

# SF30AJ - JG

## GLASS PASSIVATED JUNCTION SUPER FAST RECTIFIERS

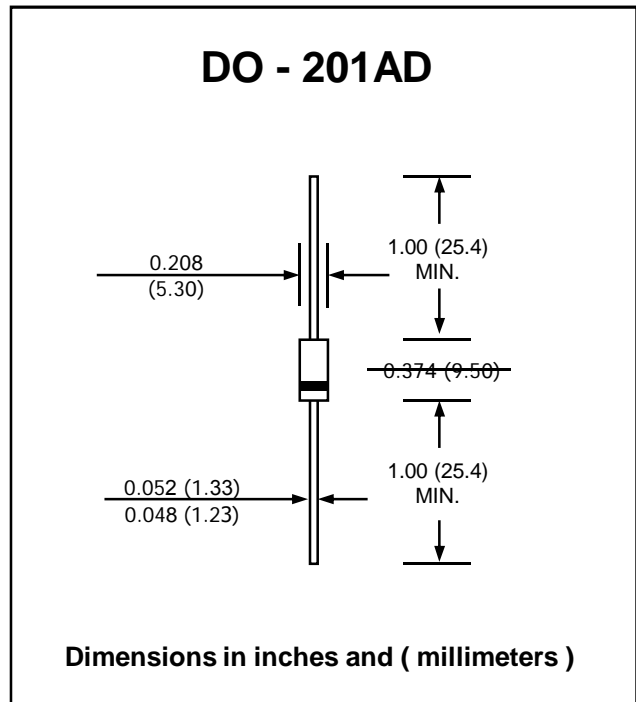
**PRV : 50 - 600 Volts**  
**Io : 3.0 Amperes**

### FEATURES :

- \* Glass passivated junction chip
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Super fast recovery time
- \* **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. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

RATING	SYMBOL	SF30 AG	SF30 BG	SF30 CG	SF30 DG	SF30 FG	SF30 GG	SF30 HG	SF30 JG	UNIT	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	100	140	210	280	350	420	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V	
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55^\circ C$	$I_{F(AV)}$	3.0								A	
Maximum Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	65								A	
Maximum Peak Forward Voltage at $I_F = 3.0 A$ .	$V_F$	0.95			1.3		1.5			V	
Maximum Peak Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 100^\circ C$	$I_R$	5.0								$\mu A$	
	$I_{R(H)}$	100									
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	35			40		50			ns	
Typical Junction Capacitance ( Note 2 )	$C_J$	75						50			pF
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	32								K/W	
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	- 65 to + 150								$^\circ C$	

#### Notes :

- ( 1 ) Reverse Recovery Test Conditions :  $I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A$ .
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

RATING AND CHARACTERISTIC CURVES ( SF30AG - SF30JG )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

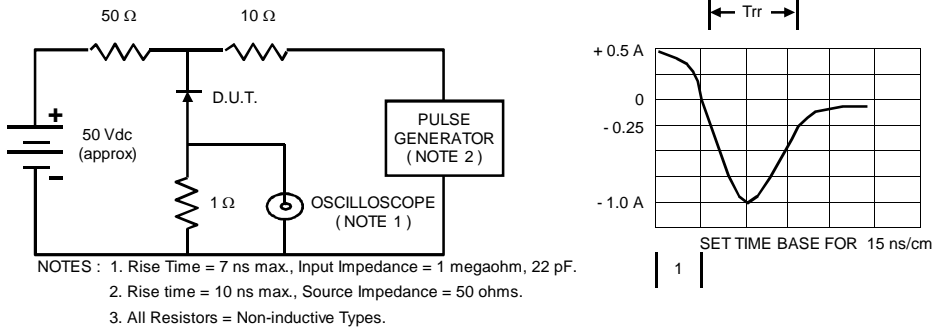


FIG.2 - FORWARD CURRENT DERATING CURVE

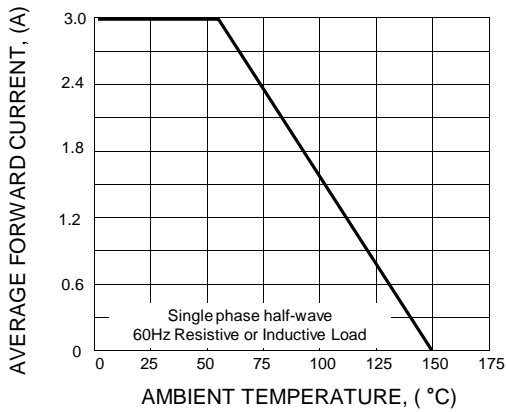


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

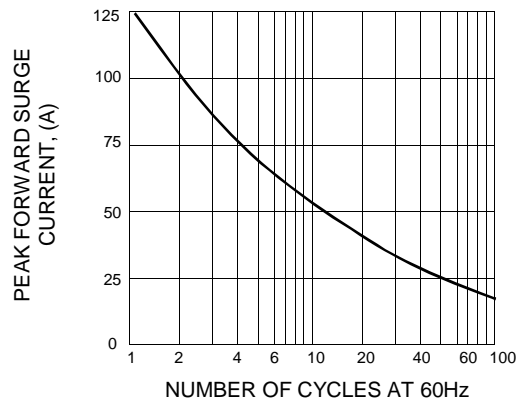


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

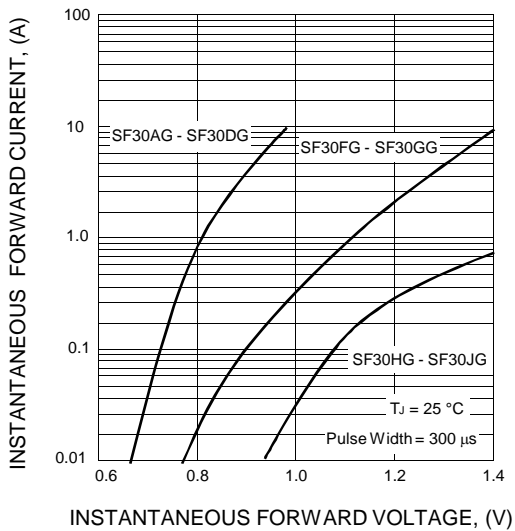


FIG.5 - TYPICAL JUNCTION CAPACITANCE

