

SF51G THRU SF58G
SUPER FAST RECOVERY RECTIFIERS



VOLTAGE 50 THRU 600 Volts

CURRENT 5.0 Amperes

DO-27/DO-201AD

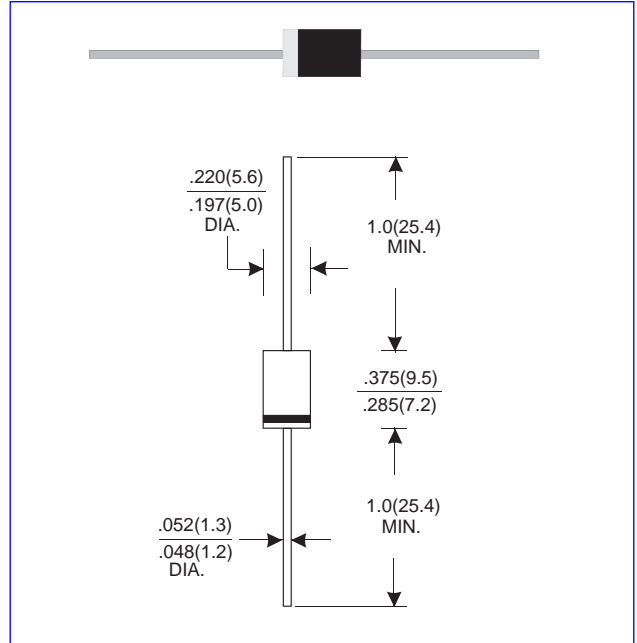
Unit:(mm)

FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Good for switching mode application

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 1.10 grams
- * Both normal and Pb free product are available:
- * Normal: 80-95%Sn, 5-20%Pb
- * Pb free: 99Sn above can meet RoHS environment substance directive request



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (TA=25°C (UNLESS OTHERWISE NOTED))

Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF58G	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=55°C	5.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	150							A
Maximum Instantaneous Forward Voltage at 5.0A	0.95				1.25	1.70		V
Maximum DC Reverse Current Ta=25°C	5.0							µA
at Rated DC Blocking Voltage Ta=100°C	50							µA
Maximum Reverse Recovery Time (Note 1)	35							nS
Typical Junction Capacitance (Note 2)	50							pF
Operating and Storage Temperature Range Tj, Tstg	-65 — +150							°C

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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RATING AND CHARACTERISTIC CURVES (TA=25°C (UNLESS OTHERWISE NOTED))

