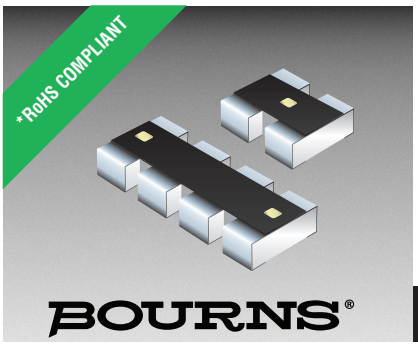


Features

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

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

General Characteristics

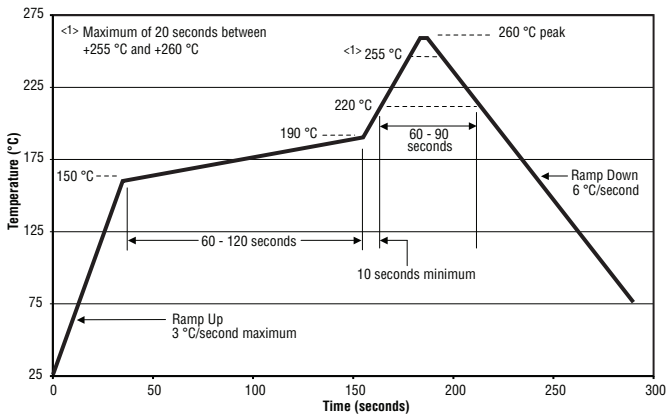
Characteristic	CAY10-xxxJ2AS	CAY10-xxxJ4AS
Number of Elements (Isolated)	2	4
Power Rating @ 70 °C per Resistor	63 mW	
Resistor Tolerance	±5 %	
Resistance Range (E24) plus Zero-ohm Jumper	3 ohms to 1 megohm	
Temperature Coefficient of Resistance (TCR)	3 Ω~9.1 Ω: ±400 ppm 10 Ω~1 MΩ: ±200 ppm	3 Ω~9.1 Ω: ±500 ppm 10 Ω~1 MΩ: ±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	±(2 % +0.1 ohm)
Soldering Heat	+260 °C ±5 °C, 10 ±1 seconds	±(1 % +0.05 ohm)
Temperature Cycling	-55 °C (30 minutes) - normal (30 minutes) +125 °C (30 minutes) - normal (30 minutes)	±(1 % +0.05 ohm)
Moisture Load Life	1000 hours	±(3 % +0.1 ohm)
Load Life	1000 hours	±(3 % +0.1 ohm)
Sulfur Test	3 ppm H2S, +50 °C, 90~95 % RH, 100 hours	±(5 % +0.1 ohm)

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

Soldering Profile



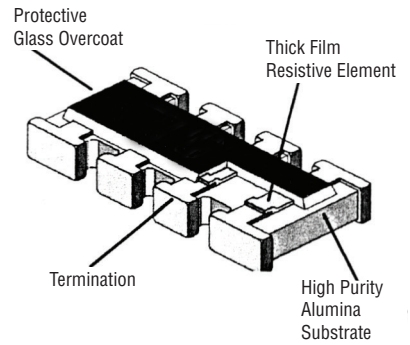
How To Order

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 = ±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



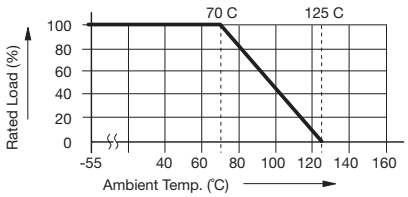
* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

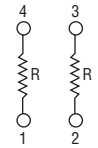
Users should verify actual device performance in their specific applications.

