

**SF31
THRU
SF38**

Features

- High Surge Capability
- Low Forward Voltage Drop
- High Current Capability
- High Reliability

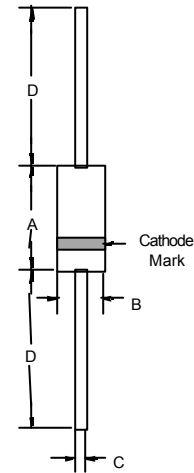
**3.0 Amp Super Fast
Rectifier
50 to 600 Volts**

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- For capacitive load, derate current by 20%

GM Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF31	50V	35V	50V
SF32	100V	70V	100V
SF33	150V	105V	150V
SF34	200V	140V	200V
SF35	300V	210V	300V
SF36	400V	280V	400V
SF38	600V	420V	600V

DO-201AD



Electrical Characteristics @ 25°C Unless Otherwise Specified

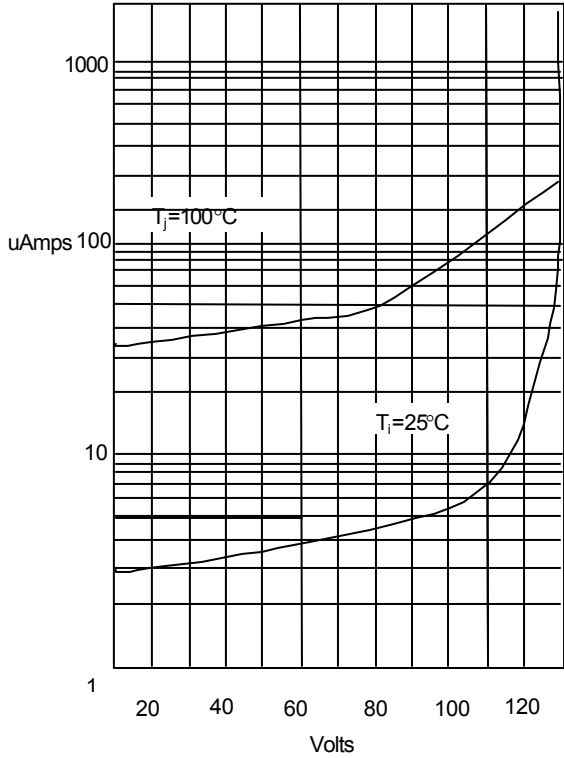
Average Forward Current	$I_{F(AV)}$	3.0 A	$T_C = 55^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF31-SF34 SF35-SF36 SF38	V_F	.95V 1.25V 1.5V	$I_{FM} = 3.0A;$ $T_C = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$
Typical Junction Capacitance SF31-SF34 SF35-SF38	C_J	100pF 80pF	Measured at 1.0MHz, $V_R=4.0V$
Maximum Reverse Recovery Time	T_{rr}	35ns	$I_F=0.5A, I_R=1.0A,$ $I_r=0.25A$

