RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

SF11 THRU SF17

GLASS PASSIVATED 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: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 0.33 gram

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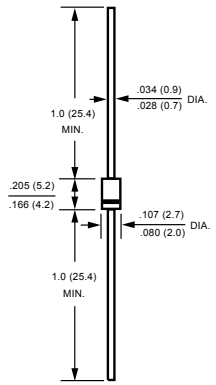

Dimensions in inches and (millimeters)

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%.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF17	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	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 Rectified Current at T_A = 55°C	I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50							°C/W
	$R_{\theta JL}$	20							
Typical Junction Capacitance (Note 2)	C_J	15				10			pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

ELECTRICAL CHARACTERISTICS(@T_A=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF17	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	0.95				1.25		1.50	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	5.0							µAmps
	@T_A = 100°C		100							
Maximum Reverse Recovery Time (Note 1)		trr	35				50			nSec

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.
3. Typical Thermal Resistance : At 9.5mm lead lengths,PCB mounted.
4. "Fully ROHS complaint", "100% Sn plating (Pb-free)"

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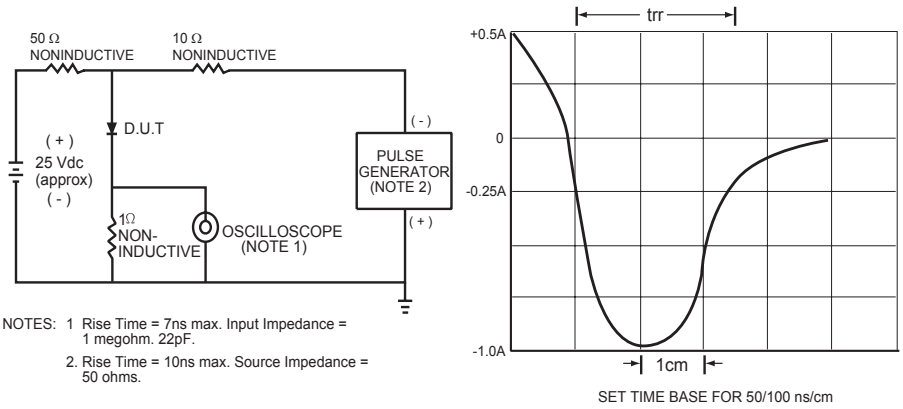
RATING AND CHARACTERISTICS CURVES (SF11 THRU SF17)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

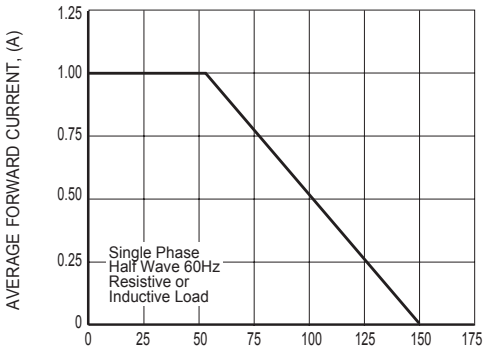


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

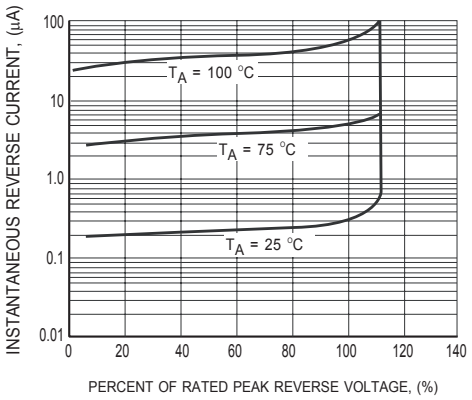


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (SF11 THRU SF17)

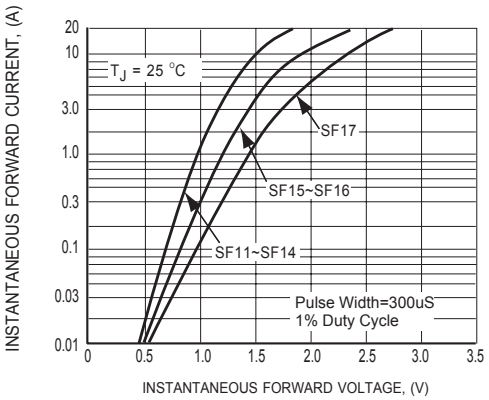


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

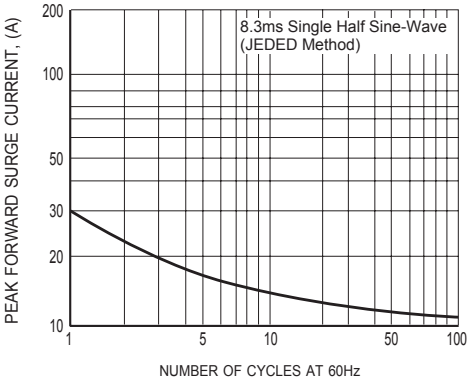


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

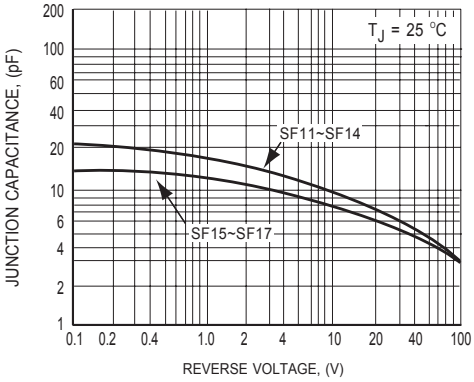


FIG.6 TYPICAL JUNCTION CAPACITANCE

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