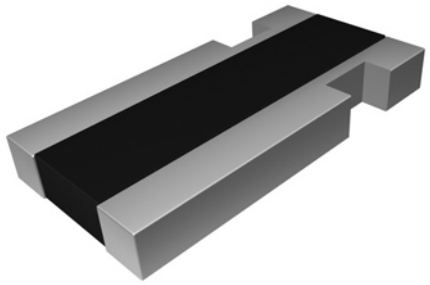
# Power Metal Strip® Resistors, High Power, Surface Mount, 4-Terminal



## FEATURES

- 4-Terminal design
- Ideal for all types of current sensing, voltage division and pulse applications
- Proprietary processing technique produces extremely low resistance values
- Durable with all-welded construction
- Low thermal EMF (< 3 µV/°C)
- Solid metal nickel-chrome or manganese-copper resistive element with low TCR (< 20 ppm/°C)
- Compliant to RoHS Directive 2002/95/EC
- AEC-Q200 qualified available (1)

AUTOMOTIVE GRADE Available

Pb-free

e3

RoHS COMPLIANT

GREEN (5-2008)**

**Note**

(1) Flame retardance test may not be applicable to some resistor technologies.

**Note**

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

## STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | SIZE | POWER RATING $P_{70\,°C}$ W | TOLERANCE ± % | RESISTANCE VALUE RANGE Ω | RESISTANCE VALUES CURRENTLY AVAILABLE (2) Ω | WEIGHT (typical) g/1000 pieces |
|---|---|---|---|---|---|---|
| WSK0612 | 0612 | 1.0 | 1.0 | 0.50m to 5.0m | 0.5m, 0.75m, 1m, 2m, 3m, 4m, 5m | 8.2 |

**Note**

(2) Other values may be available, contact factory.

## TECHNICAL SPECIFICATIONS

| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
|---|---|---|
| Temperature coefficient | ppm/°C | ± 600 for 0.5 mΩ and 0.75 mΩ, ± 275 for 1 mΩ, ± 225 for 2 mΩ, ± 150 for 3 mΩ, 4 mΩ and 5 mΩ |
| Operating temperature range | °C | - 65 to + 170 |
| Maximum working voltage | V | $(P \times R)^{1/2}$ |

## GLOBAL PART NUMBER INFORMATION

**Global Part Numbering example: WSK06121L000FEA**

| W | S | K | 0 | 6 | 1 | 2 | 1 | L | 0 | 0 | 0 | F | E | A | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

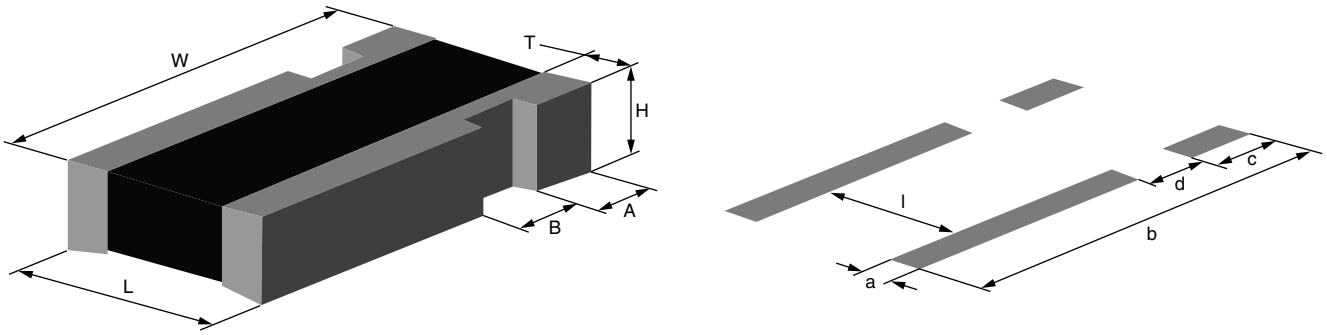
| GLOBAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING CODE | SPECIAL |
|---|---|---|---|---|
| **WSK0612** | **L** = mΩ<br>**L5000** = 0.0005 Ω<br>**L7500** = 0.00075 Ω<br>**1L000** = 0.001 Ω<br>**2L000** = 0.002 Ω<br>**3L000** = 0.003 Ω<br>**4L000** = 0.004 Ω<br>**5L000** = 0.005 Ω | **F** = ± 1.0 % | **EA** = Lead (Pb)-free, tape/reel<br>**EK** = Lead (Pb)-free, bulk | (Dash number)<br>(Up to 2 digits)<br>From **1 to 99** as applicable |



