



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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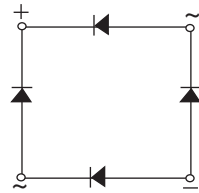
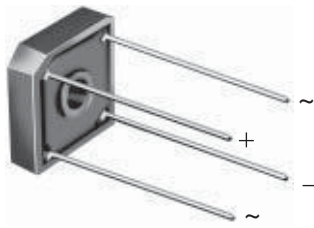
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Glass Passivated Single-Phase Bridge Rectifier



Case Style GBPC1

FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- Typical I_R less than 0.1 μ A
- High case dielectric strength
- High surge current capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

PRIMARY CHARACTERISTICS	
Package	GBPC1
$I_{F(AV)}$	3 A
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V
I_{FSM}	60 A
I_R	5 μ A
V_F at $I_F = 1.5$ A	1.0 V
T_J max.	150 °C
Diode variations	Quad

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

MECHANICAL DATA

Case: GBPC1

Molding compound meets UL 94 V-0 flammability rating Base P/N-E4 - RoHS-compliant, commercial grade

Terminals: Silver plated leads, solderable per J-STD-002 and JESD22-B102

Polarity: As marked, positive lead by beveled corner

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.

Recommended Torque: 5.7 cm-kg (5 inches-lbs)

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)									
PARAMETER	SYMBOL	GBPC 1005	GBPC 101	GBPC 102	GBPC 104	GBPC 106	GBPC 108	GBPC 110	UNIT
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	$I_{F(AV)}$	$T_C = 60$ °C ⁽¹⁾							A
		$T_A = 25$ °C ⁽²⁾							
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	60							A
Rating for fusing ($t < 8.3$ ms)	I^2t	15							A ² s
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150							°C

Notes

⁽¹⁾ Unit mounted on 4.0" x 4.0" x 0.11" thick (10.5 cm x 10.5 cm x 0.3 cm) aluminum plate

⁽²⁾ Unit mounted on P.C.B. at 0.375" (9.5 mm) lead length with 0.5" x 0.5" (12 mm x 12 mm) copper pads



ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)											
PARAMETER	TEST CONDITIONS	SYMBOL	GBPC 1005	GBPC 101	GBPC 102	GBPC 104	GBPC 106	GBPC 108	GBPC 110	UNIT	
Maximum instantaneous forward voltage drop per diode	I _F = 1.5 A	V _F	1.0								V
Maximum DC reverse current at rated DC blocking voltage per diode	T _A = 25 °C	I _R	5.0								μA
	T _A = 125 °C		500								
Typical junction capacitance per diode	4.0 V, 1 MHz	C _J	21								pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	SYMBOL	GBPC 1005	GBPC 101	GBPC 102	GBPC 104	GBPC 106	GBPC 108	GBPC 110	UNIT	
Typical thermal resistance ⁽¹⁾	R _{θJA}	12								°C/W
	R _{θJC}	8.0								

Note

⁽¹⁾ Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer with #6 screw

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
GBPC106-E4/51	2.5	51	100	Paper box

