



MASTER INSTRUMENT CORPORATION

SINGLE-PHASE BRIDGE RECTIFIER RB151 THRU RB157

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.5 Amperes

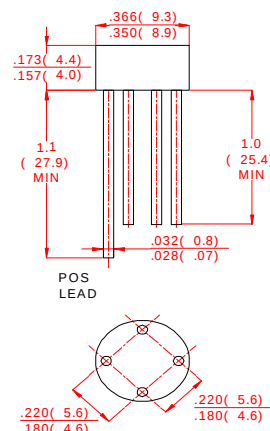
FEATURES

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

MECHANICAL DATA

- Case: Molded plastic body
- Terminal: Lead solderable per MIL-STD-202E method 208C.
- Polarity: Polarity symbols molded on case
- Mounting: Thru hole for #6 screw, 5 in.-lbs torque max.
- 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							A^2S
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							μAmps
	$T_A=100^\circ\text{C}$	0.5							mAmps
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40							$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES:

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



MASTER INSTRUMENT CORPORATION

SINGLE-PHASE BRIDGE RECTIFIER
RB151 THRU RB157

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.5 Amperes

RATINGS AND CHARACTERISTIC CURVES RB151 THRU RB157

FIG.1-DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT

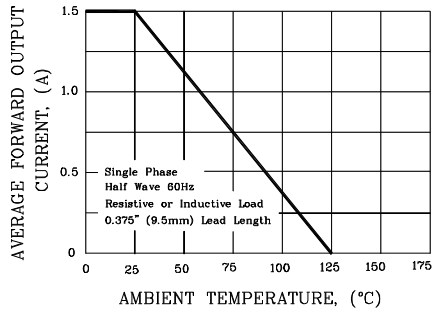


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT PER ELEMENT

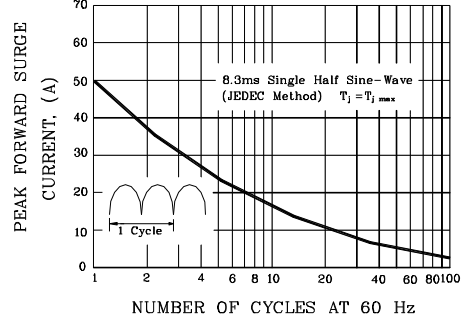


FIG.3-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

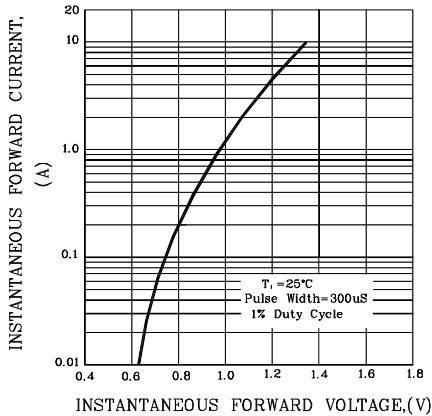


FIG.4-TYPICAL REVERSE CHARACTERISTICS
PER BRIDGE ELEMENT

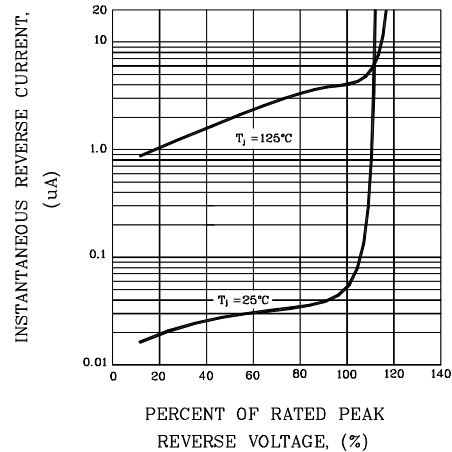


FIG.5-TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT

