1A, 50V - 1000V Standard Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- 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

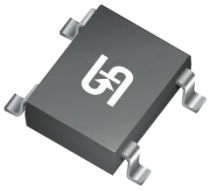
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

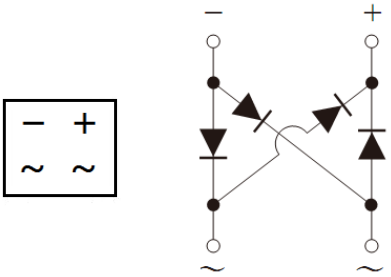
- Case: DBLS
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.360g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	1	A
V_{RRM}	50 - 1000	V
I_{FSM}	30, 40	A
$T_{J\ MAX}$	150	°C
Package	DBLS	
Configuration	Quad	

Pb-Free RoHS COMPLIANT HALOGEN FREE



DBLS



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	DBLS 101G	DBLS 102G	DBLS 103G	DBLS 104G	DBLS 105G	DBLS 106G	DBLS 107G	UNIT
Marking code on the device		DBLS 101G	DBLS 102G	DBLS 103G	DBLS 104G	DBLS 105G	DBLS 106G	DBLS 107G	
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	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<8.3ms)	I^2t	6.6					3.7		A^2s
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°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode[1]	I_F = 1A, T_J = 25°C	V_F	-	1.1	V
Reverse current @ rated V_R per diode[2]	T_J = 25°C	I_R	-	2	μA
	T_J = 125°C		-	100	μA
Junction capacitance per diode	1MHz, V_R = 4.0V	C_J	25	-	pF

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE[1][2]	PACKAGE	PACKING
DBLS1xG	DBLS	1,500 / Tape & Reel
DBLS1xGH	DBLS	1,500 / Tape & Reel

Notes:

1. “x” defines voltage from 50V(DBLS101G) to 1000V(DBLS107G)
2. “H” means AEC-Q101 qualified

