



Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 3 A

FEATURES

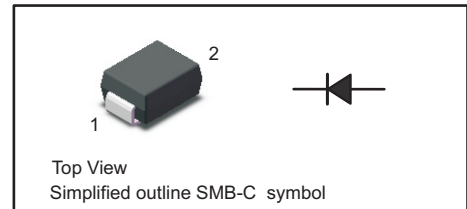
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SMB-C
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.098g / 0.003oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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	RS3ABC	RS3BBC	RS3DBC	RS3GBC	RS3JBC	RS3KBC	RS3MBC	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 @ Fig.1	$I_{F(AV)}$	3							A	
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	90							A	
Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	180							A	
I^2t Rating for fusing (3ms≤t≤8.3ms)	I^2t	33.6							A ² S	
Maximum Forward Voltage at 3 A	V_F	1.3							V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ °C}$ $T_a = 125\text{ °C}$	I_R	5 100							μA	
Typical Junction Capacitance at $V_R=4V$, $f=1MHz$	C_j	28							pF	
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	150				250		500		ns
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	43 9 18							°C/W	
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°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 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.



Fig.1 Maximum Average Forward Current Rating

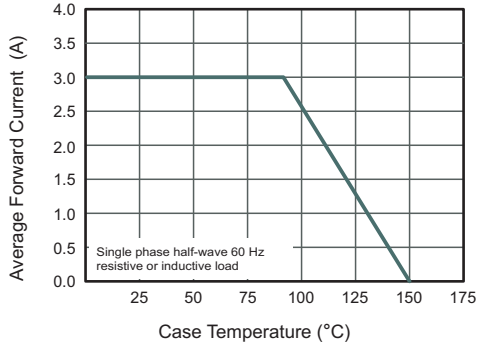


Fig.2 Typical Reverse Characteristics

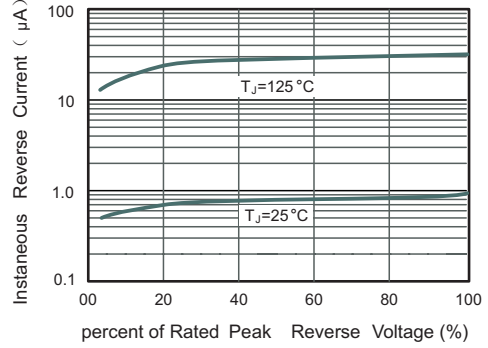


Fig.3 Typical Instantaneous Forward Characteristics

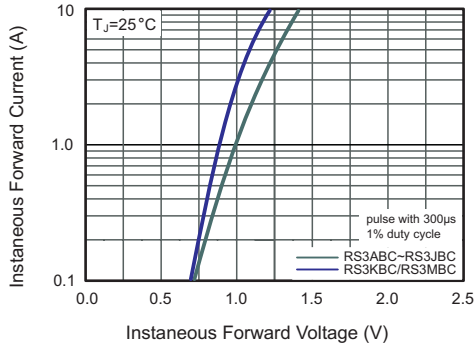


Fig.4 Typical Junction Capacitance

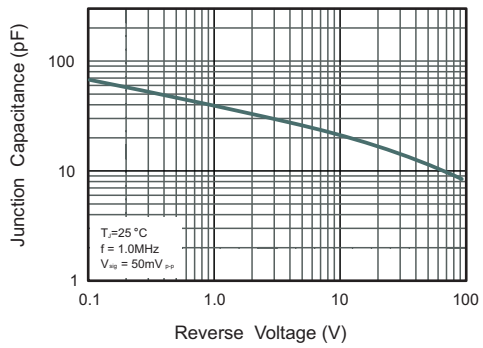
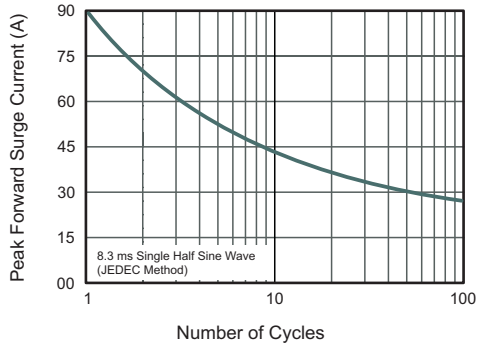


