



## Features



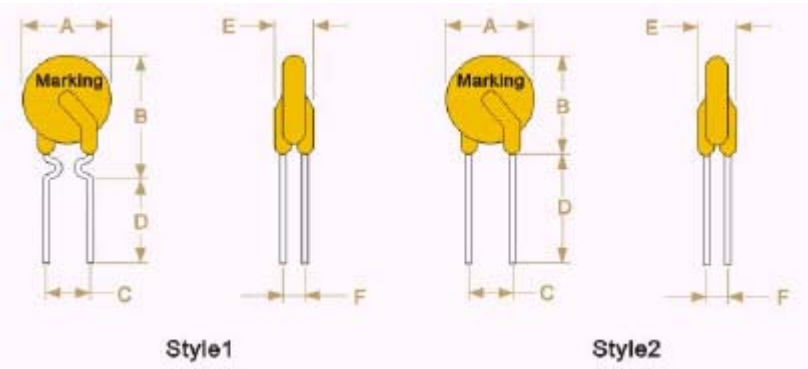
- Radial leaded devices
- Cured, flame retardant epoxy polymer insulating material meets UL94 V-0 requirements
- Available in lead-free version
- Agency Recognition: UL, CSA, TUV



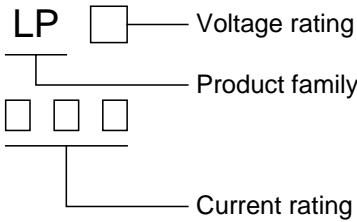
# LP60 *series* *R-line devices*

### Product Dimensions(mm)

Part number	A		B		C		D		E		F		Lead	
	Max.	Max.	Typ.	Min.	Max.	Typ.	Style	Size( )						
LP60-005	5.7	10.5	5.1	7.6	3.1	1.1	1	0.6						
LP60-010	5.7	10.9	5.1	7.6	3.1	1.1	1	0.6						
LP60-017	5.8	11.1	5.1	7.6	3.1	1.1	1	0.6						
LP60-020	5.9	11.2	5.1	7.6	3.1	1.1	1	0.6						
LP60-025	6.1	11.4	5.1	7.6	3.1	1.1	1	0.6						
LP60-030	7.6	13.4	5.1	7.6	3.1	1.1	1	0.6						
LP60-040	7.7	13.6	5.1	7.6	3.1	1.1	1	0.6						
LP60-050	7.9	13.7	5.1	7.6	3.1	1.1	1	0.6						
LP60-065	9.7	14.5	5.1	7.6	3.1	1.1	1	0.6						
LP60-075	10.7	15.5	5.1	7.6	3.1	1.1	1	0.6						
LP60-090	11.7	16.5	5.1	7.6	3.1	1.1	1	0.6						
LP60-110	13.0	16.7	5.1	7.6	3.1	1.4	2	0.8						
LP60-135	15.7	17.6	5.1	7.6	3.1	1.4	2	0.8						
LP60-160	16.7	19.7	5.1	7.6	3.1	1.4	2	0.8						
LP60-185	17.8	22.9	5.1	7.6	3.1	1.4	2	0.8						
LP60-250	21.3	23.5	10.2	7.6	3.1	1.4	2	0.8						
LP60-300	24.9	27.4	10.2	7.6	3.1	1.4	2	0.8						
LP60-375	28.5	32.5	10.2	7.6	3.1	1.4	2	0.8						



### Marking system



\* Lead materials: Tin-plate metal wire.  
 \* Lead-free devices are available, the right logo is lead-free mark of wayon.



## Electrical Characteristics

Part number	$I_H$	$I_T$	$T_{trip}$	$V_{max}$	$I_{max}$	$Pd_{typ}$	$R_{min}$	$R_{max}$
	(A)	(A)	(S)	(V)	(A)	(W)	( )	( )
LP60-005	0.05	0.10	5.0	60	40	0.26	7.30	11.10
LP60-010	0.10	0.20	8.0	60	40	0.51	2.50	4.50
LP60-017	0.17	0.34	5.0	60	40	0.60	2.00	3.20
LP60-020	0.20	0.40	3.6	60	40	0.52	1.50	2.84
LP60-025	0.25	0.50	3.2	60	40	0.52	1.00	1.95
LP60-030	0.30	0.60	3.0	60	40	0.59	0.76	1.36
LP60-040	0.40	0.80	3.8	60	40	0.66	0.52	0.86
LP60-050	0.50	1.00	4.0	60	40	0.80	0.41	0.77
LP60-065	0.65	1.30	5.3	60	40	0.90	0.27	0.48
LP60-075	0.75	1.50	6.3	60	40	0.95	0.18	0.40
LP60-090	0.90	1.80	7.2	60	40	1.00	0.14	0.31
LP60-110	1.10	2.20	8.2	60	40	1.51	0.14	0.25
LP60-135	1.35	2.70	9.6	60	40	1.71	0.12	0.19
LP60-160	1.60	3.20	11.4	60	40	1.98	0.09	0.14
LP60-185	1.85	3.70	12.6	60	40	2.10	0.08	0.12
LP60-250	2.50	5.00	15.6	60	40	2.50	0.05	0.08
LP60-300	3.00	6.00	19.8	60	40	2.80	0.04	0.06
LP60-375	3.75	7.50	24.0	60	40	3.20	0.03	0.05

$I_H$ =Hold current: maximum current at which the device will not trip at 25 still air.

