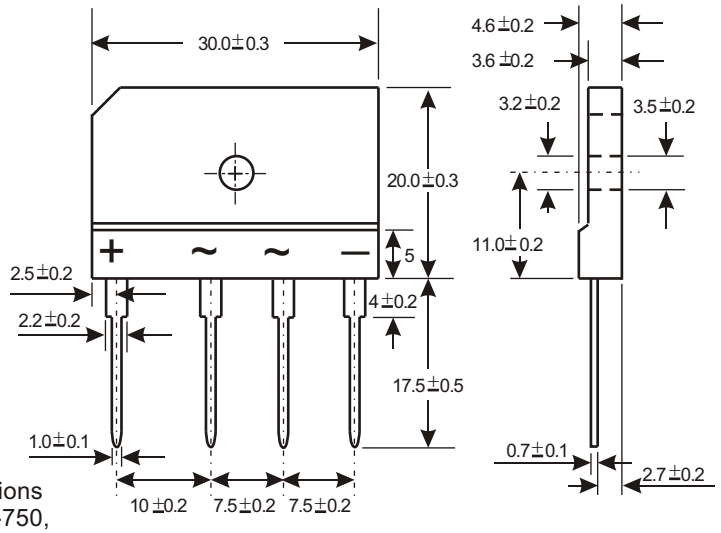
SEP ELECTRONIC CORP.

KBJ6005 thru KBJ610

6 A Single-Phase Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

KBJ6



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 : 0.26 ounce, 7.0 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 6005	KBJ 601	KBJ 602	KBJ 604	KBJ 606	KBJ 608	KBJ 610	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input 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 (with heatsink note1) rectified current at Tc=110°C (without heatsink)	IF(AV)	6.0 2.8							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
Typical thermal resistance per element (note 1)	RthJC	1.8							°C / W
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

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 6005	KBJ 601	KBJ 602	KBJ 604	KBJ 606	KBJ 608	KBJ 610	Unit
Maximum instantaneous forward voltage drop per leg at 3.0 A	VF	1.0							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	5.0 500							μA

Notes: (1) Device mounted on 250mm x 250mm x 20mm aluminum plate heatsink.

Rating and Characteristic Curves (T_A=25°C Unless otherwise noted)
KBJ6005 thru KBJ610

Fig. 1 Derating Curve for Output Rectified Current

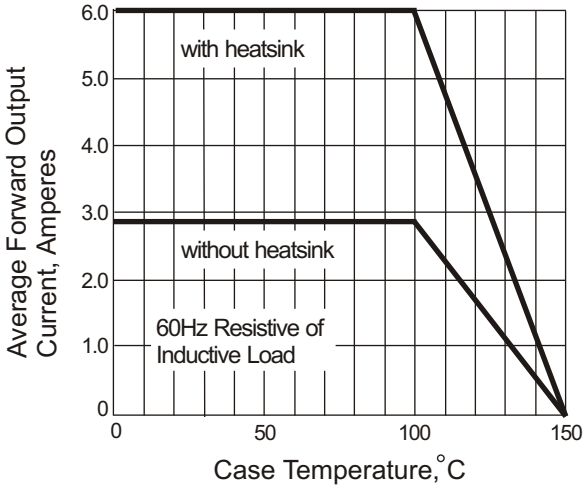


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

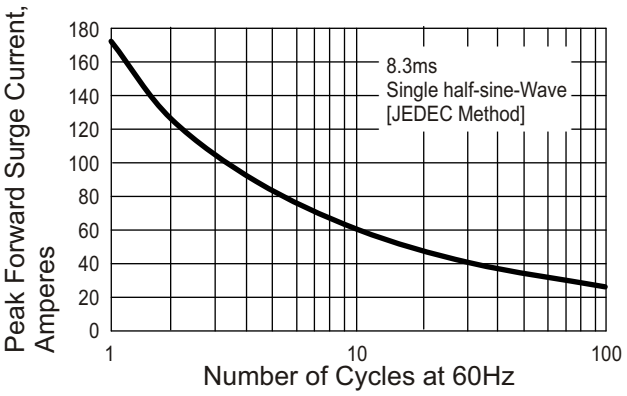


Fig. 3 Typical Instantaneous Forward Characteristics

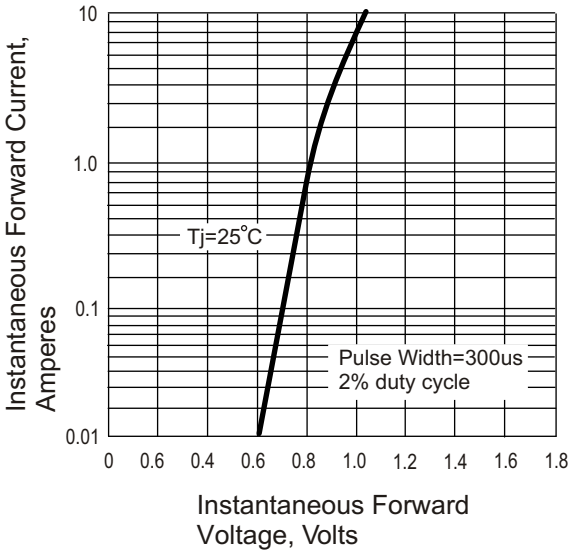


Fig. 4 Typical Reverse Characteristics at Tj=25°C

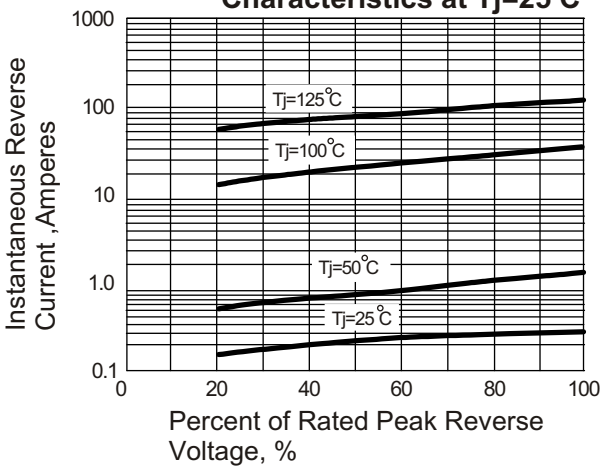


Fig. 5 Typical Junction Capacitance