

Features

- RoHS compliant*
- Convex termination style
- 2 or 4 isolated elements in an 04 package width
- Resistance tolerance: $\pm 5\%$
- Resistance range: 3 ohms to 1 megohm & zero-ohm jumper

- Sulfur-resistant design



This series is currently available, but not recommended for new designs. The Model [CAY10A-AS](#) Series is the recommended replacement.

CAY10-AS Series - Sulfur-Resistant Thick Film Chip Arrays

General Characteristics

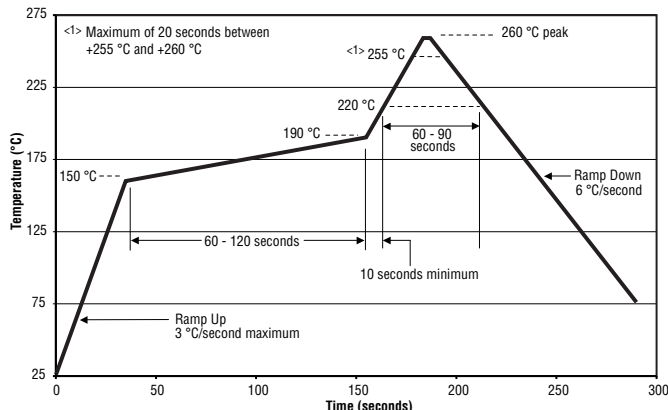
| Characteristic | CAY10-xxxJ2AS | CAY10-xxxJ4AS |
|--|---|---|
| Number of Elements (Isolated) | 2 | 4 |
| Power Rating @ 70 °C per Resistor | 63 mW | |
| Resistor Tolerance | $\pm 5\%$ | |
| Resistance Range (E24) plus Zero-ohm Jumper | 3 ohms to 1 megohm | |
| Temperature Coefficient of Resistance (TCR) | 3 Ω ~9.1 Ω : ± 400 ppm 10 Ω ~1 M Ω : ± 200 ppm | 3 Ω ~9.1 Ω : ± 500 ppm 10 Ω ~1 M Ω : ± 250 ppm |
| Maximum Overload Voltage | 100 V | |
| Maximum Working Voltage | 50 V | |
| Operating Temperature Range | -55 to +125 °C | |
| Storage Conditions | +5 ~ +40 °C, 25~75 % RH, 1 year | |
| Derating Temperature | +70 °C | |
| Packaging (Paper Tape) | 10,000 pcs. per reel | |
| Zero-ohm Jumper: Current Rating Maximum Resistance | 1 A per element 50 milliohms | |

Environmental Characteristics

| Specification | Test Method (JIS C 5201-1) | Characteristics |
|---------------------|---|-------------------------------|
| Short Time Overload | Rated voltage x 2.5, 5 seconds | $\pm(2\% + 0.1 \text{ ohm})$ |
| Soldering Heat | +260 °C ± 5 °C, 10 ± 1 seconds | $\pm(1\% + 0.05 \text{ ohm})$ |
| Temperature Cycling | -55 °C (30 minutes) - normal (30 minutes) +125 °C (30 minutes) - normal (30 minutes) | $\pm(1\% + 0.05 \text{ ohm})$ |
| Moisture Load Life | 1000 hours | $\pm(3\% + 0.1 \text{ ohm})$ |
| Load Life | 1000 hours | $\pm(3\% + 0.1 \text{ ohm})$ |
| Sulfur Test | 3 ppm H ₂ S, +50 °C, 90~95 % RH, 100 hours | $\pm(5\% + 0.1 \text{ ohm})$ |

NOTE: Zero-ohm jumper <50 milliohms except sulfur test <100 milliohms.

