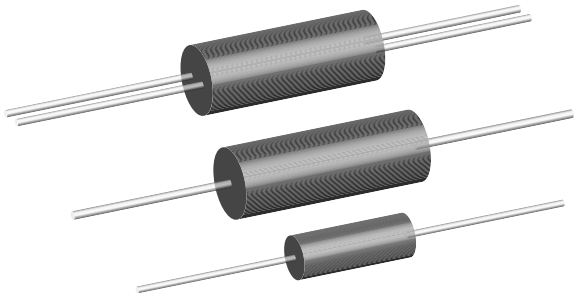
Wirewound Resistors, Precision Power, Low Value, Military, MIL-PRF-49465 Qualified, Type RLV, Axial Lead



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 inductance
- Cooler operation for high power to size ratio

STANDARD ELECTRICAL SPECIFICATIONS

MILITARY MODEL	VISHAY REFERENCE MODEL	POWER RATING $P_{25\,°C}$ W	RESISTANCE RANGE Ω	TOLERANCE ± %	TECHNOLOGY
M4946501 (RLV10)	SPR1005…26	5	0.01 to 0.5	1, 3, 5	Coil spacewound

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	M4946501 (RLV10)
Operating Temperature Range	°C	-55 to +275
Dielectric Withstanding Voltage	V_{RMS}	1000
Insulation Resistance	Ω	1000 MΩ minimum dry
Short Time Overload	-	5 x rated power for 5 s
Terminal Strength (minimum)	lb	10
Temperature Coefficient (0.01 Ω to 0.0249 Ω)	ppm/°C	± 150
Temperature Coefficient (0.025 Ω to 0.0499 Ω)	ppm/°C	± 125
Temperature Coefficient (0.05 Ω to 0.0749 Ω)	ppm/°C	± 100
Temperature Coefficient (0.075 Ω to 0.099 Ω)	ppm/°C	± 50
Temperature Coefficient (≥ 0.1 Ω)	ppm/°C	± 50
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Weight (typical)	g	6.35

GLOBAL PART NUMBER INFORMATION

Military Part Numbering Example: M4946501TR0100FS51

M	4	9	4	6	5	0	1	T	R	0	1	0	0	F	S	5	1

MIL TYPE	SPEC. SHEET NUMBER	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE
M49465	**01** (RLV10)	**T**	**R0100** = 0.01 Ω **R1000** = 0.10 Ω	**F** = ± 1.0 % **H** = ± 3.0 % **J** = ± 5.0 %	**S51** = skin pack (RLV10)

Note

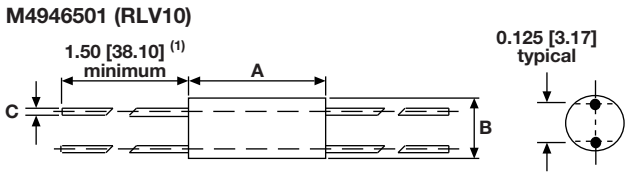
- **M4946506 (RLV30) and M4946507 (RLV31) are End of Life on May 22, 2021. M4946501 (RLV10) will still be supported**

For technical questions, contact: ww2aresistors@vishay.com

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DIMENSIONS in inches [millimeters]



MILITARY MODEL	DIMENSIONS in inches [millimeters]		
	A	B	C
M4946501 (RLV10)	0.937 ± 0.062 [23.80 ± 1.57]	0.375 ± 0.031 [9.53 ± 0.787]	0.040 ± 0.005 [1.02 ± 0.130]

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 (M4946501 (RLV10) utilizes manganin for some values)

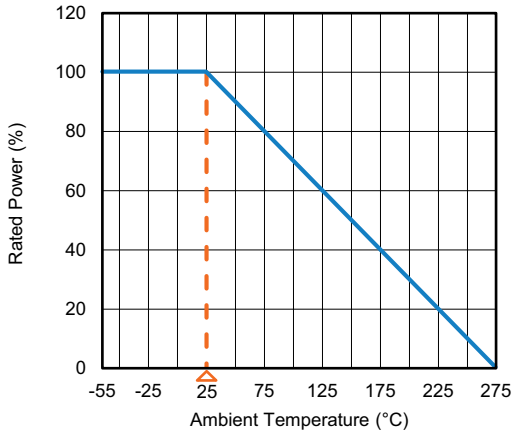
Encapsulation: high temperature mold compound

Terminals: tinned copper

Packaging: reference "Wirewound Through Hole Resistor Packaging" document: www.vishay.com/doc?21028

MARKING	
EXAMPLE	
91637	Source code
1101	Date code YYMM
M4946507	MIL-PRF-49465 model
TR0100F	Characteristic, resistance type designation, tolerance

DERATING



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) Δ*R*
Short Time Overload	5 x rated power for 5 s	± (0.5 % + 0.0005 Ω) Δ*R*
Low Temperature Storage	-55 °C for 24 h	± (0.2 % + 0.0005 Ω) Δ*R*
High Temperature Exposure	250 h at +275 °C	± (2.0 % + 0.0005 Ω) Δ*R*
Dielectric Withstanding Voltage	1000 V_{RMS}, 1 min	± (0.1 % + 0.0005 Ω) Δ*R*
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) Δ*R*
Shock, Specified Pulse	MIL-STD-202 method 213, 100 *g*'s for 6 ms, 10 shocks	± (0.1 % + 0.0005 Ω) Δ*R*
Vibration, High Frequency	Frequency varied 10 Hz to 2000 Hz, 20 *g* peak, 2 directions 6 h each	± (0.1 % + 0.0005 Ω) Δ*R*
Load Life	2000 h at rated power, +25 °C, 1.5 h "ON", 0.5 h "OFF"	± (2.0 % + 0.0005 Ω) Δ*R*
Solderability	ANSI J-STD-002	95 % coverage
Bias Humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	± (1.0 % + 0.0005 Ω) Δ*R*

Note

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