



深圳市万瑞和电子有限公司  
SHENZHEN WONDHOPE ELECTRIC CO., LTD

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1nd Bldg, Meitai Industrial Zone, Guanguang Road,  
Guanlan, Longhua, Shenzhen, China

封装 (package): SMD 1812

型号 (Model): WH 050

最大电压 ( $V_{max}$ ): 24V

电话 (Tel): 86-0755-29503668 29503690 29503691

最大电流 ( $I_{max}$ ): 40A

传真 (Fax): 86-0755-29503998 邮编 (P.C.): 518131

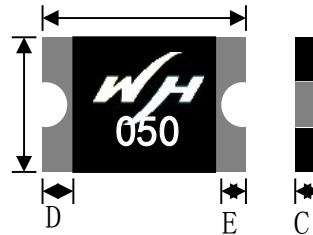
邮箱 (Email): sales@whptc.com 网址 (http://): www.whptc.com

## 产品规格书 Specification Sheet

### 产品标识/Marking:

WH: 万瑞和(Wondhope)

050: 工作电流(hold current)



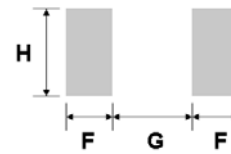
产品外形尺寸  
/Appearance  
and size of  
production

### 焊点可焊性/Solderability:

符合EIA规定RS186-9E 和ANSI/J-STD-002  
第3类标准/Meets EIA specification RS186-  
9E and ANSI/J-STD-002 Category 3

### 焊点材料/Terminal Pad Materials:

无铅镀锡的镀镍铜箔/Sn-plated nickle-copper, lead-free device.



推荐焊盘设计  
/Recommended  
pad layout

### 产品尺寸/Dimensions:

	A		B		C		D	E	F	G	H
UNIT	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MIN			
mm	4.37	4.73	3.07	3.41	0.4	0.9	0.3	0.25	1.75	3.2	3.2
inch	0.17	0.19	0.12	0.13	0.02	0.04	0.01	0.01	0.07	0.12	0.12

### 电气特性/Performance Specification:

Model	$V_{max}$ ( $V_{dc}$ )	$I_{max}$ (A)	$I_{hold}$ @25°C (A)	$I_{trip}$ @25°C (A)	$P_d$ Tpy. (W)	Maximum Time To Trip		Resistance	
						Current t	Time (Sec)	R <sub>imin</sub> (Ω)	R <sub>1max</sub> (Ω)
SMD050	24	40	0.5	1.0	0.8	8.0	0.15	0.150	1.200

$V_{max}$ : 产品在规定电流下工作不被破坏的最大电压;

/Maximum voltage, device can withstand without damage at rated current;

$I_{max}$ : 产品在规定电压下工作不被破坏的最大电流;

/Maximum fault current, device can withstand without damage at rated voltage;

$I_{hold}$ : 产品在25°C静止空气中30分钟不动作的最大工作电流;

/Hold Current, device will sustain for 30min without tripping in 25°C still air;

$I_{trip}$ : 产品在25°C静止空气中动作的最小电流;

/Minimum current at which the device will trip in 25°C still air;

$P_d$ : 产品在25°C静止空气中保护状态中消耗的功率;

/Power dissipated from device when in the tripped state in 25°C still air;

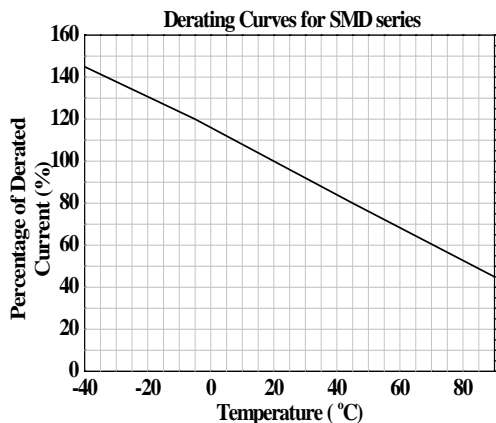
R<sub>imin</sub>: 满足功能要求的最小成品电阻值;

/Minimum resistance of device in initial (un-soldered) state;

