

# R2500F THRU R5000F

## HIGH VOLTAGE FAST RECOVERY RECTIFIER

**REVERSE VOLTAGE:** 2500 to 5000 VOLTS  
**FORWARD CURRENT:** 0.2 AMPERE

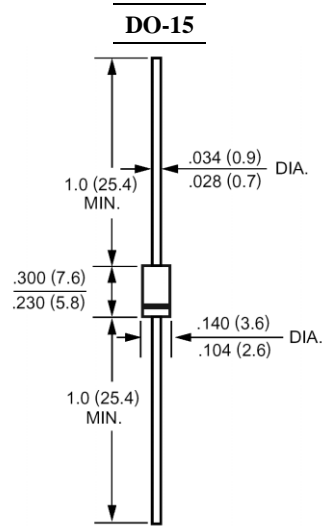
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### FEATURES

- Fast switching
- Low leakage
- Low forward voltage drop
- High current capability
- High current surge
- High reliability

### MECHANICAL DATA

Case: Molded plastic, DO-15  
Epoxy: UL 94V-O rate flame retardant  
Terminals: Axial leads, solderable per MIL-STD-202, method 208 guaranteed  
Polarity: Band denotes cathode  
Mounting position: Any  
Weight: 0.015ounce, 0.4gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	R2500F	R3000F	R4000F	R5000F	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	2500	3000	4000	5000	Volts
Maximum RMS Voltage	$V_{RMS}$	1750	2100	2800	3500	Volts
Maximum DC Blocking Voltage	$V_{DC}$	2500	3000	4000	5000	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at $T_A=50$	$I_{(AV)}$	0.2				Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30				Amp
Maximum Forward Voltage at 0.2A	$V_F$	4.0	5.0	6.5		Volts
Maximum Reverse Current at Rated DC Blocking Voltage $T_A=25$	$I_R$	5.0				uAmp
Maximum Full Load Reverse Current Average, Full Cycle .375", (9.5mm) lead length at $T_L = 55$		100				uAmp
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	500				nS
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150				

### NOTES:

1- Reverse Recovery Test Conditions :  $I_F=.5A$  ,  $I_R=1A$  ,  $I_{RR}=.25A$ .

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### RATINGS AND CHARACTERISTIC CURVES

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FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

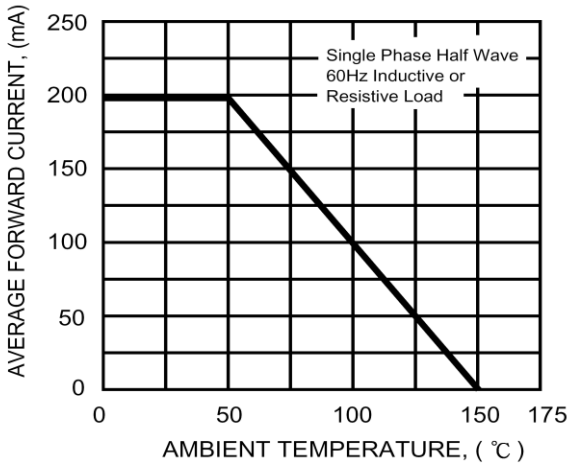


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

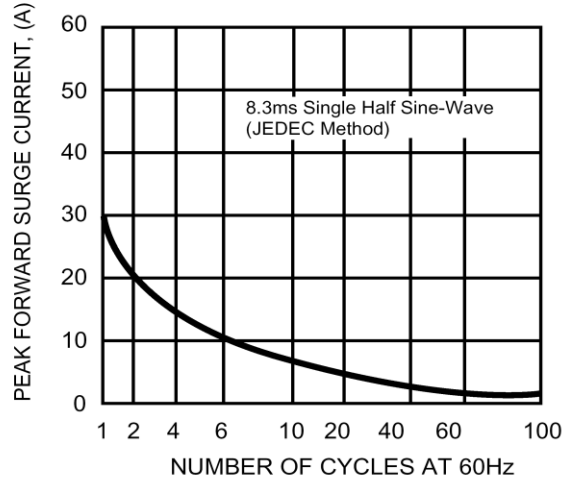
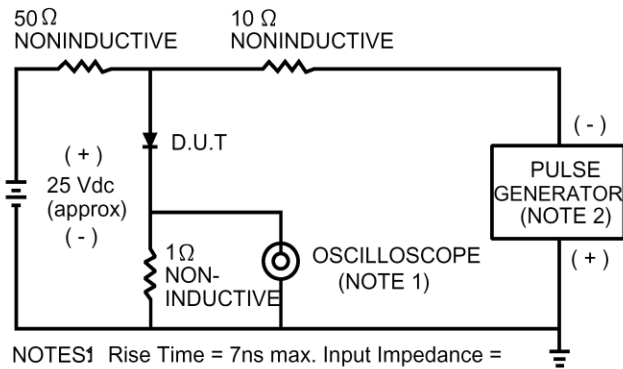


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

