



## Features

- Two resistance-matched PTCs in a plastic housing
- Narrow resistance tolerance
- RoHS compliant\*

## Applications

Used as a secondary overcurrent protection device in:

- Customer Premise Equipment (CPE)
- Central Office (CO)
- Access equipment

# CMF-SDP Series - Telecom CPTC Resettable Fuses

## Electrical Characteristics

| Model      | Induction Voltage Withstand | Rated Voltage | Rated Resistance (RN) |           | Resistance Matching in Housing | Hold Current | Trip Current | Imax @ 230 VAC | Typ. Time to Trip @ Imax / 230 VAC |
|------------|-----------------------------|---------------|-----------------------|-----------|--------------------------------|--------------|--------------|----------------|------------------------------------|
|            | VAC                         |               | Volts                 | Ohms      | Tolerance                      |              |              |                |                                    |
| CMF-SDP07  | 250                         | 230           | 7                     | ±20 %     | ≤1.0                           | 0.080        | 0.200        | 3.0            | 0.45                               |
| CMF-SDP10  | 250                         | 230           | 10                    | ±20 %     | ≤1.0                           | 0.180        | 0.360        | 1.0            | 3.8                                |
| CMF-SDP10A | 250                         | 230           | 10                    | ±20 %     | ≤1.0                           | 0.150        | 0.360        | 1.0            | 3.8                                |
| CMF-SDP25  | 250                         | 230           | 25                    | ±20 %     | ≤1.0                           | 0.130        | 0.260        | 2.8            | 0.2                                |
| CMF-SDP25A | 250                         | 230           | 25                    | ±20 %     | ≤1.0                           | 0.130        | 0.260        | 2.8            | 0.3                                |
| CMF-SDP35  | 600                         | 230           | 35                    | +15/-20 % | ≤1.0                           | 0.110        | 0.230        | 4.6            | 0.06                               |
| CMF-SDP35A | 600                         | 230           | 35                    | +15/-20 % | ≤1.0                           | 0.110        | 0.230        | 2.5            | 0.2                                |
| CMF-SDP50  | 600                         | 230           | 50                    | ±15 %     | ≤1.0                           | 0.090        | 0.190        | 2.5            | 0.13                               |
| CMF-SDP50A | 600                         | 230           | 50                    | ±15 %     | ≤1.0                           | 0.090        | 0.190        | 2.5            | 0.2                                |
| CMF-SDP75  | 600                         | 230           | 75                    | ±20 %     | ≤2.0                           | 0.070        | 0.150        | 2.5            | 0.12                               |

Operating Temperature Range: -40 °C to +125 °C.

## Test Procedures And Requirements For Model CMF-SDP Series

| Test                                   | Primary Protection | Test Condition   | Requirements         |
|--|--------------------|--|----------------------|
| Mains Power Contact - ITU-T K.20, K.21 | None               | 230 V rms, 10 ohms, 15 Min.                              | (Ri-Rf) / Ri < ±10 % |
| Power Induction - ITU-T K.20, K.21     | None               | 600V rms, 600 ohms, 0.2 seconds, 10 cycles, every 1 Min. | (Ri-Rf) / Ri < ±10 % |
| Power Induction - ITU-T K.20, K.21     | GDT                | 600 V rms, 600 ohms, 1 second, 10 cycles, every 1 Min.   | (Ri-Rf) / Ri < ±10 % |
| Power Induction - ITU-T K.20, K.21     | GDT                | 600 V rms, 200 ohms, 1 second, 10 cycles, every 1 Min.   | (Ri-Rf) / Ri < ±10 % |
| Lightning Surge - ITU-T K.20, K.21     |                    | 10/700 μs, 25 ohms, 1.0 kV, 10 Tests, every 1 Min.       | (Ri-Rf) / Ri < ±10 % |
| Lightning Surge                        |                    | 10/1000 μs, 60 ohms, 1.5 kV, 30 Tests, every 3 Min.      | (Ri-Rf) / Ri < ±10 % |

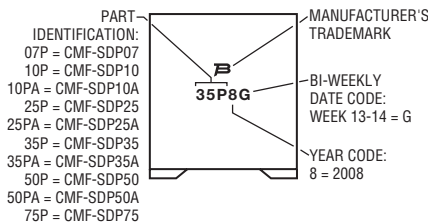
Ri = R initial; Rf = R final

Moisture Sensitivity Level (MSL) ..... Level 1

ESD Classification - HBM..... Class 6

## Typical Part Marking

Represents total content. Layout may vary.



