

### Features

- Compliant with AEC-Q200 Rev-C- Stress Test Qualification for Passive Components in Automotive Applications
- 100 % electrically compatible with all previous generations of 1812 SMT devices
- Compatible with Pb and Pb-free solder reflow profiles
- RoHS compliant\* and halogen free\*\*
- Surface mount packaging for automated assembly
- Agency recognition:
- Standard 4532 mm (1812 mils) footprint

## PRCP-MSMF Series - Polymer Resettable Circuit Protectors

### Electrical Characteristics

| Model               | V max.<br>Volts | I max.<br>Amps | I <sub>hold</sub> | I <sub>trip</sub> | Resistance        |                    | Max. Time To Trip |                  | Tripped Power Dissipation |
|---------------------|-----------------|----------------|-------------------|-------------------|-------------------|--------------------|-------------------|------------------|---------------------------|
|                     |                 |                | Amperes at 23 °C  |                   | Ohms at 23 °C     |                    | Amperes at 23 °C  | Seconds at 23 °C | Watts at 23 °C            |
|                     |                 |                | Hold              | Trip              | R <sub>Min.</sub> | R <sub>1Max.</sub> |                   |                  | Typ.                      |
| PRCP-MSMF010        | 60.0            | 40             | 0.10              | 0.30              | 0.70              | 15.00              | 0.5               | 1.50             | 0.8                       |
| PRCP-MSMF014        | 60.0            | 40             | 0.14              | 0.34              | 0.40              | 6.50               | 1.5               | 0.15             | 0.8                       |
| PRCP-MSMF020        | 30.0            | 80             | 0.20              | 0.40              | 0.40              | 6.00               | 6.0               | 0.06             | 0.8                       |
| PRCP-MSMF020/60 *** | 60.0            | 40             | 0.20              | 0.40              | 0.40              | 6.00               | 1.5               | 0.15             | 0.8                       |
| PRCP-MSMF030        | 30.0            | 10             | 0.30              | 0.60              | 0.30              | 3.00               | 8.0               | 0.10             | 0.8                       |
| PRCP-MSMF050        | 15.0            | 100            | 0.50              | 1.00              | 0.15              | 1.00               | 8.0               | 0.15             | 0.8                       |
| PRCP-MSMF075        | 13.2            | 100            | 0.75              | 1.50              | 0.11              | 0.45               | 8.0               | 0.20             | 0.8                       |
| PRCP-MSMF075/24     | 24.0            | 40             | 0.75              | 1.50              | 0.11              | 0.45               | 8.0               | 0.20             | 0.8                       |
| PRCP-MSMF110        | 6.0             | 100            | 1.10              | 2.20              | 0.04              | 0.21               | 8.0               | 0.30             | 0.8                       |
| PRCP-MSMF110/16     | 16.0            | 100            | 1.10              | 2.20              | 0.04              | 0.21               | 8.0               | 0.30             | 0.8                       |
| PRCP-MSMF110/24X*** | 24.0            | 20             | 1.10              | 2.20              | 0.06              | 0.18               | 8.0               | 0.50             | 0.8                       |
| PRCP-MSMF125        | 6.0             | 100            | 1.25              | 2.50              | 0.035             | 0.14               | 8.0               | 0.40             | 0.8                       |
| PRCP-MSMF150        | 6.0             | 100            | 1.50              | 3.00              | 0.03              | 0.120              | 8.0               | 0.5              | 0.8                       |
| PRCP-MSMF150/24X    | 24.0            | 20             | 1.50              | 3.00              | 0.03              | 0.120              | 8.0               | 1.50             | 1.0                       |
| PRCP-MSMF160        | 8.0             | 100            | 1.60              | 2.80              | 0.035             | 0.099              | 8.0               | 2.0              | 0.8                       |
| PRCP-MSMF200        | 8.0             | 40             | 2.00              | 4.00              | 0.020             | 0.080              | 8.0               | 3.0              | 0.8                       |
| PRCP-MSMF250/16X    | 16.0            | 100            | 2.50              | 5.00              | 0.015             | 0.100              | 8.0               | 5.0              | 1.2                       |
| PRCP-MSMF260        | 6.0             | 100            | 2.60              | 5.20              | 0.015             | 0.080              | 8.0               | 5.0              | 0.8                       |

