

FR107DGW-HAF

Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 1000 V

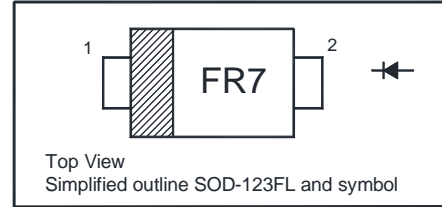
Forward Current - 1 A

Features

- Halogen and Antimony Free(HAF), RoHS compliant

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter | Symbols | Value | Units |
|---|----------------|---------------|---------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 1000 | V |
| Maximum Average Forward Rectified Current at $T_a = 65^\circ\text{C}$ | $I_{F(AV)}$ | 1 | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 30 | A |
| Maximum Instantaneous Forward Voltage at 1 A | V_F | 1.3 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 5 50 | μA |
| | | | |
| Maximum Reverse Recovery Time ¹⁾ | t_{rr} | 500 | ns |
| Typical Junction Capacitance ²⁾ | C_j | 15 | pF |
| Operating and Storage Temperature Range | T_j, T_{stg} | - 55 to + 125 | °C |

¹⁾ Measured with $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$

²⁾ Measured at 1MHz and applied reverse voltage of 4V D.C

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Figure 1. Forward Current Derating Curve

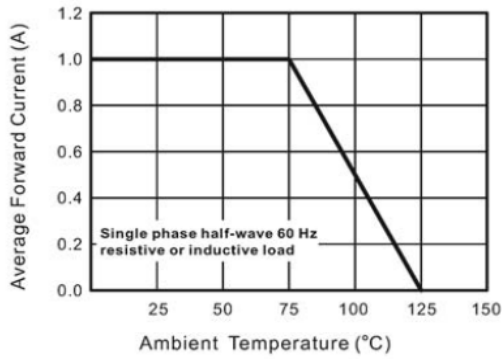


Fig.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

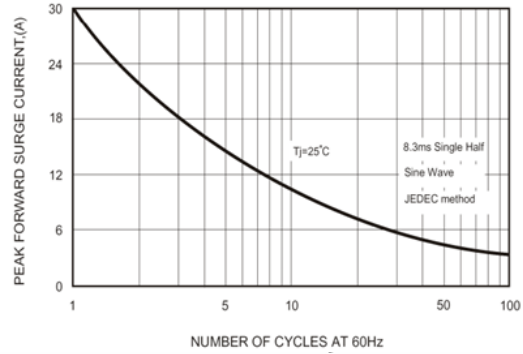


Fig.3 Typical Instantaneous Forward Characteristics

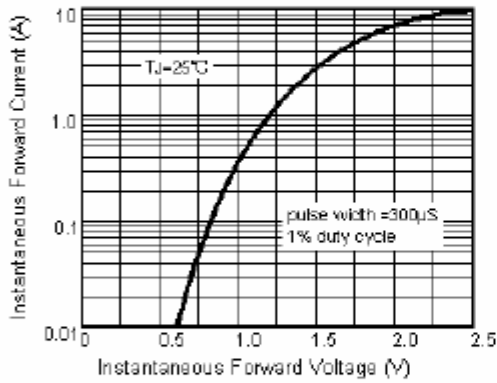


Fig.4 Typical Reverse Characteristics

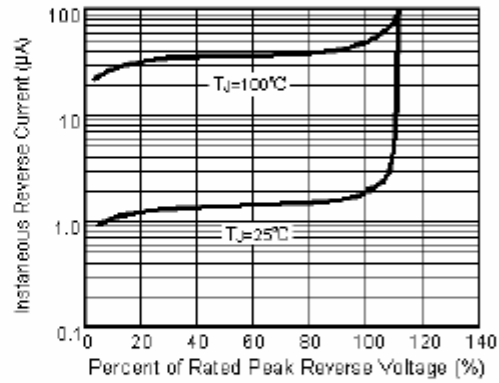
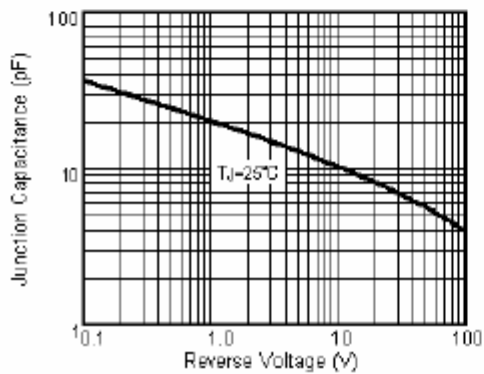


Fig.5 Typical Junction Capacitance

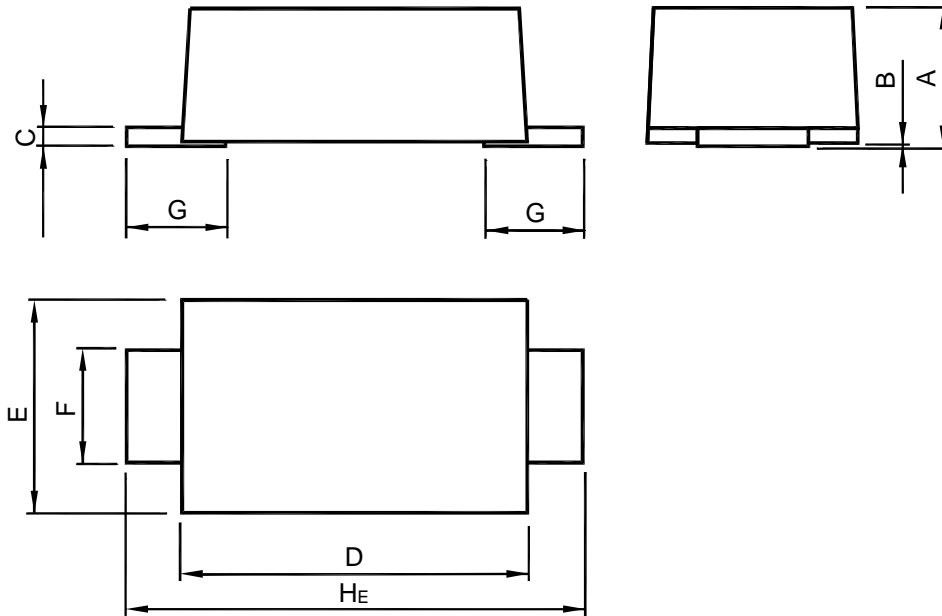


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PACKAGE OUTLINE

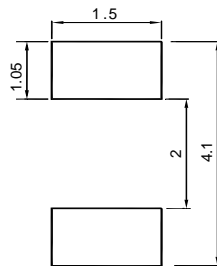
Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT | A | B | C | D | E | F | G | H _E |
|------|--------------|----------|------------|------------|------------|------------|------------|----------------|
| mm | 1.08 0.88 | 0.1 0 | 0.2 0.1 | 2.9 2.6 | 1.9 1.7 | 1.1 0.8 | 0.9 0.7 | 3.9 3.5 |

Recommended Soldering Footprint



Packing information

| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|-----------|-----------------|---------|---------------|-----------|------|---------------------------|
| | | mm | inch | mm | inch | |
| SOD-123FL | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

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