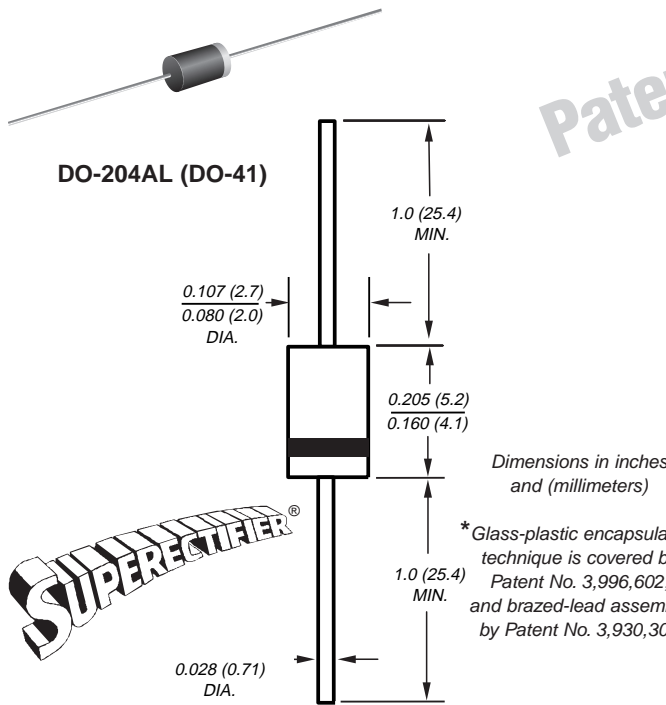


Glass Passivated Junction Rectifiers

Reverse Voltage
200 to 1000V
Forward Current 1.0A



*Patented**

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.0 Ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AL, molded plastic over glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 oz., 0.3 g

NOTE: Lead diameter is $\frac{0.026}{0.023}$ ($\frac{0.66}{0.58}$) for suffix "E" part numbers

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | 1N 4245GP | 1N 4246GP | 1N 4247GP | 1N 4248GP | 1N 4249GP | Unit |
|---|------------------------------------|--------------|--------------|--------------|--------------|--------------|---------------------------|
| * Maximum repetitive peak reverse voltage | V_{RRM} | 200 | 400 | 600 | 800 | 1000 | V |
| * Maximum RMS voltage | V_{RMS} | 140 | 280 | 420 | 560 | 700 | V |
| * Maximum DC blocking voltage | V_{DC} | 200 | 400 | 600 | 800 | 1000 | V |
| * Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | A |
| * Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 25 | | | | | A |
| * Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$ | $I_{R(AV)}$ | 50 | | | | | μA |
| Typical thermal resistance ⁽¹⁾ | $R_{\theta JA}$ $R_{\theta JL}$ | 55 25 | | | | | $^\circ\text{C}/\text{W}$ |
| * Operating junction temperature range | T_J | -65 to +160 | | | | | $^\circ\text{C}$ |
| * Storage temperature range | T_{STG} | -65 to +175 | | | | | $^\circ\text{C}$ |

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| | | | | | | | |
|--|-------|-----------|--|--|--|--|---------------|
| * Maximum instantaneous forward voltage at 1.0A | V_F | 1.2 | | | | | V |
| * Maximum reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$ | I_R | 1.0 25 | | | | | μA |
| Typical junction capacitance at 4.0V, 1MHz | C_J | 8.0 | | | | | pF |

Note: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted *JEDEC registered values

