

高分断能力瓷保险丝管(速断型) HIGH BREAKING CAPACITY CERAMIC TUBE FUSE (QUICK-ACTING)

目录编号 CATALOG NO.	额定电流 CURRENT RATING	最大电压降 (mv) MAX. VOLTAGE DROP	安全认证 SAFETY APPROVALS								PT 参考值 REFERENCE (A ² ·Sec.) (RoHS)
			CCC	CQC	SEMKO	VDE	UR/CUR	BSI	PSE	KT	
50CF-0250H	250mA	2800	●		●	●	●	●			0.029
50CF-0315H	315mA	2500	●		●	●	●	●			0.053
50CF-0400H	400mA	2000	●		●	●	●	●			0.093
50CF-0500H	500mA	1800	●		●	●	●	●			0.156
50CF-0630H	630mA	1500	●		●	●	●	●			0.281
50CF-0800H	800mA	1200	●		●	●	●	●			0.191
50CF-010H	1A	1000	●		●	●	●	●	●	○	0.319
50CF-013H	1.25A	800	●		●	●	●	●	●	○	0.563
50CF-016H	1.6A	600	●		●	●	●	●	●	○	1.076
50CF-020H	2A	500	●		●	●	●	●	●	○	2.655
50CF-025H	2.5A	400	●		●	●	●	●	●	○	2.288
50CF-032H	3.15A	350	●		●	●	●	●	●	○	4.467
50CF-040H	4A	300	●		●	●	●	●	●	○	9.20
50CF-050H	5A	250	●		●	●	●	●	●	○	16.90
50CF-063H	6.3A	200	●		●	●	●	●	●	○	36.00
50CF-080H	8A	200		●	●	●	●	●	●	○	72.44
50CF-100H	10A	200		●	●	●	●	●	●	○	140.0
50CF-120H	12A	200			●	●	●	●	●	○	228.6
50CF-125H	12.5A	200			●	●	●	●	●	○	261.8
50CF-150H	15A	200			●	●	●	●	●	○	481.8
50CF-160H	16A	200			●	●	●	●	●	○	571.0

H DENOTES FOR 250V (H 表示 250V)

● DENOTES FOR APPROVED (● 表示已取得认证)

○ DENOTES FOR PENDING (○ 表示申请中)

分断能力:

BREAKING CAPACITY:

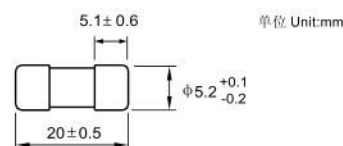
1,500 amperes at 250V AC

电气特性 ELECTRICAL CHARACTERISTICS:

额定 RATING		熔断时间 BLOWING TIME			
		250mA-4A	5A-6.3A	8A-10A	>10A
2.1In	最慢 Max.	30 minutes	30 minutes	30 minutes	30 minutes
	最快 Min.	10ms	10ms	40ms	40ms
2.75In	最慢 Max.	2 seconds	3 seconds	20 seconds	30 seconds
	最快 Min.	3ms	3ms	10ms	10ms
4In	最慢 Max.	300ms	300ms	1 second	1s
	最快 Min.	20ms	20ms	30ms	40ms

