RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

R1200F
THRU
R2000F

HIGH VOLTAGE FAST RECOVERY RECTIFIER

VOLTAGE RANGE 1200 to 2000 Volts CURRENT 0.2 to 0.5 Ampere

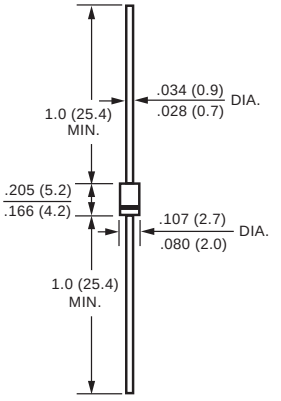
FEATURES

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

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* 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%.

MAXIMUM RATINGS (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	R1200F	R1500F	R1800F	R2000F	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1200	1500	1800	2000	Volts
Maximum RMS Volts	V_{RMS}	840	1050	1260	1400	Volts
Maximum DC Blocking Voltage	V_{DC}	1200	1500	1800	2000	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
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 175				°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	R1200F	R1500F	R1800F	R2000F	UNITS
Maximum Instantaneous Forward Voltage at 0.5A/0.2A DC	V_F	2.5			4.0	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)	trr	500				nSec

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

RATING AND CHARACTERISTIC CURVES (R1200F THRU R2000F)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

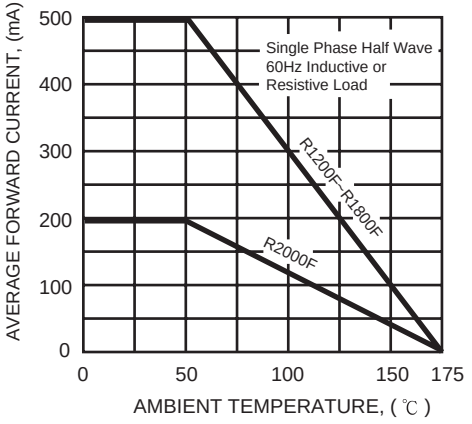


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

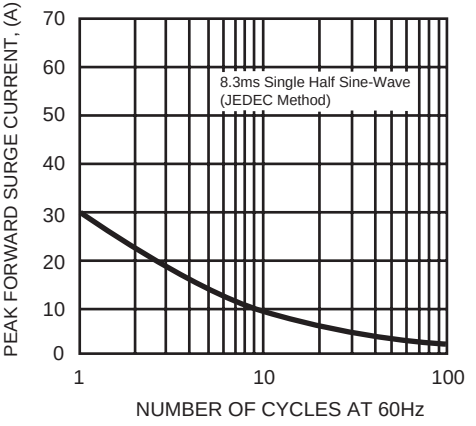
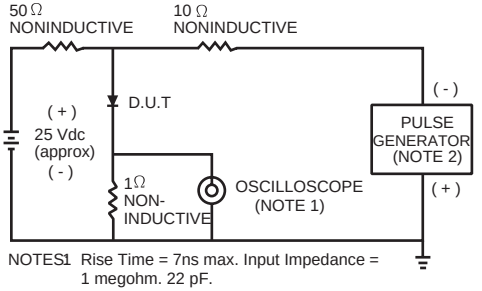


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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