\*\*\* UL and TÜV

### Environmental Characteristics

|  |   |
|--|---|
| Operating Temperature .....                              | -40 °C to +85 °C  |
| Maximum Device Surface Temperature in Tripped State..... | 125 °C  |
| 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 to -40 °C, 20 times ..... ±10 % typical resistance change  |
| Solvent Resistance .....                                 | MIL-STD-202, Method 215 ..... No change                           |
| Vibration .....  | MIL-STD-883C, Method 2007.1, ..... No change<br>Condition A       |

### Test Procedures And Requirements For Model PRCP-MSMF Series

| Test                  | Test Conditions  | Accept/Reject Criteria                   |
|-----------------------|--|--|
| Visual/Mech .....     | Verify dimensions and materials.....                   | Per P.R.C.P. physical description        |
| Resistance .....      | In still air @ 23 °C.....                              | R <sub>min</sub> ≤ R ≤ R <sub>1max</sub> |
| Time to Trip .....    | At specified current, V <sub>max</sub> , 23 °C .....   | T ≤ max.time to trip (seconds)           |
| Hold Current .....    | 30 min at I <sub>hold</sub> .....                      | No trip                                  |
| Trip Cycle Life ..... | V <sub>max</sub> , I <sub>max</sub> , 100 cycles ..... | No arcing or burning                     |
| Trip Endurance .....  | V <sub>max</sub> , 48 hours .....                      | No arcing or burning                     |
| Solderability .....   | ANSI/J-STD-002.....                                    | 95 % min. coverage                       |

UL File Number ..... E300792

TÜV Certificate Number..... R50383882

\*RoHS Directive 2015/863, Mar. 31, 2015 and Annex.

\*\*COPAL is using the definition that appears to be prevalent definition used as the industry standard at this time. The COPAL definition of "halogen-free" is: Bromine(Br) content: ≤ 900 ppm; Chlorine(Cl) content: ≤ 900 ppm; Total Br + Cl content: ≤ 1500 ppm.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

## Applications

- Overcurrent and overtemperature protection of automotive electronics
- Hard disk drives
- PC motherboards
- PC peripherals
- Point-of-sale (POS) equipment
- PCMCIA cards
- USB port protection - USB 2.0, 3.0 & OTG
- HDMI 1.4 Source protection

## PRCP-MSMF Series - Polymer Resettable Circuit Protectors

### Product Dimensions (see next page for outline drawings)

| Model            | A                      |                        | B                      |                        | C                      |                        | D                      | Style |
|------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------|
|                  | Min.                   | Max.                   | Min.                   | Max.                   | Min.                   | Max.                   | Min.                   |       |
| PRCP-MSMF010     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.10}{(0.043)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF014     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.10}{(0.043)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF020     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.10}{(0.043)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF020/60  | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.10}{(0.043)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF030     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.10}{(0.043)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF050     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.55}{(0.022)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF075     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.55}{(0.022)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF075/24  | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.55}{(0.022)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF110     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.45}{(0.018)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF110/16  | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.45}{(0.018)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF110/24X | $\frac{4.37}{(0.172)}$ | $\frac{4.83}{(0.190)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.60}{(0.063)}$ | $\frac{0.30}{(0.012)}$ | 2     |
| PRCP-MSMF125     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.55}{(0.022)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF150     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.55}{(0.022)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF150/24X | $\frac{4.37}{(0.172)}$ | $\frac{4.83}{(0.190)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.60}{(0.063)}$ | $\frac{0.30}{(0.012)}$ | 2     |
| PRCP-MSMF160     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.55}{(0.022)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF200     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.55}{(0.022)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |
| PRCP-MSMF250/16X | $\frac{4.37}{(0.172)}$ | $\frac{4.83}{(0.190)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.70}{(0.028)}$ | $\frac{1.60}{(0.063)}$ | $\frac{0.30}{(0.012)}$ | 2     |
| PRCP-MSMF260     | $\frac{4.37}{(0.172)}$ | $\frac{4.73}{(0.186)}$ | $\frac{3.07}{(0.121)}$ | $\frac{3.41}{(0.134)}$ | $\frac{0.48}{(0.019)}$ | $\frac{0.85}{(0.033)}$ | $\frac{0.30}{(0.012)}$ | 1     |

#### Packaging :

PRCP-MSMF010 through PRCP-MSMF030 = 1500 pcs. per reel.

