



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**R1200  
THRU  
R3000**

**TECHNICAL SPECIFICATIONS OF HIGH VOLTAGE SILICON RECTIFIER**

**VOLTAGE RANGE - 1200 to 3000 Volts**

**CURRENT - 0.2 to 0.5 Ampere**

**FEATURES**

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

**MECHANICAL DATA**

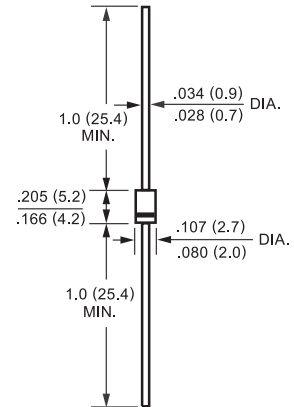
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.35 gram

**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)

	SYMBOL	R1200	R1500	R1800	R2000	R2500	R3000	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	1200	1500	1800	2000	2500	3000	Volts
Maximum RMS Volts	V <sub>RMS</sub>	840	1050	1260	1400	1750	2100	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	1200	1500	1800	2000	2500	3000	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 50°C	I <sub>O</sub>	500			200			mAmps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30						Amps
Maximum Instantaneous Forward Voltage at 0.5A/0.2A DC	V <sub>F</sub>	2.0			3.0	4.0		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	@ T <sub>A</sub> = 25°C						uAmps
		@ T <sub>A</sub> = 100°C						
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T <sub>L</sub> = 75°C		30						uAmps
Typical Junction Capacitance (Note)	C <sub>J</sub>	30						pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175						°C

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES (R1200 THRU R3000)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

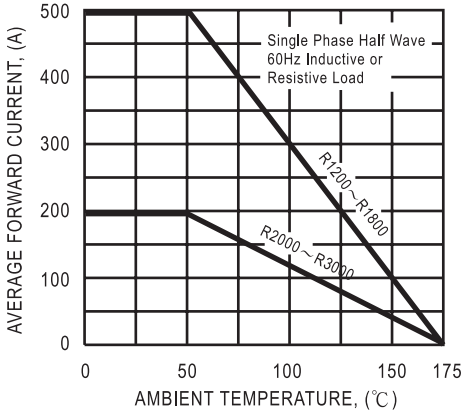


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

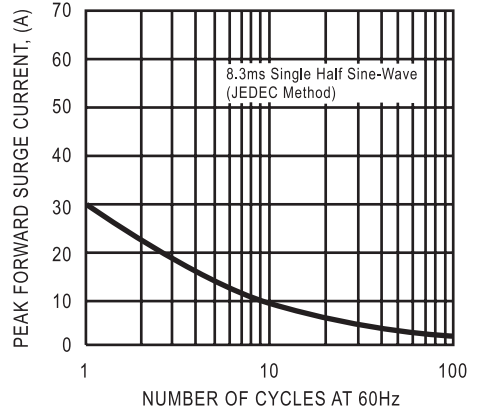
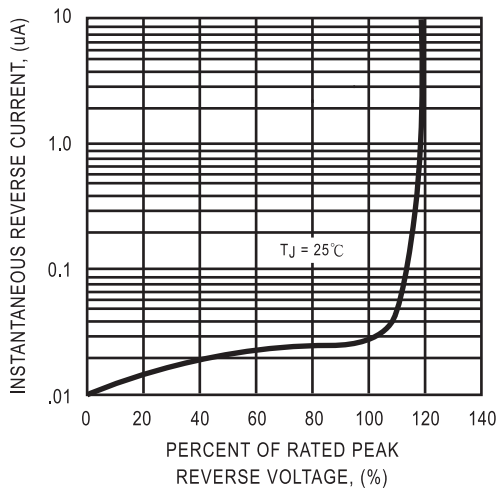


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS





**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

R4000  
THRU  
R5000

TECHNICAL SPECIFICATIONS OF HIGH VOLTAGE SILICON RECTIFIER  
VOLTAGE RANGE - 4000 to 5000 Volts  
CURRENT - 0.2 Ampere

**FEATURES**

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

**MECHANICAL DATA**

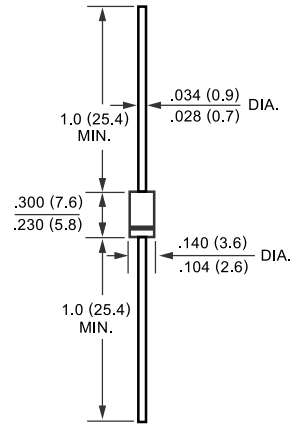
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.35 gram

**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-15



Dimensions in inches and (millimeters)

	SYMBOL	R4000	R5000	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	4000	5000	Volts
Maximum RMS Volts	V <sub>RMS</sub>	2800	3500	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	4000	5000	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 50°C	I <sub>O</sub>	200		mAmps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30		Amps
Maximum Instantaneous Forward Voltage at 0.2A DC	V <sub>F</sub>	5.0		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	@ T <sub>A</sub> = 25°C	5.0	uAmps
		@ T <sub>A</sub> = 100°C	100	
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T <sub>L</sub> = 75°C		30		uAmps
Typical Junction Capacitance (Note)	C <sub>J</sub>	30		pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175		° C

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES (R4000 THRU R5000)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

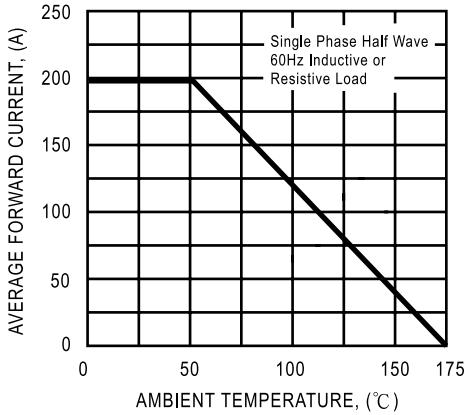


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

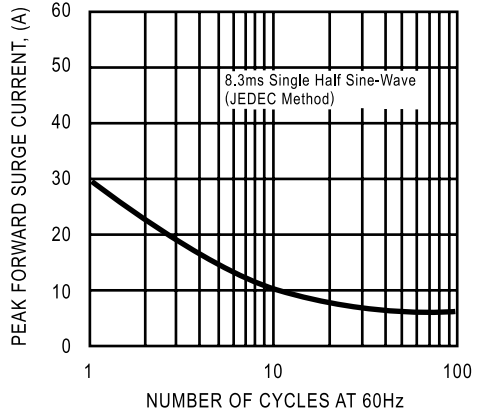


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

