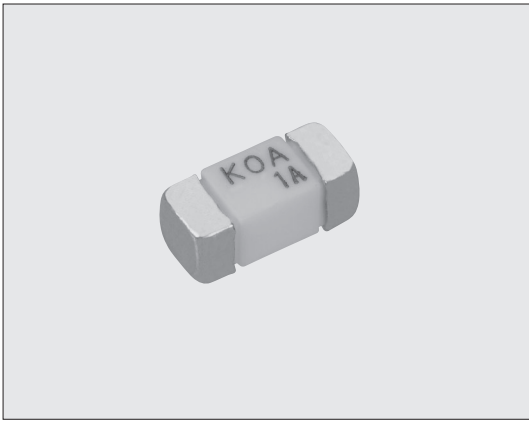


## CCF1F 片式电流保险丝 (抗硫化型) Chip Current Fuses (Anti Sulfuration)



外观颜色: 白色 Coating color: White

### 特点 Features

- 由于使用高性能抗硫化材料, 因此抗硫化性优异。
- 依据 IEC60127-4。(7A以下)
- 采用陶瓷本体, 机械强度优异。
- 对应回流焊和波峰焊。
- 符合欧盟RoHS。
- Excellent anti-sulfuration characteristic due to using high sulfuration-proof material.
- Meets IEC60127-4 specifications. (7A or less)
- Stable fusing characteristics due to the original technology.
- Suitable for reflow and flow soldering.
- Products meet EU – RoHS requirements.

### 取得规格 Approvals Awarded

UL248.14 File No.E171861  
c-UL(CSA)C22.2 No.248.14 File No.E171861

### 参考标准 Reference Standard

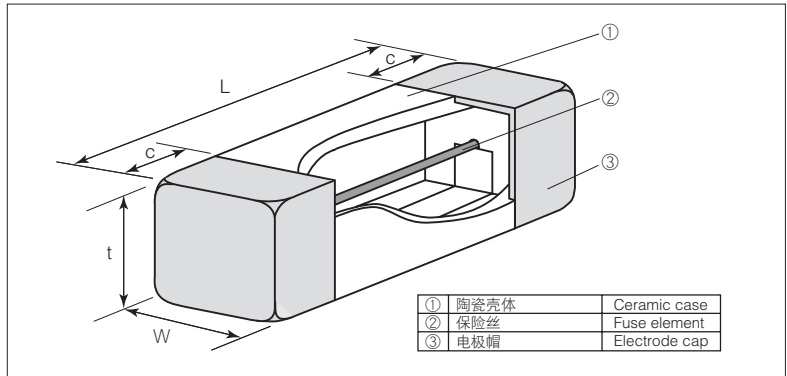
IEC60127-4 通用模块型保险丝标准表2  
IEC60127-4 Universal modular fuse-Links Standard sheet2

### 额定值 Ratings

| 型号<br>Type | 额定电流<br>Rated Current | 额定电压<br>Rated Voltage        | 断路容量<br>Interrupting Capacity        | 熔断特性<br>Fusing Characteristics |                     | 内部电阻值<br>Internal R.<br>(mΩ) Max. | 公称熔断值<br>Nominal Melting<br>I <sup>2</sup> t (A <sup>2</sup> ·s) | 编带和包装数/卷<br>Taping & Q'ty/Reel (pcs)<br>TE |
|------------|-----------------------|------------------------------|--------------------------------------|--------------------------------|---------------------|-----------------------------------|--|--|
|            |                       |                              |                                      | 额定电流<br>Rated Current          | 熔断时间<br>Fusing Time |                                   |  |  |
| CCF1F0.4   | 0.4A                  | UL(c-UL)<br>AC125V<br>DC125V | UL(c-UL)<br>AC125V 50A<br>DC125V 50A | UL(c-UL)<br>100%               | 4h Min.<br>60s Max. | 650                               | 0.024  | 1,000                                      |
| CCF1F0.5   | 0.5A                  |                              |                                      |                                |                     | 510                               | 0.030  |  |
| CCF1F0.63  | 0.63A                 |                              |                                      |                                |                     | 390                               | 0.052  |  |
| CCF1F0.8   | 0.8A                  |                              |                                      |                                |                     | 250                               | 0.125  |  |
| CCF1F1     | 1A                    |                              |                                      |                                |                     | 90.4                              | 0.156  |  |
| CCF1F1.25  | 1.25A                 |                              |                                      |                                |                     | 75.9                              | 0.220  |  |
| CCF1F1.6   | 1.6A                  |                              |                                      |                                |                     | 59.3                              | 0.513  |  |
| CCF1F2     | 2A                    |                              |                                      |                                |                     | 42.9                              | 0.814  |  |
| CCF1F2.5   | 2.5A                  |                              |                                      |                                |                     | 36.6                              | 1.31   |  |
| CCF1F3.15  | 3.15A                 |                              |                                      |                                |                     | 26.0                              | 2.37   |  |
| CCF1F4     | 4A                    |                              |                                      |                                |                     | 20.1                              | 3.85   |  |
| CCF1F5     | 5A                    |                              |                                      |                                |                     | 15.3                              | 6.5  |  |
| CCF1F6.3   | 6.3A                  |                              |                                      |                                |                     | 11.4                              | 10.6   |  |
| CCF1F7     | 7A                    |                              |                                      |                                |                     | 10.6                              | 12.8   |  |
| CCF1F8     | 8A                    |                              |                                      |                                |                     | 9.5                               | 17.0   |  |
| CCF1F10    | 10A                   | 7.5                          | 27.7                                 |                                |                     |                                   |  |  |
| CCF1F12    | 12A                   | UL(c-UL)<br>AC65V<br>DC65V   | UL(c-UL)<br>AC65V 50A<br>DC65V 50A   |                                |                     | 4.5                               | 73.5   |  |
| CCF1F15    | 15A                   |                              |                                      |                                |                     | 3.5                               | 125.5  |  |