PRCP-MSMF050 through PRCP-MSMF200 & PRCP-MSMF260 = 2000 pcs. per reel.

PRCP-MSMF110/24X, PRCP-MSMF150/24X & PRCP-MSMF250/16X = 1500 pcs. per reel.

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

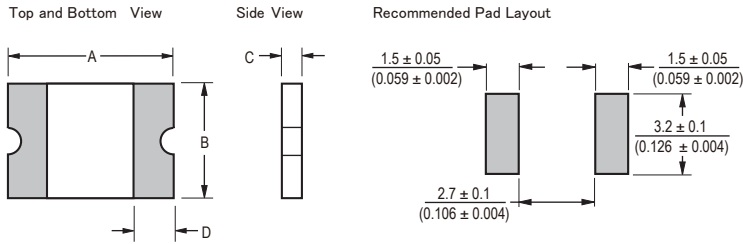
Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# PRCP-MSMF Series - Polymer Resettable Circuit Protectors

## Product Dimensions (see previous page for dimensions)

### Style 1

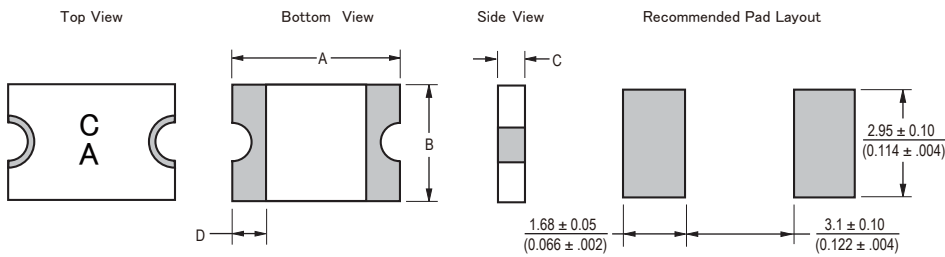


Terminal material:  
Electroless Ni under immersion Au

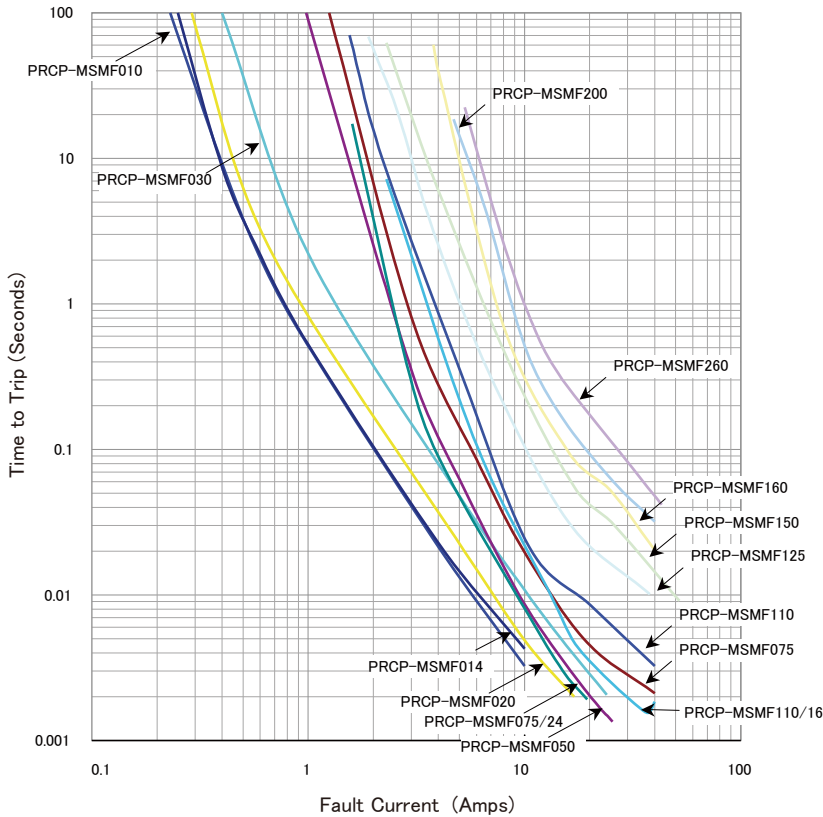
Termination pad solderability:  
Standard Au finish:  
Meets ANSI/J-STD-002 Category 2.

