



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**SF11
THRU
SF18**

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts

CURRENT - 1.0 Ampere

FEATURES

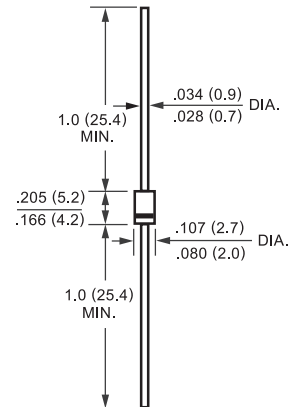
- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 0.33 gram



DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

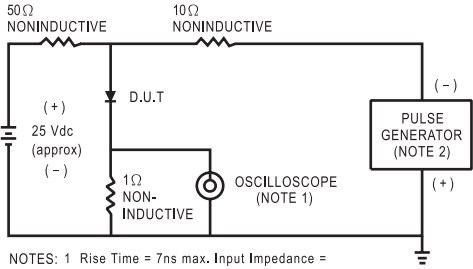
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF18	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Volts	V _{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Current at TA = 55°C	I _O	1.0							Amps
Peak Forward Surge Current I _{FM} (surge):8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30							Amps
Maximum Forward Voltage at 1.0A DC	V _F	0.95			1.25		1.7		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@ TA = 25°C							uAmps
		5.0							
Maximum Reverse Recovery Time (Note 1)	t _{rr}	150							nSec
		@ TA =150°C							
Typical Junction Capacitance (Note 2)	C _J	35			10				pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 150 °C							

NOTES : 1. Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (SF11 THRU SF18)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

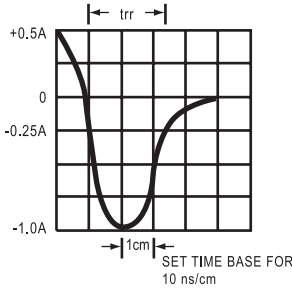


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

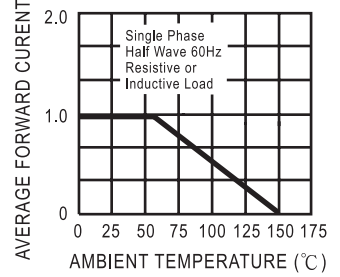


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

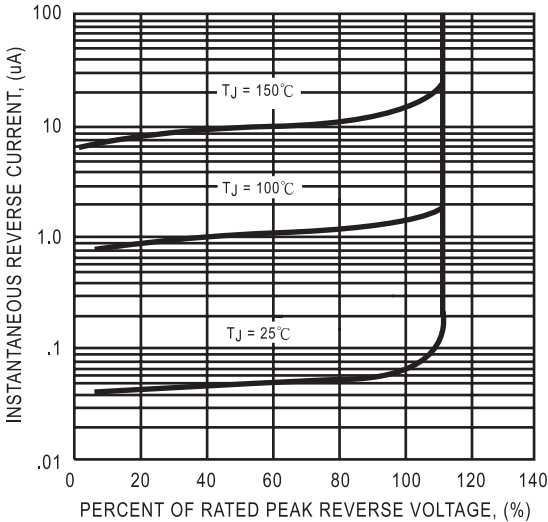


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

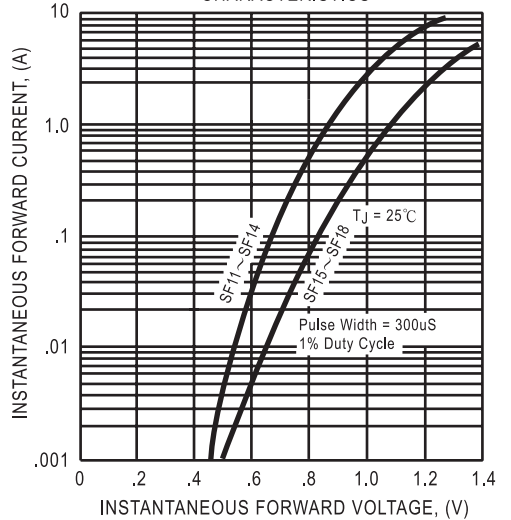


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

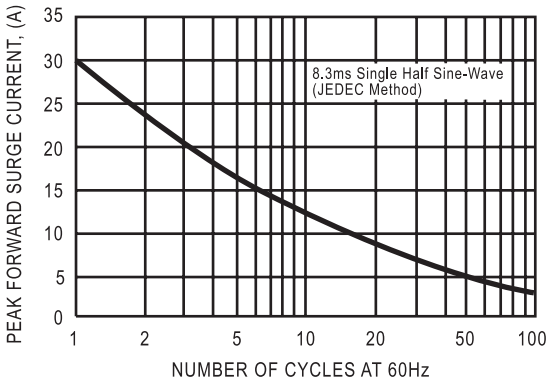
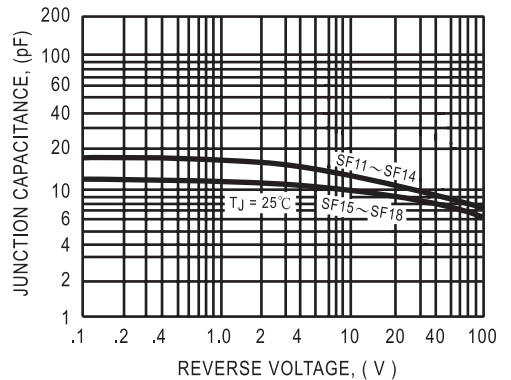


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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