

US5AB THRU US5MB

Surface Mount Ultrafast Recovery Rectifier

Reverse Voltage – 50V~1000 V

Forward Current – 5.0 A

FEATURES

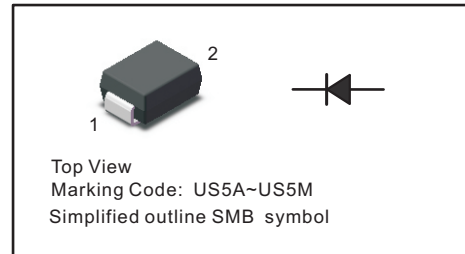
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.1g / 0.003oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	US5AB	US5BB	US5DB	US5GB	US5JB	US5KB	US5MB	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	$I_{F(AV)}$	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage at 5A	V_F	1.0		1.3		1.68			V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	I_R	5 100							μA
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	50				75			ns
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$	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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Fig.1 Maximum Average Forward Current Rating

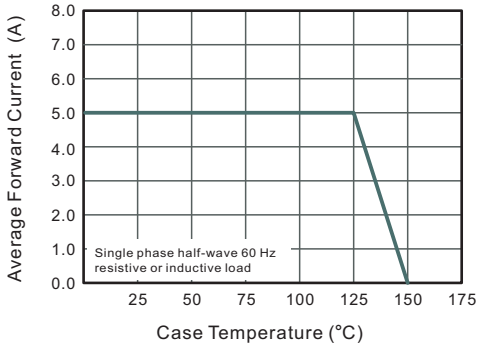


Fig.2 Typical Reverse Characteristics

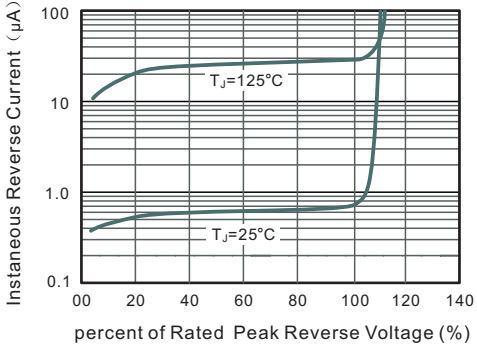


Fig.3 Typical Forward Characteristics

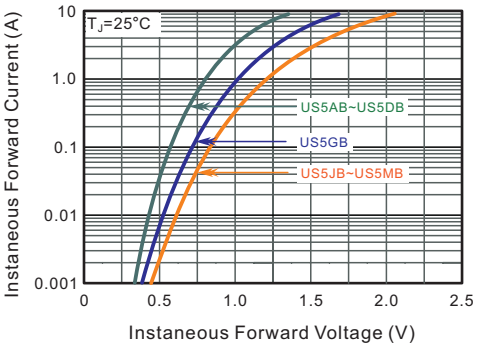
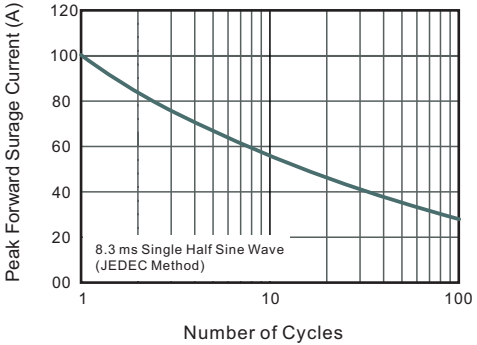


