

Wirebondable Dual Value Thin Film Chip Resistor Networks, Center Tap



Actual Size

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

- Economic cost
- Low TCR < 25 ppm/°C
- Rapid Rise Time
- Low Noise < 35 dB
- Wirebondable
- Stability 0.03 % (2000 h, rated power, at + 70 °C)
- Compliant to RoHS Directive 2002/95/EC



RoHS
COMPLIANT
GREEN
(5-2008)**

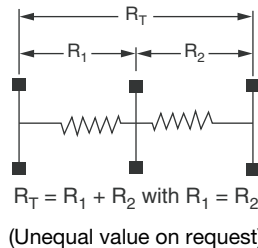
Note

** Please see document "Vishay Material Category Policy":
www.vishay.com/doc?99902

TYPICAL PERFORMANCE

	ABS	TRACKING
TCR	15 ppm/°C	5 ppm/°C
	ABS	RATIO
TOL.	0.5 %	0.05 %

SCHEMATIC



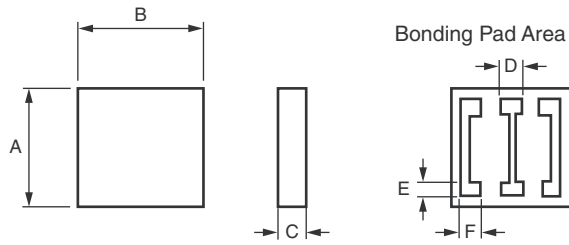
STANDARD ELECTRICAL SPECIFICATIONS		
TEST	SPECIFICATIONS	CONDITIONS
SERIES	ULTRAFILM	
Resistance range	10 Ω to 500 kΩ	$(R_T = R_1 + R_2)$
Extended ohmic range	> 500 kΩ to 1 MΩ	$R_1 = R_2 \left(R_T = \frac{R_T}{2} + \frac{R_T}{2} \right)$ $R_1 \neq R_2$: Please consult
TCR	Tracking	± 5 ppm/°C maximum
	Absolute	± 25 ppm/°C maximum (± 15 ppm/°C typical)
Tolerance	Ratio	± 0.5 % (tighter on request) ⁽²⁾
	Absolute	± 0.5 %, ± 1 %, ± 2 %
Power rating	250 mW at 70 °C, 50 mW at + 125 °C	
Stability	300 ppm typical	2000 h Pn at + 70 °C
Voltage coefficient	< 0.01 ppm/V	
Limiting voltage	100 V _{DC} on R_T	
Operating temperature range	- 55 °C to + 155 °C ⁽¹⁾	
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

Notes

- ⁽¹⁾ For temperature up to 200 °C, please contact factory
⁽²⁾ For tighter ratio: Please consult (ohmic range may vary)



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

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: **RSK33N5KD25KB0016** (preferred part number format)

R	S	K	3	3	N	5	K	D	2	5	K	B	0	0	1	6
GLOBAL MODEL		R_1 VALUE Decimal R, K or M		ABS. TOLERANCE D = ± 0.5 % F = ± 1.0 % G = ± 2.0 %			R_2 VALUE Decimal R, K or M		RAT. TOLERANCE D = 0.5 % B = 0.1 % W = 0.05 %			OPTION Leave blank if no option				

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

RSK 33N	5K 25K	0.5 % 0.1 %	R0016
HISTORICAL MODEL	R_1/R_2 VALUE	ABS. TOLERANCE AND RATIO TOLERANCE	OPTION



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