



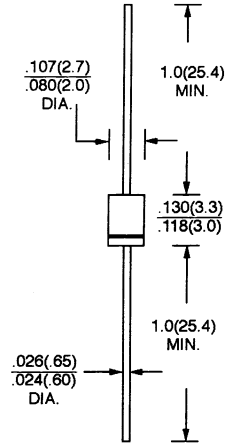
# SFR1A1 THRU SFR1A7

1.0 AMP. SOFT FAST RECOVERY RECTIFIERS

## VOLTAGE RANGE

50 to 1000 Volts  
CURRENT  
1.0 Ampere

### R-1



Dimensions in inches and (millimeters)

## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any
- \* Weight: 0.20 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

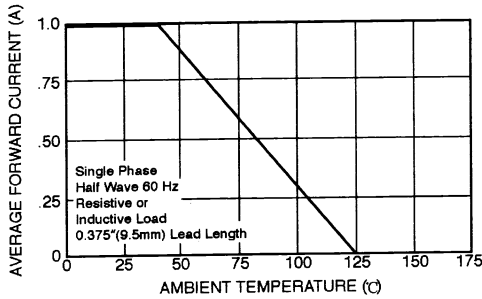
TYPE NUMBER	SYMBOLS	SFR 1A1	SFR 1A2	SFR 1A3	SFR 1A4	SFR 1A5	SFR 1A6	SFR 1A7	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum D. C Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length @ $T_A = 40^\circ C$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	25							A
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.2							V
Maximum D. C Reverse Current @ $T_A = 25^\circ C$ at Rated D. C Blocking Voltage @ $T_A = 100^\circ C$	$I_R$	5.0 100							$\mu A$ $\mu A$
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	120				200	350		nS
Typical Junction Capacitance (Note 2)	$C_J$	15							pF
Operating Temperature Range	$T_J$	- 65 to + 125							$^\circ C$
Storage Temperature Range	$T_{STG}$	- 65 to + 150							$^\circ C$

NOTES: 1. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ .

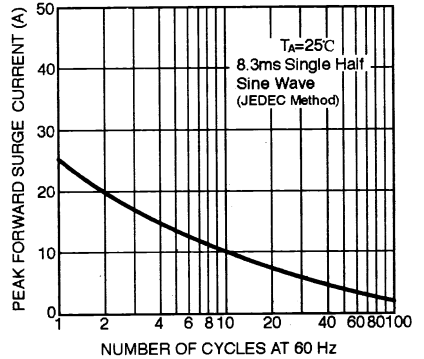
2. Measured at 1 MHz and applied reverse voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SFR1A1 THRU SFR1A7)

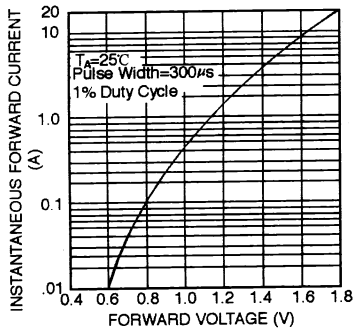
**FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE**



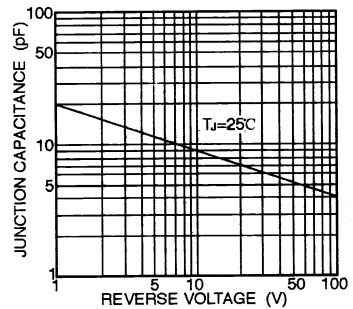
**FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 3-TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4-TYPICAL JUNCTION CAPACITANCE**



**FIG. 5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**

