


1. 適用範圍 / SCOPE

1032SF 系列快速保險絲，適用於一般電子設備。
1032SF series Fast Acting Fuse, used in electronic equipment.



2. 產品編碼 / Part Numbering

例「example」：

| | | | |
|--------|-----|------|---|
| 1032SF | 20A | 250V |  |
| ① | ② | ③ | ④ |

- 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:

20A~60A

額定電壓 / Rated Voltage:

20A~30A: 250Vac 100V dc

40A~60A: 250Vac 72V dc

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4. 標示 / MARKING

保險絲上需有下列標示 / The fuses shall have the following marking

- ① 產品系列標識 / Series type Logo : S
- ② 額定電流 / Rated Current (A): __A

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：無顯著的汙點、鐵銹或裂紋；標示應容易辨識。

Appearances : There shall not be any remarkable stain, rust or crack on the appearances; marking shall be easily legible.

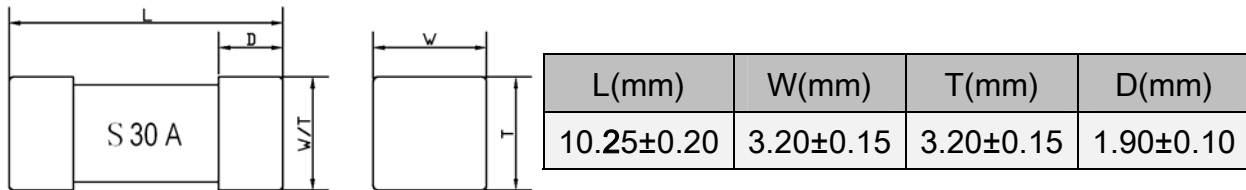
5-2 形狀：表面貼裝式保險絲

Configuration : Surface Mount 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

| 元件 Component | 材質 Material | 數量 Quantity |
|-----------------|--------------------------------|----------------|
| 銅帽 Cap | 黃銅鍍金 Brass with gold plated | 2 |
| 本體 Body | 陶瓷管 Ceramic tube | 1 |

7. 產品特性 / PRODUCT CHARACTERISTICS

| 編號 No. | 項目 Item | 內容 Content | 參考標準 Reference standard |
|-----------|--|---|--|
| 1 | 絕緣阻抗 Insulation resistance (after opening) | 10,000 ohms minimum | MIL-STD-202G, Method 302 Test Condition A |
| 2 | 可焊性 Solderability | T=215°C±15°C, t=3+0/-0.5s, Cover ≥95% | MIL-STD-202G, Method 208H |
| 3 | 耐焊接熱 Soldering heat resistance | 10 sec at 260°C ΔR :<10% | MIL-STD-202G, Method 210F Test Condition B |
| 4 | 熱衝擊 Thermal Shock | 5 cycles between -65°C/+125°C 15minutes ; each extreme ΔR :<10% | MIL-STD-202G, Method 107 Test Condition B |
| 5 | 機械衝擊 Mechanical Shock | 100Gs Peak amplitude , sawtooth wave 6 ms duration , 3 cycles XYZ+xyz=18 shocks. ΔR :<10% | MIL-STD-202G, Method 213 Test Condition 1 |
| 6 | 高/低溫儲存 High/Low Temperature Storage | T=125°C±2°C , 96hours , T=-55°C±3°C , 96hours ΔR : <10% | IEC60068-2-1 / IEC60068-2-2 |
| 7 | 抗潮濕性 Moisture Resistance | 85°C±3°C, 80%~90%RH 10 cycles ΔR :<10% | MIL-STD-202, Method 106 |
| 8 | 振動 Vibration | 10-55-10 Hz Sweep in 1 minure , 0.03 in.amplitude . 2hours in each of XYZ planes=6hours total. ΔR : <10% | MIL-STD-202 Method 201 (10-55Hz) |
| 9 | 鹽霧實驗 Salt spray | 5% salt solution , 48hours ΔR : <10% | MIL-STD-202G,Method 101E, Test Condition B |

