

KBF401 thru KBF410

Glass Passivated Single-Phase Bridge Rectifiers
 Reverse Voltage 100~1000V Output Current 4.0A

Features

- Glass passivated Bridge Rectifiers
- Ideal for PCB
- High surge current capability
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



Package: KBF

Mechanical Data

- Case:KBF,Molding compound meets UL 94V-0 flammability rating
- Base P/N with suffix'E' on packing code-halogen free
- Terminals:Matte tin plated leads,solderable per MII-STD-750 Method 2026,J-STD-002 and JESD22-B102, meets JESD 201 class 1A whisker test



Schematic Diagram

Applications

General purpose use in AC-to-DC bridge full wave rectification for TV, monitors, SMPS, adapters, printers, audio equipment, and home applications applications.

Maximum Ratings (T_A = 25 °C unless otherwise noted)

Parameter	Symbol	KBF401	KBF402	KBF404	KBF406	KBF408	KBF410	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	100	200	400	600	800	1000	V
Maximum Average Output Rectified Current	I _{O(AV)}	4.0 ⁽¹⁾ 2.0 ⁽²⁾						A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I _{FSM}	150						A
Rating for Fusing (t ≤ 8.3ms)	I ² t	93.8						A ² s
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to 150						°C

Note1)with heatsink

2)without heatsink

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	KBF401	KBF402	KBF404	KBF406	KBF408	KBF410	Unit
Maximum Instantaneous Forward Voltage	I _F =2.0A	V _F	1.0						V
	I _F =4.0A		1.1						
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	5.0						μA
	T _A =125°C		200						
Junction Capacitance	4.0 V, 1 MHz	C _J	34						pF

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Thermal Characteristics (T_A=25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	KBF401	KBF402	KBF404	KBF406	KBF408	KBF410	Unit
Typical Thermal Resistance ¹⁾	Juntion to Ambient	R _{θJA}	30						°C/W
	Juntion to Case	R _{θJC}	8						

Note:1) The thermal resistance from junction to ambient and case,mounted on glass epoxy FR-4 P.C.B

Ratings and Characteristics Curves

(T_A = 25°C unless otherwise noted)