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

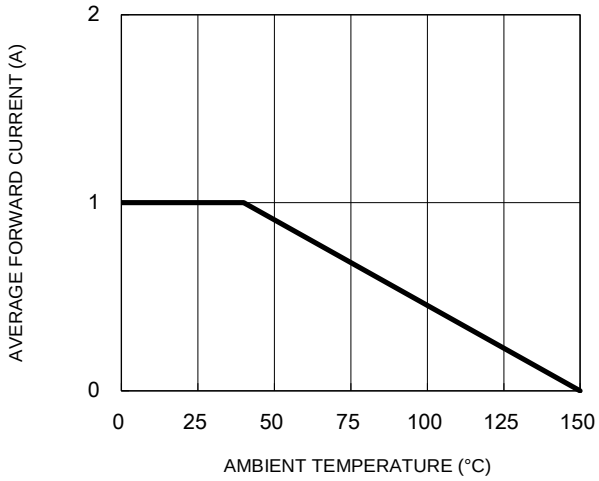


Fig.2 Typical Junction Capacitance

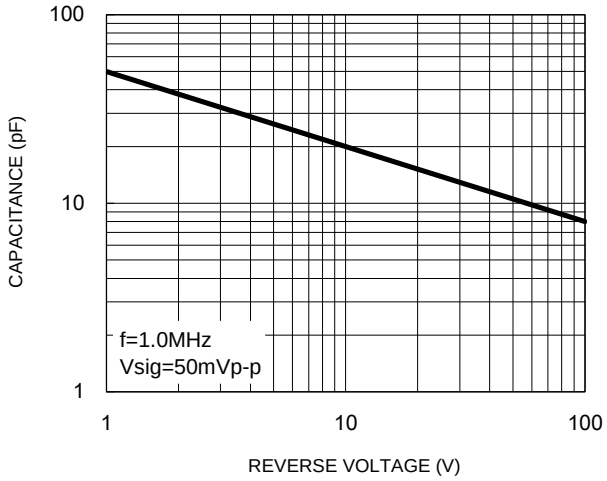


Fig.3 Typical Reverse Characteristics

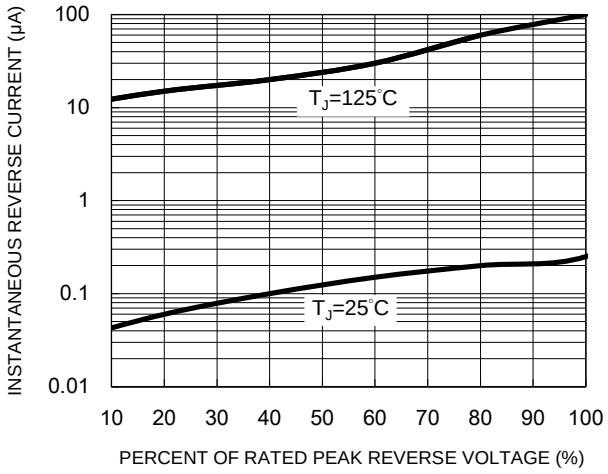


Fig.4 Typical Forward Characteristics

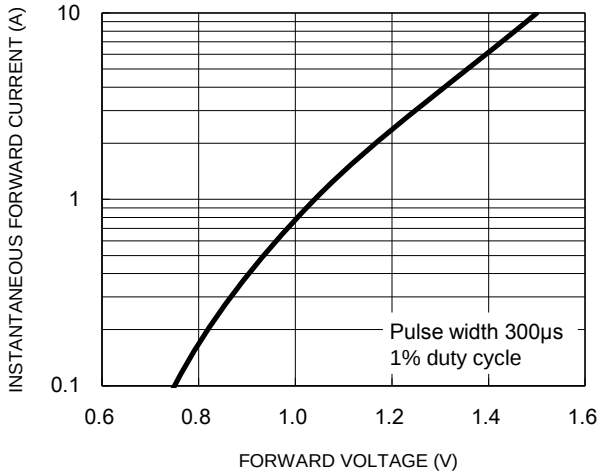
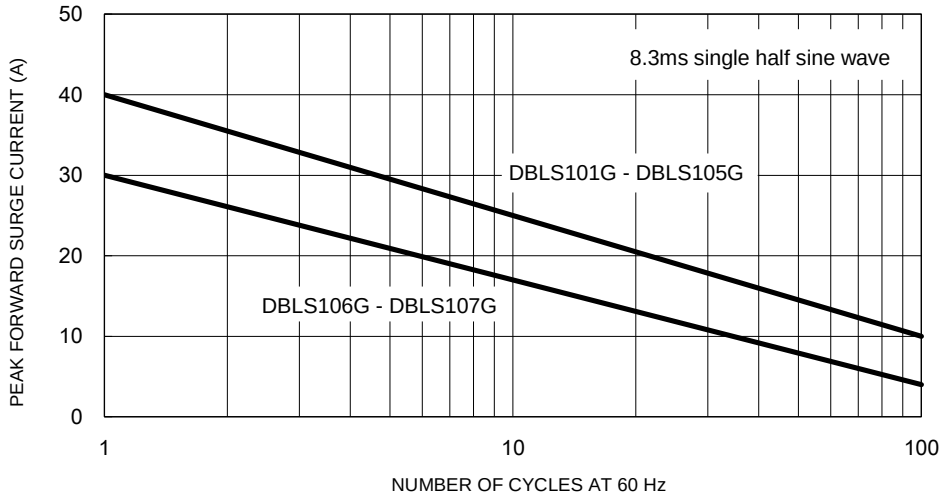
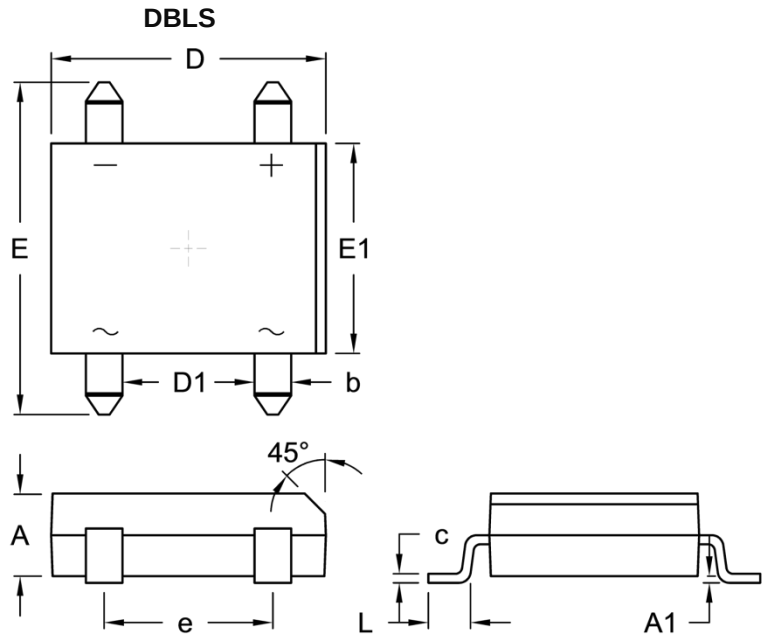


Fig.5 Maximum Non-Repetitive Forward Surge Current

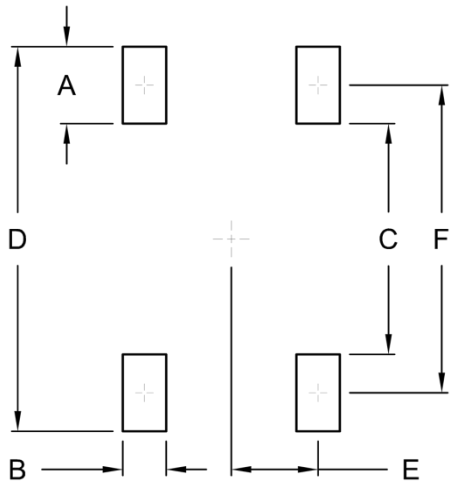


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.40	2.60	0.094	0.102
A1	0.076	0.330	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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