

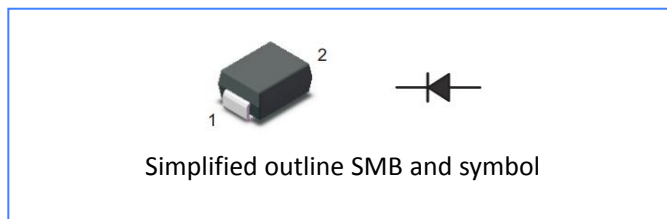
US3AB THRU US3MB

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 20
- Approx. Weight: 0.095g / 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	US3AB	US3BB	US3DB	US3GB	US3JB	US3KB	US3MB	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 at Tc = 125 °C	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 Instantaneous Forward Voltage at 1 A	V _F	1.0			1.3	1.65			V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C	I _R	5 100							μ A
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}	50			75			ns	
Typical Thermal Resistance ⁽³⁾	R _{θJA}	45							°C/W
	R _{θJC}	15							
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 2.0" X 2.0" (5 X 5 cm) copper pad areas

Rating And Characteristic Curves

Fig.1 Maximum Average Forward Current Rating

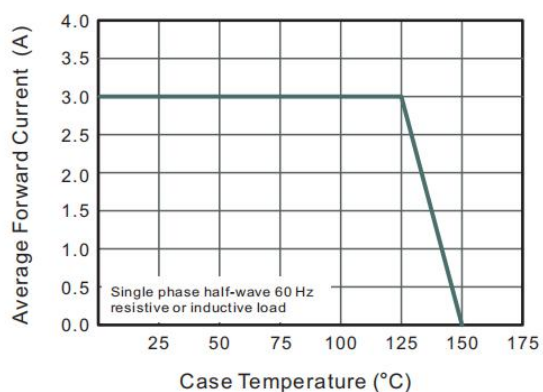


Fig.2 Typical Reverse Characteristics

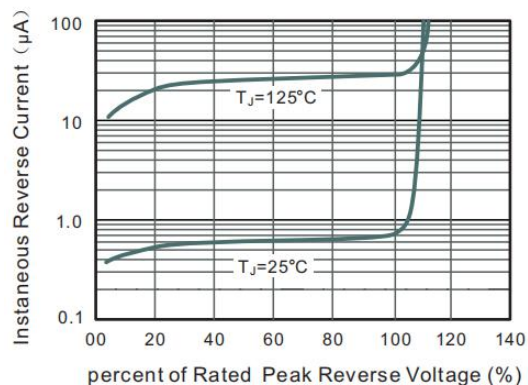


Fig.3 Typical Forward Characteristics

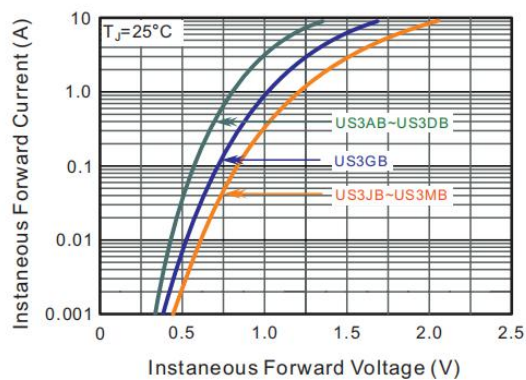
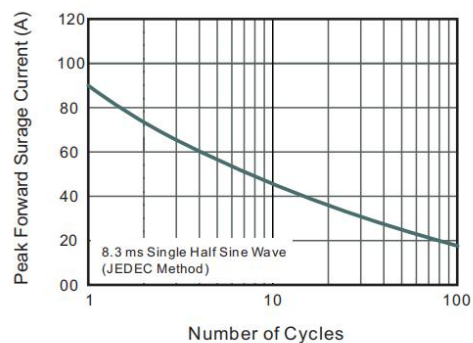


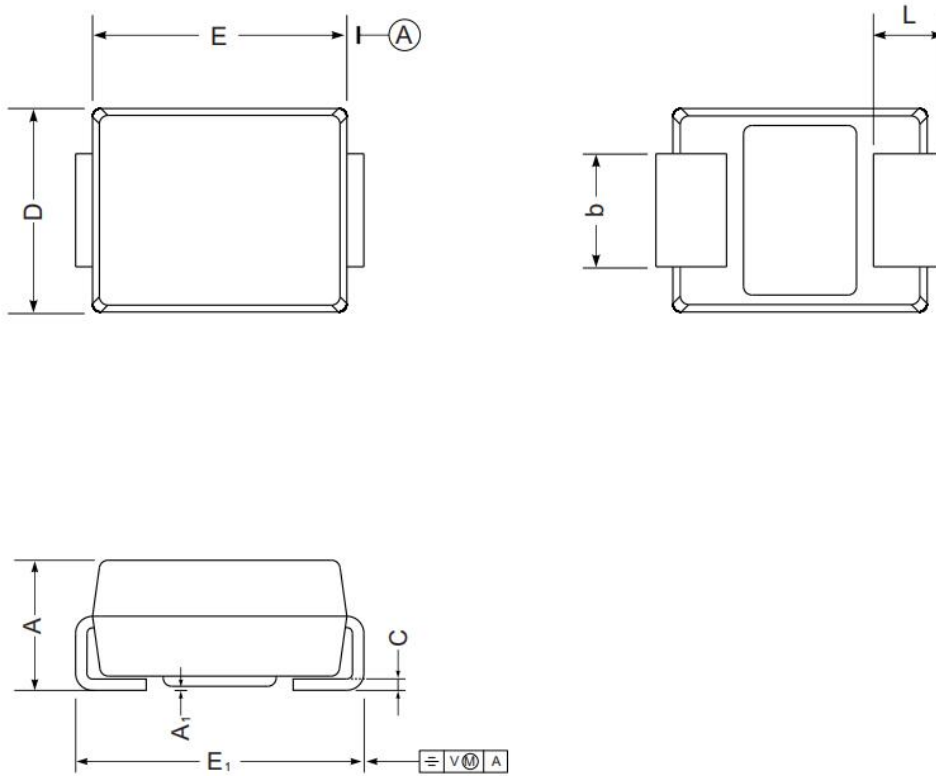
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

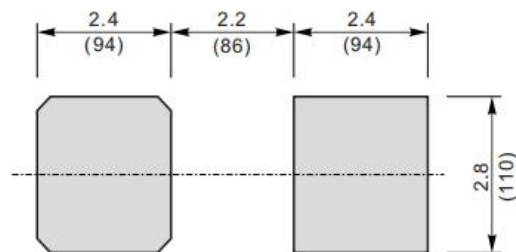
Plastic surface mounted package; 2 leads

SMB



UNIT		A	C	D	E ₁	A ₁	L	H	b
mm	max	2.44	0.305	3.94	5.59	0.20	1.5	4.70	2.2
	min	2.13	0.152	3.3	5.08	0.05	0.8	4.06	1.9
mil	max	96	12	155	220	7.9	59	185	87
	min	84	6	130	200	2.0	32	160	75

The recommended mounting pad size



Unit : $\frac{\text{mm}}{(\text{mil})}$