Wirebondable Dual Value Thin Film Chip Resistor Networks, Center Tap

Actual Size

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

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

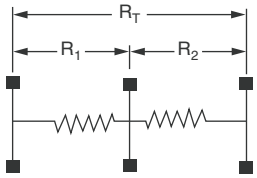
LINKS TO ADDITIONAL RESOURCES

3D Models

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.

SCHEMATIC



$R_T = R_1 + R_2$ with $R_1 = R_2$

(Unequal value on request)

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE (1) Ω	POWER RATING $P_{70\,°C}$ W	ABSOLUTE TOLERANCE ± %	RATIO TOLERANCE (2) %	ABSOLUTE TCR (3) ± ppm/°C	RATIO TCR ± ppm/°C
RSK 33N	0303	10 to 500K	0.250	0.5, 1, 2	0.05, 0.1, 0.5, no	15, 25	5

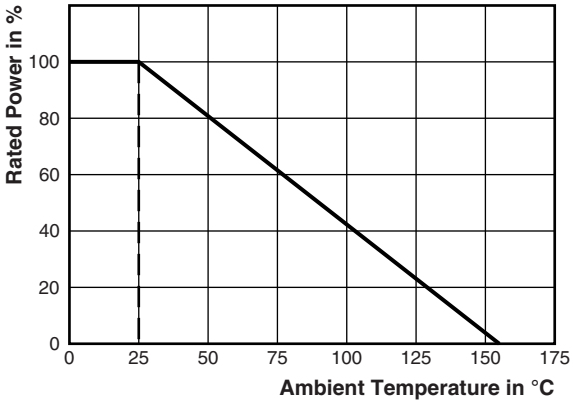
Notes

(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

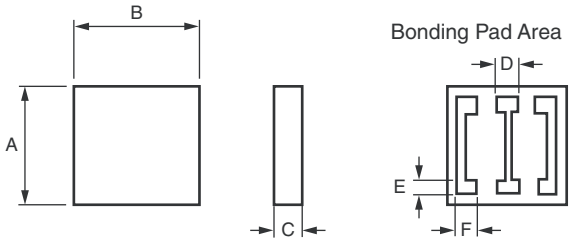


CLIMATIC SPECIFICATIONS

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_{DC} on R_T	
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_1 VALUE	ABS. TOLERANCE	R_2 VALUE	RAT. TOLERANCE	OPTION
	Decimal R, K, or M	**D** = ± 0.5 % **F** = ± 1.0 % **G** = ± 2.0 %	Decimal R, K, or M	**D** = 0.5 % **B** = 0.1 % **W** = 0.05 % **N** = no	Leave blank if no option

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