

## Features

- ◆ Lower power consumption by ultra-low resistance
- ◆ Alternative shapes and sizes available on request
- ◆ Agency recognition: UL, CSA, TUV
- ◆ RoHS Compliant

## Applications

- ◆ Battery protection

## Electrical Characteristics (电气特性):

| P/N     | 保持电流      | 跳脱电流      | 最大电压          | 最大电流          | 最大动作时间 |        | 消耗功率              | 电阻范围(Ω)    |            |             |
|---------|-----------|-----------|---------------|---------------|--------|--------|-------------------|------------|------------|-------------|
|         | $I_H$ (A) | $I_T$ (A) | $V_{max}$ (V) | $I_{max}$ (A) | (A)    | (Sec.) | $P_{d\ typ.}$ (W) | $R_{min.}$ | $R_{max.}$ | $R1_{max.}$ |
| TAL110  | 1.10      | 2.8       | 6             | 50            | 5.5    | 3      | 1.0               | 0.011      | 0.025      | 0.045       |
| TAL120  | 1.20      | 3.0       | 6             | 50            | 6.0    | 3      | 1.0               | 0.011      | 0.025      | 0.045       |
| TAL140  | 1.40      | 3.6       | 6             | 50            | 7.0    | 3      | 1.0               | 0.010      | 0.020      | 0.035       |
| TAL160  | 1.60      | 4.0       | 6             | 50            | 8.0    | 3      | 1.0               | 0.009      | 0.018      | 0.035       |
| TAL170  | 1.70      | 4.2       | 6             | 50            | 8.5    | 3      | 1.0               | 0.008      | 0.017      | 0.035       |
| TAL175  | 1.75      | 4.5       | 6             | 50            | 8.7    | 3      | 1.0               | 0.006      | 0.015      | 0.024       |
| TAL180  | 1.80      | 4.6       | 6             | 50            | 9.0    | 3      | 1.0               | 0.006      | 0.013      | 0.024       |
| TAL190  | 1.90      | 4.9       | 6             | 50            | 9.5    | 3      | 1.0               | 0.006      | 0.013      | 0.024       |
| TAL190S | 1.90      | 4.9       | 6             | 50            | 9.5    | 3      | 1.0               | 0.006      | 0.013      | 0.024       |
| TAL190N | 1.90      | 4.9       | 6             | 50            | 9.5    | 3      | 1.0               | 0.006      | 0.013      | 0.024       |
| TAL200  | 2.00      | 5.3       | 6             | 50            | 10.0   | 3      | 1.0               | 0.006      | 0.012      | 0.024       |
| TAL210  | 2.10      | 5.6       | 6             | 50            | 10.5   | 3      | 1.0               | 0.005      | 0.012      | 0.024       |
| TAL250  | 2.50      | 8.0       | 6             | 50            | 12.5   | 3      | 1.0               | 0.004      | 0.012      | 0.020       |
| TAL260  | 2.60      | 6.0       | 6             | 50            | 13.0   | 3      | 1.0               | 0.004      | 0.010      | 0.020       |
| TAL270  | 2.70      | 6.2       | 6             | 50            | 13.5   | 3      | 1.0               | 0.004      | 0.010      | 0.026       |
| TAL280  | 2.80      | 5.6       | 6             | 50            | 14.0   | 3      | 1.0               | 0.004      | 0.010      | 0.020       |
| TAL300  | 3.00      | 8.0       | 6             | 50            | 15.0   | 3      | 1.3               | 0.003      | 0.010      | 0.018       |
| TAL300L | 3.00      | 8.0       | 6             | 50            | 15.0   | 3      | 1.3               | 0.003      | 0.010      | 0.018       |
| TAL310  | 3.10      | 8.0       | 6             | 50            | 15.5   | 3      | 1.3               | 0.003      | 0.011      | 0.024       |
| TAL350  | 3.50      | 8.1       | 6             | 50            | 17.5   | 5      | 1.3               | 0.003      | 0.009      | 0.015       |
| TAL370  | 3.70      | 9.0       | 6             | 50            | 18.5   | 5      | 1.3               | 0.002      | 0.010      | 0.020       |
| TAL410  | 4.10      | 9.2       | 6             | 50            | 20.5   | 5      | 1.3               | 0.002      | 0.008      | 0.015       |
| TAL450  | 4.50      | 9.5       | 6             | 50            | 22.5   | 5      | 1.3               | 0.002      | 0.008      | 0.015       |

