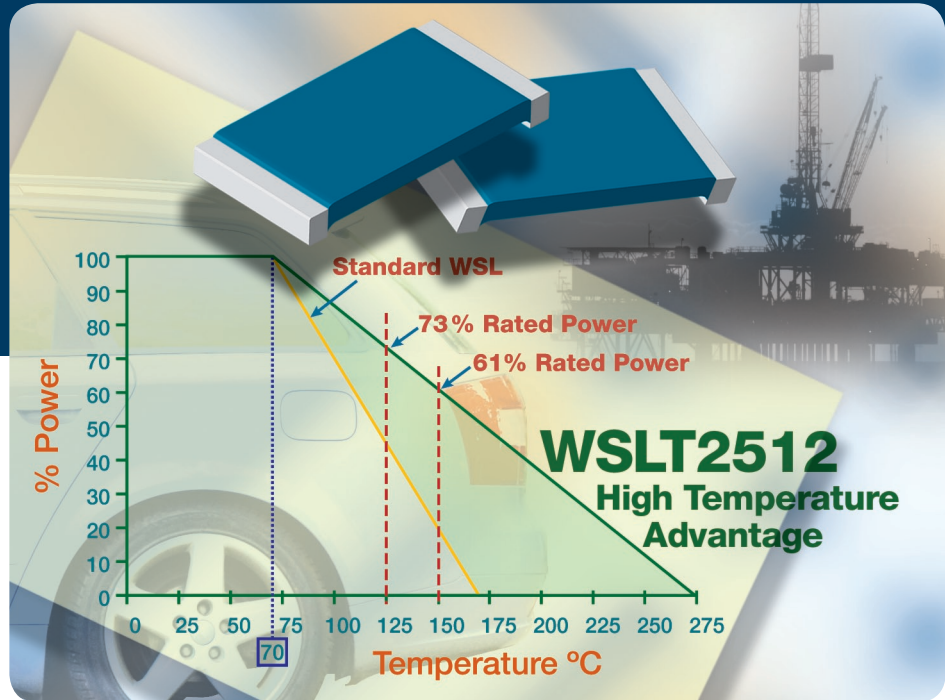




POWER METAL STRIP® RESISTOR

WSLT2512



High Temperature (+ 275 °C), Surface-Mount Power Metal Strip® Resistor

KEY BENEFITS

- Provides high temperature (+ 275 °C) performance for use in harsh environments
- Enables use in high-temperature environments with less derating required; for example, 61 % rated power at 150 °C
- Very low resistance values: 10 mΩ to 500 mΩ
- Low TCR resistance element (< 20 ppm/°C) results in accurate current-sensing, allowing the use of lower cost ICs
- Operating temperature range of - 65 °C to + 275 °C
- Lead (Pb)-free construction is RoHS-compliant

APPLICATIONS

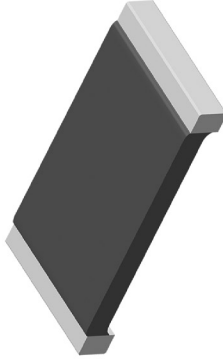
- Automotive
- Industrial

Datasheet is available on our web site at www.vishay.com for WSLT2512 - <http://www.vishay.com/doc?30121>

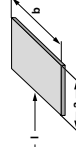
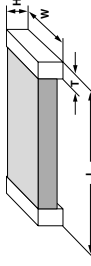
Power Metal Strip® Resistors, High Temperature (275 °C), Low Value (Down to 0.01 Ω), Surface Mount

FEATURES

- Ideal for all types of current sensing, voltage division and pulse applications including switching and linear power supplies, instruments and power amplifiers
- Proprietary processing technique produces extremely low resistance values
- Specially selected and stabilized materials allow for high temperature derating (to +275 °C)
- All welded construction
- Solid metal Nickel-Chrome alloy resistive element with low TCR (< 20 ppm/°C)
- Very low inductance (< 5 nH)
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 μV/°C)

