

## 4A, 50V - 1000V Standard Bridge Rectifier

### FEATURES

- AEC-Q101 qualified available
- Glass passivated chip junction
- Ideal for printed circuit board
- High case dielectric strength
- Typical IR less than 0.1 $\mu$ A
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

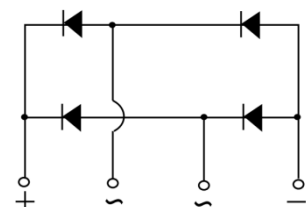
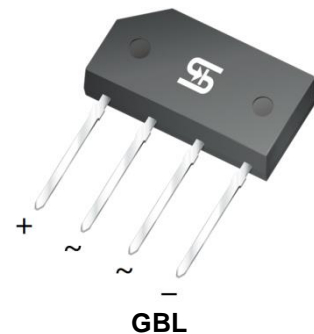
### APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application

### MECHANICAL DATA

- Case: GBL
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 2.00g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_F$	4	A
$V_{RRM}$	50 - 1000	V
$I_{FSM}$	120	A
$T_{J\ MAX}$	150	$^{\circ}$ C
Package	GBL	
Configuration	Quad	



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^{\circ}$ C unless otherwise noted)									
PARAMETER	SYMBOL	GBLA 005	GBLA 01	GBLA 02	GBLA 04	GBLA 06	GBLA 08	GBLA 10	UNIT
Marking code on the device		GBLA 005	GBLA 01	GBLA 02	GBLA 04	GBLA 06	GBLA 08	GBLA 10	
Repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Forward current	$T_C = 50^{\circ}$ C	4							A
	$T_A = 40^{\circ}$ C	3							A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	120							A
Rating for fusing ( $t < 8.3ms$ )	$I^2t$	59							$A^2s$
Junction temperature	$T_J$	- 55 to +150							$^{\circ}$ C
Storage temperature	$T_{STG}$	- 55 to +150							$^{\circ}$ C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>UNIT</b>
Junction-to-lead thermal resistance	$R_{\theta JL}$	10	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	47	°C/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage per diode <sup>(1)</sup>	$I_F = 4\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	5	$\mu\text{A}$
	$T_J = 125^\circ\text{C}$		-	500	$\mu\text{A}$
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	$C_J$	95	-	pF
			40	-	pF

**Notes:**

1. Pulse test with  $PW = 0.3\text{ms}$
2. Pulse test with  $PW = 30\text{ms}$

<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE</b> <sup>(1)(2)</sup>	<b>PACKAGE</b>	<b>PACKING</b>
GBLx	GBL	25 / Tube
GBLxH	GBL	25 / Tube

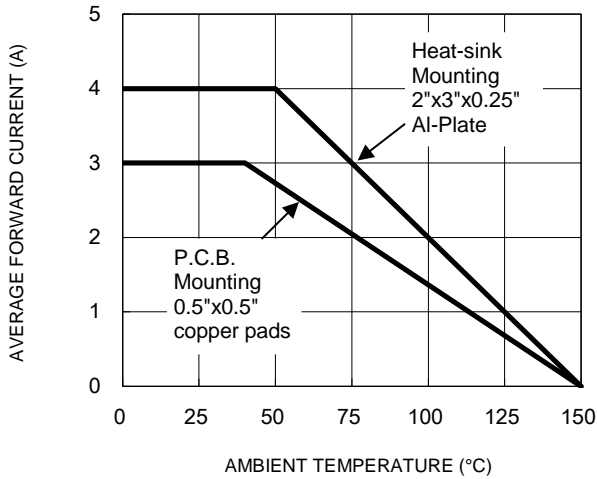
**Notes:**

1. "x" defines voltage from 50V(GBLA005) to 1000V(GBLA10)
2. "H" means AEC-Q101 qualified

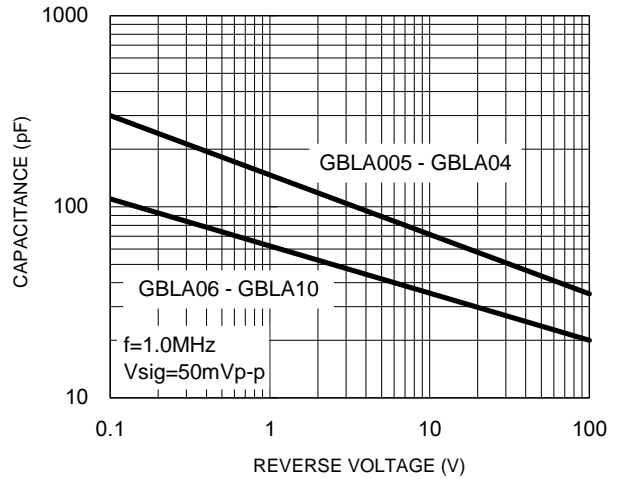
**CHARACTERISTICS CURVES**

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

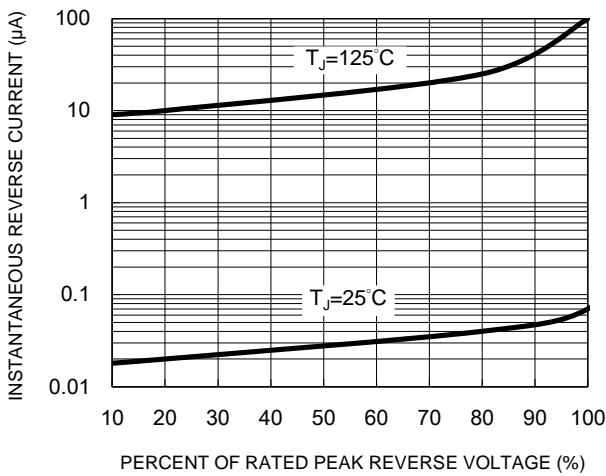
**Fig.1 Forward Current Derating Curve**



