



Surface Mount Glass Passivated Fast Recovery Rectifier

Reverse Voltage -50~1000 V

Forward Current - 1.0A

FEATURES

- Low forward voltage drop
- Low leakage current
- 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

MECHANICAL DATA

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz

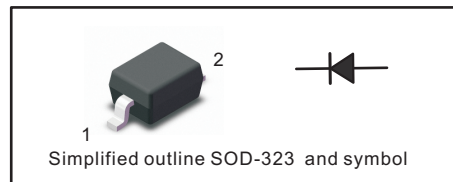
Maximum Ratings and Electrical characteristics

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 %.

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Parameter	Symbols	SGP1RWS	SGP2RWS	SGP3RWS	SGP4RWS	SGP5RWS	SGP6RWS	SGP7RWS	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	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	15							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.3							V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	I_R	5 50							μA
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JC}$	150 30							$^\circ\text{C/W}$
Typical reverse recovery time ⁽²⁾	t_{rr}	150				250	500		ns
Typical junction capacitance ⁽³⁾	C_j	5							pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

(1) P.C.B. mounted with 2.54X2.54mm copper pad areas.

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

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



Fig.1 Forward Current Derating Curve

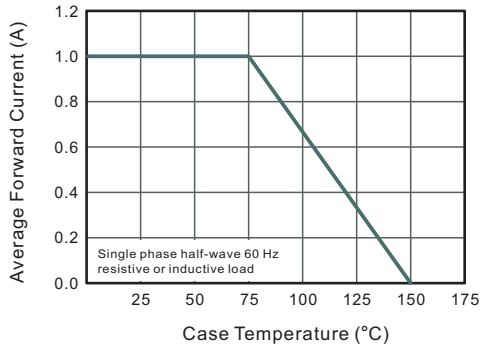


Fig.2 Typical Instaneous Reverse Characteristics

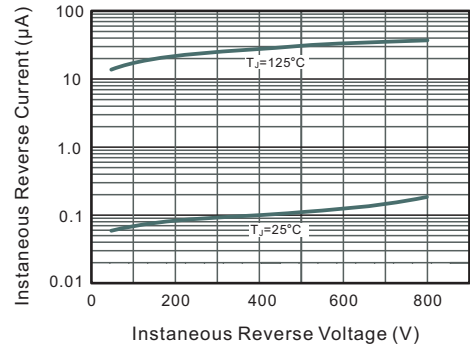


Fig.3 Typical Forward Characteristic

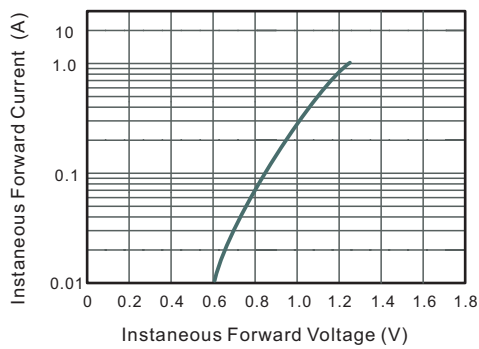


Fig.4 Typical Junction Capacitance

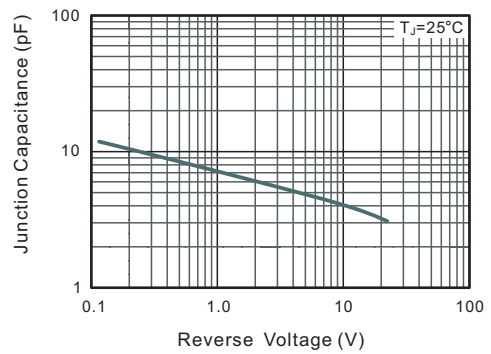


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

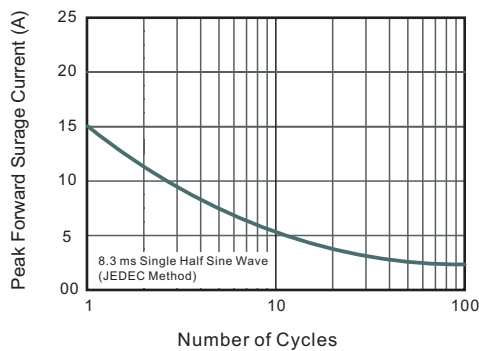
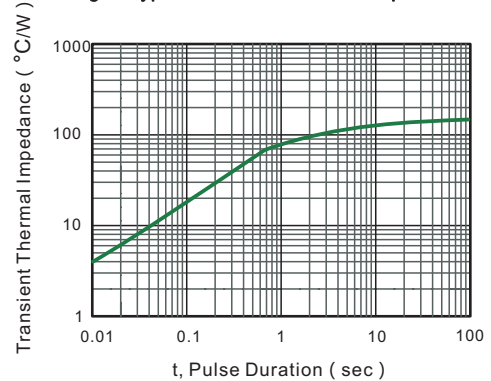


