

## Glass Passivated Bridge Rectifiers

### FEATURES

- Glass passivated junction
- Integrally molded heatsink provide very low thermal resistance for maximum heat dissipation
- Typical  $I_R$  less than 0.2μA
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC



**GBPC**



**GBPC-W**



**GBPC-M**



### MECHANICAL DATA

**Case:** GBPC

GBPC-W: Wire structure

GBPC-M: Terminal cathode parallel to anode

Molding compound, UL flammability classification rating 94V-0

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

**Polarity:** Polarity as marked on the body

**Mounting torque:** 20 in-lbs maximum

**Weight:** 16.95 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)            |                    |                                             |     |     |     |     |     |      |      |
|---------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------|-----|-----|-----|-----|-----|------|------|
| PARAMETER                                                                                               | SYMBOL             | 005                                         | 01  | 02  | 04  | 06  | 08  | 10   | UNIT |
| Maximum repetitive peak reverse voltage                                                                 | V <sub>RRM</sub>   | 50                                          | 100 | 200 | 400 | 600 | 800 | 1000 | V    |
| Maximum RMS voltage                                                                                     | V <sub>RMS</sub>   | 35                                          | 70  | 140 | 280 | 420 | 560 | 700  | V    |
| Maximum DC blocking voltage                                                                             | V <sub>DC</sub>    | 50                                          | 100 | 200 | 400 | 600 | 800 | 1000 | V    |
| Maximum average forward rectified current<br>GBPC15<br>GBPC25<br>GBPC35                                 | I <sub>F(AV)</sub> | 15<br>25<br>35                              |     |     |     |     |     |      | A    |
| Peak forward surge current,8.3 ms<br>single half sine-wave superimposed<br>on rated load (JEDEC method) | I <sub>FSM</sub>   | 300<br>300<br>400                           |     |     |     |     |     |      | A    |
| Maximum instantaneous<br>forward voltage drop per<br>element at specified current<br>(Note 1)           | V <sub>F</sub>     | GBPC15 7.5A<br>GBPC25 12.5A<br>GBPC35 17.5A | 1.1 |     |     |     |     |      | V    |
| Maximum reverse current @ Rated VR @ T <sub>J</sub> =25°C                                               | I <sub>R</sub>     | 5                                           |     |     |     |     |     |      | μA   |
| Typical thermal resistance                                                                              | R <sub>θJC</sub>   | 1.5                                         |     |     |     |     |     |      | °C/W |
| Operating junction temperature range                                                                    | T <sub>J</sub>     | - 55 to +150                                |     |     |     |     |     |      | °C   |
| Storage temperature range                                                                               | T <sub>STG</sub>   | - 55 to +150                                |     |     |     |     |     |      | °C   |

Note 1: Pulse test with PW=300μs, 1% duty cycle

| ORDERING INFORMATION |              |         |         |
|----------------------|--------------|---------|---------|
| PART NO.             | PACKING CODE | PACKAGE | PACKING |
| GBPC*5xx<br>(Note 1) | T0           | GBPC    | Tray    |

Note 1: "\*" defines current from 15A (GBPC15xx) to 35A (GBPC35xx),  
"xx" defines voltage from 50V (GBPC\*5005) to 1000V (GBPC\*510)

| EXAMPLE       |          |              |             |
|---------------|----------|--------------|-------------|
| PREFERRED P/N | PART NO. | PACKING CODE | DESCRIPTION |
| GBPC1510 T0   | GBPC1510 | T0           |             |

## RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

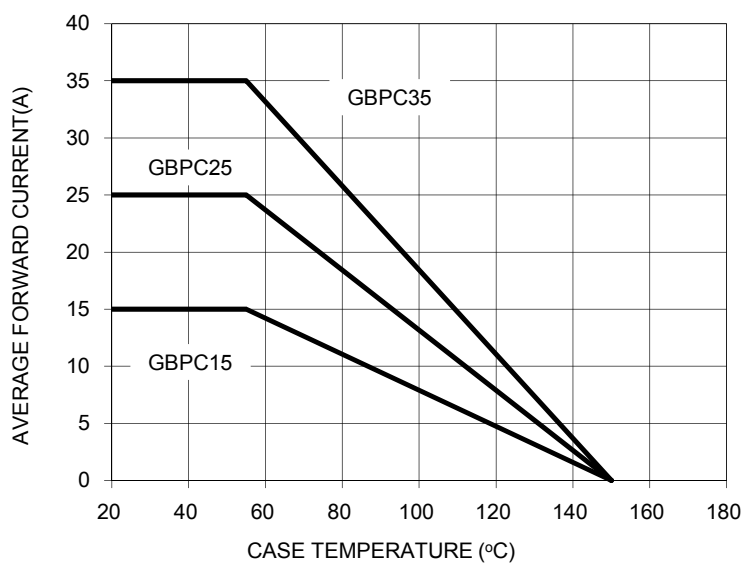


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

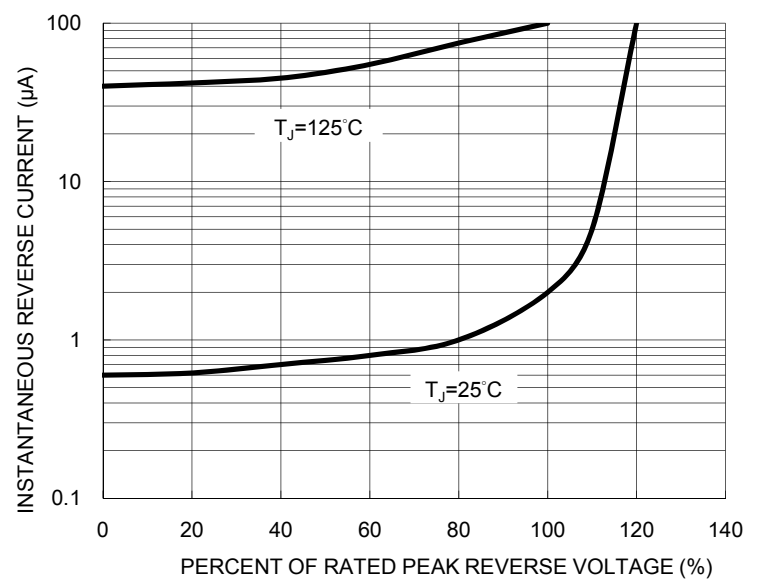


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

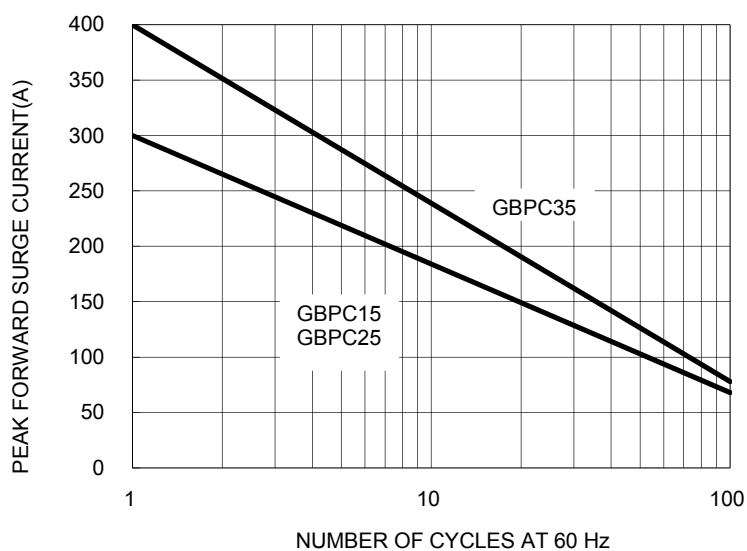


