WCCF series

High current square Fuse

特征/General Information



应用/ Applications

主要应用于刀片服务器、电源模块、基站电源、不间断电源、大功率电池系统、配电单元、工业工具等。/Mainly used in blade servers, power packs, base station power supplies, uninterruptible power supplies, high power battery systems, power distribution units, industrial tools, etc.

环保标准/Environment Standard

无铅/Lead-free，无卤/Halogen-free，RoHS

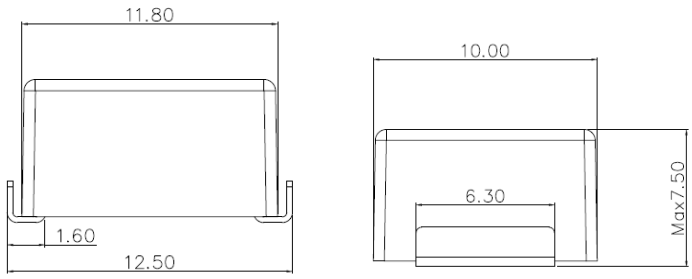
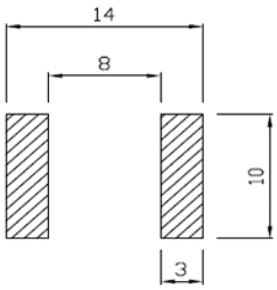
工作温度/Operating temperature

-55℃ to +125℃ (需降额/with de-rating)

产品认证/Certificates

NA

产品尺寸与推荐焊盘/Dimensions and Recommended Land Pattern(mm)

产品尺寸/Dimensions	推荐焊盘/ Recommended Land Pattern
	

● 动作时间特性/Clear-Time Characteristics

% of current rating	Clear-time at 25°C
100%	1 hours min
250%	60 seconds max

● 电气特性/Electrical Characteristics

产品代码 Part number	额定电流 Current Rating	额定电压 Voltage Rating	分断能力 Interrupting Rating	冷态电阻 Nominal Cold DCR	额定压降 Nominal Voltage Drop	标称 I^2t Nominal I^2t
	A	VDC	A	mΩ	mV	(A^2s)
WCCF0060A125V	60	125VDC 100VDC 75VDC	3KA@125VDC 4KA@100VDC 15KA@75VDC	0.75	65.8	1348
WCCF0070A125V	70			0.70	70.2	1573
WCCF0080A125V	80			0.68	79.5	3620
WCCF0090A125V	90			0.63	78.6	4925
WCCF0100A125V	100			0.60	61.2	7513
WCCF0125A125V	125			0.55	62.9	8620
WCCF0150A125V	150			0.39	66.8	10350
WCCF0175A125V	175			0.34	75.6	18000
WCCF0200A125V	200			0.28	84.3	26830

Notice:

1.冷态电阻是在环境温度为 25℃时，以<10%的额定电流测量的。/DC cold resistance are measured at <10% of rated current in ambient temperature of 25℃.

2. 计算 I^2T 的电流值为 0.001 秒预电弧时间。/ Melting I2t at 0.001 second pre-arcing time.

3. 在 100%额定电流下测得的额定压降。/Nominal Voltage Drop measured at 100% rated Current.

* (1)60A~90A：铜宽 9mm，铜厚 6 oz，双层；/60A~90A: copper width 9 mm, weight 6 oz, double layer;

(2) 100A~125A：铜宽 12.5mm，铜厚 6 oz，双层；/100A~125A: copper width 12.5 mm, weight 6 oz, double layer;

(3) 150A~200A：铜宽 20mm，铜厚 6 oz，双层。/150A~200A: copper width 20 mm, weight 6 oz, double layer.

