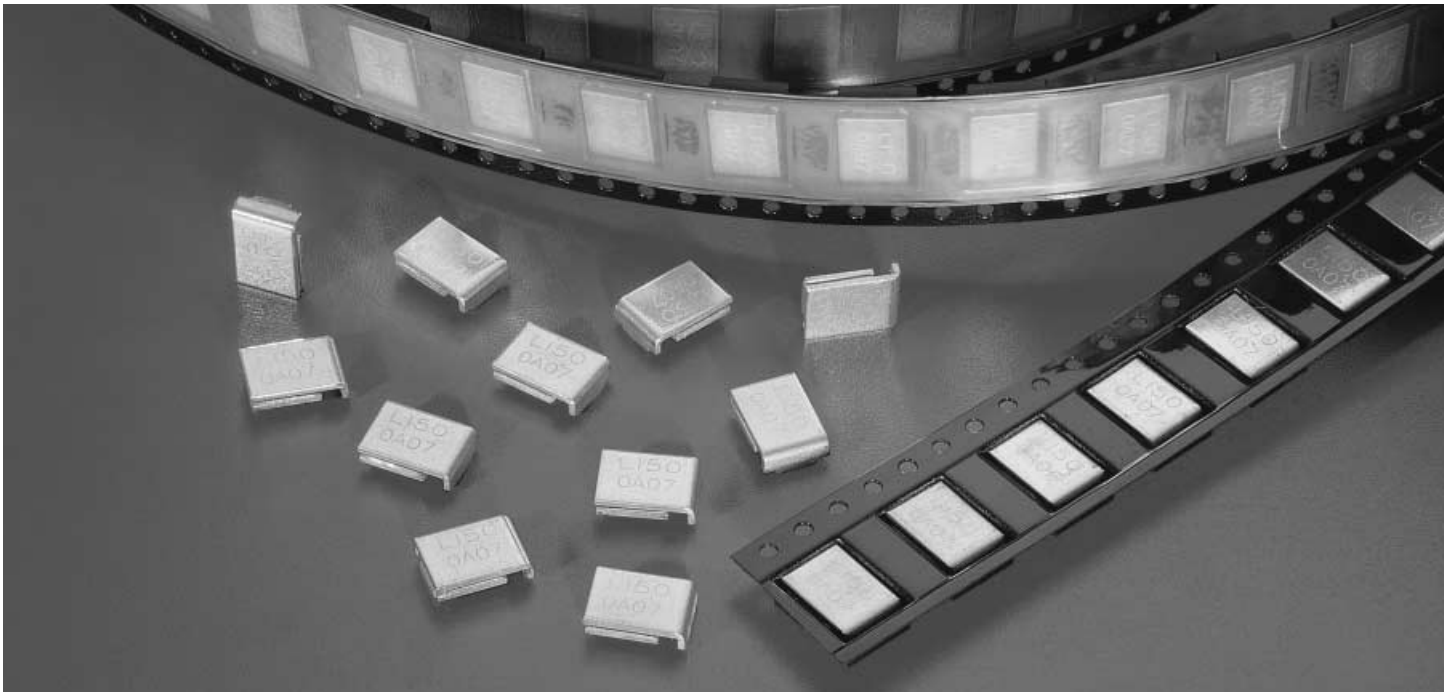
# 3425L Series



- The 3425L Series Resettable devices utilize a unique polymer-based, Positive Temperature Coefficient (PTC) material to protect electrical circuits against overcurrent conditions.
- In normal operation, the 3425L Series PTC has many conductive paths and a very low resistance. In an overcurrent condition, the temperature of the polymer material rises. This dramatically reduces the conductive paths resulting in an immediate rise in resistance. In this condition, the device provides circuit protection by significantly limiting the flow of current. However, once the cause of the initial overcurrent condition is eliminated, the 3425L Series PTC cools down and resets to a low resistance value permitting the normal current flow to resume.
- The 3425L Series are surface mountable.

**AGENCY APPROVALS:** Recognized under the Components Program of Underwriters Laboratory and the Component Acceptance Program of CSA. TUV approved.

**AGENCY FILE NUMBERS:** UL E183209, CSA LR 108832

**PHYSICAL SPECIFICATIONS:**

**Materials:** Terminal Material: Tin Plated Brass to MIL-T-10727B

**Solderability:** Meets EIA specification RS186-9E and IPC/EIA J-STD-002, and IPC/EIA J-STD-001.

**Device Labeling:** Device is marked with the letter 'L', amperage rating and date code.

**Packaging:** Packaged in tape and reel carrier per EIA 481-2 standard

**Standard reel quantities:**

| Part Number | Reel Quantity | Packaging Suffix |
|---|---|---|
| 3425L Series | 1500 | DR |

**ENVIRONMENTAL SPECIFICATIONS:**

**Passive Aging:** 85°C, 1000 Hours.

**Humidity Aging:** 85°C, 85% R.H., 100 hours.

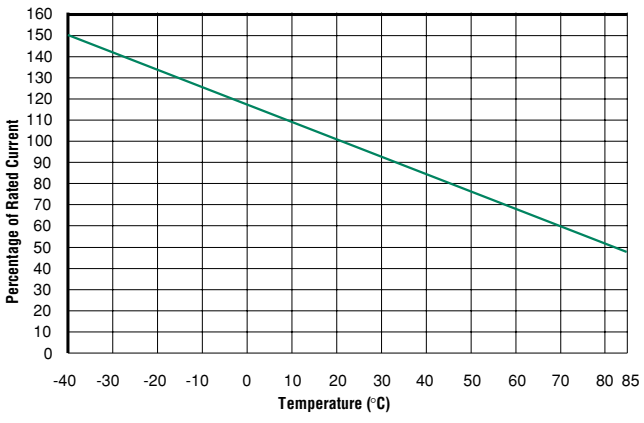
**Thermal Shock:** 85°C / –40°C, 20 times.
125°C / –55°C, 10 times.

