R1200F THRU R2000F

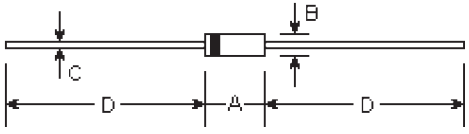
HIGH VOLTAGE FAST RECOVERY RECTIFIER

Reverse Voltage - 1200 to 2000 Volts
Forward Current - 0.2 to 0.5 Ampere

Features

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

DO-41



Mechanical Data

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD-202E method 208C guaranteed
- **Mounting Position:** Any
- **Weight:** 0.012 ounce, 0.335 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	ϕ
C	0.028	0.034	0.71	0.86	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	R1200F	R1500F	R1800F	R2000F	Units
Maximum repetitive peak reverse voltage	V_{RRM}	1200	1500	1800	2000	Volts
Maximum RMS voltage	V_{RMS}	840	1050	1260	1400	Volts
Maximum DC blocking voltage	V_{DC}	1200	1500	1800	2000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=50℃	$I_{(AV)}$	500			200	mAmps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	30.0				Amps
Maximum instantaneous forward voltage at 0.5/0.2A DC	V_F	2.5			4.0	Volts
Maximum full load reverse current average, full cycle 0.375" (9.5mm) lead length at T_A=55℃	$I_{R(AV)}$	100.0				μ A
Maximum DC reverse current at rated DC blocking voltage T_A=25℃	I_R	5.0				μ A
Maximum reverse recovery time (Note 1)	T_{rr}	500.0				nS
Operating and storage temperature range	T_J, T_{STG}	-65 to +175				℃

Note:

(1) Test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

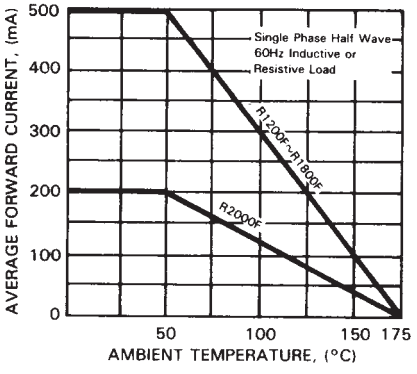


FIG. 2 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

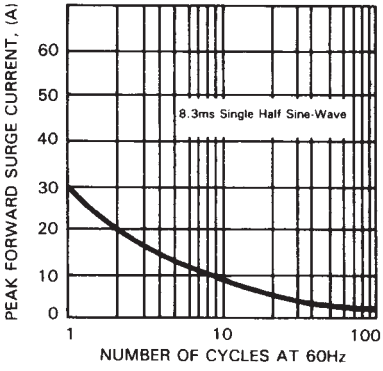
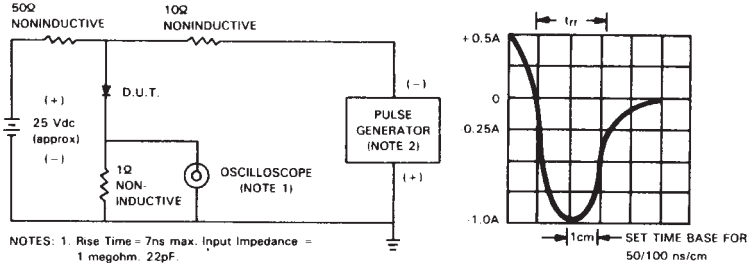


FIG. 3 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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