

Thin Film 0510 Size Resistor on Alumina

CHIP RESISTORS



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:

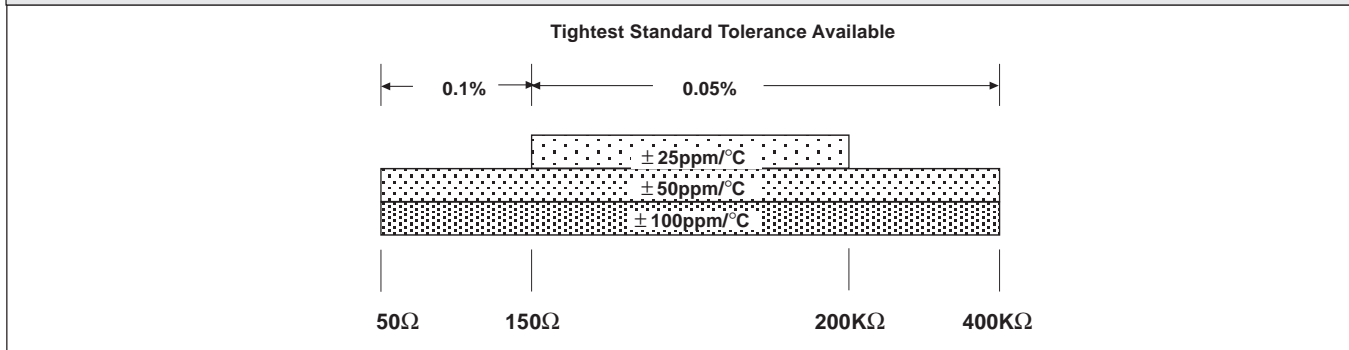
- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

Recommended for hermetic environment where die is not exposed to moisture

FEATURES

- Chip size: 0.050 x 0.100 inches
- Resistance range: 50Ω to 400kΩ
- Alumina substrate
- Low stray capacitance: < 0.2pF
- Resistor material: nichrome
- Resistor passivation coat optional
- Tolerances to 0.05%
- Solder pad optional

TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES AND TOLERANCES

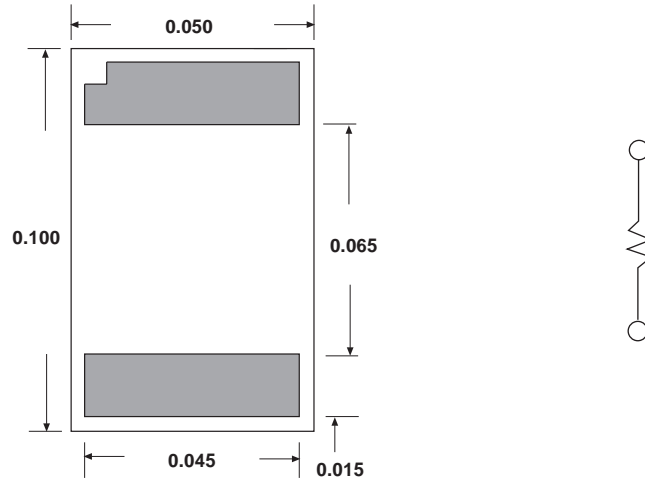


STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	
Noise, MIL-STD-202, Method 308	- 20dB typical
Moisture resistance, MIL-STD-202 Method 106 - Hermetic applications	± 0.2% maximum ΔR/R
Stability, 1000 hours, + 125°C, 175mW	± 0.1% maximum ΔR/R
Operating temperature range	- 55°C to + 125°C
Thermal shock, MIL-STD-202, Method 107, Test condition F	± 0.25% maximum ΔR/R
High temperature exposure, + 150°C, 100 hours	± 0.1% maximum ΔR/R
Dielectric voltage breakdown	400V
Insulation resistance	10 ¹² minimum
Operating voltage	100V maximum
DC power rating at + 125°C (derated to zero at + 150°C)	175mW maximum
5 x rated power short-time overload, + 25°C, 5 seconds	± 0.25% maximum ΔR/R

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DIMENSIONS in inches

SCHEMATIC


MECHANICAL SPECIFICATIONS in inches	
PARAMETER	
Chip size	0.050 x 0.100 ± 0.003 (1.27 x 2.54 ± 0.076mm)
Chip thickness	0.010 ± 0.002 (0.254 ± 0.05mm)
Chip substrate material	99.6% alumina, 2-4 microinch finish
Resistor material	Nichrome
Bonding pad size	0.015 x 0.045 (0.381 x 1.143mm) minimum
Number of pads	2
Pad material	25kÅ 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% visualled, 80Ω, ± 10%, ± 50ppm/°C TCR, Gold Terminations, Resistor coated (thermal set plastic)						
W	CC4	8000	B	K	D	GC
INSPECTION /PACKAGING	PRODUCT FAMILY	RESISTANCE VALUE	MULTIPLIER CODE	TOLERANCE CODE	TCR	TERMINATIONS
W = 100% visually inspected parts in matrix tray per MIL-STD-883		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 = ± 10ppm/°C B = ± 25ppm/°C D = ± 50ppm/°C E = ± 100ppm/°C	G = Gold S = Solder GC = Gold/Coated SC = Solder/Coated