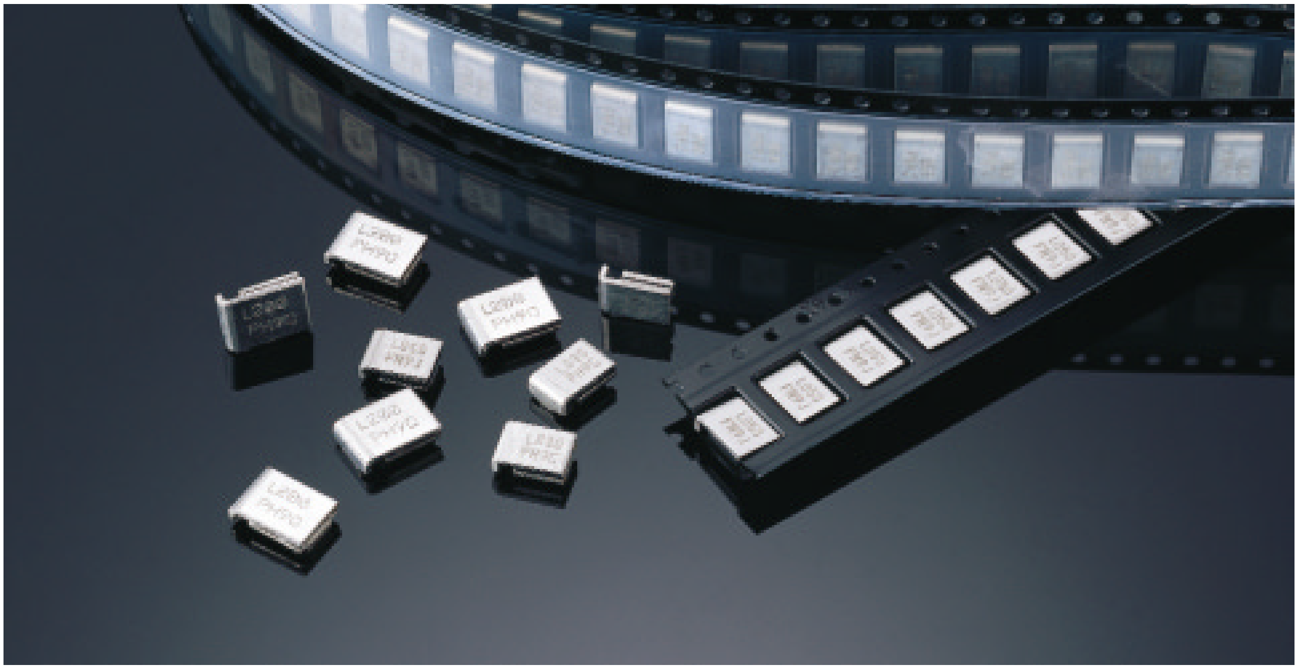
SURFACE MOUNT PTC

2029L/3425L Series



- The 2029L/3425L Series Resettable devices utilize a unique polymer-based, Positive Temperature Coefficient (PTC) material to protect electrical circuits against over-current conditions.
- In normal operation, the 2029L/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 i[illegible]al ov[illegible]curre[illegible]t con[illegible]tion [illegible] elim[illegible]ated the 2029L/34[illegible]5L Series PT[illegible] cools [illegible]ow[illegible] and resets [illegible]o a low resistan[illegible] value pe[illegible]mitt[illegible] [illegible]orma[illegible] [illegible]nt fl[illegible]w to resume.
- The 2029L/34[illegible] Se[illegible]s are [illegible]urfa[illegible] mo[illegible]table.

OBSOLETE PART

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

AGENCY FILE NUMBERS: UL E183209, [illegible]SA LR[illegible]088[illegible]2

PHYSICAL SPECIFICATIONS:

Materials: Terminal Material: Tin Plated B[illegible]ss to MIL-T-10727B

Lead Solderability: Meets EIA specification RS186-9E

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
2029L Series	2000	PR
3425L Series	1500	DR

ENVIRONMENTAL SPECIFICATIONS:

Passive Aging: 85°C, 1000 Hours. ±5% typical resistance change.

Humidity Aging: 85°C, 85% R.H., 1000 hours. ±5% typical resistance change.

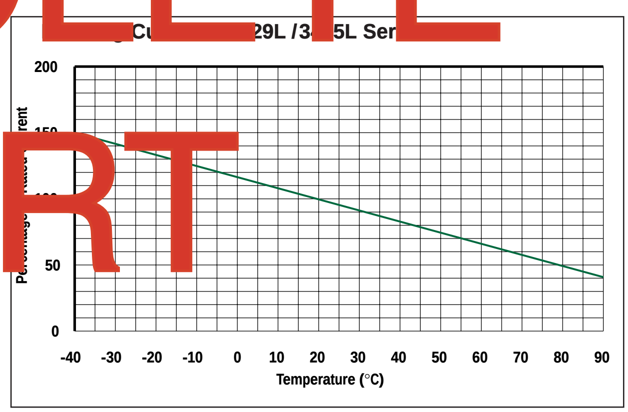
Thermal Shock: 85°C / –40°C, 20 times. ±10% typical resistance change.

