EVERFUSE™

Revision: B

STD-Axial Leaded Strap Lead(Pb) Free PTC Devices

- The Axial Leaded Strap Lead(Pb) Free devices (STD), a polymer-based Positive Temperature Coefficient (PTC) device to protect electrical circuits against overcurrent conditions with resettable feature, is fully compatible with current industrial standards.
- The Axial Leaded Strap Lead(Pb) Free devices featuring low profile form factor with nickel terminals can be welded directly to battery cells without encumbering pack design.
- The design of Axial Leaded Strap providing both overcurrent and overtemperature protection is ideal for rechargeable battery pack protection.
- Agency Approval: UL/ CSA File # E201431.
  TÜV Certificate # 9956421

Polytronics Technology Corp
REGISTERED TO QS9000, TL9000
ISO9001 (version 2000), and ISO 14001
CERTIFICATE NO.A8727 and A16971

RoHS 2002/95/EC

ELECTRICAL CHARACTERISTICS

Part Number	I_{hold} (A)	I_{trip} (A)	V_{max} (Vdc)	I_{max} (A)	P_d max. (W)	Maximum Time To Trip		Resistance			Agency Approval
						Current (A)	Time (Sec.)	R_{min} (Ω)	R_{max} (Ω)	R_{1max} (Ω)	
STD120F	1.2	2.7	15	100	1.2	6.00	5.00	0.085	0.160	0.220	UL TÜV CSA
STD120SF	1.2	2.7	15	100	1.2	6.00	5.00	0.085	0.160	0.220	UL TÜV CSA
STD175F	1.75	3.8	15	100	1.5	8.75	5.00	0.050	0.090	0.120	UL TÜV CSA
STD175SF	1.75	3.8	15	100	1.5	8.75	5.00	0.050	0.090	0.120	UL TÜV CSA
STD200F	2.00	4.4	30	100	1.9	10.00	4.00	0.030	0.060	0.100	UL TÜV CSA
STD350F	3.50	6.3	30	100	2.5	20.00	3.00	0.017	0.031	0.050	UL TÜV CSA
STD420F	4.20	7.6	30	100	2.9	20.00	6.00	0.012	0.024	0.040	UL TÜV CSA

Note: I_{hold} = Hold current: maximum current device will pass without tripping in 20℃ still air.

I_{trip} = Trip current: minimum current at which the device will trip in 20℃ still air.

V_{max} = Maximum voltage device can withstand without damage at rated current (I_{max})

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max})

P_d = Power dissipated from device when in the tripped state at 20℃ still air.

R_{min}= Minimum resistance of device in initial (un-soldered) state.

R_{1max}= Maximum resistance of device at 20℃ measured one hour after tripping or reflow soldering of 260℃ for 20 sec.

Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

Recognitions: UL, CSA, TÜV recognized.

◎Specifications are subject to change without notice.

12/6/2006

聚鼎科技股份有限公司 Polytronics Technology Corp.
新竹市科學工業園區展業一路 9 號 6 樓之 3 6F-3,No.9 Prosperity Rd.I,SBIP,Hsin-Chu,Taiwan
TEL:886-3-5643931 FAX:886-3-5644624 E-mail:sales@pttc.com.tw Http://www.pttc.com.tw

How to Select a Polymer PTC fuse:

(1) Determine the following operating parameters for the circuits:
  (A) Normal Operating Current (I hold)
  (B) Maximum Circuit Voltage (V max)
  (C) Maximum Interrupt Current (I max)
  (D) Normal Operating Temperature (min℃/max℃)

(2) Select the device form factor and dimension suitable for the application:
  Surface Mount Device (SMD Series)
  Radial Leaded Device (RLD Series)
  Axial Leaded Strap Device (STD, VTD, VLD, LTD, LRD Series)
  Other Custom-designed Device (Disc/Chip)

(3) Compare the maximum ratings for V max and I max of the PTC device with the circuit in application and make sure that the circuit's requirement does not exceed the device ratings.

