RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

R2500F THRU R5000F

HIGH VOLTAGE FAST RECOVERY RECTIFIER

VOLTAGE RANGE 2500 to 5000 Volts CURRENT 0.2 Ampere

FEATURES

*Fast switching
*Low leakage
*High reliability
*High current capability
*High surge capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 0.4 gram

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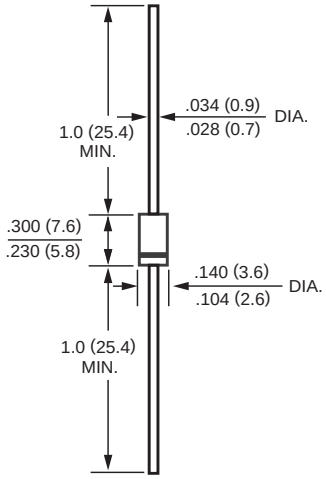

Dimensions in inches and (millimeters)

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 (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	R2500F	R3000F	R4000F	R5000F	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	2500	3000	4000	5000	Volts
Maximum RMS Volts	V_{RMS}	1750	2100	2800	3500	Volts
Maximum DC Blocking Voltage	V_{DC}	2500	3000	4000	5000	Volts
Maximum Average Forward Rectified Current at T_A = 50°C	I_O	200				mAmps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30				Amps
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150				°C

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

CHARACTERISTICS	SYMBOL	R2500F	R3000F	R4000F	R5000F	UNITS
Maximum Instantaneous Forward Voltage at 0.2A DC	V_F	4.0	5.0	6.5		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 25°C	I_R	5.0				uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T_L = 55°C		100				uAmps
Maximum Reverse Recovery Time (Note)	trr	500				nSec

NOTES : Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A

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RATING AND CHARACTERISTIC CURVES (R2500F THRU R5000F)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

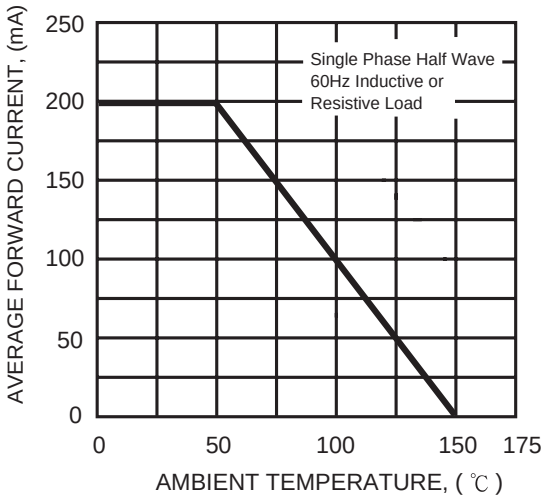


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

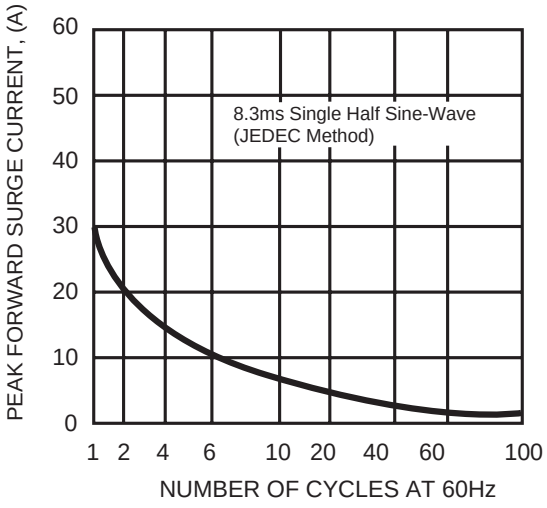
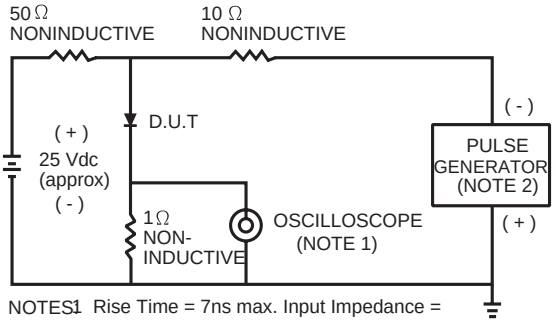


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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