

# 1N4001G~1N4007G

Rev.B Sep.-2025

## 描述 / Descriptions

通用硅整流器，反向电压：50V~1000V，正向电流：1.0A，轴向 DO-41 封装。

General purpose silicon rectifier, Reverse Voltage: 50 to1000V, Forward Current: 1.0A, DO-41 axial package.

## 特征 / Features

电镀轴向引脚，反向泄漏低，高正向浪涌电流能力。

Plated axial lead, Low reverse leakage, High forward surge current capability.

## 用途 / Applications

一般用途。

General purpose.

## 内部等效电路 / Equivalent Circuit



## 引脚排列 / Pinning



PIN1: Cathode PIN2:Anode

## 印章代码 / Marking

见印章说明。

See Marking Instructions.

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## 极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数<br>Parameter                                                                                  | 符号<br>Symbol    | 数值<br>Rating |         |         |         |         |         |         | 单位<br>Unit                |
|--------------------------------------------------------------------------------------------------|-----------------|--------------|---------|---------|---------|---------|---------|---------|---------------------------|
|                                                                                                  |                 | 1N4001G      | 1N4002G | 1N4003G | 1N4004G | 1N4005G | 1N4006G | 1N4007G |                           |
| Maximum Recurrent Peak Reverse Voltage                                                           | $V_{RRM}$       | 50           | 100     | 200     | 400     | 600     | 800     | 1000    | V                         |
| Maximum RMS Voltage                                                                              | $V_{RMS}$       | 35           | 70      | 140     | 280     | 420     | 560     | 700     | V                         |
| Maximum DC Blocking Voltage                                                                      | $V_{DC}$        | 50           | 100     | 200     | 400     | 600     | 800     | 1000    | V                         |
| Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_A=75^\circ\text{C}$    | $I_{F(AV)}$     | 1.0          |         |         |         |         |         |         | A                         |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 30.0         |         |         |         |         |         |         | A                         |
| Typical Junction Capacitance <sup>1)</sup>                                                       | $C_j$           | 15.0         |         |         |         |         |         |         | pF                        |
| Typical Thermal Resistance <sup>2)</sup>                                                         | $R_{\theta JA}$ | 50.0         |         |         |         |         |         |         | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range                                                          | $T_j, T_{stg}$  | -55~+150     |         |         |         |         |         |         | $^\circ\text{C}$          |

Note:

1) Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2) Thermal resistance from junction to ambient at 0.375" (9.5mm)lead length,P.C.B. mounted.

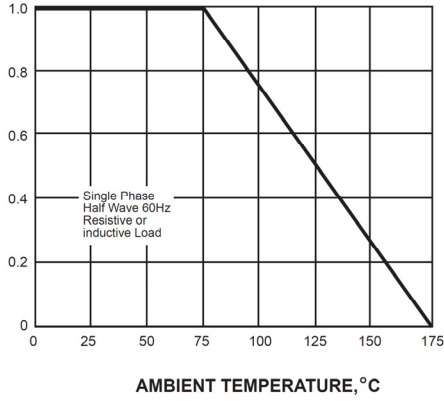
## 电性能参数 / Electrical Characteristics(Ta=25°C)

| 参数<br>Parameter                                           | 符号<br>Symbol | 测试条件<br>Test Conditions | 数值<br>Rating |         |         |         |         |         |         | 单位<br>Unit    |
|-----------------------------------------------------------|--------------|-------------------------|--------------|---------|---------|---------|---------|---------|---------|---------------|
|                                                           |              |                         | 1N4001G      | 1N4002G | 1N4003G | 1N4004G | 1N4005G | 1N4006G | 1N4007G |               |
| Maximum Instantaneous Forward Voltage                     | $V_F$        | $I_F=1.0\text{A}$       | 1.1          |         |         |         |         |         |         | V             |
| Maximum DC Reverse Current at Maximum DC Blocking Voltage | $I_R$        | $T_A=25^\circ\text{C}$  | 5.0          |         |         |         |         |         |         | $\mu\text{A}$ |
|                                                           |              | $T_A=125^\circ\text{C}$ | 50.0         |         |         |         |         |         |         | $\mu\text{A}$ |

