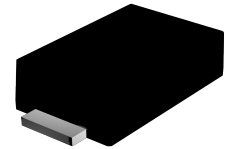


## Features

- Low profile - typical height of 1.0 mm
- 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



Package: 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<sub>A</sub> = 25°C unless otherwise noted)

| Parameter  | Symbol                            | FF1           | FF2 | FF3 | FF4 | FF5 | FF6 | FF7  | Unit |
|--|-----------------------------------|---------------|-----|-----|-----|-----|-----|------|------|
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>                  | 50            | 100 | 200 | 400 | 600 | 800 | 1000 | V    |
| Maximum RMS Voltage  | V <sub>RMS</sub>                  | 35            | 70  | 140 | 280 | 420 | 560 | 700  | V    |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                   | 50            | 100 | 200 | 400 | 600 | 800 | 1000 | V    |
| Maximum Average Forward Rectified Current  | I <sub>F(AV)</sub>                | 1.0           |     |     |     |     |     |      | A    |
| Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load | I <sub>FSM</sub>                  | 30            |     |     |     |     |     |      | A    |
| Operating Junction and Storage Temperature Range                                   | T <sub>J</sub> , T <sub>STG</sub> | - 55 to + 150 |     |     |     |     |     |      | °C   |

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

| Parameter   | Test Conditions   | Symbol           | FF1     | FF2 | FF3 | FF4 | FF5 | FF6 | FF7 | Unit  |
|---|---|------------------|---------|-----|-----|-----|-----|-----|-----|-------|
| Maximum Instantaneous Forward Voltage                   | 1 A   | V <sub>F</sub>   | 1.3     |     |     |     |     |     |     | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | T <sub>A</sub> =25°C<br>T <sub>A</sub> =125°C                         | I <sub>R</sub>   | 5<br>50 |     |     |     |     |     |     | µA    |
| Maximum Reverse Recovery Time                           | I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A,<br>I <sub>tr</sub> =0.25A | t <sub>rr</sub>  | 150     |     |     |     | 250 | 500 |     | nS    |
| Typical Junction Capacitance                            | 4.0 V, 1 MHz  | C <sub>J</sub>   | 8.2     |     |     |     |     |     |     | pF    |
| Typical Thermal Resistance <sup>1)</sup>                | junction to ambient   | R <sub>θJA</sub> | 76      |     |     |     |     |     |     | °C/W  |
|   | junction to case  | R <sub>θJC</sub> | 42      |     |     |     |     |     |     |       |
|   | junction to mount   | R <sub>θJM</sub> | 7       |     |     |     |     |     |     |       |

Note:1)The thermal resistance from junction to ambient,case or mount,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)

