

	<b>E502650</b>
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## Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

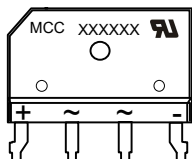
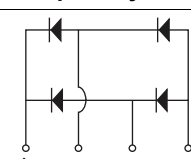
## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		KBJ 4005G	KBJ 401G	KBJ 402G	KBJ 404G	KBJ 406G	KBJ 408G	KBJ 410G	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>								
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Average Rectified Forward Current @ T <sub>C</sub> =110°C	I <sub>F(AV)</sub>	4							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I <sub>FSM</sub>	150							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		300							
I <sup>2</sup> t Rating for Fusing @1ms≤t≤8.3ms	I <sup>2</sup> t	93							A <sup>2</sup> s
Dielectric strength @Terminals to Case, AC 1 Minute	V <sub>dis</sub>	2							KV

## Marking Code

Part Number	Marking Code
KBJ4005G	KBJ4005G
KBJ401G	KBJ401G
KBJ402G	KBJ402G
KBJ404G	KBJ404G
KBJ406G	KBJ406G
KBJ408G	KBJ408G
KBJ410G	KBJ410G

## Internal Structure

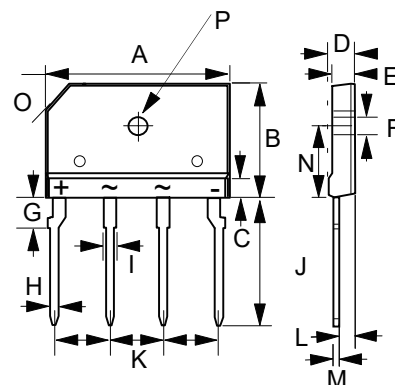
Simplified Outline	Graphic Symbol
 <p>XXXXXX: Marking Code</p>	

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High temperature solder exemption applied, see EU directive annex 7a.

# 4 Amp Bridge Rectifier 50 to 1000 Volts

KBJ



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.976	0.992	24.80	25.20	
B	0.579	0.602	14.70	15.30	
C	0.154	0.161	3.90	4.10	
D	0.173	0.189	4.40	4.80	
E	0.134	0.150	3.40	3.80	
F	0.122	0.134	3.10	3.40	Φ
G	0.130	0.146	3.30	3.70	
H	0.035	0.043	0.90	1.10	
I	0.059	0.075	1.50	1.90	
J	0.669	0.709	17.00	18.00	
K	0.287	0.303	7.30	7.70	
L	0.098	0.114	2.50	2.90	
M	0.024	0.031	0.60	0.80	
N	0.366	0.413	9.30	10.50	
O	0.118 X 45°		3.0 X 45°		
P	0.122	0.134	3.10	3.40	Φ

Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T <sub>J</sub>	Operating Junction Temperature Range		-55		150	°C
T <sub>stg</sub>	Storage Temperature Range		-55		150	°C
Rth <sub>(J-C)</sub>	Thermal Resistance from Junction to Case	Note 1		3		°C/W
Rth <sub>(J-A)</sub>	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 <sub>F</sub>	I <sub>F</sub> =2A;T <sub>J</sub> =25°C			1.0	V
Reverse Current	I <sub>R</sub>	at Rated V <sub>R</sub> ;T <sub>J</sub> =25°C at Rated V <sub>R</sub> ;T <sub>J</sub> =125°C			5 100	μA
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =4V;f=1MHz;T <sub>J</sub> =25°C		50		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

