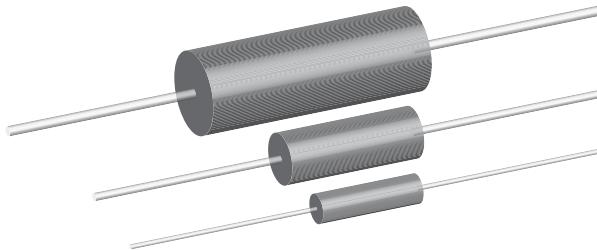


Wirewound Resistors, Precision Power, Low Value, Commercial, Axial Lead



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
- MIL-PRF-49465 qualified, type RLV resistors can be found at: www.vishay.com/doc?30283
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS*
Available


Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25^\circ\text{C}}$ W	RESISTANCE RANGE ⁽¹⁾ Ω	TOLERANCE $\pm \%$	TECHNOLOGY	WEIGHT (typical) g
LVR01	LVR-1	1	0.01 to 0.1 ⁽²⁾	1, 3, 5, 10	Metal strip	0.5
LVR03	LVR-3	3	0.005 to 0.2	1, 3, 5, 10	Metal strip	2
LVR05	LVR-5	5	0.005 to 0.3	1, 3, 5, 10	Metal strip	5
LVR10	LVR-10	10	0.01 to 0.8	1, 3, 5, 10	Coil spacewound	11

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.

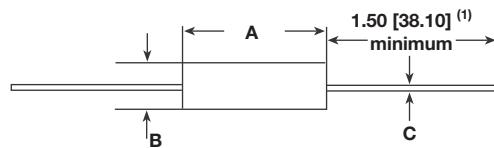
(2) LVR01: Standard resistance values are 0.01 Ω , 0.015 Ω , 0.02 Ω , 0.025 Ω , 0.03 Ω , 0.033 Ω , 0.04 Ω , 0.05 Ω , 0.051 Ω , 0.06 Ω , 0.068 Ω , 0.07 Ω , 0.08 Ω , 0.09 Ω and 0.1 Ω with 1 % tolerance. Other resistance values may be available upon request.

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	LVR01	LVR03	LVR05	LVR10
Operating Temperature Range	$^\circ\text{C}$	-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
Maximum Working Voltage	V			$(P \times R)^{1/2}$	

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: LVR055L000FS73 (visit www.vishay.net Vishay Dale parts numbering manual for all options)																	
L	V	R	0	5	5	L	0	0	0	F	S	7	3				
GLOBAL MODEL	VALUE				TOLERANCE				PACKAGING					SPECIAL			
LVR01	R = Decimal				F = $\pm 0.5\%$				E12 = Lead (Pb)-free bulk					(Dash Number) (up to 3 digits) From 1 to 999 as applicable			
LVR03	L = m Ω				G = $\pm 1.0\%$				E03 = Lead (Pb)-free lacer pack (LVR10)								
LVR05	(values < 0.010 Ω)				H = $\pm 2.0\%$				E70 = Lead (Pb)-free, tape/reel 1000 pieces (LVR01, 03)								
LVR10	R1500 = 0.15 Ω				J = $\pm 3.0\%$				E73 = Lead (Pb)-free, tape/reel 500 pieces								
	7L000 = 0.007 Ω				K = $\pm 10.0\%$				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								

DIMENSIONS in inches [millimeters]

Note

(1) 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

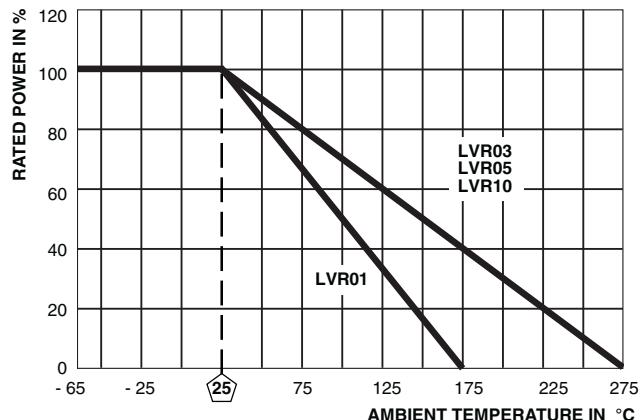
Element: Self-supporting nickel-chrome alloy (LVR10 also utilizes manganin)

Encapsulation: High temperature mold compound

Terminals: Tinned copper

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

Packaging: Reference "Wirewound Through Hole Resistor Packaging" (www.vishay.com/doc?21028)

DERATING


TEMPERATURE COEFFICIENT (ppm/°C)			
LVR01	LVR03	LVR05	LVR10
± 1000 for 0.01 Ω to 0.0249 Ω	± 850 for 0.005 Ω to 0.0099 Ω	± 650 for 0.005 Ω to 0.0099 Ω	± 300 for 0.01 Ω to 0.0249 Ω
± 400 for 0.025 Ω to 0.0499 Ω	± 350 for 0.01 Ω to 0.0249 Ω	± 250 for 0.01 Ω to 0.0249 Ω	± 150 for 0.025 Ω to 0.0499 Ω
± 300 for 0.05 Ω to 0.0749 Ω	± 200 for 0.025 Ω to 0.0499 Ω	± 150 for 0.025 Ω to 0.0499 Ω	± 125 for 0.05 Ω to 0.0749 Ω
± 250 for 0.075 Ω to 0.099 Ω	± 125 for 0.05 Ω to 0.0749 Ω	± 100 for 0.05 Ω to 0.0749 Ω	± 100 for 0.075 Ω to 0.099 Ω
± 150 for 0.1 Ω to 0.1 Ω	± 75 for 0.075 Ω to 0.099 Ω	± 75 for 0.075 Ω to 0.099 Ω	± 50 for 0.1 Ω to 0.8 Ω
	± 50 for 0.1 Ω to 0.2 Ω	± 50 for 0.1 Ω to 0.3 Ω	

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	-65 °C to +125 °C, 5 cycles, 15 min at each extreme	± (0.2 % + 0.0005 Ω) ΔR
Short Time Overload	5x 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, 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 Hz 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
Bias Humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	± (1.0 % + 0.0005 Ω) ΔR

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