8. 電氣特性 / ELECTRICAL CHARACTERISTICS



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

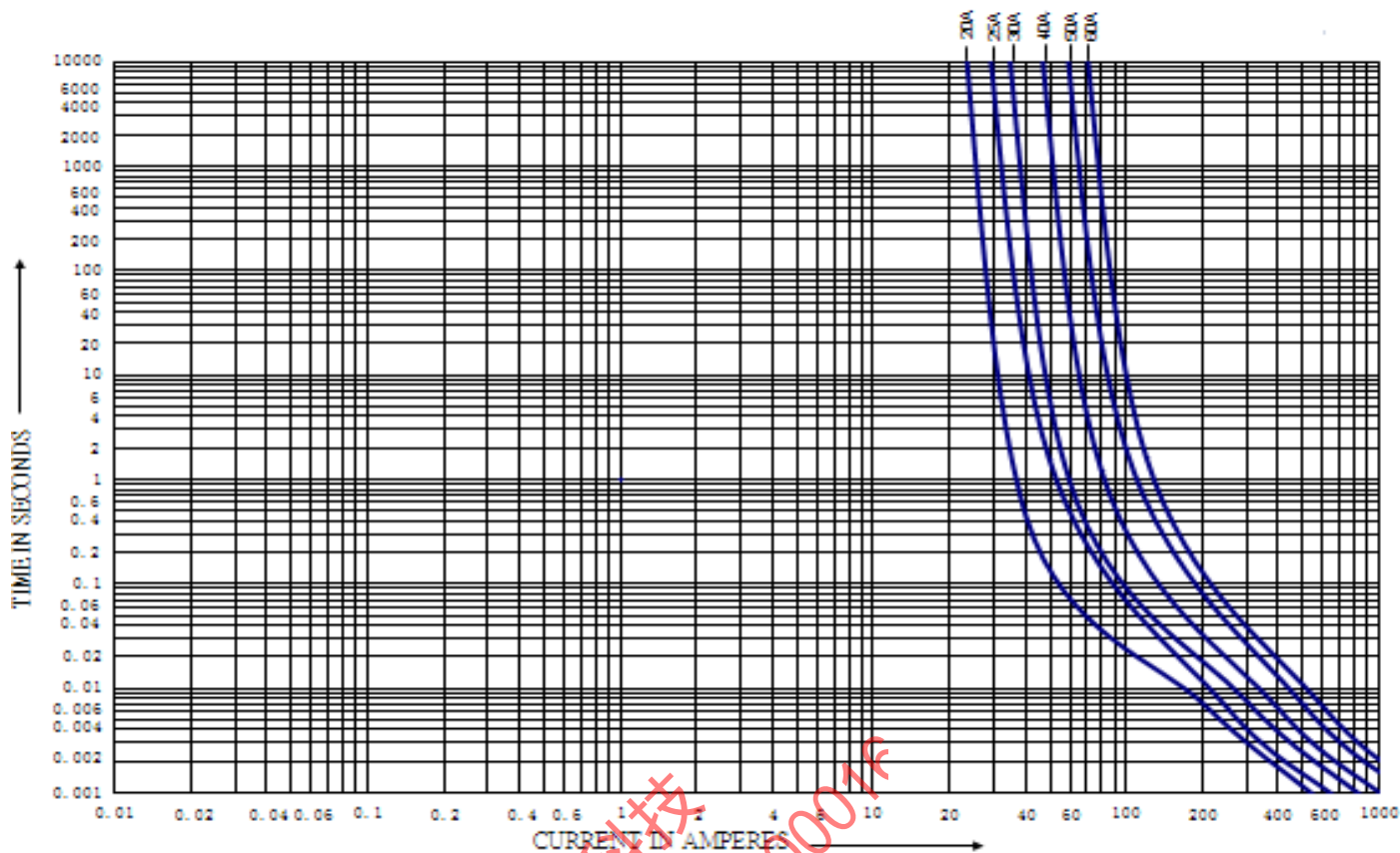
| RATED CURRENT | 1 In | 2In | 10In |
|---------------|-----------|----------|------|
| 20A~60A | 4hrs Min. | 60s Max. | >1ms |

