

S3AB THRU S3MB

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- 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: 0.09g / 0.003oz



Simplified outline SMB and symbol

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	S3AB	S3BB	S3DB	S3GB	S3JB	S3KB	S3MB	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 $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	90							A
Maximum Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	5 100							μA
Typical Junction Capacitance ⁽¹⁾	C_j	35							pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$	48 16							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

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

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

Rating And Characteristic Curves

Fig.1 Forward Current Derating Curve

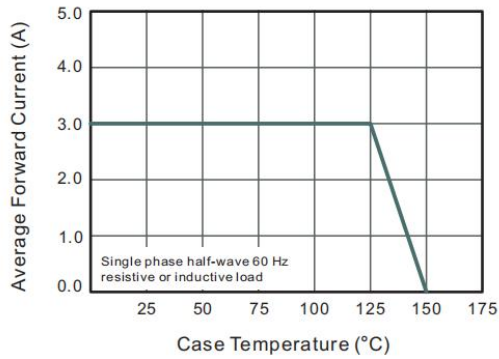


Fig.2 Typical Instantaneous Reverse Characteristics

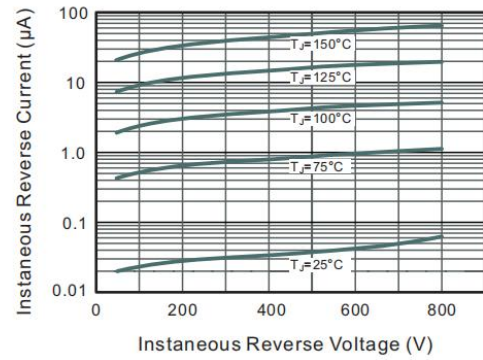


Fig.3 Typical Forward Characteristic

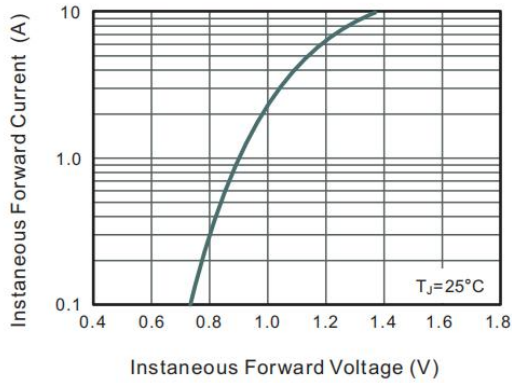


Fig.4 Typical Junction Capacitance

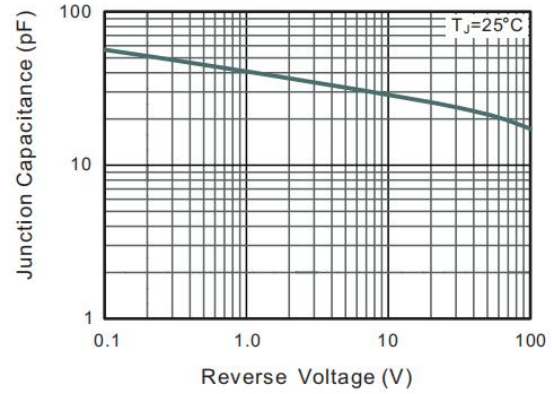
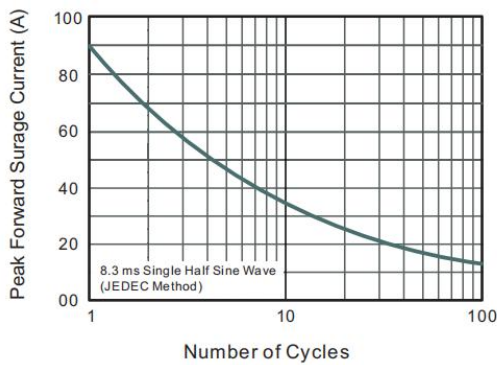


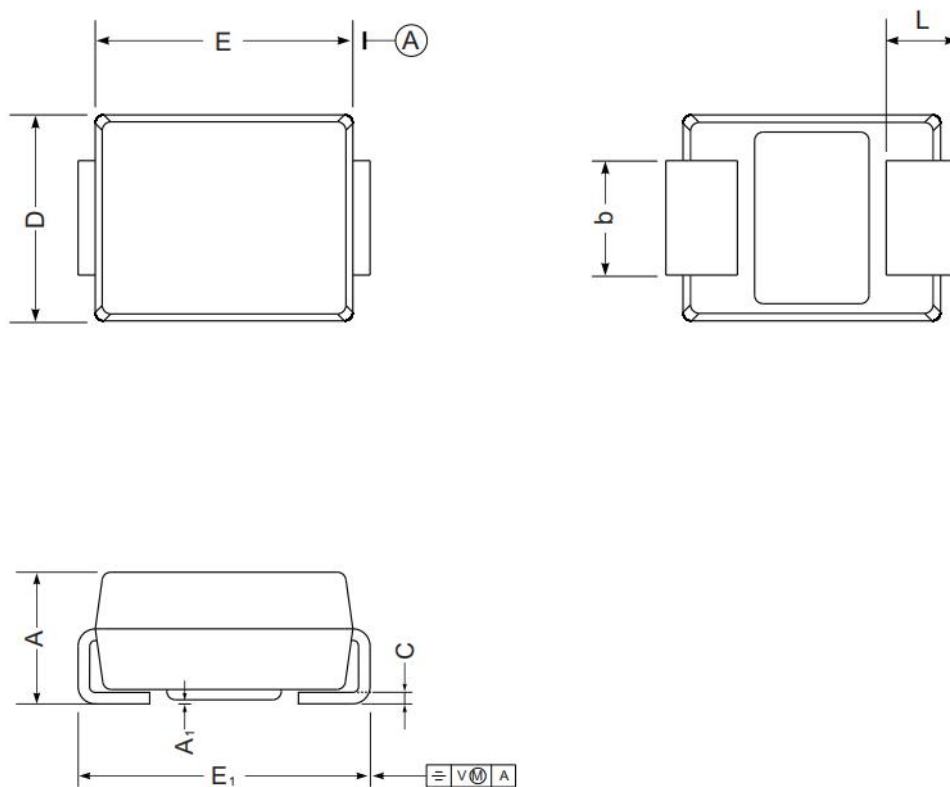
Fig.5 Maximum Non-Repetitive Peak
Forward Surge Current



Package Outline

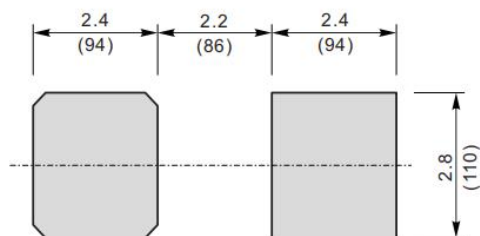
Plastic surface mounted package; 2 leads

SMB



UNIT		A	C	D	E1	A1	L	b	E
mm	max	2.44	0.305	3.94	5.59	0.20	1.5	2.2	4.7
	min	2.13	0.152	3.3	5.08	0.05	0.8	1.9	4.06
mil	max	96	12	155	220	7.9	7.9	87	185
	min	84	6	130	200	2.0	2.0	175	160

The recommended mounting pad size



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