$I_T$ =Trip current: minimum current at which the device will always trip at 25 still air.

$V_{max}$ =Maximum voltage device can withstand without damage at rated current.

$I_{max}$ =Maximum fault current device can withstand without damage at rated voltage.

$T_{trip}$ =Maximum time to trip(s) at assigned current.

$Pd_{typ}$ =Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

$R_{min}$ =Minimum device resistance at 25 prior to tripping.

$R_{max}$ =Maximum device resistance at 25 prior to tripping.

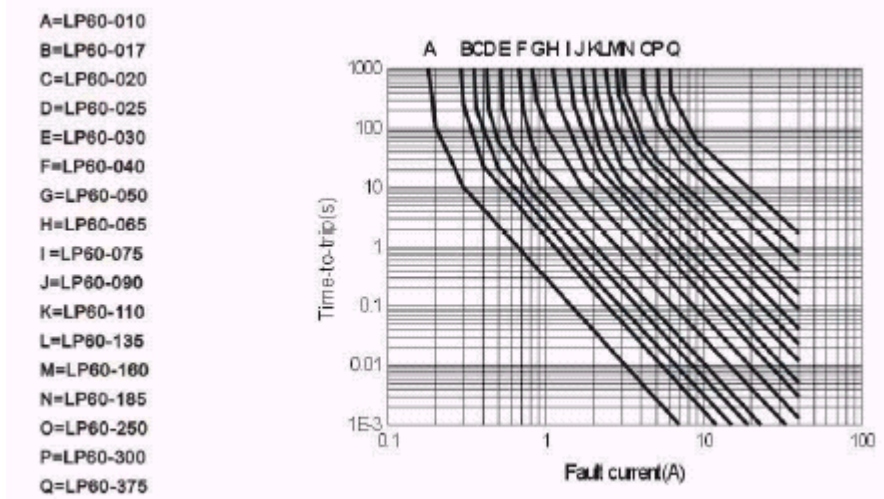
## Thermal Derating Chart- $I_H$ (A)

Part number	Maximum ambient operating temperatures( )								
	-40	-20	0	25	40	50	60	70	85
LP60-005	0.077	0.069	0.061	0.050	0.044	0.040	0.036	0.032	0.025
LP60-010	0.18	0.15	0.13	0.10	0.08	0.07	0.06	0.05	0.03
LP60-017	0.28	0.24	0.20	0.17	0.14	0.12	0.10	0.09	0.06
LP60-020	0.34	0.29	0.25	0.20	0.16	0.14	0.13	0.10	0.07
LP60-025	0.42	0.36	0.31	0.25	0.20	0.18	0.16	0.12	0.09
LP60-030	0.52	0.44	0.38	0.30	0.24	0.22	0.18	0.14	0.10
LP60-040	0.66	0.57	0.50	0.40	0.32	0.29	0.24	0.20	0.14
LP60-050	0.83	0.74	0.63	0.50	0.41	0.36	0.30	0.25	0.18
LP60-065	1.10	0.95	0.82	0.65	0.53	0.47	0.40	0.33	0.24
LP60-075	1.26	1.11	0.95	0.75	0.61	0.54	0.45	0.39	0.28
LP60-090	1.52	1.30	1.15	0.90	0.73	0.65	0.55	0.47	0.33
LP60-110	1.82	1.60	1.35	1.10	0.89	0.79	0.65	0.55	0.40
LP60-135	2.20	1.91	1.65	1.35	1.09	0.96	0.80	0.68	0.50
LP60-160	2.60	2.30	1.95	1.60	1.30	1.13	1.00	0.80	0.60
LP60-185	3.00	2.63	2.30	1.85	1.50	1.33	1.12	0.92	0.67
LP60-250	4.05	3.58	3.02	2.50	2.02	1.80	1.55	1.30	0.90
LP60-300	4.82	4.16	3.62	3.00	2.43	2.16	1.85	1.50	1.09
LP60-375	6.02	5.19	4.50	3.75	3.02	2.68	2.30	1.95	1.39

## Test Procedures And Requirements

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

## Typical Time-to-Trip Charts at 25



## Package Information

Bulk:

LP60-005~LP60-065/ LP60-160~LP60-185.....1000pcs per bag  
 LP60-075~LP60-135/ LP60-250~LP60-300.....500pcs per bag  
 LP60-375.....250pcs per bag

Tape & Reel:

LP60-005~LP60-090.....3000pcs per reel  
 LP60-110~LP60-160.....1500pcs per reel  
 LP60-185~LP60-375.....1000pcs per reel