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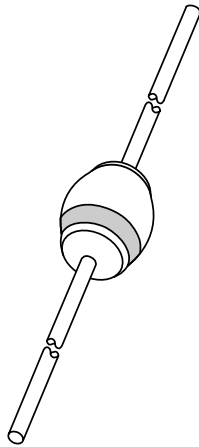
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Jameco Part Number 36012PHILIPS

# DATA SHEET



## **1N4001G to 1N4007G** **Rectifiers**

Product specification  
Supersedes data of April 1992

1996 May 24

# Rectifiers

# 1N4001G to 1N4007G

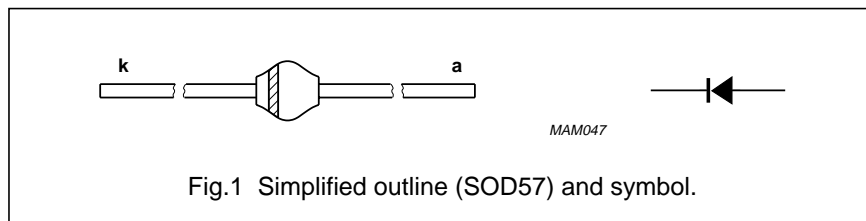
### FEATURES

- Glass passivated
- High maximum operating temperature
- Low leakage current
- Excellent stability
- Available in ammo-pack.

### DESCRIPTION

Rugged glass package, using a high temperature alloyed construction.

This package is hermetically sealed and fatigue free as coefficients of expansion of all used parts are matched.



### LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

| SYMBOL             | PARAMETER                           | CONDITIONS   | MIN. | MAX.        | UNIT |
|--------------------|-------------------------------------|--|------|-------------|------|
| V <sub>RRM</sub>   | repetitive peak reverse voltage     |  |      |             |      |
|                    | 1N4001G                             |  | –    | 50          | V    |
|                    | 1N4002G                             |  | –    | 100         | V    |
|                    | 1N4003G                             |  | –    | 200         | V    |
|                    | 1N4004G                             |  | –    | 400         | V    |
|                    | 1N4005G                             |  | –    | 600         | V    |
|                    | 1N4006G<br>1N4007G                  |  | –    | 800<br>1000 | V    |
| V <sub>R</sub>     | continuous reverse voltage          |  |      |             |      |
|                    | 1N4001G                             |  | –    | 50          | V    |
|                    | 1N4002G                             |  | –    | 100         | V    |
|                    | 1N4003G                             |  | –    | 200         | V    |
|                    | 1N4004G                             |  | –    | 400         | V    |
|                    | 1N4005G                             |  | –    | 600         | V    |
|                    | 1N4006G<br>1N4007G                  |  | –    | 800<br>1000 | V    |
| I <sub>F(AV)</sub> | average forward current             | averaged over any 20 ms period; T <sub>amb</sub> = 75 °C; see Fig.2  | –    | 1.00        | A    |
|                    |                                     | averaged over any 20 ms period; T <sub>amb</sub> = 100 °C; see Fig.2 | –    | 0.75        | A    |
| I <sub>F</sub>     | continuous forward current          | T <sub>amb</sub> = 75 °C; see Fig.2                                  | –    | 1.00        | A    |
| I <sub>FRM</sub>   | repetitive peak forward current     |  | –    | 10          | A    |
| I <sub>FSM</sub>   | non-repetitive peak forward current | half sinewave; 60 Hz   | –    | 30          | A    |
| T <sub>stg</sub>   | storage temperature                 |  | –65  | +175        | °C   |
| T <sub>j</sub>     | junction temperature                |  | –65  | +175        | °C   |

## Rectifiers

## 1N4001G to 1N4007G

**ELECTRICAL CHARACTERISTICS**

$T_j = 25\text{ }^\circ\text{C}$ ; unless otherwise specified.

| SYMBOL      | PARAMETER                          | CONDITIONS  | MAX. | UNIT          |
|-------------|------------------------------------|---|------|---------------|
| $V_F$       | forward voltage                    | $I_F = 1\text{ A}$ ; see Fig.3                            | 1.1  | V             |
| $V_{F(AV)}$ | full-cycle average forward voltage | $I_{F(AV)} = 1\text{ A}$                                  | 0.8  | V             |
| $I_R$       | reverse current                    | $V_R = V_{Rmax}$  | 10   | $\mu\text{A}$ |
|             |                                    | $V_R = V_{Rmax}$ ; $T_{amb} = 100\text{ }^\circ\text{C}$  | 50   | $\mu\text{A}$ |
| $I_{R(AV)}$ | full-cycle average reverse current | $V_R = V_{RRMmax}$ ; $T_{amb} = 75\text{ }^\circ\text{C}$ | 30   | $\mu\text{A}$ |

