

Power Metal Strip® Resistors, High Temperature (275 °C), Low Value (down to 0.01 Ohm), 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
- All welded construction
- Specially selected and stabilized materials allow for high temperature derating (to + 275 °C)
- 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)
- Compliant to RoHS Directive 2002/95/EC
- AEC-Q200 qualified available ⁽¹⁾

 AUTOMOTIVE
GRADE
Available

RoHS
COMPLIANT
GREEN
(5-2009)**

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 $P_{70^{\circ}\text{C}}$ W | TOLERANCE \pm % | RESISTANCE VALUE RANGE Ω | WEIGHT (typical) g/1000 pieces |
|--------------|------|---|----------------------|---------------------------------------|--------------------------------------|
| WSLT2512 | 2512 | 1.0 | 0.5, 1.0 | 0.01 to 0.50 | 63.6 |

Note

- Part marking: DALE, value, tolerance code.

TECHNICAL SPECIFICATIONS

| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
|-----------------------------|--------|--------------------------|
| Temperature coefficient | ppm/°C | \pm 75 |
| Inductance | nH | < 5 |
| Operating temperature range | °C | - 65 to + 275 |
| Maximum continuous current | A | $(P/R)^{1/2}$ |

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: WSLT2512R0100FEA

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| W | S | L | T | 2 | 5 | 1 | 2 | R | 0 | 1 | 0 | 0 | F | E | A | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|

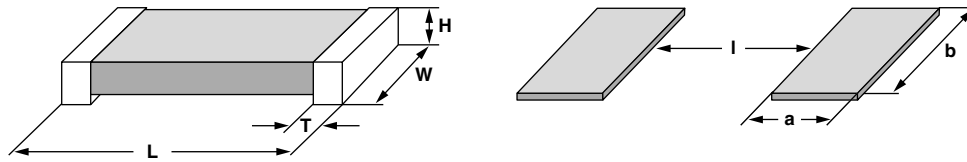
| |
|-----------------|
| GLOBAL MODEL |
| WSLT2512 |

| |
|--|
| RESISTANCE VALUE |
| R = Decimal R0100 = 0.01 Ω |

| |
|--|
| TOLERANCE CODE |
| D = \pm 0.5 % F = \pm 1.0 % |

| |
|---|
| PACKAGING CODE |
| EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk |

| |
|------------------------------|
| SPECIAL |
| Reserved for future specials |

DIMENSIONS in inches (millimeters)


| MODEL | DIMENSIONS | | | | SOLDER PAD DIMENSIONS | | |
|----------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|-----------------------|-----------------|-----------------|
| | L | W | H | T | a | b | l |
| 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) | 0.030 ± 0.010 (0.762 ± 0.254) | 0.065 (1.65) | 0.145 (3.68) | 0.160 (4.06) |

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 | 5 x 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 at 70 °C | 1000 h, 1.5 h "ON", 0.5 h "OFF" | ± 1.0 % ΔR |
| Load life at 150 °C | 1000 h, 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 | ± 1.0 % ΔR |

| PACKAGING | | | | |
|-----------|------------------------|-----------|-------------|------|
| MODEL | REEL | | | |
| | TAPE WIDTH | DIAMETER | PIECES/REEL | CODE |
| WSLT2512 | 12 mm/embossed plastic | 178 mm/7" | 2000 | EA |

Note

- Embossed Carrier Tape per EIA-481.



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