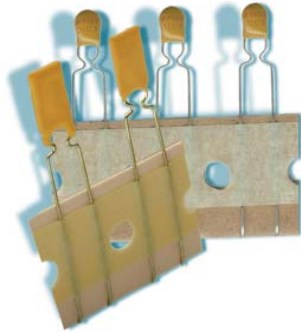


RLD-USB



USB Type, 6 V / 16V

Standard

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

Approvals

cULus Recognition
TÜV

Features

This new radial leaded products are designed specifically for Universal Serial Bus (USB) applications with low resistance, faster time-to-trip and low voltage drop features.

Specifications

Packaging

A* bulk
G tape and reel
F* tape and ammo
* preferred type

Materials

Insulating Material: Yellow Epoxy Polymer, UL 94 V-0

Round Pins: Copper alloy, tin plated

Max. Device Surface Temperature in Tripped State
125 °C

Operating / Storage Temperature
-40 °C to +85 °C (consider derating)

Humidity Ageing
+85 °C, 85% R.H., 1000 hours, ± 5 % typical resistance change

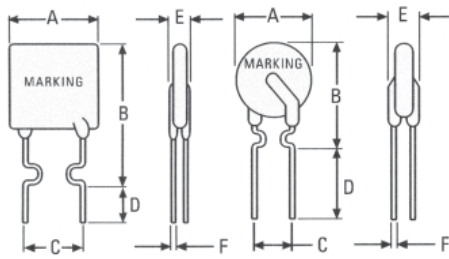
Soldering Characteristics
Solderability per MIL-STD-202, Method 208E

Thermal Shock
MIL-STD-202F, Method 107G
+125 °C to -40 °C 10 times, ± 5 % typical resistance change

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

Marking
"P", voltage, amperage rating, lot number

Dimensions (mm)



16V Model

6V Model

Figure 1

Figure 2



Dimensions (mm)

| Model | Fig. | A Max | B Max | C typ | D Min | E Max | Physical Characteristics | | packaging quantity | |
|------------|------|----------|----------|----------|----------|----------|--------------------------|----------|--------------------|-------|
| | | | | | | | Lead | Material | bag | ammo |
| RLD06P075B | 2 | 6.9 | 11.4 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/Cu | 500 | 2,000 |
| RLD06P120B | 2 | 6.9 | 11.7 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |
| RLD06P155B | 2 | 6.9 | 11.7 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |
| RLD16P090B | 1 | 7.4 | 12.2 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |
| RLD16P110B | 1 | 7.4 | 14.2 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |
| RLD16P135B | 1 | 8.9 | 13.5 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |
| RLD16P160B | 1 | 8.9 | 15.2 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |
| RLD16P185B | 1 | 10.2 | 15.7 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |
| RLD16P250B | 1 | 11.4 | 18.3 | 5.1 | 7.6 | 3.0 | 0.51 dia. | Sn/CuFe | 500 | 2,000 |

Permissible continuous operating current is ≤ 100 % at ambient temperature of 20 °C (68 °F).

| Model | I _{hold} (A) | I _{Trip} (A) | V _{max. dc} (V) | I _{max.} (A) | max. time to trip (s @ A) | P _{d max.} (W) | Resistance | | Approvals | |
|------------|--------------------------|--------------------------|-----------------------------|--------------------------|------------------------------|----------------------------|-----------------------|-------------------------|-----------|-----|
| | | | | | | | R _{min.} () | R _{I max.} () | cULus | TÜV |
| RLD06P075B | 0.75 | 1.30 | 6 | 40 | 0.40 @ 8.00 | 0.3 | 0.100 | 0.230 | • | • |
| RLD06P120B | 1.20 | 2.00 | 6 | 40 | 0.50 @ 8.00 | 0.6 | 0.065 | 0.140 | • | • |
| RLD06P155B | 1.55 | 2.70 | 6 | 40 | 0.60 @ 8.00 | 0.6 | 0.040 | 0.100 | • | • |
| RLD16P090B | 0.90 | 1.80 | 16 | 40 | 5.90 @ 4.50 | 0.6 | 0.070 | 0.180 | • | • |
| RLD16P110B | 1.10 | 2.20 | 16 | 40 | 6.60 @ 5.50 | 0.7 | 0.050 | 0.140 | • | • |
| RLD16P135B | 1.35 | 2.70 | 16 | 40 | 7.30 @ 6.75 | 0.8 | 0.040 | 0.120 | • | • |
| RLD16P160B | 1.60 | 3.20 | 16 | 40 | 8.00 @ 8.00 | 0.9 | 0.030 | 0.110 | • | • |
| RLD16P185B | 1.85 | 3.70 | 16 | 40 | 8.70 @ 9.25 | 1.0 | 0.030 | 0.090 | • | • |
| RLD16P250B | 2.50 | 5.00 | 16 | 40 | 10.3 @ 12.5 | 1.2 | 0.020 | 0.060 | • | • |

