

1. 適用範圍 / SCOPE

FHC 系列小型保險絲，適用於一般電子設備。  
FHC series Miniature-Fuse, used in electronic equipment.



2. 產品型號 / TYPE

例「example」：



- ① 系列號 / Series Number
- ② 額定電流 / Rated Current
- ③ 額定電壓 / Rated Voltage
- ④ 認證符號 / Approved Symbol

3. 額定電流和額定電壓/ RATED CURRENT AND RATED VOLTAGE

額定電流 / Rated Current:

8A~25A

額定電壓 / Rated Voltage:

420VAC/DC

4. 標示 / MARKING

保險絲兩端銅帽上需有下列標示/The fuses cap shall have the following marking

①規 格：製造工廠的商標+額定電流+額定電壓

Specification: The Manufacture' s Logo +Rated Current + Rated Voltage

8A~25A: \_\_\_\_\_A420V

②系列號+認證符號

Trade mark: Part Number + Approved Symbol.

8A~25A:  FHC  

注意 / Note:

對標示的大小和位置沒有規定 / Size and position of the markings shall not be provided.

5. 外觀及形狀 / APPEARANCES AND CONFIGURATION

5-1 外觀：不應有破碎、明顯的污斑。

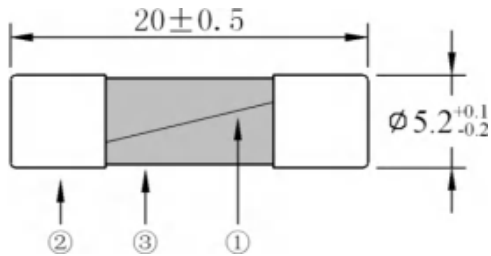
Appearances: There shall not be break up and any remarkable blotch.

5-2 形狀：小型保險絲。

Configuration: Miniature-Fuse.

## 6. 工程圖和結構 / OUTLINE DRAWING AND STRUCTURE

### 6-1 工程圖 (單位：mm) / Outline Drawing and Dimensions (Unit: mm)



### 6-2 結構 / Structure

編號 No.	元件 Component	材質 Material	數量 Quantity
①	熔絲 Wire	合金 Alloy	1
②	銅帽 Cap	黃銅鍍鎳 Brass with nickel plated	2
③	本體 Body	陶瓷管 Ceramic Tube	1
④	填充物 Filler	石英砂 Quartz sand	

## 7. 產品特性 / PRODUCT CHARACTERISTICS

### 7-1 拉力測試/Tensile test

軸向拉力 5 牛頓，持續 60 秒/Pulling the cap of the fuse with 5 N at axial direction keep 60 sec.

### 7-2 推力測試/Thrust test

軸向推力 2 牛頓，持續 10±1 秒/Thrust two cap's bottom of the fuse with 2N at axial direction keep 10±1sec.

## 8. 電氣特性 / ELECTRICAL CHARACTERISTICS

### 8-1 熔斷 / 電流特性：Pre-Arcing Time / Current Characteristic (limits)

RATED CURRENT	2.1 In	2.75 In		4 In		10 In
	Max.	Min.	Max.	Min.	Max.	Max.
Above 8A to 25A	30 min	40 ms	20 s	10 ms	1 s	30 ms