8-2 產品規格/Specification

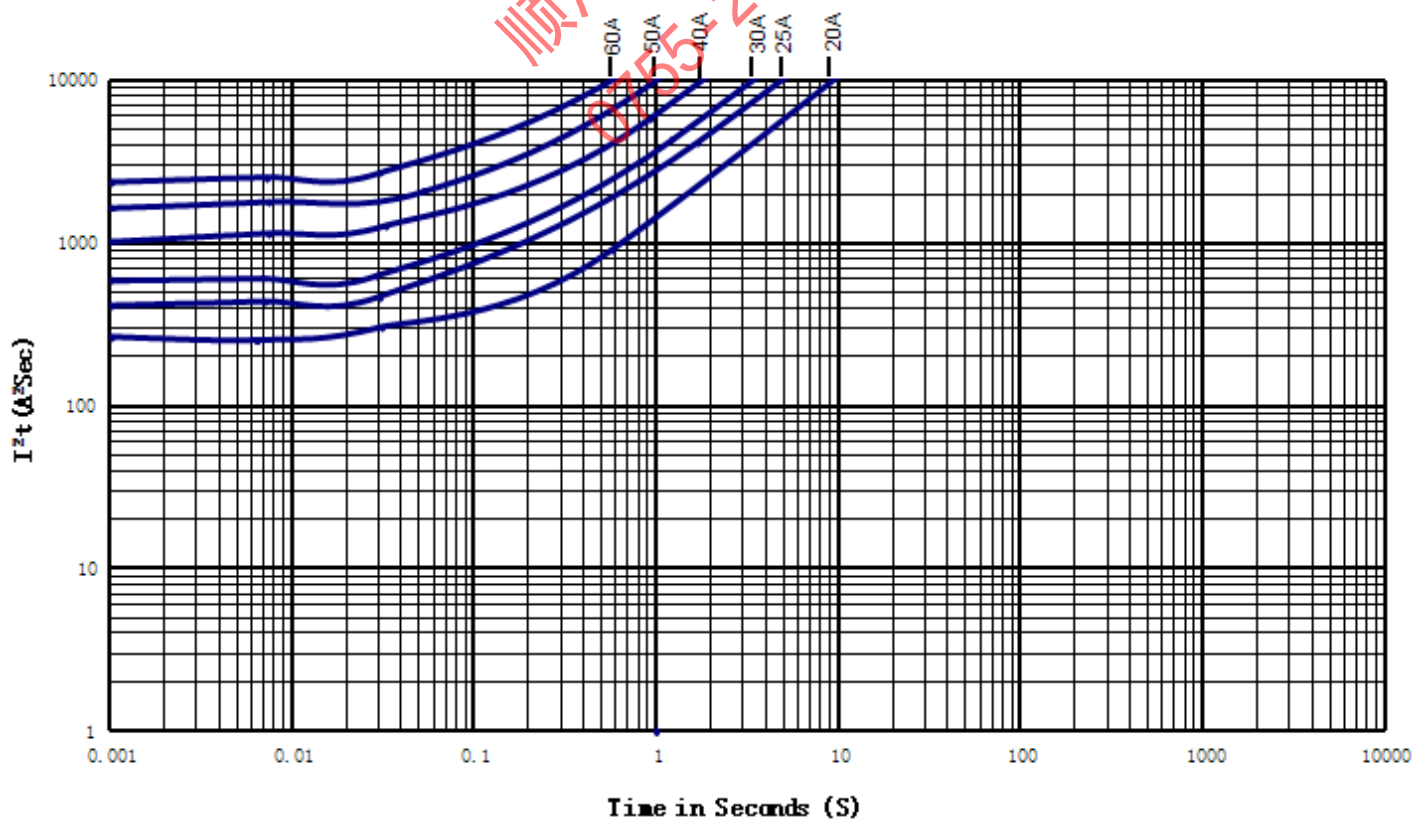
| 額定電流 Rated Current | 額定電壓 Rated Voltage | 分斷能力 Breaking Capacity | Typical Cold DCR (mΩ) | Normal I ² T** (A ² sec) |
|-----------------------|-----------------------|---|--------------------------|--|
| 20A | 250Vac / 100V dc | 100A@ 250V AC | 3.08 | 264 |
| 25A | 250Vac / 100V dc | 300A@ 65V AC 300A@ 100V DC 500A@ 72V DC | 2.15 | 413 |
| 30A | 250Vac / 100V dc | 1000A@ 32V DC | 2.08 | 594 |
| 40A | 250Vac / 72V dc | 100A@ 250V AC | 1.23 | 1024 |
| 50A | 250Vac / 72V dc | 300A@ 65V AC 180A@ 72V DC 600A@ 60V DC | 1.00 | 1650 |
| 60A | 250Vac / 72V dc | | 0.88 | 2376 |

