Micro Commercial Components
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SF31 THRU SF38

3.0 Amp Super Fast Rectifier 50 to 600 Volts

Features

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

Maximum Ratings

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

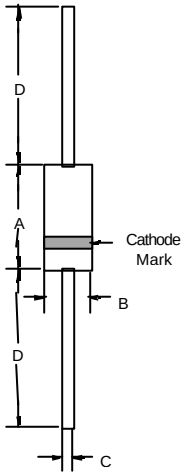
MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF31	50V	35V	50V
SF32	100V	70V	100V
SF33	150V	105V	150V
SF34	200V	140V	200V
SF35	300V	210V	300V
SF36	400V	280V	400V
SF38	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0 A	T_C = 55°C
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF31-SF34 SF35-SF36 SF38	V_F	 .95V 1.3V 1.7V	 I_{FM} = 3.0A; T_C = 25°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	T_C= 25°C T_C = 100°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_{rr}=0.25A

*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

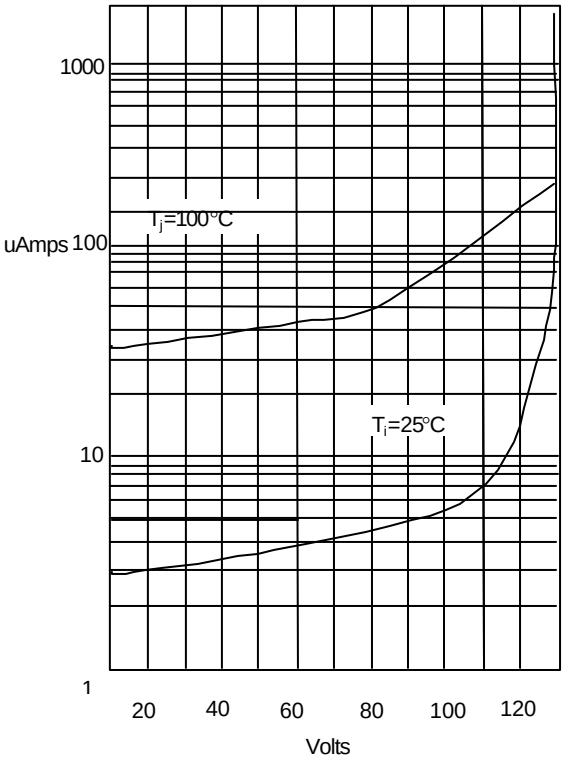
DO-201AD



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

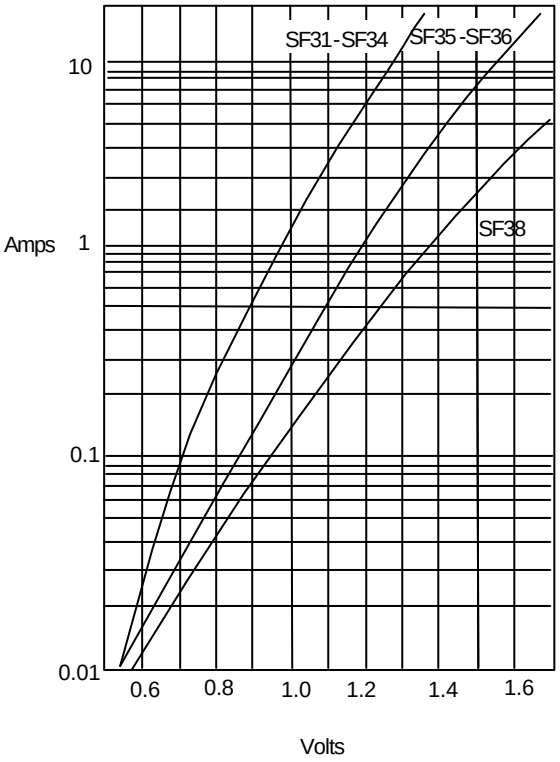
SF31 thru SF38

Figure 1
Typical Reverse Characteristics



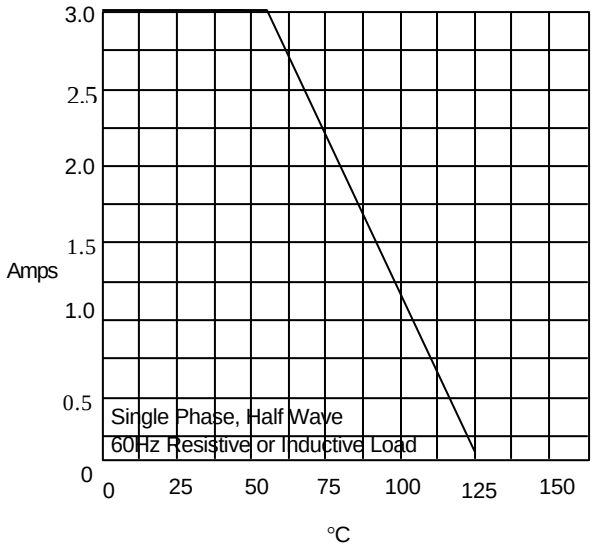
Instantaneous Reverse Current - uAmperes *versus*
Percent of Rated Peak Reverse Voltage - %

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

Figure 4
Maximum Non-repetitive Forward Surge Current

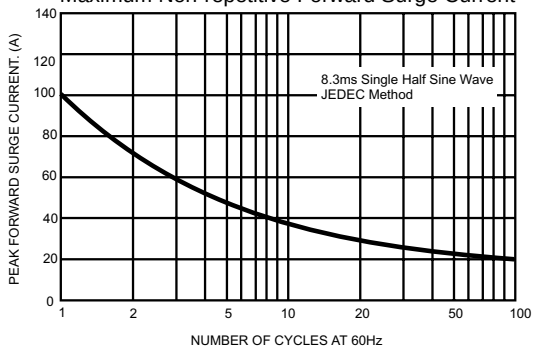


Figure 5
Typical Junction Capacitance

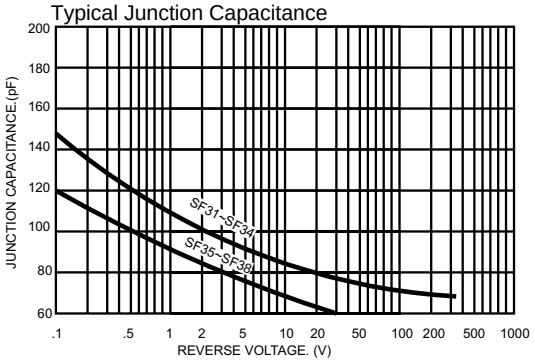
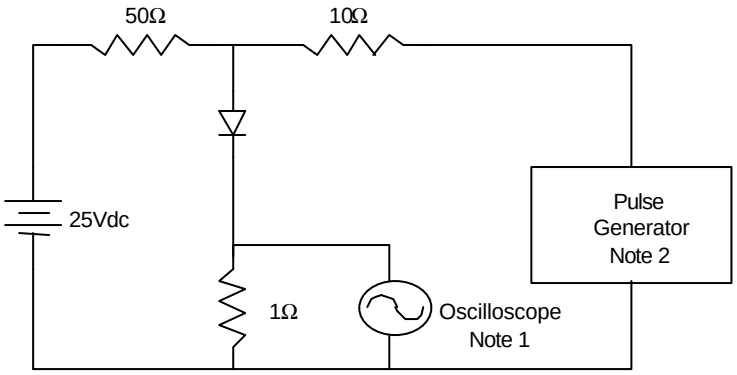
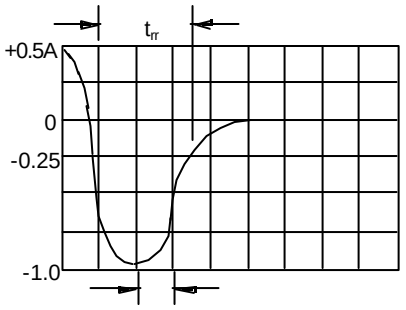


Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

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