使用温度范围 Operating Temp. Range: -55°C ~ +125°C

### 结构图 Construction



### 外形尺寸 Dimensions (mm)

| 型号 Type<br>(Inch Size Code) | 尺寸 Dimensions (mm) |       |       |       | Weight (g)<br>(1000pcs) |
|-----------------------------|--------------------|-------|-------|-------|-------------------------|
|                             | L±0.2              | W±0.2 | t±0.2 | c±0.2 |                         |
| CCF1F (2410)                | 6.0                | 2.5   | 2.5   | 1.4   | 140                     |

### 品名构成 Type Designation

| 实例 Example                          | CCF | 1 | F                        | 5 | T     | TE   |
|-------------------------------------|-----|---|--------------------------|---|-------|--|
| 品种<br>Product Code                  | 1   | 1 | 1                        | 1 | 1     | 1  |
| 形状<br>style                         | 1   | 1 | 1                        | 1 | 1     | 1  |
| 熔断特性<br>Fusing Characteristics      |     |   | F: 速断型<br>F: Fast-Acting |   |       |  |
| 额定电流<br>Rated Current               |     |   |                          | 5 |       |  |
| 端子表面材质<br>Terminal Surface Material |     |   |                          |   | T: Sn |  |
| 二次加工<br>Taping                      |     |   |                          |   |       | TE: 4mm pitch plastic embossed<br>BK: Bulk |

欲知关于此产品含有的环境负荷物质详情(除EU-RoHS以外), 请与我们联系。

编带细节请参考卷末附录C。

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping, please refer to APPENDIX C on the back pages.

### 用途 Applications

- 照明用Inverter电源 Power supplies for Illumination inverters
- 复印机, LBP Copying machines, Laser beam printers
- 工业用机器 Industrial equipment

## ■ 降低额定值 Derating

### ● 稳恒电流 Stationary current

稳恒电流在重复脉冲时，稳恒电流波形的峰值是恒稳电流值。

Regard the peak of stationary current waveform as stationary current value when the stationary current is repeated pulse.

### ● 通常降低额定值 Normal derating

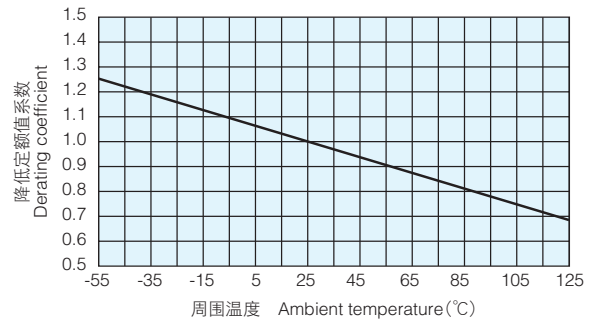
本产品的通常降低额定值为标准应在0.7以下。

Normal derating of this product should be 0.7max. as standards.

