



Features

- RoHS compliant*
- Concave terminal style
- 4 isolated elements available
- Resistance tolerance: 1 % and 5 %

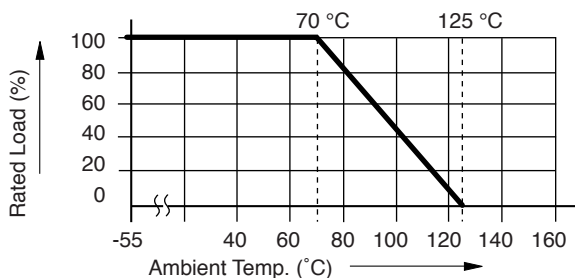
- Resistance range: 10 Ω to 1 M Ω and zero jumper
- AEC-Q200 compliant

CAT16A-LF Series – Thick Film Chip Arrays

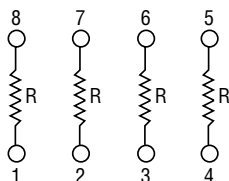
Electrical Characteristics

Characteristic	CAT16A-xxx4LF
Number of Elements (Isolated)	4
Power Rating @ 70 °C per Resistor	63 mW
Resistor Tolerance	1 %, 5 %
Resistor Range & TCR (E24 + E96 for 1 %, E24 for 5 %) plus zero ohm jumper	1 %, 10 ~ 1 M Ω ... 200 ppm/°C 5 %, 10 ~ 1 M Ω ... 200 ppm/°C
Maximum Overload Voltage	100 V
Maximum Working Voltage	50 V
Operating Temperature Range	-55 to +125 °C
Rating Temperature	+70 °C
Packaging	5,000 pieces per reel
Zero Ohm Jumper Current Rating / Max. Resistance (per element)	1 A / 2.5 A / 50 m Ω max.

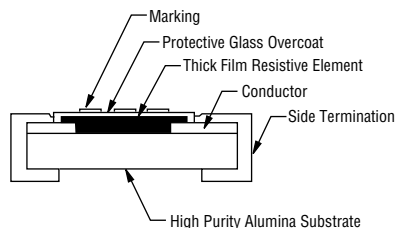
Derating Curve



Isolated Circuit



Construction



Additional Information

Click these links for more information:



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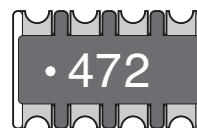


[SAMPLES](#)



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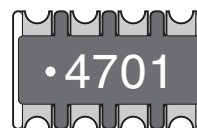
Typical Part Marking



±5 % (E24)

3 digits; first two digits are significant, third digit is the number of zeroes to follow.

EX: 472 = 4700 Ω = 4.7K Ω
000 = 0 Ω



±1 % (E96)

4 digits; first three digits are significant, fourth digit is the number of zeroes to follow.

EX: 4701 = 4700 Ω = 4.7K Ω

Storage Conditions

5~35 °C, 40~75 % RH, 2 years



WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.

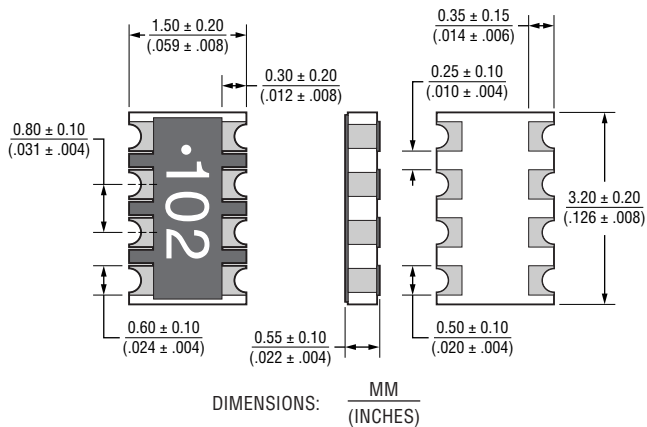
Users should verify actual device performance in their specific applications.

