



KBPC3005 THRU KBPC310

SINGLE PHASE SILICON BRIDGE RECTIFIER

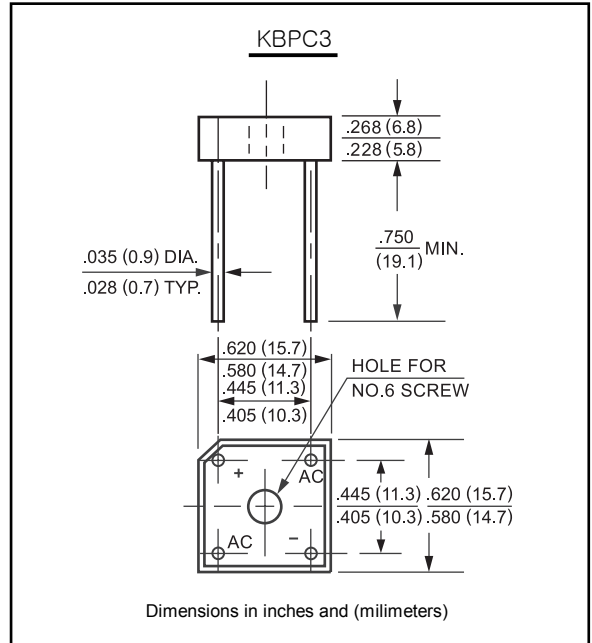
Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Ampere

FEATURES

- Diffused Junction
- Surge overload rating: 50A peak

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	KBPC 3005	KBPC 301	KBPC 302	KBPC 304	KBPC 306	KBPC 308	KBPC 310	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ $T_C = 50^\circ\text{C}$	I_o	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							A
Forward Voltage per leg @ $I_F = 1.5\text{A}$	V_{FM}	1.1							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	I_R	5.0 500							μA
I^2t Rating for Fusing ($t < 8.3\text{ms}$) (Note 2)	I^2t	10							A^2s
Typical Junction Capacitance (Note 3)	C_j	25							pF
Typical Thermal Resistance per leg (Note 1)	$R_{\theta JC}$	10							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125							$^\circ\text{C}$

- Note: 1. Mounted on metal chassis.
2. Non-repetitive, for $t > 1\text{ms}$ and $< 8.3\text{ms}$.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



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RATINGS AND CHARACTERISTIC CURVES

