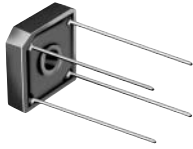




# GBPC1005 THRU GBPC110

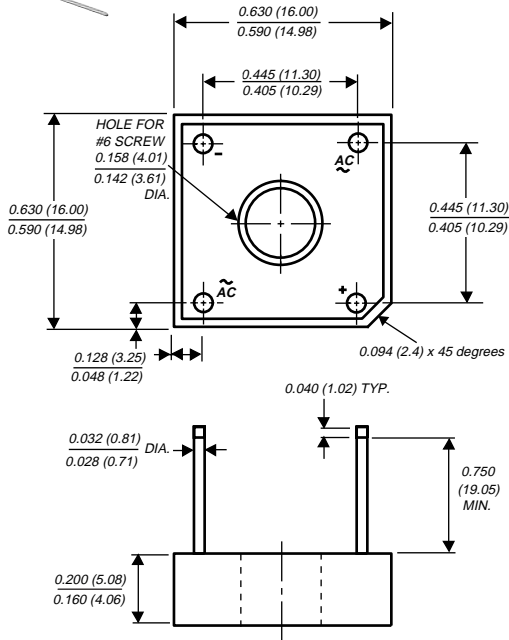
Vishay Semiconductors  
formerly General Semiconductor



## Glass Passivated Single-Phase Bridge Rectifier

Rectifier Reverse Voltage 50 and 1000 V  
Rectifier Forward Current 3.0 A

Case Style GBPC1



Polarity shown on side of case: Positive lead by beveled corner

Dimensions in inches and (millimeters)

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- Glass passivated chip junction
- 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:  $260^\circ C/10$  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)

**Weight:** 0.1 oz., 2.8 g

**Packaging codes/options:** 1/100 EA. per Bulk Box

## Maximum Ratings & Thermal 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	V
Maximum RMS bridge input 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 output current at $T_C=60^\circ C$ <sup>(2)</sup> $T_A=25^\circ C$ <sup>(3)</sup>	$I_{F(AV)}$	3.0 2.0						A	
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_C=60^\circ C$	$I_{FSM}$	60						A	
Rating for fusing ( $t < 8.3ms$ )	$I^2t$	15						$A^2sec$	
Typical thermal resistance per leg (NOTE 1)	$R_{\theta JA}$ $R_{\theta JC}$	12 8.0						$^\circ C/W$	
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150						$^\circ C$	

## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage drop per leg at 1.5 Amperes	$V_F$	1.0						V
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						$\mu A$
Typical junction capacitance per leg at 4.0V, 1MHz	$C_J$	21						pF

### 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

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## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)