



**THE DATASHEET OF  
CAT16-471J4LF**





### Features

- RoHS compliant\*
- Convex and concave terminals
- 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)<br>-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)<br>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)**

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# 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      | $0.40 \pm 0.15$<br>(.016 ± .006) | —                                | $3.20 \pm 0.20$<br>(.126 ± .008) | $0.80 \pm 0.10$<br>(.032 ± .004) | $1.60 \pm 0.20$<br>(.063 ± .008)  | $0.50 \pm 0.10$<br>(.020 ± .004) | $0.30 \pm 0.15$<br>(.012 ± .006) |
| CAT16-J4      | $0.40 \pm 0.15$<br>(.016 ± .006) | —                                | $3.20 \pm 0.20$<br>(.126 ± .008) | $0.80 \pm 0.10$<br>(.032 ± .004) | $1.55 \pm 0.25$<br>(.061 ± .0098) | $0.50 \pm 0.10$<br>(.020 ± .004) | $0.30 \pm 0.20$<br>(.012 ± .008) |
| CAY16-F4, -J4 | $0.50 \pm 0.15$<br>(.020 ± .006) | $0.70 \pm 0.10$<br>(.027 ± .004) | $3.20 \pm 0.20$<br>(.126 ± .008) | $0.80 \pm 0.05$<br>(.032 ± .002) | $1.60 \pm 0.20$<br>(.063 ± .008)  | $0.50 \pm 0.10$<br>(.020 ± .004) | $0.30 \pm 0.20$<br>(.012 ± .008) |

## Configurations



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

Specifications are subject to change without notice.

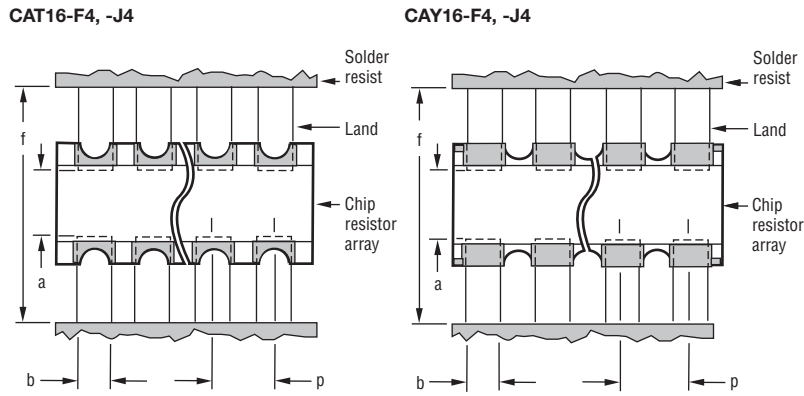
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# CAT/CAY 16 Series - Chip Resistor Arrays

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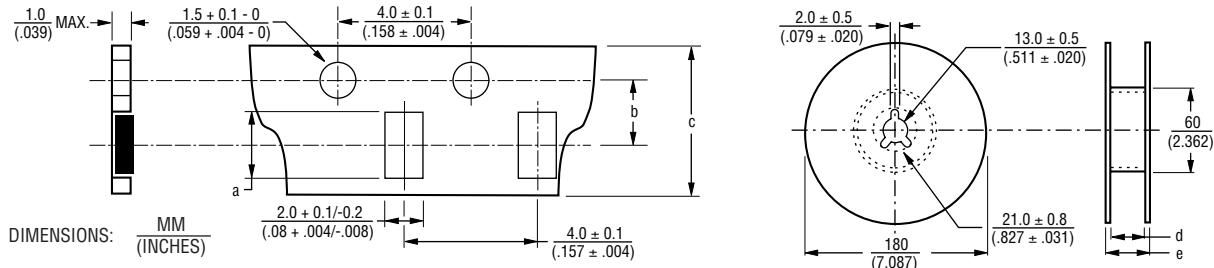
## Land Patterns



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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