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

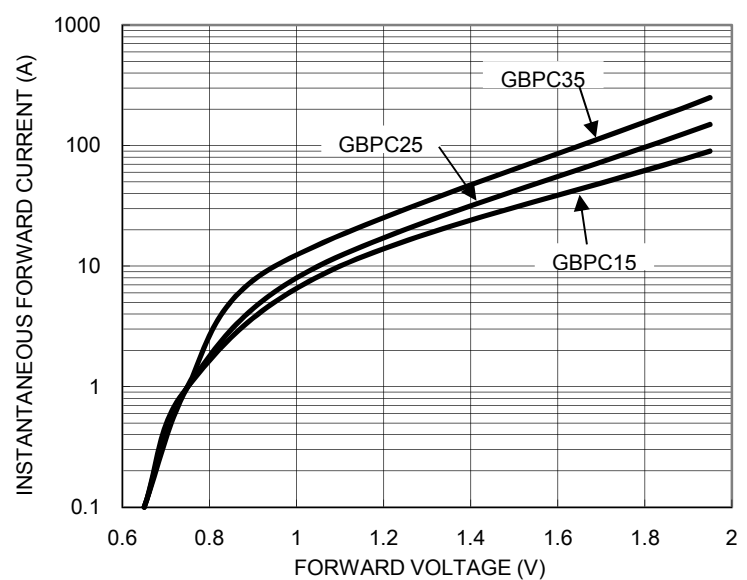
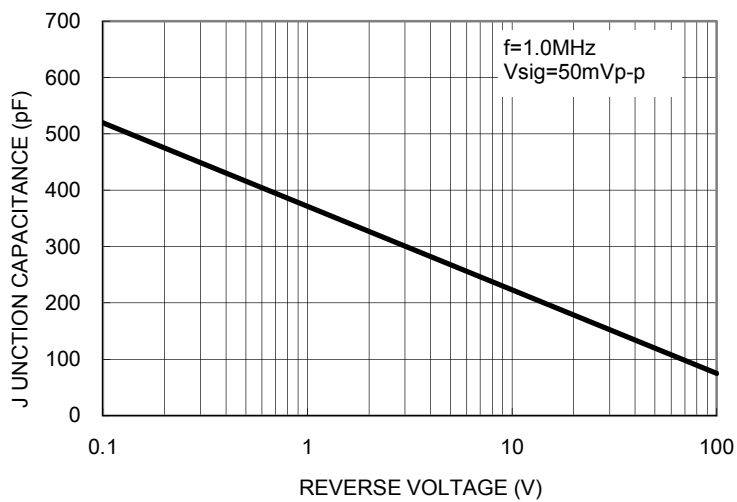
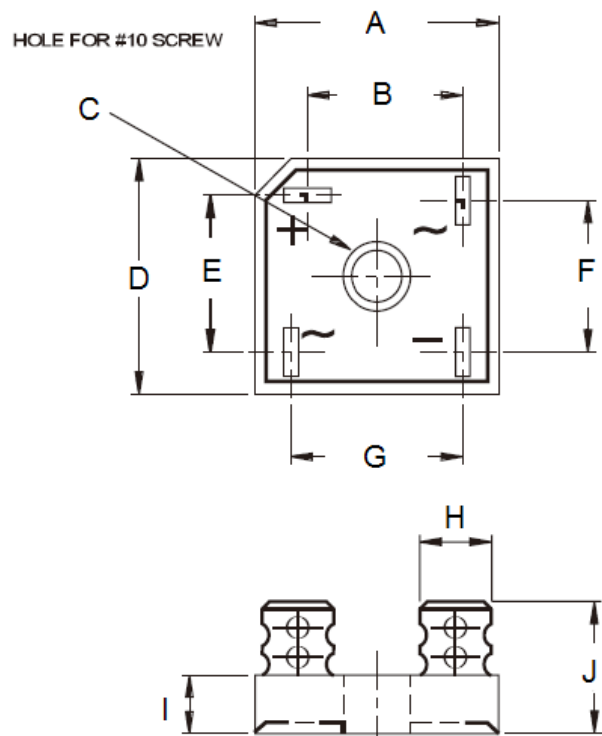


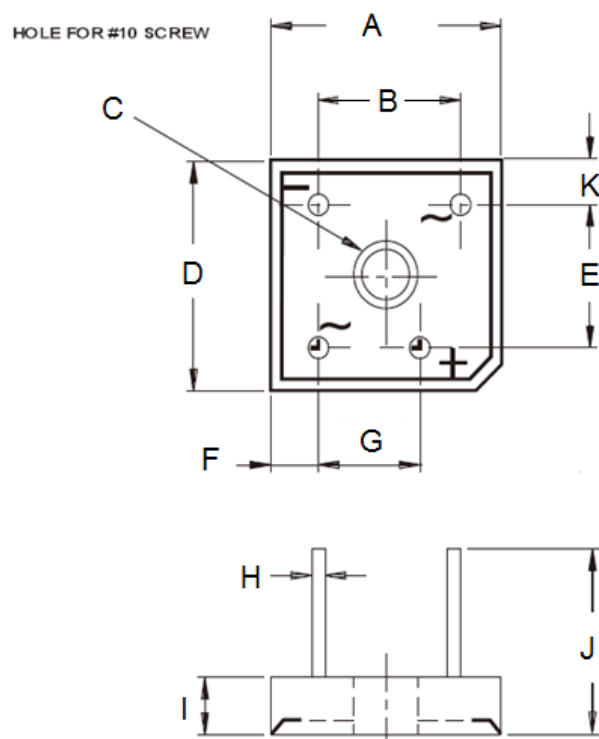
FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