Recommended Storage:  
40 ° C max./70 % RH max.

### Style 2



## Typical Time to Trip at 23 °C



The Time to Trip curves represent typical performance of a device in a simulated application environment. Actual performance in specific customer applications may differ from these values due to the influence of other variables.

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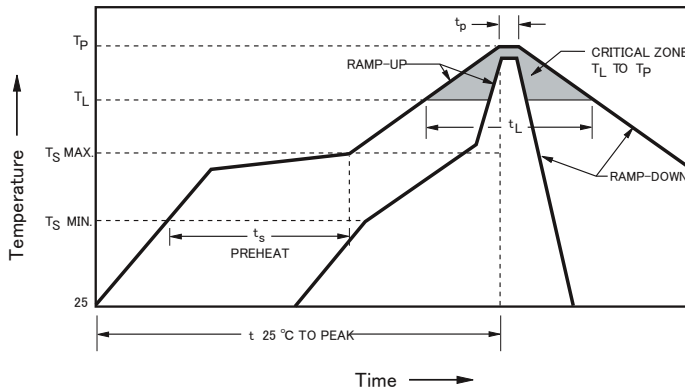
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# PRCP-MSMF Series - Polymer Resettable Circuit Protectors

Thermal Derating Chart -  $I_{hold}$  /  $I_{trip}$  (Amps)

