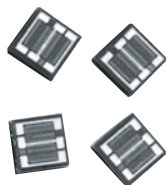


# Wirebondable Dual Value Thin Film Chip Resistor Networks, Center Tap



 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.

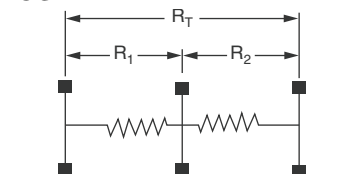
## FEATURES

- High precision
- Very low temperature coefficient < 10 ppm/°C
- Excellent stability 0.03 % (2000 h, rated power, at + 70 °C)
- Aluminum or gold pads
- High temperature version (up to 230 °C) see RMKHT ([www.vishay.com/doc?60075](http://www.vishay.com/doc?60075))
- Wirebondable
- Ohmic range 1 kΩ to 500 kΩ
- 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)

## SCHEMATICS



$$R_T = R_1 + R_2 \text{ with } R_1 = R_2 \text{ Standard}$$

(Unequal values on request)

## PERFORMANCES

Stability	300 ppm typical	2000 h at + 70 °C under Pn
Voltage coefficient	< 0.01 ppm/V	
Limiting voltage	100 V <sub>DC</sub> on R <sub>T</sub>	
Noise	< - 35 dB typical	MIL-STD-202 method 308
Thermal EMF	< 0.01 μV/°C	
Shelf life stability	50 ppm	1 year

## STANDARD ELECTRICAL SPECIFICATIONS

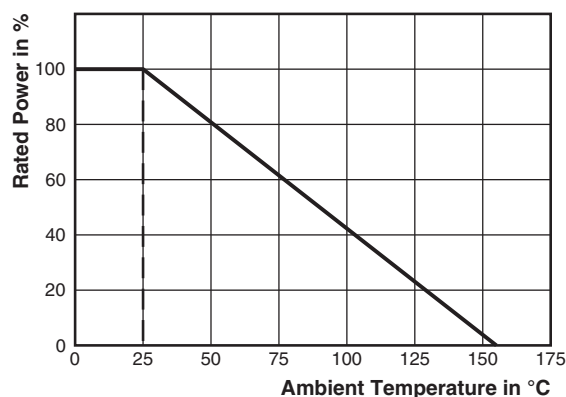
MODEL	SIZE	RESISTANCE RANGE <sup>(1)</sup> Ω	POWER RATING P <sub>70 °C</sub> W	ABSOLUTE TOLERANCE ± %	RATIO TOLERANCE ± %	ABSOLUTE TCR <sup>(2)</sup> ± ppm/°C	RATIO TCR ± ppm/°C
RMK 33N	0303	1K to 500K	0.050	0.1, 0.5, 1	0.1, 0.05, 0.02, 0.01	5, 10	1, 2

### Notes

<sup>(1)</sup> (R<sub>T</sub> = R<sub>1</sub> + R<sub>2</sub>)

<sup>(2)</sup> ± 5 ppm/°C maximum at 0 °C to + 70 °C, ± 10 ppm/°C maximum at - 55 °C to + 155 °C

## DERATING

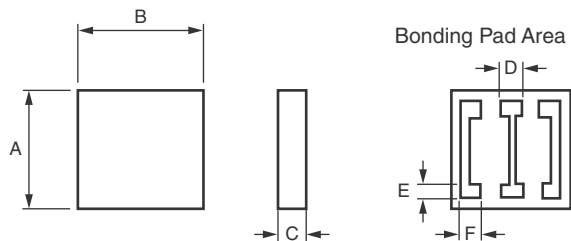


## CLIMATIC SPECIFICATIONS

Operating temperature range	- 55 °C to + 155 °C
Storage temperature range	- 55 °C to + 155 °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	Passivated nichrome
Substrate material	Silicon (alumina on request)
Passivation	Silicone nitride
Bonding pads	Aluminum or gold

## GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: RMK33N5KF25KB0099

R	M	K	3	3	N	5	K	F	2	5	K	B		0	0	9	9
GLOBAL MODEL			R <sub>1</sub> VALUE		ABS. TOLERANCE			R <sub>2</sub> VALUE		RAT. TOLERANCE			TERMINATIONS		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 %			Blank = Aluminum <b>G</b> = Gold		Leave blank if no option		



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