



E502650

## Features

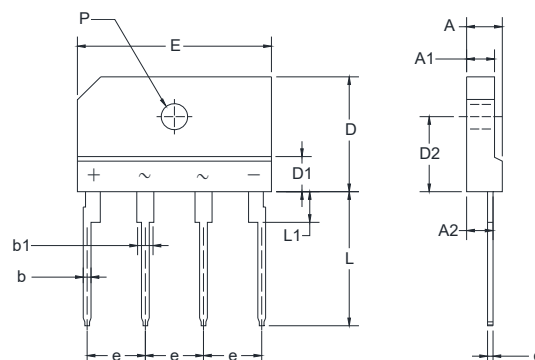
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

# 10 Amp Bridge Rectifier 1000 Volts

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	1000	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{RMS}$	700	V
Average Rectified Forward Current @ $T_C=110^\circ\text{C}$	$I_{F(AV)}$	10	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	175	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		350	
$I^2t$ Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	127	$\text{A}^2\text{s}$
Dielectric strength @ Terminals to Case, AC 1 Minute	$V_{dis}$	2	KV

KBJ



## DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.173	0.189	4.40	4.80	
A1	0.134	0.150	3.40	3.80	
A2	0.126	0.134	3.20	3.40	
b	0.035	0.043	0.90	1.10	
b1	0.059	0.075	1.50	1.90	
c	0.024	0.031	0.60	0.80	
D	0.579	0.602	14.70	15.30	
D1	0.150	0.165	3.80	4.20	
D2	0.374	0.413	9.50	10.50	
E	0.976	0.992	24.80	25.20	
e	0.287	0.303	7.30	7.70	
L	0.669	0.709	17.00	18.00	
L1	0.130	0.146	3.30	3.70	
P	0.122	0.134	3.10	3.40	Ø

## Internal Structure

Simplified Outline	Graphic Symbol

Note:

1. High temperature solder exemption applied, see EU directive annex 7a.

## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		2		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		20		°C/W

Note:

1.Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## Mechanical Data

Recommended Mounting Torque: 0.5 N•m

## Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=5A; T_J=25^{\circ}C$			1.0	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			5 100	$\mu A$
Junction Capacitance	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		53		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

