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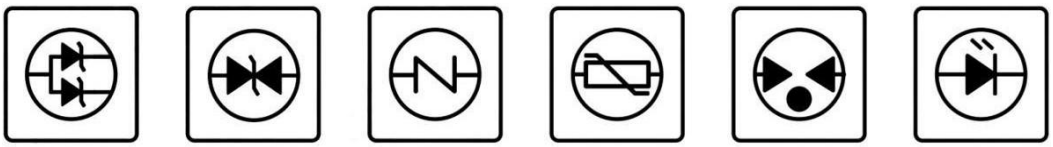
SEMICONDUCTOR



SOD4001-MS THRU SOD4007-MS

Product specification

Surface Mount Glass Passivated Standard Rectifier
Reverse Voltage 50~1000V Forward Current 0.8A

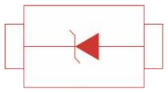
FEATURES

- Glass passivated Standard Rectifiers
- Very low profile - typical height of 1.0 mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- AEC-Q101 qualified
- High temperature soldering guaranteed: 260℃/10 seconds
- Halogen-free according to IEC 61249-2-21 definition

Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device,power supplies and other consumer applications.

Reference News

SOD-123FL	Schematic Diagram
	

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Marking

SOD4001-MS	SOD4002-MS	SOD4003-MS	SOD4004-MS
A1	A2	A3	A4
SOD4005-MS	**SOD4006-MS**	**SOD4007-MS**	
A5	A6	A7	

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Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	SOD4001-MS	SOD4002-MS	SOD4003-MS	SOD4004-MS	SOD4005-MS	SOD4006-MS	SOD4007-MS	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	IF(AV)	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	25							A
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150							°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	SOD4001-MS	SOD4002-MS	SOD4003-MS	SOD4004-MS	SOD4005-MS	SOD4006-MS	SOD4007-MS	Unit
Maximum instantaneous forward voltage	1.0A Volts	V_F	1.0							V
Maximum DC reverse current at rated DC blocking voltage	TA=25℃ TA=125℃	I_R	5 50							μA
Typical reverse recovery time	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	t_{rr}	1.8							uS
Typical junction capacitance	4.0 V, 1 MHz	C_J	6							pF
Typical thermal resistance[1)]	juntion to ambient	$R_{\theta JA}$	70							℃/W
	juntion to case	$R_{\theta JC}$	40							
	juntion to mount	$R_{\theta JM}$	5							

Note 1),The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 5×5mm copper pads,2 OZ,FR4 PCB

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Package Outline Dimensions

(TA = 25℃ unless otherwise noted)

