

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

FEATURES

- Ideal for automated placement
- 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

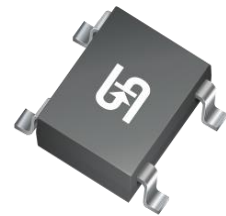
APPLICATIONS

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

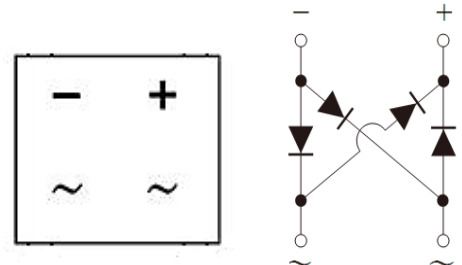
MECHANICAL DATA

- Case: DBLS
- Molding compound :meets UL 94V-0 flammability rating
- Packing code with suffix "G" means green compound (halogen-free)
- Moisture sensitivity level: level 1, per J-STD-020
- 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)

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



DBLS



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)						
PARAMETER	SYMBOL	DBLS 104G-T	DBLS 105G-T	DBLS 106G-T	DBLS 107G-T	UNIT
Marking code on the device		DBLS104G	DBLS105G	DBLS106G	DBLS107G	
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 ² t value (of a surge on-state current)	I ² t	6.6		3.7		A ² s
Junction temperature	T _J	-55 to +150				°C
Storage temperature	T _{STG}	-55 to +150				°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	15	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	40	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage ⁽¹⁾	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.1	V
Reverse current @ rated V_R ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	2	μA
	$T_J = 125^\circ\text{C}$		-	100	μA
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 $PW = 30\text{ ms}$.

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
DBLS10xG-T (Note 1, 2)	C1	G	DBLS	50 / TUBE
	RD		DBLS	1,500 / 13" Paper reel

Notes:

1. "x" defines voltage from 400V (DBLS104G-T) to 1000V (DBLS107G-T)
2. Whole series with green compound (halogen-free)

EXAMPLE P/N

EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
DBLS104G-T C1G	DBLS104G-T	C1	G	Green compound

