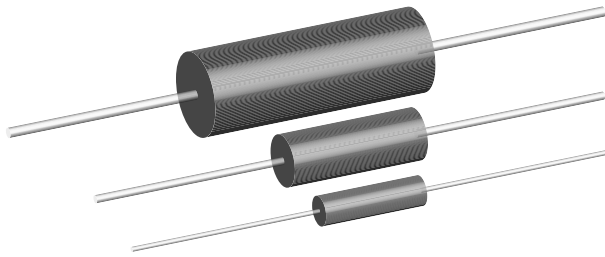


Wirewound Resistors, Precision Power, Low Value, Commercial, Military, MIL-PRF-49465 Type RLV, Axial Lead



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



STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	HISTORICAL MODEL	MIL-PRF-49465 TYPE	POWER RATING $P_{25\text{ }^\circ\text{C}}$ W	RESISTANCE RANGE* Ω $\pm 1\%, \pm 3\%, \pm 5\%, \pm 10\%$	TECHNOLOGY
LVR01	LVR-1	—	1	0.01 - 0.1**	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

* 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.
 ** 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/+ 175	- 65/+ 275		
Dielectric Withstanding Voltage	V_{AC}	1000	1000	1000	1000
Insulation Resistance	Ω	10000 Megohms minimum dry			
Short Time Overload	-	5 x rated power for 5 seconds			10 x rated power for 5 seconds
Terminal Strength (minimum)	lb	5	10	10	10
Temperature Coefficient	ppm/°C	See TC 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: LVR055L000FS70 (preferred part numbering format)

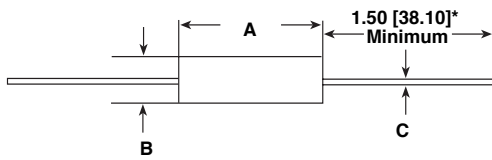
L	V	R	0	5	5	L	0	0	0	F	S	7	0			
GLOBAL MODEL LVR01 LVR03 LVR05 LVR10	VALUE R = Decimal L = Milliohm (below 0.01 Ω) R1500 = 0.15 Ω 7L000 = 0.007 Ω	TOLERANCE D = $\pm 0.5\%$ F = $\pm 1.0\%$ G = $\pm 2.0\%$ H = $\pm 3.0\%$ J = $\pm 5.0\%$ K = $\pm 10\%$	PACKAGING E12 = Lead (Pb)-free bulk E03 = Lead (Pb)-free lacer pack (LVR10) E70 = Lead (Pb)-free T/R 1000 pcs (LVR01, 02, 03) or 500 pcs (LVR05) B12 = Tin/lead bulk F03 = Tin/lead lacer pack (LVR10) S70 = Tin/lead T/R 1000 pcs (LVR01, 02, 03) or 500 pcs (LVR05)				SPECIAL (Dash Number) (up to 3 digits) From 1-999 as applicable									

Historical Part Number example: LVR-5 0.005 Ω 1 % S70 (will continue to be accepted)

LVR-5	0.005 Ω	1 %	S70
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING



DIMENSIONS



* On some standard reel pack methods, the leads may be trimmed to a shorter length than shown.

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]

MATERIAL SPECIFICATIONS

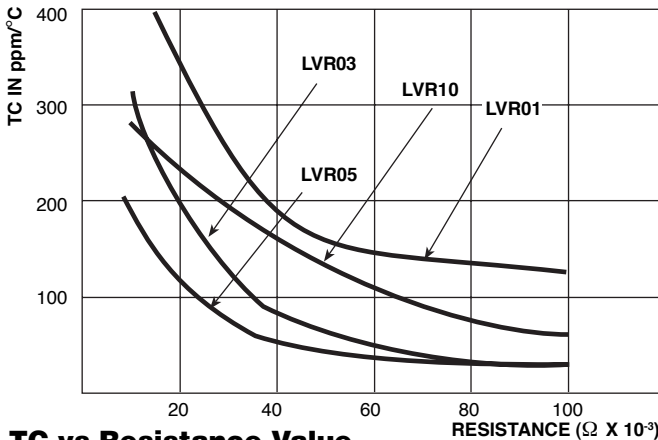
Element: Self-supporting nickel-chrome alloy
(LVR10 also utilizes manganin)

