Features

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

CAT/CAY 16 Series - Chip Resistor Arrays

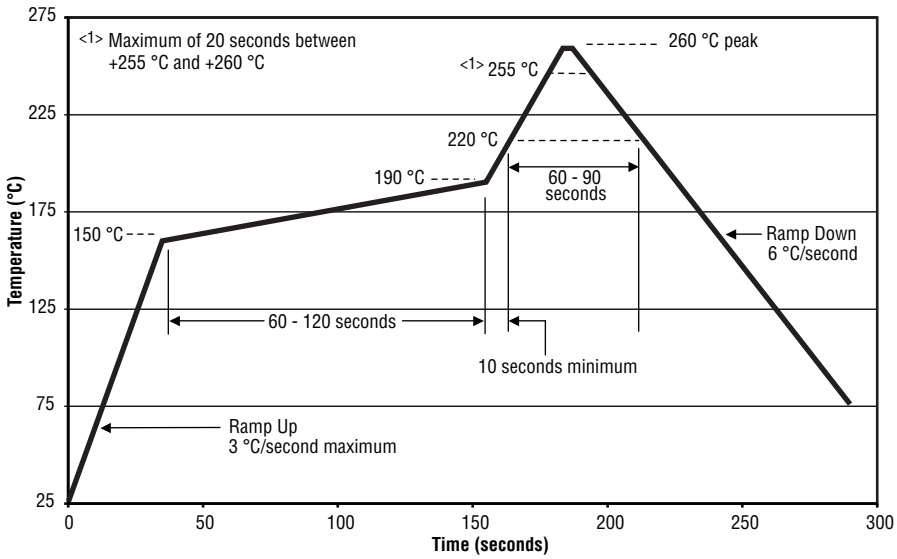
Specifications

Requirement	Characteristics	Test Method
Short Time Overload	±2 % +0.1 ohm	Rated Voltage X 2.5, 5 seconds
Soldering Heat	±2 % +0.1 ohm	260 °C ±5 °C, 10 seconds ±1 second
Temperature Cycling (5)	±1 % + 0.1 ohm	125 °C (30 minutes) - normal (15 minutes) -55 °C (30 minutes) - normal (15 minutes)
Moisture Load Life	±3 % +0.1 ohm	1000 hours
Load Life	±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 @ 70 °C	0.0625 W
Package Power Rating @ 70 °C	0.250 W (0.125 W for J2)
Temperature Coefficient of Resistance	±200 PPM/°C
Resistance Tolerance	±1 %, ±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

Soldering Profile for RoHS Compliant Chip Resistors and Arrays



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)

≥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)

≥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 = ±5 % (2, 4, 8 resistor pkg. and for Zero Ohm Jumper)
- F = ±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)

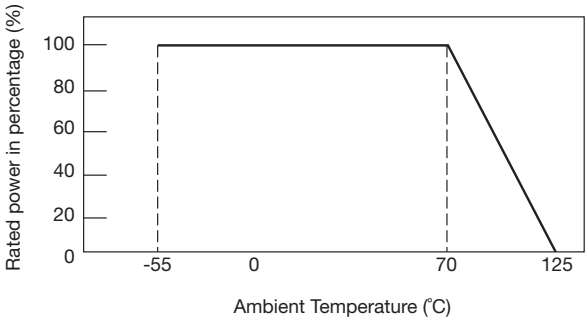
Packaging Size

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.