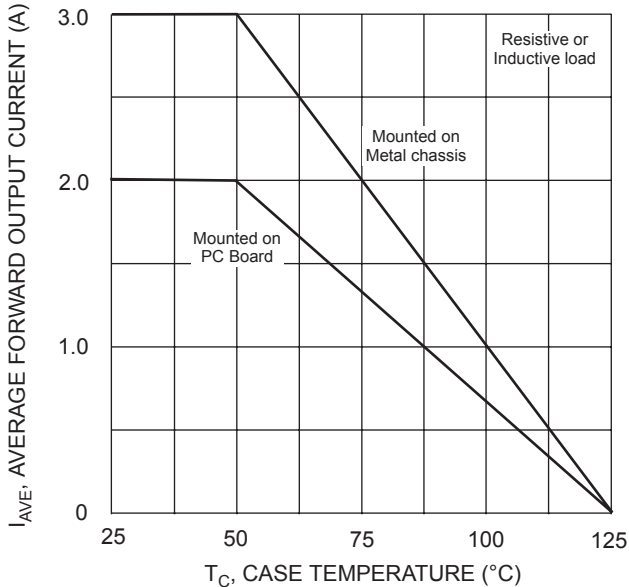


Fig. 1 Forward Current Derating Curve

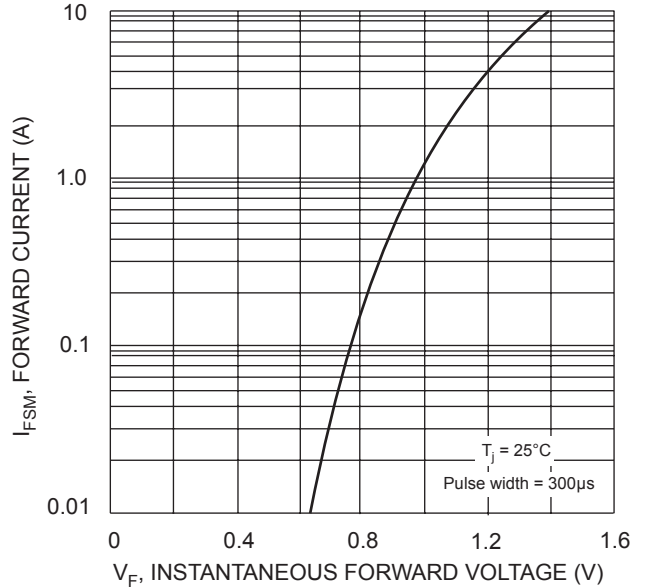


Fig. 2 Typical Forward Characteristics, per element

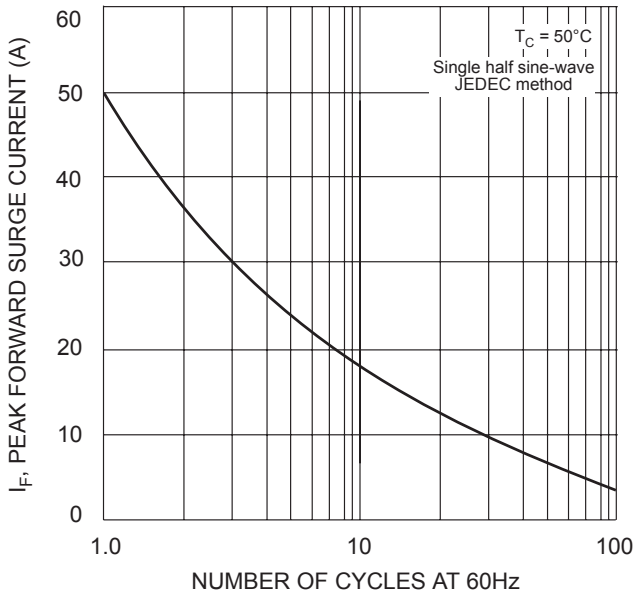


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

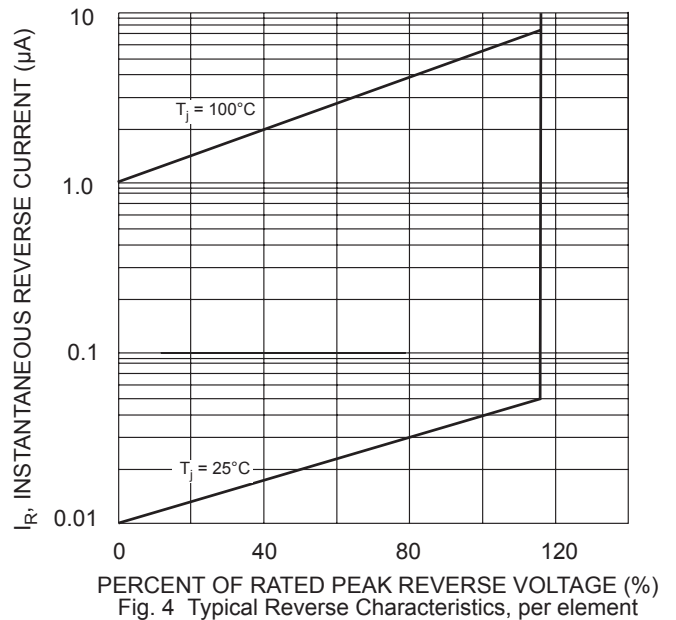


Fig. 4 Typical Reverse Characteristics, per element