



**SEMICONDUCTOR  
TECHNICAL DATA**

**KBK8A  
THRU  
KBK8M**

FORWARD INTERNATIONAL ELECTRONICS LTD.

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**

**VOLTAGE RANGE - 50 to 1000 Volts**

**CURRENT - 8.0 Amperes**

**FEATURES**

- \* Low leakage
- \* Low forward voltage
- \* Surge overload rating: 170 Amperes peak
- \* Ideal for printed circuit boards
- \* High forward surge current capability

**MECHANICAL DATA**

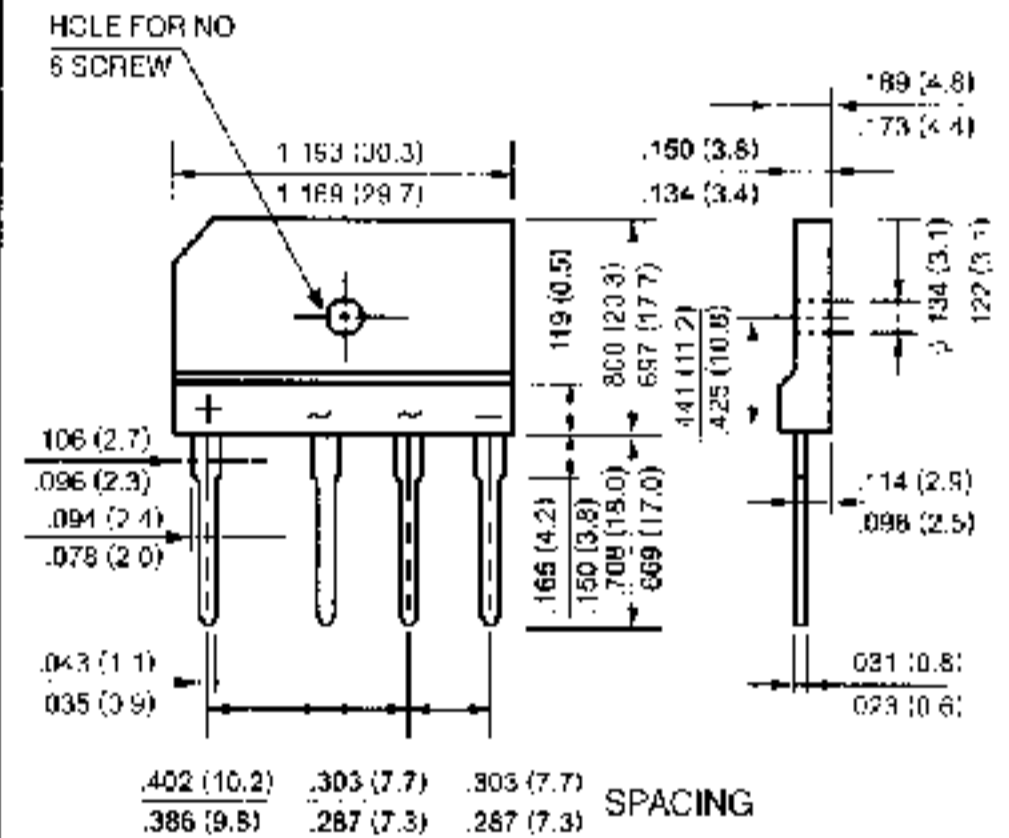
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: MIL-STD-202E. Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 6.6 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load derate current by 20%.



**KBK**



Dimensions in inches and (millimeters)

	SYMBOL	KBK8A	KBK8B	KBK8D	KBK8G	KBK8J	KBK8K	KBK8M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at T <sub>c</sub> = 75 °C	I <sub>C</sub>	8.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	170							Amps
Maximum Forward Voltage Drop per Element at 4.0A DC	V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element:	I <sub>R</sub>	10							µAmps
@ 1A = 25 °C		500							
@ 1A = 100 °C		500							
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	120							A <sup>2</sup> Sec
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	55							pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	15							°C/W
Operating Temperature Range	T <sub>L</sub> T <sub>stg</sub>	-55 to - 150							°C

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Case per element Unit mounted on 300x300x1.6mm Aluminum plate heat-sink.

# RATING AND CHARACTERISTIC CURVES (KBK8A THRU KBK8M)