9. 環境特性 / ENVIRONMENTAL CHARACTERISTIC

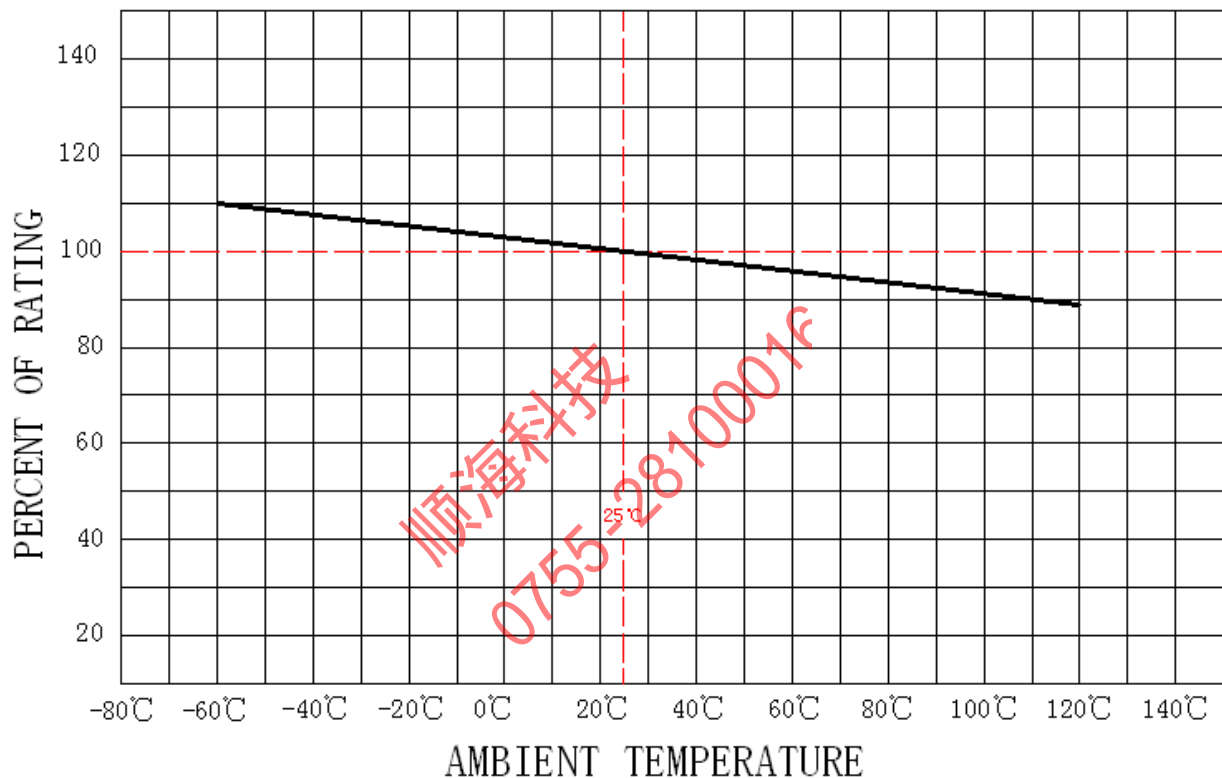
9-1 操作溫度範圍:  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$  / Operating Temperature:  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$

若貴司操作環境溫度超出 $25 \pm 5^{\circ}\text{C}$ 範圍，在選用保險絲規格時，需考慮操作環境溫度對保險絲的影響。  
請參照：溫度-電流曲線圖。

When choosing the fuse's specification, if the operating environmental temperature beyond the scope from  $20 \sim 30^{\circ}\text{C}$ , you should consider the environmental temperature's affection to fuses.

Please refer:

Temperature-Current curve:



9-2 存儲條件 / Storage Conditions

在溫度 $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、相對濕度 $\leq 75\%$ 的密閉條件下可存放 3 年。

Under airtight in temperature  $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、relative humidity  $\leq 75\%$  can store 3 years.

在溫度 $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、相對濕度為 95%的非露天下最多可存放 30 天。

Without dew in temperature  $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、relative humidity be 95% maximum value for 30days.

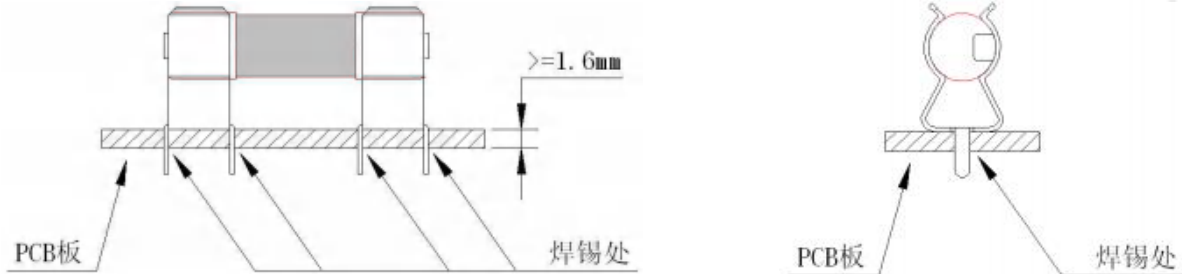


10. 安裝方式及條件 / INSTALLATION WAY AND PARAMETERS



10-1 建議如下圖安裝方式安裝，並滿足所要求的尺寸。

Propose that the following picture installation way is installed, and satisfied the required size.



10-2 建議客戶焊接參數 / Recommended Customer Soldering Parameters

波峰焊參數 / Wave Parameters:

錫爐溫度 / Solder Pot Temperature:

260°C Max

焊接時間 / Solder Dwell Time:

2~5s

手工焊參數 / Hand-Solder Parameters:

烙鐵溫度 / Solder Iron Temperature:

350±5°C

焊接時間 / Heating Time:

5 s Max

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11. 其他使用注意事項 / OTHER NOTICE IN USED

如果需在保險絲上加熱縮套管，烘烤溫度與時間需參照以下規定

If need to add heat draws back the sleeve pipe on the fuse, it needs to consult the following regulation to toast temperature and time.

