



**DESCRIPTION**

The ES2AB~ES2JB are available in SMB package.

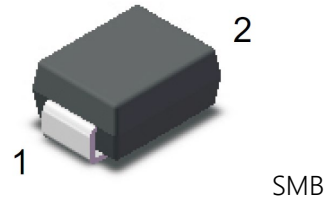
**MECHANICAL DATA**

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.55g / 0.002oz

**FEATURE**

- For Surface Mounted Applications
- Low Profile Package
- Glass Passivated Chip Junction
- Superfast Reverse Recovery Time
- Comply with EU RoHS 2011/65/EU Directives

**PIN DESCRIPTION**



**ORDERING INFORMATION**

Package Type	Part Number
SMB	ES2AB
	ES2BB
	ES2CB
	ES2DB
	ES2EB
	ES2GB
	ES2JB
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN#	DESCRIPTION
1	CATHODE
2	ANODE

**ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbol	ES2AB	ES2BB	ES2CB	ES2DB	ES2EB	ES2GB	ES2JB	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	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	60							A
Maximum Instantaneous Forward Voltage at 3A	$V_F$	1	1	1	1	1.25	1.25	1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	5							$\mu\text{A}$
	$T_A = 125^\circ\text{C}$	100							
Typical Junction Capacitance	$C_j$	40							pF
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	35							
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	60							$^\circ\text{C}/\text{W}$
	$R_{\theta JC}$	20							
Operating Temperature Range	$T_j$	-55 ~ +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ +150							$^\circ\text{C}$