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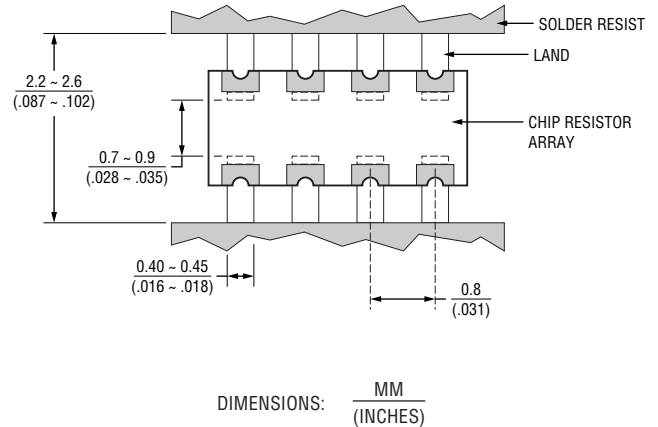
CAT16A-LF Series – Thick Film Chip Arrays

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Product Dimensions



Recommended Pad Layout



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CAT16A-LF Series – Thick Film Chip Arrays

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How to Order

CA T 16 A - 103 J 4 LF

Series

CA = Chip Array

Type

T = Concave

Model

16 = 06 Package Width

Feature

A = AEC-Q200 Compliant

Resistance Code

For 1 % Tolerance: (E96)

<100 Ω – “R” represents decimal point (example 24R3 = 24.3 Ω)

$\geq 100 \Omega$ – First three digits are significant, fourth digit represents number of zeroes to follow (example: 8252 = 82.5k Ω).

For 5 % Tolerance: (E24)

$\geq 10 \Omega$ – First two digits are significant, third digit represents the number of zeroes to follow (example: 474 = 470k Ω)

000 = Zero Ohm Jumper.

Resistance Tolerance

F = $\pm 1\%$ J = $\pm 5\%$

Number of Resistors

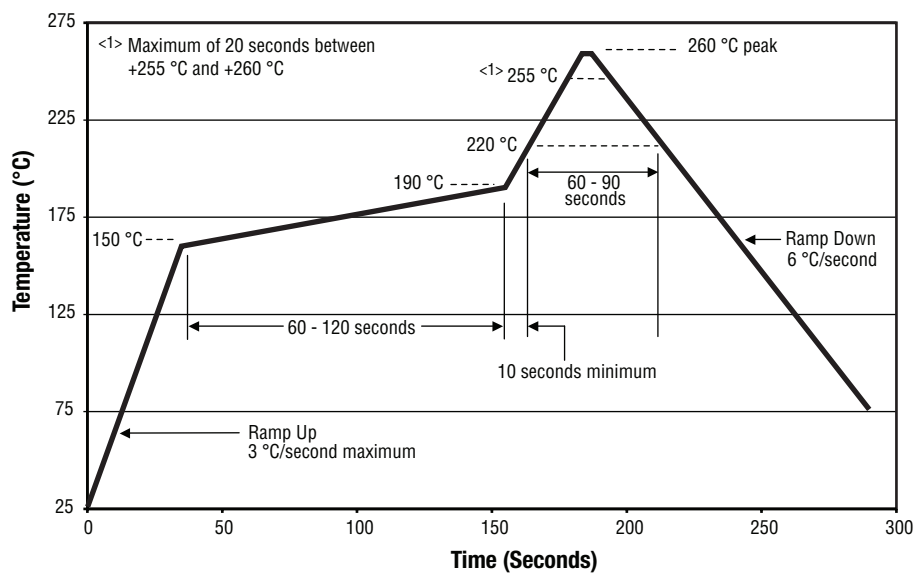
4 = 4 Resistors

Special Characteristics

LF = Tin-plated Terminations (RoHS Compliant)

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

Soldering Profile



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CAT16A-LF Series – Thick Film Chip Arrays

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Performance Characteristics (AEC-Q200)

