

## ■ FEATURES

- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

## ■ TYPICAL APPLICATIONS

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

## ■ MECHANICAL DATA

- **Package:** DO-204AL(DO-41)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

## ■ MAXIMUM RATINGS (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL             | UNIT             | 1N4001G    | 1N4002G | 1N4003G | 1N4004G | 1N4005G | 1N4006G | 1N4007G |
|---|--------------------|------------------|------------|---------|---------|---------|---------|---------|---------|
| Device marking code   |                    |                  | 1N4001G    | 1N4002G | 1N4003G | 1N4004G | 1N4005G | 1N4006G | 1N4007G |
| Maximum Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>   | V                | 50         | 100     | 200     | 400     | 600     | 800     | 1000    |
| Maximum RMS Voltage   | V <sub>RMS</sub>   | V                | 35         | 70      | 140     | 280     | 420     | 560     | 700     |
| Maximum DC blocking Voltage   | V <sub>DC</sub>    | V                | 50         | 100     | 200     | 400     | 600     | 800     | 1000    |
| Average Forward Current<br>@60Hz sine wave, Resistance load, T <sub>a</sub> =85°C             | I <sub>F(AV)</sub> | A                | 1.0        |         |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C | I <sub>FSM</sub>   | A                | 30         |         |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25°C    |                    |                  | 60         |         |         |         |         |         |         |
| Current squared time<br>@1ms≤t <sub>8.3</sub> ≤ms T <sub>j</sub> =25°C. Rating of per diode   | I <sup>2</sup> t   | A <sup>2</sup> s | 3.735      |         |         |         |         |         |         |
| Typical junction capacitance<br>@Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C    | C <sub>j</sub>     | pF               | 6          |         |         |         |         |         |         |
| Storage Temperature   | T <sub>stg</sub>   | °C               | -55 ~ +150 |         |         |         |         |         |         |
| Junction Temperature  | T <sub>j</sub>     | °C               | -55 ~ +150 |         |         |         |         |         |         |

## ■ ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL         | UNIT | TEST CONDITIONS       | 1N4001G | 1N4002G | 1N4003G | 1N4004G | 1N4005G | 1N4006G | 1N4007G |
|---|----------------|------|-----------------------|---------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =1.0A | 1.1     |         |         |         |         |         |         |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | μA   | T <sub>j</sub> =25°C  | 2.5     |         |         |         |         |         |         |
|   |                |      | T <sub>j</sub> =125°C | 50      |         |         |         |         |         |         |

■ **THERMAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

| PARAMETER                  | SYMBOL           | UNIT                 | 1N4001G | 1N4002G | 1N4003G | 1N4004G | 1N4005G | 1N4006G | 1N4007G |
|----------------------------|------------------|----------------------|---------|---------|---------|---------|---------|---------|---------|
| Typical Thermal Resistance | $R_{\theta J-A}$ | $^{\circ}\text{C/W}$ | 60      |         |         |         |         |         |         |

■ **PACKAGING INFORMATION**

| PREFERRED P/N   | PACKAGE CODE | UNIT WEIGHT(g)   | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-----------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| 1N4001G~1N4007G | D1           | Approximate 0.27 | Approximate 5000     | 5000                    | 50000                      | Tape          |
| 1N4001G~1N4007G | C1           | Approximate 0.27 | Approximate 1000     | 1000                    | 50000                      | Bulk          |