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

(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



## TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Maximum Average Forward Current Rating

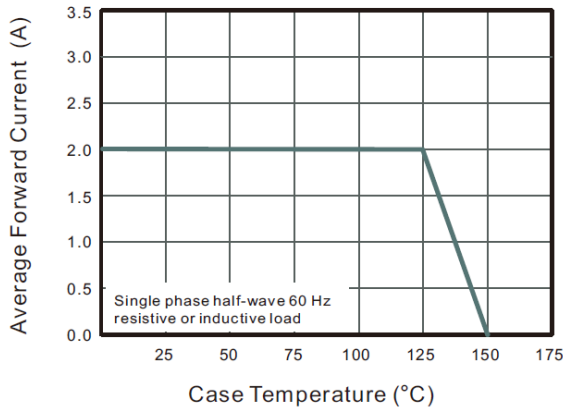


Fig 2. Typical Reverse Characteristics

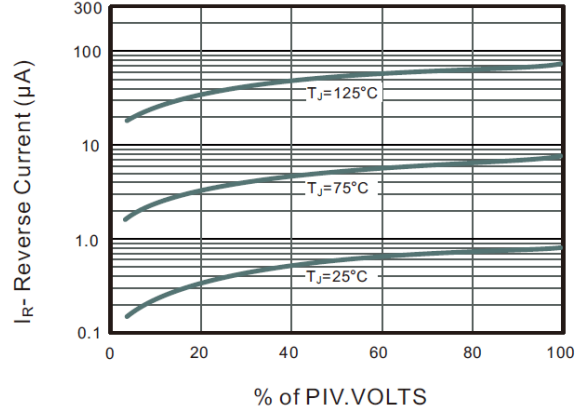


Fig 3. Typical Forward Characteristics

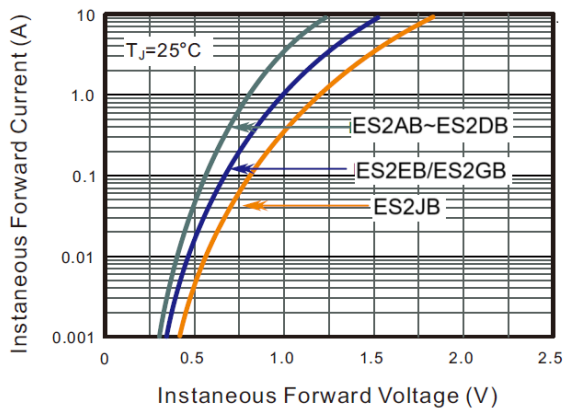


Fig 4. Typical Junction Capacitance

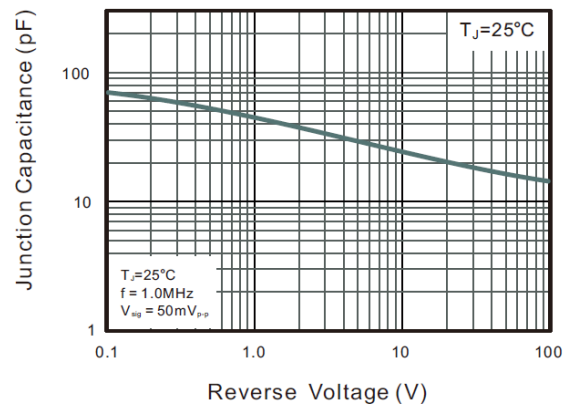


Fig 5. Maximum Non-Repetitive Peak Forward Surge Current

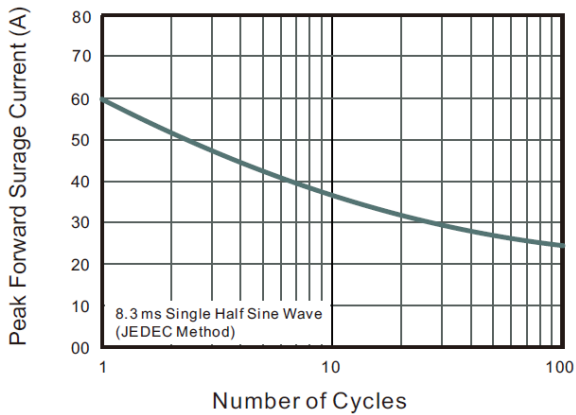
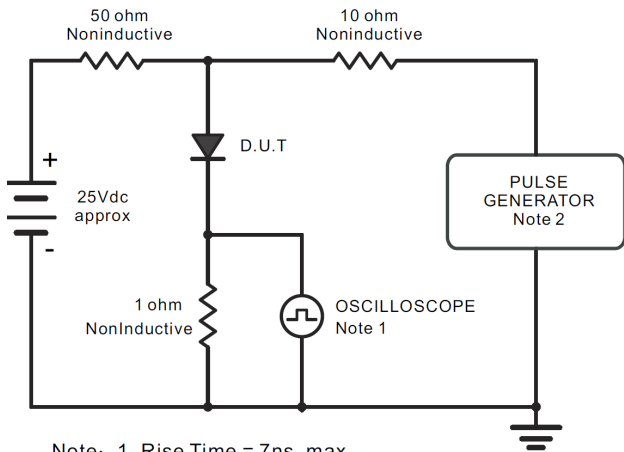
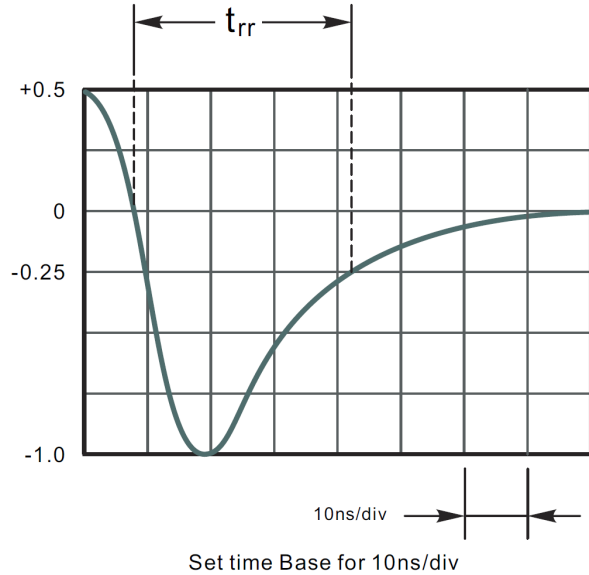




Fig 6. Reverse Recovery Time Characteristic and Test Circuit Diagram



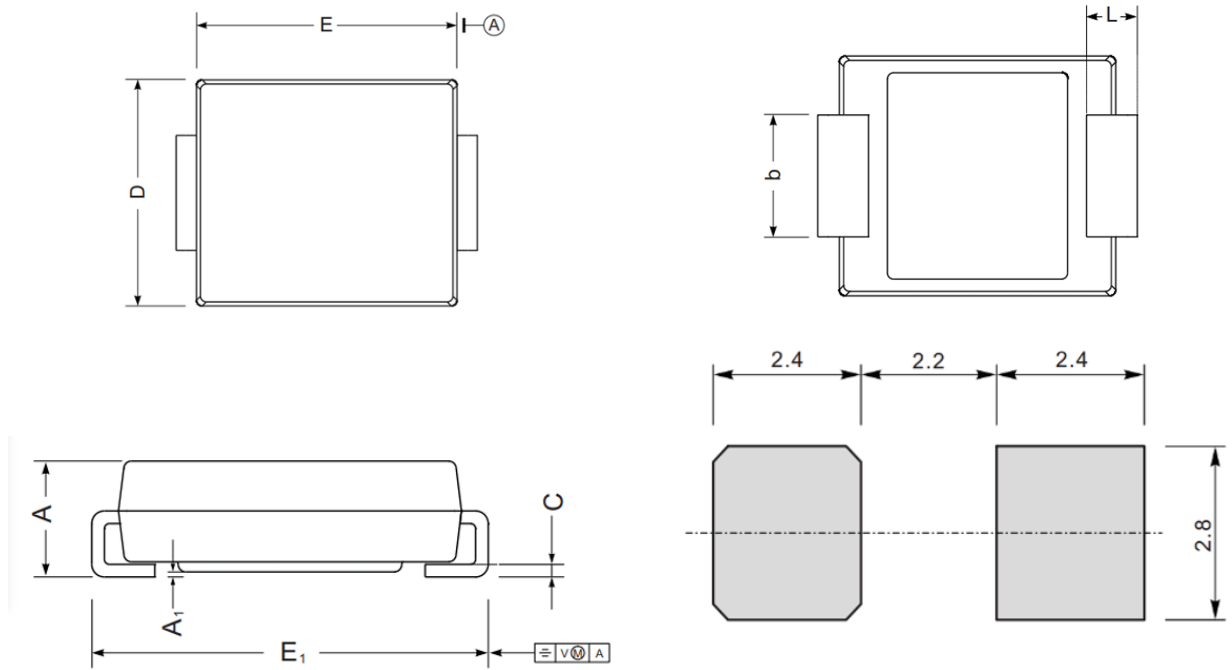
- Note: 1. Rise Time = 7ns, max.  
Input Impedance = 1megohm, 22pF.
- 2. Rises Time = 10ns, max.  
Source Impedance = 50 ohms.





**PACKAGE INFORMATION**

Dimension in SMB Package (Unit: mm)



The recommended mounting pad size

SYMBOL	MIN	MAX
A	2.130	2.440
A1	0.050	0.200
b	1.900	2.200
C	0.152	0.305
D	3.300	3.940
E	4.060	4.700
E1	5.080	5.590
L	0.800	1.500



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