

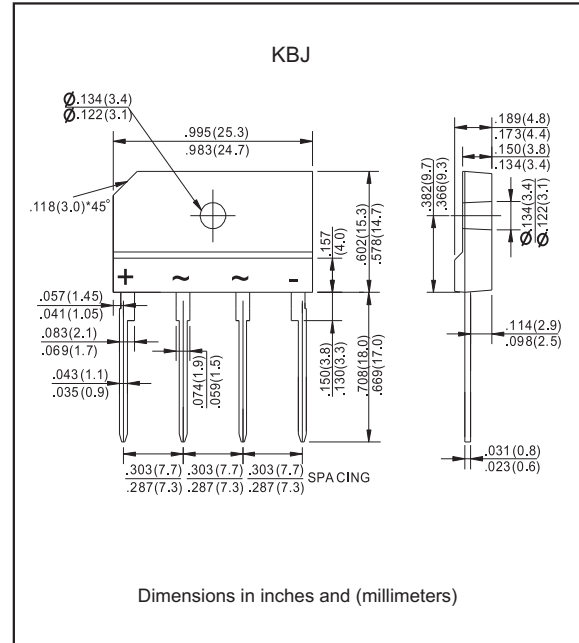
### Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Low forward voltage drop, high current capability.
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product.
- Glass passivated chip junction.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen free parts, ex. KBJ810-H.

### Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, KBJ
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Maximum average forward rectified current	with heatsink Note 1	$I_{F(AV)}$			8.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	$I_{FSM}$			160	A
Reverse current	$V_R = V_{RRM} \quad T_J = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM} \quad T_J = 125^\circ\text{C}$				500	
Rating for fusing	$t < 8.3 \text{ ms}$	$I^2t$			106	$\text{A}^2\text{s}$
Typical Junction capacitance Per Element	Measured at 1.0MHz and applied reverse voltage of 4.0V DC	$C_J$		55		pF
Typical thermal resistance	Junction to case	$R_{\theta JC}$		1.8		$^\circ\text{C/W}$
Storage temperature		$T_{STG}$	-65		+175	$^\circ\text{C}$

Note: 1. Device mounted on 75mm\*75mm\*1.6mm Cu plate heatsink.

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J, (^\circ\text{C})$
KBJ8005	50	35	50	1.0	-55 to +150
KBJ801	100	70	100		
KBJ802	200	140	200		
KBJ804	400	280	400		
KBJ806	600	420	600		
KBJ808	800	560	800		
KBJ810	1000	700	1000		

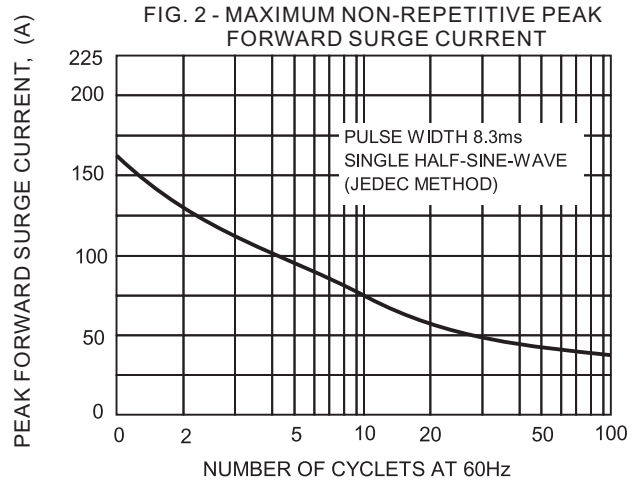
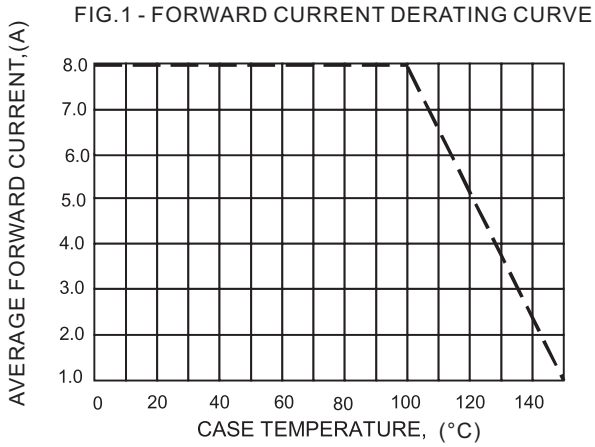
\*1 Repetitive peak reverse voltage

