



Glass Passivated Single-Phase Bridge Rectifier

Case Type GBL

Reverse Voltage 50 and 1000 V
Forward Current 4.0 A

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 strength
- Typical I_R less than 0.1 μ A
- High surge current capability
- Ideal for printed circuit boards

Mechanical Data

Case: Molded plastic body over passivated junctions
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
 High temperature soldering guaranteed:
 260°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3kg) tension
Mounting Position: Any
Weight: 0.071 oz., 2.0 g
Packaging codes/options:
 1/400 EA. per Bulk Tray Stack

Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GBL 005	GBL 01	GBL 02	GBL 04	GBL 06	GBL 08	GBL 10	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS 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 $T_C=50^\circ C$ $T_A=40^\circ C$	$I_{F(AV)}$	4.0 ⁽¹⁾ 3.0 ⁽²⁾							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_J=150^\circ C$	I_{FSM}	150							A
Rating for fusing ($t < 8.3ms$)	I^2t	93							A ² sec
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JL}$	22 ⁽¹⁾ 3.5 ⁽²⁾							°C/W
Operating junction storage and temperature range	T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward drop per leg at 4.0 Amperes	V_F	1.00							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							μ A
Typical junction capacitance per leg at 4.0V, 1MHz	C_J	95				40			pF

Notes: (1) Unit mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3cm) Al. plate
 (2) Unit mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5 x 0.5" (12 x 12mm) copper pads

GBL005 thru GBL10

Vishay Semiconductors
formerly General Semiconductor



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