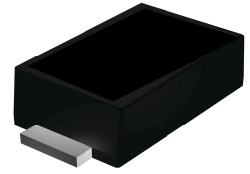


Features

- Glass passivated standard rectifiers
- Very low profile - typical height of 1.0 mm
- Low forward voltage drop, Low leakage current
- ESD capability
- 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



Package: eSGA
(SOD-123FL)



Applications

For use of general purpose rectification, power supplies and other consumer applications, and polarity protection.

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

Parameter	Symbol	SGA1J	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	600	V
Maximum RMS Voltage	V _{RMS}	420	V
Maximum DC Blocking Voltage	V _{DC}	600	V
Maximum Average Forward Rectified Current	I _{F(AV)}	1.0	A
Peak Forward Surge Current (8.3 ms 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 specified)

Parameter	Test Conditions	Symbol	SGA1J	Unit
Maximum Instantaneous Forward Voltage	1 A	V _F	1.0	V
Maximum DC Reverse Current at rated DC Blocking Voltage	T _A =25°C T _A =125°C	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	µs
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	6	pF

Immunity to Electrical Static Discharge with the Following Standards

($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Standard	Test Type	Test Conditions	Symbol	Class	Value
JESD22-A114/AEC-Q101-001	Human body model(contact mode)	C=100pF,R=1.5K Ω	VC	H3A	>4KV
JESD22-A115/AEC-Q101-002	Machine model(contact mode)	C=200pF,R=0 Ω		M4	>400V

Thermal Characteristics ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	SGA1J	Unit
Typical Thermal Resistance	$R_{\theta JA}$	70	$^{\circ}\text{C/W}$
	$R_{\theta JM}$	15	
	$R_{\theta JC}$	35	

Note: Thermal resistance from junction to ambient and junction to lead mounted on PCB with 5.0mm*5.0mm copper pad areas.

