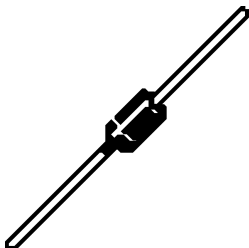
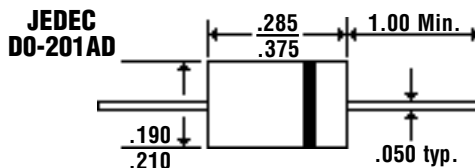


## Description



## Mechanical Dimensions



## Features

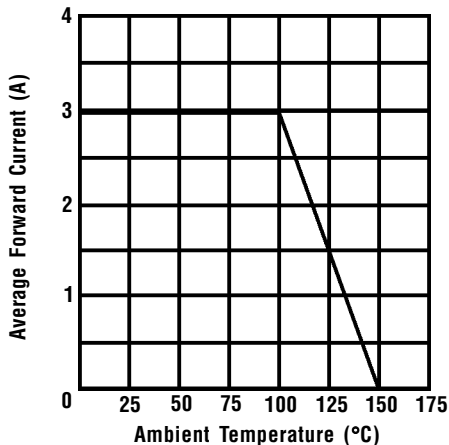
- FAST SWITCHING FOR HIGH EFFICIENCY
- HIGH SURGE CAPABILITY

- 3.0 AMP OPERATION @  $T_A = 105^\circ\text{C}$ , WITH NO THERMAL RUNAWAY
- MEETS UL SPECIFICATION 94V-0

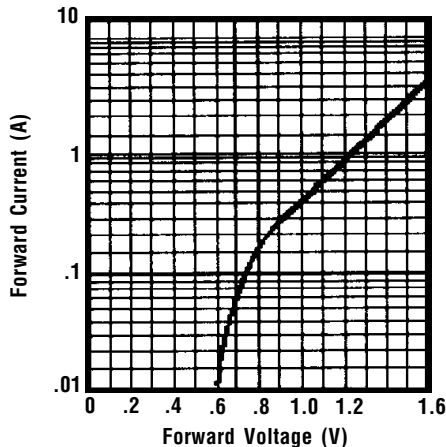
| FR30. . . 310 Series                                                                   |            |      |      |      |      |      |       | Units |
|----------------------------------------------------------------------------------------|------------|------|------|------|------|------|-------|-------|
| Maximum Ratings                                                                        | FR30       | FR31 | FR32 | FR34 | FR36 | FR38 | FR310 |       |
| Peak Repetitive Reverse Voltage...V <sub>RRM</sub>                                     | 50         | 100  | 200  | 400  | 600  | 800  | 1000  | Volts |
| RMS Reverse Voltage...V <sub>R(rms)</sub>                                              | 35         | 70   | 140  | 280  | 420  | 560  | 700   | Volts |
| DC Blocking Voltage...V <sub>DC</sub>                                                  | 50         | 100  | 200  | 400  | 600  | 800  | 1000  | Volts |
| Average Forward Rectified Current...I <sub>F(av)</sub><br>T <sub>A</sub> = 55°C        | 3.0        |      |      |      |      |      |       | Amps  |
| Non-Repetitive Peak Forward Surge Current...I <sub>FSM</sub><br>@ Rated Current & Temp | 200        |      |      |      |      |      |       | Amps  |
| Operating & Storage Temperature Range...T <sub>J</sub> , T <sub>STRG</sub>             | -65 to 150 |      |      |      |      |      |       | °C    |
| Electrical Characteristics                                                             |            |      |      |      |      |      |       |       |
| Maximum Forward Voltage @ 3.0A...V <sub>F</sub>                                        | 1.3        |      |      |      |      |      |       | Volts |
| Maximum DC Reverse Current...I <sub>R</sub> @ 25°C                                     | 50         |      |      |      |      |      |       | μAmps |
| @ Rated DC Blocking Voltage @ 100°C                                                    | 100        |      |      |      |      |      |       | μAmps |
| Typical Junction Capacitance...C <sub>j</sub> (Note 1)                                 | 60         |      |      |      |      |      |       | pF    |
| Maximum Reverse Recovery Time...t <sub>RR</sub>                                        | 150        | 150  | 150  | 150  | 250  | 500  | 500   | ns    |

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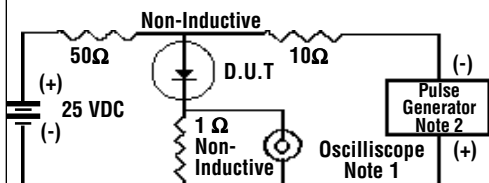
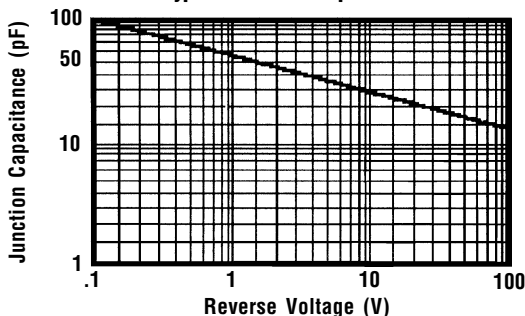
**Forward Current Derating Curve**



**Typical Instantaneous Forward Characteristics**

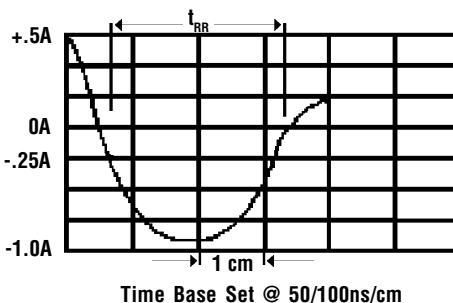


**Typical Junction Capacitance**



- 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.