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

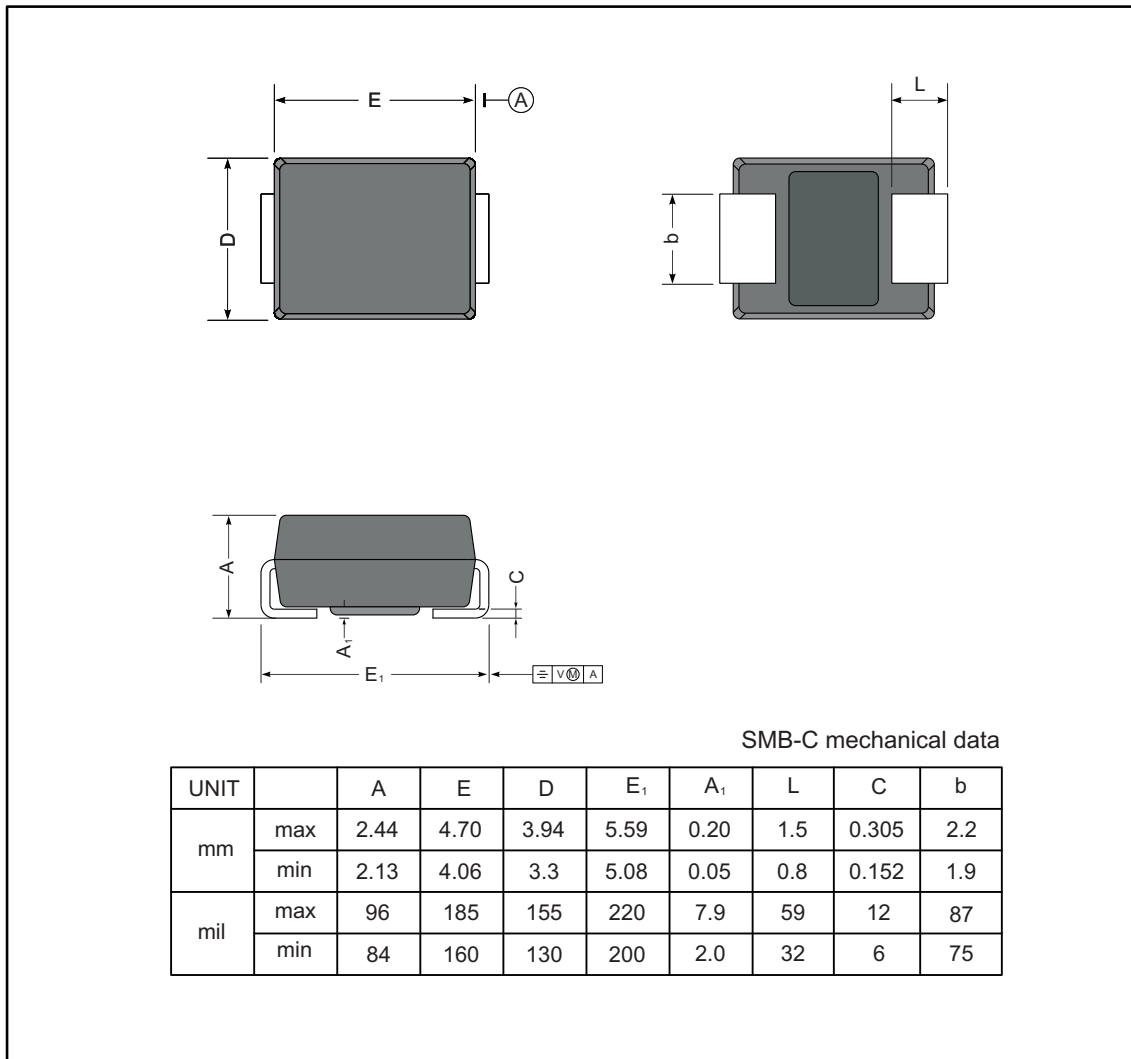




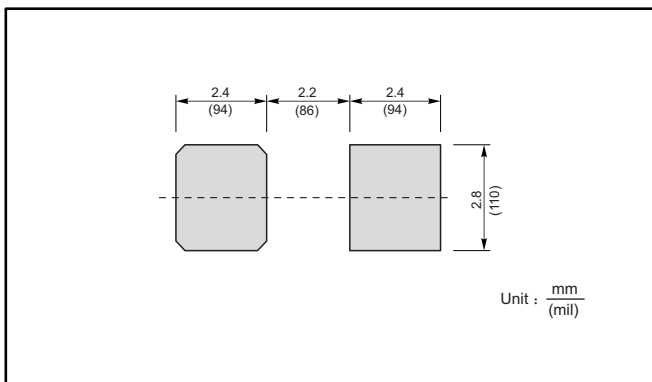
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB-C



The recommended mounting pad size



Marking

Type number	Marking code
RS3ABC	RS3A
RS3BBC	RS3B
RS3DBC	RS3D
RS3GBC	RS3G
RS3JBC	RS3J
RS3KBC	RS3K
RS3MBC	RS3M



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