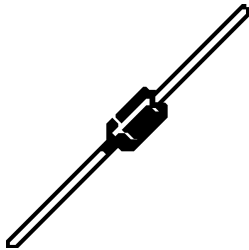


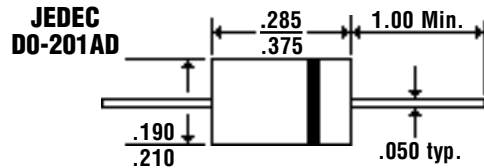
# 3.0 Amp FAST RECOVERY PLASTIC RECTIFIERS

**BY396 . . . 399 Series**

## Description



## Mechanical Dimensions

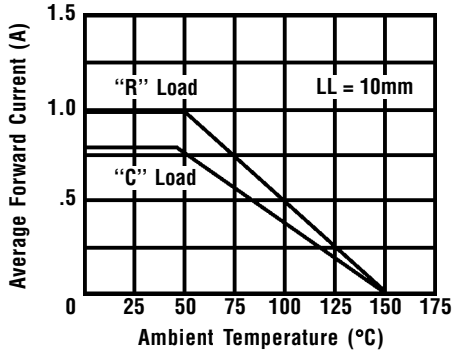


## Features

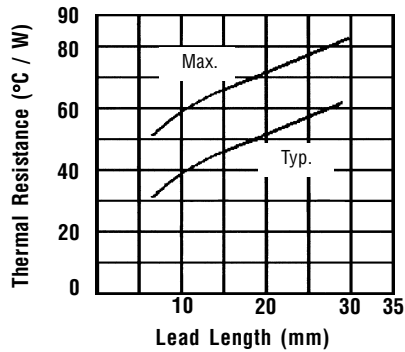
- FAST SWITCHING FOR HIGH EFFICIENCY
- HIGH SURGE CAPABILITY
- 3.0 AMP OPERATION @  $T_A = 50^\circ\text{C}$ , WITH NO THERMAL RUNAWAY
- MEETS UL SPECIFICATION 94V-0

<b>BY396 . . . 399 Series</b>					<b>Units</b>
<b>Maximum Ratings</b>	<b>BY396</b>	<b>BY397</b>	<b>BY398</b>	<b>BY399</b>	
Peak Repetitive Reverse Voltage... $V_{RRM}$	100	200	400	800	Volts
RMS Reverse Voltage... $V_{R(rms)}$	70	140	280	560	Volts
DC Blocking Voltage... $V_{DC}$	100	200	400	800	Volts
Average Forward Rectified Current... $I_{F(av)}$ $T_A = 50^\circ\text{C}$	3.0				Amps
Non-Repetitive Peak Forward Surge Current... $I_{FSM}$ @ Rated Current & Temp	100				Amps
Operating & Storage Temperature Range... $T_J, T_{STRG}$	-50 to 150				°C
<b>Electrical Characteristics</b>					
Maximum Forward Voltage @ 3.0A... $V_F$	1.3				Volts
Maximum DC Reverse Current... $I_R$ @ Rated DC Blocking Voltage	10				μAmps
Maximum Thermal Resistance... $R_{\theta JC}$	30				°C / W
Maximum Reverse Recovery Time... $t_{RR}$ @ $I_F = 10\text{mA}, I_R = 10\text{mA}, I_{RR} = 1\text{mA}$	500				ns

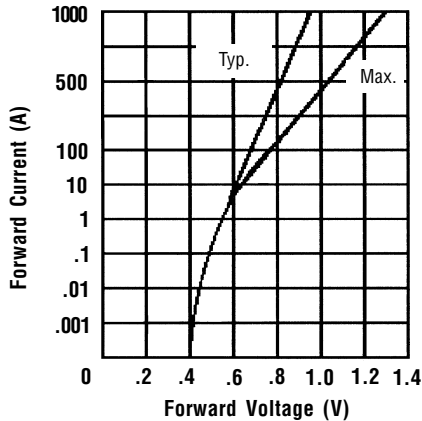
**Forward Current Derating Curve**



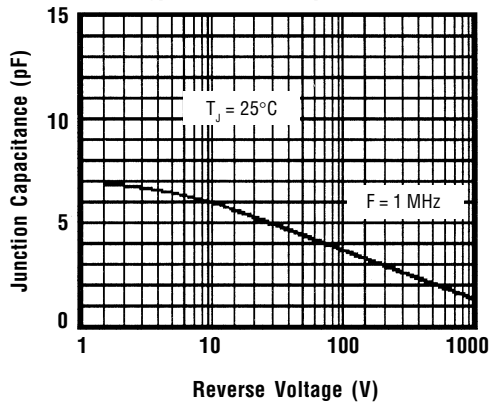
**Thermal Resistance Junction & Ambient**



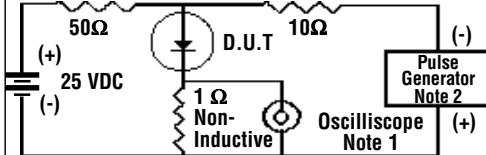
**Instantaneous Forward Characteristics**



**Typical Junction Capacitance**

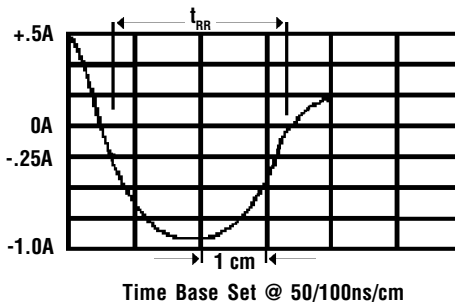


**Non-Inductive**



- Notes:**
1. Rise Time = 7 ns Max.  
Impedance = 1 megohm, 22 pF
  2. Rise Time = 10 ns Max.  
Source Impedance = 50 Ohms

**Reverse Recovery Characteristics**



Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 Hz Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

- NOTES:**
1. Measured @ 1 MHz and applied reverse voltage of 4.0V.
  2. Thermal Resistance Junction to Case, Jedec Method.