

## Low Rho Polymer PTC Resettable Fuses

### Features

1. Overcurrent and overtemperature protection device has a low resistance and high hold current.
2. Weldable nickel terminals.
3. Very low internal resistance.
4. RoHS compliant.

### Applications

1. Battery Packs

### Ordering Information

B	LP	140	□	□
(1)	(2)	(3)	(4)	(5)

(1) Byle Technology Product

(2) Product Type

- Chip area and electrical characteristics are same.
- LP : round chip type
- LQ : square chip type

(3) Hold Current,  $I_H$

- 180 : 1.8A

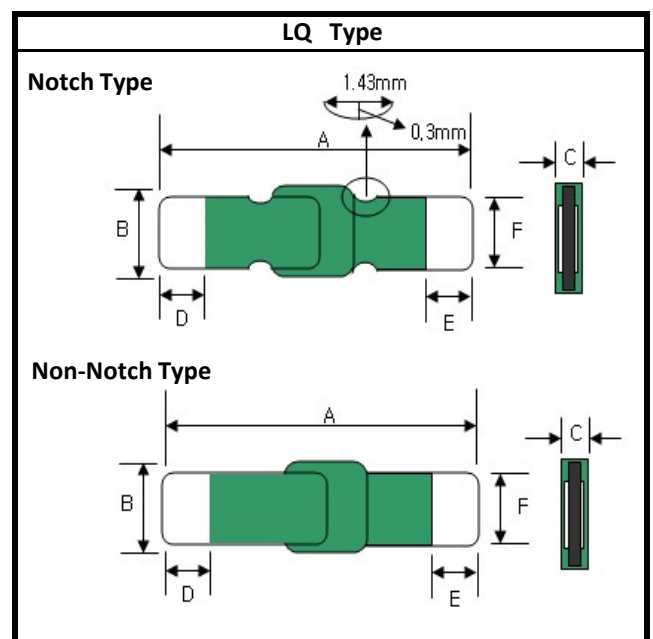
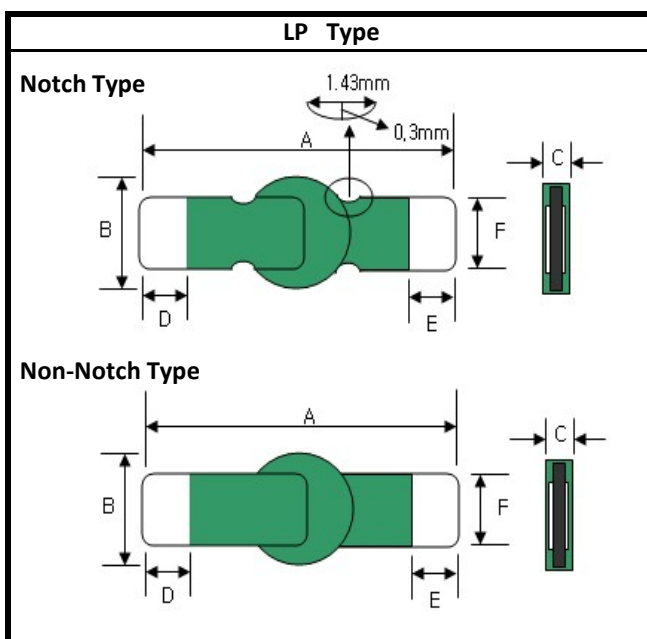
(4) Lead Type Code

- N : Notch type
- Blank : non-notch type

(5) Lead Shape Type

- The contact portion of the leads to chip are same
- The leads terminals are integral parts and there's no connection with solder or welding.

### Shape



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### Dimensions

LP Type

	A		B		C		D		E		F	
	min	max	min	max	min	max	min	max	min	max	min	max
BLP140□□	9.2	10.8	2.96	3.3	0.7	1.1	1.6	3.1	1.6	3.1	2.2	2.4
	0.36	0.43	0.12	0.13	0.03	0.04	0.06	0.12	0.06	0.12	0.087	0.094
BLP180□□	9.2	10.8	2.96	3.3	0.7	1.1	1.6	3.1	1.6	3.1	2.2	2.4
	0.36	0.43	0.12	0.13	0.03	0.04	0.06	0.12	0.06	0.12	0.087	0.094
BLP190□□	9.2	10.8	2.96	3.3	0.7	1.1	1.6	3.1	1.6	3.1	2.2	2.4
	0.36	0.43	0.12	0.13	0.03	0.04	0.06	0.12	0.06	0.12	0.087	0.094
BLP270□□	9.2	11.5	2.96	3.5	0.7	1.1	1.6	3.1	1.6	3.1	2.2	2.4
	0.36	0.45	0.12	0.14	0.03	0.04	0.06	0.12	0.06	0.12	0.087	0.094
BLP370□□	9.2	12.5	2.96	4.2	0.7	1.1	1.6	3.1	1.6	3.1	2.2	2.4
	0.36	0.49	0.12	0.17	0.03	0.04	0.06	0.12	0.06	0.12	0.087	0.094