**THERMAL CHARACTERISTICS**

| SYMBOL         | PARAMETER                                     | CONDITIONS          | VALUE | UNIT |
|----------------|---|---------------------|-------|------|
| $R_{th\ j-tp}$ | thermal resistance from junction to tie-point | lead length = 10 mm | 46    | K/W  |
| $R_{th\ j-a}$  | thermal resistance from junction to ambient   | note 1              | 100   | K/W  |

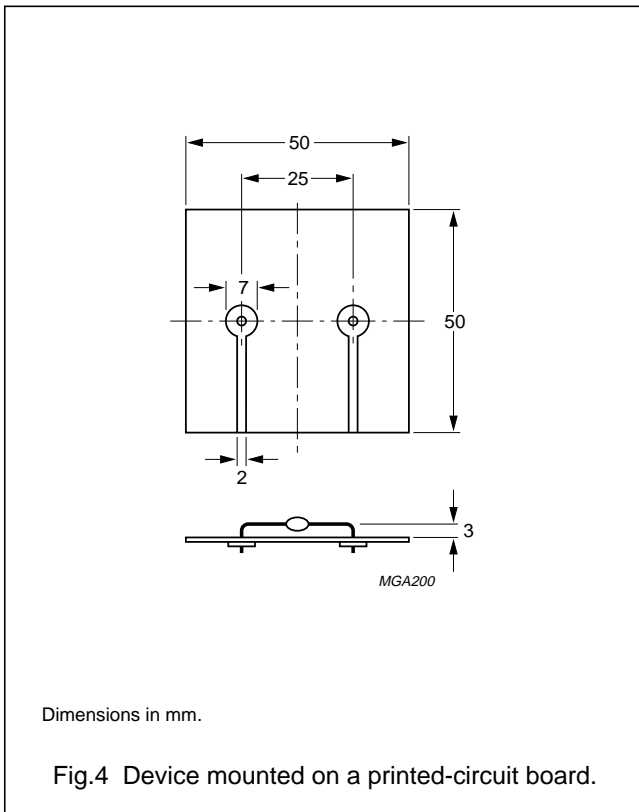
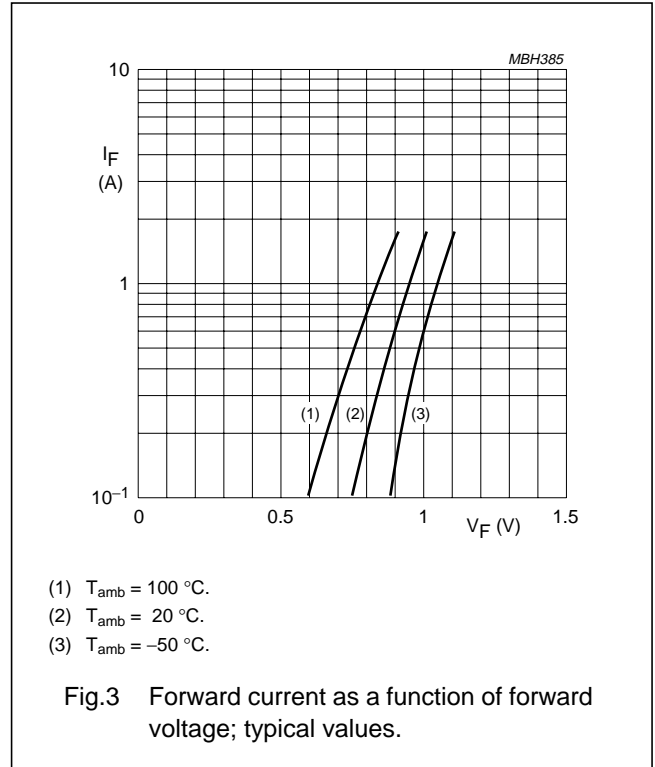
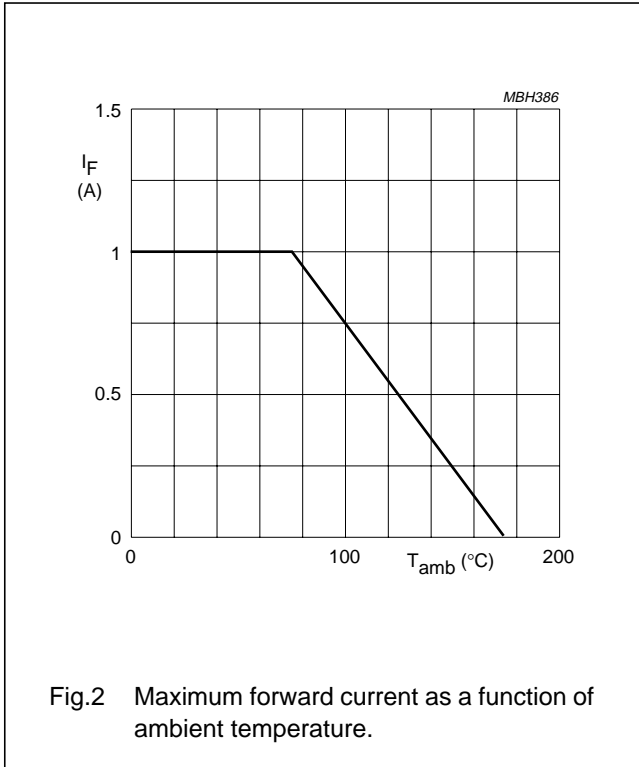
**Note**

