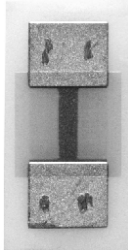


Thin Film 0402 Size Resistor on Alumina



Product may not be to scale

FEATURES

- Wire bondable
- Small single chip size: 0.020 x 0.040 inches
- Resistance range: 10 Ω to 24 k Ω
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: Nichrome
- Resistor passivation coat optional
- Solder Pads optional

The CC1 series single-value resistor chips offer a small size, low shunt capacitance and solder pad option. The CC1s nichrome resistor material offers excellent stability.

The CC1s are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The CC1s are 100 % electrically tested and visually inspected to MIL-STD-883.

APPLICATIONS

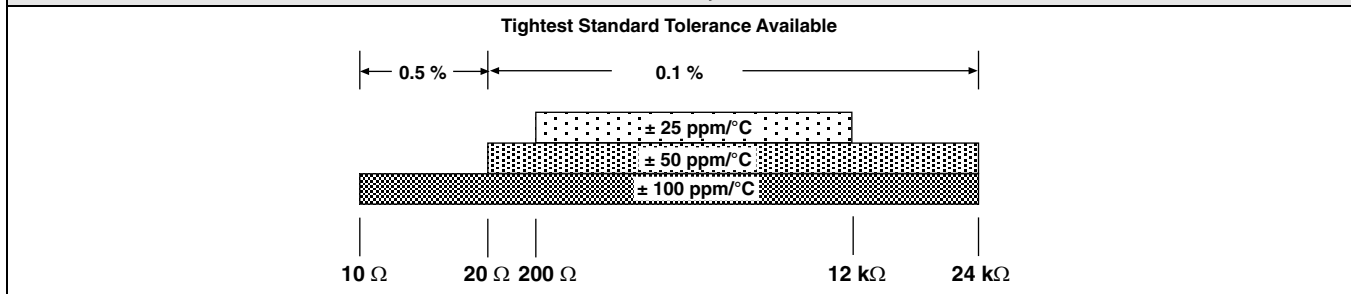
Vishay EFI CC1 chip resistors provide excellent high-frequency response and are ideally suited for prototyping.

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

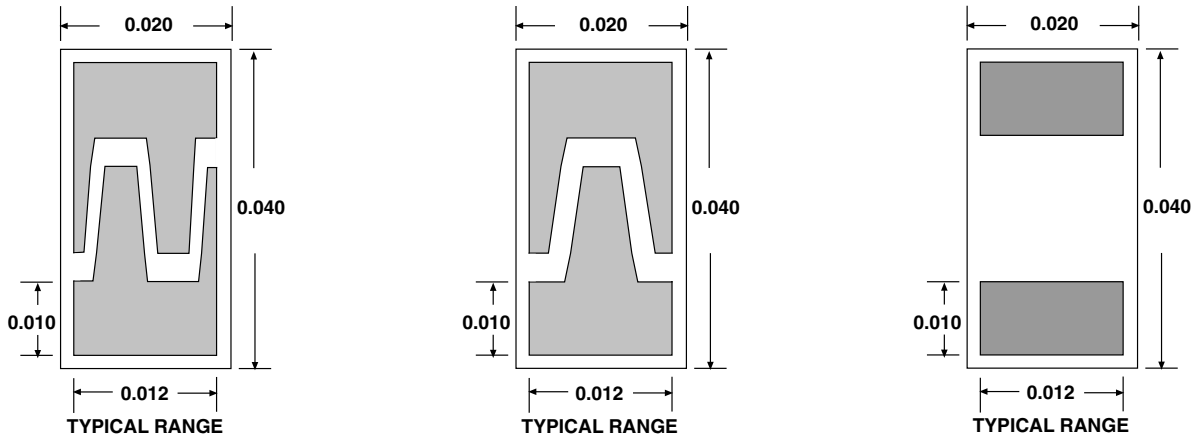


Note

* Only 25 Ω to 1 k Ω are standard strip line designs for microwave applications

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 °C, 40 mW	± 0.1 % max. $\Delta R/R$
Operating Temperature Range	- 55 °C 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.
Operating Voltage	100 V max.
DC Power Rating at + 125 °C (Derated to Zero at + 150 °C)	40 mW max.
5 x Rated Power Short-Time Overload, + 25 °C, 5 s	± 0.25 % max. $\Delta R/R$

DIMENSIONS in inches

SCHEMATIC


MECHANICAL SPECIFICATIONS in inches	
PARAMETER	
Chip Size	0.020 x 0.040 ± 0.003 (0.5 x 1.0 ± 0.08 mm)
Chip Thickness	0.010 ± 0.002 (0.254 ± 0.03 mm)
Chip Substrate Material	99.6 % alumina, 2 - 4 microinch finish
Resistor Material	Nichrome
Bonding Pad Size	0.010 x 0.012 (0.175 x 0.30 mm)
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, 50 Ω, ± 10 %, ± 100 ppm/°C TCR, gold terminations						
W	CC1	5000	B	K	E	G
INSPECTION/ PACKAGING	PRODUCT FAMILY	RESISTANCE VALUE	MULTIPLIER CODE	TOLERANCE CODE	TCR	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	B = 0.1 %* C = 0.25 %* D = 0.5 % F = 1.0 % G = 2.0 % J = 5.0 % K = 10 %	B = ± 25 ppm/°C D = ± 50 ppm/°C E = ± 100 ppm/°C	G = Gold S = Solder
				* Coating standard		

Note

- Factory will convert order number into final part number



Disclaimer

All product specifications and data are subject to change without notice.

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