


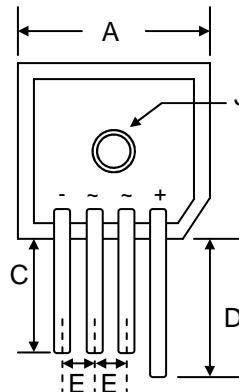
## 25A GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

### Features

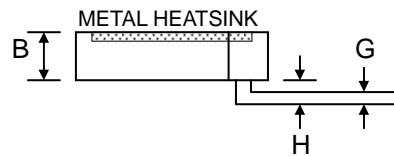
- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
-  Recognized File # E157705

### 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 |                |       |

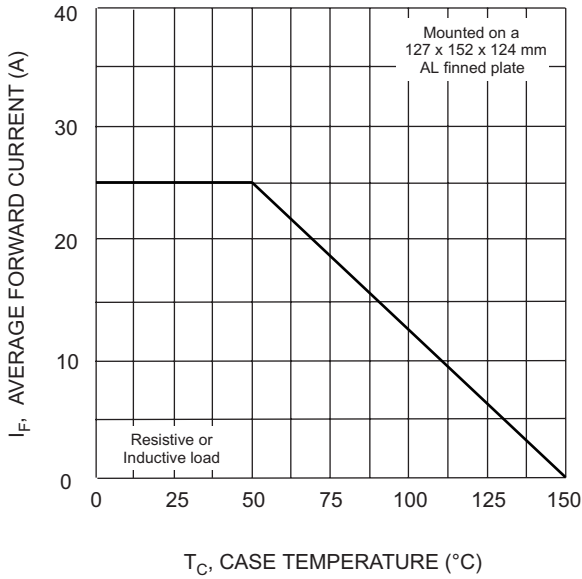


### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

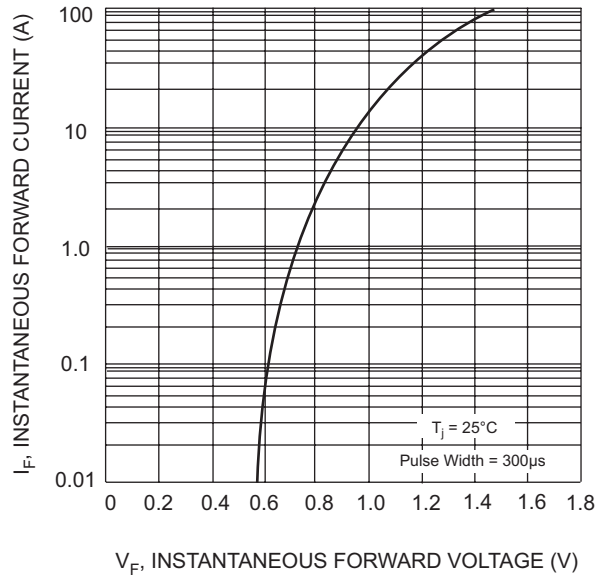
Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic  | Symbol          | GBPC25      |     |     |     |     |     |      |      |      |      | 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 @ $T_C = 50^\circ\text{C}$   | $I_O$           | 25          |     |     |     |     |     |      |      |      |      | A                         |   |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$       | 300         |     |     |     |     |     |      |      |      |      | A                         |   |
| Forward Voltage per leg @ $I_F = 12.5\text{A}$  | $V_{FM}$        | 1.1         |     |     |     |     |     |      |      |      |      | V                         |   |
| Peak Reverse Current @ $T_C = 25^\circ\text{C}$<br>At Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$           | $I_{RM}$        | 5.0<br>500  |     |     |     |     |     |      |      |      |      | $\mu\text{A}$             |   |
| $I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )   | $I^2t$          | 375         |     |     |     |     |     |      |      |      |      | $\text{A}^2\text{s}$      |   |
| Typical Junction Capacitance (Note 1)   | $C_j$           | 300         |     |     |     |     |     |      |      |      |      | pF                        |   |
| Typical Thermal Resistance per leg (Note 2)   | $R_{\theta JC}$ | 1.9         |     |     |     |     |     |      |      |      |      | $^\circ\text{C}/\text{W}$ |   |
| RMS Isolation Voltage from Case to Leads  | $V_{ISO}$       | 2500        |     |     |     |     |     |      |      |      |      | V                         |   |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$  | -65 to +150 |     |     |     |     |     |      |      |      |      | $^\circ\text{C}$          |   |