Soldering Profile



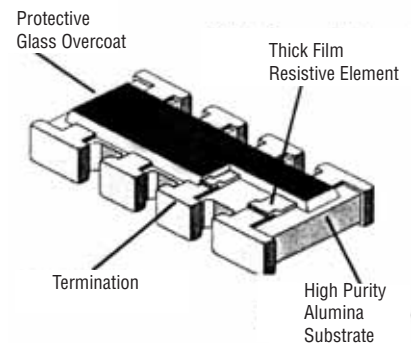
How To Order

CA Y 10 - 103 J 4 AS

- Chip Array _____
- Type _____
- Y = Convex
- Model _____
- 10 = 04 Package Width
- Resistance Code _____
- First two digits are significant, third digit represents number of zeros to follow (example: 103 = 10K ohms)
 - 000 = Zero-ohm jumper
- Resistance Tolerance _____
- J = $\pm 5\%$
- Resistors _____
- 2 = 2 Resistors
 - 4 = 4 Resistors
- Special Characteristics _____
- AS = Sulfur-resistant, Tin-plated terminations (RoHS compliant)

For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

Construction



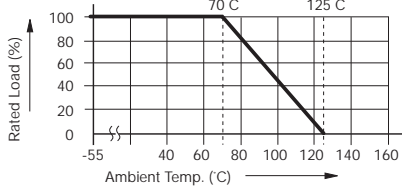
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf

CAY10-AS Series - Sulfur-Resistant Thick Film Chip Arrays

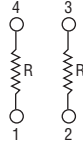
BOURNS®

Derating Curve

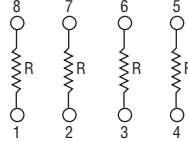


Isolated Circuits

CAY10-xxxJ2AS



CAY10-xxxJ4AS



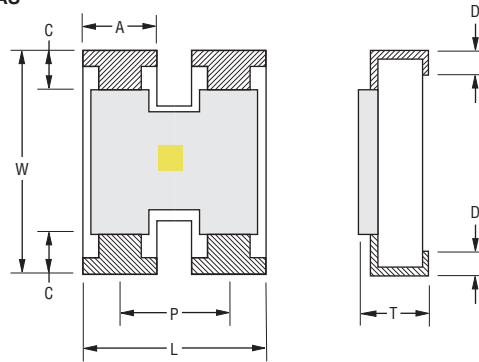
Typical Part Marking

Marking..... Refer to Product Dimensions
Marking Color Yellow

Product Dimensions

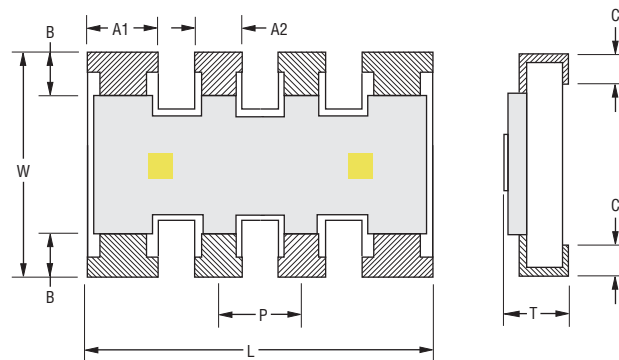
| Dim. | CAY10-xxx-J2AS |
|------|---|
| L | $\frac{1.00 \pm 0.20}{(0.039 \pm 0.008)}$ |
| W | $\frac{1.00 \pm 0.20}{(0.039 \pm 0.008)}$ |
| A | $\frac{0.33 \pm 0.15}{(0.013 \pm 0.006)}$ |
| C | $\frac{0.20 \pm 0.15}{(0.008 \pm 0.006)}$ |
| D | $\frac{0.25 \pm 0.10}{(0.010 \pm 0.004)}$ |
| T | $\frac{0.35 \pm 0.05}{(0.014 \pm 0.002)}$ |
| P | $\frac{0.65 \pm 0.10}{(0.026 \pm 0.004)}$ |

