

# 1N4001G thru 1N4008G

**General Purpose Plastic Rectifiers**  
**Reverse Voltage 50 to 1200V Forward Current 1.0A**

## Feature & Dimensions

- \* Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- \* Construction utilizes void-free molded plastic technique
- \* Low reverse leakage
- \* High forward surge capability
- \* Glass passivated chip
- \* High temperature soldering guaranteed:  
260°C/10 seconds
- \* 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

## Mechanical Data

**Case:** JEDEC DO-41, molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

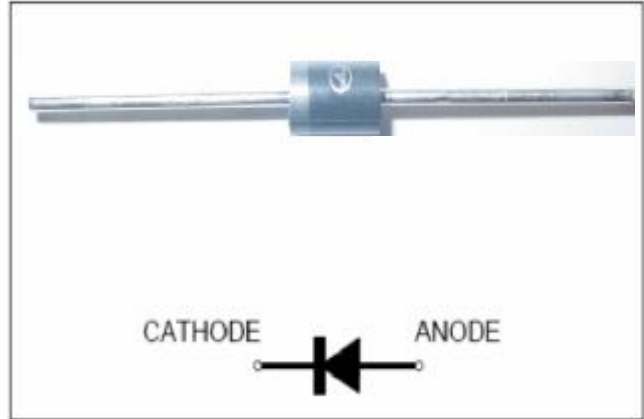
**Weight:** 0.011 oz., 0.284 g

**Handling precaution:** None

## Electrical Characteristic

### 1. Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol                                                                                               | symbol          | 1N4 001G    | 1N4 002G | 1N4 003G | 1N4 004G | 1N4 005G | 1N4 006G | 1N4 007G | 1N4 008G | Unit               |
|----------------------------------------------------------------------------------------------------------------|-----------------|-------------|----------|----------|----------|----------|----------|----------|----------|--------------------|
| Maximum repetitive peak reverse voltage                                                                        | $V_{RRM}$       | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | 1200     | V                  |
| Maximum RSM voltage                                                                                            | $V_{RSM}$       | 35          | 70       | 140      | 280      | 420      | 560      | 700      | 840      | V                  |
| Maximum DC blocking voltage                                                                                    | $V_{DC}$        | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | 1200     | 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          |          |          |          |          |          |          |          | A                  |
| Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths at $T_A = 75^\circ\text{C}$ | $I_R(AV)$       | 30          |          |          |          |          |          |          |          | $\mu\text{A}$      |
| Typical thermal resistance (Note 1)                                                                            | $R_{\theta JA}$ | 50          |          |          |          |          |          |          |          | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range                                                               | $T_J, T_{STG}$  | -50 to +150 |          |          |          |          |          |          |          | $^\circ\text{C}$   |



We declare that the material of product compliance with ROHS requirements

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol                                                                                              | symbol | 1N4 001G  | 1N4 002G | 1N4 003G | 1N4 004G | 1N4 005G | 1N4 006G | 1N4 007G | 1N4 008G | Unit          |
|---------------------------------------------------------------------------------------------------------------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|---------------|
| Maximum instantaneous forward voltage at 1.0A                                                                 | $V_F$  | 1.10      |          |          |          |          |          |          |          | V             |
| Maximum DC reverse current $T_A = 25^\circ\text{C}$<br>at rated DC blocking voltage $T_A = 125^\circ\text{C}$ | $I_R$  | 5.0<br>50 |          |          |          |          |          |          |          | $\mu\text{A}$ |
| Typical junction capacitance at 4.0V, 1MHz                                                                    | $C_J$  | 15        |          |          |          |          |          |          |          | PF            |

NOTES:

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

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## 2. Characteristic Curves ( TA = 25°C unless otherwise noted )

