号 PART NUMBER	型号规格 MODEL DETAIL	产品部件号 PART NUMBER	型号规格 MODEL DETAIL
5DT(P)-010H	5DT T1AH 250V	5DT(P)-063H	5DT T6.3AH 250V
5DT(P)-013H	5DT T1.25AH 250V	5DT(P)-080H	5DT T8AH 250V
5DT(P)-016H	5DT T1.6AH 250V	5DT(P)-100H	5DT T10AH 250V
5DT(P)-020H	5DT T2AH 250V	5DT(P)-120H	5DT T12AH 250V
5DT(P)-025H	5DT T2.5AH 250V	5DT(P)-125H	5DT T12.5AH 250V
5DT(P)-032H	5DT T3.15AH 250V	5DT(P)-150H	5DT T15AH 250V
5DT(P)-040H	5DT T4AH 250V	5DT(P)-160H	5DT T16AH 250V
5DT(P)-050H	5DT T5AH 250V		

型号规格: 型号 特性符号 额定电流 分断能力符号 额定电压
 MODEL DETAIL: Type Characteristic Symbol Rated Current Breaking Capacity Symbol Rated Voltage
 例如/ Example: 5DT I 2A H 250V

*特性符号/ Characteristic Symbol: T - 慢断型/ Time-Lag, 分断能力符号/ Breaking Capacity Symbol: H - 高分断能力/ High Breaking Capacity.

2 相关标准/ APPLICABLE STANDARDS

2.1 5DT(P) RoHS 系列产品适用的相关标准是 IEC 60127 和 GB 9364.

Applicable standards for 5DT(P) RoHS series are IEC 60127 and GB 9364.


2.2 认证情况/ APPROVED DETAILS

额定电压 RATED VOLTAGE	认证范围 APPROVED RANGE	认证号码 CERT. NO.	
		UR/cUR	TUV
250V	1A~16A	E500879	J50447102

3 公司地址/ ADDRESS

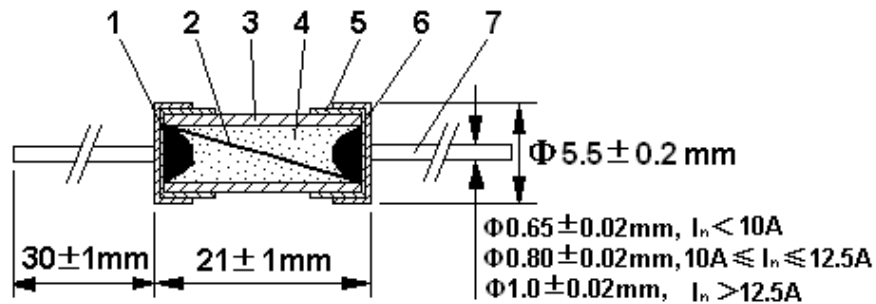
厦门火炬高新区(翔安)产业区翔安西路 8057 号第五层 A 区。

Fifth floor A District, NO.8057 West Xiang'An Rd, Torch High-tech industrial District, Xiang'An, Xiamen.

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4 构造图/ CONSTRUCTION FIG. & DIMENSION

4.1 DIMENSION (Unit: mm)



编号 No.	品名 PART	材料名 MATERIAL MODEL	备注 NOTE
1	焊锡/ Solder	无铅焊锡/ Pb Free	
2	可熔体/ Element	金属丝/ Metal Wire	
3	管体/ Tube	陶瓷管/ Ceramic Tube	灌砂/ Filled Sand
4	填充物/ Filler	石英砂/ Quartz Sand	/
5	铜帽/ Cap	黄铜/ Brass	镀镍/ Nickel Plated
6	尾线铜帽/ Cap with Pig Tail	黄铜/ Brass	镀镍/ Nickel Plated
7	尾线/ Pig Tail	镀锡铜线/ Tin Plated Copper	镀锡/ Tin Plated

4.2 陶瓷管/ CERAMIC TUBE

陶瓷管无破裂、缺损或污染等现象。

The ceramic tube shall have no defects such as crack, injury and contamination.

4.3 铜帽/ CAP

铜帽应焊接牢固，以保证在未损坏熔断体时，铜帽不能被卸脱。样品在 15°C-35°C 水中浸 24 小时取出后，在每个端帽上均匀施加拉力至 10N，保持 1 分钟，铜帽不应脱落。

Cap should be firmly attached so that it is not possible to remove them without damaging the fuse itself. The samples are immersed in water for 24 hours at a temperature between 15°C and 35°C. After remove from the water, an axial pull steadily increasing to 10N is applied to each cap for 1 minute.