| Model            | Ambient Operating Temperature |             |             |             |             |             |             |             |             |
|------------------|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                  | -40 °C                        | -20 °C      | 0 °C        | 23 °C       | 40 °C       | 50 °C       | 60 °C       | 70 °C       | 85 °C       |
| PRCP-MSMF010     | 0.16 / 0.32                   | 0.14 / 0.28 | 0.12 / 0.24 | 0.10 / 0.20 | 0.08 / 0.16 | 0.07 / 0.14 | 0.06 / 0.12 | 0.05 / 0.10 | 0.03 / 0.06 |
| PRCP-MSMF014     | 0.23 / 0.52                   | 0.19 / 0.45 | 0.17 / 0.40 | 0.14 / 0.34 | 0.12 / 0.29 | 0.10 / 0.25 | 0.09 / 0.23 | 0.08 / 0.21 | 0.06 / 0.16 |
| PRCP-MSMF020     | 0.29 / 0.5                    | 0.26 / 0.52 | 0.23 / 0.46 | 0.20 / 0.40 | 0.17 / 0.34 | 0.15 / 0.30 | 0.14 / 0.28 | 0.12 / 0.24 | 0.10 / 0.20 |
| PRCP-MSMF020/60  | 0.29 / 0.5                    | 0.26 / 0.52 | 0.23 / 0.46 | 0.20 / 0.40 | 0.17 / 0.3  | 0.15 / 0.30 | 0.14 / 0.28 | 0.12 / 0.24 | 0.10 / 0.20 |
| PRCP-MSMF030     | 0.44 / 0.88                   | 0.39 / 0.78 | 0.35 / 0.70 | 0.30 / 0.60 | 0.26 / 0.52 | 0.23 / 0.46 | 0.21 / 0.42 | 0.18 / 0.36 | 0.15 / 0.30 |
| PRCP-MSMF050     | 0.77 / 1.54                   | 0.68 / 1.36 | 0.59 / 1.18 | 0.50 / 1.00 | 0.44 / 0.88 | 0.40 / 0.80 | 0.37 / 0.74 | 0.33 / 0.66 | 0.29 / 0.58 |
| PRCP-MSMF070     | 1.15 / 2.30                   | 1.01 / 2.02 | 0.88 / 1.76 | 0.75 / 1.50 | 0.65 / 1.30 | 0.60 / 1.20 | 0.55 / 1.10 | 0.49 / 0.98 | 0.43 / 0.86 |
| PRCP-MSMF075/24  | 1.15 / 2.30                   | 1.01 / 2.02 | 0.88 / 1.76 | 0.75 / 1.50 | 0.65 / 1.30 | 0.60 / 1.20 | 0.55 / 1.10 | 0.49 / 0.98 | 0.43 / 0.86 |
| PRCP-MSMF110     | 1.59 / 3.18                   | 1.43 / 2.86 | 1.26 / 2.52 | 1.10 / 2.20 | 0.95 / 1.90 | 0.87 / 1.74 | 0.80 / 1.60 | 0.71 / 1.42 | 0.60 / 1.20 |
| PRCP-MSMF110/16  | 1.59 / 3.18                   | 1.43 / 2.86 | 1.26 / 2.52 | 1.10 / 2.20 | 0.95 / 1.90 | 0.87 / 1.74 | 0.80 / 1.60 | 0.71 / 1.42 | 0.60 / 1.20 |
| PRCP-MSMF110/24X | 2.00 / 4.00                   | 1.70 / 3.40 | 1.40 / 2.80 | 1.10 / 2.20 | 0.95 / 1.90 | 0.88 / 1.76 | 0.80 / 1.60 | 0.73 / 1.46 | 0.61 / 1.22 |
| PRCP-MSMF125     | 1.80 / 3.61                   | 1.63 / 3.25 | 1.43 / 2.86 | 1.25 / 2.50 | 1.08 / 2.16 | 0.99 / 1.98 | 0.91 / 1.82 | 0.81 / 1.62 | 0.68 / 1.36 |
| PRCP-MSMF150     | 2.17 / 4.34                   | 1.95 / 3.90 | 1.72 / 3.44 | 1.50 / 3.00 | 1.30 / 2.59 | 1.18 / 2.37 | 1.09 / 2.18 | 0.97 / 1.94 | 0.82 / 1.64 |
| PRCP-MSMF150/24  | 2.10 / 4.20                   | 1.90 / 3.80 | 1.70 / 3.40 | 1.50 / 3.00 | 1.25 / 2.50 | 1.13 / 2.26 | 1.00 / 2.00 | 0.88 / 1.76 | 0.69 / 1.38 |
| PRCP-MSMF160     | 2.30 / 5.00                   | 2.20 / 4.40 | 1.90 / 3.80 | 1.60 / 2.80 | 1.45 / 2.90 | 1.30 / 2.60 | 1.15 / 2.30 | 1.03 / 2.06 | 0.91 / 1.82 |
| PRCP-MSMF200     | 3.08 / 5.40                   | 2.71 / 4.74 | 2.35 / 4.11 | 2.00 / 3.50 | 1.80 / 3.15 | 1.60 / 2.80 | 1.50 / 2.63 | 1.40 / 2.40 | 1.25 / 2.10 |
| PRCP-MSMF250/16X | 3.85 / 7.70                   | 3.45 / 6.90 | 3.00 / 6.00 | 2.50 / 5.00 | 2.05 / 4.10 | 1.85 / 3.70 | 1.75 / 3.50 | 1.30 / 2.60 | 1.10 / 2.20 |
| PRCP-MSMF260     | 4.00 / 7.98                   | 3.52 / 7.01 | 3.06 / 6.09 | 2.60 / 5.15 | 2.34 / 4.64 | 2.08 / 4.13 | 1.95 / 3.87 | 1.39 / 2.74 | 1.04 / 2.05 |

## Solder Reflow Recommendations



Notes:

- PRCP-MSMF models are intended for reflow soldering (including, but not limited to heating plate, hot air, IR, nitrogen, and vapor phase).
- Wave soldering is permissible only if the device is on the top of the PCB, opposite the heat source.
- Hand soldering is not recommended for these devices.
- All temperatures refer to the topside of the device, measured on the device body surface.
- If reflow temperatures exceed the recommended profile, devices may not meet the published specifications.
- Compatible with Pb and Pb-free solder reflow profile.
- Excess solder may cause a short circuit.

