

# 1N4007W-13-HAF

## Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 1000 V

Forward Current - 1 A

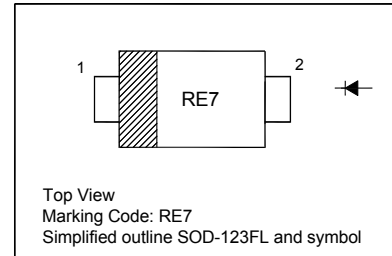
### Features

- Halogen and Antimony Free(HAF), RoHS compliant

Note: Part number suffix: "-13" - 13 inch reel

### 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         | 1N4007W       | 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) | $I_{FSM}$       | 25            | A                  |
| Maximum Instantaneous Forward Voltage at 1 A  | $V_F$           | 1.1           | V                  |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | $I_R$           | 5<br>50       | $\mu\text{A}$      |
| Typical Junction Capacitance <sup>1)</sup>  | $C_j$           | 4             | pF                 |
| Typical Thermal Resistance <sup>2)</sup>  | $R_{\theta JA}$ | 180           | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range   | $T_j, T_{stg}$  | - 55 to + 150 | $^\circ\text{C}$   |

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V D.C.

<sup>2)</sup> Thermal resistance from junction to ambient at FR-4 Epoxy PCB with copper mounting pad area of 2.2 mm<sup>2</sup>.

**TOP DYNAMIC**

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

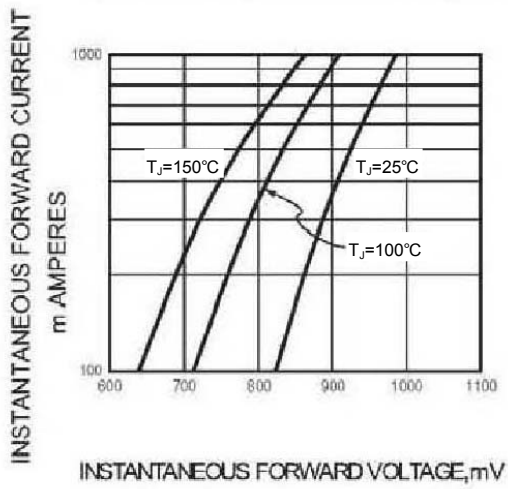


FIG.2 – TYPICAL JUNCTION CAPACITANCE

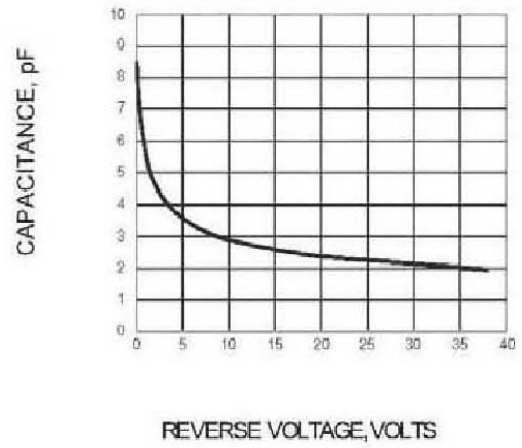


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

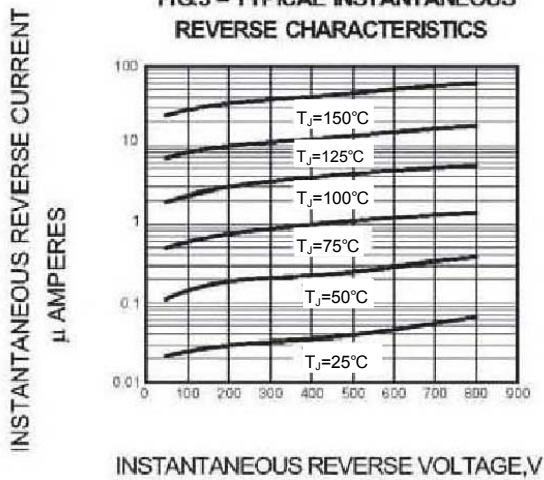
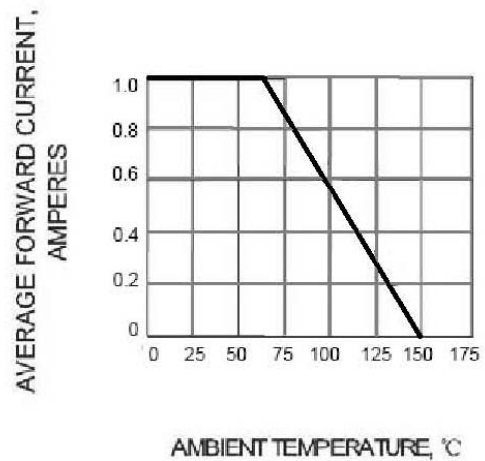


FIG.4 – FORWARD DERATING CURVE

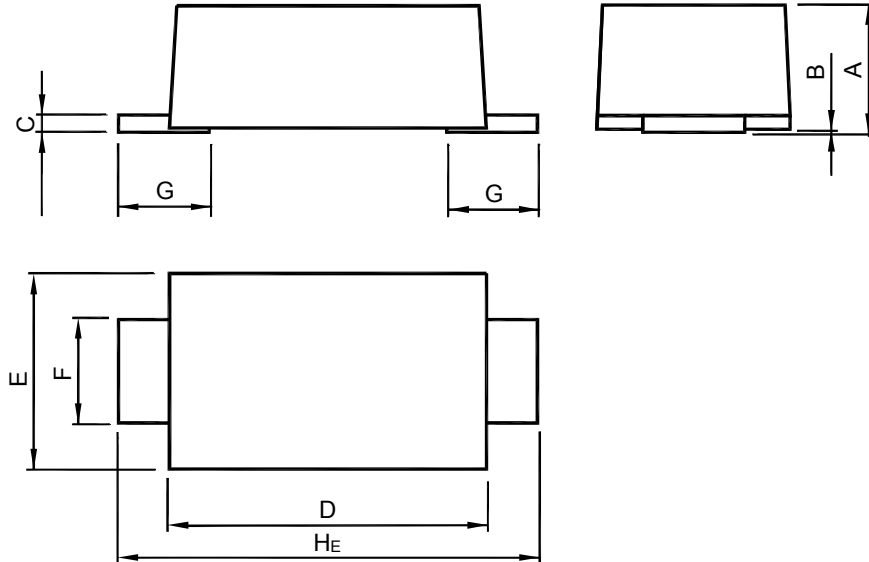


# 1N4007W-13-HAF

## PACKAGE OUTLINE

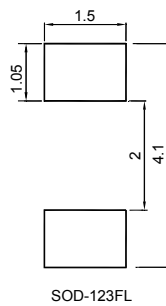
Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT | A    | B   | C   | D   | E   | F   | G   | H <sub>E</sub> |
|------|------|-----|-----|-----|-----|-----|-----|----------------|
| mm   | 1.08 | 0.1 | 0.2 | 2.9 | 1.9 | 1.1 | 0.9 | 3.9            |
|      | 0.88 | 0   | 0.1 | 2.6 | 1.7 | 0.8 | 0.7 | 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 | 330       | 13   | 10,000                    |

**TOP DYNAMIC**