

SF51G THRU SF58G

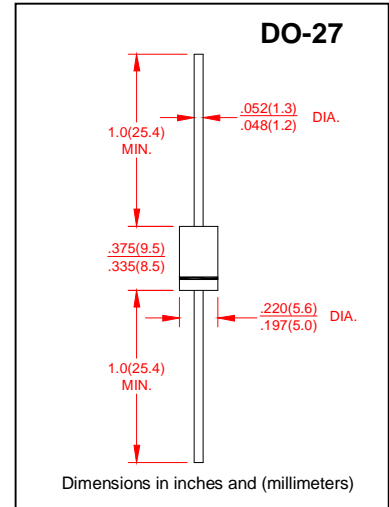
VOLTAGE RANGE 50 to 600 Volts  
CURRENT 5.0 Ampere

FEATURES

- Super fast switching speed
- Glass passivated chip junction
- Low power loss, high efficiency
- Low leakage
- High Surge Capacity
- High temperature soldering guaranteed  
260°C/10 seconds, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

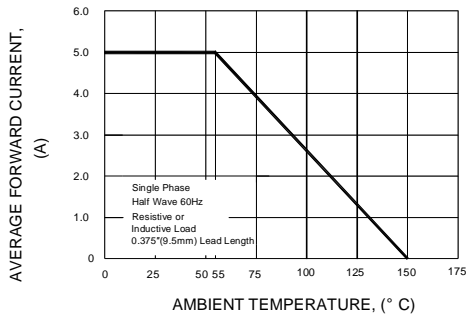
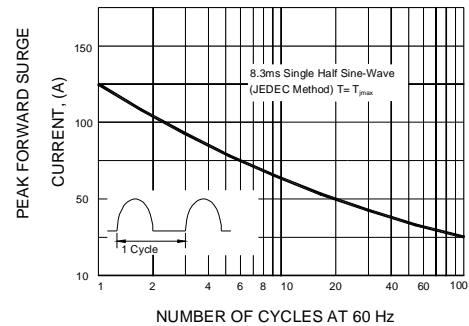
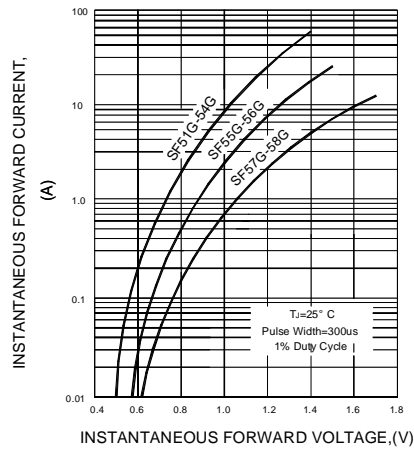
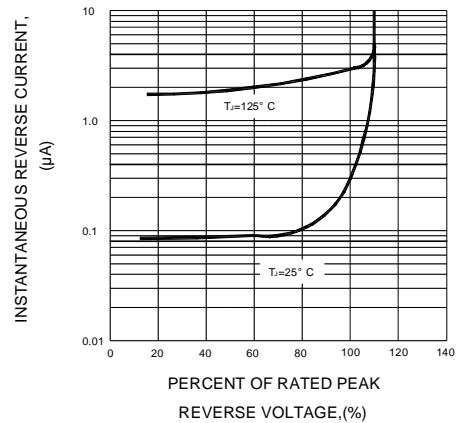
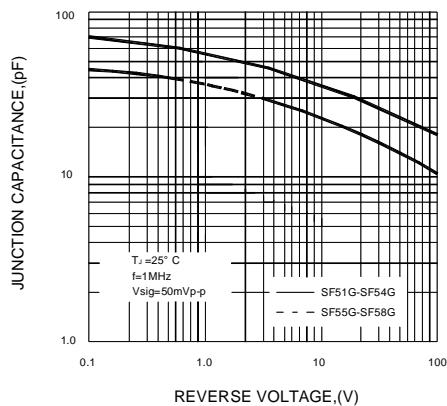
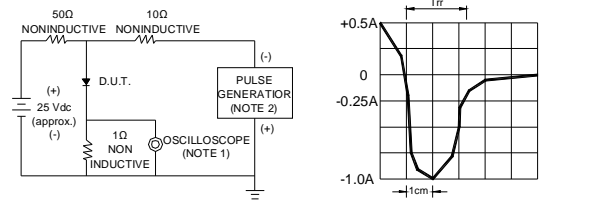
- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	SF 51G	SF 52G	SF 53G	SF 54G	SF 55G	SF 56G	SF 57G	SF 58G	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	100	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm) lead length at T <sub>A</sub> =55°C	I <sub>(AV)</sub>	5.0								Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	125								Amps
Maximum Instantaneous Forward Voltage at 5.0A	V <sub>F</sub>	0.95			1.25		1.7			Volts
Maximum DC Reverse Current at rated DC blocking Voltage at	T <sub>A</sub> = 25°C	5.0								µA
	T <sub>A</sub> = 125°C	50								
Maximum Reverse Recovery Time Test conditions I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>RR</sub> =0.25A	t <sub>rr</sub>	35								nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C <sub>J</sub>	50				30				pF
Typical Thermal Resistance (NOTE 1)	R <sub>θJA</sub>	30								°C/W
Operating Junction Temperature Range	T <sub>J</sub>	(-55 to +150)								°C
Storage Temperature Range	T <sub>STG</sub>	(-55 to +150)								°C

Notes:

1. Thermal Resistance from Junction to Ambient with 0.375" (9.5mm) lead length, PCB mounted.

## RATING AND CHARACTERISTIC CURVES SF51G THRU SF58G

**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**

**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

**FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

**FIG.4-TYPICAL REVERSE CHARACTERISTICS**

**FIG.5-TYPICAL JUNCTION CAPACITANCE**

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


- NOTES : 1. Rise Time=7ns max. Input Impedance= 1 magohm. 22pF  
2. Rise time=10ns max. Source Impedance= 50 ohms

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