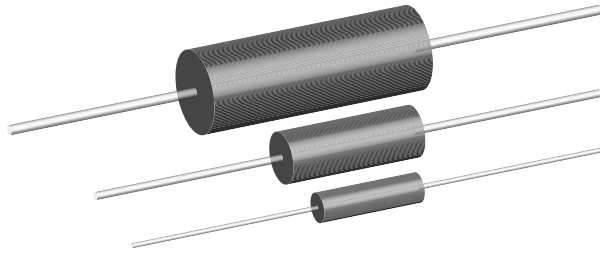


Wirewound Resistors, Precision Power, Low Value, Commercial, Military, MIL-PRF-49465 Type RLV, Axial Lead



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 <i>P</i> _{25 °C} W	RESISTANCE RANGE Ω ⁽¹⁾ ± 1 %, ± 3 %, ± 5 %, ± 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

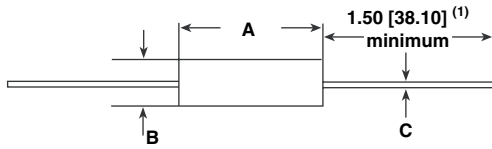
TECHNICAL SPECIFICATIONS						
PARAMETER	UNIT	LVR01	LVR03	LVR05	LVR10	
Rated Power at + 25 °C	W	1	3	5	10	
Operating Temperature Range	°C	- 65 to + 175		- 65 to + 275		
Dielectric Withstanding Voltage	V _{AC}	1000	1000	1000	1000	
Insulation Resistance	Ω	10 000 MΩ minimum dry				
Short Time Overload	-	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	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 = mΩ (values < 0.010 Ω) R1500 = 0.15 Ω 7L000 = 0.007 Ω	D = ± 0.5 % F = ± 1.0 % G = ± 2.0 % H = ± 3.0 % J = ± 5.0 % K = ± 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

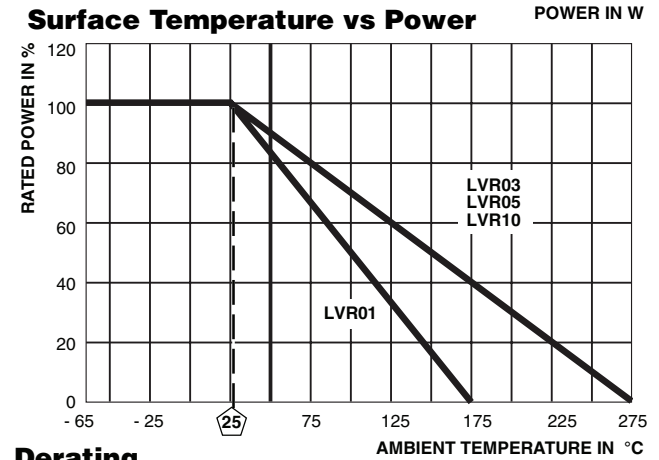
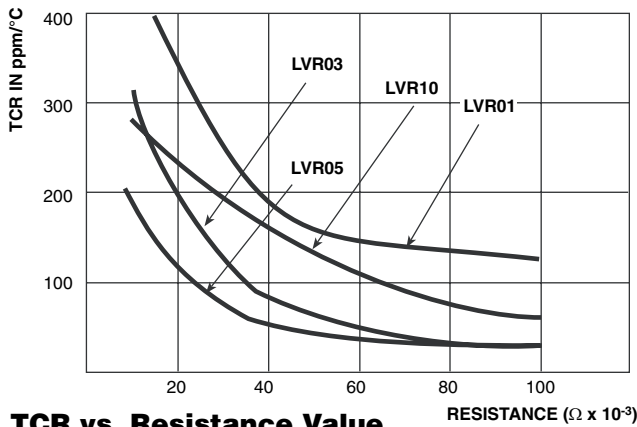
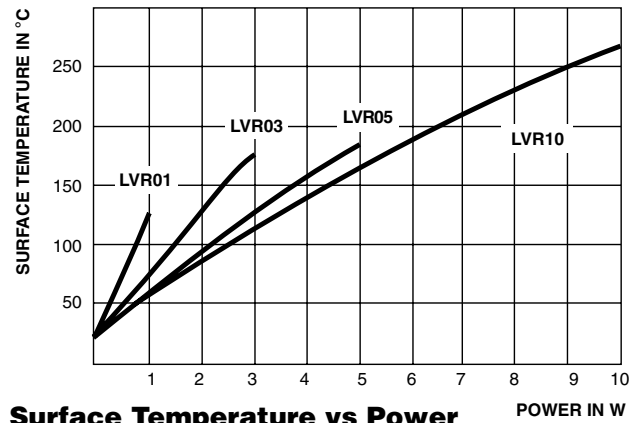
Element: Self-supporting nickel-chrome alloy (LVR10 also utilizes manganin)

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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