KBL4005 THRU KBL407

SINGLE PHASE SILICON BRIDGE RECTIFIER

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

FEATURES

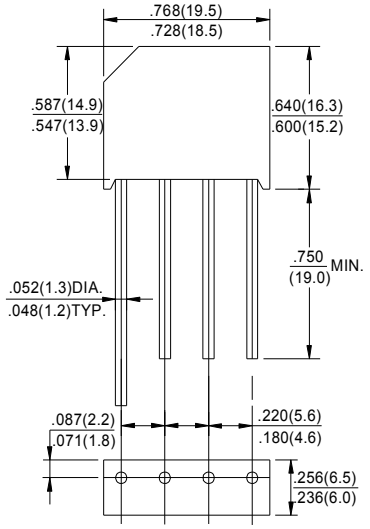
- Ideal for printed circuit board
- Surge overload rating: 150A peak
- High case dielectric strength
- High temperature soldering guaranteed: 260°C/10 seconds at 5lbs. (2.3kg) tension

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

RoHS Compliant

KBL / RS



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ 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 407	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @T_C = 75°C	I_O	4.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							A
Forward Voltage (per element) @I_F = 2.0A	V_{FM}	1.1							V
Peak Reverse Current @T_C = 25°C At Rated DC Blocking Voltage @T_C = 100°C	I_R	10 1.0							μA mA
Rating for Fusing (t < 8.3ms) (Note 1)	I^2t	166							A^2s
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	19							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-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

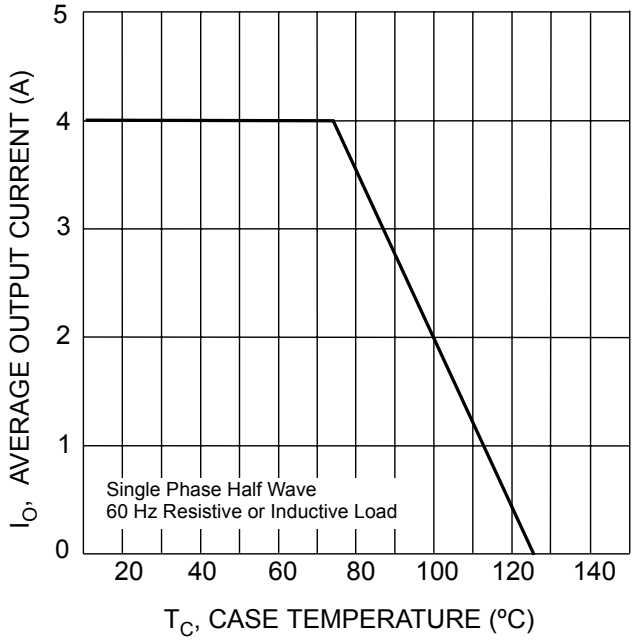

Fig. 1 Forward Current Derating Curve

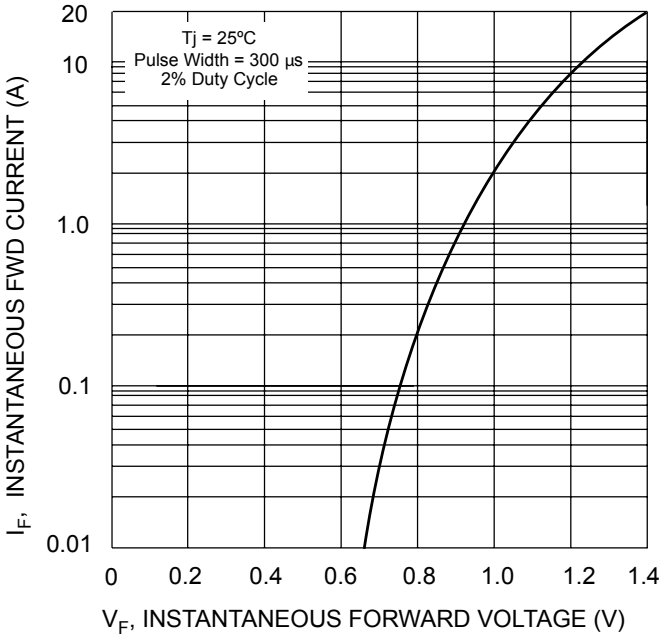

Fig. 2 Typical Forward Characteristics, per element

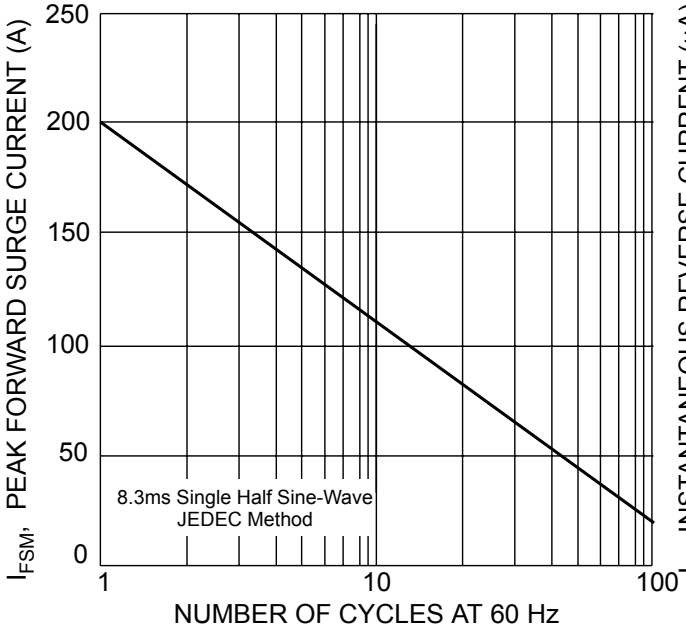

Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

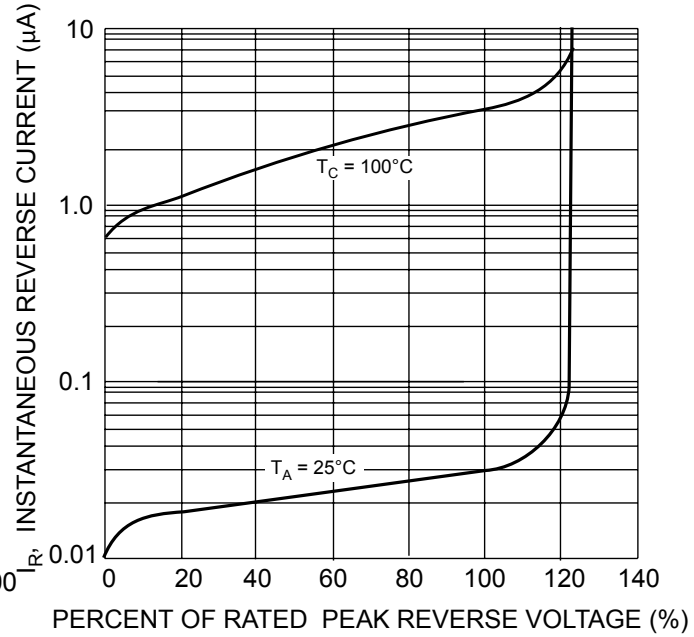

Fig. 4 Typical Reverse Characteristics, per element