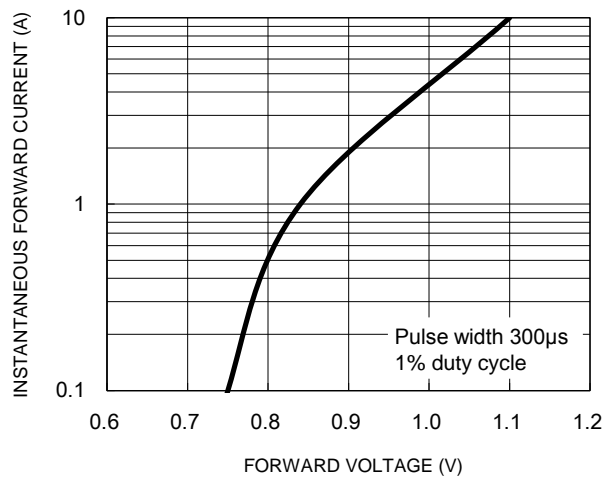
**Fig.2 Typical Junction Capacitance**



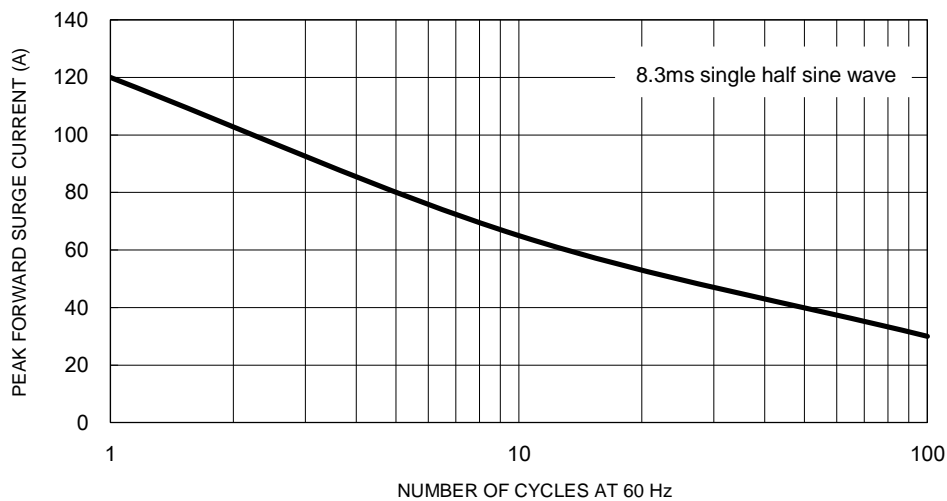
**Fig.3 Typical Reverse Characteristics**



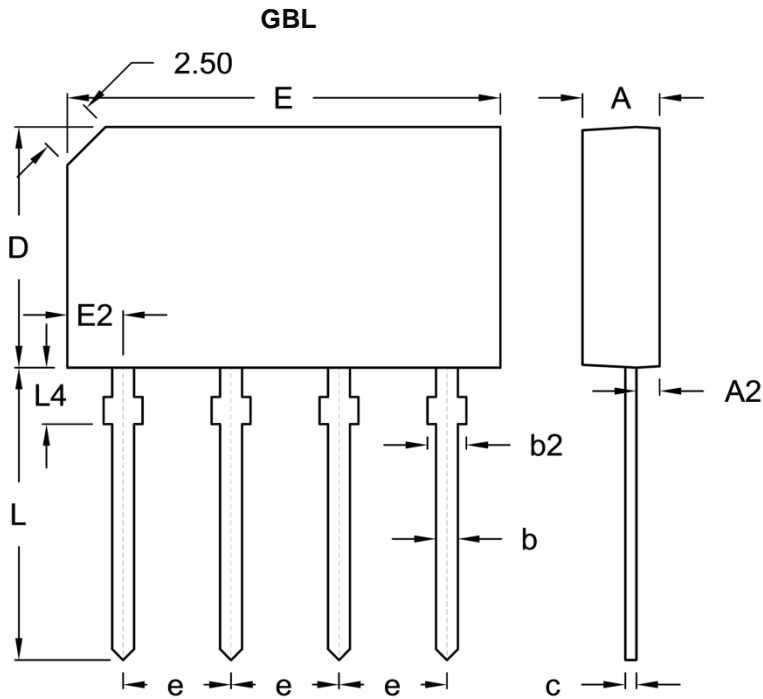
**Fig.4 Typical Forward Characteristics**



**Fig.5 Maximum Non-Repetitive Forward Surge Current**



**PACKAGE OUTLINE DIMENSIONS**



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A2	0.80	1.20	0.031	0.047
b	0.90	1.10	0.035	0.043
b2	1.30	2.00	0.051	0.079
c	0.40	0.60	0.016	0.024
D	10.70	11.30	0.421	0.445
E	19.70	20.30	0.776	0.799
E2	2.30	2.70	0.091	0.106
e	4.80	5.20	0.189	0.205
L	13.00	14.00	0.512	0.551
L4	2.30	2.70	0.091	0.106

**MARKING DIAGRAM**



- P/N = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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