



Micro Commercial Components  
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# SF500 GP thru SF504 GP

## Features

- Low forward voltage, high current capability
- Hermetically sealed
- High surge capability
- Superfast recovery times-epitaxial construction

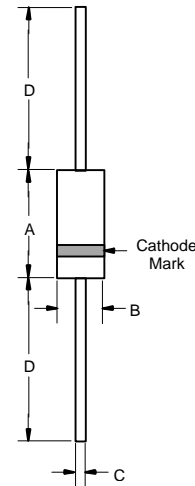
## 5 Amp Surper Fast Recovery Rectifiers 50 - 400Volts

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 25.0°C/W Junction To Lead

Microsemi Catalog Number	Device Marking	Maximum Reccurent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF500GP	SF500GP	50V	35V	50V
SF501GP	SF501GP	100V	70V	100V
SF502GP	SF502GP	200V	140V	200V
SF503GP	SF503GP	300V	210V	300V
SF504GP	SF504GP	400V	280V	400V

## DO-201AD



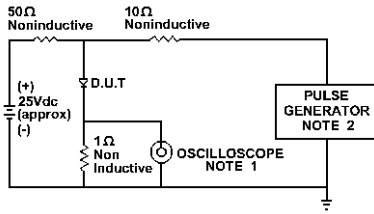
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	5.0A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	.95V	$I_{FM} = 5.0A;$ $T_A = 25^\circ\text{C}^*$
SF500~SF502 SF503~SF504		1.25V	
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0uA 300uA	$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{rr}$	35nS	Test Conditions $I_F = .5A, I_R = 1A, I_{rr} = .25A$
Typical Junction Capacitance	$C_J$	45pF	Measured at 1.0MHz, $V_R = 4.0V$

DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

# SF500GP thru SF504GP



NOTE:1. Rise Time = 7ns max.  
 Input Impedance = 1 megohm. 22pF  
 2. Rise Time = 10ns max.  
 Source Impedance = 50 Ohms

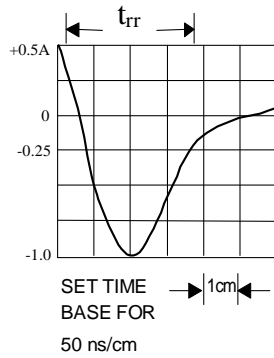


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

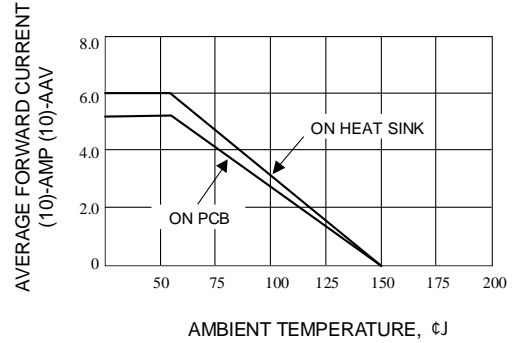


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

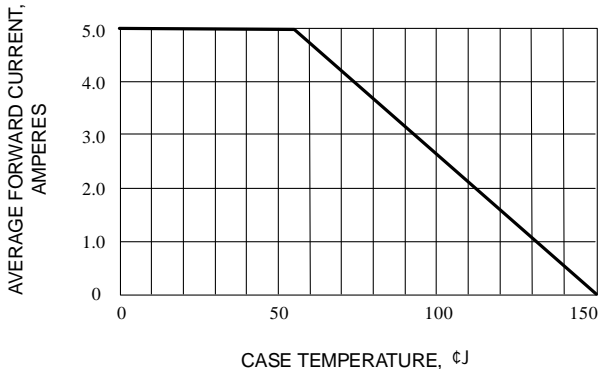


Fig. 3-MAXIMUM AVERAGE FORWARD CURRENT RATING

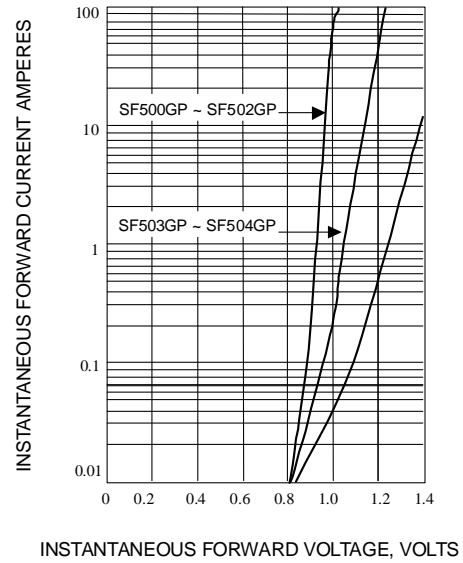


Fig. 4-FORWARD CURRENT DERATING CURVE

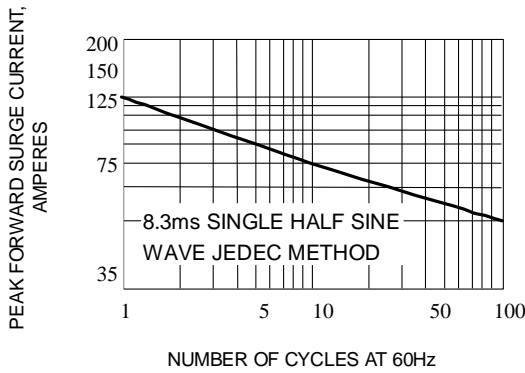


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

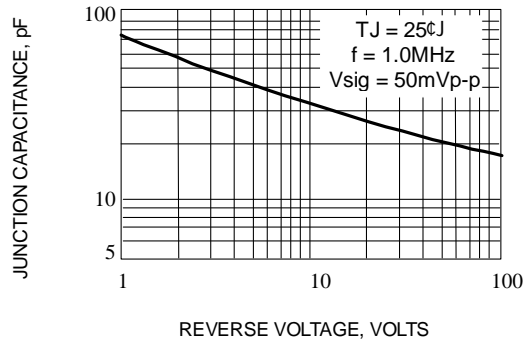


Fig. 6-TYPICAL JUNCTION CAPACITANCE