FEATURES

The RS3AB~RS3MB are available in SMB Package

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time

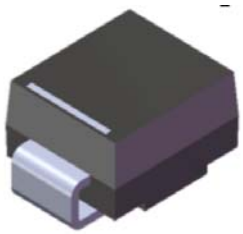
MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

ORDERING INFORMATION

Package Type	Part Number
SMB	RS3AB
	RS3BB
	RS3DB
	RS3GB
	RS3JB
	RS3KB
	RS3MB
SPQ	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



SMB

1 Cathode

2 Anode

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified.

Parameter	Symbols	RS3AB	RS3BB	RS3DB	RS3GB	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	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	I_{FSM}	90				A
Maximum Forward Voltage at 3 A	V_F	1.3				V
Maximum DC Reverse Current T_A = 25 °C at Rated DC Blocking Voltage T_A =125 °C	I_R	5 100				μA
Typical Junction Capacitance at V_R=4V, f=1MHz	C_j	40				pF
Maximum Reverse Recovery Time*	t_{rr}	150				ns
Typical Thermal Resistance**	$R_{\theta JA}$ $R_{\theta JC}$	48 16				°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150				°C

* Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

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

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.

T_A = 25°C, unless otherwise specified.

Parameter	Symbols	RS3JB	RS3KB	RS3MB	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Maximum RMS voltage	V_{RMS}	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	600	800	1000	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	I_{FSM}	90			A
Maximum Forward Voltage at 3 A	V_F	1.3			V
Maximum DC Reverse Current T_A = 25 °C at Rated DC Blocking Voltage T_A =125 °C	I_R	5 100			μA
Typical Junction Capacitance at V_R=4V, f=1MHz	C_j	40			pF
Maximum Reverse Recovery Time*	t_{rr}	250	500		ns
Typical Thermal Resistance**	$R_{\theta JA}$ $R_{\theta JC}$	48 16			°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150			°C

* Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

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

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.