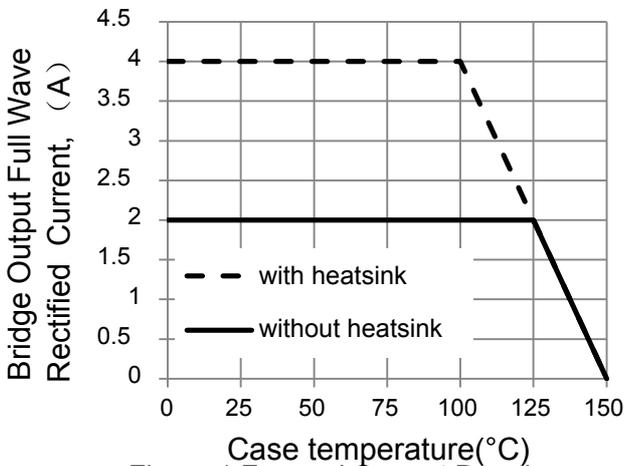


Figure 1. Forward Current Derating Curve

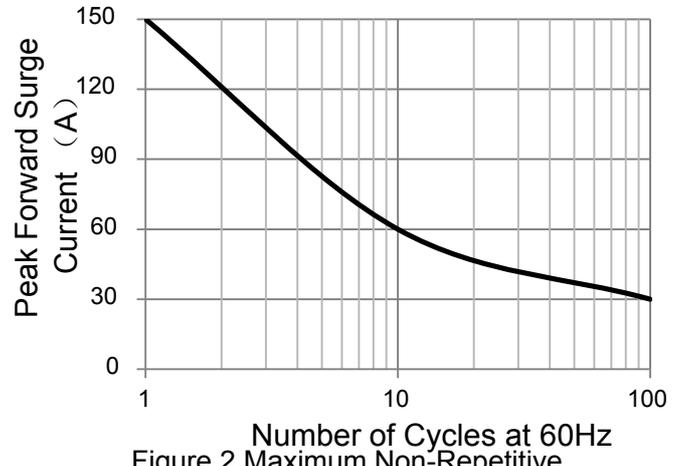


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

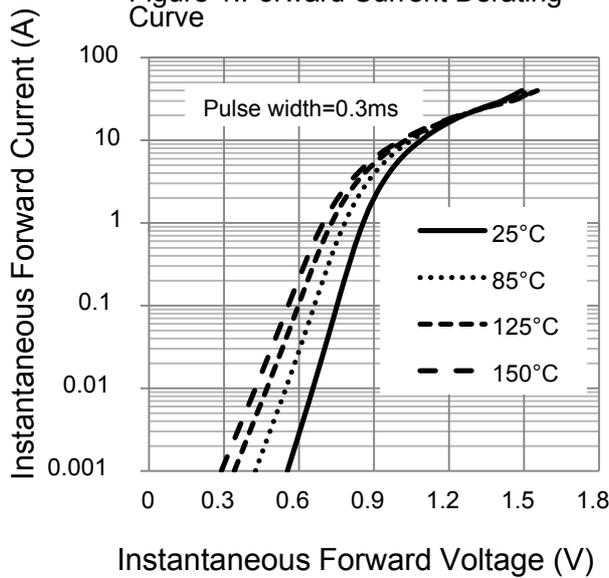


Figure 3. Typical Instantaneous Forward Characteristics

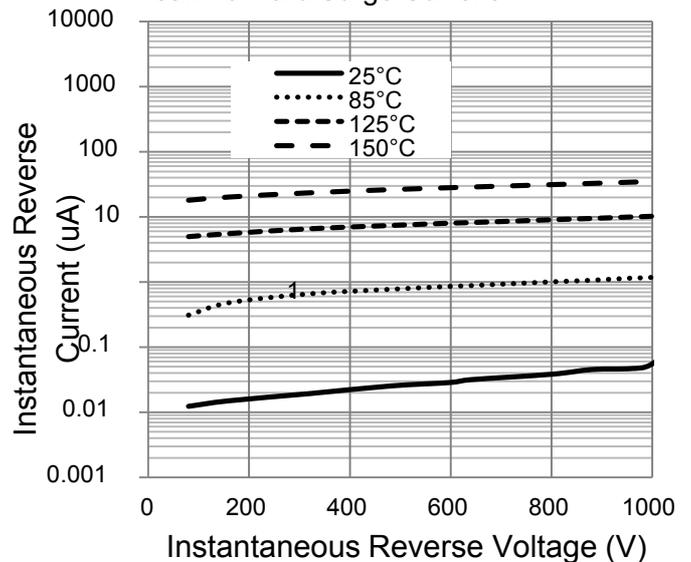


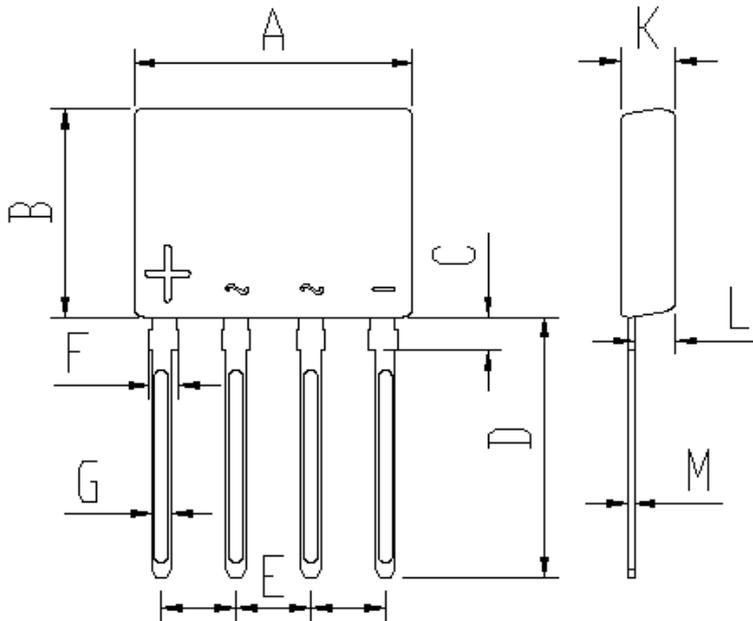
Figure 4. Typical Reverse Characteristics

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Package Outline Dimensions

KBF



Unit: mm

	Min	Max
A	13.95	14.45
B	10.80	11.20
C	1.75 Typical	
D	13.50	14.00
E	3.61	4.01
F	1.30	1.70
G	0.90	1.10
K	2.65	2.95
L	2.00	2.20
M	0.26	0.46