


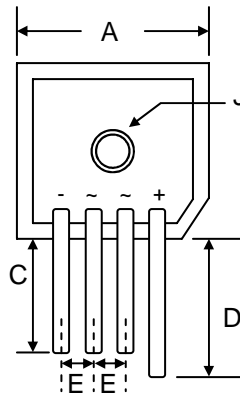
## 40A GLASS PASSIVATED HIGH CURRENT SINGLE-PHASE BRIDGE RECTIFIER

### Features

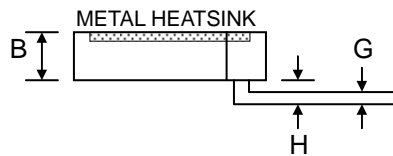
- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
-  Recognized File # E157705

### 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		

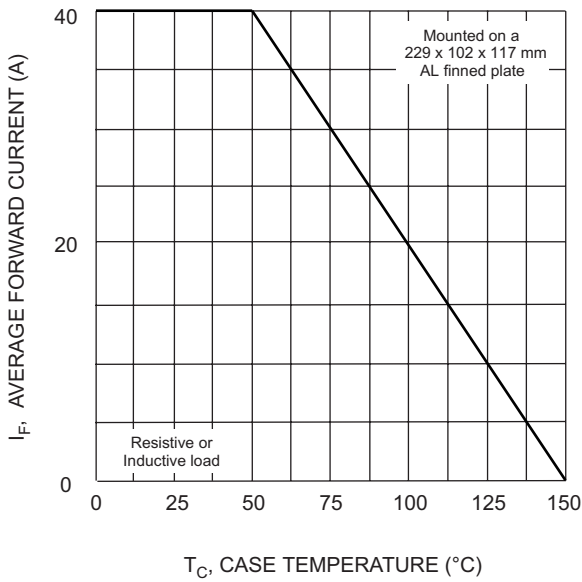


### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

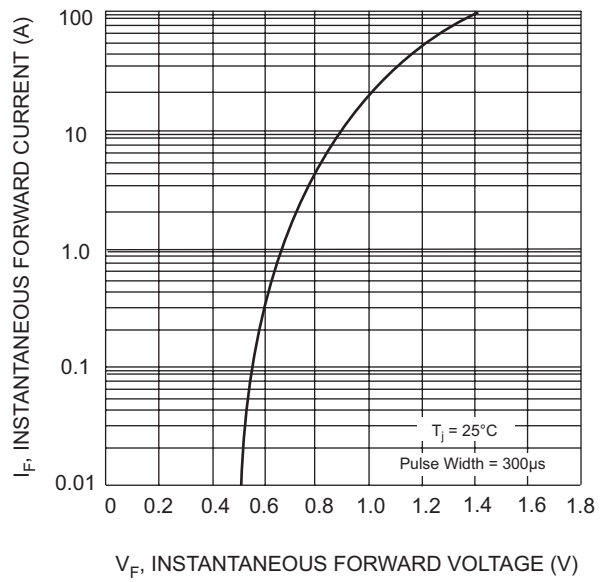
Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	GBPC40										Unit
		00S	01S	02S	04S	06S	08S	10S	12S	14S	16S	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>VRWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	1200	1400	1600	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	840	980	1120	V
Average Rectified Output Current @T <sub>C</sub> = 50°C	I <sub>O</sub>	40										A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400										A
Forward Voltage per leg @I <sub>F</sub> = 20A	V <sub>FM</sub>	1.1										V
Peak Reverse Current @T <sub>C</sub> = 25°C At Rated DC Blocking Voltage @T <sub>C</sub> = 125°C	I <sub>RM</sub>	5.0 500										μA
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	660										A <sup>2</sup> s
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	400										pF
Typical Thermal Resistance per leg (Note 2)	R <sub>θJC</sub>	1.4										°C/W
RMS Isolation Voltage from Case to Leads	V <sub>ISO</sub>	2500										V
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150										°C