TYPICAL CHARACTERISTICS

Fig 1. Maximum Average Forward Current Rating

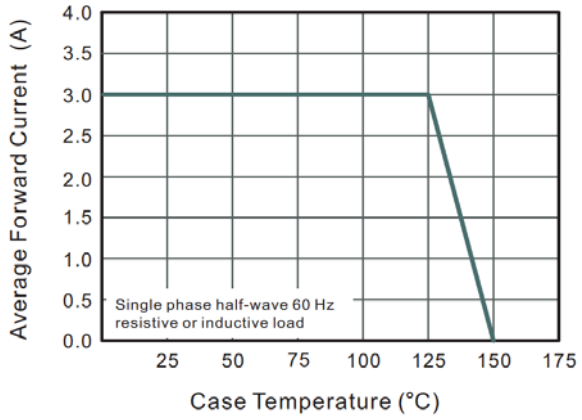


Fig 2. Typical Reverse Characteristics

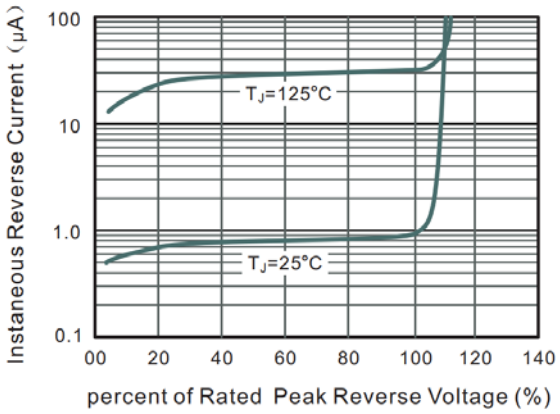


Fig 3. Typical Instantaneous Forward Characteristics

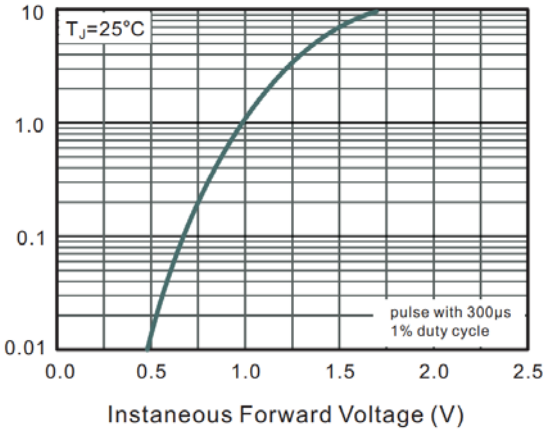


Fig 4. Typical Junction Capacitance

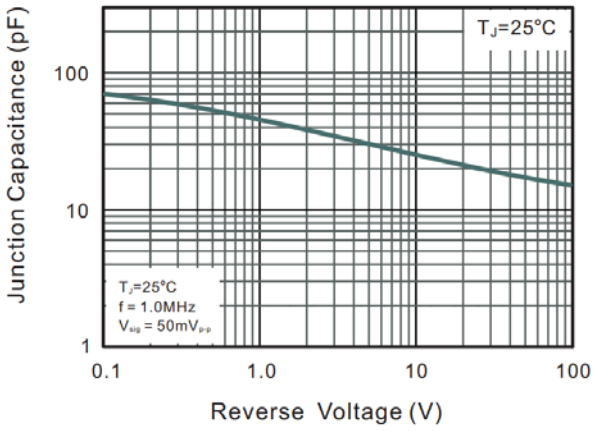
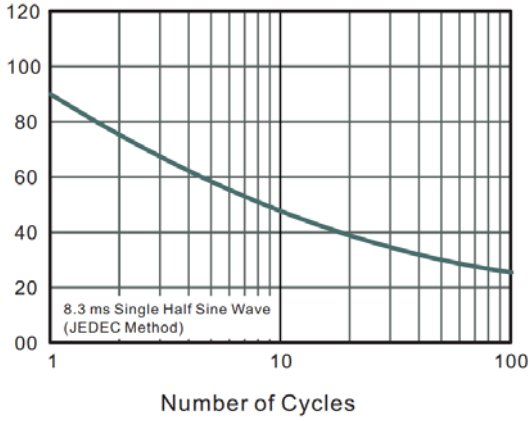
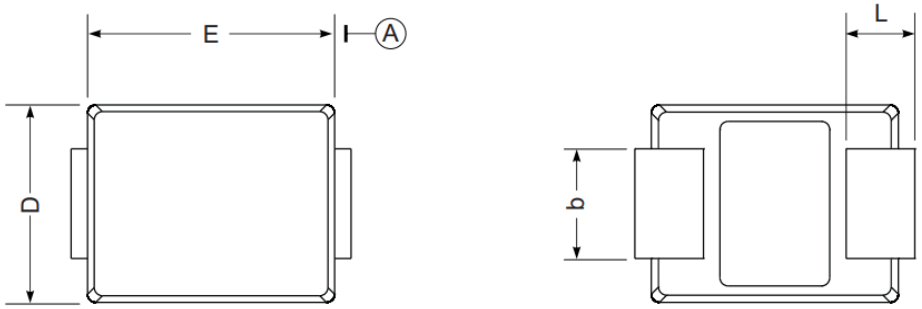


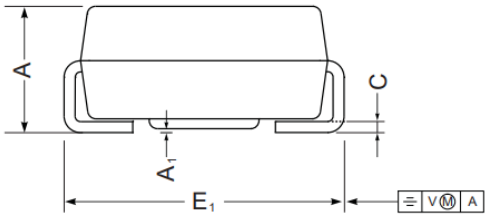
Fig 5. Maximum Non-Repetitive Peak Forward Surge Current

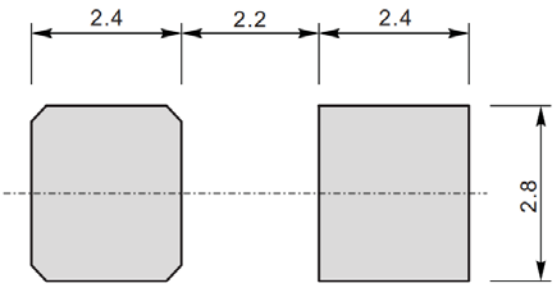


PACKAGE INFORMATION

Dimension in SMB (Unit: mm)







RECOMMENDED LAND PATTERN

Symbol	Min	Max
A	2.13	2.44
E	4.06	4.70
D	3.3	3.94
E_1	5.08	5.59
A_1	0.05	0.20
L	0.8	1.5
C	0.152	0.305
b	1.9	2.2

IMPORTANT NOTICE

AiT Semiconductor Inc. (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Semiconductor Inc. integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or server property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Semiconductor Inc. assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.