

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 ⁽¹⁾
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

 AUTOMOTIVE
GRADE
Available

RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

Note

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

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | |
|------------------------------------|------|---|------------------|-----------------------------|---|-----------------------------------|
| GLOBAL MODEL | SIZE | POWER RATING $P_{70\text{ }^\circ\text{C}}$ W | TOLERANCE ± % | RESISTANCE VALUE RANGE Ω | RESISTANCE VALUES CURRENTLY AVAILABLE ⁽²⁾ Ω | WEIGHT (typical) g/1000 pieces |
| WSLT2726 | 2726 | 3.0 | 1.0 | 0.3m to 5m | 2m, 3m, 4m, 5m | 420 |

Notes

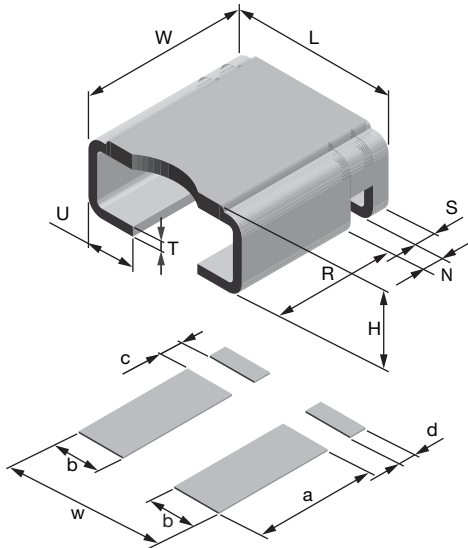
- Power rating depends on the max. temperature at the solder point, component placement density and the substrate material.
- Part marking: Model, value, tolerance, date code.
- ⁽²⁾ Other values may be available, contact factory.

| 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 2L000 = 0.002 Ω 3L000 = 0.003 Ω 4L000 = 0.004 Ω 5L000 = 0.005 Ω | | | F = ± 1.0 % | | | EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk | | | (Dash number) (up to 2 digits) 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 (6.9 ± 0.2) | 0.260 + 0.012/- 0.008 (6.6 + 0.3/- 0.2) | 0.117 ± 0.008 (3.0 ± 0.2) | 0.198 (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 in inches (millimeters) | | | | |
|----------|---|-----------------|-----------------|-----------------|----------------|
| | a | b | c | d | w |
| WSLT2726 | 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 |
|----------|-----------------------|------------------|
| 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 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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