

Features

- Lower power consumption by lower resistance
- The miniaturized PTC elements leads a flexible design around battery
- Typical used for protection of Li-ion /Polymer Li-ion battery
- Lead-free
- Halogen free
- Agency recognition: UL、CSA、TUV



LN series

Product Dimensions (mm)

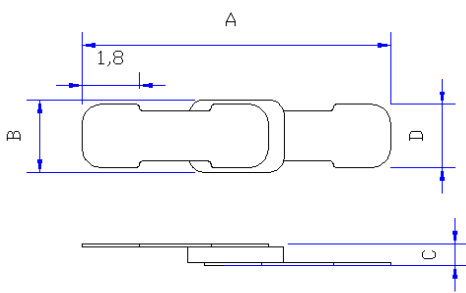


Fig. 1 Bared

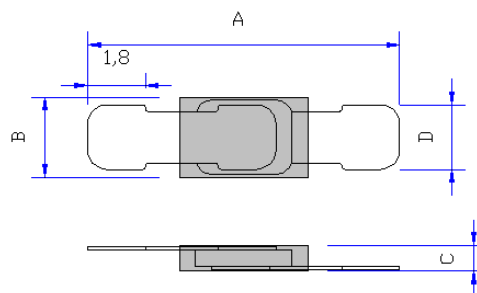


Fig. 2 Tape

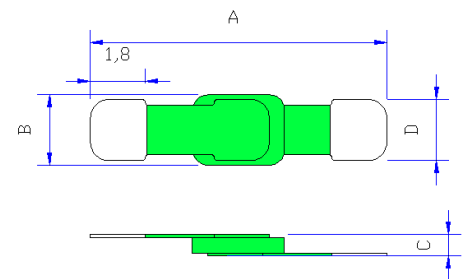


Fig. 3 Coating

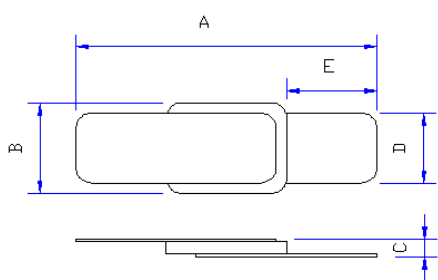


Fig. 4 Bared

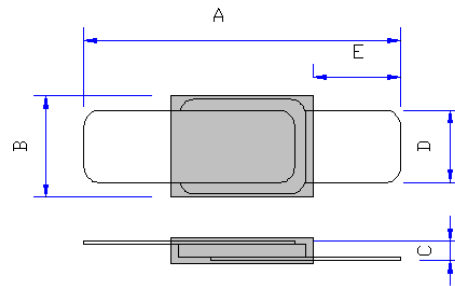


Fig. 5 Tape

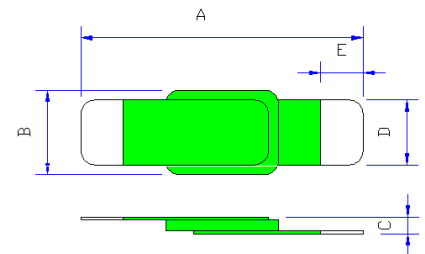


Fig. 6 Coating

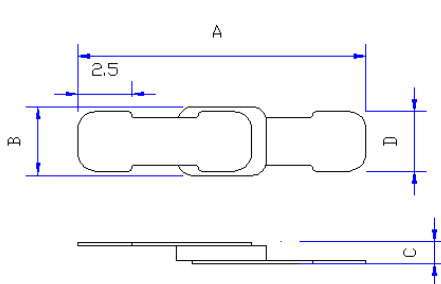


Fig. 7 Bared

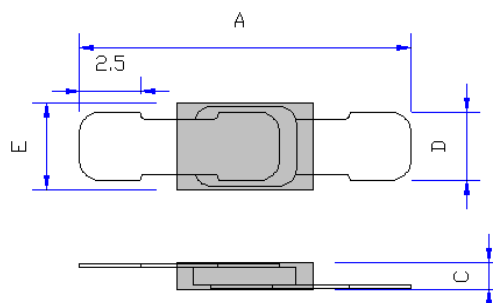


Fig. 8 Tape

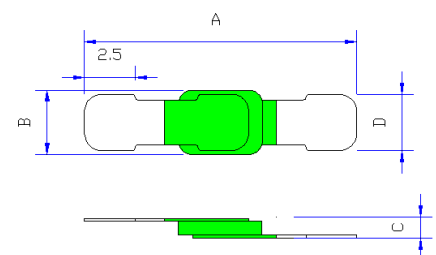


Fig. 9 Coating

PART NUMBER	A		B		C		D		E		Figure
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
LN110	9.4	10.0	--	2.5	0.55	0.9	1.9	2.1	--	--	1/2/3
LN140	9.4	10.0	--	2.5	0.55	0.9	1.9	2.1	--	--	1/2/3
LN170	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN190	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN210	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN250	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN270	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN300	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN310	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN350	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN370	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN400	9.7	10.3	2.96	3.26	0.55	0.9	2.2	2.4	1.5	--	4/5/6
LN450	12.5	13.3	3.25	3.55	0.55	0.9	2.7	2.9	--	--	7/8/9
LN500	12.5	13.3	3.25	3.55	0.55	0.9	2.7	2.9	--	--	7/8/9