** I²T Values stated for 10 msec opening time

8-3 I-t 圖/CHARACTERISTICS DIAGRAM(I-t)



8-4 I²t - t 圖/CHARACTERISTICS DIAGRAM(I²t - t)



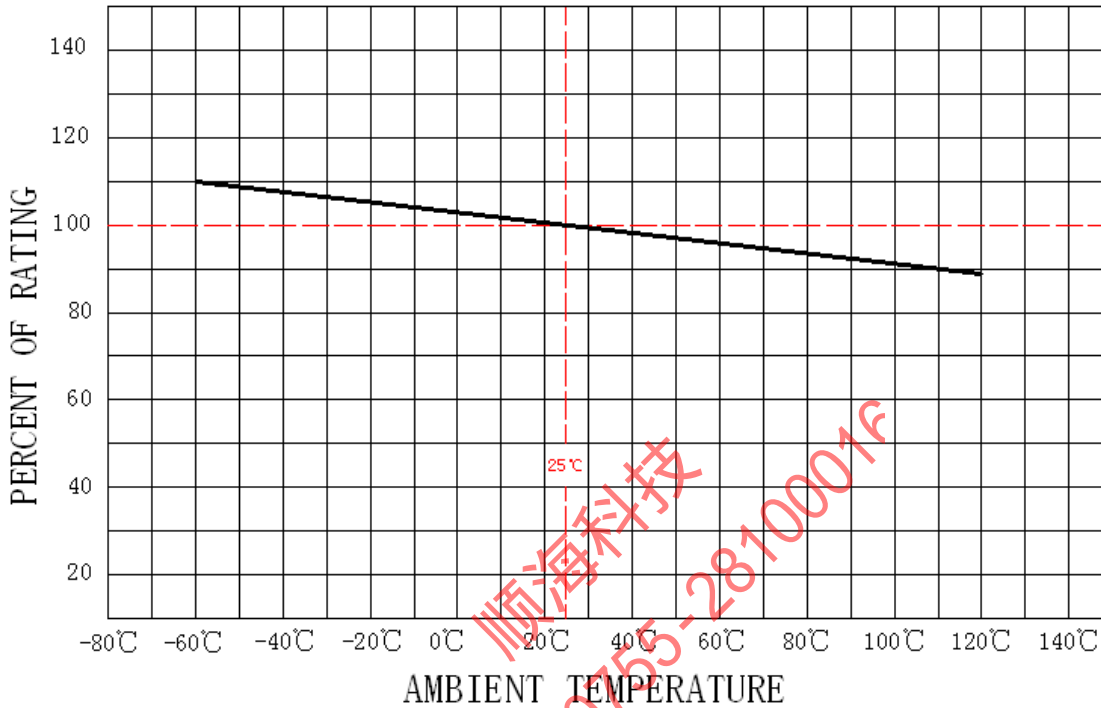
9.環境特性 / ENVIRONMENTAL CHARACTERISTIC

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 $+5^{\circ}\text{C} \sim 30^{\circ}\text{C}$ 、相對濕度 25%~60%的密閉條件下可存放 2 年。

Under airtight in temperature $+5^{\circ}\text{C} \sim 30^{\circ}\text{C}$ 、relative humidity 25%~60% can store 2 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。

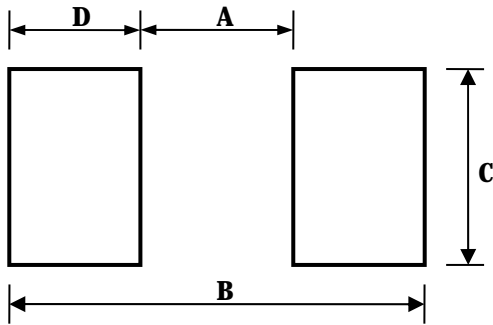
Without dew in temperature $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、relative humidity be 95% maximum value for 30days.