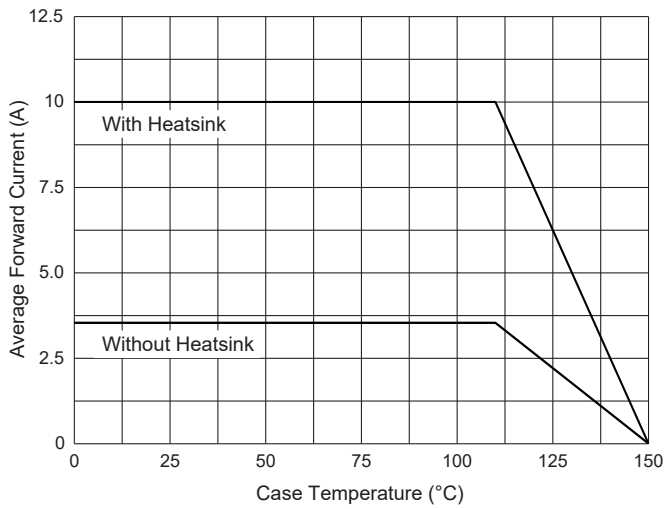


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

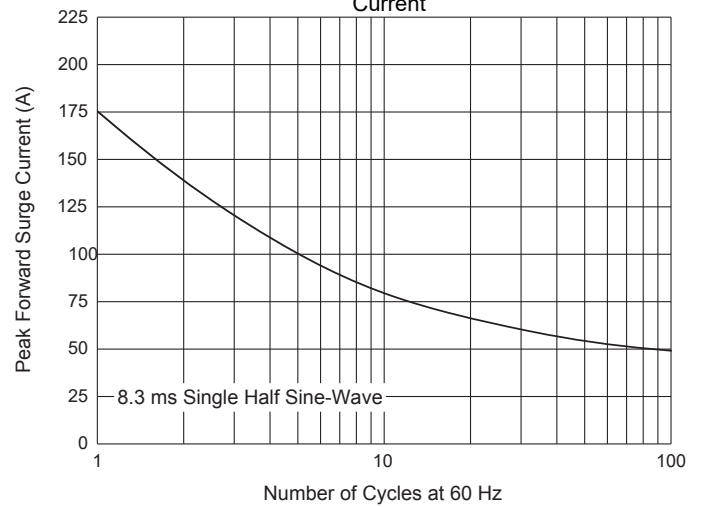


Fig. 3 - Typical Forward Characteristics

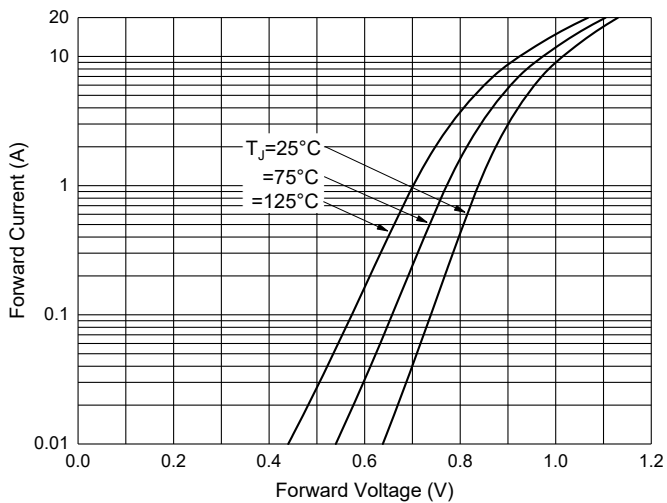


Fig. 4 - Typical Reverse Leakage Characteristics

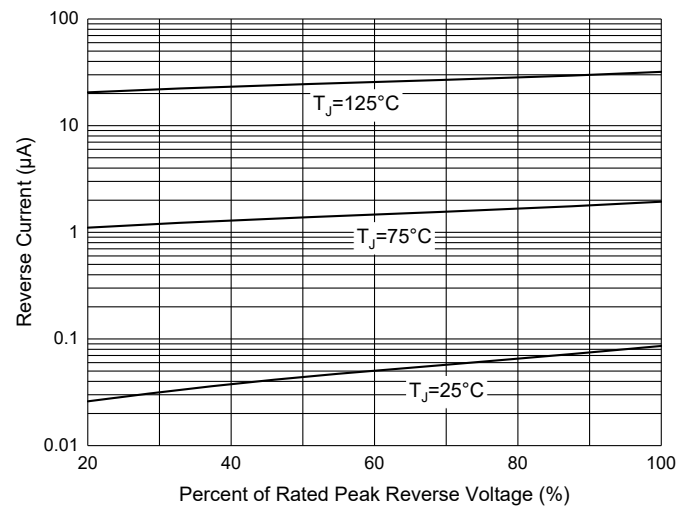
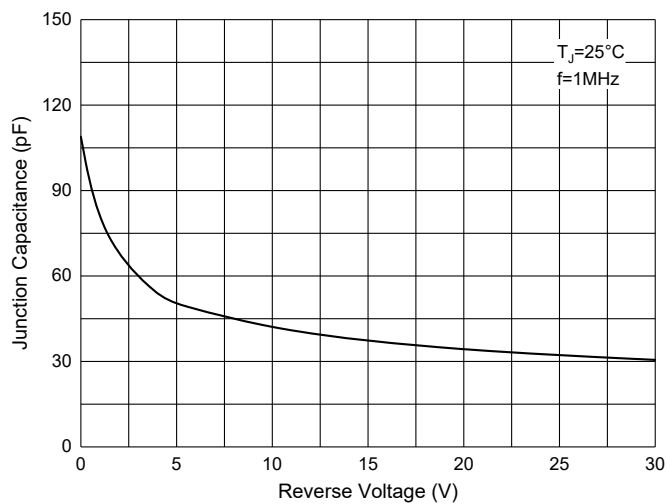


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
KBJ1010GS-BP	Bulk:20pcs/Tube,1Kpcs/Box,2Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. KBJ1010GS-BP-HF

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