溫度 temperature	120°C	130°C	140°C	150°C	160°C	170°C	180°C
時間 time	Max 80s	Max 75s	Max 70s	Max 65s	Max 60s	Max 55s	Max 50s

12. 安全認證及編號 / STANDARDS AND APPROVALS

UL	E56092 (8A~25A)
TUV	J50326694 (8A~25A)

13. 包裝 / PACKING

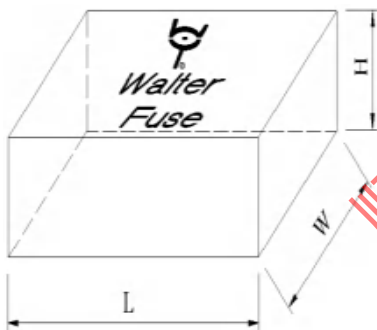
13-1 包裝數量 / Packing Quantity

A：每內盒裝 1000 個保險絲。  
1000pcs per inner box .

B：每外箱裝 10 內盒保險絲。  
10 inner boxes per outer box .



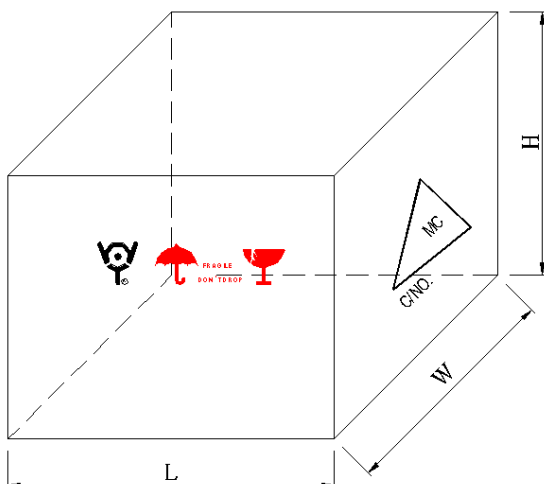
13-2 內包裝盒/Inner box of packing



單位/Unit : mm

L	W	H
157±3	127±3	84±2

13-3 外包裝箱/Outer box of packing



單位/Unit : mm

L	W	H
270±5	445±5	190±5

## 14.其他 / OTHERS

14-1 如果在使用中有超出本規格書的要求，必須經由雙方協商確認。

In the event that an impropriety is found beyond this specification, it shall be fixed by mutual agreement between the parties.

14-2 如果本規格書有不適當的情況，必須通過雙方協商並由本公司修改。

In the event that an impropriety is found in this specification, WALTER ELECTRONIC CO., LTD. shall amend it by mutual agreement between the parties.



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版次	製作	確認	審核
第六版	饒紅	蔡明威	<i>Eris Kuo</i>



# UL iQ for Fuses



Fuses

E56092

Guide Information

## SUZHOU WALTER ELECTRONIC CO LTD

NO.99 Xinli Road, Fenhu Technic Development Zone, Wujiang Jiangsu 215211 CN

### FHC

Supplemental fuses: filled-tube, cartridge enclosed

<u>Size</u> mm(in)	<u>Amps</u> (A)	<u>Volts</u> (V)	<u>Interrupting</u> <u>Rating (A)</u>
5.2 x 20 (0.20 x 0.79)	8 - 25	420Vac	300
	8 - 25	420Vdc	300

Report Date: 2015-10-07

Last Revised: 2019-07-22

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**Zertifikat**  
mit überwachter Konformität

**Certificate**  
of surveyed conformity



Zertifikat Nr. *Certificate No.*  
J 50326694

Blatt *Page*  
0001

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

*Date of Issue*  
(day/mo/yr)

05-LJP- 16071827 001

11.12.2015

**Genehmigungsinhaber *License Holder***

Walter Electronic Co., Ltd.  
2nd FL. 97 Chung King N RD., Sec. 4  
Taipei  
Taiwan

**Fertigungsstätte *Manufacturing Plant***

Dongguan Walter Electric Co., Ltd.  
Yantian Village, Fenggang Town  
Dongguan, Guangdong 523702  
P.R. China

**Prüfzeichen *Test Mark***

**Geprüft nach *Tested acc. to***

EN 60127-1:2006+A1  
EN 60127-7:2013



**Zertifiziertes Produkt *(Geräteidentifikation)***  
**Certified Product *(Product identification)***

**Lizenzentgelte - Einheit**  
**License Fee - Unit**

(Miniature Fuse-link)

Type Designation : FHC FHP  
Trademark : Walter (Logo) Walter  
Rated Voltage : AC/DC 420V  
Rated Current : 8A; 10A; 12.5A; 15A; 16A  
T/I Characteristic : t2=30min; t3=40ms; t4=20s;  
t5=10ms; t6=1s; t8=30ms.  
Rated Breaking Capacity: 300A

9

**Remark :**

- 1) The Maximum voltage drop and the Maximum sustained dissipation were based on the statement of the manufacturer. See appendix 1 for detail.
- 2) The labelling requirements acc. to EU Directive 2001/95 have to be observed for distribution within the EEA. The installation has to be carried out according to installation instruction accompanying the products.

