

# ES2AB-AT THRU ES2JB-AT

## SURFACE Mount Super RECOVERY RECTIFIERS

Forward Current-2A

Reverse Voltage-50V to 600V

### FEATURES

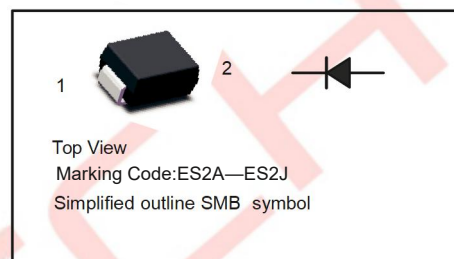
- ◆ For surface mounted applications
- ◆ Glass passivated chip junction
- ◆ Low profile package
- ◆ Superfast reverse recovery time
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

### PINING

PIN	DESCRIPTION
1	Cathode
2	Anode

### MECHANICAL DATA

- ◆ Case: SMB molded plastic body
- ◆ Terminals: Solderable per MIL-STD- 750, Method 2026
- ◆ Weight: Approximated 0.055 g/0.002 oz



### 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 derating by 20 %.

PARAMETER	SYMBOL	ES2AB -AT	ES2BB -AT	ES2CB -AT	ES2DB -AT	ES2EB -AT	ES2GB -AT	ES2JB -AT	UNIT	
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 at $T_C=125^\circ\text{C}$	$I_{F(AV)}$	2								A
Peak Forward Surge Current(Note1)	$I_{FSM}$	60								A
Maximum Forward Voltage at 2.0 A	$V_F$	1.0				1.25		1.68	V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$					5	100		$\mu\text{A}$	
Typical Junction Capacitance at $V_R=4\text{V}, f=1\text{MHz}$	$C_j$					40				pF
Maximum Reverse Recovery Time (Note1)	$T_{rr}$					35				nS
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$					60	20		$^\circ\text{C/W}$	
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$	

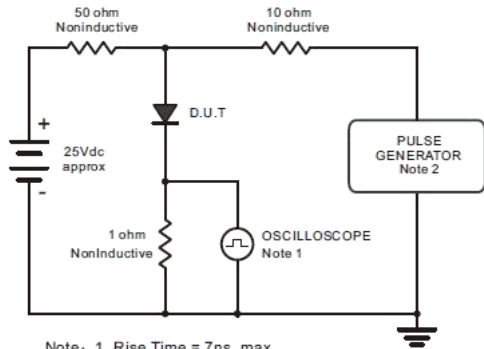
Notes: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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

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## RATINGS AND CHARACTERISTIC CURVES