Thermal Derating Chart-IH(A)

Part number	Maximum ambient operating temperatures(°C)							
	-40	-20	0	25	40	50	60	70
LN110	1.90	1.70	1.45	1.10	0.90	0.74	0.60	0.46
LN140	2.40	2.10	1.80	1.40	1.14	0.97	0.80	0.63
LN170	3.00	2.60	2.20	1.70	1.40	1.20	1.00	0.80
LN190	3.60	3.10	2.60	1.90	1.60	1.30	1.20	1.00
LN210	3.60	3.20	2.80	2.10	1.84	1.40	1.34	1.10
LN250	4.40	3.90	3.30	2.50	2.10	1.80	1.50	1.20
LN270	4.60	4.00	3.40	2.70	2.20	1.90	1.60	1.30
LN300	5.20	4.50	3.85	3.00	2.45	2.10	1.75	1.40
LN310	5.45	4.70	4.00	3.10	2.55	2.20	1.80	1.45
LN350	5.90	5.20	4.50	3.50	2.80	2.40	2.00	1.60
LN370	6.10	5.40	4.70	3.70	3.00	2.50	2.10	1.70
LN400	6.20	5.50	4.80	4.00	3.30	2.80	2.50	2.00
LN450	6.50	5.80	5.00	4.50	3.80	3.30	3.00	2.40
LN500	6.80	6.00	5.30	5.00	4.40	3.75	3.50	2.80

Electrical Characteristics

Part number	I _H (A)	I _T (A)	V _{max} (V)	P _{d max} (W)	I _{max} (A)	Max Time to Trip		Initial Resistance		R _{1max} (m Ω)
						Current (A)	Time (S)	R _{min} (m Ω)	R _{max} (m Ω)	
LN110	1.1	2.8	6	1.0	50	5.5	5.0	15	30	60
LN140	1.4	3.6	6	1.0	50	7.0	5.0	10	20	35
LN170	1.7	4.2	6	1.0	50	8.5	5.0	9	18	32
LN190	1.9	4.9	6	1.0	50	9.5	2.0	7	14	24
LN210	2.1	5.6	6	1.0	50	10.5	2.0	7	13	22
LN250	2.5	6.2	6	1.0	50	12.5	2.0	6	12	22
LN270	2.7	8.0	6	1.0	50	13.5	2.0	5	12	22
LN300	3.0	8.8	6	1.3	50	15.0	2.0	4	11	20
LN310	3.1	6.5	6	1.3	50	15.5	2.0	4	11	20
LN350	3.5	9.0	6	1.3	50	17.5	2.0	4	10	20
LN370	3.7	9.2	6	1.3	50	18.5	2.0	4	10	20
LN400	4.0	12.0	6	1.5	50	20.0	2.0	4	9	20
LN450	4.5	13.5	6	1.5	50	22.5	5.0	4	9	20
LN500	5.0	15.0	6	1.8	50	25.0	5.0	4	9	20

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.

Max Time-to-trip=Maximum time to trip(s) at assigned current.