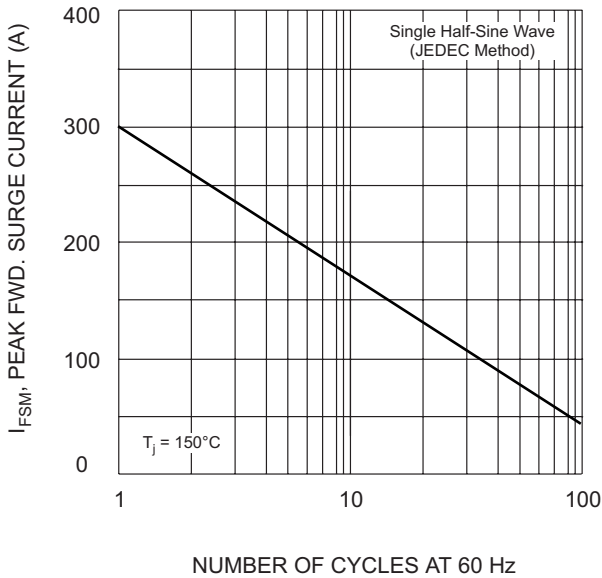
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Mounted on 127 x 152 x 124mm Al. finned plate.



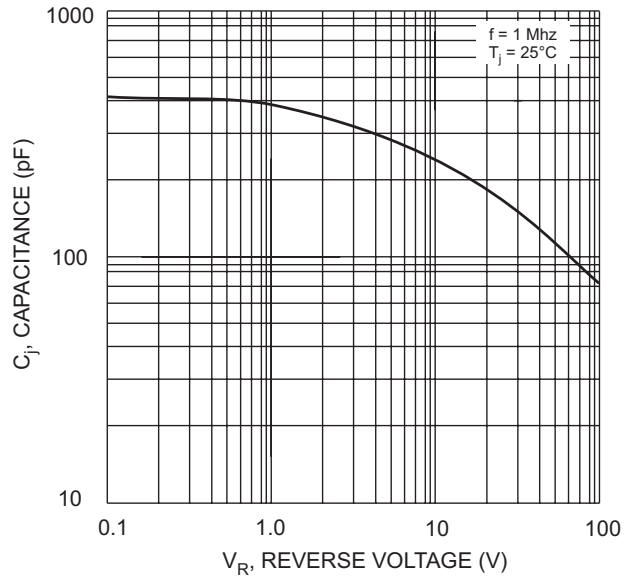
$T_C$ , CASE TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



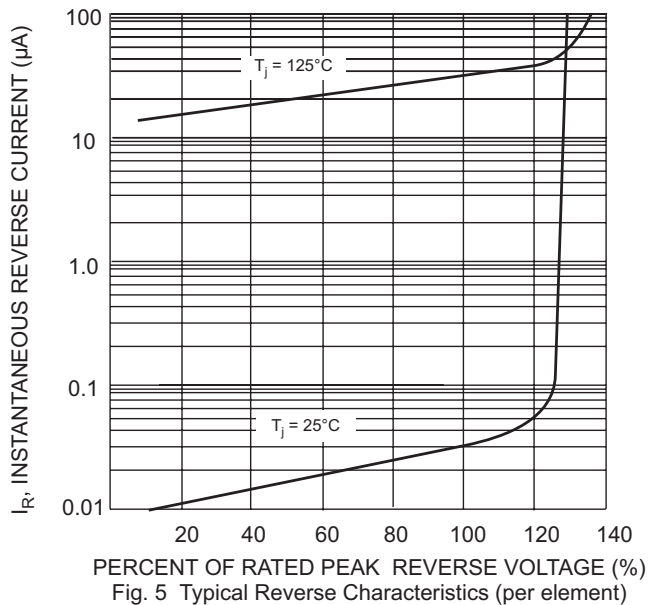
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics (per element)



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

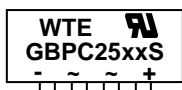


$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 5 Typical Reverse Characteristics (per element)

## MARKING INFORMATION



WTE = Manufacturer's Logo  
 GBPC25xxS = 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<br>L x W x H (mm) | Quantity<br>(PCS) | Carton Size<br>L x W x H (mm) | Quantity<br>(PCS) | Approx. Gross Weight<br>(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 |
|-------------|--------------|-------------------|
| GBPC2500S   | SIL Bridge   | 78 Units/Box      |
| GBPC2501S   | SIL Bridge   | 78 Units/Box      |
| GBPC2502S   | SIL Bridge   | 78 Units/Box      |
| GBPC2504S   | SIL Bridge   | 78 Units/Box      |
| GBPC2506S   | SIL Bridge   | 78 Units/Box      |
| GBPC2508S   | SIL Bridge   | 78 Units/Box      |
| GBPC2510S   | SIL Bridge   | 78 Units/Box      |
| GBPC2512S   | SIL Bridge   | 78 Units/Box      |
| GBPC2514S   | SIL Bridge   | 78 Units/Box      |
| GBPC2516S   | 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, GBPC2500S-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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