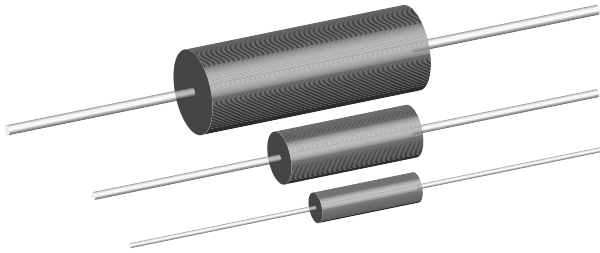


Wirewound Resistors, Precision Power, Low Value, Commercial, Military, MIL-PRF-49465 Type RLV, Axial Lead



FEATURES

- Ideal for all types of current sensing applications including switching and linear power supplies, instruments and power amplifiers
- Proprietary processing technique produces extremely low resistance values
- Excellent load life stability
- Low temperature coefficient
- Low inductance
- Cooler operation for high power to size ratio



RoHS*
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | HISTORICAL MODEL | MIL-PRF-49465 TYPE | POWER RATING $P_{25^{\circ}\text{C}}$ W | RESISTANCE RANGE Ω ⁽¹⁾ $\pm 1\%, \pm 3\%, \pm 5\%, \pm 10\%$ | TECHNOLOGY |
|--------------|------------------|--------------------|--|---|-----------------|
| LVR01 | LVR-1 | - | 1 | 0.01 - 0.1 ⁽²⁾ | Metal Strip |
| LVR03 | LVR-3 | - | 3 | 0.005 - 0.2 | Metal Strip |
| LVR03...26 | LVR-3-26 | RLV30 (M4946506) | 3 | 0.01 - 0.2 | Metal Strip |
| LVR05 | LVR-5 | - | 5 | 0.005 - 0.3 | Metal Strip |
| LVR05...26 | LVR-5-26 | RLV31 (M4946507) | 5 | 0.01 - 0.3 | Metal Strip |
| LVR10 | LVR-10 | - | 10 | 0.01 - 0.8 | Coil Spacewound |

Notes

- (1) Resistance is measured 3/8" [9.52 mm] from the body of the resistor, or at 1.183" [30.05 mm], 1.315" [33.40 mm], 1.675" [42.545 mm] or 2.575" [65.405 mm] spacing for the LVR01, LVR03, LVR05 and LVR10 respectively
- (2) Standard resistance values are 0.01 Ω , 0.015 Ω , 0.02 Ω , 0.025 Ω , 0.03 Ω , 0.033 Ω , 0.04 Ω , 0.05 Ω , 0.051 Ω , 0.06 Ω , 0.068 Ω , 0.07 Ω , 0.08 Ω , 0.09 Ω and 0.1 Ω with 1 % tolerance. Other resistance values may be available upon request

TECHNICAL SPECIFICATIONS

| PARAMETER | UNIT | LVR01 | LVR03 | LVR05 | LVR10 |
|---------------------------------|----------|------------------------------------|-------|---------------|--------------------------|
| Rated Power at + 25 °C | W | 1 | 3 | 5 | 10 |
| Operating Temperature Range | °C | - 65 to + 175 | | - 65 to + 275 | |
| Dielectric Withstanding Voltage | V_{AC} | 1000 | 1000 | 1000 | 1000 |
| Insulation Resistance | Ω | 10 000 M Ω minimum dry | | | |
| Short Time Overload | - | 5 x rated power for 5 s | | | 10 x rated power for 5 s |
| Terminal Strength (minimum) | lb | 5 | 10 | 10 | 10 |
| Temperature Coefficient | ppm/°C | See TCR vs. Resistance Value chart | | | |
| Maximum Working Voltage | V | $(P \times R)^{1/2}$ | | | |
| Weight (maximum) | g | 2 | 2 | 5 | 11 |

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: LVR055L000FS73 (preferred part number format)

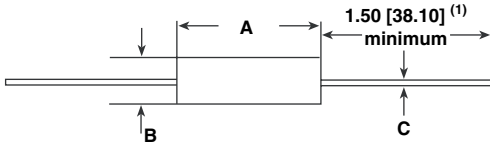
L V R 0 5 5 L 0 0 0 F S 7 3

| GLOBAL MODEL | VALUE | TOLERANCE | PACKAGING | SPECIAL |
|----------------------------------|--|---|--|--|
| LVR01 LVR03 LVR05 LVR10 | R = Decimal L = m Ω (values < 0.010 Ω) R1500 = 0.15 Ω 7L000 = 0.007 Ω | D = $\pm 0.5\%$ F = $\pm 1.0\%$ G = $\pm 2.0\%$ H = $\pm 3.0\%$ J = $\pm 5.0\%$ K = $\pm 10.0\%$ | E12 = Lead (Pb)-free bulk E03 = Lead (Pb)-free lacer pack (LVR10) E70 = Lead (Pb)-free, tape/reel 1000 pieces (LVR01, 03) E73 = Lead (Pb)-free, tape/reel 500 pieces B12 = Tin/lead bulk L03 = Tin/lead lacer pack (LVR10) S70 = Tin/lead, tape/reel 1000 pieces (LVR01, 03) S73 = Tin/lead, tape/reel 500 pieces | (Dash Number) (up to 3 digits) From 1 - 999 as applicable |

Historical Part Number Example: LVR-5 0.005 Ω 1% S73 (will continue to be accepted for tin/lead product only)

| | | | |
|------------------|------------------|----------------|-----------|
| LVR-5 | 0.005 Ω | 1% | S73 |
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |

* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS in inches [millimeters]


| MODEL | DIMENSIONS in inches [millimeters] | | |
|-------|------------------------------------|----------------------|----------------------|
| | A ± 0.010 [0.254] | B ± 0.010 [0.254] | C ± 0.002 [0.051] |
| LVR01 | 0.427 [10.85] | 0.115 [2.92] | 0.020 [0.508] |
| LVR03 | 0.560 [14.22] | 0.205 [5.21] | 0.032 [0.813] |
| LVR05 | 0.925 [23.50] | 0.330 [8.38] | 0.040 [1.02] |
| LVR10 | 1.828 [46.43] | 0.392 [9.96] | 0.040 [1.02] |

Note

(1) On some standard reel pack methods, the leads may be trimmed to a shorter length than shown

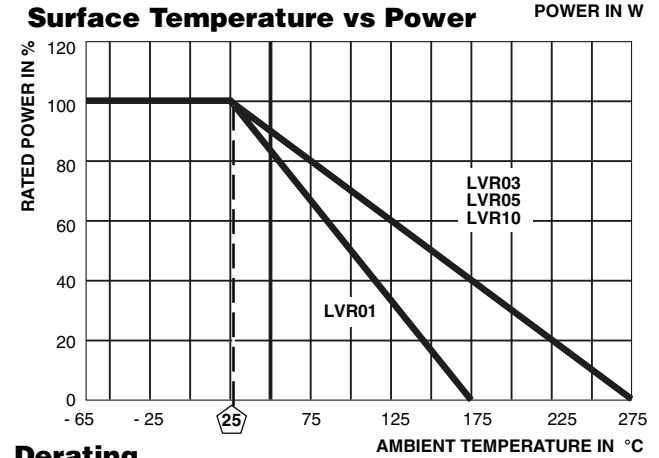
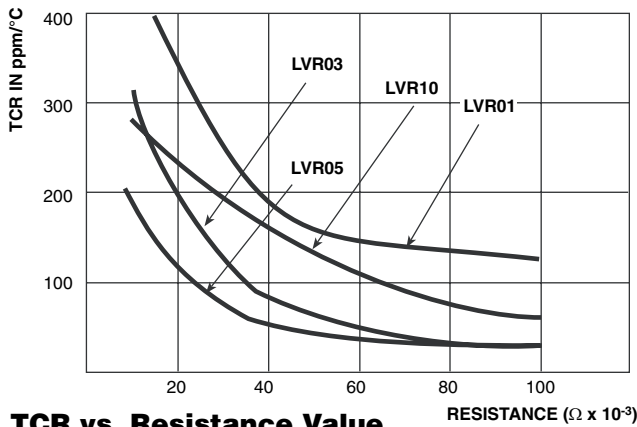
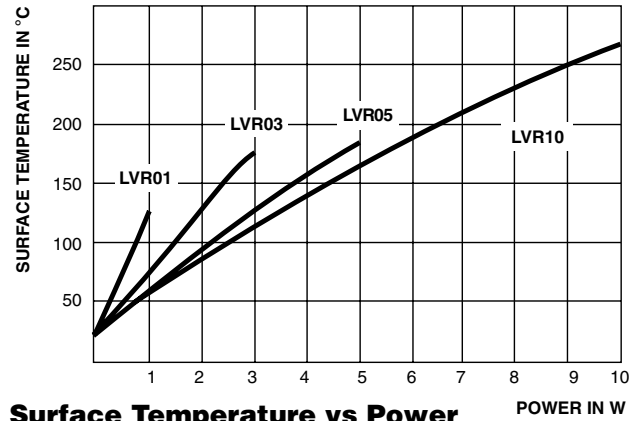
MATERIAL SPECIFICATIONS
Element: Self-supporting nickel-chrome alloy
 (LVR10 also utilizes manganin)

Encapsulation: High temperature mold compound

Terminals: Tinned copper

Part Marking: DALE, model, wattage, value, tolerance, date code

The improved TCR characteristics of these LVR models from -55 °C to +125 °C (reference to +25 °C) are as follows:


TCR vs. Resistance Value
Derating

| PERFORMANCE | | |
|---------------------------------|---|-------------------------|
| TEST | CONDITIONS OF TEST | TEST LIMITS |
| Thermal Shock | -65 °C to +125 °C, 5 cycles, 15 min at each extrem | ± (0.2 % + 0.0005 Ω) ΔR |
| Short Time Overload | 5 x rated power (LVR01, 03, 05), 10 x rated power (LVR10) for 5 s | ± (0.5 % + 0.0005 Ω) ΔR |
| Low Temperature Storage | -65 °C for 24 h | ± (0.2 % + 0.0005 Ω) ΔR |
| High Temperature Exposure | 250 h at +275 °C (+175 °C for LVR01) | ± (2.0 % + 0.0005 Ω) ΔR |
| Dielectric Withstanding Voltage | 1000 V _{rms} , 1 min | ± (0.1 % + 0.0005 Ω) ΔR |
| Insulation Resistance | MIL-STD-202 Method 302, 100 V | 1000 MΩ minimum |
| Moisture Resistance | MIL-STD-202 Method 106, 100 7b not applicable | ± (0.2 % + 0.0005 Ω) ΔR |
| Shock, Specified Pulse | MIL-STD-202 Method 213, 100 g's for 6 ms, 10 shocks | ± (0.1 % + 0.0005 Ω) ΔR |
| Vibration, High Frequency | Frequency varied 10 to 2000 Hz, 20 g peak, 2 directions 6 h each | ± (0.1 % + 0.0005 Ω) ΔR |
| Load Life | 2000 h at rated power, +25 °C, 1.5 h "ON", 0.5 h "OFF" | ± (2.0 % + 0.0005 Ω) ΔR |
| Solderability | ANSI J-STD-002 | 95 % coverage |
| Bias Humidity | +85 °C, 85 % RH, 10 % bias, 1000 h | ± (1.0 % + 0.0005 Ω) ΔR |



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