Fig.6- Typical Transient Thermal Impedance

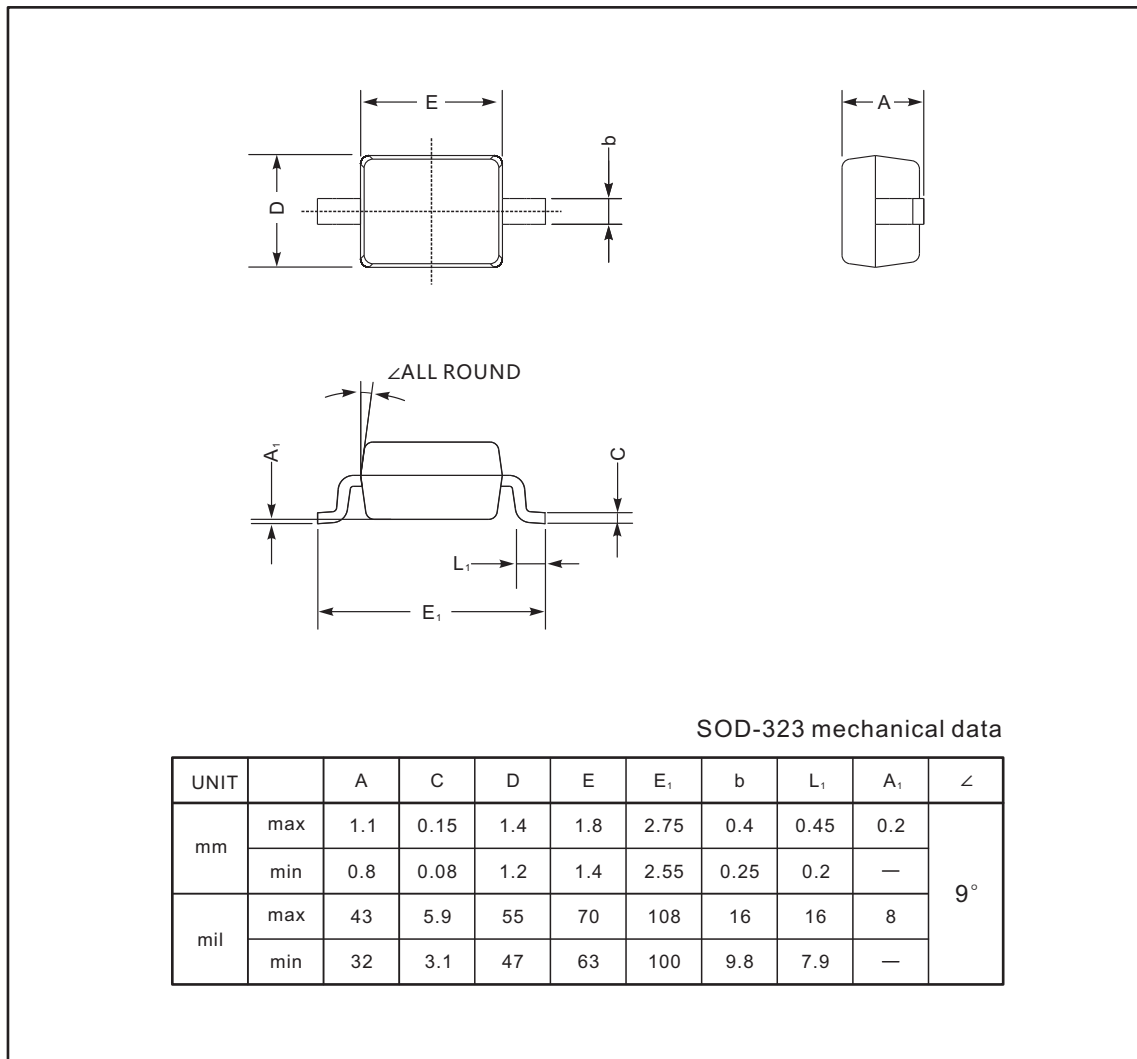




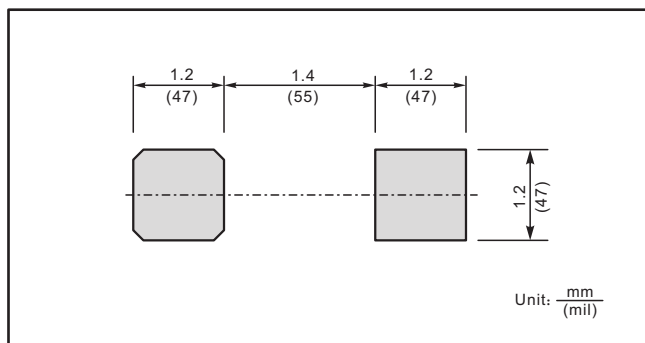
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



The recommended mounting pad size



Marking

Type number	Marking code
SGP1RWS	1R
SGP2RWS	2R
SGP3RWS	3R
SGP4RWS	4R
SGP5RWS	5R
SGP6RWS	6R
SGP7RWS	7R



文件履历表

序号	制/修订日期	生效日期	版次	修订内容	变更原因	制/修订人	备注
01	2019.1.18	2019.1.18	Rev 1.1	初版制定	/	张阁	
02	2022.7.28	2022.8.8	Rev 1.2	增加参数热阻	自发性变更	张阁	



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.