**Vibration:** MIL-STD 202, Method 201. No resistance change.

**Mechanical Shock:** MIL-STD-202, Method 213 test condition I (100 g's, 6 sec.).

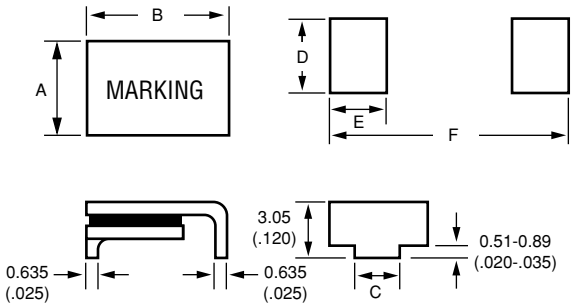
**Operating/Storage Temperature:** –40°C to 85°C Devices should remain in sealed bags prior to use.

**Rerating Curve For 3425L Series**



# 3425L Series

**Dimensions (Inches)**




**Recommended Pad Layout (Inches)**

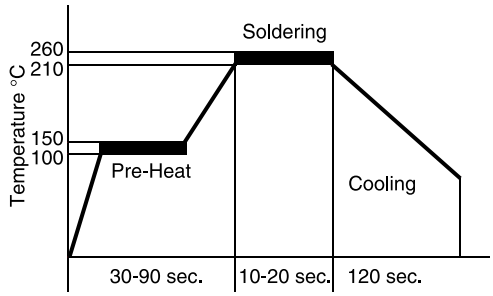
All dimensions are nominal.

| Series | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 3425L | 6.70 max (.264 max.) | 9.50 max (.374 max.) | 3.68 (.145) | 4.572 (.180) | 2.29 (.090) | 10.67 (.420) |

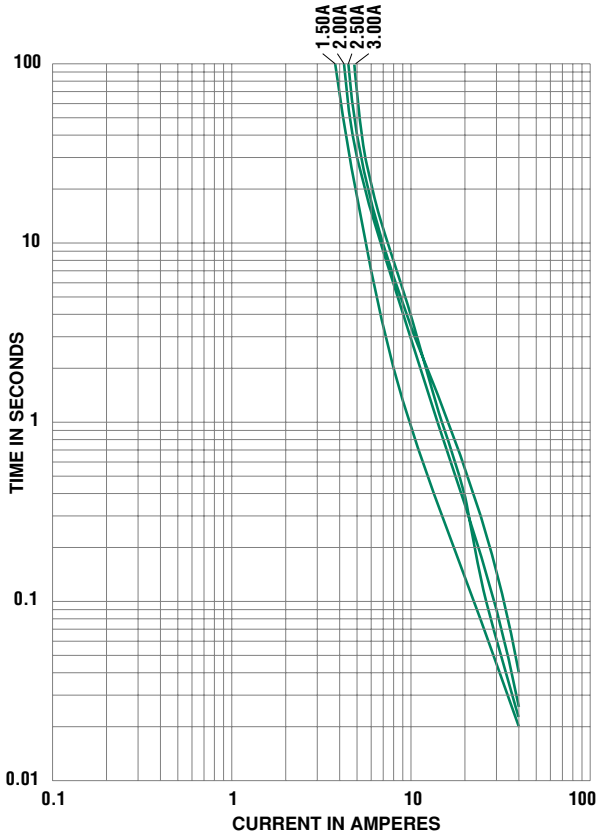
**RECOMMENDED REFLOW CONDITIONS:**

(IR, Forced Air Convection, Vapor Phase)

Devices are not designed to be wave soldered.




**Average Time Current Curves**




**ORDERING INFORMATION:**

| Catalog Number | $I_{hold}$ (A) | $I_{trip}$ (A) | $V_{max}$ (Vdc) | $I_{max}$ (A) | $P_d$ max. (W) | Maximum Time To Trip | | Resistance | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Current (A) | Time (Sec) | $R_{IL}$ (Ω) | $R_{AT}$ (Ω) |
| 3425L150 | 1.50 | 3.0 | 15 | 40 | 1.9 | 8.0 | 5.0 | 0.060 | 0.25 |
| 3425L200 | 2.00 | 4.0 | 15 | 40 | 1.9 | 8.0 | 12.0 | 0.050 | 0.15 |
| 3425L250 | 2.50 | 5.0 | 15 | 40 | 1.9 | 8.0 | 25.0 | 0.035 | 0.10 |
| 3425L300 | 3.00 | 6.0 | 6 | 40 | 1.9 | 8.0 | 32.0 | 0.020 | 0.06 |

$I_{hold}$ = Hold Current: maximum current device will sustain for 4 hours without tripping in 20°C still air.

$I_{trip}$ = Trip Current: minimum current at which the device will trip in 20°C still air.

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

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

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

$RI_L$ = Minimum resistance of device in initial (un-soldered) state.

$R_{AT}$ = Maximum measured resistance in the non-tripped state 1 hour after reflow with reflow conditions of 260°C for 20 sec.

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