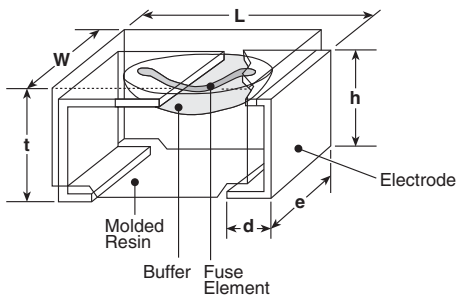




features

- Immediate cut-off of excessive heat
- No generation of heat
- UL94V0 epoxy case
- Suitable for flow and reflow soldering
- UL248.14, file #131375
- One-time fuse device
- Marking: Black body color with white marking
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

dimensions and construction



| Size Code | Dimensions inches (mm) | | | | | |
|-----------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| | L | W | t | h | e | d |
| 2B | .126±.008 (3.2±0.2) | .063±.008 (1.6±0.2) | .047±.008 (1.2±0.2) | .031±.004 (0.8±0.1) | .047±.004 (1.2±0.1) | .024±.004 (0.6±0.1) |
| 2E | | .098±.008 (2.5±0.2) | .087±.008 (2.2±0.2) | .075±.004 (1.9±0.1) | .067±.004 (1.7±0.1) | .02±.004 (0.5±0.1) |

ordering information

| New Part # | CCP | 2B | 20 | Nil | T | TE |
|------------|-----|----------------------|------------------------|--|----------------------|---|
| Type | | Size Code | Rating | Fusing Magnification | Termination Material | Packaging |
| | | 2B: 1206 2E: 1210 | Reference rating chart | Nil: 2B: 200% 2E: 250% H: 2E: 200% | T: Sn | TE: 7" embossed plastic (2B - 3,000 pieces/reel) (2E - 2,000 pieces/reel) |

applications and ratings

| Part Designation | Current Rating | Fusing Current | Fusing Time | Internal R. Maximum (mΩ) | Maximum Open Circuit Voltage* | Rated Ambient Temperature | Operating Temperature Range |
|------------------|----------------|----------------|-----------------------------------|--------------------------|-------------------------------|---------------------------|-----------------------------|
| CCP2B15 | 0.75A | 1.5A | 1 second max. @ fusing current | 150 | 24V (40V/76V)* | +70°C | -40°C to +125°C |
| CCP2B20 | 1.00A | 2.0A | | 100 | | | |
| CCP2B25 | 1.25A | 2.5A | | 75 | | | |
| CCP2B30 | 1.50A | 3.0A | | 60 | | | |
| CCP2B35 | 1.75A | 3.5A | | 50 | | | |
| CCP2B40 | 2.00A | 4.0A | | 45 | | | |
| CCP2B50 | 2.50A | 5.0A | | 35 | | | |
| CCP2B63 | 3.15A | 6.3A | | 23 | | | |
| CCP2B80 | 4.00A | 8.0A | | 19 | | | |
| CCP2B100 | 5.00A | 10.0A | | 15 | | | |
| CCP2E10H | 0.50A | 1.0A | | 200 | 72V | | |
| CCP2E13H | 0.65A | 1.3A | | 170 | | | |
| CCP2E15H | 0.75A | 1.5A | | 150 | | | |
| CCP2E20H | 1.00A | 2.0A | | 100 | | | |
| CCP2E25H | 1.25A | 2.5A | | 75 | | | |
| CCP2E30H | 1.50A | 3.0A | | 60 | | | |
| CCP2E35H | 1.75A | 3.5A | | 50 | | | |
| CCP2E38H | 1.90A | 3.8A | | 48 | | | |

* Note: High rated voltage (76V: 0.75A ~ 3.15A; 40V: 4A ~ 5A) also available, please contact KOA.

