

# Wirebondable High Precision Single Value Thin Film Chip Resistors



The demand for high precision, high stability microchips for both military and industrial environments is increasing with the growth and sophistication of modern hybrid circuitry.

The RMK 22 series are single value resistor chips. They provide excellent long term stability 0.03 % (2000 h, rated power, at +70 °C) and low noise characteristics < 35 dB.

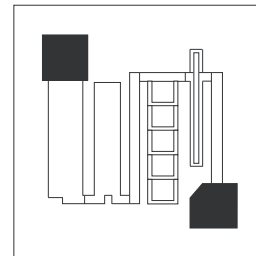
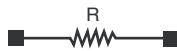
## FEATURES

- Small size 20 mils x 20 mils
- Excellent temperature coefficient < 10 ppm/°C
- Excellent stability 0.03 % after 2000 h at Pn at 70 °C
- Aluminum pads
- Wirebondable
- Tolerance down to 0.01 %
- High temperature (230 °C), see RMKHT datasheet ([www.vishay.com/doc?60075](http://www.vishay.com/doc?60075))
- 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)

## SCHEMATIC AND PATTERN



STANDARD ELECTRICAL SPECIFICATIONS						
MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWER $P_{70^{\circ}\text{C}}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
RMK 22N	0202	50 to 300K	0.05	100	0.01, 0.02, 0.05, 0.1, 0.5, 1	5, 10

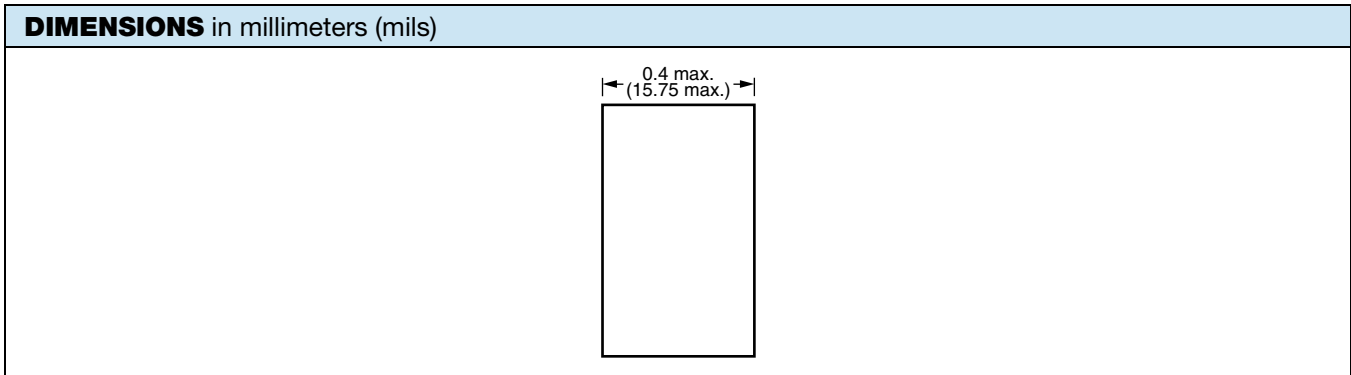
CLIMATIC SPECIFICATIONS	
Operating temperature range	-55 °C to +155 °C
Storage temperature range	-55 °C to +155 °C

MECHANICAL SPECIFICATIONS	
Resistive element	Nichrome
Passivation	Silicon nitride
Substrate material	Silicon
Bonding pads	Aluminum

DIMENSIONS in millimeters (mils)		
<p>                     Type A (Current)                      Overall width: <math>0.58 \pm 0.05</math> (23 ± 2)                      Pad width: <math>0.43</math> (17.2)                      Overall height: <math>0.58 \pm 0.05</math> (23 ± 2)                      Pad height: <math>0.43</math> (17.2)                      Pad thickness: 0.08 min. (3.2 min.)                      Pad offset: 0.08 min. (3.2 min.)                 </p>	<p>                     Type B (New)                      Overall width: <math>0.58 \pm 0.05</math> (23 ± 2)                      Pad width: <math>0.47</math> (18.8)                      Overall height: <math>0.58 \pm 0.05</math> (23 ± 2)                      Pad height: <math>0.47</math> (18.8)                      Pad thickness: 0.125 min. (5 min.)                      Pad offset: 0.10 min. (4 min.)                 </p>	

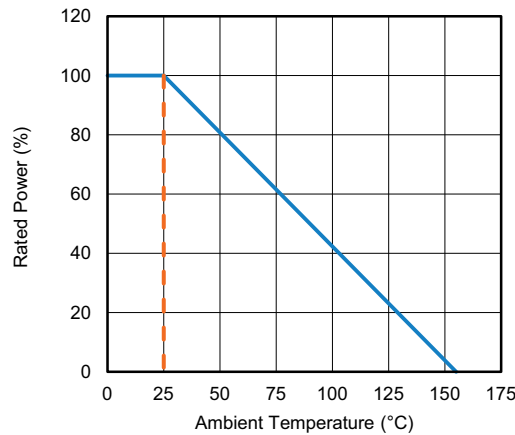
### Note

- Customer can get one or the other part, but positions of pads are similar



TECHNICAL SPECIFICATIONS		
TEST	SPECIFICATIONS	CONDITIONS
Stability	± 0.03 % typical, ± 0.05 % maximum	2000 h at + 70 °C under Pn
Voltage coefficient	< 0.1 ppm/V	
Noise	< -35 dB typical	MIL-STD-202 method 308
Thermal EMF	< 0.01 µV/°C	
Shelf life stability	50 ppm	1 year at +25 °C

**DERATING**



**GLOBAL PART NUMBER INFORMATION**

New Global Part Numbering: **RMK22N100KD0016**

R	M	K	2	2	N	1	0	0	K	D		0	0	1	6
GLOBAL MODEL			VALUE Decimal R, K, or M			TOLERANCE L = ± 0.01 % P = ± 0.02 % W = ± 0.05 % B = ± 0.1 % D = ± 0.5 % F = ± 1.0 %			TERMINATIONS Blank = aluminum		OPTION Leave blank if no option				



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