

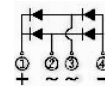
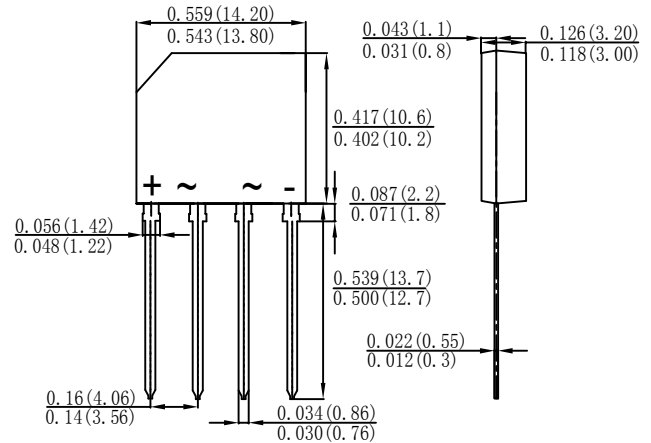
SINGLE BRIDGE RECTIFIERS

Features

- ◆ Glass Passivated Chip Junction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High surge current capability
- ◆ The Plastic material-has UL flammability 94V-0

KBP

RoHS
COMPLIANT



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 unless otherwise specified.

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

Parameter	SYMBOLS	MDD	MDD	MDD	MDD	MDD	MDD	MDD	UNITS
		KBP4005	KBP401	KBP402	KBP404	KBP406	KBP408	KBP410	
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 $T_c=100^\circ\text{C}$	I_{AV}	4.0							A
(With heatsink) (Without heatsink)									
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	90							A
Maximum instantaneous forward voltage drop per bridge element at 4.0A	V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$ 10							μA
		$T_A=125^\circ\text{C}$ 1							mA
I^2t Rating for fusing ($3\text{ms} \leq t \leq 8.3\text{ms}$)	I^2t	35							A^2S
Typical Junction Capacitance per element (Note 2)	C_j	50							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	55							$^\circ\text{C/W}$
	$R_{\theta JC}$	14							
	$R_{\theta JL}$	20							
Operating junction temperature range	T_J	-55 to +150							$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note:1. Mounted on glass epoxy PC board with 1.3mm^2 solder pad.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

Ratings And Characteristic Curves

Fig. 1 Derating Curve for Output Rectified Current

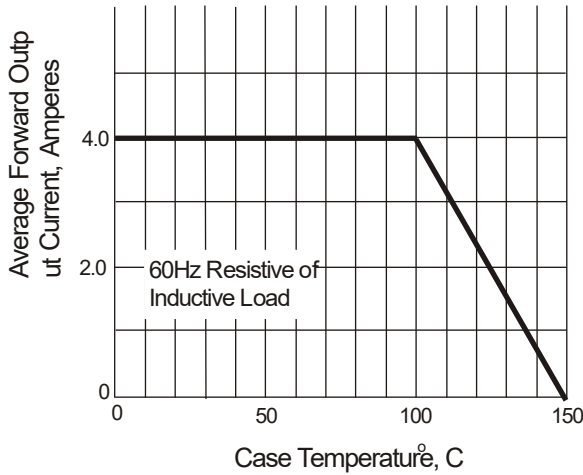


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

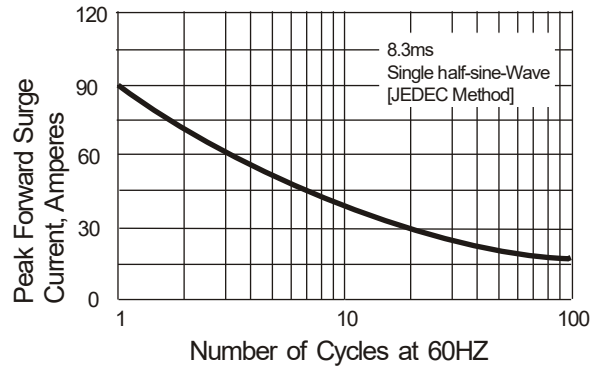


Fig. 3 Typical Instantaneous Forward Characteristics

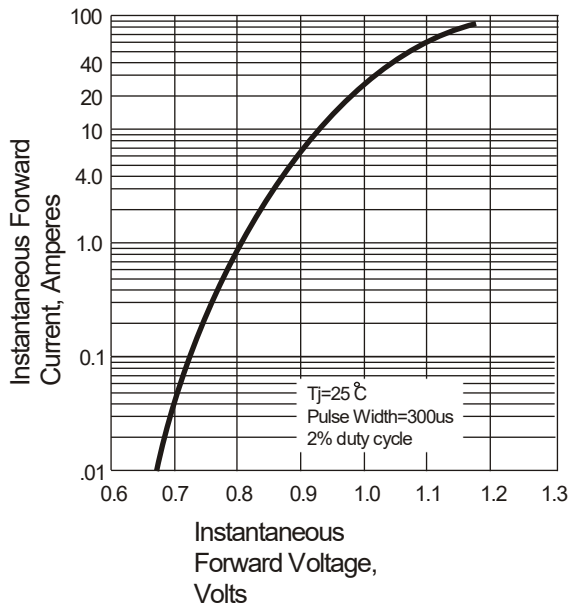


Fig. 4 Typical Reverse Characteristics

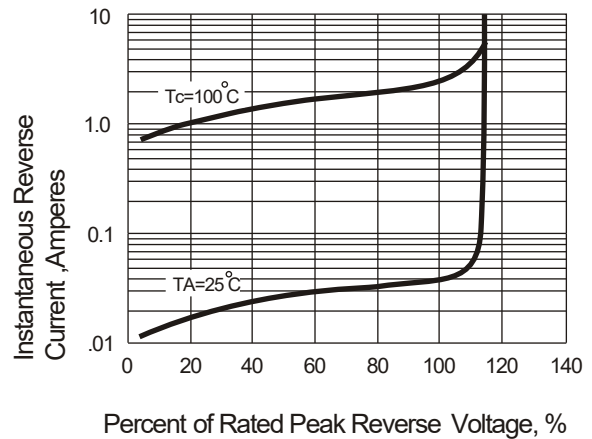
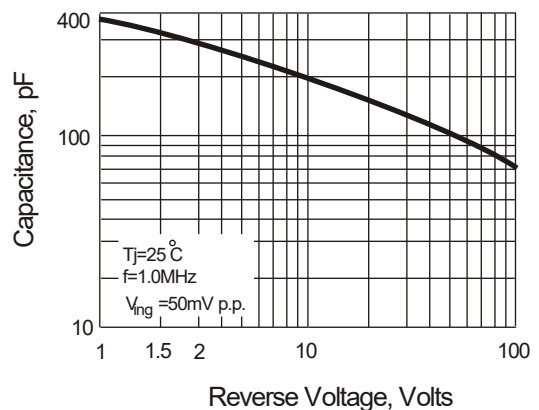


Fig. 5 Typical Junction Capacitance



The curve above is for reference only.