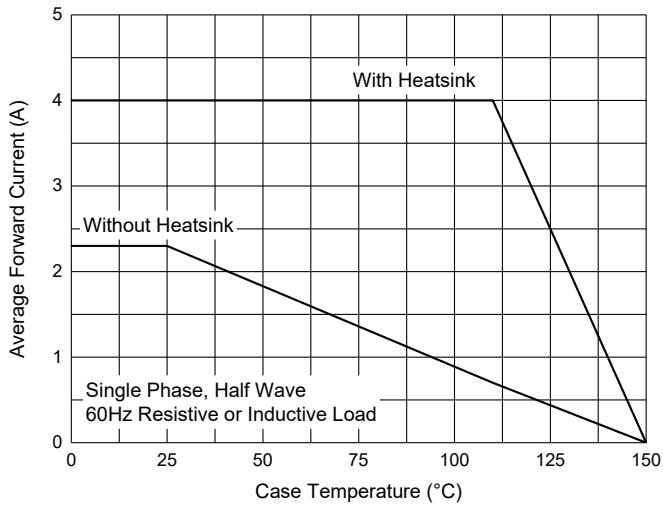


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

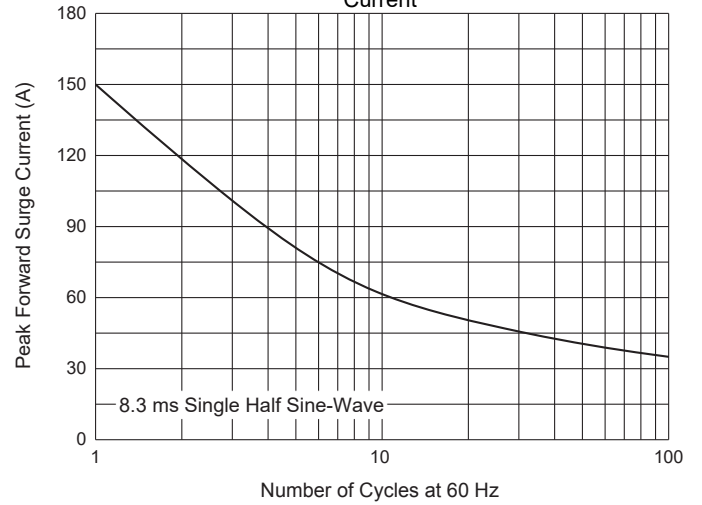


Fig. 3 - Typical Forward Characteristics

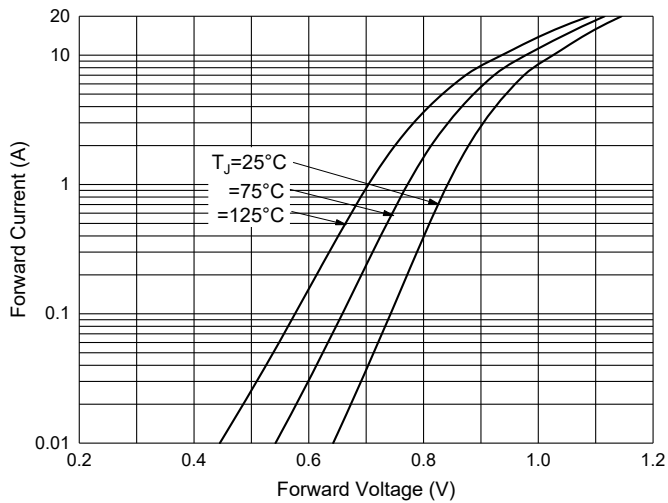


Fig. 4 - Typical Reverse Leakage Characteristics

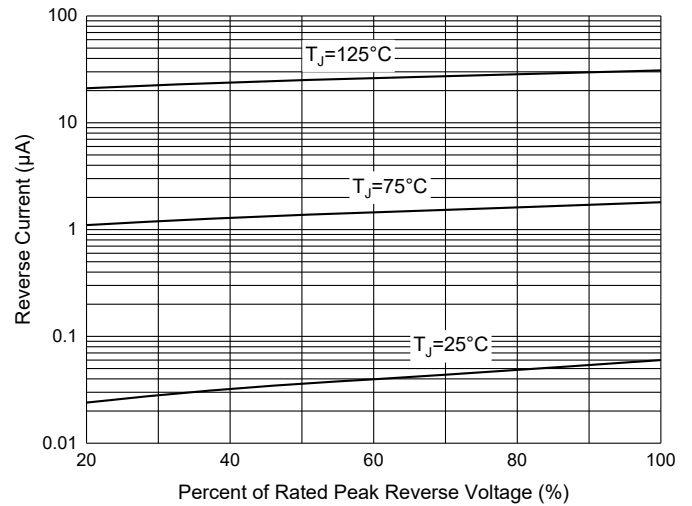
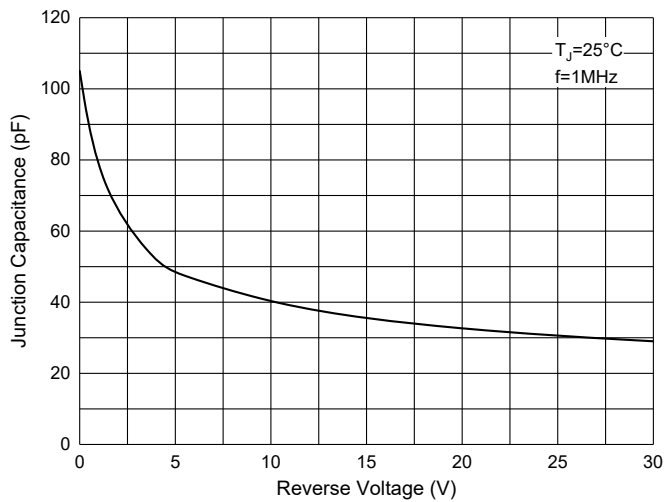


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

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

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

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