For technical questions, contact: ww2bresistors@vishay.com

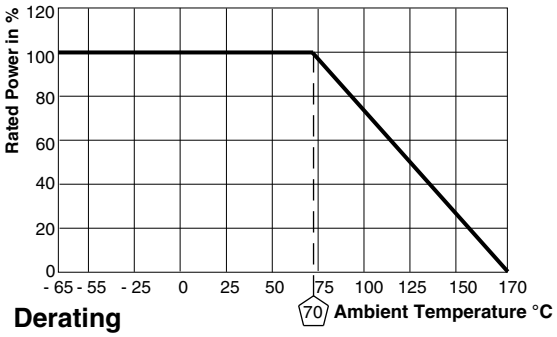
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## DIMENSIONS




| MODEL | DIMENSIONS in inches (millimeters) | | | | | |
|---|---|---|---|---|---|---|
| | L | W | H | T | A | B |
| WSK0612 | 0.060 ± 0.010 (1.50 ± 0.254) | 0.120 ± 0.010 (3.05 ± 0.254) | 0.015 ± 0.010 (0.381 ± 0.254) | 0.015 ± 0.010 (0.381 ± 0.254) | 0.020 ± 0.005 (0.51 ± 0.127) | 0.020 ± 0.005 (0.51 ± 0.127) |

| MODEL | SOLDER PAD DIMENSIONS in inches (millimeters) | | | | |
|---|---|---|---|---|---|
| | a | b | c | d | l |
| WSK0612 | 0.040 (1.01) | 0.135 (3.43) | 0.030 (0.762) | 0.015 (0.381) | 0.030 (0.76) |




**Derating**

| PERFORMANCE | | |
|---|---|---|
| TEST | CONDITIONS OF TEST | TEST LIMITS |
| Thermal shock | - 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme | ± 1.0 % Δ*R* |
| Short time overload | 5 x rated power for 5 s | ± 0.5 % Δ*R* |
| Low temperature operation | - 65 °C for 45 min | ± 0.5 % Δ*R* |
| High temperature exposure | 1000 h at + 170 °C | ± 2.0 % Δ*R* |
| Bias humidity | + 85 °C, 85 % RH, 10 % bias, 1000 h | ± 0.5 % Δ*R* |
| Mechanical shock | 100 *g*'s for 6 ms, 5 pulses | ± 0.5 % Δ*R* |
| Vibration | Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h | ± 0.5 % Δ*R* |
| Load life | 1000 h at + 70 °C, 1.5 h "ON", 0.5 h "OFF" | ± 2.0 % Δ*R* |
| Resistance to solder heat | + 260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence | ± 0.5 % Δ*R* |
| Moisture resistance | MIL-STD-202, method 106, 0 % power, 7a and 7b not required | ± 1.0 % Δ*R* |

| PACKAGING | | | | |
|---|---|---|---|---|
| MODEL | REEL | | | |
| | TAPE WIDTH | DIAMETER | PIECES/REEL | CODE |
| WSK0612 | 8 mm/embossed plastic | 178 mm/7" | 4000 | EA |

**Note**

- Embossed Carrier Tape per EIA-481.



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**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.**

**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**