

## 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This series is obsolete. Model [CAY10A-AS](#) Series is the recommended replacement.

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

### General Characteristics

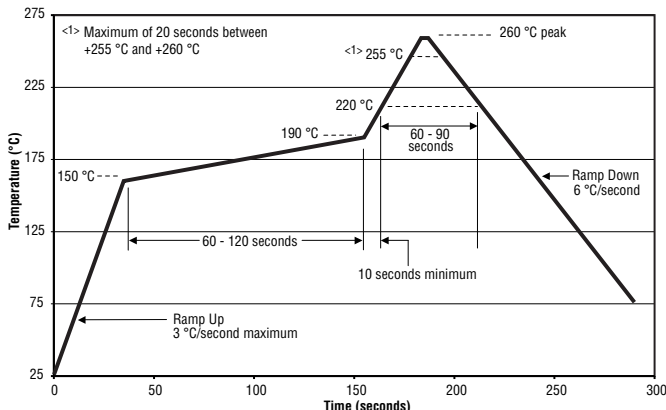
Characteristic	CAY10-xxxJ2AS	CAY10-xxxJ4AS
Number of Elements (Isolated)	2	4
Power Rating @ 70 °C per Resistor	63 mW	
Resistor Tolerance	$\pm 5\%$	
Resistance Range (E24) plus Zero-ohm Jumper	3 ohms to 1 megohm	
Temperature Coefficient of Resistance (TCR)	3 $\Omega$ ~9.1 $\Omega$ : $\pm 400$ ppm 10 $\Omega$ ~1 M $\Omega$ : $\pm 200$ ppm	3 $\Omega$ ~9.1 $\Omega$ : $\pm 500$ ppm 10 $\Omega$ ~1 M $\Omega$ : $\pm 250$ 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 $\pm 5$ °C, 10 $\pm 1$ 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 <sub>2</sub> 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



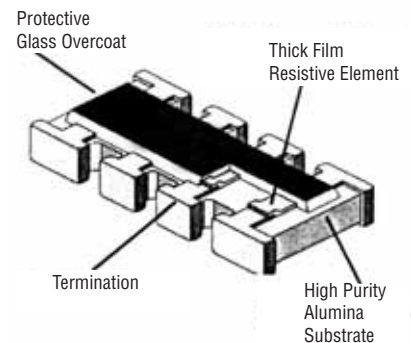
### How To Order

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



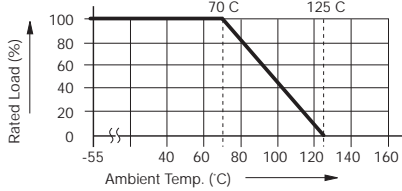
**WARNING**  
Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*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](http://www.bourns.com/docs/legal/disclaimer.pdf)

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

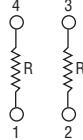
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## Derating Curve

