

KBPC6005 thru KBPC610

6.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V



Features

- This series is UL listed under the Recognized Component Index, file number E142814
- High temperature metallurgically bonded internal rectifiers
- Typical I_R less than $.1\mu A$
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- High temperature soldering guaranteed $265^\circ C$ /10 seconds at 5 lbs (2.3kg) tension

Mechanical Data

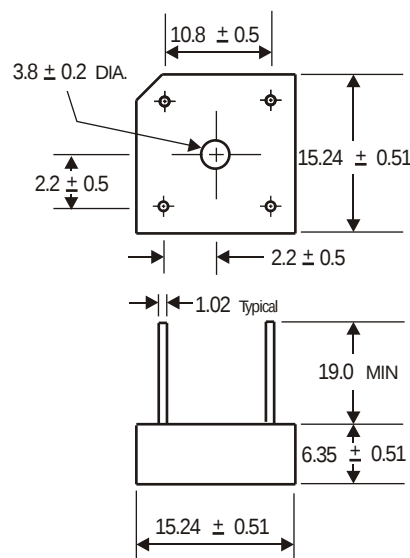
Case: Void-free plastic package

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting: Thru hole for #6 screw

Mounting position: Any

Weight: 3.8 grams (approx)



Dimensions in millimeters(1mm =0.0394")

Maximum Ratings & Thermal Characteristics

Rating at $25^\circ C$ ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
For Capacitive load derate current by 20%.

Parameter	Symbol	KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current $T_c = 75^\circ C$ (1)	IF(AV)	6.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	125							A
Rating for fusing ($t < 8.3ms$)	$I^2 t$	10							A ² sec
Typical thermal resistance per element(2)	ReJA	9.4							$^\circ C / W$
Typical junction capacitance per element(3)	Cj	55							pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							$^\circ C$

Electrical Characteristics

Rating at $25^\circ C$ ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
For Capacitive load derate by 20 %.

Parameter	Symbol	KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	Unit
Maximum instantaneous forward voltage drop per leg at 3.0A	VF	1.1							V
Maximum DC reverse current at rated $T_A = 25^\circ C$ DC blocking voltage per element $T_A = 100^\circ C$	IR	10 1000							μA

Notes: (1)Mounted on metal chassis.

(2)Non-repetitive, for $t > 1ms$ and $< 8.3ms$.

(3)Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

Rating and Characteristic Curves ($T_A = 25^{\circ}\text{C}$ Unless otherwise noted)

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Fig. 1 Derating Curve for Output Rectified Current

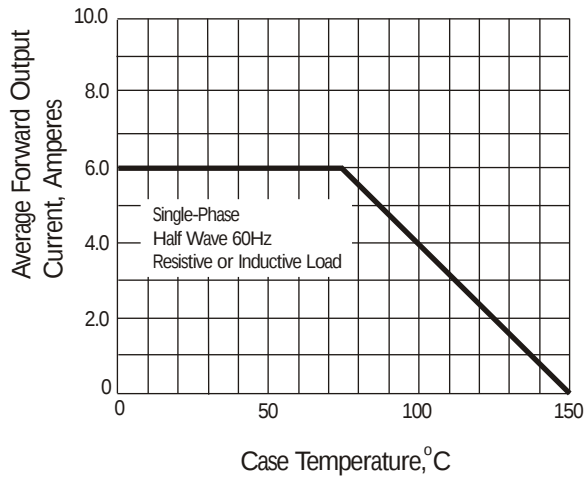


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

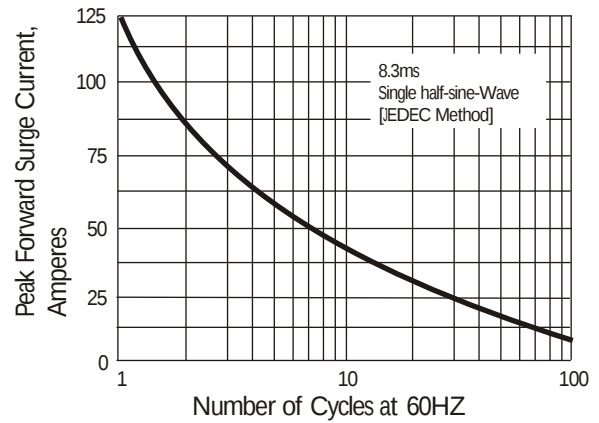


Fig. 3 Typical Instantaneous Forward Characteristics

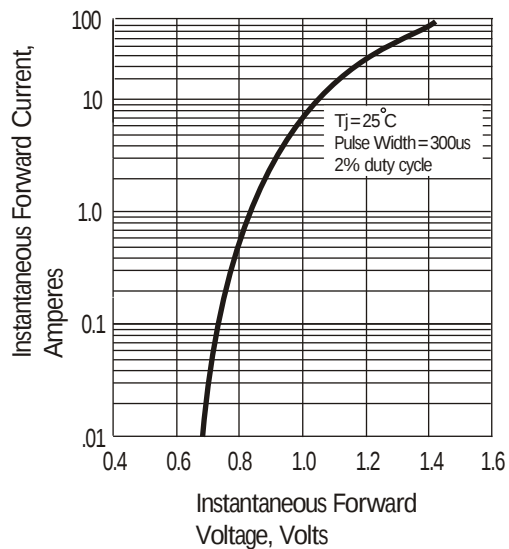


Fig. 4 Typical Reverse Characteristics

