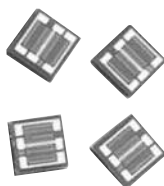


## Dual Value Chip Resistors, Center Tap



 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 5 M $\Omega$ )
- Good stability 0.1 % (2000 h, rated power, at + 70 °C)
- Wirebondable

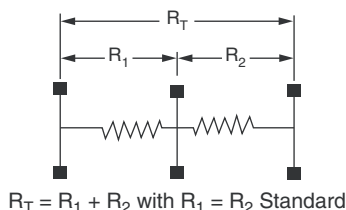


**RoHS**  
COMPLIANT  
**GREEN**  
(5-2008)\*

### TYPICAL PERFORMANCE

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

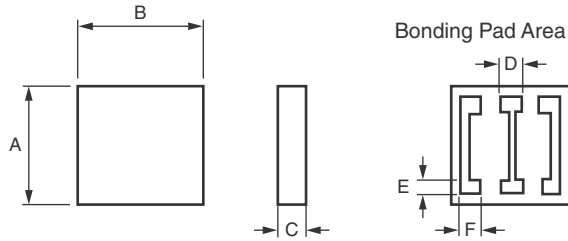
### SCHEMATIC



STANDARD ELECTRICAL SPECIFICATIONS			
TEST		SPECIFICATIONS	CONDITIONS
MATERIAL		PASSIVATED CHROMIUM SILICON	
Resistance range		10 k $\Omega$ to 5 M $\Omega$	for $R_T = R_1 + R_2$
TCR:	Tracking	$\pm 5$ ppm/°C	- 55 °C to + 155 °C
	Absolute	$\pm 100$ ppm/°C ( $\pm 50$ ppm/°C on request)	- 55 °C to + 155 °C
Ohmic value	Ratio	1/1 standard (unequal values: please consult)	
Tolerance:	Absolute	$\pm 0.5$ %, $\pm 1$ %, $\pm 2$ %	
	Matching	$\pm 0.5$ % standard	
Power rating		250 mW at + 25 °C, 125 mW at + 70 °C, 50 mW at + 125 °C	
Stability		$\pm 0.1$ % typical, $\pm 0.2$ maximum	2000 h at + 70 °C under Pn
Voltage coefficient		0.1 ppm/V	
Working 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 $\mu$ V/°C	
Shelf life stability		200 ppm	1 year at + 25 °C

\* Please see document "Vishay Green and Halogen-Free Definitions (5-2008)" <http://www.vishay.com/doc?99902>

## DIMENSIONS



DIMENSION	INCHES	MILLIMETERS
A	$0.03 \pm 0.004$	$0.76 \pm 0.10$
B	$0.03 \pm 0.004$	$0.76 \pm 0.10$
C	$0.01 \pm 0.015$	$0.25 \pm 0.40$
D	0.004	0.10
E	0.006	0.15
F	0.006	0.15

## MECHANICAL SPECIFICATIONS

Resistive element	Chromium Silicon
Passivation	Silicone Nitride
Substrate material	Silicon (Consult Vishay for $\text{Al}_2\text{O}_3$ )
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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