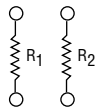
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Derating Curve

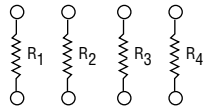


Schematics

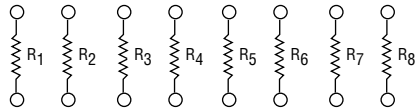
CAT16-J2
CAY16-J2



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



CAT16-F8, -J8
CAY16-J8

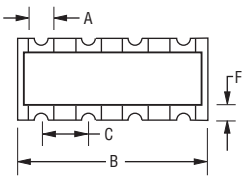


Dimensions

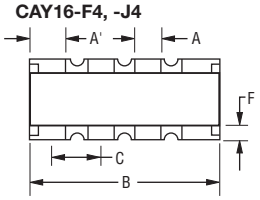
Model	A	A'	B	C	D	E	F
CAT16-F4	0.40 ± 0.15 (.016 ± .006)	—	3.20 ± 0.20 (.126 ± .008)	0.80 ± 0.10 (.032 ± .004)	1.60 ± 0.20 (.063 ± .008)	0.50 ± 0.10 (.020 ± .004)	0.30 ± 0.15 (.012 ± .006)
CAT16-J4	0.40 ± 0.15 (.016 ± .006)	—	3.20 ± 0.20 (.126 ± .008)	0.80 ± 0.10 (.032 ± ± .004)	1.55 ± 0.25 (.061 ± .0098)	0.50 ± 0.10 (.020 ± .004)	0.30 ± 0.20 (.012 ± .008)
CAY16-F4, -J4	0.50 ± 0.15 (.002 ± .006)	0.70 ± 0.10 (.027 ± .004)	3.20 ± 0.20 (.126 ± .008)	0.80 ± 0.05 (.032 ± .002)	1.60 ± 0.20 (.063 ± .008)	0.50 ± 0.10 (.020 ± .004)	0.30 ± 0.20 (.012 ± .008)
CAT16-J2	0.40 ± 0.15 (.016 ± .006)	—	1.60 ± 0.15 (.063 ± .006)	0.80 ± 0.05 (.032 ± .002)	1.60 ± 0.15 (.063 ± .006)	0.60 ± 0.15 (.024 ± .006)	0.30 ± 0.20 (.012 ± .008)
CAY16-J2	—	0.60 ± 0.15 (.024 ± .006)	1.60 ± 0.15 (.063 ± .006)	0.76 ± 0.10 (.030 ± .004)	1.60 ± 0.15 (.063 ± .006)	0.45 +0.15/-0.10 (.018 +0.006/-0.004)	0.30 ± 0.20 (.012 ± .008)
CAT16-F8, -J8	0.40 ± 0.15 (.016 ± .006)	—	6.40 ± 0.20 (.252 ± .008)	0.80 ± 0.15 (.032 ± .006)	1.60 ± 0.20 (.063 ± .008)	0.60 ± 0.15 (.024 ± .006)	0.30 ± 0.20 (.012 ± .008)
CAY16-J8	0.30 ± 0.15 (.012 ± .006)	0.30 ± 0.15 (.012 ± .006)	3.80 ± 0.20 (.15 ± .008)	0.50 ± 0.05 (.02 ± .002)	1.60 ± 0.20 (.063 ± .008)	0.50 ± 0.10 (.02 ± .004)	0.30 ± 0.15 (.012 ± .006)

Configurations

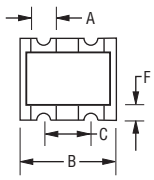
CAT16-F4, -J4



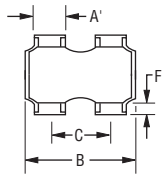
CAY16-F4, -J4

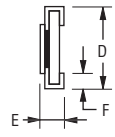


CAT16-J2



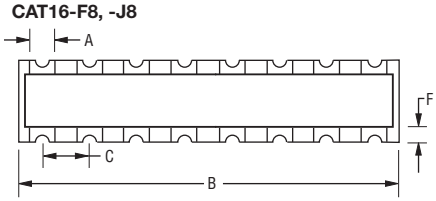
CAY16-J2



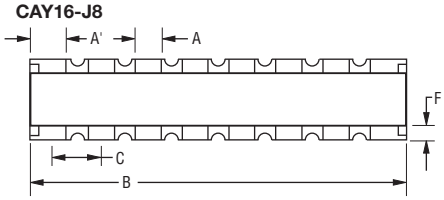


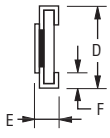
DIMENSIONS: MM / (INCHES)

