

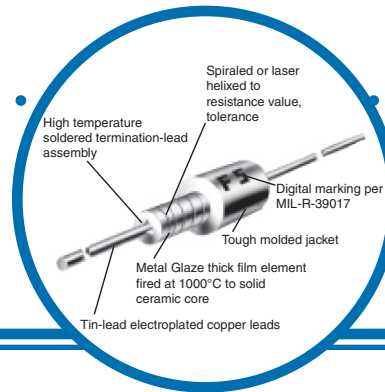
Established Reliability Mil-Qualified Metal Glaze™ Resistor



RLR Series

- 1/8 watt to 1/2 watt
- TCR of ± 100 ppm/ $^{\circ}\text{C}$
- 1% and 2% tolerance
- 4.3 ohms to 3.01M ohms
- MIL-R-39017 approved to "S" level

OBSOLETE



Electrical Data

MIL Type	Marking	Tolerance ($\pm\%$)	T.C. (ppm/ $^{\circ}\text{C}$)	Power Rating (watts)	Resistance Range (ohms)	Nominal Size	Max Voltage Rating
RLR05/S*	Stamp	1, 2	100	1/8 @ 70 $^{\circ}\text{C}$	10 to 301K	1/8W	200
RLR07/S	Stamp	1, 2	100	1/4 @ 70 $^{\circ}\text{C}$	10 to 3.01M	1/4W	250
RLR20/S	Stamp	1, 2	100	1/2 @ 70 $^{\circ}\text{C}$	4.3 to 3.01M	1/2W	350

* Conformally coated construction on all 1/8 nominal sizes.

Environmental Data

Test Conditions	MIL-R-22684 Test Limits Allowed	RL07 Max. $\%\Delta R$ ($\pm 3\sigma$)
Temperature Coefficient (ppm/ $^{\circ}\text{C}$)	± 100	± 100
Low Temperature Operation	$\pm 0.25\%$	$\pm 0.05\%$
Thermal Shock	$\pm 0.25\%$	$\pm 0.15\%$
Moisture Resistance	$\pm 1.00\%$	$\pm 0.50\%$
Short Time Overload	$\pm 0.50\%$	$\pm 0.15\%$
Load Life (70 $^{\circ}\text{C}$ --- 1/4W) 1000 hours	$\pm 4.00\%$	$\pm 0.50\%$
Terminal Strength	$\pm 0.25\%$	$\pm 0.05\%$
Effect of Soldering	$\pm 0.25\%$	$\pm 0.10\%$
Shock	$\pm 0.50\%$	$\pm 0.05\%$
Vibration	$\pm 0.50\%$	$\pm 0.05\%$
High Temperature Exposure (150 $^{\circ}\text{C}$ No Load)	$\pm 2.00\%$	$\pm 0.50\%$
Temperature Rise @ 1/4W Power Load	-	See Temperature Rise Chart
Dielectric Strength	$\pm 0.25\%$	$\pm 0.05\%$

ESTABLISHED RELIABILITY MIL SPECIFICATIONS: RLR products listed above are qualified to the appropriate established reliability MIL Specification. In general, Metal Glaze units such as these are specified for all RLR requirements.

General Note

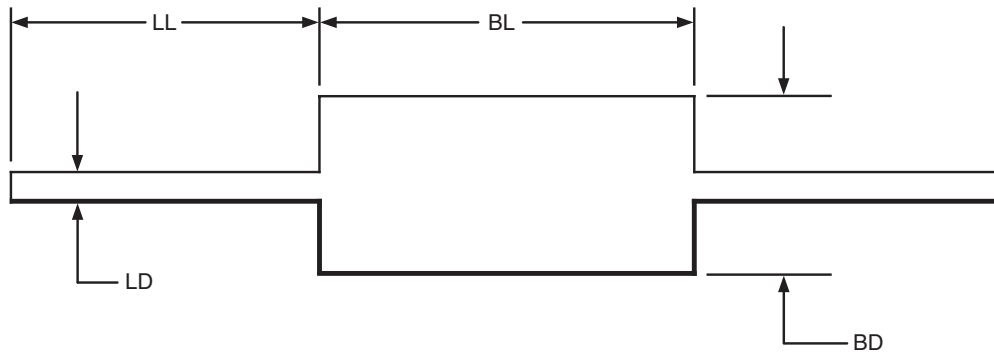
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Physical Data

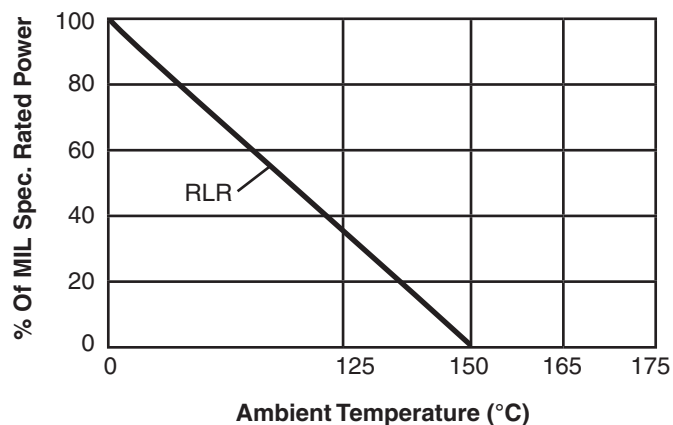


Dimensions (Inches and (mm))

Nominal Size	Body Length BL	Body Diameter BD	Lead Length LL	Lead Diameter LD	Clean Lead
1/8 watt	0.150 ±0.020 (3.8 ±0.5)	0.066 ±0.008 (1.7 ±0.2)	1.00 ±0.125 (25.4 ±3.2)	0.016 ±0.002 (0.41 ±0.05)	0.187 (4.7)
1/4 watt	0.250 ±0.015 (6.4 ±0.4)	0.090 ±0.008 (2.3 ±0.2)	1.50 ±0.125 (38.1 ±3.2)	0.025 ±0.002 (0.64 ±0.05)	0.300 (7.6)
1/2 watt	0.390 ±0.010 (9.9 ±0.3)	0.140 ±0.008 (3.6 ±0.2)	1.50 ±0.125 (38.1 ±3.2)	0.032 ±0.002 (0.81 ±0.05)	0.450 (11.4)

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MIL Spec. Power Derating Chart



Ordering Data

Sample Part No.	RLR	20	C	1001	F	S
MIL Style	RL = Fixed Film Resistor. Established reliability.					
Power Rating	05 = 1/8 watt 07 = 1/4 watt 20 = 1/2 watt					
Lead Material	C = Solderable/weldable leads					
Resistance	First three digits represent significant figures; fourth digit is number of zeros.					
Tolerance	F = ±1%, G = ±2%					
Failure Rate	S = 0.001% for 1000 hours (60% confidence)					