



# 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

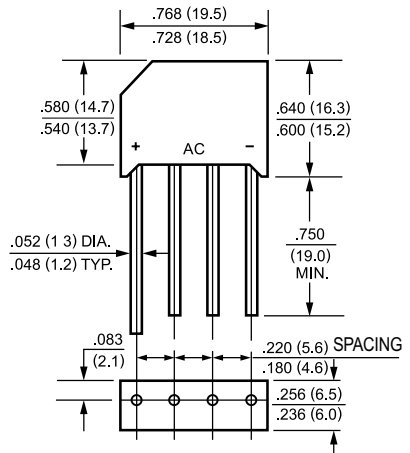
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 4.8 grams

### 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		VRRM	50	100	200	400	600	800	1000	Volts	
Maximum RMS Bridge Input Voltage		VRMS	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Output Current TA = 75°C		IO	4.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	200								Amps
Maximum Forward Voltage Drop per element at 3.0A DC		VF	1.0								Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	@TA = 25°C	IR	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)		CJ	40								pF
Typical Thermal Resistance (Note 2)		RθJA	19								°C/W
Operating Temperature Range		TJ	-55 to + 150								°C
Storage Temperature Range		TSTG	-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

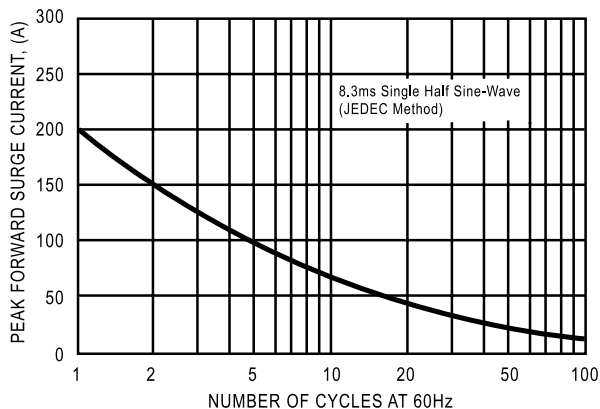


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

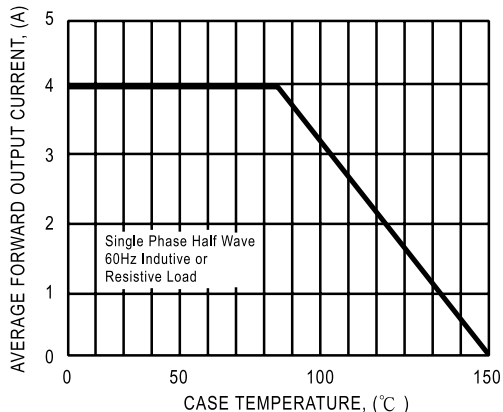


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

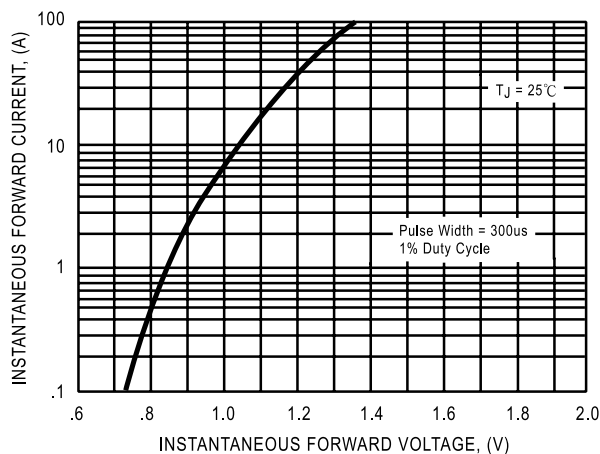
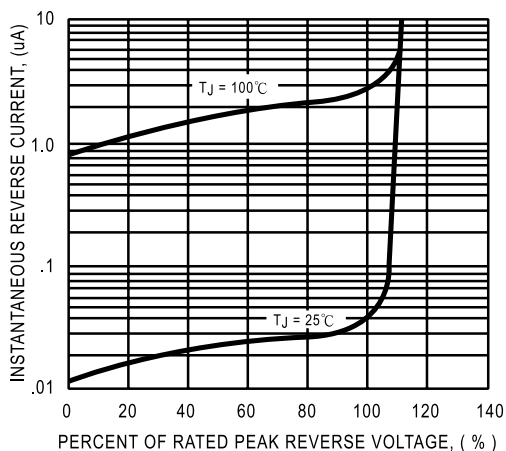


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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