

## R3000F thru R5000F

### 1.FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* Easily cleaned with Freon, Alcohol, Isopropanol and similar solvents
- \* Diffused junction
- \* Capable of meeting environmental standards of MIL-S-19500
- \* High temperature soldering guaranteed: 260°C/10 seconds

### 2.Mechanical Data

**Case:** JEDEC DO-15, molded plastic body

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.015 oz., 0.40 g

**Handling precaution:** None

### 3.Electrical Characteristic

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

| Parameter Symbol                                                                                     | symbol           | R<br>3000F  | R<br>4000F | R<br>5000F | Unit |
|------------------------------------------------------------------------------------------------------|------------------|-------------|------------|------------|------|
| Maximum repetitive peak reverse voltage                                                              | V <sub>RRM</sub> | 2500        | 4000       | 5000       | V    |
| Maximum RMS voltage                                                                                  | V <sub>RMS</sub> | 1750        | 2800       | 3500       | V    |
| Maximum DC blocking voltage                                                                          | V <sub>DC</sub>  | 2500        | 4000       | 5000       | V    |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length at T <sub>A</sub> = 50°C     | IF(AV)           | 0.2         |            |            | A    |
| Peak forward surge current 8.3ms single half sine-<br>wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub> | 25          | 15         |            | A    |
| Typical thermal resistance (Note 2)                                                                  | RθJA             | 35          |            |            | °C/W |
| Operating junction and storage temperature range                                                     | TJ, TSTG         | −50 to +150 |            |            | °C   |

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

| Parameter Symbol                                                                | symbol         | R<br>3000F | R<br>4000F | R<br>5000F | Unit |
|---------------------------------------------------------------------------------|----------------|------------|------------|------------|------|
| Maximum instantaneous forward voltage at IF(AV)                                 | V <sub>F</sub> | 4.0        | 5.0        |            | V    |
| Maximum DC reverse current TA = 25°C<br>at rated DC blocking voltage TA = 100°C | IR             | 5.0<br>200 |            |            | μA   |
| Typical reverse recovery time (Note 1)                                          | trr            | 500        |            |            | ns   |
| Typical junction capacitance at 4.0V, 1MHz                                      | CJ             | 15         |            |            | PF   |

NOTES:

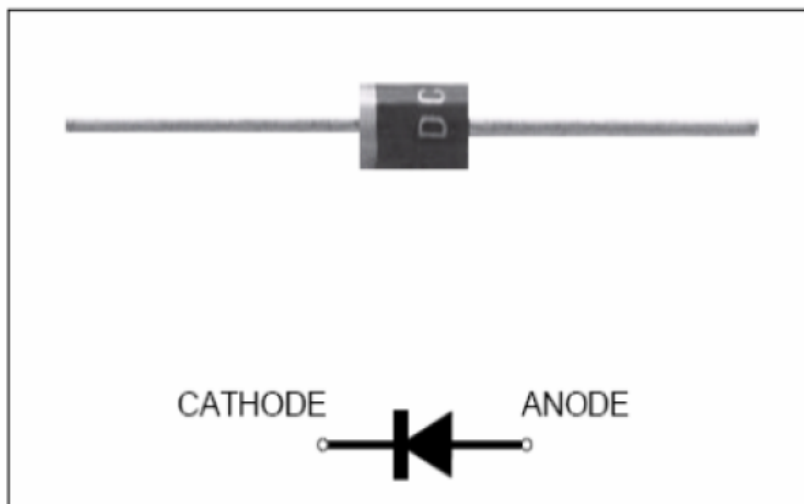
1.  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $IRR = 0.25A$

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

### HIGH VOLTAGE FAST RECOVERY RECTIFIERS

Reverse Voltage 2500 to 5000V

Forward Current 0.2A



We declare that the material of product compliance with RoHS requirements.

