

KBJ10005 THRU KBJ1010

Glass Passivated Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts

Forward Current - 10.0 Amperes

Features

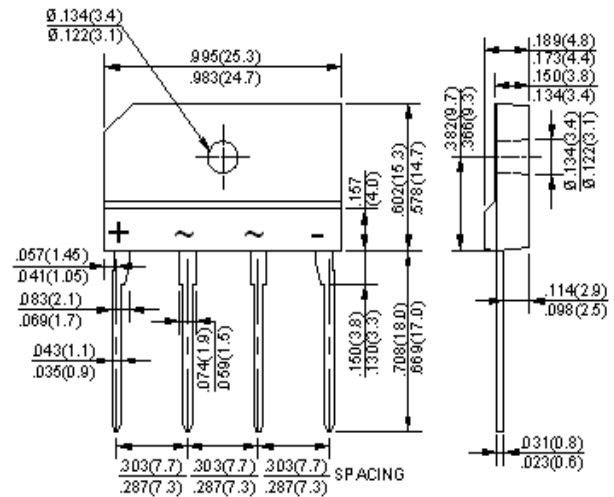
- Glass passivated chip
- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability
- Meet UL flammability classification 94V-0

Mechanical Data

- Polarity: Symbol marked on body
- Mounting position: Any

Applications

- General purpose use in AC/DC bridge full wave rectification, for SMPS, lighting ballaster, adapter, etc.



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	K B J	K B J	K B J	K B J	K B J	K B J	K B J	Unit
		10005	1001	1002	1004	1006	1008	1010	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS 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 Note 2)	I _(AV)	10.0							A
Rectified Current @ T _c =100℃ (without heatsink)		3.0							
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	200							A
I ² t Rating for Fusing (t<8.3mS)	I ² t	166							A ² s
Peak Forward Voltage per Diode at 5A DC	V _F	1.0							V
Maximum DC Reverse Current at Rated @T _J =25℃	I _R	5.0							μA
DC Blocking Voltage per Diode @T _J =125℃		500							
Typical Junction Capacitance per Diode (Note1)	C _J	55							pF
Typical Thermal Resistance to Ambient (without heatsink)	R _{θJA}	24							℃/W
Typical Thermal Resistance to case (with heatsink (Note2))	R _{θJC}	1.4							℃/W
Typical Thermal Resistance to lead (without heatsink)	R _{θJL}	3							℃/W
Operating Junction Temperature Range	T _J	-55 to +150							℃
Storage Temperature Range	T _{STG}	-55 to +150							℃

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

2.Device mounted on 150mm*150mm*1.6mm Cu plate heatsink.

3.The typical data above is for reference only



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Fig. 1 - Forward Current Derating Curve

