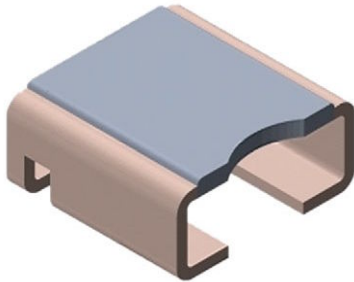


Power Metal Strip® Resistors, Very High Power (to 7 W), Low Value (down to 0.0003 Ω), Surface Mount



FEATURES

- High power to foot print size ratio
- All welded construction of the Power Metal Strip® resistors are ideal for all types of current sensing, voltage division and pulse applications
- Proprietary processing technique produces extremely low resistance values, down to 0.0003 Ω
- Specially selected and stabilized materials allow for high power rating (to 7 W)
- Construction is unaffected by high sulfur environments
- Solid metal nickel-chrome or manganese-copper alloy resistive element with low TCR (< 20 ppm/°C)
- Very low inductance 0.5 nH to 5 nH
- Low thermal EMF (< 3 μV/°C)
- AEC-Q200 qualified ⁽¹⁾
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

 AUTOMOTIVE
GRADE

RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)
DESIGN TOOLS (click logo to get started)


Notes

- Follow link to Overview of Automotive Grade Products for more details: www.vishay.com/doc?49924
- ⁽¹⁾ Flame retardance test may not be applicable to some resistor technologies

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | |
|------------------------------------|------|---|------------------|--------------------------------|--|--------------------------------------|
| GLOBAL MODEL | SIZE | POWER RATING $P_{70^{\circ}\text{C}}$ W | TOLERANCE ± % | RESISTANCE VALUE RANGE Ω | RESISTANCE VALUES CURRENTLY AVAILABLE ⁽²⁾ Ω | WEIGHT (typical) g/1000 pieces |
| WSLP2726 | 2726 | 5.0 | 1.0, 5.0 | 2m to 5m | 2m, 3m, 4m, 5m | 420 |
| WSLP2726 | 2726 | 7.0 | 1.0, 5.0 | 0.3m to 1m | 0.3m, 0.5m, 0.7m, 1m | 420 |

Notes

- Power rating depends on the max. temperature at the solder point, component placement density and the substrate material
- Part marking: Model, value, tolerance, date code
- ⁽¹⁾ Other values may be available, contact factory

| GLOBAL PART NUMBER INFORMATION | | | | | | | | | | | | | | | | | |
|--|---|--|---|---|-----------------------------|---|---|---|---|--|---|---|---|---|---|--|--|
| Global Part Numbering: WSLP2726L5000FEA (visit www.vishay.net Vishay Dale parts numbering manual for all options) | | | | | | | | | | | | | | | | | |
| W | S | L | P | 2 | 7 | 2 | 6 | L | 5 | 0 | 0 | 0 | F | E | A | | |
| GLOBAL MODEL (8 digits) | | RESISTANCE VALUE (5 digits) | | | TOLERANCE CODE (1 digit) | | PACKAGING CODE ⁽¹⁾ (2 digits) | | | SPECIAL (2 digits) | | | | | | | |
| WSLP2726 | | L = mΩ L5000 = 0.0005 Ω L7000 = 0.0007 Ω 1L000 = 0.0010 Ω 2L000 = 0.0020 Ω | | | F = ± 1.0 % J = ± 5.0 % | | EA = lead (Pb)-free, tape/reel EK = lead (Pb)-free, bulk | | | (dash number) (up to 2 digits) from 1 to 99 as applicable | | | | | | | |

Note

- ⁽¹⁾ Packaging code: EB (lead (Pb)-free) is a non-standard packaging code designating 1000 piece reels. The non-standard packaging code is identical to our standard EA (lead (Pb)-free), except that it is a package quantity of 1000 pieces

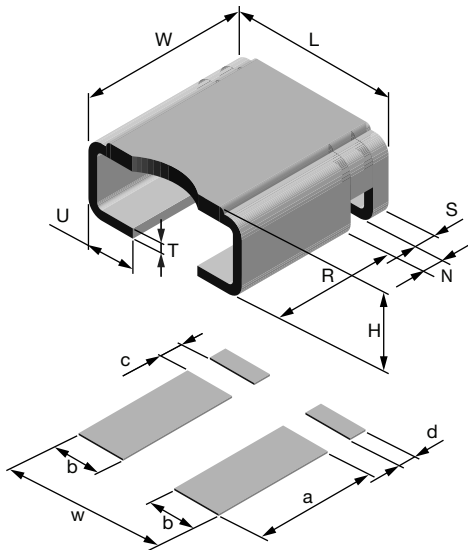
| TECHNICAL SPECIFICATIONS | | |
|---|--------|--------------------------|
| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
| Component temperature coefficient (including terminal) ⁽¹⁾ | ppm/°C | ± 75 for 0.5 mΩ to 5 mΩ |
| | | ± 110 for 0.3 mΩ |
| Element TCR ⁽²⁾ | ppm/°C | < 20 |
| Operating temperature range | °C | -65 to +170 |
| Maximum working voltage ⁽³⁾ | V | $(P \times R)^{1/2}$ |

Notes

- (1) Component TCR - total TCR that includes the TCR effects of the resistor element and the copper terminal
- (2) Element TCR - only applies to the alloy used for the resistor element; refer to item 1 in the construction illustration on the following page
- (3) Maximum working voltage - the WSL is not voltage sensitive, but is limited by power / energy dissipation and is also not ESD sensitive

DIMENSIONS in inches (millimeters)

| MODEL | DIMENSIONS | | | | | | | |
|----------|------------------------------|--|------------------------|----------------|------------------------------|-------------------------------|------------------------------|--------------------------------|
| | L | W | H | R (REF.) | S | T | U | N |
| WSLP2726 | 0.272 ± 0.008 (6.9 ± 0.2) | 0.260 + 0.012/- 0.008 (6.6 + 0.3/- 0.2) | Please see table below | 0.195 (5.0) | 0.028 ± 0.004 (0.7 ± 0.1) | 0.016 ± 0.002 (0.4 ± 0.05) | 0.078 ± 0.004 (2.0 ± 0.1) | 0.039 ± 0.006 (0.99 ± 0.15) |



| MODEL | SOLDER PAD DIMENSIONS | | | | |
|----------|-----------------------|-----------------|-----------------|-----------------|----------------|
| | a | b | c | d | w |
| WSLP2726 | 0.220 (5.6) | 0.096 (2.44) | 0.035 (0.89) | 0.035 (0.89) | 0.290 (7.4) |

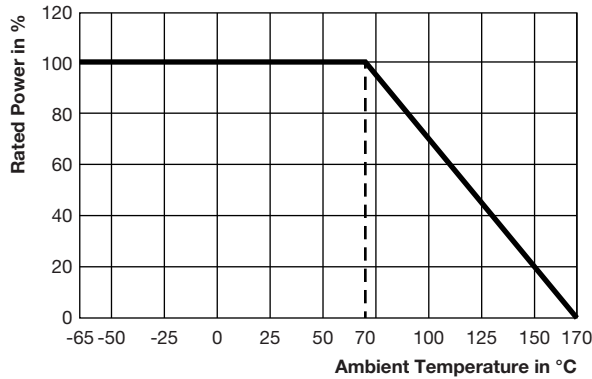
| MODEL | RESISTANCE VALUE (mΩ) | ELEMENT MATERIAL | HEIGHT H |
|----------|-----------------------|------------------|--------------------------------|
| WSLP2726 | 0.3 | Mn-Cu | 0.141 ± 0.008 (3.58 ± 0.2) |
| WSLP2726 | 0.5 | Mn-Cu | 0.116 ± 0.008 (2.95 ± 0.2) |
| WSLP2726 | 0.7 | Mn-Cu | 0.111 ± 0.008 (2.82 ± 0.2) |
| WSLP2726 | 1.0 | Mn-Cu | 0.1055 ± 0.008 (2.68 ± 0.2) |
| WSLP2726 | 2.0 | Ni-Cr | 0.114 ± 0.008 (2.9 ± 0.2) |
| WSLP2726 | 3.0 | Ni-Cr | 0.108 ± 0.008 (2.74 ± 0.2) |
| WSLP2726 | 4.0 | Ni-Cr | 0.1046 ± 0.008 (2.66 ± 0.2) |
| WSLP2726 | 5.0 | Ni-Cr | 0.110 ± 0.008 (2.79 ± 0.2) |

Notes

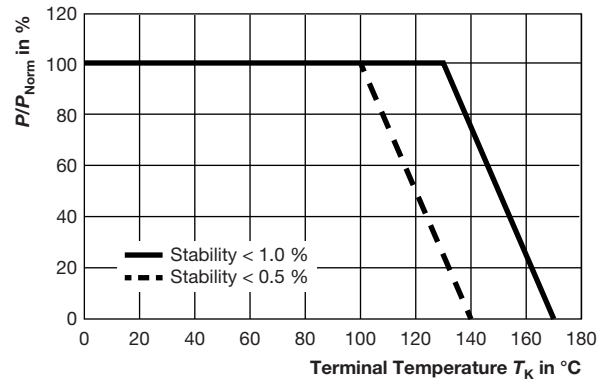
- 3D models available: www.vishay.com/doc?30314
- Surface mount solder profile recommendations: www.vishay.com/doc?31052



DERATING - AMBIENT TEMPERATURE



DERATING - TERMINAL TEMPERATURE



Example: WSLP2726 0.0005 Ω, 0.001 Ω

| PERFORMANCE | | |
|---------------------------|--|-------------|
| TEST | CONDITIONS OF TEST | TEST LIMITS |
| Thermal shock | -55 °C to +150 °C, 1000 cycles, 15 min at each extreme | ± 0.5 % |
| Low temperature operation | -65 °C for 24 h | ± 0.5 % |
| High temperature exposure | 1000 h at +170 °C | ± 1.0 % |
| Bias humidity | 85 °C, 85 % RH, 10 % bias, 1000 h | ± 0.5 % |
| Mechanical shock | 100 g's for 6 ms, 5 pulses | ± 0.5 % |
| Vibration | Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h | ± 0.5 % |
| Load life | 1000 h at +70 °C, 1.5 h "ON", 0.5 h "OFF" | ± 1.0 % |
| Resistance to solder heat | +260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence | ± 0.5 % |
| Moisture resistance | MIL-STD-202, method 106, 0 % power, 7b not required | ± 0.5 % |

| PACKAGING (1) | | | | |
|---------------|------------------------|------------|-------------|------|
| MODEL | REEL | | | |
| | TAPE WIDTH | DIAMETER | PIECES/REEL | CODE |
| WSLP2726 | 16 mm/embossed plastic | 330 mm/13" | 1500 | EA |

Notes

- Embossed carrier tape per EIA-481
- (1) Additional packaging details at www.vishay.com/doc?20051



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