



Features

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



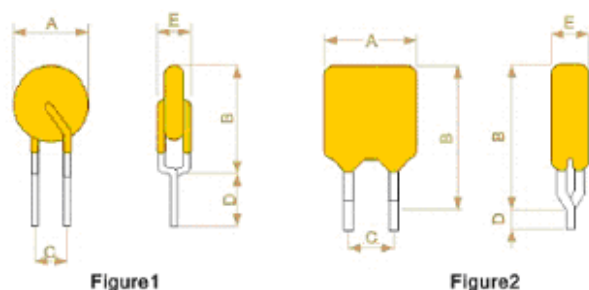
LB series

R-line devices

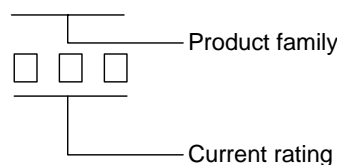
Product Dimensions

Part number	A	B	C	D	E	Lead	
	Max	Max	Max	Min	Max	Style	Size(φ)
LB080F	5.8	9.9	5.1	4.7	4.6	1	0.6
LB080UF	4.8	9.3	5.1	4.7	3.8	1	0.6
LB110F	6.5	11.0	5.1	4.7	4.6	1/2	0.6
LB110UF	6.0	10.0	5.1	4.7	3.8	1/2	0.6
LB120F	6.5	11.0	5.1	4.7	4.6	2	0.6
LB120UF	6.0	10.0	5.1	4.7	3.8	2	0.6
LB145F	6.5	11.0	5.1	4.7	4.6	2	0.6
LB145UF	6.0	10.0	5.1	4.7	3.8	2	0.6
LB180F	11.0	13.6	5.1	4.7	4.6	1/2	0.6
LB180UF	10.4	12.6	5.1	4.7	3.8	1/2	0.6

Marking system



LB



- *The suffix "U" means no outside envelop
- * 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 interrupt}	I _{max}	Pd _{typ}	R _{min}	R _{max}
	(A)	(A)	Current(A)	Time(S)	(V)	(A)	(W)	(Ω)	(Ω)
LB080F	0.080	0.160	0.35	3.00*	250	3	1.0	15.00	22.00
LB080UF	0.080	0.160	0.35	3.00*	250	3	1.0	14.00	20.00
LB110F	0.110	0.220	1.00	0.80	250	3	1.0	7.00	15.00
LB110UF	0.110	0.220	1.00	0.75	250	3	1.0	8.00	14.00
LB120F	0.120	0.240	1.00	1.00	250	3	1.0	4.00	12.00
LB120UF	0.120	0.240	1.00	0.95	250	3	1.0	6.00	12.00
LB145F	0.145	0.290	1.00	2.50	250	3	1.0	3.00	7.50
LB145UF	0.145	0.290	1.00	2.00	250	3	1.0	3.50	6.50
LB180F	0.180	0.360	1.00	21.00	250	10	1.0	0.80	2.50
LB180UF	0.180	0.360	1.00	15.00	250	10	1.0	0.80	2.00

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

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

$V_{max\ interrupt}$ =Maximum interrupt 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 at assigned current.

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

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

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

Thermal Derating Chart- $I_H(A)$

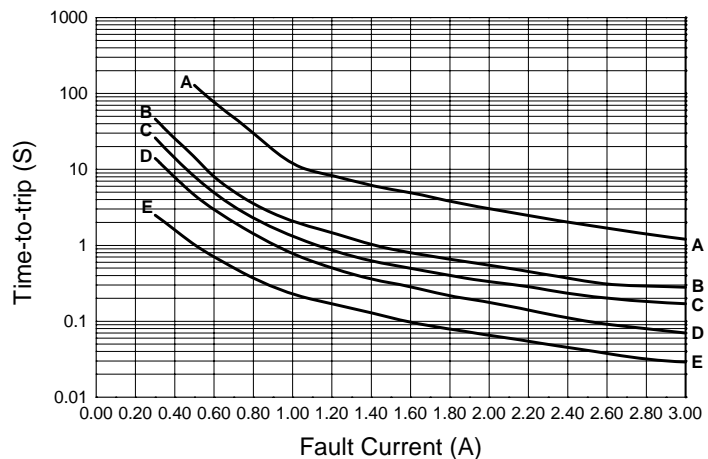
Part number	Maximum ambient operating temperatures(°C)								
	-40	-20	0	25	40	50	60	70	85
LB080F/LB080UF	0.124	0.110	0.095	0.080	0.066	0.059	0.051	0.044	0.033
LB110/FLB110UF	0.171	0.151	0.131	0.110	0.091	0.081	0.071	0.061	0.046
LB120F/LB120UF	0.191	0.170	0.148	0.120	0.104	0.093	0.082	0.071	0.055
LB145F/LB145UF	0.225	0.199	0.172	0.145	0.119	0.106	0.093	0.080	0.060
LB180F/LB180UF	0.269	0.240	0.211	0.180	0.153	0.138	0.123	0.109	0.087

Test Procedures And Requirements

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	$T \leq$ 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°C