电参数曲线图 / Electrical Characteristic Curve

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

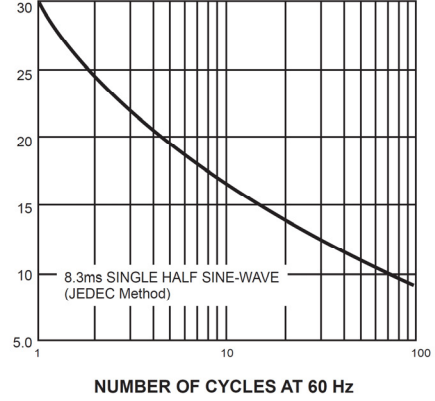
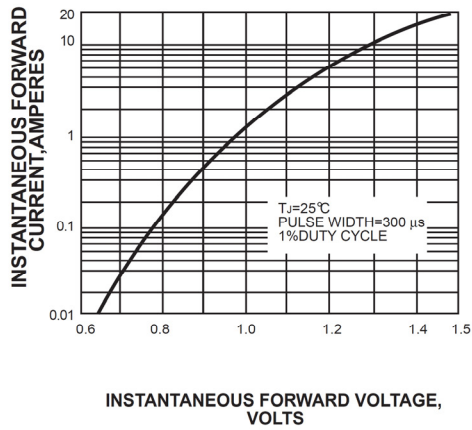


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

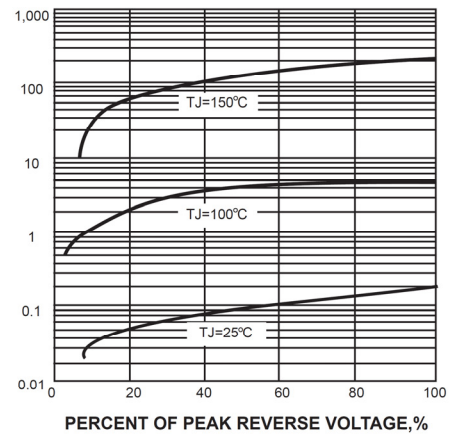
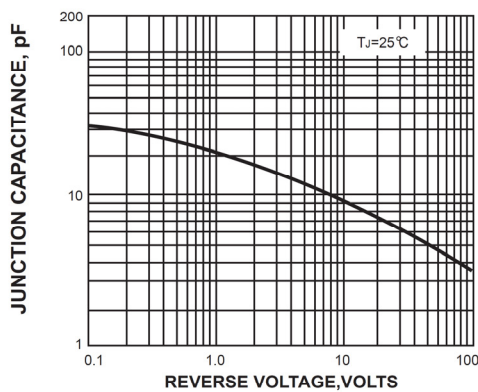
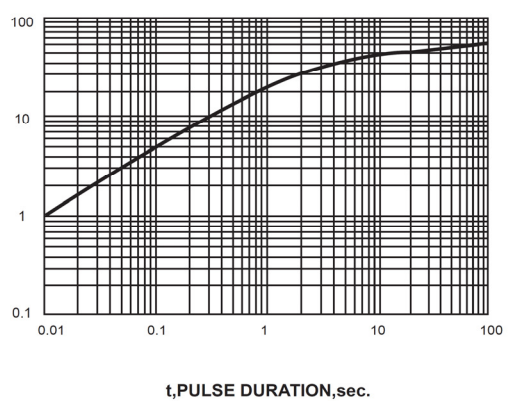


FIG. 5-TYPICAL JUNCTION CAPACITANCE



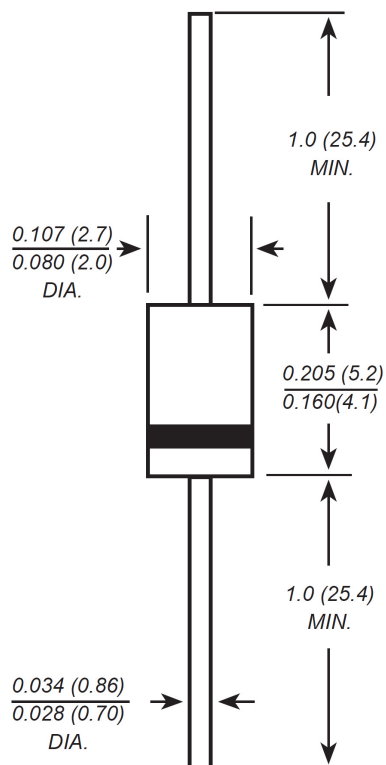
TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



