

SF11G~SF18G

Glass Passivates Superfast Rectifiers

Reverse Voltage - 50 to 600 V

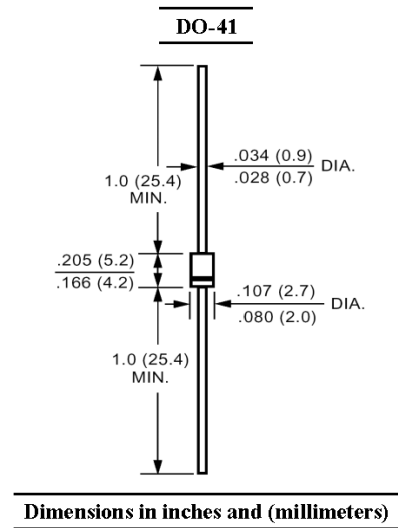
Forward Current - 1 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge capability
- Low forward voltage, high current capability
- Hermetically sealed
- Super-fast recovery times
- Low leakage

Mechanical Data

- **Case:** DO-41 molded plastic
- **Terminals:** Axial Leads, solderable per MIL-STD-202, method 208 guaranteed
- **Polarity:** Colored band denotes cathode end
- **Mounting position:** Any



Absolute Maximum Ratings and Characteristics

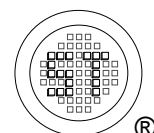
Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load, for capacitive load, derate current by 20%.

Parameter	Symbols	SF11G	SF12G	SF13G	SF14G	SF15G	SF16G	SF18G	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) Lead Length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine -wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Forward Voltage at 1 A	V_F	0.95			1.25		1.7		V
Maximum Reverse Current Rated DC Blocking Voltage	I_R					5 50			μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}					35			ns
Typical Junction Capacitance ²⁾	C_J	50			25				pF
Typical Thermal Resistance ³⁾	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_i, T_{stg}	- 55 to + 150							$^\circ\text{C}$

¹⁾ Reverse recovery test conditions: $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$.

²⁾ Measured at 1.0 MHz and applied reverse voltage of 4 V.

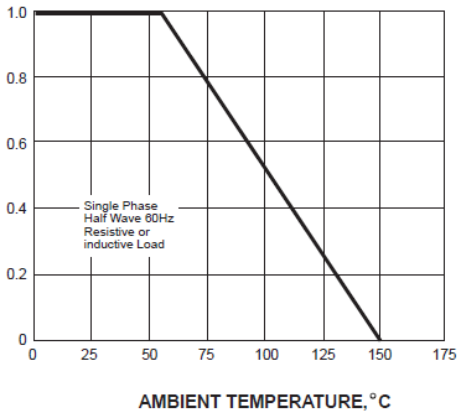
³⁾ Thermal resistance from junction to ambient 0.375" (9.5 mm) lead length P.C.B mounted.



Electrical Characteristics Curves

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

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

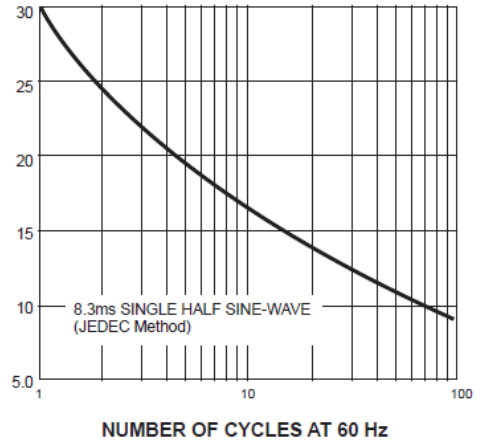
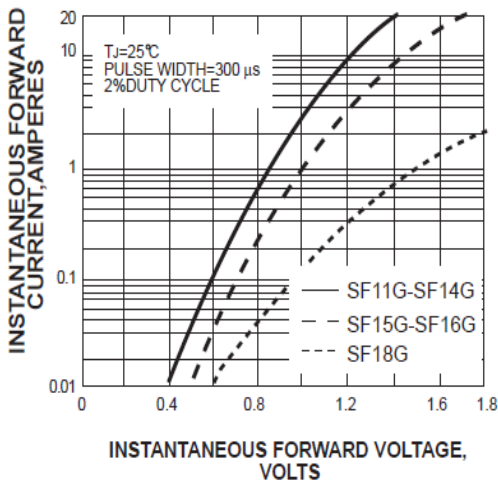


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

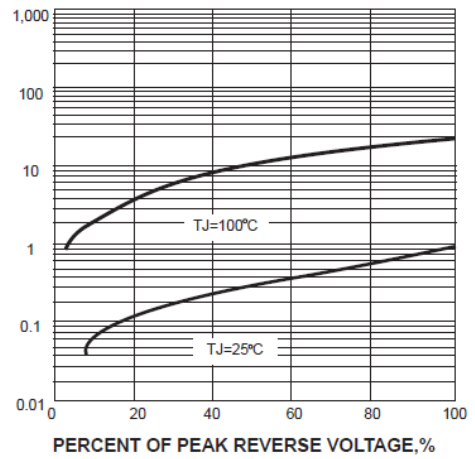
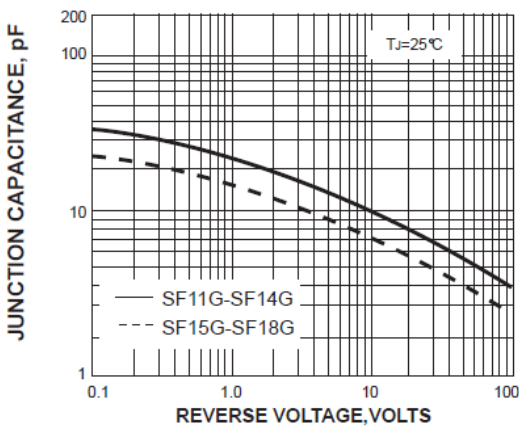
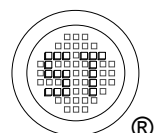
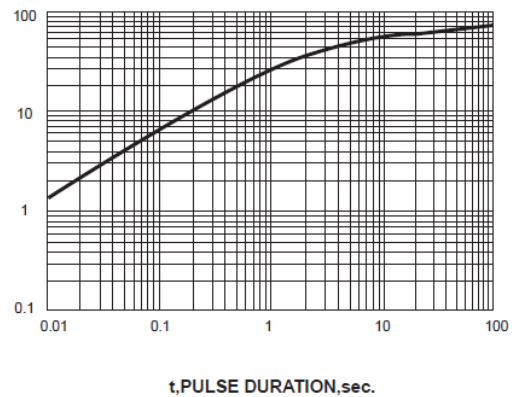


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



SF11G~SF18G

Marking information

" SF**G " = Part No.

Type	Marking	Type	Marking
SF11G	SF11G	SF12G	SF12G
SF13G	SF13G	SF14G	SF14G
SF15G	SF15G	SF16G	SF16G
SF18G	SF18G		

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