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*

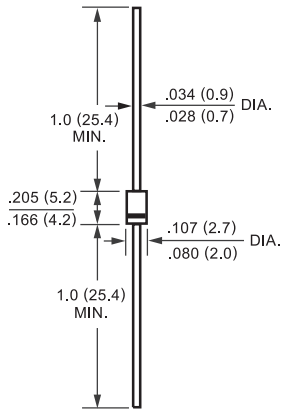
FEATURES

* 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

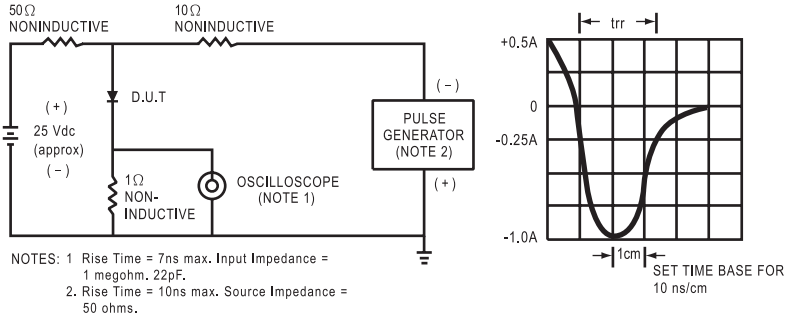
Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

		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 T_A = 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	@T_A = 25°C	I_R	5.0							uAmps
at Rated DC Blocking Voltage	@T_A =150°C		150							
Maximum Reverse Recovery Time (Note 1)		trr	35							nSec
Typical Junction Capacitance (Note 2)		C_J	15				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.

NEXT EXIT

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

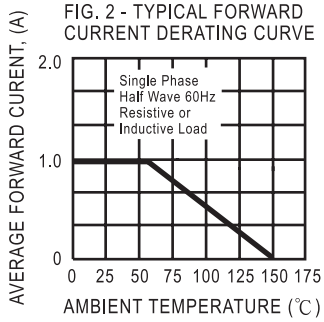


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

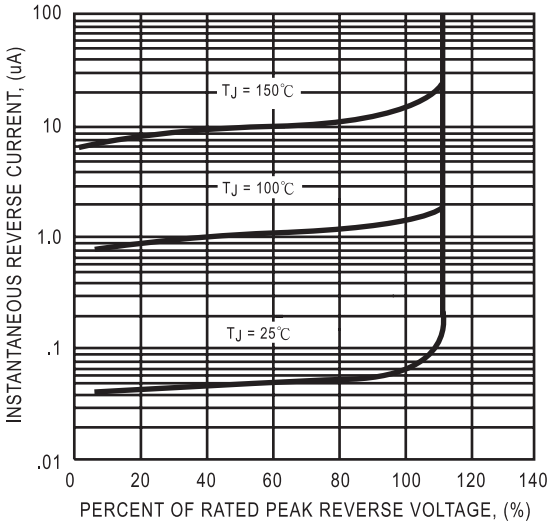


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

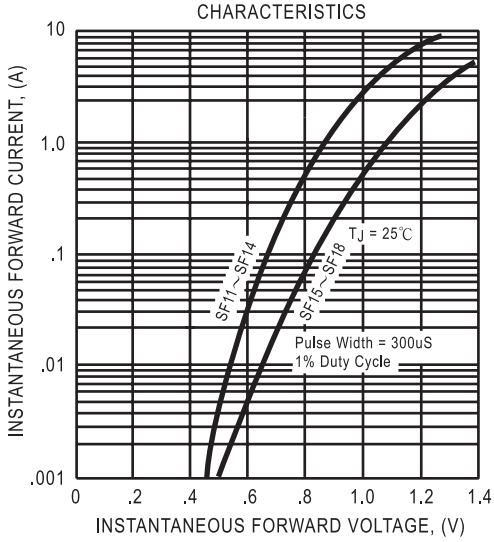


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

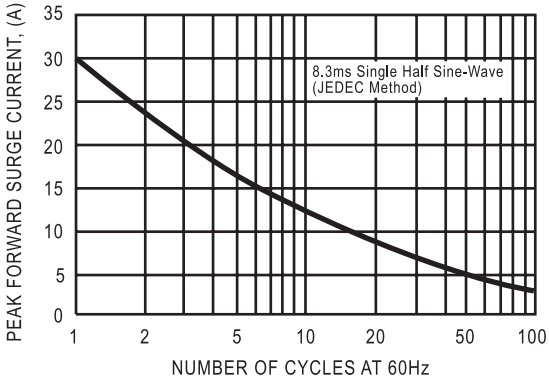


FIG. 6 - TYPICAL JUNCTION CAPACITANCE