



SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 V

Forward Current - 2A

FEATURES

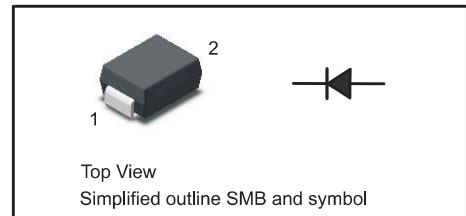
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.098g / 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	US2AB	US2BB	US2DB	US2GB	US2JB	US2KB	US2MB	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	$I_{F(AV)}$	2							A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	50							A	
Peak Forward Surge Current, 1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100							A	
I^2t Rating for fusing (3ms ≤ t ≤ 8.3ms)	I^2t	10.3							A ² S	
Max Instantaneous Forward Voltage at 2 A	V_F	1.0		1.3		1.65			V	
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	I_R	5 100							μA	
Typical Junction Capacitance ⁽¹⁾	C_j	35		30	23	16			pF	
Maximum Reverse Recovery Time ⁽²⁾	t_{rr}	50				75				ns
Typical Thermal Resistance ⁽³⁾	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	43 9 18							°C/W	
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C	

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

(3) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.



Fig.1 Forward Current Derating Curve

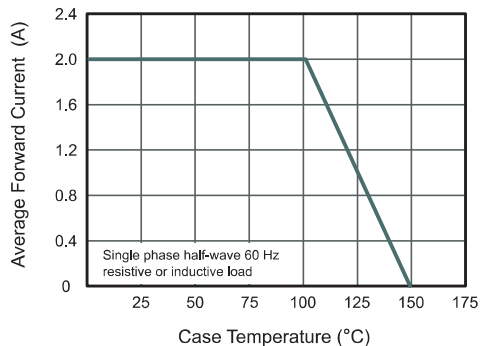


Fig.2 Typical Reverse Characteristics

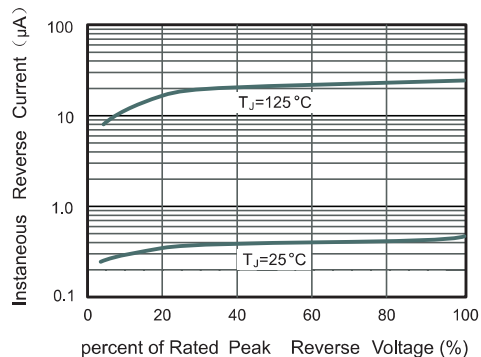


Fig.3 Typical Forward Characteristics

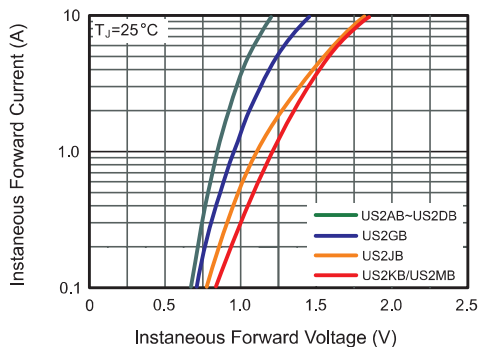


Fig.4 Typical Junction Capacitance

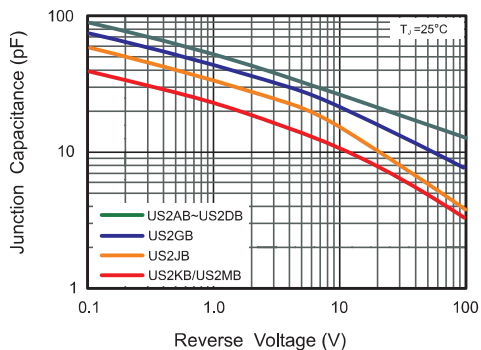
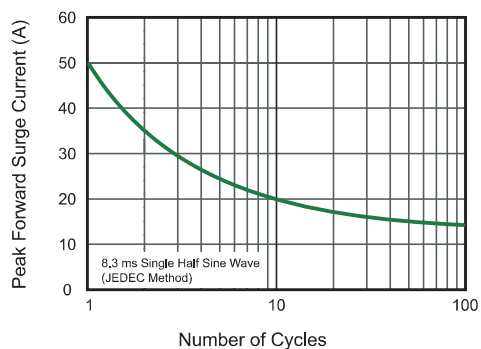