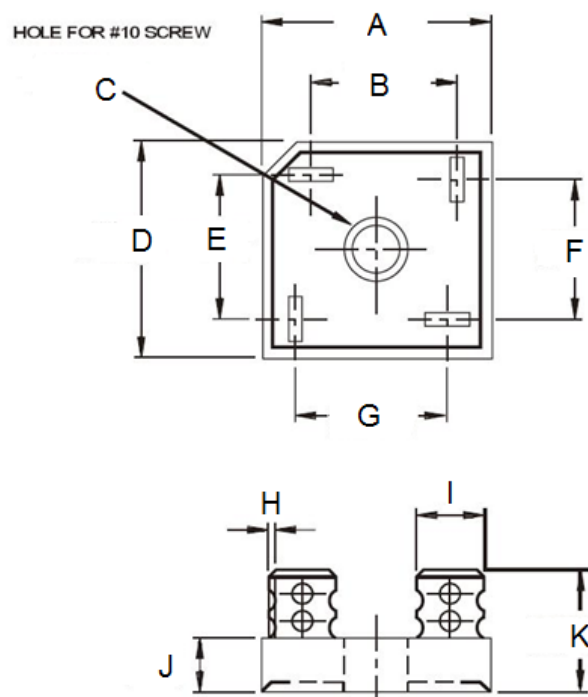


| GBPC |            |       |             |       |
|------|------------|-------|-------------|-------|
| DIM. | Unit (mm)  |       | Unit (inch) |       |
|      | Min        | Max   | Min         | Max   |
| A    | 28.50      | 29.00 | 1.122       | 1.142 |
| B    | 15.50      | 17.60 | 0.610       | 0.693 |
| C    | 5.08       | 5.59  | 0.200       | 0.220 |
| D    | 28.50      | 29.00 | 1.122       | 1.142 |
| E    | 15.50      | 17.60 | 0.610       | 0.693 |
| F    | 13.30      | 15.30 | 0.524       | 0.602 |
| G    | 17.10      | 19.10 | 0.673       | 0.752 |
| H    | 6.35 (TYP) |       | 0.25 (TYP)  |       |
| I    | 10.97      | 11.23 | 0.432       | 0.442 |
| J    | 21.50      | 24.50 | 0.846       | 0.965 |



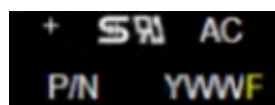
| GBPC-W |           |       |             |       |
|--------|-----------|-------|-------------|-------|
| DIM.   | Unit (mm) |       | Unit (inch) |       |
|        | Min       | Max   | Min         | Max   |
| A      | 28.50     | 29.00 | 1.122       | 1.142 |
| B      | 17.10     | 19.10 | 0.673       | 0.752 |
| C      | 5.08      | 5.59  | 0.200       | 0.220 |
| D      | 28.50     | 29.00 | 1.122       | 1.142 |
| E      | 17.10     | 19.10 | 0.673       | 0.752 |
| F      | 4.40      | 6.20  | 0.173       | 0.244 |
| G      | 10.40     | 12.40 | 0.409       | 0.488 |
| H      | 0.97      | 1.07  | 0.038       | 0.042 |
| I      | 10.97     | 11.23 | 0.432       | 0.442 |
| J      | 30.50     | -     | 1.201       | -     |
| K      | 4.40      | 6.20  | 0.173       | 0.244 |

PACKAGE OUTLINE DIMENSIONS



| GBPC-M |           |       |             |       |
|--------|-----------|-------|-------------|-------|
| DIM.   | Unit (mm) |       | Unit (inch) |       |
|        | Min       | Max   | Min         | Max   |
| A      | 28.50     | 29.00 | 1.122       | 1.142 |
| B      | 15.50     | 17.60 | 0.610       | 0.693 |
| C      | 5.08      | 5.59  | 0.200       | 0.220 |
| D      | 28.50     | 29.00 | 1.122       | 1.142 |
| E      | 15.50     | 17.60 | 0.610       | 0.693 |
| F      | 15.50     | 17.60 | 0.610       | 0.693 |
| G      | 15.50     | 17.60 | 0.610       | 0.693 |
| H      | 0.76      | 0.86  | 0.030       | 0.034 |
| I      | 6.6 (TYP) |       | 0.26 (TYP)  |       |
| J      | 10.97     | 11.23 | 0.432       | 0.442 |
| K      | 21.26     | 24.57 | 0.837       | 0.967 |

MARKING DIAGRAM



P/N = Specific Device Code  
YWW = Date Code  
F = Factory Code

### Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9