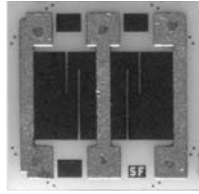


## Thin Film, 1010 Center-Tapped Resistor Divider Network on Alumina



Product may not be to scale

The CCC series resistor chips offer good 400 mW power, low shunt capacitance and a center tap feature.

The CCCs nichrome resistor material offers excellent stability. The CCCs are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology.

The CCCs are 100 % electrically tested and visually inspected to MIL-STD-883, method 2032 class H or K.

### FEATURES

- Wire bondable
- Larger single size for extended value range
- Resistance range total: 100  $\Omega$  to 1 M $\Omega$   
Custom values:  $R_A$  or  $R_B$  - 50  $\Omega$  to 500 k $\Omega$
- Chip size: 0.100" x 0.100"
- Case: 1010
- Power: 400 mW
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: Nichrome
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### APPLICATIONS

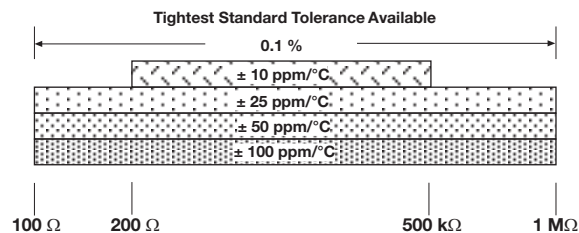
Vishay EFI CCC chip resistors provide excellent high-frequency response and are ideally suited for prototyping.

Typical application areas are:

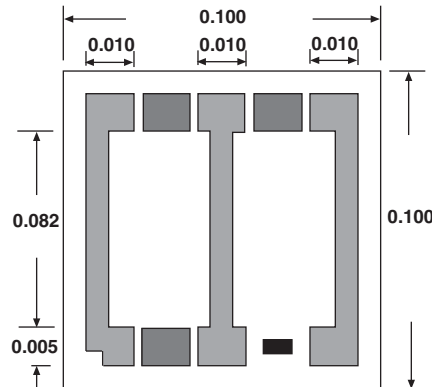
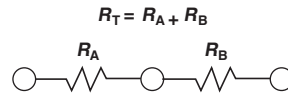
- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

Recommended for hermetic environments where die is not exposed to moisture

TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES, AND TOLERANCES		
PARAMETER	VALUE	UNIT
Total Resistance Range	100 to 1M	$\Omega$
Standard Tolerances	$\pm 0.1$	%
TCR	$\pm 10, \pm 25, \pm 50, \pm 100$	ppm/ $^{\circ}$ C



STANDARD ELECTRICAL SPECIFICATIONS		
PARAMETER	VALUE	UNIT
Noise, MIL-STD-202, Method 308	- 20 typ.	dB
Center Tap Ratio, $R_A/R_B$ : Tolerance	$1 \pm 1$	%
Stability, 1000 h, + 125 $^{\circ}$ C, 400 mW	$\pm 0.1$ 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, 100 h	$\pm 0.25$ max. $\Delta R/R$	%
Dielectric Voltage Breakdown	400	V
Insulation Resistance	$10^{12}$ min.	$\Omega$
Operating Voltage	200 max.	V
DC Power Rating at 125 $^{\circ}$ C	0.4 max.	W
5 x Rated Power Short-Time Overload, + 25 $^{\circ}$ C, 5 s	$\pm 0.25$ max. $\Delta R/R$	%

**DIMENSIONS** in inches

**SCHEMATIC**


MECHANICAL SPECIFICATIONS	
PARAMETER	VALUE
Chip Size	0.100" x 0.100" ± 0.003" (2.5 mm x 2.5 mm ± 0.08 mm)
Chip Thickness	0.010" ± 0.002" (0.25 mm ± 0.03 mm)
Chip Substrate Material	99.6 % alumina, 2 microinch to 4 microinch finish
Resistor Material	Nichrome
Bonding Pad Size	0.005" x 0.010" (0.12 mm x 0.24 mm) min.
Number of Pads	6
Pad Material	25 kÅ minimum gold standard
Backing	None (Au optional)

GLOBAL PART NUMBER INFORMATION																
Global Part Number: <b>CCC50000KCKKNHWS</b>																
Global Part Number Description: <b>CCC 5K 10 % RT 0.25 % ± 100 ppm/°C ± 10 ppm/°C Au None H WS</b>																
<b>C</b>	<b>C</b>	<b>C</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>K</b>	<b>C</b>	<b>K</b>	<b>K</b>	<b>G</b>	<b>N</b>	<b>H</b>	<b>W</b>	<b>S</b>
MODEL	RESISTANCE (R TOTAL)	RESISTANCE MULTIPLIER CODE	TOL. CODE (%)	RATIO TOL. (%)	TCR (ppm/°C)	TCR TRACK (ppm/°C)	TERMINATION	BACK METAL	VISUAL CLASS	PACKAGING CODE						
<b>CCC</b>	First 4 digits are significant figures of resistance	<b>A</b> = 0.1 <b>0</b> = 1 <b>1</b> = 10 <b>2</b> = 100 <b>3</b> = 1000	<b>B</b> = 0.1 <b>C</b> = 0.25 <b>D</b> = 0.5 <b>F</b> = 1.0 <b>G</b> = 2.0 <b>J</b> = 5.0 <b>K</b> = 10.0	<b>B</b> = 0.1 <b>C</b> = 0.25 <b>D</b> = 0.5 <b>F</b> = 1.0 <b>G</b> = 2.0 <b>U</b> = User <b>N</b> = No	<b>E</b> = ± 25 <b>C</b> = ± 50 <b>K</b> = ± 100	<b>G</b> = ± 2 <b>J</b> = ± 5 <b>K</b> = ± 10 <b>N</b> = No	<b>G</b> = Au	<b>G</b> = Au <b>N</b> = None	<b>H</b> = Class H <b>K</b> = Class K	<b>WS</b> = Waffle pack 100 min., 1 mult						



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