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EVERFUSE ™
Polymeric PTC Fuse



# Device Specification(preliminary)

Polytronics Technology Corp
REGISTERED TO QS9000, TL9000
ISO9001 (version 2000), and ISO 14001
CERTIFICATE NO.A8727 and A10971

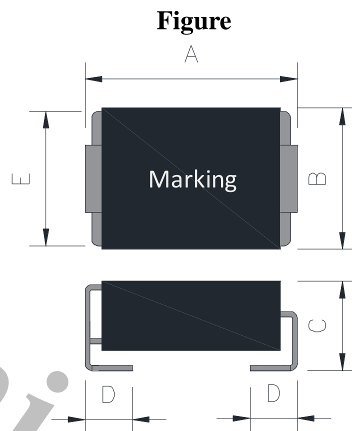
## Electrical Rating

Voltage: 30V
Current: 30A

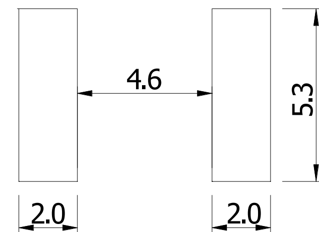
## Marking :

**P**(Polytronics / Polystar Logo)

**Figure**




**Recommended Pad Layout (mm)**




## Physical Dimensions (mm)

| Part Number | A | | B | | C | | D | | E | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| SHV2920P500/30-AA | 6.70 | 8.60 | 5.00 | 5.70 | 2.00 | 3.20 | 1.00 | 2.30 | 4.90 | 5.30 |

## Electrical Characteristics

| Part Number | $I_{hold}$ (A) | $I_{trip}$ (A) | $V_{max}$ (V) | $I_{max}$ (A) | $P_{d\ typ}$ (W) | Maximum Time-to-Trip | | Resistance (Ω ) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | (A) | (Sec) | $R_{min}$ | $R_{1max}$ |
| SHV2920P500/30-AA | 5.0 | 12.5 | 30 | 30 | 3.5 | 25.0 | 10.0 | 0.003 | 0.020 |

Note: $I_{hold}$ = Hold current: maximum current device will pass without tripping in 25℃ still air.
$I_{trip}$ = Trip Current: minimum current at which the device will trip in 25℃ still air.
Vmax = Maximum voltage device can withstand without damage at rated current (Imax)
Imax = Maximum fault current device can withstand without damage at rated voltage (Vmax)
Pd = Power dissipated from device when in the tripped state at 25℃ still air.
Rmin = Minimum resistance of device in initial (un-soldered) state.
R1max = Maximum resistance of device reflow soldering of 260℃ for 20 sec.
***Value specified were determined using the PWB with 0.150” *1.5oz copper traces.**

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

◎ Specifications are subject to change without notice.

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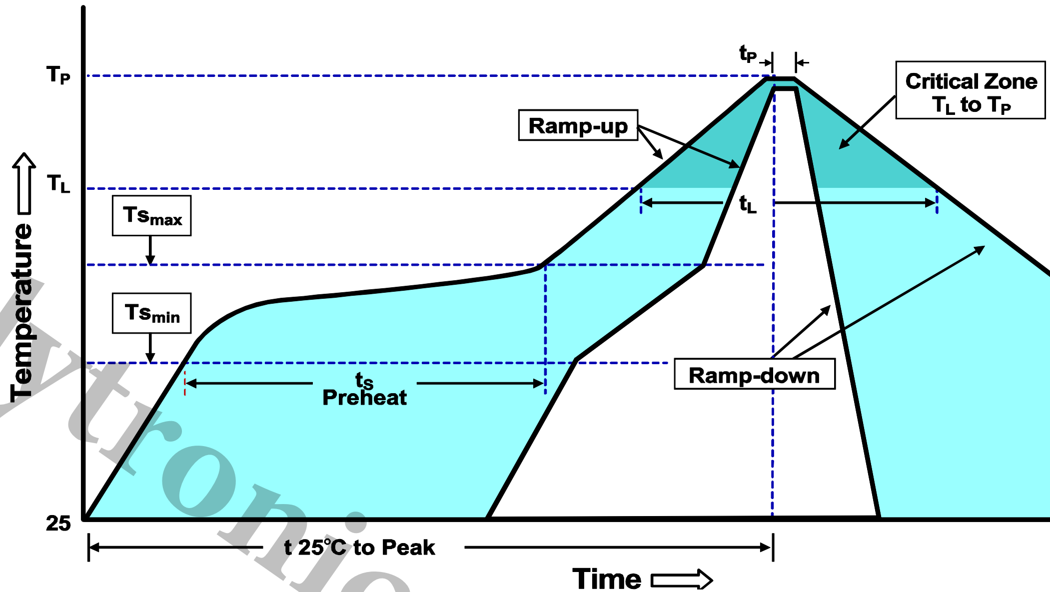
Product: SHV2920P500/30-AA
Revision: C
Date: 25 October,2016


## Soldering Parameters




| Profile Feature | Pb-Free Assembly |
|---|---|
| Average Ramp-Up Rate ($Ts_{max}$ to $T_P$) | 3℃/second max. |
| Preheat<br>-Temperature Min ($Ts_{min}$)<br>-Temperature Max ($Ts_{max}$)<br>-Time ($Ts_{min}$ to $Ts_{max}$) | <br>150℃<br>200℃<br>60-180 seconds |
| Time maintained above:<br>-Temperature ($T_L$)<br>-Time ($t_L$) | <br>217℃<br>60-150 seconds |
| Peak Temperature ($T_P$) | 260℃ |
| Time within 5℃ of actual Peak Temperature ($t_P$) | 20-40 seconds |
| Ramp-Down Rate | 6 ℃ /second max. |
| Time 25℃ to Peak Temperature | 8 minutes max. |
| Storage Condition | 0℃ ~35℃, ≦70%RH |

- Recommended reflow methods: IR, vapor phase oven, hot air oven, $N_2$ environment for lead-free
- Recommended maximum paste thickness is 0.25mm (0.010 inch)
- Devices can be cleaned using standard industry methods and solvents.

**Note 1: All temperature refer to topside of the package, measured on the package body surface.**

**Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.**

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