- A=LB180F/180UF
- B=LB/145F/145UF
- C=LB120F/120UF
- D=LB110F/110UF
- E=LB080F/080UF



Package Information

Bulk:

LB080F/LB080UF~LB180F/LB180UF.....1000pcs per bag

Tape & Reel:

LB080F/LB080UF~LB180F/LB180UF.....3000pcs per reel

LBV series

R-line Device

Features

- Radial leaded devices
- Very high voltage surge capabilities
- Lead-free and compliant with the European Union RoHS Directive 2002/95/EC
- Agency Recognition: UL、CSA、TUV



Applications

- Customer Premise Equipment
- MDF modules
- Network Interface Devices
- Base station
- Power supply

Product Dimensions

Part number	A	B	C	D	E	Lead
	Max	Max	Max	Min	Typ	Size(φ)
LBV150	13.5	12.6	6.5	4.7	5.1	0.6
LBV160	13.5	12.6	6.5	4.7	5.1	0.6

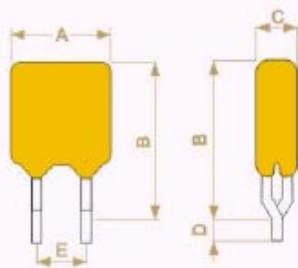
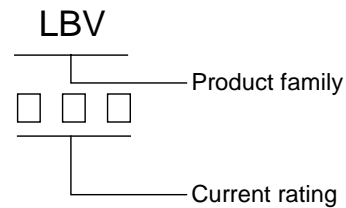


Figure 2

Marking system



*The suffix "U" means no outside envelop

* Lead materials: Tin-plate metal wire.

Electrical Characteristics

Part number	I_H	I_T	T_{trip}	$V_{max\ interrupt}$	I_{max}	$P_{d_{typ}}$	R_{min}	R_{max}
	(A)	(A)	Current(A) Time(S)	(V)	(A)	(w)	(Ω)	(Ω)
LBV150	0.150	0.300	1.00 5.00	600	3.0	1.0	6.00	12.00
LBV160	0.160	0.320	1.00 7.00	600	3.0	1.0	4.00	10.00

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

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

$V_{max\ interrupt}$ =Maximum interrupt 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 at assigned current.

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

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

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

Thermal Derating Chart-Ih(A)

Part number	Maximum ambient operating temperatures(°C)								
	-40	-20	0	25	40	50	60	70	85
LBV150	0.238	0.211	0.183	0.150	0.128	0.115	0.101	0.088	0.067
LBV160	0.250	0.220	0.195	0.160	0.147	0.123	0.110	0.095	0.074

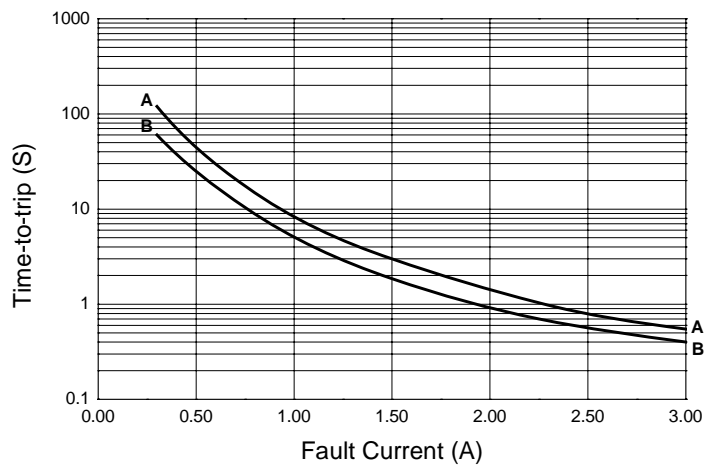
Test Procedures And Requirements

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	$T \leq$ 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°C

A=LBV160

B=LBV150



Package Information

Bulk:

LBV150~LBV160.....1000pcs per bag

Tape & Reel:

LBV150~LBV160.....600pcs per reel

Notices:

The devices are intended for protection against occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions are anticipated.

Operation beyond maximum ratings or improper use may result in device damage and possible electrical arcing and flame.

Shanghai Wayon Thermo/Electro Materials Co.,Ltd.

16th Floor, No.1398, Jinqiao Road, Shanghai 200136,China

Tel: 86-21- 50310888

E-mail: market@way-on.com

Fax: 86-21-50757680

Http://www.way-on.com

Features



- Radial leaded devices
- Designed for use in line voltage applications, permitting maximum voltages of up to 265 VAC
- Protecting against both overcurrent and overtemperature faults on the primary side of power supplies and transformers
- Available in lead-free version
- Recognition: UL, CSA, TUV is pending