Encapsulation: High temperature mold compound

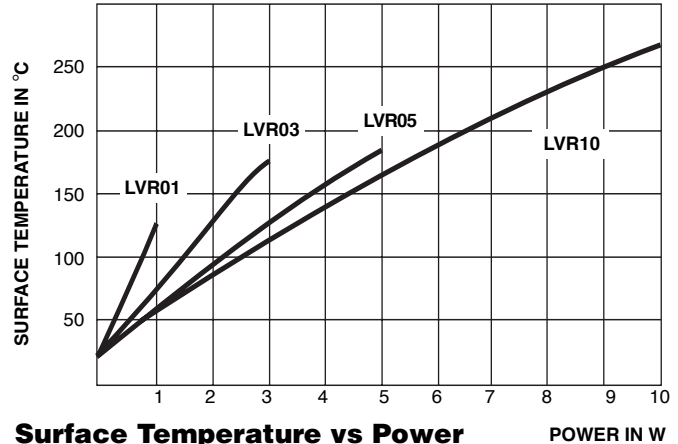
Terminals: Tinned copper

Part Marking: DALE, Model, Wattage, Value, Tolerance,
Date Code

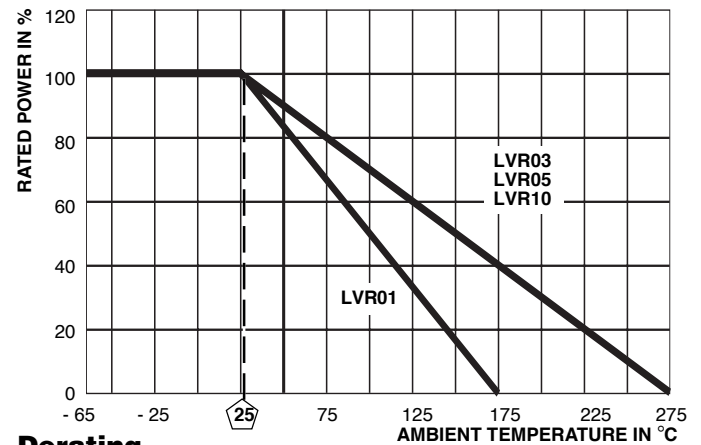
The improved TC characteristics of these LVR models from -55 °C to +125 °C (referenced to +25 °C) are as follows:



TC vs Resistance Value



Surface Temperature vs Power



Derating

PERFORMANCE		
TEST	CONDITIONS OF TEST (MIL-PRF-49465)	TEST LIMITS
Thermal Shock	-65 °C to +125 °C, 5 cycles, 15 minutes 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 seconds	± (0.5 % + 0.0005 Ω) ΔR
Low Temperature Storage	-65 °C for 24 hours	± (0.2 % + 0.0005 Ω) ΔR
High Temperature Exposure	250 hours at +275 °C (+175 °C for LVR01)	± (2.0 % + 0.0005 Ω) ΔR
Dielectric Withstanding Voltage	1000 V rms, one minute	± (0.1 % + 0.0005 Ω) ΔR
Insulation Resistance	MIL-STD-202 Method 302, 100 volts	1000 MΩ minimum
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	± (0.2 % + 0.0005 Ω) ΔR
Shock, Specified Pulse	MIL-STD-202 Method 213, 100 g's for 6 milliseconds, 10 shocks	± (0.1 % + 0.0005 Ω) ΔR
Vibration, High Frequency	Frequency varied 10 to 2000 Hz, 20 g peak, 2 directions 6 hours each	± (0.1 % + 0.0005 Ω) ΔR
Load Life	2000 hours at rated power, +25 °C, 1.5 hours "ON", 0.5 hours "OFF"	± (2.0 % + 0.0005 Ω) ΔR
Solderability	ANSI J-STD-002	95 % coverage
Bias Humidity	+85 °C, 85 % RH, 10 % bias, 1000 hours	± (1.0 % + 0.0005 Ω) ΔR



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