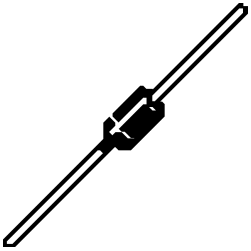
Semiconductor *Data Sheet*

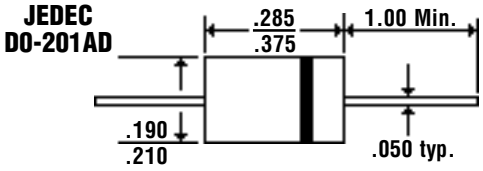
3.0 Amp FAST RECOVERY PLASTIC RECTIFIERS

BY396 . . . 399 Series

Description



Mechanical Dimensions



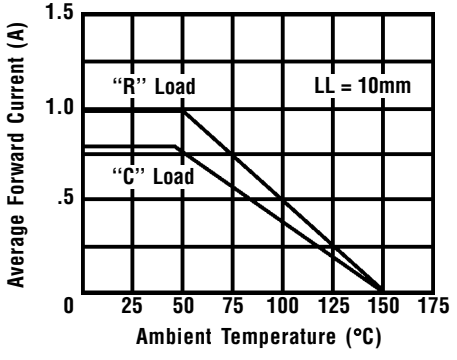
Features

- **FAST SWITCHING FOR HIGH EFFICIENCY**
- **HIGH SURGE CAPABILITY**
- **3.0 AMP OPERATION @ T_A = 50°C, WITH NO THERMAL RUNAWAY**
- **MEETS UL SPECIFICATION 94V-0**

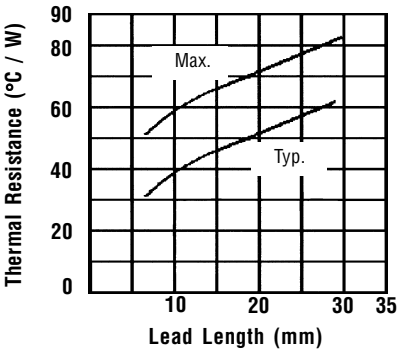
	BY396 . . . 399 Series				**Units**
Maximum Ratings	**BY396**	**BY397**	**BY398**	**BY399**	
Peak Repetitive Reverse Voltage...V_{RRM}	100	200	400	800	Volts
RMS Reverse Voltage...$V_{R(rms)}$	70	140	280	560	Volts
DC Blocking Voltage...V_{DC}	100	200	400	800	Volts
Average Forward Rectified Current...$I_{F(av)}$ T_A = 50°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
Electrical Characteristics					
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 = 10mA, I_R = 10mA, I_{RR} = 1mA	500				ns

3.0 Amp FAST RECOVERY PLASTIC RECTIFIERS

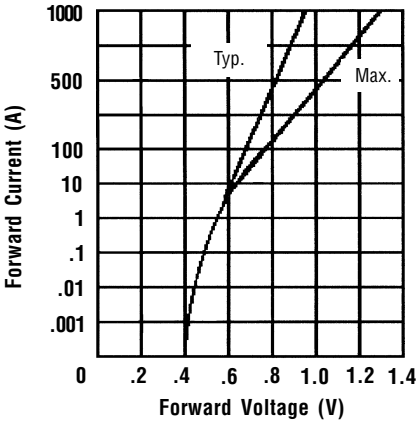
Forward Current Derating Curve



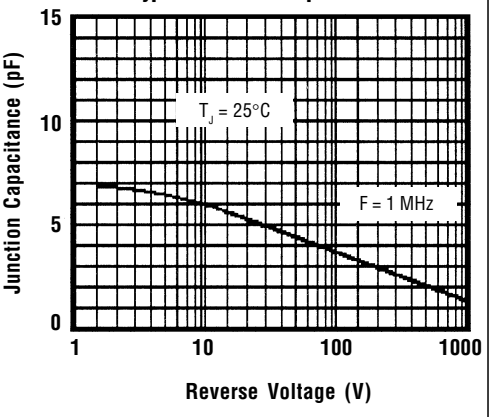
Thermal Resistance Junction & Ambient

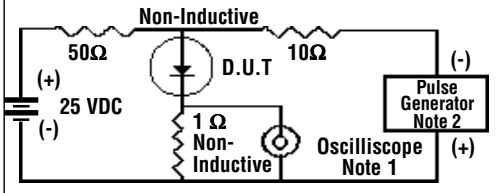


Instantaneous Forward Characteristics



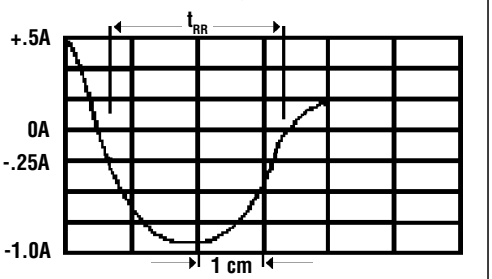
Typical Junction Capacitance





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.