



MASTER INSTRUMENT CORPORATION

**SINGLE-PHASE BRIDGE RECTIFIER
KBL005 THRU KBL10**

**VOLTAGE RANGE 50 to 1000 Volts
CURRENT 4.0 Amperes**

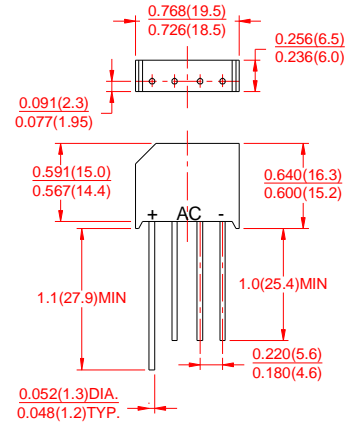
FEATURES

- 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 Mounting Postition: Any
- l Weight: 0.22ounce, 6.21gram

RS-4



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	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	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}						4.0		Amps
	$T_A=50^\circ\text{C}$ (Note 3)									
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200						Amps		
Rating for Fusing (t<8.3ms)	I^2t	166						A^2s		
Maximum Instantaneous Forward Voltage Drop per bridge element at 4.0A	V_F	1.0						Volts		
Maximum DC Reverse Current at rated DC blocking voltage per element	$T_A=25^\circ\text{C}$	I_R						10		μAmps
	$T_A=100^\circ\text{C}$							1.0		mAmps
Typical Junction Capacitance (Note 1)	C_J	105						pF		
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20						$^\circ\text{C/W}$		
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150						$^\circ\text{C}$		

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on 3.0"x3.0"x0.11" thick (7.5x7.5x0.3 cm) Al. plate.
3. P.C. Board mount with 0.5"x0.5" (12x12cm) copper pads 0.375" (9.5mm) lead length



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RATINGS AND CHARACTERISTIC CURVES KBL005 THRU KBL10

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

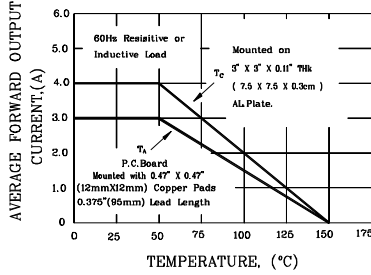


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

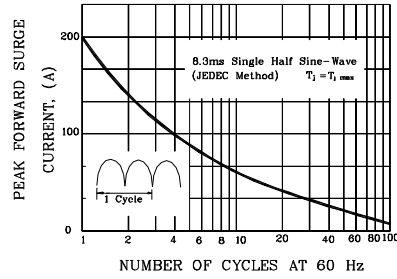


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

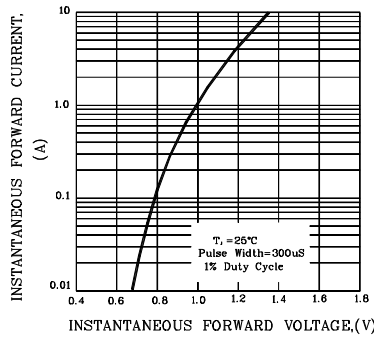


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

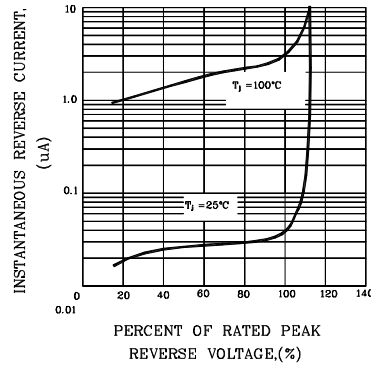


FIG.5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