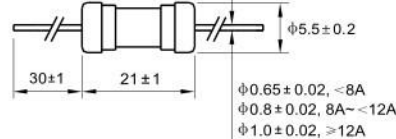


50CF



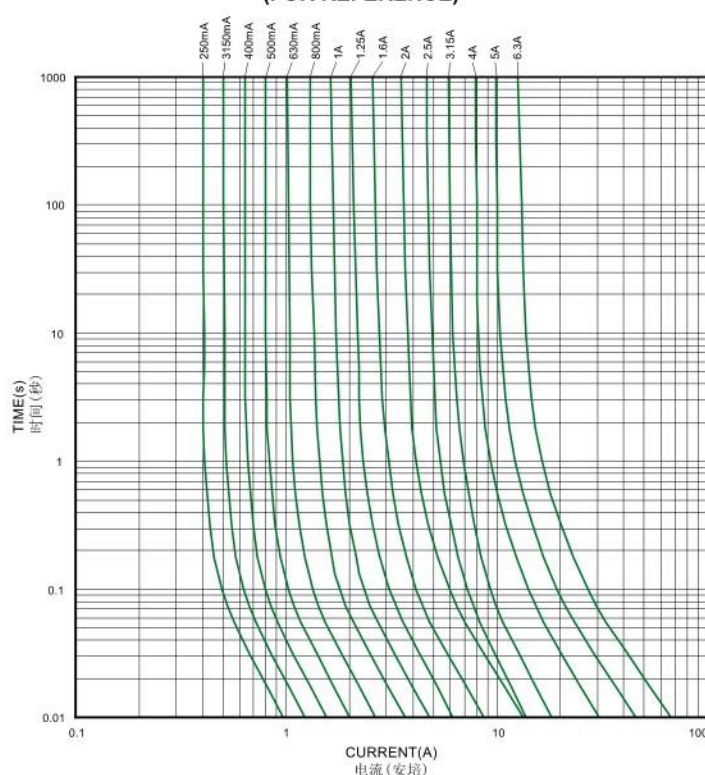
单位 Unit:mm

50CF(P)



50CF 平均 I-T 曲线图 (仅供参考)

50CF AVERAGE I-T CHARACTERISTICS CURVE (FOR REFERENCE)



 Hollyland Cop., Ltd. 廈門寧利電子有限公司	PRODUCT SPECIFICATION	ISSUED DATE:	2007/3/22
	50CF(P) RoHS SERIES	REV. NO.: DOC. NO.: PAGE:	A02 NLD-PSI-135 Page 1 of 9

制定 PREPARED BY	Ken Wu	审核 CHECKED BY	James Su	批准 APPROVED BY	Henry Huang
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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 50CF(P) RoHS 系列 HOLLY® 商标的小型保险丝管。

This specification defines the technical requirements of miniature fuse type 50CF(P) RoHS series with HOLLY® 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 50 CF(P) 020 H

* 额定电压/ Voltage Rating H - 250V 产品部件号/ PART NUMBER

PART NUMBER	额定电流 RATED CURRENT	额定电压 RATED VOLTAGE	PART NUMBER	额定电流 RATED CURRENT	额定电压 RATED VOLTAGE
50CF(P)0100H	100mA	250V	50CF(P)020H	2 A	250V
50CF(P)0125H	125mA		50CF(P)025H	2.5 A	
50CF(P)0160H	160mA		50CF(P)032H	3.15 A	
50CF(P)0200H	200mA		50CF(P)040H	4 A	
50CF(P)0250H	250mA		50CF(P)050H	5 A	
50CF(P)0315H	315mA		50CF(P)063H	6.3 A	
50CF(P)0400H	400mA		50CF(P)080H	8 A	
50CF(P)0500H	500mA		50CF(P)100H	10 A	
50CF(P)0630H	630mA		50CF(P)120H	12 A	
50CF(P)0800H	800mA		50CF(P)125H	12.5 A	
50CF(P)010H	1 A		50CF(P)150H	15 A	
50CF(P)013H	1.25 A		50CF(P)160H	16 A	
50CF(P)016H	1.6 A				

2 相关标准/ APPLICABLE STANDARDS

2.1 50CF(P) RoHS 系列产品适用的相关标准是 IEC 60127 和 GB 9364。

Applicable standards for 50CF(P) RoHS series are IEC 60127 and GB 9364.

2.2 认证情况/ APPROVED DETAILS

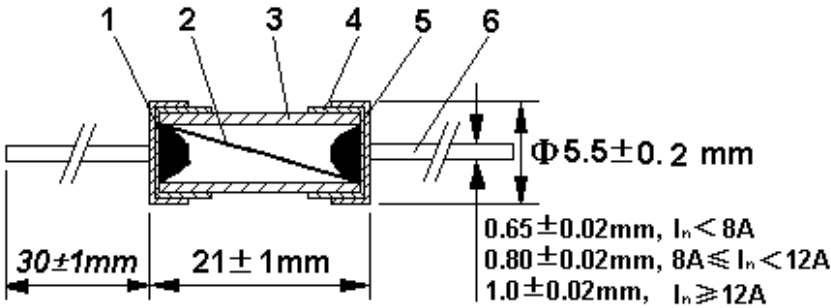
额定电压 RATED VOLTAGE	CCC		CQC		VDE	
	认证范围 APPROVED RANGE	认证号码 CERT. NO.	认证范围 APPROVED RANGE	认证号码 CERT. NO.	认证范围 APPROVED RANGE	认证号码 CERT. NO.
250V	250mA~6.3A	200601020719 4847	8A, 10A	CQC06012017 419	250mA~6.3A;	40020380
额定电压	SEMKO		UR/CUR		BSI	

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RATED VOLTAGE	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.
250V	250mA~6.3A; 8A;10A	712815	250mA~16A	E156471	250mA~10A	KM52652

3 公司地址/ ADDRESS
中国福建省厦门市湖里区枋湖路 9-19 号。
NO.9-19, FANGHU ROAD, HULI, XIAMEN, FUJIAN, CHINA.

