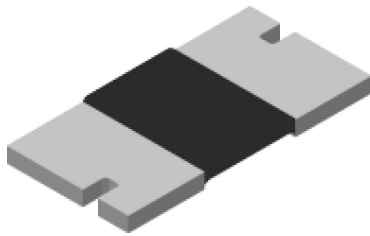


Power Metal Strip® Resistors, Low Value (down to 0.001 Ω), Surface Mount, 4-Terminal



FEATURES

- 4-Terminal design allows for 1 % tolerance down to 0.001 Ω and 0.5 % tolerance down to 0.003 Ω
- Ideal for all types of precision current sensing, voltage division and pulse applications including switching and linear power supplies, instruments, power amplifiers
- Proprietary processing technique produces extremely low resistance values (down to 0.001 Ω)
- All welded construction
- Solid metal Nickel-Chrome or Manganese-Copper alloy resistive element with low TCR (< 20 ppm/°C)
- Solderable terminations
- Very low inductance 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- Lead (Pb)-free version is RoHS compliant



RoHS*
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING $P_{70^{\circ}\text{C}}$ W	RESISTANCE RANGE Ω	
		$\pm 0.5 \%$	$\pm 1.0 \%$
WSK2512	1.0	0.003 - 0.025	0.001 - 0.025

Note

- Part Marking: DALE, Value, Tolerance; due to resistor size limitations some resistance values will be marked with only the resistance value

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	WSK2512
Temperature Coefficient	ppm/°C	0.001 Ω - 0.0029 Ω = ± 250 0.003 Ω - 0.0049 Ω = ± 75 0.005 Ω - 0.025 Ω = ± 35
Operating Temperature Range	°C	- 65 to + 170
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Weight/1000 pieces	g	63.6

GLOBAL PART NUMBER INFORMATION

NEW GLOBAL PART NUMBERING: WSK25125L000FTA (PREFERRED PART NUMBERING FORMAT)

W S K 2 5 1 2 5 L 0 0 0 F T A

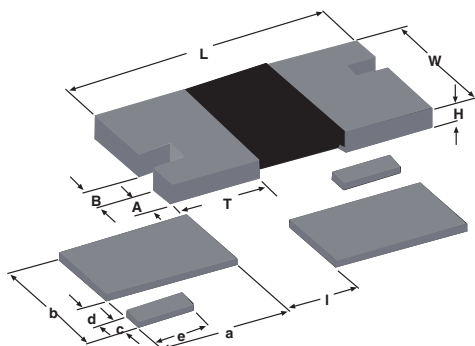
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	SPECIAL
WSK2512	L = m Ω * R = Decimal 5L000 = 0.005 Ω R0100 = 0.01 Ω * use "L" for resistance values < 0.01 Ω	D = $\pm 0.5 \%$ F = $\pm 1.0 \%$	EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk TA = Tin/lead, tape/reel (R86) BA = Tin/lead, bulk (B43)	(Dash Number) (up to 2 digits) From 1 - 99 as applicable

HISTORICAL PART NUMBERING: WSK2512 0.005 Ω 1 % R86 (WILL CONTINUE TO BE ACCEPTED)

WSK2512	0.005 Ω	1 %	R86
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

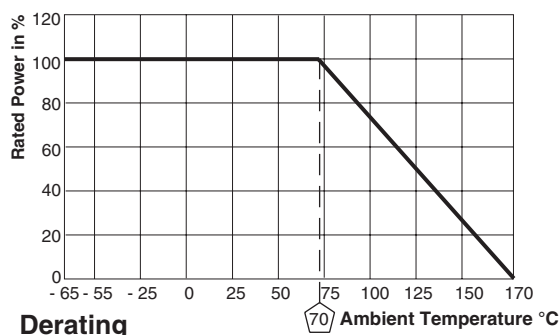
* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS



MODEL	DIMENSIONS in inches [millimeters]						
	RESISTANCE RANGE Ω	L	W	H	T	A	B
WSK2512	0.001 - 0.0049	0.250 ± 0.010 [6.35 ± 0.254]	0.125 ± 0.010 [3.18 ± 0.254]	0.025 ± 0.010 [0.635 ± 0.254]	0.087 ± 0.010 [2.21 ± 0.254]	0.030 ± 0.010 [0.762 ± 0.254]	0.020 ± 0.010 [0.508 ± 0.254]
	0.005 - 0.025	0.250 ± 0.010 [6.35 ± 0.254]	0.125 ± 0.010 [3.18 ± 0.254]	0.025 ± 0.010 [0.635 ± 0.254]	0.047 ± 0.010 [1.19 ± 0.254]	0.030 ± 0.010 [0.762 ± 0.254]	0.020 ± 0.010 [0.508 ± 0.254]

MODEL	SOLDER PAD DIMENSIONS in inches [millimeters]					
	a	b	c	d	e	I
WSK2512	0.125 [3.18]	0.130 [3.30]	0.030 [0.76]	0.020 [0.51]	0.055 [1.40]	0.065 [1.65]



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± (0.5 % + 0.0005 Ω) ΔR
Short Time Overload	5 x power for 5 s	± (0.5 % + 0.0005 Ω) ΔR
Low Temperature Storage	- 65 °C for 24 h	± (0.5 % + 0.0005 Ω) ΔR
High Temperature Exposure	1000 h at + 170 °C	± (1.0 % + 0.0005 Ω) ΔR
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 h	± (0.5 % + 0.0005 Ω) ΔR
Mechanical Shock	100 g's for 6 ms, 5 pulses	± (0.5 % + 0.0005 Ω) ΔR
Vibration	Frequency varied 10 to 2000 Hz in 1 min, 3 directions, 12 h	± (0.5 % + 0.0005 Ω) ΔR
Load Life	1000 h at rated power, + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± (1.0 % + 0.0005 Ω) ΔR
Resistance to Solder Heat	+ 260 °C Solder, 10 - 12 s dwell, 25 mm/s emergence	± (0.5 % + 0.0005 Ω) ΔR
Moisture Resistance	MIL-STD-202 Method 106, 0 % power, 7a and 7b not required	± (0.5 % + 0.0005 Ω) ΔR

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSK2512	12 mm/Embossed Plastic	178 mm/7"	2000	R86

Note

- Embossed carrier tape per EIA-481-1A



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