

Silicon Bridge Rectifiers

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KBP200 Thru 2010

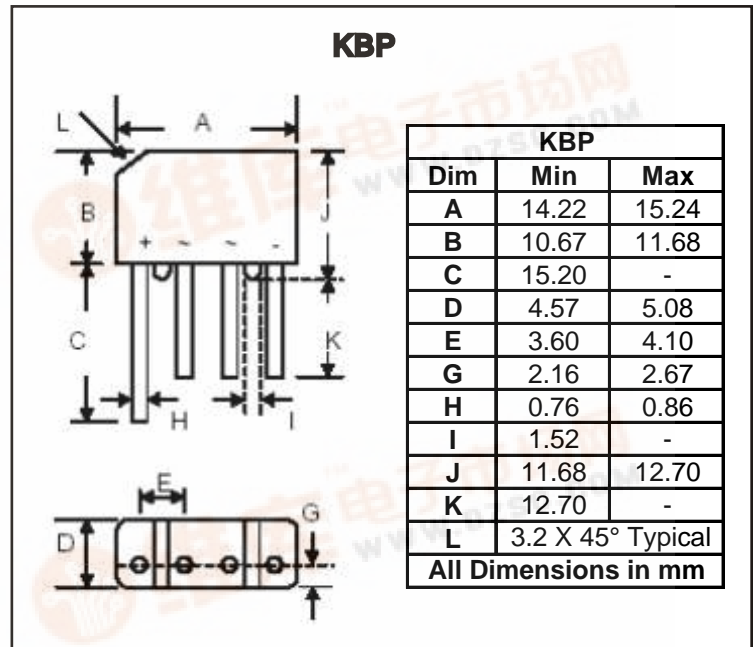
Reverse Voltage: 50 - 1000 Volts**Forward Current: 2.0 Amp**

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
- Weight: 1.7 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



Maximum Ratings and Electrical Characteristics

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

CHARACTERISTICS	Symbol	KBP 200	KBP 201	KBP 202	KBP 204	KBP 206	KBP 208	KBP 2010	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}								
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_A = 50^\circ\text{C}$ (Note 1)	I_O	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rate load (JEDEC Method)	I_{FSM}	60							A
Forward Voltage (per element) @ $I_F = 2.0\text{A}$	V_{FM}	1.1							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	I_{RM}	10							μA
At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$		500							
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	15							A^2s
Typical Junction Capacitance per element (Note 2)	C_j	25							pF
Typical Thermal Resistance (Note 3)	R_{JA}	30							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +160							$^\circ\text{C}$

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.

Rating and Characteristic Curves (KBP200 - KBP2010)

