

2A, 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

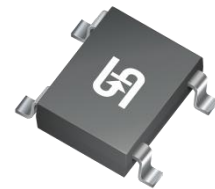
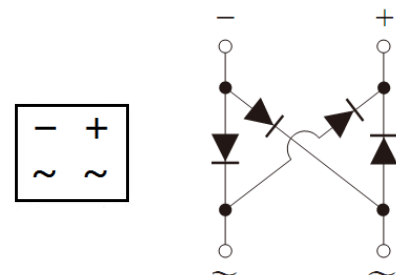
APPLICATIONS

- 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 | 2 | A |
| V_{RRM} | 400 - 1000 | V |
| I_{FSM} | 50 | 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 204G-T | DBLS 205G-T | DBLS 206G-T | DBLS 207G-T | UNIT |
| Marking code on the device | | DBLS204G | DBLS205G | DBLS206G | DBLS207G | |
| 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 | 2 | | | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 50 | | | | A |
| Rating for fusing ($t < 8.3\text{ms}$) | I^2t | 10.37 | | | | 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⁾ | $I_F = 2\text{A}, T_J = 25^\circ\text{C}$ | V_F | - | 1.15 | V |
| Reverse current @ rated V_R per diode ⁽²⁾ | $T_J = 25^\circ\text{C}$ | I_R | - | 2 | μA |
| | $T_J = 125^\circ\text{C}$ | | - | 500 | μA |

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 |
|------------------------------|---------|---------------------|
| DBLS2xG-T | DBLS | 1,500 / Tape & Reel |

Notes:

1. "x" defines voltage from 400V(DBLS204G-T) to 1000V(DBLS207G-T)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

