



SEA & LAND ELECTRONIC CORP.

[www.sealand-pptc.com](http://www.sealand-pptc.com)

ALPHA-TOP TECHNOLOGY CORP.

[www.alpha-top.cn](http://www.alpha-top.cn)

## APPROVAL SHEET

MODEL NO.: SMD0805-004-60V

CUSTOMER:

CUSTOMER'S APPROVAL:

AUTHORIZED SIGNATURE/STAMP:

DATE

### MANUFACTURER:

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Submitted by: Chen  
Approved by: YC Lin  
DATE: 22-Aug-25

SEA & LAND ELECTRONIC CORP.



#### Features

- Surface Mount Devices
- Lead free device
- Size 2.0\*1.2 mm / 0.08\*0.05 inch
- Surface Mount packaging for automated assembly

#### Applications

- Almost anywhere there is a low voltage power supply, up to 15V and a load to be protected, including:
- Computer mother board, Modem, USB hub
  - PDAs & Charger, Analog & digital line card
  - Digital cameras, Disk drivers, CD-ROMs,

# SMD0805-004-60V

Alpha-Top (Sea & Land Alliance)

#### Performance Specification

Model	Marking	$V_{max}$	$I_{max}$	$I_{hold}$	$I_{trip}$	$P_d$	Maximum Time To Trip		Resistance		Agency Approval
		(Vdc)	(A)	@25°C (A)	@25°C (A)	Typ. (W)	Current (A)	Time (Sec)	$R_{i_{min}}$ (Ω)	$R_{1max}$ (Ω)	
SMD0805-004-60V	X	60	40	0.04	0.15	0.5	0.5	1.00	3.000	45.000	UL TUV

**I<sub>hold</sub>** = Hold Current. Maximum current device will not trip in 25°C still air.

**I<sub>trip</sub>** = Trip Current. Minimum current at which the device will always trip in 25°C still air.

**V<sub>max</sub>** = Maximum operating voltage device can withstand without damage at rated current (I<sub>max</sub>).

**I<sub>max</sub>** = Maximum fault current device can withstand without damage at rated voltage (V<sub>max</sub>).

**P<sub>d</sub>** = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

**R<sub>imin/max</sub>** = Minimum/Maximum device resistance prior to tripping at 25°C.

**R<sub>1max</sub>** = Maximum device resistance is measured one hour post reflow.

**CAUTION** : Operation beyond the specified ratings may result in damage and possible arcing and flame.

#### Environmental Specifications

Test	Conditions
Passive aging	+85°C, 1000 hrs.
Humidity aging	+85°C, 85% R.H. , 168 hours
Thermal shock	+85°C to -40°C, 20 times
Resistance to solvent	MIL-STD-202,Method 215
Vibration	MIL-STD-202,Method 201
Ambient operating conditions : - 40 °C to +85 °C	
Maximum surface temperature of the device in the tripped state is 125 °C	
In case of special use, please contact our engineer	

#### Agency Approvals :

#### Regulation/Standard:

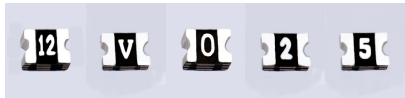


2015/863/EU

EN14582

#### I<sub>hold</sub> Versus Temperature

Model	Maximum ambient operating temperature (T <sub>mac</sub> ) vs. hold current (I <sub>hold</sub> )								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD0805-004-60V	0.060	0.052	0.047	0.040	0.033	0.030	0.025	0.021	0.013



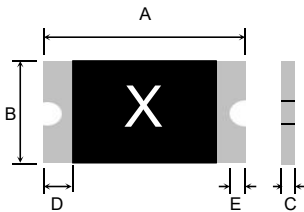
SMD0805-004-60V

Alpha-Top (Sea & Land Alliance)

Construction And Dimension (Unit:mm)

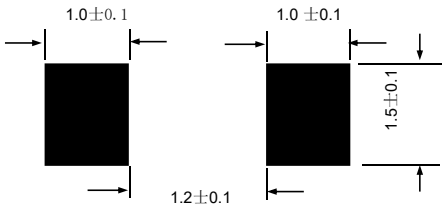
Model	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
SMD0805-004-60V	1.90	2.20	1.20	1.50	0.60	1.30	0.20	0.20	0.10	0.10

Dimensions & Marking



X = Part identification

Recommended Pad Layout (mm)



