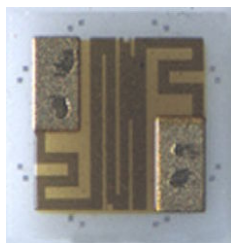


## Thin Film 0202 Size Resistor on Alumina



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 method 2032 class H or class K.

### FEATURES

- Chip size: 0.020 inches square
- Wire bondable
- Resistance range: 20  $\Omega$  to 20 k $\Omega$
- Alumina substrate
- Case: 0202
- Low stray capacitance: < 0.2 pF
- Resistor material: nichrome with passivation coat
- Tolerances to 0.5 %
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### APPLICATIONS

Vishay EFI CC8 chip resistors provide excellent high-frequency response and are ideally suited for prototyping.

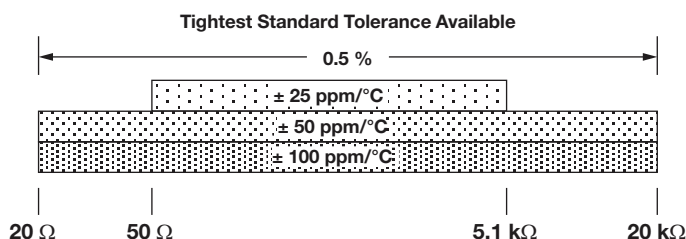
Typical application areas are:

- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

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

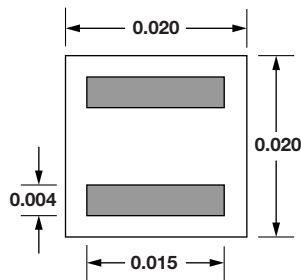
### TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES, AND TOLERANCES

PARAMETER	VALUE	UNIT
Total Resistance Range	20 to 20K	$\Omega$
Standard Tolerances	$\pm 0.5$	%
TCR	$\pm 25, \pm 50, \pm 100$	ppm/ $^{\circ}$ C

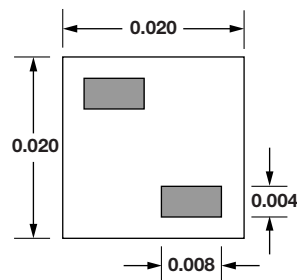


### STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	VALUE	UNIT
Noise, MIL-STD-202, Method 308	-20 dB typ.	dB
Moisture Resistance, MIL-STD-202 Method 106 (Passivated Film)	$\pm 0.5$ max. $\Delta R/R$	%
Stability, 1000 h, +125 $^{\circ}$ C, 25 mW	$\pm 0.2$ max. $\Delta R/R$	%
Operating Temperature Range	-55 to +125	$^{\circ}$ C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	$\pm 0.25$ max. $\Delta R/R$	%
High Temperature Exposure, +150 $^{\circ}$ C, 1000 h	$\pm 0.5$ max. $\Delta R/R$	%
Dielectric Voltage Breakdown	400	V
Insulation Resistance	$10^{12}$ min.	$\Omega$
Operating Voltage	100 max.	V
DC Power Rating at +70 $^{\circ}$ C (Derated to zero at +150 $^{\circ}$ C)	0.035 max.	W
5x Rated Power Short-Time Overload, +25 $^{\circ}$ C, 5 s	$\pm 0.25$ max. $\Delta R/R$	%

**DIMENSIONS** in inches


**TYPICAL RANGE**  
20  $\Omega$  to 100  $\Omega$



**TYPICAL RANGE**  
110  $\Omega$  to 20 k $\Omega$

**SCHEMATIC**

**MECHANICAL SPECIFICATIONS**

PARAMETER	VALUE
Chip Size	0.020" x 0.020" $\pm$ 0.003" (0.5 mm x 0.5 mm $\pm$ 0.08 mm)
Chip Thickness	0.010" $\pm$ 0.002" (0.25 mm $\pm$ 0.05 mm)
Chip Substrate Material	99.6 % alumina, 2 $\mu$ " to 4 $\mu$ " finish
Resistor Material	Nichrome
Bonding Pad Size	0.004" x 0.008" (0.10 mm x 0.20 mm) minimum
Number of Pads	2
Pad Material	25 k $\Omega$ minimum gold standard
Passivation <sup>(1)</sup>	PECVD nitride
Backing	None

**Note**

<sup>(1)</sup> PECVD nitride will be included on part unless otherwise specified

**GLOBAL PART NUMBER INFORMATION**

**GLOBAL PART NUMBER: CC8-12500KKSGNHWS**

**GLOBAL PART NUMBER DESCRIPTION: CC8 1.25K 10 % 100 ppm Std Gold None H WS**

C	C	8	-	1	2	5	0	0	K	K	S	G	N	H	W	S
MODEL	RESISTANCE	RESISTANCE MULTIPLIER CODE	TOLERANCE CODE	TCR (ppm/ $^{\circ}$ C)	TRIM STYLE	TERMINATION	BACK METAL	VISUAL CLASS	PACK CODE							
CC8-	First 4 digits are significant figures of resistance	B = 0.01 A = 0.1 0 = 1 1 = 10	D = 0.5 % F = 1.0 % G = 2.0 % J = 5.0 % K = 10 %	E = $\pm$ 25 C = $\pm$ 50 K = $\pm$ 100	E = edg S = std U = usr	G = Au A = Al	G = Au N = none	H = class H K = class K	WS = waffle pack 100 min., 1 mult.							



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