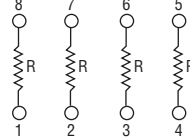


## Isolated Circuits

CAY10-xxxJ2AS



CAY10-xxxJ4AS



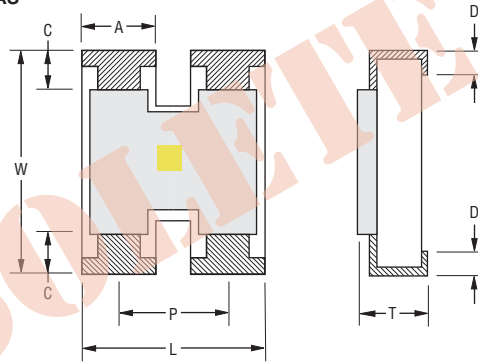
## Typical Part Marking

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

## Product Dimensions

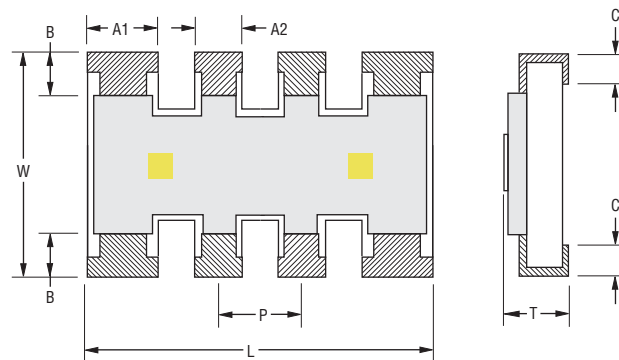
Dim.	CAY10-xxx-J2AS
L	$\frac{1.00 \pm 0.20}{(0.039 \pm 0.008)}$
W	$\frac{1.00 \pm 0.20}{(0.039 \pm 0.008)}$
A	$\frac{0.33 \pm 0.15}{(0.013 \pm 0.006)}$
C	$\frac{0.20 \pm 0.15}{(0.008 \pm 0.006)}$
D	$\frac{0.25 \pm 0.10}{(0.010 \pm 0.004)}$
T	$\frac{0.35 \pm 0.05}{(0.014 \pm 0.002)}$
P	$\frac{0.65 \pm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

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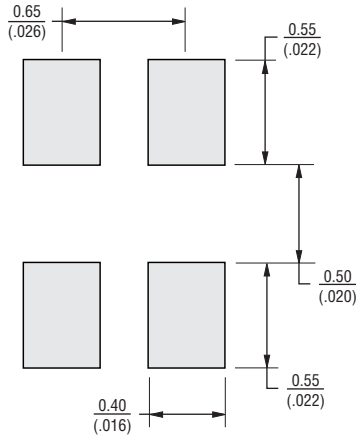
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# CAY10-AS Series - Sulfur-Resistant Thick Film Chip Arrays

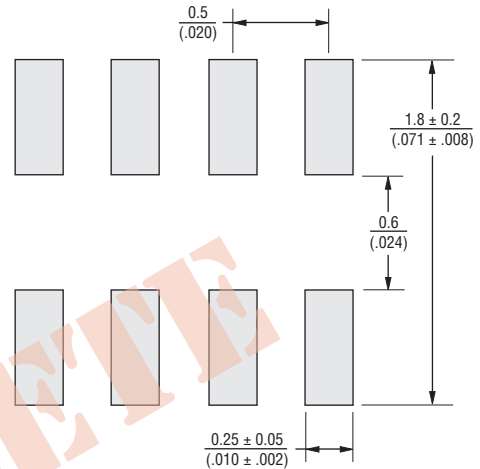
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## Recommended Land Patterns

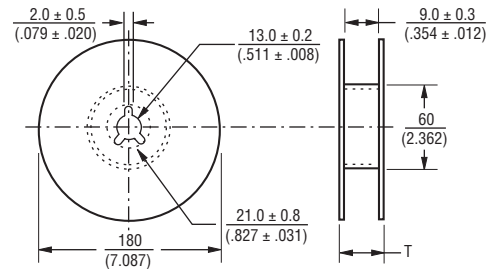
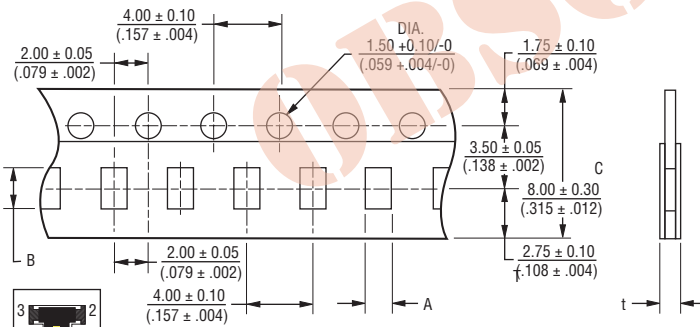
CAY10-xxxJ2AS



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

**BOURNS®**

**Asia-Pacific:**

Tel: +886-2 2562-4117

Email: asiacus@bourns.com

**Europe:**

Tel: +36 88 885 877

Email: eurocus@bourns.com

**The Americas:**

Tel: +1-951 781-5500

Email: americus@bourns.com

[www.bourns.com](http://www.bourns.com)

REV. 06/21

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