SUPER FAST RECTIFIERS

SF31 THRU SF36

1.0 AMPS. Super Fast Rectifiers

Features

Low forward voltage drop

High current capability

High reliability

High surge current capability

Mechanical Data

Cases: DO-201AD Molded Plastic

Epoxy: UL 94V-0 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℃/10 seconds/.375"(9.5mm) lead lengths at 5 lbs., (2.3kg) tension

Weight: 1.2 grams

Maximum Ratings and Electrical Characteristics

Rating at 25℃ Ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

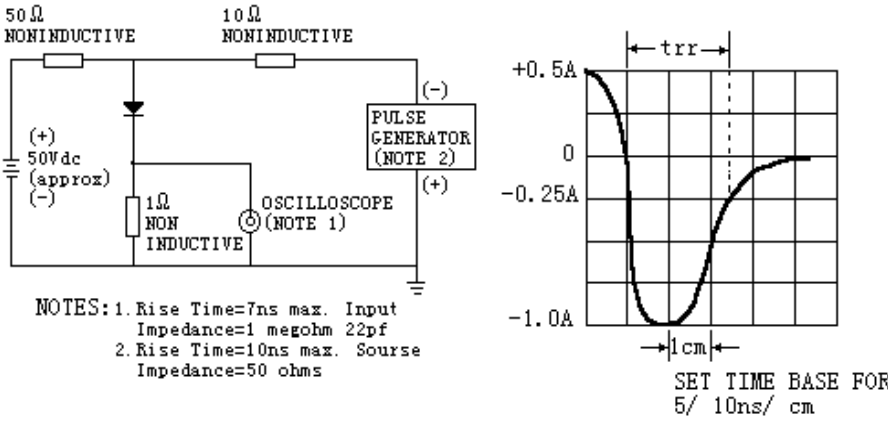
Type Number	**SF31**	**SF32**	**SF33**	**SF34**	**SF35**	**SF36**	**Units**
Maximum Recurrent peak Reverse Voltage	50	100	150	200	300	400	V
Maximum RMS Voltage	35	70	105	140	210	280	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	V
Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead length @TA=55℃	3.0						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	125						A
Maximum Instantaneous Forward Voltage @3.0A	0.95				1.3		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0 (@T_A=25℃) 100 (@T_A=100℃)						μA μA
Maximum Reverse Recovery Time (Note 1)	35						nS
Typical Junction Capacitance (Note 2)	100			80			pF
Operating Temperature Range T_J	-65 to +125						℃
Storage Temperature Range T_{STG}	-65 to +150						℃

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 V D.C.

RATINGS AND CHARACTERISTIC CURVES (SF31 THRU SF36)

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



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance=50 ohms

FIG. 2-MAXIMUM AVERAGE FORWARD CURRENT DERATING

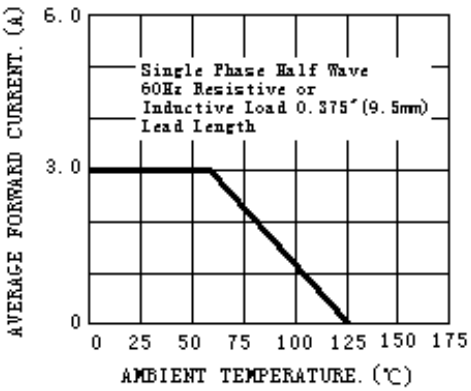


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

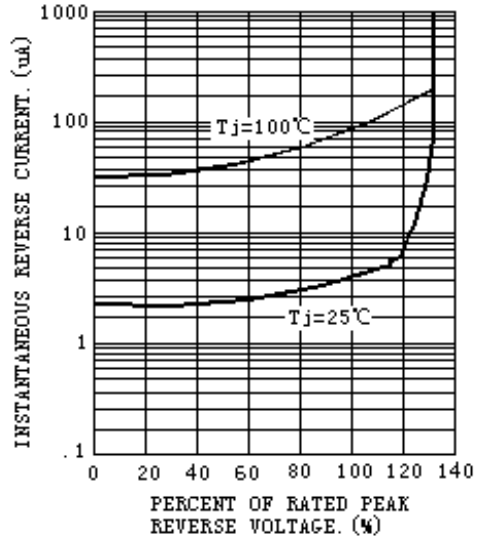


FIG. 4-TYPICAL FORWARD CHARACTERISTICS

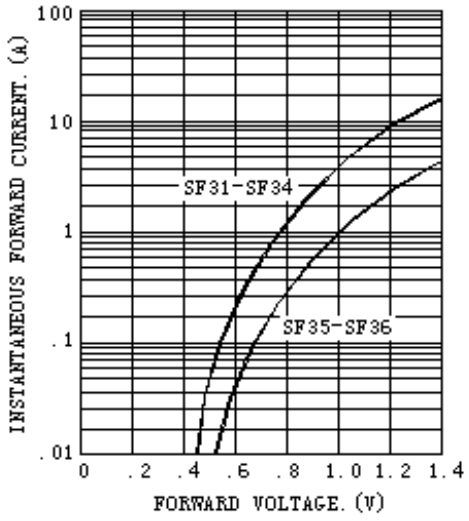


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

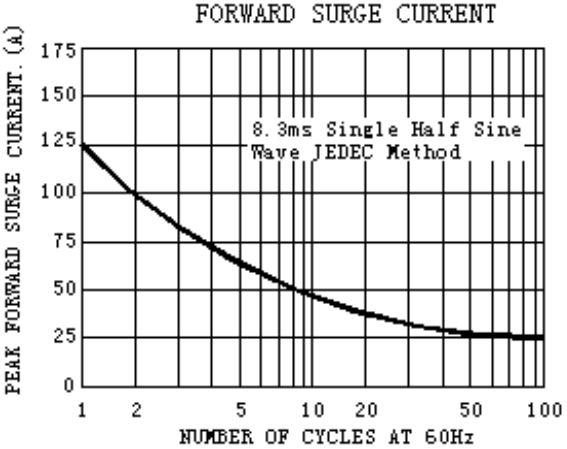


FIG. 6-TYPICAL JUNCTION CAPACITANCE