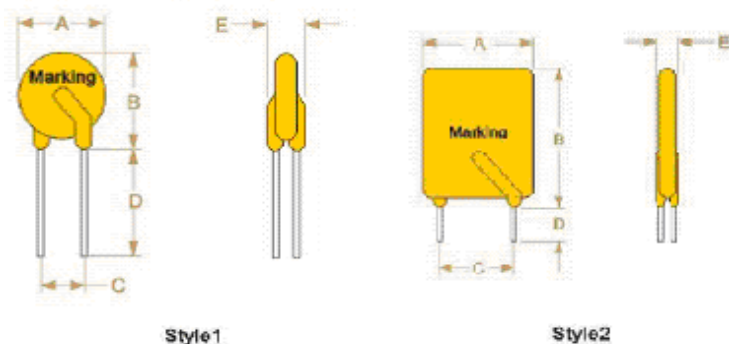


LBLV series

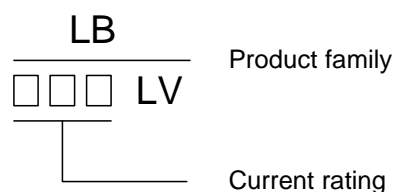
R-line devices

Product Dimensions

Part number	A	B	C	D	E	Lead	
	Max	Max	Typ	Min	Max	Style	Size(ϕ)
LB050LVF	8.3	10.7	5.1	7.6	3.8	1	0.6
LB080LVF	8.3	10.7	5.1	7.6	3.8	1	0.6
LB120LVF	8.3	10.7	5.1	7.6	3.8	1	0.6
LB160LVF	9.9	12.5	5.1	7.6	3.8	1	0.6
LB250LVF	9.6	17.4	5.1	7.6	3.8	2	0.6
LB330LVF	11.5	16.5	5.1	7.6	3.8	2	0.6
LB400LVF	11.5	19.5	5.1	7.6	3.8	2	0.6
LB600LVF	11.5	19.5	5.1	7.6	3.8	2	0.6
LB800LVF	13.0	22.5	5.1	7.6	3.8	2	0.6



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}	R_{min}	R_{max}
	(A)	(A)	(A)	(S)	(V)	(A)	(Ω)	(Ω)
LB050LVF	0.05	0.12	0.25	15.0	265	1.0	18.50	31.00
LB080LVF	0.08	0.19	0.40	15.0	265	1.2	7.40	12.00
LB120LVF	0.12	0.30	0.60	15.0	265	1.2	3.00	6.50
LB160LVF	0.16	0.37	0.80	15.0	265	2.0	2.50	4.10
LB250LVF	0.25	0.56	1.25	18.5	265	3.5	1.30	2.10
LB330LVF	0.33	0.80	1.65	21.0	265	4.5	0.77	1.24
LB400LVF	0.40	0.90	2.00	26.0	265	5.5	0.60	0.97
LB600LVF	0.60	1.35	3.00	36.0	265	5.5	0.40	0.70
LB800LVF	0.80	1.80	4.00	40.0	265	10.0	0.30	0.70

I_H =Hold current: maximum current at which the device will not trip at 25°C still air.
 I_T =Trip current: minimum current at which the device will always trip at 25°C 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.
 R_{min} =Minimum device resistance at 25°C prior to tripping.
 R_{max} =Maximum device resistance at 25°C prior to tripping.

Thermal Derating Chart- $I_H(A)$

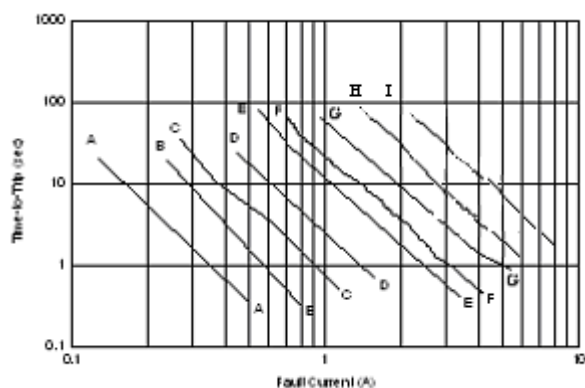
Part number	Maximum ambient operating temperatures(°C)								
	-40	-20	0	25	40	50	60	70	85
LB050LVF	0.080	0.075	0.062	0.050	0.040	0.035	0.030	0.025	0.017
LB080LVF	0.128	0.120	0.100	0.080	0.064	0.056	0.048	0.040	0.028
LB120LVF	0.192	0.180	0.150	0.120	0.096	0.084	0.072	0.060	0.042
LB160LVF	0.256	0.240	0.200	0.160	0.128	0.112	0.096	0.080	0.056
LB250LVF	0.400	0.375	0.315	0.250	0.200	0.175	0.150	0.125	0.087
LB330LVF	0.63	0.50	0.42	0.33	0.27	0.23	0.20	0.17	0.11
LB400LVF	0.64	0.60	0.50	0.40	0.32	0.28	0.24	0.20	0.21
LB600LVF	0.96	0.90	0.75	0.60	0.48	0.42	0.36	0.30	0.21
LB800LVF	1.28	1.20	1.00	0.80	0.64	0.56	0.48	0.40	0.28

Test Procedures And Requirements

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	$T \leq$ 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°C

A=LB050LVF
 B=LB080LVF
 C=LB120LVF
 D=LB160LVF
 E=LB250LVF
 F=LB330LVF
 G=LB400LVF
 H=LB600LVF
 I=LB800LVF



Package Information

Bulk:
 LB050LVF~LB400LVF.....1000pcs per bag
 Tape & Reel:
 LB050LVF~LB400LVF.....3000pcs per reel