



# SF51 THRU SF58

## 5.0 AMP. Super Fast Rectifiers

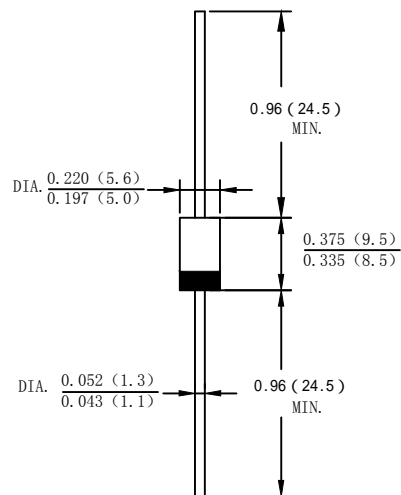
### Features

- 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
- Making: Type Number
- Lead Free: For RoHS/Lead Free Version

### 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	SF51	SF52	SF53	SF54	SF55	SF56	SF58	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 @ $T_A=55^\circ\text{C}$	$I_o$	5.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150							A
Forward Voltage @ $I_F=5.0\text{A}$	$V_{FM}$	0.95			1.30		1.7		V
Peak Reverse Current @ $T_A=25^\circ\text{C}$	$I_R$	5.0							uA
At Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$		100							
Typical Junction Capacitance (Note 1)	$C_J$	90			75				pF
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	10							$^\circ\text{C}/\text{W}$
Maximum Reverse Recovery Time (Note 3)	$T_{rr}$	35							ns
Operating Temperature Range	$T_J$	-55 to +125							$^\circ\text{C}$
/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:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$



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FIG. 1 – FORWARD CURRENT DERATING CURVE

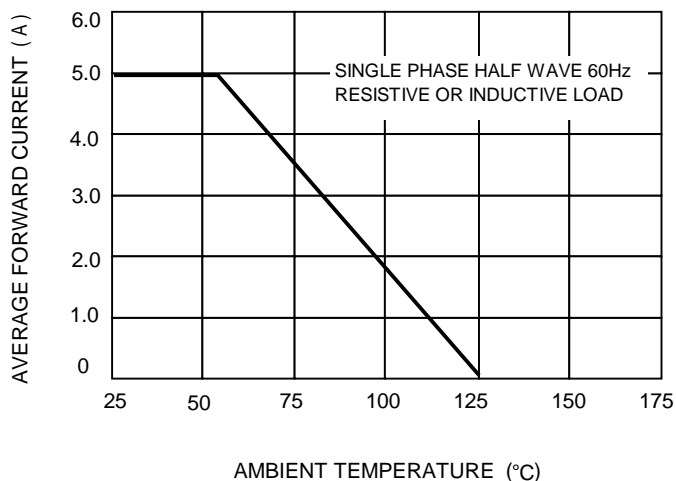


FIG.2-TYPICAL FORWARD CHARACTERISTICS

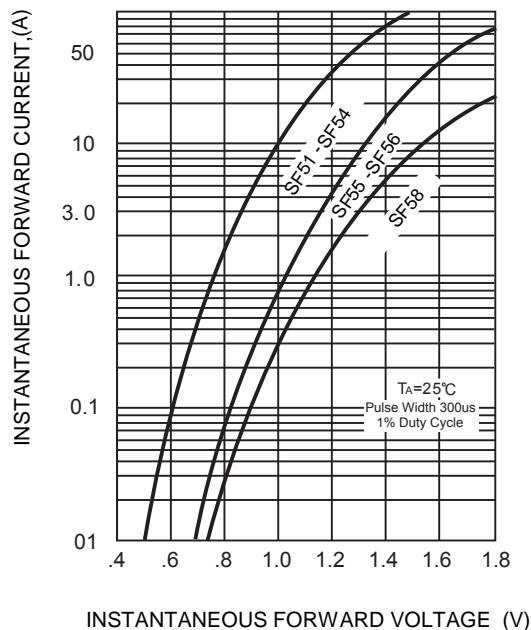


FIG. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

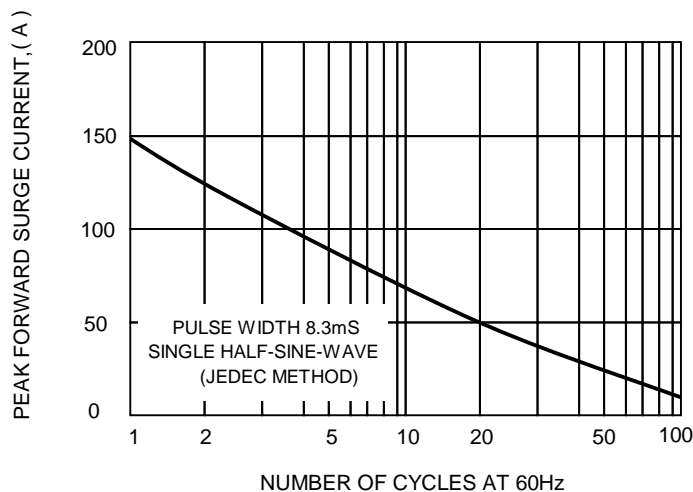


FIG.4 – TYPICAL JUNCTION CAPACITANCE