\*2 RMS voltage

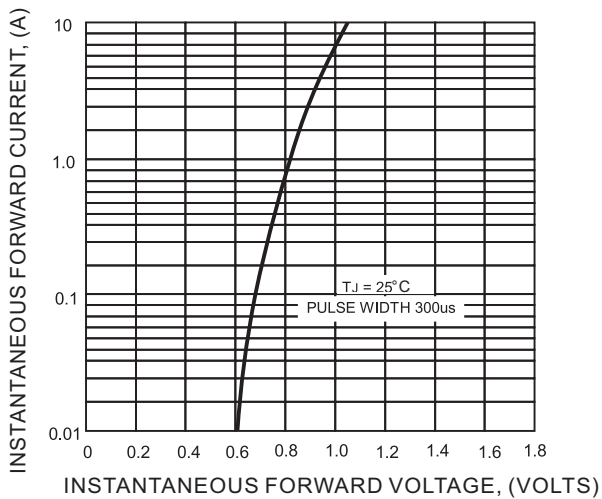
\*3 Continuous reverse voltage

\*4 Maximum forward voltage @  $I_F=4.0\text{A}$

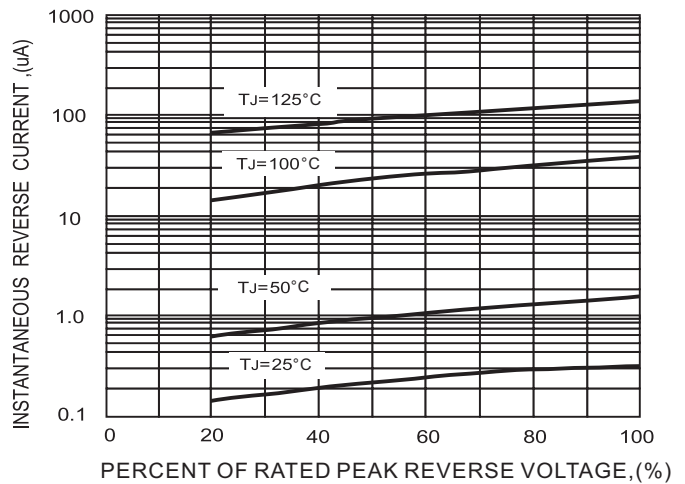
## Rating and characteristic curves (KBJ8005 thru KBJ810)



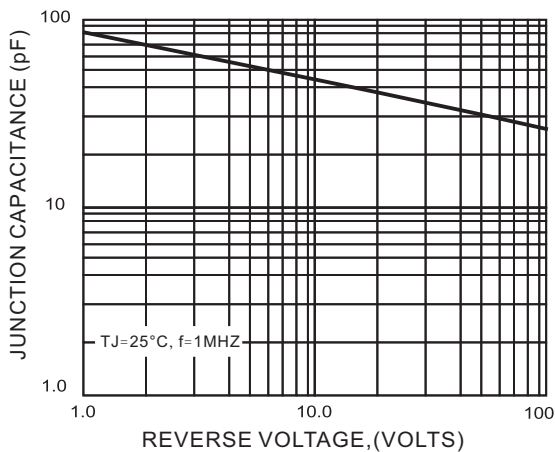
**FIG. 3 - TYPICAL FORWARD CHARACTERISTICS**



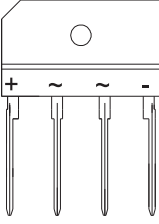
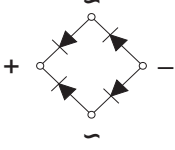
**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**



### Pinning information

Simplified outline	Symbol
	

### Marking

Type number	Marking code
KBJ8005	KBJ8005
KBJ801	KBJ801
KBJ802	KBJ802
KBJ804	KBJ804
KBJ806	KBJ806
KBJ808	KBJ808
KBJ810	KBJ810