

SILICON BRIDGE RECTIFIERS

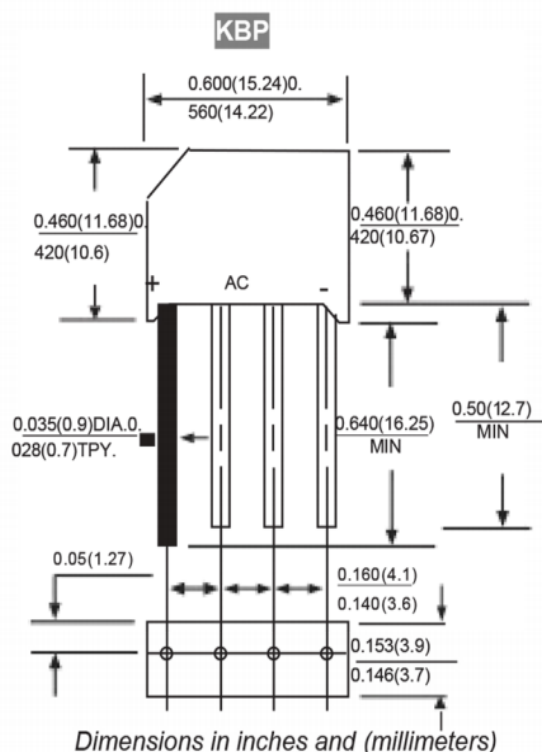
Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes

Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 1.35 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	KBP 6005	KBP 601	KBP 602	KBP 604	KBP 606	KBP 608	KBP 610	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 (Note 1) @T _A = 50°C	I _O	6.0							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 = 6.0A	V _{FM}	1.1							V
Peak Reverse Current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 100°C	I _{RM}	10 500							μA
Typical Thermal Resistance (Note 3)	R _{θJA}	40							K/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Thermal resistance junction to ambient mounted on PC board with 12mm² copper pad.

RATINGS AND CHARACTERISTIC CURVES KBP6005 THRU KBP610

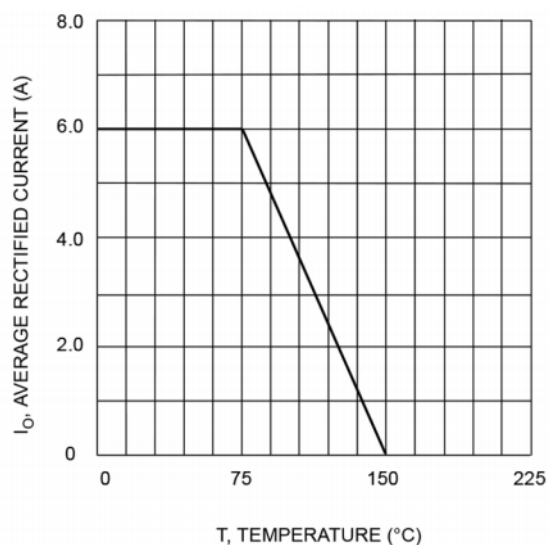


Fig. 1 Forward Current Derating Curve

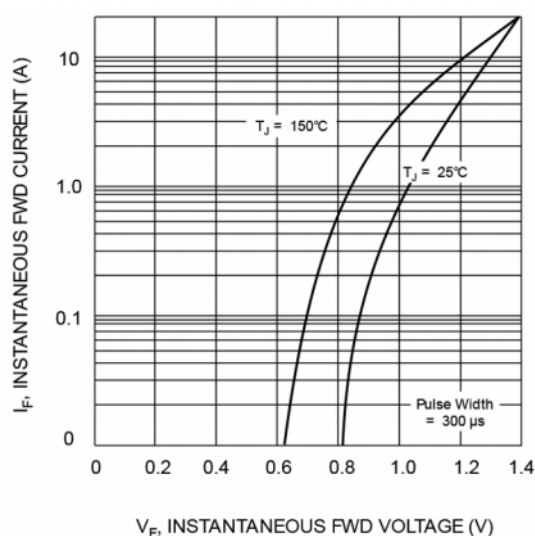


Fig. 2 Typical Fwd Characteristics

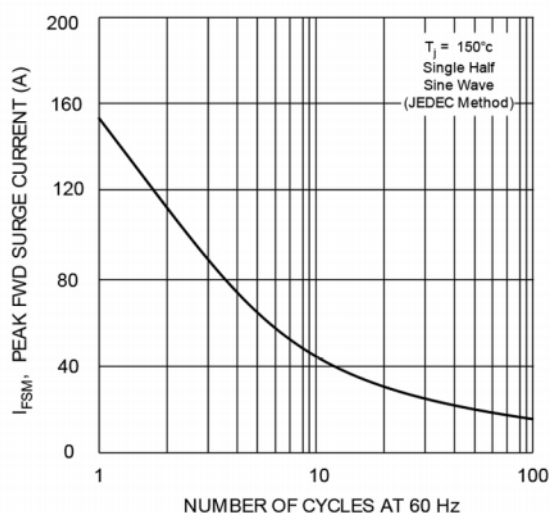


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

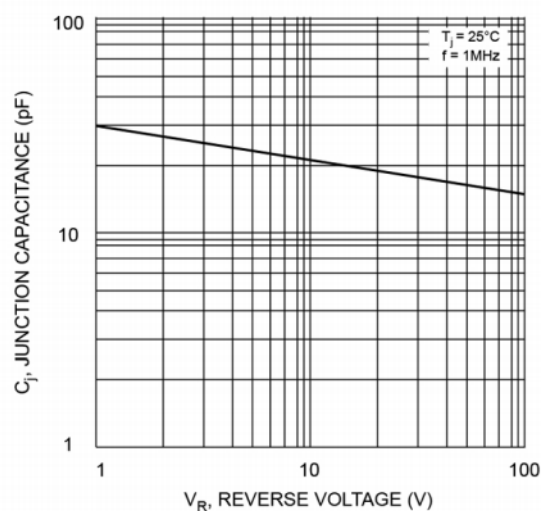


Fig. 4 Typical Junction Capacitance

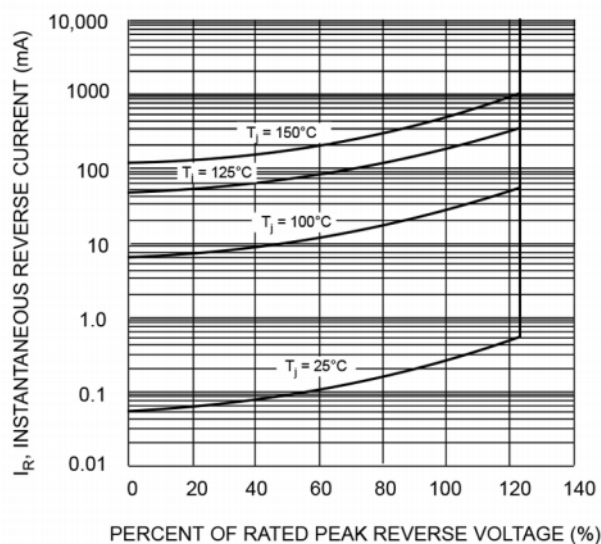


Fig. 5 Typical Reverse Characteristics