



## SOFT RECOVERY FAST SWITCHING RECTIFIER

**SFR501 THRU SFR507**

**VOLTAGE RANGE**  
**CURRENT**

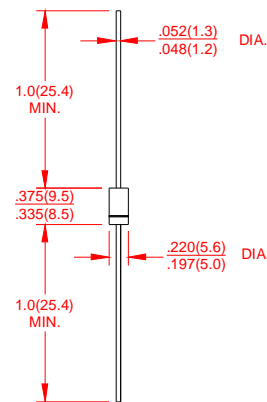
**50 to 1000 Volts**  
**5.0Ampere**

### FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 secods/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 grams



**DO-27**

Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	SFR 501	SFR 502	SFR 503	SFR 504	SFR 505	SFR 506	SFR 507	UNITS	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current 0.375”(9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	5.0							Amp	
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	200							Amps	
Maximum Instantaneous Forward Voltage @ 5.0A	$V_F$	1.3							Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	25							$\mu\text{A}$	
	$T_A = 100^\circ\text{C}$	1.0								
Maximum Reverse Recovery Time (NOTE2) $T_j=25^\circ\text{C}$	$t_{rr}$	100	150	200						ns
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	10							$^\circ\text{C}/\text{W}$	
Operating Junction Temperature Range	$T_J$	(-55 to +150)							$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	(-55 to +150)							$^\circ\text{C}$	

#### Notes:

1. Thermal Resistance from junction to Ambient at .375”(9.5mm)lead length, P.C.board mounted,with 1.1”×1.1”(30×30mm)copper heatsink.
2. Reverse Recovery Test Conditions:If=0.5mA,Ir=1.0mA,Irr=0.25A



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## RATING AND CHARACTERISTIC CURVES SFR501 THRU SFR507