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

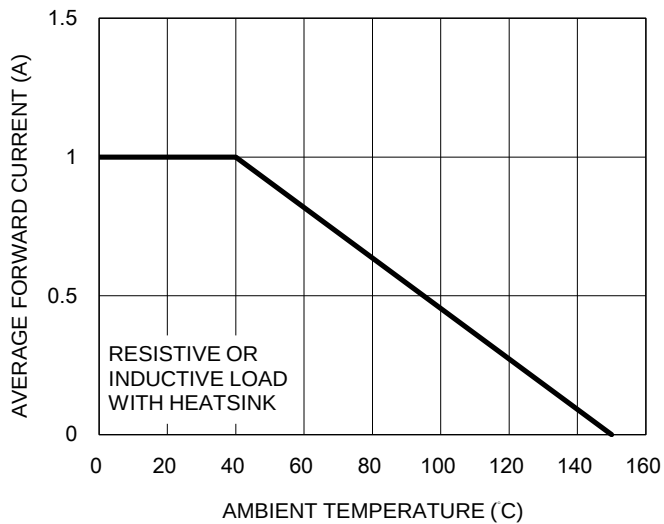


Fig.2 Typical Junction Capacitance

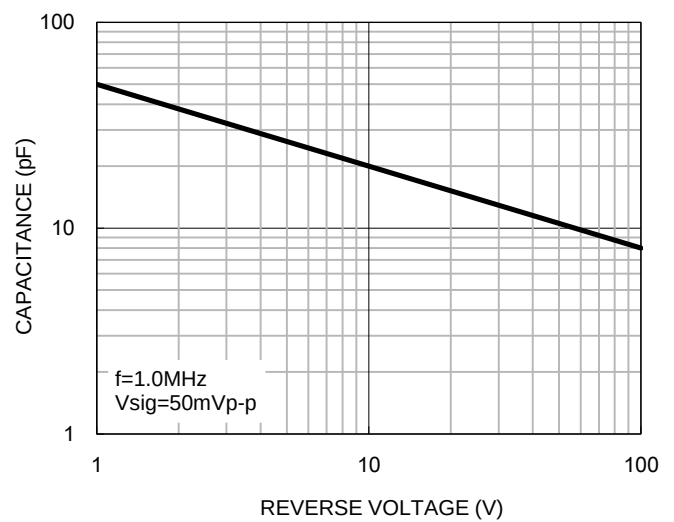


Fig.3 Typical Reverse Characteristics

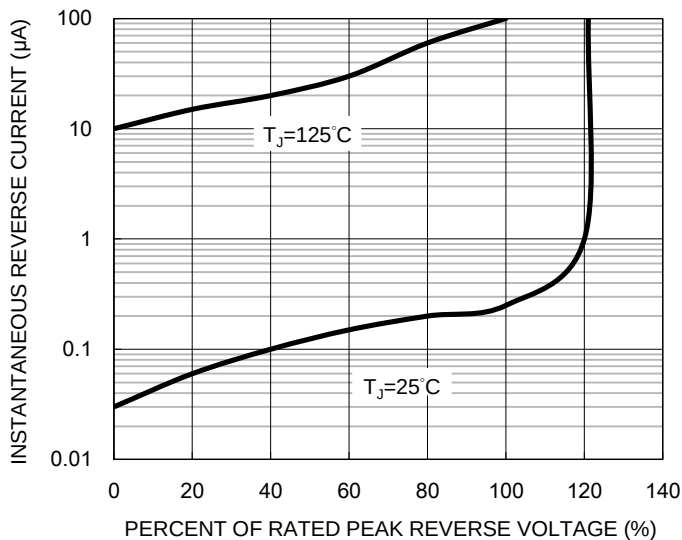
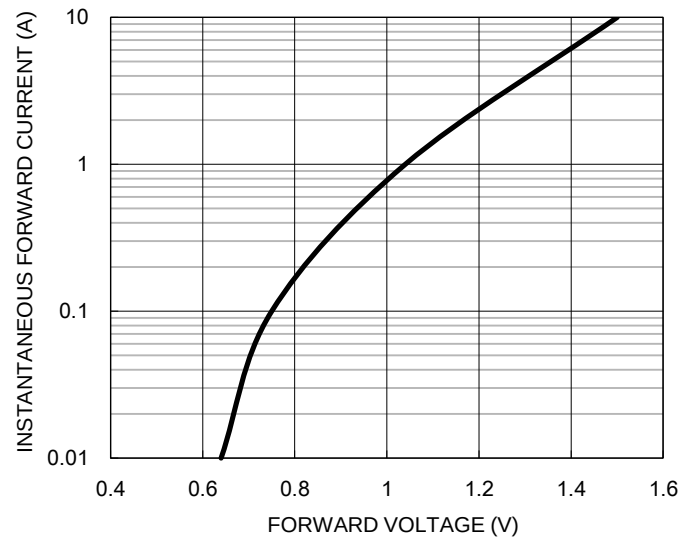


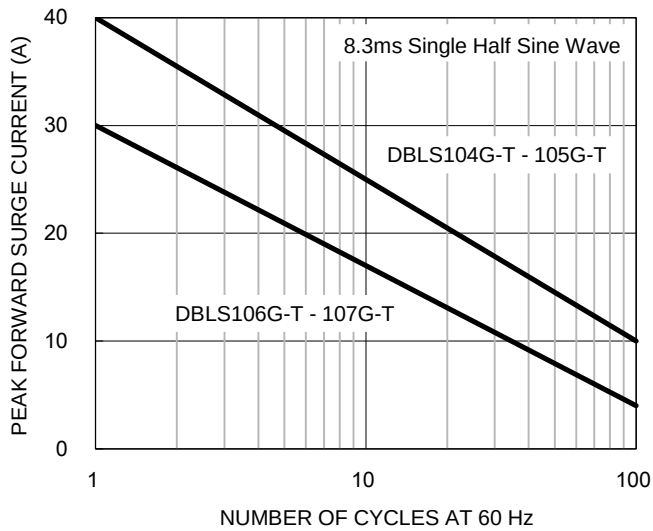
Fig.4 Typical Forward Characteristics



CHARACTERISTICS CURVES

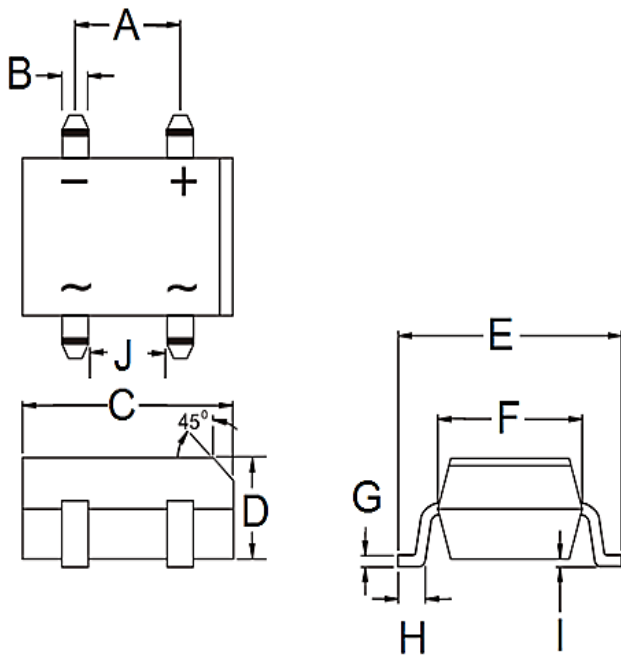
($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.5 Maximum Non-repetitive Forward Surge Current



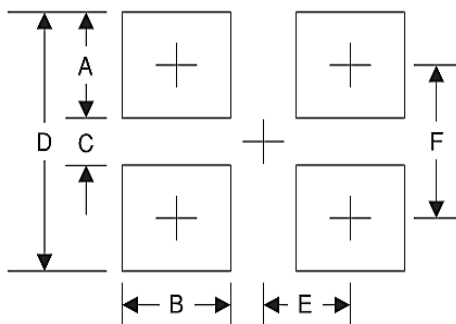
PACKAGE OUTLINE DIMENSIONS

DBLS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	5.00	5.20	0.197	0.205
B	1.02	1.20	0.040	0.047
C	8.13	8.51	0.320	0.335
D	2.35	2.60	0.093	0.102
E	9.80	10.30	0.386	0.406
F	6.20	6.50	0.244	0.256
G	0.22	0.33	0.009	0.013
H	1.02	1.53	0.040	0.060
I	0.076	0.33	0.003	0.013
J	3.90	4.10	0.154	0.161

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
B	1.3	0.051
C	6.9	0.272
D	11.5	0.453
E	2.6	0.102
F	9.2	0.362

MARKING DIAGRAM



P/N = Specific Device Code
 G = Green Compound
 YW = Date Code
 F = Factory Code

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