

SF31 THRU SF38

3.0 AMP. 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

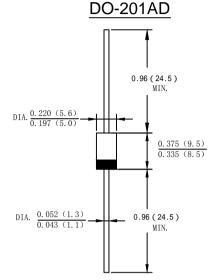
· Case: Molded plastic DO-201AD

 Terminals: Plated leads solderable per MIL-STD-202, Method 208 guaranteed

· Polarity: Color band dentes cathode end

Mounting Position: AnyMaking: Type Number

Lead Free: For RoHS/Lead Free Version



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	SF31	SF32	SF33	SF34	SF35	SF36	SF38	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	VDC	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current.375"(9.5mm) lead length @T∟=100°C	IF(AV)	3.0							А
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	İfsm	125							А
I ² t Rating for Fusing (t < 8.3ms)	l ² t	64.84							A ² s
Forward Voltage @IF=3.0A	V _{FM}	0.95 1.25 1.7					٧		
Peak Reverse Current @T _A =25°C	5.0								T.,,
At Rated DC Blocking Voltage @T _A =125°C	100							uA	
Typical Junction Capacitance (Note 1)	Сı	70					45		pF
Typical Thermal Resistance Junction to Ambient(Note 2)	RөJA	20							°C/W
Maximum Reverse Recovery Time(Note 3)	Trr	35							ns
Operating Temperature Range	Тл	-55 to +125							$^{\circ}$
/Storage Temperature Range	Тѕтс	-55 to +150							$^{\circ}$

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: IF=0.5A, IR=1A, Irr=0.25A

SF31 THRU SF38

FIG. 1 - FORWARD CURRENT DERATING CURVE

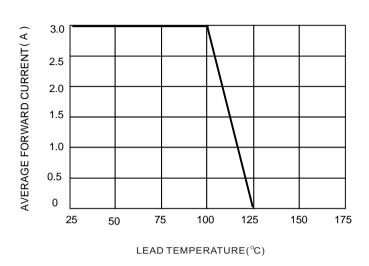
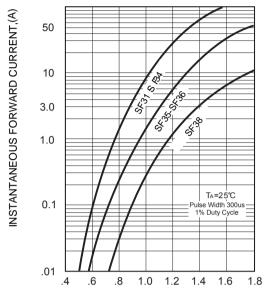


FIG.2-TYPICAL FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE (V)

FIG. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

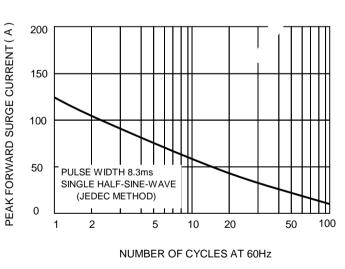
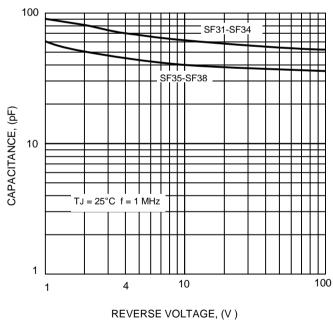


FIG.4 - TYPICAL JUNCTION CAPACITANCE





SF31 THRU SF38

Important Notice and Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from DIYI.
- DIYI reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- DIYI disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- DIYI 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.
 - DIYI 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 ris k andagree to fully indemnify DIYI for any damages resulting from such improper use or sale.
- Since DIYI uses lot number as the tracking base, please provide the lot number for tracking when complaining.