

## Power Metal Strip® Resistors, High Temperature (275 °C), High Power, Low Value, Surface Mount, 4-Terminal



### FEATURES

- 4-terminal design allows for 1 % tolerance down to 0.002 Ω
- High power-to-footprint size ratio
- Ideal for all types of current sensing, voltage division and pulse applications, including switching and linear power supplies, instruments, power amplifiers and shunts
- Proprietary processing technique produces extremely low resistance values, down to 0.0005 Ω
- All welded construction
- Solid metal nickel-chrome 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 available <sup>(1)</sup>
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

 AUTOMOTIVE  
GRADE  
Available

**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### Note

- <sup>(1)</sup> Flame retardance test may not be applicable to some resistor technologies.

### STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | SIZE | POWER RATING<br>$P_{70^\circ\text{C}}$<br>W | TOLERANCE<br>± % | RESISTANCE<br>VALUE RANGE<br>Ω | RESISTANCE VALUES<br>CURRENTLY AVAILABLE <sup>(2)</sup><br>Ω | WEIGHT<br>(typical)<br>g/1000 pieces |
|--------------|------|---|------------------|--------------------------------|--|--------------------------------------|
| WSLT2726     | 2726 | 3.0   | 1.0              | 0.3m to 5m                     | 2m, 3m, 4m, 5m   | 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.
- <sup>(2)</sup> Other values may be available, contact factory.

### TECHNICAL SPECIFICATIONS

| PARAMETER                   | UNIT   | RESISTOR CHARACTERISTICS                  |
|-----------------------------|--------|---|
| Temperature coefficient     | ppm/°C | ± 75 over temperature of +20 °C to +60 °C |
| Operating temperature range | °C     | -65 to +275                               |
| Maximum continuous current  | V      | $(P \times R)^{1/2}$                      |

### GLOBAL PART NUMBER INFORMATION

Global Part Numbering: WSLT27265L000FEA (WSLT2726, 0.005 Ω, ± 1 %)

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| W | S | L | T | 2 | 7 | 2 | 6 | 5 | L | 0 | 0 | 0 | F | E | A |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|

| GLOBAL MODEL | RESISTANCE VALUE   | TOLERANCE CODE | PACKAGING CODE  | SPECIAL   |
|--------------|--|----------------|---|---|
| WSLT2726     | L = mΩ<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 |

**DIMENSIONS**

| MODEL    | DIMENSIONS in inches (millimeters) |  |                              |                |                              |                               |                              |                                |
|----------|------------------------------------|--|------------------------------|----------------|------------------------------|-------------------------------|------------------------------|--------------------------------|
|          | L                                  | W  | H                            | R (REF.)       | S                            | T                             | U                            | N                              |
| WSLT2726 | 0.272 ± 0.008<br>(6.9 ± 0.2)       | 0.260 + 0.012/- 0.008<br>(6.6 + 0.3/- 0.2) | 0.117 ± 0.008<br>(3.0 ± 0.2) | 0.198<br>(5.0) | 0.028 ± 0.004<br>(0.7 ± 0.1) | 0.016 ± 0.002<br>(0.4 ± 0.05) | 0.078 ± 0.004<br>(2.0 ± 0.1) | 0.039 ± 0.006<br>(0.99 ± 0.15) |



| MODEL    | SOLDER PAD DIMENSIONS in inches (millimeters) |                 |                 |                 |                |
|----------|---|-----------------|-----------------|-----------------|----------------|
|          | a   | b               | c               | d               | w              |
| WSLT2726 | 0.220<br>(5.6)                                | 0.096<br>(2.44) | 0.035<br>(0.89) | 0.035<br>(0.89) | 0.290<br>(7.4) |

| MODEL    | RESISTANCE VALUE (mΩ) | ELEMENT MATERIAL |
|----------|-----------------------|------------------|
| WSLT2726 | 2.0                   | Ni-Cr            |
|          | 3.0                   | Ni-Cr            |
|          | 4.0                   | Ni-Cr            |
|          | 5.0                   | Ni-Cr            |

**DERATING**


| PERFORMANCE               |  |              |
|---------------------------|--|--------------|
| TEST                      | CONDITIONS OF TEST   | TEST LIMITS  |
| Thermal shock             | -55 °C to +150 °C, 1000 cycles, 15 min at each extreme   | ± (0.5 %) ΔR |
| Short time overload       | 0.3 mΩ, 0.5 mΩ, 2 mΩ and 3 mΩ - 5x rated power for 5 s<br>4 mΩ and 5 mΩ - 3x rated power for 5 s | ± (0.5 %) ΔR |
| Low temperature operation | -65 °C for 45 min  | ± (0.5 %) ΔR |
| High temperature exposure | 1000 h at +275 °C  | ± (1.0 %) ΔR |
| Bias humidity             | +85 °C, 85 % RH, 10 % bias, 1000 h   | ± (0.5 %) ΔR |
| Mechanical shock          | 100 g's for 6 ms, 5 pulses   | ± (0.5 %) ΔR |
| Vibration                 | Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h                                   | ± (0.5 %) ΔR |
| Load life                 | 1000 h at +70 °C, 1.5 h "ON", 0.5 h "OFF"  | ± (1.0 %) ΔR |
| Resistance to solder heat | +260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence  | ± (0.5 %) ΔR |
| Moisture resistance       | MIL-STD-202, method 106, 0 % power, 7b not required  | ± (0.5 %) ΔR |

| PACKAGING |                        |            |             |      |
|-----------|------------------------|------------|-------------|------|
| MODEL     | REEL                   |            |             |      |
|           | TAPE WIDTH             | DIAMETER   | PIECES/REEL | CODE |
| WSLT2726  | 16 mm/embossed plastic | 330 mm/13" | 1500        | EA   |

**Note**

- Embossed Carrier Tape per EIA-481.



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