



# THE DATASHEET OF R3000



**HIGH VOLTAGE SILICON RECTIFIER**  
**VOLTAGE RANGE 2500 to 5000 Volts CURRENT 0.2 Ampere**

**FEATURES**

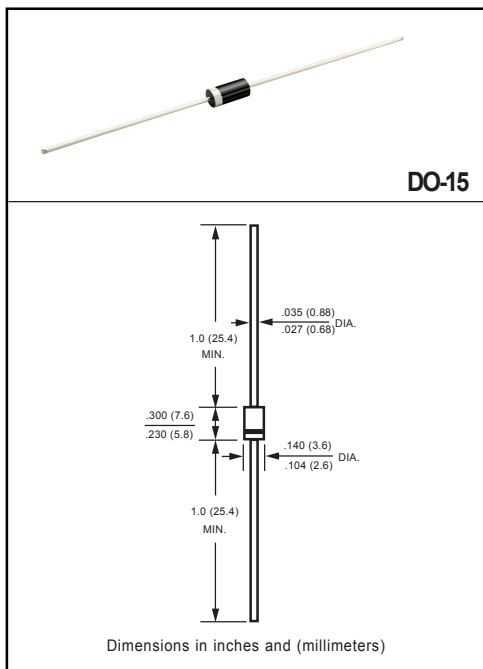
- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.40 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%.



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

RATINGS	SYMBOL	R2500	R3000	R4000	R5000	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
Typical Thermal Resistance	RθJA	65				°C/W
	RθJL	30				
Typical Junction Capacitance (Note)	CJ	30				pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150				°C

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

CHARACTERISTICS	SYMBOL	R2500	R3000	R4000	R5000	UNITS
Maximum Instantaneous Forward Voltage at 0.2A DC	VF	3.0	4.0	5.0		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	5.0				uAmps
		50				
Maximum Full Load Reverse Current Average, Full Cycle .375", (9.5mm) lead length at TL = 75°C		30				uAmps

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. "ROHS compliant"  
3. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

# RATING AND CHARACTERISTIC CURVES ( R2500 THRU R5000)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

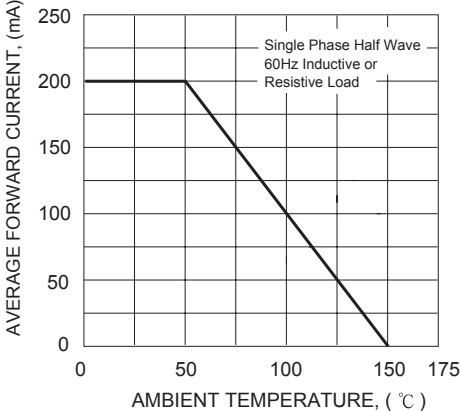


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

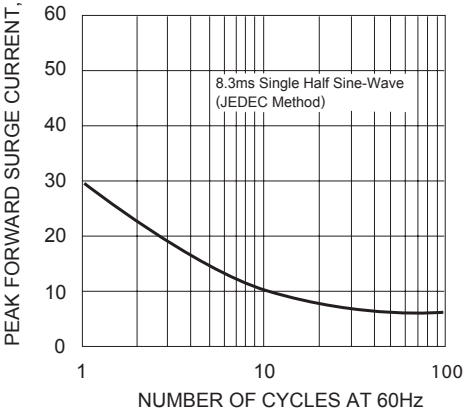
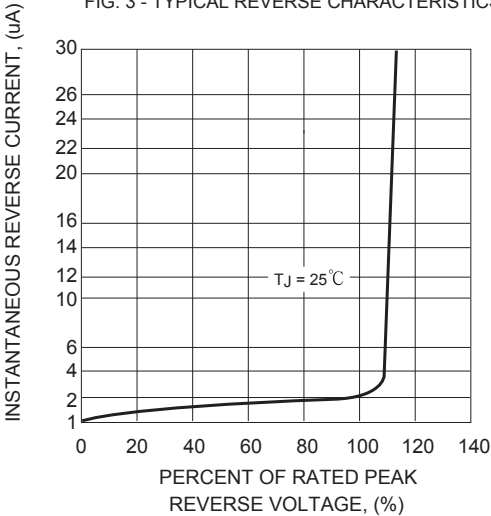
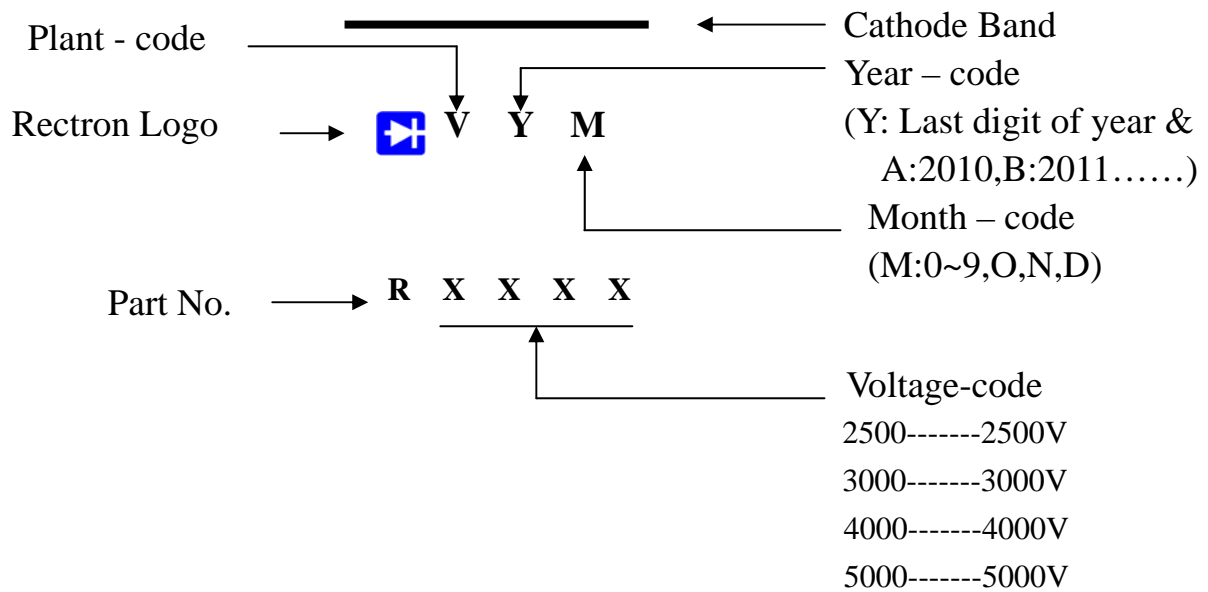


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS



## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-15	-B	500	194*84*21	415*220*255	25,000	12.74

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-15	-T	4,000	4,000	5.0	52	330	355*350*335	16,000	10.05



### AMMO PACK

PACKAGE	PACKING CODE	REEL ( EA )	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON ( EA )	GROSS WEIGHT (Kg)
DO-15	-F	1,500	5.0	52	255*73*100	400*268*225	15,000	8.8



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