

# SMD0603-100

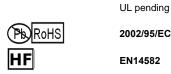
#### Performance Specification

Model	Mentring	V <sub>max</sub>	I <sub>max</sub>	I <sub>hold</sub>	I <sub>trip</sub>	P <sub>d</sub>	Maximum Time To Trip		Resistance	
Woder	Marking	(Vdc)	(A)	@25°C (A)	@25°C (A)	Тур. (W)	Current (A)	Time (Sec)	Ri <sub>min</sub> (Ω)	R1max (Ω)
SMD0603-100	0	6.0	40	1.00	2.00	0.5	8.0	0.10	0.040	0.300
Itrip = Trip Current. M Vmax = Maximum ope Imax = Maximum faul Pd = Power dissipat Rimin/max = Minimum	SMD0603-100    0    6.0    40    1.00    2.00    0.5    8.0    0.10    0.040    0.300      Ihold    = Hold Current. Maximum current device will not trip in 25°C still air.    Itrip    = Trip Current. Minimum current at which the device will always trip in 25°C still air.    Vmax    = Maximum operating voltage device can withstand without damage at rated current (Imax).    Imax    = Maximum fault current device is in the tripped state in 25°C still air environment at rated voltage.      Pd    = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.    Rimin/max    = Maximum device resistance prior to tripping at 25°C.      R1 <sub>max</sub> = Maximum device resistance is measured one hour post reflow.    Example to the content of									

#### **Environmental Specifications**

Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hrs.	±5% typical
Humidity aging	+85°C, 85% R.H. , 168 hours	±5% typical
Thermal shock	+85°C to -40°C, 20 times	±33% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change
Ambient operating conditions : - 40 °C to +85 °C		
Maximum surface temperature of the device in the tripped	state is 125 °C	

Regulation/Standard:



2002/95/EC EN14582

#### Ihold Versus Temperature

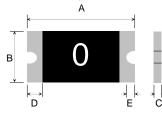
Model	Maximum ambient operating temperature ( $T_{mao}$ ) vs. hold current ( $I_{hold}$ )									
woder	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C	
SMD0603-100	1.30	1.12	1.08	1.00	0.80	0.72	0.58	0.53	0.42	

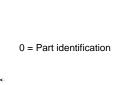
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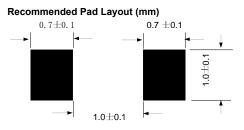
#### Construction And Dimension (Unit:mm)

Model	Α		В		С		D	E
Woder	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
SMD0603-100	1.45	1.85	0.65	1.05	0.50	1.10	0.15	0.10

#### **Dimensions & Marking**







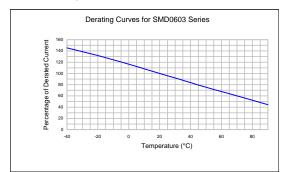
#### **Termination Pad Characteristics**

Terminal pad materials : Terminal pad solderability : Tin-plated Nickel-Copper Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

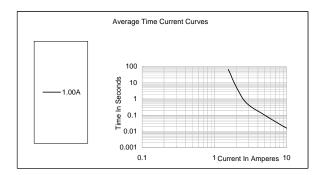
#### Rework

Use standard industry practices, the removal device must be replaced with a fresh one.

#### **Thermal Derating Curve**



#### Typical Time-To-Trip At 25°C



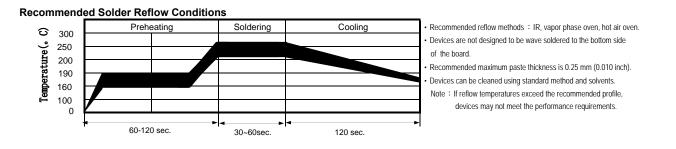
# \Lambda WARNING:

- · Use PPTC beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- PPTC are intended for protection against occasional over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
  Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- · Use PPTC with a large inductance in circuit will generate a circuit voltage (L di/dt) above the rated voltage of the PPTC.
- · Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.
- Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices. PPTC SMD can be cleaned by standard methods.

Requests that customers comply with our recommended solder pad layouts and recommended reflow profile. Improper board layouts or reflow profile could negatively impact solderability performance of our devices.

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Carrier tape Embossed cavity

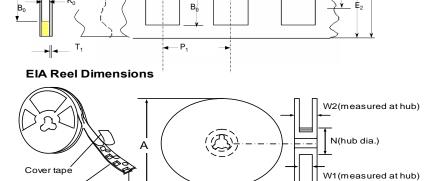
#### Tape And Reel Specifications (mm)

#### Paper Tape Component Dimensions

A<sub>0</sub>

► D<sub>0</sub>

Governing Specifications	
W	8.0 ± 0.2
P <sub>0</sub>	4.0 ± 0.10
P <sub>1</sub>	4.0 ± 0.10
P <sub>2</sub>	2.0 ± 0.05
A <sub>0</sub>	1.05 ± 0.10
B <sub>0</sub>	1.85 ± 0.10
B <sub>0</sub> D <sub>0</sub> F E <sub>1</sub>	1.55 + 0.05
F	3.5 ± 0.05
E <sub>1</sub>	1.75 ± 0.10
E <sub>2</sub> min.	6.25
Т	0.75
T₁max.	0.1
K <sub>0</sub>	0.75/0.95 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W <sub>1</sub>	9.0 ± 0.5
W <sub>2</sub>	12.0 ± 0.05



P

E<sub>1</sub>

w

P

#### Storage And Handling

- Storage conditions : 40°C max, 70% R.H.
- · Devices may not meet specified performance
- if storage conditions are exceeded.

#### Order Information

Order Information	Packaging				
SMD0603	100	Tape & Reel Quantity			
Product name	Hold				
Size 1508 mm / 0603 inch	Current	5,000 pcs/reel			
SMD: surface mount device	1.00A				