#### 4. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

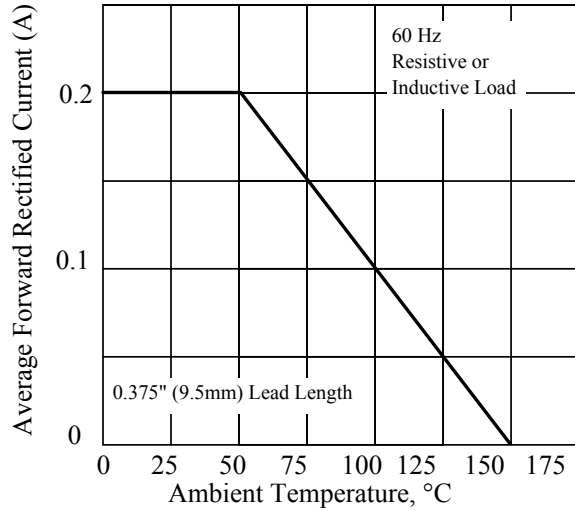


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

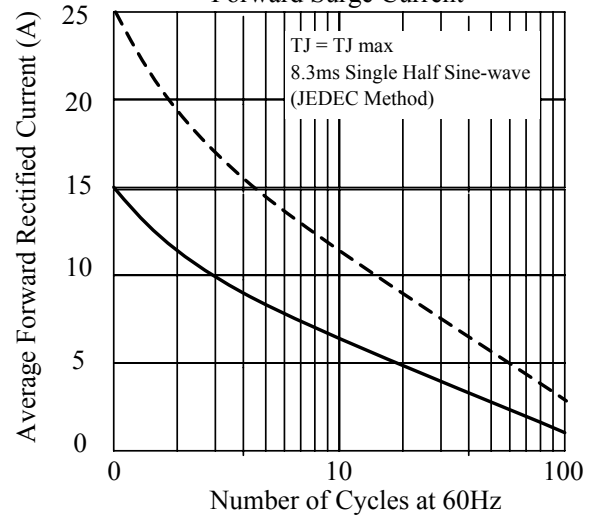


Fig 3. - Typical Instantaneous Forward Characteristics