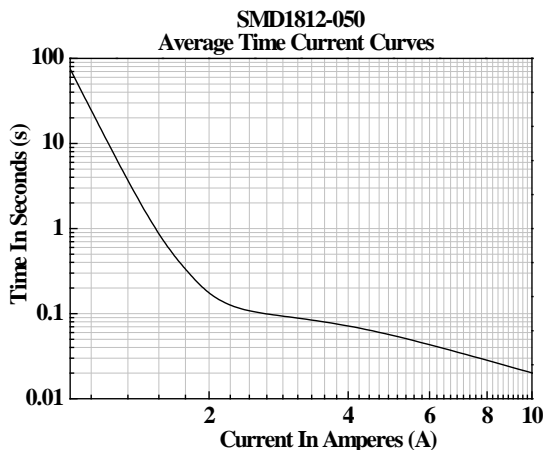
R<sub>1max</sub>: 焊接完1小时, 产品在25°C静止空气中的最大电阻值。

/Maximum resistance of device at 25°C measured one hour post reflow.

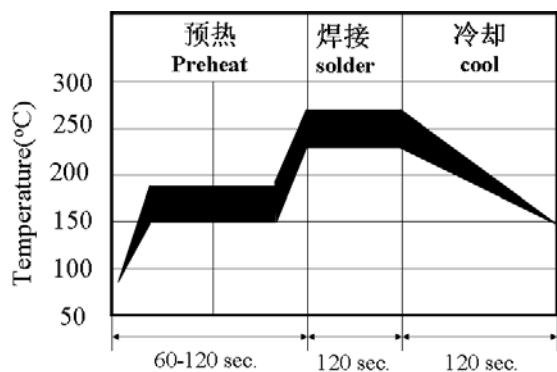
## 电流折减与环境温度曲线图 /Average Time Current Curve



## 25°C时动作时间曲线图 /Average Time Current Curve at 25°C



## 回流焊接条件/Solder reflow conditions



注意：如果回流焊温度超过图表建议最高温度 (260°C)，元件可能损坏而达不到规范要求。

1、建议回流方法：红外线、蒸汽炉、热空气炉；  
/Recommended reflow methods: IR, vapor phase oven, hot air oven.

2、使用于波焊制程时，不可将元件置于电路板之背面/底面；  
/Devices are not designed to be wave soldered to the bottom side of the board.

3、建议焊锡膏涂抹厚度最大为0.25mm/0.010 inch；  
/Recommended maximum paste thickness is 0.25 mm (0.010 inch).

4、元件可使用一般业界标准程序和溶剂来实施清洁。  
/Devices can be cleaned using standard method and solvents.

/Note: If reflow temperatures exceed the recommended profile, devices may not meet the performance

## 储存与放置/Storage and Handling

储存条件：低于30 °C，相对湿度小于60%。如果超出储存条件，元件可能达不到规范要求。/Storage conditions: 30°C max, 60% R.H. Devices may not meet specified performance if storage conditions are exceeded.

## 订购须知/Order Information

WH=公司标识 /Trademark, SMD1812=封装尺寸/ Packaging, 050=产品型号 /Model  
包装数量2000个/盘 2000pcs/Reel

## 注意事项/ WARNING:

- 1、超出额定范围或不正确地使用PPTC元件都可能导致产品的损坏，并可能导致电弧和火焰；  
/Use PPTC exceed by the maximum rating and improper use may result in device damage and possible electrical arcing and flame.
- 2、PPTC元件一般只用于偶然的过流或超温故障时的保护，切勿用于故障频繁发生或预期会发生长时间故障的场合；  
/PPTC are designed for protection against over current or temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- 3、如果不按照建议安装、测试和使用产品，元件性能可能会受到不利影响；  
/Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- 4、在电感强度大的电路中使用，可能会产生超过PPTC元件的额定电压的回路电压；  
/Use PPTC with a large inductance in circuit will generate a circuit voltage above the rated voltage of the PPTC.
- 5、PPTC元件应用时不能长期处于压力下，使其缺乏膨胀空间而影响其性能，如处于高压或安装在受限的狭小空间里。  
/Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.
- 6、由于上述原因造成的质量问题，我司概不负责。  
/If any quality problems caused by improper use mentioned above, our company is not responsible.