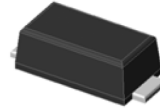


Features

- Glass passivated superfast recovery Rectifiers
- Very 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. For automotive customers only
- 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 (TA = 25 °C unless otherwise noted) | | | | | | | | |
|--|----------|---------------|------|------|------|------|------|----|
| Parameter | Symbol | AFU1 | AFU2 | AFU3 | AFU4 | AFU5 | Unit | |
| Maximum repetitive peak reverse voltage | VRRM | 50 | 100 | 200 | 400 | 600 | V | |
| Maximum RMS voltage | VRMS | 35 | 70 | 140 | 280 | 420 | V | |
| Maximum DC blocking voltage | VDC | 50 | 100 | 200 | 400 | 600 | V | |
| Maximum average forward rectified current | IF(AV) | 1 | | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | IFSM | 30 | | | | | | A |
| Operating junction and storage temperature range | TJ, TSTG | - 55 to + 150 | | | | | | °C |

| Electrical Characteristics (TA = 25 °C unless otherwise noted) | | | | | | | | |
|--|---|------------------|------|------|------|------|------|-------|
| Parameter | Test Conditions | Symbol | AFU1 | AFU2 | AFU3 | AFU4 | AFU5 | Unit |
| Maximum instantaneous forward voltage | 1 A | V _F | 0.95 | | | 1.3 | 1.7 | Volts |
| Maximum DC reverse current at rated DC blocking voltage | TA=25°C TA=125°C | I _R | 5.0 | | | | | µA |
| Maximum reverse recovery time | I _F =0.5A, I _R =1.0A, I _{rr} =0.25A | t _{rr} | 35 | | | | | nS |
| Typical junction capacitance | 4.0 V, 1 MHz | C _J | 0.75 | | | | | pF |
| Typical thermal resistance ¹⁾ | junction to ambient | R _{θJA} | 66 | | | | | °C/W |
| | junction to case | R _{θJC} | 32 | | | | | |
| | junction to mount | R _{θJM} | 1 | | | | | |

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

(TA = 25°C unless otherwise noted)

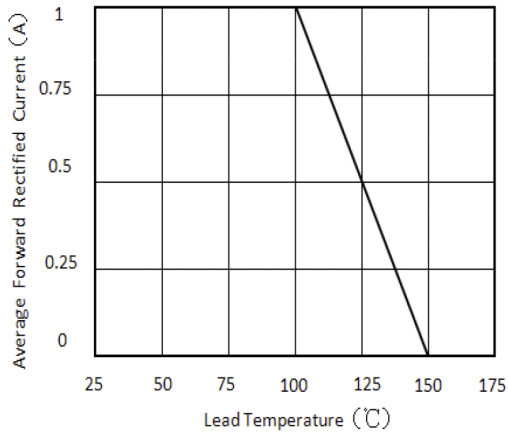


Figure 1. Forward Current Derating Curve

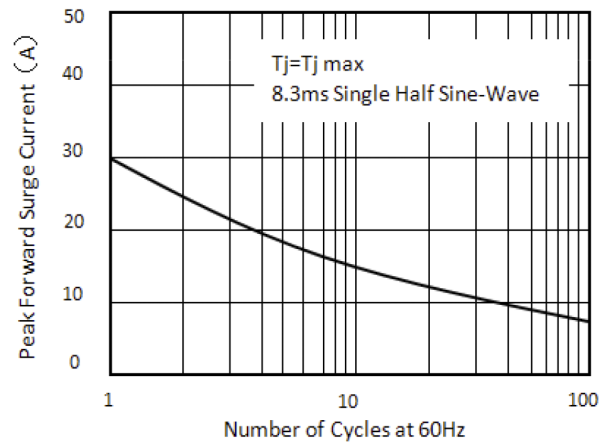


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

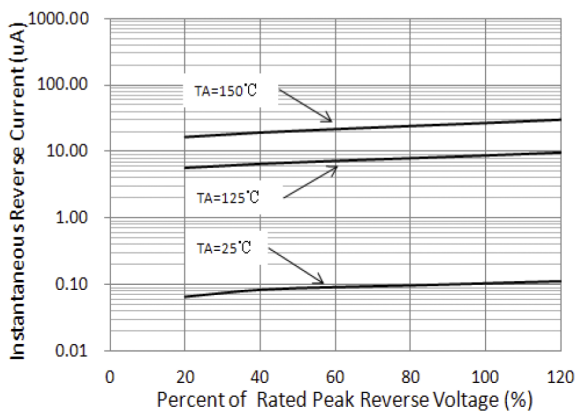


Figure 3. Typical Reverse Characteristics

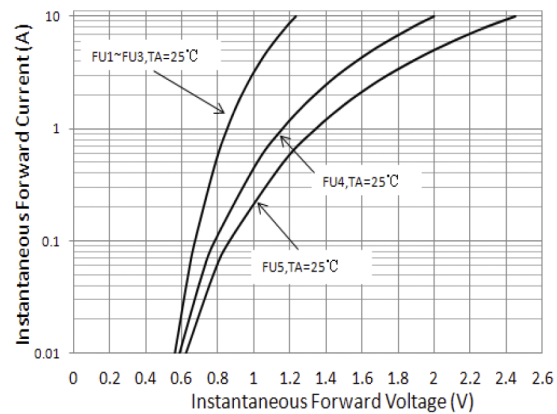


Figure 4. Typical Instantaneous Forward Characteristics

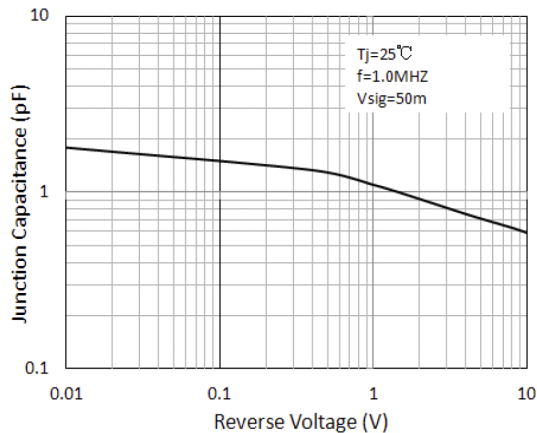
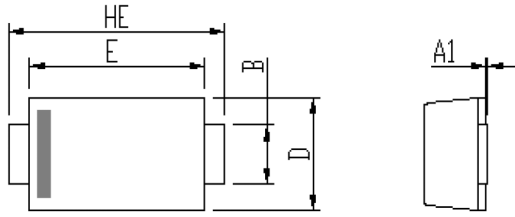


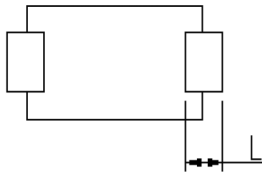
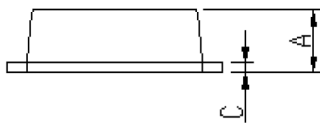
Figure 5. Typical Junction Capacitance

Package Outline Dimensions

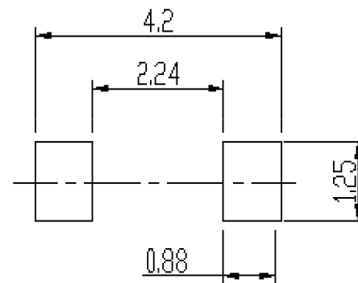
in inches (millimeters)



| 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



Packing Information

Packing quantities:

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

Tape & Reel Specification

