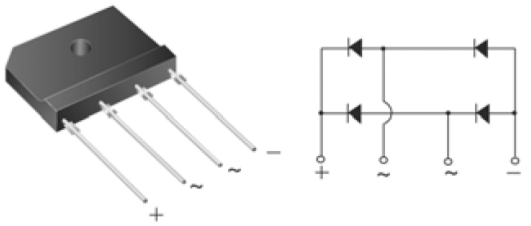
KBJ4AV thru KBJ4MV

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

2018

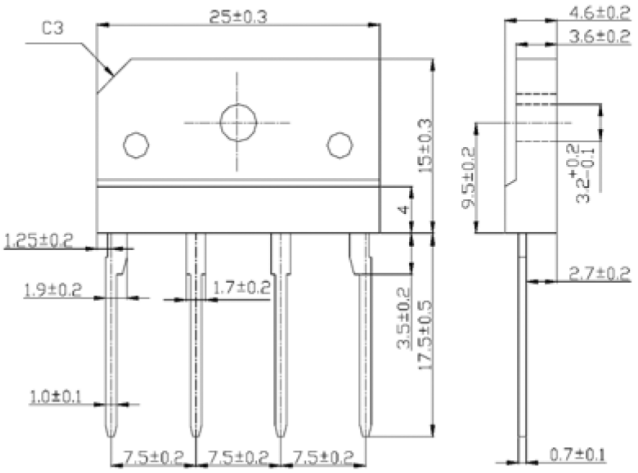
Features

- Glass passivated junction
- Ideal for printed circuit board
- Reliable low cost construction
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Surge overload rating to 150 amperes peak
- High case dielectric strength of 2000V_{RMS}



Mechanical Data

- Case: KBJ(3S)
  Epoxy meets UL-94V-0 Flammability rating
- Terminals: Leads solderable per MILSTD-750, Method 2026
- High temperature soldering guaranteed:
  260°C/10 seconds, 0.375 (9.5mm) lead length,
  5lbs.(2.3kg) tension
- Weight: 0.15 ounce, 4.3 grams
- Mounting torque: 5 in. lbs. max.



Package outline dimensions in millimeters

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

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	KBJ4AV	KBJ4BV	KBJ4DV	KBJ4GV	KBJ4JV	KBJ4KV	KBJ4MV	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°C / T_A=25°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}	150							Amps
Rating for fusing (t<8.3ms)	I^2t	93							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°C / T_A=125°C	I_R	5 / 250							uA
Typical thermal resistance per leg	$R_{\theta JA}$ / $R_{\theta JC}$	26 (2) / 5 (1)							°C/W
Dielectric strength (Therminals to case, AC 1 minute)	V_{ISO}	2000							Volts
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°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°C unless otherwise noted)