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.



| Dimensions | A(mm) | B(mm) | C(mm) | D(mm) |
|---------------|------------------|------------------|------------------|------------------|
| 1032SF | 5.72±0.30 | 12.6±0.30 | 3.43±0.30 | 3.25±0.30 |

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

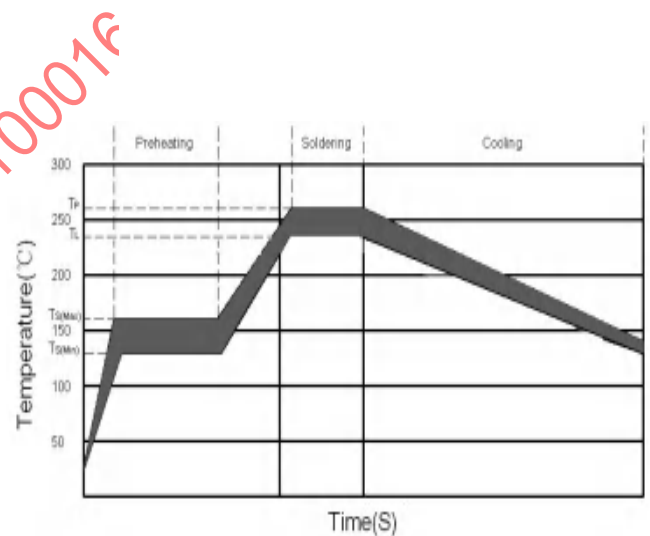
1. Infrared Reflow:

Temperature : 260°C

Time : 5sec Max.

Recommend Reflow profile

| Reflow Condition | | Pb-Free assembly |
|------------------|-----------------------------|------------------|
| Preheating | -Temperature Min (Ts(min)) | 150 °C |
| | -Temperature Max (Ts(max)) | 200 °C |
| | -Time | 60~120 Secs |
| Soldering | -Temperature (TL)(Liquidus) | 235 °C |
| | -Time Max (TL) | 20~40Secs |
| | -Peak Temperature (Tp) | Max 260 °C |
| | -Time Max (Tp) | 5 Secs |



2. Wave soldering

Reservoir Temperature : 260°C

Time in Reservoir : 10sec Max.

3. Hand Soldering :

Temperature : 350°C

Time : 3sec Max.

Soldering iron avoid touch Brass Cap.

11. 其他使用注意事項 / OTHER NOTICE IN USED

符合本公司可能的其它檔的要求。

It could be in conformance with another file which made by our company.

