

**HIGH VOLTAGE FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE 2500 to 5000 Volts CURRENT 0.2 Ampere**

**FEATURES**

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

**MECHANICAL DATA**

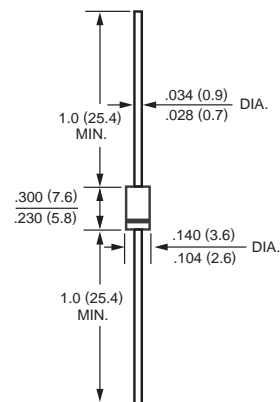
- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.4 gram

**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**



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

RATINGS	SYMBOL	R2500F	R3000F	R4000F	R5000F	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	2500	3000	4000	5000	Volts
Maximum RMS Volts	VRMS	1750	2100	2800	3500	Volts
Maximum DC Blocking Voltage	Vdc	2500	3000	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
Operating and Storage Temperature Range	TJ, Tstg	-65 to + 175				°C

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

CHARACTERISTICS	SYMBOL	R2500F	R3000F	R4000F	R5000F	UNITS
Maximum Instantaneous Forward Voltage at 0.2A DC	V <sub>F</sub>	4.0	5.0	6.5		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>A</sub> = 25°C	I <sub>R</sub>	5.0				uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T <sub>L</sub> = 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 ( R2500F THRU R5000F )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

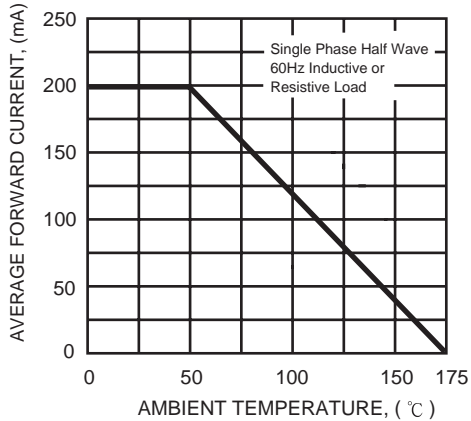


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

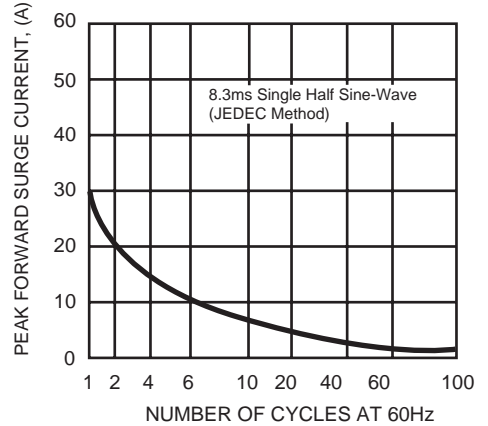
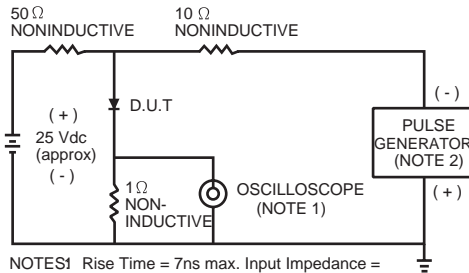


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