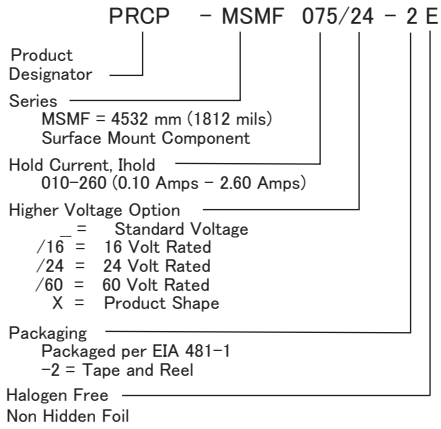
| Profile Feature   | Pb-Free Assembly                   |
|---|------------------------------------|
| Average Ramp-Up Rate ( $T_{s_{max}}$ to $T_p$ )   | 3 °C / second max.                 |
| PREHEAT:<br>Temperature Min. ( $T_{s_{min}}$ )<br>Temperature Max. ( $T_{s_{max}}$ )<br>Time ( $T_{s_{min}}$ to $T_{s_{max}}$ ) ( $t_s$ ) | 150 °C<br>200 °C<br>60~180 seconds |
| TIME MAINTAINED ABOVE:<br>Temperature ( $T_L$ )<br>Time ( $t_L$ )   | 217 °C<br>60~150 seconds           |
| Peak Temperature ( $T_p$ )  | 260 °C                             |
| Time within 5 °C of Actual Peak Temperature ( $t_p$ )   | 20~40 seconds                      |
| Ramp-Down Rate  | 6 °C / second max.                 |
| Time 25 °C to Peak Temperature  | 8 minutes max.                     |

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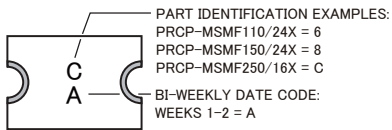
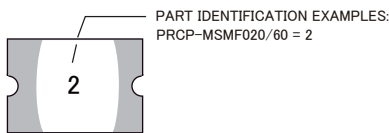
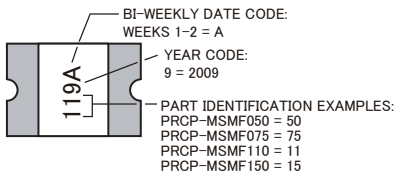
# PRCP-MSMF Series - Polymer Resettable Circuit Protectors

## How to Order



## Typical Part Marking

Represents total content. Layout may vary.

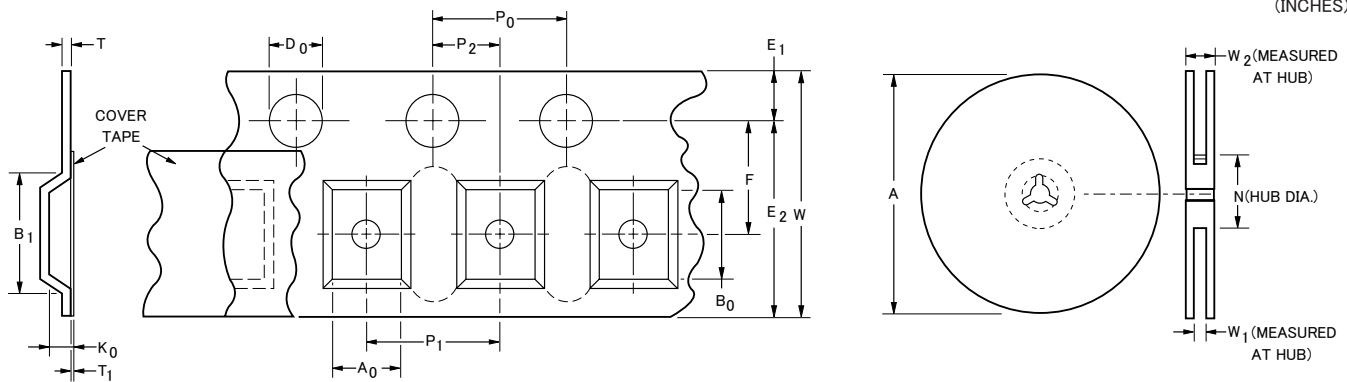


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# PRCP-MSMF Series Tape and Reel Specifications