4 构造图/ CONSTRUCTION FIG. & DIMENSION



编号 No.	品名 PART	材料名 MATERIAL MODEL	备注 NOTE
1	焊锡 Solder	无铅焊锡/ Pb Free	额定电流 $I_n < 8A$
		含铅高温焊锡/ Pb Contained High Temperature Solder	额定电流 $I_n \geq 8A$
2	可熔体/ Element	金属丝/ Metal Wire	/
3	管体/ Tube	陶瓷管/ Ceramic Tube	灌砂/ Filled Sand
4	铜帽/ Cap	黄铜/ Brass	镀镍/ Nickel Plated
5	尾线铜帽 Cap with Pig Tail	黄铜/ Brass	镀镍/ Nickel Plated
6	尾线/ Pig Tail	镀锡铜线/ Tin Plated Copper	镀锡/ Tin Plated

4.1 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.

4.2 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℃-35℃水中浸 24 小时取出后，
在每个端帽上均匀施加拉力至 5N，保持 1 分钟，铜帽不应脱落。

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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 5N is applied to each cap for 1 minute.

4.3 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)
100mA 125mA 160mA 200mA	250	7,000 5,000 4,300 3,500	1.6
250mA 315mA 400mA 500mA 630mA 800mA 1A		2,800 2,500 2,000 1,800 1,500 1,200 1,000	2.5
1.25A 1.6A 2A 2.5A 3.15A 4A 5A 6.3A 8A 10A		800 600 500 400 350 300 250 200 200 200	4
12A 12.5A 15A		200	6
16A 20A		200	8

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.	Max.
100mA-4A	30min.	10ms	2sec.	3ms	300ms	20ms

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>4A-6.3A	30min.	10ms	3sec.	3ms	300ms	20ms
>6.3A-10A	30min.	40ms	20sec.	10ms	1s	30ms
>10A	30min.	40ms	30sec.	10ms	1s	40ms

5.3 分断能力/ INTERRUPTING CAPACITY 额定分断能力为:1500A(A.C.).

Rated breaking capacity is 1500A, tested with A.C..

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。 / A current $1.5I_n$ is then passed through the fuse-link for 1hour.

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量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.