NOTE:
 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})

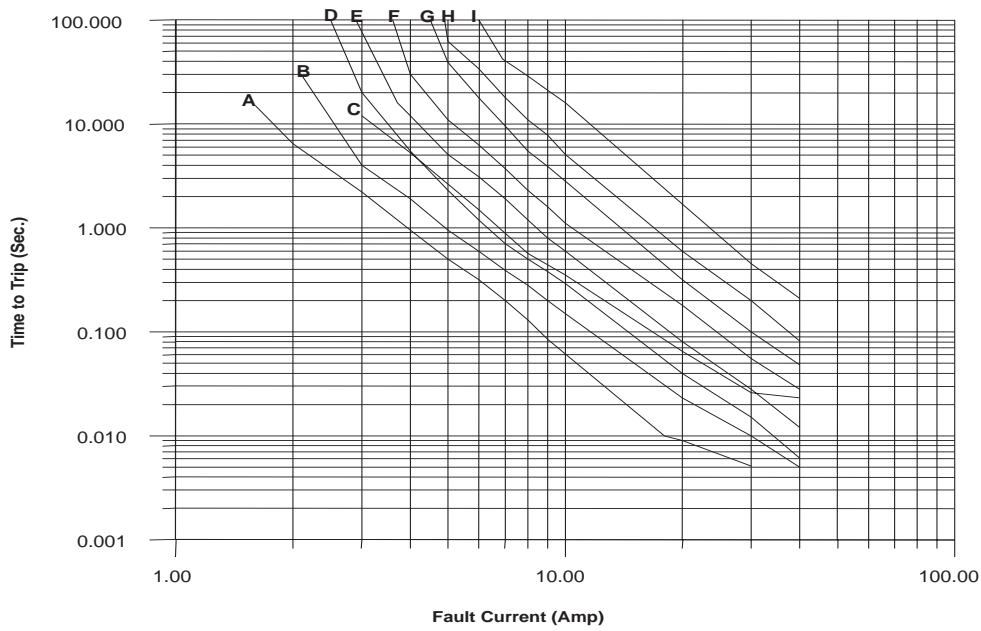
P_d = Power dissipated from device when in the tripped state at 20 °C still air.
 R_{min} = Minimum resistance of device in initial (un-soldered) state.
 R_{I max} = Maximum resistance of device at 20 °C measured one hour after tripping for 20 s.
Caution: Operation beyond the specified rating may result in damage and possible arcing and flame. Specifications are subject to change without notice

Order Information

| | | | | |
|------|--------------|-------|---|-----------|
| Qty. | Order-Number | Model | * | Packaging |
|------|--------------|-------|---|-----------|

* optional "F" for lead free devices

RLD-USB



- A: RLD06P075B
- B: RLD06P120B
- C: RLD06P155B
- D: RLD16P090B
- E: RLD16P110B
- F: RLD16P135B
- G: RLD16P160B
- H: RLD16P185B
- I: RLD16P250B

Thermal Derating Chart

| Model | Ambient Operation Temperature - I_{hold} (A) | | | | | | | | |
|------------|--|--------|------|-------|-------|-------|-------|-------|-------|
| | -40 °C | -20 °C | 0 °C | 23 °C | 40 °C | 50 °C | 60 °C | 70 °C | 85 °C |
| RLD06P075B | 1.05 | 0.95 | 0.85 | 0.75 | 0.65 | 0.60 | 0.55 | 0.50 | 0.43 |
| RLD06P120B | 1.69 | 1.52 | 1.36 | 1.20 | 1.04 | 0.96 | 0.88 | 0.80 | 0.68 |
| RLD06P155B | 2.17 | 1.96 | 1.75 | 1.55 | 1.34 | 1.24 | 1.13 | 1.03 | 0.88 |
| RLD16P090B | 1.31 | 1.17 | 1.04 | 0.90 | 0.75 | 0.69 | 0.61 | 0.55 | 0.47 |
| RLD16P110B | 1.60 | 1.43 | 1.27 | 1.10 | 1.00 | 0.92 | 0.75 | 0.67 | 0.57 |
| RLD16P135B | 1.96 | 1.76 | 1.55 | 1.35 | 1.12 | 1.04 | 0.92 | 0.82 | 0.70 |
| RLD16P160B | 2.32 | 2.08 | 1.84 | 1.60 | 1.33 | 1.23 | 1.09 | 0.98 | 0.83 |
| RLD16P185B | 2.68 | 2.41 | 2.13 | 1.85 | 1.54 | 1.42 | 1.26 | 1.13 | 0.96 |
| RLD16P250B | 3.63 | 3.25 | 2.88 | 2.50 | 2.08 | 1.93 | 1.70 | 1.53 | 1.30 |