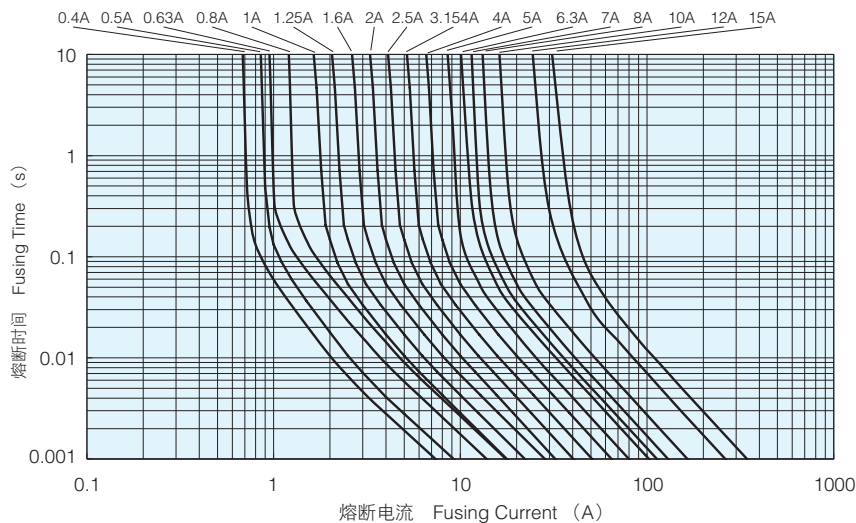
### ● 温度降低额定值 Deratings by ambient temperatures

如果在常温(25°C±5°C)以外的环境温度条件下使用本产品，必须进行温度修正，请参考右图的降低额定值系数。

When using the products at the temperatures other than normal temperature (25°C±5°C), temperature adjustment will be required. Please refer to the derating coefficient as shown in the figure.



## ■ 熔断特性 Fusing Characteristics



## ■ 性能 Performance

| 试验项目<br>Test Items                   | 标准值 Performance Requirements<br>ΔR±%   |             | 试验方法<br>Test Methods   |
|--------------------------------------|--|-------------|--|
|                                      | 保证值 Limit  | 代表值 Typical |  |
| 熔断特性<br>Fusing Characteristics       | 规定时间内熔断后的绝缘电阻在0.1MΩ以上。<br>Within specified time. Insulation resistance shall not be less than 0.1MΩ. | —           | 以额定电流的200%的电流通电，测量到熔断为止的时间 (at 25°C)<br>Fusing time measured under rated current×200% (at 25°C)              |
| 表面温度上升<br>Surface Temp. Rise         | 温度上升75°C以下、不熔断 (全部额定)。<br>Max. Temp. Rise 75°C and not Fusing (All the rating).                      | —           | 以额定电流的100%的电流通电1小时后的箱体表面温度<br>Surface temp. should be measured by rated current×100% 1hour                   |
| 电极强度<br>Bending Test                 | 可熔断体不断线且箱体不损坏<br>No mechanical damage  | —           | 支点间隔90mm，弯曲度3mm，速度1mm/s<br>Distance between holding points 90mm, bent by 3mm at arte of 1mm/s                |
| 耐焊接热<br>Resistance to soldering heat | 10   | 3           | 260°C±5°C、10s±0.5s   |
| 焊接性<br>Solderability                 | 应有95%以上的新焊锡覆盖。<br>95% coverage min.  | —           | 235°C±5°C, 3s±0.5s   |
| 通电寿命<br>Load life                    | 10   | 5           | 70°C±2°C、1000hr、额定电流×70%、1.5小时ON、0.5小时OFF的周期<br>Rated current×70%, 1.5h ON/0.5h OFF cycle                    |
| 耐湿通电寿命<br>Load life moisture         | 10   | 5           | 40°C±2°C、90%~95%RH、1000hr、额定电流×70%、1.5小时ON、0.5小时OFF的周期<br>Rated current×70%, 1.5h ON/0.5h OFF cycle          |
| 温度突变<br>Rapid change of temperature  | 10   | 5           | -55°C(30min.) / +125°C(30min.) 100cycles   |
| 抗硫化性<br>Sulfuration test             | 5  | —           | 用含硫3.5%的工业油浸渍 105°C±3°C 500h<br>Soaked in industrial oil with sulfur substance 3.5% contained 105°C±3°C 500h |

## ■ 使用注意事项 Precautions for Use

- 本产品由于受温度的影响，使用前请将其安装在贵公司产品上，进行温度上升 (Δt=50°C以下) 及异常电流的电路切断评价和确认。
- 选定保险丝时，请与本目录内的「保险丝的使用注意事项」一起确认。
- High temperature affects on the product's performances. After mounting the products on your applications, be sure that the maximum temperature rise is 50 degrees or below and that if the circuit is interrupted or not under abnormal current.
- When you select fuse product, please make sure to confirm "Precautions for Use of Fusing Components" in this catalogue and ask KOA sales.

本产品目录中记载的产品规格如有变更，恕不一一奉告。订购以及使用之前，请仔细确认规格表的内容。

用于车载设备、医疗设备、航空设备以及其它涉及人身安全、或可能引起重大损失的设备上时，请务必事先与我公司联系。这些产品在这类用途中出现故障或失灵可能导致人身事故或严重损坏。

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

Contact our sales representatives before you use our products for applications including automobiles, medical equipment and aerospace equipment.

Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

Nov. 2018