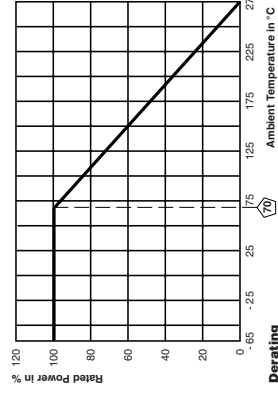


DIMENSIONS



| MODEL | DIMENSIONS in inches (millimeters) | | | |
|----------|------------------------------------|---------------------------------|----------------------------------|---------------------------------|
| | L | W | H | T |
| WSLT2512 | 0.250 ± 0.010 [6.35 ± 0.254] | 0.125 ± 0.010 [3.18 ± 0.254] | 0.025 ± 0.010 [0.635 ± 0.254] | 0.060 ± 0.010 [1.52 ± 0.254] |

| MODEL | SOLDER PAD DIMENSIONS in inches (millimeters) | | |
|----------|---|-----------------|-----------------|
| | a | b | l |
| WSLT2512 | 0.083 [2.11] | 0.145 [3.68] | 0.160 [4.06] |



STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | POWER RATING P_{70} , °C W | RESISTANCE RANGE Ω | | WEIGHT (Typical) g/1000 pcs |
|--------------|------------------------------------|-----------------------|-------------|-----------------------------------|
| | | ± 0.5 % | ± 1.0 % | |
| WSLT2512 | 1.0 | 0.01 - 0.50 | 0.01 - 0.50 | 63.6 |

* Part Marking: DALE, Value, Tolerance Code

TECHNICAL SPECIFICATIONS

| | | |
|-----------------------------|--------|----------------------|
| PARAMETER | UNIT | WSLT2512 |
| Temperature Coefficient | ppm/°C | ± 75 |
| Inductance | nH | < 5 |
| Operating temperature range | °C | -65/+275 |
| Max. Continuous Current | A | (P/R) ^{1/2} |

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: WSLT2512R0100FEA

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------------------|---|---|
| W | S | L | T | 2 | 5 | 1 | 2 | R | 0 | 1 | 0 | 0 | F | E | A |
| RESISTANCE VALUE | | | | | | | | | | | | | PACKING CODE | | |
| L = Milliohm* | | | | | | | | | | | | | EA = Lead (Pb)-free, Tape/Reel | | |
| R = Decimal | | | | | | | | | | | | | EK = Lead (Pb)-free/Bulk | | |
| 4L000 = 0.004 Ω | | | | | | | | | | | | | Special | | |
| R0100 = 0.01 Ω | | | | | | | | | | | | | Reserved for future specials | | |
| * Use "L" for resistance values < 0.01 Ω. | | | | | | | | | | | | | | | |

PERFORMANCE

| TEST | CONDITIONS OF TEST | TEST LIMITS |
|---------------------------|---|-------------|
| Thermal Shock | -55 °C to +150 °C, 1000 cycles, 15 minutes at each extreme | ± 0.5 % ΔR |
| Short Time Overload | 5 x rated power for 5 seconds | ± 0.5 % ΔR |
| Low Temperature Operation | -65 °C for 45 minutes | ± 0.5 % ΔR |
| High Temperature Exposure | 1000 hours at +275 °C | ± 1.0 % ΔR |
| Bias Humidity | +85 °C, 85 % RH, 10 % Bias, 1000 hours | ± 0.5 % ΔR |
| Mechanical Shock | 100 g's for 6 milliseconds, 5 pulses | ± 0.5 % ΔR |
| Vibration | Frequency varied 10 to 2000 Hz in one minute, 3 directions, 12 hours | ± 0.5 % ΔR |
| Lead Life at 150 °C | 1000 hours, 1.5 hrs "ON", 0.5 hours "OFF" | ± 1.0 % ΔR |
| Resistance to Solder Heat | 260 °C Solder, 10 - 12 second dwell, 25 mm ² /second emergence | ± 0.5 % ΔR |
| Moisture Resistance | MIL-STD-202, Method 106, 0 % power, 7b not required | ± 1.0 % ΔR |

PACKING

| MODEL | TAPE WIDTH | DIAMETER | PIECES/REEL | CODE |
|----------|------------------------|-----------|-------------|------|
| WSLT2512 | 12 mm Embossed Plastic | 178 mm/7" | 2000 | EA |

Embossed Carrier Tape per EIA-481-2

Revision 20-Jun-06

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For technical questions, contact ww2bresistors@vishay.com