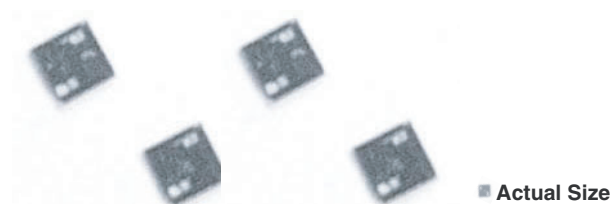


# Precision Wirebondable Single Value Thin Film Chip Resistor



## LINKS TO ADDITIONAL RESOURCES



3D Models

## FEATURES

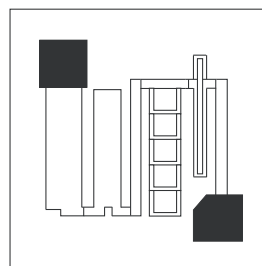
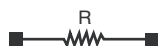
- Small size 20 mils x 20 mils
- Low temperature coefficient 25 ppm/°C
- Excellent stability 0.05 % (2000 h, rated power at +70 °C)
- Wirebondable
- Tolerance down to 0.1 %
- High temperature (230 °C), see RMKHT datasheet ([www.vishay.com/doc?60075](http://www.vishay.com/doc?60075))
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

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 RSK 22 series are single value resistor chips. They provide excellent long term stability  $\pm 0.05$  % (2000 h, rated power, at +70 °C) and low noise characteristics < 35 dB.

## SCHEMATIC AND PATTERN



## STANDARD ELECTRICAL SPECIFICATIONS

| MODEL   | SIZE | RESISTANCE RANGE<br>$\Omega$ | RATED POWER<br>$P_{70^\circ\text{C}}$<br>W | LIMITING ELEMENT VOLTAGE<br>V | TOLERANCE<br>$\pm$ % | TEMPERATURE COEFFICIENT<br>$\pm$ ppm/°C |
|---------|------|------------------------------|--|-------------------------------|----------------------|---|
| RSK 22N | 0202 | 10 to 500K                   | 0.05                                       | 100                           | 0.1, 0.5, 1          | 25                                      |

## CLIMATIC SPECIFICATIONS

|  |                   |
|--|-------------------|
| Operating temperature range <sup>(1)</sup> | -55 °C to +155 °C |
| Storage temperature range                  | -55 °C to +155 °C |

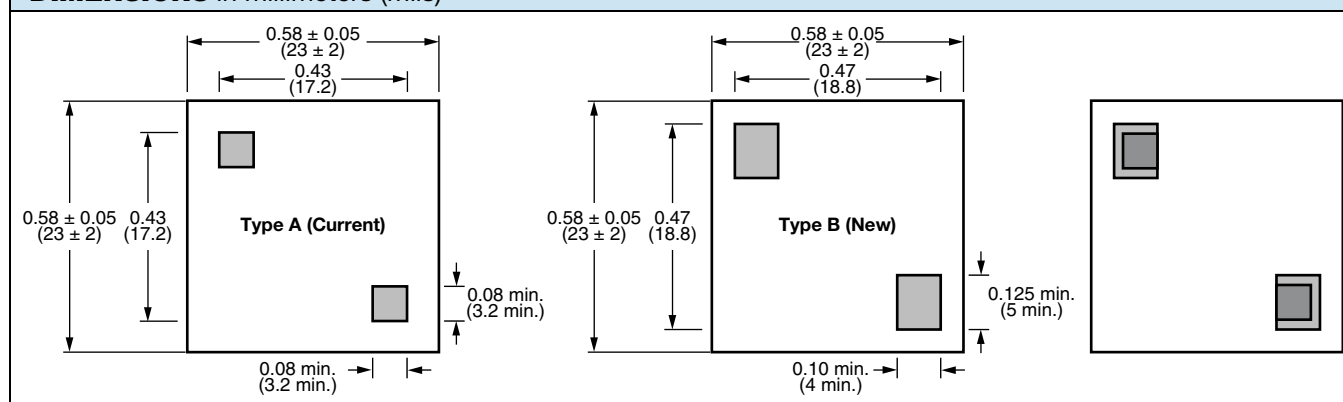
### Note

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

## MECHANICAL SPECIFICATIONS

|                    |                 |
|--------------------|-----------------|
| Resistive element  | Nichrome        |
| Passivation        | Silicon nitride |
| Substrate material | Silicon         |
| Bonding pads       | Aluminum        |

## DIMENSIONS in millimeters (mils)

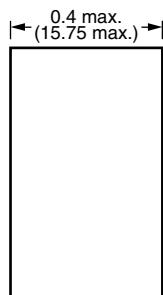


### Note

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



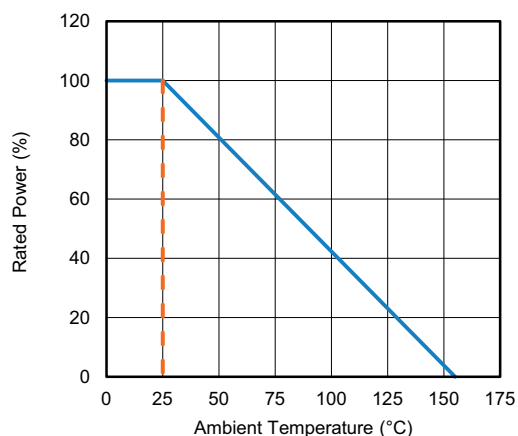
**DIMENSIONS** in millimeters (mils)



**TECHNICAL SPECIFICATIONS**

| TEST                 | SPECIFICATIONS                            | CONDITIONS                     |
|----------------------|---|--------------------------------|
| Stability            | $\pm 0.05$ % typical, $\pm 0.1$ % maximum | 2000 h at $+70$ °C under $P_n$ |
| Voltage coefficient  | $< 0.1$ ppm/V                             |                                |
| Noise                | $< -35$ dB typical                        | MIL-STD-202 method 308         |
| Thermal EMF          | $0.01$ $\mu$ V/°C                         |                                |
| Shelf life stability | $< 50$ ppm                                |                                |

**DERATING**



**GLOBAL PART NUMBER INFORMATION**

New Global Part Numbering: RSK22N100KD0016 (preferred part number format)

R S K 2 2 N 1 0 0 K D 0 0 1 6

GLOBAL MODEL

VALUE

Decimal  
R, K, or M

TOLERANCE

B =  $\pm 0.1$  %  
D =  $\pm 0.5$  %  
F =  $\pm 1.0$  %

OPTION

Leave blank  
if no option

Historical Part Number Example: RSK 22N 100K 0.5 % R0016 (will continue to be accepted)

RSK 22N

HISTORICAL MODEL

100K

VALUE

0.5 %

TOLERANCE

R0016

OPTION



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