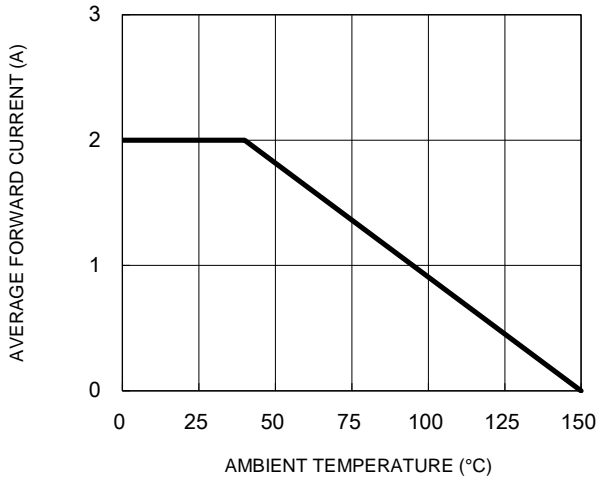


Fig.2 Typical Junction Capacitance

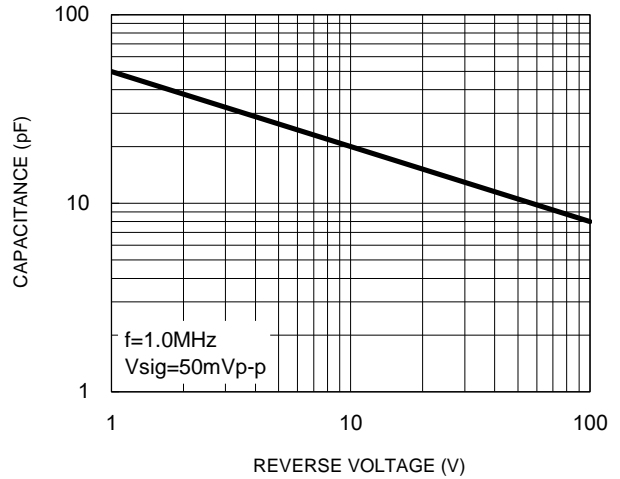


Fig.3 Typical Reverse Characteristics

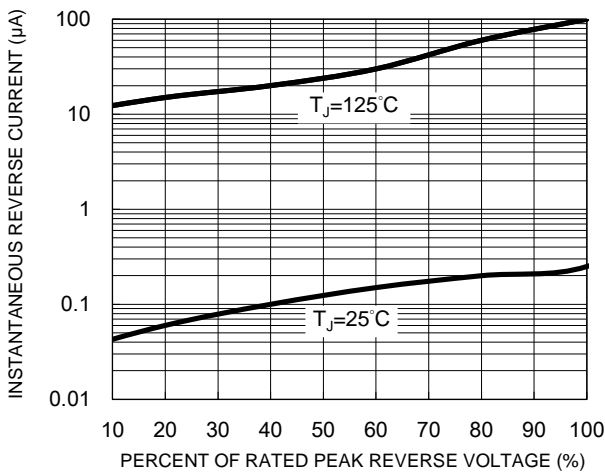


Fig.4 Typical Forward Characteristics

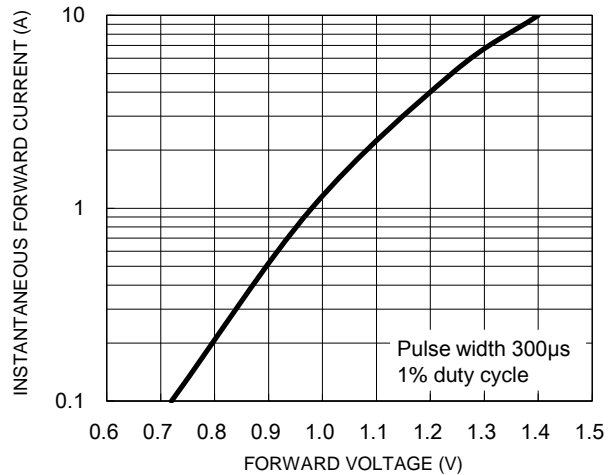
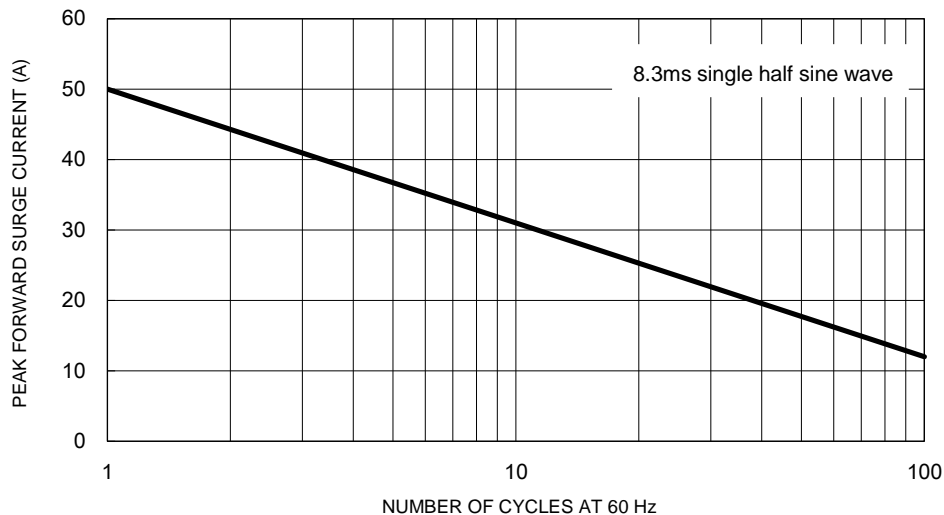
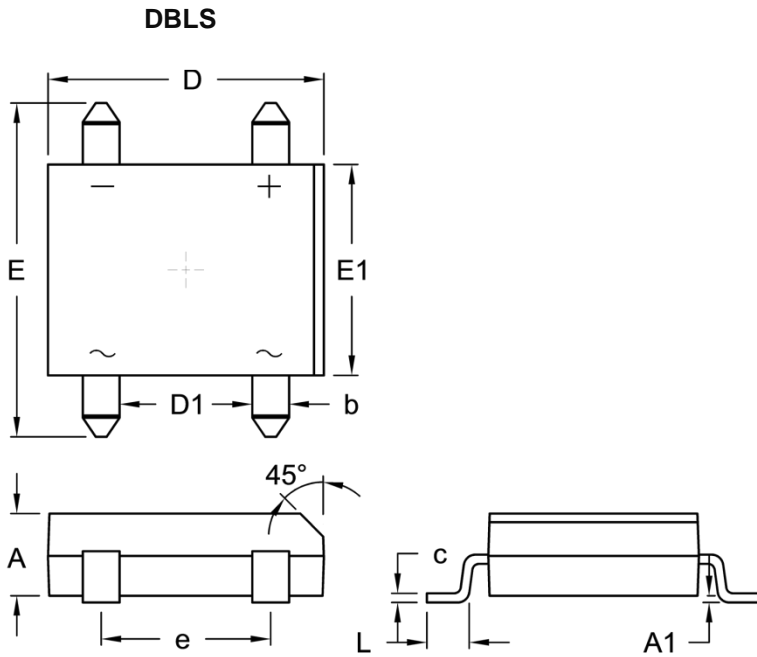


Fig.5 Maximum Non-Repetitive Forward Surge Current

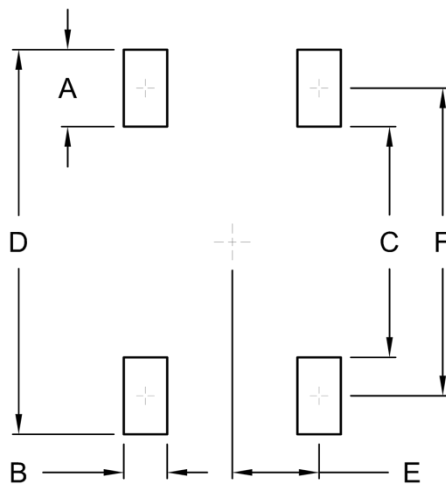


PACKAGE OUTLINE DIMENSIONS



| 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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.