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

Mechanical Shock: MIL-STD-202, Method 213 test condition [illegible] (100 g’s[illegible]) N[illegible]

Ma[illegible] Surface [illegible]emperature: [illegible]25°C

Op[illegible]ating/St[illegible] [illegible]mpera[illegible]ure: –4[illegible] to [illegible]5°C

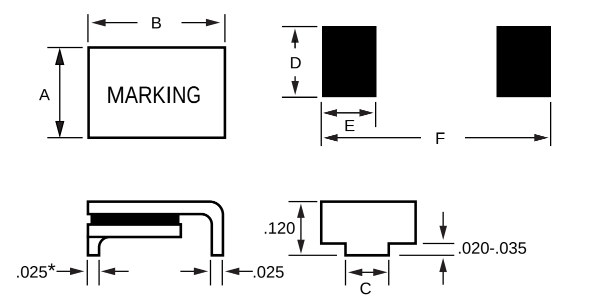


For NEW Designs use 1812L series PTC in place of the 2029L Series.

SURFACE MOUNT PTC

2029L/3425L Series

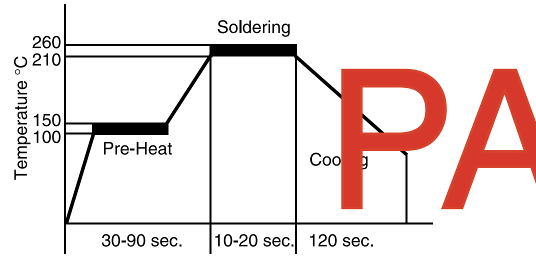
Dimensions (Inches) **Recommended Pad Layout (Inches)**
All dimensions are nominal.



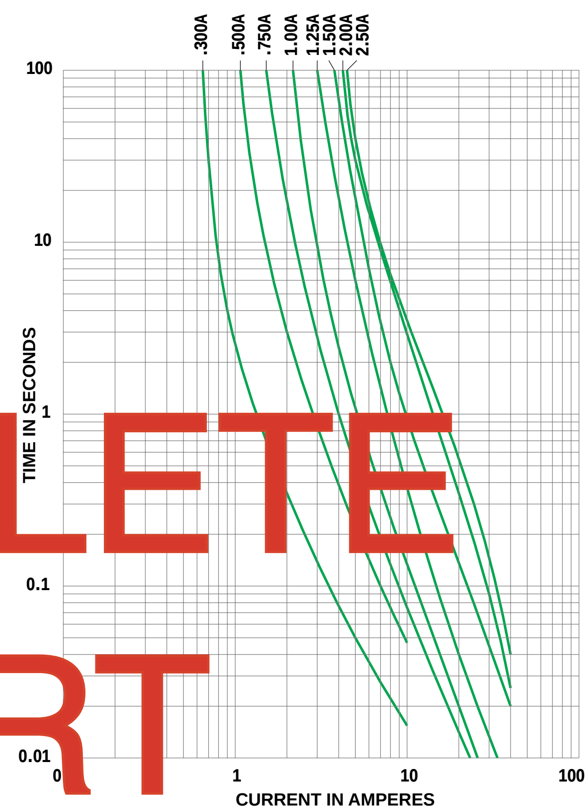
*0.010 for 2029L050

Series	A	B	C	D	E	F
2029L	[illegible]	.3[illegible]	.09[illegible]	[illegible]	.090	[illegible]
3425L	[illegible]264 max.	.3[illegible]4 max.	.1[illegible]	.180	.09[illegible]	.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: Current (A)	Maximum Time To Trip: Time (Sec)	Resistance: R_{IL} (Ω)	Resistance: R_{AT} (Ω)
2029L030	0.30	0.6	60	10	1.7	1.5	3.0	1.200	4.80
2029L050	0.50	1.0	60	10	1.7	2.5	4.0	0.350	1.40
2029L075	0.75	1.5	30	40	1.7	8.0	0.3	0.350	1.00
2029S100	1.10	2.2	15	40	1.7	8.0	0.5	0.120	0.48
2029L100	1.10	2.2	30	40	1.7	8.0	0.5	0.120	0.48
2029L125	1.25	2.5	15	40	1.7	8.0	2.0	0.070	0.25
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	0.13
3425L250	2.50	5.0	15	40	1.9	8.0	25.0	0.035	0.09
2029L260	2.60	5.2	6.0	40	1.7	8.0	20.0	0.025	0.075

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 (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°C still air.
R_{IL} = Minimum resistance of device in initial (un-soldered) state.
R_{AT} = Maximum resistance of device at 20°C measured one hour after tripping or reflow soldering of 260°C for 20 sec.

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