

## Features

- Low profile-typical height 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



**eSGA**  
(SOD-123FL)

## Applications

For use in fast switching in RF module, lighting, cell phone, portable devices, power supply and other consumer applications.

## Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	FSL16	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	60	V
Working Peak Reverse Voltage	V <sub>RMS</sub>	42	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	60	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	1.0	A
Peak Forward Surge Current (8.3ms Single Half Sine-Wave Superimposed on Rated Load)	I <sub>FSM</sub>	40	A
Junction Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Instantaneous Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1A, T <sub>A</sub> =25°C	0.48	0.55	V
		I <sub>F</sub> =1A, T <sub>A</sub> =125°C	0.45	-	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	T <sub>A</sub> =25°C	0.2		mA
		T <sub>A</sub> =125°C	30		
Typical Junction Capacitance	C <sub>J</sub>	4.0V, 1 MHz	65		pF
Typical Thermal Resistance <sup>1</sup>	R <sub>θJM</sub>	Juntion to Mount	20		°C/W

Note:

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

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

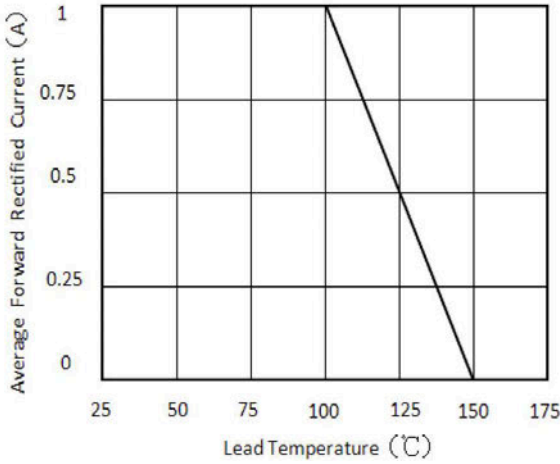


Figure 1. Forward Current Derating Curve

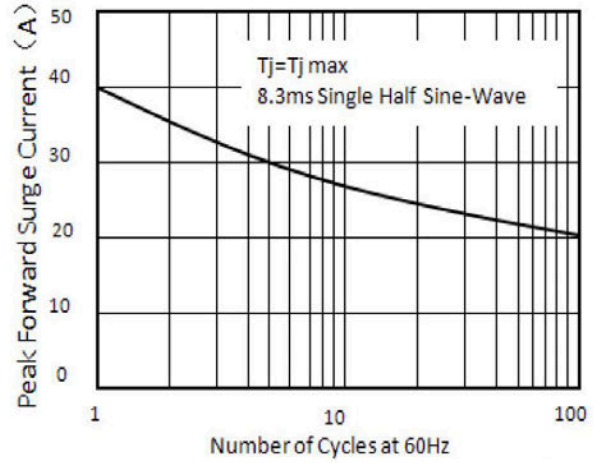


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

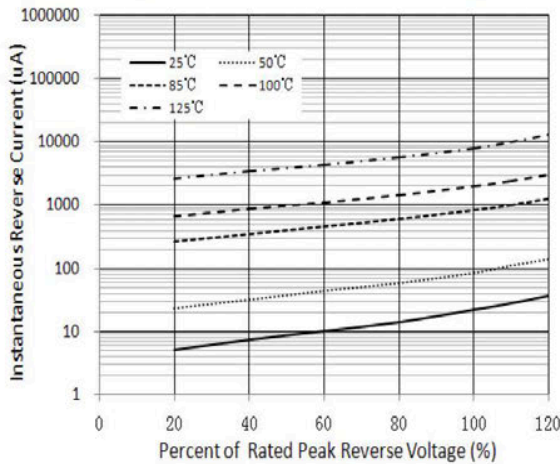


Figure 3. Typical Reverse Characteristics

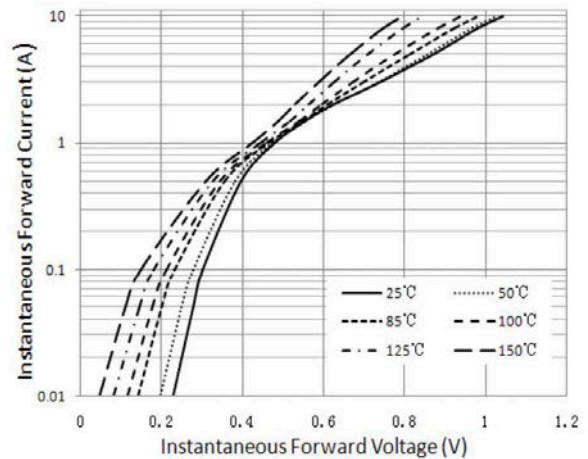


Figure 4. Typical Instantaneous Forward Characteristics

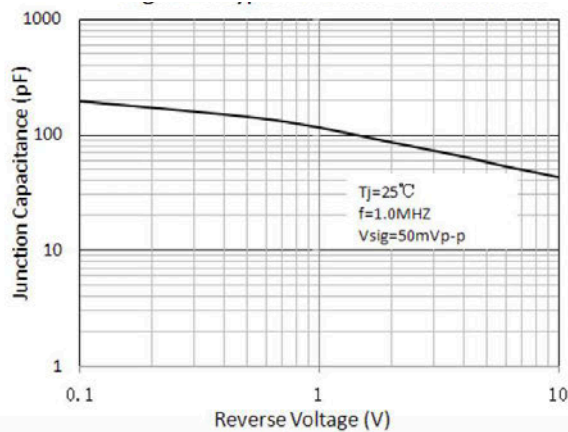
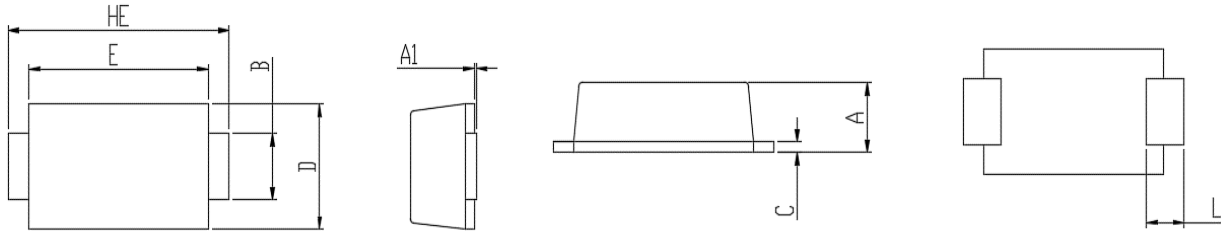


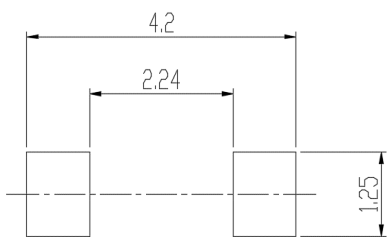
Figure 5. Typical Junction Capacitance

**Package Outline Dimensions eSGA (SOD-123FL)**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.080	0.035	0.043
A1	0.000	0.100	0.000	0.004
B	0.850	1.050	0.033	0.041
C	0.100	0.250	0.004	0.010
D	1.700	2.000	0.067	0.079
E	2.900	3.100	0.114	0.122
L	0.430	0.830	0.017	0.033
HE	3.500	3.900	0.138	0.154

**Recommended Pad Layout**



unit: mm