Fig. 1 - Forward Current Derating Curve

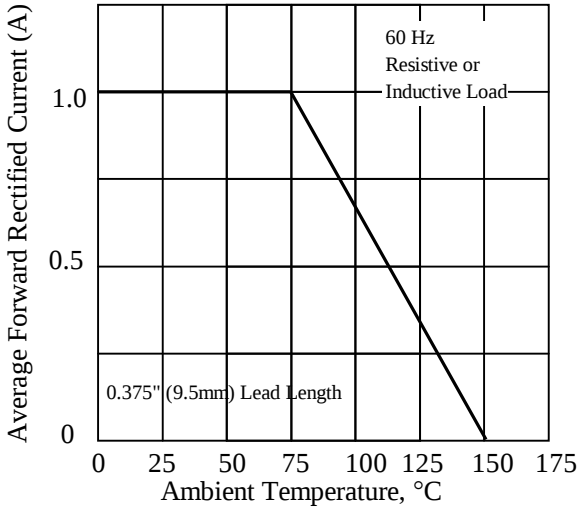


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

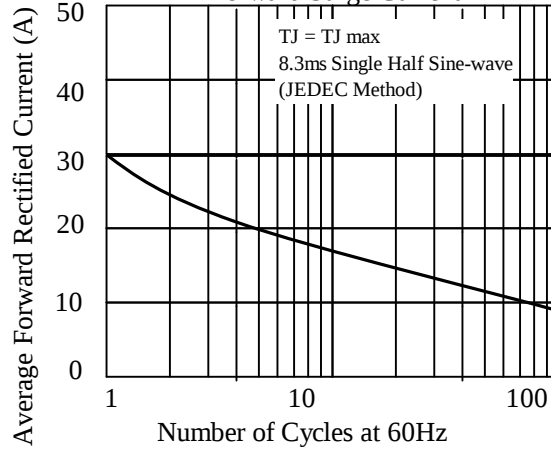


Fig 3. - Typical Instantaneous Forward Characteristics

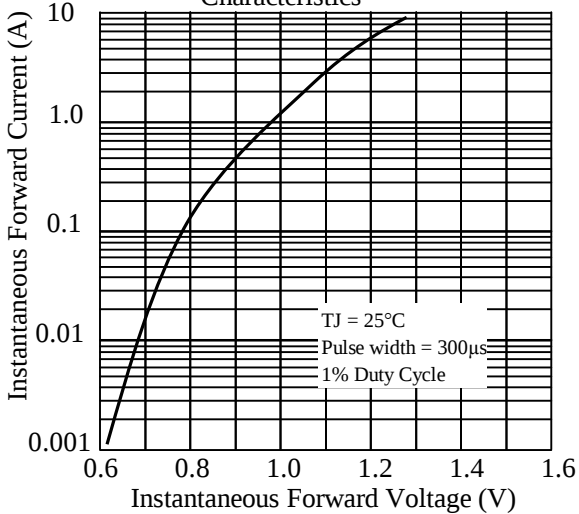


Fig 4. - Typical Reverse Characteristics

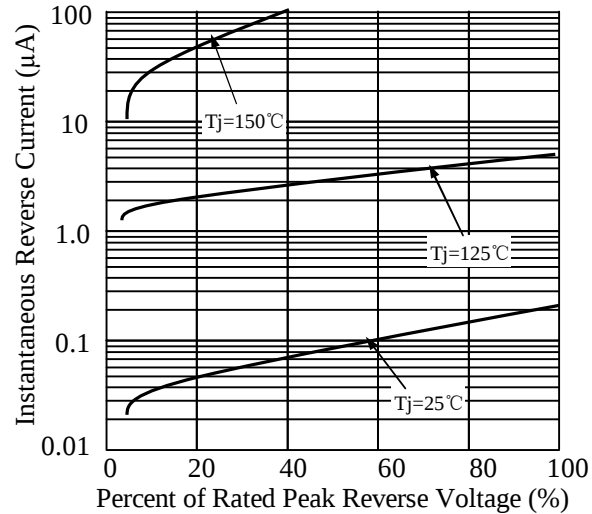


Fig 5. - typical transient thermal impedance

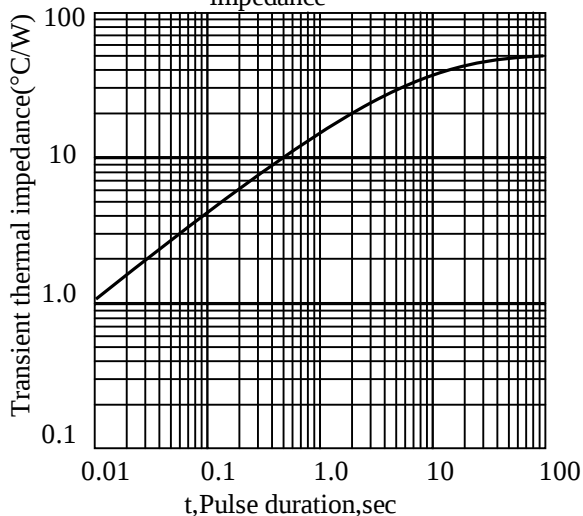
