



## SUPER FAST GLASS PASSIVATED RECTIFIER

### SF11G/RG THRU SF18G/RG

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

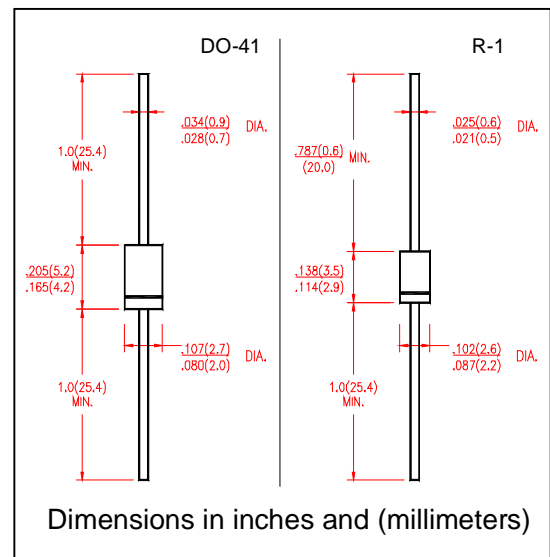
1.0 Ampere

### 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 second, 0.375" (9.5mm) lead length
- SF11G Packing DO-41, SF11RG Packing R-1.

### 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: 0.012ounce, 0.33 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 11G/RG	SF 12G/RG	SF 13G/RG	SF 14G/RG	SF 15G/RG	SF 16G/RG	SF 17G/RG	SF 18G/RG	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 $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30								Amps
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	0.95			1.25		1.7			Volts
Maximum DC Reverse Current at rated DC Blocking Voltage at	$I_R$	$T_A = 25^\circ\text{C}$								$\mu\text{A}$
		$T_A = 125^\circ\text{C}$								
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 (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	15			10					pF
Typical Thermal Resistance (NOTE 1)	$R_{\theta JC}$	60								$^\circ\text{C/W}$
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.



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CURRENT 1.0 Ampere

## RATING AND CHARACTERISTIC CURVES SF11G/RG THRU SF18G/RG

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

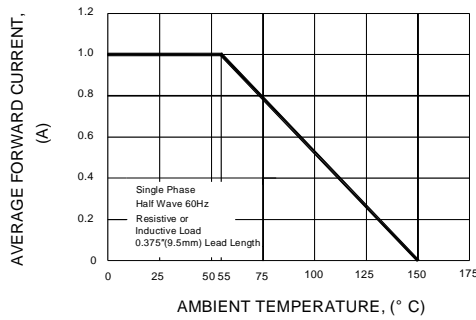


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

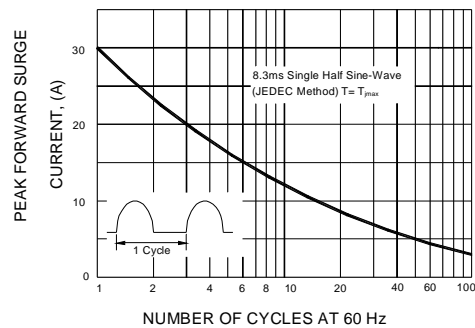


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

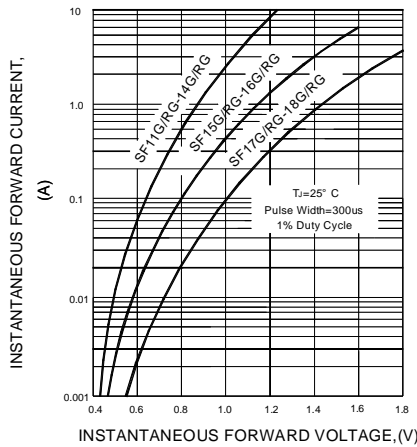


FIG.4-TYPICAL REVERSE CHARACTERISTICS

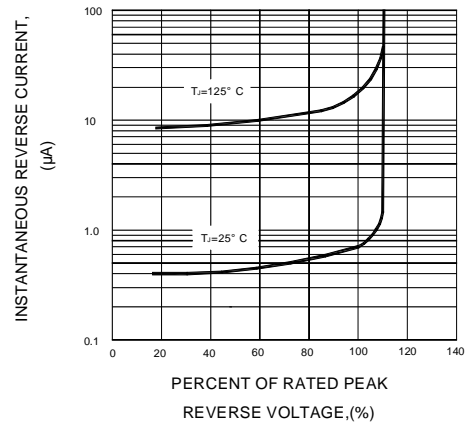


FIG.5-TYPICAL JUNCTION CAPACITANCE

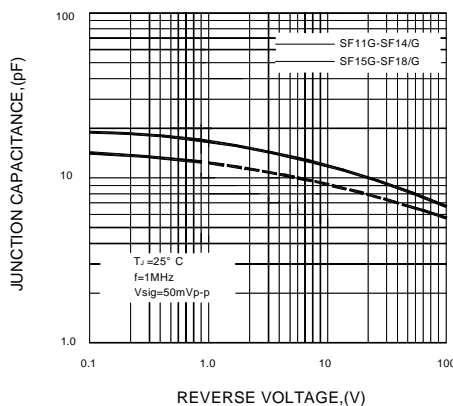
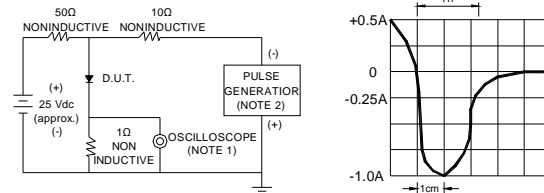


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE f 50/100ns/cm