



DATA SHEET

SEMICONDUCTOR

KBPC6005 THRU KBPC610

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 6.0 Amperes

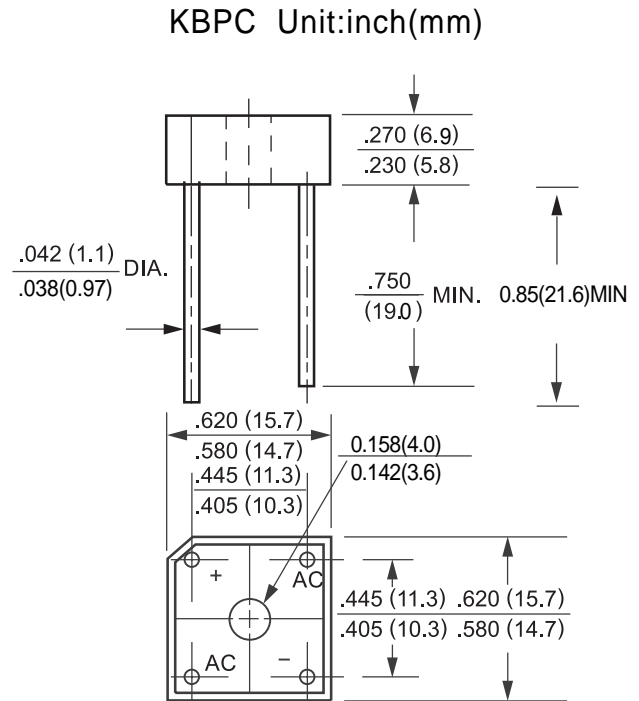


FEATURES

- Surge overload rating: 125 Amperes peak
- Low forward voltage drop
- Small size: simple installation
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

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: 6.1 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%.

PARAMETER	SYMBOL	KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	UNITS
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 Rectified Output Current at Tc = 50°C	IO	6.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	125							Amps
Maximum Forward Voltage Drop per element at 3.0A DC	VF	1.0							Volts
Maximum CD Reverse Current at Rated	IR	500							uAmps
DC Blocking Voltage per element									
I2t Rating for Fusing (t<8.3ms)	I2t	127							A2Sec
Typical Junction Capacitance (Note1)	CJ	166							pF
Operating Temperature Range	TJ	-55 to + 125							
Storage Temperature Range	TSTG	-55 to + 150							

NOTES : 1.Measured at 1 MHZ and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.

DEVICE CHARACTERISTICS

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Fig. 1 — DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

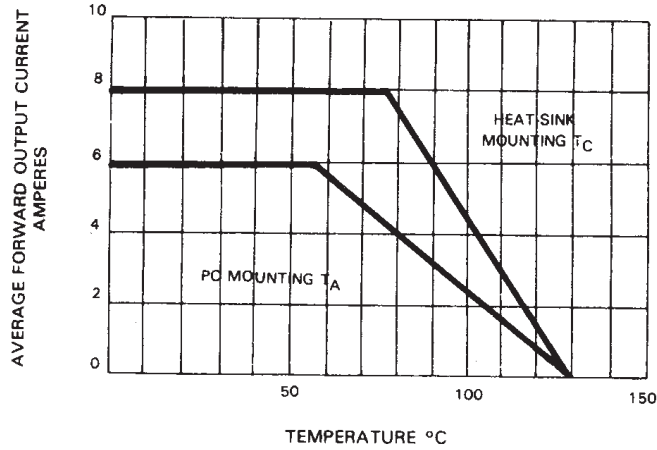


Fig. 2 — TYPICAL REVERSE CHARACTERISTICS

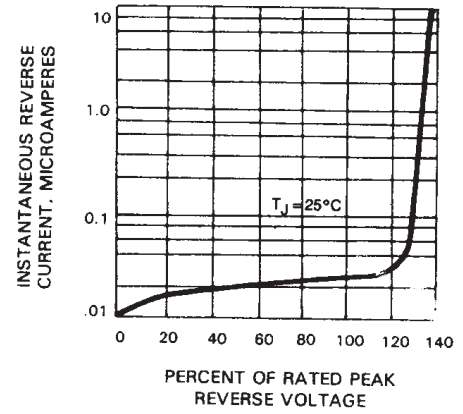


Fig. 3 — MAXIMUM FORWARD SURGE CURRENT

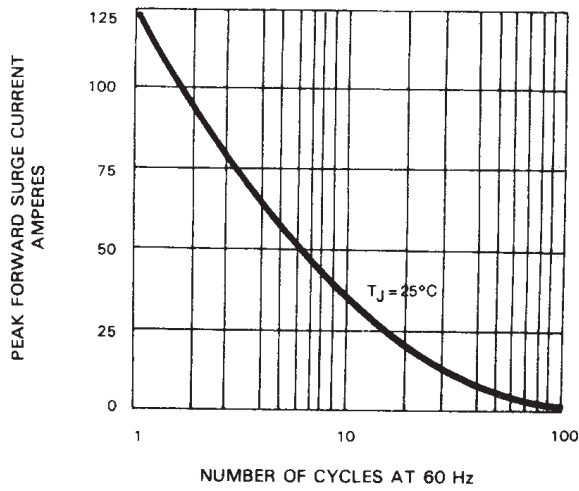


Fig. 4 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