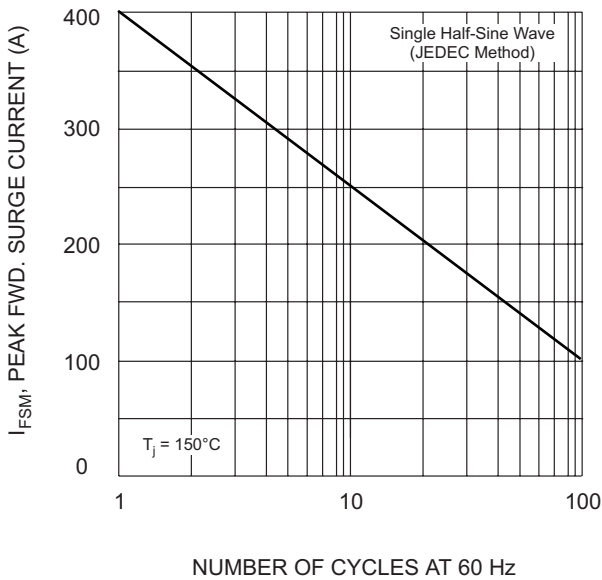
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Mounted on 229 x 102 x 117mm Al. finned plate.



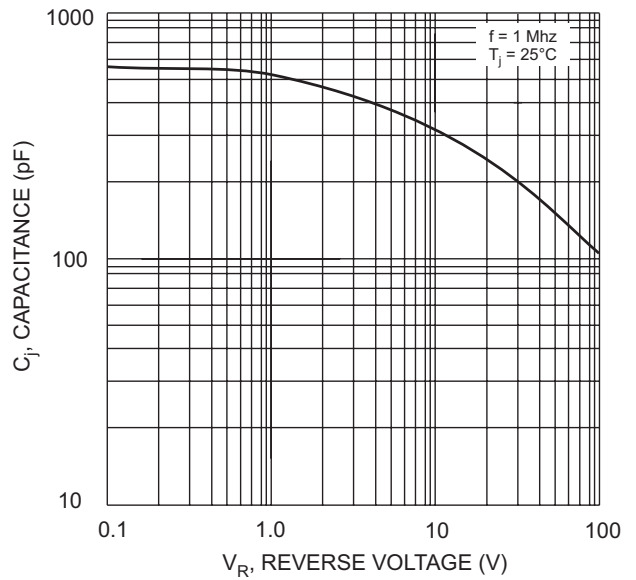
$T_C$ , CASE TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



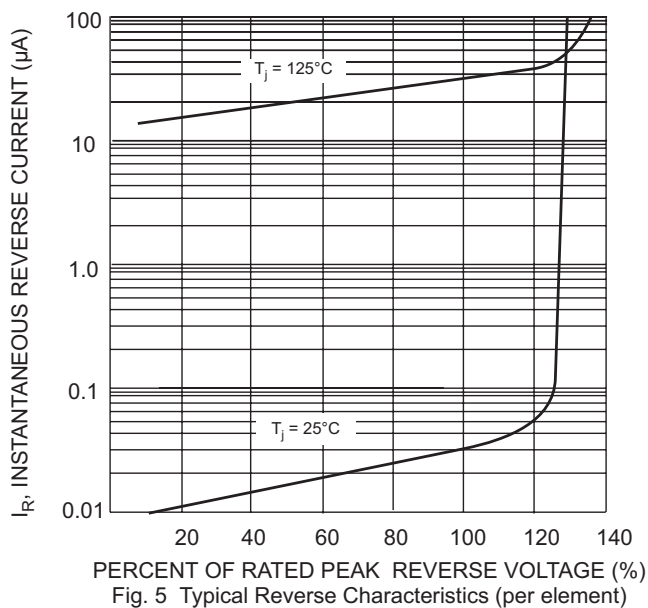
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Surge Current

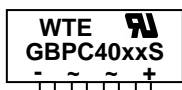


$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
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	78	405 x 205 x 240	780	17.0

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

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
GBPC4000S	SIL Bridge	78 Units/Box
GBPC4001S	SIL Bridge	78 Units/Box
GBPC4002S	SIL Bridge	78 Units/Box
GBPC4004S	SIL Bridge	78 Units/Box
GBPC4006S	SIL Bridge	78 Units/Box
GBPC4008S	SIL Bridge	78 Units/Box
GBPC4010S	SIL Bridge	78 Units/Box
GBPC4012S	SIL Bridge	78 Units/Box
GBPC4014S	SIL Bridge	78 Units/Box
GBPC4016S	SIL Bridge	78 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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