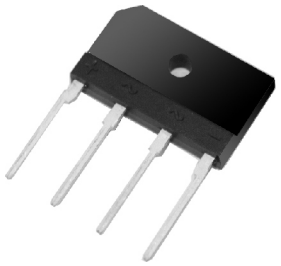
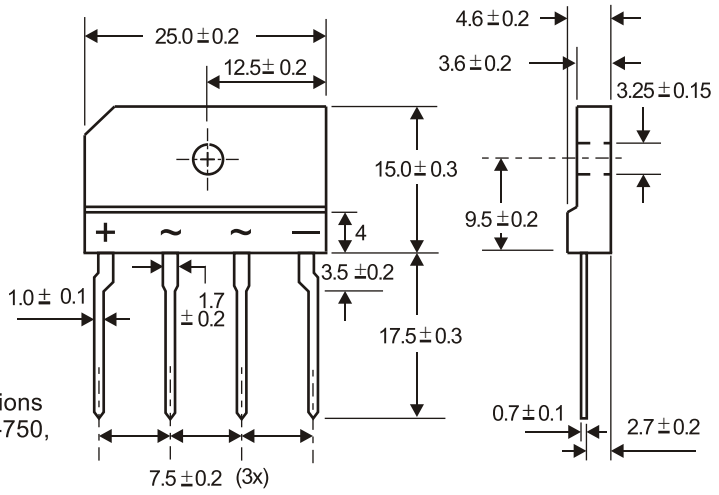
KBJ10005 thru KBJ1010

10.0A Single-phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V



KBJ4



Dimensions in millimeters(1mm =0.0394")

Features

- This series is UL listed under the Recognized Component Index, file number E142814
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500VRMS Ideal for printed circuit boards
- High surge current capability

Mechanical Data

Case : Molded plastic body over passivated junctions
Terminals : Plated leads solderable per MIL-STD-750, Method 2026
Polarity : Polarity symbols molded on body
Mounting Position : Any(3)
Mounting Torque : 5 in-lbs max.
Weight : 0.15 ounce, 4.0 grams (approx)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
For Capacitive load derate current by 20%.

Parameter	Symbol	KBJ 10005	KBJ 1001	KBJ 1002	KBJ 1004	KBJ 1006	KBJ 1008	KBJ 1010	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current Tc=110℃	IF(AV)	10.0 3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	170							A
Rating for fusing (t<8.3ms)	I^2t	120							A^2sec
Maximum thermal resistance (Note 1)	RthJC	1.4							℃ / W
Operating junction and storage temperatu re range	TJ, TSTG	-55 to + 150							℃

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
For Capacitive load derate by 20 %.

Parameter	Symbol	KBJ 10005	KBJ 1001	KBJ 1002	KBJ 1004	KBJ 1006	KBJ 1008	KBJ 1010	Unit
Maximum instantaneous forward voltage drop per leg at 2.0A	VF	1.05							V
Maximum DC reverse current at TA =25°C rated DC blocking voltage per leg TA =125°C	IR	10 500							μA

Notes: (1)Device mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.
(2)Recommended mounting position is to bolt down on heat sink with silicone thermal compound for maximum heat transfer with #6 screw.

Fig. 1 Derating Curve for Output Rectified Current

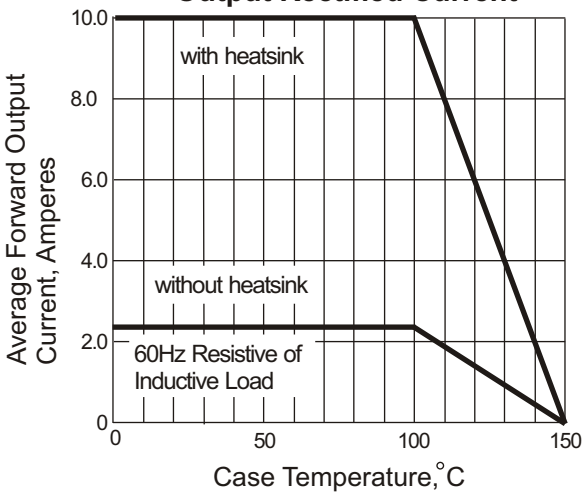


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

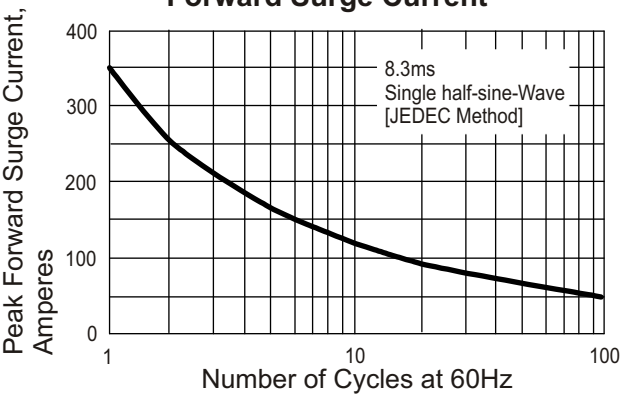


Fig. 3 Typical Instantaneous Forward Characteristics

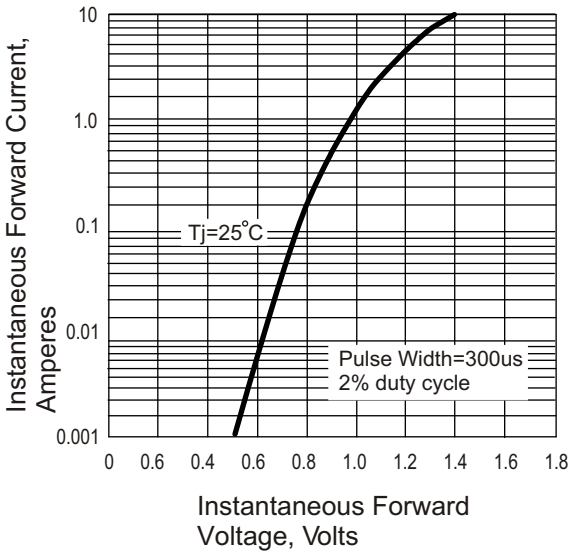


Fig. 4 Typical Reverse Characteristics at Tj=25°C

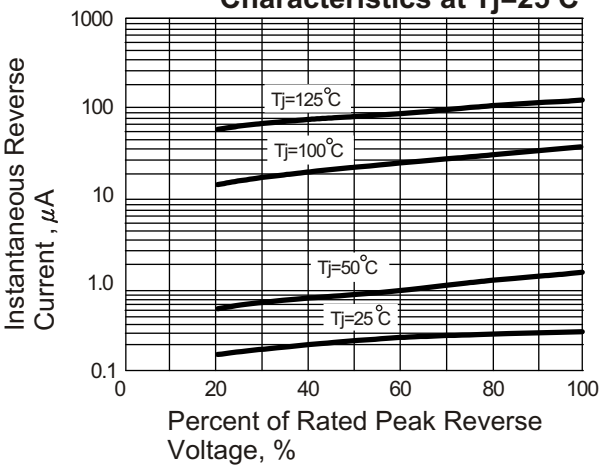


Fig. 5 Typical Junction Capacitance