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 CC4- nichrome resistors material offers excellent stability.

The CC4- resistors are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The CC4- resistors are 100 % electrically tested and visually inspected to MIL-STD-883, method 2032 class H or K.

FEATURES

- Wire bondable
- Chip size: 0.050" x 0.100"
- Case: 0510
- Resistance range: 50 Ω to 400 kΩ
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: Nichrome
- Resistor passivation coat optional
- Tolerances to 0.05 %
- Solder pad optional
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

RoHS* Available

HALOGEN FREE Available

GREEN (5-2008) Available

Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

APPLICATIONS

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

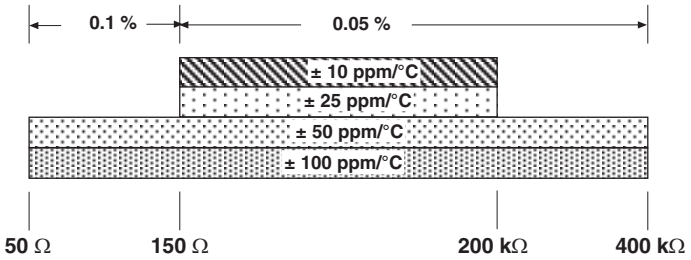
- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

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

TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES, AND TOLERANCES

PARAMETER	VALUE	UNIT
Resistance range	50 to 400K	Ω
Tolerances	± 0.05, ± 0.1	%
TCR	± 10, ± 25, ± 50, ± 100	ppm/°C

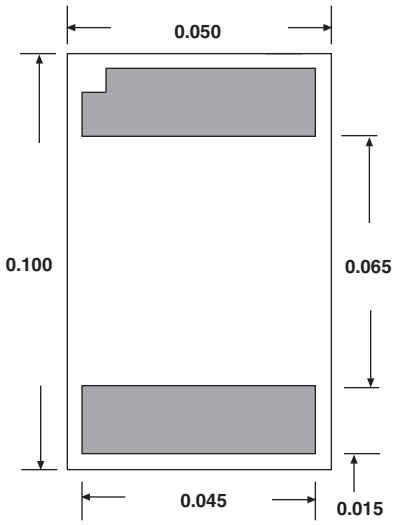
Tightest Standard Tolerance Available



STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	VALUE	UNIT
Noise, MIL-STD-202, method 308	-20 typ.	dB
Moisture resistance, MIL-STD-202, method 106 - hermetic applications	± 0.2 max. $\Delta R/R$	%
Stability, 1000 h, +125 °C, 175 mW	± 0.1 max. $\Delta R/R$	%
Operating temperature range	-55 to +125	°C
Thermal shock, MIL-STD-202, method 107, test condition F	± 0.25 max. $\Delta R/R$	%
High temperature exposure, +150 °C, 100 h	± 0.1 max. $\Delta R/R$	%
Dielectric voltage breakdown	400	V
Insulation resistance	10^{12} min.	Ω
Operating voltage	100 max.	V
DC power rating at +125 °C (derated to zero at +150 °C)	0.175 max.	W
5 x rated power short-time overload, +25 °C, 5 s	± 0.25 max. $\Delta R/R$	%

DIMENSIONS in inches



SCHEMATIC

MECHANICAL SPECIFICATIONS	
PARAMETER	
Chip size	0.050" x 0.100" ± 0.003" (1.27 mm x 2.54 ± 0.076)
Chip thickness	0.010" ± 0.002" (0.254 mm ± 0.05)
Chip substrate material	99.6 % alumina, 2 to 4 microinch finish
Resistor material	Nichrome
Bonding pad size	0.015" x 0.045" (0.381 mm x 1.143 mm) minimum
Number of pads	2
Pad material	25 kÅ minimum gold standard
Backing	None

GLOBAL PART NUMBER INFORMATION

Global Part Number: CC4-12500KKSSNHWS

Global Part Number Description: CC4 1.25K 10 %, 100 ppm/°C, Std, SnPb, None, H, WS

C	C	4	-	1	2	5	0	0	K	K	S	S	N	H	W	S

MODEL	RESISTANCE	RESISTANCE MULTIPLIER CODE	TOL. CODE (%)	TCR (ppm/°C)	TRIM STYLE	TERMINATION	BACK METAL	VISUAL CLASS	PACKAGING CODE
CC4- 50 x 100 size NiCr on alumina	First 4 digits are significant figures 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** = 10.0	**E** = ± 25 **C** = ± 50 **K** = ± 100	**E** = edg **S** = std **U** = usr	**G** = Au **S** = SnPb **A** = Al **T** = lead (Pb)-free (e1)	**G** = Au **N** = none	**H** = class H **K** = class K	**WS** = waffle pack 100 min., 1 mult. **TS** = tape and reel 100 min., 1 mult.

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