



SF31 THRU SF38

3.0 AMPS. SUPER FAST RECTIFIERS

**Voltage Range
50 to 600 Volts
Current
3.0 Amperes**

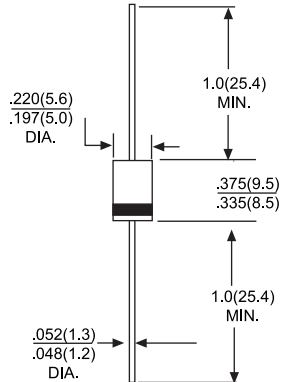
Features

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

Mechanical Data

- Cases: Molded plastic
- Epoxy: UL 94V-O rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: 1.2 grams

DO-201AD



Dimensions in inches and (millimeters)

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%

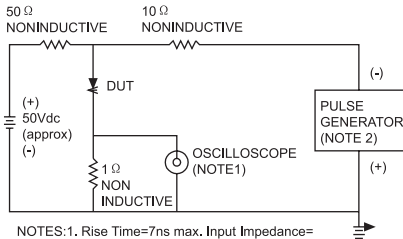
Type Number		SF31	SF32	SF33	SF34	SF35	SF36	SF37	SF38	UNITS	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	v	
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	v	
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	v	
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @T _A = 55°C	I _{F(AV)}	3.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	125								A	
Maximum Instantaneous Forward Voltage @3.0A	V _F	0.95			1.3		1.7			v	
Maximum DC Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 100°C	I _R					5.0 100					uA uA
Maximum Reverse Recovery Time (Note 1)	T _{RR}					35					nS
Typical Junction Capacitance (Note 2)	C _J	100				80					pF
Operating Temperature Range	T _J					-55 to +125					°C
Storage Temperature Range	T _{STG}					-55 to +150					°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 4.0 Volts D.C.

RATING AND CHARACTERISTIC CURVES SF31 THRU SF38



FIG.1- REVERSE RECOVER 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

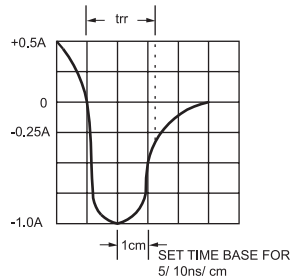


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

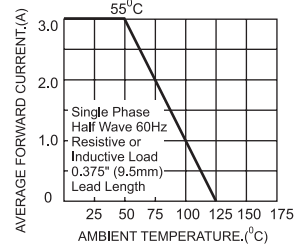


FIG.3- TYPICAL REVERSE CHARACTERISTICS

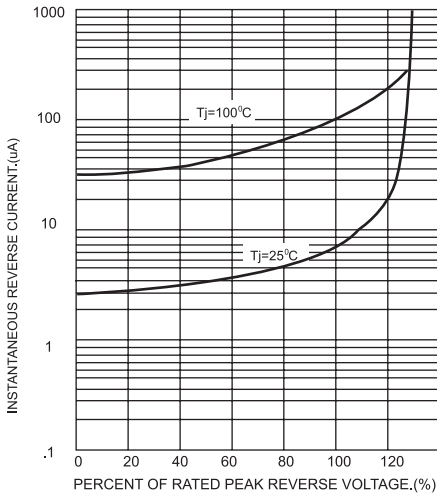


FIG.4- TYPICAL FORWARD CHARACTERISTICS

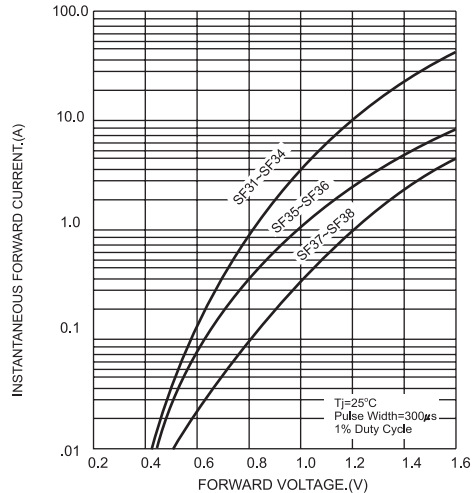


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

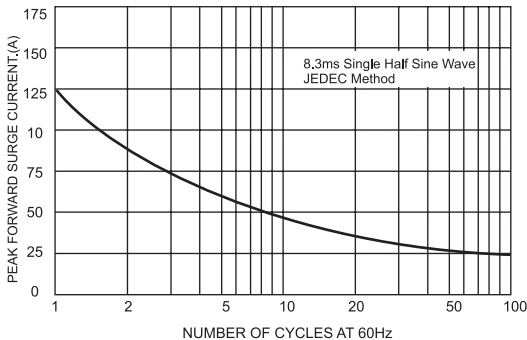


FIG.6- TYPICAL JUNCTION CAPACITANCE