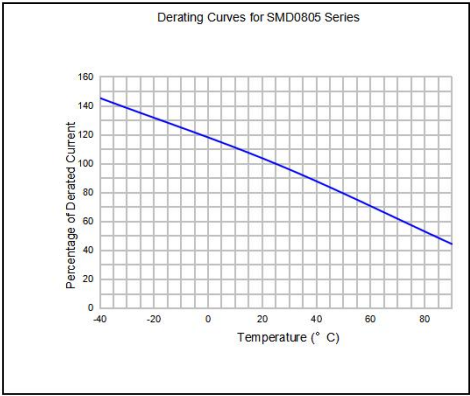
Termination Pad Characteristics

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

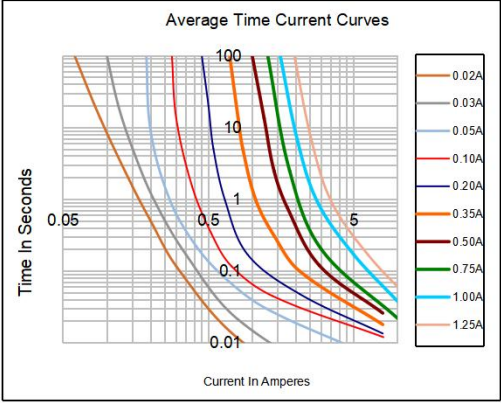
Rework

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

Thermal Derating Curve



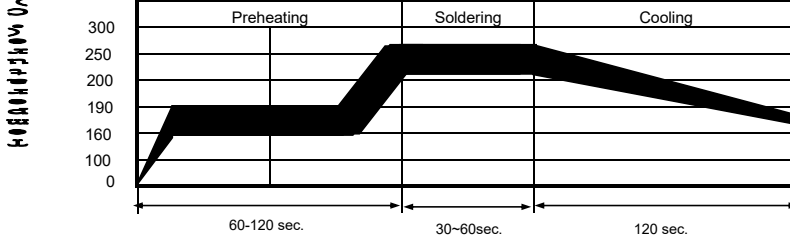
Typical Time-To-Trip At 25°C



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 current or 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.

### Recommended Solder Reflow Conditions

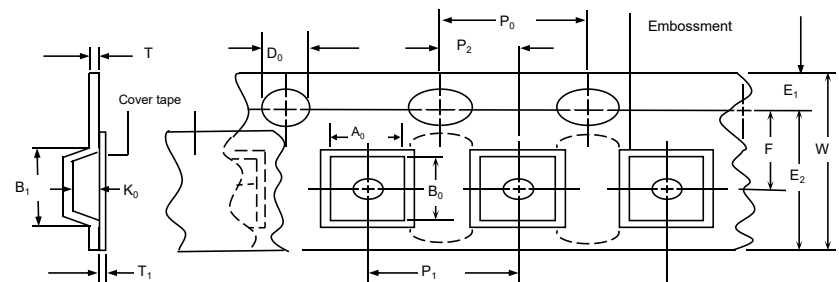


- Recommended reflow methods: IR, vapor phase oven, hot air oven.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Recommended maximum paste thickness is 0.25 mm (0.010 inch).
- Devices can be cleaned using standard method and solvents.
- Note: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

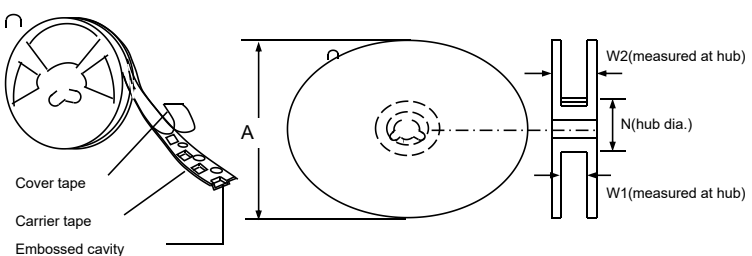
### Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-1
W	$8.0 \pm 0.3$
P0	$4.0 \pm 0.10$
P1	$4.0 \pm 0.10$
P2	$2.0 \pm 0.05$
A0	$1.45 \pm 0.10$
B0	$2.30 \pm 0.10$
B1max.	4.35
D0	$1.55 + 0.1, -0$
F	$3.5 \pm 0.05$
E1	$1.75 \pm 0.10$
E2min.	6.25
T	0.25
T1max.	0.1
K0	$0.74 \pm 0.1$
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W1	$9.0 \pm 0.5$
W2	$12.0 \pm 0.05$

### EIA Tape Component Dimensions



### EIA Reel Dimensions



### Storage And Handling


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

### Order Information

SMD0805	004-60V	Packaging	Tape & Reel Quantity
Product name	Hold		
Size 2012 mm / 0805 inch	Current		
SMD: surface mount device	0.04A		5,000 pcs/reel

Tape & reel packaging per EIA481-1

### Labeling Information



TECHFUSE

**Sea & Land Electronic Corp.**

HF

Pb

RoHS

Model:

Part no.:

Spec.:

Lot no.:

Q'ty:

倉儲：密封！溫度：18~33℃/濕度：30~60% A