



KBJ4A thru KBJ4M

Glass Passivated Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 4.0 Amperes

Features

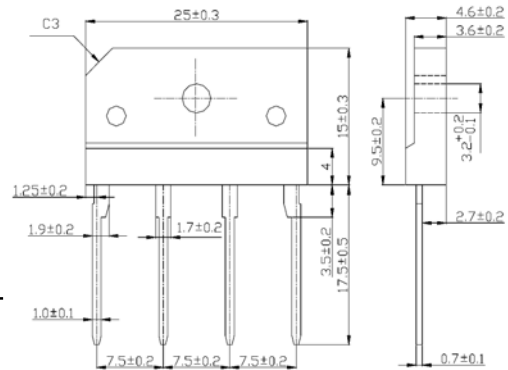
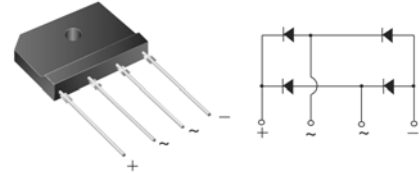
- ◆ Ideal for printed circuit boards
- ◆ High surge current capability
- ◆ High case dielectric strength of 2000 V_{RMS}
- ◆ Glass passivated chip junction
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0

Mechanical Data

- ◆ Case: KBJ(3S)
Epoxy meets UL-94V-0 Flammability rating
- ◆ Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- ◆ High temperature soldering guaranteed:
260°C/10 seconds, 0.375 (9.5mm) lead length,
5lbs.(2.3kg) tension
- ◆ Polarity: As marked on body
- ◆ Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.
- ◆ Recommended Torque: 5.7 cm-kg (5 inches-lbs)

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Monitor, TV, Printer, Switching Mode Power Supply, Adapter, Audio equipment, and Home Appliances applications



Package outline dimensions in millimeters

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	KBJ4A	KBJ4B	KBJ4D	KBJ4G	KBJ4J	KBJ4K	KBJ4M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified output current at $T_C=100^\circ\text{C}$ $T_A=25^\circ\text{C}$	$I_{F(AV)}$	4.0 ⁽¹⁾ 2.3 ⁽²⁾						Amps	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80.0						Amps	
Rating for fusing (t<8.3ms)	I^2t	26						A^2sec	
Maximum instantaneous forward voltage drop per leg at 2.0A	V_F	1.0						Volt	
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_R=125^\circ\text{C}$	I_R	5.0 250.0						μA	
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JC}$	26 ⁽²⁾ 5 ⁽¹⁾						$^\circ\text{C}/\text{W}$	
Dielectric strength (Terminals to case, AC 1 minute)	V_{ISO}	2000						Volts	
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150						$^\circ\text{C}$	

- Notes:**
1. Unit case mounted on 6.3x6.3x0.15cm thick Al plate heatsink.
 2. Units mounted on P.C.B. with 0.5 x 0.5" (13 x 13 mm) copper pads and 0.375" (9.5 mm) lead length
 3. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

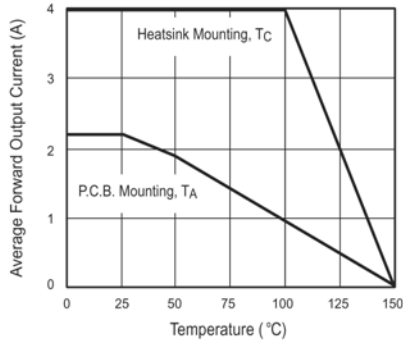


Figure 1. Derating Curve Output Rectified Current

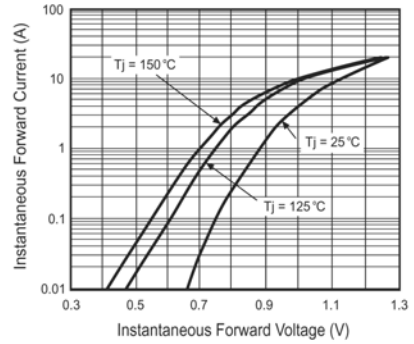


Figure 3. Typical Forward Characteristics Per Leg

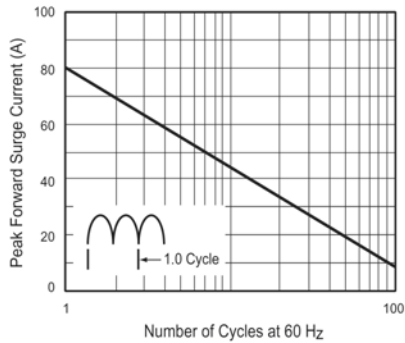


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

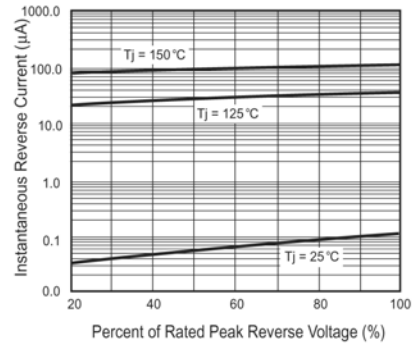


Figure 4. Typical Reverse Characteristics Per Leg

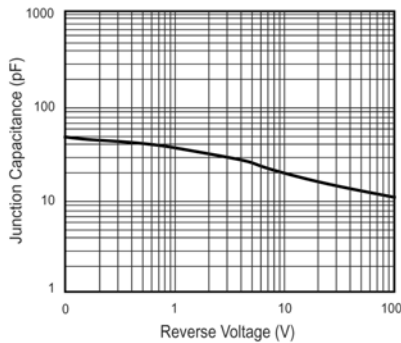


Figure 5. Typical Junction Capacitance Per Leg

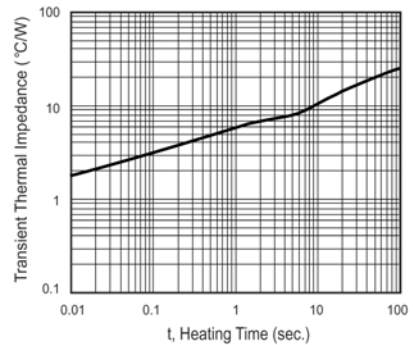


Figure 6. Typical Transient Thermal Impedance Per Leg