

**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

 KBL / RS  
 005 / 401  
 THRU  
 KBL / RS  
 10 / 407

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts**
**CURRENT - 4.0 Amperes****FEATURES**

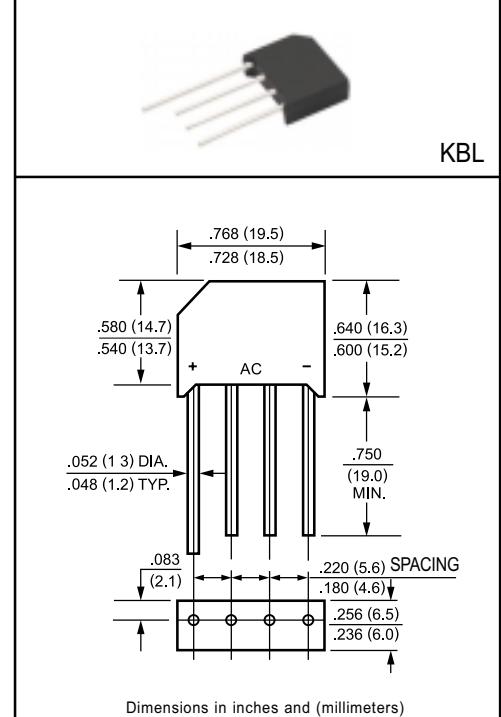
- \* Ideal for printed circuit board
- \* Surge overload rating: 200 Amperes peak
- \* Molded structure

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 4.8 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%.



	SYMBOL	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	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 TA = 75°C	I <sub>O</sub>				4.0				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>				200				Amps
Maximum Forward Voltage Drop per element at 3.0A DC	V <sub>F</sub>				1.0				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	I <sub>R</sub>	@TA = 25°C			10				uAmps
@TA = 100°C					500				
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t				93				A <sup>2</sup> Sec
Typical Junction Capacitance ( Note1)	C <sub>J</sub>				40				pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>				19				°C/W
Operating Temperature Range	T <sub>J</sub>				-55 to + 150				°C
Storage Temperature Range	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 Ambient with units mounted on 3.0x3.0x0.11" (7.5x7.5x0.3cm) AL plate.

## RATING AND CHARACTERISTIC CURVES

( KBL005      THRU      KBL10  
 RS401    RS407 )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

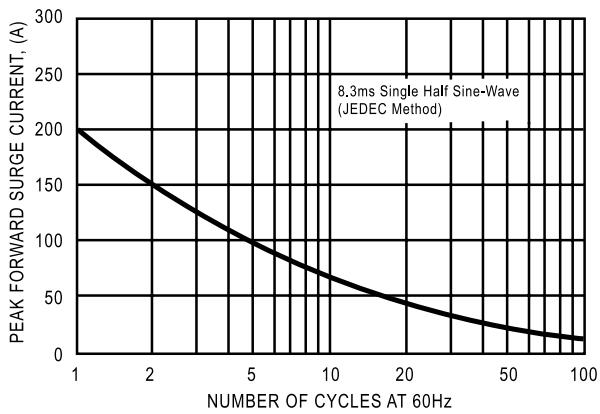


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

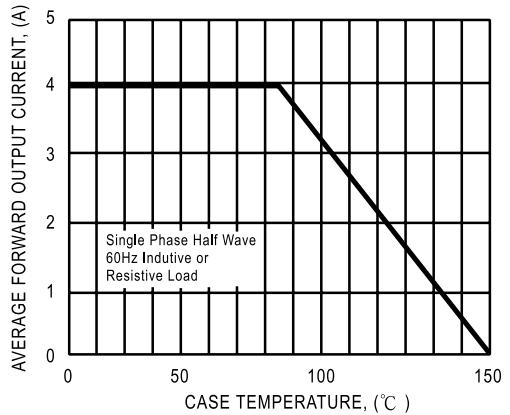


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

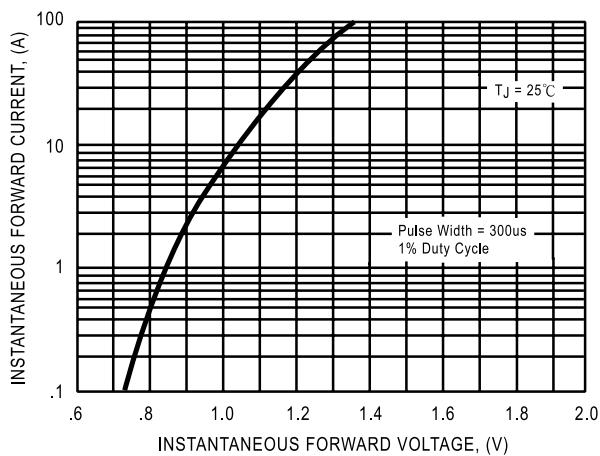
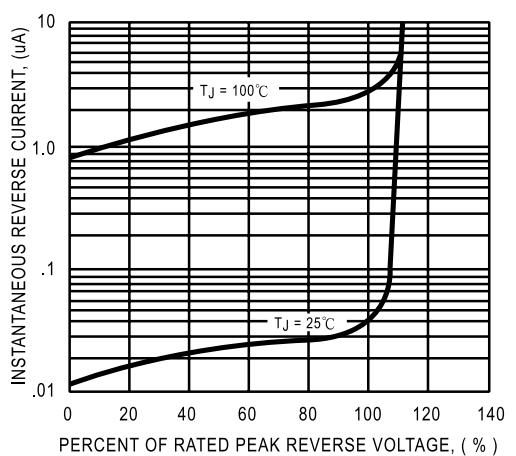


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



DC COMPONENTS CO., LTD.