

# ITV Devices SMT Battery Protection Device

PRODUCT: ITV9550L2045

DOCUMENT: SCD29539 REV LETTER: A

REV DATE: MARCH 7, 2020

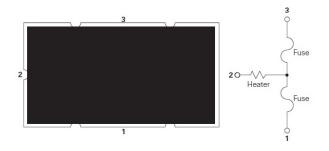
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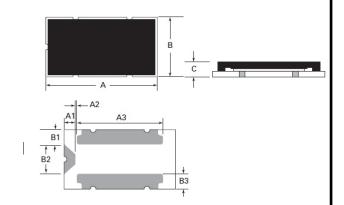
# **Specification Status: Released**

# TABLE I. Electrical Rating:

| Current      | 100% x I <sub>rated</sub>                              |  |  |  |  |  |
|--------------|--|--|--|--|--|--|
| Capacity     | No Melting   |  |  |  |  |  |
| Cut Time     | 200% x I <sub>rated</sub>                              |  |  |  |  |  |
|              | < 1 min  |  |  |  |  |  |
| Interrupting | 150A, power on 5 ms, power off 995 ms, 10000 cycles    |  |  |  |  |  |
| Current      | No Melting   |  |  |  |  |  |
| Over Voltage | In apparation valtage range, the fusing time is 14 min |  |  |  |  |  |
| Operation    | In operation voltage range, the fusing time is <1min.  |  |  |  |  |  |

### **Device Circuit:**





#### **TABLE II. DIMENSIONS (mm):**

| Α  | $9.50 \pm 0.2$ |
|----|----------------|
| В  | $5.00 \pm 0.3$ |
| С  | 2.00 max       |
| A1 | $0.89 \pm 0.1$ |
| A2 | 0.15 ± 0.1     |
| А3 | $7.32 \pm 0.1$ |
| B1 | 1.32 ± 0.1     |
| B2 | $2.36 \pm 0.1$ |
| В3 | 1.25 ± 0.1     |

### **TABLE III. Electrical Specification:**

| Dout Normhor | Moulsing | I <sub>rated</sub> | Cells in | $V_{max}$          | I <sub>break</sub> | V <sub>OP</sub> | Resistance              |                          | Age<br>Appr      |              |
|--------------|----------|--------------------|----------|--------------------|--------------------|-----------------|-------------------------|--------------------------|------------------|--------------|
| Part Number  | Marking  | (A)                | series   | (V <sub>DC</sub> ) | (A)                | (V)             | $R_{heater} \ (\Omega)$ | $R_{fuse}$ (m $\Omega$ ) | c <b>717</b> :us | TÜVRheinland |
| ITV9550L2045 | LF2045   | 45                 | 5        | 62                 | 120                | 16.7 ~ 23.5     | 5.6 ~ 9.9               | 0.4 ~ 2.0                | Pending          | Pending      |

#### Notes

 $I_{\text{rated:}}$  Current carrying capacity that is measured at  $40^{\circ}\text{C}$  thermal equilibrium condition.

 $\ensuremath{I_{\text{break}}}\xspace$  . The current that the fuse element is able to interrupt.

 $\ensuremath{V_{\text{max}}}\xspace$  The maximum voltage that can be cut off by fuse.

V<sub>OP</sub>: Range of operation voltage.

R<sub>heater</sub>: The resistance of the heating element.

R<sub>fuse</sub>: The resistance of the fuse element.

Cells in series: Number of battery cells connected in series in the circuit for ITV device to protect.

• Value specified is determined by using the PWB with 25mm\*2oz copper traces, AWG8 covered wire, and 0.6mm glass epoxy PCB.



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#### **Materials Information:**

ROHS Compliant

**ELV Compliant** 

**Halogen Free\*** 

Directive 2011/65/EU Compliant

Directive 2000/53/EC Compliant



\* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm.

## **Environmental Specifications:**

| Storage Temperature   | 0~35°C, ≤ 70%RH                             |  |  |  |  |
|-----------------------|---|--|--|--|--|
|                       | 3 months after shipment                     |  |  |  |  |
| Operating Temperature | -10°C to +65°C                              |  |  |  |  |
| Hot Passive Aging     | 100±5°C, 250 hours                          |  |  |  |  |
|                       | No structural damage and functional failure |  |  |  |  |
| Harris March Amelian  | 60°C±2°C, 90~95%R.H. 250 hours              |  |  |  |  |
| Humidity Aging        | No structural damage and functional failure |  |  |  |  |
| Cold Dessive Aging    | -20±3°C, 500 hours                          |  |  |  |  |
| Cold Passive Aging    | No structural damage and functional failure |  |  |  |  |
| Thermal Shock         | MIL-STD-202 Method 107G                     |  |  |  |  |
|                       | +125°C /-55°C, 100 times                    |  |  |  |  |
|                       | No structural damage and functional failure |  |  |  |  |

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