

# 1A, 400V - 1000V Glass Passivated Bridge Rectifier

## FEATURES

- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- UL Recognized File # E-326854
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

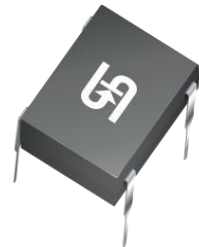
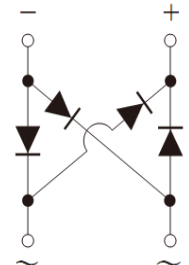
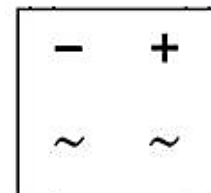
KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	1	A
$V_{RRM}$	400 - 1000	V
$T_{JMAX}$	150	°C
Package	DBL	
Configuration	Quad	

## APPLICATIONS

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

## MECHANICAL DATA

- Case: DBL
- Molding compound :meets UL 94V-0 flammability rating
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 0.36 g (approximately)


**DBL**


ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER	SYMBOL	DBL104 G-T	DBL105 G-T	DBL106 G-T	DBL107 G-T	UNIT
Marking code on the device		DBL104G	DBL105G	DBL106G	DBL107G	
Repetitive peak reverse voltage	$V_{RRM}$	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	400	600	800	1000	V
Forward current	$I_{F(AV)}$	1.0				A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	40		30		A
$I^2t$ value (of a surge on-state current)	$I^2t$	6.64		3.37		A <sup>2</sup> s
Junction temperature	$T_J$	-55 to +150				°C
Storage temperature	$T_{STG}$	-55 to +150				°C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>LIMIT</b>	<b>UNIT</b>
Junction-to-lead thermal resistance	$R_{\theta JL}$	15	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	40	°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 <sup>(1)</sup>	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.1	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	2	$\mu\text{A}$
	$T_J = 125^\circ\text{C}$		-	500	$\mu\text{A}$
Junction capacitance	1 MHz, $V_R = 4.0\text{V}$	$C_J$	25	-	pF

**Notes:**

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

<b>ORDERING INFORMATION</b>				
<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>PACKAGE</b>	<b>PACKING</b>
DBL10xG-T (Note 1, 2)	CB	G	DBL	50 / TUBE

**Notes:**

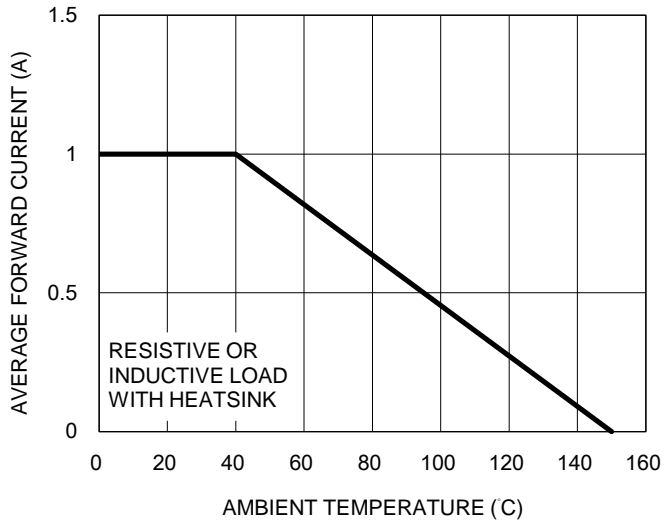
1. "x" defines voltage from 400V (DBL104G-T) to 1000V (DBL107G-T)
2. Whole series with green compound (halogen-free)

<b>EXAMPLE P/N</b>				
<b>EXAMPLE P/N</b>	<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>DESCRIPTION</b>
DBL104G-T CBG	DBL104G-T	CB	G	Green compound

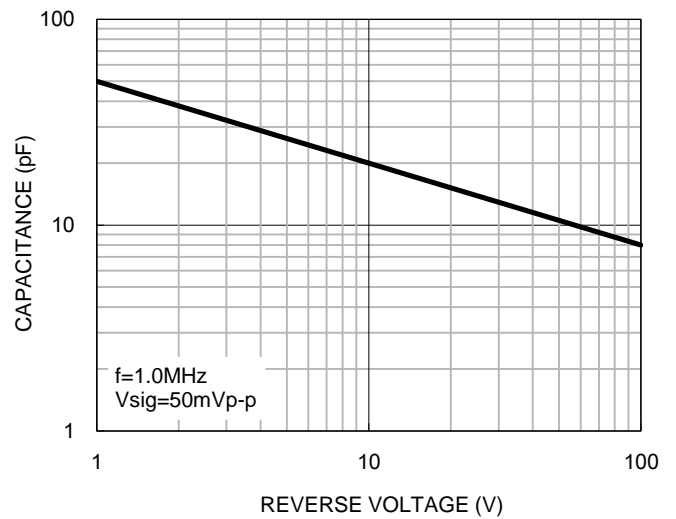
**CHARACTERISTICS CURVES**

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

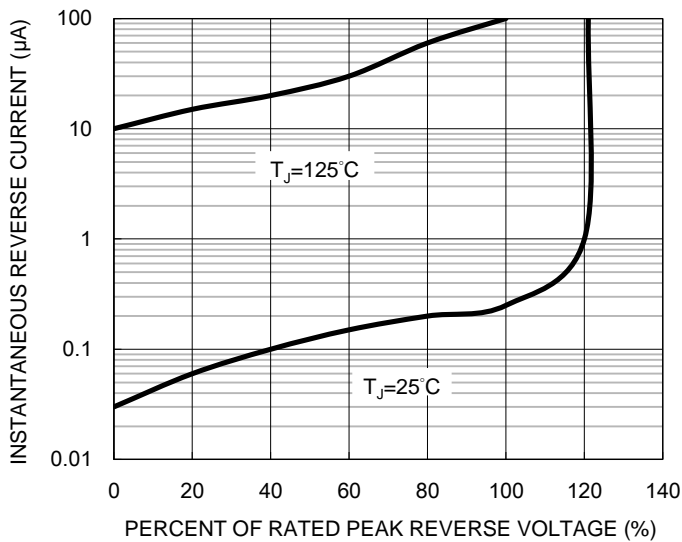
**Fig.1 Forward Current Derating Curve**



