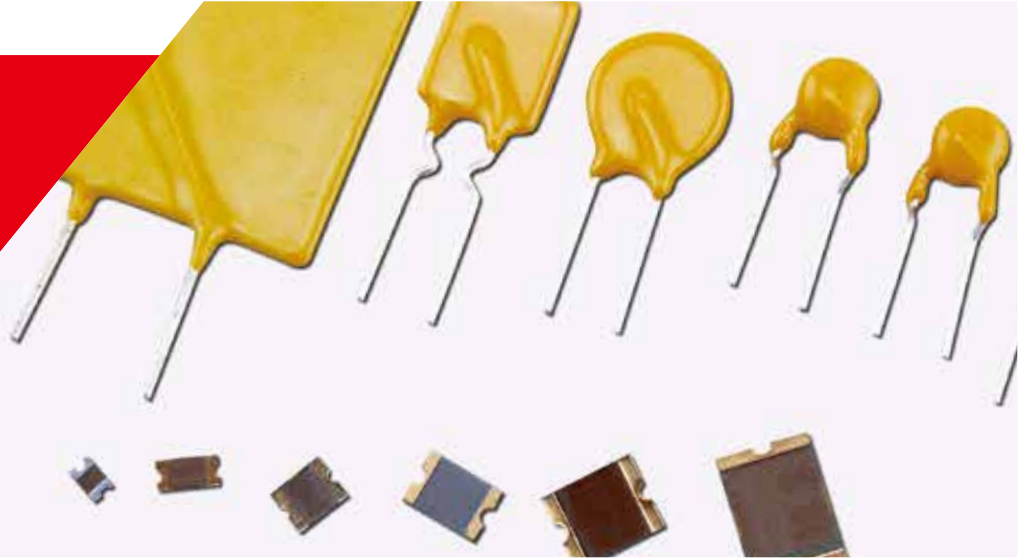


RUILON

瑞隆源电子



Positive Thermal Coefficient

RLVR240 Series

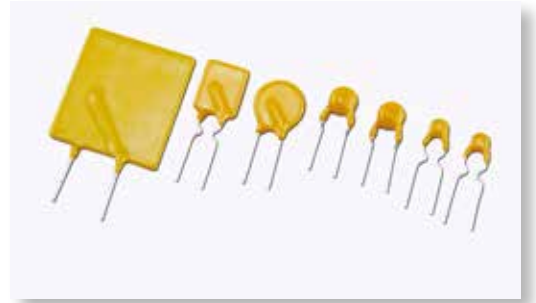
361° Circuit Protection
System

Revision:FEB-17

Please refer to <http://www.ruilon.com.cn> for current information.

Positive Thermal Coefficient - RLVR240 Series

Positive Thermal Coefficient devices(PTC),provide over-current protection for electrical and electronic devices.They function using conducting strips of metal imbedded inside polymers.Under normal conditions,the devices resistance is near zero,but over-current conditions will heat the PTC and expand the polymer,increasing the impedance.When current returns to normal,the components cool down,returning to their original shape and very low levels of resistance.



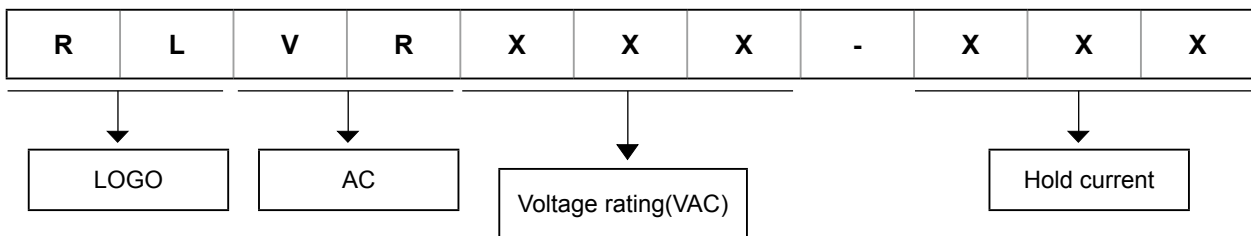
Features

- I(hold): 0.05~2.0A
- 240VAC Operating voltages
- Radial leaded devices
- Over-current protection
- Very high voltage surge capabilities.
- Available in lead-free version.
- Fast time-to-trip
- RoHS compliant, Lead- Free and Halogen-Free

Applications

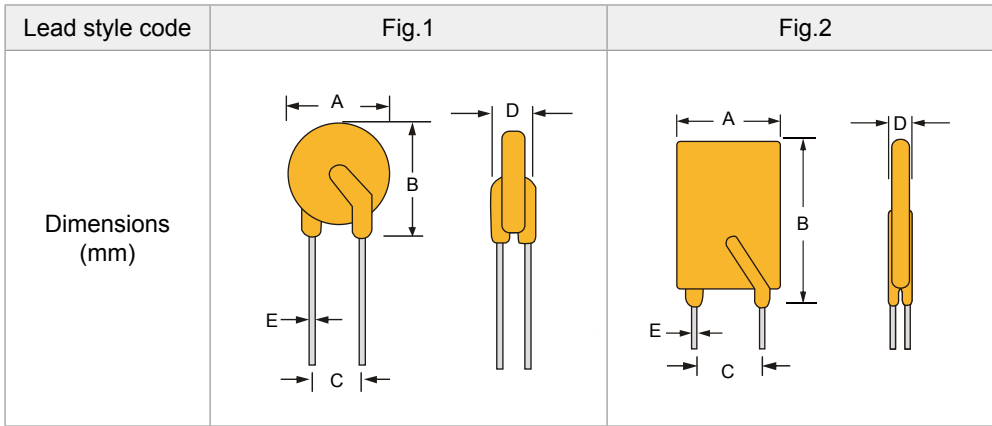
- Overcurrent and overtemperature protection of automotive electronics
- Hard disk drives
- Point-of-sale (POS) equipment
- PCMCIA cards
- Power over Ethernet (POE)
- HDMI 1.4 Source protection
- Computers & peripherals
- Industrial control
- Security systems

