

1A, 400V - 1000V Standard 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
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

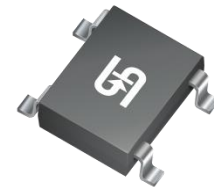
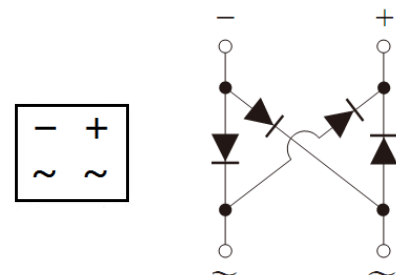
APPLICATIONS

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

MECHANICAL DATA

- Case: DBLS
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 0.360g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	1	A
V_{RRM}	400 - 1000	V
I_{FSM}	30, 40	A
$T_{J\ MAX}$	150	°C
Package	DBLS	
Configuration	Quad	


DBLS


ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER	SYMBOL	DBLS 104G-T	DBLS 105G-T	DBLS 106G-Y	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
Forward current	I_F	1				A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	40		30		A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	6.64		3.73		A ² s
Junction temperature	T_J	- 55 to +150				°C
Storage temperature	T_{STG}	- 55 to +150				°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	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 per diode ⁽¹⁾	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.1	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	2	μA
	$T_J = 125^\circ\text{C}$		-	100	μA
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	C_J	25	-	pF

Notes:

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

ORDERING INFORMATION

ORDERING CODE ⁽¹⁾	PACKAGE	PACKING
DBLS1xG-T	DBLS	1,500 / Tape & Reel

Notes:

1. "x" defines voltage from 400V(DBLS104G-T) to 1000V(DBLS107G-T)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

