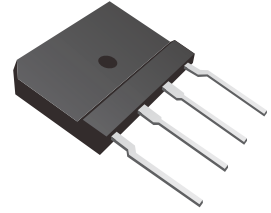


10A Single-Phase Silicon Bridge Rectifier

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500V_{RMS}
Ideal for printed circuit boards
- High surge current capability
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical data

- Case : 4KBJ
- 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.

Ordering Information

Part Number	Shipping	Packing Type
KBJ10005 THRU KBJ1010	250PCS/Box	Tube

Maximum Ratings and Thermal Characteristics

Ratings 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	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward (with heatsink note1) rectified current at T _c =110°C (without heatsink)	I _{F(AV)}	10.0 3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	170							A
Rating for fusing (t<8.3ms)	I ² t	120							A ² sec
Typical thermal resistance per element (note 1)	R _{thJC}	1.4							°C / W
Operating junction and storage temperature range	T _J , T _{STG}	-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 10005	KBJ 1001	KBJ 1002	KBJ 1004	KBJ 1006	KBJ 1008	KBJ 1010	Unit
Maximum instantaneous forward voltage drop per leg at 5.0 A	V _F	1.05							V
Maximum DC reverse current at rated DC blocking voltage per element TA =25°C TA =125°C	I _R	10.0 500							μA

Notes: (1) Device mounted on 150mm x 150mm x 1.6mm copper plate heatsink.

Characteristics Curves (T_A=25°C Unless otherwise noted)