Test	Procedure	Test Limits
Short Time Overload	2.5 X rated voltage for 5 sec.	$\pm (2.0 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
High Temperature Exposure (Storage)	1000 hrs. @ T=125 °C. Unpowered. Measurement at 24 $\pm$ 2 hours after test conclusion.	1 %: $\pm (1.0 \% + 0.05 \Omega)$ 5 %: $\pm (2.0 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
Temperature Cycling	1000 Cycles (-55 °C to +125 °C) Measurement at 24 $\pm$ 4 hours after test conclusion. 30 min. maximum dwell time at each temperature extreme. 1 min. maximum transition time.	$\pm (2.0 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
Moisture Resistance	T=24 hours / Cycle, 10 Cycles. Notes: Steps 7a & 7b not required. Unpowered.	$\pm (2.0 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
Biased Humidity	1000 hours 85 °C / 85 % RH. Note: Specified conditions: 10 % of operating power (not exceeding max. working voltage). Measurement at 24 $\pm$ 2 hours after test conclusion.	$\pm (3 \% + 0.1 \Omega)$ 0 Ω : 100 m Ω or less
Operational Life	1000 hours T _A =125 °C at 35 % rated power. Measurement at 24 $\pm$ 4 hours after test conclusion.	$\pm (3 \% + 0.1 \Omega)$ 0 Ω : 100 m Ω or less
Mechanical Shock	Wave Form: Tolerance for half sine shock pulse. Peak value is 100 g's. Normal duration (D) is 6 ms.	$\pm (1 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
Vibration	5 g's for 20 min., 12 cycles each of 3 orientations. Note: Test from 10-2000 Hz.	$\pm (1 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
Resistance to Soldering Heat	Condition B: Immerse the specimens in an eutectic solder at 260 $\pm$ 5 °C for 10 $\pm$ 1 s.	$\pm (1 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
Thermal Shock	-55 °C / +155 °C. Note: Number of cycles required: 300, Maximum transfer time: 20 seconds, dwell time: 15 minutes. Air to Air.	$\pm (1 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
ESD	Verify the voltage setting at 500 V	$\pm (2 \% + 0.1 \Omega)$
Solderability	Method B, aging 4 hours at 155 °C dry heat Lead-free solder bath at 235 $\pm$ 3 °C Dipping time: 3 $\pm$ 0.5 seconds	> 95 % area covered with tin
Flammability	V-0 or V-1 are acceptable. Electrical test not required.	V-0 or V-1
Board Flex (Bending)	The duration of the applied forces shall be 60 (+ 5) sec.	$\pm (1 \% + 0.1 \Omega)$ 0 Ω : 50 m Ω or less
Terminal Strength (SMD)	Force of 1.8 kg for 60 seconds.	$\pm (1 \% + 0.05 \Omega)$ 0 Ω : 50 m Ω or less

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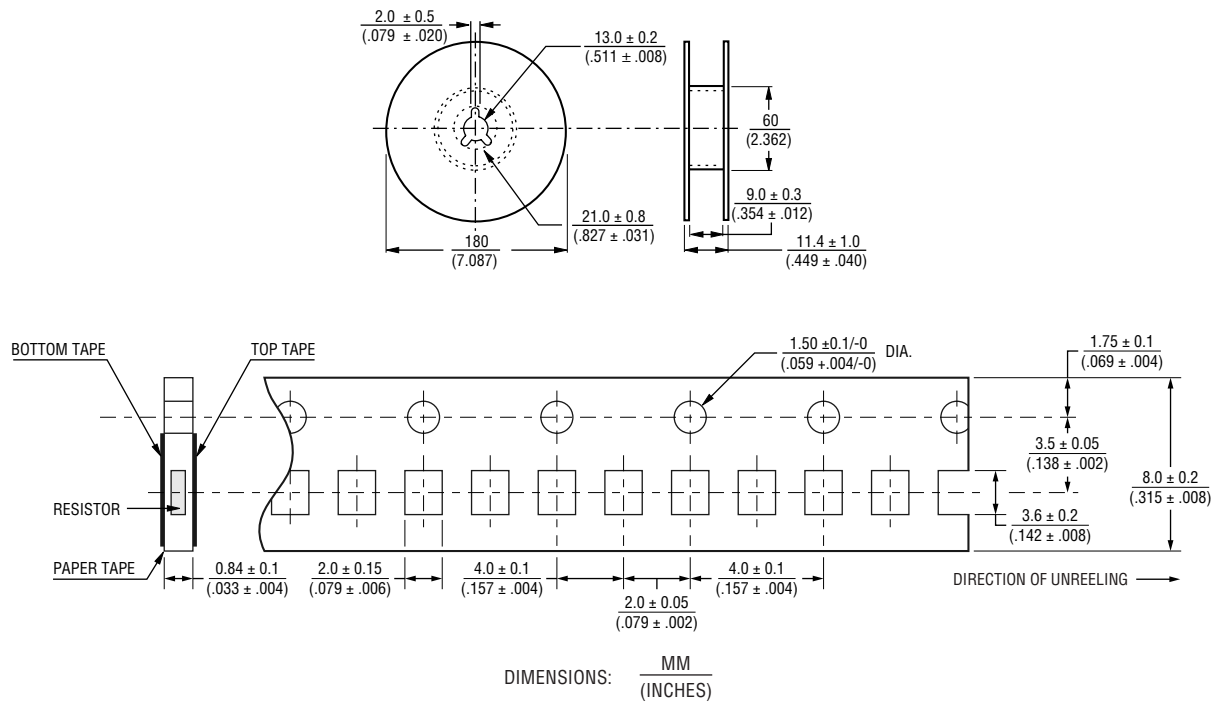
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CAT16A-LF Series – Thick Film Chip Arrays

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Packaging Dimensions



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