

6A Glass Passivated Super Fast Rectifiers

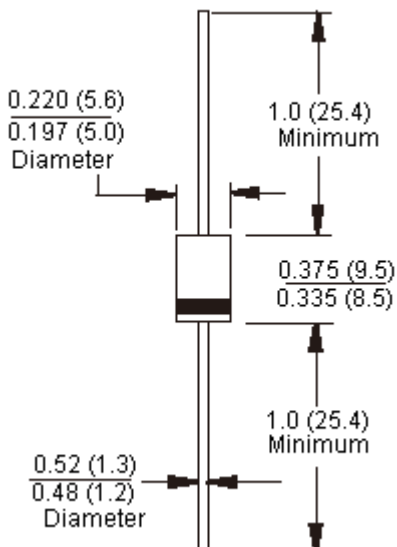


Features:

- 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 and prefix "G" on datecode.



DO-201AD



Dimensions : Inches (Millimetres)

Marking Diagram



SF6XG = Specific device code.
G = Green Compound
Y = Year
WW = Work Week

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Mechanical Data

Case	: Moulded plastic.
Epoxy	: Rate flame retardant.
Lead	: Pure tin plated, lead free solderable per MIL-STD-202, Method 208 guaranteed.
Polarity	: Colour band denotes cathode.
High temperature soldering guaranteed	: 260°C / 10 seconds 0.375 inches (9.5 mm) lead lengths at 5lbs., (2.3kg) tension.
Mounting position	: Any.

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Type Number	Symbol	SF63G	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 at $T_A = 55^\circ\text{C}$	$I_F (AV)$	6	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150	
Maximum Instantaneous Forward Voltage at 6A	V_F	0.975	V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ Rated DC Blocking Voltage (Note 1) at $T_A = 125^\circ\text{C}$	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}		

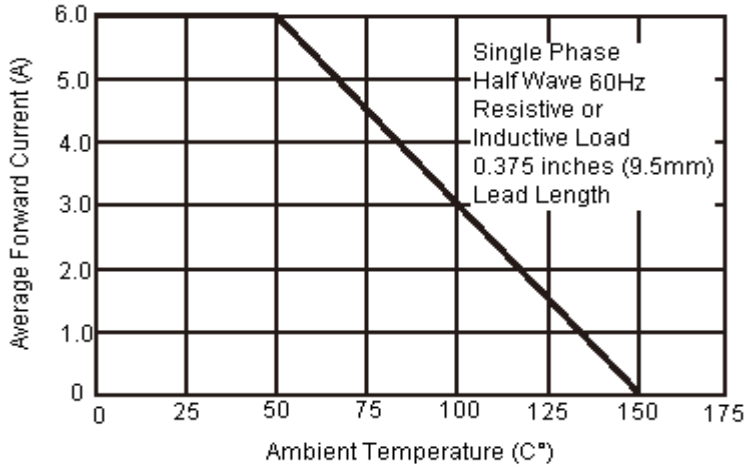
- Notes:**
1. Pulse test with $PW = 300\mu\text{s}$, 1% duty cycle.
 2. Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.
 3. Measured at 1MHz and applied reverse voltage of 4V dc.
 4. Mount on Cu-Pad Size 16 × 16mm on PCB.

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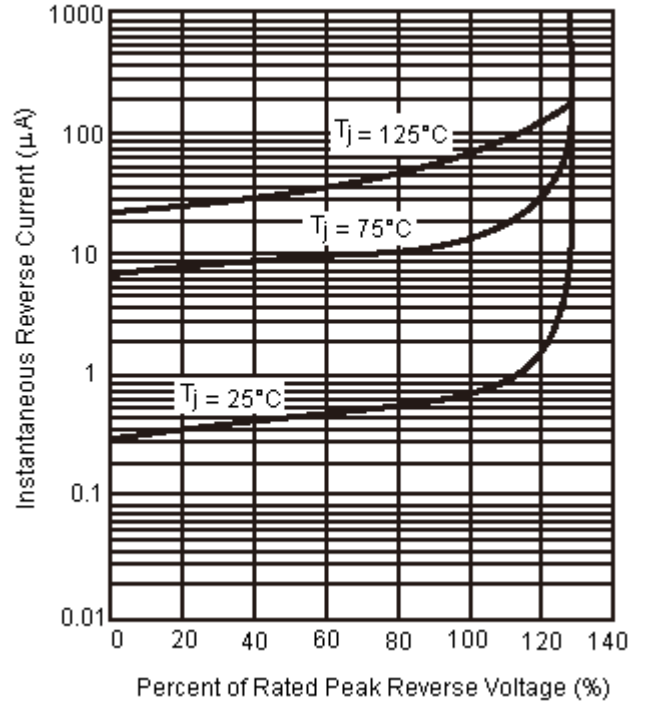