## Product Dimensions & Marking (Unit: mm) (产品尺寸) :

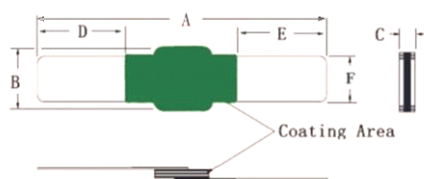


Fig.1

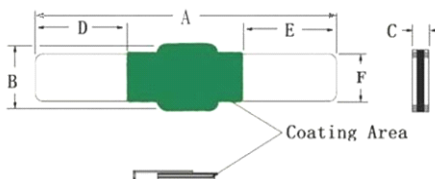


Fig.2

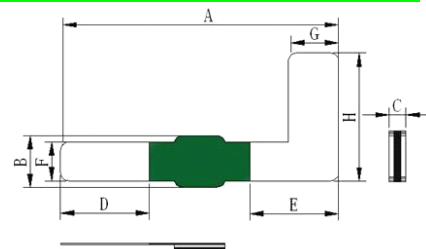


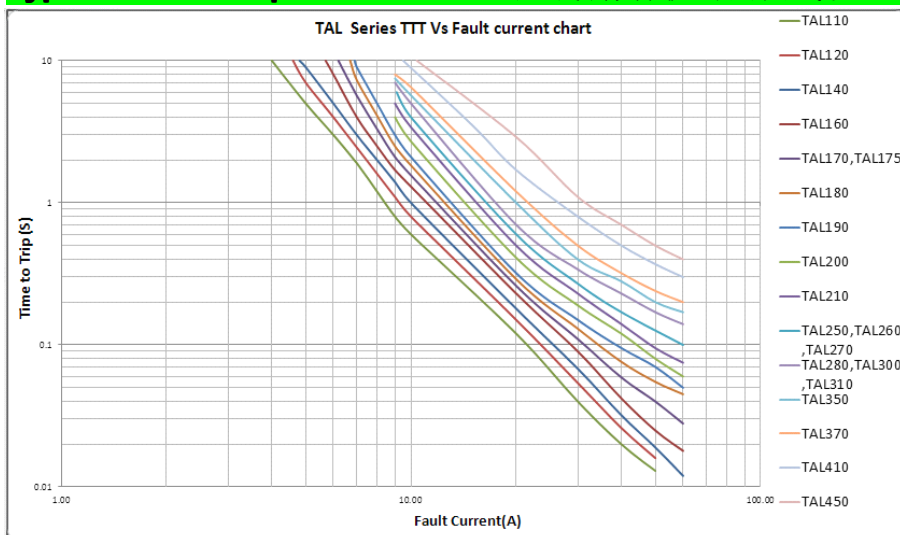
Fig.3

| P/N     | Fig            | A(Nor.)        | B(Nor.)        | C(Max) | D(Nor.)       | E(Nor.)       | F(Nor.)       | G(Nor.)        | H(Nor.)        |
|---------|----------------|----------------|----------------|--------|---------------|---------------|---------------|----------------|----------------|
| TAL110  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL120  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL140  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL160  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL170  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL175  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL180  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL190  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL190S | Fig.1 or Fig.2 | $10.0 \pm 0.8$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL190N | Fig.1 or Fig.2 | $20.0 \pm 0.5$ | $2.6 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TRA200  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL210  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL250  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL260  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL270  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL280  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL300  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL300L | Fig.3          | $16.5 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ | $3.0 \pm 0.05$ | $7.6 \pm 0.05$ |
| TAL310  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.5 \pm 0.5$ | $4.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL350  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.0 \pm 0.5$ | $4.0 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL370  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.1 \pm 0.15$ | 1.1    | $4.0 \pm 0.5$ | $4.0 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL410  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.6 \pm 0.15$ | 1.1    | $3.5 \pm 0.5$ | $3.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |
| TAL450  | Fig.1 or Fig.2 | $14.7 \pm 0.5$ | $3.6 \pm 0.15$ | 1.1    | $3.5 \pm 0.5$ | $3.5 \pm 0.5$ | $2.3 \pm 0.1$ |                |                |

