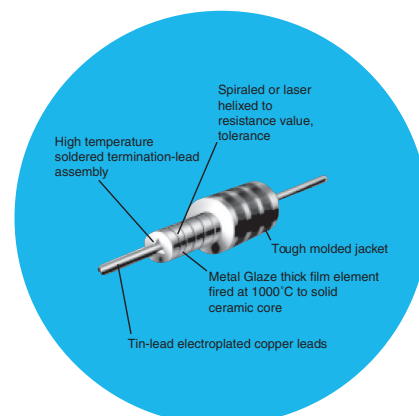


# Semi-Precision Mil-Qualified Metal Glaze™ Resistor

## RL Series

- MIL-R-22684
- $\pm 200$  ppm/°C
- 1/4 watt to 1/2 watt
- 2% and 5% tolerance
- 4.3 ohms to 470K ohms



 All Pb-free parts comply with EU Directive 2011/65/EU (RoHS2)

## Electrical Data

| MIL Type | Marking | Tolerance (±%) | T.C. (ppm/°C) | Power Rating (watts) | Resistance Range (ohms)* | Nominal Size | Max Voltage Rating |
|----------|---------|----------------|---------------|----------------------|--------------------------|--------------|--------------------|
| RL07     | Band    | 2, 5           | 200           | 1/4 @ 70°C           | 51 to 150K               | 1/4W         | 250                |
| RL20     | Band    | 2, 5           | 200           | 1/2 @ 70°C           | 4.3 to 470K              | 1/2W         | 350                |

\* For values below or above Mil Resistance, the **Non-Mil** part can be used. But keep in mind -- it is a non-mil part.

## Environmental Data

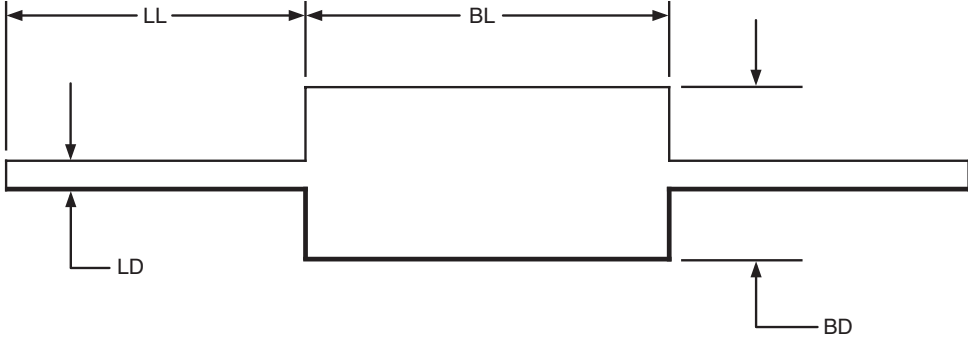
| Test Conditions                           | MIL-R-22684 Test Limits Allowed | RL07 Max. %ΔR (±3σ)        |
|-------------------------------------------|---------------------------------|----------------------------|
| Temperature Coefficient (ppm/°C)          | ±200                            | ±200                       |
| Low Temperature Operation                 | ±0.50%                          | ±0.10%                     |
| Thermal Shock                             | ±1.00%                          | ±0.15%                     |
| Moisture Resistance                       | ±1.5%                           | ±0.05%                     |
| Short Time Overload                       | ±0.50%                          | ±0.10%                     |
| Load Life (70°C --- 1/4W) 1000 hours      | ±2.00%                          | ±0.40%                     |
| Terminal Strength                         | ±0.50%                          | ±0.10%                     |
| Effect of Soldering                       | ±0.50%                          | ±0.10%                     |
| Shock                                     | ±0.50%                          | ±0.05%                     |
| Vibration                                 | ±0.50%                          | ±0.05%                     |
| High Temperature Exposure (150°C No Load) | N/A                             | ±0.75%                     |
| Rated Power for 10,000 hours at 70°C      | N/A                             | ±0.60%                     |
| Temperature Rise @ 1/4W Power Load        | -                               | See Temperature Rise Chart |
| Dielectric Strength                       | ±0.50%                          | ±0.05%                     |

