

ES3AB THRU ES3JB

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- 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



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%.

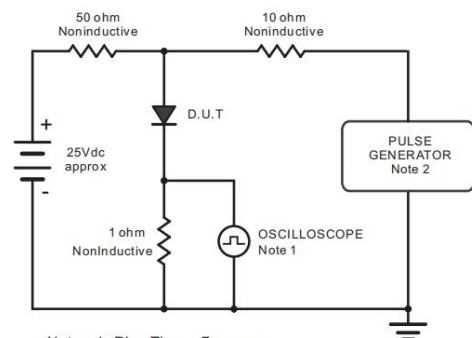
Parameter	Symbols	ES3AB	ES3BB	ES3CB	ES3DB	ES3EB	ES3GB	ES3JB	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current	I _{F(AV)}	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	90							A
Maximum Forward Voltage at 1 A	V _F	1.0				1.25		1.68	V
Maximum DC Reverse Current Ta = 25° C at Rated DC Blocking Voltage Ta =125° C	I _R	5 100							μ A
Typical Junction Capacitance at VR=4V, f=1MHz	Cj	45							pF
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}	35							ns
Typical Thermal Resistance ⁽²⁾	RθJA	50							°C/W
	RθJC	16							
Operating and Storage Temperature Range	T _J , T _{stg}	-55 ~ +150							°C

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

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

Rating And Characteristic Curves

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7 ns, max.
Input Impedance = 1 megohm, 22 pF.
2. Rise Time = 10 ns, max.
Source Impedance = 50 ohms.

