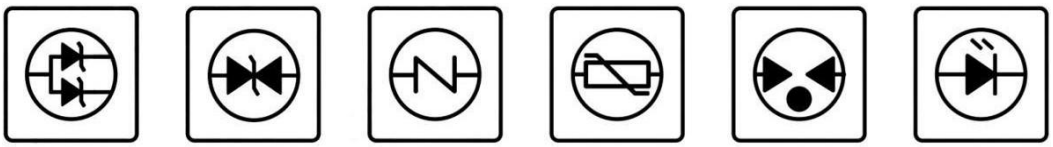
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SEMICONDUCTOR



SGP1A-MS THRU SGP7A-MS

Product specification

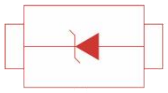
SGP1A-MS THRU SGP7A-MS

Reverse Voltage：-50~1000 V
Forward Current：- 1.0A

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

Reference News

SOD-323	Schematic Diagram
	

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

MECHANICAL DATA

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

Marking

SGP1A-MS	SGP2A-MS	SGP3A-MS	SGP4A-MS
A1	A2	A3	A4
SGP5A-MS	**SGP6A-MS**	**SGP7A-MS**	
A5	A6	A7	

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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	SGP1A -MS	SGP2A -MS	SGP3A -MS	SGP4A -MS	SGP5A -MS	SGP6A -MS	SGP7A -MS	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	1.1							V
Maximum DC Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a = 125 °C	I_R	5 50							μA
Typical Thermal Resistance (1)	$R_{\theta JA}$	55							°C/W
Typical reverse recovery time (2)	trr	1.8							us
Typical junction capacitance (3)	C_j	5							pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

(1) P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.
(2) Measured with I_F=0.5A, I_R = 1A, I_{rr}=0.25A
(3) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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Fig.1 Forward Current Derating Curve

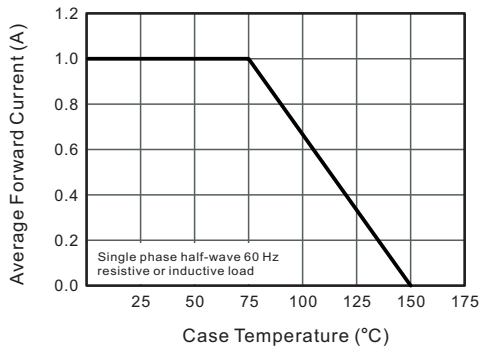


Fig.2 Typical Instaneous Reverse Characteristics

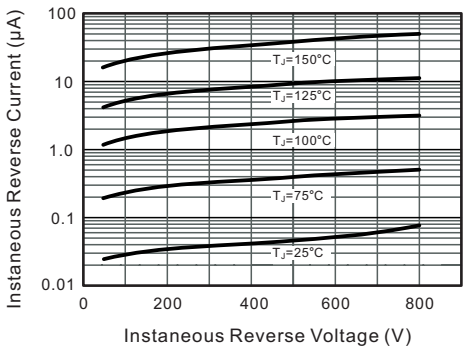


Fig.3 Typical Forward Characteristic

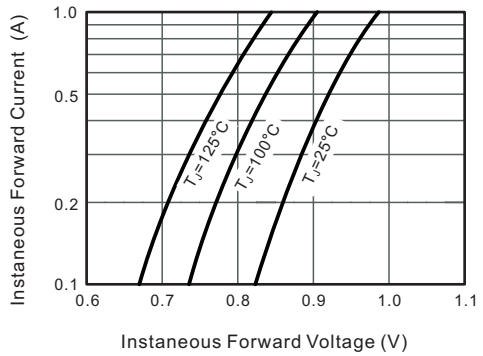


Fig.4 Typical Junction Capacitance

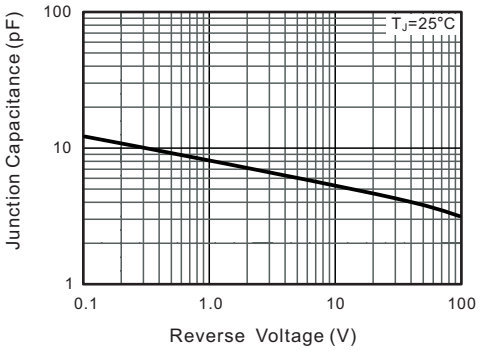
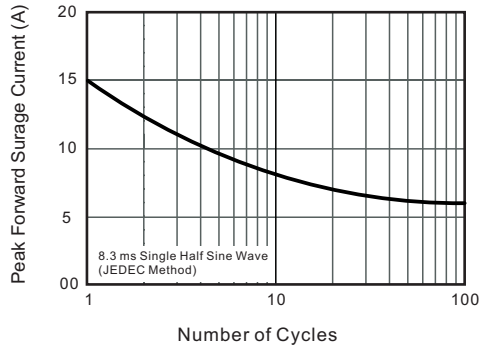
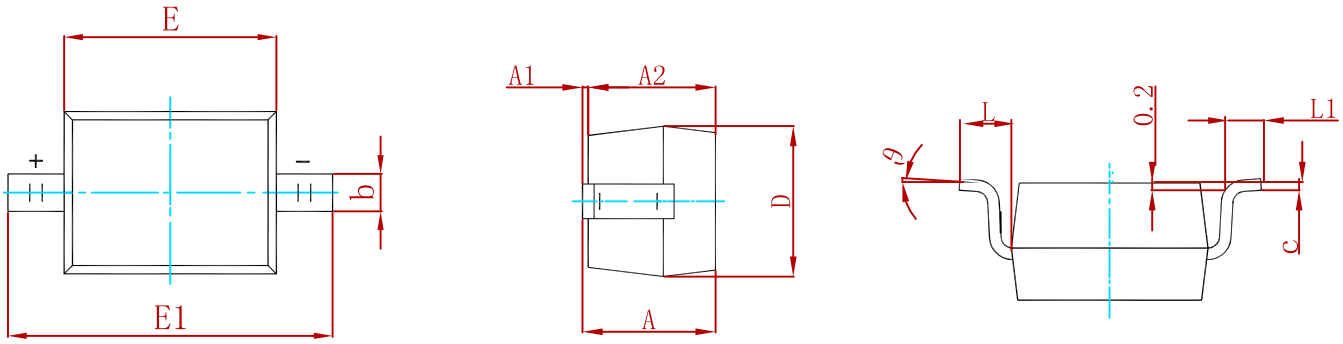


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



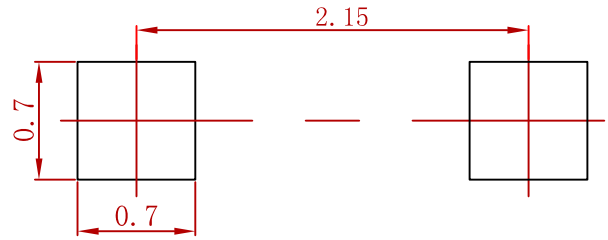
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PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
SGP1A-MS THRU SGP7A-MS	SOD-323	3000

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