Ratings and Characteristic Curves

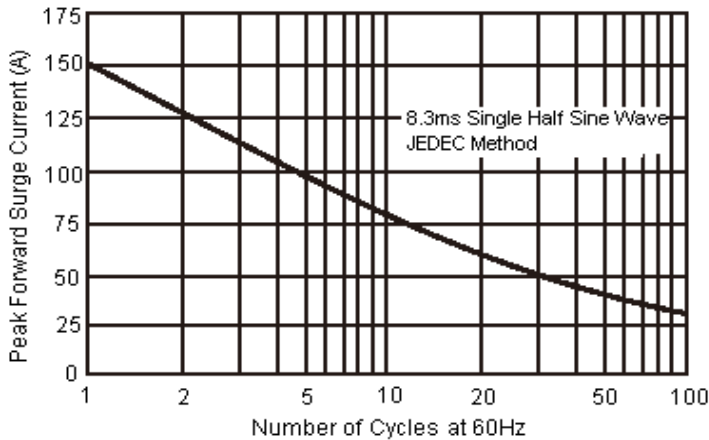
Maximum Average Forward Current Derating



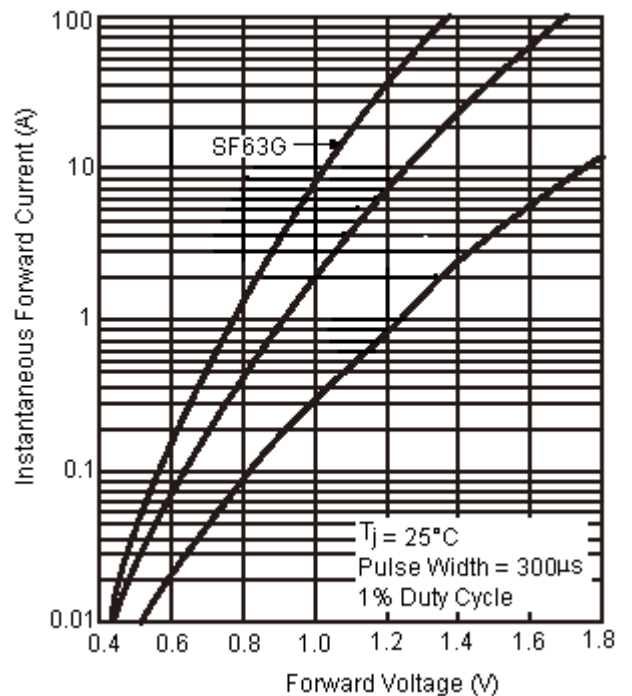
Typical Reverse Characteristics



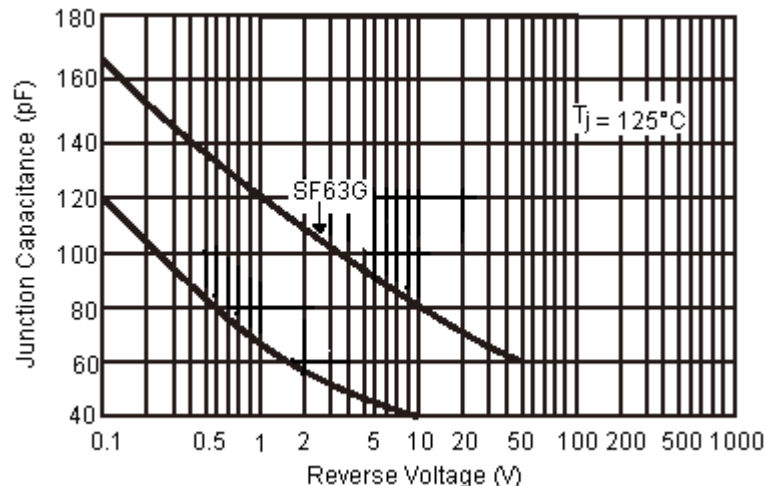
Maximum Non-Repetitive Forward Surge Current



Typical Forward Characteristics

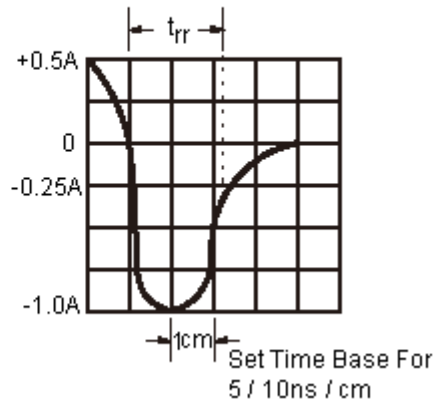
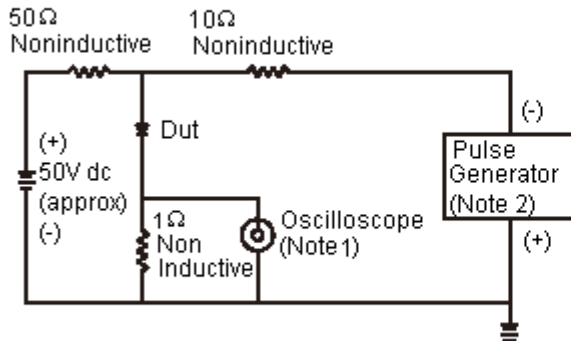


Typical Junction Capacitance



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Reverse Recovery Time-Characteristic and Test Circuit Diagram



- Notes: 1. Rise Time = 7ns maximum input impedance = 1megohm 22pf.
 2. Rise Time = 10ns maximum source impedance = 50 ohms.

Part Number Table

Description	Part Number
Diode, Rectifiers, S Fast, 6A, 150V, DO201AD	SF63G

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