



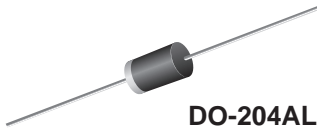
JAN and JANTX 1N3611 thru 1N3614 and 1N3957

Patented*

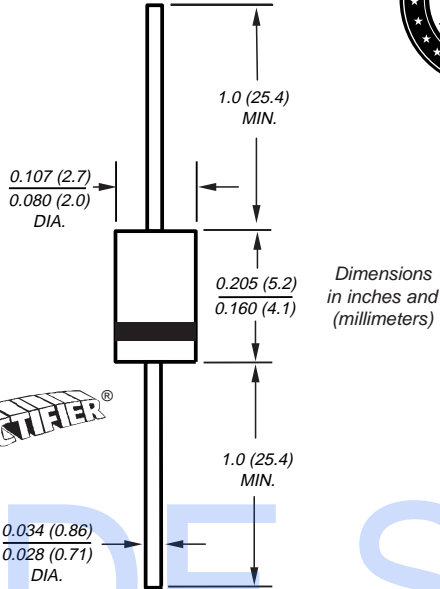
Vishay Semiconductors
formerly GENERAL SEMICONDUCTOR®

Glass Passivated Rectifiers

Reverse Voltage 200 to 1000V
Forward Current 1.0A



DO-204AL (EG1)



Features

- Qualified to MIL-PRF-19500/228
- Class 1 high temperature metallurgically bonded construction brazed > 600°C
- 1.0 ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- Cavity-free, glass passivated junction. In epoxy over hermetic glass
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, 0.375 (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: DO-204AL, molded epoxy over glass body (EG1)

Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any **Weight:** 0.015oz., 0.4g

Flammability: Epoxy is rated UL 94V-0.

* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

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

| Parameter | Symbol | Prefix J = JAN Quality Level; Prefix JX = JANTX Quality Level | | | | | Unit |
|--|------------------------------------|---|-------------|-------------|-------------|-------------|--------------------|
| | | J,JX 1N3611 | J,JX 1N3612 | J,JX 1N3613 | J,JX 1N3614 | J,JX 1N3957 | |
| 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 10 surges of 8.3ms each at 1 min. intervals super-imposed on $I_O = 750\text{mA DC}$; $V_R = \text{rated } V_{RRM}$ $T_A = 100^\circ\text{C}$ (per MIL-STD-750 m 4066) | I_{FSM} | 30 | | | | | A |
| Typical thermal resistance ⁽¹⁾ | $R_{\theta JL}$ $R_{\theta JA}$ | 38 45 | | | | | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -65 to +175 | | | | | $^\circ\text{C}$ |
| Barometric Pressure | Hg | 8 | | 54 | | 87 | mm |

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

| | | | | | | | |
|--|----------|-------------------|-----|-----|-----|------|---------------|
| Minimum reverse breakdown voltage at 50 μA | V_{BR} | 220 | 440 | 660 | 880 | 1100 | V |
| Maximum instantaneous forward voltage $T_p = 300\mu\text{s}$ | V_F | 1.1 1.3 1.5 | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage | I_R | 1 300 | | | | | μA |
| Typical reverse recovery time at $I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$ | t_{rr} | 2.0 | | | | | μs |
| Typical junction capacitance at 4V, 1MHz | C_J | 8.0 | | | | | pF |

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

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

Fig. 1 – Forward Current Derating Curve

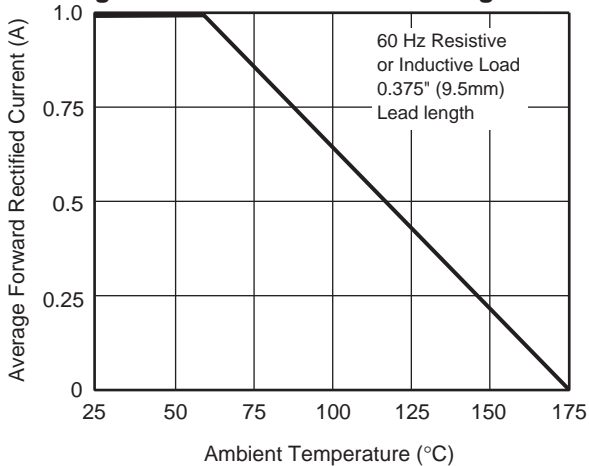


Fig. 2 – Typical Instantaneous Forward Characteristics

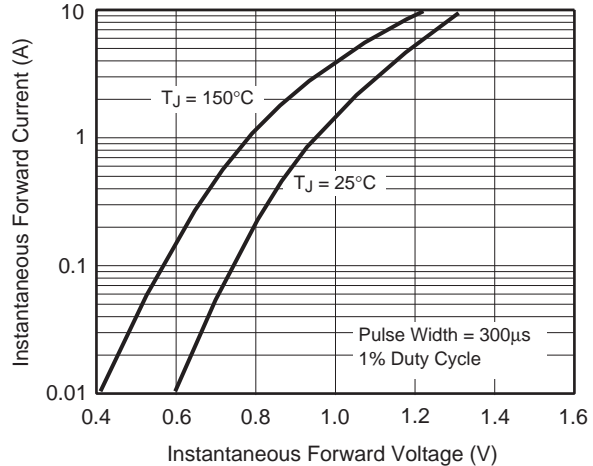


Fig. 3 – Typical Reverse Characteristics

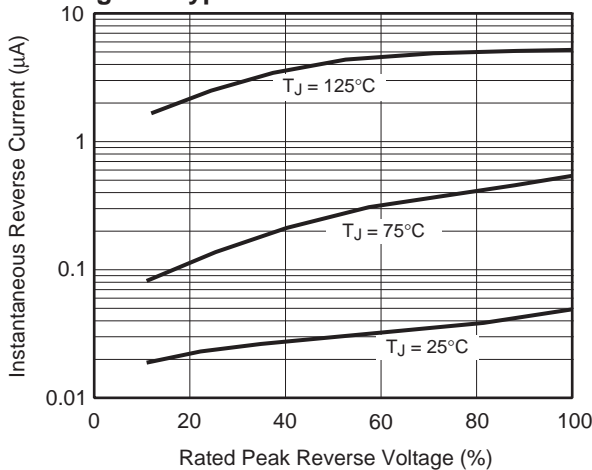


Fig. 4 – Typical Junction Capacitance

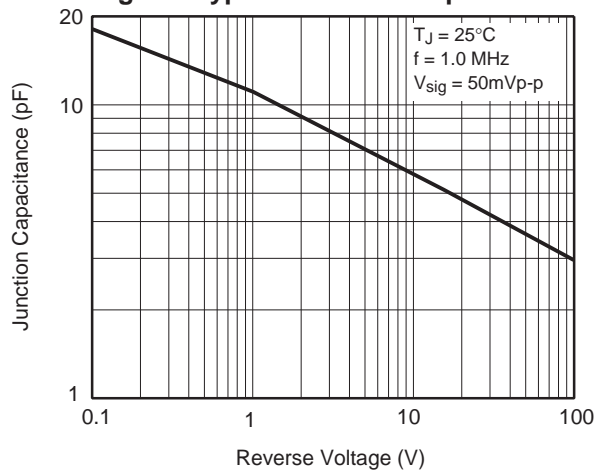


Fig. 5 – Typical Transient Thermal Impedance

