



SF31G THRU SF38G

3.0 AMPS. Ultra Fast Recovery Rectifiers

	Voltage Range 50 to 600 Volts Current 3.0 Amperes
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<p>Features</p> <ul style="list-style-type: none"> ✧ Low forward voltage drop ✧ High current capability ✧ High reliability ✧ High surge current capability <p>Mechanical Data</p> <ul style="list-style-type: none"> ✧ Case: 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: 260°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension ✧ Mounting position: Any ✧ Weight: 1.1 grams 	<p style="text-align: center;">DO-201AD</p> <div style="text-align: center;"> </div> <p style="text-align: center;">Dimensions in inches and (millimeters)</p>
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Maximum Ratings and Electrical Characteristics
 Rating at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%

Type Number	Symbol	SF	SF	SF	SF	SF	SF	SF	SF	Units
		31G	32G	33G	34G	35G	36G	37G	38G	
Maximum Recurrent 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 _(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 =125°C	I _R	5.0				100				µA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35								nS
Typical Junction Capacitance (Note 2)	C _j	80				60				pF
Typical Thermal Resistance (Note 3)	R _{θJA} R _{θJL}	35 10								°C/W
Operating Temperature Range	T _J	-65 to +150								°C
Storage Temperature Range	T _{STG}	-65 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 V D.C.
 3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

RATINGS AND CHARACTERISTIC CURVES (SF31G THRU SF38G)

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

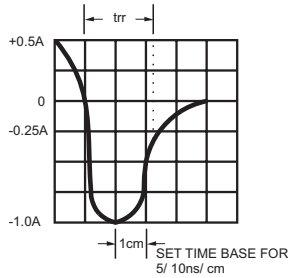
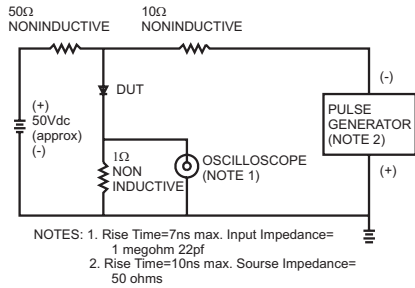


FIG. 2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

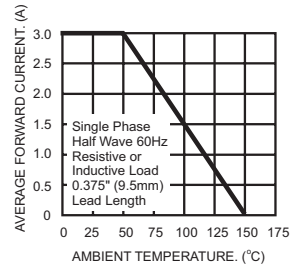


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

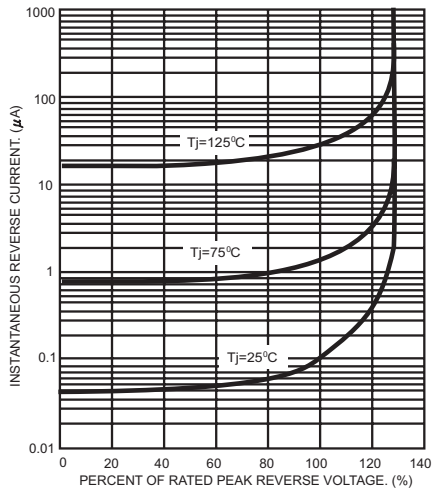


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

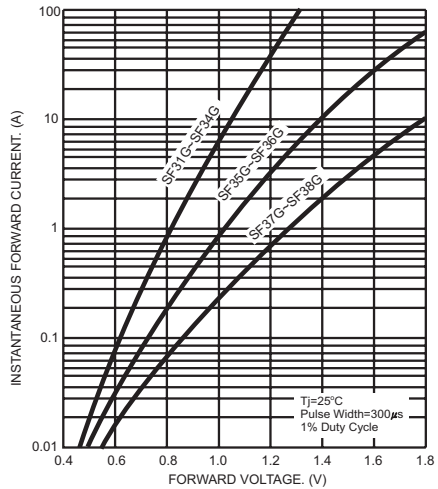


FIG. 5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

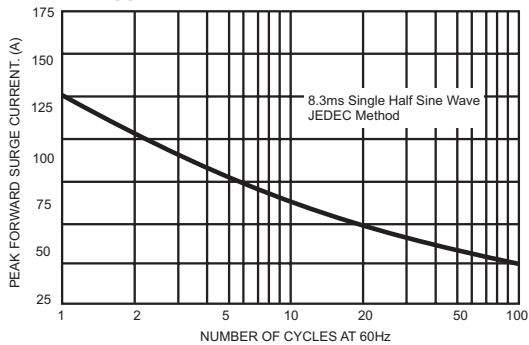


FIG. 6- TYPICAL JUNCTION CAPACITANCE