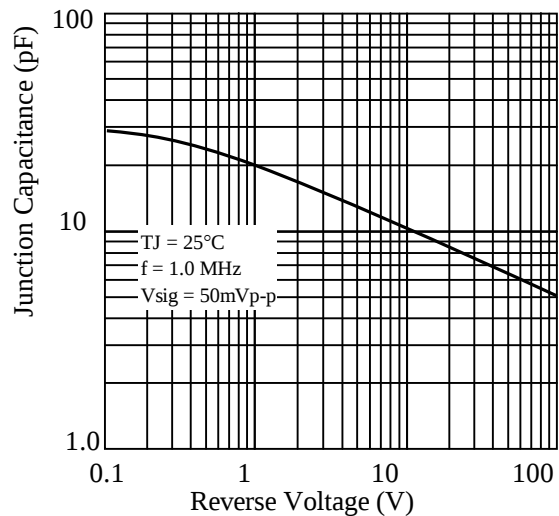
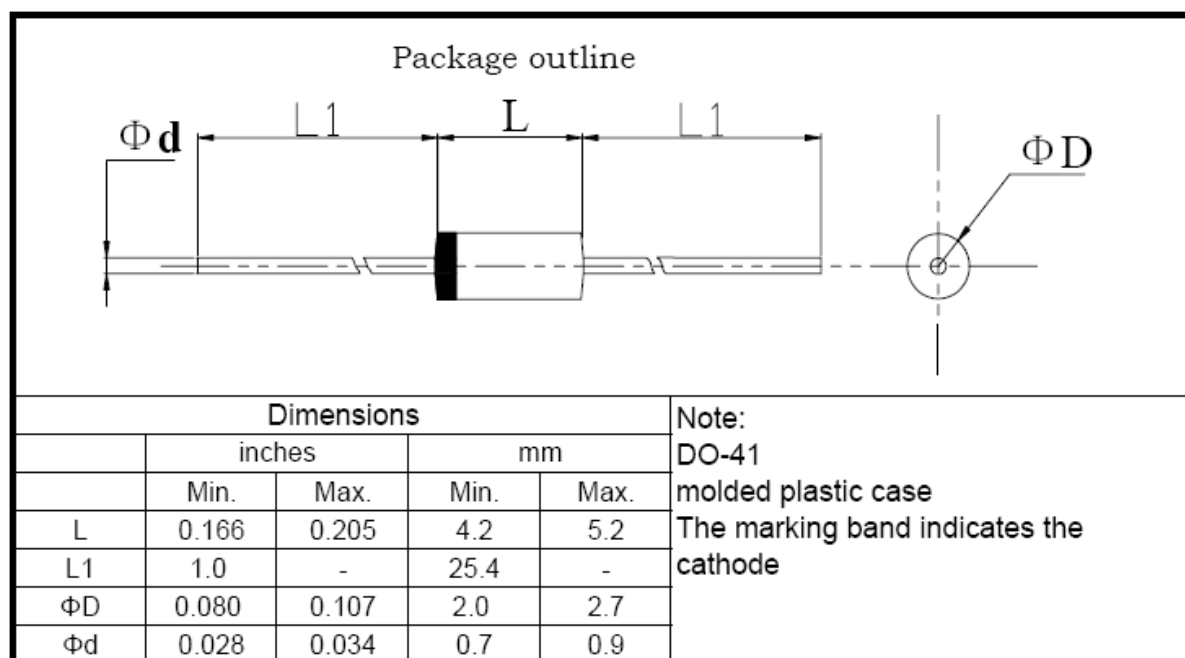


Fig 6. - Typical Junction Capacitance



## 1N4001G thru 1N4008G

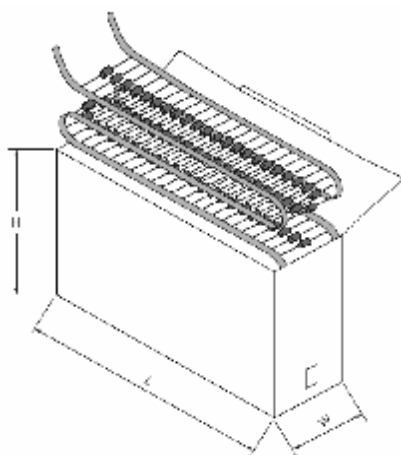
### 3. dimension:



|                          |                  |
|--------------------------|------------------|
| 标题：<br><br>塑封生产线轴向产品包装规范 | 文件编号： WI-250     |
|                          | 第 4 版    第 0 次修改 |
|                          | 第 1 页            |

