

Bridge Rectifier

GBPC601

100V / 6A

DATASHEET

from

www.web-bcs.com

OEM – General Semiconductor

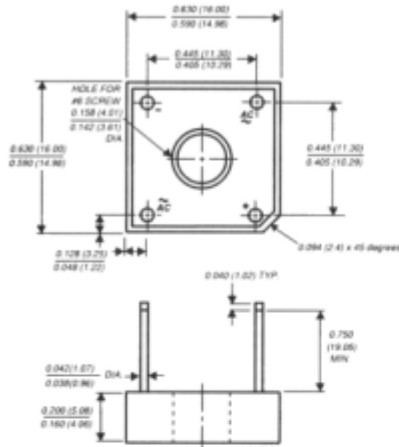
Source: General Semiconductor Databook 1998

GBPC6005 THRU GBPC610

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes

Case Style GBPC

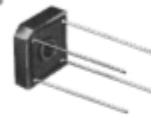


Polarity shown on side of case: Positive lead by beveled corner

Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ This series is UL listed under recognized under Component Index, file number E54214
- ◆ Glass passivated chip junctions
- ◆ High case dielectric strength of 1500 VRMS
- ◆ Typical I_R less than 0.5 μ A
- ◆ High forward surge current capability
- ◆ Ideal for printed circuit boards
- ◆ High temperature soldering guaranteed: 260°C/10 seconds at 5lbs. (2.3 kg) tension



MECHANICAL DATA

Case: Molded plastic body over passivated junction
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 6005	GBPC 601	GBPC 602	GBPC 604	GBPC 606	GBPC 608	GBPC 610	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	VDC	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified output current at $T_C=50^\circ\text{C}$ (NOTE 1, 2) and $T_A=40^\circ\text{C}$ (NOTE 3)	$I_{(AV)}$					6.0			Amps
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}					175.0			Amps
Rating for fusing ($t < 8.3\text{ms}$)	I^2t					127.0			A ² sec
Maximum instantaneous forward voltage drop per leg at 3.0 Amperes	V_F					1.0			Volts
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ and $T_A=125^\circ\text{C}$	I_R					5.0			μ A
Typical junction capacitance per leg (NOTE 4)	C_J	186.0				90.0			pF
Typical thermal resistance per leg (NOTE 3) (NOTE 2)	$R_{\theta JA}$ $R_{\theta JC}$					22.0			$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J					-55 to +150			$^\circ\text{C}$
Storage temperature range	T_{STG}					-55 to +150			$^\circ\text{C}$

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 5.5 x 6.0 x 0.11" thick (14 x 15 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 MHz and applied reverse voltage of 4.0 Volts

RATINGS AND CHARACTERISTICS CURVES GBPC6005 THRU GBPC610

