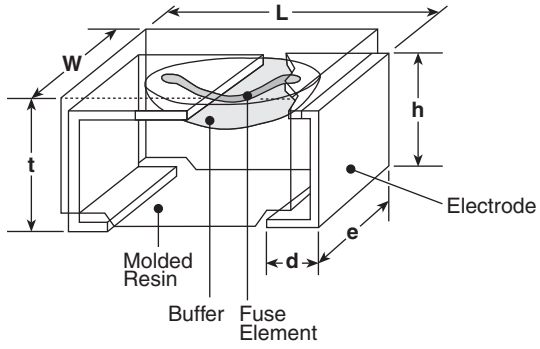
## features

- 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 yellow 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<br>2E: 1210 | Reference rating chart | Nil: 2B, 2E: 250%<br>H: 2E: 200% | T: Sn | TE: 7" embossed plastic<br>(2B - 3,000 pieces/reel)<br>(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 | | | |

* Note: High rated voltage (76V: 0.76A - 2A; 40V: 2.5A - 3.15A) also available, please contact factory.

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.

1/06/09

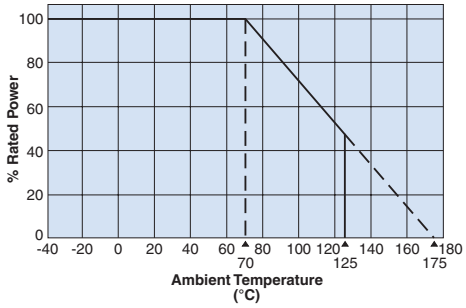
## applications and ratings (continued)

| Part Designation | Current Rating | Fusing Current | Fusing Time | Internal R. Maximum (mΩ) | Maximum Open Circuit Voltage | Rated Ambient Temperature | Operating Temperature Range |
|---|---|---|---|---|---|---|---|
| CCP2E10H | 0.50A | 1.0A | 1 second max. @ fusing current | 200 | 72V | +70°C | -40°C to +125°C |
| 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 | | | |
| CCP2E40H | 2.00A | 4.0A | | 45 | | | |
| CCP2E45H | 2.25A | 4.5A | | 40 | | | |
| CCP2E50H | 2.50A | 5.0A | | 35 | | | |
| CCP2E63H | 3.15A | 6.3A | | 23 | | | |
| NEW 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 | | | |

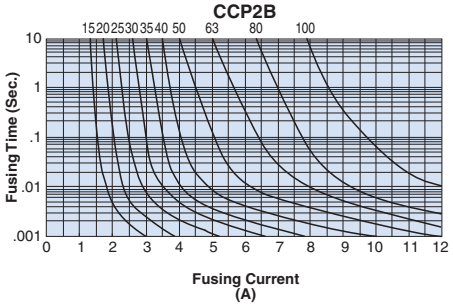
Note: High rated voltage (76V: 0.75A ~ 2A; 40V: 2.5A ~ 3.15A) also available, please contact KOA

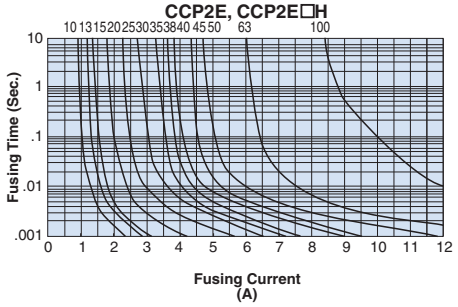
## environmental applications

### Derating Curve




### Fusing Characteristics




### Performance Characteristics

| Parameter | Requirement | Test Method |
|---|---|---|
| Clearing Time | Within 1 second | CCP2B and CCP2E_H: 200% of rated current shall be carried<br>CCP2E: 250% of rated current shall be carried |
| Open Circuit Voltage | No fusing, flaming, explosion | Apply DC voltage between the termination after fusing<br>CCP2B: 24V, CCP2E: 72V |
| Residual Resistance | Over 10kΩ | Measuring DC resistance after fusing |
| Bending Test | No breakdown of termination and disconnection | Holding point: 90mm, Bending: 10mm, 1 time |
| Resistance to Solder Heat | ΔR: ±10% | 260°C ± 5°C, 10 seconds ± 0.5 seconds, 3 cycles |
| Solderability | 95% coverage minimum | 230°C ± 5°C, 3 seconds ± 0.5 seconds |
| Load Life | ΔR: ±10% | 70°C ± 3°C, 1000 hours, rated current |
| Moisture Resistance | ΔR: ±10% | 40°C ± 2°C, 90% RH, rated current |
| Temperature Cycling | ΔR: ±10% | -40°C (30 minutes)/+125°C (30 minutes), 10 cycles |
| Resistance to Solvent | No aberration of marking in appearance | Conforming to MIL-STD-202F |

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