


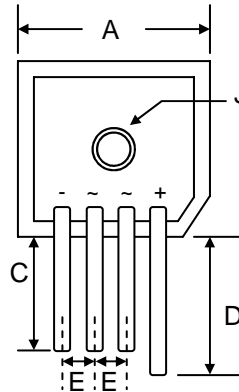
## 40A GLASS PASSIVATED HIGH CURRENT SINGLE-PHASE BRIDGE RECTIFIER

### Features

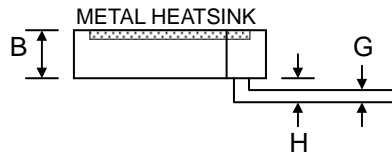
- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
-  Recognized File # E157705

### Mechanical Data

- Case: KBPC-S, Molded Plastic with Heatsink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 21 grams (approx.)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



KBPC-S		
Dim	Min	Max
A	28.40	28.70
B	10.97	11.23
C	—	21.00
D	—	25.00
E	5.10	—
G	1.20 Ø Typical	
H	3.05	3.60
J	5.08 Ø Nominal	
All Dimensions in mm		



### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	GBPC40										Unit	
		00S	01S	02S	04S	06S	08S	10S	12S	14S	16S		
Peak Repetitive Reverse Voltage	$V_{RRM}$												V
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	1200	1400	1600		
DC Blocking Voltage	$V_R$												
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	980	1120	V	
Average Rectified Output Current @ $T_C = 50^\circ\text{C}$	$I_O$	40										A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	400										A	
Forward Voltage per leg @ $I_F = 20\text{A}$	$V_{FM}$	1.1										V	
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$	$I_{RM}$	5.0 500										$\mu\text{A}$	
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	660										$\text{A}^2\text{s}$	
Typical Junction Capacitance (Note 1)	$C_j$	400										pF	
Typical Thermal Resistance per leg (Note 2)	$R_{\theta JC}$	1.4										$^\circ\text{C}/\text{W}$	
RMS Isolation Voltage from Case to Leads	$V_{ISO}$	2500										V	
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150										$^\circ\text{C}$	

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Mounted on 229 x 102 x 117mm Al. finned plate.

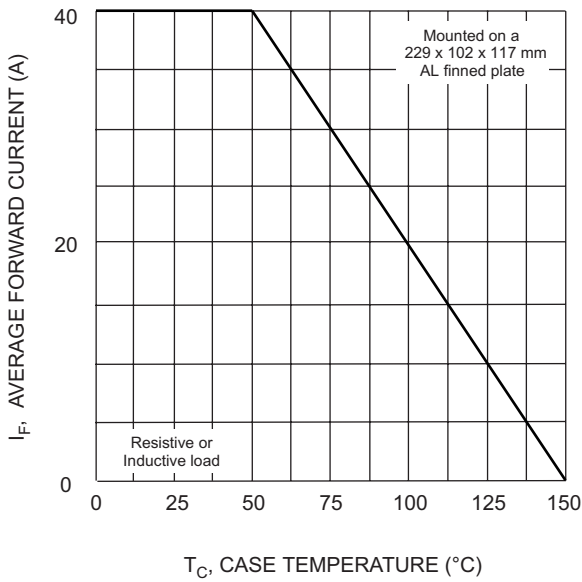


Fig. 1 Forward Current Derating Curve

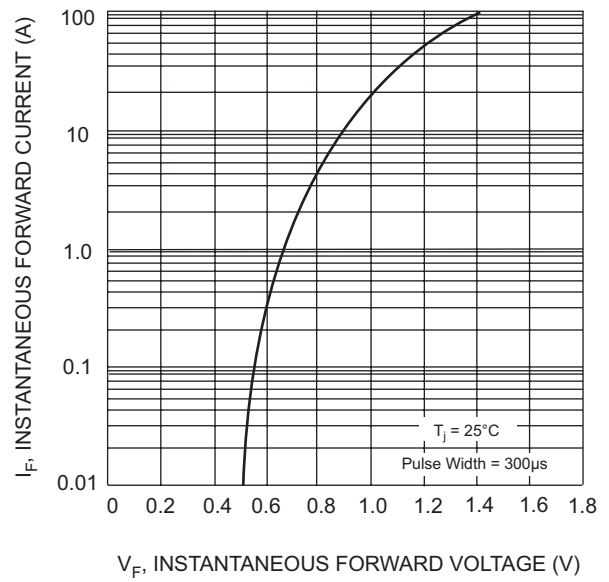


Fig. 2 Typical Forward Characteristics (per element)

