



# KBL4005 THRU KBL410

## SINGLE PHASE SILICON BRIDGE RECTIFIER

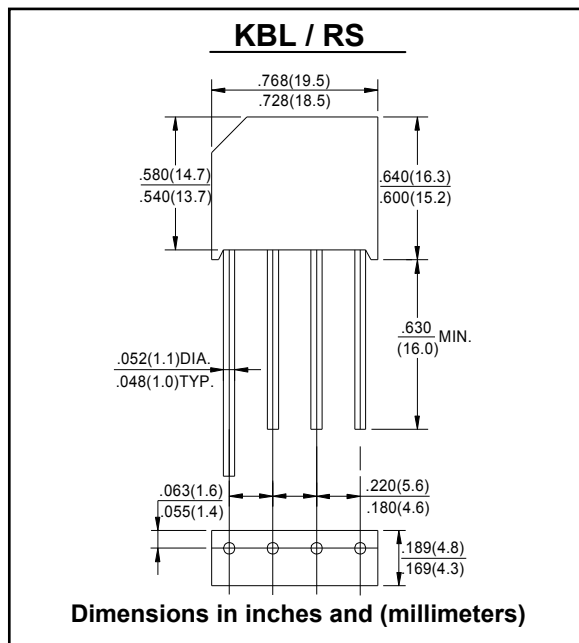
Reverse Voltage - 50 to 1000 Volts    Forward Current - 4.0 Ampere

### FEATURES

- Ideal for printed circuit board
- Surge overload rating: 150A peak
- High case dielectric strength
- High temperature soldering guaranteed:  
260°C/10 seconds at 5lbs. (2.3kg) tension
- Glass passivated chip junction

### MECHANICAL DATA

- Case: UL-94 Class V-0 recognized Flame Retardant Epoxy
- Terminals: Plated leads solderable per  
MIL-STD 202, method 208
- Mounting Position: Any
- Marking: Type Number



### 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 current derate by 20%.

Characteristic	Symbol	KBL 4005	KBL 401	KBL 402	KBL 404	KBL 405	KBL 406	KBL 410	Unit	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>									
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	V	
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V	
Average Rectified Output Current @T <sub>C</sub> = 75°C	I <sub>O</sub>	4.0								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150								A
Forward Voltage (per element) @I <sub>F</sub> = 2.0A	V <sub>FM</sub>	1.1								V
Peak Reverse Current @T <sub>C</sub> = 25°C	I <sub>R</sub>	10								µA
At Rated DC Blocking Voltage @T <sub>C</sub> = 100°C		1.0								mA
Rating for Fusing (t < 8.3ms) (Note 1)	I <sup>2</sup> t	166								A <sup>2</sup> s
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>	19								K/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150								°C

Note: 1. Non-repetitive for t > 1ms and < 8.3ms.  
2. Thermal resistance junction to case per element mounted on PC board with 13.0x13.0x0.03mm thick land areas.



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## RATINGS AND CHARACTERISTIC CURVES