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 300µsec, Duty Cycle 1%

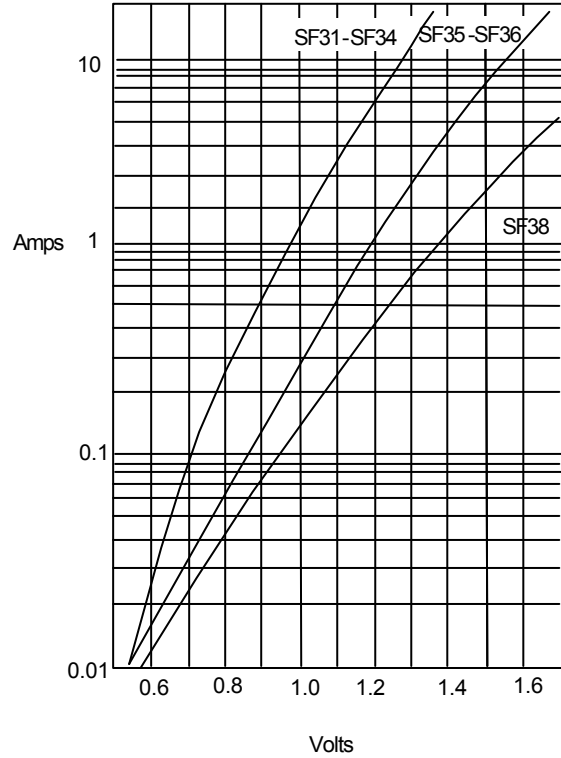
SF31 thru SF38

Figure 1
Typical Reverse Characteristics



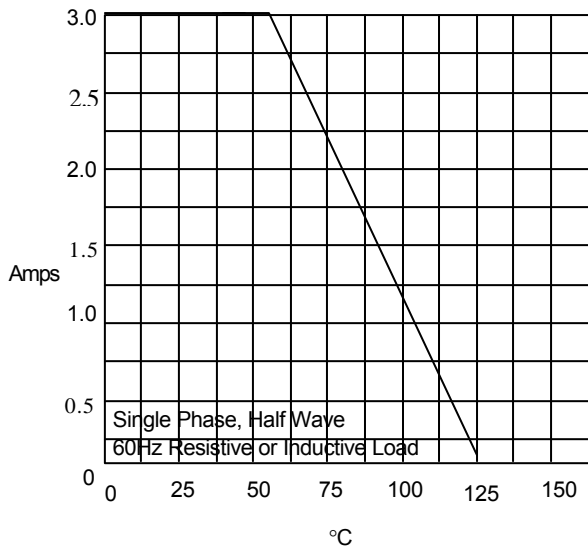
Instantaneous Reverse Current - uAmperes versus
Percent of Rated Peak Reverse Voltage - %

Figure 2
Typical Forward Characteristics



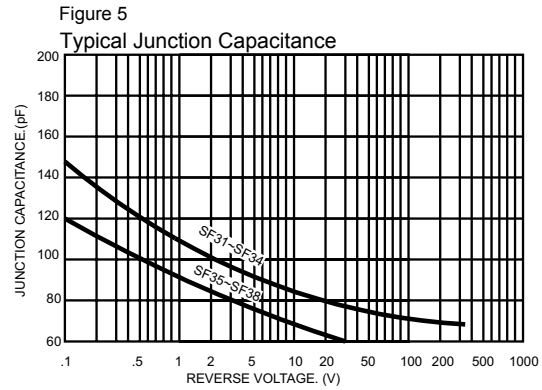
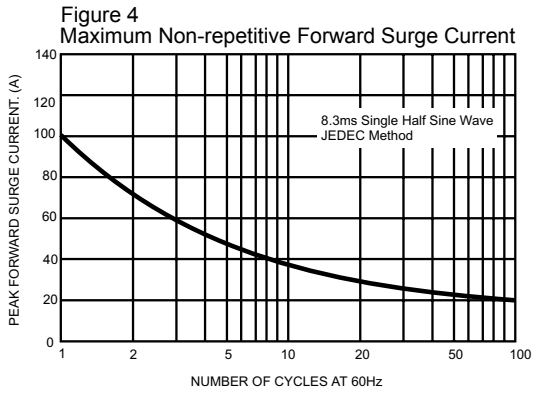
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 3
Forward Derating Curve



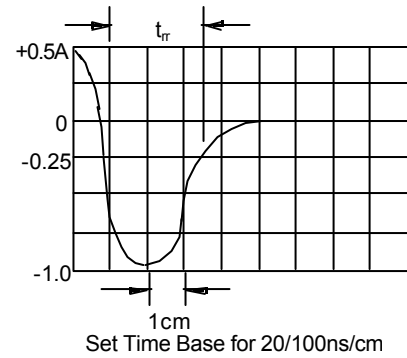
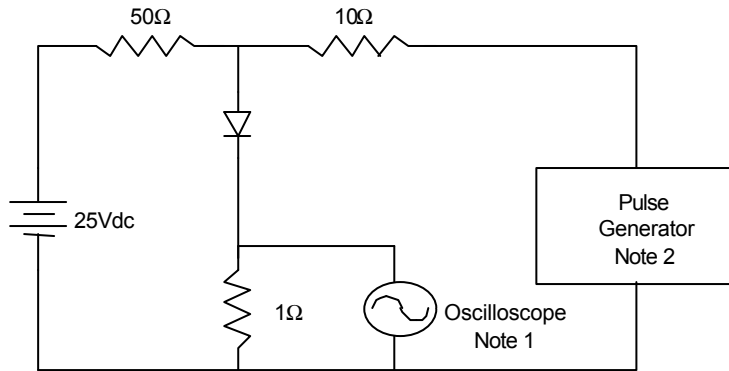
Average Forward Rectified Current Per Leg - Amperes versus
Case Temperature - °C

SF31 thru SF38



SF38

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:

1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive