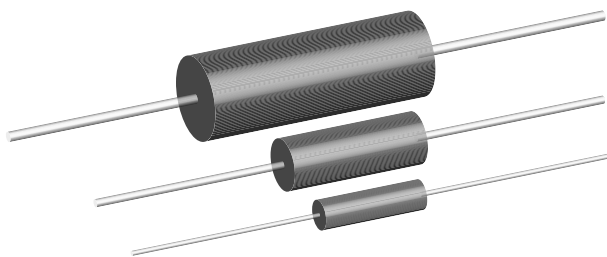


Vishay Dale

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 P _{25°C} TYPE	POWER RATING Ω W	RESISTANCE RANGE* ± 1%, ± 3%, ± 5%, ± 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" [9.52mm] from the body of the resistor, or at 1.183" [30.05mm], 1.315" [33.40mm], 1.675" [42.545mm] or 2.575" [65.405mm] spacing for the LVR01, LVR03, LVR05 and LVR10 respectively.

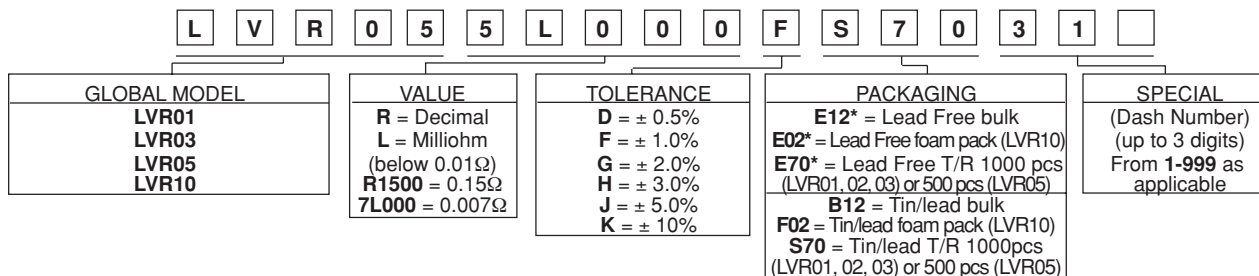
**Standard resistance values are 0.01Ω, 0.015Ω, 0.02Ω, 0.025Ω, 0.03Ω, 0.033Ω, 0.04Ω, 0.05Ω, 0.051Ω, 0.06Ω, 0.068Ω, 0.07Ω, 0.08Ω, 0.09Ω and 0.1Ω with 1% tolerance. Other resistance values may be available upon request.

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	10,000 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 x R) ^{1/2}			
Weight (maximum)	g	2	2	5	11

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: LVR055L000FS7031 (preferred part numbering format)



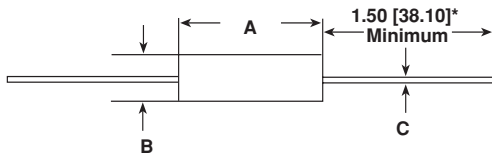
*Lead Free will not be available until Q2 2005

Historical Part Number example: LVR-5-31 0.005Ω 1% S70 (will continue to be accepted)





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)

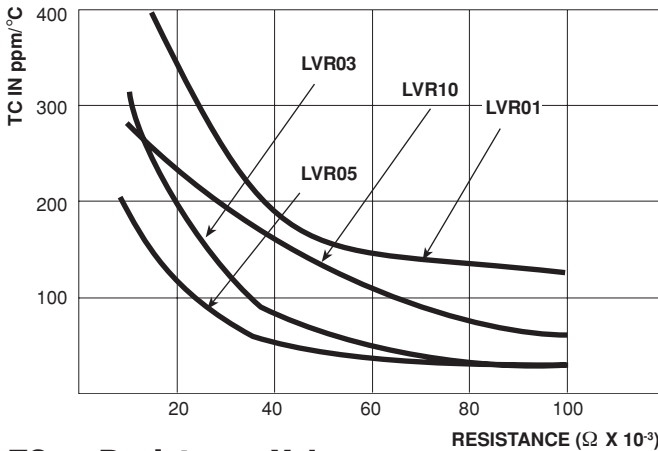
Encapsulation: High temperature mold compound

Terminals: Tinned copper

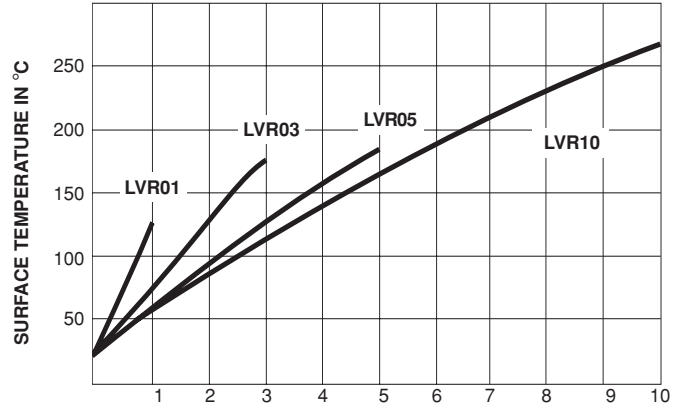
Part Marking: DALE, Model, Wattage, Value, Tolerance,

Date Code

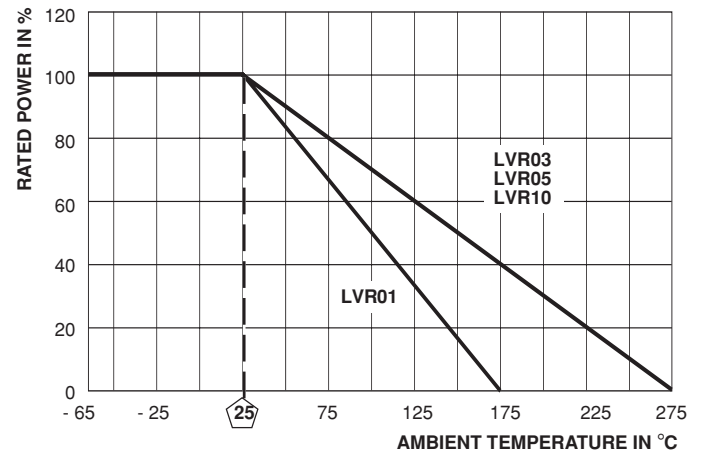
The improved TC characteristics of these LVR models from -55°C to +125°C (referenced to +25°C) are as follows:



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 extreme	± (0.2% + 0.0005Ω)ΔR
Short Time Overload	5 x rated power (LVR01, 03, 05), 10 x rated power (LVR10) for 5 seconds	± (0.5% + 0.0005Ω)ΔR
Low Temperature Storage	-65°C for 24 hours	± (0.2% + 0.0005Ω)ΔR
High Temperature Exposure	250 hours at +275°C (+175°C for LVR01)	± (2.0% + 0.0005Ω)ΔR
Dielectric Withstanding Voltage	1000V rms, one minute	± (0.1% + 0.0005Ω)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% + 0.0005Ω)ΔR
Shock, Specified Pulse	MIL-STD-202 Method 213, 100g's for 6 milliseconds, 10 shocks	± (0.1% + 0.0005Ω)ΔR
Vibration, High Frequency	Frequency varied 10 to 2000Hz, 20g peak, 2 directions 6 hours each	± (0.1% + 0.0005Ω)ΔR
Load Life	2000 hours at rated power, +25°C, 1.5 hours "ON", 0.5 hours "OFF"	± (2.0% + 0.0005Ω)ΔR
Solderability	ANSI J-STD-002	95% coverage
Bias Humidity	+85°C, 85% RH, 10% bias, 1000 hours	± (1.0% + 0.0005Ω)ΔR