## How to Order

### CMF - SD P 35 A - XX - 2

|                             |  |
|-----------------------------|--|
| Product Designator          | CMF - SD P 35 A - XX - 2                                     |
| Style                       | SD = Surface Mount Dual Pkg.                                 |
| Housing                     | P = Plastic  |
| Rated Resistance (RN)       | 7-75 (7-75 Ohms)   |
| Footprint and Height Option | Blank = Standard Product<br>A = Reduced Footprint and Height |
| Resistance Tolerance Option | Blank = Standard<br>-XX = XX %; e.g. -10 = ±10 %             |
| Packaging                   | - 2 = Tape & Reel  |

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**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

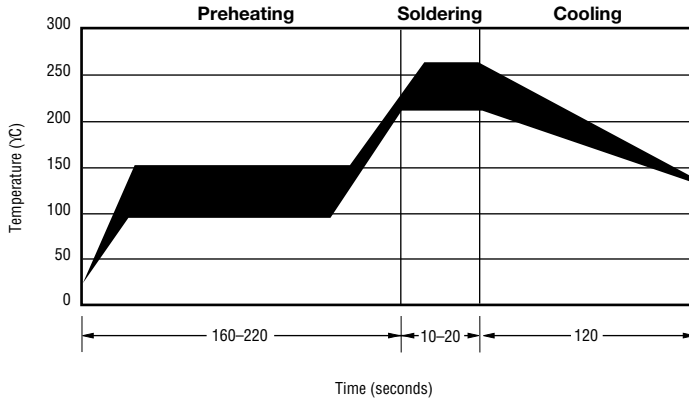
Users should verify actual device performance in their specific applications.

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# CMF-SDP Series - Telecom CPTC Resettable Fuses

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## Solder Reflow Recommendations



### Solder reflow

- Recommended reflow methods: IR, vapor phase oven, hot air oven.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Gluing the devices is not recommended.
- Recommended maximum paste thickness is 0.25 mm (.010 inch).
- Devices can be cleaned using standard industry methods and solvents.

### Note:

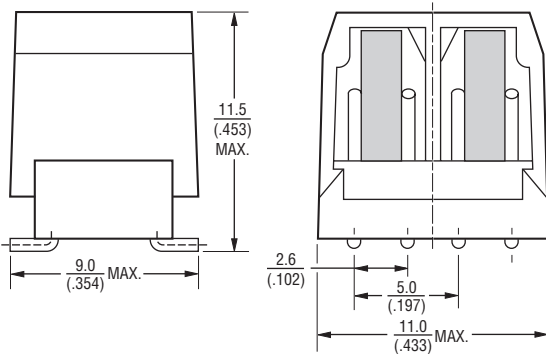
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

### Rework

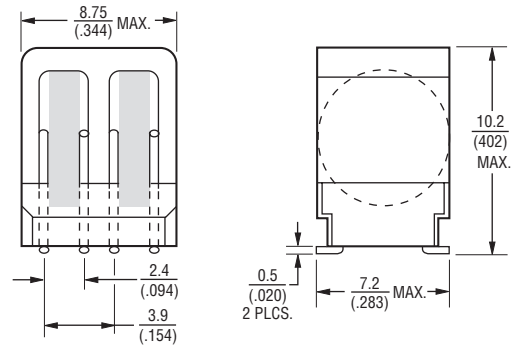
- A device should not be reworked.

## Product Dimensions

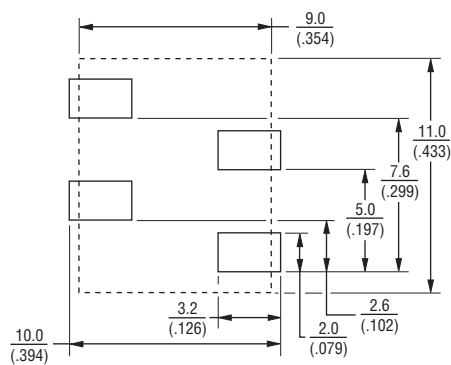
### CMF-SDP05, 07, 10, 25, 35, 50 & 75



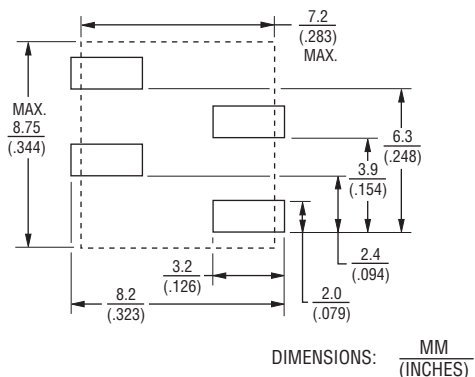
### CMF-SDP10A, 25A, 35A, 50A & 75A



## Recommended Pad Layout



Packaging - Tape and Reel: 350 pcs. per reel



Packaging - Tape and Reel: 400 pcs. per reel

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

CMF-SDP SERIES, REV. F, 04/18

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# CMF-SDP Series Tape and Reel Specifications

