RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

RB151 THRU RB157

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
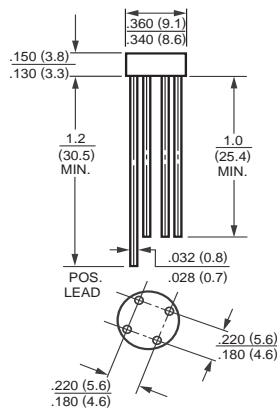* Weight: 1.04 grams
* Silver-plated copper leads

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

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Dimensions in inches and (millimeters)

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 $T_A = 25^oC$ unless otherwise noted)

RATINGS	SYMBOL	RB151	RB152	RB153	RB154	RB155	RB156	RB157	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 Output Current at $T_A = 25^oC$	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							^0C
Storage Temperature Range	T_{STG}	-55 to + 150							^0C

ELECTRICAL CHARACTERISTICS (At $T_A = 25^oC$ unless otherwise noted)

CHARACTERISTICS		SYMBOL	RB151	RB152	RB153	RB154	RB155	RB156	RB157	UNITS
Maximum Forward Voltage Drop per Bridge Element at 1.0A DC		V_F	1.0							Volts
Maximum Reverse Current at Rated DC Blocking Voltage per element	@$T_A = 25^oC$	I_R	10							uAmps
	@$T_A = 100^oC$		1							mAmps

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RATING AND CHARACTERISTIC CURVES (RB151 THRU RB157)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD
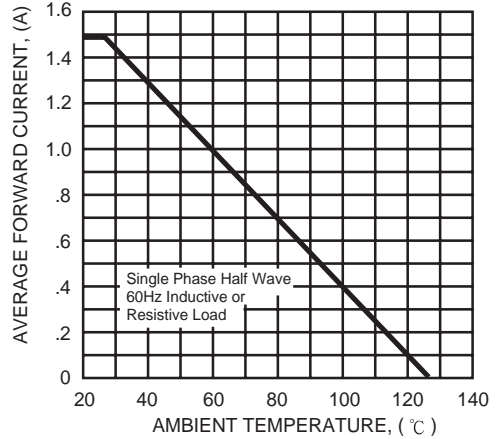SURGE CURRENT

PEAK FORWARD SURGE CURRENT, (A)

8.3ms Single Half Sine-Wave
(JEDED Method)

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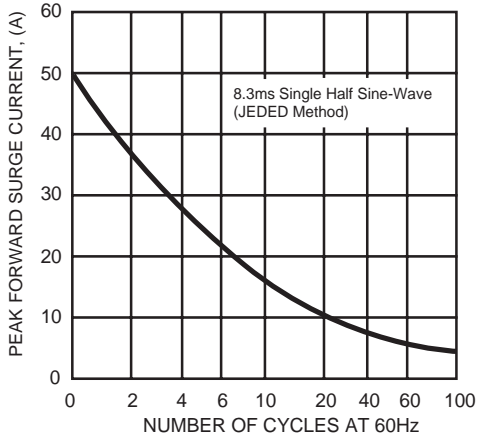
FIG. 2 - TYPICAL FORWARD CURRENT
DERATING CURVE

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
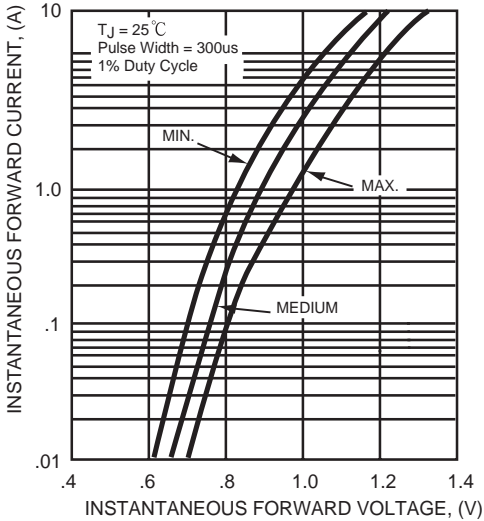1% Duty Cycle

MIN.

MAX.

MEDIUM

INSTANTANEOUS FORWARD VOLTAGE, (V)

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, (uA)

$T_J = 25℃$

PERCENT OF RATED PEAK
REVERSE VOLTAGE, (%)

RECTRON