LQ Type

	A		B		C		D		E		F	
	min	max	min	max	min	max	min	max	min	max	min	max
BLQ140□□	9.2	12.0	2.3	3.3	0.7	1.1	1.6	3.1	1.6	3.1	1.9	2.4
	0.36	0.47	0.09	0.13	0.03	0.04	0.06	0.12	0.06	0.12	0.075	0.094
BLQ180□□	9.2	12.0	2.3	3.3	0.7	1.1	1.6	3.1	1.6	3.1	1.9	2.4
	0.36	0.47	0.09	0.13	0.03	0.04	0.06	0.12	0.06	0.12	0.075	0.094
BLQ190□□	9.2	12.0	2.3	3.3	0.7	1.1	1.6	3.1	1.6	3.1	1.9	2.4
	0.36	0.47	0.09	0.13	0.03	0.04	0.06	0.12	0.06	0.12	0.075	0.094
BLQ270□□	9.2	12.0	2.3	3.7	0.7	1.1	1.6	3.1	1.6	3.1	1.9	2.4
	0.36	0.47	0.09	0.15	0.03	0.04	0.06	0.12	0.06	0.12	0.075	0.094
BLQ370□□	9.2	13.0	2.3	4.2	0.7	1.1	1.6	3.1	1.6	3.1	1.9	2.4
	0.36	0.51	0.09	0.17	0.03	0.04	0.06	0.12	0.06	0.12	0.075	0.094

### Specifications

The specifications for LP type and LQ type are same.

#### Electrical Characteristics

P/N	$V_{max}$ (V)	$I_{max}$ (A)	$I_H$ (A)	$I_T$ (A)	$P_{d,max}$ (W)	max. time to trip (A)	max. time to trip (s)	$R_{min}$ (mΩ)	$R_{max}$ (mΩ)	$R_{1,max}$ (mΩ)	Agency Recognition
BLP140□□ /BLQ140□□	6	50	1.4	3.6	1.0	7.0	3.0	10.0	20.0	35.0	
BLP180□□ /BLQ180□□	6	50	1.8	5.2	1.0	9.0	5.0	7.0	14.0	24.0	
BLP190□□	6	50	1.9	4.7	1.0	9.5	2.0	7.0	15.0	24.0	UL
BLQ190□□	6	50	1.9	4.7	1.0	9.5	2.0	7.0	15.0	24.0	
BLP270□□ /BLQ270□□	6	50	2.7	6.2	1.0	13.5	2.0	6.0	15.0	26.0	
BLP370□□ /BLQ370□□	6	50	3.7	9.0	1.3	18.5	5.0	4.0	10.0	16.0	

#### Thermal Derating

P/N	Maximum Ambient Temperature (°C)											
	0°C				25°C				60°C			
	Hold	Trip	Hold	Trip	Hold	Trip	Hold	Trip				
BLP140□□ /BLQ140□□	1.40	3.60	1.20	3.10	0.60	2.10						
BLP180□□ /BLQ180□□	2.45	7.20	1.80	5.20	0.80	2.35						
BLP190□□ /BLQ190□□	2.60	6.80	1.90	4.70	1.00	2.20						
BLP270□□ /BLQ270□□	3.80	8.30	2.70	6.20	1.40	3.30						
BLP370□□ /BLQ370□□	5.00	12.10	3.70	9.00	1.90	4.80						

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## Physical Characteristics

Lead Material	0.1mm nominal thickness, half-hard nickel
Coating Material	Epoxy

## Environmental Specifications

Test	Test Condition	Criteria
Passive Aging	-40°C / 1000hours	Resistance Change ±5%
	60°C / 1000hours	Resistance Change ±20%
Humidity Aging	60°C / 95% RH, 1000hours	Resistance Change ±30%
Thermal Shock	-40°C / 85°C 10 times	Resistance Change ±5%
Vibration	MIL-STD-883D Method 2026	No Change

## Terms and Description

- Hold current ( $I_H$ )** : maximum current at which the device will not trip at 20°C
- Trip current ( $I_T$ )** : minimum current at which the device will always trip at 20°C.
- Typical power dissipation (Pd)** : Typical amount of power dissipation by the device when in tripped state in 20°C still air environment.
- $R_{min}$**  : Minimum device resistance at 20°C prior to tripping
- $R_{max}$**  : Maximum device resistance at 20°C prior to tripping
- $R_{1max}$**  : Maximum device resistance at 20°C measured 1 hour post trip
- $I_{max}$**  : Maximum interrupt current.
- $V_{max}$**  : Maximum operating voltage.

## Packaging Information

- Standard : 1,000pcs per Bag

## Caution

- Operation beyond the rated voltage or current may result in rupture, electrical arcing or flame.
- Damage to coating may result in electrical performance outside specified ratings.