5.5 I-T 曲线图/ I-T CHARACTERISTICS AVERAGE CURVE (FOR REFERENCE ONLY)

50CF(P) RoHS I-T CHARACTERISTICS CURVE

50CF(P) RoHS 电流-时间曲线图



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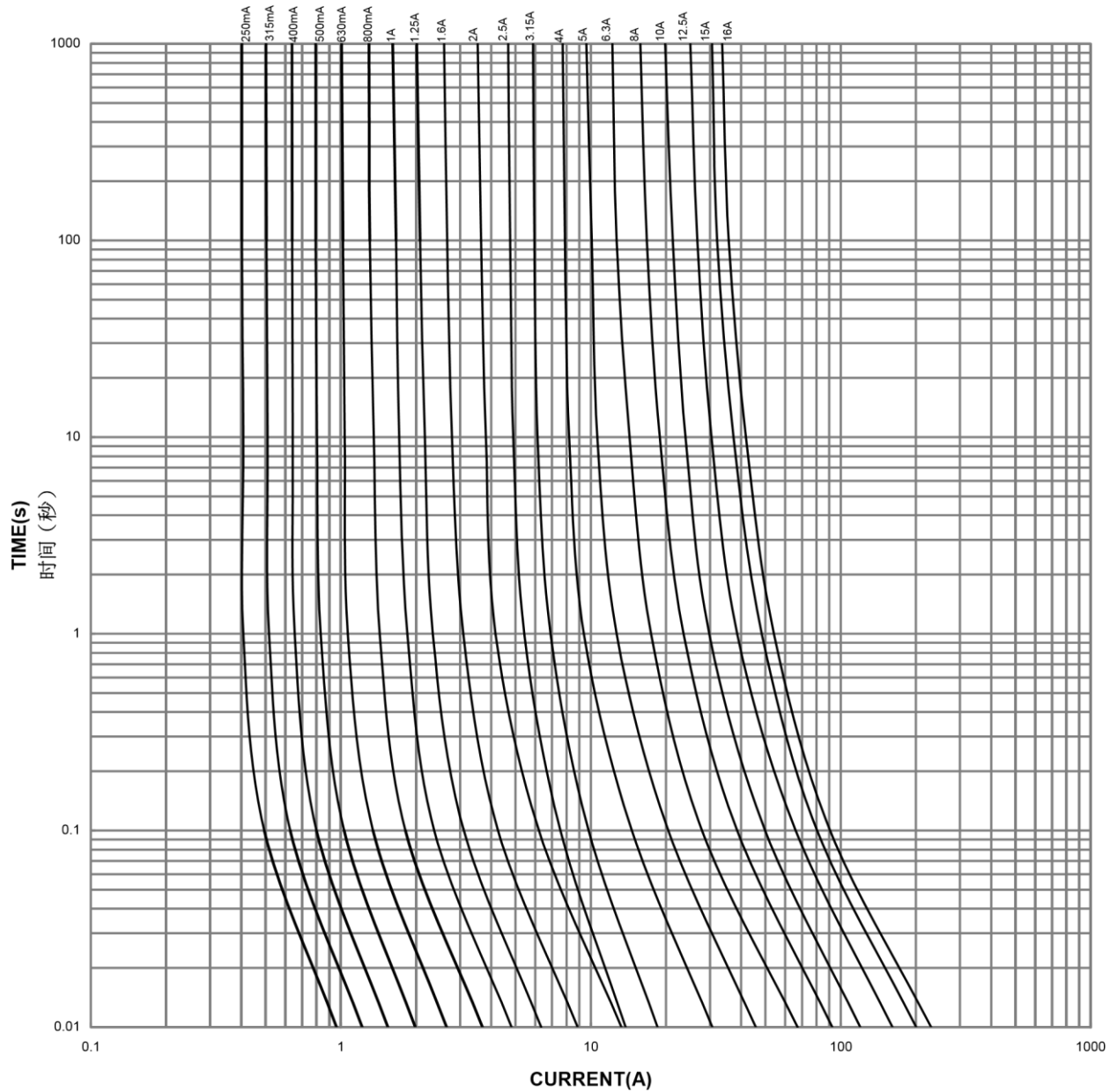
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电流 (安培)



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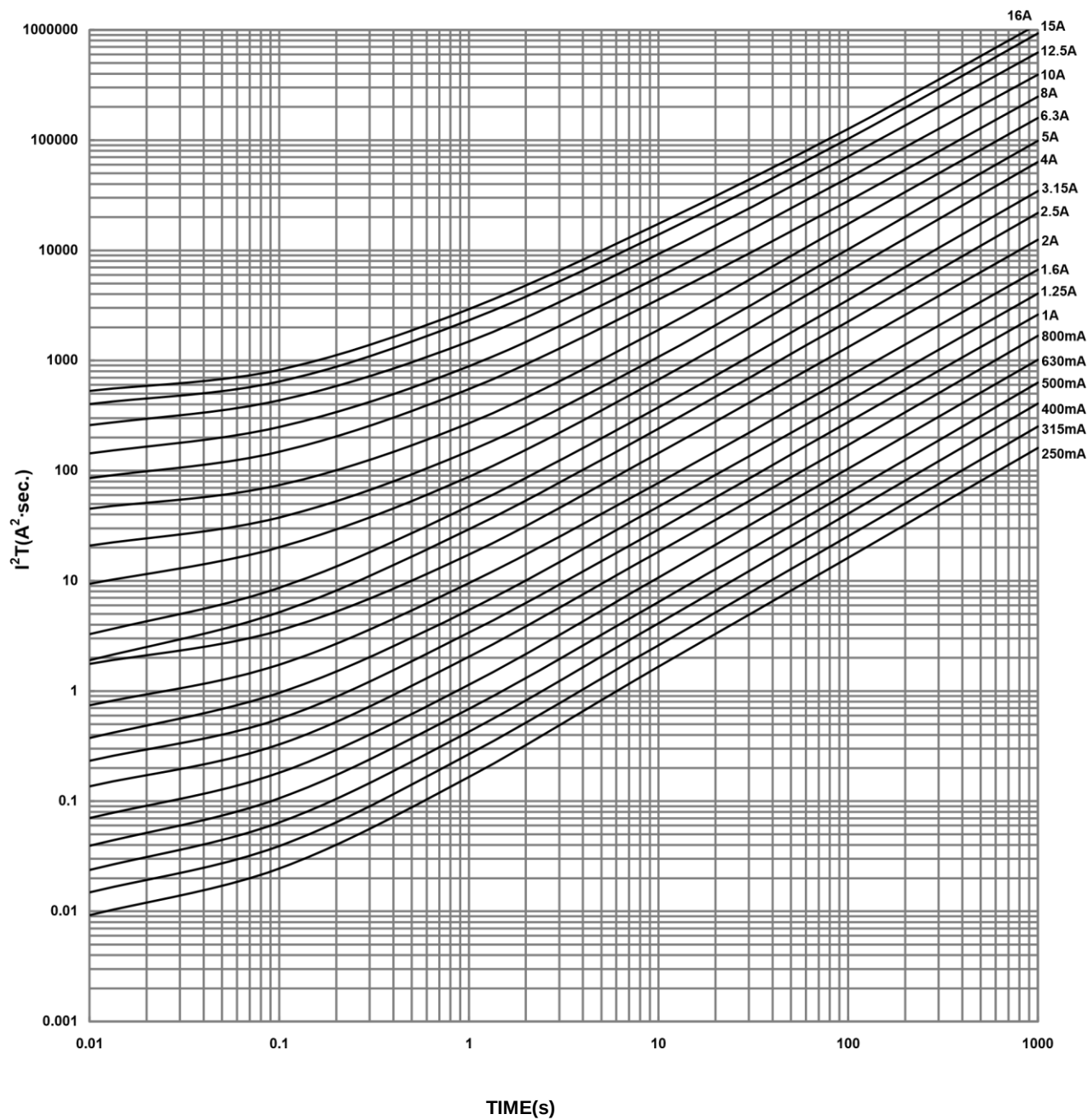
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5.6 I^2T -T 曲线图/ I^2T -T CHARACTERISTICS AVERAGE CURVE (FOR REFERENCE ONLY)

