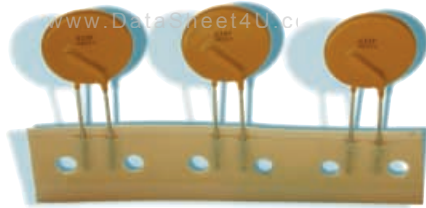
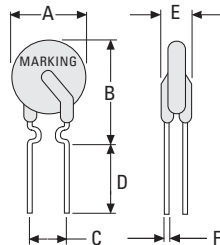


# No. RLD60



## Dimensions (mm)



## Radial Leaded, 60V

### Standard

UL 1434 1st Edition  
CSA C22.2 No.0, CSA TIL No. CA-3A

### Approvals

cULus Recognized: File No. E 67006  
TÜV: File No. R 50017428

## Features

Low voltage (60Vdc) overcurrent protection  
Low resistance and power dissipation  
Low trip-to-hold current ratios  
Internationally approved

Wide range of applications, including switching power supplies, loudspeakers, security systems, DC/DC converters and motor actuators

## WebLinks

### Data Sheet - latest version

[www.wickmannusa.com/products/rld60.pdf](http://www.wickmannusa.com/products/rld60.pdf)

### Approval Certificates

[www.wickmannusa.com/approvals](http://www.wickmannusa.com/approvals)

### Packaging

[www.wickmannusa.com/pack](http://www.wickmannusa.com/pack)

## Specifications

### Packaging Code and Info

A: Bulk (Qty.: see table below)  
F: Tape/Ampopack (Qty.: see table below)

### Materials

Insulating Mat.: Cured Epoxy Polymer, UL 94V0  
Round Pins: Copper alloy, tin plated

### Device Surface Temperature in Tripped State

125°C Max.

### Operating / Storage Temperature

-40°C to +85°C (see de-rating table)

### Humidity Ageing

+85°C, 85% RH, 1000 hrs., ± 5% typical resistance change

### Passive Ageing

+85°C, 1000 hrs., ± 5% typical resistance change

### Thermal Shock

-40°C to +125°C, 10 times, ±10% typical resistance change (MIL-STD-202F, Method 107G)

### Solvent Resistance

MIL-STD-202, Method 215F, no change

### Solderability

Wave/Hand: 260°C, ≤ 3 sec.  
(MIL-STD-202, Method 208E)

### Marking

"P", Voltage, Current Code, Lot Code



| Dimensions Legend |          |          |          |          |          |       | Packaging Quantity |      |
|-------------------|----------|----------|----------|----------|----------|-------|--------------------|------|
| Rating            | A (max.) | B (max.) | C (typ.) | D (min.) | E (max.) | F (Ø) | Bulk               | Tape |
| 100mA / 60V       | 7.4      | 12.7     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 170mA / 60V       | 7.4      | 12.7     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 200mA / 60V       | 7.4      | 12.2     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 250mA / 60V       | 7.4      | 12.7     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 300mA / 60V       | 7.4      | 13.0     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 400mA / 60V       | 7.6      | 13.5     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 500mA / 60V       | 7.9      | 13.7     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 650mA / 60V       | 9.7      | 14.5     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 750mA / 60V       | 10.4     | 15.2     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 900mA / 60V       | 11.7     | 15.7     | 5.1      | 7.6      | 3.1      | 0.51  | 500                | 2000 |
| 1.10A / 60V       | 13.0     | 18.0     | 5.1      | 7.6      | 3.1      | 0.81  | 500                | 1000 |
| 1.35A / 60V       | 14.5     | 19.6     | 5.1      | 7.6      | 3.1      | 0.81  | 100                | 1000 |
| 1.60A / 60V       | 16.3     | 21.3     | 5.1      | 7.6      | 3.1      | 0.81  | 100                | 1000 |
| 1.85A / 60V       | 17.8     | 22.9     | 5.1      | 7.6      | 3.1      | 0.81  | 100                | 1000 |
| 2.50A / 60V       | 21.3     | 26.4     | 10.2     | 7.6      | 3.1      | 0.81  | 100                | 1000 |
| 3.00A / 60V       | 24.9     | 30.0     | 10.2     | 7.6      | 3.1      | 0.81  | 100                | 1000 |
| 3.75A / 60V       | 28.4     | 33.5     | 10.2     | 7.6      | 3.1      | 0.81  | 100                | -    |

