

Thin Film 0510 Size Resistor on Alumina



Product may not
be to scale

The CC4 series single-value resistor chips offer increased power in larger size, low shunt capacitance and solder pad option. The CC4s nichrome resistor material offers excellent stability.

The CC4s are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The CC4s are 100 % electrically tested and visually inspected to MIL-STD-883.

APPLICATIONS

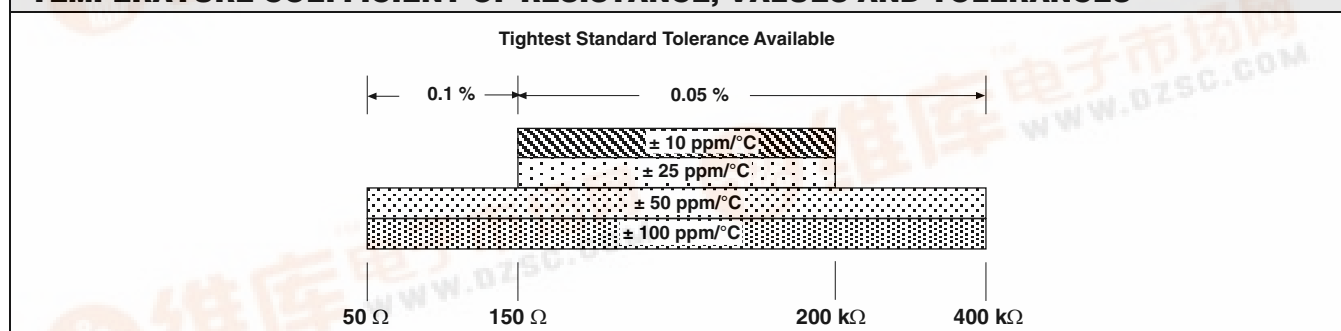
Vishay EFI CC4 chip resistors provide excellent high-frequency response and are ideally suited for prototyping.

Typical application areas are:

- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

Recommended for hermetic environments where die is not exposed to moisture.

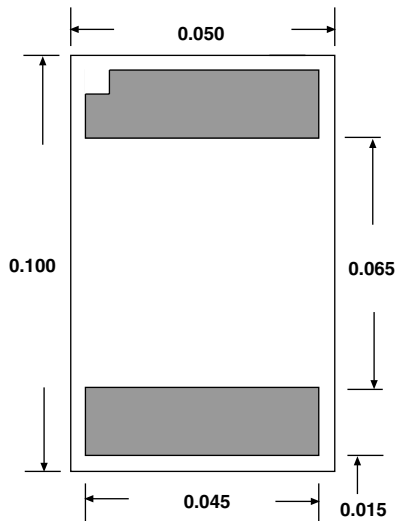
TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES AND TOLERANCES



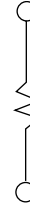
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	
Noise, MIL-STD-202, Method 308	- 20 dB typ.
Moisture Resistance, MIL-STD-202 Method 106 - Hermetic Applications	± 0.2 % max. $\Delta R/R$
Stability, 1000 h, + 125 $^{\circ}$ C, 175 mW	± 0.1 % max. $\Delta R/R$
Operating Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	± 0.25 % max. $\Delta R/R$
High Temperature Exposure, + 150 $^{\circ}$ C, 100 h	± 0.1 % max. $\Delta R/R$
Dielectric Voltage Breakdown	400 V
Insulation Resistance	10^{12} min.
Operating Voltage	100 V max.
DC Power Rating at + 125 $^{\circ}$ C (Derated to Zero at + 150 $^{\circ}$ C)	175 mW max.
5 x Rated Power Short-Time Overload, + 25 $^{\circ}$ C, 5 s	± 0.25 % max. $\Delta R/R$

DIMENSIONS in inches



SCHEMATIC



CHIP
RESISTORS

MECHANICAL SPECIFICATIONS in inches

PARAMETER	
Chip Size	0.050 x 0.100 ± 0.003 (1.27 x 2.54 ± 0.076 mm)
Chip Thickness	0.010 ± 0.002 (0.254 ± 0.05 mm)
Chip Substrate Material	99.6 % alumina, 2 - 4 microinch finish
Resistor Material	Nichrome
Bonding Pad Size	0.015 x 0.045 (0.381 x 1.143 mm) minimum
Number of Pads	2
Pad Material	25 kÅ minimum gold standard
Backing	None

Options: Terminations: Aluminum, nickel solder (62/32)
 Gold back for solder die attach
 Contact Applications Engineer

ORDERING INFORMATION

Example: 100 % visual, 80 Ω, ± 10 %, ± 50 ppm/°C TCR, gold terminations

W INSPECTION /PACKAGING	CC4 PRODUCT FAMILY	8000 RESISTANCE VALUE	B MULTIPLIER CODE	K TOLERANCE CODE	D TCR	G TERMINATIONS
W = 100 % visually inspected parts in matrix tray per MIL-STD-883 X = Sample, commercial visually inspected parts loaded in matrix trays (4 % AQL)		Use first 4 significant digits of resistance	B = 0.01 A = 0.1 0 = 1 1 = 10 2 = 100	A = 0.05 %* B = 0.1 %* C = 0.25 %* D = 0.5 % F = 1.0 % G = 2.0 % J = 5.0 % K = 10 % *Coating standard	A = ± 10 ppm/°C B = ± 25 ppm/°C D = ± 50 ppm/°C E = ± 100 ppm/°C	G = Gold S = Solder

Disclaimer

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