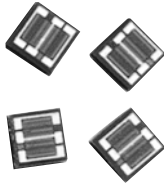


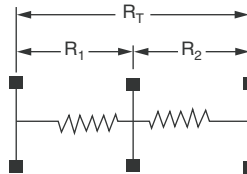
## Dual Value Chip Resistors, Center Tap



Actual Size

The demand for high precision, high stability microchips for both military and industrial environments is increasing with the growth and sophistication of modern day hybrid circuitry. The need for high accuracy ultra stable micro dividers particularly triggered the development of these third generation nickel chromium microchip dividers which offer standards of accuracy and thermal/time stability never achieved before in the conventional second generation thin metal film technologies.

### SCHEMATICS



$R_T = R_1 + R_2$  with  $R_1 = R_2$  Standard  
(Unequal values on request)

### FEATURES

- High precision
- Very low temperature coefficient < 10 ppm/°C
- Excellent stability 0.03 % (2000 h, rated power, at + 70 °C)
- Wirebondable



### TYPICAL PERFORMANCE

	ABS	TRACKING
TCR	5 ppm/°C	1 ppm/°C
	ABS	RATIO
TOL.	0.1 %	0.01 %

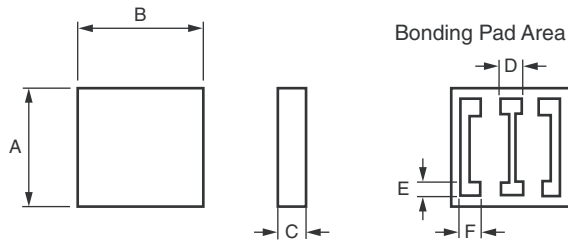
STANDARD ELECTRICAL SPECIFICATIONS		
TEST	SPECIFICATIONS	CONDITIONS
SERIES	ULTRAFILM®	
Resistance range	1 kΩ to 250 kΩ	( $R_T = R_1 + R_2$ )
TCR:	Tracking	± 1 ppm/°C typical (± 2 ppm/°C maximum)
	Absolute	± 5 ppm/°C maximum ± 10 ppm/°C maximum
Tolerance:	Ratio	0.1 %, 0.05 %, 0.02 %, 0.01 %
	Absolute	± 0.1 %, ± 0.5 %, ± 1 %
Power rating	125 mW at 25 °C/50 mW at + 70 °C, 25 mW at + 125 °C	
Stability	300 ppm typical	2000 h at + 70 °C under Pn
Voltage coefficient	< 0.01 ppm/V	
Working voltage	100 V <sub>DC</sub> on R <sub>T</sub>	
Operating temperature range	- 55 °C to + 155 °C <sup>(1)</sup>	
Storage temperature range	- 55 °C to + 155 °C	
Noise	< - 35 dB typical	MIL-STD-202 Method 308
Thermal EMF	< 0.01 μV/°C	
Shelf life stability	50 ppm	1 year

**Note:**

<sup>(1)</sup> For Temperature up to 200 °C, please consult factory

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

**DIMENSIONS**



DIMENSION	INCHES	MILLIMETERS
A	0.03 ± 0.004	0.76 ± 0.10
B	0.03 ± 0.004	0.76 ± 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	Passivated Nichrome
Substrate material	Silicon (Alumina on request)
Body	Silicon
Passivation	Silicone Nitride
Bonding pads	Aluminum

**GLOBAL PART NUMBER INFORMATION**

New Global Part Numbering: **RMK33N5KF25KB0016** (preferred part number format)

<b>R</b>	<b>M</b>	<b>K</b>	<b>3</b>	<b>3</b>	<b>N</b>	<b>5</b>	<b>K</b>	<b>F</b>	<b>2</b>	<b>5</b>	<b>K</b>	<b>B</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>
GLOBAL MODEL		R1 VALUE		ABS. TOLERANCE			R2 VALUE		RAT. TOLERANCE			OPTION				
		Decimal R, K or M		<b>B</b> = ± 0.1 % <b>W</b> = ± 0.05 % <b>D</b> = ± 0.5 % <b>F</b> = ± 1.0 %			Decimal R, K or M		<b>B</b> = ± 0.1 % <b>W</b> = ± 0.05 % <b>P</b> = 0.02 % <b>L</b> = 0.01 %			leave blank if no option				

Historical Part Number example: **RMK 33N 5K 25K 1 % 0.1 % R0016** (will continue to be accepted)

<b>RMK 33N</b>	<b>5K 25K</b>	<b>1 % 0.1 %</b>	<b>R0016</b>
HISTORICAL MODEL	R1/R2 VALUE	ABS. TOLERANCE AND RATIO TOLERANCE	OPTION



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