

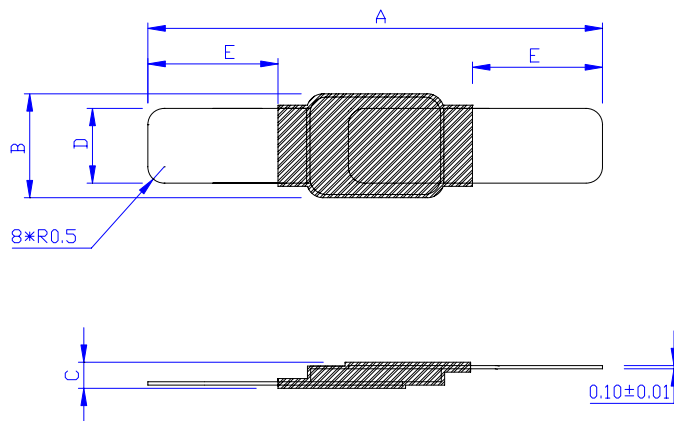
Features

- ✧ 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
- ✧ Agency recognition: UL、CSA、TUV




- ✧   

Product Dimensions



Note

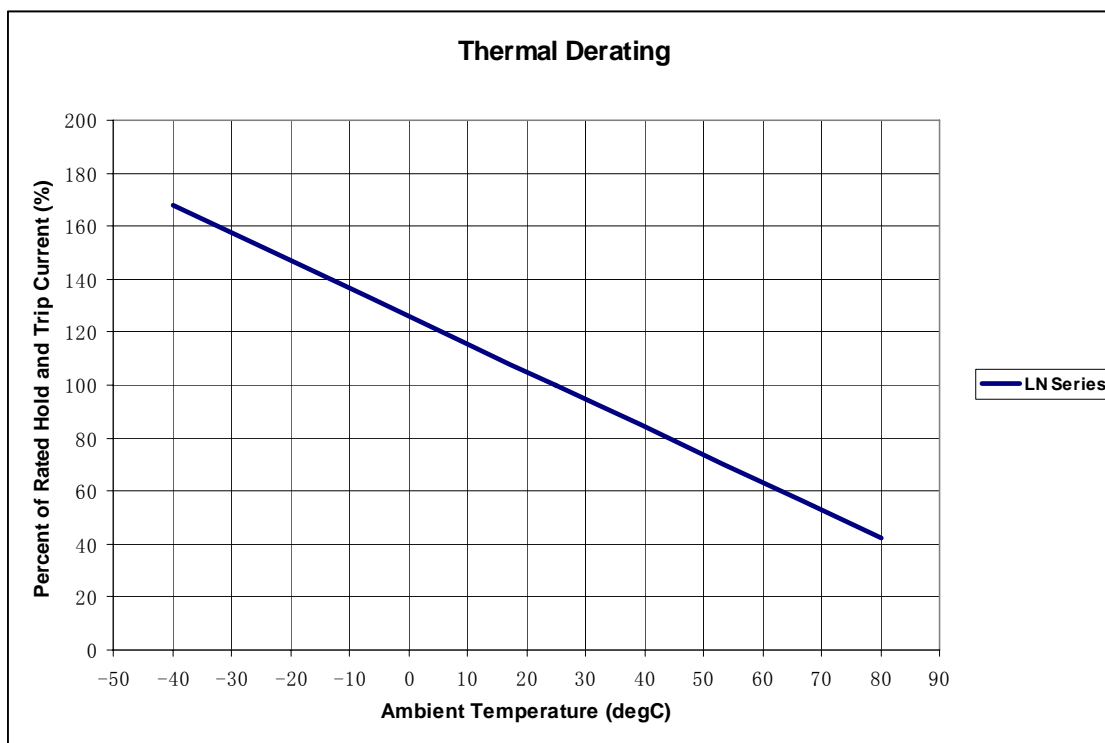
 shows coated areas,

chip size: 3*4mm

Part number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
LN190	9.7	10.3	2.96	3.26	0.7	1.1	2.2	2.4	1.8	2.8
LN250	9.7	10.3	2.96	3.26	0.7	1.1	2.2	2.4	1.8	2.8
LN350	9.7	10.3	2.96	3.26	0.7	1.1	2.2	2.4	1.8	2.8
LN370	9.7	10.3	2.96	3.26	0.7	1.1	2.2	2.4	1.8	2.8

Thermal Derating Chart-IH(A)

Part Number	Maximum ambient operating temperatures(°C)									
	-40	-20	0	20	25	40	50	60	70	80
LN190	3.2	2.8	2.4	2.0	1.9	1.6	1.4	1.2	1.0	0.8
LN250	4.2	3.7	3.2	2.6	2.5	2.1	1.8	1.6	1.3	1.0
LN350	6.0	5.2	4.4	3.6	3.5	2.8	2.4	2.0	1.6	1.2
LN370	6.2	5.4	4.6	3.8	3.7	3.0	2.6	2.2	1.8	1.4

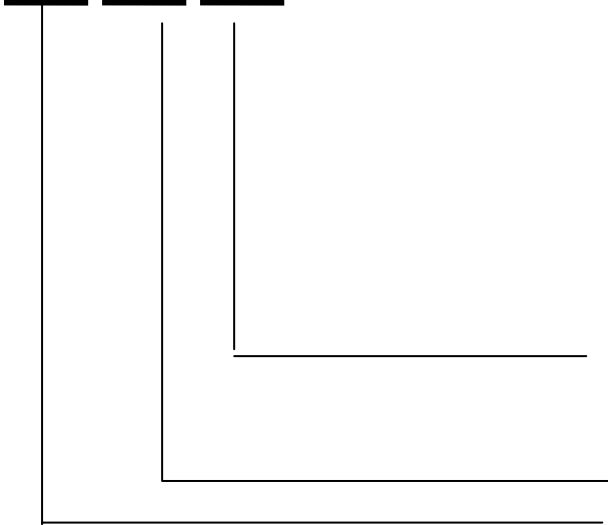


Electrical Characteristic

Part number	I_H	I_T	V_{max}	I_{max}	$P_{d max}$	T_{trip}		R_{min}	R_{max}	R_{1max}
	(A)	(A)	(V)	(A)	(W)	Current (A)	Time (S)	(Ω)	(Ω)	(Ω)
LN190	1.9	4.9	6	50	1.0	9.5	2.0	0.007	0.014	0.024
LN250	2.5	8.0	6	50	1.3	12.5	2.0	0.006	0.012	0.020
LN350	3.5	9.0	6	50	1.3	17.5	5.0	0.004	0.010	0.016
LN370	3.7	9.2	6	50	1.3	18.5	5.0	0.003	0.008	0.015

Part Numbering System

LN 190 N



Modifier

- N = Narrow chip
- S = Slit lead
- SS = Both leads slit
- L = Long lead
- Hold current (mA)
- Product series

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

Physical Characteristics and Environmental Specifications

Physical Characteristics

Lead material	0.10mm nominal thickness, 1/2 H nickel
Coating material	Epoxy resin

Environmental Specifications

Test	Conditions	Resistance Change
Passive aging	-40°C, 1000hours	$\leq R_{1max}$
	70°C, 1000hours	$\leq R_{1max}$
Humidity aging	60°C/95% RH, 1000hours	$\leq R_{1max}$
Vibration	MIL-STD-883D ,Method 2026	No change

Electrical Specifications:

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.

$P_{d max}$ =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.

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.