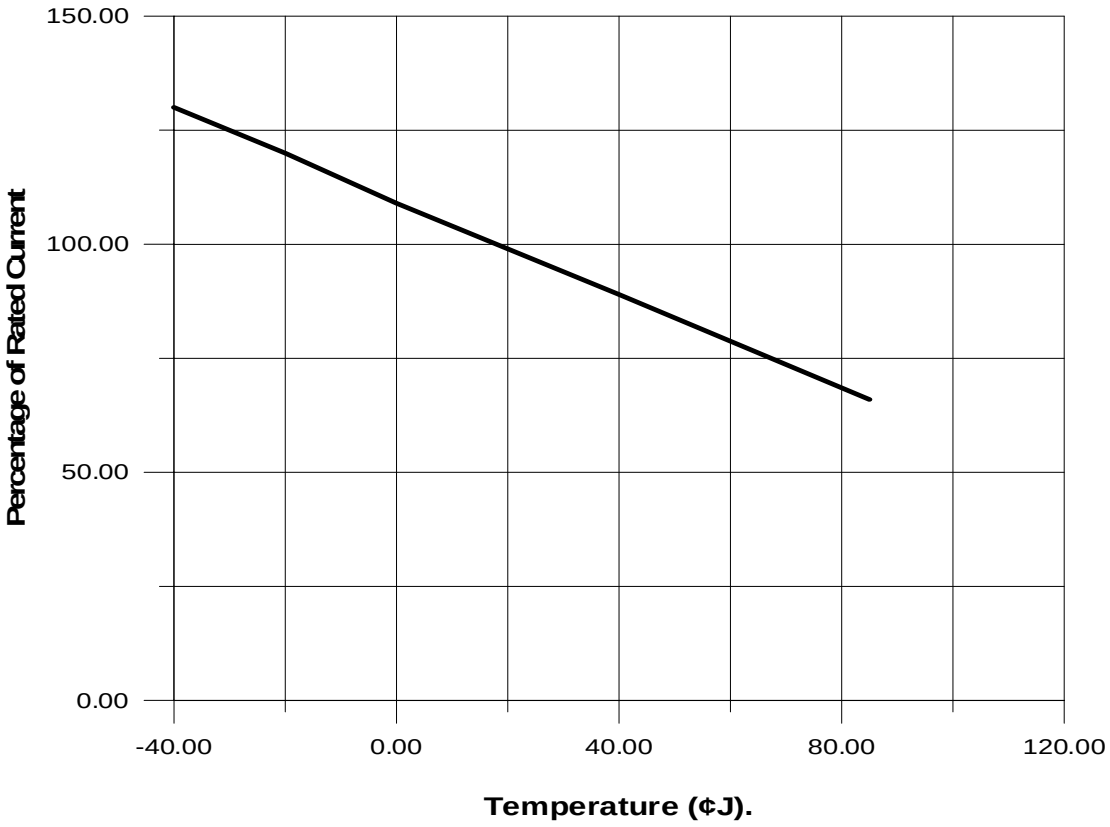
(4) Check that the PTC device's trip time (time-to-trip) will protect the circuit.

(5) Verify that the circuit operating temperatures are within the PTC device's normal operating temperature range.

(6) Verify the performance and suitability of the chosen PTC device in the application.

聚鼎科技股份有限公司 Polytronics Technology Corp.
新竹市科學工業園區展業一路 9 號 6 樓之 3 6F-3,No.9 Prosperity Rd.I,SBIP,Hsin-Chu,Taiwan
TEL:886-3-5643931 FAX:886-3-5644624 E-mail:sales@pttc.com.tw Http://www.pttc.com.tw

