KBP3005 THRU KBP310

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0Amperes

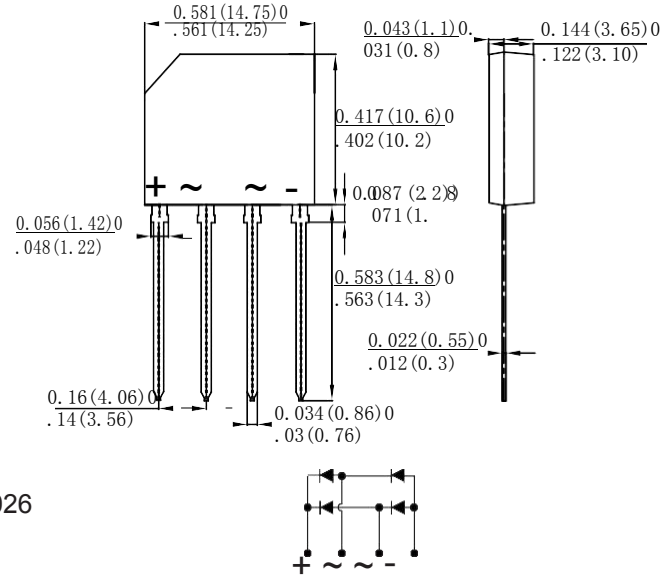
SINGLE BRIDGE RECTIFIERS

Features

KBP

RoHS COMPLIANT

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated die construction
- Ideal for printed circuit boards
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC KBP Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.050 ounce, 1.52 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unlss otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter	SYMBOLS	RCD KBP3005	RCD KBP301	RCD KBP302	RCD KBP304	RCD KBP307	RCD KBP308	RCD KBP310	UNITS
Marking Code									
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS 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 output rectified current at Tc=100°C	$I_{(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	55							A
Maximum instantaneous forward voltage drop per birdge element at 3.0A	V_F	1.15							V
Maximum DC reverse current T_A=25°C	I_R	.0							μA
at rated DC blocking voltage T_A=125°C		0.5							mA
I^2t Rating for fusing (3ms≤t ≤8.3ms)	I^2t	12.5							A^2S
Typical Junction Capacitance per element (Note 1)	C_j	40							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	40 10 18							°C/W
Operating junction temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Note: (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
(2) Thermal Resistance Junction to Case, Lead and Ambient.

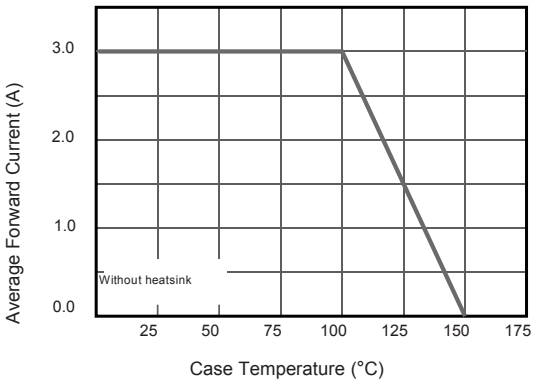


Fig.2 Typical Instaneous Reverse Characteristics

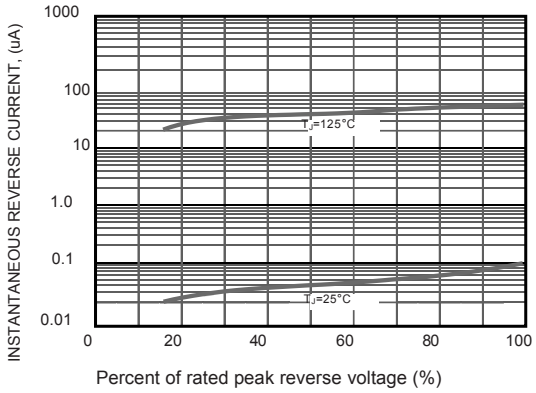


Fig.3 Typical Forward Characteristic

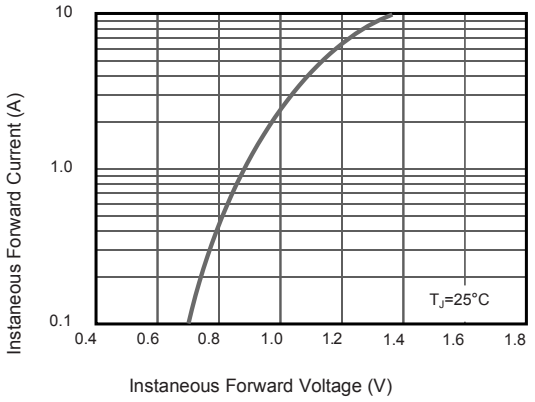


Fig.4 Typical Junction Capacitance

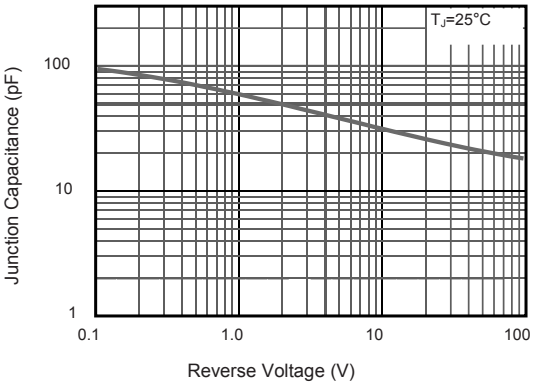


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

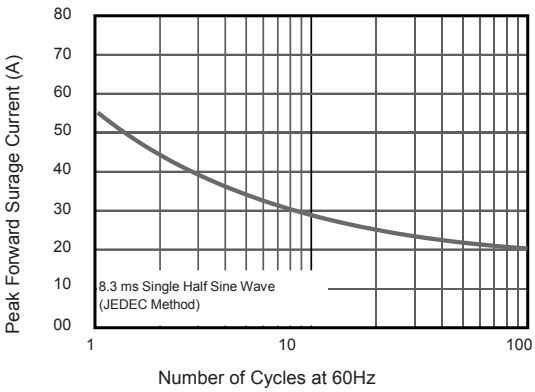


Fig.6- Typical Transient Thermal Impedance