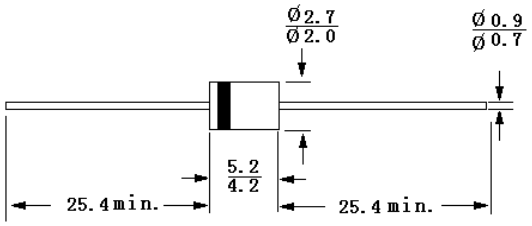
R2500F THRU R3000F

HIGH VOLTAGE FAST RECOVERY RECTIFIERS
Reverse Voltage – 2500 to 3000 V
Forward Current – 0.2 A

DO-41



Dimensions in mm

Features

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

Absolute Maximum Ratings and 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 %.

Parameter	Symbols	R2500F	R3000F	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	2500	3000	V
Maximum RMS Voltage	V_{RMS}	1750	2100	V
Maximum DC Blocking Voltage	V_{DC}	2500	3000	V
Maximum Forward Voltage at 0.2 A	V_F	4	5	V
Maximum Average Forward Rectified Current 375" (9.5 mm) Lead Length at Ta = 50 °C	$I_{F(AV)}$	0.2		A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30		A
Maximum Reverse Current at T_a = 25 °C at Rated DC Blocking Voltage at T_a = 100 °C	I_R	5 100		µA
Maximum full load reverse current average, Full cycle 0.375" (9.5 mm) lead length at T_L = 55 °C		100		
Maximum reverse recovery time [1)]	T_{rr}	500		ns
Operating and storage temperature range	T_j, T_{stg}	- 55 to + 150		°C

[1)] Reverse recovery test conditions I_F = 0.5 A, I_R = 1 A, I_{RR} = 0.25 A.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

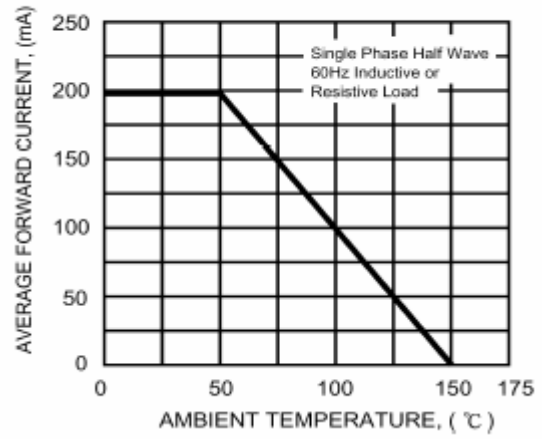


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

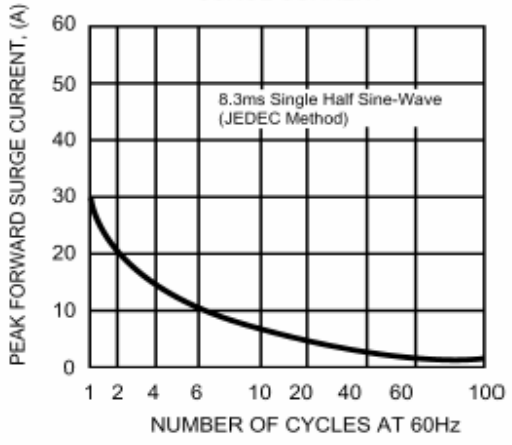
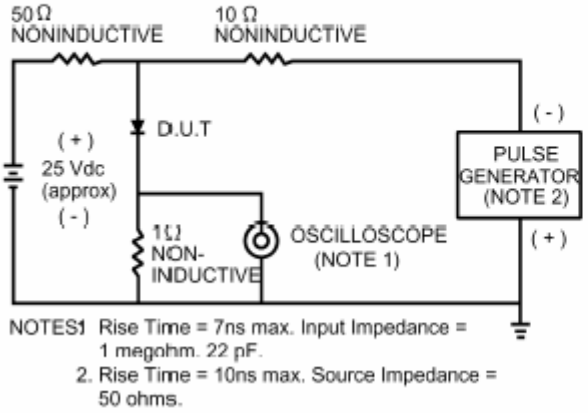


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.