THERMAL DERATING CURVE FOR STD SERIES

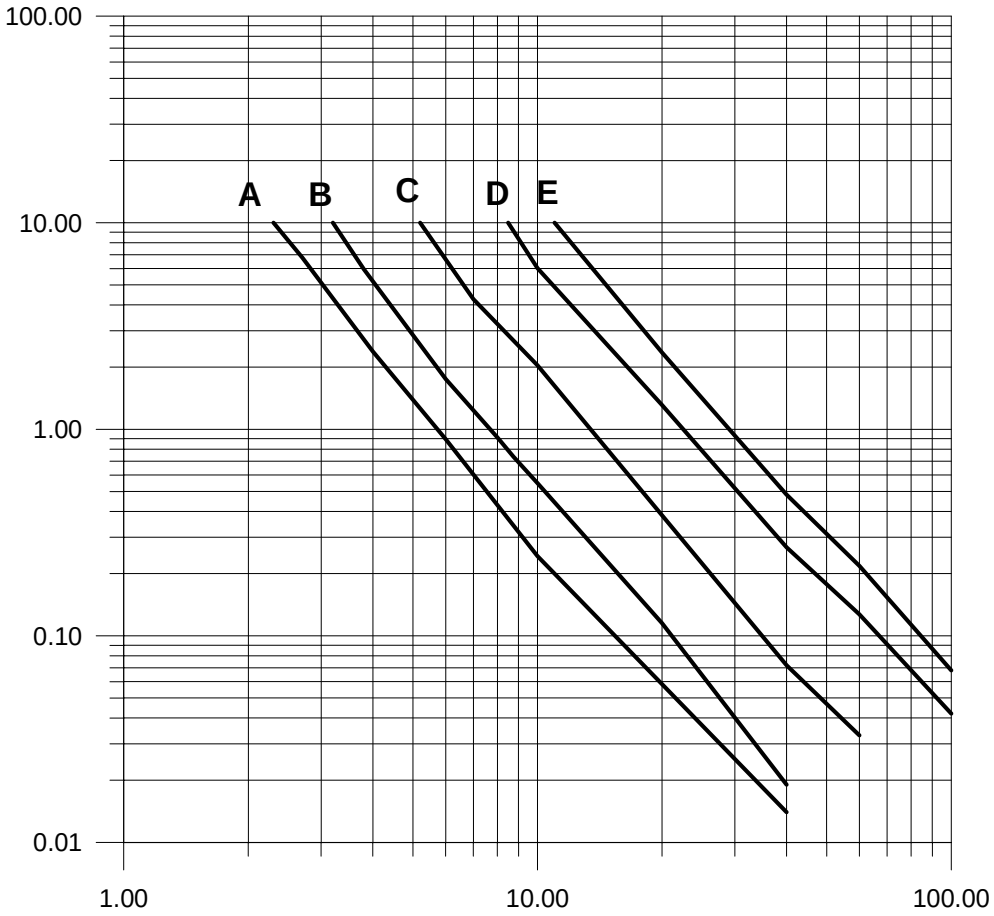


THERMAL DERATING CHART FOR STD SERIES - Ihold (Amps)

Model	Ambient Operation Temperature								
	-40℃	-20℃	0℃	20℃	40℃	50℃	60℃	70℃	85℃
STD120F	1.90	1.70	1.50	1.20	1.00	0.90	0.80	0.70	0.50
STD120SF	1.90	1.70	1.50	1.20	1.00	0.90	0.80	0.70	0.50
STD175F	2.50	2.30	2.00	1.75	1.50	1.30	1.20	1.10	0.90
STD175SF	2.50	2.30	2.00	1.75	1.50	1.30	1.20	1.10	0.90
STD200F	3.20	2.80	2.50	2.00	1.70	1.60	1.40	1.20	0.90
STD350F	5.40	4.80	4.30	3.50	3.00	2.80	2.50	2.20	1.70
STD420F	6.40	5.70	5.10	4.20	3.60	3.30	3.00	2.60	2.10

12/6/2006

AVERAGE TIME-CURRENT CURVE FOR STD SERIES



A=STD120F
B=STD175F
C=STD200F
D=STD350F
E=STD420F

PART NUMBERING SYSTEM

STD□□□ □(S)

(S): Slitted Lead
F:Lead Free
Hold Current Rating
Axial Leaded Strap Device

聚鼎科技股份有限公司 Polytronics Technology Corp.
新竹市科學工業園區展業一路 9 號 6 樓之 3 6F-3,No.9 Prosperity Rd.I,SBIP,Hsin-Chu,Taiwan
TEL:886-3-5643931 FAX:886-3-5644624 E-mail:sales@pttc.com.tw Http://www.pttc.com.tw

