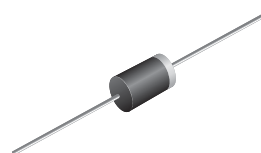


Ultrafast Plastic Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
V_{RRM}	600 V
I_{FSM}	90 A
t_{rr}	30 ns
V_F	1.6 V
$T_j \text{ max.}$	150 °C



DO-201AD

Features

- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low switching losses, high efficiency
- High forward surge capability
- Solder Dip 260 °C, 40 seconds



Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and Telecommunication

Mechanical Data

Case: DO-201AD

Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade

Polarity: Color band denotes cathode end

Maximum Ratings

$T_A = 25\text{ °C}$ 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" (9.5 mm) lead length at $T_L = 110\text{ °C}$	$I_{F(AV)}$	3.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	90	A
Operating junction and storage temperature range	T_J, T_{STG}	- 40 to + 150	°C
Reverse Avalanche Energy (8/20 μ s surge)	E_{AR}	10	mJ

Electrical Characteristics

$T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Minimum reverse breakdown voltage	at 10 μA	$V_{(BR)}$	600	V
Maximum instantaneous forward voltage	at 3.0 A ⁽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

Thermal Characteristics

$T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise specified

Parameter		Symbol	Value	Unit
Typical thermal resistance ⁽¹⁾	Junction-to-ambient	$R_{\theta JA}$	30	$^{\circ}\text{C/W}$
	Junction-to-lead	$R_{\theta JL}$	8.0	

Notes:

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

Ratings and Characteristics Curves

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

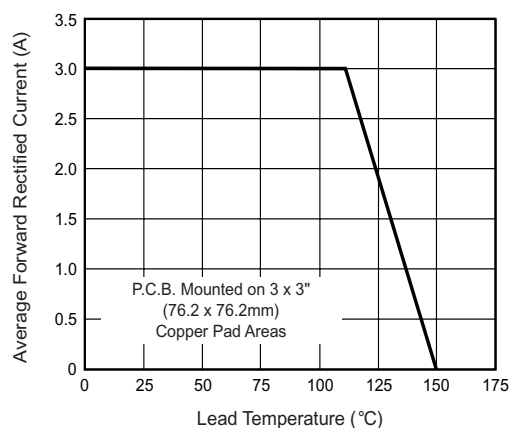


Figure 1. Maximum Forward Current Derating Curve

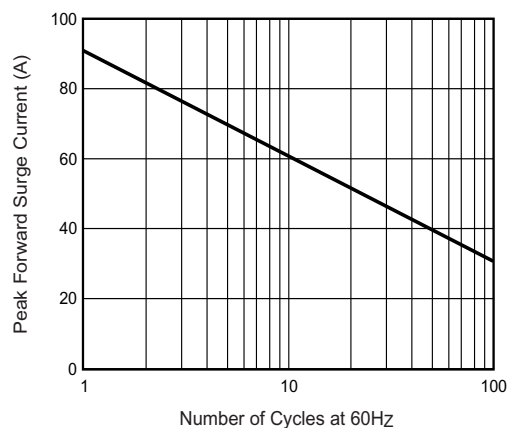


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

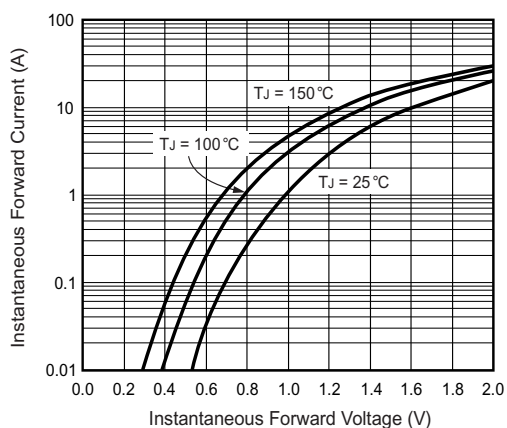


Figure 3. Typical Forward Voltage

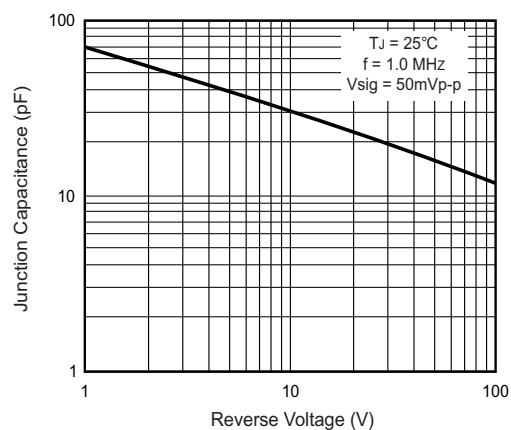


Figure 5. Typical Junction Capacitance

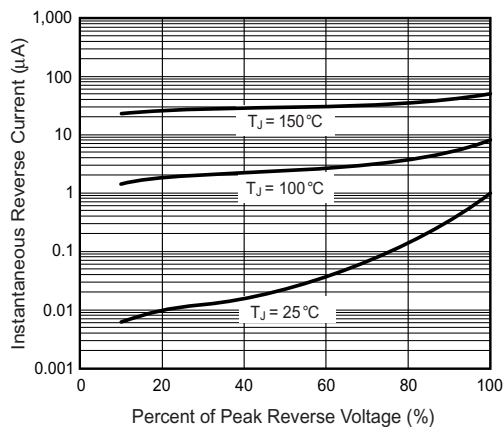
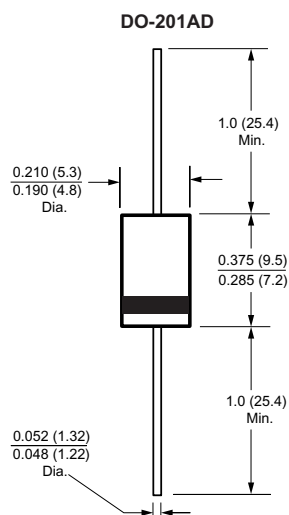


Figure 4. Typical Reverse Current

Package outline dimensions in inches (millimeters)





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