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

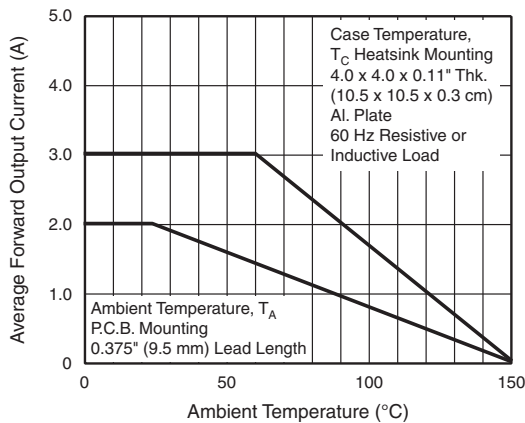


Fig. 1 - Derating Curve Output Rectified Current

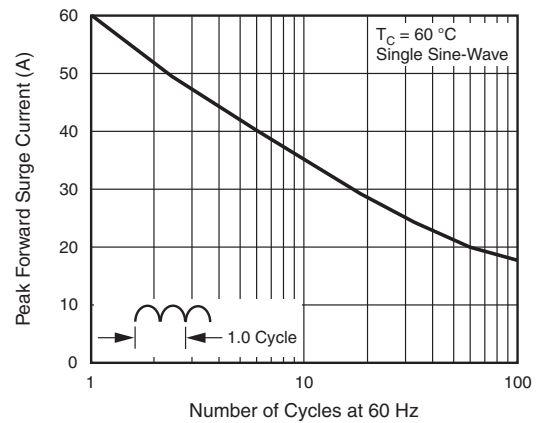


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

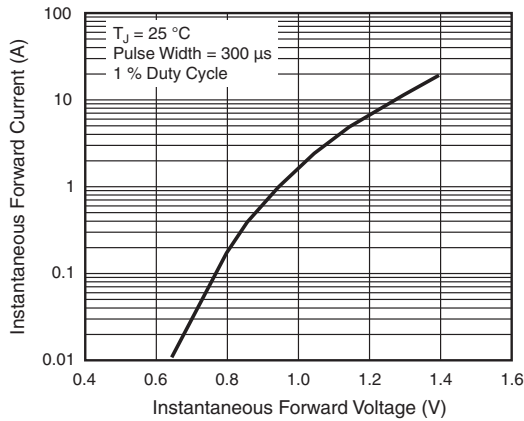


Fig. 3 - Typical Forward Characteristics Per Diode

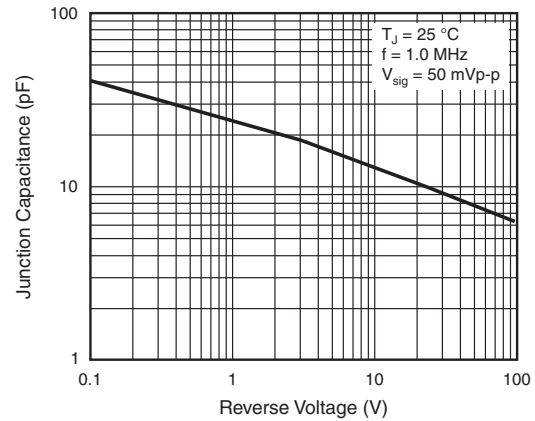


Fig. 5 - Typical Junction Capacitance Per Diode

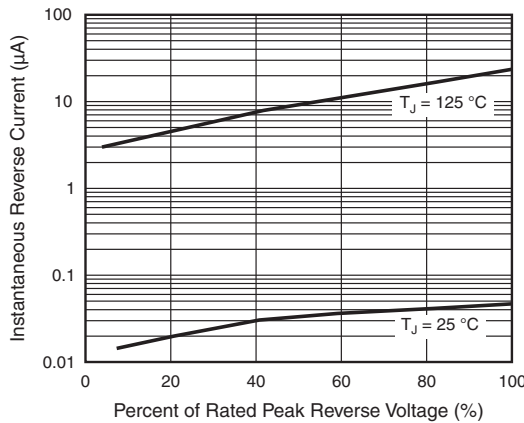


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

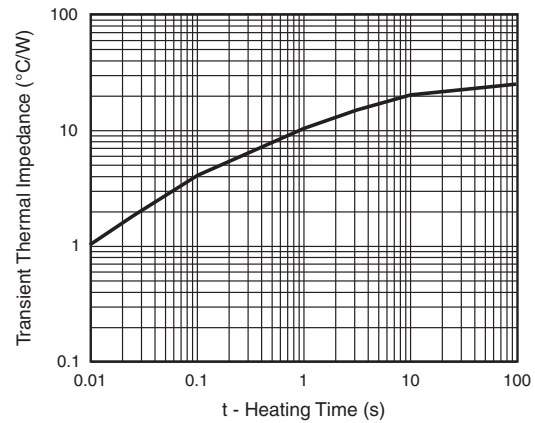
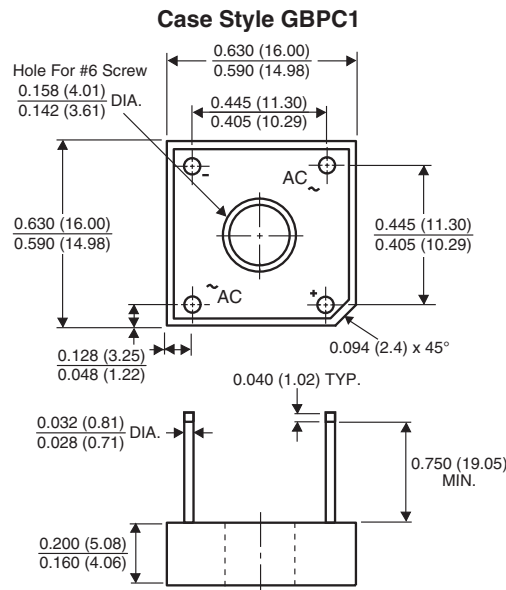


Fig. 6 - Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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



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