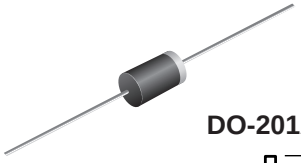
*New Product*

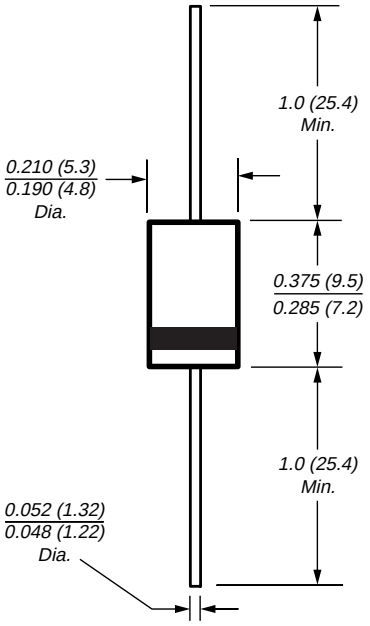
Vishay Semiconductors
formerly General Semiconductor

# Ultrafast Plastic Rectifier

**Reverse Voltage** 400V
**Forward Current** 3.0A



**DO-201AD**




*Dimensions in inches and (millimeters)*

## Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Glass passivated chip junction
- Low cost
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Low leakage
- High surge capability
- High temperature soldering guaranteed: 250°C, 0.375" (9.5mm) lead length for 10 seconds, 5 lbs. (2.3kg) tension

## Mechanical Data

**Case:** JEDEC DO-201AD molded plastic body over passivated chip

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.04 oz., 1.1 g

## Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | | Symbol | Value | Unit |
|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | | $V_{RRM}$ | 400 | V |
| Maximum RMS voltage | | $V_{RMS}$ | 280 | V |
| Maximum DC blocking voltage | | $V_{DC}$ | 400 | V |
| Maximum average forward rectified current, 0.375" (9.5mm) lead length | with FIN<br>w/o FIN/PCB | $I_{F(AV)}$ | 3.0<br>1.5 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A$ = 55°C | | $I_{FSM}$ | 60 | A |
| Typical thermal resistance[1] Junction-to-ambient | | $R_{\theta JA}$ | 80 | °C/W |
| Operating junction and storage temperature range | | $T_J$, $T_{STG}$ | –40 to +150 | °C |
| Reverse Avalanche Energy (8/20μs surge) | | $E_{AR}$ | 10 | mJ |

## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Minimum reverse breakdown voltage at 10μA | $V_{(BR)}$ | 400 | V |
| Maximum instantaneous forward voltage at 3.0A[1] | $V_F$ | 1.25 | V |
| Maximum DC reverse current at rated DC blocking voltage | $I_R$ | 20 | μA |
| Maximum reverse recovery time at $I_F$ = 0.5A, $I_R$ = 1.0A, $I_{rr}$ = 0.25A | $t_{rr}$ | 30 | ns |

**Note:** (1) Pulse test: 300μs pulse width, 1% duty cycle

## Ratings and Characteristic Curves ($T_A$ = 25°C unless otherwise noted)

**Fig. 1 – Maximum Forward Current Derating Curve**

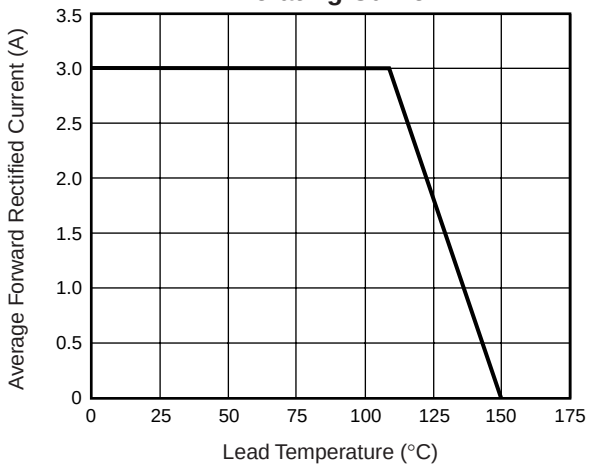



**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**

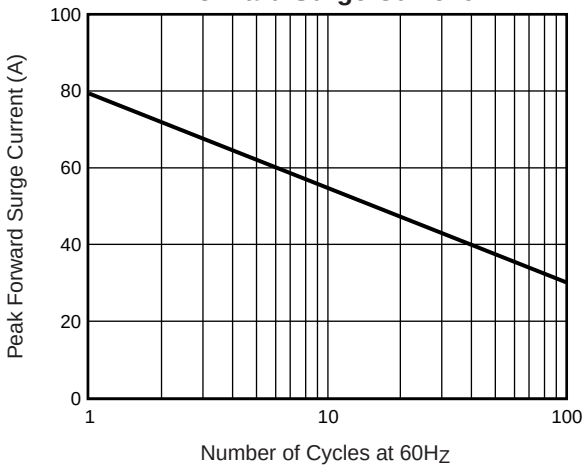



**Fig. 3 – Typical Reverse Characteristics**

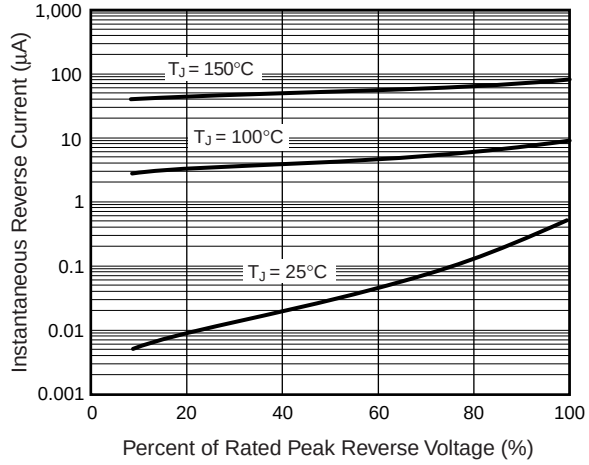



**Fig. 4 – Typical Instantaneous Forward Characteristics**

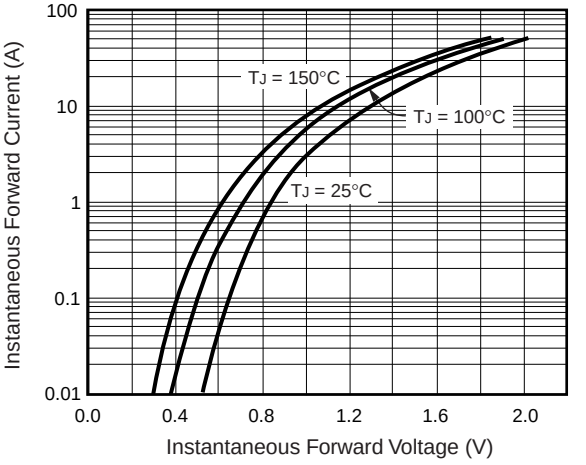



**Fig. 5 – Typical Junction Capacitance**