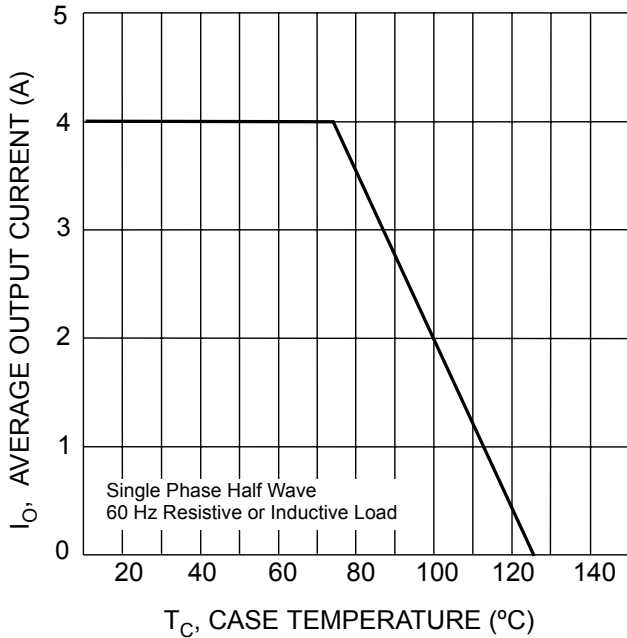


Fig. 1 Forward Current Derating Curve

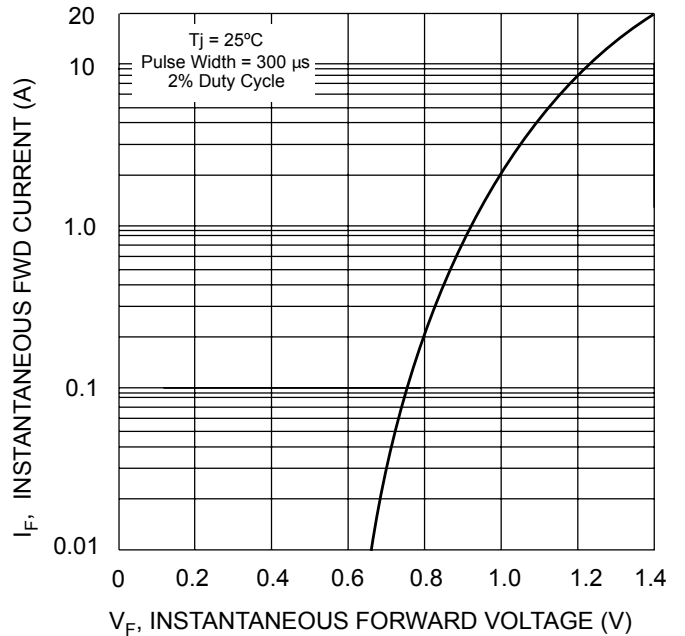


Fig. 2 Typical Forward Characteristics, per element

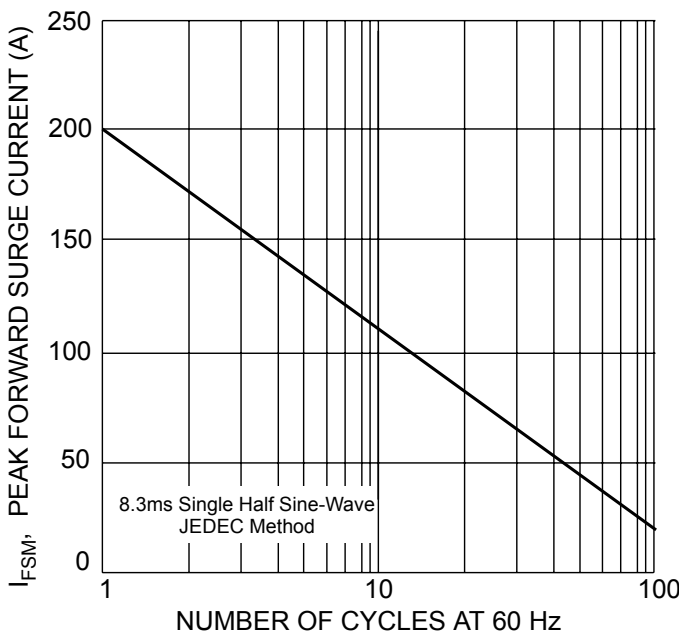


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

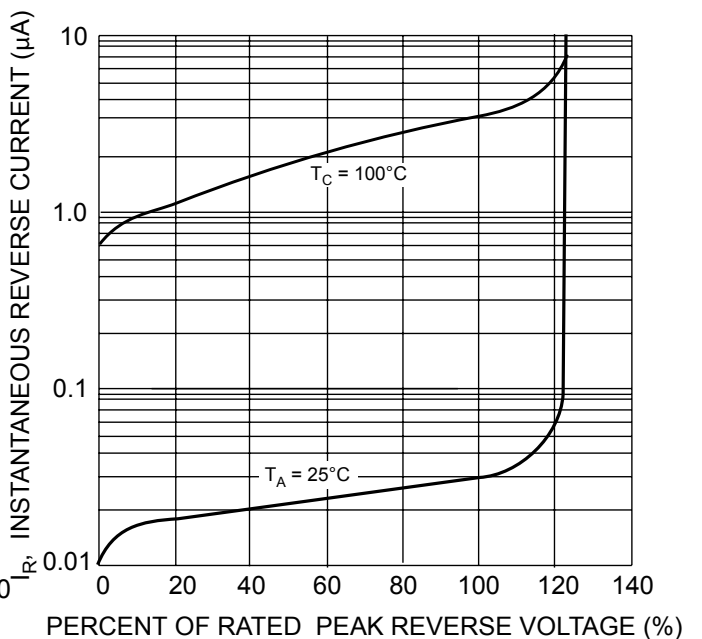


Fig. 4 Typical Reverse Characteristics, per element