

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 0.2 μ A
- 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 ($T_A=25^\circ\text{C}$ unless otherwise noted) | | | | | | | | | |
|--|-----------------|---|-----|-----|-------------------|-----|-----|------|--------------------|
| PARAMETER | SYMBOL | 005 | 01 | 02 | 04 | 06 | 08 | 10 | UNIT |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current GBPC15 GBPC25 GBPC35 | $I_{F(AV)}$ | | | | 15 25 35 | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | | | | 300 300 400 | | | | A |
| Maximum instantaneous forward voltage drop per element at specified current (Note 1) | V_F | GBPC15 7.5A GBPC25 12.5A GBPC35 17.5A | | | 1.1 | | | | V |
| Maximum reverse current @ Rated VR @ $T_J=25^\circ\text{C}$ | I_R | | | | 5 | | | | μA |
| Typical thermal resistance | $R_{\theta JC}$ | | | | 1.5 | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | | | | - 55 to +150 | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | | | | - 55 to +150 | | | | $^\circ\text{C}$ |

Note 1: Pulse test with $PW=300\mu\text{s}$, 1% duty cycle

ORDERING INFORMATION

| PART NO. | PACKING CODE | PACKAGE | PACKING |
|----------------------|--------------|---------|---------|
| GBPC*5xx (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

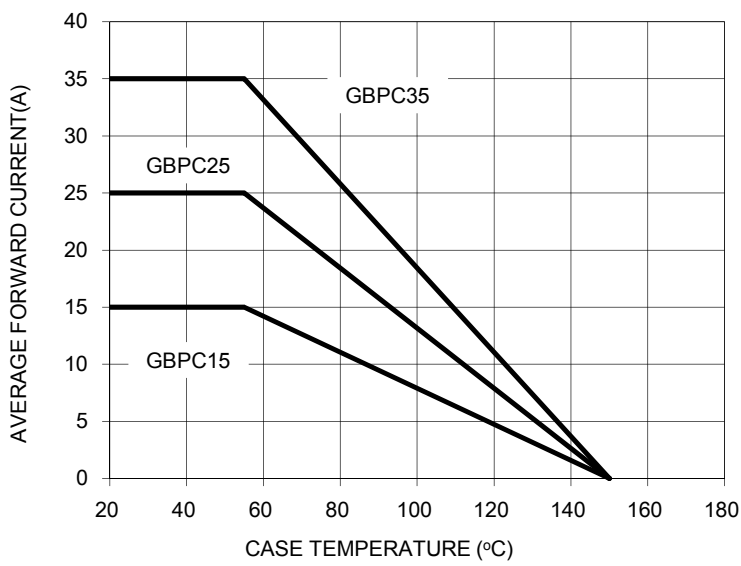


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

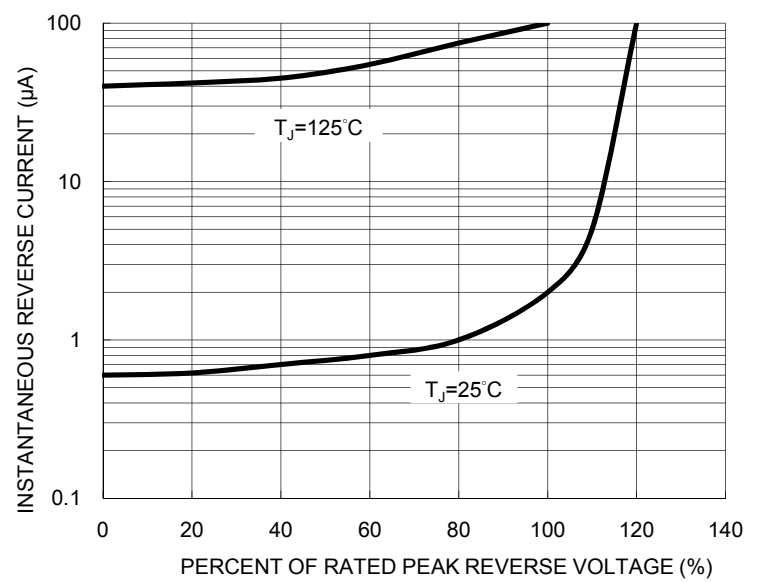


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG. 4 TYPICAL FORWARD CHARACTERISTICS

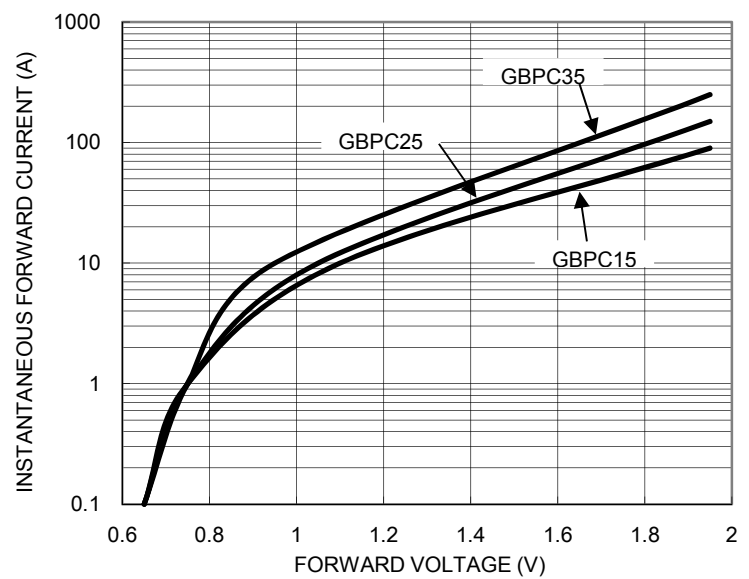


FIG. 5 TYPICAL JUNCTION CAPACITANCE



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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.