| Permissible continuous operating current is ≤ 100% at ambient temperature of 20°C (68°F). |            |                                |                         |                                     |                                     |                          |      |                       |                        |                           |
|---|------------|--------------------------------|-------------------------|-------------------------------------|-------------------------------------|--------------------------|------|-----------------------|------------------------|---------------------------|
| Hold Current<br>$I_{hold}$  | Model Code | Trip Current<br>$I_{trip}$ (A) | Voltage Rating<br>(Vdc) | max. Fault Current<br>$I_{max}$ (A) | max. Power Dissipation<br>$P_d$ (W) | max. Time-to-trip<br>(A) | (s)  | Resistance            |                        | Approvals<br>cURus<br>TÜV |
|   |            |                                |                         |                                     |                                     |                          |      | $R_{min}$<br>min. (Ω) | $R_{1max}$<br>max. (Ω) |                           |
| 100mA   | P010X      | 0.20                           | 60                      | 40                                  | 0.38                                | 0.50                     | 4.0  | 2.500                 | 7.500                  | • p                       |
| 170mA   | P017X      | 0.34                           | 60                      | 40                                  | 0.48                                | 0.85                     | 3.0  | 3.300                 | 8.000                  | • p                       |
| 200mA   | P020X      | 0.40                           | 60                      | 40                                  | 0.41                                | 1.00                     | 2.2  | 1.830                 | 4.400                  | • •                       |
| 250mA   | P025X      | 0.50                           | 60                      | 40                                  | 0.45                                | 1.25                     | 2.5  | 1.250                 | 3.000                  | • •                       |
| 300mA   | P030X      | 0.60                           | 60                      | 40                                  | 0.49                                | 1.50                     | 3.0  | 0.880                 | 2.100                  | • •                       |
| 400mA   | P040X      | 0.80                           | 60                      | 40                                  | 0.56                                | 2.00                     | 3.8  | 0.550                 | 1.290                  | • •                       |
| 500mA   | P050X      | 1.00                           | 60                      | 40                                  | 0.77                                | 2.50                     | 4.0  | 0.500                 | 1.170                  | • •                       |
| 650mA   | P065X      | 1.30                           | 60                      | 40                                  | 0.88                                | 3.25                     | 5.3  | 0.310                 | 0.720                  | • •                       |
| 750mA   | P075X      | 1.50                           | 60                      | 40                                  | 0.92                                | 3.75                     | 6.3  | 0.250                 | 0.600                  | • •                       |
| 900mA   | P090X      | 1.80                           | 60                      | 40                                  | 0.99                                | 4.50                     | 7.2  | 0.200                 | 0.470                  | • •                       |
| 1.10A   | P110X      | 2.20                           | 60                      | 40                                  | 1.5                                 | 5.50                     | 8.2  | 0.150                 | 0.380                  | • •                       |
| 1.35A   | P135X      | 2.70                           | 60                      | 40                                  | 1.7                                 | 6.75                     | 9.6  | 0.120                 | 0.300                  | • •                       |
| 1.60A   | P160X      | 3.20                           | 60                      | 40                                  | 1.9                                 | 8.00                     | 11.4 | 0.090                 | 0.220                  | • •                       |
| 1.85A   | P185X      | 3.70                           | 60                      | 40                                  | 2.1                                 | 9.25                     | 12.6 | 0.080                 | 0.190                  | • •                       |
| 2.50A   | P250X      | 5.00                           | 60                      | 40                                  | 2.5                                 | 12.50                    | 15.6 | 0.050                 | 0.130                  | • •                       |
| 3.00A   | P300X      | 6.00                           | 60                      | 40                                  | 2.8                                 | 15.00                    | 19.8 | 0.040                 | 0.100                  | • •                       |
| 3.75A   | P375X      | 7.50                           | 60                      | 40                                  | 3.2                                 | 18.75                    | 24.0 | 0.030                 | 0.080                  | • •                       |