4.4 焊点/ SOLDERING JOINT

焊接铜帽端时,管内和铜帽外表面不能有残留的助焊剂、焊锡等异物。

Soldering joint in end cap shall not be melted during normal operation and shall not have solder chips on tube, element in view and outer surface of caps.


5 电气特性/ ELECTRICAL PERFORMANCES

5.1 电压降/ VOLTAGE DROP

熔断体在额定电流条件下,其两端的电压降不应超过下表规定的最大值。

The voltage drop across the fuse-link at their rated current shall not exceed the maximum values is in follows.

额定电流 Rated Current (A)	额定电压 Rated Voltage (V)	最大电压降 Maximum Voltage Drop (mV)	最大维持功耗 Maximum Sustained Power Dissipation (W)

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1A 1.25A 1.6A 2A 2.5A	250V	350 300 200 190 180	2.5
3.15A 4A 5A 6.3A 8A 10A 12A 12.5A		140 100 100 100 100 80 80	4
15A 16A		80 80	6

5.2 预飞弧时间电流-特性/ PRE-ARCING TIME-CURRENT CHARACTERISTICS

额定电流 Rated Current	2.1I _n	2.75I _n		4I _n		10I _n	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1A-3.15A	30min.	750ms	80sec.	95ms	5sec.	10ms	150ms
>3.15A-10A	30min.	750ms	80sec.	150ms	5sec.	10ms	150ms
>10A	30min.	1sec.	80sec.	150ms	8sec.	20ms	150ms

5.3 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 breaking 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	分断电流/ BREAKING CURRENT
	UR/cUR/TUV
250Va.c.	1500A

5.4 耐久性试验/ ENDURANCE TEST


耐久性试验过程下。/ The process of endurance test is as follows.

A 对熔断体通过 1.2 倍的额定电流 1 小时，然后切断电流 15 分钟，重复此循环 100 次。/ A current 1.2I_n is passed through the fuse-link for a period of 1hour. The current is then switched off for a period of 15 minutes. The cycle is repeated 100 times.

B 然后对熔断体通以 1.5 倍额定电流 1 小时(I_n≤6.3A)或 0.5 小时(I_n>6.3A)。/ A current 1.5I_n is then passed through the fuse-link for 1hour(I_n≤6.3A) or 0.5hour(I_n>6.3A).