| Tape Dimensions        | PRCP-MSMF010-<br>PRCP-MSMF030<br>per EIA-481-1 | PRCP-MSMF050-<br>PRCP-MSMF260<br>per EIA 481-1 | PRCP-MSMF110/24X<br>PRCP-MSMF150/24X<br>PRCP-MSMF250/16X<br>per EIA 481-1 |
|------------------------|--|--|---|
| W                      | 12.0 ± 0.30<br>(0.472 ± 0.012)                 | 12.0 ± 0.30<br>(0.472 ± 0.012)                 | 12.0 ± 0.30<br>(0.472 ± 0.012)  |
| P <sub>0</sub>         | 4.0 ± 0.10<br>(0.157 ± 0.004)                  | 4.0 ± 0.10<br>(0.157 ± 0.004)                  | 4.0 ± 0.10<br>(0.157 ± 0.004)   |
| P <sub>1</sub>         | 8.0 ± 0.10<br>(0.315 ± 0.004)                  | 8.0 ± 0.10<br>(0.315 ± 0.004)                  | 8.0 ± 0.10<br>(0.315 ± 0.004)   |
| P <sub>2</sub>         | 2.0 ± 0.05<br>(0.079 ± 0.002)                  | 2.0 ± 0.05<br>(0.079 ± 0.002)                  | 2.0 ± 0.05<br>(0.079 ± 0.002)   |
| A <sub>0</sub>         | 3.66 ± 0.15<br>(0.144 ± 0.004)                 | 3.66 ± 0.15<br>(0.144 ± 0.006)                 | 3.70 ± 0.10<br>(0.146 ± 0.004)  |
| B <sub>0</sub>         | 4.93 ± 0.10<br>(0.194 ± 0.004)                 | 4.98 ± 0.10<br>(0.196 ± 0.004)                 | 5.10 ± 0.10<br>(0.200 ± 0.004)  |
| B <sub>1</sub> max.    | 5.9<br>(0.232)                                 | 5.9<br>(0.232)                                 | 5.9<br>(0.232)  |
| D <sub>0</sub>         | 1.5 + 0.10/-0.0<br>(0.059 + 0.004/-0)          | 1.5 + 0.10/-0.0<br>(0.059 + 0.004/-0)          | 1.5 + 0.10/-0.0<br>(0.059 + 0.004/-0)                                     |
| F                      | 5.5 ± 0.05<br>(0.217 ± 0.002)                  | 5.5 ± 0.05<br>(0.217 ± 0.002)                  | 5.5 ± 0.05<br>(0.217 ± 0.002)   |
| E <sub>1</sub>         | 1.75 ± 0.10<br>(0.069 ± 0.004)                 | 1.75 ± 0.10<br>(0.069 ± 0.004)                 | 1.75 ± 0.10<br>(0.069 ± 0.004)  |
| E <sub>2</sub> min.    | 10.25<br>(0.404)                               | 10.25<br>(0.404)                               | 10.25<br>(0.404)  |
| T max.                 | 0.6<br>(0.024)                                 | 0.6<br>(0.024)                                 | 0.6<br>(0.024)  |
| T <sub>1</sub> max.    | 0.1<br>(0.004)                                 | 0.1<br>(0.004)                                 | 0.1<br>(0.004)  |
| K <sub>0</sub>         | 1.30 ± 0.10<br>(0.051 ± 0.004)                 | 0.95 ± 0.10<br>(0.037 ± 0.004)                 | 1.50 ± 0.10<br>(0.059 ± 0.004)  |
| Leader min.            | 390<br>(15.35)                                 | 390<br>(15.35)                                 | 390<br>(15.35)  |
| Trailer min.           | 160<br>(6.30)                                  | 160<br>(6.30)                                  | 160<br>(6.30)   |
| <b>Reel Dimensions</b> |  |  |   |
| A max.                 | 185<br>(7.28)                                  | 185<br>(7.28)                                  | 185<br>(7.28)   |
| N min.                 | 50<br>(1.97)                                   | 50<br>(1.97)                                   | 50<br>(1.97)  |
| W <sub>1</sub>         | 12.4 + 2.0/-0.0<br>(0.488 + 0.079/-0.0)        | 12.4 + 2.0/-0.0<br>(0.488 + 0.079/-0.0)        | 12.4 + 2.0/-0.0<br>(0.488 + 0.079/-0.0)                                   |
| W <sub>2</sub> max.    | 18.4<br>(0.724)                                | 18.4<br>(0.724)                                | 18.4<br>(0.724)   |

DIMENSIONS:  $\frac{\text{MM}}{\text{INCHES}}$



Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.