

# RS3AC-AT THRU RS3MC-AT

## Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

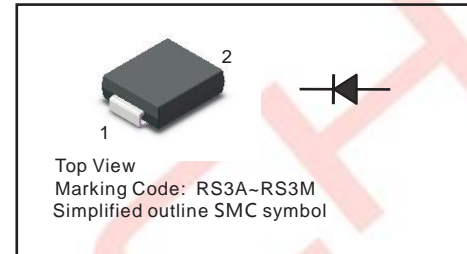
Forward Current - 3A

### FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ Fast reverse recovery time
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### MECHANICAL DATA

- ◆ Case: SMC
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.22g / 0.0077oz

### Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Parameter	Symbols	RS3AC -AT	RS3BC -AT	RS3DC -AT	RS3GC -AT	RS3JC -AT	RS3KC -AT	RS3MC -AT	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	90							A
Maximum Forward Voltage at 3A	$V_F$	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ }^\circ\text{C}$ $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$
Typical Junction Capacitance at $V_R=4\text{V}$ , $f=1\text{MHz}$	$C_j$	40							pF
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	150				250	500	ns	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JC}$	45 15							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

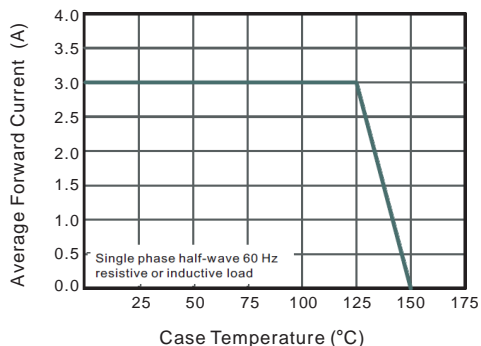
(1) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

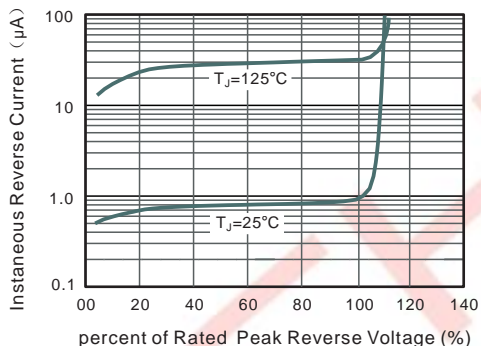
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## RATINGS AND CHARACTERISTIC CURVES

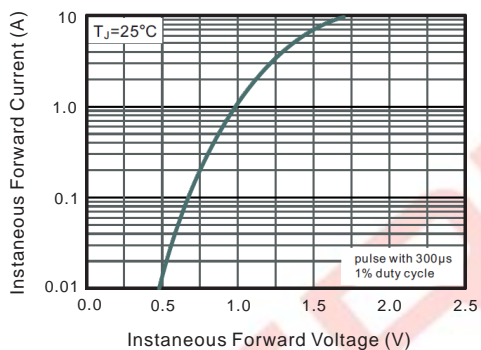
**Fig.1 Maximum Average Forward Current Rating**



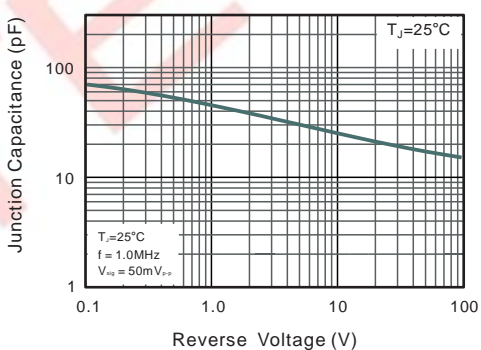
**Fig.2 Typical Reverse Characteristics**



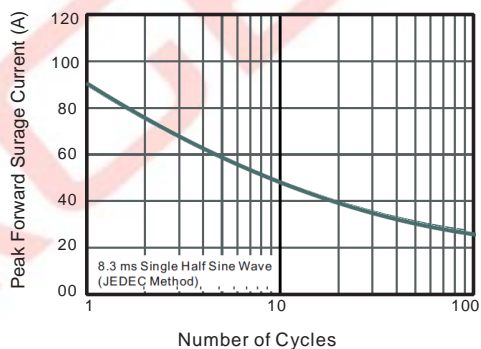
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



