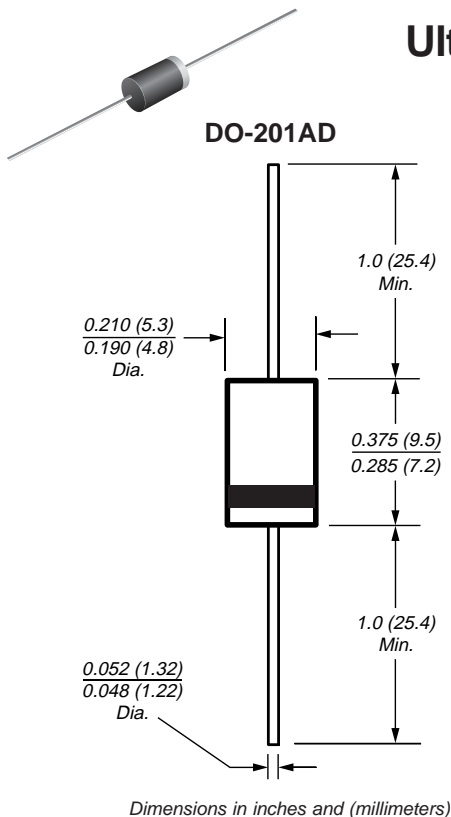


Ultrafast Plastic Rectifier

Reverse Voltage 600V
Forward Current 3.0A


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}	600	V
Maximum RMS voltage	V_{RMS}	420	V
Maximum DC blocking voltage	V_{DC}	600	V
Maximum average forward rectified current, 0.375" (9.5mm) lead length at $T_L = 110^\circ\text{C}$	$I_{F(AV)}$	3.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A = 55^\circ\text{C}$	I_{FSM}	90	A
Typical thermal resistance ⁽¹⁾ Junction-to-ambient Junction-to-lead	$R_{\theta JA}$ $R_{\theta JL}$	30 8	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +150	$^\circ\text{C}$
Reverse Avalanche Energy (8/20 μs surge)	EAR	10	mJ

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Minimum reverse breakdown voltage at 10 μA	$V_{(BR)}$	600	V
Maximum instantaneous forward voltage at 3.0A ⁽¹⁾	V_F	1.6	V
Maximum DC reverse current at rated DC blocking voltage	I_R	20	μA
Maximum reverse recovery time at $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$	t_{rr}	30	ns

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

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

Fig. 1 – Maximum Forward Current Derating Curve

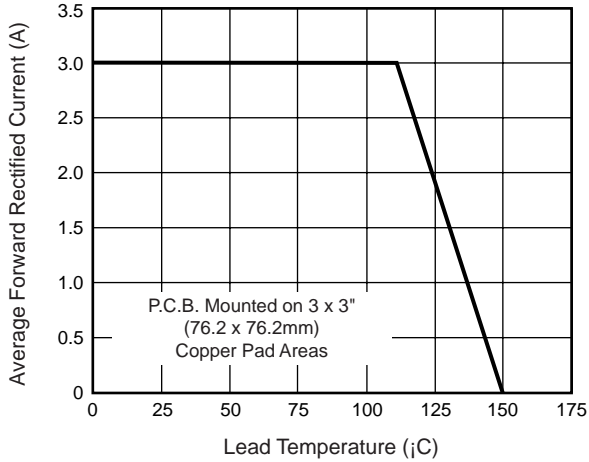


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

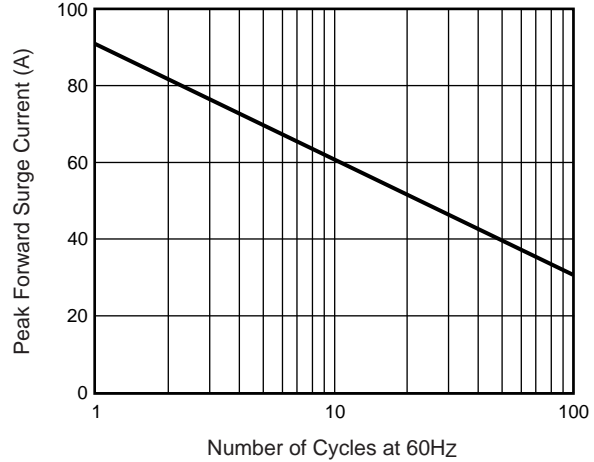


Fig. 3 – Typical Forward Voltyage

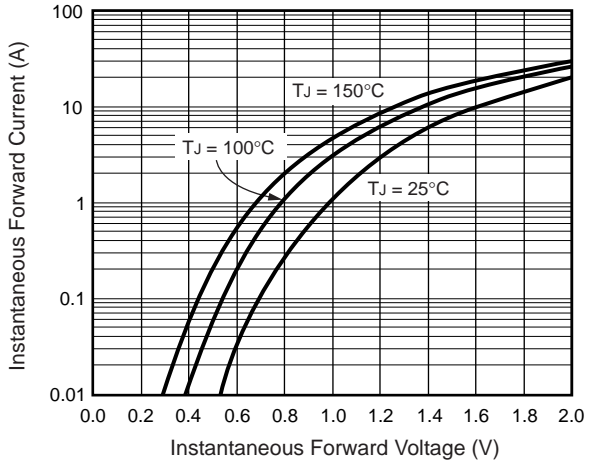


Fig. 4 – Typical Reverse Current

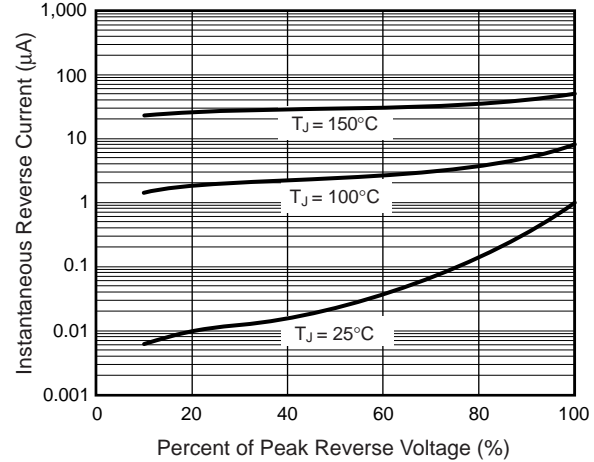


Fig. 5 – Typical Junction Capacitance

