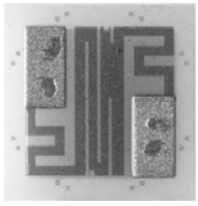
Thin Film 0202 Size Resistor on Alumina



Product may not be to scale

The CC8 series resistor chips offer a combination of low shunt capacitance, small size and excellent stability.
The CC8s are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The CC8s are 100 % electrically tested and visually inspected to MIL-STD-883.

FEATURES

- Wire bondable
- Chip size: 0.020 inches square
- Resistance range: 20 Ω to 20 kΩ
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: Nichrome with passivation coat
- Tolerances to 0.5 %

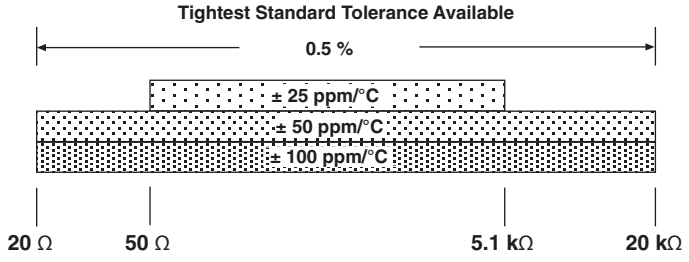
APPLICATIONS

Vishay EFI CC8 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.

TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES AND TOLERANCES



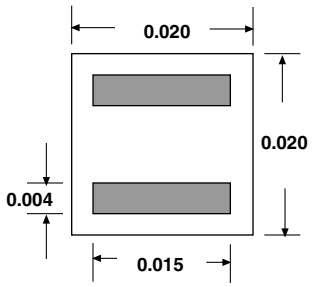
PROCESS CODE	
CLASS H*	CLASS K*
303	308
302	307
301	306

* MIL-PRF-38534 inspection criteria

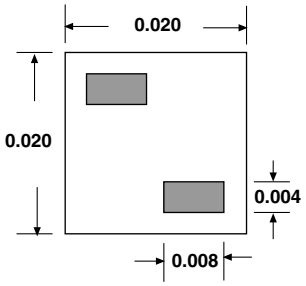
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	
Noise, MIL-STD-202, Method 308	- 20 dB typ.
Moisture Resistance, MIL-STD-202 Method 106 (Passivated Film)	± 0.5 % max. Δ*R*/*R*
Stability, 1000 h, + 125 °C, 25 mW	± 0.2 % max. Δ*R*/*R*
Operating Temperature Range	- 55 °C to + 125 °C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	± 0.25 % max. Δ*R*/*R*
High Temperature Exposure, + 150 °C, 1000 h	± 0.5 % max. Δ*R*/*R*
Dielectric Voltage Breakdown	400 V
Insulation Resistance	10^{12} min.
Operating Voltage	100 V max.
DC Power Rating at + 70 °C (Derated to Zero at + 150 °C)	35 mW max.
5 x Rated Power Short-Time Overload, + 25 °C, 5 s	± 0.25 % max. Δ*R*/*R*

DIMENSIONS in inches



TYPICAL RANGE
20 Ω - 100 Ω



TYPICAL RANGE
110 Ω - 20 kΩ

SCHEMATIC

MECHANICAL SPECIFICATIONS in inches	
PARAMETER	
Chip Size	0.020 x 0.020 ± 0.003 (0.5 x 0.5 ± 0.08 mm)
Chip Thickness	0.010 ± 0.002 (0.25 ± 0.05 mm)
Chip Substrate Material	99.6 % alumina, 2 - 4 microinch finish
Resistor Material	Nichrome
Bonding Pad Size	0.004 x 0.008 (0.10 x 0.20 mm) minimum
Number of Pads	2
Pad Material	25 kΩ minimum gold standard
Passivation	Thermalset plastic
Backing	None

Options: Gold back for solder die attach
Contact Applications Engineer

ORDERING INFORMATION

Example: 100 % visual, 50 Ω, ± 10 %, ± 50 ppm/°C TCR, gold pads, class H visual inspection

W	**CC8**	**302**	**5000**	**B**	**K**
INSPECTION/ PACKAGING	PRODUCT FAMILY	PROCESS CODE	RESISTANCE VALUE	MULTIPLIER CODE	TOLERANCE CODE
W = 100 % visually inspected parts in matrix tray per MIL-STD-883 X = Sample, commercial visually inspected parts loaded in matrix trays (4 % AQL)		See Process Code table	Use first 4 significant digits of resistance	**B** = 0.01 **A** = 0.1 **0** = 1 **1** = 10	**D** = 0.5 % **F** = 1.0 % **G** = 2.0 % **H** = 2.5 % **J** = 5.0 % **K** = 10 % *Coating standard

Disclaimer

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

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