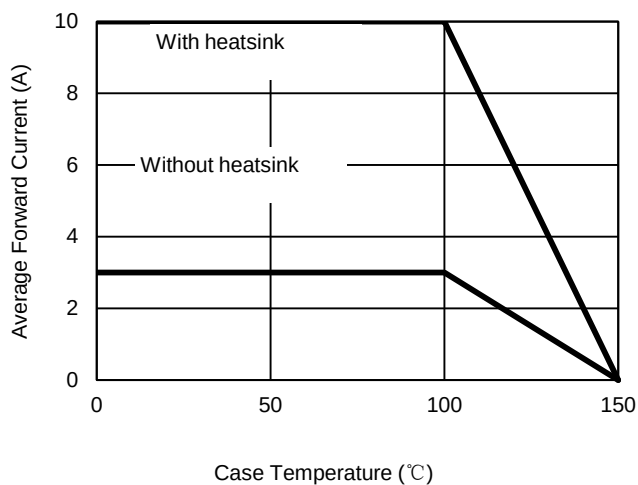


Fig. 2 - Maximum Non-Repetitive Surge Current

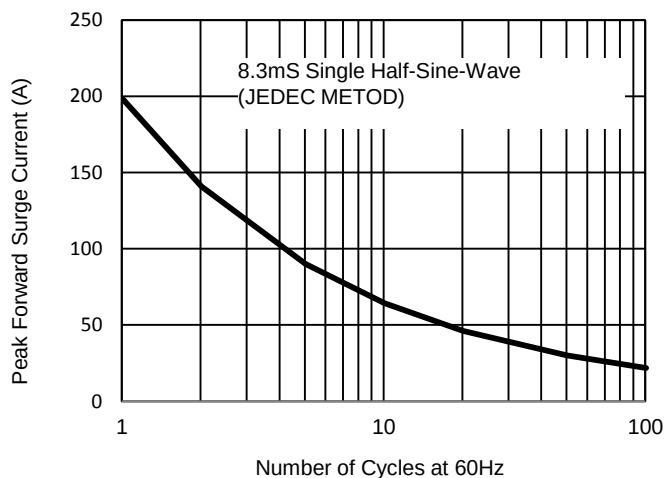


Fig. 3 - Typical Reverse Characteristics

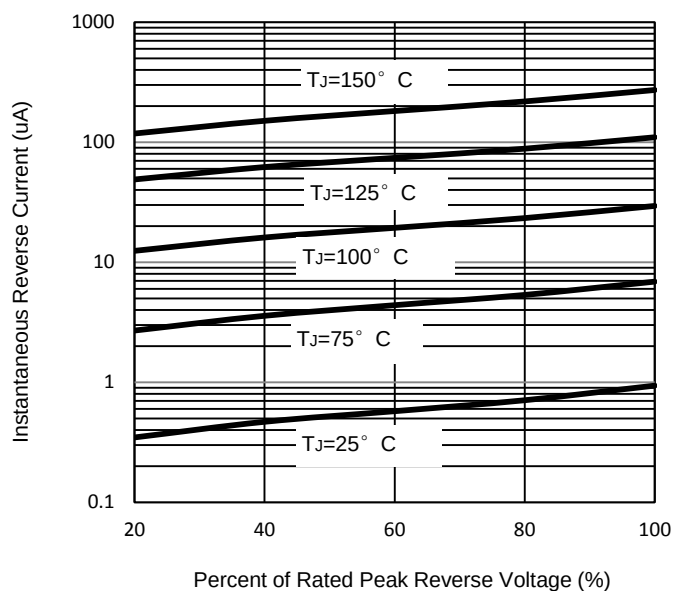


Fig. 4 - Typical Forward Characteristics

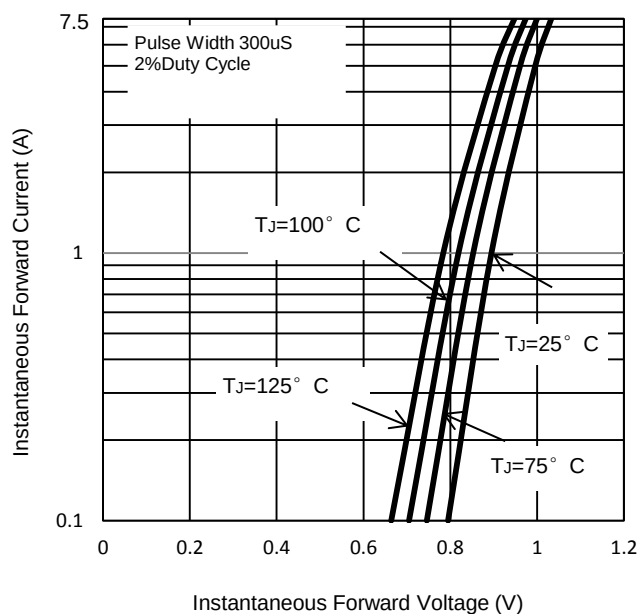


Fig. 5 - Typical Junction Capacitance