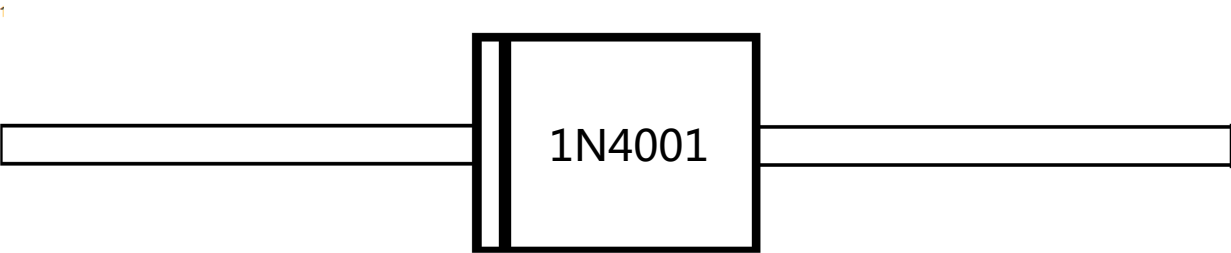
外形尺寸图 / Package Dimensions

# DO-41



Dimensions in inches and (millimeters)

印章说明 / Marking Instructions



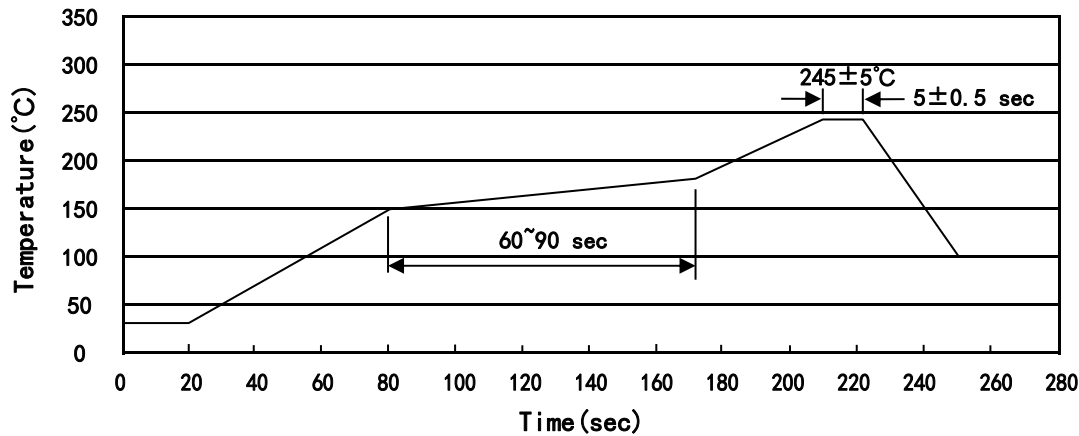
说明：  
1N4001：为型号代码

Note:  
1N4001：Product Type Code

Marking

| Type number | Marking code |
|-------------|--------------|
| 1N4001G     | 1N4001       |
| 1N4002G     | 1N4002       |
| 1N4003G     | 1N4003       |
| 1N4004G     | 1N4004       |
| 1N4005G     | 1N4005       |
| 1N4006G     | 1N4006       |
| 1N4007G     | 1N4007       |

## 回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150~180°C，时间 60~90sec；
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec；
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

## 耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

## 包装规格 / Packaging SPEC.

卷盘包装 / REEL

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| DO-41                | 3,000              | 1                       | 3,000                  | 10                           | 30,000                 | 7" ×6                                   | 262×72×90   | 425×270×200 |

## 使用说明 / Notices