

ELECTRONICS



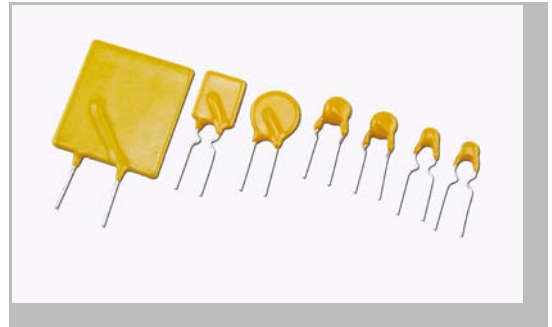
Positive Thermal Coefficient

RL60 Series

Positive Thermal Coefficient - RL60 Series

Features

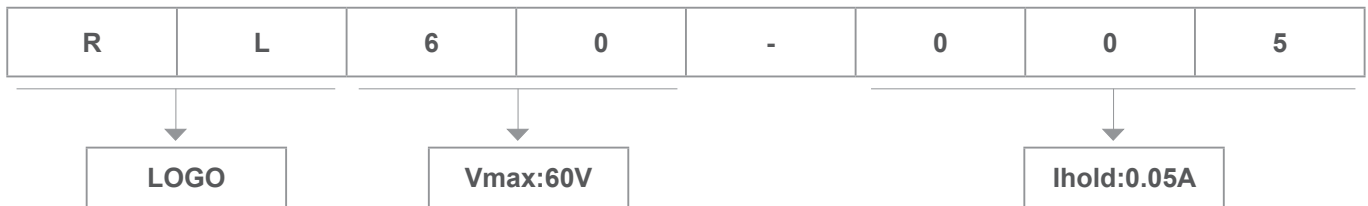
- 1. I(hold):005~500mA
- 2. 60V Operating voltages
- 3. Radial leaded devices.
- 4. Very high voltage surge capabilities.
- 5. Available in lead-free version.
- 6. Fast time-to-trip
- 7. RoHS compliant, Lead- Free and Halogen-Free



Applications

- 1. Overcurrent and overtemperature
- 2. protection of automotive electronics
- 3. Hard disk drives
- 4. PC motherboards
- 5. PC peripherals
 - Point-of-sale (POS) equipment
 - PCMCIA cards
 - USB port protection
 - HDMI 1.4 Source protection
 - Computers & peripherals
 - General Electronics