## Thermal Derating Chart – I<sub>hold</sub> (Amps) (环境温度与工作电流关系特性曲线)

| P/N        | Ambient Operating Temperature(工作环境温度) |      |      |      |      |      |      |      |      |
|------------|---------------------------------------|------|------|------|------|------|------|------|------|
|            | -40℃                                  | -20℃ | 0℃   | 25℃  | 40℃  | 50℃  | 60℃  | 70℃  | 85℃  |
| TAL110     | 1.80                                  | 1.60 | 1.40 | 1.10 | 1.00 | 0.90 | 0.80 | 0.70 | 0.60 |
| TAL120     | 2.00                                  | 1.80 | 1.60 | 1.20 | 1.10 | 0.90 | 0.90 | 0.70 | 0.60 |
| TAL140     | 2.30                                  | 2.10 | 1.80 | 1.40 | 1.20 | 1.10 | 1.00 | 0.80 | 0.70 |
| TAL160     | 2.70                                  | 2.40 | 2.10 | 1.60 | 1.40 | 1.20 | 1.10 | 0.90 | 0.70 |
| TAL170     | 2.90                                  | 2.50 | 2.20 | 1.70 | 1.50 | 1.30 | 1.10 | 0.90 | 0.70 |
| TAL175     | 2.90                                  | 2.50 | 2.20 | 1.75 | 1.50 | 1.30 | 1.10 | 0.90 | 0.70 |
| TAL180     | 3.00                                  | 2.70 | 2.30 | 1.80 | 1.50 | 1.30 | 1.20 | 1.00 | 0.80 |
| TAL190/S/N | 3.20                                  | 2.80 | 2.40 | 1.90 | 1.60 | 1.40 | 1.20 | 1.00 | 0.80 |
| TAL200     | 3.40                                  | 2.90 | 2.50 | 2.00 | 1.70 | 1.40 | 1.20 | 1.00 | 0.80 |
| TAL210     | 3.50                                  | 3.10 | 2.70 | 2.10 | 1.80 | 1.50 | 1.30 | 1.10 | 0.90 |
| TAL250     | 4.20                                  | 3.70 | 3.20 | 2.50 | 2.10 | 1.80 | 1.50 | 1.30 | 1.00 |
| TAL260     | 4.40                                  | 3.80 | 3.30 | 2.60 | 2.18 | 1.87 | 1.56 | 1.35 | 1.04 |
| TAL270     | 4.60                                  | 4.00 | 3.40 | 2.70 | 2.20 | 1.90 | 1.60 | 1.30 | 1.00 |
| TAL280     | 4.70                                  | 4.10 | 3.50 | 2.80 | 2.30 | 2.00 | 1.70 | 1.40 | 1.10 |
| TAL300/L   | 5.10                                  | 4.40 | 3.80 | 3.00 | 2.50 | 2.10 | 1.80 | 1.50 | 1.10 |
| TAL310     | 5.20                                  | 4.60 | 3.90 | 3.10 | 2.50 | 2.20 | 1.90 | 1.50 | 1.20 |
| TAL350     | 5.90                                  | 5.20 | 4.40 | 3.50 | 2.80 | 2.40 | 2.10 | 1.70 | 1.30 |
| TAL370     | 6.30                                  | 5.40 | 4.60 | 3.70 | 3.00 | 2.60 | 2.20 | 1.70 | 1.30 |
| TAL410     | 6.90                                  | 6.00 | 5.10 | 4.10 | 3.30 | 2.80 | 2.40 | 1.90 | 1.50 |
| TAL450     | 7.60                                  | 6.60 | 5.60 | 4.50 | 3.60 | 3.10 | 2.60 | 2.10 | 1.60 |

## Typical time to trip at 25℃ (25℃下的动作保护时间曲线表):



◆ The Time to Trip curves represent typical performance of a device in a simulated application environment. Actual performance in specific customer applications may differ from these values due to the influence of other variables.

## Agency Approvals (安规认证):

- Agency Approvals: UL、CSA、TUV
- Regulation/Standard: RoHS 2.0(2011/65/CE)

## Package information (包装信息):

| Model           | Bulk(-0) package | Q'ty/bag |
|-----------------|------------------|----------|
| TAL110 ~ TAL450 |                  | 1000 pcs |