

SF1001G THRU SF1008G

VOLTAGE RANGE

50 to 600 Volts

CURRENT

10.0 Ampere

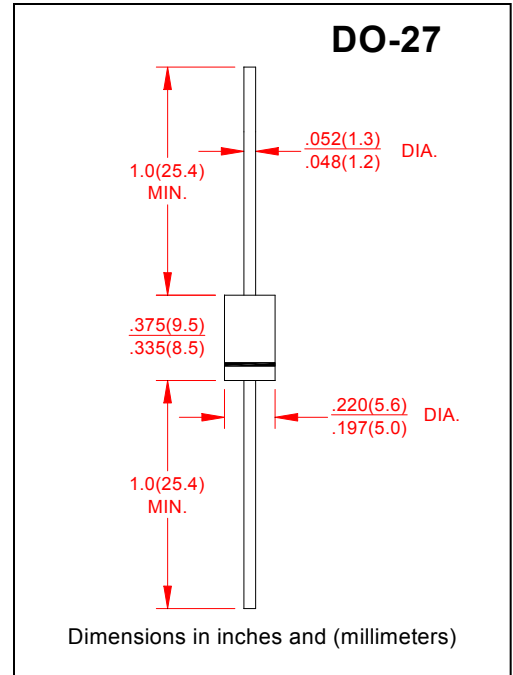
Features

- 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%

TYPE NUMBER	SYMBOLS	SF 1001G	SF 1002G	SF 1003G	SF 1004G	SF 1005G	SF 1006G	SF 1007G	SF 1008G	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	100	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm) lead length at $T_A=80^\circ\text{C}$	$I_{(AV)}$	10.0								Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	250								Amps
Maximum Instantaneous Forward Voltage at 10.0A	V_F	0.95			1.30		1.70			Volts
Maximum DC Reverse Current at rated DC blocking Voltage at	$T_A = 25^\circ\text{C}$	5.0								μA
	$T_A = 125^\circ\text{C}$	50								
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	T_{RR}	35								nS
Typical Junction Capacitance (NOTE 1)	C_J	50				30				pF
Typical Thermal Resistance (NOTE 1)	$R_{\theta JA}$	30								$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	(-55 to +150)								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)								$^\circ\text{C}$

Notes:

1. Thermal Resistance from Junction to Ambient with 0.375"(9.5mm) lead length, PCB mounted.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V

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Ratings and Characteristic Curves (TA=25°C unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

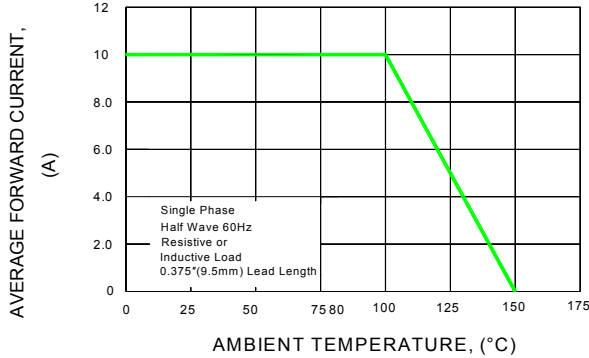


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

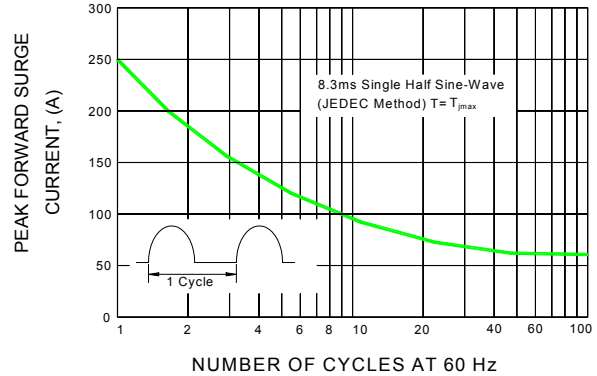


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

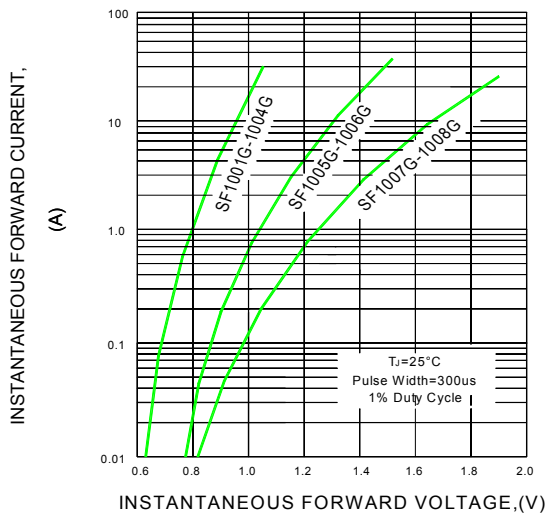


FIG.4-TYPICAL REVERSE CHARACTERISTICS

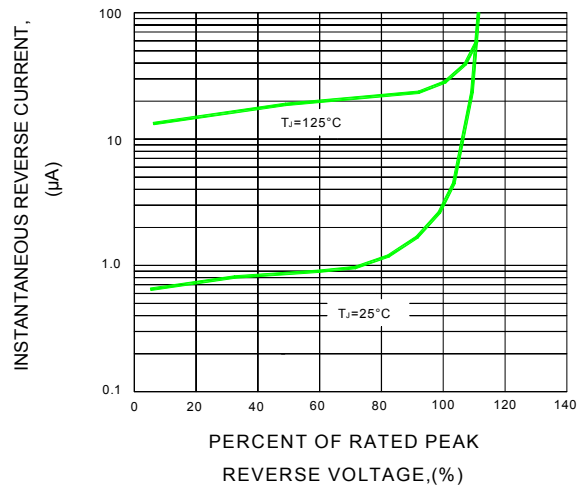


FIG.5-TYPICAL JUNCTION CAPACITANCE

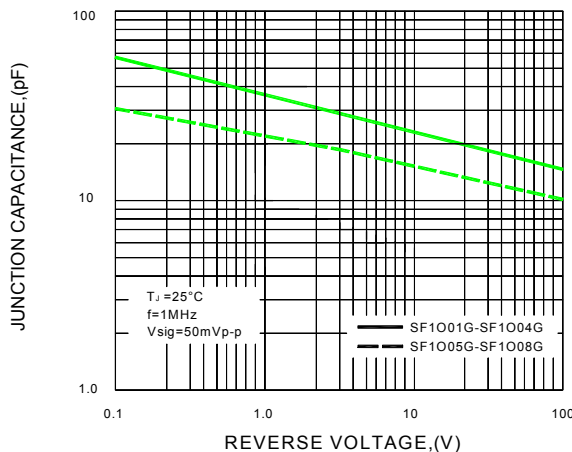
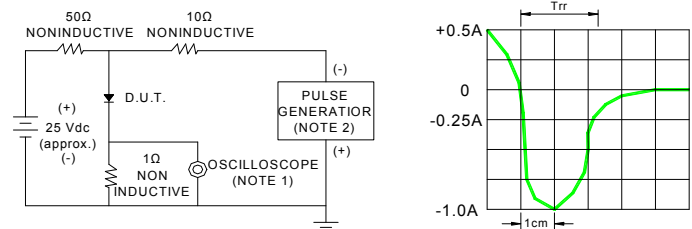


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR 50/100ns/cm

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.