

SF41G - SF48G

4.0 AMPS. Glass Passivated Super Fast Rectifiers

DO-201AD

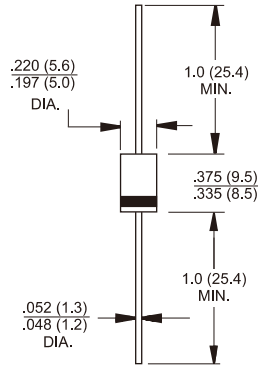


Features

- ◇ 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: 1.2 grams



Dimensions in inches and (millimeters)

Marking Diagram



- SF4XG = 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 41G	SF 42G	SF 43G	SF 44G	SF 45G	SF 46G	SF 47G	SF 48G	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 @ $T_A = 55^\circ C$	$I_{F(AV)}$	4.0								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 @ 4.0A	V_F	1.0		1.3		1.7			V	
Maximum DC Reverse Current at @ $T_A=25^\circ C$ Rated DC Blocking Voltage (Note 1) @ $T_A=125^\circ C$	I_R	5.0				500				μA μA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35								nS
Typical Junction Capacitance (Note 3)	C_j	100			80					pF
Thermal Resistance (Note 4)	$R_{\theta JA}$	25								$^\circ C/W$
Operating Temperature Range	T_J	-65 to +150								$^\circ C$
Storage Temperature Range	T_{STG}	-65 to +150								$^\circ C$

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
 2. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 3. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
 4. Mount on Cu-Pad Size 16mm x 16mm on P.C.B

RATINGS AND CHARACTERISTIC CURVES (SF41G THRU SF48G)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

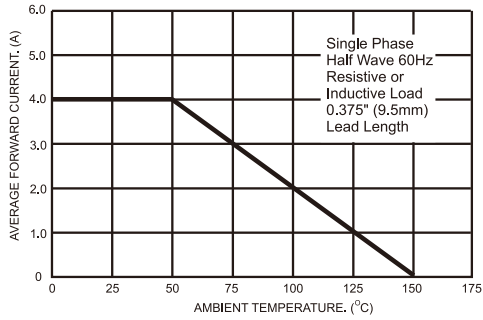


FIG.2- TYPICAL REVERSE CHARACTERISTICS

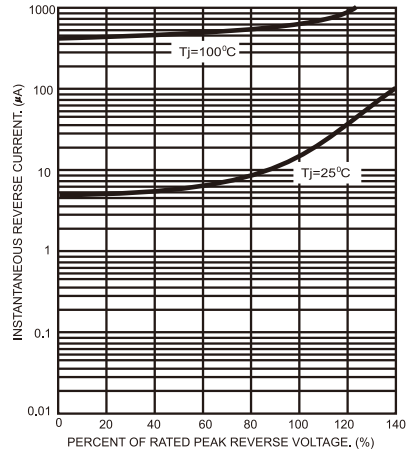


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

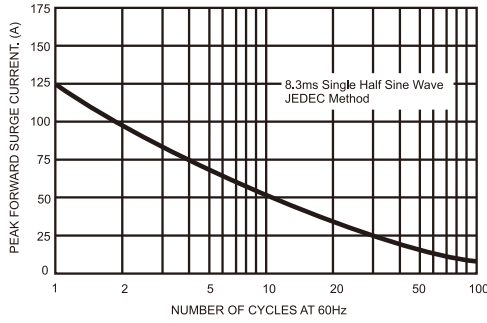


FIG.5- TYPICAL FORWARD CHARACTERISTICS

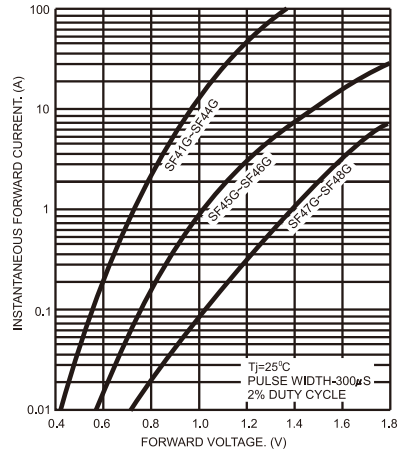


FIG.4- TYPICAL JUNCTION CAPACITANCE

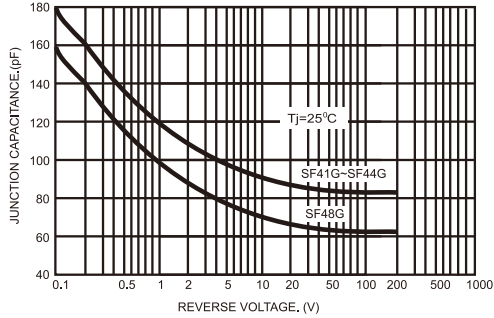


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

