

Features

- ♦ Compact design, 0805 size, surface mount type
- ♦ Operation temperature range up to 85°C
- ♦ Low-profile
- ♦ Fast response for fault protection
- ♦ Low thermal derating factor
- ♦ RoHS compliant ^[1]
- ♦ Halogen free ^[2]

Applications

- ♦ Resettable fault protection of general electronics equipment
- ♦ Industrial control

Electrical Performance

Vmax (Vdc)	Imax (Amperes)	Current Rating**		Time to Trip**	Resistance		Tripped State Power Dissipation**
		Amperes @25°C		Seconds @25°C 8A Max	Ohms @25°C		Watts @25 °C 12Vdc Typ.
		Ihold	Itrip		Rmin	R1max*	
12	40	1.10	2.20	0.30	0.03	0.21	0.6

*Maximum Resistance is measured 1 hour after reflow

**Values specified were determined using PCB testing board.

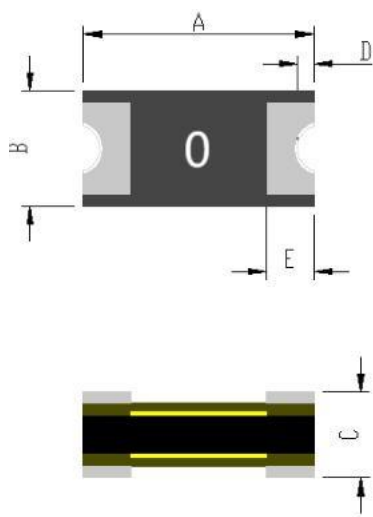
Thermal Derating--Hold current (A) at Ambient Temperature (°C) (for reference only)

Ambient Operation Temperature(°C)	-40°C	-20°C	0°C	+25°C	+40°C	+50°C	+60°C	+70°C	+85°C
Hold Current (A)	1.45	1.35	1.20	1.10	0.92	0.84	0.75	0.65	0.52

Environmental Characteristics

Test	Test Conditions	Accept/Reject Criteria
Operating Temperature	-40°C to +85°C	
Recommended Storage	+40°C max/70% R.H. max	
Maximum Device Surface Temperature in Tripped State	125°C	
Passive Aging	+85°C, 1000 hours	+/-5% typical resistance change
Humidity Aging	+85°C, 85% R.H., 100 hours	+/-5% typical resistance change
Thermal Shock	+85°C/-40°C 20 times	-30% typical resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-883, Method 2007, Condition A	No change
Moisture Sensitivity Level	J-STD-020	Level 1

Dimensions



Dimensions MM (INCH)

Dimension	Min	Max
A	2.00 (0.079)	2.20 (0.087)
B	1.20 (0.047)	1.50 (0.059)
C	0.50 (0.020)	1.20 (0.047)
D	0.05 (0.002)	0.45 (0.02)
E	0.20 (0.008)	0.55 (0.022)

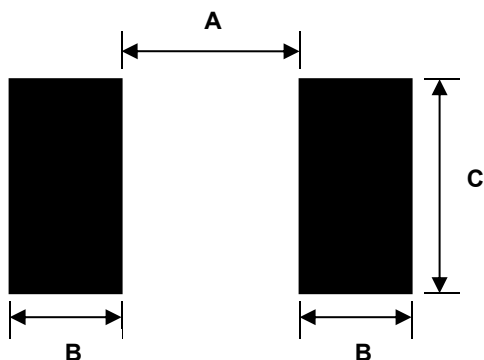
Terminal Material:

100% Matte Tin with Nickel Underplate

Lead Solderability:

Meets ANSI/J-STD-002, Category 3.

Pads Layout (Recommended)



Recommended Pad Layout Figures			
	A	B	C
	NOM	NOM	NOM
mm:	1.20	1.00	1.50
inch	(0.047)	(0.039)	(0.060)

Can be soldered using standard Pb-free reflow profile.



Warnings:

- Electrical performance can differ according to installation condition of the device. Users shall independently assess the suitability of the device under actual using condition.
- Operation beyond the stated maximum ratings could result in damage to the devices and lead to electrical arcing and/or flame.
- These devices are intended to protect against the effects of temporary overcurrent or over-temperature fault conditions and are not intended to perform as protective devices where such conditions are expected to be repetitive or prolonged in duration.
- Avoid the exposure to silicon-based oils, solvents, electrolytes, acids, and similar materials.
- These devices undergo thermal expansion under fault conditions, and thus shall be provided with adequate space and be protected against mechanical stresses.
- Circuits with inductance may generate a voltage ($L di/dt$) above the rated voltage of the PTCs device.