

# Super Fast Rectifier



## Features:

- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

## Mechanical Data:

Case	: JEDEC DO-27 molded plastic
Polarity	: Colour band denotes cathode
Weight	: 0.04 ounces , 1.1 grams
Mounting Position	: Any
Reverse Voltage	: 100 to 600 Volts
Forward Current	: 3.0 Amperes

## 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%.

Characteristics	Symbol	SF32	SF36	SF38	Unit
Max. Recurrent Peak Reverse Voltage	$V_{RRM}$	100	400	600	V
Max. RMS Voltage	$V_{RMS}$	70	280	420	
Max. DC Blocking Voltage	$V_{DC}$	100	400	600	
Max. Average Forward Rectified Current $T_A = 55^\circ\text{C}$	$I_{(AV)}$	3			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Super Imposed on Rated Load (JEDEC method )	$I_{FSM}$	125			
Peak Forward Voltage at 3.0A DC	$V_F$	0.95	1.3	1.7	V
Max. DC Reverse Current at Rated DC Blocking Voltage at $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	$I_R$	5 100			$\mu\text{A}$
Max. Reverse Recovery Time (Note 1)	$T_{RR}$	35			nS
Typical Junction Capacitance (Note 2)	$C_J$	70	45		pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	20			$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to +150			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$				

## Notes:

1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient.
4. The typical data above is for reference only

## Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

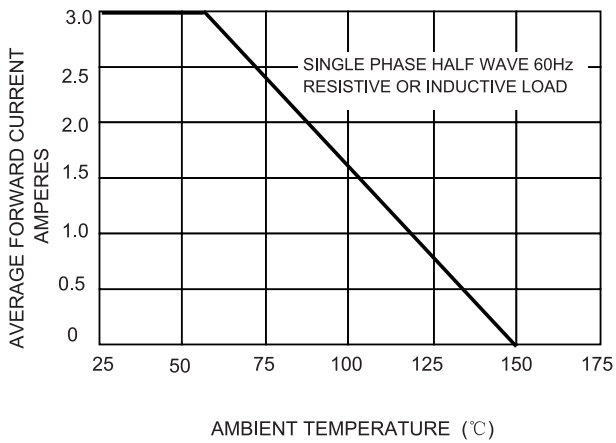


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

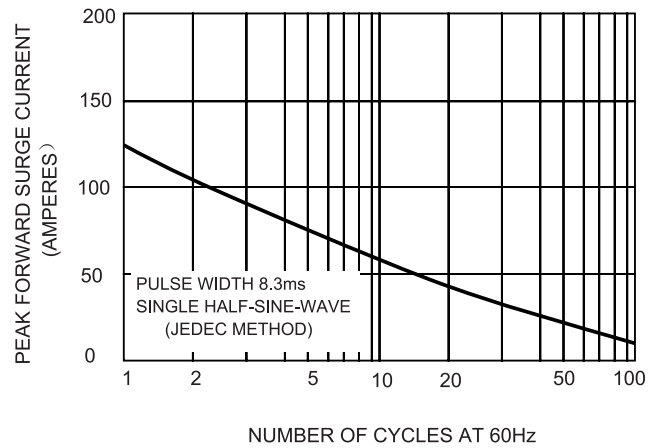


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

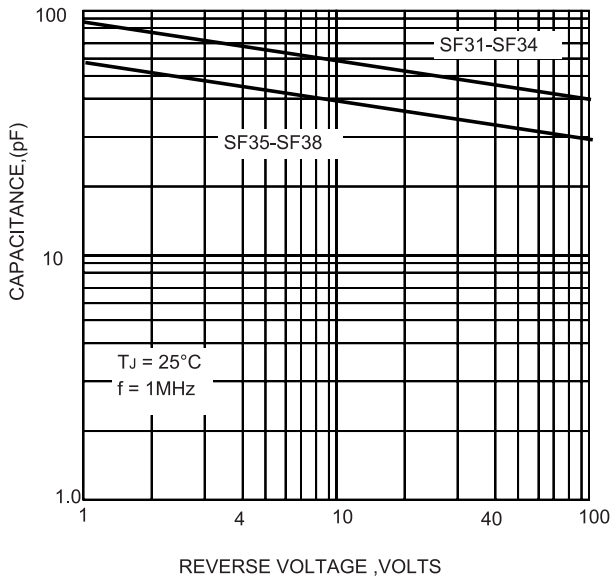
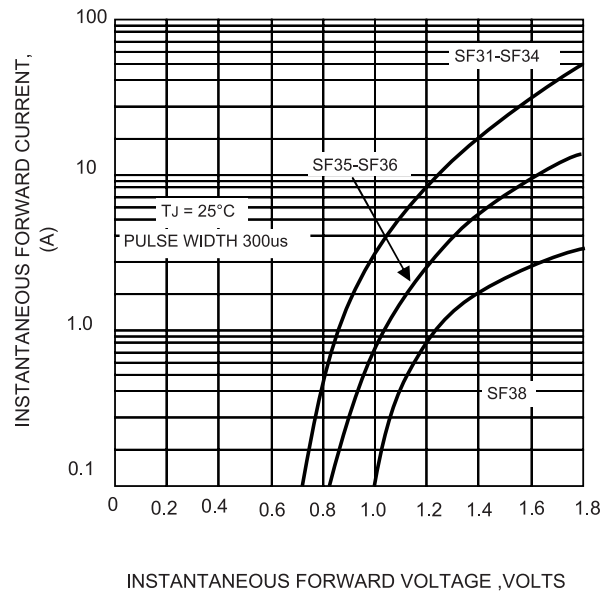


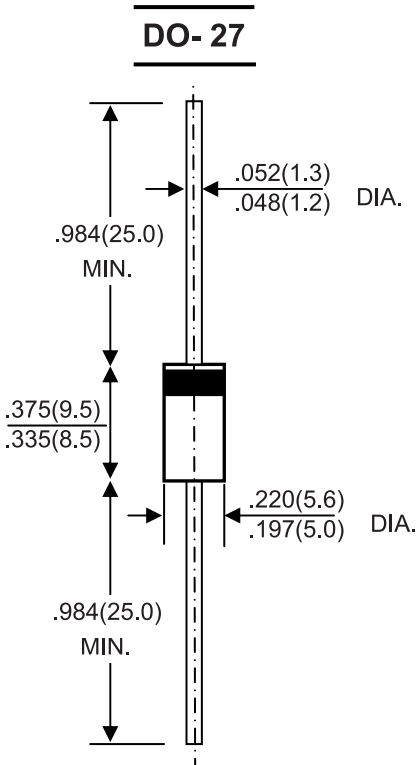
FIG.4-TYPICAL FORWARD CHARACTERISTICS



# Super Fast Rectifier



## Dimensions:



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Super Fast Rectifier	SF32
	SF36
	SF38

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