Fig.1 Derating Curve for Output Rectified Current

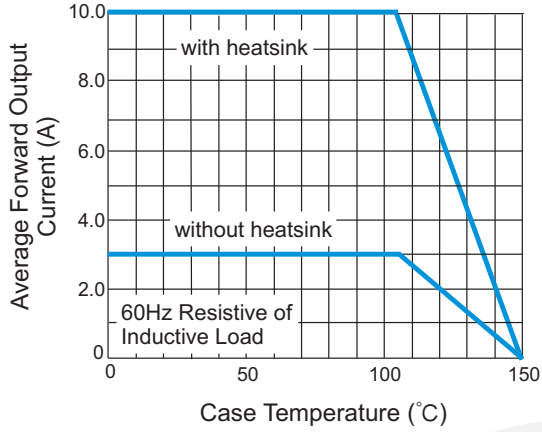


Fig.2 Maximum Non-repetitive Peak Forward Surge Current

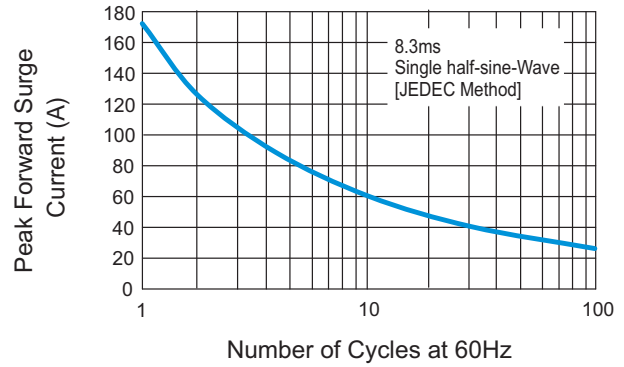


Fig.3 Typical Instantaneous Forward Characteristics

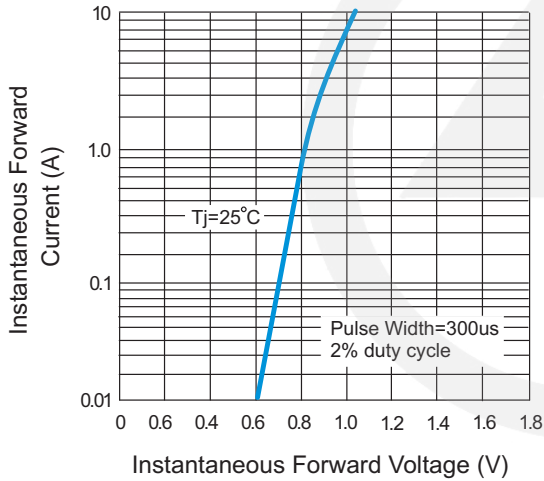


Fig.4 Typical Reverse Characteristics at T_J=25°C

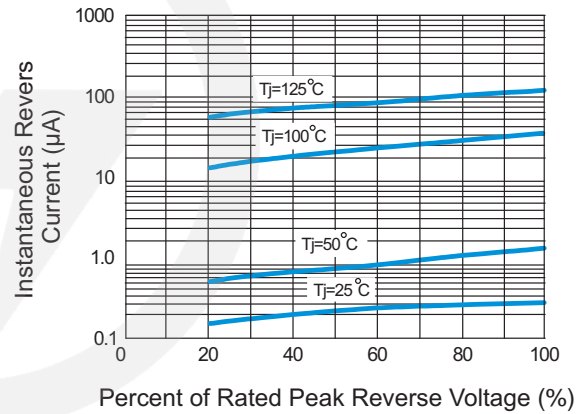
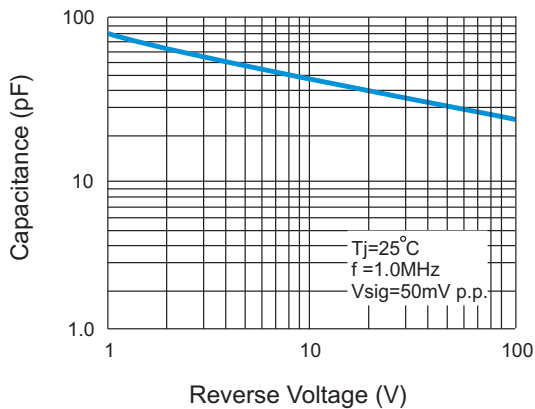
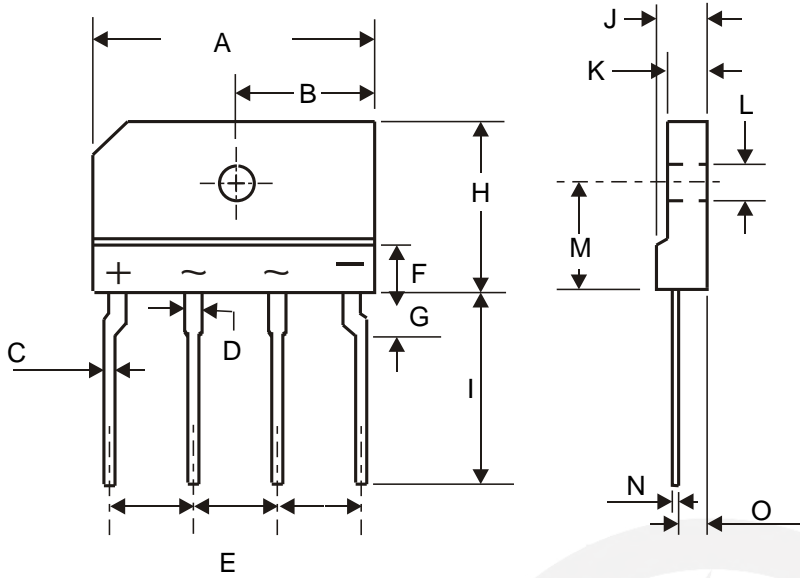


Fig.5 Typical Junction Capacitance



4KBJ Package Outline

Unit : mm



SYMBOL	DIMENSIONS	
	MIN	MAX
A	24.70	25.30
B	12.30	12.70
C	1.10	0.90
D	1.50	1.90
E	7.30(3x)	7.70(3x)
F	4.00	4.00
G	3.20	3.80
H	14.70	15.30
I	17.00	18.00
J	4.40	4.80
K	3.40	3.80
L	3.10	3.40
M	9.30	9.70
N	0.40	0.80
O	2.50	2.90

Marking

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

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.5.13	2024.5.13	3.0	New File	/	Ding	