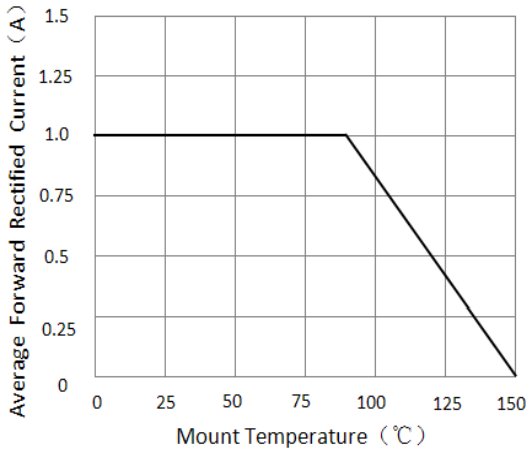


Figure 1. Forward Current Derating Curve

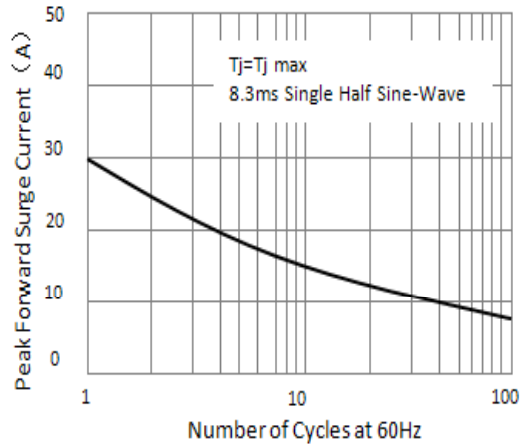


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

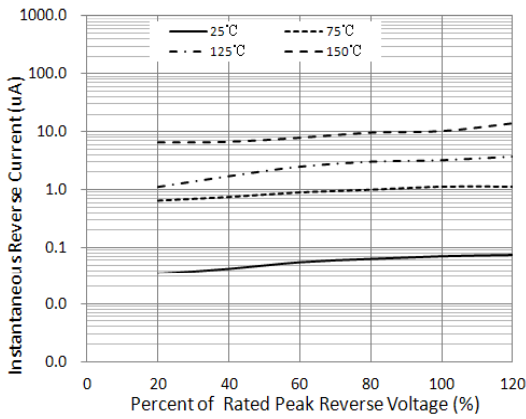


Figure 3. Typical Reverse Characteristics

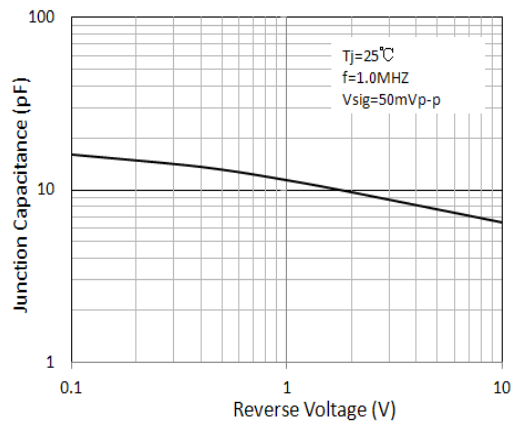


Figure 4. Typical Junction Capacitance

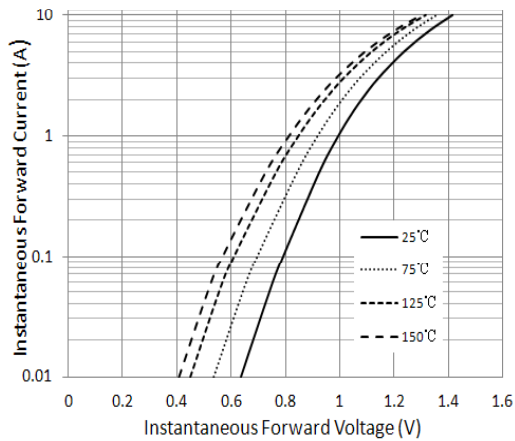
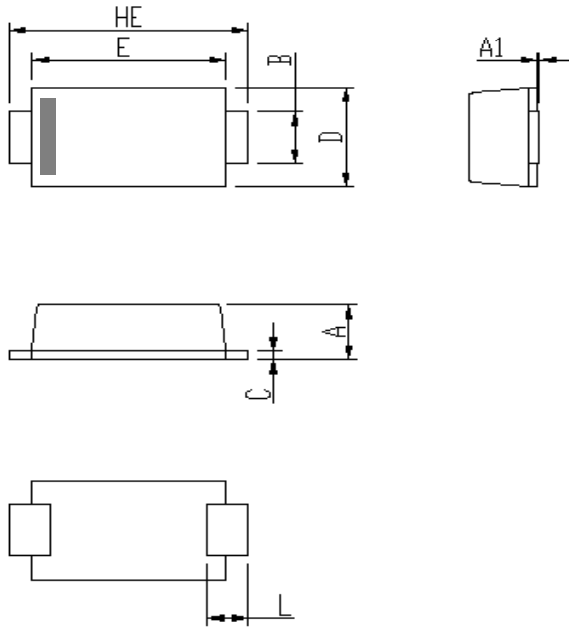


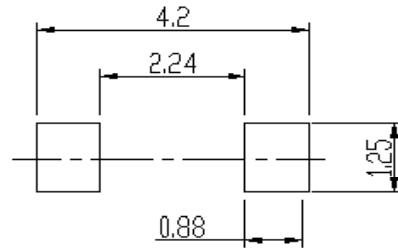
Figure 5. Typical Instantaneous Forward Characteristics

**Package Outline Dimensions**



| 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**

