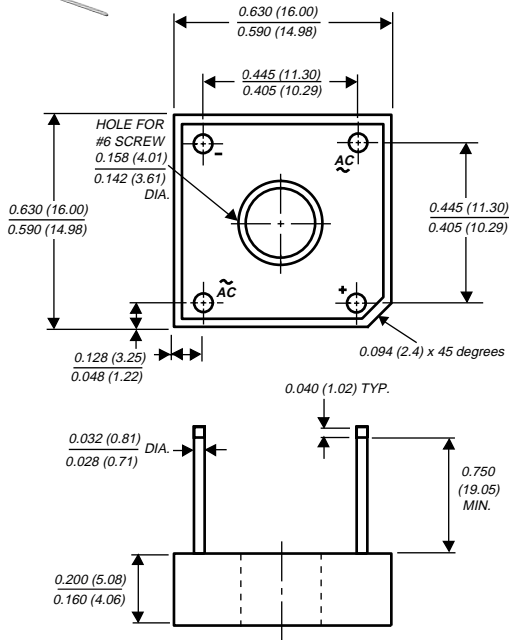


Glass Passivated Single-Phase Bridge Rectifier

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 $T_C=60^\circ C^{(2)}$ $T_A=25^\circ C^{(3)}$	$I_{F(AV)}$	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 ² sec
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							μA
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

Vishay Semiconductors
formerly General Semiconductor

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

Fig. 1 — Derating Curve Output Rectified Current

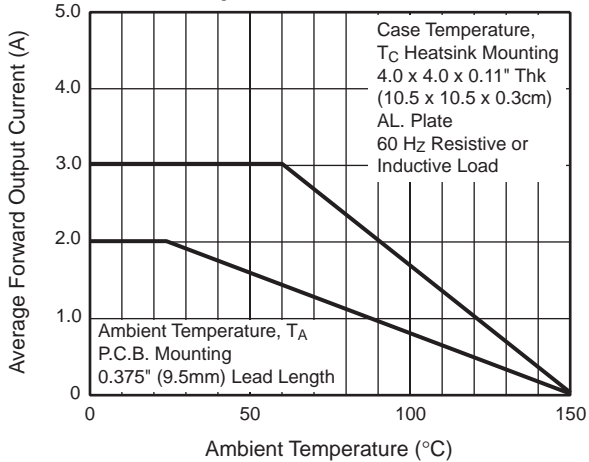


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current Per Leg

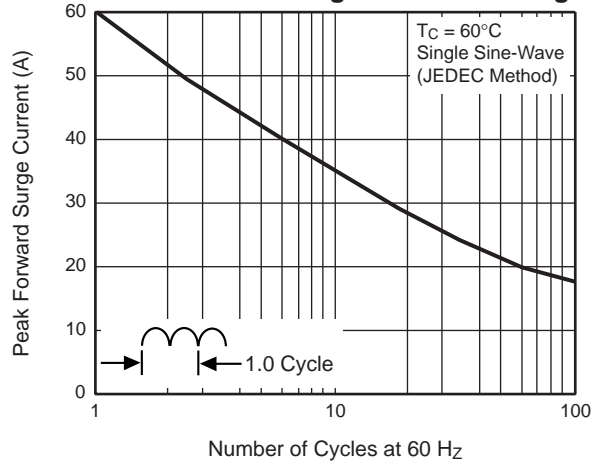


Fig. 3 — Typical Forward Characteristics Per Leg

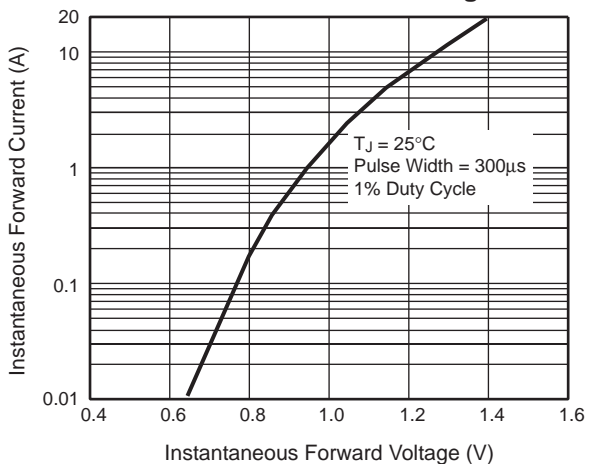


Fig. 4 — Typical Reverse Leakage Characteristics Per Leg

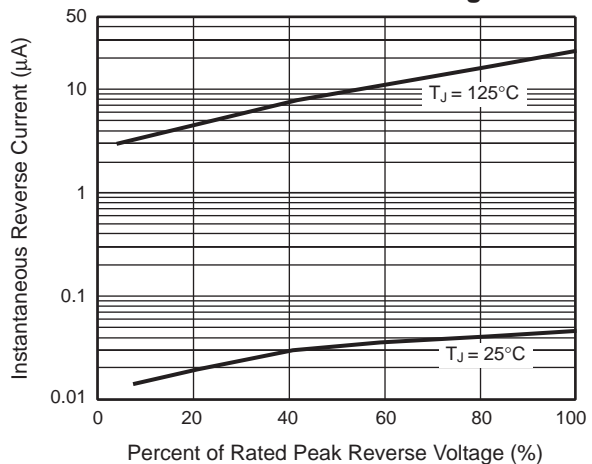


Fig. 5 — Typical Junction Capacitance Per Leg

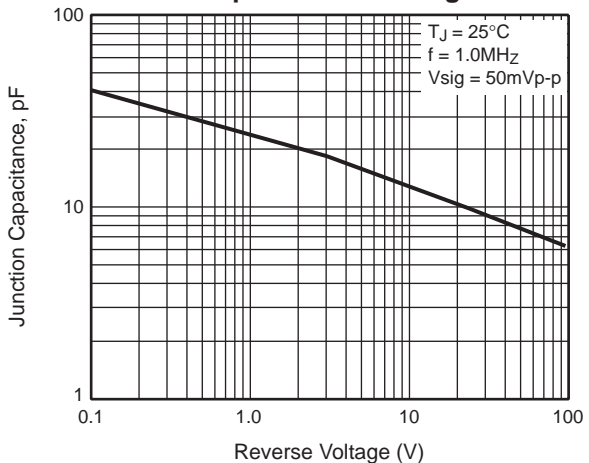


Fig. 6 — Typical Transient Thermal Impedance Per Leg