Product Name



Positive Thermal Coefficient - RLVR240 Series

Electrical Characteristics



Type Number	I_{hold}	I_T	V_{max}	Time-to-Trip		I_{max}	R_{max}	R_{min}	Package Dimensions (mm)					Circuit Figure
	A	A	V	I_{trip} A	T_{max} S	A	Ω	Ω	A (max)	B (max)	C (max)	D (max)	E (max)	
RLVR240-005	0.05	0.12	AC240	0.25	15	10	31	18	8.3	12.9	5.1	3.8	0.5	Fig.1
RLVR240-008	0.08	0.19	AC240	0.4	15	10	12	7.4	8.3	12.9	5.1	3.8	0.5	Fig.1
RLVR240-012	0.12	0.24	AC240	0.6	15	10	12	3	8.3	10.7	5.1	3.8	0.6	Fig.1
RLVR240-016	0.16	0.38	AC240	0.8	15	10	7.8	2.5	9.9	13.8	5.1	3.8	0.6	Fig.1
RLVR240-025	0.25	0.5	AC240	1.25	18.5	10	3.8	1.3	9.6	18.8	5.1	3.8	0.6	Fig.2
RLVR240-033	0.33	0.66	AC240	1.65	21.0	10	2.6	0.77	12.5	19.0	5.1	3.8	0.8	Fig.2
RLVR240-040	0.4	0.8	AC240	2.0	26.0	10	1.9	0.6	12.5	19.0	5.1	3.8	0.8	Fig.2
RLVR240-055	0.55	1.0	AC240	2.75	26.0	10	1.45	0.45	14	22.4	5.1	4.1	0.8	Fig.2
RLVR240-075	0.75	1.45	AC240	3.75	18.0	10	0.69	0.25	11.5	23.4	5.1	4.8	0.8	Fig.2
RLVR240-100	1.0	2	AC240	5.0	13.6	10	0.47	0.179	14.0	20.1	10.2	4.1	0.8	Fig.1
RLVR240-125	1.25	2.2	AC240	6.25	18.0	10	0.32	0.117	14	21.7	5.8	5.3	0.8	Fig.2
RLVR240-135	1.35	2.7	AC240	6.75	20.0	10	0.3	0.109	16.3	21.7	5.8	4.1	0.8	Fig.2
RLVR240-200	2.0	4.0	AC240	10.0	36.0	10	0.205	0.075	20.7	31.8	10.2	3.5	0.8	Fig.2

Test procedures and requirement

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @25°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current, V_{max} , 25°C	$T \leq \max. \text{ Time to trip}(T_{trip})$
Hold Current	30 min, at I_H	No trip
Trip Cycle Life	V_{max} , I_{max} , 100 cycles	No arcing or burning
Trip Endurance	V_{max} , 24hours	No arcing or burning

Positive Thermal Coefficient - RLVR240 Series

Manual Soldering Recommendation Parameters

Items	Conditions
Soldering condition	The highest power of the manual soldering iron should be 30W or less, soldering temperature should not be higher than 280 ℃ .
Soldering time	The soldering time should be kept within 3 seconds, otherwise it might cause insulation layer cracking, and increased part resistance.
Soldering position	The distance on the leads between the soldering point and bottom of the PPTC body should be equal or greater than 4mm.
Other	The soldering iron should not contact the PPTC body except the leads. If the soldering conditions are kept to lower temperature, less time and larger distance, the outcome of the soldering will be better.

Notes: 1. Before using the device must be stored in the original bags, if the storage conditions do not guarantee, the device may not be able to meet the given value.
 2. The devices can't used for reflow soldering.

Mechanical Characteristics

Items	Specifications	Test Conditions/Methods
Tensile strength	No visible damage	1.0Kgf, 10 seconds
Bending strength	No visible damage	0.5Kgf, 90°, 3 times
Vibration	No visible damage	Freq: 10-55Hz, Amp: 0.75mm, 1min

Mechanical Characteristics

Items	Specifications	Test Conditions/Methods
Solder ability	No visible damage, Solder OK, Solder area $\geq 95\%$	245±5 ℃ , 2±1s, dipping depth=0.5inch max from the body
Resistance to soldering heat	No visible damage, Electrical OK, $ \Delta R/R0 \leq 50\%$	260±5 ℃ , 10+2/-0s
Damp heat, steady state	No visible damage, Electrical OK, $ \Delta R/R0 \leq 20\%$	40±2 ℃ , 90~95 % RH, total 48Hrs, after 4Hrs test electrical parameter
Temperature cycling	No visible damage, Electrical OK, $ \Delta R/R0 \leq 20\%$	Ta = -10+0/-1 ℃ 30min, Ta = 70+1/- 0 ℃ 30min, 5cycles, after 1hr test electrical parameter