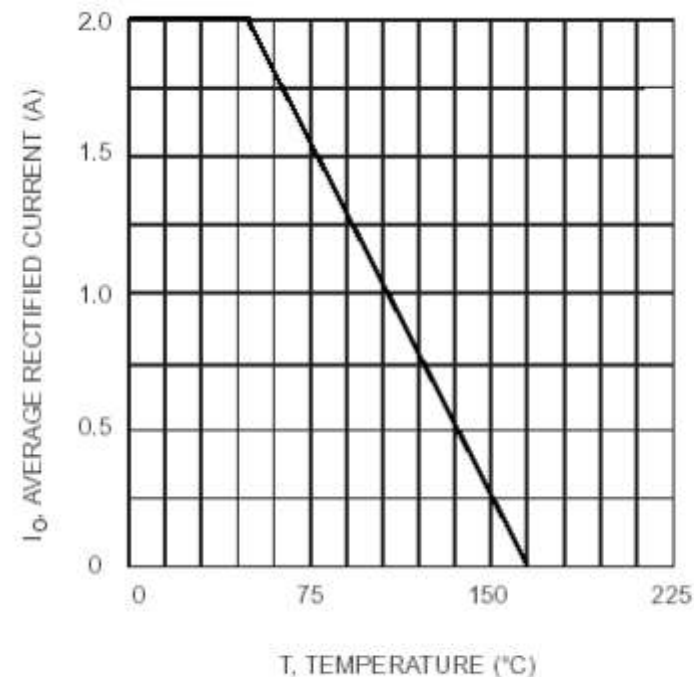


Fig. 1 Forward Current Derating Curve

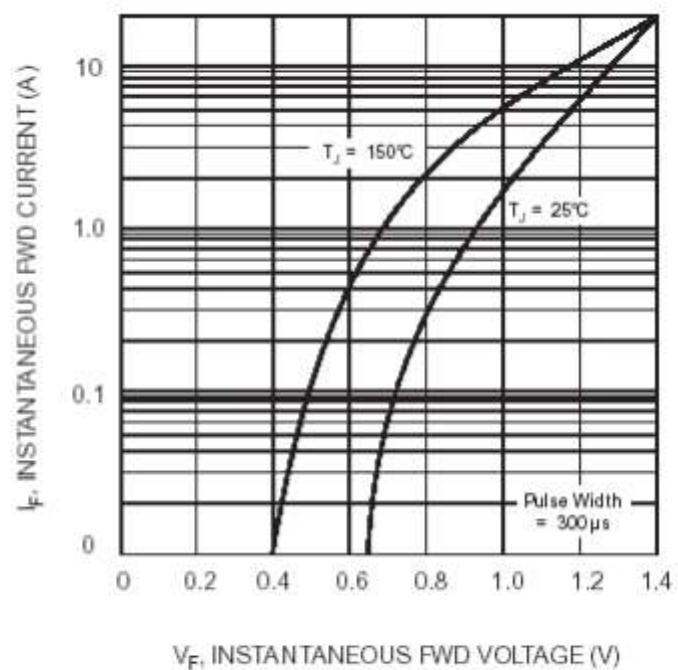


Fig. 2 Typical Fwd Characteristics

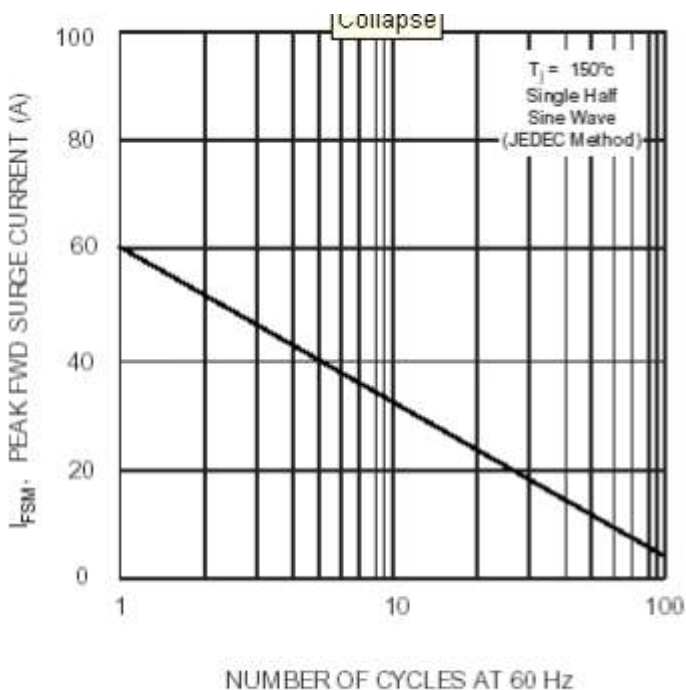


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

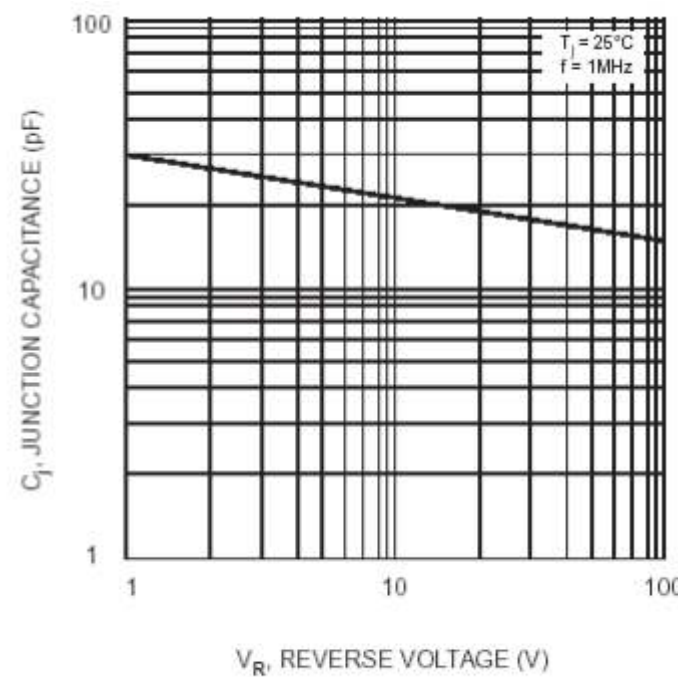


Fig. 4 Typical Junction Capacitance

Rating and Characteristic Curves (KBP200 - KBP2010)

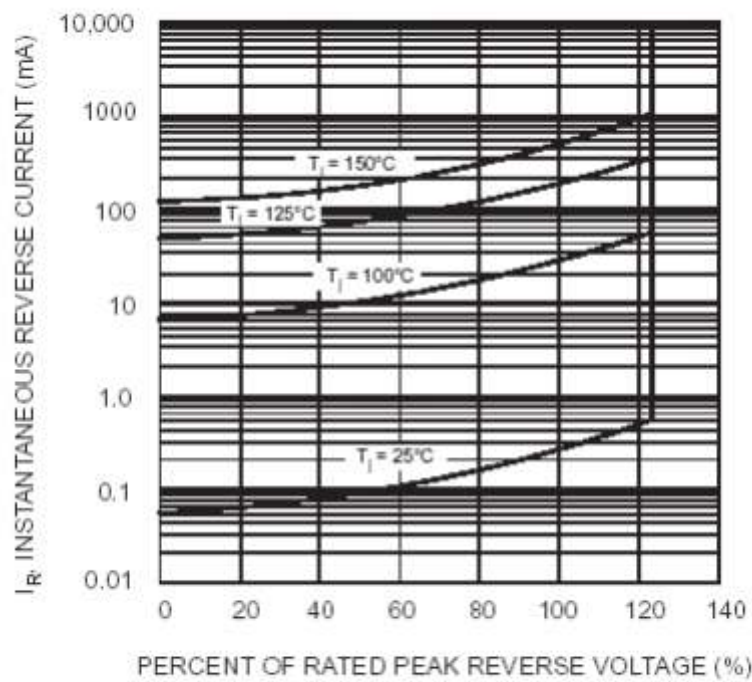


Fig. 5 Typical Reverse Characteristics