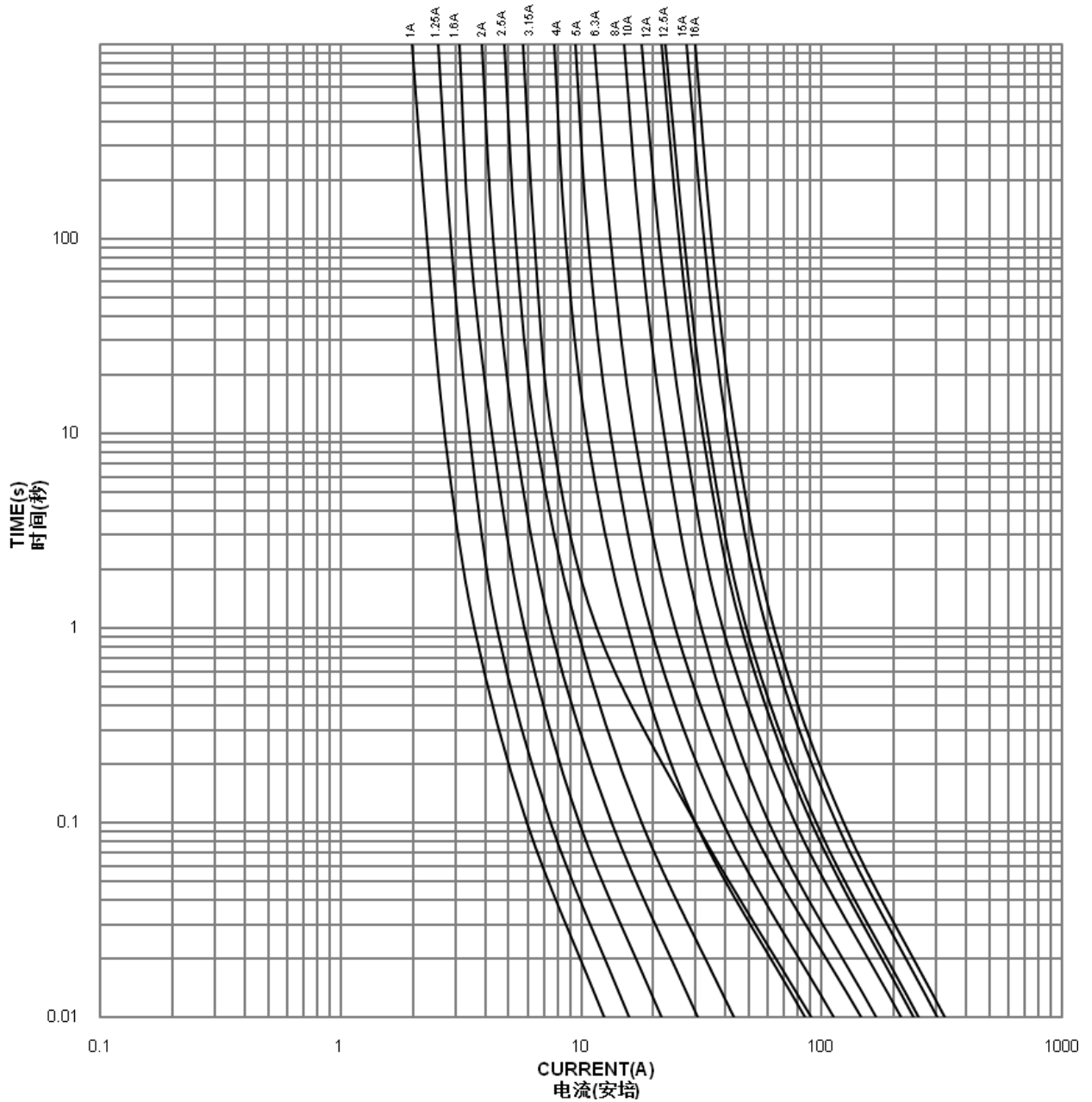
C 测量熔断体两端的电压降。试验后，熔断体两端的电压降的增大值不大于试验前测得值的 10%。/ Finally, the voltage drop across the fuse-link is measured. The voltage drop across the fuse-link after the test shall not have increased by more than 10% of the Value measured before the test.


D 试验后，标记仍应清晰可辨，而且诸如端帽上的焊点不应出现任何明显的劣变。/ After the test, the marking shall still be legible and soldered joints on end caps, for example, shall not show and appreciable deterioration.