1 弹带盒装 ammo and box

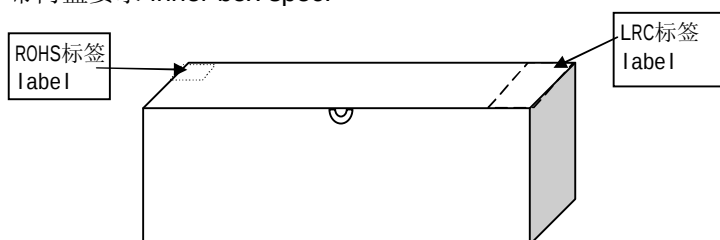
1.1. 弹带盒规格 ammo spec.



单位：mm

|     | L     | W    | H    |
|-----|-------|------|------|
| T52 | 262±2 | 76±2 | 90±2 |
| T42 | 262±2 | 64±2 | 90±2 |
| T26 | 250±3 | 45±3 | 95±3 |

1.2 弹带内盒要求 inner box spec.



|                             |               |
|-----------------------------|---------------|
| 标题:<br><b>塑封生产线轴向产品包装规范</b> | 文件编号: WI-250  |
|                             | 第 4 版 第 0 次修改 |
|                             | 第 2 页         |

#### 1.4 标签要求 label spec.

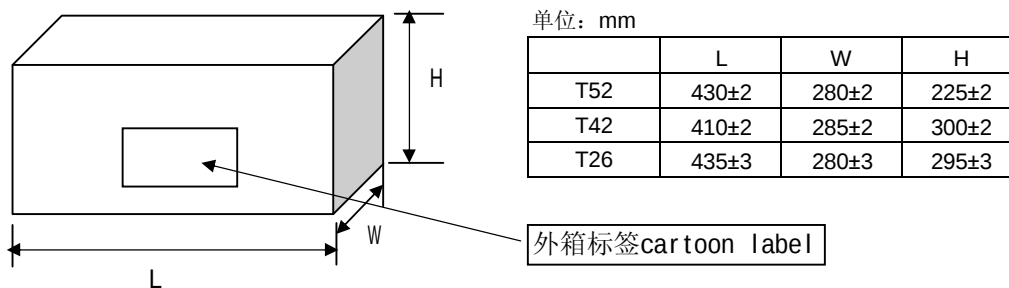
##### 1.4.1 LRC标签 LRC label

|                                |       |                                   |
|--------------------------------|-------|-----------------------------------|
| 成型<br>FORMING                  | ***** | ← 成型规格 forming spec.              |
| 型号<br>TYPE                     | ***** | ← LRC产品型号 type                    |
| 重复峰压 (V)<br>PRV (V)            | ****  | ← 产品重复峰压值 peak repetitive voltage |
| 额定电流 (A)<br>I <sub>o</sub> (A) | **    | ← 产品额定电流值 average output current  |
| 数量 (只)<br>QTY (pcs)            | ****  | ← 产品数量 quantity                   |
| 检验员<br>CHECKER                 | 02    |                                   |
| 日期:<br>DATE:                   | ***** | ← 产品生产日期 date                     |

##### 1.4.2 环保标签 environmental protection label



#### 2. 外箱规格 cartoon spec.



#### 3 按以上包装方式, 编带数量和外包装箱产品数量: typing and cartoon spec.

|                                  | 塑封外型                |       |                      |          |
|----------------------------------|---------------------|-------|----------------------|----------|
|                                  | A-405 & DO-41 & R-1 | R-3   | DO-15                | DO-201AD |
| 每根编带数量<br>quantity/ammo          | 3K                  | 1.8K  | 2K(T52)<br>1.8K(T26) | 0.8K     |
| 外箱数量 (T52编带)<br>quantity/cartoon | 30K                 | 18K   | 20K                  | 8.0K     |
| 外箱数量 (T26编带)<br>quantity/cartoon | 60K                 | 36K   | 36K                  | -        |
| 外箱数量 (T42编带)<br>quantity/cartoon | 54K                 | 32.4K | 36K                  | -        |

