



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 1206

型号(Model): 020

最大电压( $V_{max}$ ): 24V

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

最大电流( $I_{max}$ ): 20A

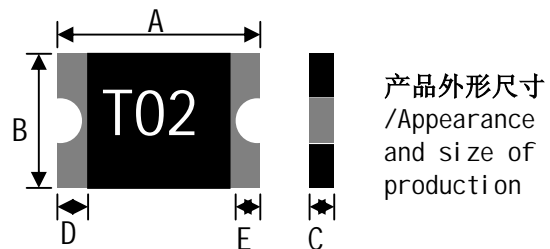
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## 产品规格书 Specification Sheet

### 产品标识/Marking:

T02: 产品型号标识/Part identification

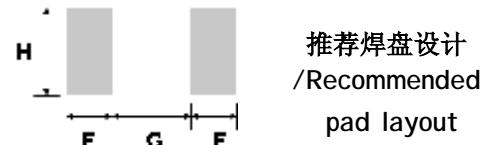


### 焊点可焊性/Solderability:

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 nickel-copper, lead-free device.



### 产品尺寸/Dimensions:

	A		B		C		D	E	F	G	H
UNIT	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MIN			
mm	3	3.5	1.5	1.8	0.4	0.9	0.15	0.1	1	2	1.9
inch	0.12	0.14	0.06	0.07	0.016	0.04	0.01	0.004	0.04	0.08	0.07

### 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 (A)	Time (Sec)	R <sub>imin</sub> (Ω)	R <sub>1max</sub> (Ω)
SMD020	24	20	0.20	0.40	0.6	8.0	0.08	0.70	4.00

$V_{max}$ : 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;

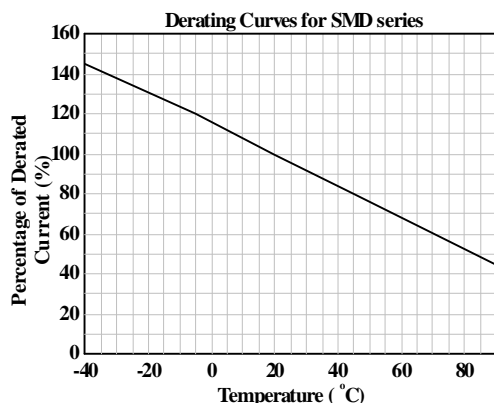
R<sub>imin</sub>: 满足功能要求的最小成品电阻值;

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

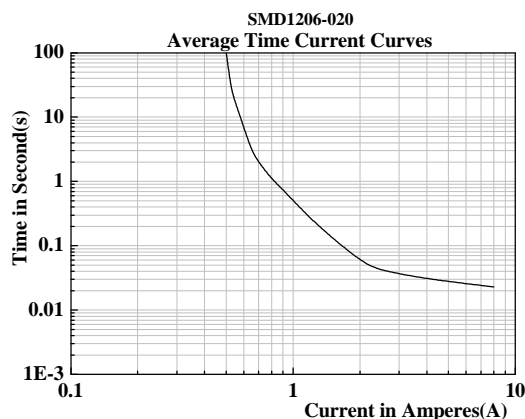
R<sub>1max</sub>: 焊接完1小时, 产品在25°C静止空气中的最大电阻值。

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

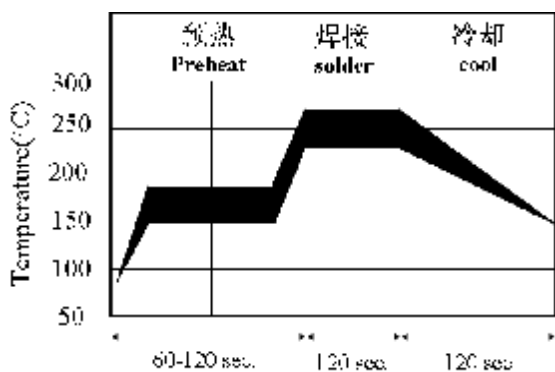
## 电流折减与环境温度曲线图 /Average Time Current Curve



## 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 requirements.**

## 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

T02=产品标识 /Part identification, SMD1206=封装尺寸/ Packaging, 020=产品型号 /Model  
包装数量3500个/盘3500pcs/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.