● 命名规则/Part Numbering

WC CF 0100A 125V

(1) (2) (3) (4)

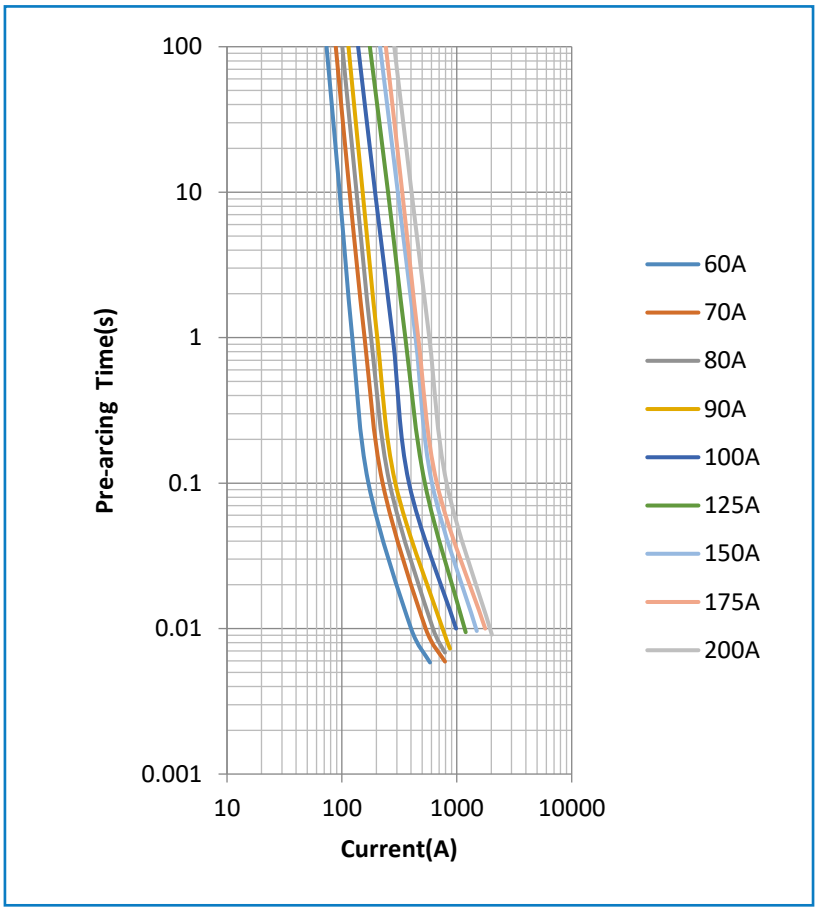
(1) 公司代码/Company code: 维安贴片保险丝/ Wayon Chip Fuse

(2) 系列代码/Series code: CF

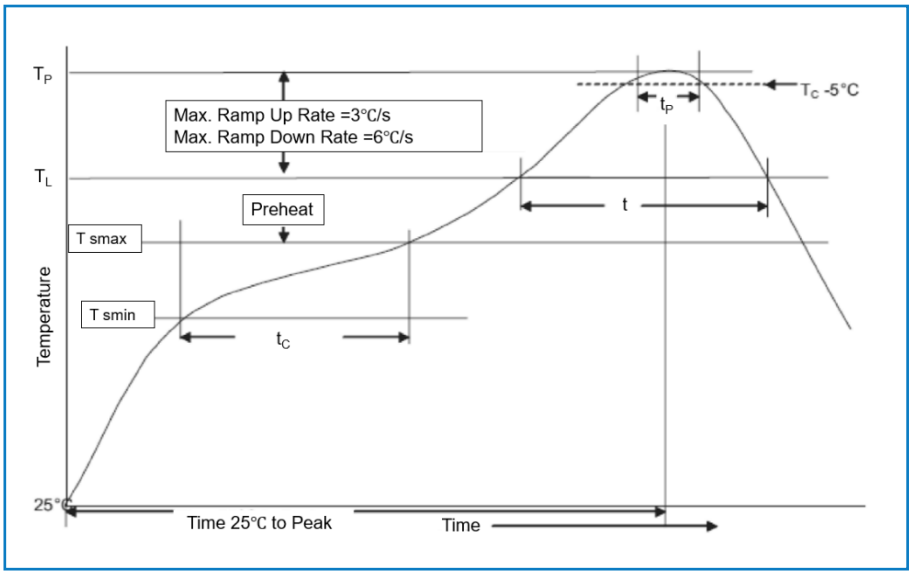
(3) 额定电流/Current rating code: 0100A-100A