CAT16-F8, -J8



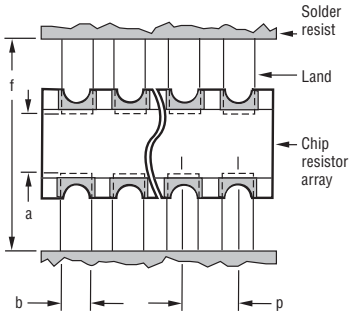
CAY16-J8



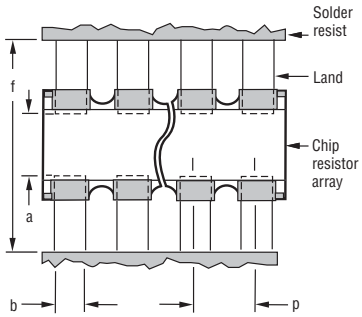


Land Patterns

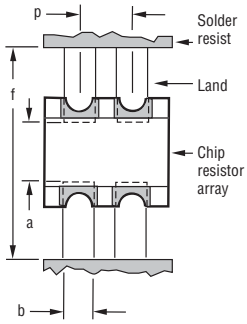
CAT16-F4, -J4, -F8, -J8



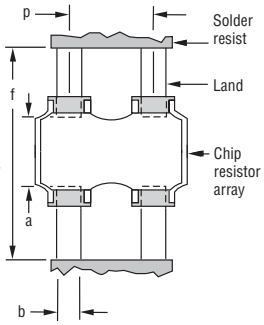
CAY16-F4, -J4, -J8



CAT16-J2

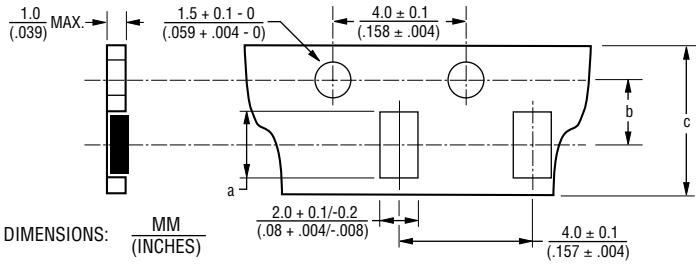


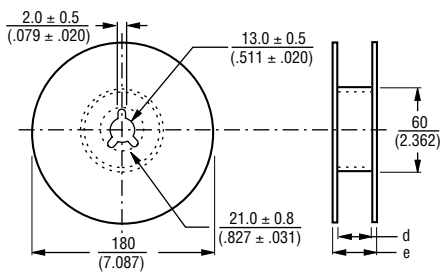
CAY16-J2



Model	a	b	p	f
CAT16-F4, -J4, -F8, -J8	0.7 to 0.9 (.028 to .035)	0.4 to 0.45 (.016 to .0178)	0.80 (.032)	2.2 to 2.6 (.087 to .102)
CAY16-F4, -J4	0.7 to 0.9 (.028 to .035)	0.4 to 0.45 (.016 to .0178)	0.80 (.032)	2.4 to 2.8 (.094 to .11)
CAY16-J8	0.7 to 0.9 (.028 to .035)	0.3 to 0.35 (.012 to .014)	0.50 (.020)	2.0 to 2.2 (.079 to .087)
CAT16-J2	0.7 to 0.9 (.028 to .035)	0.4 to 0.45 (.016 to .0178)	0.80 (.032)	2.2 to 2.6 (.087 to .102)
CAY16-J2	0.7 to 0.9 (.028 to .035)	0.4 to 0.5 (.016 to .020)	0.80 (.032)	2.0 to 2.6 (.079 to .102)

Packaging Dimensions





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

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

Component Placement

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

Soldering

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