

Glass Passivated Super Fast Rectifier 6AMP



RoHS
Compliant



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

Specifications:

Mechanical Data:

Case : Molded Plastic
Lead : Pure Tin plated
Polarity : Colour band denotes cathode
Weight : 1.2 grams
Mounting Position : Any

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%

Characteristics	Symbol	Value	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	150	V
Maximum RMS Voltage	V_{RMS}	105	
Maximum DC Blocking Voltage	V_{DC}	150	
Maximum Average Forward Rectified Current 0.375 (9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{F(AV)}$	6	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150	
Maximum Instantaneous Forward Voltage @ 6A	V_F	0.975	V

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Characteristics	Symbol	Value	Units
Maximum DC Reverse Current at @ $T_A=25^{\circ}\text{C}$ Rated DC Blocking Voltage (Note 1) @ $T_A=125^{\circ}\text{C}$	I_R	5 100	μA
Maximum Reverse Recovery Time(Note 2)	T_{rr}	35	nS
Typical Junction capacitance (Note 3)	C_j	100	pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$ $R_{\theta JL}$	40 5	$^{\circ}\text{C/W}$
Operating Temperature Range	T_J	-65 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	

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

Ratings And Characteristic Curves:

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

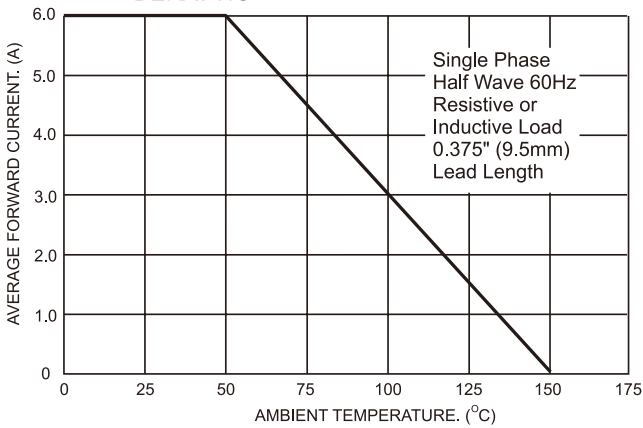
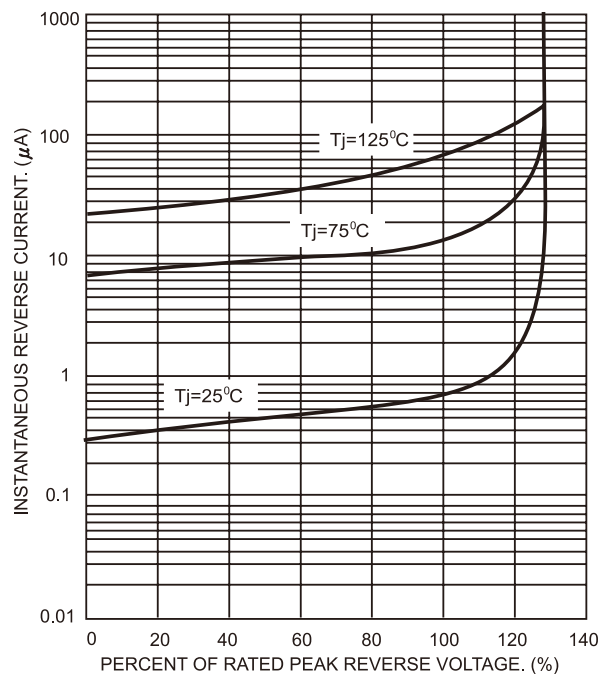


FIG.2- TYPICAL REVERSE CHARACTERISTICS



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FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

