



MASTER INSTRUMENT CORPORATION

SINGLE-PHASE BRIDGE RECTIFIER
RB151 THRU RB157

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.5 Amperes

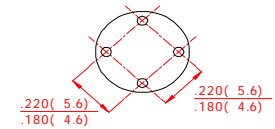
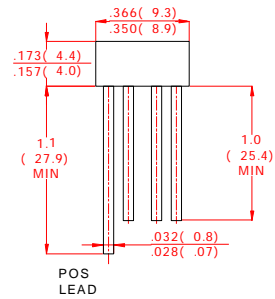
FEATURES

- | 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°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<8.3ms)	I ² T	10							A ² 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°C	5.0							μAmps
	T _A =100°C	0.5							mAmps
Typical Junction Capacitance (Note 1)	C _J	15							pF
Typical Thermal Resistance (Note 2)	R _{θJA}	40							°C/W
Operating Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°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

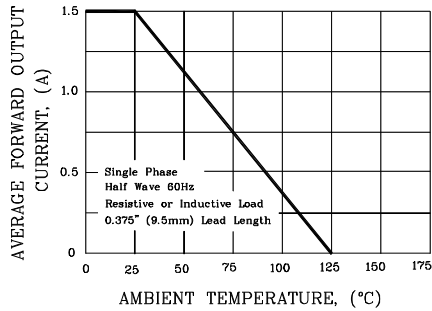


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

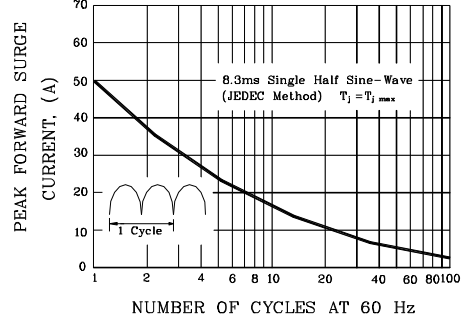


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

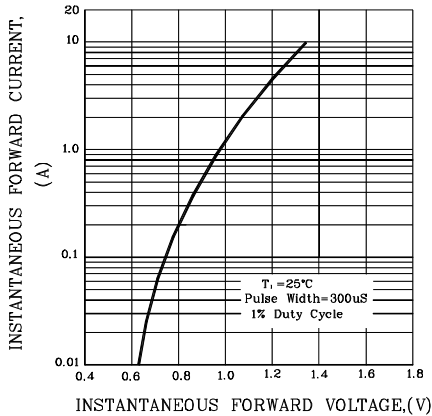


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

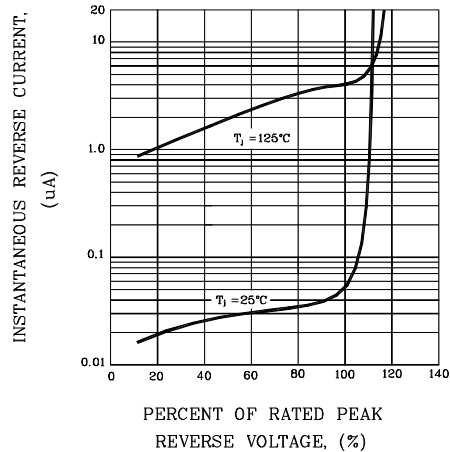


FIG.5- TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

