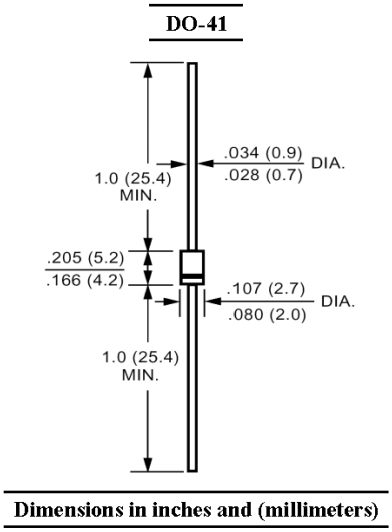
SF11G~SF18G

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



Dimensions in inches and (millimeters)

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℃ 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℃	$I_{F(AV)}$	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 at T_a = 25℃ at T_a = 100℃	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							℃/W
Operating and Storage Temperature Range	Ti ,T_{stg}	- 55 to + 150							℃

[1] Reverse recovery test conditions: I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 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.

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Electrical Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

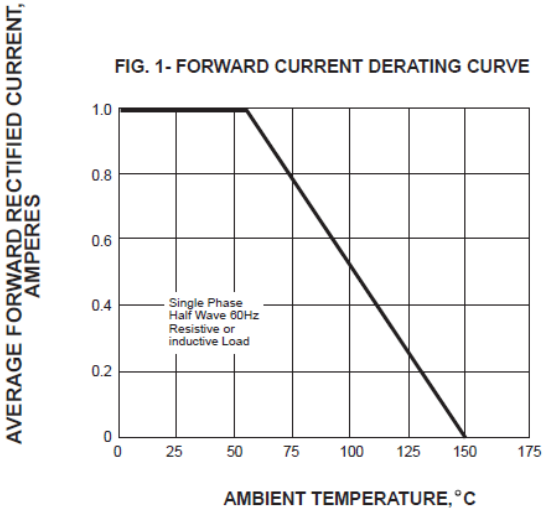


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

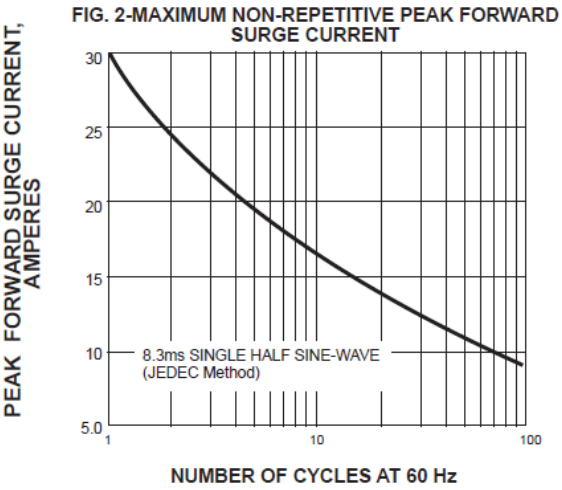


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

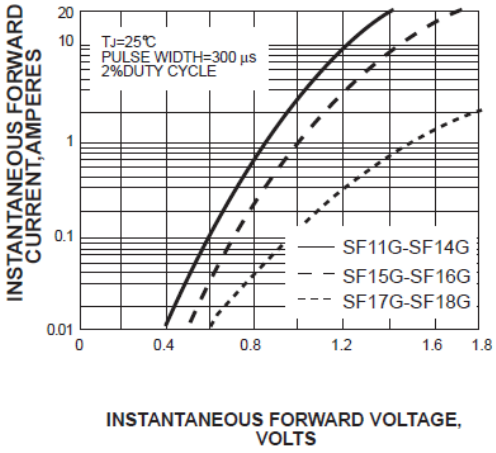


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

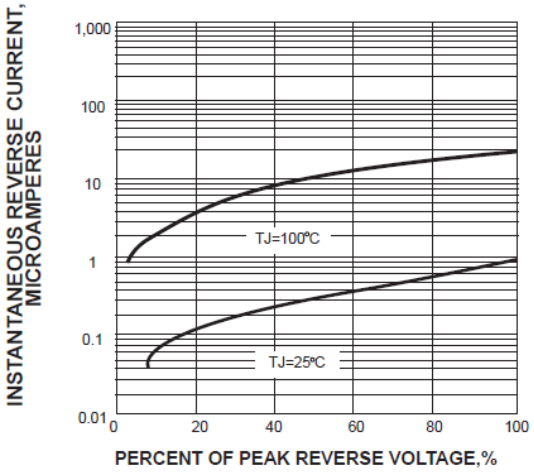


FIG. 5-TYPICAL JUNCTION CAPACITANCE

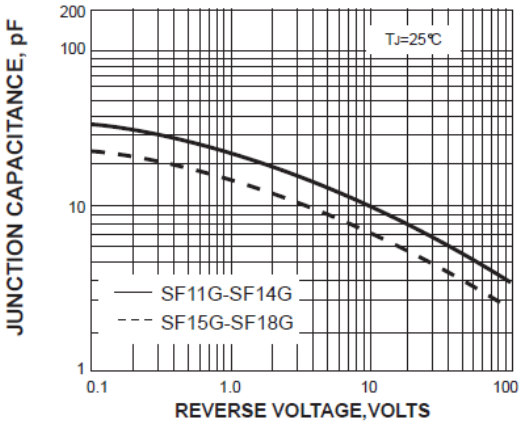
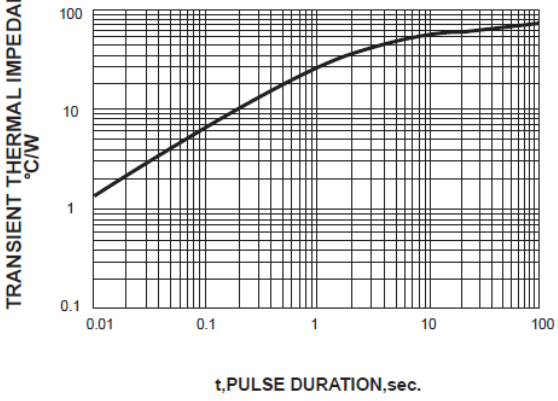


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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