

# FE3A ~ FE3D

## GLASS PASSIVATED JUNCTION SUPER FAST RECTIFIERS

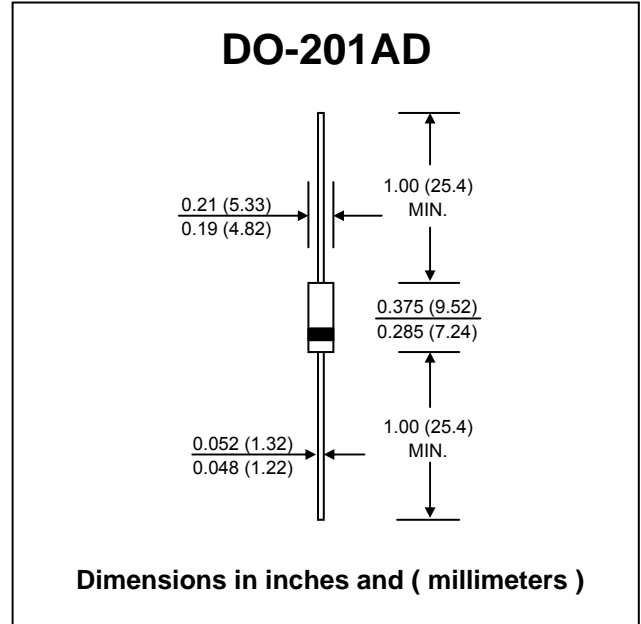
**PRV : 50 - 200 Volts**  
**Io : 3.0 Amperes**

### FEATURES :

- \* Glass passivated junction chip
- \* Superfast recovery time for high efficiency
- \* High surge current capability
- \* High current capability
- \* Low leakage current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : DO-201AD Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 1.16 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	FE3A	FE3B	FE3C	FE3D	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	V
Maximum Reverse Voltage	$V_R$	50	100	150	200	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 75\text{ }^\circ\text{C}$	$I_{F(AV)}$	3.0				A
Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	125				A
Maximum instantaneous Forward Voltage at $I_F = 3\text{ A}$	$V_F$	0.95				V
Maximum Reverse Current $V_R = V_{RRM}, T_a = 25\text{ }^\circ\text{C}$ at Rated Peak Reverse Voltage $V_R = V_{RRM}, T_a = 100\text{ }^\circ\text{C}$	$I_R$	5.0				$\mu\text{A}$
	$I_{R(H)}$	50				$\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	35				ns
Typical Thermal Resistance ( Note 2, 3 )	$R_{\theta JA}$	55				K/W
	$R_{\theta JL}$	20				K/W
Typical Junction Capacitance ( $V_R = 4\text{V}, f = 1\text{ MHz}$ )	$C_J$	100				pF
Operating Junction Temperature Range	$T_J$	- 55 to + 175				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 175				$^\circ\text{C}$

#### Notes :

- (1) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$ .
- (2) Thermal resistance from junction to ambient and/or lead, 0.375 "(9.5mm) lead length mounted on P.C.B. with 0.5x0.5 (12x12mm)copper pads.
- (3) Thermal resistance from junction to lead at 0.375 " (9.5 mm) lead length with both leads attached to heatsinks

## RATING AND CHARACTERISTIC CURVES ( FE3A ~ FE3D )

FIG.1 - FORWARD CURRENT DERATING CURVE

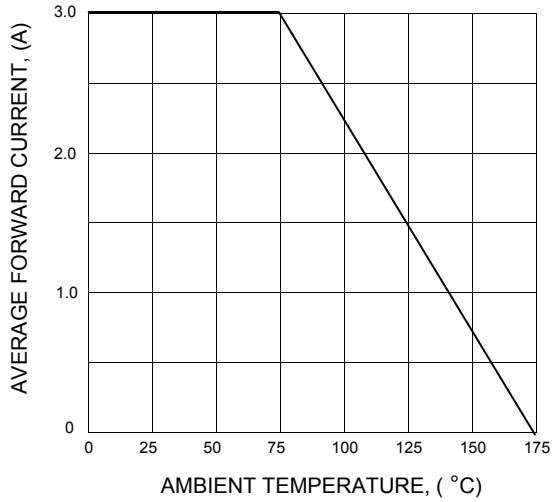


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

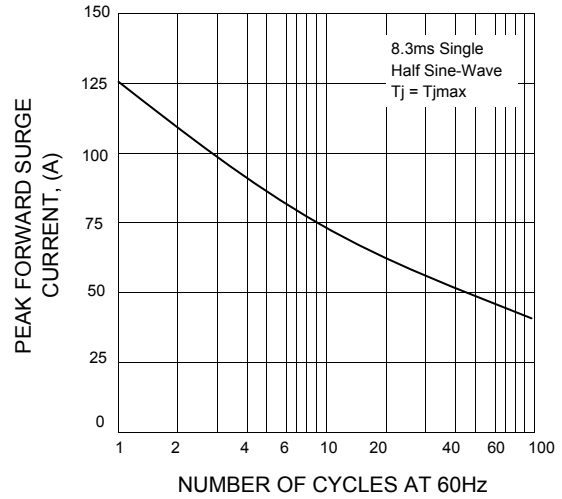


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

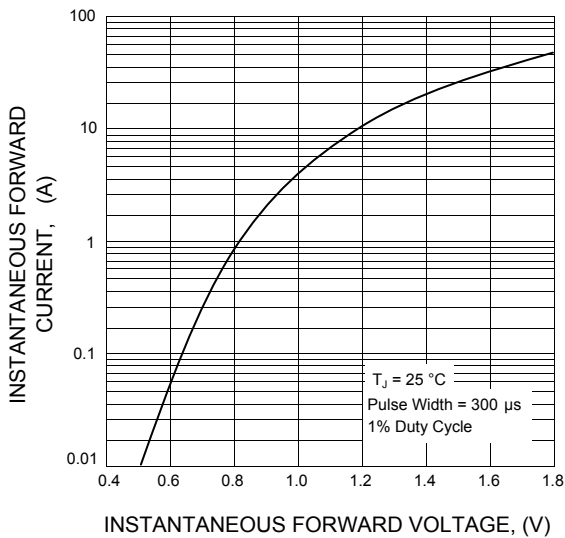


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

