



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**R1200F  
THRU  
R3000F**

**TECHNICAL SPECIFICATIONS OF HIGH VOLTAGE FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE - 1200 to 3000 Volts**

**CURRENT - 0.2 to 0.5 Ampere**

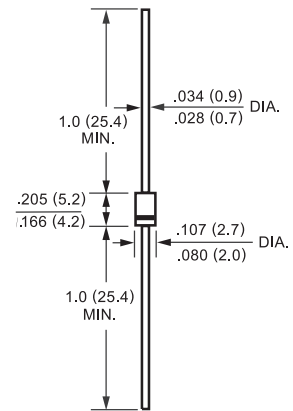
**FEATURES**

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

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.35 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	R1200F	R1500F	R1800F	R2000F	R2500F	R3000F	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	1200	1500	1800	2000	2500	3000	Volts
Maximum RMS Volts	V <sub>RMS</sub>	840	1050	1260	1400	1750	2100	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	1200	1500	1800	2000	2500	3000	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 50°C	I <sub>O</sub>	500			200			mAmps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30						Amps
Maximum Instantaneous Forward Voltage at 0.5A/0.2A DC	V <sub>F</sub>	2.5		4.0		5.0		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>A</sub> = 25°C	I <sub>R</sub>	5.0						uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T <sub>L</sub> = 55°C		100						uAmps
Maximum Reverse Recovery Time (Note)	t <sub>rr</sub>	500						nSec
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175						°C

NOTES : Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A

RA TING AND CHARACTERISTIC CURVES (R1200F THRU R3000F)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

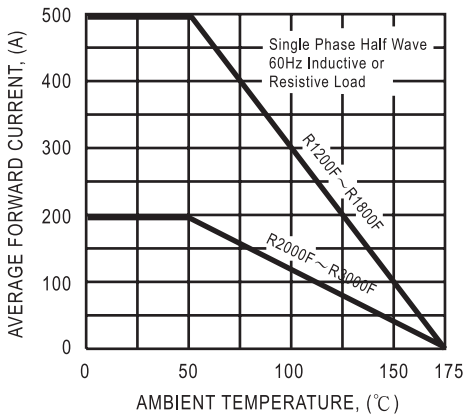


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

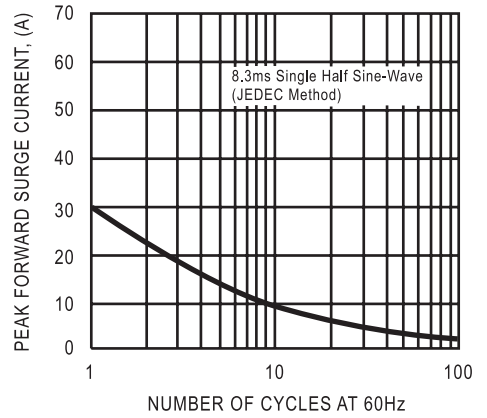
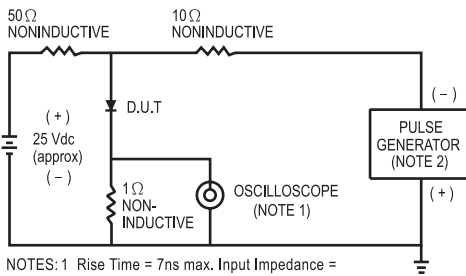
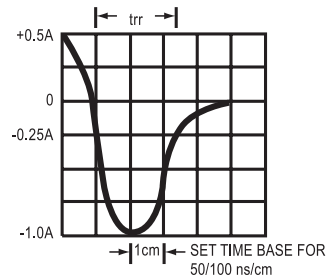


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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



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