■ **CHARACTERISTICS (TYPICAL)**

FIG.1:  $I_o$ - $T_a$  Curve

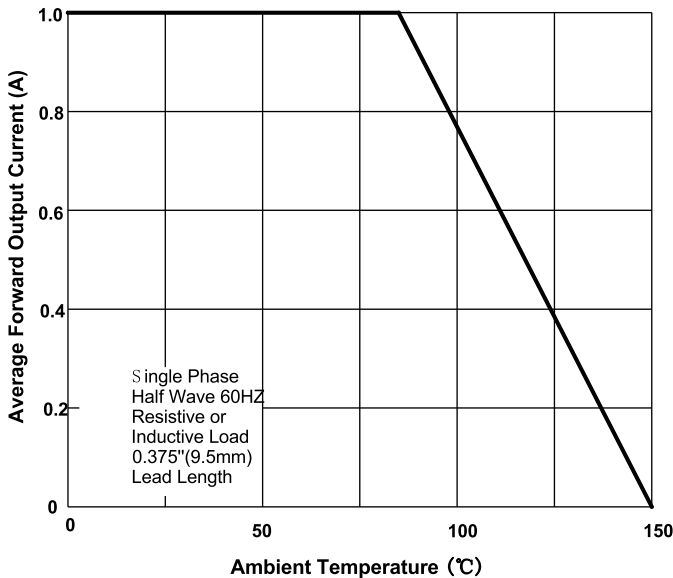


FIG.2: Forward Surge Current Capability

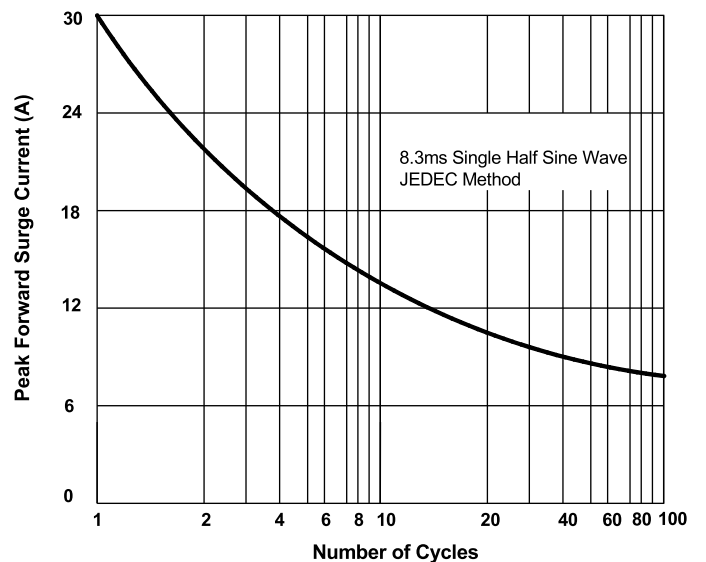


FIG.3: Forward Voltage

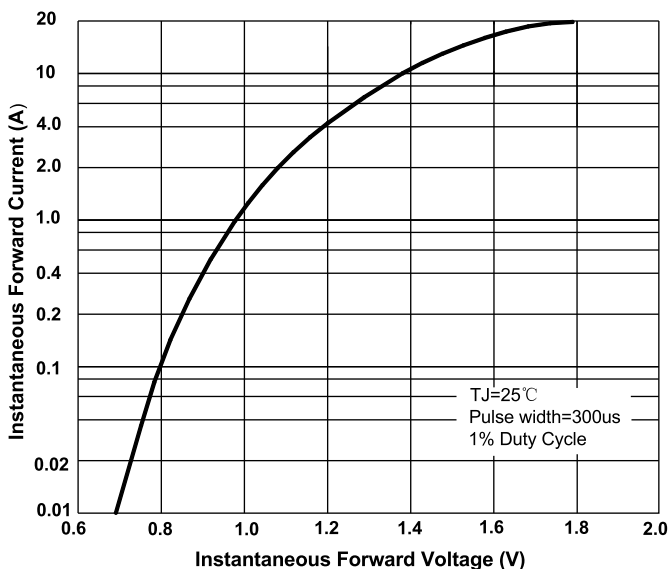
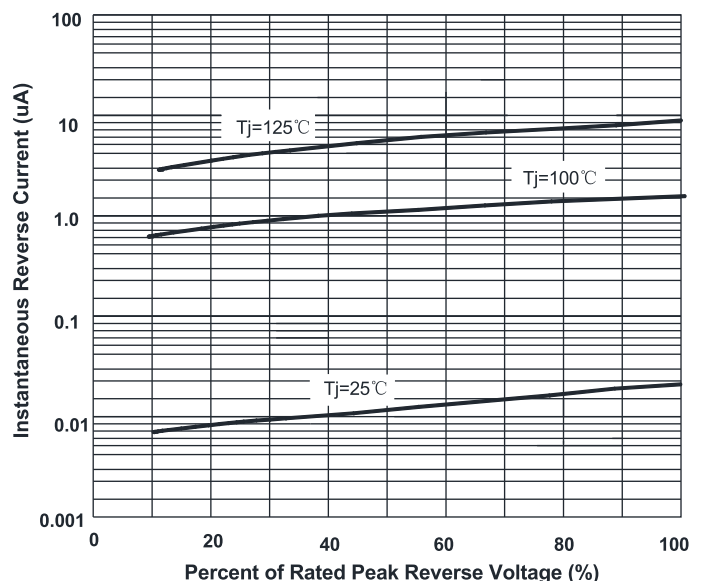
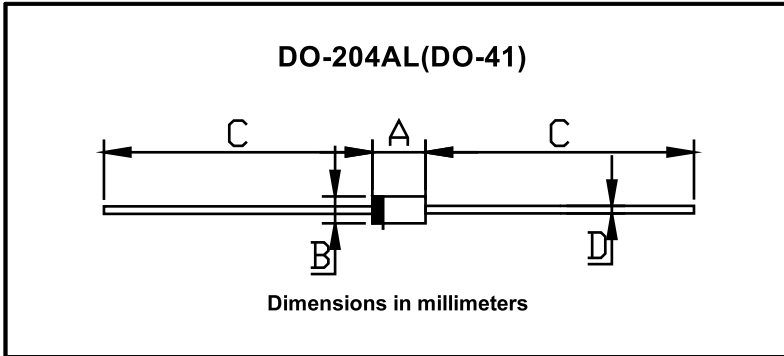


FIG.4: Typical Reverse Characteristics



■ **OUTLINE DIMENSIONS**



| <b>DO-204AL(DO-41)</b> |      |      |
|------------------------|------|------|
| Dim                    | Min  | Max  |
| A                      | 4.22 | 5.21 |
| B                      | 2.03 | 2.72 |
| C                      | 25.4 | /    |
| D                      | 0.69 | 0.86 |