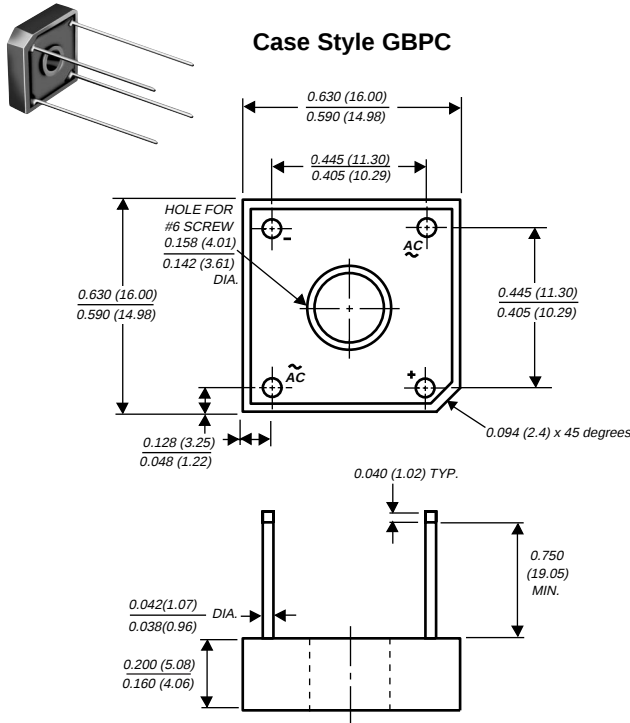


Glass Passivated Single-Phase Bridge Rectifier

Reverse Voltage 50 and 1000 V
Forward Current 6.0 A



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 0.5 μ A
- High forward surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds at 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 & Thermal 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	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 $T_C=50^\circ\text{C}$ (NOTE 1, 2) $T_A=40^\circ\text{C}$ (NOTE 3)	$I_F(AV)$	6.0 3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175							A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	127							A ² sec
Typical thermal resistance per leg (NOTE 1)	$R_{\theta JA}$ $R_{\theta JC}$	22 7.3							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

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 instantaneous forward voltage drop per leg at 3.0 A	V_F	1.0							V
Maximum DC reverse current at rated $T_A=25^\circ\text{C}$ DC blocking voltage per leg $T_A=125^\circ\text{C}$	I_R	5.0 500							μ A
Typical junction capacitance per leg at 4.0V, 1MHz	C_J	186				90			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 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

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

