

Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 1 A

FEATURES

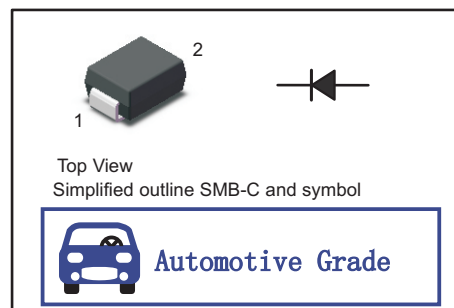
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives
- Hireliability application and automotive grade AEC-Q101 qualified

MECHANICAL DATA

- Case: SMB-C
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.09g / 0.003oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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 derate by 20 %.

Parameter	Symbols	AT-S1ABC	AT-S1BBC	AT-S1DBC	AT-S1GBC	AT-S1JBC	AT-S1KBC	AT-S1MBC	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 @ Fig.1	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	60							A
I^2t Rating for fusing (3ms≤t≤8.3ms)	I^2t	3.7							A ² S
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ °C}$ $T_a = 125\text{ °C}$	I_R	5 50							μA
Typical Junction Capacitance ⁽¹⁾	C_j	7							pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	43 9 18							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

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

(2) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.



Fig.1 Forward Current Derating Curve

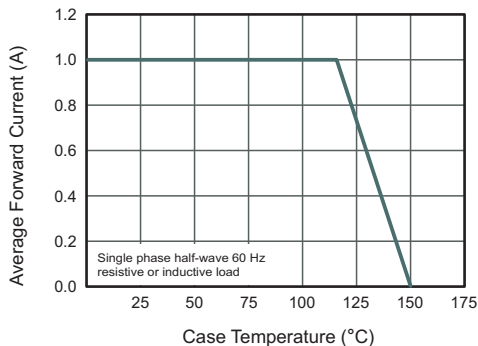


Fig.2 Typical Instaneous Reverse Characteristics

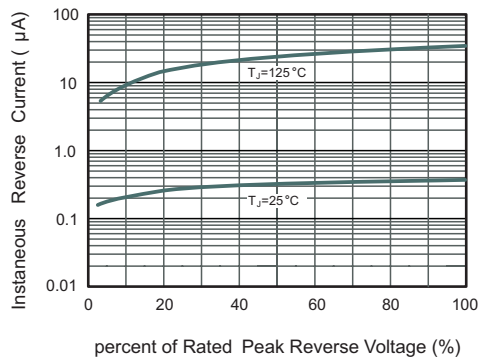


Fig.3 Typical Forward Characteristic

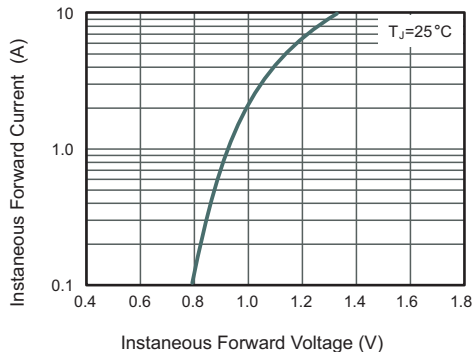


Fig.4 Typical Junction Capacitance

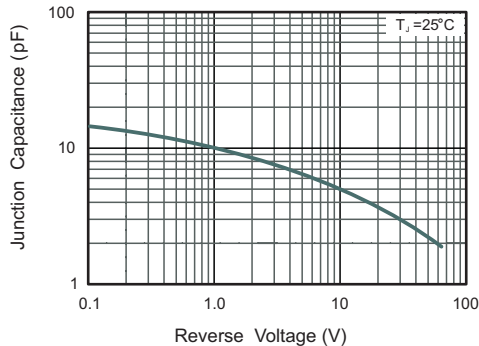
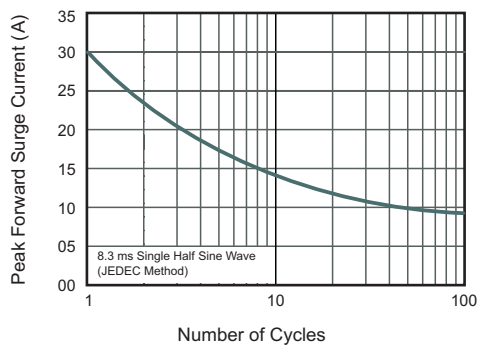