P = pending  
 $I_{hold}$  = Hold current: maximum current device will pass without tripping in 20°C still air.  
 $I_{trip}$  = Trip current: minimum current at which the device will trip in 20°C still air.  
 $V_{max}$  = Maximum voltage device can withstand without damage at rated current ( $I_{max}$ ).  
 $I_{max}$  = Maximum fault current device can withstand without damage at rated voltage ( $V_{max}$ ).

$P_d$  = Power dissipated from device when in the tripped state at 20°C still air.  
 $R_{min}$  = Minimum resistance of device in initial (un-soldered) state.  
 $R_{1max}$  = Maximum resistance of device at 20°C measured one hour after tripping.

**Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.**

## Order Information

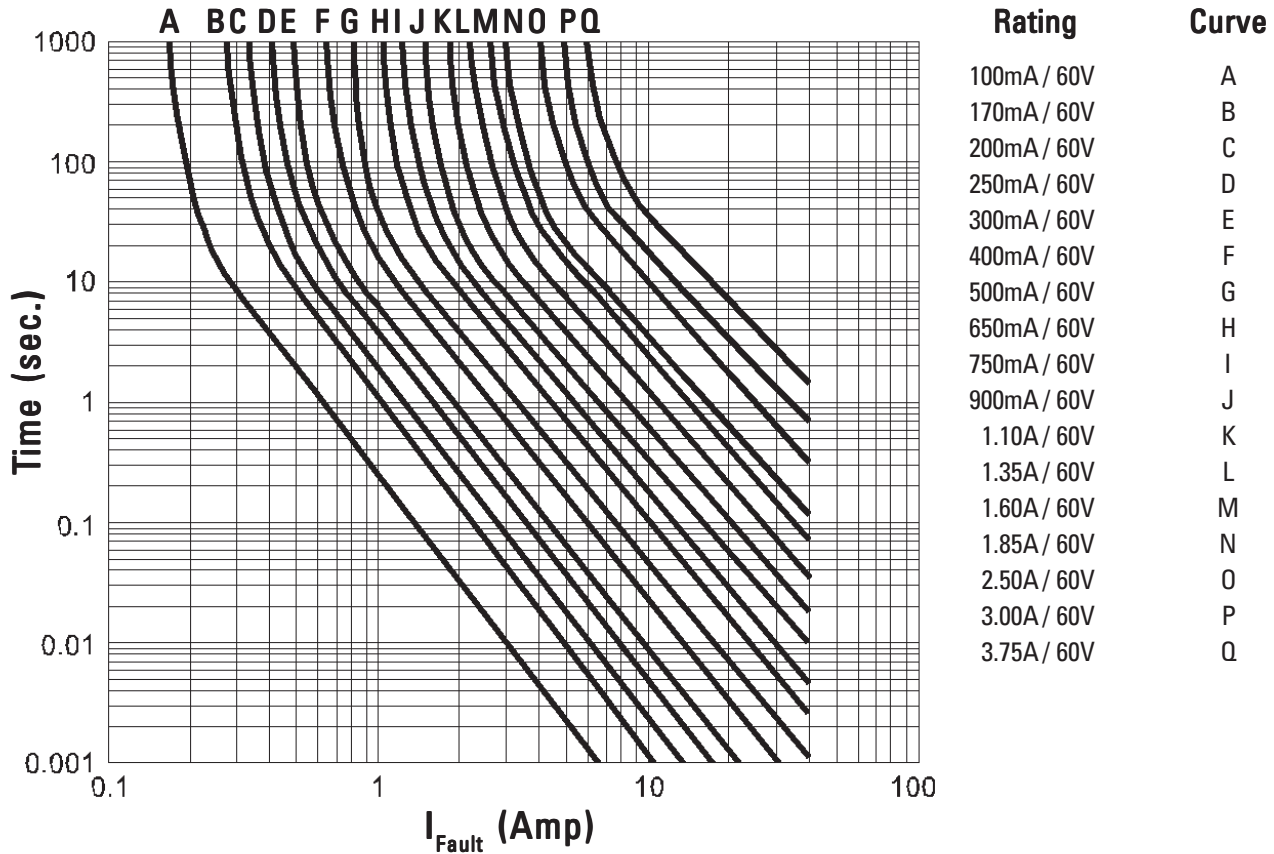
| Qty. | Order-Number | Series | Model Code | Pack. Code |
|------|--------------|--------|------------|------------|
|      |              | RLD60  |            |            |

