DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

R4000F THRU R5000F

TECHNICAL SPECIFICATIONS OF HIGH VOLTAGE FAST RECOVERY RECTIFIER

VOLTAGE RANGE0 - 4000 to 5000 Volts *CURRENT - 0.2 Ampere*

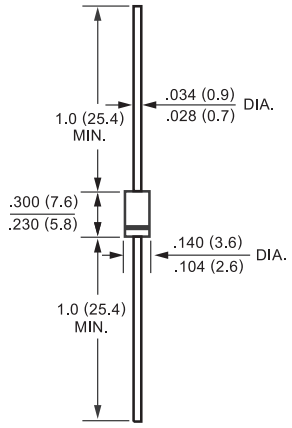
FEATURES

*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

DO-15



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	R4000F	R5000F	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	4000	5000	Volts
Maximum RMS Volts	V_{RMS}	2800	3500	Volts
Maximum DC Blocking Voltage	V_{DC}	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
Maximum Instantaneous Forward Voltage at 0.2A DC	V_F	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
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

NEXT BACK EXIT

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

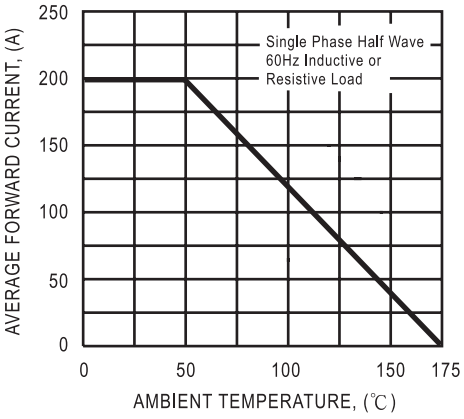


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

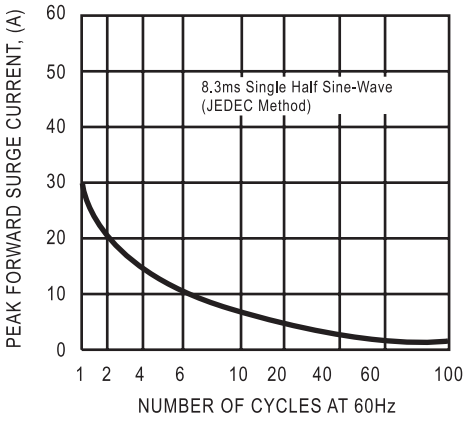
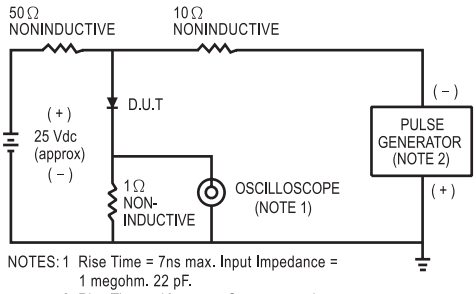


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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