新芯微电子
NewChip
Microelectronics

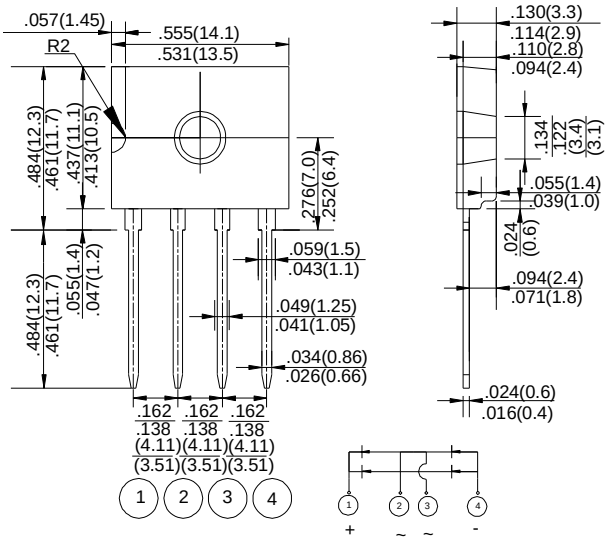
KBP4005 THRU KBP410

2.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

Features

- Ideal for printed circuit board mounting
- This series is UL listed under the Recognized Component Index, file number E142814
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed 265℃/10 seconds at 5 lbs (2.3kg) tension



Dimensions in inches and (milimeters)

Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique
Terminals: Plated leads solderable per MIL-STD-202, Method 208
Mounting Position: Any
Weight: 0.2 ounce, 5.6 grams (approx)

Maximum Ratings & Thermal Characteristics

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

Parameter	Symbol	KBP 4005	KBP 401	KBP 402	KBP 404	KBP 406	KBP 408	KBP 410	unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at T_A=100°C (with heatsink)	$I_{F(AV)}$	4.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	45							A
Rating for fusing (t<8.3ms)	I^2t	14.91							A^2sec
Typical thermal resistance per element (with heatsik) (1)	$R_{\theta JA}$	55							°C / W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to + 150							℃

Electrical Characteristics

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

Parameter	Symbol	KBP 4005	KBP 401	KBP 402	KBP 404	KBP 406	KBP 408	KBP 410	Unit
Maximum instantaneous forward voltage drop per leg at 4.0A	V_F	1.1							V
Maximum DC reverse current at rated TA =25°C **DC blocking voltage per element TA =125°C**	I_R	10 1000							μA

Notes: (1)Thermal resistance from Junction to Ambemt on P.C.board mounting.

Rating and Characteristic Curves (TA = 25°C Unless otherwise noted)

Fig. 1 Derating Curve for Output Rectified Current

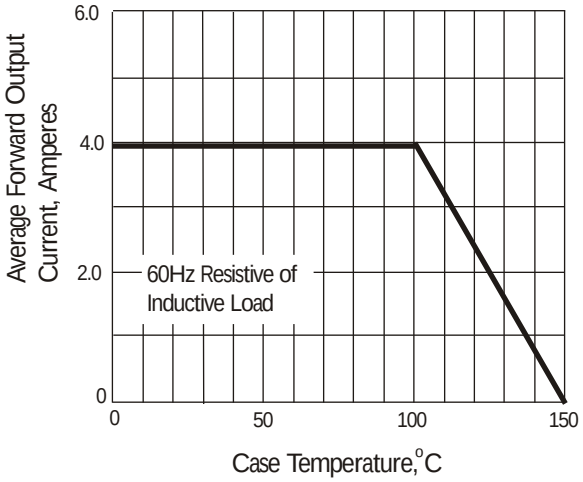


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

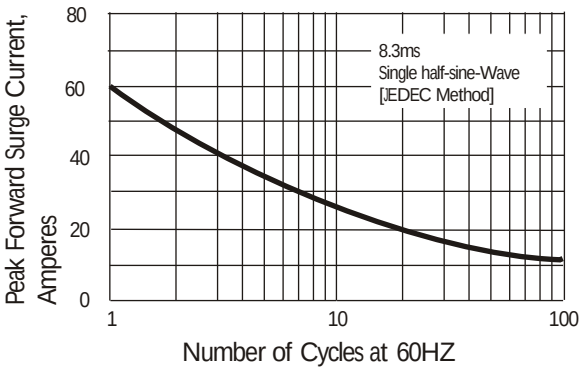


Fig. 3 Typical Instantaneous Forward Characteristics

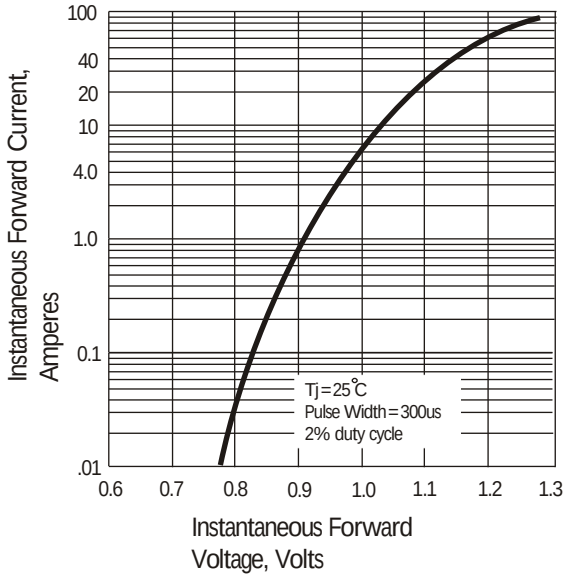


Fig. 4 Typical Reverse Characteristics

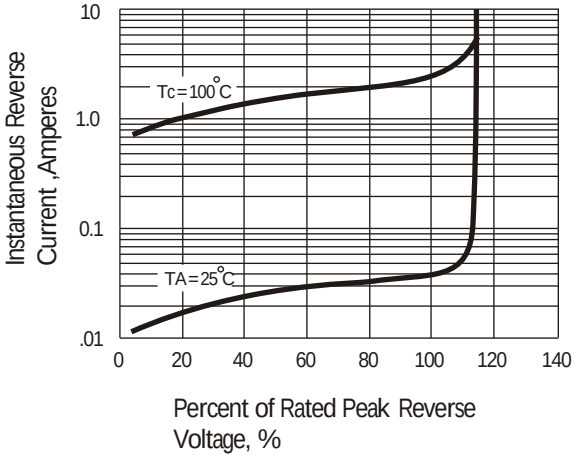


Fig. 5 Typical Junction Capacitance