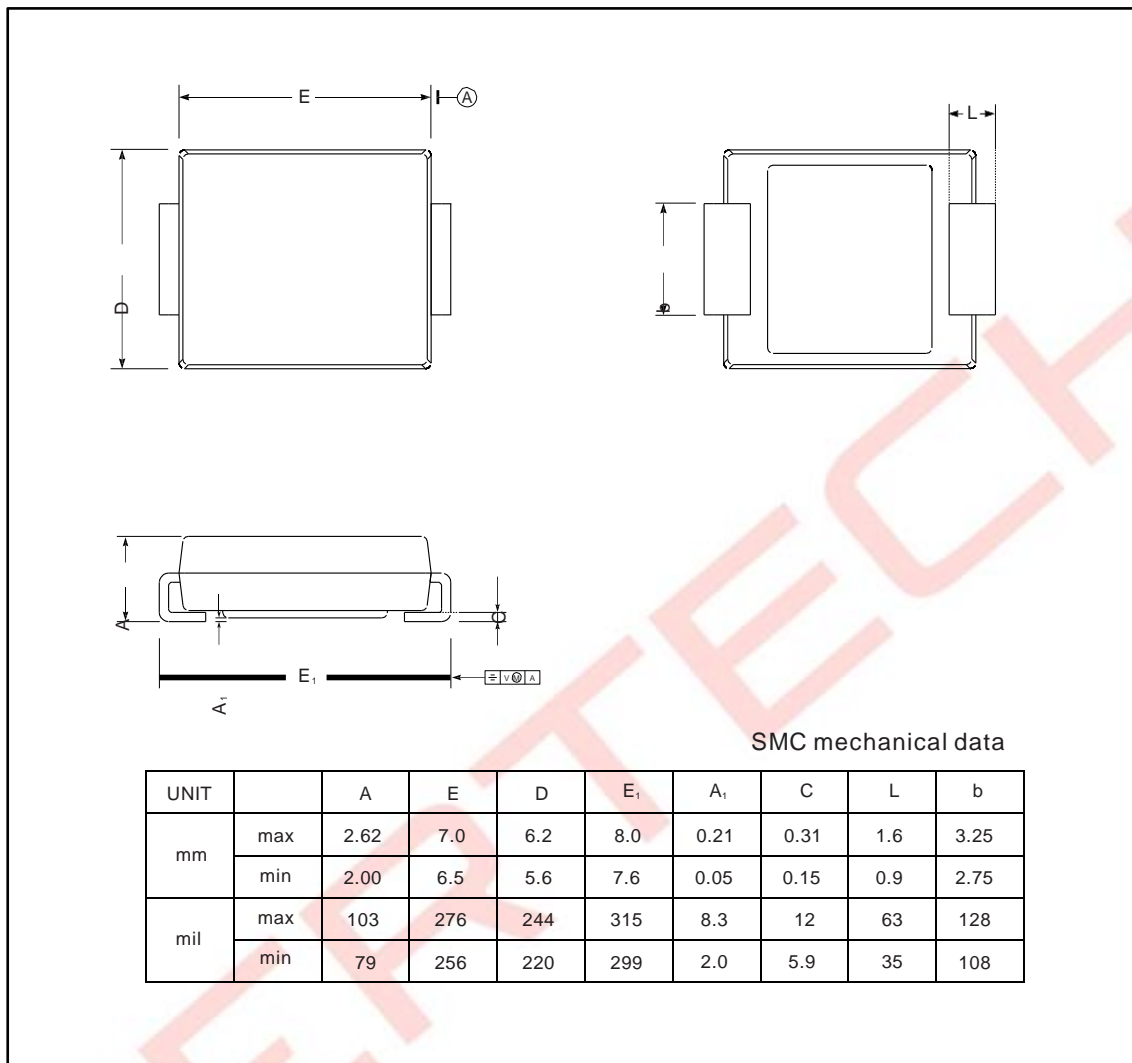
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



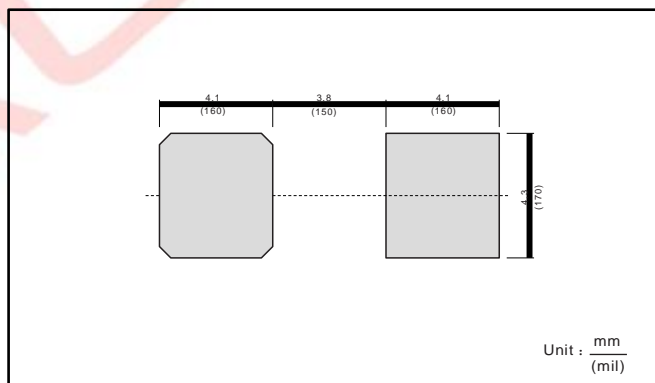
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## PACKAGE OUTLINE

SMC



### The recommended mounting pad size



### Marking

Type number	Marking code
RS3AC-AT	RS3A
RS3BC-AT	RS3B
RS3DC-AT	RS3D
RS3GC-AT	RS3G
RS3JC-AT	RS3J
RS3KC-AT	RS3K
RS3MC-AT	RS3M