Product Name



Positive Thermal Coefficient - RL60 Series

Dimension

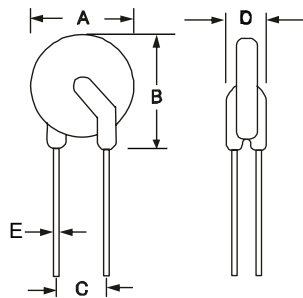


Fig.1

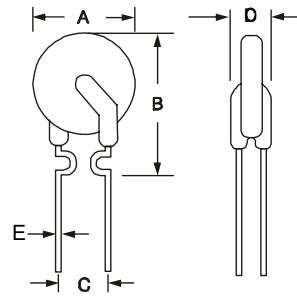


Fig.2

Type Number	Ihold	Vmax	Itrip	Imax	Rmax	Rmin	Pdtyp	Package Dimensions (mm)					Circuit Figure
	A	V	A	A	Ω	Ω	W	A	B	C	D	E	
RL60-005	0.05	60	0.1	40	20	7.3	0.3	5	8.5	5.1	3	0.8	Fig.1/2
RL60-010	0.1	60	0.2	40	7.5	2.5	0.38	5.5	9.5	5.1	3	0.8	Fig.1/2
RL60-017	0.17	60	0.34	40	5.21	2.84	0.48	7.4	12.7	5.1	3	0.8	Fig.1/2
RL60-020	0.2	60	0.4	40	2.84	1.83	0.41	7.4	12.7	5.1	3	0.8	Fig.1/2
RL60-025	0.25	60	0.5	40	1.95	1	0.45	7.4	12.7	5.1	3	0.8	Fig.1/2
RL60-030	0.3	60	0.6	40	1.38	0.76	0.49	7.4	13	5.1	3	0.8	Fig.1/2
RL60-040	0.4	60	0.8	40	0.88	0.55	0.56	7.8	13.5	5.1	3	0.8	Fig.2
RL60-050	0.5	60	1	40	0.79	0.5	0.77	7.8	13.5	5.1	3	0.8	Fig.2
RL60-065	0.65	60	1.3	40	0.5	0.31	0.88	9.7	14.5	5.1	3	0.8	Fig.2
RL60-075	0.75	60	1.5	40	0.42	0.25	0.92	10.4	15.2	5.1	3	0.8	Fig.2
RL60-090	0.9	60	1.8	40	0.33	0.2	0.99	11.7	15.8	5.1	3	0.8	Fig.2
RL60-110	1.1	60	2.2	40	0.27	0.15	1.5	13	18	5.1	3	0.8	Fig.1
RL60-135	1.35	60	2.7	40	0.21	0.12	1.7	14.5	19.6	5.1	3	0.8	Fig.1
RL60-160	1.6	60	3.2	40	0.16	0.09	1.9	16.3	21.3	5.1	3	0.8	Fig.1
RL60-185	1.85	60	3.7	40	0.14	0.08	2.1	17.8	22.9	5.1	3	0.8	Fig.1
RL60-250	2.5	60	5	40	0.1	0.05	2.5	21.3	26.4	10.5	3	0.8	Fig.1
RL60-300	3	60	6	40	0.08	0.04	2.8	21.3	26.4	10.5	3	0.8	Fig.1
RL60-375	3.75	60	7.5	40	0.07	0.03	3.2	28.5	33.5	10.5	3	0.8	Fig.1
RL60-500	5	60	10	40	0.02	0.03	4.2	28.5	33.5	10.5	3	0.8	Fig.1

I hold = Hold Current. Maximum current device will not trip in 25°C still air.

I trip = Trip Current. Minimum current at which the device will always trip in 25°C still air.

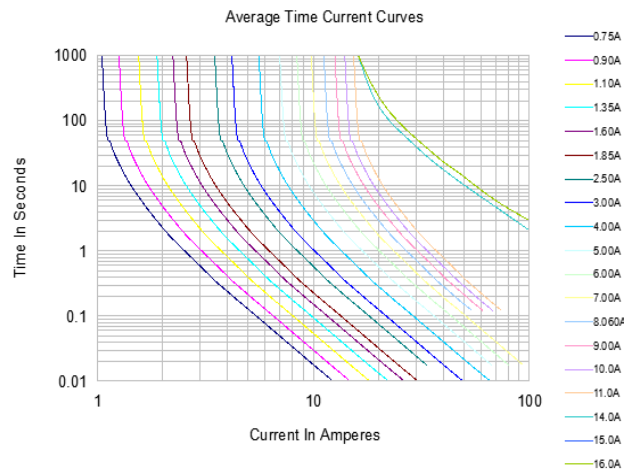
V max = Maximum operating voltage device can withstand without damage at rated current (Imax).

I max = Maximum fault current device can withstand without damage at rated voltage (V max).

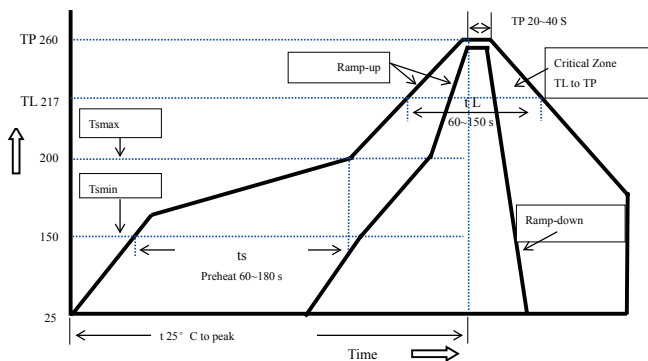
R min/max = Minimum/Maximum device resistance prior to tripping at 25°C.

Positive Thermal Coefficient - RL60 Series

Average Time Current Curves



Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts max to T p)	3°C/second mac.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	+217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~35°C,70%RH

Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free

Recommended maximum paste thickness is 0.25mm

Devices can be cleaned using standard industry methods and solvents.

