



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

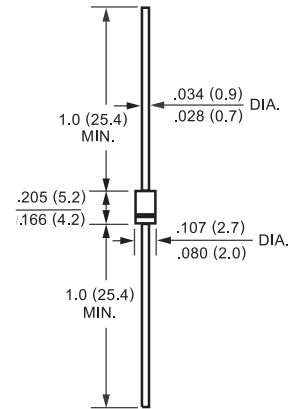
FEATURES

- *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 _{RRM}	1200	1500	1800	2000	2500	3000	Volts
Maximum RMS Volts	V _{RMS}	840	1050	1260	1400	1750	2100	Volts
Maximum DC Blocking Voltage	V _{DC}	1200	1500	1800	2000	2500	3000	Volts
Maximum Average Forward Rectified Current at T _A = 50°C	I _O	500			200			mAmps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30						Amps
Maximum Instantaneous Forward Voltage at 0.5A/0.2A DC	V _F	2.5		4.0		5.0		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)	t _{rr}	500						nSec
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 175						°C

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

RATING AND CHARACTERISTIC CURVES (R1200F THRU R3000F)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

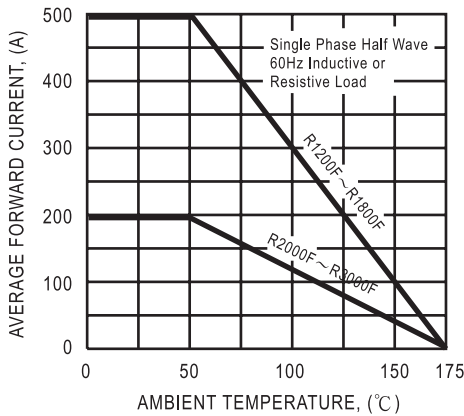


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

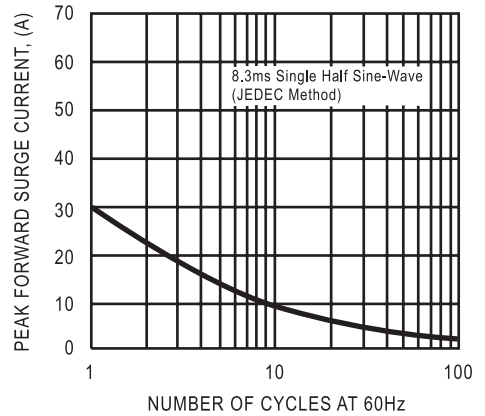
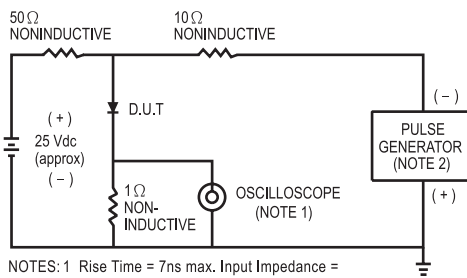
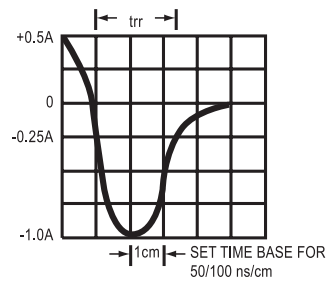


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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





DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**R4000F
THRU
R5000F**

TECHNICAL SPECIFICATIONS OF HIGH VOLTAGE FAST RECOVERY RECTIFIER

VOLTAGE RANGE 0 - 4000 to 5000 Volts

CURRENT - 0.2 Ampere

FEATURES

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

MECHANICAL DATA

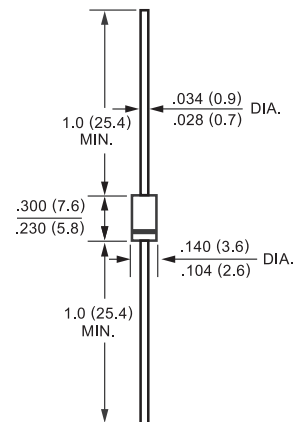
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.4 gram

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%.



DO-15



Dimensions in inches and (millimeters)

	SYMBOL	R4000F	R5000F	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	4000	5000	Volts
Maximum RMS Volts	VRMS	2800	3500	Volts
Maximum DC Blocking Voltage	VDC	4000	5000	Volts
Maximum Average Forward Rectified Current at TA = 50°C	Io	200		mAmps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30		Amps
Maximum Instantaneous Forward Voltage at 0.2A DC	VF	6.5		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	IR	5.0		uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at TL = 55°C		100		uAmps
Maximum Reverse Recovery Time (Note)	trr	500		nSec
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 175		°C

NOTES : Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

RATING AND CHARACTERISTIC CURVES (R4000F THRU R5000F)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

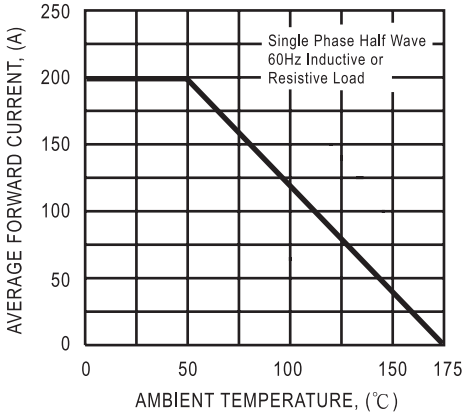


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

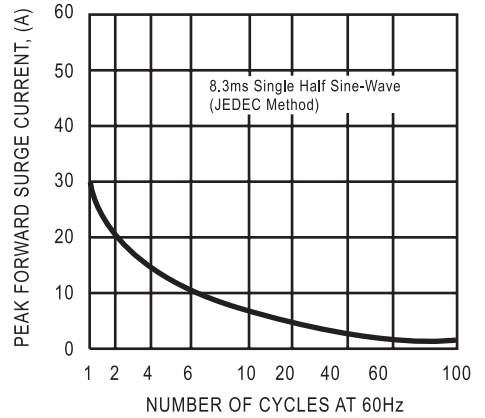
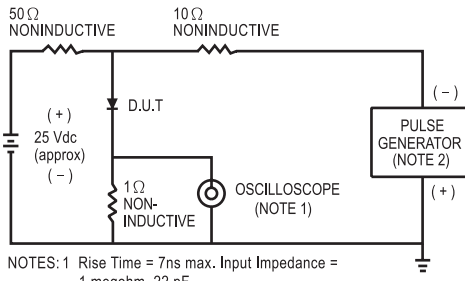
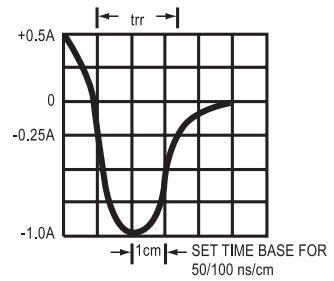


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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



DC COMPONENTS CO., LTD.