



## MASTER INSTRUMENT CORPORATION

### SINGLE-PHASE BRIDGE RECTIFIER RB151 THRU RB157

**VOLTAGE RANGE** 50 to 1000 Volts  
**CURRENT** 1.5 Amperes

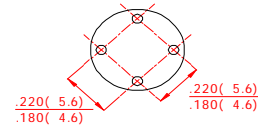
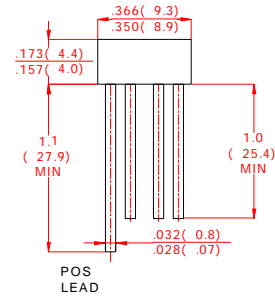
#### FEATURES

- l Low cost construction
- l High forward surge current capability
- l Ideal for printed circuit board
- l High isolation voltage from case to leads
- l High temperature soldering guaranteed:  
260°C/10 second, at 5 lbs. (2.3kg) tension.

#### MECHANICAL DATA

- l Case: Molded plastic body
- l Terminal: Lead solderable per MIL-STD-202E method 208C.
- l Polarity: Polarity symbols molded on case
- l Mounting: Thru hole for #6 screw, 5 in.-lbs torque max.
- l Weight: 0.13ounce, 3.66 grams

RB-15



Dimensions in inches and (millimeters)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	RB151	RB152	RB153	RB154	RB155	RB156	RB157	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS 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 $T_C=25^\circ\text{C}$ (Note 2)	$I_{(AV)}$	1.5							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50							Amps
Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	10							$\text{A}^2\text{S}$
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.0							Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	$T_A=25^\circ\text{C}$	5.0							$\mu\text{Amps}$
	$T_A=100^\circ\text{C}$	0.5							mAmps
Typical Junction Capacitance (Note 1)	$C_J$	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40							$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

#### NOTES:

1. Unit mounted on 8.7"×8.7"×0.24" thick (22×22×0.6 cm) Al. plate.
2. Unit mounted on P.C.B at 0.375" (9.5mm) lead length with 0.22"×0.22" (5.5×5.5mm) copper pads.



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RATINGS AND CHARACTERISTIC CURVES RB151 THRU RB157

FIG.1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

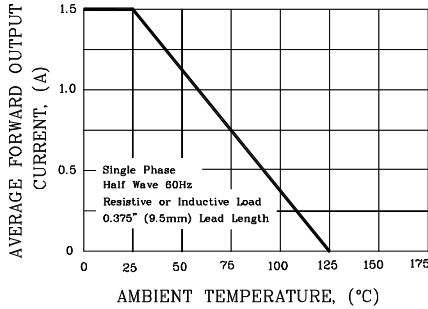


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

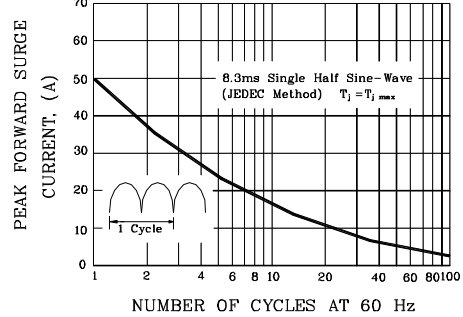


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

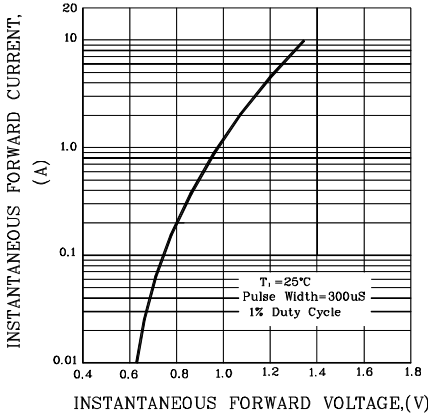


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

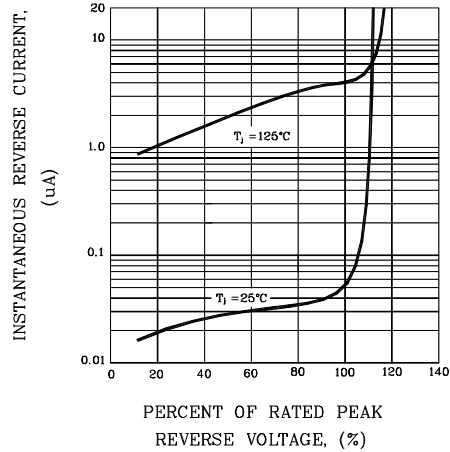


FIG.5- TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

