



MASTER INSTRUMENT CORPORATION

SINGLE-PHASE BRIDGE RECTIFIER BR1005 THRU BR1010

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 10 Amperes

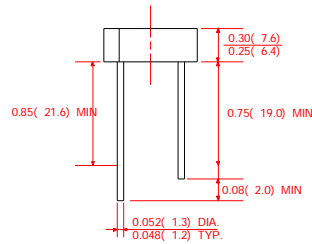
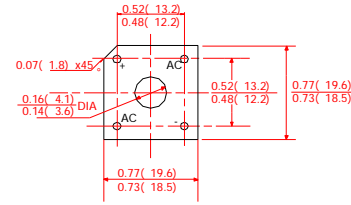
FEATURES

- l Low cost
- l This series is UL recognized under component index, file number E127707
- 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: 0.20ounce, 5.62 grams

BR-10



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	BR1005	BR101	BR102	BR104	BR106	BR108	BR1010	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	$I_{(AV)}$	$T_C=50^\circ\text{C}$ (Note1)							10.0	Amps
		$T_C=100^\circ\text{C}$ (Note1)							6.0	
		$T_A=50^\circ\text{C}$ (Note2)							6.0	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							Amps	
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	93							A^2S	
Maximum Instantaneous Forward Voltage at 5.0A	V_F	1.1							Volts	
Maximum DC Reverse Current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$							5.0	μAmps
		$T_A=150^\circ\text{C}$							1.0	mAmps
Isolation Voltage from case to leads	V_{ISO}	2500							V_{AC}	
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	6.0							$^\circ\text{C}/\text{W}$	
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 (22×22×0.6mm) Al. plate.
2. Unit mounted on P.C.B at 0.375" (9.5mm) lead length with 0.47"×0.47" (12×12mm) copper pads.



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RATINGS AND CHARACTERISTIC CURVES BR1005 THRU BR1010

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

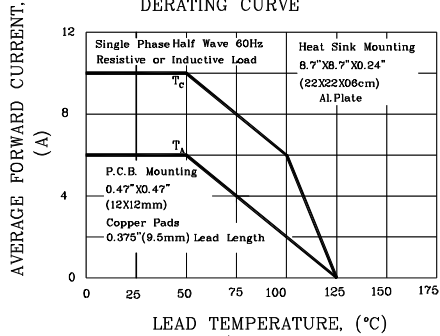


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

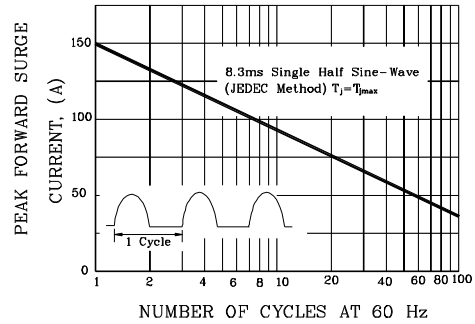


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

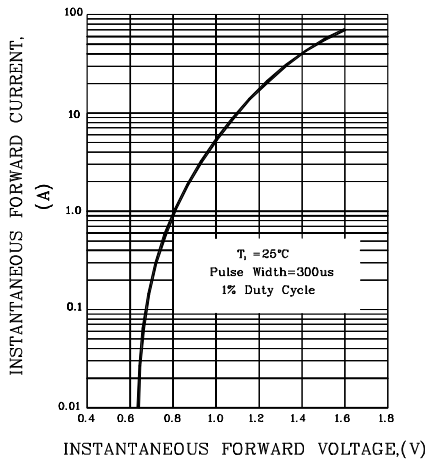


FIG.4-TYPICAL REVERSE CHARACTERISTICS

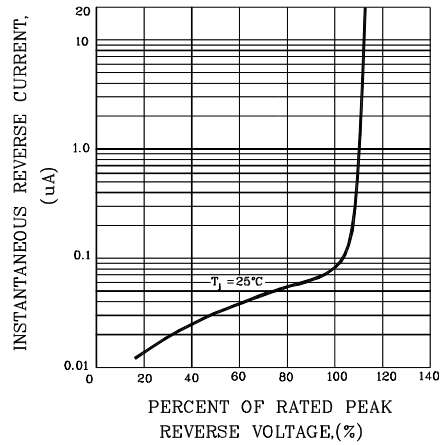


FIG.5-TYPICAL JUNCTION CAPACITANCE

