

Bridge Rectifier

GBPC101

100V / 4A

DATASHEET

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OEM – General Semiconductor

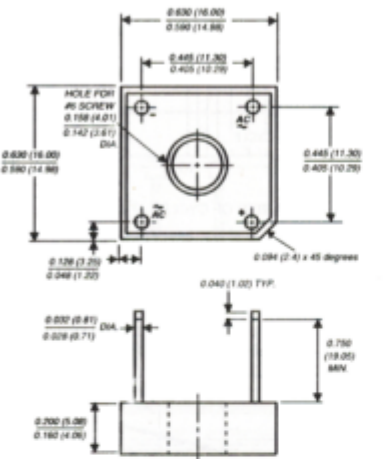
Source: General Semiconductor Databook 1998

GBPC1005 THRU GBPC110

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

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

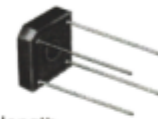
Case Style GBPC1



Dimensions in inches and (millimeters)

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: $260^\circ C/10$ 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)
Mounting Torque: 5.0 in. - lb. max.
Weight: 0.1 ounce, 2.8 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $25^\circ C$ 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				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_t				15.0				A ² 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				μA
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				$^\circ C/W$
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 $4.0 \times 4.0 \times 0.11"$ thick ($10.5 \times 10.5 \times 0.3cm$) Al. Plate
- (3) Unit mounted on P.C.B. at $0.375"$ (9.5mm) lead length with $0.5 \times 0.5"$ ($12 \times 12mm$) copper pads
- (4) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

RATINGS AND CHARACTERISTICS CURVES GBPC1005 THRU GBPC110

