

## Features

- RoHS compliant\*
- Convex and concave terminals
- 2, 4 or 8 isolated elements available
- Resistance tolerance  $\pm 1\%$  and  $\pm 5\%$
- Resistance range: 10 ohms to 1 megohm

## CAT/CAY 16 Series - Chip Resistor Arrays

### Specifications

Requirement	Characteristics	Test Method
Short Time Overload	$\pm 2\% +0.1$ ohm	Rated Voltage X 2.5, 5 seconds
Soldering Heat	$\pm 2\% +0.1$ ohm	260 °C $\pm 5$ °C, 10 seconds $\pm 1$ second
Temperature Cycling (5)	$\pm 1\% + 0.1$ ohm	125 °C (30 minutes) - normal (15 minutes) -55 °C (30 minutes) - normal (15 minutes)
Moisture Load Life	$\pm 3\% +0.1$ ohm	1000 hours
Load Life	$\pm 3\% +0.1$ ohm	1000 hours

### Characteristics

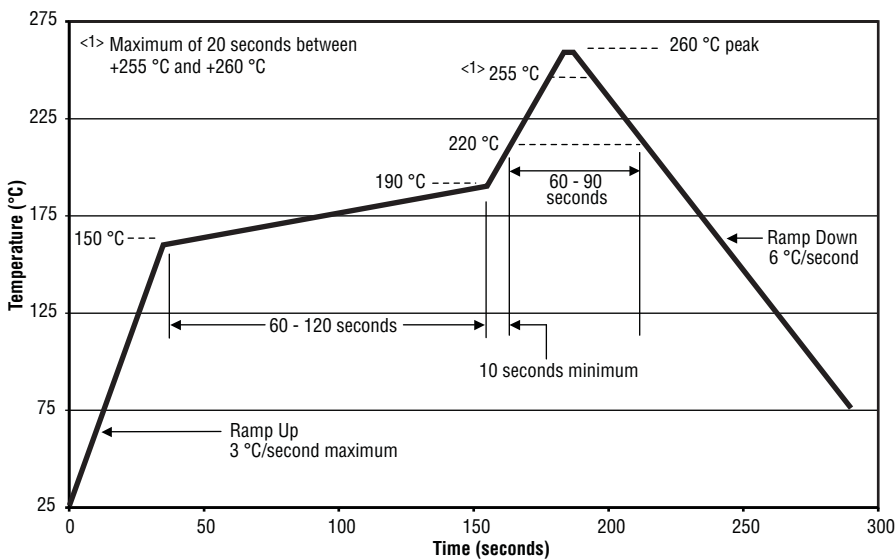
Characteristics	CAT16/CAY16
Number of Elements	2 (J2), 4 (F4, J4), 8 (F8, J8)
Power Rating Per Resistor	62 mW (31 mW for CAY16-J8)
Resistance Tolerance	$\pm 1\%$ , $\pm 5\%$
Resistance Range: E24 (J), E96 + E24 (F) Zero-Ohm Jumper < 0.05 ohm	10 ohms - 1 megohm
Max. Working Voltage	50 V (25 V for CAY16-J8)
Operating Temp. Range	-55 °C - 125 °C

### How To Order

**CA Y 16 - 103 J 4 LF**

Chip Arrays \_\_\_\_\_  
 Type \_\_\_\_\_  
 • CAT16 = Concave Terminations  
 • CAY16 = Convex Terminations  
 Resistance Code \_\_\_\_\_  
 • 103 = 10 K ohms  
 • 1003 = 100 K ohms (1 % tolerance)  
 • 000 = Zero-ohm  
 Resistance Tolerance \_\_\_\_\_  
 • J =  $\pm 5\%$  (Use "J" for zero-ohm jumper)  
 • F =  $\pm 1\%$  (4 resistor pkg. and CAT16-F8)  
 Resistors \_\_\_\_\_  
 • 2 = 2 Isolated Resistors  
 • 4 = 4 Isolated Resistors  
 • 8 = 8 Isolated Resistors  
 Terminations \_\_\_\_\_  
 • LF = Tin-plated (RoHS compliant)

