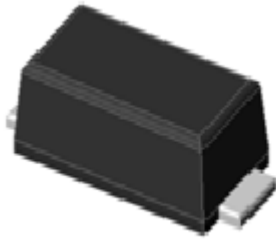


Surface Mount Glass Passivated High Efficient Rectifier
SOD-123FL(eSGA)

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}	30A
I_{RM}	5 μ A
V_{FM} at $I_F=1A$	1.3/1.7V
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
		FH1	FH2	FH3	FH4	FH5	FH6	FH7	
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}	30							A
Max. instantaneous forward voltage drop per diode	V_{FM}	1		1.3		1.7		V	
Max. instantaneous reverse current at rated DC blocking voltage	I_{RM}	5							μ A
		100							
Operating junction temperature	T_J	-55 ~ +150							°C
Storage temperature	T_{STG}	-55 ~ +150							°C
Maximum reverse recovery time (Note 2)	t_{rr}	50				75			nS
Typical thermal resistance (Note1)	R_{J-A}	66							°C/W
	R_{J-C}	28							
	R_{J-M}	1							

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. Reverse recovery test conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$



Surface Mount Glass Passivated High Efficient Rectifier

Ordering information (Example)

PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
FH7				

Typical characteristics

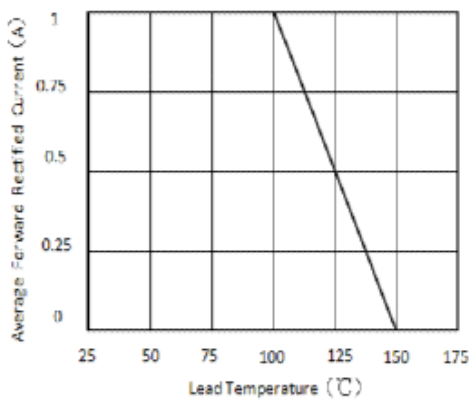


Figure 1. Forward Current Derating Curve

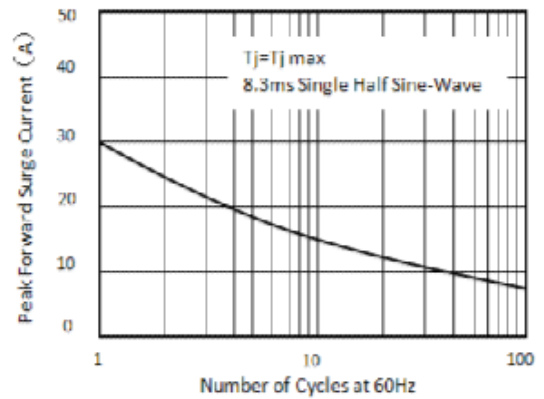


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

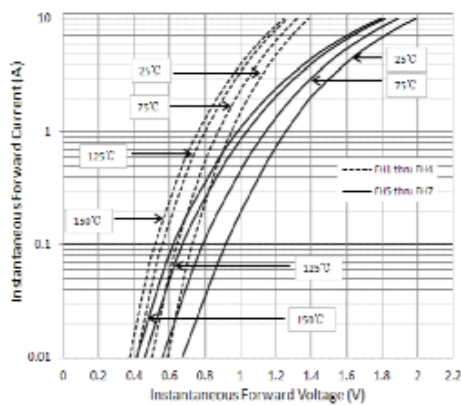


Figure 3. Typical Instantaneous Forward Characteristics

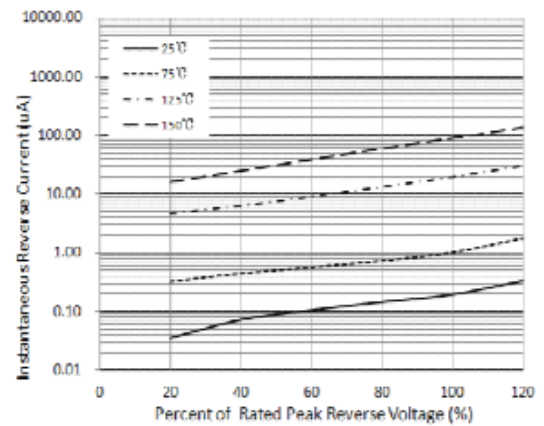
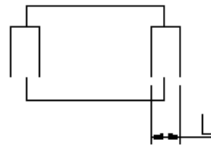
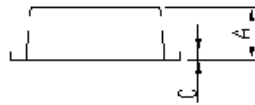
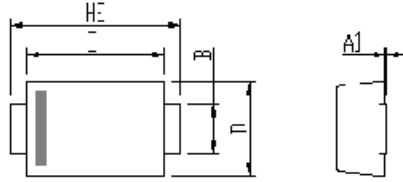


Figure 4. Typical Reverse Characteristics

Surface Mount Glass Passivated High Efficient Rectifier

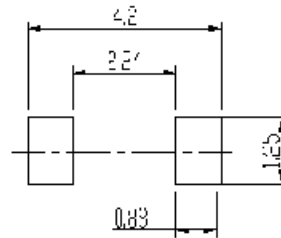
Package outline dimensions

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



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