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

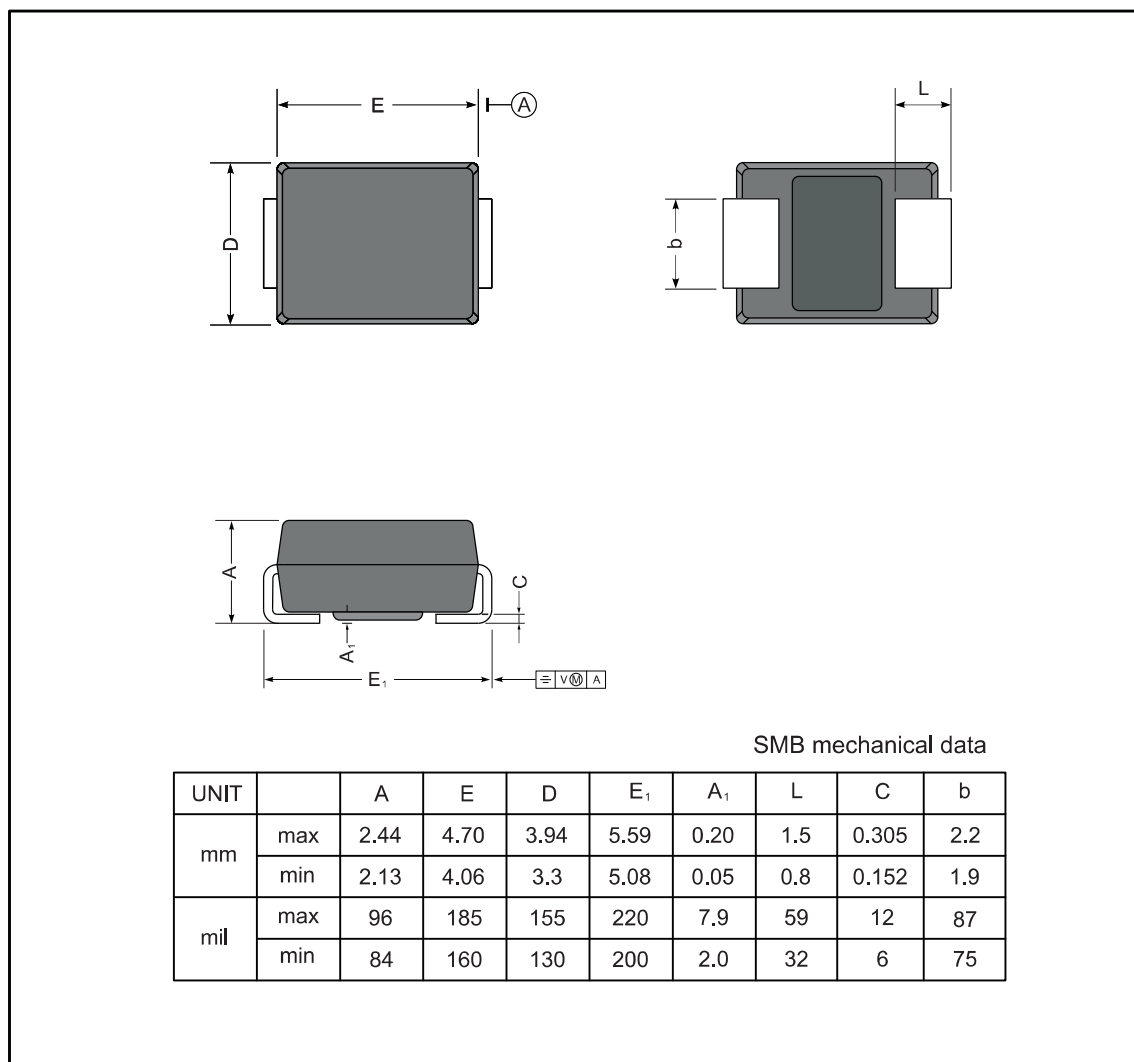




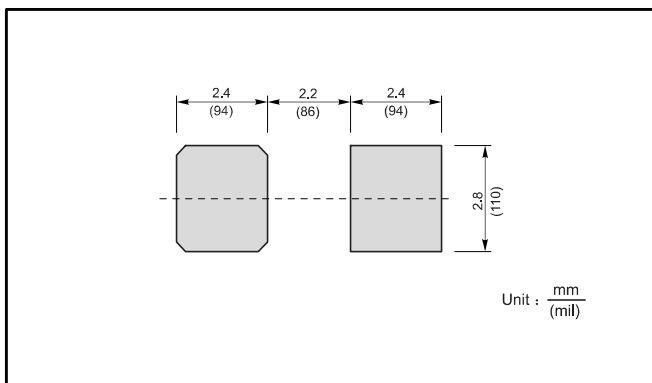
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB



The recommended mounting pad size



Marking

Type number	Marking code
US2AB	US2A
US2BB	US2B
US2DB	US2D
US2GB	US2G
US2JB	US2J
US2KB	US2K
US2MB	US2M



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