9

**ANLAGE (Appendix): 1**

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.  
Das Produkt entspricht den o.g. Anforderungen die Herstellung wird überwacht.  
This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.



TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg  
Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com  
Fax: +49 221 806-3935 http://www.tuv.com/safety

G. Yin



# Zertifikat

mit überwachter Konformität

# Certificate

of surveyed conformity



Zertifikat Nr. *Certificate No.*  
J 50326694

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0002

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

*Date of Issue*  
(day/mo/yr)

05-YFC- 16071827 002

18.08.2017

## Genehmigungsinhaber *License Holder*

Walter Electronic Co., Ltd.  
2nd FL. 97 Chung King N RD., Sec. 4  
Taipei  
Taiwan

## Fertigungsstätte *Manufacturing Plant*

Dongguan Walter Electric Co., Ltd.  
Yantian Village, Fenggang Town  
Dongguan, Guangdong 523702  
P. R. China

## Prüfzeichen *Test Mark*



## Geprüft nach *Tested acc. to*

EN 60127-1:2006+A1+A2  
EN 60127-7:2016

Zertifiziertes Produkt (*Geräteidentifikation*)  
*Certified Product (Product Identification)*

Lizenzentgelte - Einheit  
*License Fee - Unit*

(Miniature Fuse-link)

Change

Test Requirement : see above

## Remark :

- 1) The Maximum voltage drop and the Maximum sustained dissipation were based on the statement of the manufacturer. See appendix 1 for detail.
- 2) The labelling requirements acc. to EU Directive 2001/95 have to be observed for distribution within the EEA. The installation has to be carried out according to installation instruction accompanying the products.

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Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com  
Fax: +49 221 806-3935 http://www.tuv.com/safety



**Zertifikat Certificate**  
mit überwachter Konformität of surveyed conformity



Zertifikat Nr. Certificate No.  
J 50326694

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0003

Ihr Zeichen Client Reference

Unser Zeichen Our Reference

Ausstellungsdatum

Date of Issue  
(day/mo/yr)

05-YFC- 16071827 003

17.07.2018

**Genehmigungsinhaber License Holder**

Suzhou Walter Electronic Co., Ltd.  
Fenhu Technic Development Zone, Luxu  
Wujiang City, Jiangsu  
P. R. China

**Fertigungsstätte Manufacturing Plant**

Suzhou Walter Electronic Co., Ltd.  
Fenhu Technic Development Zone, Luxu  
Wujiang City, Jiangsu  
P. R. China

**Prüfzeichen Test Mark**



**Geprüft nach Tested acc. to**

EN 60127-1:2006+A1+A2  
EN 60127-7:2016

Zertifiziertes Produkt (Geräteidentifikation)  
Certified Product (Product Identification)

Lizenzentgelte - Einheit  
License Fee - Unit

(Miniature Fuse-link)

as pages 0001-0002

Addition

Name and Address of Factory : see above

Change

Name and Address of License Holder : see above

Remark :

The Maximum voltage drop and the Maximum sustained  
dissipation were based on the statement of the manufacturer.  
See appendix 1 for detail.

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde  
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.  
This certificate is based on our Testing and Certification Regulation. The product  
fulfills above mentioned requirements, the production is subject to surveillance.

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Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com  
Fax: +49 221 806-3935 http://www.tuv.com/safety



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**Zertifikat** *Certificate*  
mit überwachter Konformität *of surveyed conformity*



Zertifikat Nr. *Certificate No.* Blatt *Page*  
J 50326694 0004

Ihr Zeichen *Client Reference* Unser Zeichen *Our Reference* Ausstellungsdatum *Date of Issue*  
05-YFC- 16071827 004 08.11.2018 (day/mo/yr)

Genehmigungsinhaber *License Holder* Fertigungsstätte *Manufacturing Plant*  
Suzhou Walter Electronic Co., Ltd. Dongguan Walter Electric Co., Ltd.  
Fenhu Technic Development Zone, Luxu Yantian Village, Fenggang Town  
Wujiang City, Jiangsu Dongguan, Guangdong 523702  
P. R. China P. R. China

Prüfzeichen *Test Mark* Geprüft nach *Tested acc. to*  
EN 60127-1:2006+A1+A2  
EN 60127-7:2016



Zertifiziertes Produkt (Geräteidentifikation) Lizenzentgelte - Einheit  
*Certified Product (Product Identification) License Fee - Unit*

(Miniature Fuse-link)

as pages 0001-0003

Addition

Rated Current : 20A, 25A

Remark :

The Maximum voltage drop and the Maximum sustained dissipation were based on the statement of the manufacturer. See appendix 1.1 for detail.

ANLAGE (Appendix): 1.1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde. Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht. This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.

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