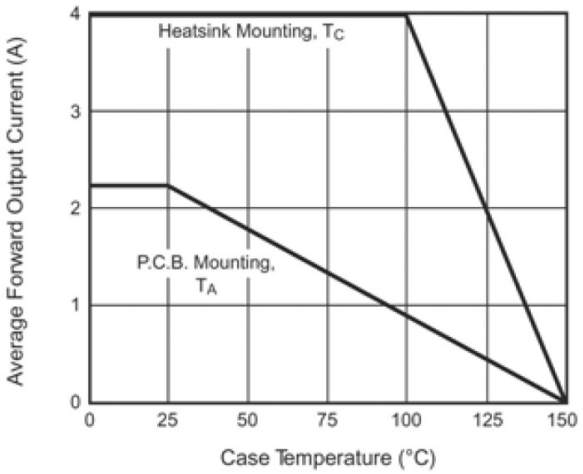


Figure 1. Derating Curve Output Rectified Current

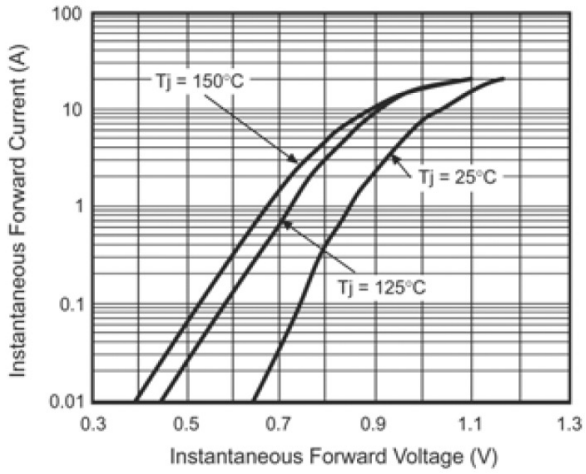


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

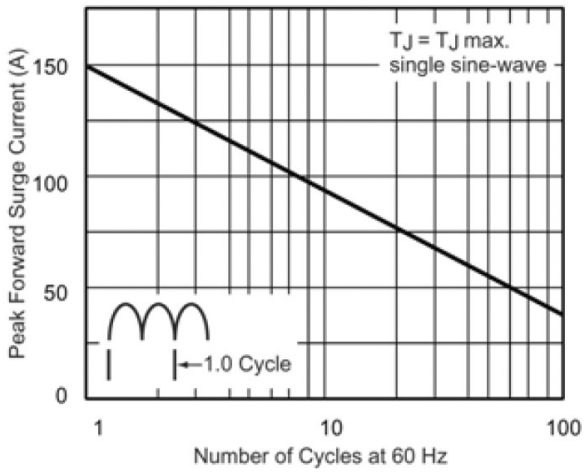


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

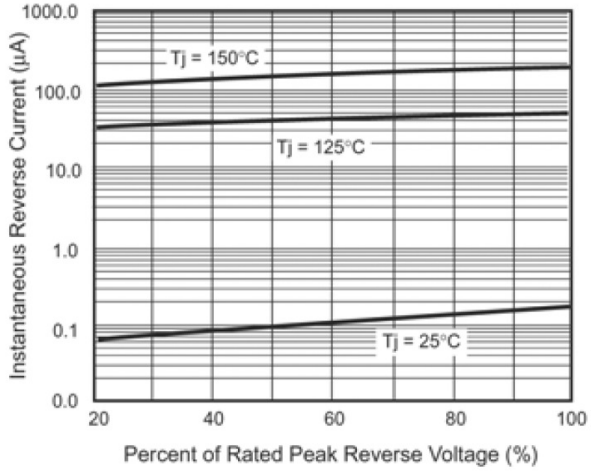


Figure 4. Typical Reverse Characteristics Per Leg

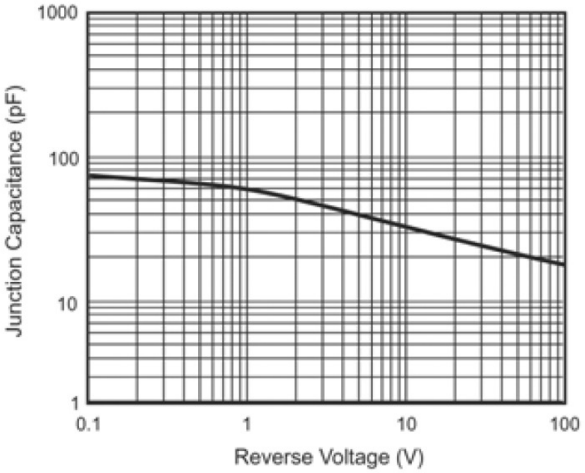


Figure 5. Typical Junction Capacitance Per Leg

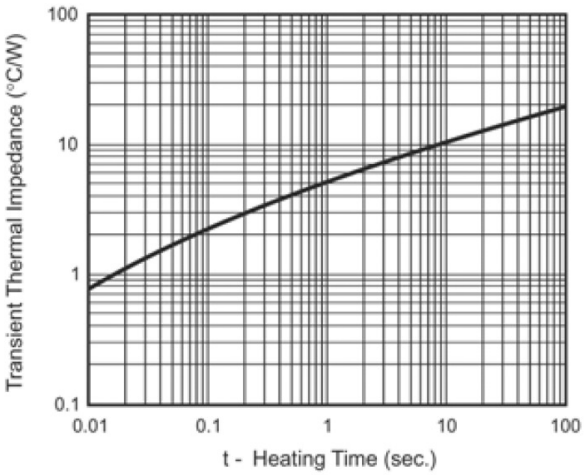


Figure 6. Typical Transient Thermal Impedance Per Leg