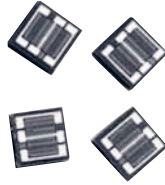


# Wirebondable Dual Value Thin Film Chip Resistor Networks, Center Tap



Actual Size

Chromium silicon thin film is very well suited to produce high density and high ohmic value resistor chips. Performances and sizes are greatly improved compared to Thick Film counterparts. The center tap configuration offers a greater flexibility for hybrid layout design.

## FEATURES

- Center tap feature
- Small size 30 mil x 30 mil
- Very high ohmic values (up to 10 MΩ)
- Wirebondable
- Good stability 0.1 % (2000 h, rated power, at + 70 °C)
- Compliant to RoHS Directive 2002/95/EC



**RoHS**  
COMPLIANT  
**GREEN**  
(5-2008)\*\*

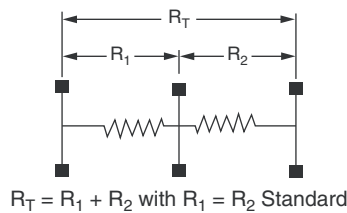
## Note

\*\* Please see document "Vishay Material Category Policy":  
[www.vishay.com/doc?99902](http://www.vishay.com/doc?99902)

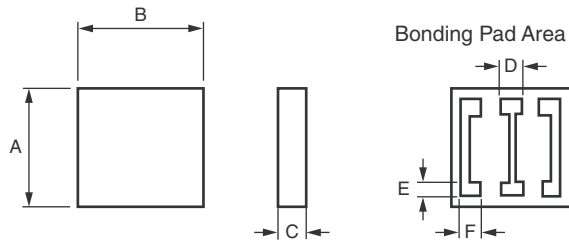
## TYPICAL PERFORMANCE

	ABS	TRACKING
TCR	100 ppm/°C	5 ppm/°C
	ABS	RATIO
TOL.	0.5 %	0.5 %

## SCHEMATIC



STANDARD ELECTRICAL SPECIFICATIONS			
TEST		SPECIFICATIONS	CONDITIONS
<b>MATERIAL</b>		<b>PASSIVATED CHROMIUM SILICON</b>	
Resistance range		10 kΩ to 10 MΩ	For $R_T = R_1 + R_2$
TCR	Tracking	± 5 ppm/°C	- 55 °C to + 155 °C
	Absolute	± 100 ppm/°C (± 50 ppm/°C on request)	- 55 °C to + 155 °C
Ohmic value	Ratio	1/1 standard (unequal values: please consult)	
Tolerance	Absolute	± 0.5 %, ± 1 %, ± 2 %	
	Matching	± 0.5 % standard	
Power rating		250 mW at + 25 °C, 125 mW at + 70 °C, 50 mW at + 125 °C	
Stability		± 0.1 % typical, ± 0.2 maximum	2000 h at + 70 °C under Pn
Voltage coefficient		0.1 ppm/V	
Limiting voltage		100 V <sub>DC</sub> on $R_T$	
Operating temperature range		- 55 °C to + 155 °C	
Storage temperature range		- 55 °C to + 155 °C	
Noise		< - 20 dB typical	MIL-STD-202 method 308
Thermal EMF		< 0.01 μV/°C	
Shelf life stability		200 ppm	1 year at + 25 °C

**DIMENSIONS**


DIMENSION	INCHES	MILLIMETERS
A	0.033 ± 0.004	0.855 ± 0.10
B	0.033 ± 0.004	0.855 ± 0.10
C	0.01 to 0.015	0.25 to 0.40
D	0.006	0.15
E	0.004	0.10
F	0.006	0.15

MECHANICAL SPECIFICATIONS	
Resistive element	Chromium silicon
Passivation	Silicone nitride
Substrate material	Silicon (consult vishay for Al <sub>2</sub> O <sub>3</sub> )
Bonding pads	Aluminum

GLOBAL PART NUMBER INFORMATION					
New Global Part Numbering: CS33-100KF1MD0016 (preferred part number format)					
C	S	3	3	-	1 0 0 K F 1 M D 0 0 1 6
GLOBAL MODEL	R1 VALUE	ABS. TOLERANCE	R2 VALUE	RAT. TOLERANCE	OPTION
	Decimal R, K or M	D = ± 0.5 % F = ± 1.0 % G = ± 2.0 %	Decimal R, K or M	D = ± 0.5 %	Leave blank if no option
Historical Part Number example: CS 33 100K 1M 1 % 0.5 % R0016 (will continue to be accepted)					
CS 33	100K 1M	1 % 0.5 %	R0016		
HISTORICAL MODEL	R1/R2 VALUE	ABS. TOLERANCE AND RATIO TOLERANCE	OPTION		



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