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

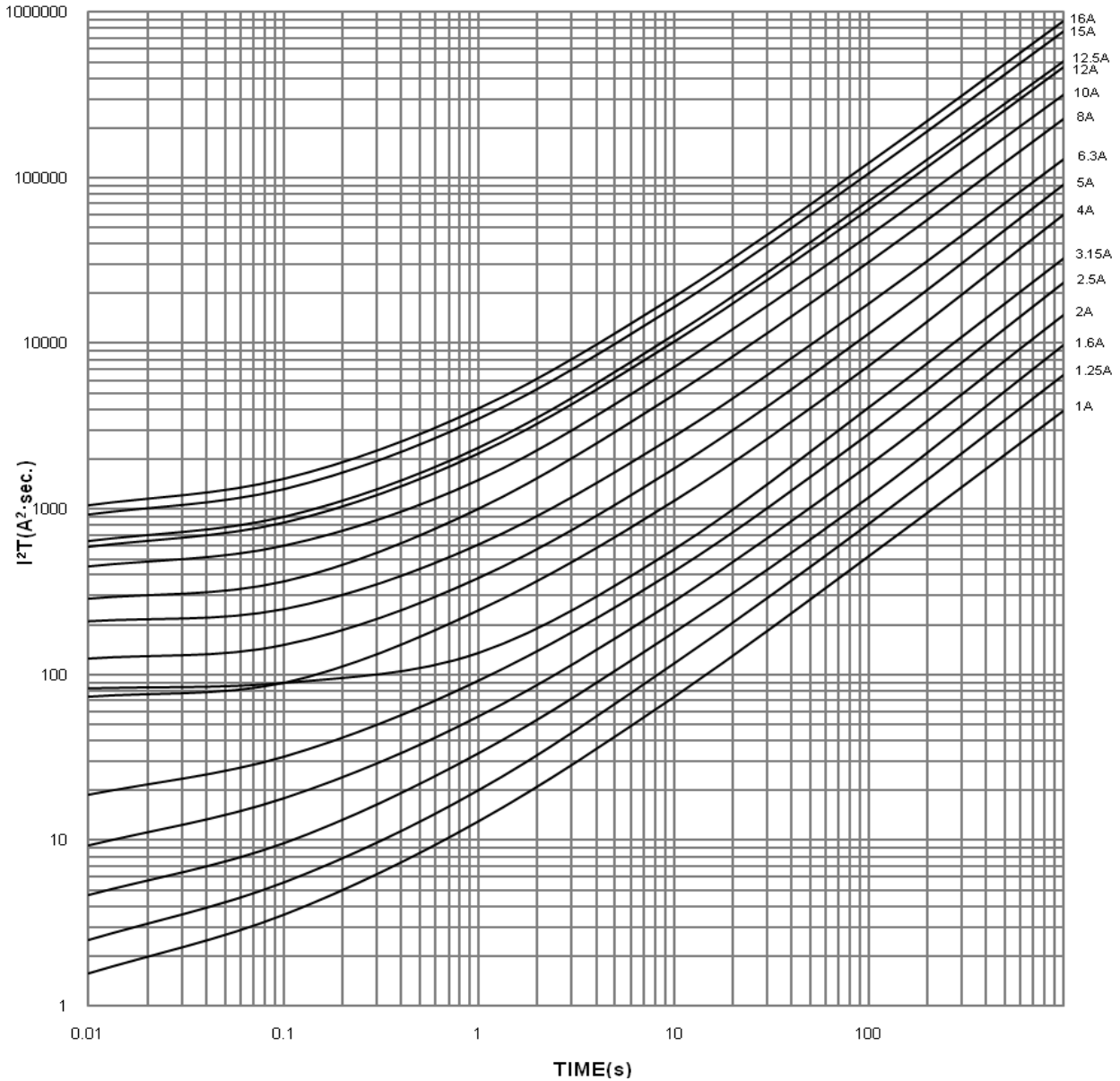
5DT(P) AVERAGE I-T CHARACTERISTICS CURVE(FOR REFERENCE ONLY)
5DT(P) 平均I-T曲线图(仅供参考)



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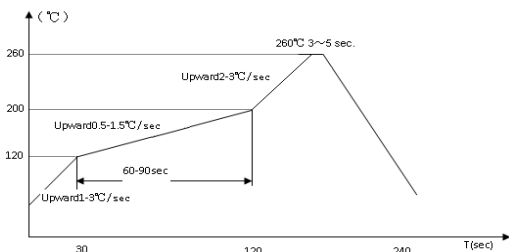
5.6 平均 I²T-T 特性曲线图(仅供参考)/ THE AVERAGE I²T-T CHARACTERISTICS CURVE(FOR REFERENCE ONLY)


5DT(P) Average I²T-T Characteristics Curve(For Reference Only)



5.7 焊接参数/ Soldering Parameters

- 1) 波峰焊---260℃，最大 10 秒。/ Wave soldering---260℃，10 seconds Maximum.
建议波峰焊接图形/ Suggest wave soldering graphics



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2) 手工焊接/ Manual soldering: 350°C, 3sec. Max..

3) 耐热焊接/ Resistance to soldering heat: 260°C, 10sec. Max

5.8 电阻测试/ COLD RESISTANCE TEST

环境温度为 25±2°C，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°C.


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) 型号名称/ Type: 5DT

3) 商标/ Trademark: 

4) 特性符号/ Characteristic Symbol: T

5) 额定电流/ Rated Current

6) 分断能力符号/ Breaking Capacity Symbol: H

7) 额定电压/ Rated Voltage

注: 1)、2) 和 3) 应标注在保险丝管一端铜帽的侧面。

Note: 1), 2) and 3) should be marked on the one side cap of the fuse.

4)、5)、6) 和 7) 应标注在保险丝管另一端铜帽的侧面。

4), 5), 6) and 7) should be marked on the other side cap of the fuse.

