

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

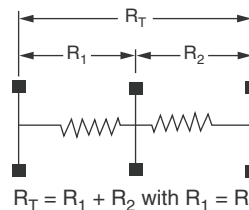

**Actual Size**
**DESIGN SUPPORT TOOLS**
[click logo to get started](#)
**3D**  
Models  
Available

The Vishay RSK33 resistive dividers are based on a nickel-chromium thin metal film formulation on an oxidized silicon substrate and incorporate two resistors of equal ohmic value for use either as a precision voltage divider or as a four terminal resistor. The RSK33 micro dividers were developed as a low cost, temperature and time stable resistive range for hybrid circuit applications demanding miniaturization with improved parametric performances in both industrial and military environments.

Their close ratio tolerance and TCR tracking performances are particularly relevant to amplifier gain-setting and diverse attenuator and terminator applications.

**FEATURES**

- Low TCR < 25 ppm/°C
- Rapid Rise Time
- Low Noise < - 35 dB
- High temperature version (up to 230 °C) see RMKHT
- Wirebondable
- Stability 0.03 % (2000 h, rated power, at + 70 °C)
- 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**


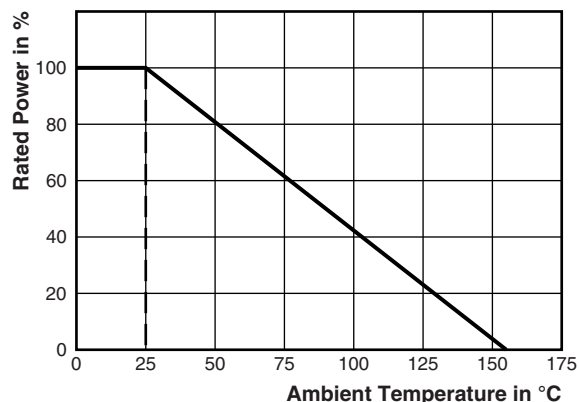
(Unequal value on request)

**STANDARD ELECTRICAL SPECIFICATIONS**

MODEL	SIZE	RESISTANCE RANGE <sup>(1)</sup> Ω	POWER RATING $P_{70\text{ °C}}$ W	ABSOLUTE TOLERANCE ± %	RATIO TOLERANCE <sup>(2)</sup> %	ABSOLUTE TCR <sup>(3)</sup> ± ppm/°C	RATIO TCR ± ppm/°C
RSK 33N	0303	10 to 500K	0.250	0.5, 1, 2	0.05, 0.1, 0.5	15, 25	5

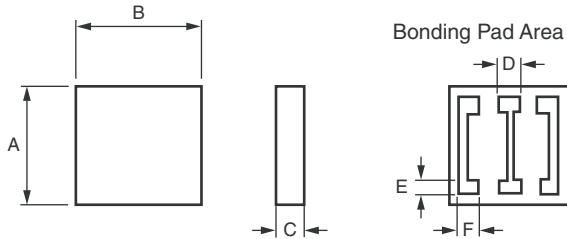
**Notes**

- (1)  $(R_T = R_1 + R_2)$
- (2)  $R > 10 \Omega$ . Tighter on request: Please consult (ohmic range may vary)
- (3) ± 25 ppm/°C maximum, ± 15 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

PERFORMANCES		
TEST	SPECIFICATIONS	CONDITIONS
Extended ohmic range	> 500 kΩ to 1 MΩ	$R_1 = R_2 \left( R_T = \frac{R_T}{2} + \frac{R_T}{2} \right)$ $R_1 \neq R_2$ : Please consult
Stability	300 ppm typical	2000 h Pn at +70 °C
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

**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
Passivation	Silicon nitride
Substrate material	Silicon
Bonding pads	Aluminum, gold on request

GLOBAL PART NUMBER INFORMATION																
New Global Part Numbering: RSK33N5KD25KB0099 (preferred part number format)																
R	S	K	3	3	N	5	K	D	2	5	K	B	0	0	9	9
GLOBAL MODEL		R <sub>1</sub> VALUE			ABS. TOLERANCE			R <sub>2</sub> VALUE			RAT. TOLERANCE			OPTION		
		Decimal R, K, or M			<b>D</b> = ± 0.5 % <b>F</b> = ± 1.0 % <b>G</b> = ± 2.0 %			Decimal R, K, or M			<b>D</b> = 0.5 % <b>B</b> = 0.1 % <b>W</b> = 0.05 %			Leave blank if no option		



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