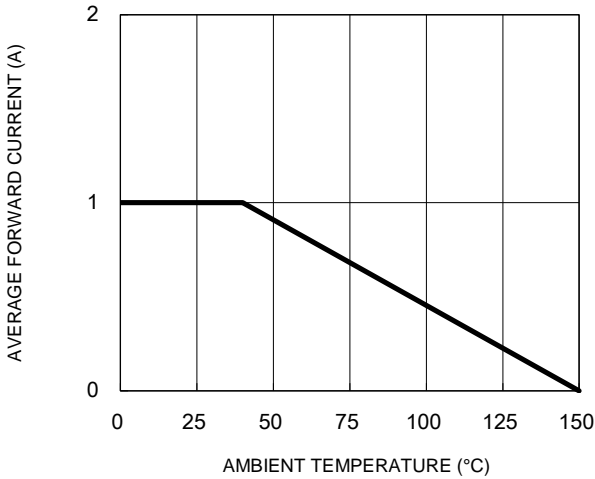


Fig.2 Typical Junction Capacitance

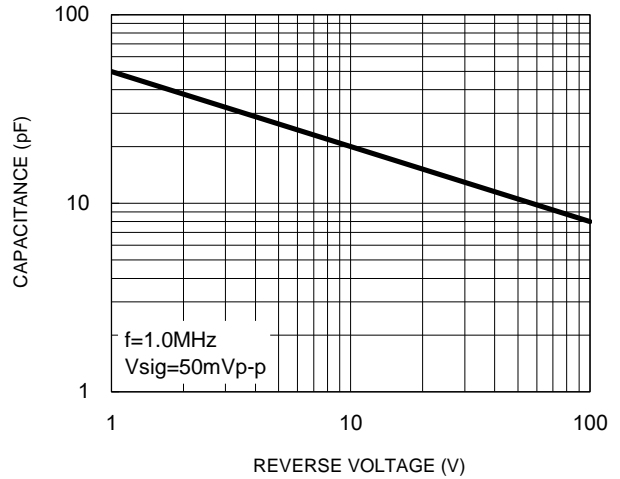


Fig.3 Typical Reverse Characteristics

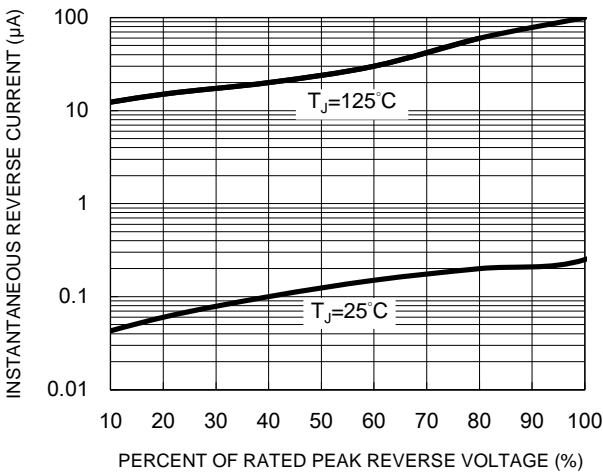


Fig.4 Typical Forward Characteristics

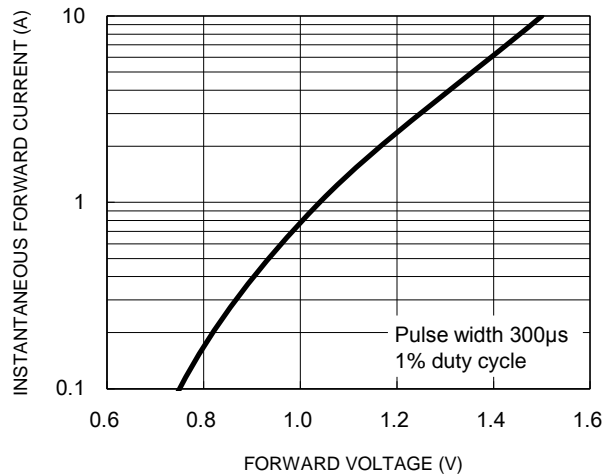
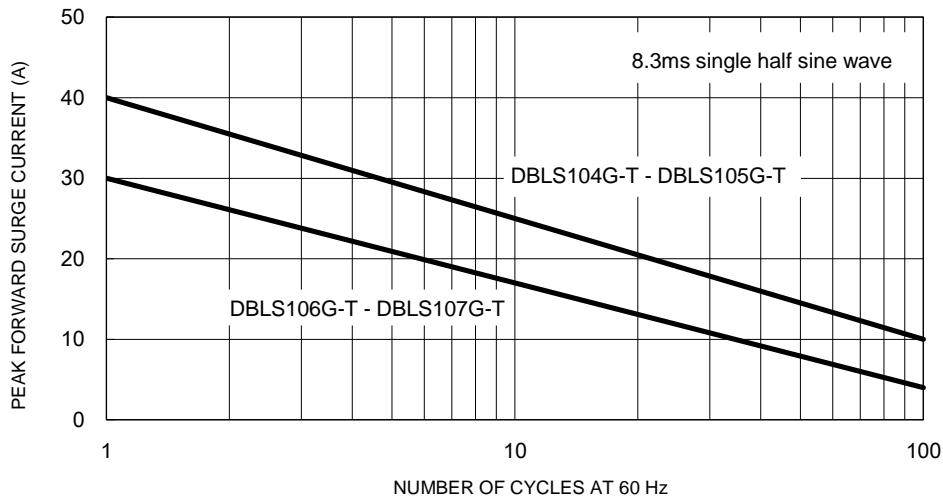
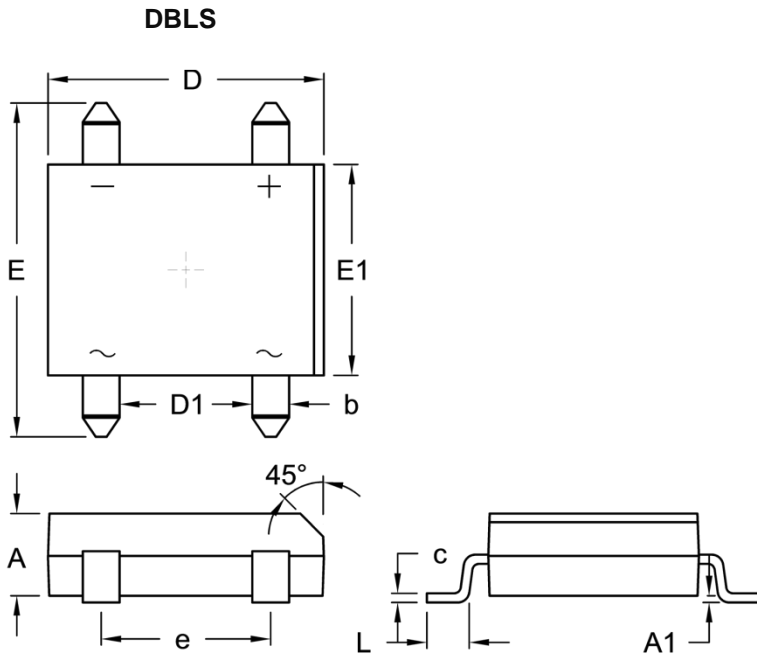


Fig.5 Maximum Non-Repetitive Forward Surge Current

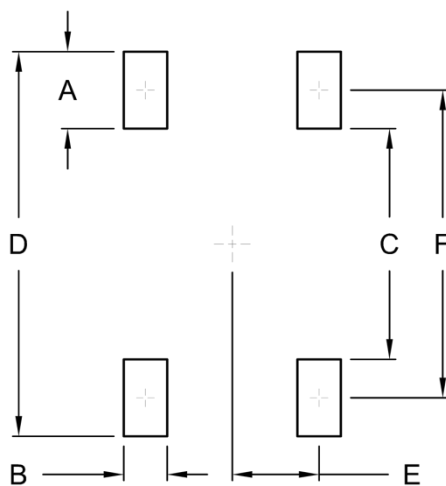


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.35	2.60	0.093	0.102
A1	0.076	0.33	0.003	0.013
b	1.02	1.20	0.040	0.047
c	0.22	0.33	0.009	0.013
D	8.13	8.51	0.320	0.335
D1	3.90	4.10	0.154	0.161
E	9.80	10.30	0.386	0.406
E1	6.20	6.50	0.244	0.256
e	5.00	5.20	0.197	0.205
L	1.02	1.53	0.040	0.060

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.30	0.091
B	1.30	0.051
C	6.90	0.272
D	11.50	0.453
E	2.60	0.102
F	9.20	0.362

MARKING DIAGRAM



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

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