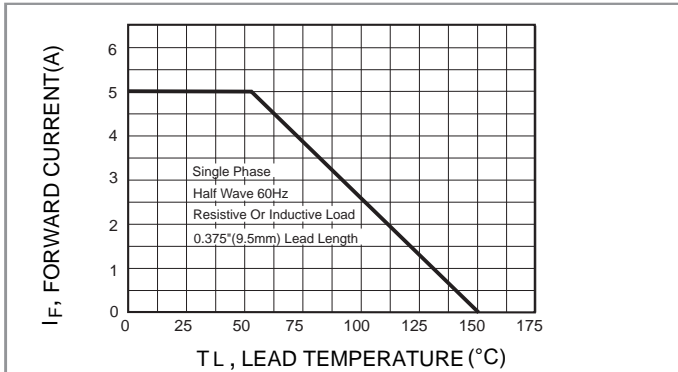


Fig.1-FORWARD CURRENT DERATING CURVE

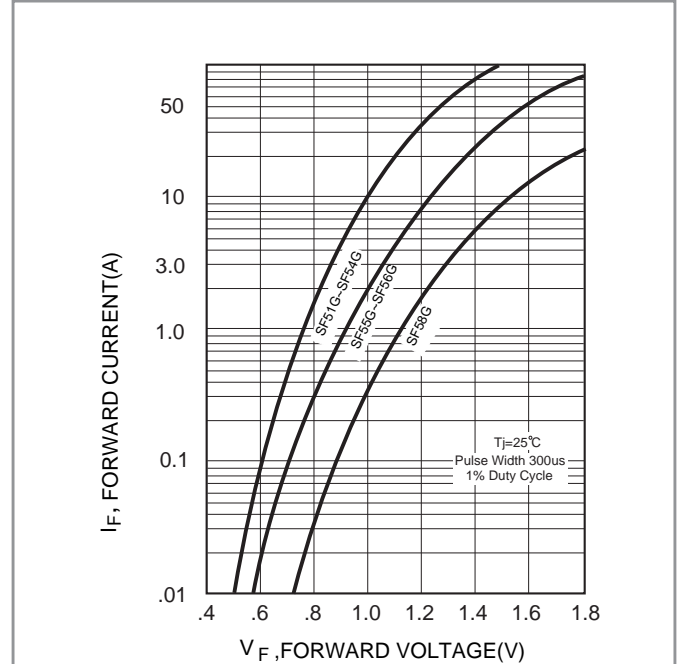


Fig.2-TYPEICAL FORWARD CHARACTERISTICS

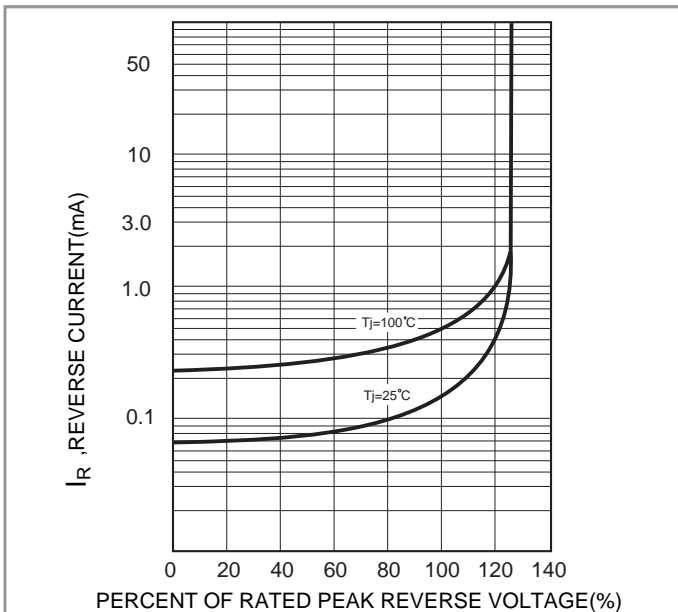


Fig.3-TYPICAL REVERSE CHARACTERISTICS

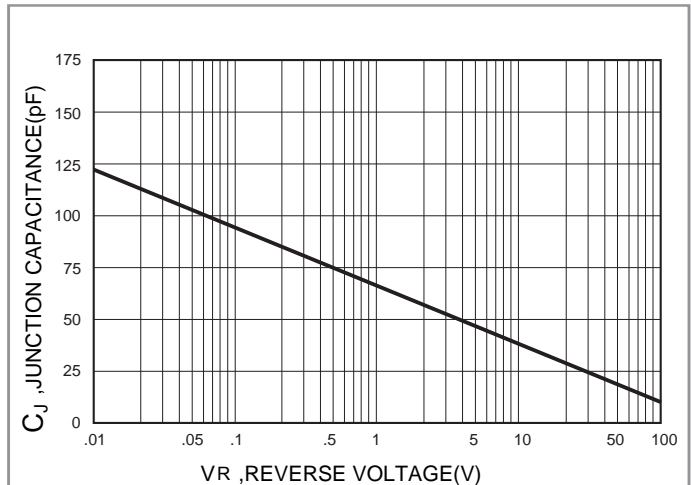


Fig.4-TYPICAL JUNCTION CAPACITANCE

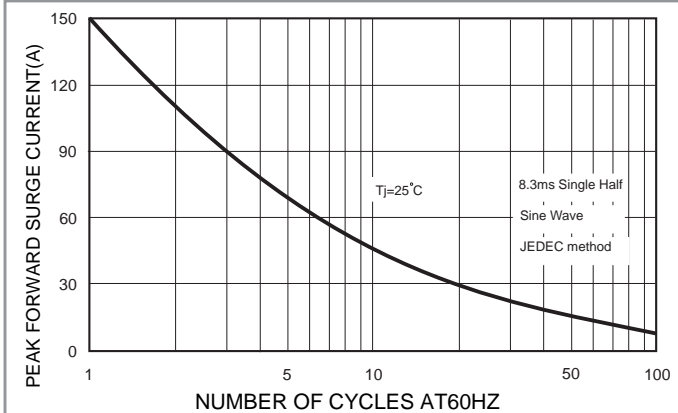
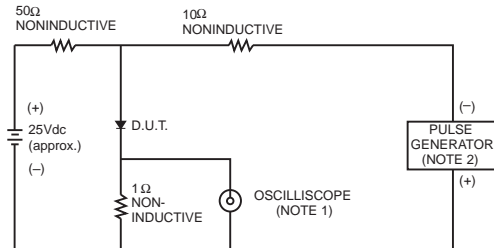


Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

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

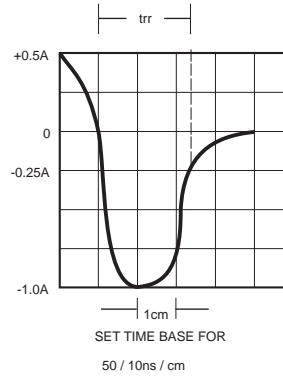


Fig.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

ORDER INFORMATION

- Packing information
T/B-1250pcs Per Box.