RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

W005L THRU W10L

SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER
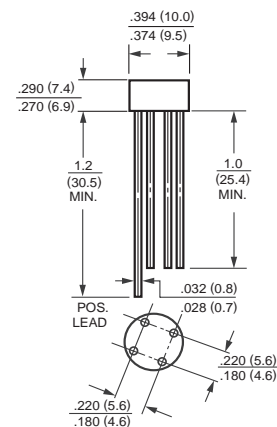
VOLTAGE RANGE 50 to 1000 Volts   CURRENT 1.5 Amperes

FEATURES

* High reverse voltage to 1000V
* Surge overload ratings to 50 amperes peak
* Good for printed circuit board assembly
* Mounting position: Any
* Weight: 1.37 grams
* Silver-plated copper leads

MECHANICAL DATA

* UL listed the recognized component directory, file #E94233
* Epoxy: Device has UL flammability classification 94V-O

RC-2

.394 (10.0)
.374 (9.5)
.290 (7.4)
.270 (6.9)
1.2 (30.5) MIN.
1.0 (25.4) MIN.
.032 (0.8)
.028 (0.7)
POS. LEAD
.220 (5.6)
.180 (4.6)
.220 (5.6)
.180 (4.6)

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 $^\circ$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 T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	W005L	W01L	W02L	W04L	W06L	W08L	W10L	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at T_A = 50°C	I_O				1.5				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}				50				Amps
Operating Temperature Range	T_J				-55 to + 125				$^\circ$C
Storage Temperature Range	T_{STG}				-55 to + 150				$^\circ$C

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

CHARACTERISTICS		SYMBOL	W005L	W01L	W02L	W04L	W06L	W08L	W10L	UNITS
Maximum Forward Voltage Drop per element at 1.5A DC		V_F				1.0				Volts
Maximum Reverse Current at Rated	@T_A = 25°C	I_R				10				uAmps
DC Blocking Voltage per element	@T_A = 100°C					1				mAmps

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RATING AND CHARACTERISTIC CURVES (W005L THRU W10L)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

8.3ms Single Half Sine-Wave
(JEDED Method)

PEAK FORWARD SURGE CURRENT, (A)

NUMBER OF CYCLES AT 60Hz
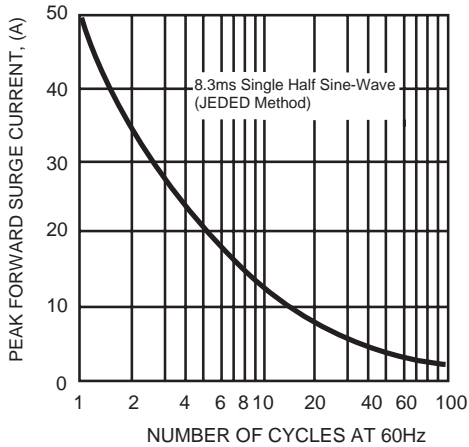
FIG. 2 - TYPICAL FORWARD CURRENT
DERATING CURVE

AVERAGE FORWARD CURRENT, (A)

Single Phase Half Wave
60Hz Inductive or
Resistive Load

AMBIENT TEMPERATURE, (℃)
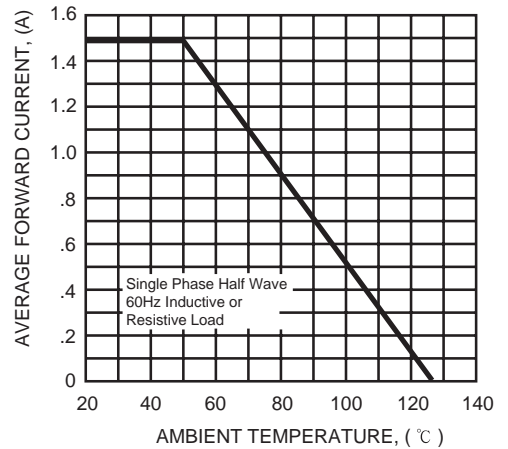
FIG. 3 - TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT, (A)

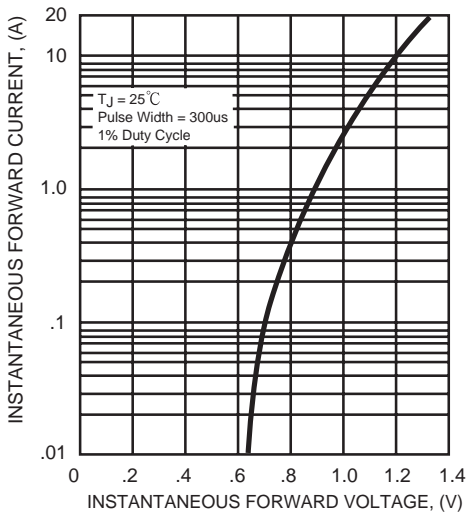$T_J = 25℃$
Pulse Width = 300us
1% Duty Cycle

INSTANTANEOUS FORWARD VOLTAGE, (V)

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, (uA)

$T_J = 25℃$

PERCENT OF RATED PEAK
REVERSE VOLTAGE, (%)

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