CAY10-xxxJ2AS



| Dim. | CAY10-xxx-J4AS |
|------|---|
| L | $\frac{2.00 \pm 0.20}{(0.079 \pm 0.008)}$ |
| W | $\frac{1.00 \pm 0.15}{(0.039 \pm 0.006)}$ |
| A1 | $\frac{0.40 \pm 0.15}{(0.016 \pm 0.006)}$ |
| A2 | $\frac{0.30 \pm 0.15}{(0.012 \pm 0.006)}$ |
| B | $\frac{0.20 \pm 0.05}{(0.008 \pm 0.002)}$ |
| C | $\frac{0.20 \pm 0.15}{(0.008 \pm 0.006)}$ |
| T | $\frac{0.35 \pm 0.10}{(0.014 \pm 0.004)}$ |
| P | $\frac{0.50 \pm 0.05}{(0.020 \pm 0.002)}$ |

CAY10-xxxJ4AS



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

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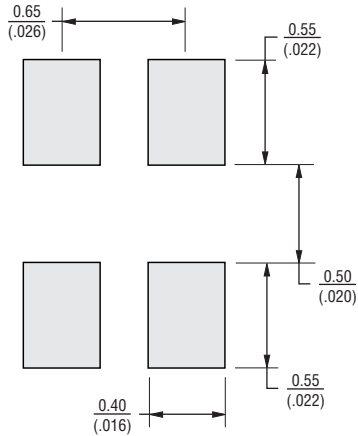
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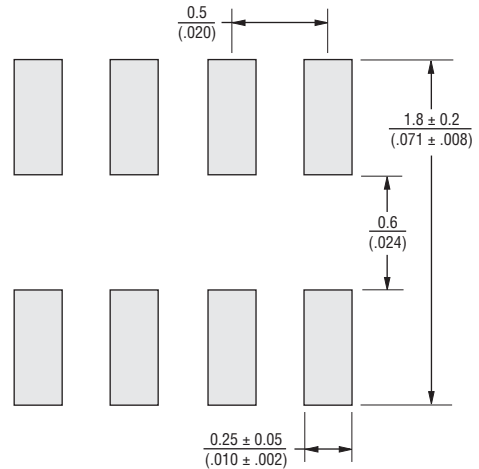


Recommended Land Patterns

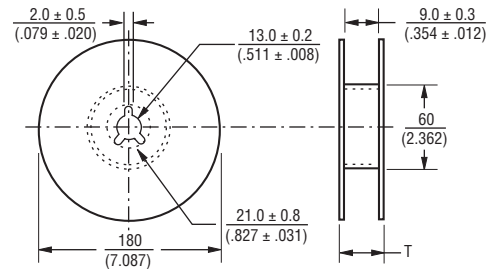
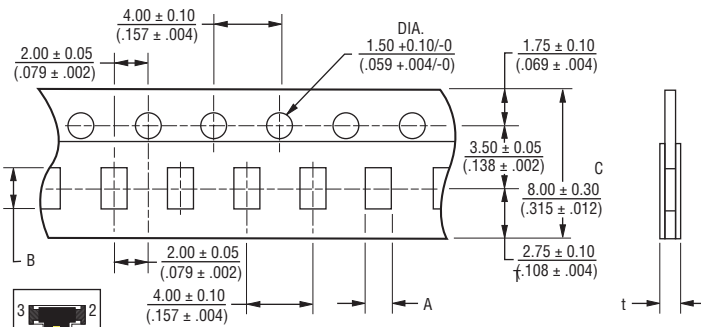
CAY10-xxxJ2AS



CAY10-xxxJ4AS



Packaging Specifications



| Dim. | CAY10-xxx-J2AS | CAY10-xxx-J4AS |
|------|---|---|
| A | $\frac{1.14 \pm 0.05}{(0.045 \pm 0.002)}$ | $\frac{1.20 \pm 0.05}{(0.047 \pm 0.002)}$ |
| B | $\frac{1.14 \pm 0.05}{(0.045 \pm 0.002)}$ | $\frac{2.20 \pm 0.05}{(0.087 \pm 0.002)}$ |
| t | $\frac{0.52 \pm 0.20}{(0.020 \pm 0.008)}$ | $\frac{0.42 \pm 0.20}{(0.017 \pm 0.008)}$ |
| T | $\frac{11.4 \pm 1.0}{(0.449 \pm 0.039)}$ | $\frac{13.0 \pm 1.4}{(0.512 \pm 0.055)}$ |

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



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REV. 06/21

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