12. 安全認證及編號 / STANDARDS AND APPROVALS

| | |
|----|--------|
| UL | E56092 |
|----|--------|

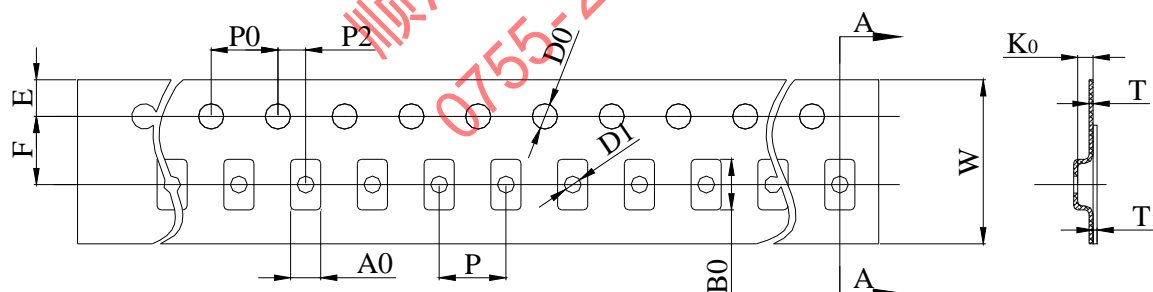
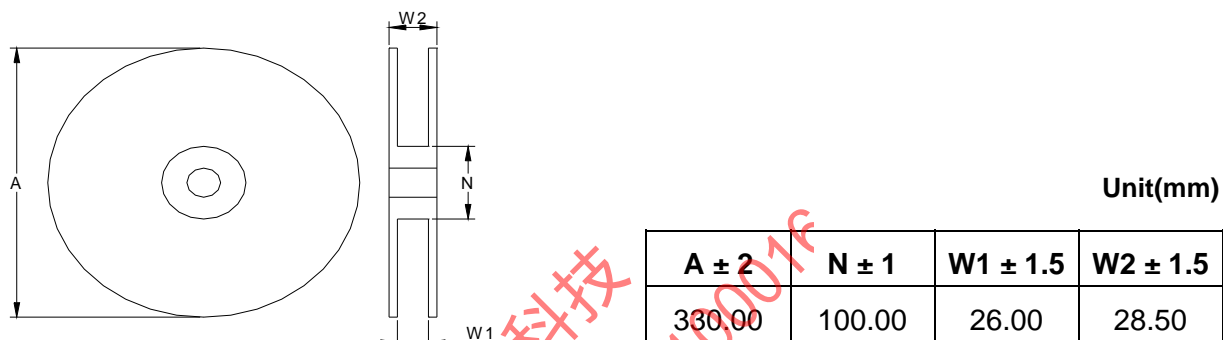
13. 包裝訊息 / PACKING INFORMATION

13-1 包裝數量、重量 / QUANTITY & WEIGHT

| 型號 Type Number | 數量(pcs) Quantity(pcs) |
|----------------|-----------------------|
| 1032SF | 2,000 |



13-2 捲輪規格 / Reel & Tape specifications

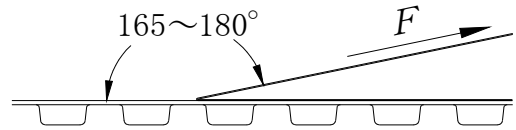


Unit(mm)

| | | | |
|----|--------------|----|--------------|
| W | 24.00 ± 0.30 | D0 | 1.50 ± 0.10 |
| P0 | 4.00 ± 0.10 | F | 11.50 ± 0.10 |
| P | 8.00 ± 0.10 | E | 1.75 ± 0.10 |
| P2 | 2.00 ± 0.10 | T | 0.35 ± 0.05 |
| A0 | 1.50 ± 0.10 | T1 | Max. 0.1 |
| B0 | 10.30 ± 0.10 | K0 | 3.50 ± 0.10 |

13-3 密封膠膜剝離強度要求 / Peeling Strength of Seal Tape

F = 剝離強度 : 0.1 – 1.0N (10 - 100gf)



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 |
|-----|----|-----|----------------------------|
| 第四版 | 饒紅 | 蔡明威 | <i>Russel</i> 2019/7/26 |



UL iQ for Fuses



Fuses

E56092

Guide Information

SUZHOU WALTER ELECTRONIC CO LTD

Fenhu Technic Development Zone, Wujiang Jiangsu 215211 CN

1032SF, 1032SS

Supplemental fuses: surface mount, cartridge enclosed

| <u>Size</u> <u>mm(in)</u> | <u>Amps</u> <u>(A)</u> | <u>Volts</u> <u>(V)</u> | <u>Interrupting</u> <u>Rating (A)</u> |
|---------------------------------------|---------------------------|----------------------------|--|
| 10.3 x 3.2 x 3.2 (0.41 x 0.13 x 0.13) | 20 - 60 | 250Vac | 100 |
| | 20 - 60 | 65Vac | 300 |
| | 40 - 60 | 72Vdc | 180 |
| | 40 - 60 | 60Vdc | 600 |
| | 20 - 30 | 100Vdc | 300 |
| | 20 - 30 | 72Vdc | 500 |
| | 20 - 30 | 32Vdc | 1000 |

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