



# SF31G THRU SF38G

3.0 AMPS. Glass Passivated Super Fast Rectifiers

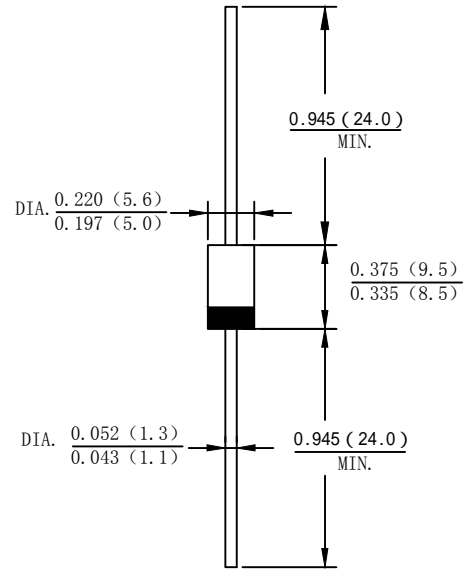
## Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Plastic material-UL flammability 94V-0

## Mechanical Data

- Case: Molded plastic DO-201AD
- Terminals: Plated leads solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number
- Lead Free: For RoHS/Lead Free Version

Case: DO-201AD



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

Type Number	SYMBOL	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF38G	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	104	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current. 375" (9.5mm) lead length @ $T_L=100^\circ\text{C}$	$I_F(AV)$	3.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	125							A
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	64.84							$\text{A}^2\text{s}$
Forward Voltage @ $I_F=3.0\text{A}$	$V_{FM}$	0.95			1.3		1.7		V
Peak Reverse Current @ $T_A=25^\circ\text{C}$	$I_R$	5.0							uA
At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$		100							
Typical Junction Capacitance (Note 1)	$C_J$	50			25				pF
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	45							$^\circ\text{C}/\text{W}$
Maximum Reverse Recovery Time (Note 3)	$T_{rr}$	35							ns
Operating Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
/Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Note: 1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

2. Leads maintained at ambient temperature at a distance of 9.5mm from the case

3. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$



# SF31G THRU SF38G

3.0 AMPS. Glass Passivated Super Fast Rectifiers

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

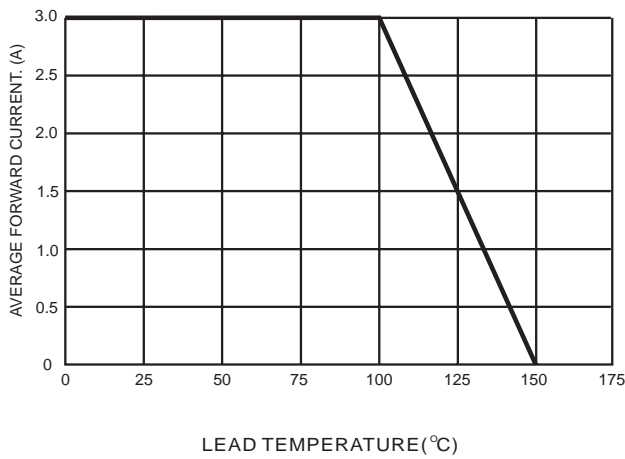


FIG.2- TYPICAL FORWARD CHARACTERISTICS

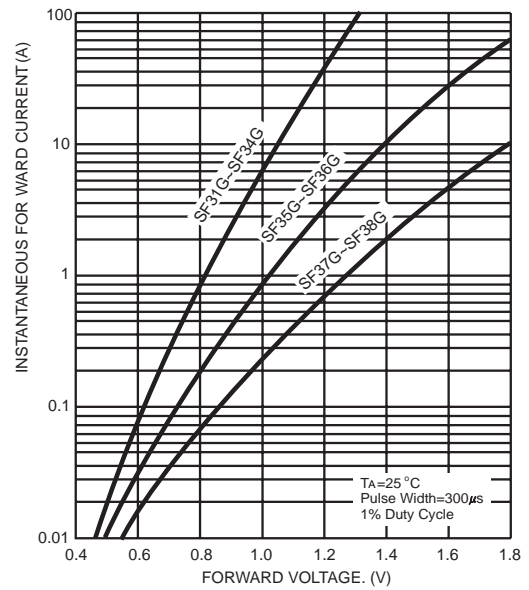


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

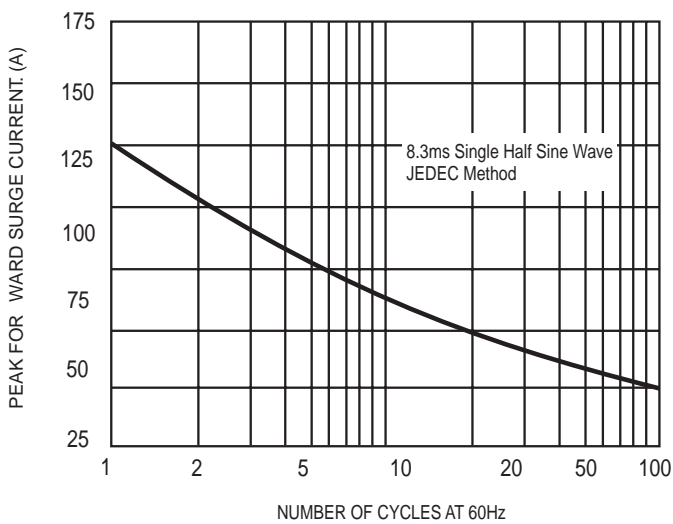
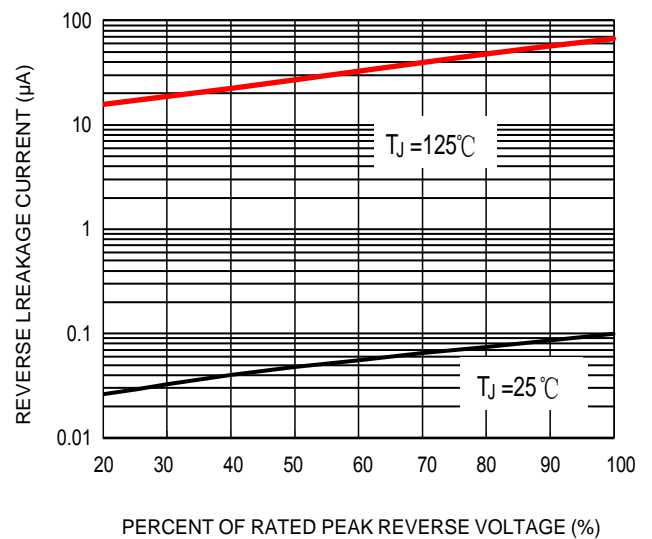


FIG. 4 TYPICAL REVERSE CHARACTERISTICS





## Important Notice and Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from XINNUO
- XINNUO reserves the right to make changes to this document and its products and specifications
- XINNUO disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- XINNUO does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the here in document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications.  
XINNUO makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown here in are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify XINNUO for any damages resulting from such improper use or sale.
- Since XINNUO uses lot number as the tracking base, please provide the lot number for tracking when complaining.