

# Bridge Rectifier

## **GBPC110**

1000V / 4A

# DATASHEET

from

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OEM – General Semiconductor

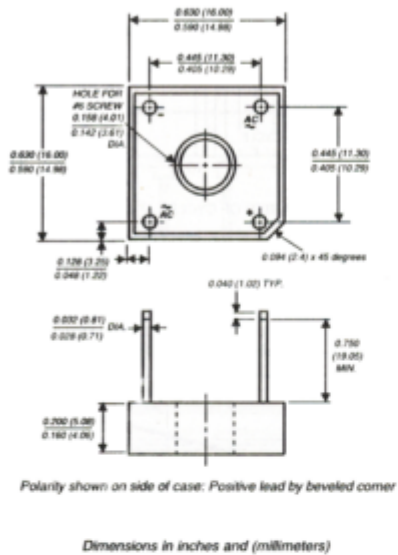
Source: General Semiconductor Databook 1998

# GBPC1005 THRU GBPC110

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

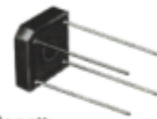
Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

### Case Style GBPC1



### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ This series is UL listed under Recognized Component Index, file number E54214
- ◆ Glass passivated chip junctions
- ◆ High case dielectric with standing voltage of 1500 VRMS
- ◆ Typical  $I_R$  less than  $0.1\mu A$
- ◆ High surge current capability
- ◆ Ideal for printed circuit boards
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** Molded plastic body over passivated junctions

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Mounting Position:** Any (NOTE 1)

**Mounting Torque:** 5.0 in. - lb. max.

**Weight:** 0.1 ounce, 2.8 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	GBPC 1005	GBPC 101	GBPC 102	GBPC 104	GBPC 106	GBPC 108	GBPC 110	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts	
Maximum RMS bridge input voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts	
Maximum average forward rectified output current at $T_C=60^\circ C$ (NOTE 2) $T_A=25^\circ C$ (NOTE 3)	$I_{(AV)}$	3.0						2.0		Amps
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_C=60^\circ C$	$I_{FSM}$	60.0								Amps
Rating for fusing (t<8.3ms)	$I^2t$	15.0								A <sup>2</sup> sec
Maximum instantaneous forward voltage drop per leg at 1.5 Amperes	$V_F$	1.0								Volts
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ C$ $T_A=125^\circ C$	$I_R$	5.0						500.0		$\mu A$
Typical junction capacitance per leg (NOTE 4)	$C_J$	21.0								pF
Typical thermal resistance per leg (NOTE 2)	$R_{\theta JA}$ $R_{\theta JC}$	12.0						8.0		$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150								$^\circ C$

**NOTES:**

(1) Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer with #6 screw

(2) Unit mounted on 4.0 x 4.0 x 0.11" thick (10.5 x 10.5 x 0.3cm) Al. Plate

(3) Unit mounted on P.C.B. at 0.375" (9.5mm) lead length with 0.5 x 0.5" (12 x 12mm) copper pads

(4) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

**RATINGS AND CHARACTERISTICS CURVES GBPC1005 THRU GBPC110**