(4) 额定电压/ Voltage rating code: 125V-125VDC

● 动作时间曲线/Average Clear-Time Curves



● 回流焊条件/Solder Reflow Recommendations



曲线特征/Profile Feature		无铅焊接 Pb-Free Assembly
平均升温速率（从 Tsmax 到 Tp） Average Ramp-UP Rate(Tsmax to Tp)		3℃/s Max
预热 Preheat	最低温度/Temperature Min(Ts min)	150℃
	最高温度/Temperature Max(Ts max)	200℃
	时间（从 Tsmin 到 Ts max） Time(Tsmin to Ts max)	60sec ~ 120sec
液相线温度/Liquidous temperature(T_L) 液相线停留时间/Time at liquidous(t_L)		217℃ 60 ~ 150s
封装体峰值温度 Peak package body temperature(Tp)		260℃
在规定等级温度（Tc）±5℃范围内的时间（tP） Time (tP) within 5℃ of the specified classification temperature (Tc)		30s
平均降温速率（从 Tp 到 Tsmax） Average ramp-down rate (T_p to T_{smax})		6℃/s Max
从 25℃升至峰值温度的时间 Time (25℃ to Peak Temperature)		8 minutes Max

● 电气规格/Electrical Specifications

分断后特性/Clear-Time Characteristics:

与简式规格书中规定的内容一致。/Same as specified on the Short Form Data Sheet.

分断后绝缘电阻/Insulation Resistance after Opening:

施加额定电压分断时，绝缘电阻最小值为 20,000 欧姆。Fuse在低压条件下分断，可能导致分断后的绝缘电阻值降低。/20,000 ohms minimum when cleared with rated voltage applied. Fuse clearing under low voltage conditions may result in lower after clearing insulation resistance values. (注：在正常故障条件下（低压或额定电压条件），WAYON贴片Fuse的分断后绝缘电阻值足以满足电路保护需求。/Note: Under normal fault conditions (low or rated voltage conditions), WAYON chip fuses provide sufficient after clearing insulation resistance values for circuit protection.)

载流能力/Current Carrying Capacity:

依据 MIL-PRF-23419 标准评估，在环境温度为 + 25℃的条件下，能承受 100% 额定电流，且持续时间不低于 4 小时。/100% Rated current at +25℃ ambient for 4 hours minimum when evaluated per MIL-PRF-23419.

分断能力/Interrupt Ratings:

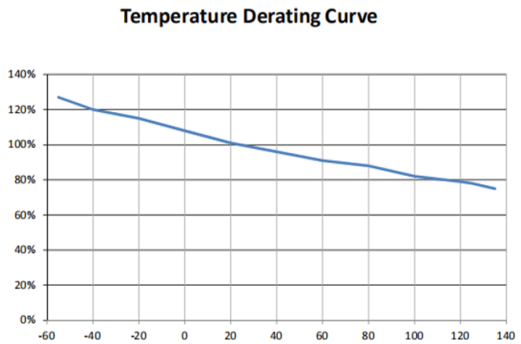
与简式规格书中规定的内容一致。/Same as specified on the Short Form Data Sheet.

保险丝选型与温度降额指南/Fuse Selection and Temperature De-rating Guideline:

环境温度会影响熔断器的载流能力。当熔断器在高于 25℃的温度下工作时，需进行 “降额”（de-rated）使用。/The ambient temperature affects the current carrying capacity of fuses. When a fuse is operating at a temperature higher than 25℃, the fuse shall be "de-rated".

从产品目录中选型时，可遵循以下规则：目录fuse额定电流 = 标称工作电流/0.75/最高工作温度下的降额百分比。/To select a fuse from the catalog, the following rule may be followed: Catalog Fuse Current Rating = Nominal Operating Current / 0.75 / % De-rating at the maximum operating temperature.