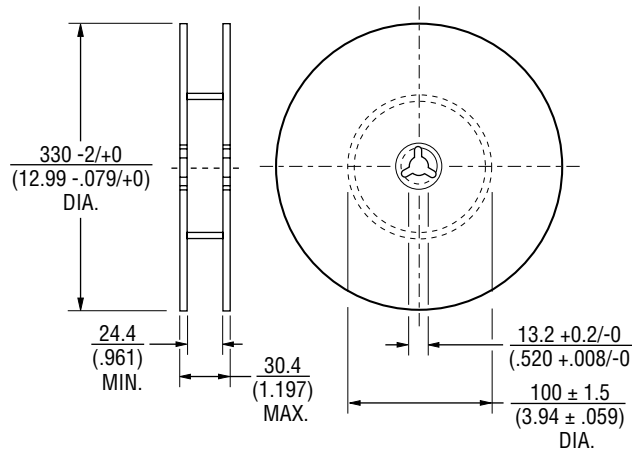
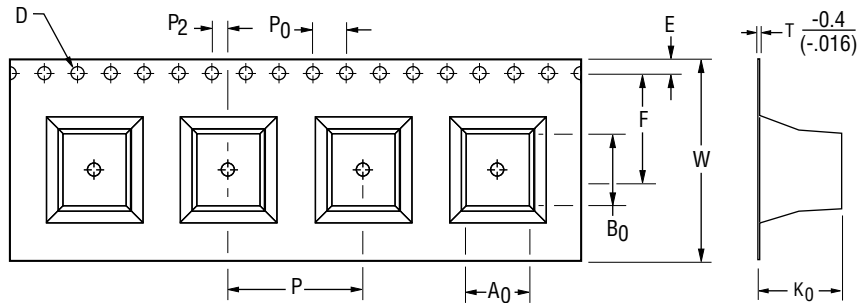
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## Tape Dimensions per EIA 481-2

CMF-SDP10-2, CMF-SDP25-2,  
CMF-SDP-35-2, CMF-SDP50-2,  
CMF-SDP75-2

CMF-SDP10A-2, CMF-SDP25A-2,  
CMF-SDP35A-2, CMF-SDP50A-2

|                |  |  |
|----------------|--|--|
| W              | $\frac{24.0 \pm 0.5}{(0.945 \pm 0.020)}$ | $\frac{24.0 \pm 0.5}{(0.945 \pm 0.020)}$ |
| P <sub>0</sub> | $\frac{4.0}{(0.157)}$                    | $\frac{4.0}{(0.157)}$                    |
| P              | $\frac{16.0}{(0.630)}$                   | $\frac{16.0}{(0.630)}$                   |
| P <sub>2</sub> | $\frac{2.0}{(0.079)}$                    | $\frac{2.0}{(0.079)}$                    |
| A <sub>0</sub> | $\frac{9.2 \pm 0.2}{(0.362 \pm 0.008)}$  | $\frac{7.5 \pm 0.2}{(0.295 \pm 0.008)}$  |
| B <sub>0</sub> | $\frac{11.0 \pm 0.2}{(0.441 \pm 0.008)}$ | $\frac{9.0 \pm 0.2}{(0.354 \pm 0.008)}$  |
| D              | $\frac{1.5}{(0.059)}$                    | $\frac{1.5}{(0.059)}$                    |
| F              | $\frac{11.5}{(0.453)}$                   | $\frac{11.5}{(0.453)}$                   |
| E              | $\frac{1.75}{(0.069)}$                   | $\frac{1.75}{(0.069)}$                   |
| t              | $\frac{0.5 \pm 0.15}{(0.020 \pm 0.006)}$ | $\frac{0.5 \pm 0.15}{(0.020 \pm 0.006)}$ |
| K <sub>0</sub> | $\frac{11.5 \pm 0.2}{(0.453 \pm 0.008)}$ | $\frac{10.0 \pm 0.2}{(0.394 \pm 0.008)}$ |



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

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