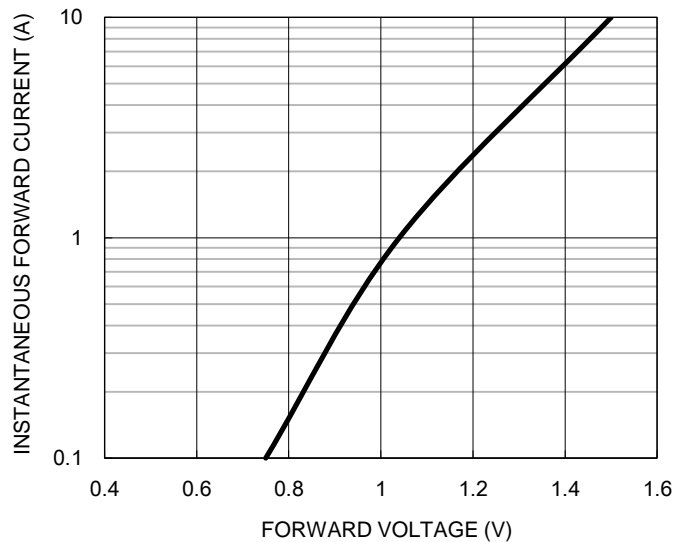
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



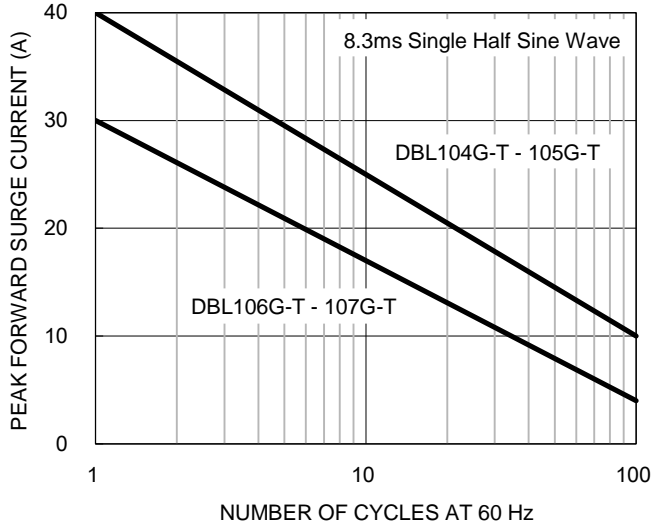
**Fig.4 Typical Forward Characteristics**



**CHARACTERISTICS CURVES**

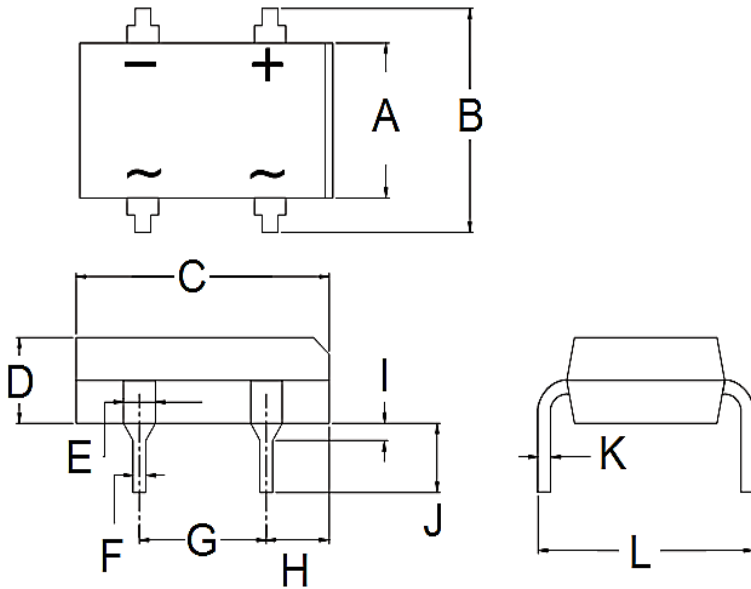
(T<sub>A</sub> = 25°C unless otherwise noted)

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



**PACKAGE OUTLINE DIMENSIONS**

DBL



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	6.20	6.50	0.244	0.256
B	7.24	8.00	0.285	0.315
C	8.12	8.51	0.320	0.335
D	2.35	2.60	0.093	0.102
E	0.89	1.14	0.035	0.045
F	0.46	0.58	0.018	0.023
G	5.00	5.20	0.197	0.205
H	1.39	1.90	0.055	0.075
I	1.27	2.03	0.050	0.080
J	3.81	4.69	0.150	0.185
K	0.22	0.33	0.009	0.013
L	7.60	8.90	0.299	0.350

**MARKING DIAGRAM**



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

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