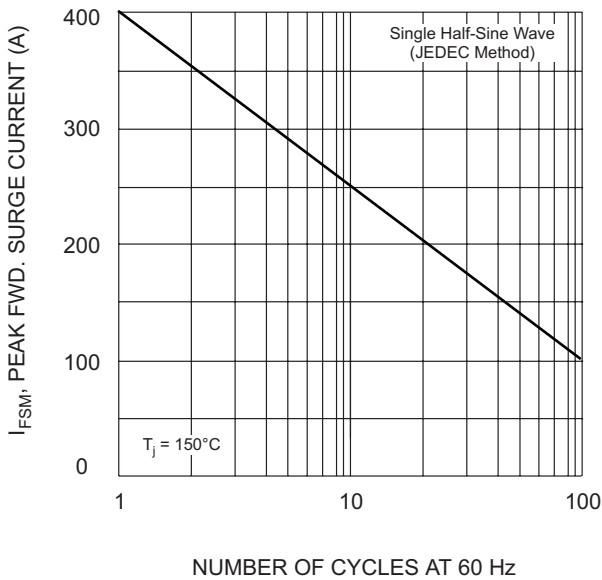


Fig. 3 Max Non-Repetitive Surge Current

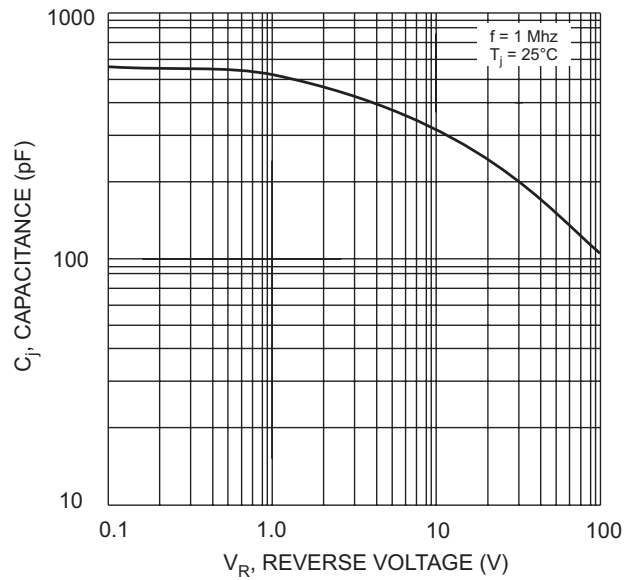


Fig. 4 Typical Junction Capacitance (per element)

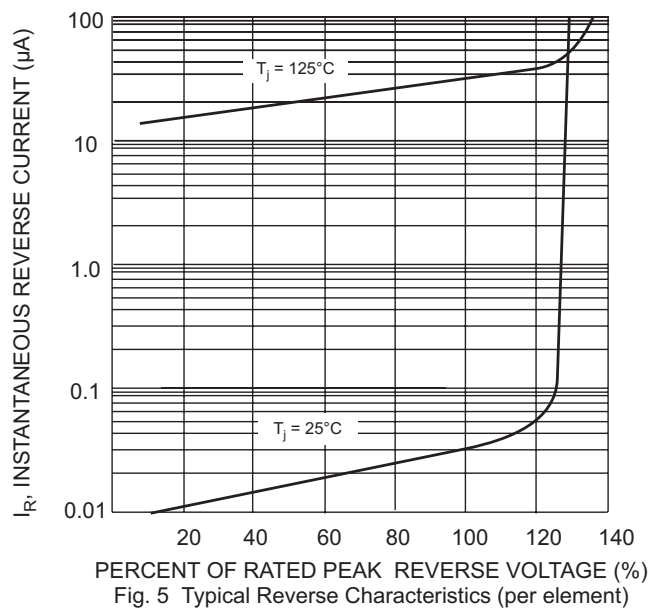


Fig. 5 Typical Reverse Characteristics (per element)

## MARKING INFORMATION



WTE = Manufacturer's Logo  
 GBPC40xxS = Device Number  
 xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16  
 Polarity = As Marked on Body

## PACKAGING INFORMATION

### BULK

Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
195 x 195 x 40	80	405 x 205 x 240	800	17.0

**Note:** 1. Paper box, white or brown color.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
GBPC4000S	SIL Bridge	80 Units/Box
GBPC4001S	SIL Bridge	80 Units/Box
GBPC4002S	SIL Bridge	80 Units/Box
GBPC4004S	SIL Bridge	80 Units/Box
GBPC4006S	SIL Bridge	80 Units/Box
GBPC4008S	SIL Bridge	80 Units/Box
GBPC4010S	SIL Bridge	80 Units/Box
GBPC4012S	SIL Bridge	80 Units/Box
GBPC4014S	SIL Bridge	80 Units/Box
GBPC4016S	SIL Bridge	80 Units/Box

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, GBPC4000S-LF.**

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**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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