

R3000 THRU R5000

200mAMP SILICON RECTIFIERS



FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.40 grams

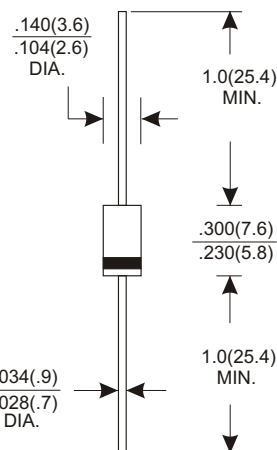
VOLTAGE RANGE

3000 to 5000 Volts

CURRENT

200 mAmpere

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	R3000	R4000	R5000	UNITS
Maximum Recurrent Peak Reverse Voltage	3000	4000	5000	V
Maximum RMS Voltage	2100	2800	3500	V
Maximum DC Blocking Voltage	3000	4000	5000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=75°C	200			mA
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30			A
Maximum Instantaneous Forward Voltage at 200mA	4.0	5.0		V
Maximum DC Reverse Current Ta=25°C	5.0			μA
at Rated DC Blocking Voltage Ta=100°C	50			μA
Typical Junction Capacitance (Note 1)	15			pF
Typical Thermal Resistance R JA (Note 2)	50			°C/W
Operating and Storage Temperature Range Tj, Tstg	-65 — +150			°C

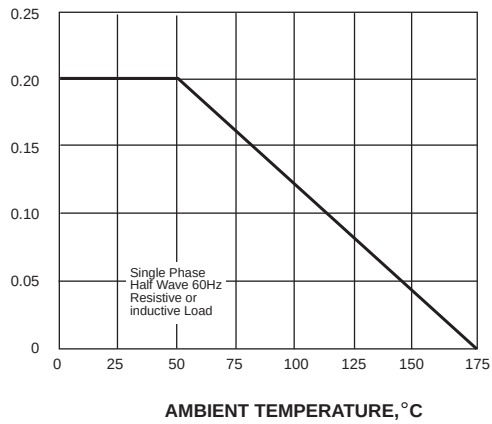
NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) lead length.

RATING AND CHARACTERISTIC CURVES (R3000 THRU R5000)

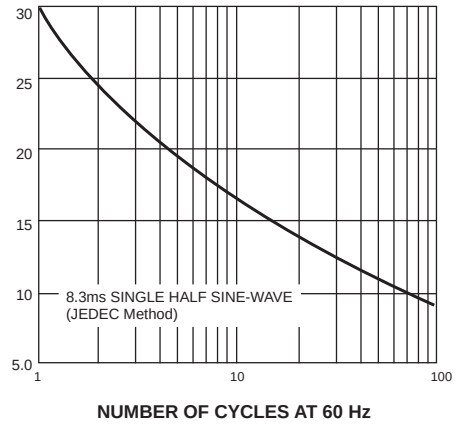
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



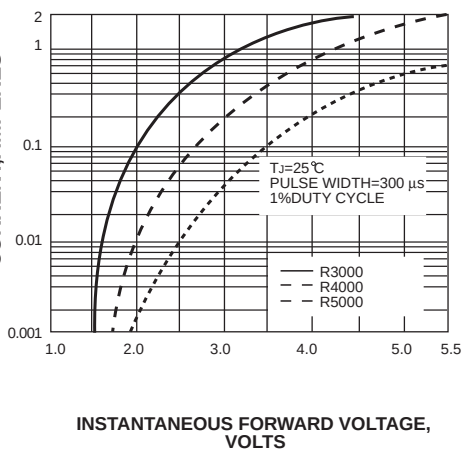
PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



INSTANTANEOUS FORWARD
CURRENT, AMPERES

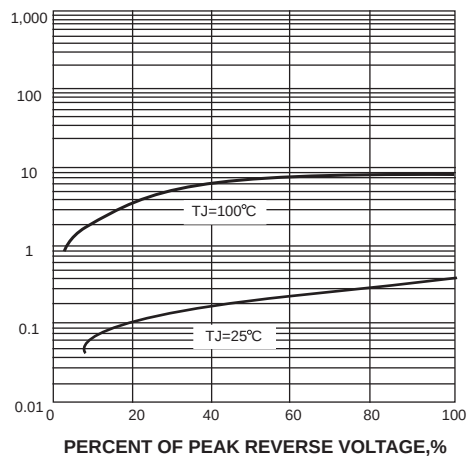
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

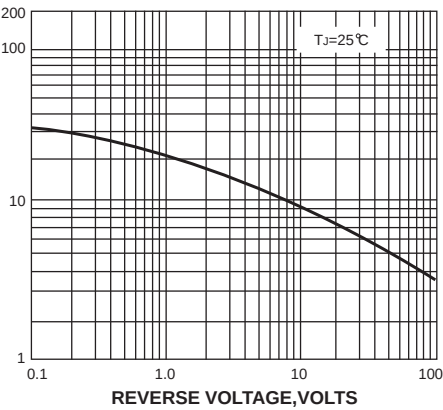
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

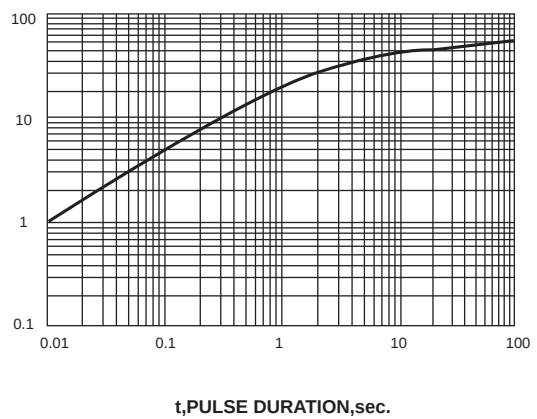
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.