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

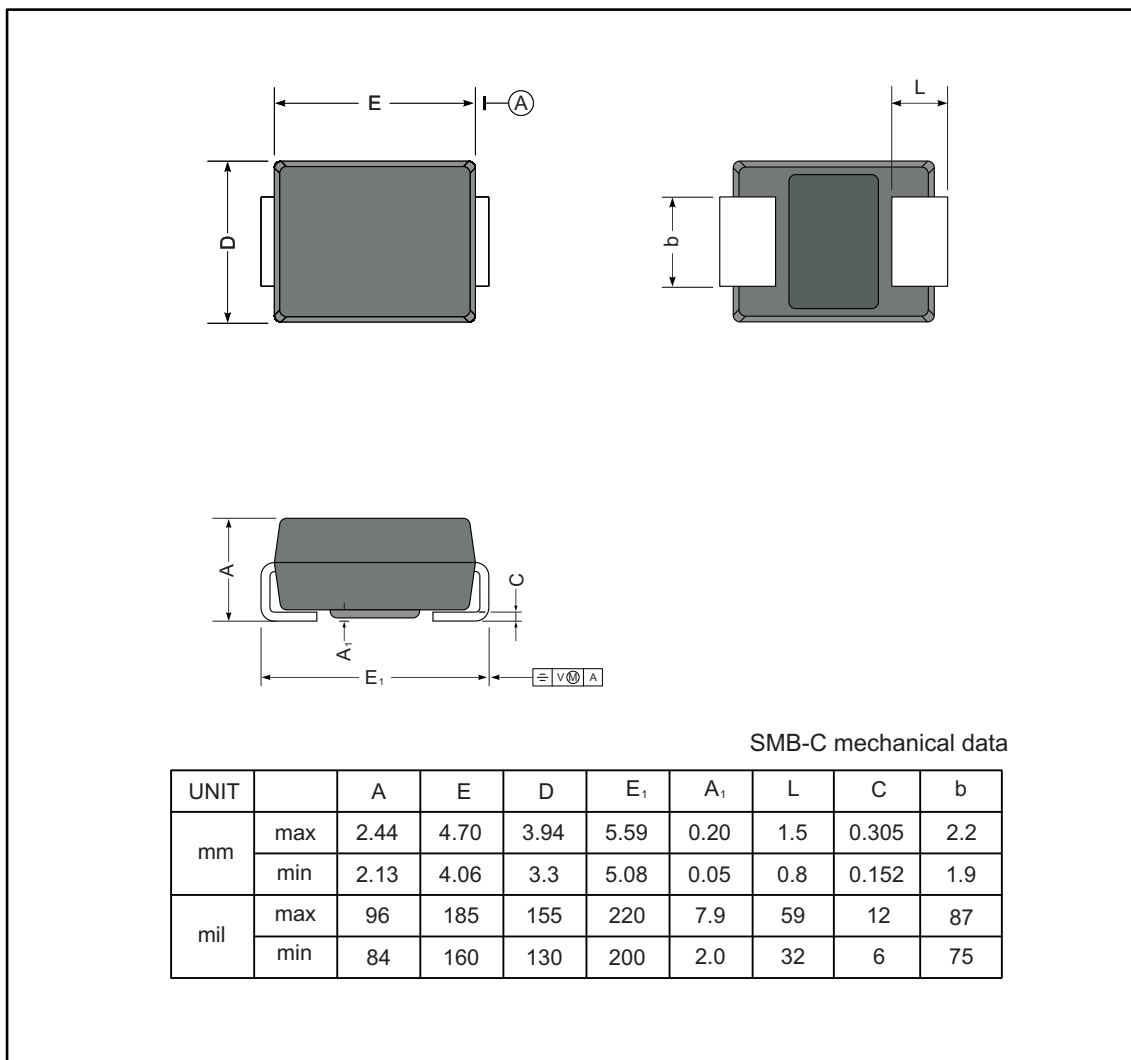




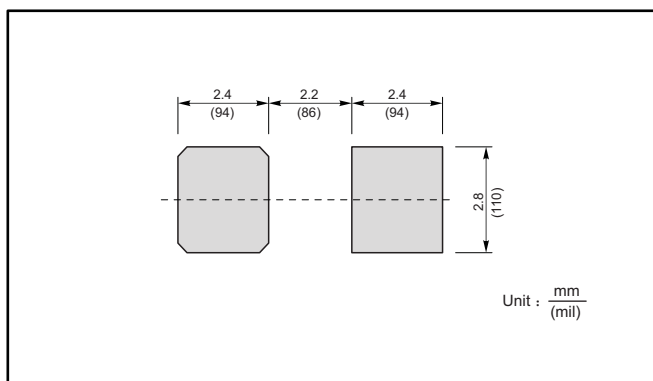
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB-C



The recommended mounting pad size



Marking

Type number	Marking code
AT-S1ABC	S1A
AT-S1BBC	S1B
AT-S1DBC	S1D
AT-S1GBC	S1G
AT-S1JBC	S1J
AT-S1KBC	S1K
AT-S1MBC	S1M



Important Notice and Disclaimer

Jingdao Microelectronics reserves the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Jingdao Microelectronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Jingdao Microelectronics assume any liability for application assistance or customer product design.

Jingdao Microelectronics does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Jingdao Microelectronics.

Jingdao Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of Jingdao Microelectronics.