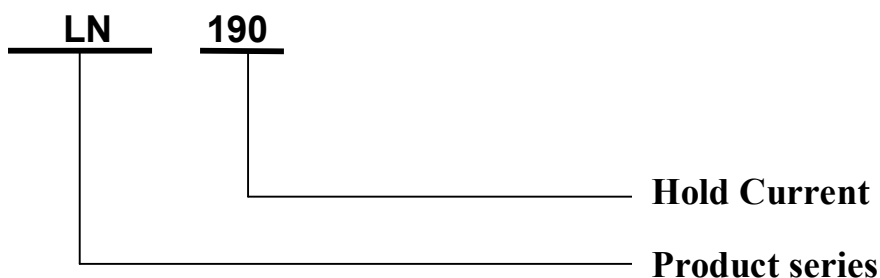
P_{d max}=Maximum power dissipation: maximum power dissipated by the device when in state air environment.

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

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

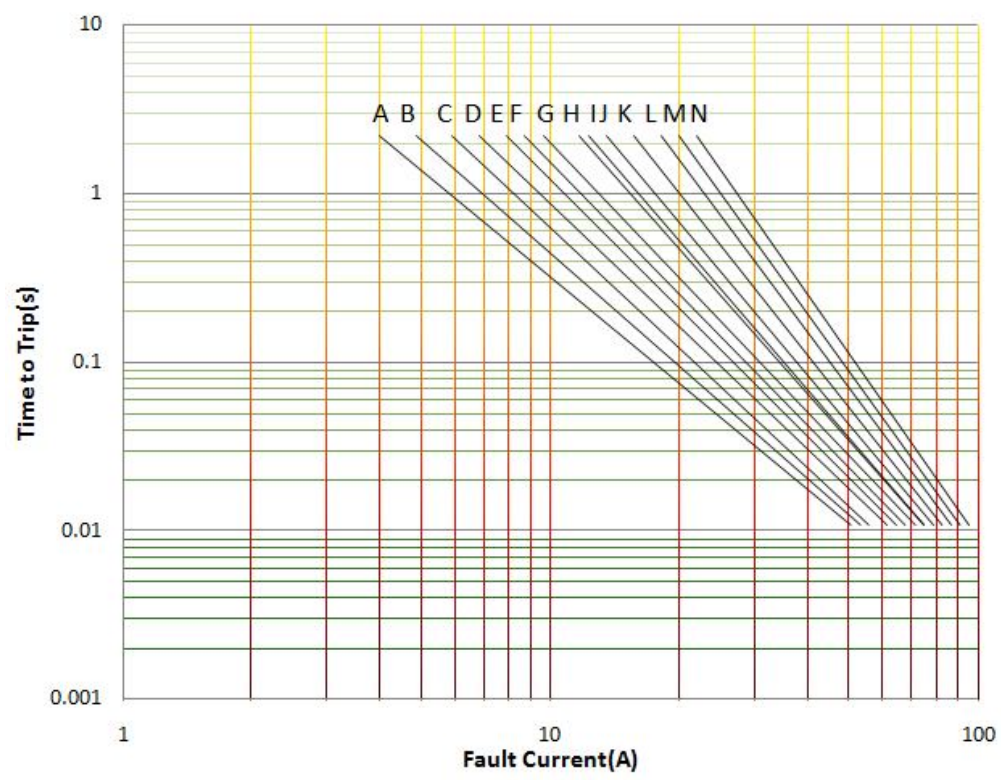
R_{1max}=Maximum device resistance at 25°C, of device one hour after being tripped the first time.

Part Numbering System



Typical Time-to-Trip Charts at 25°C

- A= LN110
- B= LN140
- C= LN170
- D= LN190
- E= LN210
- F= LN250
- G= LN270
- H= LN300
- I= LN310
- J= LN350
- K= LN370
- L= LN400
- M= LN450
- N= LN500



Physical Characteristics

Lead material	0.10mm nominal thickness, 1/2 H nickel
Coating	Epoxy Resin
Tape	Polyester

Environmental Specifications

Test	Conditions	Resistance Change
Passive aging	-40°C, 1000hours	≤ R _{1max}
	85°C, 1000hours	≤ R _{1max}
Humidity aging	60°C/95% RH, 1000hours	≤ R _{1max}
Vibration	MIL-STD-883D ,Method 2026	No change

Packaging and Storage

Packaging

Bulk, 1000pcs per bag

Storage

The maximum ambient temperature shall not exceed 40°C. Storage temperatures higher than 40°C could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 70%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components. Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.

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