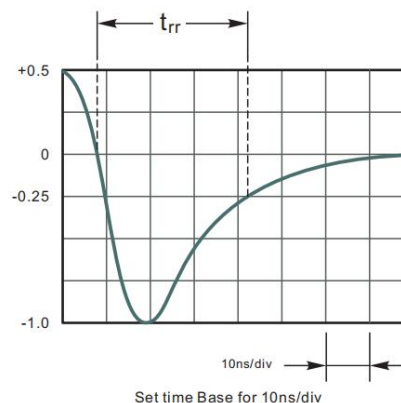


Fig.2 Maximum Average Forward Current Rating

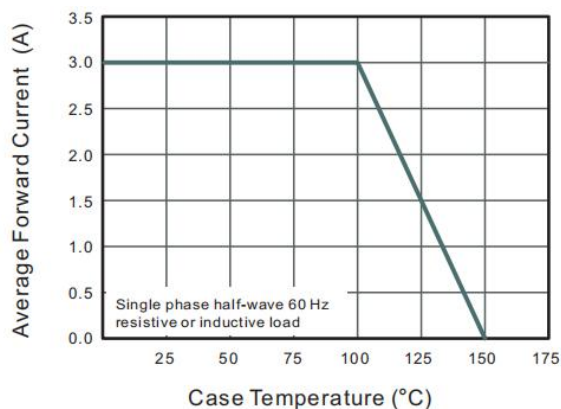


Fig.3 Typical Reverse Characteristics

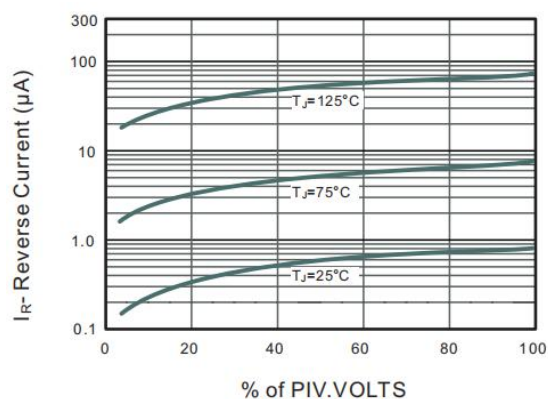


Fig.4 Typical Forward Characteristics

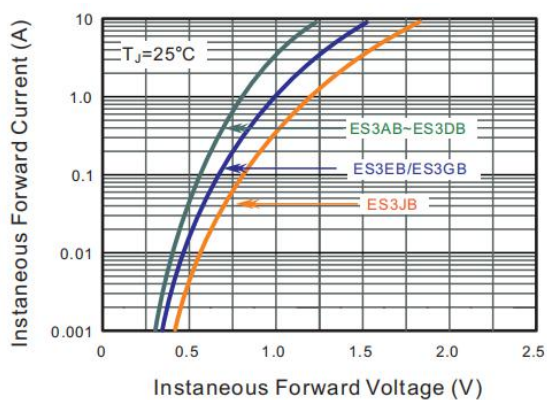


Fig.5 Typical Junction Capacitance

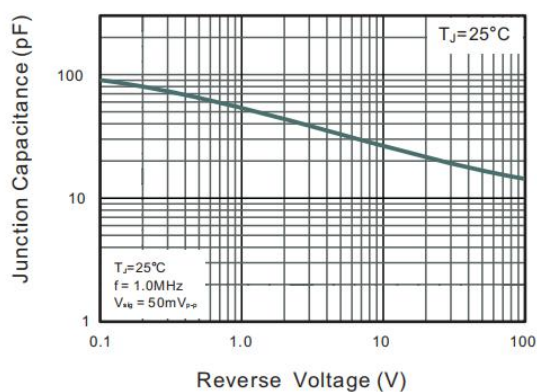
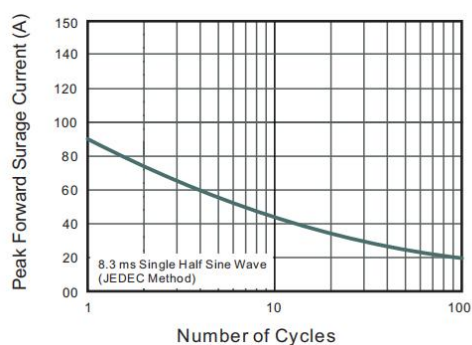


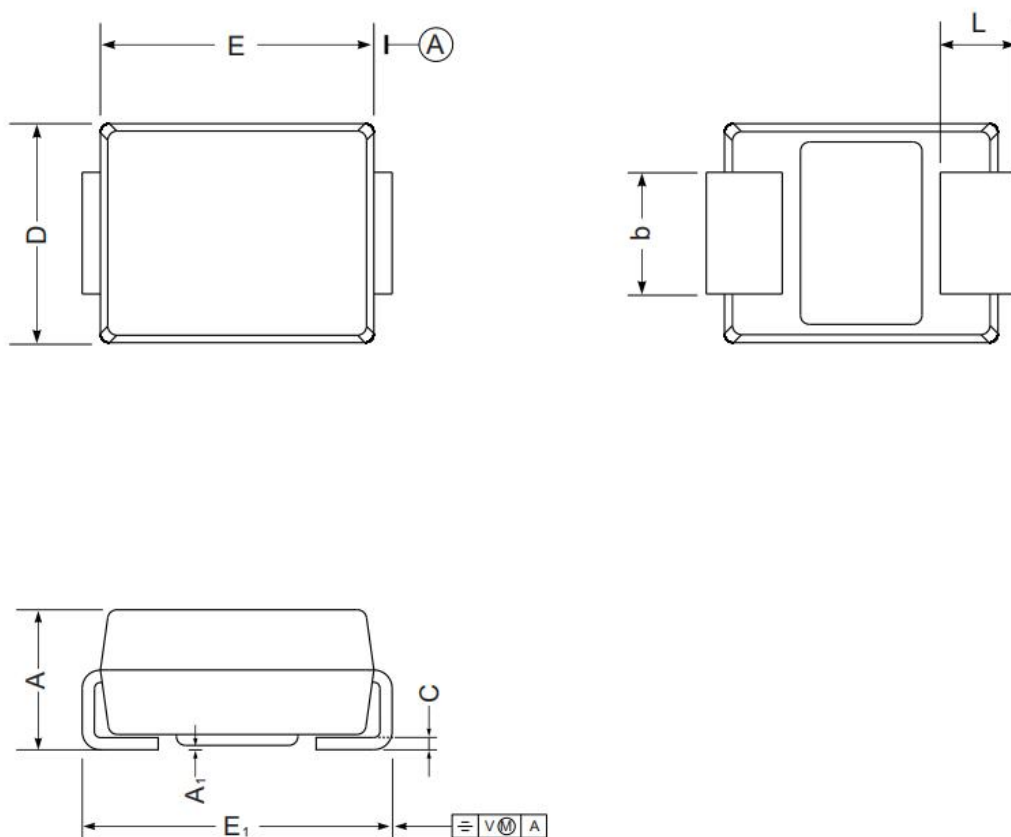
Fig.6 Maximum Non-Repetitive Peak
Forward Surge Current



Package Outline

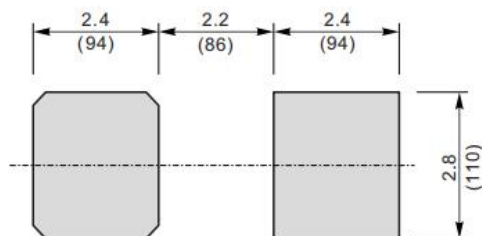
Plastic surface mounted package; 2 leads

SMB



UNIT		A	C	D	E	E ₁	A ₁	L	b
mm	max	2.44	0.305	3.94	4.7	5.59	0.20	1.5	2.2
	min	2.13	0.152	3.3	4.06	5.08	0.05	0.8	1.9
mil	max	96	12	155	185	220	7.9	59	87
	min	84	6	130	160	200	2.0	32	75

The recommended mounting pad size



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