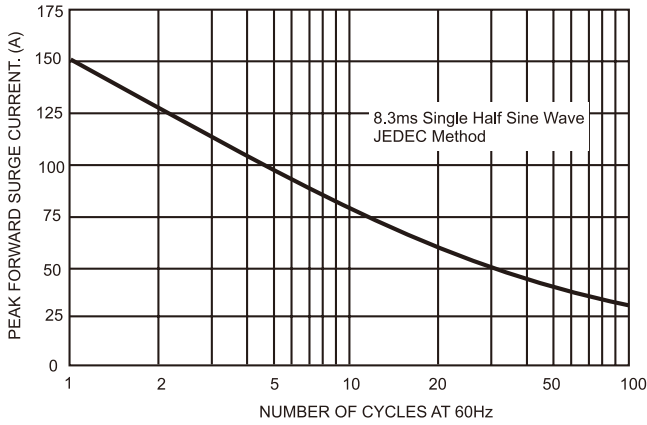


FIG.5- TYPICAL FORWARD CHARACTERISTICS

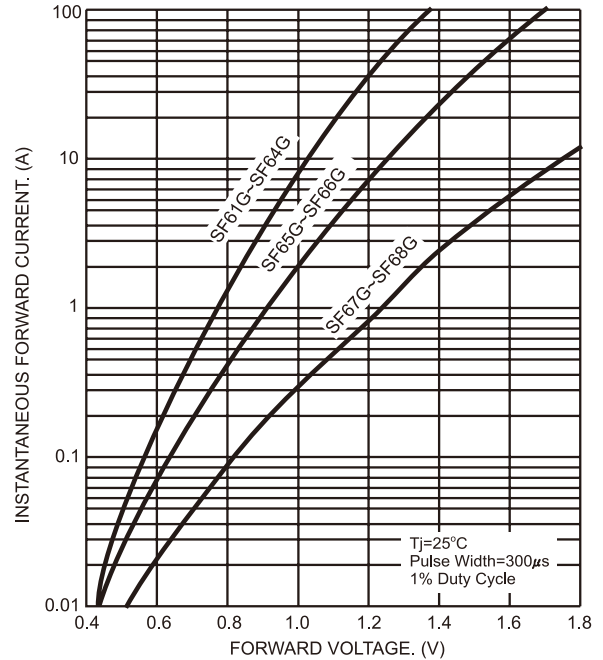


FIG.4- TYPICAL JUNCTION CAPACITANCE

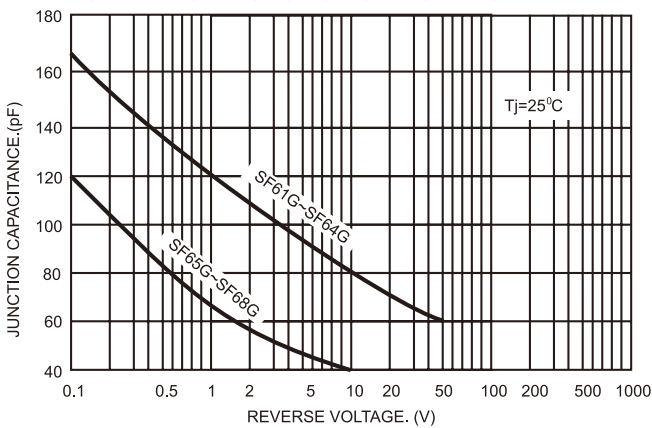
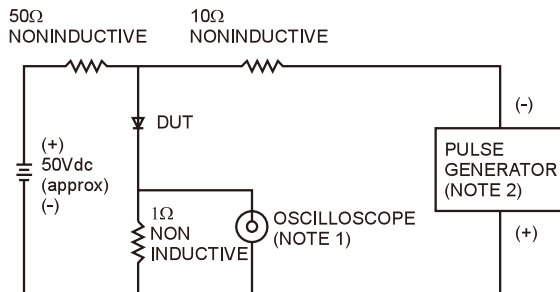
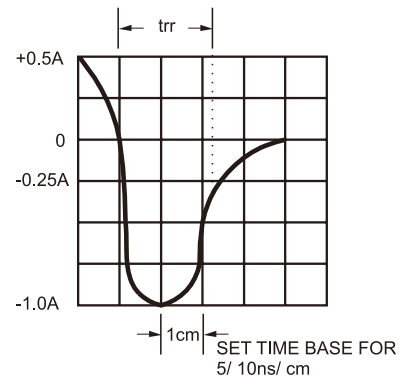


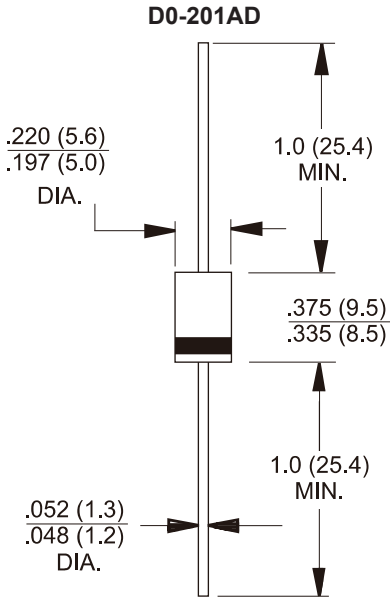
FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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



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Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Rectifier, S Fast, 6A, 150V, DO-201	SF63G

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