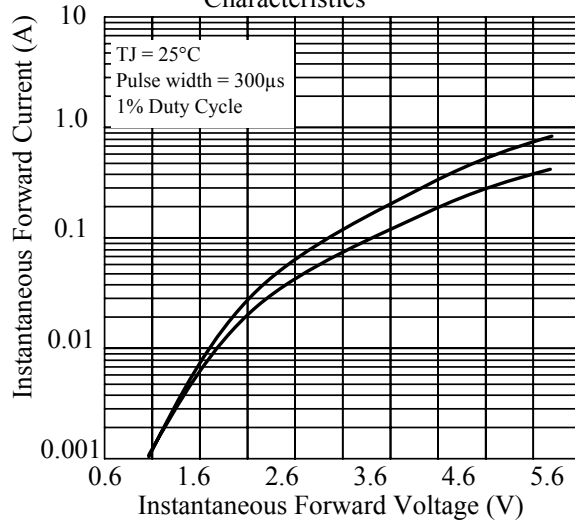


Fig 4. - Typical Reverse Characteristics

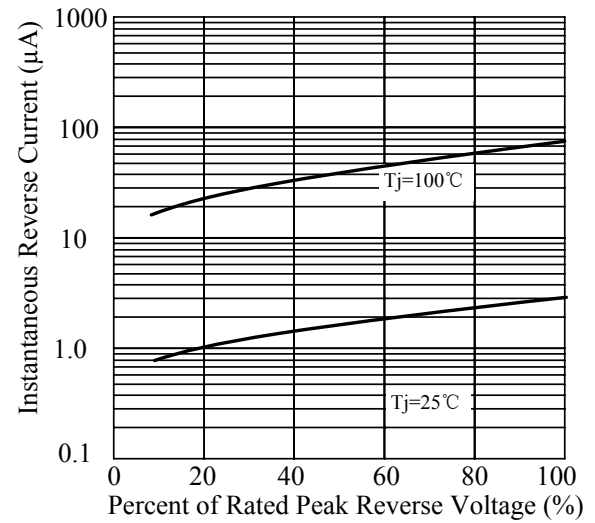


Fig 5. - typical transient thermal impedance

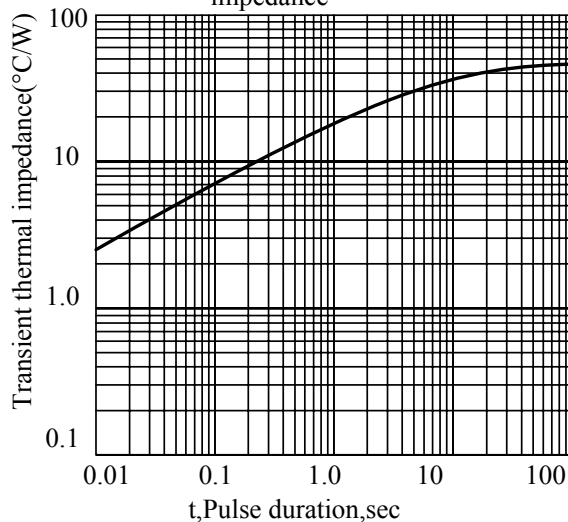
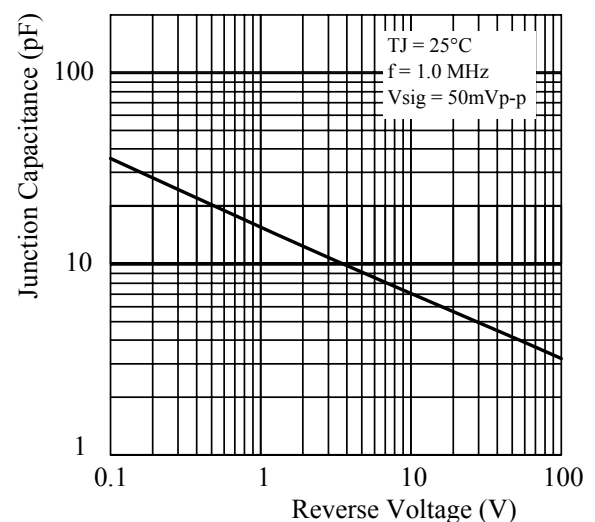
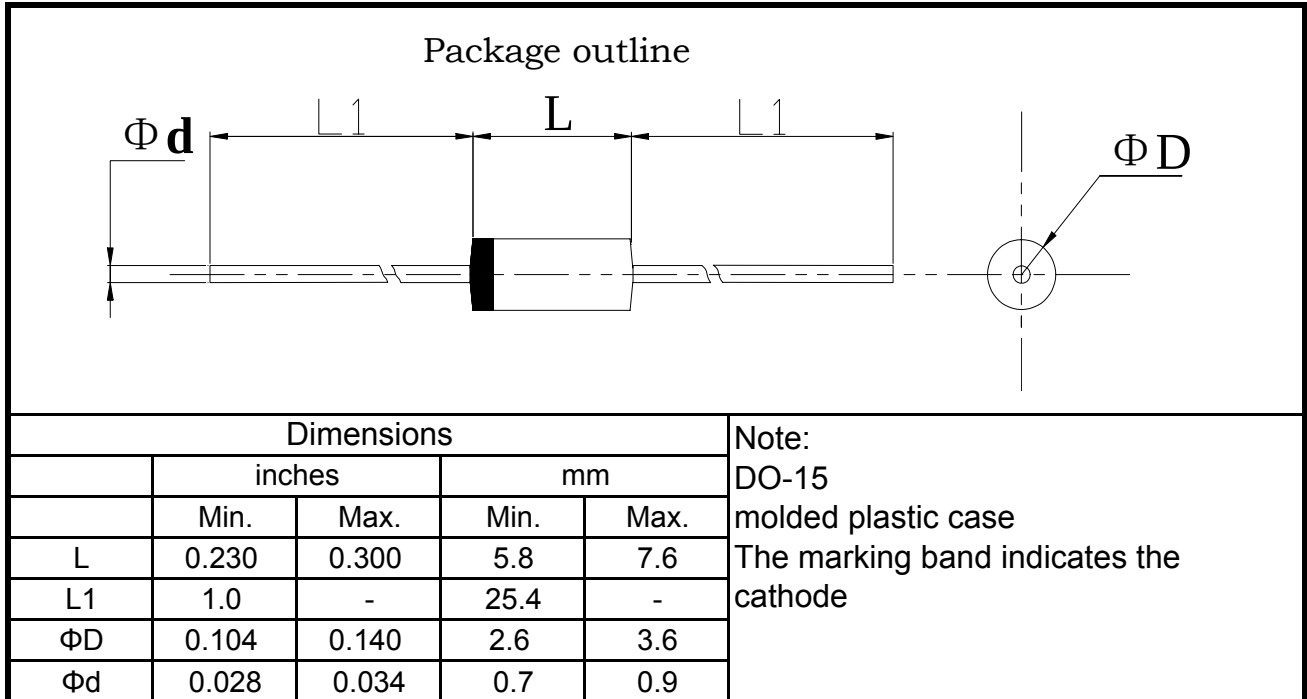


