

Features

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



RoHS
COMPLIANT



eSGA
(SOD-123FL)

Typical Applications

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

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

Parameter	Symbol	F1DS	F2DS	F3DS	F4DS	F5DS	F6DS	F7DS	Unit
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)}				1.0				A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}				25				A
Operating Junction and Storage Temperature Range	T _{J/T_{STG}}			-55 to +150					°C

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

Parameter	Test Conditions	Symbol	F1DS	F2DS	F3DS	F4DS	F5DS	F6DS	F7DS	Unit
Maximum Instantaneous Forward Voltage	1A	V _F			1.1					V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R			5					μA
	T _A =125°C				50					
Typical Reverse Recovery Time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}			1.8					μS
Typical Junction Capacitance	4.0V, 1MHz	C _J			6					pF
Typical Thermal Resistance ¹	Junction to Ambient	R _{θJA}			80					°C/W
	Junction to Case	R _{θJC}			50					
	Junction to Lead	R _{θJL}			10					

Note:

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

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

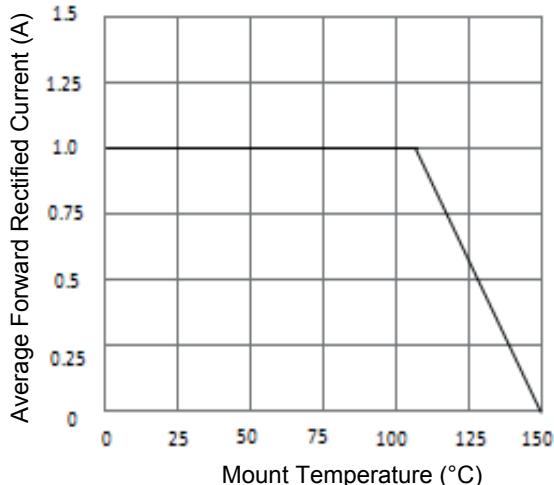


Figure 1. Forward Current Derating Curve

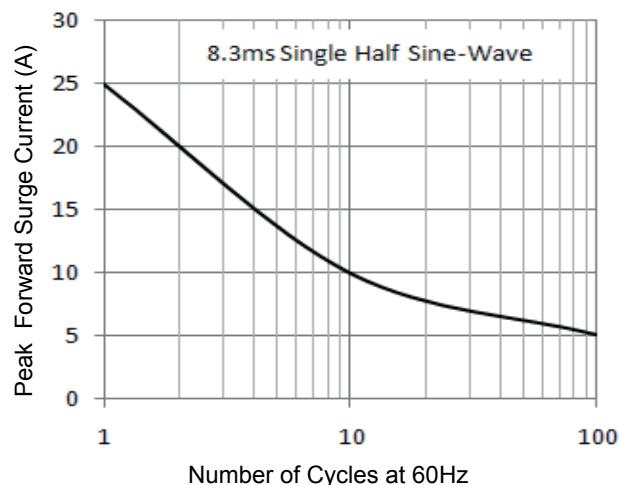


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

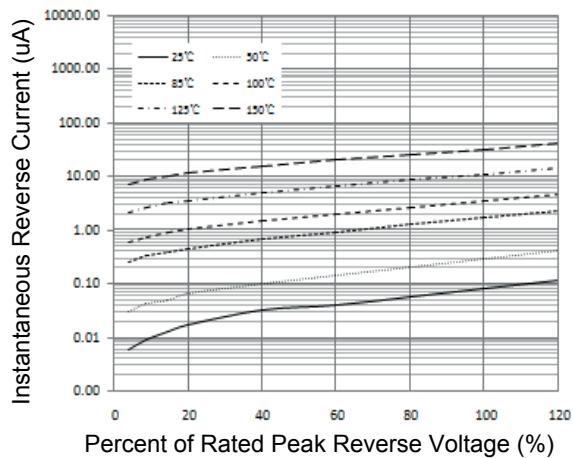


Figure 3. Typical Reverse Characteristics

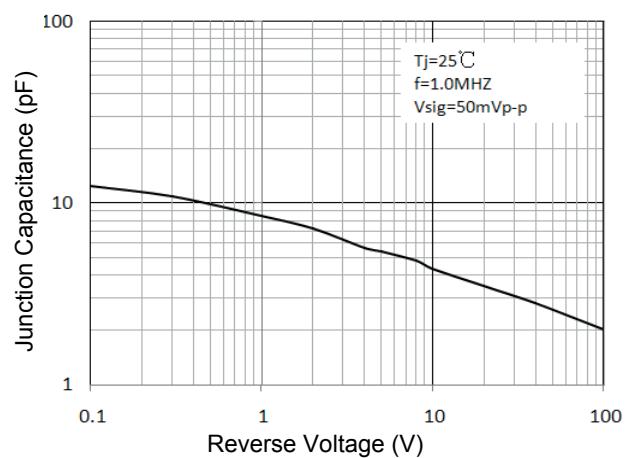


Figure 4. Typical Junction Capacitance

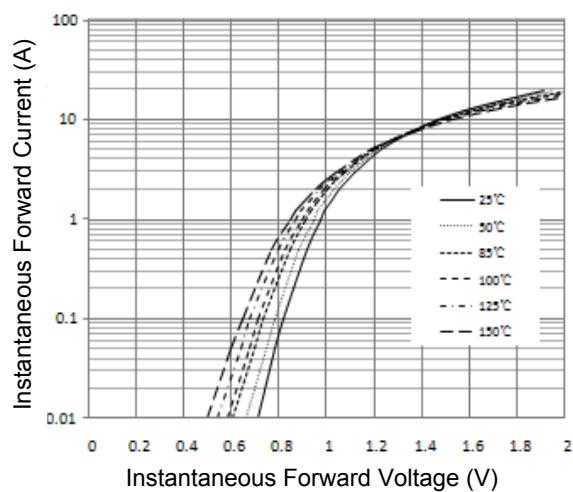
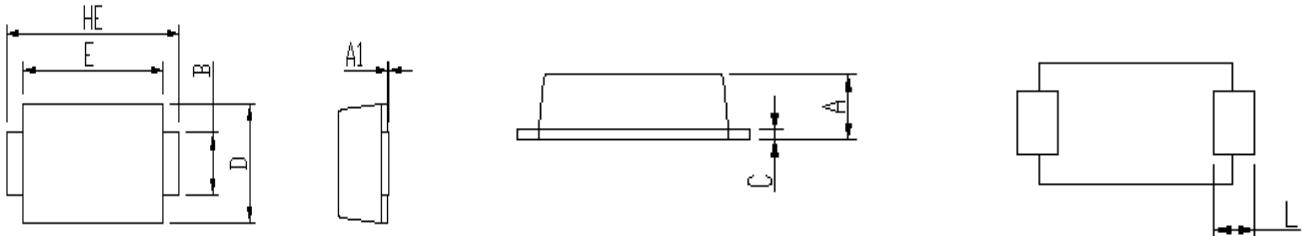


Figure 5. Typical Instantaneous Forward Characteristics

Package Outline Dimensions eSGA (SOD-123FL)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.08	0.035	0.043
A1	0.00	0.10	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.10	0.25	0.004	0.010
D	1.70	2.00	0.067	0.079
E	2.90	3.10	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.50	3.90	0.138	0.154

Recommended Pad Layout

