



**THE DATASHEET OF  
CAY16-510J8LF**





### Features

- RoHS compliant\*
- Convex and concave terminations
- 4 isolated elements
- 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	4 (F4, J4)
Power Rating Per Resistor @ 70 °C	0.0625 W
Package Power Rating @ 70 °C	0.250 W
Temperature Coefficient of Resistance	$\pm 200$ PPM/°C
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
Max. Overload Voltage	100 V
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 \_\_\_\_\_

- For 1 % Tolerance:
  - <100 ohms - "R" represents decimal point (example: 24R3 = 24.3 ohms)
  - $\geq 100$  ohms - First three digits are significant, fourth digit represents number of zeros to follow (example: 8252 = 82.5k ohms)
- For 5 % Tolerance:
  - <10 ohms - "R" represents decimal point (example: 4R7 = 4.7 ohms)
  - $\geq 10$  ohms - First two digits are significant, third digit represents number of zeros to follow (example: 474 = 470k ohms)
- 000 = Zero Ohm Jumper

Resistance Tolerance \_\_\_\_\_

- J =  $\pm 5\%$  (4 resistor pkg. and Zero Ohm Jumper)
- F =  $\pm 1\%$

Resistors \_\_\_\_\_

- 4 = 4 Isolated Resistors

Terminations \_\_\_\_\_

- LF = Tin-plated (RoHS compliant)

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



### Packaging Size

F4, J4 ..... 1206 Package Size

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

### Additional Information

Click these links for more information:



**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).

# CAT/CAY 16 Series - Chip Resistor Arrays

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## Derating Curve



## Schematics



## Dimensions

Model	A	A'	B	C	D	E	F
CAT16-F4	$0.40 \pm 0.15$ (.016 ± .006)	—	$3.20 \pm 0.20$ (.126 ± .008)	$0.80 \pm 0.10$ (.032 ± .004)	$1.60 \pm 0.20$ (.063 ± .008)	$0.50 \pm 0.10$ (.020 ± .004)	$0.30 \pm 0.15$ (.012 ± .006)
CAT16-J4	$0.40 \pm 0.15$ (.016 ± .006)	—	$3.20 \pm 0.20$ (.126 ± .008)	$0.80 \pm 0.10$ (.032 ± .004)	$1.55 \pm 0.25$ (.061 ± .0098)	$0.50 \pm 0.10$ (.020 ± .004)	$0.30 \pm 0.20$ (.012 ± .008)
CAY16-F4, -J4	$0.50 \pm 0.15$ (.020 ± .006)	$0.70 \pm 0.10$ (.027 ± .004)	$3.20 \pm 0.20$ (.126 ± .008)	$0.80 \pm 0.05$ (.032 ± .002)	$1.60 \pm 0.20$ (.063 ± .008)	$0.50 \pm 0.10$ (.020 ± .004)	$0.30 \pm 0.20$ (.012 ± .008)

## Configurations



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

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# CAT/CAY 16 Series - Chip Resistor Arrays

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## Land Patterns

CAT16-F4, -J4

CAY16-F4, -J4



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

Model	a	b	p	f
CAT16-F4, -J4	$\frac{0.7 \text{ to } 0.9}{(.028 \text{ to } .035)}$	$\frac{0.4 \text{ to } 0.45}{(.016 \text{ to } .0178)}$	$\frac{0.80}{(.032)}$	$\frac{2.2 \text{ to } 2.6}{(.087 \text{ to } .102)}$
CAY16-F4, -J4	$\frac{0.7 \text{ to } 0.9}{(.028 \text{ to } .035)}$	$\frac{0.4 \text{ to } 0.45}{(.016 \text{ to } .0178)}$	$\frac{0.80}{(.032)}$	$\frac{2.4 \text{ to } 2.8}{(.094 \text{ to } .11)}$

## Packaging Dimensions



Model	a	b	c	d	e
CAT16-F4, -J4 & CAY16-F4, J4	$\frac{3.60 \pm 0.20}{(.142 \pm .008)}$	$\frac{3.50 \pm .005}{(.138 \pm .004)}$	$\frac{8.0 \pm 0.3}{(.315 \pm .012)}$	$\frac{9.0 \pm 0.3}{(.354 \pm .012)}$	$\frac{11.4 \pm 1.0}{(.449 \pm .040)}$

- 5,000 pcs. per reel
- Paper tape

REV. 02/23

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# Chip Resistor Arrays - Application Note

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## 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.



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