7 包装要求/ PACKING DETAILS

7.1 外箱包装方式/ EXTERNAL CARTON PACKING

7.1.1 参考尺寸: 长×宽×高=470×400×230mm。

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

7.1.2 包装细节: 100 个/袋; 4 袋/盒; 25 盒/箱。

Packing Details: 100EA/ bag; 4 bags/ box; 25 boxes/ 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。

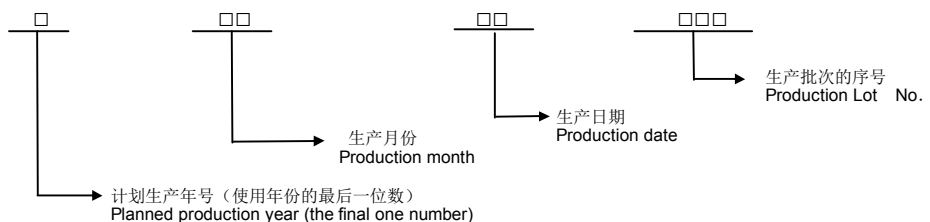
Packing shall be so carried out that the products will not absorb moisture or be damaged during transportation or storage.

7.2 标签/ LABEL

标签应包括型号、额定电流、额定电压、额定分断电流、商标、安全标志、批量号码、公司名称、RoHS 标志、绿色“G”、绿色“e”(仅无铅产品)和“QA”标志。

The label in the smallest package in which the fuses are put shall contain the Type, Rated current, Rated voltage, Breaking current, Trademark, Safety approval logo, Lot. No., Company name, “RoHS” mark, green “G”, green “e” (only Pb free products) and “QA” mark.


例批量号/Example Lot No.



8 环境参数/ ENVIRONMENTAL PARAMETERS

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

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

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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：210% ≤ 30 分、150% ≥ 1 小时。 After high temperature test, the resistance value of the fuses shall be in range. Electrical Characteristics:210% ≤ 30 minutes, 150% ≥ 1 hour.	测试温度：105 $\pm 2^{\circ}\text{C}$ ，测试时间：1000小时。 Test Temperature: 105 $\pm 2^{\circ}\text{C}$ ， 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：210% ≤ 30 分、150% ≥ 1 小时。 After low temperature test, the resistance value of the fuses shall be in range. Electrical Characteristics:210% ≤ 30 minutes, 150% ≥ 1 hour.	测试温度：-20 $\pm 2^{\circ}\text{C}$ ，测试时间：1000小时。 Test Temperature: -20 $\pm 2^{\circ}\text{C}$ ， 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：210% ≤ 30 分、150% ≥ 1 小时。 After high humidity test, the resistance value of the fuses shall be in range. Electrical Characteristics: 210% ≤ 30 minutes, 150% ≥ 1 hour.	测试温度：40 $\pm 2^{\circ}\text{C}$ ，测试湿度：90%~95%，测试时间：96小时。 Test Temperature: 40 $\pm 2^{\circ}\text{C}$ ， Test Humidity: 90%~95%， 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：210% ≤ 30 分、150% ≥ 1 小时。 After thermal shock test, the resistance value of the fuses shall be in range. Electrical Characteristics: 210% ≤ 30 minutes, 150% ≥ 1 hour.	每个循环：-40 $^{\circ}\text{C}$ 放置30分钟 85 $^{\circ}\text{C}$ 放置30分钟，测试10循环。 -40 $^{\circ}\text{C}$ / 30minutes \rightarrow 85 $^{\circ}\text{C}$ / 30minutes, 10 cycles.
落下、冲击试验 Falling Shock Test	铜帽应固定牢固,以保证在未损坏熔断体时,铜帽不能被卸下。铜帽表面镀层应牢固不易脱落,每个端帽应能经受专用的设备外加的轴向拉力10N,保持1分钟。陶瓷管必须无缺陷破裂和缺损。试验后保险丝管的电阻符合范围；电气特性符合：210% ≤ 30 分、150% ≥ 1 小时。 Cap should be firmly attached so that it is not possible to remove them without damaging the fuse itself. The means of attachment shall be sufficient to withstand an axial pull of 10N applied to each cap for 1 minute. The cap shall be nickel plated firmly. The ceramic tube 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: 210% ≤ 30 minutes, 150% ≥ 1 hour.	一箱10,000个保险丝管从一米高自由落下,跌落20次。 10,000EA 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 $\pm 5^{\circ}\text{C}$ 的无铅焊锡5 ± 0.5 秒。 Immerse to flux 5 ± 1 sec. then dip in solder bath 245 $\pm 5^{\circ}\text{C}$, 5 ± 0.5 sec..

单击下面可查看定价，库存，交付和生命周期等信息

[>>DXFUSE\(厦门得线\)](#)