

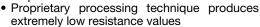


Wirewound Resistors, Precision Power, Low Value, Commercial, **Axial Lead**



FEATURES

• Ideal for all types of current sensing applications including switching and linear power supplies, instruments and power amplifiers



- Excellent load life stability
- Low temperature coefficient
- Low inductance
- · Cooler operation for high power to size ratio
- MIL-PRF-49465 qualified, type RLV resistors can be found at: www.vishay.com/doc?30283
- Compliant to RoHS Directive 2002/95/EC









STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING P _{25 °C} W	RESISTANCE RANGE (1) Ω	TOLERANCE ± %	TECHNOLOGY
LVR01	LVR-1	1	0.01 to 0.1 ⁽²⁾	1, 3, 5, 10	Metal strip
LVR03	LVR-3	3	0.005 to 0.2	1, 3, 5, 10	Metal strip
LVR05	LVR-5	5	0.005 to 0.3	1, 3, 5, 10	Metal strip
LVR10	LVR-10	10	0.01 to 0.8	1, 3, 5, 10	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

LVR01: Standard resistance values are 0.01 Ω , 0.015 Ω , 0.02 Ω , 0.025 Ω , 0.03 Ω , 0.040 Ω , 0.050 Ω , 0.051 Ω , 0.060 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
Operating Temperature Range	°C	- 65 to + 175 - 65 to + 275			275
Dielectric Withstanding Voltage	V_{RMS}	1000	1000	1000	1000
Insulation Resistance	Ω	10 000 MΩ 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	0.5	2	5	11

GLOBAL PART NUMBER INFORMATION					
LV	pering example: LVR09	5 L 0	0 0 F S 7 3		
LVR01 LVR03 LVR05 LVR10	$\begin{tabular}{ll} VALUE \\ \hline R = Decimal \\ L = $m\Omega$ \\ (values < 0.010 \Omega) \\ $R1500 = 0.15 \Omega$ \\ \hline \end{tabular}$	TOLERANCE D = ± 0.5 % F = ± 1.0 % G = ± 2.0 % H = ± 3.0 %	PACKAGING 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	SPECIAL (Dash Number) (up to 3 digits) From 1 to 999 as applicable	
Historical Part Nu	7L000 = 0.007Ω Imbering example: LV	$J = \pm 5.0 \%$ K = ± 10.0 % (R-5 0.005 Ω 1 % \$73	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		
LVR-5		0.005 Ω	1 % S7	3	
HISTORICAL MODEL RESISTANCE VALUE		RESISTANCE VALUE	TOLERANCE CODE PACKA	GING	

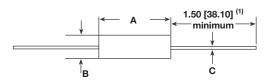
^{*} Pb containing terminations are not RoHS compliant, exemptions may apply
** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902





Vishay Dale Wirewound Resistors, Precision Power, Low Value, Commercial, Axial Lead

DIMENSIONS in inches [millimeters]



	DIMENSIONS in inches [millimeters]			
MODEL	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

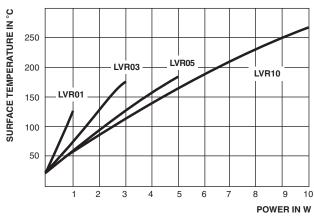
code

Packaging: Reference "Wirewound Through Hole Resistor

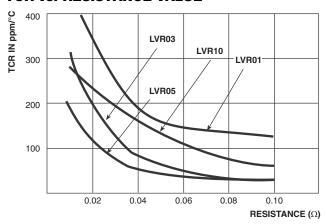
Packaging" (www.vishay.com/doc?21028)

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

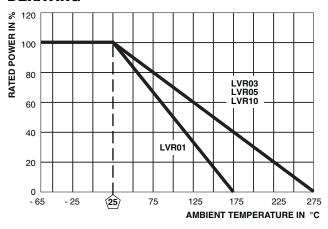
SURFACE TEMPERATURE vs. POWER



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 extreme	\pm (0.2 % + 0.0005 Ω) ΔR			
Short Time Overload	5 x rated power (LVR01, 03, 05), 10 x rated power (LVR10) for 5 s	\pm (0.5 % + 0.0005 Ω) ΔR			
Low Temperature Storage	- 65 °C for 24 h	$\pm (0.2 \% + 0.0005 \Omega) \Delta R$			
High Temperature Exposure	250 h at + 275 °C (+ 175 °C for LVR01)	\pm (2.0 % + 0.0005 Ω) ΔR			
Dielectric Withstanding Voltage	1000 V _{RMS} , 1 min	\pm (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, 7b not applicable	\pm (0.2 % + 0.0005 Ω) ΔR			
Shock, Specified Pulse	MIL-STD-202 Method 213, 100 g's for 6 ms, 10 shocks	\pm (0.1 % + 0.0005 Ω) ΔR			
Vibration, High Frequency	Frequency varied 10 Hz to 2000 Hz, 20 g peak, 2 directions 6 h each	\pm (0.1 % + 0.0005 Ω) ΔR			
Load Life	2000 h at rated power, + 25 °C, 1.5 h "ON", 0.5 h "OFF"	\pm (2.0 % + 0.0005 Ω) ΔR			
Bias Humidity	+ 85 °C, 85 % RH, 10 % bias, 1000 h	± (1.0 % + 0.0005 Ω) ΔR			



Legal Disclaimer Notice

Vishay

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