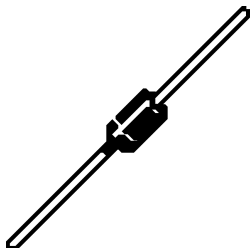


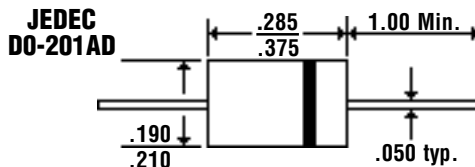
# 3.0 Amp FAST RECOVERY PLASTIC RECTIFIERS

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## Description



## Mechanical Dimensions



FR30 . . . . 310 Series

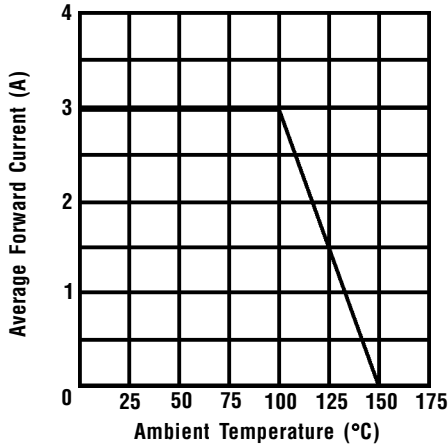
### Features

- FAST SWITCHING FOR HIGH EFFICIENCY
- HIGH SURGE CAPABILITY
- 3.0 AMP OPERATION @  $T_A = 105^\circ\text{C}$ , WITH NO THERMAL RUNAWAY
- MEETS UL SPECIFICATION 94V-0

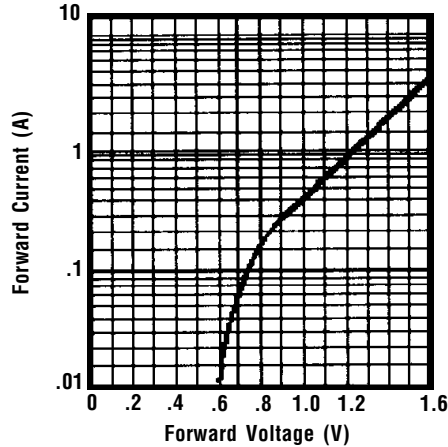
FR30 . . . 310 Series								Units
Maximum Ratings	FR30	FR31	FR32	FR34	FR36	FR38	FR310	
Peak Repetitive Reverse Voltage... $V_{RRM}$	50	100	200	400	600	800	1000	Volts
RMS Reverse Voltage... $V_{R(rms)}$	35	70	140	280	420	560	700	Volts
DC Blocking Voltage... $V_{DC}$	50	100	200	400	600	800	1000	Volts
Average Forward Rectified Current... $I_{F(av)}$ $T_A = 55^\circ\text{C}$				3.0				Amps
Non-Repetitive Peak Forward Surge Current... $I_{FSM}$ @ Rated Current & Temp				200				Amps
Operating & Storage Temperature Range... $T_J, T_{STRG}$				-65 to 150				$^\circ\text{C}$
<b>Electrical Characteristics</b>								
Maximum Forward Voltage @ 3.0A... $V_F$				1.3				Volts
Maximum DC Reverse Current... $I_R$ @ Rated DC Blocking Voltage				50				$\mu\text{Amps}$
				100				$\mu\text{Amps}$
Typical Junction Capacitance... $C_j$ (Note 1)				60				pF
Maximum Reverse Recovery Time... $t_{RR}$	150	150	150	150	250	500	500	ns

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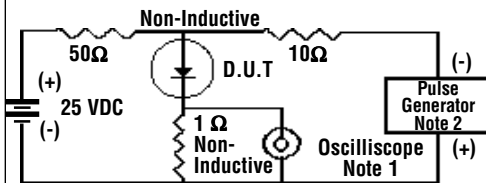
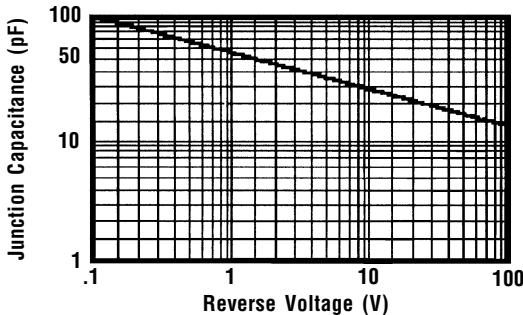
**Forward Current Derating Curve**



**Typical Instantaneous Forward Characteristics**

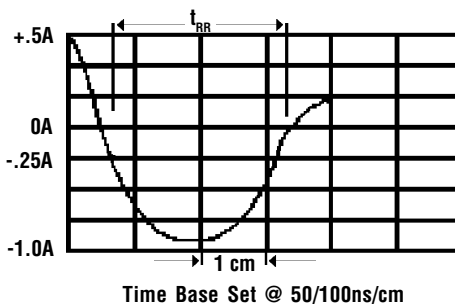


**Typical Junction Capacitance**



- 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.