

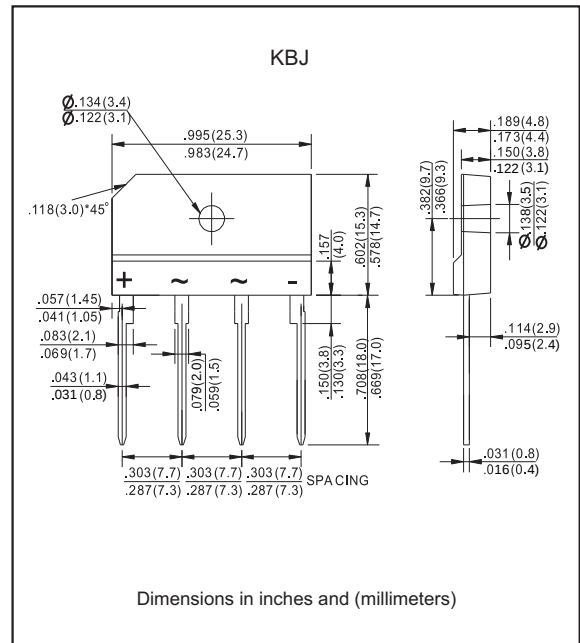
Features

- 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. KBJ1010-H.

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, KBJ
- Terminals : Solder plated, solderable per MIL-STD-202, Method 208
- 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		$I_{F(AV)}$			10.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			200	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			10.0	μA
	$V_R = V_{RRM} \quad T_A = 125^\circ\text{C}$				500	
Rating for fusing	$t < 8.3 \text{ ms}$	I^2t			166	A^2s
Typical Junction capacitance Per Element	Measured at 1.0MHz and applied reverse voltage of 4.0V DC	C_J		100		pF
Typical thermal resistance	Junction to case (Note1)	$R_{\theta JC}$		3		$^\circ\text{C/W}$
Storage temperature		T_{STG}	-55		+150	$^\circ\text{C}$

Note1: Device mounted on 50mm x 50mm x 1.6mm Cu Plate Heatsink

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature $T_J, (^\circ\text{C})$
KBJ10005	50	35	50	1.1	-55 to +150
KBJ1001	100	70	100		
KBJ1002	200	140	200		
KBJ1004	400	280	400		
KBJ1006	600	420	600		
KBJ1008	800	560	800		
KBJ1010	1000	700	1000		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage @ $I_F = 5.0\text{A}_{dc}$

Rating and characteristic curves (KBJ10005 thru KBJ1010)

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

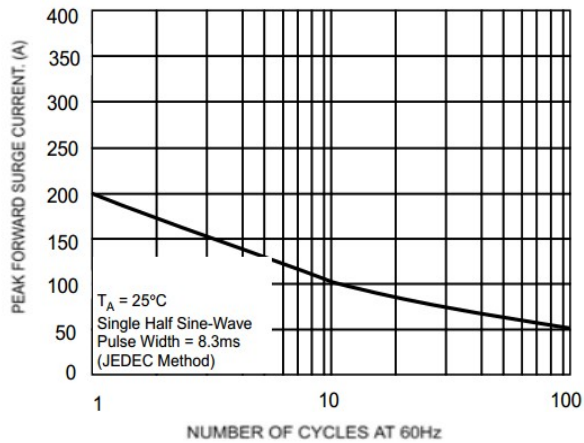


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

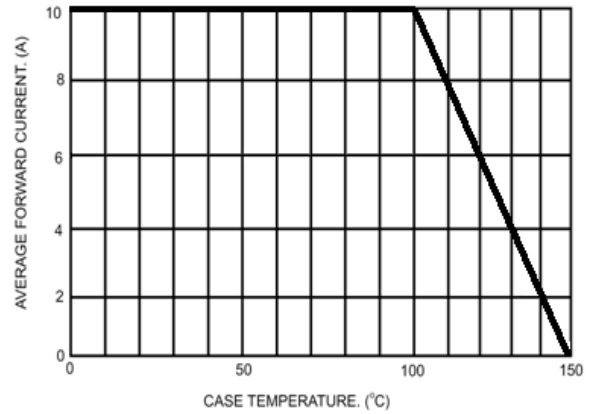


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

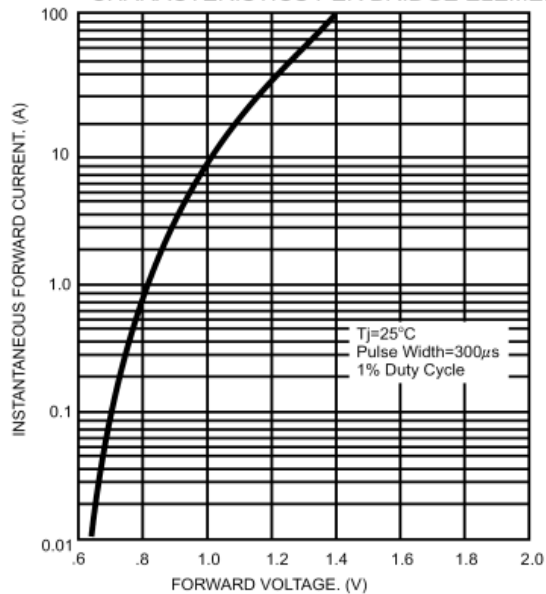
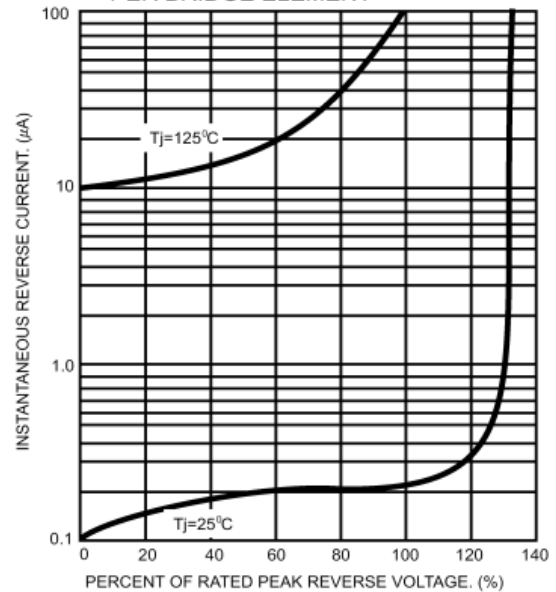
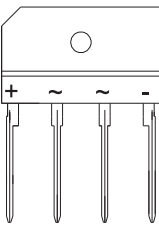
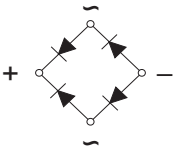


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



Pinning information

Simplified outline	Symbol
	

Marking

Type number	Marking code
KBJ10005	KBJ10005
KBJ1001	KBJ1001
KBJ1002	KBJ1002
KBJ1004	KBJ1004
KBJ1006	KBJ1006
KBJ1008	KBJ1008
KBJ1010	KBJ1010