Specifications are subject to change without notice.

# No. RLD60

www.DataSheet4U.com

## Time-to-trip Characteristics



## Thermal Derating Chart

| Rating      | $I_{hold}$ (Amp) / Ambient Operating Temperature |       |      |      |      |      |      |      |      |
|-------------|--|-------|------|------|------|------|------|------|------|
|             | -40°C  | -20°C | 0°C  | 23°C | 40°C | 50°C | 60°C | 70°C | 85°C |
| 100mA / 60V | 0.16   | 0.14  | 0.12 | 0.10 | 0.08 | 0.07 | 0.06 | 0.05 | 0.04 |
| 170mA / 60V | 0.26   | 0.23  | 0.20 | 0.17 | 0.14 | 0.12 | 0.11 | 0.09 | 0.07 |
| 200mA / 60V | 0.31   | 0.27  | 0.24 | 0.20 | 0.16 | 0.14 | 0.13 | 0.11 | 0.08 |
| 250mA / 60V | 0.39   | 0.34  | 0.30 | 0.25 | 0.20 | 0.18 | 0.16 | 0.14 | 0.10 |
| 300mA / 60V | 0.47   | 0.41  | 0.36 | 0.30 | 0.24 | 0.22 | 0.19 | 0.16 | 0.12 |
| 400mA / 60V | 0.62   | 0.54  | 0.48 | 0.40 | 0.32 | 0.29 | 0.25 | 0.22 | 0.16 |
| 500mA / 60V | 0.78   | 0.68  | 0.60 | 0.50 | 0.41 | 0.36 | 0.32 | 0.27 | 0.20 |
| 650mA / 60V | 1.01   | 0.88  | 0.77 | 0.65 | 0.53 | 0.47 | 0.41 | 0.35 | 0.26 |
| 750mA / 60V | 1.16   | 1.02  | 0.89 | 0.75 | 0.61 | 0.54 | 0.47 | 0.41 | 0.30 |
| 900mA / 60V | 1.40   | 1.22  | 1.07 | 0.90 | 0.73 | 0.65 | 0.57 | 0.49 | 0.36 |
| 1.10A / 60V | 1.71   | 1.50  | 1.31 | 1.10 | 0.89 | 0.79 | 0.69 | 0.59 | 0.44 |
| 1.35A / 60V | 2.09   | 1.84  | 1.61 | 1.35 | 1.09 | 0.97 | 0.85 | 0.73 | 0.54 |
| 1.60A / 60V | 2.48   | 2.18  | 1.90 | 1.60 | 1.30 | 1.15 | 1.01 | 0.86 | 0.64 |
| 1.85A / 60V | 2.87   | 2.52  | 2.20 | 1.85 | 1.50 | 1.33 | 1.17 | 1.00 | 0.74 |
| 2.50A / 60V | 3.88   | 3.40  | 2.98 | 2.50 | 2.03 | 1.80 | 1.58 | 1.35 | 1.00 |
| 3.00A / 60V | 4.65   | 4.08  | 3.57 | 3.00 | 2.43 | 2.16 | 1.89 | 1.62 | 1.20 |
| 3.75A / 60V | 5.81   | 5.10  | 4.46 | 3.75 | 3.04 | 2.70 | 2.36 | 2.03 | 1.50 |