### Soldering Profile for RoHS Compliant Chip Resistors and Arrays



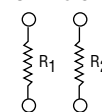
### Packaging Size

J2 ..... 0606 Package Size  
 F4, J4 .... 1206 Package Size  
 F8 ..... 2406 Package Size for CAT16  
 J8 ..... 2406 Package Size for CAT16;  
 1506 Package Size for CAY16

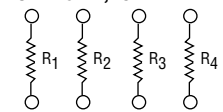
For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

### Schematics

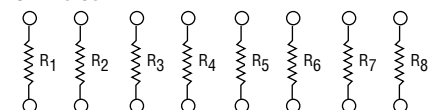
#### CAT16-J2 CAY16-J2



#### CAT16-F4, -J4 CAY16-F4, -J4



#### CAT16-F8, -J8 CAY16-J8



\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex. Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications.

# CAT/CAY 16 Series - Chip Resistor Arrays

**BOURNS®**

## Derating Curve

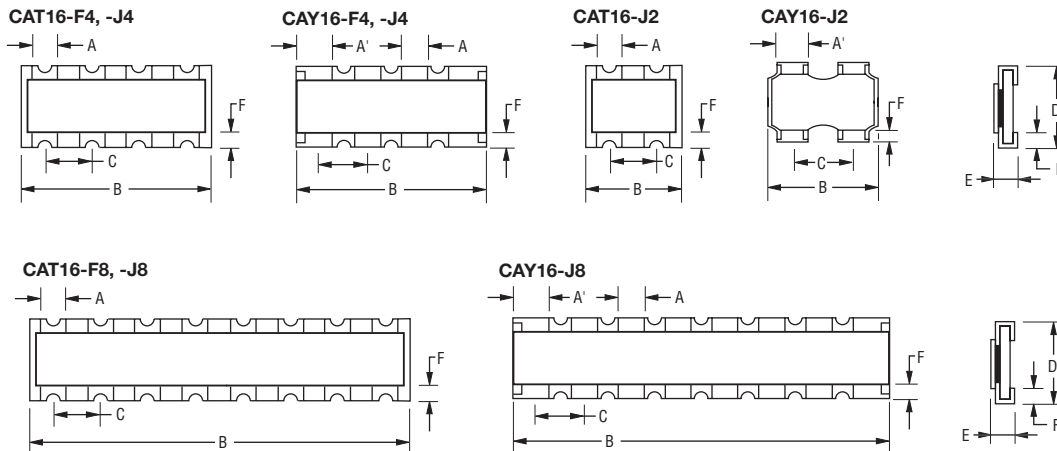


## Dimensions

Model	A	A'	B	C	D	E	F
CAT16-F4, -J4	$\frac{0.40 \pm 0.15}{(.016 \pm .006)}$	—	$\frac{3.20 \pm 0.20}{(.126 \pm .008)}$	$\frac{0.80 \pm 0.10}{(.032 \pm .004)}$	$\frac{1.50 \pm 0.20}{(.059 \pm .008)}$	$\frac{0.50 \pm 0.10}{(.020 \pm .004)}$	$\frac{0.30 \pm 0.20}{(.012 \pm .008)}$
CAY16-F4, -J4	$\frac{0.50 \pm 0.15}{(.002 \pm .006)}$	$\frac{0.70 \pm 0.10}{(.027 \pm .008)}$	$\frac{3.20 \pm 0.20}{(.126 \pm .008)}$	$\frac{0.80 \pm 0.05}{(.032 \pm .002)}$	$\frac{1.60 \pm 0.20}{(.063 \pm .008)}$	$\frac{0.50 \pm 0.10}{(.020 \pm .004)}$	$\frac{0.30 \pm 0.20}{(.012 \pm .008)}$
CAT16-J2	$\frac{0.40 \pm 0.15}{(.016 \pm .006)}$	—	$\frac{1.60 \pm 0.15}{(.063 \pm .006)}$	$\frac{0.80 \pm 0.05}{(.032 \pm .002)}$	$\frac{1.60 \pm 0.15}{(.063 \pm .006)}$	$\frac{0.60 \pm 0.15}{(.024 \pm .006)}$	$\frac{0.30 \pm 0.20}{(.012 \pm .008)}$
CAY16-J2	—	$\frac{0.60 \pm 0.15}{(.024 \pm .006)}$	$\frac{1.60 \pm 0.15}{(.063 \pm .006)}$	$\frac{0.76 \pm 0.10}{(.030 \pm .004)}$	$\frac{1.60 \pm 0.15}{(.063 \pm .006)}$	$\frac{0.45 + 0.15 / -0.10}{(.018 + 0.006 / -0.004)}$	$\frac{0.30 \pm 0.20}{(.012 \pm .008)}$
CAT16-F8, -J8	$\frac{0.40 \pm 0.15}{(.016 \pm .006)}$	—	$\frac{6.40 \pm 0.20}{(.252 \pm .008)}$	$\frac{0.80 \pm 0.15}{(.032 \pm .006)}$	$\frac{1.60 \pm 0.20}{(.063 \pm .008)}$	$\frac{0.60 \pm 0.15}{(.024 \pm .006)}$	$\frac{0.30 \pm 0.20}{(.012 \pm .008)}$
CAY16-J8	$\frac{0.30 \pm 0.15}{(.012 \pm .006)}$	$\frac{0.30 \pm 0.15}{(.012 \pm .006)}$	$\frac{3.80 \pm 0.20}{(.15 \pm .008)}$	$\frac{0.50 \pm 0.05}{(.02 \pm .002)}$	$\frac{1.60 \pm 0.20}{(.063 \pm .008)}$	$\frac{0.50 \pm 0.10}{(.02 \pm .004)}$	$\frac{0.30 \pm 0.15}{(.012 \pm .006)}$