Fig 6. - Typical Junction Capacitance



## 5.Package Dimensions in inches and (millimeters)

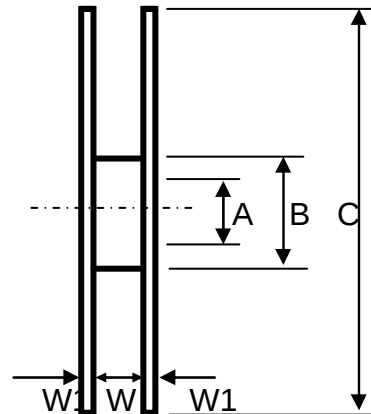
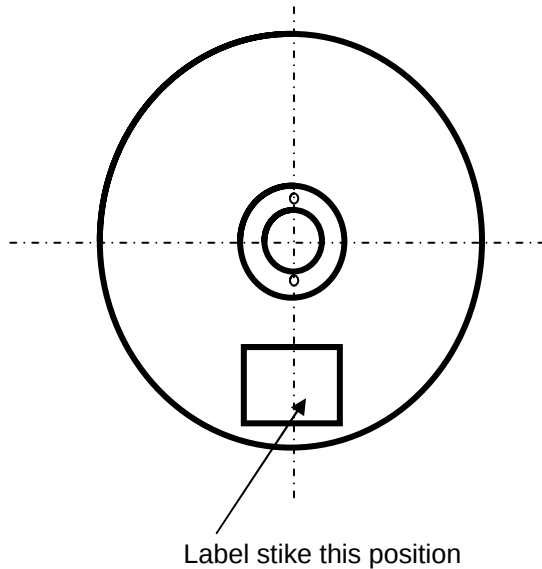


## Packing Of Plastic-Sealed Axial Lead Diodes

### 1. 卷盘/Reel Packing (52mm)

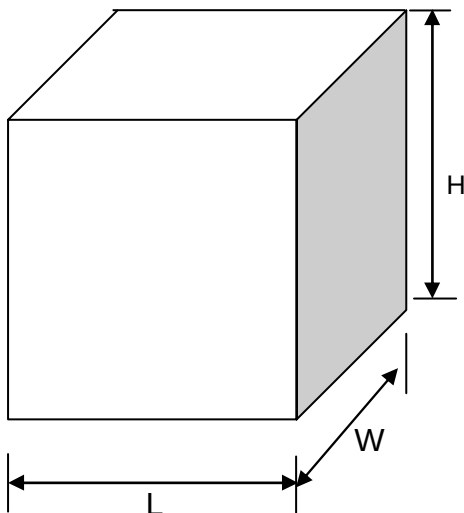
Unit:mm

A: 卷盘规格/Reel spec.



| Item      | Symbol | Dimension |
|-----------|--------|-----------|
| Dimeter   | A      | 76.4±0.1  |
|           | B      | 82.5±0.2  |
|           | C      | 330±0.5   |
| Width     | W      | 72±0.2    |
| Thickness | W1     | 3±0.2     |

B: 外箱规格/Outer Box Specification



| Item | Symbol | Dimension |
|------|--------|-----------|
| Size | L      | 350±2     |
|      | W      | 350±2     |
|      | H      | 340±4     |

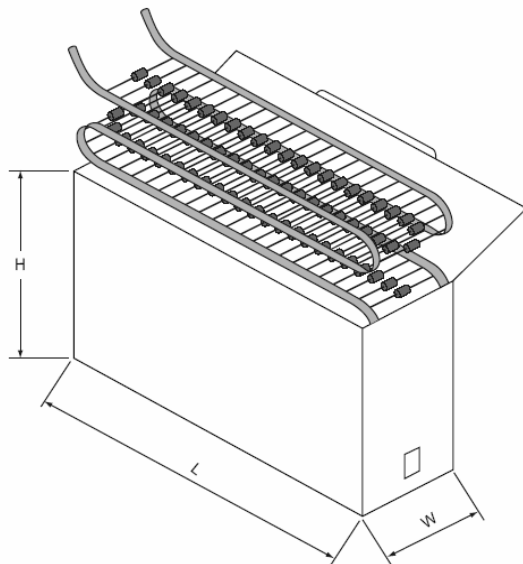
按以上包装方式: (As per the above spec)

|                   | 外型/Outside    |       |          |
|-------------------|---------------|-------|----------|
|                   | DO-41 & A-405 | DO-15 | DO-201AD |
| Q'ty/Taping       | 5K            | 4K    | 1.4K     |
| Q'ty/Packing Case | 20K           | 16K   | 5.6K     |

