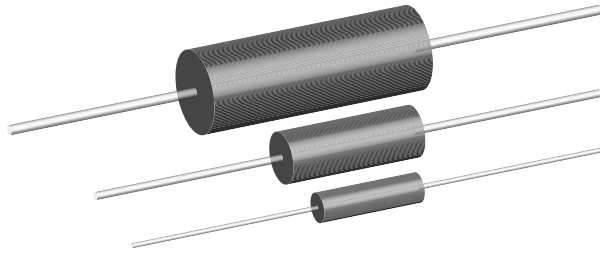


Wirewound Resistors, Precision Power, Low Value, Commercial, Military, MIL-PRF-49465 Type RLV, Axial Lead



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 $P_{25\text{ }^\circ\text{C}}$ 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

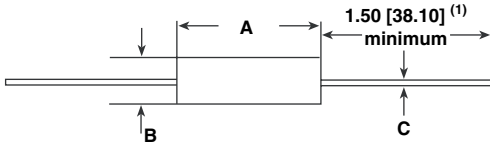
Notes

- ⁽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		(Dash Number) (up to 3 digits) From 1 - 999 as applicable
			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		
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

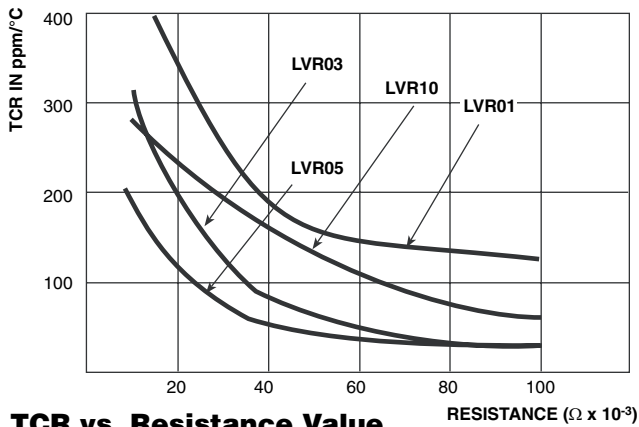
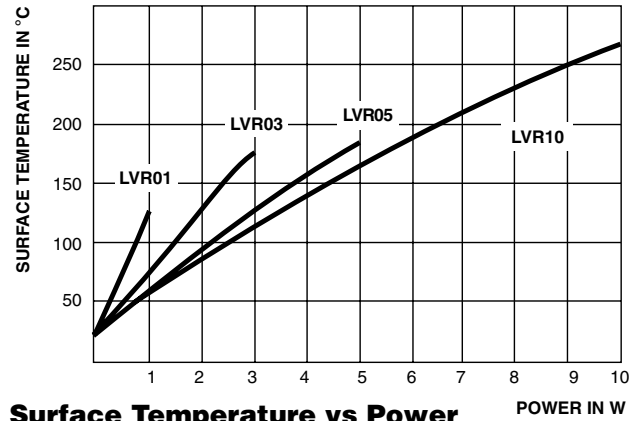
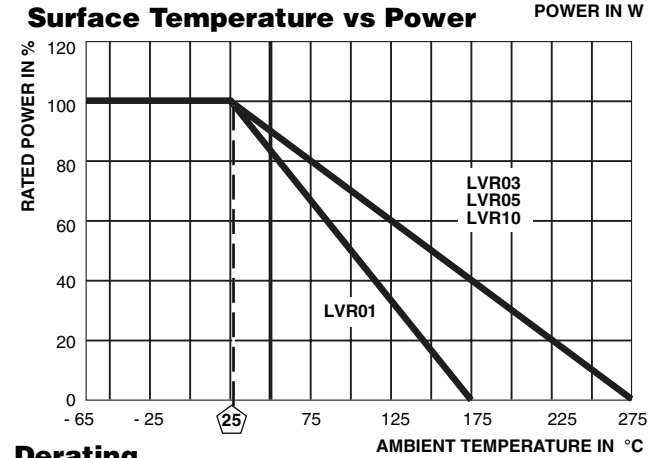
MATERIAL SPECIFICATIONS
Element: Self-supporting nickel-chrome alloy
 (LVR10 also utilizes manganin)

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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