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

## Configurations



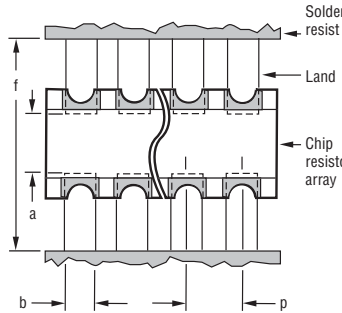
Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# CAT/CAY 16 Series - Chip Resistor Arrays

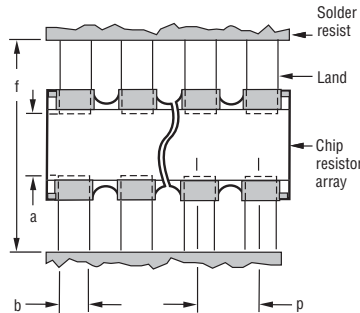
**BOURNS®**

## Land Patterns

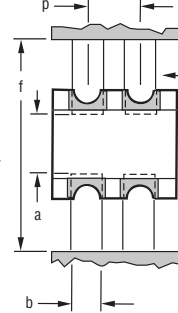
CAT16-F4, -J4, -F8, -J8



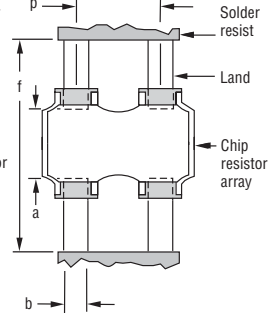
CAY16-F4, -J4, -J8



CAT16-J2

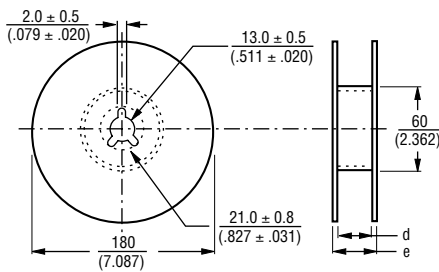
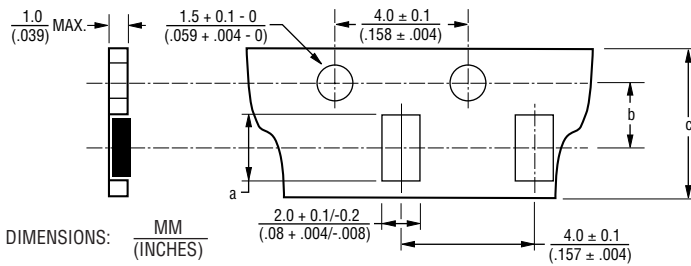