标题:

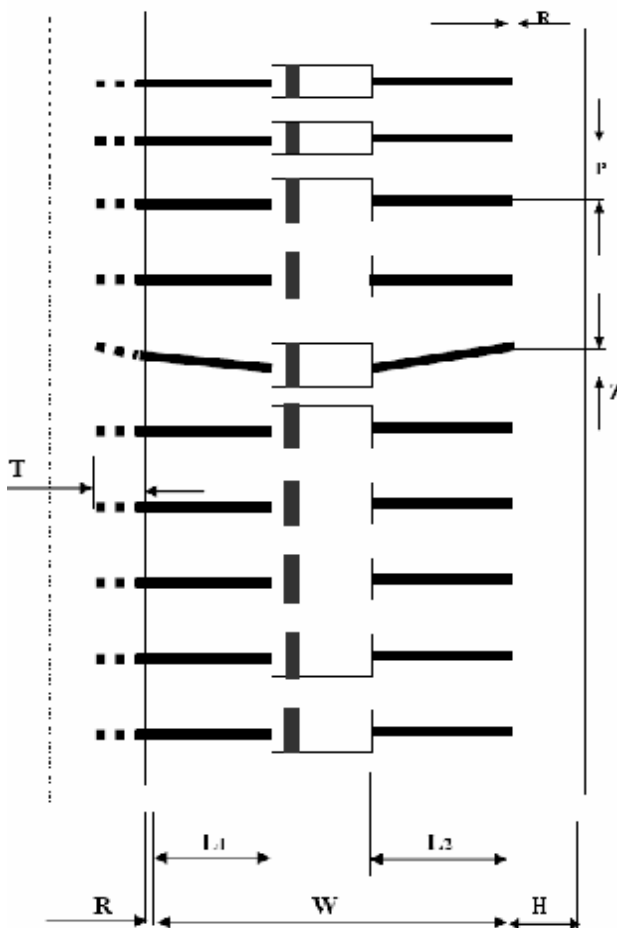
塑封生产线轴向产品包装规范

文件编号: WI-250

第 4 版 第 0 次修改

第 3 页

#### 4 编带规格 brede spec



| 尺寸代号  | 编带尺寸 typing dimension |              |              |              |              |              |
|-------|-----------------------|--------------|--------------|--------------|--------------|--------------|
|       | 26/tape               | 35/tape      | 40/tape      | 42/tape      | 52/tape      | 52/tape#     |
| W     | 26 0.0/+1.6           | 35 -1.0/+0.5 | 40 -1.0/+0.5 | 42 -1.0/+1.0 | 52 -1.0/+2.0 | 52 -1.0/+2.0 |
| P     | 5±0.5                 | 5±0.5        | 5±0.5        | 5±0.5        | 5±0.5        | 10±0.5       |
| L1-L2 | <1.0                  | <1.0         | <1.0         | <1.0         | <1.0         | <1.0         |
| H     | 6±1.0                 | 6±1.0        | 6±1.0        | 6±1.0        | 6±1.0        | 6±1.0        |
| Z     | <1.0                  | <1.0         | <1.0         | <1.0         | <1.0         | <1.0         |
| R     | <1.0                  | <1.0         | <1.0         | <1.0         | <1.0         | <1.0         |
| T     | >3.5                  | >3.5         | >3.5         | >3.5         | >3.5         | >3.5         |

注: 52编带# 为DO-201AD编带规格 "52编带#" just for D0-201AD

1. 红白编带厚度为0.05mm; 两种胶带各自之间无明显色差; 编带要求均为胶带。  
The typing thickness is 0.05mm and color is obvious difference
2. 两端引带20~40cm. Typing lead over 20~40cm
3. 红色编带一端为二极管“负极”; 白色编带一端为二极管“正极”。  
red color is cathode ,white color is anode
4. 无卤 green epoxy compound (无卤产品才贴HF only)

**Green**

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### 4. Update Record

| 版次 | 更新记录      | 更新作者 | 更新日期     |
|----|-----------|------|----------|
| 1  | 第一版       | 周杰   | 2010-4-7 |
| 2  | 增加1N4008G | 周杰   | 2012-8-2 |