50CF(P) RoHS I^2T -T CHARACTERISTICS CURVE



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5.7 电阻测试/ COLD RESISTANCE TEST

环境温度为 $25 \pm 2^{\circ}\text{C}$ ，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 $25 \pm 2^{\circ}\text{C}$.

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 安全认证标志/ Safety approval logo:






型号名称/ Type: 50CF

- 1) 商标/ Trademark: 
- 2) 额定电流、电压/ Rated Current & Voltage
- 3) 特性符号/ Characteristic Symbol: F
- 4) 分断能力符号/ Breaking Capacity Symbol: H

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) 和 6) 应标注在保险丝管另一端铜帽的侧面。

4), 5) and 6) 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 包装方式 A/ Packing Mode A

7.1.1.1 参考尺寸：长×宽×高=355×295×260mm。

Reference Dimension: length×width×height=355×295×260mm.

7.1.1.2 包装要求：100 个/ 小塑料袋；25 小塑料袋/ 大塑料袋；4 大塑料袋/ 每箱。

Packing Details: 100EA/ little plastic-bag; 25 little plastic-bags/big plastic-bag; 4big plastic-bags/ External Carton.

7.1.2 包装方式 B/ Packing Mode B

7.1.2.1 参考尺寸：长×宽×高=375×245×165mm。

Reference Dimension: length×width×height=375×245×165mm.

7.1.2.2 包装要求：100 个/小塑料袋；5 小塑料袋/盒；10 盒/ 每箱。

Packing Details: 100EA/ little plastic-bag; 5 little plastic-bags/ box; 10 boxes/ 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、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。

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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$2℃，测试湿度：90%~95%，测试时间：96 小时。 Test Temperature: 40$\pm$2℃, Test Humidity: 90%~95%, Test Time: 96hours.
热冲击试验 Thermal Shock Test	试验后保险丝管的电阻符合范围；电气特性符合：210% ≤ 30 分、150%≥ 1 小时。 After thermal shock test, the resistance value of the fuses shall be in range. Electrical Characteristics: 210% ≤ 30 minutes, 150%≥ 1 hour.	每个循环：-40℃放置 30 分钟后室温 25℃放置 5 分钟再放置 85℃ 30 分钟最后放置室温 25℃ 5 分钟，测试 10 循环。 -40℃/ 30minutes$\rightarrow$ 25℃/ 5minutes$\rightarrow$ 85℃ / 30minutes$\rightarrow$ 25℃ / 5minutes, 10 cycles./5mins, 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 5N，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 5N 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5,000个或10,000个保险丝管从一米高自由落下，跌落 20 次。 5,000EA or 10,000EA fuses/ one external carton, Falling Height: 1 meter, Falling Times: 20.