STD-Axial Leaded Strap Lead(Pb) Free PTC Devices

Figure 1

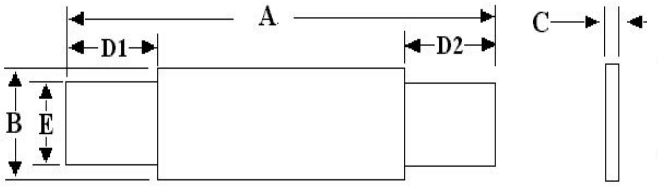
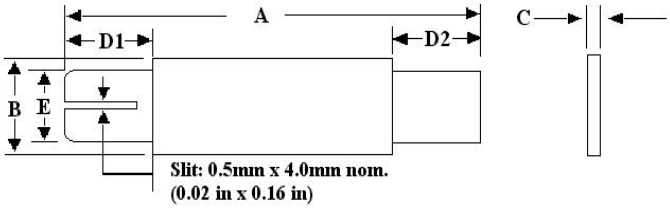


Figure 2



PHYSICAL DIMENSIONS (mm)

Part Number	A			B		C		D1	D2	E	
	Fig.	Min.	Max.	Min.	Min.	Min.	Max.	Min.	Min.	Min.	Max.
STD120F	1	19.9	22.1	4.9	5.2	0.6	1.0	5.5	5.5	3.9	4.1
STD120SF	2	19.9	22.1	4.9	5.2	0.6	1.0	5.5	5.5	3.9	4.1
STD175F	1	20.9	23.1	4.9	5.2	0.6	1.0	4.1	4.1	3.9	4.1
STD175SF	2	20.9	23.1	4.9	5.2	0.6	1.0	4.1	4.1	3.8	4.2
STD200F	1	21.3	23.4	10.2	11.0	0.5	1.1	5.0	5.0	4.8	5.4
STD350F	1	28.4	31.8	13.0	13.5	0.5	1.1	6.3	6.3	6.0	6.6
STD420F	1	30.6	32.4	12.9	13.6	0.5	1.1	5.0	5.0	6.0	6.7

ENVIRONMENTAL SPECIFICATIONS

Operating/Storage Temperature	-40℃ to +85℃	
Maximum Device Surface Temperature in Tripped State	125℃	
Passive Aging	+70℃, 1000 hours	±5% typical resistance change
Humidity Aging	+85℃, 85%R.H. 7 days	±5% typical resistance change
Vibration	MIL-STD-883C, Condition A	No change

PHYSICAL SPECIFICATIONS

Lead Material	0.13mm nominal thickness, quarter-hard nickel
Insulating Material	Polyester tape

◎Specifications are subject to change without notice.

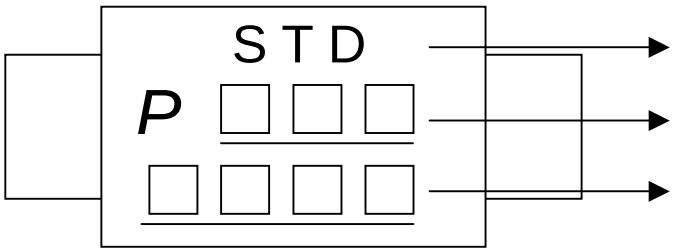
12/6/2006

PACKAGING INFORMATION

Product Description	Part I.D.	Bag Quantity(ea)	Standard Package(ea)
STD120F	120F	500	10000
STD120SF	120SF	500	10000
STD175F	175F	500	10000
STD175SF	175SF	500	10000
STD200F	200F	500	10000
STD350F	350F	500	5000
STD420F	420F	500	5000

*All models are packaged in bulk.

PART MARKING SYSTEM



Product Type
P: Polytronics Symbol
Part Identification
Lot Number

CROSS REFERENCE

Polytronics/ EVERFUSE™	Cross Reference	
	Raychem/ PolySwitch®	Bourns/ Multifuse®
STD120F	SRP120	MF-S120
STD120SF	SRP120S	MF-S120S
STD175F	SRP175	MF-S175
STD175SF	SRP175S	MF-S175S
STD200F	SRP200	MF-S200
STD350F	SRP350	MF-S350
STD420F	SRP420	MF-S420

12/6/2006