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

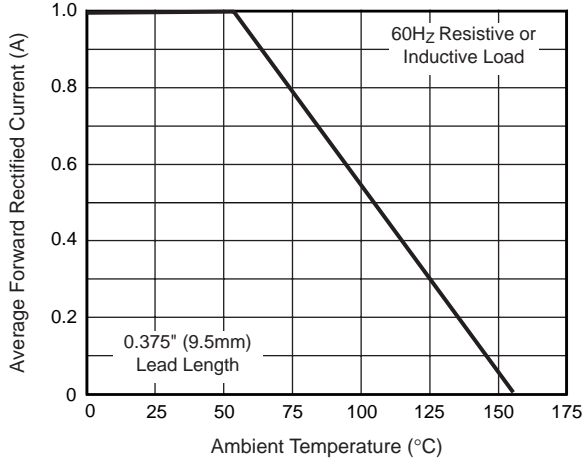


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

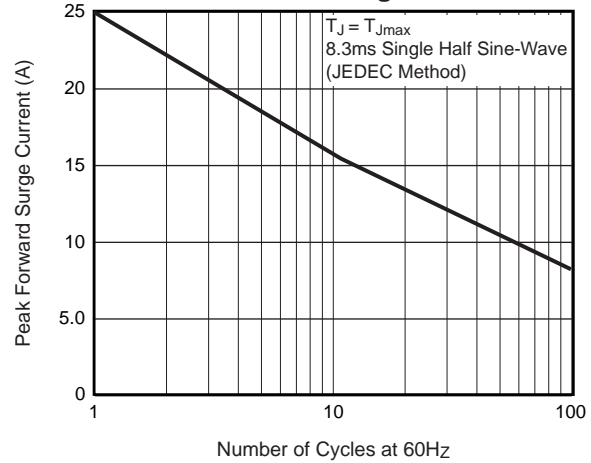


Fig. 3 – Typical Instantaneous Forward Characteristics

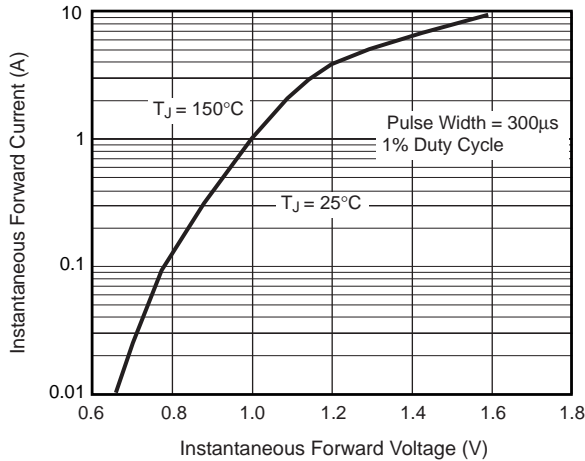


Fig. 4 – Typical Reverse Characteristics

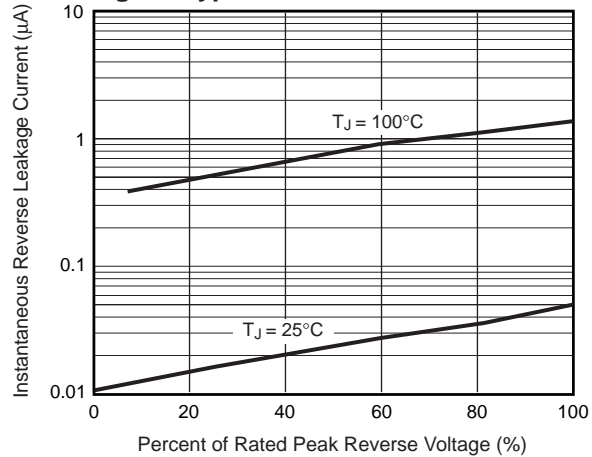


Fig. 5 – Typical Junction Capacitance

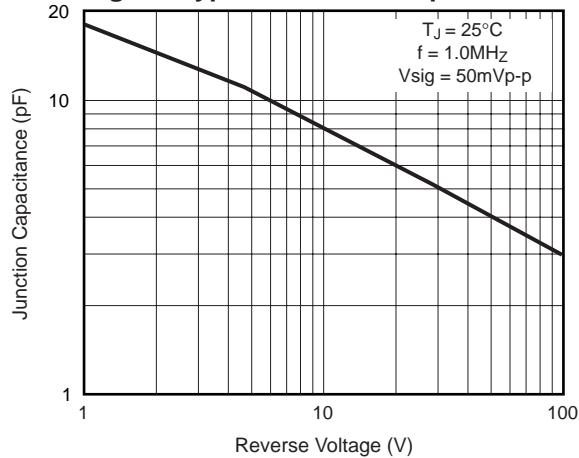


Fig. 6 – Typical Transient Thermal Impedance