Derating Curve

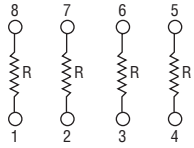


Isolated Circuits

CAY10-xxxJ2AS



CAY10-xxxJ4AS



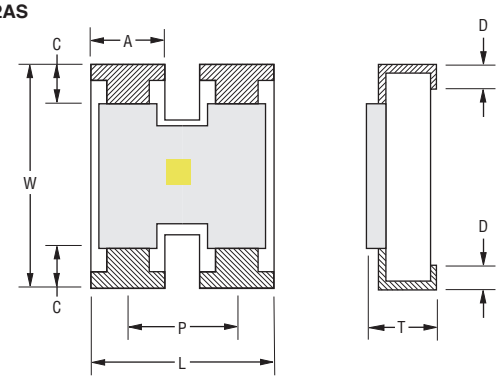
Typical Part Marking

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

Product Dimensions

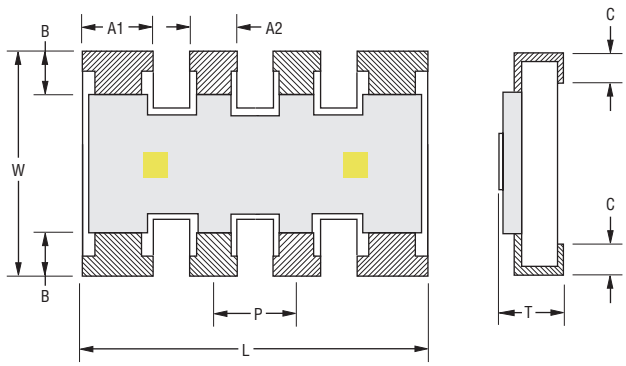
Dim.	CAY10-xxx-J2AS
L	1.00 ± 0.20 (0.039 ± 0.008)
W	1.00 ± 0.20 (0.039 ± 0.008)
A	0.33 ± 0.15 (0.013 ± 0.006)
C	0.20 ± 0.15 (0.008 ± 0.006)
D	0.25 ± 0.10 (0.010 ± 0.004)
T	0.35 ± 0.05 (0.014 ± 0.002)
P	0.65 ± 0.10 (0.026 ± 0.004)

CAY10-xxxJ2AS



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

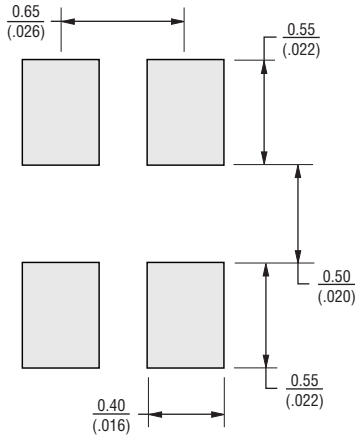
CAY10-xxxJ4AS



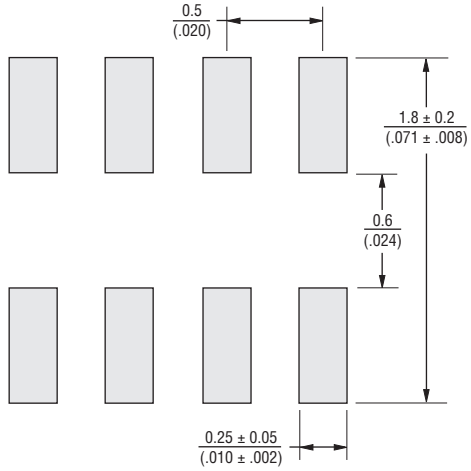
DIMENSIONS: MM / (INCHES)

Recommended Land Patterns

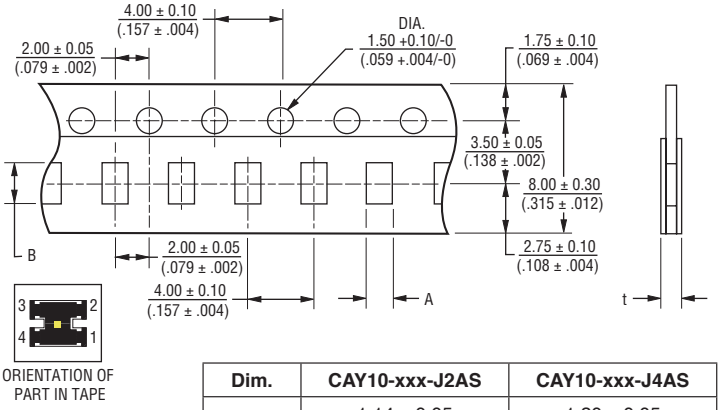
CAY10-xxxJ2AS



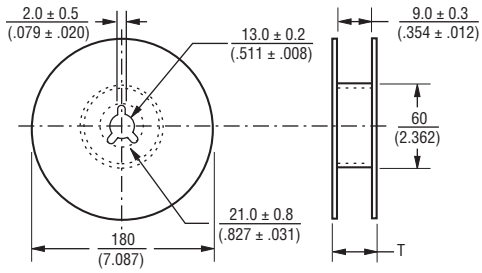
CAY10-xxxJ4AS



Packaging Specifications



ORIENTATION OF PART IN TAPE



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

DIMENSIONS: MM (INCHES)

BOURNS®

Asia-Pacific:
Tel: +886-2 2562-4117
Email: asiacus@bourns.com

Europe:
Tel: +36 88 520 390
Email: eurocus@bourns.com

The Americas:
Tel: +1-951 781-5500
Email: americus@bourns.com

www.bourns.com

10/16