## 2. 弹带盒装/Ammo Packing

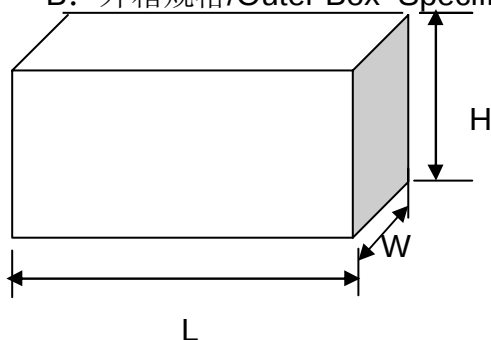
Unit:mm

### A: 弹带盒规格/Ammo Box Spec.



| Item       | Symbol | Dimension | Notes     |
|------------|--------|-----------|-----------|
| Box's Size | L      | 260±2     | 52mm TYPE |
|            | W      | 76±2      |           |
|            | H      | 100±4     |           |
|            | L      | 250±3     | 26mm TYPE |
|            | W      | 45±3      |           |
|            | H      | 95±5      |           |

### B: 外箱规格/Outer Box Specification



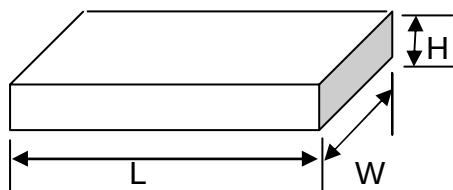
| Item        | Symbol | Dimension | Notes     |
|-------------|--------|-----------|-----------|
| Case's Size | L      | 430±2     | 52mm TYPE |
|             | W      | 280±2     |           |
|             | H      | 225±4     |           |
|             | L      | 435±3     | 26mm TYPE |
|             | W      | 280±3     |           |
|             | H      | 295±5     |           |

按以上包装方式: (As per the above spec)

|                                | 外型/Outside          |       |          |
|--------------------------------|---------------------|-------|----------|
|                                | A-405 & DO-41 & R-1 | DO-15 | DO-201AD |
| Q'ty/Taping                    | 3K                  | 2K    | 0.8K     |
| Q'ty/Packing Case<br>26mm/TYPE | 30K                 | 20K   | 7.2K     |
| Q'ty/Packing Case<br>52mm/TYPE | 60K                 | 40K   | 14.4K    |

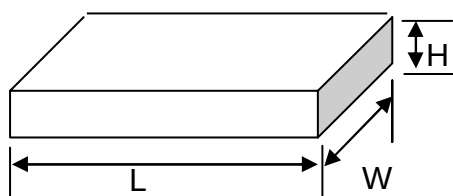
### 3. 散装/Bulk Packing

#### A. 包装盒尺寸/Box Dimension



( DO-41&DO-15 )

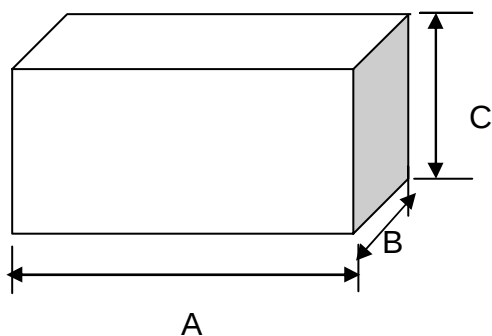
| Item       | Symbol | Dimension |
|------------|--------|-----------|
| Box's Size | L      | 200±2     |
|            | W      | 84±2      |
|            | H      | 21±2      |



( DO-201AD )

| Item       | Symbol | Dimension |
|------------|--------|-----------|
| Box's Size | L      | 200±2     |
|            | W      | 84±2      |
|            | H      | 29±2      |