示例：在 100℃温度下，降额百分比为 80%，标称工作电流为4A，则从产品目录中选取的fuse额定电流应为：/Example: At 100℃, % De-rating is 80%. The nominal operating current is 4A. The current rating for fuse selected from the catalog shall be:



● 包装与储存/Packaging and Storage

储存/Storage

环境最高温度不得超过 40℃。超过 40℃的储存温度可能导致包装材料变形。建议的储存最高相对湿度为 70%。高温高湿环境会加速端子上镀层的氧化，降低元器件的可焊性。应使用含干燥剂的密封塑料袋储存，以减少端子氧化，且仅在使用前打开密封袋。产品不得储存在含有硫或氯的有害气体环境中。

The maximum ambient temperature shall not exceed 40℃. Storage temperatures higher than 40℃ could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 70%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components. Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.

包装/Packaging

维安（WAYON）贴片保险丝采用卷带包装，适用于自动贴片机；特殊应用场景下也提供散装包装。卷带包装和散装包装的产品均采用含干燥剂的塑料袋密封。

WAYON's chip fuse are provided on tape-and-reel for use in pick-and-place machines or in bulk for special applications. Both tape-and-reel and bulk products are sealed in plastic bags with desiccant.

包装数据/Packaging Data

每卷包装/Taping Packing:　500pcs

每箱包装/Master Carton Packing:　3000pcs

Contact Information

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Product Specification Statement

1.The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.

2.The product parameters described in the product specification are numerical values, characteristics, and functions obtained through actual testing or theoretical calculations of the product in an independent or ideal state. Due to the complexity of product applications and variations in test conditions and equipment, there may be slight fluctuations in parameter test values. WAYON shall not guarantee that the actual performance of the product when installed in the customer's system or equipment will be entirely consistent with the product specification, especially concerning dynamic parameters. It is recommended that users consult with professionals for product selection and system design. Users should also thoroughly validate and assess whether the actual parameters and performance when installed in their respective systems or equipment meet their requirements or expectations. Additionally, users should exercise caution in verifying product compatibility issues, and WAYON assumes no responsibility for the application of the product.

3.WAYON strives to provide accurate and up-to-date information to the best of our ability. However, due to technical, human, or other reasons, WAYON cannot guarantee that the information provided in the product specification is entirely accurate and error-free. WAYON shall not be held responsible for any losses or damages resulting from the use or reliance on any information in these product specifications. WAYON reserves the right to revise or update the product specification and the products at any time without prior notice, and the user's continued use of the product specification is considered an acceptance of these revisions and updates. Prior to purchasing and using the product, users should verify the above information with WAYON to ensure that the product specification is the most current, effective, and complete. If users are particularly concerned about product parameters, please consult WAYON in detail or request relevant product test reports. Any data not explicitly mentioned in the product specification shall be subject to separate agreement.

4.Users are advised to pay attention to the parameter limit values specified in the product specification and maintain a certain margin in design or application to ensure that the product does not exceed the parameter limit values defined in the product specification. This precaution should be taken to avoid exceeding one or more of the limit values, which may result in permanent irreversible damage to the product, ultimately affecting the quality and reliability of the system or equipment.

5.The design of the product is intended to meet civilian needs and is not guaranteed for use in harsh environments or precision equipment. It is not recommended for use in systems or equipment such as medical devices, aircraft, nuclear power, and similar systems, where failures in these systems or equipment could reasonably be expected to result in personal injury. WAYON shall assume no responsibility for any consequences resulting from such usage.

6.Users should also comply with relevant laws, regulations, policies, and standards when using the product specification. Users are responsible for the risks and liabilities arising from the use of the product specification and must ensure that it is not used for illegal purposes. Additionally, users should respect the intellectual property rights related to the product specification and refrain from infringing upon any third-party legal rights. WAYON shall assume no responsibility for any disputes or controversies arising from the above-mentioned issues in any form.