

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

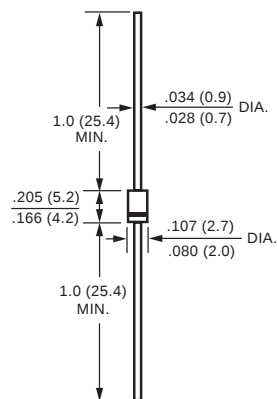
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.35 gram

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-41



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	R1200F	R1500F	R1800F	R2000F	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	1200	1500	1800	2000	Volts
Maximum RMS Volts	VRMS	840	1050	1260	1400	Volts
Maximum DC Blocking Voltage	VDC	1200	1500	1800	2000	Volts
Maximum Average Forward Rectified Current at TA = 50°C	Io	500			200	mAmps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	30				Amps
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150				°C

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

CHARACTERISTICS	SYMBOL	R1200F	R1500F	R1800F	R2000F	UNITS
Maximum Instantaneous Forward Voltage at 0.5A/0.2A DC	VF	2.5			4.0	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

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

RATING AND CHARACTERISTIC CURVES (R1200F THRU R2000F)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

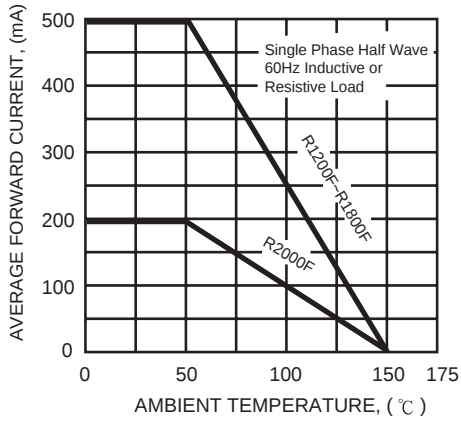


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

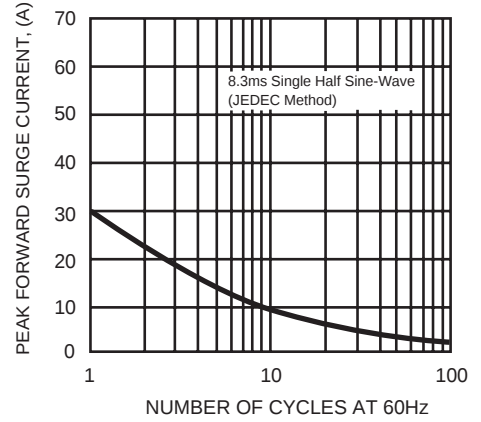
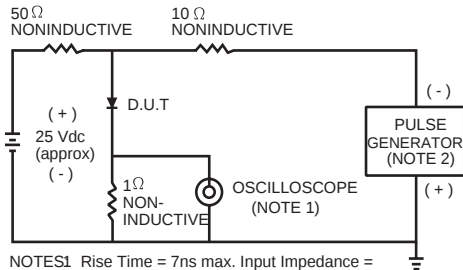


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