### General Note

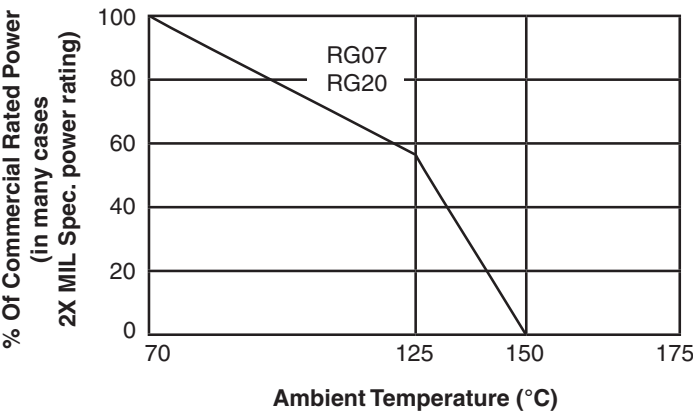
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RL Series

Physical Data

|  |                            |                            |                            |                              |                 |
|------------------------------------------------------------------------------------|----------------------------|----------------------------|----------------------------|------------------------------|-----------------|
| Dimensions (Inches and (mm))                                                       |                            |                            |                            |                              |                 |
| Nominal Size                                                                       | Body Length<br>BL          | Body Diameter<br>BD        | Lead Length<br>LL          | Lead Diameter<br>LD          | Clean Lead      |
| 1/4 watt                                                                           | 0.250 ±0.015<br>(6.4 ±0.4) | 0.090 ±0.008<br>(2.3 ±0.2) | 1.50 ±0.125<br>(38.1 ±3.2) | 0.025 ±0.002<br>(0.64 ±0.05) | 0.310<br>(7.9)  |
| 1/2 watt                                                                           | 0.390 ±0.010<br>(9.9 ±0.3) | 0.140 ±0.008<br>(3.6 ±0.2) | 1.50 ±0.125<br>(38.1 ±3.2) | 0.032 ±0.002<br>(0.81 ±0.05) | 0.450<br>(11.4) |

Commercial Power Derating Chart

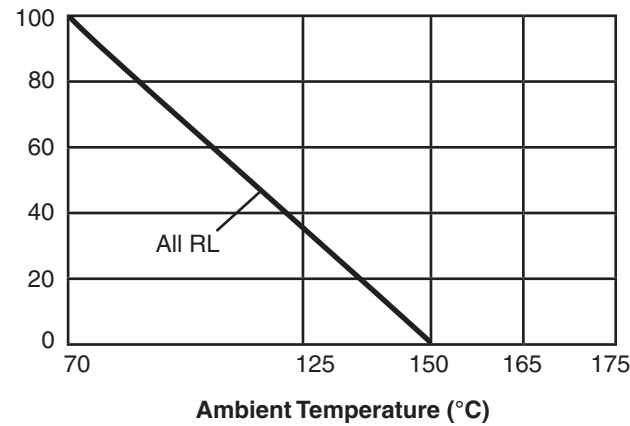


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RL Series

MIL Spec. Power Derating Chart



Ordering Data

|                                                   |    |    |   |      |   |
|---------------------------------------------------|----|----|---|------|---|
| Sample Part No. ....                              | RL | 07 | S | 1001 | G |
| MIL Style • .....                                 |    |    |   |      |   |
| RL = Fixed Film Resistor                          |    |    |   |      |   |
| Power Rating • .....                              |    |    |   |      |   |
| 07 = 1/4 watt                                     |    |    |   |      |   |
| 20 = 1/2 watt                                     |    |    |   |      |   |
| Lead Material • .....                             |    |    |   |      |   |
| S = Solderable/weldable leads                     |    |    |   |      |   |
| Resistance • .....                                |    |    |   |      |   |
| First three digits represent significant figures; |    |    |   |      |   |
| fourth digit is number of zeros.                  |    |    |   |      |   |
| Tolerance • .....                                 |    |    |   |      |   |
| G = 2%, J = 5%                                    |    |    |   |      |   |

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