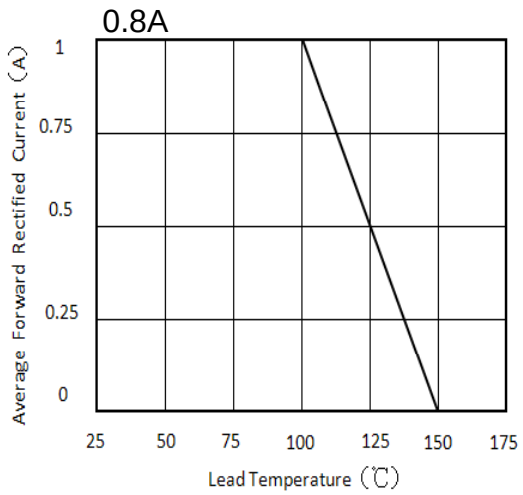

Figure 1.Forward Current Derating Curve

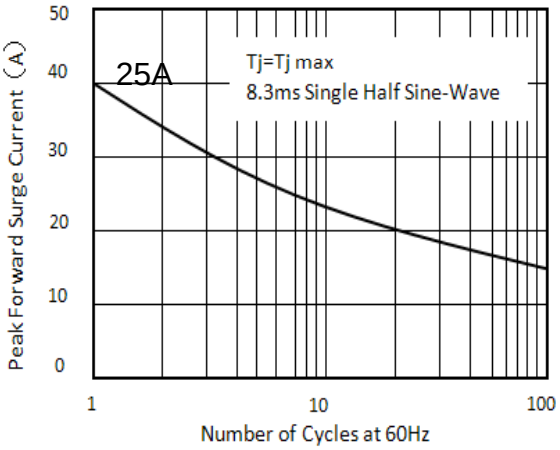

Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

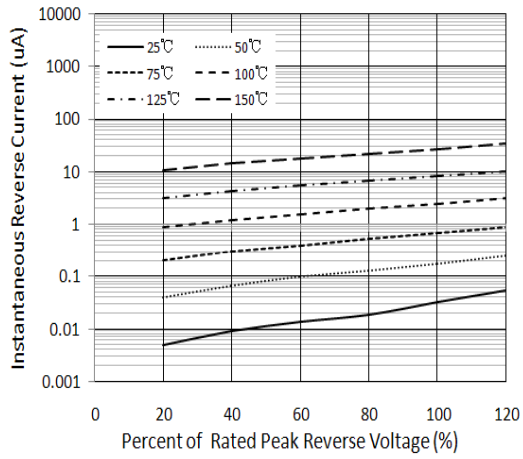

Figure 3. Typical Reverse Characteristics

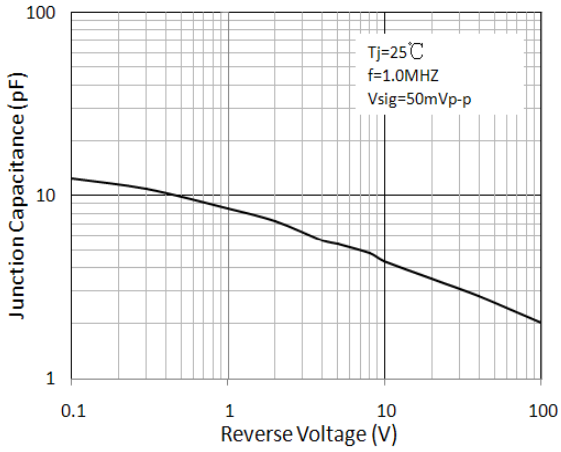

Figure 4. Typical Junction Capacitance

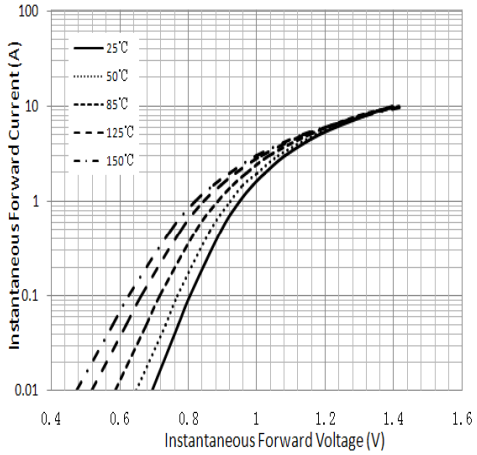

Figure 5. Typical Instantaneous Forward Characteristics

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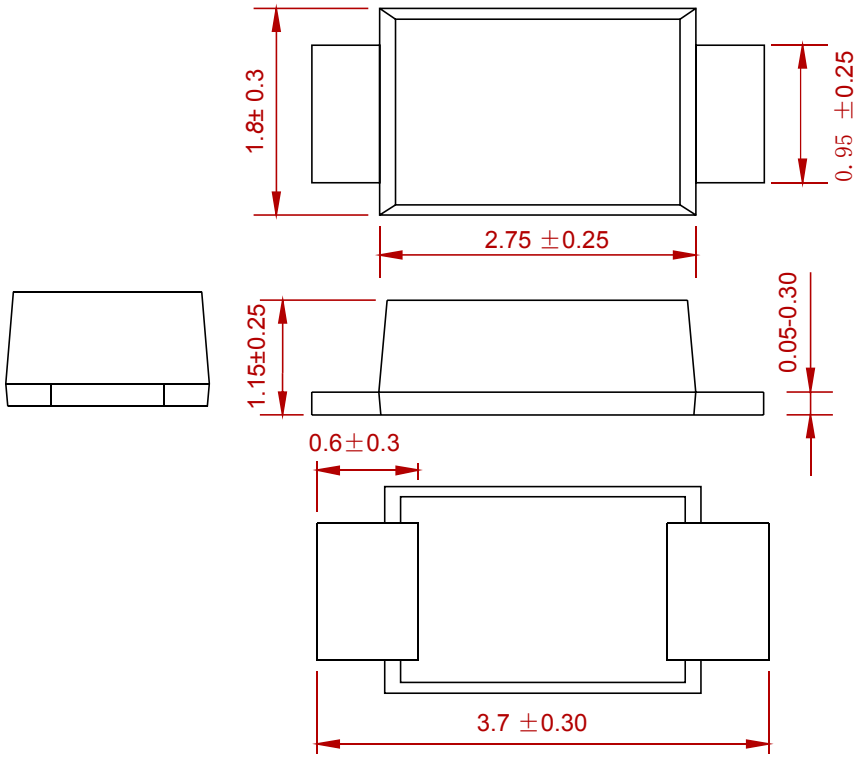
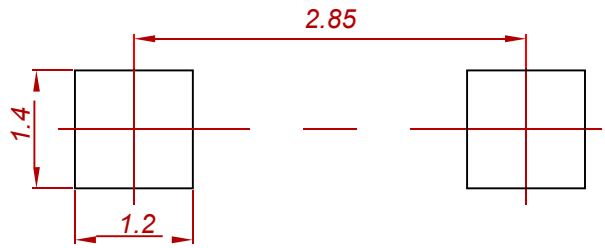
PACKAGEMECHANICALDATA



Dimensions in millimeters

Suggested Pad Layout



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

REELSPECIFICATION

P/N	PKG	QTY
SOD4001-MS THRU SOD4007-MS	SOD-123FL	3000

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