(20) 0805L UL Series ${ }^{\text {c }} \boldsymbol{\chi} \mathbf{\Lambda}_{\text {us }}$ 产

## Device Specification

## ELECTRICAL CHARACTERISTICS

| Part Number | Marking | $\mathrm{I}_{\text {hold }}$ (A) | $\mathrm{I}_{\text {trip }}$ <br> (A) | $\begin{aligned} & \mathbf{V}_{\text {max }} \\ & (\mathrm{Vdc}) \end{aligned}$ | $I_{\text {max }}$ <br> (A) | $\mathrm{Pd}_{\text {Typ }}$ (W) | Maximum Time-to-Trip |  | Resistance |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Current <br> (A) | Time (Sec.) | $\mathbf{R}_{\text {min }}$ <br> $(\Omega)$ | $\mathbf{R}_{1 \text { max }}$ <br> ( $\Omega$ ) |
| 0805L075UL | -G | 0.75 | 1.50 | 6 | 50 | 0.6 | 8.0 | 0.3 | 0.050 | 0.15 |
| 0805L110UL | -H | 1.10 | 1.80 | 6 | 50 | 0.6 | 8.0 | 0.3 | 0.040 | 0.120 |
| 0805L150UL | -K | 1.50 | 3.00 | 6 | 50 | 0.6 | 8.0 | 0.5 | 0.024 | 0.085 |
| 0805L175UL | -V | 1.75 | 3.50 | 6 | 50 | 0.6 | 8.0 | 0.6 | 0.018 | 0.063 |
| 0805L200ULTH | -L | 2.00 | 4.00 | 6 | 50 | 0.6 | 8.0 | 1.0 | 0.014 | 0.049 |
| 0805L260ULTH | -S | 2.60 | 5.20 | 6 | 50 | 0.6 | 8.0 | 4.0 | 0.010 | 0.035 |

Note: $\mathrm{I}_{\text {hold }}=$ Hold current: maximum current device will pass without tripping in $20^{\circ} \mathrm{C}$ still air.
$\mathrm{I}_{\text {trip }} \quad=$ Trip Current: minimum current at which the device will trip in $20^{\circ} \mathrm{C}$ still air.
$\mathrm{V}_{\max } \quad=$ Maximum voltage device can withstand without damage at rated current (Imax)
$\mathrm{I}_{\max } \quad=$ Maximum fault current device can withstand without damage at rated voltage (Vmax)
$\mathrm{Pd} \quad=$ Power dissipated from device when in the tripped state at $20^{\circ} \mathrm{C}$ still air.
$\mathrm{R}_{\text {min }} \quad=$ Minimum resistance of device in initial (un-soldered) state.
$\mathrm{R}_{1 \max }=$ Maximum resistance of device at $20^{\circ} \mathrm{C}$ measured one hour after tripping or reflow soldering of $260^{\circ} \mathrm{C}$ for 20 sec.
Caution
:Operation beyond the specified rating may result in damage and possible arcing and flame.

Figure


Solder Pad Layout (mm)


## PHYSICAL DIMENSIONS (mm)

| Part Number | A |  | B |  | C |  | D |  | E |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 0805LxxxUL | 2.00 | 2.20 | 1.20 | 1.50 | 0.40 | 0.75 | 0.20 | 0.55 | 0.05 | 0.45 |

Note: $x \times x$ represents hold current rating ( $075,110,150,175,200$ and 260$)$.

POLYFUSE ${ }^{\circledR}$ Resettable PTCs


## Temperature Rerating

|  | Ambient Operation Temperature |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $-40^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C}$ | $0^{\circ} \mathrm{C}$ | $20^{\circ} \mathrm{C}$ | $40^{\circ} \mathrm{C}$ | $50^{\circ} \mathrm{C}$ | $60^{\circ} \mathrm{C}$ | $70^{\circ} \mathrm{C}$ | $85^{\circ} \mathrm{C}$ |  |  |  |  |
| Part Number |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0805L075UL | 1.15 | 1.0 | 0.85 | 0.75 | 0.55 | 0.45 | 0.40 | 0.30 | 0.20 |  |  |  |  |
| 0805L110UL | 1.7 | 1.5 | 1.3 | 1.1 | 0.85 | 0.7 | 0.6 | 0.5 | 0.3 |  |  |  |  |
| 0805L150UL | 2.25 | 2 | 1.75 | 1.5 | 1.15 | 1 | 0.85 | 0.65 | 0.45 |  |  |  |  |
| 0805L175UL | 2.6 | 2.3 | 2 | 1.75 | 1.3 | 1.15 | 0.95 | 0.75 | 0.5 |  |  |  |  |
| 0805L200UL | 3.1 | 2.75 | 2.4 | 2 | 1.65 | 1.4 | 1.15 | 0.95 | 0.65 |  |  |  |  |
| 0805L260UL | 3.8 | 3.3 | 2.9 | 2.6 | 2.2 | 1.95 | 1.75 | 1.5 | 1.05 |  |  |  |  |

## Average Time Current Curves



Temperature Rerating Curve


Note: The average time current curves and Temperature Rerating curve performance is affected
By a number of variables, and these curves provide as guidance only. Customer must verify the performance in their application.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## Soldering Parameters

| Condition | Reflow |
| :--- | :--- |
| PeakTemp/ DurationTime | $260^{\circ} \mathrm{C} / 10 \mathrm{Sec}$ |
| Time above liquids (TAL) $220^{\circ} \mathrm{C}$ | $60 \mathrm{Sec} \sim 100 \mathrm{Sec}$ |
| Preheat $120^{\circ} \mathrm{C} \sim 180^{\circ} \mathrm{C}$ | $50 \mathrm{Sec} \sim 150 \mathrm{SeC}$ |
| Storage Condition | $0^{\circ} \mathrm{C} \sim 35^{\circ} \mathrm{C}, \leqq 70 \% \mathrm{RH}$ |

- Recommended reflow methods: IR, vapor phase oven, hot air oven, $\mathrm{N}_{2}$ environment for lead-free
- Recommended maximum paste thickness is 0.25 mm ( 0.010 inch)
- Devices can be cleaned using standard industry methods and solvents.
Note: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.


## Physical Specifications

| Terminal Material | Solder-Plated Copper <br> (Solder Material: Matte Tin (Sn)) |
| :--- | :--- |
| Lead Solderability | Meets EIA Specification RS186-9E, <br> ANSI/J-STD-002, Category 3 |



## Environmental Specifications

| Operating/Storage <br> Temperature | $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Maximum Device Surface <br> Temperature in Tripped <br> State | $125^{\circ} \mathrm{C}$ |
| Passive Aging | $+85^{\circ} \mathrm{C}, 1000$ hours <br> $-1+5 \%$ typical resistance change |
| Humidity Aging | $+85^{\circ} \mathrm{C}, 85 \%$, R.H., 1000 hours <br> $-1+5 \%$ typical resistance change |
| Thermal Shock | MIL-STD-202, Method 107G <br> $+85^{\circ} \mathrm{C} /-40^{\circ} \mathrm{C} 20$ <br> $-30 \%$ times |
| Solvpical resistance change |  |$|$| MIL-STD-202, Method 215 |
| :--- |
| No change |, | MIL-STD-883C, Method 2007.1, |
| :--- |
| Condition A |
| No change |,

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