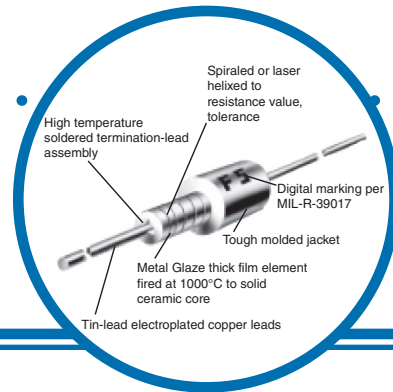


# Established Reliability Mil-Qualified Metal Glaze™ Resistor



## RLR Series

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



## 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/ $^{\circ}\text{C}$ )	$\pm 100$	$\pm 100$
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

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

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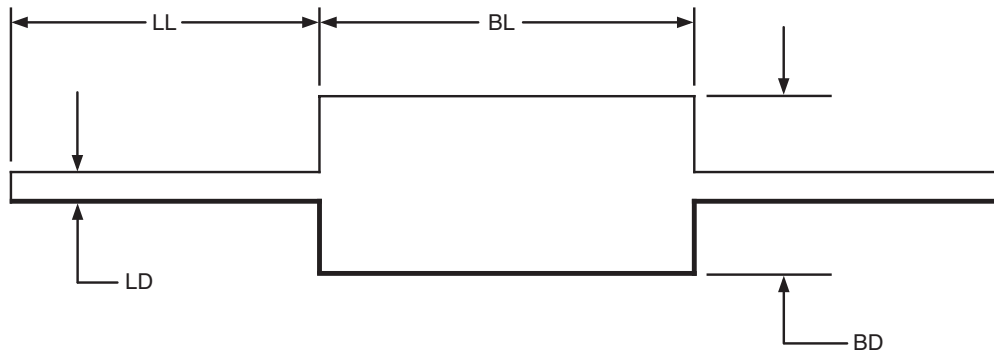


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# Established Reliability Mil-Qualified Metal Glaze™ Resistor



## Physical Data



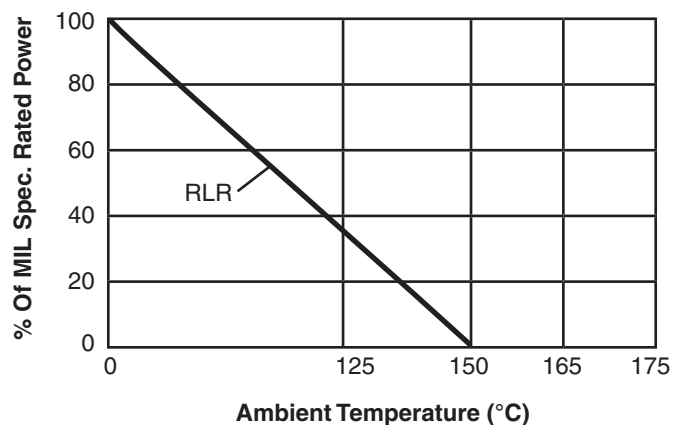
Dimensions (Inches and (mm))

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)

# Established Reliability Mil-Qualified Metal Glaze™ Resistor



## 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)