CAY16-J2



Model	a	b	p	f
CAT16-F4, -J4, -F8, -J8	$\frac{0.7 \text{ to } 0.9}{(.028 \text{ to } .035)}$	$\frac{0.4 \text{ to } 0.45}{(.016 \text{ to } .0178)}$	$\frac{0.80}{(.032)}$	$\frac{2.2 \text{ to } 2.6}{(.087 \text{ to } .102)}$
CAY16-F4, -J4	$\frac{0.7 \text{ to } 0.9}{(.028 \text{ to } .035)}$	$\frac{0.4 \text{ to } 0.45}{(.016 \text{ to } .0178)}$	$\frac{0.80}{(.032)}$	$\frac{2.4 \text{ to } 2.8}{(.094 \text{ to } .110)}$
CAY16-J8	$\frac{0.7 \text{ to } 0.9}{(.028 \text{ to } .035)}$	$\frac{0.3 \text{ to } 0.35}{(.012 \text{ to } .014)}$	$\frac{0.50}{(.020)}$	$\frac{2.0 \text{ to } 2.2}{(.079 \text{ to } .087)}$
CAT16-J2	$\frac{0.7 \text{ to } 0.9}{(.028 \text{ to } .035)}$	$\frac{0.4 \text{ to } 0.45}{(.016 \text{ to } .0178)}$	$\frac{0.80}{(.032)}$	$\frac{2.2 \text{ to } 2.6}{(.087 \text{ to } .102)}$
CAY16-J2	$\frac{0.7 \text{ to } 0.9}{(.028 \text{ to } .035)}$	$\frac{0.4 \text{ to } 0.5}{(.016 \text{ to } .020)}$	$\frac{0.80}{(.032)}$	$\frac{2.0 \text{ to } 2.6}{(.079 \text{ to } .102)}$

## Packaging Dimensions



Model	a	b	c	d	e
CAT16-F4, -J4 & CAY16-F4, J4	$\frac{3.60 \pm 0.20}{(.142 \pm .008)}$	$\frac{3.50 \pm .005}{(.138 \pm .004)}$	$\frac{8.0 \pm 0.3}{(.315 \pm .012)}$	$\frac{9.0 \pm 0.3}{(.354 \pm .012)}$	$\frac{11.4 \pm 1.0}{(.449 \pm .040)}$
CAT16-J2 & CAY16-J2	$\frac{1.80 \pm 0.10}{(.070 \pm .004)}$	$\frac{3.50 \pm .005}{(.138 \pm .004)}$	$\frac{8.0 \pm 0.3}{(.315 \pm .012)}$	$\frac{9.0 \pm 0.3}{(.354 \pm .012)}$	$\frac{11.4 \pm 1.0}{(.449 \pm .040)}$
CAT16-F8, -J8	$\frac{6.90 \pm 0.20}{(.272 \pm .008)}$	$\frac{5.50 \pm 0.10}{(.217 \pm .004)}$	$\frac{12.0 \pm 0.2}{(.472 \pm .008)}$	$\frac{13.0 \pm 0.2}{(.512 \pm .008)}$	$\frac{15.4 \pm 1.0}{(.606 \pm .040)}$
CAY16-J8	$\frac{4.10 \pm 0.15}{(.161 \pm .012)}$	$\frac{3.50 \pm 0.05}{(.138 \pm .002)}$	$\frac{8.0 \pm 0.3}{(.315 \pm .012)}$	$\frac{9.0 \pm 0.3}{(.354 \pm .012)}$	$\frac{11.4 \pm 1.0}{(.449 \pm .040)}$

- 5,000 pcs. per reel (J2, J4, CAY16-J8)
- 4,000 pcs. per reel (CAT16-F8, -J8)
- Paper tape

REV. 11/09

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# Chip Resistor Arrays - Application Note

**BOURNS®**

## Component Placement

- Reduce the mechanical stress to a minimum during and after placing of the unit in order not to damage the terminals and protective coating.
- Misplacement of components may cause solder bridges.

## Soldering

- Reflow soldering: Recommendation is shown in the following chart.
- Wave soldering: Recommendation according to IEC standards.
- Hand soldering: Don't touch the protective coating of the part. Solder within 3 seconds when the temperature is over 280 °C.

