

SF31G - SF38G

3.0 AMPS. Glass Passivated Super Fast Rectifiers DO-201AD

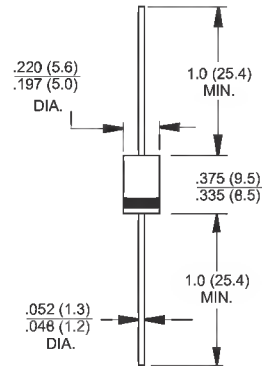


Features

- ✦ High efficiency, low VF
- ✦ High current capability
- ✦ High reliability
- ✦ High surge current capability
- ✦ Low power loss.
- ✦ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✦ Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- ✦ Case: Molded plastic
- ✦ Epoxy: UL 94V-0 rate flame retardant
- ✦ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✦ Polarity: Color band denotes cathode
- ✦ 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



Dimensions in inches and (millimeters)

Marking Diagram



- SF3XG = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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 31G	SF 32G	SF 33G	SF 34G	SF 35G	SF 36G	SF 37G	SF 38G	Units
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				µA
						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	R _{θJA} R _{θJL} R _{θJC}					35				°C/W
						10				
						9				
Operating Temperature Range T _J	T _J	-65 to +150								°C
Storage Temperature Range T _{STG}	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- MAXIMUM AVERAGE FORWARD CURRENT DERATING

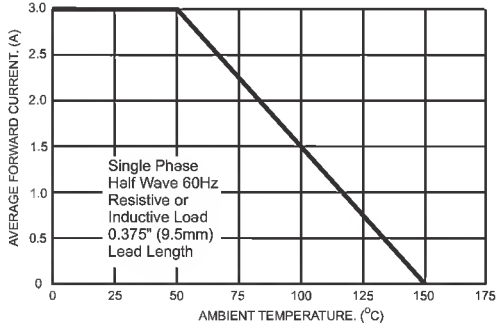


FIG.3- TYPICAL REVERSE CHARACTERISTICS

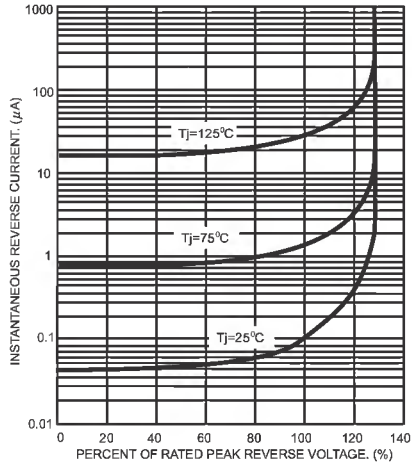


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

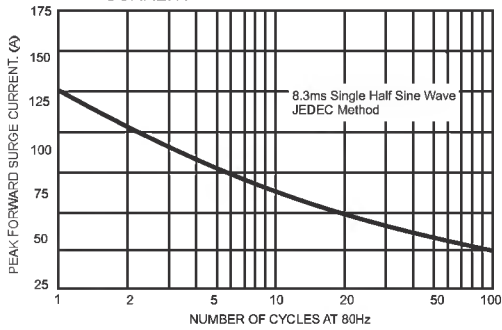


FIG.4- TYPICAL FORWARD CHARACTERISTICS

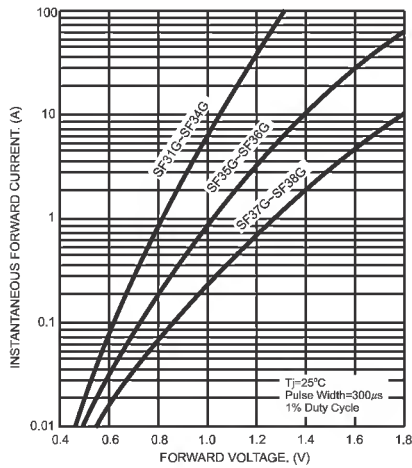


FIG.5- TYPICAL JUNCTION CAPACITANCE

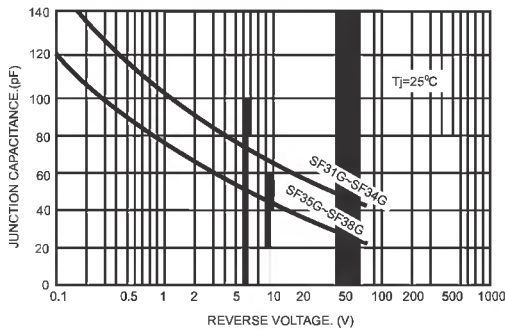


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