1. Device mounted on epoxy-glass printed-circuit board, 1.5 mm thick; thickness of copper  $\geq 40\text{ }\mu\text{m}$ , see Fig.4. For more information please refer to the "General Part of associated Handbook".

Rectifiers

1N4001G to 1N4007G

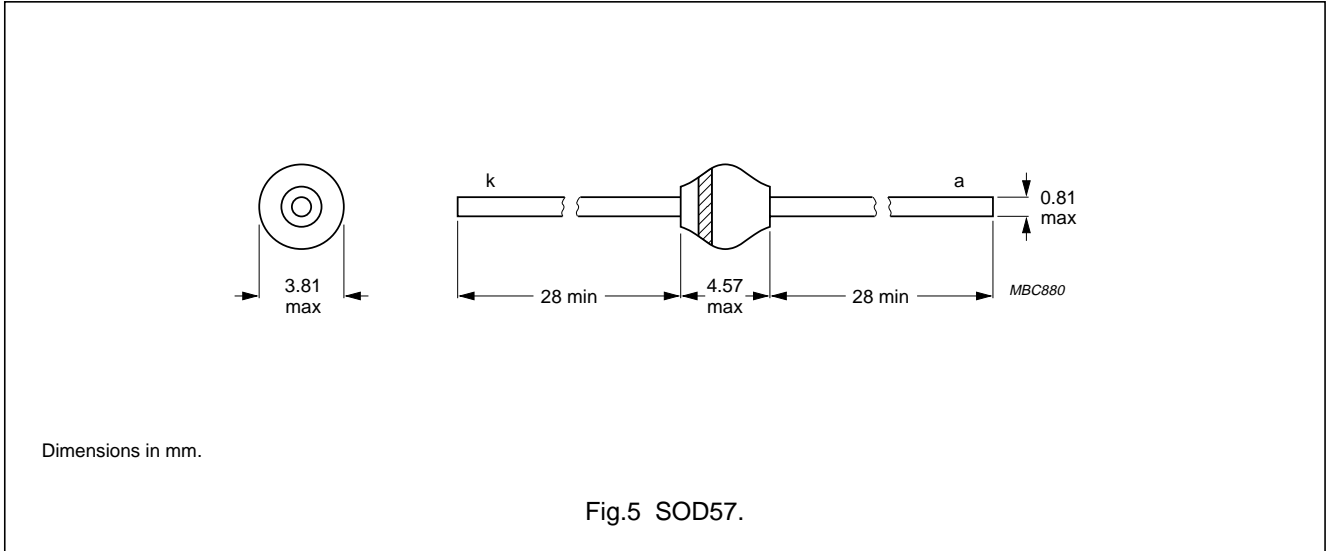
GRAPHICAL DATA



Rectifiers

1N4001G to 1N4007G

PACKAGE OUTLINE



DEFINITIONS

|   |   |
|---|---|
| <b>Data sheet status</b>  |   |
| Objective specification   | This data sheet contains target or goal specifications for product development.       |
| Preliminary specification   | This data sheet contains preliminary data; supplementary data may be published later. |
| Product specification   | This data sheet contains final product specifications.                                |
| <b>Limiting values</b>  |   |
| Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability. |   |
| <b>Application information</b>  |   |
| Where application information is given, it is advisory and does not form part of the specification.   |   |

LIFE SUPPORT APPLICATIONS

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