



# 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

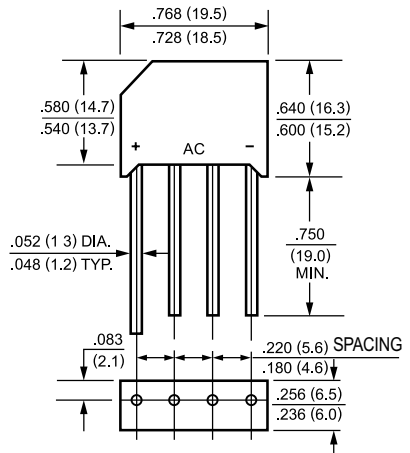
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 4.8 grams

### 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%.



KBL



		SYMBOL	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	UNITS
			RS401	RS402	RS403	RS404	RS405	RS406	RS407	
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 T <sub>A</sub> = 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	@T <sub>A</sub> = 25°C	I <sub>R</sub>					10			uAmps
	@T <sub>A</sub> = 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 THRU RS407 )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

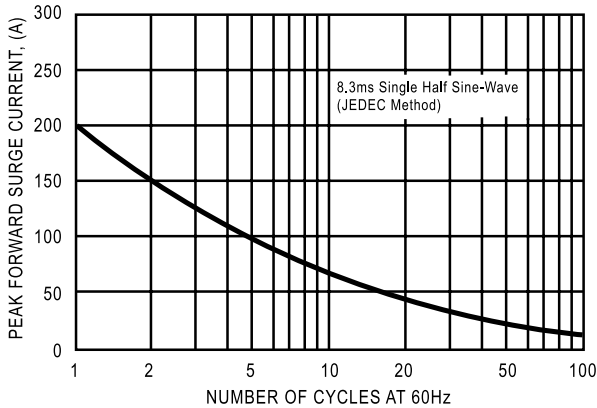


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

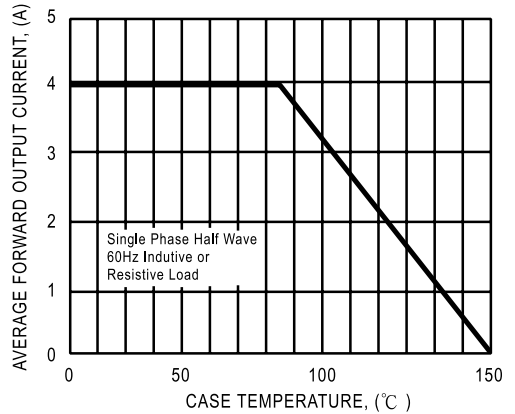


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

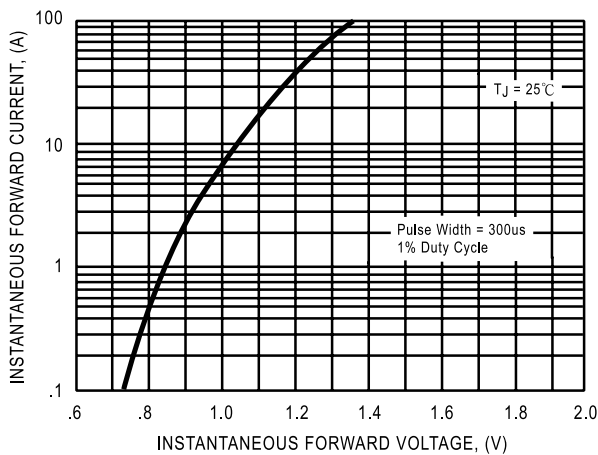
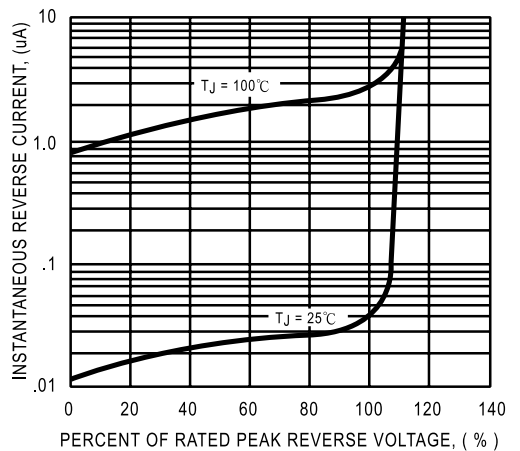


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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