Note 1: All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Positive Thermal Coefficient - RL60 Series

Ihold Versus Temperature

Type Number	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
RL60-010	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.05	0.04
RL60-017	0.26	0.23	0.20	0.17	0.14	0.12	0.11	0.09	0.07
RL60-020	0.31	0.27	0.24	0.20	0.16	0.14	0.13	0.11	0.08
RL60-025	0.39	0.34	0.30	0.25	0.20	0.18	0.16	0.14	0.10
RL60-030	0.47	0.41	0.36	0.30	0.24	0.22	0.19	0.16	0.12
RL60-040	0.62	0.54	0.48	0.40	0.32	0.29	0.25	0.22	0.16
RL60-050	0.78	0.68	0.60	0.50	0.41	0.36	0.32	0.27	0.20
RL60-065	1.01	0.88	0.77	0.65	0.53	0.47	0.41	0.35	0.26
RL60-075	1.16	1.02	0.89	0.75	0.61	0.54	0.47	0.41	0.30
RL60-090	1.40	1.22	1.07	0.90	0.73	0.65	0.57	0.49	0.36
RL60-110	1.71	1.50	1.31	1.10	0.89	0.79	0.69	0.59	0.44
RL60-135	2.09	1.84	1.61	1.35	1.09	0.97	0.85	0.73	0.54
RL60-160	2.48	2.18	1.90	1.60	1.30	1.15	1.01	0.86	0.64
RL60-185	2.87	2.52	2.20	1.85	1.50	1.33	1.17	1.00	0.74
RL60-250	3.88	3.40	2.98	2.50	2.03	1.80	1.58	1.35	1.00
RL60-300	4.65	4.08	3.57	3.00	2.43	2.16	1.89	1.62	1.20
RL60-375	5.81	5.10	4.46	3.75	3.04	2.70	2.36	2.03	1.50

Warehouse Storage Conditions of Products

- Storage Conditions:
 1. Storage Temperature: -10°C~+40°C
 2. Relative Humidity: ≤75%RH
 3. Keep away from corrosive atmosphere and sunlight.
- Period of Storage: 1 year

RuiLongYuan Electronics Co., Ltd.

- Reproducing and modifying information of the document is prohibited without permission from Ruilongyuan International Inc.
 - Ruilongyuan International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
 - Ruilongyuan International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
 - Ruilongyuan International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
 - Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Ruilongyuan International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
 - The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Ruilongyuan International Inc. for any damages resulting from such improper use or sale.
-

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Resettable Fuses - PPTC](#) category:

Click to view products by [Ruilongyuan](#) manufacturer:

Other Similar products are found below :

[RF0077-000](#) [RF3256-000](#) [RF3281-000](#) [RF3301-000](#) [RF3341-000](#) [RF3344-000](#) [RF3382-000](#) [SMD125-2](#) [RF2171-000](#) [RF2531-000](#) [RF2873-000](#) [RF3060-000](#) [TR600-150Q-B-0.5-0.130](#) [RXE090](#) [5E4795/04-1502](#) [TRF250-080T-B-1.0-0.125](#) [SMD100-2](#) [NIS5452MT1TXG](#) [NIS5431MT1TXG](#) [SMD250-2](#) [0ZCM0001FF2G](#) [0ZCM0003FF2G](#) [0ZCM0004FF2G](#) [BK60-017-DZ-E0.6](#) [F95456-000](#) [LVR100S](#) [RS30-090](#) [RS30-110](#) [RS30-600](#) [RS30-700](#) [RS30-800](#) [RS30-900](#) [RS60RB-005](#) [RS60RB-010](#) [RS60RB-020](#) [RS60RB-025](#) [RS60RB-050](#) [RS60RB-075](#) [RS60RB-160](#) [RS60SB-250](#) [ASMD0603-010-30V](#) [ASMD0603-025-16V](#) [ASMD2920-260-24V](#) [BSMD0603-025-12V](#) [BSMD1206-150-12V](#) [BSMD0805-020-33V](#) [BSMD1206-075-13.2V](#) [BSMD2920-400-6V](#) [BSMD2920-300-6V](#) [BSMD2920-700-6V](#)