



# SF31U THRU SF38U

3.0 AMP. Super Fast Rectifiers

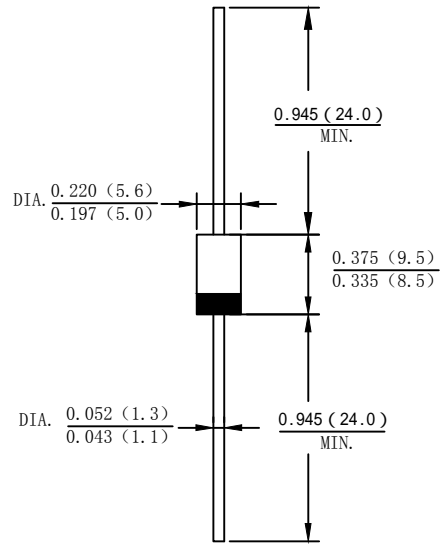
## Features

- 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 denotes cathode end
- Mounting Position: Any
- Marking: 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	SF31U	SF32U	SF33U	SF34U	SF35U	SF36U	SF38U	Unit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	104	140	210	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current.375"(9.5mm) lead length @T <sub>L</sub> =100°C	IF(AV)	3.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150							A
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	93.375							A <sup>2</sup> s
Forward Voltage @IF=3.0A	V <sub>FM</sub>	0.95				1.3		1.7	V
Peak Reverse Current @T <sub>A</sub> =25°C	I <sub>R</sub>	5.0							uA
At Rated DC Blocking Voltage @T <sub>A</sub> =125°C		100							
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	50				25			pF
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	70							°C/W
Maximum Reverse Recovery Time(Note 3)	T <sub>rr</sub>	35							ns
Operating Temperature Range	T <sub>J</sub>	-55 to +125							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

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

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



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Fig. 1 Forward Current Derating Curve

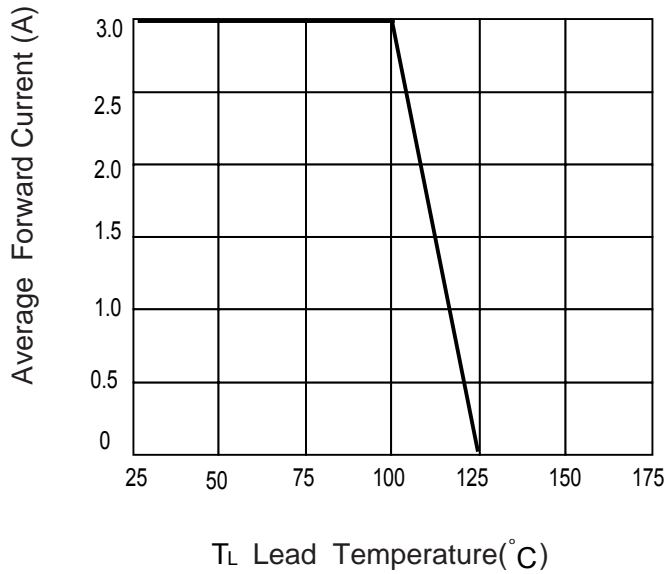


Fig. 2 Typ. Forward Characteristics

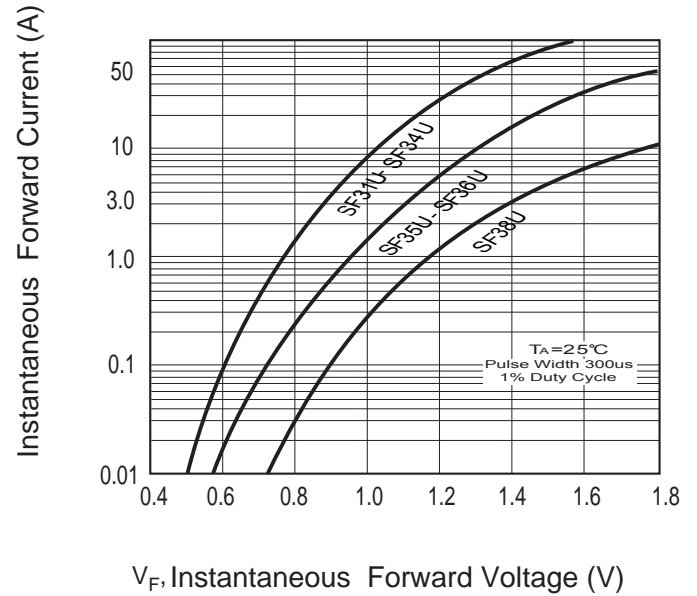


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

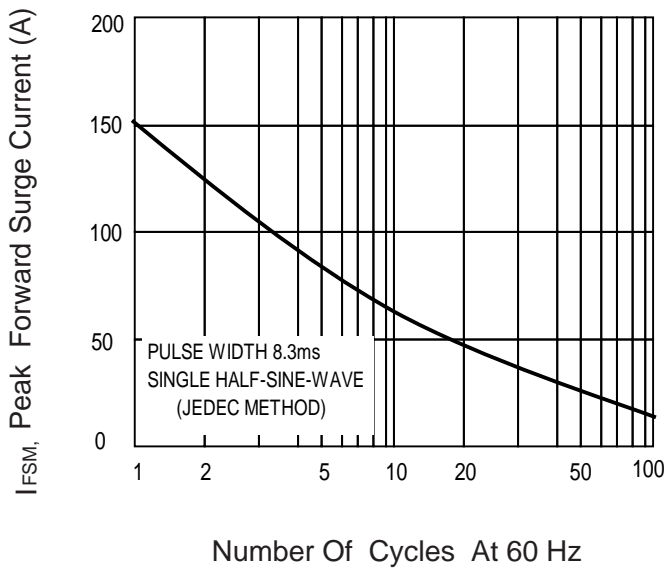
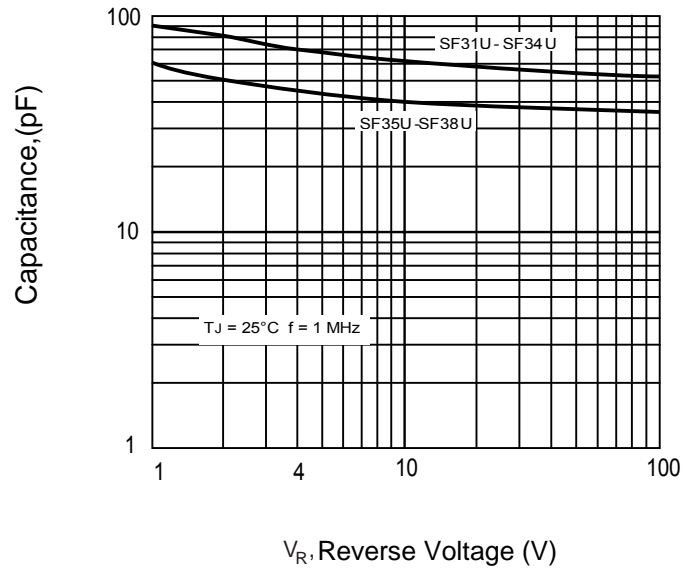


Fig.4 Typical Junction Capacitance





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