Ratings and Characteristic Curves

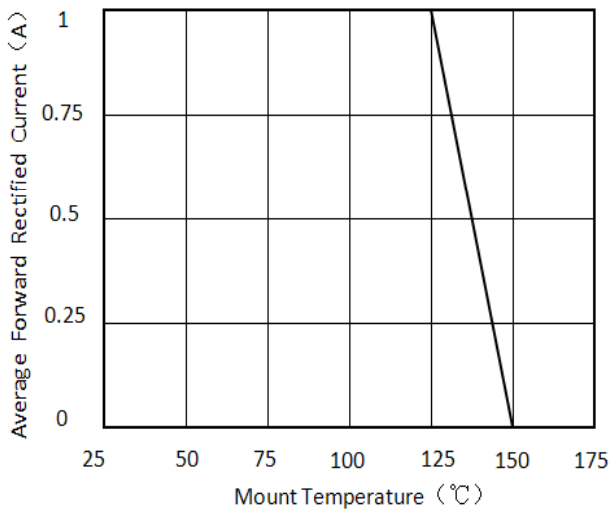


Figure 1. Forward Current Derating Curve

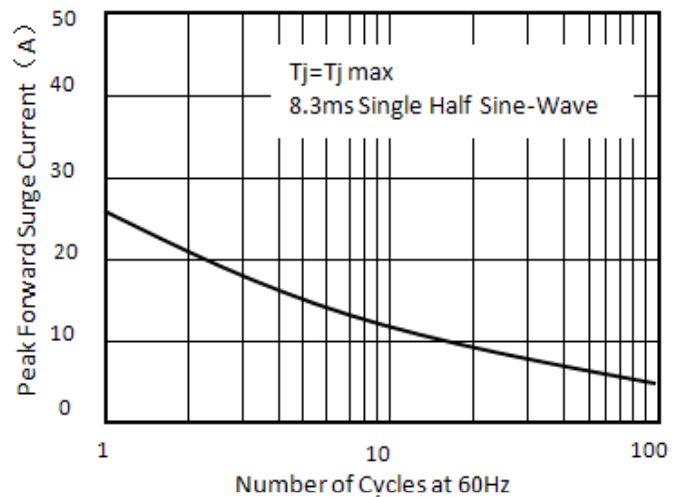


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

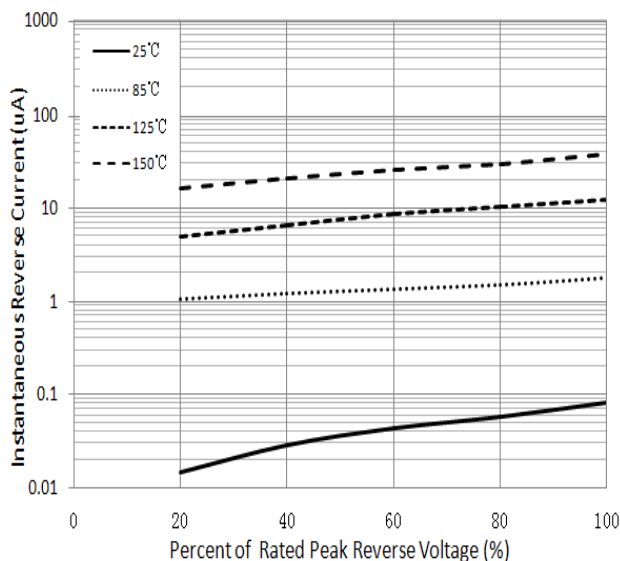


Figure 3. Typical Reverse Characteristics

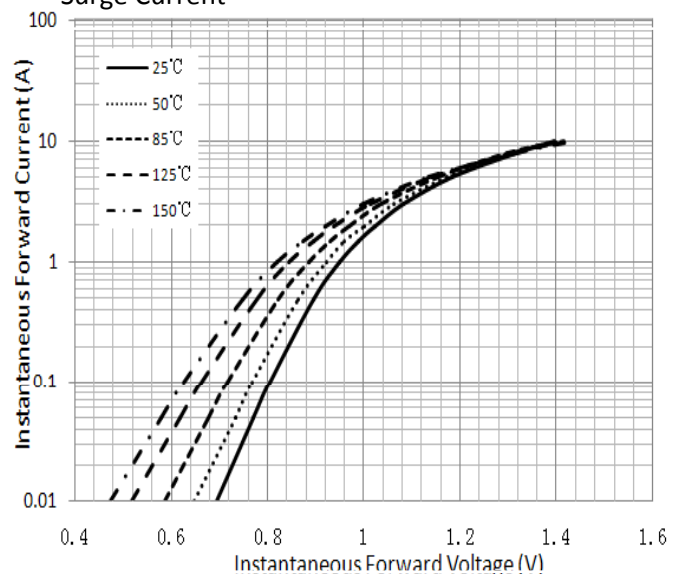
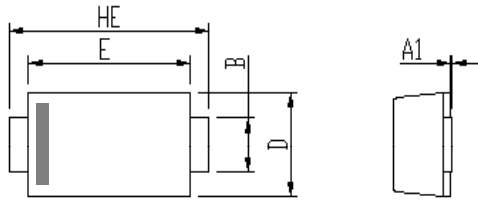


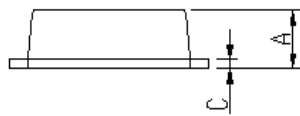
Figure 4. Typical Forward Characteristics

Package Outline Dimensions

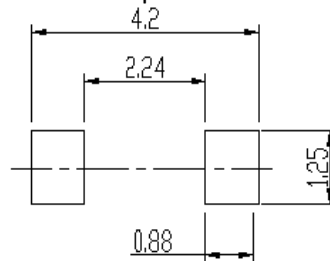
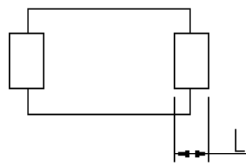
eSGA (SOD-123FL)



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



Packing Information

Packing quantities:

3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel

Tape & Reel Specification

