



## MASTER INSTRUMENT CORPORATION

### SINGLE-PHASE BRIDGE RECTIFIER KBU10A THRU KBU10M

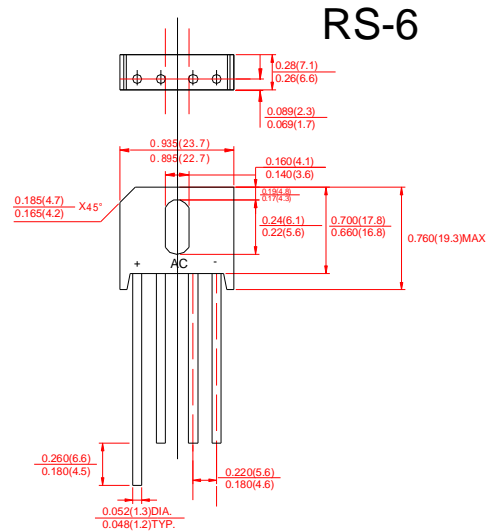
**VOLTAGE RANGE** 50 to 1000 Volts  
**CURRENT** 10.0 Amperes

#### 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 temperature soldering guaranteed:  
260 °C/10 second, 0.375" (9.5mm) lead length at 5 lbs.(2.3kg) tension.

#### MECHANICAL DATA

- l Case: Transfer molded plastic
- l Terminal: Lead solderable per MIL-STD-202E method 208C
- l Polarity: Polarity symbols marked on case
- l Mounting: Thru hole for #6 screw, 5 in.-lbs torque max
- l Weight: 0.27 ounce, 7.59 gram



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	KBU 10A	KBU 10B	KBU 10D	KBU 10G	KBU 10J	KBU 10K	KBU 10M	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	$T_C=50^\circ\text{C}$ (Note 2)	$I_{AV}$							Amps
	$T_C=100^\circ\text{C}$ (Note 2)	10.0							
	$T_A=45^\circ\text{C}$ (Note 3)	8.0							
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	6.0							Amps
Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	350							$\text{A}^2\text{s}$
Maximum Instantaneous Forward Voltage Drop per bridge element at 10.0A	$V_F$	373							Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	$T_A=25^\circ\text{C}$	$I_R$							$\mu\text{Amps}$
	$T_A=100^\circ\text{C}$	5.0							mAmps
Typical Junction Capacitance (Note 1)	$C_j$	1.0							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	200							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	5.0							$^\circ\text{C}$

#### NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on 6.0"x5.5"x0.24" thick (15x14x0.6cm) Al. plate.
3. Unit mounted in free air, no heatsink, P.C.B at 0.375" (9.5mm) lead length with 0.5"x0.5" (12x12cm) copper pads



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## RATINGS AND CHARACTERISTIC CURVES KBU10A THRU KBU10M

FIG.1- DERATING CURVE FOR  
OUTPUT RECTIFIED CURRENT

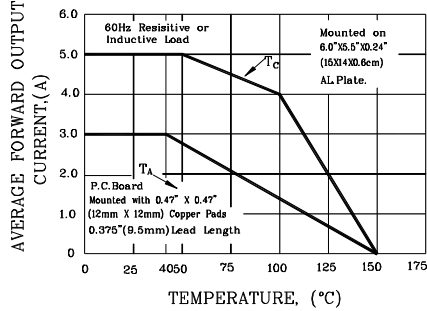


FIG.2- MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER ELEMENT

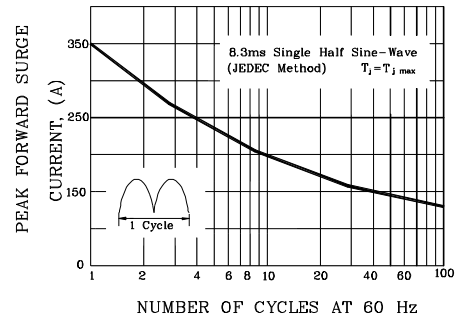


FIG.3- TYPICAL FORWARD CHARACTERISTICS  
PER BRIDGE ELEMENT

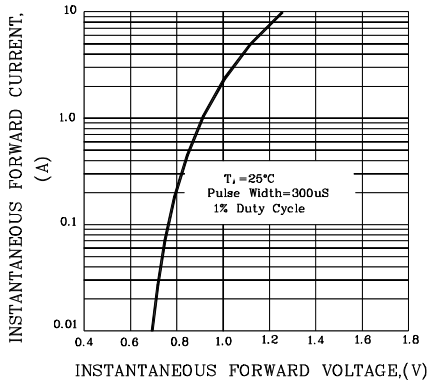


FIG.4- TYPICAL REVERSE CHARACTERISTICS  
PER BRIDGE ELEMENT

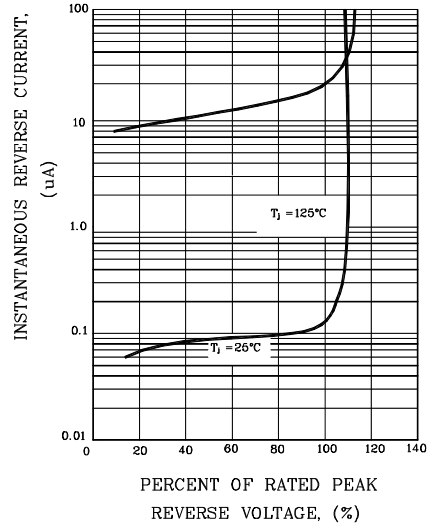


FIG.5- TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT