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

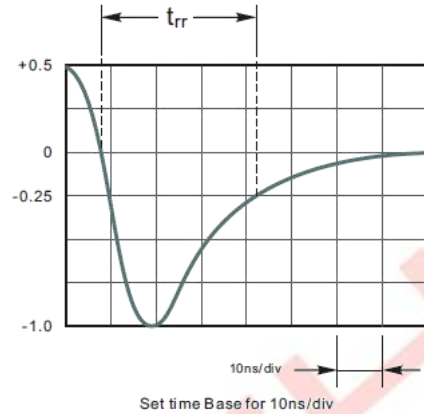


Fig.2 Maximum Average Forward Current Rating

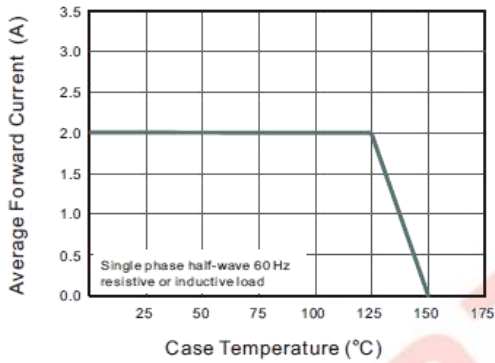


Fig.3 Typical Reverse Characteristics

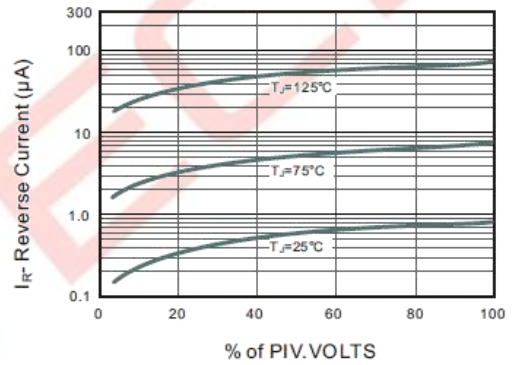


Fig.4 Typical Forward Characteristics

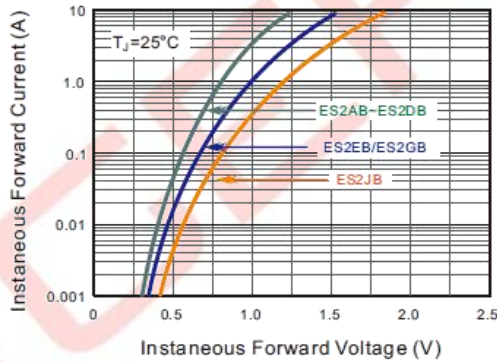


Fig.5 Typical Junction Capacitance

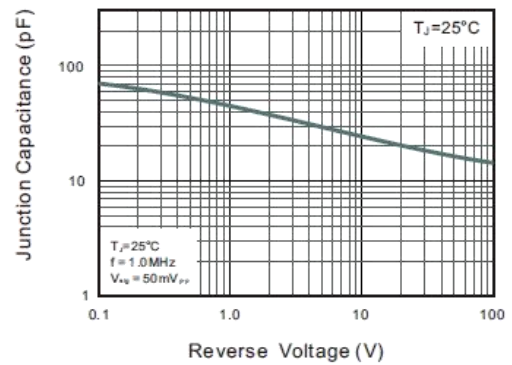
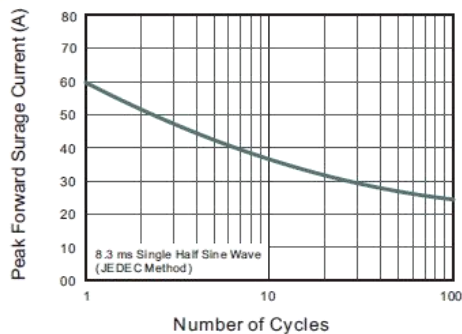


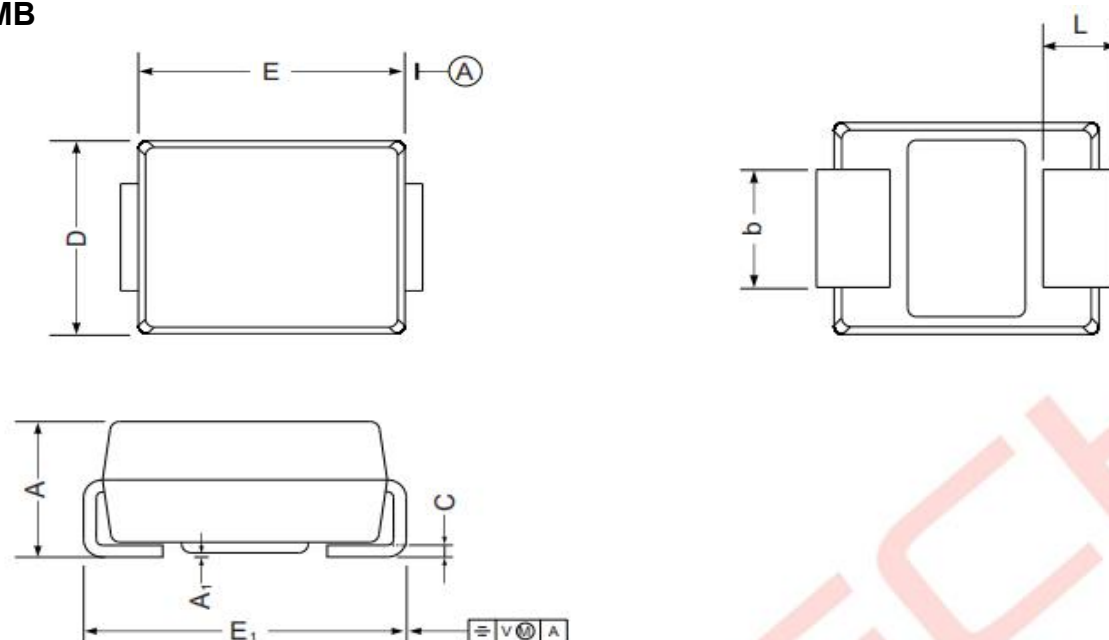
Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



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## PACKAGE OUTLINE

### SMB



### Dimensions in millimeters

### SMB mechanical data

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

### The recommended mounting pad size