#### B: 外箱规格/Outer Box Specification

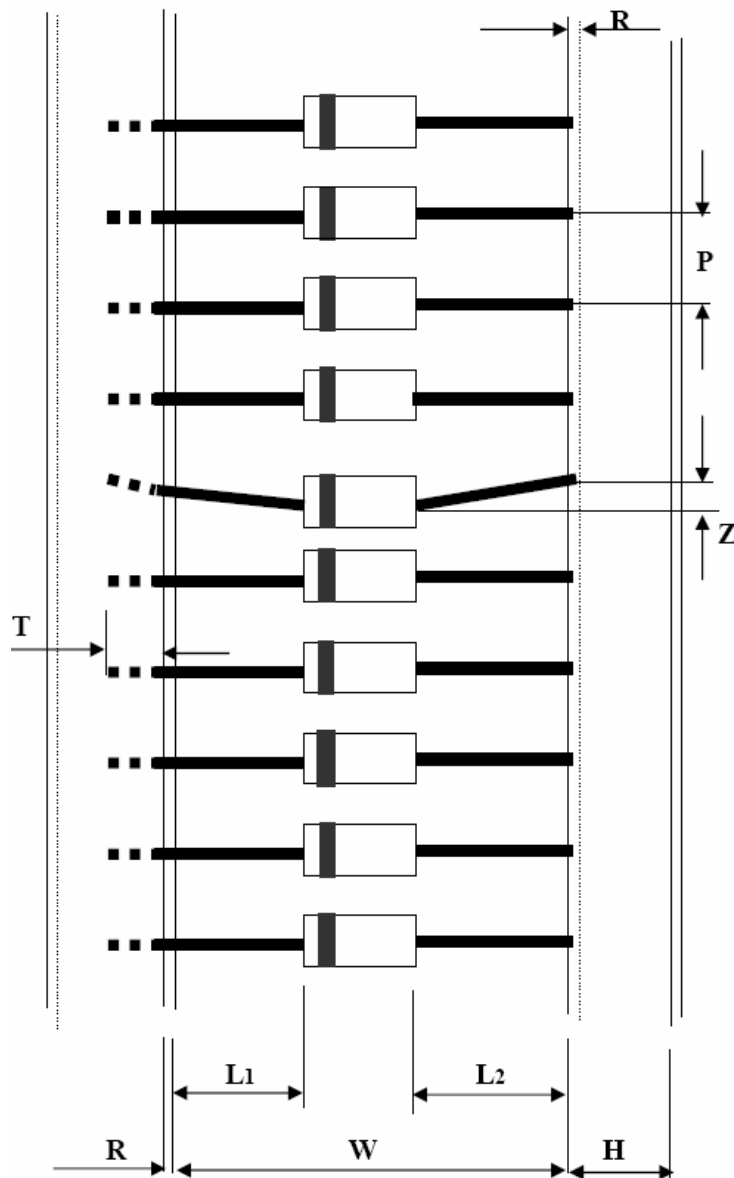


| Item        | Symbol | Dimension |
|-------------|--------|-----------|
| Case's Size | L      | 465±2     |
|             | W      | 225±2     |
|             | H      | 260±4     |

按以上包装方式: (As per the above spec)

|                   | 外型/Outside      |       |          |
|-------------------|-----------------|-------|----------|
|                   | DO-41&A-405&R-1 | DO-15 | DO-201AD |
| Q'ty/Taping       | 1K              | 0.5K  | 0.3K     |
| Q'ty/Packing Case | 50K             | 25K   | 12K      |

## 4. 编带图形及规格/Taping Specification



Unit:mm

| 尺寸代号           | 编带尺寸/Tape Dimension |              |              |
|----------------|---------------------|--------------|--------------|
| Dimension Code | 26/tape             | 52/tape      | 52/tape#     |
| W              | 26 0.0/+1.6         | 52 -1.0/+2.0 | 52 -1.0/+2.0 |
| P              | 5±0.5               | 5±0.5        | 10±0.5       |
| L1-L2          | <1.0                | <1.2         | <1.2         |
| H              | 6±1.0               | 6±1.0        | 6±1.0        |
| Z              | <1.2                | <1.2         | <1.2         |
| R              | <1.0                | <1.0         | <1.0         |
| T              | >3.2                | >3.2         | >3.2         |

注: 52编带# 为DO-201AD编带规格

Remark: 52 tape# is DO-201AD taping spec.