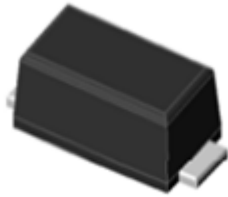


Surface Mount Glass Passivated Standard Rectifier

**SOD-123FL(eSGA)**



**Features**

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020 LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874



**Primary characteristics**

$I_{F(AV)}$	1A
$V_{RRM}$	50V to 1000V
$I_{FSM}$	40A
$I_{RM}$	5 $\mu$ A
$V_{FM}$ at $I_F=1A$	1V
$T_J$ max.	150 °C

**Applications**

Ideal for ac-to-dc bridge full wave rectification such as SMPS, home appliances, office equipment, industrial automation applications

**Mechanical data**

- SOD-123FL(eSGA)
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque:10cm·kg(8.8 inches·lbs)max.
- Recommended Torque:5.7 cm·kg(5 inches·lbs)

**Maximum rating (Ta=25°C unless otherwise noted)**

Parameter	Sym	SOD-123FL(eSGA)							Unit
		A1	A2	A3	A4	A5	A6	A7	
Max. repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Max. RMS reverse voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Max. DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Max. average forward current	$I_{F(AV)}$	1							A
Non-repetitive peak forward surge current 8.3ms single half-sine-wave	$I_{FSM}$	40							A
Max. instantaneous forward voltage drop per diode	$V_{FM}$	1 (1A)							V
Max. instantaneous reverse current at rated DC blocking voltage	$I_{RM}$	5							$\mu$ A
		50							$\mu$ A
Operating junction temperature	$T_J$	-55 ~ +150							°C
Storage temperature	$T_{STG}$	-55 ~ +150							°C
Typical thermal resistance (Note 1)	$R_{J-A}$	70							°C/W
	$R_{J-C}$	40							°C/W
	$R_{J-M}$	5							°C/W
Typical junction capacitance (Note 2)	$C_J$	6							pF
Typical reverse recovery time (Note 3)	$t_{rr}$	1.8							us

- Notes:**
1. The thermal resistance from junction to ambient, case or mount, mounted on P.C.B with 5x5mm copper pads, 2 OZ, FR4 PCB
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C
  3. Reverse recovery test conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$



Ordering information (Example)

PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
A7				

Typical characteristics

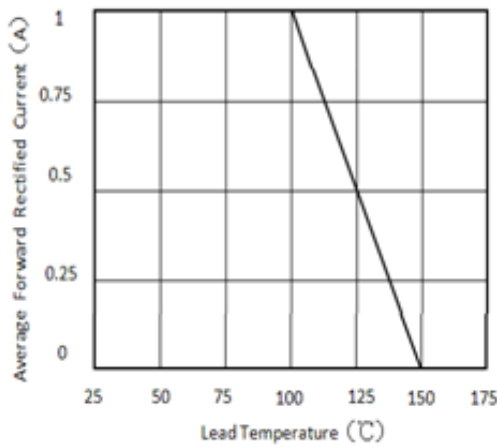


Figure 1. Forward Current Derating Curve

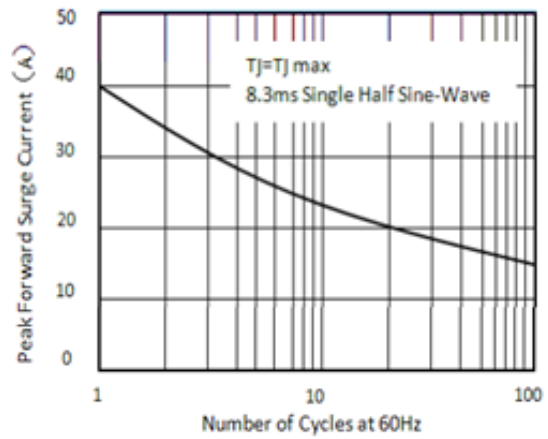


Figure 2. Maximum Non-Repetitive Peak-Forward Surge Current

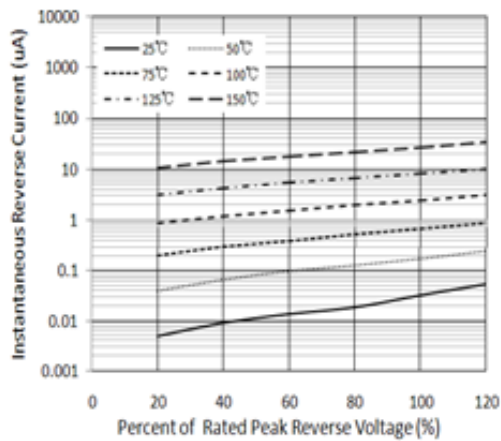


Figure 3. Typical Reverse Characteristics

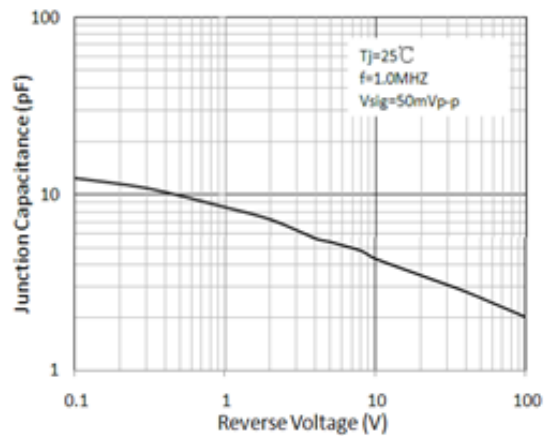
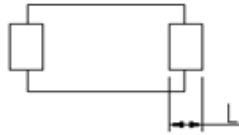
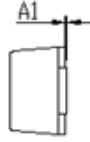
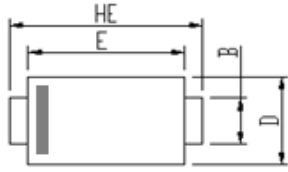


Figure 4. Typical Junction Capacitance

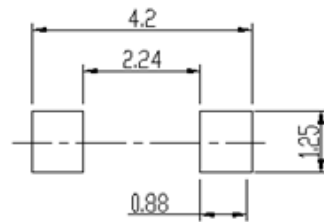
Package outline dimensions

in-inches (millimeters)



DIM.	Unit: mm.		Unit: inch.	
	MIN.	MAX.	MIN.	MAX.
A.	0.9.	1.08.	0.035.	0.043.
A1.	0.	0.1.	0.000.	0.004.
B.	0.85.	1.05.	0.033.	0.041.
C.	0.1.	0.25.	0.004.	0.010.
D.	1.7.	2.	0.067.	0.079.
E.	2.9.	3.1.	0.114.	0.122.
L.	0.43.	0.83.	0.017.	0.033.
HE.	3.5.	3.9.	0.138.	0.154.

Soldering footprint



Golden SEMI Inc. - Legal Notice

Disclaimer – All data and specifications are subject to changes without notice

GOLDEN SEMI Inc, it's affiliates, agents, distributors and employees neither accept nor assume any responsibility for errors or inaccuracies. All data and specifications are intended for information and provide a product description only. Electrical and mechanical parameters listed in GOLDEN SEMI data sheets and specifications will vary dependent upon application and environmental conditions . GOLDEN SEMI is not liable for any damages occurred or resulting from any circuit, product or end-use application for which it's products are used. GOLDEN SEMI products are not intended or designed for use in life saving or sustaining apparatus and purchase of any GOLDEN SEMI products automatically indemnifies GOLDEN SEMI against any claims or damages resulting from application malfunction