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

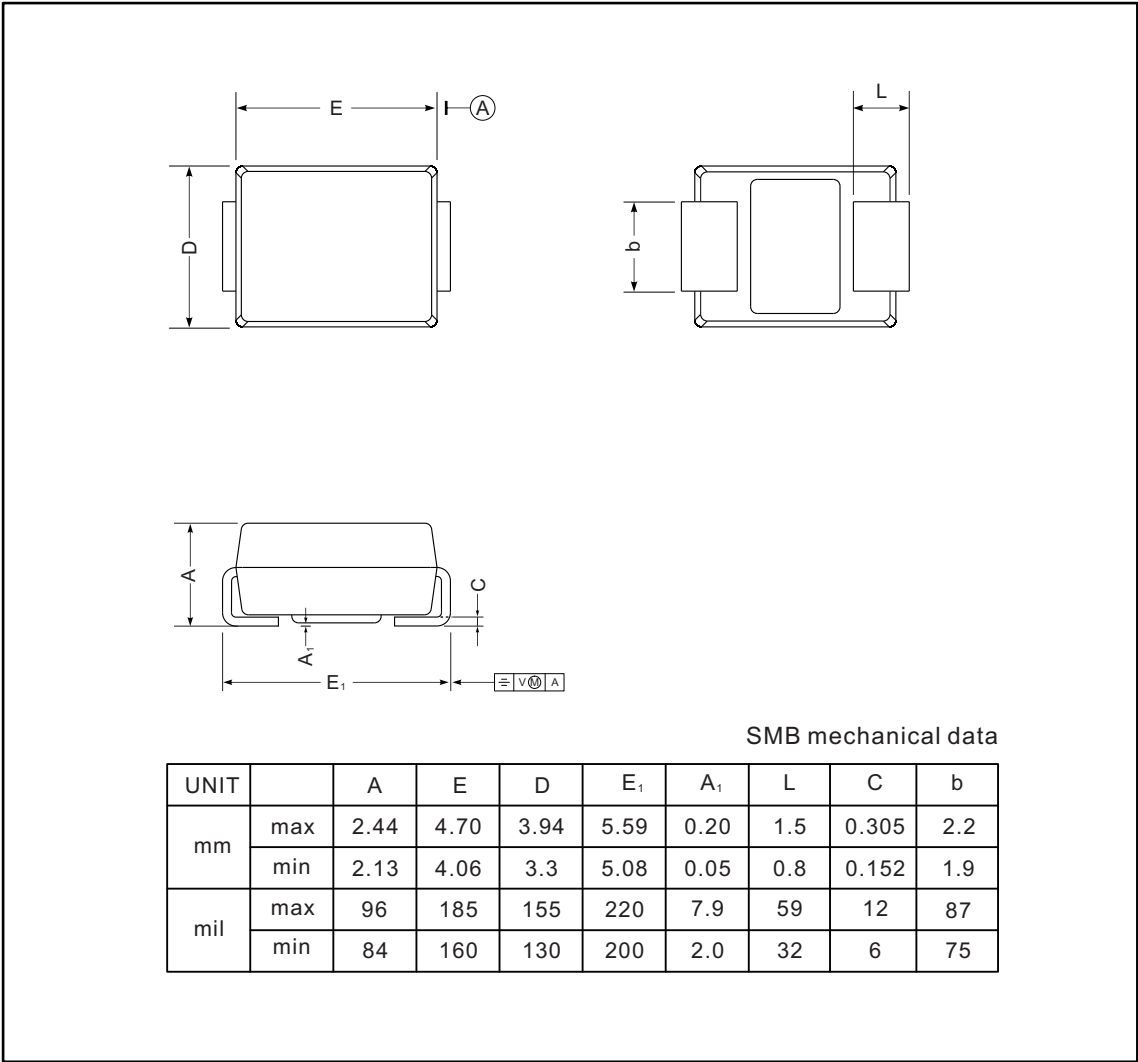


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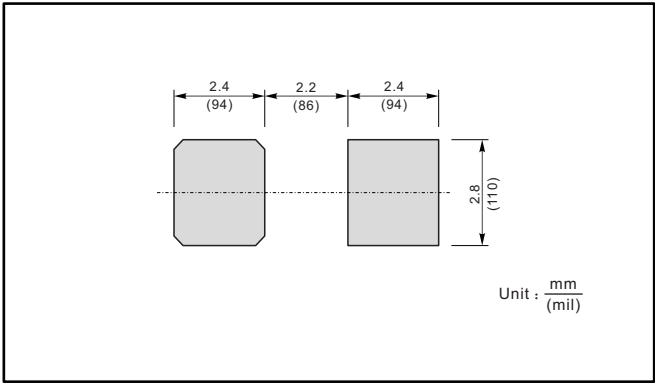
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB



The recommended mounting pad size



Marking

Type number	Marking code
US5AB	US5A
US5BB	US5B
US5DB	US5D
US5GB	US5G
US5JB	US5J
US5KB	US5K
US5MB	US5M