## **SMD Fuses 9550, 30A**

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### RoHS Compliant

### **Description**

These Series is a surface mountable battery protector designed to protect against both over current and overcharging. Fuse can cut off the circuit when over current occurs. Also, combining with IC and FET, the embedded heater can generate heat to blow the fuse element to achieve over voltage protection.

### **Application**

- Moped
- · Lawn mower
- · Energy storage batteries
- Vacuum cleaner
- Electric scooters
- Electric bicycles
- BMS
- Robot

#### **Features**

- · Protect Li-ion battery from over current and overcharge
- · Substrate embedded Resistor
- · Surface mounted fuse
- Halogen free / Sb free
- · Fast response time

### **Specification Table**

Part Number	Applicable cells in series	Rated Current (A)	Rated Voltage (V DC)	Breaking Capacity (A)	Fuse Resistance (mΩ)	Operating Voltage (V)	Heater Resistance (Ω)
MCATF955006V30A	1 cells	30	80	80	0.5 - 2.5	4 ~ 6.6	0.8 ~ 1.2
MCATF955012V30A	3 cells					8.4 ~ 13.8	3.2 ~ 5.2
MCATF955018V30A	4 cells					11.1 ~ 18.4	6.3 ~ 9.3
MCATF955030V30A	6-7 cells					20.2 ~ 31.5	18.8 ~ 31.2
MCATF955040V30A	9-10 cells					28 ~ 46.9	40 ~ 60.0
MCATF955050V30A	15 cells					42 ~ 67.5	83 ~ 135.6

### **Electrical Characteristics**

Items	Conditions	Requirements / Result	
Current carrying capacity	Apply 100% of its rated current.	No melting.	
	Apply 200% of its rated current.	The fuse shall be melt within 1min.	
Fusing time	The minimum value of the operating voltage range of each model shall be applied to heater.		
Operating temperature range	The following examinations are executed respectively within the range from -10 to 65°C.  • Fusing time test  • Current carrying capacity test	The fuse shall be passed each test.	

<sup>\*</sup>Electrical characteristics are influenced by thermal capacity of PCB, parts, pattern width, etc. Therefore you should check them on your PCB.

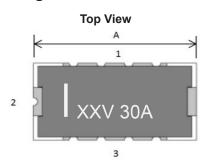
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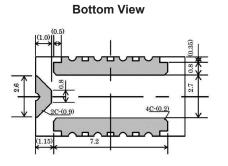


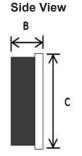
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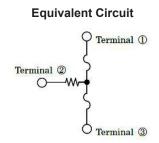
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### Diagram





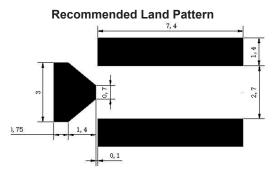


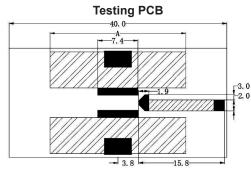


#### **Dimension**

Code	Spec.(mm)	
Α	9.5 ±0.5	
В	2 Max.	
С	5 ±0.5	
*Without extra notification the tolerance is ± 0.1mm		

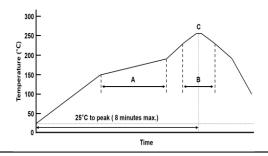
### **Recommended Solder Land Pattern and PCB**





Materials	Width (A)	Thickness	Copper Thickness	Wires
FR-4	6mm	0.6mm	2.0 OZ	AWG10

### **Reflow Profile Recommended**



Code	Temperature (°C)	Time (s)
A (Pre-Heating)	150~190	90 ±30
B (Heating)	Over 230	25 ±5
C (Peak)	255 ± 5	Max. 5

Dimensions : Millimetres

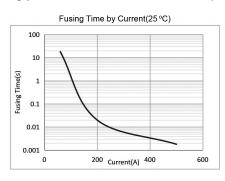
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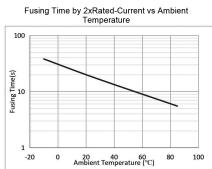


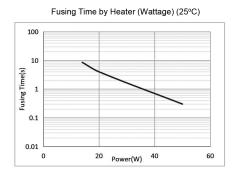
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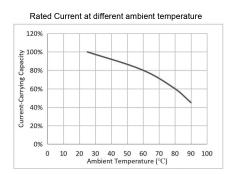


### Typical Performance Data (Ambient Temperature: 25°C)









### **Part Number Table**

Description	Part Number		
SMD Fuse, 9550 Series, 30A, 6V	MCATF955006V30A		
SMD Fuse, 9550 Series, 30A, 12V	MCATF955012V30A		
SMD Fuse, 9550 Series, 30A, 18V	MCATF955018V30A		
SMD Fuse, 9550 Series, 30A, 30V	MCATF955030V30A		
SMD Fuse, 9550 Series, 30A, 40V	MCATF955040V30A		
SMD Fuse, 9550 Series, 30A, 50V	MCATF955050V30A		

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