For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

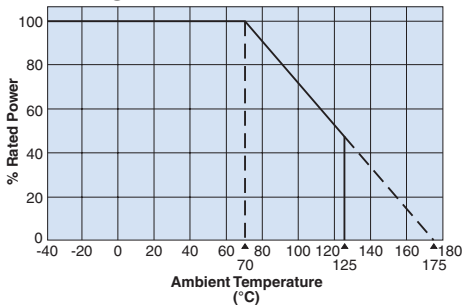
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applications and ratings (continued)

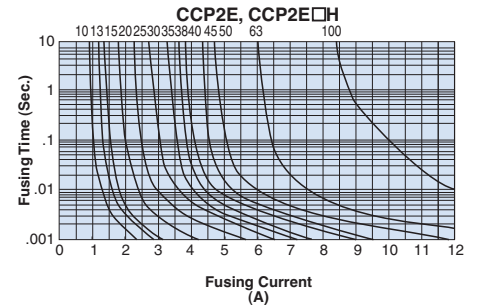
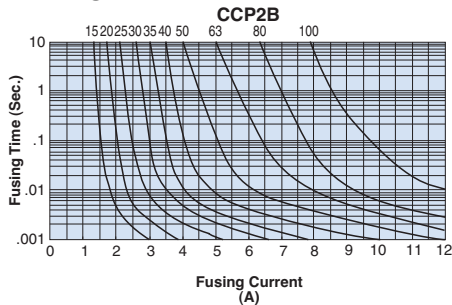
| Part Designation | Current Rating | Fusing Current | Fusing Time | Internal R. Maximum (mΩ) | Maximum Open Circuit Voltage | Rated Ambient Temperature | Operating Temperature Range |
|------------------|----------------|----------------|-----------------------------------|--------------------------|------------------------------|---------------------------|-----------------------------|
| CCP2E40H | 2.00A | 4.0A | 1 second max. @ fusing current | 45 | 72V | +70°C | -40°C to +125°C |
| CCP2E45H | 2.25A | 4.5A | | 40 | | | |
| CCP2E50H | 2.50A | 5.0A | | 35 | | | |
| CCP2E63H | 3.15A | 6.3A | | 23 | | | |
| CCP2E100 | 4.00A | 10.0A | | 15 | | | |
| CCP2E10 | 0.4A | 1.0A | | 200 | | | |
| CCP2E13 | 0.52A | 1.3A | | 170 | | | |
| CCP2E15 | 0.6A | 1.5A | | 150 | | | |
| CCP2E20 | 0.8A | 2.0A | | 100 | | | |
| CCP2E25 | 1.0A | 2.5A | | 75 | | | |
| CCP2E30 | 1.2A | 3.0A | | 60 | | | |
| CCP2E35 | 1.4A | 3.5A | | 50 | | | |
| CCP2E38 | 1.5A | 3.8A | | 48 | | | |
| CCP2E40 | 1.6A | 4.0A | | 45 | | | |
| CCP2E45 | 1.8A | 4.5A | | 40 | | | |
| CCP2E50 | 2.0A | 5.0A | | 35 | | | |
| CCP2E63 | 2.5A | 6.3A | | 23 | | | |

environmental applications

Derating Curve



Fusing Characteristics



Performance Characteristics

| Parameter | Requirement $\Delta R_{\pm}\%$ | | Test Method |
|------------------------------|--|---------|---|
| | Limit | Typical | |
| Fusing Characteristics | Within 1 second | — | CCP2B: 200% of rated current shall be carried CCP2E: 250% of rated current shall be carried CCP2E□H: 200% of rated current shall be carried |
| Open Circuit Voltage | No fusing, flaming, explosion | — | Apply DC voltage between the termination after fusing. CCP2B: 24V; CCP2E, CCP2E□H: 72V |
| Residual Resistance | 10kΩ or more | — | Measure DC resistance after fusing |
| Bending Test | No mechanical damages | — | Distance between holding points 90mm, bending width 10mm, 1 time |
| Resistance to Soldering Heat | ±10% | ±2.5% | 260°C ±5°C, 10 seconds ± 0.5 seconds, 2 cycles |
| Solderability | ±95% coverage min. | — | 230°C ±5°C, 3 seconds ± 0.5 seconds |
| Load Life | ±10% | ±3% | 70°C ± 3°C, 1000 hours, rated current, 1.5 hr ON, 0.5 hr OFF cycle |
| Load Life Moisture | ±10% | ±1.5% | 40°C ± 2°C, 90 - 95% RH, 1000 hours, rated current, 1.5 hr ON, 0.5 hr OFF cycle |
| Rapid Change of Temperature | ±10% | ±4.0% | -40°C (30 minutes), +125°C (30 minutes), 10 cycles |
| Resistance to Solvent | No evidence of damages to protective coating and marking | — | Conforming to MIL-STD-202F |

circuit protection